MEETING NOTES

PROJECT:	23982-23929 I-70 West Vail Pass Auxiliary Lanes
PURPOSE:	ALIVE ITF #3 Meeting
DATE HELD:	February 10, 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 David Cesark, CDOT Region 3 Matt Figgs, CDOT Region 3 Cinnamon Levi-Flynn, CDOT Jeff Peterson, CDOT Carole Huey, US Forest Service Jen Prusse, US Forest Service Kristin Salamek, CDOT USFWS Liaison Michelle Cowardin, DNR Jeff Bellen, FHWA Stephanie Gibson, FHWA Pete Wadden, Town of Vail Jen Bradtmueller, Kiewit Jim Thomsen, Kiewit Mark Gutknecht, Kiewit Julia Kintsch, ECO-resolutions Paige Singer, Rocky Mountain Wild Jillian Mauer, Pinyon Environmental Randal Lapsley, R S & H Mary Jo Vobejda, Jacobs Jim Clarke, Jacobs Pat Bastings, Jacobs Loretta LaRiviere, Jacobs
COPIES:	Attendees

SUMMARY OF DISCUSSION:

1. **Introductions & Meeting Purpose**
    a. Karen introduced the attendees at today's meeting.
    b. Mary Jo reviewed the purpose and goals for today's meeting:
        - Gather feedback on the ALIVE (**A** **L**andscape Level **I**nventory of **V**alued **E**cosystem Components) process to ensure the project is successful. Topics for today's meeting are:
            i. Review EA and INFRA project commitments
            ii. Understand team roles and responsibilities
            iii. Gather feedback on approach to wildlife crossing development
2. **Work Completed**

a. Karen said the FONSI (**F**inding **o**f **n**o **S**ignificant **I**mpact) was signed and published on the CDOT website on February 9, 2021.

b. Mary Jo said a survey was sent to all PLT, TT & Issue Task Force (ITF) members and the purpose was seek feedback on how the CSS (**C**ontext **S**ensitive **S**olutions) process went during the last few years while developing the EA. The survey focused on the CSS process, not the outcome of the project. The survey questions covered multidisciplinary nature of the teams, regularity of meetings, team effectiveness, reflection of the community's qualities, collaborative discussions, project stakeholder contributions, input through the process, availability of resources, and 2-way communications.

   i. The survey was sent to 54 participants in the previous process and sixteen responses were received. Overall, the results were 80% positive responses. Some comments suggested more 2-way conversations and more opportunities for feedback as improvements.

   ii. Mary Jo said if anyone has suggestions on how to improve 2-way conversations and opportunities for more feedback they can email us their suggestions.

   Mary Jo said that based on the feedback received from the TT (**T**echnical **T**eam) their meetings will now be monthly and have been scheduled through June. The PLT (**P**roject **L**eadership **T**eam) will meet quarterly. The TT has met twice and the PLT once.

c. Revisions suggested for the PLT, TT & ITF membership have been incorporated.

d. The design team is starting to work on the first projects for the INFRA Grant.

3. INFRA (**In**frastructure **f**or **R**ebuilding **A**merica) **Grant Project Scope**

a. Karen said the overall project is estimated to be $700M. The first phase is $140.4 M for design and construction. The reason we chose the scope shown is we want to optimize safety and operations in the eastbound direction.

   i. A third lane will be added from MP 185-190 and increasing the inside shoulder from four-feet to six-feet and the outside shoulder to ten-feet. In this area we are installing six wildlife underpasses and fencing. The fencing will connect with the bridge MM 185 at the bridge and extend it up to the top of the pass.

   ii. Glare screen barriers will be installed on both the east and westbound medians where they are at the same level.

   iii. The recreation trail will be relocated further away from I-70 from MP 185 – MP 187 to make room for the eastbound third lane.

   iv. Because of the high crash rates at the curves at westbound MP 188 and MP 186, the curves will be smoothed to meet current geometry standards and increasing the inside shoulder from four-feet to six-feet.

   v. The bridge at Eastbound MP 185 is in poor condition and is Bridge Enterprise eligible so will be reconstructed. This is where the auxiliary lane and shoulder widening begins.

vi. Straightening out the lower truck ramp at MP 182 to meet current truck ramp standards.

vii. Installing signage improvements throughout the corridor including a variable speed limit system.

viii. Installing an automated highway closure system at the bottom and top of the pass with overhead signage and a push-button gate.

ix. Installing an anti-icing system on the eastbound bridge at MM 184.

4. Overall Project Design and Construction Schedule

a. Karen said the project will be using the CMGC (**C**onstruction **M**anager/**G**eneral **C**ontractor) method. The grant commitment is to start construction this summer of the first construction package. Since the SCAP (**S**ediment **C**ontrol **A**ction **P**lan) won't be completed by then, we are evaluating scope that does not include impervious surfaces. The first construction package being designed are the highway closure system, and the lower truck ramp reconstruction. The remaining three construction projects are to be determined later.

i. The ITFs will be more heavily involved early on. ALIVE especially dictates some of the major design elements so we want to get your feedback early in the design process. and will continue to be involved during the design.

ii. Karen said the I-70 CSS process will continue throughout construction.

iii. Design will be completed by the end of 2022 and construction will be done by the end of 2024.

iv. The CAP #1 project design will be finished in May. The remainder of the project will be at FIR in the fall. Then we will start to break out the packages and prioritize them for delivery in February 2022, May 2022, and December 2022.

5. CSS Process

a. Mary Jo explained we are now in Life Cycle Phase 3 of the CSS Process: Project Design. During this phase, we will be looking to ensure the options best serve the decisions that were made in the EA. This phase will ensure the mitigation commitments are incorporated.

i. Jen inquired what CSS meant.

a. Mary Jo explained that CSS is the acronym for Context Sensitive Solutions which is part of the I-70 Mountain Corridor Programmatic Agreement and the ROD (**R**ecord **o**f **D**ecision). This process ensures the design solutions are sensitive to the context. The process includes stakeholder involvement with people who live and use the facilities, and their input is included into the design or solution that is sensitive to all the context issues.

b. The five Life Cycle Phases of CSS are:

1. I-70 Mountain Corridor Planning
2. Project Development
3. Project Design
4. Project Construction
5. I-70 Operations, Maintenance and Monitoring

c. The CSS 6 Steps during this Phase remain the same as the other phases:

i. Define the Actions (Defined in the EA Preferred Alternative and Mitigation)
ii. Endorse Process (by TT & PLT)
iii. Establish Criteria (ITF methodology)
iv. Develop Options (ITF may or may not develop)
v. Evaluate Options (ITF and TT recommendations)
vi. Document (Environmental Mitigation Tracking)

d. Mary Jo noted there may be design options for some of the ITFs but there may only be one way to reach the mitigation using the ITF methodology.

e. Documentation of the methods used for meeting the mitigation will be included in design. Construction of the mitigation will be documented in the Mitigation Tracking Table.

f. Mary Jo reviewed the different ITFs and how closely one impacts another:

i. 106 / Aesthetics - Design exceptions/Rec Trail/SWEEP/ALIVE
ii. SWEEP (**S**tream and **W**etland **E**cological **P**rogram) - Aesthetics/ALIVE
iii. ALIVE - Aesthetics/SWEEP
iv. Recreation Trail - Aesthetics
v. Design Exceptions – Aesthetics

g. The recreation trail is being looked at by the TT rather than setting up a separate ITF.

h. An Emergency Services ITF has been added and a meeting is scheduled for March 29th.

i. Julia said you will be hearing more about the coordination between the different ITFs at the next meeting.

6. ALIVE MOU (**M**emorandum **o**f **U**nderstanding)

a. Julia introduced herself as a part of the RS&H team. She noted she has a long history of working on the Corridor and West Vail Pass and was part of the ALIVE committee that prepared the I-70 Corridor ALIVE MOU. Prior to the that, she and Paige completed the I-70 Ecological Project which revisited the originally identified corridor LIZs (**L**inkage **I**nterference **Z**ones). She is excited to be a part of this project, the design team and finally realize the vision we've had in the Corridor for several years.

b. Julia said the ALIVE MOU evolved during the I-70 PEIS process and identified the need for interagency coordination to achieve our wildlife mitigation and connectivity goals along the Corridor. It was signed by all the participating agencies

(CDOT; FHWA; US Fish & Wildlife Service; US Forest Service; US Bureau of Land Management and the Colorado Department of Natural Resources, Division of Wildlife) in 2008.

c. Julia quickly reviewed the objectives:

   i. Increase the permeability of the I-70 Mountain Corridor

   ii. Streamline interagency coordination

d. Julia then explained the major commitments:

   i. Ensure functional Linkage Interference Zones (LIZ) and wildlife passages

   ii. Ensure agencies cooperate in early and full implementation of corrective actions to solve permeability problems in identified LIZs

7. INFRA Project EA Commitments Related to ALIVE

a. Julia said the West Vail Pass Auxiliary Lanes Project lies entirely within the West Vail Pass LIZ. She noted the ALIVE ITF last meeting was in 2019 during the EA process. The agencies will continue to work together during design to create mitigation solutions in this portion of the Corridor. She then went on to explain the specific EA commitments for wildlife.

b. The Terrestrial Wildlife Connectivity Commitments include:

   i. Improve wildlife movement and reduce habitat fragmentation in the study area

      a. Construct six new wildlife crossings (2 large and 4 small-medium culverts)
      b. Promote small fauna passage
      c. Place snow deflection devices to keep crossing clear of snow and debris and passable all year

   ii. 8’ high wildlife fencing will be installed from MP 185.2 to MP 190 with escape ramps every 0.25 miles. This is the portion of the fence that is funded as part of INFRA Project. The EA commitment is for fencing all the way down to East Vail.

c. The Threatened, Endangered, and Special Status Species – Canada lynx Commitments are:

   i. Ensure dark sky compliant lighting

      a. Do not direct lighting into lynx or snowshoe hare habitat

   ii. CDOT is required to provide an annual report documenting project impacts on Canada lynx and notify USFWS of any incidental take

d. Other Wildlife Commitments are:

   a. Survey bridges for bat use and, where needed, add features to promote roosting

a. Aquatic connectivity will maintain existing fish barriers to prevent the spread of non-native species into headwater streams that support native trout populations.

e. Commitments During Construction include:

i. Conduct work during daylight hours as much as possible to avoid impacts to lynx activity

ii. Temporary lighting will be used with directional shielding

iii. Concentrate construction areas to minimize habitat impacts and all temporarily impacted habitats will be restored

iv. Where bats are present, suspend bridge construction during maternity season (May 15 – July 15)

v. All Migratory Bird Treaty Act nest survey guidelines will be followed

f. The group had no additions or comments on the commitments.

8. Wildlife Undercrossing Locations

a. Julia said the team has been reviewing and evaluating the wildlife underpass locations originally proposed in the EA and she noted there may be some shifts in locations.

i. Julia said they don't anticipate any changes to the large mammal crossings at MP 187.3 & MP 188.3

ii. There are some concerns for the originally identified small to medium mammal crossings locations between MP 186 – MP 190. Julia said they are coordinating with the roadway and drainage design teams to evaluate the functionality and feasibility of the original locations and determine what the best options are.

iii. Julia noted the wildlife crossings may be concentrated higher on the pass in locations with the best habitat access and to avoid steep slopes and areas with higher levels of human activity.

1. Michelle said her notes from the previous ALIVE meeting have the location for the large mammal crossing at MP 187.6, not MP 187.3.

2. Michelle said that in 2008 at a West Vail Pass Linkage meeting, CPW said they had observed bighorn sheep crossings around MP 186.4. She wanted to get this on the record because all the crossings are above this location and there could potentially be bighorn sheep and, mountain goats may have moved through the lower locations, closer to The Narrows. Michelle said she would send her notes for both meetings to include with these meeting notes.

a. Julia said it's good to be aware of the bighorn sheep and mountain goats potentially using the crossings and they will keep it in mind. She said the locations haven't been finalized yet but in reviewing the EA locations, there were potential design constraints at MP 187.

Closer to The Narrows there is steeper terrain and the bike path is close to the underpass location which limits what we can do in that location. It would be very difficult to construct the underpass at MP 186 because of the steep terrain. There was also concern about wildlife access to an underpass. The wildlife fencing will guide them to the existing bridge over Pole Creek at MP 185.5 which is suitable for bighorn sheep passage.

3. Jenn inquired what the specs are for the two large mammal crossings.
    a. Julia said the EA did not specify the exact size and the team will be focusing their efforts on the size and type as laid out in the methodology.
4. Jenn said for the small to medium crossings, bobcat was listed as a target mammal but not lynx, but she can't remember why this was differentiated.
    a. Julia said lynx is listed in the EA as a large mammal and it is a targeted species, though it is expected that lynx would also be able to use the small to medium mammal underpasses.

9. ALIVE Development Process

a. Julia noted the design is progressing for the first INFRA project at the same time the ALIVE team has been working on what we are presenting at today's meeting.

b. Following today's meeting, the ALIVE team will use your feedback and input to revise the preliminary crossing locations and expanding the methodology for determining crossing sites and sizes. This will be used to inform the design process.

c. The wildlife crossing design will be reviewed for conflicts and interactions with SWEEP features and other ITFs.

d. At the next ALIVE meeting we will get your feedback on the crossing locations, sizes, fencing details, aesthetic treatments, and interactions with SWEEP features.

e. Another ALIVE meeting may be scheduled if needed.

10. Methodology for Sizing and Designing Wildlife Crossings

a. Julia noted that you were emailed the complete methodology outline prior to today's meeting and she hopes you had a chance to review it. The proposed methodology reviews wildlife crossing dimensions, layout, and variables influencing the crossing success for projects located in similar landscapes and with similar target species. This approach ensures that the project team, in coordination with the ALIVE stakeholders, systematically address species' passage requirements and bring the best available research and practice to the design of wildlife crossings on West Vail Pass. This methodology is based on seven major considerations, described below:

i. West Vail Pass Mitigation Design Objectives

- Crossing structures use by all target species
- Designed to have a minimum 60% success rate with a goal of 80% for all target species at crossing structures

- There is no goal for wildlife/vehicle collisions because West Vail Pass has a very low incidence rate largely due to the barrier effect of the interstate. With the new crossing structures and fencing, we expect to see even fewer incidents.

ii. West Vail Pass Target Species

- Large mammal underpasses: black bear, Canada lynx, elk, moose, mountain lion and mule deer. The design focus is Canada lynx, elk, mule deer. By designing the structures for theses focal species, we will also accommodate the other mammals listed.
- Small mammal underpasses target species are bobcat, coyote, red fox, marten, marmot, snowshoe hare and weasels. The primary passage requirements for these species are providing a dry, natural substrate through the structure, good vegetation cover at the approaches and for the smaller fauna providing cover features such as rocks or woody debris piles through the structures.

iii. West Vail Pass Target Species Movement Types

- Lynx: There is an established resident breeding population just outside the project area on the east side of Vail Pass. Dispersal movements may be expected by members of this resident population frequently and dispersing members infrequently.
- Elk, Mule Deer during summer range. During summer the vegetation is abundant across the landscape, the populations are more dispersed, and we expect to see occasional use by individuals or small groups including mothers with their young of the year. We don't expect to see large herd movements through the crossing structures.

iv. West Vail Pass Population-Level Habituations Considerations

- Recreational activity, traffic, noise, and lights from I-70, the CDOT shed and truck parking area at the top of the pass are all influences on wildlife populations' responses to human activity in the project area.

v. West Vail Pass Roadway Footprint

- Approximately 150' at wildlife crossing locations (will shorten wherever possible, especially at the large mammal crossing locations).

vi. West Vail Pass Terrain Limitation Considerations

- Fill depth may limit the height of the large crossing structures. Balancing structure height while maintaining gentle approach slopes leading into the crossings.
- There are steep slopes between I-70 and Gore Creek

vii. Other West Vail Pass Variables Considerations

- Roadway features, e.g., walls and barriers

- Vail Pass Winter Recreation Area; recreation trail
- Sediment ponds
- Aesthetics

b. Julia said the next step will be to do a more in-depth review of successful crossings in other locations with similar conditions and target species. The results of the review will be shared at the next ALIVE ITF meeting to show how it informed the sizing and design of the West Vail Pass wildlife crossings.

11. Comments on Methodology

1. Kristin asked how will you monitor the mitigation objective of a 60% success rate and 80% goal for target species.
    a. Julia said these are design objectives which are the goals we are using to establish how we are designing the crossing structures for all the targeted species and understanding that crossing structure effectiveness is likely to vary among the target species.
    b. Karen said the design criteria dictates the size and design parameters for the crossings. CDOT is not able to track the success rates. We are looking into doing this as a parallel effort, but it isn't tied to mitigation for this project.
2. Michelle inquired if we should include bighorn sheep on the list but not as a targeted species.
    a. Julia said she didn't think there is much bighorn sheep activity in the area in the upper portion of the project area and it may be out of scope to include them in the methodology. Any bighorn sheep in this portion of the project area attempting to cross I-70 would be directed to the existing bridges under I-70 by the wildlife fencing.
3. Michelle said she realizes nothing is finalized but she would like to see more details about the new location of the recreational trail and the other structures such as walls and barriers. Those may impact the design and location of the crossings.
    a. Julia said the design team has been working to evaluate the trail location in relation to the wildlife crossings and looking for ways to gain some distance between the two. She said there will probably be more design details to share at the next meeting.
4. Karen said the team realizes it is important for all of the components to fit together. She reminded the group that each ITF needs to focus on their specific issues so that we can hear from the experts what their priorities might be. The balance between ITFs would be discussed with the TT.
    a. Paige agrees providing movement for elk is critical to provide for. She was curious what you consider small group movements because they have seen some fairly large groups during the East Vail Pass

monitoring. Julia said she would like to hear more details about their monitoring project numbers.

5. Stephanie said the targeted large animals are deer and elk, but moose are also listed. Will the crossings sized for elk be the right size for moose to use?
    a. Julia said that moose aren't very picky about going through crossings despite their large body size and the design sized for elk will be appropriate for moose.
6. Michelle asked if the ITF will be able to give input on the recommended sizes at the next meeting.
    a. Julia said there will be internal coordination with the design team to ensure they have sizes they can work with and design.
    b. Karen said today we presented the methodology and based on your feedback we will revise the preliminary locations and crossing sizes. At the next meeting we will provide an update and seek feedback on the sizing, locations, and other design considerations.
    c. Mary Jo asked for flexibility in timing of the next meeting so we can time the meeting for when the materials will be ready. The design is moving forward which would mean the next meeting will probably be in April. We will schedule that meeting as soon as we can.

12. Design Approach to Wildlife Fencing

a. Julia said we are focusing on the fencing within the INFRA Project boundaries. The western end will tie into the existing Polk Creek bridge. The east end will go up to the rest area exit around MP 190.
b. There are some questions to evaluate on where to install the fence along the roadway. The west side of the interstate is complicated because there is very little room between I-70 and Black Lakes Road, and they need to make sure the fencing won't be damaged by snow cast from snowplows.
c. Coordination is needed with the Vail Pass rest area project activity and the proposed wildlife crossings mitigation on the east side of the pass.
d. Escape ramps will be placed approximately every 0.25 miles.
e. CDOT is looking at conducting a test fence which is not part of the INFRA project. They will construct 3 sections of test fence in summer 2021 (200 LF) and the test will run through next winter. It will be designed to handle heavy snow loads. CDOT is interested in balancing cost-effectiveness with durability/longevity. This test will be very useful for informing the formal fence design for our project.

13. Next Steps

a. Mary Jo reviewed the next steps:
    i. Start-up ITF meetings completed in February
    ii. TT meets again in February after 1st ITF meetings completed and will review the ITF progress and assess overlap among the ITF work

iii. INFRA Grant Project Design proceeds
iv. ITF meetings to present design recommendations
v. Wildlife Crossing FOR will be in fall 2021

14. Comments Received after the Meeting

Attach Michelle Cowardin's meeting documents to finalized notes.