

EAST COLFAX AVENUE BUS RAPID TRANSIT (BRT) PROJECT TECHNICAL MEMORANDUM

For Land Use and Zoning

Prepared for:

City and County of Denver and Regional Transportation District

April 2024

Contents

1	PROJECT DESCRIPTION	1
1.1	PURPOSE OF THE PROJECT	4
1.2	NEED FOR THE PROJECT	4
2	INTRODUCTION TO ANALYSIS	4
2.1	SUMMARY OF RESULTS	5
2.2	REGULATORY ENVIRONMENT.....	5
3	AFFECTED ENVIRONMENT	6
3.1	METHODOLOGY	6
3.2	EXISTING CONDITIONS.....	ERROR! BOOKMARK NOT DEFINED.
4	IMPACT ANALYSIS.....	8
4.1	METHODLOGY	ERROR! BOOKMARK NOT DEFINED.
4.2	IMPACTS	8
4.3	MITIGATION.....	9
5	REFERENCES	9

Figures

Figure 1.	BRT Service Routing and Travel Headways	1
Figure 2.	Project Area and Station Locations	4
Figure 3.	Project Zoning Classifications.....	8

Tables

Table 1.	Proposed Station Features.....	2
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Acronyms

BRT	Bus Rapid Transit
CCD	City and County of Denver
CE	Categorical Exclusion
COA	City of Aurora
CEQ	Council on Environmental Quality
CDOT	Colorado Department of Transportation
DOTI	Denver Department of Transportation and Infrastructure
DRCOG	Denver Regional Council of Governments
DUS	Denver Union Station
FTA	Federal Transit Administration
I-225	Interstate 225
LRT	Light Rail Transit
NEPA	National Environmental Policy Act
ROW	Right-of-way
RTD	Regional Transportation District
TSP	Transit Signal Priority
US	United States

1. Project Description

The Federal Transit Administration (FTA) in coordination with the City and County of Denver (CCD) and the Regional Transportation District (RTD) are performing a National Environmental Policy Act (NEPA) evaluation for a Bus Rapid Transit (BRT) system that would serve East Colfax Avenue between downtown Denver and the RTD R Line light rail transit (LRT) Colfax Station at Interstate 225 (I-225) in Aurora (Project). The Project qualifies as a Categorical Exclusion (CE) per the FTA, which is the lead federal agency for this undertaking. The City of Aurora (COA), Colorado Department of Transportation (CDOT) and the Denver Regional Council of Governments (DRCOG) are active Project participants along with numerous public and private stakeholders. The CCD and the RTD implemented a robust stakeholder involvement program as a part of the Project and will continue to work with the stakeholders as design advances, funding is obtained, and construction is initiated.

The Project has completed preliminary design for BRT operations, including the identification of routing and station locations. The East Colfax Avenue BRT would run on existing, heavily traveled bus routes and would serve downtown Denver at the western end of the corridor, communities and businesses along East Colfax Avenue, and the Anschutz Medical Campus at I-225 and East Colfax Avenue in the east. Specifically, the 9.9-mile-long Project would include:

- Reliable BRT service (combined Route 15/15L) operating 24 hours per day, 7 days per week. This would include three service patterns all serving Denver Union Station (DUS) and three patterns that diverge at the eastern project terminus in the COA (including bus turnarounds at the RTD R Line LRT Colfax Station, Tower Road, and the R Line Aurora Metro Center Station). Two patterns would occur with 15-minute headways and one pattern with a 10-minute headway to provide a composite 4.3-minute BRT headway from DUS to the RTD R Line LRT Colfax Station. Connection between Civic Center Station and the Decatur/Federal Station is also provided via Route 16 (Figure 1).

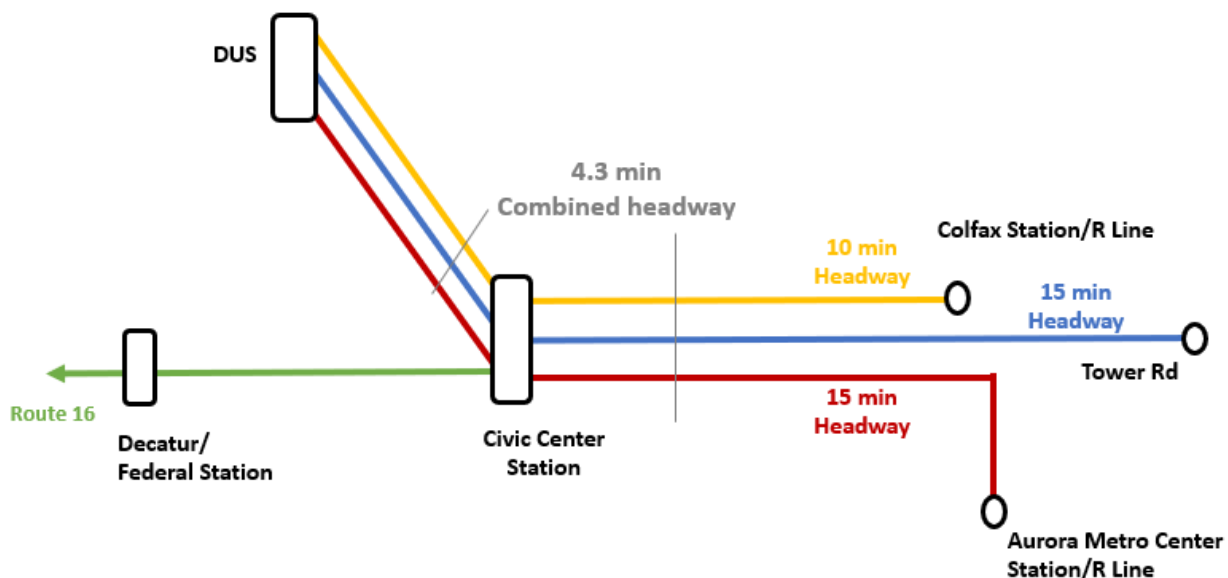


Figure 1. BRT Service Routing and Travel Headways

- Curbside-running alignment in existing 15th Street and 17th Street on-street bus lanes between DUS and Civic Center (East Colfax Avenue/Broadway), – 1.4 miles.
- Center-running alignment in dedicated bus-only lanes between Civic Center (East Colfax Avenue/Broadway) and East Colfax Avenue/Yosemite Street – 5.5 miles.
- Curbside-running alignment in mixed-flow traffic through COA between East Colfax Avenue/Yosemite Street and the existing RTD R Line LRT Colfax Station at I-225 – 3.0 miles.
- Upgraded signals to provide Transit Signal Priority (TSP) throughout the center-running section.
- Branded service, stations, and vehicles.
- Thirty-five (35) station locations with an average spacing of 0.32 miles.
- Enhanced station amenities including level boarding platforms, high-quality shelters, off-board fare collection, lighting, security features, real-time system traveler information, protection from traffic and weather, and public art opportunities.
- The COA has contributed funding for upgraded station improvements at certain locations between Yosemite Street and I-225 along East Colfax Avenue. At East Colfax Avenue and Havana Street, a station design similar to those planned in the center-running alignment section in Denver, but with a curbside alignment, would be located at the corner of East Colfax Avenue and Havana Street. In addition, level boarding platforms are planned at the intersections of East Colfax Avenue and Peoria Street, Moline Street, and the RTD R Line Colfax Station. The level boarding platforms would be constructed where the existing 15L shelters are currently located at these three locations, and the 15L shelters would be attached on top of each new platform.
- Dual northbound left-turn lanes on Colorado Boulevard at the intersections of East 13th Avenue and East 17th Avenue to improve traffic operations and travel times within the project area. An approximate 5-foot southbound travel lane shift would be required for the turn lane improvements. These improvements consist of widening of the roadway at the intersection by 10 feet. The added lane width will be accomplished by removal of the existing 5-foot median and shifting the existing curb line 5 feet to the west at both intersections.

Station locations and proposed features are highlighted in Table 1 and Figure 2 below.

Table 1. Proposed Station Features

Station	Stop Location	Full Signature BRT Station	Level Boarding Platforms	Existing Enhanced 15L Shelter to Remain	New Relocated Enhanced 15L Shelter	Branding and BRT Amenities
Denver Union Station (DUS)	Curbside					✓
Lawrence /16 th	Curbside					✓
California/15 th	Curbside					✓
Tremont/15 th	Curbside					✓
Lawrence /17 th	Curbside					✓
Champa/17 th	Curbside					✓
Welton/17 th	Curbside					✓

Station	Stop Location	Full Signature BRT Station	Level Boarding Platforms	Existing Enhanced 15L Shelter to Remain	New Relocated Enhanced 15L Shelter	Branding and BRT Amenities
Civic Center Station/Broadway	Curbside			✓		✓
Pennsylvania	Center	✓	✓			✓
Downing	Center	✓	✓			✓
Franklin/Park	Center	✓	✓			✓
Josephine/York	Center	✓	✓			✓
Fillmore	Center	✓	✓			✓
Madison	Center	✓	✓			✓
Colorado	Center	✓	✓			✓
Cherry	Center	✓	✓			✓
Elm	Center	✓	✓			✓
Hudson	Center	✓	✓			✓
Krameria	Center	✓	✓			✓
Monaco	Center	✓	✓			✓
Quebec	Center	✓	✓			✓
Syracuse	Center	✓	✓			✓
Uinta	Center	✓	✓			✓
Yosemite	Curbside			✓		✓
Chester	Curbside				✓	✓
Dayton	Curbside			✓		✓
Florence	Curbside				✓	✓
Havana	Curbside	✓	✓			✓
Kingston	Curbside				✓	✓
Moline	Curbside		✓	✓		✓
Peoria	Curbside		✓	✓		✓
Scranton	Curbside			✓	✓	✓
Children's Way	Curbside			✓		✓
Wheeling / Fitzsimons (VA)	Curbside				✓	✓
R Line LRT Colfax Station	Curbside		✓		✓	✓

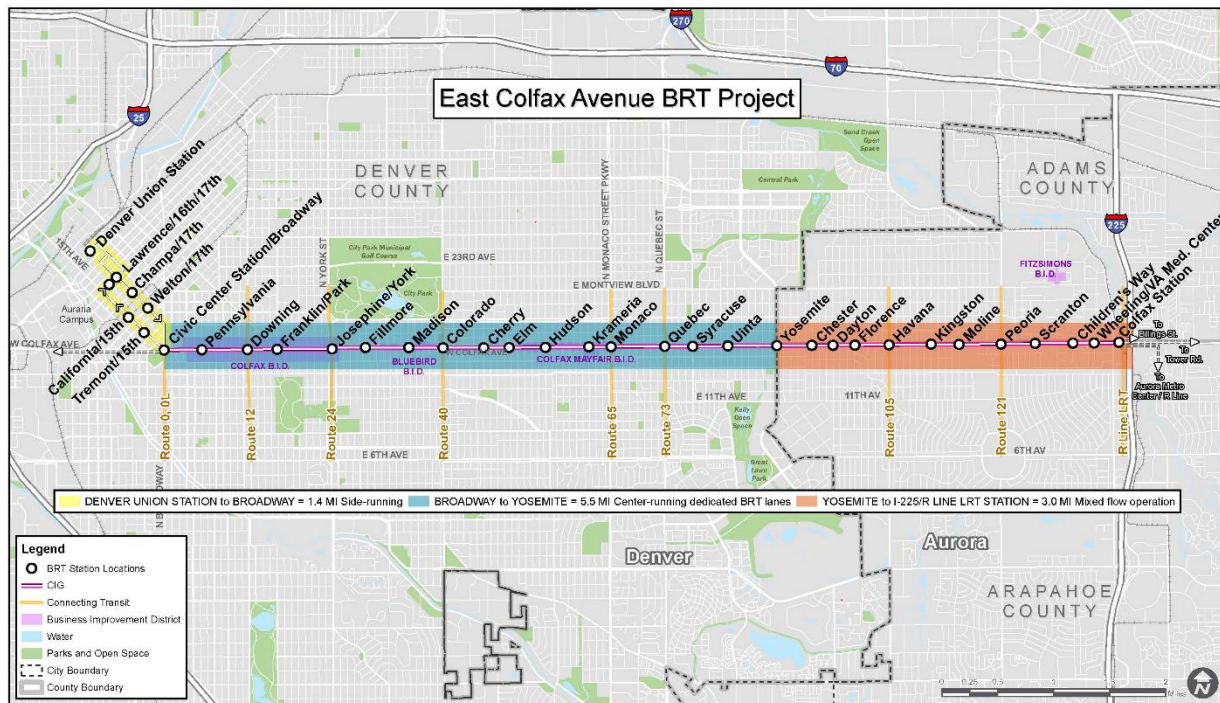


Figure 2. Project Area and Station Locations

1.1 PURPOSE OF THE PROJECT

The purpose of the Project is to provide additional person-trip capacity to meet growing travel demand with a high-quality, high-capacity, cost-effective, reliable, and safe transit solution serving the East Colfax Avenue corridor. This new service would provide a faster, more reliable, and more comfortable passenger experience compared with existing bus service, and thereby attract additional transit ridership. The Project would improve local and regional accessibility, mobility, safety, transit travel times and reliability, and passenger facilities in the most heavily used transit corridor in the Denver region.

1.2 NEED FOR THE PROJECT

The need for the Project is demonstrated by increasing transit travel demand in the corridor. The Project would aid the growth of transit ridership in the corridor by providing a comfortable, more frequent, and more reliable service for transit patrons, to a variety of destinations along the corridor. The Project also supports Denver’s Vision Zero initiative, making travel safer for pedestrians, cyclists, motorists and transit riders. The Project would also support future investment along the East Colfax Avenue corridor, while continuing to provide an affordable travel option to help reduce household transportation costs. Seven needs have been identified and outlined for the Project:

- Serve the Growing Travel Demand
- Provide Improved Mobility
- Provide Equity and Affordability

- Improve Safety
- Provide Improved Access to Major Destinations
- Align Mobility Improvements with Land Use, Neighborhood and Economic Plans
- Improve Placemaking

2. Introduction to Analysis

This technical memorandum discusses the regulatory setting and affected environment associated with land use within the land use study area. The land use study area encompasses the entire BRT system, including the curbside-running alignment within existing operational ROW (i.e., 15th Street and 17th Street between DUS and Civic Center and East Colfax Avenue between Yosemite Street and the existing RTD R-Line LRT Colfax Station at I-225) the physical improvements along East Colfax Avenue between Broadway and Yosemite Street, and the addition of left turn lanes on Colorado Boulevard at East 13th Avenue and East 17th Avenue. Land use was generally evaluated within one city block on either side of East Colfax Avenue and 15th and 17th Streets. In addition, this memorandum documents impacts to identified land use resulting from the physical and operational improvements associated with the Project.

2.1 SUMMARY OF RESULTS

The Project is compatible with the existing and adopted future land use/transportation plans and zoning requirements. Implementing the Project would keep East Colfax Avenue as a transportation corridor and result in minimal direct impacts. The Project would require a total of eight (9) partial acquisitions and 30 temporary construction easements for minor improvements along East Colfax Avenue between Broadway and Yosemite Street and along Colorado Boulevard at the intersections of East 13th Avenue and East 17th Avenue (e.g., Americans with Disabilities Act compliance, curb ramp installation).

2.2 REGULATORY ENVIRONMENT

Land use generally refers to human modification of land, often for residential or economic purposes or for preservation or protection of natural resources. Land uses are frequently regulated by management plans, policies, ordinances, and regulations that determine the types of activities that are allowed or that protect specially designated or environmentally sensitive uses. Land use regulatory documents include general land use and ownership, land management plans, and special use areas. For this CE, land use within the land use study area is governed by the following land use plans:

- *Denver Comprehensive Plan 2040*: Adopted in 2019 this plan sets forth vision elements guiding the City's growth and development through 2040 (CCD, 2019a).
- *Blueprint Denver*: A supplement to the Comprehensive Plan, this plan was adopted in 2019. It is a citywide land use and transportation plan, calling for an equitable city of complete neighborhoods and transportation networks (CCD, 2019b).
- *East Central and East Area Neighborhood Plans*: These Denver neighborhood plans, adopted in 2020, provide policy guidance for land use, urban design, housing, mobility, parks, and the local economy for the neighborhoods bordering East Colfax Avenue east of downtown Denver (CCD, 2020a; CCD, 2020b).

- *The Aurora Places Comprehensive Plan*: Adopted in 2018, the plan emphasizes the importance of creating and improving the variety and types of places throughout the city (Aurora, 2018). These "place types" include dynamic urban districts, attractive and convenient commercial and industrial areas, regional parks and open space, districts for employment and innovation, and several types of distinctive neighborhoods.

In 2010, CCD revised the Denver Zoning Code. The updated code reflects the current land uses and transportation plans. The code's purpose is to implement the *Denver Comprehensive Plan* and guide orderly development that preserves and promotes the public health, safety, prosperity, and welfare of its inhabitants. In 2019, the COA adopted the Unified Development Ordinance, with a purpose to develop the city in a manner that is consistent with the *Aurora Places Comprehensive Plan*.

3. Affected Environment

3.1 METHODOLOGY

Information on land use was obtained through a review of current land uses, local and regional land use plans, and zoning information.

3.2 EXISTING CONDITIONS

The Project is located within the CCD and COA. Land use within the land use study area consists of a transit corridor adjoined by a mix of multi-unit residential, commercial, office, civic, institutional, and entertainment uses.

The Project is consistent with all of the identified vision elements guiding Denver's growth and development through 2040 (CCD, 2019a). *Blueprint Denver* is a citywide land use and transportation plan that calls for an equitable city of complete neighborhoods and transportation networks. The plan identifies future infill and higher density growth potential in key nodes and corridors throughout the City of Denver. Both the East Colfax Avenue corridor and downtown Denver are forecast growth areas slated to accommodate a significant portion of Denver's future household and employment growth through 2040. Further, the *East Central and East Area Neighborhood Plans* acknowledge and incorporate anticipated public investment in the East Colfax Avenue Bus Rapid Transit Project.

In the *Aurora Places Comprehensive Plan (2018)*, East Colfax Avenue is depicted as a future high frequency transit corridor. The plan also recommends that areas along East Colfax Avenue be designated as a new DRCOG-designated "Urban Center". The East Colfax Avenue corridor in Aurora has been identified as a "Strategic Development Area" particularly suitable for significant investment or needing ongoing focus and intervention. "Place types" along the East Colfax Avenue corridor, are intended to be connected with high frequency transit services. They include:

- **Original Aurora**: Original Aurora is the city's first neighborhood, at the city's western edge characterized by a street grid, commercial corridors, established residential areas and an active arts district. East Colfax Avenue is the major commercial and transit corridor connecting the Anschutz Medical Campus in Aurora to central Denver, and the emerging Westerly Creek area, anchored by the Stanley Marketplace. Targeted reinvestment is encouraged with a focus on arts and civic venues, dining, entertainment, and mixed-use development, walkability and robust transit service.

- Innovation District: Aurora’s Innovation District is located around the Anschutz Medical Campus. It includes a high-density medical campus, complemented by mixed use commercial (including startups, business incubators, and accelerators), residential and other business park uses surrounding the campus.
- Urban District: Aurora’s Urban Districts are identified as the city’s most intensely developed area with mixed-use, entertainment, institutional, retail, restaurant, and multifamily residential uses. Complementing the Anschutz Medical Campus and the Innovation District, the success of the urban district is dependent on corridor, transit, pedestrian, and bike connections.

The City of Aurora has station area plans for all of its stations, which have been incorporated into the City’s Comprehensive Plan. Several align with the Project including:

- The Fitzsimons-Colfax and East 13th Avenue Station Area Plan and the Fitzsimons Station Area Plan. Both plans set medium and higher density visions for the neighborhoods near the Anschutz Medical Campus. As a current and future major regional employment center, the Anschutz Medical Campus and associated hospitals are forecast for 45,000 employees at full buildout. The plans also call for additional office, hotel, other commercial and residential uses surrounding the campus and hospitals. The broad focus for the area includes medical and bioscience uses.

Denver’s zoning along East Colfax Avenue calls for mixed use development, more specifically Main Street zoning (Figure 3). Main Street zoning is appropriate for enhanced transit corridors in order to accommodate mixed use and higher densities along these corridors as well as reduced parking requirements. Denver’s downtown zoning context provides for a mix of multi-unit residential, commercial, office, civic, institutional, and entertainment uses in large multi-use buildings. It allows the tallest buildings in the city with parts of downtown allowing unlimited maximum heights.

As shown in Figure 3, the City of Aurora’s zoning along the East Colfax Avenue corridor calls for mixed use development in the “Original Aurora” zoning districts and a mixed use-institutional district at the Anschutz Medical Campus. The “Original Aurora” districts support building forms and development that are mixed use. They also call for urban-mixed use environments that allow entertainment, commercial, office and residential uses while allowing for higher density, vertical development. The mixed-use zoning around the Anschutz Medical Campus is intended to provide services for and link to the medical campus and its environs (Aurora 2019).

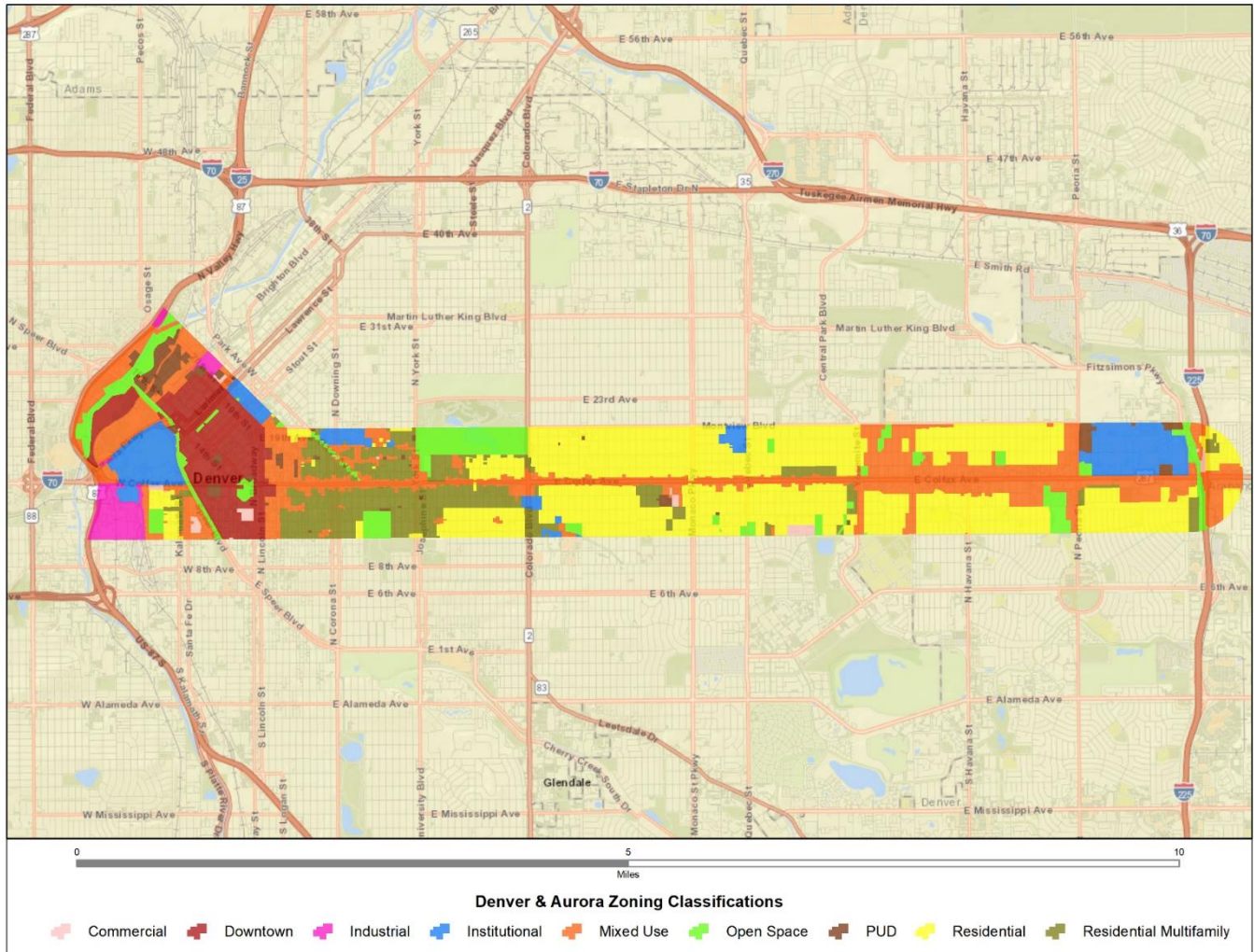


Figure 3. Project Zoning Classifications

4. Impact Analysis

4.1 METHODOLOGY Following a review of local and regional land use plans and zoning information, impacts were assessed based on the Project’s land use changes. Further, compatibility with the land use plans was evaluated to determine both the impacts of short-term construction and long-term maintenance and operations.

4.2 IMPACTS

The Project would result in minimal direct impacts to land use, as it is compatible with the existing and adopted future land use/transportation plans and zoning requirements within the land use study area. Direct impacts include a total of eight (9) partial right-of-way acquisitions and 30 temporary construction easements to accommodate station improvements along East Colfax Avenue between Broadway and Yosemite Street (e.g., Americans with Disabilities Act compliance, curb ramp installation) and along Colorado Boulevard at East 13th and 17th Avenues for the addition of a left turn lane at each intersection.

5. Mitigation

The Project would have minor direct impacts to land uses through partial right-of-way acquisitions and temporary construction easements. Necessary easements will be obtained in accordance with applicable RTD, CCD and COA standard policies. All property/land acquisition and/or relocation will comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 USC Chapter 61).

6. References

- Aurora, 2018. “Aurora Places Comprehensive Plan” prepared by City of Aurora, adopted in 2018. Website accessed December 2021:
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- CCD, 2019b. “Blueprint Denver: A Blueprint for an Inclusive City”, prepared by CCD, adopted in 2002 and updated 2019. Website accessed December 2021:
<https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Community-Planning-and-Development/Blueprint-Denver>.
- CCD, 2020a. “East Central Area Plan” prepared by CCD, adopted in 2020. Website accessed December 2021: https://www.denvergov.org/content/denvergov/en/community-planning-and-development/planning-and-design/Neighborhood_Planning_Initiative/Planning-Areas/East_Central_Area_Plan.html.
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