



MEETING NOTES

PROJECT:	23982-23929 I-70 West Vail Pass Safety and Operations Improvements
PURPOSE:	106/Aesthetics ITF #5 Meeting
DATE HELD:	August 5, 2021
LOCATION:	Online Google Meet Meeting
ATTENDING:	John Kronholm, Project Manager, CDOT Region 3 Karen Berdoulay, Resident Engineer, CDOT Region 3 Rob Beck, Program Engineer, CDOT Region 3 Matt Figgs, Project Manager, CDOT Region 3 Jen Klaetsch, CDOT Lisa Schoch, CDOT Jared Pierce, US Forest Service Tom Fuller, US Forest Service Jeff Bellen, FHWA Stephanie Gibson, FHWA Todd Oppenheimer, Town of Vail Kevin Sharkey, ECO Trails Shannon Anderson, Bicycle Colorado Jessica Brown, Kiewit Randal Lapsley, R S & H Patti Miers, Goodbee & Associates Mary Jo Vobejda, Jacobs Diane Yates, Jacobs Jim Clarke, Jacobs Loretta LaRiviere, Jacobs
COPIES:	Attendees

SUMMARY OF DISCUSSION:

1. Introductions & Meeting Purpose

Karen introduced the attendees at today’s meeting.

Mary Jo said the purpose of today’s meeting is to review and discuss the draft Aesthetic Guidelines chapters that were submitted to you. As we are going through aesthetic design strategies for each section, it will be more if effective we talk about any of your questions or concerns while we are going through each section.

2. Update on the Curved Wall Design

Mary Jo said we are still discussing the look of this retaining wall and working with the contractor on feedback from the Town of Vail. We are working towards an ultimate recommendation for the look of these walls where they may be needed. There have been some minor changes since you saw the aesthetic review memo previously. Because it is such a prominent feature of the wall, we have refined the nose of it a bit more. John was instrumental in going back to the as-builts and doing some field work to see is there variability in wall height and width of planting area between tiered walls so we can



understand what exists today and try to mimic the curved wall features for future walls. Our goals for new curved walls are:

- Wall design that honors the historic resource
- Minimizes disturbance area during construction
- Minimizes lane closures
- Minimizes impacts to forested areas, the recreation trail, existing walls, and slopes

1. Stephanie said, as I remember, we discussed the new tiered walls will be a little bit steeper because the depth of curved panel is a little less and therefore it can stack a little closer and that also minimizes disturbances.

Karen said, yes that is correct. One of the big advantages of the modern scallop wall is that it has a much smaller footprint which required a lot less wall and less natural area disturbance. Greg measured walls in the East Vail area, and in some cases the width of planting area between the tiered walls is narrower than we thought. That would allow more flexibility because if we wanted to go to a deeper scallop, we could narrow the planting area width a bit. We're going to go up and look at this ourselves,

3. Interpretive Sign Planning

Jim said the FONSI includes a mitigation commitment to provide an interpretive sign to honor the Vail Pass historic district. The Vail Pass rest area reconstruction project is currently in planning & design phase and there are plans for an interpretive sign to be provided for the archeological site. We are considering integrating the two interpretive sign efforts.

Lisa said Property Management has already hired a consultant to start working on the design and she is supposed to meet with them in a few weeks. The interpretive sign content is more about construction of the highway and not the archaeological site because the adverse effect is to the Vail Pass historic district. The idea is because we have an adverse effect from both the Vail Pass Rest Area project and the Auxiliary Lanes project, we thought we would piggyback the requirement for interpretive signs for both projects, and we'll let SHPO know we 'killed two birds with one stone.' There might be some content about archeology, but I don't know what the effect will be to the signs so I would have to defer to Dan Jepson (CDOT Cultural Resource staff). Dan is retiring at the end of the month and Greg Wolff will be the new contact for archeology.

1. Stephanie said providing the sign at the rest area gives us a good opportunity, even if there are two signs, one for archeological and one for the highway, to have them visually complement each other and do it cohesively which is always a good thing.

Lisa said there are some panels designed for the original rest area building so I believe Dan has been talking with Property Management about trying to either repurpose the panels because they are the original artwork, or coming up with something that is compatible with those are also under consideration.

4. Updates to Previously Reviewed Chapters

Diane noted the foundation for the *West Vail Pass Aesthetic Guidance* was the *I-70 Crest of the Rockies Aesthetic Guidance* that covers I-70 from the Eisenhower Johnson Tunnels to Edwards. We also referenced the *Area of Special Attention for Top of Vail Pass*, the *Vail Pass Historic Context* report, the Section 106 PA (Programmatic Agreement) and at least seven other documents.

These changes were made because of the previous 5-chapter submittal sent to you in March.

- **Introduction** – Index: omitted chapter on Interchanges because there are not any interchanges on West Vail Pass.
- **Chapter 3 Runaway Truck Ramps** – At MP 185.5, we reworded the strategy to locate new highway features such as signage or barriers to maintain historic views to sculpted rock cut. Views are is obstructed by the features, not the ramp itself.
- **Chapter 3 Highway Retaining Walls** – We had to add OSHA safety standards to require fall protection for some of the walls that may need maintenance from the top of the wall. Sensitively designed protection would be required for those walls that require maintenance for drainage swales and other things on the top of walls. Also added concrete form-liner walls with rock texture for Recreation Trail walls only.
- **Chapter 5 Color** – Instead of using an integral color to match the original project color methods, it has been changed to adding color stain or coating on structures.
- **Chapter 6 Earthwork** – We softened the strategy language to allow natural rock outcroppings exposed during excavation to hold back the slopes as an alternative to building new walls. We added guidance on drainage swale aesthetics, and omitted tree thinning and removals next to highway.
- **Chapter 8 Landscape** – We added strategies to avoid planting trees & shrubs in the snow zone next to the highway because they get pelted and damaged with snow removal activities. We remind the landscape designers to consider wildlife issues with planting designs and added wetland plant species for wetlands to be restored in roadside stormwater ditches.
- **18 Construction Materials** – No change to content
- **All chapters** – We changed the prescriptive measure language to match Sec 106 PA (3rd Supplement).

5. Review Sections of the Aesthetic Guidelines

Mary Jo said you may notice the chapter numbering is not sequential because these are the actual chapter numbers.

Diane said when we put together these slides with key design strategies to provide the highlights of what is in this document. I invite you to look closely at the Aesthetic Guidance so you can think about these strategies and imagine how the design may



appear from the drivers' or Rec Trail users' perspectives. This guidance will be so much better with your input.

Mary Jo said we included with the recent submittal to you a place for you to document your comments. We will talk about your comments today but if you have additional comments in the next week, you can add them to the form or send them in an email: <https://drive.google.com/drive/folders/1bUYkK565lv0QMATyQrDETWSx7TRuGTSO?usp=sharing>

a. Chapter 1: Transportation and Land Relationships

Diane said Transportation and Land Relationships is the essence of the I-70 on Vail Pass design. She noted these are pretty basic highway design strategies from *The Crest of the Rockies* guidance. A summary of the key design strategies are:

- Adapting I-70 West Vail Pass to existing topography
- Preserve the natural features
- Road alignment to maintain split elevations and respect stream and valley sinuosity

b. Chapter 2: Transportation Facilities Alignment

Diane reviewed the key design strategies for median and lane separations:

- Maintain median width or if it can't be maintained create a zone that does not require guardrail as much as possible.
- Add native plantings that are characteristic to Vail Pass plant communities. It should appear as if the plant communities extended from both sides of the roadway and through the median, so it looks like the roadway barely interrupts the plant community patterns.

c. Chapter 3: Transportation Support Structures

Diane explained there are four types of support structures in this chapter.

- i. Existing Highway Features key design strategies include:
 - New construction to honor historic context and consistent design aesthetic
 - Consider White River USFS uses
 - Minimize new disturbance to the landscape and topography

New construction for bridges and walls, as well as a new segment of the Recreation Trail is included with the Auxiliary Lane Project.

- ii. Summary of key design strategies for Bridge Structures include:
 - Bridges are contributing features to eligible historic district
 - Both the adjacent east and west bound bridges built next to each other should be designed as matched pair



- Consider aesthetic views to underside of bridges, especially from Recreation Trail users.
- New bridges to visually complement dominant features of original historic bridges.

Since new bridge decks will be wider with the addition of the auxiliary lanes, it presents a great opportunity for a potentially new design concept for a contemporary re-creation of the original bridge designs.

iii. Recreation Path Design and Retaining Walls key design strategies:

- The new Recreation Trail segment across Black Gore Creek is a new feature to the historic district.
- Trail retaining walls should have a distinct design independent from walls supporting the highway. This was a design strategy from *The Crest of the Rockies* and should be continued for West Vail Pass.
- Proposed trail pavement is 14' wide which is wider than the original trail of 10' wide.
- Three wall design options for the Recreation Trail include rock texture with either cast-in-place walls, or shotcrete texture on soil nail walls. Whatever the construction method is, we suggest the wall face complement the natural rock textures and geology found in the valley.

1. Shannon asked about the three options noted for the walls: did you choose one or is it still being considered?

Diane said the three options are under consideration right now. It depends on the location, how they can be constructed, what kind of visible geologic rock formation is next to it.

2. Tom gave a suggestion for the concrete rock texture wall along the rec trail. USFS had good success with Caltrans at Lake Tahoe on Echo Summit replacing an historic wall. They had an artist stained it to make the color look right. So, I'm happy with that design if you use it.

Shannon said when she was looking at the wall photos, she thought two of them looked really fake. I like the more stacked rock look. Did they make it look natural?

Tom said it looked natural. The problems were (1) it is on the underside of a steep hill so the only place where people saw it was where the rocks were next to the highway and (2) it may be difficult to get trucks in there to pour the concrete so you might have to do a stacked wall anyway.

Tom thinks he has some pictures that he can share. Diane said he would appreciate pictures and any other information he may have about this particular wall.

3. Mary Jo said for the truck ramp we were very specific in the specifications for the wall on things like Tom mentioned. We are making



sure the contractor knows the level of artistry that we are looking for on the walls.

Randal said for the truck ramp wall, we tried creating enough relief in the wall design so the artist could create a 3-D effect of having rocks holding back the slope. We also defined the number of color elements, three different color elements to be used for the staining so that gives the artist a good palette of colors.

We've also required the contractor to do a test panel so we can see what it looks like prior to construction. Patti, our landscape architect, understands what the look and feel should be, and she will be on site to take a look at that test panel to make sure we are creating the look and feel that we want. We looked at the batter of the wall and may be looking at some areas where we might want to create some areas for dirt for plants to grow on.

We're really trying to be conscious with CDOT's expectations for the rock texture to look natural. Fortunately doing this through the CMGC method, we have the contractor at all of our meetings, so they hopefully understand what we are trying to accomplish.

iv. Recreation Path Creek Crossings key design strategies:

- There are two new creek crossings at Black Gore Creek:
- The crossings will either be bridges or large arch-shaped culverts.

For ease of maintenance, there has been a preference not to replicate the wood guard railing that is there but perhaps use a metal railing. The rail color and finish will be consistent with finishes throughout the entire Corridor for metal rails and trail signage. The visual design continuity for color, texture and finishes is important throughout the Corridor.

1. Shannon asked who will decide whether it's a bridge or an arched culvert. I don't think it really matters as long as riders can see what's coming.

Randal said right now we have two creek crossings, similar to what was in the EA. We've looked at a number of different alignments to determine whether bridges or precast arch culverts would be better. Right now, we are leaning towards installing bridges. At this point they are the similar to the prefabricated bridges you'll see on the Rec Trail closer to Copper Mountain. Doing a bridge also allows us to create some light underneath which will help with some of the wetland impacts and the open rail helps with user visibility where you can see through and past the bike lane as you are going around the curves.

d. Chapter 4: Guardrail, Barriers, and Edge Delineation

Diane noted the key design strategies include:



- Concrete vehicle barrier will be used in most areas requiring edge protection along the highway. The concrete will match the Vail Pass color palette as established by the original project.
- W-beam with timber posts and rail will also be used where concrete barrier is not appropriate. Metal rail will have a dull brown finish.
- Spray screens on concrete barrier on the bridge segments above the creek crossings is being considered. This hasn't been decided yet but the need to reduce the amount of sediment and salt going into the creek has been voiced as a concern. These screens would also match the colors and textures of the other metal features along the Corridor.

Karen said we were careful to not define too much detail about the shape and size of barriers because that changes with M&S Design Standards based on different crash tests that happen every year.

Mary Jo said one other question that has come up in other meetings is about glare screening. Is that addressed in the Aesthetic Guidelines?

Diane said more discussion is needed on this but her gut reaction would be to make it consistent with what has happened all along the I-70 Corridor in the Crest of the Rockies, and, if possible, use the color palate that is unique to Vail Pass.

e. Chapter 7: Streams and Hydrologic Features

Key Design Strategies:

- Avoid construction impacts to natural streams and drainages. We're working with the contractor to make that possible.
- Use natural material where feasible for drainpipe inlets and outlets, ditches, and basins. There may be a need for concrete lined water quality basins to collect gravel, salt and other de-icing materials used for snow and ice removal on the Pass.
 1. Stephanie said for the concrete water quality basins, we may want to say the basins should be located and designed to make them less visible from the roadway and recreation trail, where possible.

Jim said that language might already be in the Aesthetic Guidelines, but we will confirm.

Diane said there needs to be a way for maintenance to access the basins to clear out sand and salt, so it doesn't go into the creeks. We want it to look as natural as possible. We are working with the hydrologists to develop basin aesthetics.

2. Shannon said when she was driving back from Denver recently in the rain, it was very frightening on Vail Pass. Part of it was because of the construction but the highway pavement also doesn't seem to drain well.



I know you are addressing this but just as a car driver, it was terrifying, and it must be improved because it is very dangerous.

3. Todd said if the concrete basins are dyed a dark brown, it would be a lot less visually obtrusive than just grey concrete. It would make the water a little more reflective.

Diane said they have also developed a salt tolerant seed mix to be planted in ditches and low areas right next to the roadway. Another goal could be to plant taller grasses to disguise the basins.

Todd said that is a good idea because grasses are probably more tolerant to the maintenance vehicles going into clean the basins than anything woody.

Diane said water quality basins were mentioned in the initial concerns for Aesthetics Guidance and we're trying to balance the need for maintenance access and visually blending the basins into the natural environment as much as possible.

f. Chapter 9: Wildlife Underpasses and Fencing

Key design strategies include:

- Wildlife fencing and wildlife crossings are new elements to the eligible historic district. The original project included one or two bridges strategically placed for the elk to cross under the highway Neath. Diane believes the wildlife fence and gates will be highly visible from highway. The locations have not been set but where there will be a large underpass, you've got to make sure the wildlife doesn't cross above the culvert and onto the highway, at underpasses, fence must be installed close to the highway.
 - The materials used for the wildlife fencing will match other fencing used on the I-70 Mountain Corridor. They include wood posts with greenish colored wire mesh.
 - Underpass entrances will be hidden from human view. Unlike some of the other walls that will be enhanced with rock textures or will mimic the historic wall designs, the wildlife underpasses will be tinted concrete to look more utilitarian. Hopefully with this image, it will be less likely humans will use the wildlife underpasses.
1. Tom said I don't like the fencing because it really deters from what the goal of the aesthetics is. We've talked about this before and I'm an opposite to the other Forest Service people. I am also worried because so many people hunt in that area, I have a feeling that they will be cutting through the fences (for hunting access.) USFS will need to address this.

Tom asked Lisa if she thought SHPO is going to be cool with the wildlife fencing. Has this issue come up before where we've had to consider it in a historic context?



Lisa said it was covered in the eligibility effects for the district in the EA. We have an adverse effect to the district. Other projects where we have installed new wildlife fencing, it really depends on the resource. Obviously, Vail Pass is unique because of the visual aspects of it and most of our highways don't have that same significance associated with CSS. So, it really depends on the resource.

Tom said he feels the health and safety of both the drivers and wildlife will win out.

Lisa said she agrees with him about that open feeling will be diminished by wildlife fencing adjacent to the highway. I think that you are right, the fencing does change the visual look of the landscape.

Tom said he's looked at some of the areas where they have proposed to put it and I think if it is back off the highway enough, up the hill, I don't think it will be as noticeable. Right on the highway it's going to be pretty noticeable, but I think where they have it planned out, it will be better, but it will still visible.

Lisa said it helps if they blend the material colors into the landscape. Along I-70 at Georgetown, they made sure the (rockfall fencing) materials matched the landscape and it does make a difference visually to the driver. That's a little different because it's against a slope but I do think there is a way to make it look better visually and I think that is what they are trying to do.

Jim said the Aesthetic Guidelines addresses the fencing color.

g. Chapter 10: Community Interface

Diane noted this was one of the chapters in the Crest of the Rockies and it also applies to West Vail Pass. Key design strategies are:

- Any I-70 improvements will be done in partnership with the Vail community and state/federal agencies
- There will be safe I-70 pedestrian / bike crossings under I-70.
- Minimize impacts to scenic resources for Vail residents and highway users

h. Chapter 11: Sound Attenuation

Diane said it is her understanding there has not been a need identified for sound attenuation, but this guidance covers not only what is going on now, but also the future. The key design strategies include:

- Use landform with or without walls to deflect the sound
- Wall colors, material and finishes to meet Vail Pass color palette
- Use planting to visually blend with adjacent natural landscape



- All sound abatement designs and locations are guided by state and federal law. We wanted to make sure this was known with the aesthetic guidance.

Karen clarified there is a section in East Vail on the north side that is eligible for sound wall but prior to building it there would be a vote that would occur regarding receptor locations.

i. Chapter 11: Avalanche Mitigation Measures

Diane said the section of I-70 near the sculpted rock cut has been identified as potential mitigation area for avalanche. The key design strategies include:

- Snow fencing
- I-70 Vail Narrows (MP 186 to 186.5)
- Preserve views of sculpted rock cut – a contributing feature of historic district
- Natural colored material to meet Vail Pass color palette
- Restore vegetation and landscape impacted by fence installation
- Consider planting trees and shrubs below fence to visually blend fence into landscape

j. Chapter 11: Roadside Facilities

Diane said on West Vail Pass the roadside facilities we are concerned with are truck pull-out lanes and parking areas, improvement to chain-up stations and the maintenance yard and sheds. Summary of key design strategies are to:

- Consider scenic resources around these facilities and avoid impact to adjacent natural environment
- Use landforms and landscape to screen views into the human made structures to mitigate unfavorable visual characteristics
- Incorporate sensitive lighting aesthetic design strategies to keep the light when and where it is needed.

1. Stephanie asked if we are going to be doing revegetation in the maintenance shed area?

Karen said we aren't doing anything near the shed (for the Auxiliary Lane Project.) We are putting in a truck parking extension on the eastbound side and chain stations. I believe Diane is just pointing out the maintenance yard for any future projects that may occur at some point, but the (Auxiliary Lane Project) EA had zero impacts to the maintenance yard.

Diane said it's interesting the original maintenance yard building is dark brown and all the utilities (attached to this building) are all painted brown, so it was picking up on the aesthetic guidance from the original project.



k. Chapter 14: Advance Guideway System

Diane noted the Aesthetic Guidelines are also for future projects and that includes the Advanced Guideway System. These are broad brush design strategies because we don't know very much about the design right now. Its location is conceptually located on maps. (This chapter is a placeholder to think about the aesthetics of this future project. A summary of key design strategies includes:

- Follows the I-70 Mountain Corridor Guidance
- It will be a new element for the I-70 Vail Pass historic district
- Provide design consistency for all I-70 Mountain Corridor transit facilities
- Avoid locating Advanced Guideway System where viewed as silhouette against the sky

l. Chapter 15: Lighting

Key design strategies include:

- Consider transportation requirements and avoid impacts for East Vail neighborhood, Gore Creek campground, recreation, and lighting that may impact wildlife (migration)
- Light poles and equipment to follow I-70 Mountain Corridor sign styles and colors
- Design goals are to preserve visibility of night sky and minimize light pollution. This is also a mitigation commitment from the Auxiliary Lane Project EA.

m. Chapter 16: Signage

Diane said the design strategies for signage is very similar to lighting. They include:

- Follow the I-70 Mountain Corridor sign styles and colors
 - Recreation Trail to follow USFS bicycle facilities sign standards
 - Sign pole and backs to be 'Forest Service Brown'
 - Consistent materials, colors, and finish for sign support structures
 - Location of overhead signs on the highway as much as possible will be located in consideration of key scenic sightlines
1. Stephanie said in Glenwood Canyon we had visualizations of where the signs were to help avoid impacting certain scenic locations. You could easily see if you moved the sign 10' one way or another, it would reduce the (visual) impact. Are we thinking about doing something like that here? It is expensive so that could be a challenge.

Karen said it isn't in the plan right now. Our first construction package which has already been awarded includes variable message signs and visualization was not done for that.



n. Chapter 17: Utilities

Key design strategies:

- Place utilities underground where feasible. Go through vegetation to avoid straight-line cuts in forests.
- Add plantings (especially from the views for recreation trail users) to screen views to existing utility corridors
- Follow the I-70 Mountain Corridor sign styles and colors
- Sign poles, sign backs and boxes to be 'Forest Service Brown'
- Consistent materials, color, and finish for sign support structures

o. Chapter 19: CSS Process

Mary Jo said CSS has been used throughout this project and these Aesthetic Guidelines are a result of this approach. Now we need to consider the strategy for thinking about how this will continue in the future. Most of the solutions that are sensitive to the context have been developed during the Auxiliary Lane Project EA and through alternative analysis and in the very beginning by setting a context statement, core values and success factors. We continue to use these as a filter as we look at all the design options.

Going forward, really the most likely place that you would see the CSS Process kick in again would be if there were truly design exceptions to any of this aesthetic guidance, to the CSS design criteria, or anything that can't meet the direction or guidance that has already been laid out. Then we would look at how we balance all the different resources that we are trying to enhance and protect.

6. Remaining Schedule

Mary Jo said we formed the ITFs in the beginning so the West Vail Pass aesthetic guidance that was required, could be pulled together and incorporated into the design as it is moved beyond 30%. We worked really hard to get these aesthetic guidelines ready for your review so they can become part of the FIR which is the 30% design for all the INFRA Grant projects and construction.

The dates on the schedule haven't really changed. PLT & TT Meetings will continue but you can see we are coming to the end of the ITF efforts.

We are planning a groundbreaking in August and construction is going to start on Package #1 on August 9th.

Karen said the intent of this ITF was to address Section 106 commitments and considerations for the Auxiliary Lane Project and to develop the Aesthetic Guidelines. In our minds, those goals have been completed once we receive comments from you. We have met three times and now the final draft is in your hands, we have been revising it based on your comments.

We could have another meeting to go through your comments and talk about the final document, similar to our meeting today where we would be summarizing the document



itself. The other option would be to have this be our last meeting, revise the documents with your comments and address the updates through email.

1. Stephanie said in her mind unless there is a major change you need to make or a major comment that needs discussion, I am fine with not having another meeting.

Mary Jo said she believes that if there are any more submittals that are needed to be submitted to SHPO in the future they would go through this group as well.

Lisa said we need to make sure that if we are consulting on milestones or commitments made in the PA separate from these ITF meetings, they need to be documented for the 106 paper trail.

Mary Jo said given that process, if something came up that we needed to reconvene this group, (I don't think we anticipate that at this point unless there was a major change or something came up in the 106 process,) it would be up to the group to decide if we have another meeting. There are always possibilities of amendments. One of the yet to be defined CSS processes is how to amend a document like this. In the future and from an aesthetic design standpoint, we might discover a new technique or new technology that we want to be sure is considered and allowed for, or discussed in the Aesthetic Guidelines. We don't foresee any of these at this moment but just so everyone knows that is an option.

7. Next Steps

- We are meeting with the PLT on August 6th. We will be presenting design exception recommendations from the TT Meeting we had on August 2nd. The PLT Meetings will continue quarterly.
- We will continue to meet monthly with the TT. As we get further into design, we might not need a TT meeting every month.
- ITF meetings are planned for SWEEP and ALIVE. We anticipate the next ALIVE meeting will be our last meeting. SWEEP has a few more meetings planned.
- Your comments will be the basis for updates to the West Vail Pass Aesthetic Guidance presented today.
- 30% Design Review meeting for the INFRA Grant project is still scheduled for September