



# Colfax BRT Next Connecting Aurora: I-225 to Picadilly

State of the Corridor Report

June 2025





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# Map disclaimer

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# List of acronyms

AA – Alternatives analysis

ACRES - The Assessment, Cleanup and Redevelopment Exchange System

ACS – American Community Survey

ADR – Average daily rate

BLA – Building to land area ratio

BLTS - Bicycle level of traffic stress

BLV – Building to land value ratio

BRT – Bus Rapid Transit

CDOT - Colorado Department of Transportation

CFR - Code of Federal Regulations

CIG - Capital Investment Grants program

DRCOG – Denver Regional Council of Governments

**DUS – Denver Union Station** 

FEMA – Federal Emergency Management Area

FHWA – Federal Highway Administration

FTA - Federal Transit Administration

HIN - High-Injury Network

LEP - Low English proficiency





LOS - Level of service

LPA - Locally Preferred Alternative

LTS - Level of Traffic Stress

NCHRP - National Cooperative Highway Research Program

NRCS - Natural Resource Conservation Service

NPDES – National Pollutant Discharge Elimination System

PCB – Polychlorinated Biphenyl

PHB - Pedestrian Hybrid Beacon

PLTS - Pedestrian level of traffic stress

RCRA – Resource Conservation and Recovery Act

RevPAR – Revenue per available room

ROW – Right-of-way

RRFB - Rectangular Rapid Flashing Beacon

RTD – Regional Transportation District

RTP – 2050 Regional Transportation Plan

SOP – System Optimization Plan

TMP – Advancing Adams Transportation Master Plan

V/C – Volume-to-capacity

VRU - Vulnerable road user

YTD - Year-to-date





# 1 Introduction

## 1.1 Project background

Colfax BRT Next is a federally compliant Alternatives Analysis (AA) study to identify a preferred alternative to an extension of the East Colfax Avenue Bus Rapid Transit (BRT) project. This AA study is specifically examining East Colfax Avenue between Interstate 225 and Picadilly Road or E-470. This corridor is one of 11 BRT corridors identified in Denver Regional Council of Governments' (DRCOG) fiscally constrained 2050 Regional Transportation Plan (RTP). It is one of five BRT corridors identified for implementation by 2030 in the 2050 RTP. DRCOG is funding this study through the Transportation Improvement Program Corridors Planning set-aside.

Studying this corridor now provides significant opportunities to leverage the connection to the East Colfax BRT project between downtown Denver and I-225 and consider investments alongside the other growth and changes that are occurring on the corridor. The corridor east of I-225 is currently experiencing significant growth and development. This study is the first step to identify options to invest in transit to amplify economic development and strategic mobility to ensure that the corridor is built out in a manner that supports the City of Aurora and regional goals. This corridor is an important investment identified in the RTP to support the regional BRT network and meet the federal air quality conformity and the state of Colorado's Transportation Greenhouse Gas Planning Standard. This study provides a unique opportunity for six agencies to collaborate and partner to define the preferred investment for the corridor.

- DRCOG and the City of Aurora are jointly managing this project.
- The Colorado Department of Transportation (CDOT), the owner of East Colfax Avenue (United States Highway 40), and the Regional Transportation District (RTD), the operator of transit service on the corridor and in the greater Denver area, are providing input during key stages of the project as part of the project advisory group that was established.
- Adams and Arapahoe Counties are also involved in the project advisory group as East Colfax Avenue straddles the county line.

The purpose of the AA is to evaluate the preliminary benefits, costs, and impacts related to implementation of a BRT service along this portion of the East Colfax Avenue corridor. The study will evaluate options to connect this corridor with the East Colfax Avenue BRT project currently under construction between Denver's Union Station and I-225/Colfax R Line Light Rail Station in Aurora. The result of this study will be a Locally Preferred Alternative (LPA) for BRT improvements along this corridor as well as a "Routemap" that will outline next steps for funding and implementation of the LPA.





# 1.2 What is an AA study?

The Alternatives Analysis (AA) process is a necessary step in the development of transit projects in the United States, particularly for those seeking federal funding through programs such as the Federal Transit Administration's (FTA) Capital Investment Grants (CIG) program. This process ensures that proposed transit solutions address identified transportation needs effectively and efficiently while considering a range of potential alternatives. The AA process evaluates various alignments and service options to determine which options are most viable, cost-effective, and beneficial for a given area or corridor.

An AA study begins with a detailed assessment of the transportation challenges in the study area, such as congestion, accessibility, or service gaps. It then identifies and evaluates a range of potential solutions, which may include different modes like bus rapid transit (BRT), light rail, or commuter rail, as well as alternative alignments or routes. A no-build option is also considered. These alternatives are measured against specific criteria, such as cost, ridership potential, environmental impacts, land use compatibility, and demographic considerations.

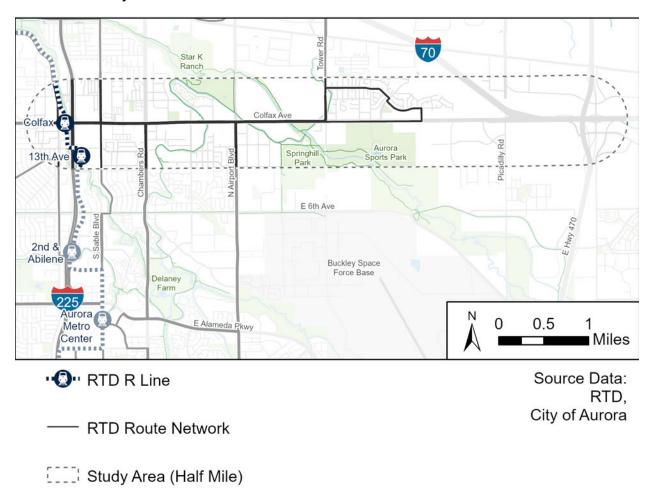
The study often includes input from stakeholders, such as local governments, transit agencies, and the public, ensuring the process is inclusive and considers diverse perspectives. An AA study culminates in the identification of a Locally Preferred Alternative (LPA) that includes an alignment, stops, and service plan. It is also possible that the no-build option that was analyzed could also be recommended.





# 1.3 Study area description

East Colfax Avenue from I-225 to E-470 is approximately six miles in length. The study area includes a half-mile buffer on either side of East Colfax Avenue. A half-mile buffer is the typical definition of a study area for a transit project like this because it is the distance that the average person can walk in approximately 10 minutes. Figure 1-1 shows the study area.



Source data: RTD, City of Aurora Figure 1-1: Map of study area





# 2 Plan review

This chapter summarizes existing planning and policy documents applicable to the Colfax BRT Next study area and adjacent areas. Reviewing current planning and policy documents, and understanding what is being planned and implemented, helps this study build on previous momentum. The project team reviewed 20 documents that cover vision and goals for future growth, and improvements (both funded and unfunded) across various geographies and agencies, including:

- · City of Aurora
- Adams County
- Arapahoe County
- Denver Regional Council of Governments, or DRCOG
- Regional Transportation District, or RTD
- Colorado Department of Transportation, or CDOT
- Other

The following sections summarize the applicable documents.

# 2.1 City of Aurora plans

Almost the entire study area for Colfax BRT Next falls within the City of Aurora, which is the third largest municipality in the state of Colorado and home to a growing number of jobs and residents. Recognizing this, along with a desire to improve mobility within the city, the City of Aurora has undertaken several planning efforts in recent years. This section summarizes six of these plans which cover the city's land use/development plans, planned multimodal improvements, and improvements for northeast Aurora.

#### 2.1.1 Aurora Places Comprehensive Plan (2018)

The Aurora Places Comprehensive Plan, adopted in 2018, presents the city's long-range goals, and recommends actions for growth and development. The plan addresses land use, transportation, housing, economic development, natural resources, parks and open space, and community identity.

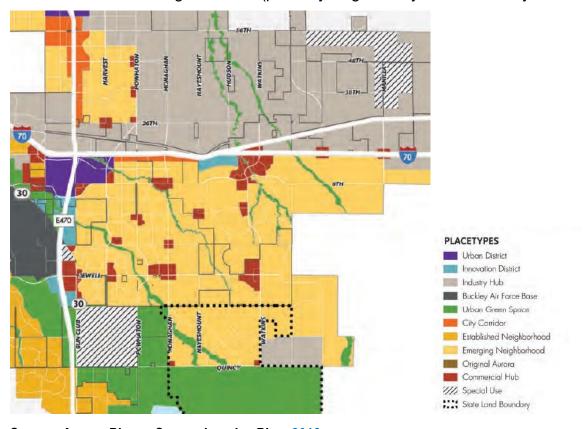
The plan also identifies 10 different place types, each with their own defined land uses, densities, and community characteristics (Figure 2-1). The Colfax BRT Next study area is categorized by place types that will have higher densities and mixed uses, which could increase demand for high-capacity transit. These include:

 Between I-225 and Tower Road, the corridor is categorized as a "City Corridor", which identifies mostly commercial, retail, and multifamily residential development.





- Between Tower Road and Picadilly Road, the corridor is a mix of "Established Neighborhood" (primarily single family and multifamily residential), "Urban Green Space" (the Aurora Sports Park), and "Commercial Hub" (primarily commercial and retail).
- Between Picadilly Road and E-470, the corridor is slated as an "Urban District,"
  which is the highest density of land use types envisioned in Aurora Places and
  includes a mix of residential, commercial, and key institutional uses such as
  medical facilities.
- Areas immediately south of Colfax Avenue, till 6th Avenue, are categorized as "Established Neighborhood" (primarily single family and multifamily residential).



Source: Aurora Places Comprehensive Plan, <u>2018</u>
Figure 2-1: Place type plan for the City of Aurora

#### 2.1.2 <u>Transit-Oriented Development Plans</u>

Policies from the 2018 Aurora Places Comprehensive Plan contributed to the development of station area plans focused on Transit-Oriented Development, also known as TOD, at R Line and A Line rail stations in Aurora. Aurora's TOD focuses on creating compact, walkable, mixed-use communities near transit stations, which integrate residential, retail, and office spaces, prioritize pedestrians, and reduce car parking.





#### **Colfax Station**

The City of Aurora's plans for the Colfax Station area focus on transforming it into a high-density, mixed-use, TOD hub with an emphasis on enhancing pedestrian and bicycle links, including access to the planned Toll Gate Creek multi-use trail. The existing Fitzsimons Boundary Area District is zoned for high density, mixed-use development while parcels outside this zone can be rezoned to align with development goals. Other plans, including <a href="https://decembed.com/The-Fitzsimons-Colfax and 13th Avenue Station Area Plan">The Fitzsimons-Colfax and 13th Avenue Station Area Plan</a> and the <a href="https://decembed.com/Fitzsimons-Colfax">Fitzsimons Urban Renewal Area</a> document plans for the area which include medium and high density office and residential uses, as well as hotels and retail uses.

#### 13th Avenue Station

The 13th Avenue Station area plan envisions transit-oriented housing and office uses that leverage proximity to the Anschutz Medical Campus and Toll Gate Creek. The City has previously improved pedestrian access to the stations, and invested in improving connections between surrounding neighborhoods and schools to the existing trail system. Future development is guided by the <a href="13th Avenue Multimodal Mobility Study">13th Avenue Multimodal Mobility Study</a>, which reflects evolving conditions and community needs.

#### **Aurora Metro Center Station**

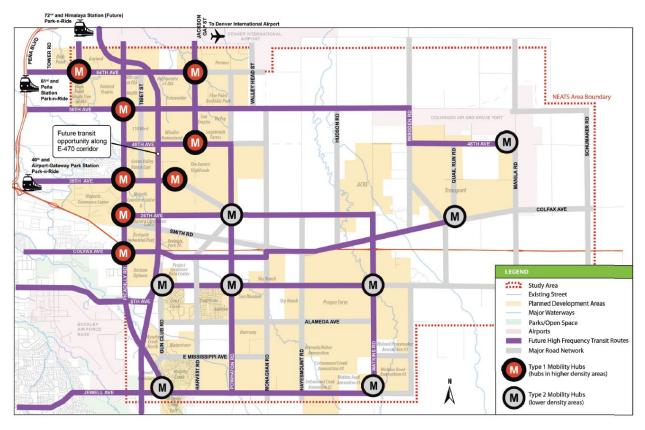
The Aurora Metro Center Station is an at grade station that is intended to be the heart of the City Center. The Aurora City Center, planned since the late 1970s as a major government and mixed-use hub, has undergone over \$400 million in infrastructure investments, including a new RTD light rail station (2017), bus transfer station, the Aurora Municipal Center, and several residential and commercial developments. Encompassing 772 acres with its own zoning district, the area supports high-density, TOD with strong pedestrian and bicycle connectivity. While most peripheral components are in place, the central 80-acre site adjacent to the rail station remains undeveloped.

#### 2.1.3 Northeast Aurora Transportation Study Refresh (2018)

The Aurora Northeast Area Transportation Study was conducted in 2007 and then refreshed in 2018. The refresh provides the framework and detail for the transportation components of the Aurora Places Comprehensive Plan. The study area's western boundary is at Picadilly Road. However, some improvements were identified for Colfax Avenue west of Picadilly Road, within the Colfax BRT Next study area (Figure 2-2), including:

- A new mobility hub at Picadilly Road and I-70
- Frequent 15-minute peak (30 minutes off-peak) fixed route service on Picadilly Road
- Frequent 15-minute peak (60 minutes off-peak) fixed route service on Colfax Avenue to Watkins (Quail Run Road)
- A new connector bike trail along the East Branch Highline Canal





Source: NEATS Refresh 2018

Figure 2-2: Future transit routes for the City of Aurora

#### 2.1.4 Aurora Bicycle and Pedestrian Plan (2012)

The Aurora Bicycle and Pedestrian Plan presents the city's coordinated vision for improving pedestrian infrastructure and establishing a network of on-street bicycle facilities to encourage biking for recreation and utilitarian trips. Since its adoption in 2012, many of its proposed early-action and short-term projects have been implemented in the city and within the study area, including improved connections to the High Line Canal Trail.

#### 2.1.5 13th Avenue Multimodal Corridor Study (in-progress)

The 13th Avenue Multimodal Corridor Study aims to provide safe, comfortable, less stressful, and convenient multimodal transportation options for all travelers along the 13th Avenue corridor, just south of Colfax Avenue. The corridor's western terminus is at Yosemite Street (outside this project's study area), while the eastern terminus is at the Colorado Front Range Trail/High Line Canal Trail, just east of Chambers Road (within the project's study area).





The plan provides design recommendations at nine separate segments along the four-mile corridor, to strengthen its role as a critical multimodal east-west corridor in the city. Planned improvements include safer, separated bicycle and pedestrian facilities including widened sidewalks and shared use paths, along with raised crosswalks near schools, improved lighting and crosswalks, curb extensions, and ADA compliant curb ramps. Improvements are also planned along Potomac Street, Sable Street, and Chambers Road, which provide connectivity from Colfax Avenue to the 13th Avenue corridor. Context-specific recommendations are provided for each street.

#### 2.1.6 Connecting Aurora (in-progress)

Connecting Aurora is the name of Aurora's first citywide multimodal transportation master plan. Currently in development, it will guide Aurora's transportation policies and infrastructure investments over the next 20 years. The goals of the plan are to improve connectivity, safety, and accessibility across all travel modes while supporting sustainability, economic development, healthy communities, and equity. The plan development kicked off in early 2024 and is currently working to summarize feedback received from Phase Two of community outreach conducted in November and December of 2024. A final plan is expected in late 2025.

## 2.2 County plans

The study area for Colfax BRT Next straddles the Adams County and Arapahoe County line. As such, Adams and Arapahoe Counties are also stakeholders on this project. This section documents each county's transportation plan, which identified a variety of improvements in the study area. The only improvements identified for the study area are bicycle facility extensions.

#### 2.2.1 Advancing Adams Transportation Master Plan (2022)

The Advancing Adams Transportation Master Plan identifies mobility improvements in Adams County through 2040. The plan identifies a long-term vision for investments in infrastructure, policies and programs that accommodate population and employment growth, while also improving the experience for people walking, biking, taking transit, and driving in Adams County. Future bicycle network projects identified in the plan that fall within the study area include various sidepath extensions. A sidepath is defined as a wide, off-street sidewalk (at least ten feet wide), separated from motor vehicles by a buffer, which supports both recreation and transportation. Refer Chapter 4.2 for further details on proposed extensions within the study area.





#### 2.2.2 Arapahoe County Transportation Plan (2021)

The Arapahoe Transportation Master Plan 2040, adopted in 2021, serves as a guiding document for the improvements to roadways and multimodal transportation networks in Arapahoe County. The plan's goals include promoting an efficient and balanced transportation system with alternative transportation solutions, coordinating land use and transportation, and continuing a strategic management/tracking approach to the county's transportation system. Refer Chapter 4.2 for further details on proposed extensions within the study area.

# 2.3 Denver Regional Council of Governments plans

The Denver Regional Council of Governments (DRCOG) is a regional planning organization that supports local governments to collaborate and establish guidelines, set policy, and allocate funding towards transportation, personal mobility, growth and development, and aging and disability resources.

#### 2.3.1 Metro Vision 2050 Regional Transportation Plan (2024)

Developed by DRCOG staff and partners, the 2050 Regional Transportation Plan, also referred to as the RTP is the Denver region's long-range transportation plan. The plan aims to increase safety, improve air quality, reduce greenhouse gas emissions, expand the region's rapid transit network, and expand mobility options for all. Metro Vision RTP includes a list of fiscally constrained projects totaling \$132.7 billion (Figure 2-3). Section 3.2 includes details on roadway improvements planned within the study area.



Source: 2050 Metro Vision Regional Transportation Plan web map

Figure 2-3: 2050 Metro Vision RTP proposed improvements in the study area





An outcome from DRCOG's Metro Vision is a connected multimodal region, which focuses on improving transportation safety. In 2024, DRCOG also updated its 'Take Action on Regional Vision Zero' plan- a call to action to reach the vision of zero fatal and serious injuries on roadways across the Denver region. The plan relied on crash data from 2013 to 2017 to identify the region's High-Injury Network, which identified Colfax Avenue as a 'critical corridor.' The plan also categorized the areas along Colfax Avenue as 'Urban,' indicating a high occurrence of crashes involving bicyclists and pedestrians, as well as crashes caused by red light or stop light running and failing to yield.

#### 2.3.2 Active Transportation Plan (2019, update in-progress)

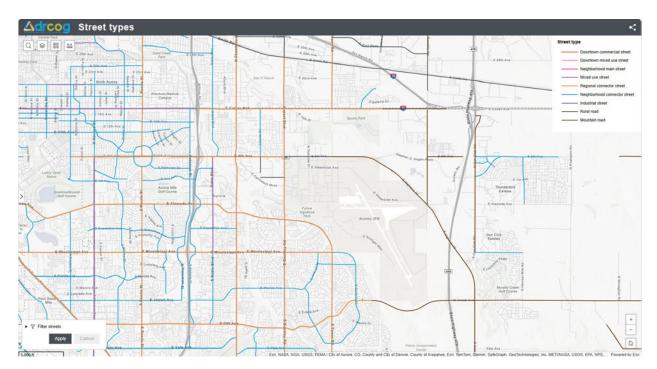
The regional Active Transportation Plan completed in 2019 outlines strategies to develop a connected, safe, and comfortable active transportation network in the Denver region. The plan identifies four elements that work together to create a more effective regional transportation system for people who walk and bicycle including regional active transportation corridors, pedestrian focus areas, short-trip opportunity zones, and local active transportation networks. Refer Chapter 4.2 for further details on proposed extensions within the study area.

An update of the plan is underway in 2025. The update kicked off in May 2024 and a draft plan will be available in summer 2025, with the final plan scheduled to be released in the fall of 2025. The draft plan update shared by DRCOG indicates that areas surrounding Colfax Avenue, from Chambers Road to Airport Road, and Yosemite Street to Chambers Road will be categorized as a Short Trip Opportunity Zone. This will recognize Colfax Avenue as a critical corridor for connecting and enhancing overall active transportation networks in the city, and push for the designated areas to be prioritized for investment in infrastructure including sidewalks, crosswalks, shared-use paths, or other bikeways.

#### 2.3.3 Regional Complete Streets Toolkit (2021)

The DRCOG Regional Complete Streets Toolkit provides a framework for designing, planning, and implementing streets that are safe, inclusive, and accessible. The toolkit categorizes streets into ten types (Figure 2-4): Downtown Commercial, Downtown Mixed-Use, Neighborhood Main Street, Mixed-Use, Regional Connector, Neighborhood Connector, Industrial, Special-Use, Rural Road, and Mountain Road. Each type includes specific guidance on modal priorities (pedestrian, transit, freight, etc.) and design elements such as sidewalks, bike lanes, medians, and landscaping.





Source: DRCOG Complete Streets web map

Figure 2-4: Regional Complete Streets Plan: Street types in the study area

Most of East Colfax Avenue in the study area is categorized as a 'Regional Connector Street,' consisting of buildings with large setbacks and off-street parking which facilitate long-distance trips for transit and driving. Design elements prioritized for this street type include pedestrian infrastructure like sidewalks, lighting, median refuge islands, curb ramps, and signalization. Recommended roadway elements include travel lanes, transit lanes, transit stops, and transit signal priority. The eastern end of East Colfax Avenue, between Himalaya Street and E-470 is classified as a 'Rural Road'.

#### 2.3.4 Regional Multimodal Freight Plan (2024)

DRCOG's Regional Multimodal Freight Plan provides a strategic framework to guide freight planning, coordination, and investment across the region. It outlines current freight conditions, key issues, and system needs, and proposes a tiered priority freight corridor network. Ten critical regional freight focus areas are identified where future project development and local planning can be prioritized. East Colfax Avenue between I-225 and E-470 is included within the I-70 East Distribution Corridor focus area—one of the densest freight and industrial hubs in the region—where proposed strategies include aligning land use planning with existing distribution centers and integrating freight needs into future interchange and local area studies.





## 2.4 Regional Transportation District plans

The Regional Transportation District (RTD) is the primary transit operator in the greater Denver metro area, with a 2,300-square-mile service area spanning eight counties and 40 municipalities. RTD covers a population of three million people using eight light rail lines, three commuter rail lines, one BRT Corridor, and more than 100 local and regional bus routes.

#### 2.4.1 Colfax Corridor Connections Alternatives Analysis (2018)

The Colfax Corridor Connections Alternatives Analysis, adopted 2018, evaluates the range of options for increasing person-trip capacity on the East Colfax Avenue corridor in Denver and Aurora, between approximately I-25 in downtown Denver (outside study area) and I-225 in Aurora (inside study area). The actual extent for the exclusive lanes was later revised to just west of Yosemite Street (outside study area).

The purpose of the alternatives analysis was to develop a package of multimodal transportation improvements to increase person-trip capacity through the introduction of high-quality, high-capacity, and cost-effective transit services. These improvements aimed to deliver a faster, more reliable, and comfortable transit experience that would also enhance accessibility, mobility, safety, and passenger facilities along the corridor.

The defined project needed to accommodate rising travel demands and intra-corridor travel needs on the East Colfax Avenue corridor, better serve existing transit users while encouraging/accommodating new transit users and enhance mobility/connectivity while adhering to principles of livability, affordability and sustainability. The Locally Preferred Alternative that emerged from this study was a Center-Running BRT on East Colfax Avenue in Denver and mixed traffic operations in Aurora, The Locally Preferred Alternative also included a variety of improvements including new signalized intersections, traffic calming, wayfinding, improved intersection design, and median treatments to enhance safety for pedestrians.

#### 2.4.2 Regional BRT Feasibility Study (2020)

The 2020 RTD Regional BRT Feasibility Study provides a long-term regional BRT vision for the RTD District. The study was conducted as part of the 2050 Regional Transportation Plan development efforts to understand increases in regional travel demand and identify BRT investments that could complement local and regional planning goals. East Colfax Avenue, which was included as part of DRCOG's 2050 Regional Transportation Plan, is not one of the corridors identified in this plan. However, the other corridors identified in this plan could be potential connections to East Colfax Avenue.

Eight suggested BRT routes emerged after four tiers of evaluation- 38th/Park Avenue, Alameda Avenue, Broadway/Lincoln, Colorado Boulevard, Federal Boulevard, Havana/Hampden, North I-25, and Speer/Leetsdale/Parker route. Of these, the





Alameda Avenue corridor extends between Wadsworth Boulevard and Sable Boulevard, just south of the study area, providing a connection to the Aurora Metro Center Station.

A full-service plan was provided for each, along with an assessment of strengths and opportunities. A recurring metric was their connection to the under construction Colfax BRT line.

#### 2.4.3 System Optimization Plan (2022)

The RTD System Optimization Plan (SOP), adopted July 2022, is a comprehensive set of service change recommendations for the region that was developed through a detailed evaluation of travel patterns, demographics, and transit routes. The SOP's recommendations are intended to increase ridership, address changing travel needs post-pandemic, and improve transit service performance. This includes improving quality and efficiency given the existing workforce and financial constraints. Refer Chapter 5.7.2 for details on recommended system optimizations impacting the study area.

### 2.5 Colorado Department of Transportation plans

Colorado Department of Transportation, also known as CDOT, is the statewide transportation agency in Colorado responsible for building and maintaining state-owned roadways throughout Colorado. Colfax Avenue is a CDOT-owned facility. The documents in this section may not have specific relevance to the study area; however, they serve to document statewide priorities and areas of alignment with DRCOG and the various local partners.

#### 2.5.1 Statewide Transportation Plan (2020)

The Colorado 2045 Statewide Transportation Plan outlines a vision and strategic recommendations for addressing transportation challenges across the state. It focuses on three key goals: Mobility, Safety, and Asset Management, aiming to improve road conditions, transit options, and the overall resilience of the transportation system. DRCOG's Metro Vision 2050 Regional Transportation Plan is the governing document for the Denver region. Notably, the Colorado legislature passed bills in 2024 that enable CDOT to financially support more future transit capital improvement projects.

#### 2.5.2 Statewide Transit Plan (2020)

The Statewide Transit Plan, an appendix to the Statewide Transportation Plan, establishes the framework for creating an integrated statewide transit system and prioritizing transit investments towards the State's long-term vision and goals. Focus areas for improvement in the plan include expansion of the Bustang family of services, Front Range Passenger Rail, mobility hubs, fleet electrification, connected vehicle infrastructure, improved transit data/real-time arrival information, and veterans'





transportation. Projects impacting the study area include increased Bustang service frequency on I-70 and extended Bustang routes from Denver Union Station to the Rocky Mountain Regional VA Medical Center located in Aurora (East 16th Avenue and North Wheeling Street).

#### 2.5.3 <u>10-Year Vision Plan (2022)</u>

The Colorado Department of Transportation's (CDOT) 10-Year Vision Plan provides a statewide list of priority transportation projects and acts like a strategic project pipeline for the Statewide Transportation Plan and the Statewide Transit Plan. It was originally adopted in 2020, and updates have been approved periodically since 2022.

The plan also identifies a variety of other improvements such as Vision Zero priority improvements, Safer Main Streets programs, noise wall maintenance, and regionwide bottleneck reductions, signal and ramp meter upgrades, trail grade separations, crossing improvements, bridge rehabilitation, and arterial BRT and transit improvements. The location of these improvements is not specified in the plan.

# 2.5.4 <u>I-70 East Corridor Multimodal Transportation Demand</u> Management Plan (2024)

The I-70 East Corridor Multimodal Transportation Demand Management Plan, or TDM for short, is a system -level study for the I-70 corridor, with a focus on creating a multimodal framework to meet CDOT's TDM requirements for new or reconfigured interchanges on the interchange system. The TDM plan takes a corridor-wide approach for advancing critical state and regional goals to minimize greenhouse gas emissions, provide mobility options to the public, and limit expensive roadway capacity improvements where possible.

Within the study area, the TDM plan identifies a variety of planned or upcoming developments including logistics centers, industrial parks, residential developments, and mixed-use developments. Transit-specific strategies identified in the plan include enhancing local transit connections to regional systems, implementing mobility-on-demand/micro transit services, improving CDOT Bustang/ Outrider/regional agency service, and expanding RTD service to areas with new/planned development.

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<sup>&</sup>lt;sup>1</sup> <u>Data & Studies — Colorado Department of Transportation</u>





## 2.6 Other Relevant plans

#### 2.6.1 Colorado Transportation Vision 2035 (2024)

Colorado Transportation Vision 2035, published in 2024, captures the governor's vision for transportation. It focuses on identifying strategies that expand transportation options to meet Colorado's climate, affordability, safety, and equity goals over the next ten years. Vision 2035 sets goals for reliable transportation options like transit, rail, biking, and walking that encourage mode shift including:

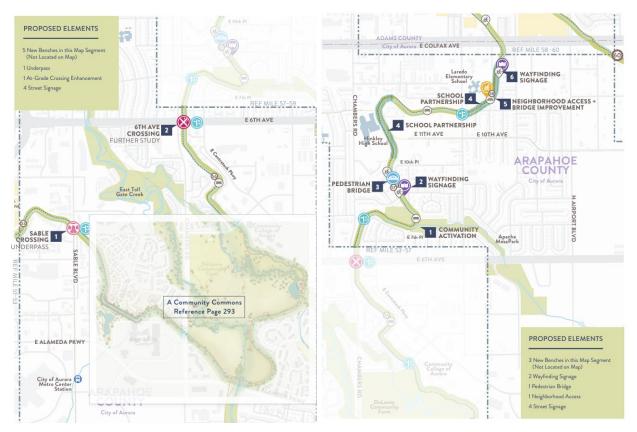
- Investments in Transit-Oriented Development, neighborhood centers, infill development, and mixed-use mobility hubs.
- Investing in low- or zero-emission buses and trains, electric charging/fueling infrastructure, and maintenance facilities and staff to support them.
- Expanding bicycle and pedestrian infrastructure to improve first-/last-mile connectivity to transit stations in areas with dense residential and mixed-use development as well as at key connections between downtown and neighborhood centers.
- Reducing greenhouse gas emissions and integrating climate goals into transportation planning.

#### 2.6.2 <u>High Line Canal Conservancy Plan (2017)</u>

The High Line Canal Conservancy Plan, adopted in 2017, outlines a comprehensive strategy to repurpose the historic 71-mile High Line Canal in Colorado, aiming to enhance public health and environmental quality. The Canal intersects with the Colfax BRT Next study area at multiple locations between Montview Boulevard and Alameda Parkway, and proposed improvements could benefit first and last mile connections to Colfax BRT.

The plan includes capital investments, distributed over three phases between 2019 to 2034, including new at-grade crossings, new trailheads, and proposed underpasses or bridges to improve trail connections within the study area (Figure 2-5). The plan also proposes improvements in streetscaping including shade structures, seating, and fitness stations. and conversion of concrete spaces to landscape spaces.





Source: High Line Conservancy Plan

Figure 2-5: High Line Conservancy Plan: Proposed elements in the study area





# 3 Roadway conditions

#### 3.1 Introduction

East Colfax Avenue (US-287, US-40, and I-70 Business) between I-225 and E-470 is a major arterial roadway which varies significantly along the corridor; moving from a more suburban four lane section with right turn lanes on the west end to a rural four lane divided highway section on the east end. The following three segments describe the condition of the roadway along the corridor:

- I-225 to Chambers Road
- Chambers Road to Tower Road
- Tower Road to E-470

More information on each segment is available on the subsequent three pages.





**I-225 to Chambers Road**: The roadway consists primarily of two general purpose lanes with nearly continuous right turn/business access outside lane and a posted speed of 35 miles per hour. This segment has the highest concentrations of businesses and business access directly off the East Colfax corridor.

The segment is lined with curb and gutter and has a landscaped median with frequent left turn lanes. Sidewalks range from 4'-10' wide, with a curbside landscaping strip next to traffic ranging from 0'-6'. There are no sidewalk gaps in this segment, however the condition and width are inconsistent. Roadway pavement width is approximately 38 feet wide in each direction of travel in this segment and right of way (ROW) width is approximately 150'. The pavement width and ROW with would allow for the addition of a transit/business access lane without major reconstruction of the roadway or ROW acquisition.



Figure 3-1: I-225 to Chambers Road condition photos

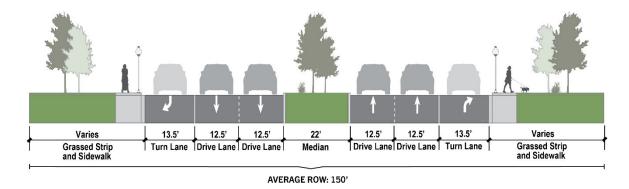


Figure 3-2: I-225 to Chambers Road typical section





**Chambers Road to Tower Road**: The roadway consists primarily of two general purpose lanes in each direction. The outside general purpose lane is oversized with a width of 23'. The posted speed limit increases to 40 miles per hour east of Chambers Road then 45 mph east of Laredo Street.

The segment is primarily lined with curb and gutter and has a landscaped median with frequent left turn lanes. Sidewalks range from 5'-10' wide, with a curbside landscaping strip next to traffic ranging from 0'-15'. There are multiple sidewalk gaps in this segment, and the condition/width of sidewalks that do exist are inconsistent. Roadway pavement width is approximately 36 feet wide in each direction of travel in this segment and ROW width is approximately 180' with two major pinch points present in the segment:

- 120-foot width at Jasper Street (east and west), 0.25-mile stretch with minimum at Jasper Street
- 130-feet between High Line Canal and Norfolk Street

The pavement width and ROW with would allow for the addition a transit/business access lane without major reconstruction of the roadway or ROW acquisition.



Figure 3-3: Chambers Road to Tower Road condition photos

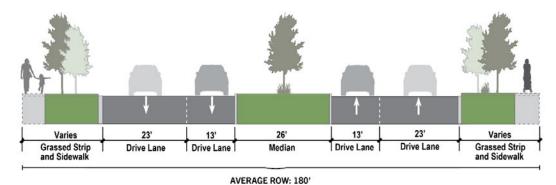


Figure 3-4: Chambers Road to Tower Road typical section





**Tower Road to E-470**: The roadway consists of a four-lane divided highway road through rural Adams and Arapahoe Counties with a posted speed limit of 55 miles per hour. Paved shoulders line much of the segment. Limited curb and gutter are present, exclusively at major intersections. Sidewalks in this segment is limited and ranges from 8-10' wide, with a curbside landscaping strip next to traffic ranging from 0'-6' where it does exist. Roadway pavement width is approximately 39 feet wide in each direction of travel in this segment and ROW width in this segment is approximately 200'. The pavement ROW with would allow for the addition of a transit/business access lane without ROW acquisition.



Figure 3-5: Tower Road to E-470 condition photos

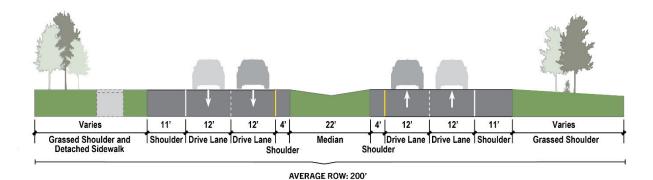


Figure 3-6: Tower Road to E-470 typical section





## 3.2 Planned roadway improvements

There are several planned roadway improvements located within the study area. This list does not include any intersection improvements associated with ongoing or planned private development.

I-70 and Picadilly Road Interchange Project: This City of Aurora project involves constructing a new diverging diamond interchange at I-70 and Picadilly Road and connecting Picadilly Road's northern segment (north of I-70) with its southern segment (south of I-70), as shown in Figure 3-7. In addition to City funding the project was awarded a \$25 million federal grant from the Federal Highway Administration (FHWA) and includes additional financial support from the Aerotropolis Regional Transportation Authority, will pay for the interchange.



Source: I-70 Picadilly Interchange, City of Aurora

Figure 3-7: Map of proposed improvements at the I-70 Picadilly Interchange

Construction began in 2023 and is planned for completion by Fall 2025. The project will improve north-south connectivity on Picadilly Road, provide local access to I-70 for the growing economic development in the Colorado Aerotropolis area, improve access for freight commerce, and ease congestion along Tower Road and Gun Club Road. The diverging diamond interchange will include additional safety measures, including an





advanced signal system, fewer high severity conflict points than a traditional diamond interchange configuration, improved lighting, and a new bicycle/pedestrian path.

Advancing Adams Transportation Master Plan (TMP): The Adams County plan identifies future bicycle network projects within the Colfax BRT Next study area including various sidepath extensions. Improvements would be coordinated with the City of Aurora as the county does not have funding identified and allocated for these projects. The projects include:

Tier 1 priority, short-term, 2022-2030.

- Fitzsimons Parkway. East Montview Boulevard to 13th Avenue 0.8 miles of sidepath.
- Chambers Road. East Montview Boulevard to East Colfax Avenue 0.5 miles of sidepath.

Tier 2 priority, medium-term, 2030-2040.

- East Colfax Avenue. Espana Street to Himalaya Road 0.4 miles of sidepath.
- East Colfax Avenue. Himalaya Road to E-470 1.9 miles of sidepath.

**Arapahoe County 2040 Transportation Master Plan**: Projects identified in the Arapahoe County transportation plan that fall within the Colfax BRT Next study area include:

- East Colfax Avenue. I-70/Picadilly Road Interchange Reconstruction.
- East Colfax Avenue. I-70/E-470 Interchange Reconstruction.
- East Colfax Avenue. Extend East Colfax Avenue to connect with Gun Club, Harvest, and Powhaton Roads.
- E-470. I-70 to County Border Recommended widening.
- Gun Club Road. I-70 to SH 30/ East Mississippi Avenue Recommended widening.

**DRCOG 2050 Regional Transportation Plan (RTP)**: The Denver region's long-range transportation plan includes roadway improvements in the study area across two staging periods. Table 3-1 lists the projects that are identified, along with the staging period.



Table 3-1: 2050 Regional Transportation Plan projects in study area

Project name and limits	Description	Staging period
Colfax Avenue Extension BRT from I-225 to E-470	BRT service and supporting safety/multimodal improvements – this study is part of the project	2020–2029
Colfax Avenue BRT from Union Station to I-225	Bus rapid transit service (dedicated lanes) and supporting safety/multimodal improvements – west of study area	2020–2029
Tower Road from Colfax Avenue to Smith Road	Locally funded road widening from two to six lanes – extends north from study corridor	2020–2029
Tower Road from 6th Avenue to Colfax Avenue	Locally funded new two-lane road – extends south from study corridor	2020–2029
Picadilly Road from Stephan D. Hogan Parkway to Colfax Avenue	Locally funded road widening from two to six lanes – extends south from study corridor	2020–2029
Picadilly Road from Colfax Avenue to I-70	Locally funded new six-lane road – extends north from study corridor connecting to new interchange	2020–2029
I-70 Picadilly Road	Locally funded new interchange – east end of study area	2020–2029
E-470 / I-70 interchange complex	Public highway toll authority project adding directional I-70 interchanges – east end of study area	2020–2029
E-470 from I-70 to 104th Avenue and from Quincy to I-70	Public highway toll authority projects widening E-470 from four to six lanes	2020–2029
Tower Road from 6th Avenue to Colfax Avenue	Locally funded road widening from two to six lanes – extends south from study corridor	2030–2039
Alameda Avenue BRT from Wadsworth to R Line	BRT service and supporting safety/multimodal improvements – adjacent to study area	2030–2039

Source: DRCOG 2050 Regional Transportation Plan (RTP)





## 3.3 Safety

#### 3.3.1 High-Injury Network

As defined in DRCOG's **Taking Action on Regional Vision Zero Plan**, the Regional High-Injury Network (HIN) identifies the roadways with the highest numbers of fatal and serious-injury crashes. There are more than 15,000 roadway miles in the Denver region, but fatal and severe injury crashes disproportionately occur on just a small percentage (roughly 9%) of these roads (DRCOG, 2024). The HIN also identifies critical corridors, which were selected by identifying corridors with the highest-density of serious-injury and fatal crashes along the HIN for each county.

Colfax Avenue for the entire study length, and several intersecting north-south corridors, are part of DRCOG's Regional High Injury Network. Colfax Avenue west of Chambers Road to I-225 is identified as an HIN critical corridor. Intersecting corridors on the HIN are listed below for reference:

- I-225 (critical corridor)
- Sable Boulevard
- Chambers Road (critical corridor)
- Airport Boulevard
- Tower Road

#### 3.3.2 Annual crash history

Year-to-year crash frequency is established in Table 3-2. Although total crashes have risen from 206 in 2021 to 219 in 2023, the number of crashes resulting in death or serious injury have reduced from ten to six over the same period. Nearly 40% of crashes result in some form of injury.

Table 3-2: Crash history by year

Year	Total crashes	All injury crashes	Serious injury and fatal crashes
2021	206	77	10
2022	217	85	6
2023	219	80	6

Source: City of Aurora (2021–2023)





#### 3.3.3 Crash hotspots

The highest concentrations of crashes on the corridor are at signalized intersections, with the greatest crash density at the I-225 interchange. The intersections at Airport Boulevard, Chambers Road, and Sable Boulevard round out the top four locations, with over 50 crashes recorded at each intersection for the three-year analysis period.

Further details about the severity of crashes at these intersections are provided in Table 3-3. The relative density of all crashes on the corridor is shown in Figure 3-8. Figure 3-8 also identifies the location of vulnerable road users (bicycle and pedestrian, VRU), serious injury, and fatal crashes distributed throughout the corridor. The greatest density of VRU crashes is toward the western end of the corridor, with over 60% of study area VRU crashes occurring between I-225 and Chambers Road (Figure 3-9). Traveling east along the corridor overall crash density generally decreases in correlation with decreasing traffic volumes.

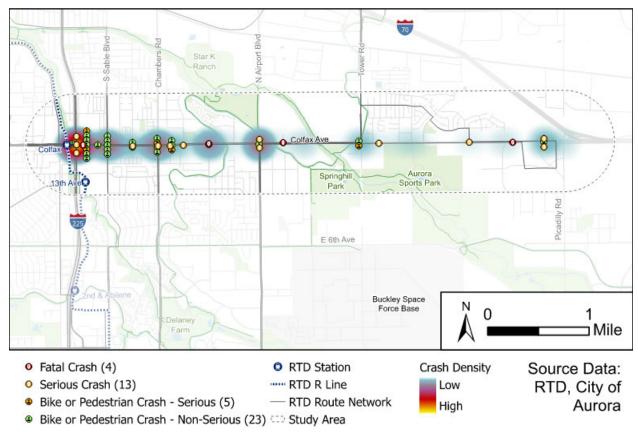
Table 3-3: Crash severity by major intersection

Intersection	Total	Non-serious injury	Serious injury / fatal	Bicycle/ pedestrian
I-225	139	45	3	1
Sable Boulevard	59	15	0	5
Chambers Road	62	19	2	4
Laredo Street	46	17	1	1
Airport Boulevard	72	26	2	1
Tower Road	23	5	1	1

Source: City of Aurora (2021–2023)







Source: RTD, City of Aurora (2021–2023)

Note: All crashes occurred on Colfax Avenue. Symbols are dispersed north-south for clarity.

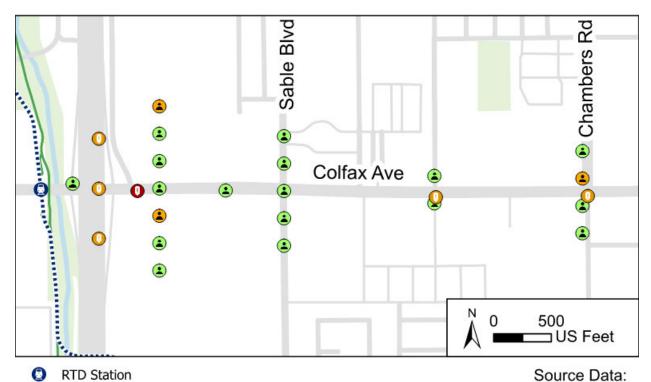
Figure 3-8: Relative density of corridor crashes





RTD, City of

Aurora



RTD Station

RTD R Line

Bike or Pedestrian Crash - Non-Serious (23)

Bike or Pedestrian Crash - Serious (5)

O Serious Crash (13)

Fatal Crash (4)

Source: RTD, City of Aurora (2021–2023)

Note: All crashes occurred on Colfax Avenue. Symbols are dispersed north-south for clarity.

Figure 3-9: Crash detail I-225 to Chambers Road





### 3.3.4 Crash locations

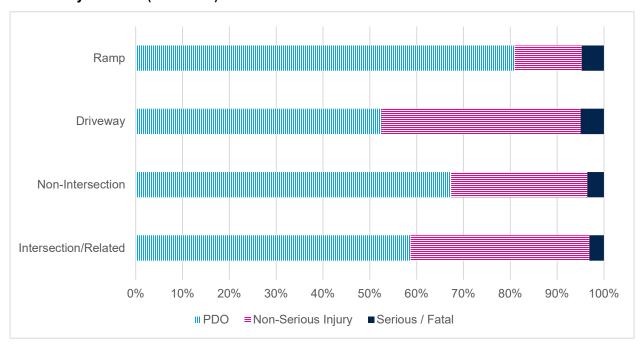
Crash locations were evaluated to understand what types of facilities within the study area are more susceptible to injury and fatal crashes. One signalized interchange, seven signalized intersections, and numerous full and partial movement driveways are located within the corridor and, as shown in Table 3-4, two-thirds of all crashes occurred at or near an intersection or driveway.

Figure 3-10 illustrates the proportional severity of crashes by location type. As shown in the figure, nearly half of all driveway and intersection or intersection-related crashes resulted in injury. Injury risk is lower at non-intersection and ramp locations.

Table 3-4: Crash severity by location type

Crash Location	No injury (PDO)	Non-serious injury	Serious injury / fatal	Total
Ramp	17	3	1	21
Driveway	21	17	2	40
Non-Intersection	132	57	7	196
Intersection/Related	226	147	12	385

Source: City of Aurora (2021–2023)



Source: City of Aurora (2021–2023)

Figure 3-10: Corridor crashes by location type





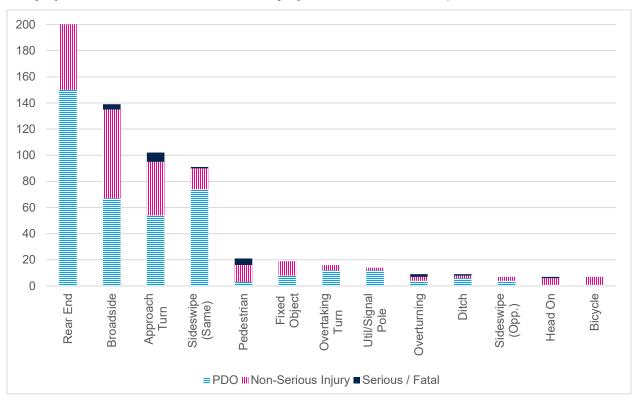
### 3.3.5 Crash types

A summary of corridor crashes by crash type is provided in Figure 3-11 to evaluate and understand whether certain movements or collision types are more susceptible to severe and fatal outcomes.

Rear end crashes, typically associated with higher intersection density and congestion, are the most common crash type. Although rear end crashes account for 31% of all incidents, they are typically low severity, comprising just 5% of serious injury and fatal outcomes in the study area.

Broadside and left turn (approach turn) crashes represent 22% and 16% of all crashes respectively. When combined (38% of all crashes), these crash types are more frequent than rear end crashes. These high-angle collisions typically occur at driveway and intersection locations and result from failure to yield right-of-way or red-light running. Nearly 50% of all broadside and approach turn crashes in the study area resulted in injury, and these crash types account for 50% of all serious and fatal crash outcomes.

A pedestrian or bicyclist (VRU) on the corridor that is involved in a crash is highly likely to be injured. Although representing just 4% of total crashes, 86% of VRU crashes result in injury. 23% of all fatal and serious injury crashes involved a pedestrian.



Source: City of Aurora (2021–2023)

Figure 3-11: Corridor crashes by type

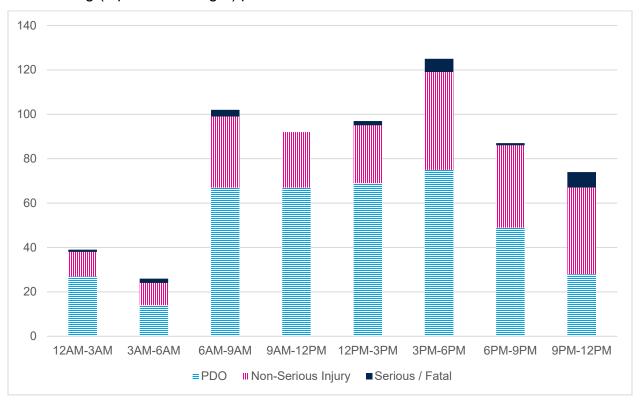




### 3.3.6 Time of day variation

Crash frequency by time of day is shown in Figure 3-12. Crash occurrence increases significantly after 6 a.m. and remains reasonably steady through to midnight, peaking during the late afternoon (3 p.m. to 6 p.m.) period.

The likelihood of an injury or fatal crash, as a proportion of all crashes during that period, is lowest during the late morning (9 a.m. to 12 p.m.). The proportion of injury and fatal crashes is greatest in the late evening (9 p.m. to Midnight) period, a time period that accounts for 11% of all crashes but carries a 60% likelihood of injury. 60% of all serious injury and fatal crashes occurred during the late afternoon (3 p.m. to 6 p.m.) and late evening (9 p.m. to Midnight) periods.



Source: City of Aurora (2021–2023)

Figure 3-12: Corridor crashes by time of day

### 3.3.7 Driver contributing factors

Roughly 15% of recorded crashes in the study area include a driver contributing factor listed in the crash report. These are crashes in which the responding officer thinks the drivers' behavior contributed to the crash. Reliability of this data can be inconsistent and difficult to verify, however 'driver emotionally upset', 'driver preoccupied' and 'impaired (alcohol or drugs)' were the most frequently reported contributing factors.





#### 3.3.8 Societal cost

For the three years of available crash data between 2021 and 2023, a total of 642 crashes were recorded within the study area along the Colfax Avenue corridor. With 224 crashes resulting in possible or minor injury and 22 resulting in serious injury or fatality, there were an average of two crashes per week where somebody was injured or killed.

Table 3-5 summarizes the societal cost incurred from crashes within the study area. As shown, the total cost was approximately \$116.3 million, or over \$40 million a year (2023 dollars), most of which is attributed to more costly serious injury and fatal crashes.

Figure 3-13 illustrates crash severity by frequency compared to crash severity by societal cost. Injury crashes—crashes resulting in any level of injury or fatality—represent a disproportionate level of societal cost compared to their total frequency (about 98% of cost versus about 38% of total frequency). This disparity is especially notable for serious injury and fatal crashes which make up less than 4% of total frequency, but nearly 65% of the total societal cost.

Table 3-5: Crash history and societal costs by severity

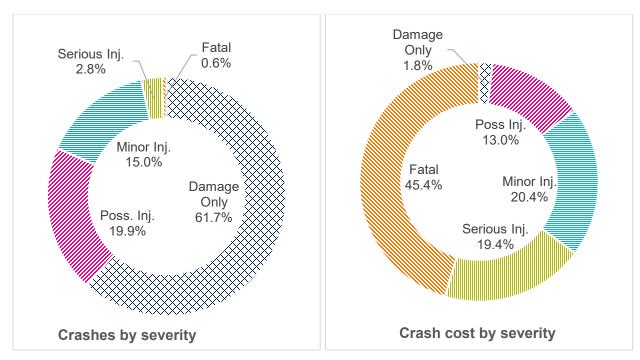
User type	Damage only	Possible injury	Minor injury	Serious injury	Fatal	Total
Bicycle/pedestrian	4	7	12	5	0	28
Vehicle	392	121	84	13	4	614
Total crashes	396	128	96	18	4	642
Cost per crash	\$5.3K	\$118K	\$247K	\$1.26M	\$13.2M	
Total societal cost	\$2.1M	\$15.1M	\$23.7M	\$22.6M	\$52.8M	\$116.3M

Source: City of Aurora (2021–2023)

Note: Monetary costs taken from USDOT Grant Program Benefit-Cost Analysis Guidance (USDOT, 2024)







Source: City of Aurora (2021–2023)

Note: Monetary costs taken from USDOT Grant Program Benefit-Cost Analysis Guidance (USDOT, 2024)

Figure 3-13: Corridor crashes and societal costs by severity

### 3.4 Existing and future traffic conditions

### 3.4.1 Existing daily volumes and congestion

Existing daily traffic volumes from 2021 through 2023 on and across the Colfax Avenue corridor are summarized in Table 3-6. Daily traffic on Colfax Avenue ranges from 13,000 to 40,000 vehicles depending on location, with volumes generally increasing moving west along the corridor.

One signalized interchange, seven signalized intersections, and numerous full and partial movement driveways are located on the corridor. Daily traffic volumes on surface cross-streets between I-225 and I-70/Picadilly Road range from 12,000 to 37,000 daily vehicles. Grade separated I-225, at the Colfax Avenue interchange, carries roughly 182,000 vehicles per day.

Colfax Avenue's posted speed limit steadily increases heading east. The speed limit is posted at 35 mph between I-225 and Chambers Road, 40 mph from Chambers Road to Laredo Street, 45 mph from Laredo Street to Airport Boulevard, and 55 mph east of Airport Boulevard. Two continuous east-west through travel lanes and one auxiliary (turn) lane exist in each direction between I-225 and Sable Boulevard. Two continuous through travel lanes exist each direction between Sable Boulevard and Picadilly Road.



Table 3-6: Existing daily traffic volumes

Location	Daily traffic (vehicles)	Speed limit (mph)	Travel lanes (2-way)
Colfax Avenue, West of Sable Boulevard	40,000	35	4 + aux lanes
Colfax Avenue, West of Chambers Road	33,000	35	4 + aux lanes
Colfax Avenue, East of Chambers Road	30,000	40	4
Colfax Avenue, West of Airport Road	24,500	45	4
Colfax Avenue, West of Tower Road	30,000	55	4
Colfax Avenue, West of Picadilly Road	13,500	55	4
Cross street: I-225	182,000	65	6
Cross street: Sable Boulevard	12,000	35	2
Cross street: Chambers Road	22,000	40	6
Cross street: Airport Boulevard	37,000	45	6
Cross street: Tower Road	20,000	40	2

Source: City of Aurora (2021–2023)

National Cooperative Highway Research Program (NCHRP) Report 825, *Planning and Preliminary Engineering Applications Guide to the Highway Capacity Manual (2016)*, provides planning-level guidance for estimating capacity on urban streets. Assuming that roughly 50% of signal cycle time at intersections is allocated to major street traffic, a four-lane urban street would be expected to become congested at around 35,000 daily vehicles while a six-lane urban street approaches capacity at 50,000 daily vehicles.

### 3.4.2 Existing peak hour volumes and congestion

Peak one-hour traffic volumes obtained from City of Aurora traffic analysis models are provided in Table 3-7. Colfax Avenue carries between 2,000 and 2,600 vehicles per hour during the morning peak, with roughly 60% of traffic traveling westbound and 40% eastbound. Evening peak hour volumes are more variable at 2,000 to 3,100 hourly vehicles depending on corridor location, albeit with a similar but reversed directional split of 60% eastbound, 40% westbound.

The traffic analysis models are developed in Synchro software, a capacity analysis and simulation tool used to model and optimize traffic systems. The models provide an estimate of intersection capacity, and therefore indication of congestion, based on input traffic data including roadway geometry, traffic volumes, and signal timings and phasing.



Table 3-7: Existing peak hour traffic volumes

Location	Eastbound AM peak	Westbound AM peak	Eastbound PM peak	Westbound PM peak
Colfax Avenue, West of Sable Boulevard	1,100	1,500	1,850	1,250
Colfax Avenue, West of Chambers Road	1,000	1,350	1,500	1,050
Colfax Avenue, West of Laredo Street	850	1,400	1,150	1,000
Colfax Avenue, West of Airport Road	750	1,300	1,050	900
Colfax Avenue, West of Tower Road	750	1,500	1,150	1,050

Source: City of Aurora

The condition of traffic operations is often expressed in terms of level-of-service (LOS), an industry-standard measure used to describe travel conditions, in this case specific to motor vehicle travel. LOS is represented by a scale that assigns a letter grade assessing operations ranging from free flow (LOS A) to oversaturated (LOS F). An LOS rating of A through D reflects acceptable vehicular operations in urban areas.

The average delay that a driver would experience during peak hours, and associated level-of-service, is summarized in Table 3-8 by intersection approach for each of the major signalized intersections on the corridor. LOS is presented for the peak hour and there are some movements approaching capacity during the peak hour. Except for the southbound off-ramp operations at I-225 and east/west operations on Colfax Avenue at Airport Boulevard, travel conditions for drivers are currently shown to be at a generally acceptable level even during the peak commute times.

Population data available on the City of Aurora website indicates steady growth over the past 15 years which, if sustained into the future, could be expected to increase traffic volumes on Colfax Avenue resulting in increased travel times and more travel time variability, especially during peak commuter periods.



Table 3-8: Existing peak hour intersection operations

Intersection	Approach	AM peak LOS	AM peak avg delay (sec/veh)	PM peak LOS	PM peak avg delay (sec/veh)
Colfax Avenue and I-225 Interchange ramps	Intersection	С	33.1	С	31.1
Colfax Avenue and I-225 Interchange ramps	Eastbound	С	32.6	С	22.0
Colfax Avenue and I-225 Interchange ramps	Westbound	С	21.0	С	26.8
Colfax Avenue and I-225 Interchange ramps	Northbound	D	43.1	D	46.4
Colfax Avenue and I-225 Interchange ramps	Southbound	Е	56.9	D	52.7
Colfax Avenue and Sable Boulevard	Intersection	С	26.1	С	35.0
Colfax Avenue and Sable Boulevard	Eastbound	В	17.8	С	29.7
Colfax Avenue and Sable Boulevard	Westbound	D	45.2	С	29.4
Colfax Avenue and Sable Boulevard	Northbound	D	39.2	D	37.1
Colfax Avenue and Sable Boulevard	Southbound	D	42.6	D	36.6
Colfax Avenue and Chambers Road	Intersection	С	33.3	D	40.3
Colfax Avenue and Chambers Road	Eastbound	С	33.6	D	48.4
Colfax Avenue and Chambers Road	Westbound	D	36.0	D	51.9
Colfax Avenue and Chambers Road	Northbound	С	23.3	D	51.6
Colfax Avenue and Chambers Road	Southbound	D	43.5	D	53.3
Colfax Avenue and Airport Boulevard	Intersection	С	33.2	D	42.3
Colfax Avenue and Airport Boulevard	Eastbound	F	80.6	D	53.1
Colfax Avenue and Airport Boulevard	Westbound	Е	60.9	D	49.8
Colfax Avenue and Airport Boulevard	Northbound	D	38.7	D	46.8
Colfax Avenue and Airport Boulevard	Southbound	В	16.2	D	43.8

Source: City of Aurora, Highway Capacity Manual

### 3.4.3 Future traffic conditions

The Denver/Aurora region is expected to grow and change over the next 30 years and so will travel patterns and congestion. DRCOG's Annual Report on Roadway Traffic Congestion in the Denver Region (DRCOG, 2024) indicates that congestion at 2 p.m. in 2050 will be worse than it is at 5 p.m. today. DRCOG maintains the regional travel demand model for metro Denver. The model includes regional growth projections for 11





counties within the planning area boundary and is used to forecast future travel demand on regional roadways.

Traffic data on the Colfax Avenue corridor were extracted by DRCOG for an existing year (2023) and horizon year (2050). The data, summarized in Table 3-9, indicates varying levels of traffic growth are anticipated on the corridor, with around 40% to 50% growth in traffic volume between I-225 and Tower Road, increasing to over 200% growth in traffic volumes approaching the eastern limits of the corridor at Picadilly Road.

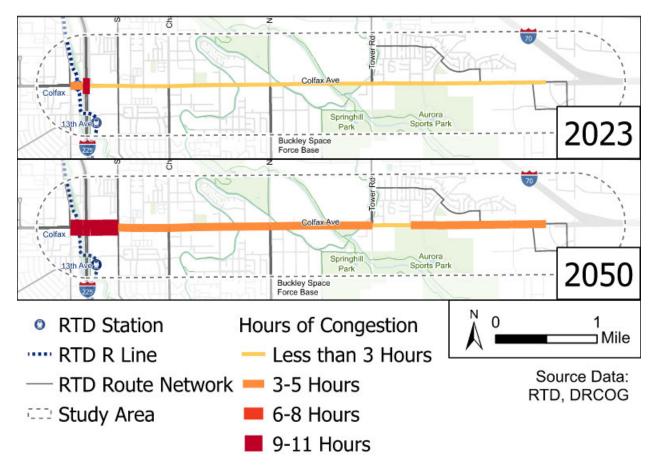
Table 3-9: DRCOG projected growth in traffic volume (2023–2050)

Colfax Avenue Corridor Segment	Traffic Volume Growth, 2023 to 2050
Colfax Avenue at I-225	38%
I-225 to Sable Boulevard	44%
Sable Boulevard to Altura Boulevard	47%
Altura Boulevard to Chambers Road	48%
Chambers Road to Jasper Street	36%
Jasper Streett to Laredo Street	45%
Laredo Street to Airport Boulevard	48%
Airport Boulevard to Salida Street	42%
Salida Street to Tower Road	53%
Tower Road to Ceylon Street	131%
Ceylon Street to Himalaya Street	133%
Himalaya Street to Lisbon Street	134%
Lisbon Street to Picadilly Road	205%

Source: DRCOG

The DRCOG regional travel demand model identifies hours of congestion based on roadway capacity and projected traffic volume throughout the day. A comparison of hours of congestion for roadway segments within the study area is provided in Figure 3-14. Existing congested hours are generally low along the corridor (less than 3 hours per day), with the area around I-225 being an exception to this trend and suffering from up to 11 hours of congestion per day. With the projected growth in traffic volumes, by 2050 the number of congested hours increases throughout the corridor, and all roadway segments east of Tower Road experience three or more hours of congestion per day.





Source: RTD, DRCOG

Figure 3-14: 2023 and 2050 estimated hours of congestion per day

# 3.5 Key takeaways

## 3.5.1 Roadway conditions

Key takeaways from roadway conditions that are relevant for the analysis of BRT guideway and alignment options include:

- East Colfax Avenue between I-225 and E-470 is a major arterial roadway varying in cross-section from a suburban four-lane roadway with right turn / auxiliary lanes and a high access density on the west end, to a rural four lane divided highway section on the east end.
- The corridor speed limit varies from 35 mph on the west end to 55 mph at the east end.
- There are several planned roadway improvements located within the study area targeting vehicle, pedestrian, bicycle, and transit travel modes.





- Interchange improvements are either planned or under construction at Picadilly Road and E-470 and there are planned improvements on Tower Road and Picadilly Road.
- On Colfax Avenue itself, there are various planned sidepath improvements as well as BRT west of I-225.

### 3.5.2 Traffic safety

Key takeaways related to safety that should be considered in the evaluation of BRT alternatives include:

- The corridor is located on the DRCOG Regional High-Injury Network (HIN).
- Over 200 crashes occur every year on the corridor, roughly 40% of which result in injury or fatality, for a total societal cost of nearly \$40 million per year.
- Although representing just 4% of total crashes, when a crash does occur there is a high likelihood of serious injury for pedestrians and bicyclists on the corridor, with these vulnerable user crashes accounting for almost one quarter of all serious injury and fatal outcomes.
- Crashes occur most frequently during the late afternoon 3 p.m. to 6 p.m. period.
- The proportion of injury and fatal crashes is greatest in the late evening (9 p.m. to midnight) period, a time period that accounts for 11% of all crashes but carries a 60% likelihood of injury.

### 3.5.3 Traffic conditions

Key takeaways related to traffic growth that are relevant to the evaluation of BRT guideway and alignment alternatives include:

- Daily traffic on Colfax Avenue ranges from 13,000 to 40,000 vehicles depending on location, with volumes generally increasing moving west along the corridor.
- Existing peak hour operations remain generally acceptable at intersections.
  However, the southbound I-225 off-ramp to Colfax Avenue, and Colfax Avenue
  eastbound and westbound at Airport Boulevard, feature high delay and
  congestion (LOS E or F) during the AM peak.
- Significant growth is forecast along the corridor, in particular to the eastern extent, with DRCOG's travel model forecasting a 40% to over 200% increase in traffic through the year 2050.
- The entire corridor will experience an increase in the number of congested hours per day. Most of the corridor will experience over three hours of congestion per day by 2050.





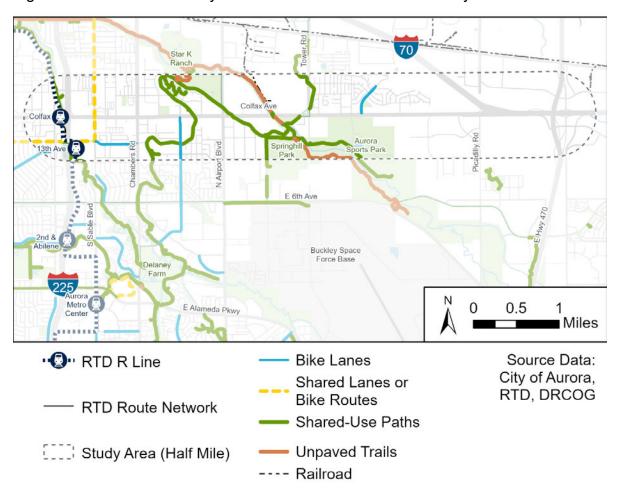
# 4 Bicycle and pedestrian conditions

# 4.1 Existing bicycle and pedestrian facilities

This section summarizes existing conditions for people bicycling, walking, rolling, or using a mobility device in and around the Colfax BRT Next study area. Examining existing conditions and the locations of connectivity gaps for bicyclists and pedestrians will provide an understanding of what transit riders currently experience in their "first and last mile" (how they travel from their origin to a transit stop and how they travel from a transit stop to their destination).

### 4.1.1 Conditions for people bicycling

Figure 4-1 illustrates the bicycle facilities in and around the study area.



Source: City of Aurora, RTD, DRCOG

Figure 4-1: Existing bicycle facilities map





While there are no on-road bicycle facilities on East Colfax Avenue in the study area, there are several other roads with facilities intersecting the corridor. Specifically, there are roadways with bike lanes, and shared lanes or bike routes.

- Shared lanes or bike routes on Sable Boulevard and 13th Avenue.
- Dedicated bike lanes on 13th Avenue, Laredo Street, and Espana Street.

Figure 4-2 depicts examples of these two types of on-street bicycle facilities.





### Dedicated bike lanes (left) and shared lanes or bike routes (right)

Figure 4-2: Examples of existing bicycle facilities in the study area

There are multiple paved and unpaved shared-use paths connecting the East Colfax Avenue Corridor to destinations beyond the study area. The four shared-use paths are:

- The Toll Gate Creek Trail on the western edge of the study area brings users south through the City of Aurora.
- The High Line Canal Trail is a circuitous path with some connections to residential areas north and south of the study area.
- The Sand Creek Greenway connects users to Commerce City located northwest of the study area.
- The Triple Creek Trail connects users to recreational parks southeast of the study area.

At the locations where three of the four shared-use paths (all but the Sand Creek Greenway) intersect East Colfax Avenue, there is no safe crossing for people using the shared-use paths. This can create a challenge for people bicycling to cross East Colfax Avenue, especially since there are long distances between locations where people can safely cross (see Figure 4-5 for a discussion of safe crossings for pedestrians).

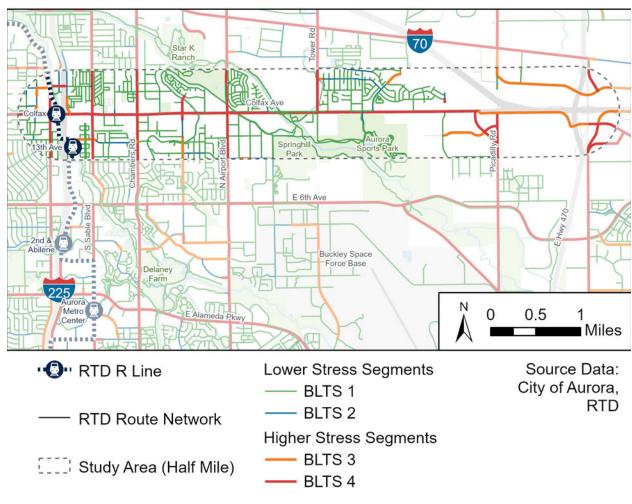
Identifying the presence of bicycle facilities is only one way of understanding the conditions for travel by bicycle. People also consider comfort when choosing to walk, roll, or ride a bicycle, and the perceived comfort can be subjective. Researchers have developed a way to measure comfort when walking and bicycling along a road or intersection through Level of Traffic Stress (LTS) analysis. Mekuria, Furth, and Nixon





(2012) developed LTS in *Low Stress Bicycling and Network Connectivity* to assign street segments, trail segments, intersections, and crossings a score from 1 to 4 based on a combination of factors (e.g., road width, traffic volume, and traffic speed). Lower LTS scores indicate more comfortable, less stressful facilities for people walking, rolling, and biking, whereas higher LTS scores indicate the opposite: more stressful facilities. LTS 1 facilities cater to all ages and abilities, while a narrow range of people feel comfortable on LTS 4 facilities.

Figure 4-3 illustrates the Bicycle Level of Traffic Stress (BLTS) for people bicycling in and around the study area. The BLTS inside the study area is highest along East Colfax Avenue and on the main north-south roads connecting to East Colfax Avenue: Potomac Street, Sable Boulevard, Chambers Road, Laredo Street, Airport Boulevard, Tower Road, and Picadilly Road. Lower-stress segments exist on smaller streets surrounding the East Colfax Avenue Corridor as well as on shared-use paths within the study area.



Source: City of Aurora, RTD

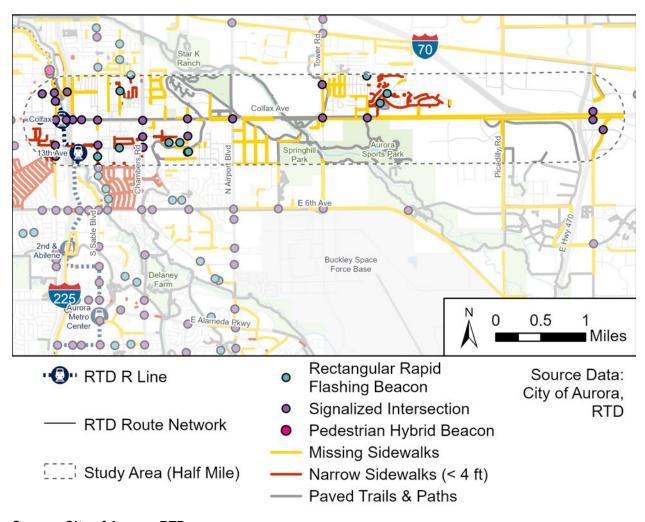
Figure 4-3: Bicycle Level of Traffic Stress (BLTS) map





### 4.1.2 Conditions for people walking or using a mobility device

Figure 4-4 depicts the existing facilities for people walking or using a mobility device around the study area. Many roads within the study area are either missing sidewalks or have narrow sidewalks (four feet wide or narrower), which may present barriers to pedestrians, especially those using a mobility device. A large section of the eastern half of East Colfax Avenue (east of Tower Road) lacks sidewalk infrastructure. Note that this assessment does not include other potential pedestrian barriers like lack of curb ramps, poor sidewalk surface conditions, or other sidewalk obstructions.



Source: City of Aurora, RTD

Figure 4-4: Existing pedestrian facilities map



Opportunities to cross East Colfax Avenue in the study area are limited outside of signalized intersections. Pedestrian hybrid beacons (PHBs) exist in the vicinity of the study area, but not within it. On streets other than East Colfax Avenue, there are several rectangular rapid flashing beacons (RRFBs). RRFBs are appropriate on lower-volume and lower-speed streets such as local or neighborhood streets. Figure 4-5 shows examples of these two types of pedestrian crossing facilities.





Rectangular rapid flashing beacon, also known as RRFB (left) and pedestrian hybrid beacons, also known as PHB (right)

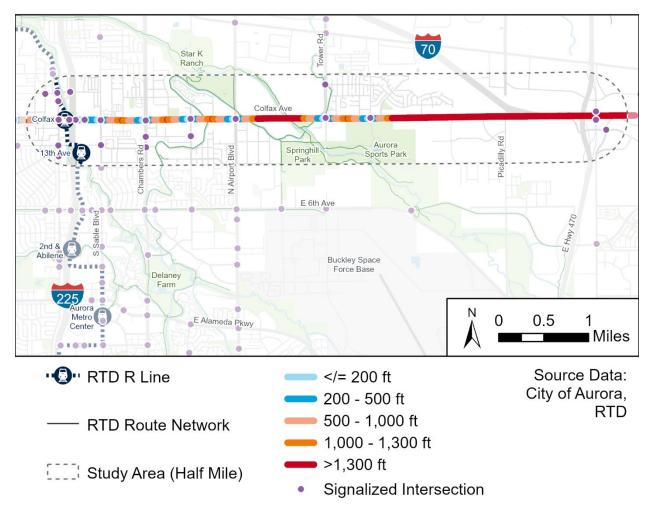
Figure 4-5: Examples of pedestrian crossing facilities

Figure 4-6 depicts the distances between protected crossing locations where people walking can cross East Colfax Avenue in the study area at a signalized intersection. Pedestrians must go far distances to reach a protected crossing location for much of the East Colfax Avenue Corridor. The distance between protected pedestrian crossing locations increases significantly from west to east.

East of Sable Boulevard, pedestrians may experience much longer distances to reach a protected crossing location, as opposed to west of Sable Boulevard which has protected crossings every 500 feet or shorter. At the eastern end of the study area, the spacing between a protected crossing location is over 1,300 feet (or a quarter of a mile). With such a long distance to reach a protected crossing location, pedestrians have reduced access to reach destinations safely in this portion of the study area.

Adequate lighting conditions are crucial for safety and visibility among road users and increase the feeling of security for people walking and rolling. However, the location of existing lighting infrastructure is challenging to illustrate because the available data does not include all known lighting facilities.





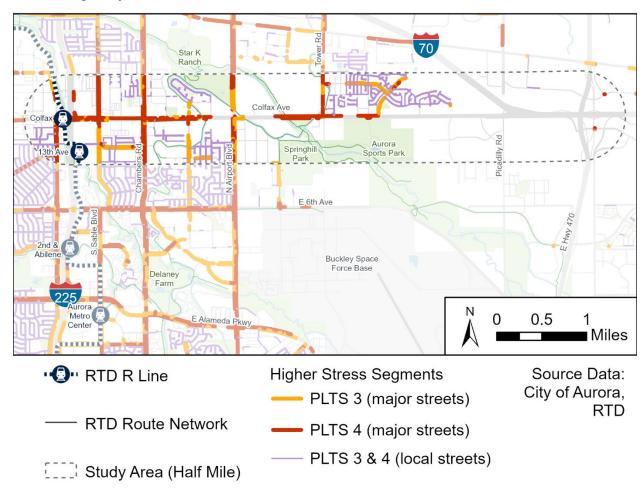
Source: City of Aurora, RTD

Figure 4-6: Distance between crossings map





Using Pedestrian Level of Traffic Stress (PLTS), Figure 4-7 illustrates higher-stress facilities for people walking or using a mobility device in and around the study area. The PLTS in the study area is highest on some segments of East Colfax Avenue, along with several major streets connecting to East Colfax Avenue, including Sable Boulevard, Chambers Road, Airport Boulevard, and Tower Road. There are also neighborhood or local streets that are higher-stress facilities, usually because sections of these roads are missing or have narrow sidewalks. Note that the PLTS analysis does not include limited-access highways, such as the furthest eastern section of East Colfax Avenue.



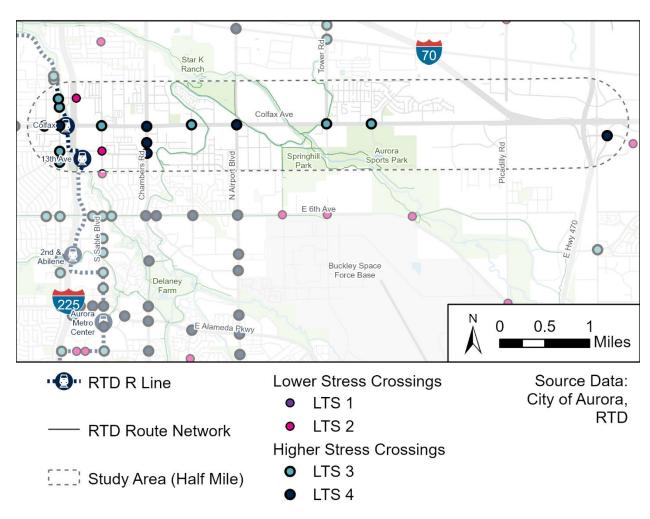
Source: City of Aurora, RTD

Figure 4-7: Pedestrian Level of Traffic Stress (PLTS) map





Figure 4-8 depicts the Crossing Level of Traffic Stress for pedestrians in and around the study area, representing the level of stress a person may feel as they use each crossing location. Within the study area, higher-stress crossings are located along the East Colfax Avenue Corridor, as well as along Chambers Road and Potomac Street. There are lower-stress crossings along Sable Boulevard and Billings Street on the western edge of the study area. Factors that are usually related to higher stress at crossings are fast traffic speeds, high traffic volumes, large number of lanes, long crossing distances, and the lack of medians.



Source: City of Aurora, RTD

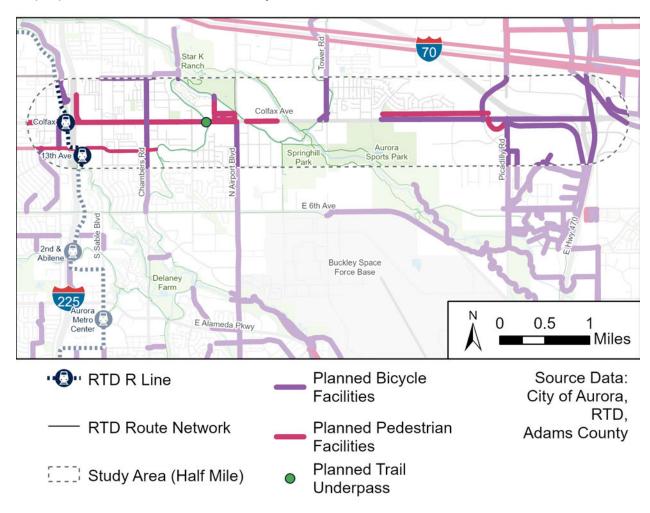
Figure 4-8: Crossing Level of Traffic Stress map





# 4.2 Previously planned and proposed bicycle and pedestrian facilities

Figure 4-9 illustrates bicycle and pedestrian facilities that have been previously planned or proposed in and around the study area.



Source: City of Aurora, RTD, Adams County

Figure 4-9: Planned or proposed bicycle and pedestrian facilities map

The City of Aurora is currently developing the *Connecting Aurora: Multimodal Transportation Plan*, which is anticipated to include new proposed bicycle and pedestrian facilities throughout the city and in the study area.

The City of Aurora's capital improvement plan has proposed improvements to pedestrian facilities that reach into the study area along 13th Avenue, as well as just outside and north of the study area along Smith Road.





The Arapahoe County Transportation Plan proposes buffered bike lanes, trail connections, sidepath extensions and off-street facilities in the Southeast portion of the study area.

The 2050 Regional Transportation Plan proposes bicycle facilities, including on-street and off-street facility types, throughout the study area. The types or classes of bicycle facility improvements were not defined in the dataset. Key on-street projects include facilities along Chambers Road, Airport Boulevard, Tower Road, Picadilly Road, and East Colfax Avenue (east of Espana Street).

The Advancing Adams County Transportation Master Plan (2022) include additional proposed projects in the study area. These projects include sidepath projects on Chambers Road and East Colfax Avenue. However, two shared-use path projects are not depicted in Figure 4-9 because the plan did not include a proposed alignment for these shared-use paths:

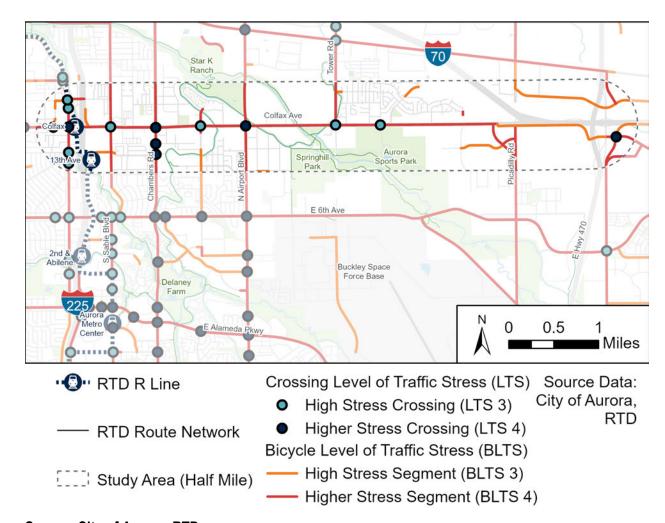
- A planned extension of First Creek Trail for 2.7 miles from East 38th Avenue down into the study area to East Colfax Avenue.
- A new unnamed shared-use path, planned for 0.7 miles running north-south from Montview Boulevard (northern-most study area boundary) to East Colfax Avenue.

# 4.3 Gaps in bicycle and pedestrian connectivity

Combining the information on existing conditions for people bicycling and walking in the study area helps provide an understanding of where there may be connectivity and access gaps for people accessing transit stops on East Colfax Avenue.

Figure 4-10 illustrates bicycle connectivity and access gaps. The Crossing and Bicycle Level of Traffic Stress results indicate the highest stress conditions for bicyclists are along East Colfax Avenue, as well as corridors connecting to East Colfax Avenue: Potomac Street, Sable Boulevard, Chambers Road, Airport Boulevard, and Tower Road.





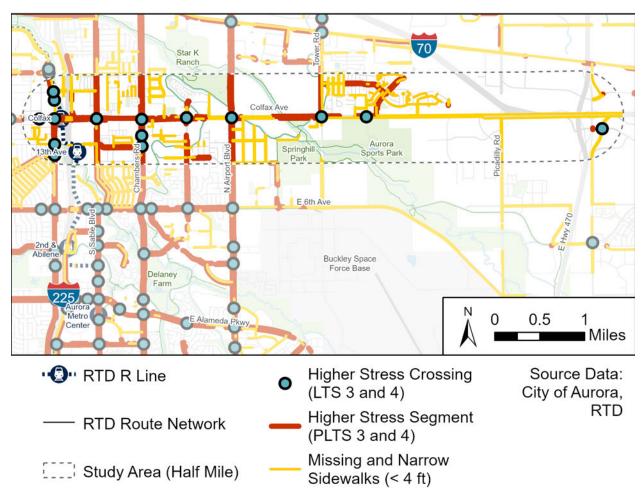
Source: City of Aurora, RTD

Figure 4-10: Bicycle connectivity and access gaps map

Figure 4-11 illustrates pedestrian connectivity and access gaps in and around the study area. The Crossing and Pedestrian Level of Traffic Stress data indicates that the highest stress conditions for pedestrians are along East Colfax Avenue, as well as some streets which connect to East Colfax Avenue including Potomac Street and Chambers Road. Additionally, the missing and narrow sidewalk infrastructure data shows where higher levels of stress may exist due to sidewalk infrastructure that is missing or substandard.

These gaps represent locations within the study area that may need to be further examined during the planning of potential BRT alignments and station locations. For successful BRT service, stations should be easily accessible to people walking and bicycling and connected via safe and comfortable bicycle and pedestrian facilities. Therefore, as the Colfax Next BRT study prioritizes potential station locations, information on the bicycle and pedestrian connectivity gaps should inform the identification of potential bicycle and pedestrian infrastructure improvements to enhance station access.





Source: City of Aurora, RTD

Figure 4-11: Pedestrian connectivity and access gaps map

# 4.4 Key takeaways

The existing bicycle and pedestrian conditions in the study area highlight critical gaps in connectivity and accessibility. These conditions will inform the Colfax BRT Next study, particularly in selecting station locations and identifying necessary bicycle and pedestrian infrastructure improvements.

Key takeaways that are relevant for the analysis of BRT station locations and alignment include:

 The lack of safe crossings, high-stress road segments, and missing or substandard sidewalks make access to transit stops challenging. One factor, of many, that could be considered for the placement of BRT stations is the location of existing sidewalks and protected crossings, such as major signalized intersections.





- Existing shared-use paths (High Line Canal Trail and Triple Creek Trail) intersect
  the corridor but lack safe crossings, impacting station accessibility. BRT station
  placement could prioritize locations near these key access points with improved
  crossing infrastructure, especially as improvements are made to shared-use path
  crossings (e.g., High Line Canal Trail, east of Laredo Street).
- High levels of traffic stress for people walking and bicycling along East Colfax Avenue and major north-south roadways (Potomac Street, Sable Boulevard, Chambers Road, Airport Boulevard, Tower Road, Picadilly Road) indicate the need for safer bicycle and pedestrian infrastructure near potential BRT stations.

Key takeaways that are relevant for identifying the future bicycle and pedestrian needs during BRT implementation include:

- Future improvements should include continuous and accessible pedestrian pathways. Large portions of the study area lack sidewalks or have substandard narrow sidewalks (≤4 feet), especially east of Tower Road.
- Protected or midblock crossings using signals such as RRFBs or PHBs should be introduced at BRT stations (e.g., on East Colfax Avenue) or BRT station areas (e.g., on north/south connecting streets), where warranted. Currently, pedestrians must travel significant distances (often over 1,000 feet) between safe crossings.
- Dedicated and protected bicycle facilities should be prioritized near BRT stations, prioritizing north-south connections (e.g., Sable Boulevard, Chambers Road, Airport Boulevard, Toward Road, Picadilly Road).
- This assessment did not include comprehensive lighting data in the study area, but improved illumination near BRT stations and along key pedestrian and bicycle routes will help enhance safety and visibility.
- This assessment did not include other potential barriers for people walking, such as a lack of curb ramps, poor sidewalk surface conditions, or other sidewalk obstructions; however, when potential station locations are identified, these conditions should be noted for improvements in station areas.

By incorporating these considerations for the placement of BRT stations and future infrastructure projects, the study area can be designed to maximize accessibility, safety, and convenience for pedestrians and bicyclists accessing the future BRT service.

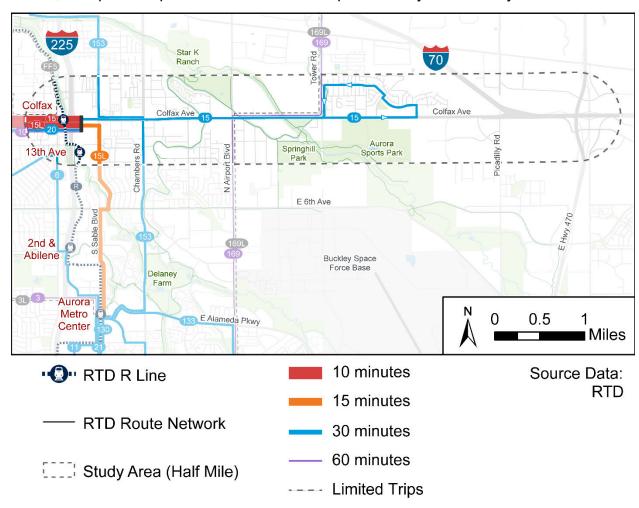




# 5 Transit conditions

### 5.1 Overview of RTD services

RTD currently operates six bus routes and one light rail line (R Line) in the study area. There is also one express bus route (FF5) and one peak-only local bus route (169L) operating in the study area (Figure 5-1). Service is provided seven days a week on most routes, except the express Route FF5 which operates only on weekdays.



Source: RTD (January-April 2024)

Figure 5-1: RTD system map in study area

RTD defines weekdays as Monday through Friday for bus routes and Monday through Thursday for all rail services, including the R Line. All rail services have a separate Friday schedule. Table 5-1 presents the service span and frequency for each of the routes in the study area. The frequency shown in the table represents the typical range for the service span.



Table 5-1: Colfax BRT Next study area route summary

Route	Route name	Service span	Service frequency
10	East 12th Avenue (9th-Clermont to Colfax-Billings)	Mon-Fri: 6:03 a.m. to 12:32 a.m. Sat: 5:00 a.m. to 12:30 a.m. Sun/Holiday: 5:01 a.m. to 12:31 a.m.	60 Min 60 Min 60 Min
15	East Colfax Avenue	Mon-Fri: 3:11 a.m. to 1:58 a.m. Sat: 3:17 a.m. to 1:58 a.m. Sun/Holiday: 3:18 a.m. to 1:58 a.m.	10/15 Min 15 Min 15 Min
15L	East Colfax Limited	Mon-Fri: 4:29 a.m. to 1:06 a.m. Sat: 5:12 a.m. to 1:06 a.m. Sun/Holiday: 5:13 a.m. to 1:05 a.m.	10/15 Min 15 Min 15/30 Min
20	20th Avenue	Mon-Fri: 5:18 a.m. to 11:57 p.m. Sat: 5:20 a.m. to 11:56 p.m. Sun/Holiday: 5:18 a.m. to 11:57 p.m.	30/60 Min 60 Min 60 Min
153	Chambers Road	Mon-Fri: 2:23 a.m. to 1:42 a.m. Sat: 2:26 a.m. to 1:41 a.m. Sun/Holiday: 2:26 a.m. to 1:41 a.m.	30/60 Min 30/60 Min 30/60 Min
169	Buckley Road	Mon-Fri: 4:19 a.m. to 1:41 a.m. Sat: 4:50 a.m. to 1:31 a.m. Sun/Holiday: 4:50 a.m. to 1:31 a.m.	60 Min 60 Min 60 Min
169L	Buckley / Tower DIA Limited	Mon-Fri: 3:54 a.m. to 11:00 p.m. Sat: 3:53 a.m. to 11:02 p.m. Sun/Holiday: 3:53 a.m. to 11:02 p.m.	5 NB trips before 1:00 p.m., 6 SB trips after 1:00 p.m. 5 NB trips before 12:00 p.m., 5 SB trips after 12:00 p.m. 5 NB trips before 12:00 p.m., 5 SB trips after 12:00 p.m.
R	Light Rail R Line	Mon-Thurs: 4:41 a.m. to 1:04 a.m. Fri- 4:41 a.m. to 1:04 a.m. Sat: 4:54 a.m. to 1:04 a.m. Sun/Holiday: 4:54 a.m. to 1:04 a.m.	30 Min 30 Min 30 Min 30 Min
FF5	Flatiron Flyer Boulder – Anschutz	Mon-Fri: 5:15 a.m. to 9:06 a.m., 2:45 p.m. to 6:40 p.m.	4 EB trips (morning), 4 WB trips (1 in the morning, 3 in the afternoon)





Most routes begin service around 3 or 4 a.m. and operate until midnight or later. Routes 15 and 153 operate close to 24 hours a day, with about an hour's gap in service early morning. Frequencies vary by route, time of day, and day of the week, as depicted in Figure 5-2Figure 5-2 through Figure 5-4

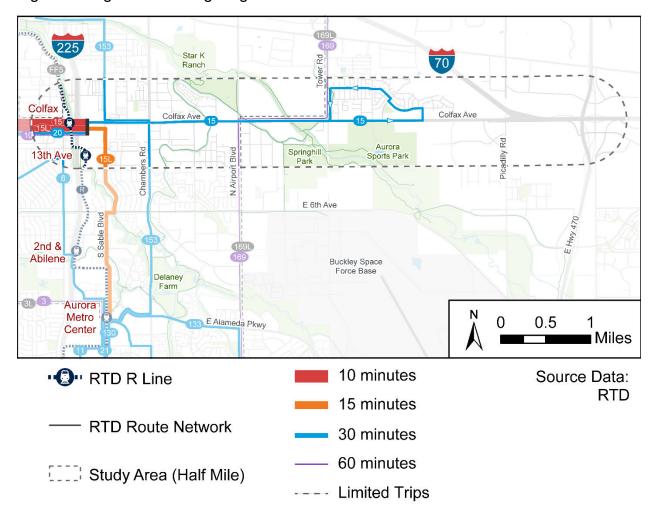
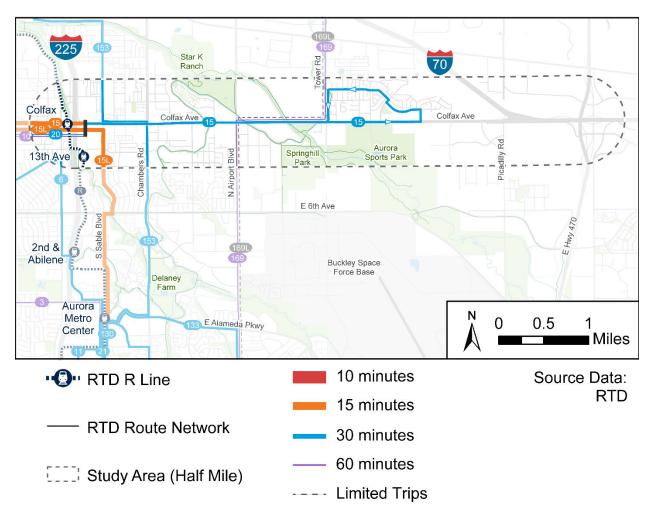


Figure 5-2: Weekday peak service frequency





Source: RTD (January-April 2024)

Figure 5-3: Saturday service frequency



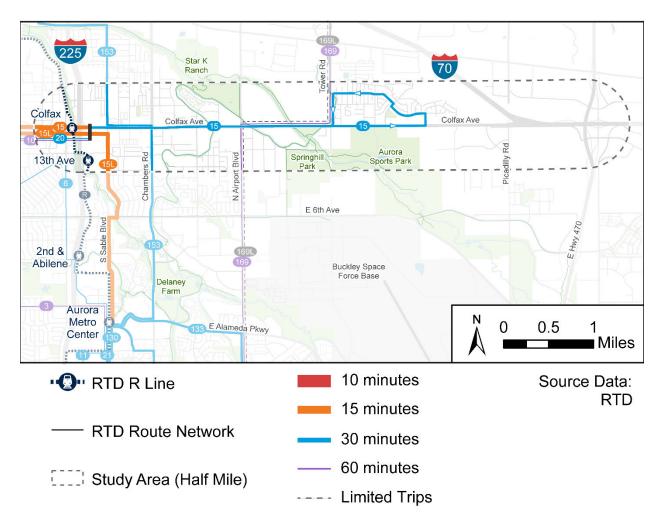


Figure 5-4: Sunday service frequency





### 5.2 Fares

RTD's fare system includes three-hour, day, airport day, and monthly passes for fixed route services, which include bus and rail, offered at a standard and a discount rate (Table 5-2). Discount fares apply to seniors 65 and over, individuals with disabilities, Medicare recipients, and those enrolled in RTD's LiVE program. All Discount fares and Monthly Passes include travel to and from the Airport Fare Zone.

Table 5-2: RTD standard and discount fares: fixed route

Service	Fare type	Standard fare	Discount fares (includes airport)
Fixed Route	Three-hour pass	\$2.75	\$1.35
Fixed Route	Day pass	\$5.50	\$2.70
Fixed Route	Airport day pass	\$10	No additional charge
Fixed Route	Monthly pass	\$88	\$27

Source: RTD

RTD also provides fixed fares for its ADA complementary paratransit service Access-a-Ride and Access-a-Ride LiVE—an income-based fare discount program. Once enrolled in LiVE, all users receive a 50% discount on their fares (Figure 5-3). In 2023, RTD expanded the LiVE program to include a transit assistance grant program, semester passes for post-secondary students, and more.

Table 5-3: RTD standard and discount fares: paratransit

Service	Fare type Access-a-Ride		Access-a-Ride LiVE
Paratransit	One-Way ticket	\$4.50	\$2.25
Paratransit	Airport	\$19	\$9.50

Source: RTD





# 5.3 Ridership

Table 5-4 shows the average ridership of all routes operating in the study area, comparing boardings on the entire route versus within the study area for all days of the week. Routes 15L and 15 had the highest ridership on all seven days of the week, with significantly more boardings than any other service. Across routes, ridership on weekends is lower than weekdays, with most routes having the lowest ridership on Sundays. However, boardings within the study area make up a small share of the entire route's ridership. The highest number of boardings within the study area is on Route 15, on Weekdays (1,029). The total ridership for stops within the study area ranges from 1,635 on Sundays to 2,907 on a typical Weekday.

Table 5-4: Average ridership for all routes operating in the study area

Route Number	Weekday ridership (entire route)	Weekday ridership in study area	Saturday ridership (entire route)	Saturday ridership in study area	Sunday ridership (entire route)	Sunday ridership in study area
10	1,411	33	791	26	697	27
15	8,693	1,029	6,437	740	5,917	660
15L	9,492	754	5,644	402	4,518	352
20	1,548	66	475	30	417	28
153	3,154	543	2,076	326	1,817	286
169	807	72	399	44	378	42
169L	274	15	206	9	190	12
R	4,011	388	2,847	266	2,569	228
FF5	167	7	-	-	-	0
TOTAL	29,557	2,907	18,875	1,843	16,503	1,635





Figure 5-5 shows the average ridership between January and April of 2024 for all routes in the study area. Routes 15 and 15L remain the most-boarded routes within the study area. Route 10, Route 169, and Route FF5 have almost negligible boardings in the study area on all seven days of the week.

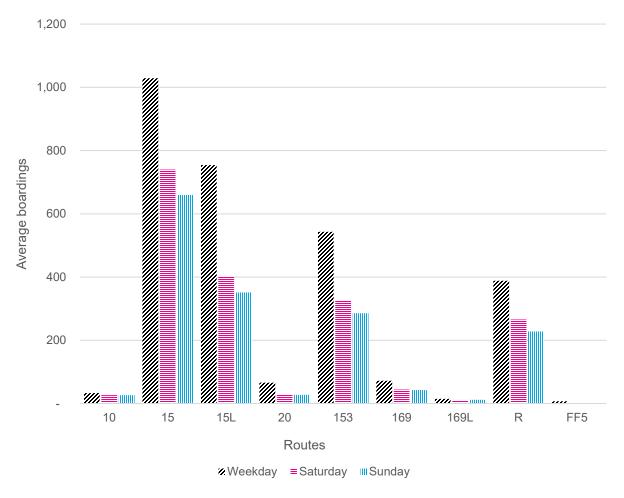


Figure 5-5: Average ridership for routes in the study area





Figure 5-6 through Figure 5-8 show the spatial distribution of boardings for weekdays, Saturday, and Sunday, respectively. On all days, the number of boardings declines on stops located beyond the intersection of Colfax Avenue and Chambers Road. Ridership is higher on Sable Boulevard in comparison to stops along Colfax Avenue and remains higher on all days. The highest number of boardings are seen around the Colfax Station and Aurora Metro Center, on all days.

The bus stops represented in the maps are primarily serviced by Route 15 on Colfax Avenue, and Route 15L on Sable Boulevard, respectively. These routes form the backbone of the planned BRT service, and following sections investigate ridership specifically on these routes, within the study area.

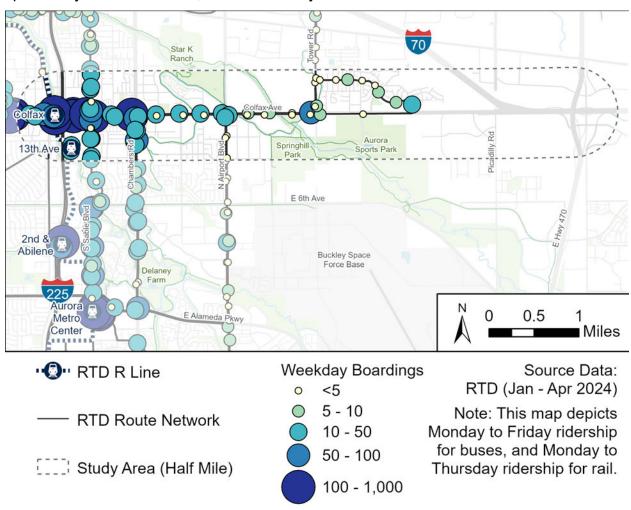


Figure 5-6: Total weekday boardings



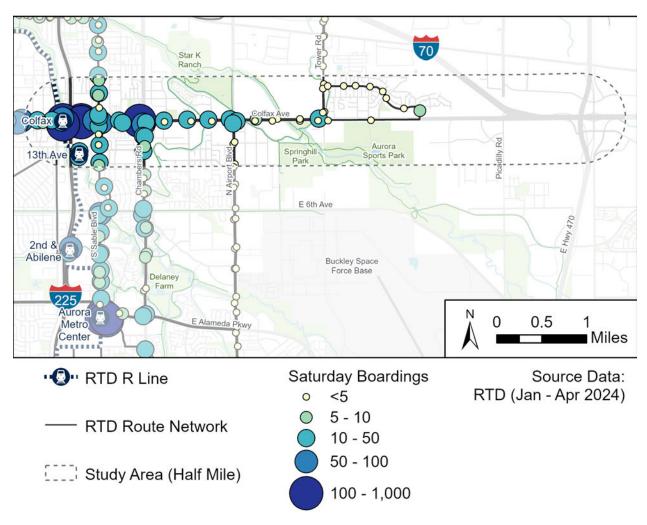
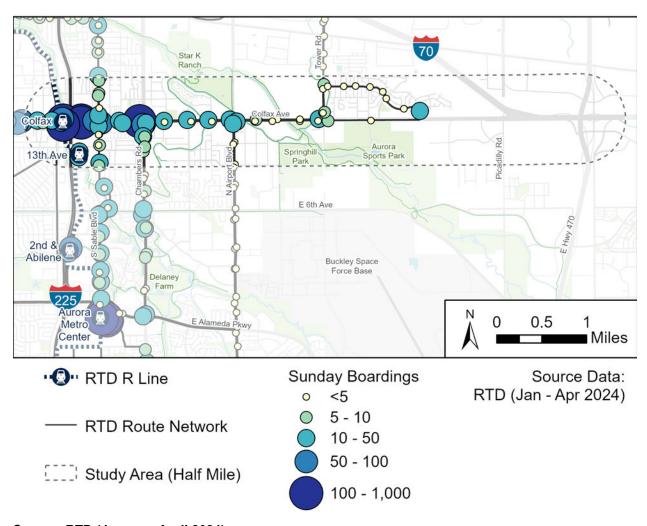


Figure 5-7: Total Saturday boardings





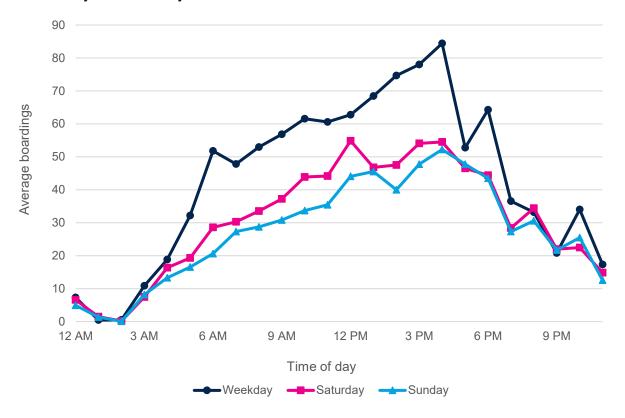
Source: RTD (January–April 2024)
Figure 5-8: Total Sunday boardings





Figure 5-9 and Figure 5-10 show the temporal distribution of ridership for Routes 15 and 15L respectively, for boardings at stops located within the study area. Notably, the distribution of ridership on the weekends is relatively flat compared to that on weekdays, which has a more distinct morning and evening peak.

On weekdays, Route 15 experiences a morning peak at 6 a.m. with about 50 boardings per hour, and again in the evening peak at 4 p.m. with an average of 85 boardings per hour in the study area. In comparison, ridership on Saturday and Sunday hovers between 30 to 55 boardings per hour, for most of the day, with slightly higher numbers on Saturday than Sunday.



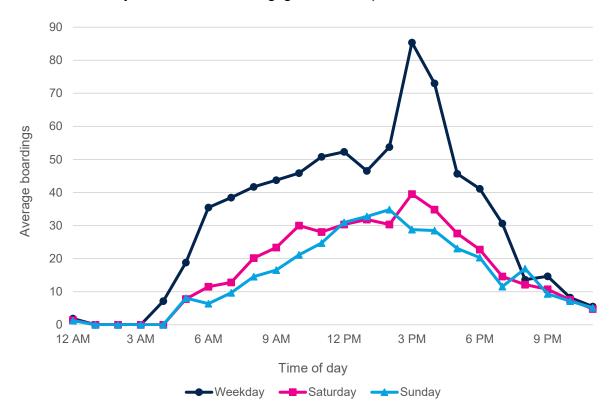
Source: RTD (January-April 2024)

Figure 5-9: Average ridership of Route 15 in the study area





On weekdays, ridership along Route 15L in the study area hovers between 35 to 55 boardings per hour for most of the day (6 a.m. to 6 p.m.), with a drastic mid-afternoon peak at 3 p.m. (85 boardings). Ridership on Saturday and Sunday, is comparatively less in numbers and flatter throughout the day. Boardings hover between 15 to 35 per hour for most of the day, and are almost negligible after 9 p.m.



Source: RTD (January-April 2024)

Figure 5-10: Average ridership of Route 15L in the study area

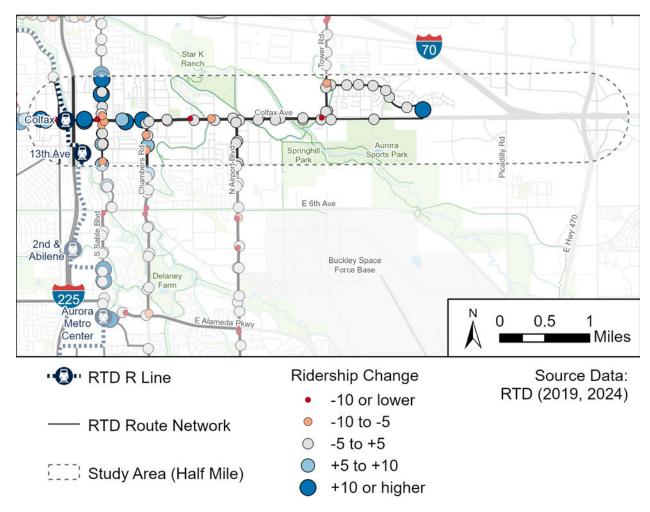
# 5.4 Post-COVID ridership recovery

The COVID-19 pandemic disrupted travel patterns for all modes of transportation, but especially for public transportation. While many agencies have recovered ridership on both their bus and rail networks, RTD has lagged the national average, with total ridership in 2024 on all bus services at roughly 63% of annual ridership in 2019. Ridership on local buses (excluding the MallRide and Flatiron Flyer, which have seen significant service disruptions due to construction and other factors) is at 73% of 2019 levels. Analyzing ridership changes between 2019 and 2024 at the route or corridor level provides insight into where transit may be serving essential workers whose travel patterns have been less impacted by trends towards hybrid or remote work, or where there may be latent demand for transit.





Ridership at all stops along East Colfax Avenue within the study area has stayed remarkably consistent between 2019 and 2024, with a net increase of 25 average boardings for a typical weekday. Figure 5-11 shows the change in ridership at the stop level within the study area. Most of the increased ridership is seen at the western end of the corridor between Chambers Road and I-225, while ridership east of Chambers Road has been mostly unchanged from 2019. This level of ridership retention suggests that transit continues to serve a critical role in serving travel demand in the study area.



Source: RTD, September-December 2019, January-April 2024

Figure 5-11: Change in ridership (2019–2024)

## 5.5 Transit productivity

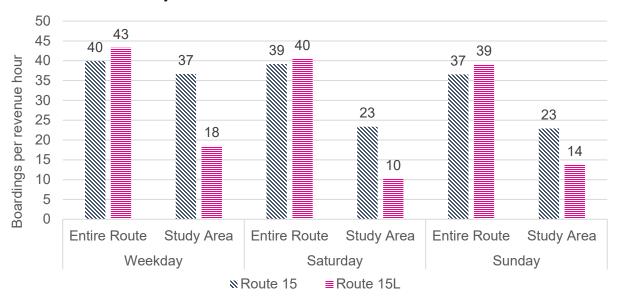
Productivity of local and limited stop local routes are typically measured in boardings per vehicle revenue hour. Revenue hours are the amount of time buses operate in service, including recovery time and operator breaks at the end of each trip.





Figure 5-12 shows the boardings per revenue hour for Routes 15 and 15L, for all seven days. On weekdays, the productivity of Route 15 is similar on the entire route and within the study area. However, the productivity of Route 15L is much lower in the study area compared to the entire route. On Saturday and Sunday, both routes have significantly lower productivity in the study area compared to their entire respective routes.

When entire routes are compared, Route 15L has higher productivity than Route 15 on all days. However, within the study area, Route 15L has significantly lower productivity than Route 15 on all days.



Source: RTD (January-April 2024)

Figure 5-12: Comparative productivity for Routes 15 and 15L, by day of week

# 5.6 Service reliability and on-time performance

## 5.6.1 Corridor bus delay

Connecting Aurora, the City's first multimodal transportation master plan included a 'State of the System' report an appendix to the full report. As part of its 'Public Transportation Overview,' bus delays was analyzed at key corridors in the city, including Colfax Avenue and Sable Boulevard. The analysis relied on transit data from Fall 2023, which varies from the January–April 2024 data set used in this report. However, findings remain relevant to understanding service reliability within the study area.

Service delay was calculated for each trip taken on each segment in the network over the course of the day and normalized by the length of the segment. Passenger delay was calculated by multiplying the average number of weekday passengers on board for a trip on that segment by the average delay.





#### **Colfax Avenue**

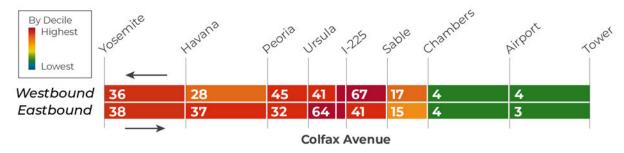
The analysis found that Colfax Avenue had the highest bus ridership in Aurora. Service on the corridor experiences 17% of all passenger delay hours in the city, at 315 hours per day, and 23% of the segment delay hours experienced at 62 hours (Figure 5-13).



Source: Connecting Aurora, State of the System report, January 2025

Figure 5-13: Colfax corridor passenger delay

Most passenger delays on Colfax Avenue are between Yosemite Street (outside the study area) and Chambers Road. In reviewing the passenger delay (Figure 5-14) and segment delay (Figure 5-15) per mile in the east and westbound directions, the most intense delay is experienced approaching I-225 in both directions. On Colfax Avenue, most of the boardings occur between Yosemite Street and Peoria Street, to the West of the study area. Most trips are made westbound towards Downtown Denver, away from the study area (Figure 5-16).

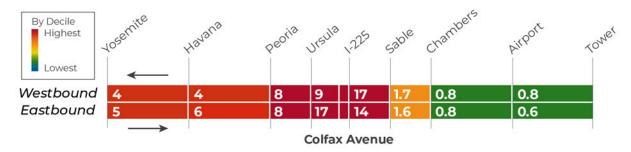


Source: Connecting Aurora, State of the System report, January 2025

Figure 5-14: Colfax average weekday hours of passenger delay per mile

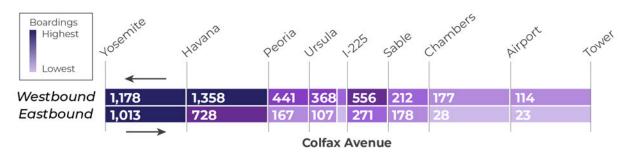






Source: Connecting Aurora, State of the System report, January 2025

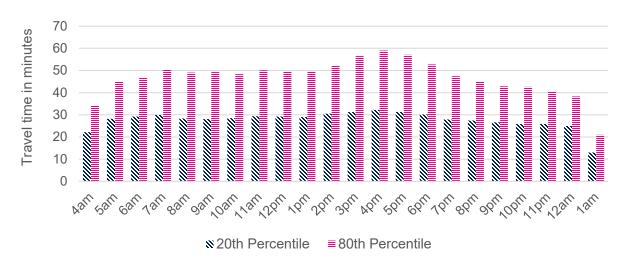
Figure 5-15: Colfax average weekday hours of segment delay per mile



Source: Connecting Aurora, State of the System report, January 2025

Figure 5-16: Colfax average weekday boardings by direction

On Colfax Avenue, the 20th percentile travel time remained relatively steady throughout the day at around 30 minutes to travel Colfax in Aurora from Yosemite Street to Picadilly Road, while the 80th percentile travel time fluctuated up to around 60 minutes at the peak around 4 p.m. (Figure 5-17).



Source: Connecting Aurora, State of the System report, January 2025

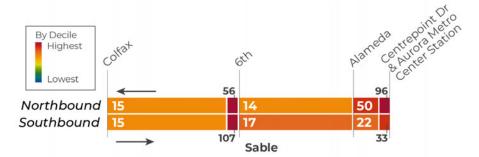
Figure 5-17: Colfax travel times from Yosemite to Picadilly





#### Sable Boulevard

The analysis found that Sable Boulevard accounts for 6% of the passenger delays in Aurora at 105 hours, and around 4% of segment delays at 11 hours. Figure 5-18 shows that passenger delays are consistently high on Sable Boulevard, especially on the short segment that connects the corridor on 6th Street and entering Aurora Metro Center Station. The segment-level delay is more moderate along the corridor but remains high at 6th Street and Aurora Metro Center Station (Figure 5-19). Most boardings in the corridor are northbound from Aurora Metro Center Station (Figure 5-20).



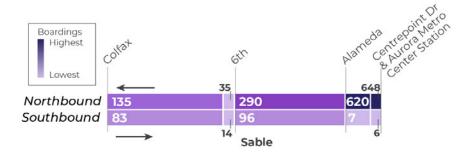
Source: Connecting Aurora, State of the System report, January 2025

Figure 5-18: Sable average weekday hours of passenger delay per mile



Source: Connecting Aurora, State of the System report, January 2025

Figure 5-19: Sable average weekday hours of segment delay per mile



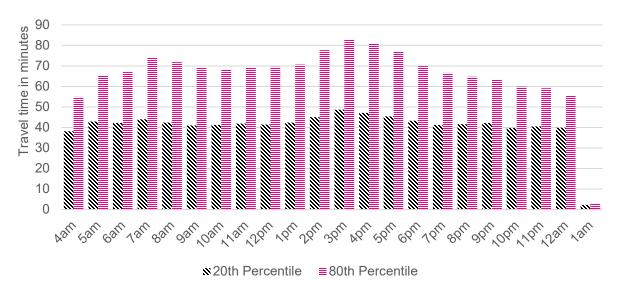
Source: Connecting Aurora, State of the System report, January 2025

Figure 5-20: Sable average weekday boardings





On Sable Boulevard, the 20<sup>th</sup> percentile travel time is around 40 minutes all day to travel from Colfax Avenue to Aurora Metro Center Station. The 80<sup>th</sup> percentile travel time ranges between 60 minutes to 80 minutes, with a peak at around 3 p.m. to 4 p.m. (Figure 5-21)



Source: Connecting Aurora, State of the System report, January 2025

Figure 5-21: Sable travel times from Colfax to Aurora Metro Center Station

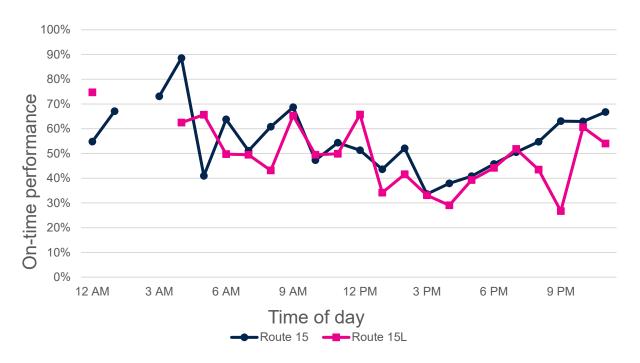
## 5.6.2 On-time performance

RTD measures on-time performance by comparing the timepoint on the schedule with the actual time the bus departs. A bus is considered on time if it departs up to one minute before or five minutes after the scheduled time. A train is considered on time if it departs up to one minute before or four minutes after the scheduled time. All services that depart earlier or later than their respective windows are considered early or late. RTD's current on-time performance goals are 87% for buses and 90% for all light rail services.

Figure 5-22 and Figure 5-23 illustrate the weekday on-time performance of Routes 15 and 15L in the study area, in the eastbound and westbound directions, respectively. Eastbound on-time performance is slightly worse than in the westbound direction. While the afternoon period has lower on-time performance than mornings, on-time performance is low throughout the day.

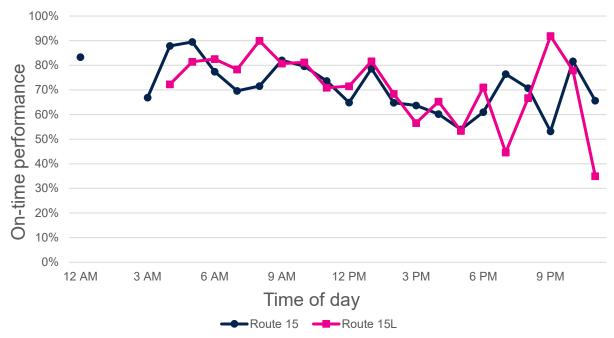






Source: RTD (January-April 2024)

Figure 5-22: Weekday eastbound on-time performance in the study area



Source: RTD (January-April 2024)

Figure 5-23: Weekday westbound on-time performance in the study area





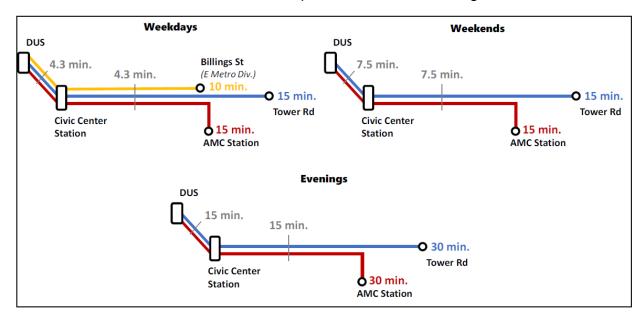
## 5.7 Recent and planned service improvements

This section documents recent and planned service improvements for the study area. Improvements identified as part of the East Colfax Avenue BRT project are presented first, followed by the improvements identified in RTD's System Optimization Plan.

## 5.7.1 East Colfax Avenue BRT project

The East Colfax Avenue BRT project, operating from Denver Union Station to the R Line at Colfax Station, is currently under construction through 2027. Between Denver Union Station and Yosemite Street, the BRT service will operate on dedicated side- or center-running bus-only lanes. From Yosemite Street to the eastern termini, service will operate in mixed traffic with speed and reliability improvements and enhanced stations.

According to the East Colfax Avenue BRT Project Transit Operations Plan and O&M Cost Estimate Tech Memo developed for the project, existing Routes 15 and 15L would be consolidated into three different route patterns, as shown in Figure 5-24.



Source: East Colfax Avenue BRT Project Transit Operations Plan and O&M Cost Estimate Tech Memo Figure 5-24: Proposed East Colfax Avenue BRT service plan

During weekdays, the three route patterns would provide a combined frequency of 4.3 minutes on the shared segment between Denver Union Station (DUS) and Billings Street. During evenings, the shared segment would have a combined frequency of 15 minutes. On weekends, the combined frequency would be 7.5 minutes. Notably, service between Billings Street and Tower Road would be improved to every 15 minutes on weekdays and weekends, up from every 30 minutes today.





The plan calls for stops to be consolidated west of Billings Street. Combined with the exclusive lanes, travel times during the p.m. peak between the Civic Center Station/Broadway and Billings Street are expected to be approximately 39 minutes in the eastbound direction and 38 minutes in the westbound direction. This is between four and six minutes faster than the existing Route 15L, depending on the direction. The plan does not make any recommendations about stop consolidation on Colfax east of Billings Street.

Ridership forecasting shows ridership would be highest in the eastbound direction during the p.m. peak hour, with the peak load occurring at Colorado Boulevard (roughly six miles from the western boundary of the Colfax BRT Next study area). With the implementation of BRT service, ridership is expected to increase by 42%, resulting in a need to accommodate 785 passengers in the peak hour in the peak direction. The proposed service plan would provide 14 buses an hour between Denver Union Station and Billing Street (4.3-minute frequencies), resulting in an average load of 56 passengers per bus trip.

This passenger load indicates that 60' articulated buses are needed for all trips to meet the peak demand. Route 15 is currently operated with 40' buses and Route 15L uses 60' articulated buses. The operating plan for East Colfax Avenue BRT indicates that all three BRT routes will be served by 60' branded BRT buses.

### 5.7.2 System Optimization Plan

RTD's System Optimization Plan (SOP) was adopted in July 2022, and recommendations began being implemented with the January 2023 service changes. During the May 2023 service changes, routing proposed in the SOP for Route 10 was modified to increase the amount of time for operator breaks/schedule recovery at the end of the line. The route was extended to Colfax and Billings, via East 11<sup>th</sup> Avenue and Peoria Street. In January 2025, two new Eastbound trips from Downtown Boulder Station to Anschutz Medical Center were added to FF5's service, however recommended headway improvements to 30 minutes from 60 minutes, are yet to be made. Additional pending recommendations include:

- Improved weekday service frequency for Route 153 from 30 minutes to 15 minutes.
- Realigning Routes 169 and 169L to start and end at Aurora Metro Center Station.
- Introducing a new Route 50 service between A Line Central Park Station and R Line Colfax Station, operating on all days at a 30-minute frequency.

Other service improvements proposed in the Arapahoe County Transportation Plan include:

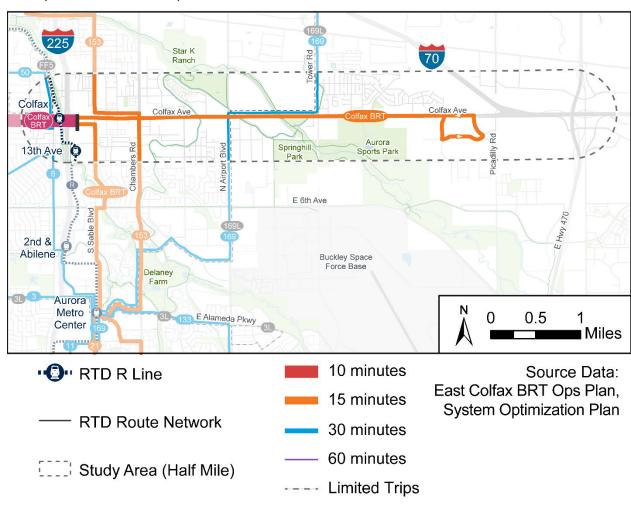
- East Colfax Avenue/Airport Boulevard Add Mobility Hub.
- North Airport Boulevard. East Colfax Avenue to Arapahoe Road Explore BRT enhancements throughout (long-term).
- East Colfax Avenue. Yosemite Street to I-225 Center-Running BRT extension.
- East Colfax Avenue. I-225 to Piccadilly Road BRT extension (long-term).
- East Colfax Avenue/Piccadilly Road Add Mobility Hub.





## 5.7.3 Maps of proposed routes and frequencies

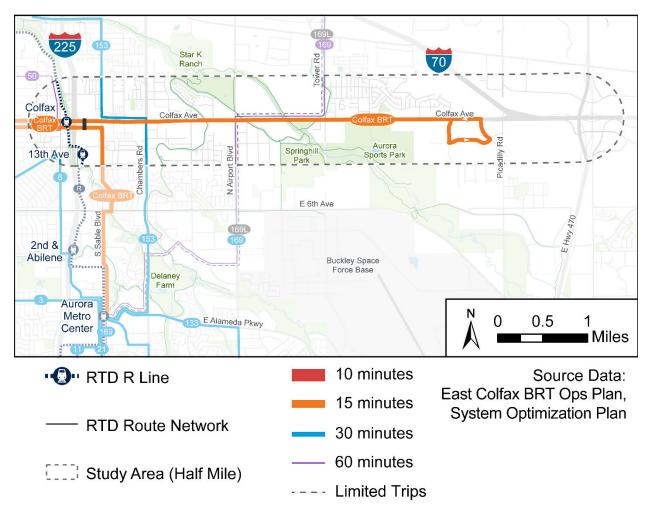
Figure 5-25 through Figure 5-27 show the planned route structure and frequencies identified for both East Colfax Avenue BRT and the System Optimization Plan within the study area. As noted previously, some of these improvements have already been implemented, while others, such as the East Colfax Avenue BRT service, have not. The intent of these figures is to show the future transit conditions on the corridor assuming all improvements are implemented.



Source: East Colfax BRT Operations Plan, System Optimization Plan

Figure 5-25: Planned system optimization – weekday service frequency

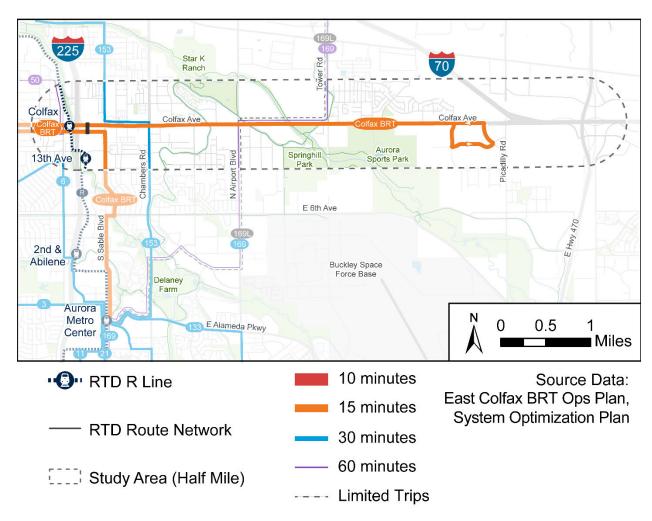




Source: East Colfax BRT Operations Plan, System Optimization Plan

Figure 5-26: Planned system optimization – Saturday service frequency





Source: East Colfax BRT Operations Plan, System Optimization Plan

Figure 5-27: Planned system optimization – Sunday service frequency





# 5.8 Bus stops and accessibility

Table 5-5 shows the percentage of amenities available at stops along Colfax Avenue and Sable Boulevard, in the study area, conducted with a desktop review. These stops are serviced by Routes 15 and 15L, respectively. Within the study area, 45% of bus stops on Colfax Avenue have benches, and 27% of stops have shelters. The percentages are lower on Sable Boulevard, with only 26% of stops in the study area having benches and 4% having a shelter. The provision of lighting at stops is negligible on both streets. Most stops along both routes have landing pads and sidewalk connections. However, only 61% of stops on Colfax Avenue are near protected signalized crosswalks. RTD is currently undertaking a bus stop inventory project that will provide more detail about the state of all bus stops in the system and may be valuable when developing recommendations for BRT station locations and enhancements.

Table 5-5: Amenities at stops for Routes 15 and 15L east of I-225

Amenity	Route 15, Colfax Avenue	Route 15L, Sable Boulevard		
Bench	15 (45%)	6 (26%)		
Shelter	9 (27%)	1 (4%)		
Lighting at stop	3 (9%)	0 (0%)		
Landing pad	23 (70%)	22 (96%)		
Sidewalk connection	28 (85%)	21 (91%)		
Adjacent to major crosswalk	20 (61%)	18 78%)		
Total number of stops	33	23		

Source: Nelson\Nygaard Consulting Associates

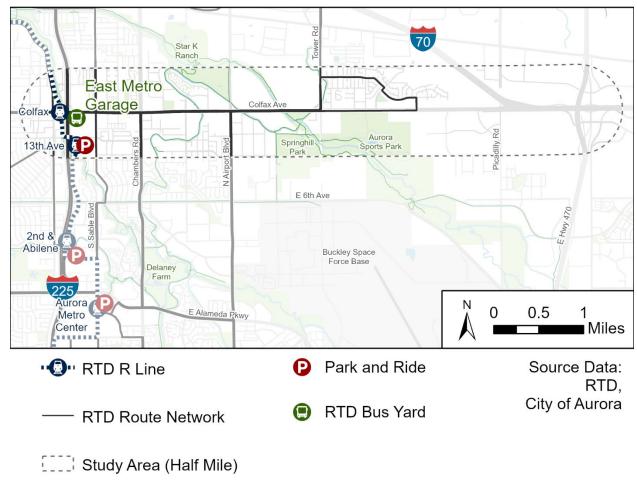




## 5.9 Transit facilities and infrastructure

Figure 5-28 shows the location of existing transit facilities and infrastructure in and around the study area. RTD provides Park-n-Rides facilities, free of cost for the first 24 hours for in-district residents, at RTD rail stations including 13<sup>th</sup> Avenue station, 2<sup>nd</sup> Avenue and Abilene station, and Aurora Metro Center station.

The East Metro Garage located on Colfax Avenue serves as RTD's bus maintenance facility for most of the service routes in the study area.



Source: RTD, City of Aurora

Figure 5-28: Transit facilities and infrastructure





# 5.10 Transit funding

RTD relies on a combination of fares, grants, sales-and-use taxes, and other revenues to maintain operations. Table 5-6 shows the fiscal year 2025 revenues, in comparison to fiscal year 2024 revenues.

Table 5-6: RTD fiscal year 2025 comparative cash flow (thousands of dollars)

Budget item	FY 2024 budget	FY 2025 budget	Change	
Fares	\$63,930	\$57,165	\$(6,765)	
Sales-and-Use Tax	\$932,541	\$903,171	\$(29,370)	
Grant Revenue and Other Income	\$349,066	\$391,728	\$41,662	
Total Revenues	\$1,345,537	\$1,352,064	\$5,527	
Salaries and benefits	\$367,320	\$419,864	\$52,544	
Materials and supplies	\$61,385	\$69,410	\$8,025	
Outside services	\$337,457	\$388,268	\$50,811	
Utilities	\$21,939	\$22,884	\$945	
Leases and rentals	\$5,239	\$5,188	\$(51)	
Other expenses	\$(6,629)	\$12,866	\$19,495	
Insurance	\$15,175	\$16,600	\$1,425	
Purchased transportation	\$238,963	\$298,531	\$59,568	
Total Operating Expenses	\$1,040,849	\$1,233,611	\$192,762	
Debt Service	\$223,284	\$229,427	\$6,143	
Capital Expenditures	\$185,460	\$36,148	\$(149,312)	
Capital Carryforward	\$232,774	\$324,998	\$92,224	
Total Non-Operating Expenditures	\$641,518	\$590,573	\$(50,945)	
Contribution to Reserves	-	\$(97,833)	\$(97,833)	
Net Cash Flow	\$(336,830)	\$(472,120)	\$(135,290)	

Source: RTD, Fiscal Year 2025 Budget Book

RTD reports that 2025 is budgeted to decrease from the previous year due to lower customer fares in 2024, however fares only comprise 5% of RTD's revenues. Further, operating and capital grants are lower for 2025 compared to 2024 due to the one-time allocation of \$150 million to the City and County of Denver for the East Colfax Avenue BRT project. Table 5-6 shows the operating expenses for fiscal year 2025, which are budgeted to increase over 2024. A major increase is seen in salaries and benefits to





support the continued hiring of frontline positions to support the System Optimization Plan and increase revenue hours in 2025. The RTD Fiscal Year 2025 Budget Book does not include operating expenses per revenue hour. However, RTD's latest profile on the National Transit Database indicates that bus service operations cost \$202.66 per revenue hour.

# 5.11 Key takeaways

Key takeaways from the existing transit service in the study area that will inform the analysis of BRT alternatives include:

- RTD's bus and rail network serves the East Colfax corridor in Aurora, with Routes 15 and 15L carrying the highest ridership.
- These routes run nearly 24/7, but frequent delays, especially near I-225 and westbound toward Denver, hinder reliability. Only 63% of buses arrive on time, falling short of RTD's target.
- Colfax Avenue accounts for 17% of all transit delays in Aurora, while Sable Boulevard (served by the 15L) experiences congestion, particularly near Aurora Metro Center Station.
- Many bus stops in the study area lack benches, shelters, and lighting, making accessibility inconsistent.
- Despite these challenges, the corridor experiences relatively high ridership, with nearly 3,000 weekday boardings on all stops within the study area.
- The East Colfax Avenue BRT project currently under construction will consolidate Routes 15 and 15L into a more efficient system with three BRT routes resulting in increased service levels along the Colfax BRT Next corridor.





# 6 Route 15 passenger experience audit

The Route 15 passenger experience audit was an opportunity to observe East Colfax Avenue from the perspective of a transit passenger. Project team members rode transit and walked between several bus stops, observing how the transit service and built environment contributed to their overall experience on the corridor. The auditors verified certain existing conditions findings, and perhaps most importantly, experienced first-hand what it is like riding and waiting for transit along the corridor.

Nine people participated in the audit and shared qualitative feedback during two sessions on two days in February 2025. This limited time on the corridor provided anecdotal evidence about the transit conditions. These observations do not represent an exhaustive inventory nor are they representative of all Route 15 trips between the R Line Colfax Station and Tower Road. The audit focused on five key themes reflecting different aspects of a transit passenger's journey, both on board the bus and while walking and waiting at bus stops:

- Personal safety, security and comfort
- Accessibility
- Multimodal connectivity
- Wayfinding
- Travel time and delay.

# 6.1 Audit itinerary

The audit was scheduled over two sessions to observe both peak and non-peak conditions on the corridor:

- Midday session Wednesday, February 19, 2025, between 11 a.m. and 1 p.m.
- **Evening session** Wednesday, February 26, 2025, between 3:30 p.m. and 5:30 p.m. Before the evening session, between 2:45 p.m. and 3:30 p.m., an auditor rode Route 15 roundtrip between Colfax Station and Sable Boulevard to make additional observations about on-board conditions during peak ridership.

The evening audit session was scheduled to be close to the 3 p.m. peak transit ridership while also observing the impact on the passenger experience of higher evening traffic volumes, and lower light conditions.





The midday audit itinerary was as follows (Figure 6-1):

- Rode Route 15 eastbound between Colfax Station and Idalia Court.
- Walked eastbound from Idalia Court to Norfolk Street.
- Rode Route 15 from Norfolk Street, through turnaround, to Altura Boulevard.
- Walked westbound from Altura Boulevard to Colfax Station.

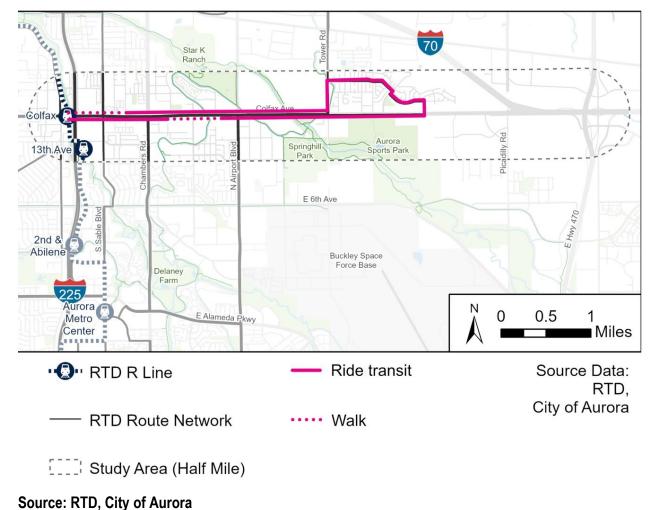


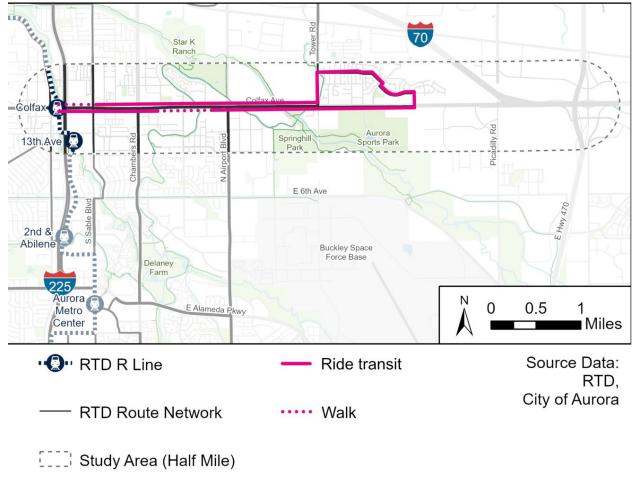
Figure 6-1: Route 15 passenger experience audit midday itinerary





The evening audit itinerary was as follows (Figure 6-2):

- When the eastbound Route 15 was late, walked from Colfax Station to Billings Street.
- Rode Route 15 from Billings Street to Idalia Court.
- Walked eastbound from Idalia Court to Norfolk Street.
- Rode Route 15 from Norfolk Street, through the turnaround, to Sable Boulevard.
- Walked westbound from Sable Boulevard to Colfax Station.



Source: RTD, City of Aurora

Figure 6-2: Route 15 passenger experience audit evening itinerary





# 6.2 Personal safety, security and comfort

The audit identified characteristics of the built environment and transit service that contribute to how safe, secure and comfortable people feel during their transit journey. For these purposes, safety was defined as protection from unintended harm, including road safety, while security was thought of as protection from deliberate harm such as crime and harassment. Certain characteristics of the transit service and corridor reduced the auditors' perceived safety and security:

- Other passengers' behavior impacted the perceptions of safety and security on board vehicles, especially on Route 15's 40-foot buses which have limited opportunity for passengers to distance themselves from uncomfortable situations.
- Vehicle cleanliness impacted auditors' experience on the bus.
- Completeness of the sidewalk network, proximity of pedestrians to traffic, activation of adjacent land uses, and cleanliness of bus stops contributed to diminished perceptions of personal safety, security and comfort while walking.

### 6.2.1 On-board safety, security, and comfort

The auditors tended to feel less secure and comfortable on the midday buses than the evening buses, largely due to other passengers' behavior, including evidence of drug and alcohol usage. A lack of vehicle cleanliness was more of an issue in the evening.

## Passenger behavior

Other passengers' behavior onboard contributed to discomfort and uneasiness of some of the midday auditors. A heated exchange between two passengers was discomforting because of the potential for it to escalate and impact other passengers' safety. One of the buses ridden at midday smelled of marijuana, and a passenger disembarked a few stops later holding a joint.

#### Vehicle cleanliness

In the evening, the auditors encountered some trash on the bus seats and floor. Finding empty miniature bottles of alcohol was especially discomforting since fellow passengers included teens and caregivers with young children.

#### Crowding

Crowding on the buses, and the associated security concerns, was not an issue during the midday or evening audits. While they never rode an empty bus, the auditors always found available seating and the crowding levels never reached standing-room only.





### 6.2.2 Safety, security, and comfort while walking

The pedestrian environment along the corridor consistently felt unsafe during midday and evening due primarily to the condition and location of sidewalks, poor lighting, sparse development, and the condition of the bus stops.

### Gaps in sidewalk network

Multiple sections of Colfax Avenue, especially east of Laredo Street, are missing sidewalks and this contributed to an uncomfortable pedestrian environment. Suddenly encountering the end of the sidewalk, especially on the eastern end of the corridor, made the walking experience unpredictable and reduced pedestrians' perceptions of safety.

### Proximity to vehicular traffic

Walking along the corridor felt safer when there was more separation between the sidewalk and vehicles (Figure 6-3). East of Laredo Street the detached sidewalk is separated from the road by a landscaped strip and street trees, making it a more comfortable place to walk. The trees provided a physical barrier to the traffic and seem to reduce the volume of street noise. In the summer months, shade from these trees may create a cooler walking environment.





**Source: Bespoke Transit Solutions** 

Figure 6-3: Examples of attached (left) and detached (right) sidewalks

Sections of the corridor with attached sidewalks, such as on the south side of Colfax Avenue between Idalia Court and Laredo Street, felt unsafe to walk along. This was especially true where the outside (e.g., curbside) lane is very wide, enabling faster driver speeds and placing pedestrians very close to higher speed traffic. An auditor commented that walking so close to moving vehicles may feel precarious for caregivers





with young children who tend to make unpredictable movements. Having a narrow, attached sidewalk is also not conducive to socializing since there is only space for pedestrians to walk single file.

### **Pedestrian crossings**

Pedestrian crossings on the corridor generally felt unprotected from vehicles. A few examples include:

- There are no crosswalks or protected pedestrian signal phases at the I-225 onramps, which felt particularly unsafe since drivers may try to accelerate as they get on the highway.
- At the southwest corner of East Colfax Avenue and Sable Boulevard, a Route 15L bus made too-tight of a southbound right-turn and drove up onto the curb.
- There is no protected pedestrian signal phase crossing Laredo Street on the south side of East Colfax Avenue. A right-turning vehicle encroached on the crosswalk as the midday auditors crossed the street.
- Many driveways have wide corner radii that allow vehicles to make high-speed turns in and out.

Crossing East Colfax Avenue itself poses some unique challenges. Between Chambers and N Airport Boulevard the signalized intersections are typically 0.5 miles apart, and it is one mile from N Airport Boulevard to Tower Road. Given long distances between signalized intersections and few underpasses, some pedestrians likely cross midblock. The median does provide a pedestrian refuge, but drivers turning left through the median (i.e., where it is level with the roadway) pose a safety risk to people trying to cross. This safety issue was evident during the evening audit when a driver made a U-turn through the red brick median treatment where the High Line Canal Trail meets East Colfax Avenue. Since there is no underpass or protected pedestrian crossing here, some pedestrians and cyclists may cross at grade, which creates a safety risk given the turning vehicles.

### Frequent driveways

Along the sections of the corridor the auditors walked, adjacent properties often each have at least one driveway access. There is little evidence of any driveway consolidation and as a result, many driveways and business accesses interrupt the sidewalks, which made the corridor feel hostile to pedestrians. Furthermore, many driveways along the corridor are configured with large turning radii or slip lanes that allow drivers to turn in and out of the driveway at high speed, increasing pedestrian discomfort. An auditor noted it was uncomfortable crossing many business driveways and having to look over their shoulder to be sure drivers making a right turn noticed them walking.

#### Less-active land uses

The eastern end of the corridor has lower-density development, and the land uses are more auto-oriented (e.g., gas station, car wash, drive-thru, storage facility).





Development with large setbacks and inactive facades felt particularly unwelcoming to pedestrians. In some cases, large undeveloped parcels or open space added to the feeling of isolation. With few other pedestrians providing "eyes on the street," the lack of natural surveillance eroded the sense of safety while walking or waiting for the bus. For example, the eastbound bus stop at Norfolk Street is in front of a storage facility, and the absence of other people around made several auditors feel isolated and uncomfortable waiting here, even in the light of midday.

### Pedestrian scale lighting and clear lines of sight

Unobstructed sight lines along the walking path and into bus stops, and adequate pedestrian-scale lighting help pedestrians and transit passengers feel safe and comfortable using a corridor at night. The source of lighting can be dedicated pedestrian lights, streetlights, lights from an adjacent building or illumination from within a bus shelter.

While most of the median includes streetlights, few dedicated pedestrian lights were observed. The bus stop shelters on the corridor typically do not include dedicated pedestrian lighting. With the lower-density development on the eastern end, there are fewer buildings adjacent to the sidewalk and bus stops to provide ambient pedestrian lighting. A few locations that felt particularly poorly lit during the audit included:

- The Colfax Station bus stops, beneath the R Line station, have colorful hanging lights which likely provide some illumination in the evening. However, the staircases and pillars partially obstruct the view of the station area, which may deter some passengers from using those stops at night.
- The I-225 underpass (Figure 6-4) felt unwelcoming during the midday and evening audits as it is not well lit and the columns prevent clear line of sight of the whole area.



Source: Bespoke Transit Solutions Figure 6-4: I-225 underpass





### Bus stop amenities

The bus stop amenities vary along the corridor. Higher ridership stops tend to have shelters, seating and trash receptacles, while lower ridership stops are marked only with a bus stop sign.

### Bus stop maintenance and cleanliness

Transit infrastructure in disrepair can make a corridor feel neglected and deter people who have other mobility options from using the transit service. While several bus stops did have trash receptacles, some stops were not clean or well-maintained. Especially on the western end of the corridor, many stops had loose trash. For example, the westbound Billings Street shelter contained a pile of charred wood and ash, and the wooden bench needs repair (Figure 6-5).





**Source: Bespoke Transit Solutions** 

Figure 6-5: Example of bus stop needing cleaning (left) and maintenance (right)

## 6.3 Accessibility

It should be noted that none of the auditors have a visible disability, nor did they use a mobility device. The auditors also did not encounter any passengers with visible disabilities during either session.

Aspects of the pedestrian environment suggest the corridor is not fully accessible to all passengers, primarily due to narrow or missing sidewalks, snow removal, and frequent driveway cuts.





#### 6.3.1 Snow removal

It snowed the day before the midday audit, and all the bus stops encountered during that session appeared to have been shoveled. However, several sections of sidewalk between Idalia Court and Norfolk Street were not shoveled, likely making the sidewalks more difficult to navigate for passengers with limited mobility or using mobility devices (Figure 6-6).

### 6.3.2 Unpaved and narrow pedestrian pathways

Sections of missing sidewalk also diminish accessibility (Figure 6-6). For instance:

- Between Idalia Court and Norfolk Street, sidewalk is missing between St. Mary Ethiopian Orthodox Tewahedo Church and High Line Flats apartment building.
- The southern sidewalk ends at Norfolk Street preventing access to North Airport Road.
- No southern sidewalk connection exists between Tower Road and the Aurora Sports Park.

In most cases even though the sidewalk is missing, there were unpaved desire line footpaths in the dirt, but since that dirt path was also covered in snow, it likely would have been difficult to traverse in a wheelchair or with a stroller.

On the south side of the corridor, east of Norfolk Avenue, the sidewalk over the High Line Canal is narrow, and its effective width narrower still because of a guardrail. It may be difficult for a person using a wheelchair user to maneuver this section of sidewalk comfortably.





Source: Bespoke Transit Solutions

Figure 6-6: Examples of missing (left) and unshoveled (right) sidewalks





## 6.3.3 Curb ramps

In many locations along the eastern end of the corridor, existing curb ramps are angled 45 degrees towards the roadway, rather than being parallel with the pedestrian crossing. This puts people using wheelchairs or pushing strollers at risk of rolling into oncoming traffic.

## 6.3.4 Driveway cuts

Not only do frequent driveways erode the feeling of safety for pedestrians, but poorly designed driveway crossings can also impact accessibility. At a newer driveway crossing at Soccer City (16251 East Colfax Avenue), the sidewalk continues level across the driveway and truncated domes indicate the driveway edge. This crossing felt safe and comfortable yet was the exception.

At the majority of driveways crossing the auditors encountered, the sidewalk is not level across the driveway. Instead, the driveway cut has a narrow flat sidewalk section and then slopes down to the roadway. Walking or rolling across a driveway with a steep slope like this can be uncomfortable at best. Worse, this can be unsafe for people using wheelchairs or pushing strollers, since the steep camber can cause the front wheels to veer down towards the road.

## 6.4 Multi-modal connections

Despite limited multi-modal connectivity along the corridor, the auditors encountered several bicyclists and skateboarders. During the evening audit, four bicyclists were seen riding on the sidewalk, several young skateboarders rode the bus, and one transit passenger unloaded a bicycle from the bus's front bike rack. There are bike racks at both Colfax Station bus stops underneath the R Line station however both sets of racks were empty during both audits.

There are several potential transit-trail connections between Route 15 and the High Line Canal and Triple Creek Trailhead that could be improved with better sidewalk connections, and more visible wayfinding signage. For example, the High Line Canal trail intersects East Colfax Avenue between Laredo Street and Norfolk Street. While there is wayfinding signage on the trail, there is no visible signage or directions between the trail and bus stops at Norfolk Street or Laredo. This will be the future location of an underpass linking the High Line Canal Trail on either side of East Colfax Avenue. Until the underpass is completed, people wanting to continue on the trail need to cross Laredo Street and then double-back along East Colfax Avenue. This detour is not currently signed nor is it legible from the nearby bus stops.





# 6.5 Wayfinding

Next stop information onboard Route 15 helps orient passengers during their trip, but there is little wayfinding or transit information outside of the buses.

## 6.5.1 On-board passenger information

Each bus ridden during the audits included audible next stop announcements and visible displays on the digital message board. Opportunities to transfer to other bus routes were not announced. Helpfully, the operator announced an eight-minute layover at the Colfax –Tower (Eb) stop.

### 6.5.2 Off-board transit information

The only real-time transit information observed on the corridor was at the two Colfax Station bus stops (Figure 6-7). The station name pylons close to the bus stops include dynamic message screens, but neither of them was operational. Adjacent to the R Line platform stairs, there is a second dynamic message board with real-time information including next bus arrivals.

## 6.5.3 Pedestrian wayfinding

Most stops along the corridor include a red RTD bus stop sign which lists the routes serving that stop. While the eastbound Colfax Station pylon lists the relevant bus routes, several auditors noted that it is not obviously a bus stop because it lacks the typical red RTD bus stop flag (Figure 6-7).



**Source: Bespoke Transit Solutions** 

Figure 6-7: Colfax Station real-time information display (left) and pylon with static information (right)





### 6.5.4 Multiple Service Patterns

Multiple service patterns operate between Colfax Station and Sable Boulevard:

- Route 15 Tower Road
- Route 15 Billings Street
- Route 15L Billings Street
- Route 15L Aurora Metro Center

Less experienced transit passengers may be unfamiliar with these route variations, especially since route and service maps are not readily available on the corridor. The evening auditors observed one passenger boarding the wrong Route 15 bus only to get off and then back on the correct bus. Service delays can compound passengers' confusion about the multiple service patterns, as the desired Route 15 or 15L bus may not arrive at the expected time.

## 6.6 Travel time and delay

The auditors experienced service delays during both the midday and evening peak sessions. Especially during the p.m. audit, it appeared as if transit delay was accumulating west of the study area and affecting service within the corridor. Midday, the eastbound buses arrived at Colfax Station and Norfolk Street two to three minutes later than scheduled. In the evening session, the eastbound bus arrived approximately 15 minutes late at Colfax Station. Adding to the auditors' frustration, the expected bus also disappeared from the real-time information in RTD's Next Ride and the Transit app. The auditors used the additional time to walk to the Billings Street stop and catch the next bus there.

That evening, maintenance vehicles blocked the curbside lane just west of the Colfax Station stop, which may have contributed to the delays. At about 5 p.m. at the end of the evening audit, three eastbound buses (two 15L – Aurora Metro Center, and one 15 – Billings Street) were bunched between Colfax Station and Billings Street stops.

Anecdotally, dwelling times appeared slightly longer west of Chambers where ridership is highest. During the midday audit, most passengers were observed paying with fare cards or mobile passes, while in the evening three passengers paid cash fares which may have increased dwell times.

## 6.7 Eastern terminus

The Route 15 service through the Tower Triangle neighborhood and layovers at Tower Road are unique characteristics of eastern terminus of the corridor, which may confuse newer riders.





Eastbound Route 15 loops through the Tower Triangle neighborhood so it can turn around at the end of the route and proceed back towards Union Station. Sometimes the loop is included at the end of an eastbound trip, other times the westbound trip begins with the loop before heading west on East Colfax Avenue. This may be unexpected for infrequent transit users.

A layover provides transit operators with a necessary break and opportunity to use the restroom. The Route 15 layover occurs at either the Colfax – Tower (Eb) stop or Colfax – Tower (Wb). The bus may layover at Colfax -Tower (Eb) at the end of an eastbound trip or beginning of a westbound trip. While it appears in RTD's schedule, the layover is not as apparent when trip planning on mobile apps.

During the midday audit, the eastbound bus laid over at the Colfax – Tower (Eb) stop for eight minutes before starting the westbound trip by continuing east to Himalaya Street and looping back through the Tower Triangle neighborhood to Tower Road. The bus operator announced the layover which helped passengers on board understand that the wait was planned but then exited the vehicle for several minutes which felt unsettling to several auditors.

While not occurring every trip, the layover at Colfax – Tower (Eb) and missing sidewalk connection between Tower Road and Dunkirk Street may limit transit access to the Aurora Sports Park. Three auditors who are parents commented they would be uncomfortable letting older children use Route 15 to access the Aurora Sports Park because the vehicle was temporarily unattended during the layover. Since there is no sidewalk connection, passengers cannot bypass the layover and simply walk to the Sports Park. This is not an issue on all trips as evidenced by the fact that during the evening audit, without a layover at Colfax – Tower (Eb), a young person dressed in soccer gear exited at Dunkirk Street, the bus stop closest to the entrance of the Sports Park.

## 6.8 Key takeaways

The main observations from the transit passenger experience audit are described in more detail by theme below, and include:

- There is a foundation of existing healthy transit ridership throughout the day despite some challenging conditions facing passengers.
- A diverse mix of passengers were observed on Route 15 buses including caregivers with toddlers, teens going to soccer practice, and an elderly passenger quietly reading.
- Walking along the corridor generally felt unsafe and uncomfortable during both time periods because of the proximity to vehicles, lack of lighting, inactive land uses and vacant parcels.





- Missing sidewalks and frequent driveway cuts diminish pedestrian safety and accessibility.
- The lack of bus stop cleanliness and maintenance reduced the quality of the pedestrian environment.
- Comfort and perception of safety and security on the bus were heavily influenced by other passengers' behavior, and vehicle cleanliness. The buses felt less comfortable and secure during the midday audit than in the evening.
- Especially during the evening audit, it appeared transit service on the corridor is susceptible to delays occurring west of Colfax Station. Bus bunching was observed in the evening eastbound at Colfax Station.
- For passengers less familiar with Route 15, the operations at the eastern end of the route, including the timing of the turnaround loop through the Tower Triangle neighborhood, and the location of the layover, may add complexity and confusion to the transit service.





# 7 Land use

The Colfax BRT Next Corridor is defined by new residential growth to the east of E-470 and by a strong jobs market in the west at Anschutz Medical Campus. In between the west end and east end of the corridor is a range of uses including manufactured homes, open space, and industrial uses. All analyses within this section use a 1-mile buffer of the corridor as the study area.

## 7.1 Economic framework

When looking at a range of asset classes including office, industrial and flex, retail, hotel, and multifamily, the corridor has seen strong growth in certain classes including industrial and flex, hotel, and multifamily. Each asset class is analyzed in more detail below.





### **7.1.1 Office**

Office developments in the corridor have remained relatively stable since 2010, growing at an annual average rate of 1.3% (Table 7-1). The corridor has absorbed approximately 1.1 million square feet of new office space since 2010, which equates to roughly two-thirds of all net new inventory in the City of Aurora. In addition, the current vacancy rate of 3.9% is low, and the rents are high (\$37.54 per square foot) suggesting that the market is tight.

Table 7-1: Office land use (2010–2025)

Description	2010	2015	2020	2025	Total change	Annual change	Annual percent
Inventory (square feet): Study area	1.9M	2.1M	2.1M	2.3M	406K	27K	1.3%
Inventory (square feet): City of Aurora	10.4M	10.7M	10.7M	10.9M	541K	36K	0.3%
Net absorption (square feet): Study area	543K	66K	-17K	0	1.1M	71K	
Net absorption (square feet): City of Aurora	575K	328K	-142K	-40K	1.7M	115K	
Vacancy rate (percent): Study area	10.6%	10.1%	2.5%	3.9%	-6.7%	-0.4%	
Vacancy rate (percent): City of Aurora	16.2%	10.7%	7.0%	9.9%	-6.3%	-0.4%	
Gross rent per square foot: Study area	\$19.07	\$18.66	\$23.91	\$37.54	\$18.47	\$1.23	4.6%
Gross rent per square foot: City of Aurora	\$14.96	\$16.02	\$18.25	\$20.44	\$5.48	\$0.37	2.1%

Source: CoStar, Economic & Planning Systems

Note: "M" represents millions, and "K" represents thousands.





### 7.1.2 Industrial and flex

Consistent with recent trends in the Denver metro region near Denver International Airport, industrial and flex inventory has increased by 9.1 million square feet since 2010 in the corridor (Table 7-2). This represents approximately 36% of all new inventory in the City of Aurora. The current vacancy rate in the corridor is 6.5%, which is lower than the City of Aurora (11%). Additionally, gross rent per square foot has seen strong growth, increasing by an annual average of 8.1% since 2010.

Table 7-2: Industrial and flex land use (2010–2025)

Description	2010	2015	2020	2025	Total change	Annual change	Annual percent
Inventory (square feet): Study area	7.5M	8.5M	12.9M	16.7M	9.1M	607K	5.4%
Inventory (square feet): City of Aurora	26.3M	28.7M	39.0M	51.7M	25.4M	1.7M	4.6%
Net absorption (square feet): Study area	-33K	48K	907K	231K	8.8M	585K	
Net absorption (square feet): City of Aurora	-305K	613K	1.9M	70K	22.6M	1.5M	
Vacancy rate (percent): Study area	10.3%	1.3%	4.1%	6.5%	-3.8%	-0.3%	
Vacancy rate (percent): City of Aurora	12.3%	5.4%	9.0%	11.0%	-1.3%	-0.1%	
Gross rent per square foot: Study area	\$3.90	\$8.13	\$10.43	\$12.62	\$8.72	\$0.58	8.1%
Gross rent per square foot: City of Aurora	\$4.46	\$5.83	\$8.09	\$8.08	\$3.62	\$0.24	4.0%

Source: CoStar, Economic & Planning Systems

Note: "M" represents millions and "K" represents thousands.





### 7.1.3 Retail

The corridor has a well-established retail inventory that has seen little change since 2010 (Table 7-3). Since 2010, the corridor has only added 61,087 square feet of retail inventory. Though, the corridor has managed to keep its retail space filled with a current vacancy rate of 1.7%. Gross rent per square foot has seen consistent growth, increasing from \$9.88 in 2010 to \$16 in 2025, which is lower than the City of Aurora's current average gross rent per square foot of \$19.04.

Table 7-3: Retail land use (2010–2025)

Description	2010	2015	2020	2025	Total change	Annual change	Annual percent
Inventory (square feet): Study area	1.5M	1.5M	1.5M	1.5M	61.1K	4.1K	5.4%
Inventory (square feet): City of Aurora	21.8M	22.2M	22.4M	22.5M	678K	45.2K	4.6%
Net absorption (square feet): Study area	24K	-1.3K	719	385	127K	8.5K	
Net absorption (square feet): City of Aurora	199K	-75.2K	-41.3K	12.7K	2.3M	154K	
Vacancy rate (percent): Study area	4.7%	3.0%	1.2%	1.7%	-3.0%	-0.2%	
Vacancy rate (percent): City of Aurora	9.1%	5.7%	5.4%	2.5%	-6.6%	-0.4%	
Gross rent per square foot: Study area	\$9.88	\$9.34	\$16.23	\$16.00	\$6.12	\$0.41	3.3%
Gross rent per square foot: City of Aurora	\$12.81	\$13.79	\$16.15	\$19.04	\$6.23	\$0.42	2.7%

Source: CoStar, Economic & Planning Systems

Note: "M" represents millions and "K" represents thousands.





#### 7.1.4 Hotel

The corridor has seen significant growth in hotel inventory, accounting for approximately 28% of all new hotel rooms in the City of Aurora since 2010 (Table 7-4). In 2024, the corridor also had a higher year-to-date (YTD) occupancy percentage, 12-month average daily rate (ADR), and 12-month revenue per available room (RevPAR) than the City of Aurora.

Table 7-4: Hotel land use (2010–2025)

Description	2010	2015	2020	2025	Total change	Annual change	Annual percent
Inventory (rooms): Study area	80	233	698	944	864	62	19.3%
Inventory (rooms): City of Aurora	3,558	4,456	6,503	6,636	3,078	220	4.6%
YTD occupancy (percent): Study area	55.9%	77.8%	42.6%	71.7%	15.8%	1.1%	
YTD occupancy (percent): City of Aurora	59.5%	77.4%	46.3%	70.6%	11.1%	0.8%	
12-month ADR: Study area	\$44.48	\$93.44	\$104.1 3	\$166.3 6	\$121.88	\$8.71	9.9%
12-month ADR: City of Aurora	\$69.37	\$91.47	\$95.58	\$152.8 6	\$83.49	\$5.96	5.8%
12-month RevPAR: Study area	\$18.54	\$51.10	\$34.24	\$82.36	\$63.82	\$4.56	11.2%
12-month RevPAR: City of Aurora	\$28.42	\$49.50	\$34.34	\$74.36	\$45.94	\$3.28	7.1%

Source: CoStar, Economic & Planning Systems





### 7.1.5 Multifamily

Since 2010, 2,790 multifamily units have been added to the corridor. This accounts for approximately 26% of all new multifamily inventory in the City of Aurora (Table 7-5). In 2025, the vacancy rate in the corridor is 15.6%, which is higher than Aurora's rate of 11.9%. Though, this could be indicative of new inventory coming online given the recent growth in the area. Rents between the corridor and City of Aurora are similar.

Table 7-5: Multifamily housing land use (2010–2025)

Description	2010	2015	2020	2025	Total change	Annual change	Annual percent
Inventory (units): Study area	5,352	5,360	6,318	8,142	2,790	186	2.8%
Inventory (units): City of Aurora	34,638	35,379	39,365	45,557	10,919	728	1.8%
Deliveries (units): Study area	0	0	561	0	2,790	186	
Deliveries (units): City of Aurora	0	301	1,571	255	11,194	746	
Vacancy rate (percent): Study area	6.2%	4.3%	7.5%	15.6%	9.4%	0.6%	
Vacancy rate (percent): City of Aurora	7.1%	4.4%	6.9%	11.9%	4.8%	0.3%	
Asking rent per unit: Study area	\$1,002	\$1,206	\$1,365	\$1,651	\$649	\$43	3.4%
Asking rent per unit: City of Aurora	\$975	1,237	\$1,438	\$1,663	\$688	\$46	3.6%
Gross rent per square foot: Study area	\$1.24	\$1.49	\$1.69	\$2.06	\$0.82	\$0.05	3.4%
Gross rent per square foot: City of Aurora	\$1.15	\$1.46	\$1.70	\$1.96	\$0.81	\$0.05	3.6%

Source: CoStar, Economic & Planning Systems





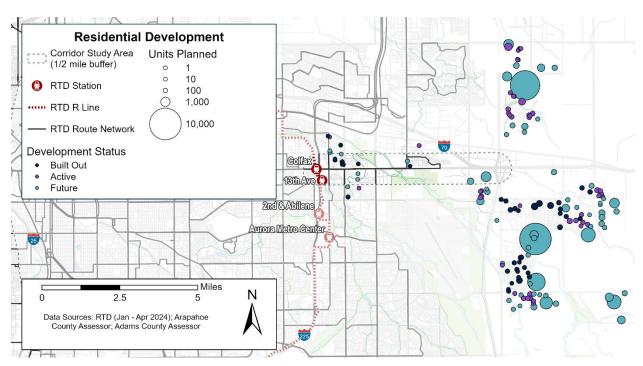
### 7.2 For-sale residential

The study area is projected to gain an additional 35,041 housing units (at an average of 3.01 persons per household) in the long term (Table 7-6). Much of this development is located just east of E-470 and East Colfax Avenue (Figure 7-1). In recent years, 7,120 housing units have achieved build out and 3,987 units are actively under development in the corridor. With this anticipated growth of housing units, the area could be called home for nearly 105,000 new residents in the coming years.

Table 7-6: For-sale residential products

Description	Build out	Active	Future
Number of Homes	7,120	3,987	35,041
Percent of Total	15.4%	8.6%	75.9%

Source: Zonda, Economic & Planning Systems



Source: RTD (January–April 2024), Arapahoe County Assessor, Adams County Assessor, Zonda, Economic & Planning Systems

Figure 7-1: Planned residential development





Of the 46,148 housing units near the East Colfax Avenue Corridor, 65.6% of the units are planned to be single-family residential units (Table 7-7). Condominium products account for 14.3% of all units, and townhouse products account for 20.1% of all units.

Table 7-7: For-sale residential by product type

Description	Single family	Condo	Townhouse
Number of Homes	30,294	6,581	9,273
Percent of Total	65.6%	14.3%	20.1%

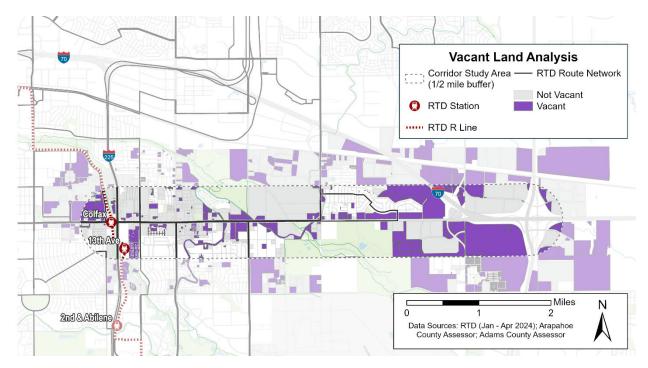
Source: Zonda, Economic & Planning Systems

## 7.3 Soft parcel analysis

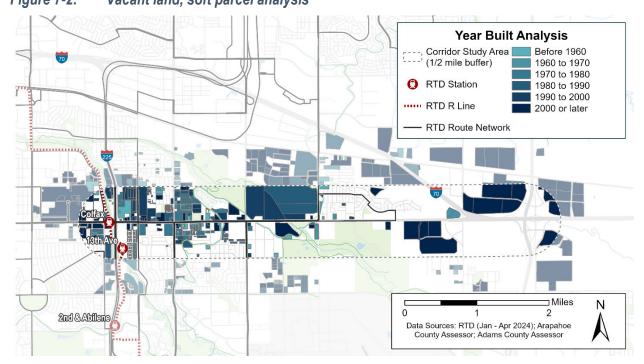
An analysis of the redevelopment potential of the study area was conducted to better understand where economic opportunities exist within the corridor. This analysis, called a soft parcel analysis, combines several criteria to give an individual property a score, typically ranging from zero to five. The score indicates a property's redevelopment potential, with zero being low and five being high. For this analysis, all single-family residential, open space, and right-of-way parcels were removed from the analysis to better focus on the redevelopment potential of vacant and commercial properties. As shown below, the following criteria were used for scoring purposes:

- Vacant land: Score of 1 if the parcel is undeveloped (Figure 7-2).
- **Year built**: Score of 1 if the structure on the parcel was built prior to 1985 (Figure 7-3). Note that the figure shows a range of categories in lieu of a score to emphasize the development patterns in the corridor.
- **Building-to-land value (BLV) ratio** compares the building value to the land value. If the ratio is less than or equal to 1, it receives a score of 1 (Figure 7-4). This indicates that the land is more valuable than the structure.
- Building-to-land area (BLA) ratio compares the total building square footprint
  to the land square footage. If the ratio is less than or equal to 0.2, it receives a
  score of 1 (Figure 7-5). This indicates that the property has low land coverage
  (below 20%) and could likely support higher density development.
- Land value per acre: If the land value per acre of the parcel is greater than \$500,000, it receives a score of 1 (Figure 7-6). Properties with high land value are typically indicative of areas ripe for development.



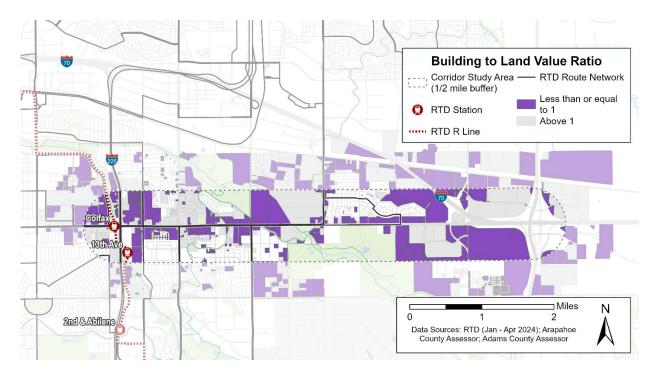


Source: RTD (January–April 2024), Arapahoe County Assessor, Adams County Assessor Figure 7-2: Vacant land, soft parcel analysis

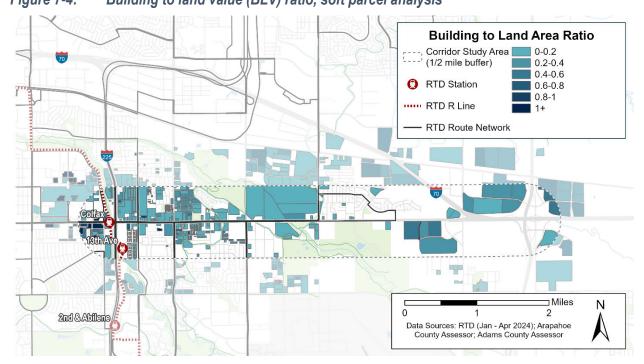


Source: RTD (January–April 2024), Arapahoe County Assessor, Adams County Assessor *Figure 7-3:* Year built, soft parcel analysis



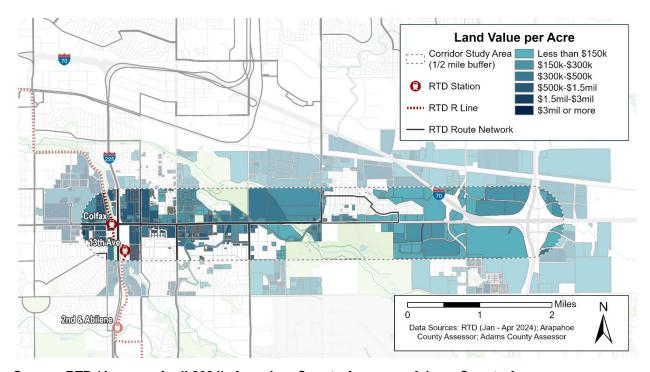


Source: RTD (January–April 2024), Arapahoe County Assessor, Adams County Assessor Figure 7-4: Building to land value (BLV) ratio, soft parcel analysis

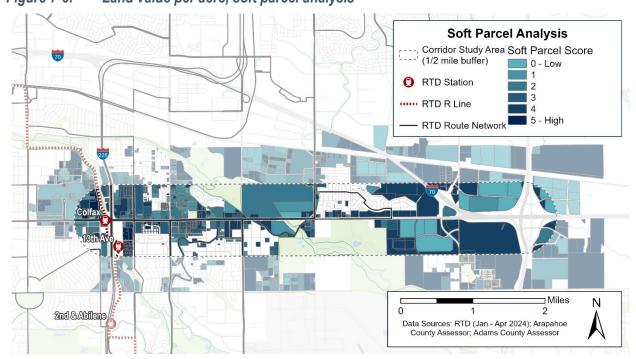


Source: RTD (January–April 2024), Arapahoe County Assessor, Adams County Assessor Figure 7-5: Building to land area (BLA) ratio, soft parcel analysis





Source: RTD (January–April 2024), Arapahoe County Assessor, Adams County Assessor Figure 7-6: Land value per acre, soft parcel analysis



Source: RTD (January–April 2024), Arapahoe County Assessor, Adams County Assessor Figure 7-7: Soft parcel analysis, overall score





The results of the soft parcel analysis (Figure 7-7) show that the sites "most ripe" for redevelopment opportunity (with a score of five) are located near the R Line and Anschutz Medical Campus. In addition to this area, there is a concentration of high scoring sites near E-470 and East Colfax Avenue on the east end of the study area. In general, the study area is anchored on each end by strong nodes—one with plenty of redevelopment opportunities (in the west) and one with new development opportunities (in the east).

## 7.4 Key takeaways

The corridor has proven to be a compelling location in terms of the commercial and residential real estate market. Across nearly all asset classes, the corridor has performed well, with nearly all metrics improving over the time period between 2010 and 2025. The most salient characteristics include:

- The office market conditions in the corridor are strong. While office has softened in most submarkets throughout the Denver metro area, the corridor office conditions reflect strong lease rates and a very low 3.6% vacancy rate. Rents are 83% higher than elsewhere in Aurora. Nearly two thirds of all new office construction in the City of Aurora in the past 15 years has located in this corridor.
- Industrial development has also been strong. Vacancy rates are well below equilibrium at 6.5%, with rents more than 50% higher than citywide averages.
- Retail has seen only modest growth, with limited new inventory (130,000 square feet). The space that has developed has been absorbed, given the very low vacancy rates on the corridor.
- Hotel development has been unusually strong with the addition of nearly 900 rooms in the corridor. The new inventory has performed well, with a 9.9% annual average growth rate over the past 15 years in Annual Daily Rate (ADR) and 11.2% annual average growth in Revenue per Available Room (RevPAR). These particularly strong metrics reflect a market that is not only able to consistently increase the inventory, but also raise rates, given that RevPAR has outpaced ADR
- Multifamily rental is the weakest asset class, with modest growth in the inventory in the corridor. There has been very little increase in supply. Weak conditions can also be seen with lower rental rates.
- Residential ownership conditions for single family, townhome, and condominium reflect an expanding inventory, when looking at the broader geography of the corridor. The market for the Denver-metro area is shifting to the eastern Aurora periphery and developers have entitled over 46,000 units, generally located within two to three miles north and south of the eastern end of the corridor.





- This imminent population growth of more than 100,000 individuals will affect the market, in terms of an increased demand for commercial services as well as an increased demand for mobility.
- The land supply in the corridor was evaluated using a series of filters built around age of structure, vacant status, and building value to land value ratios. The composite of these factors indicate where existing land uses are strong, or alternatively, soft. The market will likely seek out the opportunities and redevelopment of the soft parcels is likely of interest to developers. Thus, the existing conditions reflect a mosaic of overall strengthening conditions amidst a wide array of soft parcels, making a dynamic with a significant amount of potential for change.





# 8 Demographics

## 8.1 Introduction and background

The Colfax BRT Next study area encompasses approximately 6.48 square miles. Table 8-1 summarizes its demographic characteristics. The population of the study area is 22,228 people, at a density of 3,430 people per square mile. There are 7,707 households in the study area, with an average household size of three people, and a household density of 1,189 households per square mile. The median age in the study area is approximately 32, with 28% of the population being under the age of 18, and 8% being over the age of 65.

Table 8-1: Demographic characteristics in the study area

Characteristic	Total
Total population	22,228
Population density	3,430 people per square mile
Total households	7,707
Average household size	3
Household density	1,189 households per square mile
Median age	32
Population over 65	1,760 (8%)
Population under 18	6,258 (28%)





## 8.2 Population

As per estimates from DRCOG, the population of the study area is expected to grow by 10,000 people over 25 years. For reference, since 2000, the corridor has added 5,738 residents. Population and population density are important factors in determining how much demand there is for transit services. Higher density areas are more likely to have productive transit service while lower density areas are typically more challenging to serve with transit and are more auto oriented.

The densest areas in the study area are generally located close to Colfax Station, along Sable Boulevard and Chambers Road (Figure 8-1), close to the existing transit service. Over the next 25 years, the population is expected to grow in the study area, especially east of Tower Road, beyond existing transit service boundaries (Figure 8-2). As these areas grow and develop, RTD will likely need to expand its service to serve a growing market.

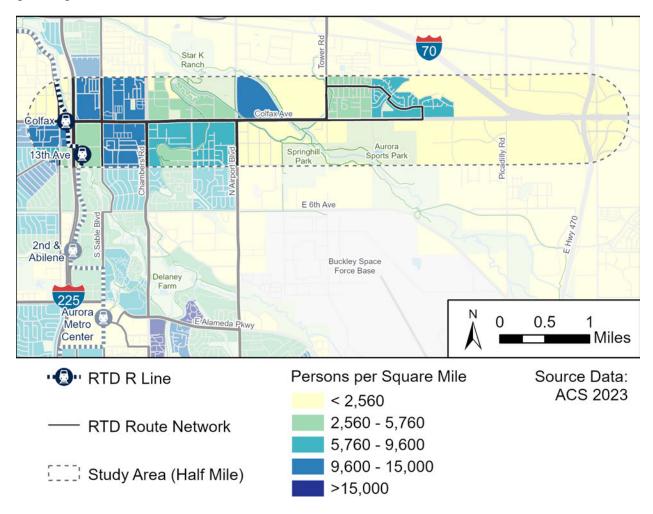
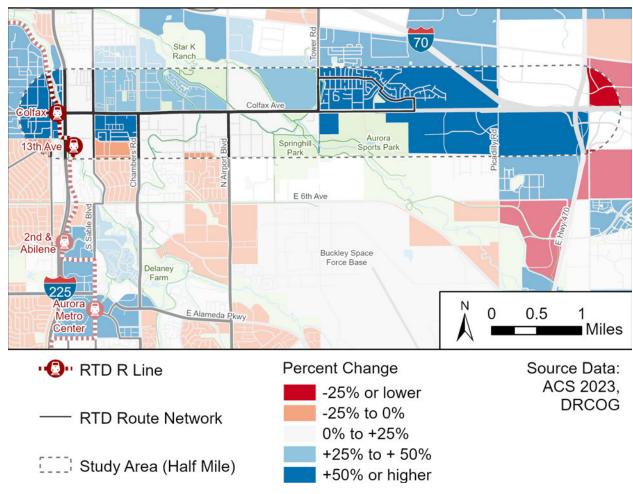


Figure 8-1: Population density in study area





Source: American Community Survey five-year estimates (2023), DRCOG

Figure 8-2: Percent change in population in study area

Population density is an important factor in how much demand there is for transit services. Higher density areas are more likely to have productive transit service while also having the infrastructure necessary (e.g., sidewalks, crosswalks) to make it easy to access transit. Lower density areas are typically more challenging to serve with transit and are more auto oriented.





### 8.3 Socioeconomic data

Demographic and socioeconomic characteristics can indicate how likely an individual, household, or community are to take transit. Using the latest American Community Survey (ACS) data, characteristics that were examined and visualized include people of color, people with disabilities, older adults, youth, low-income households, household vehicle ownership, renters, rent burdened households, and low English proficiency.

## 8.3.1 People of Color

People of Color are defined as non-white residents. Race and ethnicity are tied to the likelihood of an individual owning a vehicle, an individual being low-income, and an individual living in transit-scarce neighborhoods. Since 2010, the study area has seen a diversification of its population. As a percentage of total population, the white population declined from 52.8% in 2010 to 30.2% in 2024 (Table 8-2). Meanwhile, much of the gains can be attributed to other race and multiple race populations groups, which increased their total share of the corridor's population by 22% since 2010.

Table 8-2: Race and ethnicity (2010–2024)

Population by Race	2010	2024	Total change	Annual change
White Alone	52.8%	30.2%	-22.6%	-1.6%
Black	16.5%	14.6%	-1.8%	-0.1%
American Indian	1.2%	2.1%	1.0%	0.1%
Asian	3.9%	5.1%	1.2%	0.1%
Pacific Islander	0.5%	0.8%	0.3%	0.0%
Other Race	19.9%	27.4%	7.4%	0.5%
Multiple Races	5.2%	19.8%	14.6%	1.0%
Total	100.0%	100.0%	0.0%	0.0%

Source: Esri Business Analyst, Economic & Planning Systems





In the study area, people of color are concentrated between Colfax station and Tower Road, and around the I-70, north of Colfax Avenue (Figure 8-3).

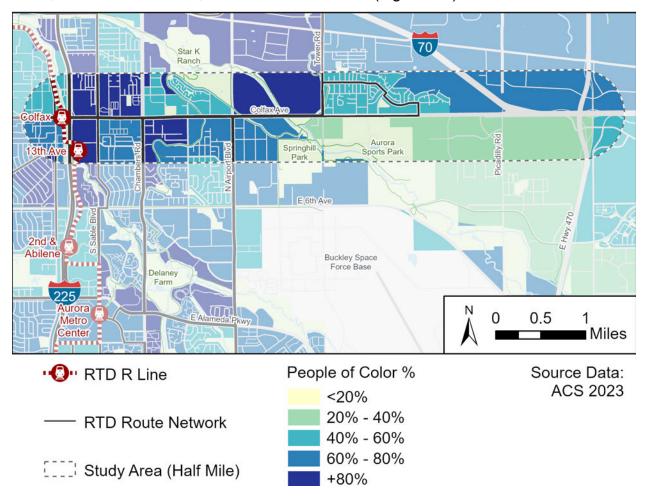


Figure 8-3: People of color within the study area





### 8.3.2 People with disabilities

People with disabilities may be more likely to rely on transit and paratransit services to meet their transportation needs and maintain an independent lifestyle. In 2022, people with disabilities accounted for 23.8 of the total population of the corridor. Parts of the study area between Chambers Road and Airport Boulevard have higher concentrations of people with disabilities than the rest of the area (Figure 8-4).

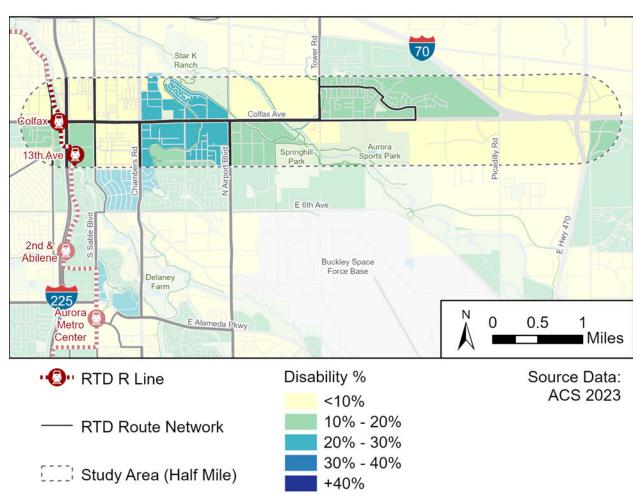


Figure 8-4: People with disabilities within the study area





#### 8.3.3 Older adults

Older adults are defined as 65 years or older. As people age, they often cannot or choose not to drive. Having access to transit can allow older adults to be mobile even if they no longer drive. While older adults typically are not a significant market for fixed-route service, they can represent potential riders for paratransit service. The eastern part of the study area, particularly south of East Colfax Avenue, has a higher concentration of older adults (Figure 8-5). Additionally, since 2010, the number of older adults who make up the corridor has increased by approximately 2.5% from 12.9% to 15.8%.

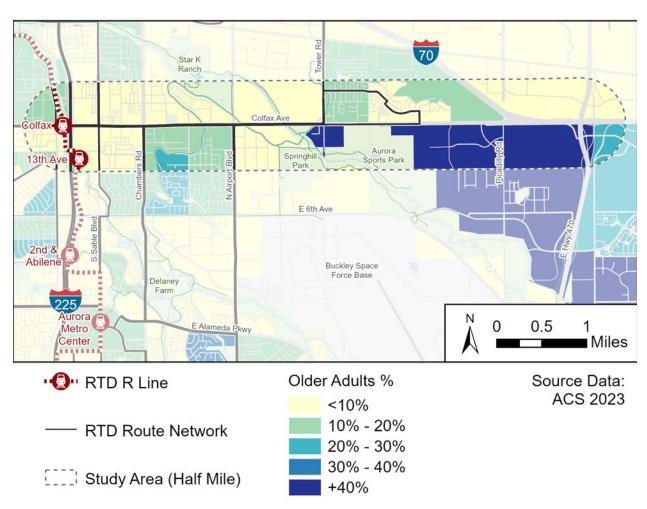


Figure 8-5: Older adults (age 65+) within the study area





#### 8.3.4 Youth

Youth is defined as 18 years or under. Households with more youth tend to make a higher number of trips. Access to transit can reduce driving trips to school and other caregiving activities. The youth in the study area are distributed between the western end near Colfax Station, and around Picadilly Road (Figure 8-6). Additionally, the number of youths who make up the corridor has decreased by 5.2% since 2010, from 33.1% of the total population to 27.8% of the total population.

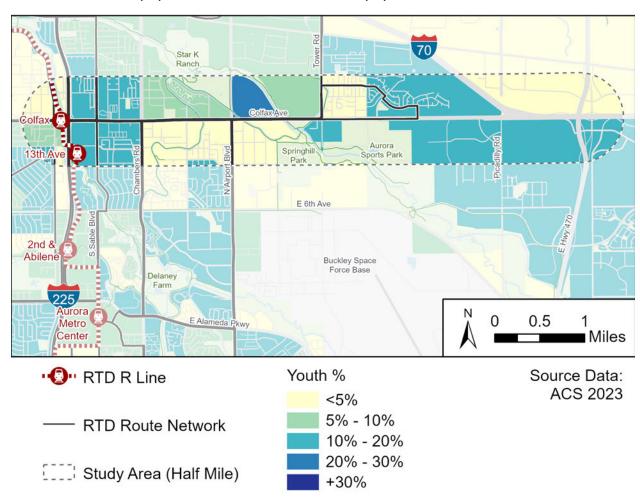


Figure 8-6: Youth (under age 18) in the study area





#### 8.3.5 Low-income households

Income is tied to the likelihood of an individual owning a vehicle. Low-income households may rely more heavily on public transportation to meet their transportation needs. The western part of the study area, especially north of East Colfax Avenue, has a higher concentration of low-income households (Figure 8-7). Additionally, the corridor's median household income of \$66,241 is lower than the City of Aurora's median household income of \$83,506.

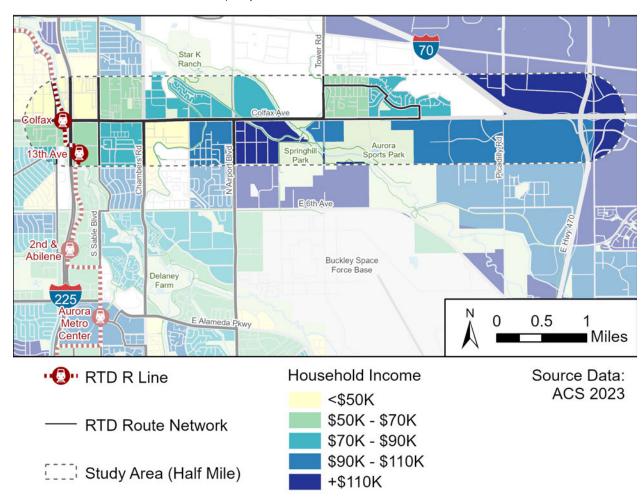


Figure 8-7: Low-income households in the study area





### 8.3.6 Household vehicle ownership

Households with zero vehicles are dependent on transit service to meet their travel needs. In recent years (since 2022), the corridor has seen a slight uptick in zero-vehicle households increasing from 9.1% of the total corridor to 11.8% (Table 8-3). Households with one vehicle have increased from 33.1% to 37.2%. Meanwhile, households with 2 vehicles and 3 or more vehicles have decreased, suggesting a shift in vehicle ownership.

Table 8-3: Car-free households (2022–2024)

Percentage of total	2022	2024	Total change	Annual change
0 Vehicles	9.1%	11.8%	2.7%	1.3%
1 Vehicle	33.1%	37.2%	4.1%	2.1%
2 Vehicles	35.8%	31.1%	-4.7%	-2.3%
3 Vehicles or more	22.0%	19.9%	-2.1%	-1.0%
Total	100.0%	100.0%	0.0%	0.0%

Source: Esri Business Analyst, Economic & Planning Systems





Vehicle ownership is the lowest on the western side of the study area, close to Colfax station and around Chambers Road (Figure 8-8).

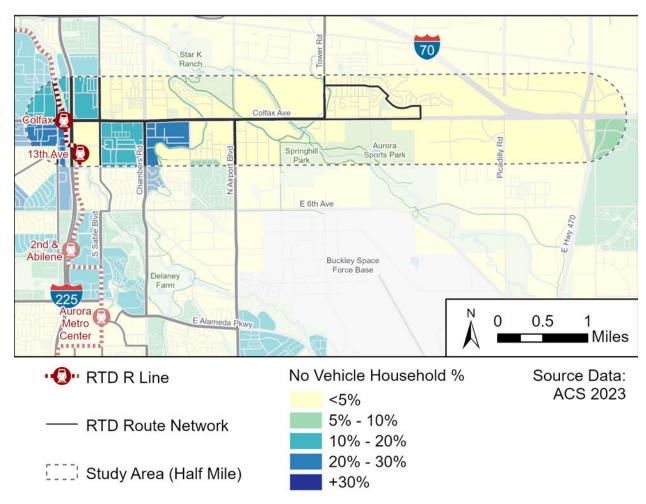


Figure 8-8: Household vehicle ownership in the study area





#### 8.3.7 Renters

Households who rent their homes are more likely to take transit. Since 2000, the corridor has seen a sizeable 12% increase in renter-occupied households, increasing from 37.5% to 49.5% (Table 8-4). Meanwhile, vacant and owner-occupied households have decreased, which indicates a stronger focus on the rental market. Ultimately, this could lead to increased ridership over time.

Table 8-4: Housing tenure by type (2000–2024)

Housing Type	2000	2010	2024	Total Change	Annual Change
Owner-Occupied	55.3%	49.1%	45.0%	-10.3%	-0.4%
Renter-Occupied	37.5%	43.2%	49.5%	12.0%	0.5%
Vacant	7.2%	7.7%	5.5%	-1.7%	-0.1%
Total	100%	100%	100%		

Source: Esri Business Analyst, Economic & Planning Systems





Most renters are located on the western side of the study area, close to Colfax station and around Chambers Road (Figure 8-9).

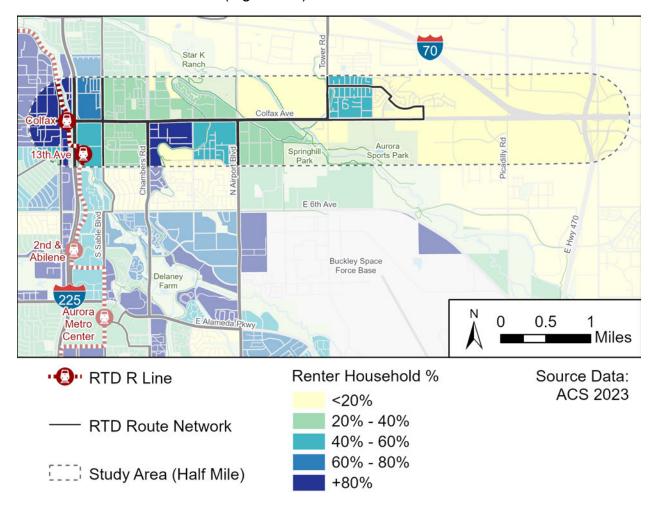


Figure 8-9: Renters within the study area





#### 8.3.8 Rent burdened households

Renters who spend over 30% of household income on shelter are considered rent burdened. In 2022, 66.8% of renters in the study area were rent-burdened. There are several block groups in the western part of the study area that have a large number of households that are rent burdened. Block groups north of Colfax Avenue, close to Tower Road, also have high percentages of rent-burdened households (Figure 8-10).

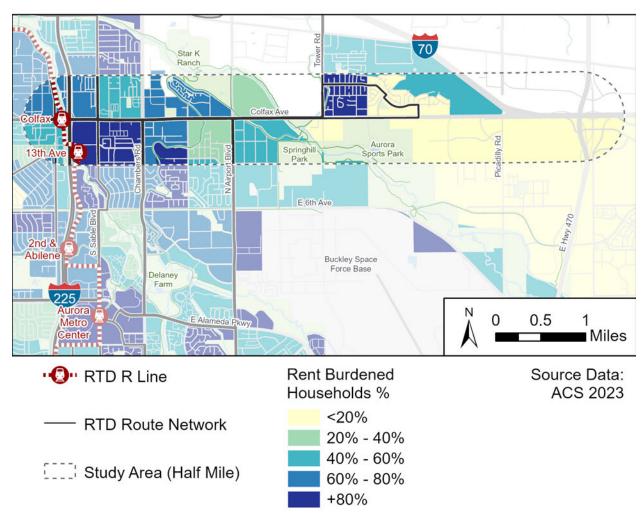


Figure 8-10: Rent burdened households in the study area





### 8.3.9 Low English proficiency (LEP)

LEP is often an indicator of immigrant communities. LEP individuals are also more likely to be low-income and not own a personal vehicle. In 2022, 24.2% of residents in the study area had LEP, which was higher than the City of Aurora, which had 17.7% of residents with LEP. Block groups close to Airport Road and north of I-70 have the lowest English proficiency in the study area (Figure 8-11).

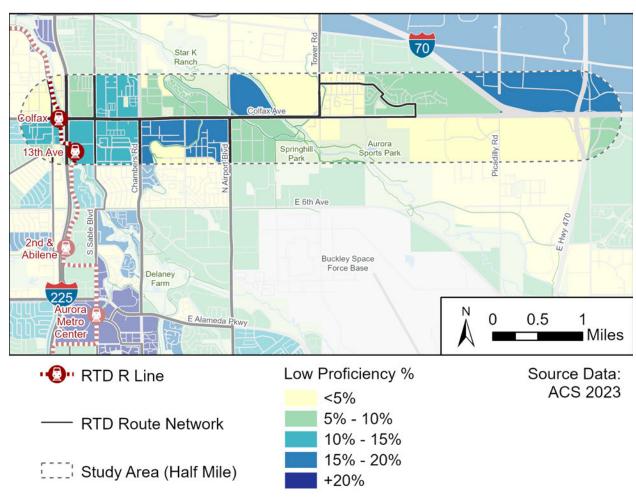


Figure 8-11: Low English proficiency in the study area





## 8.4 Employment

The study area is anticipating exponential employment growth, with projections showing an increase of nearly 5,000 jobs over the next 25 years in the study area (Table 8-5). From 2010 to 2023, the corridor had an average annual growth rate in total jobs of 7.7%.

Table 8-5: Existing and future employment in study area (2023–2050)

Geography	Employment (2023)	Employment (2050)	Growth rate
Study area	19,831	24,687	24.48%

Source: DRCOG

Figure 8-12 shows that areas east of Airport Boulevard south of East Colfax Avenue are predicted to have a 100–1000% increase in employment by 2050. Areas between I-225 and Airport Road will also see a 50%–100% increase in employment by 2050. Of these, neighborhoods around I-70 are currently not served by RTD transit and would require improved services to ensure that future employees are able to access these opportunities.

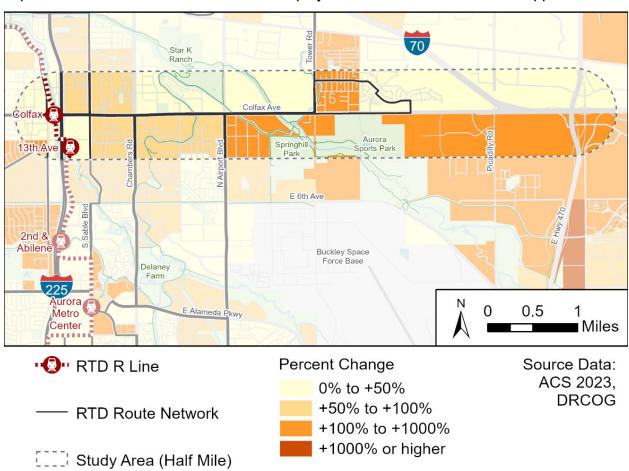


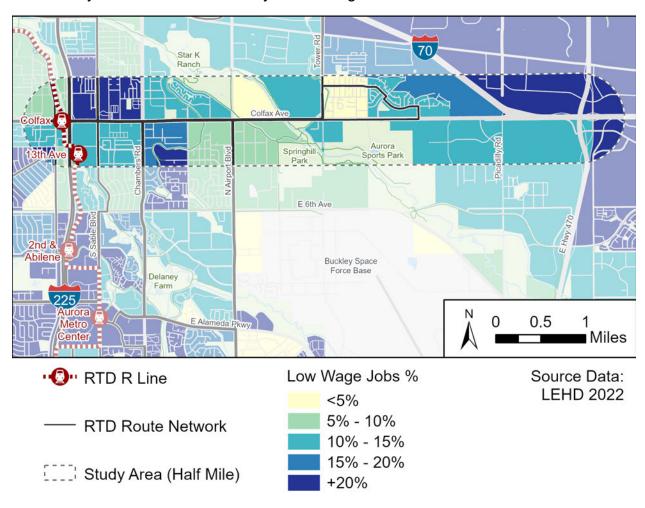
Figure 8-12: Percent change in employment in the study area





#### Low-wage jobs

To understand where employees might be more dependent on transit service for their commute, low-wage jobs throughout the study area were analyzed. Low-wage jobs are defined as those that generate a monthly income of less than \$1,250 per month, or \$15,000 per year. Employees who work low-wage jobs are more likely to use transit because it is a lower cost option than private vehicle ownership and reduces their transportation cost burden. Low wage jobs in the study area are concentrated in various block groups along East Colfax Avenue (Figure 8-13). Of these, jobs at the eastern end of the study area are not serviced by the existing fixed-route transit service.



Source: Longitudinal Employer-Household Dynamics (2022)

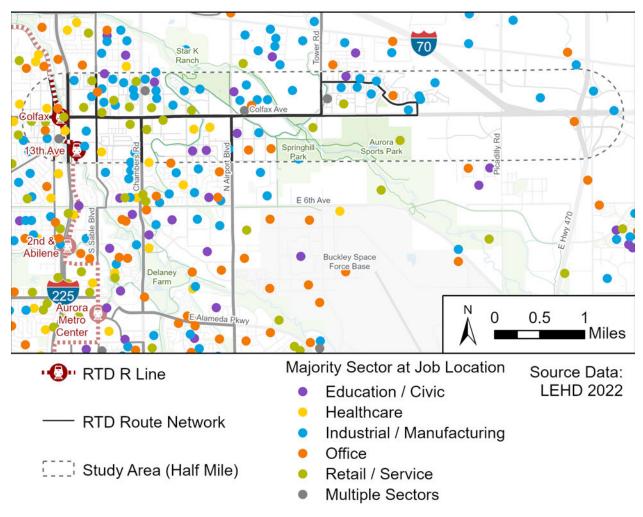
Figure 8-13: Low wage jobs in the study area





#### Jobs by sector

Detailed employment data provides insight into the types of jobs located in each area. The composite map (Figure 8-14) shows the distribution of jobs in the following sectors: education/civic, industrial/manufacturing, healthcare, and office. Each of these jobs has different travel characteristics that must be considered when designing transit service. For instance, the Anschutz Medical Campus is in the northwest corner of the study area and generates many healthcare jobs. People with these jobs typically work in shifts that may not coincide with typical office work schedules and require special considerations when designing future transit services.



Source: Longitudinal Employer-Household Dynamics (2022)

Figure 8-14: Job locations by sector in the study area



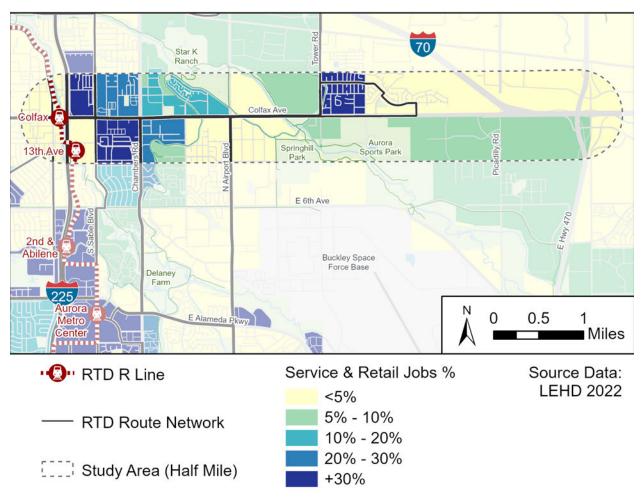


#### Jobs in service, retail, food and accommodation

Other sectors that generally employ transit-reliant commuters include the service and retail job sector (Figure 8-15), and the food and accommodation job sector (Figure 8-16).

Service and retail jobs make up at least 30% of overall jobs in the following locations:

- North of East Colfax Avenue between I-225 and Sable Boulevard
- North of East Colfax Avenue between Tower Road and Dunkirk Street
- South of East Colfax Avenue between Sable Boulevard and Chambers Road



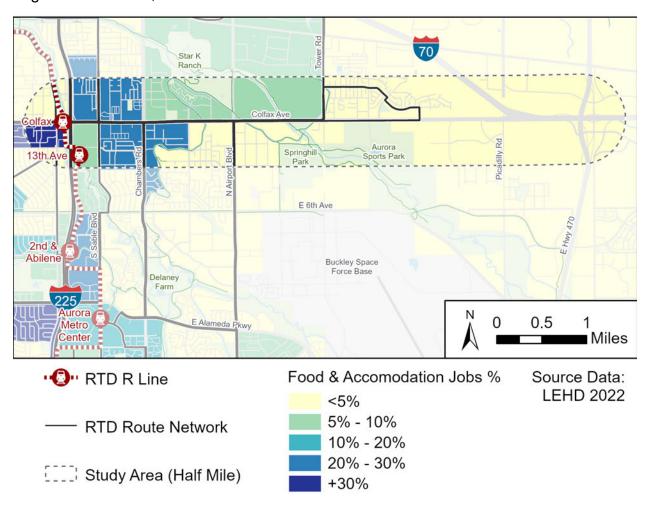
Source: Longitudinal Employer-Household Dynamics (2022)

Figure 8-15: Service and retail jobs in the study area





Food and accommodation jobs make up at least 30% of overall jobs at the southwest edge of the corridor, south of East Colfax Avenue and west of I-225.



Source: Longitudinal Employer-Household Dynamics (2022)

Figure 8-16: Food and accommodation jobs in the study area





### 8.5 Commute data

Table 8-6 shows how people living in the study area commute to work. Roughly seven in 10 people (69%) drive alone to work, and an additional 14.3% carpool or take taxis. Only 3.8% of the total residents in the study area currently use public transit, while 3% walk. Nonetheless, the percentage of commuters who use transit in the study area to commute is higher than the City of Aurora overall (3.6%) and the greater Denver area (2.6%).

Table 8-6: Commute to work mode share in the study area

Travel mode	Number	Percentage
Drive alone	7,271	69.0%
Carpooled/taxi	1,506	14.3%
Public transit	401	3.8%
Bicycle	3	0.0%
Walk	321	3.0%
Other	197	1.9%
Work from home	845	8.0%
Total	10,543	





## 8.6 Existing transit propensity

Using select demographic, socioeconomic, and employment data can help determine the overall transit need for a given area. Areas of higher propensity, or demand, are more likely to generate ridership and support the transit service that is provided. This analysis used 2023 5-year ACS Census data to examine demographic factors such as race and ethnicity, household income, household vehicle access, and citizenship status (Figure 8-17). In the study area, the populations that are most likely to use transit are concentrated towards the west, especially in neighborhoods surrounding Colfax station.

To calculate transit propensity, the density of each variable is sorted into quintiles and assigned a score between one and five. The quintile score of each variable is then summed to determine a total transit propensity score for each census tract. A value of less than one means that group is less likely to be a transit user, and a value higher than one means that group is more likely to be a transit user on average.

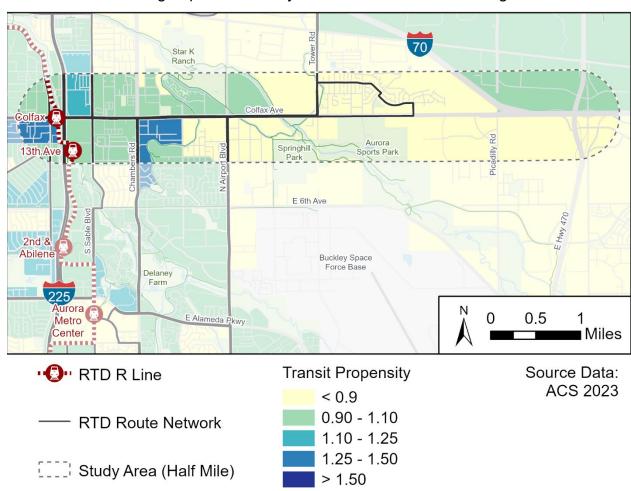


Figure 8-17: Transit propensity map in the study area.





## 8.7 Key takeaways

Several of the demographics characteristics of the study area suggest that there is the opportunity to meet travel needs of the growing corridor with transit.

- The East Colfax Corridor in Aurora is home to 22,228 residents, with a population density of 3,430 people per square mile and an average household size of three.
- The area has a relatively young median age of 32, with 28% of residents under 18, and 8% over 65.
- Over the next 25 years, the population is expected to grow significantly, especially east of Tower Road, where development is extending beyond current transit service areas. This anticipated growth, coupled with increasing employment opportunities—projected to rise by nearly 5,000 jobs—suggests a growing need for expanded transit services to connect new residential and job centers.
- Currently, the densest areas are near Colfax Station, Sable Boulevard, and Chambers Road, which align with existing transit infrastructure.
- Demographic shifts indicate a more diverse population, with the percentage of white residents declining from 52.8% in 2010 to 30.2% in 2024, while multiple-race and other-race populations have increased.
- The corridor also has a high proportion of low-income households, renters, and zero-vehicle households, especially in the western portion near Colfax Station. Approximately 11.8% of households do not own a car, and 49.5% are renter-occupied, trends that correlate with higher transit dependency. Additionally, 66.8% of renters are rent-burdened, and 24.2% of residents have limited English proficiency, further reinforcing the need for reliable and accessible transit services.
- While 69% of residents currently drive alone to work, only 3.8% use public transit, highlighting a potential gap in transit access and service quality. Improved transit could address these disparities by serving key high-need areas where transit propensity is highest.





## 9 Environmental conditions

This section documents a preliminary review of existing conditions of environmental resources present in the study area.

As all or portions of this project move forward in the project development process, information on existing environmental resources and constraints can be used in shaping the BRT design and development process. Information on existing conditions can inform routing decisions, infrastructure requirements and operational strategies. As the project progresses and requires compliance with the National Environmental Policy Act, commonly known as NEPA, this information can inform opportunities to avoid, minimize and mitigate impacts to important community and natural resources, as well as identify opportunities to streamline required clearances.

### 9.1 Hazardous materials

There are multiple federal, state, and local environmental regulations that provide for the use, transport, and disposal of hazardous materials and for clean-up of soil and groundwater that have been impacted by the improper use, storage, and disposal of these materials.

Common regulations that pertain to hazardous materials and hazardous waste include the following:

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; 42 United States Code [USC] Part 103, Sec. 9601 et seq.).
- EPA Standards and Practices for All Appropriate Inquiries/ASTM (40 CFR Part 312).
- Resource Conservation and Recovery Act (RCRA; 40 CFR Parts 260-299. RCRA (42 USC §321 et seq.).
- Underground Storage Tank Remediation, Colorado Department of Labor and Employment—Division of Oil and Public Safety (7 CCR 1101-14).
- Radiation Control, Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (6 CCR 1007-1).
- Colorado Department of Public Health and Environment Water Quality Control Commission Regulations.

Hazardous materials include any material that poses a risk to human health and/or the environment. This includes any hazardous or toxic substance, waste, pollutant, or chemical regulated under the Clean Air Act, Clean Water Act, Toxic Substance Control Act, and/or the Resource Conservation and Recovery Act. Publicly available information was reviewed during the existing conditions data collection task on February 3, 2025, to identify known hazardous concerns.





Spatial datasets were accessed from a database search completed by Environmental Risk Information Services (also known as ERIS) on February 4, 2025, and reviewed in relation to the study area. The following federal and state datasets were pulled and spatially reviewed:

- Comprehensive Environmental Response, Compensation and Liability Information System
- Emergency Response Notification System
- The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database
- Solid Waste Facilities and Landfills
- Tri-County Historic Landfills
- Leaking Storage Tanks
- Leaking Underground Storage Tank Trust Sites
- Underground Storage Tanks
- Aboveground Storage Tanks
- Delisted Storage Tanks
- Brownfield Sites
- Facility Registry Service/Facility Index
- Colorado Storage Tank Information System
- Hazardous Materials Information Reporting System
- Superfund Enterprise Management System
- Potentially Responsible Parties List
- Integrated Compliance Information System
- Mineral Resource Data System
- Alternative Fueling Stations
- Air Facility System
- Registered Pesticide Establishments
- Drycleaner Facilities
- Formerly Used Defense Sites
- Polychlorinated Biphenyl (PCB) Notifiers
- Per- and Polyfluoroalkyl Substances
- Asbestos Abatement and Demolition Projects
- National Clandestine Drug Labs
- Resource Conservation and Recovery Act (RCRA) Active Sites
- National Pollutant Discharge Elimination System (NPDES)





The following hazardous concerns were found in or near the study area and are depicted in Figure 9-1.

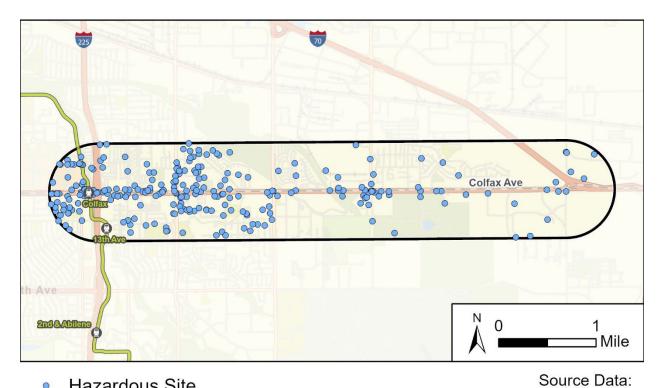
- Old Colfax/Aurora Landfill, 28 feet west of the site was on the HIST LANDFILLS/ BROWNFIELDS database. The Environmental Protection Agency, commonly referred to as the EPA inspected in-site and found methane in 1978. This site is a 36-acre landfill on the south side of Colfax Avenue near the Highline Canal. Soil and groundwater contamination were reported. The EPA has determined that no further federal action will be taken at this site.
- Salud Airport and Colfax Property, 20 feet west of the site. Some asbestos contaminated materials in surrounding property. A voluntary cleanup program was started on the site to remove asbestos contaminated materials in 2022.
- I-70 & Buckley Road, 74 feet West of the site. There was an oil/gas spill onto land in 1993 caused by a leaking valve from a pipeline. Another spill happened in May 2015, where a diesel pump at the Conoco Station at Airport Road and Colfax was leaking. No cleanup information is available.
- 1461 Helena, 201 feet west of the site. There were approximately 17 drums (some labeled Hazmat) and a 1,500-gallon tank that leaked paint thinner and used oil in November 1998. No cleanup information is available.
- 18500 East Colfax Avenue, 255 feet east-southeast of the site. There was an 80-gallon oil spill in August 2005. There was disagreement on who was the party responsible, and they were given warnings about late reporting and not having cleaned up the spill yet (approximately 12 days after the spill). No cleanup information is available.





RTD,

**ERIS** 



- Hazardous Site
- RTD Station
- RTD R Line
- Study Area

Source: RTD, Environmental Risk Information Services

Figure 9-1: Hazardous sites in the study area





#### 9.2 Farmlands

Farmland resources are governed by the following:

- Farmland Protection Policy Act of 1981 (7 United States Code [U.S.C.] 4201-4209
- 7 Code of Federal Regulations (CFR) § 658: Guidelines for Implementing the Final Rule of the Farmland Protection Policy Act for Highway Projects

Prior to farmlands being used (converted to a transportation use) for a project, an assessment must be completed to determine if prime, unique, or statewide or locally important farmlands would be converted to non-agricultural uses. If the assessment determines the use of farmland is more than the parameters set by the Natural Resource Conservation Service, known as NRCS. These parameters ensure that impacts to farmland are minimized and there is no unnecessary or irreversible conversion of farmland to non-agricultural uses.

To determine the presence of farmland, the study area was overlayed with the United States Department of Agriculture-Natural Resources Conservation Service soils data and U.S. Census "urbanized areas."

Lands committed to urban development are not considered farmland under the Farmland Protection Policy Act because they are generally developed with impermeable (paved) surfaces unavailable for agricultural production. Lands located within the Census 2020 "urbanized areas" were identified (U.S. Census Bureau, 2020). "Urbanized Areas" include areas that are considered committed to urban development.

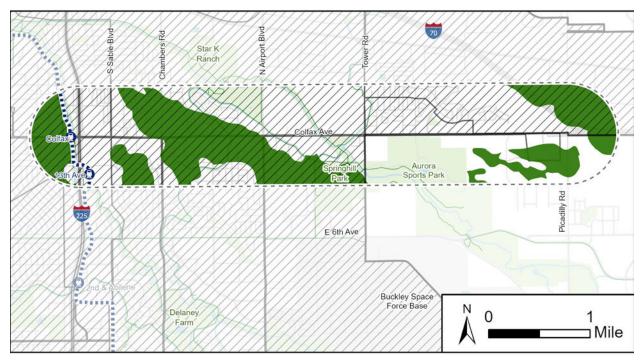
Under the Farmland Protection Policy Act, the NRCS defines farmlands as follows:

- Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oil-seed, and other crops.
   Prime farmland does not include land already in urban development or water storage. Prime farmland in this report includes:
  - o prime farmland if irrigated,
  - prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season, and
  - o prime farmland if irrigated and reclaimed of excess salts and sodium.
- Unique farmland is land other than prime farmland that is used for the
  production of specific high-value food and fiber crops. It can economically
  produce high sustained yields of these specialized crops when treated and
  managed correctly.
- Statewide or locally important farmland is land that has been designated of state or local importance for the production of food, feed, fiber, forage, or oil-seed crops as determined by state or local government agencies but is not of national significance.





The study area is predominantly developed with commercial uses along the corridor. Data was downloaded from the NRCS soils survey database to confirm the presence of prime, unique, or statewide or local important farmland in the study area (NRCS, 2025). According to the NRCS soils data, there are 170 total acres of prime farmland if irrigated within the study area that are not located in an urban area, as shown in Figure 9-2.



- RTD Station
- RTD Route Network
- ····· RTD R Line
- **U.S.** Census Urban Area
- Prime Farmland if Irrigated
- Study Area

Source: USDA, US Census Bureau Figure 9-2: Prime farmland

Source Data: RTD (Jan - Apr 2024), US. Census Bureau, USDA





#### 9.3 Wetlands and waters

Federal waters of the U.S., including wetlands, have legal protection in accordance with the Clean Water Act (33 U.S.C. § 1344). The Clean Water Act was enacted to restore and maintain the chemical, physical, and biological integrity of the Nation's waters through the elimination of discharges of pollutants. Among other things, the act provided that continuing (point-source) pollutant discharges could not occur unless specifically authorized by permit, and it established permit programs for various forms of discharges, including the discharge of dredged materials. The U.S. Army Corps of Engineers generally requires the issuance of a permit, or coverage under an existing permit, for all actions that have the potential to degrade or modify these features.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge (temporary or permanent) of dredged or fill material into waters of the U.S., including wetlands. A discharge of dredged or fill material includes but is not limited to grading, placing riprap for erosion control, pouring concrete, and stockpiling excavated material into waters of the U.S OTUS. The limits of these waters are defined through a preliminary jurisdictional determination or an approved jurisdictional determination accepted by the U.S. Army Corps of Engineers. A preliminary jurisdictional determination is a written indication by U.S. Army Corps of Engineers that assumes all, or most, aquatic resources identified in a specified area are WOTUS. An approved jurisdictional determination is an official determination issued by U.S. Army Corps of Engineers that identifies the presence/absence of waters of the U.S. in a defined area.

Section 404 of the Clean Water Act defines wetlands as areas that are inundated (flooded) or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (Clean Water Act Section 404).

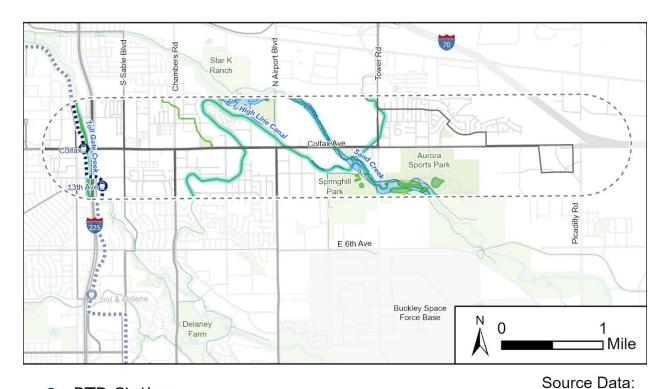
To determine the presence and extent of wetlands within the study area, the National Wetlands Inventory was accessed to identify previously mapped aquatic resources. Wetland resources were mapped for the study area using the wetlands data layer obtained in February 2025 from the U.S. Fish and Wildlife Service National Wetlands Inventory data<sup>2</sup> and spatially analyzed in GIS (U.S. Fish and Wildlife Service 2025b). Locations of the wetlands are depicted in Figure 9-3. Table 9-1 lists the mapped resources in the study area, from west to east. Feature classification codes and descriptions were obtained from the accompanying feature class data, which is classified according to the Cowardin Classification System.

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<sup>&</sup>lt;sup>2</sup> https://www.fws.gov/program/national-wetlands-inventory/web-mapping-services



RTD (Jan - Apr 2024), NWI



- RTD Station
- ····· RTD R Line
- RTD Route Network
- ---- River
- Riparian Area
- Wetland
- **Study Area**

Source: RTD (January–April 2024), National Wetland Inventory Figure 9-3: National Wetland Inventory wetland locations



Table 9-1: Mapped Wetlands in the Colfax BRT Next study area

Wetland type	Location	Classification description
Freshwater Pond	East Sports Park Circle	Palustrine, unconsolidated bottom, intermittently exposed, excavated
Freshwater Pond	Triple Creek Trail (Trail)	Palustrine, unconsolidated bottom, intermittently exposed, excavated
Freshwater Pond	Triple Creek Trail (Trail)	Palustrine, unconsolidated bottom, intermittently exposed, excavated
Freshwater Pond	Triple Creek Trail (Trail)	Palustrine, unconsolidated bottom, intermittently exposed, excavated
Freshwater Emergent Wetland	Sports Complex Connector (Trail)	Emergent & scrub-shrub wetland
Freshwater Emergent Wetland	Sports Complex Connector (Trail)	Emergent & scrub-shrub wetland
Freshwater Emergent Wetland	Sports Complex Connector (Trail)	Palustrine emergent persistent wetland, seasonally flooded
Freshwater Forested/ Shrub Wetland	Sports Complex Connector (Trail)	Palustrine, forested, broad-leaved deciduous, temporarily flooded wetland
Freshwater Forested/ Shrub Wetland	Sports Complex Connector (Trail)	Palustrine, forested, broad-leaved deciduous, temporarily flooded wetland
Freshwater Pond	Sports Complex Connector (Trail)	Palustrine unconsolidated bottom, semi permanently flooded bottom
Riverine	Sports Complex Connector (Trail) From Tower Road to Stephen D. Hogan Pkwy	Riverine, unknown perennial, unconsolidated bottom, permanently flooded
Freshwater Forested/ Shrub Wetland	Triple Creek Trail (Trail)	Palustrine, forested, broad-leaved deciduous, temporarily flooded wetland
Freshwater Forested/ Shrub Wetland	Triple Creek Trail (Trail)	Palustrine, forested, broad-leaved deciduous, temporarily flooded wetland
Freshwater Forested/ Shrub Wetland	Triple Creek Trail (Trail)	Palustrine, forested, broad-leaved deciduous, temporarily flooded wetland
Riverine	Utah Avenue to East 44 <sup>th</sup> Avenue	Riverine streambed, seasonally flooded, excavated
Riverine	East 14th Avenue to I-225	Riverine Upper Perennial Unconsolidated Bottom, semi permanently flooded



Wetland type	Location	Classification description
Riverine	Colfax Avenue to South Platte River	Riverine, intermittent, streambed, seasonally flooded, excavated
Freshwater Emergent Wetland	East 17 <sup>th</sup> Avenue	Palustrine emergent persistent wetland, seasonally flooded
Freshwater Emergent Wetland	Toll Gate Creek Trail (Trail)	Palustrine emergent persistent wetland, seasonally flooded
Freshwater Emergent Wetland	Toll Gate Creek Trail (Trail)	Palustrine emergent persistent wetland, seasonally flooded
Freshwater Emergent Wetland	Toll Gate Creek Trail (Trail)	Palustrine emergent persistent wetland, temporarily flooded
Freshwater Emergent Wetland	East Richthofen Circle	Palustrine emergent persistent wetland, temporarily flooded
Freshwater Pond	Jasper Street and Colfax Avenue	Palustrine unconsolidated bottom, semi permanently flooded, excavated
Freshwater Forested/ Shrub Wetland	North Potomac Street	Palustrine scrub-shrub, temporarily flooded
Riverine	South Platte River at Alameda Parkway to East 14 <sup>th</sup> Drive	Riverine, intermittent, streambed, seasonally flooded, excavated.
Riverine	East Vassar Place to Peoria Street	Riverine, unknown perennial, unconsolidated bottom, permanently flooded

Source: U.S. Fish and Wildlife Service 2025b





## 9.4 Threatened and endangered species

Protection of threatened and endangered species are governed by the following federal and state regulations:

- Endangered Species Act
- Migratory Bird Treaty Act
- Bald and Golden Eagle Protection Act
- Colorado Non-game, Endangered and Threatened Species Conservation Act Colorado Parks and Wildlife
- Black-tailed Prairie Dog Protection
- Colorado Senate Bill 40

The Endangered Species Act, enacted in 1973, stands as one of America's most significant conservation laws, providing critical protection for species at risk of extinction. The legislation categorizes vulnerable species as either "threatened" (likely to become endangered in the foreseeable future) or "endangered" (in danger of extinction throughout all or a significant portion of their range).

The Information for Planning and Consultation is a project planning tool that streamlines the United States Fish and Wildlife Service environmental review process. The tool identifies United States Fish and Wildlife Service managed resources and suggests conservation measures for projects. An unofficial review of the study area using the tool, for information purposes only, reveals the following species (USFWSb 2025a):

- Piping Plover (Charadrius melodus) threatened
- Whooping Crane (Grus americana) endangered
- Pallid Sturgeon (Scaphirhynchus albus) endangered
- Monarch Butterfly (Danaus plexippus) proposed threatened
- Suckley's Cuckoo Bumble Bee (Bombus suckleyi) proposed endangered
- Ute Ladies'-tresses (Spiranthes diluvialis) threatened
- Western Prairie Fringed Orchid (Platanthera praeclara) threatened

Critical habitat refers to specific geographic areas that contain features essential to the conservation of endangered or threatened species and which may require special management considerations or protection. There is currently no designated critical habitat within the study area.





## 9.5 Paleontology

There are no paleontological resources anticipated in the study area since the area is previously disturbed.

## 9.6 Archaeology

There are no archeological resources anticipated in the study area since the area is previously disturbed.

## 9.7 History

Protection of historic resources is important; these resources provide tangible connections to our past while offering irreplaceable educational value about historical events and cultural practices. Section 106 of the National Historic Preservation Act of 1966, ensures that federal agencies thoughtfully consider these important values before proceeding with projects that might damage or destroy historic properties.

In February 2025, 50 properties were identified as being 45 years old or older that require evaluation. These properties have not yet been evaluated for eligibility on the National Register of Historic Places. Table 9-2 summarizes the current eligibility status for the National Register of Historic Places for the Colfax BRT Next properties that are 45 years of age or older and the locations of these eligible and potentially eligible historic resources are shown in Figure 9-4. When cultural resource specialists conduct field surveys as part of a Section 106 review, they may identify resources that they believe would qualify for the National Register of Historic Places based on their professional judgment and application of the National Register criteria. These resources are considered "field eligible" and are treated as historic properties subject to the Section 106 process. Fields that are denoted with "N/A" means that information was missing or is not applicable to that resource.

Table 9-2: Properties 45 years of age or older

Site number and/or address	Property description	Construction date	Number of buildings over 45 years	National Register of Historic Places eligibility
14100 East Colfax Avenue/Arapahoe	N/A	1979	1	N/A
14300 East Colfax Avenue/Arapahoe	Auto Dealer	1962/1979	2	N/A



Site number and/or address	Property description	Construction date	Number of buildings over 45 years	National Register of Historic Places eligibility
14500 East Colfax Avenue/Arapahoe	Lyall Len Chevrolet Inc	1977	1	N/A
15200 East Colfax Avenue/Arapahoe	Fitness	1974	1	N/A
15290 East Colfax Avenue/Arapahoe	Burger King	1977	1	N/A
1461 N Helena Street/Arapahoe	N/A	1959/1961/ 1961	3	N/A
15500 East Colfax Avenue/Arapahoe	Liquor Store	1957	1	N/A
15566 East Colfax Avenue/Arapahoe	N/A	1948	3	N/A
15612 East Colfax Avenue/Arapahoe	N/A	1940	1	N/A
15700 East Colfax Avenue/Arapahoe	N/A	1931-1953	9	N/A
15770 East Colfax Avenue/Arapahoe	N/A	1947/1948	2	N/A
15814 East Colfax Avenue/Arapahoe	N/A	1954	1	N/A
15910 East Colfax Avenue/Arapahoe	N/A	1912	1	N/A
1498 Laredo Street/ Arapahoe	School	1950	1	N/A
16250 East Colfax Avenue/Arapahoe	Church	1952	1	N/A
16290 East Colfax Avenue/Arapahoe	Church	1948	1	N/A
16300 East Colfax Avenue/Arapahoe	Apartment	1956	2	N/A
Arapahoe/ 5AH.388	Highline Canal (segment)	N/A	Three crossings in study area	Officially Eligible 2017
18360 East Colfax Avenue/Arapahoe	N/A	1973/1975	2	N/A



Site number and/or address	Property description	Construction date	Number of buildings over 45 years	National Register of Historic Places eligibility
18498 East Colfax Avenue/Arapahoe/ 5AH.317	Mobile Housing/Koa Motel	1925		Field Not Eligible
18500-18800 East Colfax Avenue/ Arapahoe/5AH.314	Koa Station ~ Koa Transmitter ~ Colorado State Highway Department Building	1924/1977	12	Officially Eligible 2021
19600-19700 East Colfax Avenue/ Arapahoe/5AH.324	N/A	1916	1	Field Not Eligible 1985
19900 East Colfax Avenue/Arapahoe	N/A	1956-1976	3	N/A
14107 East Colfax Avenue/Adams	Restaurant	1977	1	N/A
14291 East Colfax Avenue/Adams	Motel	1950	2	N/A
14851 East Colfax Avenue/Adams	Shop	1978	1	N/A
14901 East Colfax Avenue/Adams	Fast Food	1973	1	N/A
15201 East Colfax Avenue/Adams	Liquor	1979	2	N/A
15305 East Colfax Avenue/Adams	Bank	1978	1	N/A
15355 East Colfax Avenue/Adams	Retail shops/ Restaurant	1975	2	N/A
15531 East Colfax Avenue/Adams	N/A	1931/1931/ 1962	3	N/A
15555 East Colfax Avenue/Adams	N/A	1951	1	N/A
15585 East Colfax Avenue/Adams	Office/Warehouse	1972	1	N/A
15611 East Colfax Avenue/Adams	Service Garage	1954	1	N/A



Site number and/or address	Property description	Construction date	Number of buildings over 45 years	National Register of Historic Places eligibility
15691 East Colfax Avenue/Adams	Motel/Restaurant	1962	2	N/A
16051 East Colfax Avenue/Adams	Mobile Home Park	1954	>50	N/A
18545 East Colfax Avenue/Adams	VFW	1960	1	N/A
18881 East Colfax Avenue/Adams	Retail	1966	1	N/A
18885 East Colfax Avenue/Adams	Retail	1966	1	N/A
21361 East Colfax Avenue/Adams/ 5AM.1475	N/A	1968	1	Officially Not Eligible 2001
21561 East Colfax Avenue/Adams/ 5AM.1474	N/A	1954/1967	2	Officially Not Eligible 2001
Adams/5AM.261	Highline Canal (segment)	N/A	Three crossings in study area	Field Eligible 2017
Arapahoe/5AH.2914	Colfax Avenue – Segment ~ Highway 40	N/A	N/A	Eligible/ Most of segment in study area unevaluated
Adams/5AM.1883	Colfax Avenue – Segment ~ Highway 40	N/A	N/A	Eligible/ Most of segment in study area unevaluated
Arapahoe/5AH.3843	Picadilly Road	N/A	N/A	No Data



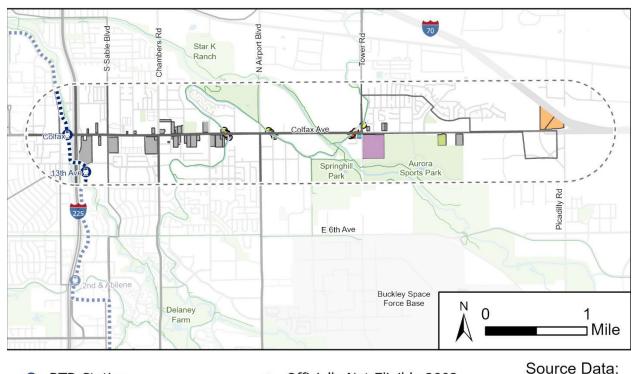
Site number and/or address	Property description	Construction date	Number of buildings over 45 years	National Register of Historic Places eligibility
Arapahoe/5AM.2777	Highline Canal Culvert F-17-E Minor	N/A	N/A	Officially Not Eligible 2002
Arapahoe/5AM.2780	Highline Canal Bridge	N/A	N/A	Officially Not Eligible 2002
Arapahoe/5AH.1582	Highline Canal Bridge	N/A	N/A	Officially Not Eligible 2002
Arapahoe/5AH.1587	Highline Canal Culvert F-17-E Minor	N/A	N/A	Officially Not Eligible 2002
Highline Canal Crossing	N/A	N/A	N/A	Unevaluate d

**Source: Adams County and Arapahoe County Assessor database** 



RTD (Jan - Apr

2024), NRHP



- RTD Station
- RTD R Line
- RTD Route Network
- Study Area

Properties over 45 Years of Age

**NRHP Status** 

- Field Eligible 2017
- Officially Eligible 2017

Officially Not Eligible 2002

Unrecorded NHRP Status

Officially Eligible 2021

Field Not Eligible

Field Not Eligible 1985

Officially Not Eligible 2001

Historic Property - Age Eligible

Source: RTD (January–April 2024), NRHP Figure 9-4: Historic Resource locations

### 9.7.1 Section 4(f) - Historic

Officially eligible properties are subject to Section 4(f). Section 4(f) of the U.S. Department of Transportation Act requires that the Federal Highway Administration evaluate the impacts of transportation projects on historic properties. For purposes of data collection, all potentially eligible properties should be considered for Section 4(f) protection.





## 9.8 Section 4(f) – Non-historic

Section 4(f) properties include significant publicly owned parks, recreation areas and wildlife/waterfowl refuges, or any publicly or privately owned historic site listed—or eligible for listing—on the National Register of Historic Places. Several 4(f) properties are located within the study area, including parks, open space, bike paths, and other public areas (Table 9-3 and Figure 9-5).

Table 9-3: Parks, trails, and open space

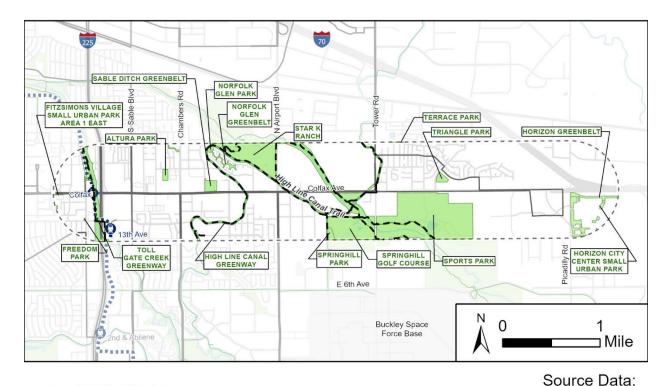
Resource name	Status	Location	Ownership
Toll Gate Creek Parkway	Existing	Potomac Street and Colfax Avenue	City of Aurora
Star K Ranch Wetland Trail	Existing	Chambers Road	City of Aurora
Triangle Park	Existing	1600 Espana Street	City of Aurora
Terrance Park	Existing	18801 East Montview Boulevard	City of Aurora
Springhill Golf Course	Existing	800 Telluride Street	City of Aurora
Springhill Park	Existing	North Telluride Street	City of Aurora
Norfolk Glen Park	Existing	15800 East 17th Place	City of Aurora
Aurora Sports Park	Existing	19300 East Colfax Avenue	City of Aurora
Sand Creek Greenway	Existing	East 13th Avenue	City of Aurora
Altura Park	Existing	East 17 <sup>th</sup> Avenue	City of Aurora
Freedom Park	Existing	8806 East 13th Avenue	City of Aurora
High Line Canal Greenway	Existing	East Colfax Avenue and East 14 <sup>th</sup> Drive	City of Aurora
Norfolk Glen Greenbelt	Existing	East 18th Place	City of Aurora
Toll Gate Creek Greenway	Existing	Potomac Street and Colfax Avenue	City of Aurora
Sable Ditch Greenbelt	Existing	Colfax Avenue and Jasper Street	City of Aurora
Fitzsimons Village Small Urban Park Area	Proposed	N/A	
Horizon City Center Small Urban Park	Proposed	N/A	Horizon Metro District
Horizon City Center Open Space	Proposed	N/A	Horizon Metro District
Horizon Greenbelt	Proposed	N/A	Horizon Metro District
Horizon Neighborhood Park	Proposed	N/A	Horizon Metro District

Source: DRCOG, 2023



RTD (Jan - Apr

2024)



- RTD Station
- ····· RTD R Line
- RTD Route Network
- --- Trail
- Park/Open Space
- Study Area

Source: DRCOG, RTD (January–April 2024)
Figure 9-5: Parks, trails, and open space





## 9.9 Section 6(f)

Section 6(f) properties are those purchased or improved with grants from the Land and Water Conservation Fund Act. Section 6(f) applies to all transportation projects involving possible conversions of the property whether Federal funding is being used for the project. Per review of the Colorado Department of Transportation Online Transportation Information System there are no 6(f) properties located within the study area.

## 9.10 Air quality

The EPA has set National Ambient Air Quality Standards for air pollutants that are harmful to the environment and public health. The EPA has defined a non-attainment area as any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for National Ambient Air Quality Standards. A maintenance area is any geographic region of the U.S. that was previously designated as a non-attainment area. The Colfax BRT Next study area is located in the larger Denver Southern Subarea nonattainment area for ozone and precursors (DRCOG 2024c). DRCOG expects the Colfax BRT from Union Station to I-225 to produce a strong reduction in carbon monoxide, a fairly strong reduction in nitrous oxide and volatile organic compounds, and a small reduction in particulate matter less than 10 microns in diameter

### **9.11 Noise**

Traffic Noise is governed by the following regulations:

- 23 CFR Part 772—Procedures for Abatement of Highway Traffic Noise and Construction Noise (23 CFR §772, 2010)
- CDOT Noise Analysis & Abatement Guidelines (CDOT, 2020)
- Federal Highway Administration Guidance (FHWA, 2011)
- Noise Measurement Handbook (FHWA, 2018)
- Federal Highway Administration Traffic Noise Model Version 2.5 (FHWA, February 2004)

Traffic noise is important to surrounding communities due to its effects on residents' wellbeing and neighborhood quality. The constant noise interferes with daily activities diminishing the enjoyment of both indoor and outdoor spaces. The project is proposing and evaluating BRT service. It is anticipated that the project will not involve substantial horizontal or vertical alteration which would cause discernable impact to any sensitive noise receptors in the study area.





## 9.12 Floodplains

Floodplains are governed by the following regulations:

- Executive Order 11988: Floodplain Management (Executive Order 11988, 1977)
- Executive Order 13690: Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (Executive Order 13690, 2015)

Regulatory floodplains are present within the study area, and the project would constitute encroachment. Floodplains were mapped using the Federal Emergency Management Area (FEMA) National Flood Hazard Layer.<sup>3</sup> A portion of the Colfax Avenue corridor from I-225 to North Eagle Street, Jasper Street to Laredo Street, and at the crossing of Sand Creek are in a Zone AE mapped 100-year floodplain, which is a Special Flood Hazard Area with established base flood elevations. Portions of this zone are also designated a regulatory floodway, which is considered the most restrictive for floodplain management, and contain reserved areas where no increases in water surface elevations should occur.

Transportation improvements in these flood hazard areas would require additional permitting. Improvements would require a permit from Adams County, Arapahoe County, and the City of Aurora. The type of floodplain permit needed for each jurisdiction will be determined in a later design phase.

### 9.13 Key takeaways

There would be no environmental concerns at this level of design for the following resources: paleontology, archaeology, Section 6(f), air quality, and noise.

 Resources that would take a longer lead time to get approval include Section 4(f) and historic resources through Section 106. These would require coordination with local jurisdictions and the State Historic Preservation Office to receive approval of project improvements and document impacts to those resources.

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<sup>&</sup>lt;sup>3</sup> https://www.fema.gov/flood-maps/national-flood-hazard-layer





# 10 References

Denver Regional Council of Governments (DRCOG). 2023. Parks, Recreation, and Open Space 2022. <a href="https://data.drcog.org/dataset/parks-recreation-and-open-space-2022">https://data.drcog.org/dataset/parks-recreation-and-open-space-2022</a>.

Denver Regional Council of Governments (DRCOG). 2024. 2023 Annual Report on Roadway Traffic Congestion in the Denver Region

Denver Regional Council of Governments (DRCOG). 2024. Taking Action on Regional Vision Zero. StoryMap accessed at:

https://storymaps.arcgis.com/collections/1007942fed964b3596895462fa9e076a?item=1

Denver Regional Council of Governments (DRCOG). 2024c. Eight-hour ozone conformity determination for the Denver Southern Subarea, triggered by the 2024-amended 2050 Regional Transportation Plan.

https://www.drcog.org/sites/default/files/acc/TPO-RP-50RTPAPPXS-EN-ACC-85x11-24-05-19-V1.pdf

Federal Emergency Management Area (FEMA). 2025. National Flood Hazard Layer. Accessed online at: <a href="https://www.fema.gov/flood-maps/national-flood-hazard-layer">https://www.fema.gov/flood-maps/national-flood-hazard-layer</a>.

U.S. Environmental Protection Agency (EPA). 2020. <a href="https://www.epa.gov/cwa-404/how-wetlands-are-defined-and-identified-under-cwa-section-404">https://www.epa.gov/cwa-404/how-wetlands-are-defined-and-identified-under-cwa-section-404</a>. Accessed February 2025.

USFWS. 2025a. IPaC Resource List (unofficial). Generated February 2025 from <a href="https://ipac.ecosphere.fws.gov/">https://ipac.ecosphere.fws.gov/</a>.

- U.S. Fish and Wildlife Service (USFWS). 2025b. USFWS National Wetlands Inventory (NWI). Accessed online at: https://www.fws.gov/program/national-wetlands-inventory.
- U.S. Department of Transportation (USDOT). 2024. Benefit-Cost Analysis Guidance for Discretionary Grant Programs. (Table A-1: Value of Reduced Fatalities, Injuries, and Crashes)