

STATE OF COLORADO
DEPARTMENT OF TRANSPORTATION
REGION 1 I-70 MOUNTAIN CORRIDOR
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I-70 EB PEAK PERIOD SHOULDER LANE

PUBLIC MEETING – APRIL 14, 2014

PROJECT NO: NHPP 0703-401

PROJECT CODE: 19474



**EB I-70 Peak Period
Shoulder Lane**

INTRODUCTIONS

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AGENDA

- Purpose and Need
- Project Description
- Impacts
- Construction Plans
- Questions?



PURPOSE AND NEED FOR THE PROJECT

Purpose:

- To relieve congestion on eastbound I-70 when traffic volumes are highest



Needs:

- Unreliable and long travel times
- Decreased access to recreational resources and local commerce
- Congested frontage roads
- Safety issues, increased crashes
- Longer emergency response times

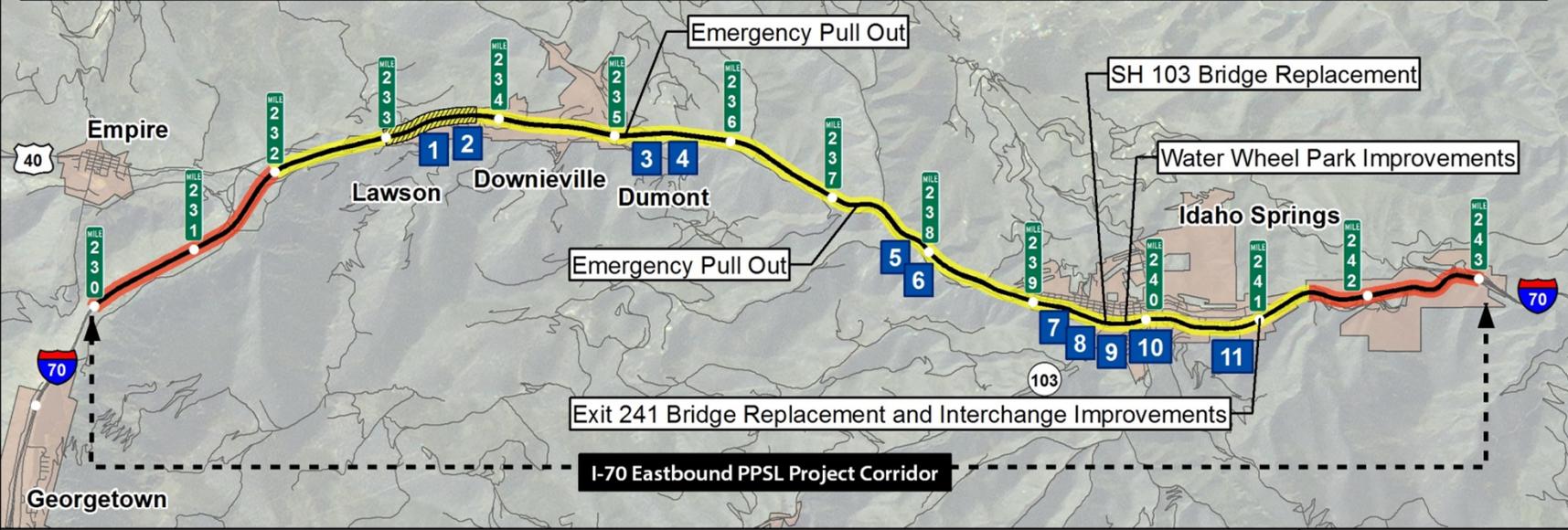
PROPOSED ACTION

Proposed Improvements

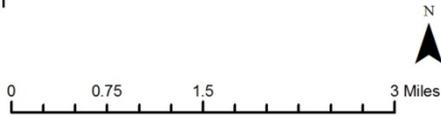
- Widening to accommodate a peak period shoulder lane.
- SH 103 bridge replacement and the Exit 241 bridge replacement and interchange improvements, including a new retaining wall.
- Construction of 10 retaining walls and rehabilitation of an existing retaining wall.
- Construction of 2 emergency pull outs.
- Signage throughout the corridor.
- Up to 14 feet of widening at the SH 103 on-ramp and approximately 4-8 feet of widening at all other on-ramps.
- Improvements to Water Wheel Park.
- Water quality treatment measures throughout the corridor.
- Two areas of rock fall mitigation near milepost 240.

Retaining Wall Summary

	Wall Location Description	Mainline or Ramp Widening	Length Wall (Feet)	Maximum Exposed Wall Height (Feet)
1	Lawson	Mainline	750	4.3
2	East of Lawson	Mainline	375	2.4
3	Dumont On-Ramp	Ramp	275	2.6
4	Between Dumont and Fall River	Mainline	875	2.6
5	Fall River On-Ramp Wall #1	Ramp	325	3.4
6	Fall River On-Ramp Wall #2	Ramp	325	2.9
7	SH 103 Off-Ramp	Ramp	210	5.8
8	SH 103 Off-Ramp (existing wall to be rehabilitated)	Ramp	400	Existing
9	SH 103 On-Ramp	Ramp	TBD	4.0
10	Approach to Bridge over Clear Creek	Ramp	75	2.0
11	Exit 241 Ramp (walls on both sides)	Ramp	500	12.0
			4,110	N/A



- PPSL Project Corridor
- Signage Only
- Roadway Improvements (Minimal to No Mainline Widening)
- Roadway Improvements (Widening of 3 to 3.5 Feet)
- X Retaining Wall Location



**I-70 EASTBOUND
PEAK PERIOD
SHOULDER LANE**
Date: 3/31/2014

Data Source: Clear Creek County, CDOT, HDR Note: TBD=To Be Determined N/A=Not Applicable

PROJECT DESCRIPTION

A tolled peak period shoulder lane (PPSL) will be added from the US 40/I-70 interchange to east Idaho Springs, eastbound lanes only.

- PPSL open during greatest congestion during peak season: Saturdays, Sundays, and holidays
- Two general purpose lanes will be free and open to all travelers
- PPSL to open in fall 2015

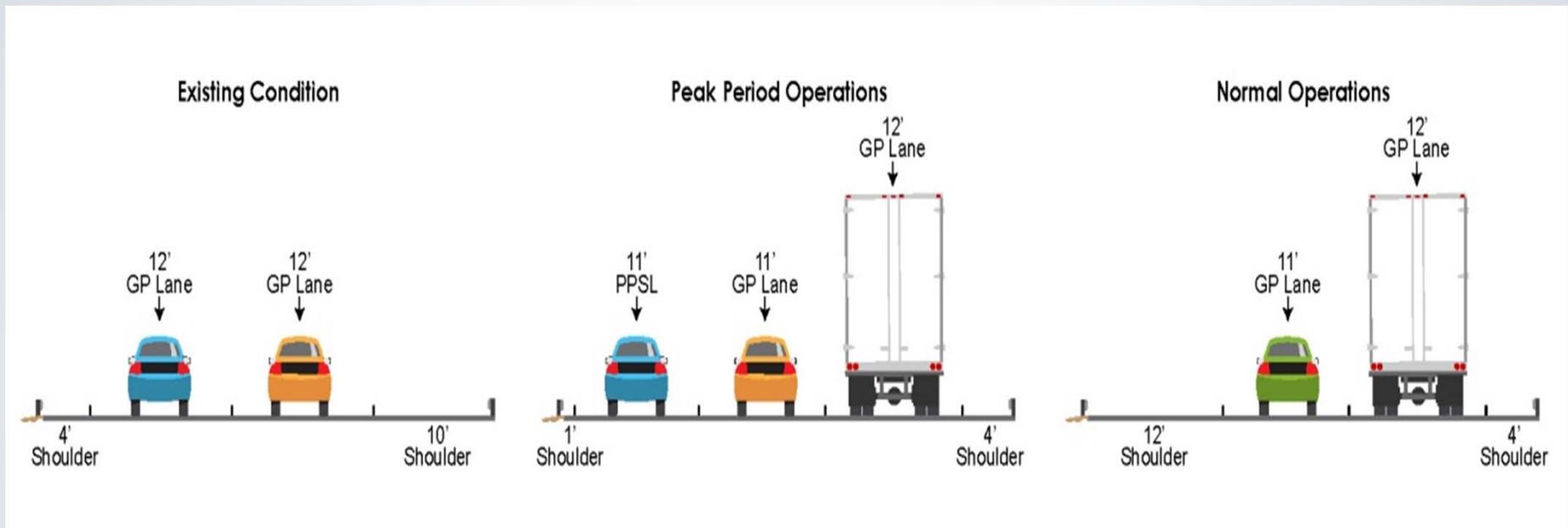


MAJOR PROJECT ELEMENTS



- ❖ Widening (roadway and on-ramps)
- ❖ Replace SH 103 bridge and Exit 241 bridge
- ❖ Emergency pull outs (2)
- ❖ Areas of rock fall mitigation (2)
- ❖ Improve Water Wheel Park
- ❖ Signage
- ❖ Water quality treatment
- ❖ Retaining walls (11)

PROPOSED CROSS-SECTIONS



HOW WILL THE PEAK PERIOD SHOULDER LANE OPERATE?

- Tolling will occur only during peak periods; the left shoulder will function for emergency usage during off-peak periods.
- Toll rates are set to achieve desired volumes and speed of 45 mph in managed lane.
- Tolls assessed through transponders or license plate monitoring.
- Toll price is undetermined. Goal is to manage the travel demand.



HOW WILL THE PEAK PERIOD SHOULDER LANE OPERATE?

- Commercial vehicles with more than two axles are prohibited
- Cameras with monitoring from the CDOT Transportation Management Center will be used to enforce use
- CO State Patrol and local law enforcement will be able to issue citations



SH 103 BRIDGE REPLACEMENT



- 59-foot wide bridge
- 21 feet wider than existing
- Shoulders 2 feet wider on the east side
- Shift I-70 south
- Center auxiliary lane
- 10-foot wide walk on the west side of the new bridge
- Aesthetics meet I-70 corridor guidance

IMPROVEMENTS FOR WATER WHEEL PARK AND THE GREENWAY TRAIL



- ❖ Redesign plaza area
- ❖ Improve creek access
- ❖ Reduced noise

- ❖ Install interpretive and retaining walls
- ❖ Install landscaped areas with native vegetation

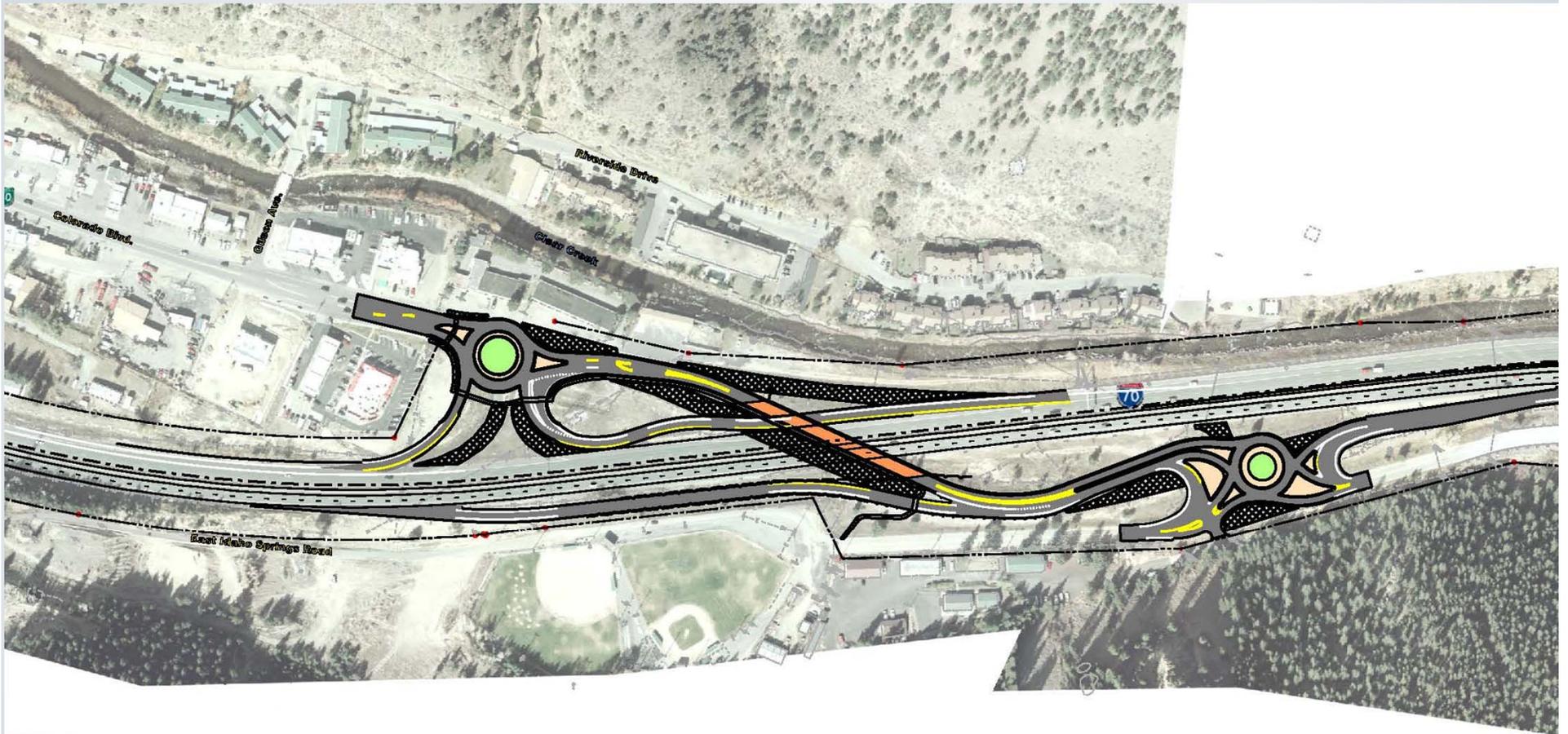


EXIT 241 BRIDGE REPLACEMENT

- Replace structurally deficient bridge
- Improve interchange
- Widen shoulders
- Aesthetics meet I-70 corridor guidance



EXIT 241: NEW ROUNDABOUT INTERSECTIONS



EMERGENCY PULLOUTS

Emergency pullout near the Dumont interchange



Emergency pullout just past MP 237 west of Fall River Road



POTENTIAL ROCK FALL MITIGATION

Western location:

~500 feet long and 55 feet high

Eastern location:

~375 feet long and 55 feet high



ROCK FALL MITIGATION (BOLTS WITH WIRE MESH)



RETAINING WALLS

- Eleven retaining walls
- Existing retaining wall west of SH 103 will be rehabilitated
- Two retaining walls will reduce noise:
 - Near Lawson
 - Next to Water Wheel Park



CONTEXT SENSITIVE SIGNAGE CONSIDERATIONS



- Messaging
- Sign type
- Frequency
- Location
- Size



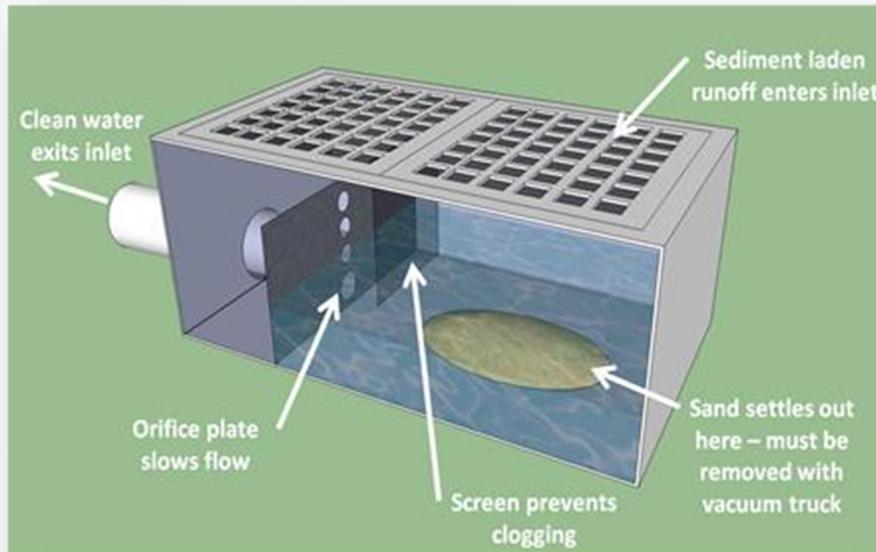
CONTEXT SENSITIVE SIGNAGE



- Signs placed in the median and on the sides of the road
- 19 new overhead signs
- 9 are Active Traffic Management signs (blank most of the time)
- Variable Speed Limit (VSL) signs will replace existing speed limit signs

WATER TREATMENT

- ❑ Primary concerns: sediment and chloride
- ✓ Permanent sediment controls
- ✓ **Permanent water treatment features**



The Proposed Action will result in a net benefit to water quality: 3% increase in pavement; treating 23%

PROJECT BENEFITS

- ✓ A time savings of approximately 30 minutes during peak periods between the Eisenhower-Johnson Memorial Tunnels and the top of Floyd Hill
- ✓ Less traffic on local roads
- ✓ Better emergency service response times
- ✓ Fewer crashes and improved safety



PROJECT BENEFITS

- ✓ Improved water quality
- ✓ Improved conditions at the Water Wheel Park
- ✓ Improved conditions for pedestrians and cyclists
- ✓ Decreased noise near Lawson and Water Wheel Park



PROJECT IMPACTS

Category	Impact Description	No Impact	Minor Impact	Moderate Impact	Significant Impact
Air Quality	<ul style="list-style-type: none"> PM₁₀ emissions may increase Other pollutants decrease. 		●		
Hazardous Materials	<ul style="list-style-type: none"> Potential to encounter historic mine waste during construction. 		●		
Farmlands	<ul style="list-style-type: none"> Roadside areas classified as “farmlands” would be converted to a transportation use. 		●		
Threatened and Endangered Species	<ul style="list-style-type: none"> May affect but not likely to adversely affect Canada lynx. 		●		
Migratory Birds	<ul style="list-style-type: none"> No known nests. 	●			
Terrestrial and Aquatic Wildlife	<ul style="list-style-type: none"> Retaining walls and lighted signs adding to the barrier effect but median jumps effectively mitigate. 		●		
Vegetation and Noxious Weeds	<ul style="list-style-type: none"> Conversion of roadside vegetation to roadway. 		●		
Wetlands and Waters of the U.S.	<ul style="list-style-type: none"> No permanent wetland impact. Impact to Waters of the U.S. at SH 103 bin wall. 		●		

PROJECT IMPACTS

Category	Impact Description	No Impact	Minor Impact	Moderate Impact	Significant Impact
Riparian Areas	<ul style="list-style-type: none"> 0.28 acre impacted. 		●		
Water Quality	<ul style="list-style-type: none"> Temporary construction improvements. BMPs will improve water quality in the study area. 		●		
Floodplains	<ul style="list-style-type: none"> Minimal impact at SH 103 bin wall. 		●		
Historic Properties	<ul style="list-style-type: none"> No direct impacts. Noise and visual impacts to 13 properties. 		●		
Archaeological and Paleontological Resources	<ul style="list-style-type: none"> No resources. 	●			
Section 4(f)	<ul style="list-style-type: none"> No Section 4(f) uses. Temporary occupancy to 3 properties. 	●			
Land Use	<ul style="list-style-type: none"> Improvements are consistent with existing and planned future land uses. 	●			
Socio-Economic	<ul style="list-style-type: none"> Temporary impacts because of access changes during construction. Positive permanent impacts due to mobility increases and reductions in traffic on frontage road . 		●		

PROJECT IMPACTS

Category	Impact Description	No Impact	Minor Impact	Moderate Impact	Significant Impact
Environmental Justice	<ul style="list-style-type: none"> Visual impacts in Lawson because of a new retaining wall. Wall will decrease noise by 2 dB to 4 dB. 		●		
Transportation	<ul style="list-style-type: none"> Vehicle miles of travel increases. Vehicle hours of travel decreases. Speed increases. Travel time decreases. Volumes on frontage road decreases. Safety increases. 			●	
Parks and Recreation	<ul style="list-style-type: none"> Temporary impacts to 5 resources. Improvements to pedestrian facilities in 3 locations. 		●		
Visual	<ul style="list-style-type: none"> Effects of retaining walls, signage, additional pavement. 		●		
Energy	<ul style="list-style-type: none"> Small reduction in energy consumption. 		●		

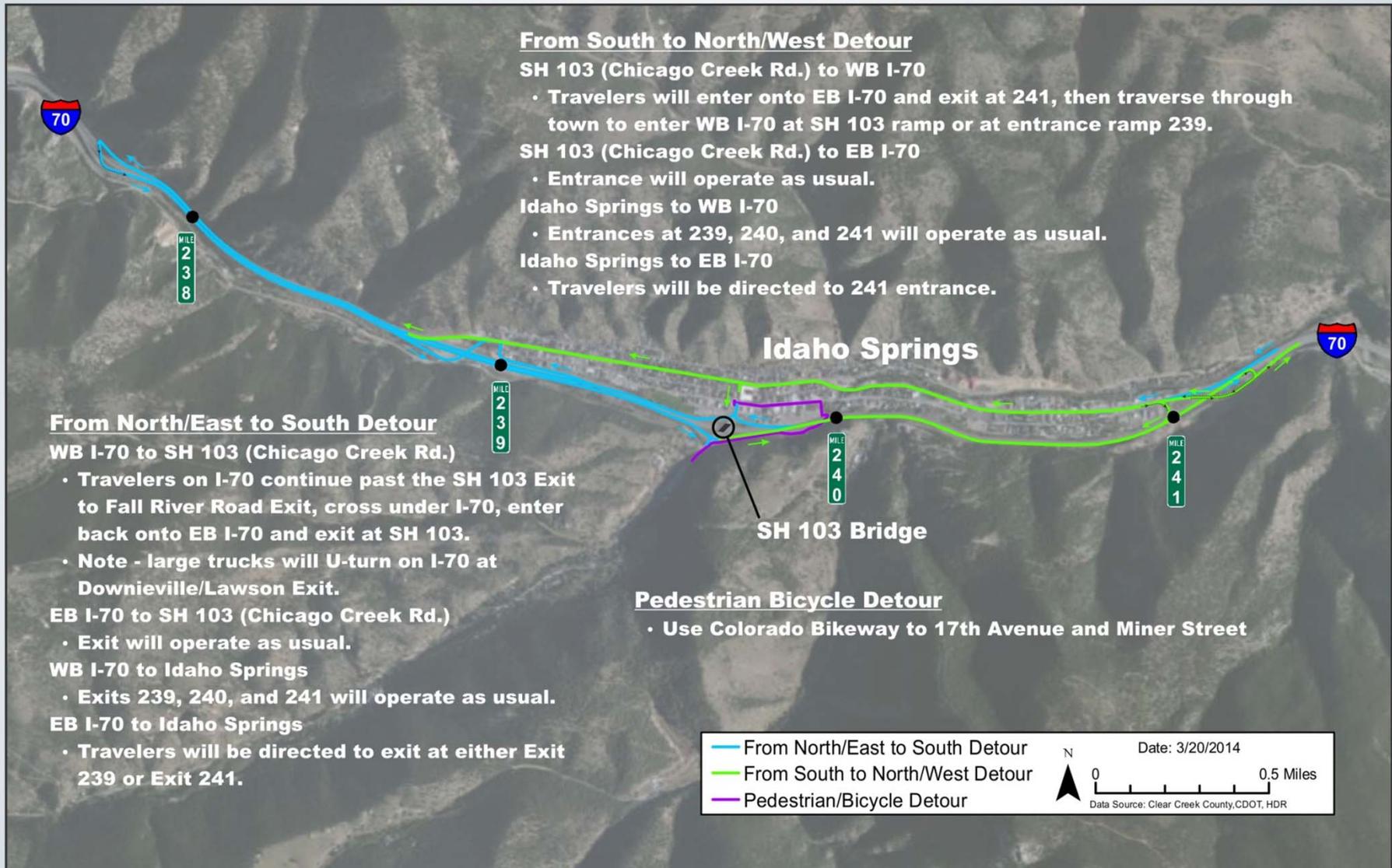
CONSTRUCTION IMPACTS

- I-70 construction to begin in June
- I-70 lane closures during off-peak traffic hours
- I-70 full closures during nighttime only
- SH 103 bridge could be closed up to 10 weeks
- SH 103 detour for cars: 4 miles or less (longer for trucks)
- Charlie Tayler Water Wheel Park and trail closed up to 3 months



- Bicycle and pedestrian traffic detoured onto SH 103 bridge (after it is constructed)
- Staggered exit closures
- Access to businesses maintained throughout construction

DETOURS WHILE SH 103 BRIDGE IS CLOSED



QUESTIONS?



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