



WELCOME

EXIT 203 (Frisco) and I-70 Eastbound
Auxiliary Lane Feasibility Study

PUBLIC OPEN HOUSE

4:00 pm to 7:00 pm

There will be a short
presentation regarding the status
of the study at 5:00 pm

PURPOSE OF THE MEETING

The purpose of tonight's Open House is to provide information related to the EXIT 203 (Frisco) and I-70 Eastbound Auxiliary Lane Feasibility Study including:

- The scope of the project
- The goals of the feasibility study
- The relationship to the I-70 Mountain Corridor Programmatic Environmental Impact Statement (PEIS)
- The critical success factors for the project
- A review of the work to date
- The project schedule and next steps
- Gather input from the local community



PROJECT OVERVIEW

PROJECT CONTEXT

In June 2011, the Federal Highway Administration (FHWA) signed the Record of Decision (ROD) for the Interstate 70 Mountain Corridor Final Programmatic Environmental Impact Statement (PEIS). This document focuses on a high-level vision of the I-70 Mountain Corridor for the horizon year of 2050.

Additional studies, including this project, are required to identify specific project alternatives, alignments, and interchange types consistent with the decisions made in the PEIS.

PROJECT DESCRIPTION

This feasibility study focuses on three main project elements:

1. The I-70 and SH 9 interchange (EXIT 203)
2. The intersection of SH 9 and Dillon Dam Road
3. The addition of an eastbound auxiliary lane from Frisco to Silverthorne

The goal of the project is to identify safety, mobility, and operations improvements on I-70 and at the SH 9 Frisco interchange.

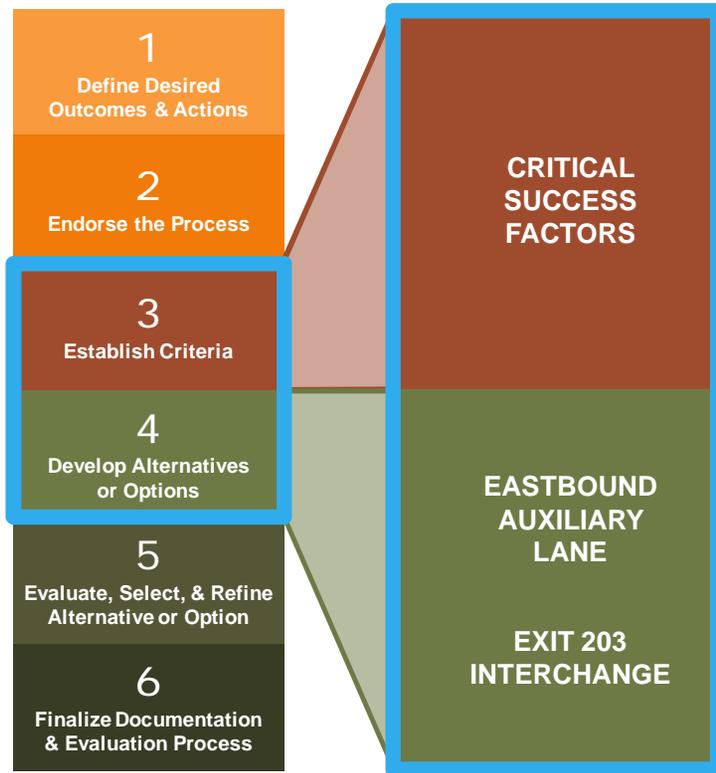
STUDY AREA

The study area for the feasibility study is along I-70 from just west of the SH 9 interchange (EXIT 203) northeast to The Silverthorne interchange (EXIT 205). It also include a portion of SH 9 from the interchange to just south of the intersection with Dillon Dam Road



CONTEXT SENSITIVE SOLUTIONS (CSS)

CSS Process



Critical Success Factors

Critical Success Factors (CSF) define the critical results or activities necessary to reach a positive or successful outcome to a project.

The CSF for the EXIT 203 (Frisco) and I-70 Eastbound Auxiliary Lane Feasibility Study are:

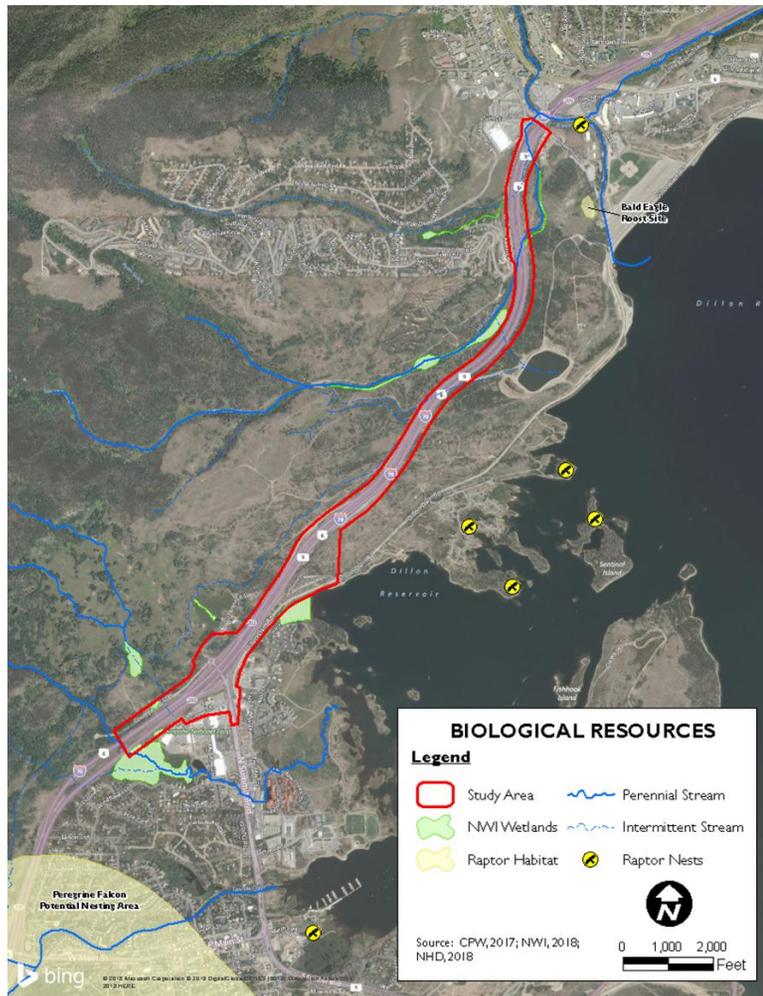
- Address Safety and Capacity of I-70 Corridor
- Improve Corridor Operations
- I-70 Lane Balance
- Attend to the PEIS
- Consider Local Planning Efforts
- Evaluate SH 9 / Dillon Dam Road Intersection

"CSS is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist. CSS principles include the employment of early, continuous and meaningful involvement of the public and all stakeholders throughout the project development process."

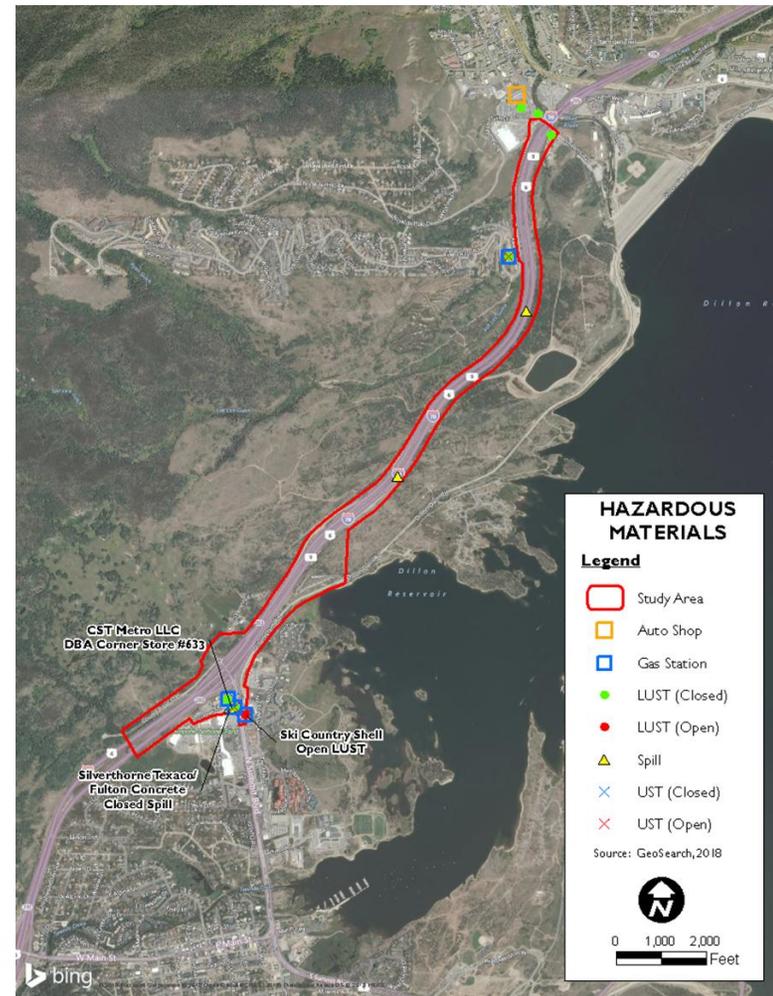
– Federal Highway Administration

ENVIRONMENTAL OVERVIEW

Biological Resources

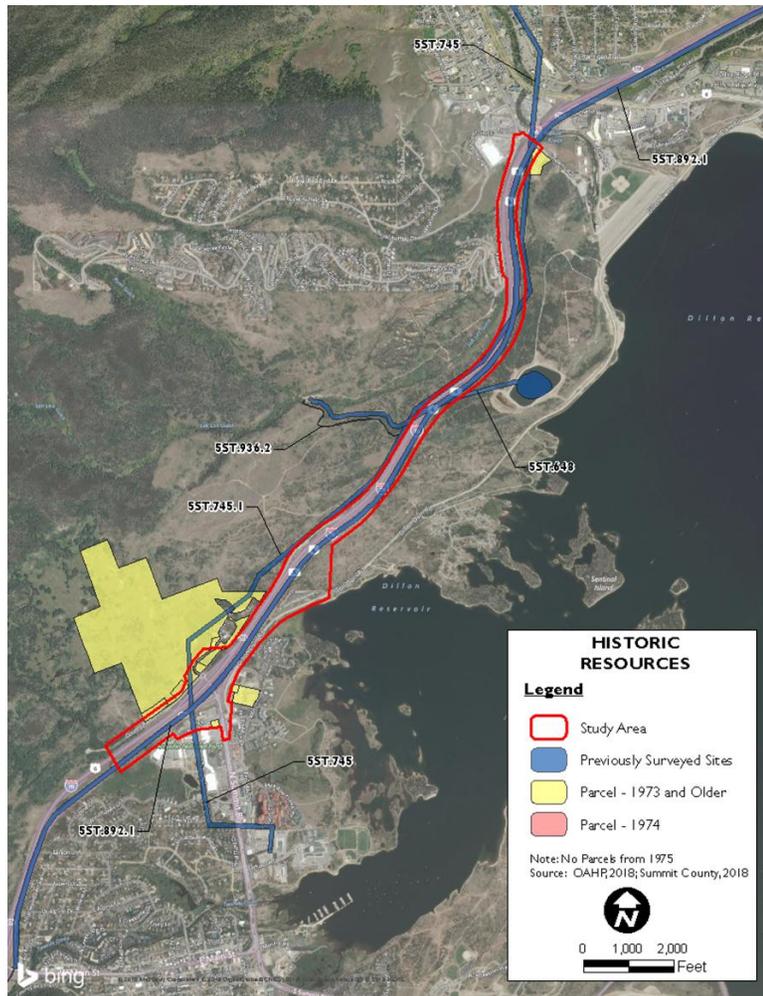


Hazardous Materials

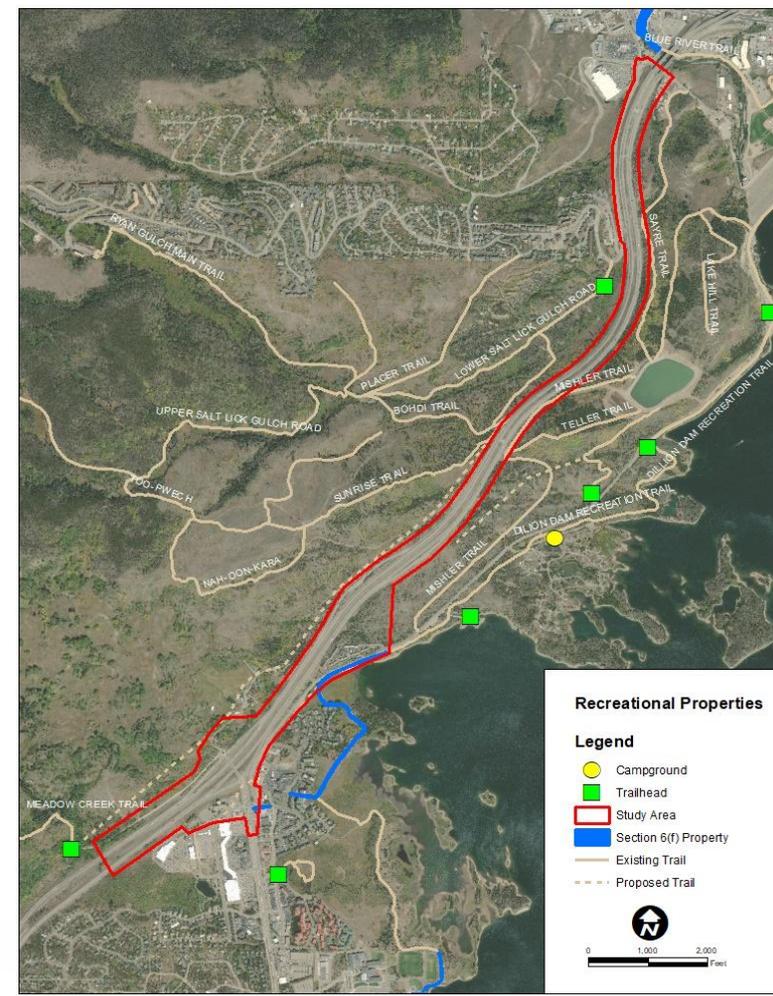


ENVIRONMENTAL OVERVIEW

Historic Resources



Recreational Properties



TRAFFIC & PLANNING

EXIT 203 Interchange Operations

What is Level of Service (LOS)?

Level of service (LOS) is a quantitative scale used to determine how well a transportation facility is operating from the traveler's perspective.

Typically, six levels of service are defined and each is assigned a letter designation from A to F, with LOS A representing the best operating conditions, and LOS F the worst.



Existing Intersection Levels of Service (LOS)
(2017)

TRAFFIC & PLANNING

I-70 Operations

Morning Peak Hour LOS



Afternoon Peak Hour LOS



Level of Service

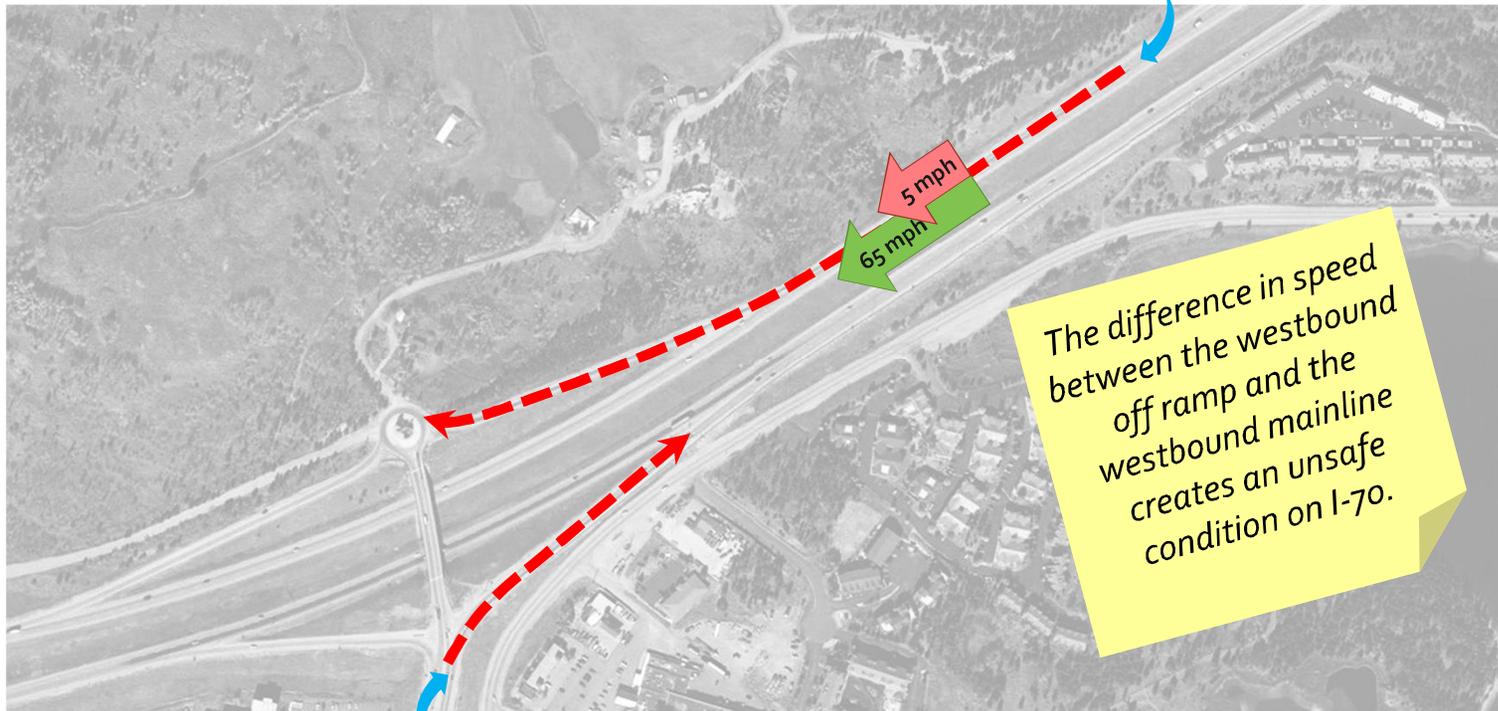


Existing I-70 Levels of Service (LOS)
(2017)

TRAFFIC & PLANNING

Safety Assessment

Maximum extent of the vehicle queue from the roundabout at Exit 203



Maximum extent of the vehicle queue from the ramp meter

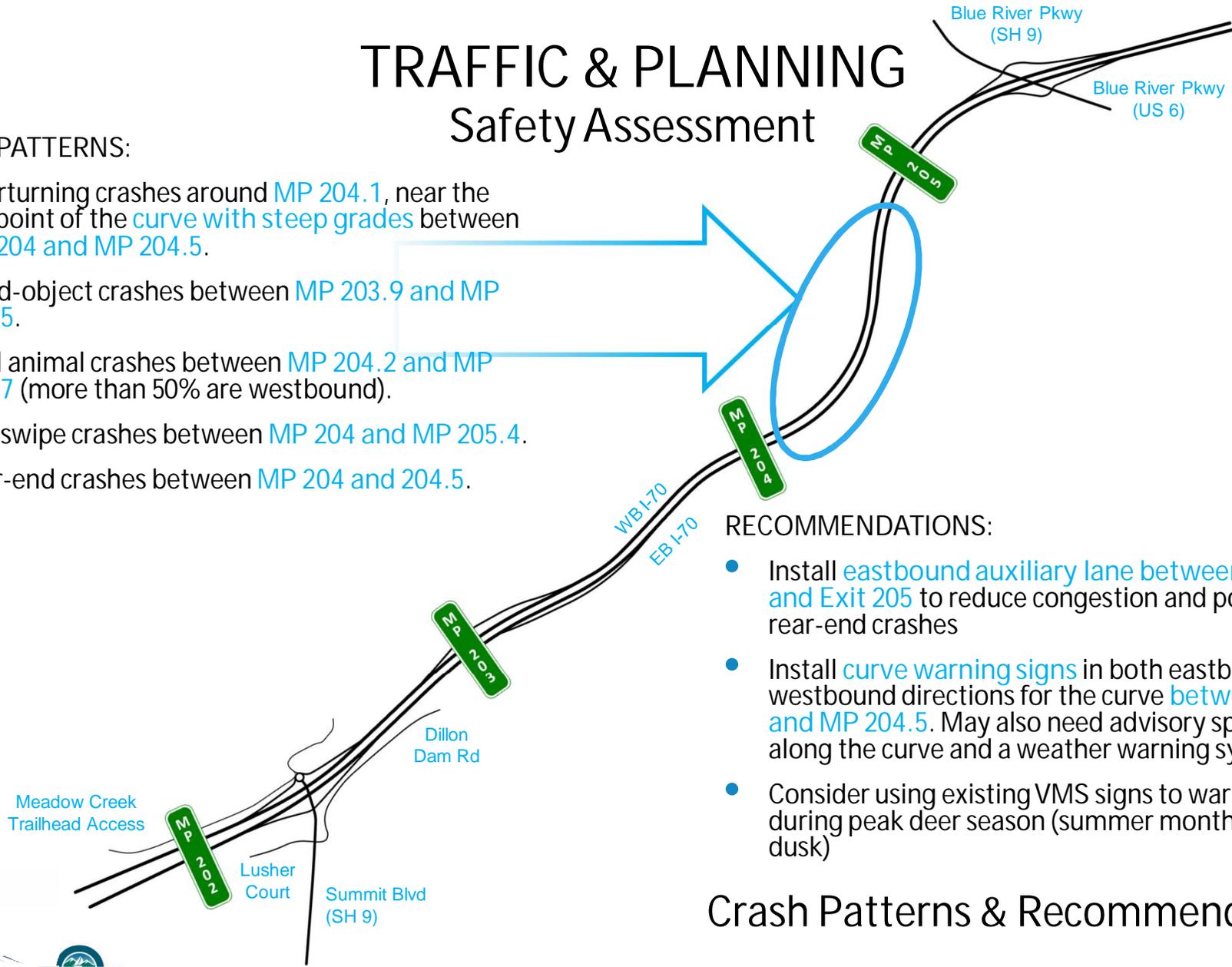
Existing Ramp Queue Lengths
(2017)

TRAFFIC & PLANNING

Safety Assessment

CRASH PATTERNS:

- Overturning crashes around MP 204.1, near the midpoint of the curve with steep grades between MP 204 and MP 204.5.
- Fixed-object crashes between MP 203.9 and MP 204.5.
- Wild animal crashes between MP 204.2 and MP 204.7 (more than 50% are westbound).
- Sideswipe crashes between MP 204 and MP 205.4.
- Rear-end crashes between MP 204 and 204.5.



RECOMMENDATIONS:

- Install eastbound auxiliary lane between Exit 203 and Exit 205 to reduce congestion and potential for rear-end crashes
- Install curve warning signs in both eastbound and westbound directions for the curve between MP 204 and MP 204.5. May also need advisory speed plaques along the curve and a weather warning system.
- Consider using existing VMS signs to warn of deer during peak deer season (summer months around dusk)

Crash Patterns & Recommendations
(2017)

TRAFFIC & PLANNING

Forecasting Methodology

SKETCH PLANNING TECHNIQUE

- Factor Method predicts future travel demands based on historical data and trends. Historical traffic counts and growth rates along I-70 will be analyzed to predict an appropriate future growth rate, which will then be used in determining future travel demands.
- Trip Generation/Trip Distribution Method predicts future traffic based on anticipated future developments. CDOT will work with Summit County and the Town of Frisco to evaluate known developments in the study area, these trips will be applied toward future traffic estimates.

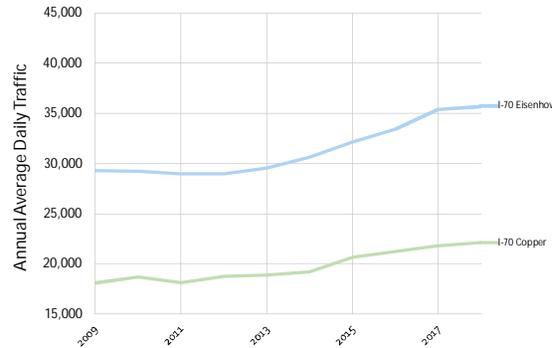
GROWTH RATES

- A flat annual growth rate will be determined based on historic growth and reflect historic growth rates and CDOT forecasting methodologies, the Intermountain Transportation Planning Region, and comprehensive plans for the Town of Frisco and Summit County. Other considerations include tourism and population growth.

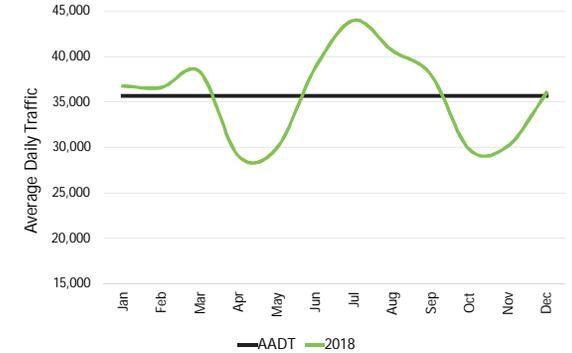
SEASONAL ADJUSTMENTS

- The I-70 mountain corridor creates seasonal patterns and the travel demand will reflect these annual fluctuations in traffic. Continuous counter data from CDOT will be used in calculating seasonal traffic factors.

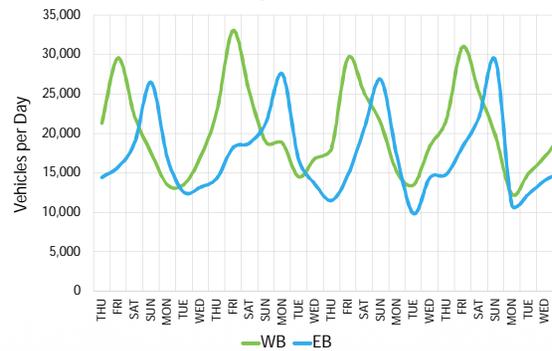
I-70 Annual Average Daily Traffic (2008 - 2018)



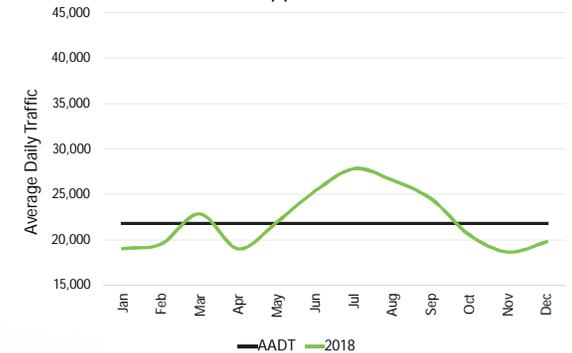
Monthly Average Daily Traffic I-70 @ Eisenhower Tunnel



I-70 West of Eisenhower - Daily Traffic Patterns (February/March 2017)



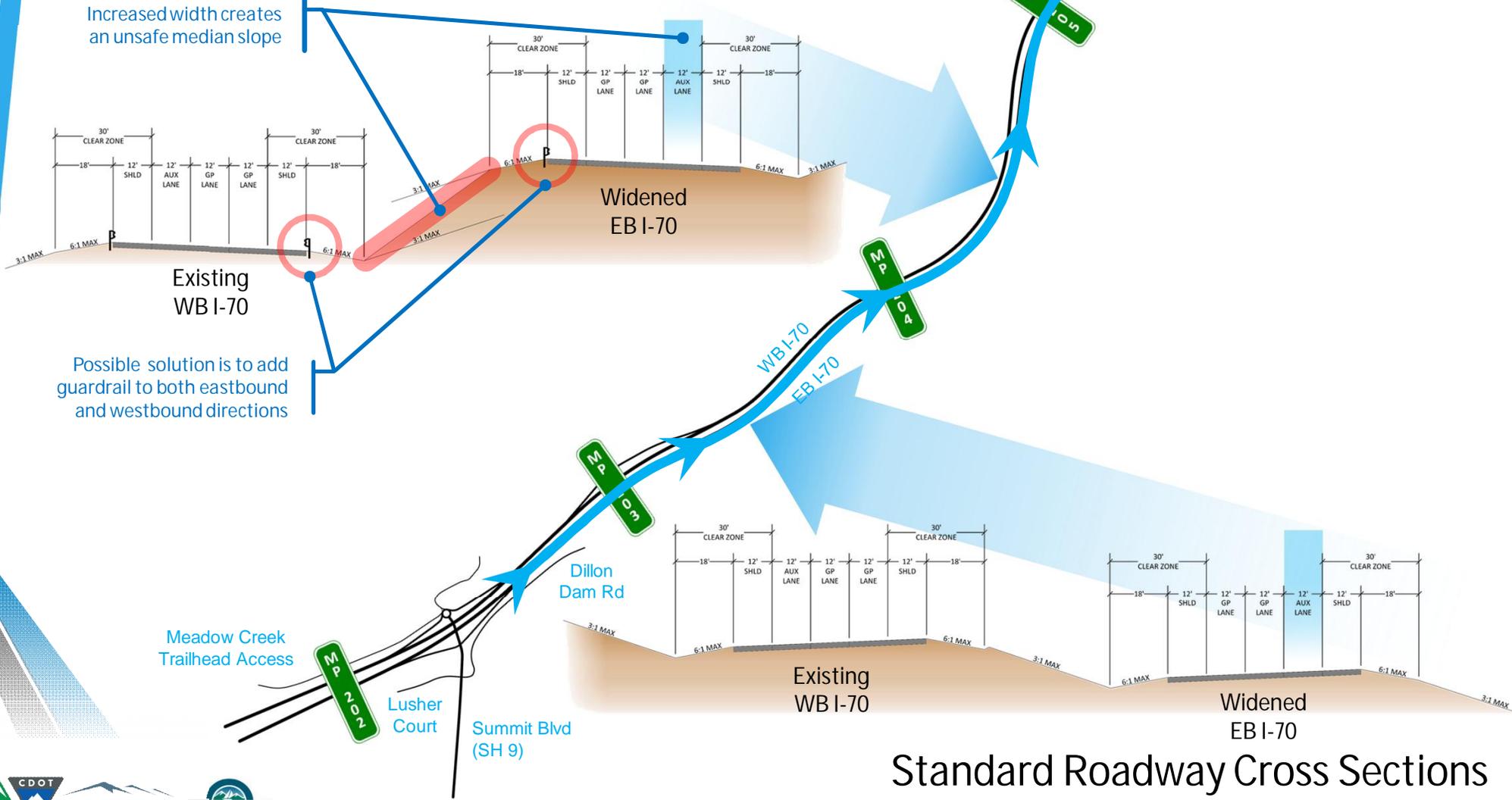
Monthly Average Daily Traffic I-70 @ Copper Mountain



CONCEPTUAL DESIGN Eastbound Auxiliary Lane

Increased width creates an unsafe median slope

Possible solution is to add guardrail to both eastbound and westbound directions



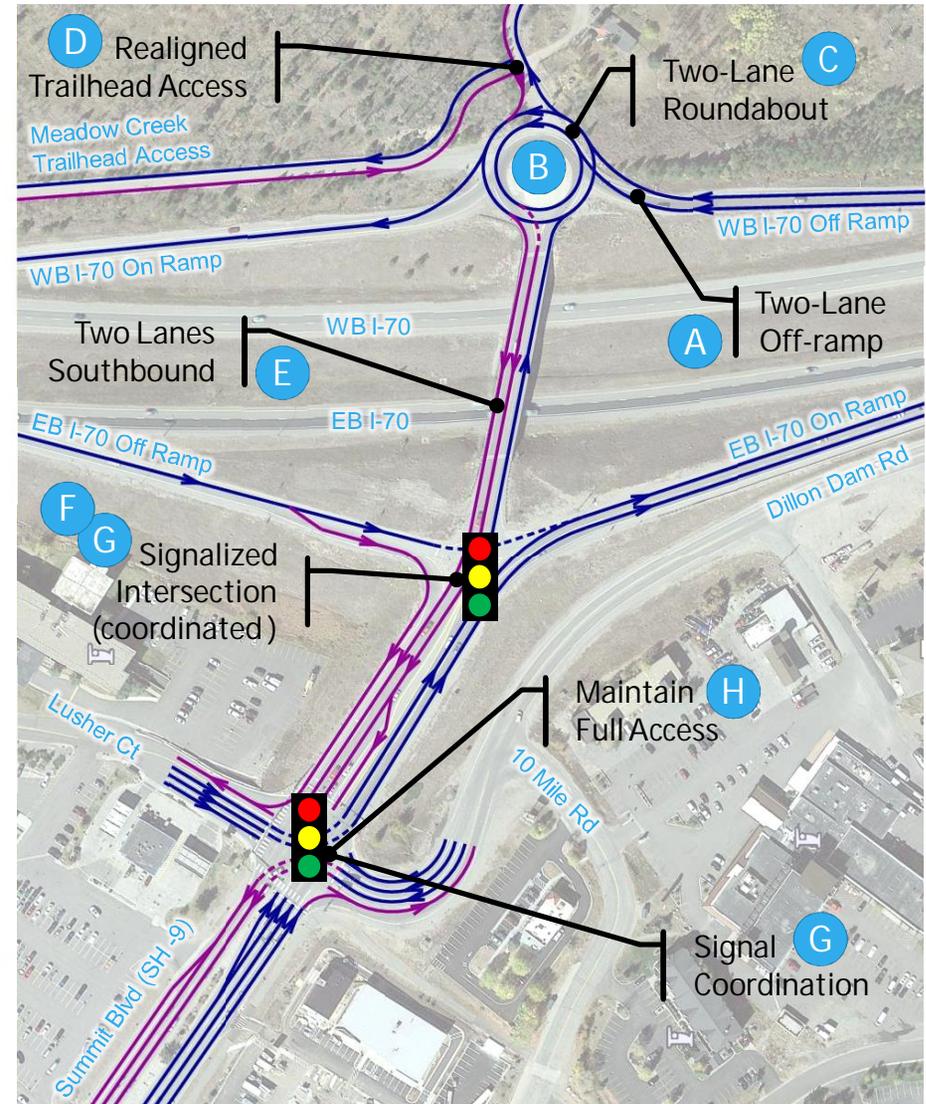
Standard Roadway Cross Sections

CONCEPTUAL DESIGN

Two-Lane Roundabout Interchange Option

TWO-LANE ROUNDABOUT:

- A. Adds one lane to the I-70 westbound off ramp
- B. Enlarges radius of the roundabout
- C. Adds one lane to the roundabout
- D. Realigns the Meadow Creek Trailhead access
- E. Adds one lane to the bridge overpass of I-70
 - Requires separate pedestrian structure or widening of the existing bridge for a pedestrian walkway to access Meadow Creek Trailhead
- F. Signalizes the I-70 eastbound on/off ramp intersection
- G. Coordinates signals on Summit Boulevard:
 - I-70 eastbound on/off ramp intersection
 - Lusher Court/Dillon Dam Road
- H. Maintains full access to Dillon Dam Road and Lusher Court

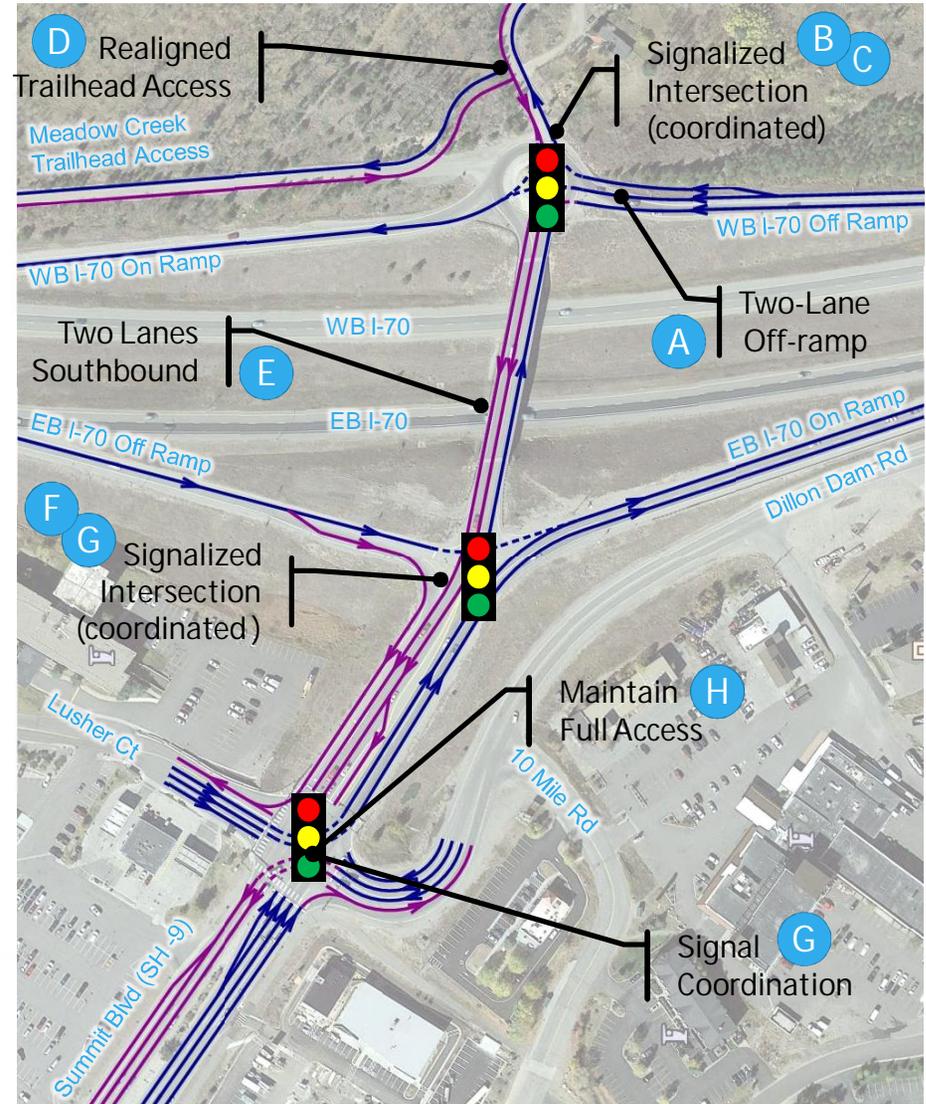


CONCEPTUAL DESIGN

Signalized Interchange Option

SIGNALIZED INTERSECTION:

- A. Adds one lane to the I-70 westbound off ramp
- B. Signalizes the I-70 westbound on/off ramp intersection
- C. Coordinates signals on Summit Boulevard:
 - I-70 westbound on/off ramp intersection
 - I-70 eastbound on/off ramp intersection
 - Lusher Court/Dillon Dam Road
- D. Realigns the Meadow Creek Trailhead access
- E. Adds one lane to the bridge overpass of I-70
- F. Signalizes the I-70 eastbound on/off ramp intersection
- G. Coordinates signals at I-70 eastbound on/off ramp intersection and Lusher Court/Dillon Dam Road
- H. Maintains full access to Dillon Dam Road and Lusher Court



PROJECT SCHEDULE

Task	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
PLT*	t	t		t		t			
Public Meeting		t				t			
Forecasting	t Forecasting methodology memo								
Environmental	t Environmental Overview memo					Feasibility Study	t		
Operations									
Alternatives						Final Concepts Development	t		
Design Survey									

*Project Leadership Team

NEXT STEPS

As the project progresses through the Feasibility Study, concepts will be identified for further evaluation.

After the Feasibility Study concludes, NEXT STEPS for the project include:

- Environmental process determinations
- 30% designs
 - I-70 eastbound auxiliary lane
 - I-70-/CO 9 Interchange (EXIT 203)
- Continue process for Context Sensitive Solutions

