

**TECHNICAL MEMORANDUM**

1242 DUPONT COURT • MANTECA, CALIFORNIA 95336 • TEL: 209.239.6229 • FAX: 209.239.8839

TO: John Schweigerdt, CASp, CFM
City of Stockton Community Development Department

FROM: Tony Marshall, P.E.

SUBJECT: 200-Year Flood Protection Analysis
Tuscany Cove Assisted Living

DATE: August 29, 2017

INTRODUCTION:

The purpose of this TM is to provide the City with evidence that the proposed development will meet the City of Stockton General Plan and Municipal Code regulations regarding 200-year Flood Protection.

BACKGROUND:

The subject property was subdivided in 2005, and street improvements were installed by the developer. However, before any homes were constructed, the State of California Central Valley Flood Protection Act of 2007 (SB-5) was passed and became law, setting a higher, 200-year level of flood protection. This property is more than 5 feet below the 200-year flood plain, and so it is no longer feasible to construct residential homes on the lots created with the subdivision improvements. Consequently, the owner/developer of the property has proposed to utilize some of the infrastructure installed for the subdivision, and develop an Assisted Living Facility on the property that can meet the new flood regulations by using the first floor for a parking garage and placing all living spaces on the second floor, above the 200-year flood plain.

NATURAL GROUND ELEVATION:

The existing lot pads range in elevation from 4.7 to 5.6, and the flowline of the gutter in the streets range in elevation from 2.2 to 3.4.

200-YEAR FLOOD ELEVATION:

The 200-Year Flood Elevation at this site is approximately 13 (NAV88). This was established by consulting using the City's 200-Year Flood Analysis Viewer at sjc-gis.maps.arcgis.com (See Exhibit A). Near the levee, the flood surface contour of 13 can be seen (red line) in Exhibit A. Exhibit A depicts the depth of flood by color. Note that most of the site is orange (between 5.01 feet and 10 feet of depth), while the only areas of the site that exceed 10 feet in depth (red) are a portion of the streets.

We compared these reported flood depth ranges with the natural grades on the site to verify their accuracy, and found that they correspond very closely to each other. For example, the lowest part of the street is the north-south street as it heads north from the entrance street, ranges in elevation from 2.2 to 2.9. Consequently, the flood elevation in this portion of the street would range from 10.8 ($13 - 2.2 = 10.8$) to 10.1 ($13 - 2.9 = 10.1$), while the balance of the streets are just under 10 feet in depth (for example, $13 - 3.4 = 9.6$). All of the lot pad heights are clearly less than 10 feet in depth (for example, $13 - 4.7 = 8.3$ feet).



TECHNICAL MEMORANDUM

1242 DUPONT COURT • MANTECA, CALIFORNIA 95336 • TEL: 209.239.6229 • FAX: 209.239.8839

PROPOSED BUILDING ELEVATIONS:

The proposed buildings will be located within a deep flood area (greater than 5 feet). Consequently, all living spaces must be elevated to within 3 feet of the 200-year flood elevation, and the lower floor must be constructed of flood-resistant materials and cannot contain any habitable space.

The first floor of the proposed buildings will be used only for parking and storage. All living space will be constructed on the second floor at a minimum elevation of 14.5. This elevation is 1.5 feet higher than the 200-year flood elevation, or 4.5 feet higher than the minimum elevation required by the City of Stockton Municipal Code (within 3 feet of the 200-year flood elevation). Proposed finished floor elevations of both structures are listed in Table 1.1.

Table 1.1 - Proposed Finished Floor Elevations:

Building:	1st Floor	2nd Floor
Assisted Living	2.5	14.5
Memory Care	3.0	15.0

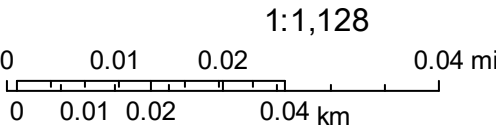
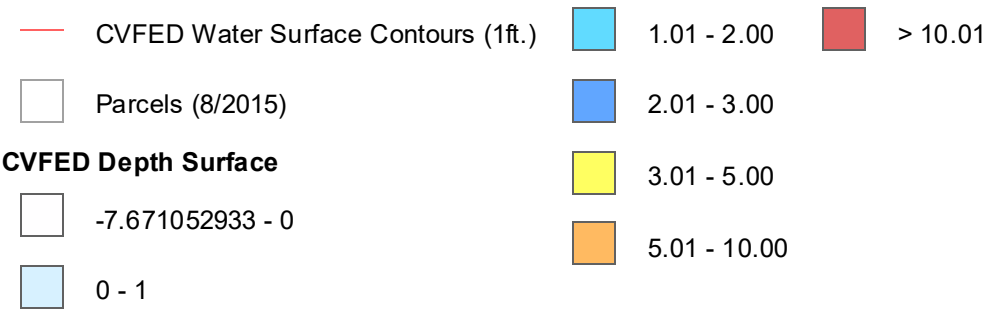
CONCLUSIONS:

The proposed development will comply with the State of California Central Valley Flood Protection Act of 2007 (SB-5) and all adopted regulations related to SB-5 in the City's General Plan and Municipal Code.

Exhibit A - CVFED 200-Year Floodplain Tuscany Cove



July 26, 2017



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community