MEETING NOTES

PROJECT:	23982-23929 I-70 West Vail Pass Safety and Operations Improvements
PURPOSE:	Emergency Services Issue Task Force (ITF) Meeting #3
DATE HELD:	March 29, 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, CDOT Region 3 Patrick Chavez, CDOT I-70 Corridor Operations Jeff Bellen, FHWA Area Engineer Tracy Sakaguchi, Colorado Motor Carriers Craig Davis, Town of Vail Fire Battalion Chief/Operations Dwight Henninger, Town of Vail Police Steve Vardaman, Eagle County Paramedics Marc Wentworth, Town of Vail Public Safety Communications & Eagle Co Emergency Dispatch Captain Jared Rapp, Colorado State Patrol Master Sergeant Ryan Parker, Colorado State Patrol Joel Holland, Vail Mountain Rescue John Wilkerson, Summit Fire and EMS, Deputy Chief of Operations Jim Thomsen, Kiewit Mark Gutknecht, Kiewit Matt Uribe, Kiewit Mitch Ellingson, Kiewit Pete Remington, Kiewit Jeb Sloan, R S & H Mary Jo Vobejda, Jacobs Loretta LaRiviere, Jacobs
COPIES:	Attendees

SUMMARY OF DISCUSSION:

1. **Introductions**
    a. Karen introduced the attendees and confirmed their jurisdiction and role.
2. **Agenda Review and Meeting Goal**
    a. Mary Jo said during today's meeting we are going to spend some time giving an update on the design of the project, and the construction which will start this summer. Today's goal is to engage in a conversation about best management practices and other information you would like us to consider to set this project up for seamless EMS services for the traveling public during construction.
3. **Project Status**
    a. Mary Jo noted the Environmental Assessment was published in late 2020 and in February of this year a Finding of No Significant Impact (FONSI) was signed which is the authorization needed for CDOT to proceed with the work.
4. **Overall Environmental Assessment Scope & Funded INFRA Grant Scope**

a. Overall Environmental Assessment - Karen said the entire project identified in the EA is estimated to cost approximately $700 million dollars. The EA included a concept design for the whole project. The scope of this work includes:

- Adding a third lane from the bottom of Vail Pass to the top of the pass on the west side MM 180 – 190. It will be a typical 12' lane with and the shoulder width will remain at 10' and we are widening the inside shoulder to be 6'. We will be doing major reconstruction on the curves that do not meet the current design geometry standards. The first curve is coming downhill west at MM 188 and MM 186 at the narrows where the rock outcroppings are both high crash hotspots.
- Moving the recreation trail from MM 185-187 where the trail is right next to the road further away from the interstate because we have to widen the road in that location.
- Additional truck parking heading eastbound near the top of the Pass to MM 189.
- Including some sections of widened shoulders and pull-offs so we can make more space for cars that do break down there is room for them to pull off the road.
- Improving some emergency truck turnarounds.
- We have designed an improved Chain Station at MM 182.5 eastbound. There is a buffer area that is pulled off the roadway more and we are adding capacity from six spots to sixteen spots.
- Installing a more passive avalanche protection in the narrows slide paths.
- Installing additional signage up and down the Pass.
- Installing wildlife underpasses from MM 185-190 and wildlife fence between MP 180-190
- Adding glare screen in the MM 185-187.5 where the east and westbound lanes are level. We are adding an extra tall barrier in between so the headlights of westbound doesn't influence the eastbound drivers.

b. Funded INFRA grant scope - CDOT was successful in being awarded a grant and with matching funds has about $140M for design and construction of the first phase. This scope includes:

- Adding a third lane EB only from 185-190. It will be a typical 12' lane with and the shoulder width will remain at 10' and we are widening the inside shoulder to be 6'. We will be doing major reconstruction on two of the curves that do not meet the current design geometry standards including: MM 188 and MM 186 which are both high crash hotspots.
- Moving the recreation trail from MM 185-187 where the trail is right next to the road further away from the interstate because we have to widen the road in that location.

- Including a portion of the total number of widened shoulders and pull-offs so we can make more space for cars that do break down there is room for them to pull off the road.
- Installing additional signage up and down the Pass.
- Installing wildlife underpasses from MM 185-190. We will be building wildlife fence between MM 185-190.
- Adding glare screen in the MM 185-187.5 where the east and westbound lanes are level. We are adding an extra tall barrier in between so the headlights of westbound doesn't influence the eastbound drivers.

c. One of the first projects for this summer is reconstructing and straightening out the Lower Truck Escape Ramp at MP 182.5 and a highway closure system between MM 180 & 190. At the top there will be manual road closure gates and a series of VMS signs. This completion of the highway closure system will likely occur in 2022 due to the lead time needed with manufacturers for some materials.

5. General Safety and Crisis Procedure Changes

a. Matt said we are using an alternative delivery method and have brought Kiewit, a contractor, on board during design and they are giving input on constructability, phasing, schedule, and safety early on. We are excited to have them on board.

b. Jim Thomsen said he is managing the pre-construction process and introduced Mitch Ellingson, Kiewit's District Safety Manager to talk about Kiewit's approach to crisis management and partnering with emergency services.

i. Mitch said he joined Kiewit back in 2005. He's been involved in safety for about 19 years. He has a lot of experience working on a large transportation project in Nevada, Project Neon, and is now working here in Colorado on Central 70.

ii. Mitch said they tailor each project based on the individual needs of the project. We start early in the project to schedule partnership training with both project and EMS personnel to create a crisis management plan to deal with any kind of crisis that could possibly happen on the project. Identifying emergency routes and access in our planning process prior to construction goes a long way in our ability to work successfully with EMS and State Patrol. We continue to meet regularly throughout the project to address questions and concerns about things that can happen and adjust our plan accordingly.

iii. Mitch said Kiewit is known for protecting people and doing the right things within the construction community, but we also embrace the philosophy and mindset that nobody gets hurt including shareholders. We strive to make construction impacts felt less around the community by having meetings with the people who live and do their daily business in the area understand what is coming up and how we can minimize the impacts of the project.

c. Jim said they won't be mobilizing until later this year so there will be not be a lot of impacts to I-70 this year from this project. The bulk of the construction will be in 2022-2024. The key to a successful partnership with EMS is communication and we will find the right blend of meetings. We fully intend to meet and communicate with you and keep you up to speed on the status of construction and any major traffic switches or impacts on I-70.

d. Mitch said they like to brainstorm with EMS to figure out their normal traffic routes and determine if we are we going to have impacts early on in the project and, if we are, what do we need to do to educate our people on how to minimize those impacts. Also important is if there is a major incident that happens either on I-70 or the construction project, how do we react to that and how do we train our employees to do respond more efficiently rather than just waiting for something to happen and hope we get it right.

e. Matt said they will be creating a list of different emergency contacts starting with this ITF contact list as part of the safety and crisis management plan for the construction project. We will start to reach out to you to schedule specific meetings in the near future. He said if the group knows of anyone else who should be included that we may have missed, please put any additions into the chat box, we will add them to our list.

f. Matt said the I-70 Emergency Response Plan, is a plan in place for incidents that happen on the Pass.

g. Pete confirmed we would update the plan to match with what we are going to do with the construction phasing. He said since it's a seasonal project they plan to have a big kick-off meeting prior to each construction season so everyone understands what we are going to be doing for the next six months and updates can be made to the plan.

    1. Ryan said he was involved in the previous meeting and wants to make sure we continue to have discussions about the emergency crossovers. There will still be major incidents on the Pass and the crossovers are important for law enforcement response.

h. Matt acknowledged we can't make any changes to the Response Plan until we have our final construction schedule but just know, we will be working with you on a regular basis.

    1. Tracy said she has a concern with the project getting ready to start work on US 50, Little Blue Creek. She said they are pushing a lot of commercial traffic that is going to the south-central/southeast part of the state, onto I-70. That construction will be shutting down US 50 for approximately six hours a day. She said this would include conveyance of livestock, and possibly additional hazardous materials carriers, being moved off the US 50 Corridor and utilizing the I-70 Corridor. It's more of a concern when I-70 starts construction. She wanted to make sure everyone was aware of each other's projects because we will be pushing commercial traffic from US 50 onto I-70.

Matt said he appreciates the information and we will start to reach out and coordinate with the US 50 project team. With the limited construction scope for this summer for this project, he doesn't expect there to be too much of an issue. He asked Tracy is she knew if the construction would be just this coming summer or multiple years?

Tracy said she believes it is supposed to be a two-year project and construction will start sometime in April. They have been talking about using 92 as the workaround but that is not a great workaround. The concern would be the RVs driving on that road. We will be trying to communicate to our motor carriers and hopefully CDOT will alert the general public that I-70 is the best alternative.

i. Matt said, as Karen mentioned earlier, two miles of the recreation trail are going to be rebuilt as part of this project from where the rec trail goes from old US 6 very wide platform and crosses underneath the I-70 bridge. We would like to know what type of equipment you use and from where you respond, mainly focusing on the upper half of the Pass.

1. Craig said Vail Fire & EMS respond to a variety of types of emergency calls and depending on where the incident is, they will utilize the rec path with smaller equipment from east Vail. But they have seen smaller rescue trucks and ambulances on the rec path. If there is going to be a point where it is closed, we just need to have that communication as soon as you know when it will be. We can work with the construction team and CDOT for some of other access points we can use when we won't be able to get to the path itself. It would be good to have it on a map and a staging point identifies so then we know we could access the path from the highway.
2. Steve said he concurs with Craig's comments. Eagle County responds to any incidents on the old Highway 6 platform with full size vehicles or ambulances, through the lower gate just above Gore Creek Campground. He said in the long-term construction, we would like to have the ability to travel the entire extent of the path with an SUV sized vehicle. There are challenges for both fire and EMS where the rec path crosses directly under the I-70 bridge because we know a vehicle can't cross the wooden bridge.

   Matt said the wooden bridge you mentioned as the pinch point is not currently planned be replaced. Outside of the project, the team will investigate any plans to replace that bridge in the future.
3. Craig said a few years ago we talked about the recreational path would always be maintained as kind of Plan C for emergency travel routes if there was something like a bridge collapse on I-70 and we needed to move emergency personnel and equipment up and over Vail Pass, we would always maintain the integrity of the infrastructure of what we call Old Highway 6 would support fairly heavy equipment as a backup to I-70. We should make sure that discussion doesn't get forgotten from two years ago.

Matt said the existing US 6 platform might have a few small tweaks to it in future design but for this immediate term funded project, there are no changes or impacts to that platform. Long-term we also will continue to accommodate the width as it is. There may be a few walls we have to put in or areas where we have to move it a little bit to accommodate the interstate but we will not be taking out the US 6 platform and narrowing it down to a 12' bike path.

Matt said the new rec trail will be 12' wide with some shoulders. The design has the trail crossing Black Gore Creek in two places and we are planning to make sure those new pedestrian bridges are traffic rated so you could get at a minimum an SUV type vehicle across those bridges.

Matt said we will post the weight limit of the bridges and they will be enrolled on CDOT's two-year regular inspection cycle.

4. Craig said he got an email a few months ago asking for the weight of the equipment that would be up there. We should probably have the weight of an ambulance on that list. Will the bridges be designed to meet DOT standards for weight limits and be inspected regularly? Matt said you can reach out to the project team on any additional vehicle weights and he will make sure it gets to the structural engineers.
5. Steve said their largest ambulance is around 13K pounds gross vehicle weight and a width of 109". Matt said he would pass this information onto the structural engineers to start taking a look at it.

   John said the bridges will be the standard design for a rec trail bridge which is HS 10 loading and so we would compare that against the weights of the vehicles you provide us to ensure the design will accommodate your vehicle weight.

j. Matt said for the trail reconstruction portion of the work, we are trying to minimize closures on the recreational trail. They plan to build the new path offline and then switch riders over to the new path and then demo the old path. We'll continue to communicate the closures to you.

6. Lower Truck Escape Ramp

a. Matt said one of the first project this summer is reconstructing and relocating the Lower Truck Escape Ramp. The current ramp is curved which leads to many trucks tipping over. The new Truck Escape Ramp will be much straighter and will have a hazardous material containment system, a concrete tub with a liner that will go to a containment tank. This is a big improvement over what is there now.

b. Matt said as we put the Truck Escape Ramp closure plan together, we'd like to hear your concerns or considerations to make sure we are doing the closure in the safest way possible.

   1. Tracy suggested implementing a brake cooling system at the top of the Pass with VMS or other signs indicating the Lower Truck Escape Ramp is out of

service. She said this ramp is frequently used so it would be good to give the motor carriers a place to cool down. Will there be lower speeds through the construction zone? Will it be one lane at any given time during construction of the ramp? Making sure we have heavy tow in place or staged throughout the heavier traffic volume days so we can get incidents cleared quickly.

John inquired if the brake cooling system should be at the very top of the Pass or would you prefer to have it be located partway down? Tracy said she would take any space they could get for brake cooling opportunities because sometimes if the motor carriers are not familiar with the area they don't know what to expect when they're at the top and then half-way down they realize maybe they should have stopped.

Matt said because the impacts will be localized to this one construction area, we haven't explored a corridor wide speed reduction. We should probably start to have conversations about when we do the closure, do we need to have commercial vehicle speed reduction? We can post two different speed limits, for the public and commercial vehicles. If that would be a benefit we can start those conversations.

Matt said there would potentially be some lane closures periodically as we are doing this work, especially where we tie in to the existing I-70, but the majority of this will be constructed with shoulder closures and lane closures, when needed, would conform to the CDOT Lane Closure Strategy which uses traffic counts to determine when closures would be allowed depending on the month of the year. It's not like we would have permanent lane closures for six months for this work, there would be periodic closures.

Tracy said they would like to work with any public information officer on it to remind the industry that we have the ramp out of use and to use the reduced speeds while traveling through the area would be great.

Matt said Kiewit has a public information firm as part of their team and we will be including those services as part of our project.

2. Craig said Vail responds frequently to this side of the Pass and said you need a pretty robust plan to ensure your folks and the construction crews have some protection in the event that a truck has lost its brakes and they're not going to try to utilize an exit plan that is right in your construction zone.

   Pete said the plan for protection during construction is to have a concrete barrier separating the construction area from the public along the entire stretch.

3. Craig said what they really like about the current configuration is the huge turnaround at the current entrance point to the ramp now. It is strategically a great spot for us when we have to get in there quickly. I don't know if there is any way to create an access point utilizing the existing turnaround or if there is a way to shift it back. We want to make sure you understand this is

something we really like is having use of that turnaround. The Lower Truck Ramp is used a lot more than the Upper Truck Ramp.

Matt said the departure location is in somewhat of a paved gore up to a certain point but can't say off the top of his head how close the interaction is versus the turnaround, but we will take a look at our plans.

7. Construction Considerations

a. Matt said we are starting to work through phasing options. We haven't finalized which one we will use but we want to present three different construction phasing plans to get your feedback on considerations or concerns with these different options.

i. The first option is the three-phased approach which will be built in three different components from 2022-2024. The first stage the westbound outside shoulder widening, and then westbound traffic would be in a reduced section. In the second stage, westbound would be shifted over to what we have built while we build the middle section of the interstate. In the third stage westbound would be back to its full size while eastbound would remain and the outside third of the road would be constructed.

ii. The second option is a two-phase approach. The traveling public would have less impacts overall, it is the same construction duration. In the first phase, we would do some temporary and permanent widening on the westbound lanes that could be done outside of the existing platform. In the second phase we would take all of eastbound traffic and put them on the newly widened westbound lanes. All four lanes of traffic would be driving on the westbound platform that would have 11' lanes with 2' shoulders and median separated for those five miles. This would allow us to build the entirety of the eastbound section at one time. The completed eastbound would be wide enough so in the next phase we can move all of the traffic over and build the westbound portion.

iii. Option 3 is the Two-Phase Contra Flow which is a hybrid of the other two but with a split lane approach. There would be one eastbound lane on the westbound platform and one eastbound lane that would stay below. There would be nightly lane closures for that lane that stays on the eastbound section so there would only be three lanes of traffic, one going uphill and two going downhill. The next year we would do the same thing where one westbound lane would be moved to eastbound below. There would also be nightly closures to do the westbound construction. There are definitely some challenges with this approach. We have had some experience with split lanes in the past and there was confusion and challenges with this approach.

1. Chris said his only input for emergency response is that we would prefer one that would minimize the inability for any emergency vehicles to move due to narrow shoulders or single lanes of traffic. When you have two lanes of traffic on one side of the highway, that raises a red flag. I'm not an expert, but it seems like if you had an accident, disabled vehicle, or emergency close to the highway, there will be gridlocked traffic and

we may not be able to get help to people who need it. He suggests an option that would maintain emergency response for fire engine sized equipment.

b. Matt asked as we look at the phasing options that move traffic to one side or the other, do the emergency crossovers matter that much or is that something we want to keep as an option?

    1. Chris said if we don't have any way to cross over, in gridlocked traffic we would need to go five miles, turn around then come back. This would be a pretty lengthy response time. He is anticipating a scenario where we wouldn't be able get anyone anywhere until the traffic is cleared. If there is a way to keep a crossover strategically throughout that five miles that would be awesome.

    2. Tracy said her concerns are with the 11' lane width. It is very hard for the trucks to see to maneuver in tight lanes and driving in the winter during construction is even more nerve wracking. We would be really concerned about not having crossovers for emergency vehicles because if we get shut down and something happens to us, it's a major catastrophe. It's important to have emergency services that don't have to go five miles to get to the incident.

       Pete said it is a really big focus of theirs to get traffic back to its preconstruction phase (or better) for the winter months. With the amount of snow we get, leaving 11' lanes with 2' shoulders doesn't work well.

       Jim said they have a baseline construction schedule that we are working through, but we aren't anticipating construction impacts to traffic from Thanksgiving to mid to late March.

c. Matt asked if emergency response is dependent on the direction of the incident? If you think about the MM 185-190 location, does the direction of travel change the direction of the response?

    1. Craig said normally it does not. If we can plan ahead we can work with a response plan and if it is an eastbound incident, and going westbound to turn around to go eastbound for the Eagle County response, we might want to address a plan with Summit County where we would just be dispatching them to any eastbound calls. Normally on the Eagle County side of Vail Pass our response will come from the west to the top of the Pass and then back down. They do utilize the crossovers rather than going all the way to the top.

       Matt said it's good to know the current way you respond and as we work through some of our details and pick one of the phasing options, we can continue to have conversations about what changes need to be made to our plan.

d. Matt said another construction procedure that may result in challenges are miles of concrete barrier with no pullouts We want to be able to provide pullouts at intervals, but it depends on our design and what the site constraints are. Any comments on pullouts or other items that we can explore to see what we can do to help emergency response.

1. Craig said if you have miles of roadway with no ability to get in and out without clearing traffic sounds problematic for public safety. He would encourage CDOT to consider some way to have removable barriers that are easily pushed out of the way, maybe every 1 ½ miles to get a broken down vehicle off this highway, even if it's into a temporary construction lane would make sense.

2. Craig also asked if there is a way to have a dedicated construction and emergency response lane? In the event of a 10-car crash or a mass causality event where we could have our own lane of travel. Another thing to consider if it is a significant incident, clearing the traffic downstream of it so that we could utilize that to secured and clear the incident. We have done this in the past. It takes a lot of communication to do safely but we have had to do it.

   Patrick said he agrees with Craig. One of the lessons learned on I-25 North is having the ability to move the barriers and having a designated route or lane for responders to use helped get them up to the incident, and even though you may have the backups that are locked in by the barriers, if the responders can get to the incidents quickly, they can get it cleared quickly and get traffic moving again. He said he doesn't have an answer yet, but we will take this back to the drawing board and see what we can provide.

3. Patrick Chavez said it is important there is also a dedicated channel of communication with whichever CDOT Operations Center will be managing this project so they can do the coordination with the other responding agencies. They can designate and tell them what's available and where they can go.

   Craig said that was a great comment when you start to do more construction next summer, we have already identified an emergency response plan that we keep on file that will cover everything from a simple car wreck to a semi fire on a windy day that is spreading to other vehicles and the surrounding landscape which may lead to a large scale incident. I think an initial communications plan is part of a larger action plan that would be well worth the time to work maybe six months ahead of construction starting.

   Matt confirmed the timing of the plan should be six months before implementing the construction phase is the goal we will shoot for.

Patrick said one of the things we are looking at is to reenergize the team. We can make this a priority to identify those IEPs and other communication channels so it simplifies the process.

4. Steve said that in addition to 911 ambulances that respond to emergencies, Eagle County EMS also has responsibility for transporting patients, in some cases critical time sensitive interfacility transport between our local hospital and Denver's specialty hospitals with an expectation of time sensitive access to the interstate. We probably do 500-600 transfers a year with a much smaller percentage being high acuity. We usually have 40-50 of the high acuity transports over the course of the summer.

   Steve said we announce those, we usually have fifteen minutes to an hour before we do one of those transports and we worked it out with our local P-SAP and they announce that to the CDOT Comms Center at the Eisenhower Tunnels. If there are certain construction activities that could be postponed or ceased until the emergency transport vehicle is through the area that is usually helpful from a patient standpoint. So, there should be some consideration for being able to give a preannouncement of an ambulance to drive through that area and hopefully get some sort of yield or right of way.

8. Next Steps

a. Mary Jo said the design for Construction Package #1 for the Lower Truck Escape Ramp and highway closure system is underway and is expected to be final in June with construction starting in late July, early August. The preliminary design for Packages 2, 3 & 4 is all being pulled together for a 30% (FIR) review in September 2021. After that the designs will get separated out into packages and proceed in a staggered manner as will the construction.

b. We will continue to talk about calls with this group as we move towards the final deliverables. There is a desire for a longer training/planning meeting that Mitch talked about to really go through all the details and dedicated meetings as a phase is being planned so it is very specific to that particular construction.

c. We also talked about meetings to inform the public. We think our focus is here with this group and we will go back to some of the questions that Matt asked in the beginning.

   Do we have everyone we need to on this group? Is this the right group for Mitch and his team to work with in planning/scheduling type of meetings or to set up dedicated meetings as the construction is getting closer? And does anyone have any additional questions?

   1. Steve asked if most of the construction will happen during the daytime hours or at night and what the traffic impacts might look like?

Pete said it will be a combination of both. Following the Lane Closure Guidelines, we can't have many of those during the day so there will be certain work that will have to happen at night. There is a short construction window from April – November so there will be a combination of both day and night shift.

Mark said they are planning on doing most of the truck hauling at night because of less impact to the traveling public.

Craig said he appreciates the opportunity to talk together as a group and is looking forward to preplanning and more communication as we move forward.

d. Karen thanked those who added additional contacts. We have recorded those and will add them to future meetings.