



Blue Line / Gold Line

Planning and Environmental Linkages Technical Memo



October 2020



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Acronyms

ACC	Austin Community College
ACS	American Community Survey
ADA	Americans with Disabilities Act
ASMP	Austin Strategic Mobility Plan
ARCH	Austin Resource Center for the Homeless
ART	Autonomous Rapid Transit
AST	Active Transportation Plan
AUS	Austin-Bergstrom International Airport
BRT	Bus Rapid Transit
CAMPO	Capital Area Metropolitan Planning Organization
Capital Metro	Capital Metro Transportation Authority
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIG	Capital Investment Grant
CoA	City of Austin
EIS	Environmental Impact Statement
EJ	Environmental Justice
FGS	Fixed Guideway Setting
FTA	Federal Transit Administration
FHWA	Federal Highway Administration
GIS	Geographical Information System
HCT	High-Capacity Transit
IBIZ	Independent Business Investment Zone
IH	Interstate Highway
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
MACC	Mexican American Cultural Center
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NTD	National Transit Database
O&M	Operations and Maintenance
PARC	Parks and Recreation Department
PCAN	Project Connect Ambassador Network
PEL	Planning and Environmental Linkages
PIP	Public Involvement Plan
PMOR	Program Manager Owner Representative

PMT	Person Miles Traveled
RATP	Regional Active Transportation Plan
ROW	Right-of-Way
SCC	Standard Cost Categories
SH	State Highway
SOPs	Standard Operating Procedures
STOPS	Simplified Trips-on-Project Software
TAC	Technical Advisory Committee
TAZs	Traffic Analysis Zones
THC	Texas Historical Commission
TPWD	Texas Parks & Wildlife Department
TSM	Transportation System Management
TSP	Transit Signal Priority
TWG	Transit Working Group
TxDOT	Texas Department of Transportation
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
UT	University of Texas
VHT	Vehicle Hours of Travel
VMT	Vehicle Miles Traveled

1.0 Introduction and Study Background

1.1 Introduction

The Capital Metro Transportation Authority (Capital Metro) developed this Planning and Environmental Linkages (PEL) Study to support the Gold Line LRT and Blue Line LRT development effort as well as position the project for the next phase of environmental and technical analysis. Capital Metro and the Federal Transit Administration (FTA) formalized the PEL process and Early Scoping for the Blue Line HCT Corridor on April 19, 2019, by publishing a Notice of Early Scoping in the Federal Register (see **Appendix A, Blue Line/Gold Line PEL Questionnaire** as **Attachment 1**).

Generally executed early in the transportation planning process, the PEL study considers the environmental, community, and economic goals of the project, which are carried through to the project development and environmental review process and ultimately through design, construction, and maintenance. The goal of PEL is to create a seamless decision-making process that minimizes duplication of effort, promotes environmental stewardship, and reduces delay from planning through project implementation. Early Scoping allows the scoping process to begin as soon as there is enough information to describe the proposal so that the public and relevant agencies can participate effectively. Through this notice, Capital Metro invited public and agency involvement and input on the (a) Project Purpose and Need, (b) proposed alternatives, and (c) potential environmental, transportation, and community impacts and benefits to consider during the National Environmental Policy Act (NEPA) process.

This PEL Report documents the NEPA early scoping process and stakeholder input, project Purpose and Need, the process by which Capital Metro developed and evaluated the alternatives, and describes the proposed Locally Preferred Alternatives (LPAs) to be advanced for further evaluation in the NEPA phase. A PEL questionnaire, which provides a summary of the planning process to date, is included in **Appendix A, Blue Line/Gold Line PEL Questionnaire**. This document is also supported by the following technical studies that document the analyses conducted to date in more detail.

- **Appendix B:** Blue Line/Gold Line Corridor Conditions Report (June 2020)
- **Appendix C:** Blue Line Preliminary Screening Analysis (September 2019)
- **Appendix D:** Blue Line Environmental Analysis (October 2019)
- **Appendix E:** Blue Line Environmental Analysis Addendum (December 2019)
- **Appendix F:** Blue Line Detailed Alternatives Evaluation Summary Technical Memo (January 2020)
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- **Appendix L:** Project Connect Public Involvement Plan Blue Line (September 2019)

Under this PEL process, Capital Metro reviewed locally adopted, community-supported, or agency-produced transportation plans to ascertain recent, current, or future planning studies or projects near the Blue Line LRT and Gold Line LRT study areas. The study area is defined as ½-mile radius around the proposed project alignment. In addition, several future infrastructure improvement projects by Texas Department of Transportation (TxDOT) and City of Austin (CoA) that are planned within the Blue Line LRT and Gold Line LRT study areas were reviewed and summarized in **Appendix B, Blue Line/Gold Line**

Corridor Conditions Report . Capital Metro also conducted an Alternatives Analysis that documented the project's Purpose and Need, analyzed a range of reasonable, feasible, and prudent HCT alternatives, and identified an LPA in accordance with the Federal Highway Administration (FHWA)/FTA Planning Regulations (23 Code of Federal Regulations [CFR] § 450.212 and 450.318), and the Council on Environmental Quality's (CEQ's) and the U.S. Department of Transportation (USDOT) regulations and guidance for implementing the NEPA (40 CFR §§ 1501.2-1501.8 and 23 CFR § 771.111, respectively), which encourage Federal agencies to initiate NEPA early in their planning processes.

1.2 Study Background

In December 2018, the Capital Metro Board of Directors approved the *Project Connect Long Term Vision Plan* (Project Connect) (2018). Project Connect is a comprehensive transit vision to improve existing High-Capacity Transit (HCT) services that provide efficient travel options into, out of, and around Central Austin from the surrounding region. Project Connect identified two HCT corridors - the Blue Line Corridor and the Orange Line Corridor - as the backbone of the future system, in addition to other improvements like new MetroRapid routes, Red Line improvements, development of the Green Line, additional MetroExpress routes with park-and-rides, and neighborhood circulators (see **Figure 1**).

In April 2019, Capital Metro initiated a formal Alternatives Analysis study on the Blue Line Corridor to investigate the viability of HCT from the Austin-Bergstrom International Airport (AUS), through downtown with a connection to the Orange Line at Republic Square, and north to Austin Community College (ACC) Highland. The Blue Line Corridor links many emerging development nodes and place-making opportunities in Downtown Austin, the South-Central Waterfront District, and the East Riverside corridor. The Corridor connects important destinations such as ACC, University of Texas at Austin (UT), the Texas State Capitol Complex, St. David's Medical Center, the Dell Seton Medical Center, the Austin Convention Center, and AUS.

Capital Metro conducted the Alternatives Analysis using a phased approach wherein the alternatives were defined, evaluated, and refined or eliminated at each step of the process. As a result of the analysis, Capital Metro identified light rail transit (LRT) as the preferred mode. With the proposed mode preference for LRT confirmed, the Blue Line was considered alongside the evolving Orange Line and broader Project Connect system. In January 2020, the joint City Council/Capital Metro board meeting yielded a potential alternative operating scenario with the Blue Line originating at AUS, traveling through downtown via 4th Street to Republic Square, where it could then interline with the Orange Line north. As shown in **Figure 2**, this route option creates a more resilient transit system supported by connection points facilitating transfers between the corridors.

Understanding the benefits of interlining the Blue Line with the Orange Line north, Capital Metro proposed dividing the Blue Line Corridor at Republic Square to create two routes – the Blue Line and the Gold Line. The Gold Line was originally introduced in the 2018 Project Connect vision map as a route connecting ACC Highland to Crestview via 4th Street downtown. However, the 2018 alignment would add additional redundancy to the proposed interlining of the Blue Line with the Orange Line, essentially establishing three HCT routes along the northern half of the Orange Line Corridor. The refined Gold Line emerged from this consideration; it would operate from ACC Highland to Republic Square. As with the Blue Line, the Gold Line would offer an additional layer of system flexibility as it could interline with the Orange Line south from Republic Square, as shown in **Figure 2**. This configuration offers optimal flexibility and connection to a greater number of destinations and Capital Metro transit centers, providing a greater number of riders with LRT service. As a result of these considerations, Capital Metro identified two Locally Preferred Alternatives (LPAs) - the Blue Line LRT and the Gold Line LRT – each operating in a dedicated transitway. See **Section 4.0** for a description of the Alternatives Analysis process and the LPAs.

Figure 1: Project Connect Long Term Vision Plan



Figure 2. Proposed Blue, Gold, and Orange Line Interlining Options



2.0 Public Involvement Planning

Effective public involvement is critical to successful Early Scoping. Project Connect serves as Capital Metro's umbrella program over multiple independent projects, including the Blue Line LRT and Gold Line LRT. As such, public engagement at the project level, and as part of the continuing overall Project Connect engagement program, occurred simultaneously. Project Connect developed public engagement goals that have been adopted by the Blue Line LRT and Gold Line LRT projects. Overarching goals for Project Connect stakeholder engagement include:

- Engage and inform the community
- Connect with individuals from all communities
- Track and report regularly on community engagement activities
- Receive clearance on environmental studies

As stand-alone projects, stakeholder engagement for the Blue Line LRT and Gold Line LRT has additional public engagement objectives. Goals tailored to the specific needs of the Blue Line/Gold Line Corridor are to:

- Understand the overarching community values to inform decision making for the project
- Coordinate with other public projects that have a similar timeframe and/or are located in proximity to the Blue Line/Gold Line corridor; and
- Understand existing small area plans identified through CoA Planning and Zoning efforts.

The project team developed a Public Involvement Plan (PIP) for the project, which is a living document aimed at articulating the ongoing engagement efforts for project development. *Project Connect Public Involvement Plan Blue Line* (September 2019) can be found in **Appendix L, Project Connect Public Involvement Plan Blue Line**. The team worked with Capital Metro and the Program Manager Owner Representative (PMOR) to define the stakeholder groups in the corridor and to assess the issues most relevant for project development. The team then crafted a detailed PIP that outlined the approach to be used to carry out public outreach. Active public coordination for the Blue Line LRT and Gold Line LRT projects during the PEL Study was structured around the technical project development schedule in order to provide public updates and receive public feedback around logical milestones in the project schedule.

2.1 Public Outreach

As outlined in the PIP, the team conducted four phases of public outreach that included open houses and other organized events illustrated in **Table 1**. During the development of the Blue Line LRT and Gold Line LRT, it was important to coordinate public involvement efforts among other inter-related studies. The team met with Capital Metro's Project Connect staff, Marketing and Communications staff, and PMOR, as well as other agencies and consultants (as directed), to discuss consistency of public involvement approaches and ways to integrate outreach efforts to lessen the burden and "meeting fatigue" on the public and stakeholders. For outreach strategies and techniques, meeting locations, and other details on the public involvement efforts for the projects, see **Appendix L, Project Connect Public Involvement Plan Blue Line**.

Table 1. Technical Milestones and Public Engagement

	Technical Milestone	Objectives
A	Development of the Purpose and Need and Early Scoping	Engage to ensure that the project’s Purpose and Need is clearly defined, and consensus is reached on draft Purpose and Need.
B	Development of Conceptual Alternatives	Evaluate and compare the Build Alternatives against each other and the No Build Alternative and reach stakeholder consensus on approach.
C	Detailed Evaluation of the Alternative	Develop and present quantitative and qualitative data and determine if Build Alternatives or the No Build Alternative consider the public’s needs and concerns.
D	Identification of the Locally Preferred Alternative (LPA)	Receive feedback, announce the LPA, make refinements, and complete the remaining steps of the project development process.

To date, Capital Metro has given presentations to key stakeholders on the Blue Line LRT and Gold Line LRT projects. These meetings have been designed to provide tailored information to stakeholders regarding their interests and will continue as needed to keep key stakeholders up to date on project developments and solicit feedback. Stakeholders briefed to date include:

- Austin Resource Center for the Homeless (ARCH)/Front Steps
- Austin Convention Center
- Austin Parks and Recreation Department
- Austin Rowing Center
- Austin Transportation Department
- Austin-Bergstrom International Airport
- Bike Austin
- Bouldin Creek Neighborhood Association
- Central Austin Neighborhood Plan Area Committee
- Central Texas Regional Mobility Authority
- Crossing Garden Homes / Chambord Condos
- Downtown Austin Alliance
- Downtown Austin Neighborhood Association
- Downtown Working Group
- East Cesar Chavez Merchants Association
- East Cesar Chavez Neighborhood Contact Team
- East Riverside/Oltorf Neighborhood Plan Contact Team
- Friends of Riverside ATX Neighborhood Association
- Kealing Middle School
- Highland Neighborhood Association
- Lakeside Apartments
- Mayor’s Office, City of Austin
- Montopolis Neighborhood Association
- Movability
- Mueller Neighborhood Association
- North University Neighborhood Association
- Organization of Central East Austin Neighborhoods
- People United for Mobility Action
- Rainey Neighborhood Association
- Real Estate Council of Austin
- South River City Citizens
- St. John’s Neighborhood Association
- Texas Department of Transportation
- Texas Facilities Commission
- The Trail Foundation
- University Area Partners Neighborhood Association
- University of Texas at Austin
- Waterloo Greenway Conservancy

Key stakeholders were also engaged through the Project Connect Ambassador Network (PCAN). The PCAN was developed to provide input and feedback on program milestones and community engagement processes to ensure an effective process. PCAN members represent various interest areas and backgrounds across Central Texas, encourage and facilitate the engagement and input of other community members,

and consider input in program discussions. This is an overarching outreach group that is not project-specific; however, the project team has provided and will continue to provide information and solicit feedback from this group at each of its meetings. The first PCAN meeting that featured a discussion on the Blue Line Corridor, which included the Gold Line at the time, was held on May 29, 2019; the presentation included a kick-off meeting for the PCAN members and information on the Alternatives Analysis process. Other meetings that have been held are listed in **Table 2**.

Table 2. PCAN Meetings

PCAN Meetings	
May 29, 2019	Blue Line Kick-Off
August 21, 2019	Conceptual Alternatives: Alternatives Analysis Update
September 26, 2019	Detailed Evaluation of Alternatives: Overview
October 28, 2019	Detailed Evaluation of Alternatives: Update
December 11, 2019	Detailed Evaluation of Alternatives: Technical Deep Dive
January 15, 2020	Project Connect Update Investment Opportunities and Transit System Scenarios
February 12, 2020	Progress Update
April 15, 2020	Locally Preferred Alternative: Overview
May 7, 2020	Community Outreach and Virtual Open House Update

2.2 Agency Coordination

Development and management of the Blue Line LRT and Gold Line LRT projects (and other Project Connect investments) consists of several decision-making and oversight bodies, with the Capital Metro Board of Directors serving as the primary decision-making body. An overview of each group, their role, and how they were involved and informed is provided below. Input from stakeholder and technical groups was provided regularly to the Capital Metro Board to support decision-making.

CAPITAL METRO BOARD

The Capital Metro Board of Directors is the final decision-making body for the project and will provide local project oversight for the Blue Line LRT and Gold Line LRT projects. Staff will regularly brief the Capital Metro Board of Directors and keep them informed of issues and opportunities associated with the project. The Capital Metro Board and its partners approved the Blue Line LRT LPA and the Gold Line LRT LPA on June 10, 2020. The LPA will be advanced into the next phase of project development, the NEPA phase, and Capital Metro Board of Directors will provide guidance relative to funding strategies and any associated changes to the Capital Metro annual budget. Since Capital Metro will be seeking federal funding for the projects, they will make a formal request to the FTA to initiate the NEPA process and evaluate the environmental benefits and impacts of the LPAs.

CITY OF AUSTIN

The Austin City Council has a variety of responsibilities which include transportation and capital improvements. The Blue Line LRT and Gold Line LRT projects would affect many communities; if they advance to design and construction, permits and approvals will be required from the City for many project elements. The Capital Metro Board and the Austin City Council have conducted several joint sessions throughout the project development process. These sessions have been aimed at building consensus toward a resolution to support the LPAs that will enable the investments to be considered by referendum in November 2020.

FEDERAL TRANSIT ADMINISTRATION (FTA)

The FTA is the lead federal agency and retains approval authority on the Blue Line LRT and Gold Line LRT projects. Given that Capital Metro will seek federal funding with a Capital Investment Grant (CIG), Capital Metro communicates with FTA on a regular basis through monthly calls and quarterly coordination meetings to review the progress of the Blue Line LRT and Gold Line LRT projects and provide guidance on applicable federal processes.

Texas Department of Transportation (TxDOT)

A meeting between TxDOT Environmental, Capital Metro PMOR, Orange and Blue Line/Gold Line teams was held on February 7, 2020 to discuss TxDOT environmental clearance requirements. It was determined that no additional coordination with TxDOT would be required; since the project will be cleared by FTA.

Capital Area Metropolitan Planning Organization (CAMPO)

The Capital Area Metropolitan Planning Organization (CAMPO) is the MPO for the Austin metropolitan area. An updated CAMPO 2045 Regional Active Transportation Plan (RATP) dated October 2017 was adopted on May 4, 2020. Capital Metro will ensure that Project Connect and the Blue Line LRT and Gold Line LRT projects are coordinated throughout the planning process.

Technical Advisory Committee (TAC)

Communication and collaboration with agencies, listed below, have been ongoing as part of a Technical Advisory Committee (TAC). The TAC consists of public agency professionals from a range of disciplines, who have worked with Capital Metro to identify and resolve technical issues related to engineering and design. A list of TAC members is provided in Appendix A of the *Project Connect Public Involvement Plan Blue Line* (May 2019). They provided a regular resource for feedback and participation in PEL decision-making. **Table 3** provides a list of TAC meetings dates and subject matter covered during the TAC meetings. Meetings were structured to allow committee members to provide feedback and buy-in on key project decisions.

Table 3. TAC Meetings

Meeting Date	Topic
May 14, 2019	Early Scoping and Purpose and Need
June 25, 2019	Conceptual Alternatives: Evaluation Framework
July 24, 2019	Conceptual Alternatives: Update
August 27, 2019	Conceptual Alternatives: Alternatives Analysis Update
September 24, 2019	Detailed Evaluation of Alternatives: Overview
October 22, 2019	Detailed Evaluation of Alternatives: Update
November 12, 2019	Detailed Evaluation of Alternatives: Update and CIG Program Information
December 10, 2019	Detailed Evaluation of Alternatives: Technical Deep Dive
January 13, 2020	Project Connect Update Investment Opportunities and Transit System Scenarios
February 11, 2020	Progress Update
March 12, 2020	Locally Preferred Alternative: Overview
May 6, 2020	Locally Preferred Alternative: Update

Other Agency Coordination

Capital Metro held initial meetings with the Austin Parks and Recreation Department (PARC) and Texas Historical Commission (THC) on October 25, 2019 and on October 28, 2019, respectively, to introduce the Blue Line Corridor project and provide an overview of the project development efforts to date. No formal coordination with tribal agencies has taken place.

Future meetings with U.S. Fish and Wildlife Service (USFWS), U.S. Army Corp of Engineers (USACE), THC, Texas Parks & Wildlife Department (TPWD), as well as other federal, state, and local agencies will be documented in the NEPA process.

3.0 Corridor Vision / Purpose and Need

The Blue Line LRT and Gold Line LRT are central to Capital Metro's *Project Connect Long-Term Vision Plan* (2018). The purpose of the Blue Line LRT and the Gold Line LRT is to provide improved HCT that operates faster; has better reliability; provides improved connectivity to affordable housing, employment, activity centers, and the AUS; and links other future transit corridors.

The goals and objectives for the Blue Line LRT and the Gold Line LRT are based on the goals established for Project Connect and the purpose and need for the projects. The extensive planning and public outreach efforts that culminated in the Blue Line LRT and Gold Line LRT projects served to establish project-related goals and objectives. In recognition that funding is a major issue in the implementation of transit projects, the goals and objectives also incorporate factors subject to the evaluation associated with the FTA CIG process. Understanding how these alternatives would meet CIG criteria provides better insight as to how competitive the project will be for FTA CIG funding. The goals are more general, whereas the objectives are more specific measures in support of the broader goals for the project. They form the basis for evaluating transit investment alternatives for the Blue Line LRT and Gold Line LRT projects.

As the region grows, highway congestion continues to worsen, leading to a degradation of local and express bus services combined with greater demand for improved transit access. The lack of mobility options and limited roadway capacity to accommodate this growth may hinder the continued vitality and economic health of the CoA and greater region. Inadequate transit access for many city residents and rising travel demand are resulting in increasing travel times, decreasing mobility, and additional travel costs for residents and businesses. Austin's transportation system must accommodate this continued growth in population and employment. It is, therefore, appropriate to consider a range of strategies for meeting the needs identified for increased transit investment that will support plans for growth throughout the CoA and greater region. The following needs have been identified for the Blue Line/Gold Line Corridor:

Need #1: Sustainably Support Austin's Population and Economic Growth

Population Growth

The population of the five county Austin-Round Rock-San Marcos Metropolitan Statistical Area (MSA), which includes Bastrop, Caldwell, Hays, Travis, and Williamson counties (Central Texas), grew 36 percent from 2010 to 2020 and is forecasted to increase by 76 percent by 2040. Similarly, the population within a 1/2-mile radius of the Gold Line LRT was approximately 44,109 in 2010 and grew 43 percent to 63,008 in 2020. It is forecast population 1/2-mile radius of the Gold Line LRT will increase to 92,585 (47 percent) by 2040. In addition, the population within a 1/2-mile radius of the Blue Line LRT was approximately 55,094 in 2010 grew 44 percent to 79,083 in 2020. It is forecast population 1/2-mile radius of the Blue Line LRT will increase to 115,512 (46 percent) by 2040. This growth in new residents will increase demand on the existing transportation network and transit system.

Employment Growth

The Blue Line LRT and Gold Line LRT provide access to some of the largest employers in Austin and employment opportunities continue to increase within and adjacent to the Blue Line LRT and Gold Line LRT study areas. The location of the Gold Line LRT and Blue Line LRT between the growing regional center of Highland, Downtown Austin, and AUS provides a chain of employment connections and a link to the international marketplace at the airport. Employment centers play a critical part in supporting HCT because they become key destinations for riders using the service. However, access to those jobs is encumbered by the lack of viable mobility options. CAMPO estimates that nearly 2.3 million people will be working in the five-county MSA by the year 2040, an increase of 104 percent from 2020. Within a 1/2-mile radius of the Blue Line LRT, employment increased by 21,130 (27 percent) between 2010 and 2020. Employment is expected to increase by 43,833 (44 percent) between 2020 and 2040. Additionally, within a 1/2-mile radius of the Gold Line LRT, employment increased by 24,066 (20 percent) between 2010 and 2020. Employment is expected to increase by 42,175 (29 percent) between 2020 and 2040.

Need #2: Increase Transportation Network Capacity to Meet Increasing Travel Demand.

CAMPO predicts that population and employment in the five-county MSA will grow 76 percent and 104 percent, respectively, by 2040, while roadway capacity would only increase by 15 percent. Because the land uses in the Blue Line LRT and Gold Line LRT study areas is largely developed and right-of-way (ROW) is limited, expanding or building new roadways to address the congested conditions on the existing roadway system would be difficult. The projected increases in employment and population will exacerbate the existing conditions. The impacts of these traffic conditions on bus service are already substantial, and future conditions will be worse. The congested roadways mean that buses cannot consistently operate on schedule, and travel times are not predictable. Not only does this inconvenience riders, it also means that it is very difficult to operate the network of services reliably and in a manner that optimizes interconnectivity and mobility. Additional transportation options, including HCT, are needed to mitigate the limitations of the roadway network.

Need #3: Provide Better Transit Options Linking Affordable Housing and Jobs

Housing affordability is a critical issue in the Austin region due to the high rate of growth in the city. Though employment options in Downtown Austin continue to grow, the cost of living has increased. Housing that was once generally considered affordable has increased in price and builders are unable to construct affordable units fast enough to keep pace with the demand. Government-backed affordable housing cannot bridge the affordability gap for employees. Employees are forced to live further from their jobs, making the need for affordable and reliable transportation paramount.

Need #4: Support Growth of and Connectivity to Activity Centers

Better transit service within the Blue Line LRT and Gold Line LRT study areas is needed to provide communities reliable and efficient access to activity centers that are increasingly encumbered by vehicle traffic. HCT service between established and planned activity centers is also needed to encourage more transit-supportive land use around places where people want to be. Development in Austin is focused on multimodal transportation and connectivity with existing and future residential developments and small businesses. Many multi-family residential units are planned for development near existing and future public transportation routes. The CoA has several emerging projects in and near the Blue Line LRT and Gold Line LRT study areas.

Need #5: Support Austin-Bergstrom International Airport (AUS) Growth in Air Travel

One of the largest single trip destinations in the Blue Line LRT study area is AUS, which currently serves over 15 million passengers annually and is projected to serve over 26 million annual passengers in the future. In addition to air travel, AUS also serves as a major center of employment, with thousands of jobs at airport passenger terminals, cargo facilities and hotels. The nationally recognized economic growth of the Austin metro area, as well as its major events and festivals, has translated into explosive growth in airport travel at AUS.

A complete summary of the purpose and need statement is found in **Appendix K, Gold Line Purpose and Need** and **Blue Line Purpose and Need** dated August 2020.

4.0 Alternatives Analysis Evaluation Process

During the Alternatives Analysis evaluation process, Capital Metro adhered to the FTA NEPA process in order to be eligible for FTA’s CIG funding. These formal guidelines require the adoption of an LPA. The findings of the Alternatives Analysis and the PEL will be documented in an Environmental Impact Statement (EIS) according to FHWA/FTA Planning Regulations (23 CFR § 450.212 and 450.318). This will enable Capital Metro to complete an EIS within the federally-required 2-year timeframe.

Capital Metro conducted the Alternatives Analysis using a phased approach, as illustrated in **Figure 3**, that was structured as a tiered screening, where alternatives were defined, evaluated, and refined or eliminated in each step of the process. The result is a proposed LPA whose environmental benefits and impacts will be further evaluated under the formal NEPA process and future project phases. The evaluation criteria identified for each step of the Alternatives Analysis process relates to the goals and objectives identified for the Blue Line LRT and Gold Line LRT projects, as shown in **Figure 4**.

Figure 3. Analysis and LPA Selection Process

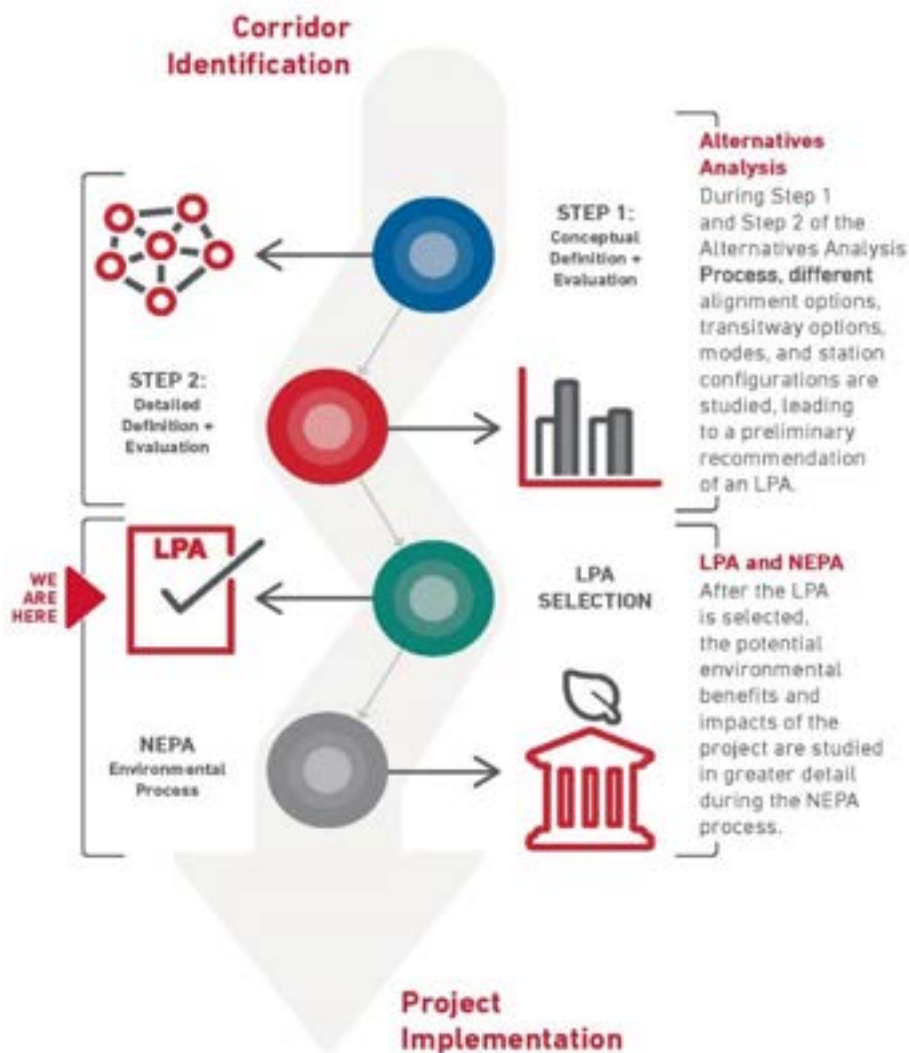


Figure 4: Blue Line LRT and Gold Line LRT Goals and Objectives



This section summarizes the steps and results of the Alternatives Analysis, which are documented in more detail in: **Appendix C, Blue Line Preliminary Screening Analysis** dated September 2019, **Appendix H, Blue Line Alternatives Analysis Draft Report** dated May 2020, and **Appendix I, Blue Line/ Gold Line Refined Alternatives Analysis Technical Memorandum** dated May 2020.

4.1 Step 1: Conceptual Definition of Alternatives and Evaluation Results

At the start of the study, Capital Metro divided the 15.5-mile Blue Line Corridor, which included the area that is now identified as the Gold Line LRT, into six segments listed below and shown in **Figure 5**. This enabled the team to focus on specific outreach and analysis with a local context. These segments do not necessarily represent phasing or constructability recommendations (which will be determined in a later phase of study).

- **Segment 1:** Highland (ACC Highland to 41th Street)
- **Segment 2:** Hancock (41th Street to Martin Luther King Boulevard)
- **Segment 3a:** Central (Martin Luther King Boulevard to Republic Square)
- **Segment 3b:** Central (Republic Square to IH-35)
- **Segment 4:** East Riverside (IH-35 to Riverside Drive/US 183)
- **Segment 5:** Airport (Riverside Drive/US 183 to AUS)

In Step 1 of the Alternatives Analysis, Capital Metro established a method to evaluate conceptual alternatives identified for the Corridor and carrying forward transitway options for each segment to the Detailed Evaluation of Step 2. The analysis evaluated the available ROW width in each segment and the transit-supportive nature of preliminary station locations to determine the appropriateness of four transitway types: street-level, elevated, cut-and-cover tunnel, and bored tunnel. Potential station areas were rated as having either low, medium, or high transit supportiveness using the following criteria for each transit station:

- | | |
|-------------------------------------|-------------------|
| ▪ Population and Employment Density | ▪ Affordability |
| ▪ Major Destinations | ▪ Walkability |
| ▪ Transit Connectivity | ▪ Market Strength |

Figure 5. Blue Line LRT and Gold Line LRT Segments



Throughout the Corridor, the type of transitway varies due to differing ROW constraints and land use. In segments where a large percentage of the ROW is narrow and/or the station areas are highly transit supportive, a more capital-intensive transitway (such as elevated or underground) was considered, while segments with minimal amounts of narrow ROW and less transit supportive station areas may not warrant a more expensive transitway capital investment.

Due to the less transit supportive nature of the station areas and the ample ROW available in Segments 1 and 4 to accommodate street-level operations, the elevated and underground transitways were eliminated from further consideration within those segments. In Segments 2, 3, and 5, all transitway options were carried forward for further evaluation in the detailed evaluation phase. The results of the Step 1 conceptual evaluation are shown in **Figure 6** and documented in **Appendix C, Blue Line Preliminary Screening Analysis** (September 2019).

Figure 6: Step 1 Transitway Preliminary Screening Results



	Street Level	Elevated	Underground
1. Highland	✓	X	X
2. Hancock	✓	✓	✓
3. Central	✓	✓	✓
4. East Riverside	✓	X	X
5. Airport	✓	✓	✓

4.2 Step 2: Detailed Alternatives Evaluation and Results

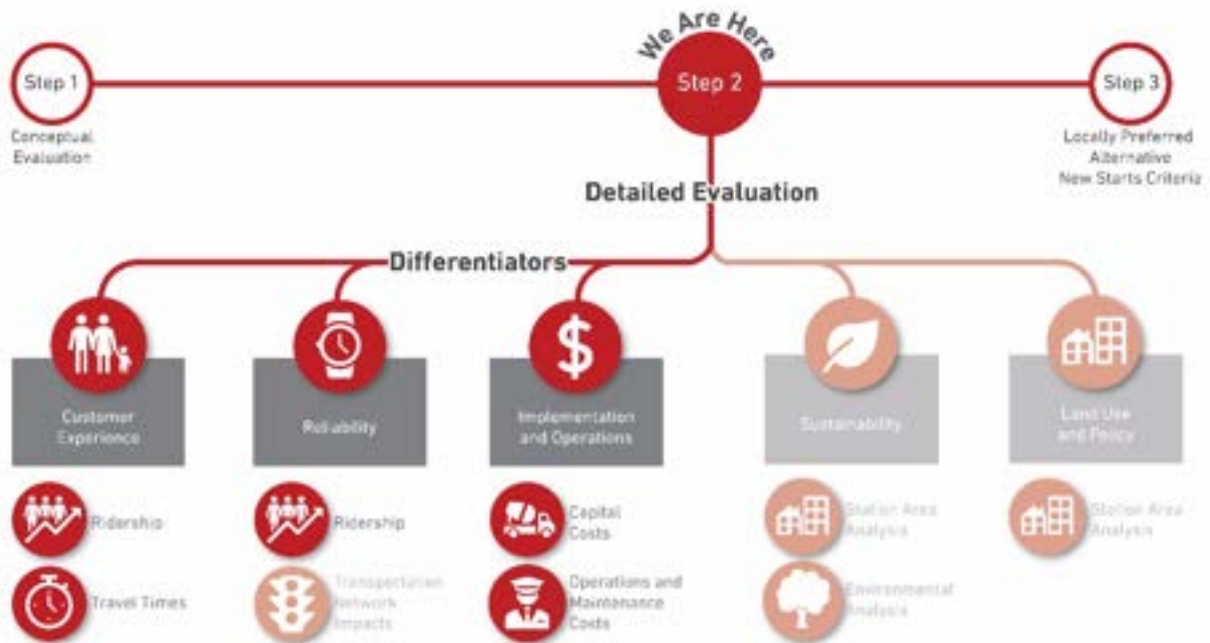
Step 2 of the Alternatives Analysis included the use of quantitative and qualitative assessments of benefits and impacts of 12 Build Alternatives to understand the performance of the alternatives and identify an LPA to evaluate further through the NEPA process. These alternatives were compared to a No Build Alternative and Transportation System Management (TSM) Alternative, described in the sections below.

The evaluation centered on six areas of technical analyses documented in technical memoranda provided in **Appendix F, Blue Line Detailed Alternatives Evaluation Summary Technical Memo** (January 2020) that provide comparative metrics on how well the alternatives address the Gold Line LRT and Blue Line LRT project’s goals and objectives, shown in **Figure 6**. These six areas included:

- Ridership
- Capital Costs
- Operating and Maintenance (O&M) Costs
- Station Area Analysis
- Environmental Analysis
- Transportation Network Impacts Analysis

The evaluation categories that provided the most distinction between alternatives were potential ridership, travel times, capital costs, and O&M costs, shown in **Figure 7** with dark red icons to highlight the role these metrics play as differentiators in the overall technical evaluations. The remaining criteria, shown in lighter red in **Figure 7**, did not provide as much differentiation between the alternatives at this stage of analysis. A detailed explanation of how alternatives were eliminated is found in **Appendix F, Blue Line Detailed Alternatives Evaluation Summary Technical Memo** (January 2020).

Figure 7. Detailed Evaluation Analyses and Goals/Objectives



Detailed Alternatives Definition

No Build

As required by NEPA, Capital Metro assessed a “No Build” alternative for comparison. The No Build Alternative included the existing transit network consistent with Capital Metro’s existing 2019 network which includes Capital Metro’s 2018 system overhaul changes referred to as Cap Remap. The No Build Alternative served as the baseline for comparison to the Transportation System Management (TSM) Alternative and multiple Build Alternatives.

Transportation Systems Management (TSM)

The TSM Alternative included a new MetroRapid route with transit priority treatments along the proposed alignment without constructing a dedicated transitway. The TSM Alternative was developed to provide a basis for comparison of what could be implemented with a less intensive capital investment. The TSM Alternative assumed 10-minute frequency, higher-capacity vehicles (likely 60-foot articulated three-door buses), transit signal priority (TSP) at all intersections except downtown (from Cesar Chavez to East Martin Luther King Junior Boulevard), and consolidated stops with enhanced amenities similar to today’s MetroRapid stations (but without level boarding or off-board fare payment) with estimated one third-mile stop spacing.

Build Alternatives

Each Build Alternative was comprised of three elements:

- Alignment
- Transitway Type
- Mode

Table 4 summarizes the 12 Build Alternatives that were evaluated in Step 2, Detailed Alternatives Evaluation.

Table 4. Detailed Build Alternatives Summary

Mode	Alignment	Transitway	Transitway Detail (By Segment)					
			Segment 1	Segment 2	Segment 3		Segment 4	Segment 5 ¹
					3A Trinity Alignment	3B S. 1 st Street Alignment		
BRT	Trinity	Mostly Street Level	Street Level	Street Level	Street Level		Street Level	N/A
		Partially Elevated		Elevated				
	South 1st Street	Mostly Street Level	Street Level	Street Level		Street Level	Street Level	N/A
		Partially Elevated		Elevated		Elevated		
LRT	Trinity	Mostly Street Level	Street Level	Street Level	Street Level		Street Level	N/A
		Partially Elevated		Elevated				
	South 1st Street	Mostly Street Level	Street Level	Street Level		Street Level	Street Level	N/A
		Partially Elevated		Elevated		Elevated		

1. Segment 5 travels through AUS property. The alignment, transitway type and station/terminus location will be determined in coordination with AUS and will depend on the development of the proposed North Terminal.

Alignment

Two alignments were evaluated for crossing Lady Bird Lake (Colorado River): a crossing near Trinity Street (Build Alternative 1) or a potential shared crossing with the Orange Line Corridor near South 1st Street (Build Alternative 2). The significant difference between the two alignments is the crossing at Lady Bird Lake (Colorado River), although there are also differences with how each alignment option connects to Republic Square and the number and location of possible stations along each alignment. In addition to the two primary alignments that separate Alternatives 1 (Trinity) and 2 (South 1st Street), other alignment options are presented within Alternatives 1 and 2 that have relatively less influence on the project definition given the alignment differences are a few street blocks.

Transitway

The detailed definition of alternatives used the results of the Step 1 evaluation to identify the transitway types considered for each segment in the Step 2 evaluation. Capital Metro initially identified four types of transitways that could accommodate HCT service within the Corridor. After the Step 1 analysis, Cut-and-Cover and Tunnel transitways were combined into one “Underground” transitway. Both Cut-and-Cover and Tunnel transitways would have similar impacts to the built environment once operational. Additionally, there was no notable difference in transit operations between Cut-and-Cover and Tunnel.

The transitway types identified for each segment were combined to generate two end-to-end transitway profiles for the Corridor: Mostly Street Level and Partially Elevated. A Partially Underground alternative will continue to move forward, but the exact details on how much of the route could be underground will be determined during the NEPA process. Due to this uncertainty, a partially underground transitway profile was not evaluated during Step 2 for any metric other than high-level capital costs.

Mode

Capital Metro considered two HCT modes for the Step 2 evaluation: Bus Rapid Transit (BRT) and LRT. Both BRT and LRT vehicle fleets were assumed to be fully electric. The primary difference between the two modes is the capacity of the vehicles and the perceived attractiveness of the modes as assumed in

ridership estimating. Autonomous Rapid Transit (ART) was identified as a mode that could be accommodated within the transitway as a future condition if the technology becomes more readily available to transit markets in the United States. At this time, ART technology cannot reasonably or feasibly be evaluated in direct comparison to BRT and LRT modes and is therefore not defined as a distinct mode in the definition of detailed alternatives.

Route Evolution

As Alternative 1 (Trinity Street Lady Bird Lake Crossing) emerged as the local preference, the Project Connect team also considered the appropriate mode and transitway profile for the Blue Line as an independent project, but also, as part of a larger, multi-generational system. Ridership demand on the Blue Line Corridor yielded a technical recommendation that LRT is the mode best-suited to serve the long-term goals of Project Connect and Central Texas' anticipated population growth. LRT is also the strong local preference, as in survey results that Capital Metro conducted as part of the public involvement efforts, see **Appendix L, Project Connect Public Involvement Plan Blue Line** dated September 2019.

The Project Connect team considered different scenarios for how the Blue Line would operate as a route to meet this demand and optimize system-wide operations. In a January 2020, joint City Council/Capital Metro board meeting, Capital Metro introduced a potential alternative operating scenario where this Blue Line route would originate at the AUS, travel through downtown via 4th Street, then interline with the Orange Line. This route option creates a more resilient transit system that is interconnected with efficient transfers between the corridors.

With the potential identified for the Blue Line Corridor to interline with the Orange Line Corridor north of Republic Square, Capital Metro continued to analyze the ridership demand and the potential cost of a route from Republic Square to ACC Highland to fully understand the viability of HCT on that segment north of 4th Street. As a result of this analysis, Capital Metro presented another route option for this segment - the Gold Line Corridor, which was originally introduced in the 2018 Vision Map as a route option connecting ACC Highland to Crestview via 4th Street downtown. However, this configuration proved redundant given the proposed interlining of the Blue Line/Gold Line Corridor with the Orange Line Corridor north of Republic Square. The Gold Line Corridor was then redefined to cover ACC Highland to Republic Square, where it could then travel south and interline with the Orange Line Corridor to the South Congress Transit Center.

The redefined Gold Line route offers an additional layer of system flexibility that can serve the corridor from ACC Highland to Downtown Station, cross east-west through downtown and travel south on the Orange Line. This configuration offers optimal flexibility and connection to a greater number of destinations and Capital Metro transit centers and provides significantly more LRT service. Redefining the original Blue Line Corridor into the Blue Line LRT and Gold Line LRT projects – and presenting each as separate investment – has the added benefit of increasing the likelihood of securing federal funds for both projects. Each distinct project can be considered as part of a sequence of investments in implementing the long-term vision. A detailed description of the Gold Line development is documented in **Appendix J, Gold Line Corridor Development and Refinement Technical Memo** dated May 2020.

4.3 Locally Preferred Alternative (LPA)

The LPA for the Blue Line Corridor is two LRT projects - the Blue Line LRT operating from AUS to Republic Square and the Gold Line LRT operating from ACC Highland to Republic Square as shown in **Figure 8**. The two LRT projects are proposed to run at Street Level (center running) throughout most of the Corridor and elevated in three sections. In addition, a tunnel is proposed to serve the two projects underground in Downtown Austin for operational benefits such as faster travel times and greater system capacity. Each line is described below.

Figure 8. Proposed Blue Line LRT and Gold Line LRT LPAs

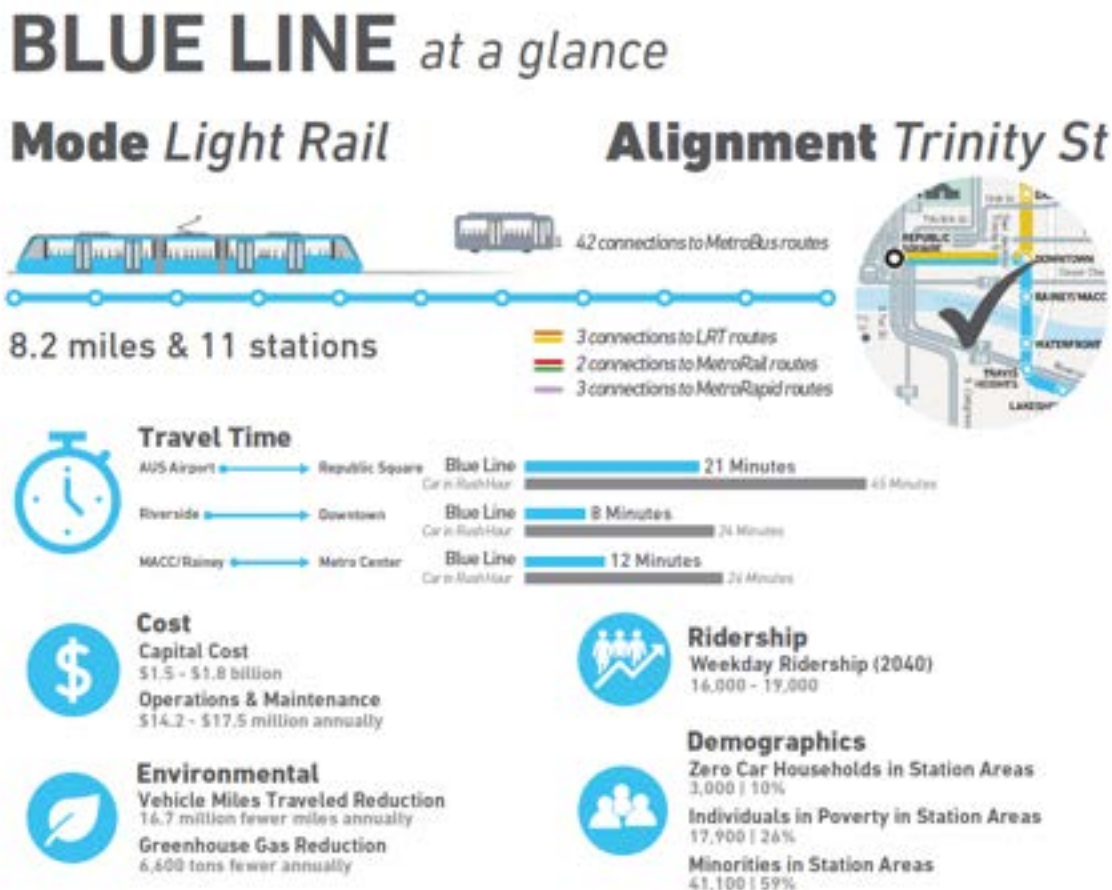


Blue Line LRT

The proposed Blue Line is LRT operating in an 8.2-mile dedicated transitway from Republic Square on the northern end of the corridor to AUS on the southern end of the corridor using Trinity Street to cross Lady Bird Lake on a new bridge. The transitway is proposed to operate at street level (center running) throughout most of the corridor, except elevated at the southern end of the corridor from Metro Center to AUS, over US 183. A tunnel is proposed between the Republic Square and Downtown stations.

Eleven stations are proposed along the route. The placement of these facilities will be coordinated with the local community during the design phase. Service has been modeled to operate every 10 to 15 minutes, seven days a week, from 5:00 a.m. to 3:50 a.m. (12:50 a.m. on Sundays). The Blue Line would feature off-board fare collection, larger stations with level boarding, Americans with Disabilities Act (ADA) accessibility, and intersection signal prioritization. The Blue Line would connect with the Orange Line and Gold Line in Downtown Austin; the location of those connections (including potential joint use of a tunnel) will be determined in NEPA and Preliminary Engineering. See **Figure 9**.

Figure 9. Blue Line Corridor at a Glance



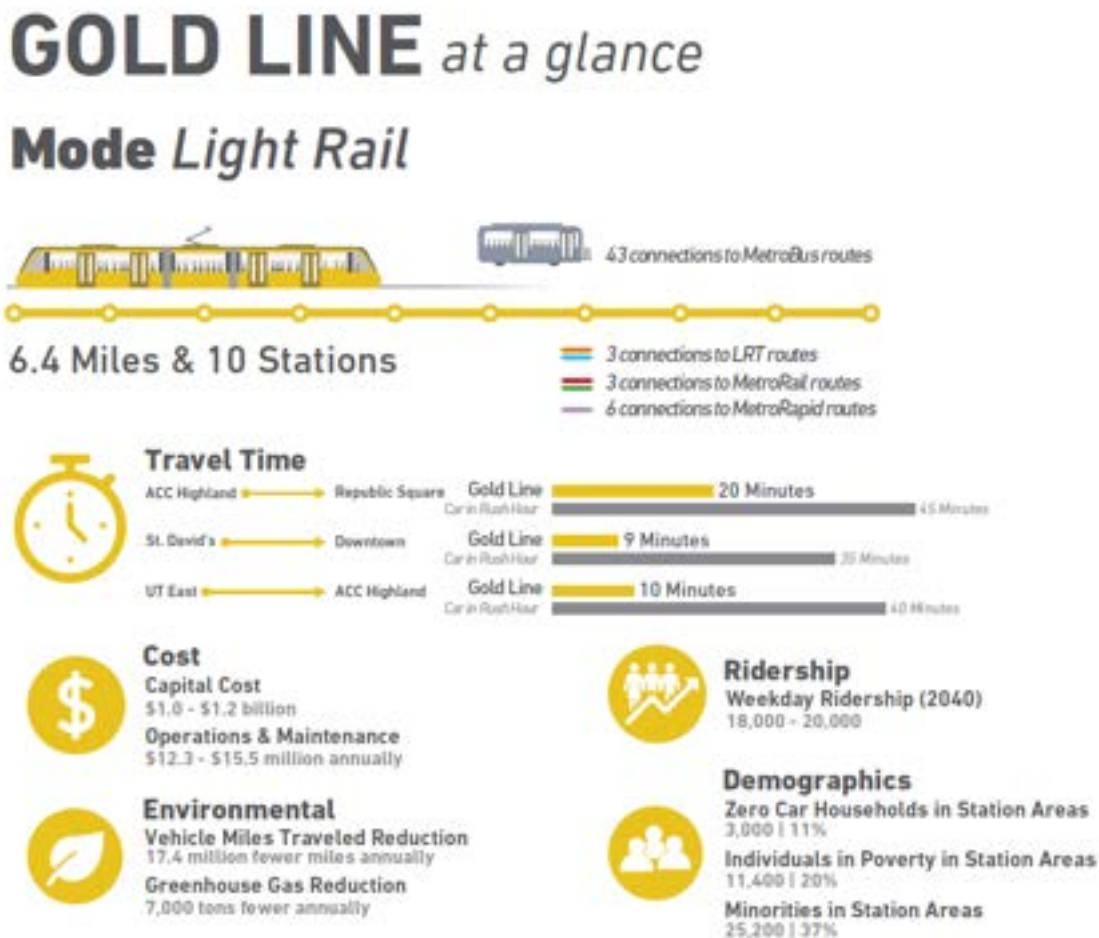
Gold Line LRT

The proposed Gold Line is LRT operating in a 6.4-mile dedicated transitway from ACC Highland on the northern end of the corridor to Republic Square on the southern end of the corridor. The transitway is

proposed to operate at street level (center running) throughout most of the corridor and elevated in two sections: where the Gold Line would cross over the Red Line north of Hancock Station; and through UT from Dean Keeton Street south to Martin Luther King Boulevard. A tunnel is proposed between the proposed Republic Square and Capitol East stations.

Ten stations are planned along the route. The placement of these facilities will be coordinated with the local community during the NEPA and Preliminary Engineering phase. Service has been modeled to operate every 10 to 15 minutes, seven days a week, from 5:00 a.m. to 3:50 a.m. (12:50 a.m. on Sundays). The Gold Line would feature off-board fare collection, larger stations with level boarding, ADA accessibility, and intersection signal prioritization. See **Figure 10**. The Gold Line would connect with the Blue Line LRT and Orange Line LRT in Downtown Austin; the location of those connections (including potential joint use of a tunnel) will be determined in the NEPA and Preliminary Engineering phase.

Figure 10. Gold Line Corridor at a Glance



5.0 Environmental Evaluations Process

As part of Step 2 of the Alternatives Analysis, Capital Metro conducted an environmental screening of the alternatives. The focus of the Environmental Screening was to identify potential adverse effects on environmental resources within the defined study areas for each resource. **Table 5** lists the variables and the study areas that were utilized in the environmental screening analysis. The environmental screening analysis was conducted using the most current and readily available data.

Table 5. Environmental Screening Criteria

Evaluation Criteria	Performance Measures
Natural and Ecological Resources	Potential impacts within ½-mile of the alignments: <ul style="list-style-type: none"> ▪ Acres of wetland ▪ Acres of 100 and 500-year floodplain & floodways ▪ Acres of critical terrestrial and aquatic habitat ▪ Acres of undisturbed ground cover
Section 4(f)/6(f) Resources	<ul style="list-style-type: none"> ▪ Number of Section 4(f)/6(f) properties within ½-mile of the alignments and within the proposed ROW.
Hazardous Materials	<ul style="list-style-type: none"> ▪ Potentially contaminated and hazardous material sites within ½-mile of the alignments
Cultural and Historic Resources	<ul style="list-style-type: none"> ▪ Number of cultural and historic resources within ½-mile of the alignments
Community Resources	<ul style="list-style-type: none"> ▪ Number of community facilities within ½-mile of the alignments
Environmental Justice	<ul style="list-style-type: none"> ▪ Number of EJ block groups within ½-mile of the alignments
Transitways and Right-of-Way	<ul style="list-style-type: none"> ▪ Number of residential and non-residential structures potentially impacted as a result of ROW acquisition
Noise- and Vibration-Sensitive Land Uses	<ul style="list-style-type: none"> ▪ Number of noise-sensitive land uses within 350 feet (LRT) or 200 feet (BRT) of the alignments ▪ Number of vibration-sensitive land uses within 450 feet (LRT) or 100 feet (BRT) of the alignments
Air Quality	<ul style="list-style-type: none"> ▪ Percent change in mobile emission as a result of the alternative
Visual and Aesthetics	<ul style="list-style-type: none"> ▪ Potential to change the visual setting

The environmental analyses in Step 2 were solely based on proposed alignment and station locations and did not take into account factors of mitigation. As the LPAs are further developed and refined and advanced to the environmental analysis phase, Capital Metro will conduct more intensive surveys and an assessment of environmental impacts in accordance with NEPA, FTA guidelines, and other applicable regulations. At that time, Capital Metro will also identify mitigation measures to reduce, minimize, and/or eliminate potential impacts.

Step 2 of the Alternatives Analysis was intended to provide a basis of comparison for a variety of environmental parameters for the alternatives under consideration. The analysis was primarily a geographic information system (GIS)-based analysis using readily available environmental data. The environmental data were collected to identify the resources located within a ½-mile buffer of the proposed alignment and stations for Build Alternative 1 and Build Alternative 2. At this stage, the analysis

identified total environmental data points that by segment and “primary” or “option” alignments. The segments that could affect a higher number of known resources were considered to be less favorable than those segments that could affect a lower number of known resources. The numbers shown in the following sections indicate a possible maximum of impacts that could occur. For example, a high density of known sites (such as historic resources or archeological resources) correlates with a higher potential to encounter such sites when compared with a route that has a lower number of sites within the corridor. Environmental Justice (EJ) and community resources are presented differently: where more EJ-defined geographies or community facilities are located within the ½-mile buffer, that segment is highlighted as more beneficial. This is because the presence of transit near EJ communities and community resources offers increased transportation access to these communities and resources.

The results of the Step 2 environmental evaluations are documented in **Appendix D, Blue Line Environment Analysis** dated October 2019, and summarized in the following sections. In addition, anticipated environmental impacts are detailed in **Appendix B, Blue Line/Gold Line Corridor Conditions Report** dated June 2020.

Blue Line LRT

Overall, there are environmental constraints or environmental benefits for each segment and option along the proposed Blue Line LRT alignment, as summarized in **Figure 11**. The environmental analysis did not indicate significant differences between either Build Alternative. In general, all alternatives whether above or underground could potentially impact archeological resources depending on the depth of disturbance required for the alternatives. The angled crossing of Lady Bird Lake would have the highest potential for environmental impacts when compared with other options. Elevated sections would have the potential for indirect adverse effects with regard to Section 4(f) and 6(f) park resources and historic structures. In general, EJ communities and community facilities would benefit from any Build Alternative as long as adverse direct effects are avoided, minimized, or mitigated.

Gold Line LRT

Similar to the Blue Line LRT, the analyses revealed that there would be both environmental constraints and benefits along the Gold Line LRT, as summarized in **Figure 12**. However, the impacts to natural and ecological resources and the extent of adverse impacts to EJ communities will be fully investigated during the NEPA phase.

The Gold Line LRT is unlikely to involve a significant encroachment to existing floodplains. However, any underground segments (including boring for support structures for elevated transitways) would have higher potential for adverse impacts to archeological resources. Also, elevated sections would have the potential for indirect adverse effects with regard to Section 4(f) resources and historic structures. In general, EJ communities and community facilities would benefit from any Build Alternative as long as adverse direct effects are avoided, minimized, or mitigated.

Figure 11. Environmental Considerations– Blue Line LRT










	<p>Habitats & Species Based on U.S. Fish and Wildlife (USFWS) data (1) there are no designated critical habitat for any federally-listed species in the study area; and (2) there are potential habitats for three federally-listed freshwater mussels species.</p>	
	<p>Floodways & Waters of the U.S. The Blue Line Corridor crosses Lady Bird Lake, also known as Town Lake, on the Colorado River. The corridor would cross 100-year floodplain on East Riverside Dr. The Blue Line Corridor is located outside of the Edwards Aquifer Transition Zone.</p>	
	<p>Capitol View Corridors Capitol View Corridors exist along the Blue Line Corridor. The Capitol View Corridors will be examined further under NEPA and the Section 106 process of the National Historic Preservation Act.</p>	
	<p>Historic and Archaeological Resources Numerous historic and archaeological resources exist throughout the Blue Line Corridor. Direct impacts to National Register of Historic Places will be avoided to the extent possible.</p>	
	<p>Parks Potential impacts to parkland are anticipated, including Town Lake Metropolitan Park; however, the Blue Line Corridor will minimize potential impacts to park resources in compliance with environmental regulations found in Section 4(f) of the U.S. Department of Transportation Act of 1966 and Section 6(f) of the Land and Water Conservation Fund Act.</p>	
	<p>Air Quality No significant negative impacts to air quality are anticipated to result from any of the alternatives.</p>	
	<p>Community Resources All Blue Line Corridor alternatives serve community resources including health care and government services, schools, places of worship, and cultural institutions.</p>	
	<p>Environmental Justice All Blue Line Corridor alternatives serve Minority and Low-Income persons as well as Zero-Car Households. Positive impacts (benefits) could include improved access to transit options and improved travel times. Adverse impacts would be avoided, minimized, or mitigated during the NEPA process.</p>	

Figure 12. Environmental Considerations – Gold Line LRT

	<p>Habitats & Species Based on U.S. Fish and Wildlife (USFWS) data (1) there are no designated critical habitat for any federally-listed species in the study area.</p>	
	<p>Floodways & Waters of the U.S. The Gold Line Corridor contains no crossings of the Waters of the U.S.; however, it would cross 100-year floodplain around the UT campus. The Gold Line Corridor is located outside of the Edwards Aquifer Transition Zone.</p>	
	<p>Capitol View Corridors Capitol View Corridors exist along the Gold Line Corridor. The Capitol View Corridors will be examined further under NEPA and the Section 106 process of the National Historic Preservation Act.</p>	
	<p>Historic and Archaeological Resources Numerous historic and archaeological resources exist throughout the Gold Line Corridor. Direct impacts to National Register of Historic Places will be avoided to the extent possible.</p>	
	<p>Parks No impacts to parkland are anticipated; however, the Gold Line Corridor will minimize impacts to park resources in compliance with environmental regulations found in Section 4(f) of the U.S. Department of Transportation Act of 1966 and Section 6(f) of the Land and Water Conservation Fund Act.</p>	
	<p>Air Quality No significant negative impacts to air quality are anticipated to result from any of the alternatives.</p>	
	<p>Community Resources All Gold Line Corridor alternatives serve community resources including health care and government services, schools, places of worship, and cultural institutions.</p>	
	<p>Environmental Justice All Gold Line Corridor alternatives serve Minority and Low-Income persons as well as Zero-Car Households. Positive impacts (benefits) could include improved access to transit options and improved travel times. Adverse impacts would be avoided, minimized, or mitigated during the NEPA process.</p>	

6.0 NEPA Scoping Information

Capital Metro will consider potential impacts and benefits to the human and natural environment during the NEPA phase beginning with formal scoping. Capital Metro will initiate formal scoping in Fall 2020. At that time, Capital Metro will invite public agencies to formally participate as a Cooperating or Participating Agency.

The environmental process will begin when the FTA publishes the Notice of Intent (NOI) to prepare and EIS. The environmental assessment will address the potential direct and indirect impacts of the projects on the following: low-income and minority populations (environmental justice), cultural resources, parklands, surface water and groundwater, threatened and endangered species, air quality, noise and vibration, soils and geologic resources. Resource-specific mitigation strategies will be considered and further evaluated for applicability during the EIS.

The data gathered for the PEL study will need to be updated to incorporate changes that may have occurred since it was initially developed. It will also need to be supplemented with field verifications during the NEPA phase. Information in the PEL will be made available for analysis to the agencies and public prior to and during NEPA scoping.

A PEL questionnaire, which provides a summary of the Planning process to date is included in **Appendix A, Blue Line/Gold Line PEL Questionnaire** dated August 2020.

7.0 Other Issues to be Considered

The Blue Line LRT and Gold Line LRT PEL Study provides a summary of issues and evaluations that should be considered during future project development. ROW needs will require further detailed evaluation during project development.

Appendix A: Blue Line/Gold Line PEL Questionnaire



Blue Line / Gold Line Planning & Environmental Linkages Study *Appendix A - PEL Questionnaire*



1.0 Background

A. Who is the sponsor of the Planning and Environmental Linkages (PEL) study?

The Blue Line LRT/Gold Line LRT PEL Study is sponsored by Capital Metropolitan Transportation Authority (Capital Metro), which was established in 1985 by referendum and operates based on state legislative authority.

The Blue Line Corridor was identified within Capital Metro's 2018 *Project Connect Long-Term Vision Plan* (Project Connect), which is a comprehensive transit vision to improve existing high-capacity transit (HCT) services and develop new, high-capacity public transportation projects that provide efficient travel options into, out of, and around Central Austin from the surrounding region. The first version of Project Connect was adopted in 2012 and guided by the Capital Area Metropolitan Planning Organization's (CAMPO) Transit Working Group (TWG). CAMPO is the metropolitan planning organization for the Central Texas region and as such, approves the use of federal transportation funds. CAMPO was established in 1973 and is governed by the Transportation Policy Board, comprised of regional and local officials. CAMPO coordinates regional transportation planning with counties, cities, Capital Metro, Capital Area Rural Transportation System (CARTS), the Texas Department of Transportation (TxDOT) and other transportation providers in the region.

In the 2018 Project Connect plan, the Blue Line Corridor was initially a 15.5-mile route that would connect the Austin Community College (ACC) Highland Campus through Central Austin and the University of Texas at Austin campus to Austin-Bergstrom International Airport (AUS). As Capital Metro evaluated alignment alternatives for the Blue Line Corridor in an Alternatives Analysis, they introduced another route option from ACC to Republic Square, the Gold Line LRT. This configuration offers optimal flexibility and connection to a greater number of destinations and Capital Metro transit centers, and provides significantly more LRT service. Each distinct project can be considered as part of a sequence of investments in implementing the long-term vision. A detailed description of the Gold Line development is documented in **Appendix J** of the PEL Tech Memo, **Gold Line Corridor Development and Refinement Technical Memo** dated May 2020.

At the conclusion of the Alternatives Analysis, Capital Metro identified two Locally Preferred Alternatives (LPA), as documented in the *Blue Line Alternatives Analysis Evaluation Summary Technical Memo: Refinements (May 2020)*. The two LPAs include the proposed Blue Line LRT operating from AUS to Republic Square and Gold Line LRT operating from ACC Highland to Republic Square. The two LRT projects are proposed to run at street level (center running) throughout most of the corridor. The proposed Blue Line LRT transitway would be elevated in one section where the Blue Line would cross over US 183 along the southern end of the corridor from Metro Center to AUS. The proposed Gold Line LRT transitway would operate at street level throughout most of the corridor and would be elevated in three sections: where the Gold Line would cross over the Red Line north of Hancock Station and through the UT from Dean Keeton Street south to Martin Luther King Boulevard. On the Blue Line, a tunnel is being considered between the proposed Downtown and Republic Square stations. A tunnel is proposed on the Gold Line between the Capitol East and Republic Square stations. Details can be found in **Appendix I** of the PEL Tech Memo, **Blue Line/ Gold Line Refined Alternatives Analysis Technical Memorandum** dated May 2020.

B. What is the name of the PEL study document and other identifying project information?

The PEL process is a collaborative and integrated approach to transportation decision-making that firstly, considers environmental, community, and economic goals early in the transportation planning process, and secondly, uses the information, analysis, and products developed during planning to inform the NEPA

environmental review process. The PEL study document is referred to as the Blue Line LRT / Gold Line LRT Planning & Environmental Linkages Study (Blue Line LRT / Gold Line LRT Corridor PEL Study). Additionally, the purpose of this document is to inform the selection of the Locally Preferred Alternatives (LPAs), which were approved by the Capital Metro board on June 10, 2020. They will be adopted into CAMPO's 2045 Long Range Transportation Plan.

C. Who was included on the study team?

Capital Metro contracted with HNTB and its subconsultant team in April 2019 to support the Gold Line/ Blue Line Corridor PEL Study effort. The following representatives from Capital Metro, the Project Connect Project Manager Owner Representative (PMOR), and HNTB team were integral to the Gold Line/ Blue Line Corridor PEL Study.

- Randy Clark – President and Chief Executive Officer (Capital Metro)
- David Couch – Project Connect Program Officer (Capital Metro)
- Jacob Calhoun – Project Connect Transportation Planner (Capital Metro)
- Jackie Nirenberg – Manager, Community Engagement (Capital Metro)
- Brian Buchanan – Project Connect PMOR (HDR)
- Tom Underwood – Project Connect PMOR (HDR)
- Gill Saunders – Project Connect PMOR (HDR)
- Stephen Roth, PE – Project Manager (HNTB)
- Sara Hage – Alternatives Analysis Manager (HNTB)
- Christy Haven – NEPA Compliance Manager (HNTB)
- Peter Demuth, PE – Operations and Engineering Manager (HNTB)
- Chris Handzel, PE – Station Area Planning Manager, HNTB
- Diane Miller – Outreach & Engagement Manager (HNTB Sub-Consultant)

D. Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding environment.

The study area for the PEL Study is a 1/2-mile buffer area surrounding the proposed alignments of the / Blue Line LRT and the Gold Line LRT. The Blue Line LRT corridor is approximately 8.2-miles in length from Republic Square to AUS on the southern end of the corridor using Trinity Street to cross Lady Bird Lake (Colorado River) on a new bridge. The Gold Line LRT corridor is approximately 6.4 miles of dedicated transitway from ACC Highland on the northern end of the corridor to Republic Square. The Blue Line LRT and Gold Line LRT connect many important Central Texas destinations including: ACC Highland and the University of Texas at Austin (UT) campuses, the Texas State Capitol Complex, St. David's and Dell Seton medical centers, the ABIA/AUS. Land uses in each of the study area are a mix of residential, commercial and mixed-use properties. Each of the study areas play a prominent role in current development trends and place-making opportunities in areas with existing and forecasted high rates of population and employment growth.

The existing transportation network within the Blue Line LRT study area and the Gold Line LRT study area is described below. More details are also provide in **Appendix J** of the PEL Tech Memo, **Gold Line/ Blue Line Corridor Conditions Report**.

Capital Metro Transit Routes

Capital Metro is the primary transit service provider in the Blue Line LRT and Gold Line LRT study areas, operating bus services and one commuter rail line (MetroRail). Currently, there are 66 Capital Metro

transit routes that travel within a portion of each of the study areas as described below and listed in **Appendix J** of the PEL Tech Memo, **Gold Line/ Blue Line Corridor Conditions Report, Table 3.1-2:**

- **MetroBus Local Bus Routes:** 6 bus routes to and from downtown, with regular stops
- **MetroBus Flyer Routes:** 6 bus routes that provide limited-stop neighborhood level service between suburban neighborhoods and downtown
- **MetroBus Feeder Routes:** 3 bus routes between neighborhoods, transit centers, and Capital Metro park & rides
- **MetroBus Crosstown Routes:** 6 bus routes that bypasses downtown and provides neighborhood level services
- **University of Texas (UT) Shuttle Routes:** 12 frequent shuttle routes that are open to the public but focus on connecting UT riders to campus and residential areas
- **MetroExpress Routes:** 7 bus routes to and from downtown, designed to bring outlying residents into central Austin
- **Metro Rapid High Frequency Routes:** 12 bus routes throughout Austin that operate on 15- minute or better frequencies, including 2 MetroRapid bus routes 801 and 803
- **Entertainment Bus (E-Bus) Routes:** 3 bus routes that operate each fall and spring when more UT students are on UT campus
- **Night Owl Routes:** 5 bus routes that operates from midnight until 3 a.m., Monday through Saturday nights
- **Special Routes:** 5 bus routes that operate on specific days of the week only
- **MetroRail:** 1 commuter rail route that operates between the Capital Metro Leander Station to the Downtown Station MetroRapid Stop Locations/Stations

Capital Metro Park & Ride Facilities

Currently there are no Park & Ride facilities located in either of the study areas; however, two Park & Ride facilities are located within 2-miles of the Blue Line LRT providing between 200 and 270 parking spaces for commuters at each station (**Appendix J, PEL Corridor Conditions Report, Table 3.1-4**). Multiple bus routes connect to the Park & Ride facilities, including the MetroRapid 801.

Existing Roadway Network

The Blue Line LRT transitway is proposed to operate at street level (center running) throughout most of the corridor, except elevated at the southern end of the corridor from Metro Center to AUS, over US 183. The Gold Line LRT transitway is proposed to operate at street level (center running) throughout most of the corridor and elevated in two sections: where the Gold Line would cross over the Red Line north of Hancock Station; and through UT from Dean Keeton Street south to Martin Luther King Boulevard. Due to the length of the Blue Line LRT and Gold Line proposed alignments and their travel through high density and urbanized areas of Austin, the alignments cross many major arterials, including:

Blue Line LRT

- | | |
|--------------------------------|------------------------------|
| ▪ Cesar Chavez Street | ▪ South Pleasant Valley Road |
| ▪ South 1 st Street | ▪ Montopolis Drive |
| ▪ Barton Spring Road | ▪ TX-71 West |
| ▪ East Riverside | ▪ US Highway 183 |
| ▪ IH 35 | ▪ Presidential Boulevard |

Gold Line LRT

- Airport Boulevard
- 2222/ East Koenig Lane
- Bruning Avenue
- East 51st Street
- East 45th Street
- Clarkson Avenue
- East 38 ½ Street
- East Dean Keeton Street
- East Martin Luther King Boulevard
- East 15th Street
- East 7th Street
- East 6th Street
- West 5th Street
- Congress Avenue
- Lavaca Street
- Guadalupe Street

E. Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were completed.

The Blue Line and Gold Line consultant team contract was approved by the Capital Metro Board in April 2019. Activity on the project began in earnest in April 2019 and is ongoing. A brief chronology of the PEL Study activities to date is provided in **Table 1**.

Table 1. Chronology of Blue Line LRT/Gold Line LRT PEL Study Activities

Date	Description
December 2018	Project Connect Long Term Vision Plan adoption
January 2019	Established the purpose, need and goals of the Blue Line Corridor
April 2019	FTA Published Notice of Intent of Early Scoping in Federal Register (Attachment 1)
April 2019	Defined the Blue Line Corridor segments and focus areas
May – June 2019	Conducted a series of early scoping public meetings and TAC and PCAN
June 2019	Refined purpose and need statement based on public and stakeholder input
June 2019	Developed corridor existing conditions
July 2019	Finalized Detailed Definition of Alternatives and Alternative Evaluation Plan
July 2019	Finalized methodology memoranda for the alternatives analyses
July – August 2019	Conducted Conceptual Alternatives Analysis public meetings
August 2019	Conceptual Alternative: Alternatives Analysis Update to TAC and PCAN
September 2019	Finalized detailed evaluation of alternatives
October 2019	Presented detailed alternatives to Capital Metro Board and City Council, TAC and PCAN
November 2019	Conducted Detailed Evaluation of Alternatives public meetings
December 2019	Detailed Evaluation of Alternatives: Technical Deep Dive to TAC and PCAN
January 2020	Project Connect Update Investment Opportunities and Transit System Scenarios to Capital Metro Board and City Council, TAC and PCAN
March 2020	Presented preliminary Locally Preferred Alternatives – Blue Line LRT and Gold Line LRT - to Capital Metro Board and City Council
April – May 2020	TAC, PCAN, and virtual public meetings and comment period on the Blue Line LRT and Gold Line LRT Locally Preferred Alternatives
June 2020	Capital Metro and City of Austin joint adoption of the Blue Line LRT and Gold Line LRT Locally Preferred Alternatives

Notes: FTA – Federal Transit Administration; TAC – Technical Advisory Committee; PCAN - Project Connect Ambassador Network

F. Are there recent, current, or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?

Capital Metro reviewed locally-adopted, community-supported, and/or agency-produced transportation plans to ascertain recent, current, and future planning studies or projects near the Blue Line LRT and Gold Line LRT projects. **Table 2** lists the plans that were reviewed. In addition, several future infrastructure improvement projects are planned within the Blue Line LRT and Gold Line LRT study areas. A list of planned TxDOT and City of Austin (CoA) roadway infrastructure projects is provided below and detailed in **Appendix J** of the PEL Tech Memo, **Gold Line/ Blue Line Corridor Conditions Report**.

Table 2. Recent Planning Studies in Vicinity of the Blue Line LRT and Gold Line LRT

Planning Study	Year of Publication
Capital Metro	
All Systems Go	2004
Central Austin Transit Study	2010
Service Plan 2020	2010
Connections 2025	2017
Project Connect: Central Texas HCT System Plan	Adopted 2012; revised 2014
Project Connect: Central Corridor HCT Study	2014
Project Connect: North Corridor LPA	2014
MetroRail Long-Range Feasibility Study	2016
Project Connect Vision Plan	2018
Plaza Saltillo District Redevelopment	Ongoing
City of Austin	
East Riverside Corridor (ERC) Master Plan	2010
Downtown Austin Plan	2011
Imagine Austin	2012
Airport Boulevard Corridor	2014
Austin Complete Streets Policy and Guide	2014
Smart City Challenge Proposal	2016
Austin Sidewalk Master Plan/ADA Transition Plan Update	2016
Vision Zero Action Plan	2016
Draft Austin Strategic Housing Blueprint	2017
2040 Airport Plan	2018
Austin Strategic Mobility Plan	2019
Affordability Unlocked Development Bonus Program	2019
Parking Polices	Ongoing
S.M.A.R.T Housing Program	Ongoing
East Riverside Corridor Specific Regulating District (ERC District), Planned Unit Development (PUD)	2010, Ongoing
TOD Ordinance and Station Area Planning & Regulating Plan	2005, Ongoing
South-Central Waterfront District	2016
Crestview Station	2014
Highland Redevelopment	2019, Ongoing
UT – Austin, St. David’s Medical, Dell Seton Medical Center Master Plan	Multiple years
Texas State Capitol Complex, Austin Convention Center Master Plan	2016

Density Bonus Program	Multiple years
Other Agency Planning Efforts	
CAMPO 2045	2020
TxDOT Mobility35 Program	Ongoing
Travis County Land, Water & Transportation Plan	2014
Other Community Planning Efforts	
Downtown Austin Alliance – Downtown Austin Vision	2018
Central Austin Community Development Corporation (CACDC) – Light Rail Proposal	2015
The Wire – Aerial Cable Car	2013, 2016

TxDOT Construction Projects

Infrastructure improvements to two TxDOT roadways are proposed in the Blue Line LRT study area and one roadway within the Gold Line LRT study area. See **Appendix B** of the PEL Tech Memo, **Blue Line LRT/Gold Line LRT Conditions Report, Table 3.1-5**. Improvements to these roadways generally consist of drainage and safety enhancements, rehabilitation improvements, and roadway widening to accommodate increases in traffic. These TxDOT projects are currently either in the final stages of planning or being finalized for construction.

CoA Planned Projects

The CoA has multiple transportation improvement projects planned within the Gold Line/ Blue Line Corridor. In 2016, Austin City Council initiated a public engagement effort to determine the community’s highest priorities for improving mobility around the city. According to the CoA’s 2016 Community Survey Findings, 72 percent of Austinites were dissatisfied with traffic flow on major city streets. In November 2016, Austin voters approved \$720 million for the local, corridor, and regional mobility improvements. A large portion is for the Corridor Mobility Program, which defines the development, design, and construction of improvements along key Austin corridors that will enhance mobility, safety, and connectivity for all users. Within this program, one project is within the Corridor Mobility Program’s Corridor Construction Program – the Guadalupe Street Project. The remaining four CoA Corridor Mobility Program projects within the Blue Line LRT and Gold Line LRT study areas are planned and currently in the preliminary engineering and design phase (see **Appendix B** of the PEL Tech Memo, **Blue Line LRT/Gold Line LRT Conditions Report, Table 3.1.-6**).

Austin Motion Corridor Mobility Program (2016)

The 2016 Mobility Bond Program invests \$720 million in transportation and mobility improvements throughout Austin; this plan expands the vision of the *Imagine Austin Comprehensive Plan*. These improvements are categorized into three groups: Regional Mobility (\$101 million), Corridor Mobility (\$482 million), and Local Mobility (\$137 million). Project work began in the Fall of 2017 and is expected to be completed in the Winter of 2025.

There are six regional mobility projects that are active. The corridor mobility projects include 3 completed projects, 17 active projects, and 6 projects that are anticipated or on hold. The Local Mobility projects encompass bikeways, safe routes to school, substandard streets/capital renewal, sidewalks, urban trails, and intersection safety/vision zero programs. Both the Blue Line LRT and Gold Line LRT projects support the use of the Austin Motion Corridor Mobility program by improving connectivity to the transportation options previously mentioned.

The proposed improvements of the Blue Line LRT and Gold Line LRT support the plans and visions outlined above. The Blue Line LRT and Gold Line LRT projects address the need to increase the transportation network capacity thereby improving mobility for the increased travel demand.

2.0 Methodology Used

A. What was the scope of the PEL study and the reason for completing it?

Project Connect was procured as a 30-month project led by Capital Metro to identify, analyze and prioritize a set of potential HCT solutions to facilitate travel into, out of, and within Central Austin. These initiatives examined corridors that may be suitable for the implementation of future HCT transit solutions, including the Blue Line and Gold Line. This PEL Study informs the selection of the LPAs and NEPA early scoping process, documents stakeholder input, describes the reasonable and feasible alternatives that were evaluated.

B. Did you use NEPA-like language? Why or why not?

Yes, NEPA-like language was used to provide the framework for the implementation of the preliminary technical recommendation and be used as a resource for future NEPA documentation. The use of Purpose and Need and other NEPA-like language provides an opportunity to build upon decisions made in the PEL Study. In addition, it is the intent of the project team to use the PEL process for Early Scoping under NEPA.

C. What were the actual terms used and how did you define them?

Terms used consistently are listed in **Table 3**.

Table 3. Blue Line LRT/ Gold Line LRT PEL Study Terms

Term	Definition
Purpose and Need	Identifies the rationale for development of project alternatives and ways to measure those alternatives. Purpose and Need statements were included in Phase 1 outreach materials and in technical memoranda.
Locally Preferred Alternative (LPA)	The locally preferred alternative to be approved by Capital Metro, adopted into the CAMPO fiscally-constrained long range transportation plan, and carried forward into NEPA.
Environmental Consequences	The potential impacts on environmental resources as a result of the Gold Line and Blue Line Corridor alternatives considered.
Mitigation Strategies	The possible mitigation measures to address adverse impacts that may occur as a result of implementing the project.
Cooperating Agencies	According to Council on Environmental Quality regulation (40 CFR 1508.5), "cooperating agency" means any Federal agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. A State or local agency of similar qualifications or, when the effects are on lands of tribal interest, a Native American tribe may, by agreement with the lead agency(s), also become a cooperating agency.
Participating Agencies	Participating agencies, as defined by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), are those Federal, State, tribal, regional, and local government agencies that may have an interest in the project. Non-governmental organizations and private entities cannot serve as participating agencies. The lead agency(s) decide which agencies to invite to serve as participating agencies.

D. How do you see these terms being used in NEPA documents?

The terms listed in Table 3 will be used in NEPA documents in the same fashion as they were used in the this PEL Study.

E. What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by state DOT and the local agency, with buy-in from FHWA, the USACE, and USFWS and other resource/regulatory agencies.

On April 19, 2019, Capital Metro and the Federal Transit Administration (FTA) published a Notice of Early Scoping (NOES) in the Federal Register to initiate early scoping for the Blue Line Corridor, which then contained the area that is now the Gold Line LRT. A copy of the NOES is provided in **Attachment 1**. Early scoping allows the scoping process to begin as soon as there is enough information to describe the proposal so that the public and relevant agencies can participate effectively. Through this notice, Capital Metro invited public and agency involvement with ongoing planning activities and studies for the Blue Line

Corridor, including review of the (a) Purpose and Need, (b) proposed alternatives, and (c) potential environmental, transportation, and community impacts and benefits to consider during the NEPA process.

The primary decision makers in the Blue Line LRT/Gold Line LRT PEL Study process are local, state, and federal agencies, as well as other community stakeholder groups. Communication and collaboration with these agencies have been ongoing throughout the project and have provided a regular resource for feedback and participation in PEL decision-making. This collaboration was formalized through meetings with Project Connect's Technical Advisory Committee (TAC) and the Project Connect Ambassador Network (PCAN). The TAC consists of professionals from public agencies listed below. The professionals offered a range of disciplines and worked with Capital Metro to identify and resolve technical issues related to engineering and design. The PCAN was developed to provide input and feedback on program milestones and community engagement processes to ensure an effective process. PCAN members, listed below, represent various interest areas and backgrounds across Central Texas, encourage and facilitate the engagement and input of other community members, and consider input in program discussions.

Regular meetings with the TAC and PCAN were held during each of the project's three phases; additional one-on-one meetings were held, by request, between large group meetings. Meetings were structured to allow committee members to provide feedback and buy-in on key project decisions. Meetings covered the information shown in **Table 4, TAC and PCAN Meetings**.

Table 4. TAC and PCAN Meetings

Meeting Date	Topic
TAC Meetings	
May 14, 2019	Early Scoping and Purpose and Need
June 25, 2019	Conceptual Alternatives: Evaluation Framework
July 24, 2019	Conceptual Alternatives: Update
August 27, 2019	Conceptual Alternatives: Alternatives Analysis Update
September 24, 2019	Detailed Evaluation of Alternatives: Overview
October 22, 2019	Detailed Evaluation of Alternatives: Update
November 12, 2019	Detailed Evaluation of Alternatives: Update and CIG Program Information
December 10, 2019	Detailed Evaluation of Alternatives: Technical Deep Dive
January 13, 2020	Project Connect Update: Investment Opportunities & Transit System Scenarios
February 11, 2020	Progress Update
March 12, 2020	Locally Preferred Alternative: Overview
May 6, 2020	Locally Preferred Alternatives Update
PCAN Meetings	
May 29, 2019	Blue Line Kick-Off
August 21, 2019	Conceptual Alternatives: Alternatives Analysis Update
September 26, 2019	Detailed Evaluation of Alternatives: Overview
October 28, 2019	Detailed Evaluation of Alternatives: Update
December 11, 2019	Detailed Evaluation of Alternatives: Technical Deep Dive
January 15, 2020	Project Connect Update Investment Opportunities and Transit System Scenarios
February 12, 2020	Progress Update
April 15, 2020	Locally Preferred Alternative: Overview
May 7, 2020	Community Outreach and Virtual Open House Update

The TAC included the following agencies as well as stakeholder groups:

- Austin Bergstrom International Airport
- Austin Community College (ACC)
- Austin Independent School District (AISD)
- Bastrop County
- Capital Area Metropolitan Planning Organization (CAMPO)
- Capital Area Rural Transportation System (CARTS)
- Central Texas Regional Mobility Authority (CTRMA)
- City of Austin (CoA)
- CoA Corridor Program Office
- CoA Economic Development
- CoA Parks and Recreation Department (PARD)
- CoA Planning and Zoning
- CoA Transportation Department
- City of Buda
- City of Cedar Park
- City of Elgin
- City of Hutto
- City of Leander
- City of Round Rock
- Hays County
- Lower Colorado River Authority (LCRA)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Department of Transportation (TxDOT)
- Texas Facilities Commission (TFC)
- Texas Historical Commission (THC)
- Travis County
- University of Texas at Austin (UT)
- Williamson County

The PCAN members included:

- American Automobile Association (AAA)
- Austin Area Research Organization (AARO)
- American Association of Retired Persons (AARP) local chapter
- AARP Texas State Office - Austin
- Americans Disabled for Accessible Public Transit (ADAPT) of Texas
- African American Resource Comm.
- Austin Independent School District (AISD) Board of Trustees
- Allandale Neighborhood Association
- Alliance for Public Transportation
- Asian American Quality of Life Resource Advisory Commission
- Austinites for Urban Rail Action (AURA)
- Austin Area Urban League
- Austin Independent Business Alliance
- Austin Lesbian, Gay, Bisexual, Transgender (LGBT) Chamber of Commerce
- Austin Neighborhoods Council
- Austin Rowing Club
- Austin Sierra Club
- Austin Tech Alliance
- Ballet Austin
- Building and Strengthening Tenant Action (BASTA)

- Bicycle Advisory Committee
- Capital City Village
- Capital Metro Access Advisory Group
- Central Austin Community Development Corporation
- Central Health
- City of Austin
- Climate Buddies
- Coalition of Texans with Disabilities
- Code Next
- Congress for the New Urbanism Central Texas Chapter
- Customer Satisfaction Advisory Committee
- DCT Consult, LLC
- Downtown Austin Alliance
- Downtown Austin Neighborhood Association
- Downtown/Pflugerville
- Drive A Senior - South Austin
- E. Riverside Corridor
- El Buen Samaritano
- Friends of Austin Neighborhoods
- Go Austin/Vamos Austin (GAVA)
- General Assembly
- Ghisallo Foundation
- Greater Austin Black Chamber of Commerce
- Greater Austin Chamber of Commerce
- Guadalupe Working Group
- Guadalupe Working Group - Disability Advocacy Student Coalition
- Guadalupe Working Group - Friends of Heritage
- Guadalupe Working Group - Heritage Neighborhood Association
- Guadalupe Working Group - Original West University Neighborhood Association
- Guadalupe Working Group - The University of Texas at Austin
- Guadalupe Working Group - University Area Partners
- Guadalupe Working Group - West Campus Neighborhood Association
- Hispanic Advocates Business Leaders of Austin (HABLA)
- Hispanic Quality of Life Commission
- Housing Authority of the City of Austin
- Housing Works Austin
- Jiffy Jeffs
- Jolt
- Leander Chamber of Commerce
- Meadows at Double Creek Property Owners Association (POA)
- Meals on Wheels
- Measure Austin
- Movability Austin
- National Alliance on Mental Illness (NAMI), Central Texas Chapter
- Network of Asian American Organizations
- North Austin Civic Association
- North Lamar Corridor
- North Lamar/Georgian Acres Neighborhood
- Onion Creek Neighborhood
- Parking Mobility

- Pedestrian Advisory Council
- Planning Commission
- Public Citizen
- Public Safety Commission
- Refugee and Immigrant Center for Education and Legal Services)
- Rainey Neighbors Association
- Real Estate Council of Austin (RECA)
- Reconnect Austin
- Rojas Planning LLC
- Round Rock Area Service Center
- Red River Merchants Association (RRMA)/Heard Presents
- Save Our Springs
- Siglo Group
- Texas Alliance of Retired Americans Austin Chapter
- Texas Campaign for the Environment
- Texas School for the Blind and Visually Impaired
- Texas School for the Deaf
- Texas State University
- TexPIRG
- Town Lake Neighborhood Association (Rainey)
- University of Texas Student Government
- Urban Transportation
- Vison Zero ATX
- Workers Defense Project

F. How should the PEL information be presented in NEPA?

Within the NEPA process, information from this PEL Study will serve as a starting point for the project-specific analysis and be used to advance the projects through the engineering and environmental analysis. It will also be used to inform the scope of the NEPA process. Public feedback gained through the public involvement process will also be used to inform future project development efforts within the NEPA framework. Categorized below is a brief summary of to-date associated activities of the Public and Stakeholder groups:

- **Stakeholder Groups:** These groups included local residential groups, business interests, and developers to name a few. One-on-one and small-group meetings were held with over 30 stakeholders near the Gold Line/ Blue Line Corridor regarding project development and to solicit feedback.
- **Public:** Capital Metro conducted four rounds of formal public engagement to gather input at key points in the process that included partner agency participation. Capital Metro made a special effort to meet people in their communities, including attending community events, conducting outreach at transit stops, and implementing innovative strategies including online open houses and virtual community meetings when community members were unable to attend in person public meetings.

The technical and environmental reports produced during the Blue Line LRT/Gold Line LRT PEL Study will be incorporated in future NEPA documents as appendices, referenced in the text, included as part of the administrative record, and serve as part of the history of the decision-making process. The summary reports generated from the public and stakeholder outreach activities summarized in **Attachment 2**,

Outreach Engagement Summaries, provide context for the public's role in the decision-making process and will be incorporated into future NEPA studies in the same manner.

3.0 Agency Coordination

A. Provide a synopsis of coordination with Federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.

Regulatory and resource agency coordination were formalized through monthly meetings with the TAC (membership list included in **Section 2.0**). Dates and subject matter covered during these TAC meetings are provided in **Section 2.0**.

The only formal coordination with a Federal agency to date has been the development of the Blue Line LRT/Gold Line LRT PEL Study with FTA guidance through quarterly meetings with FTA Region 6 throughout the project development process as a funding partner for the study. Initial meetings with Austin Parks and Recreation Department (PARC) and Texas Historical Commission (THC) was held on October 25, 2019 and on October 28, 2019 respectively, to introduce the project and provide an overview of the Gold Line and Blue Line Corridor efforts to date.

No formal coordination with tribal agencies has taken place.

State and federal agencies, including, but not limited to, the: U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), THC, Texas Parks and Wildlife Department (TPWD) National Parks Service (NPS), Environmental Protection Agency (EPA), Texas Department of Transportation (TxDOT), Federal Aviation Administration (FAA), Department of Interior (DOI), Federal Highway Administration (FHWA), and Texas Commission for Environmental Quality (TCEQ) will be sent invitations to serve as either a participating agency or cooperating agency. Future meetings with these agencies will be documented in this section.

B. What transportation agencies did you coordinate with or were involved during the PEL study?

Transportation agencies were included as part of the TAC for the Blue Line and Gold Line efforts and formal coordination with these agencies. They will also be invited to participate in the NEPA process. These agencies included the following:

- City of Austin Transportation Department
- CARTS
- CAMPO
- TxDOT
- CTRMA

C. What steps will need to be taken with each agency during NEPA scoping?

Agencies will be invited to participate as participating or cooperating agencies. A kickoff meeting will be held with the agencies that accepted the invitations, and they will be able to review and comment on the public involvement plan, schedule, Purpose and Need, and alternatives being evaluated. Individual meetings will also be held with each agency on a case-by-case basis, as appropriate.

4.0 Public Coordination

A. Provide a synopsis of your coordination efforts with the public and stakeholders.

In Fall 2018, as Capital Metro prepared to advance project development on the Project Connect HCT corridors, a Capital Metro Board/Austin City Council Engagement Work Session was held to provide feedback to the Project Connect team regarding ongoing and future Project Connect community engagement. Major themes included:

- Clearly communicate the process and the community's role by identifying the aspects of the project for which feedback is needed and how that feedback will be applied
- Provide multiple and meaningful feedback opportunities with ample notice and locations where stakeholders already gather
- Share information through traditional and non-traditional approaches

Project Connect is moving forward as Capital Metro's umbrella program over multiple independent projects, including the Blue Line LRT and Gold Line LRT. As such, public engagement at both projects, and as part of the continuing overall Project Connect engagement program, is occurring simultaneously.

Public

Though many tools for public coordination are available at all times, active public coordination for the Blue Line Corridor during the PEL Study was structured around the technical project development schedule in order to provide public updates and receive public feedback around logical milestones in the project schedule. The goals of this public outreach phase were to:

- Introduce the project study area, alternatives being considered, relevant environmental benefits and impacts being considered, and the overall schedule and public participation process.
- Allow the public an opportunity to review and provide comments on the project's Purpose and Need statements.

To accomplish this outreach, between May 20, 2019 and June 28, 2019, the project team conducted a first phase of public outreach that included four open house meetings to correspond with the four segments identified in the project's Public Involvement Plan. With the exception of the May 20, 2019 event, which included longer hours (3:00 p.m. – 7:00 p.m.), partner tables, and more extensive staffing, each meeting was set up similarly and held from 4:30 p.m. – 6:30 p.m. between June 17, 2019 and June 20, 2019. In addition, a virtual open house (VOH) was available May 20, 2019 to June 28, 2019. The VOH information and questions were designed to reflect the in-person meeting presentation as closely as possible.

The FTA published a formal Notice of Early Scoping on April 19, 2019. Notifications to the public, key stakeholders and neighborhood associations included e-mail blasts, newspaper ads, radio ads, flyer distribution, e-newsletters, follow-up calls, social media, the project website, and earned media. A total of 1,444 individuals participated in the first phase outreach activities, and the project team received a total of 273 comments.

The second public outreach phase on the conceptual alternatives was conducted July 30, 2019 to August 13, 2019, and consisted of three public meetings held in three segments along the corridor to ensure that Capital Metro heard from a variety of community members to understand their needs and desires for their communities. These conceptual alternatives public meetings were designed to:

1. Inform the public about the process used for the conceptual alternatives analysis and the planning considerations examined during this phase, including transitway profiles (street-level, elevated, cut-and-cover and tunnel), station locations and two build alternatives in the corridor's Central segment.
2. Allow the public an opportunity to review and comment on the results of the conceptual alternatives analysis.

The three public meetings were conducted between July 30, 2019 and August 1, 2019 and utilized the same format and information. Doors opened at 5:00 p.m., followed by a presentation from 5:30 to 6:00 p.m., facilitated discussion from 6:00 to 6:45 p.m., a recap of table discussions from 6:45 to 7:00 p.m. and a survey completed by attendees. The VOH, which was available online between July 30, 2019 and August 13, 2019, provided information and questions designed to reflect the in-person meeting presentation as closely as possible.

Notifications to the public, key stakeholders and neighborhood associations included e-mail blasts, newspaper ads, radio ads, flyer distribution, e-newsletters, follow-up calls, social media, the project website, and earned media. A total of 1,138 individuals participated in the second phase outreach activities, and the project team received a total of 674 comments.

The third public outreach phase on the detailed evaluation of alternatives included public Open House meetings, presentations and outreach activities conducted along the corridor, along with a VOH offered online. These public engagement efforts were designed to:

1. Inform the public about the detailed evaluation of alternatives process, which analyzes how well different combinations of alignment, transitway type, and mode meet the project's Purpose and Need, goals and objectives.
2. Allow the public an opportunity to review and comment on the detailed evaluation of alternatives analysis which provides preliminary information on travel time, potential ridership, cost to build and cost to operate.

Three public Open House events were conducted between November 4, 2019 and November 7, 2019. Each event took place between 5:00 p.m. to 7:30 p.m. and utilized the same information and the same guided open house format. In addition to reviewing the open house exhibits, attendees also had the opportunity to ask detailed questions of subject-matter experts and to complete a survey. The VOH was available online between November 4, 2019 and December 6, 2019. The VOH information and questions were designed to reflect the in-person exhibits and discussions as closely as possible.

The project team utilized email notifications, social media posts, flyer distribution to organizations and businesses along the corridor and at high-ridership transit stops, emails and phone calls to neighborhood associations, and paid advertising in local media to drive attendance to the public meetings and VOH. Meeting notifications, comment cards and the survey were translated into Spanish. Broad outreach for Project Connect was also conducted across the community during this public input period to raise awareness about Project Connect and encourage participation in the public meetings and VOH. A total of 1,309 individuals participated in the third phase outreach activities, and the project team received a total of 325 comments.

The goal of the fourth public outreach phase was to connect the community to information on the draft Project Connect Recommended System Plan, which includes the Blue Line LRT and Gold Line LRT LPAs, for

their comment and feedback prior to its adoption. Due to the Covid-19 pandemic and the City of Austin Stay Home - Work Safe Order, in-person public meetings were not conducted. In their place were a series of Virtual Community Meetings (VCM) that were held between May 15 to May 29, 2020. There were nine VCM's, including one Spanish language meeting hosted by Univision. Each VCM included live question and answer sessions and comments provided online were captured.

Additional remote stakeholder meetings were conducted through FM radio, Youtube live stream and Zoom. Meetings were archived and made available on CapMetro's Facebook page and on YouTube via ProjectConnect.com. The VCM conducted in Spanish was also available live on Univision62's Facebook page, and the Citywide VCM was available on the City of Austin's television channel ATXN. Questions not answered during the live meetings were answered in writing and made available in both English and Spanish on ProjectConnect.com.

In addition, there was a VOH which opened on May 7 and closed May 31, 2020. Included in the VOH was general information, information on the different elements proposed in the Recommended System Plan, including the Blue Line LRT and Gold Line LRT LPAs, feedback opportunities including a comment form and survey, and details of what to expect moving forward. The VOH was provided in both English and Spanish.

Outreach prior to the meetings email notifications, e-newsletters, social media posts, virtual flyers and paid advertising in local newspapers and radio stations. Outreach tools were selected and designed to be responsive to Austin's Stay Home – Work Safe Order and engage stakeholders of different gender, ethnicity, income level and interest in transit.

Overall engagement resulted in a total of 17,697 people engaged and 1,626 comment submissions. All detailed active engagements and public inputs are documented in **Attachment 3, Project Connect Virtual Open House; Engagement Report Update** dated May 2020.

Stakeholders

To date, numerous presentations and one-on-one meetings have been held with stakeholders in the Blue Line LRT and Gold Line LRT study areas. These meetings were designed to provide information to stakeholders regarding the projects and to solicit feedback. Stakeholders included but are not limited to agency partners, elected officials, neighborhood groups, non-profit and civic organizations, and the business community.

Key stakeholders are also being engaged through the PCAN, as discussed in response to Question E. See **Table 4** for the full list of meetings.

General

As mentioned, many public and stakeholder communication avenues are available at all times. These include:

Project website: <https://capmetro.org/projectconnect/>

Twitter: @CapMetroATX

Project Connect Community Office at 607 Congress Avenue

Via email to Feedback@ProjectConnect.com

Please see **Section 2.0 of the Gold Line/ Blue Line Corridor PEL Study** for additional details on agency and public coordination.

5.0 The Purpose of the Gold Line/ Blue Line HCT Investment

A. What was the scope of the PEL study and the reason for completing it?

Project Connect was procured as a 30-month project led by Capital Metro to identify, analyze and prioritize a set of potential HCT solutions to facilitate travel into, out of and within Central Austin. These initiatives examined corridors that may be suitable for the implementation of future HCT transit solutions, including the Blue Line LRT and Gold Line LRT.

The PEL Study is intended to inform the selection of an LPA for the Blue Line and Gold Line and NEPA early scoping process, document stakeholder input, identify and evaluate reasonable and feasible alternatives, and dismiss alternatives from further consideration.

B. Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.

Purpose

The purpose of the Blue Line LRT and Gold Line LRT is to provide improved HCT that operates faster; has better reliability; provides improved connectivity to affordable housing, employment, activity centers, and the ABIA; and links other future transit corridors.

The Need for the Blue Line LRT and Gold Line LRT Investment

The need for Blue Line LRT and Gold Line LRT is demonstrated by increasing congestion within the Blue Line LRT and Gold Line LRT study areas and parallel roadways, which is exacerbated by the inability to sufficiently expand roadway capacity to accommodate the projected demand while maintaining reliable travel speeds or levels of service. Blue Line LRT and Gold Line LRT would efficiently expand mobility capacity by leveraging the existing transportation network infrastructure. Sustaining Austin's strong economy relies upon ongoing population and employment growth, which would increase travel demand and corresponding congestion without an efficient means to move more people. Failure to accommodate this increased demand for efficient mobility is a threat to continued community and economic growth. Specific needs for the Blue Line LRT and Gold Line LRT investments are listed below and further detailed in **Section 3.0 of the Blue Line LRT/Gold Line LRT PEL Study**:

- **Need #1: Sustainably Support Austin's Population and Economic Growth:** Significant population and employment growth are affecting all travel modes and travel times.
- **Need #2: Increase Transportation Network Capacity to Meet Increasing Travel Demand:** CAMPO estimates that while the region's population doubles by 2040, new roadway capacity will grow by 15 percent between 2010 and 2040.
- **Need #3: Provide Better Transit Options Linking Affordable Housing and Jobs:** Employment opportunities continue to increase within and adjacent to the Blue Line LRT/Gold Line LRT study area. However, access to those jobs is challenged by the lack of affordable housing and reliable mobility options.
- **Need #4: Support Growth of and Connectivity to Regional Activity Centers:** Capital Metro would provide better transit service along the Blue Line LRT/Gold Line LRT study areas to connect existing activity centers and future growth along the corridor.
- **Need #5: Support Austin-Bergstrom International Airport Growth in Air Travel:** One of the largest single trip destinations in the Blue Line LRT study area is AUS, which currently serves over 15 million passengers annually and is projected to serve over 26 million annual passengers in the future. In addition to air travel, AUS also serves as a major center of employment, with thousands of jobs at airport passenger terminals, cargo facilities and hotels.

C. What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?

Please see **Section 4.0 of the Blue Line LRT/Gold Line LRT PEL Technical Memorandum** which includes a detailed discussion of the Blue Line LRT and Gold Line LRT Project's Purpose and Needs. Minimal additional effort is expected to make this a NEPA-level purpose and need statement.

6.0 Range of alternatives

A. What types of alternatives were looked at?

The alternatives that Capital Metro evaluated in the Alternatives Analysis and PEL Report are summarized in the PEL Technical Memorandum. Capital Metro conducted the Alternatives Analysis using a phased approach that was structured as a tiered screening, where alternatives were defined, evaluated, and refined or eliminated in each step of the process. The result was two LPAs – the Blue Line LRT and Gold Line LRT - whose environmental benefits and impacts will be further evaluated under the formal NEPA process. The alternatives are also described in detail in: **Appendix C, Blue Line Preliminary Screening Analysis** dated September 2019, **Appendix H, Blue Line Alternatives Analysis Draft Report** dated May 2020, and **Appendix I, Blue Line/ Gold Line Refined Alternatives Analysis Technical Memorandum** dated May 2020.

B. How did you select the screening criteria and screening process?

When Capital Metro initiated the Alternatives Analysis, they evaluated alternatives that encompassed both the Blue Line LRT and the Gold Line LRT. The process of developing and screening Blue Line Corridor Project alternatives took into account the following: Federal and State requirements; the purpose and needs, and goals and objectives for the project; ability to avoid or minimize environmental impacts; and public and stakeholder input. The process was developed with input during the TAC and PCAN meetings to sufficiently address the identified needs of the Blue Line Corridor.

C. For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s).

Alternative transitway options per segment were eliminated from further consideration during the Step 1 and Step 2 processes. Due to uncertainties, a partially underground transitway profile was not evaluated during Step 2 for any metric other than high-level capital costs; however, a tunnel will be explored in the next phase, which would serve the two projects underground in Downtown Austin for operational benefits such as faster travel times and greater system capacity. In addition, ART as a stand-alone mode was eliminated out as part of the Step 2 process. ART technology cannot reasonably or feasibly be evaluated in direct comparison to BRT and LRT modes within the Gold Line/ Blue Line Corridor and is therefore not defined as a distinct mode in the definition of detailed alternatives. A detailed explanation of the process used in eliminating alternatives in Step 2 is found in **Appendix F** of the PEL Tech Memo, **Blue Line Alternatives Analysis Draft Report** dated May 2020.

D. Which alternatives should be brought forward into NEPA and why?

The Blue Line LRT LPA would be light rail operating in an 8.2-mile dedicated transitway and would involve the construction of tracks, stations, maintenance facilities supporting the fixed guideway service, and a new bridge crossing Lady Bird Lake. The transitway would operate at street level throughout most of the corridor and would be elevated in one section where the Blue Line would cross over US 183 along the southern end of the corridor from Metro Center to AUS. It would operate in a tunnel between the proposed Downtown and Republic Square stations.

The Gold Line LRT LPA would be light rail operating in a 6.4-mile dedicated transitway and would involve the construction of tracks, stations, maintenance facilities supporting the fixed guideway service. The transitway would operate at street level throughout most of the corridor and would be elevated in three sections: where the Gold Line would cross over the Red Line north of Hancock Station and through the University of Texas from Dean Keeton Street south to Martin Luther King Boulevard. It would operate in a tunnel between proposed Downtown and Republic Square stations and between the proposed Capitol East and Republic Square stations.

E. Did the public, stakeholders, and agencies have an opportunity to comment during this process?

The TAC, PCAN, and public were given the opportunity to review and comment at all major milestones/decision points.

F. Were there unresolved issues with the public, stakeholders and/or agencies?

To date, there are no unresolved issues with the public, stakeholder, or agencies.

7.0 Planning assumptions and analytical methods

A. What is the forecast year used in the PEL study?

The study assesses existing conditions and projected conditions presented in the CAMPO 2040 model.

B. What method was used for forecasting transit ridership?

The ridership forecast methodology for the Blue Line LRT and Gold Line LRT projects employed the use of FTA's Simplified Trips on Project Software (STOPS) model. STOPS is a standalone ridership model created by FTA specifically for evaluating Capital Investment Grant (CIG) candidate transit projects. It is similar to a conventional four-step model that evaluates zone-to-zone travel markets based on socioeconomic characteristics and the existing transit network. STOPS produce base year average weekday ridership forecasts for CIG mobility, congestion relief, and cost effectiveness measures; and quantifies the projected change in daily automobile person miles travelled (PMT) resulting from implementation of the proposed project. STOPS has been calibrated and validated using actual ridership experience on transitways including bus rapid transit (BRT), light rail (LRT), and commuter rail across the country. The in-depth understanding gained from this process provided decision-makers with thorough information on the possible outcomes and tradeoffs associated with scenario performance.

C. Are the planning assumptions and the corridor vision/purpose and need statement consistent with the long-range transportation plan?

Project Connect is the long-range HCT system plan within which the Blue Line and Gold Line was identified as a priority investment corridor. Per Project Connect, priority investment corridors are to advance to NEPA and will be consistent with the vision/purpose of the plan. The Blue Line and Gold Line planning assumptions and purpose and need statements are consistent with the long-range transportation plan and other planning efforts in the region. The Gold Line and Blue Line LPA was approved by Capital Metro in June 2020 and will be adopted into CAMPO's 2045 Long-Range Transportation Plan.

D. What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs and network expansion?

CAMPO developed an updated 2045 Regional Active Transportation Plan (RATP) to document and provide a shared vision for the development of a safe and highly-functional active transportation network of pedestrian and bicycle facilities and amenities for the six-county CAMPO Region. It was adopted on May 4, 2020. For the PEL Study, the existing 2040 CAMPO model was used as a base. Projected population and employment numbers for the Traffic Analysis Zones (TAZs) for a 2025 base year and 2040 horizon year were used to derive the residential and employment densities. The 2018 Cap Remap transit network was included as the No Build scenario.

8.0 Environmental Resources

A. In the PEL study, at what level of detail was the resource reviewed and what was the method of review?

The environmental analysis was primarily a desktop, screening level exercise using geographic information system (GIS)-based analysis using readily available environmental data. The analysis was solely based on proposed alignment and station locations and did not consider mitigation efforts that could ameliorate impacts to resources. A detailed existing conditions assessment of environmental resources within the Blue Line LRT/Gold Line LRT and the methodologies for each resource review are documented within **Appendix J** of the PEL Tech Memo, **Gold Line/ Blue Line Corridor Conditions Report**.

B. Is this resource present in the area and what is the existing environmental condition for this resource?

Please see **Appendix J** of the PEL Tech Memo, **Gold Line/ Blue Line Corridor Conditions Report**.

C. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?

Any potential impacts to the human and natural environment will need to be considered during the NEPA phase. The assessment will address the potential direct and indirect impacts of the project on the following: low-income and minority populations (environmental justice), cultural resources, parklands, surface water and groundwater, threatened and endangered species, air quality, noise and vibration, soils and geologic resources.

D. How will the data provided need to be supplemented during NEPA?

The data gathered for the PEL study will need to be updated to incorporate changes that may have occurred since it was initially accessed. It will also need to be supplemented with field verifications during the NEPA phase.

9.0 List environmental resources you are aware of that were not reviewed in the PEL study and why?

Electromagnetic Interference and energy analyses have been deferred to the NEPA process.

10.0 Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where it can be found.

No. Analysis of cumulative impacts will be completed for the EIS.

11.0 Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.

Resource-specific mitigation strategies will be considered and further evaluated for applicability during the EIS.

12.0 What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?

Information in the PEL will be made available for analysis to the agencies (TAC/PCAN) and public prior to and during NEPA scoping (as outlined in **Section 2.0**).

13.0 Are there any other issues a future project team should be aware of?

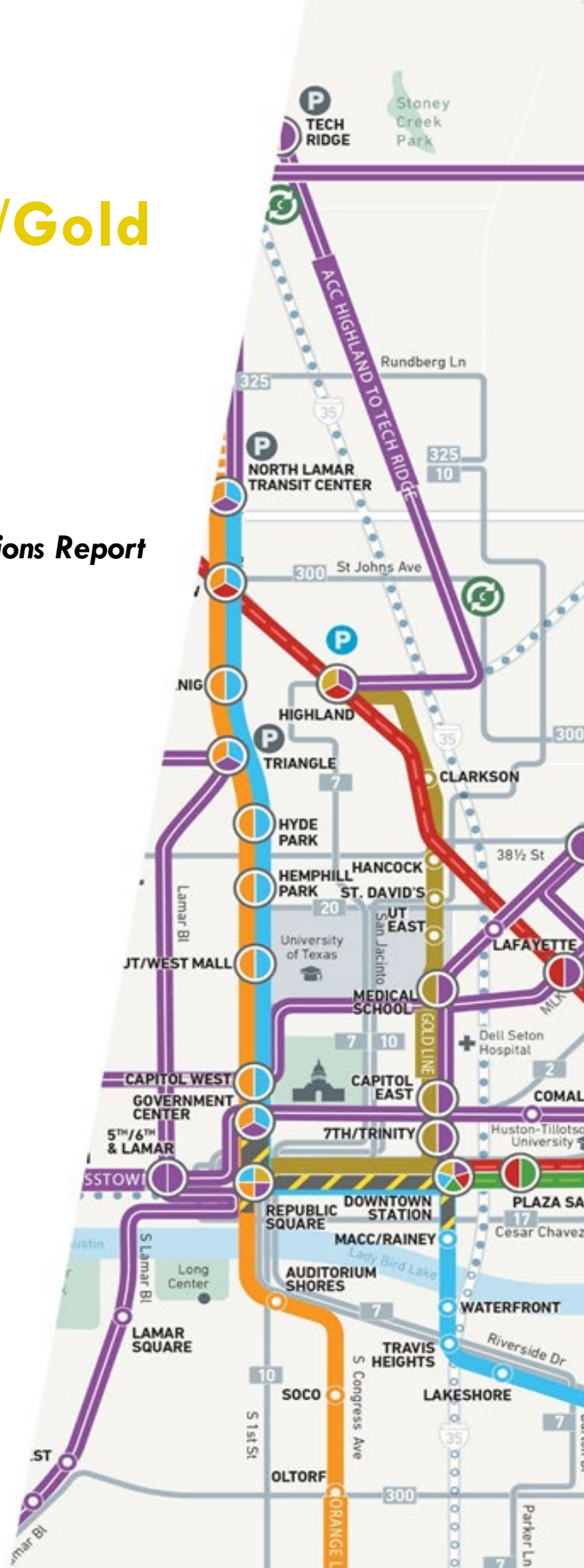
The Blue Line LRT/Gold Line LRT PEL Study provides a summary of issues and evaluations that should be considered during future project development. Right-of-way (ROW) needs will require further detailed evaluation during project development.

Appendix B: Blue Line/Gold Line Corridor Conditions Report

»» Blue Line LRT/Gold Line LRT

Planning & Environmental Linkages Study

Appendix B - Corridor Conditions Report



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- Appendix B-5: Hazardous Materials within the Blue Line LRT/Gold Line LRT Corridor

List of Acronyms

µg/m ³	micrograms per cubic meter
ACC	Austin Community College
ACS	American Community Survey
AOR	Areas of Responsibility
ARR MSA	Austin-Round Rock Metropolitan Statistical Area
ASMP	Austin Strategic Mobility Plan
AST	Aboveground Storage Tanks
AUS	Austin-Bergstrom International Airport
BA1	Built Alternative 1
BA2	Built Alternative 2
BGEPA	Bald and Golden Eagle Protection Act
BRT	Bus Rapid Transit
BSA	Brownfield Site Assessment
CAA	Clean Air Act
CAMPO	Capital Area Metropolitan Planning Organization
CAPCOG	Capital Area Council of Governments
Capital Metro	Capital Metro Transportation Authority
CBD	Central Business District
CFR	Code of Federal Regulations
CIG	Capital Investment Grant
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CoA	City of Austin
CWA	Clean Water Act
DCRP	Dry Cleaner Remediation Program
EJ	Environmental Justice
EMST	Ecological Mapping Systems of Texas
EO	Executive Order
ERC	East Riverside Corridor
ESA	Endangered Species Act
ESRI	Environmental Systems Research Institute
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GIS	Geographical Information System
GHG	Greenhouse Gas
HCT	High-Capacity Transit
HPALM	Hybrid Potential Archeological Liability Map
HTC	Historic Texas Cemeteries
HUD	Housing and Urban Development

IH	Interstate Highway
IHWCA	Industrial Hazardous Waste Corrective Action
IOP	Innocent Owner/Operator Program
IPaC	Information for Planning and Consultation
LOS	Level of Service
LPA	Locally Preferred Alternative
LPST	Leaking Petroleum Storage Tanks
LRT	Light Rail Transit
LWCF	Land and Water Conservation Fund
MBTA	Migratory Bird Treaty Act
mg/m ³	milligrams per cubic meter
MSA	Metropolitan Statistical Area
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NB	Northbound
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHCD	Neighborhood Housing and Community Development Department
NO _x	Nitrogen Oxides
NO ₂	Nitrogen Dioxide
NPA	Neighborhood Planning Area
NPS	National Park Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O ₃	Ozone
OTHM	Official Texas Historical Marker
PARC	Parks and Recreation Department
Pb	Lead
PEL	Planning and Environmental Linkages
PM	Particulate Matter
ppb	parts per billion
ppm	parts per million
PST	Petroleum Storage Tanks
RATP	Regional Active Transportation Plan
RTEST	Rare, Threatened, and Endangered Species of Texas
SB	Southbound
SF	Superfund
SH	State Highway
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
T&E	Threatened and Endangered
TAZ	Traffic Analysis Zone

THC	Texas Historical Commission
THSA	Texas Historic Sites Atlas
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks & Wildlife Department
TxDOT	Texas Department of Transportation
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tanks
UT	University of Texas
VCP	Voluntary Cleanup Program
VMT	Vehicle Miles Travelled
WOTUS	Waters of the U.S.

1.0 Introduction

Capital Metro is currently conducting a Planning and Environmental Linkage (PEL) Study (referred to herein as the PEL Study) for the Blue Line and Gold Line. Capital Metro is conducting the study to identify existing conditions and anticipated constraints to the development of transit improvements. This Corridor Conditions Report has been prepared as part of the Blue Line LRT/Gold Line LRT PEL Study and documents current transportation and environmental conditions within the corridor for both the Blue Line and Gold Line. The information presented in this report has been used as a basis in developing and evaluating possible high capacity transit (HCT) alternatives and helped to inform the Locally Preferred Alternatives (LPAs). More detailed information about the Alternatives Analysis process is presented in the **Blue Line/Gold Line Refined Alternatives Analysis Technical Report** (May 2020).

2.0 Corridor Conditions Report Methodology

2.1 Study Area

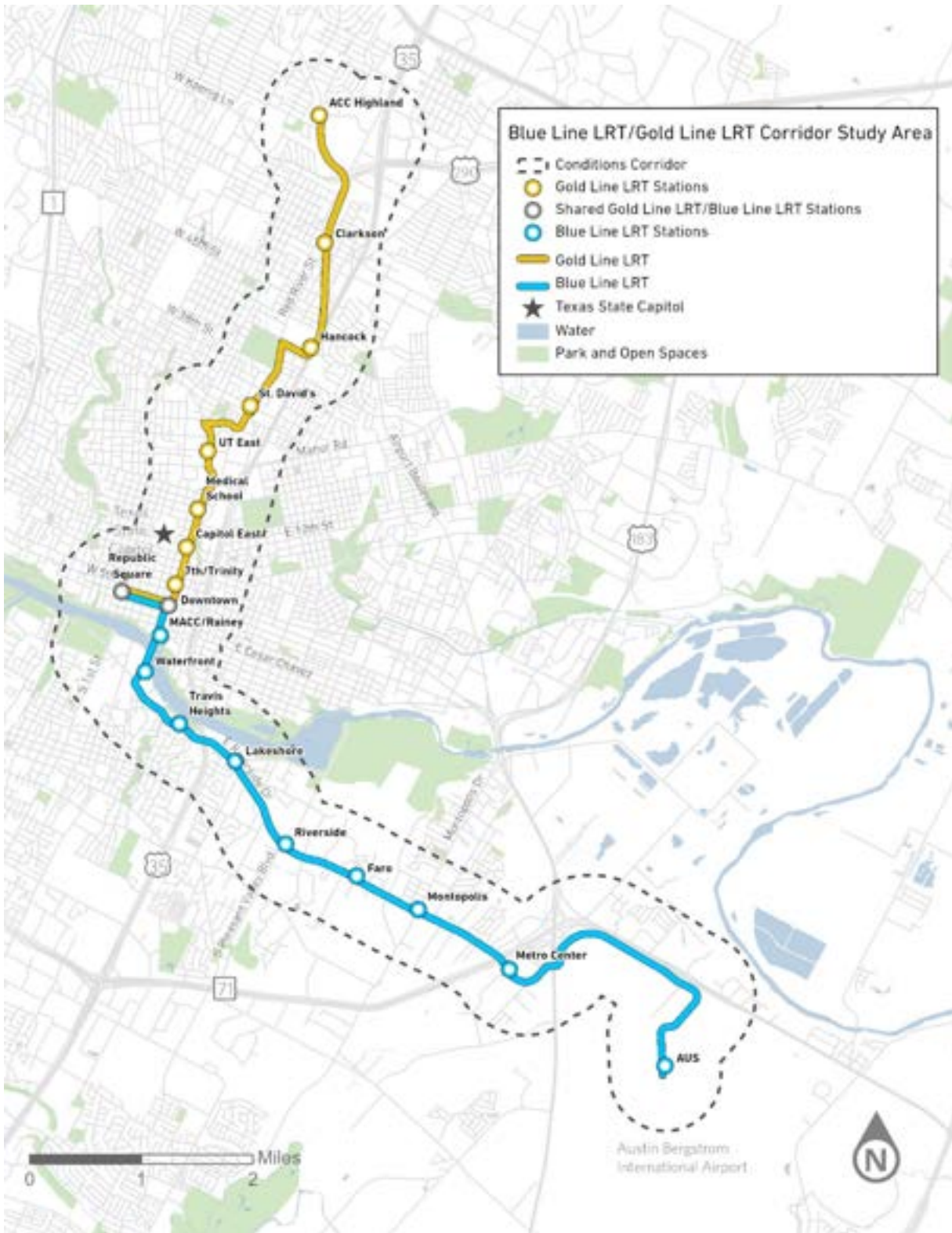
The study area for the PEL Study extends ½-mile from the center line of the proposed Blue Line LRT/Gold Line LRT alignments, as documented in the *Project Connect Long-Term Vision Plan*. The corridor connects many important Central Texas destinations including Austin Community College (ACC) Highland and the University of Texas (UT) at Austin campuses, the Texas State Capitol Complex, St. David's and Dell Seton medical centers, the Austin Convention Center, and Austin Bergstrom International Airport (AUS) (see **Figure 2.1-1**). The study area contains a mix of residential, commercial and mixed-use properties within its boundaries, and plays a prominent role in current development trends and place-making opportunities in areas with existing and forecasted high rates of population and employment growth.

2.2 Methodology

Information provided in this Corridor Conditions Report was obtained from a number of sources, including the Project Connect PEL Study dated December 2018, conducted for the *Project Connect Long-Term Vision Plan*; state, regional and local agencies; as well as through a comprehensive public and agency coordination effort, which will continue as the Blue Line LRT/Gold Line LRT PEL Study proceeds. The analysis was primarily a geographic information system (GIS)-based analysis using readily available environmental data. The environmental data were collected to identify the resources located within the study area, defined as a ½-mile buffer around the proposed alignment and stations for Blue Line LRT and Gold Line LRT. At this stage, the analysis identified total environmental data points that by segment and “primary” or “option” alignments. Capital Metro evaluated and documented the following resources:

- 3.1 Transportation
- 3.2 Land Use and Economic Development
- 3.3 Neighborhoods
- 3.4 Visual Quality
- 3.5 Air Quality
- 3.6 Noise and Vibration
- 3.7 Energy and Electromagnetic Interference
- 3.8 Ecosystems
- 3.9 Water Resources
- 3.10 Historical and Archeological Resources
- 3.11 Parklands
- 3.12 Hazardous Materials
- 3.13 Public Safety and Security

Figure 2.1-1 Blue Line LRT/Gold Line LRT Corridor Study Area



3.0 Blue Line LRT/Gold Line LRT Corridor Conditions

Each section of **Chapter 3.0** is organized into the following:

- **Methodology** – Describes the methodology and data sources used to assess existing conditions within the Blue Line LRT/Gold Line LRT Corridor.
- **Results** – Describes the existing conditions in the context of the Blue Line LRT/Gold Line LRT Corridor and tabulates data results for each resource, where applicable.

At the conclusion of Chapter 3.0, a summary is provided to present next steps of how the corridor conditions information will inform the conceptual and detailed evaluation of alternatives for the Blue Line LRT and Gold Line LRT in the NEPA phase.

3.1 Transportation

This section provides a summary of transportation infrastructure and transit networks within the Blue Line LRT/Gold Line LRT study area.

3.1.1 Methodology

Current and future transportation conditions within the Blue Line LRT/Gold Line LRT study area were evaluated using 2040 CAMPO data, an updated CAMPO 2045 Regional Active Transportation Plan (RATP) dated October 2017 was adopted on May 2, 2020. Transportation conditions were evaluated through the identification of the following:

- Current and future (forecasted) roadway Level of Service (LOS) for major cross streets within the Blue Line LRT/Gold Line LRT study area
- Current and future Capital Metro transit routes within the Blue Line LRT/Gold Line LRT study area
- Current and future Capital Metro Park & Ride facilities within the Blue Line LRT/Gold Line LRT study area
- Current and future Ridership data
- Current and future Station location data
- Current and future Planned Texas Department of Transportation (TxDOT) and City of Atlanta (CoA) roadway projects within the Blue Line LRT/Gold Line LRT study area

3.1.2 Results

Existing Traffic Conditions

Population and employment growth in Austin have resulted in a corresponding increase in traffic. Although the ongoing Covid-19 pandemic has caused a decrease in traffic starting in early 2020, traffic during this period will be evaluated as it becomes available. According to a report from INRIX, Austin drivers spend approximately 104 hours stuck in traffic every year, which is more than any other Texas city (INRIX, 2018). As shown in **Table 3.1-1**, several roadways are currently designated LOS E or F and several more roadways are forecasted to operate at LOS E or F by the year 2040. LOS is an indicator of congestion and delay. It is a term used to qualitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. The LOS of a facility is designated with a letter, A to F, with A representing the best operating conditions and F the worst. Specifically, LOS E is defined as severe congestion with some long-standing queues on critical approaches and LOS F is defined as total breakdown, stop-and-go operation (Federal Highway Administration [FHWA], 2017) generating excessive delay and queuing.

Table 3.1-1 Blue Line LRT/Gold Line LRT Study Area LOS, 2020 to 2040

Major Arterials Intersected by Study Area	From	to	2020 MAX LOS	2040 MAX LOS
Airport Blvd	Guadalupe Street	US 290 East	D	E
	US 290 East	51st Street	E	F
	51st Street	Aldrich Street	E	F
RM 2222	Lamar Blvd	Airport Blvd	E	F
E 51st St	Duval Street	Airport Blvd	F	F
	Airport Blvd	IH 35	E	F
E 45th St	Speedway Drive	Red River Street	E	F
	Red River Street	Airport Blvd	D	E
E 38 1/2 St	Red River	IH 35	F	F
	IH 35	Cherrywood Road	E	F
E Martin Luther King Blvd	Guadalupe Street	San Jacinto Blvd	F	F
	San Jacinto Blvd	Red River Street	F	F
	Red River Street	IH 35	F	F
E 15th St	Guadalupe Street	IH 35	E	F
	Rio Grande Street	IH 35	E	F
E 7th St	Lamar Blvd	Congress Avenue	E	F
	Congress Avenue	IH 35	D	E
W 5th St	Lamar Blvd	Congress Avenue	D	E
	Congress Avenue	IH 35	E	F
Congress Ave	Mary Street	Cesar Chavez	F	F
	Cesar Chavez Street	11th Street	D	E
Lavaca Street	Cesar Chavez Street	11th Street	D	E
	11th Street	MLK Blvd.	D	E
Guadalupe St	Cesar Chavez Street	11th Street	E	F
	11th Street	MLK Blvd.	E	F
	MLK Blvd.	27th Street	F	F
Cesar Chavez St	Lamar Blvd	Congress Avenue	F	F
	Congress Avenue	IH 35	F	F
S 1st St	Mary Street	Cesar Chavez	F	F
Barton Springs Rd	Lamar Blvd	Congress Avenue	F	F
Riverside Drive	Lamar Blvd	Congress Avenue	E	F
	Congress Avenue	IH 35	F	F
	IH 35	Pleasant Valley Road	F	F
IH 35	Pleasant Valley Road	SH 71	D	E
	US 290 East	45th Street	F	F
	45th Street	MLK Blvd.	F	F
	MLK Blvd.	Cesar Chavez	F	F

Major Arterials Intersected by Study Area	From	to	2020 MAX LOS	2040 MAX LOS
	Cesar Chavez Street	Woodland Avenue	F	F
S Pleasant Valley Rd	Oltorf Street	Lakeshore Blvd	D	F
Montopolis Dr	Grove Blvd.	Hogan Avenue	D	E
SH 71	Pleasant Valley Road	US 183 S	E	F
	US 183 S	Presidential Blvd	D	E
US Hwy 183	Montopolis Drive	Patton Avenue	F	F
Presidential Blvd	Hotel Drive	SH 71	C	C

Source: CAMPO, 2015

Capital Metro Transit Routes

Capital Metro is the primary transit service provider in the Blue Line LRT/Gold Line LRT study area, operating bus services and one commuter rail line (Metro Rail). Currently, there are 66 Capital Metro transit routes traveling within or through the Blue Line LRT/Gold Line LRT study area as described below and listed in **Table 3.1-2:**

- **MetroBus Local Bus Routes:** 6 bus routes to and from Downtown, with regular stops
- **MetroBus Flyer Routes:** 6 bus routes that provide limited-stop neighborhood level service between suburban neighborhoods and Downtown
- **MetroBus Feeder Routes:** 3 bus routes between neighborhoods, transit centers, and Capital Metro park & rides (located outside of the Blue Line Corridor)
- **MetroBus Crosstown Routes:** 6 bus routes that bypasses Downtown and provides neighborhood level services
- **UT Shuttle Routes:** 12 frequent shuttle routes that are open to the public but focus on connecting UT riders to campus and residential areas
- **MetroExpress Routes:** 7 bus routes to and from Downtown, designed to bring outlying residents into central Austin
- **High Frequency Routes:** 12 bus routes throughout Austin that operate on 15- minute or better frequencies, including 2 MetroRapid bus routes 801 and 803
- **Entertainment Bus (E-Bus) Routes:** 3 bus routes that operate each fall and spring when more UT students are on UT campus
- **Night Owl Routes:** 5 bus routes that operate from midnight until 3 a.m., Monday through Saturday nights
- **Special Routes:** 5 bus routes that operate on specific days of the week only.
- **MetroRail:** 1 commuter rail route that operates between the Capital Metro Leander Station to the Downtown Station MetroRapid Stop Locations/Stations

Seventeen MetroRapid stations are within the Blue Line LRT/Gold Line LRT study area. They are listed in **Table 3.1-3.**

Table 3.1-2 Capital Metro Transit Routes within the Blue Line LRT/Gold Line LRT Study Area

Route	Route Name	Route Type	Direction
1	North Lamar/South Congress	Local	NB/SB
2	Rosewood	High Frequency	EB/WB
3	Burnet/Manchaca	Local	NB/SB
4	7th Street	High Frequency	EB/WB
5	Woodrow/Lamar	Local	NB/SB
6	East 12th	Local	EB/WB
7	Duval / Dove Springs	High Frequency	NB/SB
10	South 1st/Red River	High Frequency	NB/SB
17	Cesar Chavez	High Frequency	EB/WB
18	Martin Luther King	High Frequency	EB/WB
19	Bull Creek	Local	NB/SB
20	Manor Rd/Riverside	High Frequency	NB/SB
30	Barton Creek Square	Local	NB/SB
103	Manchaca Flyer	Flyer	NB/SB
105	South 5th Flyer	Flyer	NB/SB
111	South Mopac Flyer	Flyer	NB/SB
135	Dell Limited	Flyer	NB/SB
142	Metric Flyer	Flyer	NB/SB
171	Oak Hill Flyer	Flyer	NB/SB
217	MONTOPOLIS FEEDER	Feeder	SB
228	VA Clinic	Feeder	EB/WB
271	Del Valle	Feeder	EB/WB
300	Springdale/Oltorf	High Frequency	NB/SB
310	Parker/Wickersham	Crosstown	EB/WB
311	Stassney	High Frequency	EB/WB
322	Chicon/Cherrywood	Crosstown	NB/SB
324	Georgian/Ohlen	Crosstown	EB/WB
335	335 35th/38th	High Frequency	EB/WB
337	Koenig/Colony Park	Crosstown	EB/WB
345	45TH	Crosstown	EB/WB
350	Airport Blvd	Crosstown	NB/SB
410	E-Bus/West Campus	E-Bus	NB/SB
411	E-Bus/Riverside	E-Bus	Counterclockwise
412	E-Bus/Main Campus	E-Bus	NB/SB
451	DOWNTOWN SALTILLO SHUTTLE	Special	EB/WB
465	MLK/UT	Special	EB/WB
481	Night Owl North Lamar	Night Owl	NB/SB
483	Night Owl Riverside	Night Owl	NB/SB

Route	Route Name	Route Type	Direction
484	Night Owl South Lamar	Night Owl	NB/SB
485	Night Owl Cameron	Night Owl	NB/SB
486	Night Owl South Congress	Night Owl	NB/SB
490	HEB Shuttle	Special	Inbound/Outbound
492	Delwood	Special	NB/SB
493	EASTVIEW	Special	Inbound/Outbound
550	Metro Rail Red Line	Rail	NB/SB
640	Forty Acres	UT Shuttle	Clockwise
641	East Campus	UT Shuttle	EB/WB
642	West Campus/UT	UT Shuttle	Counterclockwise
656	Intramural Fields/UT	UT Shuttle	Inbound/Outbound
661	Far West/UT	UT Shuttle	Inbound/Outbound
663	Lake Austin/UT	UT Shuttle	Inbound/Outbound
670	Crossing Place	UT Shuttle	Inbound/Outbound
671	North Riverside	UT Shuttle	Inbound/Outbound
672	Lakeshore	UT Shuttle	Inbound/Outbound
680	North Riverside/Lakeshore	UT Shuttle	Inbound/Outbound
681	Intramural/Far West	UT Shuttle	Inbound/Outbound
682	Forty Acres/East Campus	UT Shuttle	Clockwise
801	N Lamar S Congress	High Frequency	NB/SB
803	Burnet/S Lamar	High Frequency	NB/SB
935	Tech Ridge Express	Express	NB/SB
980	North Mopac Express	Express	NB/SB
981	Oak Knoll Express	Express	NB/SB
982	Pavilion Express	Express	NB/SB
985	Leander/Lakeline Direct	Express	NB/SB
987	Leander/Lakeline Express	Express	NB/SB
990	Manor/Elgin Express	Express	EB/WB

Source: Capital Metro, 2019a

Notes: Currently, there are 66 Capital Metro transit routes traveling within or through the Blue Line LRT/Gold Line LRT Corridor.

NB: Northbound; SB: Southbound; EB: Eastbound; WB: Westbound

Table 3.1-3: Existing MetroRapid Stations in the Blue Line LRT/Gold Line LRT Study Area

Name	Location
Highland Station	Northwest corner of Airport and Denson
Soco Station (NB)	Southeast corner of Congress and Elizabeth
Vic Mathias/Auditorium Shores	Northeast corner of Riverside and 1st
VIC MATHIAS/AUDITORIUM/TEMPORA	Southeast corner of Riverside and Haywood
Seaholm Station (NB)	Northwest corner of Cesar Chavez and San Antonio
Republic Square Station (NB)	Northeast corner of Lavaca and 3rd
Republic Square Station (SB)	Northwest corner of Guadalupe and 4th
Austin History Center Station	Northwest corner of Guadalupe and 8th
Austin History Center Station	Southeast corner of Lavaca and 8th
Capitol Station (SB)	Northwest corner of Guadalupe and 12th
Capitol Station (NB)	Southeast corner of Lavaca and 13th
Museum Station (SB)	Southwest corner of Guadalupe and 17th
Museum Station (NB)	Southeast corner of Lavaca and 17th
UT West Mall Station (SB)	Southwest corner of Guadalupe and 23rd
UT West Mall Station (NB)	Northeast corner of Guadalupe and West Mall UT
UT Dean Keeton Station (NB)	Southeast corner of Guadalupe and Dean Keeton
UT Dean Keeton Station (SB)	Northwest corner of Guadalupe and 26th

Source: Capital Metro, 2019d

Park & Ride Facilities

There are no Park & Ride Facilities within the Blue Line LRT/Gold Line LRT study area.

Planned TxDOT Projects within the Blue Line LRT/Gold Line LRT Study Area

Several future infrastructure improvement projects are planned within the Blue Line LRT/Gold Line LRT study area. A review of planned TxDOT and CoA roadway infrastructure projects is provided below.

TxDOT Construction Projects

Infrastructure improvements to three TxDOT roadways are proposed within the Blue Line LRT/Gold Line LRT Corridor as provided in the **Table 3.1-4**. Improvements to these roadways generally consist of capacity and operational improvements to accommodate increases in traffic.

Table 3.1-4 Planned TxDOT Projects Within the Blue Line LRT/Gold Line LRT Corridor

CSJ #	Route	From	to	Description
026501113	SH 71	SH 71/US 183 Interchange	Presidential Blvd.	Construct direct connectors
011313163	SH 71	East of Riverside	US 183	Construct frontage roads
011401062	RM 2222	North Lamar Blvd.	IH 35	Install advanced traffic management system
001513388	IH 35	US 290E	US 290W/SH 71	Widen road – add lanes

Source: TxDOT, 2015

Planned CoA Projects within the Blue Line LRT/Gold Line LRT Study Area

As shown in **Table 3.1-5**, the CoA has multiple transportation improvement projects planned within the Blue Line LRT/Gold Line LRT study area. In 2016, Austin City Council initiated a public engagement effort to determine the community’s highest priorities for improving mobility around the city. According to the CoA’s 2016 Community Survey Findings, 72 percent of Austinites were dissatisfied with traffic flow on major city streets.

In November 2016, Austin voters approved \$720 million for the local, corridor, and regional mobility improvements. A large portion is for the Corridor Mobility Program, which defines the development, design, and construction of improvements along key Austin corridors that will enhance mobility, safety, and connectivity for all users—whether you drive, bike, or take transit. Within this program, one project is within the Corridor Mobility Program’s Corridor Construction Program - the Guadalupe Street project, the remaining four CoA Corridor Mobility Program projects within the Blue Line LRT/Gold Line LRT study area are currently in the preliminary engineering and design phase.

Table 3.1-5 Planned CoA Infrastructure Projects within Blue Line LRT/Gold Line LRT Study Area

Route	Route Name	Route Type	Direction
Roadway	From	to	Description
Guadalupe Street	18th Street	29th Street	Includes up to 3 traffic signal improvements, up to 4.5 miles of new or rehabilitated sidewalks, up to 1.5 miles of pavement rehabilitation, addition of transit operational enhancements, new street lighting to improve visibility and enhance safety, a new continuous, dedicated center turning lane along 24th Street between Lamar Boulevard and Guadalupe Street, and restripe Nueces Street
North Lamar Boulevard	Lady Bird Lake	US 183	Intended to improve safety, mobility, and connectivity for people using all modes of transportation. In order to allow for additional coordination with Capital Metro’s <i>Project Connect Long-Term Vision Plan</i> , this project is currently on hold.
Guadalupe Street	29th Street	North Lamar Boulevard	Intended to improve safety, mobility, and connectivity for people using all modes of transportation. In order to allow for additional coordination with Capital Metro’s <i>Project Connect Long-Term Vision Plan</i> , this project is currently on hold.
E MLK/FM 969	North Lamar Boulevard	US 183	Intended to improve safety, mobility, and connectivity for people using all modes of transportation. Funding for this project has not been identified.

Source: City of Austin Transportation Department

3.2 Land Use and Economic Development

The Blue Line LRT/Gold Line LRT study area is located entirely within the city limits of Austin. The CoA is the municipal agency responsible for land use planning within the corridor. Though unable to set land use policy, other agencies involved with local land use planning recommendations within the corridor include the Capital Area Metropolitan Planning Organization (CAMPO) and several Neighborhood Planning Associations.

3.2.1 Methodology

Land Use

Existing land use information was obtained from the CoA (2018). The goal of the land use evaluation is to provide the land use classifications by percentage with the Blue Line LRT/Gold Line LRT study area and document land uses that may be unique to the study area.

Economic Development

The economic development assessment was designed to document key economic development areas within the Blue Line LRT/Gold Line LRT study area, as identified in the CoA’s *Imagine Austin Comprehensive Plan*. (CoA, 2012). Additionally, emerging projects were identified from the City’s Planning GIS Applications database (CoA, 2019).

3.2.2 Results

Land Use

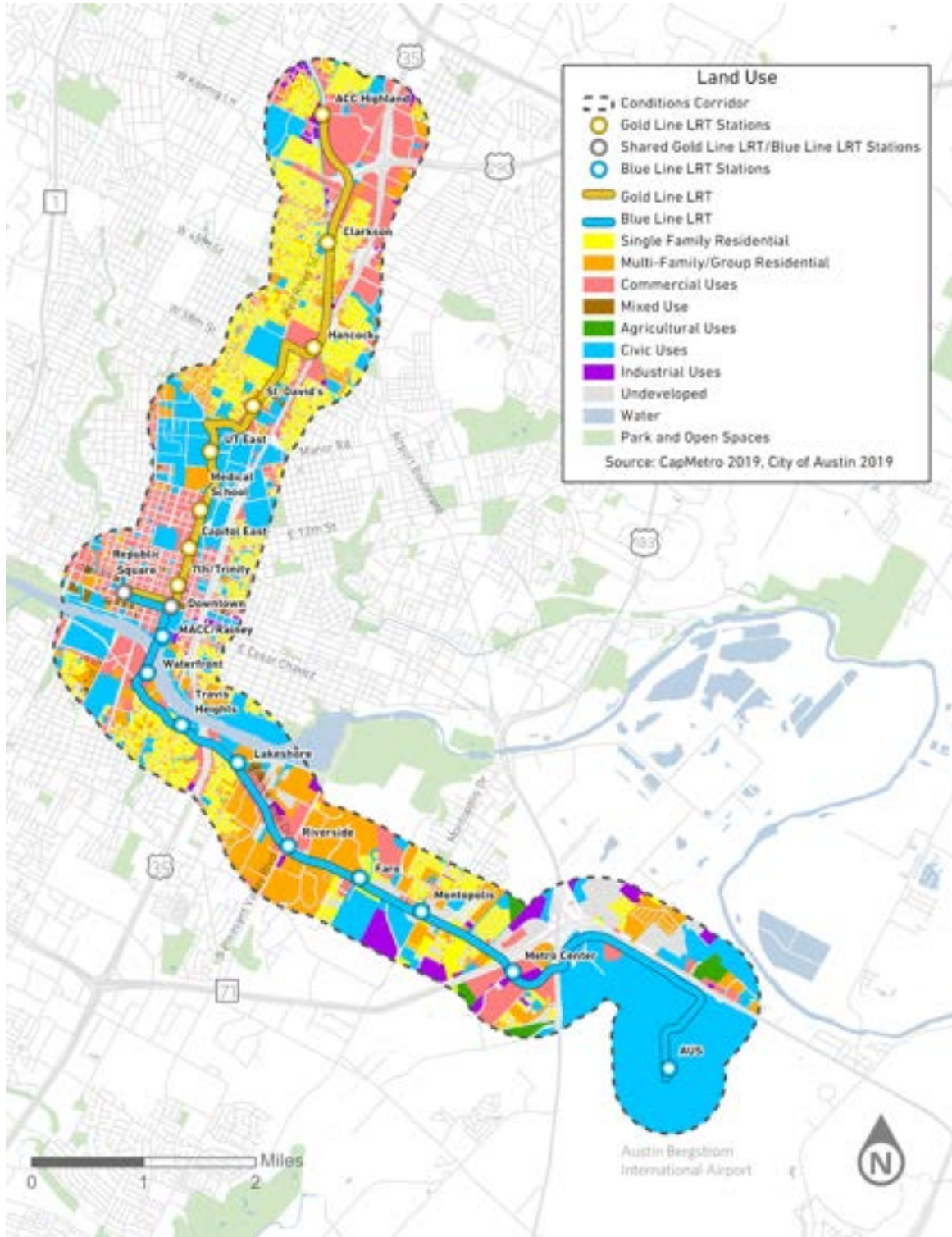
Existing land use within the Blue Line LRT/Gold Line LRT study area is primarily single-family residential, aviation, apartment/condo, and commercial uses, as shown in **Table 3.2-1** and depicted on **Figure 3.2-1**.

Table 3.2-1 Land Uses in the Blue Line LRT/Gold Line LRT Study Area

Land Use Category	Percentage of Blue Line LRT/Gold Line LRT study area	Land Use Category	Percentage of Blue Line LRT/Gold Line LRT study area
Single Family	18.2%	Agricultural	1.1%
Aviation	14.8%	Transportation	0.8%
Apartment/Condo	11.1%	Group Quarters	0.8%
Commercial	10.5%	Cemetery	0.8%
Office	6.7%	Golf Courses	0.8%
Educational	5.0%	Mixed Use	0.7%
Undeveloped	4.9%	Hospital	0.4%
Parks/Greenbelts	4.2%	Retirement Housing	0.4%
Meeting and Assembly	3.7%	Railroad Facilities	0.4%
Common Areas	2.6%	Three/Fourplex	0.4%
Duplexes	2.4%	Utilities	0.4%
Government Services	2.1%	Cultural Services	0.2%
Parking	1.8%	Miscellaneous Industrial	0.1%
Mobile Homes	1.7%	Streets and Roads	0.1%
Warehousing	1.7%	Large-lot Single Family	0.1%
Manufacturing	1.4%	Agricultural	1.1%

Source: CoA, 2018

Figure 3.2-1 Land Use within the Blue Line LRT/Gold Line LRT Study Area



Source: CMTA, 2019. CoA, 2019

The largest areas of land in the Blue Line LRT/Gold Line LRT study area are occupied by UT at Austin, AUS, the State of Texas Capitol Complex, the Highland Mall redevelopment, and several parks and recreational trail systems along Lady Bird Lake. The Blue Line LRT/Gold Line LRT study area also traverses Downtown Austin, which includes a mix of office, commercial, and multi-family uses.

Economic Development

The CoA’s Comprehensive Plan, *Imagine Austin* (2012), identified 50 activity centers and 25 activity corridors in which to focus economic and land development. The plan identifies compact and walkable activity centers and corridors, as well as job centers, and coordinates them with future transportation improvements. These centers and corridors allow people to reside, work, shop, access services, and recreate without traveling far distances. Within them, the design and scale of buildings and the design and availability of parks and gathering spaces will welcome people of all ages and abilities. They will be walkable, bikeable, and connected to one another, the rest of the city, and the region by roads, transit, bicycle routes and lanes, and trails.

The Blue Line LRT/Gold Line LRT study area connects some of the largest Activity Centers within southeast and central Austin (see **Figure 3.2-2**). It connects areas of high employment concentration such as Downtown, the Capitol complex, and the UT, with the AUS and residential areas along Riverside Drive and throughout central Austin. As population and jobs continue to grow in the Austin area, additional Activity Centers continue to emerge along the study area. The eight Activity Centers in the Blue Line LRT/Gold Line LRT study area are listed in **Table 3.2-2**. The table also provides the type of center as recommended by the comprehensive plan.

Table 3.2-2 Imagine Austin Activity Centers within the Blue Line LRT/Gold Line LRT study Area

Activity Center	Center Type
Mueller Station	Town Center
Downtown	Regional Center
Crestview Station	Town Center
Riverside Stations	Town Center
South Central Waterfront	Regional Center
Plaza Saltillo	Neighborhood Center
Highland Mall Station	Regional Center
McKinney Center	Job Center

Source: CoA, 2012

Figure 3.2-2 Imagine Austin Activity Centers along the Blue Line LRT/Gold Line LRT Study Area



Source: CoA, 2019

Of the Imagine Austin Activity Corridors, 15 are located along or are crossed by the Blue Line LRT/Gold Line LRT study area as shown in **Table 3.2-3**.

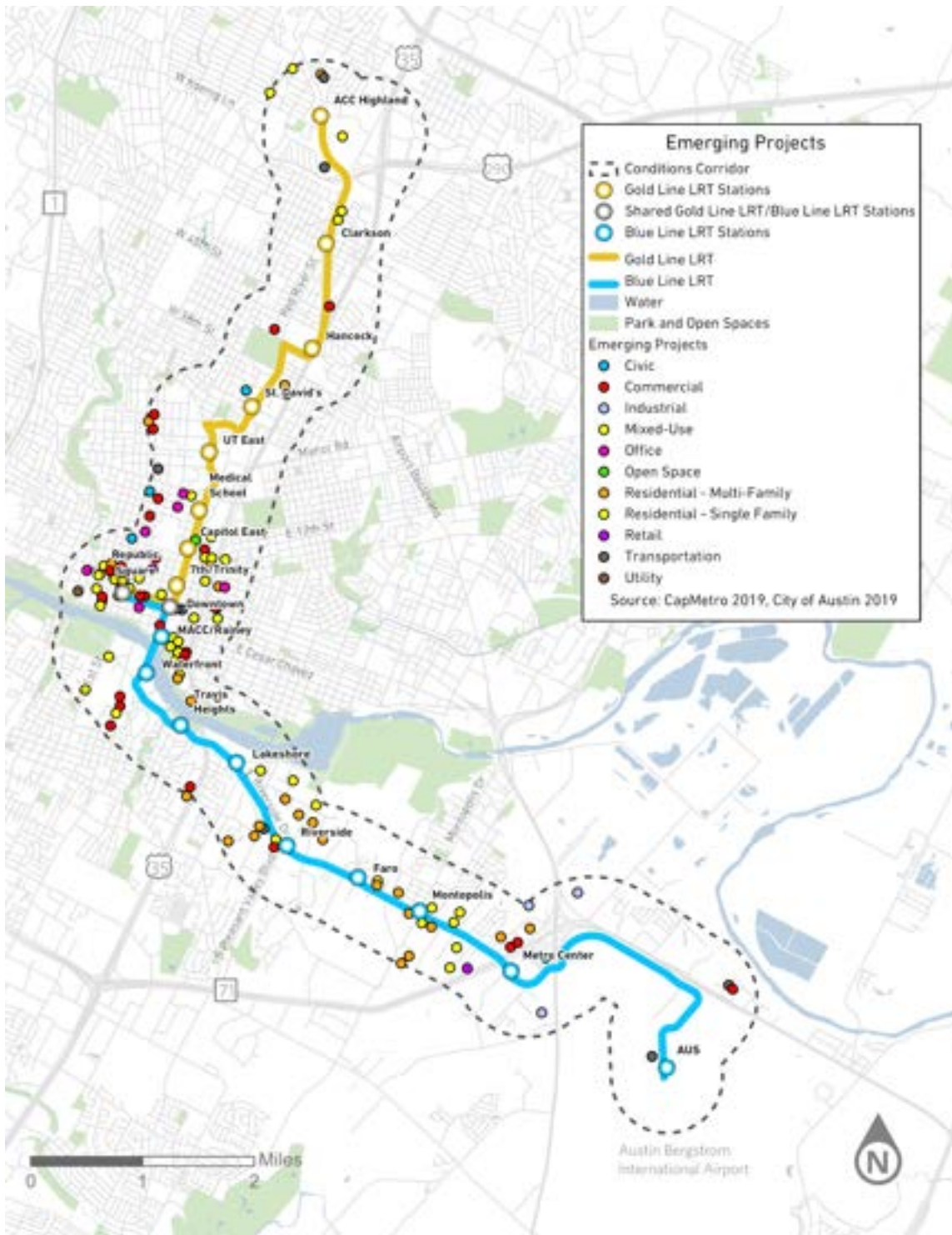
Table 3.2-3 Imagine Austin Activity Corridors within the Blue Line LRT/Gold Line LRT Study Area

Activity Center Name	Activity Center Name
Airport Blvd	Pleasant Valley
East 7th St	12 th Street
51st Street / Airport / 53rd Street	MLK
East Cesar Chavez	South First
South Congress	Lamar Boulevard
11 th Street	Manor/Springdale/Cameron
5th/6th Streets/Lake Austin Blvd	Cameron Road/Dessau
Riverside Drive	

Source: CoA, 2012

In addition to the Activity Centers and Activity Corridors, the CoA also provides a database of emerging projects, defined as prominent projects in planning or construction phases in and around Austin. As shown in **Figure 3.2-3**, as of December 2019, there are 150 emerging projects within the Blue Line LRT/Gold Line LRT study area, including office, mixed use, single family residential, multifamily residential, and commercial developments (CoA, 2019). These projects link many emerging development nodes and place-making opportunities in Downtown Austin, the South-Central Waterfront District and the East Riverside Corridor. As previously stated, the Blue Line LRT/Gold Line LRT study area connects important destinations such as the UT at Austin, Austin Community College, the Texas State Capitol Complex, St. David’s Medical Center, the Dell Seton Medical Center, the Austin Convention Center, and AUS.

Figure 3.2-3 Emerging Projects within the Blue Line LRT/Gold Line LRT Study Area



Source: CoA, 2019

3.3 Neighborhoods

The following sections discuss demographics, and community characteristics, and Environmental Justice (EJ) communities within the Blue Line LRT/Gold Line LRT study area.

3.3.1 Methodology

Demographics

Demographics are defined as the statistical information of the human population and particular groups to identify characteristics such as age, income, and race. These demographic indicators are used to identify potential social and economic impacts or benefits as a result of actions from a project such as the Blue Line and Gold Line. In addition, demographics can provide information to identify transit dependent populations to further assess the need for additional transit service.

The Blue Line LRT/Gold Line LRT study area analysis assessed existing and future population and employment conditions using the CAMPO 2040 model. The 2010 base year and 2040 projected population and employment numbers for the Traffic Analysis Zones (TAZs) are used to derive the residential and employment growth within the Blue Line LRT/Gold Line LRT study area.

The Blue Line LRT/Gold Line LRT study area analysis also recognized that low-income populations, children, elderly populations, people with disabilities, and zero-car households are traditionally transit-dependent populations and can benefit from improved access to transit to meet their mobility needs. Block group data from the U.S. Census Bureau's 2013-2017 American Community Survey (ACS) 5-year estimates for the Blue Line LRT/Gold Line LRT study area were used to evaluate the potential transit access for Low-Income Populations, Populations Under 18, Populations Over 65, Populations with a Disability, and Zero-Car Households.

Community Characteristics

Community characteristics identified within the Blue Line LRT/Gold Line LRT study area include Neighborhood Planning Areas (NPAs), culturally important properties, and community facilities such as schools and places of worship. Information used to identify community characteristics within the Blue Line LRT/Gold Line LRT study area was obtained from the CoA Open Data Portal (2019) and Google maps (2019).

Environmental Justice

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was issued by President William J. Clinton in 1994 to focus federal attention on the environmental and health effects of federal actions on minority and low-income populations. EO 12898 directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable. Accordingly, "Environmental Justice" (EJ) is the avoidance of unnecessary, inequitable, or unfair impacts to minority or low-income communities.

Minority persons are defined as people belonging to the following racial or ethnic groups: Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and Hispanic or Latino. Low-Income persons are defined as those whose household income is below the federal poverty threshold specified for the size and composition of the household. Capital Metro used 2017 ACS data to identify the percentages of low-income and minority populations located in the Blue Line LRT/Gold Line LRT study area.

3.3.2 Results

Demographics

The population of the five county Austin-Round Rock-San Marcos Metropolitan Statistical Area (MSA), which includes Bastrop, Caldwell, Hays, Travis, and Williamson counties (Central Texas), grew 36 percent from 2010 to 2020 and is forecasted to increase by 76 percent by 2040. Population growth along the Blue Line LRT and Gold Line LRT study areas are projected to outpace the city and county averages. Similarly, the population within a ½-mile radius of the Blue Line LRT was approximately 55,094 in 2010 grew 44 percent to 79,083 in 2020. It is forecast population ½-mile radius of the Blue Line LRT will increase to 115,512 (46 percent) by 2040. In addition, the population within a ½-mile radius of the Gold Line LRT was approximately 44,109 in 2010 and grew 43 percent to 63,008 in 2020. It is forecast population ½-mile radius of the Gold Line LRT will increase to 92,585 (47 percent) by 2040. (See **Table 3.3-1** and **Figure 3.3-1**).

Table 3.3-1 Population Growth, 2010-2040

Area	2010	2020	2040	2010 – 2020 Percent Growth	2020 – 2040 Percent Growth
Blue Line LRT	55,094	79,083	115,512	44%	46%
Gold Line LRT	44,109	63,008	92,585	43%	47%
City of Austin	777,710	976,180	1,314,551	26%	35%
Travis County	1,001,490	1,250,211	1,709,791	25%	37%
5-County MSA Region	1,675,419	2,282,118	4,005,843	36%	76%

Source: CAMPO, 2015

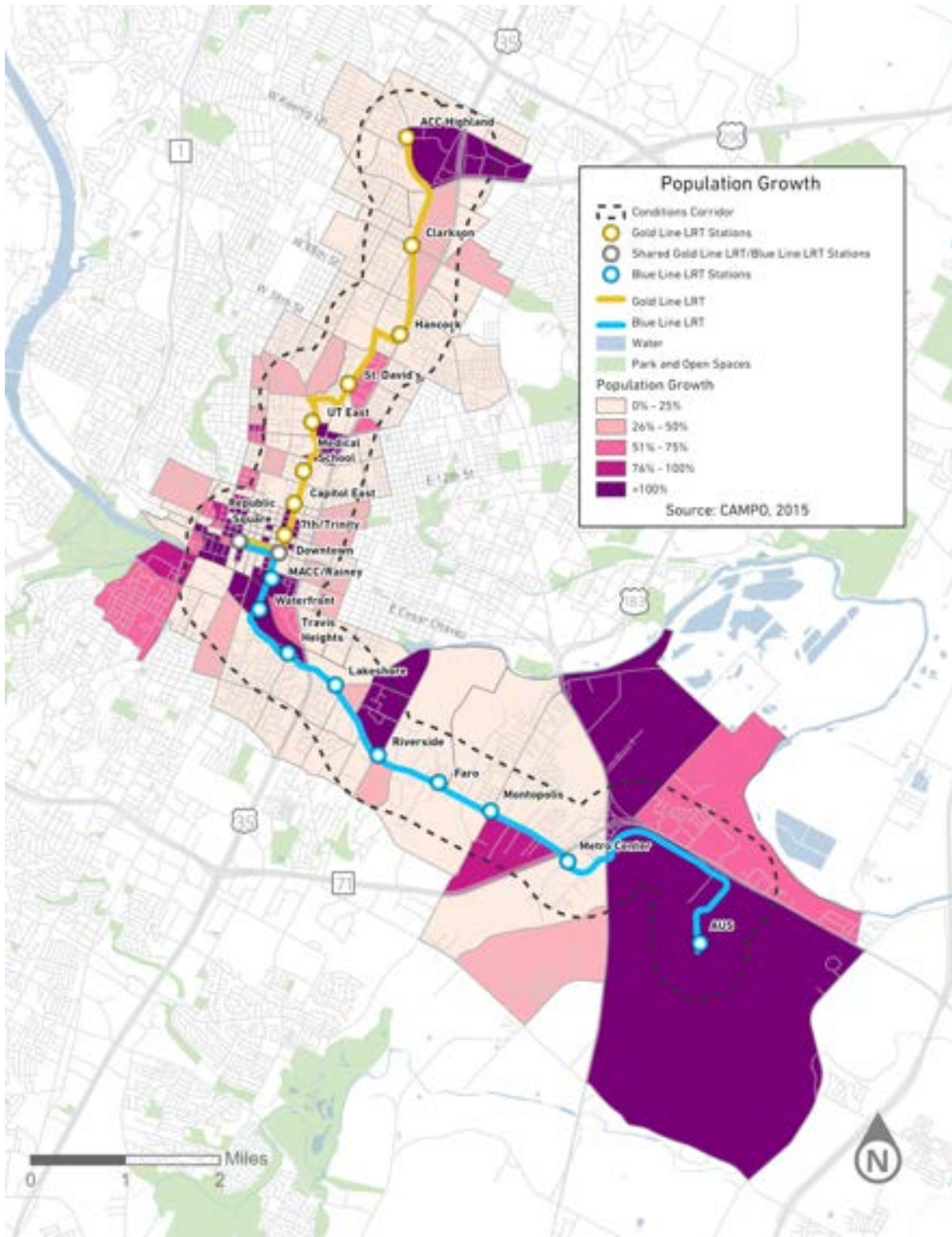
CAMPO estimates that nearly 2.3 million people will be working in the five-county MSA by the year 2040, an increase of 104 percent from 2020. Within a ½-mile radius of the Blue Line LRT, employment increased by 21,130 (27 percent) between 2010 and 2020. Employment is expected to increase by 43,833 (44 percent) between 2020 and 2040. Additionally, within a ½-mile radius of the Gold Line LRT, employment increased by 24,066 (20 percent) between 2010 and 2020. Employment is expected to increase by 42,175 (29 percent) between 2020 and 2040. (See **Table 3.3-2** and **Figure 3.3-2**)

Table 3.3-2 Employment Growth, 2010-2040

Area	2010	2020	2040	2010 – 2020 Percent Growth	2020 – 2040 Percent Growth
Blue Line LRT	79,315	100,445	144,278	27%	44%
Gold Line LRT	123,151	147,217	189,392	20%	29%
City of Austin	512,251	713,752	1,166,435	39%	63%
Travis County	563,637	760,507	1,195,660	35%	57%
5-County MSA Region	760,292	1,127,623	2,296,746	48%	104%

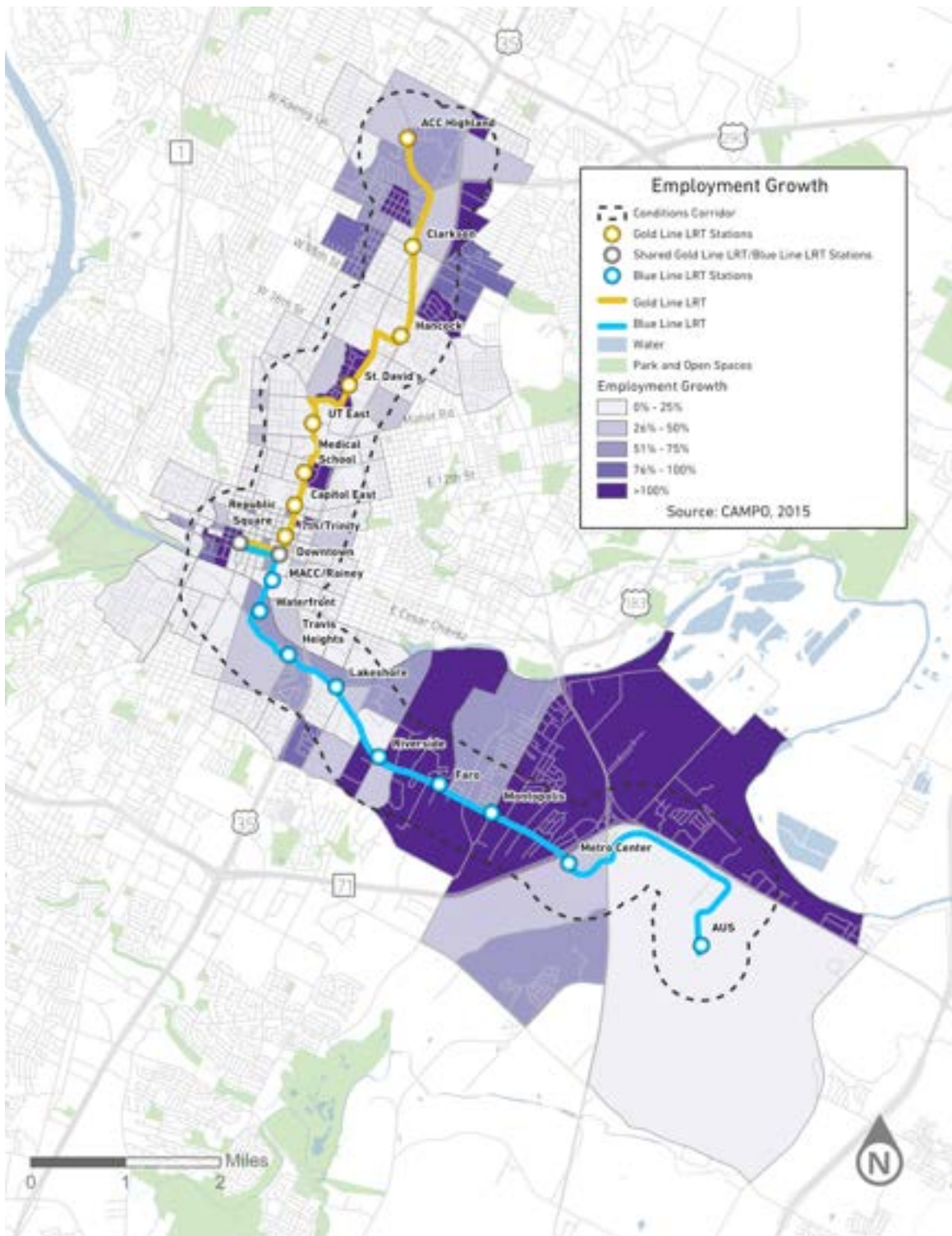
Source: CAMPO, 2015

Figure 3.3-1 Population Growth within the Blue Line LRT/Gold Line LRT Study Area, 2020-2040



Source: CAMPO, 2015

Figure 3.3-2 Employment Growth within the Blue Line LRT/Gold Line LRT Study Area, 2020-2040



Source: CAMPO, 2015

Table 3.3-3 provides demographic information for the population residing along the Blue Line LRT/Gold Line LRT study area, which could help identify those who are dependent on transit.

Table 3.3-3 Transit-Dependent Populations Surrounding the Blue Line LRT/Gold Line LRT Study Area

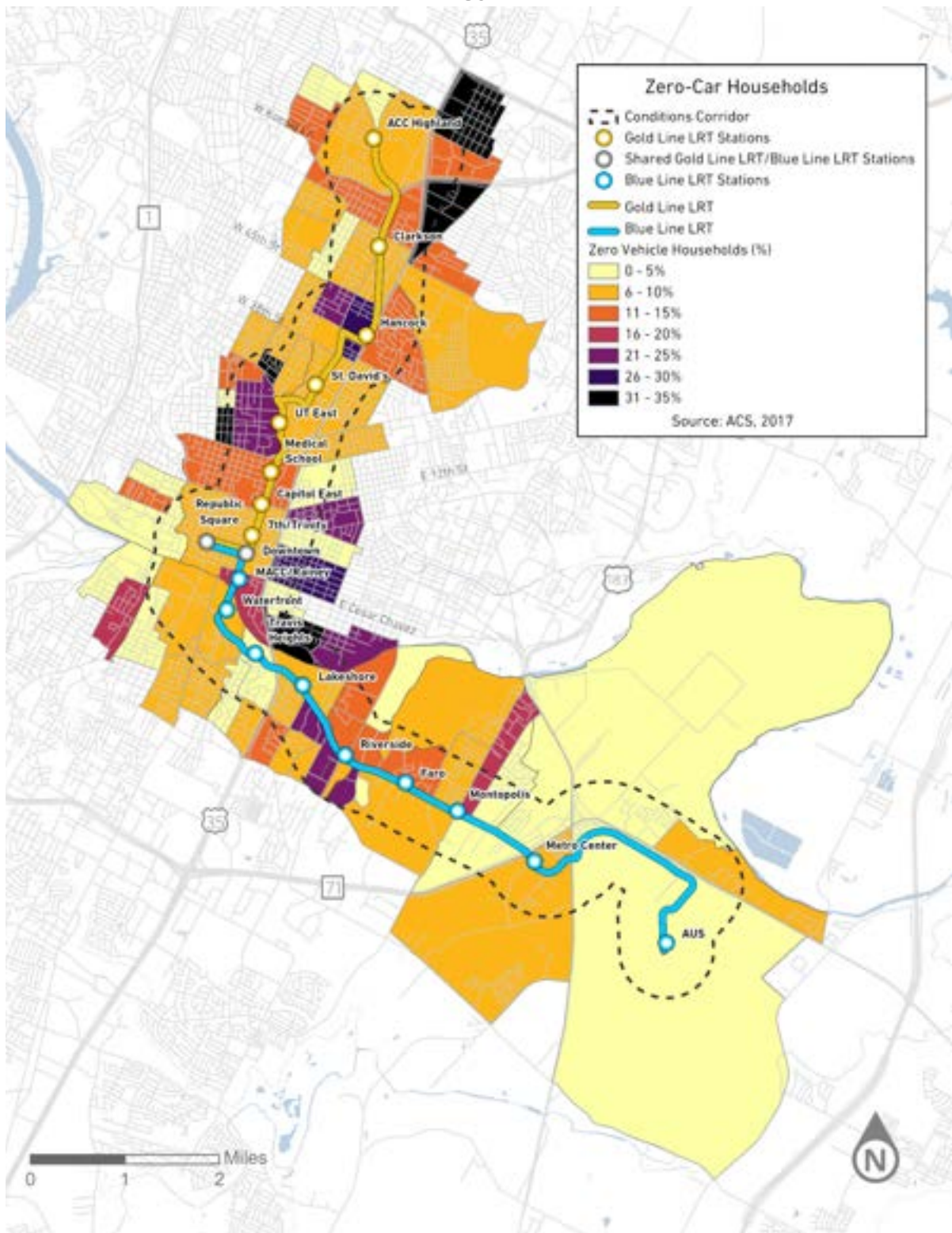
Location	Percent Low-Income Population	Percent Zero-Car Households	Percent Population Under 18 Years	Percent Population 65 Years and Over	Percent Population with a Disability
Travis County	14%	5%	23%	9%	9%
CoA	15%	6%	21%	8%	9%
Blue Line LRT/Gold Line LRT Study Area	26%	11%	13%	6%	9%

Source: ACS, 2017

The Blue Line LRT/Gold Line LRT study area has higher percentages of residents living below the federal poverty level and higher percentages of zero-car households than the county and city averages. Zero-car household percentages within the Blue Line LRT/Gold Line LRT study area are presented in **Figure 3.3-3**. Many of the zero-car households are located near UT at Austin or in areas with high amounts of student housing. Other locations in proximity to Downtown also have a higher proportion of zero-car households as the need to own a car is lessened when one is in proximity to major job centers (e.g. Downtown and UT). Areas with a particularly high rate of zero-car households, but located away from major job centers, are the St. Johns and Windsor Park neighborhoods near I-35 and E. Highway 290. These areas have high concentrations of residents who may or may not have access to a personal car and are, therefore, dependent on public transportation. East of Highway 183, the land use becomes much more auto-oriented.

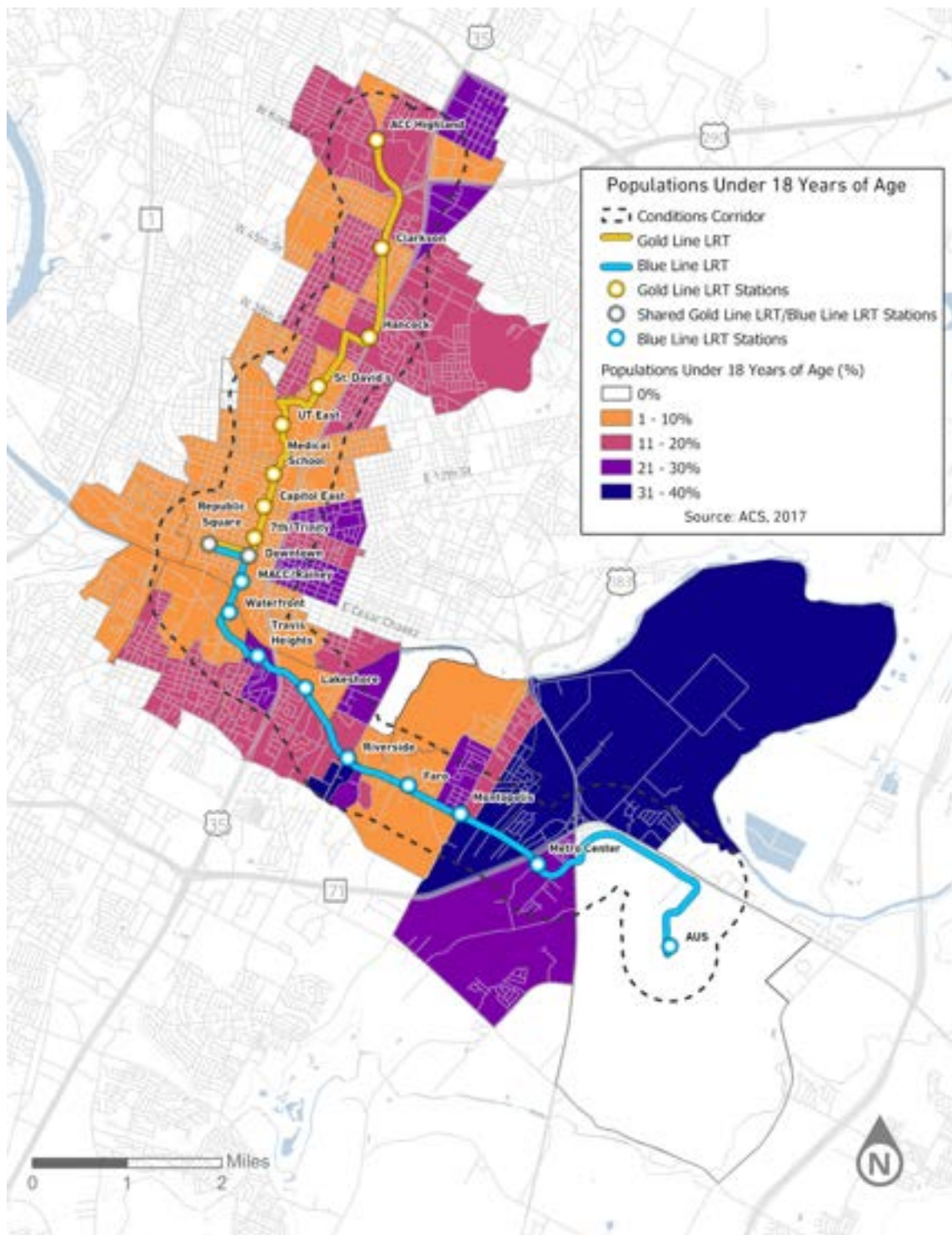
The median age for residents within the block groups that intersect the Blue Line LRT/Gold Line LRT study area is 31 years. Approximately 13 percent of the population residing along the Blue Line LRT/Gold Line LRT study area are under 18 years, and residents 65 years or older make up approximately 6 percent of the population, illustrating a younger population (**Figure 3.3-4**). These two groups combined are typically described as transit-dependent. Additionally, several of the census block groups that intersect the Blue Line LRT/Gold Line LRT study area have percentages of populations with a disability greater than 9 percent, which is greater than the CoA and Travis County averages see (**Figure 3.3-5**).

Figure 3.3-3 Zero-Car Households within the Blue Line LRT/Gold Line LRT Study Area



Source: U.S. Census Bureau's ACS 2013-2017 5-year estimates

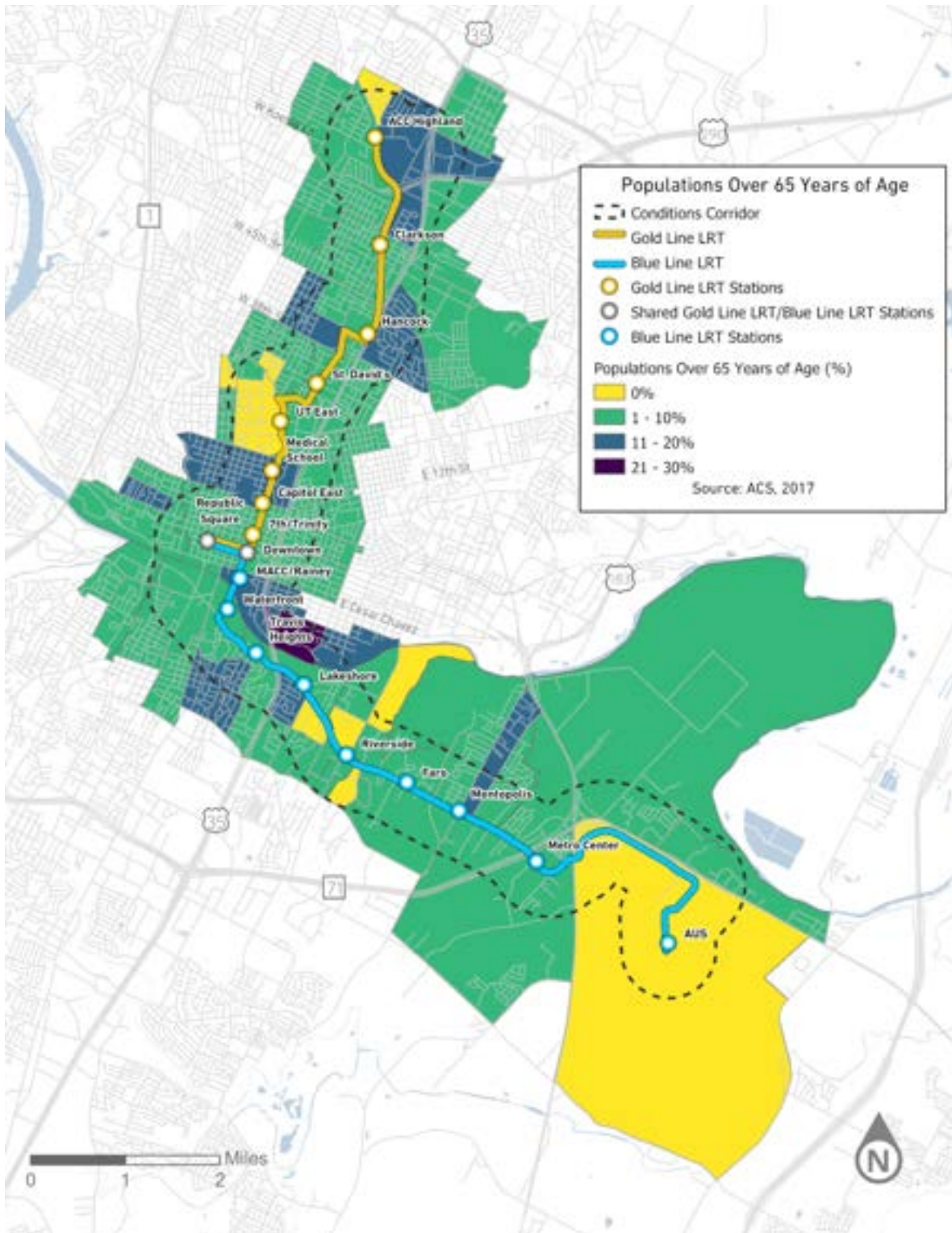
Figure 3.3-4 Populations Under 18 Years of Age within the Blue Line LRT/Gold Line LRT Study Area



Source: U.S. Census Bureau's ACS 2013-2017 5-year estimates

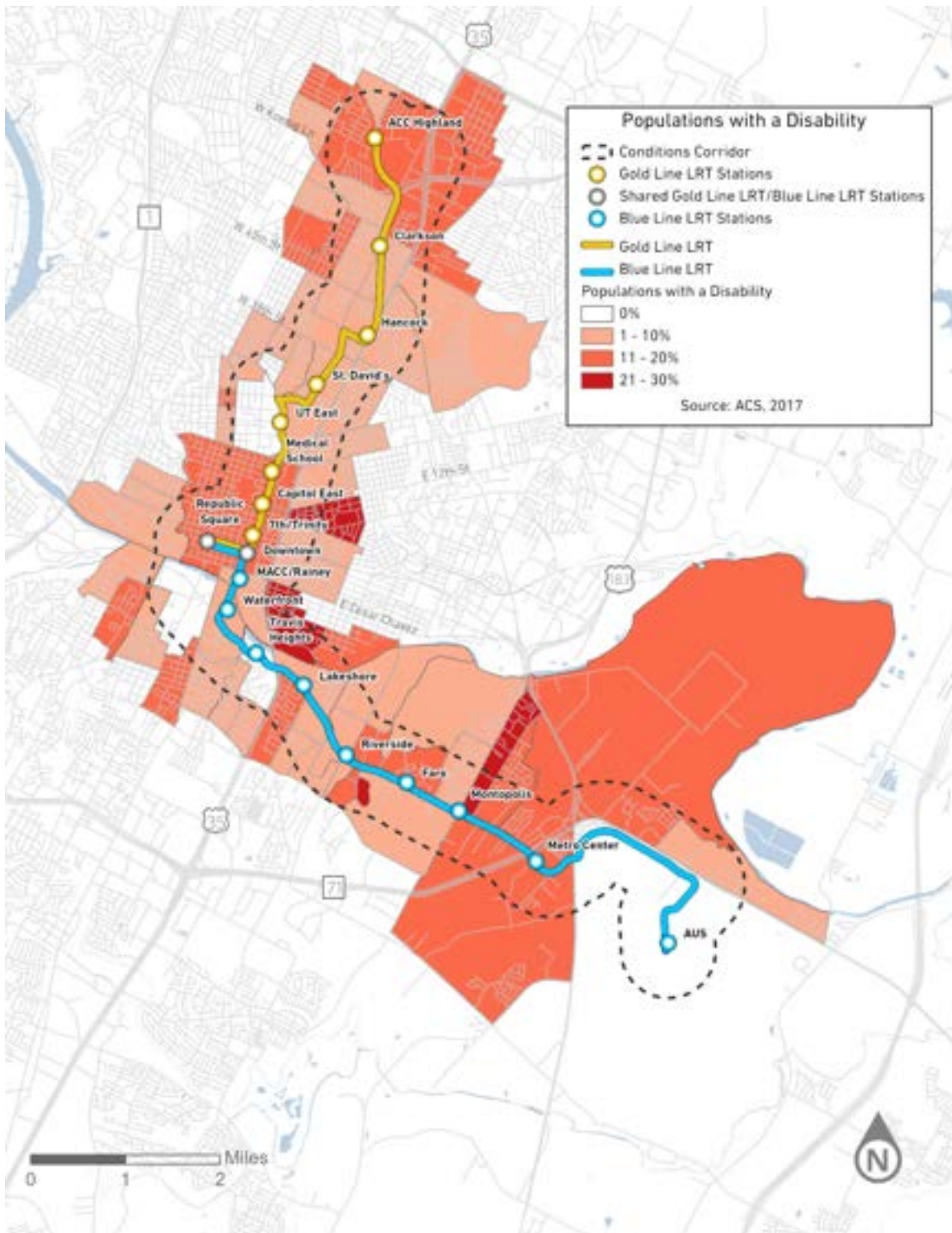
Note: No demographic data are available for the white areas within the study area buffer.

Figure 3.3-5 Over 65 Years of Age within the Blue Line LRT/Gold Line LRT Study Area



Source: Source: U.S. Census Bureau's ACS 2013-2017 5-year estimates

Figure 3.3-6 Populations with a Disability within the Blue Line LRT/Gold Line LRT Study Area



Source: Source: U.S. Census Bureau's ACS 2013-2017 5-year estimates

Note: No demographic data are available for the white areas within the study area buffer.

Community Characteristics

There are currently 16 active NPAs within the Blue Line LRT/Gold Line LRT study area, as shown in **Figure 3.3-7** and described in **Table 3.3-4**. Each NPA contains a plan for future land uses, as well as ordinances acknowledging the CoA’s adoption of neighborhood plans. The southern terminus for the Blue Line LRT/Gold Line LRT study area does not contain an NPA, nor does the portion of the Blue Line LRT/Gold Line LRT study area in Downtown Austin. However, City Council adopted the *Downtown Austin Plan* in December 2011 that was a result of Downtown stakeholder engagement (CoA, 2011). Additionally, the *2040 Master Plan* for the AUS was published in December 2018 after many months of forecasting, demand-capacity analysis, alternatives analysis and community involvement; it is ultimately intended to guide the future development and growth of AUS (ABIA, 2018).

Table 3.3-4 Active Neighborhood Planning Areas within the Blue Line LRT/Gold Line LRT Study Area

Bouldin Creek	Hyde Park
Highland (Brentwood/Highland Combined)	Montopolis
West University (Central Austin Combined)	North Loop
Central East Austin	Old West Austin
East Cesar Chavez	Southeast Combined
Parker Lane (East Riverside/Oltorf Combined)	St. Johns (St. Johns/Coronado Hills Combined)
South River City (Greater South River City Combined)	Windsor Park (University Hills/Windsor Park Combined)
Holly	Upper Boggy Creek

Source: CoA, 2019e

There are currently 25 public and private schools surrounding the Blue Line LRT/Gold Line LRT study area, including elementary, middle, and high schools, the Texas School for the Deaf, charter schools, preschools, and other various private schools. Additionally, there are six daycare facilities located within a ½-mile of the Blue Line LRT/Gold Line LRT study area.

Also, within the Blue Line LRT/Gold Line LRT study area is one public university (UT), one public community college (ACC), one private college (Acton School of Business), one private graduate school (Seminary of the Southwest), and five vocational and trade schools. The student enrollment at UT is over 51,000 with the majority of these students residing on campus or in neighborhoods adjacent to the campuses (UT, 2019). Additionally, ACC Highland is the largest ACC campus with over 6,000 students enrolled (ACC, 2019).

There are also three hospitals, four medical clinics, and one pediatrician’s office within the Blue Line LRT/Gold Line LRT study area. Additionally, six libraries, the Festival Beach Community Garden, the Hancock Recreation Center, the Long Center for the Performing Arts, and the Dougherty Arts Center are located along the Blue Line LRT/Gold Line LRT study area. There are also 44 places of worship surrounding the Blue Line LRT/Gold Line LRT study area. See **Appendix B-1** for details on community facilities along the Blue Line LRT/Gold Line LRT study area.

Figure 3.3-7 NPAs within the Blue Line LRT/Gold Line LRT Study Area



Source: CoA, 2019

Environmental Justice

This subsection describes the EJ community along the Blue Line LRT/Gold Line LRT study area, as defined by block group geographies. **Table 3.3-5** describes EJ populations. The Blue Line LRT/Gold Line LRT study area has a substantially higher percentage of low-income residents than the CoA or Travis County, and the percent of minority residents is consistent with the CoA and Travis County. For a detailed breakdown of minority and low-income populations see **Appendix B-1**.

Table 3.3-5 EJ Populations within the Blue Line LRT/Gold Line LRT Study Area

Location	Total Population	Percent Minority	Percent Low-Income*
Travis County	1,176,584	51%	14%
CoA	916,906	51%	15%
Blue Line LRT/Gold Line LRT Study Area	69,848	51%	26%

Source: ACS, 2017

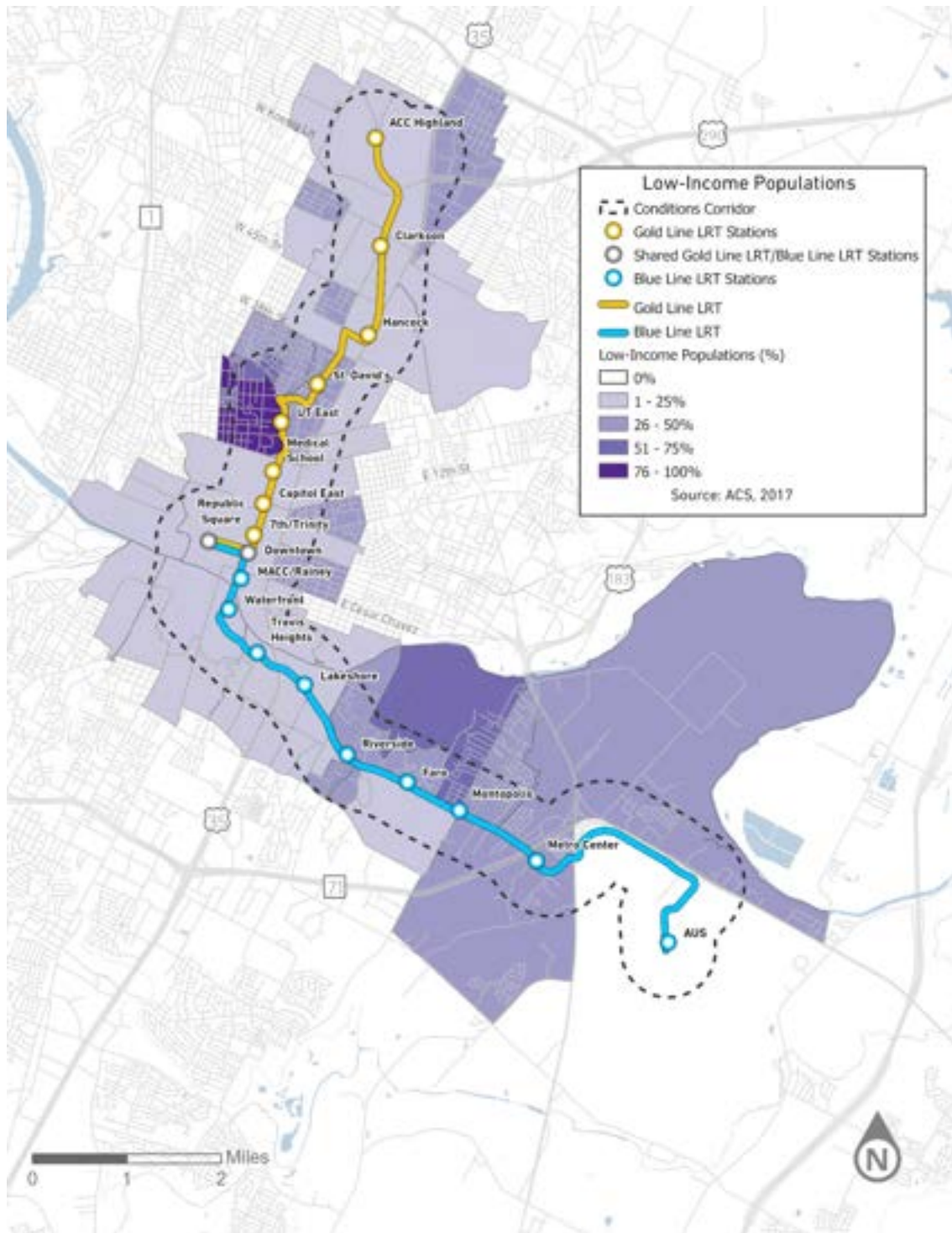
*People whose poverty status is undefined are excluded from Census Bureau poverty tabulations. For some persons, such as unrelated individuals under age 15, poverty status is not defined. For the decennial censuses and the ACS, poverty status is also undefined for people living in college dormitories and in institutional group quarters. Thus, the total population in poverty tables--the poverty universe--is slightly smaller than the overall population.

The EJ communities identified by this analysis are as follows:

- 32 block groups have minority populations greater than 50 percent of the total population for the block group (i.e. predominantly minority block groups).
- 52 block groups have low-income populations greater than 15 percent of the total population for the block group (i.e. block groups with percent low-income populations greater than the CoA and Travis County averages).
- The highest percentage minority group along the Blue Line LRT/Gold Line LRT study area is Hispanic (35.3 percent of the total population).

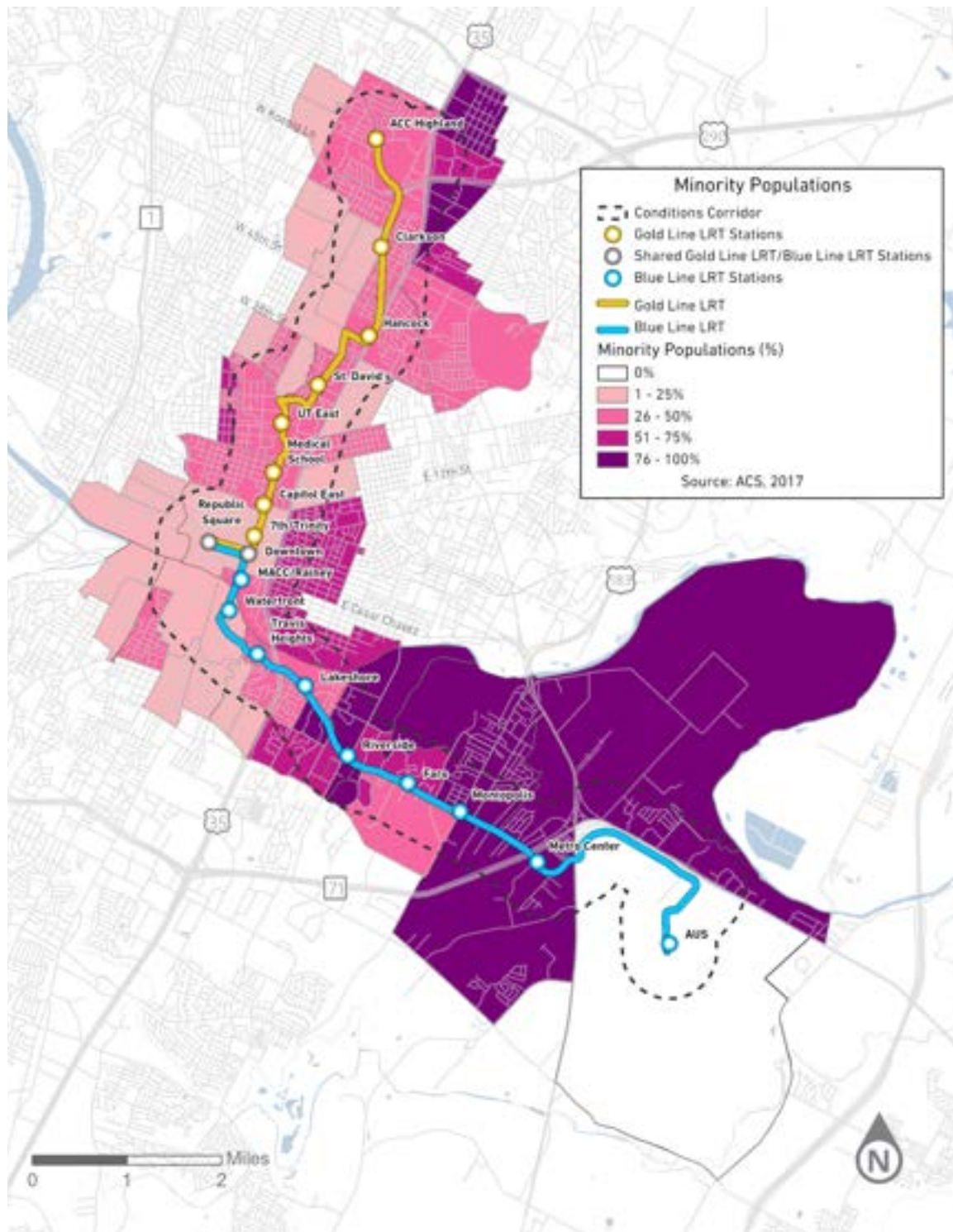
As shown on **Figures 3.3-8** and **3.3-9**, EJ communities are located throughout the Blue Line LRT/Gold Line LRT study area. Of note, a small cluster of minority communities are located near the northern terminus of the corridor to the east of I-35 and a larger cluster of minority communities is located south of Lady Bird Lake and east of I-35 in the East Riverside corridor. The low-income EJ communities are generally in the same location with an additional cluster around UT, representing the large student population.

Figure 3.3-8 Low-Income Populations within the Blue Line LRT/Gold Line LRT Study Area



Source: U.S. Census Bureau's ACS 2013-2017 5-year estimates
 Note: No demographic data are available for the area near AUS.

Figure 3.3-9 Minority Populations within the Blue Line LRT/Gold Line LRT Study Area



Source: U.S. Census Bureau's ACS 2013-2017 5-year estimates
 Note: No demographic data are available for the area near AUS.

3.4 Visual Quality

3.4.1 Methodology

FHWA describes visual quality as an aesthetic issue and recognizes visual perception of the natural environment, cultural environment, and the project's composition (built environment) in its *Visual Impact Assessment* procedures (FHWA 2015). Natural harmony, cultural order, and project coherence are three types of visual perceptions corresponding to the three visual resources, respectively. In addition, the landscape composition and vividness of the project should be compared to the existing composition. The project should include visual preferences from the affected population.

Visual quality can be evaluated based on viewers' perception of visual resources that compose the visual character of a particular scene. Neighbors and travelers may evaluate the visual quality of specific visual resources differently based on the factors of natural harmony, cultural order, and vividness, as defined below.

- Natural harmony – what a viewer perceives about the natural environment, labeling the environment as being either harmonious or inharmonious.
- Cultural Order – how viewers perceive the organization of the cultural visual environment, or the man-made built environment, including buildings, transportation facilities, structures or historical artifacts, labeling the built environment as orderly or disorderly.
- Vividness – the degree of memorable, dramatic or distinctive components of the landscape. Vividness is an overall aggregation of topography, vegetation, water features and cultural elements created by people. Each of the segments received subjective ratings for the three categories, ranging from low, medium-low, medium, medium-high, and high. The sum of the three categories' scores provides the visual quality assessment for a particular segment. In addition to the visual quality assessment, each segment has received a viewer sensitivity rating.

Low – refers to areas lacking valued or having degraded visual resources with no aesthetically pleasing composition. An example would be a disjointed, abandoned industrial area adjacent to a heavily trafficked highway.

Moderately low – refers to areas containing some visual resources but lacking a coherent and aesthetically pleasing composition. An example would be poorly maintained commercial area adjacent to a new community center.

Moderate – refers to areas primarily of visual resources combined in an aesthetically pleasing composition with low levels of disruptive visual detractors. An example would be a cohesive, well-maintained development. This could be urban, suburban or rural.

Moderately high – refers to areas of visual resources combined in an aesthetically pleasing composition, expressing a sense of place and lacking prominent disruptive visual detractors. An example would be a planned development that includes open space and trails, or well-maintained agricultural lands with open vistas.

High – refers to areas comprising visual resources free of disruptive visual detractors and with a strong sense of place. An example would be federally protected, undeveloped land with unique, scenic vistas.

Viewer sensitivity is the degree to which viewers are sensitive to changes in the visual character of visual resources. Viewer sensitivity is assessed on a scale of low, moderate and high. Viewer sensitivity is the consequence of two factors, viewer exposure and viewer awareness. Sensitivity to views varies among viewer types, which would, therefore, affect the significance of the impact. A definition for viewer exposure and viewer awareness follows:

- Viewer exposure – a measure of the proximity, extent and duration of a viewer to a visual resource. Proximity is the distance between the viewer and the visual resource being viewed. Extent is the number of people viewing the visual resource. Duration is the length of time the visual resource is viewed.
- Viewer awareness – a measure of attention (level of observation based on routine and familiarity), focus (level of concentration) and protection (legal and social constraints on the use of visual resources).

Viewers using this corridor are experiencing visual changes to the environment due to the construction of new buildings and multimodal pathways. Capital Metro currently provides rapid transit service in the corridor. Viewer sensitivity is a result of the viewers' response to the visual environment including exposure and awareness of visual resources. The degree of exposure to visual resources includes a viewers' location or proximity, viewers' duration of exposure, and the number of viewers in a given location. Visual awareness is a measure of the viewers' attention and focus on visual resources and the level of protection of visual resources. To understand and rate viewer sensitivity, key resources include natural visual resources can be geological or biological features such as designated forests, open space, or river. Cultural visual resources are man-made such as buildings or artifacts that hold importance to the community; the Capitol View Corridors are protected by the CoA's ordinance and protect the view of the Capitol dome.

A key component of assessing visual quality is to determine which views to base evaluations, because it is impossible to consider the viewshed of all viewer types from all locations. Therefore, key visual resources are used in the evaluation and come from a variety of places. Natural visual resources are primarily geological or biological in origin, but may be altered by people, such as maintenance and beautification of a designated forest, open space, or river. Cultural visual resources include the man-made built environment composed of buildings and artifacts of importance to the community. For example, the CoA has an ordinance to protect the view of the Capitol dome from various points within the city (referred to as Capitol View Corridors, **Figure 3.4.1**).

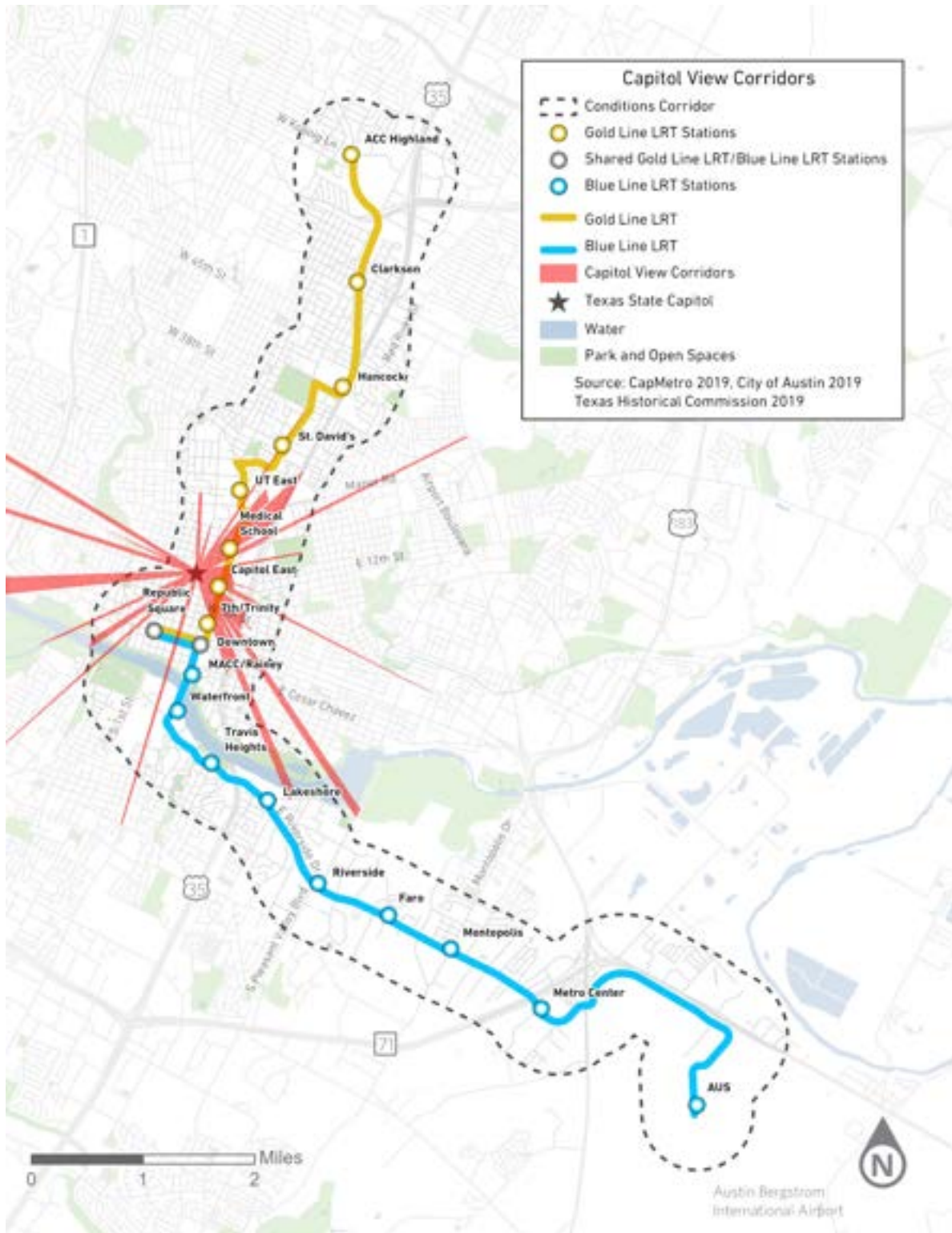
3.4.2 Results

This section provides a visual quality assessment and viewer sensitivity rating for each segment. Guidance for the aesthetic character of the community is regulated by local plans and ordinances from the CoA and also from the NPAs in the Blue Line LRT/Gold Line LRT study area.

Segment 1: Highland (ACC Highland to 45th Street)

The boundaries for Segment 1 extend from the Austin Community College at the northern terminus to 45th Street. The northern portion of this segment is characterized by the college campus of ACC surrounded by multifamily and single-family housing, office, commercial, and industrial facilities, civic buildings, open spaces, and transportation including the Interstate 35 and Highway 290 interchange. Segment 1 has a low density of visual resources.

Figure 3.4-1 Capitol View Corridors



Source: CMTA, 2019; CoA, 2019

Segment 2: Hancock (45th Street to Martin Luther King Boulevard to IH-35)

The boundaries of Segment 2 extend from 45th Street to Martin Luther King Jr. Boulevard and I-35. The northern portion of the segment is characterized by mostly by single family homes, commercial and office facilities, and open spaces. The southern portion is mainly civic buildings with multifamily and single-family housing, commercial and utilities, as well as transportation, roads, and mixed use. The Blue Line LRT/Gold Line LRT is adjacent to a golf course. The University of Texas at Austin is a large landmark in this segment of the corridor. The density of visual resources in Segment 2 is higher than Segment 1 yet much lower than Segment 3.

Segment 3 Central (Martin Luther King Jr. Boulevard to IH-35)

The central segment is considered the downtown area which is characterized mainly by office buildings, commercial, utilities, industrial, and parks. Single family and multifamily housing and mixed use are found near I-35 and along the riverfront. The south end of Segment 3 would provide for mainly commercial and multifamily and single-family housing including access to the parks. Several historic districts are found in the central segment of the Blue Line LRT/Gold Line LRT corridor where some lie along the river. Segment 3 has the highest density of visual resources in the corridor.

Segment 4 East Riverside (IH-35 to Riverside Drive/US 183)

This segment is characterized by multi-family, commercial, large-lot single family, open space, industrial, and office uses. There is a low density of visual resources in Segment 4.

Segment 5: Airport (Riverside Drive/US 183 to AUS)

The Austin Bergstrom International Airport (AUS) occupies the majority of this segment with multifamily and single-family housing and large-lot single family housing, mobile homes, civic, office, industrial, and undeveloped lands. There is a very low density of visual resources in Segment 5.

Results are summarized in **Table 3.4-1** Visual Quality Assessment.

Table 3.4-1 Visual Quality Assessment

Segment	Natural Harmony	Cultural Order	Vividness	Viewer Sensitivity
1	Low	Moderately -low	Low	Low
2	Moderately-low	Moderate	Moderately-low	Moderate
3	Moderate	Moderate	Moderate	Moderately-high
4	Moderately-low	Low	Moderately-low	Moderate
5	Low	Low	Low	Low

The visual segments illustrating these segments are shown in **Appendix A**. More detail of the key resources can be found in the following sections: for Historic Resources, refer to **Section 3.9.2** Historical and Archeological Resources; for neighborhood resources, refer to **Section 3.3.2** Neighborhoods; for parklands, refer to **Section 3.10.2 Parklands**; and for rivers, streams, and bodies of water, please refer to **Section 3.8.2** Water Resources.

Table 3.4-2 presents the identified resources and whether the project would have to comply with the Capitol View Corridor restrictions. It is important to note that visual impacts will vary based on the mode option. Segments 2, 3, and 4 intersect the Capitol View Corridors.

Table 3.4-2 Visual and Aesthetics Results: Number of Parks, Historic Districts, and Landmarks and Capitol View Corridor Restriction

Alternative	Segment	Number of Parks, Historic Districts, and Landmarks	Capitol View Corridor Restriction
Both	Segment 1 - Primary ACC Highland West	3	No
Both	Segment 1 - Option ACC Highland East	2	No
Both	Segment 2 - Primary Trinity	55	Yes
Both	Segment 2 - Option Red River	46	Yes
Alt 1 Trinity	Segment 3 - Primary New Bridge + Trinity/4 th (Straight Crossing)	151	Yes
Alt 1 Trinity	Segment 3 - Option 1 New Bridge + Trinity/4 th (Angled Crossing at Rainey St.)	165	Yes
Alt 1 Red River	Segment 3 - Option 2 New Bridge + Red River/4 th (Straight Crossing)	163	Yes
Alt 2 1 st Street	Segment 3 - Primary S. 1 st St. Bridge + Trinity/4 th	158	Yes
Alt 2 1 st Street	Segment 3 - Option S. 1 st St. Bridge + Red River/4 th	168	Yes
Both	Segment 4 - Primary Riverside	6	Yes
Both	Segment 5 - Primary AUS	1	No

Note: "Both" = Build Alternative 1 and Build Alternative 2.

As shown in **Table 3.4-1**, Segment 3 has the highest concentration of landmarks within the Blue Line LRT/Gold Line LRT study area buffer.

3.5 Air Quality

Air quality is affected by pollutants generated by both natural and human-caused sources. Of the latter, the largest contributors are generally fossil fuel combustion sources such as transportation and industrial operations. The largest contributors of transportation pollution are motor vehicles. Pollutants of concern for this project include the pollutants emitted from motor vehicles, which include carbon monoxide (CO); particulates; ozone (O₃) and its precursors, including nitrogen oxides (NO_x) and volatile organic compounds (VOCs); air toxics; and greenhouse gases (GHGs). The Clean Air Act (CAA) of 1970 (as amended) establishes

federal policy to protect and enhance the quality of the nation's air resources to protect human health and the environment. The CAA requires that adequate steps be taken to control the release of air pollutants and prevent significant deterioration in air quality. The 1990 amendments to the CAA require federal agencies to determine the conformity of proposed actions with respect to State Implementation Plan (SIP) for attainment of air quality goals.

Regulations implementing the CAA established primary and secondary National Ambient Air Quality Standards (NAAQS) as a basis for assessing air quality. Primary standards set limits to protect public health, including the health of children, the elderly and asthmatics. Secondary standards set limits to protect public welfare, which includes damages to animals, crops, vegetation and buildings. The US Environmental Protection Agency (USEPA) regulates air quality in accordance with the primary and secondary NAAQS. The NAAQS currently regulate six criteria pollutants under the primary standards. These are CO, nitrogen dioxide (NO₂), O₃, lead (Pb), particulate matter (PM) and sulfur dioxide (SO₂). PM standards are further defined into a standard for PM₁₀, regulating particulate matter smaller than 10 microns in diameter and PM_{2.5} regulating particulate matter smaller than 2.5 microns in diameter.

The CAA requires that all states attain compliance by adhering to the NAAQS, as demonstrated by the comparison of measured pollutant concentrations with the NAAQS. The NAAQS represent the maximum levels of background pollution considered acceptable with an adequate margin of safety to protect public health and welfare. These pollutants are typically quantified in units of milligrams per cubic meter (mg/m³), parts per million (ppm), parts per billion (ppb) or micrograms per cubic meter (µg/m³). **Table 3.5-1** shows the NAAQS for the six criteria pollutants.

Of these pollutants, vehicular sources including transit bus and diesel trains contribute significantly to emissions of CO and PM, along with nitrogen oxides (NO_x), hydrocarbons, air toxics, and carbon dioxide (CO₂). Most of the NAAQS pollutants are emitted directly from their sources; however, O₃ is not emitted directly but is formed in the atmosphere through chemical reactions of the precursor pollutants oxides of nitrogen and volatile organic compounds in the presence of sunlight. Electric trains are emission-free at the point of use.

3.5.1 Methodology

Existing conditions for the air quality Blue Line LRT/Gold Line LRT study area, defined as the Austin – Round Rock Metropolitan Statistical Area (ARR MSA) airshed, were developed by reviewing the current attainment status of the ARR MSA with respect to the NAAQS pollutants, reviewing metrological conditions affecting local air quality, and summarizing air quality trends within the Blue Line LRT/Gold Line LRT study area. The main air quality consideration is the regulatory status of the Blue Line LRT/Gold Line LRT study area which primarily determines the needs and requirements for air quality regional planning purposes.

GHG emissions come from transportation sources such as motor vehicles, aircraft, construction equipment, and boats. Burning fossil fuel for electricity also produces GHG emission. In *Greenhouse Gas Emissions from Transit Projects: Programmatic Assessment* (dated January 2017), the FTA states that, “the majority of GHG emissions that light rail projects are expected to generate are operations-related upstream emissions (e.g., emissions associated with the production and generation of the purchased electricity used to power the light rail vehicles). For this reason, the net volume of annual GHG emissions from light rail projects largely depend on the fuel source used for electricity generation.” However, to get estimate whether the projects would result in changes in GHG emissions, Capital Metro measured the potential effects of the LRT projects on vehicle miles traveled (VMT). The change in VMT was obtained using FTA's Simplified Trips-on-Project Software (STOPS) model, which reports a reduction in automobile person miles traveled (PMT) that results when individuals decide to switch their trips from the automobile mode to transit.

Table 3.5-1 National Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Primary Standards	Average Times ¹	Secondary Standards
CO	9 ppm (10 mg/m ³)	8-hour ²	None
	25 ppm (40 mg/m ³)	1-hour ²	None
Pb	0.15 µg/m ³	Rolling 3-Month Average	Same as Primary
NO ₂	100 ppb (0.100 ppm)	1-hour ³	None
	52 ppb (0.053 ppm)	Annual (Arithmetic Mean)	Same as Primary
PM ₁₀	150 µg/m ³	24-hour ⁴	Same as Primary
PM _{2.5}	12 µg/m ³	Annual ⁵	15 µg/m ³
	35 µg/m ³	24-hour ³	Same as Primary
O ₃	0.070 ppm	8-hour ⁶	Same as Primary
SO ₂	75 ppb (0.075 ppm)	1-hour ⁷	None
	None	3-hour ²	0.5 ppm (1300 µg/m ³)

Source: EPA, 2019

Notes:

¹ – The time period for which compliance with the standard is measured

² – Not to exceed more than once a year

³ – 98th percentile, averaged over 3 years

⁴ – Not to be exceeded more than once per year on average over 3 years

⁵ – Annual mean, averaged over 3 years

⁶ – The 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.070 ppm

⁷ – 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years

3.5.1 Results

The greater ARR MSA (including the Central Texas counties of Travis, Williamson, Hays, Caldwell, and Bastrop) is currently in attainment or unclassifiable with respect to all NAAQS pollutants; therefore, the transportation conformity rules do not apply. Air quality is affected by the rate and location of pollutant emissions and meteorological conditions that influence the movement and dispersal of pollutants in the atmosphere. These conditions include wind speed and direction, air temperature gradients, and local topography. The Blue Line LRT/Gold Line LRT study area is located in generally flat to rolling topography that does not hinder or trap air movement like large hills and mountains would. The Central Texas – Austin area climate is humid subtropical with hot summers and generally mild winters. Average temperatures in Austin vary from 42 Fahrenheit (F) in January to 97F in August, with annual average precipitation of approximately 34 inches (Austin Texas Climate, 2019). Prevailing winds for the Austin area are generally out of the south. Austin area weather conditions include extended hot summers and occasional stagnant, foggy conditions during winter with temperature inversions, all of which are conducive to either forming or trapping air pollutants within the lower atmosphere.

With respect to ozone, winter inversions and fog conditions are not as frequent during the year or do not impact ozone exceedances as much as hot summer conditions do. The highest concentrations of ozone form on sunny days with low wind speeds, as high-pressure systems dominate the regional weather and tend to produce clear skies that increase photochemical reaction with stagnate winds (Texas Commission on Environmental Quality (TCEQ), 2019a). The ozone season in Central Texas is roughly April through November and TCEQ forecasts ozone action days during this period for several regions including the Austin metropolitan area.

According to the most recent Air Quality Report for the ARR MSA (Capital Area Council of Governments [CAPCOG], 2018), air pollution levels have remained in compliance with all NAAQS, although the region's 2015-2017 O₃ levels were just 1 percent below the 2015 O₃ NAAQS. However, since 1999, the region's ozone design value shows a steady downward trend with an average ozone decrease of approximately 1.1 ppb per year. The design value for all other NAAQS pollutants is well below the respective NAAQS for the pollutant.

Both the Gold Line LRT and Blue Line LRT are predicted to see a reduction in average weekday VMT by 2040 compared to the No Build Alternative. The average weekday reduction in VMT for the Blue Line LRT as compared to the No Build Alternative is 53,500 in 2040 and 53,800 for the Gold Line. Because of the reduction in VMT, GHG emissions are estimated to decrease with the proposed LRT service from existing conditions. However, as previously stated, the light rail system's electrical consumption may indirectly add GHG emissions related to energy production outside the project corridor. The results of FTA's *Greenhouse Gas Emissions from Transit Projects: Programmatic Assessment* will be incorporated in the EIS.

3.6 Noise and Vibration

Noise and vibration are major concerns regarding the effects of a transit project on the surrounding communities and are key elements of the environmental impact assessment process for public transportation projects. A transit system is often placed near population centers by necessity and may cause noise and vibration at nearby residences and other sensitive types of land use. While vibration from transit projects can be a major concern in underground subway operations, it is less of concern for at-grade and elevated operations. Criteria for determining noise and vibration impacts from the Gold Line and Blue Line transit project was established following FTA's Transit Noise and Vibration Impact Assessment Manual, September 2018 to guide impact evaluations. When impacts are identified from a new or improved transit project, mitigation measures are identified and considered for inclusion in the final design.

3.6.1 Methodology

Existing noise and vibration conditions were developed based on the Blue Line LRT/Gold Line LRT alignments. The noise and vibration conditions analysis focused on a 1,000-foot buffer on each side of the alignment. Per the FTA Manual's maximum screening distances and given the urban/suburban nature of the corridor, 1,000 feet provides a sufficient buffer for this analysis. Noise and vibration sensitive receptor categories are explained in **Tables 3.6-1** and **3.6-2**. Each land use and facility present varying levels of sensitivity to noise and vibration and forms the basis for impact criteria. **Table 3.6-3** identifies the screening distances for various transit noise projects. **Table 3.6-4** defines screening distances from transit facilities to identify potential vibration impacts. Data sources used in the analysis include:

- CoA – building footprints
- CAPCOG – land use
- Google Earth, 2019
- FTA Transit Noise and Vibration Impact Assessment Manual (2018) – screening distances
- FTA Noise Impact Assessment Spreadsheet - methodology

Table 3.6-1 Land Use Categories and Metrics for Transit Noise Impact Criteria

Land Use Category	Land Use Type	Noise Metric, dBA	Description of Land Use Category
1	High Sensitivity	Outdoor Leq(1hr)*	Land where quiet is an essential element of its intended purpose. Example land uses include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and national historic landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category.
2	Residential	Outdoor Ldn	This category is applicable all residential land use and buildings where people normally sleep, such as hotels and hospitals.
3	Institutional	Outdoor Leq(1hr)*	This category is applicable to institutional land uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also included in this category.

Source: FTA, 2018

* $L_{eq(1hr)}$ for the loudest hour of project-related activity during hours of noise sensitivity

Table 3.6-2 Land Use Categories for General Vibration Assessment Impact Criteria

Land Use Category	Land Use Type	Description of Land Use Category
-	Special Buildings	This category includes special-use facilities that are very sensitive to vibration and noise that are not included in the categories below and require special consideration. However, if the building will rarely be occupied when the source of the vibration (e.g., the train) is operating, there is no need to evaluate for impact. Examples of these facilities include concert halls, TV and recording studios, and theaters.
1	High Sensitivity	This category includes buildings where vibration levels, including those below the threshold of human annoyance, would interfere with operations within the building. Examples include buildings where vibration-sensitive research and manufacturing* is conducted, hospitals with vibration-sensitive equipment, and universities conducting physical research operations. The building's degree of sensitivity to vibration is dependent on the specific equipment that will be affected by the vibration. Equipment moderately sensitive to vibration, such as high-resolution lithographic equipment, optical microscopes, and electron microscopes with vibration isolation systems are included in this category. For equipment that is more sensitive, a Detailed Vibration Analysis must be conducted.
2	Residential	This category includes all residential land use and buildings where people normally sleep, such as hotels and hospitals. Transit-generated ground-borne vibration and noise from subways or surface running trains are considered to have a similar effect on receivers.
3	Institutional	This category includes institutions and offices that have vibration-sensitive equipment and have the potential for activity interference such as schools, churches, doctors' offices. Commercial or industrial locations including office buildings are not included in this category unless there is vibration-sensitive activity or equipment within the building. As with noise, the use of the building determines the vibration sensitivity.

Source: FTA, 2018

Table 3.6-3 Screening Distance for Noise Assessments

Project Systems	Screening Distance, ft*		
	Unobstructed	Intervening Buildings	
Fixed-Guideway Systems			
RRT	700	350	
RRT Station	200	100	
Light Rail Transit (LRT)	350	175	
Streetcar	200	100	
Access Roads to Stations	100	50	
Low and Intermediate Capacity Transit	Steel Wheel	125	50
	Rubber Tire	90	40
Monorail	175	70	
Yards and Shops		1000	
Parking Facilities	125	75	
Access Roads to Parking	100	50	
Ancillary Facilities: Ventilation Shafts	200	100	
Yards and Shops		1000	
Bus Systems			
Busway	500	250	
Bus Rapid Transit (BRT) on exclusive roadway	200	100	
Bus Facilities	Access Roads	100	50
	Transit Mall	225	150
	Transit Center	225	150
	Storage & Maintenance	350	225
	Park & Ride Lots w/Buses	225	150

Source: FTA, 2018

* Measured from centerline of guideway for fixed-guideway sources, from the ROW on both sides of the roadway for highway/transit sources, from the center of noise-generating activity for stationary sources, or from the outer boundary of the proposed project site for fixed facilities spread out over a large area.

Table 3.6-4 Screening Distances for Vibration Assessments

Type of Project	Land Use Cat. 1	Land Use Cat. 2v	Land Use Cat. 3
Conventional Commuter Railroad	600	200	120
Rapid Rail Transit (RRT)	600	200	120
LRT and Streetcars	450	150	100
Innovative Clean Transit (ICT)	200	100	50
Bus Projects (if not previously screened out)	100	50	

Source: FTA, 2018

*For the Vibration Screening Procedure, evaluate special buildings as follows: Category 1 - concert halls and TV studios, Category 2 - theaters and auditoriums. There are no special buildings for Category 3.

3.6.2 Results

The Blue Line LRT/Gold Line LRT study area centers on Downtown Austin and spans out north toward highland mall and east towards the airport through numerous residential neighborhoods, parks, and schools and universities. **Table 3.6-5** identifies the number of single-family houses, educational and religious facilities, libraries, and parks/cemeteries between proposed stations and within 1,000 feet of the Blue Line LRT/Gold Line LRT. Land uses that are highly sensitive to vibration including concert halls, theaters and research facilities may be located within the two university complexes, hospitals or other Downtown areas.

Table 3.6-5 Potential Noise and Vibration Receptors within 1,000 feet (ft) of the Blue Line LRT/Gold Line LRT

No	Segment		Residential			Institutional			Parks
	Station	Station	Houses	Apartment Buildings	Hotels	Religious	Education	Library	
1	ACC Highland	Clarkson	435	6	1	3	1	0	0
1 - Option	ACC Highland (Middle Fiskville Option)	Clarkson	261	8	3	3	1	0	0
2	Clarkson	Hancock	583	19	1	4	0	0	0
	Hancock	St. David's	333	26	0	1	2	0	0
	St. David's	UT East	0	25	0	0	1	0	1
	UT East	Medical School	0	1	0	0	1	0	1
3	Medical School	Capitol East	0	0	0	0	2	0	2
3 – Alt 1	Capitol East	7 th / Trinity	2	2	3	3	1	1	2
	7 th / Trinity	Downtown	0	4	3	0	0	0	1
	Downtown	Rainey	11	9	5	0	0	0	3
	Rainey	South Central Waterfront	29	3	1	0	0	1	1
	South Central Waterfront	Travis Heights	191	15	1	0	0	0	3
	Capitol East	Downtown	2	8	5	3	2	0	
3 – Alt 2	Downtown	Republic Square	0	16	5	2	2	0	2
	Republic Square	Auditorium Shores	95	11	4	0	0	0	4
	Auditorium Shores	Travis Heights	185	3	0	1	0	0	4

No	Segment		Residential			Institutional			Parks
	Station	Station	Houses	Apartment Buildings	Hotels	Religious	Education	Library	
3	Travis Heights	Lakeshore	166	12	0	0	0	0	3
4	Lakeshore	Riverside	72	59	0	0	0	0	0
	Riverside	Faro	36	21	0	1	0	0	0
	Faro	Montopolis	152	2	0	2	0	1	0
	Montopolis	Metro Center	246	6	6	0	0	0	0
5	Metro Center	AUS	39	2	3	1	0	0	0

Source: Google Earth, 2019

Notes: UT campus noted as 1 education facility, without differentiation of residential and other uses

3.7 Energy and Electromagnetic Interference

Light rail can create electromagnetic interference (EMI), which can cause disruptions and possible malfunction of some types of equipment. This is because electrification of the light rail service requires an electrified overhead system and supporting traction power facilities, which increases sources of electromagnetic fields (EMF) in the study area. EMF levels decrease with distance away from operating equipment or away from current-carrying electric lines. Since there are medical facilities with sensitive equipment that are located in the study area, EMI associated with the electrified Project will be a concern. Capital Metro Capital Metro did not evaluate potential effects related to EMI in the Alternatives Analysis. It will be evaluated according to federal guidance when the project enters the NEPA stage.

Regional energy consumption is based on regional VMT that are derived from the CAMPO travel demand model. Transit operating consumption is defined as the energy used for vehicle propulsion, operation of stations and ancillary facilities, and the maintenance of transit vehicles and track systems. The Gold Line and Blue Line are predicted to see a reduction in average weekday VMT by 2040 compared to the No Build Alternative, which would result in a reduction of energy use. However, as previously stated, the light rail system's electrical consumption may increase energy production outside the project corridor. In the NEPA phase of the project, Capital Metro will evaluate the potential energy impacts of the proposed LRT system by comparing total energy consumption of the LRT alignment with the No Build Alternative.

3.8 Ecosystems

Ecosystems are communities of living organisms (including plants and animals) in a particular area which interact with each other and support natural resources. The following federal laws have been established to protect plants and animals: the Endangered Species Act (ESA), the Migratory Bird Treaty Act (MBTA), and the Bald and Golden Eagle Protection Act (BGEPA). Potential federally-funded development projects, such as the Gold Line and Blue Line, should consider the ecosystems in which the project occurs and the existing wildlife habitats therein especially for remnant habitats in the urbanized project corridor.

Information on the natural and ecological resources contained in this report are for the area within a 1/2-mile radius of the Blue Line LRT/Gold Line LRT alignments; there are approximately 9,508-acres in this 1/2-mile analysis area. The following data and analysis are not narrowed down to the prospective project alignments right-of-way.

3.8.1 Methodology

Information used to identify and characterize ecoregions, vegetation and habitat types, threatened, endangered and other protected species habitats, and wildlife corridors in the Blue Line LRT/Gold Line LRT study area were obtained from the following resources:

- Texas Parks and Wildlife Department (TPWD) Ecological Mapping Systems of Texas (EMST) (TPWD, as downloaded in 2019)
- TPWD Rare, Threatened, and Endangered Species of Texas (RTEST) (TPWD, as downloaded in 2019)
- U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS, 2019),
- National Wetland Inventory (USFWS, 2019), and
- Google Earth aerial photography (aerial photometry dated January 2018).

Research and analysis centered on utilizing the most current version of publicly available information. Conclusions contained in this section are the opinion of the professionals who conducted the review and subject to confirmation by the USFWS and TPWD.

The wildlife resources that were identified during the review are categorized into the following:

Vegetation and Habitats: Vegetation and habitat types mapped within the Blue Line LRT/Gold Line LRT study area using TPWD EMST data and aerial photography.

Threatened & Endangered (T&E) Species: Federal- and state-listed T&E species, including federal candidate species for listing under the ESA. Species specific information was obtained from the above resources and used in conjunction with aerial imagery and research to determine potential suitable habitat determinations.

MBTA and BGEPA Species: Species federally-protected by the MBTA and BGEPA. Species specific information was obtained from the above resources and used in conjunction with aerial imagery and research to make preliminary potential suitable habitat determinations.

3.8.2 Results

The Blue Line LRT/Gold Line LRT study area is located within urbanized environments in the Texas Blackland Prairies ecoregion; it should be noted that this corridor is just east and outside of the interface with the Edwards Plateau ecoregion. The Texas Blackland Prairies ecoregion stretches from the Red River through the Dallas/Fort Worth area and down into central Texas, forming a narrow strip of relatively fertile land between the calcareous Edwards Plateau and sandier soils of the Post Oak (*Quercus stellata*) Savanna ecoregion. The Northern Blackland Prairies ecoregion historically supported tallgrass prairie and savanna; however, much of this ecoregion has been converted to farmland, livestock grazing and various types of human development (Griffith, Bryce, Omernik, & Rogers, 2007).

Vegetation and Habitats

Thirty-two EMST habitat types were mapped within the Blue Line LRT/Gold Line LRT study area. See **Figure 3.8-1**. In general, the habitats fall into eight general categories: urban (83.4 percent), grassland and savanna (6.9 percent), oak (*Quercus spp.*)/hardwood/Ashe juniper (*Juniperus ashei*) woodland (4.2 percent), open water (2.0 percent), riparian/floodplain/slope forest (1.9 percent), native-invasive woodland and shrubland (1.1 percent), riparian and floodplain shrubland (0.3 percent), and barren (0.1 percent). **Table 3.8-1** provides a list of EMST types and corresponding acreages within the Blue Line LRT/Gold Line LRT study area.

Threatened & Endangered Species

Twenty-eight federal- and state-listed T&E and candidate species were identified as having the potential to be present in Travis County (**Appendix B-4**). However, based on analysis of the vegetation characteristics, the urban setting within the Blue Line LRT/Gold Line LRT study area (over 83 percent of the corridor – **Table 3.8-1**) and review of aerial photography, no potential habitat was identified for any federally-listed terrestrial, avian or plant species. It is still to be determined whether the Colorado River (Lady Bird Lake) could be potential habitat for three federally-listed and one state-listed mollusk species.

A unique system of karst (cave) features is well documented in the Edwards Plateau of Central Texas. Due to the presence of several protected cave fauna (karst species) in this general area, portions of Travis County have been divided into the following Karst Zones (USFWS, 2019):

- Zone 1: Areas known to contain endangered cave fauna
- Zone 2: Areas having a high probability of suitable habitat for endangered cave fauna
- Zone 3: Areas that probably do not contain endangered cave fauna
- Zone 4: Areas which do not contain endangered cave fauna

Only Karst Zone 4 is mapped under the northern portion of the Blue Line LRT/Gold Line LRT study area, which indicates that this portion of the Blue Line LRT/Gold Line LRT study area is in an area which does not contain endangered cave fauna. The southern portion of the study area from approximately East Riverside Boulevard to the AUS terminal is outside of any delineated Karst Zones.

No USFWS officially designated critical habitats for federally-listed species were mapped within the Blue Line LRT/Gold Line LRT study area (USFWS, 2019). **Appendix B-4** includes information on species listing status, habitat descriptions, and suitable habitat determinations for federal and state listed T&E species identified by the USFWS and TPWD for Travis County, Texas.

MBTA and BGEPA Species

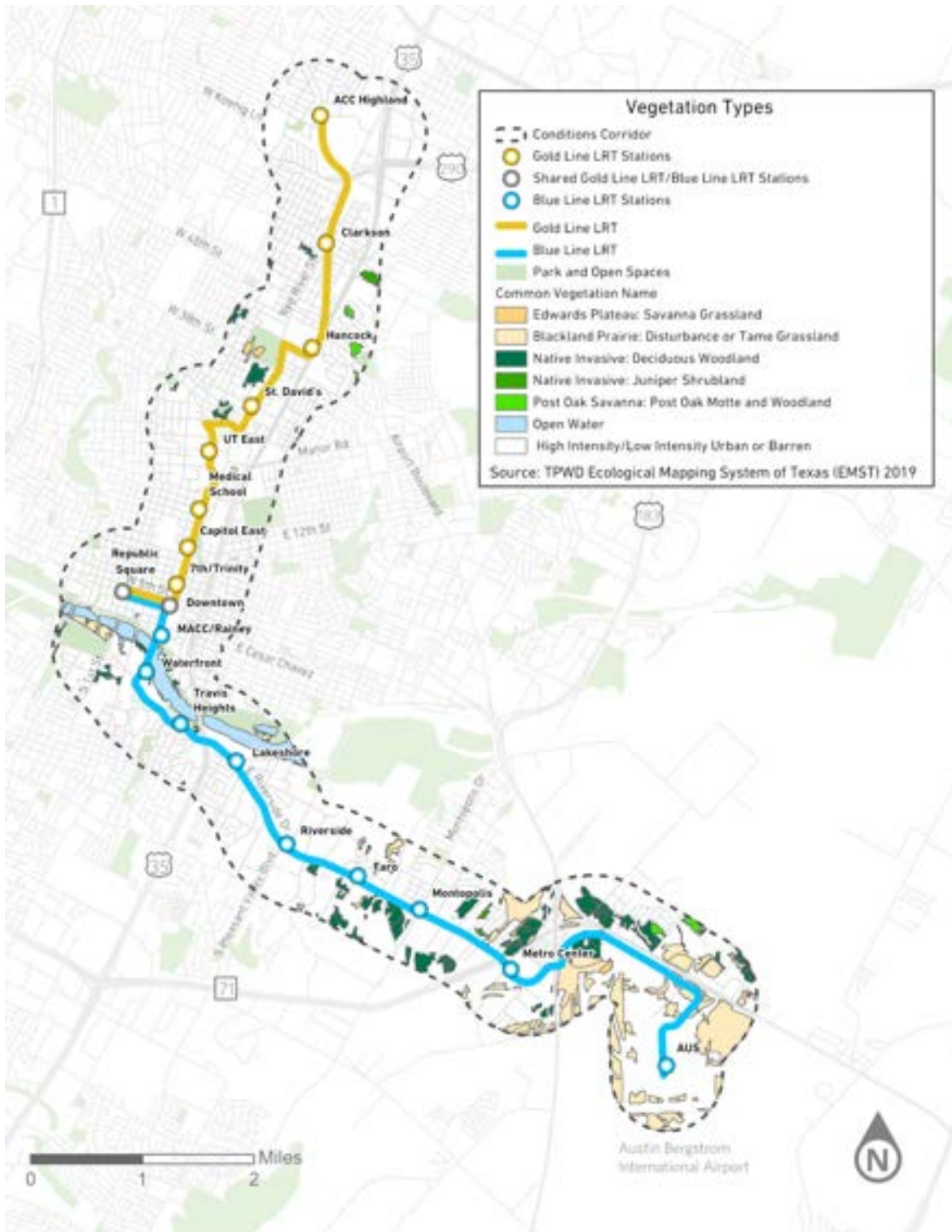
The bald eagle and their nests are federally protected from take under provisions of the BGEPA. Though potential suitable nesting habitat may be present within the Blue Line LRT/Gold Line LRT study area along the more northern portions of Colorado River, bald eagles are not known to nest along this section of the river and no known eagle nests are located with or in the vicinity of the Blue Line LRT/Gold Line LRT study area.

Table 3.8-1 EMST Types within the Blue Line LRT/Gold Line LRT Study Area

EMST Types	Acres	Percent (%)
Urban Low Intensity	4,722.81	50.19
Urban High Intensity	3,160.52	33.23
Blackland Prairie: Disturbance or Tame Grassland	551.95	5.80
Native Invasive: Deciduous Woodland	303.31	3.18
Open Water	192.83	2.02
Central Texas: Floodplain Hardwood Forest	93.95	0.98
Edwards Plateau: Deciduous Oak - Evergreen Motte and Woodland	62.88	0.66
Native Invasive: Mesquite Shrubland	58.50	0.61
Central Texas: Floodplain Hardwood - Evergreen Forest	54.53	0.57
Native Invasive: Juniper Shrubland	50.11	0.52
Central Texas: Floodplain Herbaceous Vegetation	47.05	0.49
Post Oak Savanna: Savanna Grassland	36.60	0.38
Post Oak Savanna: Post Oak Motte and Woodland	24.87	0.26
Central Texas: Floodplain Evergreen Shrubland	22.73	0.23
Edwards Plateau: Savanna Grassland	16.14	0.16
Central Texas: Riparian Hardwood - Evergreen Forest	12.58	0.13
Edwards Plateau: Oak - Ashe Juniper Slope Forest	11.20	0.11
Central Texas: Riparian Herbaceous Vegetation	10.71	0.11
Edwards Plateau: Oak - Hardwood Motte and Woodland	8.78	0.09
Post Oak Savanna: Post Oak/Yaupon Motte and Woodland	8.49	0.08
Central Texas: Riparian Hardwood Forest	8.18	0.08
Barren	7.78	0.08
Row Crops	6.11	0.06
Edwards Plateau: Live Oak Motte and Woodland	5.09	0.05
Edwards Plateau: Oak - Hardwood Slope Forest	4.37	0.04
Central Texas: Riparian Juniper Forest	2.61	0.02
Edwards Plateau: Ashe Juniper Motte and Woodland	2.59	0.02
Central Texas: Floodplain Live Oak Forest	1.98	0.02
Central Texas: Riparian Live Oak Forest	1.38	0.01
Central Texas: Riparian Deciduous Shrubland	0.88	0.009
Grass Farm	0.38	0.003
Central Texas: Floodplain Juniper Forest	0.31	0.003
total Acreage	9,508.56	

Source: TPWD EMST data as downloaded on September 5, 2019

Figure 3.8-1 Vegetation Types within the Blue Line LRT/Gold Line LRT Study Area



Source: TPWD Ecological Mapping System of Texas (EMST), 2019

Migratory birds and their nests are federally protected from take under provisions of the MBTA. Multiple migratory bird species have potential to nest in the Blue Line LRT/Gold Line LRT study area including swallows (e.g. *Petrochelidon* spp. and *Hirundo rustica*) which often nest on man-made structures such as bridges. Other suitable habitat for migratory birds includes wooded and forested areas (especially along waterways), fencerows, fields, and other undeveloped, suburban, or landscaped areas within the Blue Line LRT/Gold Line LRT study area. Several features and natural areas were identified within the Blue Line LRT/Gold Line LRT study area as having a high likelihood to support migratory bird nesting habitat, including Hancock Golf Course and Recreation Center parklands, Waller Creek Corridor, Colorado River, and adjacent parklands, the East Bouldin Creek/Blunn Creek/Country Club Creek/Carson Creek corridors, as well as various other parks and recreation areas as discussed in **Section 3.10**. Consultations with the USFWS and TPWD are recommended in later environmental phases. In addition, nest surveys may be required to ensure no eagles or migratory birds are nesting in the construction areas prior to construction.

3.9 Water Resources

This section provides a summary of water resources within the Blue Line LRT/Gold Line LRT study area (wholly or in part), including general hydrology, floodplains, waterbodies and wetlands. Groundwater and drinking water were not evaluated at this phase of analysis. However, no groundwater or drinking water impacts are anticipated due to the Gold Line and Blue Line development being proposed in existing ROW. Potential impacts to groundwater and drinking water would be determined in later environmental phases.

3.9.1 Methodology

Floodplains

Travis County and the CoA participate in the National Flood Insurance Program (NFIP), administered by the Federal Emergency Management Agency (FEMA), and are responsible for regulating development within FEMA designated floodplains. Information used to identify and characterize floodplains within the Blue Line LRT/Gold Line LRT study area were obtained from the FEMA Flood Insurance Rate Map (FIRM) panels 48453C0455J; 48459C0445J; 48453C0465J; 48453C0585H; 48453C0605J; 48453C0610K; 48453C0610K; 48453C0615J; 48453C0620K. The City of Austin's Floodplain Management and Regulations Department administers, monitors, and maintains ongoing floodplain changes for the city. In later phases of environmental analysis, the City of Austin's new and existing floodplain determinations would be assessed, including designations of 100-year and 500-year floodplain zones.

Streams, Rivers, Lakes/Reservoirs, Wetlands

In recognition of the importance of clean water and the ecological value of streams and wetlands, in 1972 the U.S. Congress passed the Clean Water Act (CWA) to protect the physical, biological, and chemical quality of waters of the U.S. (WOTUS), including adjacent wetlands. Section 404 of the CWA defines waters of the U.S. as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the tidal ebb and flow of coastal waters.
- All interstate waters including interstate wetlands (all rivers, lakes and other waters that flow across or form part of, state boundaries) and their tributaries. All waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, in use, degradation or destruction of which would affect interstate or foreign commerce and their tributaries
- All impoundments of waters otherwise defined as waters of the U.S. and their tributaries.

- Wetlands adjacent (bordering, contiguous or neighboring) to the above-mentioned waters (other than waters that are themselves wetlands)

The U.S. Army Corps of Engineers (USACE) and EPA have statutory responsibilities under Section 404 of the CWA. Under this act, discharges of dredged or fill material into WOTUS are regulated; therefore, such activities may require permit authorization. The Blue Line LRT/Gold Line LRT study area lies within the USACE Fort Worth District Areas of Responsibility (AOR). Any permission USACE renders for the Project would be conditioned such that construction of each phase of the Project that impacts jurisdictional waters would not be allowed to occur until such time that each phase of the Project is designed, submitted for review and subsequently approved by the USACE. Information used to identify and characterize waterbodies, streams, and wetlands within the Blue Line LRT/Gold Line LRT study area were obtained from the following resources in September 2019:

- USFWS National Wetlands Inventory (NWI) (USFWS, 2019c)
- United States Geological Survey (USGS) topographic Maps (USGS, 2019c)
- Google Earth recent aerial photography (Google, 2019)

Research and analysis centered on utilizing the most current version of information available online. Conclusions contained in this section are based on data provided by various agencies and subject to confirmation by field investigations and the USACE.

3.9.2 Results

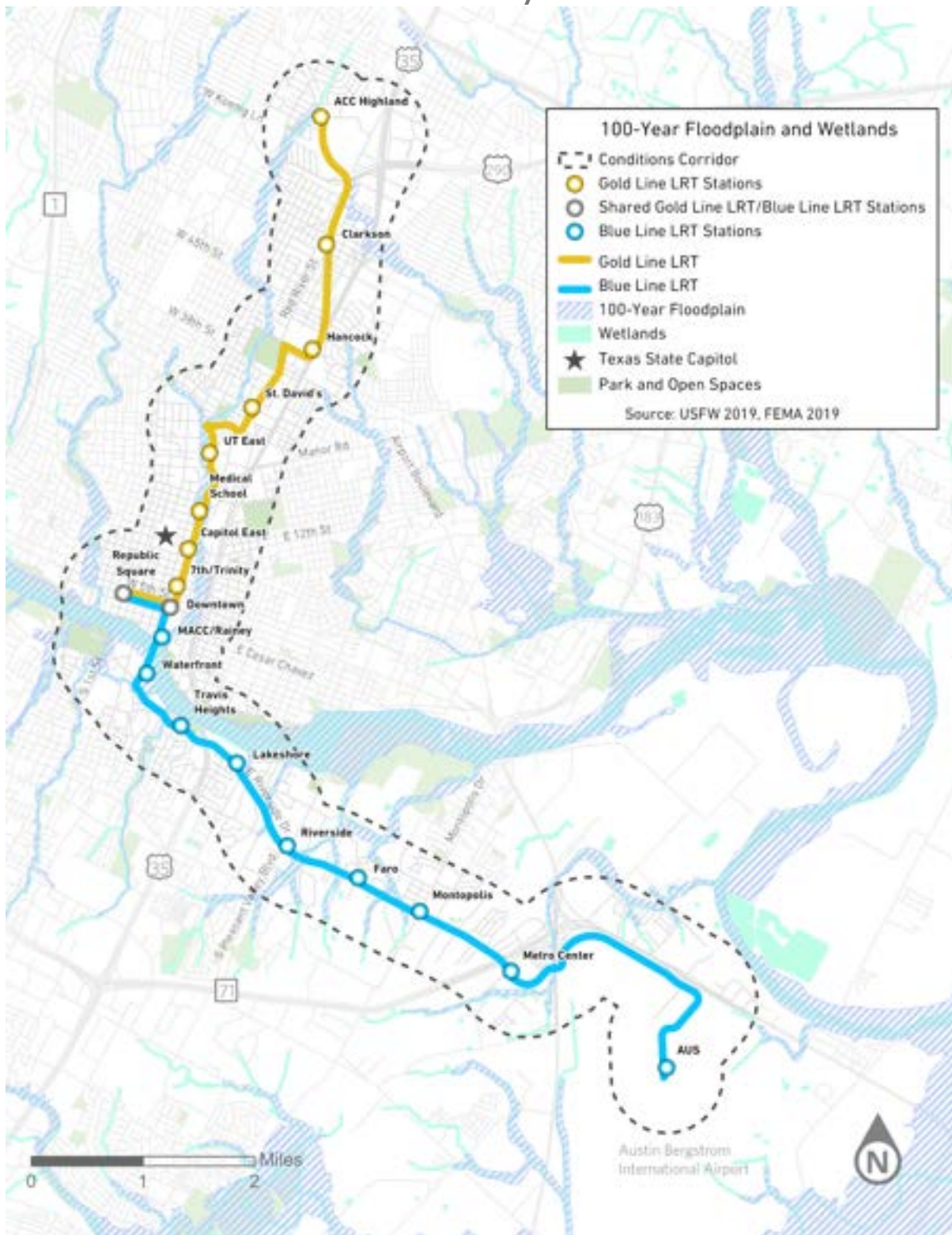
Floodplains

There are several mapped 100-year floodplains within the Blue Line LRT/Gold Line LRT study area that approximately correspond to mapped hydrological features, including the Colorado River, streams, and other drainages. These floodplains are mapped within Zones A, AE, and AO. Other portions of the Blue Line LRT/Gold Line LRT study area are mapped within Zone X, areas that have a 0.2 percent annual chance of flood hazard (500-year floodplain) as well as areas of minimal flood hazard. Descriptions of the 100-year floodplain zones are provided below:

- Zone A is part of the FEMA 100-year flood hazard area where base flood elevations have not been determined.
- Zone AE is part of the FEMA 100-year flood hazard area where base flood elevations have been determined.
- Zone AO is part of the FEMA 100-year flood hazard area subject to shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 ft and base flood elevations have been determined.

Most 100-year floodplains mapped along drainages within the Blue Line LRT/Gold Line LRT study area are designated as Zone AE. Small portions of these drainages are designated as Zone A and Zone AO (Appendix B-1). Floodways include the channel of a stream and the adjacent land areas that must remain unobstructed. No floodways have been delineated for drainages within the Blue Line LRT/Gold Line LRT study area. See **Figure 3.9-1**.

Figure 3.9-1 100-Year Floodplains and Wetlands within the Blue Line LRT/Gold Line LRT Study Area



Source: USFW, 2019, FEMA, 2019

Streams, Rivers, Lakes/Reservoirs, Wetlands

topography within the Blue Line LRT/Gold Line LRT study area is generally level to gently undulating or rolling with surface gradient sloping down at locations associated with drainages, especially the Colorado River (Lady Bird Lake). The highest elevation is located in the northern portion of the Blue Line LRT/Gold Line LRT study area at approximately 650 feet above mean sea level (MSL). The lowest elevation is located along Colorado River (Lady Bird Lake) near the central portion of the Blue Line LRT/Gold Line LRT study area at approximately 428 ft above MSL. The elevation at the northern end of the AUS runway is 541 ft. above MSL. The corridor is located within the USGS Montopolis and Austin East 7.5-minute topographic quadrangle maps (2019).

The Blue Line LRT/Gold Line LRT study area is located within the Colorado River Basin and the Austin-Travis Lakes sub-basin. The Blue Line LRT/Gold Line LRT study area lies within the CoA-Colorado River and Onion Creek-Colorado River watersheds; more specifically the study area is within the Lady Bird (town) Lake-Colorado River, Carson Creek-Colorado River, and Walnut Creek-Colorado River sub-watersheds (TPWD, 2019).

National Wetland Inventory (NWI) data, several streams and waterbody features were identified within the Blue Line LRT/Gold Line LRT study area 1/2-mile radius buffer area. A total of 23.25 miles (122,783 ft.) of NWI flowline features were identified within the Blue Line LRT/Gold Line LRT study area. These streams, river and waterbodies were identified on the following waterbodies as well as their tributaries: the Colorado River, Waller Creek, Tannehill Branch, Shoal Creek, Blunn Creek, East Bouldin Creek, West Bouldin Creek, Country Club Creek, Carson Creek and two unnamed drainages. See **Table 3.9-1** for more information on the linear feet of each NWI stream/creek classification (i.e. river lake/reservoir; riverine; freshwater emergent wetlands; freshwater forested/shrub wetlands) for each of the streams/creeks/lakes. **Table 3.9-2** provides information of the acres of each NWI classification in the study area.

One major waterbody, the Lady Bird Lake reservoir on the Colorado River totaling approximately 219.2 acres was identified within the Blue Line LRT/Gold Line LRT study area (**Appendix B-1**). There were also eight freshwater ponds totaling 3.4 acres identified within the study area (**Table 3.9-3**).

Table 3.9-1 National Wetland Inventory Stream Features within the Blue Line LRT/Gold Line LRT Study Area

Waterways by NWI Classifications	Length (ft) within Study Area
River Reservoir	16,748
Colorado River (Lady Bird Lake)	16,748
Streams/Creeks (Riverine)	81,034
Waller Creek	18,889
Unnamed Drainage	1,076
Tannehill Branch	3,336
Shoal Creek	4,018
Blunn Creek	5,423
East Bouldin Creek	4,905
West Bouldin Creek	341
Unnamed Tributaries of the Colorado River	7,207
Country Club Creek and Unnamed Tributaries	16,475
Carson Creek and Unnamed Tributaries	19,364
Streams/Creeks (Freshwater Emergent Wetland)	3,727
Waller Creek	3,727
Streams/Creeks (Freshwater Forested/Shrub Wetland)	21,274
Waller Creek	12,795
Carson Creek and Unnamed Tributaries	7,472
Unnamed Drainage	1,007
total	122,783 ft. (23.25 miles)

Source: NWI, 2019

Table 3.9-2 Acres of National Wetland Inventory Classified Features within the Blue Line LRT/Gold Line LRT Study Area

NWI Classifications	Acres
Lakes (Reservoirs)	219.2
Riverine	36.1
Freshwater Forested/Shrub Wetlands	8.3
Freshwater Emergent Wetlands	6.3
Freshwater Ponds	3.4
total	273.3

Source: NWI, 2019

Table 3.9-3 NWI Reservoir/Pond Features within the Blue Line LRT/Gold Line LRT Study Area

NWI Waterbodies	Acres
Reservoirs	
Lady Bird Lake	219.2
Freshwater Ponds	3.4
total	222.6

Source: NWI, 2019

3.10 Historical and Archeological Resources

This section includes information on historic and archeological resources within the Blue Line LRT/Gold Line LRT study area.

3.10.1 Methodology

Historical Resources

A review of historic resources was conducted to identify previously recorded and/or designated historic resources within a ½ mile buffer of the Blue Line LRT/Gold Line LRT study area. The term historic resource refers to any building, structure, object, and historic district that is listed in, or eligible for listing in, the National Register of Historic Places (NRHP). The literature review included a search of the Texas Historic Sites Atlas (THSA), NRHP database, TxDOT historic resources databases, and the CoA Landmarks database to identify previously-recorded and/or designated historic resources including properties and historic districts that are listed in the NRHP, Official Texas Historical Markers (OTHMs), Historic Texas Cemeteries (HTCs), Historic Texas Highways, and CoA historic landmarks. CoA historic landmarks are not necessarily eligible for listing in the NRHP but are conservatively treated as historic properties for the purposes of this analysis.

Archeological Resources

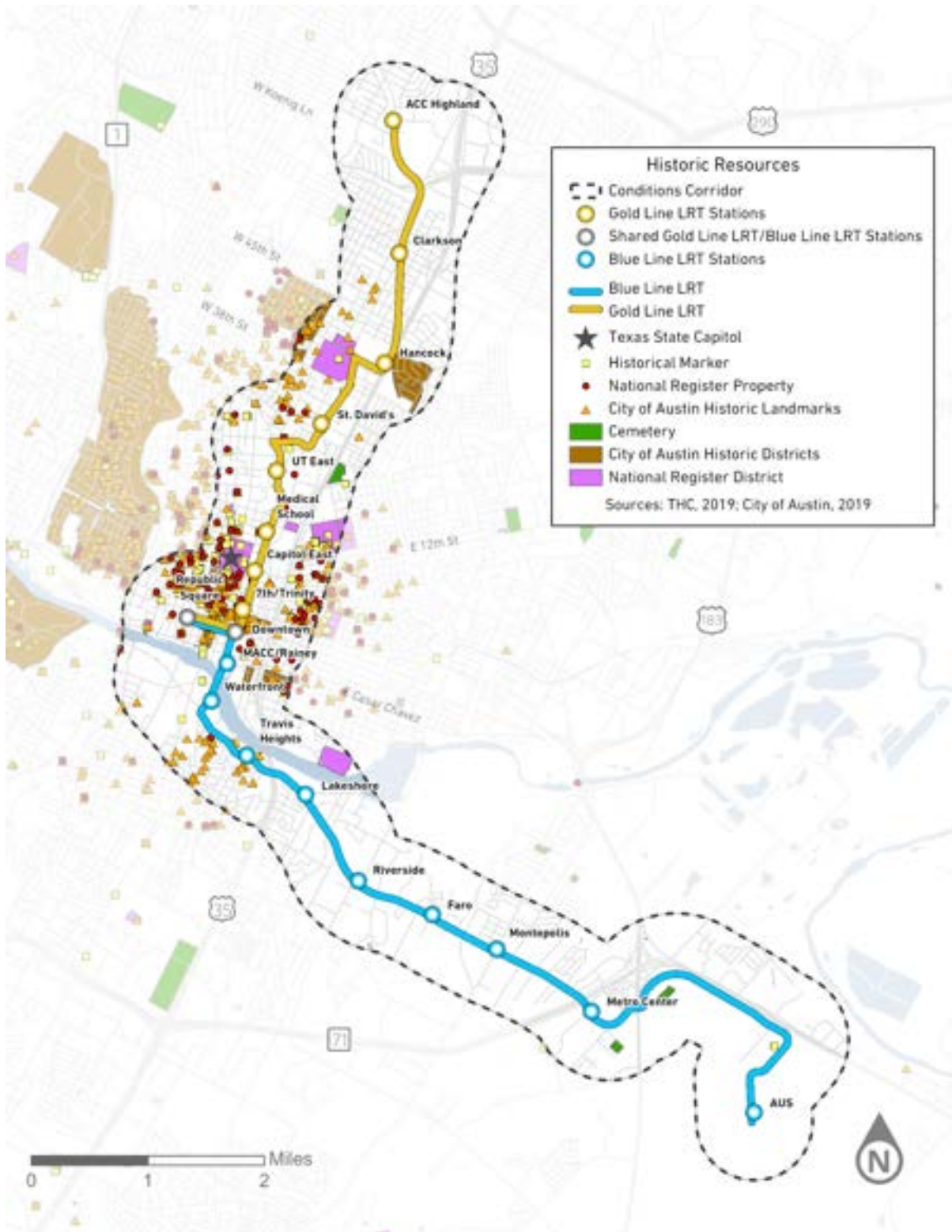
Information on previously recorded archeological sites within the Blue Line LRT/Gold Line LRT study area (wholly or in part) is presented below. This information was compiled by conducting a file search of the THC’s Texas Archeological Sites Atlas, and from GIS site data provided by the Texas Archeological Research Laboratory at the UT at Austin (THC, 2019).

3.10.2 Results

Historical Resources

The results of the historical resources review are depicted in **Figure 3.10-1** and in **Appendix B-3**. The review resulted in the identification of 273 CoA Historic Landmarks, 152 THC historic markers, 27 districts listed in the National Register of Historic Places, and 82 individual properties listed in the National Register of Historic Places. Of these resources, the Perry Estate/St. Mary’s Academy NRHP District, Hancock Golf Course NRHP District, J. Frank Dobie House NRHP property, Scholz Garten NRHP property, St. David’s Episcopal Church NRHP Property, Sixth Street NRHP District, Rainey Street NRHP District, and Congress Avenue NRHP District are located within or adjacent to the Blue Line LRT/Gold Line LRT study area (THC, 2019). Other historic resources identified as part of this review include 11 HTCs and the 1916, 1924, 1940, and 1960 alignments of the Meridian Highway, although none of these segments are eligible for the National Register.

Figure 3.10-1 Historic Resources Surrounding the Blue Line LRT/Gold Line LRT Study Area



Source: THC, 2019; CoA, 2019

Archeological Resources

Previously Recorded Archeological Sites

The archeological background review revealed a total of 80 previously recorded archeological sites within the Blue Line LRT/Gold Line LRT study area. Of these, 42 sites contain only historic components, 11 sites contain only prehistoric components, and 3 sites contain both prehistoric and historic components. No information was available for 24 of the site records. Overall, 14 of the 80 previously recorded sites have been determined eligible for listing in the NRHP by the Texas State Historic Preservation Office (SHPO)/Texas Historical Commission (THC), 19 sites have been determined ineligible for the NRHP, and 23 sites have undetermined eligibility. Two of the NRHP-Eligible sites are also recorded as State Antiquities Landmarks: 41TV1668 and 41TV1899 (THC, 2019).

Many archeological sites mapped near the corridor only have centroid points available in Atlas data, and therefore lack information regarding a potentially larger site boundary. Thus, it is likely that more sites than described here extend to within or adjacent to the Blue Line LRT/Gold Line LRT study area.

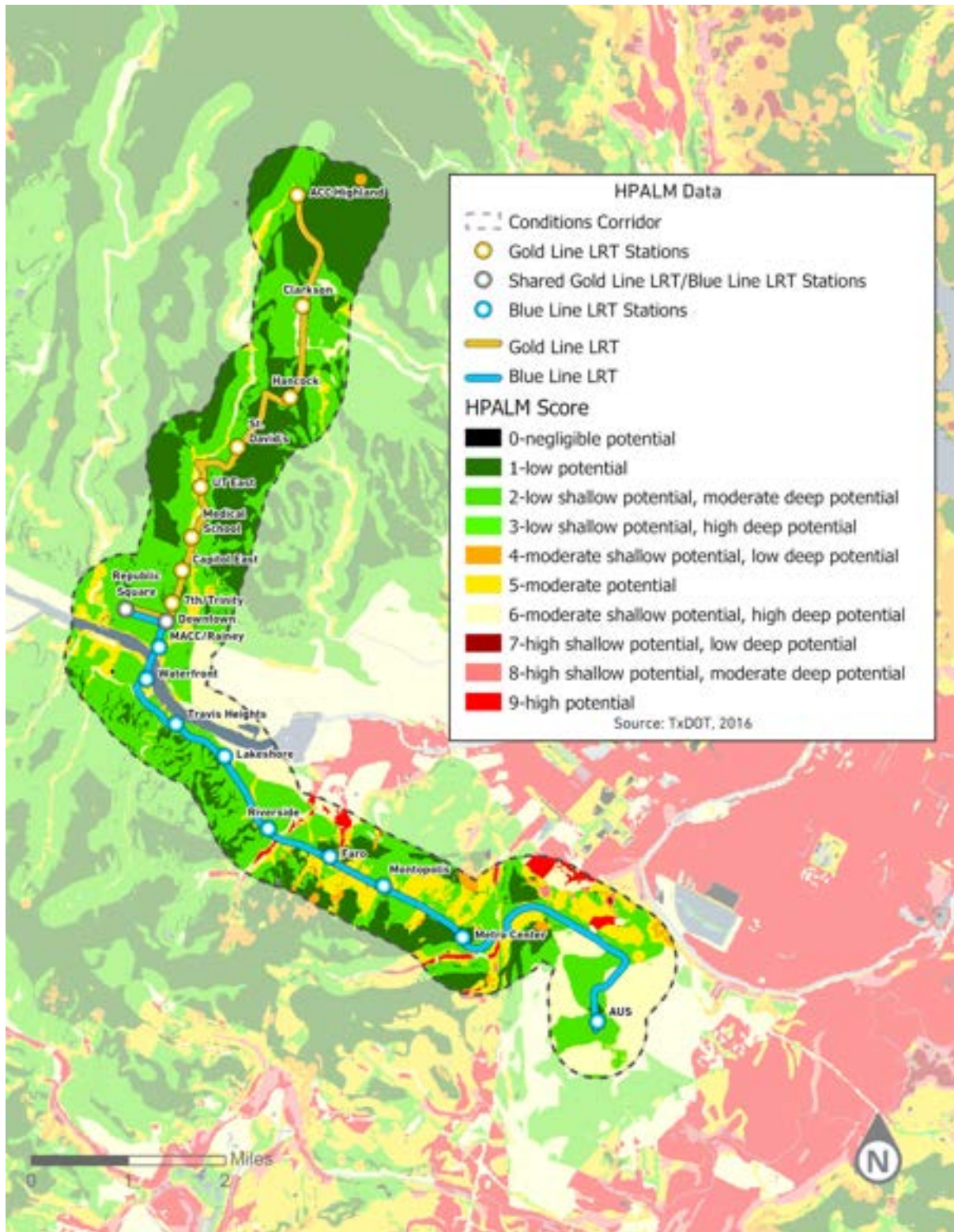
The Atlas search revealed 11 recorded cemeteries within the Blue Line LRT/Gold Line LRT study area. These include: the Davidson-Littlepage Cemetery (TV-C011), the Austin State Hospital Cemetery (TV-C023), the Mount Calvary Cemetery (TV-C065), the Oakwood Cemetery (TV-C067), two San Jose Cemeteries (TV-C103 and TV-C113), the Greenwood Cemetery (TV-C112), the George Herbert Kinsolving Crypt (TV-C199), Martin Family Cemetery (TV-C208), and two Beth Israel Cemeteries (TV-C212 and TV-C213). None of these cemeteries extend to within the Blue Line LRT/Gold Line LRT study area (THC, 2019).

Potential for Unrecorded Archeological Sites

A review of extant site distribution in Travis County indicates that prehistoric archeological sites tend to be concentrated near water sources. Numerous streams are crossed by the Blue Line LRT/Gold Line LRT study area, including the Colorado River (and Lady Bird Lake), Boggy Creek, Tannehill Branch of Boggy Creek, Country Club Creek, Carson Creek, West Bouldin Creek, East Bouldin Creek, Blunn Creek, Waller Creek, and Shoal Creek. Depositional areas adjacent to some of these drainages should be considered high probability areas for the presence of archeological sites. At some of these crossings, it is likely that well defined floodplain and terrace morphological features are preserved with Holocene-age alluvial and/or colluvial fills, which have a high probability for containing buried cultural materials with reasonable stratigraphic integrity. To further evaluate the potential to which the Blue Line LRT/Gold Line LRT study area might contain intact prehistoric sites, a review of TxDOT's Austin Hybrid Potential Archeological Liability Map (HPALM) model was undertaken. The HPALM model predicts the locations of eligible prehistoric sites based upon certain geologic and pedologic integrity criteria and ranks the areas from 0 to 9 in terms of integrity potential in both shallow and deeply buried settings (more than 1 meter or 3.28 feet below ground surface). Based on the HPALM data for the Blue Line LRT/Gold Line LRT study area, 70.72 percent of the study area exhibits at least moderate potential overall, while just 27.05 percent exhibits low, and only 2.23 percent exhibits negligible potential (Abbott and Pletka, 2016). See **Figure 3.10-2**.

In terms of historic archeological sites, a review of historic topographic maps and aerial imagery indicates that numerous historic resources were once present within the Blue Line LRT/Gold Line LRT study area, including roadways, residences, and both commercial and industrial structures. It is possible that buried features, including foundations, cisterns, wells, middens, and privies may be found beneath existing pavement. An archeological survey of these areas and a monitoring or inadvertent discovery plan may be necessary prior to construction.

Figure 3.10-2 HPALM Data for the Blue Line LRT/Gold Line LRT Study Area



Source: TxDOT, 2016

3.11 Parklands

Recreational resources, including parklands, are important community features that warrant consideration during federally funded projects. These resources include parks, trails, greenbelts, and open space areas which offer opportunities for recreation, including both passive and active activities. Parks and other recreational resources were identified and evaluated within the Blue Line LRT/Gold Line LRT study area as discussed below.

3.11.1 Methodology

Existing and future or planned parks and recreational resources in the Blue Line LRT/Gold Line LRT study area were identified and evaluated through review of CoA’s Parks and Recreation Department (PAR) data (CoA, 2019g), CoA Urban Trails dataset (CoA, 2019h), PAR Interactive Map (CoA, 2019i), CoA 2011-2016 “Long Range Plan for Land, Facilities, and Programs” master plan (CoA, 2010), and recent aerial imagery from Google Earth (2018). In addition, Section 6(f) properties were identified on the National Parks Service (NPS) Land and Water Conservation Fund (LWCF) project list (NPS, 2019).

3.11.2 Results

Existing Recreational Resources

Numerous existing parks, trails, greenbelts, and other recreational resources were identified within the Blue Line LRT/Gold Line LRT study area (wholly or in part) (see **Appendix B-1**). Details and characteristics of recreational resources in the Blue Line LRT/Gold Line LRT study area are presented in **Table 3.11-1**.

Table 3.11-1 Parks and Recreational Resources Identified within the Blue Line LRT/Gold Line LRT Study Area

Resource Name	Address	Resource Type	Owner	Size (Acres)
Adams-Hemphill Neighborhood Park	201 W 30th St., Austin, Texas 78705	Mixed-use Park	CoA	9.98
Auditorium Shores at town Lake Metro Park	800 W Riverside Dr., Austin, Texas 78704	Mixed-use Park	CoA	48.58
Blunn Creek Greenbelt	1901 East Side Dr., Austin, Texas 78704	Corridor	CoA	13.33
Brush Square (O. Henry Museum)	409 E 5th St., Austin, Texas 78701	Historical/Cultural	CoA	1.75
Burnett "Blondie" Pharr Tennis Center	4201 Brookview Rd. Austin, Texas 78722	Active Park	CoA	8.29
Central Maintenance Complex at town Lake Metro Park	2525 S Lakeshore Blvd., Austin, Texas 78741	Special Use Area	CoA	9.22
Dougherty Arts Center	1110 Barton Springs Rd., Austin, Texas 78704	Special Use Area	CoA	2.34
Duncan Neighborhood Park	900 W 9th St., Austin, Texas 78701	Mixed-use Park	CoA	5.11
East Bouldin Creek Greenbelt	901 Bouldin Ave., Austin, Texas 78704	Natural Area	CoA	0.69
Eastwoods Neighborhood Park	3001 Harris Park Ave., Austin, Texas 78705	Active Park	CoA	9.52

Resource Name	Address	Resource Type	Owner	Size (Acres)
Edward Rendon Sr. Metro Park at Festival Beach	2101 Jesse E Segovia St., Austin, Texas 78702	Mixed-use Park	CoA	72.79
Hancock Golf Course	811 E 41st St., Austin, Texas 78751	Special Use Area	CoA	50.40
Harpers Branch Creek Greenbelt	1405 Kenwood Ave., Austin, Texas 78704	Natural Area	CoA	1.26
Holly Shores at town Lake Metro Park	2711 Canterbury St., Austin, Texas 78702	Corridor	CoA	17.84
International Shores at town Lake Metro Park	1800 S Lakeshore Blvd., Austin, Texas 78741	Corridor	CoA	6.06
Lakeshore at town Lake Metro Park	2200 S Lakeshore Blvd., Austin, Texas 78741	Corridor	CoA	3.28
Lamar Beach at town Lake Metro Park	1200 W Cesar Chavez St., Austin, Texas 78703	Mixed-use Park	CoA	65.41
Lawrence Street Pocket Park	1805 Lawrence St., Austin, Texas 78741	Mixed-use Park	CoA	0.98
Little Stacy Neighborhood Park	1500 Alameda Dr., Austin, Texas 78704	Active Park	CoA	6.86
Lott Pocket Park	1180 Curve St., Austin, Texas 78702	Active Park	CoA	1.12
Margaret Hoffman Oak Park	315 W Cesar Chavez St., Austin, Texas 78701	Passive Park	CoA	0.22
Mary Dawson Pocket Park	650 Dawson Rd., Austin, Texas 78704	Natural Area	CoA	0.51
Michael Butler Park at town Lake Metro Park	1000 Barton Springs Rd. Austin, Texas 78704	Mixed-use Park	CoA	20.71
Montopolis Neighborhood Park	1200 Montopolis Dr., Austin, Texas 78741	Active Park	CoA	7.60
Mueller Northwest Greenway	Philomena St, Austin, TX 78722	Greenway	Private/Mueller	14.00
Norwood Tract at town Lake Metro Park	1009 Edgecliff Ter., Austin, Texas 78704	Special Use Area	CoA	9.53
Oakwood Annex Cemetery	1509 E MLK Jr Blvd., Austin, Texas 78702	Special Use Area	CoA	18.58
Oakwood Cemetery	1012 E 16th St., Austin, Texas 78702	Special Use Area	CoA	39.32
Old Bakery and Emporium	1006 Congress Ave., Austin, Texas 78701	Historical/Cultural	CoA	0.31
Patterson Neighborhood Park	4200 Brookview Rd., Austin, Texas 78722	Active Park	CoA	9.31
Peace Point at town Lake Metro Park	2200 S Lakeshore Blvd., Austin, Texas 78741	Corridor	CoA	5.47
Reilly School Park	6001 Guadalupe St., Austin, Texas 78752	Active Park	CoA	7.17

Resource Name	Address	Resource Type	Owner	Size (Acres)
Republic Square	422 Guadalupe St., Austin, Texas 78701	Passive Park	CoA	1.75
Roberta Crenshaw Overlook at Shoal Beach at town Lake Metro Park	201 W Cesar Chavez St., Austin, Texas 78701	Corridor	CoA	1.63
Sanchez School Park	64 Waller St., Austin, Texas 78702	Active Park	CoA	1.15
Shoal Beach at town Lake Metro Park	707 W Cesar Chavez St., Austin, Texas 78701	Corridor	CoA	13.48
Shoal Creek Greenbelt	2600 N Lamar Blvd., Austin, Texas 78705	Corridor	CoA	80.68
Sir Swante Palm Neighborhood Park	200 N IH 35 SvrD SB, Austin, Texas 78701	Active Park	CoA	3.24
Swede Hill Pocket Park	907 E 14th St., Austin, Texas 78702	Passive Park	CoA	0.87
Symphony Square	1101 Red River St., Austin, Texas 78701	Historical/Cultural	CoA	0.49
The Circle Greenbelt	1300 The Circle, Austin, Texas 78704	Corridor	CoA	1.21
Vic Mathias Shores at town Lake Metro Park	700 W Riverside Dr., Austin, Texas 78704	Special Use Area	CoA	5.77
Waller Beach at town Lake Metro Park	30 East Ave., Austin, Texas 78701	Corridor	CoA	28.81
Waller Creek Greenbelt	703 E 6th St., Austin, Texas 78701	Corridor	CoA	4.26
Waterloo Neighborhood Park	500 E 12th St., Austin, Texas 78701	Mixed-use Park	CoA	10.01
West Bouldin Creek Greenbelt	1200 S 6th St., Austin, Texas 78704	Mixed-use Park	CoA	16.87
Wooldridge Square	900 Guadalupe St., Austin, Texas 78701	Special Use Area	CoA	1.73

Source: CoA, 2019g, CoA, 2019i

Of the parks and recreational resources within the Blue Line LRT/Gold Line LRT study area, several were identified adjacent to and/or intersecting the Blue Line and Gold Line, including Auditorium Shores at town Lake Metropolitan Park, Republic Square and Pedestrian Walkways, and the Ann and Roy Butler Hike and Bike Trail system (hike and bike trail). (CoA, 2019g), (CoA, 2019h) (CoA, 2019i).

Future or Planned Recreational Resources

Several proposed urban trails within the Blue Line LRT/Gold Line LRT study area were identified in the CoA Urban Trails database (CoA, 2019h). These urban trails are at least 12 feet wide and include concrete walkways. See **Table 3.11-2** for proposed urban trails identified within the Blue Line LRT/Gold Line LRT study area.

Table 3.11-2 Proposed Urban Trails Identified within the Blue Line LRT/Gold Line LRT Study Area

Urban Trail System	Extent	Location
183 Tollway Shared Use Path	Bastrop Hwy SB from Grove Dr to Airport Commerce Dr	Along Roadway
51st St Trail	E 51st St at N IH 35 SB Connector	Along Roadway
ABIA Connector	ABIA Connector	Along Roadway
Academy Dr to IH 35 Sb Lady Bird Bridge West Sidewalk	Academy Dr to Alta Vista Ave	Within Parks
Academy Dr to IH 35 Sb Lady Bird Bridge West Sidewalk	Norwood Tract	Within Parks
Academy Dr to IH 35 Sb Lady Bird Bridge West Sidewalk	Alta Vista Ave to Edgecliff Ter	Along Roadway
Ann and Roy Butler Trail	Lamar Blvd to Trinity St	Within Parks
Ann and Roy Butler Trail	Deep Eddy Ave to Lamar Blvd	Within Parks
Ann and Roy Butler Trail	Ann and Roy Butler Trail Connector	Along Roadway
Ann and Roy Butler Trail	Waller Beach at town Lake	Within Parks
Ann and Roy Butler Trail	Ann and Roy Butler Trail Connector	Neighborhood Connector
Ann and Roy Butler Trail	Rainey St to East Ave	Within Parks
Ann and Roy Butler Trail	Sterzing St to Riverside Dr	Within Parks
Ann and Roy Butler Trail	Ann and Roy Butler Trail Connector	Within Parks
Ann and Roy Butler Trail	Rainey St to East Ave	Within Parks
Ann and Roy Butler Trail	Ann and Roy Butler Trail Connector	Along Roadway
Ann and Roy Butler Trail	Ann and Roy Butler Trail Connector	Within Parks
Ann and Roy Butler Trail	Lamar Blvd to Trinity St	Within Parks
Ann and Roy Butler Trail	Robert T Martinez Jr St to Pedernales St	Within Parks
Ann and Roy Butler Trail	Butler Trail Bridge Over Colorado River	Within Parks
Ann and Roy Butler Trail	East Ave to Pedernales St	Along Creek
Ann and Roy Butler Trail	S Lakeshore Blvd to S Pleasant Valley Rd	Along Creek
Ann and Roy Butler Trail	Riverside Dr to Congress Ave	Within Parks
Blunn Creek Trail	Blunn Creek Preserve	Within Parks
Blunn Creek Trail	Blunn Creek Preserve	Within Parks
Bowie St Underpass	Bowie St Underpass	Along Roadway
Br Reynolds Dr Trail	Br Reynolds Dr	Within Parks
Chesterfield Ave Connector	Chesterfield Ave Connector	Along Roadway
Country Club Creek Trail	Roy G Guerrero Colorado River Metro Park to E Oltorf Rd	Along Creek
E Ben White Blvd Corridor	ABIA Connector to Burleson Rd	Along Railroad
Lady Bird Bridge	N IH 35 Sb Bridge from Festival Beach to Norwood Tract	Within Parks

Urban Trail System	Extent	Location
Lady Bird Bridge	N IH 35 Sb Bridge from Festival Beach to E Riverside Dr	Within Parks
Lance Armstrong Bikeway	N IH 35 NB to Chicon St	Along Roadway
Montopolis Tributary Trail	E Riverside Dr to Frontier Valley Dr	Along Creek
Mueller Trail	Philomena St to Manor Rd	Along Roadway
Mueller Trail	N IH 35 NB to E 51st St	Along Roadway
Mueller Trail	IH 35 to Philomena St	Along Roadway
N IH 35 and Clarkson to Red Line Trail Connector	Clarkson Ave to Wilshire Blvd	Along Roadway
N IH 35 NB and E 32nd St Connector	E 32nd St to E 32nd St	Along Roadway
Red Line Trail	Denson Dr to Alexander Ave	Along Roadway
Riverside Trail	E Riverside Dr and Alameda Dr	Along Roadway
S IH 35 Sb and Riverside Dr to Oltorf St Trail	E Riverside Dr to E Oltorf St	Along Roadway
SH 71 Shared Use Path	Ben White Blvd to E SH 71 WB	Along Roadway
Shoal Creek Trail	W 3rd St Connector	Along Roadway
Shoal Creek Trail	Kingsbury St to W 6th St	Within Parks
Shoal Creek Trail	W 5th St to W 4th St	Within Parks
Shoal Creek Trail	Rio Grande St and 4th to Shoal Creek Trail Bridge	Along Creek
The Boardwalk Trail at Lady Bird Lake	Boardwalk to S Lakeshore Blvd	Along Creek
The Boardwalk Trail at Lady Bird Lake	Boardwalk to E Riverside Dr	Along Creek
Trail to The ABIA Airport	Airport Commerce Dr to Spirit of Texas Dr	Along Roadway
Us 290 IH 35 Interchange Connector	N IH 35 SB to E Koenig Ln Eb	Along Roadway
Us 290 IH 35 Interchange Connector	E US 290 Hwy EB to Clayton Ln	Along Roadway
Us 290 IH 35 Interchange Connector	E US 290 Hwy EB to N IH 35 SB	Along Roadway
West Bouldin Creek Trail	Riverside Dr to West Bouldin Creek Greenbelt	Along Creek

Source: CoA, 2019h

Proposed urban trails that intersect and/or cross the Blue Line LRT/Gold Line LRT study area include the Red Line Trail, Shoal Creek Trail, Country Club Creek Trail, and proposed and existing to portions of the Ann and Roy Butler Hike and Bike Trail.

Several relevant neighborhood and combined neighborhood plans discussed in Chapter 7 of the CoA 2011-2016 “Long Range Plan for Land, Facilities, and Programs” include recreational resources within the Blue Line LRT/Gold Line LRT study area (CoA, 2010). Plans outline improvements to existing facilities and extensions of greenbelts and trails within the Blue Line LRT/Gold Line LRT study area, including the Brentwood/Highland Combined Neighborhood Plan, Bouldin Neighborhood Plan, Central Austin Combined Neighborhood Plan, and East Riverside/Oltorf Combined Neighborhood Plan (CoA, 2010).

The proposed neighborhood plans are conceptual in nature and many details are not yet available. Coordination with the local jurisdictions will continue throughout the project as plans for these recreational resources develop. Neighborhood and master plans may be updated while this project is progressing. However, efforts should be made to not preclude previous planning efforts made by local jurisdictions.

Section 4(f) Properties

Several of the parks and recreational resources within the Blue Line LRT/Gold Line LRT study area may be afforded protection under Section 4(f) as defined in 23 Code of Federal Regulations (CFR) 774. In order to qualify as a park, recreation area, or refuge under the statute, a property must meet all of the following criteria:

- It must be publicly owned
- It must be open to the public
- Its major purpose must be for park, recreation, or refuge activities
- It must be significant as a park, recreation area or refuge

In addition, among the basic types of properties protected by Section 4(f) are historic sites. In order to qualify for protection under Section 4(f), a historic site must meet the following criteria:

- It must be of national, state or local significance
- It must be on or eligible for listing on the NRHP

Historic resources are discussed in **Section 3.9** and identify the sites listed on or eligible to be listed on the NRHP as well as the sites that may be eligible to be listed on the NRHP. These sites are considered Section 4(f) resources.

If one of these properties is impacted as part of the proposed Blue Line LRT/Gold Line LRT, then a Section 4(f) evaluation and coordination with the U.S. Department of Transportation (USDOT) will be required.

Section 6(f) Properties

Section 6(f) of the LWCF Act (36 CFR 59) protects recreational lands planned, acquired, or developed with funds from the LWCF. Once an area has been funded with LWCF assistance, it is continually maintained in public recreation use unless the National Park Service approves substitution property. Section 6(f) applies to all transportation projects involving possible conversions of the LWCF property, whether or not federal funding is being used for the project.

The NPS identified one property within the Blue Line LRT/Gold Line LRT study area that has received LWCF grant assistance; town Lake Metropolitan Park, located in the Downtown portion of the Blue Line LRT/Gold Line LRT study area adjacent to the Blue Line LRT/Gold Line LRT. Lady Bird Lake was also identified as receiving LWCF grant assistance; however, portions of the lake are located outside of the Blue Line LRT/Gold Line LRT study area and project details were not available. No additional resources were identified (NPS, 2019).

3.12 Hazardous Materials

This section provides a summary of properties with the potential to have recognized hazardous material issues within the Blue Line LRT/Gold Line LRT study area.

3.12.1 Methodology

The methodology used to identify sites with the potential for recognized hazardous material issues within the

Blue Line LRT/Gold Line LRT study area included the following:

- Evaluation of available data from the TCEQ that pertained to releases of hazardous materials into the environment from the following databases: Industrial Hazardous Waste Corrective Action (IHWCA), Leaking Petroleum Storage Tanks (LPST), Superfund Sites (SF), Dry Cleaner Remediation Program (DCRP) and Voluntary Cleanup Program (VCP).
- Identifying sites from the above-mentioned databases considered to have the potential for recognized environmental conditions.
- Based on the lack of hazardous releases or spills, certain databases from the TCEQ including: Brownfield Site Assessments (BSA), Innocent Owner/Operator Program (IOP), Municipal Solid Wastes / Landfills (MSW), and Petroleum Storage Tanks (PST) were not accounted for in this section of the report.

For this hazardous materials assessment summary, sites within the Blue Line LRT/Gold Line LRT study area are identified as having known (current and historic) soil or groundwater contamination and distinguished as sites with recognized environmental conditions. Recognized environmental conditions, include sites with “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum into structures on the property or into the ground, groundwater, or surface water of the property” (American Society for Testing and Materials [ASTM], 2013).

3.1.2.2 Results

A total of 189 sites with potential to become recognized environmental conditions were identified within the Blue Line LRT/Gold Line LRT study area (see **Appendix B-1** and **Appendix B-5**). Large urban areas generally consist of areas where light industrial and commercial businesses historically or currently operate within the same area. These types of businesses, such as manufacturing plants, gasoline service stations, drycleaners, automotive repair facilities, and larger truck stop establishments, typically use underground storage tanks (UST) or aboveground storage tanks (AST) to store petroleum products, waste oils, and/or other hazardous materials. Such facilities are also often regulated based on their current hazardous waste generation management activities. Consequently, areas with light industrial and commercial use present a risk of having the presence of soil and groundwater contamination, as the result of past spills or releases of hazardous substances, including petroleum products.

Based on the data gathered from TCEQ, there are 189 entries located on properties within the Blue Line LRT/Gold Line LRT study area. Of these entries, 137 are from the LPST database, 19 are from the IHWCA database, 2 are from the DCRP database, 31 are from the VCP database and none from the SF database. These entries are considered to pose the highest risk due to proximity to the Blue Line LRT/Gold Line LRT and known past releases or spill.

3.13 Public Safety and Security

The public safety and security are among the primary concerns regarding any transit improvement project. This section provides a summary of the existing safety and security conditions for pedestrians, cyclist, motorists and for the community at large. Potential safety hazards that could occur include accidents with a transit vehicle, a motor vehicle (non-transit), fires, major structural failures, etc. Security impacts could include the potential for criminal or terrorist activity within transit vehicles.

3.13.1 Methodology

The methodology used to identify current safety and security conditions included an evaluation of the fire,

police, and medical emergency facilities within a half mile of the project centerline (the Blue Line LRT/Gold Line LRT study area) and a review of recent criminal activity. to evaluate the current emergency response capabilities in the Blue Line LRT/Gold Line LRT study area the following data were collected and their proximity to the Gold Line and Blue Line documented:

- Available fire and police station data from the CoA
- Available data of medical facilities that offer emergency response capabilities from the Environmental Systems Research Institute (ESRI)

Potential hazards were also analyzed through a review of the crime data and included the following:

- Available crime data from the Austin Police Department

3.13.2 Results

Fire Protection and Emergency Medical Services

There are four fire stations within the Blue Line LRT/Gold Line LRT study area, as shown in **Table 3.13-1**. There are also two medical centers within the Blue Line LRT/Gold Line LRT study area that could provide care during a medical emergency, as shown in **Table 3.13-2**. The hospitals are ones where emergency medical services could be provided and where emergency vehicles (i.e., ambulances) could deliver patients in the event of a medical emergency. These fire stations and hospitals would serve as initial responders for a fire or medical emergency along the Blue Line LRT/Gold Line LRT study area. Fire stations outside of the Blue Line LRT/Gold Line LRT study area (not shown in referenced table), may also be utilized if additional resources were needed during an incident. In 2018, 90 percent of fire emergency calls were responded to in under 8:07 minutes while 90 percent of medical emergency calls were responded to in under 9:17 minutes.

Table 3.13-1 Existing Fire Emergency Stations within the Blue Line LRT/Gold Line LRT Study Area

Name	Address	Distance to Centerline (ft.)
Austin Central Fire Station 1	401 East 5th St., Austin, TX. 78741	Buffer Zone
Austin Fire Station 9	4301 Speedway, Austin, TX. 78751	2,402
Austin Fire Station 14	4305 Airport Blvd., Austin, TX. 78723	2,495
Austin Fire Station 22	5309 East Riverside Dr., Austin, TX. 78741	Buffer Zone

Source: CoA, 2018

Table 3.13-2 Existing Medical Emergency Service Providers within the Blue Line LRT/Gold Line LRT Study Area

Name	Address	Distance to Centerline (ft.)
St. David Medical Center	919 East 32 nd Street, Austin, TX. 78705	612
Dell Seton Medical Center	1500 Red River Street, Austin, TX. 78701	Buffer Zone

Source: ESRI, 2018

Police Protection

The Austin Police Department Main Headquarters is located within the Blue Line LRT/Gold Line LRT study area and is located at 715 East 8th Street (CoA, 2018). This police station is approximately 1,334 feet from

the Blue Line LRT/Gold Line LRT centerline. The Blue Line LRT/Gold Line LRT study area is under the jurisdiction of the Austin Police Department. Police facilities and patrols located outside of the Blue Line LRT/Gold Line LRT study area could respond to a large incident within the Blue Line LRT/Gold Line LRT study area if additional support were required. Additionally, Capital Metro Security officers provide 24-hour per day coverage of the entire Capital Metro service area and respond to service calls on the agency’s buses, trains, paratransit vehicles, and facilities (Capital Metro, 2017).

Existing Crime

Crimes committed in the Blue Line LRT/Gold Line LRT study area are reported for 2018. The most common type of crime included burglaries, as shown in **Table 3.13-3**.

Table 3.13-3 Reported Crimes in the Blue Line LRT/Gold Line LRT Study Area (2018)

Month	Murder	Aggravated Assault ¹	Robbery ²	Burglary ³	Kidnapping	Hit and Run ⁴
January		40	20	50	3	1
February	1	21	15	42	1	7
March		39	26	49	1	7
April		25	20	41		8
May	1	29	15	38	1	11
June		53	23	57	1	8
July	1	32	12	55	1	4
August		38	30	35	1	7
September		37	22	41		13
October		35	25	53	1	14
November		22	23	49		6
December		20	34	48		7
total	3	391	265	558	10	93

Source: Austin Police Department (updated April 29, 2019)

1 Includes: aggravated assault, aggravated assault family/date violence, aggravated assault on public servant, aggravated assault w/ motor vehicle.

2 Includes: aggravated robbery by assault, aggravated robbery w/ deadly weapon, robbery by assault, robbery by threat.

3 Includes: burglary of non-residential sheds, burglary of residential-family, burglary of non-residence, burglary of coin-op machine, burglary of residence, burglary of vehicle.

4 Crash and driver fails to stop and render aid.

3.14 Summary of Study Area Conditions

This Corridor Conditions Report has been prepared as part of the Blue Line LRT/Gold Line LRT PEL Study to identify current transportation and environmental conditions, and anticipated constraints for consideration during the development of HCT alternatives. Key findings of the evaluation are provided by resource in **Table 3.14-1**.

Table 3.14-1 Key Findings of Study Area Conditions

Resource	Key Findings
<p>Transportation</p>	<p>Several roadways are designated at a LOS of D, E, and F, with a forecast of LOS E and F in 2040 for these roadways. Presidential Boulevard has a LOS of C and is forecasted to remain at LOS of C.</p> <p>Capital Metro is the proposed transit provider for the Blue Line LRT and Gold Line LRT, which also contains 65 bus transit routes and one commuter rail route (MetroRail). MetroRapid bus routes 801 and 803 are two of the 12 high frequency routes within the Blue Line LRT/Gold Line LRT study area.</p> <p>There are no Park & Ride Facilities within the Blue Line LRT/Gold Line LRT study area.</p> <p>Three TxDOT roadway construction projects are planned within the Blue Line LRT/Gold Line LRT study area.</p> <p>The Guadalupe project is one mobility project is within the Corridor Mobility Program.</p> <p>Four City of Austin infrastructure projects are planned within the Blue Line LRT/Gold Line LRT study area.</p>
<p>Land Use and Economic Development</p>	<p>Current land use within the Blue Line LRT/Gold Line LRT study area includes single family residential, aviation, apartment/condo, and commercial uses.</p> <p>Significant land uses include Austin’s Central Business District, University of Texas at Austin, Austin Bergstrom International Airport, the State of Texas Capitol Complex, the Highland Mall redevelopment, and several parks and recreational trail systems along Lady Bird Lake.</p> <p>Downtown Austin is a mix of office, commercial, and multi-family uses.</p> <p>Per the Imagine Austin Comprehensive Plan, eight activity centers and eight activity corridors are located within the Blue Line LRT/Gold Line LRT study area.</p> <p>A total of 150 emerging projects are located within the Blue Line LRT/Gold Line LRT study area and include office, mixed use, single family residential, multifamily residential, and commercial developments.</p>

Resource	Key Findings
Neighborhoods	<p>CAMPO data for 2010 showed the Blue Line LRT/Gold Line LRT study area contained approximately 13% of the total population of Austin and 30% of the total employment in Austin. Population and employment are expected to increase in 2040 by 94% within the Blue Line LRT/Gold Line LRT study area.</p> <p>Poverty levels and zero-car households are higher in the Blue Line LRT/Gold Line LRT study area than the county and city averages.</p> <p>There are currently 16 active Neighborhood Planning Areas within the Blue Line LRT/Gold Line LRT study area.</p> <p>There are currently 25 public and private schools surrounding the Blue Line LRT/Gold Line LRT study area and six daycare facilities within a half mile of the corridor.</p> <p>One public university, one public community college, one private college, and five vocational and trade schools are located within the half mile buffer of the corridor.</p> <p>Three hospitals, four medical clinics, and one pediatrician's office is located within the study area.</p> <p>Six libraries, the Festival Beach Community Garden, the Hancock Recreation Center, the Long Center for the Performing Arts, and the Dougherty Arts Center are located within the Blue Line LRT/Gold Line LRT study area.</p> <p>Forty-four places of worship surround the Blue Line LRT/Gold Line LRT study area.</p> <p>Environmental justice communities include 32 block groups having minority populations greater than 50% and 52 block groups having low-income populations greater than 15% of the total population for the block group. The Blue Line LRT/Gold Line LRT study area has the same percentage of minority populations as Travis County and the City of Austin and a higher percentage of low-income EJ populations within the Blue Line LRT/Gold Line LRT study area than the county and city.</p>
Visual Quality	<p>Visual quality within the Blue Line LRT/Gold Line LRT study area is rated high for segments 2, 3, and 4 due to the number of landmarks, historic places, and parks that would be impacted by the project. Segments 1 and 5 are rated as medium since the number of sites that would be impacted by the project is lower than the other segments of the Blue Line LRT/Gold Line LRT study area.</p>

Resource	Key Findings
Air Quality	Air pollution levels have remained in compliance with NAAQS for the region.
Noise and Vibration	<p>Two university complexes, hospitals, and other Downtown areas that may have concert halls, theaters, and/or research facilities are land uses that are highly sensitive to Noise and Vibration within the Blue Line LRT/Gold Line LRT study area.</p> <p>Each segment of the Blue Line LRT/Gold Line LRT study area has noise and vibration receptors within 1,000 feet of the Blue Line LRT/Gold Line LRT study area.</p>
Ecosystems	<p>The Blue Line LRT/Gold Line LRT study area is located within urbanized environments in the Texas Blackland Prairies ecoregion and is east of the Edwards Plateau ecoregion. There are approximately EMST 9,508-acres and thirty-two habitat types in a 1/2-mile analysis area of the Blue Line LRT/Gold Line LRT study area.</p> <p>Twenty-eight federal- and state-listed T&E and candidate species were identified as having the potential to be present in Travis County.</p> <p>No USFWS officially designated critical habitats for federally-listed species were mapped within the Blue Line LRT/Gold Line LRT study area.</p> <p>Several features and natural areas were identified within the Blue Line LRT/Gold Line LRT study area as having a high likelihood to support migratory bird nesting habitat, including Hancock Golf Course and Recreation Center parklands, Waller Creek Corridor, the Colorado River corridor including Lady Bird Lake and adjacent parklands, the East Bouldin Creek/Blunn Creek/Country Club Creek/Carson Creek corridors, as well as various other parks and recreation areas</p>

Resource	Key Findings
Water Resources	<p>The Blue Line LRT/Gold Line LRT study area is within floodplain Zones A, AE, AO, and X.</p> <p>A total of 23.25 miles (122,783 ft.) of National Wetland Inventory flowline features were identified within the Blue Line LRT/Gold Line LRT study area.</p> <p>One major waterbody, the Lady Bird Lake reservoir on the Colorado River totaling approximately 219.2 acres was identified within the Blue Line LRT/Gold Line LRT study area. There were also eight freshwater ponds totaling 3.4 acres identified within the study area.</p>
Historical and Archaeological Resources	<p>The Blue Line LRT/Gold Line LRT study area have high potential for unrecorded prehistoric and historic sites with the Blue Line LRT/Gold Line LRT study areas.</p> <p>The Blue Line LRT/Gold Line LRT study area contain 11 recorded cemeteries, 80 previously recorded archaeological sites, and 273 City of Austin Landmarks, 152 Texas Historic Commission historic markers, 27 historic districts and 82 individual historic properties.</p>
Parklands	<p>Parks and recreational resources within the Blue Line LRT/Gold Line LRT study area include Auditorium Shores at town Lake Metropolitan Park, Brush Square, Republic Square and Pedestrian Walkways, and the Ann and Roy Butler Hike and Bike Trail system (hike and bike trail).</p> <p>Proposed urban trails that would intersect and/or cross the Gold Line and Blue Line include the Red Line Trail, Shoal Creek Trail, Country Club Creek Trail, and proposed and existing to portions of the Ann and Roy Butler Hike and Bike Trail.</p>
Hazardous Materials	<p>A total of 189 sites with potential to become recognized environmental conditions were identified within the Blue Line LRT/Gold Line LRT study area and could pose a high risk due to proximity to the proposed alignments and known past releases or spill.</p>
Public Safety and Security	<p>There are four fire stations and two medical centers within the Blue Line LRT/Gold Line LRT study area. The study areas are under jurisdiction of the Austin Police Department and Austin Police headquarters are located within the Blue Line LRT/Gold Line LRT study areas.</p>

4.0 References

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GIS Data Sources

Data Layer: Parks and Open Spaces

Data File Name (Feature Class/Shapefile/Raster): BOUNDARIES_city_of_austin_parks
Data File Type: Vector
Data Source: City of Austin Data Current As Of: 2019
Acquired/Downloaded: August 2019
Download Link: https://data.austintexas.gov/Locations-and-Maps/BOUNDARIES_city_of_austin_parks/8f2b-a4q5

Data Layer: Neighborhood Planning Areas
Data File Name (Feature Class/Shapefile/Raster): Neighborhood_Planning_Areas
Data File Type: Vector
Data Source: City Of Austin Data Current As Of: December 2019
Acquired/Downloaded: December 2019
Download Link: <https://data.austintexas.gov/Locations-and-Maps/Neighborhood-Planning-Areas-Dissolved/t2dy-2sz7>

Data Layer:
Streams/Rivers Data File Name (Feature Class/Shapefile/Raster): NHDFlowline
Data File Type: Vector
Data Source: US Geological Survey, National Hydrography Dataset, NHDFlowline
Data Current As Of: September 2019
Acquired/Downloaded: April 2019
Download Link: <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>

Data Layer: Water Bodies
Data File Name (Feature Class/Shapefile/Raster): Hydrography Polygons 2006 Data File Type: Vector
Data Source: City of Austin
Data Current As Of: August 2019
Acquired/Downloaded: August 2019
Download Link: <https://data.austintexas.gov/Locations-and-Maps/Hydrography-Polygons-2006/99y8-6pgc>

Data Layer: Wetlands
Data File Name (Feature Class/Shapefile/Raster): Wetlands_NWI Data File Type: Vector
Data Source: United States Fish and Wildlife Service (USFWS) – National Wetland Inventory (NWI), CONUS_wet_poly
Data Current As Of: 2018
Acquired/Downloaded: April 2019
Download Link: <http://www.fws.gov/wetlands/Data/State-Downloads.html>

Data Layer: Land Use
Data File Type: Vector
Data Source: City of Austin
Data Current As Of: 2019
Acquired/Downloaded: April 2019
Download Link: <https://data.austintexas.gov/Locations-and-Maps/Land-Use-Inventory-Detailed/fj9m-h5qy>

Data Layer: Pipelines
Data File Name (Feature Class/Shapefile/Raster): pipe453l_
Data File Type: Vector

Data Source: Railroad Commission of Texas
Data Current As Of: 2019
Acquired/Downloaded: 2019
Download Link: <http://www.rrc.state.tx.us>

Data Layer: Roads/Highways
Data File Name (Feature Class/Shapefile/Raster): TxDOT_Roadway_Inventory
Data File Type: Vector
Data Source: Texas Department of Transportation
Data Current As Of: 2019
Acquired/Downloaded: September 2019 Download Link: <http://www.tnris.org/get-data>

Data Layer: Texas Railroads
Data File Name (Feature Class/Shapefile/Raster):
Texas Railroads
Data File Type: Vector
Data Source: Texas Department of Transportation
Data Current As Of: 2016
Acquired/Downloaded: December 2019 Download Link: <http://gis-txdot.opendata.arcgis.com/datasets/texas-railroads>

Data Layer: Blue Line Corridor (Half-Mile Buffer)
Data File Name (Database/Shapefile): OL_Corridor_BufferHalfMile
Data File Type: Vector
Data Source: HNTB
Data Current As Of: December 2019
Acquired/Downloaded: N/A

Data Layer: Texas Department of Transportation Projects
Data File Name (Feature Class/Shapefile/Raster): TXDOT_Projects
Data File Type: Vector
Data Source: Texas Department of Transportation (TxDOT)
Data Current As Of: December 2019
Acquired/Downloaded: December 2019
Download Link: <http://gis-txdot.opendata.arcgis.com/datasets/txdot-projects>

Data Layer: Metrorail
Data File Name (Feature Class/Shapefile/Raster): CapMetro Red Line
Data File Type: Vector
Data Source: Capital Metropolitan Transportation Authority
Data Current As Of: June 2019
Acquired/Downloaded: September 2019
Download Link: <https://data.texas.gov/Transportation/CapMetro-Shapefiles-JUNE-2019/4unr-i9qe>

Data Layer: Industrial and Hazardous Waste Corrective Action
Data File Name (Feature Class/Shapefile/Raster): TCEQ_IHWCA_POINTS
Data File Type: Vector
Data Source: Texas Commission on Environmental Quality
Data Current As Of: 2019
Acquired/Downloaded: December 2019

Download Link: https://www.tceq.texas.gov/remediation/corrective_action/ihwca.html

Data Layer: Leaking Petroleum Storage Tank

Data File Name (Feature Class/Shapefile/Raster): TCEQ_LPST_POINTS

Data File Type: Vector

Data Source: Texas Commission on Environmental Quality

Data Current As Of: 2019

Acquired/Downloaded: December 2019 Download Link: <https://www.tceq.texas.gov/agency/data/lookup-data/download-data.html>

Data Layer: Voluntary Cleanup Program

Data File Name (Feature Class/Shapefile/Raster): TCEQ_VOLUNTARY_CLEANUP_POINTS

Data File Type: Vector

Data Source: Texas Commission on Environmental Quality

Data Current As Of: 2019

Acquired/Downloaded: December 2019

Download Link: <https://www.tceq.texas.gov/remediation/vcp/vcp.html>

Data Layer: Floodplain

Data File Name (Feature Class/Shapefile/Raster): S_FLD_HAZ_AR Data File Type: Vector

Data Source: FEMA

Data Current As Of: 2017

Acquired/Downloaded: December 2019

Download Link: <https://msc.fema.gov/portal/advanceSearch>

Data Layer: Historic Markers

Data File Name (Feature Class/Shapefile/Raster): HistoricalMarkers

Data File Type: Vector

Data Source: Texas Historic Commission Data Current As Of: 2019 Acquired/Downloaded: December 2019

Download Link: <https://atlas.thc.state.tx.us/Data/GISData>

Data Layer: National Register Point

Data File Name (Feature Class/Shapefile/Raster): NationalRegisterPT Data File Type: Vector

Data Source: Texas Historic Commission

Data Current As Of: 2019

Acquired/Downloaded: December 2019

Download Link: <https://atlas.thc.state.tx.us/Data/GISData>

Data Layer: National Register District

Data File Name (Feature Class/Shapefile/Raster): NationalRegisterPY

Data File Type: Vector

Data Source: Texas Historic Commission Data Current As Of: 2019 Acquired/Downloaded: December 2019

Download Link: <https://atlas.thc.state.tx.us/Data/GISData>

Data Layer: Capitol View Corridor

Data File Name (Feature Class/Shapefile/Raster): PLANNINGCADASTRE_overlay_capitol_view_corridors

Data File Type: Vector Data Source: City Of Austin

Data Current As Of: 2019

Acquired/Downloaded: December 2019

Download Link:
https://services.arcgis.com/0L95CJOVTaxqcmED/arcgis/rest/services/PLANNINGCADASTRE_overlay_capitol_view_corridors/FeatureServer

Data Layer: Cemeteries
Data File Name (Feature Class/Shapefile/Raster): Cemeteries
Data File Type: Vector
Data Source: Texas Historic Commission Data Current As Of: 2019 Acquired/Downloaded: December 2019
Download Link: <https://atlas.thc.state.tx.us/Data/GISData>

Data Layer: Museums
Data File Name (Feature Class/Shapefile/Raster): Museums
Data File Type: Vector
Data Source: Texas Historic Commission Data Current As Of: 2019 Acquired/Downloaded: December 2019
Download Link: <https://atlas.thc.state.tx.us/Data/GISData>

Data Layer: Urban Trails
Data File Name (Feature Class/Shapefile/Raster): CoA Urban Trails
Data File Type: Vector
Data Source: City Of Austin
Data Current As Of: December 2019
Acquired/Downloaded: December 2019
Download Link:
<https://data.austintexas.gov/Locations-and-Maps/Urban-Trails/bxbe-ndaw>

Data Layer: Imagery
Data File Name (Feature Class/Shapefile/Raster): World Imagery
Raster Data File Type: ESRI Basemap
Data Source: DigitalGlobe
Data Current As Of: April 2019
Acquired/Downloaded: December 2019
Download Link: <https://www.arcgis.com/home/item.html?id=10df2279f9684e4a9f6a7f08febac2a9>

Data Layer: Activity Centers
Data File Name (Feature Class/Shapefile/Raster): Activity Centers (Imagine Austin Centers)
Data File Type: Vector
Data Source: Imagine Austin Comprehensive Plan
Data Current As Of: 2019
Acquired/Downloaded: December 2019
Download Link: <https://data.austintexas.gov/Locations-and-Maps/Imagine-Austin-Centers/k4sq-5xm6>

Data Layer: Community Resources
Data File Name (Feature Class/Shapefile/Raster): Community Resources
Data File Type: Vector
Data Source: Cox-McClain
Data Current As Of: December 2019
Acquired/Downloaded: December 2019
Download Link: N/A

Data Layer: Fire Station
Data File Name (Feature Class/Shapefile/Raster): Data File Name: Austin_Fire_Stations
Data File Type: Vector
Data Source: City of Austin Data Current As Of: 2019
Acquired/Downloaded: December 2019
Download Link: [https://data.austintexas.gov/Public- Safety/Austin-Fire-Station-Map/szku-46rx](https://data.austintexas.gov/Public-Safety/Austin-Fire-Station-Map/szku-46rx)

Data Layer: Police Station
Data File Name (Feature Class/Shapefile/Raster): Austin_Police_Stations
Data File Type: Vector
Data Source: City of Austin Data Current As Of: 2019
Acquired/Downloaded: December 2019
DownloadLink: [https://data.austintexas.gov/Public- Safety/Austin-Police-Stations/jmp6-p8e2](https://data.austintexas.gov/Public-Safety/Austin-Police-Stations/jmp6-p8e2)

Data Layer: HPALM
Data File Name (FeatureClass/Shapefile/Raster): HPALM
Data File Type: Raster
Data Source: Texas Department of Transportation (TxDOT)
Data Current As Of: 2016
Acquired/Downloaded: December 2019
Download Link: <http://www.txdot.gov/inside-txdot/division/environmental/compliance-toolkits/toolkit/archeological-map.html>.

Data Layer: City of Austin Historic Landmark
Data File Name (Feature Class/Shapefile/Raster): HistoricLandmarks_20190513
Data File Type: Vector
Data Source: Texas City of Austin (CoA)
Data Current As Of: May 2019
Acquired/Downloaded: December 2019
Download Link: NA

Data Layer: City of Austin Historic District
Data File Name (Feature Class/Shapefile/Raster): HistoricDistricts_20190513
Data File Type: Vector
Data Source: City of Austin (CoA)
Data Current As Of: May 2019
Acquired/Downloaded: December 2019
Download Link: NA

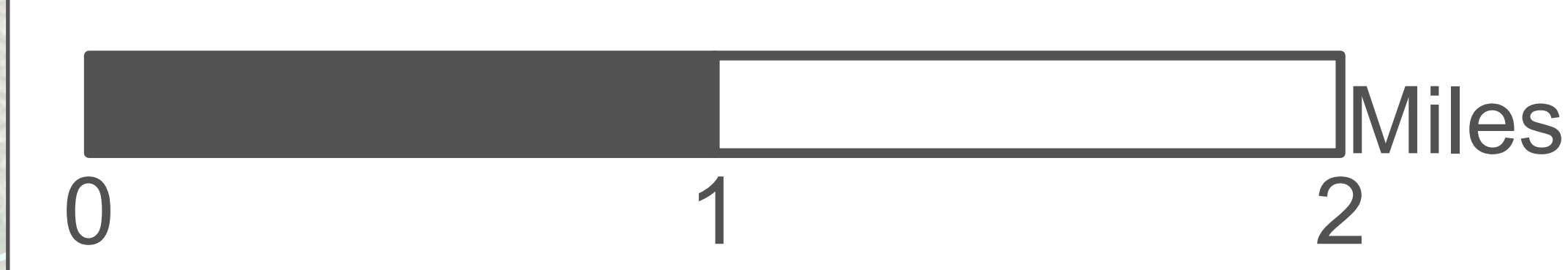
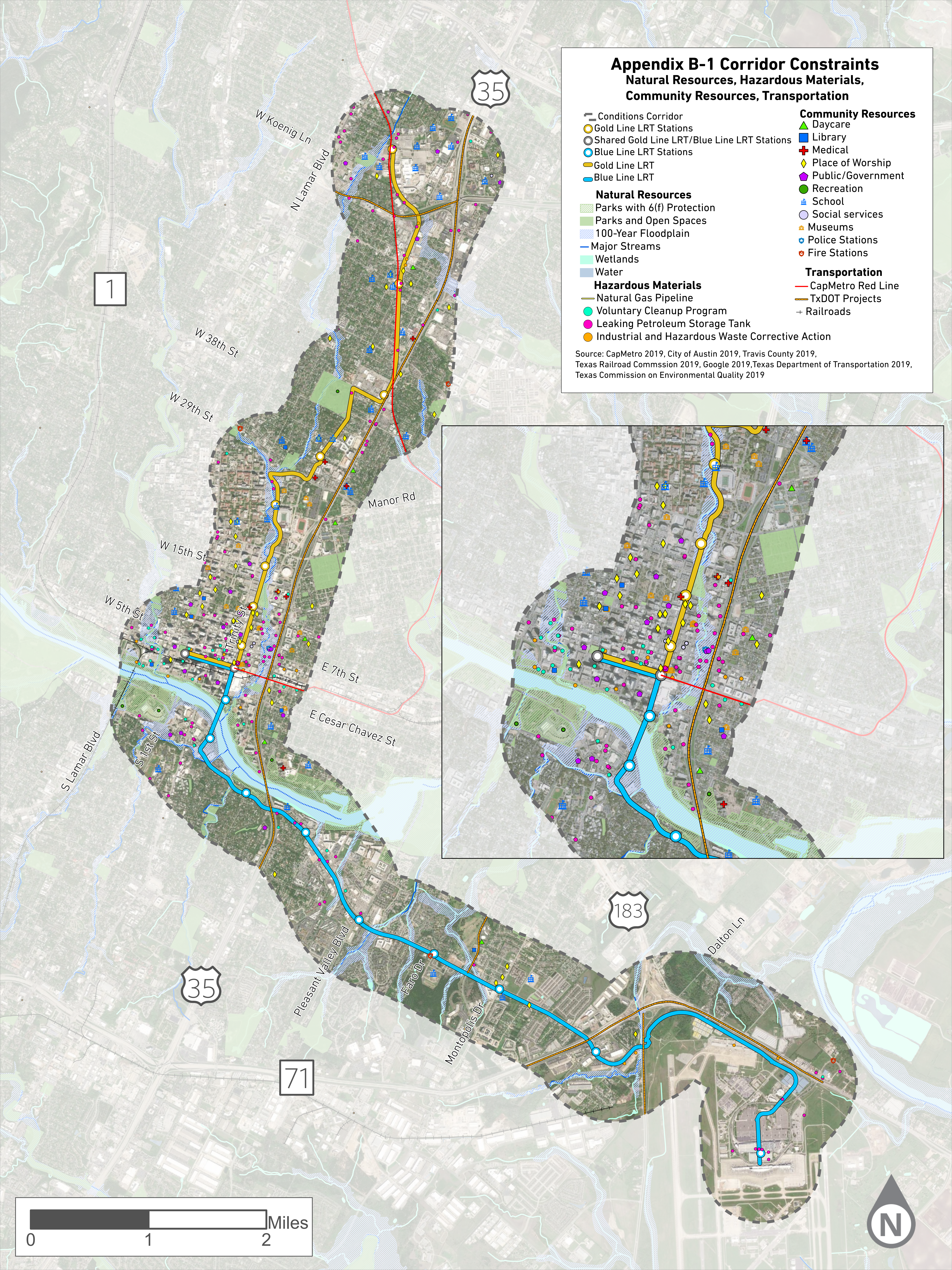
Data Layer: Neighborhood Planning Are (NPAs) and Non-Neighborhood Planning Areas
Data File Name (Feature Class/Shapefile/Raster): neighplans
Data File Type: Vector
Data Source: City of Austin (CoA)
Data Current As Of: September 2019
Acquired/Downloaded: December 2019
Download Link: <https://data.austintexas.gov/Locations-and-Maps/Neighborhood-Plan-Status/b2z2-zp7a>

Appendix B-1: Blue Line LRT/Gold Line LRT Corridor Constraints

Appendix B-1 Corridor Constraints Natural Resources, Hazardous Materials, Community Resources, Transportation

- Conditions Corridor
- Gold Line LRT Stations
- Shared Gold Line LRT/Blue Line LRT Stations
- Blue Line LRT Stations
- Gold Line LRT
- Blue Line LRT
- Natural Resources**
- Parks with 6(f) Protection
- Parks and Open Spaces
- 100-Year Floodplain
- Major Streams
- Wetlands
- Water
- Hazardous Materials**
- Natural Gas Pipeline
- Voluntary Cleanup Program
- Leaking Petroleum Storage Tank
- Industrial and Hazardous Waste Corrective Action
- Community Resources**
- Daycare
- Library
- Medical
- Place of Worship
- Public/Government
- Recreation
- School
- Social services
- Museums
- Police Stations
- Fire Stations
- Transportation**
- CapMetro Red Line
- TxDOT Projects
- Railroads

Source: CapMetro 2019, City of Austin 2019, Travis County 2019, Texas Railroad Commission 2019, Google 2019, Texas Department of Transportation 2019, Texas Commission on Environmental Quality 2019



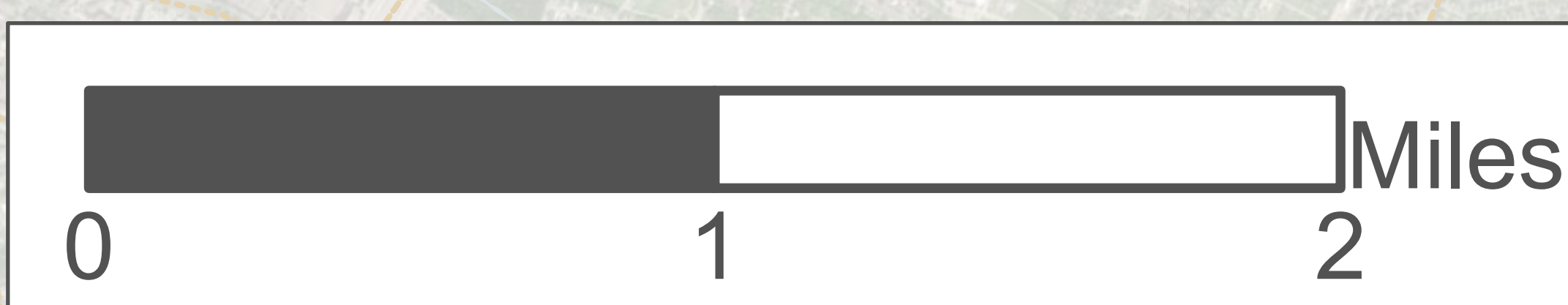
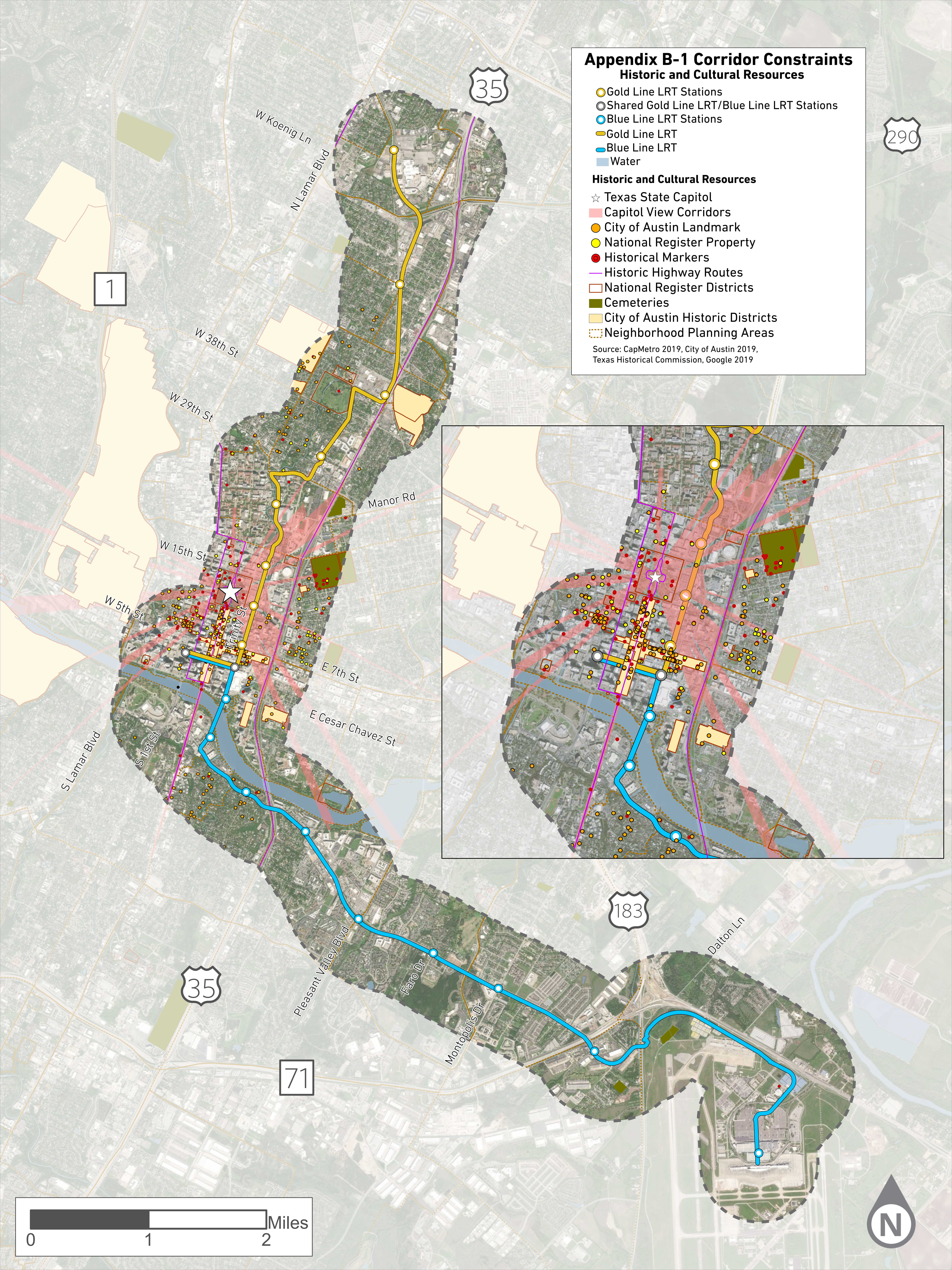
Appendix B-1 Corridor Constraints Historic and Cultural Resources

- Gold Line LRT Stations
- Shared Gold Line LRT/Blue Line LRT Stations
- Blue Line LRT Stations
- Gold Line LRT
- Blue Line LRT
- Water

Historic and Cultural Resources

- ☆ Texas State Capitol
- Capitol View Corridors
- City of Austin Landmark
- National Register Property
- Historical Markers
- Historic Highway Routes
- National Register Districts
- Cemeteries
- City of Austin Historic Districts
- Neighborhood Planning Areas

Source: CapMetro 2019, City of Austin 2019, Texas Historical Commission, Google 2019



Appendix A-2: Supplemental Neighborhood Information within the Blue Line LRT/Gold Line LRT Corridor

APPENDIX B-2: SUPPLEMENTAL NEIGHBORHOOD INFORMATION

Community Facilities within 1/2-mile of the Blue Line LRT/Gold Line LRT 2
Racial and Ethnic Distribution Surrounding the Blue Line/Gold Line LRT 8
Low-Income Distribution Surrounding the Blue Line/Gold Line LRT..... 14

Community Facilities within 1/2-mile of the Blue Line LRT/Gold Line LRT

Name	Address	Type	Additional Detail
Lee Elementary	3308 Hampton Rd Austin, Texas, 78705	Public school	Elementary
Maplewood Elementary	3808 Maplewood Ave Austin, Texas, 78722	Public school	Elementary
Martin Middle School	1601 Haskell St Austin, Texas, 78702	Public school	Middle
Pease Elementary	1106 Rio Grande St Austin, Texas, 78701	Public school	Elementary
Reilly Elementary	405 Denson Dr Austin, Texas, 78752	Public school	Elementary
Ridgetop Elementary	5005 Caswell Ave Austin, Texas, 78751	Public school	Elementary
Sanchez Elementary	73 San Marcos St Austin, Texas, 78702	Public school	Elementary
Webb Middle School	601 E Saint Johns Ave Austin, Texas, 78752	Public school	Middle
Webb Primary School	601 E Saint Johns Ave Austin, Texas, 78752	Public school	Elementary
Cedars Academy Next Generation High School at Highland	6700 Middle Fiskville Rd Austin, Texas, 78752	Charter school	High School
Baty Elementary	2101 Faro Dr Austin, Texas, 78741	Public school	Elementary
IDEA Montopolis Academy	1701 Vargas Rd Austin, Texas, 78741	Charter school	Elementary
IDEA Montopolis College Preparatory	1701 Vargas Rd Austin, Texas, 78741	Charter school	Elementary/Seco ndary
Texas School for the Deaf	1102 S Congress Ave Austin, Texas, 78704	Public school - TSD	Elementary/ Secondary
University of Texas at Austin High School	2901 N Interstate 35 Austin, Texas, 78722	Public school	High School
University High School	2007 University Ave Austin, Texas, 78705	Charter school	High School
Escuela Montessori	2013 Montopolis Dr Austin, TX 78741	Private school	Elementary
Griffin School	5001 Evans Ave Austin, TX 78751	Private school	High School
Growing Tree Learning Center	2807 Robinson Ave Austin, TX 78722	Private school	Preschool
Headwaters School	807 Rio Grande St Austin, TX 78701	Private school	Elementary/ Secondary
Little Tiger Chinese Immersion School	708 E 51st St Austin, TX 78751	Private school	Elementary
Odyssey School	4407 Red River St Austin, TX 78751	Private school	Middle/High School
St. Francis School	300 E Huntland Dr Austin, TX 78752	Private school	Elementary/ Secondary
St. Paul Lutheran School	3407 Red River St Austin, TX 78705	Private school	Elementary/ Secondary

Name	Address	Type	Additional Detail
Stepping Stone School - Hyde Park	1007 E 40th St Austin, TX 78751	Private school	Preschool
Acton School of Business	1404 E Riverside Dr Austin, TX 78741	Private college	Adult education
Auguste Escoffier School of Culinary Arts	6020 Dillard Cir Austin, TX 78752	Vocational/Trade school	Adult education
Aveda Arts & Sciences Institute Austin	6001 Middle Fiskville Rd Austin, TX 78752	Vocational/Trade school	Adult education
Bella Beauty College	4631 Airport Blvd #101 Austin, TX 78751	Vocational/Trade school	Adult education
CyberTex Institute of Technology	6300 La Calma Dr #350 Austin, TX 78752	Vocational/Trade school	Adult education
New Horizons Computer Learning Centers	300 E Highland Mall Blvd Suite 100 Austin, TX 78752	Vocational/Trade school	Adult education
Seminary of the Southwest - Graduate school	501 E 32nd St Austin, TX 78705	Graduate school	Adult education
The University of Texas at Austin	Austin, TX 78712	Public university	Adult education
Austin Community College - Highland campus	6101 ACC Highland Campus Dr Austin, TX 78752	Public community college	Adult education
Child Inc Fountain Plaza Child Development Center	825 E 53rd 1/2 St D Austin, TX 78751	Daycare	
Escuelita Del Alma - Day care center	3109 N Interstate 35 Frontage Rd Austin, TX 78722	Daycare	
The University of Texas Child Development Center	2205 Comal St Austin, TX 78722	Daycare	
Ebenezer Child Development Center	1014 E 10th St Austin, TX 78702	Daycare	
Extend-A-Care For Kids	55 N Interstate 35 Frontage Rd Austin, TX 78702	Daycare	
Stockton Hicks Family Tree DC	1515 Grove Blvd Austin, TX 78741	Daycare	
Archives of the Episcopal Church - Library	606 Rathervue Pl Austin, TX 78705	Library	
Terrazas Branch, Austin Public Library	1105 E Cesar Chavez St Austin, TX 78702	Library	
Ruiz Branch, Austin Public Library	1600 Grove Blvd Austin, TX 78741	Library	
Austin Central Library, Austin Public Library	710 W Cesar Chavez St Austin, TX 78701	Library	
Austin History Center, Austin Public Library	810 Guadalupe St Austin, TX 78701	Library	
Travis County Law Library	314 W 11th #140 Austin, TX 78701	Library	
CommUnityCare	15 Waller St Austin, TX 78702	Medical	Clinic
CommUnityCare David	4614 N Interstate 35	Medical	Clinic

Name	Address	Type	Additional Detail
Powell Clinic - Medical clinic	Frontage Rd Austin, TX 78751		
Family Wellness Clinic	2901 N Interstate Hwy 35 Suite 1.301 Austin, TX 78722	Medical	Clinic
University of Texas Physicians	313 E 12th St Austin, TX 78701	Medical	Clinic
Brackenridge Hospital	601 E 15th St Austin, TX 78701	Medical	Hospital
Children's Hospital of Austin	1400 N Interstate 35 Frontage Rd Austin, TX 78701	Medical	Hospital
St. David's Medical Center	919 E 32nd St Austin, TX 78705	Medical	Hospital
Dr. JoAnne Wise Edoka, M.D., F.A.A.P. - Pediatrician	2911 Medical Arts Square #7 Austin, TX 78705	Medical	Pediatrician
Housing Authority of Travis County - Housing authority	502 E Highland Mall Blvd Austin, TX 78752	Public/government	
Capitol Police District	5805 N Lamar Blvd Austin, TX 78752	Public/government	
Social Security Administration	1029 Camino La Costa Austin, TX 78752	Public/government	
Travis County Sheriff's Office	5555 Airport Blvd Austin, TX 78751	Public/government	
Central Health - Public health department	1111 E Cesar Chavez St Austin, TX 78702	Public/government	
Housing Authority of the City of Austin	1124 S IH 35 Frontage Rd Austin, TX 78704	Public/government	
Child And Family Services	105 W Riverside Dr Austin, TX 78704	Public/government	
One Texas Center	505 Barton Springs Rd Austin, TX 78704	Public/government	
Austin City Offices	201 E 2nd St Austin, TX 78701	Public/government	
Austin City Hall	301 W 2nd St Austin, TX 78701	Public/government	
United States Federal Courthouse	501 W 5th St Austin, TX 78701	Public/government	
Austin Fire Department - Station 1	401 E 5th St Austin, TX 78701	Public/government	
Austin Municipal Court	700 E 7th St Austin, TX 78701	Public/government	
Austin Police Station	715 E 8th St Austin, TX 78621	Public/government	
City of Austin Police Department	715 E 8th St Austin, TX 78701	Public/government	
United States Postal Service	823 Congress Ave Ste 150 Austin, TX 78701	Public/government	

Name	Address	Type	Additional Detail
J.J. Pickle Federal Building	300 E 8th St Austin, TX 78701	Public/government	
Travis County Jail	500 W 10th St Austin, TX 78701	Public/government	
United States Postal Service	111 E 17th St Austin, TX 78701	Public/government	
Texas Capitol	1100 Congress Ave Austin, TX 78701	Public/government	
Housing & Community Affairs	221 E 11th St Austin, TX 78701	Public/government	
The Salvation Army Center	501 E 8th St Austin, TX 78701	Social services	
CommUnityCare ARCH	500 E 7th St Austin, TX 78701	Social services	
Trinity Center (Homelessness Service)	304 E 7th St Austin, TX 78701	Social services	
Sake For Women's	411 Brazos St Austin, TX 78701	Social services	
Texas Association Against Sexual Assault - Social services organization	1033 La Posada Dr Austin, TX 78752	Social services	
Hancock Recreation Center	811 E 41st St Austin, TX 78751	Recreation	
The Long Center for the Performing Arts	701 W Riverside Dr Austin, TX 78704	Recreation	
Dougherty Arts Center	1110 Barton Springs Rd Austin, TX 78704	Recreation	
Festival Beach Community Garden	35 Waller St Austin, TX 78702	Recreation	
Austin Community College: Highland Campus	6101 ACC Highland Campus Dr Austin, TX 78752	Place of worship	
Austin Life Church	5925 Dillard Cir Austin, TX 78752	Place of worship	
Neighborhood Baptist Church	1000 Atkinson Rd Austin, TX 78752	Place of worship	
HOPE Prayer Room	1122 E 51st St Austin, TX 78723	Place of worship	
Little Vine Primitive Baptist Church	915 E 52nd St Austin, TX 78751	Place of worship	
Victory Fellowship Ministries	5207 Airport Blvd Austin, TX 78751	Place of worship	
Trinity Chapel - Church	Austin, TX 78751	Place of worship	
Ridgetop Baptist Church	708 E 51st St Austin, TX 78751	Place of worship	
Evergreen Church of Austin	2623, 5002 Caswell Ave Austin, TX 78751	Place of worship	
Iglesia bautista nueva vida	Austin, TX 78751	Place of worship	
Korean Baptist Church	Austin, TX 78751	Place of worship	
Red River Church	4039, 4425 Red River St	Place of worship	

Name	Address	Type	Additional Detail
	Austin, TX 78751		
St. George's Episcopal Church	4301 I-35 Austin, TX 78722	Place of worship	
Genesis Presbyterian Church	1507 Wilshire Blvd Austin, TX 78722	Place of worship	
St. Paul Lutheran Church	3501 Red River St Austin, TX 78705	Place of worship	
Midtown Church Austin	3308 Hampton Rd Austin, TX 78705	Place of worship	
Fellowship Bible Believers	1100 E 12th St Austin, TX 78702	Place of worship	
Metropolitan AME Church	1101 E 10th St Austin, TX 78702	Place of worship	
Emmanuel United Methodist Church	200 Brushy St Austin, TX 78702	Place of worship	
Austin Baptist Chapel-Angel House Soup Kitchen	908 E Cesar Chavez St Austin, TX 78702	Place of worship	
Templo Sinai Church	6210 E Riverside Dr Austin, TX 78741	Place of worship	
Greater Holy Temple Church	1806 Montopolis Dr Austin, TX 78741	Place of worship	
United Church of God in Christ	1614 Montopolis Dr Austin, TX 78741	Place of worship	
Onion Creek Baptist Church	8214 E Riverside Dr Austin, TX 78744	Place of worship	
Green Life Fellowship	8214 E Riverside Dr Austin, TX 78744	Place of worship	
New Jerusalem Baptist Church	6707 E Riverside Dr Austin, TX	Place of worship	
Good Shepherd On The Hill	1700 Woodland Ave Austin, TX 78741	Place of worship	
City Life Church	501 W 3rd St Austin, TX 78701	Place of worship	
12 Wells Church	311 E 5th St Austin, TX 78701	Place of worship	
St. David's Episcopal Church	301 E 8th St Austin, TX 78701	Place of worship	
Capital City Church of Christ	Austin, TX 78701	Place of worship	
Central Presbyterian Church	200 E 8th St Austin, TX 78701	Place of worship	
Texas Baptist Christian Life	812 San Antonio St Austin, TX 78701	Place of worship	
First Baptist Church of Austin	901 Trinity St Austin, TX 78701	Place of worship	
St Mary Cathedral	203 E 10th St Austin, TX 78701	Place of worship	
Cathedral School of Saint Mary	910 San Jacinto Blvd Austin, TX 78701	Place of worship	
Central Christian Church	1110 Guadalupe St Austin, TX 78701	Place of worship	

Name	Address	Type	Additional Detail
St. Elias Antiochian Orthodox Church	408 E 11th St Austin, TX 78701	Place of worship	
First Presbyterian Church	1103 Trinity St Austin, TX 78701	Place of worship	
First United Methodist Church of Austin	1201 Lavaca St Austin, TX 78701	Place of worship	
First Church of Christ, Scientist	1309 Guadalupe St Austin, TX 78701	Place of worship	
Gethsemane Church	1510 Congress Ave Austin, TX 78701	Place of worship	
University Ave Church of Christ	1903 University Ave Austin, TX 78705	Place of worship	
University Christian Church	2007 University Ave Austin, TX 78705	Place of worship	
University Catholic Center	2010 University Ave Austin, TX 78705	Place of worship	

Source: Google (2019).

Racial and Ethnic Distribution Surrounding the Blue Line LRT/Gold Line LRT

Census Geography	Race and Ethnicity																		
	Total Pop.	Not Hispanic or Latino														Hispanic**		Total Minority***	
		White		Black*		American Indian*		Asian		Pacific Islander*		Other*		Two*					
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Travis County	1,176,584	580,292	49.3%	92,653	7.9%	1,875	0.2%	74,442	6.3%	439	~0.0%	2,250	0.2%	26,235	2.2%	398,398	33.9%	596,292	50.7%
City of Austin	916,906	445,269	48.6%	66,724	7.3%	1,674	0.2%	63,411	6.9%	341	~0.0%	1,556	0.2%	21,222	2.3%	316,709	34.5%	471,637	51.4%
Block Group 3, Census Tract 3.02	872	705	80.8%	0	0.0%	0	0.0%	92	10.6%	0	0.0%	0	0.0%	14	1.6%	61	7.0%	167	19.2%
Block Group 4, Census Tract 3.02	908	547	60.2%	37	4.1%	0	0.0%	139	15.3%	0	0.0%	0	0.0%	15	1.7%	170	18.7%	361	39.8%
Block Group 5, Census Tract 3.02	1,222	1,029	84.2%	10	0.8%	0	0.0%	35	2.9%	0	0.0%	0	0.0%	50	4.1%	98	8.0%	193	15.8%
Block Group 1, Census Tract 3.04	1,060	676	63.8%	13	1.2%	0	0.0%	128	12.1%	0	0.0%	0	0.0%	11	1.0%	232	21.9%	384	36.2%
Block Group 2, Census Tract 3.04	1,969	1,652	83.9%	0	0.0%	0	0.0%	53	2.7%	0	0.0%	0	0.0%	0	0.0%	264	13.4%	317	16.1%
Block Group 1, Census Tract 3.05	1,343	1,104	82.2%	42	3.1%	0	0.0%	40	3.0%	0	0.0%	0	0.0%	24	1.8%	133	9.9%	239	17.8%
Block Group 2, Census Tract 3.05	773	650	84.1%	0	0.0%	0	0.0%	29	3.8%	0	0.0%	0	0.0%	23	3.0%	71	9.2%	123	15.9%
Block Group 3, Census Tract 3.05	1,550	1,171	75.5%	41	2.6%	0	0.0%	34	2.2%	0	0.0%	0	0.0%	19	1.2%	285	18.4%	379	24.5%
Block Group 1, Census Tract 3.06	4,869	2,820	57.9%	451	9.3%	0	0.0%	415	8.5%	0	0.0%	10	0.2%	99	2.0%	1,074	22.1%	2,049	42.1%
Block Group 1, Census Tract 3.07	1,786	1,300	72.8%	58	3.2%	0	0.0%	45	2.5%	0	0.0%	0	0.0%	74	4.1%	309	17.3%	486	27.2%
Block Group 1, Census Tract 4.01	2,086	1,668	80.0%	54	2.6%	0	0.0%	48	2.3%	0	0.0%	0	0.0%	98	4.7%	218	10.5%	418	20.0%
Block Group 2, Census Tract 4.01	2,001	1,174	58.7%	54	2.7%	0	0.0%	226	11.3%	0	0.0%	17	0.8%	130	6.5%	400	20.0%	827	41.3%

Census Geography	Race and Ethnicity																		
	Total Pop.	Not Hispanic or Latino														Hispanic**		Total Minority***	
		White		Black*		American Indian*		Asian		Pacific Islander*		Other*		Two*					
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Block Group 3, Census Tract 4.02	802	412	51.4%	230	28.7%	0	0.0%	31	3.9%	29	3.6%	0	0.0%	28	3.5%	72	9.0%	390	48.6%
Block Group 1, Census Tract 5	849	470	55.4%	0	0.0%	0	0.0%	186	21.9%	0	0.0%	0	0.0%	29	3.4%	164	19.3%	379	44.6%
Block Group 2, Census Tract 5	767	551	71.8%	16	2.1%	0	0.0%	81	10.6%	0	0.0%	12	1.6%	40	5.2%	67	8.7%	216	28.2%
Block Group 3, Census Tract 5	1,120	943	84.2%	0	0.0%	0	0.0%	23	2.1%	0	0.0%	0	0.0%	20	1.8%	134	12.0%	177	15.8%
Block Group 4, Census Tract 5	1,750	1,420	81.1%	4	0.2%	0	0.0%	153	8.7%	0	0.0%	0	0.0%	0	0.0%	173	9.9%	330	18.9%
Block Group 1, Census Tract 6.01	1,271	750	59.0%	63	5.0%	16	1.3%	208	16.4%	0	0.0%	0	0.0%	18	1.4%	216	17.0%	521	41.0%
Block Group 2, Census Tract 6.01	8,876	4,727	53.3%	1,448	16.3%	8	0.1%	568	6.4%	9	0.1%	8	0.1%	236	2.7%	1,872	21.1%	4,149	46.7%
Block Group 4, Census Tract 6.03	713	519	72.8%	12	1.7%	0	0.0%	63	8.8%	0	0.0%	5	0.7%	8	1.1%	106	14.9%	194	27.2%
Block Group 5, Census Tract 6.03	1,936	964	49.8%	222	11.5%	0	0.0%	408	21.1%	0	0.0%	4	0.2%	22	1.1%	316	16.3%	972	50.2%
Block Group 2, Census Tract 6.04	2,748	1,228	44.7%	150	5.5%	52	1.9%	783	28.5%	0	0.0%	9	0.3%	56	2.0%	470	17.1%	1,520	55.3%
Block Group 1, Census Tract 7	1,123	740	65.9%	20	1.8%	21	1.9%	70	6.2%	0	0.0%	0	0.0%	29	2.6%	243	21.6%	383	34.1%
Block Group 3, Census Tract 8.03	878	671	76.4%	121	13.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	0.8%	79	9.0%	207	23.6%
Block Group 2, Census Tract 8.04	1,314	426	32.4%	285	21.7%	0	0.0%	10	0.8%	0	0.0%	0	0.0%	47	3.6%	546	41.6%	888	67.6%
Block Group 2, Census Tract 9.01	1,431	626	43.7%	196	13.7%	0	0.0%	78	5.5%	0	0.0%	0	0.0%	42	2.9%	489	34.2%	805	56.3%
Block Group 4, Census Tract 9.02	1,025	322	31.4%	164	16.0%	0	0.0%	12	1.2%	0	0.0%	0	0.0%	0	0.0%	527	51.4%	703	68.6%

Census Geography	Race and Ethnicity																		
	Total Pop.	Not Hispanic or Latino														Hispanic**		Total Minority***	
		White		Black*		American Indian*		Asian		Pacific Islander*		Other*		Two*					
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Block Group 1, Census Tract 10	605	232	38.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	373	61.7%	373	61.7%
Block Group 4, Census Tract 10	458	179	39.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	31	6.8%	248	54.1%	279	60.9%
Block Group 5, Census Tract 10	724	273	37.7%	52	7.2%	0	0.0%	70	9.7%	0	0.0%	0	0.0%	4	0.6%	325	44.9%	451	62.3%
Block Group 1, Census Tract 11	4,109	3,180	77.4%	242	5.9%	0	0.0%	199	4.8%	0	0.0%	0	0.0%	11	0.3%	477	11.6%	929	22.6%
Block Group 2, Census Tract 11	1,892	1,214	64.2%	71	3.8%	0	0.0%	202	10.7%	0	0.0%	0	0.0%	0	0.0%	405	21.4%	678	35.8%
Block Group 2, Census Tract 12	2,991	2,403	80.3%	53	1.8%	0	0.0%	223	7.5%	0	0.0%	35	1.2%	39	1.3%	238	8.0%	588	19.7%
Block Group 3, Census Tract 12	836	665	79.5%	0	0.0%	16	1.9%	31	3.7%	0	0.0%	0	0.0%	0	0.0%	124	14.8%	171	20.5%
Block Group 1, Census Tract 13.03	1,505	1,143	75.9%	29	1.9%	0	0.0%	148	9.8%	0	0.0%	0	0.0%	12	0.8%	173	11.5%	362	24.1%
Block Group 2, Census Tract 13.03	1,660	1,332	80.2%	12	0.7%	11	0.7%	67	4.0%	0	0.0%	0	0.0%	16	1.0%	222	13.4%	328	19.8%
Block Group 1, Census Tract 13.05	1,344	1,180	87.8%	0	0.0%	0	0.0%	17	1.3%	0	0.0%	0	0.0%	50	3.7%	97	7.2%	164	12.2%
Block Group 3, Census Tract 13.05	1,500	1,291	86.1%	51	3.4%	0	0.0%	19	1.3%	0	0.0%	0	0.0%	0	0.0%	139	9.3%	209	13.9%
Block Group 4, Census Tract 13.05	1,420	959	67.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	14	1.0%	447	31.5%	461	32.5%
Block Group 1, Census Tract 14.01	1,878	1,418	75.5%	48	2.6%	6	0.3%	82	4.4%	0	0.0%	0	0.0%	44	2.3%	280	14.9%	460	24.5%
Block Group 2, Census Tract 14.01	1,482	1,136	76.7%	32	2.2%	57	3.8%	46	3.1%	0	0.0%	0	0.0%	77	5.2%	134	9.0%	346	23.3%
Block Group 1, Census Tract 14.02	684	505	73.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	82	12.0%	97	14.2%	179	26.2%

Census Geography	Race and Ethnicity																		
	Total Pop.	Not Hispanic or Latino														Hispanic**		Total Minority***	
		White		Black*		American Indian*		Asian		Pacific Islander*		Other*		Two*					
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Block Group 2, Census Tract 14.02	624	549	88.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	75	12.0%	75	12.0%
Block Group 3, Census Tract 14.02	1,309	1,102	84.2%	23	1.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	13	1.0%	171	13.1%	207	15.8%
Block Group 1, Census Tract 14.03	681	269	39.5%	27	4.0%	0	0.0%	38	5.6%	0	0.0%	0	0.0%	10	1.5%	337	49.5%	412	60.5%
Block Group 2, Census Tract 14.03	1,042	650	62.4%	57	5.5%	0	0.0%	16	1.5%	0	0.0%	14	1.3%	18	1.7%	287	27.5%	392	37.6%
Block Group 1, Census Tract 15.03	1,393	877	63.0%	0	0.0%	0	0.0%	85	6.1%	0	0.0%	0	0.0%	75	5.4%	356	25.6%	516	37.0%
Block Group 2, Census Tract 15.03	305	203	66.6%	18	5.9%	0	0.0%	10	3.3%	0	0.0%	0	0.0%	0	0.0%	74	24.3%	102	33.4%
Block Group 3, Census Tract 15.03	1,640	889	54.2%	129	7.9%	0	0.0%	25	1.5%	0	0.0%	31	1.9%	24	1.5%	542	33.0%	751	45.8%
Block Group 4, Census Tract 15.03	651	334	51.3%	0	0.0%	0	0.0%	24	3.7%	0	0.0%	0	0.0%	19	2.9%	274	42.1%	317	48.7%
Block Group 3, Census Tract 15.05	1,169	935	80.0%	4	0.3%	0	0.0%	9	0.8%	0	0.0%	35	3.0%	0	0.0%	186	15.9%	234	20.0%
Block Group 4, Census Tract 15.05	1,236	1,068	86.4%	20	1.6%	0	0.0%	16	1.3%	0	0.0%	0	0.0%	99	8.0%	33	2.7%	168	13.6%
Block Group 1, Census Tract 18.12	1,322	524	39.6%	199	15.1%	0	0.0%	119	9.0%	0	0.0%	0	0.0%	44	3.3%	436	33.0%	798	60.4%
Block Group 3, Census Tract 18.12	2,930	253	8.6%	242	8.3%	0	0.0%	90	3.1%	0	0.0%	46	1.6%	0	0.0%	2,299	78.5%	2,677	91.4%
Block Group 1, Census Tract 21.05	1,949	826	42.4%	322	16.5%	0	0.0%	19	1.0%	0	0.0%	0	0.0%	5	0.3%	777	39.9%	1,123	57.6%
Block Group 2, Census Tract 21.05	2,521	464	18.4%	331	13.1%	0	0.0%	53	2.1%	0	0.0%	0	0.0%	56	2.2%	1,617	64.1%	2,057	81.6%
Block Group 3, Census Tract 21.05	492	251	51.0%	0	0.0%	0	0.0%	23	4.7%	0	0.0%	0	0.0%	29	5.9%	189	38.4%	241	49.0%

Census Geography	Race and Ethnicity																		
	Total Pop.	Not Hispanic or Latino														Hispanic**		Total Minority***	
		White		Black*		American Indian*		Asian		Pacific Islander*		Other*		Two*					
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Block Group 1, Census Tract 23.04	1,255	296	23.6%	122	9.7%	0	0.0%	77	6.1%	0	0.0%	0	0.0%	0	0.0%	760	60.6%	959	76.4%
Block Group 2, Census Tract 23.04	1,727	1,225	70.9%	23	1.3%	0	0.0%	129	7.5%	0	0.0%	0	0.0%	67	3.9%	283	16.4%	502	29.1%
Block Group 3, Census Tract 23.04	675	152	22.5%	32	4.7%	0	0.0%	20	3.0%	0	0.0%	0	0.0%	0	0.0%	471	69.8%	523	77.5%
Block Group 1, Census Tract 23.10	879	55	6.3%	52	5.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	772	87.8%	824	93.7%
Block Group 2, Census Tract 23.10	2,345	209	8.9%	170	7.2%	0	0.0%	0	0.0%	0	0.0%	12	0.5%	45	1.9%	1,909	81.4%	2,136	91.1%
Block Group 1, Census Tract 23.12	1,288	160	12.4%	272	21.1%	0	0.0%	1	0.1%	0	0.0%	0	0.0%	0	0.0%	855	66.4%	1,128	87.6%
Block Group 2, Census Tract 23.12	3,416	210	6.1%	155	4.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3,051	89.3%	3,206	93.9%
Block Group 3, Census Tract 23.12	4,001	706	17.6%	295	7.4%	0	0.0%	57	1.4%	0	0.0%	0	0.0%	61	1.5%	2,882	72.0%	3,295	82.4%
Block Group 1, Census Tract 23.14	695	75	10.8%	104	15.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	516	74.2%	620	89.2%
Block Group 2, Census Tract 23.14	1,341	836	62.3%	67	5.0%	0	0.0%	27	2.0%	0	0.0%	0	0.0%	0	0.0%	411	30.6%	505	37.7%
Block Group 3, Census Tract 23.14	974	355	36.4%	255	26.2%	0	0.0%	90	9.2%	16	1.6%	0	0.0%	74	7.6%	184	18.9%	619	63.6%
Block Group 4, Census Tract 23.14	2,102	281	13.4%	377	17.9%	0	0.0%	94	4.5%	0	0.0%	0	0.0%	0	0.0%	1,350	64.2%	1,821	86.6%
Block Group 1, Census Tract 23.15	1,349	411	30.5%	9	0.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	8	0.6%	921	68.3%	938	69.5%
Block Group 2, Census Tract 23.15	1,785	570	31.9%	54	3.0%	0	0.0%	26	1.5%	0	0.0%	0	0.0%	12	0.7%	1,123	62.9%	1,215	68.1%
Block Group 1, Census Tract 23.16	1,743	377	21.6%	102	5.9%	0	0.0%	10	0.6%	0	0.0%	0	0.0%	40	2.3%	1,214	69.7%	1,366	78.4%

Census Geography	Race and Ethnicity																		
	Total Pop.	Not Hispanic or Latino														Hispanic**		Total Minority***	
		White		Black*		American Indian*		Asian		Pacific Islander*		Other*		Two*					
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Block Group 2, Census Tract 23.16	1,799	600	33.4%	166	9.2%	0	0.0%	71	3.9%	0	0.0%	0	0.0%	36	2.0%	926	51.5%	1,199	66.6%
Block Group 3, Census Tract 23.16	1,402	413	29.5%	141	10.1%	0	0.0%	48	3.4%	0	0.0%	0	0.0%	42	3.0%	758	54.1%	989	70.5%
Block Group 1, Census Tract 23.17	4,796	1,163	24.2%	733	15.3%	0	0.0%	420	8.8%	42	0.9%	55	1.1%	186	3.9%	2,197	45.8%	3,633	75.8%
Block Group 2, Census Tract 23.17	1,135	216	19.0%	270	23.8%	0	0.0%	64	5.6%	0	0.0%	0	0.0%	0	0.0%	585	51.5%	919	81.0%
Block Group 1, Census Tract 23.18	5,960	1,509	25.3%	802	13.5%	0	0.0%	846	14.2%	0	0.0%	0	0.0%	235	3.9%	2,568	43.1%	4,451	74.7%
Block Group 2, Census Tract 23.18	2,711	149	5.5%	572	21.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	225	8.3%	1,765	65.1%	2,562	94.5%
Block Group 2, Census Tract 24.31	3,134	521	16.6%	207	6.6%	0	0.0%	108	3.4%	0	0.0%	0	0.0%	39	1.2%	2,259	72.1%	2,613	83.4%
Block Group 1, Census Tract 9800	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
TOTAL	135,906	66,058	48.6%	10,633	7.8%	187	0.1%	7,677	5.6%	96	0.1%	293	0.2%	2,981	2.2%	47,981	35.3%	69,848	51.4%

Source: ACS 2017.

*The Complete Census race descriptions are as follows: White alone; Black or African American alone; American Indian and Alaska Native alone; Asian alone; Native Hawaiian and Other Pacific Islander alone; Some Other Race alone; and Two or More Races.

**See 2010 Census Summary File 1 Technical Documentation for additional information about race and origin here: <http://www.census.gov/prod/cen2010/doc/sf1.pdf>.

***Blocks in bold have more than 50 percent minority persons.

Low-Income Distribution Surrounding the Blue Line LRT/Gold Line LRT

Geography	Total Population	Population with Household Incomes Below the Federal Poverty Level	Percent Low-Income Population*
Travis County	1,152,639	159,948	13.9%
City of Austin	896,303	138,274	15.4%
Block Group 3, Census Tract 3.02	872	249	28.6%
Block Group 4, Census Tract 3.02	863	125	14.5%
Block Group 5, Census Tract 3.02	1,222	176	14.4%
Block Group 1, Census Tract 3.04	1,046	166	15.9%
Block Group 2, Census Tract 3.04	1,969	278	14.1%
Block Group 1, Census Tract 3.05	1,343	268	20.0%
Block Group 2, Census Tract 3.05	773	151	19.5%
Block Group 3, Census Tract 3.05	1,550	410	26.5%
Block Group 1, Census Tract 3.06	4,852	786	16.2%
Block Group 1, Census Tract 3.07	1,786	164	9.2%
Block Group 1, Census Tract 4.01	2,069	59	2.9%
Block Group 2, Census Tract 4.01	1,758	760	43.2%
Block Group 3, Census Tract 4.02	802	127	15.8%
Block Group 1, Census Tract 5	849	464	54.7%
Block Group 2, Census Tract 5	767	269	35.1%
Block Group 3, Census Tract 5	1,079	331	30.7%
Block Group 4, Census Tract 5	1,727	454	26.3%
Block Group 1, Census Tract 6.01	806	476	59.1%
Block Group 2, Census Tract 6.01	56	56	100.0%
Block Group 4, Census Tract 6.03	567	378	66.7%
Block Group 5, Census Tract 6.03	1,616	1,261	78.0%
Block Group 2, Census Tract 6.04	1,606	1,371	85.4%
Block Group 1, Census Tract 7	1,123	220	19.6%
Block Group 3, Census Tract 8.03	878	139	15.8%

Geography	Total Population	Population with Household Incomes Below the Federal Poverty Level	Percent Low-Income Population*
Block Group 2, Census Tract 8.04	1,314	405	30.8%
Block Group 2, Census Tract 9.01	1,202	232	19.3%
Block Group 4, Census Tract 9.02	1,025	315	30.7%
Block Group 1, Census Tract 10	605	16	2.6%
Block Group 4, Census Tract 10	458	7	1.5%
Block Group 5, Census Tract 10	724	155	21.4%
Block Group 1, Census Tract 11	3,957	488	12.3%
Block Group 2, Census Tract 11	1,892	340	18.0%
Block Group 2, Census Tract 12	2,991	140	4.7%
Block Group 3, Census Tract 12	836	92	11.0%
Block Group 1, Census Tract 13.03	1,505	107	7.1%
Block Group 2, Census Tract 13.03	1,650	261	15.8%
Block Group 1, Census Tract 13.05	1,344	186	13.8%
Block Group 3, Census Tract 13.05	1,471	276	18.8%
Block Group 4, Census Tract 13.05	1,420	88	6.2%
Block Group 1, Census Tract 14.01	1,878	180	9.6%
Block Group 2, Census Tract 14.01	1,361	146	10.7%
Block Group 1, Census Tract 14.02	672	65	9.7%
Block Group 2, Census Tract 14.02	624	19	3.0%
Block Group 3, Census Tract 14.02	1,309	179	13.7%
Block Group 1, Census Tract 14.03	681	117	17.2%
Block Group 2, Census Tract 14.03	1,042	242	23.2%
Block Group 1, Census Tract 15.03	1,393	273	19.6%
Block Group 2, Census Tract 15.03	305	28	9.2%
Block Group 3, Census Tract 15.03	1,640	230	14.0%
Block Group 4, Census Tract 15.03	651	93	14.3%

Geography	Total Population	Population with Household Incomes Below the Federal Poverty Level	Percent Low-Income Population*
Block Group 3, Census Tract 15.05	1,162	106	9.1%
Block Group 4, Census Tract 15.05	1,236	184	14.9%
Block Group 1, Census Tract 18.12	1,322	346	26.2%
Block Group 3, Census Tract 18.12	2,930	755	25.8%
Block Group 1, Census Tract 21.05	1,921	356	18.5%
Block Group 2, Census Tract 21.05	2,521	770	30.5%
Block Group 3, Census Tract 21.05	492	20	4.1%
Block Group 1, Census Tract 23.04	1,219	399	32.7%
Block Group 2, Census Tract 23.04	1,727	170	9.8%
Block Group 3, Census Tract 23.04	675	182	27.0%
Block Group 1, Census Tract 23.10	879	241	27.4%
Block Group 2, Census Tract 23.10	2,335	857	36.7%
Block Group 1, Census Tract 23.12	1,288	477	37.0%
Block Group 2, Census Tract 23.12	3,416	941	27.5%
Block Group 3, Census Tract 23.12	3,963	1,438	36.3%
Block Group 1, Census Tract 23.14	695	336	48.3%
Block Group 2, Census Tract 23.14	1,340	132	9.9%
Block Group 3, Census Tract 23.14	974	48	4.9%
Block Group 4, Census Tract 23.14	2,102	728	34.6%
Block Group 1, Census Tract 23.15	1,349	325	24.1%
Block Group 2, Census Tract 23.15	1,785	289	16.2%
Block Group 1, Census Tract 23.16	1,743	414	23.8%
Block Group 2, Census Tract 23.16	1,783	764	42.8%
Block Group 3, Census Tract 23.16	1,391	333	23.9%

Geography	Total Population	Population with Household Incomes Below the Federal Poverty Level	Percent Low-Income Population*
Block Group 1, Census Tract 23.17	4,796	2,432	50.7%
Block Group 2, Census Tract 23.17	1,135	838	73.8%
Block Group 1, Census Tract 23.18	5,960	2,036	34.2%
Block Group 2, Census Tract 23.18	2,711	1,389	51.2%
Block Group 2, Census Tract 24.31	3,134	845	27.0%
Block Group 1, Census Tract 9800	0	0	0.0%
TOTAL	123,913	31,969	25.8%

Source: ACS 2017.

Note: People whose poverty status is undefined are excluded from Census Bureau poverty tabulations. For some persons, such as unrelated individuals under age 15, poverty status is not defined. For the decennial censuses and the ACS, poverty status is also undefined for people living in college dormitories and in institutional group quarters. Thus, the total population in poverty tables--the poverty universe--is slightly smaller than the overall population.

*Blocks in bold have more than 15 percent low-income persons. 52 block groups have low-income populations greater than 15 percent of the total population for the block group (i.e. block groups with percent low-income populations greater than the City of Austin and Travis County averages).

Appendix B-3: Cultural Resources within the Blue Line LRT/Gold Line LRT Corridor

**APPENDIX B-3: CULTURAL RESOURCES WITHIN BLUE LINE LRT/GOLD LINE LRT
CORRIDOR**

National Register Properties within 1/2-mile of the Blue Line LRT/Gold Line LRT 2
National Register Districts within 1/2-mile of the Blue Line/Gold Line LRT..... 4
Historical Markers within 1/2-mile of the Blue Line/Gold Line LRT 5
Historic Highways within 1/2-mile of the Blue Line/Gold Line LRT..... 8
Cemeteries within 1/2-mile of the Blue Line/Gold Line LRT..... 9
City of Austin Historic Landmarks within 1/2-mile of the Blue Line/Gold Line LRT..... 10
City of Austin Historic Districts within 1/2-mile of the Blue Line/Gold Line LRT..... 15

National Register Properties within 1/2-mile of the Blue Line LRT/Gold Line LRT

Name	Address	Atlas ID
1918 State Office Building and 1933 State Highway Building	1019 Brazos and 125 E. 11th Sts.	2097001625
Arnold Bakery	1010 E. 11th St.	2003001416
Austin Central Fire Station #1	401 E. Fifth St.	2000000454
Austin Daily Tribune Building	920 Colorado	2000001358
Austin Public Library	810 Guadalupe St.	2093000389
Austin US Courthouse	200 West Eighth St.	2001000432
Bailetti House	1006 Waller St.	2085002268
Barnes, Charles W., House (Gone)	1105 E. 12th St.	2085002266
Battle Hall	South Mall, University of Texas campus	2070000763
Bertram Building	1601 Guadalupe Street	2012000590
Boardman-Webb-Bugg House	602 W. 9th St.	2080004152
Briones, Genaro P. and Carolina, House	1204 E. 7th St.	2098000280
Brizendine House	507 W. 11th St.	2074002090
Brown Building	708 Colorado St.	2097000364
Carrington-Covert House	1511 Colorado St.	2070000765
Central Christian Church	1110 Guadalupe St.	2092000889
Chapman House	901 East 12th Street	2010000739
Connelly-Yerwood House	1115 E. 12th St.	2003000279
Cox--Craddock House	720 E. 32nd St.	2001000612
Delta Kappa Gamma Society International Headquarters Building	416 West 12th Street	2012000198
Dobie, J. Frank, House	702 E. 26th St.	2091000575
Driskill Hotel	117 E. 7th St.	2069000212
Fannie Moss Miller House	900 Rio Grande Street	2008000318
Federal Office Building	300 East 8th Street	2011000211
Fischer House	1008 West Ave.	2082001741
Gethsemane Lutheran Church	1510 Congress Ave.	2070000766
Gilfillan House	603 W. 8th St.	2080004153
Goodman Building	202 W. 13th St.	2073001976
Haehnel Building	1101 E. 11th St.	2085002295
Hancock, John, House	1306 Colorado St.	2073001977
Hildreth--Flanagan--Heierman House	3909 Ave. G	2090001184
Hirshfeld, Henry, House and Cottage	303 and 305 W. 9th St.	2073001978
Hofheintz-Reissig Store	600 E. 3rd St.	2083003165
Irvin, Robert, House	1008 E. 9th St.	2085002270
Jobe, Phillip W., House	1113 E. 9th St.	2085002278
Johnson, C. E., House	1022 E. 7th St.	2085002282
Kappa Kappa Gamma House	2001 University Avenue	2013000602
Limerick-Frazier House	810 E. 13th St.	2005000238
Littlefield House	24th St. and Whitis Ave.	2070000767
Maddox, John W., House	1115 E. 3rd St.	2085002293
Mather-Kirkland House	402 Academy	2078002990
McGown, Floyd, House	1202 Garden St.	2085002290
Millett Opera House	110 E. 9th St.	2078002991
Moonlight Towers	#7: W. 9th St. and Guadalupe St.	2076002071
Moonlight Towers	#17: E. 11th St. and Trinity St.	2076002071
Moonlight Towers	#18: E. 11th St. and Lydia St.	2076002071
Moonlight Towers (Gone)	#20: E. 2nd St. and Neches St.	2076002071
Moonlight Towers (Gone)	#19: E. 6th St. and Medina St.	2076002071
Moonlight Towers (Gone)	#13: W. 23rd St. and Red River St.	2076002071

Name	Address	Atlas ID
Moonlight Towers (Gone)	#5 W. 4th St. and Nueces St.	2076002071
Newton House	1013 E. Ninth St.	2087000578
Norwood Tower	114 West 7th Street	2010001224
Old Bakery	1006 Congress Ave.	2069000214
Old Land Office Building	108 E. 11th St.	2070000769
Page--Gilbert House	3913 Ave. G	2090001186
Paramount Theatre	713 Congress Ave.	2076002072
Peterson, George A., House	1012 E. 8th St.	2085002273
Polhemus, Joseph O., House	912 E. 2nd St.	2085002299
Porter, William Sidney, House	409 E. 5th S.	2073001979
Rather House	3105 Duval St.	2079003013
Robinson-Macken House	702 Rio Grande St.	2085002300
Rogers--Bell House	1001 E. Eighth St.	2088000703
Royal Arch Masonic Lodge	311 W. 7th St.	2005000362
Sampson, George W., House	1003 Rio Grande	2082004526
Schneider, J. P., Store	401 W. 2nd St.	2079003014
Scholz Garten	1607 San Jacinto	2079003015
Scottish Rite Dormitory	210 W. 27th St.	2098000404
Shotgun at 1206 Canterbury Street (Gone)	1206 Canterbury St.	2085002285
Shotguns at 1203--1205 Bob Harrison (Gone)	1203--1205 Bob Harrison	2085002284
Southwestern Telegraph and Telephone Building	410 Congress Ave.	2078002993
St. David's Episcopal Church	304 E. 7th St.	2078002994
St. Mary's Cathedral	201--207 10th St.	2073001981
Teachers State Association of Texas Building	1191 Navasota	2005000361
Tucker Apartment House	1105 Nueces Street	2100001379
U.S. Post Office and Federal Building	126 W. 6th St.	2070000771
University Baptist Church	2130 Guadalupe St.	2098000955
University Junior High School	1925 San Jacinto Blvd.	2001000396
Victory Grill	1104 E. 11th St.	2098001226
Wahrenberger House	208 W. 14th St.	2078002995
West Sixth Street Bridge at Shoal Creek	West Sixth Street at Shoal Creek	2014000499
Westgate Tower	1122 Colorado Street	2010000820
Worrell-Ettlinger House	3110 Harris Park Ave.	2004001152

Source: THC (2019).

National Register Districts within 1/2-mile of the Blue Line LRT/Gold Line LRT

Name	Address	Atlas ID
All Saints' Chapel	209 West 29th Street	2015000543
Austin Fire Drill Tower	201 West Cesar Chavez Street	2016000720
Bremond Block Historic District	Roughly bounded by Guadalupe, San Antonio, 7th and 8th Sts.	2070000764
Cambridge Tower	1801 Lavaca Street	2100002603
City Cemetery	16th & Navasota	2085002297
Congress Avenue Historic District	Congress Ave. from 1st to 11th Sts.	2078002989
Delwood Duplex Historic District	Roughly bounded between Maplewood Ave and Kirkwood, Ashwood, and Wrightwood Roads	2011000132
Edgar H. Perry Jr. House	801 Park Boulevard	2014000404
Fiesta Gardens	2101 Jesse East Segovia Street	2100003600
French Legation	802 San Marcos St.	2069000213
Gethsemane Lutheran Church and Luther Hall (boundary extension)	105 West 16th Street	2004001398
Governor's Mansion	1010 Colorado St.	2070000896
Hancock Golf Course	801 East 41st Street	2014000821
Hyde Park Historic District	Roughly bounded by Ave. A, 45th St., Duval St., and 40th St.	2090001191
Little Campus	Bounded by 18th, Oldham, 19th, and Red River Sts.	2074002091
Oakwood Cemetery Annex	1601 Comal St.	2003001103
Perry Estate--St. Mary's Academy	701 E. 41st St.	2001000874
Rainey Street Historic District	70--97 Rainey St.	2085002302
Seaholm Power Plant	800 West Cesar Chavez	2013000614
Shadow Lawn Historic District	Roughly bounded by Ave. G, 38th St., Duval St., and 39th St.	2090001192
Sixth Street Historic District	Roughly bounded by 5th, 7th, Lavaca Sts. and I-35	2075002132
Swedish Hill Historic District	900--1000 blks. of E. Fourteenth St. and 900 blk. of E. Fifteenth St.	2086001088
Texas State Capitol	Congress and 11th Sts.	2070000770
West Line Historic District	Roughly bounded by Baylor Street, W. Fifth & Sixth Streets, Mopac Expressway (Loop 1), and Twelfth and Thirteenth Street	2005001166
Willow-Spence Streets Historic District	Portions of Willow, Spence, Canterbury, San Marcos & Waller Sts.	2085002264
Wilshire Historic District	Roughly bounded by Southern Pacific Rail Road, Ardenwood, Wilshire Boulevard, and the Delwood III subdivision	2011000347
Wooldridge Park	Guadalupe St.	2079003018

Source: THC (2019).

Historical Markers within 1/2-mile of the Blue Line LRT/Gold Line LRT

Name	Atlas ID	Marker ID
Ebenezer (Third) Baptist Church	5507014787	14787
Abner Hugh Cook	5507014789	14789
Adams-Ziller House	5507015867	15867
Addcox House	5453012238	12238
African Americans in the Texas Revolution	5507013929	13929
All Saints' Episcopal Church	5507015108	15108
Andrew Jackson Hamilton	5507014948	14948
Austin's Moonlight Towers	5453006424	6424
Austin High School - John T. Allan Campus	5507015360	15360
Austin Presbyterian Theological Seminary	5453012743	12743
Austin Presbyterian Theological Seminary Campus	5453012757	12757
Austin Public Library, 1933	5453006425	6425
Austin Woman's Club	5453006430	6430
Austin, C.S.A.	5453012690	12690
Boardman-Webb House	5507014502	14502
Bremond, John, Jr., House	5453006435	6435
Brizendine House	5453006453	6453
Brueggemann-Sandbo House	5507015080	15080
Buen Retiro	5507015258	15258
Carrington-Covert House	5453006423	6423
Catherine Robinson House	5453006431	6431
Central Christian Church	5453006417	6417
Central Presbyterian Church	5507013928	13928
Christianson-Leberman	5453006437	6437
Claudia Taylor Johnson Hall	5507014916	14916
Col. Lewis Miles Hobbs Washington	5507015334	15334
Colored Teachers State Association of Texas Building	5507018401	18401
Confederate Texas Legislatures	5453012685	12685
Congress Avenue	5507014389	14389
Del Valle Army Air Base (Bergstrom Air Force Base)	5507013778	13778
Diocese of Austin	5507014420	14420
Driskill Hotel	5507013931	13931
E. H. Carrington Grocery Store and Lyons Hall	5507014345	14345
Edward Clark House Outbuilding	5507017293	17293
Emma West Flats	5453006451	6451
Eugene Bremond House	5453006434	6434
Evans, Ira Hobart	5453006429	6429
F. Weigl Iron Works	5507014294	14294
First United Methodist Church of Austin	5453006418	6418
Fischer House	5453006452	6452
French Legation	5507014828	14828
Gen. George W. Terrell	5507015113	15113
George A. Peterson House	5507018238	18238
George H. Kinsolving Crypt	5507018634	18634

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Name	Atlas ID	Marker ID
George Washington Glasscock	5507017856	17856
German Free School	5453012732	12732
Gethsemane Church	5507014770	14770
Gilfillan House	5507014373	14373
Goodman Building	5453006438	6438
Gov. Andrew Jackson Hamilton	5507015101	15101
Gov. Elisha M. Pease	5507014643	14643
Governors James E. & Miriam Ferguson	5507014797	14797
Hancock Recreation Center	5507017925	17925
Helena and Robert Ziller House	5507017746	17746
Henry Smith	5507015055	15055
Hirshfeld Cottage	5453006441	6441
Hirshfeld House	5453006440	6440
Hofheintz-Reissig Store	5507014765	14765
Hotel Provident & Heierman Bldg.	5507014733	14733
Houston-Hale Home	5453006436	6436
J. Frank Dobie House	5507014242	14242
J. L. Buas Building	5507014635	14635
Jacob Fontaine	5507015048	15048
John Crittenden Duval	5507016097	16097
John Elbridge Hines	5507015862	15862
Joseph and Mary Robinson Martin House	5453012793	12793
Joseph Baker	5507014153	14153
Kappa Kappa Gamma House	5507014452	14452
King-Tears Mortuary	5453012826	12826
Littlefield Building	5453012734	12734
Littlefield Home	5507014889	14889
M. M. Long's Livery Stable & Opera House	5507014469	14469
Major William Martin "Buck" Walton	5453012249	12249
Mauthe-Myrick Mansion	5453006420	6420
McNeal Home	5507014448	<Null>
Metropolitan African Methodist Episcopal Church	5507015642	15642
Moore-Flack House	5453012243	12243
Moses Austin	5507016141	16141
Mrs. Alfred Robinson, Sr. Home	5453004306	4306
Norwood Tower	5507013620	13620
O. Henry	5507014859	14859
O. Henry Hall	5507015479	15479
Oakwood Cemetery	5507014309	14309
Old Depot Hotel	5507015476	15476
Old Lundberg Bakery	5507014949	14949
Ollie O. Norwood Estate	5507018478	18478
Openheimer-Montgomery Building	5507014111	14111
Original Site of First Baptist Church in Austin	5507014191	14191
Original Site of First Methodist Church of Austin	5453011783	11783
Paggi Carriage Shop	5507015638	15638
Paramount Theater	5507014684	14684
Pease School	5453006413	6413

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Name	Atlas ID	Marker ID
Pease School Building	5507017181	17181
Peter Henry Oberwetter	5507014600	14600
Philquist-Wood House	5507015196	<Null>
Pierre Bremond Home	5453006433	6433
Platt-Simpson Building	5507014334	14334
Price Daniel	5453013094	13094
Randerson-Lundell Building	5507013859	13859
Rebecca Kilgore Stuart Red	5507015556	15556
Robinson-Macken House	5453004309	4309
Saint David's Episcopal Church	5507014196	14196
Saint Mary's Cathedral	5507014676	14676
Sampson Building	5507014087	14087
Sampson, George W., Home	5453002162	2162
Scarborough Building	5453012733	12733
Schneider, J. P. Store	5453006450	6450
Scholz Garten	5453012245	12245
Scottish Rite Temple	5507015644	15644
Seaholm Power Plant	5507013974	<Null>
Second Travis County Courthouse, Walton Building	5507015063	15063
Site of Haynie-Cook House	5507016346	16346
Site of John Bremond & Company	5453013153	13153
Site of Saint Martin's Evangelical Lutheran Church	5507015486	15486
Site of Samuel Huston College	5507015242	15242
Site of Swedish Evangelical Free Church	5507015046	15046
Site of Texas Wesleyan College	5507014343	14343
Sixth Street	5507015449	15449
Smith, B.J., Property	5453006439	6439
Southwestern Telegraph & Telephone Building	5507014090	14090
St. Charles House	5507014909	14909
Stanley and Emily Finch House	5453012239	12239
State Bar of Texas	5453006422	6422
Stephen F. Austin Hotel	5453013141	13141
Susanna W. Dickinson	5507015158	15158
Swante Palm	5507015675	15675
Swedish Central Methodist Church, Site of	5507015330	15330
Swedish Consulate and Swante Palm Library	5507014680	14680
Swedish Hill	5453012686	12686
Texas and the Civil War Secession Convention	5453012693	12693
Texas and the Civil War State Military Board	5453012696	12696
Texas Highway Department	5453012247	12247
Texas Land Commissioner, Johann Jacob Groos	5507014753	14753
Texas Newspapers, C.S.A.	5453012687	12687
Texas School for the Deaf	5507013458	13458
Texas State Capitol	5507014150	14150
The Academy	5507014493	14493

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Name	Atlas ID	Marker ID
The Archive War	5507014722	14722
The Austin Statesman	5507014219	14219
The Walter Tips Company Building	5507013774	13774
The Woman Suffrage Movement in Texas	5507015026	15026
Travis County Government, Third Site	5453006426	6426
Tyler Rose	5507015263	15263
University Interscholastic League	5507015883	15883
Victory Grill	5507015520	15520
Wahrenberger, John, House	5453006421	6421
Walter Bremond Home	5453006432	6432
West-Bremond Cottage	5507014858	14858
Westgate Tower	5507017182	<Null>
Williams-Weigl House	5453012887	12887
Woolridge Park	5453006428	6428
Zachary Taylor Fulmore	5453006427	6427

Source: THC (2019).

Historic Highways within 1/2-mile of the Blue Line LRT/Gold Line LRT

Highway Name	Atlas ID	Confidence Level
1916 The Meridian Road in Texas	4500000057	Medium
1916 The Meridian Road in Texas	4500000072	Low
1916 The Meridian Road in Texas	4500000088	Low
1916 The Meridian Road in Texas	4500000089	Low
1916 The Meridian Road in Texas	4500000090	Low
1916 The Meridian Road in Texas	4500000091	Low
1924 Automobile Red Book - Meridian	4500000099	<Null>
1940 Texas Highway Department - Meridian	4500000139	<Null>
1960 Texas Highway Department - Meridian	4500000147	<Null>

Source: THC (2019).

Cemeteries within 1/2-mile of the Blue Line LRT/Gold Line LRT

Highway Name	Atlas ID	Cemetery ID
Austin State Hospital Cemetery	7453002305	TV-C023
Beth Israel #1	7453021205	TV-C212
Beth Israel #2	7453021305	TV-C213
Davidson-Littlepage	7453001105	TV-C011
George Herbert Kinsolving Crypt	7453019905	TV-C199
Greenwood	7453011203	TV-C112
Martin Family	7453020805	TV-C208
Mount Calvary	7453006503	TV-C065
Oakwood	7453006705	TV-C067
San Jose #2	7453010305	TV-C103
San Jose #3	7453011303	TV-C113

Source: THC (2019).

City of Austin Historic Landmarks within 1/2-mile of the Blue Line LRT/Gold Line LRT

Name	Address	COA ID
ADKINS - THARP HOUSE	506 BELLEVUE PLACE	601
ALL SAINTS CHAPEL	209 W 27th STREET	410
ALLEN - VON BOECKMANN BUILDING	811 CONGRESS AVENUE	509
ARNOLD'S BAKERY	1010 E 11th STREET	489
AUSTIN MUNICIPAL BUILDING (CITY HALL)	124 W EIGHTH STREET	531
BAILETTI HOUSE	1006 WALLER STREET	401
BARKER (BEN M.) HOUSE	3215 DUVAL STREET	188
BARTHOLOMEW - ROBINSON BUILDING	1415 LAVACA STREET	131
BENGSTON HOUSE	3803 AVENUE H	724
BERGEN - TODD HOUSE	1403 S CONGRESS AVENUE	183
BERTRAM STORE BUILDING	1601 GUADALUPE STREET	230
BLOMQUIST HOUSE	1000 E 14th STREET	221
BOARDMAN - WEBB HOUSE	602 W 9th STREET	292
Bonugli Grocery Store	78 San Marcos Street	1264
BOOTHE - SANTA ANA HOUSE	1011 E 8th STREET	1
BOSCHE BUILDING	804 CONGRESS AVENUE	172
BRASS - MILAM HOUSE	1409 NEWNING AVENUE	13
BREMOND (EUGENE) BUILDING	801 CONGRESS AVENUE	171
BREMOND (EUGENE) HOUSE	404 W 7th STREET	340
BREMOND (JOHN) HOUSE	700 GUADALUPE STREET	248
BREMOND (PIERRE) HOUSE	402 W 7th STREET	339
BREMOND (WALTER) HOUSE	711 SAN ANTONIO STREET	319
Bremond Carriage House	504 W 7th Street	1259
BRIONES, GENARO P. AND CAROLINA, HOUSE	1204 E 7th STREET	501
BRIZENDINE HOUSE	507 W 11th STREET	37
BROWN BUILDING	714 COLORADO STREET	133
BROWN DUMAS BLACKSMITH SHOP	104 W 2nd STREET	498
BRUEGGMANN HOUSE	200 E 30th STREET	238
BRUNSON HOUSE	200 THE CIRCLE	568
BRUSH - TURNER - HIRSHFELD BUILDING	709 CONGRESS AVENUE	463
BUASS (J. L.) BUILDING	407 E 6th STREET	357
BURLAGE - FISCHER HOUSE	1008 WEST AVENUE	402
CAMBELL-MILLER HOUSE	900 RIO GRANDE STREET	681
CAPITOL OF TEXAS	100 E 11th STREET	152
CARRINGTON - COVERT HOUSE	1511 COLORADO STREET	156
CARRINGTON (E. H.) STORE	520 E 6th STREET	367
CARUTHERS-PIERCE-RICHARD HOUSE	500 E MONROE STREET	789
Castleman-Bull House (Structure is Historic not property)	201 Red River Street	1195
CENTRAL LIBRARY	810 GUADALUPE STREET	251
CHAPMAN HOUSE	901 E 12th STREET	646
CHICAGO (MCANGUS) HOUSE	607 TRINITY STREET	389
CLARKSON-CRUTCHFIELD HOUSE	4001 AVENUE G	1183
CLEM LINDSAY HOUSE	904 JUNIPER STREET	552
CLOUD - KINGSBERRY HOUSE	1001 E RIVERSIDE DRIVE	719

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Name	Address	COA ID
COMMISSIONERS GENERAL PROVISION (PART 1 OF 2)	501 E 6th STREET	413
COMMISSIONERS GENERAL PROVISION (PART 2 OF 2)	503 E 6th STREET	364
Commodore Perry Estate	710 E 41st Street	1201
CONNELLY - YERWOOD HOUSE	1115 E 12th STREET	517
CONTINENTAL CLUB	1315 S CONGRESS AVE	812
COOK - SIFUENTES HOUSE	1009 E 9th STREET	49
COTTON EXCHANGE	401 E 6th STREET	236
COX-CRADDOCK HOUSE	720 E 32nd STREET	684
CRAWFORD (J. M.) CO. BUILDING	1412 S CONGRESS AVENUE	67
CROW - TENANT HOUSE	805 RIO GRANDE STREET	35
DAMON - BROWN - PIERCE HOUSE	1110 E 32nd STREET	385
DAVIS (NELSON) WAREHOUSE	107 W 4th STREET	82
DAVIS (W. H.) HOUSE	1203 NEWNING AVENUE	126
DAWSON-TINNIN HOUSE	905 Dawson Road	1258
DAY BUILDING	319 CONGRESS AVENUE	418
Dedrick-Hamilton House	908 E 11th Street	1229
DEMPSEY HOUSE	700 E 44th STREET	219
DEPOT HOTEL	504 E 5th STREET	212
DICKINSON - HANNIG HOUSE	411 E 5th STREET	456
DILL - WHITE HOUSE	1110 E 10th STREET	375
DITTLINGER BUILDING	302 E 6th STREET	290
DOBIE (J. FRANK) HOUSE	702 E DEAN KEATON	398
DOS BANDEROS	410 E 6th STREET	359
Driskill Hotel	604 Brazos Street	1256
Driskill Hotel Tower	117 E 7TH ST	1139
DRISKILL, DAY & FORD BUILDING	403 E 6th Street	354
DUMBLE - BOATRIGHT HOUSE	1419 NEWNING AVENUE	269
DUNCAN WASHINGTON HOUSE	1214 E 7th STREET	748
ETTLINGER- WORRELL HOUSE	3110 HARRIS PARK AVENUE	502
EVANS - MORRIS - HIESLER HOUSE	1000 E CESAR CHAVEZ STREET	434
FANNIE WLAKER HOUSE	902 OLIVE STREET	553
FINCH - KRUEGER HOUSE	3300 DUVAL STREET	55
FITZGERALD-SHORT HOUSE	502 E 32nd STREET	689
FRANK AND MARTHA JONES HOUSE	1001 WILLOW STREET	1051
FRENCH LEGATION	801 EMBASSY DRIVE	335
GERHARDT - STREET HOUSE	508 BELLEVUE PLACE	723
GERMAN FREE SCHOOL	507 E 10th STREET	377
GETHSEMANE LUTHERAN CHURCH AND LUTHER HALL	1510 CONGRESS AVENUE	343
GIESE-STARK STORE	1211 SAN BERNARD STREET	620
GILFILLAN HOUSE	603 W 8th STREET	195
GINSBURG BUILDING	219 E 6th STREET	43
Goldberg House	402 E 34th ST	1225
GOODMAN BUILDING	202 W 13th STREET	423
GORDON-DAMON HOUSE	3400 DUVAL STREET	772
GOVERNOR'S MANSION	1010 COLORADO STREET	154
GRANDBERRY BUILDING	907 CONGRESS AVENUE	175
GULLETT HOUSE	1304 NEWNING AVENUE	4
HAENEL STORE BUILDING	1101 E 11th STREET	199
HAMILTON (JEREMIAH) BUILDING	1101 RED RIVER STREET	493
HAMILTON BUILDING	419 E 6th STREET	361
HANCOCK HOUSE (CHRISTIANSON-LEBERMAN STUDIO)	1306 COLORADO STREET	155

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Name	Address	COA ID
HANNIG BUILDING	206 E 6th STREET	346
HARRIS-CARTER HOUSE	603 CAROLYN AVENUE	607
HATZFELD HOUSE	604 W 11th STREET	32
HAUKE HOUSE	1409 TRINITY STREET	390
HEIERMAN BUILDING	115 E 5th STREET	210
Helena and Robert Ziller House	800 EDGECLIFF TERRACE	1164
HENRY STRINGFELLOW HOUSE	902 JUNIPER STREET	551
HERNANDEZ - JOHNSON HOUSE	1000 E 8th STREET	136
HILDRETH-FLANAGAN-HEIERMAN HOUSE	3909 AVENUE G	226
HILL - SEARIGHT HOUSE	410 E MONROE STREET	262
HIRSHFELD HOUSE AND COTTAGE	303 W 9th STREET	291
HOFHEINTZ-REISSIG STORE	600 E 3rd STREET	381
HOWSON HOUSE	700 SAN ANTONIO STREET	242
INSHALLAH	602 E 43rd STREET	220
JACOB AND BERTHA SCHMIDT HOUSE	712 SPARKS AVENUE	1133
JACOBY - POPE BUILDING	200 E 6th STREET	344
JAMES H ROBERTSON BUILDING	416 CONGRESS AVE	1188
JOHNS - HAMILTON BUILDING	716 CONGRESS AVENUE	169
JOHNSON (ALFRIDA) HOUSE	1022 E 7th STREET	511
KAPPA KAPPA GAMMA HOUSE	2001 UNIVERSITY AVENUE	1069
KLEBERG HOUSE	501 W 12th STREET	392
KOPPEL BUILDING	318 CONGRESS AVENUE	160
KREISLE (MATHIAS) BUILDING	400 E 6th STREET	352
KREISLE BUILDING	412 CONGRESS AVENUE	740
KUEHNE (HUGO) HOUSE	500 E 32nd STREET	386
LAND OFFICE BUILDING	112 E 11th STREET	200
LARMOUR (JACOB) BLOCK (A)	906 CONGRESS AVENUE	174
LARMOUR (JACOB) BLOCK (B)	908 CONGRESS AVENUE	328
LARMOUR (JACOB) BLOCK (C)	910 CONGRESS AVENUE	176
LARMOUR (JACOB) BLOCK (D)	912 CONGRESS AVENUE	178
LARMOUR (JACOB) BLOCK (E)	914 CONGRESS AVENUE	179
LARMOUR (JACOB) BLOCK (F)	916 CONGRESS AVENUE	180
LARMOUR (JACOB) BLOCK (G)	918 CONGRESS AVENUE	284
LARMOUR (JACOB) BLOCK (H)	920 CONGRESS AVENUE	181
LARMOUR (JACOB) BLOCK (I)	922 CONGRESS AVENUE	177
LEWIS - THOMAS HOUSE	1508 NEWNING AVENUE	270
LIMERICK - FRAZIER HOUSE	810 E 13th STREET	235
LINDEMANN HOUSE	1100 E 8th STREET	192
LITTLEFIELD BUILDING	106 E 6th STREET	165
LUNDBERG BAKERY	1006 CONGRESS AVENUE	182
MACKEN - ANDERSON HOUSE	1007 E 16th STREET	342
Majors-Butler-Thomas House	1119 E 11th ST	1221
MARTIN HOUSE	600 W 7th STREET	239
MATHER - KIRKLAND HOUSE (THE ACADEMY)	404 ACADEMY DRIVE	138
MAUTHE - MYRICK HOUSE	408 W 14th STREET	222
MAYER - HOWSE HOUSE	810 W 10th STREET	380
MCCRAVEN - WILSON HOUSE	602 E 11th STREET	197
MCDONALD - MCGOWAN HOUSE	1802 LAVACA STREET	256
MCDONALD BUILDING	607 SAN JACINTO STREET	233
MCGOWN - GRIFFIN HOUSE	1202 GARDEN STREET	229
MCKEAN - EILERS BUILDING	323 CONGRESS AVENUE	419
MCLAUGHLIN (J. W.) HOUSE	800 SAN ANTONIO STREET	320

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Name	Address	COA ID
MERONEY - ISAACS BUILDING	404 E 6th STREET	355
METCALFE-BOHN HOUSE	1204 TRAVIS HEIGHTS BLVD	610
METROPOLITAN AME CHURCH	1101 E 10th STREET	374
	10th East Street	
METZ BUILDING	706 CONGRESS AVENUE	508
MILLER - CROCKETT HOUSE	112 ACADEMY DRIVE	433
MILLETT OPERA HOUSE	110 E 9th STREET	273
MINNIE HUGHES HOUSE	900 JUNIPER STREET	550
MITCHELL-ROBERTSON BUILDING	909 CONGRESS AVENUE	619
MONROE BUILDING	300 E 6th STREET	803
MONTGOMERY HOUSE	808 WEST AVENUE	283
MOONLIGHT TOWERS	360 NUECES STREET	39901
MOONLIGHT TOWERS	1133 E 11th STREET	39912
MOONLIGHT TOWERS	307 W 9th STREET	39909
MOONLIGHT TOWERS	1001 TRINITY STREET	39913
MOONLIGHT TOWERS	94 TRINITY STREET	39905
MOORE-FLACK HOUSE	901 RIO GRANDE STREET	589
MOORE - FLACK HOUSE	606 W 9th STREET	309
MOORE - WILLIAMS HOUSE	1312 NEWNING AVENUE	528
MORLEY BROTHERS DRUG	209 E 6th STREET	348
MORRISON-SMITH HOUSE	4615 CASWELL AVENUE	1048
MORSE HOUSE	3126 DUVAL STREET	72
MURCHESON - DOUGLAS HOUSE	1200 TRAVIS HEIGHTS BLVD	771
NALLE (JOSEPH) BUILDING	409 E 6th STREET	358
NEWTON HOUSE	1013 E 9th STREET	115
NICHOLS - GELLMAN HOME	201 E 6th STREET	345
NORTH - EVANS CHATEAU	708 SAN ANTONIO STREET	318
NORTH COTTAGE	706 SAN ANTONIO STREET	317
NORWOOD HOUSE	1012 EDGECLIFF TERRACE	420
NORWOOD TOWER	114 W 7th STREET	707
OAKWOOD CEMETERY	1601 NAVASOTA STREET	499
OLD GOLF CLUB HOUSE	512 E 39th STREET	643
OPENHEIMER - MONTGOMERY BUILDING	105 W 8th STREET	194
ORSAY - DOYLE HOUSE	1017 RED RIVER STREET	198
PADGITT - WARMOTH	208 E 6th STREET	347
PAGE - GILBERT HOUSE	3913 AVENUE G	228
PAGGI BLACKSMITH SHOP	503 NECHES STREET	264
PAGGI CARRIAGE SHOP	421 E 6th STREET	362
PALM SCHOOL	700 E CESAR CHAVEZ STREET	215
PARAMOUNT THEATRE	713 CONGRESS AVENUE	168
PARSLEY HOUSE	1009 E 8th STREET	45
PATTERSON (JOHN M.) RESIDENCE	604 E 47th STREET	522
PEARCE - ANDERSON HOUSE	809 W 46th STREET	65
PEARL HOUSE BAR	221 CONGRESS AVENUE	157
Pennybacker-Alexander House	811 E 38th Street	1262
PERRY (EDGAR) JR. HOUSE	801 PARK BOULEVARD	431
PETER & ESTHER ALLIDI HOUSE	1315 Kenwood Avenue	1243
PETERSON, GEORGE A., HOUSE	1012 E 8th STREET	548
PHILLIPS - KNUDSEN HOUSE (AKA HOUSTON HALE)	706 GUADALUPE STREET	250
PHILLIPS BUILDING	105 E 5th STREET	414
PHILQUIST - WOOD HOUSE	4007 AVENUE G	549
PLATT BUILDING	304 E 6th STREET	289

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Name	Address	COA ID
PORTER, WILLIAM SIDNEY, HOUSE (O HENRY MUSEUM)	409 E 5th STREET	211
PRESTON - GARCIA HOUSE	1214 NEWNING AVENUE	268
PROCTOR-EVANS-RICHARD HOUSE	4200 DUVAL STREET	788
QUAST BUILDING	412 E 6th STREET	360
RAMSDELL - WOLFF HOUSE	4002 AVENUE H	104
RANDERSON - LUNDELL BUILDING	701 E 6th STREET	368
RED - PURCELL HOUSE	210 ACADEMY DRIVE	109
Red River International House	3805 Red River	1216
REPUBLIC SQUARE - 400 BLOCK (WEST SIDE)	400 GUADALUPE STREET	88
RHAMBO BUILDING	406 E 6th STREET	356
RISHER - NICHOLAS BUILDING	422 E 6h STREET	286
RISHER - ROACH BUILDING (PART 1 OF 2)	509 E 6th STREET	365
RISHER - ROACH BUILDING (PART 2 OF 2)	511 E 6Th STREET	440
ROBINSON - MACKEN HOUSE	702 RIO GRANDE STREET	308
ROBINSON - ROSNER BUILDING	504 CONGRESS AVENUE	163
ROBINSON (CATHERINE) HOUSE	705 SAN ANTONIO STREET	316
ROBINSON BROTHERS WAREHOUSE	501 IH-35 FRONTAGE ROAD, NB	521
ROGERS - LYONS HOUSE	1001 E 8th STREET	114
ROSS - MOORE HOUSE	405 E MONROE STREET	6
Routon_ Alvarez-Lopez House	809 E 9th Street	1182
ROYAL ARCH MASONIC LODGE	311 W 7th STREET	441
SAMPSON - HENRICKS BUILDING	620 CONGRESS AVENUE	166
SAMPSON (GEORGE W.) HOUSE	1003 RIO GRANDE STREET	278
SAN ANTONIAN	702 SAN ANTONIO STREET	315
SAYERS HOUSE	709 RIO GRANDE STREET	616
SCARBROUGH BUILDING	522 CONGRESS AVENUE	164
SCHNEIDER (J. P.) STORE	402 W 2nd STREET	336
SCHNEIDER VAULTS	400 W 2nd STREET	461
SCHOLZ GARTEN	1607 SAN JACINTO STREET	282
SCHUWIRTH HOUSE (AKA 423 E. 6TH ST.)	512 NECHES STREET	265
Seaholm Power Plant	800 W CESAR CHAVEZ STREET	1202
SMITH - HAGE BUILDING	325 E 6th STREET	351
SMITH (B. J.) HOUSE	610 GUADALUPE STREET	232
SMITH (W. B.) BUILDING	316 CONGRESS AVENUE	159
SOUTHWESTERN TELEPHONE & TELEGRAPH BUILDING	410 CONGRESS AVENUE	161
ST. CHARLES HOUSE	316 E 6th STREET	350
ST. DAVID'S EPISCOPAL CHURCH	300 E 7th STREET	338
ST. MARY'S CATHEDRAL	201 E 10th STREET	376
Stacy-Tate House	1705 Travis Heights BLVD	1223
STACY HOUSE	1201 TRAVIS HEIGHTS BLVD	538
STANLEY AND EMILY FINCH	3312 DUVAL STREET	729
STARK (W. L.) HOUSE	3215 FAIRFAX WALK	510
STEINER BUILDING	807 CONGRESS AVENUE	173
STEPHEN F. AUSTIN HOTEL	701 CONGRESS AVENUE	122
STOHL - SALDANA HOUSE	1005 E 9th STREET	84
Stolle-Westling-Lewis-Sweatt House	1209 e 12th Street	1273
SUEHS HOUSE	600 BELLEVUE PLACE	600
SWIFT BUILDING	315 CONGRESS AVENUE	158
TEXACO DEPOT	1300 E 4th STREET	1045

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Name	Address	COA ID
TIPS (EDWARD) BUILDING	708 CONGRESS AVENUE	416
TIPS (WALTER) BUILDING	710 CONGRESS AVENUE	167
TOWNSEND - THOMSON BUILDING	718 CONGRESS AVENUE	170
TRASK HOUSE	211 RED RIVER STREET	302
TRAVIS HEIGHTS HOUSE	1007 MILAM PLACE	632
Tucker-Winfield Apartment House	1105 Nueces Street	1265
VICTORY GRILL	1104 E 11th STREET	721
WALKER-STILES HOUSE	508 HARRIS BOULEVARD	569
WALTON - JOSEPH BUILDING	708 E 6th STREET	415
WARNER - LUCAS HOUSE	303 ACADEMY DRIVE	110
WATERLOO COMPOUND (B)- WEDDING HOUSE	604 E 3rd STREET	422
WATSON (A.O.) HOUSE	402 W 12th STREET	520
Webb-Shaw Building	214 E 6th Street	1191
WEBB - SHAW BUILDING	212 E 6th STREET	349
WEDIG - HARDEMAN HOUSE	1111 RED RIVER STREET	196
West Sixth Street Bridge over Shoal Creek	800 block of W 6th Street	1270
WHEELER-HOLCOMB TRIPLEX	905 AVONDALE ROAD	794
WHITLEY-KELTNER HOUSE	200 E 32nd STREET	542
WILKINS - HEATH HOUSE	1208 NEWNING AVENUE	267
WILLIAMS - WEIGL HOUSE	4107 AVENUE H	446
WOODY HOUSE	709 BOULDIN AVE	1033
WOOLDRIDGE PARK	900 GUADALUPE STREET	87
WOOTEN MEDICAL OFFICES	109 E 10th STREET	94
WORLEY HOUSE	802 E 47th STREET	642
WUPPERMAN HOUSE	506 TEXAS AVENUE	1134
ZIMMERLI - ROSENQUIST HOUSE	4014 AVENUE H	252

Source: COA (2019).

City of Austin Historic Districts within 1/2-mile of the Blue Line LRT/Gold Line LRT

Zoning	Case Number
HD	C14H-2016-0053
SF-3-H-HD-NCCD	C14H-2011-0003
HD	C14H-2010-0019

Source: COA (2019).

Appendix B-4: TPWD Species of Concern within the Blue Line LRT/Gold Line LRT Corridor

APPENDIX B-4: TPWD SPECIES OF CONCERN WITHIN THE BLUE LINE LRT/GOLD LINE LRT CORRIDOR

Species	Federal Status	State Status	Description	Suitable Habitat Present
Birds:				
Bald eagle (<i>Haliaeetus leucocephalus</i>)	BGEPA	ST	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds.	Marginal Habitat. Suitable nesting habitat may be present along the Colorado River; however this species is not known to nest along this section of the river and no known nests are present within or immediately surrounding the Study Area.
Black Rail (<i>Laterallus jamaicensis</i>)	PT	NL	Found in salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps. Nests in or along the edges of marshes; nests are usually hidden in marsh grass or at the base of <i>Salicornia</i> spp.	No Nesting Habitat. Species may occur as extremely rare migrant or transient, however, no marshes or ponds were identified within the Study Area.
Black-capped Vireo (<i>Vireo atricapilla</i>)	DL	SE	Oak-juniper woodlands with distinctive patchy, 2-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer.	No Nesting Habitat. Species may occur as migrant or transient; however, no oak-juniper woodlands with distinct patchy habitat are likely present within the Study Area.
Golden-cheeked Warbler (<i>Setophaga chrysoparia</i>)	FE	SE	Juniper-oak woodlands; dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.	No Potential Nesting Habitat. Based on vegetation characteristics provided by TPWD, no suitable nesting habitat would be present within the Study Area as a migrant/transient within the Study Area

Species	Federal Status	State Status	Description	Suitable Habitat Present
Interior Least Tern (<i>Sterna antillarum athalassos</i>)	FE	SE	Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also known to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc.); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	No Nesting Habitat. No gravel bars within braided streams or rivers are present in the Study Area. In addition, the proposed project is not a wind energy project
Piping Plover (<i>Charadrius melodus</i>)	FT	ST	Beaches, sandflats, dunes, and spoil islands along coastal areas; prefers sand flats and algal flats; beaches used as secondary habitat. Species is a winter resident along Texas coast and breeds outside of the state.	No Nesting Habitat. Species may occur as a migrant/transient; however, no suitable coastlines, beaches, sand flats, or algal flats were identified within the Study Area; this species breeds outside of the state.
Red Knot (<i>Calidris canutus rufa</i>)	FT	NL	Red knots migrate long distances in flocks northward through the contiguous U.S. mainly April-June, southward July- October. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.	No Nesting Habitat. Species may occur as a rare migrant. No nesting habitat is present in the Study Area and lacks the connection to the coast lines or bays with beaches. In addition, the proposed project is not a wind energy project
Swallow-tailed Kite (<i>Elanoides forficatus</i>)	NL	ST	Nests mostly in east Texas within lowland forested regions, especially swampy areas, ranging into open woodlands along rivers, lakes and ponds. Nests in tall trees; usually pine, cypress, or large deciduous tree.	No Nesting Habitat. The species may occur as a migrant/transient; however, no lowland forested regions along rivers, lakes, or ponds are located within the Study Area.
White-faced Ibis (<i>Plegadis chihi</i>)	NL	ST	Prefers freshwater marshes, sloughs, and irrigated rice fields; found primarily near the coast in Texas. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	No Nesting Habitat. Species may occur as a migrant/transient; however, no marshes, sloughs, or irrigated rice fields are located within the Study Area. Additionally, the Study Area is outside of this

Species	Federal Status	State Status	Description	Suitable Habitat Present
				species' known breeding range.
Whooping Crane (<i>Grus americana</i>)	FE	SE	Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	No Nesting Habitat. The species may occur as a migrant; however, no nesting habitat is present in the Study Area
Wood Stork (<i>Mycteria americana</i>)	NL	ST	Prefers to nest in large tracts of bald cypress (<i>Taxodium distichum</i>) or red mangrove (<i>Rhizophora mangle</i>); forages in prairie ponds, flooded pastures, or fields, ditches, and other shallow standing water. Breeds in Mexico and moves into Gulf states post-breeding; formerly nested in Texas, but no breeding records since 1960	No Nesting Habitat. Species may occur as a migrant/transient; However, Texas is outside of this species currently known breeding range.
Zone-tailed Hawk (<i>Buteo albonotatus</i>)	NL	ST	Found in arid, open country, including deciduous or pine-oak woodlands, mesas, or mountain country; often near watercourses. Nets is various sites, ranging from small trees in lower desert, giant cottonwoods, in riparian areas, to mature conifers in high mountains	No Nesting Habitat. Species may occur as a migrant or transient; However, no nesting habitat was identified within the Study Area
Amphibians				
Austin Blind Salamander (<i>Eurycea waterlooensis</i>)	FE	SE	Mostly restricted to subterranean cavities of the Edwards Aquifer; dependent upon water flow/quality from the Barton Springs segment of the Edwards Aquifer; only known from the outlets of Barton Springs (Sunken Gardens (Old Mill) Spring, Eliza Spring, and Parthenia (Main) Spring which forms Barton Springs Pool); feeds on amphipods, ostracods, copepods, plant material, and (in captivity) a wide variety of small aquatic invertebrates.	No Suitable Habitat. The Study Area is located in Karst Zone 4 (areas known to not contain endangered cave fauna).

Species	Federal Status	State Status	Description	Suitable Habitat Present
Barton Springs Salamander (<i>Eurycea sosorum</i>)	FE	SE	Dependent upon water flow/quality from the Barton Springs pool of the Edwards Aquifer; known from the outlets of Barton Springs and subterranean water-filled caverns; found under rocks, in gravel, or among aquatic vascular plants and algae, as available; feeds primarily on amphipods.	No Suitable Habitat. The Study Area within Karst Zone 4 (areas known to not contain endangered cave fauna).
Houston Toad (<i>Anaxyrus houstonensis</i>)	F	SE	Primary habitat is sandy soil supporting pine and post oak savannas and woodlands ponds and ephemeral pools, stock tanks, etc. Breeds February-June	No Suitable Habitat. The Study Area does not contain sandy soils with pines and/or post oak near water. The Study Area is also outside of this species' known range.
Jollyville Plateau Salamander (<i>Eurycea tonkawae</i>)	FT	NL	Known from springs and waters of some caves north of the Colorado River	No Suitable Habitat. A portion of the Study Area is located within Karst Zone 4 (areas known to not contain endangered cave fauna).
Arachnids				
Bee Creek Cave/Reddell Harvestman (<i>Texella reddelli</i>)	FE	NL	Small, blind, cave-adapted harvestman endemic to a few caves in Travis and Williamson counties	No Suitable Habitat. A portion of the Study Area is located within Karst Zone 4 (areas known to not contain endangered cave fauna).
Bone Cave Harvestman (<i>Texella reyesi</i>)	FE	NL	Small, blind, cave-adapted harvestman endemic to several caves in Travis and Williamson counties; weakly differentiated from <i>Texella reddelli</i>	No Suitable Habitat. A portion of the Study Area is located within Karst Zone 4 (areas known to not contain endangered cave fauna).
Tooth Cave Pseudoscorpion (<i>Tartarocreagris texana</i>)	FE	NL	Small, cave-adapted pseudoscorpion known from small limestone caves of the Edwards Plateau.	No Suitable Habitat. A portion of the Study Area is located within Karst Zone 4 (areas known to not contain endangered cave fauna).
Tooth Cave Spider (<i>Tayshaneta myopica</i>)	FE	NL	Very small, cave-adapted, sedentary spider.	No Suitable Habitat. A portion of the Study Area is located within Karst Zone 4 (areas known to not contain endangered cave fauna).
Fishes				
Blue Sucker (<i>Cycleptus elongatus</i>)	NL	ST	Found in channels and flowing pools with moderate current of larger portions of major rivers in Texas; bottoms of exposed bedrock but generally intolerant of turbid waters.	No Suitable Habitat. Lady Bird Lake in the Study Area is a static water body.

Species	Federal Status	State Status	Description	Suitable Habitat Present
Sharpnose Shiner (<i>Notropis oxyrhynchus</i>)	FE	NL	Species endemic to the Brazos River drainage and apparently introduced into the Colorado River drainage; found in large turbid rivers.	No Suitable Habitat. Not known to occupy Lady Bird Lake.
Smalleye Shiner (<i>Notropis buccula</i>)	FE	NL	Endemic to upper Brazos River system and its tributaries (Clear Fork and Bosque); apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water; presumably eats small aquatic invertebrates	No Suitable Habitat. Not known to occupy Lady Bird Lake
Western Creek Chubsucker (<i>Erimyzon claviformis</i>)	NL	ST	Found in pools of clear headwaters, creeks and small rivers over silt sand and gravel substrates; often near vegetation.	No Suitable Habitat. Not known to occupy Lady Bird Lake
Insects				
Kretschmarr Cave Mold Beetle (<i>Texamaurops reddelli</i>)	FE	NL	Small, cave-adapted beetle found under rocks buried in silt; small, Edwards Limestone caves in of the Jollyville Plateau, a division of the Edwards Plateau.	No Suitable Habitat. A portion of the Study Area is located within Karst Zone 4 (areas known to not contain endangered cave fauna).
Tooth Cave Ground Beetle (<i>Rhadine persephone</i>)	FE	NL	Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson counties	No Suitable Habitat. A portion of the Study Area is located within Karst Zone 4 (areas known to not contain endangered cave fauna).
Mollusks				
Golden Orb (<i>Quadrula aurea</i>)	FC	NL	Probably medium to large rivers; substrates unknown; one study indicated willows (<i>Salix</i> spp.) were present where golden orbs were found in mud; San Antonio, Guadalupe, Colorado, Brazos, Nueces, and Frio (historic) river basins	Potential Suitable Habitat. The Colorado River is located within the Study Area; however, this species is not known to occupy Lady Bird Lake.
False Spike Mussel (<i>Quadrula mitchelli</i>)	NL	ST	Possibly extirpated in Texas; probably medium to large rivers; substrates varying from mud through mixtures of sand, gravel and cobble; one study indicated water lilies were present at the site; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins	Potential Suitable Habitat. The Colorado River is located within the Study Area; however, this species is not known to occupy Lady Bird Lake
Smooth Pimpleback (<i>Quadrula houstonensis</i>)	FC	ST	Small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to	Potential Suitable Habitat. The Colorado River is located within the Study Area; however, this species is

Species	Federal Status	State Status	Description	Suitable Habitat Present
			moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins.	not known to occupy Lady Bird Lake
Texas Fatmucket (<i>Lampsilis bracteata</i>)	FC	ST	Streams and rivers on sand, mud, and gravel substrates; intolerant of impoundment; broken bedrock and coarse gravel or sand in moderately flowing water; Colorado and Guadalupe River basins.	Potential Suitable Habitat. The Colorado River is located within the Study Area; however, this species is not known to occupy Lady Bird Lake
Texas Pimpleback (<i>Quadrula petrina</i>)	FC	ST	Mud, gravel and sand substrates, generally, in areas with slow flow rates; Colorado and Guadalupe river basins	Potential Suitable Habitat. The Colorado River is located within the Study Area; however, this species is not known to occupy Lady Bird Lake
Reptiles				
Texas Horned Lizard (<i>Phrynosoma cornutum</i>)	NL	ST	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September.	No Suitable Habitat. No open arid regions with sparse vegetation are present within the Study Area.
Texas Tortoise (<i>Gopherus berlandieri</i>)	NL	ST	Found in open brushlands with grassy understory; avoids bare ground and open grass.	No Suitable Habitat. No open brushlands with grassy understory are present within the Study Area.
Timber Rattlesnake (<i>Crotalus horridus</i>)	NL	ST	Found in swamps, floodplains, upland pine and deciduous woodlands, riparian zones, and abandoned farmland. Prefers limestone bluffs, sandy soils, or black clay with dense ground cover (i.e. grapevines, palmetto)	No Suitable Habitat. No Typical vegetation types are present within the Study Area.
Plants				
Bracted Twistflower (<i>Streptanthus bracteatus</i>)	FC	R	Texas endemic; shallow, well-drained gravelly clays and clay loams over limestone in oak-juniper woodlands and associated openings, on steep to moderate slopes and in canyon bottoms; several known soils include Tarrant, Brackett, or Speck over Edwards, Glen Rose, and Walnut	No Suitable Habitat. No typical vegetation types are present within the highly urbanized Study Area.

Species	Federal Status	State Status	Description	Suitable Habitat Present
			geologic formations; flowering mid-April to late May, fruit matures and foliage withers by early summer. This species is closely tied to geologic positions that occur along the Balcones Fault Zone. Known populations occur within 0.6 miles of this zone.	

Source: TPWD, 2018

DL-Delisted; ST-State Threatened; SE-State Endangered; FE-Federally Endangered; FC-Federal Candidate Species; NL-Not Listed

Appendix B-5: Hazardous Materials within the Blue Line LRT/Gold Line LRT Corridor

APPENDIX B-5: HAZARDOUS MATERIALS WITHIN THE BLUE LINE LRT/GOLD LINE LRT CORRIDOR

SITE NAME	ADDRESS	PROGRAM	REGISTRATION NUMBER	ID NUMBER
TRAMMELL CROW DAVIS STREET WAREHOUSE AUSTIN	602 DAVIS STREET	IHWCA	RN104657903	T2013
901 9017 EAST 6TH STREET		IHWCA	RN109701458	T3335
PROPOSED SPRING CONDOMINIUMS	302 BOWIE STREET	IHWCA	RN105023113	T2118
LINCOLN PROPERTY AUSTIN	100 CONGRESS AVENUE	IHWCA	RN100594738	66361
CAZARES PROPERTY	1112 E 6TH STREET	IHWCA	RN104285804	T0497
PROPOSED TWIN LIQUORS WAREHOUSE - AUSTIN TX	5639 AIRPORT BOULEVARD	IHWCA	RN105870067	T2424
PRODUCT RESEARCH FACILITY	8201 E RIVERSIDE DRIVE STE 600	IHWCA	RN101449874	86453
MESABA AVIATION	9401 CARGO AVENUE STE 400	IHWCA	RN105586655	88605
SEAHOLM POWER PLANT	800 W CESAR CHAVEZ STREET	IHWCA	RN100217348	33939
LANDMARK ORGANIZATION AUSTIN	401 NECHES STREET	IHWCA	RN104646625	T1783
GREEN WATER TREATMENT PLANT	600 W CESAR CHAVEZ STREET	IHWCA	RN105377568	T2229
UNIVERSITY MEDICAL CENTER BRACKENRIDGE	601 E 15TH STREET	IHWCA	RN100549658	69915
NJ AIRPORT PARTNERS	5307 AIRPORT BOULEVARD	IHWCA	RN110457637	T3444
FAST STOP	5325 AIRPORT BOULEVARD	IHWCA	RN101488591	T3144
BERGSTROM AIR FORCE BASE AUSTIN		IHWCA	RN100720473	66002
TOKYO ELECTRON TEXAS	2500 MONTOPOLIS DRIVE	IHWCA	RN100615350	85656
PROPOSED HANOVER REPUBLIC SQUARE		IHWCA	RN110752318	T3514
5TH AND BRAZOS TOWER	501 BRAZOS STREET	IHWCA	RN110606431	T3489
XBIOTECH	8201 E RIVERSIDE DRIVE STE 100	IHWCA	RN108626706	96348
BERGSTROM AFB	BUILDING 4517	LPST	RN100720473	103777
BOOTHE PROPERTY VACANT	508 E 6TH STREET	LPST	RN101490456	107192
TXDOT MAIN FACILITY	760 BASTROP HIGHWAY	LPST	RN101696235	97012
SOUTHERN UNION GAS	5613 AVENUE F	LPST	RN104091863	110042

SITE NAME	ADDRESS	PROGRAM	REGISTRATION NUMBER	ID NUMBER
SAFEWAY RENTAL EQUIP	311 BOWIE STREET	LPST	RN101053411	95362
TEXACO FOOD MART	701 EAST AVENUE	LPST	RN105020283	97519
WOODS HONDA FUN CENTER	6509 N LAMAR BOULEVARD	LPST	RN100562412	104753
BEVERAGE BARN	2001 E RIVERSIDE DRIVE	LPST	RN102822178	104786
HYDE PARK TEXACO STATION	4500 DUVAL STREET	LPST	RN100634963	102703
AUSTIN SHELL 411	814 E 7TH STREET	LPST	RN101490043	117501
TEXACO	5740 N IH 35	LPST	RN104442660	96921
EBENEZER BAPTIST CHURCH	1011 SAN MARCOS STREET	LPST	RN101494524	107418
RIVERSIDE CHEVRON	400 S CONGRESS AVENUE	LPST	RN103730206	107107
CLOSED GASOLINE STATION	2803 SAN JACINTO BOULEVARD	LPST	RN101492007	96737
SNEAD BUS BARN	5901 GUADALUPE STREET	LPST	RN100597277	101331
JAMES DREW RENTAL	406 EAST AVENUE	LPST	RN101491827	118788
ELECTRIC UTILITY	300 WEST AVENUE	LPST	RN102338076	96554
DIAMOND SHAMROCK 236	1620 E RIVERSIDE DRIVE	LPST	RN102379898	116305
VACANT LOT	1328 E 12TH STREET	LPST	RN102252178	106832
TEXACO STATION	3828 N IH 35	LPST	RN104784061	97932
US AIR FORCE	BUILDING 1610	LPST	RN100720473	101945
NCNB TEXAS	201 E 5TH STREET	LPST	RN106997265	99343
7 ELEVEN 23295	1814 GUADALUPE STREET	LPST	RN102018819	115013
SERVICE BLDG VEHICLE REFUEL STN	304 E 24TH STEET	LPST	RN103762134	96480
CONTINENTAL CARS	200 W HUNTLAND DRIVE	LPST	RN100556224	101182
STOP N SAVE 3	1800 BURTON DRIVE	LPST	RN101499796	91818
VACANT BUILDING	701 E 6TH STREET	LPST	RN106976236	99450
CENTRAL TEXAS EQUIPMENT	127 E RIVERSIDE DRIVE	LPST	RN104700117	93963
EXXON 60103	2512 E RIVERSIDE DRIVE	LPST	RN101620326	114520
US AIR FORCE	BUILDING 217	LPST	RN100720473	103776
OLD TOWNSENDS TEXACO	2511 SAN JACINTO	LPST	RN106982275	106331
TEXACO	701 N IH 35	LPST	RN105020283	107988
JUNIOR LEAGUE OF AUSTIN PKG LOT	524 E 6TH STREET	LPST	RN101496685	102489

SITE NAME	ADDRESS	PROGRAM	REGISTRATION NUMBER	ID NUMBER
QUICKIE PICKIE	1208 E 11TH STREET	LPST	RN102349073	109294
SPAW GLASS CONSTRUCTION SITE	1020 RED RIVER STREET	LPST	RN101492841	93412
AUSTIN DOG CAT HOSPITAL	506 E 5TH STREET	LPST	RN101489912	102270
PARTY STOP	3807 N IH 35	LPST	RN102351897	116836
BRIGHT TRUCK LEASING	911 E SAINT JOHNS AVENUE	LPST	RN103099784	109480
GEORGE TORRES TEXACO	301 W KOENIG LANE	LPST	RN101510295	116141
REDDY ICE OAK FARMS SOUTHLAND	910 RED RIVER STREET	LPST	RN101492056	91874
UNIV U HAUL CENTER	4021 N IH 35	LPST	RN101696318	91950
ZIPPY FOOD STORE	6600 N LAMAR BOULEVARD	LPST	RN106972763	91169
BERGSTROM AFB	BUILDING 201	LPST	RN100720473	106827
SHOPPERS MART 6	2453 HIGHWAY 71 E	LPST	RN105053508	95400
EXXON 60003	5324 AIRPORT BOULEVARD	LPST	RN102655206	91397
29WAT R907222	4TH	LPST	RN102130325	105655
M D PHARMACY	1701 LAVACA STREET	LPST	RN102233913	103931
DEL VALLE ISD	2454 CARDINAL LOOP	LPST	RN101495471	108816
TOLSONS CLOSED FUEL FAC	5512 AIRPORT BOULEVARD	LPST	RN106979313	102470
NATIONSRENT	6111 E HIGHWAY 290	LPST	RN102470341	104754
WALKER TIRE	814 IH BOULEVARD 35	LPST	RN101643575	106144
NCNB TEXAS	219 E 6TH STREET	LPST	RN106997257	99342
ABC APPLIANCE	5011 AIRPORT BOULEVARD	LPST	RN101509875	109201
BERGSTROM AFB	BUILDING 2700	LPST	RN100720473	107004
EXXON STATION 67897	1104 EAST AVENUE	LPST	RN100714864	94253
S FOOD MART	6301 N LAMAR BOULEVARD	LPST	RN102393139	112387
STATE SERVICE STATION	1502 SAN JACINTO BOULEVARD	LPST	RN104805403	97342
INTERSTATE AUTO	4834 N IH 35	LPST	RN101493310	108480
TEXAS DEPT OF PUBLIC SAFETY	5805 N LAMAR BOULEVARD	LPST	RN101721728	94079
SERVICE CENTER 2	600 RIVER STREET	LPST	RN102125515	91466
SELF SERVE CAR WASH	201 E 53RD STREET	LPST	RN105793764	118355
VACANT TEXACO STATION	N IH 35	LPST	RN106978786	100857

SITE NAME	ADDRESS	PROGRAM	REGISTRATION NUMBER	ID NUMBER
JET SERVICE STATION	3825 N IH 35	LPST	RN102353935	97461
SPEEDY STOP 410	7114 N IH 35	LPST	RN102655057	118914
SHOPPERS MART 22	1609 E RIVERSIDE DRIVE	LPST	RN102821915	104746
SHOP N SAVE	2204 WOODLAND AVENUE	LPST	RN101499309	120177
MOBIL STATION	E 7TH STREET	LPST	RN106972441	91022
EXXON STATION 67383	3807 EAST AVENUE	LPST	RN102154465	99887
PACIFIC SOUTHWEST BANK PROPERTY	907 S CONGRESS AVENUE	LPST	RN102400306	102685
MOBIL 12D97	7114 N IH 35	LPST	RN102655057	105200
PHILLIPS 66 021268	3311 N IH 35	LPST	RN101698181	119533
STATE PROPERTY	1518 SAN JACINTO BOULEVARD	LPST	RN103054102	111590
SHOPPERS MART 6	2453 HIGHWAY 71 E	LPST	RN105053508	91829
COTHRONS TEXACO SERVICE	701 W 6TH STREET	LPST	RN101488872	98124
DIAMOND SHAMROCK 234	5906 AIRPORT BOULEVARD	LPST	RN102065679	96271
CHEVRON STATION 108651	5805 N IH 35	LPST	RN102492550	95849
CAPITOL CHEVROLET	501 N LAMAR BOULEVARD	LPST	RN100526912	95067
HENNINGER GULF SERVICE	3501 N IH 35	LPST	RN101491454	95166
SUPERIOR DAIRIES	600 E 1ST STREET	LPST	RN102715166	93871
COMMERICAL TITLE BUILDING	910 LAVACA STREET	LPST	RN106975642	95340
FORMER SETH ENGINE PARTS FACILITY	617 E 3RD STREET	LPST	RN102067188	94728
EXXON 6 0931	2605 S IH 35	LPST	RN102659158	102387
7 ELEVEN 16996	2600 GUADALUPE STREET	LPST	RN102020625	102858
7 11 STORE 12681	4511 AIRPORT BOULEVARD	LPST	RN102017134	103119
FORMER RTC PROPERTY	206 CONGRESS AVENUE	LPST	RN102451283	103123
PERRY ROSE TIRE HIGHLAND MALL	6401 AIRPORT BOULEVARD	LPST	RN101497279	102170
BROOKS PERRY PARKING GARAGE	720 BRAZOS STREET	LPST	RN101494144	101630
CHEVRON STATION	IH 35	LPST	RN106972490	91070
EXXON 60015	343 S CONGRESS AVENUE	LPST	RN102655388	91595

SITE NAME	ADDRESS	PROGRAM	REGISTRATION NUMBER	ID NUMBER
7 ELEVEN STORE 23295	1814 GUADALUPE STREET	LPST	RN102018819	119942
TEXACO	701 N IH 35	LPST	RN105020283	91374
QUIX 605	5303 CAMERON ROAD	LPST	RN102405990	119225
ENVIRONMENTAL IMPACT IN WALLER CK		LPST	RN106973696	91563
SWANNS GARAGE RADIATOR	6203 N LAMAR BOULEVARD	LPST	RN100621788	104480
CONTINENTAL CARS	6757 AIRPORT BOULEVARD	LPST	RN100708072	105936
BERGSTROM AFB	BUILDING 208	LPST	RN100720473	103775
AUSTIN AMERICAN STATESMAN	305 S CONGRESS AVENUE	LPST	RN101489169	104432
JIMS TEXACO	4011 RED RIVER STREET	LPST	RN101492544	105257
AUSTIN GREENWOOD CONDO	909 COLORADO STREET	LPST	RN102390275	105043
W & G AUTOMOTIVE	3421 N IH 35	LPST	RN100655265	106012
BROADDUS CHEVRON	30 N IH 35	LPST	RN102472586	105305
ATT AUSTIN FACILITY	705 E 12TH STREET	LPST	RN102939071	104852
US AIR FORCE	67 CES DEV	LPST	RN100720473	105099
MCMORRIS FORD	808 W 6TH STREET	LPST	RN100587419	109726
BRACKENRIDGE HOSPITAL	601 E 15TH STREET	LPST	RN100549658	109025
EXXON 62013	7114 N IH 35	LPST	RN102655057	91124
SOUTHLAND REDDY ICE	901 RED RIVER STREET	LPST	RN102056074	92275
UNIVERSITY OF TEXAS PHYSICAL PLANT	1800 MANOR ROAD	LPST	RN102339504	92699
BEVERAGE BARN FORMER CITGO STATION	2001 E RIVERSIDE DRIVE	LPST	RN102822178	93488
JIMS CONOCO	1308 LAVACA STREET	LPST	RN102042611	97790
UT PHYSICAL PLANT PARKING LOT	1815 MANOR ROAD	LPST	RN102714979	96947
EXXON 67450	1901 GUADALUPE STREET	LPST	RN101474179	111047
KOLPACK PROPERTY	901-905 BARTON SPRINGS ROAD	LPST	RN106984511	112262
MR G TEXACO STATION	6515 AIRPORT BOULEVARD	LPST	RN102466745	101816
CIRCLE K 3224	806 E 51ST STREET	LPST	RN102036100	108040
DIAMOND SHAMROCK 2066	160 E RIVERSIDE DRIVE	LPST	RN102370186	115780
AUSTIN METAL IRON	301 SAN MARCOS STREET	LPST	RN102467875	97147

SITE NAME	ADDRESS	PROGRAM	REGISTRATION NUMBER	ID NUMBER
LEIF JOHNSON FORD	501 E KOENIG LANE	LPST	RN100597376	96764
SHOPPERS MART 9	900 EAST AVENUE	LPST	RN104162466	96329
OLD SEARS WAREHOUSE	108 DENSON DRIVE	LPST	RN101490084	96481
THE TUNNEL CLUB	509 E 5TH STREET	LPST	RN101497956	96081
FIRESTONE TIRE SERVICE CENTER	311 S CONGRESS AVENUE	LPST	RN101499291	106686
BERGSTROM AFB	BUILDING 2911	LPST	RN100720473	106773
TEXAS SCHOOL FOR DEAF	1102 S CONGRESS AVENUE	LPST	RN100691435	108546
WALMART STORE 1185	6700 MIDDLE FISKVILLE ROAD	LPST	RN102220183	107993
AUSTIN BAKERY	5800 AIRPORT BOULEVARD	LPST	RN100690544	108914
CEN TEX NISSAN	1400 S CONGRESS AVENUE	LPST	RN100598390	108915
SHELL OIL RETAIL FAC	601 N IH 35	LPST	RN101492262	107629
TETCO 1167	717 E 7TH STREET	LPST	RN104081229	107633
FIRE STATION 1	401 E 5TH STREET	LPST	RN102239019	113612
AUSTIN TOYOTA	805 W 5TH STREET	LPST	RN102443637	99907
TEXACO	2000 E RIVERSIDE DRIVE	LPST	RN102793338	101251
FORMER AIRPORT EXXON	2511 HIGHWAY 71 E	LPST	RN101510188	117952
LITTLEFIELD BUILDING	106 E 6TH STREET	LPST	RN105527584	117973
STARR BUILDING HISTORICAL SS		LPST	RN106989213	118164
7 ELEVEN STORE 12705	408 W 15TH STREET	LPST	RN102021409	118292
DIAMOND SHAMROCK 2126	1516 TINNIN FORD ROAD	LPST	RN102371432	117256
DOWNTOWN RAILYARD PROPERTY	800 E 4TH STREET	VCP	RN106158793	2601
STRAIT MUSIC	805 W 5TH STREET	VCP	RN101053700	1333
SCARBROUGH HOUSE TRACT	2612 WHITIS AVENUE	VCP	RN101053221	1414
300 MEDINA	301 SAN MARCOS STREET	VCP	RN101053379	646
BLOCK 4, 100 COLORADO STREET	100 COLORADO STREET	VCP	RN100247758	1110
RIVERSIDE PLACE SHOPPING CENTER	2410 E RIVERSIDE DRIVE	VCP	RN101475390	157
DRAKE CONDOMINIUMS	68 RAINEY STREET	VCP	RN105195408	2036
APPLE TRACT	811 W 6TH STREET	VCP	RN102061397	780
AMERICAN CLEANERS FACILITY	309 W 5TH STREET	VCP	RN100698174	188

SITE NAME	ADDRESS	PROGRAM	REGISTRATION NUMBER	ID NUMBER
SAFE WAY RENTAL TOWER SITE	311 BOWIE STREET	VCP	RN101053411	1266
LITTLEFIELD DRISKILL GHOST TANK	106 E 6TH STREET	VCP	RN105527584	2172
HOLIDAY INN - AUSTIN AIRPORT	6911 N IH 35	VCP	RN101056190	1047
CRESCENT MACHINERY	127 E RIVERSIDE DRIVE	VCP	RN104700117	1835
AUSTIN ENERGY CRESCENT TRACT		VCP	RN106268352	2451
RMMA REGIONAL RETAIL PARCEL	NO ADDRESS	VCP	RN105098727	1992
CITY OF AUSTIN ELECTRIC UTILITY DEPT	800 W CESAR CHAVEZ STREET	VCP	RN102744109	283
AUSTIN ENERGY POLE YARD	300 WEST AVENUE	VCP	RN102644226	880
SAFE WAY RENTAL TOWER SITE	311 BOWIE STREET	VCP	RN101053411	2409
GARDNER IRON AND METAL	1201 E 4TH STREET	VCP	RN103161501	2796
HYATT REGENCY HOTEL	208 BARTON SPRINGS ROAD	VCP	RN104778188	1872
TOWN LAKE PLAZA SHOPPING CENTER	1918 E RIVERSIDE DRIVE	VCP	RN105377006	2113
VACANT GASOLINE SERVICE STATION	1221 S IH 35	VCP	RN103017505	1568
STENGER TRACT	1406 N IH 35	VCP	RN106104037	2395
SCARBROUGH BUILDING	101 W 6TH STREET	VCP	RN101053650	638
WATER TRTMT PLANT - CITY OF AUSTIN PUB WORKS	600 W CESAR CHAVEZ STREET	VCP	RN105377568	2199
AUSTIN ENERGY WEST AVENUE	301 WEST AVENUE	VCP	RN106321532	2485
FORMER AIRPORT EXXON	2511 HWY 71 E	VCP	RN101510188	2672
LITTLEFIELD PARKING GARAGE	508 BRAZOS STREET	VCP	RN102617198	673
AUSTIN MUSEUM OF ART		VCP	RN101461853	1322
SEAHOLM SUBSTATION	800 W CESAR CHAVEZ	VCP	RN100217348	2324
PHILLIPS BUILDING	103 E 5TH STREET	VCP	RN101055549	690
FORMER AMERICAN CLEANERS FACILITY	309 W 5TH STREET	DCRP	RN100698174	DC0097
CR T OPERATING	5324 CAMERON ROAD	DCRP	RN104763339	DC0203

Appendix C: Blue Line Preliminary Screening Analysis

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Appendix D: Blue Line Environmental Analysis

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Appendix E: Blue Line Environmental Analysis Addendum

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Appendix F: Blue Line Detailed Alternatives Evaluation Summary Technical Memo

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Appendix G: Blue Line Alternatives Analysis Evaluation Summary Technical Memo: Refinements

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Appendix H: Blue Line Alternatives Analysis Draft Report

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Appendix I: Blue Line/Gold Line Refined Alternatives Technical Memorandum

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Appendix J: Gold Line Corridor Development and Refinement Technical Memo

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Appendix K: Gold Line Purpose and Need and Blue Line Purpose and Need

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Appendix L: Project Connect Public Involvement Plan Blue Line

Under separate cover