



ENVIRONMENTAL ASSESSMENT

Federal Boulevard Improvements Project Between West 7th Avenue and West Howard Place

Project Number: NHPP 2873-172, Project Code: 19957

City and County of Denver, Colorado

Lead Agencies

Federal Highway Administration



Colorado Department of Transportation



October 15, 2014

ENVIRONMENTAL ASSESSMENT SIGNATURES

Submitted by:

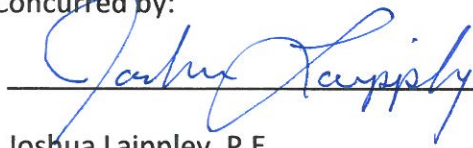


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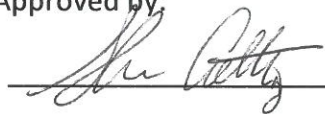


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PUBLIC COMMENT PERIOD

The public comment period for this document begins October 15, 2014 and ends November 7, 2014. Written comments regarding this document can be submitted through the project website <https://www.denvergov.org/infrastructure/PolicyandPlanning/CurrentProjects/FederalBoulevard/tabid/442758/Default.aspx>, by mail email, or fax to the following address:

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APPENDICES – PROVIDED ON CD

APPENDIX A – SUPPORTING DOCUMENTS BY SUBJECT

- A1 Air Quality
- A2 Water Quality
- A3 Biological Resources Report
- A4 Historic Resources Report
- A5 Archaeological Resources
- A6 Paleontological Resources
- A7 Economic Resources
- A8 Social and Community Resources
- A9 Environmental Justice Determination
- A10 Transportation Resources
- A11 Traffic Noise
- A12 Hazardous Materials
- A13 Land Use
- A14 Cumulative Impact Assessment

APPENDIX B – AGENCY COORDINATION

APPENDIX C – PUBLIC INVOLVEMENT

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LIST OF ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
APCD	Air Pollution Control Division
APE	Area of Potential Effect
BMP	Best Management Practice
CCD	City and County of Denver
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CO	Carbon monoxide
CPW	Colorado Parks and Wildlife
DRCOG	Denver Regional Council of Governments
EA	Environmental Assessment
EPB	Environmental Programs Branch
ESA	Environmental Site Assessment
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
ISA	Initial Site Assessment
LOS	Level of Service
LRT	Light Rail Transit
MBTA	Migratory Bird Treaty Act
MMP	Materials Management Plan
MS4	Municipal Separate Storm Sewer System
NEPA	National Environmental Policy Act
NHRP	National Register of Historic Places
O ₃	Ozone
OPS	Colorado Division of Oil and Public Safety
PEL	Planning and Environmental Linkages
PM ₁₀	Particulate matter 10 micrometers in diameter and smaller
ROW	Right of Way
RTD	Regional Transportation District
SH 88	State Highway 88
SHPO	State Historic Preservation Officer
SB 40	Senate Bill 40
SWMP	Stormwater Management Plan

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U.S.	US
US 6	US Highway 6
US 40	US Highway 40
USFWS	US Fish and Wildlife Service
USACE	US Army Corps of Engineers
VMT	Vehicle Miles Traveled
vpd	Vehicles per Day

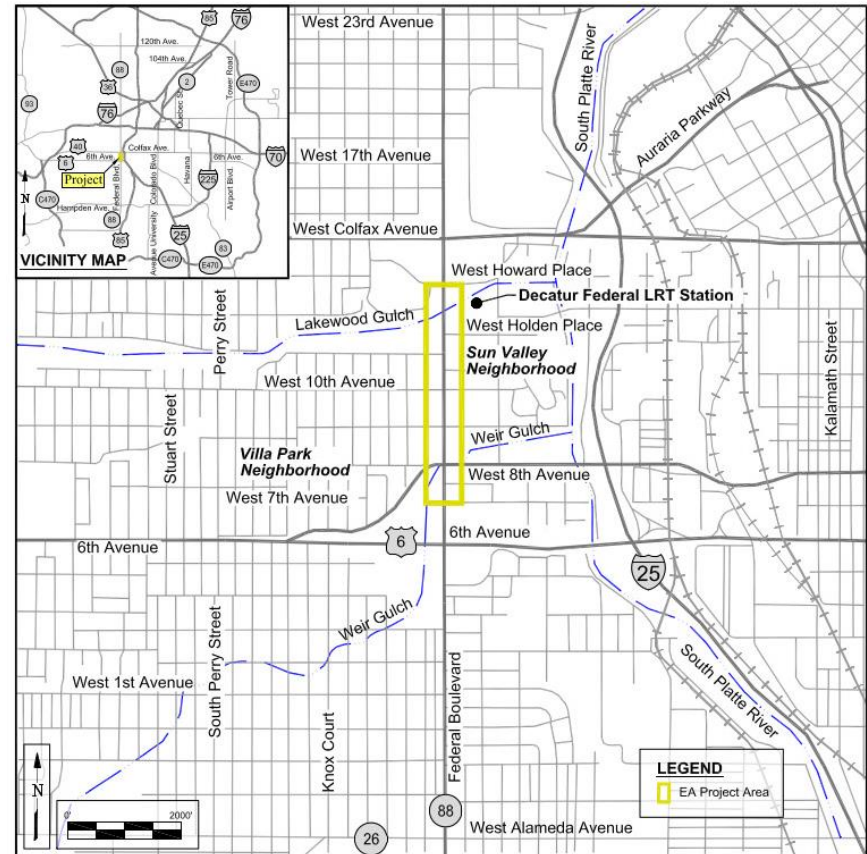
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INTRODUCTION

This Environmental Assessment (EA) has been prepared for the Federal Boulevard Improvements Project (“Project”). The Project Area is located along Federal Boulevard between West 7th Avenue and West Howard Place, with the eastern and western boundaries generally extending to the back of right of way (ROW) of the parcels immediately adjoining Federal Boulevard (“Project Area,” Figure 1). Federal Boulevard is a principal north-south, urban arterial roadway that falls under the jurisdiction of the Colorado Department of Transportation (CDOT) as State Highway 88 (SH 88). Federal Boulevard spans 20 miles between Bowles Avenue to the south and 120th Avenue to the north, on the west side of the Denver metropolitan area. In the Project Area, Federal Boulevard provides access to a number of major thoroughfares, including U.S. Highway 6 (US 6) and US Highway 40 (also known as Colfax Avenue). The stretch of Federal Boulevard in the Project Area is lined by commercial development with residential development behind the businesses. Federal Boulevard serves as a high travel-demand traffic corridor. In the Project Area, there are four bus routes on Federal Boulevard (with two additional bus routes that cross it). Bus ridership is considered very strong for the segment of the Federal Boulevard corridor located within the Project Area, with the bus stops located in the vicinity of the Denver Department of Human Services and the Decatur-Federal Light Rail Transit (LRT) station being highly utilized (Monroe, 2014). Federal Boulevard is one of the Regional Transportation District’s (RTD) busiest cross-town bus routes, providing access to multiple cities as well as to the West Corridor LRT at the Decatur-Federal LRT station (CCD, 2012). The Decatur-Federal station is located at Federal Boulevard and West Howard Place, to the north of the Project Area. The station is on the West Line that connects Downtown Denver with West Denver and Lakewood, terminating at the Jefferson County Government Center in Golden; this LRT corridor has a total of 12

Figure 1. EA Project Area



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stations. The Decatur-Federal LRT station is located near major roadways, low- to medium-density land uses, important transit routes, transit-dependent populations, and special-event centers (e.g., Sports Authority Field at Mile High). Two bicycle routes cross Federal Boulevard: Route D-12 at West 10th Avenue and Route D-10 which follows Lakewood Gulch and passes underneath the roadway. There are also two multi-use trails (Lakewood Gulch Trail and Weir Gulch Trail) that can be accessed within the Project Area.

This is a local-agency project sponsored by the City and County of Denver (CCD) in conjunction with CDOT and the Federal Highway Administration (FHWA) serving as joint lead agencies. This EA evaluates the Proposed Action, which would add a third northbound lane between West 7th Avenue and West 10th Avenue, widen the southbound lanes to CDOT standards, add a raised median between West 7th Avenue and West Howard Place, upgrade pedestrian facilities in compliance with the Americans with Disabilities Act (ADA) throughout the Project Area, enhance multi-modal connectivity, and improve water quality. There currently are three northbound lanes between West 10th Avenue and West Howard Place including on the bridge over Lakewood Gulch; roadway improvements in this section would increase lane widths to meet CDOT standards.

A Planning and Environmental Linkages (PEL) Study was completed for the portion of Federal Boulevard between West 5th Avenue and West Howard Place in October 2009 (FHU, 2009a). A PEL Study is a long-range systems or project planning study that evaluates alternatives and documents planning information and decisions to streamline the National Environmental Policy Act (NEPA) process (FHWA, 2014). The Proposed Action in this EA is consistent with the improvements recommended in the PEL Study, which is a continuous third northbound lane between West 5th Avenue and West Howard Place with a raised median complemented by multi-modal improvements. This cross-section was constructed between West Alameda Avenue and West 5th Avenue, to the south of this Project Area, in 2012. The US 6 interchange and the section of Federal Boulevard between West 5th Avenue and West 7th Avenue are currently being addressed through CDOT's US 6 Bridges Design-Build project. The RTD LRT project, completed in 2013, included widening of the Federal Boulevard Bridge over Lakewood Gulch between West 10th Avenue and West Howard Place to three lanes northbound and southbound. This EA used information from the PEL Study as a starting point; however, traffic and environmental resource data were updated and the conceptual design, which has been further developed since the PEL Study, was used for impact analyses and mitigation planning. Additionally, this EA conducted public outreach that built upon the stakeholder involvement efforts of the PEL Study.

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WHAT IS THE PURPOSE OF THE PROJECT?

The purpose of the Project is to improve safety for all modes of travel (e.g., personal vehicles, transit vehicles, and bicycles as well as foot traffic), improve traffic operations for all traffic modes, reduce existing and future northbound congestion, and enhance multi-modal connectivity.

WHAT ARE THE NEEDS FOR THE PROJECT?

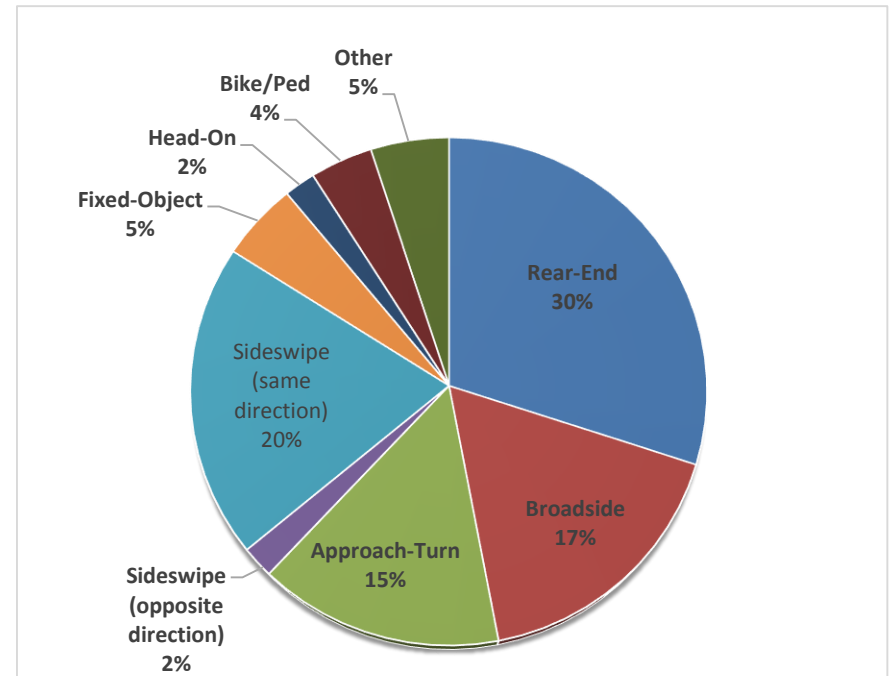
Safety Problem: Higher than Expected Crash Rates

Vehicle-crash data for the Project Area from January 2009 to December 2013 was compared to the Statewide average for similar transportation facilities over the same five years. During this timeframe, there were 300 reported crashes on Federal Boulevard between West 7th Avenue and West Howard Place, that is higher than the Statewide average. Property-damage-only crashes were 3.1 times higher than the 5-year average; injury crashes were 4.5 times higher than the 5-year average; and crashes involving fatalities were 2.3 times higher than the 5-year average (TSH, 2014a).

The most frequent crash type was rear-end collisions (90 crashes), followed by sideswipe crashes (62 crashes), broadside crashes (51 crashes), approach-turn crashes (46 crashes), and pedestrians or bicycles hit by motor vehicles (12 crashes) (Figure 2). There are two high-density crash locations in the Project Area: 137 of the 300 crashes recorded (46 percent) occurred at the intersection of Federal Boulevard with either West 8th Avenue or West 10th Avenue (TSH, 2014a).

There are currently three through-lanes in the southbound direction with lane widths that do not meet CDOT standards (9.5 feet wide) and inconsistent pedestrian facilities. The roadway cross-section of northbound Federal Boulevard in the Project Area is inconsistent as both the width (ranging from 9.5 feet to 11 feet) and number of lanes vary, and the roadway does not provide enough capacity to accommodate existing and projected traffic volumes. The two-lane northbound section between West 7th Avenue and West 10th Avenue has lanes of varying width, inconsistent pedestrian facilities that are not compliant with the ADA, and no center median to manage access to the numerous access points

Figure 2. Crash Type Distribution on Federal Boulevard between 2009 and 2013



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in the Project Area. The high density of access points on Federal Boulevard means that there are frequent turning movements throughout much of the Project Area. Additionally, buses make frequent stops within the Project Area. With only two lanes in the northbound direction along Federal Boulevard, there is little room for drivers to pull out and pass vehicles entering or exiting the roadway, or to pass buses stopped in the right lane, resulting in access-point-related crashes. These factors contribute to the higher than Statewide average number of crashes.

There is also substantial pedestrian traffic in the Project Area. Based upon information collected by the Denver Regional Council of Governments (DRCOG), Federal Boulevard (from Bowles Avenue to 104th Avenue) was documented as having the highest number of fatal pedestrian crashes in the Denver region, with 42 fatal pedestrian crashes between 2001 and 2010 (DRCOG, 2012). There are two bicycle routes that cross Federal Boulevard, although there is no formal route along the roadway: Route D-10 follows the Lakewood Gulch Trail that crosses beneath Federal Boulevard and D-12 crosses at West 10th Avenue. There are also two multi-use trails that cross Federal Boulevard: the Lakewood Gulch Trail and the Weir Gulch Trail. These multi-use trails draw both pedestrian and bicycle traffic along and across Federal Boulevard. The Lakewood Gulch Trail crosses underneath Federal Boulevard at the Gulch and can be accessed from West Holden Place. The Weir Gulch Trail can be accessed from Federal Boulevard at West 8th Avenue; it eventually connects to the South Platte River Trail.

The existing conditions listed below result in diminished safety for pedestrians and bicyclists in the Project Area:

- Discontinuity of sidewalks and lack of a consistent sidewalk width, which forces pedestrians and bicyclists to make their own route between sidewalk segments
- Lack of compliance with current ADA standards for parts of the Project Area, which makes the route inaccessible for some individuals
- Lack of a consistent buffer zone between the sidewalk and edge of roadway, which potentially leads pedestrians closer to the roadway than is desirable
- Lack of a dedicated bicycle lane on Federal Boulevard, which results in some cyclists using the sidewalks, which in turn leads to pedestrian and bicyclist conflicts due to the narrow width of the existing sidewalk
- Presence of numerous uncontrolled left turns, which potentially leads to conflict points between vehicles entering/exiting the roadway while a pedestrian is crossing
- Absence of pedestrian refuges and crosswalks, which leads to a greater number of vehicle versus pedestrian and bicycle conflict points; this forces pedestrians and bicyclists to make their own route when they cross the roadway

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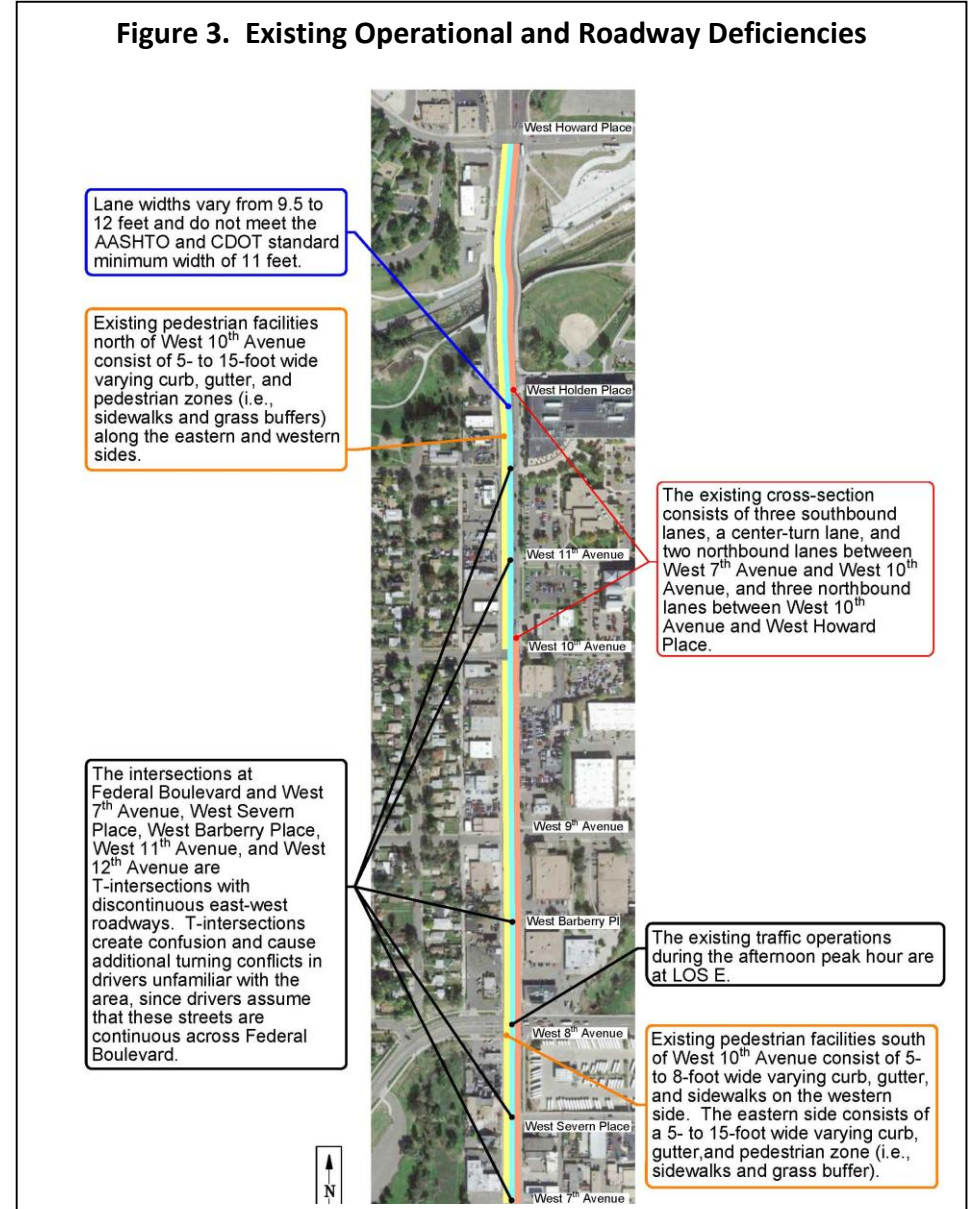
- Multiple curb cuts and access points, which leads to a greater number of vehicle versus pedestrian and bicycle conflict points

Traffic Operations Problem: Inconsistent, Substandard Cross-Section Leading to Poor Traffic Operations

The cross-section of the roadway in the Project Area is inconsistent in width and number of lanes, and the roadway does not meet current design standards. This contributes to poor traffic operations resulting in congestion, which reduces mobility. The following roadway characteristics and deficiencies negatively affect the operations of traffic through the Project Area (Figure 3): Northbound lane widths within the Project Area vary from 9.5 to 12 feet, which do not meet the American Association of State Highway and Transportation Officials' (AASHTO) and CDOT's standard minimum width of 11 feet for multi-lane roadways (CDOT, 2005)

- The center median is a painted two-way, center-turn lane varying in width from 9.5 to 12 feet, allowing for unimpeded turning movements across lanes of through traffic, which can impact traffic operations
- Non-signalized intersections are located throughout the Project Area, which result in uncontrolled access to and from Federal Boulevard, that in turn can impact traffic operations
- The intersections of Federal Boulevard and West 7th Avenue, West Severn Place, West Barberry Place, West 11th Avenue, and West 12th Avenue are offset or "T-intersections," which can create confusion and cause turning conflicts by drivers unfamiliar with the area as the drivers could assume that these streets are continuous across Federal Boulevard

Figure 3. Existing Operational and Roadway Deficiencies



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- When a bus stops for passengers in the right lane, northbound traffic flow is limited to a single lane between West 7th Avenue and West 10th Avenue. This condition causes operational problems, including added congestion, as vehicles attempt to merge into the left lane to avoid being stopped behind the bus
- An imbalance of travel lanes in the Project Area creates an inconsistency and discontinuity of travel. The cross-section of Federal Boulevard generally consists of three southbound lanes; a two-way center-turn lane; two northbound lanes between West 7th Avenue and West 10th Avenue; and three northbound lanes between West 10th Avenue and West Howard Place

Federal Boulevard has a six through-lane configuration (three northbound lanes and three southbound) to the north and south of the Project Area. The narrowed section of the roadway in the Project Area, combined with the existing lane imbalance from West 5th Avenue to West 10th Avenue negatively affects traffic operations.

Congestion Problem: Traffic Volumes Exceed Capacity in Certain Locations

Traffic volumes remain consistently heavy over long periods of the day with 41,300 vehicles per day (vpd) reported in May 2013 for the combined southbound and northbound traffic. Percentages of traffic occurring in the peak hours are indicative of commuting with an increase in traffic volumes during the morning and evening rush hours. In 2013, the traffic volumes on Federal Boulevard resulted in the West 8th Avenue and Federal Boulevard intersection operating at a Level of Service (LOS) E during the evening peak period (TSH, 2014b). All other intersections operated at LOS C or better during the 2013 peak periods (Table 1). In urbanized areas, LOS D is generally considered to be acceptable for peak-period operations, which coincide with the morning and evening commute in the Project Area (Figure 4).

Table 1. Existing and 2035 No-Action Level of Service at Signalized Intersections

Intersection	Level of Service (Average Delay per Vehicle for LOS Intersections in Seconds)			
	Existing (2013)*		Projected (2035)	
	AM	PM	AM	PM
West Holden Place	A (4)	A (9)	A (9)	C (28)
West 10 th Avenue	B (11)	B (13)	D (37)	F (92)
West 8 th Avenue	C (21)	E (55)	F (122)	F (164)

Source: TSH, 2014b

*Note: Existing volumes derived as outlined in PEL Study Traffic Report dated June 2009 using volumes from May 2013 DRCOG traffic counts on Federal Boulevard north of West 8th Avenue.

Traffic projections for the year 2035 take into account forecasts of regional growth, major reconstruction of the US 6 and Federal Boulevard interchange, construction of the Decatur-Federal LRT station, and the proposed re-development in the Project Area. These actions are expected to add to the travel demand, which in turn will continue to place pressure on the roadway. Traffic modeling indicated that in the year 2035,

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vpd would range between 53,000 vpd and 55,000 vpd (FHU, 2009a); this is an increase of 28 to 33 percent over the 2013 vpd rate. The 2035 vpd is expected to cause the intersection at West 8th Avenue to continue to fail, with a total intersection delay of approximately two minutes in the morning peak period and almost three minutes in the evening peak period. This is in comparison with less than a minute of delay in the year 2013 in either the morning or evening peak period at the West 8th Avenue intersection. The intersection at West 10th Avenue is also anticipated to operate at an unacceptable LOS F in the evening peak period in the year 2035 with approximately one and a half minutes of delay (Table 1).

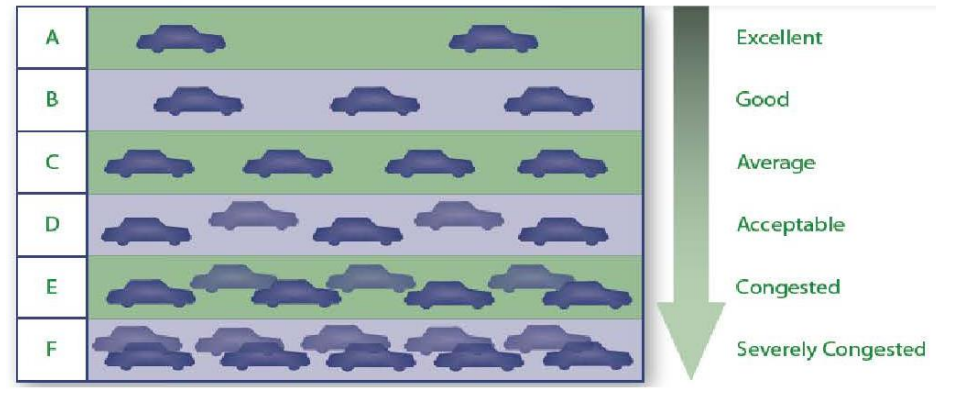
Multi-Modal Problem: Poor Connectivity between Transportation Modes

Federal Boulevard, including the Project Area, includes vehicular, transit, pedestrian, and bicycle modes of transportation; it truly is a multi-modal facility. In identifying Federal Boulevard as an “enhanced bus transit corridor,” CCD notes its high level of both pedestrian and transit usage. Connections between modes are needed to support the traveling public. CCD’s Pedestrian Master Plan identifies “an inherently strong relationship and dependency between transit and pedestrian accessibility...” (CCD, 2004).

Compared with the CCD average, there is a high reliance on transit by the residents in the neighborhoods adjacent to the Project Area. Of the employed individuals living in the Sun Valley neighborhood, 29.4 percent use public transit to commute to work, as do 10.1 percent of the employed individuals living in the Villa Park neighborhood; this is compared to just over 7 percent in the CCD overall (US Census, 2010). This reliance on transit contributes to the heavy pedestrian traffic as individuals walk or bike to transit stops, including the nearby Decatur-Federal LRT station. The Federal Transit Administration (FTA) forecasts almost 600 daily alightings (i.e., exiting/boardings) by pedestrians and bicyclists in 2025 (the planning year for their study) at the Decatur-Federal station, substantiating that there is considerable pedestrian traffic accessing this facility (FTA, 2003). However, lack of consistent, ADA-compliant pedestrian facilities hinders connectivity between non-motorized travel and other modes.

Figure 4. Level of Service

The term level of service with values ranging from A to F is used to describe the operation characteristics of intersections and roadways. LOS A represents the best possible operations conditions, while LOS F is characterized by severe congestion and extremely poor traffic operations (i.e., gridlock).



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Pedestrian Traffic

Local community facilities are typically centers of pedestrian activity, and pedestrians travel along or across Federal Boulevard in order to gain access to them. Community facilities identified within or in the vicinity of the Project Area include parks, recreational trails and centers, bicycle routes, a public library, Denver Department of Human Services, West Side Health Clinic, Denver Community Credit Union, schools, and several places of religious worship. In addition, Federal Boulevard is designated as an Enhanced Bus Transit Corridor, as documented in the Pedestrian Master Plan (CCD, 2004) and Blueprint Denver (CCD, 2002); however, the existing cross-section does not meet the design guidelines for this type of facility for pedestrian access, because of the varying and narrow width of the pedestrian zone (i.e., 5 to 15 feet), inconsistent buffer area, lack of directional curb ramps at every intersection, and lack of other safety measures.

There are signalized crosswalks located at the Federal Boulevard intersections with West 8th Avenue and West 10th Avenue. There are numerous existing curb cuts, curb ramps, and sidewalks that do not meet ADA or local and State standards. This deficiency can make it difficult for individuals to access the transit stops, local businesses, or community facilities. Although some ramps are in adequate condition, often the pavement adjacent to the ramp is in poor condition, thus making it unsuitable for wheelchair access. The lack of consistent pedestrian facilities likely contributes to the large number of pedestrian accidents along Federal Boulevard noted in the safety section above.

Bicycle Traffic

Although Federal Boulevard is not a designated bicycle route, connectivity to the two routes that cross it should be provided. West 10th Avenue, which crosses Federal Boulevard, is east-west bicycle Route D-12, and east-west bicycle Route D-10 crosses underneath the Federal Boulevard Bridge along Lakewood Gulch (CCD, 2011). In addition, two multi-use trails are located in the area: the Lakewood Gulch Trail extends under Federal Boulevard just north of West Holden Place, and the Weir Gulch Trail connects to West 8th Avenue. The Weir Gulch Trail utilizes West 8th Avenue and Federal Boulevard to cross West 6th Avenue and resumes as an off-road trail to the southwest of the Federal Boulevard interchange with West 6th Avenue. Due to a lack of signage, it may not be clear to bicyclists where the D-10 and D-12 bicycle routes or two multi-use trails cross Federal Boulevard. This lack of clarity can result in bicyclists riding in traffic along Federal Boulevard which, due to narrow lane widths, numerous access points, and the high volume of traffic, is unsafe. The construction of the Decatur-Federal LRT station improved regional bicycle mobility, but it also emphasized the need for multi-modal connectivity, as bicycles can be loaded onto any LRT vehicle through the Bike-n-Ride facilities.

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WHAT IS THE PROPOSED ACTION?

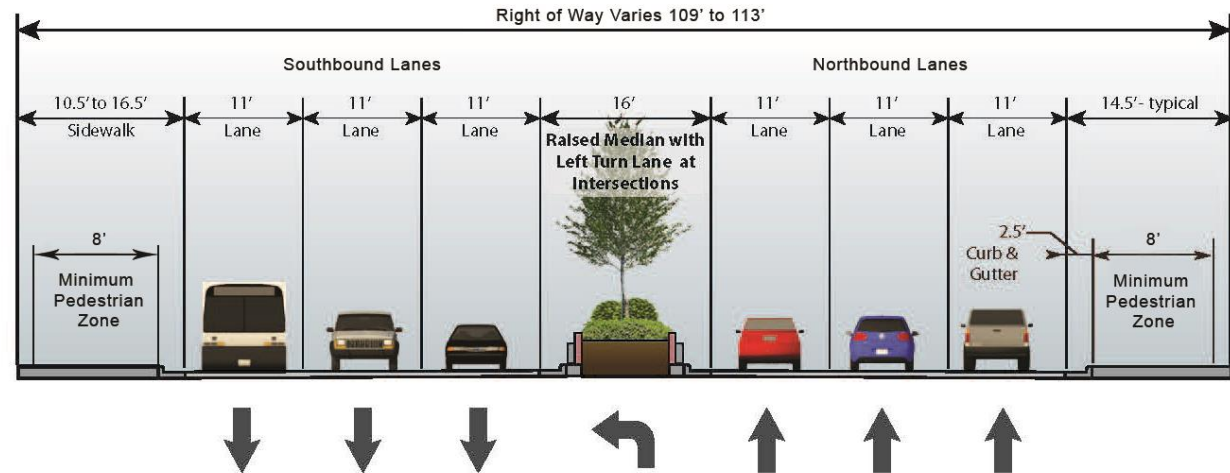
The Proposed Action is to add a third northbound lane between West 7th Avenue and West 10th Avenue and a raised median throughout the Project Area to improve mobility and safety (Figure 5). North of West 10th Avenue, the width of the existing three northbound lanes would be brought up to standard (11 feet). The existing southbound lanes would also be brought up to standard width in areas where they are currently substandard. The widening of Federal Boulevard as a part of the Proposed Action will meet AASHTO and CDOT standards. Access will be limited by controlling left-turns at non-signalized points. In the Proposed Action, the existing signalized crosswalks at the intersections of Federal Boulevard with West 8th Avenue and West 10th Avenue will be upgraded with new traffic and pedestrian signals and enhanced concrete crosswalks. Sidewalks on the west and east sides of the street will be brought up to ADA standards; this will match the existing sections of Federal Boulevard to the north and south.

Access to bus service, which connects to local and regional destinations as well as the greater transit system, including the nearby West Line of RTD's LRT system, will be improved by upgrading the sidewalk to be consistent and compliant with ADA standards. Additionally, connectivity to the Weir Gulch Trail would be enhanced with better signage for the trail, reducing the curvature of the "T" intersection where the trail and sidewalk connect along West 8th Avenue, signage for the Trail, and a wider sidewalk along West 8th Avenue, all of which support the CCD's Bicycle Master Plan (CCD, 2001) and Denver Moves (CCD, 2011). These improvements are anticipated to improve mobility, safety, and enhance multi-modal options within the Project Area.

In summary, the Proposed Action consists of the following elements:

- Federal Boulevard roadway alignment and improvements

Figure 5. Cross-Section of the Proposed Action



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- Widening Federal Boulevard from the ROW boundary on the west side of Federal Boulevard toward the east between West 7th Avenue and approximately West 10th Avenue with an additional 11-foot northbound lane
- Restriping and widening the three northbound lanes on Federal Boulevard between approximately West 10th Avenue to approximately West Howard Place to be 11 feet wide
- Restriping and widening the three southbound lanes on Federal Boulevard between approximately West 7th Avenue and West 10th Avenue to be 11 feet wide
- Bicycle and pedestrian improvements
 - Improving the sidewalks on the east side of Federal Boulevard between West 7th Avenue and West 10th Avenue to meet ADA standards and better accommodate pedestrians
 - Standardizing inconsistent sidewalk widths on both the east and west sides of Federal Boulevard with an 8-foot pedestrian zone consisting of either a detached 5-foot sidewalk with a 3-foot buffer or an attached 8-foot sidewalk with ADA-compliant curb ramps and driveway cuts
 - Enhancing access to the Decatur-Federal LRT station through improved multi-modal connectivity by improving the sidewalks throughout the Project Area
 - Upgrading existing pedestrian signals and constructing enhanced concrete crosswalks at the signalized intersections of Federal Boulevard with West 8th Avenue and West 10th Avenue
 - Enhancing bicycle and pedestrian connectivity to the Weir Gulch Trail with better signage, wider sidewalks, and access ramps
 - Enhancing bicycle connectivity to Routes D-10 and D-12 by adding signage in the Project Area that meets CCD and CDOT standards

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WHAT WILL HAPPEN IF THE PROPOSED ACTION IS NOT IMPLEMENTED?

The No-Action Alternative would leave Federal Boulevard as it currently is configured and would not provide any improvements beyond typical maintenance activities. The roadway would remain the same, with 3 southbound and 2 northbound lanes (each 9.5 to 11 feet in width) and a continuous two-way, center, left-turn median between West 7th Avenue and West 10th Avenue (Figure 6). The segment of Federal Boulevard from West 10th Avenue to West Howard Place has three southbound and three northbound lanes, and a continuous two-way left-turn median over Lakewood Gulch (Figure 7). The existing sidewalks along the both sides of Federal Boulevard in the Project Area are either narrow or not well-defined, and the curb ramps at intersections do not meet current ADA or CDOT standards. As part of SH 88, normal maintenance of Federal Boulevard would continue to be performed by CDOT. This includes the current direct discharge of stormwater to the nearby gulches.

Figure 6. Cross-Section of the No-Action Alternative between West 7th Avenue and West 10th Avenue

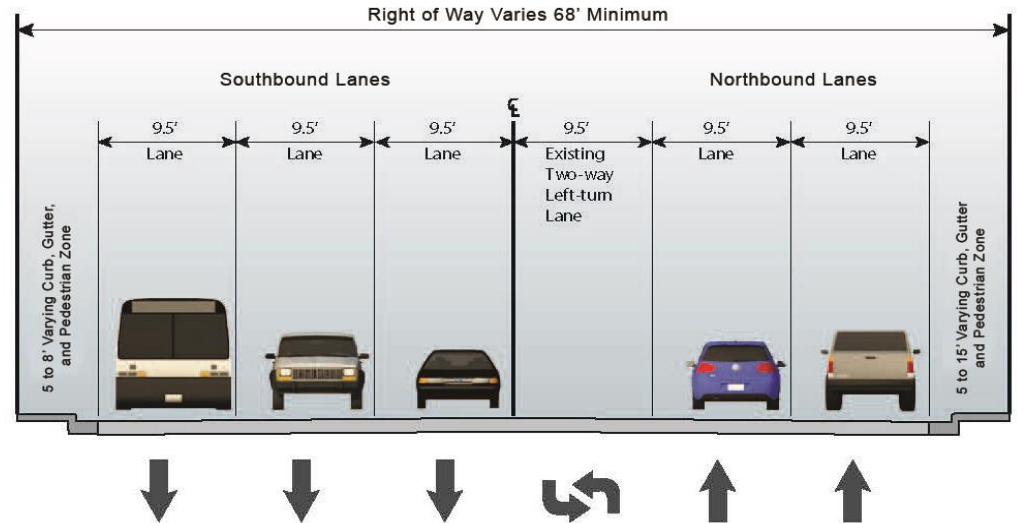
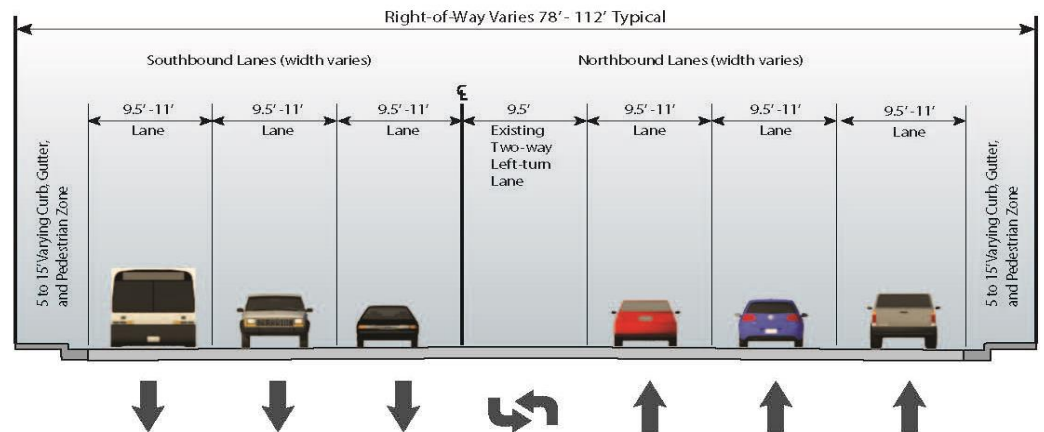


Figure 7. Cross-Section of the No-Action Alternative between West 10th Avenue and West Howard Place



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HOW WELL DO THE NO-ACTION ALTERNATIVE AND PROPOSED ACTION MEET THE PURPOSE AND NEED?

The Proposed Action meets the Purpose and Need. The No-Action Alternative does not meet the Purpose and Need of the Project; however, it is discussed further in this EA and used as a baseline for comparison. Table 2 summarizes the specific Project needs and how they are addressed by the No-Action Alternative and the Proposed Action.

Table 2. Purpose and Need Summary for the No-Action Alternative and Proposed Action

Project Needs	No-Action Alternative	Proposed Action
<p>Improve Safety for All Modes of Travel</p>	<ul style="list-style-type: none"> • There are no safety improvements associated with the No-Action Alternative. <ul style="list-style-type: none"> ○ Traffic volumes will continue to increase and result in higher crash rates (TSH, 2014). Design elements of the existing typical section of Federal Boulevard that contribute to these higher crash rates include: <ul style="list-style-type: none"> ▪ Lane imbalances ▪ Substandard lane widths ▪ Turning movements that cross numerous lanes ▪ “T” intersections inconsistent ▪ Non-ADA compliant pedestrian facilities 	<ul style="list-style-type: none"> • Provides a third northbound lane from West 7th Avenue to West 10th Avenue to balance the capacity of Federal Boulevard, with three lanes both northbound and southbound, as well as matching cross-sections immediately to the north and south of the Project Area. This capacity enhancement will address the high frequency of rear-end accidents. Specifically, the addition of the third northbound lane will provide traffic the increased ability to pass buses that stop in the right lane and to pass vehicles that are accessing the numerous driveways along the corridor. • Widens the northbound lanes between West 10th Avenue and West Howard Place and the southbound lanes between West 7th Avenue and West Howard Place to meet AASHTO and CDOT minimum standards. Implementation of these standards will address the high frequency of side-swipe accidents. • Adds a raised median throughout the Project Area to control traffic access at intersections and reduce the volume of left-turns. This design enhancement will help address the high number of driveway-related approach-turn, broadside, and pedestrian accidents. • Reconfigures the “T” intersections along Federal Boulevard. This reconfiguration will improve traffic safety and will reduce the number of easterly “T” intersections. • Improves sidewalks to comply with ADA standards, which will improve pedestrian safety.

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Project Needs	No-Action Alternative	Proposed Action
		<ul style="list-style-type: none"> • Adds signage for the two bicycle routes that cross Federal Boulevard. • Improves the connection of the Weir Gulch Trail and the sidewalk along West 8th Avenue and adds signage for this access point.
<p>Improve Traffic Operations</p>	<ul style="list-style-type: none"> • There are no improvements to traffic operations associated with the No-Action Alternative. <ul style="list-style-type: none"> ○ Does not upgrade lane widths to meet AASHTO and CDOT standards. ○ Continues to permit left-turn lanes to move across through lanes of traffic. ○ Leaves “T” intersections in place, which contributes to conflict points. ○ Does not address lane imbalance, which contributes to poor traffic operations. ○ Does not add capacity for vehicles to maneuver around stopped buses or vehicles accessing driveways. 	<ul style="list-style-type: none"> • Provides consistent lane widths to comply with AASHTO and CDOT standards. • Provides a raised center median to limit left-turn movements across through-lanes of traffic. • Eliminates confusion at “T intersections” and reduces conflict points. • Balances lanes with the cross-sections to the north of West 10th Avenue and south of West 7th Avenue. • Provides a third northbound lane between West 7th Avenue and West 10th Avenue and allows more space for drivers to avoid slowing down behind a stopped bus or vehicles accessing driveways by permitting travel in one of the two other lanes.
<p>Reduce Traffic Congestion</p>	<ul style="list-style-type: none"> • There is no reduction to traffic congestion associated with the No-Action Alternative. <ul style="list-style-type: none"> ○ Does not provide capacity to accommodate existing evening peak traffic volumes at the West 8th Avenue and Federal Boulevard intersection. ○ Does not provide capacity to accommodate morning or evening peak traffic volumes at the West 8th Avenue and Federal Boulevard intersection in 2035 when the forecasted LOS will be an F, with delays of over two minutes in the morning and close to three minutes in the evening. ○ Does not provide capacity to accommodate the evening peak traffic volumes at the West 10th Avenue and Federal Boulevard intersection in 2035 when the 	<ul style="list-style-type: none"> • Provides sufficient capacity by adding a third northbound lane between West 7th Avenue and West 10th Avenue to accommodate projected 2035 travel demand during the morning and evening peak traffic volumes, with the exception of the intersection of Federal Boulevard at West 8th Avenue. This intersection would operate at LOS F in the evening peak period in 2035 with a delay of approximately 146 seconds, a reduction in delay in comparison to the No-Action Alternative (164 seconds of delay). • Provides a third northbound lane and allows more space for drivers to avoid slowing down behind a stopped bus or vehicles accessing driveways by permitting travel in one of the two other lanes.

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Project Needs	No-Action Alternative	Proposed Action
	<p>forecasted LOS will be an F, with delays of approximately one and a half minutes.</p> <ul style="list-style-type: none"> ○ Maintains two-lane configuration between West 7th Avenue and West 10th Avenue with substandard widths for northbound traffic, which would hinder traffic in the right lane when a bus is stopped or a vehicle is accessing a driveway. 	
<p>Improve Multi-Modal Connectivity</p>	<ul style="list-style-type: none"> ● There are no improvements to multi-modal mobility associated with the No-Action Alternative. <ul style="list-style-type: none"> ○ Maintains cross-sections that are inconsistent with those to the north and south of the Project Area. ○ Maintains pedestrian facilities that are not compliant with ADA standards. ○ Does not provide additional signage for the Weir Gulch Trail or improve access to it. ○ Does not enhance multi-modal connectivity at the LRT station through improved sidewalks. ○ Does not provide signage for bicycle routes. 	<ul style="list-style-type: none"> ● Provides consistent pedestrian facilities throughout the Project Area that will match existing sections to the north and south. ● Provides ADA-compliant sidewalks. ● Provides better signage and access for the Weir Gulch Trail and improves access. ● Enhances multi-modal mobility and access to bus stops along Federal Boulevard by improving pedestrian facilities. ● Enhances vehicle, bus, pedestrian, and bicycle access to the Decatur-Federal LRT station by providing wider, ADA compliant facilities. ● Provides signage for bicycle routes.

WHY ARE FHWA AND CDOT RECOMMENDING THE PROPOSED ACTION?

FHWA and CDOT are recommending that the Proposed Action be implemented because it improves safety for all modes of travel, improves traffic operations, reduces congestion, and improves multi-modal connectivity. The CCD supports the recommendation.

WHAT ARE THE IMPACTS ASSOCIATED WITH THE NO-ACTION ALTERNATIVE AND PROPOSED ACTION?

The No-Action Alternative and Proposed Action have been evaluated for their potential impacts to the resources present within the Project Area. Table 3 provides a summary of impacts for the No-Action Alternative and Proposed Action. Both the permanent, long-term impacts that would be a result of the completed Project as well as the temporary, short-term impacts that would occur during the construction of the Proposed Action were assessed. The Mitigation Tracking Number in Table 3 corresponds to the mitigation measures identified in Table 4 that

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will be implemented to offset the impacts of the Proposed Action. For more detailed information on the identified impacts, please see the corresponding technical memoranda in Appendix A.

Data collection for the Project determined that the following resources are either not present in the Project Area, or are present but not impacted so they are not discussed:

- Soils and Geology
- Energy
- Farmlands
- Floodplains
- Section 6(f) Resources (properties that have received funds from the Land and Water Conservation Fund)

Table 3. Environmental Impacts of the No Action Alternative and the Proposed Action

Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
Air Quality (Appendix A1)	The Denver metropolitan area is currently designated as an attainment/maintenance area for carbon monoxide (CO) and particulate matter 10 micrometers in diameter and smaller (PM ₁₀) and nonattainment for ozone (O ₃).	<p><u>Permanent Impacts:</u> No permanent impacts to air quality would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u> No temporary impacts to air quality would occur if the No- Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u> Air pollutants are not predicted to exceed the National Ambient Air Quality Standards in the future.</p> <p><i>PM₁₀</i>: Permanent impacts would result from changes in traffic volume and congestion. Since the Proposed Action would add capacity along Federal Boulevard, it is expected to increase total traffic volume and decrease congestion. Lower vehicle emissions due to congestion reduction coupled with minor additional vehicle miles traveled (VMT) and a percent total VMT increase meaning that traffic-related changes to PM₁₀ would be minimal. This project will not add or contribute to the generation of heavy truck traffic influences.</p> <p><i>CO</i>: Based on the analysis (Appendix A1), the Federal Boulevard and West 8th Avenue intersection is not expected to exceed the 8-hour or 1-hour CO standard.</p> <p><u>Temporary Impacts:</u> Neighboring areas could be exposed to construction-related and fugitive dust emissions during the construction phase of this project. No air quality</p>	<u>1</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
<p>Water Quality (Appendix A2)</p>	<p>The Project crosses Weir Gulch and Lakewood Gulch, both of which join the South Platte River approximately four-tenths of a mile to the northeast. These features are listed for <i>E. coli</i> on the Colorado Department of Public Health and Environment’s (CDPHE’s) 303(d) list of impaired waters. Transportation projects do not further this impairment as they are not a source of <i>E.coli</i>.</p> <p>North of West 11th Avenue, stormwater runoff from Federal Boulevard flows to the RTD water quality treatment facility. South of West 11th Avenue, stormwater currently drains from crowned roads into curb and gutter stormwater inlets along both sides of Federal Boulevard and the intersecting streets and outlets to the gulches.</p>	<p><u>Permanent Impacts:</u></p> <p>No change in impervious surface; however, there would be continued discharge of runoff directly to gulches if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to water quality would occur if the No-Action Alternative is implemented.</p>	<p>sensitive receptors (i.e., schools, childcare facilities, or retirement centers) are located adjacent to the roadway.</p> <p><u>Permanent Impacts:</u></p> <p>Implementation of the Proposed Action would result in an increase of impervious surface by 4.2 percent resulting in higher amounts of runoff.</p> <p><u>Temporary Impacts:</u></p> <p>Temporary impacts to water quality could occur during construction due to ground disturbance, potential for spills or accidental release of pollutants, and runoff from the construction area.</p>	<p><u>2, 3, 4, 5</u></p>
<p>Threatened, Endangered, or Special-Status Species (Appendix A3)</p>	<p>No suitable habitat is present for any of the federally listed threatened, endangered or candidate species (Preble’s meadow jumping mouse, Ute ladies’-tresses orchid) or any state-listed species</p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to threatened, endangered, or special-status species would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>It is not anticipated that the Proposed Action would impact any federally listed threatened, endangered, or special-status species or any state-listed species. Approximately 2.88 acres of land will be disturbed, all of which is urbanized and developed and does not provide</p>	<p><u>6</u></p>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
	<p>(burrowing owl, northern leopard frog).</p> <p>Migratory bird and/or raptor nests were not observed to be present; however, suitable habitat (i.e., large trees, open space, and man-made structures) is located in the Project Area and/or Project vicinity.</p>	<p><u>Temporary Impacts:</u></p> <p>No temporary impacts to threatened endangered, or special-status species would occur if the No-Action Alternative is implemented.</p>	<p>suitable habitat for threatened, endangered or special-status species.</p> <p>There is a low potential for the Project to impact any migratory birds or raptors that may use the Project Area for nesting or foraging during construction activities. Although no migratory bird or raptor nests were observed at the time of this study, they could be present by the time of construction and therefore impacted.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to threatened, endangered or special-status species would occur if the Proposed Action is implemented.</p>	
<p>Wetlands/Waters of the US (Appendix A3)</p>	<p>Weir Gulch is an incised, channelized feature likely to be a Waters of the US under the jurisdiction of the US Army Corps of Engineer (USACE), because it eventually flows to the South Platte River. Two wetland areas were identified along Weir Gulch. Lakewood Gulch, another feature likely to be a Water of the US, crosses the Project Area underneath the Federal Boulevard bridge.</p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to wetlands or open waters would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to wetlands or open waters would occur if the No Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to wetlands or open waters would occur if the Proposed Action is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>Impacts may occur due to the construction of a new stormwater outfall at Weir Gulch. It is anticipated that the outfall structure would temporarily impact approximately 436 square feet (0.01 acre) of open water in Weir Gulch; however, wetland areas would not be impacted.</p>	<u>7</u>
<p>Riparian/Senate Bill 40 (Appendix A3)</p>	<p>Riparian and Senate Bill 40 (SB 40) resources (riparian trees and shrubs greater than two inches in diameter) are present along Weir Gulch.</p>	<p><u>Permanent Impacts:</u></p> <p>No direct impacts to riparian vegetation would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to riparian vegetation would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>Riparian vegetation along Weir Gulch would be impacted by the installation of a stormwater outfall. Two trees (with a total of four stems over two inches in diameter) within the SB 40 extent would be impacted by Project-related activities</p> <p><u>Temporary Impacts:</u></p>	<u>8</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
			There would be removal of riparian vegetation from construction-related activities (i.e., staging areas).	
Vegetation/ Noxious Weeds (Appendix A3)	The vegetation present within the Project Area mainly consists of landscaped and horticultural trees and shrubs, and maintained lawns. The vegetated areas adjacent to Weir Gulch and along Lakewood Gulch are maintained and consist of seeded grasses and few weedy forbs. Unmaintained vegetation along fence lines and adjacent to buildings in the Project Area consists mainly of weedy species (field bindweed, Russian olive, and cheatgrass).	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to noxious weeds or vegetation would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to noxious weeds or vegetation would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>The disturbance of soils due to construction activities could contribute to the spread of noxious weed species or introduction of new weed species from outside sources.</p> <p><u>Temporary Impacts:</u></p> <p>There would be removal of vegetation from construction-related activities (i.e., staging areas).</p>	<u>9</u>
Fish (Appendix A3)	Lakewood Gulch and Weir Gulch are incised and channelized features in an urban environment that do not provide suitable habitat to fish. However, the gulches flow to the South Platte River which does provide adequate habitat for fish including trout and bass.	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to fish would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to fish would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to fish would occur if the Proposed Action is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to fish would occur if the Proposed Action is implemented.</p>	<u>Not Applicable</u>
Wildlife (Appendix A3)	The area is an urban environment that offers little habitat for wildlife. Weir Gulch and Lakewood Gulch might provide limited opportunities for foraging; however, these gulches are	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to wildlife would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to wildlife would occur if the Proposed Action is implemented; 2.88 acres of urbanized, developed land would be disturbed.</p> <p><u>Temporary Impacts:</u></p>	<u>Not Applicable</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
	<p>also highly disturbed and provide little value to wildlife. Canada geese, a belted kingfisher, and pigeons were the only wildlife observed in the Project Area.</p>	<p>No temporary impacts to wildlife would occur if the No-Action Alternative is implemented.</p>	<p>No temporary impacts to wildlife would occur if the Proposed Action is implemented.</p>	
<p>Historic and Archaeological Resources (Appendix A4 and A5)</p>	<p>Twelve potential historic resources located within the Area of Potential Effect (APE) were surveyed at an intensive level in December 2013. This survey resulted in the production of 12 architectural inventory forms. Only one of the resources, Vigil’s Shamrock Service Station (5DV11363), was determined eligible for listing on the National Register of Historic Places (NHRP). The remaining resources lack either significance or integrity and were found to be not eligible for listing on the NHRP.</p> <p>A file search completed in January 2014, revealed that no prehistoric or historic archaeological sites have been identified to date within the APE.</p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to historic or archaeological resources would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to historic or archaeological resources would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>Impacts by the Proposed Action would result in <i>no adverse effect</i> to Vigil’s Shamrock Service Station.</p> <p>No permanent impacts to archaeological resources are anticipated to occur if the Proposed Action were to be implemented. However, it is unknown whether archaeological resources are present underground. If archaeological resources are present, they could be impacted during construction.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to historic or archaeological resources are anticipated to occur if the Proposed Action is implemented.</p>	<p><u>10</u></p>
<p>Section 4(f) Historic (Appendix A4)</p>	<p>Vigil’s Shamrock Service Station (5DV11363), was determined eligible for listing on the NHRP, which makes it a Section 4(f) resource.</p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to historic resources would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>The FHWA made a <i>De Minimis</i> Finding on May 30, 2014 based on the finding of <i>no adverse effect</i> under Section 106 with regard to the one historic property eligible for listing on the NRHP in the Project Area.</p>	<p><u>Not Applicable</u></p>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
Paleontological Resources (Appendix A6)	The dominant surface exposure within the Project Area is the Pleistocene Broadway Alluvium, which has produced fossils within the greater Denver area.	<p><u>Permanent Impacts:</u></p> No permanent impacts to paleontological resources would occur if the No-Action Alternative is implemented. <p><u>Temporary Impacts:</u></p> No temporary impacts to paleontological resources would occur if the No-Action Alternative is implemented.	<p><u>Permanent Impacts:</u></p> Ground disturbance from roadway construction activities could potentially cause permanent impacts (damage or destruction) to paleontological resources. <p><u>Temporary Impacts:</u></p> No temporary impacts to paleontological resources are anticipated to occur if the Proposed Action is implemented.	<u>11</u>
Economic Resources (Appendix A7)	Over time, the Project Area has changed from a strong commercial corridor into a distressed, urban-blighted corridor (CCD, 2012).	<p><u>Permanent Impacts:</u></p> There would be no permanent impacts if the No-Action Alternative is implemented; however, it does not support the CCD goal of an Area of Change and may depress revitalization of the economy in the Project Area. <p><u>Temporary Impacts:</u></p> No temporary impacts to economic resources would occur if the No-Action Alternative is implemented.	<p><u>Permanent Impacts:</u></p> Implementation of the Proposed Action would support the economic revitalization of the Project Area, as it would support the goals of an Area of Change. <p><u>Temporary Impacts:</u></p> During construction, temporary impacts to businesses would result from roadway-access changes, construction-related noise, temporary detours, and out-of-direction travel.	<u>12, 18</u>
Social and Community (Appendix A8)	Social and community resources consist of playgrounds, and athletic fields, bicycle routes, public and private schools with afterschool programs, head start programs, a Denver Public Library branch, Westside Family Health Center, the Rude Recreation Center, the Denver Workforce Center at Westside, the	<p><u>Permanent Impacts:</u></p> The No-Action Alternative would continue to provide limited access to community and transportation facilities. Additionally, the No-Action Alternative would not improve mobility or safety, nor would it enhance multi-modal options.	<p><u>Permanent Impacts:</u></p> The Proposed Action would substantially benefit local neighborhoods and communities by improving access, mobility, safety, and enhancing multi-modal transportation connectivity. <p><u>Temporary Impacts:</u></p> Temporary impacts during construction could occur as residents and community facility users could be temporarily affected by limited access, traffic congestion, dust, and noise.	<u>1, 13, 18, 21</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
	<p>Denver Community Credit Union, and multiple places of religious worship.</p> <p>Two residential neighborhoods are located within the Project Area: Villa Park and Sun Valley.</p> <p>Transportation facilities used by the community include bus stops, sidewalks, bicycle routes, and the Decatur-Federal LRT station located at Federal Boulevard and West Howard Place.</p>	<p>Temporary Impacts:</p> <p>No temporary impacts to social or community resources would occur if the No-Action Alternative is implemented.</p>		
<p>Parks and Trails (Appendix A8)</p>	<p>There are three parks in the Project Area: Barnum Park, located to the west of Federal Boulevard between US 6 and West 8th Avenue within the Project Area; Sanchez Park, located to the west of Federal Boulevard north of West 12th Avenue and underneath the bridge over Lakewood Gulch; and Rude Park, located on the east side of Federal Boulevard north of West Holden Place and underneath the bridge over Lakewood Gulch.</p> <p>There are two trails in the Project Area: Lakewood Gulch Trail which passes underneath the Federal Boulevard Bridge and the Weir Gulch Trail which crosses Federal Boulevard at grade on West</p>	<p>Permanent Impacts:</p> <p>There would be no permanent impacts to the parks or trails if the No-Action Alternative is implemented; however, it does not provide improved access and connectivity to the Weir Gulch Trail.</p> <p>Temporary Impacts:</p> <p>No temporary impacts to parks or trails would occur if the No-Action Alternative is implemented.</p>	<p>Permanent Impacts:</p> <p>There would be no impacts to parks in the Project Area.</p> <p>The Proposed Action would improve connectivity and access to the Weir Gulch Trail by reducing the curvature where trail connects to the sidewalk along West 8th Avenue, providing better signage for the trail access point, and widening the West 8th Avenue sidewalk.</p> <p>Temporary Impacts:</p> <p>Access to the Weir Gulch Trail would not be closed during construction but there may be the need for a temporary detour; this need will be determined during final design and construction phasing.</p>	<p>14</p>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
	8 th Avenue and utilizes West 8 th Avenue, Federal Boulevard, and West 6 th Avenue.			
Section 4(f): Non-Historic (Appendix B)	Non-historic Section 4(f) resources include three publically owned parks and two trails; Lakewood Gulch Trail which passes underneath Federal Boulevard and the Weir Gulch Trail, which has access from Federal Boulevard on West 8 th Avenue.	<p><u>Permanent Impacts:</u></p> <p>There would be no permanent impacts if the No-Action Alternative is implemented; however, it does not improve the connectivity to the Weir Gulch Trail.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to Section 4(f) non-historic resources would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>Impacts to the Weir Gulch Trail are covered under exception (g) of Section 4(f) which allows the use of a Section 4(f) property solely for the purpose of preserving or enhancing it when the use is supported by the jurisdictional agency (CCD for this resource).</p> <p><u>Temporary Impacts:</u></p> <p>Access to the Weir Gulch Trail would not be closed during construction but there may be the need for a temporary detour; this need will be determined during final design and construction phasing.</p>	<u>14</u>
Environmental Justice (Appendix A9)	All five of the Block Groups in the Project Area have been identified as a being minority population, with both Latino and Korean populations present, and four Block Groups in the Project Area have been identified as being low-income populations. Many of the residents within the neighborhoods surrounding the Project Area are dependent on pedestrian mobility and public transportation, and are likely reliant upon the transit services along Federal Boulevard.	<p><u>Permanent Impacts:</u></p> <p>Under the No-Action Alternative, congestion will increase and mobility and safety issues will not be addressed; these issues will negatively affect environmental justice communities. There will not be any improvements to multi-modal connectivity. These impacts will be borne by all stakeholders and not specific to the environmental justice community. No disproportionately high and adverse effects to environmental justice populations would occur exist in the Project Area.</p>	<p><u>Permanent Impacts:</u></p> <p>There would be permanent impacts to environmental justice populations and the general public in the form of ROW acquisition including displacement of businesses owned by minorities and increased noise; however, these impacts are off-set by the benefits of reduced congestion, improved safety, and improved multi-modal connectivity. No disproportionately high and adverse effects to environmental justice populations would occur in the Project Area.</p> <p><u>Temporary Impacts:</u></p> <p>During construction, temporary impacts would include changes to access, dust, noise, and transportation options.</p>	<u>1, 15, 16, 17 18, 20, 21</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
Transportation Resources (Appendix A10)	Federal Boulevard is a principal north-south urban arterial roadway that operates under the jurisdiction of CDOT as SH 88. Federal Boulevard provides access to several major east-west roadways and currently serves large vehicular volumes combined with high frequency bus service and high pedestrian volumes. Federal Boulevard also provides access to the West Corridor LRT at the Decatur-Federal LRT station.	<p><u>Permanent Impacts:</u></p> Given the projected increase in volumes and resultant congestion, implementation of the No-Action Alternative would result in continued degradation of safety and traffic operations, increased congestion, and lack of improved multi-modal connectivity. <p><u>Temporary Impacts:</u></p> No temporary impacts would occur if the No-Action Alternative is implemented.	<p><u>Permanent Impacts:</u></p> Improved safety and traffic operations through the addition of a third northbound lane between West 7 th Avenue and West 10 th Avenue; upgrading lane widths to meet standards between West 10 th Avenue and West Howard Place; construction of a raised median throughout the Project Area; reduced congestion by adding capacity; improved multi-modal connectivity by bringing the sidewalks up to ADA standards; additional signage for bicycle routes; improved access to the Weir Gulch Trail; and new signage for the Weir Gulch Trail would result if the Proposed Action were implemented. <p><u>Temporary Impacts:</u></p> Temporary impacts during construction activities could impact transportation facilities through roadway and lane closures, detours, and increased congestion and travel time.	<u>18</u>
Utilities	There are numerous utilities in the Project Area including water lines, wastewater, electric, and gas lines.	<p><u>Permanent Impacts:</u></p> No permanent impacts would occur to utilities if the No-Action Alternative is implemented. <p><u>Temporary Impacts:</u></p> No temporary impacts would occur to utilities if the No-Action Alternative is implemented.	<p><u>Permanent Impacts:</u></p> Utilities would be relocated as required if the Proposed Action is implemented, with no permanent loss of service. <p><u>Temporary Impacts:</u></p> Relocation of underground utilities within the ROW may be required as part of the construction activities for the Proposed Action. There may be a temporary loss of service during utility relocations. In addition, there may be a temporary impact to CDOT traffic signals during construction.	<u>19</u>
Noise (Appendix A11)	Federal Boulevard between West 7 th Avenue and West Howard Place is an urbanized corridor with 116 receptors within 500 feet of Federal Boulevard between West 7 th	<p><u>Permanent Impacts:</u></p> Sixteen commercial receptors out of 116 overall would be impacted by traffic noise in 2035 if the No-	<p><u>Permanent Impacts:</u></p> Fifteen commercial receptors would be impacted by noise in 2035 under the Proposed Action, which is one less than the No-Action Alternative. The number of impacted receptors for the Proposed Action is reduced	<u>20, 21</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
	Avenue and West Howard Place. Adjacent land uses include commercial, industrial, and public properties.	Action Alternative were to be implemented. Temporary Impacts: No temporary noise impacts would occur if the No-Action Alternative were to be implemented.	because one receptor impacted under the No-Action Alternative would be removed through ROW acquisition. Temporary Impacts: Noise levels may increase temporarily during construction.	
Visual Resources/ Aesthetics	The Project Area is an urbanized, multi-modal transportation corridor with three parks and two trails.	Permanent Impacts: No permanent impacts would occur to visual resources if the No-Action Alternative is implemented. Temporary Impacts: No temporary impacts would occur to visual resources if the No-Action Alternative is implemented.	Permanent Impacts: No impact to visual resources; the Proposed Action would not change the context of the Project Area. Temporary Impacts: Temporary impacts to visual resources would include construction equipment in close proximity to businesses and dust from construction activities.	<u>1</u>
Hazardous Materials (Appendix A12)	The Project Area is located in an urbanized corridor comprised of commercial properties, including: retail stores, automotive sales and service facilities, community resource facilities (e.g., workforce center, health facilities, credit union), automotive fueling and service stations (former and current), and professional offices. Many of these facilities were identified in the Project Area as having potential or recognized environmental conditions.	Permanent Impacts: No permanent impacts from hazardous materials would occur if the No-Action Alternative is implemented. Temporary Impacts: No temporary impacts from hazardous materials would occur if the No-Action Alternative is implemented.	Permanent Impacts: Environmental conditions (e.g., petroleum-contaminated soil or groundwater and hazardous materials) may be encountered during construction of the Project given the long history of chemical and petroleum storage and material-handling practices in the corridor. A total of 13 parcels were identified with a high potential to impact the Project Area, based upon the presence of known or potential regulated materials and already recognized environmental concerns. In addition, there is a potential for methane gas and waste debris from nearby historical landfills. Temporary Impacts: Temporary impacts would occur from the abatement of regulated building materials and subsequent demolition of structures for the Project.	<u>22</u>
Right of Way	The transportation ROW is bordered by commercial,	Permanent Impacts:	Permanent Impacts:	<u>17</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
(Appendix A13)	industrial, and public land uses. It is approximately 68 feet wide.	<p>No permanent ROW impacts would occur if the No-Action Alternative is implemented.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary ROW impacts would occur if the No-Action Alternative is implemented.</p>	<p>A total of approximately 2.88 acres of land would be impacted and acquired by the Proposed Action. The acquisition of land would consist of eight full parcel acquisitions (1.9 acres) and 12 partial acquisitions (0.98 acre), thereby affecting 20 parcels. No private residences would be acquired; however, 27 businesses would be displaced as a result of constructing the Proposed Action.</p> <p>In addition, there would be 0.01 acre of permanent easements required for the Proposed Action.</p> <p><u>Temporary Impacts:</u></p> <p>There would be 1.23 acres of temporary easements for construction of the Proposed Action.</p>	
Land Use (Appendix A13)	<p>Land-use development along Federal Boulevard between West 7th Avenue and West Howard Place consists predominantly of industrial and commercial properties, including Denver Public School support facilities, retail stores, automotive fueling and service stations, and the recently constructed Decatur-Federal LRT station.</p> <p>According to the <i>Denver Comprehensive Plan 2000</i> and the supplemental <i>Blueprint Denver 2002</i>, the Project is located within an Area of Change.</p>	<p><u>Permanent Impacts:</u></p> <p>No permanent impacts to land use would occur if the No-Action Alternative is implemented. The No-Action Alternative is not consistent with currently adopted land-use plans.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary impacts to land use would occur if the No-Action Alternative is implemented.</p>	<p><u>Permanent Impacts:</u></p> <p>The Proposed Action would have beneficial impacts that are compatible with currently adopted regional-transportation and land-use plans through supporting and enhancing neighborhood commercial activity, improving neighborhood circulation for all modes of travel, enhancing neighborhood safety, and creating neighborhood recreational opportunities.</p> <p><u>Temporary Impacts:</u></p> <p>There would be temporary easements during construction.</p>	<u>Not Applicable</u>
Cumulative Impacts (Appendix A14)	The timeframe used for the cumulative impacts assessment is 1940 to 2035. The resources assessed for	<p><u>Permanent Impacts:</u></p> <p>Not applicable as the No-Action Alternative is included in the past,</p>	<p><u>Permanent Impacts:</u></p> <p><i>Transportation Resources:</i></p>	<u>15, 17, 20</u>

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
	<p>cumulative impacts are transportation, land use, environmental justice, noise, water quality, and air quality. The Project is located within an area that has undergone continued growth and redevelopment in regards to transportation facilities and land use (i.e., conversion of open lands to residential, public, industrial, and commercial uses). As the area was developed, it became an affordable place to live for many low-income households; the area also developed a large minority population. Furthermore, growth and development of the area has led to an increase in ambient noise levels as well as a decrease, and then improvement, of water and air quality over time.</p>	<p>present, and reasonably foreseeable future actions.</p> <p><u>Temporary Impacts:</u></p> <p>No temporary cumulative impacts would occur if the No-Action Alternative is implemented.</p>	<p>When combined with other past, present, and reasonably foreseeable future actions, the Proposed Action is expected to contribute to the positive trend in the improvement of transportation resources due to the reduced congestion, improved mobility safety, and enhanced multi-modal connectivity.</p> <p><i>Land Use, ROW Acquisitions, and Relocations</i></p> <p>When combined with other past, present, and reasonably foreseeable future actions, the Proposed Action would contribute to the cumulative impact of converting land to a transportation use as well as the continued urbanization of the area. This trend includes ROW acquisitions and relocations.</p> <p><i>Environmental Justice:</i></p> <p>When combined with other past, present, and reasonably foreseeable future actions, the Proposed Action would contribute to the trend of impacting the environmental justice populations through ROW acquisition and increase in noise levels. These populations would also experience a positive trend from the Proposed Action, in combination with other current and reasonably foreseeable transportation projects, through improved safety and mobility as well as increased multi-modal connectivity.</p> <p><i>Noise Levels:</i></p> <p>Increased traffic volumes on Federal Boulevard and other streets in the Project Area would contribute to the rise in noise levels, as will construction of current and planned projects. Re-development and population growth will also add the noise levels; re-development and growth will occur regardless of the implementation of the Proposed Action. Additionally, the Proposed Action is not expected to cause an increase in noise levels above those that are forecasted for the year 2035 without its implementation. When combined with other</p>	

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Resource	Context	No-Action Alternative	Proposed Action	Mitigation Number
			<p>past, present, and reasonably foreseeable future actions, the Proposed Action is expected to have a negligible contribution to the trend in the increase of noise levels in the Project Area.</p> <p><i>Water Quality:</i></p> <p>The construction of the Proposed Action would add impervious surface and would result in additional runoff. However, requirements to comply with federal, state, and local stormwater regulations would provide a positive effect on treatment of runoff within the Project Area. The Proposed Action would result in a negligible increase of impervious surface when added to existing and future development in the Project Area. When combined with other past, present, and reasonably foreseeable future actions, the Proposed Action is expected to contribute to the trend of improving water quality in the Project Area.</p> <p><i>Air Quality:</i></p> <p>When combined with other past, present, and reasonably foreseeable future actions, the Proposed Action is not expected to contribute to the trend in the change of air quality in the Project Area. Cumulative effects to air quality would be negligible as the difference in emissions at a local level generated by the Proposed Action, compared to changes at the regional level due to growth and increased travel demand with or without the project, would be inconsequential.</p>	

WHAT MITIGATION COMMITMENTS WILL BE MADE FOR THE PROPOSED ACTION?

Mitigation commitments for the Proposed Action have been identified in detail for each impacted resource and are presented in the technical memoranda contained in Appendix A. Each technical memorandum provides additional details regarding the methodology used in the analysis of impacts and mitigation measures. Table 4 provides a unique tracking number, mitigation category, impact, mitigation commitment,

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responsible agency for tracking commitments, and the timing or phase that the mitigation measure will be implemented; thus, Table 4 summarizes all of the commitments made for the Proposed Action.

Table 4. Mitigation Measures for the Proposed Action

#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
1	Air Quality	Construction-related emissions and dust	<ul style="list-style-type: none"> Engines and exhaust systems on equipment will be maintained in good working order. Equipment will be maintained on a regular basis, and will be subject to inspection by the project manager to ensure compliance. Fugitive dust will be systematically controlled through diligent implementation of CDOT's Standard Specifications for Road and Bridge Construction, particularly Sections 107.24, 209 and 250, and CDPHE-Air Pollution Control Division's (APCD) Air Pollutant Emission Notification, CDPHE-APCD's demolition permit, and fugitive dust control plan requirements. No excessive idling of inactive equipment or vehicles and compliance with CCD's idling ordinance (5 minutes). Construction equipment and vehicles will utilize low-sulfur fuel to reduce pollutant emissions. 	CDOT Construction Engineering	Construction
2	Water Quality	Increased Impervious Surface	Either a permanent water-quality basin will be constructed to treat runoff from the Project, or the Project will be included in the Regional Water Quality Exchange Program. If the former is chosen, the extended detention basin will be constructed at the northeast corner of the intersection of West 8 th Avenue and Federal Boulevard. It will collect runoff from the portion of the Project to the south of West 11 th Avenue via the proposed storm-sewer system, ultimately discharging to Weir Gulch. The facility will contain the required water-quality capture volume and will meet the requirements of the CCD's Multiple Separate Sewer System (MS4) permit. If the variance is selected as the preferred	CDOT Region 1 Environmental, CDOT Design Engineering, and CDOT Construction Engineering	Design and Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			<p>strategy, then sufficient water-quality capture will occur and be treated at a regional facility</p> <p>There is an existing stormwater-quality facility under the jurisdiction of RTD constructed during the Decatur-Federal Street LRT Station project that currently captures and retains runoff from the portion of Federal Boulevard to the north of West 11th Avenue; it is sized to accommodate flows from that section of Federal Boulevard. That stormwater-quality facility discharges to Lakewood Gulch.</p>		
3	Water Quality	Runoff during Construction	Temporary stormwater-management controls will be implemented to keep pollutants from entering stormwater during concurrent construction activity and precipitation events. Control measures will reduce or eliminate water-quality impacts during the construction of the Proposed Action.	CDOT Region 1 Environmental, CDOT Design Engineering, and CDOT Construction Engineering	Design and Construction
4	Water Quality	Temporary Construction Impacts – Spills	A spill prevention, control, and countermeasure plan will be developed and implemented for the construction site that will establish standard operating procedures and required employee training to minimize the accidental release of pollutants which could contaminate stormwater runoff.	CDOT Region 1 Environmental, CDOT Design Engineering, and CDOT Construction Engineering	Design and Construction
5	Water Quality	Temporary Construction Impacts – Stormwater Runoff	A Stormwater Management Plan (SWMP) will be developed and implemented to address temporary construction impacts as a result of the Proposed Action. A Transportation Erosion-Control Supervisor will inspect the construction site every seven days, and after any precipitation or snowmelt event with the potential to cause surface erosion, during active construction, and as necessitated by permit requirements. The Supervisor will document evidence of, or the potential for, pollutants entering the local drainage system. Any Best Management Practices (BMPs) not operating in accordance	CDOT Region 1 Environmental, CDOT Design Engineering, and CDOT Construction Engineering	Design and Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			with the SWMP will be addressed immediately in order to minimize the discharge of pollutants.		
6	Threatened, Endangered, or Special-Status Species	Potential impacts to Migratory Birds or Raptors (i.e., Nesting Or Foraging) during Construction Activities	<p>Pre-construction surveys for nesting birds will be completed prior to construction, if construction begins during between April 1st and August 31st, by a wildlife biologist with a minimum of three years of experience conducting migratory bird surveys. No construction activities will occur within 50 feet of an active nest and orange construction fencing will be installed around active nests to protect them until the nest becomes inactive or the young fledge. The following conditions will apply to construction activities:</p> <ul style="list-style-type: none"> • If tree trimming, vegetation removal, or demolition activities occur between February 15 and August 31, then a pre-construction survey for nesting birds must be completed. Surveys for nesting birds are valid for five days. If work is not completed within this time, a new survey is required. • If construction-related activities occur between February 15 and August 31, a pre-construction survey for nesting raptors must be completed within a half-mile buffer of the project limits. If nesting raptors occur within the buffer area, then Colorado Parks and Wildlife (CPW) "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors" guidelines should be followed. The CPW may reduce the buffer requirements based upon site conditions and type of work being done, but it must be consulted for approval prior to construction within the recommended buffer zone of an active nest. <p>CDOT Specification 240 includes additional details on the Migratory Bird Treaty Act (MBTA) compliance. Construction activities as a result of the Proposed Action will adhere to these specifications.</p>	CDOT Region 1 Environmental, CDOT Design Engineering, and CDOT Construction Engineering	Design and Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
7	Wetlands and Other Waters of the US	New Outfall at Weir Gulch	A request will be submitted to the USACE, documenting that the Project will be covered under Nationwide Permit Number 7; however, no mitigation is required for the new outfall at Weir Gulch.	CDOT Region 1 Environmental	Pre-Construction
8	Riparian Vegetation/ Senate Bill 40	Permanent impacts to Riparian Vegetation/SB 40 Resources from Installation of a Stormwater Outfall Pond at Weir Gulch	<p>The Project will follow the general conditions in the SB 40 guidelines, including the following:</p> <ul style="list-style-type: none"> • Trees with a Diameter at Breast Height over 2 inches that need to be removed will be replaced at a 1:1 ratio. • Trees, native or non-native, will be replaced with native species. In this case, the four stems of Siberian elm will be replaced with two Plains cottonwood (<i>Populus deltoides</i>) and two peach leaf willow (<i>Salix amygdaloides</i>) trees. • Tree replacement will occur on site. <p>Success criteria for the replacement trees will meet CDOT Specification 214.</p>	CDOT Region 1 Environmental	Post-Construction
9	Vegetation/ Noxious Weeds	Spread or Introduction of Noxious Weeds during Construction	<p>In order to reduce the spread of noxious-weed species, and to reduce the introduction of other noxious weed into the area, standard BMPs will be followed. Some general BMPs that will reduce the spread of noxious weeds include:</p> <ul style="list-style-type: none"> • Equipment entering and leaving the Project Area will be inspected as being free of mud and vegetation material capable of moving weed seed. Any vehicle found to be transporting mud and vegetation capable of moving weed seed shall be thoroughly cleaned before entering or leaving the Project Area. • Soil disturbance will be minimized to the greatest extent possible. • Disturbed soil will be re-seeded with a weed-free seed mix as soon as possible after completion of work. 	CDOT Region 1 Environmental and CDOT Construction Engineering	Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			<ul style="list-style-type: none"> To reduce the potential for introducing and spreading nuisance aquatic species, project equipment that was previously used in another water body will be disinfected as directed in the SB40 requirements prior to entering the Project Area. 		
10	Archaeological Resources	Archaeological Resources Discovered during Construction	<p>If any subsurface archaeological resources are found, work will be immediately halted in the vicinity of the find, and the CDOT senior archaeologist will be promptly notified.</p> <p>If bones of potential human origin are discovered during construction, ground-disturbing work must be stopped in the vicinity of the discovery, and the Denver County Coroner, the Denver County Sheriff, the Colorado State Historic Preservation Officer (SHPO), the Colorado State Archaeologist, and the CDOT senior archaeologist will be promptly notified. Work cannot resume in the vicinity of the find until clearance is granted. The Contractor shall comply with CDOT standard specification 107.23 (Archaeological and Paleontological Discoveries).</p>	CDOT Region 1 Environmental and CDOT Construction Engineering	Construction
11	Paleontological Resources	Paleontological Resources Discovered during Construction	<p>If any subsurface bones or other potentially significant fossils are found, work will be immediately halted in the vicinity of the find, and the CDOT staff paleontologist will be promptly notified. If the Denver Formation will be excavated, a paleontologist will be present on-site to monitor the construction activity.</p> <p>The Contractor shall comply with CDOT standard specification 107.23 (Archaeological and Paleontological Discoveries).</p>	CDOT Region 1 Environmental and CDOT Construction Engineering	Construction
12	Economic Resources	Temporary Impacts to Businesses during Construction	Access will be maintained to businesses during construction; signs indicating access points and construction ahead, as well as advance notification of construction activities, will be provided. To avoid disruption of business activities during construction, any new access points will be provided before the existing access points are removed.	CDOT Design Engineering and CDOT Construction Engineering	Design and Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
13	Social and Community Resources	Temporary Impacts to Access and Travel Patterns during Construction	<p>Access will be maintained to local businesses during construction and signs indicating access points will be posted. Local residents and businesses will be updated with information regarding the Project’s construction activities (i.e., schedule, traffic circulation plans, traffic signage). Additionally, construction will be phased to minimize traffic-congestion impacts. To avoid disruption to local residents and businesses during construction, any new access points will be provided before the existing access points are removed.</p> <p>Mitigation for construction impacts will consider implementation of the following measures, as appropriate, during final engineering design and construction:</p> <ul style="list-style-type: none"> • Coordination with emergency-service providers to identify methods to minimize delays and provide access to properties during construction. • Provision of temporary transit shelters and of information for transit patrons about temporary changes in transit-shelter locations prior to construction. • Maintenance of access to local businesses and trails during construction. • Coordination with business owners to minimize disruption during construction. • Implementation of a phased-construction approach to minimize the degree of disruption to business owners. • Maintenance of two through lanes (one northbound and one southbound) with a turn lane at all times during the phased construction. 	CDOT Design Engineering and CDOT Construction Engineering	Design and Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			<ul style="list-style-type: none"> Maintenance of access to public health and welfare facilities during construction. 		
14	Parks and Trails	Temporary Disruption of Access to Weir Gulch Trail at West 8 th Avenue	Should access be affected, a detour will be in place so that the Trail is available for use.	CDOT Design Engineering	Design and Pre-Construction
15	Environmental Justice	ROW Property Acquisitions / Existing-Business Relocations	<p>All property acquisitions and business relocations will adhere to State and Federal guidelines regarding acquisition policies and relocation assistance, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and applicable Colorado statutes. Numerous State and Federal requirements create procedures designed to ensure that land owners are paid “just compensation” for necessary acquisitions. Certain relocation benefits will be provided for all eligible businesses displaced by property acquisitions.</p> <p>The CCD will work with CDOT to develop a Construction and Business Outreach Plan designed to assist individuals and businesses along Federal Boulevard prior to construction, to assist them in maintaining business operations during construction, and to work with those individuals and businesses that will be displaced. In addition, the CCD and CDOT will actively pursue partnership opportunities with other organizations that might be able to provide additional assistance and resources to individuals and businesses impacted by the Project.</p> <p>The CCD and CDOT will identify programs and services to assist business and property owners impacted by the Project; some activities could occur after the ROW property is acquired. This assistance will focus on the following efforts and measures:</p>	CDOT Design Engineering and CDOT ROW Specialists	Pre-Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			<ul style="list-style-type: none"> • The CCD and CDOT will hold at least one business-to-construction outreach forum with affected property owners and businesses to determine the assistance needed and general resources available. • Site-selection assistance, and technical and regulatory assistance will be provided through the relocation process. • Workforce development, and financing assistance will be provided by Business Assistance Programs. • The CCD will recommend potential sources of financing for small businesses needing funding above and beyond their relocation benefits. • Neighborhoods in the region with similar demographic profiles to the displaced businesses will be identified to determine whether these areas will be suitable for relocation. • Translation services will be provided as needed during the ROW property acquisition process. 		
16	Environmental Justice	Temporary Impacts to Access and Travel Patterns during Construction	<p>Mitigation for construction impacts will consider implementation of the following measures, as appropriate, during final engineering design and construction:</p> <ul style="list-style-type: none"> • Coordination with emergency-service providers to identify methods to minimize delays and provide access to properties during construction. • Provision of temporary transit shelters and of information for transit patrons about temporary changes in transit-shelter locations prior to construction. • Maintenance of access to local businesses and trails during construction. 	CDOT Design Engineering and CDOT Construction Engineering	Design and Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			<ul style="list-style-type: none"> • Coordination with business owners to minimize disruption during construction. • Implementation of a phased-construction approach to minimize the degree of disruption to business owners. • Maintenance of two through lanes (one northbound and one southbound) with a turn lane at all times during the phased construction. • Maintenance of access to public health and welfare facilities during construction. • Translation services will be provided as needed for public information. 		
17	Right of Way	ROW Acquisition	<p><u>ROW Acquisition:</u></p> <p>For any person(s) whose real property interests may be impacted by this project, the acquisition of those property interests will comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (Uniform Act). The Uniform Act is a federally mandated program that applies to all acquisitions of real property or displacements of persons resulting from Federal or federally assisted programs or projects. It was created to provide for and insure the fair and equitable treatment of all such persons. To further ensure that the provisions contained within this act are applied "uniformly," CDOT requires Uniform Act compliance on any project for which it has oversight responsibility regardless of the funding source. Additionally, the Fifth Amendment of the United States Constitution provides that private property may not be taken for a public use without payment of "just compensation." All impacted owners will be provided notification of the acquiring agency's intent to acquire an interest in their property including a written offer letter of just compensation</p>	CDOT ROW Specialist	Pre-Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			<p>specifically describing those property interests. A-Right-of-Way Specialist will be assigned to each property owner to assist them with this process.</p> <p><u>Relocation:</u></p> <p>In certain situations, it may also be necessary to acquire improvements that are located within a proposed acquisition parcel. In those instances where the improvements are occupied, it becomes necessary to "relocate" those individuals from the subject property (residential or business) to a replacement site. The Uniform Act provides for numerous benefits to these individuals to assist them both financially and with advisory services related to relocating their residence or business operation. Although the benefits available under the Uniform Act are far too numerous and complex to discuss in detail in this document, they are available to both owner occupants and tenants of either residential or business properties. In some situations, only personal property must be moved from the real property and this is also covered under the relocation program. As soon as feasible, any person scheduled to be displaced shall be furnished with a general written description of the displacing Agency's relocation program which provides at a minimum, detailed information related to eligibility requirements, advisory services and assistance, payments, and the appeal process. It shall also provide notification that the displaced person(s) will not be required to move without at least 90 days advance written notice. For residential relocatees, this notice cannot be provided until a written offer to acquire the subject property has been presented, and at least one comparable replacement dwelling has been made available. Relocation benefits will be provided to all eligible persons regardless of race, color, religion, sex or national origin. Benefits under the Act, to which each eligible owner or</p>		

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
			tenant may be entitled, will be determined on an individual basis and explained to them in detail by an assigned Right-of-Way Specialist.		
18	Transportation Resources	Temporary Impacts to Access during Construction	During final engineering design, access points (i.e., new, modified, or combined) will be identified in a formal access-control plan prepared for the Proposed Action from West 7 th Avenue to West Howard Place along Federal Boulevard. All access points will be constructed in accordance with CCD and ADA standards.	CDOT Design Engineering and CDOT Construction Engineering	Design and Construction
19	Utilities	Temporary Impact to CDOT Traffic Signals or Loss of Service for other Utilities during Construction.	Coordinate utility relocation with utility companies during final design and construction.	CDOT Design Engineering and CDOT Construction Engineering	Design and Construction
20	Traffic Noise	Noise Impacts at Commercial Receptors in 2035	Noise mitigation in the form of walls or berms has been evaluated and found not to be feasible based on CDOT noise abatement criteria. Therefore, no mitigation is required for traffic noise.	<u>Not Applicable</u>	<u>Not Applicable</u>

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
21	Construction Noise	Temporary, Elevated Noise Levels During Construction	<p>To address the temporarily elevated noise levels that could be experienced during construction, standard mitigation measures will be incorporated into the construction contracts for the Proposed Action, where it is feasible to do so. These measures will include:</p> <ul style="list-style-type: none"> • Exhaust systems on equipment will be in good working order. Equipment will be maintained on a regular basis, and will be subject to inspection by the project manager to ensure maintenance. • Properly designed engine enclosures and intake silencers will be used where appropriate. • New equipment will be subject to new-product noise-emission standards. • Stationary equipment will be located as far from sensitive receptors as possible. • Most construction activities in noise-sensitive areas will be conducted during hours that are least disturbing to the general public. If night work is anticipated, a temporary noise-variance permit with the CCD will be required. • Compliance with CCD noise regulations (Municipal Code, Chapter 36). • In cases where CCD noise regulations might be violated by construction activities, a variance will be requested from the Department of Environmental Health. 	CDOT Design Engineering and CDOT Construction Engineering	Design and Construction

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#	Mitigation Category	Impact	Mitigation Commitment From Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
22	Hazardous Materials/ Waste	Hazardous Materials Encountered During Construction	<p>In order to address any environmental and resulting liability concerns, Phase I Environmental Site Assessments (ESAs) or Initial Site Assessment (ISAs) will be conducted of parcels or portions of parcels which are to be acquired for ROW purposes. It should be noted that in accordance with the CDOT Environmental Programs Branch (EPB) Hazardous Materials Guidance Table, CDOT reserves the right to designate whether a Phase I ESA or ISA is prepared.</p> <p>Consideration will be given to conduct additional investigations (i.e., soil and groundwater sampling) for any property identified as having a high potential to impact the Project, in order to evaluate subsurface conditions and to identify any potential hazardous material management issues. In particular, the known groundwater plume that extends from the property located at 750 Federal Boulevard and 2880 West 8th Avenue will be evaluated prior to potential construction of the water quality pond at Weir Gulch, as it is anticipated that petroleum-impacted groundwater could be encountered at that location as part of the proposed activities.</p> <p>Pre-demolition asbestos surveys will be conducted on any structure that will be demolished.</p> <p>A Project-specific Materials Management Plan (MMP) will be developed prior to construction activities in order to address materials management and worker health and safety concerns.</p>	CDOT Construction Engineering	Pre-Construction (for MMP) and Construction

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WHAT PERMITS ARE REQUIRED FOR THIS PROJECT?

In addition to the NEPA evaluation of environmental impacts provided in this EA, the Proposed Action must comply with Federal and State laws and regulations, including the Clean Water Act, Endangered Species Act, MBTA, and others. This compliance includes obtaining all of the required permits, performing preliminary and construction surveys, completing reviews, and obtaining other approvals as required by local agency, State, and Federal regulations. Due to the absence of federally listed threatened and endangered species and lack of wetland impacts, there has been no formal consultation with the US Fish and Wildlife Service (USFWS) or the USACE.

The following summarizes the types of permits, coordination, and authorizations that are expected to be required to support the Proposed Action's construction. Please note that this list could change during and after final design.

- A Construction Access Permit will be required for detours and lane closures from the CDOT Region Access Control Manager; the construction contractor would obtain this permit.
- A State Access Permit will be required for all new or modified access points to Federal Boulevard (SH 88); the construction contractor would obtain this permit.
- An Air Pollutant Emissions Notice Permit will be needed from CDPHE as well as other regional and local authorities, as required. The construction contractor would acquire this permit.
- A variance from CCD will be required for noise should there be construction at night; the construction contractor would obtain this permit.
- A water-quality report would be submitted by CCD to CDOT Water Quality personnel documenting compliance with their requirements the MS4 permit.
- A Colorado Discharge Permit System Permit, which includes the preparation of a SWMP, will be required to protect State waters and ensure the quality of stormwater runoff on any construction activity that disturbs at least one acre of land. CDOT or the construction contractor would obtain this permit from CDPHE's Water Quality Control Division.
- A Construction Dewatering Operations Permit, if groundwater were to be discharged from an excavation to any waters of the State, would need to be obtained by CDOT or the construction contractor from CDPHE.
- A Sewer Use and Discharge Permit will need to be obtained by the construction contractor from CCD.
- A Pre-Construction Notification would be submitted to the USACE by CCD, documenting that the Proposed Action would be covered under Nationwide Permit Number 7.

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- A notification of the use of a Programmatic SB 40 Certification would be submitted to CPW by CDOT.
- A Utility Permit will be required for any construction work within CDOT's ROW that installs or maintains a utility; the construction contractor would obtain this permit.

Other local permits might also be required by the CCD, such as building or survey permits to support Project-construction requirements.

WHAT OUTREACH AND OPPORTUNITIES FOR STAKEHOLDER PARTICIPATION WERE PROVIDED?

Public involvement activities conducted during this EA built upon a continuum of outreach that was initiated during the PEL Study and continued through design refinement and funding application; it has included opportunities for participation in the decision-making process for interested stakeholders (Table 5). Additionally, specific outreach efforts to the environmental justice populations present in the adjacent neighborhoods have been made. Activities include presentations to small groups with translation services present, distribution of flyers at neighborhood meetings, updates to the Project webpage, interviews of property and business owners in person and by telephone in June 2014 (which identified the need for Korean translation), notification of a public meeting in English, Spanish, and Korean, and an open house held on August 14, 2014, with

Table 5. Public Involvement Activities

Date	Public Involvement Activity/Group
February 25 and 26, 2009	Villa Park and Sun Valley Neighborhood Association Meetings
March 19, 2009	Door-to-door visits with businesses along Federal Boulevard
March 31, 2009	Valverde Neighborhood Association Meeting
April 2009	Notice of the April 2009 open house public meeting posted to the CCD Community Calendar, mailed to 5,500 businesses/residents, and distributed to approximately 420 residents of the Sun Valley neighborhood
April 14, 2009	Concerned Citizens for Barnum Meeting
April 22, 2009	Open House Public Meeting
April 23, 2014	Villa Park Neighborhood Association meeting
April 24, 2014	Denver Housing Authority Local Resident Council meeting
May 6, 2014	Sun Valley Neighborhood Association meeting
June 3, 2014	Interviews of property and business owners by telephone
June 4, 2014	Interviews of property and business owners in person
July 2014	Notice of the August 2014 open house public meeting posted to the CCD Community Calendar, mailed to 337 businesses/residents in the Project Area and distributed to the Flea Market business owners as well as the leaders of the neighborhood groups
August 14, 2014	Open House Public Meeting

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bilingual materials and Spanish and Korean-speaking translators.

During the public involvement process, the mailing list from the PEL Study was updated for property owners, businesses, interested individuals, and residents within the neighborhoods surrounding the Project Area. This included use of the sign-in sheet forms completed during the neighborhood meetings and anyone that entered this information on the project webpage.

Project staff met with local neighborhood associations and the local business group to discuss the Project as well as any concerns and issues related to the Project. Many of the stakeholders were familiar with the Project from the PEL Study. A public meeting was held August 14, 2014. A project flyer in English, Spanish, and Korean inviting stakeholders to the public meeting was sent via a mass mailing to 337 neighborhood residents and businesses in the Project Area and any other addresses on the contact list. Flyers in English, Spanish, and Korean were also hand delivered to the Flea Market, households in the adjacent neighborhoods, and provided to the neighborhood group leaders for distribution and posting in common areas. Contact information and a website address was also provided on the flyer as well as general project information. The Project website includes the meeting materials in English and Spanish as well as a method to provide comment.

The August 2014 public meeting was held in an open-house format with a brief presentation; materials were in both English and Spanish and a Spanish-speaking translator was at the meeting. Korean translation was offered upon request as noted on the meeting announcement. The meeting was designed to provide the public with information on the EA process including the anticipated impacts, proposed mitigation measures, and schedule. The meeting was held prior to the completion of this EA to solicit feedback for incorporation in the decision-making process and to maintain the relationship with the local populations initiated by the other planned transportation projects in the area.

These efforts have solicited comments on the Project; to date no opposition has been expressed, although two commenters were unsure of their feelings regarding the project. All other comments expressed support for the project; a desire for it to be expedited; an emphasis on safety for pedestrians; an interest in the potential installation and maintenance of landscaping; protected turn signals for east-west traffic on West 10th Avenue at Federal Boulevard; and concern for the appearance of existing businesses. Appendix B contains documentation of the August 2014 public meeting; outreach specific to the Environmental Justice communities can be found in the Environmental Justice Determination Technical Memorandum, which is Appendix A9.

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WHAT AGENCY COORDINATION HAS OCCURRED?

The SHPO was consulted with in accordance with Section 106 for concurrence with the determinations of eligibility of resources for listing on the NRHP in the APE and the effects determinations for the property determined to be eligible for listing. Section 106 consulting parties (CCD Landmark Preservation and Historic Denver) were also involved. FHWA contacted 11 federally recognized Native American Tribes with an established interest in CCD and invited them to participate in the Project as consulting parties under Section 106 of the National Historic Preservation Act. Only one tribe, the Pawnee Nation, responded indicating that they were not interested in participating. CCD and CDOT coordinated on the status of the Weir Gulch Trail agreeing that it is a Section 4(f) resource and that the Proposed Action would result in an enhancement of the Trail, which makes an exception applicable. Appendix C contains documentation of agency coordination and consultation to date.

WHAT ADDITIONAL OPPORTUNITIES FOR STAKEHOLDER PARTICIPATION WILL BE PROVIDED?

Stakeholder coordination will continue to take place throughout Project development and construction. As part of the proposed Federal Boulevard improvements, ongoing coordination with CCD Public Works, CCD Traffic Engineering Services, and emergency providers is currently being implemented; subsequent coordination will be accomplished in regards to access management.

The public review and comment period for this EA will be 30 days. Comments can be submitted in the following ways:

- Online: www.denvergov.org/infrastructure/PolicyandPlanning/CurrentProjects/FederalBoulevard/tabid/442758/Default.aspx
- by email: Karen.Good@denvergov.org
- in writing: Karen Good
201 West Colfax Department 509
Denver, CO 80202
- via fax: 720-865-2676

The EA document has been translated into Spanish and Korean, upon request material in the appendices will be translated. A public meeting is not planned during the review period. A public meeting was held August 14, 2014 at the Barnum Recreation Center and there have not been changes to the Proposed Action, impact assessment, or mitigation commitments since the event. However, per 23CFR771.111 (h)(2)(iv)

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individuals may request a meeting during the 30-day review period. Requests for additional materials to be translated or for a meeting can be made by contacting Karen Good (see above contact information).

WHAT ARE THE NEXT STEPS?

After the 30-day public-comment period concludes, the comments received will be evaluated and responses to substantive comments will be prepared and included in the decision document. If comments are received during the public-comment period that indicate changes to the Proposed Action are necessary, then clarification will be made to:

- Reflect the changes in the Proposed Action or in the mitigation measures and any resulting impacts of these changes
- Include any necessary findings, agreements, or determinations (for example, a change in anticipated impact due to a design refinement)

Upon completion of the decision document and the final design, the Project's construction phase will commence. It is anticipated that ROW acquisition will begin in the spring of 2015 and that construction will start in spring of 2016 and will continue for approximately two years.

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