

FLOOD REVIEW BOARD

Date: February 22, 2024

Time: 8:30 AM, MST

Location: Lake Estes Conference Room, 3rd Floor, 200 W Oak St., Fort Collins and via Zoom meeting

Contact: Tina Kurtz, Larimer County Engineering Department

MEETING MINUTES - DRAFT

Staff Present: Tina Kurtz, Caryn Nezat, Traci Shambo

Staff Online: Morgan Fay

Board Members Present: Dr. Chris Thornton, Chad Morris, Travis Rounsaville, John Hunt, Dr. Elisabeth Ervin-Blankenheim

Board Members Online: None

Call to Order: Dr. Thornton opened the meeting at 8:32 a.m., MST.

Introductions

Item 1: Approval of January 25, 2024, Board meeting minutes

Motion:

Dr. Elisabeth Ervin-Blankenheim motioned to approve the January 25, 2024, Board meeting minutes.

Travis Rounsaville seconded the motion.

Further Discussion:

Discussion occurred between staff and the board concerning the requirement to meet a no-rise condition for a CLOMR submittal. The question was regarding the tabled Red River Corp CLOMR submittal and whether they are required to meet the standard. No other amendments or changes were made to the minutes.

Vote:

Mr. Hunt – YES

Dr. Thornton – YES

Mr. Morris – YES

Dr. Ervin-Blankenheim – YES

Mr. Darrow – absent



Mr. Rounsaville – YES

Motion passed [5-0], with 0 abstentions.

Item 2: A petition filed by the West Fort Collins Water District for a Floodplain Project Review under Section 12.1.6.H of the Larimer County Land Use Code for installation of a new pressurized waterline crossing the Cache La Poudre River in the Cache La Poudre FEMA Zone A Floodplain Overlay District at the following location to wit: Section 24, Township 8 North, Range 70 West, Larimer County, CO otherwise known as 5117 Falloon Lane, Laporte, CO, Parcel 0824100031

Applicants Present: Matt Clark, Anderson Consulting Engineers

Ms. Kurtz introduced the project to the Flood Review Board and stated that this is a Floodplain Project Review for installation of a new pressurized waterline crossing the Cache la Poudre River in the FEMA Zone A floodplain. The pipeline will be a twenty-inch PVC pipe encased in a thirty-inch steel pipe. This will be a trenching operation. The top of the pipe will be five feet below the existing thalweg so it can connect to existing water pipes.

Mr. Clark used the provided PowerPoint presentation to describe the technical aspects of the project. He noted that there is bend scour on the bank near the water line location and this drove the design considerations. They are planning for riprap reinforcement to mitigate this. They used a HEC-RAS to model the scour. The model velocity is up to 9 FPS in this area. Considering this, they will use 24" riprap above the pipe. All finished elevations will be at or below existing grades and they will show this with pre- and post-project survey. They feel that they are satisfying the no adverse impact requirement.

Mr. Morris asked if they only used LiDAR topography for the model or if there was survey or bathymetry data available. His concern is if they have accurate survey of existing conditions considering water surface elevations that would be captured in the LiDAR data.

Mr. Rounsaville suggested doing pre-project survey instead of using just LIDAR so they are comparing pre-project survey to post-project survey.

Mr. Clark confirmed they do have some survey data and they will perform pre- and post-project survey to verify the elevations and support the no-rise condition.

Dr. Ervin-Blankenheim asked if they know the depth to bedrock ? Mr. Clark stated no geotech was done so they are not sure of the depth to bedrock.

Mr. Morris asked if the new water line would be in the same place as the old line and if the elevations were the same as the original line elevations. Mr. Clark noted the 1965 plans did not have elevations that were able to be translated to the current datum.

Dr. Thornton asked why the riprap protection was not taken further upstream to protect the bank from scouring? Mr. Morris asked if a vertical stability of the channel analysis had been done? Mr. Clark made



the assumption that the contractor would want to disturb as little as possible, so they planned to keep riprap only in the disturbed areas.

Mr. Morris commented to ensure that upstream is flanked and tied-in so water cannot get behind the rock. Mr. Hunt is not sure if riprap would be better than the trees to hold bank.

Mr. Hunt asked about any permit constraints. Mr. Clark said they have nationwide permit and no permit constraints in widening or extending disturbance.

The Board discussed using smaller rock and the pros and cons of the different sized rock options. Further discussion on the best approach for the riprap design included increasing the amount of riprap upstream to protect the bank, tie in closer to the trees and extending the riprap within the trench to the west to further protect the pipe from scour.

FRB made direction to:

1. Revise the plans to extend the upstream bank protection with 2 times D_{50} riprap.
2. Minimum of 4 times D_{50} riprap at the top of pipe casing
3. Expand detail to show both top and bottom section of the pipe and riprap placement for contractor clarification.

Motion:

Mr. Rounsaville moved to recommend approval of the West Fort Collins Water District Floodplain Project Review for installation of a new pressurized waterline crossing the Cache La Poudre River to the County Engineer, with the following conditions:

CONDITIONS:

1. The western extents of the riprap extend to Station 2+00.
2. Upstream bank protection extents shall be extended by an additional 4 feet.
3. Total top width of the rip rap protection in the channel shall be a minimum of 4 times D_{50} on each side of the pipe.

Mr. Morris seconded the motion.

Further Discussion:

Discussed how far to extend to riprap in condition #1 and landed at Station 2+00.

Vote:

Mr. Hunt – YES

Dr. Thornton – YES

Mr. Morris – YES

Dr. Ervin-Blankenheim – YES

Mr. Darrow – absent

Mr. Rounsaville – YES



Motion passed [5-0], with 0 abstentions

Item 3: A petition filed by the Larimer County Engineering Department for a Map Amendment under Section 12.1.6.G of the Larimer County Land Use Code for a Letter of Map Revision related to construction of three culverts, Deer Path Street, Wildsong Road, and Sheep Creek, in the Buckhorn Creek Best Available Zone A Floodplain Overlay District at the following locations to wit: Sections 15 and 16, Township 7 North, Range 71 West, Larimer County, CO

Applicants Present: Mike Turner, Anderson Consulting Engineers; Morgan Fay, Larimer County Engineering Department

Ms. Kurtz introduced the project to the Flood Review Board and stated that this is a Map Amendment for a Letter of Map Revision related to construction of three culverts, Deer Path Street, Wildsong Road, and Sheep Creek, in the Buckhorn Creek Best Available Zone A floodplain.

The old culverts on these three sites were susceptible to overtopping and failure. The new culverts will increase resiliency for the local and county road (LCR 44H). The Colorado Hazard Mapping Program floodplain mapping was used as the effective model. The culverts are designed to the post-fire 25-yr flood event to the extent possible before overtopping due to NRCS Emergency Watershed Protection funding requirements.

Mr. Turner used the provided PowerPoint to describe the history of flooding and damage and the project area. The area is a current Zone A floodplain with a model and base flood elevations. No structures are included in the model, only single cross sections bisecting the road embankments are included. The new culverts are sized for a post-fire 25-year event.

Mr. Turner clarified that as part of the Wildsong crossing they removed an obsolete timber structure just downstream and that crossing was not in the Colorado Hazard Mapping Program (CHAMP) model. He further showed and discussed the pre-project and post-project crossings. Mr. Turner showed the study reach and went through the permits, modeling and mapping that was done.

Mr. Rounsaville confirmed with Mr. Turner that the CHAMP Zone A modeling requirements were met for no adverse impact.

Mr. Hunt asked what is the main purpose of the LOMR? Mr. Turner explained it was to quantify the situation to have more accurate modeling with the structures. Ms. Nezat clarified there was a rise exceeding 0.3 feet on Sheep Creek which triggers the LOMR requirement from the Colorado Water Conservation Board for Zone A floodplains. It was also desirable to update the whole section of the model with the structures.

Motion:



Dr. Ervin-Blankenheim moved to recommend approval of signing the MT-2 form for the Larimer County Engineering Department Letter of Map Revision for construction of three culverts, Deer Path Street, Wildsong Road, and Sheep Creek on Buckhorn Creek to the County Engineer.

Mr. Rounsaville seconded the motion.

Further Discussion:

None

Vote:

Mr. Hunt – YES

Dr. Thornton – YES

Mr. Morris – YES

Dr. Ervin-Blankenheim – YES

Mr. Darrow – absent

Mr. Rounsaville – YES

Motion passed [5-0], with 0 abstentions.

Other items:

None

- Discussed upcoming agendas.
 - In April/March - Post-Assisted Log structure within Sheep Creek along the Poudre.
 - In April/May – Red River Corp (Swetsville Zoo) CLOMR resubmittal
 - NISP diversion structure is pending but eminent.

Meeting adjourned at 9:40 a.m., MST.