



PROJECT:	I-70 Frontage Road Improvement (Old US 40/CR 314)
PURPOSE:	PLT/TT #4
DATE/TIME HELD:	January 18, 2012: 1:00pm – 4:00pm
LOCATION:	Idaho Springs City Hall – 1711 Miner Street, Idaho Springs, CO

Meeting Minutes

1. Meeting Goal and Agenda Review

Introductions

Schedule review – upcoming - City Council meeting and Rafting company meetings

PLT #5 next month

Still on schedule for this project

- CSS Step 5: Confirm alignment and sections
- Process overview and website reminder
All updates on the website

<http://www.coloradodot.info/projects/i70frontageroad-idahosprings>

2. Updates

- David Singer welcomed a little boy into the world two weeks ago, he will be back tomorrow.
- Response to Clear Creek Letter will be posted on the website and sent to Clear Creek County.
- Construction Project Engineer Field Visit
- Utilities – Send plan to Dave Ruble with wall locations once finalized, high power line easement
- Other Meetings include: SWEEP, ALIVE, 106, and Twin Tunnels

3. Engineering Refinements

- **Cut Walls**



- Wall 7,9, and 10
- Per design criteria, maximum wall height 12 foot. Would need to tier since walls height could be 28 – 30 ft.
- Wall length consistency
- Rockery Option
 - Natural look, multiple tiers, more consistent tiers, Clear Creek County maintenance Concerns, limited lateral and structural support, need a stable slope to build up against. No standard CDOT design.
- Soil Nail with sculptured shotcrete Option
 - Sculpted, painted, and or stained, surface undulation, no fill required behind the form liner, variety of aesthetic treatments, faster construction rate than rockery walls. Less natural look and color matching might be difficult in this area. Where there is good solid rock, wouldn't require wall. More difficult to match the cantilever walls. Really no drainage issues.
- Soil Nail with form liner Option
 - Can see the seams sometimes with this type. Raised decorative patterns. A controlled look. Easier to match colors and can match the cantilever walls. Fastest construction. No actual artistry or molding. Would require fill behind the form liner. Natural undulation would be difficult to get. Crash against the wall would be harder to match the repairs to the rest of the wall
- PLT/TT Comments:
 - Would like to see better example pictures.
 - What is the thickness of the shotcrete walls? Are there any freeze/thaw issues? Examples of where they've been used successfully. Generally, shotcrete walls don't have an issue with freeze/thaw. A very robust earth retention system. Just up the road where the landslide occurred there is a shotcrete wall.
 - Wall 9 and 10 get up to 28 – 30 feet max. Height is varied. A form liner will have a more uniform height, more of a step affect.



- Slopes are looser than expected. These are not the best slopes for rockeries – would need 6ft tiers, which would be a lot. The entire system could potentially be more unstable than the shotcrete or form liner.
- What about a rock facade in front of the soil nails?
- Haven't seen much cracking in shotcrete.
- Don't like block walls – PLT/TT prefers natural look walls.
- Construction wise, soil nail walls might be better. Move away from rockery walls. Either soil nail wall will work structurally and the treatment or façade can be decided later.
- PLT needs better examples and pictures.
- There are other options for facades to the soil nail walls – split rock of various kinds that can be applied.
- CDOT will get prices and pictures of soil nail walls and possibly have another meeting to discuss the options.
- Tiering depends on the profile of the wall. The FIR plans have the profiles.
- At next meeting design team will provide:
 - Tiering concepts. Maximum height on the lower tier, but may not have the same criteria as the upper tiers.
 - Renderings –tiers vs the non-tiered. Different facings. Interaction with walls on I-70.
 - Images of finishes.
 - Geotech information – what we expected vs. what we got. The team will write up a memo explaining what we expected and what actually is out there.
- PLT agreed soil nail walls will be used for 7, 9, and 10
- If PLT is saying yes to soil nail walls on the taller walls, does that mean this will be used for all of them? No. Phase II walls are shorter distances and heights may be fine without soil nail walls and rockery treatment could



possibly be used. Design team will identify a treatment that is consistent/blends with treatment of larger walls. PLT needs to know the consequences of these decisions. Would like to have a treatment that gives us the most options for the future.

- Soil nails walls were for the cut walls only. More discussion of fill (cantilever) wall once geotech information is available.
 - How will potential earthquakes affect wall design? Design will follow AASHTO guidelines.
- Now that Phase I extends to Hidden Valley, PLT concern that something is taken away from Phase I. Concern for quality construction. Design team is trying to maximize what the project includes. PLT request to reduce from 12' lanes to 11' lanes provided cost savings that can be applied to the project. Money saved on the Frontage Road project will stay on the Frontage Road project for Phase II.
- **Transition from near Doghouse Bridge to Phase I**
 - Limit any throw any work away.
- **Cantilever railing location**
 - Railing is on top of cantilever at northern end of the shared use path (wall 8). Estimated length of 175'. Railing has to meet vehicle crash loads, 42" fall protection, and minimum of 6" opening. Guardrail options will be consistent with Mountain Mineral Belt Guidelines - Type 8 guardrail or Type 10. Discussion of PLT preference.
 - Difference between Type 8 and 10 – height of concrete and “openness”.
 - Is plowing an issue? Plowing not as essential on the shared use path
 - Any cost difference? The more steel you have, the higher the cost.
 - Rails on top and total height will be 42". The larger size rail just says smaller town, slower, pedestrian friendly. Materials for steel guardrail – railing could be created out of same material or powder coat it in the brown. Concern for rust lines with Core 10 materials – drip protection options.



- PLT preference – need to look as a unit with barrier, rail, on top of wall. Also consider rafters experience. This project will be setting precedence on what the walls in this area will look like.
- Combined barrier and fall railing – not readily available or crash tested.
- Looks like could step on barrier and go over railing. Could increase the height of the pedestrian rail or consider other treatment if this is a concern.
- Initial preferences: most support for Type 10 (more open look), some support for Type 8 (simple look). Don't want two colors. Want guardrail and fencing to be the same.
- Visualization will include Type 10 all one color and look for opportunities to clean it up if need be.
- Core 10 rusts, Powder coat avoids this. Would not powder coat guardrail, but could use galvanized or weathering steel. You could powder coat it, but it gets bumped and scraped, may be tougher to maintain and replace. Will look into options.
- **Pull-Out Area**
 - At previous PLT/TT, discussed adding in inlets. It was decided to leave the buffer and put in a 16' x 100' parking area with aggregate material. Normal crowns and superelevations work. Drainage will be better. Parking signs and No parking signs in middle of tapers.
 - Concerns for parking gravel shifting into barrier (swale). Material to be used in barrier area is still TBD. Barrier should be free draining and may provide opportunity to improve water quality.
- **Trail Crossing Area – Phase I near no work zone**
 - 10 foot crosswalk where trail ends. Signage for crossing with beacon in both directions. There will be a pedestrian push button for pedestrians to activate.
 - No work zone is where Twin Tunnels would reconstruct the frontage road as part of flattening the I-70 curve. If enough money, they could build the trail, but may have to go back to the crosswalks and signs.



- Shared use path extension along Phase I to Hidden Valley in Phase II or option to extend path underneath the new bridges on I-70. Twin Tunnels is looking at the feasibility of putting the trail underneath the bridge
- **Traffic control during construction**
 - Option –full closure - safest, quickest, and least expensive
 - Option – keeping a lane open and/or access for non-motorized vehicles. 30 – 50% more construction time if it isn't closed. Will affect recreation for biking, rafting, etc.
 - Main concern is access for the rafters and maintaining their business. Design team is setting up calls and meetings with the rafting companies to get their input. Also contact Don Kruger and Swiftwater Rescue.
 - Not closing the creek, just the roadway. River use will be limited during blasting - setting the charges, blasting, and clean-up. Blasting usually happens once a day, early in the morning. Team will have an incident/management plan and this will be a part of it.
 - Safety is first.
 - How to reach out to independent rafters and fisherman? Signage or some warning, may post info on user groups websites.
 - Emergency traffic will be let through work zone.
 - Other options include truck bike traffic through the work zone, Uniform Traffic Control, etc.
 - Construction of frontage road - June to October for full closure.
 - Twin Tunnels detour March or April 2013 until October 31 2013.

4. Due to time constraints, quick overview of other slides/issues

- Aesthetic Considerations
- Resolution of Greenway Issues
- Status of CATEX
- Historic Resource Resolution



- Process Clarifications

5. Decisions Required

- Cut side wall type – soil nail wall for taller walls
- Traffic control during construction – Full closure and management plan.
- Section at Bell property – minimal impact in Phase I.
- Treatment of crosswalk at end of separated trail – okay with crosswalk
- Parking area – Aggregate and dimensions approved
- Guardrail treatment – include Type 10 barrier in renderings

6. Next Steps

- Meet in two weeks with visualizations of guardrail options and walls.
- This presentation will be posted on website for further review.
- No need for separate meeting for Greenway issues
- Preparing for City Council on February 13th. The purpose of this meeting is to get Idaho Springs' approval of the portion of the Greenway through both phases I and II of this project. Ben Acimovic, Janet Gerak and Craig Friesen will be attending this meeting.
- PLT in March further discussion of Phase II and any final decisions on phase I elements.
- Extension of Clear Creek County - Greenway Trail under I-70 bridges. Further consideration instead of extension to Hidden Valley in Phase II.