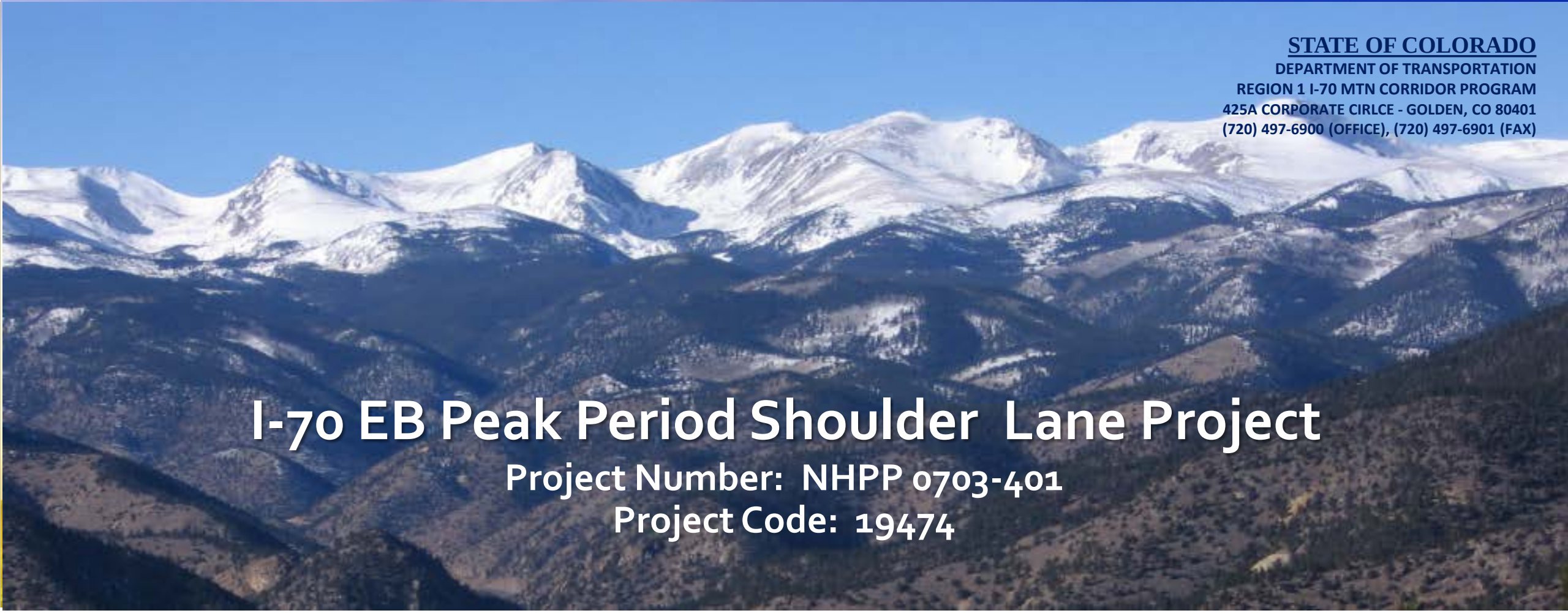


STATE OF COLORADO
DEPARTMENT OF TRANSPORTATION
REGION 1 I-70 MTN CORRIDOR PROGRAM
425A CORPORATE CIRLCE - GOLDEN, CO 80401
(720) 497-6900 (OFFICE), (720) 497-6901 (FAX)

I-70 EB Peak Period Shoulder Lane Project

Project Number: NHPP 0703-401
Project Code: 19474

Technical Team Meeting #3

September 23, 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
   - Benefits of PPSL
   - Definition of Interim
3. OUTCOMES FROM ISSUES TASK FORCE MEETINGS
   - Section 106
   - Roadway
   - SWEEP
   - Emergency Response
4. ISSUES TIMELINE
5. REVIEW PROPOSED SOLUTIONS
   - Left vs. Right
   - Roadway Width
   - Widening Median vs. Creek
   - Acceleration and Deceleration Lanes
6. DEVELOP CRITERIA FOR:
   - Retaining Walls
   - Emergency Response
7. 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

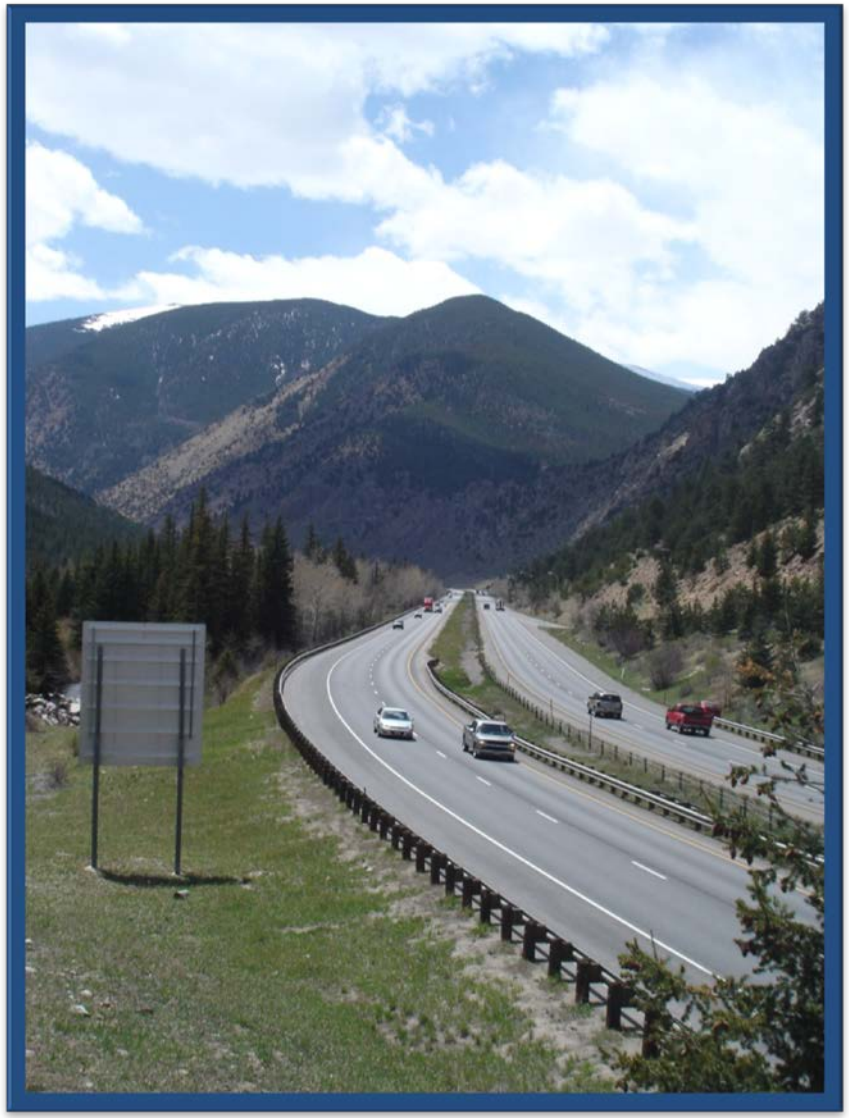
STEP 6
Finalize Documentation and Evaluation Process

PROJECT SCHEDULE

- **ENVIRONMENTAL BASELINE DATA**
  - EARLY OCTOBER
- **CONCEPT OF OPERATIONS REPORT**
  - LATE OCTOBER
- **PRELIMINARY DESIGN MEETING**
  - NOVEMBER 20
- **OPEN TO TRAFFIC**
  - JULY 2015

OTHER PROJECT EFFORTS

- RAMP Recommendations
- Traffic and Revenue
- Twin Tunnels
- AGS



RESPONSES TO TECHNICAL TEAM ISSUES

➢ PARKING LOT

- **Benefits of PPSL**
  - **Are managed lanes a requirement?**
- **Interim definition**
- **Lane width, what is the smallest lane width that is safe?**
- **ROD Compatibility**
- **EA versus Cat Ex**
- **Highway 103 bridge**
- **Snow removal**
- **Whole transportation system Including local roads**

BENEFITS OF PPSL

- Allows CDOT to capitalize on the Twin Tunnels Investment by providing a reduced congestion alternative for 12 miles of the I-70 corridor.
- Provides faster speeds in the managed lane (faster by 25 to 35 mph) and the general purpose lanes (faster by 20 to 30 mph).
- Reduces travel times by up to 42% - 48%. Travel times are reduced in all lanes.
- Reduces congestion related crashes.
- Provides a reliable trip.

RESPONSES TO TECHNICAL TEAM ISSUES

➢ DEFINITION OF INTERIM

- Definition to be captured in Concept of Operations and MOU.
- Opening day projections estimate it will operate 3.5% of total time (in 3 -9 hour intervals) for 58 days per year. Based on 2900 vehicles per hour.
- 2020 projections estimate that percentage raises to 3.9% or 64 days per year.
- Check in on overall PPSL effectiveness in 2020.

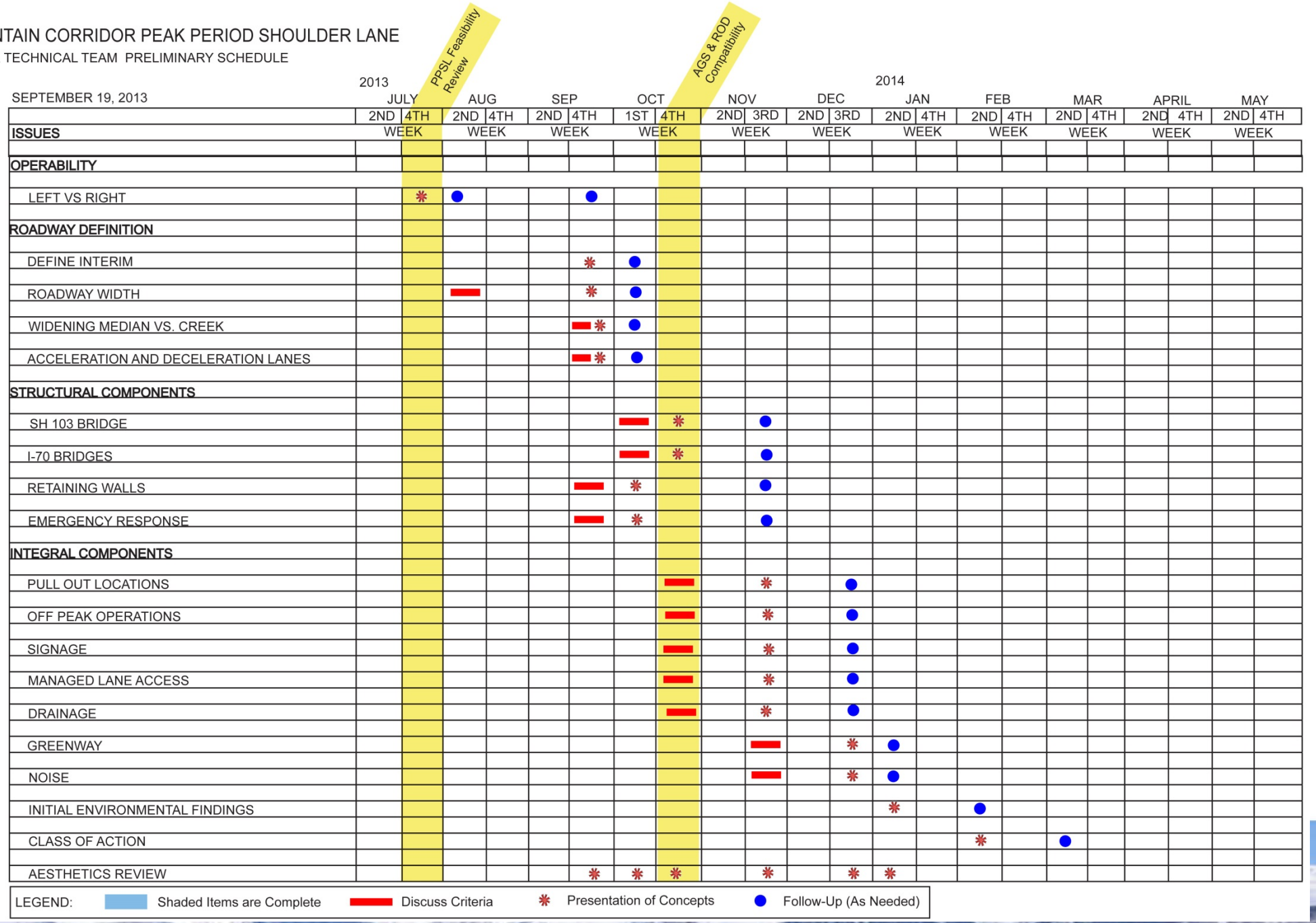
OUTCOMES FROM ISSUE TASK FORCE MEETINGS

- SECTION 106
- LOCAL AGENCY/ROADWAY
- SWEEP
- EMERGENCY RESPONDERS

CSS TRACKING SCHEDULE

I-70 MOUNTAIN CORRIDOR PEAK PERIOD SHOULDER LANE

ISSUES FOR TECHNICAL TEAM PRELIMINARY SCHEDULE



GLOSSARY OF TERMS

Acceleration Lane	**A lane adjacent to the primary travel lane that allows drivers to accelerate before merging into traffic on the main road**
Auxiliary Lane	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.
Deceleration Lane	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.
EOP	Edge of pavement.
General Purpose Lane	A traffic lane that does not have any restrictions, such as time of day or type of vehicle that may use the lane.
Managed Lane	In this case, the managed lane operates during a peak period and traffic utilizing that lane will be required to pay a toll.
Peak Period Shoulder Lane	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.
Breakdown Lane	A strip of ground with a hard surface beside a major road where vehicles can stop in an emergency.
Rumble Strips	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
Active Traffic Management	A method of increasing peak capacity and smoothing traffic flows on busy major highways. Techniques include variable speed limits, hard-shoulder running and ramp-metering and may be controlled by overhead variable message signs .
Traffic Management Operations	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.
Dynamic Toll	A toll per vehicle that increases or decreases depending on the level of congestion in order to maintain the smooth flow of traffic.
Median	The central area between divided highway lanes with traffic travelling in opposite directions.
Interim Solution	A capacity improvement on a roadway that is not intended to be a permanent solution.

CSS PROCESS

DEPARTMENT OF TRANSPORTATION
Region 1 I-70 Mountain Corridor
425A Corporate Circle, Golden
Ph: 720.497.6900 Fax: 720.497.6901

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
Safety	• Emergency Response • Safety of Travelling Public • Local and Tourist Driver Expectancy • Incident Management	1. Address Safety During PPSL Operations? 2. Maintain Safety During non-peak times?
Mobility	• Reliability • Operations • Maintenance • Active Management • Roadway Connectivity/Network	3. Improve mobility and reliability during peak times? 4. Minimize the effort required to maintain the option?
Constructability	• Fiscally Responsible Costs • Limit Throw Away Work • Adverse Impacts to Enviro/Community • Minimize Infrastructure Improvements • Keep to Operations Project • Adaptability	5. Enable the project team to achieve the goal of opening PPSL by July 1, 2015? 6. Create infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function and purpose.
Community	• Recreation • Historical and Cultural Resources • Tourism and Economy • Local Access • Signing • Livability • Effects to low-income and minority populations	7. Allow for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor? 8. Create opportunities to "correct past damage"? 9. Provide access and protect opportunities for enhancements to tourist destinations, community facilities, and interstate commerce and limit disproportionate effects to the community?
Environment	• Clear Creek • Wildlife Habitat and Movement • Mining and Metals • Water Quality • Sediment • Air Quality • Noise • Wetlands	10. Incorporate sustainability by using locally available materials and environmentally-friendly processes? 11. Protect or create unique features for the area as a gateway? 12. Protect wildlife needs? 13. Protect Clear Creek? 14. Protect the defining historical elements of Clear Creek County?
Engineering Criteria & Aesthetic Guidelines	• Balance Design Using CSS Guidance • Aesthetics Inspired By Surroundings • Adherance to ROD • Use of Most Recent Technology	15. Meet CDOT and industry standards? 16. Achieve the mountain mineral belt aesthetic guidelines? 17. Meet the I-70 Mountain Corridor design criteria?
Sustainability	• Blends with Future Possibilities (AGS, Transit, Greenway, etc.) • Definition of Interim • Idaho Springs Visioning	18. Preserve opportunities for the AGS and the ultimate preferred alternative? 19. Adaptable for future changes/projects (including Idaho Springs Visioning)?

PROCESS AND MEASURES FOR APPLYING DESIGN CRITERIA

FAIR / BETTER / BEST RATING SYSTEM

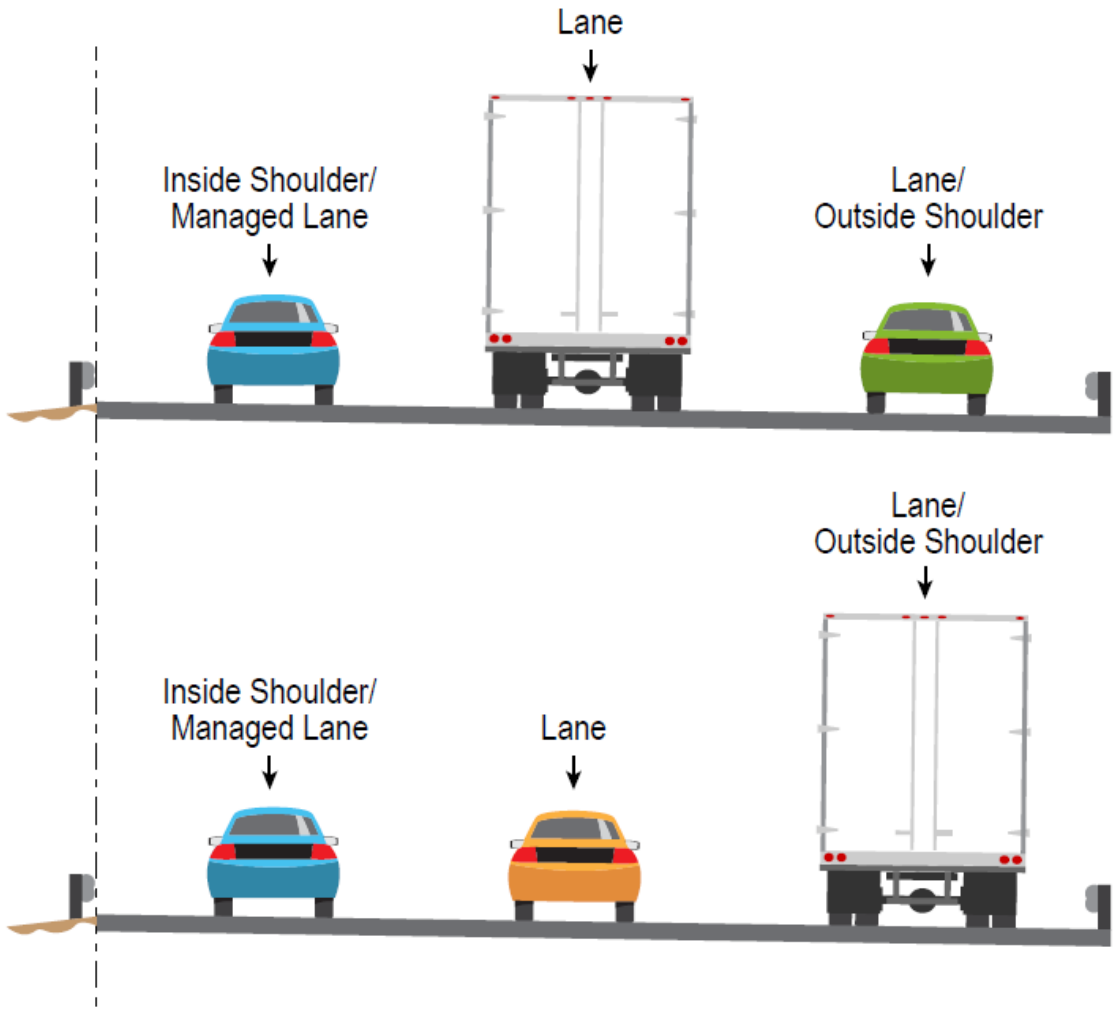
1. Proposed by Project Team
2. Augmented by the Technical Team
3. Utilized by the Project Team to develop solutions
4. Results presented to the Technical Team
5. Technical Team offers feedback
6. As necessary, Project Team incorporates refinements

FAIR	BETTER	BEST

LEFT VS. RIGHT

LEFT VS. RIGHT

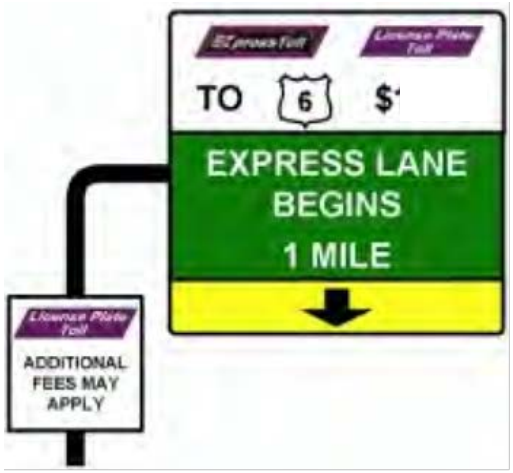
TRUCK TRAVEL – ON PEAK



Right Option

Left Option

SIGNAGE



Right Side

(two signs needed)

Left Side

(one sign needed)

LEFT VS. RIGHT

Peak Period Operations	LEFT	RIGHT
SAFETY		
Breakdown lane on the left		
Rumble strips	✓	
Truck lane use	✓	
DRIVER EXPECTANCY		
Single lane managed lane and peak period shoulder lane	✓	
Lane shift	✓	
striping	✓	
INFRASTRUCTURE		
Widening (acceleration lane)		
Signage	✓	
OPERATIONS		
Travel Time	✓	

Off Peak Operations	LEFT	RIGHT
SAFETY		
Breakdown lane on the left		✓
Rumble strips	✓	
Truck lane use		✓
DRIVER EXPECTANCY		
Single lane managed lane and peak period shoulder lane	✓	
Lane shift	✓	
striping	✓	
INFRASTRUCTURE		
Widening (acceleration lane)		
Signage	✓	
OPERATIONS		
Travel Time		✓

LEFT VS. RIGHT

DRAFT

Left vs. Right

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Left-Side	Right-Side
Evaluation Criteria			
1	Addresses safety during PPSL operations	•Standard ML striping with solid white line •GP lanes are consistent on peak and off peak •Allows for traditional rumble strips	•Unconventional ML striping with dashed line. •GP lanes shift between on peak and off peak operations
2	Maintains safety during non-peak times	•Left-side breakdown lane (non-standard)	• Right-side breakdown lane (standard)
3	Improves mobility during peak times	• Increases weaving to/from the express lane •Enhances travel time •Commercial vehicles may operate in right lane	•Decreases weaving to/from the express lane •Commercial vehicles must operate in middle lane
4	Minimizes the effort required to maintain the option	•Reduces signing and structures •Creates snow removal/ sediment control challenges •Conventional striping patterns	•Increases signing and structures •Unconventional striping patterns
5	Enables the project team to achieve the goal of opening PPSL by July 2015	•Not a differentiator	
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•Configuration consistent with CDOT similar projects on North I-25, US-36	•Increases signing infrastructure more than left-side option •Configuration not consistent with CDOT similar projects
7	Allows for a process to engage and communicate with all the local, regions and national users of the I-70 Mountain Corridor	•Not a differentiator	

LEFT VS. RIGHT

Left vs. Right

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Left-Side	Right-Side
Evaluation Criteria			
8	Creates opportunities to "correct past damage"	•Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	• Not a differentiator	
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	•Creates an opportunity to replace the 103 bridge	•Opportunity to maintain the 103 bridge
12	Protects wildlife needs	• Not a differentiator	
13	Protects Clear Creek	• Not a differentiator	
14	Protects the defining historical elements of Clear Creek County	•Less signs impacting historic viewshed	•More signs impacting historic viewshed
15	Meets CDOT's and industry standards	• Not a differentiator	
16	Achieves the mountain mineral belt aesthetic guidelines	•Not a differentiator	

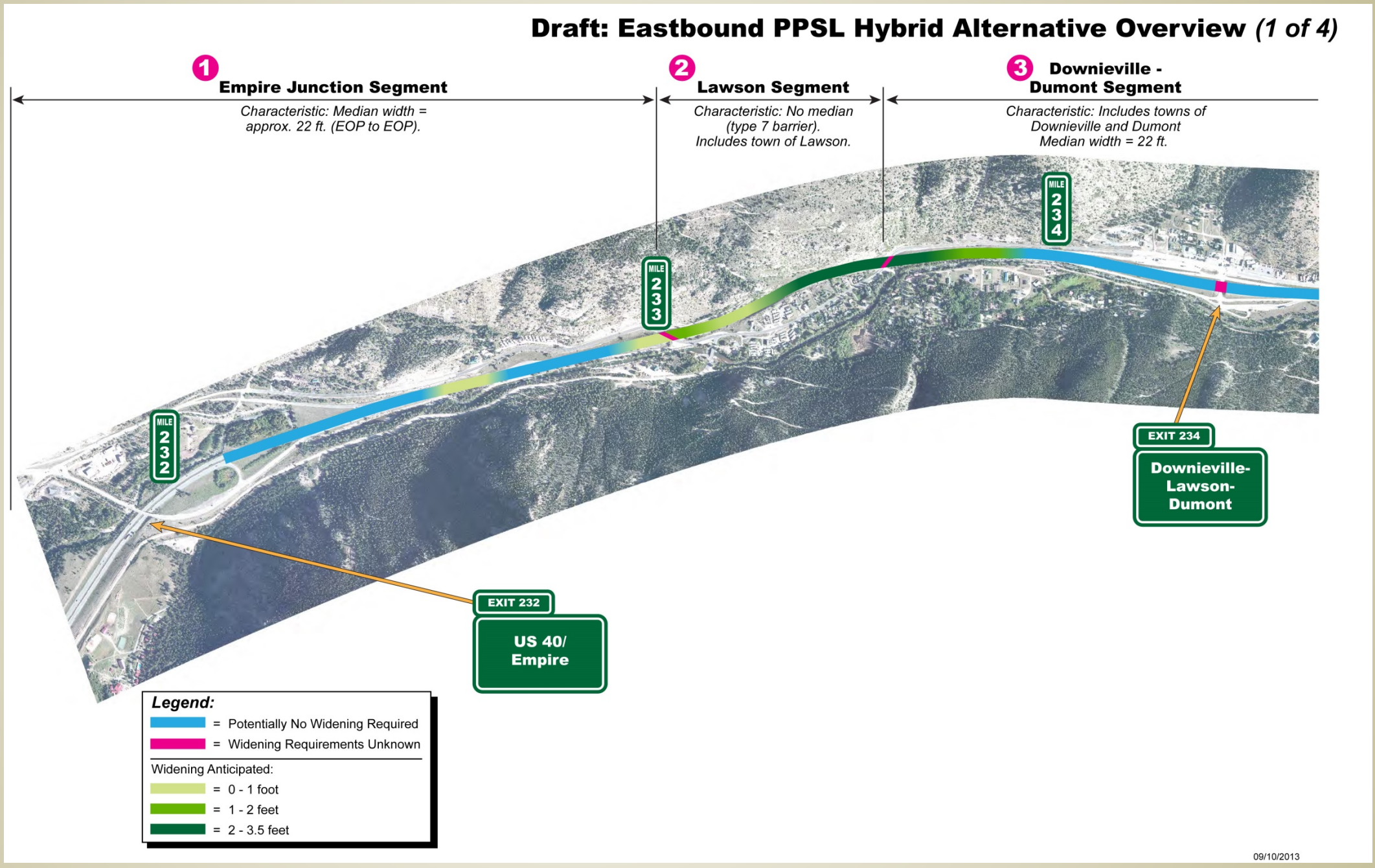
LEFT VS. RIGHT

Left vs. Right

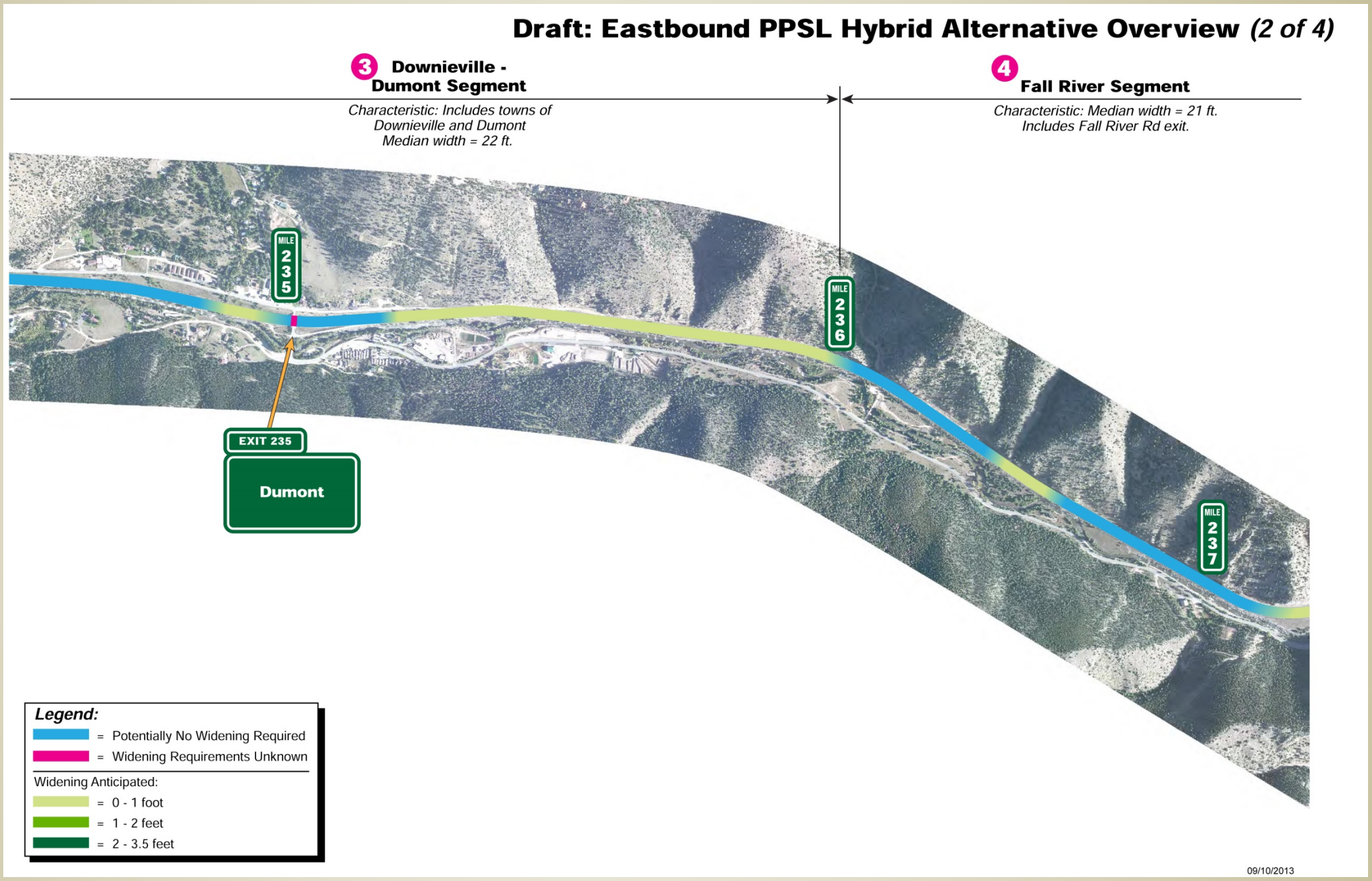
ID	Criteria	Options Ranking (Fair / Better / Best)	
		Left-Side	Right-Side
Evaluation Criteria			
17	Meets the I-70 Mountain Corridor design criteria	•Not a differentiator	
18	Preserves opportunities for the AGS and the ultimate preferred alternative	•Not a differentiator	
19	Adaptable for future changes/projects	• Less infrastructure removal (signage)	• Additional infrastructure removal (signage)
ID	**Criteria**	**Options Ranking** (Fair / Better / Best)	
		Left-Side	**Right-Side**
Issue Specific Criteria			
1	Meets driver expectations/roadway environment/precedence set for express lanes in the state	•Standard ML striping with solid white line • Breakdown lane on non-traditional left side •GP lanes are in the same configuration (on peak versus off peak) •Consistent with US 36 and North I-25 managed lane corridors	•Unconventional ML striping with dashed line. • Breakdown lane on traditional right side • Possible fewer emergency pullouts required •Not consistent with North I-25 and US 36 managed lane corridors •GP lanes are in different configurations (on peak versus off peak)
2	Minimizing signing types and locations throughout the corridor	•Requires less signing	•Requires more signing
3	Maintains fluid ramp access and standard ramp geometry on and off-ramps accesses and ramp geometry.	• Not a differentiator	
Identification of Preferred Option: Summary		Left-Side PPSL Operation provides greater enhancement of safety and operational benefits to the traveling public, as well as a reduction of impacts to the stakeholders along the corridor during peak and off peak operations. The analysis accounted for, but was not limited to Safety, Driver Expectancy, Infrastructure and Operations.	

ROADWAY WIDTH

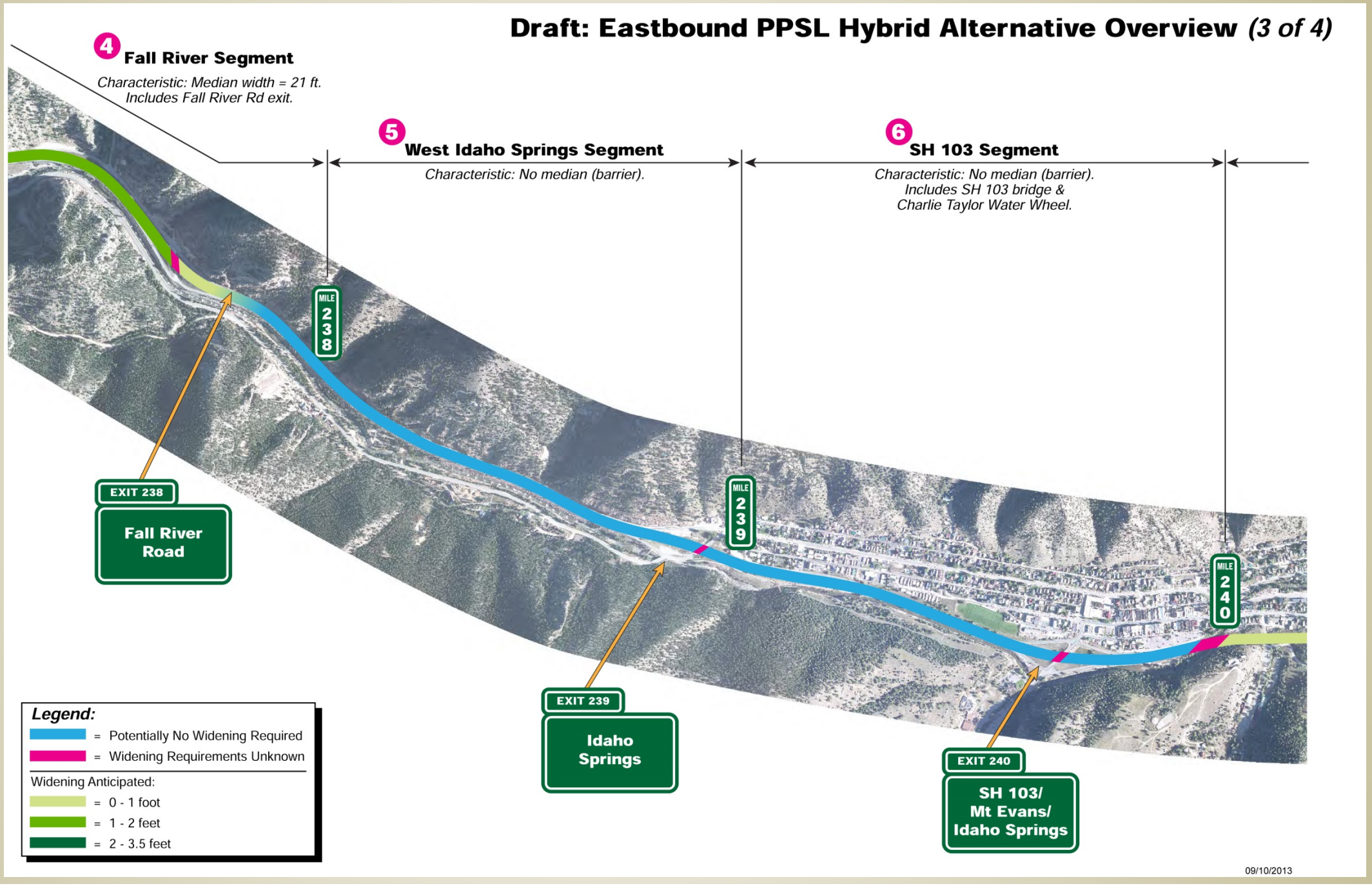
PPSL HEAT TEMP DIAGRAMS



PPSL HEAT TEMP DIAGRAMS

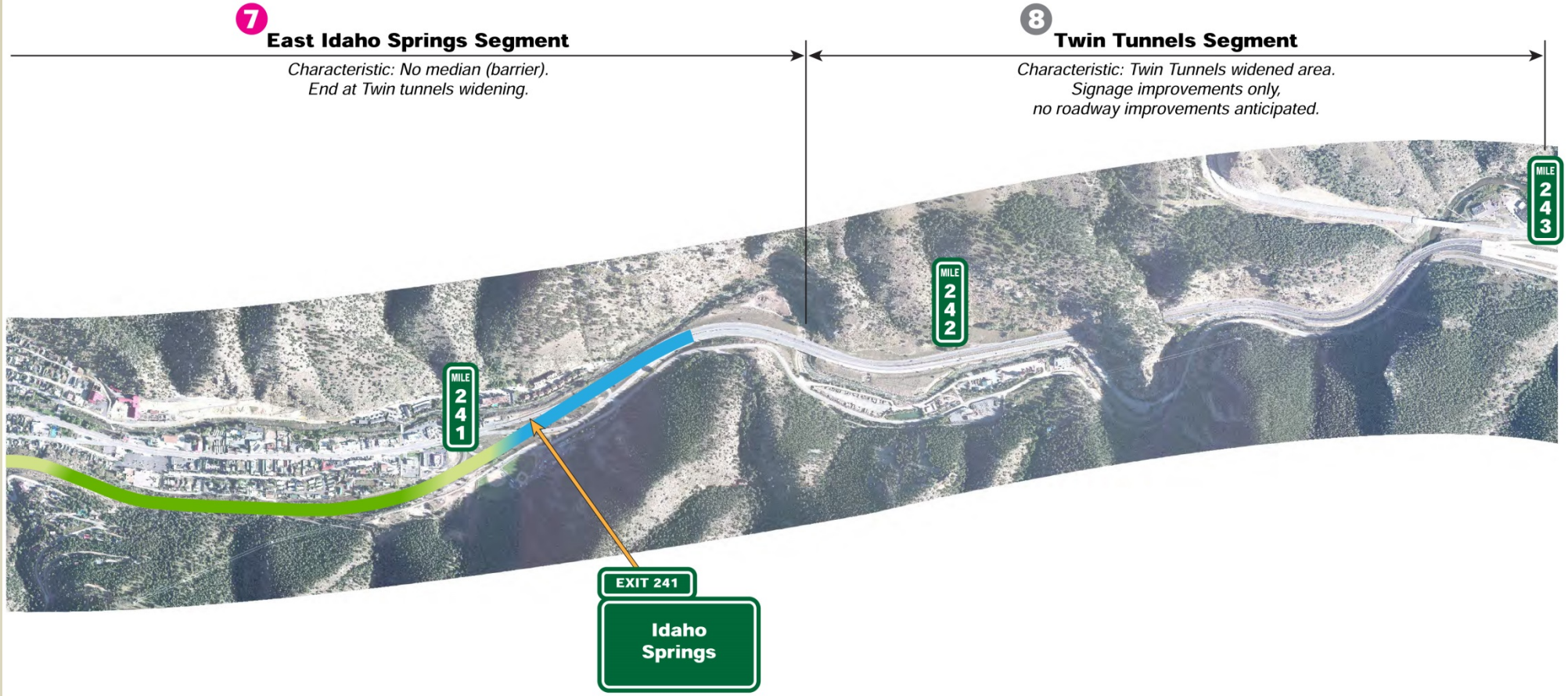


PPSL HEAT TEMP DIAGRAMS



PPSL HEAT TEMP DIAGRAMS

Draft: Eastbound PPSL Hybrid Alternative Overview *(4 of 4)*



Legend:

- = Potentially No Widening Required
- = Widening Requirements Unknown

Widening Anticipated:

- = 0 - 1 foot
- = 1 - 2 feet
- = 2 - 3.5 feet

09/10/2013

ROADWAY WIDTH

DRAFT

Roadway Width

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Hybrid Width	40' or greater width
Evaluation Criteria			
1	Addresses safety during PPSL operations	•Narrower, less width for driver error	•Wider shoulder widths consistently
2	Maintains safety during non-peak times	•Narrower, less width for driver error	•Wider shoulder widths consistently
3	Improves mobility during peak times	•Narrower section causes generally slower speeds	•Wider section allows for generally faster speeds
4	Minimizes the effort required to maintain the option	•Less infrastructure, less maintenance	•Additional infrastructure, additional maintenance
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•Narrower cross section could require less effort for NEPA, design, and construction.	•Wider cross section could require additional effort for NEPA, design, and construction.
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•Less infrastructure is more consistent with an interim definition for the project.	•More infrastructure would be required (widening of all I-70 bridges, increase in wall areas)

ROADWAY WIDTH

Roadway Width

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Hybrid Width	40' or greater width
Evaluation Criteria			
7	Allows for a process to engage and communicate with all the local, regions and national users of the I-70 Mountain Corridor	•Not a differentiator	
8	Creates opportunities to "correct past damage"	• Fewer Opportunites	• More Opportunites
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	•Not a differentiator	
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	• Fewer Opportunites	• More Opportunites
12	Protects wildlife needs	•Less barrier effect impeding highway permeability	•More barrier effect impeding highway permeability
13	Protects Clear Creek	•Less potential for encroachment into creek •Less visual impact for walls •More space for WQ features to be added	•More potential for creek encroachment •More visual impact from walls •Less space for WQ features to be added
14	Protects the defining historical elements of Clear Creek County	•Less infrastructure, less visual impact	•More infrastructure, more visual impact, more potential encroachment into historic properties
15	Meets CDOT's and industry standards	•Rarely meets minimum standards	• More frequently meets minimum standards

ROADWAY WIDTH

Roadway Width

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Hybrid Width	40' or greater width
Evaluation Criteria			
16	Achieves the mountain mineral belt aesthetic guidelines	• Less opportunities	• More opportunities
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	•Not a differentiator	
ID	**Criteria**	**Options Ranking (Fair / Better / Best)**	
		Hybrid Width	**40' or greater width**
Issue Specific Criteria			
1	Clear Creek County Preference	• Meets preference	• Less preferred
2	Impacts to compounding safety risk factors	• More safety risk factors	• Fewer safety risk factors
3	Meets definition of a PPSL project	• Optimizes existing infrastructure	• Increased infrastructure improvements
4			
Identification of Preferred Option: Summary			

9/19/2013

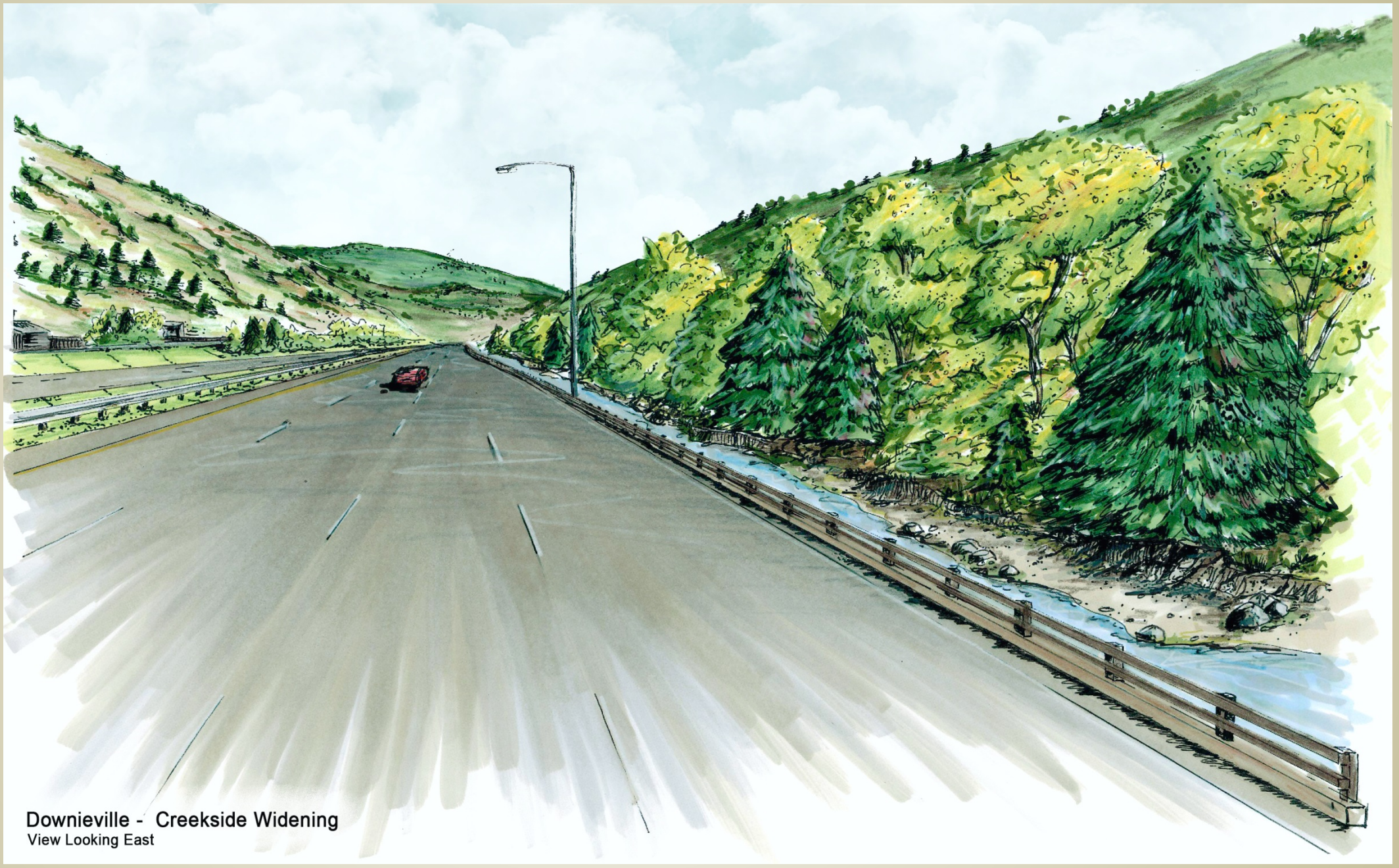
WIDENING MEDIAN VS. CREEK

DOWNIEVILLE – EXISTING CONDITION LOOKING EAST ON I-70

DOWNIEVILLE – MEDIAN WIDENING OPTION

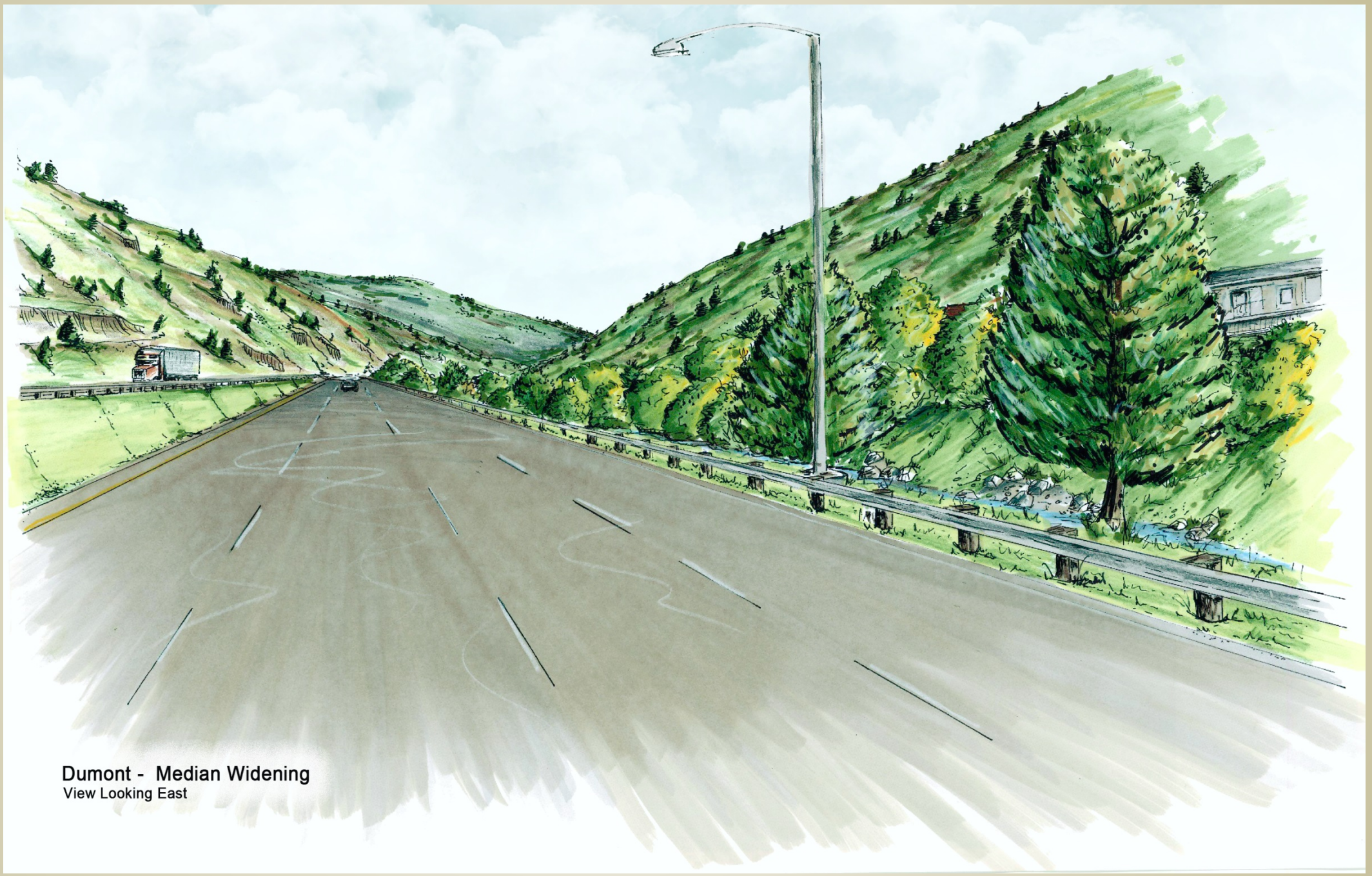
DOWNIEVILLE – EXISTING CONDITION LOOKING EAST ON I-70

DOWNIEVILLE – CREEKSIDE WIDENING OPTION



DUMONT – EXISTING CONDITION LOOKING EAST ON I-70

DUMONT – MEDIAN WIDENING OPTION



DUMONT – EXISTING CONDITION LOOKING EAST ON I-70

DUMONT – CREEKSIDE WIDENING OPTION

DUMONT – EXISTING CONDITION LOOKING EAST FROM SOUTH SIDE OF CREEK

DUMONT – CREEKSIDE WIDENING LOOKING EAST FROM SOUTH SIDE OF CREEK

FALL RIVER – EXISTING CONDITION LOOKING EAST ON I-70

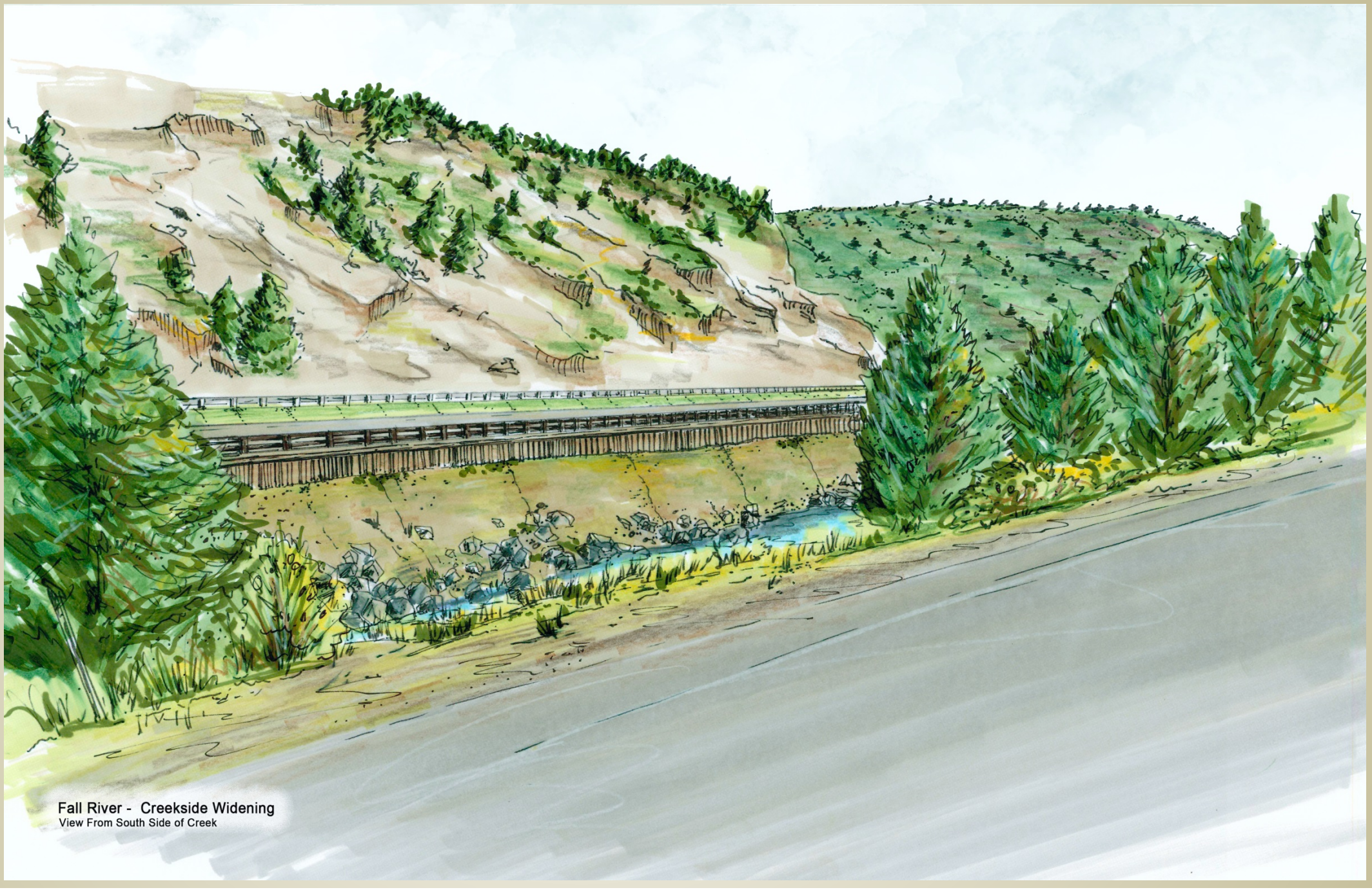
FALL RIVER – MEDIAN WIDENING OPTION

FALL RIVER – EXISTING CONDITION LOOKING EAST ON I-70

FALL RIVER – CREEKSIDE WIDENING OPTION

FALL RIVER – EXISTING CONDITION LOOKING EAST FROM SOUTH SIDE OF CREEK

FALL RIVER – CREEKSIDE WIDENING LOOKING EAST FROM SOUTH SIDE OF CREEK



DRAFT

Widening Median vs. Creek

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Widen to Creek	Widen to Median
Evaluation Criteria			
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	•More difficult to maintain taller walls along creek	•Easier to maintain shorter walls and access from roadway.
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•More wall area to design & build increases schedule	•Less wall area to design & build reduces schedule
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•More wall area has more impacts, is more expensive, and requires more maintenance	•Less wall area has less impacts, is less expensive, and requires less maintenance

WIDENING MEDIAN VS. CREEK

Widening Median vs. Creek

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Widen to Creek	Widen to Median
Evaluation Criteria			
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	
8	Creates opportunities to "correct past damage"	•Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	• More impacts to riparian vegetation affects river recreational experience	• More impacts to the median vegetation
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	•More barrier effect impeding highway permeability	•Less barrier effect impeding highway permeability
13	Protects Clear Creek	•More potential for creek encroachment •More visual impact from walls and tree removal •Less space for WQ features to be added • Degrades recreational experience	•Less potential for encroachment into creek •Less visual impact for walls and tree removal •More space for WQ features to be added
14	Protects the defining historical elements of Clear Creek County	•More infrastructure, more visual impact	•Less infrastructure, less visual impact

WIDENING MEDIAN VS. CREEK

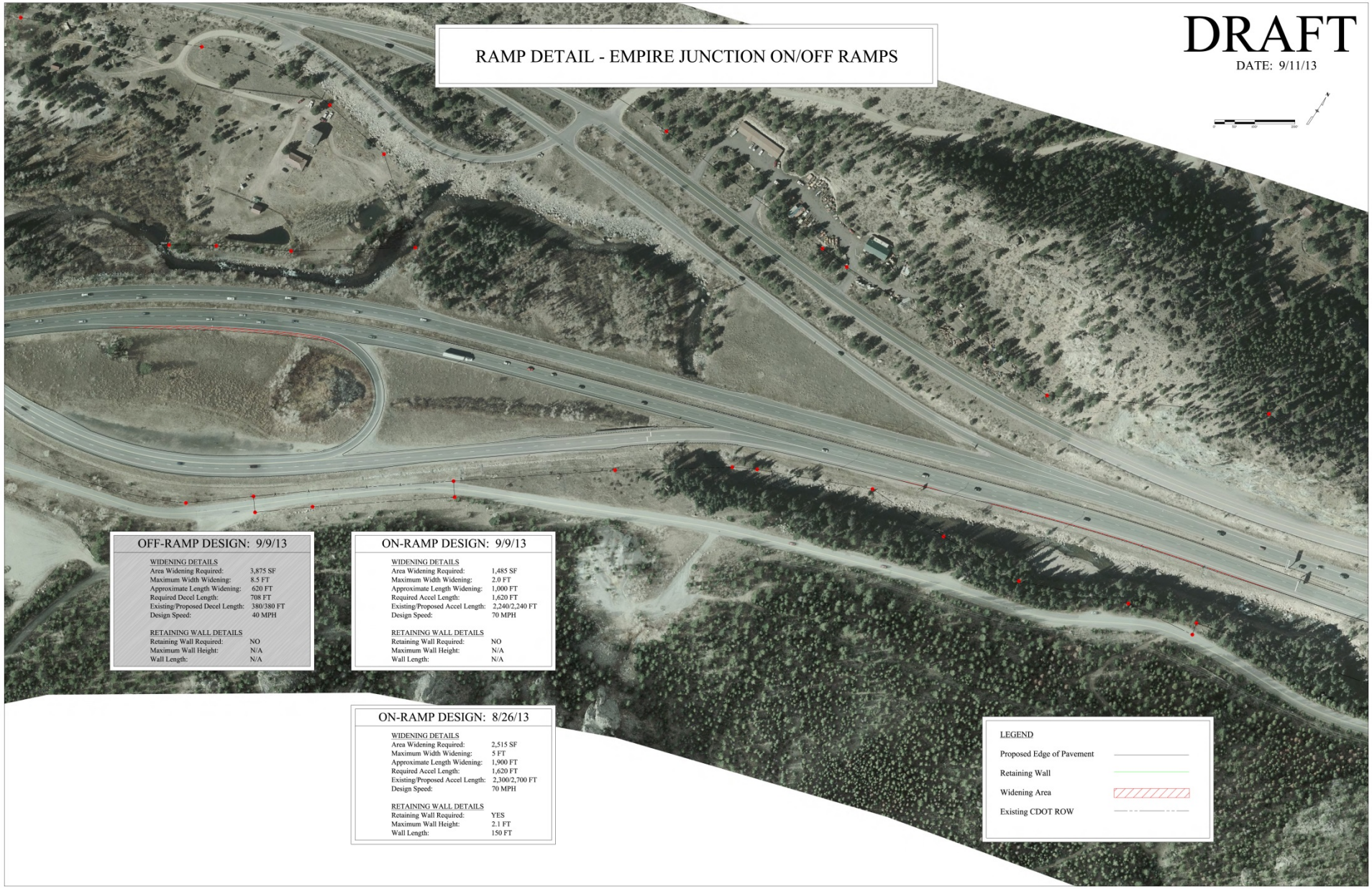
Widening Median vs. Creek

ID	Criteria	Options Ranking (Fair / Better / Best)	
		Widen to Creek	Widen to Median
Evaluation Criteria			
15	Meets CDOT's and industry standards	•Not a differentiator	
16	Achieves the mountain mineral belt aesthetic guidelines	• More impacts to riparian vegetation	• Minimizes the area of walls
17	Meets the I-70 Mountain Corridor design criteria	• Meets the corridor design criteria by not decreasing median width	• Narrows the median
18	Preserves opportunities for the AGS and the ultimate preferred alternative	•Not a differentiator	
19	Adaptable for future changes/projects	• More infrastructure to remove in future	• Less infrastructure to remove in future
ID	**Criteria**	**Options Ranking (Fair / Better / Best)**	
		Widen to Creek	**Widen to Median**
Issue Specific Criteria			
1	Impacts to creek users	• More visual impacts to creek users	• No visual impacts to creek users
2			
3			
4			
Identification of Preferred Option: Summary			

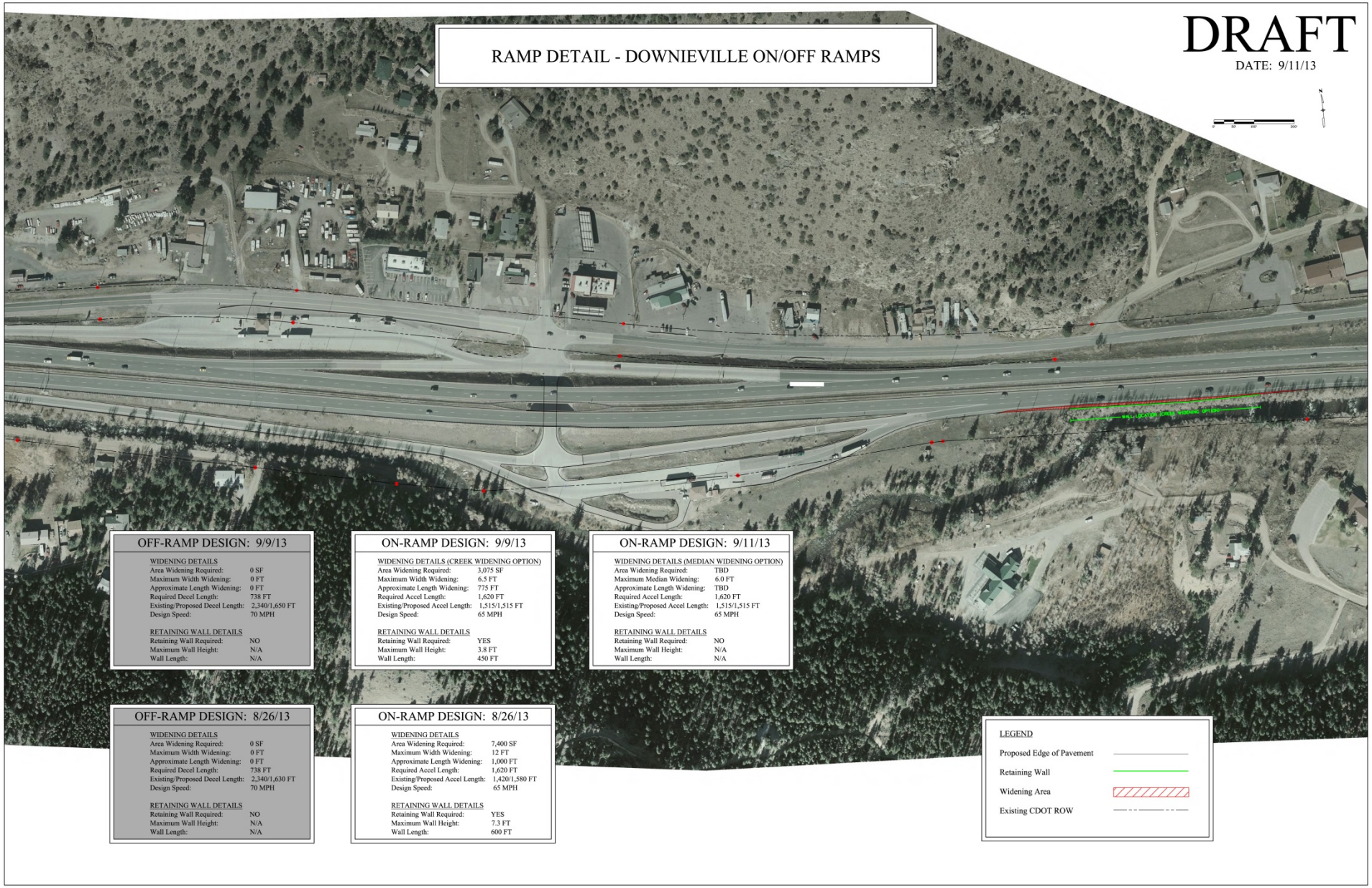
9/19/2013

ACCELERATION AND DECELERATION LANES

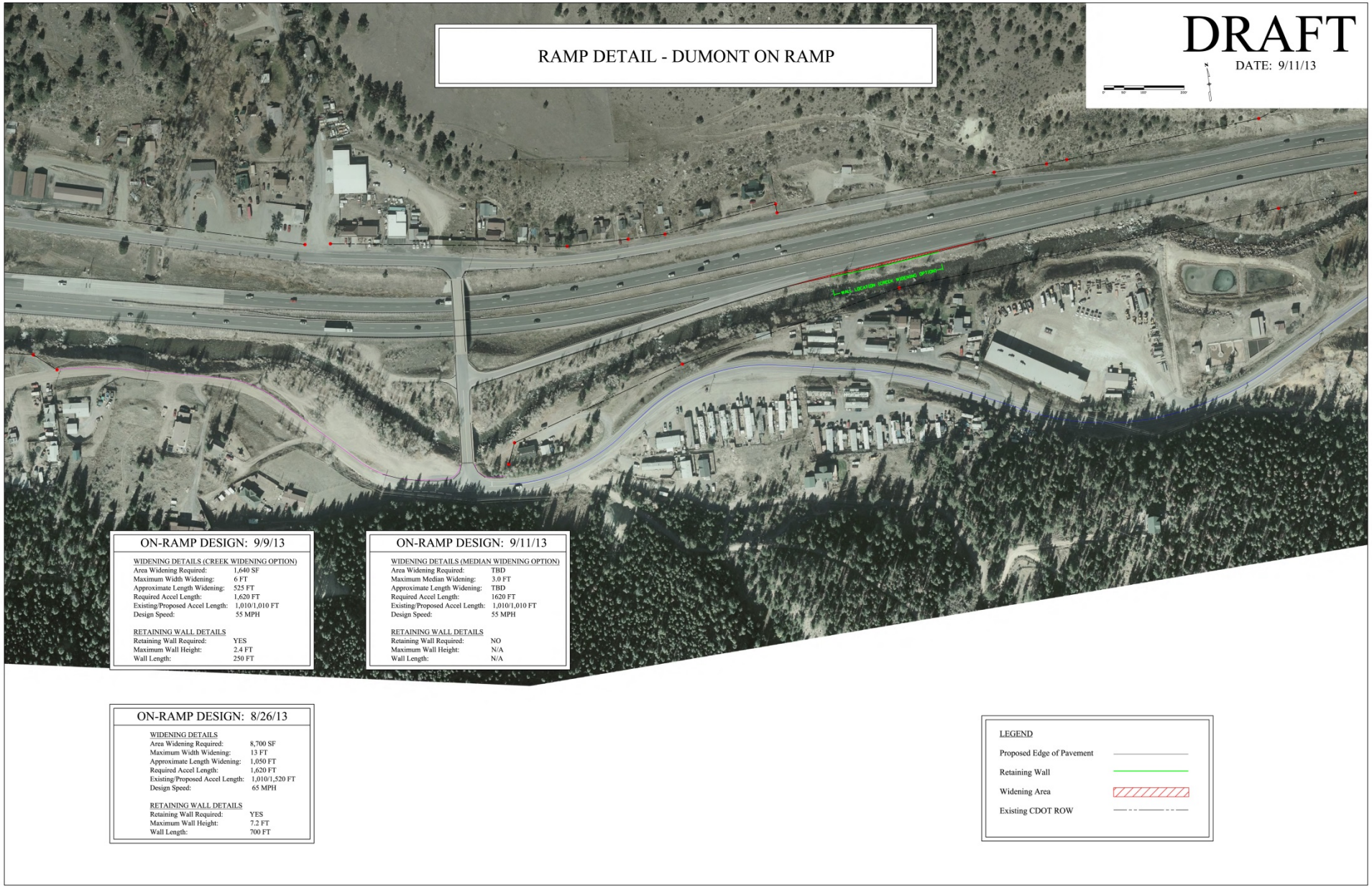
AC CELERATION AND DECELERATION LANES



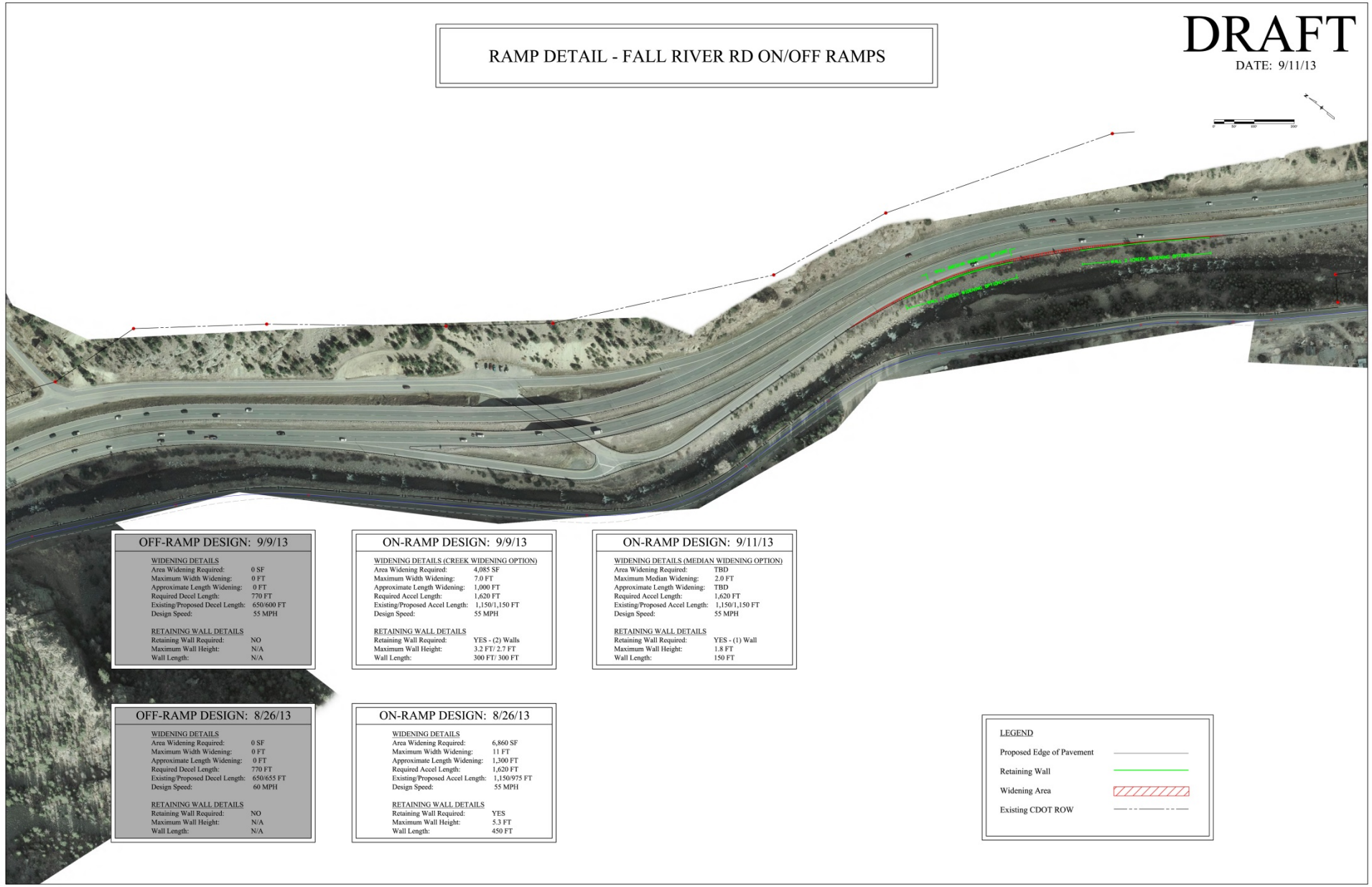
AC CELERATION AND DECELERATION LANES



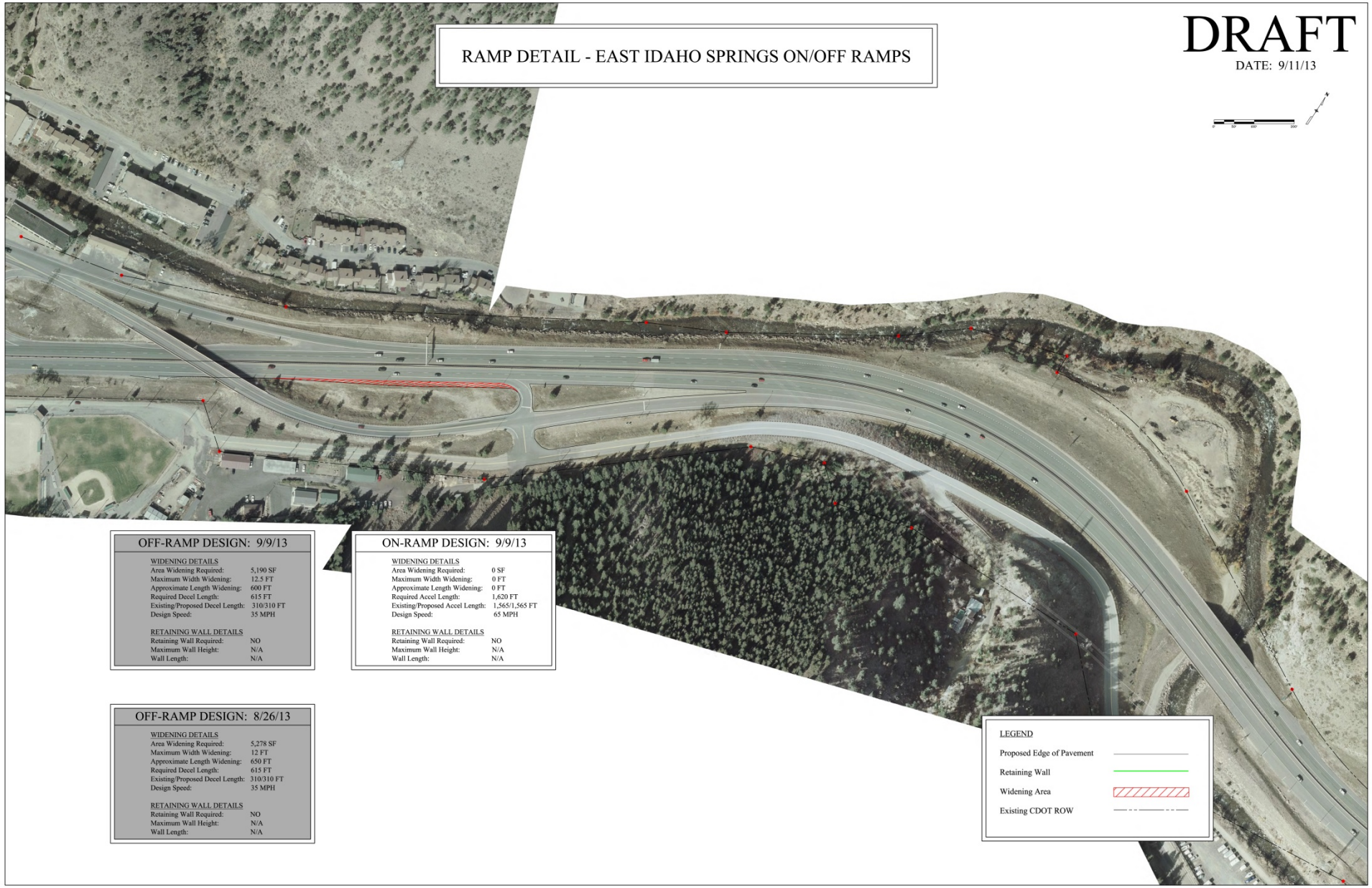
AC CELERATION AND DECELERATION LANES



AC CELERATION AND DECELERATION LANES



AC CELERATION AND DECELERATION LANES



ACCELERATION AND DECELERATION LANES

DRAFT

Accleration and Deceleration Lanes

ID	Criteria	Options Ranking (Fair / Better / Best)	
		AASHTO Standard Acceleration and Deceleration Length for Interchange Ramps	Match Existing Acceleration and Deceleration Lengths for Interchange Ramps
Evaluation Criteria			
1	Addresses safety during PPSL operations	•Provides maximum safety benefit and meets current design standards	•Does not meet current standards and may decrease safety at acceleration and deceleration lanes
2	Maintains safety during non-peak times	•Provides maximum safety benefit and meets design standards	•Does not meet current standards and may decrease safety at acceleration and deceleration lanes
3	Improves mobility during peak times	•Longer ramps provide increased opportunities for merging and diverging increasing mobility	•Shorter ramps decrease opportunities for merging and diverging
4	Minimizes the effort required to maintain the option	•Not a differentiator	
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•Increased Infrastructure increasing construction efforts and Project schedule.	•Less Infrastructure decreasing construction efforts and Project schedule.
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•Additional Infrastructure investments provide less value for Project life cycle, function, and purpose.	•Maximizes use of existing infrastructure and provides best value for Project life cycle, function, and purpose

ACCELERATION AND DECELERATION LANES

Accleration and Deceleration Lanes

ID	Criteria	Options Ranking (Fair / Better / Best)	
		AASHTO Standard Acceleration and Deceleration Length for Interchange Ramps	Match Existing Acceleration and Deceleration Lengths for Interchange Ramps
Evaluation Criteria			
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	
8	Creates opportunities to "correct past damage"	•Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	•Not a differentiator	
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	•Increased barrier effect impeding highway permeability	•Less barrier effect impeding highway permeability
13	Protects Clear Creek	•More potential for encroachment into creek •More visual impact for walls •Less space for WQ features to be added	•Less potential for encroachment into creek •Less visual impact for walls •More space for WQ features to be added
14	Protects the defining historical elements of Clear Creek County	•More infrastructure, more visual impact, more potential encroachment into historic properties	•Less infrastructure, less visual impact
15	Meets CDOT's and industry standards	•Meets design Standards	• Does not meet design standards

ACCELERATION AND DECELERATION LANES

Accleration and Deceleration Lanes

ID	Criteria	Options Ranking (Fair / Better / Best) AASHTO Standard Acceleration and Deceleration Length for Interchange Ramps	Match Existing Acceleration and Deceleration Lengths for Interchange Ramps
Evaluation Criteria			
15	Meets CDOT's and industry standards	•Meets design Standards	• Does not meet design standards
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	•Not a differentiator	

ID	Criteria	Options Ranking (Fair / Better / Best) AASHTO Standard Acceleration and Deceleration Length for Interchange Ramps	Match Existing Accereration and Deceleration Lengths for Interchange Ramps
Issue Specific Criteria			
1	Clear Creek County Preference	• Less Preferred	• More Preferred
2	Impacts to compounding safety risk factors	• Less safety risk factors	• More safety risk factors
3	Meets definition of a PPSL project	• Increased infrastructure Improvements	• Optimizes existing infrastructure
4			
Identification of Preferred Option: Summary			

9/19/2013

EVALUATION CRITERIA

1. Addresses safety during PPSL operations
2. Maintains safety during non-peak times
3. Improves mobility during peak times
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 area 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

Retaining Walls

- xxx
- xxx
- xxx
- xxx

Emergency Response

- xxx
- xxx
- xxx
- xxx

NEXT STEPS

- Public Involvement
  - Online public meeting
  - Schedule
- ALIVE Meeting
- Next Section 106 Meeting
- Next PLT Meeting
- SH 103 Issue Taskforce Meeting

FUTURE TECH TEAM MEETINGS

- **DATES**

10/7 8:30 – 11:30am at Idaho Springs

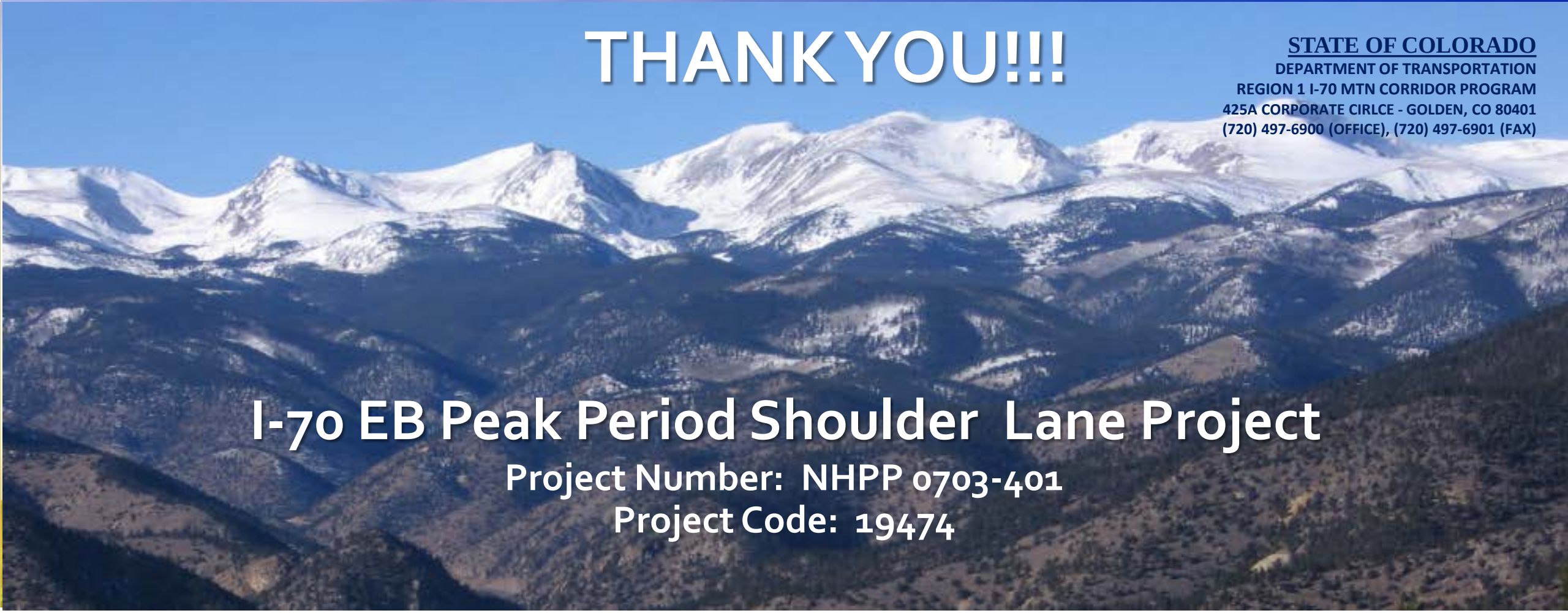
10/28 8:30 – 2:30pm at CDOT

11/18 8:30 – 2:30pm at Idaho Springs

12/16 8:30 – 2:30pm at CDOT

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 #3

September 23, 2013

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