



# NATIONAL FLOOD INSURANCE PROGRAM

FEMA PRODUCTION AND TECHNICAL SERVICES CONTRACTOR

January 26, 2022

Ms. Genevieve L. Donart, P.E.  
Registered Civil Engineer  
Isaacson & Arfman, Inc.  
128 Monroe Street Northeast  
Albuquerque, NM 87108

IN REPLY REFER TO:  
Case No.: 22-06-0212P  
Community: City of Albuquerque, New Mexico  
Community No.: 350002

316-AD

Dear Ms. Donart:

This responds to your request dated October 28, 2021, concerning a request that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) issue a revision to the Flood Insurance Rate Map (FIRM) for the above-referenced community, Bernalillo County, New Mexico, and Incorporated Areas. Pertinent information about the request is listed below.

Identifier:	Oakland Ave Shallow Flooding
Flooding Source:	South La Cueva Arroyo
FIRM Panel Affected:	35001C0137H

The data required to complete our review, which must be submitted within 90 days of the date of this letter, are listed on the attached summary.

If we do not receive the required data within 90 days, we will suspend our processing of your request. Any data submitted after 90 days will be treated as an original submittal and will be subject to all submittal/payment procedures, including the flat review and processing fee for requests of this type established by the current fee schedule. The fee schedule is available for your information on the FEMA website at <https://www.fema.gov/flood-maps/change-your-flood-zone/status/flood-map-related-fees>.

FEMA receives a very large volume of requests and cannot maintain inactive requests for an indefinite period of time. Therefore, we are unable to grant extensions for the submission of required data for revision requests. If a requester is informed by letter that additional data are required to complete our review of a request, the data **must** be submitted within 90 days of the date of the letter. Any fees already paid will be forfeited if the requested data are not received within 90 days.

If you have general questions about your request, FEMA policy, or the National Flood Insurance Program (NFIP), please contact the FEMA Mapping and Insurance eXchange (FMIX), toll free, at 1-877-FEMA MAP (1-877-336-2627). If you have specific questions concerning your request, please contact your case reviewer, Mr. Ryan Woods, E.I.T., CFM, by e-mail at [ryan.woods2@aecom.com](mailto:ryan.woods2@aecom.com) or by telephone at (972) 735-7051, or the Revisions Coordinator for your state, Mr. Bosulu Lokulutu, E.I.T., CFM, by e-mail at [bosulu.lokulutu@aecom.com](mailto:bosulu.lokulutu@aecom.com) or by telephone at (972) 735-7093.

Sincerely,

A handwritten signature in black ink, appearing to read "Benjamin Kaiser", enclosed within an oval-shaped scribble.

Benjamin Kaiser, P.E., CFM  
Revisions Manager  
Compass PTS JV

Attachment:

Summary of Additional Data

cc: Mr. James D. Hughes, P.E.  
Floodplain Administrator  
City of Albuquerque

Mr. Mark Tekin  
President  
Tekin & Associates, LLC



# NATIONAL FLOOD INSURANCE PROGRAM

FEMA PRODUCTION AND TECHNICAL SERVICES CONTRACTOR

## Summary of Additional Data Required to Support a Letter of Map Revision (LOMR)

Case No.: 22-06-0212P

Requester: Ms. Genevieve L. Donart, P.E.

Community: City of Albuquerque, New Mexico

Community No.: 350002

The issues listed below must be addressed before we can continue the review of your request.

1. Please address the following comments regarding the submitted hydrologic analysis or provide an explanation for each.
  - a. Our review revealed that the peak discharge computed in the City of Albuquerque Rational Method does not specify the duration. However, the other equations use the 6-hour duration. The Department of Homeland Security's Federal Emergency Management Agency (FEMA) floodplains are done using the 24-hour duration. Please revise the peak discharge equation to determine the 1-percent-annual-chance (base) flood discharge using the 24-hour duration or provide an explanation how the peak discharge is using the 24-hour duration.
  - b. Our review of the drainage area map, entitled "Basin Map," revealed that there are missing contours on the upstream sub basin, missing flow lines showing, and the map was not certified. Please submit a copy of the drainage area map showing the contours used to delineate the sub basins, the flow lines, and certified (signed, sealed, and dated) by a registered Professional Engineer (P.E.). Enough contours should be labeled to be able to verify the delineation.
  - c. Our review of your submittal revealed that backup information for the parameters in the regression equations was not provided. This information includes the land treatment information. Please provide this information to support the hydrological analysis.
2. Please address the following comments regarding the submitted hydraulic analysis or provide an explanation for each.
  - a. Our review of the submitted existing conditions HEC-RAS hydraulic model and the topographic work map entitled "Oakland Ave Shallow Flooding," prepared by Isaacson & Arfman, Inc., dated August 13, 2021, revealed inconsistencies in cross section orientation. Cross Sections 1000, 1050, 1100, 1150, 1200, 1250, 1300, 1350, 1400, 1450, 1500, 1550, 1600, 1650, and 1688.81 are stationed from left to right looking upstream. Traditionally, cross sections in hydraulic models are stationed from left to right looking downstream. Please reverse the stationing data for the aforementioned cross sections to maintain a consistent orientation.
  - b. Our review revealed that there are interpolated cross sections in the HEC-RAS hydraulic model at Cross Sections 1005, 1010, 1015, 1020, 1025, 1030, 1035, 1040, 1045, 1060, 1070, 1080, 1090, 1125, 1175, 1225, 1275, 1325, 1375, 1425, 1475, 1525, 1575, 1605, 1610, 1615, 1620, 1625, 1630, 1635, 1640, 1645, 1654.85, 1659.7, 1664.55, 1669.41, 1674.26, 1679.11, and 1683.96. Please revise the model to include only field run cross sections and/or cross sections cut from topographic data, or explain why interpolated cross sections are appropriate at these locations. Please note that interpolated cross sections are not appropriate at locations where the bounding cross sections have greatly varied geometry.

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- c. Our review revealed water-surface elevations (WSELs) higher than the end points of the cross section at Cross Section 1650 in the existing conditions HEC-RAS hydraulic model along South La Cueva Arroyo. Please revise the cross section geometry coordinates so that the end points of all cross sections are equal to or extend higher than the corresponding WSELs.
  - d. Our review revealed the right overbank length is over two times the channel length at Cross Section 1688.81 in the existing conditions HEC-RAS hydraulic model. Please provide an explanation for the use of the high right overbank length, or revise the existing conditions HEC-RAS hydraulic model using a reasonable right overbank length.
  - e. The channel bank stations must be selected so that a relatively flat overbank area exists outside the channel banks. Please revise the overbank stations to reflect the natural channel banks at Cross Sections 1050, 1100, 1150, 1200, 1250, 1300, 1350, 1400, 1450, 1500, 1550, 1600, 1650, and 1688.81 in the existing conditions HEC-RAS hydraulic model, or provide an explanation why the channel bank stations used in the model were chosen.
3. The above-referenced topographic work map does not provide essential information required to complete our review of this request. Please submit a revised topographic work map, certified by a registered P.E., which shows all applicable items listed in Section C of Application/Certification Form 2, entitled "Riverine Hydrology and Hydraulics Form," including the following information. Please ensure that there is consistency between the work map, revised hydraulic model, and the annotated Flood Insurance Rate Map (FIRM).
- a. Please show the boundary delineations of the existing conditions base floodplain. The floodplain boundaries should generally follow the proposed contours and should be delineated to the elevations calculated in the existing conditions hydraulic model. It is helpful to use different colored lines as well as line types to distinguish the boundary delineations.
  - b. Please include the upstream area as part of this revision. The upstream area is needed to ensure that the entire area can be changed from Zone AO to Zone X (shaded).
  - c. Please show smooth graphical tie-ins between the existing and effective flood hazard boundary delineations at the upstream and downstream ends of the revised reach. Please ensure that the existing delineations tie-in directly to the effective delineations and that the tie-ins occur a short distance upstream of the upstream most cross section in the existing conditions hydraulic model and a short distance downstream of the downstream most cross section.
  - d. Please show and label the topographic contour information used for the boundary delineations of the base floodplain for all areas on the map. Please ensure that enough contours are labeled so that the floodplain delineations can be verified.
  - e. Our review revealed that the cross sections overlap the cross sections from the effective LOMR Case No. 15-06-0268P. However, the floodplain is contained before the effective LOMR. Please truncate your cross sections so that they do not intersect with the effective LOMR Case No. 15-06--0268P cross sections.
  - f. Please provide certification (signed, sealed, and dated) by a registered P.E.
  - g. To assist our review and to expedite processing of this request, please provide digital Computer-Aided Design (CAD) or Geographic Information System (GIS) data including topographic contours that reflect the revised topographic work map. Please ensure the digital data are spatially referenced and cite what projection (coordinate system, example: Universal Transverse Mercator [UTM]/State Plane) was used, so that the data may be used for accurate mapping. The important data to show on the digital work map are the contour information, the stream centerline, the cross section lines, the road crossings and hydraulic structures, the preliminary and proposed flood hazard delineations, and the tie-in locations. Everything should be clearly labeled and all information should be contained within the drawing and not externally referenced.

4. The channel distances computed in the existing conditions HEC-RAS hydraulic analysis for the cross sections listed in the table below do not match the channel distances shown on the above-referenced topographic work map. Please submit a revised hydraulic analysis or revised work maps as appropriate.

Cross Section	Channel Distance (feet)	
	Model	Map
1688.81	5	39
1650	5	50
1600	25	50
1550	25	50
1500	25	50
1450	25	50
1400	25	50
1350	25	50
1300	25	50
1250	25	50
1200	25	50
1150	25	50
1100	10	50
1050	5	50

5. Please submit an annotated FIRM from effective LOMR Case No. 15-06-0268P at the scale of the effective FIRM that shows the revised boundary delineations of the base floodplain as shown on the updated work map and how they tie-in to the boundary delineations shown on the effective FIRM from effective LOMR Case No. 15-06-0268P at the downstream and upstream ends of the revised reach. Please use different colors to differentiate the proposed and effective boundary delineations. Also, please show the title block of the effective FIRM on the annotated FIRM.

Please upload the required data using the Online LOMC website at <https://hazards.fema.gov/femaportal/onlinelomc/signin>.

For identification purposes, please include the case number referenced above on all correspondence.