# Appendix H

# Floodplain Design Criteria Memorandum

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# MEMORANDUM

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| TO: | The City of San Jose<br>Attn: Arlene Lew and Vivian Tom | DATE: | September 28, 2021 |
| FROM: | Caitlin Gilmore, PE | JOB #: | HANO.02.21 |

SUBJECT: **905 N Capitol Floodplain Design Criteria Memorandum**

## Introduction

It is the intent of this memorandum to describe the floodplain characteristics at the subject property and to provide a basis for selecting a highest adjacent grade upon which floodplain design criteria will be set. This memo is limited to the podium structure portion of the project.

The property is located in a FEMA effective special flood hazard area (SFHA) AO(2); characterized by an average of two feet of shallow flooding. The floodplain is a result of spills mapped from Upper Penitencia Creek based on the effective flood insurance rate map (FIRM) 06085C0088J. The map, although dated February 19, 2014, is based on a 1980's analysis and depicted in Figure 1.

A newer floodplain study is available, completed by Schaaf & Wheeler on behalf of Valley Water in 2019 as part of a FEMA Cooperating Technical Partnership (CTP). This analysis has been under review by FEMA and a date has not been set for its adoption as the new effective map. The floodplain at the site from this analysis can be seen in Figure 2. In the draft analysis the site is not located in a SFHA.

Since the draft map is not yet effective, the project must design to the effective map. Therefore, based on the city municipal code section 17.08.620, project must elevate residential finish floors to the highest adjacent natural grade around the perimeter of the structure, plus the depth of flooding.

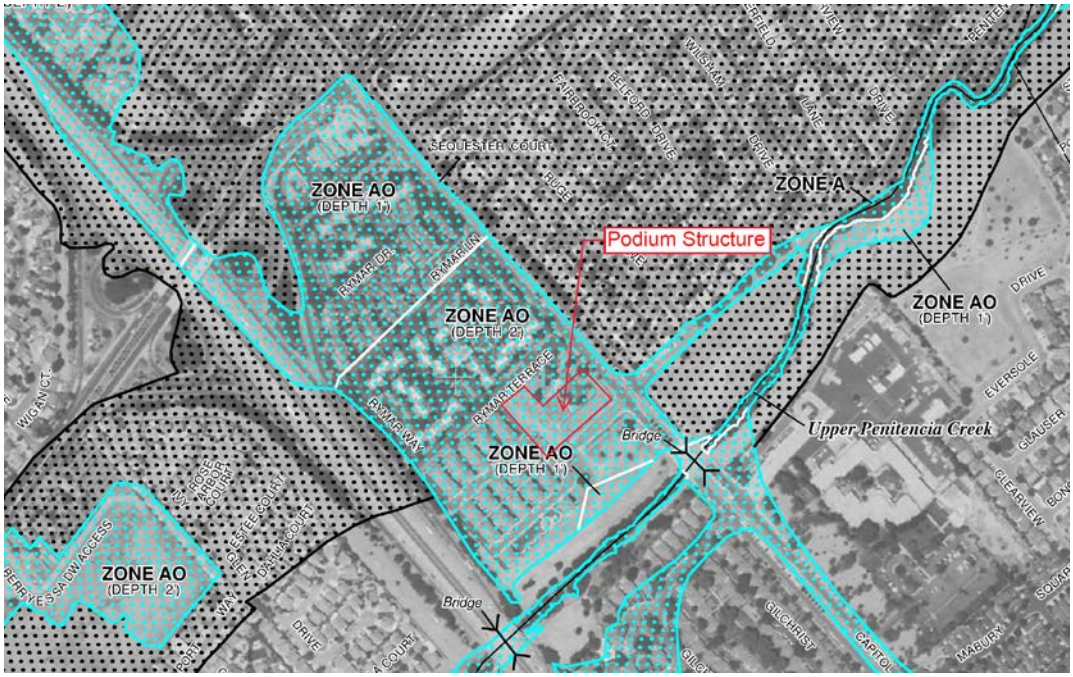


**Figure 1. Effective FEMA FIRM**


**Figure 2. CTP Draft Flood Map**

## Highest Adjacent Grade Methodology

The Site grades are generally around elevations 144-148 feet NAVD88 with the exception of the east corner which slopes steeply to the intersection of North Capitol Avenue and Penitencia Creek Road. As a result, the definition of highest adjacent grade and associated minimum finish floor elevation is highly sensitive to the structure location relative to the eastern slope. Setting the structure's HAG based on the corner slope will result in a very conservative finish floor elevation for the entire podium, which will impact total structure height and ADA accessibility.

The average elevation of the ground beneath the leasing office in the eastern corner is 148.5 feet, therefore the average elevation of the effective AO(2) flood would be 150.5 feet. The structure finish floor should be above this elevation. If a highest adjacent grade of 150 is identified, the minimum finish floor elevation of 152 feet would be conservatively above the highest anticipated flood elevation at the structure. The elevation 150 contour wraps the high side of the structure as shown as the pink line in Figure 3 below.

Based on the above, I recommend that a HAG of 150 feet NAVD88 be set for the structure.

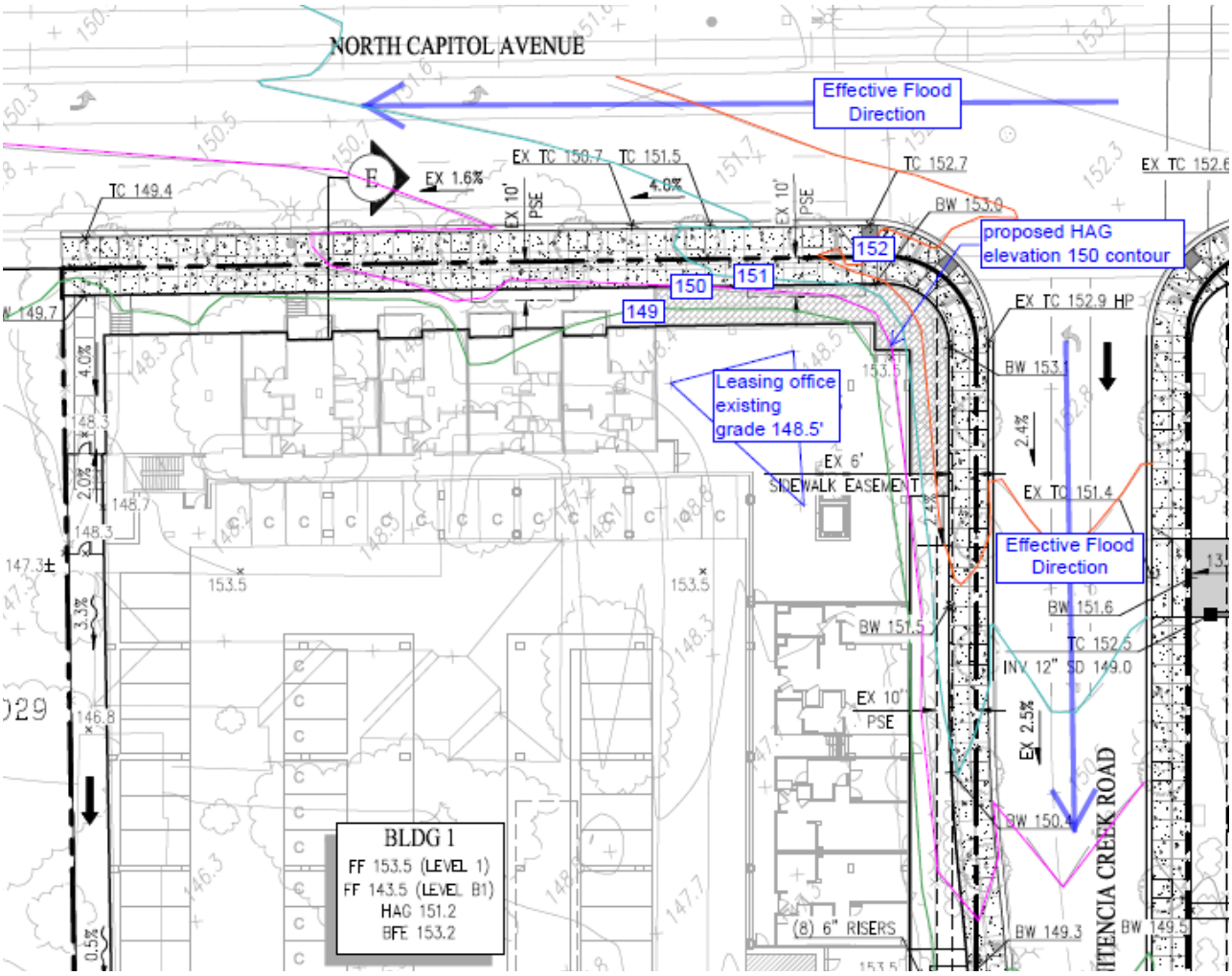


**Figure 3. Highest Adjacent Grade Topography**