

## **APPENDIX G**

### **SEWER CAPACITY STUDY**

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**To:** Theresa Wallace, LSA Associates, Inc.  
**From:** Eric Petrel, Project Engineer, HydroScience Engineers  
**Reviewed By:** Angela Singer, Project Manager, HydroScience Engineers  
**Subject:** 388 Vintage Park Development, Sewer Capacity Study  
**Date:** October 22, 2021

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This technical Memorandum (TM) is being submitted in partial fulfillment of an agreement between HydroScience Engineers, Inc. (HydroScience) and LSA Associates, Inc. (LSA), which was executed on June 11, 2021. Under the agreement, HydroScience will prepare a water supply assessment and sewer capacity study to support LSA's California Environmental Quality Act (CEQA) documentation efforts for a redevelopment project at 388 Vintage Park Drive in Foster City California (Proposed Project). This TM addresses the Proposed Project's impacts on the existing municipal sanitary sewer infrastructure serving the Proposed Project site.

## Proposed Project Description

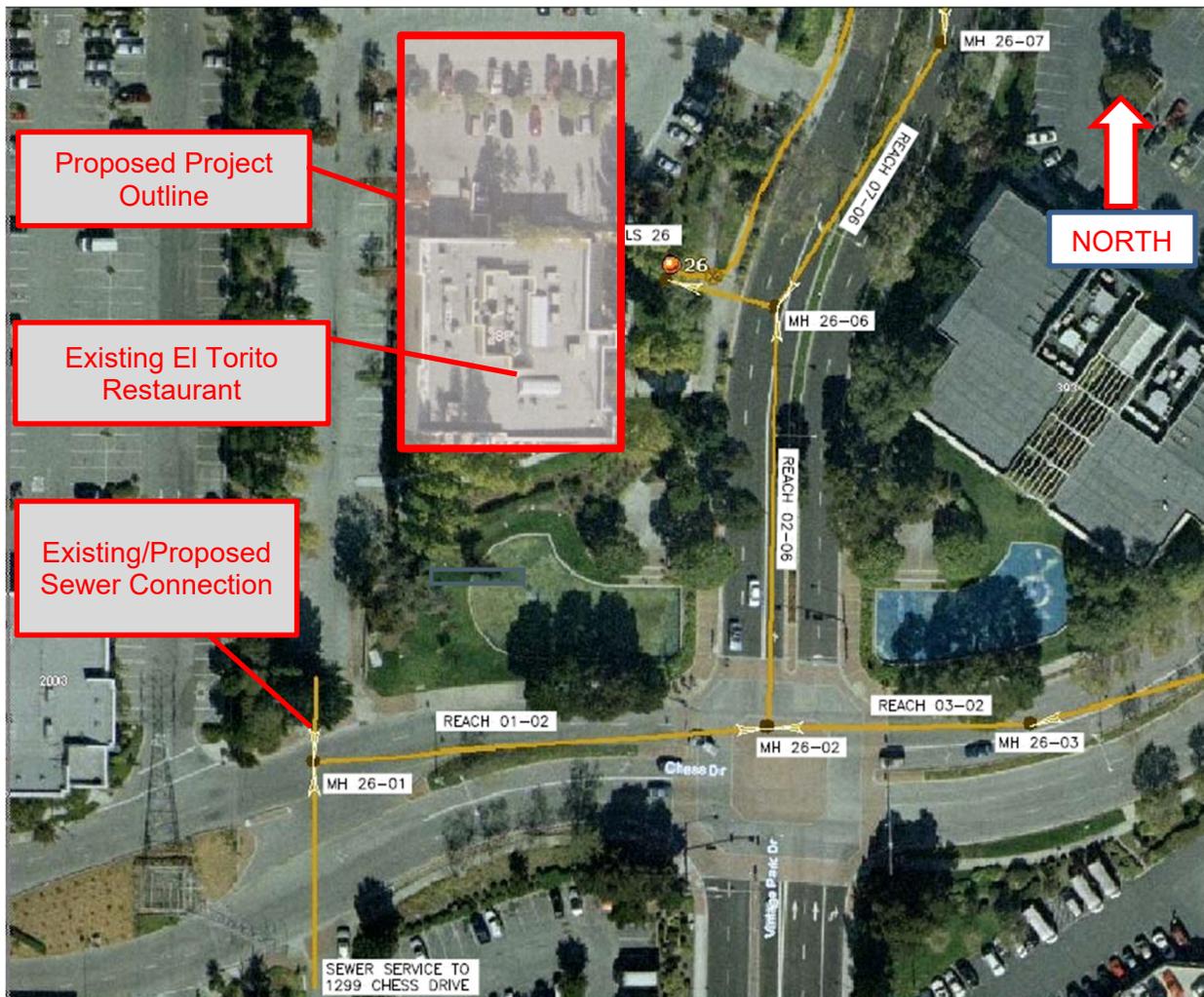
The Proposed Project, if approved, would be constructed at the intersection of Vintage Park Drive and Chess Drive, at the municipal boundary between Foster City and San Mateo. The City of Foster City (City) is reviewing the potential impacts of the Proposed Project. The proposed Project encompasses 2.2 acres and includes redevelopment of an existing site that is currently a single-story 10,120 square foot (sq. ft.) vacant commercial building – the El Torito restaurant, which closed in November 2018. The Proposed Project would result in the demolition of the restaurant building and construction of an approximately 95,931 sq. ft. four-story (68 feet tall) life science building with ground level parking and other infrastructure improvements.

Plans for the Proposed Project were provided by LSA. These plans, entitled "Planning Application for Rezoning (Amendment to General Development Plan), Use Permit, and Use Permit Modification", dated April 16, 2021. Copies of the existing site plan and the conceptual site plan are included in **Attachment A**. These plans show that the proposed building will occupy the area currently occupied by the existing restaurant, and will additionally occupy some of the existing paved parking area. Irrigated landscaping will be installed as a part of the Proposed Project, and will cover roughly the same area as the existing irrigated landscaping, primarily along the east side of the building.

## Sewer Setting

The configuration of existing sewer facilities is shown in **Figure 1**, below.

**Figure 1: Existing Sewer Facilities Configuration**



Gravity sewers in the vicinity of the Proposed Project all flow into Lift Station 26, located between the El Torito restaurant and Vintage Park Drive. The Proposed Project will connect to the existing sewer system at Manhole 26-01, located at the end of the southern driveway in Chess Drive. This is the same manhole to which the restaurant is currently connected.

## Historic versus Projected Site Wastewater Flows

El Torito restaurant was shuttered in November 2018, and has not been in operation since that time. The City provided historic water usage records for the restaurant from 2012 to 2017, which indicate that the restaurant consumed water at an average rate of approximately 7,200 gallons per day (gpd), or 5 gallons per minute (gpm) (see **Attachment B**). These records reflect water use within the restaurant building for cooking, dishwashing, restroom use, and building cleaning, and nearly all of the water used would have returned to the sewer system (a separate meter at the site measures water used for landscape irrigation). On this basis, we estimate that the restaurant generated wastewater at an average of 5.0 gpm.

Maddaus Water Management, Inc. prepared a TM, dated October 15, 2020, estimating the water use for the Proposed Project. Their estimate was based on the following key assumptions:

- The Proposed Project footage be split half-and-half between research and development space, and office space.
- Water demand rate for research and development space will be 25 gallons per year (gpy) per square foot (sq. ft.). This is based on historic water use for similar research and development facilities within the City.
- Water demand rate for office space will be 13 gpy/sq. ft. This is also based on historic water use for similar office space within the City.
- Some irrigation water demand is included in the above water demand rates.

The Maddaus TM estimated that the average water use for the Proposed Project will be 5.7 acre feet per year, or an average water use of 3.5 gpm. It is unknown how much of this will be used as irrigation water. Assuming that 100% of the water is returned to the sewer system, then the average wastewater discharge from the Proposed Project will be 3.5 gpm.

## Analysis and Opinion

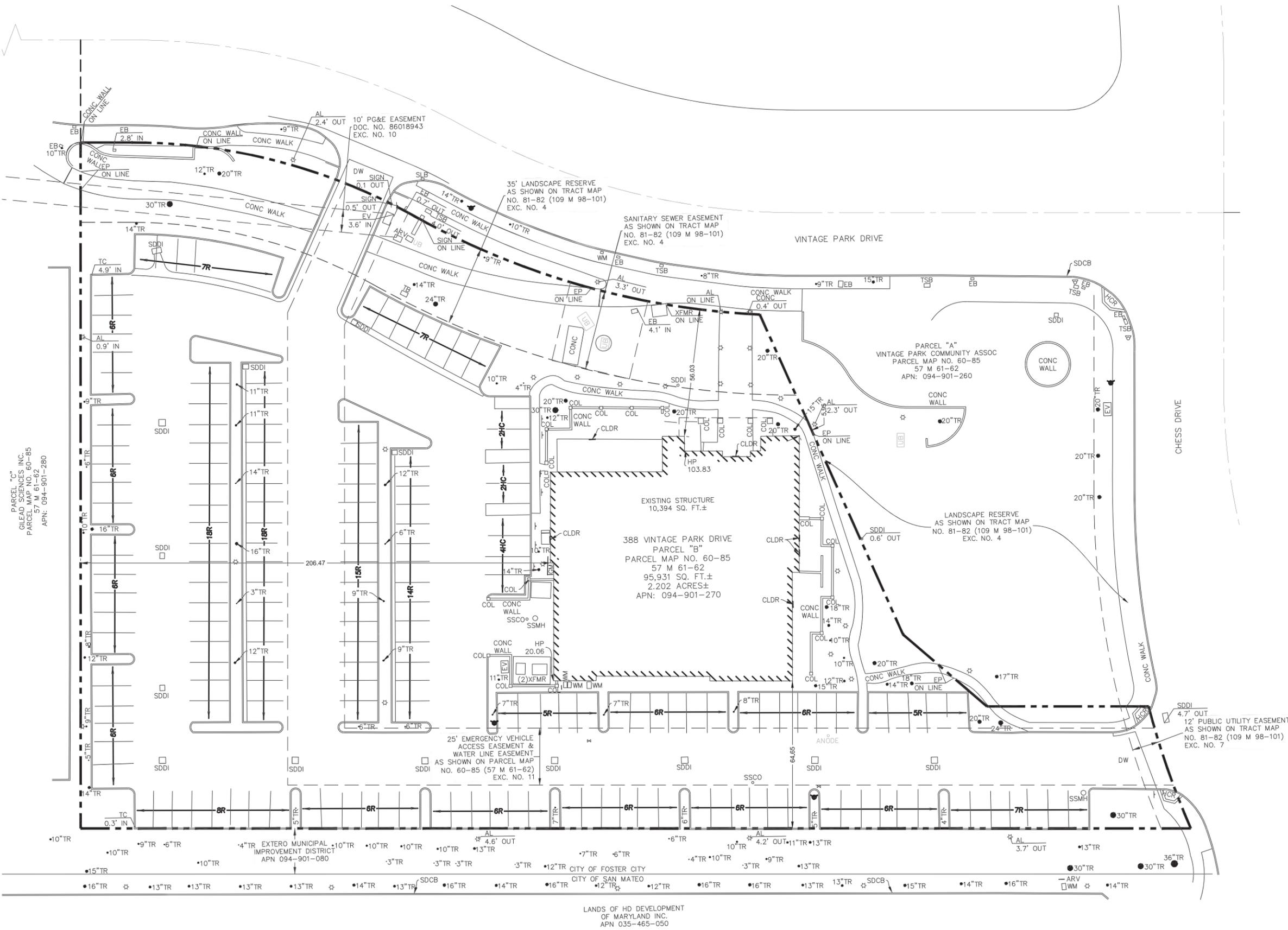
Comparing the historic and projected wastewater flows from the Proposed Project site, the average wastewater discharge is expected to drop from 5.0 gpm to 3.5 gpm, for a reduction of 1.5 gpm. Any adverse difference in the peaking factor (the ratio of peak daily wastewater discharge to average wastewater discharge) between the restaurant and the Proposed Project should be mitigated by the 30% reduction in average wastewater use.

It is our opinion that the Proposed Project will not result in an increase in wastewater discharge from the site.

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**ATTACHMENT A**  
LSA Associates, Inc.  
388 Vintage Park Development, Sewer Capacity Study  
Existing Site Plan and Conceptual Site Plan

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PARCEL "C"  
 GILEAD SCIENCES INC.  
 PARCEL MAP NO. 60-85  
 57 M 61-62  
 APN: 094-901-280

10' PG&E EASEMENT  
 DOC. NO. 86018943  
 EXC. NO. 10

35' LANDSCAPE RESERVE  
 AS SHOWN ON TRACT MAP  
 NO. 81-82 (109 M 98-101)  
 EXC. NO. 4

SANITARY SEWER EASEMENT  
 AS SHOWN ON TRACT MAP  
 NO. 81-82 (109 M 98-101)  
 EXC. NO. 4

PARCEL "A"  
 VINTAGE PARK COMMUNITY ASSOC  
 PARCEL MAP NO. 60-85  
 57 M 61-62  
 APN: 094-901-260

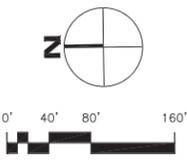
EXISTING STRUCTURE  
 10,394 SQ. FT.±  
 388 VINTAGE PARK DRIVE  
 PARCEL "B"  
 PARCEL MAP NO. 60-85  
 57 M 61-62  
 95,931 SQ. FT.±  
 2.202 ACRES±  
 APN: 094-901-270

LANDSCAPE RESERVE  
 AS SHOWN ON TRACT MAP  
 NO. 81-82 (109 M 98-101)  
 EXC. NO. 4

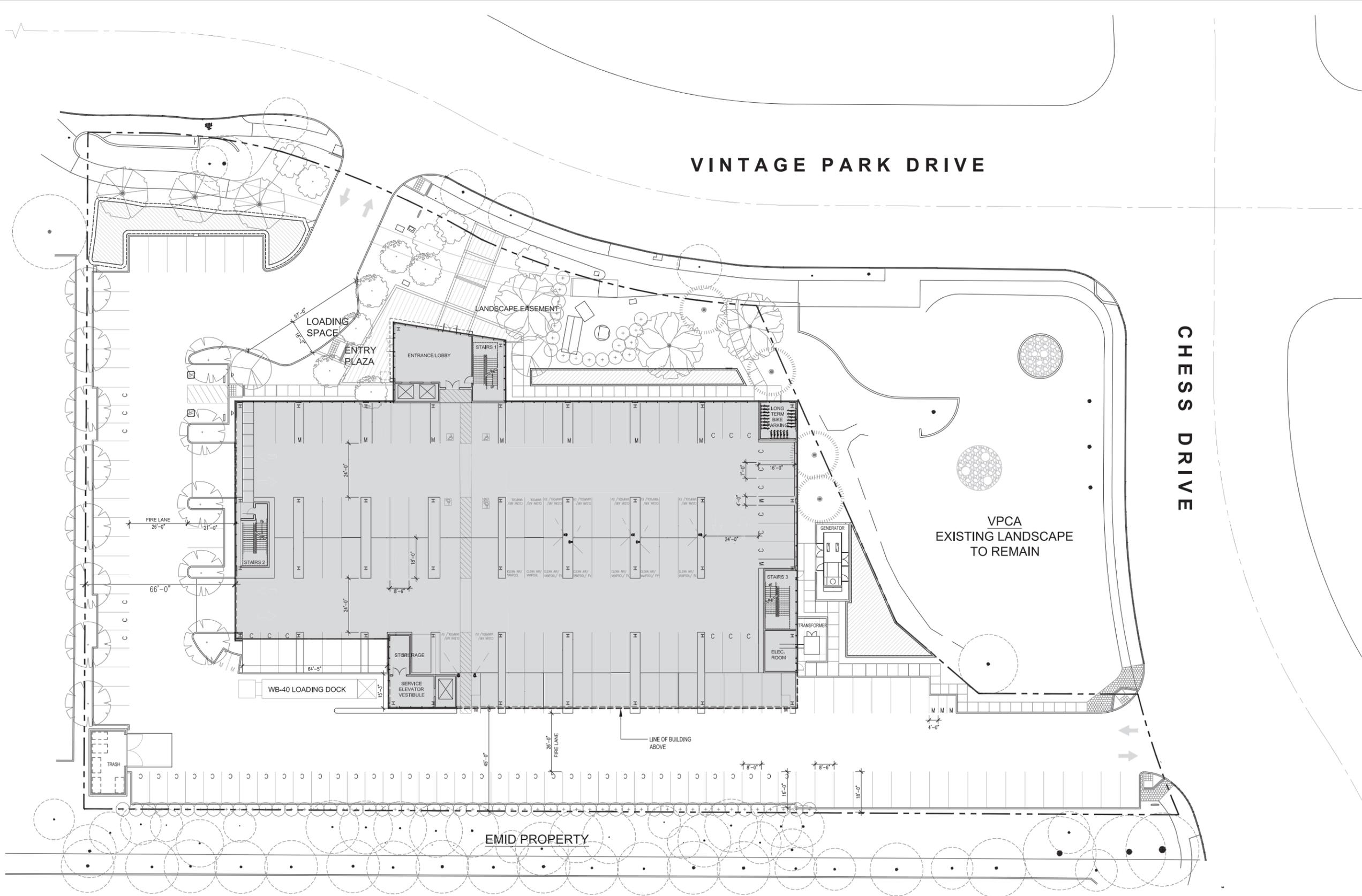
25' EMERGENCY VEHICLE  
 ACCESS EASEMENT &  
 WATER LINE EASEMENT  
 AS SHOWN ON PARCEL MAP  
 NO. 60-85 (57 M 61-62)  
 EXC. NO. 11

12' PUBLIC UTILITY EASEMENT  
 AS SHOWN ON TRACT MAP  
 NO. 81-82 (109 M 98-101)  
 EXC. NO. 7

LANDS OF HD DEVELOPMENT  
 OF MARYLAND INC.  
 APN 035-465-050



Apr 16, 2021 - 9:36am J:\Hou P:\Vehes\388\VintagePark\10244001\DWG\Arch\A2\_Existing\_Site\_Plan.dwg



1 Site Plan  
1"=20'-0"

Apr 16, 2021 - 4:54pm Helio P:\Helios\388VintagePark\10244001\Draw\Arch\A3\_Conceptual\_Site\_Plan.dwg

**ATTACHMENT B**  
LSA Associates, Inc.  
388 Vintage Park Development, Sewer Capacity Study  
Historic and Projected Water Use Rates

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**Historic Building Water Use**  
**388 Vintage Park Drive, Foster City (El Torito Restaurant)**  
**Provided by City of Foster City**  
**(Does not include irrigation water, which is metered separately)**

Location ID	Customer ID	Service Address	Consumption-CCF	From Date	To Date	# of Days	GPD
80982	58081	388 VINTAGE PARK DR	546	07/31/2012	10/03/2012	64	6381
80982	58081	388 VINTAGE PARK DR	432	10/03/2012	11/27/2012	55	5875
80982	58081	388 VINTAGE PARK DR	414	11/27/2012	01/30/2013	64	4839
80982	58081	388 VINTAGE PARK DR	370	01/30/2013	03/27/2013	56	4942
80982	58081	388 VINTAGE PARK DR	738	03/27/2013	06/04/2013	69	8000
80982	58081	388 VINTAGE PARK DR	606	06/04/2013	08/05/2013	62	7311
80982	58081	388 VINTAGE PARK DR	574	08/05/2013	10/05/2013	61	7039
80982	58081	388 VINTAGE PARK DR	606	10/05/2013	12/07/2013	63	7195
80982	58081	388 VINTAGE PARK DR	494	12/07/2013	02/06/2014	61	6058
80982	58081	388 VINTAGE PARK DR	570	02/06/2014	04/08/2014	61	6990
80982	58081	388 VINTAGE PARK DR	686	04/08/2014	06/08/2014	61	8412
80982	58081	388 VINTAGE PARK DR	504	06/08/2014	08/08/2014	61	6180
80982	58081	388 VINTAGE PARK DR	450	08/08/2014	10/08/2014	61	5518
80982	58081	388 VINTAGE PARK DR	440	10/08/2014	12/08/2014	61	5395
80982	58081	388 VINTAGE PARK DR	592	12/08/2014	02/07/2015	61	7259
80982	58081	388 VINTAGE PARK DR	606	02/07/2015	04/09/2015	61	7431
80982	58081	388 VINTAGE PARK DR	600	04/09/2015	06/09/2015	61	7357
80982	58081	388 VINTAGE PARK DR	660	06/09/2015	08/09/2015	61	8093
80982	58081	388 VINTAGE PARK DR	596	08/09/2015	10/09/2015	61	7308
80982	58081	388 VINTAGE PARK DR	548	10/09/2015	12/09/2015	61	6720
80982	58081	388 VINTAGE PARK DR	608	12/09/2015	02/08/2016	61	7455
80982	58081	388 VINTAGE PARK DR	602	02/08/2016	04/09/2016	61	7382
80982	58081	388 VINTAGE PARK DR	686	04/09/2016	06/09/2016	61	8412
80982	58081	388 VINTAGE PARK DR	640	06/09/2016	08/09/2016	61	7848
80982	58081	388 VINTAGE PARK DR	622	08/09/2016	10/09/2016	61	7627
80982	58081	388 VINTAGE PARK DR	648	10/09/2016	12/09/2016	61	7946
80982	58081	388 VINTAGE PARK DR	634	12/09/2016	02/08/2017	61	7774
80982	58081	388 VINTAGE PARK DR	774	02/08/2017	04/10/2017	61	9491
80982	58081	388 VINTAGE PARK DR	758	04/10/2017	06/10/2017	61	9295
Average (gallons per day)							7156
Average (gallons per minute)							4.97

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## Technical Memorandum – Final

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Date: October 15, 2020

To: Nick Moorhead, SteelWave

From: Michelle Maddaus, Maddaus Water Management Inc.

**Title: Water Capacity Investigation for 388 Vintage Park Road, Foster City**

This technical memorandum details the Water Capacity Investigation (WCI), or preliminary site water use analysis, that has been prepared by Maddaus Water Management Inc. (MWM) for SteelWave for 388 Vintage Park Road, Foster City (Vintage Park) near the Gilead Sciences campus. The Vintage Park site is currently occupied by a vacant restaurant which has been “dark” for two years. SteelWave is exploring the possibility of developing on this site an approximate 3-story, 95,931-square-foot building, over 1 level of parking, that has a lab-to-office ratio of around 50/50.

Initially, this WCI was conducted because the proposed Vintage Park development project was potentially large enough to require a Water Supply Assessment in a subsequent step. Instead, a preliminary analysis was conducted by MWM of site water use and the City of Foster City existing and projected demands. This analysis determined that the city’s water supplies were sufficient to serve existing development, including the proposed site and other planned growth as per adopted Water Supply Assessments. The water supplies analyzed included water supplies in normal and multiple dry years as reported in the most recent published Urban Water Management Plan (UWMP). The demand calculations for the site required the determination of net increase over demand associated with former development that was already included in the 2020 water demand projections developed for Estero Municipal Improvement District (EMID).

For this analysis, MWM researched the unit water use (gallons/day/sq. ft.) for the projected site using city records as well as referencing more than 20 years of experience conducting audits of commercial buildings in Foster City. This knowledge was used to verify and validate the water use factors.

### **Analysis Inputs and Assumptions**

MWM considers the following assumptions to be relevant with regard to the final WCI conclusions listed within this memorandum:

- It is assumed the existing site will be demolished.
- It is assumed the existing site had zero water use; however, the EMID water service area demands do include the restaurant demand, so it would be legitimate to account for this and reduce net additional demand. In a more comprehensive water supply assessment, previous site water demands should be considered for the restaurant that closed in 2018.
- It is assumed the site will be developed between 2020 and 2025.
- It is assumed outdoor water use is potable.
- Lab space is assumed to be ~47,965 sq. ft.
- Office space is assumed to be ~47,965 sq. ft.
- It is assumed that a site water use factor was developed using recent water use from nearby Gilead Sciences buildings having a similar function.

## **Analysis Outputs**

The following table presents the estimated site water use for the proposed 388 Vintage Park 95,931-square-foot lab/office development.

<b>388 Vintage Park</b>	<b>Demand (acre-feet per year)</b>	<b>Notes</b>
<b>Demand for Proposed R&amp;D Space (47,965 sq. ft.)</b>	3.7	Based on R&D water use factor of 25 gallons per year per square foot. <sup>1</sup>
<b>Demand for Proposed Office Space (47,965 sq. ft.)</b>	2.0	Based on large office with cooling tower water use factor of 13 gallons per year per square foot. <sup>2</sup>
<b>Demand from Existing Building to Be Demolished</b>	-	The existing building is planning to be demolished. The site's restaurant has been closed since 2018, so no existing water use is assumed. <sup>3</sup>
<b>Net Project Demand</b>	<b>5.7</b>	

<sup>1</sup>Based on 2014-2017 water use data from Gilead Sciences 355 Lakeside Drive. Includes landscape irrigation. Assumes demand use factor of 25 gpy/sq. ft.

<sup>2</sup>Based on 2016-2017 water use data from Gilead Sciences 309 Velocity Way. Includes landscape irrigation. Assumes demand use factor of 13 gpy/sq. ft.

<sup>3</sup>El Torito Mexican Restaurant has been closed since 2018, so no existing water use is assumed. It is planned to be demolished.

## **Conclusions**

- This preliminary analysis has estimated the proposed site's water use to be 5.7 acre-feet per year.
- The City of Foster City's current water supplies in normal and multiple dry years are sufficient to serve existing development, including the proposed site, and other planned growth.