

Areas of Special Attention are locations or stretches along the Interstate 70 (I-70) Mountain Corridor that have been identified as having multiple or unique issues. These areas were identified by stakeholders during the Aesthetic Working Group meetings.

Addressing the various issues and integrating them into design solutions requires further understanding of stakeholder concerns, the issues, and some of the suggested solutions. These concerns, issues, and suggested solutions (when available) have been recorded and provided in a report for each Area of Special Attention.



How to Use This Report

The intent of this report is to provide to planners and designers of the I-70 Mountain Corridor a record of the discussions focused on the Downieville, Lawson, and Dumont (DLD) and Empire Junction Areas of Special Attention. This report also includes a description of the area, the goals and objectives for the area, relevant plans that must be reviewed, and the suggested process for moving forward.

This report is not an exhaustive list of alternatives and may not include recent comments and issues.

DLD and Empire Junction Information

How this Report Was Developed

DLD and Empire Junction was identified as an Area of Special Attention by the I-70 Mountain Corridor Context Sensitive Solutions (CSS) Aesthetic Working Group.

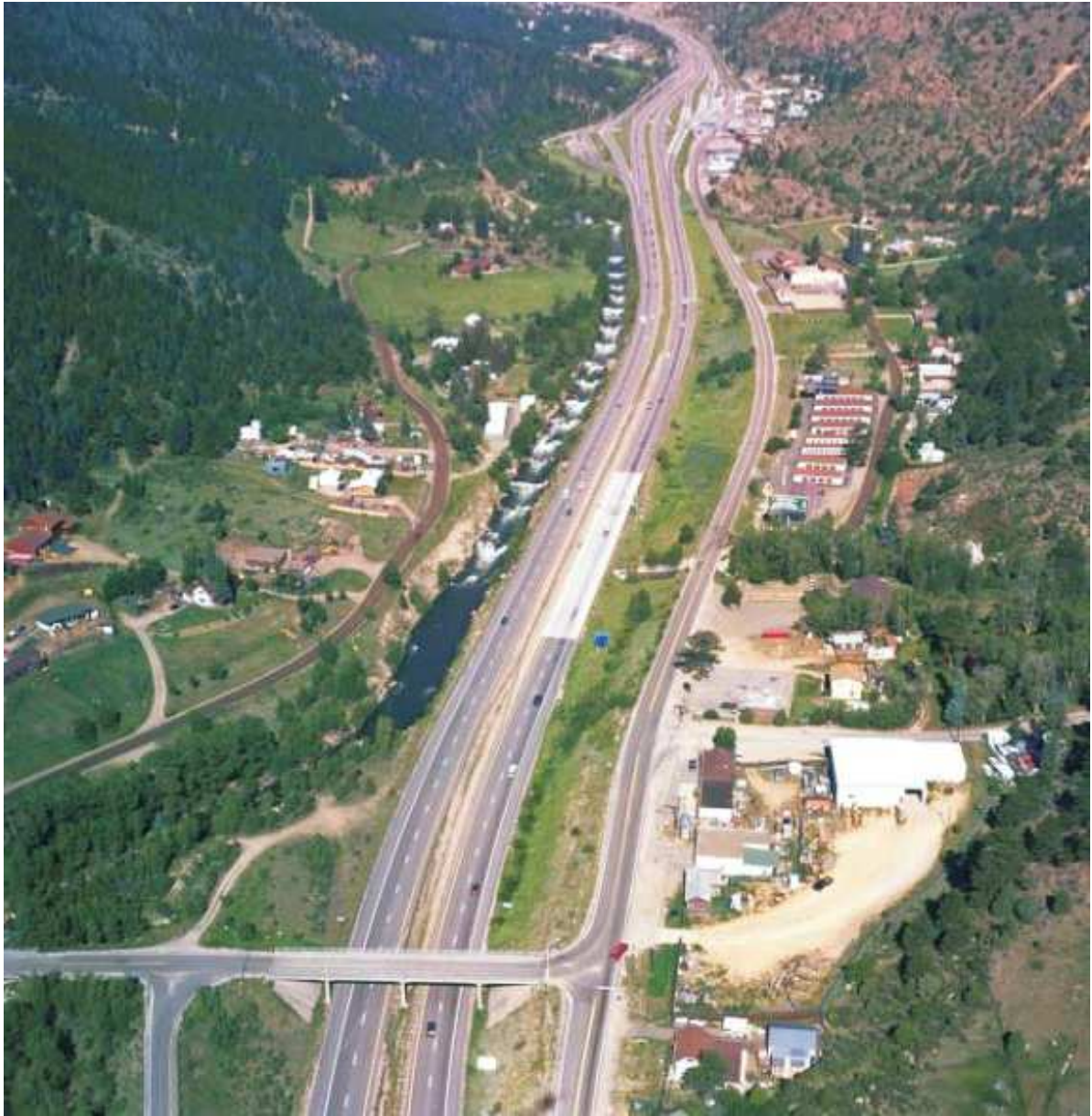
WHY DLD AND EMPIRE JUNCTION IS AN AREA OF SPECIAL ATTENTION

- *Historic character*
- *Most open part of Clear Creek County*
- *Future development opportunities*
- *Dramatic views*
- *Proximity to Clear Creek*
- *Gateway to Grand County*
- *Need for efficient land use*
- *Relocation of port-of-entry*
- *Economic impacts to Downieville, Lawson, and Dumont due to I-70*
- *Transportation hub of Clear Creek County*
- *Needed interchange improvements*
- *Proposed AGS*
- *Proposed I-70 improvements*

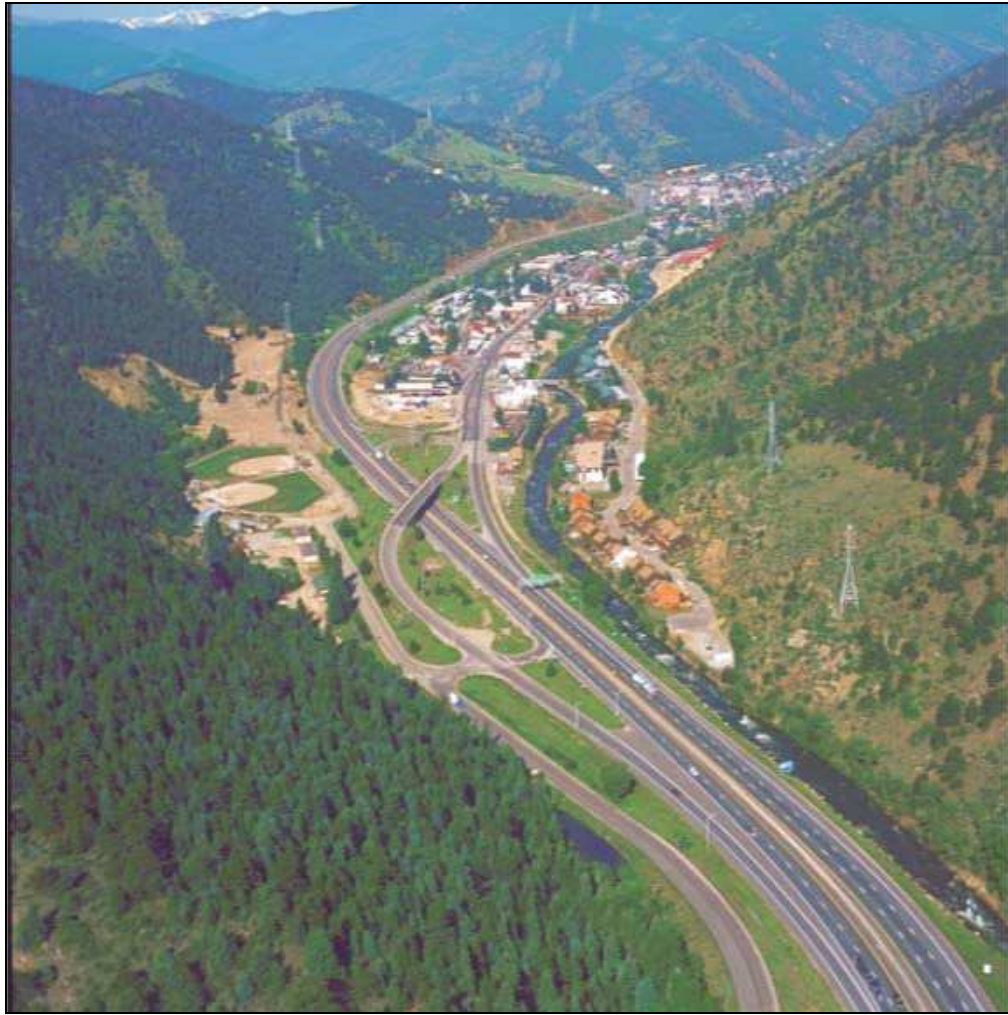
Area Limits and Description

The proposed I-70 improvements, Clear Creek County's economic development plans, the natural beauty of this area, and Clear Creek appear at first to be in competition for land. Proposed I-70 improvements include a new US Highway 40 (US 40) Interchange, a new eastbound auxiliary lane, a new westbound auxiliary lane, the relocation of the Port-of Entry to Empire Junction from Downieville, and a new interchange at Downieville and Dumont. Empire Junction is the broadest and most open part of the Clear Creek Canyon, providing future development opportunities. Dramatic views and the integrity of the view shed are in potential conflict with the development of I-70 improvements. Empire Junction is a gateway to Grand County and the hub of Clear Creek County. The canyon becomes narrow through Downieville, Lawson, and Dumont. Proposed I-70 improvements appear to be in conflict with the communities, Clear Creek, and the canyon. Access north and south across I-70 in these communities is difficult. Construction impacts of I-70 improvements may affect the economies of these small communities.

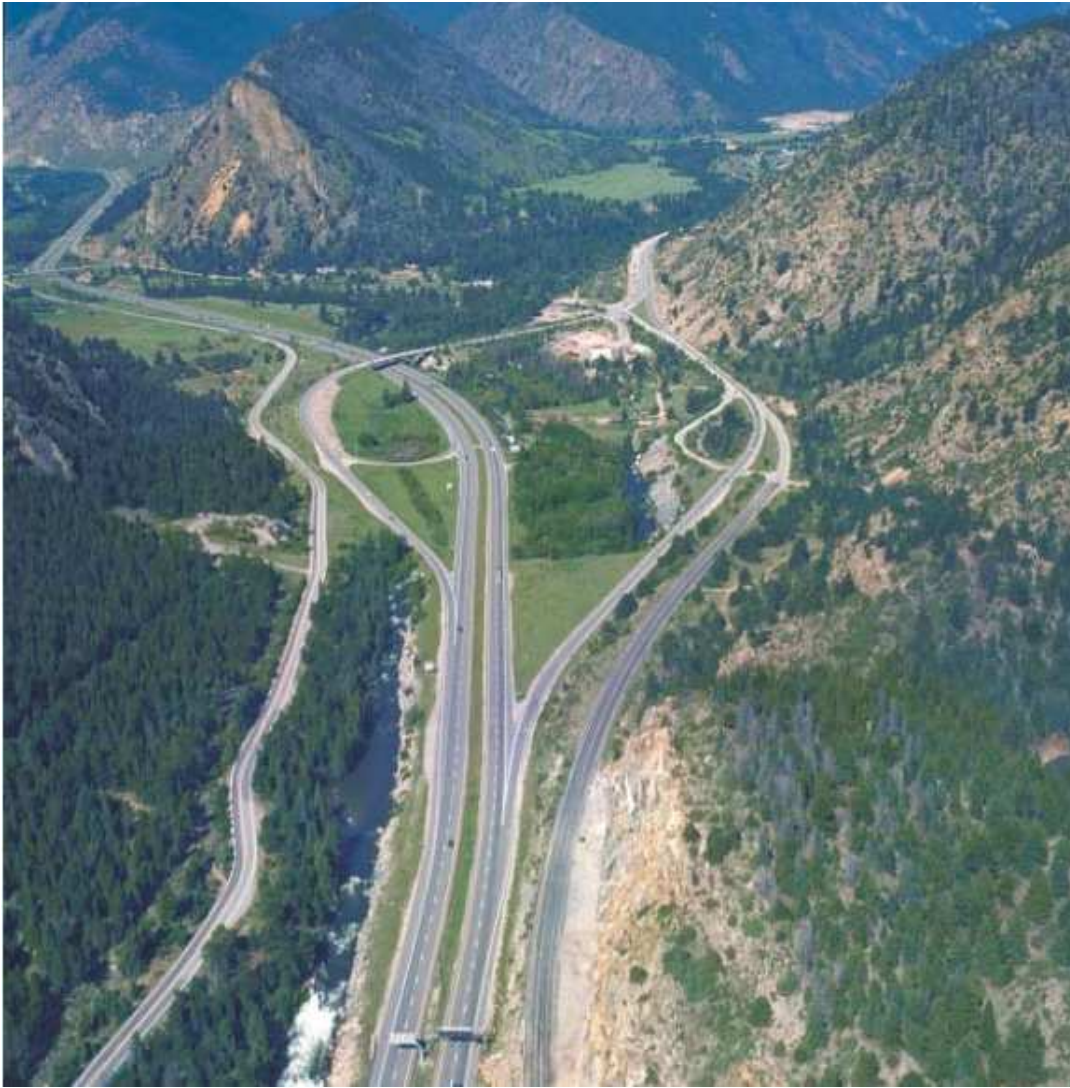
DLD and Empire Junction is generally bound by Dumont (exit 236) on the east and Empire Junction on the west. These limits (mile marker 236 to mile marker 232) were used to focus the discussion.



Dumont and Lawson



Downieville and Empire Junction



Empire Junction

DLD and Empire Junction Context

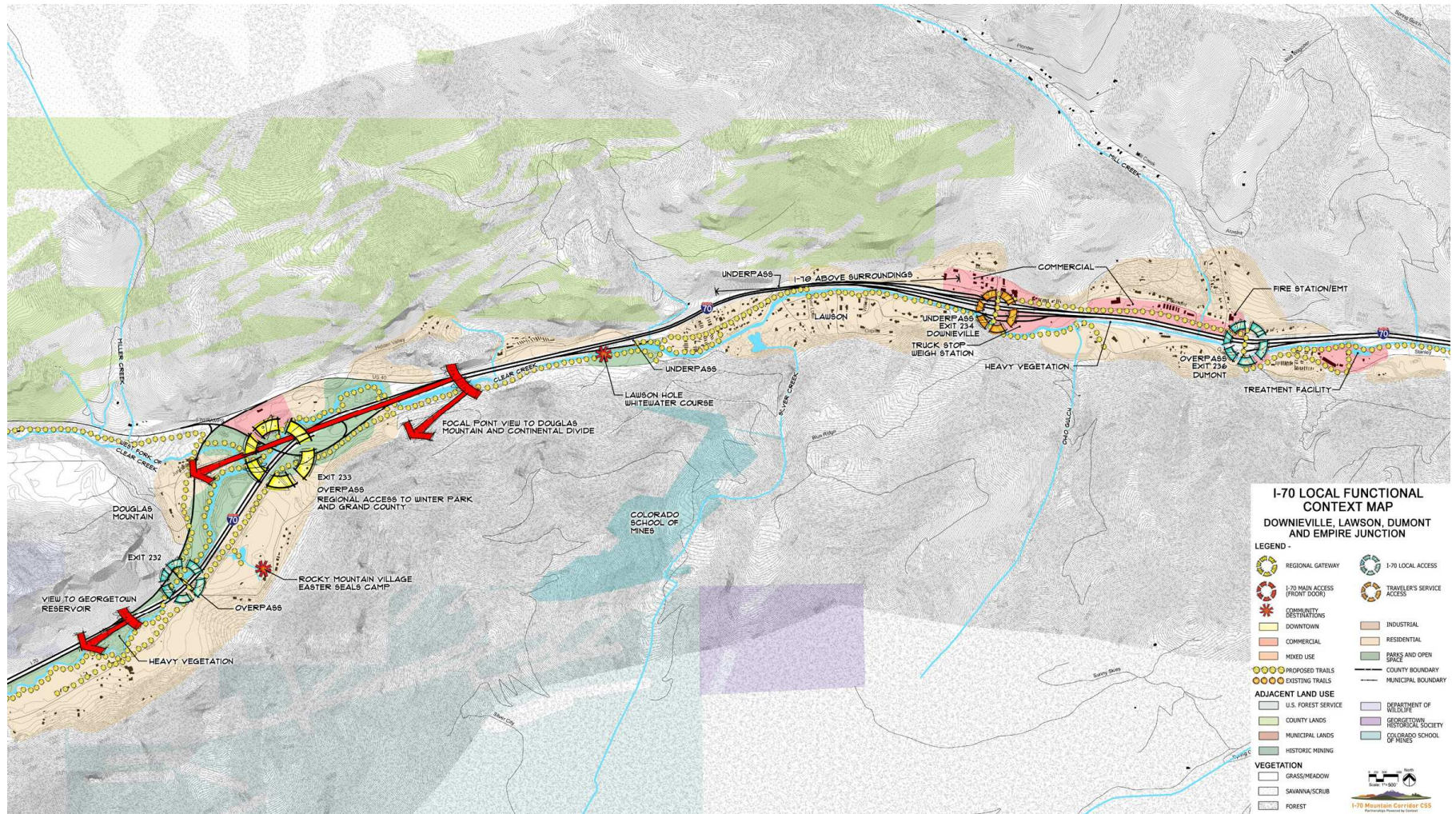
Important contextual features and places within the DLD and Empire Junction Areas create a unique context in and around the area. These include historic buildings, the birthplace of the gold and silver booms, Douglas Mountain, the Rocky Mountain Easter Seals Camp, Lawson Hole Whitewater Course, Port of Entry, Colorado Department of Transportation (CDOT) maintenance facilities, proximity to Clear Creek, and regional access to Grand County. The functional aspects of DLD and Empire Junction are graphically represented on the Local Functional Context Map, which illustrates the layout and operational aspects of the area -- including land use, circulation and access interrelationships, and operational priorities.

DLD AND EMPIRE JUNCTION- AREA OF SPECIAL ATTENTION REPORT

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DLD and Empire Junction Functional Context Map



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VIEW WESTBOUND TO DUMONT EXIT 235



VIEW TO I-70 FROM DUMONT



PORT OF ENTRY AT DUMONT



VIEW WESTBOUND TO DOWNIEVILLE/LAWSON EXIT 234



BUILDINGS IN DUMONT



LOCAL BUSINESSES



VIEW OF DUMONT BUSINESSES

DOWNIEVILLE,
LAWSON AND
DUMONT
CONTEXT
PHOTOGRAPHS

I-70 Mountain Corridor CSS
Partnership. Powered by Context.

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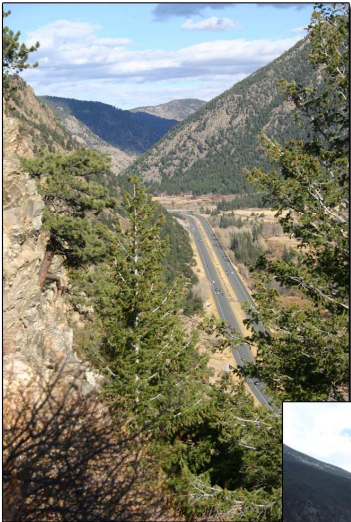
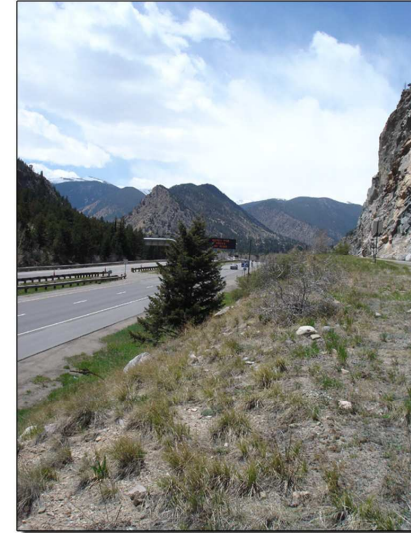


I-70 LOOKING WEST TOWARD DOUGLAS MOUNTAIN



WESTBOUND I-70 VIEW OF DOUGLAS MOUNTAIN

LOOKING WEST TO DOUGLAS MOUNTAIN



LOOKING EAST AT I-70: EASTER SEALS CAMP ON RIGHT AND DOUGLAS MOUNTAIN ON LEFT



CDOT MAINTENANCE FACILITY AT I-70/US 40 INTERCHANGE



LOOKING WEST: FROM LEFT TO RIGHT I-70, CLEAR CREEK AND DOUGLAS MOUNTAIN



LOOKING EAST FROM US 40 FLYOVER



LOOKING WEST TO DOUGLAS MOUNTAIN AT EXIT 232

EMPIRE JUNCTION PHOTOGRAPHS



Transportation Vision Elements to Be Considered

Future improvements and studies in the I-70 Mountain Corridor through the DLD and Empire Junction Area should consider each of the elements outlined below. Terraced roadway alternatives should be considered on hillsides to lower environmental impacts and create a better community interface and development through the DLD and Empire Junction Area.

- Advanced Guideway System (AGS)
 - **Potential Station Locations**
 - Downieville (exit 234)
 - Empire (exit 232)
- I-70 Improvements
 - **Interchange Locations**
 - Fall River Road (exit 238)
 - Downieville (exit 234)
 - Empire (exit 232)

Goals and Objectives for the Area

- Provide efficient interchange configurations to free space for development and incorporate the natural environment.
- Mitigate unfavorable visual appearances from both the community and roadway perspectives with the use of buffers and transitions between community uses.
- Allow for possible development of a multi-modal transit node to serve as a regional gateway.
- Incorporate the Port of Entry in the US 40 interchange improvements.
- Allow no further encroachment into Clear Creek.
- Restore existing rock faces and unstable slopes in Clear Creek and Timber Creek.
- Provide open structures over the creeks for wildlife passage. (This is a Wildlife Linkage Interference Zone (LIZ #11.)
- Protect landmark focal view to Douglas Mountain.
- Provide sound attenuation concepts other than free-standing walls to protect neighborhoods, the Greenway, and the Easter Seals Camp.
- Minimize economic impact to the communities.

Design and Engineering Guidance

I-70 Mountain Corridor Design Criteria - Overview

The following overarching principles apply to the entire I-70 Mountain Corridor. These principles are supported by the Aesthetic Guidance, which is divided into Design Segments and which presents specific objectives and strategies. The principles are provided to the future managers and designers of transportation facilities within the corridor to guide the desired outcomes of individual projects.

A. Corridor Design Character

Elegantly engineered transportation facilities will reflect function, simplicity, and integrated design throughout the corridor. The landscape under, adjacent to, and beyond the structures supporting transportation facilities shall be rugged, organic, and made of natural materials. Designers will not attempt to make facilities falsely appear natural with the application of materials. The linkage of land and transportation features will be visualized as a single design effort, rendering a cohesive quality for the entire corridor. The geometry of the road should maintain a continuous flow and fit existing land forms.

B. Integrated and Complete Design

All facilities included in a project -- whether primary or auxiliary to the function of the corridor -- will be identified, programmed, and conceptually designed prior to completion of 30% design. This will include consideration of the entire construction disturbance zone. A comprehensive design is necessary in order to plan for all construction disturbances and create an integrated, sustainable corridor that accounts for each project. Aesthetic objectives and functionality are optimized when all elements are included in the design at inception. Integrated design includes considerations such as drainage and hydrology, water quality, wildlife crossings, rock cuts, life cycle costs, and long-term maintenance.

C. Partnerships to Create the Corridor

Corridor design will include consideration of a buffer and transition area between transportation facilities and community-oriented land uses. The landscape planting, earthwork, structural solutions, and location of the transportation facilities need to be fully examined in order to avoid potential visual and scenic impacts, buffer highway noise, and preserve community character and patterns. Road and trail connections and multi-modal travel corridor opportunities should be considered. Reinforcement of alternative methods of travel such as pedestrian and biking paths should be incorporated and coordinated with community and recreational planning efforts.

D. Using the Programmatic Environmental Impact Statement (PEIS)

The I-70 Mountain Corridor PEIS contains critical background and reference information foundational to design. The PEIS should be reviewed throughout the entire design process for insight into the detailed assessments of various corridor aspects. This will ensure alignment and consistency with the analyses and recommendations determined by the PEIS.

E. Corridor-Wide Projects

Projects that will be implemented across the entire corridor have the potential to create elegant consistency. These projects should be approached with an additional level of care and scrutiny, and should address the ideas set forth in the Aesthetic Guidance for all four corridor Design Segments. The goal should be a project that yields an overall aesthetic benefit to the corridor.

Engineering the I-70 Mountain Corridor

Design Criteria

Seven required Engineering Design Criteria have been developed to address the unique characteristics of the I-70 Mountain Corridor. These criteria are intended to influence the alignment of the transportation facilities and are an essential component of the engineering design.

The Engineering Design Criteria have been developed and adopted by the Colorado Department of Transportation (CDOT) because they represent an approach that enhances safety, mobility, and sustainability while reducing maintenance through design and engineering.

Design Criteria Categories

The following Design Criteria categories direct the development of both I-70 and the Advanced Guideway Systems (AGS)*:

- Design Speed
- Alignment
- Slope Cut and Fill
- Disturbance
- Rock Cut
- Bridge Structures
- Sound Attenuation

*As the AGS for the I-70 Mountain Corridor is further defined, developed, and refined, the criteria may be updated to match the chosen technology.

Application of Design Criteria

All of the Design Criteria must be met in Life Cycle Phase 2: Project Planning. Alternatives may be refined in Life Cycle Phase 3: Project Design, when the designer is able to determine which criteria may require an exception and why. The one exception for this requirement is in Areas of Special Attention, where a design exception may be considered in Phase 2 due to the complexity of the issues involved.

Federal, state, and local agencies will neither officially review nor grant design exceptions until Life Cycle Phase 3: Project Design.

Project Leadership Team Role

The Project Leadership Team (PLT) must be apprised of the Design Criteria being used on its I-70 Mountain Corridor project.

Justification for any criteria that would not be met as determined during design must be presented, discussed, and agreed upon by the PLT. Consideration will be given to the I-70 Mountain Corridor Core Values; safety; operation; compatibility with the overall network; character of traffic; cost implications; and impacts to scenic, historic, and environmental features. Other variables to consider include the amount of change to the criteria, its effect on other criteria, and any additional impacts that one change may make.

Design Exception Process

Due to challenges presented within the I-70 Mountain Corridor, a situation may arise in which the existing Design Criteria cannot be met, or in which the impact of meeting the criteria would be too great. Should this be the case, a design exception must be requested. Design exceptions may assist a designer in finding a transportation solution that balances impacts to scenic, historic, and culturally or environmentally sensitive areas while still providing for safety and mobility. Designers should think innovatively, consider the Core Values, and take into account the flexibility available to them when designing a transportation solution for the I-70 Mountain Corridor.

Design exceptions may be granted for the following justifications:

- Complementing surrounding physical characteristics
- Enhancing safety
- Increasing capacity
- Reducing costs
- Protecting the environment
- Preserving historic and scenic elements
- Interfacing with multiple modes of transportation
- Utilizing new technology or innovative approaches
- Doing the right thing

I-70 Mountain Corridor Design Criteria

Design Criteria		Remarks
Design Speed	<p>For I-70, 65 MPH design speed. For Advanced Guideway System (AGS), dependent on technology.</p>	<ol style="list-style-type: none"> 1) Posted speed of 55 MPH on I-70. 2) Federal Highway Administration (FHWA) 13 controlling criteria and Colorado Department of Transportation (CDOT) Design Criteria apply. 3) Technology-appropriate Design Criteria will apply to AGS.
Alignment	<p>Eastbound highway lanes, westbound highway lanes, and the AGS will be designed as separate, independent alignments.</p> <p>The three alignments will maintain no less than the existing median width or create a clear zone that does not require a guardrail or barrier.</p> <p>No loss of existing vertical separation of highway lanes will occur in any section.</p>	<ol style="list-style-type: none"> 1) Provides a recovery zone. 2) Median required for snow removal and maintenance. 3) Separation prevents headlight glare, improving safety and maintenance conditions. 4) Separate alignments will adapt to topographic conditions. 5) See Illustration 1 for highway cross section.
Slope Cut and Fill	<p>Limits of physical disturbance shall be less than 40 vertical feet from the top of the pavement or rail platform to the farthest edge of cut or fill.</p> <p>Cut and fill embankment will not exceed a slope of 2.5:1 (H:V).</p> <p>All roadway retaining walls over 12' in height will be installed below the elevation of the roadway.</p>	<ol style="list-style-type: none"> 1) Planting, re-vegetation, and restoration of slopes will be successful with flatter slope embankment. 2) Slopes will be more easily maintained and erosion and sediment transport will be manageable. 3) See Illustrations 1 and 2.

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Design Criteria		Remarks
Disturbance	<p>Construction will be fully contained with areas of historic or current disturbance if no centerline change occurs.</p> <p>New alignments must be consistent with Design Criteria for slope cut and fill.</p>	<ol style="list-style-type: none"> 1) Existing maintenance problems will be resolved or improved by staying within the existing limits of disturbance. 2) Construct without increasing the disturbance zone.
Rock Cut	<p>A geotechnical analysis report will be completed and reviewed prior to any proposal to create rock cuts for an alignment.</p> <p>If rock cuts are required, naturalized custom cuts methods are required. Rock cuts shall be constructed using scatter blasting techniques and provide for adequate rockfall area at the base.</p>	<ol style="list-style-type: none"> 1) Allows for understanding of rock formations at an early planning stage to potentially avoid rock cuts. 2) Avoids rockfall mesh and reduces maintenance. 3) Scatter blasting techniques provide a naturalized cut and allow safety from rockfall to be incorporated in the design.
Bridge Structures	<p>Bridge structures will not utilize slope paving techniques and will require a closed-end abutment design with a minimum vertical height of 8', measured below the bridge girder.</p> <p>Bridge embankments shall be 2.1:1 maximum.</p>	<ol style="list-style-type: none"> 1) Avoids the maintenance of slope paving. 2) Provides a method of incorporating re-vegetation and landscape into bridge slopes. 3) A clear span over streams and drainages avoids water quality construction impacts and reduces maintenance and pier scour. 4) Provides benefits below bridges for vehicle clearance, wildlife crossing, solar access, and re-vegetation success. 5) See Illustrations 3 and 4.

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Design Criteria		Remarks
Sound Attenuation	<p>Sound buffering and attenuation will be designed in conjunction with the horizontal and vertical alignment to eliminate the need for noise mitigation.</p> <p>Mitigation, if required, will integrate landforms, landscape planting buffers, and walls.</p>	<ol style="list-style-type: none">1) Design can minimize or eliminate additional noise mitigation.2) If sound walls are required, see Illustrations 5 and 6.

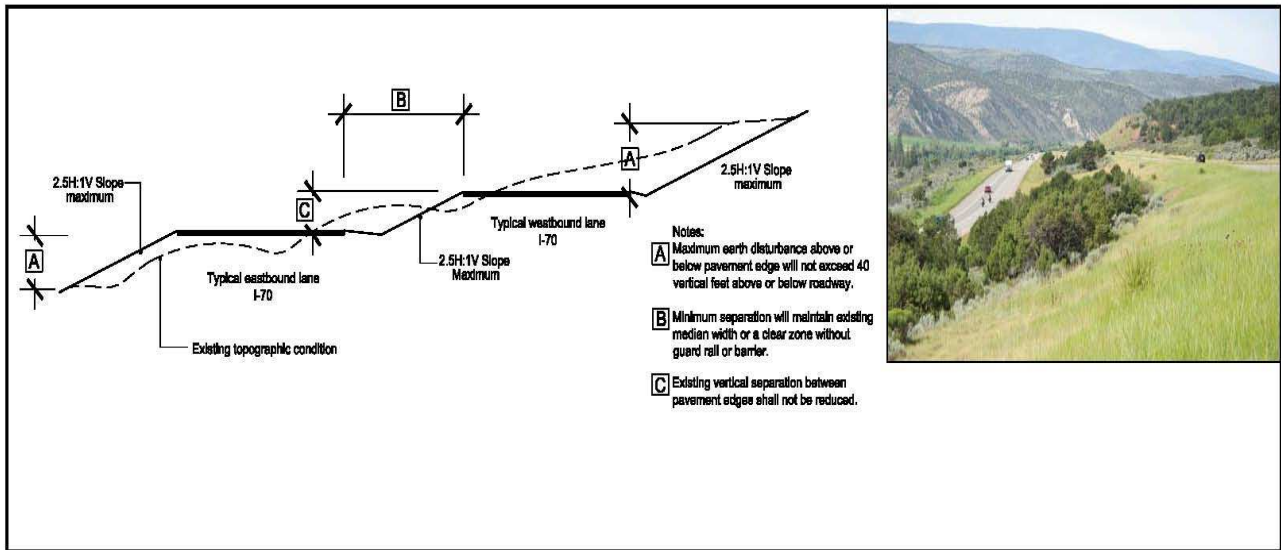


ILLUSTRATION 1: DESIGN CRITERIA FOR ALIGNMENT AND CUT AND FILL

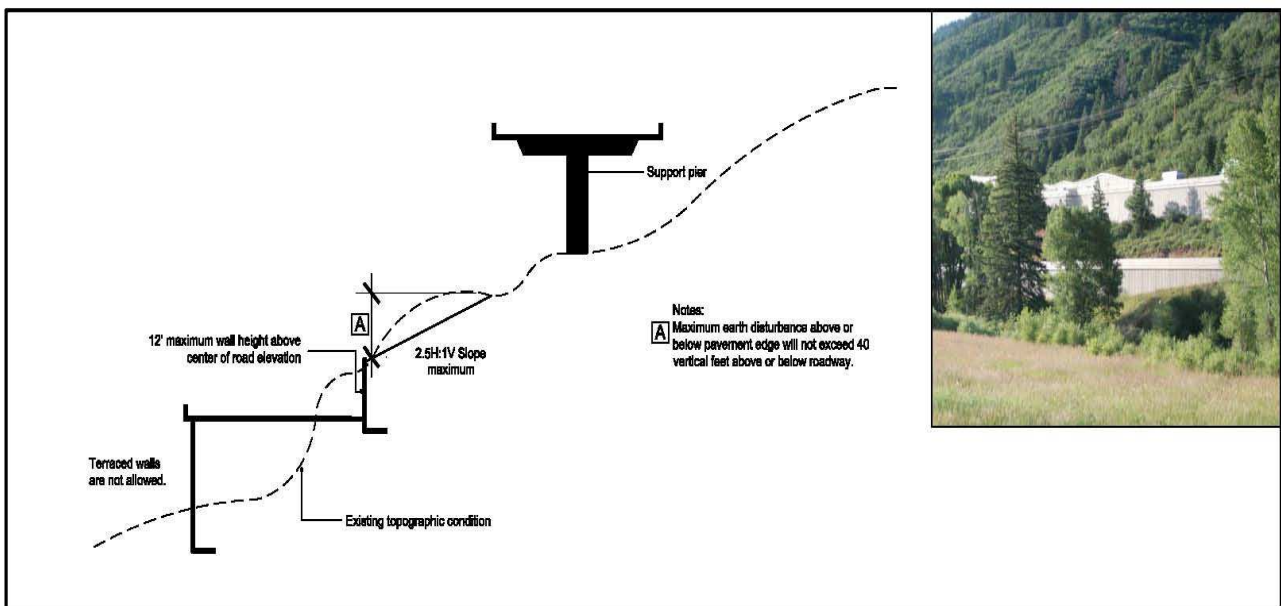


ILLUSTRATION 2: DESIGN CRITERIA FOR CUT AND FILL

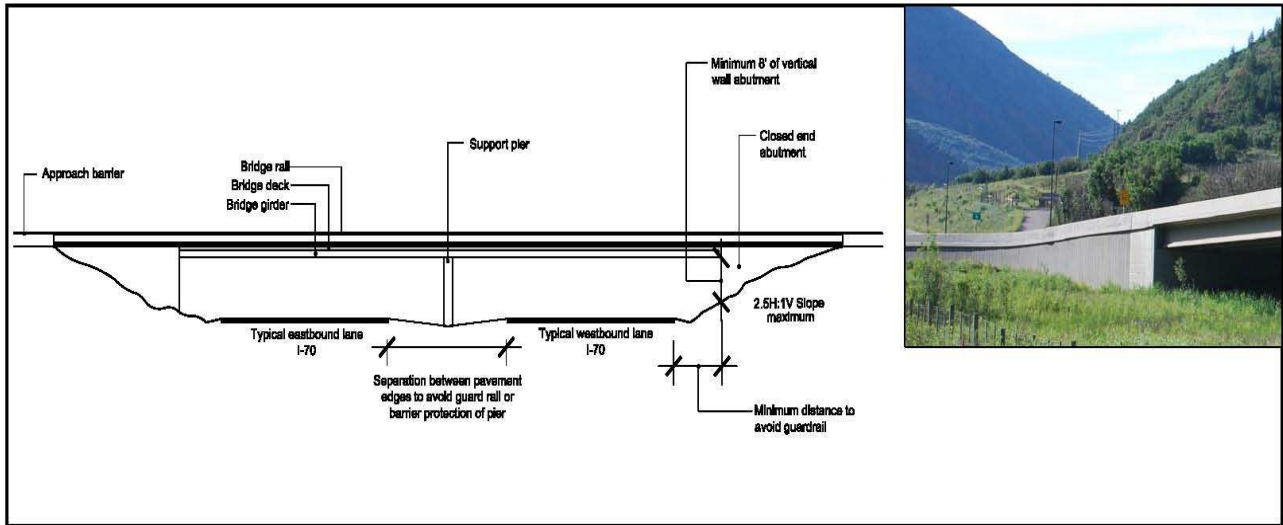


ILLUSTRATION 3: DESIGN CRITERIA FOR BRIDGE STRUCTURES OVER I-70

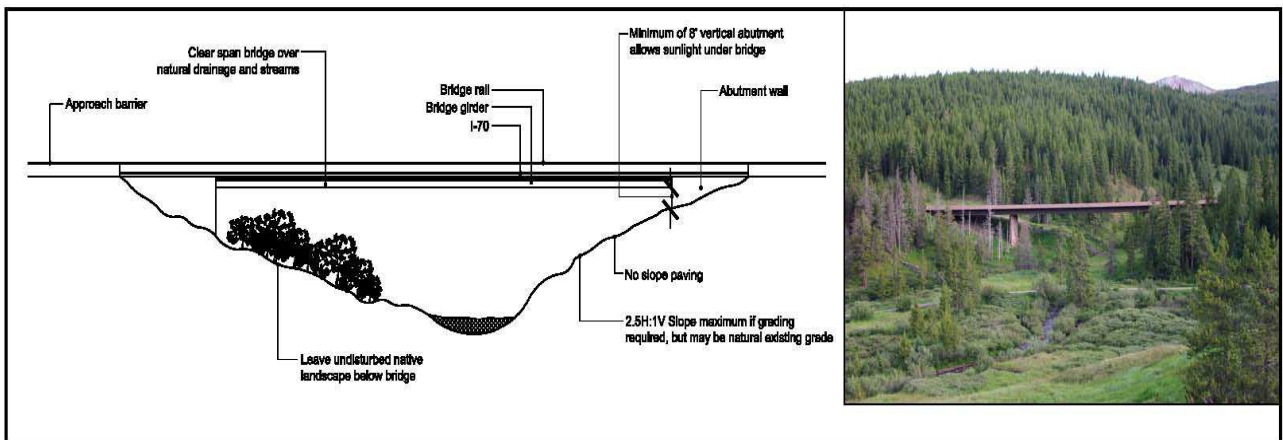


ILLUSTRATION 4: DESIGN CRITERIA FOR I-70 BRIDGE OVER NATURAL FEATURES OR OTHER ROADWAYS

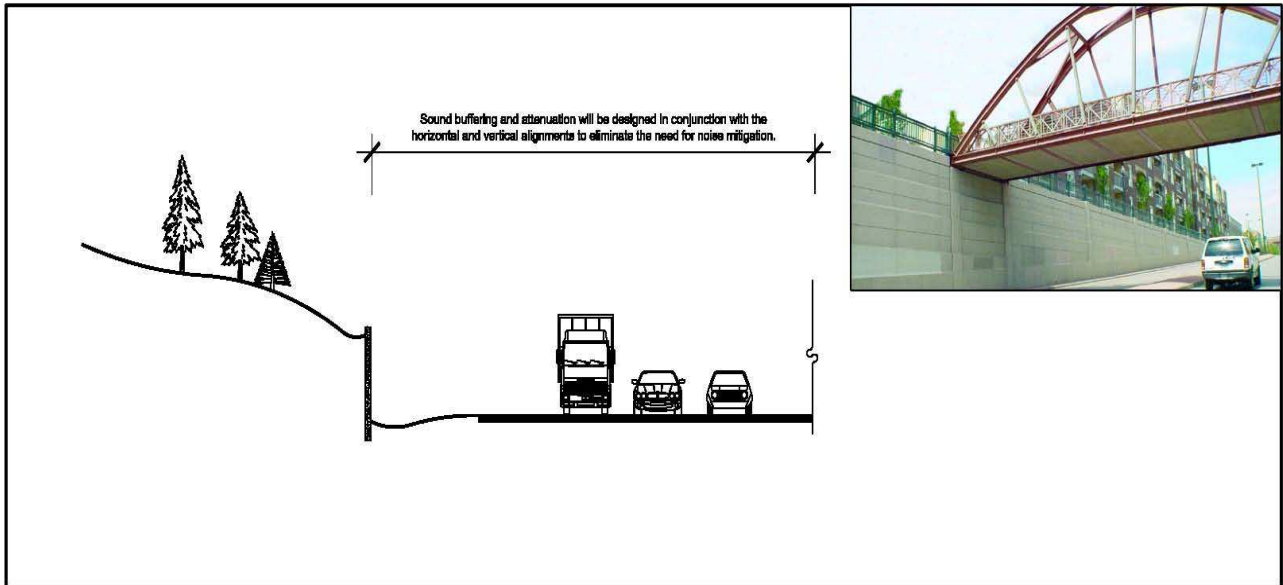


ILLUSTRATION 5: DESIGN CRITERIA FOR SOUND ATTENUATION

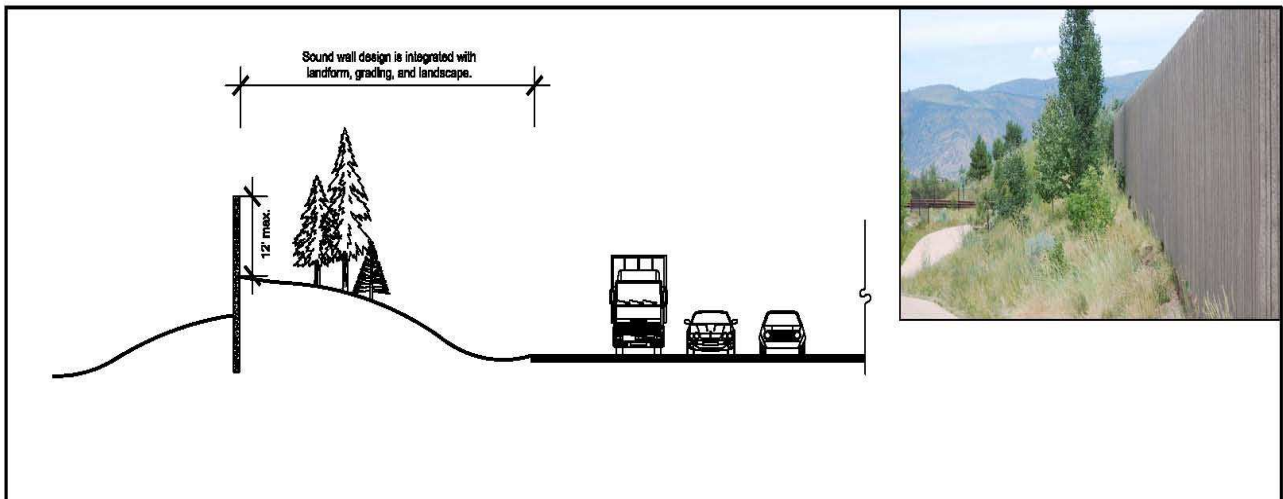


ILLUSTRATION 6: DESIGN CRITERIA FOR SOUND WALL DESIGN

Who Should Be Involved?

Stakeholders in the DLD and Empire Junction Area include citizens, business owners, property owners, organizations, travelers, transporters, and agencies. Future studies, planning, and design work should continue to involve not only these stakeholders, but also planning, design, landscape architecture, operations, environment, public process, and communications experts. This involvement and collaboration will allow the stakeholders to look for common ground and provide opportunities to develop partnerships.

The following is an initial list of agencies and organizations. Additional stakeholders and partners should be involved as they are identified.

- Downieville, Lawson, Dumont, and Empire community members
- Clear Creek County
- Colorado Department of Transportation
- Federal Highway Administration
- Federal Railroad Administration
- US Forest Service
- Colorado Division of Wildlife
- Colorado Historical Society
- Denver Regional Council of Governments
- Northwest Council of Governments
- US Army Corps of Engineers
- US Fish and Wildlife Service
- Colorado Department of Public Health and Environment
- Colorado Motor Carriers
- National Trust for Historic Preservation
- Audubon Society
- Colorado Rail Passenger Association
- OmniTrax
- Trout Unlimited
- Colorado Preservation Inc.
- ECO-Resolutions
- Center for Native Ecosystems
- Colorado Association of Transit Agencies
- Rocky Mountain Easter Seals Camp

Other Relevant Materials to Be Included in the Process

The following studies and plans should be considered in continuing work in the DLD and Empire Junction Area of Special Attention. This is an initial list and provides a starting point. Additional studies and plans should be included and referenced as they are identified.

- I-70 Mountain Corridor Programmatic Environmental Impact Statement
- I-70 Mountain Corridor Context Sensitive Solutions Guidance
- I-70 Mountain Corridor 106 Programmatic Agreement
- Stream and Wetland Ecological Enhancement Program (SWEEP) MOU
- A Landscape Level Inventory of Valued Ecosystem (ALIVE) MOU
- I-70 Coalition Land Use Planning Study for Rail Transit Alignment Throughout the I-70 Corridor
- Clear Creek County Master Plan
- Clear Creek Greenway Plan
- Clear Creek Sediment Control Action Plan (SCAP)
- Rocky Mountain Rail Authority High Speed Rail Feasibility Study
- I-70 Mountain Corridor Chain Station Plan
- Rocky Mountain Rail Authority High Speed Rail Study

The studies listed below have not begun or are not complete at the time of this report. When completed, these studies will provide insights and input for future work.

- CDOT Statewide Transit Plan
- CDOT Statewide Bicycle Plan
- Interchange Safety Study
- I-70 AGS Tier 2 Study