

**STATE OF COLORADO**  
DEPARTMENT OF TRANSPORTATION  
REGION 1 I-70 MTN CORRIDOR PROGRAM  
425A CORPORATE CIRLCE - GOLDEN, CO 80401  
(720) 497-6900 (OFFICE), (720) 497-6901 (FAX)

# I-70 EB Peak Period Shoulder Lane Project

Project Number: NHPP 0703-401

Project Code: 19474

## Technical Team Meeting #8

December 16, 2013

CDOT I-70 Mountain Corridor | HDR Engineering, Inc.



# AGENDA

## 1. INTRODUCTIONS AND OVERVIEW

- Project Schedule
- Other Project Efforts

## 2. RESPONSES TO TECHNICAL TEAM ISSUES

- How the Peak Period Shoulder Lane Works
- Highway 103 bridge/Interchange
- Online Meeting Update

## 3. OUTCOMES FROM ISSUES TASK FORCE MEETINGS

- Section 106
- ALIVE
- SWEEP

## 4. ISSUES TIMELINE

## 5. FOLLOW UP

- SH 103 Bridge/Interchange
- Managed Lane Access
- Tolling
- ATM

## 6. REVIEW PROPOSED SOLUTIONS

- Signing
- East Idaho Springs
- Pullout Locations

## 7. OUTSTANDING ISSUES

## 8. DEVELOP CRITERIA FOR:

- ??

## 9. NEXT STEPS



# CORE VALUES

- SAFETY
- MOBILITY
- CONSTRUCTABILITY
- COMMUNITY
- ENVIRONMENT
- ENGINEERING CRITERIA AND AESTHETICS
- SUSTAINABILITY

**STEP 1**  
Define Desired Outcomes  
and Actions

**STEP 2**  
Endorse the Process

**STEP 3**  
Establish Criteria

**STEP 4**  
Develop Alternatives and  
Options

**STEP 5**  
Evaluate, Select and  
Refine Alternatives and  
Options

**STEP 6**  
Finalize Documentation  
and Evaluation Process



➤ **CONCEPT OF OPERATIONS REPORT**

- JANUARY 2014

➤ **PRELIMINARY DESIGN MEETING**

-NOVEMBER 2013

➤ **ENVIRONMENTAL ANALYSIS**

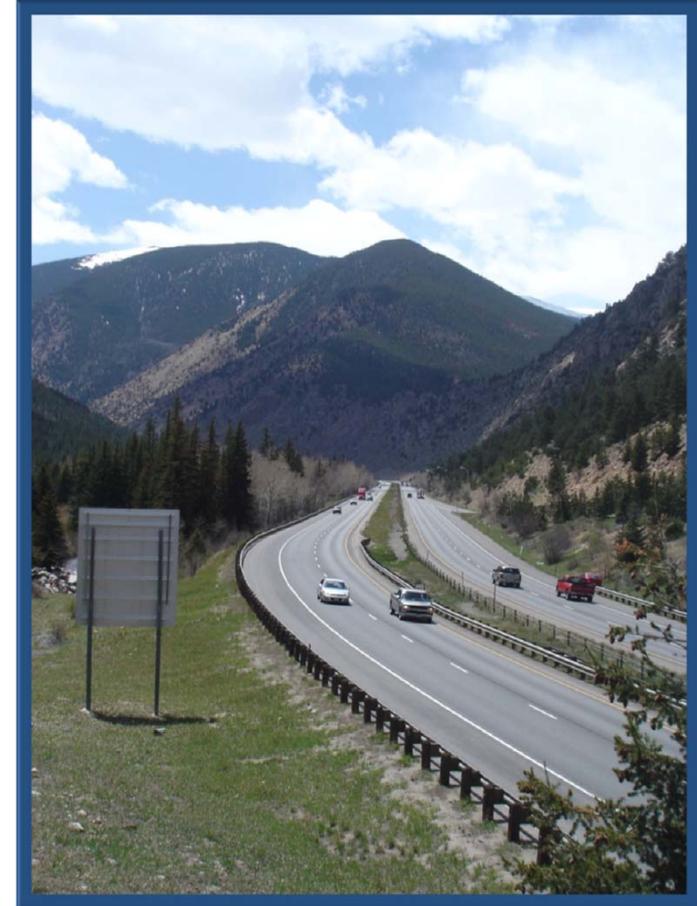
-JANUARY 2014

➤ **OPEN TO TRAFFIC**

- JULY 2015



- **Traffic and Revenue**
- **Twin Tunnels**
- **Westbound Tunnel  
Expansion**
- **AGS**
- **CCC Transportation  
Visioning**



## ➤ PARKING LOT

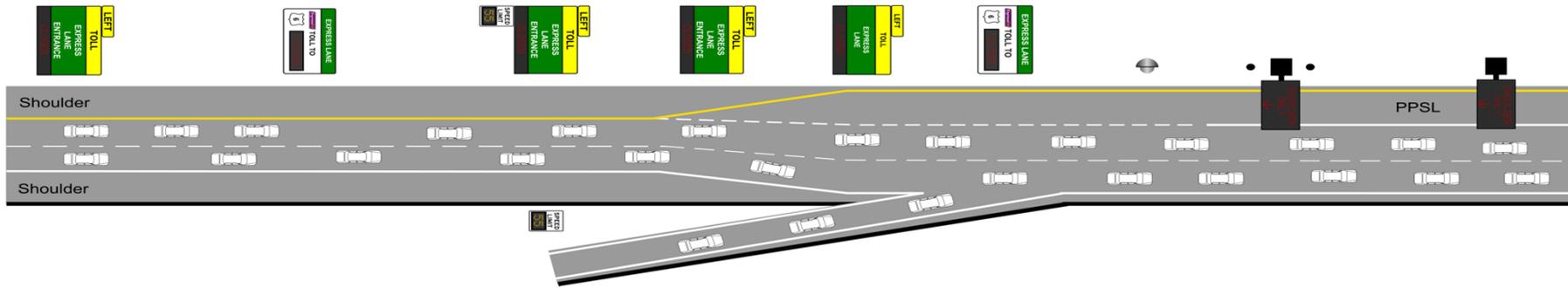
- How Peak Period Shoulder Lane Works
- Individual Vehicle Communication Technology
- Highway 103 Interchange
- Online Meeting Update
- Visual Context Maps
- Pullout Locations
- EA versus Cat Ex
- Snow removal
- Whole transportation system Including local roads
- Cooperative Agreements (revegetation, greenway, transportation, etc.)
- Enhancement opportunities along creek (revegetation etc.)





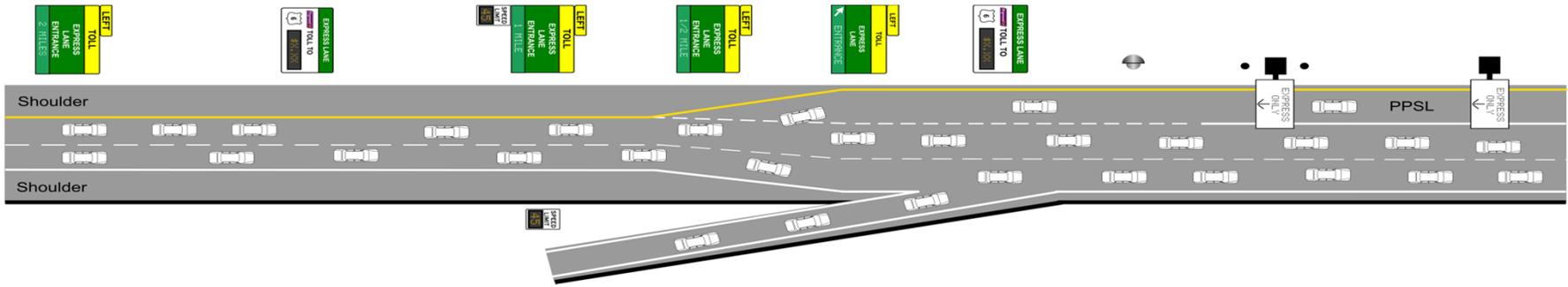
# HOW THE PPSL WORKS

# Off Peak - Normal

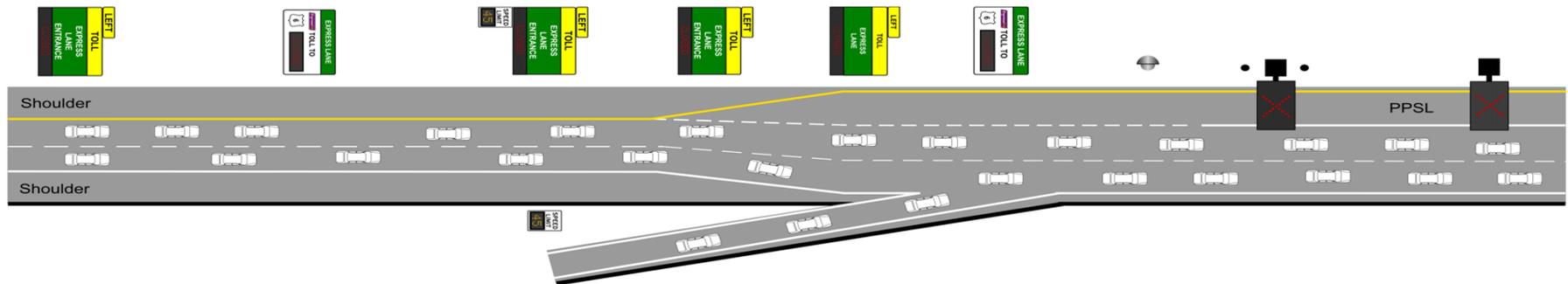


# HOW THE PPSL WORKS

## Open



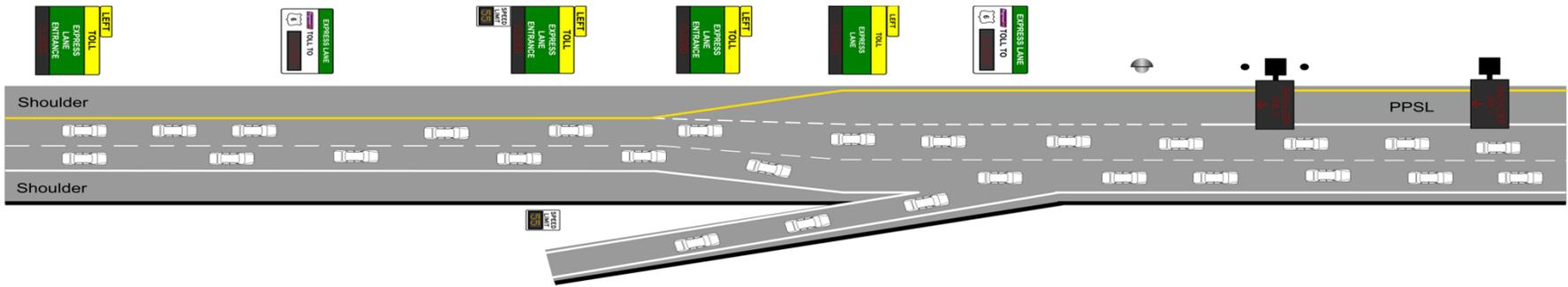
# Emergency



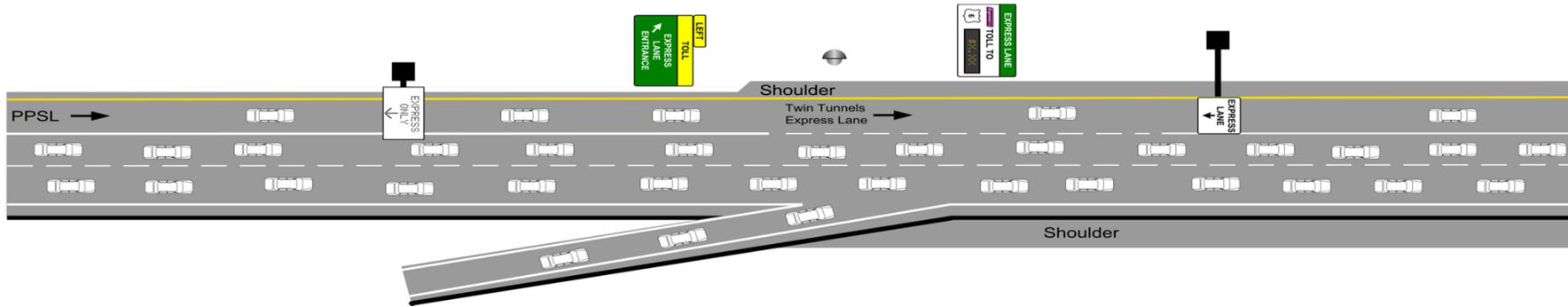


# HOW THE PPSL WORKS

## Closed



# Twin Tunnels Tie In



•SECTION 106

- Dec 2
- 22 properties recommended eligible

•ALIVE

- Dec 3
- Recommend median jumps and removal of fencing

•SWEEP

- Dec 5
- Concerns about impacts of wall at SH 103



# CSS TRACKING SCHEDULE

## I-70 MOUNTAIN CORRIDOR PEAK PERIOD SHOULDER LANE ISSUES FOR TECHNICAL TEAM PRELIMINARY SCHEDULE

ISSUES	2013		2013		2013		2013		2013		2013		2014		2014		2014		2014	
	2ND	4TH	2ND	4TH	2ND	4TH	1ST	4TH	2ND	3RD	2ND	3RD	2ND	4TH	2ND	4TH	2ND	4TH	2ND	4TH
WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK	WEEK
<b>OPERABILITY</b>																				
LEFT VS RIGHT	*	●			●															
<b>ROADWAY DEFINITION</b>																				
DEFINE INTERIM					*					●										
ROADWAY WIDTH		—			*	●														
WIDENING MEDIAN VS. CREEK					—*	●														
ACCELERATION AND DECELERATION LANES					—*	●														
<b>STRUCTURAL COMPONENTS</b>																				
SH 103 BRIDGE							—*	●		●		●								
I-70 BRIDGES							—*	●		●										
EAST IDAHO SPRINGS									—	*		●								
RETAINING WALLS					—*	●														
EMERGENCY RESPONSE					—*	●														
<b>INTEGRAL COMPONENTS</b>																				
PULL OUT LOCATIONS										—	*	●								
SIGNAGE								—	*	*	*	●		●						
ATM										*	●									
MANAGED LANE ACCESS								—	*	●										
DRAINAGE										—	*	●		*	●					
GREENWAY										—	*	●		*	●					
SNOW REMOVAL/ MAINTENANCE										—	*	●		*	●					
NOISE										—	*	●		*	●					
BARRIER/ GUARDRAIL														—	*	●				
INITIAL ENVIRONMENTAL FINDINGS														*	●					
CLASS OF ACTION														*	●					
AESTHETICS REVIEW					*	*	*			*	*	*		*	*					
LOCAL ROADWAY NETWORK														●						

LEGEND:  Shaded Items are Complete — Discuss Criteria \* Presentation of Concepts ● Follow-Up (As Needed)

PPBL Feasibility Review

ROD Compatibility

# GLOSSARY OF TERMS

<b>Acceleration Lane</b>	A lane adjacent to the primary travel lane that allows drivers to accelerate before merging into traffic on the main road
<b>Active Traffic Management</b>	A method of increasing peak capacity and smoothing traffic flows on busy major highways. Techniques include variable speed limits, hard-shoulder running, ramp-metering and may be controlled by overhead variable message signs .
<b>Auxiliary Lane</b>	Along a highway an auxiliary lane connects entrance and exit ramps, with the entrance ramp or acceleration lane from one interchange leading to the exit ramp or deceleration lane of the next.
<b>Breakdown Lane</b>	A strip of ground with a hard surface beside a major road where vehicles can stop in an emergency.
<b>Deceleration Lane</b>	A lane adjacent to the primary travel lane that allows drivers to pull off the main road and decelerate safely in order to turn or exit without slowing the traffic behind.
<b>Dynamic Toll</b>	A toll per vehicle that increases or decreases depending on the level of congestion in order to maintain the smooth flow of traffic.
<b>EOP</b>	Edge of pavement.
<b>General Purpose Lane</b>	A traffic lane that does not have any restrictions, such as time of day or type of vehicle that may use the lane.
<b>Interim Solution</b>	A capacity improvement on a roadway that will not be a permanent solution.
<b>Managed Lane</b>	In this case, the managed lane operates during a peak period and traffic utilizing that lane will be required to pay a toll.
<b>Median</b>	The central area between divided highway lanes with traffic traveling in opposite directions.
<b>Peak Period Shoulder Lane</b>	This is a lane of traffic that may function either as a shoulder and a managed lane or a shoulder and a general purpose lane, depending on left versus right.
<b>Rumble Strips</b>	A series of raised strips across a road or along its edge that make a loud noise when a vehicle drives over them in order to warn the driver to go slower or that he or she is too close to the edge of the road
<b>Traffic Management Operations</b>	A coordinated approach to road traffic management where ITS traffic data is utilized to provide traffic information across various platforms to allow for more effective incident management and more efficient management of traffic. This could include continual monitoring of video feed from the corridor.



## Context Statement

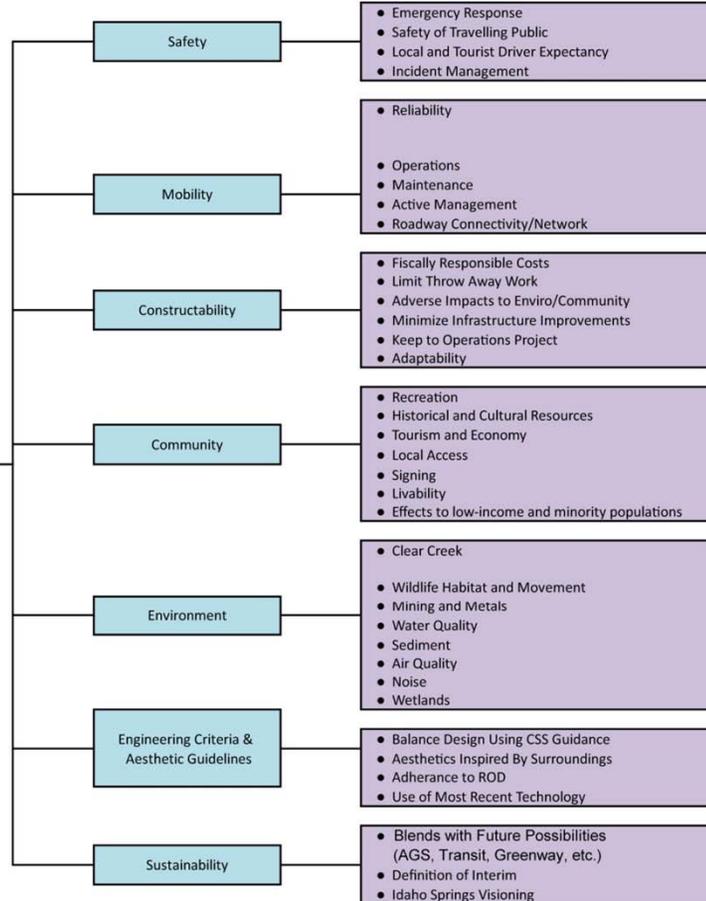
The I-70 mountain corridor is Colorado's only east-west interstate and the primary access route from Denver to the mountains of western Colorado.

The segment of the I-70 corridor that runs from Empire Junction to the Twin Tunnels at Idaho Springs has spectacular view sheds and is one of the most heavily populated areas of Clear Creek County. It also is one of the narrowest sections in the corridor, with the roadway located on the canyon floor adjacent to Clear Creek. This segment of interstate is an important link for the community, acting as a major arterial throughout the area and also providing multi-modal forms of transportation. Improvements to the interstate in this area directly impact established communities as well as unique environmental, historic and recreational resources.

This segment of the corridor experiences heavy flows of eastbound traffic causing severe congestion and traffic delays during peak periods, especially at the I-70/US 40 interchange at Empire Junction.

Short term operational strategies need to be explored until sufficient funding can be obtained to implement the corridor's ultimate vision.

## Core Values



## Critical Issues

## Evaluation Criteria





# SH 103 Interchange

# SH 103-INTERCHANGE North vs. South Alignment



## PEAK PERIOD SHOULDER LANE CRITERIA

DRAFT

### SH 103 - I-70 Widening North vs. South

ID	Criteria	Options Ranking	
		Shift to North	Shift to South
<div style="text-align: right;"> <span>Fair</span> <span>Better</span> <span>Best</span> </div>			
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	•Not a differentiator	
2	Maintains safety during non-peak times	•Not a differentiator	
3	Improves mobility during peak times	•Not a differentiator	
4	Minimizes the effort required to maintain the option		• Requires maintenance of park improvements.
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•Not a differentiator	
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	• Requires significant and costly impacts to drainage, utilities, and City parking.	• Minor impacts to the park. • Creates opportunities for park improvements.
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	• By impacting drainage, utilities, and City parking, users along the I-70 corridor will be less likely to visit due to increased construction and reduced parking.	• Park improvements will engage I-70 travelers with community amenities and history
8	Creates opportunities to "correct past damage"	• Increases impacts to the City	• Provides opportunity for park improvements which may increase usage of the facility.



# SH 103- INTERCHANGE North vs. South Alignment

9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	<ul style="list-style-type: none"> <li>Increases impacts to the City</li> </ul>	<ul style="list-style-type: none"> <li>Provides opportunity for park improvements which may increase usage of the facility.</li> </ul>
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
11	Protects or creates unique features for the area as a gateway	<ul style="list-style-type: none"> <li>Increases impacts to the City parking</li> </ul>	<ul style="list-style-type: none"> <li>Provides opportunity for park improvements which may increase usage of the facility.</li> </ul>
12	Protects wildlife needs	<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
13	Protects Clear Creek	<ul style="list-style-type: none"> <li>Less potential for encroachment into creek</li> <li>Less visual impact for walls</li> </ul>	<ul style="list-style-type: none"> <li>More potential for creek encroachment</li> <li>More visual impact from walls</li> <li>Positively impacts recreational experience</li> </ul>
14	Protects the defining historical elements of Clear Creek County	<ul style="list-style-type: none"> <li>No impacts to historical elements</li> </ul>	<ul style="list-style-type: none"> <li>Park enhancements may lead to a greater awareness and more frequent visits to the water wheel</li> </ul>
15	Meets CDOT's and industry standards	<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
16	Achieves the mountain mineral belt aesthetic guidelines	<ul style="list-style-type: none"> <li>No opportunity for park improvements</li> </ul>	<ul style="list-style-type: none"> <li>Provides opportunity for park improvements</li> </ul>
17	Meets the I-70 Mountain Corridor design criteria	<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
18	Preserves opportunities for the AGS and the ultimate preferred alternative	<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
19	Adaptable for future changes/projects	<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	



# SH 103 INTERCHANGE North vs. South Alignment

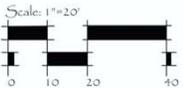
ID	Criteria	Options Ranking	
		Widen to Creek	Widen to Median
<div style="text-align: right;"> <span style="border: 1px solid black; padding: 2px;">Fair</span> <span style="border: 1px solid black; padding: 2px; background-color: yellow;">Better</span> <span style="border: 1px solid black; padding: 2px; background-color: green;">Best</span> </div>			
<b>Issue Specific Criteria</b>			
1	Appropriate Cost/Benefit	<ul style="list-style-type: none"> <li>• More costs associated with utility and drainage impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Less costs and more benefits associated with Park improvements.</li> </ul>
2	How well does the solution support pedestrian movement?	<ul style="list-style-type: none"> <li>• Does not impact pedestrian movements</li> </ul>	<ul style="list-style-type: none"> <li>• Improves pedestrian movements</li> </ul>
3	How does the solution affect the Bikeway and Water Wheel Park?	<ul style="list-style-type: none"> <li>• Does not impact Bikeway or Park</li> </ul>	<ul style="list-style-type: none"> <li>• Greatly improves Bikeway and Park (connectivity, aesthetically)</li> </ul>
4	How does the solution affect emergency services?	<ul style="list-style-type: none"> <li>• Not a differentiator</li> </ul>	
5	How does the CDOT parking lot (currently in use by Kramer) integrate with the activities of the interchange?	<ul style="list-style-type: none"> <li>• Not a differentiator</li> </ul>	
6	How is access to Idaho Springs and Mt. Evans affected during construction and in the long term?	<ul style="list-style-type: none"> <li>• Not a differentiator</li> </ul>	
<b>Identification of Preferred Option: Summary</b>		Shifting the I-70 alignment to the south eliminates impact to the City's parking, drainage and utilities along the north side of I-70. While shifting to the south does have some minor impacts to Water Wheel Park, it provides opportunities for improvements not only to the park but to the multi-use trail along the creek. Additionally, the stakeholders requested that this shift accommodate additional maximum width (~6' to 8') to allow for the possibility of a future WB PPSL.	



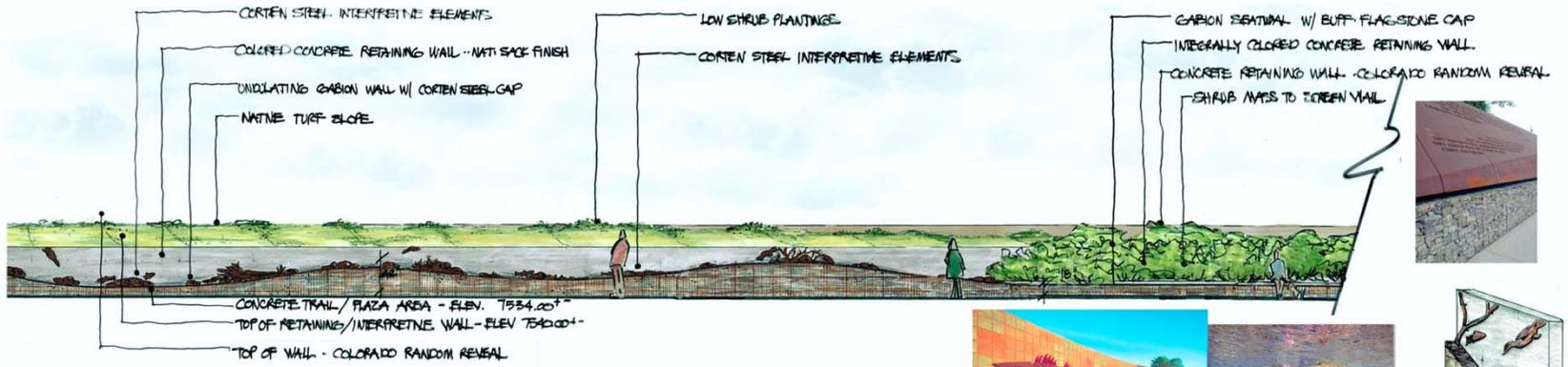
# SH 103 INTERCHANGE Potential Trail and Park Enhancements



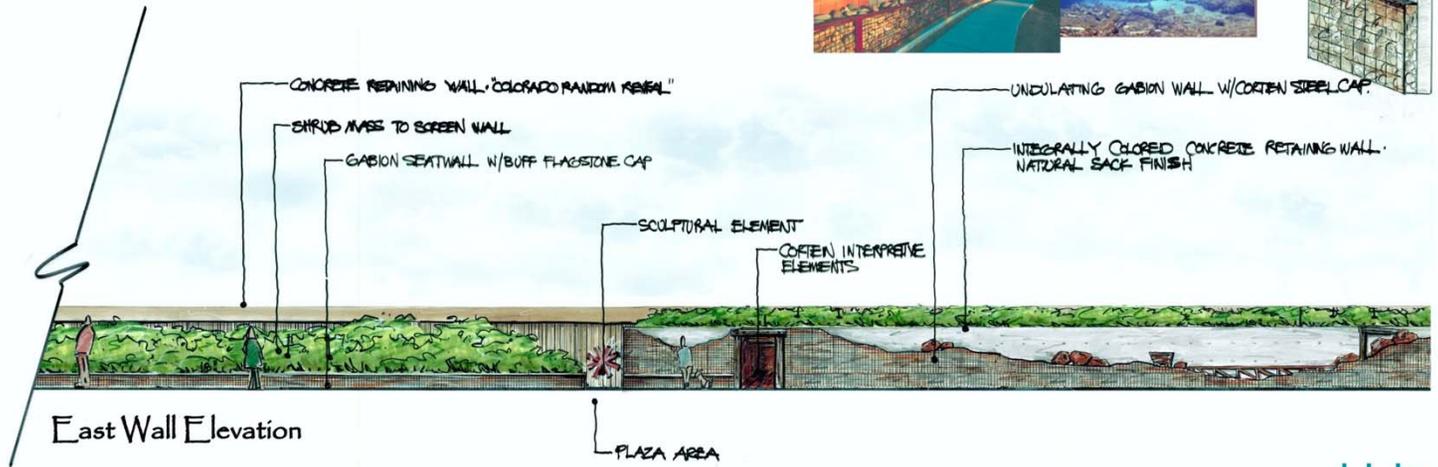
Conceptual Site Plan



# SH 103 INTERCHANGE Potential Trail and Park Enhancements



West Wall Elevation

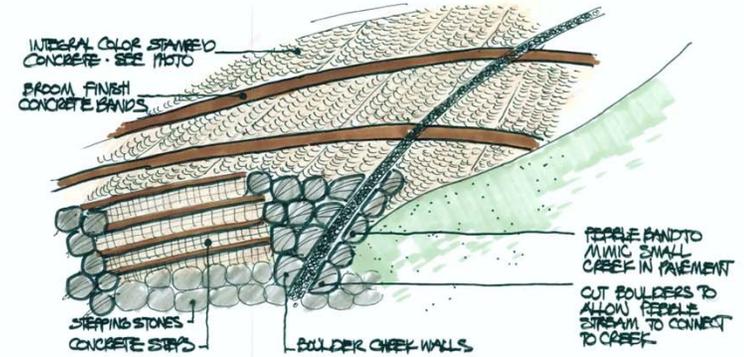
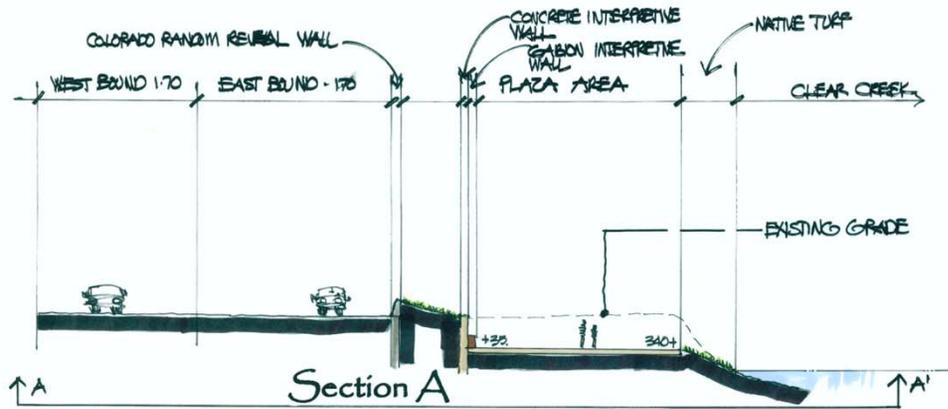


East Wall Elevation

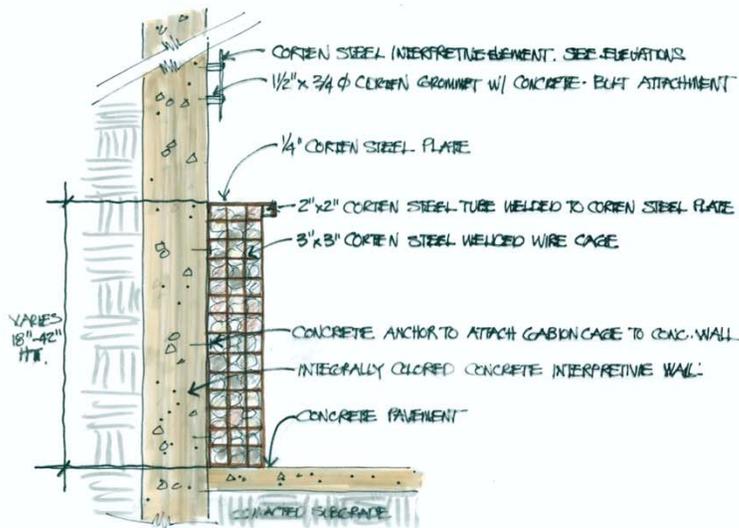
Conceptual Wall Elevations



# SH 103 INTERCHANGE Potential Trail and Park Enhancements



Stamped Concrete - Plaza Enlargement



Gabion Interpretive Wall  
Conceptual Sections and Details



Plaza Area Character Photos



# SIGNAGE

## NEW SIGNAGE CONSIDERATIONS

WHAT	ACCESS	TOLLING	ATM
HOW	FHWA Compliance	Static vs. Dynamic	Lane Use



PROPOSED SIGNAGE



**EXPRESS LANE ENTRANCE**

**STA. 175+00**

**2MILE WARNING SIGN**



PROPOSED SIGNAGE



**EXPRESS LANE ENTRANCE**

STA. 225+00

**1 MILE WARNING SIGN**



PROPOSED SIGNAGE



EXPRESS LANE ENTRANCE

1/2 MILE WARNING SIGN

STA. 250+00



PROPOSED SIGNAGE



EXPRESS LANE TOLL SIGN

STA. 304+00



PROPOSED SIGNAGE



ATM SIGN

STA 400+00



PROPOSED SIGNAGE



ATM Sign

STA 440+00



PROPOSED SIGNAGE



ATM Sign

STA. 510+00



PROPOSED SIGNAGE



ATM SIGN

STA. 686+00



PROPOSED SIGNAGE



**EXPRESS LANE ENTRANCE SIGN  
FOR RE-ENTRY AFTER IDAHO SPRINGS**

STA. 775+00



PROPOSED SIGNAGE



**EXPRESS LANE TOLL SIGN  
FOR RE-ENTRY AFTER IDAHO SPRINGS**

**STA. 789+00**



PROPOSED SIGNAGE



EXPRESS ONLY SIGN

STA. 810+50





**PEAK PERIOD SHOULDER LANE CRITERIA**

**DRAFT**

**ATM**

ID	Criteria	Options Ranking	
		ATM - YES	ATM -NO
<i>Evaluation Criteria</i>			
1	Addresses safety during PPSL operations	Provides additional driver information, provides for emergency response vehicles	Provides less driver information
2	Maintains safety during non-peak times	Could provide information about lane use during non peak.	Provides less driver information
3	Improves mobility during peak times	Not a differentiator	
4	Minimizes the effort required to maintain the option	More infrastructure to maintain	Less infrastructure to maintain
5	Enables the project team to achieve the goal of opening PPSL by 1-July-15	Software development and implementation impacts	No software development and implementation impacts
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	Anticipated to provide a positive return on investment.	No additional return on investment.
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	Increased driver information	Decreased driver information

Fair Better Best

ID	Criteria	Options Ranking	
		Fair	Better
<i>Evaluation Criteria</i>			
8	Creates opportunities to "correct past damage"	Increased infrastructure	Less infrastructure
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, and interstate commerce.	Increased infrastructure	Less infrastructure
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	Not a differentiator	
11	Protects or creates unique features for the area as a gateway	May impact viewshead	No impact
12	Protects wildlife needs	Increased infrastructure	Less infrastructure
13	Protects Clear Creek	Not a differentiator	
14	Protects the defining historical elements of Clear Creek County	More infrastructure (signs)	Less infrastructure (signs)
15	Meets CDOT's and industry standards	Industry trends toward dynamic managed shoulders	Not the trend
16	Achieves the mountain mineral belt aesthetic guidelines	Not a differentiator	
17	Meets the I-70 Mountain Corridor design criteria	Not a differentiator	
18	Preserves opportunities for the AGS and the ultimate preferred alternative	Not a differentiator	
19	Adaptable for future changes/projects	Increased adaptability	Less adaptable



ID	Criteria	Options Ranking	
		ATM - YES	ATM -NO
<i>Issue Specific Criteria</i>			
1	Efficiency and consolidation (including old signs)	Not a differentiator	
2	Preserves emergency response capabilities	Provides ability to control managed lane	Provides no ability to control managed lane
<b>Identification of Preferred Option: Summary</b>		The recommendation is to incorporate ATM because it preserves the ability for emergency response.	

12/11/2013



# MANAGED LANE ACCESS



## PEAK PERIOD SHOULDER LANE CRITERIA

DRAFT

### MANAGED LANE ACCESS

ID	Criteria	Options Ranking	
		SINGLE	INTERMEDIATE
<i>Evaluation Criteria</i>			
1	Addresses safety during PPSL operations	Per David Hatton safer	
2	Maintains safety during non-peak times	Not a differentiator	
3	Improves mobility during peak times	Not a differentiator	
4	Minimizes the effort required to maintain the option	Less infrastructure to maintain	More infrastructure to maintain
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	Not a differentiator	
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	Not a differentiator	
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	Not a differentiator	

Fair Better Best



# MANAGED LANE ACCESS

8	Creates opportunities to "correct past damage"	Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, and interstate commerce.	Less access points	More access points
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	Not a differentiator	
11	Protects or creates unique features for the area as a gateway	Not a differentiator	
12	Protects wildlife needs	Less infrastructure (signs)	More infrastructure (signs)
13	Protects Clear Creek	Not a differentiator	
14	Protects the defining historical elements of Clear Creek County	Less infrastructure (signs)	More infrastructure (signs)
15	Meets CDOT's and industry standards	Not a differentiator	
16	Achieves the mountain mineral belt aesthetic guidelines	Not a differentiator	
17	Meets the I-70 Mountain Corridor design criteria	Not a differentiator	
18	Preserves opportunities for the AGS and the ultimate preferred alternative	Not a differentiator	
19	Adaptable for future changes/projects	Less infrastructure (signs)	More infrastructure (signs)



# MANAGED LANE ACCESS

ID	Criteria	Options Ranking	
		SINGLE	INTERMEDIATE
<i>Issue Specific Criteria</i>			
1	How does it affect signage?	Less infrastructure (signs)	More infrastructure (signs)
<b>Identification of Preferred Option: Summary</b>		The single point of entry is the preferred alternative, it has less infrastructure impacts and a reduction of conflict points, enhancing safety. The intermediate option does not appear to be an enhancement to mobility or safety. Still allows for local access.	
12/11/2013			





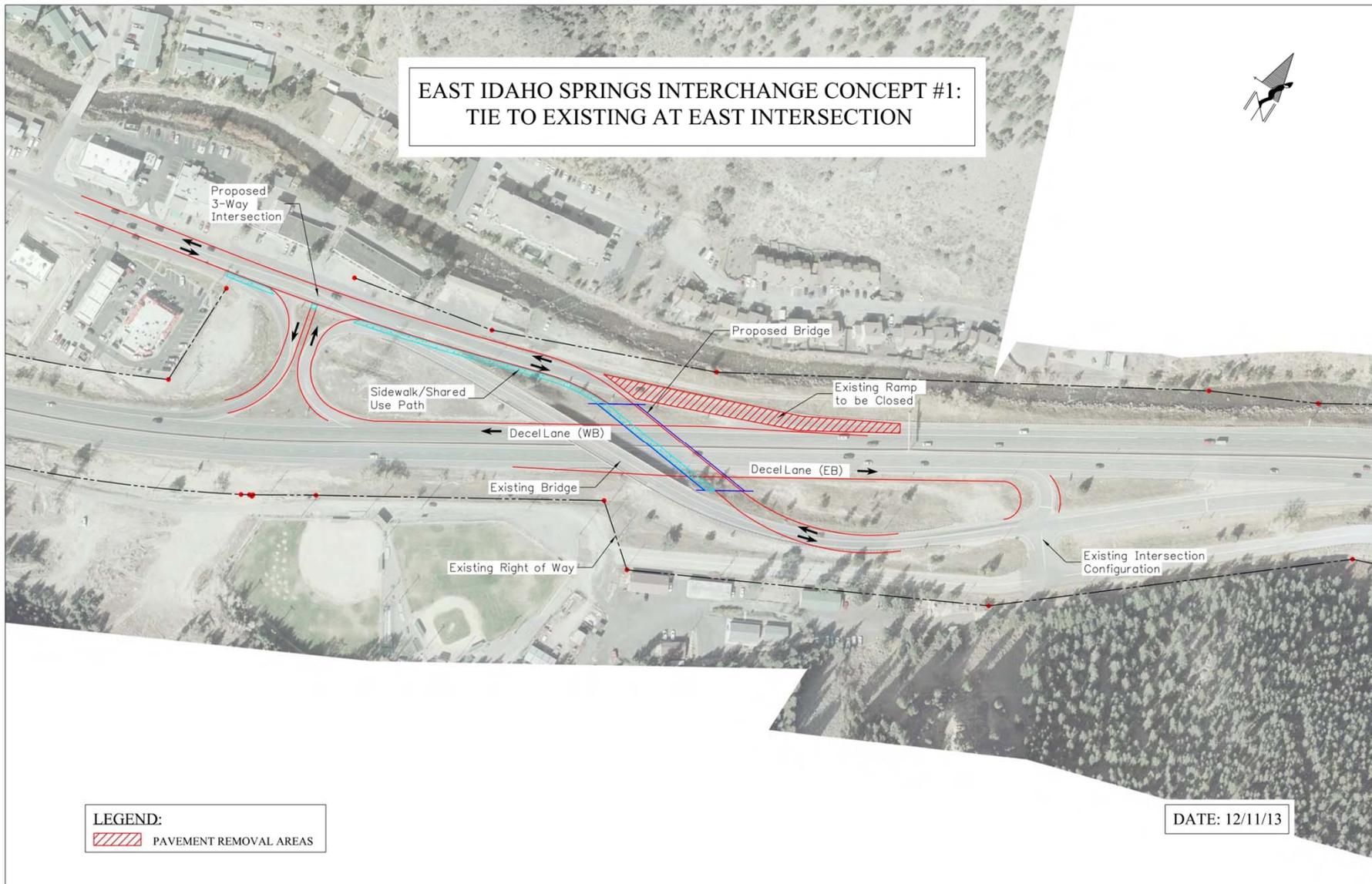
# EAST IDAHO SPRINGS

EAST IDAHO SPRINGS BRIDGE



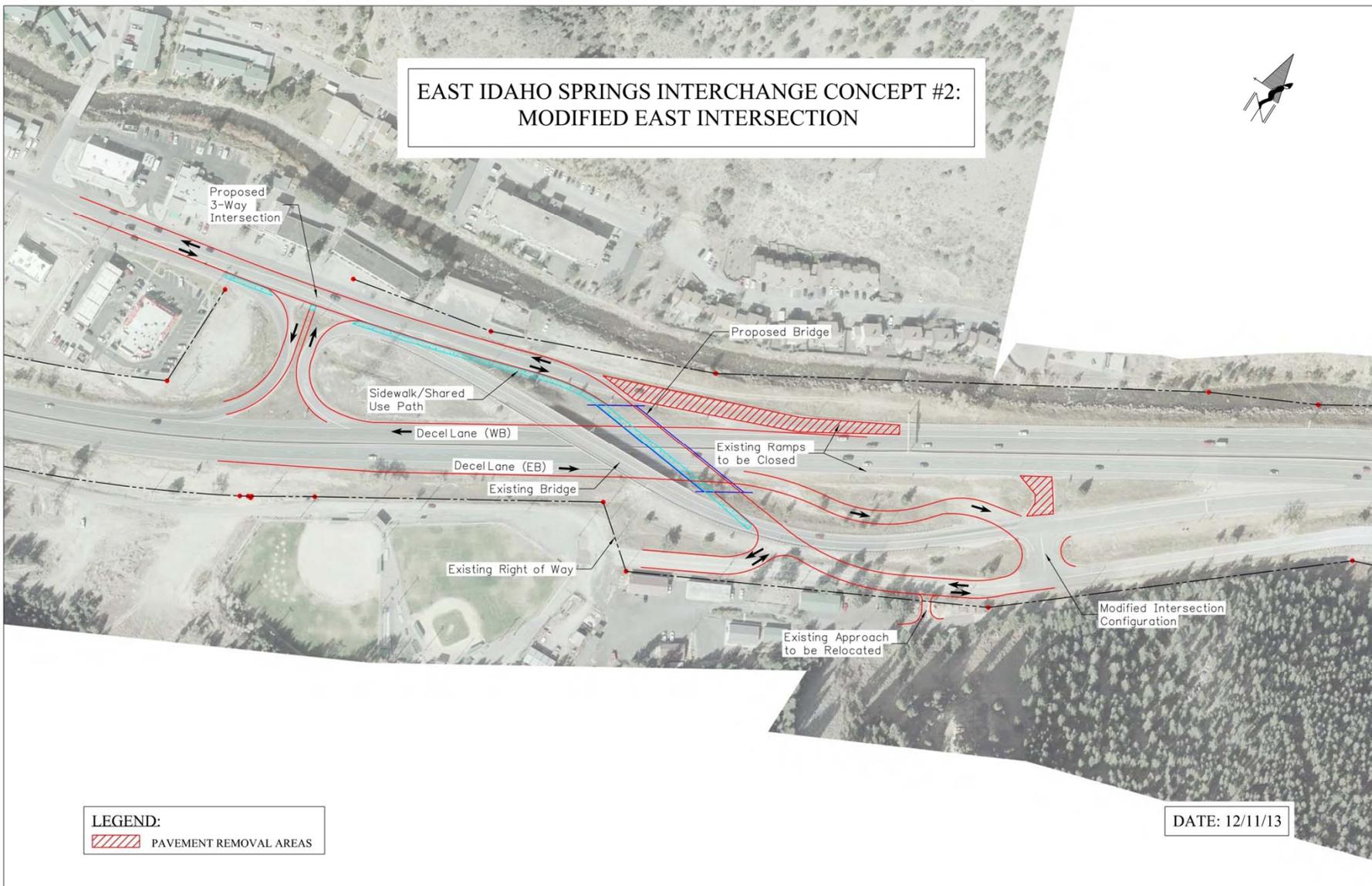
# EAST IDAHO SPRINGS BRIDGE

## EAST IDAHO SPRINGS INTERCHANGE CONCEPT #1: TIE TO EXISTING AT EAST INTERSECTION



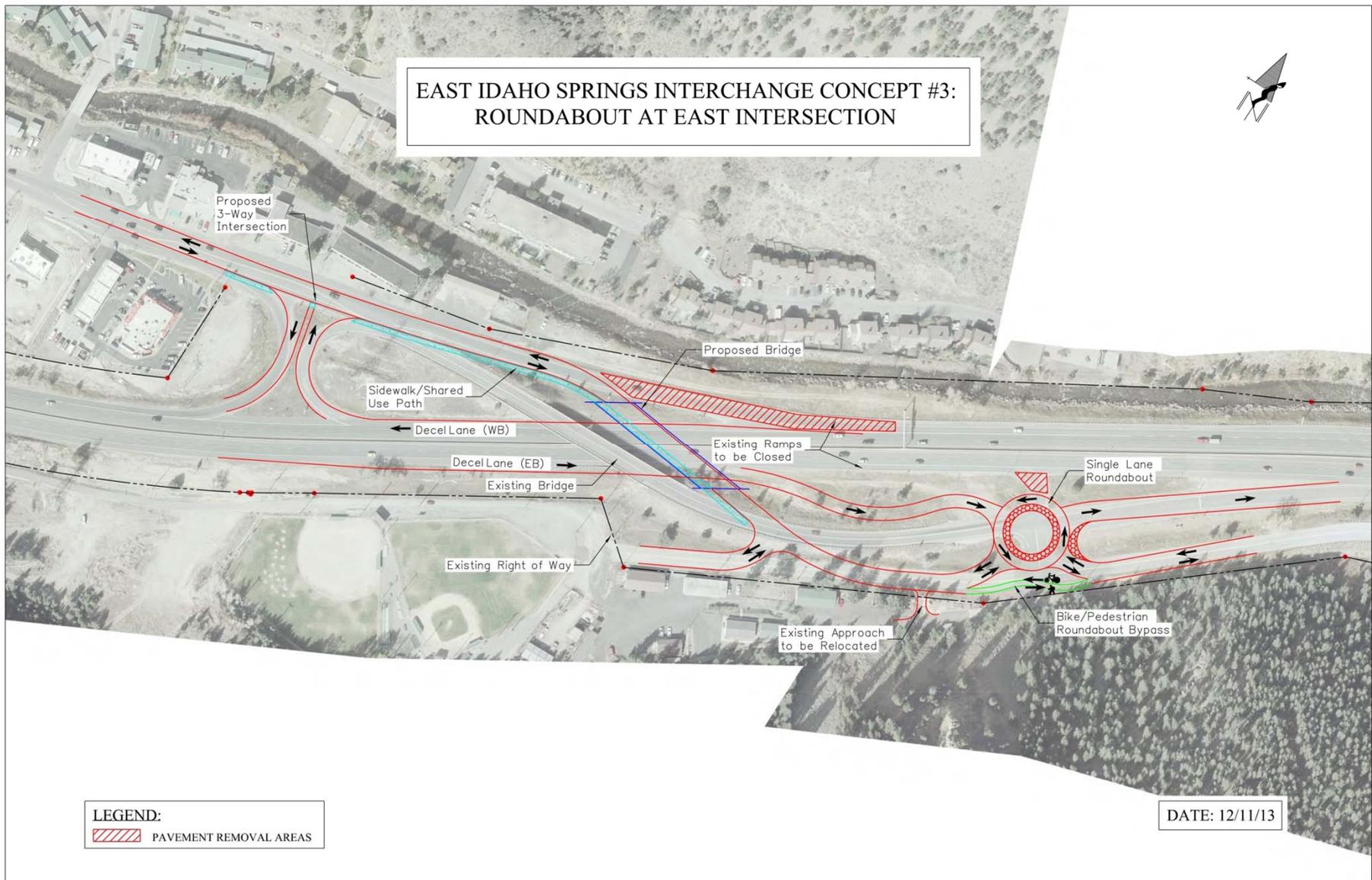
# EAST IDAHO SPRINGS BRIDGE

## EAST IDAHO SPRINGS INTERCHANGE CONCEPT #2: MODIFIED EAST INTERSECTION



# EAST IDAHO SPRINGS BRIDGE

## EAST IDAHO SPRINGS INTERCHANGE CONCEPT #3: ROUNDAABOUT AT EAST INTERSECTION



**LEGEND:**  
PAVEMENT REMOVAL AREAS

DATE: 12/11/13



# EMERGENCY PULLOUTS

## ➤ EMERGENCY PULLOUTS

- Required Length: 510 ft to 710 ft (including tapers)
- Required Width: 12 ft to 16 ft
- Should be paved
- Should be large enough to accommodate a tractor trailer unit and at least one piece of emergency equipment



## EMERGENCY PULLOUTS SUMMARY

No	MP	Location	Length	Width	Miles Between
1	232.1	East of Empire	510	16	-
2	233.2	Lawson	510	16	1.1
3	235.0	Dumont	510	16	1.8
4	236.6	East of Spring Gulch	510	16	1.6
5	236.8	West of Fall River Rd	510	16	0.2
6	239.0	West Idaho Springs	510	12	2.2
7	240.2	East Idaho Springs	510	16	1.2



## LOCATION 1: MP 232.1 (EAST OF EMPIRE)



## LOCATION 1: MP 232.1 (EAST OF EMPIRE)



LENGTH: 510 FT WIDTH: 16 FT

CONCERNS: WILDLIFE,  
WETLAND



## LOCATION 2: MP 233.2 (LAWSON)



## LOCATION 2: MP 233.2 (LAWSON)



LENGTH: 510 FT WIDTH: 16 FT

CONCERNS:  
LAWSON HISTORIC  
DISTRICT

## LOCATION 3: MP 235.0 (DUMONT)



## LOCATION 3: MP 235.0 (DUMONT)



LENGTH: 510 FT WIDTH: 16 FT

CONCERNS: POTENTIAL  
CONFLICT ON RAMP



## LOCATION 4: MP 236.6 (EAST OF SPRING GULCH)



## LOCATION 4: MP 236.6 (EAST OF SPRING GULCH)



LENGTH: 510 FT WIDTH: 16 FT

CONCERN: POTENTIAL  
SMALL RETAINING WALL  
REQUIRED

## LOCATION 5: MP 236.8 (WEST OF FALL RIVER)



## LOCATION 5: MP 236.8 (WEST OF FALL RIVER)



LENGTH: 510 FT WIDTH: 16 FT

CONCERN: ???

## LOCATION 6: MP 239.0 (WEST IDAHO SPRINGS)



## LOCATION 6: MP 239.0 (WEST IDAHO SPRINGS)



LENGTH: 510 FT WIDTH: 12 FT

CONCERN:  
IMPACTS TO PATH  
CLOSE TO OFF RAMP

## LOCATION 7: MP 240.2 (EAST IDAHO SPRINGS)



## LOCATION 7: MP 240.2 (EAST IDAHO SPRINGS)



LENGTH: 510 FT WIDTH: 16 FT

CONCERNS: DRAINAGE,  
POTENTIAL ROCK CUT

## EMERGENCY PULLOUTS SUMMARY WITH RAMPS

No	MP	Location	Length	Width	Miles Between
Ramp	231.9	Empire Ramp (E-14-S)	380	12	-
Ramp	233.0	Lawson Ramp (E-14-AM)	980	12	1.1
2	233.2	Lawson	510	16	0.2
Ramp	234.2	Downieville Ramp (E-14-AK)	1650	12	1.0
3	235.0	Dumont	510	16	0.8
5	236.8	West of Fall River Rd	510	16	1.8
Ramp	237.7	Fall River Ramp (E-14-AZ)	600	12	0.9
Ramp	238.9	West Idaho Springs Ramp (F-14-H)	670	12	1.2
Ramp	239.6	SH 103 Ramp (F-14-E/F-14-AA)	800	12	0.7
7	240.2	East Idaho Springs	510	16	0.6
Ramp	241.1	East Idaho Springs Ramp (F-14-Y)	310	12	0.9



## EVALUATION CRITERIA

1. Addresses safety during PPSL operations
2. Maintains safety during non-peak times
3. Improves mobility and reliability during peak times for both I-70 and the local roadway network
4. Minimizes the effort required to maintain the operation
5. Enable the project team to achieve the goal of opening the PPSL
6. Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function and purpose.
7. Allows for a process to engage and communicate with all the local, regions and national users of the I-70 Mountain Corridor
8. Creates opportunities to “correct past damage”
9. Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.



## EVALUATION CRITERIA

10. Incorporates sustainability by using locally available materials and environmentally- friendly process
11. Protects or creates unique features for the areas as a gateway
12. Protects wildlife needs
13. Protects Clear Creek
14. Protects the defining historical elements of Clear Creek County
15. Meets CDOT's and industry standards
16. Achieves the Mountain Mineral Belt aesthetic guidelines
17. Meets the I-70 Mountain Corridor design criteria
18. Preserves opportunities for the AGS and the ultimate preferred alternative
19. Adaptable for future changes/projects (including Idaho Springs Visioning)



## OUTSTANDING ISSUES

- **Drainage**
- **Greenway**
- **Snow Removal/ Maintenance**
- **Noise**
- **Barrier/ Guardrail**
- **Initial Environmental Findings**
- **Class of Action**
- **Aesthetics**
- **Local Roadway Network**



# ISSUE SPECIFIC CRITERIA

- ??
- ??



- Local Roadway Network

**HAPPY HOLIDAYS!**



# FUTURE TECH TEAM MEETINGS

## ➤ DATES

- Monday, 1/27 at Clear Creek School Commons Area
- Monday 2/24 at Trail Ridge Conference Room in Golden
- Monday 3/24 at Clear Creek School Commons Area

All meetings are scheduled from 8:30am to **12:00**pm.



# THANK YOU!!!

**STATE OF COLORADO**  
DEPARTMENT OF TRANSPORTATION  
REGION 1 I-70 MTN CORRIDOR PROGRAM  
425A CORPORATE CIRLCE - GOLDEN, CO 80401  
(720) 497-6900 (OFFICE), (720) 497-6901 (FAX)

## I-70 EB Peak Period Shoulder Lane Project

Project Number: NHPP 0703-401

Project Code: 19474

## Technical Team Meeting #8

December 16, 2013

CDOT I-70 Mountain Corridor | HDR Engineering, Inc.

