

# TECHNICAL TEAM (TT) MEETING MINUTES

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** October 11, 2017

**Location:** CDOT – Golden

### Technical Team

### Meeting #1

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

#### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

#### Target Dates

- Data Collection and Alternatives Development – begin Fall of 2017
- NEPA / Design - Winter of 2017 through Spring of 2020
- Complete design followed by construction - Summer of 2020\*\*

\*\*Subject to funding

**ACTION - THK/HDR:** 1041 needs to fit within the target dates; we need to determine when a 1041 process is necessary. Add to Target Dates

#### Project Updates

**WB I-70 PPSL** – Working through the design process with the Technical Team. The fifth WB I-70 PPSL Technical Team Meeting was held this morning (October 11, 2017) to gather input on roadway striping and alternatives development.

- **INFRA Grant** – Applying for a federal INFRA Grant (Infrastructure for Rebuilding America) to receive transportation funding. CDOT is drafting a grant application with HDR.

- Scope (if funding is awarded)
  - Elements of Greenway
  - Phase II CR 314
  - Rockfall Mitigation
  - Fall River Road Bridge
  - WB PPSL
  - SH 103 Intersection, Drainage, Sight Distance and Ramp Improvements
  - Due - November 2, 2017
  - Notification of Award – March 2018
  - Local Contributions and Private Contributions will be important factors in winning the grant.

### **Greenway**

- \$4 million has been awarded in the last few weeks to Clear Creek County (\$2 million) and Idaho Springs (\$2 million)
- Recent fundraiser to share funds between Greenway, Argo Mine redevelopment and Mountain Bike Area 28 – raised \$50,000.

### **Region 3 Vail Pass**

- PLT #2 postponed
- An executive PLT was formed

### **Idaho Springs Transit Center**

- Exit 241 closed – paving will take about 2 weeks.

### **Fall River Road Bridge**

- Vehicular bridge seems preferred based on feedback to date

### **Geohazard Mitigation Program**

- Bids came in really high; split project in half. Will work on first sites this winter/spring and then shut it down in the fall. Some closures expected and the project team will reach out to those impacted ahead of time to discuss when the closures will occur and getting the information out to the traveling public.

### **Soda Creek**

- Ad for work in January. Night construction in summer 2018

**ACTION: THK** - Add Recreation Management Symposium to Project Updates

### **CSS Process**

## **Kevin Shanks, THK Associates, presents an overview of the CSS Process.**

As part of the Record of Decision, the CSS Process is used as a foundation of the various teams (Project Leadership Team, Technical Team, Project Staff).

### **Flow Chart**

Kevin reviewed the CSS process flow chart from the previous Concept Development Process (CDP), and revised by the Floyd Hill Project Leadership Team, outlining the Context Statement, Core Values, Critical Issues and Evaluation Criteria. The Floyd Hill PLT and TT can use this as starting point as they tailor and modify the different components to Floyd Hill's needs.

### **TT Membership**

TT members confirmed that Steve Cook, DRCOG, was part of the TT. There is a request that Project Staff reach out to Steve Cook again to try and get him more involved with the Floyd Hill TT. DRCOG input will be important for long-range plan and TIP.

**ACTION: CDR** - Follow-up with Steve Cook

### **Core Values and Evaluation**

The TT discussed "Recreation" as a Core Value.

Jo Ann Sorensen notes that Colorado Recreation Lands and Facilities are being "Loved to Death." We need to think about how the burden of population growth influences recreation facilities. There is a carrying capacity issue and we are destroying the very thing that people love about Colorado. There are indirect and cumulative impacts that need to be assessed.

Suggestion to add an Evaluation Criteria for Recreation around prevention of overuse or over-recreation.

**ACTION: THK** – modify Recreation Evaluation Criteria to say "Supports/Enhances **quality** recreational access and facilities" to reflect the deterioration of quality of recreation experiences due to overuse.

**ACTION: CDR**- post updated Flow Chart on [GDrive](#).

Jo Ann Sorensen: suggested that local agreements/studies be included in the analysis/evaluation of alternatives at the beginning of the process to avoid backtracking. There are more agreements and studies than just the ROD that apply to this process.

**ACTION - TT members:** Send relevant local studies to Taber Ward, CDR Associates, to be included in the alternatives development and evaluation process.

## Technical Team Schedule

The Technical Team reviewed the schedule. There were no comments or changes made. This schedule will be updated as new issues come up during the alternatives development process. The schedule will be update and posted on the Shared [GDrive](#).

## Glossary of Terms

No Additions. We will update the Glossary as needed to ensure we are all speaking the same language. Words matter.

## Charter

Taber Ward, CDR Associates, reviewed the Charter. Changes to the Context Statement and Desired TT Outcomes were made. There was a request that Project Staff be included in the Charter text.

**ACTION:** CDR to update Charter based on TT Feedback.

Desired Outcomes that the TT articulated (in addition to the PLT Desired Outcomes):

- Address preservation of habitat and environmental values
- Conservation of the eco-system and habitat.
- Enhancement of existing environment and functionality.
- All impacts need to be considered
- Air quality improvements. There may be an ozone issue bumping up against Floyd Hill.
- Design a fundable, realistic and sustainable alignment
- Consideration of indirect and cumulative impacts

It was also noted that community members need a contact for the project at CDOT, since no contact is currently listed on the website.

**Agreement:** CDOT will determine whose contact information will be listed and ensure that it's included on the project website.

**ACTION:** CDOT - Update website with project materials and contact information.

## Community Considerations

The TT reviewed the Community Considerations derived from the Concept Development Process (CDP), public input, and with Floyd Hill PLT modifications and additions.

Jonathan Bartsch, CDR Associates, asked the group:

1. What do we need to add? What is missing?
2. What do we do with these? How do we use these?
  - Some are critical issues (community concerns and issues) – These are used to develop evaluation criteria.
  - Some of them are design concepts (some are solutions) – These solutions assist with the project design and these will be evaluated in the evaluation matrix.

The TT asked how community considerations will be tied to the decisions we are making?

**Answer:** Ensuring that these community considerations have been addressed in the alternatives development and evaluation process is, in part, a TT responsibility. The TT, PLT, and Project Staff will use the list of Community Considerations to validate and verify that the alternatives developed are context sensitive and take into account community concerns and opportunities and ensure that nothing is missed.

The community considerations speak to what is here today – we are not looking into the future based on different alternative alignments.

This list will continue to grow from input at public meetings and as we go through this process.

### Community Considerations suggestions from the TT

1. Safety: The bottleneck where three lanes becomes two lanes is a safety hazard
2. Mobility and Accessibility: Consider operational needs first, before moving into the design process
3. Environment: Minimize impact to wetlands and avoid fens
4. Decision Making: Address compatibility with new Clear Creek County Community Master Plan and its resolutions

**Agreement** – Project Staff and TT will work together to track community considerations and report out on what we did with each and every one of these.

**ACTION:** HDR/THK – Update Community Considerations – underlining new additions.

## Land Use

These opportunities and issues will take collaboration between agencies and the community.

- Local and regional mobility; local access, commercial development, greenway, rafting access, truck parking.

## Outreach Summary

Vanessa Henderson, CDOT presented a DRAFT Outreach Summary

- STAKEHOLDER MEETINGS – TWO IN-PERSON MEETINGS
- SMALL GROUP MEETINGS – LOCAL AGENCIES, PROPERTY/BUSINESS OWNERS, ETC.
- OTHER TOOLS – NEWSLETTERS, PROJECT HOTLINE, PROJECT EMAIL ADDRESS, PROJECT WEBSITE, SOCIAL MEDIA, AND ONLINE SURVEYS

The group discussed the outreach plan and techniques:

- Project hotline will be set up when the project gets started. E-mail that is received is automatically documented and there is hotline documentation as well.
- We will go out to the public when alternatives are more defined.
- Telephone Town Hall is another potential meeting format – these can be very valuable and should consider using this meeting format as well.
- An online meeting similar to what was used for the EB PPSL project was also suggested.
- We have emails from the public meetings and will do outreach to these folks with an initial email that lets them know the project development process has started and where to go for more information (website). This will get sent out after the website has been updated.
- Part of what we put together is what we will need for NEPA. We will take this basic plan to see what else needs to be augmented.
- Public meetings - called Stakeholder meetings.
- Should consider holding at least one of the public meetings in Jefferson County so that more people can participate.

## Proposed Solutions

Anthony Pisano, Atkins, presented Alignment and Interchange concepts from the CDP. Atkins is currently modifying and refining these concepts and advancing the level of design for TT discussions.

The following Alignment and Interchange concepts were presented to the TT:

**North Alignment Concept**

**South Alignment Concept**

**Off Alignment**

**Move Interchange East**

**Full Movements at Current locations**

**Shift other movements to the East**

**Hidden Valley**

**Some interchanges work better with different alignments.**

John Muscatell suggested that we talk about how the road should operate before we talk about how to design it. This operations discussion should include parking and open space. Operational issues will drive the design. Some of this includes issues that are not within CDOT's jurisdiction, i.e. trucks off road during closure or how the fire department gets to the high school. These should be on the table early. This is an opportunity for the community and for CDOT.

**Agreement:** At the next TT meeting we will brainstorm operational issues and opportunities and decide how to proceed (ITFs, Individual Meetings, etc). These might include school bus operations, trucking, open space, residential impacts, emergency, greenway.

## **NEPA**

**Study area:** Mile Post 248 East of CR 65 Ramps to Mile Post 242 West of the Veterans Memorial Tunnels

**INITIAL CLASS OF ACTION – Environmental Assessment (EA) by FHWA/CDOT.**

We will not know the level of environmental impacts until we start developing alternatives and can assess their impacts. If we see that there is a potential for significant impacts, we can reconsider this class of action.

## **CSS Training**

Purpose – all participants will have a common understanding of the CSS process as agreed upon by corridor stakeholders for use on the I-70 Mountain Corridor.



October 26, 2017 CDOT R1 Golden - 9am to 12pm – Current attendees include CDOT R1 and R3 staff as well as current project consultant staff.

25 people signed up

## Next Steps

### Future TT Meetings:

- **2ND AND 4TH WEDNESDAYS from 1pm -4pm at CDOT.**

### Scheduling Section 106, SWEEP and ALIVE MEETINGS late 2017/early 2018

**Data Collection** Atkins is looking at the past data and technical reports, e.g. windshield surveys, OTIS tool.

Vanessa Henderson, CDOT discussed collecting data and resources, existing conditions and methodologies. Gary Frey requested to review the data collection methodologies. Vanessa agreed to provide this information.

**ACTION:** CDOT to share the methodology information when available.

## Parking Lot

### Recreation Management

- Clear Creek County is working on symposium in early Spring - Feb-May- meeting of 20-30 discussing; CCC/USFS/CDOT/CPW - align effort to address issues.
- Clear Creek County will be convening
- Core group of policy makers or issue oriented stakeholders - CCD, Denver Chamber.

**ACTION:** THK - Move to Project Updates

## Actions and Agreements

**ACTION - TT members:** Send relevant local studies to Taber Ward, CDR Associates, to be included in the alternatives development and evaluation process.

**ACTION - THK/HDR:** 1041 needs to fit within the target dates; we need to determine when a 1041 process is necessary. Add to Target Dates

**ACTION:** THK/HDR – Update Community Considerations – underlining new additions.

**ACTION:** THK - Add Recreation Management Symposium to Project Updates

**ACTION: THK** – modify Recreation Evaluation Criteria to say “Supports/Enhances **quality** recreational access and facilities” to reflect the deterioration of quality of recreation experiences due to overuse.

**ACTION: THK** - Move to Recreation Management from Parking Lot to Project Updates

**ACTION: CDR**- post updated Flow Chart on [GDrive](#).

**ACTION: CDR** – Follow up with Steve Cook

**ACTION: CDR** to update Charter based on TT Feedback.

**ACTION: CDOT** - Update website with project materials and contact information.

**ACTION: CDOT** to share the methodology information when available.

**Agreement:** CDOT will determine whose contact information will be listed and ensure that it's included on the project website.

**Agreement – Project Staff and TT** will work together to track community considerations and report out on what we did with each and every one of these

**Agreement:** At the next TT meeting we will brainstorm operational issues and opportunities and decide how to proceed (ITFs, Individual Meetings, etc). These might include school bus operations, trucking, open space, residential impacts, emergency, greenway.

## Attendees

Carol -FS Kruse (USFS), Holly Huyck (Clear Creek Watershed Foundation); Jo Ann Sorensen, Tim Mauck, Randy Wheelock (Clear Creek County); Bill Coffin, John Muscatell (Community Reps from Floyd Hill); Lynette Hailey (I-70 Coalition); Martha Tableman (Clear Creek Open Space); Wendy Koch (Town of Empire); Joseph Walter (CPW); Yelena Onnen (Jefferson County); Kelly Larson (FHWA); Anthony Pisano (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks, Julie Gamec (THK Associates); Vanessa Henderson, Neil Ogden, Stephen Harelson, Kevin Brown (CDOT); Taber Ward, Jonathan Bartsch (CDR Associates)

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

Date: October 25, 2017

Location: CDOT – Golden

### Technical Team

### Meeting #2

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1JOOUnkNU0>

#### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

#### Target Dates

- Data Collection and Alternatives Development – begin Fall of 2017
- NEPA / Design - Winter of 2017 through Spring of 2020
- Complete design followed by construction Summer of 2020\*\*
- 1041 Process begins after final design plans are complete. 90 day duration.

\*\*Subject to funding

#### Project Updates

The TT reviewed and reported on other project efforts in the region:

**Idaho Springs Transit Center** – pursuing integration of bus ramps and pullouts into the PPSL project to improve circulation

**Clear Creek Greenway** – A Categorical Exclusion was approved for the Greenway.

**Fall River Road** – This is included in the WB I-70 PPSL project. CDOT spoke with HOAs in the area about a vehicular bridge and this idea was generally positively received.

**Smart70/RoadX** – currently writing the software. The CDOT Transportation Commission has formally committed to supporting phases 1- 5.

**Geohazard Mitigation Program** – Working with Frei Pit on a maintenance of Traffic (MoT) plan; the goal is to keep the mine open during construction and to complete in two construction seasons. The work will be conducted east of Mayhem Gulch and will provide access for Jefferson County Open Space during construction.

**Bridge Deck Repair at Soda Creek and Floyd Hill** – A PLT meeting is scheduled for November 15, 2017 and the project is in the design stages now. There are minimal impacts expected but the right lane is “falling apart.” Anticipated completion date is summer 2018.

## CSS Process

The CSS process was reviewed with a discussion on how to ensure that specific ideas, opportunities and concerns raised during the process are tracked and incorporated into decision making.

Kevin Shanks, THK Associates, outlined the overall CSS process and the TT schedule. He discussed how the “community considerations” have been separated from the specific design ideas or solutions to ensure tracking of issues throughout the process.

It was suggested that the evaluation criteria for the Recreation Core Value be modified. Specifically, to say: “supports/enhances **quality** recreation access and facilities and meets local and regional standards and objectives where they exist.”

- The definition of “quality” was discussed with TT members. It was noted that quality is a key determining factor in meeting expectations. Others highlighted that quality recreation experience is why people come to Colorado. Definitions of quality may vary by individual, and it was re-emphasized that one of the TT’s job is to ensure that it is addressed during the evaluation process.
- The design guidelines were also discussed as a measure of “quality,” and the example of the Greenway Plan illustrated. The Greenway Plan has definitions including color, identification of species of trees etc.
- Other TT members cautioned the group not to only focus on meeting a standard of quality as this is a subjective experience.

It was mentioned that one way to move forward in the CSS process is to think in terms of “desired outcomes,” prior to discussing design ideas.

The desired outcomes, according to some TT members, drive the design by envisioning the end-goal outcomes that we want to accomplish. Design ideas flow from this foundation of understanding.

## Project Charter

The Project Charter was discussed and finalized. Discussion notes, captured in the Project Charter, include the following.

## Context Statement

Include: “Denver’s playground” – “recreational” CCC is not a resort area but a playground.

Add “cycling” to list of recreational pursuits

We should broaden the jurisdictional boundaries to include: “I-70 Mountain Corridor communities, natural and ‘historic’ heritage.”

The Central City expressed a desire to participate in the FH PLT; the TT supported this addition and will suggest to the existing PLT. Shirley Voorhies (Mayor Pro-Tem) from Central City was suggested as the representative.

**ACTION:** CDR to update Charter, send to the TT and put in GDrive.

**Agreement:** After this discussion, the TT adopted the Charter.

## Responses to Technical Team Issues

Kevin Shanks, THK Associates, passed around the Community Considerations and highlighted that the TT has an on-going responsibility to evaluate whether the considerations are incorporated the effort. It was suggested to change ‘community considerations’ to ‘context considerations’ going forward.

## Community Considerations Discussion

Suggestion to rename these to “Context Considerations”

Central City noted that the needs of commuters who are working in the gaming communities should be considered in the Floyd Hill discussions.

The Clear Creek County Visioning Plan has many duplications within the ‘community/context considerations.’ The group agreed to go through these and include the relevant considerations from the CCC Visioning Plan. Need to mention cycling from the top of FH to the bottom (at US 6).

The frontage roads were discussed in the context of emergency access. In the ROD it states that CDOT will build a bike trail and frontage roads from Idaho Springs to Hidden Valley and Hidden Valley to US 6. Other TT members noted that the Clear Creek Resolution states building a bikeway that is physically capable of also carrying emergency vehicles. The Concept Development Process brought forward 3 alignment alternatives that will have impacts on the frontage road all of which will need to “consider the role of frontage roads in all alternatives.”

It was also noted that if there is an incident on I-70 there is an impact on the Central City Parkway.

**TT members discussed the separation of the context considerations from design ideas.**

**Q:** Why is “sun glare” a consideration and “headlight glare” a design option? **A:** The lists need further refinement.

**Q:** Couldn't we turn the considerations into outcome statements? **A:** Yes, but the team doesn't want to pre determine a preferred alternative at this point and will do so later when evaluating alternatives.

The TT asked for two separate lists of items – the considerations that will become evaluation criteria (discriminators) and those that will become design ideas. It was emphasized that this effort was a means for organizing the information and data to connect it to decision making but needs TT review and attention.

**ACTION:** THK to rename Community Considerations to “Context Considerations”

**ACTION:** THK to add other relevant Community Considerations to the list from the CCC Visioning Plan

**ACTION:** THK - Under “Access/Mobility” include making connections with Jefferson County Road 65 to Beaver Brook Highlands

**ACTION:** THK - Under “Access/Mobility” – From the top of FH to the bottom it is important to remember emergency access,.

**ACTION:** THK – Add “consider the role of frontage roads in all alternatives” to community/context considerations

**ACTION:** THK to “clump” conflicting considerations together so TT can understand which considerations/designs are in conflict or mutually exclusive.

**ACTION:** 1) THK to develop “design ideas” master list and “context considerations” list. CDR to distribute to TT for review. 2) TT to review and refine design ideas and context lists and provide feedback. 3) After TT Review, Atkins will identify ideas to resolve in the context of desired outcomes list.

## Outreach Summary

The outreach summary was reviewed with the TT.

**Q:** What is the status of a public contact person for CDOT for the project? **A:** A generic CDOT e-mail address will be set up and added to the website and checked as well as used for an e-mail blast. CDOT will also post a phone number residents can call and leave a voicemail.

The Floyd Hill neighbors use NextDoor and it may be good to post information there. The quarterly HOA meetings also would provide an opportunity to hear input and distribute information. Additional ways to get information out to the community, such as posting to a VMS Board at the exit was discussed.

**ACTION:** Bill Coffin, John Muscatell and Lynnette Hailey will send HOA e-mail contacts to Taber/Vanessa for communication plan

### Follow-Up on TT Issues

The TT reviewed a large map of the top of Floyd Hill and began to identify operational issues and desired outcomes. The TT made specific suggestions and comments including the following:

- Fire and emergency response to the high school. The Clear Creek County Fire Department that services the High School is located on JC 65 just south of I-70. To access the school, they must cross I-70, take US-40 west to Holmstead Road. They then cross back over I-70 to access the school. In the process, they pass the Evergreen fire station along US-40. Evergreen is not responsible for servicing the High School. The Williams property is proposed for development and is platted or dedicated to the County; it is unclear where a road would be located. The Ezre property is divided into 5 separate properties. One of the challenges is that this is private property and any solutions would need to be implemented in conjunction with the Counties (Jefferson and Clear Creek) and private property owners. The land owners may be required to provide emergency access to the school. If access is not platted or donated, the County would have to condemn, as CDOT would not have jurisdiction.
- Truck chain up and turn around area issues were identified. At present, trucks exit I-70 to chain up along I-40 resulting in congestion. During closures, trucks exit I-70 and take I-40 to homestead Rd. There, they cross I-70 and try to do a “K turn” to go back to I-70. Sometimes trucks are too large and cannot turn around blocking residents from getting up Floyd. CMV drivers will try to wait it out, especially if their “clock is turned on.” However, if it is past 8 hours of service they will go to Denver and get rest, otherwise they will try to sit it out at the top of FH. It would good to have dedicated parking at the top. Truck parking would be best before the decent 70 WB before CO 65. The desired outcome is a chain up/down area for trucks east of MP 248; not only a winter problem but a multi-seasonal issue. The project should consider a roundabout on the north side of Holmstead Rd and I-70 so trucks can turn around and go back down I-70.
- Recreational Operational issues. It is important to separate bicycles from vehicles and to identify the most common bicycle routes. It was suggested that the TT or a subset of the TT ride the area on a bicycle. Ride the Rockies participants often part at the bottom of FH near the Frey Pit.
- Parking at the multi-use lot southeast of the interchange is used for bike and skiing parking (Loveland); moving vans transfer and other activities.
- Blackhawk doesn’t want 40 closed and to have access to EB I-70.
- The merging of 3 lanes to 2 in the WB direction just over the crest of the hill is a problem.
- New parking lot on north side of I-70 just west of the crossover is used for open space access purposes.

**ACTION:** Yelena will provide Jefferson County bicycle maps (existing and projected) along with Bike Jefferson County priorities. Yelena will send Anthony Jefferson County bike map both existing and future routes.

**Agreement:** The TT agreed that a similar exercise be used throughout the study area to identify safety and flow operational issues and opportunities, including commuters to/from Central City and Blackhawk.

The TT discussed how operational issues will be incorporated into design criteria including the following next steps:

- 1) Biking/recreation studies and mapping for the entire project; desired outcome is to separate vehicles and bicycles
  - a. What is planned already? Jefferson County Peaks to Plains Plan?
  - b. Status of greenway plans – open space
  - c. Bikes also park near the lot by the Frei Pit.
- 2) Emergency vehicles – explore emergency access through the area. What does the plat map say?
  - a. **Q:** Can a dirt access road be made available? **A:** it is a private property issue
- 3) Land ownership. Some want a road and connection to CR 65, others do not. This would govern how the developers move forward with their property.
  - a. What is the existing easement for emergency access?
  - b. Who are the champions that can address this issue in the community?
    - i. Start with outreach to Evergreen and CCC EMS – understand the history of the area and build up to county and residents about what they want to see. Contact: Unincorporated Jeff County Road and Bridge staff either Rick Beck/Carl Shell;
  - c. Consider a frontage road on CDOT right-of-way to solve political problems and improve access; consider restricting for emergency purposes only.
  - d. **ACTION:** CCC to pull the plats for this area.
  - e. Contact: Jim White for information about the Williams property and the politics of building a connector road to service the school.

The TT noted that some of the ideas/options are conflicting and that the project will need to pick the best option because it is not possible to do everything. It will require a true partnership.

**ACTION:** Contact Mitch Houston about bus routes who is the Chairman of school board

**ACTION:** Contact Colorado Highway Patrol – what are their desired plans for operations and closures? Captain Dittman and Chauvez

**ACTION:** Contact Clear Creek Sheriff's Office – Rick Albers re: emergency concerns

**ACTION:** Jefferson County to provide biking maps and GIS information.



**ACTION:** Talk to Mike Raber re: bike routes

**ACTION:** Martha Tableman to send open space plans/maps

**ACTION:** Outreach to Evergreen and CCC EMS – understand the history of the area and build up to county and residents about what they want to see. Contact: Unincorporated Jeff County Road and Bridge staff either Rick Beck/Carl Shell

**ACTION:** CCC to pull the plats for this area for emergency access area

**ACTION:** Call Jim White about Williams property

**ACTION:** CDOT and CCC determine snow operations for multi-use lot – outreach and bring back to TT

For the above-listed people, we need to determine their desired outcomes: Questions to ask them:

- If they want something better what would it look like?
- What can they live with?
- Emphasize that the project lasts until 2050, as a point of context

## **Wildlife**

On the north side of I-70 is an Elk and calving area; there are crossing herds in the meadows on the north. Consider an elk bridge or tunnel.

**ACTION:** Martha Tableman will send a list of wildlife issues for Floyd Hill that include CPW findings.

**ACTION:** Steve Harelson will send a photo of Rocky and Bulwinkle to the group.

**Q:** Where are the historic walls from old FH? **A:** For exact locations – contact CCC Archivist Christine Bradley.

**ACTION:** HDR to send the historic wall locations to the TT

How quickly are we going to engage SWEEP/ALIVE/Section 106? **A:** we are collecting data collection and then engage them, we need to respect their time, probably in spring 2018. SWEEP, ALIVE, and Section 106 have desired outcomes listed in their MOUs/PA along with mitigation ideas.

## **Process Going Forward**

**Q:** Where do the population and employment projections come from? **A:** DRCOG - the quality of data is skewed in the mountains and metro area is more accurate than in the mountains. That is why the team looks to the counties for more accurate information. For example, there was a prediction of growth in CCC – year after year but it hasn't happened. For DRCOG, they do an

overall projection for the standard municipal area and then they allocate population and employment. This is often the source of argument, i.e. where the growth will occur.

### Alternatives Development and Evaluation

The Project Staff will come to TT with issue specific criteria and different options to evaluate. The alternatives will be evaluated using the agreed upon criteria. We will start with alignments and then go to interchanges afterward. Examining interchanges in isolation of the alignments doesn't make sense. The process will be iterative. We will do the same operational discussion at the bottom of FH.

**Q:** What is the length of time to get to a proposed action for FH? **A:** By early 2018

**Q:** How do you proceed to construction? What level of design can we go to? **A:** Can't go beyond 30% without signed NEPA document. When it goes to construction there are numerous options 1) design build 2) design bid build 3) CMGC (Construction Management General Contractor) and 4) Alliance method. There are advantages and disadvantages for each of these options.

The next TT meetings will look at the operational issues from the top of Top of Floyd Hill down to Hidden Valley.

### Actions and Agreements Summary

**ACTION:** CDR to update Charter, send to the TT and put in GDrive.

**ACTION:** THK to rename Community Considerations to "Context Considerations"

**ACTION:** THK to add other relevant Community Considerations to the list from the CCC Visioning Plan

**ACTION:** THK - Under "Access/Mobility" include making connections with Jefferson County Road 65 to Beaver Brook Highlands

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**ACTION:** Bill Coffin, John Muscatell and Lynnette Hailey will send HOA e-mail contacts to Taber/Vanessa for communication plan

**ACTION:** Yelena will provide Jefferson County bicycle maps (existing and projected) along with Bike Jefferson County priorities. Yelena will send Anthony Jefferson County bike map both existing and future routes.

**ACTION:** Contact Unincorporated JeffCO Road and Bridge staff either Rick Beck/Carl Shell re: emergency access and land ownership issues.

**ACTION:** CCC to pull the plats for this area to assess land ownership and emergency access

**ACTION:** Contact Jim White for information about the Williams property and the politics of building a connector road to service the school.

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- What can they live with?
- Emphasize that the project lasts until 2050, as a point of context

**ACTION:** Martha Tableman will send a list of wildlife issues for Floyd Hill that include CPW findings.

**ACTION:** Steve Harelson will send a photo of Rocky and Bulwinkle to the group.

**ACTION:** HDR to send the historic wall locations to the TT

**Agreement:** After this discussion, the TT adopted the Charter

**Agreement:** The TT agreed that a similar mapping exercise be used throughout the study area to identify safety and flow operational issues and opportunities, including commuters to/from Central City and Blackhawk.

## Attendees

Randy Wheelock, Tim Mauck, Cindy Neeley (Clear Creek County); Lynnette Hailey (I-70 Coalition); Ray Rears (Central City), Carole Kruse (USFS); Martha Tableman (Clear Creek Open Space); John Muscatell, Bill Coffin (Floyd Hill Community); Wendy Koch (Town of Empire); Holly Huyck (Phoenix Geosciences Group); Yelena Onnen (Jefferson County); Tracy Sakaguchi (CMCA); Jonathan Bartsch, Taber Ward (CDR Associates); Anthony Pisano (Atkins); Kevin Shanks (THK Associates); Gina McAfee (HDR Inc.); Kevin Brown, Neil Ogden, Vanessa Henderson, Stephen Harelson, Robert VanHorn (CDOT)



## Westbound I-70 Mountain Corridor - Floyd Hill Technical Team Chartering Agreement

Updated 10.31.17

### 1. Purpose of the WB I-70 Mountain Corridor – Floyd Hill Technical Team

The purpose of the WB I-70 Floyd Hill NEPA Process (“WB I-70 Floyd Hill”) Technical Team (TT) is to ensure that local and agency contexts are defined and integrated as part of the Context Sensitive Solutions (CSS) process for the completion of the WB I-70 Floyd Hill.

### 2. Established Context Statement, Core Values, Critical Success Factors and Desired Outcomes for the WB I-70 Floyd Hill Project.

**Context Statement (TT revised on 10.25.17, once approved by TT, this will go to the PLT for final review)**

The Floyd Hill highway segment is the gateway to the Rocky Mountains from the Denver metro area. Floyd Hill marks a physical transition in both landscape and land use as it rises out of the hustle and bustle of Denver’s urban edge and then drops into the quieter, clustered, mountain communities and natural ecosystems of Clear Creek.

Floyd Hill is a significant ridge line when traveling west from Denver along I-70, and it is the connection between Jefferson, Gilpin and Clear Creek Counties. In addition to being part of a regional transportation network that traverses the Rocky Mountains and supports various recreational, economic, commercial and defense networks, Floyd Hill is also a critical point of access for local community members and residents who rely on this roadway for local travel and connection to other communities – with limited alternative routes available due to the mountainous terrain.

Floyd Hill is the entry point to the I-70 Mountain Corridor communities’ rich natural and historic heritage and thriving tourist attractions. Visitors from around the world come to recreate in the Arapaho-Roosevelt National Forest, the third busiest National Forest in the United States, to experience world-class cycling, hiking, rafting, skiing, hunting, fishing, climbing, and other recreational opportunities in the region. There is a strong desire among Floyd Hill stakeholders to preserve and protect wildlife, habitat and natural features along with the unique small mountain-town aesthetics and historical landmarks.

Current Floyd Hill roadway geometry includes steep grades, tight corners, narrow shoulders and limited sight distance. Additionally, Floyd hill presents unique



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Transportation

management challenges due to weather-related events, including snow, wind, and fog. Highway Improvements are needed to facilitate smooth, safe and efficient transportation. The improvements should be designed and constructed in a manner that respects the environmental, historical, community and recreational resources of Floyd Hill.

### **Core Values of the WB I-70 Floyd Hill Project**

- Safety
- Mobility and Accessibility
- Implementability
- Community
- Environment
- Engineering Criteria and Aesthetics
- Sustainability
- Historic Context
- Decision Making
- Recreation

### **The WB Floyd Hill project must achieve the following Critical Success factors:**

- Develop alternatives that can be permitted and constructed in compliance with the ROD and other project agreements.
- Complete implementation of agreed upon project elements in the ROD between Floyd Hill and Idaho Springs.
- Identify key issues and impacts along with appropriate mitigation strategies and opportunities.
- Integrate the overall context, including, but not limited to, physical, historic and legal context (e.g. ROD), community, economic, recreational, environmental, construction impacts and safety into decision making.
- Adherence to the Aesthetic Guidelines and Engineering Design Criteria.
- Collaboratively develop the Floyd Hill project by working together to identify opportunities and build communities.



**The WB I-70 Floyd Hill project will consider and strive to meet the following Desired Outcomes confirmed by the Technical Team:**

- Ensure recreation access while addressing the capacity of the forest and ecosystem to handle additional use.
- Recreation facilities and the highway will act in concert with each other – i.e. Glenwood Canyon.
- Improve recreational access at the bottom of Floyd Hill. This would include improving and formalizing rafting access and support facilities, intersections with greenway and trail connections, and wildlife crossings.
- Consider and improve wildlife movement corridors, including fish passage and wildlife crossings.
- Balance highway functionality with visible enhancement and aesthetic improvements.
- Design a realistic and sustainable alignment.
- Minimize impact to the travelling public during construction.
- Minimize impact to local businesses and residents during construction
- Improve safety and move traffic while protecting the environment.
- Develop and implement a workable traffic management plan at the top of Floyd Hill.
- Map a route for an AGS, beyond “not precluded.”
- Improve access to and from Central City.
- Address the technical aspects of integrating the preferred alignment with the interchanges.
- The project should be viable for 30 years – avoid problems immediately after opening.
- Explore Public Private Partnerships to create enhancements.
- Enhance habitat and wildlife conservation efforts and ecosystem services

**3. Membership and Attendance**

The TT is comprised of corridor community members, agencies and non-profit groups with technical expertise, Federal Highway Administration (FHWA), and Colorado Department of Transportation (CDOT). The goal is to ensure that the local context is defined and integrated into the project. CDOT and FHWA are the lead agencies and final decision makers for projects on I-70. To ensure that these projects meet the commitment that FHWA and CDOT have made to CSS, a collaborative approach should be used that involves a wide range of disciplines and participants.



The following entities will have representation on the TT:

<b>Name</b>	<b>Affiliation</b>
Lynnette Hailey/Margaret Bowles [ALT]	I-70 Coalition
Sam Hoover / Ray Rears [ALT]	Central City
Mike Raber	Clear Creek Bikeway User Group
JoAnn Sorenson/Tim Mauck [ALT]/Randy Wheelock [ALT]	Clear Creek County
Tim Mauck	Greenway Authority
Martha Tableman	Clear Creek Open Space
John Muscatell/Bill Coffin [ALT]	Community
Holly Huyck/Dave Holm [ALT]	Clear Creek Watershed Foundation
Tracy Sakaguchi	CMCA
Joseph Walter/Brandon Marette [ALT]	CPW
Steve Cook	DRCOG
Kelly Babeon	Fire/Safety
Rick Albers	Law Enforcement/Safety
Nicolena Johnson	EMS/Safety
Kelly Larson	FHWA
Andy Marsh/Mike Hillman [ALT]	Idaho Springs
Leslie Klusmire / Daniel Horn [ALT]	Gilpin County
Gary Frey	Environmental/Aquatic Resources
Adam Bianchi/Leslie McFadden [ALT]	USFS
Tom Gosiorowski	Summit County
Yelena Onnen /Steve Durian	Jefferson County
Steve Harelson/Neil Ogden/Vanessa Henderson	CDOT
Anthony Pisano/Carrie Wallis [ALT]	Consultant Project Manager

Although only one member will participate at the table, primary and alternate members of the TT agree to strive to attend all meetings in person.

Members agree that in-person participation is more desirable than participation by conference call.

Generally, meetings will be held on the 2<sup>nd</sup> and 4<sup>th</sup> Wednesdays of the month at 1pm at the CDOT R1 Golden Residence.

For the process to efficiently move forward, the TT agrees not to backtrack on TT decisions. Any primary TT member unable to attend a meeting will appoint an alternate. If a TT member misses a meeting, the TT member can still contribute to the process by providing agenda items for discussion and by reviewing appropriate materials to prepare for discussions in subsequent meetings.





**Weather Cancellation:** If a significant number of members are unable to attend due to weather, meetings will be canceled. As a general guideline, if school buses are canceled in the meeting location or in members' areas, the meeting will be canceled.

#### 4. Roles and Responsibilities

##### **Project Leadership Team (PLT)**

The purpose of a PLT is to lead the project, identify relevant material, endorse the process, champion the CSS process through all phases of a project and move the project forward by enabling efficient decision making.

The PLT drives the WB Floyd Hill Process and ensures that the CSS process and guidance is followed. It is crucial that the TT identify when the process is working, or not working, and when the process needs to be modified. The TT members agree to raise process issues in a direct way and as soon as an issue or concern is identified.

The PLT will strive to communicate and listen to the desired outcomes from each PLT member and stakeholder to enable fair and just evaluation of the highway options and alternatives presented. PLT members commit to meeting others' goals while balancing and representing their own constituents' needs. PLT members will work toward consensus and will strive to create an atmosphere of open-mindedness, empathy and understanding of different viewpoints. The PLT will work to addressing issues in meetings, face-to-face and focus on the pros and cons of the issues brought to the table.

The PLT discussions will remain at a high level and focus on policy issues and maintaining and following the CSS process and on broader policy issues. The PLT will determine what materials are relevant for decision making and has identified the Technical Team members for WB I-70 Floyd Hill, if membership changes are necessary, such changes will be discussed with the PLT.

The PLT will communicate with the relevant TT members the themes, policies and CSS process outcomes to ensure there are no gaps in information shared.

The PLT will conduct process check-ins during the Floyd Hill project to ensure the process is on track. Further, the TT will work to incorporate lessons learned from Concept Development Process and Twin Tunnels projects

If there are any issues that the TT cannot resolve, these issues will be elevated to the PLT. The PLT/TT is also tasked with developing a stakeholder engagement plan to include the public.



When policy issues arise that are broader than the project team’s scope, the PLT will identify the steps needed to resolve the issue. As the PLT will be responsible for identifying who must be involved in making the decision, bringing the decision makers together, and proposing solutions or approaches that keep the project moving forward.

The following entities will have representation on the PLT:

<b>Members</b>	<b>Organization/Agency</b>
Cindy Neely	Clear Creek County
Tim Mauck	Clear Creek County
Mike Hillman	Idaho Springs
Andy Marsh [ALT]	Idaho Springs
Daniel Miera	Central City
Wendy Koch	Town of Empire
Adam Bianchi (ALT)	USFS
Carol Kruse	USFS
Leslie McFadden [ALT]	USFS
Lynnette Hailey	I-70 Coalition
Margaret Bowes [ALT]	I-70 Coalition
Ron Engels	Gilpin County
Anthony Pisano	Atkins
Carrie Wallis [ALT]	Atkins
Kelly Larson	FHWA
Shaun Cutting [ALT]	FHWA
Neil Ogden	CDOT
Vanessa Henderson	CDOT
Stephen Harelson	CDOT-R1 Program Engineer
Taber Ward / Jonathan Bartsch [ALT]	CDR

**Technical Team**

The Technical Team (TT) members are the first to define the specific context of the segments and then identify the specific critical issues, context considerations, technical, environmental and social/economic in a segment.

The TT evaluates concepts and alternatives based on the critical issues, context considerations, and core values for the corridor and segment. To this end, the TT



will have ample time to interact with maps and technical documents through interactive activities.

The TT is a working group made up of technical experts and experts in multi-disciplinary fields.

- Assists in developing alternatives based on the CDP process
- Examines how different alternatives work and identifies trade-offs
- Assists in evaluating alternatives using Core Values and Evaluation Criteria developed by the PLT and TT.
- TT members are expected to come to the table and show up to meetings. TT member commitment and consistency are key to a successful process.
- An overall schedule will be developed, along with key topics to ensure that appropriate TT members are present.
- The TT has the responsibility to communicate TT meeting discussions and outcomes with their PLT representatives.

### **Project Staff**

- Project Staff serves to organize information and data for the PLT and TT and to assist with organization, funding and facilitating the process.
- Project Staff will deliver and lead the project by working with the PLT to champion the CSS process and enable decision making.
- Project Staff will develop the alternative evaluation process by 1) developing evaluation criteria that reflects participant, members and stakeholders' interests and concerns and 2) gaining the endorsement of the evaluation process from the TT members.
- Project Staff will develop alternatives or options to meet the project goals using the following methods: 1) Staff will work with the PLT, TT, stakeholders, and the public to identify a full range of potential options. 2) Staff will then capture, consider, track, and document all suggestions. 3) Staff will evaluate, select, and refine alternatives and options. 4) Staff will apply the alternative evaluation process to the full range of alternatives and options. 5) Staff will involve the PLT, TT and the public in selecting and refining an alternative. 6) Staff will clearly document how each idea was evaluated and provide a record of how each idea was evaluated and possibly modified.
- Project Staff will document each Step of the CSS Process.
- Project Staff will document meetings and ensure timely and responsive communication.



- Project Staff will conduct an evaluation of the Project and the CSS Process.

A list of current project staff is below:

Anthony Pisano	Atkins
Carrie Wallis	Atkins
Kevin Shanks	THK
Julie Gamec	THK
Jonathan Bartsch	CDR
Taber Ward	CDR
Gina McAfee	HDR
Kevin Brown	CDOT
Ben Acimovic	CDOT
Neil Ogden	CDOT
Stephen Harelson	CDOT
Vanessa Henderson	CDOT

## 5. Operating Guidelines

The following discussion guidelines will be used to encourage productive deliberations and decision making among the TT. The TT will commit to “best efforts” at following the guidelines and give the facilitators the authority to enforce them:

### *Discussion Guidelines*

- **It is crucial that everyone have a chance to be heard and to hear others.**
  - Pay attention to what is being discussed in the meeting and avoid side conversations or distractions (phone calls, etc.).
  - Allow people to speak and refrain from making interruptions.
  - Be brief and speak to the point.
- **It is important to find creative, innovative solutions.**
  - Avoid judging ideas prematurely and try to remain open minded.
  - Look for ways to improve proposals.
  - Promote positive behaviors that result in agreement.



- **Disagreements are inevitable; however, they should be focused on the issues involved rather than on the people holding a particular view.**
  - Raise issues or concerns in a productive fashion and as early as possible.
  - Address one another in respectful ways.
  - Clearly articulate, after deliberation and when appropriate, whether a particular PLT/TT/ITF recommendation can be supported.

## 6. Decision Making

CDOT and FHWA are the lead agencies and final decision makers for projects on I-70. To ensure that these projects meet the commitment that FHWA and CDOT have made to CSS, a collaborative approach should be used that involves a wide range of disciplines and impacted parties.

The WB I-70 Floyd Hill CSS Process is built on a commitment to collaborative decision making. The key principles of collaborative decision making are:

- Principle-based
- Outcome-driven
- Multidisciplinary

To achieve a collaborative outcome, the WB I-70 Floyd Hill will use the 6-Step decision process and CSS process.

In concert with the CSS process, the project will use a consensus-building process in making decisions. A consensus is an agreement built by identifying and exploring all parties' interests and developing an agreement that satisfies these interests to the greatest extent possible. A consensus is reached when all parties agree that their major interests have been taken into consideration in a satisfactory manner.

Consensus does not necessarily mean unanimity. Some parties may strongly endorse a recommendation while others may accept it as a workable agreement. Members can participate in the consensus without embracing each element of the agreement with the same fervor as other members or having each interest fully satisfied. The TT will seek to balance community values, project goals, and technical information during deliberations and discussions.

To enhance creativity during meetings, individuals are expected to explore a full range of ideas that may transcend or be inconsistent with previously held



positions. The goal of the meetings is to have frank and open discussion of the topics and issues needed to lead the project and enable decision making.

## 7. Communication

The TT commits to raising relevant issues in a timely and direct manner. For the TT and PLT to work as effectively together as possible, the PLT will receive all communications that are sent to the TT. The PLT will be notified when documents are finalized or decisions have been made.

All email communications will be labeled with a consistent naming convention as follows: **21912, I-70 WB Floyd Hill [Subject Matter]**

### **Pre-Meeting Materials and Post-Meeting Summaries**

TT pre-meeting materials will be sent to TT members the Friday before the next TT meeting for review and comment.

Post-Meeting summaries will be prepared following each meeting of the TT highlighting action items and decisions and sent out at the same time as the pre-meeting materials. All meeting summaries will be considered drafts until adopted by the TT. TT members will review and send comments before the summaries are sent out as FINAL and placed in a shared folder. This folder will be a shared Google Drive folder. This Google Drive folder will also hold any other documents used or presented to the TT.

Once the project documents are final, they will be posted on the CDOT project website.

E-mail will be used for meeting scheduling and logistics, document review, meeting summaries, and agenda building. E-mail may be used for discussion, comment, deliberation, or agreement building.

## 8. Schedule and Milestones

Members of the TT commit to efficient, effective discussions. All members agree up front to strive to meet the schedule, goals, and action plans established at the first meeting. Additional teams identified by the TT will meet as needed to address specific issues and provide recommendations to the TT and PLT. Group discussion and deliberations may result in the intentional, formal adjustment of the schedule and milestones.

The TT commits to a consistent schedule, meeting at key intervals during the process (2<sup>nd</sup> and 4<sup>th</sup> Wednesday at 1 pm of each month). The TT will meet at the CDOT R1 Residence in Golden.



**9. Public Coordination**

For the TT to fulfill its purpose, work sessions must be focused and manageable. These work sessions will be open to the public; any participation of public observers will be at the discretion of the TT. TT members will serve as conduits for communication between their stakeholders and the TT.

The TT further commits to being involved in designing public outreach events.

**10. Communication with Other Organizations, Individuals, and the Media**

In communicating about the TT's work -- including communication with the press -- each member agrees to speak only for herself or himself, to avoid characterizing the personal position or comments of other participants. No one will speak for any group other than his or her own without the explicit consent of that group.

**11. Constituent Communication**

Members of the TT who represent agencies or constituencies will inform their constituents on an ongoing basis about the issues under discussion and the progress being made in the consensus problem-solving meetings. They will represent the interests of their constituent group and bring their constituents' concerns and ideas to the deliberations. Materials developed for the TT can be shared with their constituency; stakeholder comments on these materials should be relayed to the full TT.

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** November 8, 2017

**Location:** CDOT – Golden

### Technical Team - Meeting #3

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J00UNkNU0>

### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

### Target Dates

- Data Collection and Alternatives Development – begin Fall of 2017
- NEPA / Design - Winter of 2017 through Spring of 2020
- Complete design followed by construction - Summer of 2020\*\*
- 1041 Process begins after final design plans are complete. 90 day duration

\*\*Subject to funding

### Project Updates

**WB I-70 PPSL** – The TT is working through the design process. The seventh WB I-70 PPSL Technical Team Meeting was held this morning (November 8, 2017) to map the context considerations with the existing roadway, looking at areas that will likely be impacted by the PPSL. The next step is to review a preliminary design concept that incorporates the context considerations.

**INFRA Grant** – Submitted the federal INFRA Grant (Infrastructure for Rebuilding America) to receive transportation funding for WB PPSL and other key components. CDOT and HDR led the drafting of the grant application in coordination with stakeholders.



- Scope (if funding is awarded)
  - Elements of Greenway
  - Phase II CR 314
  - Rockfall Mitigation
  - Fall River Road Bridge
  - WB PPSL
  - SH 103 Intersection, Drainage, Sight Distance and Ramp Improvements
  - Due - November 2, 2017
  - Notification of Award – March 2018

**Q:** What does the INFRA Grant do with CR 314, i.e. frontage road? **A:** Improvements to CR 314 (Phase 2) are included in the application between East Idaho Springs and the recently completed CR 314 improvements south of VMT – at Dog House Bridge. There are no other frontage road sections included in the application. The frontage road improvements east of this point to US 6 are a part of the Floyd Hill project.

**Clear Creek Greenway** - The discussion on the Greenway focused on how it was characterized in the INFRA grant application. The Clear Creek Greenway was consolidated into one package for the application but divided into five sections: 1) Animal Shelter to Dumont Trail Head 2) Dumont Trail Head Connection to Lower Dumont Creek Access 3) Trail Improvements through St. Mary's 4) West Idaho Springs Trail and 5) East Idaho Springs Trail to the Game Check Station Trail Head.

**Q:** What is the status of the Greenway on the north side of DLD? **A:** It is not part of the INFRA grant, but will be looking at the feasibility of moving the recently approved alignment to the north side as a separate effort, but in parallel with the WB PPSL project. A concept will be developed if it is possible.

A summary graphic was requested that provides an overview of the entire greenway, whether it is in the INFRA grant or not. It will be important to consider the impacts and connections with the CCC Parkway and Greenway.

**ACTION: CDOT** to develop a summary graphic for the CCC Greenway efforts.

Amy Saxton has been hired as the Executive Director for the Greenway Authority

**ACTION: CDR** - Add Amy Saxton to the TT Distribution List (Tim Mauck to send contact details).

**Idaho Springs Transit Center** – The SH 103 intersection improvements have been included in the INFRA grant to address sight distance problems on the ramp.

**Vail Pass** – After a brief break, CDOT is holding a ‘re-kickoff’ meeting with the consultant team on November 16. A PLT meeting will be scheduled afterward.

**Colorado Blvd** – On-going -- completion is scheduled for summer 2018.

**Fall River Rd Bridge** – A part of INFRA grant including a new vehicular bridge over CC to connect Stanley Road to the Fall River Road interchange.

**Geohazard Mitigation Program** - Clear Creek Canyon project has been advertised for bid; it is anticipated that work will start in early 2018. The goal is to keep the mine open during construction and to complete it in two construction seasons. The work will be conducted east of Mayhem Gulch and will provide access for Jefferson County Open Space during construction. The canyon will be closed on select weekdays and allow the Frei gravel pit to remain in operation.

**Soda Creek Bridge Deck Repair** – A PLT meeting is scheduled for November 15, 2017 and the project is in the design stages. There are minimal impacts expected and the anticipated completion date is summer 2018. The Soda Creek project in Jefferson County will fix potholes. Night closures expected.

**Recreation Mgmt Symposium** – DOLA informed CCC that money for this type of effort is going away and there is a need to apply by December 1, 2017. CCC and USFS are evaluating options.

## **CSS Process and Context Considerations**

### **Kevin Shanks presents an overview of the CSS Process.**

The CSS process was reviewed with a discussion on how to ensure that specific ideas, opportunities and concerns raised during the process are tracked and incorporated into decision making. Context Considerations, previously known as community considerations, were discussed, particularly how to ensure that all of the considerations are integrated into decision making.

Kevin made the suggestion to organize the ‘context considerations’ into buckets that separate (1) design ideas from (2) process ideas and (3) considerations that lead to evaluation criteria. It was noted that it is important to identify discriminators and common factors across alternatives that must be considered. A “cheat sheet” or easy way to look at design criteria issues and ensure that they are included in deliberations was suggested.

Another 'bucket' may be to group context considerations into evaluation criteria or critical issues. For example, under Safety #22, "providing neighborhood access at top of FH" would be part of the evaluation criteria.

The TT encouraged the group not to over simplify the comments or "over-aggregate" because we may lose the specific context. A small group Issue Task Force was suggested to help sort through the design ideas, process considerations and to craft evaluation criteria for TT review. Development of actionable considerations and toward functional requirements would be useful. It was suggested that the group not get hung up on criteria rather consider the functional goals.

Anthony Pisano, Atkins, suggested that context considerations be treated like any NEPA comments. That is, they would be organized in a matrix and responded to with comments to track how they would be dealt with in the project. Additionally, it will be useful to graph the comments on the FH map.

The group was asked who would like to be in the small "context considerations" ITF. Anyone from the TT who was interested in joining could join. The volunteers are: Kevin Shanks, Neil Ogden, Cindy Neeley, John Mustcatell, Taber Ward, Anthony Pisano and Vanessa Henderson. This group will meet before the next TT meeting.

**ACTION:** THK to initiate a Doodle Poll for the Context Considerations ITF.

### Technical Team Schedule

The Technical Team reviewed the schedule. There were no comments or changes made. This schedule will be updated as new issues come up during the alternatives development process. The schedule will be update and posted on the Shared [GDrive](#).

### Glossary of Terms

No Additions. We will update the Glossary as needed to ensure we are all speaking the same language.

### Outreach Summary

Vanessa Henderson, CDOT, presented a DRAFT Outreach Summary (see PPT slides)

The public outreach plan was reviewed. It was clarified that a public hearing will be held after the EA document is released but before the decision document.

Tear away post-cards at the visitor's center was suggested. A total of 450,000 people a year come through the visitor center and it would be helpful to have information there once the

alternatives are developed. Identifying locations where people eat to drop project flyers was identified.

**ACTION: CDOT** to finalize draft outreach plan that includes comments heard from TT to date. **CDR** to send Draft Outreach Plan to the PLT and schedule a meeting.

## Coordination Efforts

School Board Chairman - meeting held with Chairman Mitch Houston on Monday November 13th.

EMS - currently scheduling a meeting with them.

Jefferson County biking maps and routes – on-going collection of information; received bike data from Jefferson County.

Bike maps for CCC are on the County website; Randy Wheelock is also “keeper of the maps.”

Private Property Coordination - Met with property owner and Secretary of Floyd Hill neighborhood HOA neighborhood Jim White.

CDOT Maintenance – met to discuss corridor operations plan

The mill sites beneath the interstate have been mapped out already; CCC Archivist, Christine Bradley, is the person to talk to as they are not on GIS separate maps.

**ACTION: Atkins** to reach out to Christine Bradley (mill sites) and CCC (bike maps)

## Review of Floyd Hill Mapping Exercise from TT Meeting #2

Anthony Pisano, Atkins, outlined the high-level ‘takeaways’ from the TT mapping exercise at the top of Floyd Hill. The take-aways and discussion points are outlined below.

**Truck chain up/down areas along with a turn around area was identified as a need.**

At present, trucks exit I-70 to chain up along US-40 resulting in congestion. During closures, trucks exit I-70 and take US-40 to Homestead Rd. There, they cross I-70 and try to do a “K turn” to go back to I-70. Sometimes trucks are too large and cannot turn around blocking residents from getting up Floyd Hill. Trucks need a place to chain up and down and a place to turn around east of MP 248; not only a winter problem but a multi-seasonal issue. A roundabout was suggested on the northside of Homestead Rd and I-70 so trucks can turn around and go back down I-70. The parking lot on the south side off of Homestead Road is owned by CDOT.

**The compounding effect of accidents and traffic can happen quickly.** One accident to West – and the interstate backs up to El Rancho. It can get really ugly as people get into personal survival mentality.

**In Jefferson County on holidays and weekends, CR 65 backs up significantly.** Massive traffic flow (I-70, US 40 and CR 65) – all trying to get down Floyd Hill. There was a suggestion to look at the bottleneck at the bottom of Floyd Hill and think about the connection to the WB PPSL.

**Fire and emergency response to the high school.** Evergreen is technically responsible for responding to the school, but they can't get there, so CCC helps. Good coordination with Evergreen Fire and CC fire/authority exists regarding response to school issues.

**The Williams property** is proposed for development and is platted or dedicated to the County; it is unclear where a road would be located. The Ezre property is divided into 5 separate properties. One of the challenges is that this is private property and any solutions would need to be implemented in conjunction with the Counties (Jefferson and Clear Creek) and private property owners. There is access from the school to the south from Elm Green Lane on a dirt road with a gate to get to the school -- the issue is the time it takes to access a situation (over a dirt road and through a gate).

**Wetland Area:** The Meadow on the south side at the top of FH serves as a wetland, storm water basin, and groundwater well recharge area and there are potential impacts if it developed. It was noted that many community members want to keep this area as open space.

**Parking Lots:** (1) On the northside of I-70 at the top of FH, look at additional parking spot to provide access to open space and car poolers etc... (2) Consider a parking lot on the northside of CR 65. The intersection is dangerous due to sight distance problems and it is very popular; this is CDOT ROW.

**CCC Visioning Plan** highlighted the need not to lose the advantages that US-40 provides. The original walls of I-70 FH also need to be identified. All “high” walls should meet CSS guidelines, consider ‘step back’ walls. US-40 is part of a national bike trail. It is important to separate bicycles from vehicles and to identify the most common bicycle routes. There is no intent to create a mirror of US-40 on the south side of I-70.

## Proposed Solutions

The TT reviewed a large map of the area west of the top of Floyd Hill and identified operational issues and opportunities. Numerous ideas were capture on the large map using

post-it-notes. The following are high-level notes from that meeting (See maps, [GDrive](#), with the specific issues and opportunities highlighted.)

**Bike routes.** Improve safety and comfort of road cyclists on US-40 and improvement of parking lot from open space on the northside at the top of the hill is needed. There is a mountain bike trail on the north side of the mountain. Ride the Rockies riders climb up US-40; this is a memorable section due to the strenuous climb. Most cross-country riders climb up US-40 due to signage and perceptions of safety. Cyclists like to use US-40 going up the hill in good weather; mountain bikes come down the trail and sometimes come back up on the road. When the weather is good, off-the-road routes are often favored but the path is not maintained. It would be ideal to have both separate off-road routes and on-the-shoulder routes on US-40 to provide choice. There is a lot of erosion on US-40 that makes riding hard - sand. There is a lot of trash coming off the interstate onto US-40 which collects at the bottom of the hill.

**Traffic Challenges:** Frei/Walstrum Quarry trucks traverse slowly up US-40 to get on EB I-70 at the top of Floyd Hill, mixing with gaming traffic. The mix of trucks, recreation vehicles from 119, cyclists, and steep grades makes this a challenging situation. One idea is to have a truck climbing lane or long acceleration route on WB I-70 to get trucks onto the interstate and off US-40.

**Wildlife:** Wildlife biologist from USFS has indicated that an over/underpass at Kermitss/2 Bears is needed. There is a sheep "hang-out" at Kermitss. Also a desire for a wildlife crossing towards the top of Floyd Hill.

**ACTION: Atkins** to follow-up with CPW (Joe Walter or Brandon Murette) regarding sheep and bear movement at the top of FH. Will also be discussed in more detail when the ALIVE group convenes.

**The Greenway** concept and plan was outlined on the large map along with identification of bike and rafting parking areas. This area is not officially a part of the Clear Creek Greenway. The rafting parking at the bottom of the hill is an operational nightmare. There are anglers, bikers, rafters, truck parking, along with a water flow station (on Frei Way) at the bottom of the hill. This is the end of the easy stretch for rafters, and there are a lot of busses. This is a popular area for anglers -- people need to be able to park at each end of the section.

**Agreement:** A desired outcome was expressed by the TT - the project design should include effective joint use management at the bottom of FH.

**ACTION:** Talk to CSP with about rafting loading and unloading at the bottom of FH.

**ACTION:** Procure maps of US-40 historic walls from Christine Bradley/HDR.

**Emergency Access:** Need to maintain emergency access to Saddleback subdivision.

The TT notes the importance of access and emergency parking for freight vehicles along with sanitary facilities at the bottom of FH.

**The frontage road** at the bottom of FH has geologic hazards as the slope is sliding. CCC wants and needs an emergency access route – CCC identified a “super bike path” (16’ - 25’) that would provide emergency access and be able to handle emergency vehicles - “minimal frontage road.” One idea suggested at a public meeting was to build a frontage road first as a mitigation during construction (detour route). CCC does not want to see anything built of that size on the south side of the creek – this is a unique recreation area. While CCC envisions the “super-path” on the existing alignment, they would consider other options if the highway is elevated or the roadway is repurposed.

**Hidden Valley** – the bike route connection to Central City Parkway and parking is a real challenge at this area. Vehicles are stopping right at the bottom of the hill and parking, anglers. Additionally for cyclists, the downhill light at the bottom of CC Parkway doesn’t get triggered by bikes. It would be good for cyclists to continue and go up US-40 non-stop. It was noted that the idea in the CCC Master Plan is to avoid that area all together for bikes. Sometimes there is a need to shut the CC Parkway down because I-70 is closed and there are communication issues. A variable message board on CC Parkway might be helpful to alert drivers earlier of an I-70 closure.

I-70 WB on-ramp at Hidden Valley is extremely short.

The Hidden Valley gas station is looking for additional access from CC Parkway.

The old free standing walls from the railroad start toward the Hidden Valley interchange and go east. Old Rye Stack retaining walls are in this area. .

**ACTION: Atkins** to contact Christine Bradley or HDR (Gina McAfee) to identify original retaining walls in Hidden Valley.

**What would make this area better?** A: A parking lot at Hidden Valley (south); chain down station for trucks at the bottom of FH; preferably off the road west of Twin Tunnels.

Westbound from VMT the first curve is 55 mph - too fast; 2<sup>nd</sup> curve has a glare and exposed joists - hard to see and narrow.

**Q:** Is there a potential that the FH project results in managed the lanes? **A:** Yes, will be looking at a managed lane from the top of FH.

CCC notes that Clear Creek was heavily modified and re-arranged during the interstate development; a basic principle is “stay away from the creek.” There is original interstate highway rip/rap in the river under the bridge. **Q:** What is the consideration for water quality – won’t you have to develop mitigation? **A:** Will be addressed in the SWEEP ITF and the Sediment Control Action Plan includes information as well.

**Q:** Community operational concerns – is there enough land to do what we want to do, i.e. water quality? **A:** TT needs to first identify the project and then we can fit the water quality structures, there should be enough room.

Who else should we reach out to?

- Fire Department - Evergreen
- Owner manager of 2 Bears
- 

**ACTION: Bill Coffin** will get name of both property and business owner for 2 Bears.

**ACTION: Atkins** to continue to try and contact Evergreen Fire Department.

**ACTION: Atkins** and **THK** to help develop a Floyd Hill project elements map/project description sheet. The intent of the map is to demonstrate what project elements are a part of the Floyd Hill project.

## Next Steps

### Near Term Next Steps

The next steps were highlighted including the following:

- 1) Determine what gets built with the FH process and what happens separate from the project, i.e. off-highway improvements or improved access to the highway. Regardless of who implement these projects, they will be identified in the Floyd Hill EA process.
- 2) The context considerations and evaluation sub-committee will define success and provide guidance ideas to the TT.
- 3) The engineering team will begin to lay out the broad brush or high-level alignment and interchange options to see what this may look like, later we will move to more detailed questions.

We will take a holistic approach to the project, get to 30% design and then determine the procurement method.

### Next TT Meeting Agenda



- Review small group recommendations regarding evaluation criteria
- Discuss draft Purpose and Need
- Review the alternative evaluation process/ screening process
- 3D review of CDP concepts and initial fatal flaw discussion

## Parking Lot

No new parking lot issues identified.

## Actions and Agreements

**ACTION: CDOT** to develop a summary graphic for the CCC Greenway efforts.

Amy Saxton has been hired as the Executive Director for the Greenway Authority

**ACTION: CDR** - Add Amy Saxton to the TT Distribution List (Tim Mauck to send contact details).

**ACTION: THK** to initiate a Doodle Poll for Context Considerations ITF.

**ACTION: CDOT** to finalize draft outreach plan that includes comments heard from TT to date. **CDR** to send Draft Outreach Plan to the PLT and schedule a PLT meeting.

**ACTION: Atkins** to follow-up with CPW (Joe Walter or Brandon Marette) regarding sheep and bear movement at the top of FH. Will also be discussed in more detail when the ALIVE group convenes.

**ACTION: Atkins** to reach out to Christine Bradley (mill sites) and CCC (bike maps)

**ACTION: Atkins** to talk with CSP with about rafting loading and unloading at the bottom of FH.

**ACTION: Atkins** to contact Christine Bradley to identify original retaining walls in Hidden Valley, mill sites and CCC bike maps (**THK** to assist).

**ACTION: Bill Coffin** will get name of both property and business owner for 2 Bears.

**ACTION: Atkins** to continue to try and contact Evergreen Fire Department.

**ACTION: Atkins** and **THK** to help develop a Floyd Hill project elements map/project description sheet. The intent of the map is to demonstrate what project elements are a part of the Floyd Hill project.

**Agreement:** A desired outcome was expressed by the TT - the project design should include effective joint use management at the bottom of FH.

## Attendees

Carol Kruse, Adam Bianchi (USFS), Tim Mauck, Randy Wheelock, Cindy Neeley (Clear Creek County); Bill Coffin, John Muscatell (Community Reps from Floyd Hill); Lynette Hailey (I-70 Coalition); Martha Tableman (Clear Creek Open Space); Wendy Koch (Town of Empire); Steve Durian (Jefferson County); Sam Hoover, Ray Rears (Central City); Daniel Horn (Gilpin County); Mike Raber (CC Bikeway User Group); Tracy Sakaguchi (CMCA); Anthony Pisano, Carrie Wallis (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks (THK Associates); Vanessa Henderson, Neil Ogden, Stephen Harelson, Kevin Brown, Pat Holinda (CDOT); Taber Ward, Jonathan Bartsch (CDR Associates)

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** November 29, 2017

**Location:** CDOT – Golden

### Technical Team - Meeting #4

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J00UNkNU0>

### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

### Target Dates

- Data Collection and Alternatives Development – begin Fall of 2017
- NEPA / Design - Winter of 2017 through Spring of 2020
- Complete design followed by construction - Summer of 2020\*\*
- 1041 Process begins after final design plans are complete. 90 day duration

\*\*Subject to funding

### Project Updates

**Geohazard Mitigation Program** - Clear Creek Canyon project has been advertised for bid; it is anticipated that work will start in early 2018 with a winter and fall construction season. US 6 will be open Monday - Wednesday morning to allow Frei gravel trucks to work and no closures on Fridays, Saturdays and Sundays.

**Soda Creek Bridge Deck Repair** – A PLT meeting was held on November 15, a summary is forthcoming. It was noted that this is the Soda Creek bridge in Jefferson County.

**Question:** What is the timing on the Floyd Hill bridge rehabilitation? **A:** It will start next summer with minimal traffic impacts since it will be night work.

## Technical Team Schedule

The schedule will be updated and posted on the Shared [GDrive](#) later and will be discussed at the next TT meeting.

## Project Elements Map Review

Kevin Shanks, THK Associates, provided a large map that highlighted various project elements, including the proposed Greenway throughout the corridor.

The map showed Greenway elements and who is responsible for implementing each section. Some Greenway components are a part of the WB PPSL project while others are separate funding streams (RAMP, GOCO, CPW) and/or led by Idaho Springs or Clear Creek County. Please see Greenway map on the [GDrive](#).

## ITF Outcomes – Context Considerations

An Issue Task Force (ITF) meeting was held on November 20th to review the context considerations and discuss how these considerations will be used in the decision making and evaluation process. The next ITF will be held on December 7.

The overall purpose of the ITF is to develop evaluation criteria that highlight the definitions of success. Kevin Shanks, THK Associates, provided an initial draft of how the group has initially organized the context considerations and encouraged the TT to provide additional categories, comments and considerations by December 5, 2017.

**Question:** Where are the interchange operations handled in the critical issues list? How do you determine whether interchanges are too close to each other? **A:** These design considerations will be addressed with reference to AASHTO's Green Book.

**Comment:** There is a neighborhood perspective around local mobility and community operations and safety. People travelling from Denver have different needs that are captured in regional mobility, traffic conflict and truck operations. There are some overlapping issues. At a future meeting, the TT will need to list the Core Values and the Critical Issues and match them together. Some strategies will have a link to several boxes.

**ACTION:** TT provides comments on Context Considerations by December 5<sup>th</sup> to Taber and the documents will be added to the [GDrive](#).

## Coordination Efforts

Anthony Pisano, ATKINS, provided an update on stakeholder coordination efforts including:

**Clear Creek EMS** – in the process of scheduling a meeting with Kelly Babeon, Clear Creek Fire Chief.

**Jefferson County** - Bike maps have been provided. Further discussions are occurring with Mike Raber.

**CCC GIS Information** – A map with land holdings is available. Tim Mauck will provide them to the team.

**Mill Site identification** – this will be conducted as part of the cultural analysis after the project has been defined further.

**CPW wildlife information - Question:** Why are sheep and bear only listed in the coordination with CPW? There are deer and moose crossings at CR 65. **A:** These were the two identified during the TT meeting when coordination with CPW was identified. However, all “critters” will be included in the analysis and this will be updated on the slide. This is part of the ALIVE process as well.

**School Board** – Conversations with the School Board have occurred. They are not concerned about parking at the top of Floyd Hill; rather they are concerned about the construction schedule and closures and how that impacts getting kids to and from school. On past projects they have had kids stuck at school without notice

**Colorado State Patrol Operations** – CDOT presented to a group of CSP and CC Sheriffs at their monthly corridor operations meeting. CDOT is preparing a summary, but the take-aways included 1) CSP concerns regarding the staging of the vehicles at the bottom of FH during inclement weather near the Frei pit along US 6; 2) Current use of the Greenway for emergency response is possible now and a wider footprint would be fine but it may not add a lot of value; 3) It was noted that a chain up area east of the top of FH would be helpful.

**ACTION:** CDOT and ATKINS to provide high-level summaries of stakeholder meetings to the TT and Context Considerations ITF group, so they can ensure this information is included.

## Purpose and Need (P&N)

Carrie Wallis, ATKINS, reviewed draft Purpose and Need elements with the TT. Members noted that they would like to see more than just a transportation-focused Purpose and Need. Items to consider including in the P&N or the related Goals and Objectives:

- Community; Business/Economic Development; Environmental; Recreation; Gaming Access; Sustainability; Quality of Life.

The Purpose (reason for doing the project) and Need (problems to be solved) was discussed further including the possibility of including the broader issues mentioned by the TT in the Goals and Objectives for the project.

A TT Community member noted that a primary reason for building highways is to encourage economic development. Others noted that the definition of success for this project includes creating jobs for the community, minimizing environmental impacts, and promoting wildlife movement. A purely highway focus in the P&N, a TT member noted, will anger the local communities. TT members mentioned that they are trying to build community as part of this highway project, particularly after the highway separated the communities. The TT pointed out that highway improvement benefits need to consider more than just the highway and regional mobility.

Others suggested that 'sustainability' related to environmental and/or economic be included into the Purpose along with improving the quality of life.

Under Project Needs, it was noted that local mobility needs are not just during weather conditions but every weekend.

**ACTION:** Project Staff to revise the P&N and outline goals and objectives and provide them to the TT for the next TT discussion.

## Alternatives Evaluation

Carrie Wallis, ATKINS, discussed the proposed alternatives evaluation process including both a qualitative and quantitative analysis.

The alternatives evaluation will use the criteria developed by the ITF and adopted by the TT.

At the Level 1 (qualitative) analysis it will be determined if an alternative can physically and financially be accomplished.

At the Level 2 analysis, an in-depth, quantitative analysis will be used and then followed by an alternative(s) refinement process and impacts/mitigation analyses.

The evaluation process will be reviewed at the next TT meeting.

The TT suggested that a generic, schematic interchange scenario with a new EB I-70 ramp from US 6 be provided to demonstrate impacts on US 40. This type of conceptual review would provide an indicator of what is likely to happen at Floyd Hill and on the side roads. The request is that enough traffic analysis be done to have information about how much traffic would likely use a new ramp.

**ACTION:** Project Staff develop a generic interchange/ramp addition scenario for TT review including, but not limited to, origins, destinations and trip assignments.

### Map Exercise

Anthony Pisano, ATKINS, summarized the operational issues identified at the November 8 TT Meeting #3 including:

- Identification of old mill site walls
- Ensuring AGS alignment compatibility
- Truck chain down station at the bottom of FH
- Sanitary facility at the bottom of FH
- Parking for trucks, anglers, rafters, etc. at the bottom of Floyd Hill
- Wildlife - sheep hangout at Kermitts/Two Bears
- Improving bike traffic on US 40 and mountain bike trails
- Open space considerations

Hidden Valley Interchange

- Parking at both sides
- Add a turn around at the gas station when CC Parkway is closed.
- Have a mechanism for Bikes to get a green light
- Access to CC Parkway from the Greenway
- Access at the Gas Station may be too close to the interchange.

**Greenway:** The TT suggested that the Greenway should be constructed on the planned alignment along the south side of the creek. The intent is to make the Greenway contiguous and keep on the creek side so there is no reason to cross over the road. It needs to be ADA compliant. Parts of the bike path have been constructed in asphalt, not concrete, which didn't meet Greenway objectives of a concrete path.

**Hidden Valley** – the bike route connection to Central City Parkway and the greenway trail is a real challenge at this area. Vehicles are stopping right at the bottom of the hill and parking. Additionally, for cyclists, the downhill light at the bottom of CC Parkway doesn't

get triggered by bikes. The Hidden Valley gas station is looking for additional access from CC Parkway.

While it was discussed at TT meeting #3 it was reiterated that there is a need for a chain up station east of the top of Floyd Hill. Impacts at the multi-use lot at CR 65 need to be considered. For more detail, see the meeting summary for TT meeting #3.

### **Floyd Hill Concepts Review**

Anthony Pisano, ATKINS, outlined the conceptual alignment options that emerged out of the Concept Development process using a 3D visualization tool.

In order to ensure that the FH highway improvement designs do not preclude the AGS, the conceptual hybrid design for the AGS, developed by Aztec, was modeled and outlined.

**Question:** Where are the AGS stations? **A:** Idaho Springs

**Question:** What is the average speed? **A:** 120 mph.

### **South Alignment**

The south alignment was displayed using the visualization tool. The following discussions points were highlighted

- Constructability is a real challenge especially with the roadway elevated 150 feet in the air and long portions of the viaduct would be constructed on top of the existing WB Roadway.
- Access at US 6 is challenging with the roadway elevated 150 feet in the air.
- Several conflicts with the AGS alignment.
- Crosses the creek and existing I-70 several times. This impacts areas south of the creek that otherwise would not be touched and the view from the creek
- Would require removing a large portion of the landslide area to ensure that the highway is safe due to the landslide. This could impact hundreds of homes in addition to the water supply for the wells in the Floyd Hill communities.
- It was noted that the goal is not to reconstruct the Hidden Valley interchange. Would be challenging to tie in to the existing interchange.
- In order to keep the speeds at 55 mph a substantial tunnel will be needed.
- **Question:** is it possible to accomplish this with rock cuts instead? **A:** it could be investigated and would be similar for other alignments.



An interest in using the old highway alignment for frontage roads and creek access was expressed by TT members. **The south alignment makes it difficult to use the old WB alignment for a new frontage road alignment.**

One of the critical issues is whether this alternative is affordable. It does not seem to be. This will be part of the evaluation criteria.

**Question:** Where does the Greenway alignment go here? **A:** first we will choose the roadway alignment and then determine where it goes, the assumption is that it will follow the railroad bed where it is currently located.

**Question:** Is the constructability and capital cost radically different between the South, North and Off-alignment alternatives? **A:** The south alignment is probably the most expensive with a lot of unknowns and problems with landslide areas.

**The South Alignment is likely the most expensive, involves the landslide area, impacts to the Floyd Hill homes and water supply/wells, conflicts with the AGS alignment, has impacts to Clear Creek, impacts the greenway, would be difficult to tie into existing interchange and creates problems with access to US 6, would have constructability challenges where the new roadway is on the existing alignment likely has extremely expensive maintenance and operations cost due to the length of the tunnel.**

**[Consensus Agreement by the TT: Drop the South Alignment due to fatal flaws listed above.](#)**

### **Off-Alignment**

The 'off-alignment' alternative was discussed including the following notes.

This is extremely rugged and virgin terrain. It would require a 5,000 foot long tunnel and 5,000 foot bridge. If the grades through the tunnel are increased, the distance of the tunnel could be shortened, but ventilation and driver comfort in the tunnel become major issues.

The original thought from the CDP was that it might be easier to go around the mountain and may only require a short tunnel. Once we obtained mapping for that area to test this concept, it proved to be a difficult path to traverse.

**Question:** How stable is the rock on this side? **A:** More than the south side but this is not yet clear.

The horizontal alignment for the off alignment enters the hidden valley area from a different angle than the current I-70 alignment making access to Central City Parkway

difficult. In addition, the alignment is higher than the other alternatives near US 6 making access more challenging.

**Off-Alignment is fatally flawed due to:** tunnel length (ventilation), limited access options at US 6 and at Central City Parkway, impacts to private land owners, environmental impact to virgin land, impacts to big horn sheep lambing areas and connectivity, and unknown geology.

Given the potential of the North Alignment to provide a similar configuration as the off alignment, the TT expressed a strong opinion that, comparatively, the off-alignment has fatal flaws including the length of bridges and tunnel. Why would you do a 5,000 foot tunnel and 5,000 foot bridge when you could do something with the North Alignment that has similar benefits?

It was suggested that during Level 1 Screening the off-alignment option could be evaluated in more detail using the established evaluation criteria. Others expressed an interest in documenting the reasons for not looking at the off-alignment options and didn't think there was a need to take them through the matrix options. The fatal flaws are so clear. The TT does not want to waste time on unrealistic and flawed alignment options.

**Consensus Agreement by the TT: Drop the Off- Alignment due to fatal flaws listed above.**

### **North Alignment**

The north alignment alternative was reviewed including the following discussion items.

**Question:** What would eastbound look like with north alignment? **A:** Would use existing WB to soften the corners for EB traffic.

The existing alignment has sharp curves that need to be flattened to meet the 55 MPH design speed. These curves are adjacent to two large Hillsides. In order to straighten out these alignments, we would need to go through these hills with tunnels or cut a bench into the hillside. Incorporating the EB alignment with the westbound alignment would require a second bore if a tunnel was used or a wider bench cut .

The TT noted is the importance of accommodating gaming traffic and the Frei Pit near US 6. The design team will evaluate access at this location.

A split alignment (WB elevated and EB lower) opens up space for EB and potentially accommodating a frontage road.

**Question:** How do you exit from WB I-70 to US 6? **A:** An exit ramp would be placed on a second steeper viaduct adjacent to the WB viaduct and then connect to the existing exit ramp by curving under the WB viaduct..

**The TT would like to see options for this alignment.**

**Consensus Agreement by the TT: The TT indicated that options along the North Alignment should be all that is evaluated moving forward.**

North Alignment options include: 1) North Alignment for WB only 2) North alignment with 2 bores to accommodate EB and WB, 4) tunnel versus benching

There will be multiple variations (4-5) for the North alignment evaluation process.

There were TT suggestions that at the second bench/tunnel, there is a need for maximizing sight distance at the exit ramp to improve visibility should be considered. Also, would like to look at opportunities to flatten EB FH roadway so there is less of a climb.

**There will also be a No-Action Alternative evaluated in the Environmental Assessment that is used as a baseline to compare action alternatives against. The No-Action only includes planned maintenance activities and no other action.**

#### **Near Term Next Steps**

1. Consider how the discussion today impacts the Level 1 Screening (does the process need to be updated?).
2. Re-work TT Schedule to reflect context considerations and screening process.
3. Level 1 and Level 2 need traffic analysis to complete the ultimate vision for the highway improvements
4. Project staff will put together necessary documentation of Fatal Flaws and elimination of South- and Off-Alignments.
5. ITF will continue working on context considerations and Evaluation Criteria to recommend to the TT
6. TT will review, modify if necessary, and adopt Evaluation Criteria
7. In January - Begin Level 1 Screening for alignment and interchanges

#### **December 13 - TT Meeting Agenda**

1. Review ITF recommendations regarding Evaluation Criteria
2. Discuss draft Purpose and Need
3. Review the alternatives evaluation process
4. Interchange discussion and concepts

## Actions and Agreements

**ACTION:** TT provides comments on Context Considerations by December 5<sup>th</sup> to Taber and the documents will be added to the [GDrive](#).

**ACTION:** CDOT and ATKINS to provide high-level summaries of stakeholder meetings to the TT and Context Considerations ITF group, so they can ensure this information is included.

**ACTION:** Project Staff to revise the P&N and outline goals and objectives and provide them to the TT for the next TT discussion.

**ACTION:** Project Staff develop a generic interchange/ramp addition scenario for TT review including, but not limited to, origins, destinations and trip assignments.

**Consensus Agreement by the TT: Drop the South Alignment due to fatal flaws.**

**Consensus Agreement by the TT: Drop the Off- Alignment due to fatal flaws.**

**Consensus Agreement by the TT: The TT indicated that options along the North Alignment should be all that is evaluated moving forward.**

## Attendees

Carol Kruse, Adam Bianchi, Scott Haas (USFS), Tim Mauck, Randy Wheelock, Cindy Neeley (Clear Creek County); Bill Coffin, John Muscatell (Community Reps from Floyd Hill); Lynette Hailey (I-70 Coalition); Wendy Koch (Town of Empire); Yellena Onnen (Jefferson County); Sam Hoover, Daniel Miera (Central City); Mike Raber (CC Bikeway User Group); Tracy Sakaguchi (CMCA); Anthony Pisano, Carrie Wallis (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks, Julie (THK Associates); Vanessa Henderson, Neil Ogden, Stephen Harelson, Kevin Brown, Stacia Sellers, John Kronholm (CDOT); Taber Ward, Jonathan Bartsch (CDR Associates), Holly Huyck (CC Watershed Foundation), Martha Taberman (CCC Open Space), Tyler Larson (Atkins), Amy Saxton (CC Greenway); Kelly Gilardi (FHWA), Carrie Wallis (Atkins), Patrick Holinda (CDOT Bridge Enterprise).

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** December 13, 2017

**Location:** CDOT – Golden

### **Technical Team - Meeting #5**

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1JOOUNkNU0>

### **Introductions and Overview**

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

#### **Outcomes from Meeting #4:**

- Discussed Draft Purpose and Need
- Agreed on Alternatives Evaluation Process
- Reviewed Context Consideration ITF Outcomes
- Reviewed CCC Greenway Trail Alignment
- Reviewed Alignment Concepts
  - Elimination of South and Off-Alignment Concepts
  - Move forward with North Alignment Concept with Design Options

### **Project Updates**

**WB I-70 PPSL** – Meeting on December 13, 2017. Focused on Idaho Springs Segment. Identified decision points and evaluation criteria for discussion at future meetings.

**Colorado Blvd** – Moving along with this project. It is on schedule, or slightly ahead of schedule. When finished, this project will be a great asset to the community.

**Bridge hit** – West of Empire Junction. No repairs needed to the bridge. The stiffener was impacted but the bearings are fine. Guard rail needs to be fixed. CDOT was complemented for good response time.

**Variable Speed Limit Concept of Operations and Development of Algorithm Project –** TT members suggested adding this project to the list of project updates. This project area is from Copper Mountain to C-470. The purpose of the project is to improve safety and travel reliability time. Ben Klein, CDOT, is leading the project.

**ACTION: THK** – Add Variable Speed Limit Concept of Operations and Development of Algorithm Project to project list on PowerPoint

### Technical Team Schedule

Anthony Pisano, ATKINS, reviewed the TT schedule and discussed the issues and when those will be discussed and evaluated. The TT is asked to review the schedule and provide comments/feedback.

**ACTION: CDR** - Add updated TT schedule to the [GDrive](#)

### Refined Purpose and Need

Carrie Wallis, ATKINS, presented the updated Floyd Hill Draft Purpose and Need Statement alongside the 2011 PEIS Purpose and Need Document. Since this is a Tier 2 project, it needs to reflect the same basic purpose and need as was developed for the Tier 1 PEIS Purpose and Need.

#### TT comments to draft P&N:

- The word “should” – can we change this to “will” or “shall?”
  - It is difficult to change the word “should” as the NEPA documentation needs to balance different components of the project, i.e. environment, recreation, historic, mobility, engineering. “Should” is therefore a more accurate term to use to describe this balancing act.
- The P&N should address the needs to “mitigate” and “repair/restore” damage. This was the spirit of the 2011 PEIS. There is a need to focus on more than just “enhancing” the corridor.

**ACTION: Technical Team** - Review and comment on the P&N by January 3rd.

**ACTION: ATKINS** – Provide an updated P&N Draft at January 10<sup>th</sup> meeting.

### ITF Outcomes – Context Considerations

Kevin Shanks, THK Associates, outlined the Context Considerations and the discussion from the December 7 ITF. Kevin distributed a handout to the TT that went through the current work of the ITF.

The ITF is continuing to develop measures of success – the idea is to look for measures that are quantifiable. The measures of success cannot be so specific that they point to one alternative/answer.

The “Category” column will be our updated “Critical Issues” in the CSS flow Chart.

#### **TT Comments:**

- The public will need a chance to review the final Context Considerations Chart so they can see how their comments are addressed.
  - The Chart will be available on the website. An email will be sent out with Project information, including the website and a link to the Context Considerations Chart, for public review and comment.
- Idaho Springs would like to look closely at the chain down areas – important to coordinate this with WB PPSL; Idaho Springs has some thoughts.
- Idaho Springs would like to look closely at a proposal for a Bustang Park n’ Ride in the vicinity of the Veterans Memorial Tunnels. This is also connected to the WB PPSL project and specific plans in Idaho Springs.

**ACTION: Technical Team** - send comments and feedback, specifically around evaluation questions and measures of success to Taber by Tuesday, December 19. The ITF can then discuss any input received at their meeting on Dec 20.

#### **Coordination Efforts**

Anthony Pisano, ATKINS, provided an update on stakeholder coordination efforts including:

Met with Clear Creek Rafting Company and the property owners of Two Bears Restaurant. Summaries are forthcoming. Setting up a meeting with Cassandra Patton, CCC Tourism Bureau, to check in on small business issues and tourism perspective.

The mill sites and historic work with Christine Bradley will be handled through the Section 106 ITF.

Tim Mauck is assisting with GIS and coordinating/collecting CCC’s information.

Still working on getting ahold of CCC and Evergreen fire departments. Suggestion to go to Fire Board meeting – these are open to the public.

**ACTION:** Steve Harelson to send Anthony Kelly Babeon’s phone number.

#### **Map Exercise - Interchange Review**

Anthony Pisano, ATKINS, reviewed current and future traffic volumes in relation to the proposed Concept Development Process Interchange scenarios (3D versions). The traffic numbers are being updated right now with more recent volumes. The goal of the presentation is to get feedback from the TT on current movements, desired movements, what is missing from designs, and what else the design team should be considering.

#### **TT Discussion:**

- In addition to traffic volumes, it will be important to look at the mix of traffic, i.e. trucks, cars, trailers, etc -- this impacts how roads and interchanges should be designed.
- CR 65 interchange with I-70 was discussed. a lot of traffic coming up US 40 from US 6 and US 6/119. The team will investigate left turn movements on the CR 65 bridge to EB I-70. Atkins will be collecting Origin/Destination information.
  - Do we need to widen bridge for left hand movements?
  - CR 65 also moves people into Evergreen.
- If there is an EB on-ramp added to the interchange at the bottom of FH – this may reduce the traffic getting on I-70 at the top of the hill. Consider adding or moving ramps at the CR 65 intersection.
- Need to consider gaming traffic and grades. US 40 is steeper than I-70. There is a traffic mix of trucks, RVs, horses, bicycles, etc.
- EB US 6 – consider the Frei truck traffic.
- Concern about a roundabout at top of FH. The grades and conditions could be a challenge for commercial vehicles coming to a stop, especially in winter. This will be addressed during the preliminary design phase.
- Generally, the WB ramp at US 6 is very low volume (one car every two minutes). This is true until there is an accident on I-70 or just heavy traffic on Saturday mornings.
  - **TT suggestion** – Where US 6 and US 40 meet – consider a roundabout to handle left hand turning movements and encourage truckers to get on I-70 using a bypass lane. If a new EB entrance ramp is added at the bottom of Floyd Hill, the by-pass lane could help encourage truckers to use the new ramp instead of going up US 40 to CR 65. Lots of the larger rigs take the canyon because grades, fuel and breaks. Problem is that there are so few roads – if we close them, it will really mess the whole system up.
- The high school track team runs a circle across CR 65, WB along US 40 and back along Homestead as part of their training – need to make sure pedestrian access is safe.



- CR 65/ US 40 – There are steep grades in the EB direction and vehicles speed though. There is also limited sight distance.
- FHWA suggests that it would be helpful to have existing crash information on these interchange areas. We should stay open to the range of options, but use the crash data to help with design and decision making. Should not rely solely on traffic counts since some changes potentially change the traffic patterns.
  - Half diamond interchanges – not favored by FHWA.
- There is a planned change for the Martee building nearby acreage just north of the interchange. Monarch Casino bought this land. It will be used as a truck staging and distribution center for a new 25 floor casino in Black Hawk.
- The team also needs to consider the 500 unit condo development being considered by Clear Creek County – for the top of Floyd Hill.
- Growth is going so fast; how do we dovetail our plans and solutions? We don't want to create a solution just to have it reach capacity right away.
  - The engineering plans will be looking 20-30 years out.
- Hidden Valley interchange – The team will investigate alternatives that continue the lanes on US 6 traffic to the Hidden Valley interchange along a new frontage road that will connect to CR 314. A roundabout intersection would be constructed to connect the new frontage road at the interchange. We anticipate that a roundabout will have sufficient capacity to accommodate the 2040 traffic volumes. The roundabout would also accommodate U-turns for the Central City Parkway when I-70 is closed. The Bell property is zoned commercial, so there could be future development.
- Need to consider emergency egress for Floyd Hill (could impact private roads on both Jefferson County and CCC).
- Crash data will be very important – Are there crashes and are they caused by the grades or the speed differential. A 3<sup>rd</sup> lane could solve the differential speed limit. Need to get the traffic mixes working better – this will impact the recreation area at the top.

### Near Term Next Steps

- ITF Meeting on December 20 to continue working on Critical Issues (Categories); Measures of Success and Evaluation Questions
- Refine North Alternative alignment design options.
- Refine interchange concept design and begin to look at how they can be realistically combined with the alignments.

- TT and Project Staff to finish developing general and specific evaluation criteria for alignments and interchanges.
- Level 1 Screening of North Alternative alignment design options and interchanges (qualitative)
- Level 2 Screening combined alignment design options and interchanges (quantitative) – new traffic information will be used here.

## Actions and Agreements

**ACTION: THK** – Add Variable Speed Limit Concept of Operations and Development of Algorithm Project to project list on PowerPoint

**ACTION: Technical Team** - Review and comment on the P&N by January 3rd.

**ACTION: ATKINS** – Provide an updated P&N Draft at January 10<sup>th</sup> meeting.

**ACTION: Technical Team** - send comments and feedback, specifically around evaluation questions and measures of success to Taber by Tuesday, December 19. The ITF can then discuss any input received at their meeting on Dec 20.

**ACTION:** Steve Harelson to send Anthony Kelly Babeon's phone number.

## Attendees

Andrew Marsh (Idaho Springs); Carol Kruse, Scott Haas (USFS); Randy Wheelock, Jo Ann Sorensen (Clear Creek County); Bill Coffin, John Muscatell (Community Reps from Floyd Hill); Lynette Hailey (I-70 Coalition); Wendy Koch (Town of Empire); Steve Durian (Jefferson County); Sam Hoover (Central City); Mike Raber (CC Bikeway User Group); Gary Frey (Trout Unlimited); Daniel Horn (Gilpin County); Tracy Sakaguchi (CMCA); Holly Huyck (CC Watershed Foundation), Martha Tabela (CCC Open Space); Kelly Gilardi (FHWA); Patrick Holinda (CDOT Bridge Enterprise); Anthony Pisano, Carrie Wallis, Tyler Larson (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks (THK Associates); Neil Ogden, Stephen Harelson, Kevin Brown, Stacia Sellers (CDOT); Taber Ward, Jonathan Bartsch (CDR Associates)

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** January 10, 2018

**Location:** CDOT – Golden

### **Technical Team - Meeting #6**

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

### **Introductions and Overview**

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

### **Outcomes from Meeting #5:**

- Presented updated draft Purpose and Need
- Update on Context Considerations ITF
- Map Exercise with Traffic volumes, turning movements, etc.
- Reviewed Concept Development - -Interchange Options

### **Project Updates**

**Fall River Road** – A PLT meeting and scoping meetings are planned for the end of January

**Vail Pass** - A PLT will be held on January 17

**Greenway** - The project team had a walk through at Silver Lakes and Animal Shelter, looking at feasibility and alignments of a north alignment.

### **Technical Team Schedule**

Anthony Pisano, ATKINS, reviewed the TT schedule and discussed the issues and when those will be discussed and evaluated. The TT was asked to review the schedule and provide comments/feedback.

**TT Question:** How do we evaluate the interchanges with the alignments? **A:** This meeting will help clarify the screening process and next steps.

**ACTION: CDR** - Add updated TT schedule to the [GDrive](#)

### **Refined Purpose and Need**

Carrie Wallis, ATKINS, presented the updated Floyd Hill Draft Purpose and Need Statement. It was noted that this Tier 2 analysis and project must reflect the same basic purpose and need as was developed for the Tier 1 PEIS Purpose and Need. The TT concurred that this P&N draft mirrors the PEIS and that it is satisfied with the P&N statement as written.

**Agreement:** TT concurrence with the Purpose and Need Statement.

### **ITF Outcomes – Context Considerations**

Kevin Shanks, THK Associates, outlined the revised Context Considerations and the discussion from the December ITF. Kevin distributed a handout to the TT that went through the current work of the ITF. The charge of the ITF was to ‘do something’ with these comments and make them usable in the evaluation efforts.

The ITF is continuing to develop “measures of success” to use in the evaluation process. The idea is to look for measures that are quantifiable. The measures of success cannot be so specific that they point to one alternative/answer.

The ITF has distilled 23 evaluation questions related to Core Values and Critical Issues that will be the basis of understanding on how to track the public, PLT and TT comments made and how these comments have been considered in this effort. The goal is to track individual comments, suggestions and context considerations through the process to the measures of success. This tool will enable people to identify their comment in the evaluation process.

On page 7 of the handout – the design criteria are highlighted in green. These will need to be considered in the design process.

**TT Comment:** A suggestion was made to ensure that the planned COMBA multi-use recreation park on the north side of the top of FH is included in the matrix with accurate associated measures of success. This comment has been captured in the Issues Question related to multiple uses at the top of Floyd Hill. Martha Tableman has been bringing up this project at the TT meetings and is the source of information for this. There will be a parking lot on the north side and the project team should be aware of the traffic interaction.

**TT Comment:** What does ‘accommodate’ SCAP mean? The Sediment Control Action Plan(SCAP) is an agenda item for the SWEEP ITF. It will be discussed/accommodated as determined in the SWEEP meetings. ALIVE ITF recommendations would be specific to wildlife recommendations.

## Coordination Efforts

Anthony Pisano, ATKINS, provided an update on stakeholder coordination efforts. All identified coordination efforts have been completed. Anthony and his team at ATKINS have been spearheading this effort.

Anthony highlights the following items from recent conversations that may be of interest to the TT:

- Met with rafting companies Mile Hi and Clear Creek Rafting. They would like to see very little impact to the river. Be careful not to change the character of the river for rafting purposes. As the design process moves forward, may need to consider how the removal of rubble and rebar from the river might impact rapids.
- Met with Two Bears Restaurant: Talked about operations and business. Some concerns about parking or access to the river.

Clear Creek County mentioned that a trails task force will be adding a recreation patrol to enforce parking, river access, trailheads, campfires, etc. . .

## Interchange Concept Review and Pros/Cons

Anthony Pisano and Tyler Larson, ATKINS, reviewed the Floyd Hill interchange options and solicited feedback regarding the benefits and downsides (pros/cons) for each option.

The goal of the interchange concept review was to determine the location of the interchanges and whether they will be 1) kept them the same, 2) changed by adding ramps and other features or 3) changed by removing ramps and other features at those locations and relocating the access to a different location. Specific interchange designs or configurations at each location will be handled separately. This discussion is focused solely on location of interchanges or interchange improvements.

The discussion notes regarding the pros/cons of these options is outlined below.

### **Option 1 (Remove Interchange at US 6/ Replace with full access interchange at the Top of Floyd Hill - Frontage Road 314 to US 6)**

#### **Pros:**

- Cleans up WB traffic from top of FH by putting trucks on to US 40
- Provides more room for recreation
- Opens US 6 to more recreational opportunities; there not a lot of space to fit a full movement interchange at US 6
- Meets driver expectancy

**Cons:**

- Hard to understand this Option 1 – and can't see it functioning with any practicality.
- Anything that moves to top of FH means you have more traffic on US 6; need information that will help understand this dynamic.
- Will put more I-70 traffic onto US 6; not safe for trucks
- 9% grade makes it hard for trucks to stop and re-start on US 40. Caution not to push large truck traffic on US 40
- Would need to upgrade US 40 or accept substandard geometry or go to out of direction (Hidden Valley)
- Multi-modal conflicts between non-motorized vehicles, road cyclists, mountain bikes
- Mixing motorized (trucks) and non-motorized vehicles on steep grades.
- Congestion and Greenway at the bottom
- This will impact Douglas Mountain residents – SH 119/US 6 – US 40 WB – frontage road;
- Conflict with Black Hawk and Central City traffic (employees and gamers)
- Congestion at roundabouts – traffic getting out of both subdivisions and whatever other types of land developments that might happen there. It was noted that roundabouts have both strengths and options and cautioned the group not to automatically dismiss them.
- Trucks don't fit into Roundabout and would struggle with the 9% grade.

**General TT Comments:** Would like to look at what problems we are trying to address. The FH region is a problem the way it is currently. A new large scale residential development will increase problems. Even if we leave the interchange the same at US 6, we still need to look at what is happening at the top of FH and the plans.

ATKINS responded that after the traffic modeling is finished we will look at the existing problems at top of FH. We will look at the whole corridor and manage the top and bottom of FH together regardless of what options we chose.

**Option 2 – (Remove Interchange at US 6/Replace with Interchange Midway on Floyd Hill US 40 Access)**

**Overview of the Option:** Remove access move all access up the hill along US 40 (midway up on Floyd Hill)

**Pros**

Interchange is not at the base of Floyd hill; moves movements and traffic out of the valley  
Doesn't impact existing landslide  
Less impact on residential area at the top of the hill  
Improves recreation

**Cons**

Water reservoir filing at the on/off on south side.  
Steep grades – tiered walls; flat slope have to go farther up  
Geologic hazard; potential for new landslide – due to new cuts

Tremendous visual impacts to the context of the area  
Area of impact is large requires aesthetic guideline variances  
Confusing - problem for driver expectancy  
AGS conflict  
Requires a lot of earthwork

### **Options 3 & 4 - Bottom of Floyd Hill - Full Access Interchange in its current location**

**Overview of Options:** Maintain existing access at the bottom of Floyd Hill; maintain WB off, WB on, and EB off ramps and add EB on, at its current location (full interchange).

#### **Pros**

No Roundabouts exist in some of the sub-options

#### **Cons**

Need to limit the access at the bottom of Floyd Hill  
Potential impacts to Clear Creek  
Flyover - doesn't work with the high options; works on low  
Steep grades  
No frontage road  
Roundabout truck movements  
Driver expectancy  
Need to accommodate truck traffic coming off of US 6  
Out of direction travel – impact on truck traffic  
Stop and Go traffic flow

#### **TT General Comments:**

This is complicated and messy; Hidden Valley/CC Parkway and Floyd Hill serve as the on/off, come down US 6; clean up by eliminating existing messes and move traffic onto I-70.

This interchange is the “big Leviathan” – messes up recreation; critical path of the entire corridor; we must clean it up here

It is hard to do interchanges in isolation from the alignments.

US 6 is the lynchpin, we need to figure this out; if anything happens at the US 6 it should be limiting the access.

Resiliency – FH gets closed all the time, need to be able to divert EB I-70 to US 6. Concern about getting to Hidden Valley – what do we do at the HV interchange?

We can't overload the CC Parkway. On the HV area – water plant and gas station and provide a service for the corridor (good location).

## **Options 5/6 – Bottom of Floyd Hill - Half Diamond Interchange Frontage Road from US 6 to CR 314.**

**Overview of Options:** Maintain WB exit ramp and add EB entrance ramp. Move WB on and EB off I-70 access to Hidden Valley with a frontage road.

### **Pros (for Half Diamond)**

Less confusing and less visual impacts

By eliminating WB on-ramp from US 6, would eliminate those bottlenecking

Less construction impacts Option 6 half-diamond

½ diamond facilitates local industry and access

½ diamond is less circuitous

Less construction impacts

No impact at Frei – keep trucks on I-70

Doesn't limit access to US 6 and Kermitts/2 Bears

### **Cons**

Off ramp on a bridge

No access to/from Denver at US 6; out of direction travel

Flyover/Half-spiral is costly and has visual impacts

Interchange is confusing

### **Half-Diamond US-6 low**

#### **Pros**

Get off I-70 – 6

Frontage road to I-70 without getting off of HV

Access to/from Idaho Springs

Take truck traffic off US 40

No mixing with CR 65 – eliminates bike conflict

Seems easier

Frontage road connection

#### **Con**

Full interchange at bottom of FH doesn't work.

Full diamond at CR 65/US 40

Roundabout capacity and issues;

**Option 7 – Mauck/Leviathan –** move all movements to Hidden Valley with frontage road (north side); off ramp at Hidden Valley – truck traffic can easily get off and frontage road. Need to limit truck traffic on US 40 and force them to Hidden Valley; CR 65 onto US 40 is dangerous. Another option is to keep WB exit off I-70



Getting rid of an interchange is extremely difficult. We can focus on area and make a good case for why it would be eliminated but it needs to be well documented and compelling.

Frontage road would exist on north side of creek on existing 70 (WB/EB)

Want both east and west/bound lanes in the tunnel.

### **Pros**

Simplify area; clean up access; eliminate conflicts

Centralize access points to interstate and to US 6 – emergency management, simplify operations

Significant footprint to provide unique solutions

Opens up US 6 area for recreation

Better opportunities for acceleration

Minimize visual impacts and decking

Bridge work and concrete

Reduces expense for access

Leave useable land for people and village use

**Notes:** This is an opportunity to do something with real vision and look at final type of solution; we need to think about and consider partnerships.

### **Cons**

Send trucks up US 40

If no tunnel, not as good of movement.

### **Tunnel discussion:**

If eastbound was also included in the tunnel it would allow the county to reuse that area for economic development as it is the flattest land in the entire county. We should compare the price in the context of adding an additional lane.

CDOT noted that the purpose of this project was focused on the improvements identified in the ROD including the WB bridge replacement, WB additional lane, and minor safety improvements to EB. The team would look at costs of an EB tunnel and how not to preclude any potential improvements on future projects.

**ACTION:** Project Staff use the pro/con discussion list to begin evaluation of the Floyd Hill concepts.

**ACTION:** Develop a graphic of the interchange options to show how the options work along the full stretch of the corridor.

### **The TT also commented on intersection details including:**

- Diamonds are better for trucks than roundabouts

- In Option 1 (Full Diamond at Homestead) – must be careful when locating roundabout as it could cause a conflict with private driveway
- Consider a roundabout for Option 1 at CR 65 (currently a full diamond)

## Actions and Agreements

**Agreement:** TT concurrence with the Purpose and Need Statement.

**ACTION: CDR** - Add updated TT schedule to the [GDrive](#)

**ACTION:** Project Staff use the pro/con discussion list to begin evaluation of the Floyd Hill concepts.

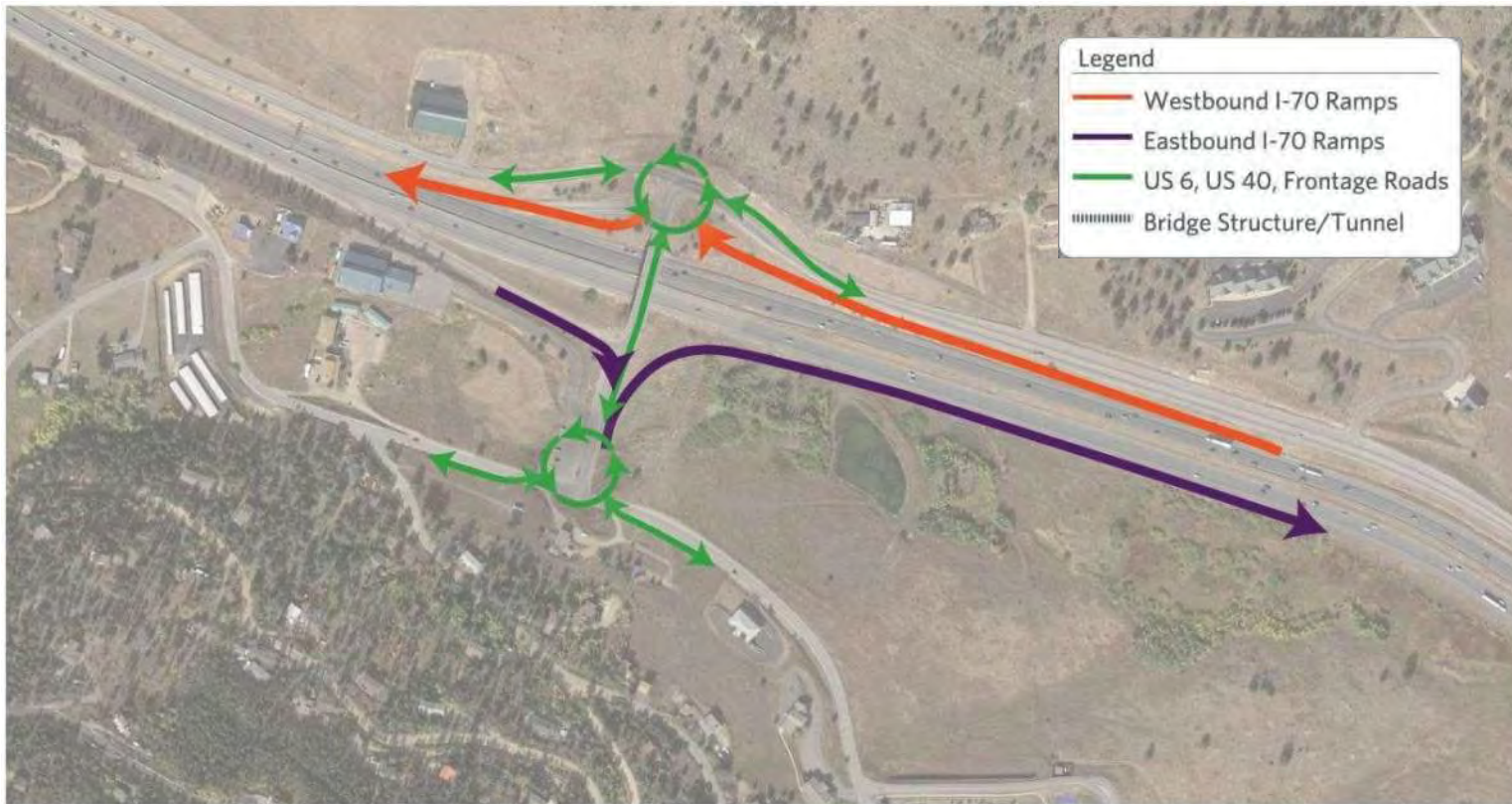
**ACTION:** Develop a graphic of the interchange options to show how the options work along the full stretch of the corridor.

## Attendees

Andrew Marsh (Idaho Springs); Adam Bianchi(USFS); Randy Wheelock, Tim Mauck, Cindy Neeley (Clear Creek County); Bill Coffin (Community Rep from Floyd Hill); Lynette Hailey (I-70 Coalition); Wendy Koch (Town of Empire); Yelena Onnen (Jefferson County); Sam Hoover (Central City); Mike Raber (CC Bikeway User Group); Stephen Strohming, Daniel Horn (Gilpin County); Tracy Sakaguchi (CMCA); Holly Huyck (CC Watershed Foundation), Kelly Galardi (FHWA); Patrick Holinda (CDOT Bridge Enterprise); Anthony Pisano, Carrie Wallis, Tyler Larson (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks (THK Associates); Neil Ogden, Kevin Brown, Vanessa Henderson, (CDOT); Taber Ward, Jonathan Bartsch (CDR Associates)

# Opt 1: Close US-6 / Move to Floyd Hill

## Full Diamond at Homestead

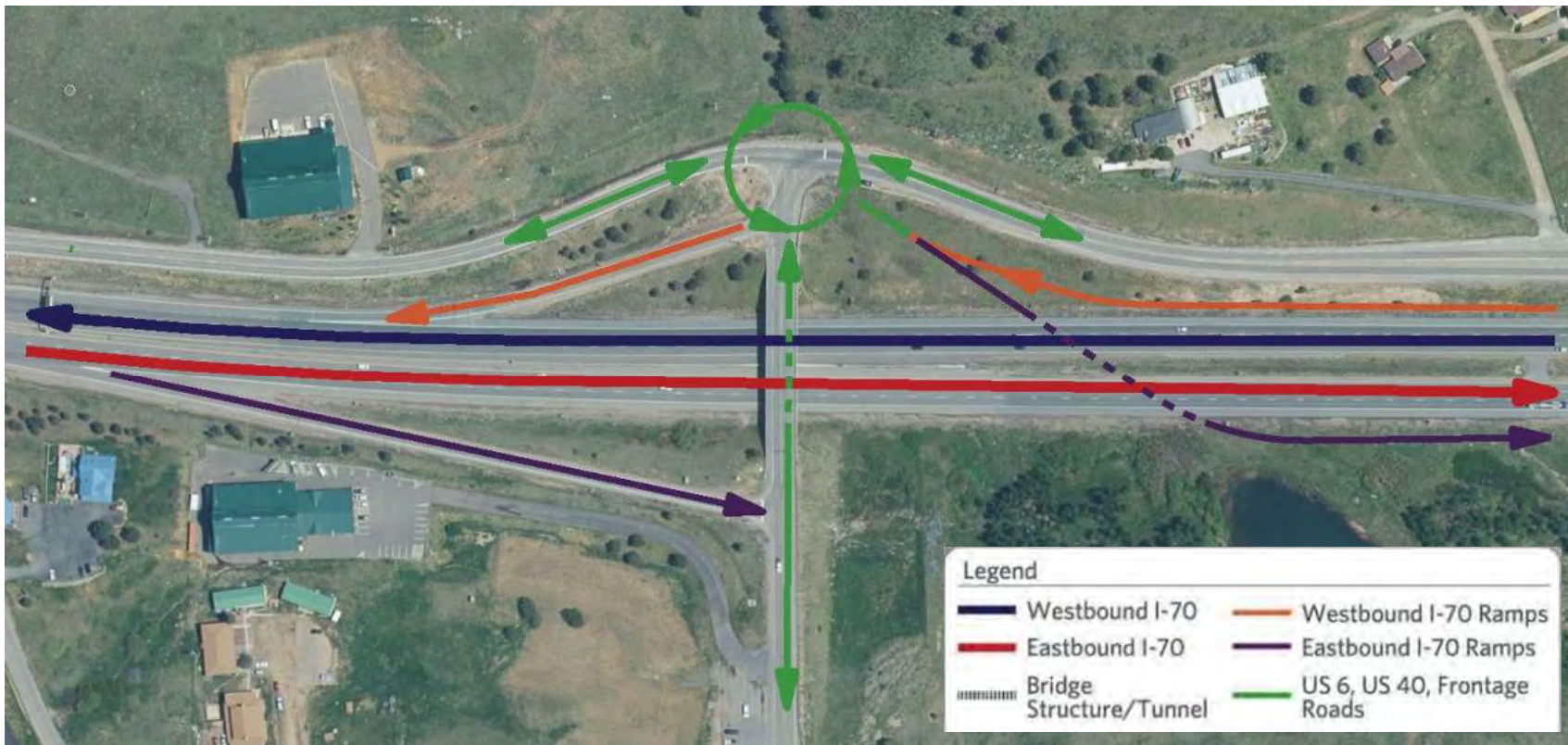


10 January 2018



# Opt 1: Close US-6 / Move to Floyd Hill

## Full Diamond at Homestead with Connector Ramp

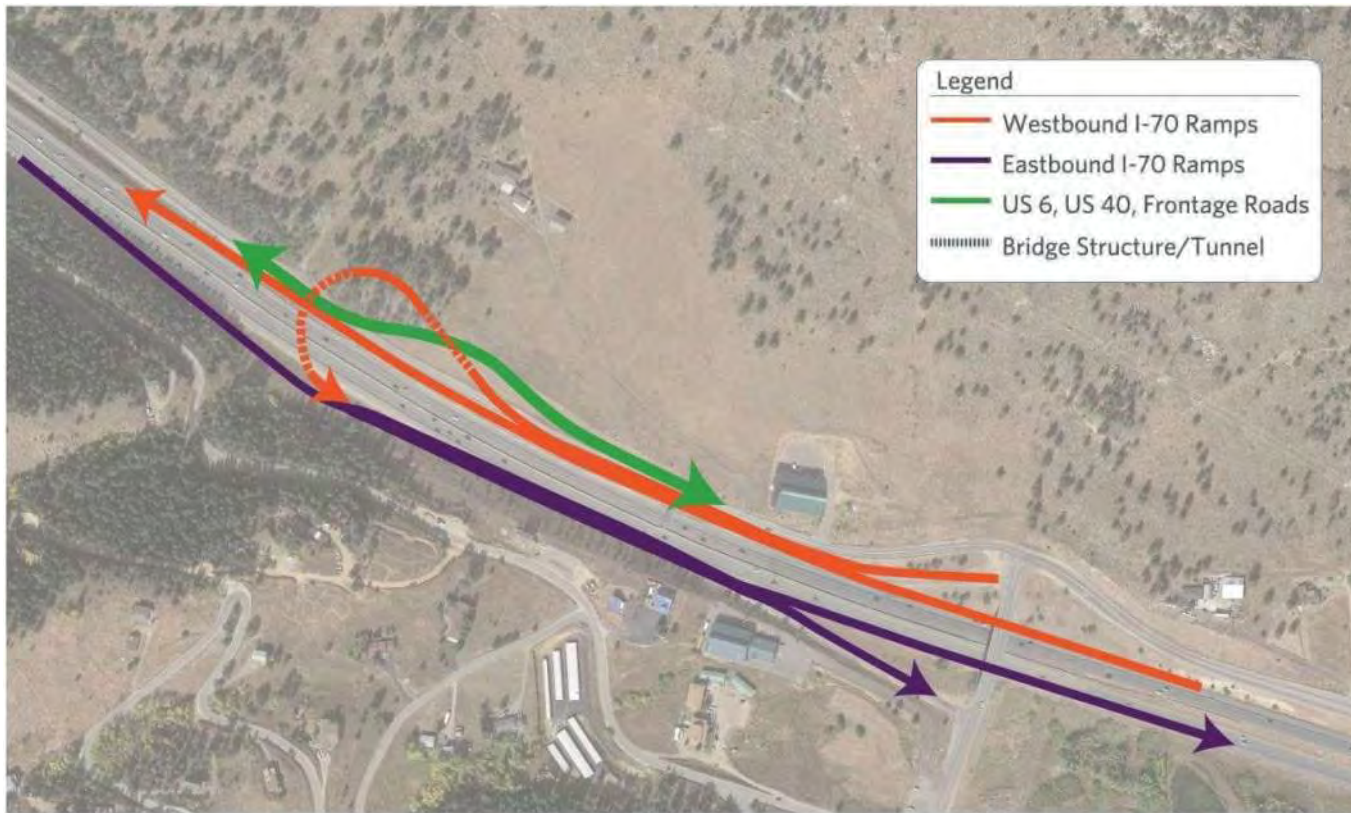


10 January 2018



# Opt 1: Close US-6 / Move to Floyd Hill

## Full Diamond with Flyover Ramp

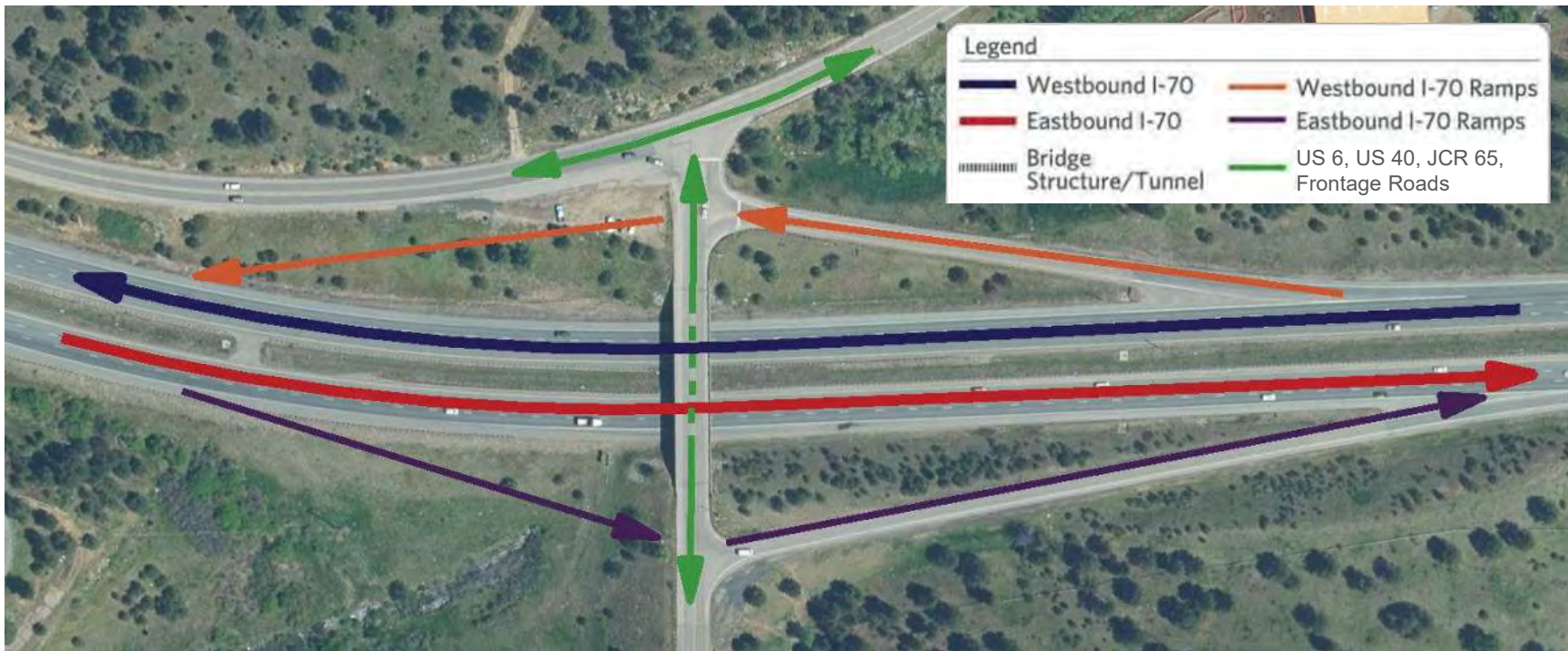


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# Opt 1: Close US-6 / Move to Floyd Hill

## Full Diamond at JCR-65



# Opt 2: US-40 Interchange

## Full Movement



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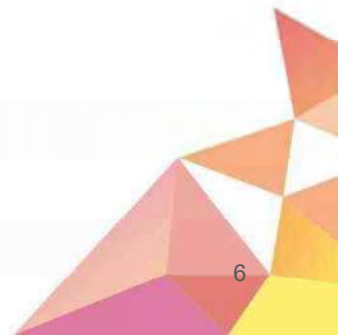


# Opt 2: US-40 Interchange

3/4 Movement (No EB On)



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# Opt 2: US-40 Interchange

½ Movement (WB On/EB Off)



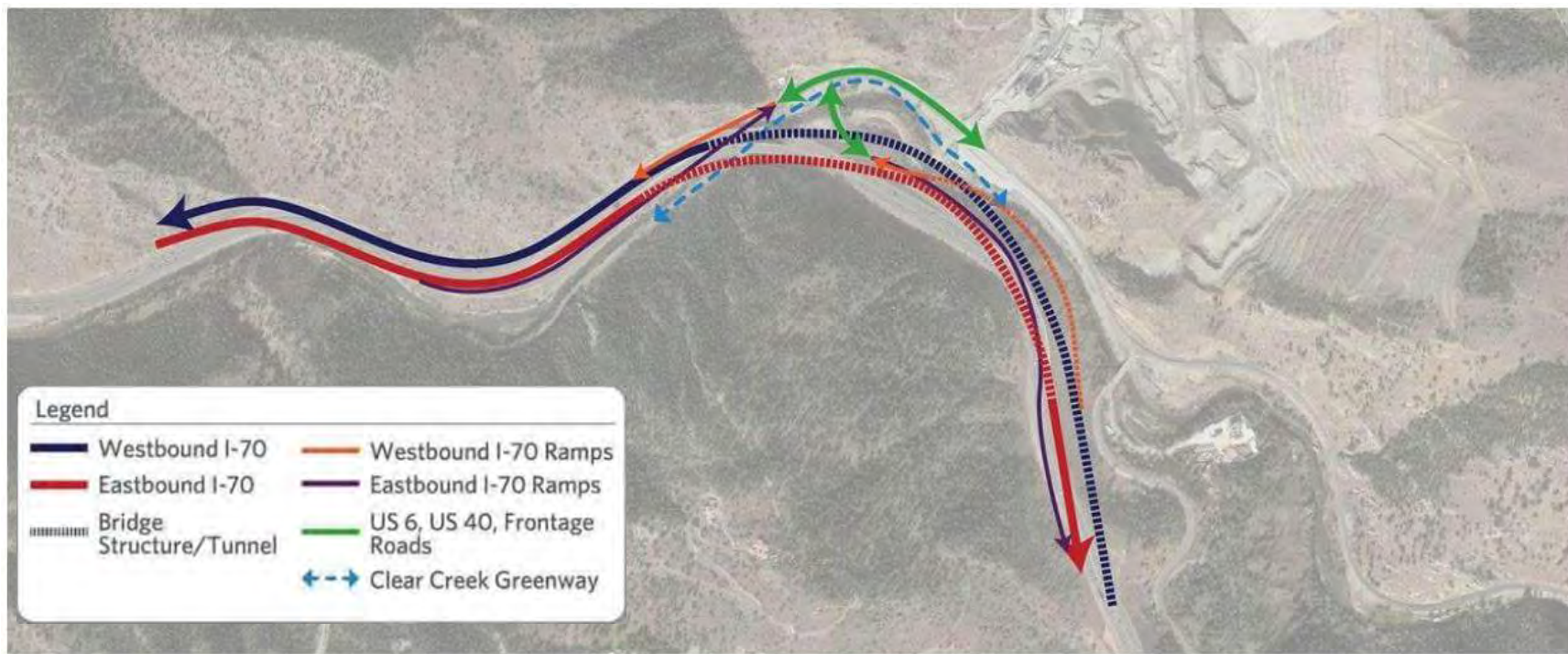
10 January 2018





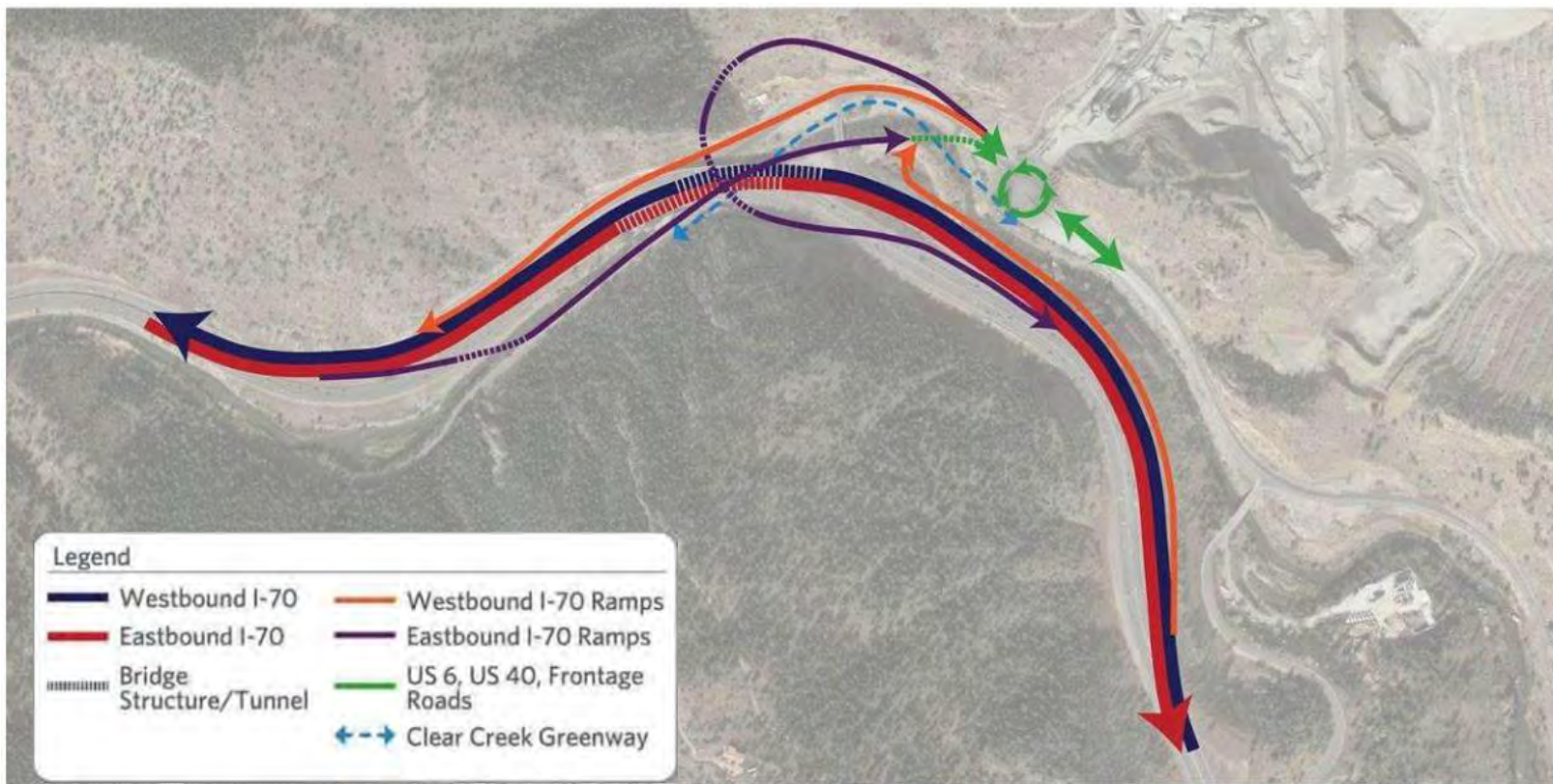
# Opt 3 & 4: Full US-6 Interchange

Existing + EB On (CDP)



# Opt 3 & 4: Full US-6 Interchange

## Flyover (CDP)



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# Opt 3 & 4: Full US-6 Interchange

## Spiral (CDP)



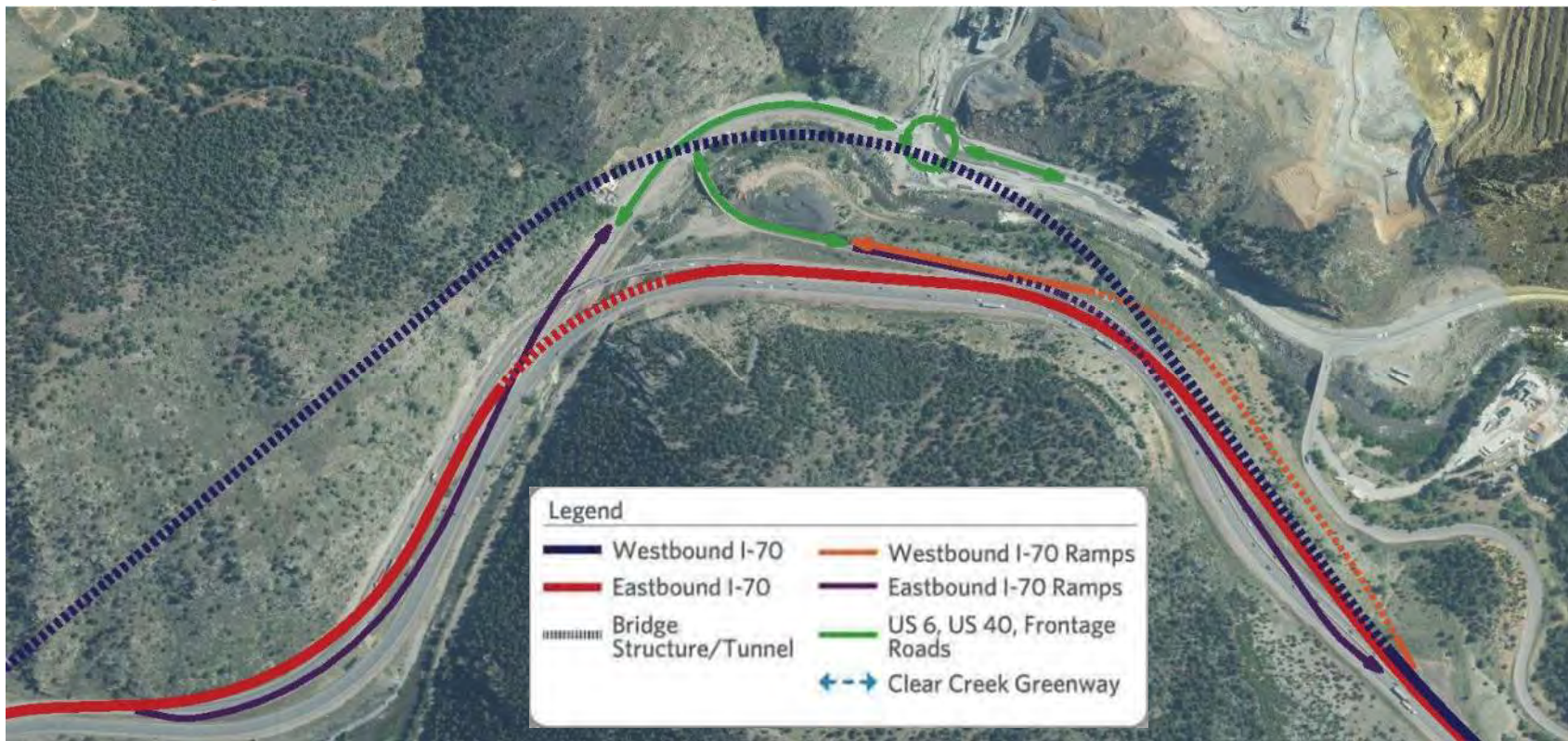
10 January 2018





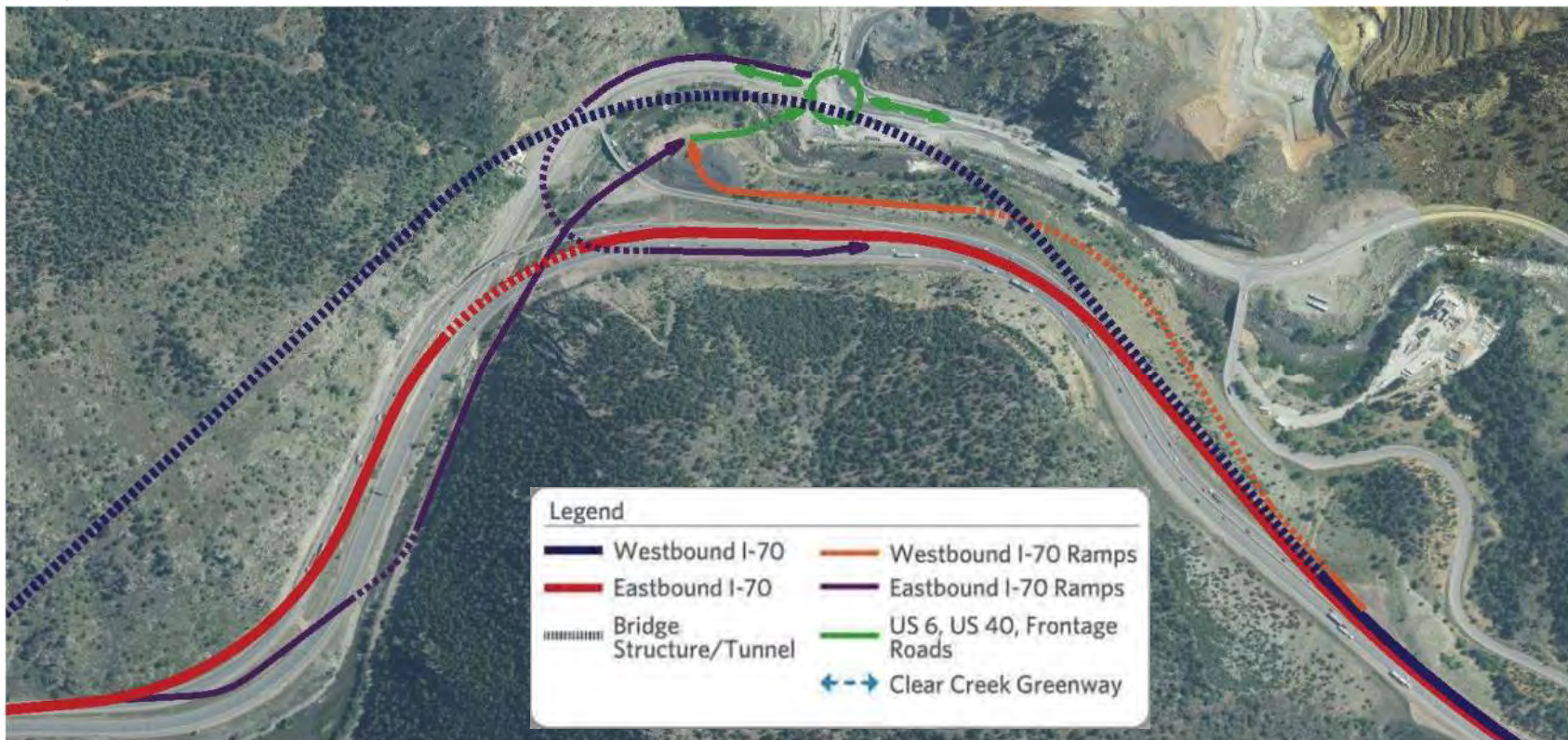
# Opt 3: Full US-6 Interchange (Viaduct)

Existing + EB On



# Opt 3: Full US-6 Interchange (Viaduct)

## Flyover

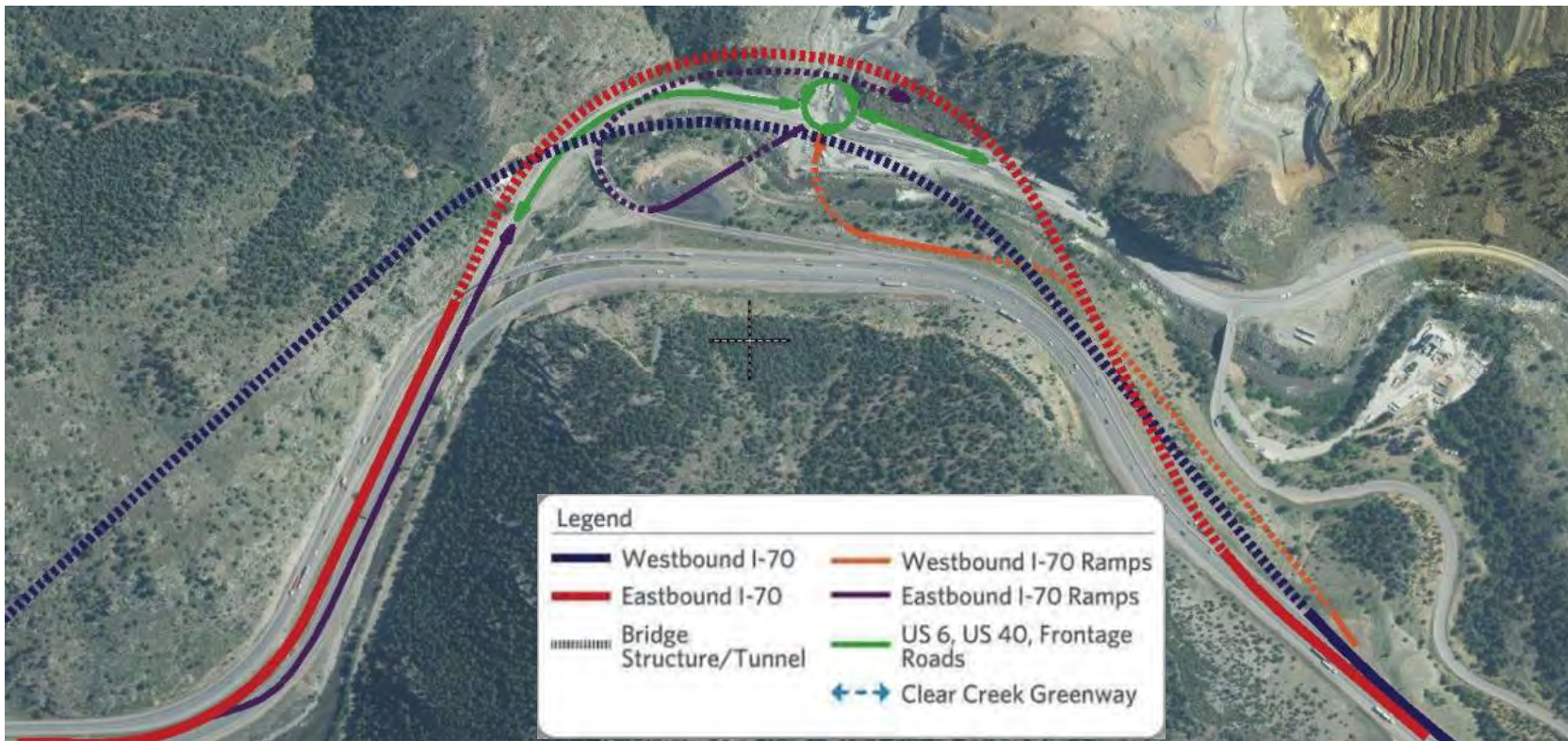


10 January 2018



# Opt 3: Full US-6 Interchange (Viaduct)

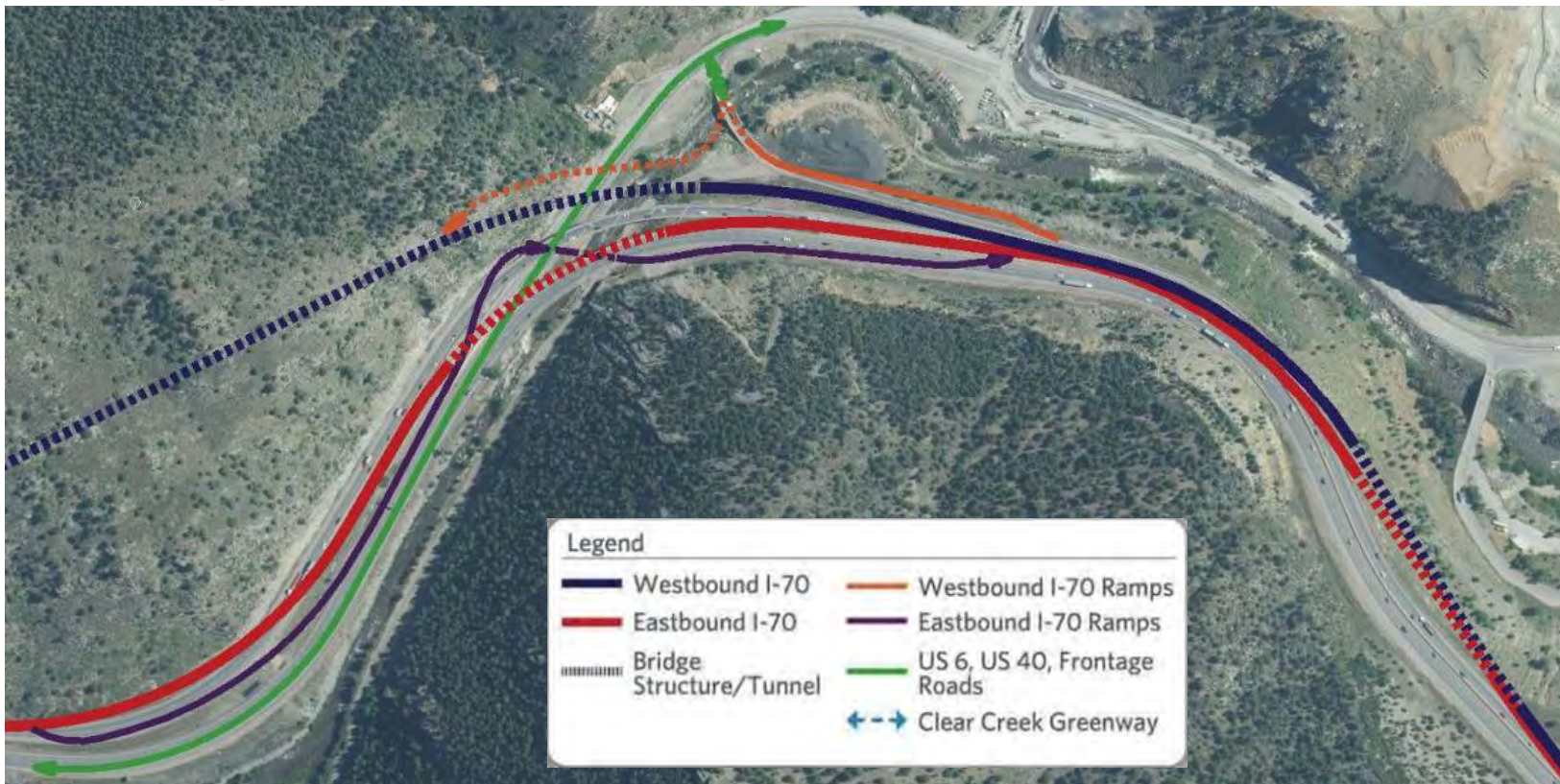
## Spiral





# Opt 4: Full US-6 Interchange (Low)

Existing + EB On

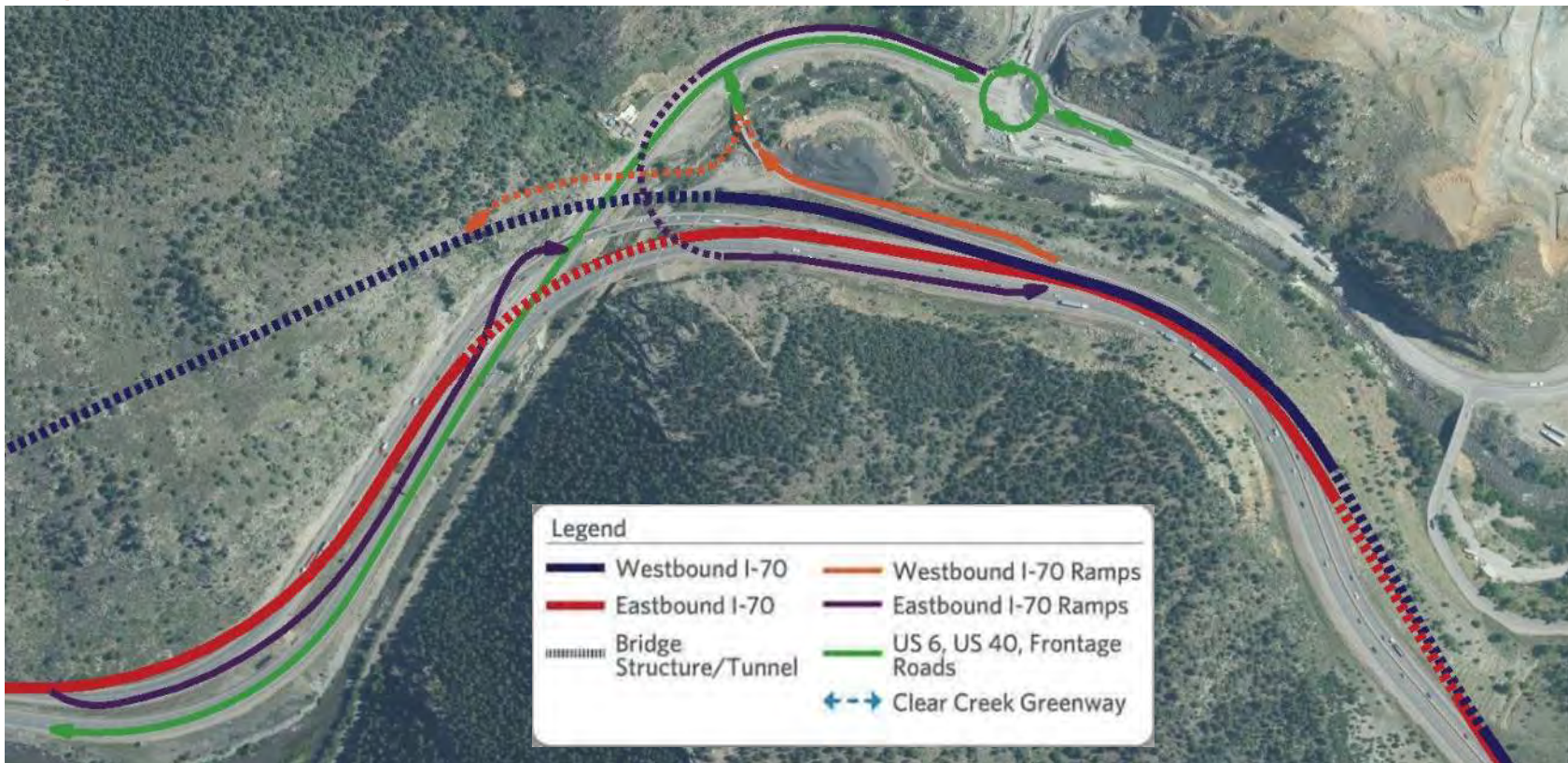


10 January 2018



# Opt 4: Full US-6 Interchange (Low)

## Flyover

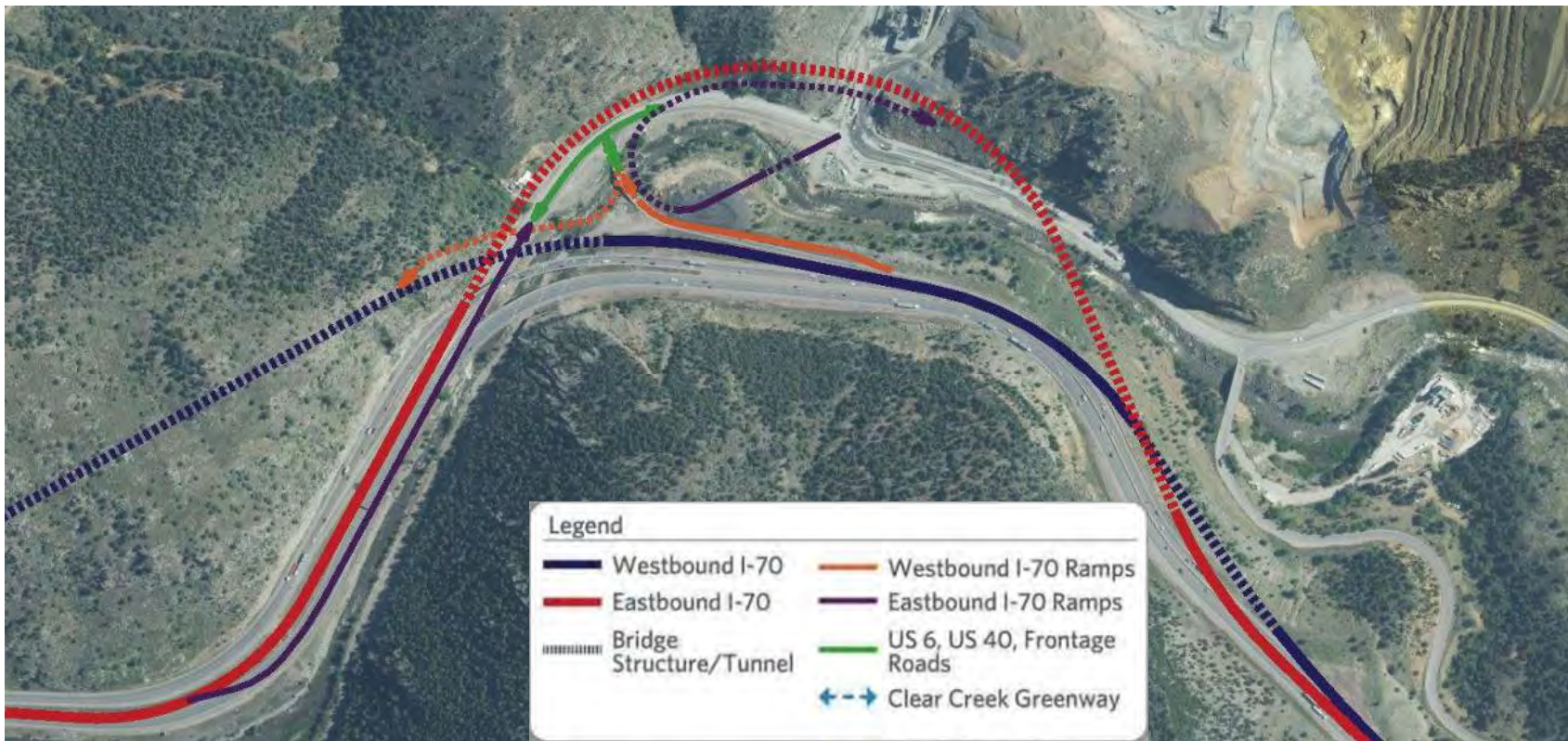


10 January 2018



# Opt 4: Full US-6 Interchange (Low)

## Spiral



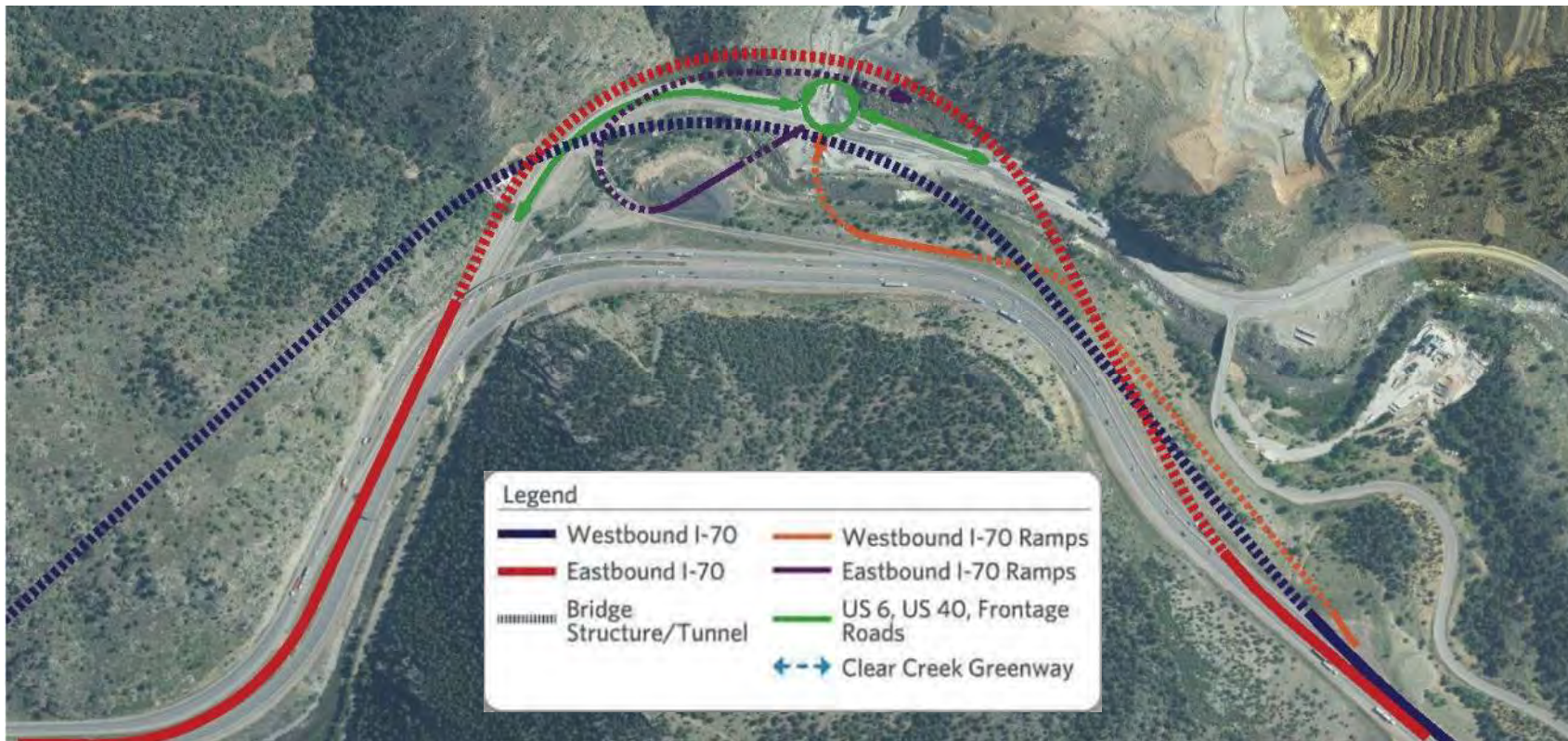
10 January 2018





# Opt 5: Half US-6 Interchange (Viaduct)

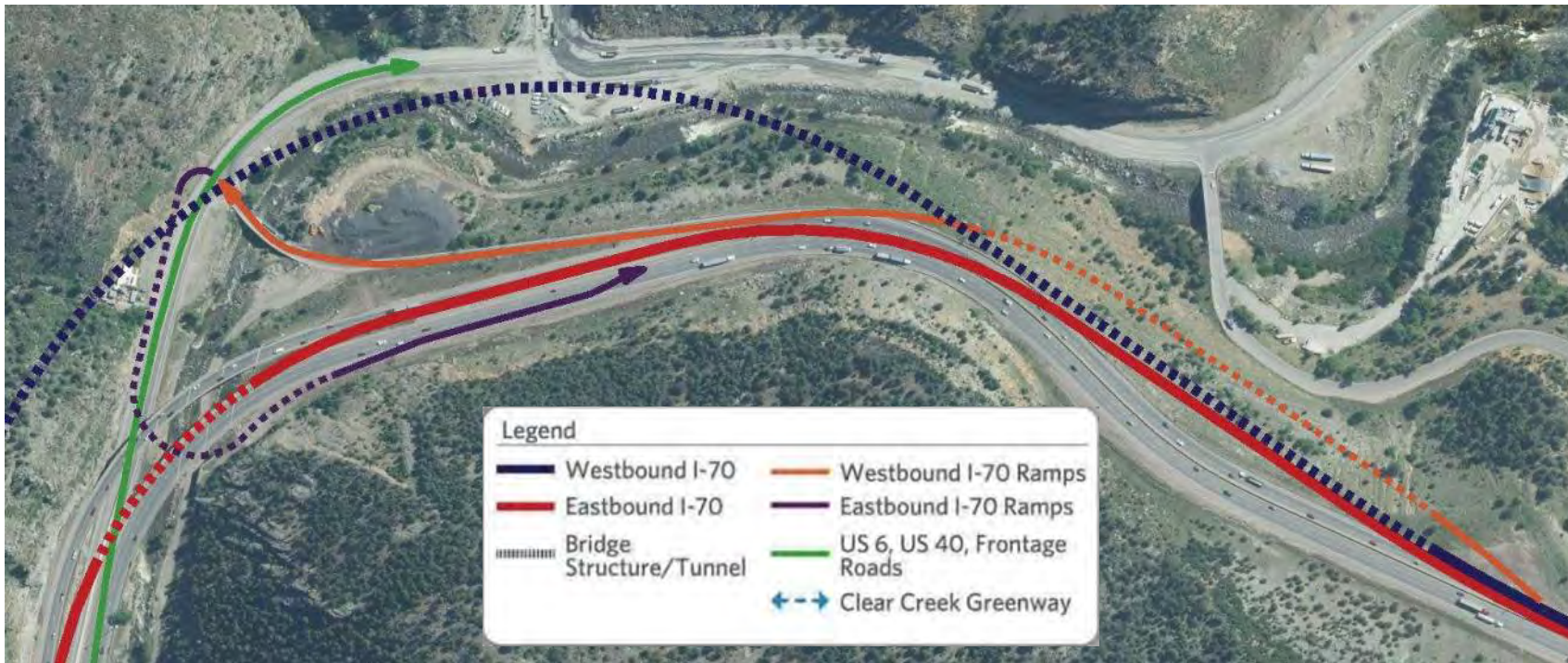
## Half Spiral



10 January 2018

# Opt 5: Half US-6 Interchange (Viaduct)

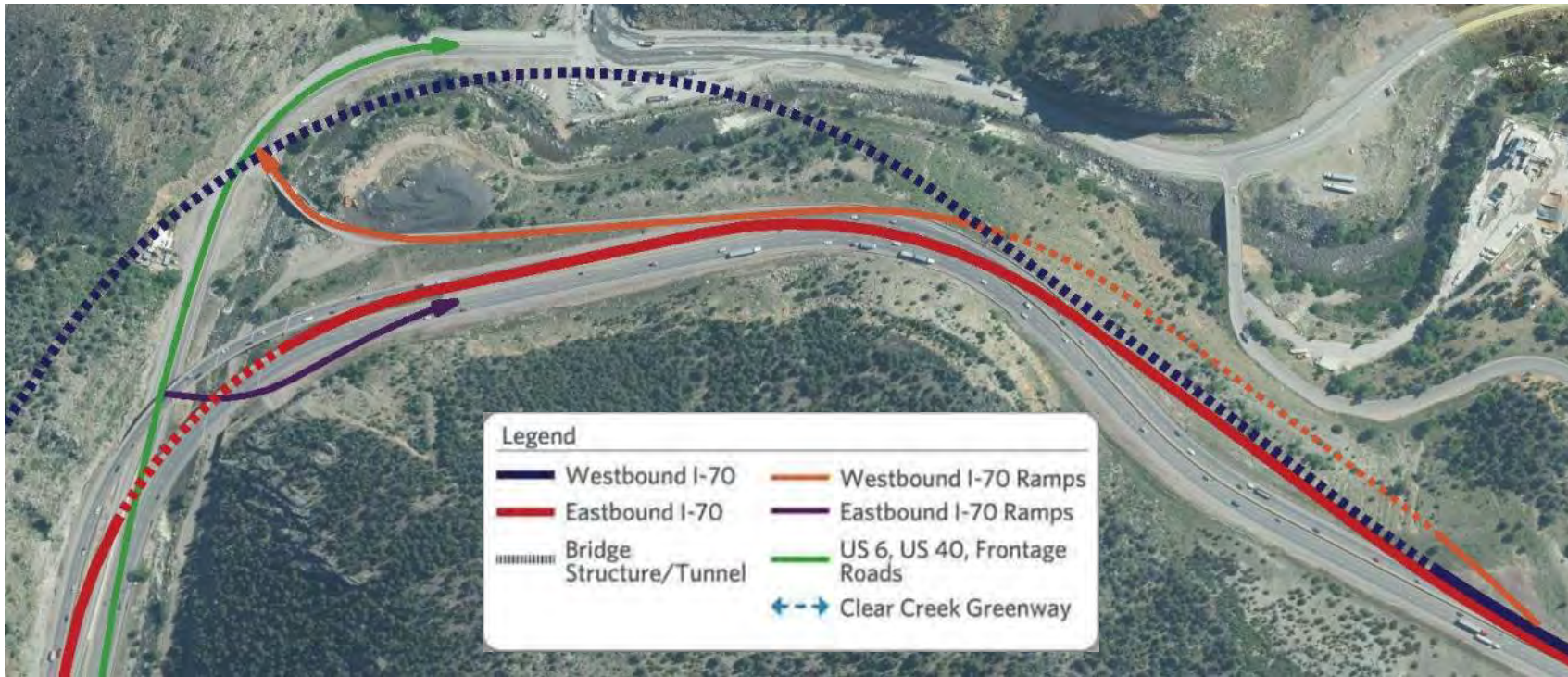
## Half Flyover





# Opt 5: Half US-6 Interchange (Viaduct)

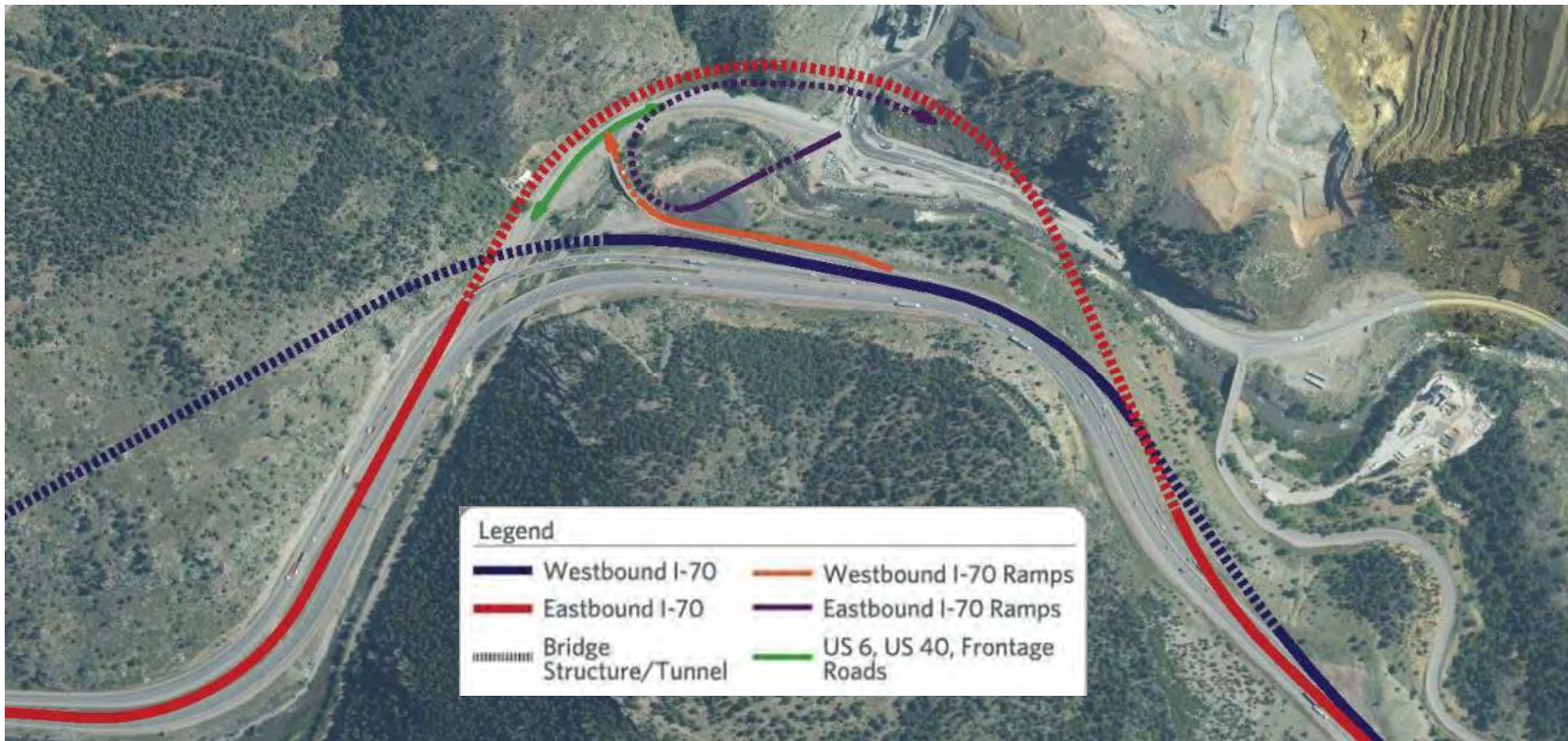
## Half Diamond





# Opt 6: Half US-6 Interchange (Low)

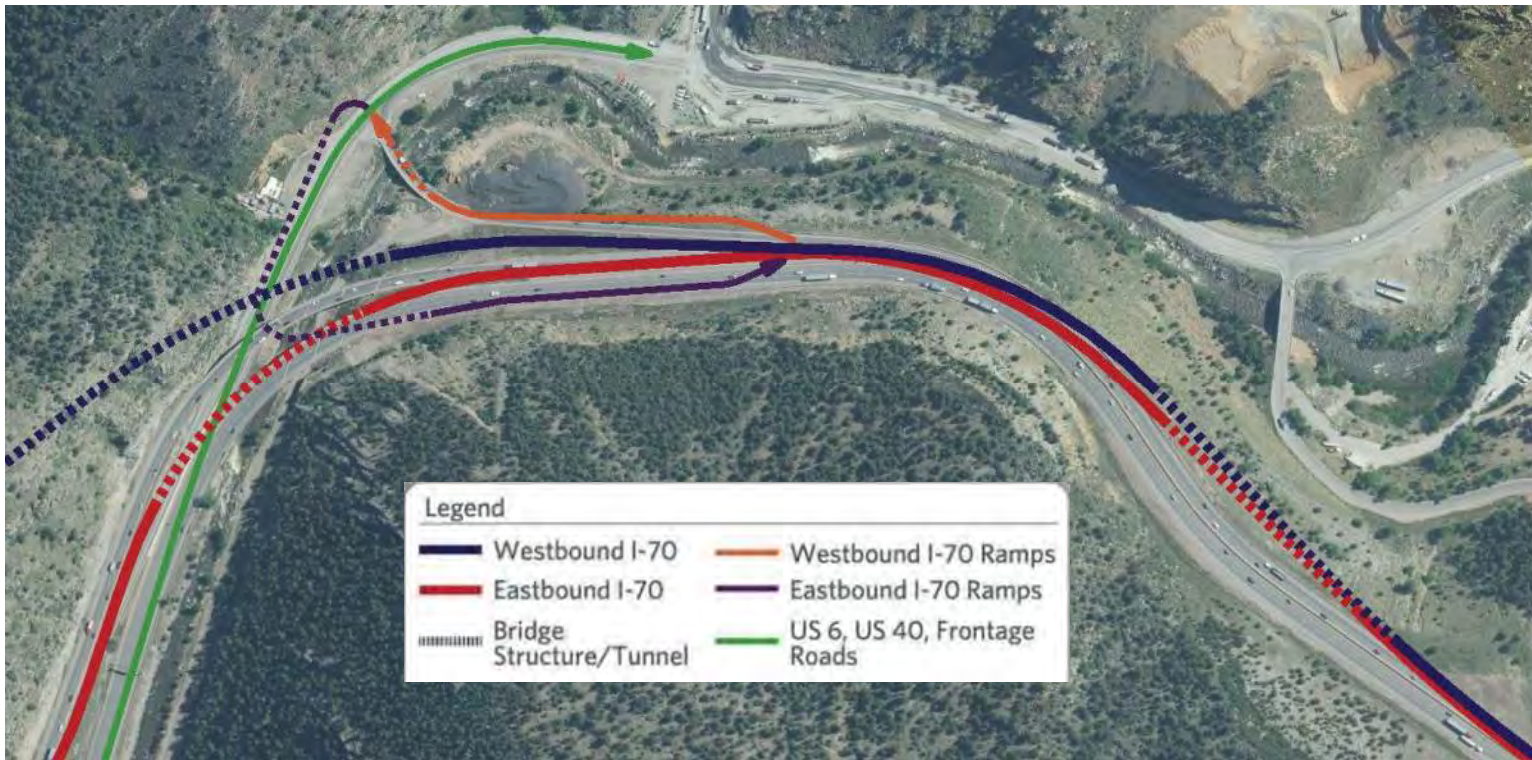
## Half Spiral



10 January 2018

# Opt 6: Half US-6 Interchange (Low)

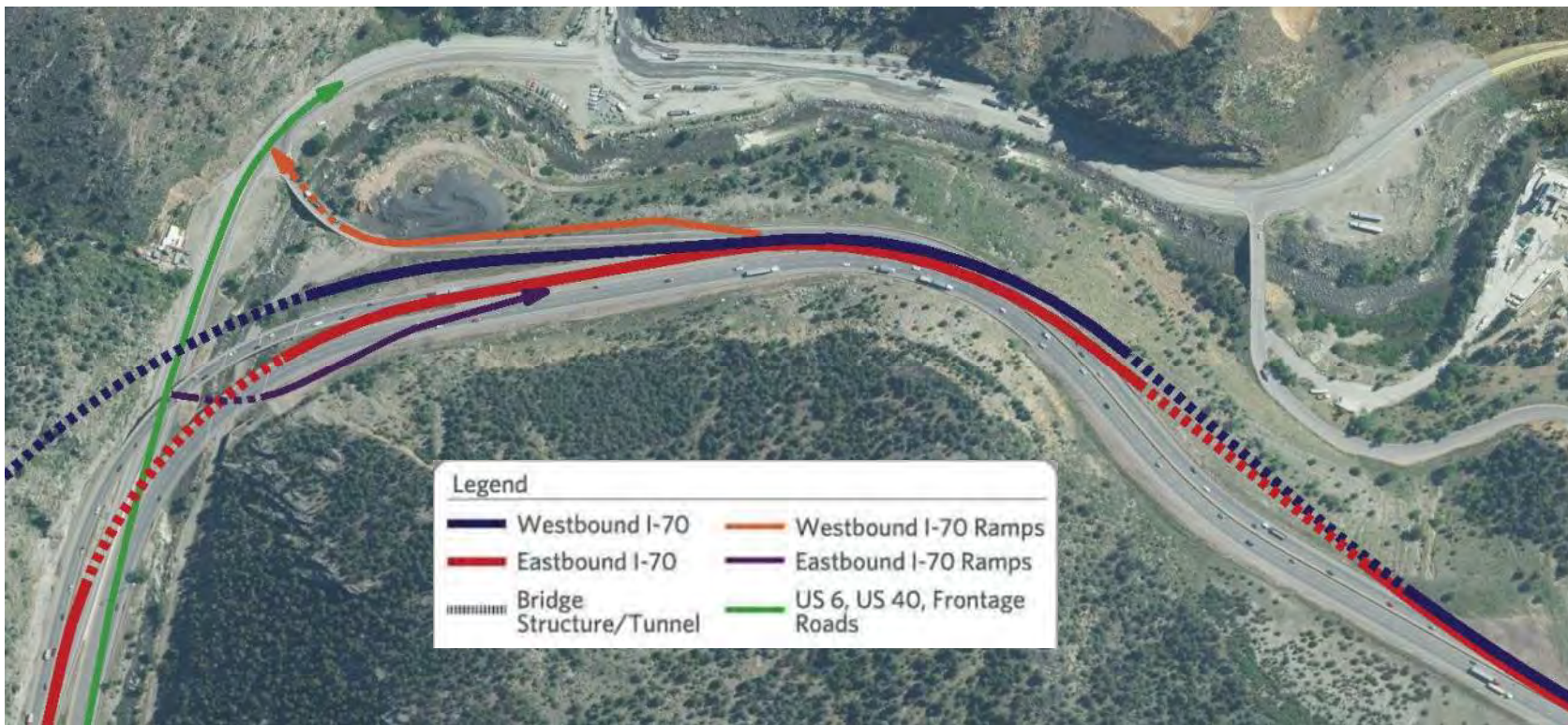
## Half Flyover



10 January 2018

# Opt 6: Half US-6 Interchange (Low)

## Half Diamond



10 January 2018

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** January 24, 2018

**Location:** CDOT – Golden

### **Technical Team - Meeting #7**

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

#### **Introductions and Overview**

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

#### **Outcomes from Meeting #6:**

- Presented and Agreed on Purpose and Need
- Update on Context Consideration ITF
- Review and TT Input on Interchange Location Options
- Development of “Pros and Cons” lists for each Interchange Option

#### **Project Updates**

**WB PPSL** – The TT met for the 11<sup>th</sup> time on January 24<sup>th</sup>; a PLT meeting is being scheduled to provide process direction to the TT.

**Fall River Road** – A scoping meeting is planned for the end of January.

**Vail Pass** - A PLT was held on January 17<sup>th</sup> and the first TT meeting will be held in early February.

**GeoHazard Mitigation** – Work will begin on February 20<sup>th</sup> with bridge deck rehabilitation at bottom of Floyd Hill at Kermitts and the Soda Creek road in Jefferson County

#### **Technical Team Schedule**

The TT reviewed the Technical Team issues schedule. It was noted that the alternatives evaluation schedule has been added.

## ITF Outcomes – Context Considerations

Kevin Shanks, THK Associates, outlined the process for incorporating input (public comments, TT, PLT and other) into the decision-making process. Kevin distributed a handout that included a new organization structure for the Context Considerations to better track input to decisions made. He noted that the charge of the Context Considerations ITF was to ‘do something’ with these comments and make them usable in the evaluation efforts, including defining the measures of success. However, the measures of success cannot be so specific that they point to only one alternative/answer.

Previously, the ITF had distilled the input into 23 Evaluation Questions related to Core Values and Critical Issues that would serve as the basis for tracking the comments. After further consideration, the ITF suggested a smaller number of questions and new Categories for the sake of clarity. The Evaluation Questions were narrowed to 18 and three new Categories were developed: 1) Items for a Different Process, i.e. outside the scope of this process 2) Design Checklist 3) Must Do. This is a living document that will be updated as necessary.

Following discussion of the organization of the input, Kevin distributed the revised CSS decision flow chart including the Context Statement, Core Values, Critical Issues, Evaluation Questions (Does the alternative...) and Measures of Success. The TT members discussed this and noted that a higher-level set of questions will be the primary tool for evaluation with the longer list of Context Considerations and questions as background.

**Agreement:** The TT indicated support for this approach and the ITF Recommendations. It was noted that this is still open for modification.

**Q:** Where does water quality (pg 4 of 6 – E9) fit into the measure of success, it doesn’t seem like what is shown here is sufficient? In looking at the Context Considerations and the matrix it is still not clear how the input connects to the measures of success.

“Accommodates SWEEP recommendations” as outlined is not enough. For wetlands, we also mention “Area of wetlands impacts” which also need to be added to Measures of Success, plus we need something like “enhances, water quality.” TT members asked other specific questions regarding how the input received related to the measures of success. The Project Staff encouraged the TT to provide additional comments prior to the next TT meeting on February 14th and to provide additional measures of success if needed, recognizing that the goal is to keep it brief and use the full list of comments as a reference document.

**ACTION:** TT members review and provide comment on the new organization of the context statements and how it has been translated into the document.

## Interchange Location Options and Evaluation

Anthony Pisano, Atkins, reviewed the US 6 Access Interchange options including the existing movements along with alignment options (Existing and Option A – E). He reviewed the TT feedback regarding the pros/cons for each option (See document attached).

The goal of the interchange location option review was to determine the location of the interchanges and whether they will 1) be kept the same, 2) be changed by adding ramps and other features or 3) be changed by removing ramps and other features at those locations.

TT discussion notes on the Interchange Options included the following.

### **Option A**

**Q:** Can the Greenway alignment be included on these diagrams? **A:** The Greenway will be on the south side of the river and the frontage road on the north side, in keeping with the Greenway Plan. There is not a lot of value in including this level of detail on these design maps.

Change the text from Pro - “Eliminate speed differentials from WB I70” to “**Reduces** speed differential.”

It was clarified that this is a big picture systems review, not an intersection issues review. Issues like a roundabout location will be examined during the design phase.

### **Option B**

This option conflicts with the AGS alignment, it should be “tossed out” as a result.

### **Option C**

Some TT comments included support for this option and others wondered about upgrading the CR 65 interchange with full movement. Anthony Pisano noted that once the traffic model is established the team will look at whether the traffic volume warrants a full interchange at CR 65. It was noted that if there was a full movement at CR65, it would handle Evergreen traffic.

**Q:** Is there a way to make an Option C1 that would look at this option (full movement at CR 65)?

This is a complicated option with expensive infrastructure and unknown impacts on other uses; visual/aesthetic impacts.

The ramps are confusing, TT members noted, but a full interchange is better for driver expectancy.



Add Pro – full interchange is better for driver expectancy.

Add Con – Visual impacts; Complicated design is confusing and worse for driver expectancy

### **Option D**

Add Pro - More room for recreation; Removes EB truck traffic from US 40

Add Con - May overload Hidden Valley with traffic coming from CO93 – US6 and there may need to be improvements at Hidden Valley; Doesn't meet driver expectancy with half-diamond

It was observed that the only option that addresses Exits 247 and 248 is Option A. There may be improvements at those interchanges that may have benefit in circulation below. Anthony Pisano noted that everything in Option A could be added to the other options. In this evaluation of US 6 Access, it doesn't mean that other options are off the table as we progress in the evaluation. Once we evaluate the movements at the US 6 interchange, we can look again at Exits 247 but 248 using the traffic numbers.

### **Option E**

Add Con - Impact to local streets; truck/ bike conflicts on US 40; out of direction for US 40

**ACTION:** Project Staff update the pro/con discussion list to refine the evaluation of the Floyd Hill concepts.

## **US 6 Access Options – Matrix Evaluation**

The TT discussed the Evaluation Matrix and indicated that in the future it is better to have the Project Staff hand out a matrix with some words in it (no colors) prior to the meeting to give the TT time to review and digest the information for the in-meeting discussions. The Project Staff were encouraged by the TT to reconcile the terms used in the Evaluation Matrix with the terms used in the CSS Flow Chart and ITF Chart so that measures of success are consistent with the ITF language.

A generic high-level systems principle was articulated by the TT: Ensure that traffic remains on I-70 – do not displace traffic to local streets; let people go to where they want to go but direct regional traffic to the interstate.

The TT used the Evaluation Matrix to begin evaluating the options and cross referenced the Context Considerations with the evaluation criteria and measures of success.

Comments were recorded in real-time on the Evaluation Matrix (**see attached**). The TT confirmed that this detailed, deep dive into the Evaluation Process and Matrix is an important exercise and want to walk through the matrix cell-by-cell.

CDOT suggested that TT members attend the next Evaluation Matrix meeting as an ITF. The following TT members volunteered: Neil Ogden, Vanessa Henderson (CDOT); Mike Raber (Bikeway); Lynette Hailey (I-70 Coalition and Black Hawk); Mitch Houston (School Board); Tim Mauck (CCC); Anthony Pisano (Atkins); Kevin Shanks and Julie Gamec (THK).

A concern was mentioned that we need to know what the Hidden Valley interchange capacity is before we know how to rank Options D and E. Will the fleet mix make a difference? We need to make sure we consider RVs and loaded trucks. The turns are tight. If US 6 traffic comes in along the frontage road, will it work?

**ACTION:** Evaluation Matrix ITF to reconcile language between the ITF, CSS Flow Chart and Evaluation Matrix documents.

**ACTION:** CDR to schedule an ITF meeting to conduct an initial evaluation of the US 6 Access Options and provide that summary to the full TT.

#### Next Steps:

- US 6 Access Options – Interchange Evaluation Matrix ITF – **Set for February 1 from 9am – 12pm.**
- Project Staff will send a new matrix out to the TT on Feb 7. **Please review and comment on this one.**
- Roadway Design Option Locations and Evaluation
  - Top of Floyd Hill to US 6
  - US 6 to Hidden Valley
  - Hidden Valley to VMT
- Integrate Roadway Design Options and Interchanges

#### Actions and Agreements

**ACTION:** TT members review and provide comment on the new organization of the context statements and how it has been translated into the document.

**ACTION:** Project Staff update the pro/con discussion list to refine the evaluation of the Floyd Hill concepts.

**ACTION:** Evaluation Matrix ITF to reconcile language between the ITF, CSS Flow Chart and Evaluation Matrix documents.

**ACTION:** CDR to schedule an ITF meeting to conduct an initial evaluation of the US 6 Access Options and provide that summary to the full TT.

## **Attendees**

Randy Wheelock, Tim Mauck, Cindy Neeley (Clear Creek County); Bill Coffin and John Muscatell (Community Reps from Floyd Hill); Lynette Hailey (I-70 Coalition); Sam Hoover (Central City); Mike Raber (CC Bikeway User Group); Tracy Sakaguchi (CMCA); Holly Huyck (CC Watershed Foundation), Amy Saxton (CCC Greenway); Mitch Houston (CCC School Board); Gary Frey (Trout Unlimited) Kelly Galardi (FHWA); Anthony Pisano, Carrie Wallis, Tyler Larson (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks, Julie Gamec (THK Associates); Neil Ogden, Kevin Brown, Vanessa Henderson, Steve Harelson (CDOT); Taber Ward, Jonathan Bartsch (CDR Associates)

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** February 14, 2018

**Location:** CDOT – Golden

### Technical Team – Meeting #8

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J00UNkNU0>

### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

### Outcomes from Meeting #7:

- Update on Context Consideration ITF
- CSS flow chart agreement
  - Asked for input on Measures of Success
  - Refined Pro/Con list for US 6 Access
- US 6 Access Location Options
- US 6 Access Locations Matrix
- Convened US 6 Access Options Matrix ITF (Feb. 1, 2018)

### Project Updates

**Region 3 Vail Pass** – TT Meeting #1 convened.

**Bridge deck repair at Soda Creek and Floyd Hill Bridges** – Likely going to advertise for construction during the week of 2/19.

**WB I-70 PPSL** – The TT met for the 12<sup>th</sup> time on February 14. TT to move into foot by foot review of conceptual designs.

### CSS Process

The CSS Process flow chart was reviewed by the TT. Comment was made that not all of the suggestions from the last meeting may have been added.

**ACTION: THK** - Double check CSS flowchart and ensure all comments are integrated.

**ACTION: CDR** – Send updated CSS Process to TT

## Technical Team Schedule

The TT reviewed the Technical Team issues schedule.

**TT Agreement:** The Recommended Proposed Action has been added as a flag to the TT schedule at the end of March.

## Outcomes from Issue Task Force Meeting

The ITF met on February 1, 2018 to complete the Evaluation Matrix for US 6 Access Interchange Options. Members of the ITF included Amy Saxton, Tim Mauck, Mike Raber, Mitch Houston, Kelly Galardi, Neil Ogden, Vanessa Henderson, Anthony Pisano, Julie Gamec, Jonathan Bartsch

The ITF Matrix Recommendations were reviewed and revised during the TT meeting.

## US 6 Access Interchange Options Evaluation Matrix Review Fair, Better, Best Options Ranking Activity

Anthony Pisano, Atkins, reviewed the US 6 Access Interchange options including the existing movements along with alignment options (Existing and Options A – E).

- Existing
- Option A: Close existing US 6; move US 6 to top of Floyd Hill
- Option B: Close existing US 6; move US 6 halfway up Floyd Hill
- Option C: Full interchange at US 6
- Option D: Half diamond at US 6 (WB off/EB on)
- Option E: Quarter diamond at US 6 (WB off)

US 6 Access Interchange Options Evaluation Matrix ITF recommendations were distributed and reviewed by the TT. Comments were recorded in real-time on the Evaluation Matrix (see attached).

The TT confirmed that this detailed, deep-dive into the Evaluation Process and Matrix is an important exercise and want to walk through the matrix cell-by-cell. Options were colored in according to fair (white)/better (yellow)/best (green) for each cell.

Specific discussions by criteria is included below. Criteria that had general agreement for coloring is not included.

### **Criterion #1: Accommodate emergency access and response?**

**Q.** Cindy Neely - Sometimes the evacuation time discussed related to FH, sometimes it discussed evacuation times from Gilpin County. This makes it hard to compare – not apples to apples.

**A. CDOT/THK** - These are competing interests, and an attempt to capture all views. We may need to keep the evaluation at a higher level rather than focusing on small details.

**Resolution:** Criterion #1 was split into 1a and 1b based on location to aid in evaluation.

**1a.** Emergency egress

**1b.** Emergency evacuation

### **Criterion # 4: Address safety of the traveling public and trucks?**

TT discussed weights of vehicles and permits needed on different roads – CMCA indicated the limit is 80,000 pounds on the interstate.

**ACTION: Tracy Sakaguchi** – check overweight permits on US 40 to determine if heavily loaded trucks are prohibited from using US 40.

### **Criterion #17: Protect Historic and Archaeological Resources**

It was noted that there is a difference between actual sites and potential sites. This evaluation will need to be revisited when all of the historical/archeological data is in. Actual listed sites have a much higher weighting than the potential sites and the matrix should note which of the sites in the matrix are actually listed and which are potential.

**ACTION** THK/Atkins - Need to include where the historical data came from, i.e. SHPO database.

**TT Agreement:** Historical status and evaluation will be reconsidered in the future when the data is complete.

### **Issue specific questions in the Matrix:**

**Criterion #1:** Address safety of the interstate facilities? Criterion was changed to clarify that this question is evaluating the safety of on/off ramps. Changed the question to better address the issue.

**TT Agreement:** Change Issue Specific Criterion #1 to: “Address weaving issues on the interstate?”

### **Criterion #2: Address safety of the interchanges?**

TT discussed the issues of driver expectation and complexity of interchanges.

**TT Agreement:** Change Issue Specific Criterion #2 to: “Address driver expectancy and operations of the interchanges?”

The ITF noted that the last three evaluation criteria were crossed out because these were redundant and captured elsewhere, or not applicable.

**TT Agreement:** Add back in “Meet Multiple Use Objectives” criterion.

### Recommended US 6 Access Interchange Option

- The colored matrix was reviewed by the TT. The TT was charged to narrow down the options to one or two to carry forward and begin focusing on roadway connection and design details.
- This does not mean that the other options are eliminated, and pieces of the other options may be included in the recommended option as design progresses.

**TT Agreement:**

- The TT indicated support for the advancement of **Interchange Access Option D** into further design refinement to combine with Roadway Design Options.
- **Full movement at Beaver Brook** should also be considered.

**ACTION:** The Project Staff will develop a Matrix Summary Statement to provide the reasoning and justification of why the TT chose to advance Option D, and why other options are not being recommended at this time. This will be provided to the TT at the next meeting for their review.

### Roadway Design Options

Anthony Pisano, Atkins, reviewed the Roadway Design Options by location (East, Central, and West).

- East (Top of Floyd Hill to US 6)
  - Widen to the south
- Central (US 6 to Hidden Valley)
  - High viaduct with Bench
  - Low viaduct with Tunnel
  - Widen on existing
- West (Hidden Valley to VMT)
  - Tunnel
  - Rock Cut

TT discussion notes, including pros and cons, on the Roadway Design Options included the following.

### **East (Top of Floyd Hill to US 6) - Widen to the South**

**Need to document compliance with design criterion of moving into the median barrier. TT noted that there may need to be some north side expansion, maximization of widening template.**

#### **Cons**

- Some concerns with the amount of space available for this option
- Concerns with aesthetics if a lot of walls are needed

### **Central (US 6 to Hidden Valley) - High viaduct with Bench**

**Height of viaduct is 150-200 feet above the creek and approximately 3,000 feet long. Since there is variable terrain, may end up with small bridges (need to optimize profile). The height is due to the terrain and desire for a bench. A lower option works, but only with a tunnel. Middle ground would be difficult to construct.**

#### **Pros:**

- Provides the opportunity to open up land, maybe only a 2-phase project rather than 10 phases. Easier MOT potentially.
- Simplistic and keeps out of traffic (even with blasting)
- No tunnel maintenance

#### **Cons:**

- How long is the viaduct, would it support oversize/overweight/hazmat vehicles?
  - It currently is an oversize/overweight route. Currently trucks are not allowed on the I-70 East viaduct, so this may be a concern.
- Bridge maintenance costs
- Interchange configuration and interference
- Visual impact of piers and rock cuts
- Piers may impact creek access (currently spaced at 250 feet)
- Maintenance concerns and snow removal (where does the snow go? Will it fall on people below?)
- Future expansion opportunities

### **Central (US 6 to Hidden Valley) - Low viaduct with Tunnel**



## **Tunnel would be approx. 2,200 feet long.**

### **Pros:**

- Interconnectivity with existing interchange.
- Less bridge maintenance costs.
- May be able to use some of the existing infrastructure/ramps going into the tunnel.
- Comes out of the tunnel close to existing grade.
- Bridge maintenance costs lower.
- No snow falling on people.

### **Cons:**

- Trucks may be excluded from tunnel. May need hazardous materials route, which would probably be along frontage road or existing alignment.
- Trucks concerned about tunnel length.
  - Consider jet fan option
- Need to consider height of tunnel for oversize/overweight
- Tunnel maintenance costs higher.

## **Central (US 6 to Hidden Valley) – Widen on existing**

- Not reviewed.

### **General TT comments:**

For the next TT, concept designs should include frontage road, Greenway and Interchange Option D.

### **Next Steps:**

- Integrate Roadway Design Options with Interchange D.
- A full movement at Beaver Brook, Greenway and a frontage road will be included in these designs.
- TT to review and provide feedback on integrated option.

### **Actions and Agreements**

**ACTION: THK** - Double check CSS flowchart and ensure all comments are integrated.

**ACTION: CDR** – Send updated CSS Process to TT

**ACTION: Tracy Sakaguchi** – check overweight permits on US 40 to determine if heavily loaded trucks are prohibited from using US 40.

**ACTION THK/Atkins** - include where the historical data came from, i.e. SHPO database.

**ACTION: Project Staff** - will develop a Matrix Summary Statement to provide the reasoning and justification of why the TT chose to advance Option D, and why other options are not being recommended at this time. This will be provided to the TT at the next meeting for their review.

**ACTION: Design Team** – integrate Roadway Design Options with Interchange D. Include a full movement at Beaver Brook, Greenway and a frontage road in these designs.

**TT Agreement:** The Recommended Proposed Action has been added as a flag to the TT schedule at the end of March.

**TT Agreement:** Change Issue Specific Criterion #1 to: “Address weaving issues on the interstate?”

**TT Agreement:** Change Issue Specific Criterion #2 to: “Address driver expectancy and operations of the interchanges?”

**TT Agreement:** Historical status and evaluation will be reconsidered in the future when the data is complete.

**TT Agreement:** Add back in “Meet Multiple Use Objectives” criterion.

**TT Agreement:**

- The TT indicated support for the advancement of **Interchange Access Option D** into further design refinement to combine with Roadway Design Options.
- **Full movement at Beaver Brook** should also be considered.

**Attendees**

Randy Wheelock, Tim Mauck, Cindy Neeley (Clear Creek County); Bill Coffin and John Muscatell (Community Reps from Floyd Hill); Scott Haas (USFS); Sam Hoover (Central City); Mike Raber (CC Bikeway User Group); Tracy Sakaguchi (CMCA); Holly Huyck (CC Watershed Foundation); Stephen Stohminger, Daniel Horn (Gilpin County); Patrick Holinda (Bridge Enterprise) Amy Saxton (CCC Greenway); Wendy Koch (Town of Empire); Gary Frey (Trout Unlimited); Steve Cook (DRCOG); Kelly Galardi (FHWA); Neil Ogden, Kevin Brown, Vanessa Henderson, Steve Harelson, Bob Smith (CDOT); Anthony Pisano, Carrie Wallis, Tyler Larson (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks, Julie Gamec (THK Associates); Taber Ward (CDR Associates)



# I-70 Floyd Hill 30% Design

## Technical Team Meeting #9

February 28, 2018

CDOT I-70 Mountain Corridor



**I-70 Floyd Hill to  
Veterans Memorial Tunnels**

# AGENDA

1. INTRODUCTIONS AND OVERVIEW
  - Outcomes from TT #8
2. PROJECT TT CHARTER
3. RESPONSES TO TECHNICAL TEAM ISSUES
4. OUTCOMES FROM ISSUE TASK FORCE MEETINGS
5. OUTREACH SUMMARY
6. FOLLOW UP
  - US 6 Access Options Summary Statement
7. DISCUSS PROPOSED SOLUTIONS
  - Alignment Options
8. OUTSTANDING ISSUES
9. DEVELOP CRITERIA FOR:
10. NEXT STEPS
  - Parking Lot



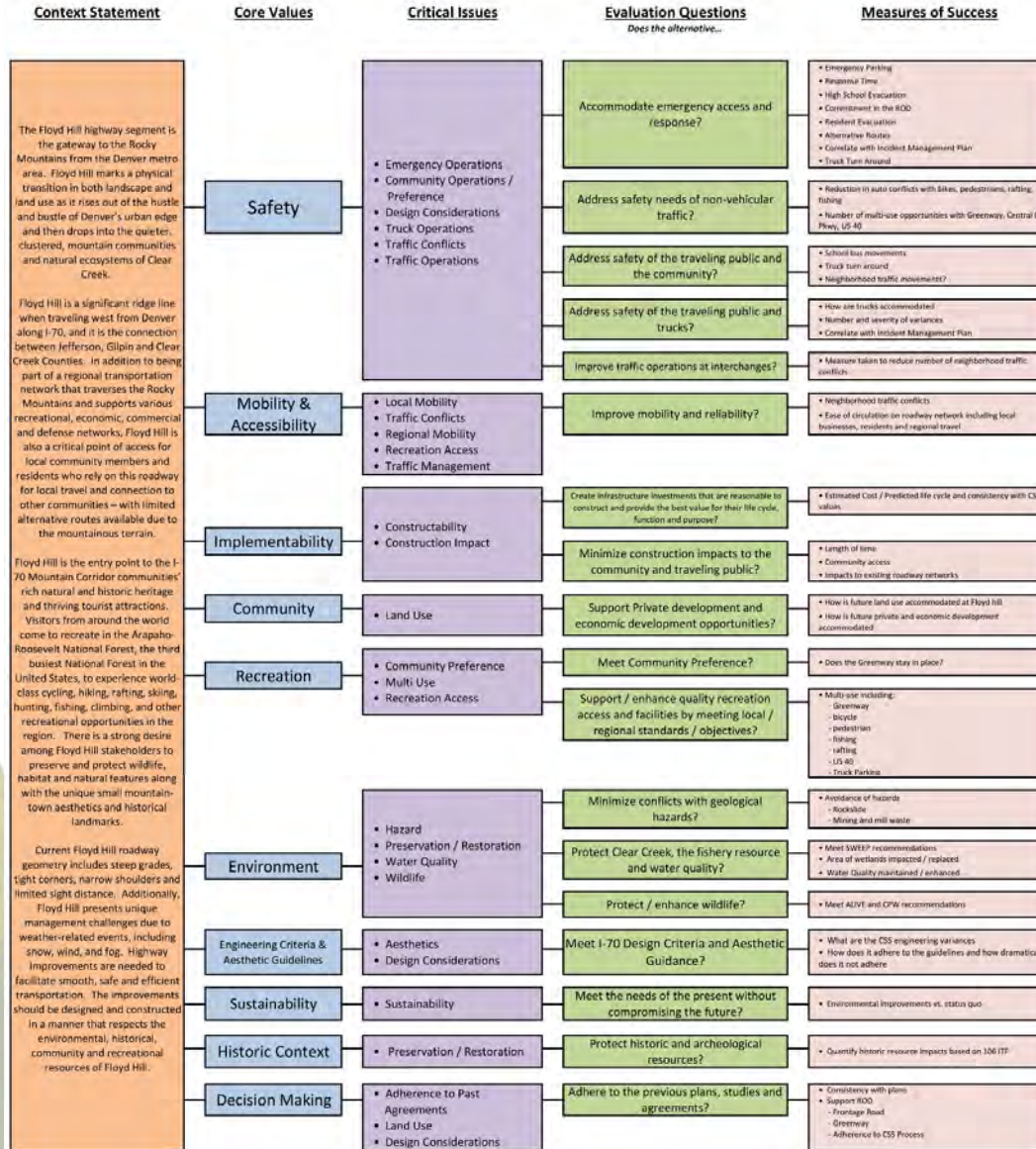
# INTRODUCTIONS AND OVERVIEW

## OTHER PROJECT EFFORTS

- Westbound PPSL
- Region 3 Vail Pass
- Idaho Springs Transit Center
- Colorado Boulevard Reconstruction
- Clear Creek Greenway
- Fall River Road Bridge
- Smart 70 / RoadX
- Geohazard Mitigation Program
- Bridge deck repair at Soda Creek and Floyd Hill Bridges
- Recreation Management Symposium
- Variable Speed Limit Concept of Operations



# CSS PROCESS









**FOLLOW UP**

## OUTCOMES FROM TT #8

- US 6 Access Locations Matrix Review
- US 6 Access Locations Matrix fair, better, best ranking
- Recommendation of moving the design of Option D forward

# US 6 ACCESS LOCATIONS MATRIX SUMMARY STATEMENTS

- **Option A:** Not recommended for further evaluation at this time for the following reasons:
  - Increases truck and gaming traffic on US 40 conflicting with neighborhood and bicycle traffic and high school athletics
  - Not consistent with Clear Creek County Master PlanHowever, will evaluate the potential need for a full diamond interchange at the top of Floyd Hill (Beaver Brook) as a part of the Proposed Action.
- **Option B:** Not recommended for further evaluation at this time for the following reasons:
  - Substantial visual, environmental and geologic impacts
  - Not consistent with Clear Creek County Master Plan
  - Requires significant infrastructure
  - Potential conflicts with the AGS

## US 6 ACCESS LOCATIONS MATRIX SUMMARY STATEMENTS

- **Option C:** Not recommended for further evaluation at this time for the following reasons:
  - Substantial visual, environmental and geologic impacts
  - Substantial impacts to the traveling public during construction
  - Requires significant infrastructure
  
- **Option D:** RECOMMENDED to be evaluated as a part of the Proposed Action. This option provides the following benefits:
  - Minimizes visual, environmental and geologic hazards.
  - Balances access at the US 6 interchange with maintaining area at bottom of Floyd Hill for recreational uses
  - Reduces truck and gaming traffic at the top of Floyd Hill.

## US 6 ACCESS LOCATIONS MATRIX SUMMARY STATEMENTS

- **Option E:** Not recommended for further evaluation at this time for the following reasons:
  - Similar to Option D but eliminates the EB on ramp at US 6.
  - Increases truck and gaming traffic on US 40 conflicting with neighborhood and bicycle traffic and high school athletics



# DISCUSS PROPOSED SOLUTIONS

➤ **ROADWAY DESIGN OPTIONS BY  
LOCATION:**

- **West (Hidden Valley to VMT)**
- **Central (US 6 to Hidden Valley)**
- **East (Top of Floyd Hill to US 6)**

➤ **ROADWAY DESIGN OPTIONS**

- **Pros / Cons Activity**
- **Issue Specific Criteria**



## NEAR TERM NEXT STEPS

- **Convene ITF for Roadway Design Options Matrix – Friday, March 2, 2018 (9:00am to 12:00pm) CDOT Golden**
- **Discuss ITF recommendations**
- **Identify other project decision points**
- **Create a Project Vision Map**



# NEXT STEPS

- **FUTURE TT MEETINGS**
  - **SCHEDULE FOR FUTURE TT MEETINGS**
  - **2<sup>ND</sup> AND 4<sup>TH</sup> WEDNESDAYS**
  - **1 PM TO 4 PM**
  
- **NEXT MEETING MARCH 14, 2018**
  
- **SCHEDULE SECTION 106, SWEEP AND ALIVE MEETINGS SPRING 2018**
  
- **DATA COLLECTION AND ANALYSIS (ALL RESOURCES)**
  
- **PUBLIC MEETING (SUMMER)**
  
- **PROJECT WEBSITE:**

<https://www.cdot.gov/projects/i-70-Floyd-hill-to-veterans-memorial-tunnels-improvements>

## PARKING LOT

- **Lane striping differentiation between acceleration / deceleration lanes and EB PPSL**

# Meeting Notes



**Date:** March 14, 2018

**Location:** CDOT – Golden

## **Technical Team – Meeting #10**

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

### **Introductions and Overview**

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

### **Project Updates**

**WB PPSL** – Conceptual Plans have been developed and a workshop with the PLT and TT is scheduled for April 10 to review the plans.

**Smart70** – The second PLT has been held. The initial project includes five roadside detectors and implementation is planned for later this year including testing of software/hardware on roadside connected vehicles.

**R3 Vail Pass** – The third TT meeting has been held; working on concept designs

**GeoHazard Mitigation** – Conducted CC canyon rock scaling; using a drape and mesh technique. Will achieve the May 1 deadline for Phase 1

**Bridge Repair Work** – Opening bids soon, likely a 6 week effort.

**Greenway** – Completing the RAMP projects; Georgetown section is advancing and Idaho Springs is ready to go to bid for their section (\$1 million from GOCO).

**Idaho Springs Transit Center** – working to identify the appropriate site.

**Colorado Blvd** – On schedule, with an August 2018 completion date.

## CSS Process

The CSS Process flow chart was updated after the last meeting. No changes were suggested.

## Technical Team Schedule

The TT briefly reviewed the schedule. It was noted again that the goal is to move the TT meetings to once a month this Spring to allow for technical work to occur between meetings. The target date for the major design component recommendations are by the end of April.

## Outcomes from TT #9

The Outcomes from TT meeting #9 were reviewed including:

1. Agreed to move forward Option D from US 6 Access Options Matrix
2. Provided updates and feedback to US 6 Access Options Matrix
3. Identified pros and cons for Roadway Design Options in West and Central Sections
4. Recommended ITF for Roadway Design Options Matrix

**ACTION:** Resend the Agreed upon US 6 Access Options Matrix to the TT

## Roadway Design Option ITF - Matrix Evaluation for Central Alignment Options

The TT reviewed the evaluation language developed during the Roadway Design ITF (March 8) for the Central Alignment. Minor language changes were suggested to the document and the group collectively ranked each of the options by applying color and recommended Option B for this segment. Central Alignment Option Matrix is located in the [Shared Project GDrive](#).

## Discussion Notes

It was clarified that all roadway design options include a frontage road, as specified in the ROD.

Emergency response vehicles may need to go the ‘wrong way’ to access accidents for each of the options. There is a need for emergency vehicles to be able to turn a different direction with any of the options.

The project team is not designing the roadway for ‘super loads’ or overload capacity. Additionally, the State Fire Marshal, CO Division of Fire Safety determines whether hazmat

vehicles can travel through tunnels. The impact of heavy vehicles must be taken into account for the frontage roads.

Evaluation Question “Create infrastructure investments that are reasonable to construct and provide the best value ....” - Consider reducing the number of variables for this question, the TT often gets stuck on this.

A concern was expressed regarding the visual and operational impacts on CC Parkway for Option C, if it would move forward.

A discussion regarding water quality and snow removal/de-icing occurred; a concern regarding the use of de-icing materials on riparian habitat was expressed.

**AGREEMENT:** The TT agreed to move forward with Option B: Low Viaduct with Tunnel for Central Alignment Options based on the discussion and evaluation.

### **Roadway Design and Interchange Next Steps**

The design team will integrate the East segment and Central Alignment segment (Option B low viaduct with tunnel) with the preferred US 6 interchange option (Option D). In addition they will analyze the Hidden Valley operations (incorporating traffic numbers), outline the frontage road route and consider intersection needs at the top of Floyd Hill - with and without Jefferson County Road 65 option. Additionally, an eastbound climbing lane will be evaluated to determine if it makes a significant operational difference. This information will be available in late April or in early May.

An ITF will be formed to develop the West Roadway Alignment option evaluation. There is a need to determine what information is needed for this exercise, in able to move forward.

### **Shared Corridor Vision Map Review**

The TT reviewed a Shared Corridor Vision map which outlined elements identified as important to TT members, regardless of the implementation responsibility. Shared Corridor Vision Map is located in [Shared Project Gdrive](#).

### **Discussion Notes**

#### Hidden Valley

Idaho Springs is promoting small trailhead parking areas (for 3-10 parking spaces each) to spread out parking along the Greenway. Would like the design team to look at areas where we can get that type of parking.

## US 6

From the top of FH to the bottom at US 6 there will be a major mountain bike area (north/south movement) that should be considered as part of this map.

## US 40

Q: Why are there no road bike options or improvements from top/bottom of FH. A: There are improvements anticipated by adding the EB on-ramp at the bottom of the hill; this will take cars/trucks off of US 40. It was noted that the current route is circuitous and out of direction.

Q: Will there be a new erosion control and sediment plan developed? A: This is a component of the 2005 Greenway Plan, the goal is to look at it holistically - boating, fishing, parking, bathrooms together.

**ACTION:** Amy Saxton will share the 2005 Greenway plan with the TT.

A discussion of private property access occurred, particularly properties between the bottom of Floyd Hill and Hidden Valley. Current access to these properties was discussed along with questions about the project's obligation to provide future access.

Q: Are we required, as part of this project, to provide physical access to these properties? We would rather not have Greenway be a roadway. A: the project cannot eliminate access without mitigation.

**ACTION:** Project Staff will gather more information about the existing private property sites and consider access options. Private property access will be added to the schedule.

**Suggestion:** Consider additional EB I-70 exit signage at the top of Floyd Hill, especially for trucks as they have gotten stuck in the school parking lot (damaging a fire hydrant).

Q: Why are trucks using Jeff Co. CR 65? A: Faster route for cement trucks.

## **Next Steps**

**Next TT meeting on April 11th.** No TT meeting on March 28th.

**Roadway Design:** an ITF will be scheduled for the West Alignment. West Alignment options were discussed including the need for additional data to be able to evaluate the options.

The TT suggested a check-in with the PLT after the project 'comes together' more. A May PLT meeting was suggested, depending on what the TT can accomplish in April.



SWEEP and ALIVE meetings have been scheduled.

### Action Items

**ACTION:** Resend the Agreed upon US 6 Access Option to the TT

**ACTION:** Amy Saxton will share the 2005 Greenway plan with the TT.

**ACTION:** Project Staff will gather more information about the existing private property sites and consider access options. Private property access will be added to the schedule.

**AGREEMENT:** The TT agreed to move forward with Option B: Low Viaduct with Tunnel for Central Alignment Options based on the discussion and evaluation.

### Attendees

JoAnn Sorenson, Cindy Neely (Clear Creek County); Bill Coffin and John Muscatell (Community Reps from Floyd Hill); Sam Hoover (Central City); Mike Raber (CC Bikeway User Group); Tracy Sakaguchi (CMCA); Gary Frey (Co Trout Unlimited); Wendy Koch (Empire); Stephen Stohminger, Daniel Horn (Gilpin County); Mike Hillman, Andrew Marsh, Jonathan Cain (Idaho Springs); Patrick Holinda (Bridge Enterprise) Amy Saxton (CCC Greenway); Wendy Koch (Town of Empire); Gary Frey (Trout Unlimited); Mitch Houston (CCSD); Kelly Galardi (FHWA); Neil Ogden, Kevin Brown, Vanessa Henderson, Steve Harelson, Bob Smith, Stacia Sellers, Christina Lacombe (CDOT); Anthony Pisano, Carrie Wallis, Tyler Larson (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks, Julie Gamec (THK Associates); Jonathan Bartsch Taber Ward (CDR Associates)

# Meeting Notes



**Date:** April 25, 2018

**Location:** CDOT – Golden

## **Technical Team – Meeting #11**

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

### **Introductions and Overview**

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

### **Project Updates**

**WB PPSL** – WB PPSL is making progress. The goal is advertising in late 2018 or early 2019.

**GeoHazard Mitigation** – Will achieve the May 1 deadline for Phase 1.

**Q:** Will there be a document regarding the GeoHazard program, specifically interested in communications and procedures? **A:** The project team will write one.

**ACTION:** CDOT will follow up with a report from the Clear Creek GeoHazard project.

**Bridge Repair Work** – The project has been awarded and is expected to start in late May.

### **Technical Team Schedule**

The TT briefly reviewed the schedule. Meetings will be moved to once a month starting in May. The next meeting is scheduled for May 23.

## Outcomes from TT #10

The Outcomes from TT meeting #9 were reviewed including:

1. TT agreed to Option B (low viaduct with tunnel) for central section roadway option
2. TT agreed upon shared vision map

## Project Report Outs

**Section 106 ITF Meeting** - Historical context, mining and tunnel exploration are being captured in the 106 Report. The group is reviewing noise impacts in the Saddleback Subdivision. The historic survey is in process, and the next meeting will be late summer or early fall when the Proposed Action is more defined and preliminary eligibility and effects are available.

- **106 Maps** – There was a request for more information about the significance and threat to an archeological site near Hidden Valley

**ACTION:** Atkins to follow up with archeological site near Hidden Valley (Note, this was done later in this same meeting.)

**SWEEP ITF Meeting**- A meeting was held last Tuesday (4/17/2018). The group is looking at whether magnesium chloride or sanding is used from Empire Junction to Exit 241 and will present more information when it is available. The impacts of magnesium chloride on the creek and surrounding vegetation is being investigated.

**ALIVE ITF Meeting** – A meeting was held last Friday (4/20/2018). Wildlife crossings and other wildlife accommodations were highlighted. For example, there were requests for larger bridge spans and underpasses for wildlife crossings. Carrie Wallis, Atkins, used a large roll plot map to depict where potential crossings could be located. Clear Creek County is working with a developer at the top of Floyd Hill on their request and will investigate partnership opportunities to accommodate a wildlife crossing near that development.

**West Section Roadway Option ITF** – Six options were considered. Four were dropped out but two are being evaluated in the Evaluation Matrix (WB Tunnel/EB Rock Cut and Balanced Rock Cut with South Frontage Road).

**Traffic Meeting** – Dave Sprague and James Parkhill represented the Atkins traffic team. They met with John Muscatell as the traffic representative on the TT to evaluate the corridor and discuss proposed methodologies. They provided a report-out later in the meeting.

## Central Section Roadway Option Visualizations

The TT reviewed visualizations of existing conditions for both east and west viewpoints. Visualizations also included single and double cut options for both viewpoints. In the single

cut, the East Bound, West Bound, and Frontage roads are at the same elevation, similar to where they are now. In the double cut option, the East Bound and Frontage roads are at the same elevation, while West Bound is terraced above them. This option results in less overall rock cut.

### **Discussion Notes**

Part of the reason a double or terraced cut was discussed is because there is a difference in the amount of rock you would have to move. The double cut has less blasting and rock removal between options.

It was noted that aesthetically it looks better to break up rock cuts.

Q: What about drainage? A: There is no difference between the cuts in regards to drainage.

Q: Was the mountain cut when I-70 was originally put in? A: Yes.

This discussion is the beginning of the option refinement process. More information will be developed about these two options. The visualizations are a reference point, and the decision between terraced and non-terraced will be made at a future TT meeting.

## **West Section Roadway Option Matrix Activity**

The TT reviewed the matrix evaluation language developed for the West Alignment. Option A is a WB tunnel/EB Rock Cut and Option B is a Balanced Rock Cut with South Frontage Road.

Minor language changes were suggested to the matrix and the group collectively ranked each of the options by applying color and recommended Option B for this segment. West Alignment Option Matrix is located in the [Shared Project GDrive](#).

### **Discussion Notes**

#### Clear Creek

Option B recommends realigning a small section of the creek. The realignment would shift the creek to the south by approximately 50 feet which would provide a similar or improved alignment while maintaining the distance from the roadway to the creek. The original option was to have a bridge or cantilever over the creek at this section, but keeping it open is better for rafters and has less impact on the creek. There is a chance to improve the creek in Option B. There was discussion over how to prevent the contractor from recommending other options that wouldn't require moving the creek, including a cantilever option.

**TT Agreement:** The TT does not want the roadway to cover to the creek, and this will be addressed in the refinement stage. The TT would like to discuss how to ensure the

contractor does move forward with a design that covers the creek if this option moves forward. This could be handled with strong language in any contract documents, regardless of the project delivery method.

#### Emergency Access

Concern was voiced over emergency access in Option A because of the tunnel. Fans would provide the option to mitigate smoke, fire, and visibility concerns.

#### Meets Community Preference

Both Options allow for extension of the multi-use trail through Hidden Valley. There was concern over longer construction times and visual impact due to rock cuts and views of the westbound lanes but was ultimately determined a not a differentiator.

#### CR 314

Q: Who maintains the road? A: Clear Creek County maintains the road. More future rock fall potential along CR 314 associated with Option B could be an issue for County maintenance. This was still preferred to large rock cuts on the North side adjacent to the interstate.

#### Water Quality: Snow and Chemicals

The TT discussed the issue of snow removal and magnesium chloride chemicals in the creek. It was noted that in either option snow removal won't move into the creek. There are options in Option B to block snow from slipping down the slope into the creek, but there is still greater concern with Option B because the EB lanes are moved closer to the creek. It was noted that with the creek realignment, the buffer or area from edge of roadway to the creek would be the same as the existing condition.

There is a need to contact Black Hawk because their water intake is just downstream of this area. Magnesium chloride chemicals need to be mitigated with either option. The TT needs more information about the impact on Black Hawk's water intake.

**ACTION:** Neil Ogden will talk to CDOT maintenance about the traction control for I-70 in this area.

**ACTION:** The Project Team will reach out to Holly Huyck and Black Hawk to gather more information on Black Hawk's intake.

#### Historic/Archeological Sites

Atkins discussed the information about the archaeological site in the Hidden Valley interchange area. The site was originally recorded in 1988 by CDOT. It includes prehistoric artifacts. It was disturbed by Central City Parkway construction of a wall and parking area,

perhaps for construction staging. Around 62 artifacts and 200 bone fragments were since found from the site dating back to 1600 BC. In 1990, the site was determined eligible for the National Register of Historic Places. It is recommended that impacts to the site be avoided. The site would be impacted by Option A.

There is a potential historic site on the south side that could potentially be impacted by Option B; however, until surveys are done, it is unknown if the site is officially eligible for the National Register of Historic Places.

### Recreation

The TT would like to talk with the rafting community to find out if they have an opinion regarding Option A or B

**ACTION:** Neil Ogden will bring up the conversation with the rafting community at a previously scheduled meeting in two weeks.

**ACTION:** The Project Team will draft a summary statement related to the findings of the matrix review.

**TT AGREEMENT:** The TT agreed to move forward with Option B: Balanced Rock Cut with South Frontage Road, based on the discussion and evaluation.

## Frontage Road Concepts/Interchanges

The TT reviewed initial Frontage Road Concepts and Interchanges at US 6. David Sprague presented six intersection options, three with roundabouts intersections and three with signalized intersections at the ramp terminals. Frontage Road Concepts can be found in the [Shared Project GDrive](#). Note: Pink arrows represent queue lengths. Larger black arrows are total I-70 travel times in both the eastbound and westbound directions.

### Discussion Notes

A Saturday traffic count has been performed. There was concern that a Saturday count does not capture peak EB times that are longer on Sundays.

**ACTION:** Project Staff will gather more information on peak Sunday hours.

Option 1 requires all traffic to go through signalized intersections and assumes the frontage road connects to Central City Parkway north of the interchange. Option 2 also requires all traffic to go through the signalized intersection but assumes the frontage road connection is on the south side of I-70. Option 3 includes a flyover ramp for WB traffic only from a south side frontage road to a ramp that connects to a signalized intersection. This creates one way couplets that connect with the ramps on the east side of the interchange. Option 3

also includes a slip ramp for EB traffic from EB I-70 to the frontage road. Option 3 has shorter queue lengths. None of the options presented will “share the road” with the Greenway east of the hidden valley interchange. The TT noted that this is an improvement over existing conditions. Options 4-6 were the same as 1-3 except they used roundabouts instead of signalized intersections.

**Q:** What is the vehicle mix used in the projections? **A:** 7-8% trucks all day long.

The TT noted that, as it stands, Option 3 provides the best overall queue management and travel times.

A discussion about the roundabout options noted that they are not appropriate, because the highway backs up, impacting all intersecting roads. They can also be challenging for trucks to negotiate.

One challenge with Option 3 is that it would require additional rock cutting for the flyover ramp.

**Q:** What is the main advantage of Option 3 over Option 1? **A:** EB traffic bound for US 6 is not forced to go through a signal, making it safer and with less delay. Travel time in WB PM is cut in half.

**Q:** Is Option 3 worth building? There is additional roadway to build. **A:** If a slip ramp EB in Option 1 was added, this could be a better option.

**ACTION:** Project Staff will refine these, investigating an option to add some of the features from Option 3 to Option 1.

## Next Steps

**Next TT meeting on May 23.** A Public Meeting has been scheduled for June 12.

**ACTION:** Project Staff will provide Public Meeting materials to the TT ahead of the Public Meeting.

The TT suggested a PLT meeting should be scheduled after the May TT meeting and prior to the Public Meeting. It was noted that the Transportation Commission has a tour of the corridor scheduled for May 15.

**ACTION:** Project Staff will schedule a PLT meeting for the end of May.

The meeting ended with a showing of the proposed video to be shown to the Transportation Commission and the media on May 15.

## Action Items

**ACTION:** CDOT will follow up with a report from the Clear Creek GeoHazard project.

**ACTION:** Atkins to follow up with archeological site near Hidden Valley (Note, this was done later in this same meeting.)

**ACTION:** Neil Ogden will talk to CDOT maintenance about the traction control for I-70 in this area.

**ACTION:** The Project Team will reach out to Holly Huyck and Black Hawk to gather more information on Black Hawk's intake.

**ACTION:** Neil Ogden will bring up the conversation with the rafting community at a previously scheduled meeting in two weeks.

**ACTION:** The Project Team will draft a summary statement related to the findings of the matrix review.

**ACTION:** Project Staff will gather more information on peak Sunday hours.

**ACTION:** Project Staff will refine these, investigating an option to add some of the features from Option 3 to Option 1.

**ACTION:** Project Staff will provide Public Meeting materials to the TT ahead of the Public Meeting.

**ACTION:** Project Staff will schedule a PLT meeting for the end of May.

**TT AGREEMENT:** The TT does not want the roadway to cover to the creek, and this will be addressed in the refinement stage. The TT would like to discuss how to ensure the contractor does move forward with a design that covers the creek if this option moves forward. This could be handled with strong language in any contract documents, regardless of the project delivery method.

**TT AGREEMENT:** The TT agreed to move forward with Option B: Balanced Rock Cut with South Frontage Road, based on the discussion and evaluation.

## Attendees

JoAnn Sorenson, Amy Saxton (Clear Creek County); Bill Coffin and John Muscatell (Community Reps from Floyd Hill); Sam Hoover (Central City); Tracy Sakaguchi (CMCA); Wendy Koch (Empire); Stephen Stohminger (Gilpin County); Steve Durian (JeffCo); Neil Ogden, Kevin Brown, Vanessa Henderson, Bob Smith (CDOT); Anthony Pisano, Carrie



Wallis, Tyler Larson, James Parkhill, David Sprague (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks (THK Associates); Taber Ward, Melissa Rary (CDR Associates)

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

Date: May 23, 2018

Location: CDOT – Golden

### Technical Team – Meeting #12

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

#### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. No changes were made to the agenda and the meeting proceeded.

#### Project Updates

**Bridge Deck Repair at Soda Creek** – Work on this project will begin June 8, 2018. CDOT Crews will be working nights and lanes will reopen in the morning.

**WB I-70 PPSL** – Neil Ogden, CDOT, noted this project is moving along and shooting for advertising in late 2018 or early 2019.

**Geohazard Mitigation Program** – The project is on summer shutdown and will begin again starting in November 2018.

#### CSS Process Flowchart and CSS Tracking Schedule

The group reviewed the flow chart and discussed whether they need to see the flowchart during each meeting. It was noted that the flowchart is a good reminder, but doesn't need to be upfront in the presentation every meeting.

**TT AGREEMENT:** The Project Team will remove the CSS Process Flowchart and Timeline slides from the beginning of the slideshow, but keep them in the back for reference if needed.

#### Outcomes from TT #11

The group reviewed Outcomes from TT #11:

- TT agreed to Balanced Rock Cut with South Frontage Road option for the West Section of the Floyd Hill project.

- The TT would like to look at modified Options for the frontage road connection at Hidden Valley. It was noted that the TT would review modified Option 1 and Option 3 during the meeting.

## Meeting Report-outs

**Rafting Meeting** – Neil Ogden attended a rafting meeting to discuss Floyd Hill and the US 6 interchange. There was not a detailed conversation about creek realignment, so the CDOT will follow up on this discussion. In general, there is general approval among the rafting community about the Floyd Hill project.

**ACTION:** Neil Ogden will discuss creek realignment with the rafting community.

**Traction Control / Maintenance / Water Quality Meeting** – The project team met with maintenance supervisors who confirmed that they have not used sand east of the Veterans Memorial Tunnels for the past year. Magnesium Chloride and ice slicer (rock salt) is used in this area. Sand is still deposited in the area by tires of vehicles that have been through areas where sand is in use. In addition, there is natural erosion occurring. So, sand is still present in the project area, but sand is not being used for traction control in the project area.

This information will guide CDOT's decisions around water quality measures in this area.

Overall chloride levels are increasing in the creek, so this will need to be monitored.

**TT Question:** Was Black Hawk part of this discussion? Does this affect their water intake?

**A:** No, they were not part of this discussion

**ACTION:** Neil Ogden will discuss water quality with Black Hawk and connect with Lynnette Hailey.

**Infrastructure Week** – Infrastructure week went well. The conceptual plan and video were presented. Also, a coalition that is introducing a ballot initiative was announced. The initiative is currently circulating petitions that call for a .62% sales tax increase. This initiative is estimated to fund \$6.2 billion and generate \$100 million a year for bridges and asset management. Floyd Hill is on the list of projects to be funded through this.

**TT Question:** Does it include increase for maintenance? **A:** Other than asset management list, no.

**TT Question:** Where can I find video? **A:** The video is on the website, and we have been getting good feedback. <https://www.codot.gov/projects/i-70-floyd-hill-to-veterans-memorial-tunnels-improvements>

**Floyd Hill PLT Meeting** – The PLT meeting was held Monday, May 21. The group discussed the public meeting on June 12 and was presented with public meeting materials.

Gilpin County and Clear Creek County will be selecting representatives for the Project Delivery Selection Team. Part of the PLT's role is to participate in project delivery selection. The PLT also discussed the high-level project goals and will provide feedback on these goals to inform the Project Delivery Selection Matrix.

**Hyperloop Meeting** – Jo Ann Sorensen attended a phone meeting for the hyperloop project, where information on the potential hyperloop was presented. She noted it was largely a front range project because of the large radius needed to accomplish curves (40,000 feet at 500mph). She found it difficult to connect this to the mountain corridor, where there is no room for these types of curves. A section to Vail was briefly mentioned, but she does not see this as a potential for the mountains.

### Discuss Proposed Solutions

The TT reviewed the West Section Roadway Option Recommendation:

- Balanced Rock Cut with South Frontage Road Option

Option Summary Statement:

*Option B: Balanced Rock Cut with South Frontage Road recommended to be evaluated as part of the Proposed Action. This option provides the following benefits:*

- *Much of the construction can be done outside of traffic limiting construction impacts to the traveling public*
- *Moving the alignment south minimizes rock cuts and visual impacts*
- *Reasonable infrastructure investment*
- *Does not require trucks to use alternate routes*

**TT AGREEMENT:** The TT ratified Option B.

### Summary of CSS Process to date

The project process to-date was reviewed:

#### OCTOBER 2017 - PRESENT

**4 PLT Meetings:** Established Charter, context statement, core values, reviewed public outreach plan, reviewed major elements, reviewed public meeting materials, introduced draft project goals

**11 TT Meetings:** Worked through 6-Step decision making process. Started with context mapping of three sections. Used matrices to evaluate and recommend options.

#### Multiple ITFs

- Developed measures of success, CSS flow chart, evaluated option for interchanges and roadway design

- Held SWEEP, ALIVE and Section 106 ITFs

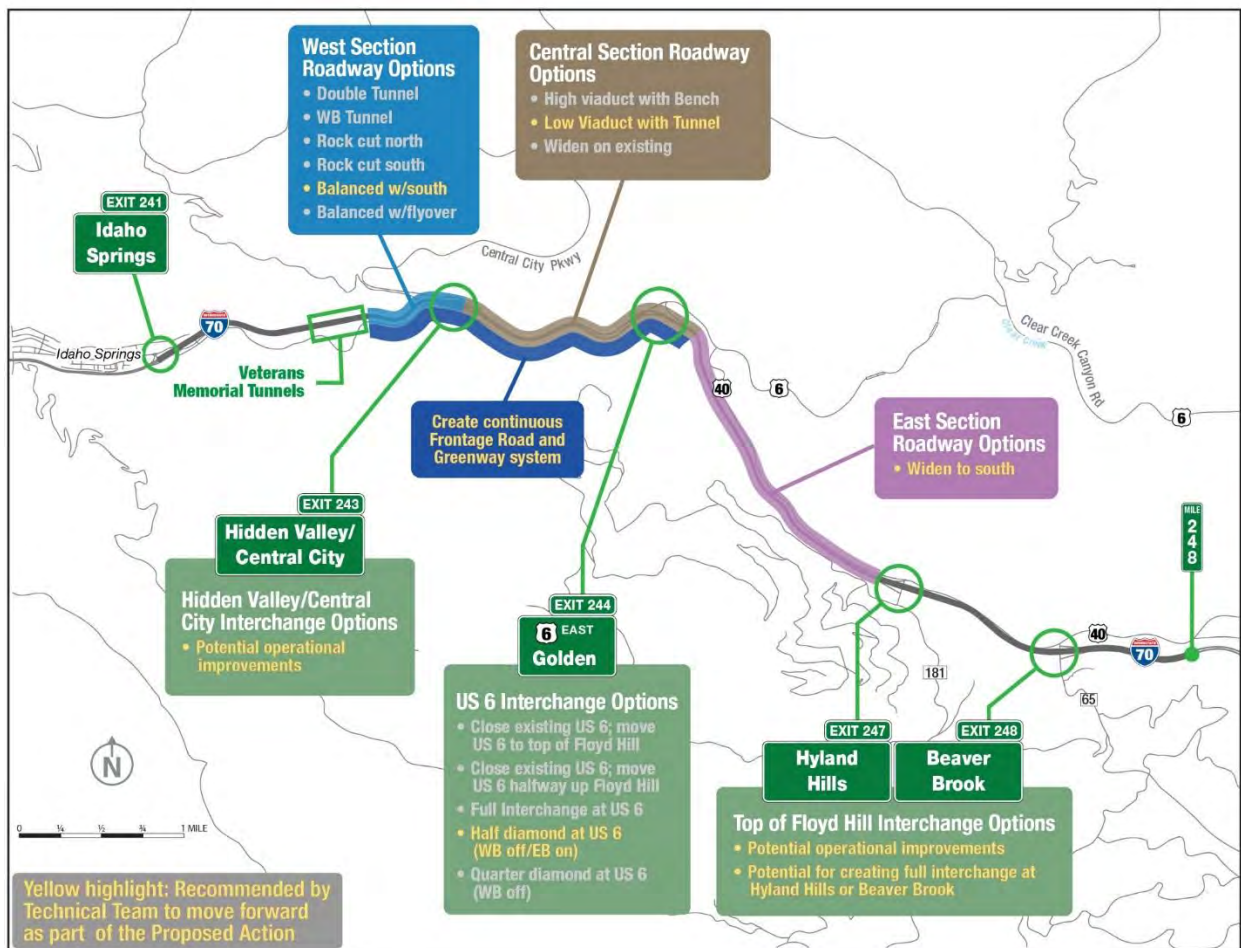
## Purpose and Need

The Purpose and Need is located in the [GDrive](#).

The Floyd Hill Purpose and Need is the first step in NEPA process. It addressed travel time, safety, mobility and deficient infrastructure. The P&N respects the Core Values developed in the CSS process and is used to evaluate design options.

## Major Elements of Proposed Action Map

The Major Elements of the Proposed Action were reviewed by the TT.



**US6 Access Interchange** – Recommendation is the half diamond at US6 (WB off/EB on)

**East Section** – Widen to south

**Central Section** – Low Viaduct with Tunnel

**West Section** – Balanced Rock Cut with South Frontage Road

The next steps will be to integrate East, Central, and West roadway sections with the recommended US 6 Interchange option.

### Other Supportive elements

- Frontage Road
- Greenway
- Hidden Valley Interchange and Intersection Configuration
- Interchange and Intersection Configurations for Top Of Floyd Hill
- Eastbound Acceleration Lane East of US 6 Interchange
- Shared Corridor Vision Map with Responsibilities

### Media Renderings

Tyler Larson, Atkins, reviewed the following road segment improvements.



In this photograph, I-70 WB is widened from 2 lanes to 3 lanes to accommodate more WB travelers. I-70 will be reconfigured to simplify curves, improve site distance and safety.

**TT Question:** How does this work with large animals? Is there any way to add large culvert on EB? **A:** ALIVE discussed widening bridges anywhere bridges are being replaced to allow benches for animals to cross. One of these locations is at the bottom of Floyd Hill where the Greenway goes underneath. An added bench for wildlife could be added so that the

animals have a separate place from humans to cross. The only other place animals are present in this section is higher up the hill, which was identified in ALIVE as a potential location for a crossing.

**TT Question:** What are next steps with ALIVE? **A:** ALIVE is currently working on field studies and additional ALIVE meetings will be held in the fall.

**ACTION:** John Muscatell will share bobcat pictures with the TT at the next meeting!

Clear Creek County Open Space noted they are buying a Sawmill parcel (currently shown as owned by Uphill Liability). This property is approximately 132 acres with some land north and south of interstate. This means that CDOT will be working with the County instead of a private land owner in this portion of the corridor.



At I-70 and US 6, the project will maintain the existing WB I-70 exit-ramp and add an EB I-70 on-ramp. US 6 will be extended to the west providing additional access to and from I-70 at the Hidden Valley interchange with Central City Parkway and will connect with CR 314. WB will be placed in tunnel. Greenway trail will be improved from US 6 to VMT.

**TT Question:** How much higher do you have to raise frontage road? **A:** Because the existing WB/EB ramps are already climbing, you can use the same profile to access the EB on ramp. EB lanes will be elevated above US 6 providing clearance for the higher profiles.

**TT Question:** Will this maintain both accesses to Two Bears? **A:** There is no earth work to frontage road at Two Bears, so the accesses will be maintained.

It was noted that in the architectural phase of the project, the group should consider making the entrance to the new tunnel look similar to the Veterans Memorial Tunnels.



This image is looking west at the Hidden Valley Interchange. This is the current concept for the frontage road connection between US 6 and Hidden Valley. There is a single lane WB flyover, and the EB frontage road would stay to the south of the highway but to north of creek. The existing greenway trail has proposed improvements. There are rock cuts, providing adequate site distance and safety considerations.

WB and EB curves are flattened to improve travel speeds and safety.

**TT Question:** If I'm driving on 314 (frontage road), would the road dead end to Greenway Trail? **A:** The existing frontage road will connect to the interchange where it does today. WB access to 314 will be from the I-70 WB exit lane and EB access from 314 will be on the I-70 EB entrance ramp





This image is looking west from just west of the Hidden Valley Interchange. CR 314 is shown on the left.

I-70 will be relocated south of existing roadway (left in the photo above) and the curves will be flattened to improve safety and travel speeds. Relocating I-70 will reduce the amount of rock cut along the northern edge (right in the photo above) of the roadway. To make room for I-70, CR 314 will be moved south and we will move a short portion of Clear Creek approximately 50 feet south as well. This will require some additional rock cuts along the south side of CR 314. One or both of the I-70 bridges over Clear Creek will be replaced. The existing interchange with Hidden Valley would keep the same configuration as today, although the team is looking at potential improvements at the ramp termini for operations.



This image looks west at the current Veterans Memorial Tunnels with 314.

The plan is to realign the creek approximately 50 feet to south. The Greenway would stay in its current location along CR 314 where it has buffer separation. The proposed plan is to extend the Greenway though intersection at Hidden Valley. The photo shows one of the rock cuts along CR 314.

**TT Question:** How are you going to connect the Greenway? **A:** The Project Team is still looking at connectivity options. It will likely be an at-grade crossing at the frontage road. The current proposal is to have at-grade crossing to connect to Greenway trail. The team will accommodate cyclists and pedestrians.

**TT Question:** Are we at the point of showing where drainage is? **A:** We aren't to that level of design.

**TT Question:** Are EB/WB at same elevation? **A:** Ranges from same elevation to 8 ft difference. Where it connects to tunnel we will keep that the same elevation. The team will evaluate opportunities to mitigate headlight glare using different centerline profiles for each direction of I-70.

**TT Question:** At the big Hidden Valley curve, trucks flip over. Has this been addressed? **A:** The design speed of this section has been increased -- all curves will be re-aligned to meet a 55mph design speed; currently those curves are posted at 45/40 mph. With this realignment, we are increasing design speed and flattening out curves to provide a safer driving environment for trucks.

**TT Question:** What is stream vegetation going to look like? **A:** Wherever this project impacts vegetation, CDOT will be responsible for revegetation. We have not developed any vegetation plans yet.

The TT recommended considering access for recreational purposes. While it isn't currently a high-value fishing area, anglers should be taken into consideration. This is the location where emergency access for rafters is also being considered.

## Traffic Team Report

David Sprague, Atkins, reviewed traffic data to date.

### Climbing Lane Analysis

The project will add a new EB I-70 entrance ramp from US 6. The project team evaluated 3 options for merging the ramp traffic onto I-70

Option 1: Use a 2000 ft acceleration lane.

Option 2: Create an auxiliary lane between the EB I-70 entrance ramp and the Homestead / CR 182 Exit.

Option 3: Create a climbing lane that extends over the top of the hill beyond the Homestead / CR 182 Exit and drops before CR 65.

The traffic analysis showed no significant difference in travel time between Options 1 and 2. The travel times between interchanges were 3-4 minutes and up to 8 minutes during peak hours

Option 3 resulted in travel times that were over 30 minutes longer; much longer than the other 2 options. The model showed that having a climbing lane for this long created a bottleneck at the top of the hill. Traffic spread out and used the climbing lane as a general purpose lane resulting in congestion when the lane was dropped. The Traffic Team is working to figure out if there is a way to model this better. It is possible that better driver information and signage might change Option 3.

**Next Steps:** The traffic team is also collecting peak EB traffic numbers in June. For EB, the numbers in the model were best guesses. Estimated a traffic mix of 15-20% trucks to model worst case conditions.

The TT noted that the climbing lane could be long enough that the widening could impact the wetland. This will be evaluated as the project development process moves forward.

**TT Question:** Did you use default lane utilization rates? **A:** Yes, just default.

Ultimately, the group noted that traffic depends on what your EB lanes are.

## **The TT will need the June EB traffic data to make a final recommendation on these Options.**

### **Start of the Third Lane**

Today, the 3 WB lanes of I-70 drop to two lanes under Homestead Road / CR 182. The new third lane will begin by simply extending this lane down the hill. All WB lanes will be shifted towards the median to eliminate the need for walls consistent with our concept for the east segment. The WB I-70 entrance ramp from Homestead Road / CR 182, will merge into the new lane.

This was an important element of the model as it showed the benefit of adding the new WB lane. Traffic that currently by-passes the top of Floyd Hill and uses I-40 to US 6, will now stay on I-70. This will reduce the amount of through traffic at both the CR 65 and Homestead Road / CR 182 interchanges.

It was noted that the third lane could be a General Purpose (GP) Lane or Managed Lane (ML). Because a GP would only have one Option, the TT reviewed the Options for MLs. Atkins is looking at both GP and ML models and scenarios.

The TT noted there is congestion in this area because of trucks and cars merging. The TT suggested keeping the trucks in the same lane so they do not have to merge. The proposed solution would extend the third lane that the trucks currently use.

The Project Team noted that the new lane would not be a PPSL, it would be a new full lane and shoulder and the lane would always be open. CDOT will need to determine how the new third lane would tie into / end at the WB PPSL. This will be a future TT discussion.

### **CR65**

The traffic team looked at the peak hour volumes at both the CR 65 and the Homestead Road / CR 182 interchanges. The volumes were based on WB traffic counts taken during January of 2018.

As mentioned above, adding a new third lane WB greatly reduced the amount of traffic using US 40 and traveling through the interchange. The addition of the new EB I-70 entrance ramp from US 6 also contributed to reduced traffic volumes. Once the project is constructed, traffic volumes will be minimal at both interchanges in the split diamond. No improvements will be necessary and the interchange should function under existing configuration.

For example, the number of WB cars at the I-70 / I-40 intersection in the no action is over 800 vehicles. Once the new WB lane is added this volume reduces to 200. Similarly, the number of cars exit WB I-70 at CR 65 drops from 260 to 80.

**TT Question:** When in January was the data collected? **A:** January 13

### **Hidden Valley Frontage Road Connection**

The traffic team brought back the TT recommendation of adding slip ramps in between US6 and Hidden Valley. With slip ramps, traffic improved. Though the options would work, the team would like to see if there is anything else to improve visual aesthetics of the area and make it more efficient. We are currently reviewing some additional options.

**TT Question:** Does this fail under existing traffic as well? **A:** Under existing conditions, the volumes are low. If we bring in US6, it gets really high

**ACTION:** The traffic team to collect June EB numbers and present updated data.

### **Shared Vision Map and Responsibilities Table**

The TT reviewed the Shared Vision Map and Responsibilities table.

**ACTION:** Clarify “Others” in the Responsibilities table where possible. (For example, CCC, Central City, etc.)

**ACTION:** Indicate locations on map and on table with numbers to make cross-referencing easier.

**ACTION:** Update and send a revised Vision Map and Responsibilities Table to the TT.

**ACTION:** CDOT to make changes to this document and send out a revised version for comments. This living document will be in the Google Drive throughout the project.

### **Next Steps**

Public Meeting at Clear Creek High School, June 12, 2018 – 5 to 7 pm

**ACTION:** CDR to send flyer to TT.

**ACTION:** TT to post flyers for public meeting.

Next TT Meeting June 27, 2018

- Wrap Up Conceptual Design
- Intersections Operations Analysis and Review
- Public Meeting Follow Up
- Environmental Analysis Methodologies
- Follow Up on Shared Vision Map and Responsibility Table
- Lane Type

The TT discussed taking a break the month of June or July.

**TT Question:** When is traffic going to be available? **A:** EB collections in early June, models will be up and running in July.

**ACTION:** CDOT to look internally at TT Meeting schedule.

## Action Items and Agreements

**TT AGREEMENT:** The Project Team will remove the CSS Process Flowchart and Timeline slides from the beginning of the slideshow, but keep them in the back for reference if needed.

**TT AGREEMENT:** The TT ratified Option B - Balanced Rock Cut with South Frontage Road Option for the West Section

**ACTION:** Neil Ogden will discuss water quality with Black Hawk and connect with Lynnette Hailey.

**ACTION:** The traffic team to collect June EB numbers and present updated data.

**ACTION:** Clarify “Others” in the Responsibilities table where possible. (For example, CCC, Central City, etc.)

**ACTION:** Indicate locations on map and on table with numbers to make cross-referencing easier.

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**ACTION:** CDR to send flyer to TT.

**ACTION:** TT to post flyers for public meeting.

**ACTION:** CDOT to look internally at TT Meeting schedule.

## Attendees

JoAnn Sorenson, (Clear Creek County); John Muscatell (Community Reps from Floyd Hill); Sam Hoover (Central City); Stephen Stohminger (Gilpin County); Holly Hoyck (Clear Creek Watershed Foundation); Mitch Houston (CC School District); Lynette Hailey (I-70 Coalition, City of Black Hawk); Kelly Galardi (FHWA); Steve Cook (DRCOG); Patrick Holinda (Bridge Enterprise); Yelena Onnen (Jefferson County); Neil Ogden, Kevin Brown, Vanessa Henderson, Lauren Boyle, Stacia Sellers, Steve Harleson (CDOT); Anthony Pisano, Carrie Wallis, Tyler Larson, James Parkhill, David Sprague (Atkins); Gina McAfee (HDR Inc.); Kevin Shanks (THK Associates); Taber Ward, Melissa Rary (CDR Associates)



# 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=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

#### 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.

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

**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)

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** October 3, 2018

**Location:** CDOT – Golden

### **Technical Team – Meeting #14**

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

<https://drive.google.com/open?id=0B5g5iHKBVK6OR2tpb1J0OUNkNU0>

#### **Introductions and Overview**

Taber Ward welcomed the group and reviewed the agenda. The difference between the terms ‘accident’ and ‘crashes’ was highlighted. The appropriate terminology is ‘crashes’ as only 6% crashes are caused by vehicle malfunction/weather while the term ‘accident’ minimizes human error and implies that there is no fault. Self-introductions followed including multiple references to the former Roman gladiator, Spartacus.

#### **Other Project Efforts**

**Bridge Deck Repair** – Project completed for the season.

**Colorado Blvd** - Reconstruction is complete and the public has responded positively.

**Greenway** - Hosting a large event entitled “Feast on the Creek” on October 7.

**Smart 70/Road X** - A PLT meeting was held that discussed the project’s security issues among other topics. A security plan is being developed. At the October 2018 Transportation Summit, the keynote speaker from Ford Automotive mentioned that they are now a partner on the Smart 70 project.

#### **Follow-up**

Mandy Whorton noted that the wetland at the top of Floyd Hill, previously discussed, does not qualify as a fen (ancient wetland fed by surface and groundwater); it remains an important wetland. It is likely that it has been developing for hundreds of years and is “on its way to being a fen.” All the wetlands have been delineated in the study area. The wetland delineation process and conclusions will be reviewed at the October 25th SWEEP meeting.

**ACTION: Provide a wetland data collection process and conclusion update at the October 25 SWEEP meeting; distribute the wetland delineation report to Clear Creek County Planning staff when finalized.**

### **Floyd Hill Project Comments Summary from WB PPSL Public Meeting**

Anthony provided an overview of the input received about the Floyd Hill project at the WB PPSL public meeting, which was September 13. Input included a desire to see improvements sooner than later and questions about how long the project will take to construct. Some were concerned that shoulder widths would be reduced, similar to the WB PPSL project, but the design includes typical sections for the mountain corridor permanent infrastructure detailed in the ROD.

### **Project Delivery Update**

Steve Harelson outlined the project delivery approach and rationale. A delivery selection panel met to evaluate the various project delivery approaches and recommend a preferred approach. A selection matrix was used to organize and evaluate the options. Based on the evaluation, a Construction Manager General Contractor (CMGC) delivery method was recommended. The recommendation was made because CMGC provides CDOT more control of the design and risks with intermediate milestone evaluation measures built in, encourages innovation and best practices, provides the opportunity to fulfill the CSS commitment, and an ability to solicit contractor input early. Steve summarized the approach by noting that the CMGC approach allows the contractor to advise on the process and constructability issues but not control the project design.

The CMGC delivery approach was detailed further including the independent design and financial review aspect that ensures the greatest project benefits. The CMGC approach was used successfully on the Twin Tunnels project and less successfully on the EB PPSL, highlighting that the delivery approach doesn't solve all potential construction issues. The CDOT Chief Engineer must still approve the recommendation, which is contingent on funding; funding for the project is included in both Proposition 110 and 109. If one or both of the measures passes, procurement of the CMGC (and final design) will likely occur in January of 2019.

**Q:** How far do you go in terms of design with a CMGC contract? **A:** 100% construction plans.

**Q:** CMGC - what level of design do you provide the CMGC contractor **A:** The CMGC engages from about 20/30% design through final design.

### **Follow Up**

#### **Frontage Road Design Option**

The frontage road options between Hidden Valley and US 6 were reviewed, and the pros/cons of a potential frontage road south of the creek were discussed. The TT was asked to identify issues, not to make a recommendation on which option to choose.

Anthony discussed the frontage road alignment comparing the north and south alignments, using both cross sections and plan view (see attached). Neither frontage road location option affects the Hidden Valley interchange or the tunnel location. If the frontage road (US6) was moved south of the creek, the intention is to have a horizontal or vertical separation between the Greenway and US 6 (frontage road) with no shared use with US 6. For either option, it is likely that US 6/frontage road would be built earlier in the construction schedule to help maintain traffic through the project

The pros and cons of the south alignment were discussed including the desire to frame most of the pros/cons as “issues to explore” further. A number of pros/cons including wildlife conflicts, visual impact, and Greenway access are subjective in that whether it is a ‘pro’ or ‘con’ depends on how one approaches them. It was also noted that rock cuts and impacts on the travelling public, however, have been quantified objectively. The Project Staff team will evaluate the “issues to explore further” and determine the best approach to advance this issue with the TT; an ITF and/or matrix evaluation were discussed as potential options.

### **Discussion Notes**

The following are TT discussion notes regarding the frontage road options. As noted, because most issues need further investigation, they are not presented as pros and cons of the two options but rather as discussion notes.

#### **“Issues to Explore” Raw notes from TT Discussion (Recorded on easel paper)**

- Impact on the Greenway?
- Clear Creek Valley – amount of pavement needed on south alignment, how will this impact the valley?
- Preference for leaving the south side of the creek undisturbed
- Share the road locations with bikers?
- What are the conflict points on the south side, i.e. Greenway users and roadway users?
- Option for pedestrian bridges at the creek bend?
- Rockfall mitigation options
- Options for natural/vegetative screening between Greenway and I-70
- EMS Access- Meadow 1 and Creek emergency response
- Truck operations, impact and accommodation

- When frontage road is elevated above the Greenway, or parallel to the Greenway, the physical distance between the Greenway and road is important to minimize run-off and sediment
- Maintenance of Greenway
- Experience of Greenway user
  - Visual
  - Sense of openness
- Drainage options
  - Basins?
  - We don't want a "Greyway"
- Greenway corridor development, will this be eliminated with south side alignment?
- Access points on the north/south?
  - Rafting access
- South side alignment – bikers will only be able to get on and off at one place, if you miss the ramp, then you peddle up with traffic
- Interference with bikers
- Rock on road and rockfall issues
- Cumulative impact issues (i.e. visual impact of quarry near more rockcut?)
- How will the sheep and wildlife access water – which alignment would be better for (1) wildlife crossing and (2) access to water/food?
- Rock cut evaluation on south side of creek
- Access to creek could be a pro or con (some want more access, some like fewer access points)
- South Side – how will this impact the vertical profile of US 6?

### **Visual Impacts and Greenway Experience**

Moving the frontage road from the north to the south side of the creek would reduce rock cut and visual impacts on I-70 and reduce the complexity and duration of construction.

If the south side option is implemented, impacts to the Greenway experience are a concern. At present, the Greenway is isolated from the adjacent roadways. Moving the frontage road on the same side of the creek as the greenway changes the character of the greenway experience in this area. Ideas to explore include opportunities to implement natural screening between greenway and roadway, such as planting trees between the Greenway and the frontage road.

One downside of moving the frontage road south of clear creek is that the south side of the canyon is relatively undisturbed now.

One benefit to the north option is that the geology of the rock on the north side may be more stable than on the south side.

If the south option is chosen, it would create more room on the north and reduce the height of rock cuts and reduce rock fall risks.

The frontage road will cross over the trail if the south option is chosen, diminishing the experience. Clear Creek County has advocated for a 'robust' trail that can be converted to emergency access when necessary.

It seems that a lot is given up by moving the frontage road to the south, especially a sense of openness and future Greenway development.

The visual impacts are complicated to quantify because you either leave one side untouched and have a serious visual impact on the north side or have smaller cuts over a larger area.

Rock cut will still be required for the south option (although shorter in height); the south option rock cut issues and visual impact need to be evaluated.

Consider the cumulative aesthetics and visual impacts with the rock cut, especially with the quarry operations at Frei in the WB direction.

Consider raising the vertical profile of US 6 along with potential structures of the south option (walls/pedestrian bridges) to improve the visual experience.

Not sure how the south alignment makes for a better Greenway experience.

One of the differences between the Glenwood Canyon comparison is that trail users are confined to the trail; in Clear Creek it would open up more access to the creek and hillside which may be both a pro and con. In this section currently, you have the creek to yourself, without vehicles.

The trail experience is compromised with a south option. The south option eliminates opportunities that could be developed into a 'real' greenway area.

### **Emergency Response**

There is a need for emergency vehicles to have bi-directional access (ability to cross from eastbound to westbound I-70 and US 6); don't put a barrier that would prevent this. Explore creek access for emergency responders and where will they be able to respond to rafting emergencies (floaters).

### **Maintenance**

Consider the erosion from the roadway on to the Greenway; keep as much physical separation between the road and bikeway as possible as it is better for trail maintenance and noise. It was noted that sand does wash onto the Greenway regardless of road location although proximity may cause a greater impact.

When considering these two options, examine drainage and maintenance; we don't want the Greenway to be the 'Grayway'. It was noted that the south option may provide more room for sediment basins.

Q: What does the 2007 study of vegetation impacts from mag chloride say about the maintenance impacts? A: It considered affected vegetation from aerosols, chlorides. Ground up road sand sticks to the leaves.

### **Constructability and Rock Cut**

Q: How much rock cut is saved by moving the frontage road south? A: Approximately 200,000 cubic yards.

Just because rock cut is easy to quantify doesn't mean it should dominate the evaluation. We need to find a way to achieve the constructability of the project while improving aesthetics.

### **Partnerships**

Partnership opportunities may be greater with the south option, i.e. parking or access to the creek, trailheads and rafting put-ins.

Freight - are there implications to hazmat vehicles and truck operations? There might be partnering opportunities with freight vehicles looking to stop for rest on the south option.

### **Creek Access**

The south option may introduce additional conflicts with greenway trail users, for example traffic that pulls over on the side of road; look at access points on the north option.

We need a comparison of access points depending on where the frontage road is; how does it change rafting access? Can we access the creek from the north side or is the bank too steep?

If the frontage road is on the north side, you don't have vehicle access to the creek except at the two ends; if the frontage is on the south side you can access the creek from more locations.

Q: Do you preserve the option to connect EB 70 - WB 6 and not pass through the Hidden Valley interchange? A: Yes, nothing changes with the frontage road design option, it preserves this movement.

Q: Why aren't we moving everything north in a tunnel; US 6 ramps to connect A: TT eliminated that alternative due to impacts.

**ACTION: Share tunnel evaluation notes with Mike Raber.**

**ACTION: Project Staff to explore issues and propose a process approach to TT regarding how to proceed.**

### **Bridge Design and Aesthetics**

Anthony outlined bridge design requirements and how they will be integrated into the I-70 aesthetic guidelines. Kevin outlined the aesthetic guidelines and reviewed the bridges/types that exist in the corridor today. The TT was asked to provide comment on the approach.

### **Discussion Notes**

Consider the structural compatibility of bridge designs with the integration of utilities, lighting, signage, and other electronics needs. Determine the compatibility of the bridges with gantries/barriers. The 'prettiest' bridge might not be able to accommodate the infrastructure needed. Think through utilities signage, drainage issues in the bridge selection process.

Q: Are there new bridge safety standards regarding bridge structures? A: There are new barrier types for bridges - new crash standards and concrete barrier from type 7 to type 9 is a transition. It was noted that all guardrails mitigate hazards but don't eliminate the crashes.

Ensure bridges are high enough to provide adequate clearance for the Greenway.

Place utilities inside the U-tub bridge as a way to hide the infrastructure; likely fiber optics will be the main infrastructure in these bridges.

In summary consider general utilities, street lights and signing, fire code, color and potentially automatic deicers. Integrate disciplines up front to avoid problems later and ensure clearance under bridge for the high water and the trail.

What are the maximum spans? Individual span lengths for a segmental bridge are up to 500 ft; steel U-tub designs are up to 400 ft. Segmental bridges are the longest followed by steel U-tubs and concrete U-tubs. There are no bridge piers expected in the creek.



We reviewed recent bridges constructed with the Twin Tunnels project and in Idaho Springs. Concrete box and I-girder bridges have been acceptable for shorter less visible bridges. The TT then reviewed the new bridges proposed for the project. Less visible bridges like the new ramp bridges at I-70 and US 6, and the new EB I-70 over Clear Creek bridges could be concrete box girders or I-girders like those recently constructed.

Longer more visible bridges may use U-tubs to meet the aesthetic guidelines. These bridges may also require longer spans which would also require a girder type such as U-tubs. These bridges include the two longer WB I-70 bridges and the new EB I-70 bridge just before the tunnel as well as the WB US 6 to WB I-70 flyover bridge just east of the Hidden Valley interchange.

TT members indicated support for the approach and noted that there is a nice convergence with aesthetic guidelines and bridge selection; the more visible bridges suit a more elaborate bridge type. Consider economies of scale for similar bridge types.

The bridge types are evaluated so far in the design process because of the use of CMGC approach. In essence, the team is conducting a feasibility analysis or putting something forward that is reasonable to the contractor based on what has been built already and compatibility with the aesthetic design standards.

**ACTION: Project Staff will initiate work on bridge design and bring issues back to TT as necessary.**

**ACTION: Ensure slide packets distributed to the TT are printer compatible.**

### Next Steps

- **ALIVE Meeting 10/16/18**
- **SWEEP Meeting 10/25/18**
- **TT Meetings**
  - 10/31/18 - Traffic Analysis, Intersections, Roadside Barriers, Frontage Road
  - 11/28/18
  - 12/19/18

### TT Member Attendees

JoAnn Sorenson, Tim Mauck (Clear Creek County); John Muscatell, Bill Coffin (Community Rep from Floyd Hill); Sam Hoover (Central City); Stephen Stohminger (Gilpin County); Mike Raber (CCC Bicycle Users Group); Gary Frey (CO Trout Unlimited); Julia Jung (Wood); Lynette Hailey (I-70 Coalition, City of Black Hawk); Kelly Galardi (FHWA); Patrick Holinda

(Bridge Enterprise); Yelena Onnen (Jefferson County); Kevin Brown, Vanessa Henderson, Lauren Boyle, Steve Harelson, (CDOT); Kevin Shanks (THK), Anthony Pisano, Tyler Larson, Joe Zufall (Atkins); Gina McAfee (HDR Inc.); Taber Ward, Jonathan Bartsch (CDR Associates); Mandy Whorton (Peak Consulting Group); Andy Marsh, Mike Hillman, Jonathan Cain (Idaho Springs); Amy Saxton (Clear Creek Greenway); Wendy Koch (Town of Empire); Mitch Houston (CCC School Board).

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** November 28, 2018

**Location:** CDOT – Golden

### Technical Team – Meeting #15

#### Technical Team Meeting #15

##### Introductions and Overview

Taber Ward welcomed the group and reviewed the agenda. Self-introductions followed. A sign-in sheet was passed around to record attendees.

##### Other Project Efforts

**Fall River Road Bridge / Westbound PPSL:** A 1041 application has been submitted to Clear Creek County & Idaho Springs for the Fall River Road Bridge and the WB PPSL projects. Fall River Road Bridge is planned to be advertised in January and WB PPSL will be advertised in late February or March 2019.

**US 6 Clear Creek Canyon:** The contractor will resume work after the holidays (January 2019).

**Clear Creek Greenway:** Currently developing new alignments. The plan is to advertise in the Spring of 2020 for the portions of the Greenway included with the INFRA grant.

**Greenway through Idaho Springs:** Construction has begun on the Greenway

The Transit Center site plan has been determined. Some property will need to be acquired; Idaho Springs is meeting with property owners on Nov. 29, 2018. Next steps include determining how to pay for the transit center and developing the payment structure.

##### Follow Up

##### Project Funding and Schedule

##### Propositions 109 and 110

Steve Harelson gave an update on funding and schedules. CDOT is transitioning through uncertainty in both funding sources and leadership changes: both Prop 109 and 110 failed the midterm elections so there is no funding for the Floyd Hill Project. It is also not clear how the new governor, CDOT

executive director, and legislature, who take office in January, will address transportation needs or priorities.

### Current Project Direction

Steve Harelson emphasized that CDOT has a budget to continue the NEPA process through March. The Environmental Assessment will not be completed until funding has been identified, as FHWA will not approve the NEPA decision document without funding. The environmental existing conditions will be completed so that if the Project moves forward, there will be a useful starting point. Key design tasks will continue, but contractor procurement is delayed.

**Q:** How long can a NEPA report sit on the shelf until it needs to be updated again? **A:** It depends, but it is reasonable to expect 5-10 years or more of relevance for the existing conditions. The more time passes, the more updates the existing conditions may require. There is not a standard for when to revisit existing conditions, but it is anticipated that the existing conditions documentation will be relevant so long as conditions do not change. Under FHWA regulations, after a NEPA decision is issued (which is not anticipated for this Project at this time), a reevaluation would be required after 3 years.

### **Frontage Road ITF**

#### North and South Frontage Road Options

Steve Harelson provided a brief update on the ITF's evaluation of constructing a frontage road on the North or South of Clear Creek. Further evaluation of several items is still needed to complete the matrix.

#### Decision finalized after construction funds are identified

No decision has been made on the frontage road because several matrix items need further evaluation and money has not been identified. Some Technical Team members from Clear Creek County reiterated their strong opposition to a south side alignment. Highlights from the TT discussion are noted below:

- The TT discussed the use of the term “frontage road,” which implies that it is an accessory road instead of a US highway (US 6). Consider re-naming this discussion to “US 6 Realignment” and including traffic impacts in the matrix to accurately describe the impacts of the frontage road options.
- The TT also discussed the Greenway's special importance. It is more than a bike path; the Greenway is the “recreational spine” connecting community recreational areas for fishing, kayaking, and history. It connects nodes of recreational activities that are fixed. These linked places cannot be moved for a road.
- If the funding is unknown, and this process ends in March--how can we clarify and define these issues now, so that down the road the community preferences and impacts are documented accurately?

- At the ITF, Clear Creek County community members noted that placing the frontage road on the south side of the creek was a fatal flaw -- the community was completely opposed. We need to state this clearly and make sure that the negative sentiment is accurately captured.
- It was noted that the County's letter stating the community preference that was submitted will be captured in the matrix when it is finalized, as well as the Meeting Summary.

### **Current Proposed Concept Discussion**

Steve provided an overview of the plan for operational improvements to the interchange at the bottom of Floyd Hill and the bridge, which is substandard and in need of repair/replacement. The plan is to add a 2,200-foot-long tunnel to carry westbound lanes around the corner; extend US 6 along the current eastbound alignment; and move the eastbound alignment onto the current westbound alignment. However, with no funding, this (and other Project elements) will be a challenge.

**Q:** If the new administration does not make this project a priority, what will happen to the bridge?

**A:** The short answer is it will eventually fail. We will go to annual inspections. The recent rehab work will give it another 5 years, but it does need to be replaced within the next decade. Although the bridge is in poor condition, it is not the worst in the state, and there are many other transportation infrastructure needs across the state.

## **Proposed Concepts**

### **Traffic Analysis - Interchanges and Intersections**

Anthony Pisano, Atkins, presented a traffic analysis for 2040 traffic volumes, modeled to specific intersections for identifying improvements at each of the interchanges in the zone of study. Anthony found that, overall, the interchanges work well with the Project into 2040.

### **Hidden Valley Interchange**

Minor modifications are proposed to add a right turn lane for the EB I-70 off-ramp and a right turn lane for WB US 6 to Central City Parkway.

**Q:** If US 6 works well, why would anyone want to get on the interstate at Hidden Valley (instead of using the flyover ramp)? **A:** Some people think they can bypass the system. The model runs a "dynamic traffic assignment," assuming that everyone has a GPS computer rerouting them around congestion.

**Q:** Where does the Greenway fit here? **A:** If the Greenway is on the north side, at some point it will have to cross the intersection. The Greenway has not yet been planned for this section, as there are logistical challenges including spacing and traffic.

Central City commented that there is an important balance between protecting open space/Greenway and making improvements to relieve traffic and congestion. The landscape is important, but we also need to focus on traffic and congestion. This point was returned to in later conversation.

## **US 6 Interchange**

For this intersection, the proposal includes adding a right-turn bay and a left-turn bay to the I-70 EB on ramp, to provide storage for turning trucks. Anthony also described converting the I-70 WB exit ramp to a one-way roadway with right- and left-turn lanes.

## **Floyd Hill/Beaver Brook interchange (I-70/CR 65)**

The proposed improvements would add a roundabout on the north side of the interchange to accommodate the turning movements from US 40, the I-70 WB exit ramp, and CR 65. The traffic study found NB CR 65 traffic would back up in the 2040 proposed action if no improvements were made at the interchange. Adding the roundabout reduced the NB queues to an average of 20 ft. The roundabout improves safety by better accommodating the unique geometry caused by the WB exit ramp's close proximity to US 40. The design team will evaluate if there is sufficient width on the CR 65 bridge to add a SB CR 65 left turn lane onto the EB I-70 on ramp.

In general, the traffic analysis shows that traffic volumes through the interchange will be reduced in 2040. Adding capacity on WB I-70 and constructing a new EB on-ramp to I-70 at US 6 at the bottom of Floyd Hill reduces the amount of traffic that diverts to US 40 and through the interchange.

## **Floyd Hill/Hyland Hills interchange (I-70/Homestead)**

The proposed improvements would add a roundabout on the north side of the interchange to accommodate the turning movements from US 40, the I-70 WB on ramp, and Homestead Rd. The traffic study found WB US 40 traffic would back up in the 2040 proposed action if no improvements were made at the interchange. Adding the roundabout reduced the WB queues to an average of 20 ft. This will improve access for the Floyd Hill residents to their neighborhoods. The roundabout improves safety by better accommodating the unique geometry caused by the WB on ramp's close proximity to US 40. The roundabout will also help trucks make a U-turn if they have been diverted onto US 40 and want to go back to Denver.

**Q:** Was there a conversation about putting an access road near the high school? **A:** That is tough politically, because of the two counties, several landowners, and a perception that it is unpopular with the public. This is not a part of this project.

**Q:** These roundabouts are proposed instead of diamond interchanges? **A:** Correct. The traffic does not warrant a full interchange, although adding ramp movements or full interchanges would not be precluded.

**Q:** Did this consider the use of trucks headed towards Evergreen? **A:** Yes, but the model, which considers a variety of traffic types, including a percentage of trucks, did not find issues with truck movements in the area.

**Q:** Are you able to compare models and traffic potentials? I thought we were trying to keep this exit as a way to get to the Floyd Hill neighborhoods. **A:** The analysis shows that the future traffic can be

adequately handled with the roundabout. This area, southwest of CR 65, is a sensitive wetlands area, and adding a ramp did not have significant impacts on traffic circulation.

**Q:** How big of a truck can you take on a roundabout, before the rear wheels come up over the center?

**A:** We have criteria for designing roundabouts. We can design them to ensure the aprons accommodate large turning radii needed for trucks to negotiate.

The group expressed general support for the roundabouts proposed at the I-70/Homestead and I-70/CR 65 interchanges and for advancing these improvements as separate, independent projects if the Floyd Hill Project does not move forward. Individuals expressed concerns for driver visibility, specifically around plantings in the center of roundabouts; concerns around being able to ride a bike straight through the center of the roundabout; concerns for adapting to the demands of Denverites to get into the mountains; and concerns for truckers, who need to be able to turn around in bad weather before arriving at the bridge and without idling on the I-70/Homestead ramps. It was noted that there is no money for the roundabout projects and if they were to proceed, they would need to go through a separate NEPA (likely CatEx) process and FHWA approval. CDOT would also need to verify that the roundabouts worked without the I-70 improvements.

### **Check-Ins with TT Members**

Most TT members took a few moments to express concerns, questions, or support for various topics covered in the meeting. Comments included:

- Ensuring balance between the Greenway and open space while adequately addressing the traffic concerns prompting the transportation changes
- Finding a means of funding some elements of the Floyd Hill plan within the next 2 to 3 years; interim solutions to help residents get home when US 40 is backed up; implementing the roundabouts, without precluding anything from the EIS, as quickly as possible
- Creating a White Paper expressing next steps when funding is identified
- Adding signage that would tell truckers where to turn around, if needed
- Ensuring any actions do not preclude anything or take away potential alternatives; it was noted that congestion helps “market” the project needs
- Adding “local traffic only” lanes and solutions

There was also a tangential conversation about the first snow closures of the year. Georgetown would like to move the closure farther down from Empire, as it has significant economic impacts on Georgetown and prevents residents from getting home. Both CDOT and State Patrol have the authority to close the road; considerations include weather and the capacity of a town to handle the influx of stuck travelers.

In addition, there was a conversation about TABOR, the requirement for voters to approve tax increases. Some people want to focus on getting the amendment repealed or amended to change the template ballot language. A few people plan to participate in the new Governor’s telephone town halls to express concern about transportation funding.

## Next Steps

- **12/19/18 TT meeting is cancelled**
- **Potential PLT/TT meeting in February 2019**
- **Section 106 ITF in February 2019**
- **Public Information Update in February 2019**

## TT Member Attendees

Gary Frey (Trout Unlimited) Sam Hoover (Central City); Mandy Whorton (Peak Consulting); Mike Raber (CC Bikeway User Group); Kelly Galardi (FHWA); Mike Hillman, Jonathan Cain (Idaho Springs); Stephen Strohming (Gilpin County); Jo Ann Sorensen, Cindy Neely (Clear Creek County); Bill Coffin, John Muscatell (Floyd Hill Community); Amy Saxton (CC Greenway Authority); Yelena Onnen (Jefferson County); Martha Tableman (CC Open Space); Holly Huyck (Clear Creek Watershed Foundation); Wendy Koch (Town of Empire); Patrick Holinda (Bridge Enterprise) Lauren Boyle, Vanessa Henderson, Stephen Harelson, Kevin Brown (CDOT); Julie Gamec (THK); Anthony Pisano, Joe Zufall (Atkins); Gina McAfee (HDR); Taber Ward, Emily Zmak (CDR)



# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**Date:** March 20, 2019  
**Location:** CDOT – Golden

### Technical Team – Meeting #16

#### Introductions and Overview

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed. A sign-in sheet was passed around to record attendees.

#### Other Project Efforts

**Westbound PPSL** has been advertised and expected to begin construction in June or July.

**Fall River Road Bridge** is under contract with SEMA Construction.

**Geohazard Mitigation Program** in the US 6 canyon will be completed by its April 1<sup>st</sup> deadline.

**Bridge deck repair at Soda Creek and Floyd Hill Bridges** is beginning and will be mostly night work in Jefferson and Clear Creek Counties.

**Region 3 Vail Pass** had a public meeting in December and is finishing up its Issue Task Forces (ITFs). The project will reconvene in early summer.

**Idaho Springs Transit Center** Idaho Springs is beginning a managed parking plan and demographics study, which may impact the Transit Center design

**Floyd Hill SWEEP** (and other ITFs) are concluding work until funding and/or direction is available.

#### Project Status

##### Contractor Procurement Delayed

Contractor procurement for Floyd Hill CM/GC is delayed due to funding.

##### Opportunities with New Administration and Legislature

Senate Bill 51 is moving through the legislature. This bill would dedicate \$250 million for transportation improvements.

At this time, the priorities and resources of the new CDOT Administration are to be determined.

##### Position Project to Move Forward Once Funding is Identified

The Floyd Hill project will resume once transportation priorities are established and funding becomes available.

Q: Once funding is identified, will NEPA rev-up again, or are we close enough to the end of NEPA?

A: No, we have approximately 18 months left of NEPA. At this point, we're finalizing the Existing Conditions reports, but lack the funding to complete NEPA.

## **Section 106 ITF Meeting**

### **Discussed Preliminary Eligibility Findings**

Vanessa Henderson, CDOT, updated the group on Section 106. A Section 106 ITF meeting was held on February 28, 2019. The meeting discussed preliminary eligibility findings for historic properties within the Area of Potential Effects (APE) (area where Project may directly or indirectly affect cultural / historic resources). One property in Jefferson County at the top of Floyd Hill was found to be eligible for the National Register of Historic Places (NRHP). The residential property is located off of US 40 and is not expected to be affected by the Project.

### **Colorado Central Railroad**

The Central Colorado Railroad is an NRHP-eligible linear resource but the segment within the APE lacks integrity to convey its historic importance or association with the railroad.

Comment: Floyd Hill is a wonderful story in the history of transportation in Colorado. The railroad, the first road alignment, and the highway could all be part of an interpretive history.

### **Floyd Hill Subdivisions**

The Floyd Hill subdivisions include some properties that are more than 50 years old (or would be at the time of construction) but there is no relevant historic context for these properties – that is, no way to evaluate whether these properties are significant examples of mountain area subdivisions. The subdivisions in these mountain communities are eclectic. CDOT is continuing to research whether other states (like California) have developed a context to evaluate mountain subdivisions but the ITF agreed that additional data regarding representative examples of these types of properties were needed to conduct the evaluation. The team agreed to treat these properties as eligible; all are located far from the project and are not expected to be directly affected.

### **Section 106 Next Steps**

The eligibility report will be distributed to consulting parties and the State Historic Preservation Office within the next month.

Comment: The archaeological surveys are not yet complete because of snow-related delays. The surveys should be complete in mid-Spring.

## **Public Outreach**

### **Website Updated**

The website is up-to-date with a general status update.

CDOT distributed a project status informational flyer to the PLT, TT and project email lists.

## **20% Design Update**

Anthony Pisano, Atkins, provided an overview on the main components of the 20% design and showed that they are consistent with the concepts developed through the CSS process. He walked through the design from west to east, and the group reviewed roll plots of the 20% design. The design would continue to evolve if the NEPA phase is reinitiated.

### **Proposed Concepts: Floyd Hill, Homestead Interchange, US 6 Interchange, Wildlife**

As previously discussed, new roundabout intersections are planned for the interchanges at the top of Floyd Hill along US 40 between CR 65 and Homestead Road. The group reviewed the potential location of the new wildlife overpass bridge. Between the top of Floyd Hill and the US 6 interchange, all widening is planned along the EB lanes of I-70. In many places, there is not room for a drainage ditch and offsite flows would need to be conveyed in a storm drain system. The offsite and onsite flows would have separate systems since the on-site flows need to be treated before being released into the adjacent creeks. Several cross culverts were determined to be plugged and may need to be re-instated to improve drainage and reduce the size of the pipe system conveying the offsite flows. This would be investigated in the next phase of the project. Issues with drainage and erosion are evident after storm events.

Q: The wildlife crossing is very close to the show home property, which appears to be building out. That needs to be factored into the location.

A: This location is very conceptual and we will look at it in more detail once we're able to move forward again. But, if there are any plans available for the additional build-out, those would be helpful to get. Jo Ann Sorensen will see if she can find anything and pass it along.

### **US 6 Interchange and Wildlife Bench / Undercrossing**

At the US 6 Interchange, the design would reuse much of the existing exit ramp from I-70. A new entrance ramp would be constructed from US 6 to EB I-70. An auxiliary lane would also be included to connect this ramp to the exit at Homestead Road at the top of Floyd Hill.

There are 4 bridges at this interchange. Each bridge will have a bench for wildlife to cross under the bridges through the interchange. The benches would be adjacent to the greenway trail and under the bridges.

Q: Does the right-of-way at the Homestead Interchange still exist? Does the design include the turnaround for trucks and improved parking lot south of the interchange as previously discussed?

A: CDOT still owns the right of way and the parking lot. CDOT may need to verify if recent land development would affect plans but the team will consider these types of community requested elements during the next phase of design.

Q: Do the roundabouts accommodate the turning requirements for semi-trucks?

A: Yes.

Q: What is being done for semi-trucks crossing the bridge at the top of Floyd Hill and trying to turn around?

A: CDOT is aware that this is an issue but no decisions have been made at this point in the 20% design.

Q: What is the grade in the EB I-70 auxiliary lane just before Homestead Road and should we extend the lane beyond the exit to allow trucks more time to merge? Do trucks have enough time to merge from the auxiliary lane into I-70 at the top of the hill? Is there enough signage? A lot of the conflicts with trucks at the top of Floyd Hill are due to signage and grade issues.

A: The crest of the hill is just east of the ramp gore . Therefore, the grade at the exit ramp where trucks would be merging with through traffic is around 1-2%. The 20% design decision not to extend the lane beyond the ramp was based on the traffic models, which found no difference between the auxiliary lane and an extended lane. Furthermore, the lane cannot be extended very far without impacting wetlands.

Q: Has there been any progress on the development adjacent to the high school?

A: The developer had issues finding a permanent water supply. His case has been suspended for the time being.

Q: Can we include a bridge at the terminus of the Greenway that connects it to the parking lot at the planned trailhead near the intersection of US 6 and US 40?

A: CDOT noted that this request will be consider as funding permits.

### **Proposed Concepts: Tunnel Layout**

Anthony Pisano introduced the proposed tunnel concept layout. The team used a software program (sketch up) to model the portals and set the length of the tunnel. The tunnel requires a certain depth of rock cover for stability along with an additional 20 ft factor of safety. We will look to optimize and reduce the overall length of tunnel in the next phase of design.

Q: Has the tunnel location changed?

A: No, the tunnel is in the same location – what we've done is located the entrance and exit portals where there is competent rock. This will minimize the overall tunnel length and provide an entrance where rocks are not falling on the portal. The goal is to find a balance of length, rock fall, and excavation.

Q: Tracy Sakaguchi, CMCA, inquired how the tunnel can be built so that trucks can access it. She requested that CDOT put in as many safety measures as possible to help bolster community support and trust for trucks using the tunnel.

A: The tunnel would require ventilation and likely fire suppression as well. In terms of hazmat, no fire suppression system will put out an oil tanker. The decision whether trucks have to reroute or can use the tunnel is made by groups outside CDOT once tunnel details are known. It is important to consider that the alternate hazmat route would be along the creek, which is not ideal.

Q: When in the design process are decisions around tunnel safety features made?

A: Soon: if we get funding, we will begin making decisions about ventilation and fire suppression.

### **Proposed Concepts: WB Tunnel to Hidden Valley**

Based on the 20% design, WB I-70 would be benched into the rock slope between the new tunnel and the Hidden Valley interchange. The height of rock cuts would range from 160' to 200' tall. The cut would be about ½ mile long and require extensive excavation. See PowerPoint for graphical representation of comparable rock cuts in the corridor.

### **Hidden Valley Interchange**

Hidden Valley interchange would remain in a similar layout as is there today. An additional right turn lane would be added to the EB I-70 exit ramp. The Greenway Trail would cross from the north to the south side of CR 314 at the intersection with Central City Parkway.

### **Hidden Valley to Veterans Memorial Tunnels**

The proposed improvements from Hidden Valley to the Veterans Memorial Tunnels showed some re-alignment of Clear Creek on the south side of I-70 balanced with rock cut along the north side of I-70. This allowed us to widen and re-use the existing WB bridge for EB I-70. The next phases of design would continue to evaluate how to optimize the bridge construction, shift the creek, and minimize rock cuts to balance costs, traffic impacts and safety. To the west of the tunnel, the Floyd Hill project ties into the WB PPSL project.

There will be no new evaluations until additional funding is identified.

Q: Where will the WB PPSL lane start?

A: WB PPSL advance signage starts to the east of the Veterans Memorial Tunnels, and the WB PPSL will start to the west of the tunnels.

Q: What small highway improvements and steps can be taken in the meantime? The Floyd Hill community hopes that something will be done to relieve traffic and improve the road, such as the roundabouts at the top of Floyd Hill.

A: CDOT will bring these questions up to their upper management. At this point, there is not funding allocated for projects in this area.

Q: The Floyd Hill project is specifically noted in the ROD, does that matter? Is CDOT obligated to do anything?

A: No. It helps streamline the NEPA process, but doesn't guarantee funding.

### **Next Steps: Refine Design**

The next steps will be to optimize design by minimizing or balancing rock cuts, wall heights, bridge lengths, tunnel length, and creek relocation.

## Next Steps

### Set Up for NEPA Completion

The completion of the 20% design and Existing Conditions documentation has created a logical point to pause the project. The next meeting will not be held until funding is available.

### Email Updates as Information Becomes Available

The project team will keep the TT group informed by email of any developments.

## Actions

- Jo Ann Sorensen to share Monarch Development plans with CDOT
- Stephen Harelson to bring community question about smaller projects, such as roundabouts up the CDOT chain of command to see if anything can be done in the short-term.
- THK to add the following to the Conceptual Design Parking Lot:
  - Truck reroute at top of Floyd Hill
  - Truck parking in city-owned parking lot at top of Floyd Hill
  - Signage for trucks on the acceleration lane
  - Extending Greenway across Clear Creek to terminus of planned trailhead
  - Fire suppression in tunnel

## TT Member Attendees

Jonathan Cain (Idaho Springs); Tracy Sakaguchi (CMCA); Scott Haas (USFS); Stephen Strohming (Gilpin County); Sam Hoover (Central City); Lynnette Hailey (Black Hawk); Cindy Neely (Clear Creek County); Kelly Galardi (FHWA); Bill Coffin, John Muscatell (Floyd Hill Community); Gary Frey (Trout Unlimited); Michael Raber (Bicycle User Group); Wendy Koch (Town of Empire); Pat Holinda (Bridge Enterprise); Mitch Houston (Clear Creek School District); Holly Huyck (Clear Creek Watershed Foundation); Amy Saxton (CCGA); Martha Tableman (CC Open Space); Yelena Onnen (Jefferson County); Neil Ogden; Vanessa Henderson; Steve Harelson; Kevin Brown; Tyler Brady (CDOT); Anthony Pisano (Atkins); Gina McAfee (HDR); Kevin Shanks (THK); Mandy Whorton (Peak Consulting)



Floyd Hill - TT Meeting Agenda - DRAFT  
Sep 19th, 2019, 9 AM to 12 PM  
CDOT Golden - Lookout Mountain Conference Room

### Welcome and Introductions

CDR welcomed the group and self-introductions followed.

### Corridor Project Updates

**WB I-70 Mountain Express Lane** - The contractor has mobilized and is currently focused on relocation of the fiber backbone throughout the project limits. Their approach is to ramp up in late October or early November and focus on building walls and other major project features in the west section of the project. They are also currently working on extending a box culvert in Idaho Springs.

**CR 314/Greenway:** CDOT is finishing preliminary design. Construction will begin in 2021. The plan for the Scott Lancaster Bridge is based on multiple ITFs, community meeting feedback, and conversations with the Lancaster family. The Bridge will be preserved as a monument, but would have to be reinforced to continue to function as a bridge. The plan is to relocate key elements of the Bridge to the Game Check Station as a memorial to both the family and the effort of the community.

The primary Greenway trail alignment will be paved and go through the Game Check Station, cross over Clear Creek to CR 314 and then stay along CR 314 as a separated path until it connects to the planned East Idaho Springs Trail segment. There will also be a spur trail that will lead to the relocated Scott Lancaster structure.

**Fall River Road Bridge:** The plan is to pour the bridge deck on Sept. 20, 2019. Current work is being done on the anchor slabs along Stanley Rd. to bring the grade up. Paving will begin in the next month.

**Silverplume Wall:** This project will kick off on 9/26/19. The WB I-70 ramp will be closed and the detour will be the Frontage Road from Silverplume to Bakerville.

**US 6 over Loveland Pass:** This project is finishing up. Next steps are to finish the guardrail and striping.

**Georgetown:** The paving of Argentine Street is finished.

**Vail Pass:** The EA is currently underway with the goal to complete it in the Spring of 2020.

**2020 Reassessment:** The workplan has been developed. It will be taken to the Collaborative Effort next week to finalize and move forward with the Reassessment.

**EJMT Paving:** Repaving will begin in Spring 2020. There will be tunnel closures next spring/summer.

**Mt Evans:** The project received a FLAP (Federal Land Access Program) grant to fix frost heaves on SH 5 up to Mt Evans. CDOT has an agreement with Central Federal Lands. Anticipated build in Summer of 2021/2022. There may be funding available to pave other portions of this highway prior to the grant program.

### **Project Background**

Neil Ogden, CDOT, reviewed the Floyd Hill Process Background and a handout was provided to participants.

#### **I-70 Mountain Corridor Record of Decision (2011)**

- Selected a Preferred Alternative for the I-70 Mountain Corridor between C-470 and Glenwood Springs
- Outlined improvements for the Floyd Hill area that includes a "Six-lane component from Floyd Hill through the Veterans Memorial Tunnels (milepost [MP] 243 to MP 247) including a bike trail and frontage roads from Idaho Springs to Hidden Valley and Hidden Valley to US 6"

#### **Concept Development Process (2016/2017)**

- Created a shared vision, defined critical issues and context for westbound I-70 between Floyd Hill and Empire Junction.
- Identified transportation improvement concepts for Floyd Hill.

#### **Preliminary Design/NEPA Process (2017/2019)**

- 5 PLT Meetings, 17 TT Meetings
- Built on the Concept Development Process concepts, refined core values and defined context considerations; provided input into the purpose and need.
- TT analyzed interchange and corridor options using core value matrices.
- TT identified challenges with South Alignment (landslide area, constructability, impacts to creek, frontage road impacts, cost); TT recommended to not carry forward but not eliminate from future consideration. (Nov 29, 2017 TT Meeting)
- TT identified challenges with Off-Alignment option (tunnel length (ventilation) and bridges, limited access options at US 6 and at Central City Parkway, impacts to private land owners, environmental impact to virgin land, impacts to big horn sheep lambing areas and connectivity, and unknown geology); TT recommended to not carry forward but not eliminate from future consideration. (Nov 29, 2017 TT Meeting)



- With PLT support, the TT recommended moving forward with the North Alignment Tunnel concept. (Nov.29, 2017 TT Meeting)

### **Project Status and Planning Updates:**

- Industry, FHWA and CDOT management raised questions regarding the tunnel concept and why a non-tunnel concept wasn't explored further.
- Staff is responding to questions regarding the tunnel concept and are re-examining a refined non-tunnel concept.
- Will carry both a tunnel concept and a non-tunnel concept (called the Tunnel and Canyon Viaduct alternatives) into NEPA for an objective evaluation of both alternatives.
- Over the summer, the Project Team has continued to collect existing conditions data for the Floyd Hill Project. Construction funding has not been identified but CDOT is currently working toward completing the Floyd Hill Design and NEPA Study.
- CDOT is also undertaking a 10-year transportation planning process. As part of this process, CDOT has been meeting with many local jurisdictions (e.g. Clear Creek County, Gilpin County); from these initial talks, local jurisdictions continue to indicate that the Floyd Hill Project is a priority project. The planning process is anticipated to be completed late this fall but CDOT wanted to engage this group now to provide an update so we are prepared if this project is determined to be one of the statewide priorities after the process is complete. CDOT is currently working to secure funding for the remainder of the NEPA study, and CDOT will continue to work to identify additional design and construction funding to advance the project.

### **Alternatives Update**

Anthony Pisano, Atkins, reviewed the Existing Tunnel Alternative, starting at the top of Floyd Hill, as a reminder of what the TT had agreed upon to-date.

Tracy Sakaguchi, CMCA, expressed some concerns about the roundabouts at the top of Floyd Hill and at Homestead, as well as truck turnaround options. Further, she noted that many loaded trucks use US 6. If US 6 is closed due to weather, noted that trucks will need to take I-70, and they will not be able to get up to speed at 50mph when they are coming up the hill starting at the US 6 interchange. Trucks will need to move over 1 lane into oncoming, uphill traffic to continue on I-70 or will end up on Homestead. This will add additional conflict and congestion at the top of Floyd Hill. She noted that trucks can go WB on I-70 now to Hidden Valley and turn around to go EB on I-70, which allows them more time to get up to speed before starting up the hill. Atkins indicated that would still be an option in the future since US 6 will continue to Hidden Valley.

Kelly Galardi, FHWA, asked if the Project team had looked at extending the climbing lane past the Homestead Interchange. Atkins replied that they had, but ran into conflicts with a bridge and a wetland. It was also noted that there were limited operational benefits of this additional length compared to what is currently planned

It was also noted that the traffic models were only based on peak hour conditions.

CMCA requested that traffic also be modeled during non-peak times, when trucks are a higher percentage of the traffic mix. For example, trucks tend to be less than 1% during peak hours and can be up to 10% during non-peak times.

**ACTION:** Atkins to look more carefully at Hidden Valley to evaluate whether there is a way to make it easy for trucks to turn around during US 6 closures.

**ACTION:** Off-peak travel times and truck issues will be considered as the designs are refined at the Top of Floyd Hill and Hidden Valley interchanges.

### Tunnel Alternative - Central Section - See Figure 1 Attached

#### **I-70 Alignment**

- **WB I-70.** WB I-70 shifts to the west just east of the exit ramp to US 6. WB traffic would be on a viaduct that would parallel I-70 and cross over US 6 into a tunnel. The viaduct will touch down on existing I-70 for a short distance to accommodate the WB exit ramp traffic to US 6. The tunnel will be located underneath the first of two hills in the canyon at the bottom of Floyd Hill. At the outlet of the tunnel, the WB alignment stays north of existing I-70 and traverses around the second hill on a bench cut into the rock. At the end of the east section, the WB alignment shifts south and ties into the existing WB alignment just east of the Hidden Valley Interchange.
- **EB I-70.** EB I-70 remains within the existing roadway prism just east of the exit ramp to US 6. Flatter curves will be constructed to improve the design speed. The existing EB I-70 bridge over Clear Creek will be replaced and will move the new EB alignment to the existing WB alignment. The roadway will create a rock cut in the first of two hills in the canyon at the bottom of Floyd Hill. This rock cut is required to flatten the EB I-70 geometry to meet design speed requirements. EB I-70 remains on an alignment similar to WB I-70 just south of the second hill (where WB I-70 is elevated above EB on a bench section). At the end of the east section, the EB alignment shifts south and ties into the existing EB alignment just east of the Hidden Valley Interchange.

#### **US 6 Alignment**

EB and WB US 6 will follow the existing EB I-70 alignment through the canyon. US 6 crosses to the south side of Clear Creek just east of the Hidden Valley Interchange and ties into the existing CR 314 alignment.

#### **Access to US 6**

- **WB I-70 Exit to US 6.** The exit ramp will be shifted slightly east of the existing fill slope and will be located on structure or retaining wall. The access will remain close to its current location
- **US 6 access to EB I-70.** A new ramp will be constructed at the bottom of the hill to provide access from US 6 to EB I-70.
- **US 6 access to WB I-70.** WB US 6 traffic will remain on US 6 through the canyon. A new flyover ramp will elevate traffic over I-70 and provide access just east of the Hidden Valley Interchange. This ramp will be braided with the WB I-70 exit ramp to Central City Parkway. This means that the Central City Parkway traffic will exit I-70 before the WB US 6 traffic enters I-70.

- **EB I-70 Exit to US 6.** EB I-70 traffic headed to US 6 will exit at Hidden Valley and will make a slight right to where the new CR 314 / US 6 alignment ties into the Hidden Valley interchange.

**Greenway Alignment.** The Greenway is located on its existing alignment.

**AGS.** The AGS alignment would remain south of I-70 and would not conflict with this alternative.

**TT Question:** How many feet of Clear Creek will be realigned?

**Answer:** Approx. 800-1200 feet. This could be extended if we refine the alignment to eliminate the rockcut along I-70 west of the Hidden Valley Interchange.

**TT Question:** Will this alternative generate more traffic from CR 314 at Hidden Valley going west? Will this portion be paved? Part of the bikeway and greenway uses this road section. It was also noted that people jump off I-70 and get on the side roads, impacting local communities.

**Answer:** CR 314 will be improved and paved during the CR 314/Greenway project. The intent of the design is to hinder people from taking other routes to the extent possible. The I-70 traffic would be more free-flow in this location.

**TT Question:** At Hidden Valley, how much of US 6 is going to be on the south side of Clear Creek? Will there be a traffic signal?

**Answer:** Approx 500 feet will be on the south side of the Creek. Yes, there will be a traffic signal. This is also where a Greenway Trail user would need to cross the road at the signal, and it would no longer be a share-the-road scenario.

## **Canyon Viaduct Alternative - Central Section - See Figure 2 Attached**

### **I-70 Alignment**

- **WB I-70.** WB I-70 shifts to the west just east of the exit ramp to US 6. The viaduct will touch down on existing I-70 for a short distance to accommodate the WB exit ramp traffic to US 6. WB traffic would be on a viaduct that would parallel I-70 and turn west at US 6 and remain on a viaduct down the median of I-70. The viaduct will be constructed above the existing bridges at the bottom of the hill and stay about 30 feet above the existing roadway when it is located along the median. The WB I-70 alignment crosses south of Clear Creek and cuts through a ridge then crosses back to the north side of the Creek. The WB alignment crosses existing I-70 and traverses along the second hill on a bench cut into the rock. At the end of the east section, the WB alignment shifts south and ties into the existing WB alignment just east of the Hidden Valley Interchange
- **EB I-70.** EB I-70 parallels WB I-70. EB and WB will be separate structures.

### **US 6 Alignment**

EB and WB US 6 will follow the existing EB I-70 alignment through the canyon. US 6 crosses to the south side of Clear Creek just east of the Hidden Valley Interchange and ties into the existing CR 314 alignment.

### **Access to US 6**

- **WB I-70 Exit to US 6.** The exit ramp will be shifted slightly east of the existing fill slope and will be located on structure or retaining wall. The access will remain close to its current

location. The alignment for this alternative is farther east than on the Tunnel Alternative and will likely require more structure.

- **US 6 access to EB I-70.** A new ramp will be constructed at the bottom of the hill to provide access from US 6 to EB I-70.
- **US 6 access to WB I-70.** WB US 6 traffic will connect to the new WB viaduct near the location of the existing ramp. The profile of the ramp will be elevated on a walled section and transition to a new bridge structure. The ramp will then tie into the new I-70 WB viaduct on the right side (instead of the left entrance that exists today). This access is different from the tunnel alternative in that it will not need a flyover or braided ramp near the Hidden Valley interchange. This will result in reduced rock cuts along WB I-70.
- **EB I-70 Exit to US 6.** EB I-70 traffic headed to US 6 will exit at Hidden Valley and will make a slight right to where the new CR 314 / US 6 alignment ties into the Hidden Valley interchange.

**Greenway Alignment.** The Greenway is located on its existing alignment.

**AGS.** The AGS alignment would remain south of I-70 and would not conflict with this alternative. It would likely be in the same cut as I-70 in the location where I-70 crosses to the south side of the creek. The Canyon Viaduct Alternative may provide an opportunity for a wider transportation corridor south of Clear Creek and provide more space for the creek.

Considering the Canyon Viaduct Alternative will:

- Allow an objective evaluation of both a Tunnel and Canyon Viaduct alternative to make a final selection stronger and more informed.
- Make it easier for a contractor to advance either alternative or elements of each alternative if they have innovative ideas.
- A Canyon Viaduct alternative will provide a back-up plan in case there is a fatal flaw in the geotechnical analysis of the tunnel or if the tunnel is determined to be infeasible for any reason.

**TT Question:** What is the height of the bridge above the creek?

**A:** The top of the bridge deck will be approx. 40 feet above the creek and 30 feet above I-70.

**TT Question:** What is the plan for mitigating adverse impacts for snow plowing (ice melt and snow into the creek?).

**Answer:** NEPA will evaluate options to protect the creek, including catch basin and pipe systems to collect and treat water before it goes into the creek.

**FHWA Question:** Did you look at an option for EB off-ramp (full diamond movement) at the bottom of the hill? This is important to assess to ensure we have evaluated all 4 possible movements and options and to show why they may or may not work. The concern is that people will go the wrong-way on roads if there is not a full diamond with 4 ramps.

**Answer:** We did not fully evaluate this as we have just started to evaluate this alternative. The portion of the canyon near the US 6 interchange is very tight. CDOT will evaluate a full movement interchange at this location.

**ACTION:** CDOT to look at full diamond (4 ramps) at Hidden Valley.

**TT Question:** Will the Canyon Viaduct option change the slope coming down Floyd Hill?

**Answer:** No, it is the same as the Tunnel.

**TT Question:** Will there be a wildlife crossing?

**Answer:** Yes, both options have underpasses in the central and west sections and both will have the overpass on the east end at the top of Floyd Hill; the Canyon Viaduct would be more open and likely provide better crossing opportunities.

**TT Question:** How many over-height permitted truck loads will need to clear wildlife crossings and Tunnel options? What communities would we need to go through for detours?

**Answer:** CDOT will look into how many over-height permitted trucks go through the area and what is currently done for these loads. There have not been recent issues with any overpasses and over-height trucks in this area. A recent over-height truck cleared the overpasses in this area, but then hit an overpass in the Golden/Denver West area. This information will be considered as the design progresses for overpasses and the tunnel.

**ACTION:** CDOT to look into over-height/superload truck data and determine detour route.

**ACTION:** CDOT will examine US 6 maintenance requirements for the section where it travels under I-70.

**TT Question:** Is there a difference in the traffic impact during construction of the Tunnel or Canyon Viaduct?

**Answer:** Both of the options have considerable elements that could be built off-line. The Canyon Viaduct would have less blasting - and this is the largest impact to traffic. Bridge work can be done at night, but blasting cannot be done at night. This will be evaluated further.

**TT Question:** Between Exit 241 and Hidden Valley, would either side of traffic be re-routed onto the Frontage road, similar to the Twin Tunnels project?

**Answer:** The construction phasing plan currently isn't anticipated to use the Frontage Road as a reroute. The new cross section of I-70 will be wider than the existing roadway. We can maintain both directions of traffic using a 52 foot roadway section. Once one direction of I-70 has been constructed, we can relocate both directions of I-70 on the newly constructed roadway while work is done on the other side. It would be the same for either alternative. There would be closures for blasting. It would be more likely that CR 314 is closed.

**Question:** The Tunnel Alternative leaves EB I-70 in the canyon and relocates WB I-70 in a tunnel and then on a bench between US 6 and Hidden Valley. For the Canyon Viaduct Alternative, would it be possible to put EB I-70 on the same alignment used for the Tunnel Alternative and just put WB on a viaduct? This would reduce the number of bridges and amount of rock cut, etc?

**Answer:** We did not look at that option because the public and the TT stated that the preference is to put as much of highway as possible out of the canyon and use the existing footprint to reclaim CR 314/US 6 scenic route.

## NEPA Process and Draft Schedule

- **Develop and Refine EA Alternatives: September - December 2019**
  - September TT Mtg - Introduce / review Canyon Viaduct Alternative
  - October TT Mtg - Review Tunnel Alternative refinements, including Frontage Road alignment
  - November & December TT Mtgs/ITF Mtgs - Refine and review alternatives for NEPA analysis (complete CSS Matrix, pros and cons, simulations as needed).
- **NEPA Impact Analysis: Winter/Spring 2020**
  - January PLT Meeting: Review alternatives for NEPA analysis and public meeting preparation
- **Public Meeting: February 2020 (update project progress, next steps, and NEPA alternatives)**
  - March PLT/TT Mtg - Follow up from Public Mtg.
  - Spring 2020: ALIVE, Section 106, and SWEEP ITF Meetings
- **NEPA EA Preparation: Summer 2020**
  - May/June TT Mtg - Review preliminary impacts and mitigation
  - July/August PLT/TT Mtg - Updates on impacts and mitigation; public hearing preparation
- **NEPA Completion (pending funding availability): Fall/Winter 2020**
  - October PLT/TT Mtg - Review public and agency comments and responses

NEPA will be used as intended to do an objective evaluation of both alternatives in order to make an informed decision. It was noted that the alternatives evaluation process will ensure that the Context Considerations developed by the PLT, TT and multiple ITFs are integrated into the NEPA evaluation criteria. The TT members noted that it will be important to see the equivalence between the Context Considerations and NEPA criteria.

The first step will be for an ITF to work on a Canyon Viaduct Matrix.

## Scheduling

October (3<sup>rd</sup> or 4<sup>th</sup> week): TT meeting to review refinements to Central alternatives and any additional data gathered, including Frontage Road

Nov (2<sup>nd</sup> week): ITF to develop Canyon Viaduct matrix and review/refine Tunnel Matrix

Nov (3<sup>rd</sup> week) TT: Refine and review alternatives for NEPA analysis (review Matrix, pros and cons, simulations as needed).

Dec (1<sup>st</sup> and 2<sup>nd</sup> week): ITF or TT follow ups: continue to work on matrix (populating matrix with colors, etc)

Jan (2<sup>nd</sup> week): TT to map context considerations to NEPA criteria

Jan (4<sup>th</sup> week): PLT to assist with public meeting prep and review TT process and work-to-date.

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**TT Question:** What is the funding plan for Floyd Hill?

**Answer:** We have a funding plan that is between \$100-200 million short. Depends on how statewide priorities shake out.

- \$30 to 200 million from Bridge Enterprise
- SB 267: We are not sure how much will be available.
- TIFIA loan: Federally subsidized construction loan backed up with toll revenue.
- We could see another INFRA.
- There is an option to go to the legislature.
- We do not have entire funding for this project.

**TT Discussion:**

- US 40 is getting worse. School children are walking to CR 65 to get rides home because US 40 is a parking lot from CR 65 to Homestead. The impact seems extended (beyond Friday and Sunday). The issue is that it narrows from essentially 5 lanes into 2 lanes at Two Bears.
- One potential solution could be to close US 40 between Homestead and US 6. Not sure of the legality.
- Another possibility would be to have “local access only” between the high school and CR 65. Then locals could get off at Beaver Brook and get home. This would help people who live in Floyd Hill and Saddleback.
- There are some Jefferson County issues, Clear Creek County issues, and local resident issues in conflict.
- The solution seems like a local county partnership. It is not a CDOT issue, but CDOT is willing to be at the table to partner with locals to come up with a solution.
- Steve Durian, Jefferson County, encouraged the local representatives to contact him to have a discussion. Jefferson County is open to having conversations with Clear Creek County, local residents, and the school district.
- Andy Marsh, Idaho Springs, noted that this alternative could provide safety improvements such as ingress/egress for emergency services, access, and fire.

**ACTION:** Local representatives to contact Steve Durian at Jefferson County.

**Attendees:**

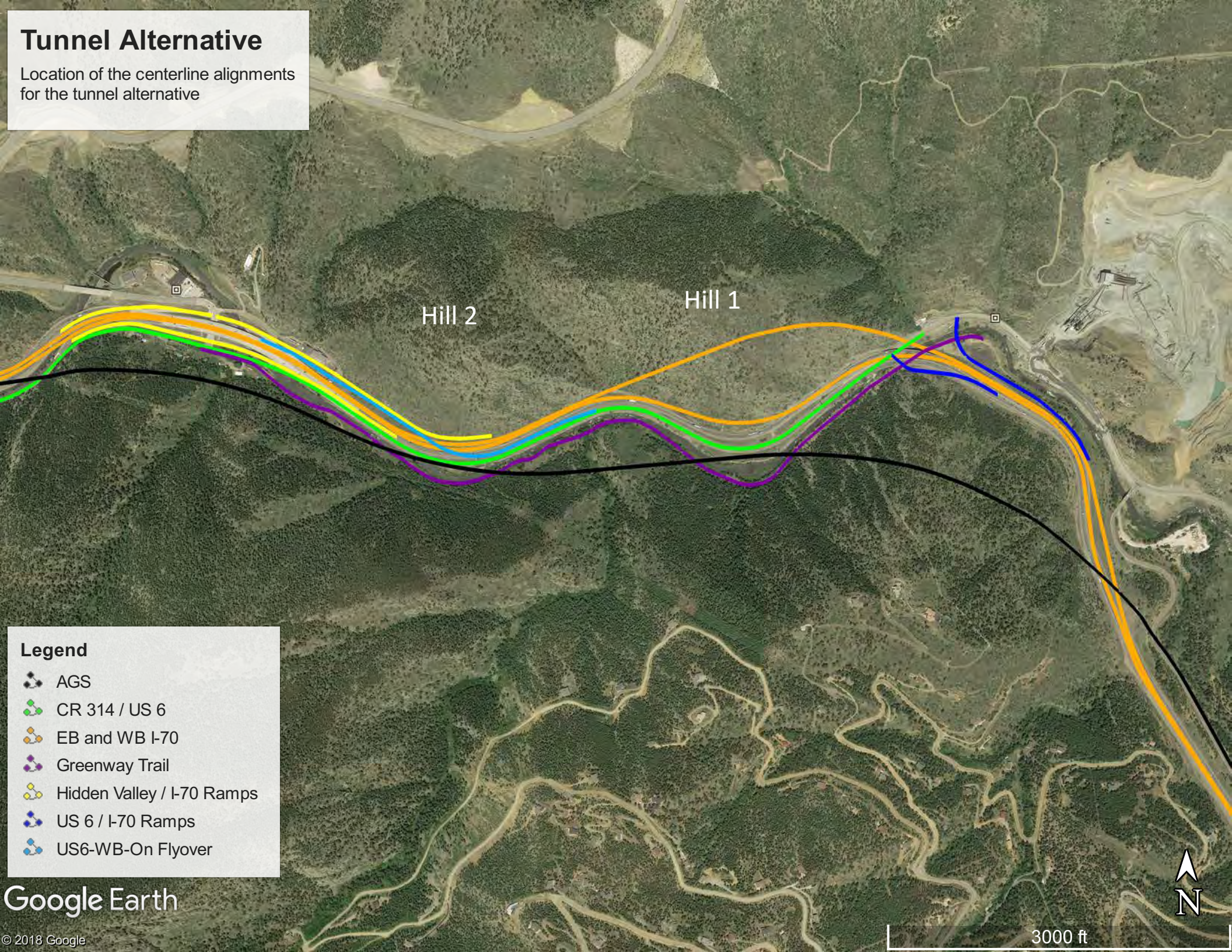
Amy Saxton, Cindy Neely, Randy Wheelock (Clear Creek County), Kelly Galardi (FHWA), Adam Bianchi (USFS), Tracy Sakaguchi (CMCA), Martha Tableman (CCC Open Space), Bill Coffin (Floyd Hill Community), Holly Huyck (Upper Clear Creek Watershed Association, UCCWA), Mike Raber (CCC Bicycle Users Group); Andrew Marsh (Idaho Springs), Steve Durian (Jefferson County), Mitch Houston (CCSD), Stephen Harelson, Vanessa Henderson, Tyler Brady, Julie George, Neil Ogden, Jeff Hampton (CDOT); Tyler Larson, Anthony Pisano (Atkins); Mandy Whorton (Peak Consulting); Taber Ward, Jonathan Bartsch (CDR)

**Phone:** Kevin Brown (CDOT)



# Tunnel Alternative

Location of the centerline alignments for the tunnel alternative



Hill 2

Hill 1

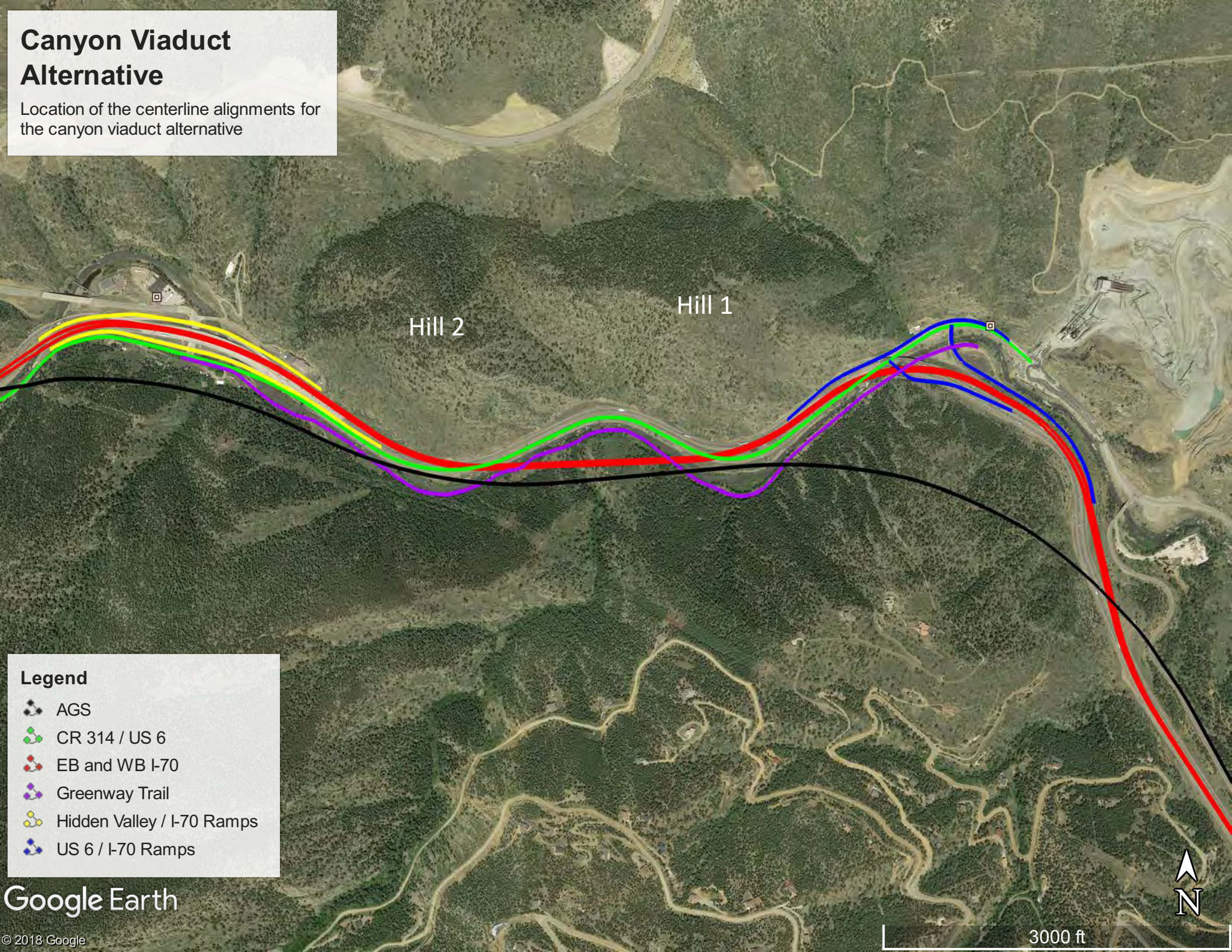
## Legend

- AGS
- CR 314 / US 6
- EB and WB I-70
- Greenway Trail
- Hidden Valley / I-70 Ramps
- US 6 / I-70 Ramps
- US6-WB-On Flyover



# Canyon Viaduct Alternative

Location of the centerline alignments for the canyon viaduct alternative



Hill 2

Hill 1

## Legend

- AGS
- CR 314 / US 6
- EB and WB I-70
- Greenway Trail
- Hidden Valley / I-70 Ramps
- US 6 / I-70 Ramps





**Floyd Hill - TT Meeting #17  
Agenda**

Sept 19th, 2019, 9 AM to 12 PM  
CDOT Golden - Lookout Mountain Conference Room

1. Welcome and Introductions (9:00 - 9:15 AM)
2. Corridor Project Updates (9:15 - 9:25 AM)
3. Project Background, Status, and Planning Update (9:25 - 9:45 AM)
4. Alternatives Update (9:45 - 10:45 AM)
5. NEPA Process and Schedule (10:45 - 11:00 AM)
6. CSS Process and Planning: Moving Forward (11:00 - 11:45 AM)
7. Next Steps/Action Items (11:45 - 12:00 PM)



## **Floyd Hill - TT Meeting Summary**

Nov 12th, 2019, 1 PM to 4 PM

*Postponed from Oct. 29, 2019 due to weather.*

CDOT Golden - Lookout Mountain Conference Room

### **Welcome and Introductions**

Taber Ward, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed.

### **Corridor Project Updates**

Neil Ogden, CDOT, updated the group on corridor-wide projects. Neil also noted that Steve Harelson, CDOT, has been promoted to Chief Engineer for CDOT and is no longer at Region 1.

**Floyd Hill:** The Transportation Commission is reviewing potential funding sources for the Floyd Hill modifications. Final approval for up to \$100 million is in December (note that it was actually approved on November 21<sup>st</sup>). The Bridge Enterprise Program is also anticipated to bring resources to the table, and the collective group is looking at federal grant opportunities and funding options over the next year.

**WB I-70 Mountain Express Lane:** Construction is underway, including conduit installation and west-end widening.

**Fall River Road Bridge:** The project is nearing completion and will open to traffic around December 20th.

**Silver Plume Sound Wall:** The wall is being removed. The project will pause around Thanksgiving and resume work in early winter. Completion is anticipated in June 2020.

**CR 314/Greenway:** CDOT has completed about 30% design on both of these WB I-70 Mountain Express Lanes INFRA companion projects and anticipates starting construction in Spring 2021. There is budget available for both projects.

**Q:** What are the endpoints of the Greenway design?

**A:** As part of the Greenway project, the East Idaho Springs section begins at Exit 241 and continues to the east, ending at the RV storage yard. The Dumont Trailhead will also be constructed as part of the Greenway project. In addition, another section between the Dumont Trailhead and the Animal Shelter is being considered. As part of the CR 314 project, the Greenway will be completed between the RV storage yard on the west to the Game Check Trailhead.

**Vail Pass:** The EA documentation has begun and a PLT meeting is scheduled for December 3, 2019.

**HPTE Funding:** A subcommittee of the Collaborative Effort has been formed to look at options for the funding gap for Floyd Hill. HPTE released a Request for Proposals for a “Floyd Hill Project Funding Gap Study” on November 15<sup>th</sup>. This process will be completed parallel to the NEPA process, will help inform project development, and is anticipated to be an eight month process.

### Action Item Follow Up

Taber Ward prompted updates on outstanding action items from TT #17 meeting.

Anthony Pisano, Atkins, addressed the action item to look into truck turn-arounds at Hidden Valley. This action item stemmed from concern that, if US 6 is closed, semi-trucks would have no option to turn around to go eastbound. Atkins ran truck-turning templates and found that a truck turn-around is possible, albeit tight.

Group discussion followed about concerns about tipping loads and right-hand U-turns for freight. Atkins emphasized that the U-turn option is for emergencies when US 6 has been closed.

Neil Ogden, CDOT, also updated the TT on his research around percentage of overheight, overweight trucks in the corridor. It was found that there is a total of approximately 600 overweight/overheight vehicles that are permitted on I-70 in the westbound direction each year.

### NEPA Process

Vanessa Henderson, CDOT, provided a handout to the TT and gave an update on the NEPA process.

There are three NEPA Alternatives:

1. **No Action Alternative** - evaluates routine maintenance projects only, including replacing the bridge at the bottom of Floyd Hill as is, and is used as a baseline for comparison of alternatives.
2. **Tunnel Alternative** - evaluates putting WB I-70 into a tunnel with two frontage road design options, one on the north side of Clear Creek and one on the south side.
3. **Canyon Viaduct Alternative** - evaluates putting both EB and WB I-70 on a viaduct .

Both the Tunnel and Canyon Viaduct Alternatives include the Frontage Road and Greenway. The differences between the alternatives is only between the US 6 and Hidden Valley interchanges, which is being called the Central Section. They both affect the US 6 interchange in the same way.

**Q:** Does the Canyon Viaduct Alternative have north and south Frontage Road options?

**A:** No. The Viaduct Alternative provides more room through the canyon than the Tunnel Alternative, so the Frontage Road would remain on the north side of the Creek.

**Q:** Will both the north and south Frontage Road options in the Tunnel Alternative be analyzed in NEPA?

**A:** Yes, both alternatives will be evaluated as part of the NEPA process. NEPA will produce more quantitative data, so it is important to carry both options forward for an objective evaluation.

**Q:** The “frontage road” in the Tunnel Alternative is an extension of US 6. It seems to be a misnomer, as a highway gets much more traffic than a frontage road.

**A:** A frontage road is a broad term indicating a subsidiary road running parallel to a main road or highway and giving access to houses and businesses.

The draft NEPA schedule provided to the TT has the following timelines:

- Sept. - Dec. 2019 (current): develop and refine NEPA alternatives
- Winter / Spring 2020: NEPA impact analysis
- February 2020: Public meeting on project status, next steps, and NEPA alternatives
- Summer 2020: Environmental Assessment (EA) preparation
- Fall 2020: EA public comment period and public hearing
- Fall / Winter 2020: NEPA completion, pending funding availability

Taber provided the group a second handout, in draft form, that provided a high-level overview of the Alternatives and Design Options and summarized the meetings and matrices. The group committed to reviewing and providing feedback on the language.

**ACTION:** TT to review Central Alignment Alternatives Review and provide feedback to CDOT.

- Recommended change: “Both frontage road design options affect the US 6 interchange in the same way.”

**Q:** Does the south frontage road option provide vehicle access to the creek?

**A:** It would be possible to drive on the Greenway in an emergency to access the creek with the south frontage road option, but it would not allow vehicles access to the creek any other time.

## Alternatives Discussion and Review

Anthony Pisano provided a detailed overview of the Tunnel Alternative with the north and south frontage road options and the Canyon Viaduct Alternative.

### Tunnel Alternative with North Frontage Road Option

**Q:** Are there four lanes on the EB side between the bottom of Floyd Hill and the Hyland Hills Exit?

**A:** There will be three general purpose lanes as there are today plus an auxiliary lane connecting the new US 6 to EB I-70 entrance ramp and the Hyland Hills exit ramp.

**Q:** Has there been a decision about where the auxiliary lane ends?

**A:** This is being evaluated during the NEPA process. At TT meeting #18, there was a suggestion to extend the lane past the ramp. This option will be considered.

**Q:** How hard would it be for a large semi-truck to get from US 6 to I-70 EB at Hidden Valley?

**A:** The new design does not require trucks to use Hidden Valley, but it is possible for a truck to make a U-turn at the existing CR 314 intersection. This would require trucks on WB US 6 to remain on the Frontage Road, drive past the new flyover ramp and go through the Hidden Valley Interchange at the intersection with CR 314. Trucks could then make a U-turn onto the EB I-70 entrance ramp.

**Q:** What is the hazmat re-route for truckers? What movements will drivers need to make in the Hidden Valley interchange?

**A:** This question will be explored in further depth once more information is known about the design.

**Q:** There is a retaining wall along the south side of I-70 (north side of Clear Creek) between the Veterans Memorial Tunnels and the Hidden Valley interchange. Both Alternatives will relocate approximately 1,200 ft of the creek in this area. How much of the retaining wall on the north side of the creek would be impacted.?

**A:** The majority of the retaining wall would be removed / replaced.

### **Tunnel Alternative with S. Frontage Road Option**

**Q:** Is moving the Greenway closer to the creek putting it at risk of flooding?

**A:** The Greenway will remain in its current location; the road will be moved up the slope. Vertical separation varies between 5 feet to 20 feet. The project will follow the design standards to keep the Greenway above the 10-year floodplain elevation.

**Q:** How do wildlife travel to get to the creek? Do animals travel on the south side?

**A:** This will be examined in NEPA and in the upcoming ALIVE ITFs.

**Q:** Do any of the Alternatives impact the mitigation work done for Clear Creek as part of the Twin Tunnels Project?

**A:** No, the Alternatives do not impact the mitigation work built. All mitigation work is upstream of this project. In fact, this could be an opportunity to continue the improvements made from that effort and it will be considered further during the NEPA process.

### **Canyon Viaduct Alternative**

**Q:** Does this Alternative address the curve issues of the highway?

**A:** Yes this alternative will also flatten the highway curves.

**Q:** What is the elevation change for the viaduct?

**A:** The elevation change is a minimum of 30' above I-70.

**Q:** Would Eastbound lanes remain in the current EB footprint until the viaduct was complete?

**A:** Correct. Once construction is completed, CDOT would have the option of moving westbound traffic to the new lanes on the viaduct, or moving both eastbound and westbound traffic head to head on the new WB bridge structure while reconstructing the current highway.

**Q:** Are there planned rock cuts at WB US 6?

**A:** No, the road hugs the curves of the existing rock cut.

### Other Items

The group discussed what information would be helpful for analyzing the Alternatives at the next meeting.

The TT asked to review the CSS Flow Chart, critical issues and the criteria matrices.

The TT also asked for general information on differentiators between the Alternatives, including bridges, height and length of rock cut, and creek crossings.

**ACTION:** Atkins to develop general information on each Alternative and quantify key variables.

**ACTION:** Atkins to print roll plots for each Alternative and bring to the ITF.

There was group discussion on the Tunnel vs. Viaduct matrix, which will be modified to reflect comparisons between the Alternatives. The TT agreed that the Project Team would develop a first draft of the matrix, to facilitate the ITF's discussions and edits to the document.

**ACTION:** Project Team to create first draft of matrix, including identification of what does not change (i.e. non-differentiators) between alternatives.

**ACTION:** The TT to review final CSS Flow Chart and Context Considerations before the ITF.

The goal of the Evaluation Matrix is not to provide a recommendation, but rather to fully document the TT discussion to carry forward into NEPA.

### Action Items

- TT to review Central Alignment Alternatives Review and provide feedback to CDOT.
- Atkins to develop statistics on each Alternative and quantify key variables.
- Atkins to print roll plots for each Alternative and bring to ITF.



- Project Team to create first draft of matrix, including identification of what does not change (i.e. non-differentiators) between alternatives.
- The TT to review final CSS Flow Chart and Context Considerations before the next ITF and bring feedback.

**Attendees:**

Amy Saxton, Cindy Neely (Clear Creek County); Tracy Sakaguchi (CMCA); Martha Tableman (CCC Open Space); Sam Hoover (Central City); Bill Coffin (Floyd Hill Community); Holly Huyck; Gary Frey (Trout Unlimited); Lynette Hailey (I-70 Coalition); Vanessa Henderson, Tyler Brady, Neil Ogden, Jeff Hampton, Kevin Brown (CDOT); Tyler Larson, Anthony Pisano (Atkins); Mandy Whorton (Peak Consulting); Patrick Holinda (Bridge Enterprise); Kevin Shanks (THK); Taber Ward, Emily Zmak (CDR); Kelly Galardi (FHWA)



**Floyd Hill - TT Meeting Summary**  
Dec 5th, 2019, 1 PM to 4 PM  
CDOT Golden - Lookout Mountain Conference Room

**Welcome and Introductions**

Jonathan Bartsch, CDR Associates, welcomed the group and reviewed the agenda. Self-introductions followed.

**Corridor Project Updates**

**WB I-70 Mountain Express Lane:** Two lanes have remained open during construction to reduce congestion and ensure the mobility of the travelling public. There was a rockslide over Thanksgiving, and this slowed traffic down. Jeff Hampton (CDOT) is working with the contractor to ensure the rockslide is cleaned up and construction work can progress as scheduled. The geotechnical team has been mobilized. The rockslide was an unforeseen event and not part of construction work.

**TT Comment:** The public information around the rockslide and its impact is going really well.

**TT Question:** How will the rockslide impact the construction schedule, what are the near-term next steps for rock work?

**CDOT Response:** Starting Wednesday, Dec. 4, CDOT will conduct rockfall mitigation work to prevent rockslides on westbound I-70 near Idaho Springs. Traffic will be periodically stopped in both directions between the hours of 9 a.m. and 3 p.m. this Wednesday and Thursday and the following Mondays through Thursdays the weeks of Dec. 9 and Dec. 16. Work will begin near MP 239 on the west end of Idaho Springs and continue through the next few weeks. This section was planned for rockfall mitigation in spring of 2020. Due to the early snow storms and extra moisture this fall, the scaling will be moved up, and done as soon as possible to prevent possible rock slides. On Monday, Dec. 9, crews will also scale and drill the rock face next to westbound I-70 near Mile Point 236, just east of Dumont. This is the location of rockslides last week. This work will be done in preparation of blasting scheduled for Dec. 18. When blasting occurs, I-70 will be closed in BOTH directions in this location for a few hours. This work will be done as soon as possible to stabilize the rock face.

**TT comment:** The 2-3 hours of closure so close to Christmas will be tough for local business.

**CDOT Response:** There is a risk of waiting, the rock face needs to be stabilized as soon as possible. We will also be working with Clear Creek School District to coordinate with school bus timing and road closures.

**Silver Plume Sound Wall:** The sound wall is down. Completion is anticipated in June 2020.

**CR 314/Greenway:** CDOT has completed about 30% design on both of these WB I-70 Mountain Express Lanes INFRA companion projects and anticipates starting construction in Spring 2021. There is budget available for both projects.

**Vail Pass:** The Environmental Assessment Draft is expected in March. A PLT was held on December 3.

**BUILD GRANT:** CDOT did not get the BUILD grant for the I-70 Truck Escape Ramp Projects; will look at a targeted grants regarding freight in the next INFRA round.

**HPTE Funding:** There will be a separate PLT for the Floyd Hill Funding Gap Study. It will be important to have full membership of all interested I-70 stakeholders, not just those proximate to Floyd Hill.

**West Program Engineer hired:** Mike Keleman was selected for this position. He was the Project Engineer on Twin Tunnels.

#### **ITF Report Out: Central Section Canyon Viaduct and Tunnel Alternatives Evaluation Matrix**

CDR handed out copies of the Central Section Canyon Viaduct and Tunnel Alternatives Evaluation Matrix with an associated “Data Needs” document to track the items that need further research, analysis and evaluation. The next step is to begin collecting this data and ensure that TT questions are answered. Data findings will be put into the Evaluation Matrix.

The Evaluation Matrix will feed into NEPA to document the PLT/TT input received during the CSS process. The CSS chapter in NEPA will discuss and summarize the TT and ITF meeting outcomes.

**TT Question:** The TT is charged with making an evaluation and indicating preference for the various alternatives. When this Evaluation Matrix is fully populated, will it be run as an Evaluation, i.e. fill in with “fair,” “better,” “best” coloring?

**CDOT Answer:** Yes. We will use this as an Evaluation and color the Matrix before Summer 2020. Most of the questions in the Matrix are also in NEPA.

#### **CSS and Project Delivery Methods and Process**

There are two potential alternative delivery methods that would be used for this project. These methods and how they work with the CSS process are described below:

**CMGC Delivery Method:** The Contractors and CSS participants work together through the final design process prior to construction.

**Design-Build:** Would need to set up a process before the selection process to determine how CSS fits in. There would be a process to align the specs and develop a contract that would meet the needs of the project and still leave room for contractor innovation. The contractors would need approval to change the more prescriptive elements of the design. This would involve a new PLT since it is a different Life Cycle in the CSS Process (i.e. Design phase, procurement phase, construction phase).

**TT Question:** How can we be assured that what we have been talking about for the last two years is included in the procurement process? We do not want to shut out the PLT/TT or community stakeholders from the procurement process. How can we bring the contractor, tester, designer, owner's rep on early enough to ensure they understand where we are coming from?

**TT Comment:** We need to make a decision, as soon as possible, about who the consultants will be: owner, designer, tester, contractor, etc. What will CDOT's oversight be once the project goes out construction? The sooner we can bring people on, the better.

**CDOT Comment:** We will look into procurement options and delivery method. There is a CDOT/FHWA Team that will make the final selection and delivery method. The CSS stakeholders will be engaged in developing the contract requirements.

**TT Comment:** We need a guidebook on how the different processes work in CSS. How do we transition and what is the stakeholder role in Concept, Design, Procurement, Construction, Maintenance, etc.?

**CDOT Answer:** There is a framework already in place for the different phases of the project. These would require further development once a delivery method is chosen.

### Floyd Hill Project Goals Discussion

CDR handed out a Floyd Hill Project Goals document to the TT members. The purpose of the Goals document is to aid in selecting the project delivery method. These are project-specific goals that were established in 2017, prior to the 109 and 110 Ballot measures and the associated project delivery selection matrix.

The Goal list was specifically generated for procurement purposes, it was not generated by PLT.

**TT suggestion:** The goals should be followed by strategies and a workplan. The goals need to be more project-specific, not general. More specificity around goals (i.e. quantifiable)

**TT Comment:** The Matrix talks about Recommendations from SWEEP and ALIVE. Both of these committees must maintain and enhance environmental quality. This should be captured in the Environmental "implied goal"

**TT Comment:** The Goals should not be contingent on funding.

**ACTION:** Project Staff will review Clear Creek County's Resolution and Concept Development Process to see if these documents contain additional goals that should be integrated into the Floyd Hill Project Goals document for procurement.

**ACTION:** Project Staff to revise Project Goals by early 2020.

**TT ACTION:** Once Project Staff revises goals, the TT will provide input into the Goals document so the right decision can be made during project delivery.

### CSS Schedule and Next Steps

- ~~Develop and Refine EA Alternatives: September – December 2019~~
  - ~~September TT Mtg – Introduce / review Canyon Viaduct Alternative~~
  - ~~October TT Mtg – Review Tunnel Alternative refinements, including Frontage Road alignment~~
  - ~~November & December TT Mtgs – Refine and review alternatives for NEPA analysis~~
- **Environmental Assessment (EA) Impact Analysis: Winter/Spring 2020**
  - January 9<sup>th</sup> ALIVE ITF - Project Update and Mitigation Discussions
  - January Greenway and Traffic/Incident Management ITFs
  - Early February PLT Meeting - Public meeting preparation
  - Spring 2020 Section 106 and SWEEP ITFs - Project Update, Effects Information (Section 106), and Mitigation Discussions
- **Public Meeting: February 2020 (Project updates, next steps, and NEPA Alternatives)**
  - March PLT/TT - Follow up from Public Meeting
- **EA Preparation: Summer 2020**
  - Summer TT (1-2 Meetings) - Review preliminary impacts and mitigation and finalize CSS Matrix documentation.
- **EA Public Comment Period and Public Hearing: Fall 2020**
  - Fall PLT - Public hearing preparation
- **NEPA Completion (pending funding availability): Winter 2021**
  - Winter PLT/TT - Follow up from Public Comment Period and Public Hearing, Wrap up Life Cycle Phase 3 (Project Design) and Transition to Life Cycle Phase 4 (Project Construction)

**ACTION:** CDR to cancel the December 17, 2019 TT Meeting.

## Greenway Discussion

The TT discussed the Clear Creek Greenway Corridor and looked over Greenway maps provided by Clear Creek County.

**Clear Creek County provided a list of potential issues and concerns as related to the Central Section highway improvements and the Greenway:**

- **ACCESS:**
  - Access above a trail and below a trail. Clear Creek County does not want a trail as a single line surrounded by concrete walls.
  - Must consider wildlife access from above and below the trail.
  - Need to ensure Emergency Services egress. The trail should allow EMS to access the trail and enough space to work.
  - Access to activity nodes, including fishing, rafting, hiking area, and cycling.
  - The design should not preclude an eventual connection, at least for pedestrians and walking traffic, to Clear Creek Road. Clear Creek Road is a road up in the Saddleback Subdivision which is south and uphill from Clear Creek.
- **VIADUCT CONCERNS:**
  - Shadowing
  - Noise
  - Traffic and types of vehicles
- **DESIGN:**
  - Trailheads need parking. Even if CDOT isn't building the parking, need to ensure space is allocated.
  - Trail needs to get through the US 6 and HV interchanges

**CDOT Question:** Is the trail alignment shown across from Two Bears the final Greenway alignment, or is there potential for variation?

**Answer:** There is some room for variation. E.g. Need to get back to the south side of the creek, the creek crossing has not yet been determined. Hwy 6 and Hwy 40 areas have not been determined. The recreational trail system shown on the map is proposed, not existing.

**Clear Creek County Comment:** Ultimately, the Greenway Corridor is a recreational asset that CCC hopes to realize. Certain highway alternatives would preclude Clear Creek County from using this system as an asset. Many of these lands are Open Space properties that were purchased with dollars that require additional visibility in the community and we are required to use funds in a certain way. There are some limits on how that land gets used. If this land is sold, the fund must be compensated.

**CDOT Question:** For the parking areas indicated, do you have a number of spaces?

**Answer:** No. This is an initial vision - as alternatives get refined, there may be other opportunities. The goal is to ensure that the Greenway works and is included in the

different alternatives. The design of Greenway needs to evolve with alternatives design.

**ACTION:** Defer the Greenway ITF conversation until design is further advanced.

**ACTION:** CCC to send electronic version of the maps to CDOT.

### Action Items

**ACTION:** Project Staff will review Clear Creek County's Resolution and Concept Development Process to see if these documents contain additional goals that should be integrated into the Floyd Hill Project Goals document for procurement.

**ACTION:** Project Staff to revise Project Goals by early 2020.

**TT ACTION:** Once Project Staff revises goals, the TT will provide input into the Goals document so the right decision can be made during project delivery.

**ACTION:** CDR to cancel the December 17, 2019 TT Meeting.

**ACTION:** Defer the Greenway ITF conversation until design is further advanced.

**ACTION:** CCC to send electronic version of the maps to CDOT.

### Attendees

Amy Saxton, Cindy Neely (Clear Creek County); Tracy Sakaguchi (CMCA); Martha Tableman (CCC Open Space); Sam Hoover (Central City); Bill Coffin, John Muscatell (Floyd Hill Community); Mike Hillman, Andy Marsh (Idaho Springs); Steve Durian (Jefferson County); Mike Raber (CC Bikeway Users Group); Gary Frey (Trout Unlimited); Vanessa Henderson (phone), Tyler Brady, Neil Ogden, Jeff Hampton, Kevin Brown (CDOT); Anthony Pisano (Atkins); Patrick Holinda (Bridge Enterprise); Kevin Shanks (THK); Taber Ward, Jonathan Bartsch (CDR)



# I-70 FLOYD HILL PROJECT

## Floyd Hill TT Meeting #22

SEPTEMBER 24, 2020 | 11:00 a.m. - 1:00 p.m.

### Meeting Summary TT Meeting #22

#### Welcome and Introductions

Jonathan Bartsch, CDR, convened the meeting with self-introductions of TT members. The meeting purpose was to review project updates, review the process for incorporating CSS documentation and input into NEPA, and review the Preliminary Preferred Alternative design graphics. There were no changes to the agenda.

#### Project Updates

##### I-70 Mountain Corridor projects:

- Greenway and CR 314 are moving forward. Construction is anticipated to begin in Summer 2021.
- Eisenhower-Johnson Memorial Tunnels are being paved.
- Westbound PPSL / MEXL construction is on-schedule. Currently, there is sanitary sewer work in Idaho Springs and it will continue through the beginning of November 2020. Idaho Springs heavy civil work has also begun and includes grading work, parking lot work, and construction in the Exit 240 area. The schedule includes both day and night work.

##### Floyd Hill Contracting

- The Floyd Hill procurement process will begin Fall 2020 with the goal to onboard the contractor in the Spring or Summer of 2021.

#### Roles and Responsibilities of TT as related to the CSS and NEPA processes

Taber Ward, CDR Associates, reviewed the TT Charter language outlining the TT's purpose and role in the CSS process:

- *“The purpose of the WB I-70 Floyd Hill NEPA Process (“WB I-70 Floyd Hill”) Technical Team (TT) is to ensure that local and agency contexts are defined and integrated as part of the Context Sensitive Solutions (CSS) process.” The TT:*
  - ◆ *Defines specific context of the segments and identify the specific critical issues, context considerations, technical, environmental and social/economic in a segment.*



- ◆ *Evaluates concepts and alternatives based on the critical issues, context considerations, and core values for the corridor and segment.*
- ◆ *Assists in developing alternatives and examines how different alternatives work and identifies trade-offs*
- ◆ *Assists in evaluating alternatives using Core Values and Evaluation Criteria developed by the PLT and TT.*

It was noted that the PLT’s role is to oversee and direct the CSS process, whereas the TT is composed of multi-disciplinary stakeholders and experts who ensure that local and agency contexts are defined and integrated as part of the CSS process. The TT members help to identify the specific critical issues, context considerations, technical, environmental and social/economic in a segment.

Moving forward, the PLT and TT meetings will be separate to ensure the PLT can focus on process oversight, and the TT can provide input on technical issues and context considerations.

### **CSS and NEPA**

Vanessa Henderson, CDOT, outlined the relationship between the CSS and NEPA processes. These concurrent processes are separate, but complimentary. The CSS process assists CDOT/FHWA in the development of multiple Alternatives that are then evaluated by NEPA to recommend a Preferred Alternative. All of the work done in the PLT and TT meetings, including evaluation matrices, community input, CSS documentation, meeting notes, community considerations, and shared vision elements, are used in the NEPA process when evaluating Alternatives, and ultimately, recommending a Preferred Alternative.

Information from the CSS process will be put into the RFP documents and EA.

Amy Saxton noted that the goal of the CSS process is not to choose one Alternative over another. The goal is to help identify and develop multiple, well informed Alternatives that will be evaluated in NEPA. The PLT and TT members ensure that the Alternatives are as well-designed as possible, and consider the local context and community concerns, before they are evaluated by the NEPA process.

Cindy Neely also pointed out that the TT will help organize the CSS Commitment Tracking Sheet, and a PLT will continue to provide oversight and input into the process during the next CSS lifecycle phases.

### **NEPA Update**

Vanessa shared that CDOT received the Floyd Hill EA on September 16, 2020 for review. The draft EA is pointing to the Canyon Viaduct as the Preliminary Preferred Alternative based on constructability, and fewer social and environmental impacts. The PLT and TT will be reviewing the Draft EA impacts during the October CSS meetings.

It is possible that the Preferred Alternative could change as NEPA continues through the review processes, which is why the Canyon Viaduct is, at this time, being called the Preliminary Preferred Alternative. When the EA is released in November, a Preferred Alternative will be identified. The Tunnel Alternative is not being eliminated because no fatal flaws have been identified. The Preferred Alternative decision will also depend on Contractor input.

## **Discussion**

**Q:** Is the Tunnel Alternative with the south frontage road option being eliminated?

**A:** No; both frontage roads options will be evaluated in NEPA. The EA states that the south frontage road is a fatal flaw from the community perspective, but there are not fatal flaws from other environmental impact perspectives.

**Q:** Is there a formal document for the TT to review?

**A:** Yes; the EA will include technical reports and an assessment of the impacts of all the Alternatives. There will be a preview of these impacts at the next TT meeting in October. The TT can make additional comments through the public process once the EA is released.

**Comment:** Mike Raber, Clear Creek County Bicycle User Group, expressed his concerns about the Canyon Viaduct Alternative because of the potential debris that could fall from the roadway onto the Greenway corridor.

**Response:** These comments and impacts are being incorporated into the impact analysis process. There was a request to TT members for their specific suggestions on how to mitigate impacts.

## **Corridor Visualization**

Tyler Larson, Atkins, shared 3D visuals of the Canyon Viaduct and walked the TT members through the corridor using (1) bird's eye view perspective, (2) I-70 driver perspective and (3) Greenway user perspective. The discussion and questions are captured below:

**Q:** How high is the bridge structure above the Creek?

**A:** The roadway is approximately 60-70 feet over the Creek crossings. This measurement is taken from the creek banks to the bridge structure.

**Q:** Would the Greenway trail on the south side of the Creek remain?

**A:** Yes.

**Q:** How does this impact AGS? Would the Canyon Viaduct Alternative impact AGS constructability, i.e. make AGS easier or harder to construct?

**A:** There is no difference in Alternatives re: constructability of AGS.

**Comment:** With climate change, there will be less snow and more rainfall. Water quality ponds need to be sized to consider erosion (rain erodes land more than snow). Consider volumes of erosion with soil ending up in sediment traps. In reviewing the draft impacts, it will be important to consider how the Alternatives compare re: run-off.

**Comment:** After the meeting, TT Member Steve Cook, DRCOG, e-mailed the Project Staff and suggested “unique site specific ITS type applications (especially real-time advanced upstream warnings; e.g. Ramp-Queue Back-up warnings, Wildlife warnings, Ice) on pavement in shady spots, etc...”

### **Hidden Valley Interchange Discussion and Highlights**

- It was noted that this design is at 20%, and there are still details to work out at this interchange.
- The roundabouts are designed for tractor trailer use.
- The design currently lays out a curb and gutter along CR 314 with a 1-2 foot buffer from the Greenway Trail.
- It was noted that this intersection is very busy as it is currently designed to accommodate many scenarios and serve a variety of multi-modal interests.
  - Although the intersection requires a lot of complexity to accommodate different uses, it is not likely that all of the uses will be simultaneous and at high volumes (e.g. multiple trucks, bikers, and pedestrians all using the intersection at the same time).
  - Concern was expressed by TT members about the pedestrian-vehicle interaction at grade, especially in snow.
- There is a need to find design solutions that separate trucks and people.
- Currently, the signalized light is very long, and it is likely that similar back-ups and queues could continue to occur with this design.

### **Evaluation Matrix Discussion for the Central Section**

Taber Ward introduced the Central Section Evaluation Matrix. She noted that the PLT directed that the TT would not make additional content changes on the Matrix, and there would be no color coding.

Amy Saxton, Clear Creek County, walked through the process of how she had updated the Central Section Matrix after TT Meeting #22. Her goal was not to change content, but to provide a timeline and record of TT/ITF/Project Staff conversations and input.

The Matrix will now go into the NEPA analysis. Applicable portions of the Matrix will be carried into the CSS Issues Tracking Sheet. It was also confirmed that there will be a CSS debrief and kick off meeting with the Contractor, once selected.

TT members requested one more opportunity to review the Matrix and add any final comments.

**ACTION:** CDR to send updated Evaluation Matrix to the TT.

### Review CSS Issues Commitment Tracking Sheet

Taber Ward presented the CSS Issues Tracking Sheet to the TT for review. The purpose of the Tracking Sheet is to reconcile all of the CSS and community input documents (i.e. community considerations/critical issues, matrices, shared vision responsibilities) to track what we have agreed to design (or not to design) as part of the CSS and community engagement processes. The hope is to track both past and upcoming design commitments.

**Q:** Will the CSS Commitment Tracking Sheet be part of the contractor specs?

**A:** The CSS tracking sheet will be part of engineering design and the construction specs. The tracking sheet will translate to the final contract to track and follow CSS commitments through the next CSS Life Cycle.

Kelly Galardi, FHWA, noted in the chat box that “from a design standpoint CDOT is still the owner and they have full control over having these commitments being incorporated into the design. The contractor is there to propose ideas and innovations, not to take control of the design.”

Mandy Whorton, Peak Consulting, also noted in the chat box that “every mountain corridor contract must adhere to design and aesthetic guidelines and PEIS commitments.”

The TT requested that the CSS Tracking Sheet ITF meet in the next 6 to 8 weeks.

**ACTION:** CDR to coordinate CSS Tracking Sheet ITF in November.

### Next Steps and Actions

- Virtual Public Engagement Planning with PLT
- TT Meeting in October
  - Review Draft NEPA Impacts
- CSS Tracking Sheet ITF

**ACTION:** CDR to send updated Evaluation Matrix to the TT.

**ACTION:** CDR to coordinate CSS Tracking Sheet ITF in November.

### Attendees

John Muscatell, Bill Coffin (Floyd Hill Community), Margaret Bowes (I-70 Coalition), Gary Frey (Trout Unlimited), Mike Raber (Clear Creek County Bicycle Users Group), Tracy Sakaguchi (CMCA), Steve Durian (Jefferson County), Andy Marsh (Idaho Springs), Patrick Holinda (Bridge Enterprise), Kelly Galardi (FHWA), Stephen Strohminger (Gilpin County), Lynnette Hailey (I-70)

Coalition and City of Black Hawk), Steve Cook (DRCOG), Holly Huyck (Upper Clear Creek Watershed Association), Mandy Whorton (Peak Consulting), Jonathan Bartsch, Taber Ward (CDR), Jon Altschuld (Chinook), Tyler Larson, Anthony Pisano (Atkins), Kevin Shanks (THK), Neil Ogden, Vanessa Henderson, Jeff Hampton, Maddie Cieciora (CDOT).



## I-70 FLOYD HILL PROJECT

### Floyd Hill TT Meeting #23

JANUARY 13, 2021 | 1:00 p.m. - 3:00 p.m.

### Meeting Summary TT Meeting #23

#### Welcome and Introductions

Jonathan Bartsch, CDR, convened the meeting. The meeting purpose was to review project updates, present the CSS Tracking Commitments Sheet, discuss the contracting and design process, and review the DRAFT NEPA Impacts and Mitigations. There were no changes to the agenda.

#### Project Updates

- Greenway and CR 314: Final design is complete. Currently working on the right of way acquisition. The Greenway will begin advertising in April 2021, with construction starting in June 2021, and wrapping up in the fall of 2021. CR 314 will begin advertising in June 2021, and construction will begin in late July/August 2021. CR 314 will likely wrap up in 2022.
- Westbound PPSL / MEXL: Construction will be done early Spring 2021. Currently, working in Idaho Springs and on paving projects.
- Resurfacing and guardrail work is being done between Georgetown and Empire.

#### CSS Process Overview DRAFT - **SUBJECT TO CHANGE**

Neil Ogden, CDOT, reviewed the **DRAFT** Floyd Hill CSS/CMGC Process Overview, image below:



refinement process. CSS participants will give input on how to structure this workshop.

- The NEPA Decision document will be moved forward concurrently with the “Alternatives Refinements/Verification Workshop.” NEPA will have a public process (targeting March/April 2021) consisting of a 30-day public review period.
  - **ACTION:** Add NEPA Public Review back into the Process Overview chart.
- CSS participants will be heavily involved during the Preliminary and Final Design phases in 2022.
  - **TT Question:** What will the TT be reviewing?
  - **Answer:** The PLT/TT will be consulted on the objectives in the CSS Commitments Tracking Sheet to ensure these are considered in the Preliminary and Final Design plans. Milestones will include: 30% design plans, 90% design plans, issues and context specific items, and major changes that need to be validated. The CSS Tracking Sheet also lists multiple documents that need to be prepared, these will be reviewed with comments from the TT during design.
  - **TT Comment:** 6 months for preliminary design might be tight. CDOT may want to consider expanding this timeline.
  - **Answer:** This is an extremely high-level draft process schedule, and it is highly likely that changes will be made in the timing and schedule. There will be multiple processes running concurrently as the project is packaged.
- **TT Question:** When will we know what “Package 1” is? And how will packages be broken out? How many packages will we end up with?
- **Answer:** We don’t know yet. The contractor will give substantial input on how to approach the project packaging and sequencing.
- **TT Comment:** There is a fairly big gap in the TT and PLTs active work between now and the Alternatives Refinement Workshop. There will need to be a re-entry time period for the TT to reorient and re-look at CSS Commitment tracking. There will also need to be a look at PLT/TT membership and changes made as needed to ensure the right people and expertise are on the team.
  - **ACTION:** Add “CSS Orientation” prior to the “Alternatives Refinement Workshop” (September 2021)
  - **ACTION:** Review TT/PLT membership prior to Alternatives Refinement Workshop to ensure the right people and skillsets are at the table.



## CSS Commitment Tracking Sheet Review

The TT reviewed the Tracking Sheet Created by the ITF. Amy Saxton, Clear Creek County, noted that the Tracking Sheet catalogues the design and construction commitments as well as the spirit, tone, and tenor of the process to the contractor.

See, *CSS Commitment Tracking Sheet* attached.

Neil Ogden, CDOT, walked the TT members through a strawman example of how CSS commitments would be tracked through the design and construction process. He made a few jokes - tough group. 😊 We were all laughing inside.

**Neil also provided the following Q&A:**

**Q:** How will the Tracking Sheet be used during the CM/GC Process?

*A: It will be a reference document in RFP. Then, the contractor will receive a copy once under contract. The CSS Tracking Sheet is a working tool in the Alternative Refinement/Validation Workshop and will serve as a standing check in item at all TT/PLT meetings through design and construction.*

**Q:** How does the Tracking Sheet inform different the design/construction processes?

*A: It is a base for where we have been. It will inform the Alternative Refinement, then Preliminary Design, then Final Design, then Construction.*

**Q:** Are the CSS commitments project requirements?

*A: The CSS commitments are project requirements if we can all work together to make them realistic and achievable.*

The TT members were asked to contact Taber Ward, CDR Associates, directly with changes to the CSS tracking document. No changes were made to the document at the meeting.

## DRAFT NEPA Impacts and Mitigation

Mandy Whorton, Peak Consulting, and Vanessa Henderson, CDOT, reviewed high level Draft NEPA Impact and Mitigation tables.

Mandy noted that 24 resources/topics were evaluated, consistent with CDOT NEPA Manual. Farmlands, Paleontological Resources, and Section 6(f) recreational resources are not present in Project area and were not evaluated. The presentation included tables with impacts and associated mitigation measures, as well as mitigation strategies recommended from the ROD and CSS process. The tables present a high-level summary; the EA and associated technical reports provide much more information.

In the chat box, Vanessa clarified that the impacts listed are for all of the Alternatives, but the mitigation just refers to the Preferred Alternative (Canyon Viaduct).

Highlights from the TT Discussion are captured below and are presented in more detail in the attached slides.

### **1. AIR QUALITY:**

**TT Question:** Does this include dust/aerosols?

**Answer:** Yes, it includes particulate matter PM<sub>10</sub>. Mitigation measures also include dust control measures.

**TT Question:** How was the baseline air quality established? Where are the air quality monitors located?

**Answer:** CDPHE regulatory monitors provide the baseline for regional air quality and were reviewed for this project. Vanessa stated that the closest monitor to the project site is at NREL in Golden. Additional air quality analysis will be provided as a companion document at the request of the CDOT Executive Director. The companion report will include a summary of data from the air quality monitors that are being managed by CDOT and Clear Creek County in Idaho Springs and at the top of Floyd Hill, but these monitors are not regulatory and can't be used for anything other than information.

**TT Comment:** CDPHE recently reviewed the Clear Creek County monitors to validate readings and make any needed adjustments.

### **2. CULTURAL RESOURCES:**

**TT Comment:** Clear Creek County requested that it be noted, for the record, that they do not agree with the findings of "No Adverse Effect" on cultural resources for the south frontage road and have provided official comments to CDOT to this effect. Vanessa said that CDOT and the county have been discussing the issue and that the county's objection is noted in the EA.

### **3. FLOODPLAINS:**

It was noted that there would be a 1400 linear foot relocation of the Creek and the floodplain will be improved.

### **4. HAZARDOUS MATERIALS:**

**TT Comment:** Only certain sections of the groundwater are mineralized; this will impact dewatering mitigation tactics. Not all areas will need to be dewatered. Suggestion to start by checking on the far west end of the project limits.

### **5. LAND USE & RIGHT OF WAY:**

**TT Comment:** Clear Creek County requested that it be noted, for the record, that they object to the Tunnel Alternative, South Frontage Road Option because it is not consistent with the Greenway Plan and Open Space Park.

Mandy responded that the EA document captures this and other concerns from the county regarding the south frontage road. The slides are a high level overview and do not contain all of the verbiage.

### **6. SECTION 4(f):**

**TT Comment:** Request that the definition of “Greenway” and “Greenway Trail” be included in the NEPA document to ensure that the difference between these two concepts is clear.

**TT Comment:** Clear Creek County Open Space requested that it be noted, for the record, that they do not agree that there is no use of Section 4(f) Recreational Property.

Mandy responded that the regulations for defining Section 4(f) resources are specific. 4(f) lands are determined by ownership, and CDOT Right of Way and the Creek itself are exempt. Further, the Open Space Property on the south side of Clear Creek Canyon is “dispersed recreation,” and, as such, not subject to 4(f).

**TT Comment:** This is only one interpretation of Section 4(f) and Clear Creek County will be meeting internally on these issues and will review how the EA approaches this whole topic in detail.

**TT Question:** Isn't the Greenway clearly a Section 4(f) resource?

**Answer:** The Greenway is a recreational resource that comprises lands in variety of uses and ownership. The trail itself (outside of the area in the Game Check Park) is also not 4(f) because it is primarily a transportation facility in transportation right of way.

Vanessa suggested that a meeting could be held between Clear Creek County, CDOT, and FHWA about Section 4(f) to discuss this further. The county agreed that it may be a good idea, but would like to wait until they've been able to review the EA first.

## 7. WATER QUALITY

**TT Comment:** CDPHE does not use the term "BMP" for permanent water quality facilities anymore; it should be changed throughout to *Control Measures* or "CM."

## 8. WILDLIFE AND AQUATIC SPECIES

**TT Comment:** Gary Frey indicated a question or comment on the wildlife impacts and mitigation but due to technical difficulties with his audio, the group was not able to understand the comment.

In the chat, Mandy noted that if the comment was related to fish impacts, the EA does identify brown trout spawning areas in the Project Area. These areas will be avoided during spawning season. Additionally, the 404 mitigation plan will include creek improvements and potentially creating new habitat areas (pools) as part of the mitigation plan.

**ACTION:** CDR to follow up with Gary Frey to capture his comment/input.

See attached for email correspondence with Gary Frey after the meeting.

## Next Steps

### PLT Meeting (1.28.2021)

#### Virtual Public Engagement

- We will be sending Public Engagement notices out to the TT to help advertise.

#### Procurement

- **ACTION:** TT members who would like to review the RFP, should contact Neil. A confidentiality agreement will need to be signed.
- **ACTION:** CDOT to onboard Cindy Neely, PLT member, to serve as the CSS Representative and participate in the Contractor/Selection Observation process

## Action Item Summary

### CSS PROCESS OVERVIEW CHART

- **ACTION:** Neil to add a line/arrow for “Design/Selection” under the existing line “CM/GC Contractor/Selection”
- **ACTION:** Add NEPA Public Review back into the Process Overview chart
- **ACTION:** Add “CSS Orientation” prior to the “Alternatives Refinement Workshop” (September 2021)
- **ACTION:** Review TT/PLT membership prior to Alternatives Refinement Workshop to ensure the right people and skill sets are at the table.

### CSS TRACKING

- **ACTION:** TT Members to send Taber feedback

### NEPA IMPACTS/MITIGATION

- **ACTION:** CDR to follow up with Gary Frey due to bad connection. (See attached correspondence.)

### PROCUREMENT

- **ACTION:** TT members who would like to review the RFP, should contact Neil. A confidentiality agreement will need to be signed.
- **ACTION:** CDOT to onboard Cindy Neely, PLT member, to serve as the CSS Representative and participate in the Contractor/Selection Observation process

## Attendees

Bill Coffin, John Muscatell (Floyd Hill Community); Mitch Houston (CCC School District); Amy Saxton, Cindy Neely (Clear Creek County); Andy Marsh (Idaho Springs); Martha Tableman (CCC Open Space); Melinda Urban (FHWA); Holly Huyck (Upper Clear Creek Watershed Association); Margaret Bowes (I-70 Coalition); Yelena Onnen (Jefferson County); Tracy Sakaguchi (CMCA); Steve Cook (DRCOG); Gary Frey (Trout Unlimited); Stephen Strohming (Gilpin County); Jeff Hampton, Vanessa Henderson, Patrick Holinda, Neil Ogden (CDOT); Mandy Whorton (Peak Consulting); Anthony Pisano, Tyler Larson (Atkins); Kevin Shanks (THK); Jonathan Bartsch, Taber Ward (CDR Associates)

# I-70 Floyd Hill Project

## TT Meeting #23

January 13, 2021

CDOT I-70 Mountain Corridor



**COLORADO**  
Department of  
Transportation

1. Welcome & Introductions
2. Corridor Project Updates
3. CSS Commitment Tracking
4. Draft NEPA Impacts and Mitigation
5. CSS Process Overview and Schedule
6. Next Steps



# Corridor Project Updates





# CSS Commitment Tracking

## ITF Report Out

- ITF Meetings (November 4<sup>th</sup>, 19<sup>th</sup> and December 3<sup>rd</sup> )
- Development of CSS Tracking Spreadsheet
- Draft of CSS preamble with "how-to" guide
- CSS Tracking will be incorporated into RFP

- How will the Tracking Sheet be used during the CM/GC Process?
- How does the Tracking Sheet inform different the design/construction processes?
- Will the Tracking Sheet continue to be edited during the design and construction processes? Where are there room for edits?
- How does the Tracking Sheet function in Construction?
- Are the CSS commitments project requirements?
- Example tracking item!!



# Draft NEPA Impacts and Mitigation

- 24 resources/topics evaluated, consistent with CDOT NEPA Manual
- Farmlands, Paleontological Resources, and Section 6(f) recreational resources not present in Project area
- Permanent and temporary impacts detailed
- Mitigation measures for identified impacts, as well as mitigation strategies recommended from ROD and CSS process

Resource	Impacts	Mitigation
Air Quality	<ul style="list-style-type: none"> <li>• Improved regional and localized air quality due to improved traffic flow</li> <li>• Minor impacts to air quality during construction</li> </ul>	<ul style="list-style-type: none"> <li>• Best management practices (BMPs), such as fugitive dust control plan, wetting haul roads and soil piles, covering stockpiles, control of construction equipment (idling, staging, etc.)</li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>• Six historic sites within Project area; No Adverse Effects</li> <li>• Clear Creek County concern regarding local history of Colorado Central Railroad under Tunnel Alternative, South Frontage Road (not Preferred Alternative)</li> <li>• One archaeological site in Project area; not expected to be impacted</li> </ul>	<ul style="list-style-type: none"> <li>• Review construction plans for potential impacts to known archaeological site; monitor if warranted</li> <li>• Stop work and evaluate in case of unexpected discovery of archaeological sites during construction</li> </ul>

Resource	Impacts	Mitigation
Floodplains	<ul style="list-style-type: none"> <li>• No change to floodplain elevation with creek realignment</li> <li>• No floodplain encroachments or rise in floodplain elevation for bridges</li> <li>• Mitigation and restoration enhances / restores floodplains and restore floodplain values</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm floodplain modeling during final design</li> <li>• Coordinate with FEMA and Clear Creek County floodplain administrator as required</li> <li>• Implement Section 404 mitigation for Clear Creek realignment</li> <li>• Implement restoration of north bank of Clear Creek under viaduct</li> </ul>
Geologic Resources	<ul style="list-style-type: none"> <li>• Excavation of 0.5M to 1.5M cubic yards of rock</li> <li>• Rock cuts up to 180 feet high</li> <li>• Rock excavation can present long-term rockfall hazards</li> <li>• Large failures during construction can cause road closures and safety concerns</li> </ul>	<ul style="list-style-type: none"> <li>• Design rock cuts using proven techniques (rockfall catchments, mesh, cable netting, fences, scaling, and blasting analyses)</li> <li>• Incorporate permanent rockfall mitigation during construction</li> </ul>

Resource	Impacts	Mitigation
Hazardous Materials	<ul style="list-style-type: none"> <li>• Disturbance of hazardous materials facilities or former mining sites during construction, especially excavation and demolition</li> <li>• Dewatering of groundwater potentially containing heavy metals or other pollutants</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and implement Materials Management Plan</li> <li>• Develop and implement Health and Safety Plan</li> <li>• Implement construction BMPs to prevent hazmat from being exposed to air or surface waters</li> <li>• Evaluate dewatering activities and obtain and implement permit(s)</li> </ul>
Land Use and Right of Way	<ul style="list-style-type: none"> <li>• No change in land use or land use patterns</li> <li>• Consistent with and supports local land use goals</li> <li>• Tunnel Alternative, South Frontage Road Option is not consistent with Greenway Plan</li> <li>• Right of way acquisition of 22 to 34 acres of public property and 1.6 to 1.8 acres of private property</li> </ul>	<ul style="list-style-type: none"> <li>• Property acquisition will comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and associated state and federal procedures.</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• Noise levels exceeding Noise Abatement Criteria for 105 noise-sensitive receptors, primarily residential land uses</li> <li>• Temporary, intermittent increases in noise during construction; rock blasting would be noisiest activity</li> </ul>	<ul style="list-style-type: none"> <li>• Noise abatement (wall) recommended in eastern Idaho Springs</li> <li>• Benefitted receptor survey to be conducted to determine if noise wall is desired</li> <li>• BMPs for construction noise activities and communication to affected residents</li> </ul>



Resource	Impacts	Mitigation
Recreation Resources	<ul style="list-style-type: none"> <li>• Preferred Alternative enhances Greenway experience and Greenway trail</li> <li>• Tunnel Alternative, South Frontage Road Option substantially degrades Greenway experience</li> <li>• Temporary closures of trail and creek use during construction, primarily rock blasting, when safety warrants</li> <li>• Noise and visual impacts to recreational users during construction</li> </ul>	<ul style="list-style-type: none"> <li>• Work with Clear Creek County to integrate Greenway vision and recreational accesses into final design of Greenway and frontage road</li> <li>• Coordinate with rafting companies and other recreationalists regarding river closures</li> <li>• Sign and provide other construction information to recreationalists</li> <li>• Fence off construction areas near creek banks during active construction</li> <li>• Establish a safety-critical zone in the vicinity of rock blasting</li> </ul>
Section 4(f) Resources	<ul style="list-style-type: none"> <li>• No use of Section 4(f) historic properties <ul style="list-style-type: none"> <li>• Transportation Facility Exception for US 6/40 historic alignment (generally follows CR 314)</li> </ul> </li> <li>• No use of Section 4(f) recreational properties <ul style="list-style-type: none"> <li>• Enhancement Exception for improvements to Greenway trail through Game Check Park (for the sole purpose of enhancing recreation)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Documentation of exceptions; no mitigation required</li> </ul>

Resource	Impacts	Mitigation
<p>Socioeconomic and Community Resources, Environmental Justice</p>	<ul style="list-style-type: none"> <li>• Improved travel conditions for local and regional travelers</li> <li>• Improved access to commercial and recreational sites and jobs</li> <li>• Change in US 6 access affecting Two Bears Tap and Grill and river recreation outfitters</li> <li>• Construction-related impacts, including travel delays, changes in accesses, increased emergency response times, reduction in through-traveler patronage for local businesses; visual impacts and increased noise and air emissions during construction</li> </ul>	<ul style="list-style-type: none"> <li>• Provide signage or other materials to communicate business access during construction and changes in access after Project is complete</li> <li>• Consider early action project for US 40 roundabouts</li> <li>• Maintain access to Two Bears and for river recreation outfitters during construction</li> <li>• Develop and implement Public Information Plan</li> <li>• Track and implement CSS mitigation commitments with the PLT and TT</li> </ul>

Resource	Impacts	Mitigation
Threatened and Endangered Species	<ul style="list-style-type: none"> <li>• Potential impacts to PMJM, northern leopard frog, and Townsend's big-eared bat habitat from:               <ul style="list-style-type: none"> <li>• Vegetation removal</li> <li>• Construction staging</li> <li>• Ground clearing and introduction / spread of noxious weeds</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Identify and implement no-work zone in PMJM suitable habitat in Beaver Brook</li> <li>• Install wildlife fence outside of riparian areas and outside of PMJM hibernation (September to May)</li> <li>• Avoid unnecessary disturbance of trees and shrubs; revegetate disturbed areas with native species</li> </ul>
Vegetation and Noxious Weeds	<ul style="list-style-type: none"> <li>• Clearing and grubbing of vegetation</li> <li>• Loss of vegetation and trees</li> <li>• Habitat disturbance</li> <li>• Soil exposure and potential for erosion / introduction of noxious weeds</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and implement Landscape Plan</li> <li>• Develop and implement Noxious Weed Management Plan</li> </ul>

Resource	Impacts	Mitigation
Visual Resources	<ul style="list-style-type: none"> <li>• Additional built elements (retaining walls, rock cuts, cut and fill slopes, vegetation removal, viaduct piers and shading) disrupt visual coherence and present strong visual contrast with natural features</li> <li>• Views of trail and creek are especially sensitive for recreationalists</li> <li>• Substantial but temporary visual impacts during construction due to the presence of large equipment, temporary signage, equipment for detours such as barriers and cones, dust and debris, temporary fencing, material stockpiles, staging areas, and barren landforms during earthwork activities such as grading and rock cutting</li> </ul>	<ul style="list-style-type: none"> <li>• Review and follow I-70 Mountain Corridor Aesthetics Guidance and I-70 Mountain Corridor Design Criteria, including specific elements related to viaduct design, rock cuts, lighting, bridge piers, signs, and water quality BMPs</li> <li>• Track and implement other CSS mitigation commitments with the PLT and TT</li> </ul>

Resource	Impacts	Mitigation
Water Quality	<ul style="list-style-type: none"> <li>• Increased impervious surfaces contribute to increased stormwater runoff</li> <li>• Winter road maintenance and use of deicers continue to adversely affect water quality</li> <li>• Permanent water quality BMPs improve water quality               <ul style="list-style-type: none"> <li>• Water quality basins remove sediments and metals</li> <li>• Roadside ditches dilute chlorides</li> </ul> </li> <li>• Continued transport of hazardous materials on I-70 presents risks of spills entering Clear Creek, especially over creek on viaduct or next to creek on frontage road</li> <li>• Shading under viaduct could limit vegetation growth and ability to filter sediment and pollutants</li> <li>• Exposed soils during construction increase potential for erosion and sediment entering water during construction</li> </ul>	<ul style="list-style-type: none"> <li>• Refine and implement water quality BMPs recommended by SWEEP ITF and included in 20% design</li> <li>• Maintain permanent water quality BMPs and train staff to implement non-structural BMPs</li> <li>• Obtain and follow provisions of all applicable state and local stormwater and dewatering permits</li> <li>• Implement appropriate construction BMPs for erosion and sediment control, including stormwater management plan</li> <li>• Revegetate and stabilize disturbed areas</li> </ul>

Resource	Impacts	Mitigation
Wetlands and Aquatic Resources	<ul style="list-style-type: none"> <li>• Small area (approximately 40 square feet) of wetlands and approximately 1,500 linear feet of surface waters impacted</li> <li>• Primary impact results from realigning Clear Creek near the Veterans Memorial Tunnels</li> <li>• Avoids impacts to high-quality Beaver Brook wetlands and Sawmill Gulch</li> <li>• Potential indirect impacts to wetlands and waters of the US from shading under bridges</li> <li>• Temporary water quality impacts from construction activities</li> </ul>	<ul style="list-style-type: none"> <li>• Install construction limit fencing around all delineated and mapped wetlands not directly affected in the Project area</li> <li>• Limit construction activities (use of fertilizers, hydromulching, construction staging, washout areas, etc.) to no closer than 50 feet from wetlands and surface waters without written authorization from CDOT biologist</li> <li>• Obtain Section 404 Individual Permit and develop / implement compensatory mitigation plan in coordination with USACE, EPA, CPW, rafting groups, and SWEEP ITF</li> </ul>

Resource	Impacts	Mitigation
Wildlife and Aquatic Species	<ul style="list-style-type: none"> <li>• General wildlife habitat, elk winter range habitat, and bighorn sheep habitat incorporated into transportation facilities</li> <li>• Improves riparian and stream habitat through stream restoration and enhancement for reclamation and creek relocation mitigation plan</li> <li>• Reduces wildlife-vehicle conflicts with wildlife fencing</li> <li>• Permanent loss of habitat connectivity over I-70 due to wildlife fencing with no crossing</li> <li>• During construction, wildlife habitat would be disturbed, and animals may avoid the area due to increased human activity, noise, and lighting; disturbance of creek could adversely affect fish and fish habitat</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a new wildlife crossing in the Region 1 area of the I-70 Mountain Corridor (east of EJMT) but outside Project limits <ul style="list-style-type: none"> <li>• One or more of six crossings identified by ALIVE ITF</li> <li>• Commensurate with cost of wildlife crossing at top of Floyd Hill (approximately \$17M)</li> <li>• Designed, funded, and constructed before Project closeout</li> </ul> </li> <li>• Construct wildlife bench under US 6 bridges</li> <li>• Install and maintain wildlife fencing from Floyd Hill/Hyland Hills interchange to Soda Creek Road, on north and south sides of I-70</li> <li>• Review Johnson Gulch culvert design for passage of medium sized fauna</li> <li>• Develop and implement habitat restoration plan for affected SB 40 areas and in conjunction with Section 404 mitigation plan and riparian restoration under viaducts</li> <li>• Install temporary construction fencing to protect riparian areas during construction</li> <li>• Conduct pre-construction surveys for raptors and migratory birds</li> <li>• Review rock blasting activities in bighorn sheep habitat locations with the ALIVE ITF</li> </ul>

Resource	Impacts	Mitigation
Cumulative Impacts	<ul style="list-style-type: none"> <li>• Cumulative benefits to socioeconomic, community, and recreational resources from complementary investments in transportation and recreational facilities; increased sales tax revenue and property values, and improvements to visitor access and increased recreation opportunities regionally</li> <li>• Cumulative benefits to air quality from reduced vehicle emissions from higher fuel efficiency standards, improved traffic flow in Express Lanes, improvements in vehicle technology, increased use of electric and hybrid vehicles, and national emission control programs; expanded regional bicycle network helps reduce VMT</li> <li>• Cumulative benefit to wildlife from new I-70 crossings</li> <li>• Cumulative improvement to Clear Creek from water quality BMPs, partnerships to improve fish habitat and floodplains</li> </ul>	<ul style="list-style-type: none"> <li>• None required</li> </ul>





# **CSS Process Overview and Schedule**

Anticipated Schedule	CDOT / CMGC	CSS Involvement / Commitments Checklist	CSS Participants
<b>Summer 2021</b>	Procurement and Selection	Input on selection	PLT
<b>Fall/winter 2021</b>	Contractor input on preferred alternative	<ul style="list-style-type: none"> <li>● Input on adjustments to the alternative(s)</li> </ul>	Input on changes
<b>Fall/winter 2021</b>	Refine alternative – Minimize impacts, risks, and incorporate contractor constructability input. Revise NEPA analyses as needed	<ul style="list-style-type: none"> <li>● Wall and bridge aesthetics</li> <li>● Creek Rehab / Impacts</li> <li>● Phasing / Packaging</li> <li>● Rock cuts / Mitigation</li> <li>● Wildlife crossing</li> <li>● Trail Design</li> </ul>	PLT – Process TT – SMEs SWEEP ALIVE
<b>Late 2021– Early 2022</b>	NEPA Decision Document  Design Phase	<ul style="list-style-type: none"> <li>● Roadside Barriers</li> <li>● Shared Vision elements</li> <li>● Water Quality Ponds</li> <li>● Rehab Old Road</li> <li>● Riparian and Forested areas</li> <li>● Communications Plan</li> <li>● Community Impacts</li> <li>● Signing Plan</li> <li>● Lighting Plan</li> </ul>	PLT – Process TT – SMEs SWEEP ALIVE





# Next Steps

- PLT Meeting – January 28, 2021
- Virtual Public Engagement
- Contractor Procurement



Taber Ward <tward@mediate.org>

## 21912\_Floyd Hill TT / Checking in

Gary Frey <gbfrey@msn.com>  
To: Taber Ward <tward@mediate.org>

Tue, Jan 26, 2021 at 4:25 PM

Hi Tabor

Thank you for the opportunity to express my concerns regarding the effects on some of the information presented in the 1/13 meeting. My concerns get to the information presented on the effect of the project on the fishery in the project on the draft NEPA document.

Using the "chat" feature Mandy Wharton speculated that my concerns get to the potential problems with the brown trout spawning cycle. While that is a concern the effect on spawning is only one issue that Trout Unlimited is concerned with. First, a little background. There are three species of trout that may occupy the project area; Brown Trout, Rainbow Trout and Colorado Greenback Cutthroat Trout. There may be another variety known as a Cut Bow which is a hybrid of the mating of the Rainbow and Cutthroat species. I'm not aware of any Brook Trout in the project area. Only the Greenback Cutthroat is native to the Clear Creek drainage. The others are introduced primarily for recreation purposes. Generally spawning takes place as follows:

Brown Trout	Late August through mid-November
Rainbow Trout	Late February through late spring
Greenback Cutthroat	Late Spring through early summer

Given that the "spawning seasons" extend over roughly a nine month period the proposal to suspend activity that is injurious to spawning doesn't seem like a reasonable response. The SWEEP program was created as a way of verifying impacts from a development project and investigate appropriate mitigation. This hasn't happened; although SWEEP has a few meetings. What is the role of SWEEP in this project?

The Greenback has special status under Colorado procedures identified as a species of concern. Fortunately, Greenbacks occupy the higher elevations and rarely been found below Georgetown. However the Colorado Division of Parks and Wildlife should be consulted to see if they have and evidence of their presence.

The table, below, raises a concern. Under Impacts the second bullet offers potential mitigation without describing what the impacts are likely to be. I assume the last bullet is trying to identify those impacts. I think the second bullet should be moved to mitigation in response to the last bullet.

The discussion of the existing draft NEPA document raises a couple of other concerns: In discussing the draft EA Mandy implied that there wasn't any discussion of the impacts from other alternatives. NEPA requires that similar alternatives should be evaluated under a suite of suite4e of environmental disciplines. Without that comparison how do you compare alternatives from an environmental perspective?.

Finally, will the TT be asked to review the final draft of the EA before it is made public?

If you need clarification on any of this please don't hesitate to get back to me.

Gary Frey

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Taber Ward &lt;tward@mediate.org&gt;

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## 21912\_Floyd Hill // Following up on your questions and comments

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Taber Ward &lt;tward@mediate.org&gt;

Wed, Jan 27, 2021 at 3:50 PM

To: Gary &lt;gbfrey@msn.com&gt;

Cc: Jonathan Bartsch &lt;jbartsch@mediate.org&gt;, "Ogden - CDOT, Neil" &lt;neil.ogden@state.co.us&gt;, Vanessa Henderson - CDOT &lt;Vanessa.henderson@state.co.us&gt;, Mandy Whorton &lt;mandy.whorton@peakconsultingco.com&gt;

Hi Gary,

Thank you again for your thoughtful input and feedback on the TT presentation. We have tried to provide answers to your questions below. Please feel free to reach out if you have further questions or need more information/clarification.

**(1) Comment:** "There are three species of trout that may occupy the project area; Brown Trout, Rainbow Trout and Colorado Greenback Cutthroat Trout. There may be another variety known as a Cut Bow which is a hybrid of the mating of the Rainbow and Cutthroat species. I'm not aware of any Brook Trout in the project area. Only the Greenback Cutthroat is native to the Clear Creek drainage."

**Response:** According to CPW data, only Brown Trout spawn in the area, and no cutthroats are present in this stretch. We should have included a bullet about fish in the Table presented to clarify this. Thanks for bringing this up, and we will clarify this point at the PLT meeting tomorrow.

**(2) Comment:** "The table, below, raises a concern. Under Impacts the second bullet offers potential mitigation without describing what the impacts are likely to be. I assume the last bullet is trying to identify those impacts. I think the second bullet should be moved to mitigation in response to the last bullet."

**Response:** The Table we presented at the TT was extremely high-level, and perhaps overly summarized. The impacts are captured in the EA and associated Tech Report. In the EA, the mitigation measure is: "*Construction work in the existing channel of Clear Creek between October 1 and May 31 will be prohibited without prior written approval from CPW to protect brown trout spawning habitat.*"

**(3) Comment:** "The SWEEP program was created as a way of verifying impacts from a development project and investigate appropriate mitigation. This hasn't happened; although SWEEP has a few meetings. What is the role of SWEEP in this project?"

**Response:** Yes, SWEEP does have a role in developing mitigation. Mitigation strategies were outlined in the PEIS and were included as appropriate. If you have further recommendations on mitigation that should be included, your input and feedback would be appreciated and useful as a comment on the EA when it is released. SWEEP will be reengaged during final design and will have an opportunity to comment on the design as it relates to SWEEP topics.

**(4) Comment:** "The discussion of the existing draft NEPA document raises a couple of other concerns: In discussing the draft EA Mandy implied that there wasn't any discussion of the impacts from other alternatives. NEPA requires that similar alternatives should be evaluated under a suite of environmental disciplines. Without that comparison how do you compare alternatives from an environmental perspective?"

**Response:** The EA includes impacts of all the alternatives, but mitigation in the EA is only shown for the preferred, with a note that if a different preferred alternative were selected, the mitigation would change. The tech reports, which will be attached to the EA, show mitigation for all alternatives.

**(5) Comment:** "Will the TT be asked to review the final draft of the EA before it is made public?"

**Response:** The TT will not review the EA before it is made public. The TT will have the opportunity to review the EA during the public review period. The summary of impacts and mitigation provided at the last TT was provided to ensure that we have accurately captured and covered the impacts, and this discussion and input is helpful to ensure that we do.

We hope this helps! Please do reach out with additional thoughts, comments, clarifications, or if we missed anything. This dialogue and your input is extremely helpful in this process.

Taber

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**Taber Ward, J.D.**  
Program Manager  
303.442.7367 x 204



[www.mediate.org](http://www.mediate.org)

CDR ASSOCIATES  
COLLABORATIVE DECISION RESOURCES



Taber Ward &lt;tward@mediate.org&gt;

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**21912\_Floyd Hill // Following up on your questions and comments**

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**Gary Frey** <gbfrey@msn.com>

Wed, Jan 27, 2021 at 4:53 PM

To: Taber Ward &lt;tward@mediate.org&gt;

Cc: Jonathan Bartsch &lt;jbartsch@mediate.org&gt;, "Ogden - CDOT, Neil" &lt;neil.ogden@state.co.us&gt;, Vanessa Henderson - CDOT &lt;Vanessa.henderson@state.co.us&gt;, Mandy Whorton &lt;mandy.whorton@peakconsultingco.com&gt;

Taber, thank you for the quick response.

The answers allay a lot of my concerns. Just to be clear in Comment (1), if CPW is saying there is no rainbow spawning in the project area then I can accept that. However, rainbows are present (I've caught several over the years. It's hard to imagine there isn't spawning if they are present

Sent from [Mail](#) for Windows 10

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