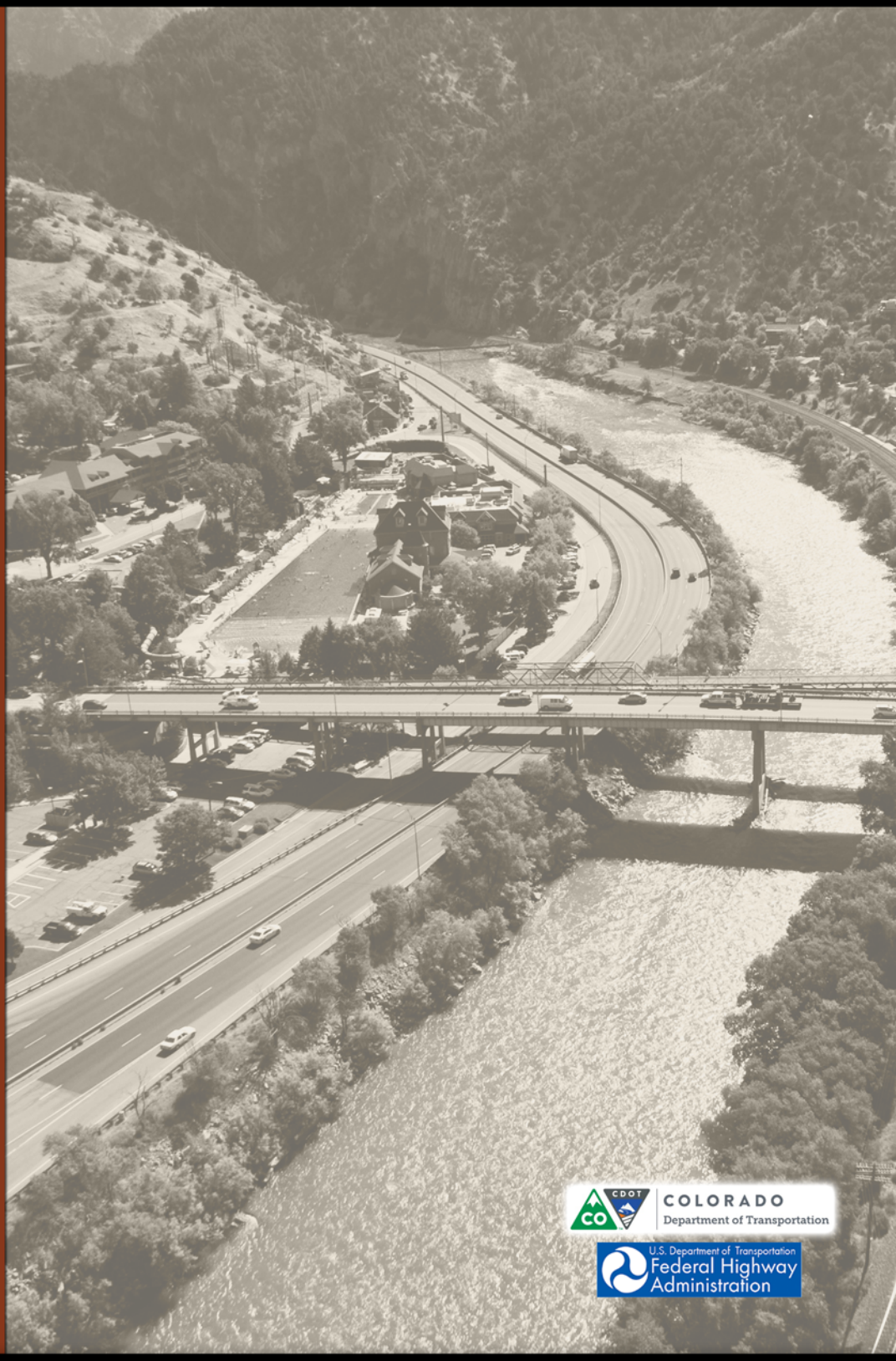
SH 82
GRAND AVENUE BRIDGE

Finding of No Significant Impact and Section 4(f) Finding
CDOT Project No.: FBR 0821-094 (18158)



COLORADO
Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

May 2015

CDOT Project Number: FBR 0821-094 (18158)
SH 82 Grand Avenue Bridge
City of Glenwood Springs, Garfield County, Colorado

Finding of No Significant Impact and Section 4(f) Finding

Submitted Pursuant to:
42 USC 4332(2)(c) and 49 USC 303

by the
U.S. Department of Transportation
Federal Highway Administration
and
Colorado Department of Transportation

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Date

The Federal Highway Administration may publish a notice in the Federal Register, pursuant to 23 United States Code (USC) § 139(l), once the Finding of No Significant Impact is approved. If such notice is published, a claim arising under Federal law seeking judicial review of a permit, license, or approval issued by a Federal agency for a highway or public transportation capital project shall be barred unless it is filed within 150 days after publication of a notice in the Federal Register announcing that the permit, license, or approval is final pursuant to the law under which judicial review is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

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*Provided on CD attached to inside of back cover.

ACRONYMS AND ABBREVIATIONS

Acronym	Definition
a.m.	Ante Meridiem
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos Containing Material
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
AREMA	American Railway Engineering and Maintenance of Way Association
ASTM	American Society for Testing and Materials
BMPs	Best Management Practices
CAQCC	Colorado Air Quality Control Commission
CBE	Colorado Bridge Enterprise
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CDPS	Colorado Discharge Permit System
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CM/GC	Construction Manager/General Contractor
CSS	Context Sensitive Solutions
dB(A)	A-Weighted decibel
DDA	Downtown Development Authority
EA	Environmental Assessment
EJ	Environmental Justice
FASTER	Funding Advancements for Surface Transportation and Economic Recovery
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
IGA	Intergovernmental Agreement
ITF	Issues Task Force
MOA	Memorandum of Agreement
MSAT	Mobile Source Air Toxics
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration

Acronym	Definition
p.m.	Post Meridiem
PLT	Project Leadership Team
PWG	Project Working Group
RFTA	Roaring Fork Transportation Authority
ROW	Right-of-Way
SH	State Highway
SHPO	State Historic Preservation Officer
SWG	Stakeholder Working Group
SWMP	Stormwater Management Plan
TDM	Transportation Demand Management
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code

1.0 INTRODUCTION

1.1 Project Location and Description

The Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA) are proposing to replace the existing State Highway (SH) 82/Grand Avenue Bridge over the Colorado River in the City of Glenwood Springs (City), Garfield County, Colorado. The project vicinity is shown in Figure 1-1 and the study area is shown on Figure 1-2. The SH 82/Grand Avenue Bridge project will replace the existing Grand Avenue Bridge with a new bridge that begins at the current southern touchdown point, then curves to the west to touch down north of the river at a location west of the existing bridge. The pedestrian bridge adjacent to the highway bridge will also be replaced on the same general alignment as the existing pedestrian bridge. The project will improve the north and south connections for both bridges, and will change the 6th Street/Laurel Street intersection to a roundabout configuration as part of the SH 82/Grand Avenue Bridge north connection improvements.

FHWA is the federal lead agency for this project and is responsible for supervising the National Environmental Policy Act (NEPA) analysis. CDOT, as the project sponsor and co-lead agency, is responsible for preparing the environmental analysis and documentation under the guidance and oversight of the FHWA. The City serves as a cooperating agency for the study.

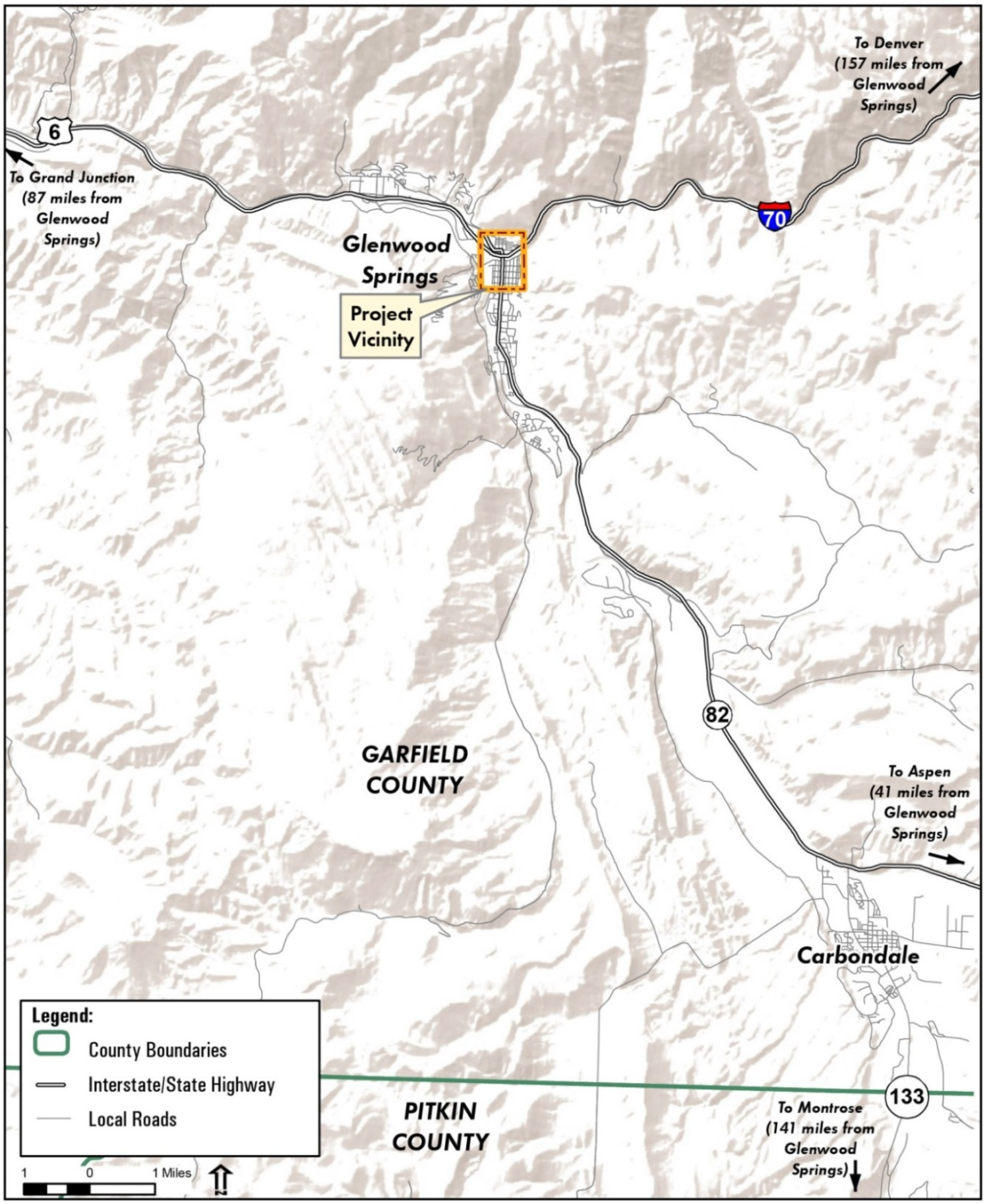
1.2 Purpose of this Document

This Finding of No Significant Impact (FONSI) completes the NEPA process for the SH 82/Grand Avenue Bridge Environmental Assessment (EA). It communicates the decision of FHWA and CDOT to implement the Build Alternative for the SH 82/Grand Avenue Bridge project. It also describes the urban design and aesthetic treatments that have been developed with stakeholders and included in the Build Alternative. This FONSI identifies the mitigation measures that will be included in the Build Alternative. It clarifies and updates the EA and Section 4(f) conclusions, and provides responses to questions and comments submitted by agencies and the public during the 60-day public comment and review period for the EA (in Appendix A *Comments and Responses*).

CDOT initiated the SH 82/Grand Avenue Bridge project in November 2011. The EA process involved an extensive public and agency involvement program that was consistent with the Context Sensitive Solutions (CSS) guidelines established as part of CDOT's I-70 Mountain Corridor CSS process.

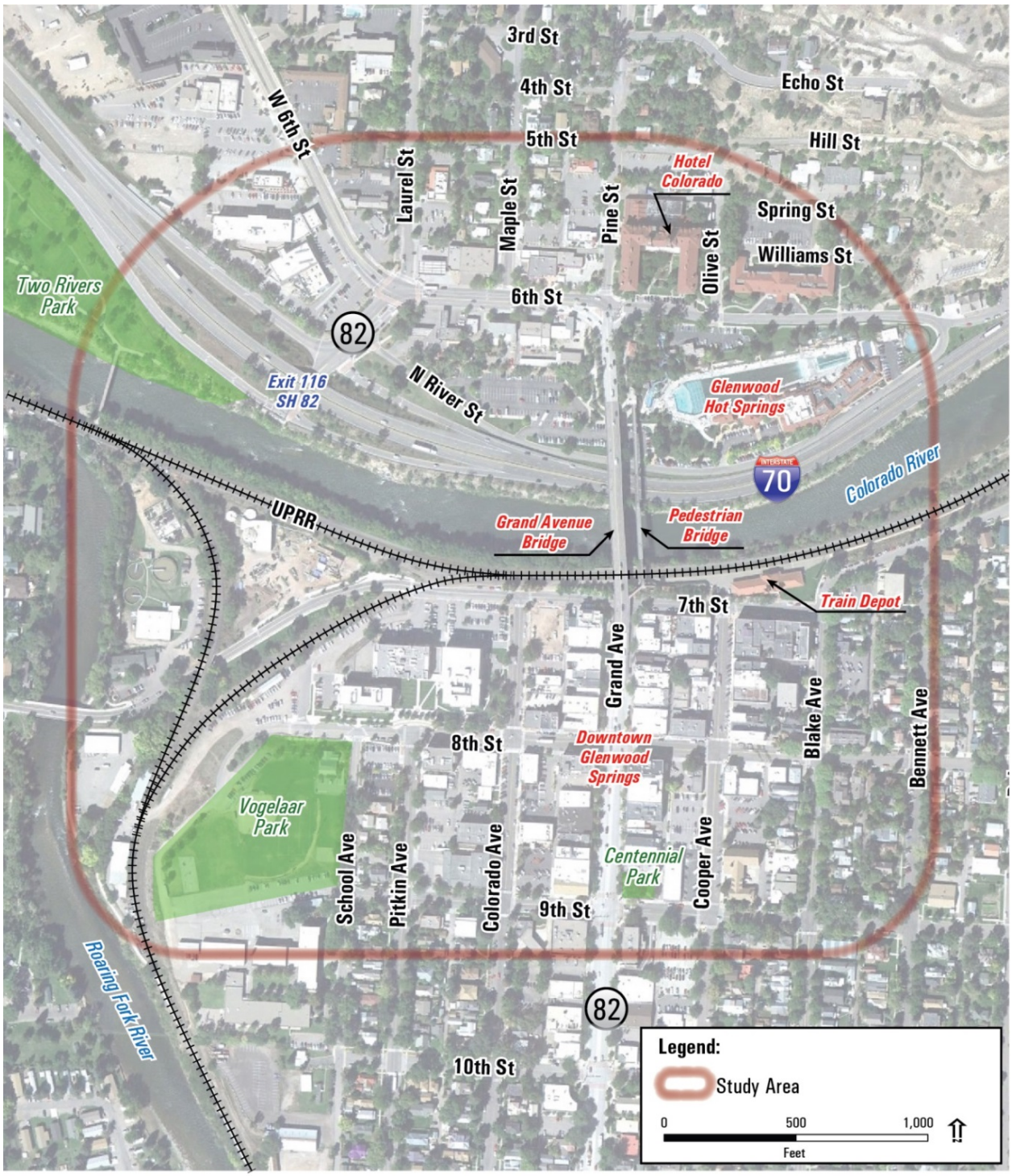
CDOT held five public meetings and numerous one-on-one meetings with interested citizens, stakeholders, business owners, non-governmental organizations, and public officials to provide project updates, answer questions, and obtain input on alternatives and the Build Alternative.

FIGURE 1-1. REGIONAL CONTEXT



Source: Jacobs, 2014.

FIGURE 1-2. STUDY AREA



Source: Jacobs, 2014.

CDOT issued the EA on October 31, 2014, for a 30-day public and agency review period. In response to stakeholder requests, the comment period was extended 30 days and concluded on December 31, 2014. CDOT held a public hearing on November 19, 2014, to present the findings of the EA and obtain comments. During the 60-day EA review period, 178 comments were received.

The decision to implement the Build Alternative is based on the analysis of social, economic, and environmental impacts presented in the EA (see Appendix B *SH 82/Grand Avenue Bridge Environmental Assessment & Section 4[f] Evaluation*) and consideration of public and agency input obtained throughout the EA process and the formal EA comment period.

Based on the impacts presented in the EA and committed mitigation measures, FHWA has determined that no significant impacts will result from implementation of the Build Alternative.

1.3 Summary of Project Purpose and Need

The Grand Avenue Bridge serves as a vital link of SH 82 across the Colorado River, I-70, and the Union Pacific Railroad (UPRR), connecting downtown Glenwood Springs and the Roaring Fork Valley with the historic Hot Springs, Hotel Colorado, and I-70. This section summarizes the Purpose and Need of the project. Please refer to Chapter 1 of the EA for a more detailed discussion of the Purpose and Need.

The purpose of the project is to provide a safe, secure, and effective multimodal connection from downtown Glenwood Springs across the Colorado River and I-70 to the historic Glenwood Hot Springs area. This project is critically important because there are only two alternate roadway options for vehicles to cross the Colorado River and I-70. The closest alternate routes are Devereux Road and Midland Avenue (Exit 114). Devereux Road does not cross the UPRR tracks, and Midland Avenue at Exit 114 is more than 2.3 miles west of the Grand Avenue Bridge. Midland Avenue does not directly connect the downtown core area with the Glenwood Hot Springs area. These alternate routes have much lower capacity and result in out-of-direction travel. In the event of a closure on an alternate route, the bridge must remain a safe and functional connection.

The importance of the bridge to the local and regional transportation network underscores the following two project needs:

- **Improve multimodal connectivity** between downtown Glenwood Springs and the Roaring Fork Valley with the historic Hot Springs pool area and I-70. The condition of the bridge, as summarized below, impairs this connection for a variety of transportation users and there are no sufficient alternate routes.

- The bridge travel lane widths are a substandard width (9 feet 4 inches instead of the standard 12 feet) and there are no shoulders. This condition impairs the bridge's ability to provide safe connectivity because they force larger vehicles (buses, emergency service vehicles, oversized passenger vehicles, etc.) to cross into the adjacent lane. These conditions also create an unnerving environment for drivers, limit drivers' ability to make emergency maneuvers, and limit the maneuverability of emergency service vehicles.

- Existing conditions limit pedestrian and bicyclist connectivity. The Grand Avenue Bridge has no sidewalks and the pedestrian bridge does not meet current Americans with Disabilities Act (ADA) standards. CDOT is a multimodal transportation agency that includes the needs of bicyclists and pedestrians in the planning, design, and operation of transportation facilities.

- Forecasted traffic growth of 2 percent per year would result in increased congestion on the bridge and its connecting streets, and worsen the bridge's ability to provide connectivity.

❖ **Address the functional and structural deficiencies of the** bridge to improve public safety, including emergency service response, and reliability as a critical transportation route.

- **The bridge is functionally obsolete.** A 2013 bridge inspection and report (CDOT, 2013) classified the bridge as "functionally obsolete." This classification is the result of geometric deficiencies, all of which must be corrected. The bridge is too narrow to accommodate four standard lane widths; vertical clearances are substandard at 7th Street and the UPRR tracks; and horizontal clearances are substandard because of the location of bridge piers related to I-70 travel lanes. Furthermore, the bridge is "scour critical," meaning the bridge foundations have been determined to be unstable under certain scour (erosion) conditions. These deficiencies resulted in a rating of 3 out of 9.

  In addition, the merging distance onto eastbound I-70 does not meet current CDOT design standards. The bridge piers adjacent to the eastbound I-70 shoulder limit the length of the on ramp and merge/taper area. As a result, the distance to merge onto I-70 eastbound is too short. The current distance from the end of the ramp to the bridge piers is approximately 300 feet, making the acceleration/merge area less than 150 feet. This is about half of the current standard, which is approximately 300 to 500 feet of acceleration distance for a design speed of 50 miles per hour (mph).

  Further deterioration of the bridge will occur and damage to the bridge as a result of a collision could result in emergency closures for repairs. An emergency short- or long-term closure of the bridge will result in substantial travel impacts

for local and regional SH 82 users, and could impact I-70 traffic. A bridge closure will delay emergency response to the residents and commercial entities located north of the Colorado River from the emergency service providers and facilities located south of river.

- **The bridge has structural deficiencies.** The bridge was designed in 1953 for two lanes of traffic using standards at the time. The existing bridge load-carrying capacity is 55 percent of new bridge design standards. It does not require the bridge to be load posted or limit the use by legal roadway traffic, and the bridge is capable of carrying higher loads on an infrequent basis. However, this bridge frequently carries loads higher than intended for its original design because it serves as the main route for heavy vehicles.

  The 2013 bridge inspection reported the following additional issues with the bridge's condition:

  - Substandard bridge rail.
  - Deterioration of concrete curbs and piers, exposing reinforcing steel in places.
  - Corrosion on railing, girders, and bridge supports.

2.0 BUILD ALTERNATIVE DESCRIPTION

The Build Alternative will consist of the elements described below and depicted on Figure 2-1.

2.1 Improvements

Alignment

The existing four-lane SH 82/Grand Avenue Bridge will be replaced with a new four-lane bridge on a modified alignment. The new bridge will begin just north of the intersection of 8th Street and Grand Avenue, and continue through downtown on the existing SH 82/Grand Avenue alignment to 7th Street. At 7th Street, the alignment will curve to the west across the UPRR and the Colorado River. It will touch down north of the river on the west side of the Glenwood Hot Springs parking lot and southeast of the existing 6th Street/Laurel Street intersection. The new alignment will connect to a new 6th Street/Laurel Street intersection and a new connection at Exit 116. Bridge height clearances will meet current federal and American Railway Engineering and Maintenance of Way Association (AREMA) standards for road and railroad crossings. The crossing over the UPRR will have a minimum clearance of 23 feet 4 inches, which will meet these requirements as well as UPRR minimum guidelines.

Cross-sections

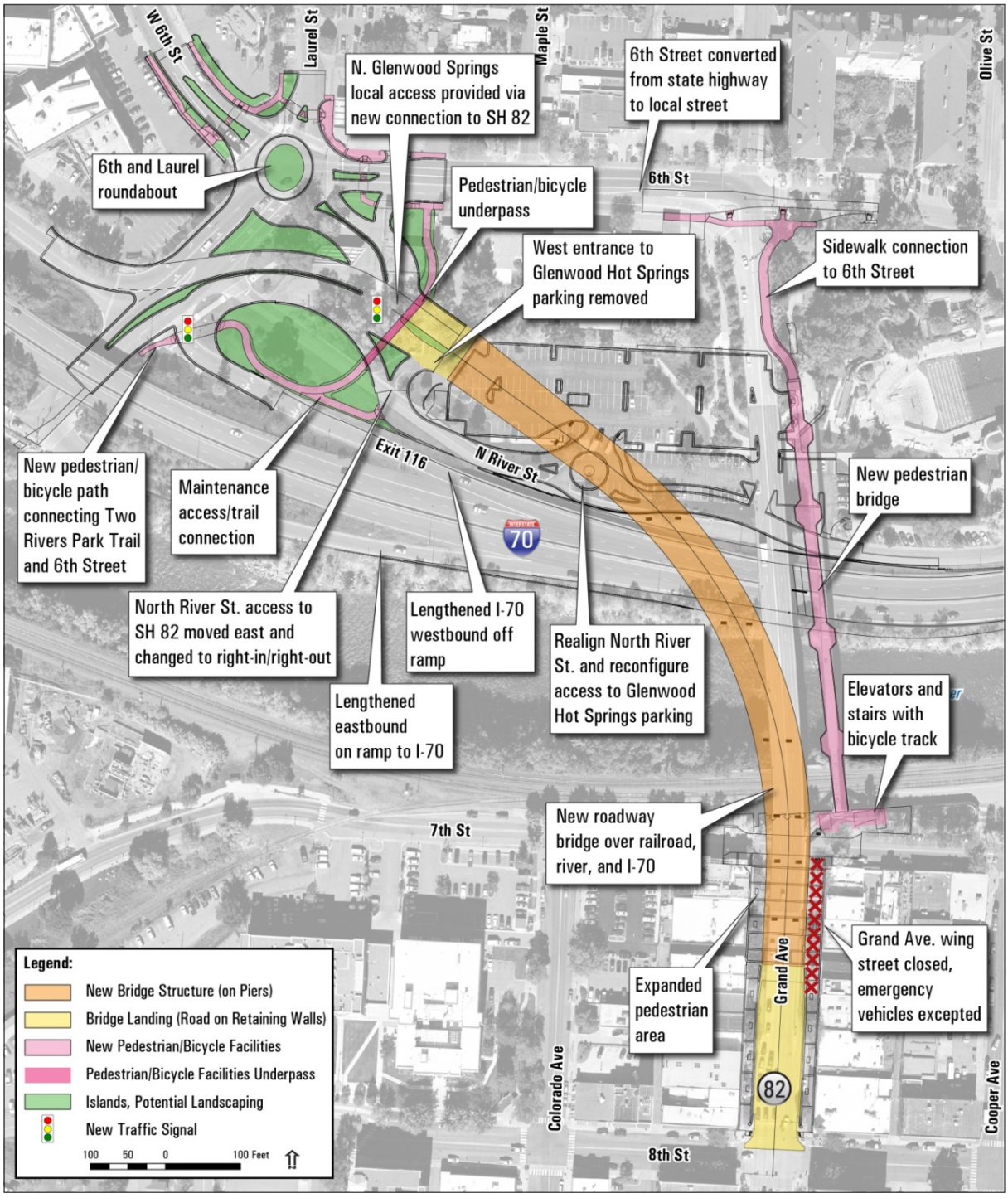
The new bridge will include four 12-foot-wide travel lanes, consistent with American Association of State Highway and Transportation Officials (AASHTO) standards. A striped median will better accommodate larger vehicles and the bridge will have a two-foot shoulder on the east side and a four-foot shoulder on the west. The southbound left turn lane to 8th Street will be lengthened. Lane widths will taper to 11 feet wide between 7th and 8th Streets to tie into the existing 11-foot lanes in downtown and minimize impacts in that area.

Intersections

6th Street/Laurel Street Intersection. A new one-lane five-leg roundabout at the 6th Street/Laurel Street intersection will help distribute traffic between I-70/SH 82, 6th Street, and Laurel Street. The fifth leg will be a one-way southbound lane to the Exit 116 interchange using the existing SH 82 alignment.

8th and Grand Avenue Intersection. A traffic signal will provide for all movements at the 8th Street and Grand Avenue intersection.

FIGURE 2-1. BUILD ALTERNATIVE



Note: Figure includes minor design changes described in Section 4.1 of this FONSI.
Source: Jacobs, 2015

Pedestrian/Bicycle Facilities

New Pedestrian Bridge. The Build Alternative will replace the existing pedestrian bridge immediately east of the highway bridge with a new pedestrian bridge that will also carry utility lines across the Colorado River. The following pedestrian facilities will be a part of the Build Alternative described above.

- *Connection to 7th Street.* A wider staircase with a bicycle track will take pedestrians and bicyclists to and from the south end of the new pedestrian bridge to 7th Street and downtown Glenwood Springs. The Build Alternative will include two elevators.
- *Pedestrian Plaza.* The bridge design will allow for an expanded open area under the new Grand Avenue Bridge south of 7th Street.
- *Connection to 6th Street.* The north end of the new pedestrian bridge will land adjacent to the existing SH 82. A sidewalk connection will continue north to the intersection of 6th Street and Pine Street, and the existing stairway will provide a direct connection to the Glenwood Hot Springs. New sidewalks and crossings will be installed at the 6th Street/Laurel Street intersection.

6th Street/Laurel Street Intersection. New sidewalks and crossings will be installed.

Pedestrian/Bicycle Path Connecting the Existing Two Rivers Park Trail and 6th Street. A new grade-separated path will replace the existing connection affected by the new SH 82 alignment. It will begin at the existing Two Rivers Park Trail just north of the I-70 underpass at Exit 116, cross the improved westbound I-70 off ramp, and continue north using an underpass/tunnel of the new SH 82/Grand Avenue Bridge alignment just west of the new bridge.

A new maintenance access and trail connection will link the new trail north of the I-70 off ramp to the on-road bicycle route on North River Street.

Additional Roadway Improvements

The Build Alternative will make improvements to existing facilities that will stay in place for the long term. These improvements are described in greater detail in the EA.

North River Street. The west end of North River Street will be realigned slightly. The intersection with SH 82/Grand Avenue will be moved to the east and become a right-in/right-out intersection.

A small roundabout will be built on North River Street at the entrance to the Glenwood Hot Springs parking lot. This roundabout will enable motorists heading west on North River Street to make a U-turn to access 6th Street, which will be required to access I-70. Drivers continuing west past this roundabout will turn right at SH 82 and go south over the Grand Avenue Bridge.

Exit 116 On and Off Ramps. The I-70 eastbound on ramp and westbound off ramp at Exit 116 will be lengthened to meet current design standards after the existing Grand Avenue Bridge and pedestrian bridge piers adjacent to them are removed. These improvements will be funded separately from the bridge project through Funding Advancements for Surface Transportation and Economic Recovery (FASTER) funds, but are planned to be constructed concurrent with the Build Alternative for cost and construction efficiency.

2.2 Construction of the Build Alternative

Construction of the Build Alternative could begin as early as fall 2015 and is anticipated to last approximately 24 to 30 months, including an approximately 90-day full bridge closure during the last 9 months. Construction will involve the following activities (refer to Section 2.4 of the EA for more information):

- Demolition of existing structures, such as the Grand Avenue Bridge, pedestrian bridge, and buildings acquired for right-of-way.
- Excavation for construction of bridge supports and storm sewers.
- Grading for construction of retaining walls, sidewalks and paths, curb and gutter, intersection improvements, and to accommodate future landscaping.
- Relocation of utilities that may conflict with the project.
- Construction of a highway and a pedestrian bridge with piers, retaining walls, road pavement, storm sewers, curb and gutter, sidewalks, and paths; and installation of traffic signals and other overhead traffic control, wayfinding and traffic signs, and landscaping.

2.2.1 Construction Phasing

The study team developed a construction phasing approach that will minimize the duration of detours and total closures of the SH 82 Grand Avenue Bridge and I-70. The approach involves building most bridge elements adjacent to the existing SH 82 route, thereby allowing SH 82 to remain open as long as possible.

The construction phasing plan calls for removing the existing Grand Avenue Bridge and installing the new bridge within an approximately 90-day period, during which the Grand Avenue Bridge will be fully closed to traffic. Based on input from the community, full closure will be scheduled to occur during spring or fall, when traffic volumes and tourism are typically lower. A pedestrian connection will be maintained for access across the Colorado River, I-70, and the railroad at all times.

Early in the construction phase, causeways for work pads will be built in the river, and a five-foot attached sidewalk with barrier will be built on the existing Grand Avenue

Bridge. The existing pedestrian bridge will be removed and the new pedestrian bridge built adjacent to and east of the existing Grand Avenue Bridge. The site at the 6th Street/Laurel Street intersection will be prepared, including removal of the Shell station. Before the existing bridge is removed, detours (described below) will be put in place, with improvements to I-70 Exit 114, Midland Avenue, and 8th Street. Finally, the Grand Avenue Bridge will be constructed, the 6th Street/Laurel Street roundabout will be finished, new pedestrian connections will be finalized, and other associated activities will conclude the construction process.

2.2.2 Detours

Two detour routes for I-70 and SH 82 are proposed during construction. Please refer to Section 2.4.2 of the EA for more information about the detours summarized in this section.

I-70 Detour

Construction of the Grand Avenue and pedestrian bridges will require full nighttime closures of I-70 approximately ten times for safety-critical overhead work, such as bridge demolition, construction of bridge components, and concrete installation. This will be planned to occur between the hours of 8:30 p.m. and 5:30 a.m. Eastbound and westbound I-70 traffic will be rerouted onto 6th Street at a temporary break in the I-70 barrier near the Yampah Vapor Caves, shown in Figure 2-2.

SH 82 Detour

During the approximately 90-day full closure of the Grand Avenue Bridge, SH 82 traffic will be rerouted onto the detour shown in Figure 2-3. The temporary route for regional traffic will begin at Exit 114 on I-70 and proceed south on Midland Avenue to 8th Street across the Roaring Fork River, then along a new temporary 8th Street connection into downtown. In the downtown grid, the traffic will be routed through a temporary "square about" for continuation south on SH 82/Grand Avenue to Aspen. This downtown route is depicted in Figure 2-4. The components of the SH 82 Detour are summarized below.

Temporary 8th Street Connection. 8th Street in downtown Glenwood Springs currently terminates just west of School Street. The temporary 8th Street connection will connect the 8th Street Bridge over the Roaring Fork River along a new alignment that will cross land owned primarily by the City and a small portion of land owned by the Roaring Fork Transportation Authority (RFTA) (see Figure 2-4). This land also contains an active railroad. The UPRR has a permanent exclusive freight rail easement across both properties. CDOT has coordinated with the UPRR on the detour.

FIGURE 2-2. I-70 DETOUR

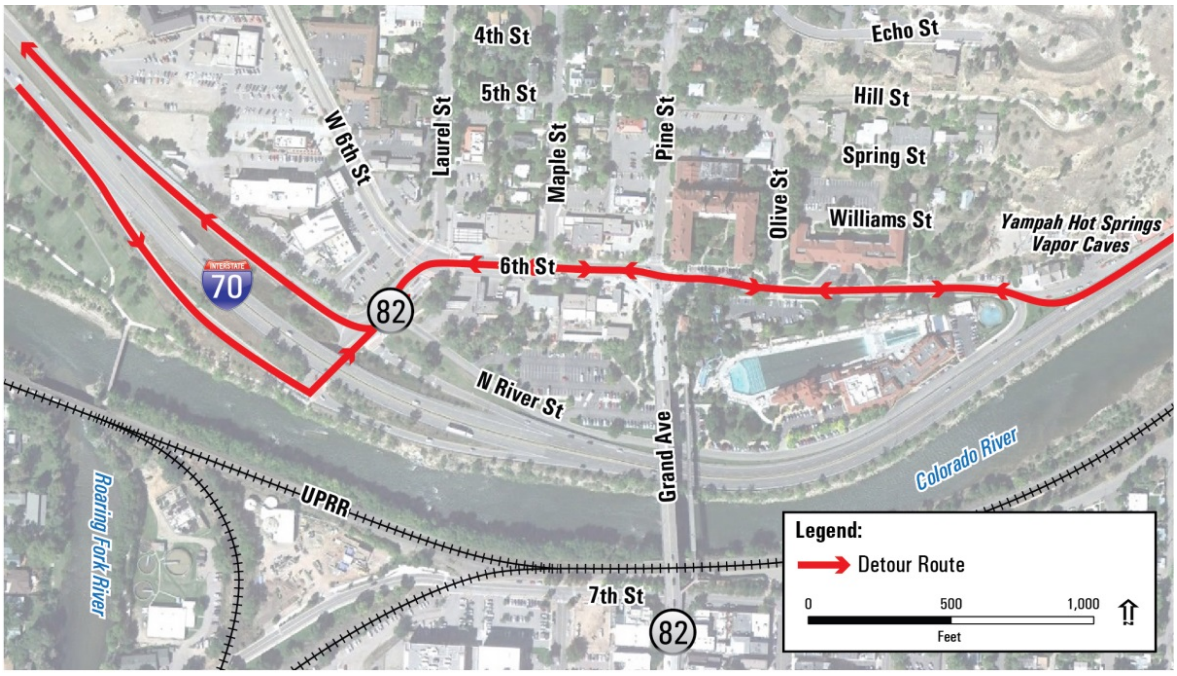


FIGURE 2-3. SH 82 DETOUR ROUTE

FIGURE 2-4. SH 82 DETOUR ROUTE, DOWNTOWN

The 8th Street connection will require the following elements:

- Temporary removal of portions of four existing railroad tracks and railbed.
- Two 12-foot lanes on 8th Street with curb and gutter on both sides.
- Drainage and water quality infrastructure.
- Temporary grade modifications on 7th Street and the Vogelaar Park access road.
- Modifications at 7th Street/8th Street to maintain bicycle access from the Rio Grande Trail along the river to downtown and sidewalk on 7th Street.
- Increased turn radius at the northeast corner of the 8th Street and Midland Avenue intersection to accommodate larger vehicles. This change will be permanent.

After the new Grand Avenue Bridge is reopened and the SH 82 Detour is no longer needed, CDOT will restore the area to preconstruction conditions and replace the railbed and railroad tracks.

Downtown Grid. A temporary one-way loop will be created on 8th Street, Colorado Avenue, 9th Street, and Grand Avenue (see Figure 2-4). To address higher traffic volumes, the following measures will be put into place:

- A temporary signal will be installed at the intersection of 8th Street and Colorado Avenue to facilitate pedestrian crossings and higher traffic volumes.
- Temporary physical barriers will be placed at the following intersections to guide traffic along the detour route and avoid cut-through traffic on local streets: 9th Street/Colorado Avenue; Pitkin Street/8th Avenue, and School Street/8th Avenue. These barriers will not be placed until the grade modifications on the Vogelaar Park access road are completed. Access to Vogelaar Park will remain open from 8th Street on the north side of the park while barriers are in place.

Exit 114. Improvements will be needed at Exit 114 to accommodate SH 82 Detour traffic, but will remain as permanent improvements. These improvements include pavement widening to extend the two-lane section of the I-70 eastbound off ramp and westbound on and off ramps to current standards, and minor changes to curb and gutter and signing/striping at the two roundabouts (see Figure 2-5).

2.2.3 Additional Temporary Improvements

Some additional elements will be necessary to support the construction of the Build Alternative. These include construction staging areas to store construction materials and equipment, and placement of temporary causeways in the Colorado River that will serve as work pads for construction without operating directly in the river. These improvements are evaluated in the EA.

As shown in Figure 2-6, the causeway on the north side of the Colorado River will be approximately 1,100 feet long, and the causeway on the south side will be approximately 600 feet long. Side slopes will be constructed as required for stability. Cofferdams (shoring systems used to create a dry working space below the river's water surface) may also be used on and between the river banks to facilitate bridge pier demolition and construction.

Temporary construction access roads will be built on the north and south sides of the Colorado River and across the UPRR tracks within the construction limits. This will allow construction equipment to be positioned for demolition and construction of the new bridges and to construct and remove the cofferdams. The locations of the temporary access roads are shown on Figure 2-6. Upon construction completion, the access roads, causeways, staging areas, and railroad grade crossing will be removed and the areas returned to their preconstruction condition and appearance.

2.3 Funding for the Build Alternative

The Build Alternative will be funded primarily through CDOT's Colorado Bridge Enterprise (CBE) FASTER program. CDOT estimates the total project cost to be approximately $110 to $115 million, of which approximately $60 million is attributed directly to construction (see Table 2-1). Ramp improvements at Exit 116 will be completed concurrently with the Grand Avenue Bridge construction.

FIGURE 2-5. EXIT 114 IMPROVEMENTS

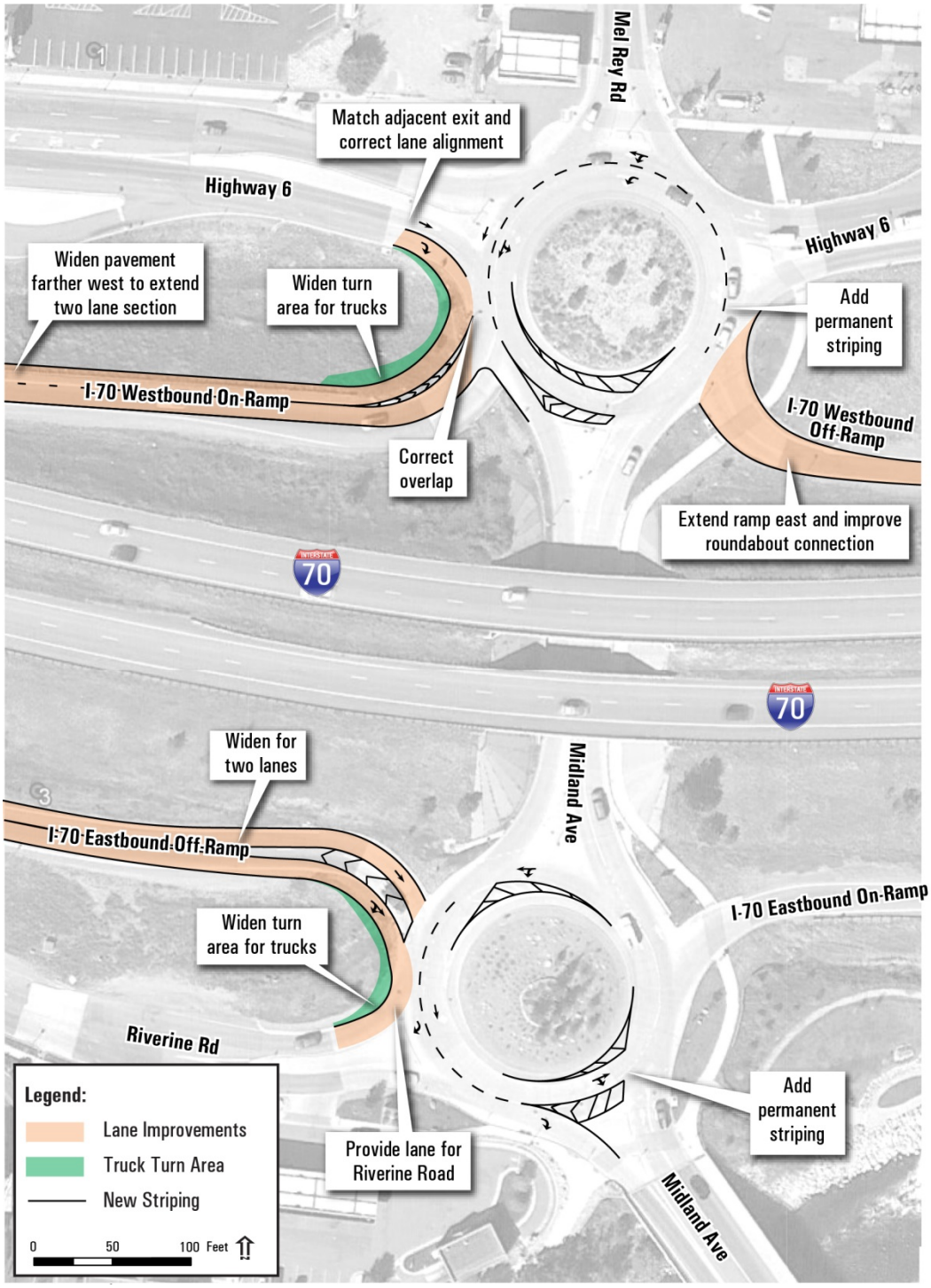


FIGURE 2-6. TEMPORARY CAUSEWAYS AND ACCESS ROADS

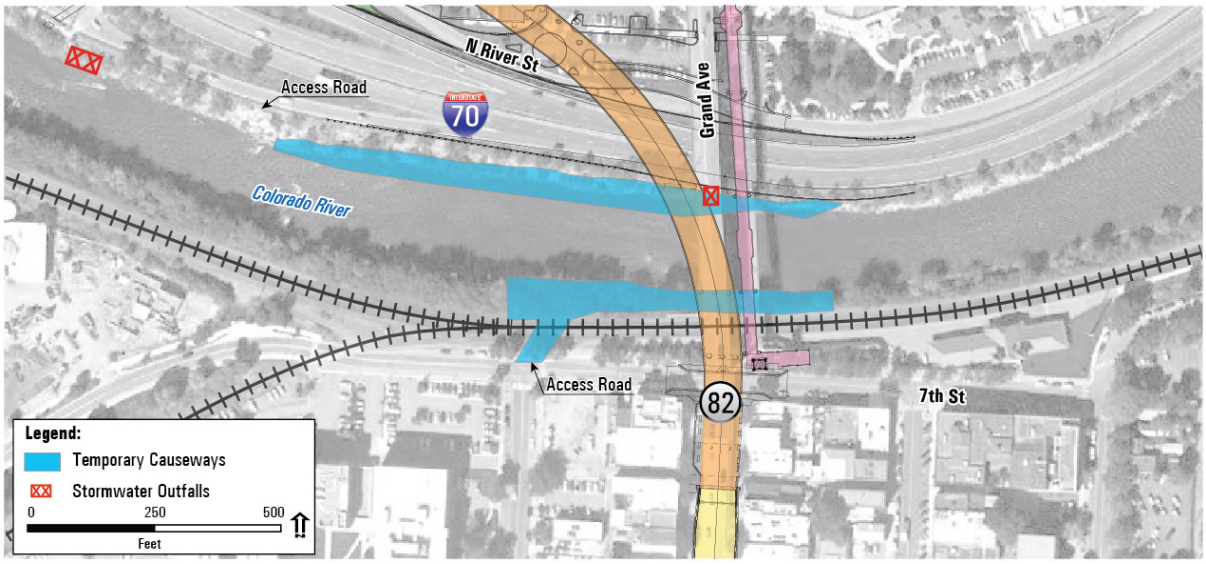


TABLE 2-1. OPINION OF PROBABLE COST

Item	Opinion of Probable Cost*
Construction Costs	
Grand Avenue Bridge and Approach Roadways	$40.5 million
Pedestrian Bridge with Elevator	$9.5 million
Construction Detour	$5.5 million
Multimodal Connections and Underpass	$1.5 million
Walls	$3.0 million
Construction Total	**$60.0 million**
Preconstruction Costs	
NEPA and Design, Right-of-way and Utilities	$25 million
Indirect Costs	
Include indirect costs (associated with CDOT management, administration, etc.), contingency costs, and other costs associated with procurement and review.	$25 to $30 million
Total Costs	**$110 to $115 million**

*Costs rounded to nearest million.

Although CDOT has worked to minimize costs, the total project cost estimate exceeds the approximately $99 million in budgeted funds available from the CBE. CDOT has secured additional project funding through other state sources and through contributions made from local agencies. Any responsibilities and agreements associated

with local source funds will be incorporated into an intergovernmental agreement (IGA) between CDOT and the local agency. To date, local agencies that have made financial commitments to the project include:

- City of Glenwood Springs
- Garfield County
- Eagle County

The Intermountain Transportation Planning Region voted to allocate $3.3 million of CDOT's Regional Priority Program toward the project.

3.0 SUMMARY OF IMPACTS, MITIGATION MEASURES, AND PERMIT REQUIREMENTS

This chapter summarizes the social, economic, and environmental impacts that will result from the Build Alternative as evaluated in the EA, and lists measures that CDOT has or will implement to mitigate those impacts.

3.1 Build Alternative Impacts

The EA evaluated impacts of the No Action Alternative and Build Alternative, as detailed in Chapter 3 of the EA. The Build Alternative will result in minor and moderate adverse impacts, as summarized in Table 3-1. Table 3-2 lists measures to mitigate these impacts.

TABLE 3-1. SUMMARY OF BUILD ALTERNATIVE IMPACTS

Resource	Impact
Visual Conditions	• In 700 block of Grand Avenue, visual presence of highway bridge would strengthen, views of narrower sidewalks would occur, and views across Grand Avenue would be blocked to a greater degree than existing conditions. Views of distant hillsides would remain. • Improvements at 7th and Grand Avenue would open up and improve views under the highway bridge at 7th, improving this area's visual quality. • New Grand Avenue Bridge alignment will partially block views of river for upper-story residents along 6th Street and 7th Street, degrading visual quality for those viewers. • New Grand Avenue Bridge would partially block views of river for residents on north side of river. • Removal of bridge at existing northern touchdown area would replace views of a transportation facility with a more pedestrian-scale and pedestrian-friendly area, improving this area's visual quality. • Removal of bridge pier in middle of river would improve views for river recreationists. • Lighting on bridges and street lighting at new 6th Street/Laurel Street roundabout would potentially increase light glare and sky glow during nighttime hours over existing conditions. • Headlight glare from new Grand Avenue Bridge would be reduced for Hotel Colorado viewers. Viewers located northwest and southeast of the bridge would experience new views of headlight glare because of the new bridge alignment. • East entry to Glenwood Springs and new pedestrian bridge will create visual gateways into Glenwood Springs. • Views of construction activities would occur during the construction phase.
Transportation	• Overall traffic volume is expected to remain the same under the Build Alternative as that expected under the No Action Alternative. • More direct connection will be provided between I-70 and SH 82 with new Grand Avenue Bridge. • 6th Street traffic is expected to decline with removal of SH 82 traffic. • Access changes will occur in some areas. • Grand Avenue wing street will be removed between 7th and 8th Streets. This will require rerouting of RFTA bus service. • Bus stop at 6th and Maple will either be removed or a new stop provided in the vicinity.

TABLE 3-1. SUMMARY OF BUILD ALTERNATIVE IMPACTS

Resource	Impact
	• No permanent impacts to transit ridership are expected. • Transportation impacts during construction will be experienced by both regional traffic and local traffic. Impacts will occur on SH 82, on I-70, and within Glenwood Springs around construction staging areas and the detours. • Travelers will be required to travel out of direction and adjust their travel behaviors during construction. Motorists will likely experience more congestion and increased travel times during the full bridge closure.
Land Use	• Portions of adjacent commercial properties will be converted to transportation use, including the Shell station at the 6th Street/Laurel Street intersection and portions of the Glenwood Hot Springs parking lot west of existing Grand Avenue Bridge. • SH 82 traffic will be routed away from 6th Street east of SH 82 and provide redevelopment opportunities between North River Street and Laurel Street.
Social and Environmental Justice	• No community facilities within the study area will be displaced or relocated. • SH 82 users will benefit from improved mobility, safety, and access within the study area. • No disproportionately high and adverse effects will occur to any minority or low-income populations. • Wider lanes on Grand Avenue Bridge will better accommodate emergency service vehicles, which, according to emergency provider input, will improve their response times. • During construction detours, access to community facilities will temporarily change. • During full bridge closure, trips from north side of the river to the hospital located south of the river would be lengthened. • Because a fire station is located on the north side of the river, emergency medical services response times are not anticipated to be affected during construction. Police response times may increase, particularly during the SH 82 Detour, if patrols are not located on the north side of the river.
Relocation and Right-of-Way	• Property acquisitions and permanent easements are needed from 11 parcels and total approximately 3.1 acres. Temporary (construction) easements are needed from 14 parcels and total approximately 4.28 acres. A total of 15 parcels will be affected. • The Build Alternative will displace the Shell station located on the southeast corner of the 6th Street/Laurel Street intersection and some parking for the Glenwood Hot Springs. No other displacements will occur.
Economic Conditions	• Replacing the bridge will require lane closures and rerouting of traffic, including an approximately 90-day full bridge closure. • Construction of the Build Alternative will directly impact businesses because of temporarily impaired access and mobility. • No permanent adverse impacts to businesses along Grand Avenue are expected. • Businesses will experience increased noise and other construction nuisances. • Most businesses closest to main construction areas will likely experience a decline in sales, despite all efforts to maintain access and minimize construction nuisances. • SH 82 through traffic will be permanently routed away from many businesses on 6th Street, reducing their visibility to through traffic. Local traffic would remain on 6th. • Partial acquisition of the Glenwood Hot Springs parking area would occur.
Air Quality	• Construction activities will temporarily generate air pollutants in the form of vehicle emissions and fugitive dust in construction areas. • No exceedances of the National Ambient Air Quality Standards are expected.

TABLE 3-1. SUMMARY OF BUILD ALTERNATIVE IMPACTS

Resource	Impact
Noise	• Noise Abatement Criteria will be exceeded for 13 noise-sensitive properties, but noise levels will be similar to those under the No Action Alternative. • Short-term impacts will be experienced near construction and staging areas due to the operation of heavy equipment. • Noise levels will temporarily increase along detour routes because of increased traffic.
Water Resources/ Wetlands/Waters of the U.S.	• No long-term direct impacts to surface water, geothermal, and groundwater resources, or to surface or groundwater quality are expected to occur. • No wetland impacts will occur. • The Build Alternative will result in approximately 3.5 acres of increased road pavements, causing additional surface water runoff. Increase in pollutants entering waterways is not expected due to the developed nature of the study area and use of permanent best management practices (BMPs). • During construction, causeways and cofferdams will temporarily impact the Colorado River, a water of the U.S. • Construction activities could temporarily impair water quality in the Colorado and Roaring Fork Rivers.
Floodplains	• No increase in flood elevations from a 100-year flood is anticipated. • Temporary impacts to floodplains will occur from construction of causeways, temporarily increasing flood risk during high flow months.
Vegetation and Noxious Weeds	• Landscaped areas along streets and parking lots will be impacted, requiring removal of some plants. Street trees along Grand Avenue between 7th and 8th Streets will be permanently removed. • Construction will impact approximately 1.8 acres of streambank vegetation, mostly non-native trees and shrubs. • Noxious weed growth may occur in disturbed areas.
Wildlife and Aquatic Species	• Long-term effects to wildlife movement/migration are not anticipated. • Construction could lead to direct mortality of small mammals and affect some bird species by eliminating future nesting sites and habitat. • Temporary wildlife displacement could occur during construction. • Aquatic species could experience temporary habitat loss and increased water turbidity during construction.
Special Status Species	• The state-listed Colorado River cutthroat trout and roundtail chub may experience temporary habitat loss during in-stream construction. • Additional short-term effects may result from sedimentation from construction-related activity.
Section 106 Historic Resources	• The Build Alternative will adversely affect the historic SH 82/Grand Avenue Bridge. • Six historic properties on the 700 block of Grand Avenue will experience indirect adverse effects because the new Grand Avenue Bridge will be wider and taller in this area. • Construction will cause temporary impacts to several historic properties.
Hazardous Materials	• Construction activities could impact regulated material sites, potentially causing transport of pollutants into waterways if not mitigated.
Parks and Recreation	• Removing the bridge pier in middle of river will provide a more central channel for river users. • During construction, Hot Springs visitors and river recreationists will experience visual and noise impacts. • Impacts to river recreationist use will occur during periodic river closure for critical overhead construction activities. • Construction activities may create muddy and unclear water conditions for anglers.

TABLE 3-1. SUMMARY OF BUILD ALTERNATIVE IMPACTS

Resource	Impact
	• Driveway to Vogelaar Park will be temporarily regraded to match 8th Street, temporarily affecting that access point to the park. • Increased traffic on Midland Avenue during full bridge closure will be experienced by Whitewater Activity Area and Veltus Park users.
Pedestrian and Bicycle Facilities	• General improvements will be provided to pedestrian and bicycle facilities, access, and movement from the new pedestrian bridge, improved bridge connections, the new pedestrian/bicycle path, and underpass connecting Two Rivers Park Trail and 6th Street. • Temporary closure and/or detour of sidewalks and bike trails during construction will occur.
Energy	• Energy consumption for operation and maintenance of the Build Alternative is expected to be reduced compared to the No Action Alternative. • Construction activities will result in temporary increase in energy consumption and greenhouse gas emissions.
Archaeological and Paleontological Resources	• Depositional units within the study area have some potential to produce fossils or subfossils; however, no fossil or subfossil remains were observed during survey and there are no known previously documented fossil resources from the immediate project area. • Unanticipated discoveries of these resources may occur during construction activities.

3.2 Mitigation Measures

CDOT will implement the mitigation measures listed in Table 3-2 to minimize impacts identified for the Build Alternative. Table 3-2 is based on Table 3-28 *Summary of Impacts and Mitigation Measures* of the EA, and includes revisions made in response to comments received on the EA or changes made through ongoing design of the Build Alternative, which are indicated by underlined text in the table. It is CDOT's responsibility to monitor compliance by CDOT and contractor staff with the mitigation commitments listed in Table 3-2 throughout design and construction of the Build Alternative.

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TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES

(Underlined text indicates changes made since distribution of the EA)

Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
1.	Visual	Visual changes from new bridges	Using the established CSS process, CDOT has and will continue to work with stakeholders to identify opportunities for aesthetic treatments in the design of the bridge, roadway, and sidewalk elements to reflect the materials and architectural style of Glenwood Springs' small town character and historic structures, as well as the visual and aesthetic goals and objectives provided in the I-70 Mountain Corridor Aesthetic Guidance.	Landscape Architect, Project Engineer	Final design and construction
2.	Visual	Visual changes from new bridges	Use open rail type side barriers on the pedestrian bridge to preserve views from the bridge.	Landscape Architect, Project Engineer	Final design and construction
3.	Visual	Visual changes from vegetation removal to construct project	Preserve existing vegetation where practicable, and revegetate riverbanks with native species as soon as practicable upon construction completion.	Landscape Architect, Project Engineer	Final design and construction
4.	Visual	Visual changes from urban/street tree removal	Preserve urban street trees where practicable. Where permanent street tree removal is necessary, CDOT will work with the City and other stakeholders to identify measures to mitigate the permanent tree loss. Any trees removed on City land that are not replaced by the project will be mitigated through reimbursement to the City.	Landscape Architect, Project Engineer	Final design and construction
5.	Visual	Visual changes from street tree removal along Grand Avenue between 7th and 8th Streets.	Work with stakeholders to identify aesthetic and urban design elements to mitigate loss of street trees. As of this writing, mitigation measures include installing two planters on each side of Grand Avenue between 7th and 8th Streets.	Landscape Architect, Project Engineer	Final design and construction
6.	Visual	Visual changes from solid barrier on highway bridge	Include aesthetic treatments on outside edge of solid barrier on highway bridge as determined through ongoing coordination with the City and stakeholders.	Landscape Architect, Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
(Underlined text indicates changes made since distribution of the EA)

Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
7.	Visual	Visual changes from new bridges	Use materials and/or aesthetic treatments on bridges to blend with the historic and mountain context of the study area. This will include, but not be limited to, consideration of the following design elements: • Use earth-tone paints and stains and select paint finishes with low reflectivity. • Use natural appearing forms to complement landscape. • Take advantage of natural screening.	Landscape Architect, Project Engineer	Final design and construction
8.	Visual	Visual changes from new lighting	Develop a lighting plan that balances sometimes conflicting needs, such as: • Compliance with CDOT and City design standards. • Incorporating lighting fixtures that minimize nighttime glare and sky glow. Where new light fixtures are added, use lamps and/or light shields that direct glare away from the street, buildings, or the sky to minimize glare and sky glow, in accordance with local ordinances. • Incorporating bridge and highway lighting as part of aesthetic treatments.	Landscape Architect, Project Engineer	Final design and construction
9.	Visual	Visual changes at new roundabout intersection	Incorporate brick pavers in the 6th Street/Laurel Street roundabout medians to soften views of transportation facilities.	Landscape Architect, Project Engineer	Final design and construction
10.	Visual	Temporary visual changes during construction	Minimize light glare during nighttime construction activities by taking measures to direct the light inward toward the construction site and minimize glare for motorists, pedestrians, and Hot Springs Pool visitors in the vicinity of the construction site.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
(Underlined text indicates changes made since distribution of the EA)

Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
11.	Transit	Removal of bus stop at 6th and Maple or provision of new stop in the vicinity	During final design, CDOT will continue to coordinate with RFTA and the City of Glenwood Springs to determine the best options to mitigate bus stop removal.	Project Engineer	Final design and construction
12.	Transit	Removal of Grand Avenue wing street impacts RFTA bus service routing	RFTA has indicated that the connection can be rerouted to either Cooper Avenue to the east or Colorado Avenue to the west. CDOT will continue to coordinate with RFTA and the City during final design and construction.	Project Engineer	Final design and construction
13.	Transit	Impacts to bus routes serving study area during construction	CDOT will coordinate with RFTA and the City during design and construction to provide adequate detour routes for impacted bus routes and bus stops.	Project Engineer	Final design and construction
14.	Transportation	Temporary transportation impacts during construction	CDOT has designed detour routes to accommodate transportation needs during construction.	Project Engineer	Final design and construction
15.	Transportation	Temporary access and connectivity impacts during construction	CDOT will maintain access and local connectivity throughout construction activities as much as possible.	Project Engineer	Final design and construction
16.	Transportation	Temporary railroad closure during construction detour	CDOT will coordinate with the UPRR and RFTA on details of the Aspen Branch railroad temporary closure and will restore the railbed and track after the new Grand Avenue Bridge is reopened.	Project Engineer	Final design and construction
17.	Transportation	Temporary access impacts during construction	Access will be maintained to businesses and properties along both sides of Grand Avenue.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
(Underlined text indicates changes made since distribution of the EA)

Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
18.	Transportation	Temporary roadway impacts during construction	7th Street will be fully closed during the approximately 90-day full bridge closure. To maintain access on 7th Street during other times of the construction period, 7th Street will be converted to either one-way westbound or alternating direction one-way operations that will be controlled by flagging or other traffic control measures.	Project Engineer	Final design and construction
19.	Transportation	Temporary safety and mobility impacts during construction	At Midland Avenue, install traffic signals at either end of the detour route to meter traffic volumes, providing gaps for local traffic turning to/from Midland Avenue. In residential areas along Midland Avenue, particularly the denser residential areas between 8th and 27th Streets, CDOT will monitor traffic during the full bridge closure and respond with appropriate measures to mitigate traffic impacts. These measures could include temporarily reducing the number of accesses onto Midland Avenue from neighborhoods with more than one access, and/or using flaggers or intersection controls during peak travel periods. To discourage use of Midland Avenue from 8th to 27th Streets as an alternate route, signing discouraging the use of this route will be installed, and the signal timing at 8th and Midland will greatly favor the official detour route, making the Midland route (27th to 8th Streets) less attractive for regional drivers. CDOT will adapt the Transportation Demand Management (TDM) plan to changing traffic conditions as needed and based on coordination with the City.	Project Engineer	Final design and construction
20.	Transportation	Temporary traffic impacts during construction	As part of the SH 82 Detour, 8th Street will be temporarily extended to connect to the 8th Street Bridge over the Roaring Fork River during the approximately 90-day full bridge closure.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
21.	Transportation	Temporary traffic impacts during construction	During the approximately 90-day full bridge closure, a temporary one-way loop <u>will be implemented</u> on 8th Street, Colorado Avenue, 9th Street, and Grand Avenue. A temporary signal will be installed at the 8th Street and Colorado Avenue intersection to facilitate pedestrian crossings and address higher traffic volumes. A temporary physical barrier will be placed at the 9th Street and Colorado Avenue intersection to force detour traffic to turn east toward Grand Avenue and keep detour traffic from continuing south on Colorado Avenue. <u>Temporary barriers will be placed at Pitkin Street and School Street to prevent right turns from 8th Street; an outlet will be left for northbound local traffic from those streets to turn onto 8th Street. CDOT will coordinate this and other design details of the detour with the City. These barriers will not be placed until the grade modifications on the Vogelaar Park access road are completed. Access to Vogelaar Park will remain open from 8th Street on the north side of the park while barriers are in place.</u>	Project Engineer	Final design and construction
22.	Transportation	Temporary road closures during construction	When closures are required at the 6th Street/Laurel Street intersection, the date and time will be widely communicated through the construction phase public information program and signage so motorists can plan. If needed, alternate route information also will be provided.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
23.	Transportation	Temporary traffic impacts during construction	Implement a full public information campaign to educate travelers on travel demand management measures to maximize the use of the detour route. CDOT will work with local and regional organizations and employers to promote the campaign. The public information campaign will inform the organizations, employers, and the general public about the upcoming closure and how to plan trips accordingly. The information campaign will include: • Timeframe for full closure. • Best and worst times to travel. • Best routes to travel. • Alternative modes of travel available.	Public Involvement, Project Engineer	Final design and construction
24.	Transportation	Temporary mobility impacts during construction	Specific travel demand management (TDM) measures could include the following: *Bicyclists/Pedestrians* • Maintain a pedestrian connection over the river during construction by building a temporary five-foot attached sidewalk with barrier on the existing Grand Avenue Bridge. • Provide additional information about bicycle and pedestrian routes to commuters and the general public. • Provide bike facilities and services – these could include bike depots, bike lockers, and bike rental/sharing services. • Provide free or low fare pedicab (bicycle taxi) service across the bridge during the period of project construction, connecting to roads on either end. *Regional and Local Motorists* • Inform commuters, recreationists, and tourists, so they could adjust their travel/work schedules during the closure period.	Public Involvement, Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
			• Offer incentives for commuters to shift their travel times to off-peak periods, carpool, or use alternative modes, including public transportation, walking, and biking. • Provide information targeted to commercial vehicles and companies, such as delivery trucks, on the detour route and less congested travel times. *Transit Users* <u>CDOT has worked with and will continue to work with</u> RFTA and the City to: • Modify transit routes and increase frequency of operation along those routes to provide a reliable transit alternative during construction<u>. RFTA has plans in place to modify local bus service during construction. Also, the City is considering modifications to their existing shuttle service during construction</u>. • Communicate transit service/schedule information to commuters, tourists, and the general public. • Extend the VelociRFTA BRT service or other regional service along the detour route temporarily and/or into downtown, where the stop will be within walking distance of the north side of the river. • Provide transit subsidies to commuters and recreationists. • Work with local businesses and tourism organizations to distribute passes and/or coupons. • Provide a regularly scheduled, free – or very low fare – shuttle along the detour route.		
25.	Social and Environmental Justice (EJ)	Temporary traffic impacts during construction	Provide advance notice to emergency service providers, community facilities, local schools, and local businesses of upcoming construction activities that are likely to result in traffic disruption, rerouting, and changes in access.	Public Involvement, Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
26.	Social and EJ	Loss of public facility	The existing restroom located underneath the SH 82 bridge that will be removed by the project will be replaced after construction of the bridge.	The location will be determined by the City and construction provided by the City per the IGA between the City and CDOT. CDOT will confirm the restroom is replaced per the IGA and this mitigation commitment.	Following Grand Avenue Bridge construction
27.	Social and EJ	Temporary detours during construction	Develop and implement a public information plan for the construction phase. This plan will include information on construction activities and the established detours and associated signage.	Public Involvement, Project Engineer	Final design and construction
28.	Social and EJ	Temporary noise impacts during construction	The contractor will conduct preliminary noise monitoring during the noisier nighttime construction periods. These are expected to be in the summer and fall of 2016 and from spring to fall of 2017 when girders for the new bridges will be erected. If noise levels exceed 66 dB(A) during construction (the threshold that CDOT typically uses for nighttime noise levels), hotel accommodations will be made available for persons residing within eligibility zones.	Public Involvement, Project Engineer	Final design and construction
29.	Relocation/Right-of-Way	Property Acquisition and Relocation (commercial and private)	All acquisition and relocation shall comply fully with federal and state requirements, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act).	Right-of-Way Agent	Final design/Right-of-Way (ROW)
30.	Relocation/Right-of-Way	Property Acquisition (commercial and private)	CDOT will provide all impacted property owners notification of its intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property	Right-of-Way Agent	Final design/ROW

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
			interests being sought. CDOT will provide all displaced persons advisory services and notification of relocation eligibility, as applicable. A Right-of-Way Specialist will be assigned to each property owner to assist them with this process. Any existing City right-of-way that is needed for this project will be addressed in a joint use agreement.		
31.	Economic	Impacts to business access	Design the Build Alternative to maintain and, where possible, improve access to existing businesses.	Project Engineer	Final design and construction
32.	Economic	Impacts to businesses acquired for right-of-way	Comply fully with federal and state requirements, including the Uniform Act, for all acquisition and relocation.	Right-of-Way Agent	Final design/ROW
33.	Economic	Impacts to parking	As part of the right-of-way acquisition process, coordinate with the Glenwood Hot Springs to identify a solution to compensate or replace parking impacts in compliance with the Uniform Act.	Project Engineer	Final design and construction
34.	Economic	Impacts to business access	Using the established context sensitive process, work with stakeholders to incorporate design features to enhance business and tourism opportunities.	Project Engineer	Final design and construction
35.	Economic	Impacts to business access	Coordinate with the City and the Downtown Development Authority (DDA) to develop signage that directs visitors to the 6th Street businesses in accordance with the City Wayfinding Signage Plan.	Project Engineer	Final design and construction
36.	Economic	Impacts to business access during construction	Maintain access to all businesses at all times.	Project Engineer	Final design and construction
37.	Economic	Impacts to businesses during construction	Target the approximately 90-day full bridge closure during the traditionally slower traffic times during the year, which is typically during the spring and fall seasons.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
38.	Economic	Impacts to businesses during construction	CDOT will expedite bridge construction to minimize bridge closure time, as possible.	Project Engineer	Final design and construction
39.	Economic	Impacts to business access during construction	Keep pedestrian access across the river open at all times.	Project Engineer	Final design and construction
40.	Economic	Parking impacts during construction	Continue to coordinate with the Glenwood Hot Springs and other businesses to mitigate temporary impacts to parking. To lessen the level of impact, conduct public outreach to inform visitors of the construction activities and options for parking in the area.	Project Engineer	Final design and construction
41.	Economic	Impacts to businesses during construction	Communicate regularly with businesses about the construction schedule.	Public Involvement, Project Engineer	Final design and construction
42.	Economic	Impacts to businesses during construction detours	Develop additional signage to clarify detour and access changes in coordination with the City.	Project Engineer	Final design and construction
43.	Economic	Impacts to businesses during construction detours	Conduct public outreach in coordination with the Chamber Resort Association to let the local community and region know that the area is open for business.	Public Involvement, Project Engineer	Final design and construction
44.	Economic	Impacts to businesses during construction	Participate with local business organizations (e.g., the DDA, the Glenwood Springs Chamber of Commerce, Downtown Market, Colorado Mountain College, and others) to identify other mitigation measures the project could incorporate to mitigate business impacts.	Project Engineer	Final design and construction
45.	Economic	Impacts to businesses during construction	CDOT's outreach team will coordinate and work closely with the Glenwood Springs Chamber of Commerce and other local organizations and groups and support additional outreach.	Public Involvement, Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
46.	Economic	Noise and air quality impacts	See mitigation measures under Air Quality and Noise.	Project Engineer	Final design and construction
47.	Air Quality	Air pollutants released during construction	CDOT and its contractor will comply with the fugitive dust permitting and control requirements of the Colorado Air Quality Control Commission (CAQCC), and obtain a general construction Air Pollutant Emission Notice. These requirements are documented in Regulation 1, Emission Control Regulation for Particulate Matter, Smoke, Carbon Monoxide, and Sulfur Oxides for the State of Colorado, effective August 30, 2007 (CAQCC, 2007), and Regulation 3, Air Pollutant Emission Notice Requirements, effective April 14, 2014 (CAQCC, 2014).	Project Engineer	Final design and construction
48.	Air Quality	Fugitive dust during construction	Apply water and chemical stabilizers in active construction areas and on haul roads in areas away from the Colorado River.	Project Engineer	Final design and construction
49.	Air Quality	Fugitive dust during construction	Post speed limit signs and enforce speeds in active construction areas and on haul roads.	Project Engineer	Final design and construction
50.	Air Quality	Fugitive dust during construction	Water, perform soil compaction, and revegetate disturbed areas as needed and appropriate for site conditions.	Project Engineer	Final design and construction
51.	Air Quality	Fugitive dust during construction	Temporarily curtail earthmoving activity during extreme wind or dust conditions.	Project Engineer	Final design and construction
52.	Air Quality	Fugitive dust during construction	Cover haul trucks, as appropriate, to reduce dust.	Project Engineer	Final design and construction
53.	Air Quality	Fugitive dust during construction	Limit haul truck speeds in unpaved areas.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES

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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
54.	Air Quality	Vehicle emissions during construction	CDOT will require contractor to reduce unnecessary vehicle idling to reduce emissions during construction.	Project Engineer	Final design and construction
55.	Noise	Noise impacts	If future substantial changes are made to design elements of the Build Alternative from what has been analyzed for the EA, the noise analysis will need to be reassessed to evaluate the impact of those changes.	Environmental Manager	Final design and construction
56.	Noise	Temporary impacts from construction activities	Adhere to the City of Glenwood Springs Code Article 100.070, Regulation of Noise. Obtain a construction noise work permit or waiver for construction activities occurring outside of the hours allowed by the Code. The Code allows construction activities to commence between the hours of 7:00 a.m. and 8:00 p.m. Monday to Friday, and 8:00 a.m. to 6:00 p.m. Saturday and Sunday.	Project Engineer	Final design and construction
57.	Noise	Temporary impacts from construction activities	Offer hotel vouchers to downtown residents most impacted by construction activities during nighttime hours. These are anticipated to be Receptor R17 (located off 6th Street) and Receptors R32a-R32f (located off 7th Street).	Project Engineer	Final design and construction
58.	Noise	Temporary impacts from construction activities	The contractor will conduct preliminary noise monitoring during the noisier nighttime construction periods. These are expected to be in the summer and fall of 2016 and from spring to fall of 2017 when girders for the new bridges will be erected. If noise levels exceed 66 dB(A) during construction (the threshold that CDOT typically uses for nighttime noise levels), hotel accommodations will be made available for persons residing within eligibility zones.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
59.	Noise	Temporary impacts from construction activities	Minimize noisy construction activities adjacent to noise-sensitive receptors at times when receptors are most sensitive during nighttime hours, as practical and feasible.	Project Engineer	Final design and construction
60.	Noise	Temporary impacts from construction activities	Use noise blankets or other muffling devices on equipment and quiet-use generators at noise-sensitive receptors as needed.	Project Engineer	Final design and construction
61.	Noise	Temporary impacts from construction activities	Use well-maintained equipment and inspect equipment regularly.	Project Engineer	Final design and construction
62.	Noise	Temporary impacts from construction activities	Locate stationary equipment and haul roads away from noise-sensitive receptors, as practical and feasible.	Project Engineer	Final design and construction
63.	Noise	Temporary impacts from construction activities	If pile driving for bridge piers is used, limit activities to daytime hours.	Project Engineer	Final design and construction
64.	Noise	Temporary impacts from construction activities	Minimize pile driving through use of drill shafts. Limit pile driving activities, if needed, to workday off-peak hours.	Project Engineer	Final design and construction
65.	Noise	Temporary impacts from construction activities	Minimize back-up alarm noises on construction vehicles in construction areas where practical and feasible, to the extent allowed by federal Occupational Safety and Health Administration (OSHA)and state requirements.	Project Engineer	Final design and construction
66.	Noise	Temporary impacts from construction activities	Turn off idling equipment and vehicles when not in use.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
67.	Noise	Temporary impacts from construction activities	The contractor will only use equipment that, operating under full load, meets manufacturer specifications. If the equipment falls out of compliance, the contractor will take remedial action to comply with the specifications.	Project Engineer	Final design and construction
68.	Noise	Temporary impacts from construction activities	For the nighttime I-70 closure detour that will occur several times during safety critical construction activities, coordinate detour nights and times with local hotels (e.g., Hotel Colorado and Glenwood Hot Springs). This will help hoteliers to move patrons to rooms farther from detour noise.	Public Involvement, Project Engineer	Final design and construction
69.	Water Resources and Water Quality	Impacts to water quality	Incorporate design measures into the Build Alternative to mitigate for potential water quality impacts. The design will improve upon the current condition where stormwater runoff drains from the bridge directly into the Colorado River.	Water Pollution Control Manager, Project Engineer	Final design and construction
70.	Water Resources and Water Quality	Impacts to water quality	Provide stormwater management infrastructure south and north of the Colorado River to treat runoff. Because of space limitations, underground BMPs will be used. These BMPs will capture and treat runoff from additional impervious areas (e.g., pavement, sidewalks, and retaining walls) from the Build Alternative and provide treatment of some existing roadway runoff, thereby improving surface water quality over the No Action Alternative. Stormwater from the BMPs will outfall into the Colorado River. Additional stormwater will be routed via existing inlets and storm sewers to the Colorado River. The City will assume inspection and maintenance responsibilities for the underground BMPs, which will be included in the IGA between CDOT and the City.	Water Pollution Control Manager, Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
71.	Water Resources and Water Quality	Impacts from stormwater runoff	Sign inlets to inform public they drain to river.	Water Pollution Control Manager, Project Engineer	Final design and construction
72.	Water Resources and Water Quality	Temporary storm water impacts during construction	Runoff from the SH 82 Detour will be drained into an existing inlet that has an outfall to the Roaring Fork River. Sediment traps will be used at the existing inlet.	Water Pollution Control Manager, Project Engineer	Final design and construction
73.	Water Resources and Water Quality	Temporary erosion and sediment impacts during construction	Implement standard erosion and sediment control best management practices in accordance with CDOT's Erosion Control and Stormwater Quality Guide (CDOT, 2002) and established sound engineering practices in final design plans.	Water Pollution Control Manager, Project Engineer	Final design and construction
74.	Water Resources and Water Quality	Temporary erosion and sediment impacts during construction	Develop and implement a site-specific stormwater management plan (SWMP). The BMPs will be designed, installed, and maintained per the SWMP.	Water Pollution Control Manager, Project Engineer	Final design and construction
75.	Water Resources and Water Quality	Temporary erosion and sediment impacts during construction	Perform all work in conformance to Section 107.25 (Water Quality Control) and Section 208 (Erosion Control) of the CDOT *Standard Specifications for Road and Bridge Construction*.	Water Pollution Control Manager, Project Engineer	Final design and construction
76.	Water Resources and Water Quality	Temporary erosion and sediment impacts during construction	Use BMPs from CDOT's *Erosion Control and Stormwater Quality Guide* for water resources and water quality, as appropriate. BMPs must be maintained for the duration of the project. Specifically: • Phase construction to limit the acreage exposed (cleared) at any given time during project construction. • Revegetate all disturbed areas with native grass and forb species, or appropriate landscaping as required. Apply seed and mulch in phases throughout construction. This will help stabilize the disturbed areas upon completion of the project even during	Water Pollution Control Manager, Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
			multiple years of potential drought and low precipitation conditions. • Temporarily stabilize disturbed areas, including areas where permanent seeding operations are not feasible due to seasonal constraints (e.g., summer and winter months), and use CDOT-approved methods to prevent erosion. • Use erosion control blankets or other suitable methods on steep, newly seeded slopes to control erosion and to promote the establishment of vegetation. Use erosion control blankets with natural fibers and bio-photodegradable mesh. • Use erosion logs, silt fence, diversion ditches, temporary berms, sediment traps, temporary detention ponds, and other sediment control devices to divert, control, and filter sediment-impacted water in order to protect surface water and inlets to the storm sewer system. • Use check dams and other velocity dissipation devices, where appropriate, to slow the velocity of water through roadside ditches and within swales. • Limit disturbed areas as much as possible to minimize construction impacts to vegetation. • Use permanent structural BMPs, such as grass swales and grass/vegetative buffers, to limit sediment and roadway pollutants resulting from winter sanding, chemical deicing, and normal traffic operations from entering waterways. • Use non-structural BMPs, including litter and debris control, and surface roughening on slopes, landscaping, and vegetative practices. • Implement temporary and permanent BMPs for erosion control, sediment control, and drainage way protection as required by local and state permitting requirements. Design BMPs to protect waterways		

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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
			from various potential pollutant sources, such as construction materials, fuels and other fluids, sediment, and trash. Best management practices will be maintained for the duration of the project.		
77.	Water Resources and Water Quality	Impacts from dewatering during construction	CDOT or its contractor will file a notice of intent with the Colorado Department of Health and Environment (CDPHE) Water Quality Control Division for groundwater dewatering, if dewatering is required for construction. A discharge permit will also be required if groundwater is discharged to a water body (e.g., the Colorado River). The CDPHE may require that water proposed for discharge be analyzed, and that the discharged water be treated to meet the surface water quality standards applicable to that river segment. The project will comply with all CDPHE dewatering and/or discharge permit requirements. In the event that discharged water cannot be treated to meet the surface water quality standards, discharged water will be stored and transported off site for disposal.	Water Pollution Control Manager, Project Engineer	Final design and construction
78.	Water Resources and Water Quality	Impacts to water quality during construction	Locate construction staging and materials stockpiling farther than 50 feet from the edge of the Colorado River, when possible. In specific circumstances, if this buffer is not achievable, CDOT will consider the placement of materials closer to the edge of water and identify appropriate additional BMPs that will be required.	Water Pollution Control Manager, Project Engineer	Final design and construction

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79.	Water Resources and Water Quality	Impacts to water quality during construction	Refuel equipment within designated refueling containment areas. No refueling will occur within 50 feet of the rivers. During refueling operations, the receiving hose will be connected and all valves will be checked to ensure delivery of product to the proper receptacle. The transfer will be constantly monitored to prevent overfilling and spilling, and the delivery hose and lines will be checked for leaks. The transport driver will remain on hand until product delivery has been completed. Following product delivery, all appropriate valves will be shut off, hoses will be disconnected, the transport driver will check for leaks, and the receptacle will be gauged to verify receipt of product. Spill response materials (spill kits) will be available, and personnel will be aware of the storage location of such kits.	Water Pollution Control Manager, Project Engineer	Final design and construction
80.	Water Resources and Water Quality	Impacts to water quality during construction	Place BMPs and containment structures for work conducted within and adjacent to the floodplain and the Colorado River to prevent concrete washout and other potential pollutants from reaching the river.	Water Pollution Control Manager, Project Engineer	Final design and construction
81.	Water Resources and Water Quality	Impacts to water quality during construction	In the event that equipment malfunctions during demolition or construction, any release that may impact waters of the state, no matter how small, must be reported immediately to the CDPHE by telephone. Written notification to the CDPHE must follow within five days. Measures of containment will be followed as included in the spill prevention, countermeasure, and control plan of the SWMP.	Water Pollution Control Manager, Project Engineer	Final design and construction
82.	Water Resources and Water Quality	Impacts to water quality during construction	Remove the two causeways used during bridge construction at the end of construction and return all areas of disturbance to existing conditions.	Water Pollution Control Manager Project Engineer	Final design and construction

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83.	Water Resources and Water Quality	Impacts to geothermal resources during construction	Design foundations to stay above the confining layer of the Belden Shale, which will avoid any penetration of the primary bedrock aquifer, the Leadville Limestone.	Water Pollution Control Manager, Project Engineer	Final design and construction
84.	Water Resources and Water Quality	Impacts to geothermal resources during construction	Use spread footings where practicable to minimize the depth of excavation.	Water Pollution Control Manager, Project Engineer	Final design and construction
85.	Water Resources and Water Quality	Impacts to geothermal resources during construction	Drill test holes to determine the subsurface conditions at the locations of foundation structures.	Water Pollution Control Manager, Project Engineer	Final design and construction
86.	Water Resources and Water Quality	Impacts to geothermal resources during construction	Consider foundation grouting near caisson foundations to minimize the depth of the excavation.	Water Pollution Control Manager, Project Engineer	Final design and construction
87.	Waters of the United States	Temporary waters of the United States impacts	CDOT's Regional Wetland Specialist will obtain Section 404 permit authorization from the U.S. Army Corps of Engineers for placement of temporary and permanent fill material in the Colorado River.	Environmental Manager	Final design and construction
88.	Waters of the United States	Temporary riparian impacts	Protect riparian areas during construction activities through placement of temporary and/or construction-limit fencing.	Landscape Architect, Project Engineer	Final design and construction
89.	Waters of the United States	Temporary waters of the United States impacts	Closely monitor all work within and near the Colorado River to ensure compliance with the U.S. Army Corps of Engineers Section 404 Permit.	Environmental Manager Project Engineer	Final design and construction
90.	Waters of the United States	Temporary waters of the United States impacts	Following construction, causeways will be removed, restoring all disturbed areas according to riparian mitigation requirements specified in the Guidelines for Senate Bill 40 Wildlife Certification.	Environmental Manager Project Engineer	Final design and construction

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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
91.	Floodplains	Potential increase in flood elevations from a 100-year flood	CDOT will evaluate the following avoidance and minimization measures during final design to reduce floodplain impacts: • Design construction causeways to protect I-70, Glenwood Hot Springs, and similarly positioned infrastructure from a 10-year flood event. • During construction, monitor snowpack data, river flow data, daily temperature forecasts, etc., to predict 10-year flood events. In the case of a potential flood event, the contractor will remove portions of the causeways to prevent flooding. • Remove riprap previously placed in the river to protect the existing highway bridge pier from erosion. This measure will require coordination with resource agencies. • CDOT will perform a detailed hydraulic analysis. If this shows no increase in flood elevations, no further mitigation will be required.	Project Engineer	Final design and construction
92.	Floodplains	Potential increase in flood elevations from a 100-year flood	CDOT will continue coordinating with the City' Floodplain Administrator regarding the City's floodplain ordinance requirements as the design and hydraulic analyses are refined.	Project Engineer	Final design and construction
93.	Floodplains	Potential increase in flood elevations	CDOT will comply with all applicable floodplain design criteria, FHWA's floodplain regulations, and Executive Order 11988, "Floodplain Management."	Project Engineer	Final design and construction
94.	Vegetation	Temporary impacts to vegetation during construction	To the extent practicable, CDOT will avoid disturbance to existing trees, shrubs, and vegetation.	Landscape Architect, Project Engineer	Final design and construction
95.	Vegetation	Temporary impacts to vegetation during construction	Areas cleared of vegetation will be revegetated <u>with native seeding</u>.	Landscape Architect, Project Engineer	Final design and construction

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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
96.	Vegetation	Temporary impacts to riparian vegetation during construction	Replace riparian trees and shrubs removed during construction as stipulated in CDOT's Guidelines for Senate Bill 40 Wildlife Certification, which states that trees removed during construction, whether native or non-native, shall be 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.	Environmental Manager, Landscape Architect	Final design and construction
97.	Vegetation	Temporary impacts to riparian vegetation during construction	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.	Landscape Architect, Project Engineer	Final design and construction
98.	Vegetation	Temporary impacts to riparian vegetation during construction	A vegetation survey will be completed during final design to determine the number of riparian trees and the areal coverage of shrubs impacted.	Environmental Manager, Landscape Architect	Final design
99.	Vegetation	Impacts to landscaped areas during construction	Revegetate landscaped areas disturbed during construction with native seeding.	Environmental Manager, Landscape Architect	Final design and construction
100.	Noxious Weeds	Weed growth where vegetation removed during construction	Revegetate disturbed areas with native species.	Environmental Manager, Landscape Architect	Final design and construction
101.	Noxious Weeds	Weed growth where vegetation removed during construction	Conduct a noxious weed survey prior to construction.	Environmental Manager, Landscape Architect	Preconstruction
102.	Noxious Weeds	Weed growth where vegetation removed during construction	Develop and implement an Integrated Weed Management Plan that will contain BMPs to prevent and/or control the establishment of noxious weeds, including, but not limited to, appropriate herbicide application, equipment cleaning, use of weed-free materials, and prompt revegetation of disturbed areas.	Environmental Manager, Landscape Architect	Final design and construction

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103.	Noxious Weeds	Weed growth where vegetation removed during construction	CDOT will identify and remove tamarisk trees (a noxious weed also known as Saltcedar), in and adjacent to areas of construction, per the BMPs that will be developed for construction plans and specifications.	Environmental Manager, Landscape Architect	Final design and construction
104.	Wildlife – Non Aquatic	Direct mortality of and removal of habitat for small mammals from permanent riparian vegetation removal	CDOT will continue to coordinate with Colorado Parks and Wildlife to implement mitigation measures to minimize impacts to wildlife.	Environmental Manager, Landscape Architect	Final design and construction
105.	Wildlife – Non Aquatic	Removal of future nesting sites for some bird species from permanent riparian vegetation removal	To ensure compliance with the Migratory Bird Treaty Act, CDOT *Specification 240* will be followed by the contractor. *Specification 240* outlines requirements regarding nests on structures, seasonal vegetation-clearance restrictions, and measures to buffer bird nests within a construction area.	Environmental Manager	Final design
106.	Wildlife – Non Aquatic	Direct mortality of and removal of habitat for small mammals from permanent riparian vegetation removal	Provide temporary fencing in riparian areas to protect wildlife from construction activities.	Environmental Manager, Landscape Architect	Final design and construction
107.	Wildlife – Non Aquatic	Temporary loss of habitat due to the clearing of vegetation in and around the Colorado River	Replace riparian trees and shrubs removed as stipulated in CDOT's *Guidelines for Senate Bill 40 Wildlife Certification*, which states that riparian trees removed during construction, whether native or non-native, shall be replaced with a goal of 1:1 replacement based on a preconstruction stem count of all trees with a diameter at breast height of two inches or greater.	Environmental Manager, Landscape Architect	Final design and construction

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108.	Wildlife – Non Aquatic	Temporary loss of habitat due to the clearing of vegetation in and around the Colorado River	Riparian shrubs removed during construction, whether native or non-native, will be replaced with native species based on their preconstruction areal coverage. In all cases, CDOT will replace all such trees and shrubs with native species.	Environmental Manager, Landscape Architect	Final design and construction
109.	Wildlife – Non Aquatic	Temporary loss of habitat due to the clearing of vegetation in and around the Colorado River	A vegetation survey will be completed during final design to determine the number of riparian trees and the areal coverage of shrubs impacted.	Environmental Manager, Landscape Architect	Final design
110.	Wildlife – Non Aquatic	Temporary loss of habitat due to the clearing of vegetation in and around the Colorado River	Avoid disturbance of native trees, shrubs, and vegetation to the extent possible. When disturbance is unavoidable, replace native and non-native species with native species.	Environmental Manager, Landscape Architect	Final design and construction
111.	Wildlife – Non Aquatic	Impacts to wildlife during construction	Use bear-resistant trash receptacles near construction areas.	Environmental Manager, Project Engineer	Final design and construction
112.	Wildlife – Aquatic	Habitat loss and increased water turbidity	CDOT will continue to coordinate with Colorado Parks and Wildlife and implement the following mitigation measures to minimize impacts to aquatic species.	Water Pollution Control Manager, Project Engineer	Final design and construction
113.	Wildlife – Aquatic	Habitat loss and increased water turbidity	Use CDOT-approved BMPs to offset the extent and duration of any temporary impacts to the Colorado River.	Water Pollution Control Manager, Project Engineer	Final design and construction
114.	Wildlife – Aquatic	Habitat loss and increased water turbidity	In no instance allow construction activities or equipment to work in flowing water or disturb sediment during recognized trout spawning seasons unless in coordination with Colorado Parks and Wildlife, as follows: • Rainbow Trout: March 1-<u>June 30th</u>	Environmental Manager	Final design and construction

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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
115.	Wildlife – Non Aquatic	Introduction of invasive aquatic species	Prevent the spread of invasive aquatic nuisance species, including Eurasian watermilfoil, zebra mussel, and New Zealand mudsnail, by following CDOT's *Guidelines for Senate Bill 40 Wildlife Certification*.	Environmental Manager, Landscape Architect	Final design
116.	Wildlife – Aquatic	Habitat loss and increased water turbidity	Provide permanent water quality measures discussed in Section 3.9.3 Water Resources and Water Quality Mitigation of the EA.	Environmental Manager	Final design and construction
117.	Wildlife – Aquatic	Sediment increase in Colorado River during construction.	Minimize sediment entrainment within the river flow and the diversion channels using protected control structures. Such protection will consist of, but not necessarily be limited to, geotextiles fabrics, riprap, and conduits.	Water Pollution Control Manager, Project Engineer	Final design and construction
118.	Special Status Species – Non Aquatic	Vegetation removal due to construction activities	CDOT will continue to coordinate with Colorado Parks and Wildlife and implement the following BMPs and mitigation measures to minimize impacts to special-status species during construction and to improve habitat availability and quality following construction.	Environmental Manager	Final design and construction
119.	Special Status Species – Non Aquatic	Potential bird impacts	Follow CDOT *Specification 240* to ensure compliance with the Migratory Bird Treaty Act.	Environmental Manager	Final design and construction
120.	Special Status Species – Non Aquatic	Potential wildlife impacts	Provide temporary fencing in riparian areas to protect wildlife from construction activities.	Environmental Manager	Final design and construction
121.	Special Status Species – Non Aquatic	Habitat removal due to construction activities	A vegetation survey will be completed during final design to determine the number of riparian trees and the areal coverage of shrubs impacted.	Environmental Manager, Landscape Architect	Final design
122.	Special Status Species – Non Aquatic	Habitat removal due to construction activities	Replace all riparian trees and shrubs removed during construction, as required by Senate Bill 40 Wildlife Certification.	Environmental Manager, Landscape Architect	Final design and construction

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Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
123.	Special Status Species – Non Aquatic	Habitat removal due to construction activities	Non-native trees and shrubs removed during construction will be replaced with native species.	Environmental Manager, Landscape Architect	Final design and construction
124.	Special Status Species – Aquatic	Introduction of invasive aquatic species	Prevent the spread of invasive aquatic nuisance species, including Eurasian watermilfoil, zebra mussel, and New Zealand mudsnail, following CDOT's *Guidelines for Senate Bill 40 Wildlife Certification.*	Environmental Manager, Landscape Architect	Final design and construction
125.	Special Status Species – Aquatic	Water quality impacts to river otter and fish during construction	Provide permanent water quality measures discussed in Section 3.9.3 Water Resources and Water Quality Mitigation of the EA.	Environmental Manager, Landscape Architect	Final design and construction
126.	Special Status Species – Aquatic	Sedimentation and streambed disturbance	No in-water work will be allowed between March 1 and June 30th to protect spawning Colorado River Cutthroat Trout.	Water Pollution Control Manager, Project Engineer	Final design and construction
127.	Special Status Species – Aquatic	Temporary habitat loss and sediment impacts during construction	Minimize sediment entrainment within the river flow and the diversion channels through use of protected control structures. Such protection will consist of, but not necessarily be limited to, geotextiles fabrics, riprap, and conduits.	Water Pollution Control Manager, Project Engineer	Final design and construction
128.	Special Status Species – Aquatic	Vegetation removal due to construction activities	In no instance allow construction activities or equipment to work in flowing water from March 1 to June 30th unless in coordination with Colorado Parks and Wildlife.	Environmental Manager, Landscape Architect	Final design and construction
129.	Historic	Direct impacts to historic properties	Prepare Level II archival documentation to mitigate the adverse effect to Glenwood Springs Viaduct/SH 82/Grand Avenue Bridge (Site #5GF.2717) per Memorandum of Agreement to be prepared.	Staff Historian	Preconstruction

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130.	Historic	Proximity impacts to historic properties	Using the established context-sensitive process, CDOT will work with Section 106 consulting parties and the State Historic Preservation Officer to identify opportunities for aesthetic treatments in the design of the bridge, roadway, and sidewalk elements to reflect the materials and architectural style of the historic period of significance for these properties: Silver Club Building (Site #5GF.1015); Palace Hotel (Site #5GF.1016); Parkison Building (Site #5GF.1017); Springs Restaurant/Doc Holliday Tavern (Site #5GF.1033); Dougan Block (Site #5GF.4730); and Ore Sampling Room (Site #5GF.1032).	Staff Historian, Landscape Architect	Final design and construction
131.	Historic	Temporary impacts to the Denver & Rio Grande Railroad – Aspen Branch (Site #5GF.1661.7) for construction detour	When the new Grand Avenue Bridge is reopened and the detour is no longer needed, CDOT will restore the Denver & Rio Grande Railroad – Aspen Branch connection to preconstruction conditions.	Staff Historian, Project Engineer	Final design and construction
132.	Historic	Noise impacts to historic properties during nighttime construction detour	Temporary noise mitigation will be deployed during nighttime detour operations along 6th Street to reduce noise impacts to nearby historic resources. This will include, but not be limited to, CDOT coordinating detour nights and times with local hotels (e.g., Hotel Colorado and Glenwood Hot Springs). This will help hoteliers to move patrons to rooms farther from detour noise.	Public Involvement, Project Engineer	Final design and construction
133.	Hazardous Materials	Possible exposure to potentially hazardous materials	CDOT will attempt to resolve regulatory responsibilities for known regulated materials contaminants at properties targeted for right-of-way acquisition or easements prior to acquisition. Properties targeted for acquisition are identified in Section 3.5 Relocation/Right-of-Way of the EA.	Environmental Manager, Project Engineer	Final design

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134.	Hazardous Materials	Possible exposure to potentially hazardous materials	CDOT's contractor will prepare a Materials Management Plan to address potential regulated materials that may be encountered during construction activities and minimize the spread of any remaining regulated materials located in the subsurface within the construction area. The plan will have emphasis on these areas: • The potential exists for hazardous materials (including residual contamination associated with the on-site filling stations as well as the Union Pacific Railroad line) to be encountered in areas where proposed construction and excavation areas approach the groundwater table and within the temporary construction detour route. Recent investigations reveal that groundwater levels are about 10 to 20 feet below ground on the south side of the river and approximately 30 feet below the ground on the north side. • Potential fill or demolition debris from roadway construction may be present on the site. Ensure that workers follow CDOT *Specification 250 – Environmental, Health and Safety Management* and the CDOT *Asbestos-Contaminated Soil Management Standard Operating Procedure* during excavation activities at this site.	Environmental Manager	Final design and construction
135.	Hazardous Materials	Possible exposure to potentially hazardous materials	Complete American Society for Testing and Materials (ASTM)-compliant Phase I Environmental Site Assessment for properties considered for right-of-way acquisition.	Environmental Manager	Final Design

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136.	Hazardous Materials	Possible exposure to potentially hazardous materials	Complete subsurface soil and groundwater investigation to identify potential contaminants in construction area. The subsurface investigation should target areas where contamination will likely be encountered during construction, or parcels where right-of-way is acquired. A subsurface investigation at the northwest portion of the study area could be eliminated since subsurface groundwater investigations are currently being conducted in this area related to active petroleum releases.	Environmental Manager	Final design
137.	Hazardous Materials	Possible exposure to potentially hazardous materials	In the event that suspected asbestos containing material (ACM) is encountered, including with buried utilities, workers must follow CDOT Specification *250.07 – Asbestos-Containing Material Management* and CDOT *Asbestos-Contaminated Soil Management Standard Operating Procedure*. Additionally, depending on the type of ACM, this material must also be abated in accordance with either Section 5.5 of the *Solid Waste Regulations*, or Regulation No. 8 of the *Air Quality Control Commission Regulations*.	Environmental Manager, Project Engineer	Construction
138.	Hazardous Materials	Possible exposure to potentially hazardous materials	Complete appropriate surveys for asbestos and lead-containing paint prior to demolition. If ACM is encountered, implement abatement activities in accordance with all applicable state and federal regulations and guidelines. Surveys for asbestos will not be required if an architect certifies the structures were constructed with asbestos-free building materials.	Environmental Manager	Final design
139.	Hazardous Materials	Possible exposure to potentially hazardous materials	Follow CDOT guidelines regarding lead-containing paint. The contractor will avoid sanding, cutting, burning, or otherwise causing the release of lead from paint on structures when possible. If this is not possible, the lead must be abated properly.	Environmental Manager, Project Engineer	Final design and construction

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140.	Hazardous Materials	Possible exposure to potentially hazardous materials	Specify proper handling procedures of contaminated media identified during subsurface investigations in accordance with applicable state and federal requirements.	Environmental Manager, Project Engineer	Final design and construction
141.	Hazardous Materials	Possible exposure to potentially hazardous materials	Develop a Health and Safety Plan to protect workers during construction activities.	Environmental Manager, Project Engineer	Final design and construction
142.	Hazardous Materials	Possible exposure to potentially hazardous materials	Stop work in the event that unknown contaminated media is encountered during construction until the contamination has been properly evaluated and measures are taken to protect worker health and safety, as well as public health and the environment.	Project Engineer, Environmental Manager	Construction
143.	Hazardous Materials	Possible exposure to potentially hazardous materials	Follow the CDOT *Specification 250 – Environmental, Health, and Safety Management* during excavation activities within the construction area.	Project Engineer, Environmental Manager	Construction
144.	Hazardous Materials	Possible exposure to potentially hazardous materials	Implement standard construction measures for fugitive dust control, as well as stormwater erosion and sediment control.	Environmental Manager, Project Engineer	Final design and Construction
145.	Hazardous Materials	Possible exposure to potentially hazardous materials	Conduct dewatering and/or dewatering activities in accordance with CDPHE permits during construction activities if groundwater is encountered.	Environmental Manager, Project Engineer	Final design and Construction
146.	Hazardous Materials	Possible exposure to potentially hazardous materials	Properly store and treat contaminated water prior to discharge in accordance with dewatering and/or discharge permits. In the event that discharged water cannot be treated to meet the surface water quality standards, discharged water will be stored and transported off site for disposal.	Environmental Manager, Project Engineer	Final design and Construction

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147.	Hazardous Materials	Possible exposure to potentially hazardous materials	Identify and properly close, remove and/or replace monitoring wells and remediation systems within the construction area to avoid impacts and minimize the spread of regulated materials. Properly abandon or potentially replace monitoring wells and/or existing remediation system components impacted during construction if the system is still being utilized.	Environmental Manager, Project Engineer	Final design and Construction
148.	Hazardous Materials	Possible exposure to potentially hazardous materials	Initiate coordination with lead regulatory agencies before impacts to regulated facilities occur.	Environmental Manager, Project Engineer	Final design and Construction
149.	Parks and Recreation	Visual impacts to Glenwood Hot Springs visitors and Colorado River recreationists	CDOT will incorporate aesthetic treatments in the design of bridge elements to reflect the materials and architectural style of the surrounding historic structures.	Staff Historian, Landscape Architect	Final design and construction
150.	Parks and Recreation	Parking impacts to Glenwood Hot Springs	CDOT will continue coordinating with the Glenwood Hot Springs as part of the right-of-way acquisition process to identify a solution to compensate or replace permanent parking impacts in compliance with the Uniform Act.	ROW Manager, Project Engineer	Final design and construction
151.	Parks and Recreation	Temporary impacts at park access	CDOT will coordinate with the City School Board about the regrading of the Vogelaar Park access road before and after implementation of the SH 82 Detour to avoid conflicts with large events that may be planned in the park or ballfield.	Project Engineer	Final design and construction
152.	Parks and Recreation	Temporary impacts at park access	Temporary barriers planned to be placed at Pitkin Avenue and School Street during detour will not be placed until the grade modifications on the Vogelaar Park access road are completed. Access to Vogelaar Park will remain open from 8th Street on the north side of the park while barriers are in place.	Project Engineer	Final design and construction

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153.	Parks and Recreation	Temporary impacts at park access	When the new Grand Avenue Bridge is reopened, the SH 82 Detour will be removed and the driveway leading to Vogelaar Park will be regraded to match the restored 8th Street grade.	Project Engineer	Final design and construction
154.	Parks and Recreation	Temporary traffic impacts to park visitors	Measures that CDOT will undertake to manage the SH 82 Detour will help mitigate the indirect traffic effects experienced by Whitewater Activity Area and Vogelaar Park and Veltus Park users during the full bridge closure.	Project Engineer	Final design and construction
155.	Parks and Recreation	Temporary impacts to river recreationists during construction	CDOT will coordinate with the U.S. Forest Service and river outfitters to minimize temporary impacts, discussing measures such as: • Methods to give advance notice of channel-disturbing activities so anglers can avoid unclear or muddy sections of the Colorado River. • Management of river users through the construction site, including measures to keep river users from encountering culvert openings (if any) and to minimize turbulent water or backwater conditions. This will address times of critical construction activities, such as bridge demolition and girder placement. • Management of recreational boat take-out during river closures, including locations and notification. CDOT will include measures to address river impacts in its Public Information Program for the project.	Public Involvement, Project Engineer	Final design and construction
156.	Pedestrian and Bicycle Facilities	Changes in street crossings	Use prominent signage to direct bicyclists and pedestrians around the roundabout.	Project Engineer	Final design and construction
157.	Pedestrian and Bicycle Facilities	Changes in circulation patterns	Install new signage to direct users to new recreational trail connections. Signage content, style, and location will be coordinated with the City.	Project Engineer	Final design and construction

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158.	Pedestrian and Bicycle Facilities	Safety for pedestrian underpass/tunnel connection users	Install lighting in the new 150-foot underpass and wider openings/approaches to improve safety and security for users.	Project Engineer	Final design and construction
159.	Pedestrian and Bicycle Facilities	Safety for sidewalk and pathway users during construction	Provide construction fencing to protect pedestrians and bicyclists from construction areas.	Project Engineer	Final design and construction
160.	Pedestrian and Bicycle Facilities	Interruption of connectivity during pedestrian bridge replacement	Maintain connectivity during construction. Early in the project, a five-foot sidewalk with barrier will be built on or adjacent to the existing Grand Avenue Bridge. The existing pedestrian bridge will be removed and the new bridge built adjacent to the existing Grand Avenue Bridge. Temporary access will be provided on the northern and southern touchdown points of the pedestrian bridge to maintain ADA access from the new pedestrian bridge to the adjacent sidewalks until permanent connections are completed.	Project Engineer	Final design and construction
161.	Pedestrian and Bicycle Facilities	Closures and detours at 6th Street/Laurel Street Streets roundabout	Provide detours to maintain pedestrian connectivity at all times to the businesses. Pedestrian routes will be kept open to the extent practical, but temporary detours will be necessary during parts of the construction.	Project Engineer	Final design and construction
162.	Pedestrian and Bicycle Facilities	Changes to trail access	Keep the North River Street and 7th Street on-road bicycle routes open to the extent feasible, although temporary detours will be necessary during parts of the construction. Detour routes for North River Street could include existing bike routes/trails both north and west of the construction area. Detour routes for 7th Street could include 8th Street or 9th Street downtown. SH 82 signal timing, including pedestrian phases, will be adjusted for the detour, and will provide adequate time for pedestrians and bicyclists to cross SH 82.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
(Underlined text indicates changes made since distribution of the EA)

Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
163.	Pedestrian and Bicycle Facilities	Changes to trail access	Access to the Two Rivers Trail will be kept open to the extent practical, but temporary detours will be necessary during construction. Detour routes could include a temporary sidewalk or a detour across the Colorado River south to the Roaring Fork Trail to 7th Street, and then back across the pedestrian bridge.	Project Engineer	Final design and construction
164.	Pedestrian and Bicycle Facilities	Access changes and closures for SH 82 Detour	Provide an ADA accessible ramp and sidewalk connecting the on-road bicycle route on 7th Street to the ramp leading to the River Trail. A sidewalk will be provided on the south side of 7th Street connecting pedestrians to the 8th Street intersection to the existing sidewalk under the railroad bridge. Pedestrians will be directed to use the sidewalk on the north side of 8th Street. When the Grand Avenue Bridge is reopened, use of sidewalks on the south side of 8th Street will be restored, and all existing pedestrian ramps along 8th Street will be restored to their original location.	Project Engineer	Final design and construction
165.	Pedestrian and Bicycle Facilities	Temporary 7th Street closure during critical overhead work	Pedestrian access will be maintained along 7th Street during the approximate 90-day bridge closure via protected overhead pedestrian structures.	Project Engineer	Final design and construction
166.	Pedestrian and Bicycle Facilities	Temporary sidewalk closures and detours during construction	Use signage to direct pedestrians and bicyclists to temporary sidewalk connections.	Project Engineer	Final design and construction
167.	Pedestrian and Bicycle Facilities	Impacts to existing pedestrian crossings along detour routes	CDOT will develop a Pedestrian Plan in coordination with the City to maintain safe pedestrian connections during operation of the construction detours.	Project Engineer	Final design and construction
168.	Energy	Energy consumption from new lighting fixtures	Incorporate lighting fixtures that minimize energy use in the design of the Build Alternative, in compliance with CDOT specifications and local light ordinances.	Project Engineer	Final design and construction

TABLE 3-2. SUMMARY OF IMPACTS AND MITIGATION MEASURES
(Underlined text indicates changes made since distribution of the EA)

Mitigation Commitment #	Mitigation Category	Impact	Mitigation Commitment	Responsible Branch	Timing
169.	Energy	Energy consumption during construction activities	CDOT will require contractors to implement an energy plan that will consider several construction energy conservation measures. These could the following: • Limit construction equipment idling. • Locate construction staging areas close to work sites to minimize travel time. • Use cleaner and more fuel-efficient construction equipment and vehicles. • Consolidate material delivery whenever possible to ensure efficient vehicle use. • Promote employee carpooling.	Project Engineer	Final design and construction
170.	Archaeological Resources	Unanticipated archaeological discoveries during construction	If any unanticipated archaeological resources are encountered during construction, ground-disturbing activities in the area of the find will immediately cease, and the CDOT Staff Archaeologist will be notified immediately to assess their significance and make further mitigation recommendations.	Project Engineer, Staff Archaeologist	Final design and construction
171.	Paleontological Resources	Unanticipated paleontological discoveries during construction	If any subsurface bones or other potential fossils are found by the construction contractor during construction, work in the immediate area will cease immediately, and the CDOT Staff Paleontologist will be contacted to evaluate the significance of the find. Once salvage or other mitigation measures (including sampling) is complete, the CDOT Staff Paleontologist will notify the construction supervisor that paleontological clearance has been granted.	Project Engineer, Staff Paleontologist	Final design and construction

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3.3 Permit Requirements

Table 3-3 lists the permits and coordination activities that are anticipated to be required to support construction of the Build Alternative at this time, and may change during final design and construction.

TABLE 3-3. PERMIT REQUIREMENTS FOR BUILD ALTERNATIVE

Permit	Applicability	Permitting Agency
Federal		
Clean Water Act Section 404 Permit	This permit is required because construction will require placement of temporary fill material below the ordinary high water mark of the Colorado River. Based on coordination with the U.S. Army Corps of Engineers (USACE) and impacts from the design developed to date, the project likely will qualify for a Nationwide Section 404 permit. CDOT will obtain Section 404 authorization prior to affecting waters of the U.S.	U.S. Army Corps of Engineers
Clean Water Act Section 402 Permit	A Section 402 Permit is required for the following activities: • Construction dewatering operations associated with such activities as utility excavation, bridge pier installation, foundation or trench digging, or other subsurface activities. • If discharge is expected to occur from a point source from mechanical wastewater treatment plants, vehicle washing, or industrial discharges. CDOT's Contractor will obtain this permit prior to any dewatering occurring.	Colorado Department of Public Health and Environment
Access control line approval	FHWA approval is required for temporary or permanent changes or breaks in interstate access control line. CDOT will obtain FHWA approval prior to construction.	Federal Highway Administration
State		
Colorado Discharge Permit System (CDPS)	A CDPS General Permit for Stormwater Discharges Associated with Construction Activity, commonly called a Stormwater Construction Permit, is required for all CDOT projects that impact one acre of land, or are part of a larger project. Prior to construction start, a Stormwater Construction Permit will be obtained. CDOT will prepare a site-specific Stormwater Management Plan that ensures that water quality of receiving waters is protected during construction.	Colorado Department of Public Health and Environment
Senate Bill 40 Certification	This certification is required for disturbance to the Colorado River banks to avoid adverse effects to waterways and adjacent riparian vegetation. CDOT will obtain this certification prior to disturbing riparian areas.	Colorado Parks and Wildlife
Air Pollutant Emission Notice	This permit includes measures to control fugitive dust. CDOT's Contractor will obtain this permit prior to construction.	Colorado Department of Public Health and Environment

TABLE 3-3. PERMIT REQUIREMENTS FOR BUILD ALTERNATIVE

Permit	Applicability	Permitting Agency
Construction Access Permit	This permit is required for temporary access needs outside the project limits. CDOT's Contractor will obtain this permit prior to accessing state rights-of-way outside of the project limits.	Colorado Department of Transportation
Demolition Permit	This permit is required for bridge and building demolition; requires an asbestos survey. CDOT's contractor will obtain this permit prior to any demolition activities.	Colorado Department of Public Health and Environment
Materials Management Plan	This plan outlines procedures followed for encounters with contaminated soils or groundwater, or hazardous materials. CDOT or its contractor will prepare this plan and it will be included in final construction plans.	Colorado Department of Public Health and Environment
State Access Permit	This permit is required for all new or modified access to SH 82. CDOT will notify property owners with existing accesses adversely affected by the Build Alternative of the proposed changes prior to modifying these accesses	Colorado Department of Transportation – Region 3 Access Manager
Local		
Intergovernmental Agreements	CDOT will secure these agreements, which are required for local maintenance requirements, ADA access requirements, and funding agreements	City of Glenwood Springs and other funding partners, such as Garfield County, and Eagle County
Other Local Permits	Other permits required by the City of Glenwood Springs as needed, such as building, utility, or survey permits needed to support project construction requirements. CDOT or its contractor will secure these permits prior to commencing related construction activities.	City of Glenwood Springs

4.0 UPDATES AND CLARIFICATIONS TO THE ENVIRONMENTAL ASSESSMENT

The SH 82/Grand Avenue Bridge EA provides the basis for this FONSI. Its conclusions are incorporated by reference with the updates and clarifications noted in this chapter.

4.1 Activities or Decisions Made Since Release of the Environmental Assessment

The Build Alternative design progressed after the EA was finalized and distributed. During this time, CDOT also has been working with stakeholders to resolve project issues, address concerns, and minimize impacts. This section describes activities and decisions made since the EA was released for public and agency review and comment. The Build Alternative description in Section 2.0 of this FONSI is consistent with these design refinements.

4.1.1 Construction

This section describes construction changes made based on design refinements and/or coordination with the Construction Manager/General Contractor (CM/GC).

- **Accelerating Bridge Construction**: The EA noted that CDOT would employ Accelerated Bridge Construction techniques. To clarify, CDOT will accelerate bridge construction, as possible, to minimize the duration of the full bridge closure by employing methods such as use of double work shifts. However, specific accelerated bridge construction techniques, such as building bridge elements off site and sliding into place, will not be employed. This is noted in Table 3-2 of this FONSI.
- **Construction Duration**: Based on January 2015 estimates, construction is anticipated to last approximately 24 to 30 months, instead of the 18 to 24 months noted in the EA. This change is based on the accelerated bridge construction phase occurring in the fall/early winter, which may potentially require remaining work to be completed the following spring. This timeframe includes an approximately 90-day full bridge closure.
- **Off-Site Bridge Construction**: The EA noted that segments of the Grand Avenue Bridge would be constructed off site through the use of pre-cast bridge elements. However, CDOT has determined that the downtown bridge unit will be cast in place instead. Cast in place construction will take more time, but will result in a more aesthetic finish.
- **Causeways:** The length of the construction causeway on the north side has been reduced from the 1,600 feet mentioned in the EA to 1,100 feet (see Figure 2-6). Also, this northern causeway will not remain in the river throughout construction, but will be constructed around August 2017 and be removed late 2017 or early 2018.
- **Paving of 6th Street for I-70 Detour**: The EA noted that CDOT would repave 6th Street along the 0.5-mile I-70 Detour route. However, CDOT has determined that the existing road surface is sufficient for the low nighttime traffic volumes expected and

the limited use (approximately 10 times) of the detour during construction; therefore, this area will not be repaved.

4.1.2 Pedestrian Bridge

Figure 2-1 reflects a design change made based on ongoing evaluation and development of construction phasing. The new pedestrian bridge will be built slightly east of the location indicated in the EA to provide sufficient room for construction. This change does not affect impacts assessed in the EA. The figure also better illustrates the location of the elevator structure and stairs at the southern pedestrian bridge connection, as well as some of the pedestrian bridge urban design elements, such as overlooks.

4.1.3 North of the River

Hot Springs Pool Parking Lot

Minor changes to the Hot Springs Pool parking lot layout were made to better accommodate parking lot traffic circulation. This included minor changes to the parking lot access points with North River Street. This is reflected on Figure 2-1.

Detention Pond

The EA anticipated use of a detention pond for water quality mitigation, but also allowed for the use of an underground vault system to address aesthetic and other concerns. Based on discussions with the City, CDOT has opted to use an in-line diversion system. The City will be responsible for maintaining this BMP; this will be included in the IGA with the City.

Removal of the detention basin will result in minor changes to the seeding planted in this area under the Build Alternative, but the terraced wall, trail, and underpass previously proposed are still included. Further, the aesthetic treatments and urban design elements currently being determined for this area in consultation with the City and other stakeholders will be included as well. Design, construction, and maintenance of more extensive landscaping within the project area may be provided by the City and/or the Downtown Development Authority (DDA) at a later date. This will be determined through CDOT's continued coordination

Rendering from EA illustrating pedestrian underpass in area planned for water quality treatment. Landscaping shown is schematic in nature as landscaping design will be completed by the City at a later date. Terraced wall, trail, and pedestrian underpass are included in the Build Alternative.

with the City and DDA. As such, landscaping illustrated in the rendering shown here is considered schematic in nature.

Pedestrian Facilities

The new maintenance access and trail connection that will link the new trail north of the I-70 off ramp to the on-road bicycle route on North River Street was initially planned to be unpaved. That access trail will now be paved.

4.1.4 South of the River

Water Quality Facilities

An underground BMP to treat runoff from the SH 82 Detour proposed in the EA would require relocation of several existing utilities, and would therefore be very costly to construct. Instead, runoff from the SH 82 Detour will drain into an existing inlet that has an outfall to the Roaring Fork River. Sediment traps will be used at the existing inlet.

4.1.5 Updates on Aesthetic Treatments and Urban Design Elements

Since the EA was distributed, design of aesthetics and urban design elements has continued in consultation with the City and other stakeholders. CDOT will include aesthetic treatments and urban design elements described in Section 3.1.4 of the EA to mitigate adverse visual impacts that will result from project construction. Also, based on design decisions that have been made to date, the Build Alternative will include the elements listed below.

- Diamond-shaped piers on both bridges.
- Stone on the piers for both bridges. A concrete finish will be used at the bottom of the bridge piers (below the stone) up to the high water line.
- Self-weathering steel or similar color for the box girders on both bridges to better blend with the natural surroundings.
- Decorative lighting fixtures on both bridges similar to existing lighting in the downtown area. Light posts on the Grand Avenue Bridge will include base pedestals designed to complement the bridge architecture.
- Monumentation at the southern end of the Grand Avenue Bridge to help provide a gateway to Glenwood Springs. The monument design will include brick exterior and lighting.
- Two planters on each side of Grand Avenue between 7th and 8th Streets to mitigate removal of streets trees in that area.
- Retaining walls in the downtown area and the most visible walls north of the river faced with cut stone. Other walls will include the Glenwood Canyon form-liner to provide consistency with walls in the Canyon.

- Aesthetic treatments at both ends of the pedestrian underpass using stone and brick. The interior of the pedestrian underpass will be well lit and include a wall coating.

Specific aesthetic treatments and design elements that will be included for the pedestrian bridge are:

- Ride-through elevator at the southern bridge access, meaning that the elevator will open on the east side at the top, and open on the west side at the bottom. This eliminates the need for bicyclists and strollers to turn around inside the elevator car. The elevator tower and stair structure will include stone, brick, glass, and clay tile roof to complement the pedestrian bridge structure and the nearby historic train station.
- Four overlooks on each side of the bridge. Two of the overlooks will include clay tile roof structures.
- Black wrought-iron for the approximately 4-foot 6-inch high hand rail along the length of the pedestrian bridge. For safety reasons, an approximately 7-foot 10-inch tall black mesh fence is required on the hand rail over railroad and I-70. Design of the mesh fence will be compatible with the black wrought-iron hand rail.
- Screen utilities located under the pedestrian bridge to minimize visual impact.
- Design of the underside of the pedestrian bridge to deter pigeons.

Because design of the Build Alternative is ongoing, this list may not be all inclusive. Also, minor variations could occur to the design elements listed above and in Section 3.1.4 of the EA depending on continued consultation with the City and other stakeholders during the ongoing final design process. If minor changes in project design elements are required, CDOT will work with the City and other stakeholders in the redesign of these elements to achieve an appearance as close as possible to that portrayed in the EA and this FONSI, recognizing existing and committed funding commitments, as well as other project requirements.

Landscaping included in the project to date consists of native seeding and mulching, and conduits for future irrigation. The project will also provide brick pavers in the 6th Street/Laurel Street roundabout medians. Design, construction, and maintenance of more extensive landscaping within the project area may be provided by the City and/or the DDA. This will be determined through CDOT's continued coordination with the City and DDA.

4.1.6 Updated Build Alternative Illustrations

Certain renderings in the EA that illustrated the Build Alternative were updated to reflect more current aesthetic treatments and urban design elements that CDOT will

include in the Build Alternative. Figure 4-1 provides the updated renderings and describes the design changes shown. These design modifications do not affect the changes in overall visual quality ratings as described in Section 3.1 of the EA.

4.1.7 Shielding on Highway Bridge

The EA noted that shielding may be used on the Grand Avenue Bridge extending from just north of the railroad tracks to the intersection of Grand Avenue and 7th Street. The purpose of the shielding was to prevent splash back from the bridge, with the added benefit of providing a small noise reduction. This shielding is no longer being considered because of City concerns about long-term maintenance and performance. Also, the Glenwood Springs Historic Preservation Commission felt the shielding was inconsistent with the area's historic context and character. Elimination of the shielding will not change noise impacts from the Build Alternative.

4.1.8 Section 106 Update

Section 3.15 of the October 2014 EA documented activities and consultation undertaken by CDOT to comply with Section 106 of the National Historic Preservation Act (NHPA). This FONSI documents the Section 106 consultation that occurred after the EA was distributed on October 31, 2014, resulting in completion of the Section 106 process for this project.

CDOT held a public hearing on November 19, 2014, where effects to historic resources and proposed mitigation measures were presented for public review and comment. Please refer to Section 5.1 and Appendix A *Comments and Responses* for more information.

After the EA was completed, CDOT also consulted with the State Historic Preservation Officer (SHPO) and other Section 106 consulting parties (City of Glenwood Springs Historic Preservation Commission, Garfield County Board of County Commissioners, Frontier Historical Society, and Colorado Preservation, Inc.) in letters dated February 27, 2015 regarding the following:

- Minor change to the historic boundary for the Denver & Rio Grande Railroad – Aspen Branch (Site #5GF.1661.7) to include the western leg of the wye (see Figure 4-2).
- Minor changes to the Area of Potential Effect (APE) boundary to encompass the historic boundaries of the Denver & Rio Grande Railroad (Site #5GF.1000.7) and Denver & Rio Grande Railroad – Aspen Branch (Site #5GF.1661.7) (see Figure 4-2).

FIGURE 4-1. UPDATED BUILD ALTERNATIVE ILLUSTRATIONS

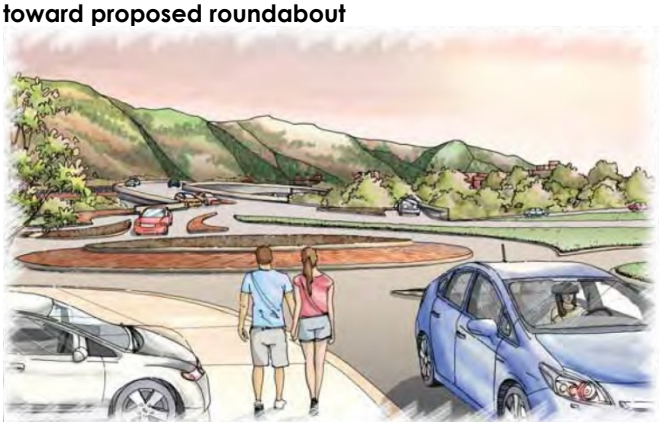
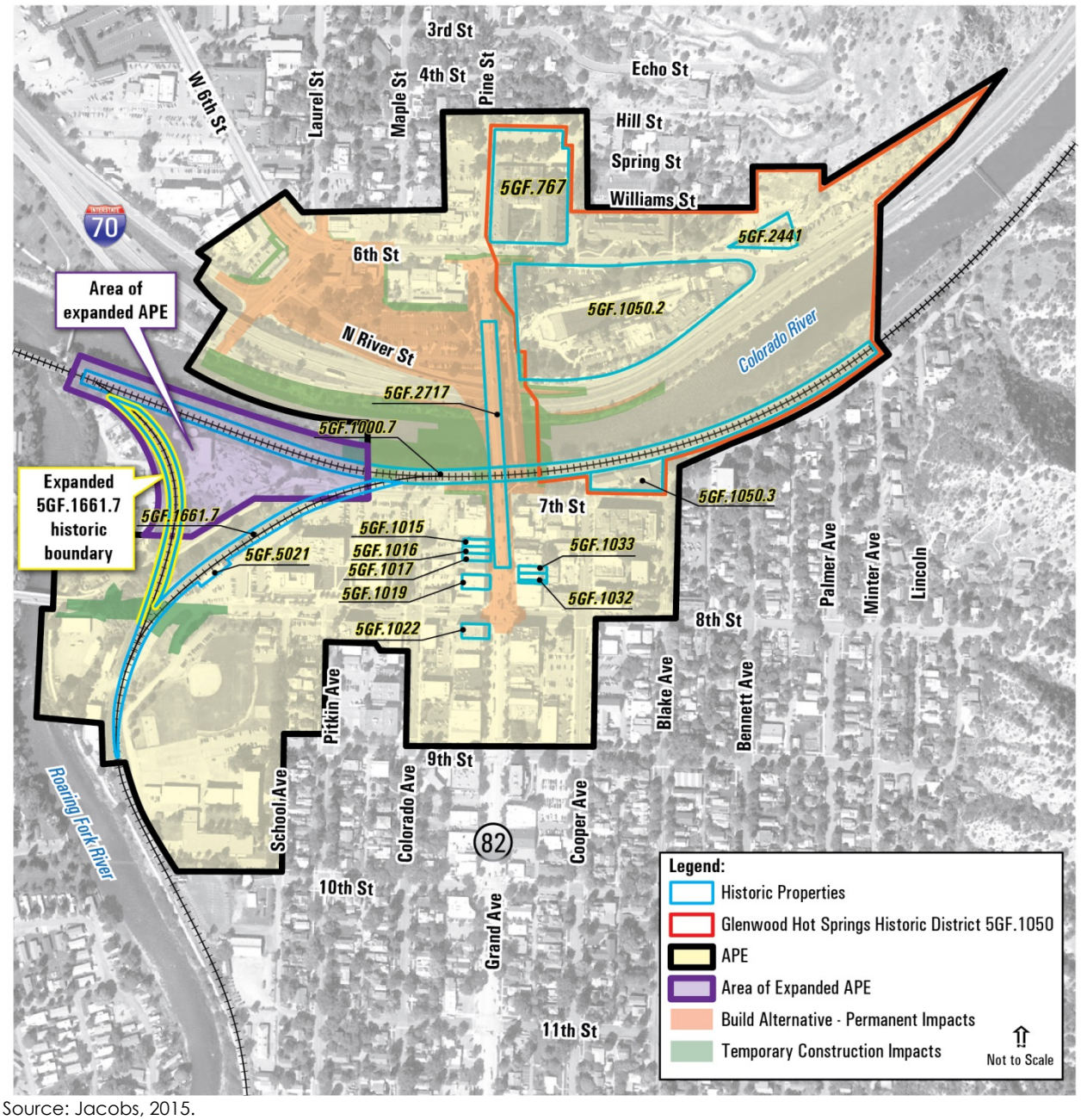
Rendering of Grand Avenue Auto and Pedestrian Bridges Landscape Unit looking east from Exit 116 off ramp  Source: Jacobs 2014.	Design changes shown include: • Constant depth bridge girders • Self-weathering steel girders • Pier shape and aesthetic treatment • Solid barrier
Viewpoint HS – North River Street looking southwest toward Grand Avenue Bridge  Source: Jacobs 2014.	Design changes shown include: • Constant depth girders • Self-weathering steel girders • Overlooks with tile roofs • Black wrought-iron handrails • Black mesh fencing on handrails where bridge crosses over railroad and I-70
Viewpoint LA – 6th Street/Laurel Street looking southeast toward proposed roundabout  Source: Jacobs 2014.	Portrays a lower level of landscaping in roundabout and medians (see Section 4.1.5 for discussion on more extensive future landscaping)

FIGURE 4-2. AREA OF POTENTIAL EFFECT



Source: Jacobs, 2015.

- Updated effect determinations for three historic properties where modifications to the easements were required (Glenwood Hot Springs Historic District [Site #5GF.1050], Glenwood Hot Springs Bathhouse/ Natatorium [Site #5GF.1050.2], and Denver & Rio Grande Railroad Tracks [Site #5GF.1000.7]) based on more detailed design (see Figure 4-3). CDOT determined these changes will be minor and the Build Alternative will still result in no adverse effect to these resources. Further, FHWA has made a *de minimis* finding for the easements based on these no adverse effect determinations (see Chapter 6 for more information).
- Additional information about the replacement of the pedestrian bridge that became available and description of the bridge's major design elements.
- The use of dual elevators/stairway and utility room at the southern pedestrian bridge connection. CDOT determined that these design elements will result in no adverse effect to the Denver & Rio Grande Railroad Station (Site #5GF.1050.3) and the Glenwood Hot Springs Historic District (Site #5GF.1050).

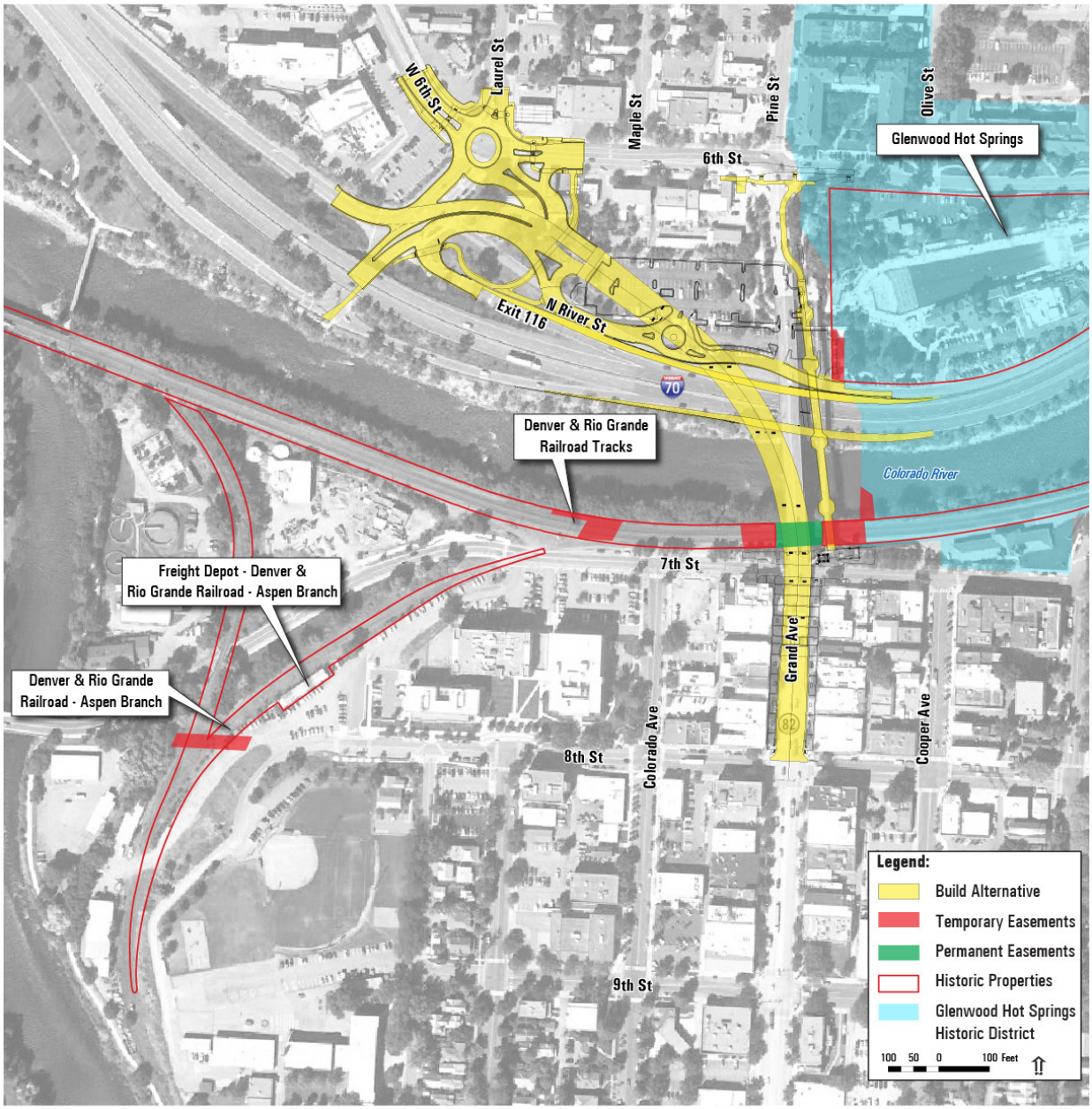
CDOT requested SHPO's concurrence with the determinations of effect described above, and comments from the other historic consulting parties.

On March 11, 2015, the SHPO concurred with the changes noted above. Concurrence on determinations of effect was received from Colorado Preservation, Inc. on March 3, 2015, and from the Glenwood Springs Historic Preservation Commission on March 16, 2015.

Because the Build Alternative will result in an adverse effect to historic properties, on March 26, 2015, FHWA provided Documentation for Finding of Adverse Effect to the Advisory Council on Historic Preservation (ACHP), and invited the ACHP to participate in Section 106 consultation for the project. The ACHP responded on April 21, 2015 and declined to participate in consultation for the project.

Section 3.15.3 of the EA noted that FHWA, CDOT, and SHPO were required to enter into a Memorandum of Agreement (MOA) to resolve the adverse effects to historic properties determined through the Section 106 process. FHWA, CDOT, SHPO, and the U.S. Army Corps of Engineers (USACE) have executed an MOA that outlines mitigation commitments and responsibilities of the MOA parties to resolve the adverse effects. The

FIGURE 4-3. TEMPORARY AND PERMANENT EASEMENTS – HISTORIC PROPERTIES



Source: Jacobs, 2015.

USACE is an MOA signatory because the MOA addresses the USACE's mitigation commitments required under Section 106 for the Section 404 Permit. CDOT has been consulting with the City's Historic Preservation Commission for this project; however, because the Historic Preservation Commission is an advisory board to the City, the City will be the signatory on the MOA.

CDOT consulted with all MOA signatories in the development of the MOA. In April 2015, the City of Glenwood Springs Historic Preservation Commission provided comments regarding mitigation measures included in the agreement. CDOT continued to consult with the Historic Preservation Commission and City Council through April and May 2015 to address their concerns regarding mitigation commitments in the MOA, which included providing responses to their comments and meeting with City Council. The consultation resulted in agreement amongst the MOA parties, and the MOA was finalized and signed in May 2015.

Mitigation commitments in the MOA include preparation of Level II archival documentation for the Glenwood Springs Viaduct/SH 82/Grand Avenue Bridge (Site #5GF.2717) and installation of interpretive signs. To resolve the adverse effect to the Silver Club Building (Site #5GF.1015), Palace Hotel (Site #5GF.1016), Parkison Building (Site #5GF.1017), Springs Restaurant/Doc Holliday Tavern Site (Site #5GF.1033), Dougan Block (Site #5GF.1019), and the Ore Sample Room (Site #5GF.1032), archival photography will be prepared to document the existing setting of these properties, and urban design and aesthetic treatments will be included in the Build Alternative. Please refer to the executed MOA in Appendix C *Agency Coordination* of this FONSI for more information. Referenced correspondence can be found in Appendix C Agency Coordination of this FONSI.

4.1.9 Right-of-Way Requirements Update

Table 3-11 of the EA listed parcels requiring property and easement acquisitions under the Build Alternative. Design modifications made since completion of the EA resulted in minor changes to those right-of-way requirements, as summarized below:

- **Parcel #3**: This parcel is now owned by JayR, LLC; right-of-way requirements for this parcel have not changed.
- **Parcel #12**: The approximate 0.07-acre permanent easement is no longer required, and the 0.51-acre temporary easement was slightly increased to approximately 0.579 acre.
- **Parcel #13**: The approximate 0.13-acre permanent easement is no longer required, and the 0.11-acre temporary easement slightly increased to approximately 0.20 acre.
- **Parcel #14**: The approximate 0.07-acre permanent easement is no longer required, and the 0.19-acre temporary easement was slightly increased to approximately 0.29 acre.

- **Parcel #15**: An approximate 0.001-acre temporary easement for construction activities will be required at the property located in the southwest corner of the Grand Avenue/7th Street intersection that is owned by Douglas Cushman Living Trust LLC. This parcel and temporary easement was not noted in the EA.

As a result of the right-of-way changes listed above, acquisitions and permanent and temporary easements required for the Build Alternative will now affect 15 parcels instead of the 14 parcels noted in the EA. Further, construction activities will now require approximately 4.28 acres from 14 parcels, instead of the 4.02 acres from 13 parcels noted in the EA.

4.2 Clarifications or Corrections to the Environmental Assessment

The analysis conducted for the EA was based on a preliminary level of design. This allowed for flexibility as design continued and CDOT worked to resolve project issues and further minimize impacts. Table 4-1 provides clarifications to the EA, organized by resource in the same order that they appear in Chapter 3 of the EA. The mitigation measures in Table 4-1 are included in Table 3-2 of this FONSI.

TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Visual Resources		
Section 3.1.3 Visual Quality Rating Changes for Selected Viewpoints, Table 3-6	Page 3-12	The Viewpoint GA rendering showed street trees along Grand Avenue and a see-through railing-type barrier on the Grand Avenue Bridge under the Build Alternative. To clarify, the updated design calls for permanent removal of the street trees in this block and a solid barrier on the Grand Avenue Bridge, resulting in a noticeable visual change for this viewpoint. These changes will reduce the unity rating for this viewpoint from a moderate/average rating to a moderately low rating; however, the overall visual quality of this view will remain in the moderate/average range. Viewer response to these visual changes is predicted to be negative.
Section 3.1.4 Visual Mitigation	Page 3-16 and Table 3-28	CDOT will employ the following measures to mitigate the new visual impacts resulting from permanent street tree removal on Grand Avenue and use of a solid barrier on the Grand Avenue Bridge: • CDOT will install two planters on each side of Grand Avenue between 7th and 8th Streets. • CDOT will include aesthetic treatments on outside edge of solid barrier on highway bridge, as determined through ongoing coordination with the City and stakeholders, as described in Section 4.1.5.
Section 3.1.4 Visual Mitigation	Page 3-16 and Table 3-28	This section includes a commitment to preserve existing vegetation and revegetate riverbanks with native species. Add this mitigation measure: "Preserve urban street trees where practicable. Where permanent street tree removal is necessary, CDOT will work with the City and other stakeholders to identify measures to mitigate the permanent tree loss. Any trees removed on City land that are not replaced by the project will be mitigated through reimbursement to the City."

TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Section 3.1.4 Visual Mitigation	Page 3-17 and Table 3-28	This section includes a commitment to comply with CDOT, Garfield County, and City lighting design standards. Remove Garfield County from this mitigation measure because Garfield County lighting design standards do not apply to this project.
Transportation		
Section 2.4.2, SH 82 Detour, Downtown Grid	Page 2-35	This section lists elements of the "square about." Add to list: "Temporary barriers will be placed at Pitkin Avenue and School Street to prevent right turns from 8th street; an outlet will be left for northbound local traffic from those streets to turn onto 8th Street. These barriers will not be placed until the grade modifications on the Vogelaar Park access road are completed. Access to Vogelaar Park will remain open from 8th Street on the north side of the park while barriers are in place " Figure 2-4 shows these barrier locations.
Section 3.2.1, Transportation Existing Conditions, Roadways	Page 3-23	This section lists major roadways in the study area. Add the following streets to the list: Pitkin Avenue, Colorado Avenue, Blake Avenue, and Cooper Avenue.
Section 3.2.2 Transportation Impacts, No Action Alternative	Page 3-31	This section describes transportation impacts from the No Action Alternative. Add this statement: "The risks of bridge failure described in Sections 1.4.1 and 1.4.2 of the EA would remain under the No Action Alternative."
Section 3.2.2 Transportation Impacts, No Build Alternative, Access Impacts	Page 3-36	Regarding access changes under the Build Alternative, add this impact: "The restriction of the River Road access to right-in/right-out onto SH 82 will cause some out of direction travel on North River Road and on 6th Street east of the Grand Avenue /Pine Street intersection. Most of this traffic will consist of exiting Hot Springs Pool traffic destined for I-70 or West 6th Street. Traffic volumes will vary throughout the year based on Hot Springs Pool traffic, but will peak at about 50 vehicles per hour, or less than 1,000 vehicles per day in summer months."
Section 3.2.2 Transportation Impacts, Build Alternative, Transit Impacts	Page 3-39	This section notes that CDOT will coordinate with RFTA to determine whether to eliminate or relocate the bus stop at 6th and Maple. To clarify, CDOT will also coordinate with the City in this effort.
Section 3.2.2, Transportation Impacts, Build Alternative	Page 3-39	This section states that removal of the Grand Avenue wing street will require rerouting RFTA buses to either Cooper Avenue or Colorado Avenue. Add this statement: "Depending upon how buses are rerouted, up to two parking spaces may be removed to accommodate turning buses."
Section 3.2.2, Transportation Impacts, Build Alternative	Page 3-39	This section describes impacts from the removal of the Grand Avenue wing street. Add this statement: "The closure of the Grand Avenue wing street will also result in the loss of five parking spaces under the existing bridge."
Section 3.2.2, Transportation Impacts, Build Alternative	Page 3-40	This section describes impacts to RFTA bus routes during construction. To clarify, the Ride Glenwood Springs bus route will also be impacted during construction.

TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Section 3.2.3, Transportation Mitigation	Page 3-41 and Table 3-28	This section describes measures to mitigate traffic impacts along Midland Avenue during full bridge closure. Add this mitigation measure: "To discourage use of Midland Avenue between 8th and 27th Streets as an alternate route, signing to discourage the use of this route will be installed and the signal timing at 8th and Midland Avenue will favor the official detour route, making the Midland Avenue route (27th to 8th) less attractive for cut-through drivers. CDOT will adapt the TDM plan to changing traffic conditions as needed and based on coordination with the City."
Section 3.2.3, Transportation Mitigation, Downtown Grid	Page 3-42 and Table 3-28	This section states that a temporary signal will be installed at the 8th Street and Colorado Avenue intersection to facilitate pedestrian crossings and address higher traffic volumes. For clarification, CDOT will coordinate this and other design details of the detour with the City.
Section 3.2.3, Transportation Mitigation, Travel Demand Management Measures	Page 3-42 and Table 3-28	This section lists TDM measures that could be implemented to reduce travel demand during the full bridge closure. To clarify, some of the measures listed would require non-CDOT funding to implement, such as enhanced transit and bike sharing. Therefore, CDOT cannot specify which elements would be implemented at this time. CDOT commits to working with stakeholders, including RFTA and the City, to identify and pursue outside funding for specific TDM measures and implement other appropriate measures such as those listed.
Section 3.2.3, Transportation Mitigation, Travel Demand Management Measures	Page 3-43 and Table 3-28	This section lists TDM measures that could be implemented to reduce travel demand during the full bridge closure. To clarify, a pedestrian connection over the river will be maintained during construction by building a temporary five-foot attached sidewalk with barrier on the existing Grand Avenue Bridge.
Section 3.2.3, Transportation Mitigation, Travel Demand Management Measures	Page 3-43 and Table 3-28	This section lists TDM measures that could be implemented to reduce travel demand during the full bridge closure. To clarify, free or low fare pedicab (bicycle taxi) service will be provided across the bridge during the period of project construction.
Section 3.2.3, Transportation Mitigation, Travel Demand Management Measures	Page 3-43 and Table 3-28	This section lists TDM measures that could be implemented for transit users to reduce travel demand during the full bridge closure. To clarify, RFTA has plans in place to modify local bus service during construction. Also, the City is considering modifications to their existing shuttle service during construction.
Land Use		
Section 3.3.1, Land Use and Zoning, Existing Conditions, Figure 3-16 Land Use	Page 3-45	This figure illustrates existing zoning within the study area. The zoning shown in the block between School Street and Pitkin Avenue has changed from R/3 (green) to C/2 (red).

TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Social Resources		
Section 3.4.1, Social Resources Existing Conditions, Figure 3-18 Community Facilities	Page 3-50	This figure depicted locations of existing community facilities. The Glenwood Springs Branch Library has moved, and locations for the police station, the Frontier Historical Museum and Fire Station #2 have been corrected in the revised Figure 3-18 provided after this table.
Section 3.4.2, Social Resources Impacts, Build Alternative	Page 3-53	This section discusses community facility impacts. To clarify, add this statement: "The Build Alternative will remove the existing restroom located underneath the SH 82 bridge on the south side. The City has agreed to replace the restroom and is evaluating several locations. This will be included in the IGA between the City and CDOT. No other community facilities located within the study area will be displaced or relocated by the Build Alternative."
Relocation/Right-of-Way		
Section 3.5.1, Relocation/ Right-of-Way Existing Conditions	Page 3-56	This section states that much of the land north of the river is owned by the Glenwood Springs Lodge and Pool, Inc., and that CDOT and the City own transportation rights-of-way for SH 82. To clarify ownership in this area, some of the land in this area currently occupied by the existing SH 82/Grand Avenue Bridge has recognized claims by both the Hot Springs Lodge and Pool, Inc. and the City.
Section 3.5.3, Relocation/ Right-of-Way Mitigation	Page 3-60 and Table 3-28	This section describes mitigation measures for right-of-way acquisition. To clarify, add this statement: "Any existing City right-of-way that is needed for this project will be addressed in a joint use agreement with the City."
Economic Conditions		
Economic Conditions Technical Report, Section 2.2.2, Businesses South of the River, West of Grand Avenue	Page 17	This section describes businesses south of the river. To clarify, The Grind restaurant has moved from the east side of Grand Avenue to the west side, not vice-versa.
Economic Conditions Technical Report, Section 2.1.1.3 Retail, Table 2	Page 14	Table 2 lists retail and personal services employment, categorized by location. To clarify, the 197 Walmart employees listed under the "23rd to City Limits" category should be moved to the "Roaring Fork Marketplace" category. This change results in a total of 237 employees in the Roaring Fork Marketplace category and 320 employees in the "23rd to City Limits" category.
Section 3.6.2, Economic Impacts, Build Alternative	Page 3-65	This section states that CDOT has made the sidewalk/plaza area south of 7th Street under the bridge as wide and pedestrian-friendly as possible. Add this statement: "The closure of the Grand Avenue wing street will also result in the loss of five parking spaces under the existing bridge."
Section 3.6.2, Economic Impacts, Build Alternative	Page 3-69	This section describes economic impacts of the Build Alternative. Add this statement: "Contributions from local governments to support construction of the Build Alternative will redirect those funds from other governmental projects or uses."

TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Section 3.6.3, Economic Mitigation	Page 3-69 and Table 3-28	This section states that CDOT will coordinate with the Glenwood Hot Springs to identify a solution to compensate for parking impacts. To clarify, CDOT will work with the Glenwood Hot Springs to identify a solution to compensate or replace parking impacts in compliance with the Uniform Act.
Section 3.6.3, Economic Mitigation	Page 3-69 and Table 3-28	This section states that CDOT will target the full bridge closure to occur during the traditionally slower traffic times of the year. To clarify, slower traffic times typically occur during the spring and fall seasons.
Section 3.6.3, Economic Mitigation	Page 3-69 and Table 3-28	This section states that CDOT will coordinate with the DDA to develop signage directing visitors to 6th Street businesses. To clarify, CDOT will also coordinate with the City in this effort and signage will be developed in accordance with the City Wayfinding Signage Plan.
Section 3.6.3, Economic Mitigation	Page 3-70 and Table 3-28	This section states that CDOT will provide additional signage to clarify detour and access changes during construction. To clarify, CDOT will coordinate with the City to develop this signage.
Section 3.6.3, Economic Mitigation	Page 3-69 and Table 3-28	This section states that CDOT will use accelerated bridge construction techniques to minimize bridge closure time. To clarify, CDOT will expedite construction to minimize bridge closure time, as possible.
Air Quality		
Section 3.7.4, Air Quality Mitigation	Page 3-76	This section states that active construction areas and haul roads will be stabilized to suppress dust. To clarify, water and chemical stabilizers will be applied in areas away from the Colorado River.
Noise		
Section 3.8.2, Noise Impacts, Build Alternative	Page 3-81	The Traffic Noise paragraph describes noise impacts along detour routes as a result of increased traffic during construction. Add this statement: "Traffic noise could also increase along other downtown streets (e.g., Pitkin and Cooper Avenues) to the extent that detour traffic filters onto these streets."
Section 3.8.3, Noise Mitigation	Page 3-83 and Table 3-28	The second bullet on this page states that hotel vouchers will be offered to downtown residents most impacted by construction activities during nighttime hours, which are anticipated to be R17 and second-story residence on 7th Street. Modify this statement to indicate that these residences are anticipated to be Receptor R17 (located off 6th Street) and Receptors R32a-R32f (located off 7th Street).
Section 3.8.3, Noise Mitigation	Page 3-83 and Table 3-28	The last bullet on this page states "Limit construction activities adjacent to noise-sensitive receptors when they are most sensitive, as practical and feasible. To clarify, this mitigation measure was modified to state "Minimize noisy construction activities adjacent to noise-sensitive receptors at times when receptors are most sensitive during nighttime hours, as practical and feasible."
Section 3.8.3, Noise Mitigation	Page 3-84 and Table 3-28	The sixth bullet on this page states that back-up alarm noises on construction vehicles in construction areas will be minimized where practical and feasible. To clarify, back-up alarms will be minimized to the extent allowed by federal Occupational Safety and Health Administration (OSHA) and state requirements.

TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Water Resources and Water Quality		
Section 3.9.3, Water Resources and Water Quality Mitigation	Pages 3-90 and 3-91, and Table 3-28	This section discusses stormwater management infrastructure. To clarify, the underground BMP on the south side of the river downtown will be located on a city street and therefore will be maintained by the City. Further, the City has agreed to maintain the in-line diversion system BMP on the north side of the river. This will be included in the IGA with the City. Additional stormwater will be routed via existing inlets and storm sewers to the Colorado River.
Section 3.9.3, Water Resources and Water Quality Mitigation	Page 3-93 and Table 3-28	This section discusses measures to mitigate water quality impacts during construction. Add the following mitigation measure: Runoff from the SH 82 Detour will be drained into an existing inlet that has an outfall to the Roaring Fork River. Sediment traps will be used at the existing inlet.
Section 3.9.3, Water Resources and Water Quality Mitigation	Page 3-93 and Table 3-28	This section states that equipment refueling will be done within designated refueling containment areas located away from the Colorado River. To clarify, no refueling of construction equipment will occur within 50 feet of the rivers.
Wetlands and Waters of the United States		
Section 3.10.2, Wetlands and Waters of the United States Impacts	Page 3-96	This section stated that construction causeways would result in approximately 1.33 acres of temporary fill below the Colorado River's Ordinary High Water Mark. Because of redesign of the northern causeway and minimization measures, this has been reduced to 1.20 acres. Also, the northern causeway will be removed after approximately four to five months and not remain in the river throughout the construction phase.
Vegetation and Noxious Weeds		
Section 3.12.3, Vegetation and Noxious Weeds Mitigation	Page 3-102 and Table 3-28	This section noted that disturbed areas will be revegetated with native species. To clarify, disturbed riparian areas will be replanted with native species. Other disturbed areas will be revegetated with native seeding.
Wildlife and Aquatic Species		
Section 3.13.3, Wildlife and Aquatic Species Mitigation	Page 3-106 and Table 3-28	This section noted that in no instance will construction activities or equipment be allowed in flowing water during the October 1-November 30 Brown Trout spawning season. Based on continued coordination with Colorado Parks and Wildlife, this seasonal restriction is no longer required.
Parks and Recreation		
Section 3.17.1, Parks and Recreation Existing Conditions	Page 3-128	This section describes existing recreation facilities within the study area. Add the Glenwood Springs Whitewater Activity Area to these facilities. Although outside the study area, that facility will be affected by traffic during full bridge closure. The Whitewater Activity Area was built in 2008 on the Colorado River immediately off I-70 at exit 114 just east (upstream) of Midland Avenue. The facility includes a small parking lot on Devereux Avenue and is a popular destination for paddling enthusiasts, who primarily use it from May through September.
Section 3.17.2, Parks and Recreation Impacts	Page 3-133	Add traffic impacts to the Whitewater Activity Area as follows: "Whitewater Activity Area visitors will experience a temporary increase in traffic along the SH 82 detour route during the approximate 90-day bridge closure, with traffic volumes returning to preconstruction conditions after the detour is no longer in use. Pedestrians and park users crossing Midland (via existing crosswalk) will deal with more traffic during the bridge closure."

TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Section 3.17.3, Parks and Recreation Mitigation	Page 3-133 and Table 3-28	This section states that CDOT will coordinate with the Glenwood Hot Springs to identify a solution to compensate for permanent parking impacts. To clarify, CDOT will work with the Glenwood Hot Springs to identify a solution to compensate or replace parking impacts in compliance with the Uniform Act.
Section 3.17.3, Parks and Recreation Mitigation	Page 3-133 and Table 3-28	Add this mitigation measure: "Measures that CDOT will undertake to manage the SH 82 Detour will help mitigate the indirect traffic effects experienced by Whitewater Activity Area users during the full bridge closure."
Section 3.17.3, Parks and Recreation Mitigation	Page 3-133 and Table 3-28	Add this mitigation measure: "Temporary barriers planned to be placed at Pitkin Avenue and School Street during detour will not be placed until the grade modifications on the Vogelaar Park access road are completed. Access to Vogelaar Park will remain open from 8th Street on the north side of the park while barriers are in place."
Section 3.17.3, Parks and Recreation Mitigation	Page 3-133 and Table 3-28	This section discusses development of a Construction River Use Plan, in coordination with others, to mitigate temporary impacts to river recreationists. To clarify, CDOT will not prepare a Construction River Use Plan. Rather, CDOT will coordinate with the U.S. Forest Service and river outfitters on methods to minimize impacts, and will include appropriate information in CDOT's Public Information Program for the project.
Pedestrian and Bicycle Facilities		
Section 2.3.4, Pedestrian and Bicycle Connections	Page 2-23	This section noted the elevator option for the pedestrian bridge received the greatest amount of City and stakeholder support. To clarify, elevators received the greatest amount of City support as represented by City Council. City support was particularly important because the City will have to maintain the elevators.
Section 3.18.1, Pedestrian and Bicycle Facilities Existing Conditions	Page 3-137	Figure 3-33 shows planned facilities included in currently approved plans. Updates to Figure 3-33 (provided after this table) are based on City comments noting improvements made or planned since completion of those approved plans.
Section 3.18.2, Pedestrian and Bicycle Facilities Impacts	Page 3-141	This section describes changes to the "Two Rivers Trail" access. Amend to "Two Rivers Park Trail access."
Section 3.18.2, Pedestrian and Bicycle Facilities Impacts	Page 3-140	This section describes impacts to pedestrian and bicycle facilities. To clarify, add following statement: "The sidewalk west of Grand Avenue between 7th and 8th Streets will be narrowed as a result of the widening of Grand Avenue, and the established shade trees on the east and west sides of Grand Avenue will be permanently removed."
Section 3.18.3, Pedestrian and Bicycle Facilities Mitigation	Page 3-141 and Table 3-28	This section notes that CDOT will install new signage to direct users to new recreation trail connections, as funding allows. To clarify, "as funding allows" is removed, and CDOT will coordinate with the City to determine signage content, style, and location.
Section 3.18.3, Pedestrian and Bicycle Facilities Mitigation	Page 3-141 and Table 3-28	This section notes that 8th and 9th Streets could be used for detour routes for 7th Street. To clarify, add statement that SH 82 signal timing, including pedestrian phases, will be adjusted for the detour, and will provide adequate time for pedestrians and bicyclists to cross SH 82.

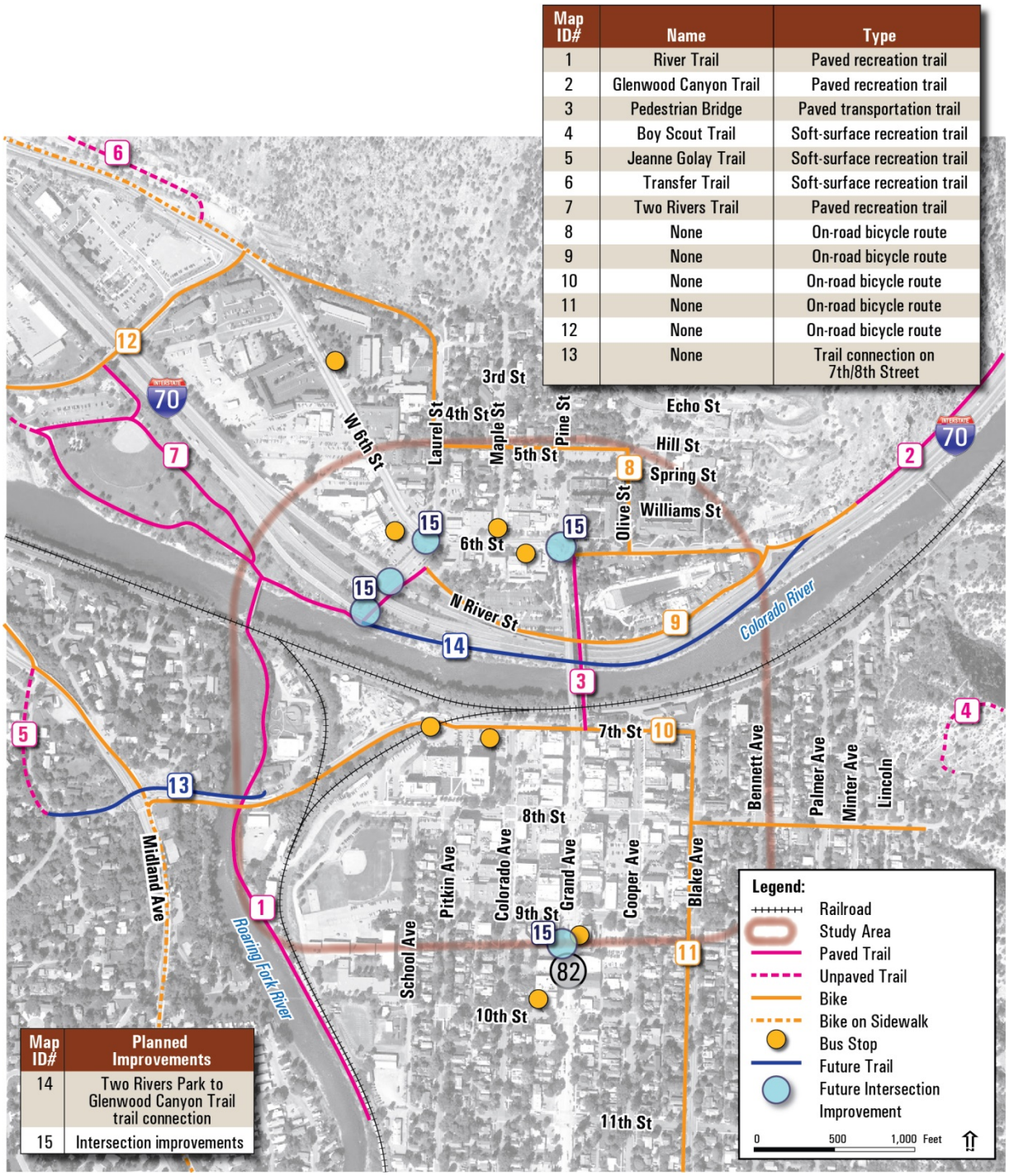
TABLE 4-1. CLARIFICATIONS OR CORRECTIONS TO THE EA

EA Section	EA Location	Clarification/Correction
Section 3.18.3, Pedestrian and Bicycle Facilities Mitigation	Page 3-142 and Table 3-28	This section describes pedestrian and bicycle mitigation during construction. Add a mitigation measure stating that pedestrian access along 7th Street will be maintained during the approximate 90-day bridge closure via protected overhead pedestrian structures.
Section 3.18.3, Pedestrian and Bicycle Facilities Mitigation	Page 3-142 and Table 3-28	This section describes pedestrian and bicycle mitigation during construction. Add a mitigation measure stating that CDOT will develop a Pedestrian Plan in coordination with the City to maintain safe pedestrian connections during operation of the construction detours.
Cumulative Impacts		
Section 3.22.4, Cumulative Impacts, Land Use	Page 3-150	This section notes that undeveloped and buildable land within Glenwood Springs is limited by topography, resulting in high real estate costs. To clarify, high real estate prices in the vicinity of Glenwood Springs also result from proximity to Aspen/Pitkin County.
Section 3.22.5, Cumulative Impacts, Reasonably Foreseeable Projects	Page 3-155	This section describes reasonably foreseeable future projects in the study area. Add the following to text: "Several private developments are proposed in northwestern Glenwood to further expand and promote Glenwood's tourist offerings. Iron Mountain Hot Spring, on the banks of the Colorado River just west of Two Rivers Park, is slated to open spring of 2015. The facility will consist of several pools, a flowing hot springs waterway, gift shop, and bathhouses. Also, farther north at the base of Iron Mountain, development plans are underway for a hotel/lodge on a 27-acre site known locally as the Holly Quarry site. The site will also accommodate an inclined cog rail to serve as another access to the Glenwood Caverns Adventure Park." See updated Figure 3-36 provided after this table.

EA FIGURE 3-18. COMMUNITY FACILITIES

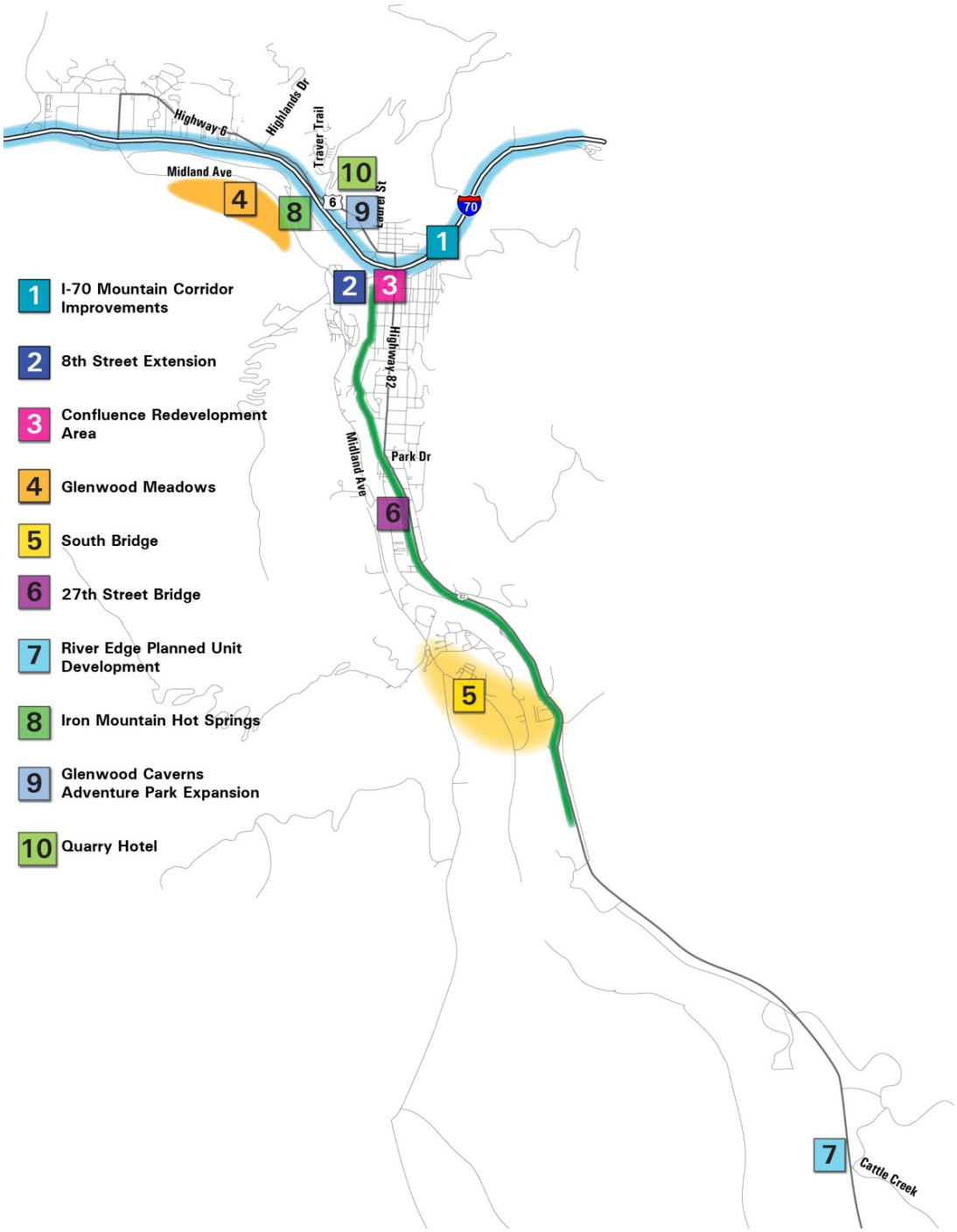
Source: Jacobs, 2015.

EA FIGURE 3-33. EXISTING AND PLANNED PEDESTRIAN AND BICYCLE FACILITIES



Source: Jacobs, 2015.

EA FIGURE 3-36. REASONABLY FORESEEABLE FUTURE PROJECTS



Source: Jacobs, 2015.

5.0 COORDINATION AND RESPONSE TO COMMENTS

Chapter 5 of the EA describes the public and agency involvement that occurred throughout the EA process. This chapter summarizes those activities and describes the public and agency involvement that occurred after completion of the EA. Public and agency comments on the EA, and responses to comments, are provided in Appendix A *Comments and Responses* of this FONSI.

5.1 Summary of Public and Agency Involvement

The EA process involved an extensive public and agency involvement program that was consistent with the CSS guidelines established as part of CDOT's I-70 Mountain Corridor CSS process. The goal of the program was to ensure widespread public and agency awareness of the project and to provide opportunities for timely public and agency input to project decision-making. Participants included interested citizens, property owners and business owners, residents, and local, state, and federal agency representatives.

CDOT initiated the SH 82/Grand Avenue Bridge project in November 2011, and held agency and public scoping meetings on November 15, 2011. Since that time, study team members have had one-on-one contact with approximately 3,000 stakeholders during the course of the study through an array of outreach activities, including:

- Open houses and workshops
- One-on-one meetings with business owners and individual stakeholders
- Meetings with elected and public officials
- Staffed displays at events such as Strawberry Days and Farmers Markets
- Civic and community group meetings, story poling events, and emergency responder meetings

CDOT used several methods to announce public meetings and distribute project information, including display advertisements in local newspapers; press releases; media briefings; CDOT's GovDelivery, Twitter, and Facebook venues; email blasts; mailings; radio/television interviews; flyers placed with downtown businesses; full-page news ads; and the project website.

The study team contacted several local-area Hispanic media organizations and groups to receive press releases and notifications of study events. Ads for public open houses offered a Spanish-speaking interpreter. Two presentations were made to the Club Rotario, and Hispanic and Spanish-speaking individuals visited the project booth at the Strawberry Days Festivals and Downtown Markets.

Consistent with the I-70 Mountain Corridor CSS process, CDOT formed several project groups, including a Project Leadership Team (PLT), Project Working Group (PWG), Stakeholder Working Group (SWG), and Issues Task Forces (ITFs), to help guide the EA process and provide input during the development and evaluation of the Build Alternative. Refer to Chapter 5 of the EA for more information.

Distribution of EA

The EA initially was made available for a 30-day public comment period from October 31, 2014 to December 1, 2014. In response to the City' request and requests by members of the public, the comment period was extended 30 days, to conclude on December 31, 2014. A public hearing was held on November 19, 2014, to present the environmental impacts and mitigation measures described in the EA and obtain public comments.

CDOT announced availability of the EA, initial comment period, and public hearing in the following ways:

- Display ads placed in the *Aspen Times* and the *Glenwood Springs Post Independent* on October 31, 2014, and November 14, 2014.
- Press release distributed on November 13, 2014.
- Emails distributed to the project contact lists on October 31, 2014.
- Postcards bulk mailed to the 81601 and 81602 zip codes (approximately 8,610 addresses) on October 30, 2014, for receipt on October 31, 2014.
- Announcement placed on the project website (www.coloradodot.info/projects/sh82grandavenuebridge) beginning on October 31, 2014.

The 30-day EA comment period extension through December 31, 2014, was announced in the following ways:

- Display ads placed in the *Glenwood Springs Post Independent* and the *Aspen Times* on November 28, 2014.
- Announcements distributed on November 26, 2014, through CDOT's GovDelivery, Twitter, and Facebook venues.
- Announcement placed on the project website on November 26, 2014.
- Email blasts to project groups and project contact lists on November 25, 2014.

Referenced advertisements, postcard, and press releases are provided in Appendix D *Public Involvement* of this FONSI.

Hard copies of the EA and supporting technical reports were made available throughout the 60-day comment period beginning October 31, 2014, for public review at the following locations:

- CDOT Headquarters, 4201 East Arkansas Avenue, Denver, CO
- CDOT Region 3, 222 South 6th Street, Room 317, Grand Junction, CO
- CDOT Region 3 Glenwood Residency, 202 Centennial Drive, Glenwood Springs, CO
- Glenwood Springs Branch Library, 815 Cooper Avenue, Glenwood Springs, CO (In response to public request at the November 19, 2014 public hearing, additional hard copies of the EA and supporting technical reports were made available at the library for check-out.)
- FHWA Colorado Division Office, 12300 West Dakota Avenue, Suite 180, Lakewood, CO

Electronic versions of the EA and supporting technical reports were placed on the project website for public review beginning October 31, 2014.

Public Hearing

CDOT held a public hearing on November 19, 2014, from 5:00 p.m. to 8:00 p.m. at the Glenwood Springs Elementary School, 915 School Street, Glenwood Springs, Colorado. There were 124 people who signed in at the hearing. The purpose of the public hearing was to present the environmental impacts and mitigation measures described in the EA and obtain public comments.

The public hearing was held in an open house format from 5:00 p.m. to 6:30 p.m. A 30-minute presentation was provided at 6:30 p.m., after which the study team took public comments. Handouts provided to attendees included the EA Executive Summary, description of methods for providing comments on the EA, and comment sheet.

During the public hearing, members of the public viewed EA information that was displayed around the room. Study team members were available to discuss the project and answer questions, and CDOT Right-of-Way staff was available to provide information about the Uniform Relocation Assistance and Real Property Acquisition Policies Act. A physical model of the project was also displayed at the hearing. Current aesthetic designs for the project were displayed, as well as information about how the project could work with a future SH 82 bypass. Further, a traffic simulation model showed traffic movements through the 6th Street/Laurel Street roundabout, and connection of SH 82 and Grand Avenue to I-70.

The 30-minute presentation summarized the project purpose and need, the EA process, alternatives screening, the Build Alternative design, project impacts, project funding,

and next steps for the project. Following the presentation, attendees were provided the opportunity to provide verbal opinions and comments about the project to the Study team and other attendees. Comments were received until approximately 8:15 p.m. A court reporter was present throughout the public hearing to record verbal comments during the entire hearing. Comment sheets were made available for attendees to complete and submit at the public hearing or submit later during the formal EA review and comment period.

The public hearing summary and sign-in sheets are provided in Appendix D *Public Involvement* of this FONSI.

5.2 Summary of Local, State, and Federal Agency Involvement

CDOT held an agency scoping meeting on November 15, 2011, to identify agency concerns or areas of analysis that will require special consideration, define the important environmental issues, identify any additional requirements, and identify the resources that should be evaluated for cumulative effects. CDOT also coordinated with individual agencies one-on-one and through the project groups formed for the project, such as the PLT and ITFs. The study team also held over 40 meetings with public officials at regular intervals during the study to provide updates on the process and obtain input on decision making.

CDOT coordinated with the following federal, state, and local agencies, and organizations throughout the EA process. The lists indicate those agencies that accepted invitations to participate in project groups, including the PLT, PWG, SWG, and ITFs.

Federal Agencies:

- Advisory Council on Historic Preservation
- Bureau of Land Management
- Federal Railroad Administration
- Natural Resources Conservation Service
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Forest Service

State Agencies:

- Colorado Department of Public Health and Environment - Hazardous Materials and Waste Management
- Colorado Department of Public Health and Environment -Water Quality Control Division
- Colorado Natural Heritage Program
- Colorado Parks and Wildlife (SWG)
- Colorado Preservation, Inc.

- Colorado Public Utilities Commission
- State Historic Preservation Officer

Local:

- City of Aspen
- City of Glenwood Springs (Cooperating Agency, PLT, PWG, SWG, ITF)
- City of Glenwood Springs Chamber (PLT, SWG, ITF)
- City of Glenwood Springs Downtown Development Authority (PLT, SWG, ITF)
- City of Glenwood Springs Fire Department (SWG)
- City of Glenwood Springs Historic Preservation Commission (PLT, SWG, ITF)
- City of Glenwood Springs Park and Recreation Department (SWG)
- City of Glenwood Springs Planning and Zoning Commission (SWG, ITF)
- City of Glenwood Springs Police Department (SWG, ITF)
- City of Glenwood Springs River Commission (SWG, ITF)
- City of Glenwood Springs Transportation Commission (SWG)
- Colorado Municipal League District 11
- Eagle County (PLT, SWG)
- Elected Officials Transportation Committee representing Pitkin County, the City of Aspen, the Town of Snowmass Village, and the Roaring Fork Transportation Authority
- Frontier Historical Society (ITF)
- Garfield County (PLT, SWG)
- Pitkin County (PLT, SWG)
- RE-1 School District Board
- Roaring Fork Transportation Authority (SWG)
- Town of Carbondale (SWG)
- Town of Newcastle (SWG)

Organizations:

- Chamber of Commerce Board
- Club Rotario
- Colorado Contractors Association
- Colorado Mountain College (SWG)
- Colorado Municipal League
- Downtown Partnership Board
- Garfield County Library (SWG)
- Glenwood Hot Springs Pool (PLT, SWG)
- Glenwood Springs Rotary Club
- Kiwanis Club
- Lions Club
- Trout Unlimited (SWG)

5.3 Comments and Responses

During the formal 60-day review period for the EA, six local, state, and federal agencies submitted comments on the EA, including the City of Glenwood Springs, the City of Glenwood Springs Community Transportation Commission, Garfield County, Colorado Parks and Wildlife, the Roaring Fork Transportation Authority, and the U.S. Fish and Wildlife Service.

Approximately 172 public comments were submitted to CDOT during the formal EA review period. This included approximately 30 verbal comments provided at the public hearing, and comment sheets, letters, and emails.

Appendix A *Comments and Responses* of this FONSI provides comments submitted during the 60-day formal review period for the EA and responses to those comments. Comments are presented on the left side of the page, and responses are provided on the right side.

All comments received were compiled and reviewed. CDOT received comments voicing support and opposition to the project. While the nature of the comments varied, several themes emerged. Table 5-1 summarizes these themes and CDOT's responses. Appendix A *Comments and Responses* of this FONSI provides the comments received and responses to each.

TABLE 5-1. GENERAL EA COMMENTS AND RESPONSES

General Comment	Response
Support the project	Comments noted.
Disagree with the Purpose and Need of this project. CDOT should not replace the Grand Avenue Bridge because it will not solve traffic problems on Grand Avenue. A SH 82 bypass/ relocation should be evaluated/built instead.	It is correct that replacing the existing bridge does not solve larger traffic or regional transportation issues, because that is not the purpose of this project. The purpose of this project is to provide a safe, secure, and effective multimodal connection from downtown Glenwood Springs across the Colorado River and I-70 to the historic Glenwood Hot Springs area. The SH 82/Grand Avenue Bridge project is about addressing the structural and functional issues with the aging bridge structure and the related connectivity deficiencies, which are detailed in Chapter 1 of the EA, and not to remove traffic from Grand Avenue. CDOT has the responsibility to maintain its highway system, which includes the Grand Avenue Bridge. The Grand Avenue Bridge project would not preclude any of the bypass options that have been studied to date.
The EA focuses on replacing existing bridge; therefore, the alternatives analysis was inadequate. The EA is a segmentation of a much larger project needed to serve the transportation needs of the Roaring Fork corridor.	The study team developed and evaluated a wide range of alternatives based on their ability to meet the project Purpose and Need documented in Chapter 1 of the EA. *FHWA Guidance for Preparing and Processing Environmental and Section 4(f) Documents* states, "The EA does not need to evaluate in detail all reasonable alternatives for the project, and may be prepared for one or more build alternatives." An objective and robust alternatives evaluation is documented in the EA and consisted of a three-tiered screening process involving almost twenty alternatives.

TABLE 5-1. GENERAL EA COMMENTS AND RESPONSES

General Comment	Response
	FHWA has determined that this project meets a specific transportation purpose and need, has independent utility (is usable even if no other transportation improvements in the area are made), and provides logical termini (rational end points of sufficient length to address the transportation need). The alternatives considered meet FHWA NEPA regulations for the meaningful evaluation of alternatives as specified in 23 Code of Federal Regulations (CFR) 771.111(f).
The Build Alternative will increase traffic and/or not address traffic needs.	The new bridge is a connection between transportation infrastructure on either side of the river that remains constant in its capacity; thus, this bridge project would not induce new traffic. The Build Alternative will meet traffic needs for the future design year of 2035. On the south side of the river, Grand Avenue's capacity is limited by its signalized intersections throughout the City. The capacity of the road system to the north (I-70, 6th Street) is also limited. This project will not add capacity to facilities that feed traffic into the area's transportation system. New intersections within the study area will function more efficiently than existing intersections and reduce traffic delay, particularly on the north side of the river. This is due to reducing vehicle conflicts and eliminating at-grade pedestrian crossings of SH 82, among other improvements.
The Build Alternative will increase speeds through downtown.	Traffic exiting I-70 will be slowed by the time it reaches the Grand Avenue Bridge due to the low-speed turns required at the bottom of the Exit 116 off ramp, which can only be negotiated at about 15 mph. Speeds over the bridge may increase slightly due to the wider lanes. The Build Alternative will be posted at 25 mph at either end of the bridge. As motorists travel south across the bridge, lane widths will taper from 12 to 11 feet at bridge touchdown points to tie into the existing roadway width to minimize impacts. This tapering, along with the stoplight at 8th Street and curvature of the bridge, should slow vehicles entering the downtown area, resulting in a traffic calming effect. However, enforcement of the 25 mph is, and will continue to be, the most effective method for maintaining lower traffic speeds downtown.
The Grand Avenue Bridge should be repaired, not replaced.	A rehabilitation alternative was evaluated that would fix the existing bridge by repairing or replacing many of the known functional and structural deficiencies. The rehabilitation alternative was dismissed from consideration for the following reasons: • Some bridge deficiencies could not be fixed without rebuilding large parts or all of the bridge. • Rehabilitating the bridge might not save money. Because so much of the bridge needs work, rehabilitation would be a massive undertaking, requiring extensive analysis, design, and major reconstruction, making the costs highly variable. • The rehabilitation alternative would have similar disruptive traffic and business impacts during construction as the other proposed alternatives, requiring long-term lane closures or even full bridge closures when replacing critical structural elements. • The rehabilitated bridge would still stand on its original piers and foundations, so it would have a shorter design life (approximately 30 years) than a new bridge, which would have a design life of 75 years.

TABLE 5-1. GENERAL EA COMMENTS AND RESPONSES

General Comment	Response
CDOT should prepare an Environmental Impact Statement (EIS). An EA is not adequate for this project.	Transportation projects vary in type, size, complexity, and potential to affect the environment. To account for this variability, three "classes of actions" prescribe the level of documentation required in the NEPA process: EISs, EAs and Categorical Exclusions (23 CFR 771.115). At the project onset, FHWA determined that an EA was the appropriate level of NEPA action for this project. In accordance with FHWA NEPA regulations, an EA is done when the significance of impacts is unknown. EISs should be completed for actions that significantly affect the environment (23 CFR 771.115). As discussed in Chapter 8 of this FONSI, FHWA has determined that the Build Alternative will have no significant impact on the human environment. This FONSI is based on the analysis presented in the attached EA and consideration of public and agency comments on the EA. Through this FONSI, FHWA has determined that preparation of an EIS is not required.
Want stronger commitment from CDOT to include aesthetic treatments vetted with stakeholders in the Build Alternative.	As noted in Section 4.1.5 of this FONSI, CDOT will include aesthetic treatments and urban design elements to mitigate adverse visual impacts that will result from project construction. Section 4.1.5 of this FONSI lists aesthetic and urban design elements that will be included in the Build Alternative based on design decisions made to date. Section 4.1.5 also notes that minor variations could occur to the design elements listed in that section depending on continued consultation with the City and other stakeholders.
Concerned about impacts to businesses during construction, particularly during full bridge closure.	CDOT has evaluated the economic impacts that would occur as a result of construction of the Build Alternative, which are detailed in Section 3.6.2 of the EA and the *Economic Conditions Technical Report* prepared for the project. CDOT is committed to minimizing impacts to local businesses during construction to the extent practicable. Please refer to the list of mitigation measures in Table 3-2 of this FONSI.
Concerned about traffic impacts during full bridge closure along detour routes.	Section 3.2 of the EA assessed impacts from the detours and full bridge closure, and listed measures that will be undertaken to minimize those impacts. Options for detour routes are limited; the detour routes described in the EA represent the most reasonable solutions to accommodate traffic during construction. Working with the City on potential detour routes resulted in the addition of the temporary 8th Street connection as a way to mitigate traffic impacts on Midland Avenue south of 8th Street. Design of the construction detours includes features to encourage their use and discourage "cut-through" traffic. In addition, the EA lists commitments to a Transportation Demand Management (TDM) plan to address traffic during construction. These commitments will continue to be developed during construction. Since the EA was distributed, CDOT has continued to work with the City and RFTA to identify transit and other TDM measures; this is an ongoing process. Also, CDOT will meet regularly with the City throughout the full bridge closure and will adapt the TDM plan to changing traffic conditions as needed. Measures to minimize impacts during construction are listed in Table 3-2 of the FONSI.

TABLE 5-1. GENERAL EA COMMENTS AND RESPONSES

General Comment	Response
CDOT is not listening and/or being responsive to public concerns.	The SH 82/Grand Avenue Bridge EA process involved an extensive public and agency involvement program, which included one-on-one contact with approximately 3,000 stakeholders since November 2011 through an array of outreach activities (refer to Comment Chapter 5 of the EA for more information). CDOT received numerous comments during the EA comment period voicing both opposition and support for the project. CDOT considers all public input received throughout the EA process, and many project design elements reflect public and stakeholder input. CDOT and FHWA consider all public input received throughout the EA process and have considered this and other pertinent data in making a decision that is in the best overall public interest. This decision was based upon a balanced consideration of the need for safe and efficient transportation; the social, economic, and environmental impacts of the proposed transportation improvement; and state and local environmental protection goals.

5.4 Public and Agency Involvement after NEPA

CDOT will continue to coordinate with the public and agencies after the NEPA phase is completed and the project moves into the final design and construction phases. For example, CDOT will continue to solicit stakeholder input on refining and finalizing the urban design elements and aesthetic treatments that will be included in the Build Alternative. CDOT also will coordinate with various agencies, including the USACE, Colorado Parks and Wildlife, and CDPHE, on permits needed for the project (see Section 3.3). CDOT will monitor compliance with the mitigation measures listed in Table 3-2 of this FONSI. CDOT will also continue to inform the public and agencies of project progress, including detours, timing, etc.

6.0 UPDATES AND CLARIFICATIONS TO THE SECTION 4(F) EVALUATION

Chapter 4 of the EA presented the Section 4(f) evaluation conducted for the project. Changes and clarifications to the Section 4(f) analysis are provided below.

6.1 Change from Temporary Occupancy Exception to a *De Minimis* Finding

As described in Section 4.5 of the EA, CDOT initially applied the Section 4(f) temporary occupancy exception, as outlined in 23 CFR 774.13 (d), for easements required by the project from three historic properties (Glenwood Hot Springs Historic District [Site #5GF.1050], Glenwood Hot Springs Bathhouse/Natatorium [Site #5GF.1050.2], and Denver & Rio Grande Railroad Tracks [Site #5GF.1000.7]). Because the nature of the easements required for these properties changed, CDOT is applying a *de minimis* use of these historic properties instead of the temporary occupancy exception. Figure 6-1 shows easements required for these historic resources.

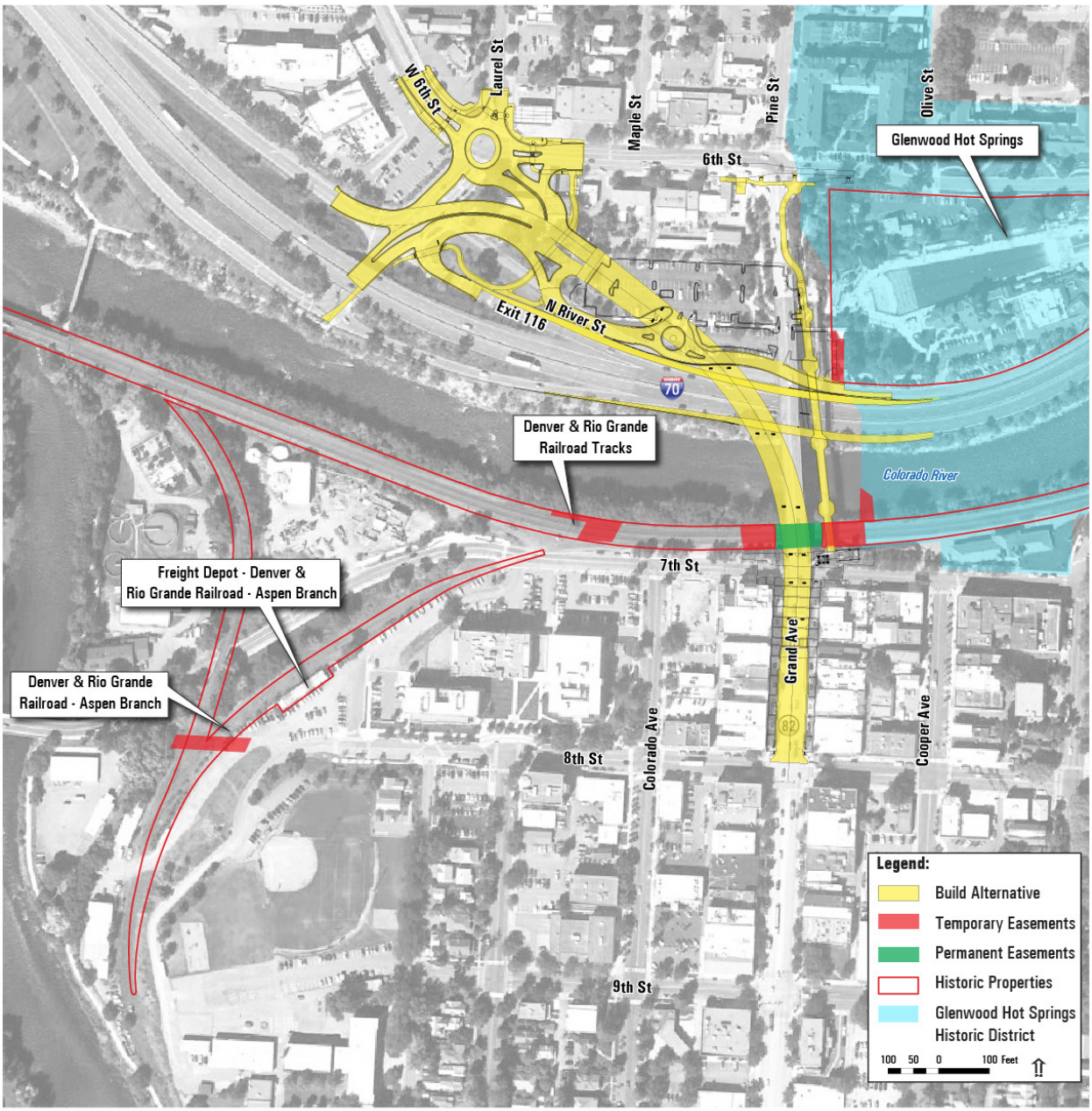
In correspondence dated February 27, 2015, the SHPO was notified that FHWA and CDOT planned to make a *de minimis* finding for the Glenwood Hot Springs District (Site #5GF.1050) and its associated resources, the Glenwood Hot Springs and Natatorium (Site #5GF.1050.2), the Denver & Rio Grande Railroad (Site # 5GF.1000.7), and the Denver & Rio Grande Railroad-Aspen Branch (Site #5GF.1661.7) and associated Freight Depot (Site #5GF.5021) due to the changes in easements required for these properties. The SHPO concurred that the project would result in no adverse effect for these resources. The historic consulting parties were also notified on February 27, 2015, of the intent to make a *de minimis* finding for these resources. The *de minimis* finding was signed by FHWA on March 24, 2015.

Referenced correspondence and signed *de minimis* finding can be found in Appendix A *Agency Coordination* and Appendix E *Section 4(f)* De Minimis *Finding*, respectively.

6.2 Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges.

As discussed in Section 4.6 of the EA, it was determined through the Section 106 process that the Build Alternative will result in an *adverse effect* to the Grand Avenue Bridge. Section 4.6 of the EA includes the Historic Bridges Programmatic Section 4(f) Evaluation prepared for the Glenwood Springs Viaduct/SH 82/Grand Avenue Bridge (Site #5GF.2717), including applicability of the programmatic evaluation, avoidance alternatives, measures to minimize harm, and coordination conducted with SHPO and historic consulting parties.

FIGURE 6-1. TEMPORARY AND PERMANENT EASEMENTS IMPACTS TO HISTORIC PROPERTIES



Source: Jacobs, 2014.

6.2.1 Determination

Based upon an examination of project documentation, circumstances, studies, and consultations as summarized in Section 4.6 of the EA, it is determined that this project meets the criteria for use of the Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges (Programmatic), and that there are no feasible and prudent alternatives for the use of the Glenwood Springs Viaduct/Grand Avenue Bridge, which is eligible to the National Register of Historic Places. FHWA has:

1. determined that the project meets the applicability criteria set forth in the Programmatic;

2. determined that all of the alternatives set forth in Findings section of the Programmatic have been fully evaluated;

3. determined that the use of the findings in the Programmatic that there are no feasible and prudent alternatives to the use of the historic bridge is clearly applicable;

4. determined that the project complies with the *Measures to Minimize Harm* section of the Programmatic; and

5. assures that implementation of the measures to minimize harm have been or will be completed

7.0 SELECTION OF THE BUILD ALTERNATIVE

FHWA, in coordination with CDOT, has determined that the Build Alternative, as described in Chapter 2 of this FONSI and Chapter 2 of the EA, is the Proposed Action. This determination is based on the analysis presented in the *SH 82/Grand Avenue Bridge Environmental Assessment and Section 4(f) Evaluation*, and consideration of comments received during the public and agency comment period. The selection of the Proposed Action incorporates all mitigation commitments described in Chapter 3 of this FONSI and all updates listed in Chapter 4 and Chapter 6 of this FONSI, including the urban design and aesthetic treatments described.

8.0 FINDING OF NO SIGNIFICANT IMPACT

The selection of the proposed alternative and the issuance of this finding are based on the analysis contained in the *SH 82/Grand Avenue Bridge Environmental Assessment & Section 4(f) Evaluation*, public comments, and our review to ensure compliance with all applicable environmental laws and executive orders. A deliberate review has been completed to ensure that impacts resulting from the selected alternative have been fully considered in the context of the Council on Environmental Quality's (CEQ's) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1500-1508). The CEQ definition of "significantly" contained at 40 CFR 1508.27 was specifically consulted and used to make this finding.

8.1 Council on Environmental Quality's Regulations

To determine whether an action will have a "significant" impact on the human environment, CEQ's regulations require consideration of both context and intensity, as described below (see 40 CFR 1508.27).

Context

Context means that "the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant."

This action is site specific, with impacts that are relatively limited and confined to the project area and its immediate surroundings. The project setting is the interstate right-of-way and historic downtown Glenwood Springs, a vibrant municipality located in the Central Mountain region of Colorado at the confluence of the Colorado and Roaring Fork River, and home of the well-known historic Glenwood Hot Springs. It is also the intersection of two major routes, SH 82 and I-70, that serve the wider region and play important roles in facilitating interstate travel and commerce. The action's purpose is mostly tailored to address acute, local needs (i.e., multimodal connectivity and bridge safety), and most of the impacts will only be experienced in the immediate project area. However, some temporary impacts could have broader implications outside of that area (e.g., travel times and behaviors, downstream water quality). As such, the significance of the impacts is evaluated with an emphasis on the localized context, with regional contexts considered when appropriate. Additionally, most impacts would be short term (18 to 24 months) and related to construction. However, some impacts, such as visual impacts, would persist over the lifespan of the infrastructure (approximately 75 years).

Intensity

Intensity refers to the severity of the impact, and identifies ten factors that should be considered in evaluating the intensity of a project's impacts and whether the impacts are substantial enough to warrant the preparation of an EIS (40 CFR 1508.27[b][1-10]).

The Build Alternative is located within an existing transportation corridor where two major routes, SH 82 and I-70, intersect. A pedestrian bridge and four-lane highway bridge are currently present in the corridor. The new four-lane highway bridge will replace an existing four-lane highway bridge. Further, detour routes will follow along existing roadways, and the detour routes have been designed to route traffic back to Grand Avenue as close as practicable to the point where traffic is diverted to the detour. The more intense impacts, such as increased traffic along detour routes and economic impacts, are temporary and will occur during the construction phase.

The factors are addressed as follows:

1. **Impacts that may be both beneficial and adverse**: The Build Alternative will have both beneficial and adverse impacts. Beneficial impacts will come as a result of addressing the project needs and include providing improved multimodal connectivity between Glenwood Springs and the Roaring Fork Valley with the historic Glenwood Hot Springs pool area and I-70; and addressing the functional and structural deficiencies of the bridge to improve public safety, including emergency service response, and reliability as a critical transportation route. The Build Alternative will also benefit the local economy, land use, recreation, and other resources, as detailed in the EA. The Build Alternative will also have some adverse effects, including removal of the historic SH 82/Grand Avenue Bridge. However, most adverse effects are temporary and related to economic and transportation impacts during construction. Over the long term, it will also result in permanent adverse visual impacts to some viewers, while improving the visual setting to others. Nonetheless, the visual quality of the study area will remain moderately high. (Section 3.1 and Table 3-1 summarize all of the Build Alternative impacts.)

2. **The degree to which the project affects public health or safety**: When complete, the Build Alternative will have a beneficial effect on public health and safety by replacing the existing substandard bridge with one that meets current design standards. Accidents are expected to decline and emergency response times will be improved, ADA access and overall walkability will be improved, and air quality will be slightly improved. While these are all important benefits to the users of these facilities, they do not affect overall public health or safety to a great or significant degree because they are relatively limited in scope.

3. **Unique characteristics of the geographical area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical area**: No prime farmlands, wetlands, wild and scenic rivers, prehistoric cultural resources, or ecologically critical areas will be affected by the project. The access road to Vogelaar Park would be temporarily impacted during construction, but park access would be maintained during construction. Refer to #8 below regarding historic resources.

4. **The degree to which the effects on the environment are expected to be highly controversial**: There is little controversy regarding the degree of the permanent environmental effects of the Build Alternative. No state or federal environmental resource agencies have disputed the environmental effects of the project or voiced opposition to the project. Although a group of individuals have strongly voiced the desire to provide an alternate SH 82 route rather than replace the Grand Avenue Bridge, this is not the type of controversy that is being queried here. Nonetheless, relocating SH 82 is a separate project with a separate purpose and need, and is not a fiscally constrained project. The economic impacts that may occur during construction, especially during the full bridge closure, are an additional area of concern that are being mitigated through expedited construction, detour routing, and a robust public involvement program. Therefore, while the Build Alternative would result in environmental impacts, those impacts are not considered highly controversial.

5. **The degree to which the effects on the quality of human environment are highly uncertain or involve unique or unknown risks**: The Build Alternative would involve replacing a highway and pedestrian bridge that are located within a constrained mountain town/resort setting with adjacent historic resources. The bridge crosses the Colorado River, which experiences a high level of recreation use and provides habitat for aquatic species. The EA fully evaluated impacts expected from implementation of the Build Alternative to these and other resources. Adverse effects to businesses during construction were documented in the EA and based on the best available information and case studies. Temporary effects from the SH 82 detour will be adaptively managed in consultation with the City to minimize effects to the human environment and reduce impacts. Placement of construction causeways in the Colorado River will temporarily increase flood risk to the river during high flow months, but these risks have been thoroughly evaluated and avoidance and minimization measures will reduce this risk. Therefore, the Build Alternative will not result in effects with a high degree of uncertain, unique, or unknown risks.

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration**: Bridge replacement projects are a category of actions that do not

normally result in a significant effect on the human environment. An EA was selected as the appropriate class of action for this project to determine if significant impacts might occur. CDOT and FHWA will continue to determine the appropriate class of action for future projects on a project-by-project basis. Therefore, this action will not set a precedent for future actions with significant effects or represent a decision in principle about a future consideration. This project will replace an existing substandard bridge. Logical project termini were thoughtfully established during project scoping. The project has independent utility and represents a reasonable expenditure of funds; it does not force additional improvements to be made to the transportation system. Therefore, this action will not establish a precedent regarding the requirements of NEPA as they will be applied to future projects.

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts**: This action has logical termini and independent utility and does not force additional transportation improvements to be made to the transportation system. The Build Alternative will not add traffic capacity for through movements and is located in a fully developed area. The project will not directly alter land use beyond the minor impacts summarized in Table 3-1. The project will neither induce substantial land use changes nor change the rate or intensity of planned growth. Mitigation measures that will be employed for water quality impacts will benefit water quality in the Colorado River. Overall, impacts from the Build Alternative, when combined with impacts from past, present, or reasonably foreseeable projects, would not result in additional cumulative impacts.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss of significant scientific, cultural, or historic resources**: This project fully evaluated whether rehabilitating the officially NRHP eligible SH 82/Grand Avenue would meet the purpose and need. It was determined that replacing the existing structure is the proposed action, which will adversely affect that resource. The Build Alternative will also have indirect adverse effects to six NRHP eligible properties in the 700 block of Grand Avenue because the proposed bridge will be slightly wider and taller in this area, but will not cause the loss of these resources. These adverse effects have been fully considered through the NHPA Section 106 consultation process, and will be mitigated through measures stipulated in the MOA between FHWA, CDOT, SHPO, and the USACE.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act**: No impacts to federally threatened or endangered species or their habitat will occur under the Build Alternative.

10. **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment**: The project does not threaten a violation of any Federal, State, or local law for the protection of the environment. All applicable permits will be acquired prior to construction.

In consideration of the foregoing factors, FHWA concludes that the impacts will not be intense or severe enough to cause significant environmental impacts that would warrant preparation of an EIS.

8.2 Conclusion

Taking into consideration both the context and intensity of the impacts as discussed above, FHWA has determined that the Build Alternative described in Section 2.3.2 of the EA and Chapter 2 of this FONSI will have no significant impact on the human environment. This FONSI is based on the attached EA (provided in Appendix B *SH 82/Grand Avenue Bridge Environmental Assessment & Section 4[f] Evaluation*), which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the Build Alternative and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an EIS is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached EA.