

# CATEGORICAL EXCLUSION



April 2014



## EB I-70 Peak Period Shoulder Lane

# Categorical Exclusion I-70 Peak Period Shoulder Lane

Clear Creek County, Colorado

CDOT Project Number: 19474

Federal Aid Project: NHPP 0703-401 and FBR 0703-410

Prepared For:



Prepared by:



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## Acronyms and Abbreviations

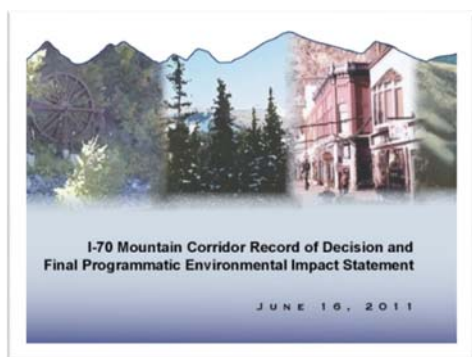
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ALIVE	A Landscape-Level Inventory of Valued Ecosystem Components
ATM	Active Traffic Management
BMP	Best Management Practices
CDOA	Colorado Department of Agriculture
CDOT	Colorado Department of Transportation
CFR	Code of Federal Regulations
CPW	Colorado Parks and Wildlife
CSS	Context Sensitive Solutions
DLD	Downieville, Lawson, and Dumont
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
I-70	Interstate 70
MP	milepost
mph	miles per hour
NRHP	National Register of Historic Places
PEIS	Programmatic Environmental Impact Statement
PLT	Project Leadership Team
PPSL	Peak Period Shoulder Lane
ROD	Record of Decision
SB 40	Senate Bill 40
SH 103	State Highway 103
SWEEP	Stream and Wetland Ecological Enhancements Program
US 40	United States Highway 40
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

## Chapter 1.0 Purpose and Need

### 1.1 Why was this Categorical Exclusion prepared?

The Colorado Department of Transportation (CDOT) has initiated the Eastbound Peak Period Shoulder Lane (PPSL) project as part of the commitments from the Interstate 70 (I-70) Mountain Corridor Programmatic Environmental Impact Statement (PEIS) Record of Decision (ROD) (CDOT, 2011a).



The I-70 Mountain Corridor PEIS ROD documented the decisions for future improvements along the I-70 mountain corridor between approximately Golden and Glenwood Springs Colorado. It is a Tier 1 document, meaning that broad decisions were made, such as location, capacity, and mode, but project specific details will be analyzed further in a Tier 2 document, as part of future project development. The ROD identifies a category of improvements included in the Preferred Alternative Minimum Program. This category is called “*Expanded use of existing transportation infrastructure in and adjacent to the Corridor.*” The PPSL project fits within this category. It maximizes the use of the existing infrastructure, focusing on interim, low-cost operational improvements to maximize the peak period usage of the existing infrastructure. It also capitalizes on the recently constructed investment of the eastbound Twin Tunnels capacity project.

CDOT is incorporating public and agency involvement consistent with the I-70 Mountain Corridor Context Sensitive Solutions (CSS)

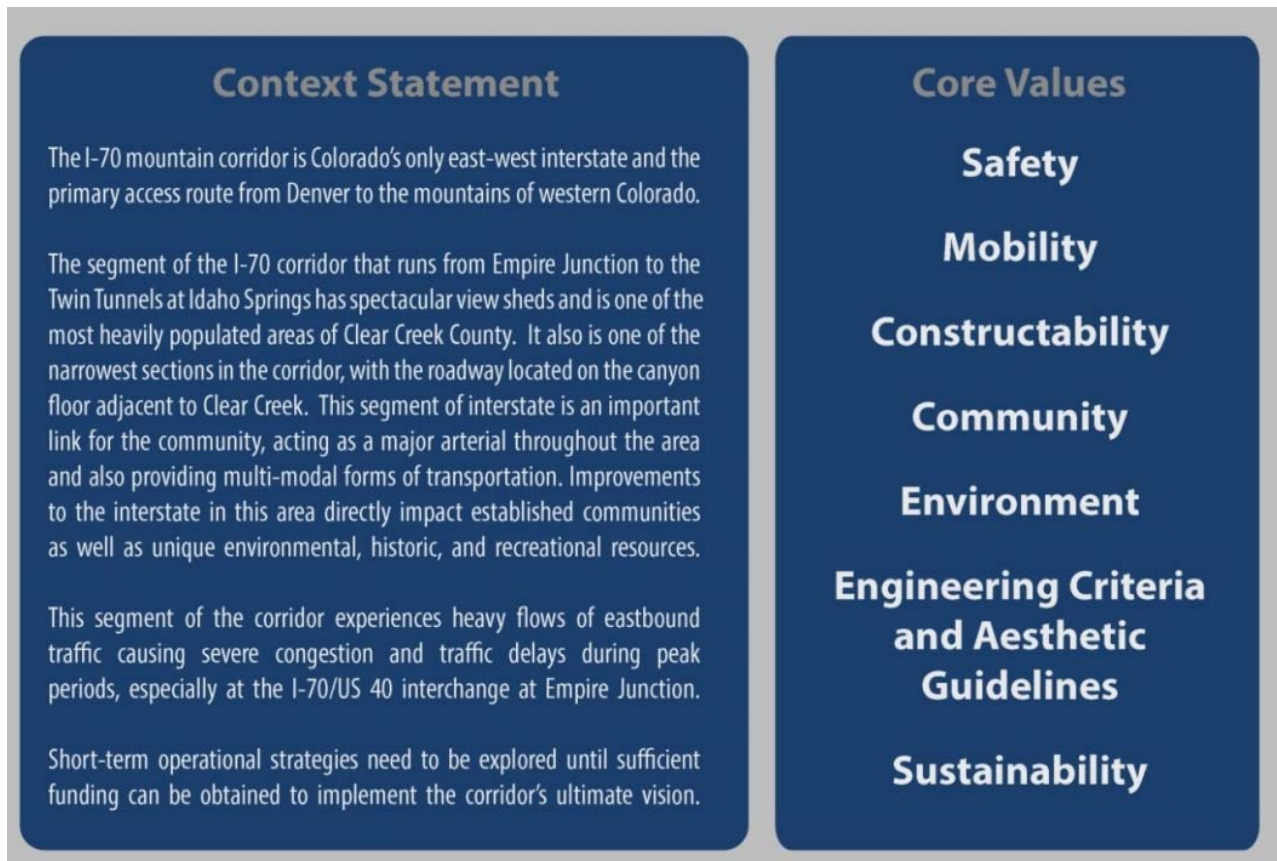
guidance. The project is a Tier 2 project so it incorporates all processes and mitigation identified in the ROD for Tier 2 processes. This National Environmental Policy Act (NEPA) documentation for the PPSL project, a categorical exclusion, is in compliance with 23 Code of Federal Regulations 771.117(d)(1), (2), and (3), which includes modernization of highways, safety and traffic operations improvements, and bridge reconstruction, all of which are consistent with the Proposed Action. In addition this document supports CDOT’s Policy Directive 1601 and the *Interchange Approval Process*. This directive ensures fair and consistent procedures for improvements to existing interchanges, and is required for this project because of proposed improvements at Exit 241.

As part of the I-70 Mountain Corridor (CSS) process, a Project Leadership Team (PLT), a Technical Team, and six Issues Task Forces were formed. These teams included federal, state, and local agencies, as well as the general public and interest groups. The teams developed a context statement and core values for this project. The context statement states the importance of I-70 for recreational and commercial travel while recognizing the unique environmental, historic, recreational, and community resources in the area. Core values of safety, mobility, constructability, community, environment, engineering criteria, aesthetic guidelines, and sustainability were adopted by the PLT. These core values were used to develop goals, objectives, and evaluation criteria which guided the development and evaluation of alternatives (see Figure 1-1).

### 1.2 Where is the Eastbound I-70 PPSL project located?

The Eastbound I-70 PPSL project is being considered between milepost (MP) 230 (MP 229.85) and MP 243. Roadway improvements are proposed between the I-70/United States Highway 40 (US 40) interchange on the west (MP 232) to the western terminus of the three-lane eastbound Twin Tunnels project on the east (MP 243.5).

Figure 1-1. Context Statement and Core Values



The US 40 interchange is a logical western terminus because of the influx of traffic at this point from traffic merging onto eastbound I-70 from US 40. The western terminus of the recently completed eastbound Twin Tunnels project is a logical eastern terminus because that is the location where three lanes eastbound begins; during peak periods this project would create a three-lane cross section from the I-70/US 40 interchange to the Denver metropolitan region.

The study area extends beyond the logical termini discussed above. This results from the need for signage improvements that start approximately 2 miles before the PPSL begins, and 1.5 mile after it ends. The study area extends from the MP 230 to MP 243, approximately 13 miles.

The existing roadway in the study area includes two 12-foot general-purpose lanes, a 4-foot left shoulder, and a 10-foot right shoulder.

### 1.3 What is the Purpose for and Need of the project?

The purpose for the PPSL project is to provide eastbound operational improvements to relieve traffic congestion during peak periods when eastbound traffic volumes are highest. This traffic congestion erodes travel time reliability, increases traffic on local roads, decreases motorist safety, and compromises emergency response.

Operational improvements are intended to be implemented quickly, without substantial construction outside of the existing I-70 highway footprint. The proposed project is a short-term fix in advance of longer-term major improvements to the I-70 Mountain Corridor.

The existing section of I-70 from US 40 at Empire Junction to the Twin Tunnels consists of two eastbound and two westbound travel lanes. The outside shoulder in each direction is

approximately 10 feet wide. This stretch of I-70 is one of the most congested stretches of interstate in the entire I-70 Mountain Corridor. High traffic volume on I-70, west of Denver, during both the summer and the winter, has led to ever increasing periods of slow traffic, which at times is considered a gridlock situation. The predominant period for gridlock is on Saturday, Sunday and holiday afternoons, on eastbound I-70, from Empire Junction to Idaho Springs. The eastbound Twin Tunnels project, which opened to traffic in December 2013, has alleviated a portion of this congestion east of the Twin Tunnels. However, recent speed data still note speeds dropping 20 miles per hour (mph) to 25 mph in this section on Saturday and Sunday afternoons.

The following specific transportation needs are a result of this congestion:

- **Travel Time Reliability.** I-70 recreational travelers, transportation dependent commerce, and other I-70 users are severely affected by the slow and unpredictable travel times on this stretch of I-70. This travel time reliability issue affects tourism and economic development and severely hampers emergency service providers who need to use I-70 for through emergency service trips (e.g. transporting someone from the mountains to Denver area hospitals via ambulance).



Congestion on eastbound I-70

During non-peak periods, in uncongested free-flow conditions, from the Eisenhower-Johnson Memorial Tunnel to the top of Floyd Hill, travel time is 33 minutes. Existing travel times during peak periods and forecasts for

opening year 2015 are similar because of the minimal growth anticipated, with travel times of approximately 100 to 110 minutes. Travel time during peak period for 2035 is forecast to be 158 minutes, nearly 5 times longer than free-flow conditions.

- **Local Access.** Some motorists divert to alternate routes (primarily frontage roads), causing congestion for local traffic and reduced safety on these roads. The frontage road is the “main street” for Downieville, Lawson, and Dumont, and the only continuous east-west local street in Idaho Springs.

Weekday traffic counts on the frontage roads average between 200 and 400 vehicles per day, with 52 percent to 56 percent of that traffic traveling eastbound. During peak periods traffic volumes range from 1,340 and 1,930 vehicles per day, with more than 90 percent of that traffic traveling eastbound. When I-70 traffic uses the frontage road, local jurisdictions are also affected by congestion because the frontage road provides access to numerous adjacent properties throughout its length.

- **Safety.** Congestion related crashes occur on I-70. Analysis of accident data in this stretch of I-70 shows that approximately 70 percent of crashes that are related to congestion, rear end and sideswipe collisions, occur in the eastbound I-70 direction compared to the westbound direction.

Emergency service providers responding to incidents in the study area are delayed by the congestion and lack of alternate ways to get to incidents on I-70. This severe congestion affects speed of response to incidents on I-70, incidents in adjacent communities and incidents affecting recreationists using the Clear Creek corridor. The resulting delay in effective incident management compromises safety and substantially inconveniences other travelers. This was corroborated during CDOT’s testing of speed harmonization in 2011. With a pilot car setting a 45 mph speed limit, emergency responders noted an improvement in emergency response times along the I-70 corridor.

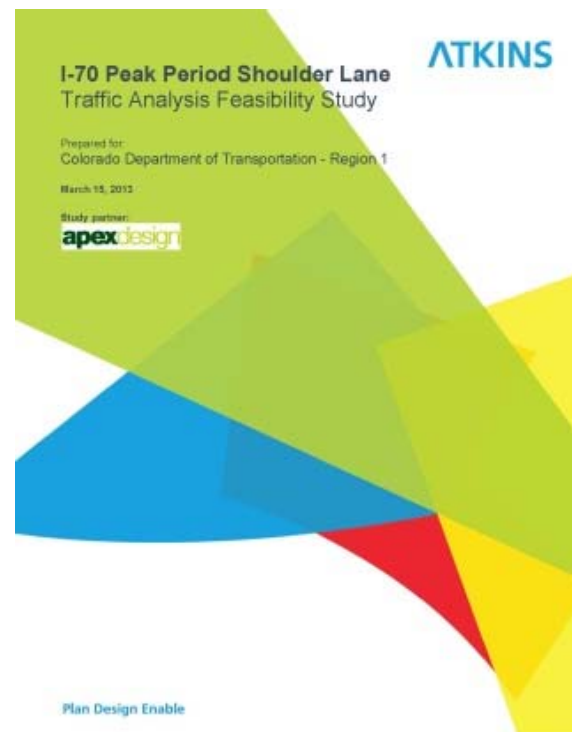


#### 1.4 What other related studies have occurred?

Developing creative solutions to maximize the use of existing highway infrastructure is a relatively recent, nationwide approach that is efficient, cost-effective, and sustainable. This approach is consistent with FHWA's report to Congress *Efficient Use of Highway Capacity* (FHWA, 2010). For the I-70 Mountain Corridor, its applicability has been studied in numerous documents over the past three years:

- *I-70 Reversible Lane Phase 1 Feasibility Study*, August 2010
- *I-70 Hard Shoulder Running Report*, July 2011
- *I-70 Mountain Corridor Mobility and Operational Assessment*, August 2011
- *I-70 Reversible Lane Phase II Feasibility Study*, March 2012
- *I-70 Peak Period Shoulder Lane Feasibility Study*, March 2013

The concept of PPSLs is consistent with the CDOT *Managed Lanes Policy Directive 1603.0*, adopted December 2012.



## Chapter 2.0 Proposed Action

## 2.1 How was the Proposed Action developed?

The Proposed Action was derived from the Interstate 70 (I-70) Programmatic Environmental Impact Statement (PEIS) Record of Decision (ROD) Preferred Alternative Minimum Program. It is an *expanded use of the existing transportation infrastructure*. This category of Non-Infrastructure Components is included in the Preferred Alternative Minimum Program. It is specifically described in various reports, including the *Efficient Use of Highway Capacity* (FHWA, 2010) and the *I-70 Mountain Corridor Phase II Feasibility Study: Evaluation and Screening of Operational Alternatives* (CDOT, 2011b).

An extensive stakeholder process was initiated in April 2013 to develop the details of the Proposed Action. This process is described in more detail in Chapter 4.0 and in Appendix A of this document.

## 2.2 What is the Proposed Action?

The Proposed Action adds a peak period shoulder lane (PPSL) between the United States Highway 40 (US 40)/I-70 interchange and east Idaho Springs, in the eastbound direction only. It is intended to be an interim solution to peak period congestion. This managed lane would be used during peak periods, defined as Saturdays, Sundays, and holidays, improving travel times, travel reliability, and operations. The 13-mile project extends from milepost (MP) 230 to MP 243, with improvements proposed as follows and shown in Figure 2-1.

- MP 230 to MP 232: signage improvements only. Signage would notify motorists of the status of the managed lane, entrance and exit points, and cost.
- MP 232 to MP 242: roadway improvements, including up to 3.5 feet of widening at select areas to accommodate the managed lane, up to 14 feet of widening at the State Highway 103 (SH 103) on-ramp, and 4 feet to 8 feet of widening at all other on-ramps in

the corridor; replacement of the existing SH 103 bridge and the Exit 241 bridge (with interchange improvements); construction of two pull outs for emergency refuge purposes; improvements to Water Wheel Park; signage; rock cuts in two locations; water quality treatment measures; and construction of 10 new retaining walls.

- MP 242 to MP 243: signage improvements only.

The managed lane, which would be tolled, would operate up to, but not exceed, 20 percent of the annual days or 7.5 percent of the time, and connect to the three-lane section provided by the eastbound Twin Tunnels project, east of Idaho Springs, thereby capitalizing on that transportation investment. The lane would also be available during emergency closures of general purpose lanes. It would not be open if weather conditions indicate travel would be unsafe.

The Proposed Action utilizes the center (left) lane. The proposed typical section is illustrated in Figure 2-2 and includes:

- A 12-foot wide inside left shoulder that also serves as an 11-foot managed lane with a 1-foot shoulder during peak times.
- A center lane that is an 11-foot wide general purpose lane.
- An outside (right) lane that is a 12-foot-wide general purpose lane.
- A minimum 4-foot-wide outside (right) shoulder.

The Proposed Action includes replacement of the bridge that carries SH 103 over I-70 (see Figure 2-3). The bridge would be widened (from 38 feet to 59 feet) to include a center auxiliary lane to accommodate future vehicle storage for left turn movements onto both the eastbound and westbound on-ramps onto I-70, wider shoulders and a wider sidewalk. Figure 2-3 shows the existing bridge and the Proposed

Figure 2-1. Roadway Improvements

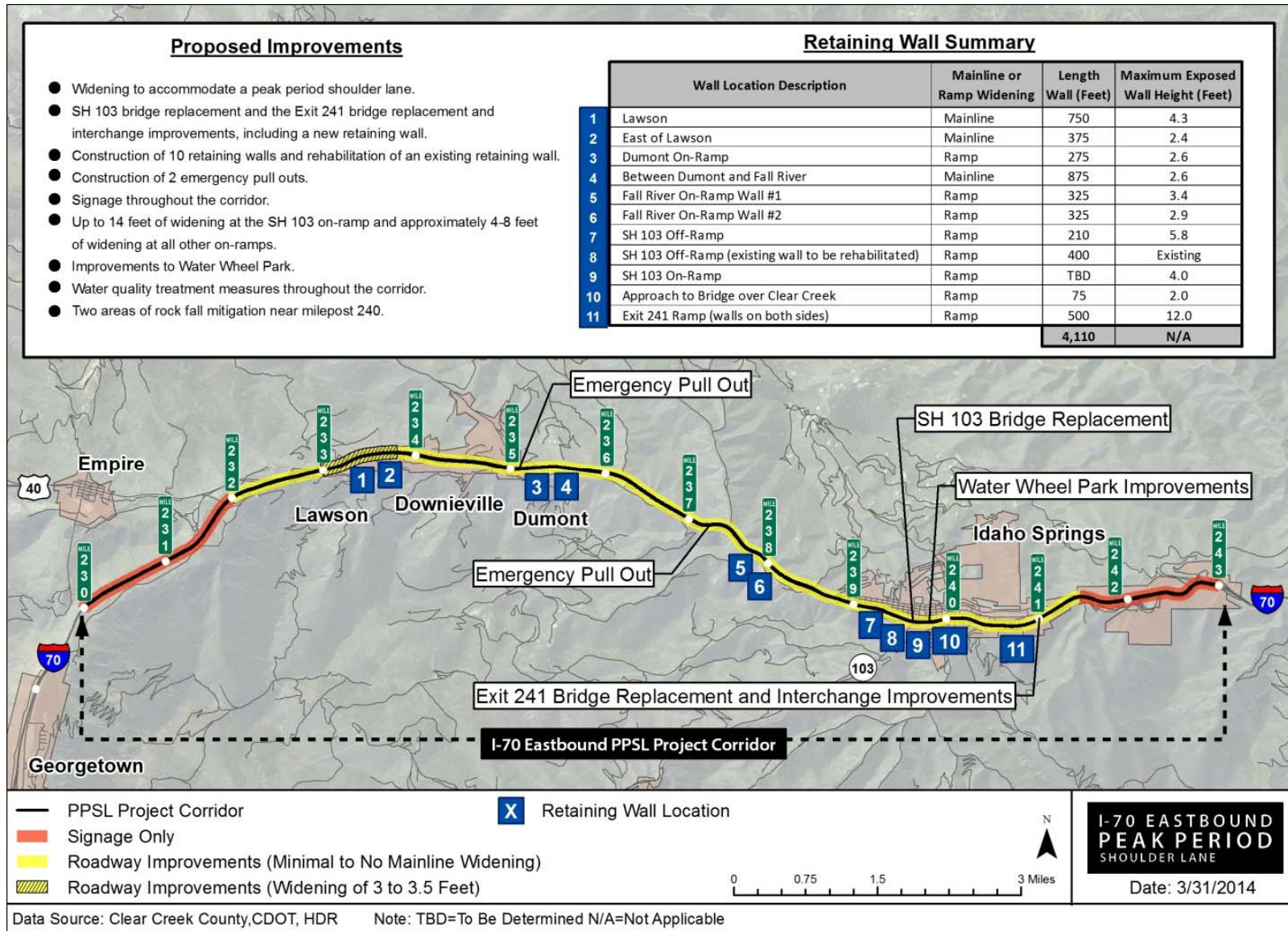
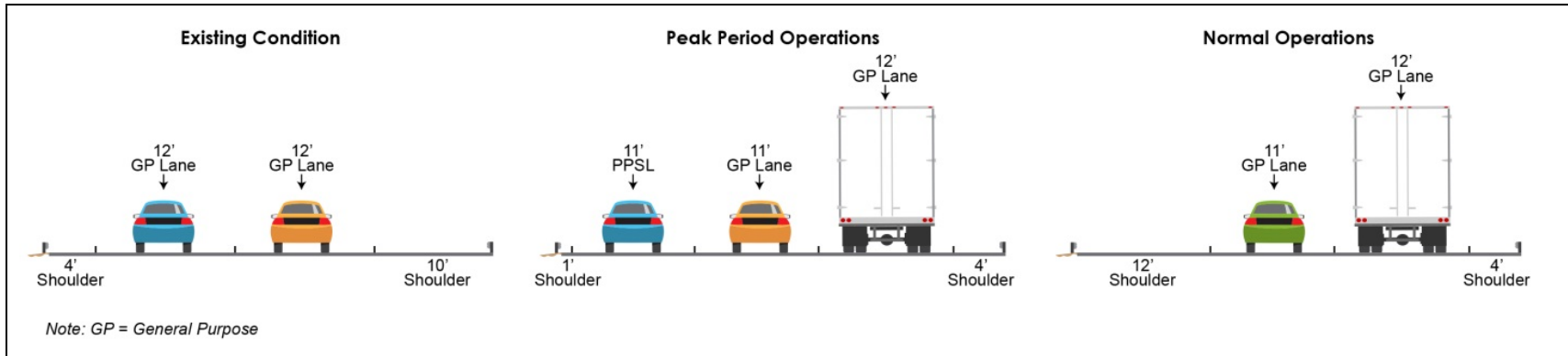
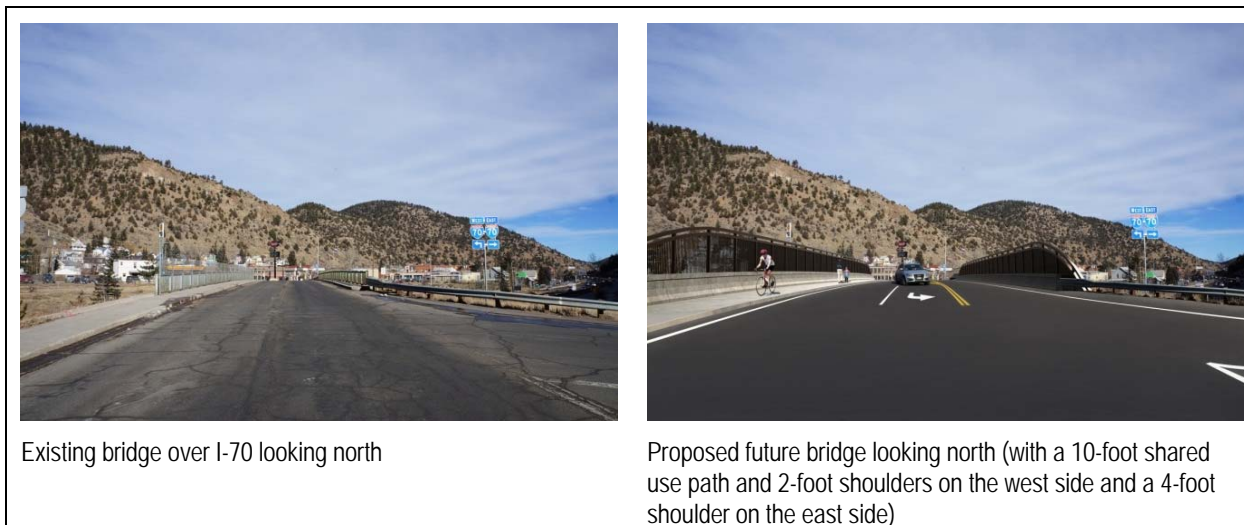


Figure 2-2. Typical Cross Sections with Lane Assignments



Source: HDR

Figure 2-3. SH 103 Bridge Replacement, Existing and Proposed Action



Source: HDR

Action. Other improvements at this location include:

- Shifting of the interstate horizontally to provide for both of the new bridge piers. The eastbound lanes are shifting slightly south and the westbound lanes are shifted slightly north just in the vicinity of the bridge.
- Minor interchange improvements to align the on and off-ramps with the horizontal shift of I-70.
- Pedestrian improvements including a new 10-foot sidewalk on the west side of the new bridge. This is a substantial improvement to the existing 4-foot sidewalks on both sides of the bridge.

The Proposed Action includes replacement of the bridge at Exit 241 and interchange improvements at this location. The bridge is structurally deficient, with a rating of 34 out of 100, indicating it needs to be replaced. Interchange improvements are needed to address existing safety concerns resulting from short deceleration lanes, sharp turns, and high speeds when entering Idaho Springs from the westbound lanes (see Figure 2-4). These improvements include:

- Interchange improvements that consist of two new roundabouts, one on each side of I-70.
- Lengthening of on and off ramps.
- 5-foot shoulders on each side of the bridge.
- Signage improvements in the vicinity of the interchange to direct pedestrians and bicyclists to the Clear Creek County Greenway, which crosses beneath I-70 at 27<sup>th</sup> Avenue.

The Proposed Action includes improvements to the Water Wheel Park and the Greenway Trail in the vicinity of the park (see Figure 2-5). Improvements include:

- Grading of the Water Wheel Park and the Greenway Trail to lower the areas most utilized by pedestrians in order to reduce noise from vehicles on I-70 and screen views

of the interstate.

- Redesigning the hardscape plaza area to improve accessibility down to Clear Creek, fishing access, and views of the Charlie Taylor Water Wheel.
- Installation of interpretive signage, which would include stand alone signage and signage mounted on the retaining walls, which showcase the unique habitat of Clear Creek and the history of mining in Clear Creek County.
- Installation of landscaped areas consistent with native vegetation in the area. Low plantings and grasses will be used to not obscure views of the Charlie Taylor Water Wheel from I-70 motorists. Existing riparian trees, vegetation and wetland habitat will be preserved and restored.

The Proposed Action includes two emergency pullouts located adjacent to the on-ramp at the Dumont interchange and on a flat area just past MP 237. Figure 2-6 and shows the location of these pullouts.

Two areas of identified of rock fall concern would be mitigated through the installation of a mesh fencing attached to the rock face. The western mitigation location is approximately 500 feet long and 55 feet high, and the eastern mitigation location is approximately 375 feet long and 55 feet high. Locations of these rock fall mitigation locations are shown on Figure 2-7.

New guardrail is planned from the east side of Water Wheel Park, where the highway crosses over Clear Creek, to just west of the ball fields, to address rock fall and clear zone hazards.

The Proposed Action is an interim improvement. CDOT will monitor its travel time reliability, use and safety and crash data annually. The Proposed Action will be reassessed in 2020, concurrent with a reassessment of the *I-70 PEIS ROD*. The managed lane will cease operation by 2035, per a Memorandum of Understanding between CDOT and FHWA, unless modified by a different project. In addition, if specific operational limits are not met, FHWA has the right to require CDOT to restore I-70 to its existing operation.

Figure 2-4. Exit 241 Bridge Replacement and Interchange Improvements



Source: HDR

Figure 2-5. Improvements for Water Wheel Park



Source: THK Associates

Figure 2-6. Emergency Pull Out Locations



Source: HDR



Figure 2-7. Rock Fall Mitigation Locations



Source: HDR

Signage is needed to make sure the I-70 users are aware of the safe use of the new infrastructure. Signs will be placed in the median cantilevered over the managed lane and on the sides of the road. The signage plan is context sensitive, using the minimum size signs necessary. New overhead signs are proposed in 19 locations (of which 9 will be Active Traffic Management [ATM] signs, which means they will be blank most of the time). New ground mounted right side sign installations and median sign installations are proposed as necessary for compliance with federal sign guidance. Existing speed limit signs will be removed and replaced with Variable Speed Limit (VSL) signs.

The Proposed Action includes two general purpose lanes that will remain open for free to all travelers. The PPSL will be tolled using transponders or license plate tolling. Pricing is planned to achieve the desired lane use in order to keep the lane operating at a speed of 45 miles per hour. In the *Peak Period Shoulder Lane Feasibility Study*, one possible toll rate was studied that could range from \$2.00 to \$6.00. No toll rate has yet been set for this project. The managed lane will be priced to meet the operational and safety objectives of the project, and the price may vary throughout peak period operations to meet those objectives.



Proposed ATM Signage



## Chapter 3.0 Affected Environment and Environmental Consequences

Chapter 3 discusses the existing conditions in the study area, and the impacts resulting from the construction and operation of the Proposed Action. Mitigation measures have been identified to offset anticipated impacts and are documented in Table 3-11.

Technical memoranda or other resource-specific reports were written for the following resources and are in Appendix D:

- Air quality
- Biological Resources
- Cultural Resources
- Environmental justice
- Floodplains
- Noise
- Recreational Resources
- Regulated materials
- Safety
- Transportation
- Visual resources
- Water quality
- Wetlands

### 3.1 Transportation and Safety

I-70 currently carries two travel lanes in each direction within the study area, except in the eastern portion, where a third eastbound lane, which is operated as a managed lane, opened in 2013. The speed limit is posted at 65 miles per hour (mph) entering the west end of the project corridor, but is reduced to 60 mph at MP 238, and further reduced to 55 mph at MP 242. While the corridor's annual average daily traffic ranges from 39,000 to 45,000 vehicles per day (vpd) (CDOT, 2011a), peak day volumes range from 59,000 to 71,000 vpd now, and are expected to increase to 66,000 to 80,000 vpd in 2035 (Atkins, 2013).

Information about congestion and safety problems in the study area is explained in Chapter 1.0.

Travel times between the Eisenhower-Johnson Memorial Tunnels to the top of Floyd Hill would be reduced approximately 42 percent to 48 percent with the implementation of the Proposed Action. In addition, travel time reliability would

be improved as the managed lane would be priced to maintain a 45 mph speed.

Vehicles miles traveled would increase by 3 percent, but total vehicle hours of travel decreases approximately 31 percent, as travel times improve during peak period (see Table 3-1).

Table 3-1. Peak Period Eastbound I-70 VMT and VHT for 2015

	VMT	VHT
With no Improvements	1,108,928	49,878
Proposed Action	1,140,488	34,458
Percent Increase/Decrease	3%	-31%

Local roads, in a majority of locations, would see a decrease in traffic, as travelers would be less likely to leave the highway because of improved highway conditions. Table 3-2 shows the anticipated decrease in traffic on local roads compared to no improvements being made.

The Exit 241 interchange is proposed to be reconstructed to a paired roundabout configuration or another interchange configuration with similar or less impacts (if identified in future value engineering or preliminary design as an acceptable interchange). Ultimately, the redesign will require the approval of FHWA obtained through their Interstate Access Request process. The redesign addresses geometric constraints introduced by the additional width of I-70 and the lengthening of the existing bridge over I-70. The roundabout on the south side is the only configuration which accommodates the multiple legs and skewed approaches to the intersection. The roundabout on the north side is the optimal configuration that accommodates all the skewed legs, allows full movement, and provides the safest operation. The roundabouts were selected through a process that included input and consent from the Idaho Springs community.



Table 3-2. 2015 Peak Period Local Road Eastbound Volumes

	County Road 308 at Lawson	Stanley Road at Fall River	Colorado Blvd. at SH 103	Colorado Blvd. at East Idaho Springs
With no Improvements	7183	4867	11,709	3754
Proposed Action	6893	4901	8077	1711
Percent Increase/Decrease	-4%	+1%	-31%	-54%

The roundabouts will operate at high levels of service (LOS) upon opening, and in the future. The roundabout intersections will operate at LOS A or LOS B under all opening day and 2035 volume scenarios. Existing LOS at the ramp termini intersections is LOS A.

The reconfigured ramp junctions with the lanes of I-70 will also operate at acceptable levels of service of LOS C or LOS D during peak traffic flow periods.

While there were no crashes identified at the ramp termini in the last five years, reconfiguring to roundabout intersections would ensure continued safe operations. Roundabouts reduce speeds, eliminate right angle conflicts, and reduce the number of conflict points.

Further, the reconfiguration of the ramps provides a safety enhancement. The substandard hook-type eastbound exit ramp will be replaced with a direct exit design. The substandard westbound “B” exit will also be lengthened and redesigned to current AASHTO standards.

In summary, the reconfiguration of the exit ramps and intersections to roundabouts improves virtually all aspects of safety and operations, with no negative impacts.

Per the *I-70 Eastbound Peak Period Shoulder Lane Safety Report* (FHU, 2014) a modest decrease is anticipated in the number of crashes in the study area. This is a result of lower traffic density resulting from the Proposed Action. Emergency vehicles would be allowed to use the lanes without paying a toll as long as they have been dispatched for emergency purposes. The managed lane will provide a less congested alternative for emergency vehicles,

increasing their reliability and response time. Safety is also anticipated to improve in the vicinity of the Exit 241 interchange improvements because roundabouts would result in lower travel speeds and eliminate the potential for head-on or right-angle collisions.

Because I-70 would maintain two travel lanes in each direction for all phases of construction, there would not be a large effect on traffic operations. However, the travel lanes would be narrow, and the speed limit would be reduced in the construction area. Motorists traveling through the study area from beginning to end should only see an increase in travel time because of reduced speed limit (except when construction is happening at night). The largest impacts to traveling behavior in the study area should be around Exit 240 near the town of Idaho Springs.

Certain detours will significantly increase travel time for some motorists. The biggest increase in travel time would be for travelers going from westbound I-70 to southbound SH 103. They would be diverted to Exit 238 and back down to Exit 240 in the eastbound direction. This detour would add approximately 4 miles of travel for these motorists. All other detours should only add 1 mile to 2 miles of additional travel for vehicles traveling around Idaho Springs. These detours would be in place for approximately eight to ten weeks while the new SH 103 bridge is being constructed.

### 3.2 Air Quality

The Proposed Action is located in an area with minimal sources of air pollution. Thus, conformity regulations and localized air quality modeling requirements do not apply to this project.

Air quality in the study area is substantially better than national standards.

The Proposed Action is expected to result in decreased congestion, increased speed and decreased vehicle hours of travel during peak periods of travel. The availability of the third lane during peak periods is anticipated to accommodate increased traffic volume and slightly increase vehicle miles of travel. Although some motor vehicle emissions in the study area during peak periods may increase, including carbon dioxide, others such as carbon monoxide are expected to decrease. No exceedances of National Ambient Air Quality Standards would result.

The construction phase of the project includes several diesel emitting sources, temporarily affecting air quality conditions. In addition, ground disturbing activity could release dust, including disturbance of mine tailings.

### 3.3 Noise

The Proposed Action has been classified as a Type III project, per 23 Code of Federal Regulations (CFR) 772, and requires no detailed analysis for highway traffic noise impacts.

At two locations, at the eastern end of Lawson and adjacent to Water Wheel Park, proposed retaining walls added as a part of the Proposed Action would be expected to reduce existing noise between 2 and 4 decibels. This is an added benefit of the retaining walls, but is not done for noise abatement purposes.

Standard construction techniques would generate noise, during both day and night construction operations, from diesel-powered equipment. Noise levels would vary, depending on the loudest piece of equipment in operation at the time.

### 3.4 Regulated Materials and Solid Waste

The following potential hazardous material concerns were noted in the study area:

- Mining and milling activities occurred in the project vicinity from approximately 1859 to the 1980s. There are potential mine-related wastes located beneath the Interstate (I-70) roadway.



Bellevue-Hudson ore bin

- Heavy metals were detected in the groundwater at levels which exceed the appropriate surface water standard for Clear Creek, and the Colorado groundwater standards, near the State Highway 103 bridge structure over I-70 and the Exit 241 Interchange.
- Lead is present within the paint on components of the State Highway 103 (SH 103) bridge structure over I-70 and on the Exit 241 interchange bridge.
- Automotive fueling stations are present and hydrologically upgradient of the study area; however, groundwater sampling indicates that these facilities are not impacting groundwater at the two replacement bridge locations where groundwater could be encountered during construction.
- Asbestos containing materials have not been detected on the SH 103 bridge or the I-70 or the Exit 241 Interchange bridge.

Direct impacts to regulated materials and solid waste would occur during construction. The effect of encountering mine-related wastes could also increase the possibility that these disturbances could cause a transport of mine-related pollutants through wind dispersion,



leaching, and drainage. For additional investigation regarding direct impacts to water quality, see Section 3.12 *Water Quality*.

The Proposed Action would require demolition of the SH 103 and Exit 241 interchange bridges, which contain lead-based paint. The incidental release of fuels and lubricants during construction could occur during equipment fueling and/or maintenance activities.

### 3.5 Farmland Protection

Protected farmlands occur in the study area, and in cases are located immediately adjacent to the highway. Approximately 0.31 acre of farmland would be converted to a transportation use. Through coordination with Natural Resources Conservation Service and

completion of the Farmland Conversation Impact Rating form, dated March 18, 2014 (see Appendix B), it was determined that the Proposed Action would not substantially impact prime or unique farmlands or farmlands of statewide or local importance within the study area.

### 3.6 Threatened and Endangered Species

Table 3-3 lists the federally and state-listed species potentially found within the study area.

The Proposed Action has the potential to impact threatened and endangered species as noted in Table 3-4.

Table 3-3. Federally and State-Listed Species Potentially Occurring in the Study Area

Species	Status <sup>1</sup>	Potential to Occur in Study Area
<b>Mammals</b>		
Canada lynx ( <i>Lynx canadensis</i> )	FT, SE	Yes
North American wolverine ( <i>Gulo gulo luscus</i> )	FC, SE	No
Preble's meadow jumping mouse ( <i>Zapus hudsonius preblei</i> )	FT, ST	No
<b>Birds</b>		
Mexican Spotted Owl ( <i>Strix occidentalis lucida</i> )	FT, ST	No
Whooping Crane ( <i>Grus Americana</i> )	FE, SE	Yes*
Least Tern ( <i>Sterna antillarum</i> )	FE, SE	Yes*
Piping Plover ( <i>Charadrius melodus</i> )	FT, ST	Yes*
Peregrine Falcon ( <i>Falco peregrines anatum</i> )	SC	Yes
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	SC	Yes
<b>Plants</b>		
Western prairie fringed orchid ( <i>Platanthera praeclara</i> )	FT	Yes*
<b>Fish</b>		
Pallid sturgeon ( <i>Scaphirhynchus albus</i> )	FE	Yes*
Greenback cutthroat trout ( <i>Oncorhynchus clarki stomias</i> )	FT, ST	No
<b>Amphibians</b>		
Boreal toad ( <i>Bufo boreas boreas</i> )	SE	Yes
<b>Reptiles</b>		
Common garter snake ( <i>Thamnophis sirtalis</i> )	SC	Yes

Source: United States Fish and Wildlife Service (USFWS) 2013; Colorado Parks and Wildlife (CPW) 2013a

\* Species potentially impacted by Platte River system water depletions

<sup>1</sup> Status Codes: FC= Federal Candidate; FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; ST = State Threatened, SC = State Special Concern

Table 3-4. Summary of Impacts for Threatened and Endangered Species


Species	Summary of Impacts
Downstream Species	Water use required for some construction activities would affect federally listed species that are potentially impacted by depletions to the Platte River system. These species include the Whooping Crane ( <i>Grus Americana</i> ), Least Tern ( <i>Sterna antillarum</i> ), Piping Plover ( <i>Charadrius melodus</i> ), western prairie fringed orchid ( <i>Platanthera praeclara</i> ), and pallid sturgeon ( <i>Scaphirhynchus albus</i> ). Measures outlined in the USFWS Final Programmatic Biological Opinion (USFWS, 2011) will be followed to minimize impacts.
American Peregrine Falcon ( <i>Falco peregrines anatum</i> )	Suitable American Peregrine Falcon habitat exists in the study area, but no nests have been identified (CPW 2013b). The Proposed Action would result in no direct or indirect impacts to the American Peregrine Falcon.
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Bald Eagles can be found year round in the study area; however, no nesting pairs have been documented in the study area (CPW 2013b). The Proposed Action would result in no direct impacts to the Bald Eagle. Construction activities could temporarily displace eagles from traditional foraging areas, but there are ample foraging areas elsewhere in the corridor.
Boreal Toad ( <i>Bufo boreas boreas</i> )	The Proposed Action would result in no direct or indirect impacts to boreal toads as there are no roadway or signage improvements proposed within their habitat.
Common Garter Snake ( <i>Thamnophis sirtalis</i> )	The Proposed Action could result in some direct mortality to common garter snakes from construction activity. The use of heavy equipment during construction may cause common garter snakes to temporarily avoid the area. The Proposed Action would directly impact approximately 0.27 acre of shrub/scrub habitat that would be converted to transportation use. However, the habitat that would be converted is disturbed roadside habitat that has already been degraded.
Canada Lynx ( <i>Lynx canadensis</i> ) 	<p>Above 8,000 feet, where lynx are most likely to occur, the Proposed Action would directly impact 0.27 acre of shrub/scrub habitat. However, this impact is primarily to disturbed roadside habitat, which does not provide lynx habitat.</p> <p>The following elements of the Proposed Action in areas above 8,000 feet would increase the barrier effect of the existing highway:</p> <ul style="list-style-type: none"> <li>▪ Two new retaining walls would be constructed in areas above 8,000 feet. One wall is 750 feet long with a maximum height of 8 feet and 6 inches. The other wall would be 375 feet long with a maximum height of 4 feet and 7 inches. Given the residential land use in the area adjacent to the proposed retaining walls, the year round presence of humans, and the location being in the lower range of elevation associated with lynx habitat, lynx are unlikely to cross the highway in this area.</li> <li>▪ The roadway would be widened up to 3.5 feet to accommodate the managed lane and on-ramps in the corridor would be widened 4 feet to 8 feet. It is not anticipated that lynx would cross the highway during peak period operations because of the volume of traffic and human activity; therefore, the higher speeds and wider roadway would likely not impact lynx during operation of the peak period shoulder lane.</li> </ul>

Table 3-4. Summary of Impacts for Threatened and Endangered Species

Species	Summary of Impacts
	<ul style="list-style-type: none"> <li>The Proposed Action would require the use of electronic signs. There would be 10 lighted signs in areas above 8,000 feet. These signs have the potential to discourage individual lynx from attempting to cross the highway.</li> </ul> <p>Construction activities would temporarily affect lynx in the vicinity of the study area for slightly over one year because of disturbance from construction noise and equipment and increased human presence. Although temporary disturbance from construction activities may occur, the effect is expected to be minor and temporary. Lynx would be expected to avoid the area during construction due to the increased noise and human presence, but their “normal” behavior would be expected to return shortly after the completion of the project.</p> <p>As noted in the <i>Eastbound I-70 PPSL Project Biological Assessment</i> (CDOT, 2014) based on the location of the project, the type of project and the conservation measures proposed, the Colorado Department of Transportation (CDOT) has determined that this project may affect, but is not likely to adversely affect the lynx. USFWS concurred with this finding in a letter dated February 13, 2014 (Appendix B).</p>

### 3.7 Raptors and Migratory Birds

The Migratory Bird Treaty Act (16 U.S.C. 703-712) protects migratory birds and their nests, eggs, young, and parts from possession, sale, purchase, barter, transport, import, and export, and take. Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act (16 USC 668–668c) and the Migratory Bird Treaty Act.

A nest survey for tree and cliff dwelling raptor nests was completed during biological resources field work conducted in fall 2013. No nests were identified at that time. In addition, bridge structures were surveyed for nesting swallows. No swallow nests were identified.

Habitat adjacent to Clear Creek within the study area is mapped as winter range and winter forage for Bald Eagles; however, there are no documented winter night roosts. While Bald Eagles are known to winter along suitable habitat adjacent to Clear Creek, the lack of contiguous riparian habitat or large cottonwood trees reduces the quality of habitat within the study area.

Indirect impacts on migratory birds would include loss of roadside habitat that would be converted to transportation use. The loss of 0.27 acre of shrub/scrub and 0.28 acre of riparian

vegetation would slightly reduce habitat availability for migratory birds in the study area. However, the habitat that would be converted is disturbed roadside habitat that has already been degraded and provides little habitat value.

Construction of the Proposed Action could result in displacement of birds from habitat near construction areas.

### 3.8 Terrestrial and Aquatic Wildlife

Large terrestrial mammal species that regularly occur within suitable habitat in the study area include mule deer, bighorn sheep, elk, and black bear. Moose are rare in the study area, but may occasionally be seen



Bighorn sheep west of Empire Junction (CPW, 2013b). The study area provides foraging habitat for a variety of predators, including coyote, red fox, bobcat, raccoon, and striped skunk. In addition, mountain lions are found throughout the region in areas that support populations of deer, bighorn sheep, and elk. Common small mammal species include ground squirrels, mice, chipmunks, and rabbits. Beaver are frequently observed adjacent to Clear Creek.



An analysis of animal vehicle collision data from MP 232 to MP 241 show that deer, elk, fox, coyote, black bear, bighorn sheep, and raccoon are the most common species involved in animal vehicle collisions in the study area.

Clear Creek is considered a “high value” fishery that provides high quantity habitat for a variety of fish species. Clear Creek supports wild, naturally reproducing brown trout populations and stocked populations of rainbow trout. Other species present in Clear Creek include brook trout, fathead minnows, common carp, and various species of sucker (CPW, 2013c).

Benthic invertebrate communities known to inhabit or potentially inhabit Clear Creek are composed primarily of mayflies, stoneflies, caddisflies, and midges.

The Proposed Action would permanently convert approximately 0.27 acre of shrub/scrub habitat and 0.28 acre of riparian vegetation to a transportation use. However, the habitat that would be converted is disturbed roadside habitat that has already been degraded and provides little habitat value to terrestrial mammals.

The new retaining walls would slightly increase the barrier effect of the highway. In addition, electrically lit signage could dissuade wildlife from crossing the roadway. The combined effect of these impacts would result in a moderate (but limited in geographic extent) effect to terrestrial wildlife.

Construction activities could result in direct mortality to small mammals from heavy equipment and construction traffic. The use of heavy equipment during construction may cause terrestrial mammals to avoid the area during construction.

The Proposed Action would permanently impact 450 square feet of the Clear Creek streambed, west of SH 103, where an existing retaining wall would be rehabilitated with new surface. Temporary impacts resulting from this construction would impact approximately 4,500 square feet of Clear Creek, resulting in a localized increase in turbidity. CPW has indicated there are no species of concern in this area of Clear Creek that would be affected by the temporarily increased turbidity. Work in

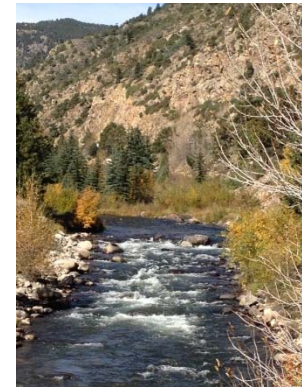
Clear Creek would have the potential to introduce invasive species, such as mussels, into the waterway.

Construction of the retaining walls and new roadway surface may cause temporary erosion of disturbed soils, sedimentation downstream, and accidentally spilled fuels.

The implementation of permanent water quality best management practices (BMPs) would result in improved long term water quality conditions compared to existing conditions.

### 3.9 Riparian Vegetation

Riparian areas, which are found along the banks of Clear Creek in the study area, serve as buffer zones to the creek and are home to unique wildlife species, including protected species. The dominant tree species in the riparian corridor in the study area is narrowleaf



Riparian vegetation

cottonwood. Other common riparian species in the study area include thinleaf alder, river birch, numerous willow species, Engelmann spruce, snowberry, and red twig dogwood. Because of the steep incised banks of Clear Creek, riparian habitat is not contiguous within the study area, and is only found where fluvial processes (e.g. flooding and sediment deposition) still persist along the creek corridor.

SB 40 (33-5-101-107, Colorado Revised Statute, 1973 as amended) is a law designed to protect and preserve all fish and wildlife resources associated with streams in Colorado. A SB 40 Certification will be obtained from Colorado Parks and Wildlife (CPW) when construction occurs in any stream, its banks, or tributaries that meet SB 40 Certification application criteria.

Direct impacts to riparian vegetation would be minor. Approximately 0.28 acre of riparian vegetation would be impacted to facilitate construction of the improvements. Temporary

construction impacts include an additional 0.28 acre of riparian habitat.

### 3.10 Vegetation and Noxious Weeds

As defined by the Colorado Department of Agriculture (CDOA), noxious weeds are plants that reduce agricultural productivity, lower real estate values, endanger human health and well-being, and damage scenic values (CDOA, 2013).

The *Clear Country Noxious Weed Management Plan* and the CDOA Noxious Weed List were reviewed to determine which noxious weeds species may occur in the county (CDOA, 2013). Twelve different species of noxious weeds were noted during field reconnaissance in September and October 2013.

Construction activities would expose soils in areas that have been previously disturbed, creating a potential for the introduction and spread of noxious weeds in the study area. Noxious weed species that occur in the disturbed areas of the study area have the potential to spread into areas impacted by roadway construction.

### 3.11 Wetlands and Other Waters of the United States

The study area contains 20 identified wetlands, with a total area of 2.1 acres. Almost all of the wetlands are immediately adjacent to Clear Creek. The two exceptions are wetlands located within roadside drainage features away from Clear Creek, but ultimately flowing into the creek.

Other waters of the U.S. present in the study area include Clear Creek, West Fork Clear Creek, Chicago Creek, Silver Creek, Mill Creek, Fall River, and Soda Creek. In addition, there are numerous unnamed intermittent drainages located throughout the corridor, associated with the mountain topography. The Clear Creek ordinary high water mark was mapped using the current edge-of-water survey and adding the two-year flood event.

There are no anticipated direct impacts to wetlands. Other waters of the U.S. would be directly impacted in one location; west of the SH 103 interchange where a retaining wall, the

base of which sits in Clear Creek, would be reconstructed and lined with boulders to eliminate the existing scour concerns. This wall is approximately 400 feet long and the new face could be up to 16 inches wide, resulting in 500 square feet of fill in Clear Creek. By reconstructing the wall the existing scour, which introduces sediment to Clear Creek and occurs as a result of the wall being undercut, would be eliminated.

Indirect impacts to wetlands and other waters of the U.S. would occur from the minor addition of impervious surface, which leads to increased water runoff, erosion, sedimentation, and the use of deicers and traction sand. Potential impacts during construction would result from spills which may cause a pollutant discharge into wetlands or other waters of the U.S. Erosion would impact wetlands and waters of the U.S. through the removal or deposit of soil and vegetation and the increased use of deicers would result in contaminants entering wetlands and waters of the U.S. The Proposed Action would increase the number of permanent water quality features in the study area, thereby lowering the amount of sediment, traction sand, and deicers entering wetlands and waters of the U.S. For additional information regarding indirect effects and water quality, see *Section 3.12 Water Quality*.



Wetland at Water Wheel Park

There are no anticipated temporary construction impacts to wetlands. Temporary construction impacts to other waters of the U.S. would include approximately 4,000 square feet of temporary impacts because of construction personnel working in Clear Creek. There would be no equipment in the water as the wall would be constructed from above. Construction would result in a localized increase in turbidity.

### 3.12 Water Quality

Clear Creek is the primary water resource in the study area and generally flows immediately adjacent to I-70, receiving roadway runoff.



Others waters present in the study area were listed in Section 3.11.

There are relatively few existing inlets and storm pipes that convey stormwater runoff from eastbound I-70, so eastbound highway runoff typically flows directly into Clear Creek. Stream water quality can be affected by the runoff of highway winter maintenance material, deicers and traction sand. The *I-70 Mountain Corridor Programmatic Environmental Impact Statement (PEIS)*(CDOT, 2011) identified traction sand and deicers as the primary water quality parameters of concern in the study area (CDOT, 2011a).

The study area falls within Clear Creek Segments 2 and 11, which have been impacted by metals from historic mining near the project area. Segments of Clear Creek, in the study area, are listed as impaired for cadmium and zinc (CDPHE, 2012).

Direct impacts on water resources related to the Proposed Action include very minor (1.5 acre) increases in impervious surface area, an increase of approximately 3 percent of the eastbound roadway surface in the study area. This would result in additional roadway runoff.

Impervious surfaces do not absorb water, and, therefore, increase runoff during storm events. This can result in increased erosion and sedimentation. In the study area, I-70 includes 50 acres of impervious surface.

Although increases in stormwater runoff and related pollutants are possible, the Proposed Action includes permanent sediment control BMP structures. These BMPs treat more impervious roadway area than is being added by the project. This would result in a net benefit to water quality, as 20 percent of the eastbound lanes will be treated.

Indirect impacts include the potential disturbance of mine tailings and a very minor increase in usage of winter maintenance materials. During heavy snowfall events the decreased shoulder width would result in snow, and any winter maintenance materials it contains, being “thrown” beyond the edge of the pavement. These materials could enter Clear Creek.

Disturbance and erosion of underlying soil, stockpiles, and access roads during construction can contribute to water quality degradation in Clear Creek. Vehicle tracking can carry loose sediment onto the roadway; concrete wash-out has the potential to be conveyed into the drainageways; accidental spills from machinery, drilling activities, and storage tanks can affect water quality during construction; and, soil disturbed during construction can lead to long-term erosion and sedimentation in Clear Creek. These potential impacts will be offset by specific mitigation measures, as discussed in Table 3-11.

### 3.13 Floodplains

Although the majority of the Federal Emergency Management Agency (FEMA) floodplain in the study area is confined within Clear Creek’s banks and does not encroach onto the highway, FEMA floodplain maps show some areas where Zone A designated floodplains intersect the highway. The project team defined the 100-year floodplain at each of these locations and determined that the highway would not flood during a 100-year event.

The limited widening included in the Proposed Action is expected to have negligible effects on the amount and peak flow rate of highway runoff, and therefore

Zone A—Areas subject to inundation by a 100-year flood event. Base Flood Elevations or flood depths have not been determined

is not expected to impact roadway drainage structure capacities. In the areas to be widened, virtually all of the proposed work occurs outside of the 100-year floodplain.

Two activities associated with the Proposed Action would occur within the floodplain in the study area. The first area is upstream of the SH 103 bridge over Clear Creek. Improvements are proposed to be made to the existing retaining wall (see Section 3.11 for details). The wall expansion and addition of boulders is considered a fill within the floodway.

The second area where the Proposed Action would impact the 100-year floodplain is located at Water Wheel Park. The current 100-year floodplain elevation is near the elevation of the existing trail. At this location, the anticipated

highway widening work would encroach into the floodplain. However, the improvements proposed for Water Wheel Park lower the existing Clear Creek Greenway trail, removing fill from the floodplain. Lowering the trail would provide a benefit by increasing flood conveyance in this area.



View of SH 103 retaining wall looking upstream from south bank of Clear Creek.

The Proposed Action is elevated above the 100-year floodplain and would not be inundated in a flood.

### 3.14 Historic Properties

Under Section 106 of the National Historic Preservation Act of 1966, federal agencies are required to evaluate the effects of their undertakings on historic properties. . This process involves identifying historic properties, evaluating effects, resolving adverse effects, and mitigation.

Consultation with the State Historic Preservation

Officer (SHPO) and interested or consulting parties is an important part of the Section 106 process. Consulting parties included Clear Creek County, City of Idaho Springs, Historical Society of Idaho Springs, Georgetown Trust for Conservation and Preservation, and Mill Creek Valley Historical Society. Of the 47 resources surveyed and/or re-evaluated, 18 were determined to be eligible for listing in the National Register of Historic Places (NRHP) or are already listed on the NRHP. These resources are summarized in Table 3-5. No archaeological sites or features are present within the APE.

The Section 106 effect determinations for the eligible properties shown in Table 3-5 were made with input from SHPO and the consulting parties. Coordination occurred via three Section 106 Issue Task Force meetings and all parties were given the opportunity to comment on the eligibility and effect determinations.

Eleven historic resources would be affected by the project. These impacts were determined to result in “no adverse effect”, as summarized in Table 3-6.

For additional information regarding the analysis of the historic resources see, the *Eastbound I-70 PPSL Cultural Resources Report* (HDR, 2014) in Appendix D. For additional information regarding the effects determinations see Appendix B. The State Historic Preservation Officer concurred with eligibility and effects on March 17, 2014 (see Appendix B).

Table 3-5. NRHP-Listed and/or Eligible Resources in the Study Area

Site Number	Description/Address
5CC.3	Georgetown-Silver Plume Historic District
5CC.181	Lawson School
5CC.201	Idaho Springs Downtown Commercial District
5CC.229	Charlie Tayler Water Wheel, Idaho Springs
5CC.313	Mill City House
5CC.328	Big Five Mine
5CC.339	Maude Munroe Mine



Lawson School

Table 3-5. NRHP-Listed and/or Eligible Resources in the Study Area

Site Number	Description/Address
5CC.427.13	
5CC.427.14	Central Colorado Railroad Grade
5CC.427.15	
5CC.1151.1	Mount Evans Road
5CC.1189.3	Twin Tunnels, Interstate 70
5CC.2124	Property located at 1853 County Road 308
5CC2132	Log cabin located at 1924 County Road 308
5CC2134	Log cabin located at 1924 County Road 308
5CC2135	Log cabin located at 1924 County Road 308
5CC2136	Log cabin located at 1924 County Road 308
5CC.2146	W. E. Anderson Store
5CC.2156	Dumont Train Depot
5CC.2157	Lawson Historic District



Dumont Train Depot

Table 3-6. Summary of “No Adverse Effects” to Historic Properties

Site No.	Name/Address	Effect
5CC.2157	Lawson Historic District	<ul style="list-style-type: none"> <li>Up to 3.5 of additional pavement adjacent, moving the edge of pavement closer to the resource.</li> <li>Existing noise will be reduced.</li> <li>Visual impacts resulting from new retaining wall.</li> </ul>
5CC.2146	W. E. Anderson Store	<ul style="list-style-type: none"> <li>Up to 3.5 of additional pavement, moving the edge of pavement closer to the resource.</li> </ul>
5CC.181	Lawson School	<ul style="list-style-type: none"> <li>Up to 3.5 of additional pavement adjacent, moving the edge of pavement close to the resource r.</li> <li>Existing noise will be reduced.</li> <li>Visual impacts resulting from new retaining wall.</li> </ul>
5CC.2124	Property located at 1853 County Road 308	<ul style="list-style-type: none"> <li>Up to 3.5 of additional pavement adjacent, moving the edge of pavement closer to the resource.</li> <li>Existing noise will be reduced.</li> <li>Visual impacts resulting from new retaining wall.</li> </ul>
5CC2132	Four log cabins located at 1924 County Road 308	<ul style="list-style-type: none"> <li>Up to 3.5 of additional pavement, moving the edge of pavement closer to the resource.</li> </ul>
5CC2134		<ul style="list-style-type: none"> <li>Existing noise will be reduced.</li> </ul>
5CC2135		<ul style="list-style-type: none"> <li>Visual impacts resulting from new retaining wall.</li> </ul>
5CC2136		
5CC.201	Idaho Springs Downtown Commercial District	<ul style="list-style-type: none"> <li>Visual impacts resulting from new signage and a minor shift, less than one foot, of the elevation of the SH 103 bridge.</li> <li>Visual impacts resulting from a rock cut and/or rock fall mitigation visible from the southern edge of the district.</li> </ul>



Table 3-6. Summary of “No Adverse Effects” to Historic Properties

Site No.	Name/Address	Effect
5CC.229	Charlie Tayler Waterwheel	<ul style="list-style-type: none"> <li>Improvements to Water Wheel Park would enhance the user experience, providing a benefit to visitors viewing the resource.</li> <li>The Water Wheel Park would be temporarily closed during construction, meaning the Charlie Tayler Water Wheel could be inaccessible for viewing by bicyclists and pedestrians. The resource would remain visible from I-70 at all times.</li> </ul>
5CC.1151	Mount Evans Road	<ul style="list-style-type: none"> <li>Visual impacts resulting from new signage and a minor shift, less than one foot, of the elevation of the SH 103 bridge.</li> </ul>

3.15 Section 4(f)

Section 4(f) of the U.S. Department of Transportation Act of 1966 was enacted to protect publicly owned parks, recreation areas, and wildlife/waterfowl refuges, as well as historic sites of local, state, or national significance (eligible for the National Historic Register of Historic Places) from being converted to a transportation use. There are 14 recreation properties that fit the definition of a Section 4(f) property in the study area, but none of these properties will be converted to a permanent transportation use. There will be no constructive use of these properties.

Water Wheel Park is located within CDOT right-of-way and per a letter from the City of Idaho Springs, not a significant recreational; therefore, Water Wheel Park is not considered a Section 4(f) resource (see Appendix B).

Five recreation properties will be temporarily impacted during construction—Clear Creek Greenway between Water Wheel Park to the Forest Service Ranger Station, USFS Prospector Trail, Idaho Springs Trail, Scott Lancaster Memorial Trail, and Philadelphia Mills Open Space—but the impacts are not considered a transportation use consistent with 23 CFR 774.13 (d). The impacts to trails and the Philadelphia Mills Open Space would be temporary in nature, with detours and alternative access provided, the resources fully restored to their existing condition or better, and no adverse impacts resulting from these minor improvements.

The finding that the temporary occupancy of these properties would not result in

transportation use was agreed to in concurrence letters from CDOT dated December 10, 2013, by the Town of Idaho Springs and Clear Creek County, the officials with jurisdiction.

There are 18 historic properties in the study area, 11 of which would be indirectly impacted. The impacts do not result in an adverse effect determination under 36 CFR 800.5 and are not considered a transportation use under 23 CFR 774.17.

3.16 Section 6(f)

Section 6(f) of the Land and Water Conservation Fund Act applies to properties purchased with these funds. There are no properties that have been purchased or improved with Section 6(f) funding in the study area; therefore there are no impacts to Section 6(f) properties.

3.17 Paleontology

Literature and museum records were reviewed to assess the paleontological sensitivity of the study area. These records indicate the likelihood of fossils occurring in the study area is low. Although there is low potential for the occurrence of fossils it is possible paleontological resources may be disturbed by construction.

3.18 Land Use

Current land use in the study area includes public undeveloped lands (e.g. parks, open space, recreation, public lands), mixed use, rural residential, commercial, light industrial and mining/historic mining uses. Land use in the eastern portion of the study area, primarily Idaho Springs, is predominantly mixed use, residential, and parks, open space and



Table 3-7. Adopted Land Use Plans and Policies

Municipality/Agency	Adopted Plans and Policies
City of Idaho Springs	City of Idaho Springs, Colorado Comprehensive Plan (2008b)
	3 Mile Area Plan (2008a)
	Article 21 (Zoning) of the City Municipal Code (2005)
Clear Creek County	Clear Creek County Master Plan 2030 (2004)
	Open Space Plan (2005a)
	Floyd Hill Gateway Sub-Regional Master Plan (2009)
	Zoning Code (2011)
Denver Regional Council of Governments	2035 Metro Vision (DRCOG, 2011)

recreation. The land use in the western part of the study area is less developed than the eastern part of the study area and includes historic mining, parks, open space public lands, and some commercial and residential use.

Current land use and future proposed land use are primarily regulated by the *City of Idaho Springs, Colorado Comprehensive Plan* and the *Clear Creek County Master Plan 2030*. These and other adopted plans and policies that influence land use in the study area are shown in Table 3-7.

The Proposed Action is consistent with existing and future land use by providing an improved, safe, and expanded transportation system.

Clear Creek County and the City of Idaho Springs future land use plans include a defined urban growth boundary within which development is concentrated and annexation is encouraged. In the study area, the urban growth boundary is around Idaho Springs and includes two growth areas beyond the municipal boundary:

- An area south of I-70 along either side of SH 103, which extends approximately 1.8 miles further south of the existing municipal boundary.
- An area south of the I-70 bridge over Soda Creek on either side of Soda Creek Road and extends approximately 0.9 mile further south of the existing municipal boundary.

The possible effect of the two future growth areas described above is that additional traffic

could be generated from those areas which would then increase traffic using I-70 both directions and using the SH 103/I-70 interchange.

### 3.19 Social and Economic

I-70 is the main transportation corridor in the study area, providing local travel through Clear Creek County communities, access to the Denver metropolitan area to the east, and ski resorts and mountain recreational destinations to the west. Many tourism activities in the study area center on Clear Creek’s access to recreational resources. Existing traffic during peak travel times is congested and noticeably affects local travel, suppresses the number of skier and other recreational visits, and negatively affects local businesses that rely on the tourism economy.

#### Businesses and Residents

Within the study area, there are 177 businesses and 421 homes (which include both single family homes and apartments). Residential development within the study area is rural in nature with a few areas of concentrated development. In westernmost Lawson, a cluster of residences are located from 60 feet to 100 feet from eastbound I-70, whereas residences in other portions of town average from 150 feet to 200 feet from eastbound I-70 lanes. Likewise, there is a mobile home park in Downieville located 100 feet from eastbound I-70, but the remainder of the study area is sparsely developed. In Idaho Springs the community ball field is within 150 feet of eastbound I-70 and town flanks westbound I-70 within 50 feet to 100 feet.

During construction, temporary effects to residents and those accessing area businesses include detours, potentially slower emergency responses, an increase in roadway congestion in and around the area, the presence of large equipment, temporary signage and lighting, dust from construction, and general temporary disruption to the surrounding area. Impacts to the rafting community would be minimal since detours would be provided and construction within the creek would be limited to low flow, off peak times (i.e., before mid-June and after mid-August).

Impacts would be most noticeable at the SH 103 bridge, since the bridge would be closed for approximately eight to ten weeks. Access to points north and south of the highway would still be available from the existing interchange. Depending on direction of travel on I-70, motorists would be directed to the next exits on the highway where detour signage would direct them to the appropriate access points. Out of direction travel would be approximately 4.5 miles.



Residences along eastbound CR 308 in Lawson

Businesses and other buildings most affected by this closure include two community service organizations (the food bank Loaves and Fishes, and the Clear Creek Rock House for Kids), a fire station, the Clear Creek Ranger Station, and AVA Rafting, which are all located south of I-70 along SH 103.

Closure of the SH 103 bridge would require out of direction travel for vehicles, bicyclists and pedestrians who need to access these business and community service organizations along SH 103. Detours for bicycles and pedestrians would include the use of the existing path along the

Clear Creek Greenway between SH 103 and Water Wheel Park. Out of direction travel would be approximately 0.5 mile.

The economic effects of these temporary disruptions are difficult to estimate; however, there may be increases in economic activity at one interchange while construction effects are more negative at another interchange. These potential negative impacts may also be offset by positive effects due to construction workers who purchase goods and services in the study area during construction.

Following construction, the Proposed Action results in the following effects to the socio-economic conditions:

- Improved economic conditions due to an easing of peak period congestion.
- Reduction in noise in Lawson and at Water Wheel Park because of the installation of solid barriers along the roadway as opposed to guardrail.
- Reduction in traffic on local roads adjacent to I-70, improving access for residents, businesses, and emergency service providers.
- Improved emergency response times because of the lower volumes on local roads, the ability to use the managed lane during off peak periods, and the availability of a less congested lane during peak periods.
- As noted by local business owners, improvements at Exit 241, which would make the interchange easier to navigate, would result in improved economic conditions because these businesses would be easier to access.

### 3.20 Environmental Justice

The Environmental Justice evaluation process identified three of five census blocks in the study area with a higher proportion of low-income households when compared to Clear Creek County overall. Four of the five census blocks contained a minority population that is greater than Clear Creek County overall.

In order to determine whether there would be disproportionately high and adverse effects, it is



important to look at both the benefits and the impacts of the Proposed Action and to determine whether the impacts are predominantly borne by low-income or minority populations. The Proposed Action would result in both adverse effects and benefits, as noted below:

**Adverse effects**

- Minor visual impacts because of increased signage, rock cuts, retaining walls.
- Increase in vehicle miles traveled during peak periods.
- Access changes during construction. These are most noticeable in the vicinity of the SH 103 bridge. There are two community service organizations on SH 103 approximately 1/3 mile south of I-70 that would experience access changes: the food bank Loaves and Fishes, and the Clear Creek Rock House for Kids. The Rock House for Kids, which provides mentoring and a safe gathering place for teens, is the only non-profit youth outreach facility in Clear Creek County. Loaves and Fishes is a food pantry that provides hot meals and groceries to area residents in need. Motorists accessing these facilities would be detoured up to 4.5 miles and bicyclists and pedestrians would be detoured to the Clear Creek County Greenway, resulting in approximately 0.5 mile of out of direction travel.
- Noise, traffic, dust, and visual impacts during construction.



Clear Creek Rock House for Kids

**Benefits**

- Improved economic conditions across the study area.

- Reduction in noise in Lawson.
- Improved emergency response times.
- Reductions in traffic on local roads.
- Reductions in traffic on I-70 general purpose lanes.
- Wide multi-use path on SH 103 bridge.
- Congestion relief and reliable travel provided in the PPSL lane.
- Improvements at Water Wheel Park
- Reductions in number of accidents

Not all motorists will have the financial resources to frequently use the managed lane. The benefits of the managed lane include reduced congestion in the general purpose lanes; so motorists who cannot or choose not to use the managed lane, would receive the benefit of decreased congestion and increased safety. In addition, residents along the frontage road, which includes environmental justice populations, would benefit from the reduction in traffic volumes on local roads as I-70 would provide a more reliable travel time.

None of these impacts would meet the threshold of disproportionately high and adverse, nor would they be appreciably more severe or of a greater magnitude for low-income or minority populations when compared to the general population or any other segment of the population; therefore, no mitigation is required.

**3.21 Right-of-Way**

The Proposed Action is in existing CDOT right-of-way; therefore, no acquisition of right-of-way is anticipated.

**3.22 Recreation**

Existing traffic during peak travel times is congested and noticeably affects local travel, suppresses the number of skier and other recreational visits, and negatively affects local businesses that rely on the tourism economy. There are numerous recreational resources in the study area, both publicly and privately owned. These include paved and dirt trails, campsites, parks, ballfields, a skate park, ziplines, and Clear Creek itself, which has access points throughout the study area,

providing opportunities for fishing and rafting.

Rafting and fishing in Clear Creek account for a large portion of the area economy. Clear Creek County lists 16 rafting companies that operate in Clear Creek near the study area. A majority of these companies use this section of Clear Creek for multiple rafting trips.



The Lawson Whitewater Park is a regional kayaking destination.

The following five recreational facilities would be directly impacted by the Proposed Action:

**Water Wheel Park:** Highway widening east of SH 103 would encroach into Water Wheel Park, which is not a Section 4(f) resource. Impacts of this encroachment are positive; however, because the Proposed Action includes redevelopment of the park and includes amenities such as a pedestrian plaza, benches, access to Clear Creek, and interpretive displays. In addition the proposed park would be lower than the highway and screened by a relatively high retaining wall, thereby lessening the impact from highway noise and views. The views of the water wheel would not be impacted. Figure 2-5 presents the proposed improvements.

**Scott Lancaster Memorial Trail**

Construction in the area of the Exit 241 bridge replacement and interchange improvements would require a temporary detour of the Scott Lancaster Trail. This detour, which would result in minimal out of direction travel, is anticipated to last 6 months.

**Colorado Bikeway**

The reconstruction of Exit 241 bridge replacement and interchange improvements

would require the temporary closure of the existing bridge, which carries the Colorado Bikeway over I-70. The duration of this closure is not yet known, but accelerated bridge construction techniques are being explored to minimize impacts. Out-of-direction travel for bicyclists and pedestrians is not anticipated to exceed 0.20 mile. This closure and detour is anticipated to last 6 to 9 months.



The Colorado Bikeway and Clear Creek provide recreation for residents and visitors.

**Water Wheel Park to Forest Service Ranger Station Multi-Use Trail**

The redevelopment of Water Wheel Park would result in this segment of the trail closing during construction. Trail users would be detoured over the SH 103 bridge. Redevelopment of the park would lower the trail and along part of its length install a wall between the trail and the highway, thereby improving the visual and noise conditions.

**Mt. Evans Scenic Byway**

This scenic byway and on-road bicycle route begins in Idaho Springs, follows SH 103 south to Echo Lake, and then continues to the summit of Mt Evans. The replacement of the SH 103 bridge would increase the expanse of pavement over the bridge. In addition, traffic would be detoured during construction, resulting in 4.5 miles of out of direction travel during the 2 month road closure. This detour and closure would also affect users of a parking lot on SH 103 just east of the School District building. The parking lot is used on weekends by cyclists, who park there to cycle up Mt. Evans Scenic Byway.

Pedestrian and bicycle circulation and facilities would be improved in the following locations:

- The existing SH 103 bridge over I-70 is 38 feet wide and has 4-foot wide sidewalks on both sides. Most pedestrian use is on the west side. The new bridge would have a 10-foot wide shared use path on the west side that allows pedestrians to cross the bridge and access the Greenway Trail and other destinations along SH 103.
- The Clear Creek County Greenway between Water Wheel Park and SH 103 would be improved because proposed modifications to the SH 103 on-ramp accessing eastbound I-70 would include lowering the trail, and as it approaches Water Wheel Park, the addition of a wall associated with the park improvements would further separate the trail and I-70. These improvements would improve the visual and noise environment of this trail segment.

An indirect effect to the local recreational economy may occur due to improved peak period conditions. Because traffic congestion is predicted to improve, thus enhancing mobility and access on weekends, there may be increased visitation to local recreational destinations. Clear Creek County is anticipating this economic boost to their local economy.

During a meeting with rafting companies on January 9, 2014, the rafting community shared their concerns with CDOT regarding project construction and activities. The primary concern by the rafting community is the SH 103 bridge replacement, which would result in access impacts and out of direction travel to access the SH 103/ Chicago Creek put in area immediately adjacent to the existing bridge. The rafting community expressed that this would not be a substantial impact as long as construction is completed outside of their peak season, which is from mid-June to mid-August.

There is the potential for short-term access disruptions, out of direction travel, and increases in noise, dust, and visual impacts during construction, affecting all recreational facilities and activities in the study area. These impacts would be short-term.

### 3.23 Visual

Clear Creek County, from Empire Junction to the east, is dominated by rugged mountain

views in the background and coniferous forests on foothills in the middle ground, in a V-shaped canyon. Historic mining features and the communities of Lawson, Dumont, Downieville, and Idaho Springs are also clearly evident to the I-70 traveler.

The *I-70 Mountain Corridor Programmatic Environmental Impact Statement (CDOT, 2011)* defined the scenic attractiveness of the study area as Class B, which indicates that the lands have some distinctive features but are overall typical of the characteristic landscape.

There are two Areas of Special Attention that are within the study area. These Areas of Special Attention were identified during the PEIS process.

**Downieville, Lawson, Dumont (DLD) and Empire Junction:** DLD and Empire Junction were identified as an Area of Special Attention by the I-70 Mountain Corridor Context Sensitive Solutions (CSS) Aesthetic Working Group.

Important contextual features and places within the DLD and Empire Junction areas create a unique context in and around the area. These include historic buildings, the birthplace of the gold and silver booms, Douglas Mountain, the Rocky Mountain Easter Seals Camp, Lawson Hole Whitewater Course, the Port-of-Entry, CDOT maintenance facilities, proximity to Clear Creek, and regional access to Grand County.

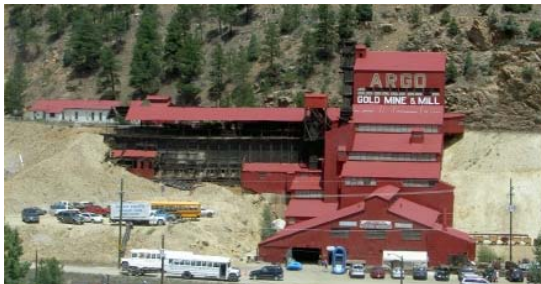


Clear Creek

**Idaho Springs:** Located in a narrow valley, I-70 through Idaho Springs was one of the first highway sections constructed in Colorado. Development in Idaho Springs is generally bounded on the east by the Twin Tunnels and

on the west by the west I-70 interchange. In addition to the businesses and residences associated with Idaho Springs, manmade landscape features include evidence of historic mining, a major electrical power line, and the I-70 highway. Several important contextual features and places add to the unique character of Idaho Springs, including the Charlie Taylor Waterwheel, the Argo Mill, and the Newhouse Tunnel. The area's proximity to Clear Creek and SH 103, which is a National Scenic and Historic Byway, also add to the visual context.

The study area is within the Mountain Mineral Belt design segment of I-70, according to the *I-70 Mountain Corridor Context Sensitive Solutions Aesthetic Design Guidelines*. Rich in mining history, the Mountain Mineral Belt includes historic towns, such as Idaho Springs and Dumont, as well as many scenic views, vibrant forests, rocky hillsides, and waterways. However, the mountainous terrain breaks up any continuous or extended views in the corridor.



Argo Gold Mine

Table 3-8 provides information about the visual impact of major elements of the Proposed Action. All impacts are anticipated to be minor. Over time, the visual impacts of the study area would be reduced as landscaping matures and softens the appearance of retaining walls.

Visual effects during construction of the Proposed Action include materials stockpiles, temporary lighting and signage, staging areas with vehicles and personnel, dust, fencing, and other similar items. This will detract from the view and the experience of the motorists and recreationists during the period of construction.

### 3.24 Energy

During peak periods, eastbound traffic volumes and congestion affect energy efficiency. Vehicles are typically at their most efficient traveling between 35 mph to 50 mph, whereas congestion during peak periods results in speeds ranging from 10 mph to 30 mph.

The Proposed Action would result in both higher and more consistent speeds, resulting in a four percent decrease in the energy resources required. Table 3-9 compares the anticipated operational energy resources required for one 14-hour peak period of operation in 2015 for the Proposed Action versus no improvements.

The decreases in both energy consumption and GHG emissions of the Proposed Action are a result of the vast majority of vehicles being able to operate at a more fuel efficient speed range.

Construction activities would have an impact on energy use. Short term lane closures, minor ramp-to-ramp detours, and lane reductions of eastbound I-70 may lead to additional energy consumption and GHG emissions from stopped or queued vehicles. Energy consumption caused from construction of the Proposed Action is anticipated to consume negligible quantities of energy and GHG emissions, because of the small area of disturbance along eastbound I-70, and short construction duration.

### 3.25 Geology

The study area is located in a valley bottom, with rugged mountains rising to the north and south sides of the highway. Slopes adjacent to the highway are typically steep with exposed bedrock visible. In some areas these slopes are adjacent to the highway and present a rock fall risk.

The Proposed Action includes rock fall mitigation in two locations; at approximately MP 240.06 and MP 240.43 (see Figure 2-7) where existing rock slopes are near the roadway edge. A mesh fence would be bolted to the rock face to minimize rock fall risk. Mesh at the western location would be approximately 375 feet long and 55 feet high, and the eastern one 500 feet long and 50 feet high. Rock fall danger would increase during construction.



Table 3-8. Visual Impact of Major Elements of the Proposed Action

Element	Description of Visual Change	Category of Impact
New downslope retaining walls (9 locations)	Most walls would not be visible to motorists. Some would be visible from adjacent communities or from Clear Creek. In no locations are scenic views changed or blocked or is there noticeable contrast created.	Minor
New Exit 241 wall for eastbound off-ramp	New wall (visible from the USFS maintenance building) would only minimally change the existing view.	Minor
Bridge replacements at SH 103 and Exit 241	The new bridges would be similar in appearance and the additional pavement and signage would only minimally increase the visual contrast.	Minor
New signage	New overhead signs are proposed in 19 locations, of which 9 will be Active Traffic Management signs, which means they will be blank a majority of the time. New ground mounted right side sign installations and median sign installations are proposed as necessary for compliance with FHWA sign guidance. Existing speed limit signs will be removed and replaced with Variable Speed Limit (VSL) signs.  New signage would be noticeable to motorists. However, the majesty of the views is unlikely to be impacted because the signs will be carefully placed to not impede important scenic views.	Minor
Two areas of rock fall mitigation	Mesh fence bolted to the rock face would be visible, but a color treatment for the mesh fencing would be selected by stakeholders to minimize contrast between the mesh fence and the rock face.	Minor
Two emergency pullouts	New pavement would be visible, but it does not noticeably contrast with the existing setting.	Minor
Median narrowing (2 locations)	Because the existing median is 22 feet wide and the new median is 16 feet to 20 feet wide, the change is minor.	Minor
Pavement widening at off-ramps	New pavement would be visible, but it does not noticeably contrast with the existing setting.	Minor

Table 3-9. Operational Energy Resources and GHG Emissions (2015)

Scenario	Fuel Equivalents (gallons)	Gas Equivalents (British Thermal Units)	GHG CO2 Equivalents (kilograms)
<b>No Improvements</b>			
I-70 Eastbound Summary Totals	16,000	2,066,800,000	148,100
I-70 Westbound Summary Totals	5,800	735,000,000	53,000
Ramp Summary Totals	540	69,600,000	5,000
<b>Totals</b>	<b>22,340</b>	<b>2,871,400,000</b>	<b>206,100</b>
<b>Proposed Action</b>			
I-70 Eastbound Summary Totals	15,300	1,979,400,000	142,500
I-70 Westbound Summary Totals	5,700	724,000,000	52,200
Ramp Summary Totals	410	52,700,000	3,800
<b>Totals</b>	<b>21,410</b>	<b>2,756,100,000</b>	<b>198,500</b>

Source: HDR Engineering



3.26 Cumulative Impacts

The Council on Environmental Quality defines a cumulative impact as the impact on the environment that results from the combination of incremental impacts of the action and other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal), entity, or person undertakes such other actions (40 CFR 1508.7).

This section analyzes the cumulative impacts of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. Only the resources that received a measurable impact from the Proposed Action are analyzed in this section (see Table 3-10). Reasonably foreseeable future actions that were analyzed for cumulative impacts are listed in Appendix C.

Table 3-10. Cumulative Impact Analysis

Resource	Past and Present Condition	Impacts of Reasonably Foreseeable Future Actions	Cumulative Impacts Including the Proposed Action
Water Quality	Water quality has been degraded by past mining, past and present pollutants from I-70 and development.	Continued negative impacts are anticipated from urban and rural development. Beneficial impacts are anticipated from water quality projects listed in Appendix C.	Only 3% additional impervious surface is being added and 23% of the eastbound roadway runoff is being treated, compared to the 10% that is currently being treated. When combined with past, present, and reasonably foreseeable future actions, the Proposed Action will have a beneficial effect on water quality.
Visual Quality	Idaho Springs is the most densely developed portion of the study area. Other parts of the study area are dominated by rugged mountain views, coniferous forests, and historic mining features.	There is a trend toward more urban features in and around Idaho Springs. Minimal visual changes in the rest of the study area.	Very minor changes in visual character occur because of signage, rock cuts, and retaining walls. Cumulative slight trend toward more urban, build features. When combined, these impacts will not substantially contribute to cumulative impacts to visual resources in the study area.
Recreation	Recreational travel and recreational activities and facilities in the study area are dominant drivers of the local and regional economy.	Completion of the Greenway Corridor will substantially enhance recreational values, contributing to the local economy.	A tendency toward increased recreational visitation may occur because of improved mobility. When combined with other past, present, and reasonably foreseeable future actions, the Proposed Action will contribute primarily to local beneficial effects on the tourist economy in Clear Creek County.



Table 3-10. Cumulative Impact Analysis

Resource	Past and Present Condition	Impacts of Reasonably Foreseeable Future Actions	Cumulative Impacts Including the Proposed Action
Historic Resources	Numerous historic properties are located adjacent to I-70 in the study area. In most cases, they retain a substantial amount of historic integrity	The Twin Tunnels Westbound Expansion project has an adverse effect on the westbound bore of the Twin Tunnels, a historic property. If AGS proceeds, it is likely to have a noticeable visual effect on historic properties.	No adverse effects to historic properties occur as a result of the Proposed Action. Additional signage has been carefully located to avoid key viewsheds of historic properties. Therefore, the Proposed Action would not substantially contribute to cumulative impacts to historic resources in the study area.

3.27 Mitigation Summary

Table 3-11 summarizes the impacts and the associated mitigation commitments. CDOT is the responsible agency for all mitigation, and will work with the contractor to ensure commitments are met.



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
1.	Transportation	Construction on or adjacent to I-70	Project wide	Traffic backups due to lane restriction during construction in the peak direction during peak periods.	Lane closures will follow the guidelines of the Region 1 Lane Closure Strategy.	CDOT Design/CDOT Construction
2.	Transportation	Construction on or adjacent to I-70	Project wide	Traffic backups due to lane restriction during construction in the peak direction during peak periods.	CDOT will work with local communities to minimize impacts to local traffic.	CDOT Design/CDOT Construction
3.	Transportation	Construction on or adjacent to I-70	Project wide	Traffic backups due to lane restriction during construction in the peak direction during peak periods.	Work requiring closure of one lane will be conducted at night as much as possible. CDOT will work closely with the contractor to avoid closures to the greatest extent practicable. Closures will be minimized to the greatest extent possible during peak periods (WB–Friday afternoon, Saturday morning) (EB–Sunday afternoon).	CDOT Design/CDOT Construction
4.	Transportation	Roadway closures for blasting	Project wide, multiple locations	Traffic backups	Advance signage along I-70 will be given warning of impending closures.	CDOT Design/CDOT Construction
5.	Transportation	Roadway closures for construction on or adjacent to I-70	Project wide, multiple locations	Disruption of emergency vehicles	CDOT and the contractor will notify emergency service providers (CSP, sheriff, police, fire dispatchers, ambulance providers, etc.) of the timing of impending closures.	CDOT Construction
6.	Transportation	Bridge closures over I-70 for replacement	SH 103 and Exit 241	Disruption of local travel routes	Alternate routes will be identified that minimize to the extent possible any out of direction	CDOT Design/CDOT





Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
					travel and traffic volume increases in town. Detour signing will clearly define alternate routes.  The bridges will not be taken out of operation at the same time.	Construction
7.	Transportation	Bridge closures over I-70 for replacement	SH 103 and Exit 241	Economic losses due to drivers not stopping to patronize local businesses.	CDOT will provide frequent and timely updates about construction activities and remind the public that the corridor is open except for necessary interruptions.	CDOT Construction
8.	Transportation	Effective directional signing during construction	Project wide	Economic losses due to drivers not stopping to patronize local businesses.	Signs notifying drivers of access to local business will be placed in both directions in advance of the East Idaho Springs interchange (Exit 241), SH 103 interchange (Exit 240), and West Idaho Springs interchange (Exit 239) as appropriate based on actual closures.	CDOT Design/CDOT Construction
9.	Transportation	Safety during construction	Project wide	Increased potential for crashes.	There will be extensive warning of the work zone before the detour for affected traffic so that they know to slow to the appropriate posted speed limit.	CDOT Design/CDOT Construction
10.	Transportation	Traffic shifts from I-70 during construction	US 285 and SH 9	Increased volumes shifted to less capable facilities.	As feasible, CDOT will minimize I-70 construction activities on weekends that could shift travel to alternative routes (SH 9 and US 285, in particular).	CDOT Design/CDOT Construction
11.	Transportation	Traffic using	US 285 and SH 9	Increased traffic volumes	CDOT will monitor signal	CDOT Traffic



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
		alternates routes during construction		moving to less capable facilities.	operations and timing on these alternative routes during peak periods and may modify.	
12.	Air Quality	Construction on or adjacent to I-70	Throughout the PPSL study area	Release of diesel and dust emissions, including potential disturbance of mine tailings, from construction equipment	File an Air Pollution Emission Notice (APEN) to fulfill EPA's concerns regarding air quality impacts. The APEN will include a Fugitive Dust Control Plan.	CDOT Construction
13.	Air Quality	Use of earthmoving equipment and other construction equipment.	Throughout the PPSL study area	Release of diesel emissions from construction equipment	Use the cleanest fuels available at the time in construction equipment and vehicles to reduce exhaust emissions. Keep construction equipment well maintained to ensure that exhaust systems are in good working order.	CDOT Construction
14.	Noise	Nighttime construction.	Nearby residences (Downieville, Dumont, Lawson, and Idaho Springs).	Nighttime construction noise in the vicinity of residences.	Limit night work to the greatest extent practical in residential areas.	CDOT Construction
15.	Regulated Materials	Exposures of mine waste and other hazardous materials during ground disturbing activities.	Throughout the PPSL study area	Exposure of potential mine-related wastes and hazardous materials.	A project-specific Materials Management Plan (MMP) has been prepared that details site-specific standard operating procedures regarding the identification, sampling, handling, and disposal of mine-related wastes and hazardous materials that could be encountered, including potentially contaminated groundwater.	CDOT Construction



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
16.	Regulated Materials	Exposures of mine waste and other hazardous materials during ground disturbing activities.	Throughout the PPSL study area	Potential mine-related wastes and hazardous materials.	Workers on this project will follow CDOT Specification 250—Environmental, Health, and Safety Management during excavation activities. The contractor will complete a Health and Safety Plan (HASP) to address potential mine-related wastes and hazardous materials that could be uncovered during construction and lead based paint protocols.	CDOT Construction
17.	Threatened and Endangered Species	Construction activities that can cause water depletions include water used for compaction, cement mixing, detention ponds, dust control, and dewatering for access and construction in wetlands and riparian areas.	Throughout the PPSL study area	Platte River species could be impacted by water depletions in tributaries such as Clear Creek.	Mitigation for impacts caused by water depletions on federally listed species will be addressed by FHWA and CDOT participation in the Platte River Recovery Implementation Program and South Platte Water Related Activities Program. Water used for this project will be reported to the USFWS at the completion of the project.	CDOT Environmental/ CDOT Construction
18.	Threatened and Endangered Species	Roadway construction and sign installation.	In projects area located above 8,000 feet	Temporary disturbance or displacement of lynx	The project Engineer shall immediately report to the CDOT Biologist any lynx sightings within or adjacent to the proposed project area during construction. Coordination with the USFWS will be conducted within 24 hours and a temporary work stoppage may be required, per USFWS direction.	CDOT Environmental/ CDOT Construction
19.	Threatened and	Nighttime	In projects area	Temporary disturbance or	Night work will be limited to a	CDOT



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
	Endangered Species	construction.	located above 8,000 feet	displacement of lynx	<p>maximum of 4 consecutive nights followed by three nights of inactivity to allow lynx the opportunity to cross the highway. Night work restrictions will only occur at elevations above 8,000 feet (MP 236-MP 243).</p> <p>Nighttime construction will be geographically concentrated in order to allow lynx the opportunity to cross the highway.</p>	Environmental
20.	Threatened and Endangered Species	In areas where erosion control blankets are used.	Throughout the PPSL study area	Mortality of the common garter snake	Erosion control blankets will have flexible natural fibers to allow for safe passage of snakes through the erosion control blanket.	CDOT Design/CDOT Construction
21.	Raptors and Migratory Birds	Construction related disturbance between April 1 and August 31.	Throughout the PPSL study area	Potential loss of eggs or young of nesting migratory birds and/or raptors	If construction is to commence between April 1 and August 31, to avoid impacts to nesting birds in accordance with the MBTA, a qualified biologist will conduct a nest survey prior to construction. If active nests are found, coordination with CPW and USFWS is required to determine an appropriate course of action, which may include, but is not limited to, a delay in construction to avoid the breeding season.	CDOT Environmental/CDOT Construction
22.	Raptors and Migratory Birds	Construction related disturbance to raptors	Throughout the PPSL study area	Potential loss of eggs or young of nesting raptors	A pre-construction survey for nesting raptors will be completed within a half-mile buffer of the project area prior to	CDOT Environmental/CDOT



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
					construction. If any nesting raptors occur within the buffer area, then CPW "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors" guidelines will be followed.	Construction
23.	Terrestrial and Aquatic Wildlife	Removal and replacement of an existing chain link fence.	Soda Creek Road and Montane Drive	Animal-Vehicle collisions and wildlife movements	Installation of 2-meter high wildlife fencing adjacent to Montane Drive. Removal and replacement of fencing where Soda Creek Road passes beneath the highway. The existing chain link fence will be replaced with a wildlife friendly 4-strand fence.	CDOT Construction
24.	Terrestrial and Aquatic Wildlife	Retrofitting the existing median barriers near Idaho Springs.	Approximate milepost locations are MP 238.95, 240.05 and 241.00	Animal-Vehicle Collisions	Modify the existing median to increase permeability. Approximate milepost locations are MP 238.95, 240.05 and 241.00.	CDOT Environmental/ CDOT Construction
25.	Terrestrial and Aquatic Wildlife	Construction work and rehabilitation of retaining walls within the two-year floodplain.	Throughout the PPSL study area	Introduction of invasive species.	Invasive mussel protocol will be followed as per SB 40 MOA.	CDOT Design/CDOT Construction
26.	Riparian	Construction on or adjacent to I-70	Throughout the PPSL study area	Temporary loss of riparian habitat (trees and shrubs).	Riparian trees and shrubs removed during construction will be replaced as stipulated in CDOT's Guidelines for Senate Bill 40 Wildlife Certification, which state that trees removed during construction, whether native or non-native, shall be	CDOT Design/ CDOT Environmental/ CDOT Construction



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
					replaced with a goal of 1:1 replacement based on a stem count of all trees with diameter at breast height of two inches or greater. Shrubs removed during construction, whether native or non-native will be replaced based on their preconstruction areal coverage. In all cases, all such trees and shrubs will be replaced with native species.  Success criteria for trees and shrubs will be followed as per CDOT Spec. 214 as per SB 40 MOA.	
27.	Riparian/Wetlands	Construction on or adjacent to I-70	The I-70/US 40 gore (wetland #1) and adjacent to Water Wheel Park (wetland #3).	Loss of vegetation and impacts to sensitive habitats.	Wetland/riparian areas adjacent to construction will be protected from construction activities by temporary and/or construction limit fencing.	CDOT Environmental/ CDOT Construction
28.	Vegetation	Vegetation and ground disturbing activities	Throughout the PPSL study area	Vegetation disturbance and ground clearing that creates potential noxious weed issues.	Reseed and protect temporary disturbance areas with CDOT approved best management practices and avoid disturbance to existing vegetation, to the maximum extent possible.	CDOT Environmental/ CDOT Construction
29.	Vegetation	Vegetation and ground disturbing activities	Throughout the PPSL study area	Introduction of noxious weeds.	An Integrated Noxious Weed Management Plan will be developed during final design and implemented during construction to prevent the spread of noxious weeds into temporary disturbance areas.	CDOT Design/ CDOT Environmental/ CDOT Construction



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
30.	Wetlands/ Waters of the U.S.	Construction work and rehabilitation of retaining walls within the two-year floodplain.	West of SH 103 where the retaining wall is being reconstructed.	Direct and/or indirect impacts to waters of the United States.	Replacement of rip-rap along Clear Creek will be closely monitored to ensure that additional fill, beyond what is included in the Section 404 permit, is not placed within the ordinary high water mark.	CDOT Design/CDOT Construction
31.	Wetlands/ Waters of the U.S.	Construction work and rehabilitation of retaining walls within the two-year floodplain.	Throughout the PPSL study area	Potential fuel spill.	Refuel equipment within designated refueling containment areas away from the ordinary high water mark and wetlands.	CDOT Construction
32.	Water Quality	Runoff from roadway during operation	Throughout the PPSL study area	Impacts to water resources and aquatic resources as a result of water quality degradation due to contaminant runoff.	CDOT will implement several of the measures identified in the Sediment Control Action Plan, which allows for flexibility in the number, sizing, type, and locations of BMP structures, while controlling drainage entering Clear Creek. BMPs will include sedimentation ponds, sediment trap inlets, rundowns and slope erosion control measures  Seven sedimentation basins and nine inlet traps have been proposed. These concepts will be further refined during final design.	CDOT Design
33.	Water Quality	Runoff from roadway during operation	Throughout the PPSL study area	Impacts to water resources as a result of water quality degradation due to contaminant runoff	Hazardous spill containment structure locations will be included at the emergency pull outs.	CDOT Design/CDOT Construction



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
34.	Water Quality	Runoff from construction	Throughout the PPSL study area	Impacts to water resources and aquatic resources as a result of water quality degradation	CDOT will implement appropriate BMPs for erosion and sediment control according to the CDOT Erosion Control and Storm Water Quality Guide (CDOT 2002), develop a Stormwater Management Plan (SWMP), which includes mitigation identified in the Upper Clear Creek Sediment Control Action Plan.	CDOT Design/CDOT Construction
35.	Water Quality	Construction staging areas.	Throughout the PPSL study area	Direct and/or indirect impacts to water resources, aquatic resources, wetlands and waters of the United States.	Construction staging and materials stockpiling will be located greater than 50 feet from the edge of wetlands or the edge of other waters of the U.S., when possible, to avoid disturbance of vegetation and to prevent pollutant discharges into sensitive habitats. If this buffer is not achievable, CDOT will consider the placement of materials closer to the edge of wetlands or the edge of water and identify appropriate additional best management practices (BMPs) that would be required to minimize.	CDOT Design/CDOT Construction
36.	Water Quality	Long-term erosion impacts from soil disturbance that occurred during construction	Throughout the PPSL study area	Erosion, leading to increased sedimentation	CDOT will achieve permanent stabilization through revegetation and permanent erosion controls and through maintenance of temporary erosion controls and plantings to stabilize disturbed areas.	CDOT Construction





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No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
37.	Floodplains	Reconstruction of the retaining wall	West of SH 103	Placement of fill in the floodway.	A Section 404 Permit will be obtained prior to construction.	CDOT Design/CDOT Environmental
38.	Floodplains	Reconstruction of the retaining wall	West of SH 103	Placement of fill in the floodway.	The low flow channel will be reshaped to offset the placement of fill.	CDOT Design/CDOT Construction
39.	Paleontology	Ground disturbing construction activities.	Throughout the PPSL study area	Discovery of subsurface bones or other fossils.	Stop work and follow procedures outlined in Section 107.23 of CDOT's Standard Specification for Road and Bridge Construction.	CDOT Construction
40.	Social and Economic/Recreation	Replacement of SH 103 Bridge	I-70 and SH 103	Closure of the SH 103 bridge temporarily impacts north-south connectivity across the highway for residents and those accessing businesses and recreation opportunities.	Provide a detour for residents and those accessing businesses and recreation opportunities.  Phase construction so that SH 103 and the multi-use path to Water Wheel Park are not closed concurrently as these provide detour routes.	CDOT Design/CDOT Construction
41.	Social and Economic/ Recreation	Replacement of SH 103 Bridge and temporary roadway closures.	I-70 and SH 103	The SH 103 bridge replacement would result in rafting access impacts and out of direction travel to access the Chicago Creek put in.	Time impactful activities to occur before mid-June or after mid-August (outside of peak rafting season.)	CDOT Design/CDOT Construction
42.	Social and Economic/Recreation	The Exit 241 Bridge Replacement and Interchange Improvements	MP 241	Access impacts and out of direction travel during construction.	Provide a detour for residents and those accessing businesses.  Provide a detour adjacent to the construction site for bicyclists and pedestrians.	CDOT Design/CDOT Construction



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
43.	Social and Economic/Recreation	Reconstruction of the retaining wall	Adjacent to Clear Creek, west of SH 103	Rehabilitation of the existing wall would impact whitewater rafters as there would be construction personnel in Clear Creek and heavy equipment operating above the creek.	Rehabilitate the bin wall during low flow and outside the whitewater rafting peak season, which extends from mid-June to mid-August  Construction activities that present a safety risk to rafters will be stopped temporarily until the rafters have passed through the construction area. CDOT will coordinate with rafting companies regarding protocols for on-river communication between spotters and rafters during construction.	CDOT Design/CDOT Construction
44.	Social and Economic/Recreation	Construction on or adjacent to I-70	Throughout the PPSL study area	Access impacts to residents and businesses resulting from roadway closures.	Implement a traffic management plan to alert recreationists to detour routes in the event of roadway closures. This will include alerting cycling groups so they can alert their members of access changes and road or lane closures.	CDOT Design/CDOT Construction
45.	Social and Economic	Construction on or adjacent to I-70	Throughout the PPSL study area	Access impacts to residents and businesses resulting from roadway closures.	Stage construction so that only one exit is closed at a time to minimize out of direction travel.	CDOT Design/CDOT Construction
46.	Recreation	Encroachment into Water Wheel Park	East of SH 103	~ 3,000 square feet of a developed park, which is not a Section 4(f) resource, would be eliminated.	Redevelop Water Wheel Park, to include, at a minimum, 3,000 square feet of user amenities.	CDOT Design/CDOT Construction
47.	Recreation	Redevelopment of Water Wheel Park.	East of SH 103	Temporary closure of the multi-use path.	Provide a detour using the SH 103 bridge.	CDOT Design/CDOT



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
					Phase construction so that SH 103 and the multi-use path are not closed concurrently as these provide detour routes.	Construction
48.	Recreation	Reconstruction of Exit 241 bridge	Colorado Bikeway at Exit 241	Interchange improvements would require temporary closure of existing bridge and result in no more than 0.20 mile out of direction travel for bicyclists and pedestrians.	Provide a detour using the Clear Creek County Greenway and the highway undercrossing at 27 <sup>th</sup> Avenue.	CDOT Design/CDOT Construction
49.	Recreation	Replacement of SH 103 bridge	SH 103 bridge	8-10 week detour resulting in up to 4.5 miles of out of direction travel for rafter using the put in at SH 103 and motorists traveling the scenic byway.	Provide a detour using the nearest east and west exits from the highway and local roads.	CDOT Design/CDOT Construction
50.	Recreation	Replacement of SH 103 bridge	SH 103 bridge	8-10 week detour for cyclists and pedestrians using the SH 103 bridge.	Provide a detour using the Clear Creek County Greenway and the highway undercrossing at 17 <sup>th</sup> Avenue.	CDOT Design/CDOT Construction
51.	Visual	Signage	Throughout the PPSL study area.	Signage noticeable by motorists.	CDOT will continue to work with the Technical Team through final design to ensure signs are placed to minimize impact to sensitive resources.	CDOT Design/CDOT Environmental/CDOT Construction
52.	Visual	Rock fall mitigation	East and west of Soda Creek Road	Rock fall mitigation is unnatural and diminishes visual quality.	Work with specialty contractors to determine the most effective means and methods for rock fall mitigation that meet geotechnical and aesthetic needs and incorporate	CDOT Design/CDOT Construction



Table 3-11. Summary of Impacts and Mitigation for the I-70 PPSL Proposed Action

No.	Mitigation Category	Activity Triggering Mitigation	Location	Impact per NEPA Document	Mitigation Commitment	Responsible Agency
					strategies from the I-70 Mountain Corridor Context Sensitive Solutions Aesthetic Design Guidelines.	
53.	Visual	Rock fall mitigation	East and west of Soda Creek Road	Mitigation techniques, such as wire mesh, diminish visual quality.	Incorporate rock fall mitigation strategies from the I-70 Mountain Corridor Context Sensitive Solutions Aesthetic Design Guidelines.	CDOT Design/CDOT Construction
54.	Visual	Construction on or adjacent to I-70	Throughout the PPSL study area	Increased transportation infrastructure alters the visual environment.	CDOT is committed to Context Sensitive Solutions (CSS), a process that is used to ensure collaboration. CDOT will follow the I-70 Mountain Corridor CSS Aesthetic Guidance and continue to review design elements with the Technical Team to ensure consistency with Core Values and local preferences.	CDOT Design/CDOT Construction
55.	Geology	Rock cuts	Immediately east and west of Soda Creek Road.	New cuts increase risk of rock fall.	Use proven techniques, such as mesh or scaling, to minimize rock fall risk.	CDOT Design/CDOT Construction

## Chapter 4.0 Public and Agency Coordination

As defined by the Federal Highway Administration (FHWA), the Context Sensitive Solution (CSS) is an interdisciplinary approach to developing a transportation facility that involves all stakeholders, and serves as a guideline for development in the Interstate 70 (I-70) Corridor. The CSS process helps to actively engage stakeholders in project development as well as uphold the commitments of the *I-70 Mountain Corridor Programmatic Environmental Impact Statement* (CDOT, 2011). FHWA and Colorado Department of Transportation (CDOT) (the lead agencies) defined the Proposed Action using input from stakeholders resulting from the CSS process.

In order to meet the objectives of the stakeholder involvement program, the lead agencies followed the I-70 Mountain Corridor CSS process; which included agency scoping meetings and the establishment of a Project Leadership Team (PLT), a Technical Team, and Issues Task Forces, all of which met and provided input regularly throughout the project. An online public meeting ([www.i70ppsl.com](http://www.i70ppsl.com)) was also held to discuss the Proposed Action. As of March 13, 2014, the online public meeting site generated over 650 unique visitors and 150 returning visitors. Additionally, 1,800 mailings were sent out to obtain public input. The Peak Period Shoulder Lane Project (PPSL) project also has a Web site that includes project and future meeting information ([www.i70ppsl.com](http://www.i70ppsl.com)).

The PLT included local leaders from Clear Creek County and Idaho Springs, CDOT, FHWA, and consultant staff. The PLTs primary roles include leading the project, championing the CSS process, and enabling decision-making. As of March 2014, the PLT has met three times.

The Technical Team included a broad group of representatives from local, state, and federal agencies, local governments, local elected governments, interest groups, and interested citizens. The Technical Team provided input on the Proposed Action, impact analysis and mitigation. As of March 2014, the Technical Team had met 11 times. These teams will

continue to provide input throughout the design and construction phases of the project.



Technical Team meeting

Issue Task Forces were created to focus on critical issues within the study area. These task forces included local, state, and federal agencies, local elected officials, interest groups, and interested citizens. The following six Issue Task Forces were established:

1. The Section 106 Issue Task Force was responsible for applying the conditions set forth in the I-70 Mountain Corridor Programmatic Agreement among the consulting parties involving Section 106 of the National Historic Preservation Act.
2. The Stream and Wetland Ecological Enhancement Program (SWEEP) Issue Task Force was responsible for fulfilling the commitments set forth in the SWEEP Memorandum of Understanding (MOU), which focuses on stream and wetland ecology.
3. A Landscape-Level Inventory of Valued Ecosystem Components (ALIVE) Issue Task Force was responsible for fulfilling the commitments set forth in the ALIVE MOU, which focuses on animal-vehicle collisions and habitat connectivity.
4. The State Highway (SH 103) Issues Task Force was responsible for providing input on the bridge type and



construction schedule for the SH 103 bridge.

5. The Local Agency Issues Task Force was responsible for providing input on the Proposed Action. This included roadway width and changes at on and off-ramps.
6. The Exit 241 Issues Task Force focused on evaluating bridge replacement and interchange improvement options at Exit 241.

Additional coordination, beyond what is described above, occurred in the form of individual and group meetings with local, state, and agencies consulted, as well as other interested parties. The project team met with numerous agencies and interested parties to obtain input regarding project development. For information regarding these meetings, as well as all public and agency coordination, and the CSS process as it applied to the Proposed Action, see Appendix A *Context Sensitive Solutions* and Appendix B *Agency Coordination*.

A public meeting was held in Idaho Springs on April 14, 2014. This public meeting provided information to the public and provided an opportunity for them to ask questions and raise concerns directly with project team members.

**Resident and Stakeholder Concerns**

In two meetings with Idaho Springs residents and stakeholders on January 21 and February 4, 2014, members of the community expressed concerns about the PPSL project, including the fear of losing homes and businesses, and businesses suffering due to construction activities. Alternatively, many community members expressed their desire for construction of the PPSL to begin. Many skiers and other recreation users have stopped driving along the I-70 corridor through Clear Creek County due to high volumes of traffic and subsequent delays. This abandonment of activities along I-70 has detrimental effects on businesses that rely on income generated by tourism.

During a meeting with rafting companies on January 9, 2014, the rafting community shared their concerns with CDOT regarding project construction and activities. The primary concern by the rafting community is the SH 103 bridge

replacement, which would not be an issue as long as construction is completed outside of the peak season, which is from mid-June to mid-August.

CDOT met with emergency responders on September 12, 2013, to hear their concerns. When asked how implementation of the Proposed Action would impact emergency response operations, emergency responders emphasized the need for providing active traffic management and appropriate signing throughout the corridor as well as driver education regarding tolling start and stop locations. Emergency responders noted that setting a certain speed limit (such as when the pilot car was setting speed at approximately 45 miles per hour) significantly and noticeably reduced emergency response travel times and also indicated that there is a need for better access to I-70 from frontage roads. Emergency responders also see an advantage to having a managed lane available that is actively managed so it could be emptied of traffic during emergency situations. This would dramatically improve the speed and response time of emergency operations.

Based upon feedback from the online public meeting and other public forums, other stakeholder concerns include the fact that the Proposed Action could result in additional traffic and the impacts to emergency responders

A clear majority of people responding to the polls on the online public meeting website indicate the project is high priority for the state.

who are unable to reach accidents because of congestion. Safety is a major concern. Additional concerns are related to tolling and the impacts to local residents who use I-70 to commute to work. Others fear losing their homes and didn't want the local community to bear the brunt of an expanded highway, while others are in favor of the Proposed Action and express that it would relieve congestion and would save local commuters both time and money. Additional comments reflect the belief that easing congestion would increase tourism, which would benefit mountain communities.

Concerns about existing and future noise and air quality have been expressed by Clear Creek County residents. The Proposed Action would

reduce noise levels in two locations: the Town of Lawson and at the Water Wheel Park. Air pollution levels in the County are currently substantially below all National Ambient Air Quality Standards and would remain so after the Proposed Action opens to traffic. Pollution from most emissions is projected to be lower than existing levels in the future, because of emission controls on vehicles. The Proposed Action would also result in lower air pollution for all air pollutants associated with traffic congestion. More information is found in Section 3.1 of this document.

Animal vehicle collisions were discussed with the ALIVE committee. An area of concern is at Empire Junction, where there is a higher rate of animal vehicle collisions when compared to the remainder of the study area. Because the Proposed Action would only result in minimal improvements in this area (primarily signage) CDOT agreed that mitigations or enhancements focused on reducing animal vehicle collisions would be addressed as part of a future project.

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