

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

Date: August 22, 2018

Location: CDOT – Golden

### Technical Team – Meeting #13

[Ctrl +Click HERE](#) or paste link below into your browser for Shared Floyd Hill Project GDrive

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OOUNkNU0>

#### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. John Muscatell distributed photographs from the Floyd Hill, highlighting the wildlife and context of the neighborhoods. Self-introductions followed.

#### Project Updates

**INFRA Grant** - Officially awarded although specific implementation guidance from FHWA Headquarters is still required. As a result of the INFRA Grant award the WB PPSL, Clear Creek Greenway, CR 314 (Phase II) and Fall River Road projects are moving toward construction. See schedule of implementation of these projects below.

Project	NEPA	Design / Advertisement	Start Construction
<b>Fall River Road</b> The Proposed Action constructs a new bridge that connects Stanley Road to the Fall River Road/I-70 interchange near Mile Post (MP) 238. Currently, bicyclists use I-70 to go between the Fall River Road community and Idaho Springs. With the Westbound Peak Period Shoulder Lane (PPSL) project, that access will no longer be available. This project is advanced mitigation for the WB PPSL project that will provide bicyclists a route between Fall River Road and Idaho Springs once I-70 is no longer available. The bridge will also allow vehicles to use it based on community preference.	Fall 2018	End of 2018	Early 2019
<b>Westbound PPSL</b> The Proposed Action includes modifications to I-70 for approximately 13 miles for a peak period toll lane, mitigation for wildlife, SH 103 modifications, pullouts for safety and enforcement, rock fall mitigation, drainage improvements, pedestrian improvements and active traffic management.	Fall 2018	Winter 2018/2019	Spring 2019
<b>County Road 314 (Phase II)</b> County Road 314 will be improved between the Game Check Station Trailhead to just west of the Exit 241 interchange. Improvements include roadway reconstruction, restriping, and minor widening for safety enhancement and bicycle and pedestrian connectivity.	Early 2019	Summer 2020	Spring 2021
<b>Clear Creek Greenway</b> Construction of portions of the multiuse Clear Creek Greenway Path. The segments include East Idaho Springs Trail to Game Check Station Trailhead, Dumont Trailhead Connection to Lower Dumont Creek Access, and the Animal Shelter to Dumont Trailhead.	Early 2019	Summer 2020	Spring 2021

Each of the four projects is going through its own NEPA process (all Categorical Exclusions; the Greenway already has a completed Categorical Exclusion and it will need Reevaluations as alignments change). Different contractors are anticipated for these INFRA Grant award projects (greenway, bridges etc...)

**Colorado Blvd.** - Nearing completion with a scheduled ribbon cutting on September 20th, followed by a “take back the city” social event (starting at 5 pm).

**Smart 70** - Moving along and while coordination is necessary between WBPPSL and Floyd Hill, no conflicts are expected with Smart 70.

**Bridge Deck Repair at Soda Creek** – Will be completed by the end of October. The scheduled rock fall work on US 6 Clear Creek Canyon will begin in November after the completion of the deck repairs.

### **Report Out from Summer Break**

**Public Meeting** - Vanessa Henderson summarized the public meeting input held on June 12, 2018 and thanked TT members for helping publicize the meeting. There was a large turnout (over 100 attendees) and many who attended were aware of details of the project and provided useful substantive input. Most public comments were supportive of the project. A public meeting summary has been distributed to the TT and is posted on the Floyd hill CDOT project website <https://www.codot.gov/projects/i-70-floyd-hill-to-veterans-memorial-tunnels-improvements/public-outreach>.

**Water Quality** – CDOT and Black Hawk (Jim Ford) met to discuss whether or not Black Hawk has any water quality concerns at the Hidden Valley plant related to operations of the highway now, during construction, or in the future operations. No water quality concerns were identified other than turbidity concerns during construction, especially when the creek is being moved. Jim Ford indicated that there needs to be good communication during construction. Black Hawk’s other plant could be used as a back-up if the turbidity is going to be high at the Hidden Valley plant, but there needs to be advanced notice for that.

Jim Ford was present at the TT meeting and he also brought up that during the Twin Tunnels project, a turbidity meter was bought for the plant as part of the project that sent automatic notifications (e-mail/text) to both the contractor and Black Hawk when the turbidity was high. He indicated that it would be good to have the contractor receive those notifications again during this project. Black Hawk can then adjust their system and protect their drinking water.

**ACTION:** Jim will provide the turbidity meter specification to JoAnn Sorenson, including cost.

**Design Review Meeting** - Neil Ogden updated the TT regarding an independent design review for Floyd Hill, held on July 23/24. CDOT brought together several staff members from FHWA, CDOT and Atkins that were not familiar with the project to evaluate the proposed action for fatal flaws and design refinements as well as to consider new concepts. The design review was constructive and served to reinforce the decisions and direction of the project. The review did not result in any substantial changes to the design or proposed action. Notes for the Design Review meeting materials will be distributed to the TT when finalized.

Q: Are TT meeting notes posted on the CDOT website? A: Yes, a link is provided.

<https://www.codot.gov/projects/i-70-floyd-hill-to-veterans-memorial-tunnels-improvements/context-sensitive-solutions-process>

**ACTION:** CDOT to provide Design Review meeting notes to TT.

### **Environmental Updates**

Mandy Whorton, Peak Consulting, is now the environmental lead for the Floyd Hill project. Mandy described her extensive experience on the I-70 mountain corridor and outlined the environmental methodology. She reviewed the entire list of environmental considerations, noting that some resources are more relevant to the Floyd Hill project and mountain corridor than others. While the names of the specific resources differ from the PEIS, the approach is comprehensive and the impact methodologies and mitigation strategies are consistent with the parameters set forth in the ROD. Additionally, the process is reliant on the Issue Task Forces (SWEEP and ALIVE MOUs and Section 106 Programmatic Agreement) recommendations and the guidelines, as well as the CSS process.

One issue of interest is the identified potential fen wetland at the top of Floyd Hill. A fen wetland is unusual, especially at this elevation. The team collected soil samples for testing to confirm whether the wetland meets the criteria for a fen; results are expected in the next two weeks. A fen is a very old wetland that is fed by both groundwater and surface water and has unique carbon filtering benefits.

### **Discussion**

**Transportation** - On slide # 11 please add local agency and homeowner coordination

**Recreation** - On slide #12 are fishing/angling included in the environmental analysis? How will the recreation analysis address the conflicts between rafting and fishing as recreation activities?

**SWEEP** – what is the schedule for SWEEP meetings for other projects mentioned at the beginning of the meeting? When is the next meeting?

**ACTION:** Both rafting and fishing are important recreational activities in Clear Creek that will be evaluated in the EA. Vanessa will follow-up with Gary Frey regarding the ALIVE/SWEEP schedule and distribution list for the WB PPSL project. Vanessa noted that integration of SWEEP/SCAP recommendations will occur when there is more design completed on the Floyd Hill project.

### **Proposed Solutions - Traffic Model Updates**

Anthony provided the TT with an update regarding the traffic model and other data collection efforts.

### **Hidden Valley/US 6 Interchange Ramps**

Anthony presented 4 interchange ramp options using stick figure schematics for the Hidden Valley/US 6 interchange. The initial plan to maintain the connections between I-70 and US 6 is as follows:

1. Maintain the existing WB I-70 Exit ramp to I-70
2. Add a New I-70 on Ramp from US 6 at the bottom of the hill
3. Extend US 6 west and route WB US 6 to WB I-70 and EB I-70 to EB I-70 through the Hidden Valley interchange.

The traffic model for this scenario showed that there were very long queues at the Hidden Valley interchange and it could not handle the traffic from item 3 above. Atkins developed four additional options to make direct connections to I-70 to accommodate the movements from bullet 3 above while maintaining bullets 1 and 2.

The traffic operations for all four of the new options are very similar and traffic operations were not a differentiating factor. Recommendations between the four alternatives were based on the amount/height of rock cuts and the resulting visual impacts north of I-70. Reducing rock cuts will also reduce construction time and impacts to the traveling public.

The four ramp options include (see attached figures):

- 1) Frontage Road Split, Westbound Flyover Slip Ramp; EB slip ramp
- 2) Frontage Road S of I-70; WB Flyover/EB flyover
- 3) Frontage Road Split, WB Flyover with braided ramps, EB slip ramp
- 4) Frontage Road S of I-70, WB Flyover with Braided ramp, EB Flyover (if needed)

The Project Staff recommended Option 4 because it operates slightly better than the other options and reduces rock cuts (width and height), visual impacts, and construction impacts

(cost, constructability) compared to the other options. After discussion, the TT agreed with the recommendation to carry forward Option 4.

The EB flyover in Option 4 may not be needed. The Hidden Valley interchange may be able to handle EB I-70 traffic going to US 6 as it is much less than the reverse direction. However, the project will be designed to accommodate this ramp if needed in the future.

### **Discussion:**

Q: Where do you need traffic signals? A: It is not clear where signals are needed, this will be addressed at the next level of detail. Once we have the ramp connections located we will focus on intersection design.

Q: What is the need for a flyover if you can get traffic through on the frontage road? A: There is too much traffic to route through the interchange, it would result in long queues on the local streets and I-70.

### **Suggestions for Presentation:**

- Colors - in the schematic drawings use blue for a creek, and green for the greenway
- Include the creek location in the schematic drawing

**TT comment:** When WB I-70 becomes congested, traffic backs up all the way to the top of Floyd Hill. Traffic diverts to local roads. What option least impacts the local communities, or what option best keeps people on the highway and off of the local roads? A: All the options push the US 6 traffic farther west away from Floyd Hill and should improve traffic flow on I-70, reducing diversions to local roads. We can consider additional intersection options to incentivize traffic to remain on I-70.

There is a balancing act in terms of having a functioning frontage road for when it is needed and encouraging traffic to get off of I-70. Q: Will people be encouraged to use US 6? A: That is not the intention and will be addressed at the next level of design when we focus on intersections.

We will consider an EB flyover ramp, if needed; finishing the model now.

Q: Tunnels are a concern for the freight industry, particularly hazmat vehicles. US 6 is a logical reroute, can we get large vehicles through with proposed Option 4? A: The ramp connection would be direct and freight traffic does not have to go through the interchange.

Q: At Hidden Valley, do you have a radius/curve that will work? Otherwise, vehicles will be moving very slowly through the interchange and impact operations. A: The freight traffic would access US 6 and I-70 through ramps and would not need to negotiate the interchange.

**ACTION:** Atkins to follow-up on the curve radius and operations for north of Hidden Valley interchange complex.

Kelly Galardi noted that because the project involves changes to an interstate interchange, FHWA Headquarters (in DC) will need to evaluate the safety and operations of the recommended option.

Q: Where is the AGS alignment for Floyd Hill? A: The AGS alignment is to the south. The Floyd Hill project fully accommodates the AGS alignment. In the future, the AGS alignment will be included on the Floyd Hill project maps/visuals. It was noted that due to the vertical and horizontal tolerances of the AGS, the AGS has less alignment flexibility than the highway.

**TT AGREEMENT:** Proceed with Option 4 for the interchange ramp at Hidden Valley/US6

### **Hidden Valley/US 6 Interchange/Frontage Road Refinement Opportunity**

A refinement opportunity for the Hidden Valley/US 6 interchange and frontage road was discussed for this area, by moving the frontage road south of the creek before the Hidden Valley interchange. Anthony noted that while the ramp configurations would stay constant (Recommended Option 4), moving the frontage road to the south would further reduce rock cuts.

The initial estimates show:

1. Rock cut height reduced from 180 ft to 80 ft
2. Max width of rock cut reduced from 120 ft to 70 ft
3. Total volume of Rock cut reduced by 50%

This also raises potential to revisit the greenway design and creek enhancements potentially carrying improvement from the Twin Tunnels farther east. The TT, after discussion, indicated a desire to examine the potential refinement further

### **Discussion**

This area, with the frontage road south of the creek, is in the shade much longer than on the north side and more salt will be needed and could impact the creek.

It is hoped that there would be a partnership to reclaim the creek in this area regardless of the location of the frontage road.

The constructability of the project would be challenged as rock cuts require road closures and thus support examination of the pros/cons of this refinement. There is a strong desire

to build this roadway quickly and reduce the visual impacts of the high rock cuts, plus this refinement could open up more space and access to the creek.

There is real potential value of separating the Greenway from the road and closer to the river, especially if better river access could be provided with a parking area or pull-out apron.

Would a parking lot go on the south side of the creek as well? A: we could potentially put a parking lot on the south side.

A restoration approach for this area is attractive where we may be able to make the creek and greenway work better. Additionally, a partnership approach has permitting benefits as other agencies are included art of the design process.

Consider: 1) wildlife movement as they cross from north and south side 2) deicers - what are the impacts to the creek? The Clear Creek flows are not comparable to the Colorado River flows and significant salt going into the water will diminish the creeks and 3) define the maintenance costs.

**ACTION:** Develop a list of pros/cons for this refinement to present at the next TT

### **Eastbound I-70 On-Ramp**

The team considered options for the traffic using the EB on-ramp from US 6 to I-70 at the bottom of Floyd Hill/US6 to accelerate before entering traffic:

1. Parallel Entrance Acceleration Lane - approximately 2500 feet long
2. Auxiliary Lane - approximately 2.5 miles - between US 6 and Homestead Road
3. Climbing Lane - from bottom of Floyd Hill/US 6 Over the top of Floyd Hill

### **Discussion**

Anthony noted that based on the initial traffic model runs, an acceleration lane is sufficient for this area. If traffic problems are identified later in the project the approach could be modified.

TT members noted that the speed differentials in this area and poor driver behavior make the on-ramp discussions a safety issue not only a traffic issue. TT members shared stories of dangerous situations in this area, highlighting the need for an auxiliary lane.

The issue with the climbing lane is at the top of Floyd Hill when the lane drops; it creates challenges for freight vehicles to merge with traffic after the climbing lane concludes. In addition, the traffic models have shown that the climbing lane could be treated as a fourth

lane creating a bottleneck at the top of the hill. Also, there is limited space to extend the climbing lane without impacting the wetland. The TT recommended discarding this option.

Another option discussed was combining the elements of an accel/auxiliary lane by extending the lane further up the mountain. One of the considerations is the line of sight over the hill. May be safer based on sight distance to have traffic merge in from an auxiliary lane than to merge just past the crest of the hill.

As part of the auxiliary lane, consider signing it as a dedicated lane for trucks. This could help to change the behavior of drivers in the area and has been used successfully in other states.

TT members also encouraged more driver education and enforcement given how challenging this area can be. “There are really bad drivers who have no discipline in driving.”

Drainage and fire mitigation (from brush fires in the ditch) is a consideration as the accel/auxiliary lane would be moved closer to homes. There is a need to limit the amount of vegetation in the drainage swale for to protect against fires that could initiate from cars (e.g. cigarettes).

**TT AGREEMENT:** Consider an auxiliary lane for EB I-70 on-ramp with the refinements suggested by TT members.

## Next Steps

Andy Marsh discussed input that Idaho Springs has received from community members regarding the Floyd Hill project and specifically the tunnel. Ways to avoid a tunnel were suggested by residents of Idaho Springs. The concern appears to be motivated by a desire to reduce cost, limit impacts to the travelling public, and shorten the implementation timeframe. TT members noted that the tunnel had been fully considered and determined by the TT as the best option. The rationale for recommending the tunnel option earlier in the process could be presented to Idaho Springs. The TT recommended that the group ‘stay the course,’ at least until after November. The evaluation matrix for this area will be redistributed to the TT. Jonathan Bartsch thanked Andy for bringing the concerns to the group and noted that bringing up concerns is part of the TT members responsibilities.

**ACTION:** CDR to distribute the evaluation matrix to the TT and discuss at a later point.

Bill Coffin noted that user conflicts and emergency response on US 40 are expected to get much worse as the population grows and that there is an existing emergency response problem for residents on US 40. While not officially part of the project Bill encouraged the



group to find a way to correct this. It was highlighted that a major problem is the split diamond interchange at CR65/US40 which doesn't have a connection on the south side of the road; until this is fixed people won't be able to turn around.

### **TT Meetings in 2018**

TT Meetings will be held from 1pm - 4pm in Golden on:

- October 3rd
- October 31st (bring your costume);
- November 28th
- December 19th

**ACTION:** CDR to send calendar invitations to TT members for the rest of 2018.

### **ACTIONS and AGREEMENTS**

**TT AGREEMENT:** Proceed with Option 4 for the interchange ramp at Hidden Valley/US6

**TT AGREEMENT:** Consider an auxiliary lane for EB I-70 on-ramp with the refinements suggested by TT members.

**ACTION:** Jim will provide the turbidity meter specification to JoAnn Sorenson, including cost.

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**ACTION:** Both rafting and fishing are important recreational activities in Clear Creek that will be evaluated in the EA. Vanessa will follow-up with Gary Frey regarding the ALIVE/SWEEP schedule and distribution list for the WB PPSL project. Vanessa noted that integration of SWEEP/SCAP recommendations will occur when there is more design completed on the Floyd Hill project.

**ACTION:** Atkins to follow-up on the curve radius and operations for north of Hidden Valley interchange complex.

**ACTION:** Develop a list of pros/cons for this refinement to present at the next TT

**ACTION:** CDR to distribute the evaluation matrix to the TT and discuss at a later point.

**ACTION:** CDR to send calendar invitations to TT members for the rest of 2018.

### **TT Member Attendees**

JoAnn Sorenson, Cindy Neeley (Clear Creek County); John Muscatell, Bill Coffin (Community Rep from Floyd Hill); Sam Hoover (Central City); Stephen Stohminger (Gilpin County);

Holly Hyuck (Clear Creek Watershed Foundation); Lynette Hailey (I-70 Coalition, City of Black Hawk); Jim Ford (Black Hawk); Kelly Galardi (FHWA); Patrick Holinda (Bridge Enterprise); Yelena Onnen (Jefferson County); Neil Ogden, Kevin Brown, Vanessa Henderson, Lauren Boyle, Steve Harelson, Bob Smith (CDOT); Anthony Pisano, Tyler Larson (Atkins); Gina McAfee (HDR Inc.); Julie Gamec (THK Associates); Taber Ward, Jonathan Bartsch (CDR Associates); Mandy Whorton (Peak Consulting Group); Andy Marsh, Mike Hillman, Jonathan Cain (Idaho Springs); Gary Frey (Trout Unlimited); Amy Saxton (Clear Creek Greenway); Tracy Sakaguchi (CMCA); Wendy Koch (Town of Empire)

**Members of Public in Attendance**

Becky English (Sierra Club)