



January 7, 2021

Eric Salazar, PE  
Senior Engineer/Project Manager  
Public Works Department  
City of San Antonio  
114 W. Commerce, 5<sup>th</sup> Floor  
San Antonio, TX 78205

**Re: Floodplain Variance (FPV) #21-002  
FPDP# 2021142 (Denied) - Culebra Creek Channel Improvements  
Public Works Department Capital Improvement Project (WBS# 23-03730)**

Dear Mr. Salazar,

The Public Works Department (PWD) Storm Water Division has reviewed the design and Floodplain Development Permit (FPDP) request associated with the proposed improvements for the Culebra Creek Channel Improvements capital project, WBS# 23-03730. The request for a FPDP has been denied as the proposed project improvements are not in compliance with the current City of San Antonio Unified Development Code (UDC) Appendix F – Floodplains as follows:

1. The proposed development does not meet the following UDC requirements:
  - Appendix F, Subdivision C, Section 35-F124(c)(1-2,4) pertaining to permitted increases in water surface elevations, which states, *"An increase in water surface elevation [for special flood hazard areas] is permitted solely when all the following conditions are met:*
    1. *Property owner owns both sides of the floodplain.*
    2. *The increase in the regulatory floodplain is contained in a dedicated drainage easement or right-of-way as required per subsection 35-504(d)(3).*
    4. *No increase in water surface elevations or velocities upstream and downstream outside of the owner's property limits."*
  - Appendix F, Subdivision C, Section 35-F133(c)(2-3) pertaining to Conditional Letter of Map Revision (CLOMR) requirements for a floodplain development permit which states,  
*"(2). No construction activity that will result in a change in the alignment, width, or elevation of a FEMA designated 1% A.C. current conditions floodplain is allowed prior to a conditional letter of map revision (CLOMR) being submitted to FEMA.*  
  
*AND*  
*(3). Excluding capital improvement projects managed by a public agency, no construction activity that will result in a change in the alignment, width, or elevation of a FEMA designated floodplain is allowed prior to a CLOMR being approved by FEMA."*

2. A variance to the above UDC requirements will be required by PWD Storm Water Division prior to issuance of the Floodplain Development Permit to allow project construction.
3. The applicant has provided the following information to assist with the review of the variance to the above UDC requirements:
  - The engineer of record has conducted a comprehensive flood study to evaluate the accuracy of the 100-year (1% annual chance) floodplain spill that occurs in the vicinity of the Timber Path bridge and the overall channel hydraulics based on several different FEMA-level modeling scenarios. The engineer summarized the study findings into a concise letter format and submitted the letter as justification for the Variance request.
4. The PWD Storm Water Division supports the Variance request for the following reasons:
  - The engineer of record has made extensive efforts to understand the complex channel hydraulics in order to minimize proposed water surface elevation (WSE) increases using all practicable measures. The maximum WSE increases are 0.03 feet (0.4 inches) or less at three (3) downstream cross-sections in the hydraulic model. The WSE increases do not translate to a measurable difference in the floodplain mapping or pose a potential adverse impact to the adjacent structures evaluated in the study.
  - The slight WSE increases mentioned above are reflected only in a comparison of the 'Proposed' and 'Corrected Effective' hydraulic modeling scenarios. Even when these slight increases are factored in, the proposed water surface elevations are between two (2) and five (5) feet lower than the adjacent structures' finished floor elevations. Reference Figure 2 in the engineer's variance request letter.
  - A comparison of the 'Proposed' and 'Effective FEMA' hydraulic modeling scenarios and resulting water surface elevations shows that the proposed water surface elevations are expected to be lower than the current Effective water surface elevations, thereby expecting to provide a reduction in flood insurance requirements, even outside of the project limits, following project construction and remapping. Reference Figure 2 in the engineer's variance request letter.
  - The channel improvements proposed with this capital project are estimated to remove approximately 169 structures from the floodplain. As such, the project is expected to provide a substantial reduction in flood risk while at the same time not causing adverse impacts to existing structures.
  - Based on the findings of no adverse impact from the comprehensive flood study and Variance request letter, a Conditional Letter of Map Revision (CLOMR) would not provide a benefit to the City of San Antonio since the proposed water surface elevations were shown to be less than the current Effective water surface elevations.
5. PWD will support a variance to the above UDC requirements with the following conditions:
  - Construction activities associated with the project within the FEMA designated floodplain shall not commence prior to approval of the final construction documents and related engineering analyses by the PWD Storm Water Division so that staff can verify the final results do not differ from what was presented for this Variance request.

If the Variance is approved by the Planning Commission, PWD Storm Water Division will issue an approved Floodplain Development Permit (FPDP) once the above conditions are met. If you have further questions or require any further assistance and/or information, please contact me at (210) 207-0182 or [sabrina.santiago@sanantonio.gov](mailto:sabrina.santiago@sanantonio.gov)

Sincerely,

*Sabrina Santiago*

Sabrina Santiago, EIT, CFM  
Interim Storm Water Engineering Manager

Attachments: AEVR# 21-002 Application  
Variance Request Letter with Attachments  
Denied FPDP# 2021142

cc: Bryan Blaisdell, PE, GISP, CFM, AECOM  
Bobby Mengden, PE, CFM, AECOM  
City of San Antonio, Planning Commission