



MEETING NOTES

PROJECT:	21685 I-70 West Vail Pass Auxiliary Lanes
PURPOSE:	Technical Team (TT) Meeting #9
DATE HELD:	February 6, 2020
LOCATION:	Online Zoom Meeting
ATTENDING:	John Kronholm, Project Manager, CDOT Region 3 Karen Berdoulay, Resident Engineer, CDOT Region 3 Martha Miller, Program Engineer, CDOT Region 3 David Cesark, Environmental Manager, CDOT Region 3 Mark Bunnell, CDOT Region 3 Traffic Vanessa Henderson, I-70 Environmental Manager, CDOT Matt Klein, US Forest Service Greg Hall, Town of Vail Pete Wadden, Town of Vail Larissa Read, Consultant to ERWSD Michelle Cowardin, Colorado Parks & Wildlife Devin Duval, Colorado Parks & Wildlife Shannon Anderson, Bicycle Colorado Kevin Sharkey, ECO Trails Benjamin Wilson, USACE Stephanie Gibson, FHWA Tracy Sakaguchi, Colorado Motor Carriers Association Kara Swanson, Consultant Environmental Task Lead, David Evans & Associates JJ Weirema, Wood Tyler Bowman, Wood Matt Figgs, CDOT Region 3
COPIES:	Attendees

SUMMARY OF DISCUSSION:

1. Introductions & Meeting Purpose

- a. After a round of self-introductions, Kara covered the purpose of the meeting.
 - i. Kara then pointed the group to the memo and drawings for reference for today’s meeting. She added that there was an updated memo that was sent out today with one small change in Table 1.
- b. Kara laid out the intent of today’s TT meeting which was:
 - i. Clarifying that nothing in the proposed action has changed and the design options all the same, this meeting is part of the Context Sensitive Solutions (CSS) process. Because the project area is part of the I-70 Mountain Corridor, specific engineering design criteria apply
 - ii. Not every element of the project can meet every design criterion, so this meeting will lay out exceptions being requested to the TT. The concerns and suggestions mentioned during today’s discussion will be taken to the next Project Leadership Team (PLT) meeting



2. Background

- a. Kara pointed to the CSS design criteria in the memo that was sent out ahead of the meeting and highlighted the justifications that are allowed when a project cannot meet the criteria
 - i. Some justifications are not used for this project's considerations
 1. Capacity was not considered because this not a capacity project
 2. Cost was also not considered. While there is a cost difference for some of the options, the Project Team did not consider it for the intent of these exceptions
 - ii. For each exception that is identified, the Project Team looked at what would need to be done to meet the criteria, then laid out what those impacts are, and compared that to existing design of I-70
- b. Kara then briefly discussed Table 1 in memo which covers the broad categories of exceptions that would be allowed and highlighted the three that this project show as necessary:
 - i. Alignment – Existing Median Width
 - ii. Slope Cut and Fill - Disturbance
 - iii. Slope Cut and Fill – Retaining Walls
- c. Kara also pointed out that the sound attenuation results have changed since last time the TT met
 - i. A sound wall has been determined to be reasonable and feasible in one area, but all of the details of the potential sound wall can meet the visual guidelines, so no exception is being requested.

3. Exceptions

- a. Kara walked through each exception in Table 2 in the memo. She asked for feedback from the TT as she went through each one.
- b. **Median Exception #1** – Kara pointed to the location of this design exception and noted that the median decreases by a maximum of 14 feet.
 - i. Kara stated that the Project Team wanted to hold south edge of pavement in order to not disturb Bighorn Road. To maintain the existing median width, the project would have to widen to the south, and the Project Team didn't want to impact Bighorn Road and homes in East Vail & have private property acquisition
 - ii. She then walked through the justifications laid out in the memo. For this, and all other exceptions, the Project Team wanted to keep the intent of the original design
 1. Stephanie stated that there is data on how much each median is decreasing, but not the existing widths of each median
 2. The Project Team started looking at that data and provided for each wall during the meeting.
 3. Greg asked to see the width that remains, not just how much we're taking away
 - iii. JJ stated that the project could widen to outside instead of into the median, but a wall would be needed that would be visible the homes on the south side of I-70. He also added that the existing median is about 300 feet wide



1. Greg replied that the design criteria guidance states that projects should have walls on the downhill fill slope and then landscape to hide the wall.
 - a. Karen asked if this criterion was about keeping the existing median width or on having a minimum median width
 - i. Vanessa answered that it is not about total median width, just whether a decrease in the existing width is needed
 - b. Greg stated that by decreasing the existing median width, vegetation would be lost which was the historic visual sight. This would be opposed to widening to the south and proving disturbance to Bighorn Road and the residents in East Vail
 - c. John added that pulling the interstate south also impacts the curve into the bridge just to the east of this location. Taking all the variables into account, this is the design that the Project Team came up with
 - d. Greg replied that a 300-foot existing median looks good, but wants to see if that 300-foot median is completely disturbed or just marginally disturbed by construction on this project. If the project could not have an exception by adding a wall to the south side of I-70, that may be preferable.
 - e. John added that the Project Team wanted to meet the promise to homeowners of holding the south edge of pavement as much as possible
 - f. Greg pointed out that the bridge to the east moves further south, so which homeowners do we protect? He also asked if the median will be landscaped.
 - i. John –replied yes, the median will be landscaped. He added that the Project Team is just looking for general feedback today, not necessarily making each of the specific design decisions
2. Greg finalized his comment for this location in that he would like the Project Team to look at balancing cuts and fills in this area to reduce the median reduction.

c. Median Exception #2

- i. JJ pointed out that the existing median in this location is 280 feet wide
- ii. Kara walked through that Project Team is realigning this curve to correct geometry and build the bridge offline during construction to not impact the public. If the project met the design criteria in this location, westbound (WB) I-70 would instead need to realign to the north, impacting wetlands, the campground, and the truck ramp (which would have to move further north, causing more disturbance, and walls over 12 feet which would create more exceptions).
 1. Greg stated that the Advanced Guideway System (AGS) is not shown on the drawings and that it would be nice to see the alignment on these sheets rather than look at different drawings.



2. Greg added that he thinks there should be an Issue Task Force (ITF) that looks at landscaping and walls and the details behind these exceptions
 - a. Karen replied that it is tricky to balance how much detail the Project Team goes into at this level during the Environmental Assessment (EA) as the project is just at about a 10% design level. The Project Team will come back to during design to refine these details and can do an ITF at that point.
 - b. Vanessa agreed that this is how the process has been done in past at CDOT. Typically, the landscaping and wall plans are brought back to the TT & ITF through CSS during the design phase
 - c. Kara added that because the corridor is also historic, CDOT will develop project specific guidance for visual requirements that will be done prior to final design work and will guide the design of walls and landscaping
 - d. Greg replied that it seems like the current design is significantly changing the visual nature of the corridor with these exceptions. He asked if having the PLT sign off on these exceptions means there is blanket approval to do these exceptions and not follow visual requirements?
 - i. John replied that some level of design that went into this and the Project Team has been trying to balance all the of pros and cons in each area. There are tall walls in some areas, but there are other issues that arise if the interstate was moved in a different direction to avoid the exceptions being shown.
 - e. Martha asked if the 79-foot-tall wall in this same area was tiered or one wall? She also asked on what was the purpose for this meeting, to establish toes for the EA. That wall is nearly an 8 story tall wall.
 - i. JJ replied that it is a tiered wall. The Project Team will develop visual criteria of the walls throughout the design process
 - ii. Greg asked what's the tallest tiered wall today existing?
 1. John replied that the existing wall at MM 183 is very large and the Project Team can look at how tall it is.
3. Karen asked what should the Project Team be approving at this stage in the process? The Project Team will still be developing an aesthetic guideline for the corridor that will govern the final design. It seems like we may be ahead of ourselves without that guideline. The Project Team is currently trying to figure out toes and limits for the EA. She stated that Greg has great questions, but it is hard to answer them at this stage of design, and it's hard to ask the TT to



grant exceptions at this stage without the aesthetic guidelines in place

- a. Vanessa replied that Greg's comments are good to incorporate into the exception so it's included moving forward. This isn't the only time CDOT has gone through this process at such a low level of design and in her experience, every project will revisit this topic as final design progresses.
- b. Greg stated that if that's the case and the Project Team wants these exceptions, it'd be best to advance the design further. Otherwise, the project will clear an area that's bigger than needed and may not need an exception. He asked if the TT could help write the aesthetic guidance?
- c. Vanessa pointed out that the aesthetic guidance document would be written before final design but not be part of the EA. She would expect that it would go through the TT for review and allow the TT to have input into it. An EA is high level, and as design progresses, the Project Team will have to revisit the EA. The Project Team is looking at impacts as best they can at this point, so it is tough to evaluate and ask for these exceptions now
- d. John added that the way the area of special attention in The Crest of Rockies is written, an EA design may not have any exceptions, except for areas of special attention which Vail Pass is one. Those areas of special attention allow for a Project Team to ask for exceptions during the EA process. It's a tough spot for the Project Team since in East Vail there has been a big attempt to not impact houses based on past commitments to the public
- e. Martha asked if the Project Team made this commitment at a 3-5% design level, why are we asking for a lot of exceptions based on a commitment made at such a low level of design?
- f. John feels the Project Team wouldn't be able to advance the design in East Vail without exceptions
- g. Karen pointed out that it is almost impossible to design with zero exceptions
 - i. Kara reiterated that statement
 - ii. Vanessa also agreed. The design guidelines were put in place as guidelines, not hard and fast rules because they were done at a Tier 1 level
- h. Kara brought the group back to the balancing act the project is trying to accomplish - is acquiring private Right-of-Way (ROW) more important than taller walls and narrower median?
- i. John added that he thinks the Project Team is moving through process the correct way. He wants this feedback to take back to the PLT for each exception.



- j. Greg stated that the PLT asked for more detail on the exceptions. He expected to see more cross sections for the walls and isn't sure if the PLT will have enough information to evaluate if a steeper slope that's landscaped is better than walls. With no cross-sections to show the differences, and the Project Team asking for an exception that gives the go-ahead to continue in design with the exceptions listed, he feels the group should be weighing design options at this point instead. That's why an ITF on this issue would be good before getting the exceptions.
- k. Martha replied that the Project Team started this process with a limited budget for the size of the EA and has been trying to spend the bulk of the resources on the EA and CSS process and less on the actual design. The Project Team tried to keep a high level view of design in order to complete the EA. For this process, is it best to note the areas that the design needs to progress and then revisit them later on?
- l. John added that per NEPA guidelines, the Team can't advance the design past a certain level. He asked if the Team could make a commitment in the EA for certain locations to revisit the exception so the Project Team doesn't progress too far in design and tie that into the visual assessment. There is a need to balance NEPA policy with the current level of design, the CSS process, and forward progress on the project
- m. JJ asked that in the interest of the outcome of the meeting, should the Project Team document that TT has a concern with tall walls, and then would CDOT be willing to present options on how to address concerns in the future?
- n. Vanessa stated that the Project Team should document all the concerns and then keep moving through each exception.
 - i. John agreed and wanted to get comments on all areas of exceptions asked

d. Wall Exception #1

- i. JJ stated that the design model shows walls as 30-foot-tall tiers with a 15-foot setback, then the next tier. This initial design was based on previous projects, not on the aesthetic guidelines for the corridor, just to have some data to put into the model.
 - 1. Greg clarified if a wall is less than 30 feet tall that there are no tiers in this current design
 - a. JJ confirmed Greg's statement was true
- ii. Kara walked the group through this exception. A potential cut slope (2.5:1) would be over 500 feet long. The proposed action would need to follow the Crest of Rockies and project specific visual guidance that is determined for building taller walls if any are constructed
- iii. Greg stated that even a 30-foot tier is a tall wall and thinks there's a balance between a cut slope and a vertical wall. Many of the forests in this area



haven't been well maintained for many years, so it may not necessarily be a requirement to save trees because they might be dead. He added that there is a Wilderness boundary close by, so it will be good to check if a 500 foot cut slope would cross that boundary.

e. Wall Exception #2

- i. Kara described this exception to the group. This wall prevents impacts to the existing rock outcroppings in the median
 1. Greg asked if the project could do a rock cut instead of a wall?
 2. JJ replied that with no geotechnical data, he's not sure if there is enough rock to cut into
 3. John added that the Project Team can make a note to explore this as a rock cut during design once geotechnical data is available
 4. Greg commented that a rock cut would look much nicer than a wall

f. Wall Exception #3

- i. Kara described this exception to the group. To make the truck ramp useful and safe, a cut into the hillside is required. A wall protects the recreation path and reduces a large cut slope from being needed
 1. Greg stated that he felt moving a bike path is easier than moving other elements of project. He asked if there is a way to balance and reduce the size of the wall and move the bike path some.
 2. Greg then asked if the current aesthetic guidance states projects can only cut slopes, how does that work when a wall would be needed instead?
 - a. Stephanie replied that it is almost impossible to not have exceptions on a project like this and it would be hard to see where the aesthetic guidance would say only 100% slopes would be allowed. She agrees that she would like to see as few walls as possible, so the question is whether the group wants to figure out all the details right now, or focus on the tradeoffs at this point and show what exceptions would be triggered if each of these exceptions weren't in place (i.e. document that we show one exception instead of many others instead)
 - b. Martha agreed with Stephanie. At these locations, the Project Team can show there is going to be an exception no matter what (either tall cut slope or a wall), but it's too early to say which one is more extreme or impactful
 - c. Karen stated that she is willing to say that the Project Team will go back to each one of the exceptions in each one of these locations with an ITF during final design to revisit.
 - d. Greg asked the group if 3 minor exceptions are less impactful than one major exception
 - e. Kara replied that the Project Team tried to show in memo how not doing one of the exceptions would trigger other exceptions.



g. Wall Exception #4

- i. Kara described this exception to the TT. This exception is part of the chain station that is being improved and the slope on south side would be over 100 feet tall if there was no wall in place
 1. Greg asked if the chain station was designed as 2 lanes and if so, is the 2 lanes for safety or capacity?
 - a. John responded that the chain station is 3 lanes with a lane in middle and parking on either side of that through lane. The purpose of 2 rows of parking is for safety. There is not enough capacity at existing chain station and trucks get stuck on the hill waiting to get into the chain station, creating an operational issue. By separating the new chain station from I-70, it also provides a safety benefit to truckers.
 - b. Greg stated that it would be great to do this, but are there other alternatives that wouldn't present the need for a wall like removing the separation
 - c. Martha added that she feels strongly about the separation for safety. The capacity of the chain station can be looked at further, but there is a significant safety need to pull the chain station further from the interstate
 - d. Greg replied that he is just trying to think of different questions that people will ask. It may be a need for the Project Team to look at tiering all walls
 - e. Karen stated that this exception is so early in design that what was presented was just to establish toes. The Project Team will look at the detail of the walls later on in the process
 - f. Kara added that the Team is simply looking at whether there is a wall or a large cut slope at this time in process. She reiterated that the Team will look at details of wall later in process

h. Wall Exception #5

- i. Kara described that this wall keeps I-70 from being closer to Black Gore Creek, and prevents median exception #3 from becoming bigger
 1. No comments from TT

i. Median Exception #3

- i. Existing roadway is already close together, either open or has barrier in middle (where median is open, warrants a barrier). Widening to north to meet median requirements would impact wetlands and Black Gore Creek. The existing median is 40 feet wide. Widening to the south would require a wall on the south side of the interstate
 1. Greg pointed out that the existing median will be reduced in half with this exception. It seems like there could be an option to cantilever the interstate or to balance it with a wall



2. Stephanie responded that the Glenwood Canyon type cantilever look may not meet historical context of Vail Pass by putting something defining another historic property in a new location
3. Greg said that reducing median would also change the character.
4. John clarified that the Project Team could look at moving the interstate closer to the creek with a cut wall and balance that with a narrower median
5. Karen stated that this was a great example of something that can be fine-tuned by the ITF during final design
6. Stephanie added that part of challenge of this process is whether it is better to preserve the forest around the roadway or the greenspace between the directions of interstate
7. Larissa asked what the impacts to Black Gore Creek would be with this exception
 - a. John responded that the current exception would make the space between directions of the interstate narrower to not get closer to Black Gore Creek. Not having exception would make I-70 get closer
8. Pete added that he likes reducing the overall footprint of I-70 where possible to benefit wetlands and waterways
 - a. Larissa agreed with Pete's comment

j. Wall Exception #6

- i. Kara described that this exception was put in place to help correct geometry of I-70, facilitate bridge construction, protect Black Gore Creek, protect the recreation trail from relocation, and not have 80 foot cut wall
 1. Greg asked if TT members could send in comments after meeting?
 - a. Kara responded yes

k. Median Exception #4

- i. Kara described that the existing median in this area is narrow and has a barrier. This exception wouldn't introduce a new barrier, but would make the median narrower. Widening to south would impact the trail that is beyond the area of trail relocation. Widening to the north would impact the forested area or cause a wall on north side of I-70. A narrower profile is also better for the wildlife underpass in this area, as those should be shorter for better usage
 1. JJ clarified that the existing median width is about 55 feet wide
 2. Greg asked as the Project Team progresses to final design, will the group put together aesthetic guidelines for individual segments or for the entire corridor?
 - a. John replied that the Project Team will look at the entire corridor
 - b. Kara reiterated John's statement
 - c. Greg then asked when that process would take place
 - d. John responded that it will be done in conjunction with final design and that the Project Team wouldn't be able to finalize



any design until the guidance is done to sure all design meets that guidance

l. Wall Exception #7

- i. Kara described this exception is for a curve modification in this area that pushes I-70 to the north. A wall prevents a very large cut slope in a heavily forested area. If the alignment shifted south, there would be trail impacts and that alignment shift would also impact two other adjacent curves, causing additional impacts in those other locations
 - 1. Greg asked if there was a balance to where the design could disturb up to the tree line and reduce the height of the wall?
 - a. Karen responded that the Project Team can look at this as design is moved forward.

m. Disturbance Exception #1

- i. Kara described that the cut slope for this exception prevents the need for a wall. The project will revegetate the area and make it look like other nearby existing cut slopes
 - 1. No comments from the TT on this exception

n. Median Exception #5

- i. Kara described that this exception is in the area between the CDOT maintenance shed on the north side of I-70, and the truck parking area, Black Lakes, and trail on the south side. To maintain the existing median width, the Team would need to impact either one of these sides of the interstate and the features on that side. Widening to the north would impact the acceleration lanes to the maintenance shed leading to more conflicts with CDOT maintenance personnel. Widening to the south would get closer to the Black Lakes, and impact the trail and parking in winter
 - 1. Greg asked if the Project Team could add the locations of the wildlife underpasses to these maps?
 - a. Kara responded that could be done
 - 2. Greg added that it looks like the existing median is full of trees and asked if they get impacted and if there was a balance in the widening both north and south? Maybe it would be best to construct a maximum sized downhill wall to show how that would reduce the impacts to the median

4. Closing

- a. Kara asked the TT group if there were any other comments or concerns
 - i. John asked TT members to send any additional comments to the Project Team by Feb 12th, prior to the scheduled PLT.
 - ii. Stephanie stated that the Project Team needs to be careful of the specificity of changes that talks about a higher level of design than we have (i.e. show a 79-foot-tall wall, but we know final design may change some). Need some sort of height parameters, but can't get too specific at this time
 - 1. The Project Team felt this is a good comment and will look at that
 - 2. John added that the Project Team would like to meet with FHWA and CDOT environmental and look at how what was discussed today relates to the PEIS and how it will be reported to the PLT.



- iii. Shannon stated her concerned for the Vail Pass Recreation Trail where it shares same platform as the Black Lakes Roadway/parking. She would like a dedicated bike lane to remove cyclists from that roadway.
 1. John responded that he will follow up outside of the context of this meeting with Shannon
- iv. Larissa asked when specific mitigation would be written up and available for review. She would like an update at some future point as to when the mitigation details will be available.
 1. John replied that the implementation of the SCAP update and the aesthetic design guidelines will be done in conjunction and before any final design is complete. They both will be done after the EA, but the Project is committing to doing those in the EA
 2. Karen added that the Project does have committed construction dollars (a small amount) and is likely to do some sort of project in 2022 or 2023. CDOT is using this as seed money for pursuing grants. The Team will proceed with a few items including the SCAP update and aesthetic guidelines later this year, then proceed with design on whatever construction project is funded. She also pointed out that the SCAP and aesthetic guidelines will be for the entire corridor.
 3. Larissa asked where does establishment of BMPs take place?
 - a. Kara responded that the Team has a BMP menu (framework) that came out of the SWEEP ITF. As final design takes place and through the continued CSS effort, the Team will work to pick specific BMPs for specific areas and coordinate with the ITFs
 - b. Larissa stated that she is looking forward to having input into exact BMPs. She asked to have the BMP menu sent to her
 - c. Kara stated that she will send the SWEEP packet from the last SWEEP ITF to Larissa

5. Additional Comments Received After the Technical Team Meeting

a. Matt Klein – US Forest Service

John / Kara:

Thank you for conducting a very informative TT meeting today (Zoom conference call) regarding suggested exceptions to the Mountain Corridor engineering design criteria.

I would like to offer my comments/feedback via this email, since conversation during the conference call was quite robust, with many folks voicing a lot of questions and opinions.

It was good to see that CDOT is suggesting the exceptions we discussed today largely for the specific reason of minimizing impacts to adjacent natural resources. The justifications provided for each proposed exception clearly explain that, were the exception not granted, the alternative would likely impose greater



impact on adjacent resources than the exception, including impacts on resources within the National Forest.

Two examples come to mind from today's conference call: One, the proposed exceptions to retaining wall dimensions seem to make sense, since the alternative to retaining walls would be cut slopes that extend several hundred feet into adjacent Forest land, and would likely require significant vegetation removal and earthwork recontouring. Two, the proposed exceptions to median dimensions also seem to make sense, since the alternative to narrower medians is a widening of the highway towards the outside of the right-of-way, which would further encroach upon (and perhaps adversely impact) Black Gore Creek and other adjacent natural resources such as a wildlife habitat.

Therefore, I don't think we will have any objections to the exceptions proposed today.

On another note, I would be remiss if I did not take this opportunity to once again emphasize that our interests in this project continue to focus on a highway design that minimizes adverse impacts to [a] wildlife (through effective fencing and properly designed underpasses), [b] water quality (through protection of Black Gore Creek, associated wetlands, and sediment ponds), [c] recreation (through preservation of adequate winter parking at Vail Pass, and close communication on any planned impacts/closures to the Vail Bike Path and Gore Creek Campground), and [d] visual aesthetics (through design/coloring of guard rails, retaining wall, and barriers, as agreed to in the 2016 CDOT-Federal lands MOU). As a cooperating agency, we look forward to future opportunities for our staff specialists to review the draft NEPA documents and design plans.

Finally, would it be possible for us to obtain GIS shapefiles and or GoogleEarth KMZ files of the proposed exceptions, proposed wildlife underpasses, etc.? The design drawings in pdf are great, but they are of limited utility when it comes to comparing proposed design features against our own data for existing resource conditions.

Please let me know if you have any questions. Thank you again for a very illuminating meeting today.

b. Devin Duval – Colorado Parks & Wildlife

John and Cinnamon,

After speaking with Michelle and following the 2/6 phone call, we wanted to pass along the following comments/recommendations and questions:

- Depict where the wildlife crossing structures are in relation to exemptions.
- No fencing construction east of MP 186 without prior completion of the wildlife crossing structures.
- Are there any proposed walls that occur on the creek side of the recreation path?
- For exemptions involving reducing median near Gore Creek: Minimize footprint of road and maximize distance from the road to the creek.