

LARIMER COUNTY | ENGINEERING DEPARTMENT

P.O. Box 1190, Fort Collins, Colorado 80522-1190, 970.498.5700, Larimer.org

FLOOD REVIEW BOARD

Date: September 22, 2022

Time: 8:30 AM, MDT

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

Contact: Tina Kurtz, Larimer County Engineering Department

MEETING MINUTES

Staff Present: Tina Kurtz, Caryn Nezat, Jake Wilson, Alan Kee

Staff Online: Hannah Suppes

Board Members Present: John Hunt, Dr. Chris Thornton, Elisabeth Ervin-Blankenheim, Mike Oberlander, Chris Carlson, Chad Morris

Board Members Online: None

Call to Order: John Hunt opened the meeting at 8:39 a.m., MDT

Introductions

Item #1: 2300 Glade Road – Unpermitted and Proposed Items – Variance

Applicants Present: Aaron Cvar with Front Range Stormwater & Floodplain Consulting

Ms. Kurtz introduced the project to the Flood Review Board (FRB) and stated that this is a Variance request for three unpermitted items (a front covered porch, additions to a utility shed and a concrete driveway) and three proposed items (two rear patios with decorative columns and a garage). The applicable Land Use Code Section for the Variance request is LCLUC Section 12.1.6.E.2. The property is located at 2300 Glade Road, Loveland within the Big Thompson FEMA and Best Available Floodway. The applicant needs a floodplain variance for all six items. The modeling analysis that was done on the unpermitted and proposed items shows a no-rise condition on the water surface elevations (WSEs). Ms. Kurtz mentioned that the front covered porch and utility shed will need as-built building permits and will be subject to the substantial improvement/substantial damage determination.

Discussion opened with Mr. Carlson asking if the original shed was unpermitted. There is a as-built permit for the shed but not the two additions. The front porch addition has been installed and has posts to support the roof. Back porch appears to be completed already. This is a variance request for the unpermitted items. This is subject to a no-rise certification.



We have not evaluated the SI/SD to determine if the improvements constitute a substantial improvement. Mr. Carlson believes the area was heavily flooded during the 2013 flood event.

Mr. Cvar explained from the proposal the items that were existing and proposed in the model. The proposed garage was included in the model. The project workmap shows the features in the model. Mr. Cvar explained the proposed condition model was compared to the existing conditions model with the existing condition including only previously permitted features to show the effect in the floodplain. The model is current and downloaded directly from the Colorado Hazard Mapping Program (CHAMP) portal site.

Mr. Hunt asked for more information on pg. 10 and tables 1 through 3. Mr. Cvar clarified the first table is the unencroached model and the other is the as-built model showing all the structures and the final is the floodway analysis. Mr. Hunt reviewed the cross-sections in table 2 that cross the subject property.

Mr. Hunt remarked that the neighboring property to the north make this an ineffective flow area. There may be slivers of effective flow areas in here but essentially the CHAMP model showed this all an ineffective flow area. Mr. Cvar went through all the modeling steps to show CHAMP also has the subject property as an ineffective flow area. Mr. Hunt asked Mr. Cvar to show in the CHAMP model the property as an ineffective flow area. Mr. Cvar showed the cross-section from the model to show how the ineffective area was modeled and represented. Part way through the house the flow becomes ineffective and there is a natural depression between the house and the garage.

Further review of the model to verify if this section is a split flow section. Mr. Cvar confirms this is part of the Glade Rd. split in the model from the main channel. Mr. Morris notes there was a reduction in the WSE at cross-section 6411 of -0.23 ft in the corrected effective model. Mr. Cvar explained that he added the cross-section 6411 to the model to better capture the garage addition. The LiDAR was from after the 2013 floods and because of the additional cross-section the model showed a decrease in the WSE for the corrected effective model. The duplicate effective model does not have any structures shown in cross-section 6411, these were added as part of the corrected effective and as-built models. The split flow in this section is really the roadside swale conveying flows, all other flows are ineffective.

The FRB asked for clarifications on the elevation and floodproofing options for the proposed garage. Ms. Kurtz confirms elevation would need to be 2' above the base flood elevation in the floodway. Wet floodproofing would be another option and we could require a non-conversion agreement in that case.

Motion:

Ms. Ervin-Blankenheim moves to recommend approval of the Variance for unpermitted and proposed items at 2300 Glade Road provided all other floodplain regulations are met to the County Engineer. With the conditions that the unpermitted shed extension and proposed garaged are floodproofed or elevated per County regulations based on staff review.

Mr. Morris seconded the motion.



Further Discussion:

None

Vote:

Mr. Hunt - yes
Dr. Thornton - absent
Mr. Morris – yes
Ms. Ervin-Blankenheim – yes
Mr. Oberlander – absent
Mr. Carlson – yes

Motion passed 4-0, with 0 abstentions.

Item #2: CR 7 and CR 70 Intersection Improvements – Floodplain Project Review

Applicants Present: Jake Wilson, Larimer County Engineering; Justin Jones (on-line) and Kit Clunis, SEH, Inc.

Ms. Kurtz introduced the project to the Flood Review Board (FRB) and stated that this is a Floodplain Project Review request for improvements at the County Road 7 and County Road 70 intersection. A portion of this project is within the Coal Creek Zone A Floodplain. This project is associated with the CR 9 and CR 70 improvements previously seen by the FRB. The applicable Land Use Code Section for the Floodplain Project Review request is LCLUC Section 12.1.6.H.2. A 2013 LOMR downstream of this area provided the hydrology and the downstream condition for the existing conditions model for this project. The water surface elevation (WSE) changes between the existing conditions and proposed conditions models are between 0.15 feet lower to 0.09 feet higher due to a difference in the County Road 7 road profile. There are no insurable structures in the area of the rise in WSEs. Where there are structures in the area there is a no-rise.

Mr. Jones started the presentation explaining that the proposed work would realign CR7 to be perpendicular to CR 70 as a 4-way intersection. The work will not alter the existing drainage structures. No adverse impact or safety concerns were found regarding access for emergency service vehicles. The project is in a FEMA Zone A with no WSE. They created a HEC-RAS to model the stream and used US Geological Survey Streamstats. There is an Ayers study from the LOMR downstream which they used as a downstream tie-in for this project.

The model shows a max decrease of -0.13 and maximum rise of 0.09. The proposed floodway shown in red does not impede on road or access for emergency vehicles. The rise is mainly in the agricultural area. The insurable structures are not impacted by the project.

Mr. Hunt asked for clarification on the scope of the project and where the work is going to be done exactly. It does not appear that the work is in the floodplain. Cross-section 2011 upstream of the project shows a rise. Mr. Jones explained there were some updates to the Manning's n values that may



be the reason there is a rise shown here. The portion of the road in the floodplain south of CR70 is being shifted slightly east which is part of the grading change in the floodplain. At the intersection it is about 30' and then gradually realigns with the historic alignment. However, this cross-section is in an ineffective flow area and should not affect the model.

Overall, the project is tying into previous road alignment on the south side of the site and is curved slightly away from the insurable structure on the southwest corner of CR7 and CR70. The old alignment will be removed, and material used to build up the new alignment south of CR70. On the north end it is still aligned slightly east of the current alignment and is paved until the driveway tie in and then becomes gravel. There is some raising of the centerline in the north portion of the road to match grade with the new sections. There is also widening of CR70 at the intersection due to the addition of the turn lane. The addition is at same elevation as current roadway. The fill prism for the existing northern section of road will be graded down some and rebuilt to the east.

Mr. Hunt asked about the box culvert load rating. The crack in the culvert was less of a concern than the separation at the wing walls. Mr. Wilson explained there may be some maintenance to prevent further deterioration. Ms. Ervin-Blankenheim asked about the erosion mitigation during the construction. There will be logs, silt fences and other erosion controls. They will need to have state permit. Scour has not been a historical concern. They did look at the structure, and the bridge is aligned with Coal Creek.

The FRB asked if there was discussion on changing n values or was it done in both models? They tried to troubleshoot the model. Not just lowering n values to get the WSE to decrease. Looking at cross-section 2207 the rise is likely due to the fill at the cross-section downstream. The fill change should not impact the ineffective flow. The model has some things that should create a difference when there should not be anything that would cause the change.

Mr. Morris asked to view more on cross-section 1154 to see if structures are being encroached upon upstream of CR 70. This area has lots of ineffective flow due to high road profile, but there is no impact to the insurable structures in the area due to the project.

The FRB asked if there is anything that needs to be clarified or addressed that might be under a Zone A when there are changes in the model? The Zone A allows for a rise. A request to the applicant is to make an additional pass at the model and provide additional explanation and have a resubmittal and any difference between the models is explained by the project explicitly.

Motion:

Mr. Carlson moves to recommend approval of the Floodplain Project Review for County Road 7 and County Road 70 intersection improvements to the County Engineer. It is recommended that the model is reviewed again, and report amended to reflect that the changes in the models are able to be explained by the project.

Ms. Ervin-Blankenheim seconded the motion.



Further Discussion:

None

Vote:

Mr. Hunt - yes
Dr. Thornton - absent
Mr. Morris – yes
Ms. Ervin-Blankenheim – yes
Mr. Oberlander – absent
Mr. Carlson – yes

Motion passed 4-0, with 0 abstentions.

Item #3: Approve Minutes from the Board meeting on August 25, 2022.

Motion:

Mr. Morris motioned to recommend approval of the August 25, 2022, minutes.

Mr. Carlson seconded the motion.

Further Discussion:

Vote:

Mr. Hunt -yes
Dr. Thornton - absent
Mr. Morris – yes
Mr. Oberlander – absent
Ms. Ervin-Blankenheim – yes
Mr. Carlson – yes

Motion passed 4-0 with 0 abstentions

Other items:

Meeting adjourned at 10:33 a.m., MDT.