



**Austin Transit
Partnership**

Austin Transit Partnership

Austin Light Rail Phase 1 Project

Draft Environmental Impact Statement

*Appendix A: Alternatives Development
and Analysis*

Austin, TX
January 2025

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Acronyms and Abbreviations

Term/Acronym	Definition
ATP	Austin Transit Partnership
CapMetro	Capital Metropolitan Transportation Authority
City	City of Austin
DEIS	Draft Environmental Impact Statement
NEPA	National Environmental Policy Act
OMF	operations and maintenance facility
PEL	Planning and Environmental Linkages
Project	Austin Light Rail Phase 1 Project
SoCo	South Congress [Station]
UT	University of Texas at Austin

1 Introduction

The alternatives development and analysis process for the Austin Light Rail Phase 1 Project (the Project) encompasses the extensive community planning and stakeholder engagement, as well as comprehensive planning and focused analysis, that occurred since 2018. Prior to the inception of the Austin Transit Partnership (ATP), the Capital Metropolitan Transportation Authority (CapMetro) conducted planning activities for high-capacity transit in Austin that culminated in the successful November 2020 election where voters passed Proposition A, an increase in the City of Austin’s (City) property tax rate, to provide local funding for the multimodal Project Connect program. Following the successful referendum and the creation of ATP in 2020, CapMetro and ATP advanced development of light rail corridors referred to in Chapter 1 as the “2020 Proposed Projects.” Ultimately, the Project was developed as a cost-effective initial phase following a community-driven process and to address the purpose and need defined for the high-capacity transit component of the Project Connect program.

This appendix reviews the Project’s planning history (see Section 2) and summarizes the mode choice and alignment decisions made for the 2020 Proposed Projects, which apply to the current Project (see Section 3). Planning documents that address the analysis of mode choice and alternative alignments are incorporated by reference in this Draft Environmental Impact Statement (DEIS) and are available for public review.¹ The alternatives analysis undertaken by ATP that culminated in local approvals for the Project is described in Section 4.

2 Planning History

Planning for high-capacity transit in the Austin Metro Area began over two decades ago to address congestion on the capacity-constrained roadway network and to accommodate the significant population and employment growth projected for the area. This planning led to the *Project Connect Long-Term Vision Plan*, which included high-capacity transit corridors (CapMetro 2018). The vision plan was included as an integral part of the *Austin Strategic Mobility Plan*, approved by the Austin City Council in 2019 (City of Austin 2023).

The Federal Transit Administration’s transportation planning regulations (23 Code of Federal Regulations 450.212 and 450.318) encourage a concept known as Planning and Environmental Linkages. Planning and Environmental Linkages embraces the idea that transportation planning and the environmental review process are integrated. Information, analysis, and products developed during transportation planning can be incorporated into and relied upon during subsequent environmental review. As long as transportation planning products are readily available for agency and public review, they may be incorporated by reference in the environmental review process. The hope is that Planning and Environmental Linkages may shorten environmental review and lead to better project decisions for both transportation and the environment.

¹ Planning documents can be found online at www.atptx.org.

Under Project Connect, transit planners originally planned for two light rail lines in Austin, one line running through downtown extending to the north and south (Orange Line) and another running downtown east to the airport (Blue Line). Beginning in May 2019, an alternatives analysis was conducted, which selected light rail as the preferred mode (CapMetro 2020a, 2020b). In 2020, CapMetro completed two Planning and Environmental Linkages studies following federal guidance that documented the alternatives analysis, purpose and need, and public and stakeholder outreach, and informed selection of the locally preferred alternatives for the Orange and Blue Line light rail projects (CapMetro 2020c, 2020d).

In May 2020, the Capital Area Metropolitan Planning Organization adopted its *2045 Regional Transportation Plan* that included the Orange and Blue Line corridors as priority transit capital investments. In June 2020, the locally preferred alternatives were adopted by CapMetro's Board of Directors as part of the Project Connect System Plan. In November 2020, voters approved Proposition A, an increase in the City's property tax rate, to provide local funding for the Project Connect program, a program of transit improvements including light rail in Austin. ATP was created following the election and authorized to implement the financing, design, engineering, and construction of the light rail component of Project Connect.

After the election, as the Orange and Blue Lines design advanced, the estimated project construction, operation, and maintenance costs continued to increase. The primary cost drivers were identified as increasing real estate costs, inflation, supply chain cost escalation, and scope change. ATP's objective is to deliver light rail in a phased approach that is fiscally feasible, aligned with the 2020 tax referendum passed by the voters, and responsive to the needs of the public. In July 2022, planning efforts on the Orange and Blue Line projects were suspended in order to evaluate viable project scenarios that were affordable, constructable, maintainable, and continued to address the purpose and need of the 2020 Proposed Projects.

ATP undertook a planning process in 2022 and 2023 to define an economically feasible and expandable light rail system with independent utility that would meet transportation goals and objectives. On June 6, 2023, the ATP Board of Directors, Austin City Council, and CapMetro Board of Directors unanimously approved the *Austin Light Rail Implementation Plan* (ATP 2023). This plan identifies the first phase of light rail, which is the Project described in this DEIS. A Notice of Intent to prepare an Environmental Impact Statement for the Project was published in the Federal Register in January 2024. Key milestones are summarized in **Figure 2-1**.

Figure 2-1: Key Milestones in Project Development for Austin Light Rail Phase 1



3 Alternatives Development and Analysis (2016–2020)

CapMetro developed a range of alternatives corridors to meet the purpose and need defined for the high-capacity transit component of Project Connect. Light Rail Transit, Bus Rapid Transit, and Transportation System Management Alternatives were developed and evaluated via a multi-tiered decision-making process.

The Light Rail Transit and Bus Rapid Transit Alternatives were compared equally and included transit operating in dedicated guideways along the routes identified in the Project Connect System Plan. At-grade, elevated, and subway alignments were evaluated for certain sections along both routes. The Transportation System Management Alternative was defined to maximize transit services within the existing and programmed transportation right-of-way. The Transportation System Management Alternative included upgraded local and regional bus service and new CapMetro Rapid routes in the Project corridor. The results of the alternatives analysis are summarized below.

3.1 Alternatives Eliminated from Further Consideration

The Transportation System Management Alternative assumed 10-minute frequency, higher-capacity vehicles (likely 60-foot, articulated, three-door buses), transit signal priority at intersections between Cesar Chavez Street and East Martin Luther King Jr. Boulevard, and consolidated stops with enhanced amenities similar to today's CapMetro Rapid stations but without level boarding or off-board fare payment, with estimated one-third-mile stop spacing. To

obtain frequencies shorter than 10 minutes, additional infrastructure and property acquisition would be required within the right-of-way. Travel time on buses under the Transportation System Management Alternative were found to be generally twice as long compared to the guideway options (light rail and bus rapid transit), and the system would support only about one-third of the ridership on the guideway options. The Transportation System Management Alternative would not provide the mobility benefits needed to accommodate the expected growth in the region and would not meet the Project goals and objectives.

During public engagement for the Planning and Environmental Linkages studies, CapMetro recorded broad support for building dedicated guideways in the corridors (more than 90 percent of survey responses), with a majority supporting light rail instead of bus rapid transit. Bus rapid transit was defined as higher frequency service and included several higher-level bus rapid transit amenities including, but limited to, off-board ticketing, multi-point vehicle access, articulated vehicles, and a dedicated guideway. Less than 20 percent of survey responses favored bus rapid transit over light rail. The combination of the bus rapid transit capacity limitations and public preference resulted in the selection of light rail as the preferred mode. While bus rapid transit on dedicated guideway could support the projected horizon year ridership, the distance between buses (headways) would be only a few minutes, and the system would operate at maximum capacity with no room for future growth. Light rail would provide for increases in ridership an estimated 10 to 20 years beyond the horizon year.

3.2 Alternatives Advanced

The Orange Line project was defined in phases as light rail operating in an approximately 20-mile dedicated guideway from Tech Ridge on the northern end of the corridor to Slaughter Lane on the southern end of the corridor, with 20 stations planned along the route. The Blue Line project was defined as light rail operating in an 8.2-mile dedicated guideway from Republic Square on the western end of the corridor to Austin-Bergstrom International Airport on the eastern end of the corridor, with 11 stations planned along the route. The Blue Line project included interlining or sharing the guideway with the Orange Line from Republic Square north to the North Lamar Transit Center. Both guideways were proposed to operate at street level and be center-running throughout most of the corridor, with a tunnel segment in Downtown Austin. Through the planning process in 2021 and 2022, the extent of the routes and station locations were refined to optimize performance of the system.

4 Alternatives Analysis Process for Austin Light Rail Phase 1 (2021–2024)

The Project is part of a phased implementation approach to light rail. The Project largely adopts the same horizontal alignments and station locations identified for the Orange and Blue Lines within redefined project limits (although station names have changed in some instances). ATP analyzed different endpoints for the light rail system while considering both an at-grade and tunnel alignment through Downtown Austin. The analysis included evaluating alternative Lady Bird Lake crossings and a siting analysis for the operations and maintenance facility (OMF). ATP's alternatives analysis process and results are described below.

4.1 Light Rail System Phasing Scenarios

In July 2022, ATP identified concerns with cost and scope escalation on the Orange and Blue Lines and initiated a community-driven planning process to develop a viable and affordable light rail implementation plan that addresses the purpose and need of providing quality and reliable high-capacity transit to the Austin Metro Area. The process included the following steps:

1. Identify build scenarios by considering and addressing:
 - cost escalation factors that rendered the Orange and Blue Lines financially infeasible and possible mitigation or avoidance of those cost drivers;
 - the Project's competitiveness in the Federal Transit Administration's Capital Investment Grants program;
 - community values and priorities identified via community engagement during alternatives analysis as well as focus group sessions; and
 - historic mobility and accessibility goals of the region, including the need to serve key destinations providing access to housing, employment, education, healthcare, and community resources.
2. Advance a reasonable range of scenarios for comparative evaluation against the Project goals and objectives;
3. Solicit public feedback on the comparative evaluation of the scenarios; and
4. Document the reasons for advancing the recommended scenario over other scenarios considered.

4.1.1 Cost Considerations

As the capital costs for the 20-mile Orange Line and 8.2-mile Blue Line grew to more than \$10 billion (including the cost for a tunnel section in Downtown Austin), it became apparent that the full limits of the Orange and Blue Lines could not be implemented within the first phase based on the current Proposition A revenue stream and the anticipated federal grant support.

A key consideration in the assessment of Phase 1 scenarios was how to best serve travel demand. The length of the light rail system that is affordable in Phase 1 would depend on the vertical profile of the alignment: the more route miles built in relatively expensive tunnels or on viaducts, the shorter the overall alignment and the fewer stations that would be served. ATP analyzed the travel demand data that were generated for each light rail scenario developed.

Stations within the geographic area with the highest ridership and those with the greatest share of minority populations within 0.5-mile of the station were identified. Demographic data was collected, including those who live in zero- or one-car households, persons of color, households with annual incomes of \$50,000 or less, households with individuals with disabilities, and persons younger than 18 or older than 65. The stations with the highest ridership in the geographic area are Crestview, University of Texas at Austin (UT), Republic Square, Stassney,

and Pleasant Valley. The top-ranking stations for minority² populations include North Lamar Transit Center, Oltorf, Pleasant Valley, and Montopolis. These stations are shown in **Figure 4-1**.

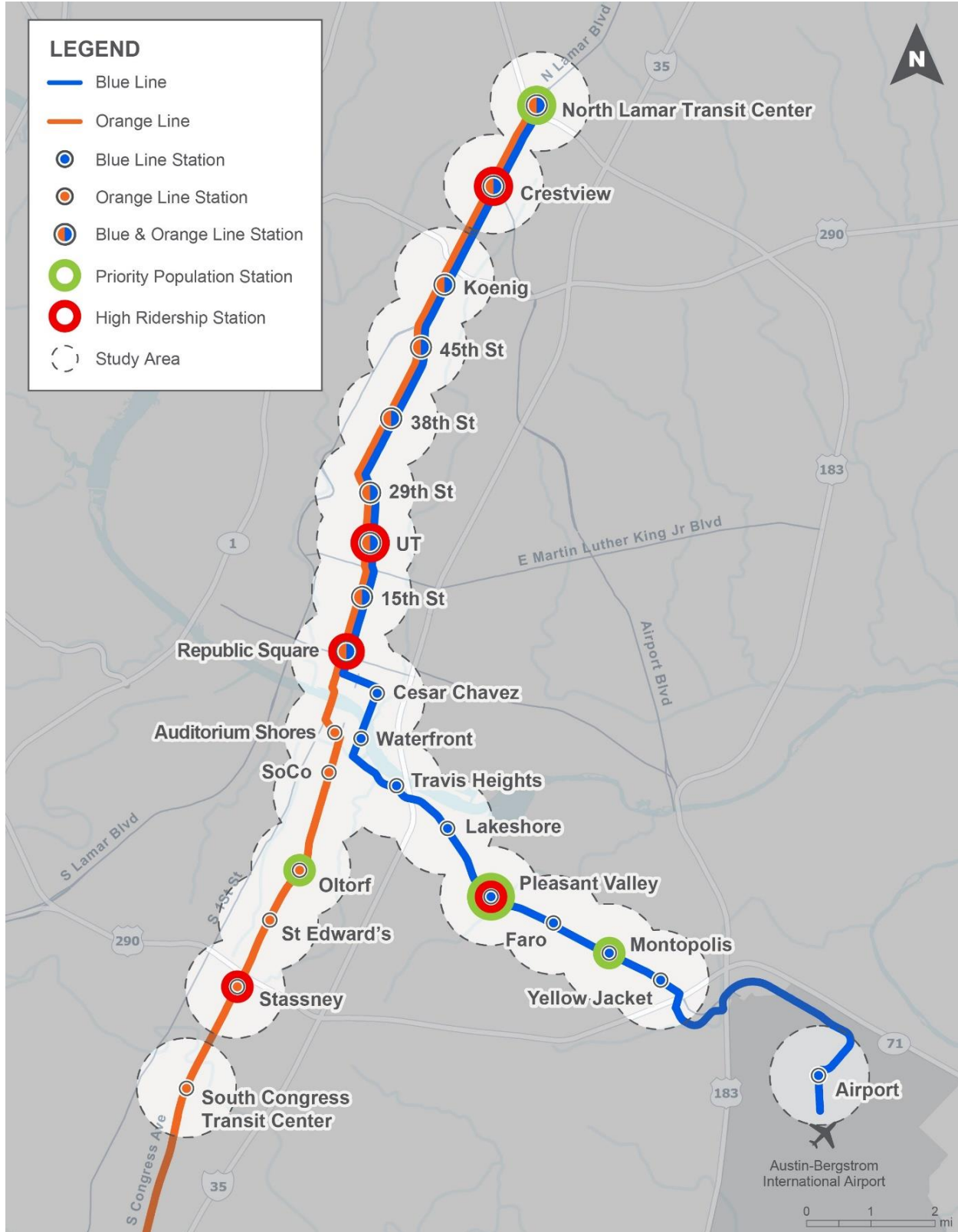
4.1.2 Community Values Criteria

ATP developed community values criteria through meetings with ATP committees, Project partners (CapMetro and the City), and stakeholders who were part of the Project Connect Ambassador Network. The community values criteria included the following:

- How many jobs, special events, education centers, and other destinations are served by the light rail train?
- Are we serving existing and planned affordable housing units?
- How many groups—including transit-dependent; minority and low-income populations—have access to the light rail train to ensure the system is equitable for all?
- How easy is it to take a bus or commuter rail (Red Line) to and from the light rail train/stations?
- How will the light rail train impact traffic?
- How does the light rail train support City efforts on the anti-displacement program and planning for equitable transit-oriented development?
- How does the light rail train complement housing development today and in the future?
- How easy is it to walk and bike to and from the light rail train?
- How much does the train impact environmental resources like parklands, heritage trees, and historic squares?
- How many people live within a half mile of proposed stations?
- How much does the light rail train reduce greenhouse gas emissions by shifting people from cars to light rail trains?
- How many people will ride the light rail train?
- How will the light rail train minimize impacts on water resources like Lady Bird Lake?

² FTA identifies minority populations as persons who are American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian and other Pacific Islander. The analysis in this DEIS also considers minority to include persons identified as being either “some other race” or “two or more races” in the census data. ATP identified a census block group as a minority block group if 50 percent or more of the residents identified as minority.

Figure 4-1: High Ridership and Minority Population Stations



Source: U.S. Census Bureau 2022.

ATP then conducted a series of focus groups in December 2022 and January 2023 to inform the set of criteria for the evaluation of scenarios. Focus group participants who were recruited were those who self-identified as a member of a minority population. Participants were recruited through direct contact to existing stakeholder lists, community organizations and groups, and social media. ATP hosted 11 focus groups, ranging from 3 to 17 people per group, for a total of 121 participants. ATP provided the participants with a brief overview of the Project Connect program and highlights of the light rail work completed to date. ATP discussed 13 different community values that apply to the light rail system and asked participants to identify the ones they felt were most important.

Focus group participants provided valuable insights on light rail and the evaluation criteria. The following criteria emerged as the most important:

- **Access to Key Destination Points.** How many jobs, special events, education centers, and other destinations are served by the light rail train?
- **Affordability Benefits.** Are we serving existing and planned affordable housing units?
- **Demographic Data.** How many groups, including transit-dependent, minority and low-income populations, have access to the light rail system to ensure the system is equitable for all?
- **Transfers to Bus and Rail.** How easy is it to take a bus to and from the light rail/train stations?
- **Traffic.** How will the light rail impact traffic?

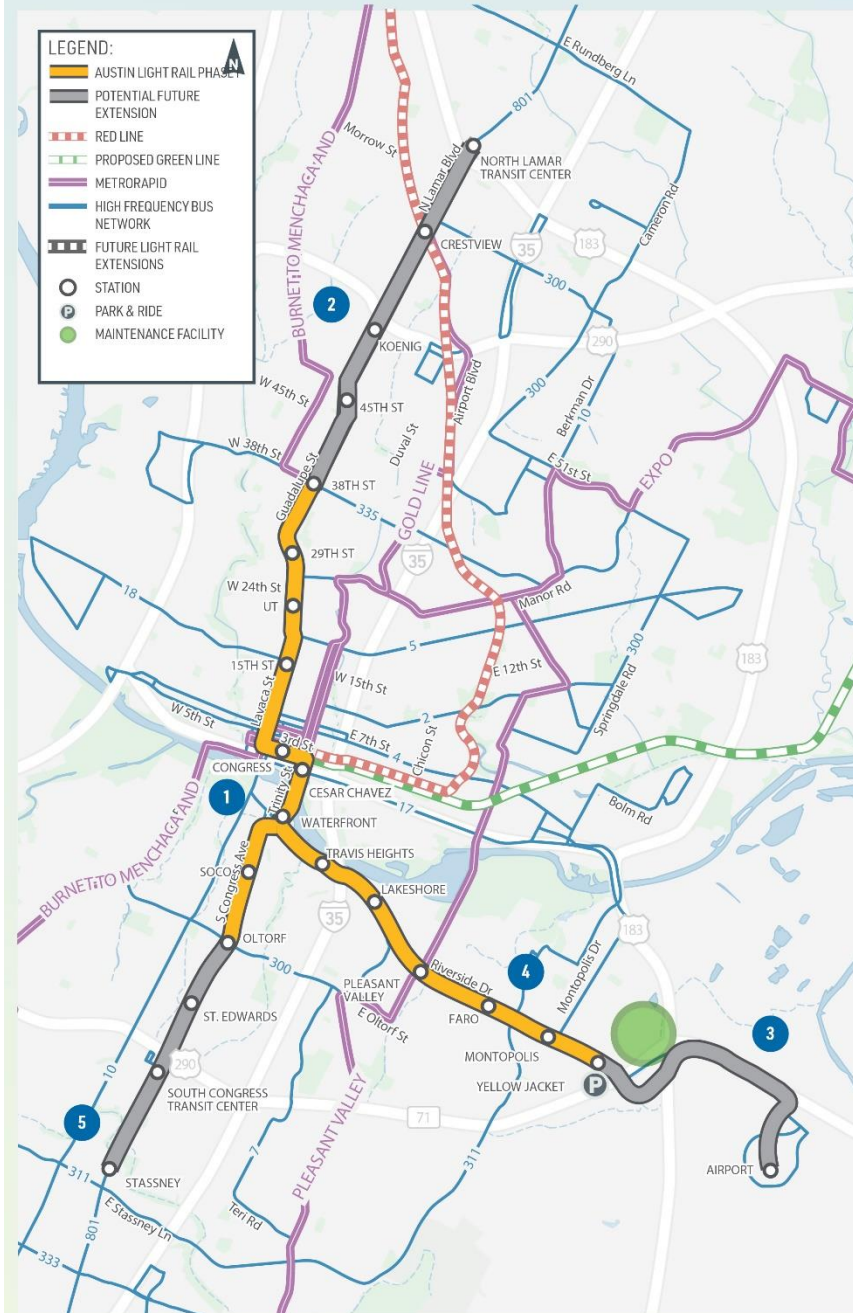
The feedback received from the focus groups was used to guide the development of scenarios, to inform enhanced goals and objectives for the Project (see **DEIS Chapter 1**) and, ultimately, to develop evaluation criteria for the comparative evaluation of the light rail Phase 1 scenarios. The community values criteria were also presented in a series of public meetings and engagements throughout spring 2023 to enable broad input. The *Light Rail Focus Groups Summary Report* is available for review at <https://www.atptx.org/engagement-library/>.

4.1.3 Scenario Development

To develop a range of scenarios that compare different endpoints for the alignment, ATP reviewed demographic data, multimodal connection opportunities, and existing and future land use. This information is presented in **Attachment A**, Figure 1 through Figure 13. The key characteristics of the different segments are summarized in **Figure 4-2**.

Figure 4-2: Key Characteristics by Segment

Key Segment Details



1 Core Area (UT/SoCo/Pleasant Valley)

- Highest ridership: Includes 3 of the 5 top ridership stations in central business district.
- Highest number of possible connections to rest of the transit network and access to opportunities in downtown.
- Connects single and multi-family developments to UT, parks, civic centers, and jobs.
- High development potential - bisects Imagine Austin's designated Regional Center and partially spans designated Town Center.

2 38th to North Lamar Transit

- High ridership: captures Crestview Station (2nd highest ridership after UT) and connects to Red Line for regional transfers.
- Robust multimodal network from past investments in sidewalks, trails, bike lanes, bus & rail stations.
- Commercial uses, multi-family, and single-family housing, and large civic campuses at southern end.
- Moderate development potential.

3 Yellow Jacket to Airport

- Lowest ridership per mile with less than 1,000 daily trips at airport station.
- Connects airport to regional transit system.
- Limited development potential north of SH71.

4 Pleasant Valley to Yellow Jacket

- Best serves low-income areas and provides opportunity to invest in a historically underserved area.
- Includes only connection to new MetroRapid routes outside the system core.
- Reaches the most minority populations.
- High mixed-use development potential (Imagine Austin Town Center and East Riverside Corridor Master Plan).

5 SoCo to Stassney

- Serves South Central Austin - Commercial, residential, education (St. Edward's), and industrial.
- Captures high ridership station at SoCo Transit Center.
- Moderate long-term residential development potential (Imagine Austin St. Edwards Neighborhood Center)

Sources: U.S. Census Bureau 2022; City of Austin 2010, 2013, 2024.

To identify differentiators among the segments, ATP looked at the key community values related to mobility, population, and affordability. The segments common to all scenarios (UT / South Congress [SoCo] to Pleasant Valley) were termed the “Core Area” and span approximately 5.5 route miles, include Austin’s central business district, and provide the spine for the light rail system. ATP’s decision-making process focused on the benefits and costs of extending from the Core Area to the north, south, and east. Extension north of the Core Area would provide an additional connection to the Red Line and the North Lamar Transit Center and would capture the high ridership station of Crestview. Extension to the east would serve the greatest share of low-income households and minority populations and would either reach or get close to Austin-Bergstrom International Airport. Extension to the south would serve a pedestrian-oriented area, capture the high ridership SoCo Station, and facilitate extension into South Austin.

The Core Area has a high number of multimodal connections (trails, sidewalks, protected lanes), as does the 38th Street to North Lamar Transit Center segment, which is indicative of the robust infrastructure investments that have historically targeted these areas. The SoCo to Stassney segment has a moderate number of connections, while the Pleasant Valley to Airport segment has a relatively low number of connections. ATP recognizes an opportunity to invest in the Pleasant Valley to Airport segment to serve low-income communities that have been affected by past transportation decision-making and that reside in an area of underinvestment. The Pleasant Valley to Airport segment has the highest percentage of people identifying as minority (72 percent), the lowest median income (\$53,000), and the greatest number of income-restricted housing units compared to the southern and northern segments.

ATP analyzed dozens of scenarios, testing different endpoint stations within these segments. Scenarios were built assuming on-street, elevated, and tunnel sections for certain segments of the alignment. The two river crossings (tunnel and bridge) proposed for the Orange and Blue Lines were key cost drivers. As a result, ATP developed the current alignment with a single river crossing and evaluated the previous river crossing at Trinity Street and an at-grade alignment at 1st Street, which were tested in multiple scenarios. Further, OMF sites were considered in relation to optimizing operational efficiencies under the different endpoint scenarios (see Section 4.2).

Based on this analysis, ATP identified five scenarios that highlighted the trade-offs that would be made within the available funding envelope for the Project:

- **Scenario 1 – On-Street: 38th to Oltorf to Yellow Jacket.** On-street guideway that extends 9.8 miles between 38th Street to the north and Oltorf Station to the south and Yellow Jacket Station to the east, serving 15 stations, and crossing Lady Bird Lake by bridge either at Trinity Street or 1st Street. The Airport Commerce Drive OMF location would serve Scenario 1 (see **Figure 4-3** and Section 4.2).
- **Scenario 2 – On-Street: North Lamar to Pleasant Valley.** On-street guideway that extends 9.8 miles between the North Lamar Transit Center to the north and Pleasant Valley to the east, serving 14 stations and crossing Lady Bird Lake by bridge either at Trinity Street or 1st Street. The North Lamar Transit Center OMF location would serve Scenario 2 (see **Figure 4-4** and Section 4.2).

- **Scenario 3 – On-Street: 29th to Airport.** On-street guideway that extends 10.1 miles between 29th Street and Austin-Bergstrom International Airport, serving 13 stations, and crossing the river by bridge at Trinity Street. The guideway would be elevated near the airport. The Airport Commerce Drive OMF location would serve Scenario 3 (see **Figure 4-5** and Section 4.2).
- **Scenario 4 – Partial Elevated: 29th to Oltorf to Yellow Jacket.** Partially elevated route extending 8.7 miles between 29th Street to the north, Oltorf Station to the south, and Yellow Jacket Station to the east, with elevated sections in Downtown Austin and along Guadalupe Street between 7th Street and East Riverside Drive, serving 13 stations, and crossing the river by bridge at 1st Street. The Airport Commerce Drive OMF location would serve Scenario 4 (see **Figure 4-6** and Section 4.2).
- **Scenario 5 – Partial Underground: UT to Yellow Jacket.** Partial underground route extending 6.6 miles between UT Station to the north and Yellow Jacket Station to the east, with a tunnel section between 21st and 7th Streets and an elevated section between 7th Street and East Riverside Drive on Guadalupe Street, serving 10 stations, and crossing the river by bridge at 1st Street. The Airport Commerce Drive OMF location would serve Scenario 5 (see **Figure 4-7** and Section 4.2).

Other scenarios were eliminated from consideration because they were not within the envelope of financial viability, because they would not be competitive in the Federal Transit Administration's Capital Investment Grants program, or because they offered no advantage over one of the scenarios that were advanced for further analysis.

In response to community feedback on Scenario 1, ATP considered an additional scenario with a terminus at Crestview Station at the intersection of North Lamar Boulevard and Airport Boulevard to capture riders transferring from the Red Line and CapMetro Rapid Route 801. However, any scenario that does not extend to North Lamar Transit Center in Phase 1 would need to extend to Yellow Jacket Station to include a viable maintenance facility location (see Section 4.2). In addition, the 38th Street to Crestview Station segment would have a high cost per mile due to overhead electric transmission line conflicts, effects on real estate, interface with the Red Line, and other complexities.

Figure 4-3: On-Street: 38th to Oltorf to Yellow Jacket

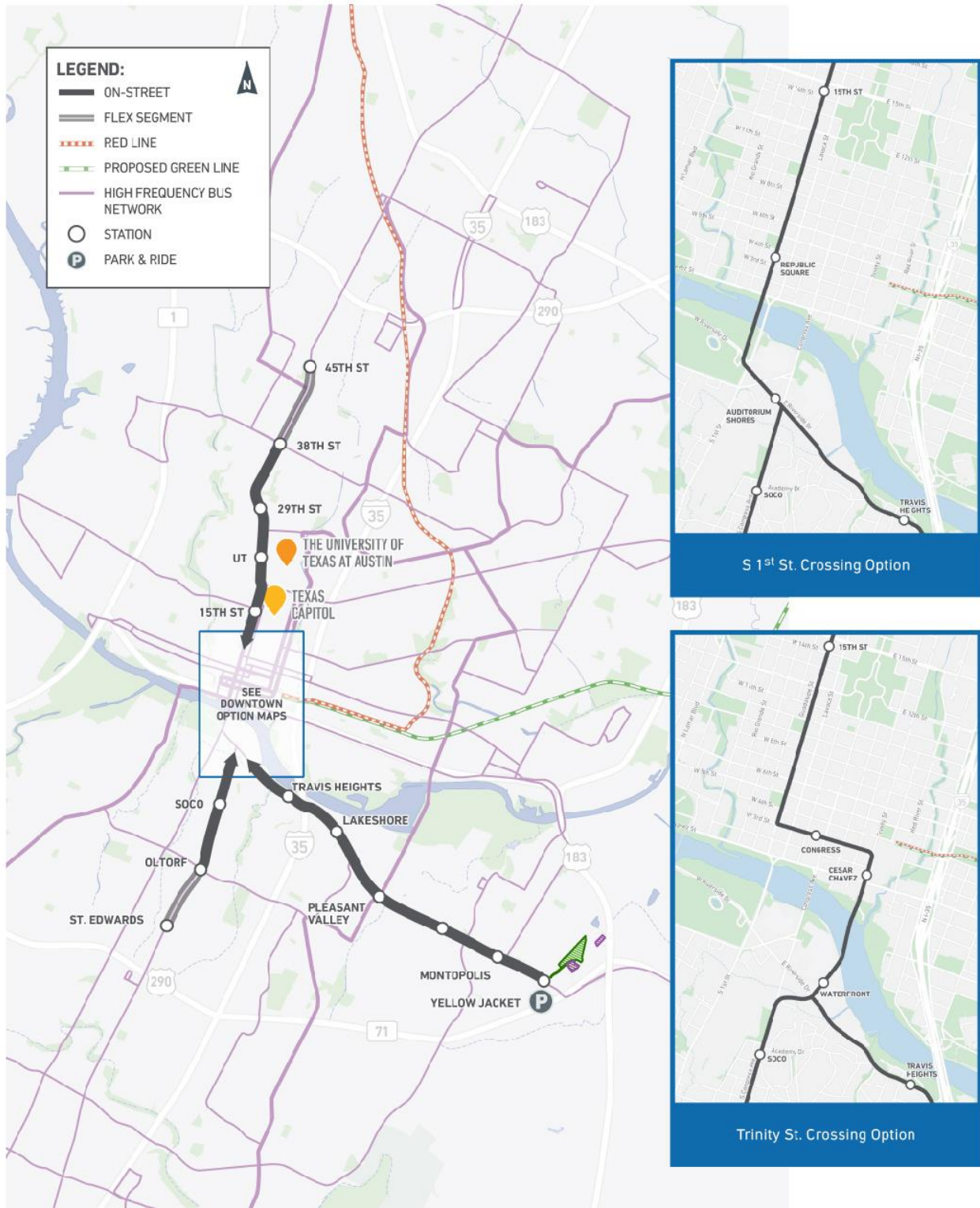


Figure 4-5: On-Street: 29th to Airport

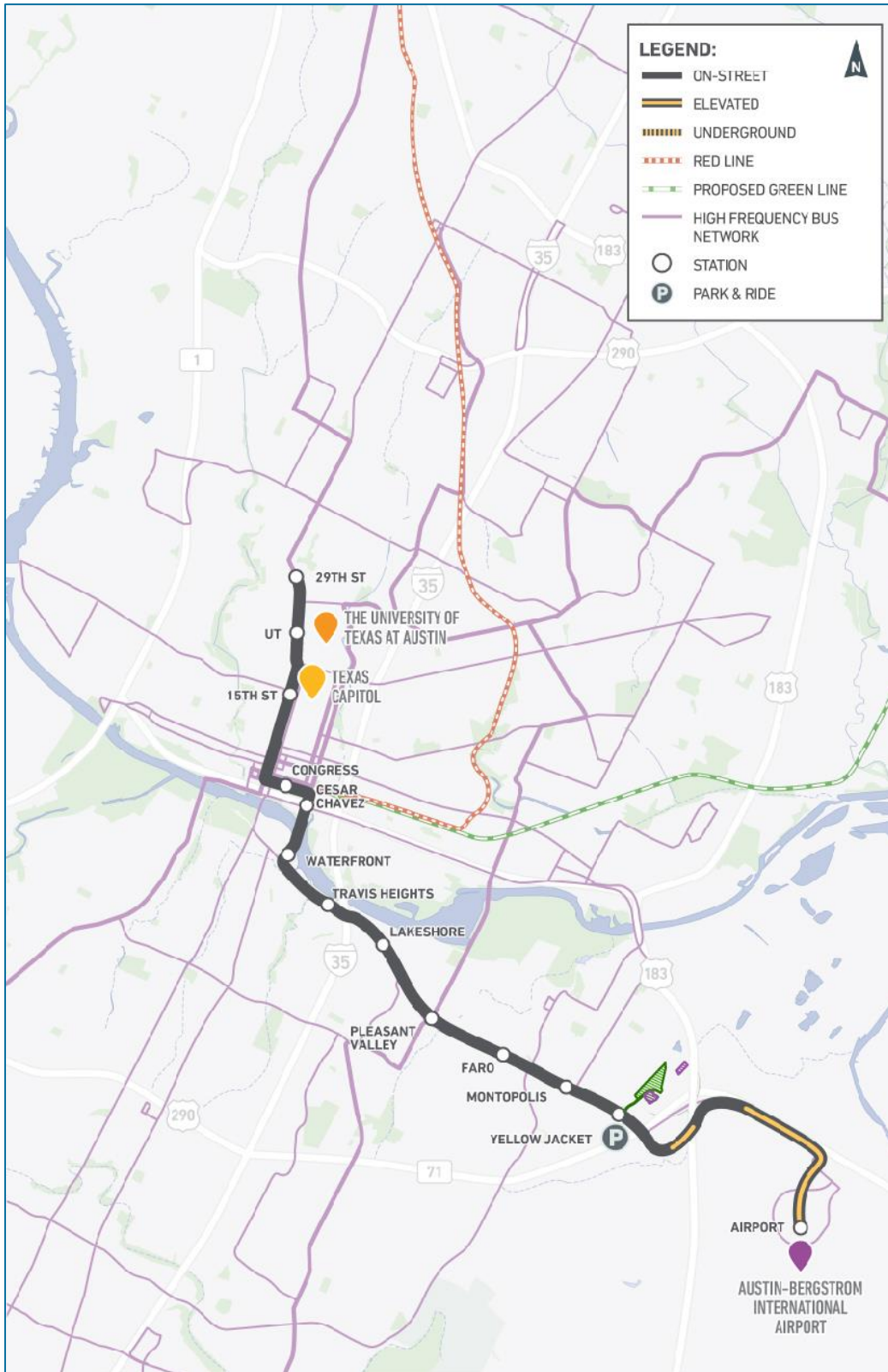


Figure 4-6: Partial Elevated: 29th to Oltorf to Yellow Jacket

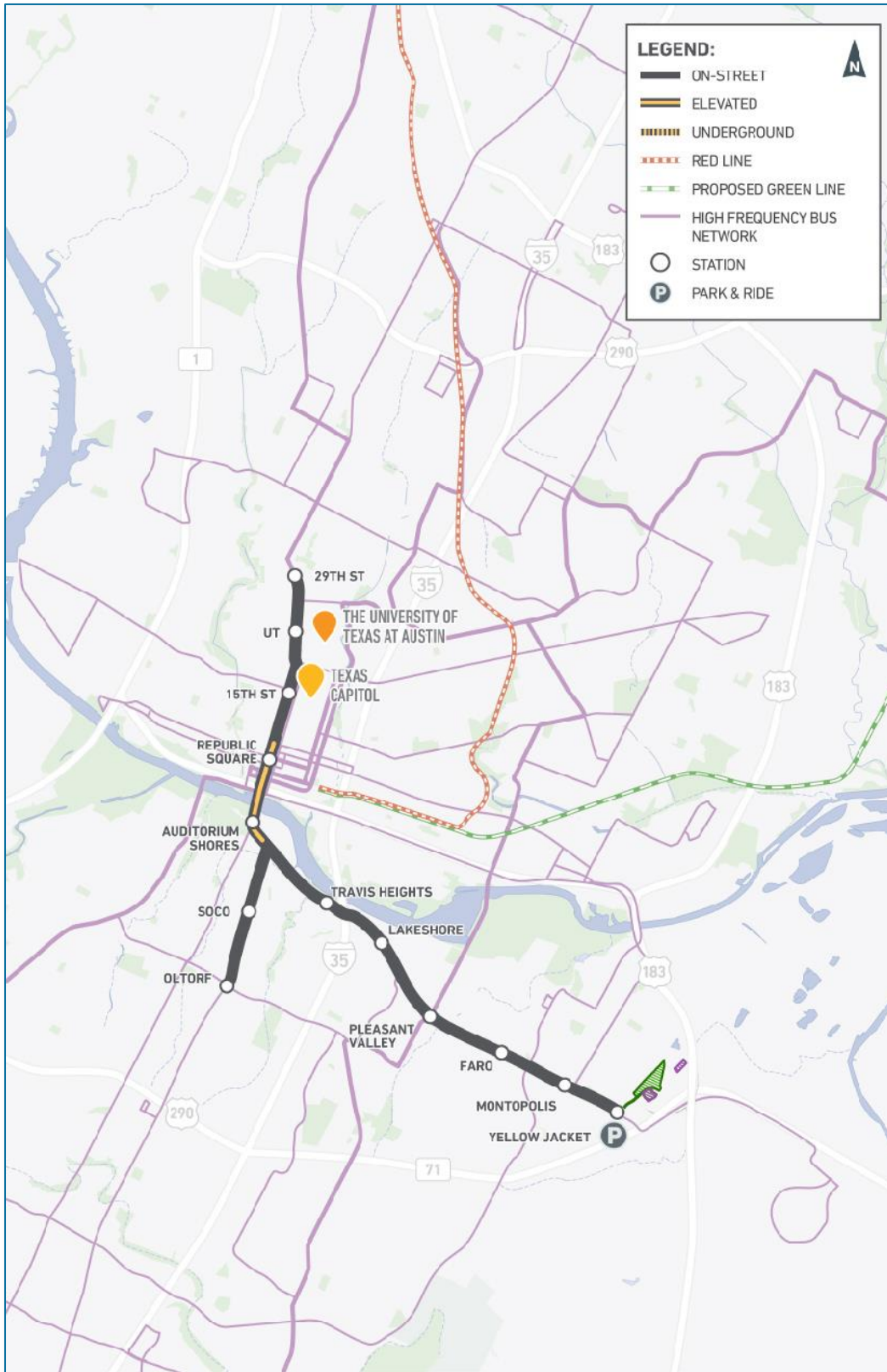
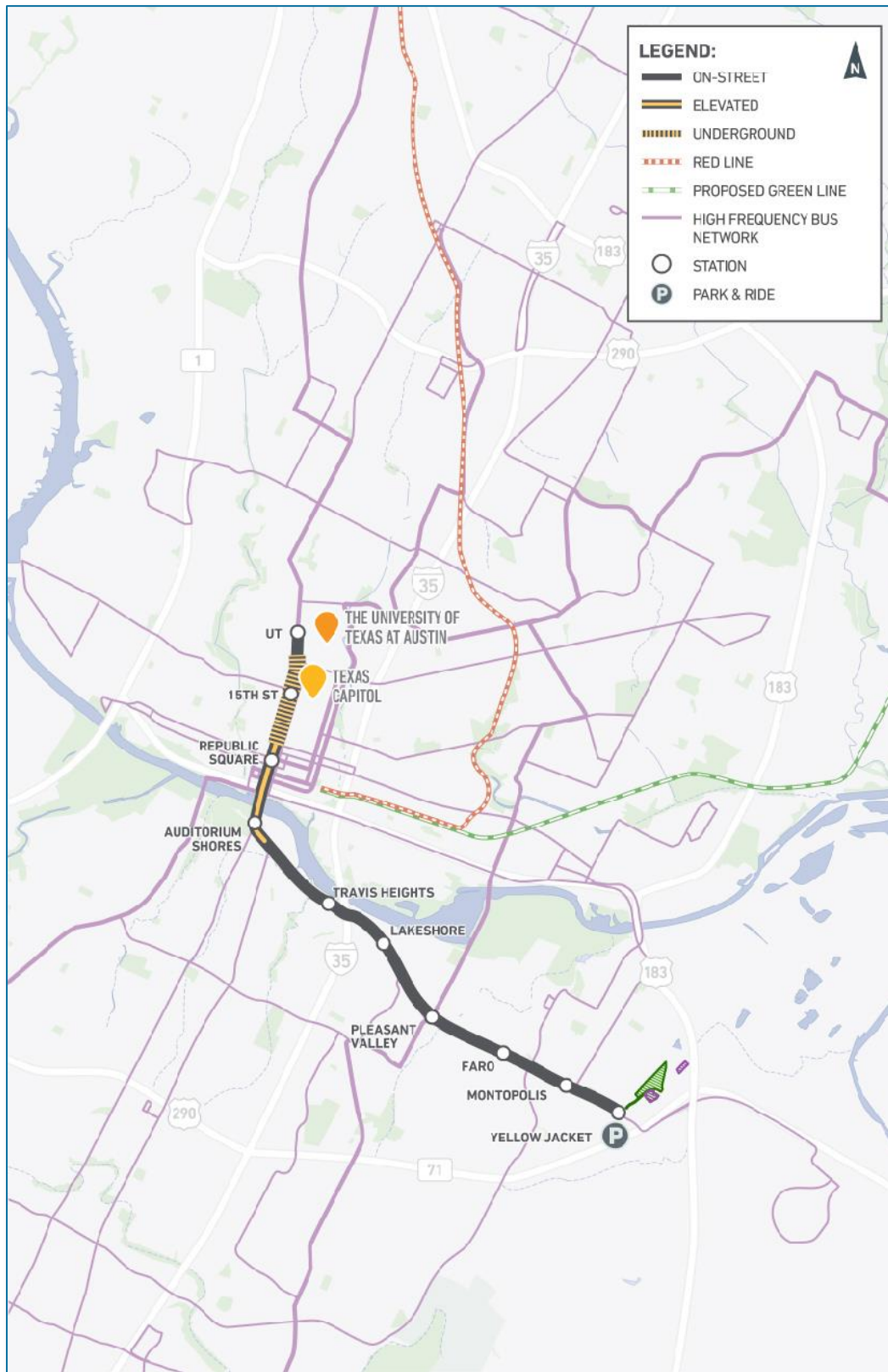


Figure 4-7: Partial Underground: UT to Yellow Jacket



4.1.4 Public Outreach and Community Dialogue

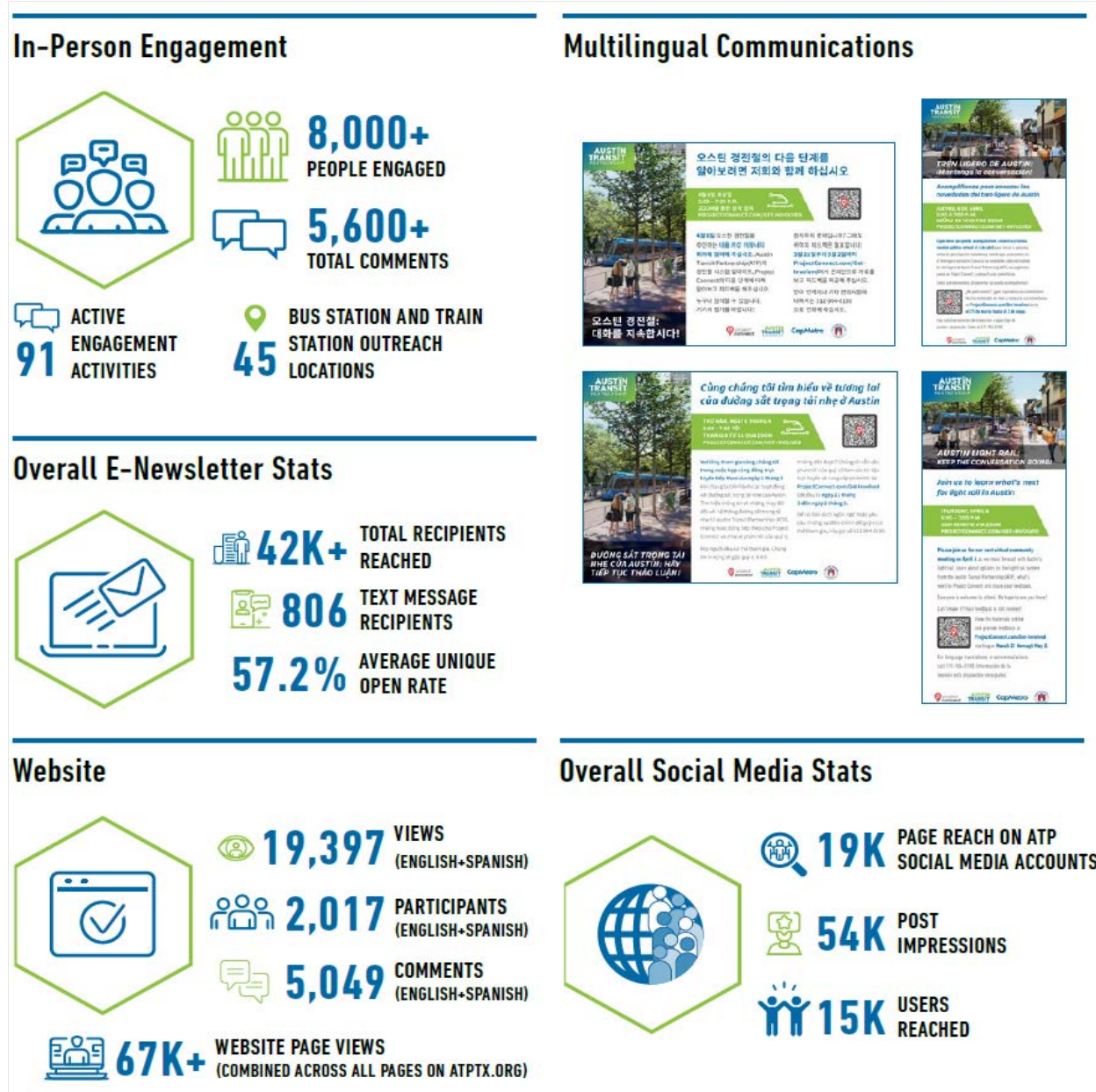
On March 21, 2023, ATP unveiled the five light rail scenarios to the community. This launched a 6-week community dialogue process from March 21 through May 2, allowing the community the opportunity to comment on the scenarios. The engagement process and summary of feedback received are presented in the *Austin Light Rail: Community Engagement Report* found at [Austin Light Rail: Community Engagement Report \(atptx.org\)](https://atptx.org).

In summary, the community feedback:

- supported the advancement of a light rail project that moves Austinites where they need and want to go;
- prioritized mobility, customer service, and access to key destinations;
- focused on greater coverage; seamless integration with other transportation options; expandability of the system; and affordably reaching key destinations including schools, medical centers, job centers, the airport, and UT;
- indicated concerns about cost and phasing with regard to the Partial Elevated and Partial Underground scenarios (Scenarios 4 and 5, respectively); on-street light rail was seen as more affordable and providing better connectivity for the community;
- indicated concerns around the lack of access for South Austin with the North Lamar Transit Center to Pleasant Valley scenario; and
- highlighted a strong interest in reaching the airport as a key destination; the 29th to Airport scenario (Scenario 3) was the most frequently discussed scenario.

Community engagement data at a glance are shown in **Figure 4-8**.

Figure 4-8: Implementation Plan Community Engagement at a Glance



In May 2023, the Community Advisory Committee³ published a recommendation that supported Scenario 1 – On-Street: 38th to Oltorf to Yellow Jacket and Scenario 2 – On-Street: North Lamar to Pleasant Valley based on community feedback and conversations with the stakeholders. The Community Advisory Committee also made recommendations for a future

³ The Community Advisory Committee was created through the Joint Powers Agreement and advises ATP, the City of Austin, and CapMetro on equity and sustainability, guides the use of Project Connect’s \$300 million anti-displacement investments, develops key performance indicators across all three partners, and serves as a voice for diverse perspectives ensuring project planning reflects community values.

maintenance facility that is environmentally sustainable and supports community needs, regardless of location (see the *Austin Light Rail: Community Engagement Report* found at [Austin Light Rail: Community Engagement Report \(atptx.org\)](https://atptx.org)).

4.1.5 Rationale for Decision-Making

After reviewing the technical results and feedback from the public, ATP recommended, and the ATP Board of Directors, Austin City Council, and CapMetro Board of Directors adopted, Scenario 1 – On-Street: 38th to Oltorf and Yellow Jacket as the preferred scenario for this Phase 1 investment in the light rail system. ATP weighed the benefits and costs of serving the historically underinvested communities east of I-35 against either capturing the highest ridership (Crestview) via extension to the north or capturing the airport market via extension further east. ATP elected to prioritize service to the underserved communities for Phase 1 to enhance access to opportunities for jobs, education, and services, and has identified two priority extensions to the north and east for advancement when funding becomes available. Scenario 1 has the second highest ridership of all scenarios while serving the most minority populations and connecting the most income-restricted housing to jobs and key destinations in the region. Scenario 1 provides geographic coverage in all three directions, supporting expansion to the north, south, and east; and it best supports the targeted growth areas identified in local neighborhood plans and the *Imagine Austin Comprehensive Plan* (City of Austin 2024).

4.2 OMF Siting Analysis

The OMF site must be sized and located so that it can provide necessary functions for the operation and maintenance of the light rail system. These functions include storage of up to 40 light rail vehicles; facilities for inspection and maintenance of the vehicles; maintenance of way facilities for maintenance of light rail materials and equipment; administrative spaces and facilities for light rail operations and maintenance staff; and light rail operations control center facilities.

ATP performed an evaluation to identify possible locations for the OMF based on a first tier of selection criteria that considered site proximity to the alignment, a minimum of 40 acres in size, and a mostly flat site. This resulted in 21 potential sites for the OMF, as shown in **Figure 4-9**, that met minimum criteria requirements.

The 21 sites were then evaluated and narrowed down to 9 locations that best met a second tier of criteria. The second-tier criteria included compatibility with surrounding land uses; avoiding residential displacements; minimizing effects on properties and businesses; avoiding properties under development by others; ability to accommodate future expansion opportunities (if feasible); avoiding or minimizing environmental effects; and cost (property plus cost to build). When the preferred scenario was selected, the number of sites was further narrowed down to those within the limits of the Phase 1 alignment.

Within the limits of the Phase 1 alignment, three sites are near the light rail alignment. The attributes of the three sites are compared in relation to the siting considerations in **Table 4-1**.

Figure 4-9: Operations and Maintenance Facility Sites Evaluated

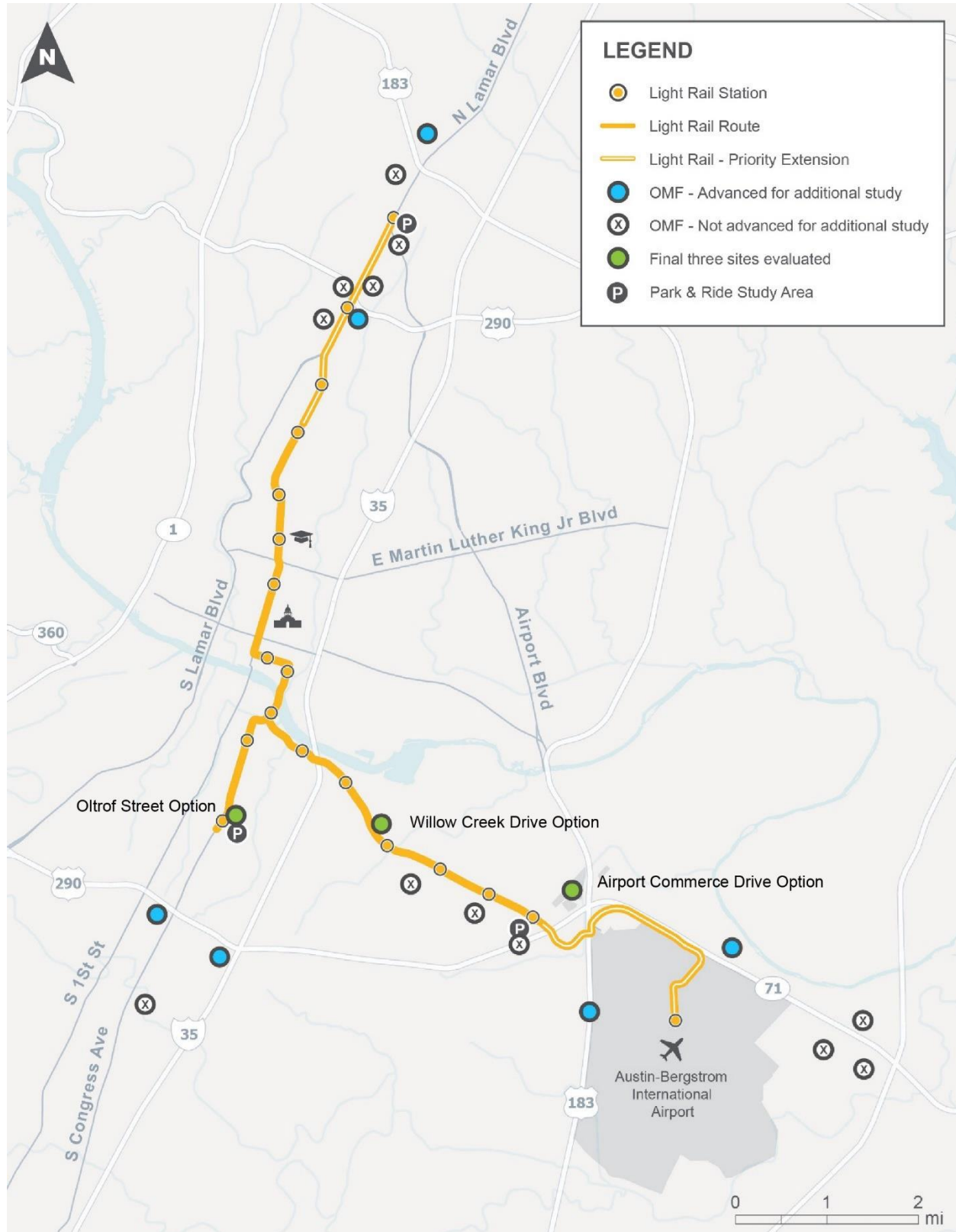


Table 4-1: Comparison of Potential Operations and Maintenance Facility Sites

Site	Pros	Cons
Willow Creek Drive	<ul style="list-style-type: none"> • Directly adjacent to the alignment • Location provides opportunity for joint development, which would maximize land use potential 	<ul style="list-style-type: none"> • Constrained site based on density of surrounding development. Size does not support maintenance of way facility or future expansion • Adjacent to multifamily housing and environmental justice areas with high environmental burdens and transportation insecurity (see DEIS Chapter 6) • Requires approximately 35 business relocations • Within East Riverside Corridor District zone for mixed use (residential/commercial) development • Floodplain boundary limits usable area
Oltorf Street (larger site option)	<ul style="list-style-type: none"> • Directly adjacent to the alignment at the end of the line (no lead track required) • Maintenance facility is a permitted use per site zoning 	<ul style="list-style-type: none"> • Constrained site based on density of surrounding development; size does not support future expansion • Adjacent to single-family and multifamily residential and environmental justice areas with high environmental burdens and transportation insecurity (see DEIS Chapter 6) • Requires at-grade crossing at Oltorf Street • Requires aerial structure over Oltorf Street for employee circulation • North parcel is under contract with new owner intending redevelopment • Requires approximately 23 business relocations
Airport Commerce Drive	<ul style="list-style-type: none"> • Approximately 0.3 mile from the alignment • Relatively flat site requires minimal costs for infill and grading • Maintenance facility is a permitted use per site zoning • Supports future expansion 	<ul style="list-style-type: none"> • Requires at-grade crossing of East Riverside Drive and Airport Commerce Drive • Adjacent to hotels and single-family residential in an environmental justice community (see DEIS Chapter 6) • Requires approximately 24 business relocations (including Old Bastrop Highway parcels) • Floodplain and drainage easement on site

ATP identified the Airport Commerce Drive site as the preferred location for the OMF due to its larger size in relation to the other sites; its ability to accommodate necessary functions and support future growth needs; its compatibility with surrounding land use; and a lower number of required displacements (business relocations). The Airport Commerce Drive site contains light industrial uses and is currently zoned to allow the OMF functions as permitted use.

The proposed Airport Commerce Drive site evaluated in this DEIS may be larger than the space required for the facilities. Detailed property acquisition acreage will be refined as design progresses. An analysis of the site selection process was prepared in accordance with Title VI of the Civil Rights Act; this report is available at www.atptx.org.

4.3 River Crossing at Lady Bird Lake Options

ATP reviewed two river crossing options during the scenario development process: Trinity Street and 1st Street. The crossing at Trinity Street is a longer route with more curves; however, it would serve two stations on the rapidly growing east side of Downtown Austin, would better connect to the Red Line at Downtown Station, and therefore has higher ridership potential. Both crossing locations would affect parkland next to Lady Bird Lake. The 1st Street option would have greater delay effects on both vehicular and bus traffic downtown. Compared to the 1st Street river crossing, the Trinity Street river crossing would serve more affordable housing units and two additional key destinations: the convention center and the Rainey Street Entertainment District.

During the community engagement process conducted as part of the alternatives analysis, stakeholders encouraged ATP to prioritize trail connectivity and bicycle/pedestrian access across Lady Bird Lake, as well as consider the robust growth, future development, and the dense employment unique to the east side of Downtown Austin near the Trinity Street crossing location. Based on the community feedback and due to its greater ridership potential and avoidance of substantial effects on traffic associated with the 1st Street river crossing, ATP identified the Trinity Street crossing as the preferred crossing of Lady Bird Lake.

4.4 NEPA Scoping Process

ATP hosted six public scoping meetings and 34 outreach events during the National Environmental Policy Act (NEPA) scoping period between January 19 and March 4, 2024. More than 480 people attended the six scoping meetings, and ATP received 3,863 comments during this scoping period. Most of the public comments (3,850) received were in the form of a scoping survey. The survey questions and summary of responses are described in **DEIS Appendix B**.

Consistent with earlier outreach for the development of the *Austin Light Rail Implementation Plan* (ATP 2023), recurring themes included the importance of providing connections to other modes of travel; accessible stations; and the priority extensions, especially to Austin-Bergstrom International Airport. A few commenters questioned whether the scope of the Project fulfills the voters' original intent or has logical termini, or indicated support for bus rapid transit in lieu of light rail to save money, better serve Austinites, and have a less drastic effect on Downtown Austin.

Of all comments received, general support for the Project was mentioned in 33 percent and general opposition was expressed in 10 percent. Most commenters were generally supportive of the locations identified by ATP for the OMF and park-and-ride facilities. Concerns about the OMF include air quality, water quality, noise and vibration, equity, property acquisition and displacements, and parklands during Project construction and operation. Concerns about the park-and-rides included proximity to residential areas and the city center; increased traffic congestion; and safety and security concerns. Commenters noted the need to provide landscaping, shade trees, and electric vehicle charging stations and solar carports at Project facilities.

5 References

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<https://www.census.gov/newsroom/press-kits/2022/acs-5-year.html>.

Attachment A. Study Area Data

Figure 1: Current Employment Density

Figure 2: Existing Affordable Housing Units

Figure 3: Current Population Density

Figure 4: Current Minority Population Density

Figure 5: Transit Connections

Figure 6: Existing and Future Bike Paths

Figure 7: Population

Figure 8: Employment: Jobs/Monthly Wages

Figure 9: Household Income

Figure 10: No Vehicle Households

Figure 11: Anti-Displacement Priority Areas and Population

Figure 12: Environmental Justice Block Groups

Figure 13: Affordable Housing

Figure 1: Current Employment Density

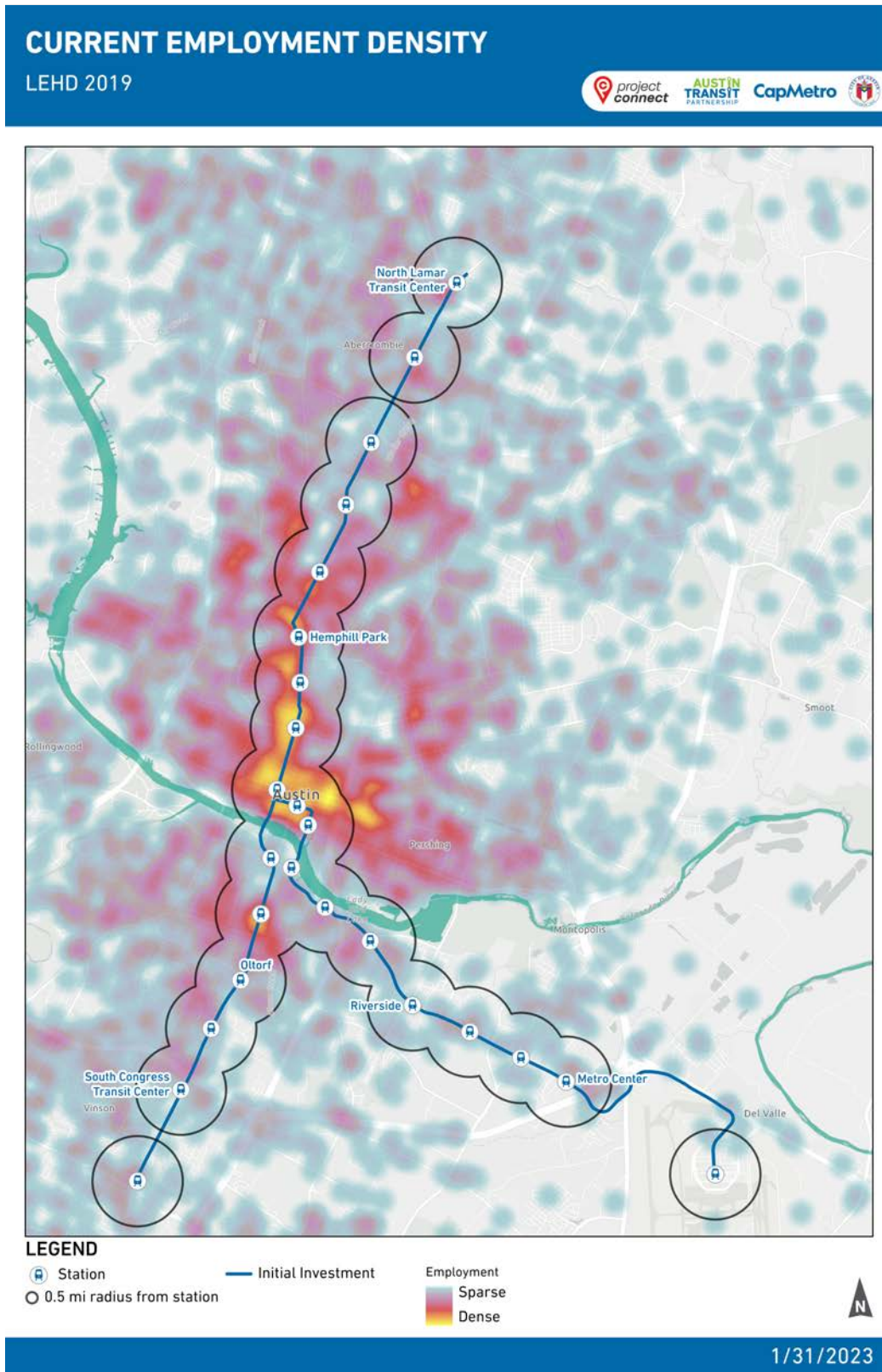


Figure 2: Existing Affordable Housing Units

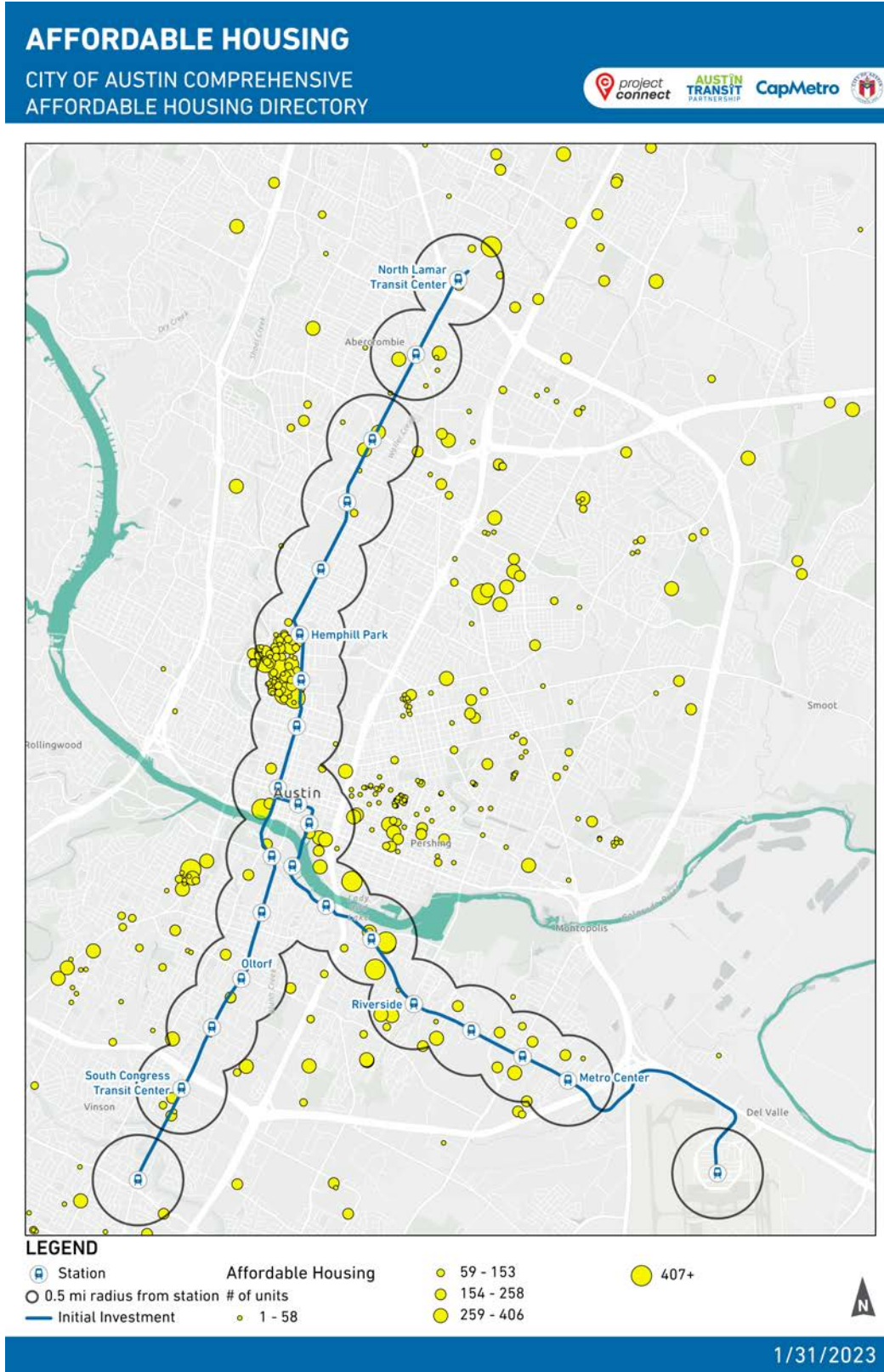


Figure 3: Current Population Density

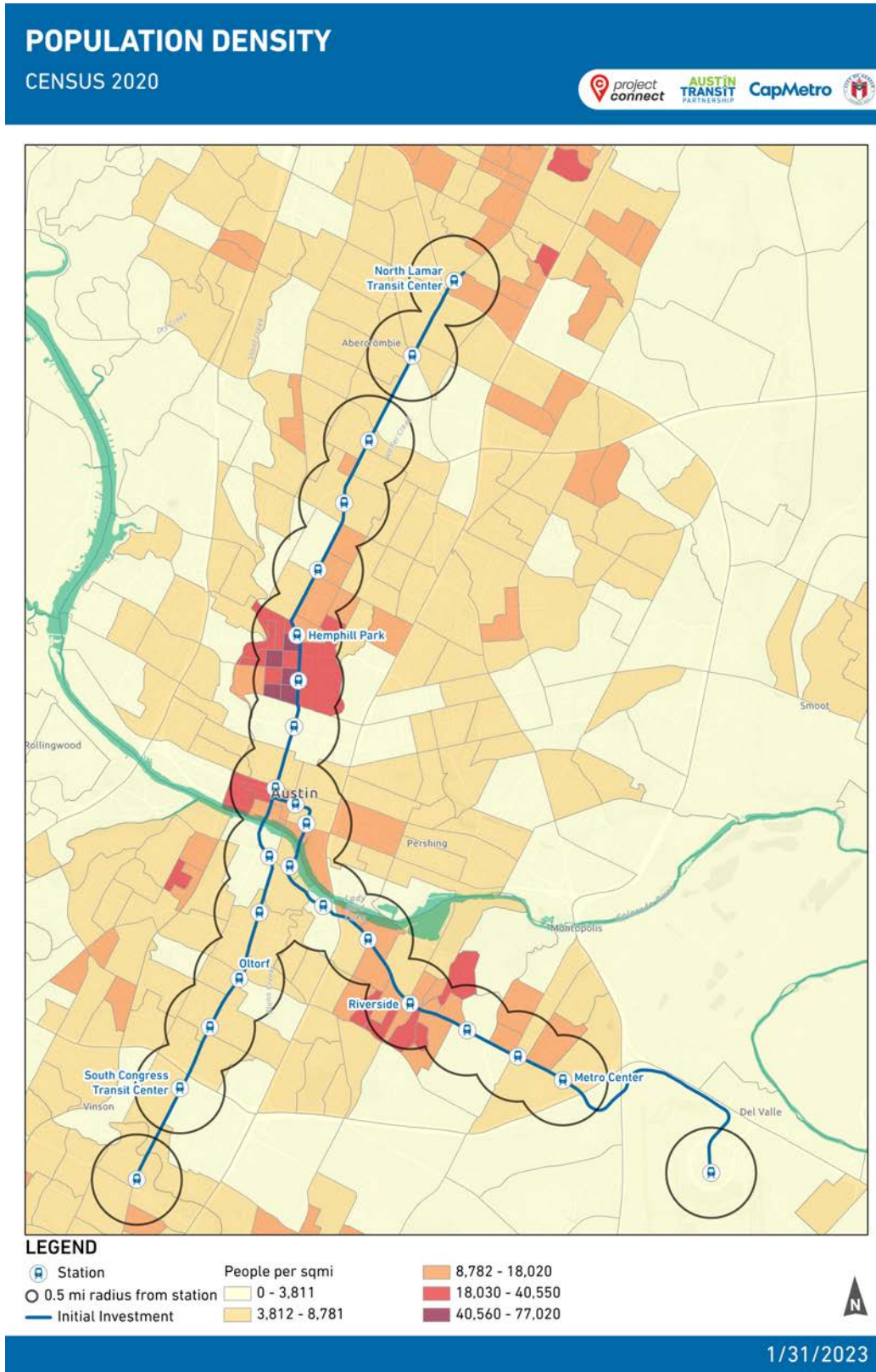


Figure 4: Current Minority Population Density

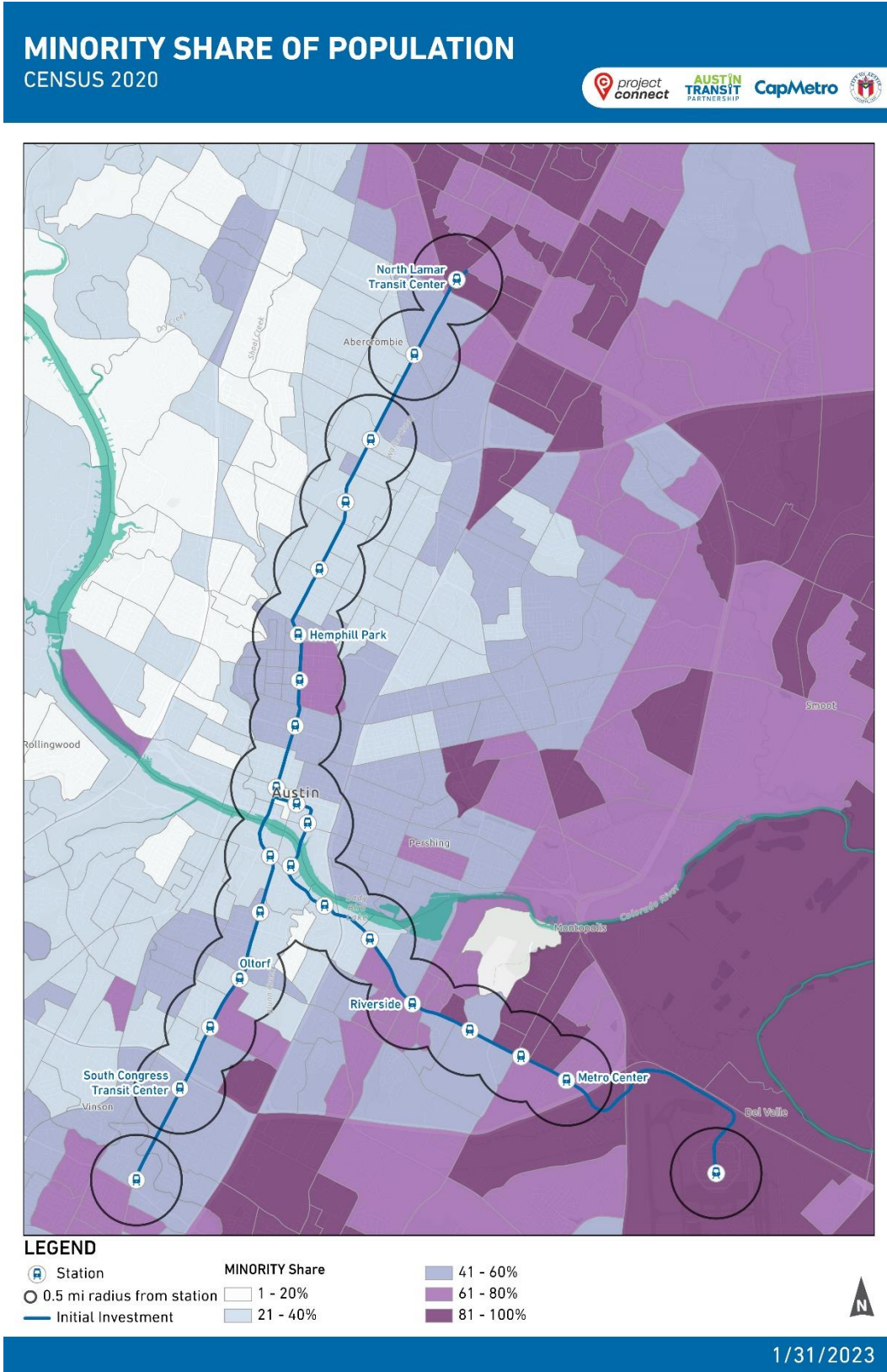


Figure 5: Transit Connections

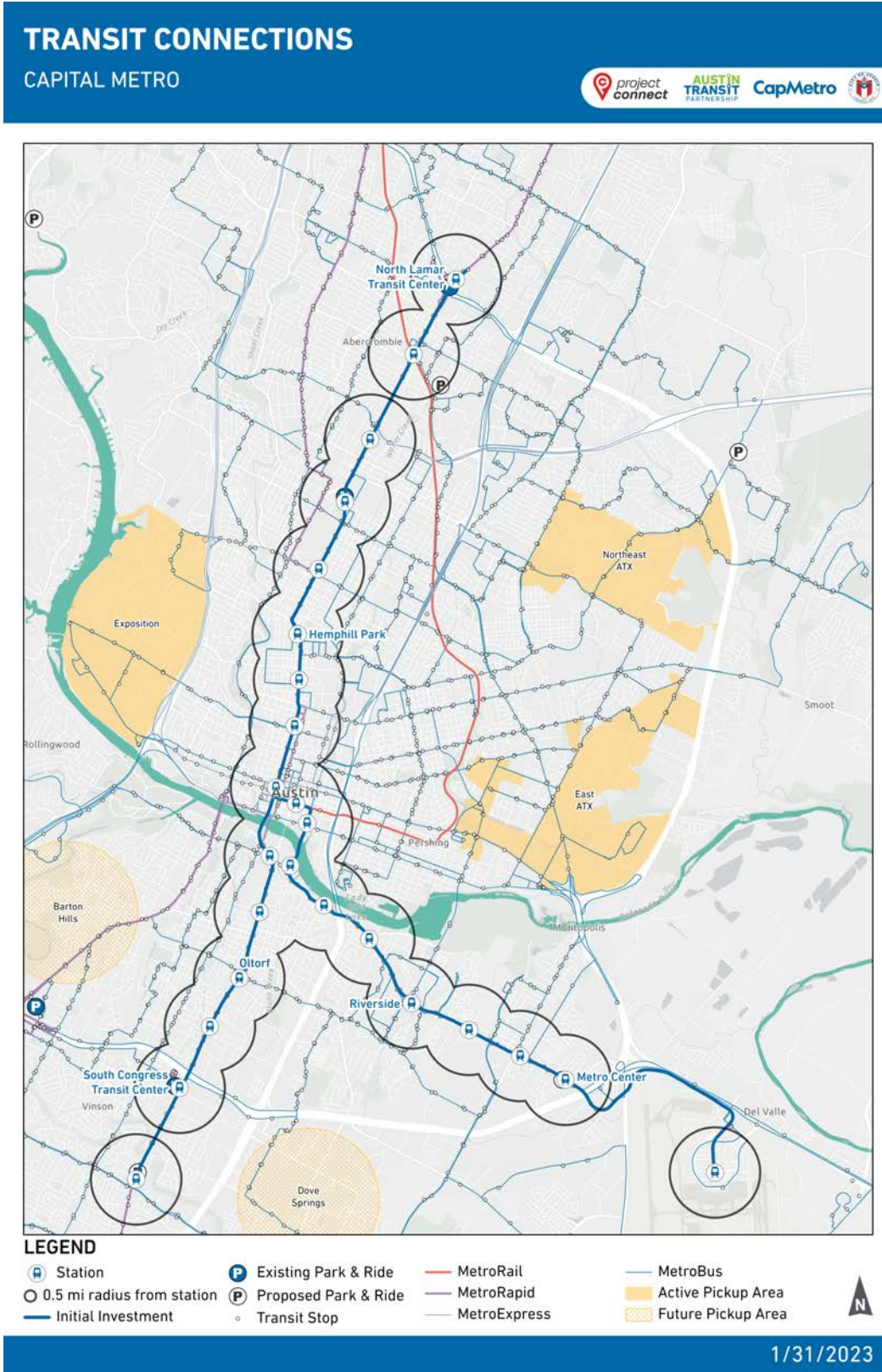


Figure 6: Existing and Future Bike Paths

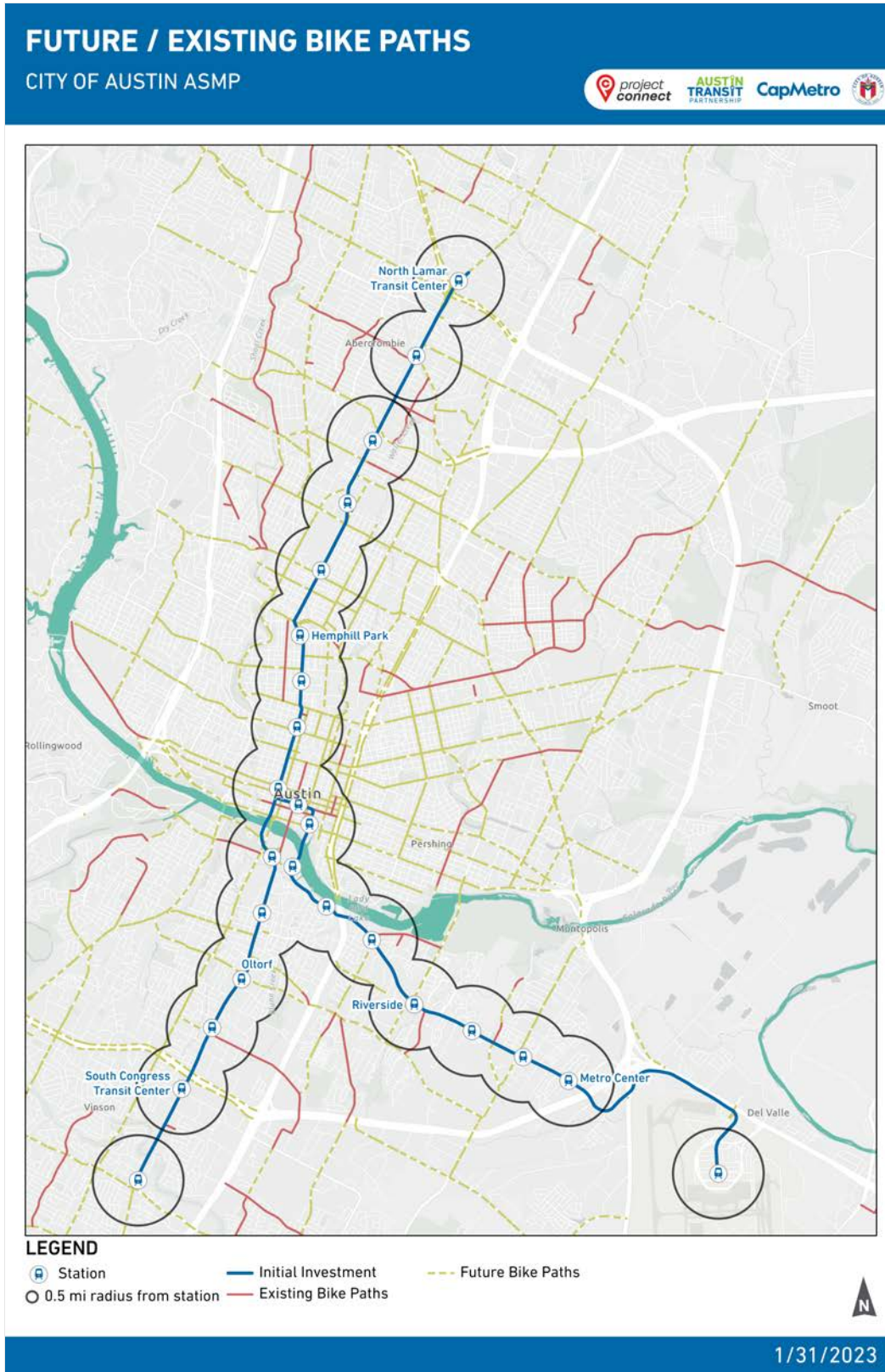
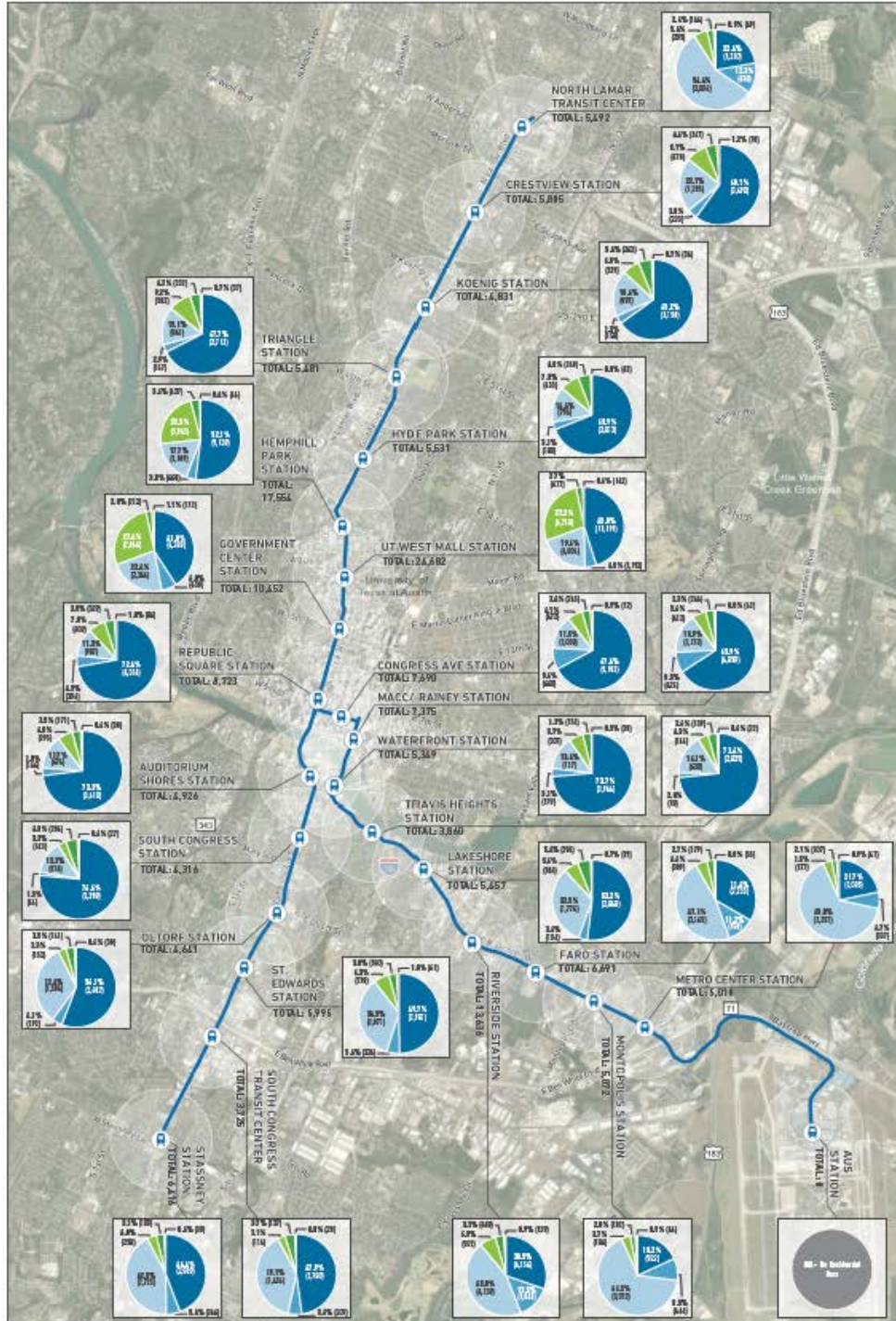


Figure 7: Population

SOCIOECONOMIC & DEMOGRAPHIC DATA BY STATION
POPULATION (CENSUS 2020)

LEGEND:
 OTHER ASIAN BLACK STATION
 MULTI-RACE HISPANIC WHITE INITIAL INVESTMENT
 0.5 MI RADIUS AROUND STATION



Demographic data used to support these graphics may be different than data used in the STOPS model and in support of FTA submittal materials. Percentages in charts are rounded and may not add up to 100%.

Figure 8: Employment: Jobs/Monthly Wages

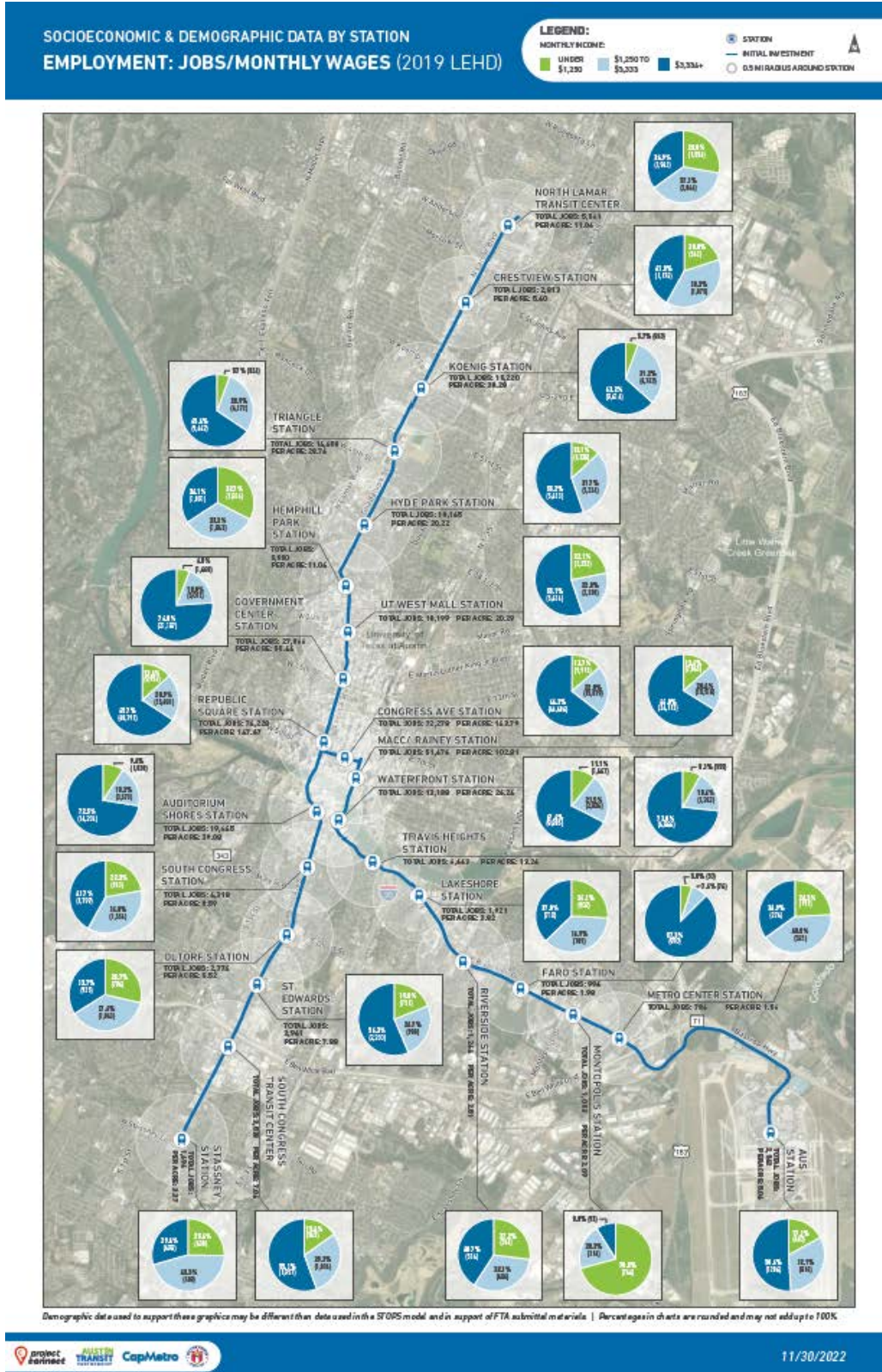


Figure 10: No Vehicle Households

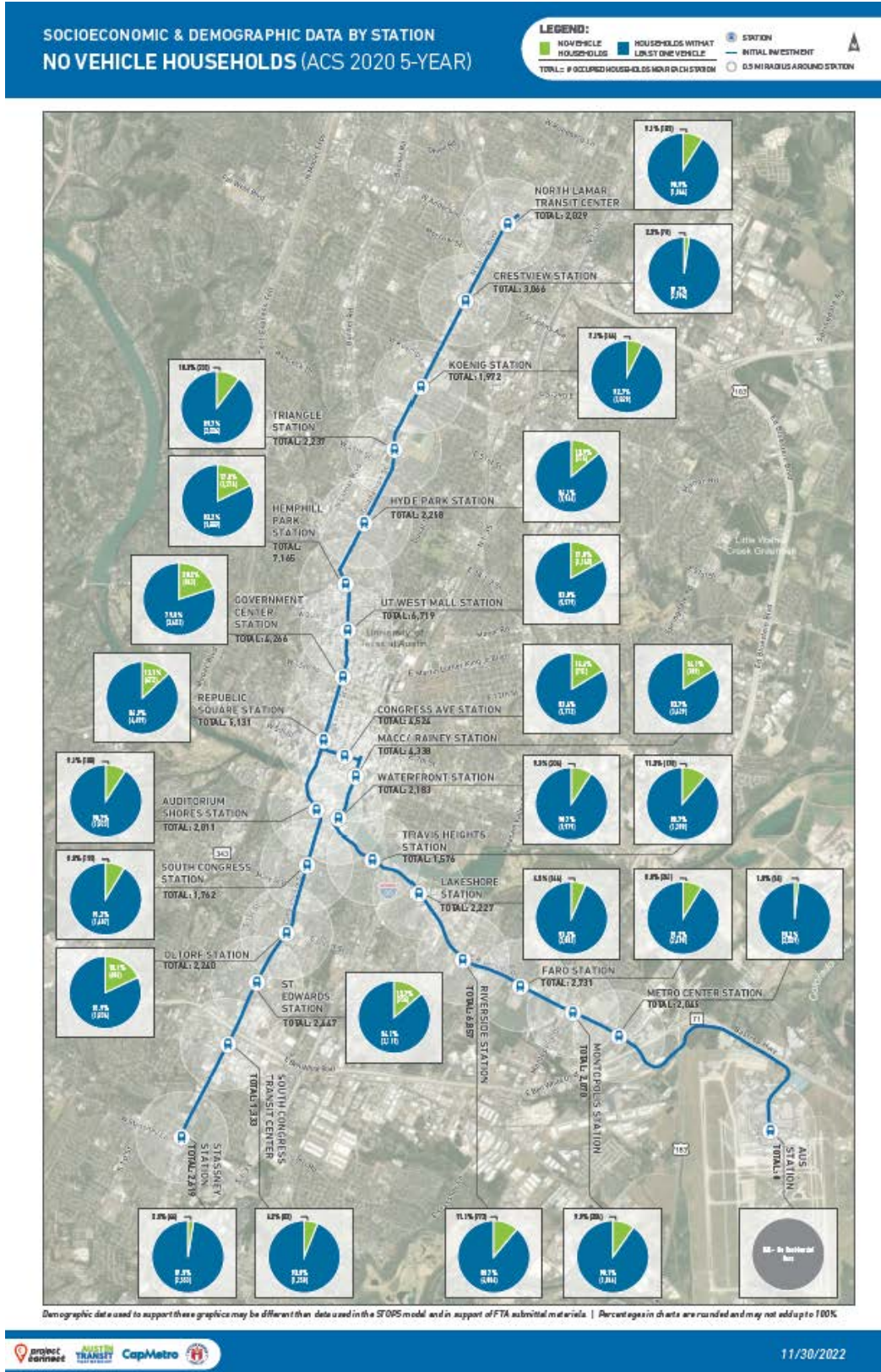


Figure 11: Anti-Displacement Priority Areas and Population

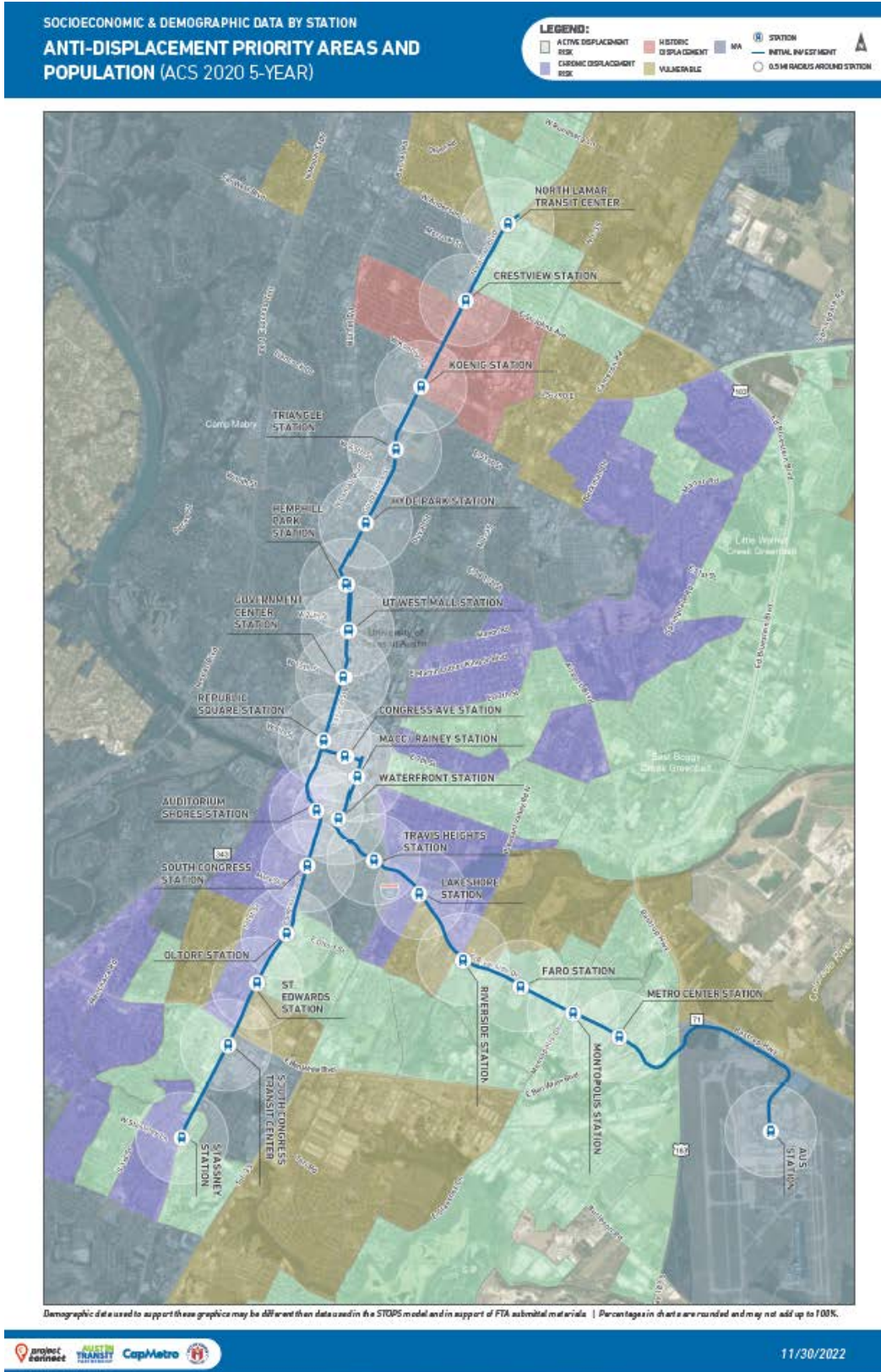


Figure 12: Environmental Justice Block Groups

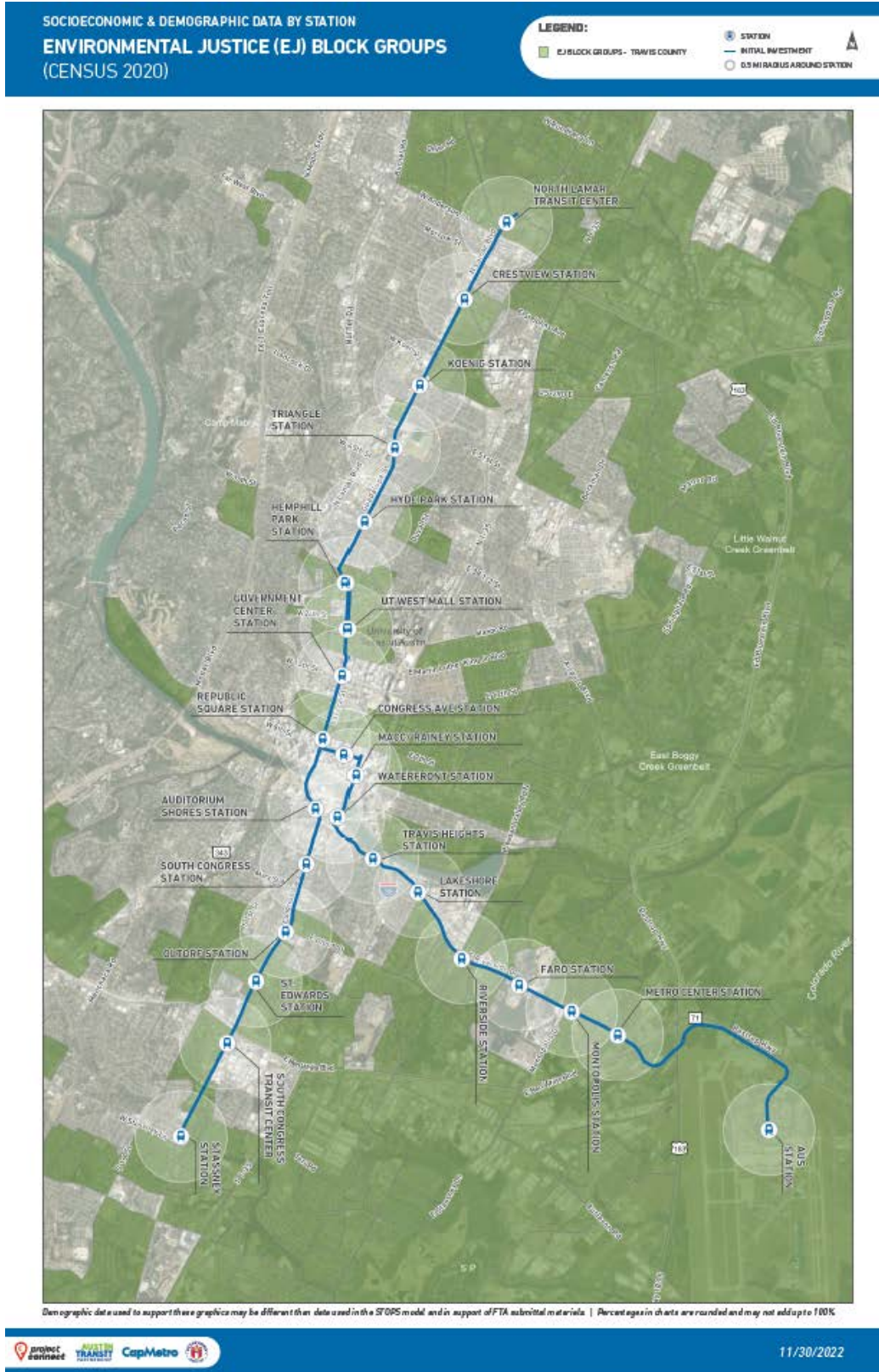


Figure 13: Affordable Housing

