

MEMORANDUM

To: Brent Little, Redwood Construction

From: Angela Pedroncelli, P.E., dk Engineering

Date: July 29, 2022

Subject: Hydrology for Sunset Apartments in Fairfield, California

The existing site at 1776 Sunset Avenue in Fairfield, California is 8.7 acres and consists of mostly a grassy field with one existing building and an existing asphalt area. The proposed project will have 130 units within 26 apartment buildings complete with roadways and sidewalk areas, along with amenities such as a communal recreation center building. Please refer to the Design Development Package prepared by dk Engineering on September 22, 2021 for the existing and proposed site plans.

The City of Fairfield requires the proposed development to accommodate post-development peak runoff via storm water detention. The proposed detention facility is required to reduce post-development flows to 90% of predevelopment peak flows for the 15, 25 and 100-year storm events. It is also required to detain the 100-year, 24-hour duration storm with a minimum of one (1) foot freeboard. To meet these requirements, a 13,936 square foot detention basin is proposed on the southeast corner of the site. The basin is 3.5 feet deep to hold the required volume of storm drain runoff. The basin is designed per the City of Fairfield guidelines, having side slopes that are 4:1. The project's storm water is directed to the detention basin via a storm drain pipe system as well as sheet flow over landscaped areas. This basin has an overflow inlet which has orifices sized to control the outfall flow rates. From the overflow inlet, the water runs through an 18" storm drain pipe to the northeast where it outfalls into the existing armored Laurel Creek Diversion Channel.

Hydrology and basin sizing will be finalized during the final design phase of this project.