

Emailed June 30, 2023

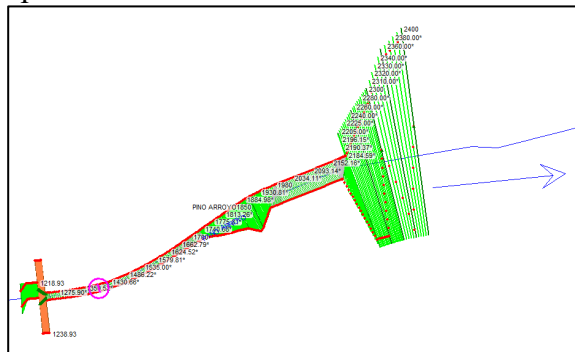
To: Renee Brissette, P.E., CFM Senior Engineer - Hydrology
City of Albuquerque;
Genny Donart, P.E., Isaacson & Arfman, Inc., Applicant Engineers

From: Jared Romero, P.E., CFM, Development Review Engineer
AMAFCA

RE: **AMAFCA COMMENTS FOR
Pino Arroyo at the Foothills – LOMR dated 6/7/2023**

Report & HEC-RAS Model

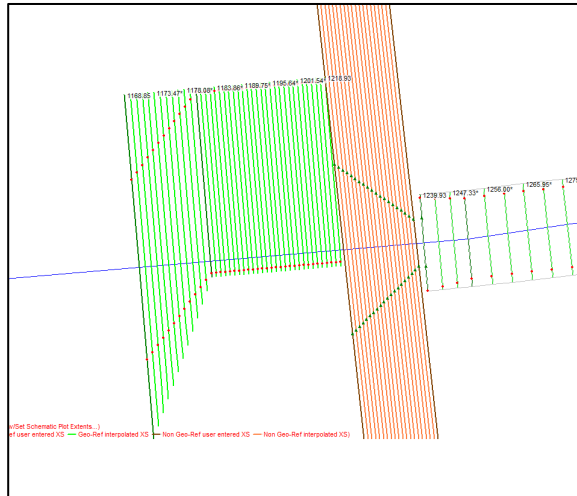
- None of the HEC-RAS results included in the report are labeled with the associated station or cross section, so it is impossible to compare the cross section to the provided as-builts
 - How were the cross section results selected for the report? The HEC-RAS model shows there are 431 XS and the table shows far fewer than that.
- Provide the HEC-RAS profile results in the report.
- There are significant issues with the HEC-RAS model:
 - The entire model appears to be developed in the upstream direction.



- There does not appear to be an as constructed/post-project model geometry. There needs to be two clearly identified geometry files: one proposed (as included with the CLOMR) and an as constructed/post-project model with adjustments made based on the certified as-built drawings
 - Also, the geometry files need to be named to clearly identify what they represent
- None of the geometry files include the culvert structure under Tramway.
- There are numerous cross sections that intersect. This must be corrected.

**AMAFCA Comments for
Juan Tabo Hills Estates - LOMR**

- There are cross sections that are not drawn perpendicular to flow and are likely to inaccurately represent the flow area of the channelization.
- There is an error indicating that “21 of the 431 XS’s are not Geo-Referenced. This error should be addressed.
- There is some error with how the cross sections are offset from the flowline in the model. This may not affect the calculations however it may raise questions from FEMA and should be fixed.



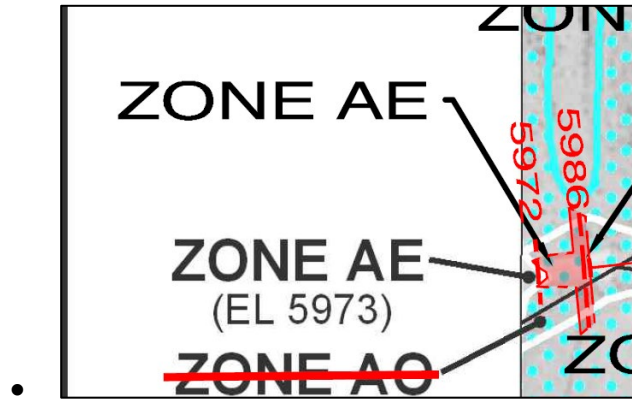
- How were the ineffective flow areas determined for the Channel downstream of the single CBC? They should be set to an elevation at least as high as the retaining walls on the downstream side of the CBC.

As-Built Plans

- There are several elevations in the HEC-RAS model that do not match the ground elevations in the as-built plans that need to be revised:
 - a. Channel connection to existing concrete rundown into Pino Dam: As-Built = 5977.82', Model = 5977.60'
 - b. Downstream headwall of CBC: As-built = 5978.62', Model = 5978.60'
 - c. Grade Break in downstream CBC: As-built = 5985.08', Model = 5985.00'

**FEMA Exhibits
Annotated FIRM**

- The proposed Zone AE floodplain BFE at the downstream connection to the existing dam pool floodplain does not match the stillwater elevation (1 ft difference).



FIS

- Tramway is spelled incorrectly on the Summary of Discharges Table.

FEMA Forms

- Overview and Concurrence Form – Should the revised FEMA Zone designations in B.4.b be AE & X since there will be established BFEs in the channel transition between the two CBC structures?
- FEMA Form 2 – Provide the details for the Revised/Post-Project conditions model in table B.4.