

# Meeting Notes



## I-70 Floyd Hill to Veterans Memorial Tunnels

**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.

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## 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)