

S.0 SUMMARY

Beginning in June 2003, analysis of the Central Corridor Extension began as part of the I-70 East Corridor Environmental Impact Statement (EIS), a joint effort between Regional Transportation District (RTD), the Federal Transit Administration (FTA), Colorado Department of Transportation (CDOT), Federal Highway Administration (FHWA), and the City and County of Denver (CCD). In June 2006, the highway and transit elements of the I-70 East Corridor EIS were separated into two independent projects because they serve different travel markets, are located in different corridors, and have different funding sources.

The transit elements continued to be analyzed under the East Corridor EIS, while the highway elements were analyzed under the I-70 East EIS. Until early in 2007, the East Corridor EIS, conducted by RTD and FTA as the lead agency, focused on transit improvements for both the East Corridor and the Central Corridor Extension.

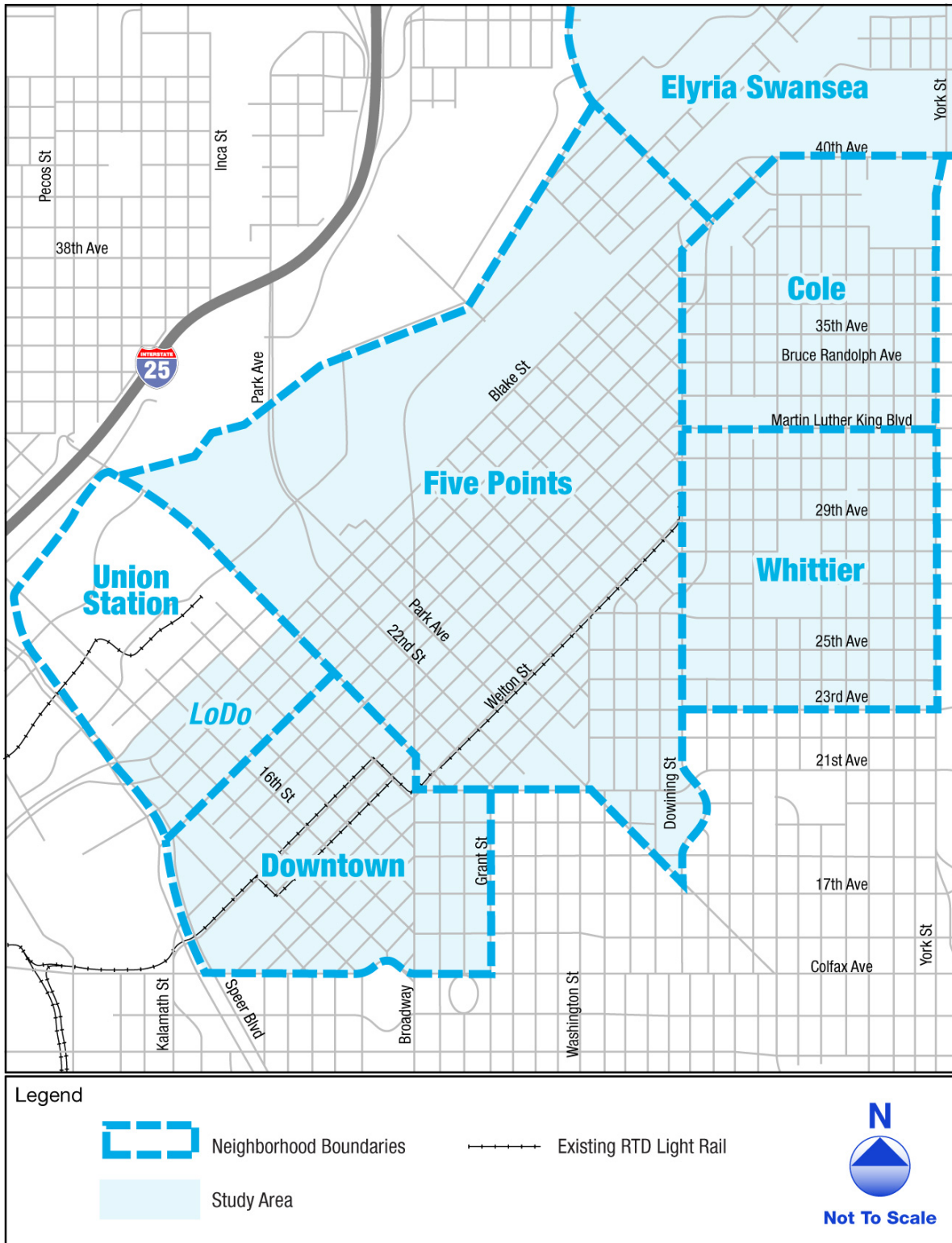
In July 2007, RTD completed the FasTracks 2007 Annual Program Evaluation, an annual assessment and update of the projected planning, funding, and operational aspects of each of the FasTracks corridors, and determined that the Central Corridor Extension improvements would not be submitted for federal funding and would not be included as part of the public-private partnership anticipated for the East Corridor. Based on the absence of federal or private funding the Central Corridor Extension was removed from the East Corridor EIS project.

In January 2008, work on the Central Corridor Extension was temporarily suspended pending station and alignment decisions for the East Corridor that were being made through the EIS process. In September 2009, the East Corridor Final EIS was released to the public, which allowed work on the Central Corridor to resume.

RTD completed this environmental evaluation (EE) to document the analysis for the Central Corridor Extension and to fulfill the RTD Board of Directors' commitment to study the environmental impacts of all FasTracks corridors, whether federally funded or not. The mitigation measures recommended in the final EE have been adopted by the Board of Directors and will be carried out during future engineering design and construction phases of the project.

Figure S-1 shows the project area, which contains established neighborhoods located just north of downtown Denver including Five Points, Downtown, the Lower Downtown (LoDo) area of Union Station, Whittier, Cole, and part of Elyria and Swansea.

**Figure S-1
Project Area**



S.1 PROJECT PURPOSE AND NEED

The purpose of the Central Corridor Extension is to provide high-quality, fixed-guideway transit that improves transportation access and mobility with connections to the rest of the RTD transit system that is consistent with previous planning efforts including the *2030 Metro Vision Regional Transportation Plan* (Denver Regional Council of Governments [DRCOG], 2005a), the *FasTracks Plan* (RTD, 2004), and the associated referendum vote of November 2004. The need for this project resulted from the following issues:

- Increased transportation demands
- Limited transportation options for underserved populations
- Completion of the *FasTracks Plan* regional fixed-guideway transit system

Increased Transportation Demands

The project area is experiencing rapid growth and redevelopment. Recent population and employment growth has resulted in increased travel demand in the project area and region. According to *Blueprint Denver: An Integrated Land Use and Transportation Plan (Blueprint Denver)* (CCD, 2002a), downtown Denver will add more than 21,000 new housing units and 47,000 new jobs by 2020. This growth and redevelopment will influence transportation and circulation in the project area. The project would help address increased travel demand by providing an additional transit service option.

Limited Transportation Options for Underserved Populations

Throughout the public outreach process of this EE, it was apparent that there was a strong public demand and need to better serve populations in the project area with improved transit. Rapid transit service would provide access for users in the corridor to regional transit lines proposed in the *FasTracks Plan*, especially with respect to the major activity centers located along the East Corridor such as the Stapleton redevelopment area and Denver International Airport (DIA). Increased rapid transit service is also important for individuals without access to vehicles and minority, low-income, disabled, and elderly populations throughout the corridor. According to the U.S. Census Bureau (2002a), the project area has 27,101 persons and 10,248 housing units.

Completion of the FasTracks Regional Fixed-Guideway Transit System

The Central Corridor Extension is part of 122 miles of proposed new light rail and commuter rail rapid transit facilities in the *FasTracks Plan*, which also includes 18 miles of bus rapid transit (BRT). These new rail transit facilities would connect with destinations throughout the entire Denver metropolitan area. The Central Corridor Extension would connect to the proposed East Corridor at the 38th/Blake station and to all of the existing light rail lines and would provide an additional transportation option for the surrounding neighborhoods.

S.2 ALTERNATIVES CONSIDERED

The Preferred Alternative for the Central Corridor Extension was developed through an extensive agency involvement and public outreach process, combined with detailed environmental and technical analysis. To help establish the transportation and environmental issues in the project area, public meetings were held with residents, businesses, and stakeholders in the community. The Preferred Alternative best addresses the transportation needs in the area while minimizing potential impacts on the community and environment.

A four-level screening process was used to reduce the range of alternatives considered to the selection of the Preferred Alternative. Alternatives were evaluated with increasing levels of detailed analysis as the process advanced.

Level One – Transit Alignments

The first level of evaluation focused on potential alignments to extend the existing light rail transit (LRT). Comparisons were made to determine if some were clearly better than others. A qualitative (good/better/best) approach was used to identify the alignments that were more effective at meeting the purpose and need and minimizing impacts.

Level Two – Transit Technologies

The second level of alternative screening was based upon feedback from the community that additional technologies should be evaluated. In response, street car and bus alternatives were considered in addition to light rail.

Level Three – Comparative Screening

Alignments and technologies remaining after level two screening were then compared. A quantitative (measure-based) analysis was used to identify the strengths and weaknesses of the alternatives.

Level Four – Alternative Refinement

The alternative that was recommended as a result of comparative screening was developed in more detail and further analyzed as part of alternative refinement. The evaluation was more in depth than the comparative screening analysis and was used to determine modifications to the alternative to make it more responsive to the project purpose and need and/or to minimize impacts. This fourth level of screening considered engineering feasibility; potential impacts on social, environmental, and economic resources; and the changed circumstances outside the control of this project, for example, moving the East Corridor commuter rail station from 40th/40th to 38th/Blake.

Alternatives Carried Forward in the Environmental Evaluation

In addition to the Preferred Alternative, a No Action Alternative, as described below, is presented in the EE.

No Action Alternative

The No Action Alternative includes planned and committed roadway improvements reflected in the DRCOG *2030 Metro Vision Regional Transportation Plan* and full implementation of the RTD FasTracks system except for the Central Corridor Extension. It represents future planned improvements in the regional transportation and transit network so that a thorough evaluation and comparison to build alternatives can be achieved. Comparison with the No Action Alternative helps determine whether benefits of the Preferred Alternative are acceptable considering environmental, economic, and social impacts.

Preferred Alternative

The Central Corridor Extension Preferred Alternative alignment is shown in Figure S-2. The alignment includes in-traffic rail transit between the existing 30th/Downing station and the East Corridor station planned at 38th/Blake, a distance of 0.8 mile. Service would be provided by light rail vehicles that complete round trip service between the East Corridor 38th/Blake station and the downtown Denver light rail loop. The trains would operate in traffic on Downing Street and 36th Street (northbound light rail vehicle in the northbound travel lane and the southbound light rail vehicle in the southbound travel lane) between the 38th/Blake station and the existing light rail station at 30th/Downing, then along the existing light rail tracks on Welton Street and into the downtown loop along California and Stout streets. In addition to the stations at 30th/Downing and 38th/Blake, the Preferred Alternative has planned stops at 33rd/Downing and at 35th/Downing. All existing LRT stations between 14th Street and 30th/Downing would also provide access.

The opening day operating plan for the Preferred Alternative would include four trains per hour (15-minute headway) in each direction between the 38th/Blake commuter rail station and the downtown Denver light rail loop.

Figure S-2
Central Corridor Extension Preferred Alternative



S.3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Detailed studies were conducted to determine the impacts of the No Action Alternative and the Preferred Alternative on social, environmental, and economic resources. These studies addressed:

- Social impacts and community facilities
- Environmental justice
- Land use and zoning
- Economic considerations
- Land acquisition, displacements, and relocations of existing uses
- Historic resources
- Visual and aesthetic qualities
- Energy
- Noise and vibration
- Hazardous materials
- Safety and security
- Utilities

Given the urban nature of the corridor, the location of the proposed alignment and stops, and the proposed transit technology, several environmental resources were not analyzed in detail because either they are not located in the project area or the project has no potential for impacting the resource. Resources not located in the project area are:

- Prime and unique farmlands
- Wild and scenic rivers
- Biological resources (including wildlife, vegetation, noxious weeds, and special status species)
- Waters of the U.S. and wetlands
- Geology and soils

Because there are no potential project-related impacts on these resources, they are not discussed in this EE.

In other cases, resources were not analyzed because the elements of the project would not result in the potential for any impacts on a resource. These resources and the justification for why they were not analyzed are:

- **Air Quality.** Transit service would be provided by the same electric light rail vehicles that are already in service in the area and would not result in additional emissions. In addition, the project is already included in the DRCOG air quality conformity model. Construction best management practices (BMP) will be used to mitigate potential temporary construction emissions.
- **Floodplains and Drainage/Hydrology.** Because the project would be built in an existing street, the drainage conditions will remain much as they are today. No increase in water runoff would occur. Any proposed drainage improvements by CCD along the corridor should be implemented before Central Corridor Extension construction to limit future disturbances in the project footprint.
- **Water Quality.** The project would be constructed using an impervious concrete foundation rather than a pervious crushed rock ballast foundation. This is expected to have only a minor impact because most of the alignment would be constructed in an urban area that is already dominated by impervious surfaces. In addition, transit sources are not major contributors to overall pollutant loading in receiving streams. Both permanent and temporary BMPs will be used to mitigate potential water quality impacts.

- **Parklands and Recreation Areas.** The project would be built within existing right of way (ROW), resulting in no direct impacts. There would be no indirect impacts as there are no park or recreation resources located within 300 feet of the Preferred Alternative alignment.
- **Archaeological and Paleontological Resources.** Archaeological and paleontological resources were not surveyed since the majority of the project area has been disturbed by years of development and redevelopment. The possibility exists, however, that buried archaeological materials may be unearthed during construction; therefore mitigation measures are included with the historic resources section under temporary construction impacts.

The potential impacts of the Preferred Alternative and proposed mitigation strategies are listed in Table S-1 in Section S.6, Mitigation Summary. Some of the potential environmental impacts of the Preferred Alternative are:

- Permanent easement, use and occupancy agreement, common use agreement, and/or intergovernmental agreement for use of existing street ROW from CCD.
- Some change in the visual character of the corridor due to the addition of overhead catenary wires and other components of the Preferred Alternative.
- Direct impacts on multiple utilities as part of the construction.

S.4 TRANSPORTATION SYSTEMS

Implementation of fixed-guideway transit has the potential to affect the surrounding transportation system including traffic patterns, traffic operations, roadway geometry, the availability of on-street parking, and bicycle and pedestrian facilities.

The No Action Alternative would not improve the transportation system to meet the future corridor demands, provide options for underserved populations, or complete the FasTracks system.

Some of the potential traffic impacts of the Preferred Alternative are:

- Introduction of rail transit operations within existing traffic on Downing Street and 36th Street.
- Addition of traffic signals.
- Conversion of one-way section of Downing Street to two-way operation.

The Central Corridor Extension would generate 4,900 average weekday riders in 2030.

S.5 PUBLIC COMMENT AND AGENCY COORDINATION

The Central Corridor Extension EE followed an extensive community and agency involvement process since the project began in July 2003 as part of the I-70 East Corridor EIS. The comprehensive public and agency outreach process continued as part of the East Corridor EIS once the highway and transit projects split in June 2006 and as part of this EE when it was determined in July 2007 that the Central Corridor Extension would no longer be included in the East Corridor EIS.

The overall goal of the community outreach and agency involvement process has been to provide an open process that includes as many of the residents, businesses, agencies, stakeholders, and community groups as possible. The process has been structured to involve people early and often, and to share information as it becomes available.

To gather input from the different agencies, several meetings were held to respond to individual agency issues, including resource agencies and CCD. The agency issues included potential environmental, transportation, and construction impacts; mitigation measures; alternative development; design constraints; analysis methodologies; and reporting requirements.

During the Draft EE review and comment period, the public was invited to respond via email, written correspondence, or during attendance at a public meeting held on December 16, 2009. The purpose of this meeting was to present project information contained in the report and to seek public input. Specific responses to the formally submitted review comments are included in Appendix A of this report. A summary of the discussion topics at the public meeting are listed below:

- Potential changes to existing traffic, bus operations, and business access. Response to traffic accidents on Downing with the addition of in-street rail transit.
- Potential impacts to the pedestrian environment throughout the corridor, including platform lighting.
- Opportunities and constraints for system expansion and anticipated service schedule.
- Construction costs, future funding scenarios and construction timing.
- Route identification and marketing strategies prior to opening day.
- Functionality of the system in connecting with other light rail lines through the downtown loop, differences between a Central Corridor Extension 36th Street stop and cross-platform transfer at the 38th/Blake station in accessing the East Corridor line.

S.6 MITIGATION SUMMARY

Table S-1 summarizes the Preferred Alternative potential impacts and the associated proposed mitigations to minimize impacts.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
Social Impacts and Community Facilities	
Direct Impacts <ul style="list-style-type: none"> • No impacts to community facilities. • Benefit from improved transit system and decreased congestion. 	<ul style="list-style-type: none"> • No mitigation required.
Indirect Impacts <ul style="list-style-type: none"> • Possible growth in population near stations at transit-oriented developments (TOD). 	<ul style="list-style-type: none"> • No mitigation required; this change is consistent with local and regional plans that encourage TOD near stations.
Temporary Construction Impacts <ul style="list-style-type: none"> • Residences within 300 feet of the project would be most affected by construction inconveniences (traffic disruptions, light and glare, and noise). 	<ul style="list-style-type: none"> • Develop a construction mitigation plan and coordinate with affected neighborhoods as needed. The construction plan would include: <ul style="list-style-type: none"> • Communication plan to inform the public of road closures, operating protocols, and

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
	disruption of utility service. <ul style="list-style-type: none"> • Air quality protection. • Noise and vibration control. • Water quality protection. • Hazardous waste control. • Visual protection. • Traffic control. • Noxious weed management. • Archeological monitoring plan. • Construction safety and security plan. • Energy plan.
Environmental Justice	
Direct Impacts <ul style="list-style-type: none"> • Faster travel and the availability of more travel options. • Easier access to jobs and services through expanded public transit options including access to local destinations (e.g., downtown Denver) as well as regional destinations (e.g., DIA, Aurora, Lakewood, Arvada, and Thornton) due to planned connecting rail and bus lines. • An estimated 137 new jobs related to construction and operation of the project would benefit all people, including minority and low-income populations, by providing opportunities for employment. 	<ul style="list-style-type: none"> • No mitigation is required.
Indirect Impacts <ul style="list-style-type: none"> • An estimated 315 related jobs would benefit all people, including minority and low-income populations, by providing opportunities for employment. 	<ul style="list-style-type: none"> • No mitigation required.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
<p>Temporary Construction Impacts</p> <ul style="list-style-type: none"> Residences within 300 feet of the project would be most affected by construction inconveniences (traffic disruptions, light and glare, and noise). 	<ul style="list-style-type: none"> Develop a construction mitigation plan and coordinate with affected neighborhoods as needed. The construction plan would include: <ul style="list-style-type: none"> Communication plan to inform the public of road closures, operating protocols, and disruption of utility service. Air quality protection. Noise and vibration control. Water quality protection. Hazardous waste control. Visual protection. Traffic control. Noxious weed management. Archeological monitoring plan. Construction safety and security plan. Energy plan. Schedule work outside of normal hours for sensitive receptors or adjust work to fit the use of adjacent facilities (should only be necessary in extreme circumstances, such as construction immediately adjacent to a health care facility, church, outdoor playground, or school).
<p>Secondary and Cumulative Impacts</p> <ul style="list-style-type: none"> Overall, long-term, positive effect on minority and low-income communities. 	<ul style="list-style-type: none"> No mitigation required.
Land Use and Zoning	
<p>Direct Impacts</p> <ul style="list-style-type: none"> Alignment and stops are consistent with adopted land-use plans. 	<ul style="list-style-type: none"> No mitigation required.
<p>Indirect Impacts</p> <ul style="list-style-type: none"> Potential increase in the urban density within 0.5 mile of stations. Change in existing zoning near the 38th/Blake station to support TOD opportunities. 	<ul style="list-style-type: none"> No mitigation required.
<p>Temporary Construction Impacts</p> <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
<p>Secondary and Cumulative Impacts</p> <ul style="list-style-type: none"> Future changes in land use and zoning related to the Preferred Alternative are consistent with, or already identified in CCD plans. 	<ul style="list-style-type: none"> No mitigation required.
Economic Conditions	
<p>Direct Impacts</p> <ul style="list-style-type: none"> Addition of approximately 137 jobs as a result of construction and operation of the Central Corridor Extension. 	<ul style="list-style-type: none"> No mitigation required.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
<p>Indirect Impacts</p> <ul style="list-style-type: none"> Benefit of 315 indirect jobs as a result of the project. Benefit of additional indirect jobs as a result of TOD. Benefit of high-density, mixed-use development as a result of TOD. 	<ul style="list-style-type: none"> No mitigation required.
<p>Temporary Construction Impacts</p> <ul style="list-style-type: none"> Temporary changes to access to businesses around stops, roadway reconfigurations, and at cross streets. 	<ul style="list-style-type: none"> Create a construction mitigation plan that includes: <ul style="list-style-type: none"> Clear signage and direction for alternative access to businesses. Coordination with local groups, business districts, communities, and jurisdictions using a variety of media (e.g., radio, flyers, advertisements, and website), where appropriate. Temporary access provided during normal business hours, where possible. Necessary permits obtained by contractors. Traffic maintenance plans to maintain access and circulation. Plans to minimize impacts to bus routes.
Land Acquisitions, Displacements, and Relocation of Existing Uses	
<p>Direct Impacts</p> <ul style="list-style-type: none"> Permanent easements, use and occupancy agreements, common use agreements, and/or intergovernmental agreement for use of existing street right of way from CCD. 	<ul style="list-style-type: none"> No mitigation required. For any person(s) whose real property interests would be affected by the Preferred Alternative, the acquisition of those property interests would comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended.
<p>Indirect Impacts</p> <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
<p>Temporary Construction Impacts</p> <ul style="list-style-type: none"> Use of property for temporary construction easements as determined during design. 	<ul style="list-style-type: none"> Coordinate the use of the property with the specific property owner for any property where a temporary construction easement is required.
Historic Resources	
<p>Direct Impacts</p> <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
<p>Indirect Impacts</p> <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required. Develop a communication plan as part of the construction mitigation plan.
<p>Temporary Construction Impacts</p> <ul style="list-style-type: none"> Potential for vibration impacts that will be determined during final design. 	<ul style="list-style-type: none"> Conduct qualitative construction vibration analysis and, if necessary, develop a mitigation plan to be implemented during construction.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
<ul style="list-style-type: none"> Potential impacts to unknown archaeological resources. 	<ul style="list-style-type: none"> Develop a worker awareness training program and monitor project during construction. Perform data recovery and excavation. Where known archaeological sites are present, avoid ground disturbing demolition and/or removals where possible. Perform archaeological monitoring during construction activities. If cultural deposits are discovered during construction, cease work in the area of discovery and notify the State Historic Preservation Officer (SHPO). The designated representative will evaluate any such discovery, and in consultation with SHPO, complete appropriate mitigation measures, if necessary, before construction activities are resumed.
Visual and Aesthetic Qualities	
<p>Direct Impacts</p> <ul style="list-style-type: none"> Project features that present the potential for visual change include overhead catenary and trackway. 	<ul style="list-style-type: none"> During final design, consider consolidating street lights, traffic signal, and overhead catenary poles to minimize visual impact. Use round catenary poles consistent with surrounding visual character.
<p>Indirect Impacts</p> <ul style="list-style-type: none"> Possible densification of land uses near the 38th/Blake station. This area may develop with taller buildings that would change the visual surroundings near the station. 	<ul style="list-style-type: none"> No mitigation required.
<p>Temporary Construction Impacts</p> <ul style="list-style-type: none"> Temporary disturbances to areas under construction and the potential for construction vehicle and equipment storage. 	<ul style="list-style-type: none"> Restore the ground surfaces outside of the trackway to their original condition after project construction, where feasible.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
Energy	
Direct Impacts <ul style="list-style-type: none"> Net decrease of 13 billion British thermal units (BTU) in annual regional energy consumption. Approximately 5 billion BTU of energy consumed each year for light rail operations. Approximately 20.9 billion BTU would be consumed for the construction of the Preferred Alternative. Approximately 9.8 billion BTU for transit construction and 11 billion BTU for roadway construction. 	<ul style="list-style-type: none"> No mitigation required.
Indirect Impacts <ul style="list-style-type: none"> Reductions in passenger vehicle miles traveled throughout the region would save 13 billion BTU (annually) over the No Action Alternative. 	<ul style="list-style-type: none"> No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> Minimal consumption of fossil fuels during construction. 	<ul style="list-style-type: none"> Incorporate BMPs into the project to reduce energy use during construction and implement environmental sustainability policies. These BMPs may include energy-efficient lighting, electrical systems, and mechanical equipment.
Air Quality	
Direct Impacts <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
Indirect Impacts <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> Localized, small-scale impacts may occur during construction. 	<ul style="list-style-type: none"> Include site-specific mitigation measures in a construction management plan. Minimize construction-related fugitive emissions using dust control practices that may include: <ul style="list-style-type: none"> Using water or wetting agent to control dust. Using wind barriers and wind screens to prevent spreading of dust from the site. Having a wheel wash station and/or crushed stone apron at egress/ingress areas to prevent dirt from being tracked onto public streets. Using vacuum-powered street sweepers to remove dirt tracked onto streets. Covering all dump trucks leaving sites. Covering or wetting temporary excavated materials. Using a binding agent for long-term excavated materials. Monitoring for PM₁₀ to allow for the real time modification or implementation of various

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
	dust control measures. <ul style="list-style-type: none"> • Implement potential mitigation strategies to reduce mobile source air toxics (MSAT) emissions during construction; possible strategies include: <ul style="list-style-type: none"> • Prohibiting unnecessary idling of construction equipment. • Locating diesel engines and motors as far away as possible from residential areas. • Locating staging areas as far away as possible from residential uses. • For winter construction, installing engine pre-heater devices to eliminate unnecessary idling. • Prohibiting tampering with equipment to increase horsepower or to defeat emission control device effectiveness. • Requiring construction vehicle engines to be properly tuned and maintained. • Using construction vehicles and equipment with the minimum practical engine size for the intended job. • Schedule work outside of normal hours for sensitive receptors or adjust work to fit the use of adjacent facilities (should only be necessary in extreme circumstances, such as construction immediately adjacent to a health care facility, church, outdoor playground, or school).
Noise	
Direct Impacts <ul style="list-style-type: none"> • 47 moderate noise impacts – none of which are within the top 50 percent of the moderate range. No moderate impacts have existing noise exposure above 65 A-weighted decibels (dBA). 	<ul style="list-style-type: none"> • No mitigation required.
Indirect Impacts <ul style="list-style-type: none"> • No impacts. 	<ul style="list-style-type: none"> • No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> • Noise related to construction activities. 	<ul style="list-style-type: none"> • Develop a communication plan as part of the construction mitigation plan to inform the public of potential construction noise impacts and measures that will be employed to reduce them. • Minimize construction duration and nighttime activities in residential areas. • Re-route truck traffic away from residential streets, where possible. • Combine noisy operations so that they occur at the same time. • Use well-maintained equipment with modern mufflers.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
	<ul style="list-style-type: none"> • Use noise blankets on equipment and/or quiet-use generators. • Use alternative construction methods (such as sonic or vibratory pile driving) in noise-sensitive areas. • Conduct high-noise activities, such as pile driving, during daytime construction (generally 7 a.m. to 7 p.m.), where possible and obtain appropriate permits/variances from CCD.
Secondary and Cumulative Impacts <ul style="list-style-type: none"> • No impacts. 	<ul style="list-style-type: none"> • No mitigation required.
Vibration	
Direct Impacts <ul style="list-style-type: none"> • No impacts. 	<ul style="list-style-type: none"> • No mitigation required.
Indirect Impacts <ul style="list-style-type: none"> • No impacts. 	<ul style="list-style-type: none"> • No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> • To be determined during final design. 	<ul style="list-style-type: none"> • Perform a quantitative construction vibration assessment before construction and in accordance with FTA guidelines. • If necessary, a mitigation plan will be developed and implemented during construction.
Secondary and Cumulative <ul style="list-style-type: none"> • No impacts. 	<ul style="list-style-type: none"> • No mitigation required.
Hazardous Materials	
Direct Impacts <ul style="list-style-type: none"> • Areas of concern include: <ul style="list-style-type: none"> • 1 National Priority List (NPL) site (Vasquez Boulevard and I-70). • 3 Resource Conservation and Recovery Act (RCRA) small quantity generator (SQG) sites corrective action list sites. • 3 Leaking Underground Storage Tanks (LUST) sites. • 9 closed LUST sites. 	<ul style="list-style-type: none"> • Develop management measures to address what will occur if hazardous materials are encountered during construction and operation of the Preferred Alternative. The environmental management plan will consist of specific measures and agency coordination requirements to protect worker and public health and safety as well as programs to identify and manage contaminated material during construction. • Modify track and structure locations during design (to the extent practical), especially excavation, to minimize conflict with subsurface contamination. • Complete a site-specific Phase II investigation where subsurface disturbance is anticipated in a potentially hazardous area. Collect soil and/or groundwater samples and submit for laboratory analysis as needed. • Develop a materials handling plan and a soil characterization and management plan. • Develop a health and safety plan.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
Indirect Impacts <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> Potential for hazardous materials sites to become exposed during construction. Water quality protection. Protection of construction workers. Accidental release of hazardous materials. 	<ul style="list-style-type: none"> Implement construction BMPs including a stormwater pollution prevention plan. BMPs may include secondary containment areas for refueling construction equipment, berms or ponds to control runoff, dust suppression, and a monitoring program to test stormwater for contaminants before discharge from the construction site. Use construction practices in compliance with Occupational Safety and Health Administration (OSHA) requirements for construction workers who may be exposed to hazardous materials; prepare health and safety and emergency response plans, air monitoring (if necessary), and provision for personal protective equipment. Where avoidance of potentially contaminated sites is not feasible, coordinate further site investigation with the affected property owner.
Safety and Security	
Direct Impacts <ul style="list-style-type: none"> The operation of the Preferred Alternative would neither increase nor decrease crime rates in the project area. The operation of the Preferred Alternative would introduce rail transit vehicles into traffic along Downing Street and 36th Street. 	<ul style="list-style-type: none"> No mitigation required beyond adherence to the RTD station design guidelines for safety and security. RTD will establish a Fire and Life Safety Committee during final design and construction to coordinate an emergency plan and emergency responses.
Indirect Impacts <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> Potential security hazards if the work areas are not adequately secured. 	<ul style="list-style-type: none"> Secure construction areas to reduce security hazards.
Utilities	
Direct Impacts <ul style="list-style-type: none"> The Preferred Alternative would have direct utility impacts on the following: <ul style="list-style-type: none"> 1 electrical transmission line. 3 electrical distribution lines. 20 natural gas lines. 17 water lines. 48 sanitary and storm sewer lines. 25 telecommunication lines. 	<ul style="list-style-type: none"> As appropriate for the impact, include the following mitigation: <ul style="list-style-type: none"> Avoid utilities during final design and construction. Reinforce or protect utilities through casing pipes and other construction methods. Use cathodic protection to mitigate corrosion or electrical grounding to mitigate impacts of induced voltages caused by alternating current. Relocate utilities in coordination with the utility owner or municipality.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
Indirect Impacts <ul style="list-style-type: none"> Possible densification of development around transit stations requiring additional utilities. 	<ul style="list-style-type: none"> No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> Temporary interruptions in service. 	<ul style="list-style-type: none"> Coordinate temporary interruptions in utility service with affected property owners and tenants. See direct impacts; construction impacts to utilities are direct impacts.
Transit Service and Operations	
Direct Impacts <ul style="list-style-type: none"> The Preferred Alternative would provide service to 4,900 riders (average weekday) in 2030. Light rail service on the D line would be modified to no longer service stops outside of the downtown loop on the Central Corridor. Transfer between the Central Corridor Extension and light rail would be required. 	<ul style="list-style-type: none"> No mitigation required.
Indirect Impacts <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
Temporary Construction Impacts <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
Roadway Facilities and Traffic	
Direct Impacts <ul style="list-style-type: none"> New in-traffic rail transit service within existing Downing Street and 36th Street ROW. Conversion of Downing Street between Walnut Street and Lawrence Street from a one-way southbound operation to a two-way operation. Elimination of left-turn movement from southbound Downing Street to 36th Avenue. Elimination of left-turn movement from southbound Downing Street to 37th Avenue. 	<ul style="list-style-type: none"> Add northbound and southbound left-turn lanes on Downing Street at California Street. Add a southbound left-turn lane on Downing Street at Lawrence Street. Convert Curtis Street to right-in, right-out access at Downing Street. Convert 35th Street to right-in, right-out access at Downing Street.
<ul style="list-style-type: none"> Addition of traffic control to assist in movement transit vehicles through intersections. 	<ul style="list-style-type: none"> Add signal to California Street/East 30th Avenue intersection. Add signal to Downing Street/36th Street/37th Avenue/Larimer Street intersection. Add signal at Walnut Street/36th Street intersection. Add signal at Blake Street/36th Street intersection.

**Table S-1
Preferred Alternative Summary of Impacts and Mitigation**

Impacts	Mitigation
<ul style="list-style-type: none"> Loss of 34 on-street parking spaces on Downing Street. Loss of 14 on-street parking spaces on 36th Street. 	<ul style="list-style-type: none"> No mitigation required; alternative parking options are available on side streets.
<ul style="list-style-type: none"> Bicycle/pedestrian crossing safety issues at 33rd/Downing stop due to limited sight distance around stopped trains. 	<ul style="list-style-type: none"> Move existing crosswalk approximately 150 feet to the north; construct median refuge similar to that at existing location.
<p>Indirect Impacts</p> <ul style="list-style-type: none"> No impacts. 	<ul style="list-style-type: none"> No mitigation required.
<p>Temporary Construction Impacts</p> <ul style="list-style-type: none"> Temporary increases in traffic for construction workers and materials during construction. Temporary lane closures to accommodate construction activities. 	<ul style="list-style-type: none"> Develop traffic control plans as part of the construction mitigation plan to reduce construction-related traffic congestion and maintain traffic flow and access to local businesses and residences.