



## MEETING NOTES

<b>PROJECT:</b>	23982-23929 I-70 West Vail Pass Safety and Operations Improvements
<b>PURPOSE:</b>	Emergency Services Issue Task Force (ITF) Meeting #5
<b>DATE HELD:</b>	September 15, 2022
<b>LOCATION:</b>	Online Google Meet Meeting
<b>ATTENDING:</b>	John Kronholm, Project Manager, CDOT Region 3 Karen Berdoulay, Resident Engineer, CDOT Region 3 Patrick Chavez, CDOT I-70 Corridor Operations Kane Schneider, CDOT Region 3 Area Deputy Superintendent Joe Bajza, CDOT Region 3 Maintenance Operations Mark Bunnell, CDOT Region 3 Traffic Jill Scott, CDOT Maintenance & Operations Andi Staley, CDOT Region 3 Emma Boff, CDOT ITS Rob Bruening, CDOT ITS Mike Curtis, CDOT Traffic Elliott Heckler, Apex Design Mark Novak, Town of Vail Fire Chief Dwight Henniger, Town of Vail Police Chief Derek Herrle, Colorado Department of Public Safety Emily Dowd, FHWA Jeff Bellen, FHWA Mark Gutknecht, Kiewit Mark Talvitie, RS & H
<b>COPIES:</b>	Attendees

### SUMMARY OF DISCUSSION:

#### 1. Introductions

- a. John introduced the attendees. Mike said Zebulon White will be taking over as the Program East Traffic representative.

#### 2. Agenda Review and Meeting Goal

- a. John said we had a meeting just about a year ago where we talked about Exits 180 and 190 and the closure systems for both of those areas and the goal of today's meeting is to revisit the proposed Exit 180 eastbound closure system to make sure everyone's comments are heard on that one and hopefully we will have time to discuss how the exit 190 westbound closure system may be enacted.

#### 3. Chain Station Parking Update

- a. John read a recap of the chain station parking from Craig Hurst. *CDOT ITS is working on the SEA standardization, which is the system engineering analysis.. It is a streamlined 13 step process to analyze all the ITS components that come online for the state. ITS is working on all the chain stations, and the truck parking system is an option that can be delivered after that. If applied for, this would qualify for freight dollars and could get prioritized quickly and the ITS integration would be ready to go.*



*There is a \$90K study that is funded and underway and will look at speed reduction and communication options in the mountains, but has some overlap with chain stations management ITS. These are the steps necessary to get approval for the system we all want to see. They are trying to develop a standard for how the chain stations are managed and this is moving forward, but not as fast as desired, but hopefully will be done the right way after the completion of the study.*

- b. Emma said the I-70 chain stations have a sign that says chain station in effect while flashing a beacon, overhead lights, a camera and VSL if it is at that station. It will be connected into open TMS so our operators could remotely click “Enact Chain Law”, and everything turns on and is logged. We are working on getting all the details figured out to make it really easy so projects can replicate it rather than having to redesign each chain station. This should be completed in the next few months. She said she didn’t realize we were doing an additional chain station as part of this project.

John said we aren’t, some of the stakeholders have been interested in the status of this study so he reached out to Craig for an update and to make people aware there is a study underway. The scope of the Vail Pass project is limited to approximately Exit 180 to Exit 190 so any improvements to the chain station would be a different project with different funding.

- c. Patrick asked if it would make more sense to shift the signs west and use them more in conjunction with 176?

Karen said we did an EA for this project through a multi-year process, and we did not look at Exit 176. We are incredibly over budget due to inflation so if this is determined it is not expected and helpful, we would cut it and it would be a future effort to look at more signs at 176. Right now, I would like to focus on what is expected at 180 that we think would be helpful.

Patrick agreed that might be the right thing to do is to look at this as a future project for Exit 176. Just like Dwight said, the 180 exit is really the initial closure just to get traffic from going up to the Pass and then when they get the 176 activated, that’s where the hard closure is and the benefit to that is they can stage the trucks ahead up to the chain station and that way we aren’t getting trucks going into Vail or trying to make those turns and heading back in the opposite direction. If that is the case, we need to look at this and consider if for a future project.

John said there is plenty of time to continue to consider any options at Exit 180 or even as part of a larger system. We can wait until 2024 or 2025 to determine what we want here. Dwight did make another point that we can install the VMS sign in the middle, and it can be used to put any message on it. It would not be solely for road closures and exit here. If there is a need at the bottom of Vail Pass to have a sign that gives additional information, then that would be the time in the project to install that sign.

Patrick said that could possibly be something again that supplements what we’re trying to do, and the goal is getting the message and notification out that the road is



closed as quickly as possible and hopefully we get compliance. In Wyoming they have the flashing lights when they close the road and don't man every point, but they do have the messaging and the notification which involves the lights so that may be something if we have that process planned, maybe that is something we can do so we are at least getting the message out to people heading up Vail Pass.

- d. Kane said he wants to assure Dwight that the procedures for closing down eastbound Vail Pass are still going to be the same. Exit 180 has smaller occurrences of short-term duration and 99 out of 100 times we are always utilizing back to Exit 176, but I think the tools that we are proposing and installing at 180 have multiple uses and being able to utilize a messaging system there for any needs we have to the east on the Pass are beneficial and I think this project affords us that opportunity. In the future, we may look at implementing something clear back to Exit 176. Moving forward with what is proposed at Exit 180 makes a lot of sense but it is not going to change how we are implementing the closures and how that affects you.

Dwight said Karen noted that this is not included in this project and that is frustrating because early meetings during the EA we had discussions about this, and it has progressed and that's why I've had discussions with Emma about the chain stations between 176 and 180 and that is concerning because there needs to be a better system to make this all happen.

- e. Dwight said he can live with the signs because I think they can be valuable for other things but if we are going to change the gate arms at just after the off ramp and then at the on ramp those need to be much better systems because the ones there don't work well. They break and it takes five minutes for an operator to open them. We need a better counterbalance in them. I'm supportive of the VMS sign, we just need to all agree that is not the solution for stopping people from going up Vail Pass and I will be really interested to see how that works at the 190 westbound this winter.

John said he has heard your comments over the years about the closure gates and we are proposing to upgrade and replace them but only to whatever the current CDOT standards are. If there is a different kind of gate other than the CDOT standard that is desirable, I'm happy to look into it but at the moment we have to use the CDOT standard.

Joe said the best gate we currently have is at the MP 167 eastbound on-ramp. It is a counterbalance versus a cable so you literally pull it off, push it and it falls and it is very easy to get back up so if we could get rid of the cable gate and go to the counterbalance gates, they are much faster and more user friendly.

Kane said he was part of putting in the counterweight gates about a decade ago. There is no white paper for them, and they are not part of VMS standards. I asked Zane about replacing them and he said any gate is fine as long as we place the gate behind a run of guard rail to protect them from vehicles. He has all the specs and information from the vendor on the counterbalance gate. Mainline would be no problem since there is guard rail on both sides of the interstate, but 180 would require guard rail be installed.



f. Derek said he completely agrees with everything you stated. As noted, 180 is only for extremely brief periods of time and is more for information collecting on what kind of incident we have up there and get resources in place at 176. As we all know, seconds count and when we can get the road closed sooner it relates to a quicker rate for reopening so we can get tow trucks and other resources up there and reduce secondary incidents in both directions. We do kind of the same thing at 190. I know this conversation is more geared at Exit 180 but with the Exit 190 discussion, we can't have it closed at the 190 exit for any length of time especially in inclement weather because we push traffic back to the 195 exit for immediate safety concerns and that is not nearly as smooth of an operation. I definitely like the VMS signs because they can be beneficial in both summer and winter to convey information for road construction and lane closures and let the travelers know traffic is stopped or slowed up ahead. A few weeks ago, we closed at both Exit 180 and 190 because of a report of a hazmat incident. It only ended being about a half-hour closure, but any kind of extra signage would have been beneficial. CDOT crews are awesome with how quickly they respond and getting staged. The 180 exit being the first point of contact helps alleviate issues that could potentially arise on the Pass and also helps getting extra resources through there.

g. Mark said he doesn't have much more to add. Obviously Dwight expressed the concerns about where the closure occurs. I completely agree and want to amplify the concern with the need for a better closure system mechanically. I know a lot of engineering has already been done but our apparatus have a system called Hoss Integration that notifies drivers when we are on the scene of an accident through apps like ways and second generation navigation systems and it would be nice if that system could integrate into the VMS signs so that if we are on the interstate with our lights on, that is when it starts sending a message and then the VMS sign would automatically populate with a message like "caution" or "incident ahead".

John said it's a great suggestion and said we can look into that. Emily said ITS would definitely need to be involved in any discussions about that.

Karen said she wants everyone to know it is still on our radar that there is need between 176 & 180. The purpose of the Vail Pass project is focused on MP 180 to MP 190 for safety and operational improvements. It's not to say there are not needs outside of that so I want you to know I heard you and it is something we will continue to look at the needs from 176 to 180. It's still on our radar but it wasn't necessarily the focus of the Vail Pass project we have out there today.

Dwight said he appreciates that, and he's talked with many of you about some system to notify the truckers about the spaces that are available at the east end of the very long chain station at MP 177 to 178. It's really important for this to be on everyone's radar as we move ahead.

h. Kane said he's really hopeful that when this project is done on West Vail Pass, he is very optimistic the third auxiliary lane and the way we will manage snow removal operation will result in less congestion back at the chain station and incidents we are dealing with like spin outs or stuck semis and closures during a storm event.

#### 4. Exit 180

- a. John said at Exit 180 there may be some varying opinions about the necessity of the signs and how we close I-70 in this area. The general conclusion at our previous meeting was that more signs will be better than none and this was the overall concept we came up with. The chain station is right around MP 178 and there are a series of existing VMS signs that could be utilized in conjunction with the new system that lets folks know that I-70 is closed, and to exit here and then at MP 180 we would turn people around and send them back west towards Exit 176. In the communications we've had with CDOT Maintenance, they do find the system to be valuable and favorable, but I would like to open it up for any discussion.
- b. Joe said the more signs the better. Any time we close the Pass, the initial closure is always implemented at MP 180 whether it's done with plows or CSP. Once we know it's going to be long-term we move the closure to MP 176 and that is where the Vail Police Department helps us out tremendously by getting out there and getting people off the highway, so we don't totally back up I-70. Turning the signs on quickly with a flip of a switch and get people off ahead of time would be a major benefit because we use a less manpower at the closure and the plow trucks can keep moving and hopefully open up faster that we would if they were sitting at the closure.
- c. Dwight said his concern is we really don't close at MP 180, we close at MP 176, and we've had that conversation for the last twenty years and it seems to me it is a fairly significant waste of taxpayer dollars to implement something that we use for maybe a half-hour at each Pass closure. Just because we put a sign up that the road is closed, you all know people will not stop until we actually force them to get off or stop on the interstate. The typical way this happens at MP 180 is either CDOT or CSP decide to close Vail Pass and as soon as that is implemented, we send folks, either the Vail Fire or Police, CDOT or CSP to close the gates at MP 180 and then we implement a fairly significant system to get everyone off the road at MP 176. We have tried turning people around as John described at MP 180 and that doesn't work. We get semis stuck and the competing traffic with the frontage road traffic does not mix well there.
- d. Patrick said he doesn't remember why we looked at Exit 180 as the turnaround point but maybe the discussion we need to have today or later is do we want to implement that closure a little harder at MP 176 and use these signs to support that and then work that piece in. The goal is how we maximize your operations at the closure points. If we can start working that in conjunction with what we are currently doing, hopefully we can make it where it is more efficient and maybe need less people out there.
- e. Dwight said he understands what you're saying. My point is any time we close Exit 180 and don't close 176, is when we're in a Level Incident Minor and rarely does a minor get done in a half-hour, it almost always turns into an Intermediate. If we can agree the VMS signs are for a closure at the 180 and put that in quotations, and know we are going to use those VMS signs for other messaging up on the Pass because there is a lot of competition for messages at MP 177 and 178 then I'm okay with it. It just seems like we are spending a lot of effort for something we don't do for any long periods of time.

## 5. Exit 190 Closure System

- a. John said at Exit 190 all of the electronic signs will start to be installed in the next few weeks. All of the infrastructure is in place for the auto closure sign at Exit 190, so we plan on having it operational by mid-November.

The concept is similar to Exit 176 and 180. Closing Exit 190 right away will keep the road as clear as possible for snow removal in the event of an emergency. It will also keep the road as safe as possible for first responders who may be on the scene and also prevent any secondary crashes that could occur before staff could get out there and physically man the closure system. There would be a series of signs leading up to the westbound 190 exit that flash the road is closed, exit here and I believe the original mode was to return to Copper Mountain. As this queue is cleared, and vehicles are turned around and sent to Copper Mountain, there is already a system or person at Exit 195 that I believe is the preferred closure area.

When it closes, and chain use signs are lit up right away, that may make some change but it's not going to stop anybody from moving on. I understand from John that the MP 190 system is not automatic gates closing, it is just signage.

John said that is correct we don't have any plan to have a physical barrier to remotely close it with a button. If we want a physical barrier, staff will have to go out and lower the gate.

- b. Patrick said the goal at MP 190 is to get that message signs up as soon as possible rather than waiting for someone to physically get up there and close the interstate, we are getting the message out there is an incident ahead and the road is closed so hopefully we can get the majority in compliance. Like you said, until some people see a person there stopping traffic or turning them around, they will try to continue.

Soon there will be a trailblazer sign, it won't be a full overhead VMS sign that will say highway closed, exit ahead and then a lane merge sign and then as they approach Exit 190, there will be an overhead sign "road closed" two red "x's" under it which are lane use signs indicating the road is closed and to exit here. And two trailblazer signs that tell them to return to I-70 eastbound

- c. Joe said it's not really going to change how we do it, just like we talked about Exit 180, it's having the tools in the toolbox to make it happen faster. I like the position of the gates being before the ramp versus how we used to go up to the flap and close it and then we build that small queue anyway. On countless closures we've been on, we that we could have opened a half-hour or an hour earlier but getting tows and plows through a queue is difficult. So being able to clear the road going up that side of the Pass and getting people turned around I think will shorten the closure time. As soon as the need arises to close whether it's a plow operator, CSP or a supervisor for CDOT will get to those gates as fast as they can and drop them. But having the signs up will deter most but it never deters everyone. Being right at the split area during a snowstorm will



probably be one of the area supervisors getting the double interstate gates and they are probably a Mary area supervisor getting the on-ramp gates and manning those is how that would go into play.

- d. Andi said at Exit 190 we've had issues with the lighting, all the underground wiring is basically shot, and we have been unsuccessful in getting a bore to work. In addition, there was a landscaping project that buried pretty much all the lighting bases in the interchange.

John said he believes that is Exit 180 that is where we are trying to get a directional bore and where the Town of Vail did some landscaping. At 190 it's just us and the Forest Service and neither one of us have any interest in doing any landscaping besides native grasses. He said he might be able to help them get electric service at Exit 180 if she sends him more information he will see how we can integrate something into our project

- e. Kane said the 190 exit is very effective for us to shut down the interstate quickly and this closure system will absolutely enhance that and make it a lot safer for our people out there with their boots on the ground. Like Sgt Hurley pointed out, if the closure goes any length of time, our next step is to move it back to 195 so we're not trying to stack people up on East Vail Pass on the grade up there which causes more congestion This has a lot of merit and maintenance is very appreciative of efforts to try to keep traffic moving and make our jobs easier especially when it comes to safety closures and operations.

## **6. Next Steps**

John said we will distribute meeting minutes and we have an FOR Meeting which is a 90% plan review meeting coming up on November 14<sup>th</sup>, so Eliot please continue to have the Exit 180 closure system in the plans, and Kane any information you have on the counterweight gate, send them to me and I'll incorporate them into the plans.