

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=0B5g5iHKBVK60R2tpb1JOOUNKNU0>

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 12th 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)