



I-70 Floyd Hill

Floyd Hill CMGC Technical Team

Meeting Summary

February 2, 2024, 9:00am to 12:00 PM

Kraemer Floyd Hill Office: 35715 US-40 Building B, Ste 220, Evergreen, CO 90439

1. Introductions, Meeting Purpose and Project Updates

CDR Associates opened the meeting and reviewed the agenda.

TT Agenda 2-2-24

1. *Introductions & Agenda Review*
2. *Project Updates*
3. *Overview of Package 3*
4. *Central Section Walls: Follow Up*
5. *Noise Wall Update*
6. *Wrap Up & Next Steps*

TT members confirmed the meeting agenda with no changes.

2. Project Updates

Main Projects

- *East Section Construction* - The Team is advancing work on all of the walls farther down Floyd Hill. There will be some blasting occurring for Wall 10 next week. Work will also begin on Wall 2 at the top of the hill next week. On Wall 1, there was not a clean excavation, so a wall will need to be put in. The Team is finalizing this design.
- *West Section Design* - Construction in the West Section should begin in March including some restriping and shifting the existing EB, WB lanes for median work. The rock scaling will not begin until late summer, early fall.

Early Projects

- *Genesee Wildlife Crossing* - Work is continuing with some exit ramp closures coming up. Construction is on track for a summer completion.



I-70 Floyd Hill

Environmental

- The Team is working through the final commitments on the West Section plan.

Utilities

- Excel has completed work in the East Section and made it to Sawmill Gulch. The Team is working together with the utility companies on a joint trench on the east side of Sawmill Gulch, and then Lumen will begin in this section. All utilities are making progress along US 6.
- Geotechnical work in the Hill Side Areas poses a challenge. The Team is working with Excel to promote access to geotech, including the de-electrification of wires as needed.

ROW

- CDOT provided appraisals to Central City which are now under review. There were some changes to Clear Creek's ROW plans with some additional ROW needed. CDOT is working through revised ROW plans internally and are looking to move forward through negotiation.

Other Updates

- Jeff Hampton, CDOT, has taken a new position as a tunnel engineer. CDOT is working to hire a replacement.
- Lisa Wolff, Floyd Hill POA, wanted to share her thanks to the Team for working to fill the hole on the US 40 Roundabout the same week the concern was brought up.

TT Questions

- **Question** (Cindy Neely, Clear Creek County): Will there be a water quality group sampling plan in the West Section? Do the West Section commitments close the door on the water sampling plan?
 - **Response** (Mandy Whorton, PEAK Consulting): The commitments don't preclude the option of having a water quality sampling plan in the West Section, as that would be a project-wide component and thus could be included in the Central Section (Package 4) 1041.
- **Question** (Amy Saxton, Clear Creek County): Is there a systemic problem with the SCAP? Are the available tools outdated and no longer applicable? Should we be looking more at a *salinity* action plan for this project rather than one focused on sediment?



I-70 Floyd Hill

- **ACTION:** Add a discussion about the functionality of the SCAP to the upcoming Deicer ITF with a focus on how it applies to/can inform a long-term salinity program.
- **Question:** What is the additional ROW needed from Clear Creek County?
 - **Response:** Some expansion is needed for the rock wall mitigation system in the West Section and a temporary easement has been added to facilitate installation of that work.

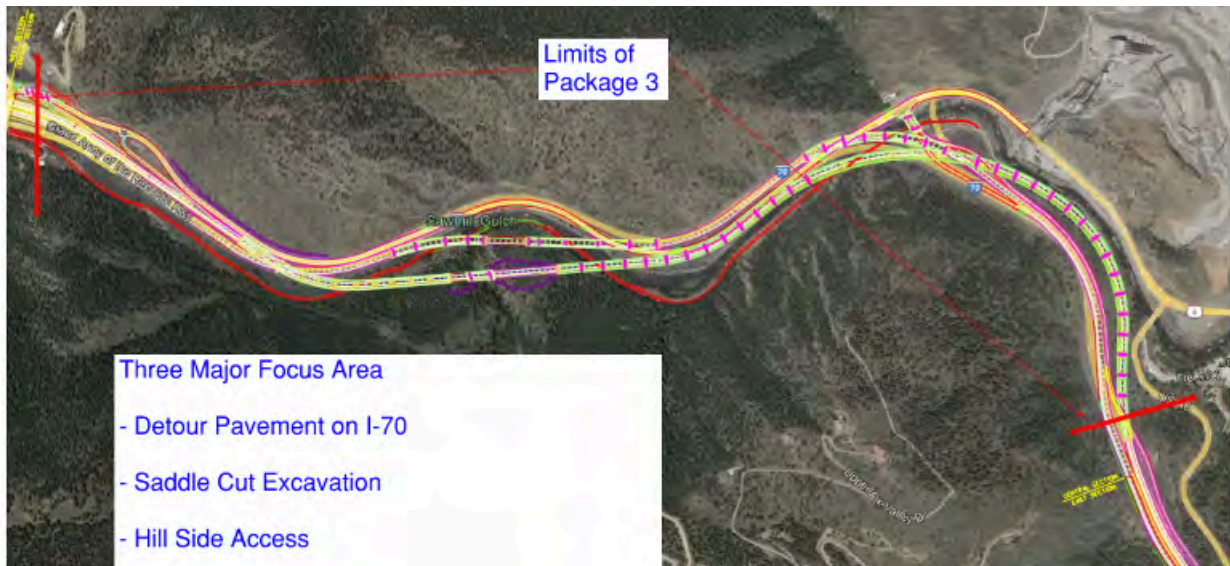
ACTION: Kurt to set up a working group with Clear Creek County to discuss Package 4 progress and stipulations in the 1041 process.

ACTION: Create a presentation for the Clear Creek County commissioners on water quality monitoring, snow removal, drainage design, and specific water quality issues.

3. Overview of Package 3

Matt Aguirre, Atkins, provided an overview of Package 3 as 90% plans had recently been submitted. This included a high level overview of the plans, reiterating what is included in Package 3, and a rendering of wall A-1 which was requested by TT members at the previous meeting. Additional information on Package 3 was shared in the TT Meeting on 1/5/2024 and [can be viewed here](#).

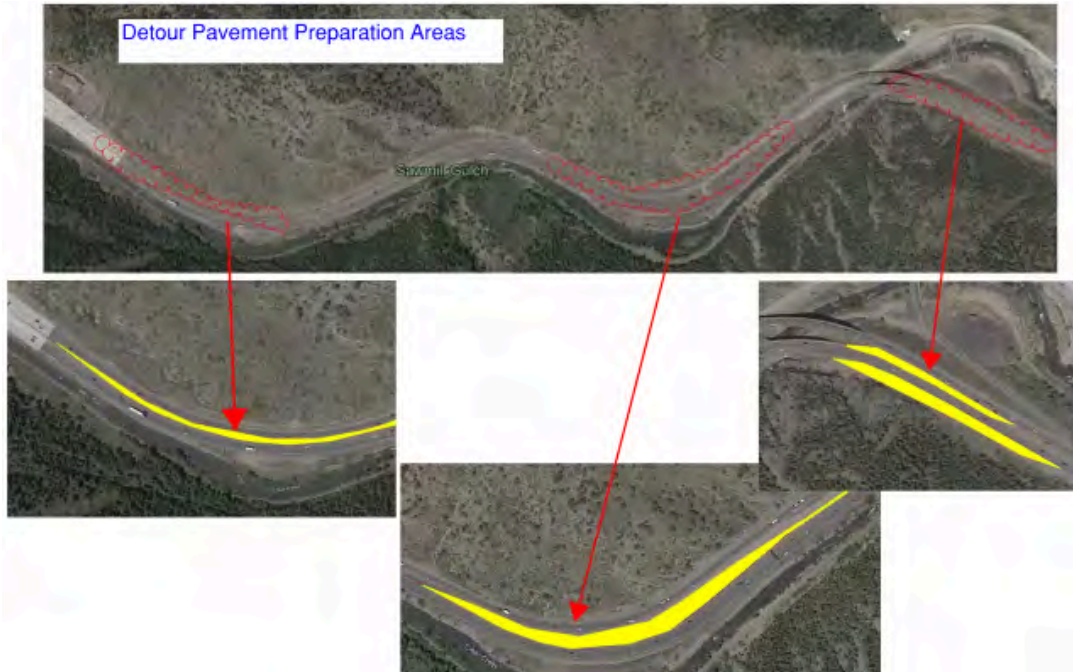
Package 3 has three major focus areas: 1) Detour Pavement on I-70, 2) Saddle Cut Excavation, and 3) Hill Side Access.





I-70 Floyd Hill

The detour pavement focus is on the following preparation areas:



The Saddle Cut excavation area included in Package 3 is the east side of Sawmill Gulch. West of Sawmill Gulch is not included in Package 3:



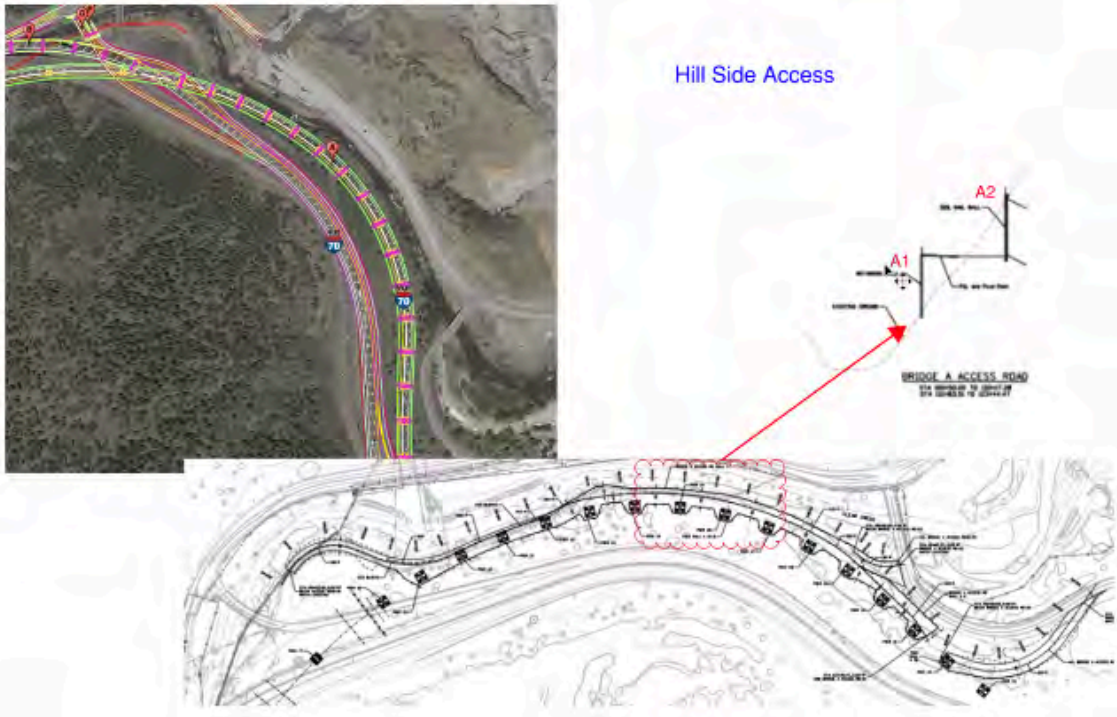
Saddle Cut
Excavation Area

Utilize Existing Trail Alignment
for access to US 6
Interchange



I-70 Floyd Hill

Hill Side access will include the following:



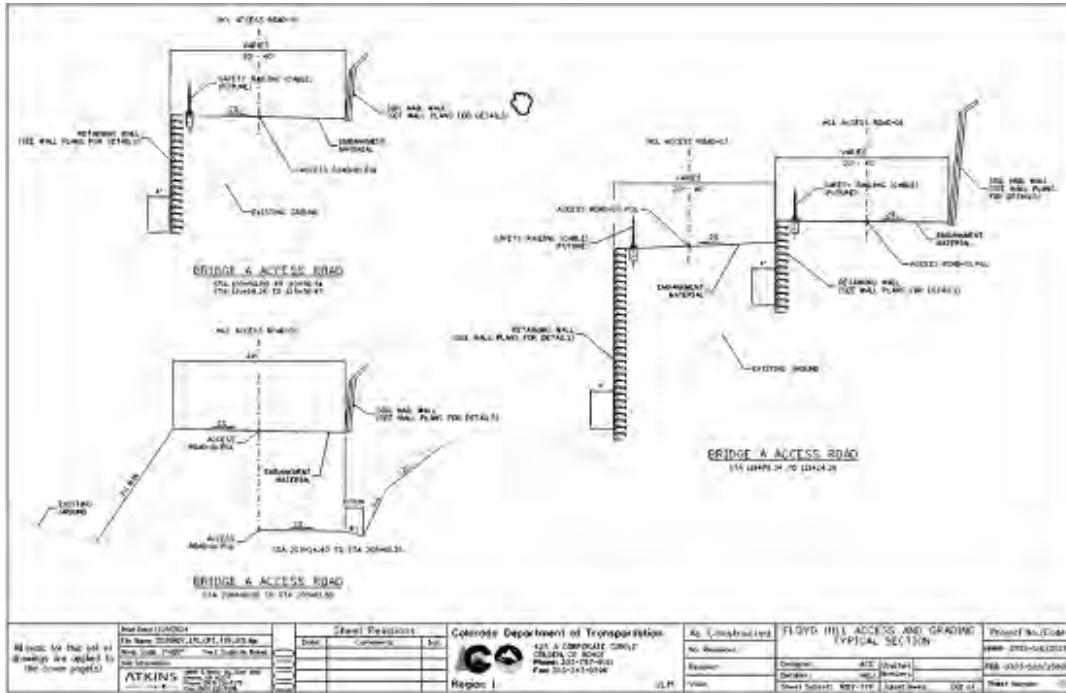
A close up of the piers for Bridge A is included below. Wall A-1 will be a permanent wall.





I-70 Floyd Hill

A profile of Wall A-1 is included below:



A rendering of Wall A-1 is below. In this view, Bridge A is seen above, and Wall A-1 is seen from US 6 looking east. The potential future Greenway would be on top of Wall A-1.

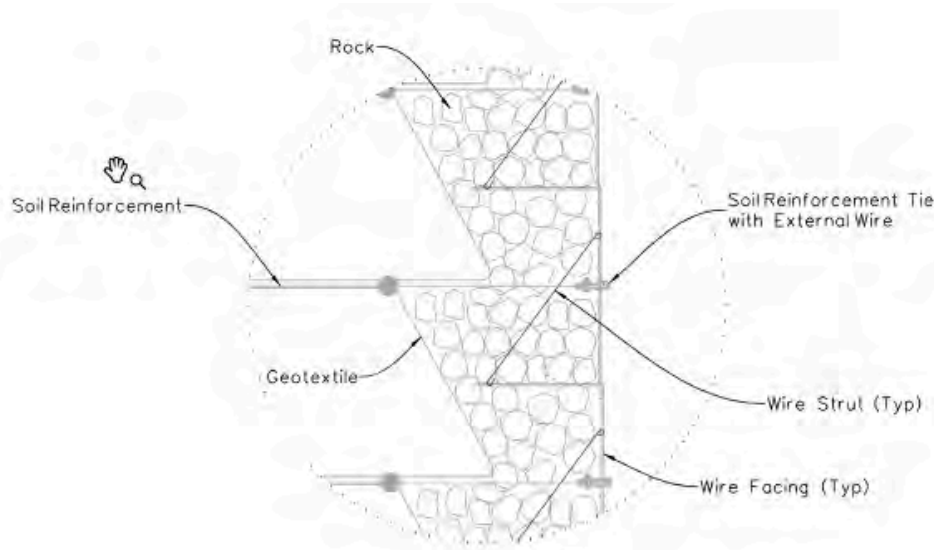
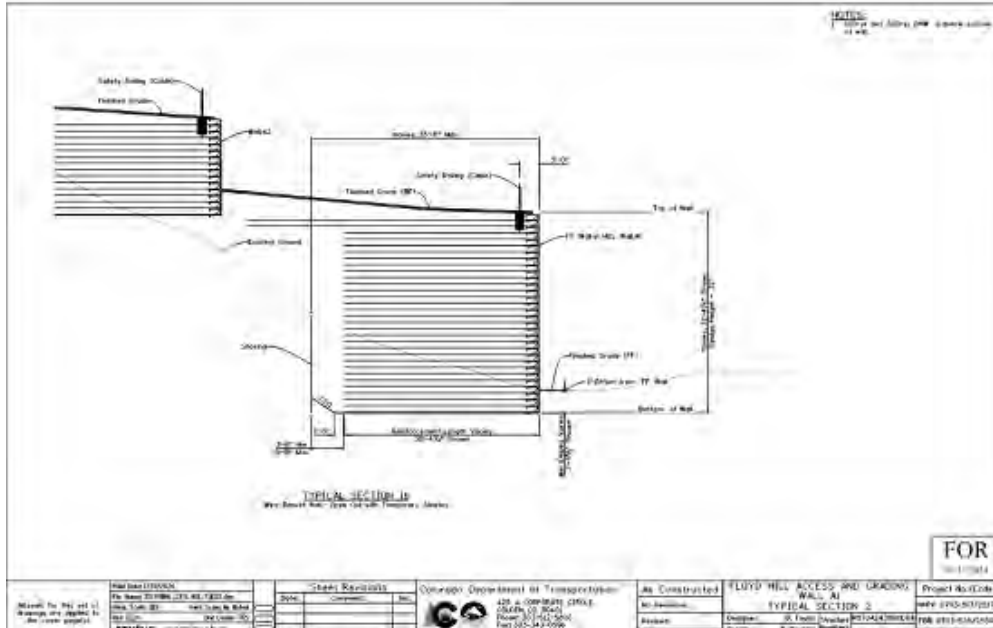




I-70 Floyd Hill

Wall A-1 will have a Gabion basket wall face. This is the same aesthetic that was previously used on CR 314. The Team is planning on using lessons learned from CR 314 for A-1. The boulders on the nearside of the river won't be altered. This wall will be 1,200ft long with a max height of ~30ft.

The Team shared additional structural diagrams, which can be seen below, to help answer TT questions.





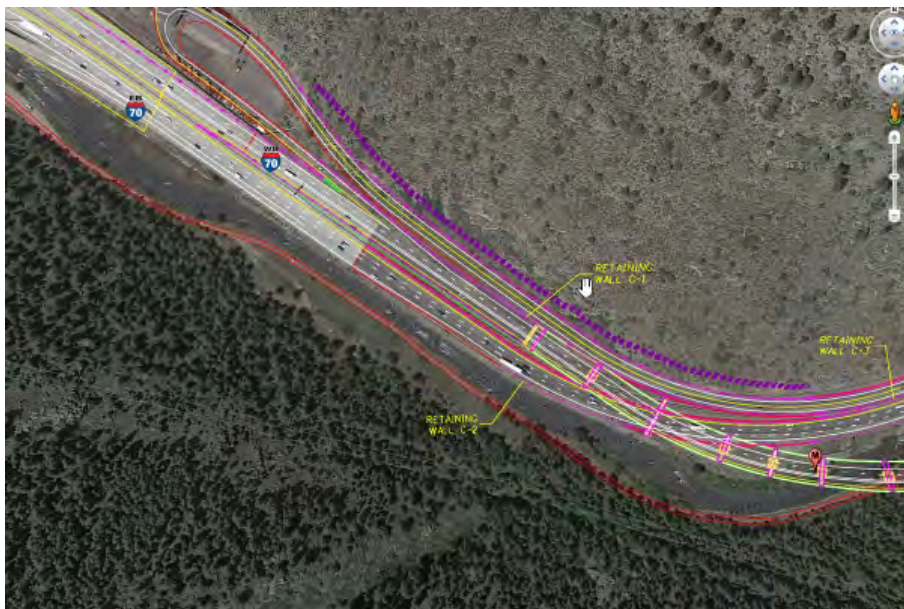
I-70 Floyd Hill

TT Questions

- **Question** (Mike Vanatta, Jefferson County): What was the reasoning behind going with the Gabion basket wall? Would shotcrete make more sense from a durability standpoint?
 - **Response** (Matt Aguirre, Atkins): The wall type was based on similar walls in the corridor and location considerations. It is a full square basket face, and does not affect the structural integrity of the wall. Atkins can talk through additional details if needed.
 - **Response** (Amy Saxton): It would not be appropriate aesthetically to use shotcrete here. This wall is not adjacent to a road and should not receive exposure to salt and other factors that might affect the durability of the galvanized wire.
- **Question:** Who will see this wall?
 - **Response:** River rafters and those traveling on the frontage road would see it. Those on the Greenway would not be able to see it.

4. Central Section Walls: Follow Up

Following up on the previous Central Section Walls discussion from the 1/5/2024 TT meeting, Matt Aguirre, Atkins, presented the renderings for Wall C-3. The Team is working on a broader presentation about the constructability and budget for the high visibility walls and will bring this to the TT at a future meeting.



Aerial map view of C-3 location.



I-70 Floyd Hill

Wall C-3: Wraps around to Bridge N on the north side. The first view is looking east from the Greenway Trail on the south side. The second view is from US 6 looking west on the north side with Bridge M in the distance.



Wall Treatment: Full height



Wall Treatment: Full height



I-70 Floyd Hill



Wall Treatment: 5x5 panels



Wall Treatment: 5x5 panels



I-70 Floyd Hill



Wall Treatment: 5x10 panels



Wall Treatment: 5x10 panels



I-70 Floyd Hill

Wall C-3 would not be visible from I-70, but would be visible from the Greenway Trail. The wall starts off at 0ft in the west, and gets progressively taller going east. The tallest point can be seen in the images above viewed from the Greenway Trail. Due to the sloping adjacent to the river, the Team anticipates challenges with bracing the 10ft panels. Thus, 5x5 panels would need to be used in MSE panel construction.

TT Questions

- **Question** (Amy Saxton): Is the feasibility of 5x10 panels still an unknown? Since they have not been used on previous projects, they pose another level of risk.
 - **Response** (Matt Hogan): Yes, the Team is still looking into the feasibility of 5x10 panels with suppliers.
- **Question** (Mandy Whorton): How much disturbance will there be in this area?
 - **Response**: There is high scour potential in this location which will require further assessment to make sure infrastructure is protected adequately. The Team is still working through engineered solutions and there will be a more detailed discussion in the future.
- **Question**: Why have full height cast in place walls been used in the past, but the Team is looking at panels for this wall?
 - **Response**: In the Peak Period Shoulder Lane project, there are horizontal joints that cannot be seen. For Twin Tunnels, the Team looked at both cast in place walls and MSE walls. In that location, the Team had the ability to entirely move traffic away from the area which allowed for the constructability of full height cast in place walls. The constraints in this project are different, so the Team has to look at what is feasible from a construction standpoint.
- **Comment**: The TT is trying to find a middle ground and a satisfactory product for everyone which is complicated on this project. In order to help in the decision making, the TT needs as many details as possible in terms of wall-specific constructability.

ACTION: Matt Aguirre to discuss wall heights with Cindy offline.

5. Noise Wall Update

Mandy Whorton, PEAK Consulting, presented a Noise Wall update to the TT after the recent presentation to Idaho Springs. The Noise Wall is part of the Central Package and is in preliminary design.



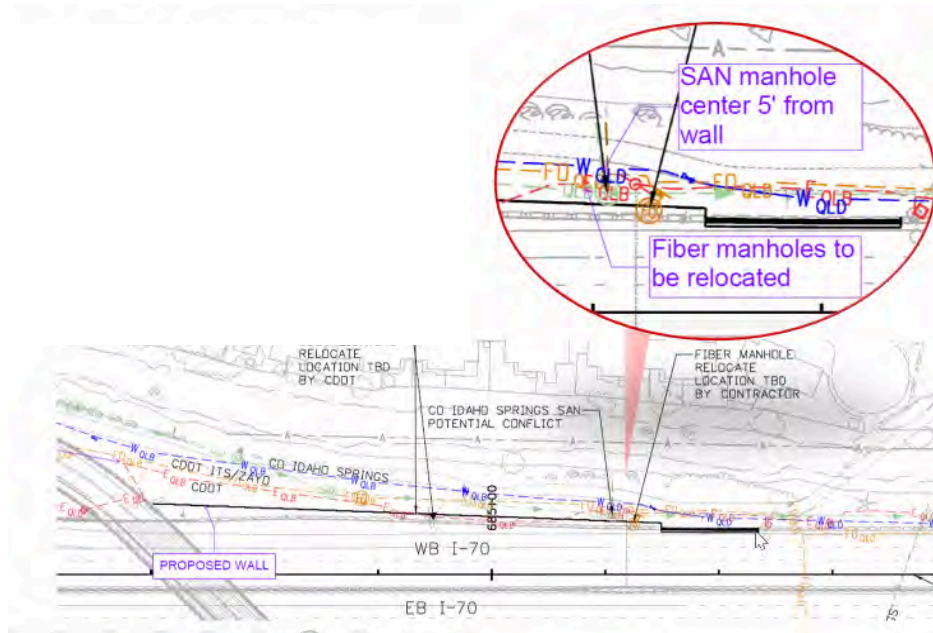
I-70 Floyd Hill

The Noise Wall in east Idaho Springs is part of the EA mitigation commitment for noise. The total proposed length of the wall is now 900ft and will provide the same level of noise benefit. The technical review looked at the option of a 14ft and also a 16ft tall wall. The 16ft wall added an additional 1/10 of a dBA decrease which was not significant enough to justify the higher wall, especially with the visual impact to residents.



Original proposed noise wall seen above in green

There were significant utility conflicts found along the planned alignment during the final design. This led to a refined design, including shortening the wall and adding overlapping walls.



Design schematic showcasing the utility conflicts in the area.



I-70 Floyd Hill

The option that aligns along the highway and shifts north along the highway atop a jersey barrier (seen in turquoise and pink below) was the recommended option.

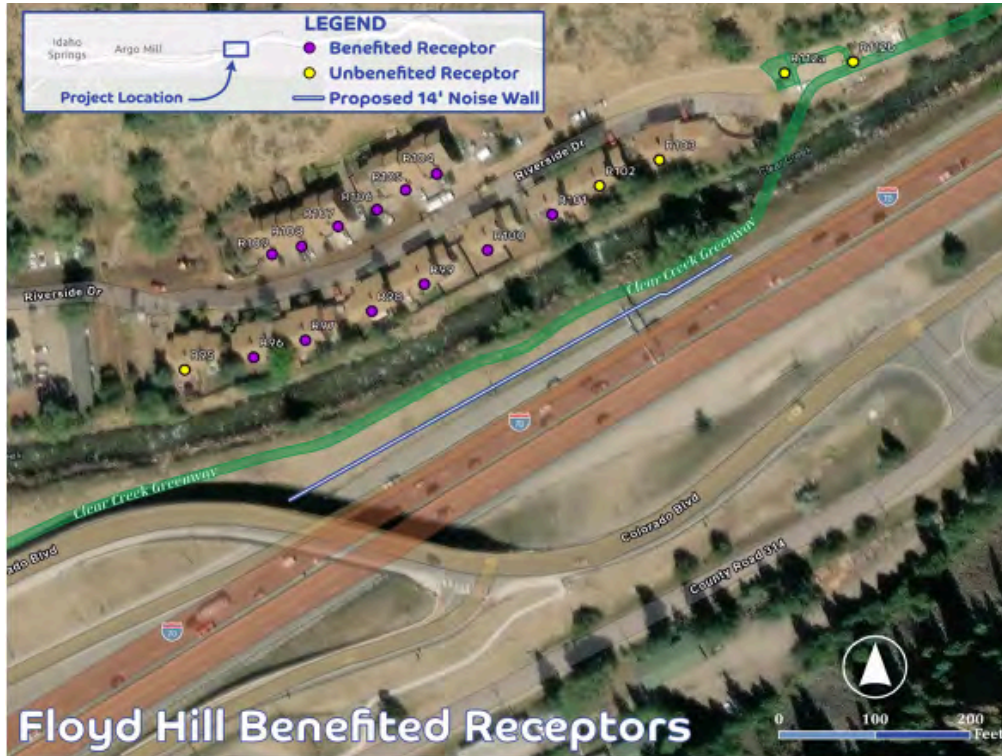


Recommended Noise Wall design seen in turquoise and pink above.

Twelve residential duplexes would receive an expected noise reduction of 5 dBA or more, and 3 additional residential properties toward the ends of the wall would receive substantial noise benefit but do not meet the regulatory definition of benefitted receptors.



I-70 Floyd Hill



Map showing the benefited receptors of the proposed Noise Wall design.

Next steps on the Noise Wall include finalizing the noise wall report, conducting a future receptor survey, and surveying the property owners and residents.



Rendering of the proposed Noise Wall.



I-70 Floyd Hill

The wall will be a post in panel wall. The wall is shown above as CO Random Reveal, but there is the possibility of having a different treatment on the resident-facing side.

ACTION: The Team will review the Silver Plume Noise Wall and determine if it is possible to repeat that wall treatment for Idaho Springs.

Amy Saxton and Cindy Neely, Clear Creek County, relayed information to the group that Idaho Springs representatives asked for them to share in their absence. Idaho Springs does not feel fully assured that they will have sufficient access to repair utilities given water and wastewater are both in the same area. The Team shared that the Noise Wall is not yet at 60% design so there is still an opportunity for further modification and time for concerns to be resolved. 60% design is expected in May. CDOT will also be attending the Idaho Springs Commission meeting on Wednesday.

ACTION: The Team will have further discussions with Idaho Springs about wall length, height, aesthetics, and assurances about utilities.

6. Wrap Up & Next Steps

Future TT Topics

- High visibility walls constructability and budget discussion
- Functioning of Clear Creek
- Archeological site excavation presentation
- Regrading at Saddle Cut and Bridge M
- Revegetation
- Noise Wall refinements
- Concept of operations (e.g. where the toll lane ends, and peak period shoulder lane begins, etc.)
- Central Section design overview
- Signage project summary (e.g. what's being added, what's being taken away, etc.)
- Review of transportation management plan (e.g. traffic movement, lane narrowing, etc.)

ACTION: Matt Hogan will look at updating the project video

ACTION: The Team will look for a Construction TT replacement for Jeff Hampton



I-70 Floyd Hill

Other Updates

- Upcoming Greenway Closure and Shuttle ITF: 2/13, 2-4pm
 - Evaluating different shuttle options and reviewing the communications plan
- Deicer ITF has been scheduled for: 2/15, 10am-12pm
- PLT Meeting: 3/1, 9-10am

ACTION ITEMS:

- **ACTION:** Add a discussion about the functionality of SCAP to the upcoming Deicer ITF with a focus on how it applies to/can inform a long-term salinity program.
- **ACTION:** Kurt to set up a working group with Clear Creek County to discuss Package 4 progress and stipulations in the 1041 process.
- **ACTION:** Create a presentation for the Clear Creek County commissioners on water quality monitoring, snow removal, drainage design, and specific water quality issues.
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7. Attendees

Gary Frey (Trout Unlimited), Jo Ann Sorensen (UCCWA); Amy Saxton, Cindy Neely (Clear Creek County); Sam Hoover, Jack Beard (Central City); Mike Raber (Clear Creek Bicycle Users Group); Jessica North (Clear Creek County School District); Chelly Sundermeyer, Liz Cramer, Julian Gonzalez (FHWA), Mike Venatta (Jefferson County); Lisa Wolff (Floyd Hill POA), Melanie Bleyler (Gilpin County); Lynnette Hailey (Black Hawk); Tracy Sakaguchi (CMCA); Sam Spicer (THK), Tyler Weldon (Bridge and Tunnel Enterprise), Mandy Whorton (PEAK Consulting), Tammy Heffron (HDR); Matt Hogan (Kraemer); Anthony Pisano, Matt Aguirre, Alan Carter (Atkins); Kurt Kionka, Stacia Sellers (CDOT); Daniel Estes, Jonathan Bartsch, Julia Oleksiak (CDR Associates)