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Department of Transportation

I-70 West Vail Pass Auxiliary Lanes Project Environmental Assessment (EA) and Section 4(f) Evaluation **Virtual Public Engagement**

September 2020



Agenda

This virtual public engagement will provide an overview of the Environmental Assessment (EA) and Section 4(f) Evaluation. The EA outlines planned improvements, project impacts, and mitigation for the impacts. The Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA) will consider feedback received before determining if the project can move forward.

- Study overview
- Purpose & need
- Planned improvements
- Project benefits, impacts, and mitigation
- Next steps



After you are done viewing this video, please let us know what you think of the planned improvements, impacts, and mitigation by submitting a comment on the project web page by October 21, 2020.

CDOT needs your input!

Comments welcome
September 22 - October 21, 2020

www.bit.ly/WestVailPass



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STUDY OVERVIEW





Project Introduction and History

The original I-70 alignment over Vail Pass was analyzed in the 1973 Vail Pass Environmental Impact Statement. Construction of this section of I-70 was completed in 1978. The original design of I-70 on West Vail Pass was groundbreaking at the time due to the context-sensitive nature of the design, intended to blend the interstate into the existing landscape and minimize environmental impacts.





Project Introduction and History

In 2011, as part of the National Environmental Policy Act (NEPA), the I-70 Mountain Corridor Programmatic Environmental Impact Statement (PEIS) was completed between C-470 and Glenwood Springs. This document analyzed potential safety, capacity, and operational improvements along the I-70 Mountain Corridor. This high-level analysis recommended the addition of auxiliary lanes eastbound and westbound on the west side of Vail Pass between mile posts 180 and 190.

An auxiliary lane is a travel lane that is added between two interchanges to improve traffic flow.



Chapter 2. Summary and Comparison of Alternatives

Figure 2-11. Preferred Alternative



- Auxiliary lanes:
 - Avon to Post Boulevard (Exit 168) (eastbound) (MP 167–MP 168)
 - West of Vail Pass (eastbound and westbound) (MP 180–MP 190)
 - Frisco to Silverthorne (eastbound) (MP 202.7–MP 205.1)
 - Morrison to Chief Hosa (westbound) (MP 253–MP 259)

I-70 Mountain Corridor
June 2011

Record of Decision
Page 5



Project Introduction and History

In 2017, CDOT and FHWA began a more detailed NEPA analysis for assessing improvements to I-70 on West Vail Pass. This presentation focuses on the process to identify those improvements and the associated impacts and mitigation for the project.





Project Area

The project's eastern end is just east of the Vail Pass Rest Area at the top of the pass and the western end is in the eastern portion of the Town of Vail. The Project study limits include eastbound and westbound I-70 from mile posts 179.5 to 191.5.





Project Groups

All I-70 Mountain Corridor projects follow a distinct Context Sensitive Solutions process. As part of this process, various groups are formed to work closely with the project team and assist with project decision-making. These groups consist of people from local organizations and local, state, and federal agencies with an interest in the project.

They review and evaluate alternatives, review environmental impacts, and discuss mitigation. The groups include a Project Leadership Team, a Technical Team, and Issue Task Forces for special interests such as history, wildlife, water quality, and wetlands.



I-70 Mountain Corridor CSS

Partnerships Powered by Context

Six-step CSS Process

1	2	3	4	5	6
Define Desired Outcomes and Actions	Endorse the Process	Establish Criteria	Develop Alternatives or Options	Evaluate, Select, and Refine Alternative or Option	Finalize Documentation and Evaluate Process
Establish project goals and actions. Define decisions to be made.	Establish participants, roles, responsibilities. Endorse goals and desired outcomes.	Establish criteria for decision-making (alternatives evaluation).	Identify alternatives relevant to desired outcomes, vision, and goals.	Analyze alternatives using established criteria.	Finalize documentation that has been developed throughout process, including final recommendations and process.



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Project leadership team and technical team





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Issue Task Forces:

- Historic Resources
- Wildlife
- Water Quality & Wetlands
- Recreation
- Emergency Services



Project Context Statement

Corridor Context

I-70 is Colorado's only east-west Interstate, providing a critical interstate economic link for the country. It also provides the only direct route between the Front Range and western Colorado. Area residents and visitors travel the corridor to access growing mountain communities, as well as local and regional recreational opportunities. Vail Pass is rich in natural beauty and unique environmental, wildlife, historic, and recreational resources.

The I-70 corridor over Vail Pass has a natural scenic beauty and dramatic views as it winds through U.S. Forest Service land. The corridor is recognized as a nationally and exceptionally significant feature of the federal interstate highway system due to its early implementation of context sensitive design, integrating a modern transportation facility with the surrounding natural environment. This section of highway is considered a historic resource due to these elements.

The steep grades, roadside terrain, and extreme weather events make I-70 over Vail Pass a challenging mountain pass to travel and maintain. Conflicts between vehicles traveling at substantially different speeds create safety problems and operational issues. Transportation improvements must preserve the natural beauty and unique resources in the corridor while improving safety and the travel experience for commerce, residents and visitors.

The Project Context Statement and Core Values helped to frame the unique conditions of the Project as well as the concerns and values to be considered during the EA and future decision-making. This Context Statement was based on the original Mountain Corridor Context Statement and was further developed for this project through a robust process with project group members, resource agencies, and community members. The Context Statement captures in words the special qualities and attributes that uniquely define Vail Pass.



Project Core Values

These Project Core Values were also developed based on input from the public and involved agencies. A Core Value describes something of significant importance to stakeholders; something they respect and will work to protect and preserve. Together with the Context Statement, the Core Values helped shape the evaluation criteria, alternatives, design options, and mitigation for the project.

CORE VALUES WHAT IS IMPORTANT?

SAFETY Improve and maintain a safe travel corridor by minimizing crashes and mitigating other safety concerns	RECREATION Provide access for all residents and visitors to recreational opportunities
OPERATIONS Address roadway operations to improve travel reliability for all road users with a modern highway system	COLLABORATIVE DECISIONMAKING Uphold commitments from the I-70 Mountain Corridor Record of Decision and utilize partnerships with stakeholders to reach decisions
CORRIDOR CHARACTER & AESTHETICS Maintain the surrounding wilderness and visual / historic resources of the project corridor, and minimize impacts to nearby residents and businesses	IMPLEMENTABILITY Identify a preferred alternative that can be funded and constructed in phases
ENHANCED ENVIRONMENT Minimize impacts to environmental resources and identify opportunities to enhance the high-quality natural environment in the corridor	SUSTAINABILITY Implement a solution that is effective to maintain and will meet the needs now and into the future



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PURPOSE & NEED / PROJECT GOALS



Purpose & Need

The Project Purpose and Need statement was developed based on the I-70 Final PEIS Purpose and Need, which identified safety and mobility issues on West Vail Pass related to speed differences between different types of vehicles such as cars and semi-trucks.

The purpose of the project is to improve safety and operations on eastbound and westbound I-70 at West Vail Pass. “Operations,” as defined here, means “how well traffic flows through an area,” which can be affected by the number of cars and trucks, weather, curves, steepness of the road, and other features. This project is needed to address safety and operational issues such as crashes, road closures due to crashes and weather, and passenger vehicles being stuck behind semi-trucks.

The purpose of the project is to improve safety and operations on eastbound and westbound I-70 on West Vail Pass.

Need:

- Safety concerns
- Operation issues





Summary of Traffic and Safety Data

Steep grades and resulting speed differentials cause slow and unreliable travel times through the corridor. Tight curves also cause drivers to slow down or crash. The corridor is frequently closed by vehicle incidents, such as crashes and car or truck breakdowns, due to lack of width to maintain a single lane of traffic adjacent to emergency responders, resulting in substantial traffic backups and delays.

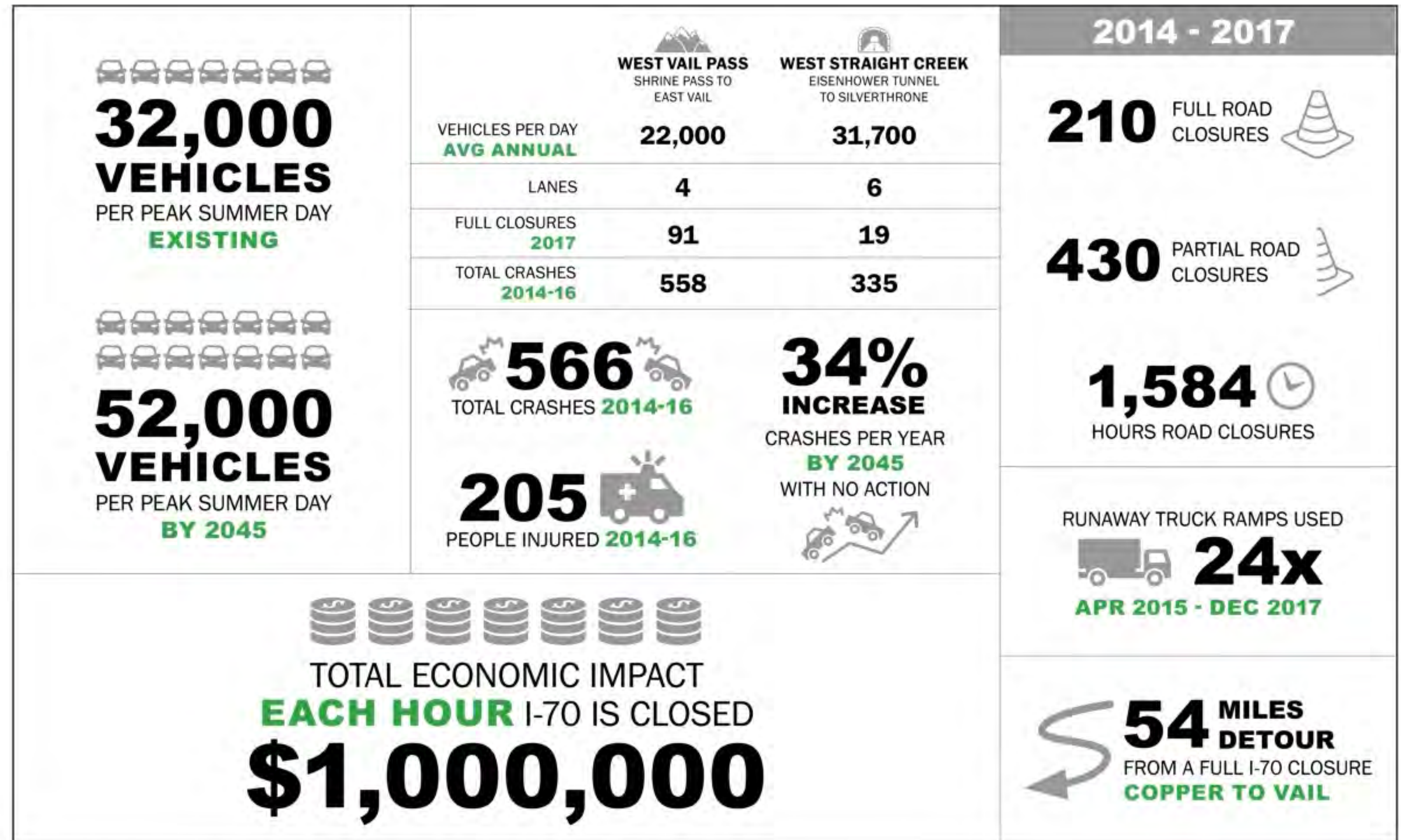




Safety and Operations by the Numbers

Traffic on West Vail Pass currently reaches a high of almost 32,000 vehicles in a peak summer day. From January 2014 through December 2016, there were a total of 566 crashes reported with 205 people injured. The number of crashes per year are anticipated to increase by up to 34 percent if no improvements are made.

West Vail Pass experiences relatively frequent partial or full highway closures due to crashes, weather, vehicle breakdowns, and other incidents.





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PLANNED IMPROVEMENTS

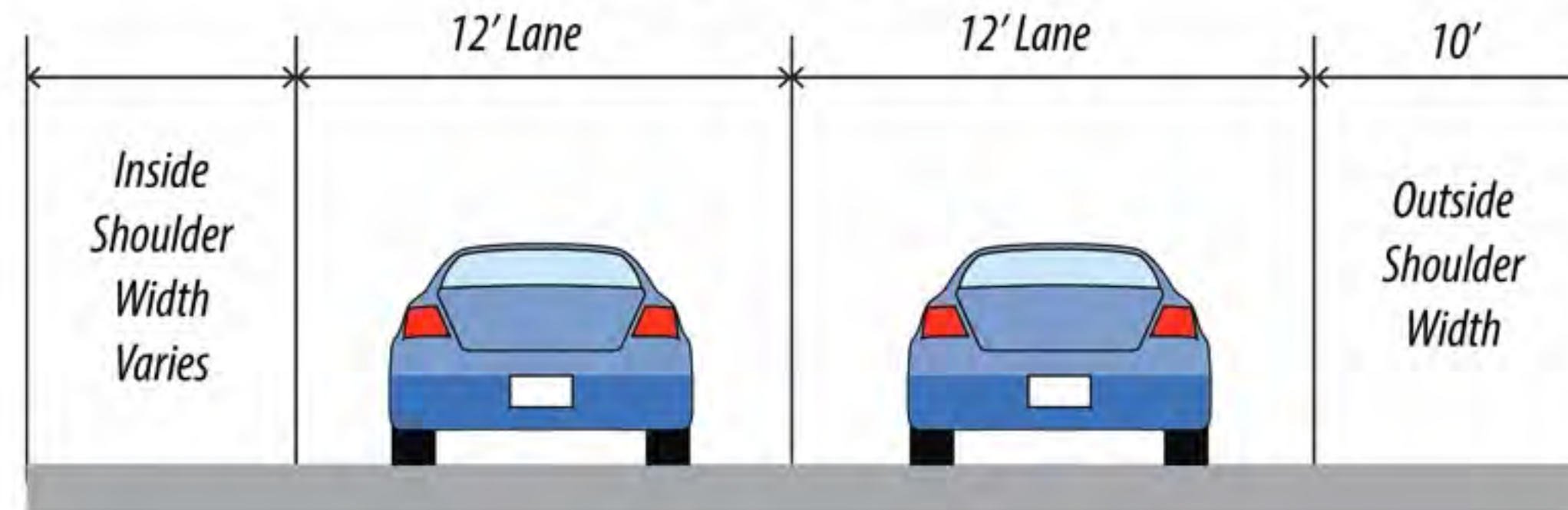




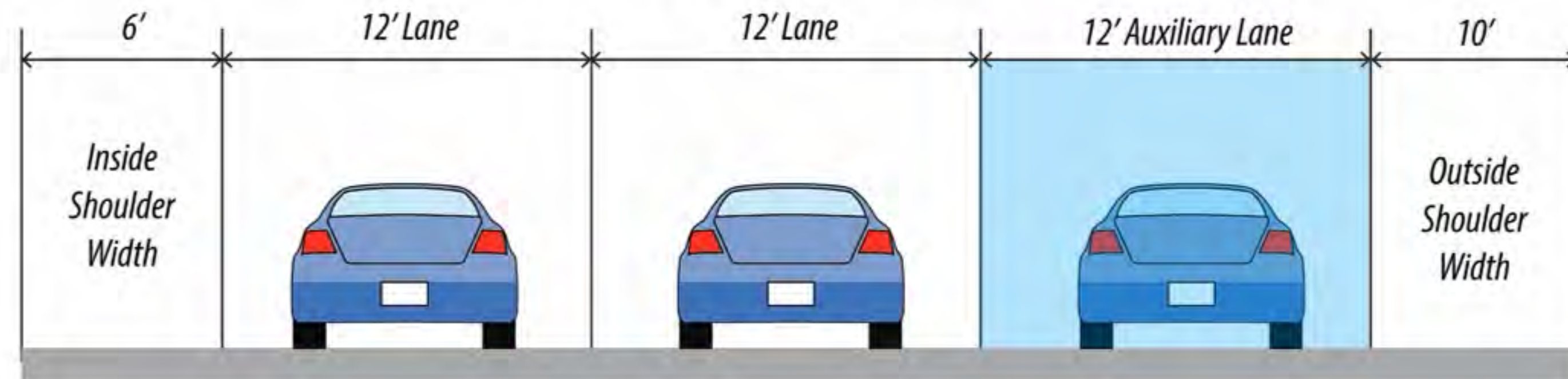
Existing and Proposed Cross-section

The Proposed Action will add a 12-foot auxiliary lane, both eastbound and westbound, for 10 miles from the East Vail Interchange to the Interchange at the top of Vail Pass. This added lane will provide a lane for slower vehicles climbing or descending the steep grades of the pass. Inside shoulders will be widened to a minimum of 6 feet and maintained at 10 feet for outside shoulders.

Existing Cross-Section



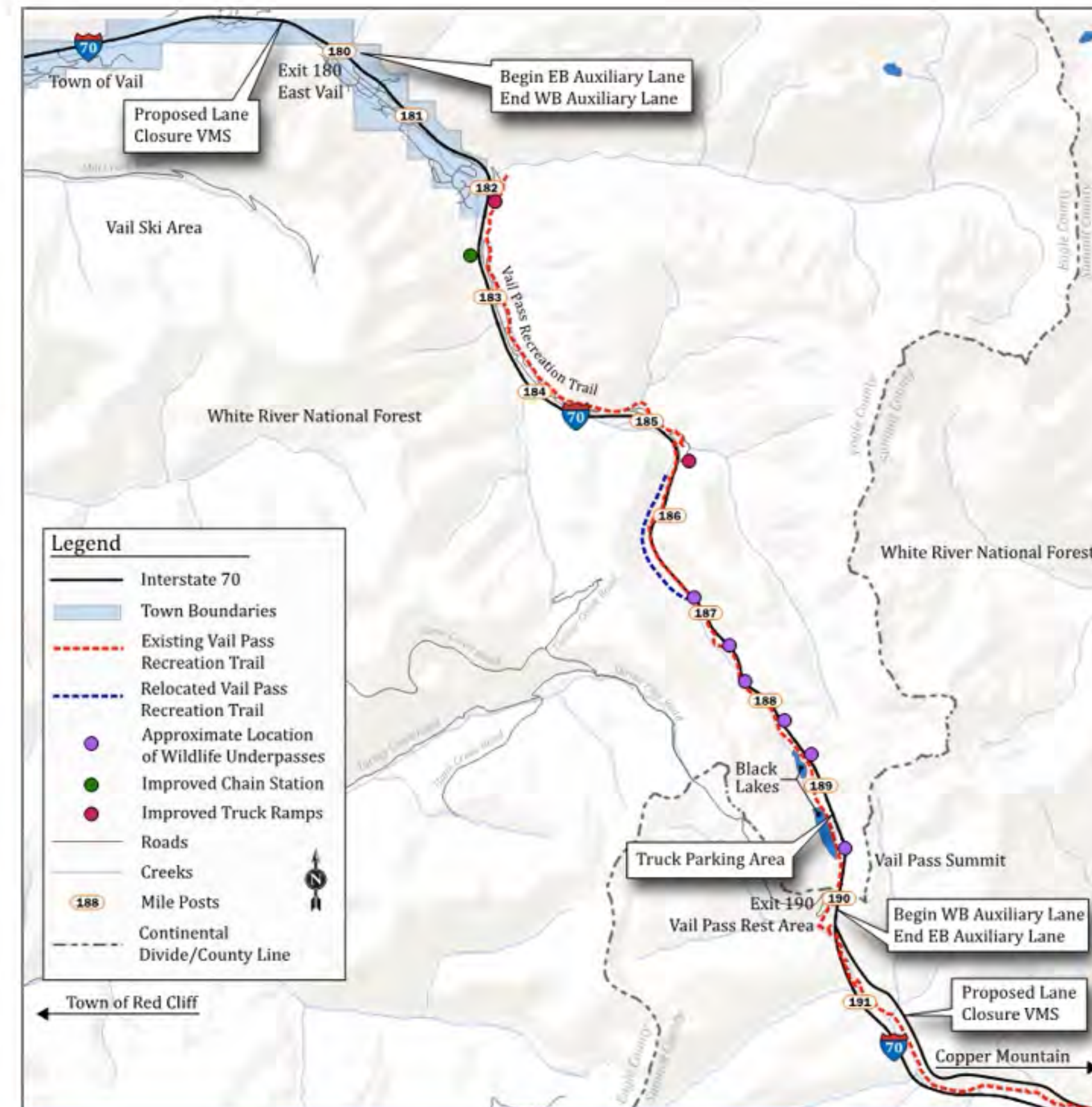
Proposed Action Cross-Section





Proposed Action

Improvements will be made to bring curves and emergency truck ramps to current design standards. Additional improvements include electronic variable speed limit signs and road closure signs, partial relocation of the Vail Pass Recreation Trail where impacted by I-70 reconstruction, wildlife underpasses and wildlife fencing, additional truck parking, widened shoulders at multiple locations, improved median emergency turnaround locations, an improved chain station, and avalanche protection.





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BENEFITS, IMPACTS, AND MITIGATION



Anticipated Benefits

The Proposed Action will bring multiple safety and operational benefits. The additional lane with full shoulders will reduce impacts of speed differences between slow-moving vehicles and passenger vehicles and reduce the need for full highway closures. Intelligent transportation systems, which are technology-based communication systems such as electronic speed limit and road closure signs, would reduce the overall duration of highway closures due to weather and incidents.

Anticipated benefits:

- Additional lane to pass slow-moving vehicles
- Less full highway closures
- Shorter duration of closures





Anticipated Benefits

Emergency responders and law enforcement will have adequate space to access crashes and breakdowns while still allowing traffic to flow over the pass. Closures due to minor crashes and breakdowns would be reduced because vehicles could use the shoulder as a refuge area with the auxiliary lane providing more space for keeping at least one lane of traffic open. Crashes in general are expected to be reduced by up to 40%.

Anticipated benefits:

- More space for emergency response
- Shoulder refuge for minor crashes and breakdowns
- Reduce crashes by up to 40%

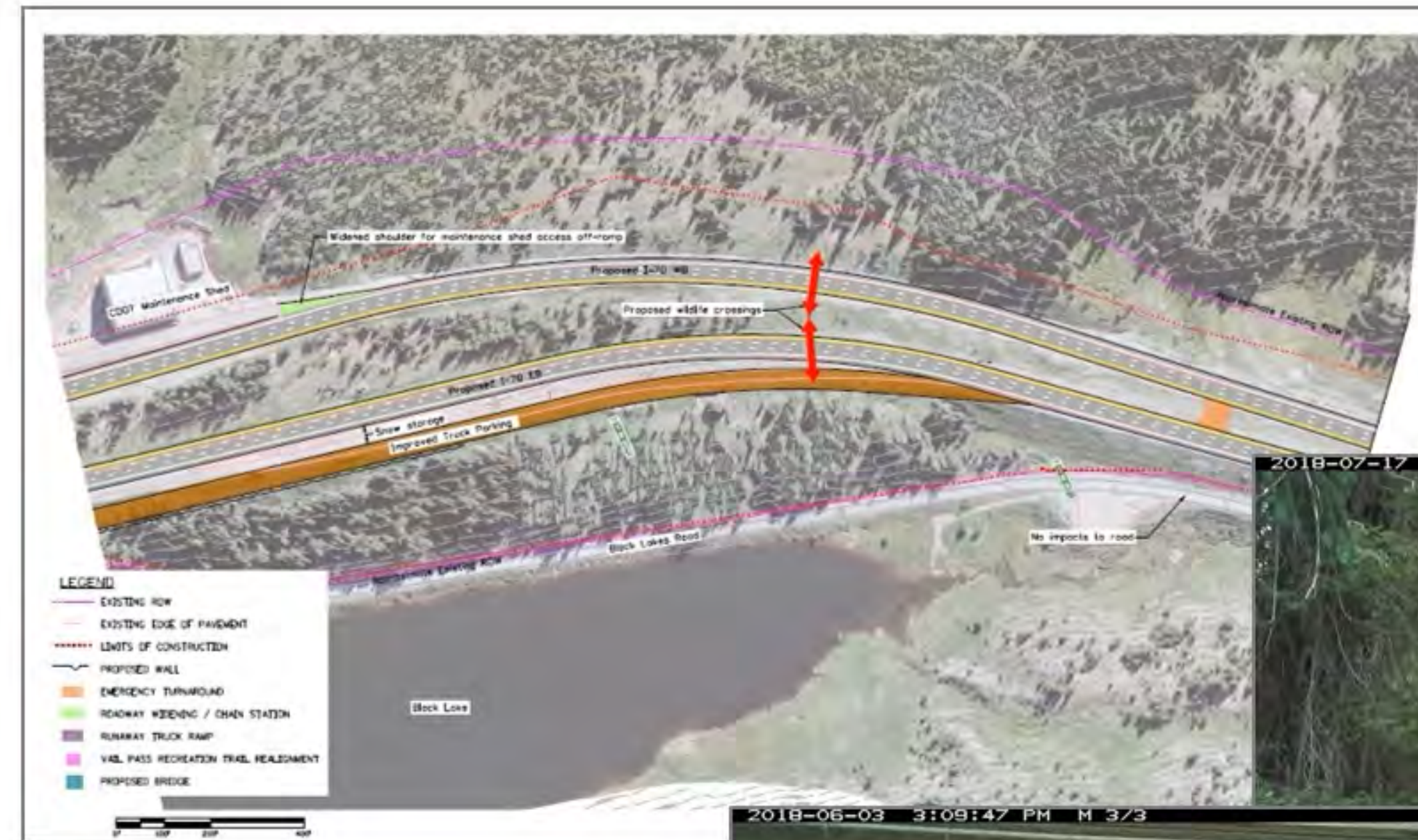




Anticipated Benefits

Wildlife fencing will direct animals to grade separated crossings to reduce wild animal crashes while preserving habitat links.

Truck parking improvements will reduce operational impacts of speed differences between vehicle traffic and trucks parked on the shoulders of I-70.





Environmental / Community Impacts and Mitigation Summary

As part of project development, impacts and proposed mitigation for each environmental resource were assessed for the Proposed Action Alternative.

This presentation will focus on resources with more notable impacts and mitigation. First, permanent impacts and mitigation will be reviewed, followed by a summary of temporary impacts during construction and associated mitigation.

Environmental resources analyzed:

- Air quality
- Noise
- Land use/right-of-way
- Economic
- Environmental justice
- Parks and recreation
- Historic
- Archeological
- Section 4(f) non-historic and historic
- Hazardous materials
- Utilities
- Vegetation
- Noxious weeds
- Wildlife
- Fish
- Threatened, endangered and special status species
- Water quality
- Floodplains
- Wetlands
- Visual
- Geologic and soils
- Paleontological
- Cumulative impacts

Details of all resources, including existing conditions, methodologies, and associated impacts and mitigation can be found in the EA document.



Project Impacts - Noise

Noise levels of future traffic volumes were modeled based on the Proposed Action alignment. Twenty-nine residential receptors and six recreation receptors were found to be impacted by traffic noise.





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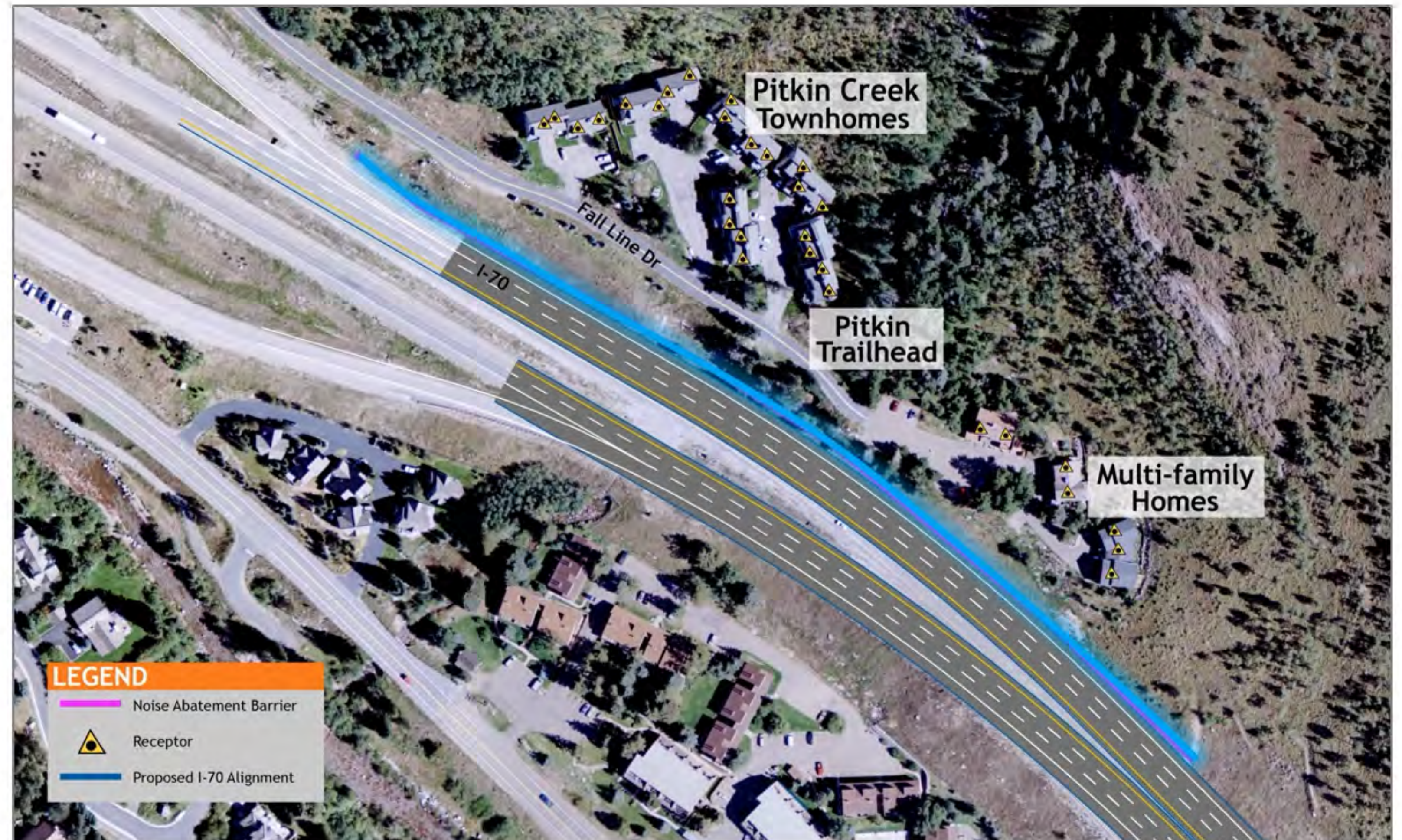




Proposed Mitigation - Noise

Two potential noise barriers in East Vail were analyzed to determine whether they'd provide enough noise reduction at a reasonable cost per benefitted residence based on federal noise guidance. The noise barrier at mile post 180 was determined to provide enough noise reduction at a reasonable cost while the other noise barrier did not.

During the final design phase of the project, a survey of those residences that would benefit from a barrier will be conducted to determine public support. Final recommendations would be determined in the final design.



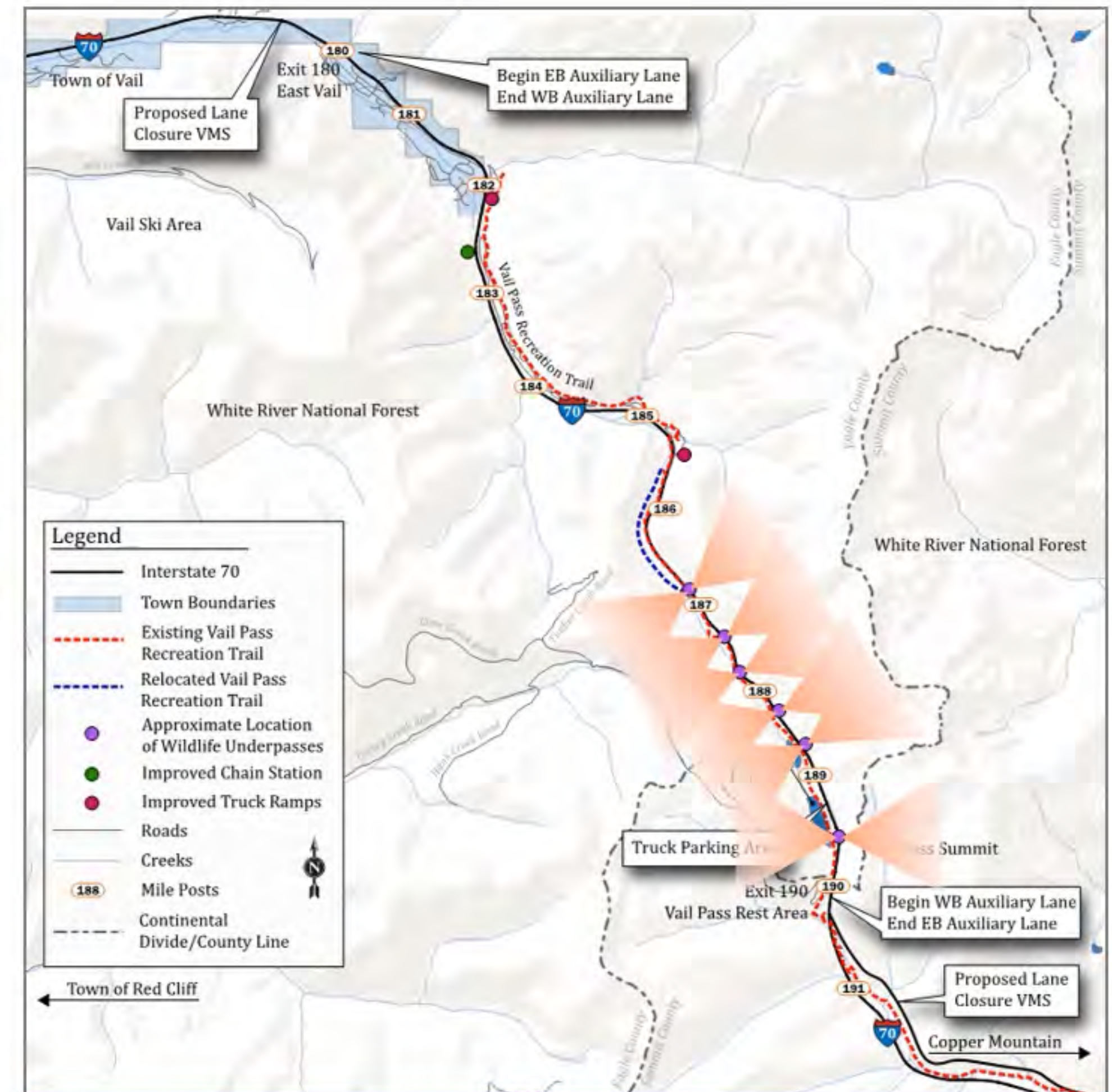


Project Impacts - Wildlife

The addition of auxiliary lanes, guardrails, and new retaining walls will result in new and wider barriers to wildlife movement and additional habitat fragmentation.

The proposed improvements are likely to adversely affect the federally threatened Canada Lynx due to loss of habitat, increased barrier effect, and light pollution.

The proposed mitigation for these impacts includes six new wildlife crossing structures, wildlife fencing, and escape ramps.





Project Impacts - Section 4(f)

Section 4(f) of the U.S. Department of Transportation Act of 1966 provides consideration of publicly owned recreation properties and historic resources during transportation projects.

FHWA has determined that there is a “use” or adverse effect to Section 4(f) properties in the project area. For those resources with a “use”, measures to minimize impacts were assessed. The following slides discuss the impacts to those historic and recreation resources and measures to minimize those impacts.

Section 4(f) considers publicly owned recreation properties and historic resources.

There is an adverse effect to Section 4(f) properties in the project area.

Impacts and ways to minimize impacts were assessed.





Project Impacts - Historic Resources and Section 4(f)

During the historic property analysis, also known as the Section 106 process, it was determined that there are three historic properties:

- Bradley Residence
- Old US 6
- I-70 at Vail Pass within the Area of Potential Effect (APE)

The Proposed Action would have an adverse effect on the I-70 at Vail Pass historic district. There would be no adverse impacts to the other two properties.

I-70 at Vail Pass Historic District would be impacted by:

- widening and realignment of I-70,
- bridge and retaining wall replacement, and
- modification of supporting features such as ramps and culverts.





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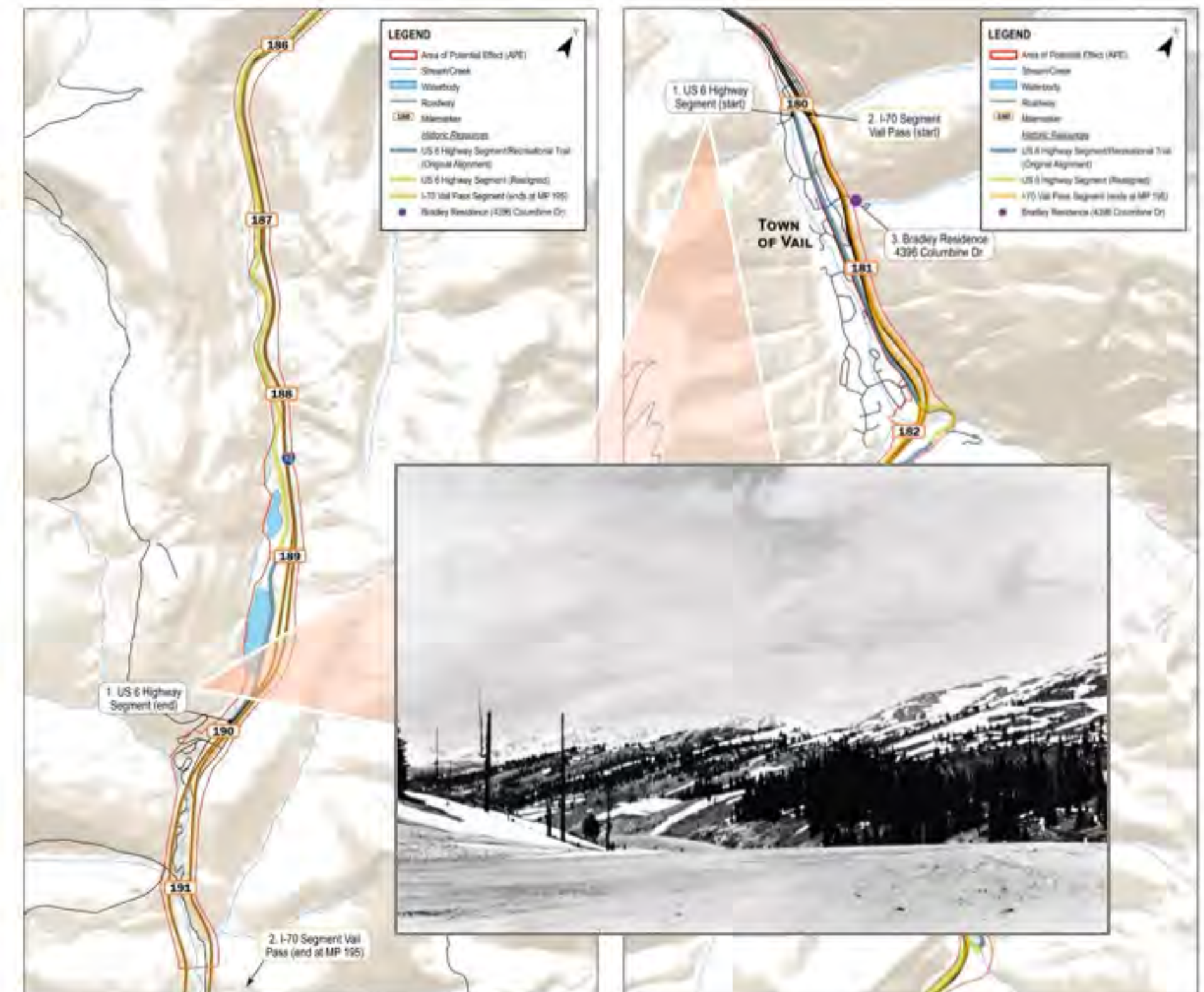
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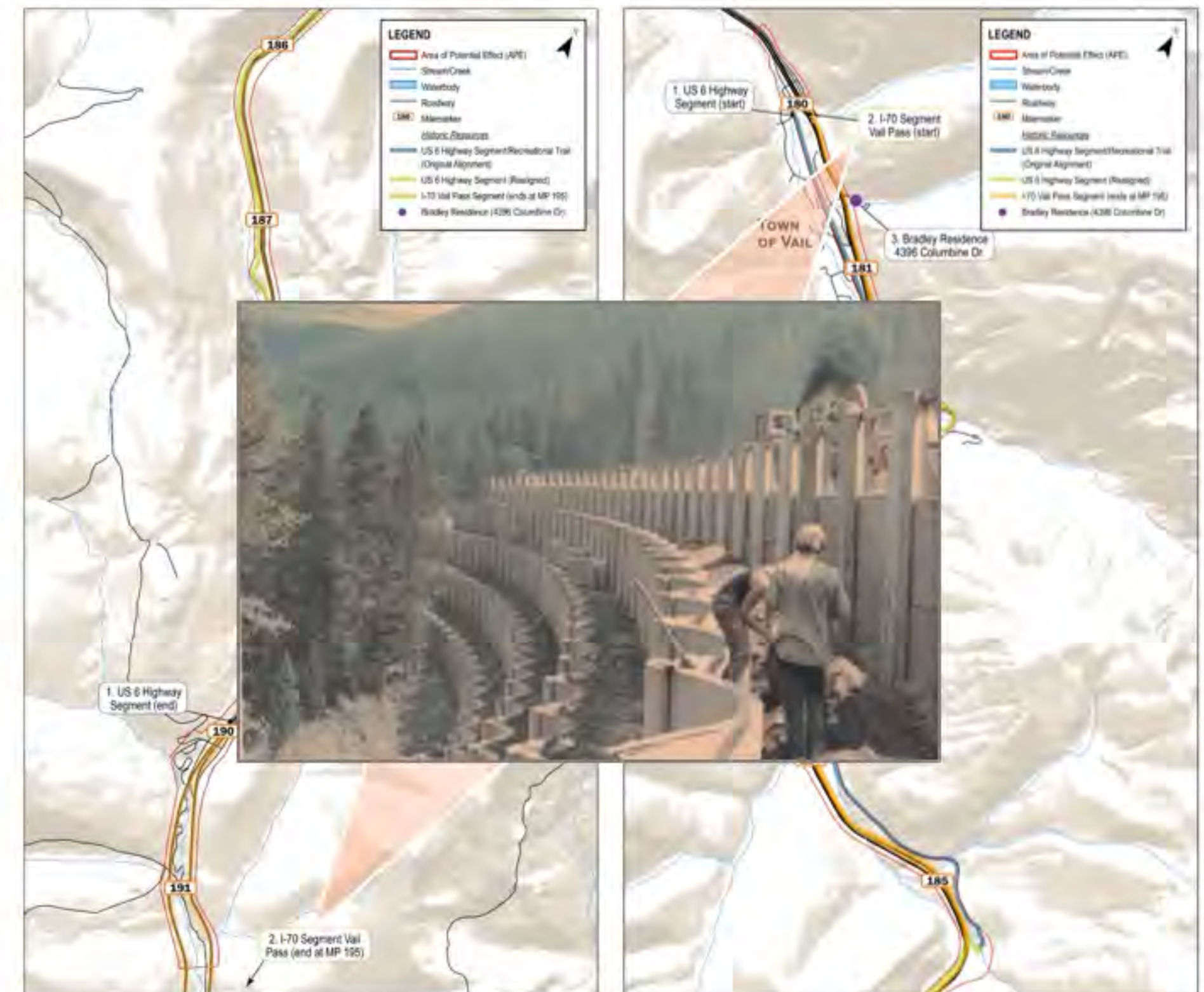
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Project Impacts - Historic Resources and Section 4(f)

Minimization measures for the historic impacts include the I-70 Vail Pass Context Study, which documents the unique history and design of the Pass; installation of an interpretive panel outlining the history of Vail Pass; and creation and application of aesthetic guidance for the design of the project to incorporate the historic context of West Vail Pass.

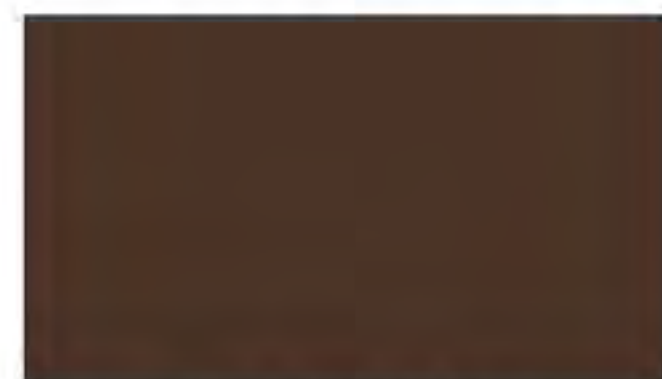
The aesthetic guidance will include, but is not limited to, aesthetic treatments for structures, materials, colors, planting, site grading forms, and maintenance recommendations.

EXAMPLE COLOR PALETTE



*Federal Standard 595B
Color 30233
Application: Accents*

*Federal Standard 59B5 Color
30372:
Application: All road structures*



*Federal Standard 595B Color
20059:
Application: All vertical features*



EXAMPLE INTERPRETIVE PANEL



Project Impacts - Recreation Resources and Section 4(f)

There are 20 parks and recreation resources within or adjacent to the Project area. Of these, the resources listed here are considered Section 4(f) properties, seven of which will be impacted by the Proposed Action.



15 non-historic Section 4(f) resources in the study area include:

- Bighorn Creek Trail
- Bighorn Park
- Black Lake Number 1 and 2
- Corral Creek Trail
- Deluge Lake Trail
- Gore Creek Campground
- Gore Creek Trail
- Gore Valley Trail
- Katsos Ranch Open Space (trails only)
- Pitkin Creek Trail
- Shrine Pass Road
- Two Elk Trail
- Vail Pass Recreation Trail
- Vail Pass Winter Recreation Area
- Wilder Gulch Trail





Project Impacts - Section 4(f)

The Vail Pass Recreation Trail would be permanently impacted due to the road widening and will be relocated for two miles. There will also be two other minor realignments.

Some recreation accesses would be temporarily closed for safety reasons due to work on the I-70 bridges over Bighorn Road.

Access to Bighorn Creek Trail would be temporarily closed due to construction work on the Columbine Drive concrete box.

Temporary closures to the following accesses:

- Deluge Lake Trail
- Gore Creek Trail
- Gore Valley Trail
- East trailhead for Two Elk Trail
- Gore Creek Campground



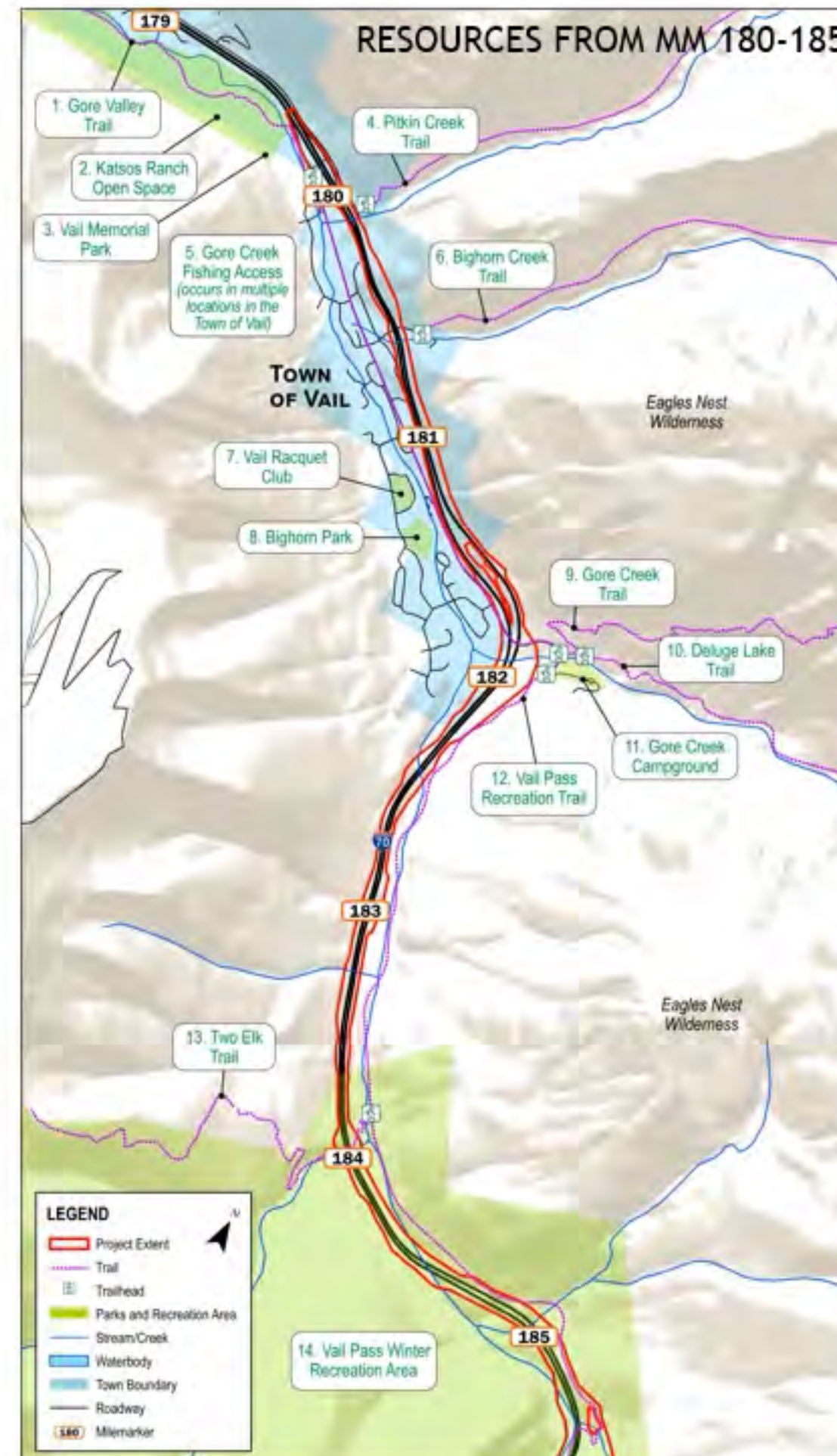


Project Impacts - Recreation Resources and Section 4(f)

To minimize impacts to trail users and as the project moves into design, all impacts will be coordinated with the US Forest Service and recreation outfitters well in advance of any planned closures.

The re-aligned portion of the Vail Pass Recreation Trail will be constructed prior to closing or removing the existing portion of trail. Access on the Vail Pass Recreation Trail will not be closed for extended durations. Where the trail requires minor realignment, flaggers will be used as necessary keep the path usable during construction.

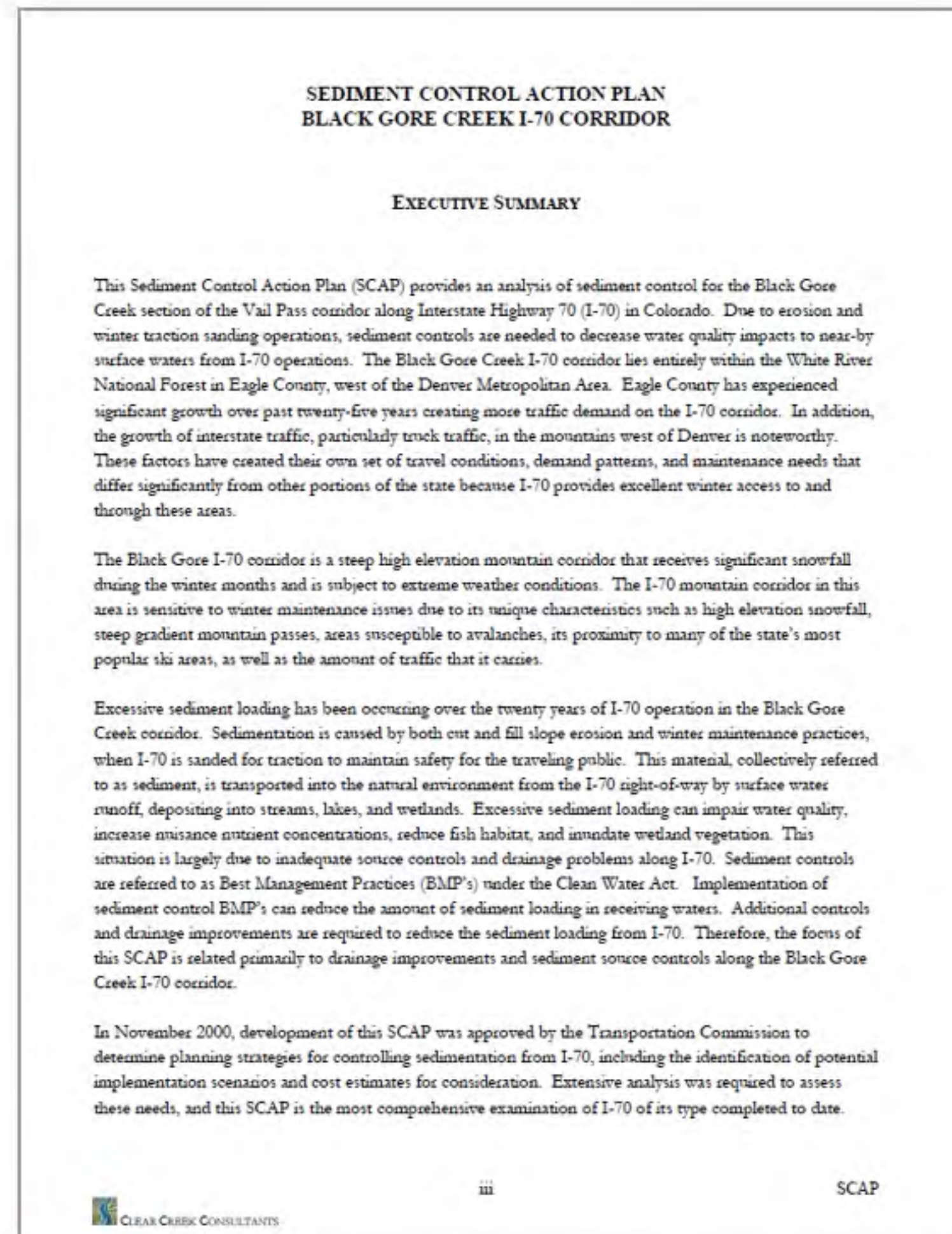
The project team will work to keep the closures of Bighorn Road, Columbine Drive, and Two Elk Trail as short as possible.





Project Impacts - Water Quality

Water quality in nearby waterways could be impacted from additional sediment runoff due to an increase in impervious surface and additional traction sand. New areas of erosion could develop, and sediment would continue to accumulate under bridges and other inaccessible areas.





Project Impacts - Water Quality

To mitigate these impacts, the existing Black Gore Creek Sediment Control Action Plan will be updated and will include recommendations for permanent water quality treatment measures, an example of which is shown here.





Project Impacts - Wetlands

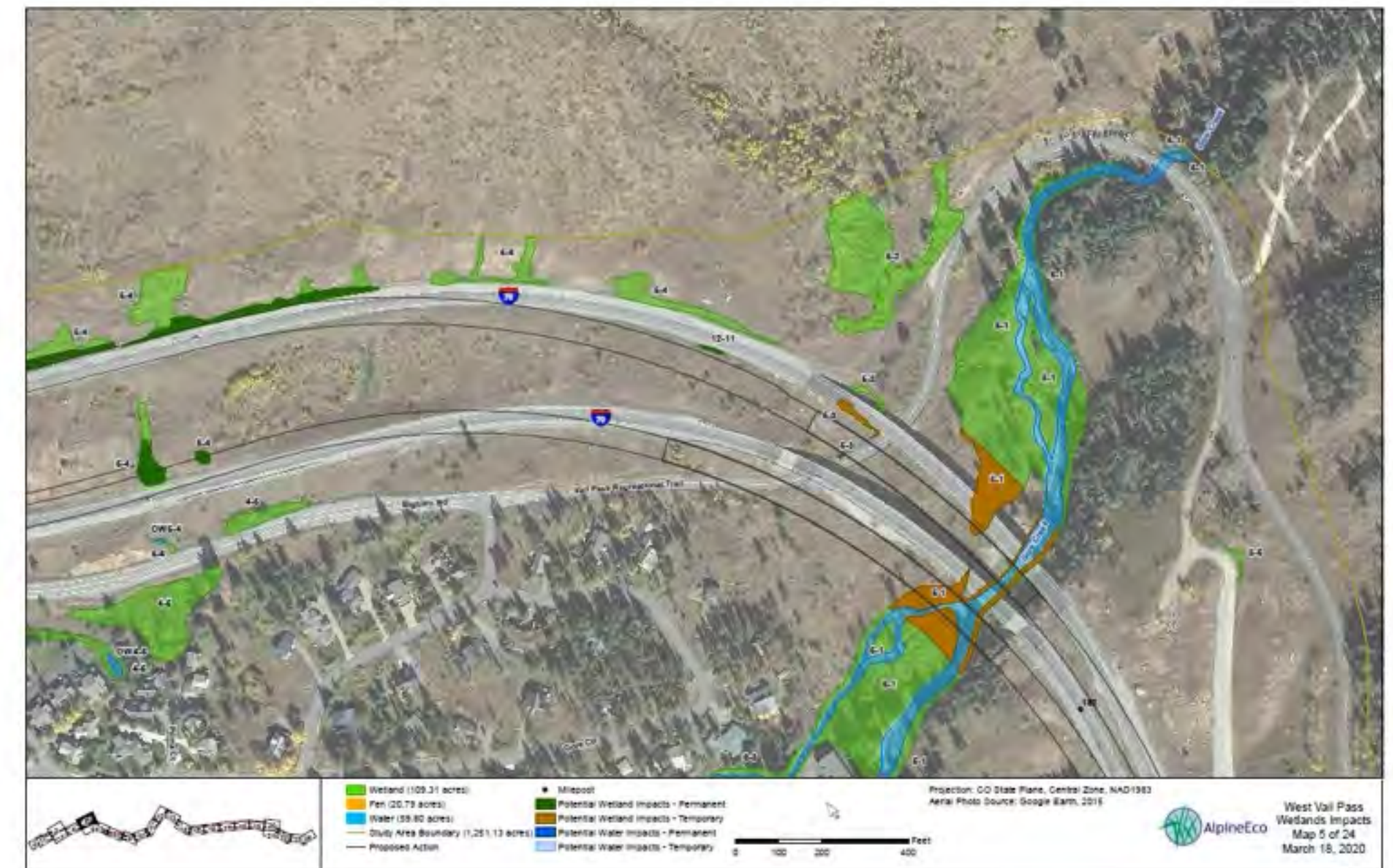
The project would impact approximately 9.44 acres of wetlands, including 0.42 acre of high-quality wetlands called “fens,” and 0.19 acre of other water features.

All wetland impacts will be mitigated on a 1:1 ratio, and fens may need to be replaced at a higher ratio if so determined by the US Army Corps of Engineers.

CDOT is committed to utilizing onsite mitigation as its first priority.

Wetland impacts include:

- 9.44 acres of wetlands (including 0.42 acre of fen)
- 0.19 acre of other water features





Construction Impacts

Resources with construction impacts are listed here.

Detailed information regarding these impacts can be found in the EA document.

Resources with construction impacts:

- Transportation
- Air Quality
- Noise
- Right-of-way
- Economic Resources
- Environmental Justice
- Parks and Recreation
- Hazardous Materials
- Utilities
- Vegetation and Noxious Weeds
- Wildlife, Fish, and Threatened & Endangered Species
- Water Quality
- Floodplains
- Wetlands/Other Waters
- Visual
- Geologic Resources



Construction Impacts

CDOT will minimize lane closures to the greatest extent possible during high traffic times. For all potential lane closures, night work, and construction near residences, CDOT will conduct early and frequent communication with the public through signage, the project web page and email campaigns, and via postal notifications.

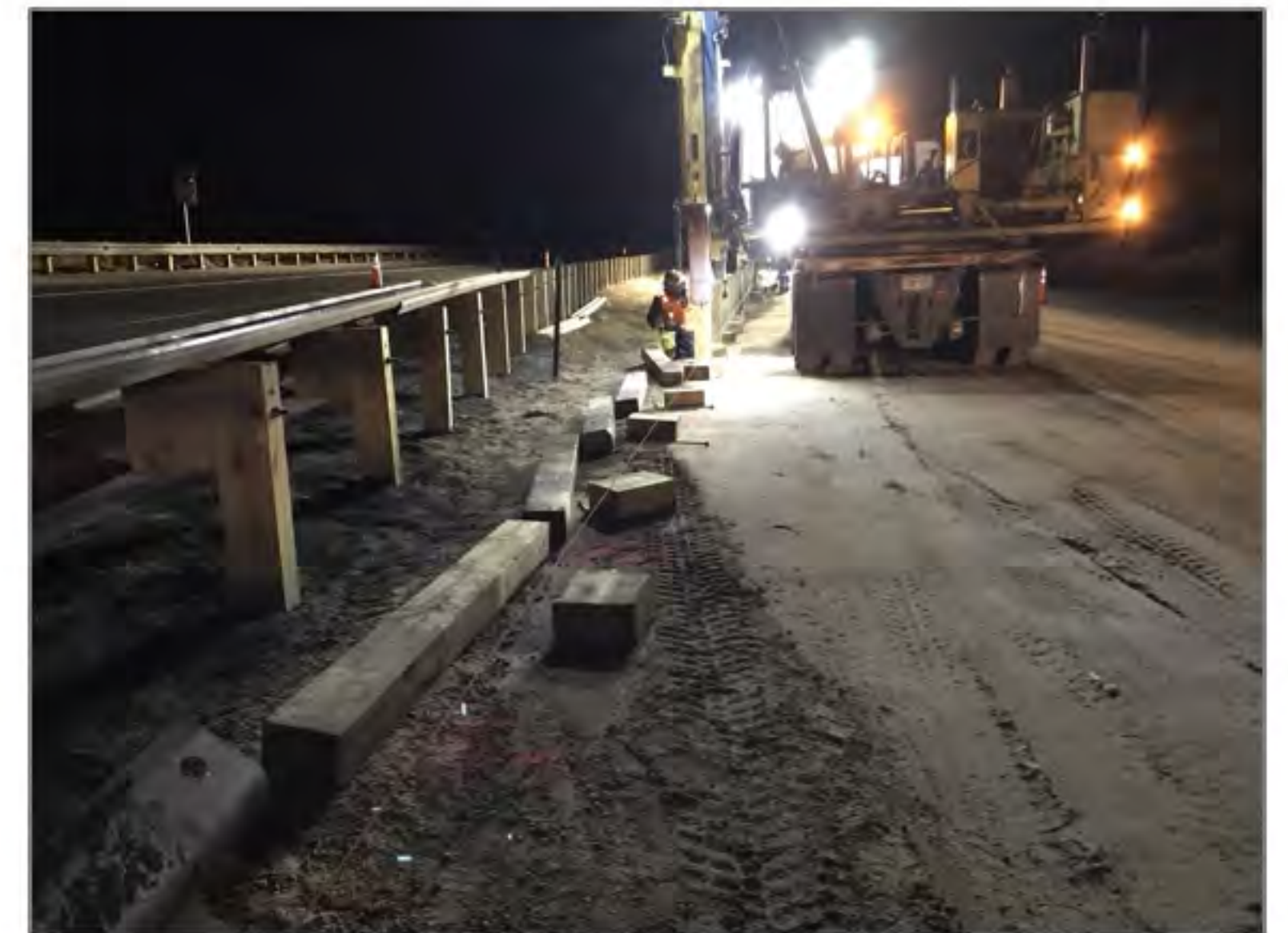




Construction Impacts

There is a potential to impact wildlife during construction due to removal of vegetation that is used for habitat and feeding and from noise and light from construction equipment.

To minimize these impacts, work will be limited to the smallest area possible. All areas will be revegetated after construction. In addition, if night work is required, work will be done for four nights in a row and then three nights of no night work. This will minimize impacts to the Canada lynx, which is considered a threatened species.



SOURCE: COLORADO PARKS AND WILDLIFE



SOURCE: COLORADO PARKS AND WILDLIFE



SOURCE: COLORADO PARKS AND WILDLIFE



Construction Impacts

There is potential for more sediment to enter waterways and wetlands due to removal of vegetation and ground disturbance during construction.

All disturbed areas will be revegetated after work is complete. Temporary control measures, such as silt fencing and other measures shown here, will be used to minimize erosion and sediment runoff during construction.





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NEXT STEPS



INFRA Grant Funding

In June 2020, CDOT was awarded a federal INFRA grant. This, combined with other funding, will allow for construction of the first phase of the project totaling \$140.4 million.

Funding Identified:

- Federal INFRA grant: **\$60.7 million**
- CDOT contribution: **\$75.2 million**
- Other federal sources: **\$4.5 million**
- Total: **\$140.4 million**

INFRA

I-70 Vail Pass Safety and Operations Improvements
Colorado Department of Transportation
Eagle County, Colorado

Proposed Award: \$60,700,000

Estimated Future Eligible Project Costs: \$140,400,000

Estimated Minimum Non-Federal Funding: \$75,200,000

The total cost for the Proposed Action is **\$700 million**.

CDOT will continue to pursue additional funding to complete the rest of the project.



INFRA Grant Elements

The INFRA project will consist of an eastbound auxiliary lane for 5 miles on the upper half of the Pass, wildlife underpasses, wildlife fencing, additional outside shoulder widening, curve reconstruction, bridge reconstruction, lower truck ramp reconstruction, signage improvements, and anti-icing technology on a bridge.

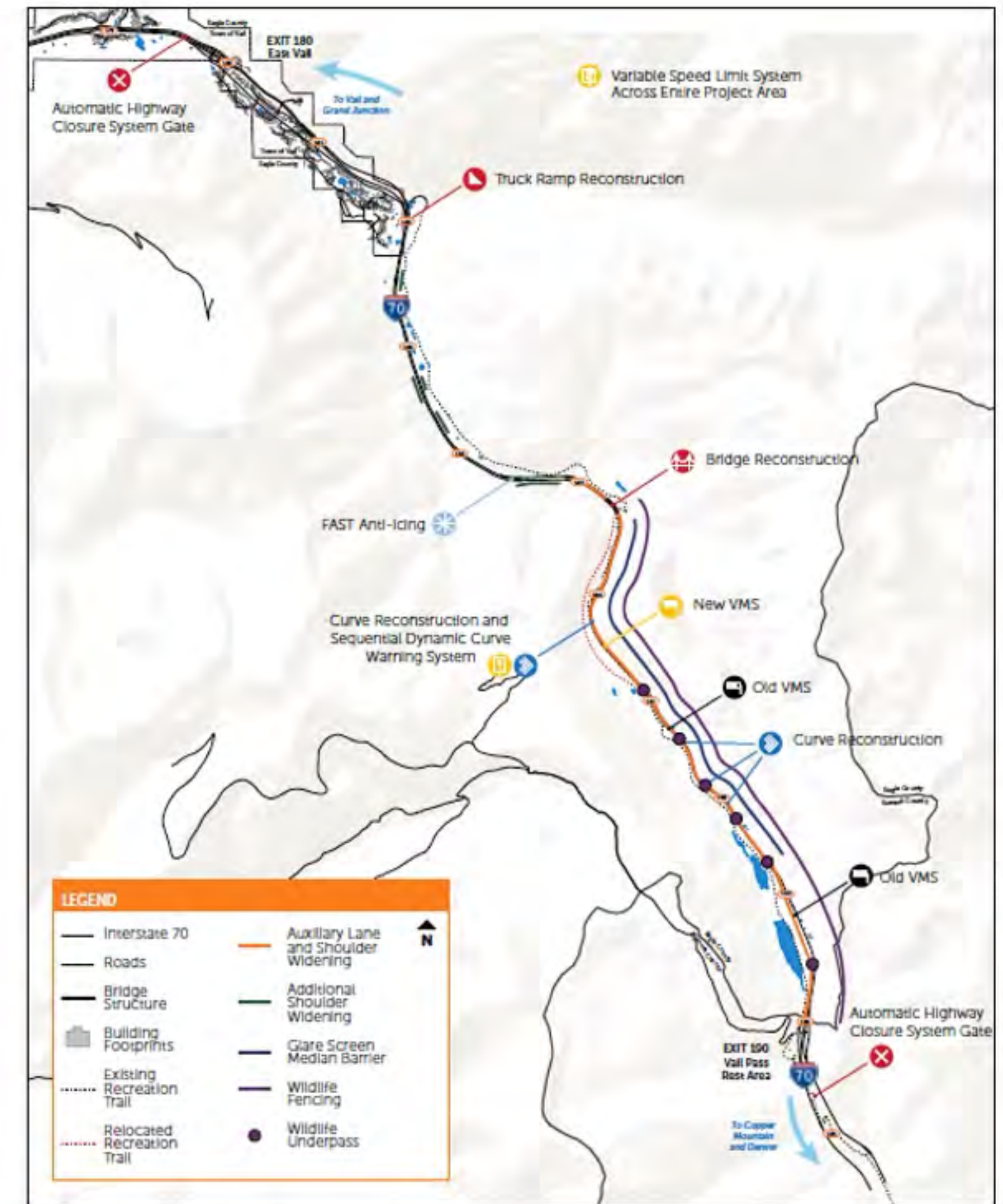


I-70 Vail Pass Safety and Operations Improvements

INFRA APPLICATION • RURAL

SPONSORED BY:





Design and Construction Schedule

The design completed for the EA is high-level and additional design is needed prior to the construction of any improvements. The design of the INFRA Grant improvements will begin in 2021, along with construction of the early action items, which are yet to be determined. Major construction would occur from 2022 to 2024.



Timing of construction for other phases will be dependent on future funding.



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Thank You

CDOT needs your input!

Comments welcome
9/22 - 10/21, 2020

The EA is available at www.bit.ly/WestVailPass

Hard copies of the EA are available for review at the Vail Public Library and Town of Vail Administration Office.

Thank you for viewing this I-70 West Vail Pass Auxiliary Lanes Environmental Review presentation to learn about the Proposed Action. Your input is requested regarding this Proposed Action and will be considered by FHWA and CDOT before they decide if the project should move forward. To submit a comment or ask a question, please visit the Comments link on the project web page or submit a comment form using instructions on the form.

Your input is important!