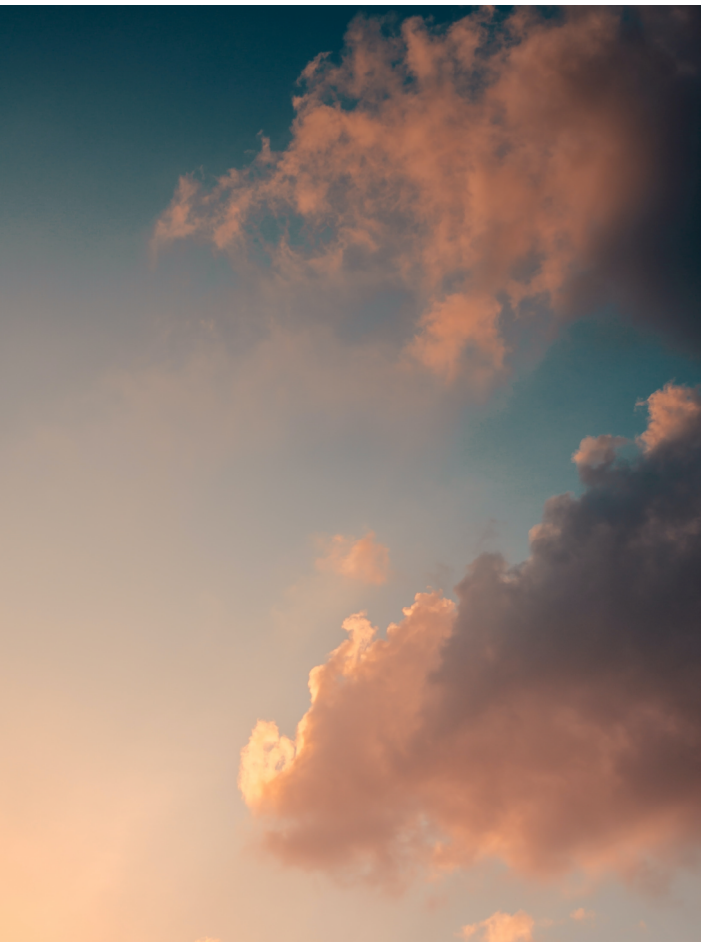
Appendix M-1

Water and Sewer Infrastructure Report

Kimley»Horn







Monterey Park Data Center

Water and Sewer Infrastructure Assessment Report

Prepared for:

SDCF MONTEREY PARK, LLC

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Date Prepared: May 2024

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1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The proposed Monterey Park Data Center Project ("Project") will redevelop a 15.83-acre lot (5.05 acre gross and buildable area) at 1977 Saturn Street, Monterey Park, located northwest of the intersection of Saturn Street and Orange Avenue ("Project Site") in the City of Monterey Park (City), within the County of Los Angeles. The Project site is bounded by Saturn Street to the south, Orange Avenue to the east, and a Southern California Edison transmission line easement to the northwest. Additionally, there is a City of Monterey Park Water Department lot (La Loma Reservoir) due north, single family homes to the northwest, and an existing office park to the east.

The proposed development will consist of an approximately 218,400± square foot rectangular building located along the southern portion of the site, along Saturn Street, with an adjacent equipment yard directly north of the building, and a substation to the northeast. A western and eastern entryway connecting the development to Saturn Street are proposed, with a fire lane wrapping around the building and equipment yard. Parking stalls are planned to be located north, east and west of the building and equipment yard. An electrical substation is also planned, with the current location north of the equipment yard. The proposed data center land usage is technology, and will be used to both house computer systems, and also for IT and associated staff to work on the systems. The HVAC system will be air-cooled, and the water consumption for HVAC operations is expected to be negligible. The data center will provide 68 parking spaces.



Vicinity Map

1.2 SCOPE OF WORK

The purpose of this report is to analyze the potential changes in water and wastewater demand as a result of the Project, and identify any necessary changes to on- or off-site infrastructure. The current location of existing water and wastewater infrastructure and analysis of potential Project demands related to this infrastructure are discussed in this technical report.

2. REGULATORY FRAMEWORK

2.1 WATER

The Project site receives water supply from the San Gabriel Valley Municipal Water District, the primary water purveyor for the City. The San Gabriel Valley Municipal Wate District is a public agency, of which the City of Monterey Park is a member. As the primary supplier of water to the City, the San Gabriel Valley Municipal Water District must comply with all applicable regulations at the State and Federal level.

Applicable regulations affecting the San Gabriel Valley Municipal Water District as a supplier of water include efficiency requirements, such as California Code of Regulations (CCR) Title 20, Chapter 4, Article 4, Section 1605, which requires all new plumbing fixtures to adhere to efficiency requirements, and CCR Title 24, Part 11, which requires a water use reduction of 20% above baseline for all homes, commercial, and state buildings.

The regulations also include reporting requirements, such as California Urban Water Management Planning Act (1984) and Senate Bill (SB) 610. The California Urban Water Management Planning Act requires that municipalities and other water suppliers must create an updated Urban Water Management Plan (UWMP) every five years, outlining anticipated trends in supply and demand for the planning period. The City of Monterey Park's most recent UWMP update was in 2020 and identified adequate supplies to match modeled demands through 2040. SB 610 required water suppliers to submit a Water Supply Assessment (WSA) for all projects that propose over 500 residential dwelling units, 500,000 square feet of commercial floor space, or employ over 1,000 individuals or the equivalent water usage. A WSA will not be required for the Project as this will be a non-residential development, the proposed business establishment will have less than 500,000 square feet of floor space, and the new development is expected to employ fewer than 1,000 individuals, based on a proposed parking space count of 68.

2.2 WASTEWATER

The Project site falls under the local authority of the City of Monterey Park (City), along with the Los Angeles County Sanitation Districts (LACSD). The City of Monterey Park requires that for proposed connections being made to a City line, a sewer capacity analysis will be required. The City does not provide will-serve letters for new sewer connections prior to a sewer study/flow capacity analysis for projects and payment of fees. For the sewer analysis, the developers are typically required to conduct flow monitoring of sewer manholes downstream of the proposed development area to verify flow depths in the system at select locations. The selected manhole monitoring locations will be determined by the City once all fees are paid.

LACSD consists of 24 independent special districts in Los Angeles County. The Project is located within LACSD's District No. 2 jurisdictional boundary, and within the service area of the A.K. Warren Water Resource Facility. The Warren Facility, owned and operated by LACSD, currently provides primary and secondary treatment for a design capacity of 400 million gallons of wastewater per day (mgd), and serves over 4.8 million residents, businesses and industries. The Warren Facility currently provides both primary and secondary treatment for approximately 237 million gallons of wastewater per day. A will-serve letter has been received from LACSD, and is included in Attachment A.

LACSD is empowered by the California Health and Safety Code to charge a fee to connect facilities (indirectly or directly) to the Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities.

3. EXISTING CONDITION

3.1 WATER

3.1.1 DOMESTIC INFRASTRUCTURE

The City of Monterey Park Public Works Department, Engineering Division owns and maintains all water infrastructure, including on-site and off-site facilities. Regarding offsite water infrastructure, there is an existing 12" water main running south on Orange Avenue to Saturn Street per drawing D-844 and an existing 12" water main running west on Saturn Street to Atlas Avenue/Potrero Grande Drive per drawings D-844, D-673 (drawing missing from City records), and D-655. There is also an existing 8" water line running east from the intersection of Orange Avenue and Saturn Street to Potrero Grande Drive. Please see Attachment E for map showing existing water lines.

The City also owns and maintains onsite water infrastructure, within an easement. There is an existing City-owned 12" water line starting at the southerly drive entry and running north through the northerly property line per drawing D-673 (missing from City records but included in atlas map). There is also an existing City-owned 8" water line that tees off the existing 12" line and runs east through site and then southeasterly through the northerly drive entry to connect back with the 12" line in Saturn Street.

Table 1 shows the estimated existing water demand for the Project Site, with demands based on 120% of the Los Angeles County Sanitation Districts (LACSD) wastewater generation factors[1]. The LASCD sewer loading table is included in Attachment A. The water demand estimate is appropriate to account for any additional water demand for possible minor losses on-site, such as water use due to human consumption (cooking, drinking, watering indoor plants, evaporation), that would deviate from the LACSD sewage generation factors. Therefore, 120% of the standard generation factor was used for the existing condition water demand estimates. The Estimated Total Water Usage (ETWU) equation is used for landscaping which is assumed to be 30% of the site. The ETWU calculation for landscaping is included as Attachment B.

[1]Loading for each class of land use. Found here:
https://www.lacsd.org/home/showpublisheddocument/3644/637644575489800000

Table 1 – Estimated Existing Water Demand

Land Use	Units or Square Footage	**Est Avg. Daily Flow Factor (gal/1000 SF gross area)[1]**	Total **Water Generation** (gpd)
Bldg. 1 (2-story; office)	41,100	240	9,864
Bldg. 1 (2-story, utility)	164,528	30	4,936
Bldg. 2 (utility)	3.936	30	118
Landscaping	206,867 sf	ETWU Method[2]	14,151
Total Existing Water Demand to be Removed			29,069 GPD

Notes

[1] Based on 120% of the sewer generation factors from the "Loading for each class of land use" from LASD (See Footnote 1).

[2] Demand based on ETWU equation: (Eto*plant factor*landscaped area* 0.62)/irrigation efficiency. Utilizing CIMIS Reference Evapotranspiration Zones Map ET of 46.6 in/yr, and a conservative plant factor of 0.7 and irrigation efficiency of 0.81 proposed condition.

3.1.2 FIRE INFRASTRUCTURE

There are currently three (3) public onsite fire hydrants within an easement, and four (4) public offsite fire hydrants surrounding the site. All hydrants, onsite and offsite, are owned and maintained by the City of Monterey Park.

3.2 WASTEWATER

3.2.1 EXISTING INFRASTRUCTURE

The City's sanitary sewer system is a gravity-flow system connecting to seven County Sanitation District (LACSD) trunk lines. These City lines collect more than two billion gallons of raw sewage annually and convey it out of the City. These lines are monitored and evaluated to determine if repairs or additional lines are warranted as the City grows. The City's sewer system is comprised of 126 miles of main line sewers ranging in size from 8" to 15" pipe and approximately 2,498 sewer manholes. Please see Attachment E for map showing existing sewer lines.

The wastewater flows originating from the Project site discharge to a City of Monterey Park sewer line in Saturn Street. From there, the wastewater is conveyed westerly to the Districts' Garfield Trunk Sewer, located in Wilcox Avenue, just south of Pomona Boulevard. The Districts' 12" diameter trunk sewer has a capacity of 1.8 million gallons per day (mgd), and conveyed a peak flow of 0.5 mgd when last measured in 2016.

The wastewater generated by the proposed Project will be treated by the Districts' A.K Warren Water Resource Facility (formerly known as the Joint Pollution Control Plant), located in the city of Carson. This facility has a capacity of 400 mgd, and currently processes an average flow of 237 mgd.

Table 2 shows the estimated existing wastewater generation for the Project Site, based on Project Site elements, and using LACSD wastewater generation factors.

Table 2 - Estimated Existing Wastewater Generation

Land Use	Units or Square Footage	**Est Avg. Daily Sewage Flow Factor (gal/1000 SF gross area)[1]**	Total **Wastewater Generation** (gpd)
Bldg. 1 (2-story; office)	41,100	200	8,220
Bldg. 1 (2-story, utility)	164,528	25	4,113
Bldg. 2 (utility)	3,936	25	98
Total	209,564		12,432
Total Existing Wastewater Demand to be Removed			12,432 GPD

4. METHODOLOGY

4.1 WATER

This report analyzes the potential effects of the Project on the existing public water infrastructure by comparing the estimated Project water demand with the calculated available supply. Existing water demand estimates are approximately 20% higher than those for sewer demand to account for any additional water demand due to human consumption, such as watering of indoor plants, drinking, and evaporation. Additional proposed water demands as a result of proposed landscaping features were calculated using the Estimated Total Water Use Equation (ETWU) following the methodology conducted as part of the Project's Water Consumption Analysis Report.

Based on available site and occupancy information, per the Tait Assessment of Water Availability included in Attachment C, Tait evaluated the availability of adequate water supply and pressures for the proposed Project and confirmed that the system has adequate capacity to deliver water to the Project for domestic and fire suppression scenarios. A fire flow test was provided and is included in Attachment D. The fire flow requirements were calculated per the California Building Code Table B105.1(2) relating to site fire protection. The Project requires 25% of 8,000 gpm for sprinklered buildings of Type V building construction. This means the Project requires 2,000 gpm at the furthest, most elevated fire hydrants along the relocated onsite 8" water line. The Tait report hence analyzed two (2) proposed hydrants along the relocated 8" water line each flowing at 1000 gpm at a minimum of 20 psi (pounds per square inch). After running a WaterCAD analysis, Tait concluded that each fire hydrant would have a residual pressure of 65 psi; therefore, it was concluded that a relocated 8" water main onsite tied into the existing public 12" water lines in Saturn Street and onsite will have plenty of capacity to provide domestic and fire suppression services.

4.2 WASTEWATER

This report also analyzes the potential increases of the Project's wastewater on the existing public sewer infrastructure by comparing the estimated Project's sewer loading with the estimated loading on the existing facilities. LACSD sewer generation factors have been utilized to estimate existing and proposed sewer flows. A will-serve letter has been received from LACSD, confirming the net additional wastewater amount, and that capacity is available in the trunk line and treatment facility to accommodate the additional sewer loading.

5. PROJECT DEMANDS

5.1 CONSTRUCTION

5.1.1 WATER

During construction, water will be required intermittently for dust control, equipment cleaning, soil grading and preparation during the early phases of the Project. The latter phases of construction normally require less water usage. Since water usage during construction is typically less demanding than the water usage for the proposed Project, it is anticipated that existing water infrastructure would meet the limited, temporary water demand associated with construction of the Project, and that the water purveyor is able to provide water during construction.

It is anticipated that the Project may require construction of new lateral connections (services) to existing water lines and/or relocation of the existing 8" waterline within the site. Construction impacts associated with the installation of water services would primarily involve trenching in order to place the lines sufficiently below the ground surface. When considering impacts resulting from the installation of any required water infrastructure, all impacts are of a relatively short-term duration (i.e., weeks to months) and would cease to occur once the installation is complete. Installation of new or relocation of existing water infrastructure will be limited to on-site water distribution, and minor off-site work associated with connections to the public main. No upgrades to public water mains, other than onsite infrastructure, are anticipated. Prior to ground disturbance, Project contractors would coordinate with City of Monterey Park to identify the locations and depth of all lines.

5.1.2 WASTEWATER

Construction activities for the Project could result in temporary wastewater generation on-site. However, such generation would be temporary and nominal (insignificant) when compared with the wastewater generated by the Project. In addition, construction workers would typically utilize portable restrooms and hand wash areas, which would not contribute to direct wastewater flows to the City's wastewater system. Thus, wastewater generation from Project construction activities is not anticipated to cause any measurable increase in wastewater flows.

Construction impacts associated with wastewater infrastructure would primarily be confined to trenching for miscellaneous utility lines and connections to public infrastructure. Installation of wastewater infrastructure will be limited to on-site wastewater distribution and minor off-site work associated with lateral connections to the existing City sewer main. Any work that may affect services to the existing sewer lines or impacts to LACSD facilities or plant will be coordinated with the City of Monterey Park Public Works Department, Engineering Division. Furthermore, construction management and access plans would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel, Moreover, when considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a relatively short-term duration and would cease to occur once the installation is complete.

5.2 OPERATION

5.2.1 WATER

5.2.1.1 WATER DEMAND

Based on the Project's proposed land uses, the Project's estimated water consumption is approximately 33,031 gallons per day (gpd). Alternatively, approximately 29,069 gpd of existing water demand will be removed, resulting in a net increased water demand of approximately 3,962 gpd over existing conditions. These demand numbers were calculated using 120% of LACSD wastewater generation factors as well as the ETWU equation for proposed landscaping. The Project site is assumed to be 30% pervious, or landscaped areas (similar to the existing conditions). A breakdown of these water demand calculations is provided in Table 3.

Table 3 – Estimated Proposed Water Demand

Land Use	Area (sf)	Avg. Generation Factor (gpd/unit)[1]	Total Water Generation (gpd)
Data Hall Center[2]	109,970 sf	30 gpd/1000 SF	3,299
Office (Network)[3]	1,750 sf	240 gpd/1000 SF	420
Office (Support)[3]	26,700 sf	240 gpd/1000 SF	6,408
Office (Circulation)[3]	16,542 sf	240 gpd/1000 SF	3,970
Ancillary (Elec.)[2]	23,976 sf	30 gpd/1000 SF	719
Ancillary (Mech.)[2]	39,463 sf	30 gpd/1000 SF	1,184
Substation (service)[4]	24,000 sf	120 gpd/1000 SF	2,880
Landscaping	206,867 sf	ETWU Method[5]	14,151
Total Proposed Water Flow			**33,031**
Total Existing Water Flow to be Removed			**29,069**
Project Net Water Flow (Proposed –Existing to be Removed)			**+3,962**

Notes
[1] Based on 120% of the sewer generation factors from the "Loading for each class of land use" from Los Angeles County Sanitation Districts
[2] Assumes 'Warehouse' will be used for Data Hall Center, Mechanical Area, Electrical Areas
[3] Assumes 'Office Building' will be used for Office areas
[4] Assumes 'Service Station' will be used for Electrical Substation
[5] Demand based on Estimated Total Water Use equation: (Eto*plant factor*landscaped area* 0.62)/irrigation efficiency. Utilizing CIMIS Reference Evapotranspiration Zones Map ET of 46.6 in/yr, and a conservative plant factor of 0.7 and irrigation efficiency of 0.81 proposed condition.

City of Monterey Park 2020 Urban Water Management Plan (UWMP) projects water demands to increase from 8,671 acre-feet per year (AFY) in 2025 to 9,066 AFY in 2045 for dry years representing an increase in demand of 395 AFY and 8,421 acre-feet per year (AFY) in 2025 to 8,804 AFY in 2045 for normal years representing an increase in demand of 383 AFY. The proposed increase in demand from the Project of 3,962 gpd (4 AFY) represents approximately

1% of the total increase in demand from 2025 to 2045 in the UWMP. The UWMP also projects adequate supplies to meet all future demands.

5.2.1.2 DOMESTIC WATER DEMAND

When analyzing the Project for infrastructure capacity, the projected demands for both fire suppression and domestic water are considered. Although domestic water demand is the Project's main contributor to water consumption, fire flow demands have a much greater instantaneous impact on infrastructure, and therefore are the primary means for analyzing infrastructure capacity. Based on the analysis of site's fire demands and review of the resulting residual pressures from the *Tait Assessment of Water Availability* (included in Attachment C), it has been determined the existing water system at the Project site is more than adequate to handle the demands for fire suppression. Furthermore, the relocation of the existing 8" water line within the site is nearly negligible in terms of system pressure loss and will not adversely affect the public water system.

5.2.1.3 FIRE FLOW REQUIREMENTS

Per the fire flow test results and *Tait Assessment of Water Availability* in Attachment C, the existing water main infrastructure will have sufficient capacity to service the Project's fire demand requirements. In summary, per the California Building Code Table B105.1(2) relating to site fire protection, the Project requires 25% of 8,000 gpm for sprinklered buildings of Type V building construction. This means the Project requires 2,000 gpm at the furthest fire hydrants in the vicinity of the Project. The Tait report hence analyzed two (2) proposed hydrants along the relocated 8" public water line each flowing at 1000 gpm with an allowed minimum pressure of 20 psi. After running the WaterCAD analysis, Tait concluded that each fire hydrant would have a residual pressure of 65 psi; therefore, it was concluded that the relocated public 8" water main onsite that connects into the existing public 12" water line in Saturn Street will have plenty of capacity. Therefore, adequate fire flows can be provided to the Project by the existing and rerouted water infrastructure.

5.2.2 WASTEWATER

5.2.2.1 SEWER GENERATION AND INFRASTRUCTURE CAPACITY

The Project's estimated sewer flows are based on LACSD sewer flow factors. Consistent with the proposed uses and LASCD's generation factors, the Project's projected wastewater generation is approximately 15,734 gpd, representing a net increase in wastewater generation at the Project Site of approximately 3,302 gpd. A breakdown of these wastewater generation calculations is provided in Table 4.

Table 4 – Estimated Proposed Wastewater Generation

Land Use	Units	Avg. Generation Factor (gpd/unit)[1]	Total Wastewater Generation (gpd)
Data Hall Center[2]	109,970 sf	25 gpd/1000 SF	2,749
Office (Network)[3]	1,750 sf	200 gpd/1000 SF	350
Office (Support)[3]	26,700	200 gpd/1000 SF	5,340
Office (Circulation)[3]	16,542	200 gpd/1000 SF	3,308
Ancillary (Elec.)[2]	23,976 sf	25 gpd/1000 SF	599
Ancillary (Mech.)[2]	39,463 sf	25 gpd/1000 SF	987
Substation (service)[4]	24,000 sf	100 gpd/1000 SF	2,400
Total Proposed Wastewater Flow			**15,734**
Total Existing Wastewater Flow to be Removed			**12,432**
Project Net Wastewater Flow (Proposed –Existing to be Removed)			**+3,302**

Notes
[1] Based on 100% of the sewer generation factors from the "Loading for each class of land use" from Los Angeles County Sanitation Districts
[2] Assumes 'Warehouse' will be used for Data Hall Center, Mechanical Area, Electrical Areas
[3] Assumes 'Office Building' will be used for Office Areas
[4] Assumes 'Service Station' will be used for Substation

It is anticipated that the Project will be served by the existing 8" sewer line located in Saturn Street. The City of Monterey Park requires a sewer connection permit if connecting to a city system. The fees are utilized to cover any infrastructure improvements that would be required because of Project implementation.

Sewer flows generated within the City drain to LACSD wastewater infrastructure and are ultimately conveyed to the A.K. Warren Water Resource Facility. The A.K. Warren Water Resource Facility has a capacity of 400 mgd and currently processes an average flow of 243.1 mgd. The Project's estimated wastewater generation increase of 3,302 gpd or 0.004 mgd comprises less than 0.002 percent of the wastewater that is processed daily at the A.K. Warren Water Resource Facility.

A will-serve letter has been received from LACSD, confirming the estimated wastewater generation increase of 3,302 gpd, and is included in Attachment A.

6. CONCLUSION

6.1 WATER

The proposed Project results in a higher water demand as compared to existing conditions. However, as shown by the *Tait Assessment of Water Availability*, the fire flow requirements will be met with the existing water infrastructure and fire hydrants. The proposed Project will increase the domestic water demands for the site by 3,962 gpd (4 AFY), this represents approximately 1% of the total increase in water demand anticipated for the City of Monterey Park from 2025 to 2045, as identified in the 2020 UWMP for dry years.

Based on the above, it is anticipated that the City of Monterey Park will be able to supply the water demands associated with the Project and future growth.

6.2 WASTEWATER

The proposed Project will result in the additional generation of sewer flow of an estimated 3,302 gpd. The actual wastewater flowrate generated from the proposed project will be 15,734 gpd, which is equivalent to 11 gpm. As mentioned previously in this report, the wastewater generated from the proposed development will drain into the existing 8" sewer line in Saturn Street, which has a sewer flow capacity of approximately 225 gpm at a slope of 1% with 50% filled capacity. The flow-depth of the existing 8" sewer has been evaluated and confirmed that there is capacity in the existing adjacent sewer system to convey the wastewater flows that will be generated by the project. The calculations are included in Attachment F of this report. The results are presented in Table 5.

Table 5 – Existing 8" Sanitary Sewer in Saturn Street

	Wastewater Flows (GPD)	Wastewater Flows (GPM)	Wastewater Flows (CFS)	Sewer Flow Depth (inches)
Capacity of Existing Sewer @ 50%-Full	389,108	225	0.50	4.0
Sewer with Wastewater from Project	15,734	11	0.025	0.96

A will-serve letter has been received from LACSD, stating that their facilities have capacity to accept the wastewater flows that would be generated by the Project.

Based on these evaluations, no impacts related to the existing wastewater infrastructure are anticipated.

ATTACHMENTS

Attachment A – LACSD Will-Serve Letter

Attachment B – Estimated Total Water Usage (ETWU) Calculations

Attachment C – Tait Assessment of Water Availability

Attachment D – Fire Flow Test

Attachment E – Water & Sewer Maps

Attachment F – Sewer Flow-Depth Calculations

Attachment A – LACSD Will-Serve Letter & Sewer Loading Table

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

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February 29, 2024

Ref. DOC 7161920

VIA EMAIL wstephens@fuscoe.com

Ms. Whitney Stephens
Stormwater Engineer
Fuscoe Engineering
15535 Sand Canyon, Suite 100
Irvine, CA 92618

Dear Ms. Stephens:

Will Serve Letter for 1977 Saturn Street

The Los Angeles County Sanitation Districts (Districts) received your will serve letter request for the subject project located in the City of Monterey Park on February 26, 2024. The proposed project is located within the jurisdictional boundary of District No. 2. We offer the following comments regarding sewerage service:

1. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the Districts, for conveyance to the Districts' Garfield Avenue Trunk Sewer, located in Wilcox Avenue just south of Pomona Boulevard. The Districts' 12-inch diameter trunk sewer has a capacity of 1.8 million gallons per day (mgd) and conveyed a peak flow of 0.5 mgd when last measured in 2016.

2. The wastewater generated by the proposed project will be treated at the A.K. Warren Water Resource Facility (formerly known as the Joint Water Pollution Control Plant) located in the City of Carson, which has a capacity of 400 mgd and currently processes an average flow of 237 mgd.

3. The expected increase in average wastewater flow from the project, described in the application as a 220,000 square-foot data center building, is 3,302 gallons per day, after all structures on the project site are demolished. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, under Services, then Wastewater Program and Permits and select Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.

4. The Districts are empowered by the California Health and Safety Code to charge a fee to connect facilities (directly or indirectly) to the Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities. This connection fee is used by the Districts for its capital facilities. Payment of a connection fee may be required before this project is permitted to discharge to the Districts' Sewerage System. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, under Services, then Wastewater (Sewage) and select Rates & Fees. In determining the impact to the Sewerage System and applicable connection fees, the Districts will determine the user category (e.g. Condominium, Single Family Home, etc.) that best represents the actual or anticipated use of the parcel(s) or facilities on the parcel(s) in the development. For more specific information regarding the connection fee application procedure and fees, please contact the Districts' Wastewater Fee Public Counter at (562) 908-4288, extension 2727.

5. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise the applicant that the Districts intend to provide this service up to the levels that are legally permitted and to inform the applicant of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2708 or at shirlywang@lacsd.org.

Very truly yours,

Shirly Wang

Shirly Wang
Customer Service Specialist
Facilities Planning Department

SW:sw

Los Angeles County Sanitation District

TABLE 1

LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
RESIDENTIAL				
Single Family Home	Parcel	260	1.22	0.59
Duplex	Parcel	312	1.46	0.70
Triplex	Parcel	468	2.19	1.05
Fourplex	Parcel	624	2.92	1.40
Condominiums	Parcel	195	0.92	0.44
Single Family Home (reduced rate)	Parcel	156	0.73	0.35
Five Units or More	No. of Dwlg. Units	156	0.73	0.35
Mobile Home Parks	No. of Spaces	156	0.73	0.35
COMMERCIAL				
Hotel/Motel/Rooming House	Room	125	0.54	0.28
Store	1000 ft^2	100	0.43	0.23
Supermarket	1000 ft^2	150	2.00	1.00
Shopping Center	1000 ft^2	325	3.00	1.17
Regional Mall	1000 ft^2	150	2.10	0.77
Office Building (office)	1000 ft^2	200	0.86	0.45
Professional Building	1000 ft^2	300	1.29	0.68
Restaurant	1000 ft^2	1,000	16.68	5.00
Indoor Theatre	1000 ft^2	125	0.54	0.28
Car Wash				
Tunnel - No Recycling	1000 ft^2	3,700	15.86	8.33
Tunnel - Recycling	1000 ft^2	2,700	11.74	6.16
Wand	1000 ft^2	700	3.00	1.58
Financial Institution	1000 ft^2	100	0.43	0.23
Service Shop	1000 ft^2	100	0.43	0.23
Animal Kennels	1000 ft^2	100	0.43	0.23
Service Station (service station)	1000 ft^2	100	0.43	0.23
Auto Sales/Repair	1000 ft^2	100	0.43	0.23
Wholesale Outlet	1000 ft^2	100	0.43	0.23
Nursery/Greenhouse	1000 ft^2	25	0.11	0.06
Manufacturing	1000 ft^2	200	1.86	0.70
Dry Manufacturing	1000 ft^2	25	0.23	0.09
Lumber Yard	1000 ft^2	25	0.23	0.09
Warehousing (utility)	1000 ft^2	25	0.23	0.09
Open Storage	1000 ft^2	25	0.23	0.09
Drive-in Theatre	1000 ft^2	20	0.09	0.05

TABLE 1
(continued)
LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
C O M M E R C I A L				
Night Club	1000 ft^2	350	1.50	0.79
Bowling/Skating	1000 ft^2	150	1.76	0.55
Club	1000 ft^2	125	0.54	0.27
Auditorium, Amusement	1000 ft^2	350	1.50	0.79
Golf Course, Camp, and Park (Structures and Improvements	1000 ft^2	100	0.43	0.23
Recreational Vehicle Park	No. of Spaces	55	0.34	0.14
Convalescent Home	Bed	125	0.54	0.28
Laundry	1000 ft^2	3,825	16.40	8.61
Mortuary/Cemetery	1000 ft^2	100	1.33	0.67
Health Spa, Gymnasium				
With Showers	1000 ft^2	600	2.58	1.35
Without Showers	1000 ft^2	300	1.29	0.68
Convention Center, Fairground, Racetrack, Sports Stadium/Arena	Average Daily Attendance	10	0.04	0.02
I N S T I T U T I O N A L				
College/University	Student	20	0.09	0.05
Private School	1000 ft^2	200	0.86	0.45
Church	1000 ft^2	50	0.21	0.11

Attachment B – Estimated Total Water Usage (ETWU) Calculations

Estimated Irrigation System Water Use						Historical Eto (in/yr) 46.6	
Landscape Area	Landscape Area (Acres)	Landscape Area (SF)	Plant Factor	Irrig. Efficiency	Gallons per year	Acre-Feet	gpd
Open Space	4.75	206,866.5	0.7	0.81	5,165,124	15.85	14,151.03

The comprehensive equation for calculating Estimated Total Water Use, including any SLAs, is given below.

$$ETWU = (ETo)(0.62)\left(\frac{PF\,x\,HA}{IE} + SLA\right)$$

Where:

ETWU = Estimated Total Water Use per year (gallons)
ETo = Reference Evapotranspiration (inches)
PF = Plant Factor from WUCOLS
HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
SLA = Special Landscape Area (square feet)
0.62 = Conversion Factor
IE = Irrigation Efficiency (minimum 0.81 or 0.75)

Attachment C – Tait Assessment of Water Availability

TAIT
RISING TO THE CHALLENGE
701 N. Parkcenter Drive, Santa Ana, CA 92705
p:714/560/8200 www.tait.com

1977 SATURN STREET, MONTEREY PARK, CA
ASSESSMENT OF WATER AVAILABILITY
TAIT #SP8987

November 9, 2022

INTRODUCTION

The subject site is commercial redevelopment project in the city of Monterey Park. The project includes the construction of a 253,000 square foot building of type V construction with sprinklers and the relocation of an existing water line within the property. This study will analyze the site's water system to verify sufficient water pressure and flow for site fire protection.

SITE CONDITIONS AND ANALYSIS

The existing facility has a public water line looping through the site. A 12" main pipe feeds into the property from the north, where it tees within the parking field to a 12" line that continues south to the 12" main within Saturn Street and an 8" line that goes east around the building before turning south and connecting to the 12" main within Saturn Street. There are several connections to the 8" line that serve each building as well as fire hydrants spaced throughout the site. As part of the project, the building footprint will increase in size and the 8" water line will be relocated further way from the building within the parking field.

For this analysis existing flow and pressure at the site were determined from a Fire Hydrant Flow Test conducted by the City of Monterey Park Public Works Department on 11/1/202. The findings of this flow test were then used to create a model of the water pipe network in the immediate vicinity of the site using WaterCAD v8i by Bentley Systems, Inc.

For site fire protection, Table B105.1(2) of the California Building Code states that the site fire flow protection for a 253,000 square foot building of type V construction, is 25% of 8,000 gpm for sprinklered buildings, equal to 2,000 gpm. The model for the analysis represents the greatest pressure loss the system would experience with 2 of the furthest most elevated hydrants along the 8" line flowing 1,000 gpm each.

CAPACITY ASSESMENT AND CONCLUSION

Fire Flow Test Data

	Flow (gpm)	Pressure (psi)
Static Pressure	0	110
Residual Pressure	1417	95
Calculated @ 20 psi	3729	20

Worst Case Fire Hydrants – Greatest Site Protection Demand Scenario

	Service size	Demand (gpm)	Minimum Residual Pressure (psi)	Residual Pressure (psi)
H-1	6”	1000	20	65
H-2	6”	1000	20	65

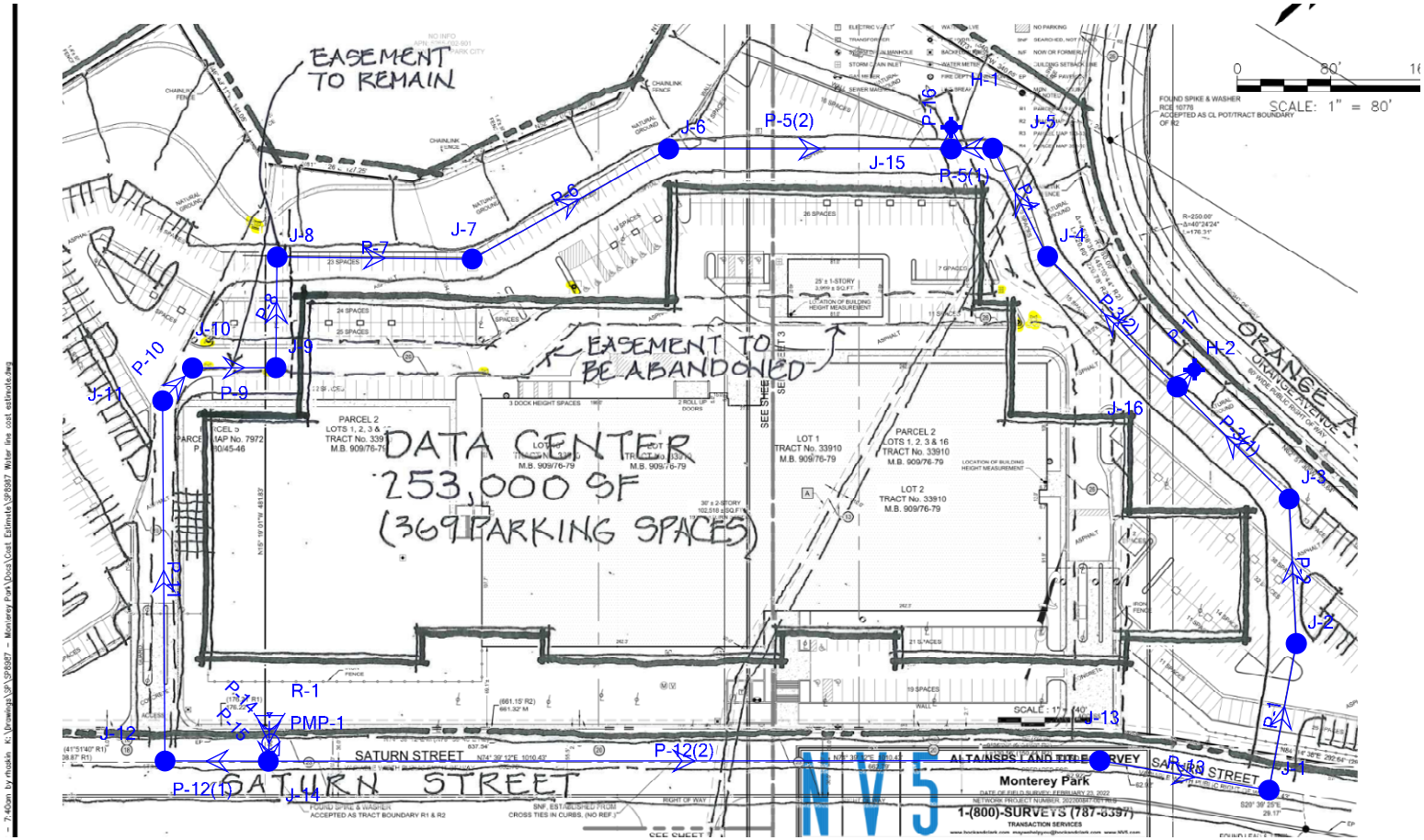
Based on the analysis of site water demands and review of the resulting residual pressures, it has been determined the existing water system at the project site is more than adequate to handle the demands for fire hydrant flow site protection. Furthermore, the relocation of the existing 8” water line within the site is nearly negligible in terms of system pressure loss and will not adversely affect the downstream public water system.

Ryan Haskin, P.E.
TAIT & Associates, Inc.

11/9/2022
DATE



Scenario: Base



FlexTable: Hydrant Table

ID	Label	Length (Hydrant Lateral) (ft)	Include Hydrant Lateral Loss?	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
67	H-1	20	True	366.50	1,000	517.75	65
72	H-2	20	True	367.00	1,000	517.64	65

FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Pressure Loss (psi)
P-1	128	8.0	PVC	150.0	1,055	6.73	1.4
P-2	124	8.0	PVC	150.0	1,055	6.73	1.0
P-4	104	8.0	PVC	150.0	55	0.35	0.0
P-6	193	8.0	PVC	150.0	-945	6.03	1.1
P-7	167	8.0	PVC	150.0	-945	6.03	1.3
P-8	95	12.0	Asbestos Cement	140.0	-945	2.68	0.1
P-9	72	12.0	Asbestos Cement	140.0	-945	2.68	0.1
P-10	38	12.0	Asbestos Cement	140.0	-945	2.68	0.0
P-11	309	12.0	Asbestos Cement	140.0	-945	2.68	0.3
P-13	147	12.0	Asbestos Cement	140.0	1,055	2.99	0.2
P-14	20	48.0	Asbestos Cement	140.0	2,000	0.35	0.0
P-12(1)	89	12.0	Asbestos Cement	140.0	-945	2.68	0.1
P-12(2)	713	12.0	Asbestos Cement	140.0	1,055	2.99	0.9
P-15	14	48.0	Asbestos Cement	140.0	2,000	0.35	0.0
P-5(1)	36	8.0	PVC	150.0	55	0.35	0.0
P-5(2)	242	8.0	PVC	150.0	-945	6.03	1.4
P-16	19	6.0	PVC	150.0	1,000	11.35	1.6
P-3(1)	136	8.0	PVC	150.0	1,055	6.73	1.1
P-3(2)	158	8.0	PVC	150.0	55	0.35	0.0
P-17	21	6.0	PVC	150.0	1,000	11.35	1.6

FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	360.00	0	531.83	74
J-2	360.00	0	528.68	73
J-3	360.00	0	526.27	72
J-4	360.00	0	523.66	71
J-5	361.00	0	523.65	70
J-6	355.00	0	526.92	74
J-7	347.00	0	529.47	79
J-8	344.00	0	532.52	82
J-9	342.00	0	532.76	83
J-10	342.00	0	533.09	83
J-11	342.00	0	533.18	83
J-12	340.00	0	533.99	84
J-13	359.00	0	532.29	75
J-14	340.00	0	534.30	84
J-15	360.23	0	523.65	71
J-16	360.00	0	523.67	71

FlexTable: Reservoir Table

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
56	R-1	346.00	<None>	2,000	346.00

FlexTable: Pump Table

Label	Elevation (ft)	Pump Definition	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
PMP-1	346.10	Connection pressure loss curve	346.00	534.30	2,000	188.30

Pump Definition Detailed Report: Connection pressure loss curve

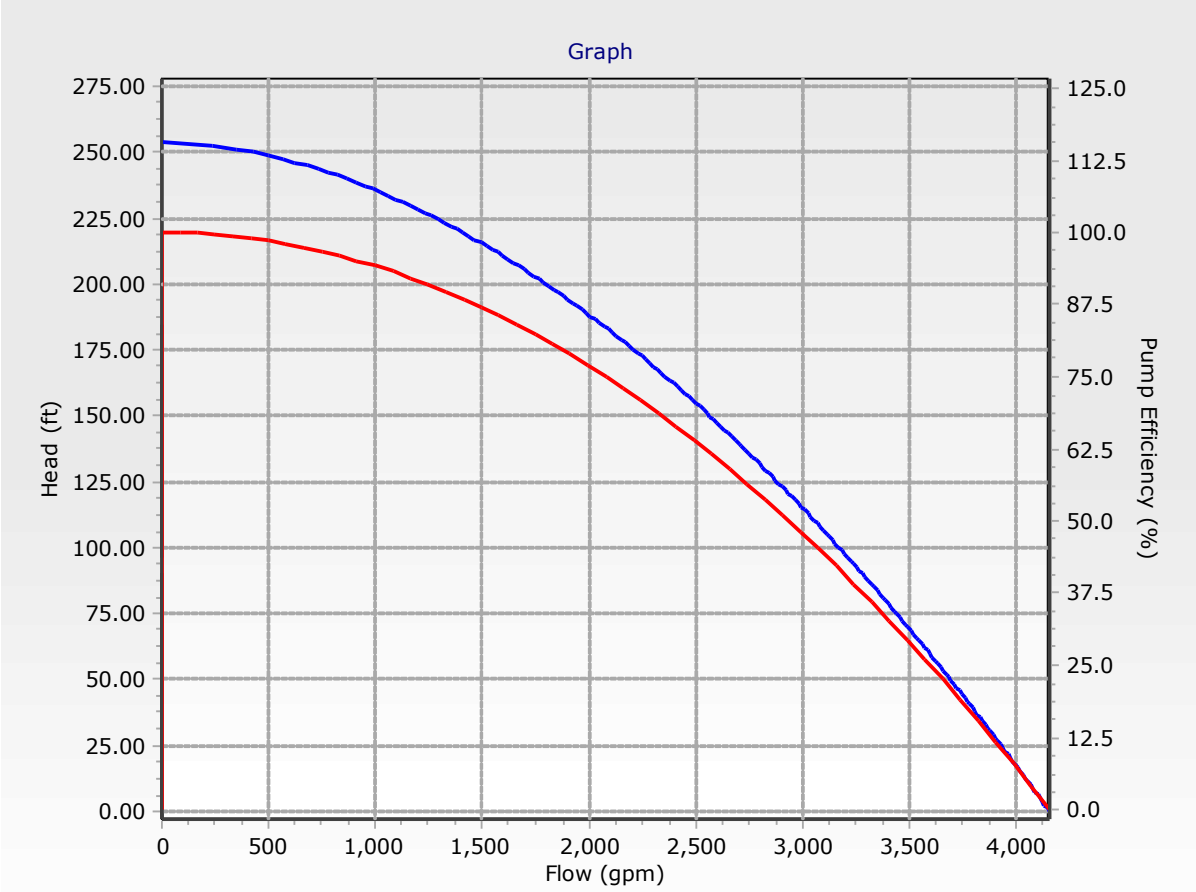
Element Details			
ID	63	Notes	
Label	Connection pressure loss curve		

Pump Definition Type			
Pump Definition Type	Standard (3 Point)	Design Head	219.20 ft
Shutoff Flow	0 gpm	Maximum Operating Flow	3,729 gpm
Shutoff Head	253.80 ft	Maximum Operating Head	46.20 ft
Design Flow	1,417 gpm		

Pump Efficiency Type			
Pump Efficiency Type	Best Efficiency Point	Motor Efficiency	100.0 %
BEP Efficiency	100.0 %	Is Variable Speed Drive?	False
BEP Flow	0 gpm		

Transient (Physical)			
Inertia (Pump and Motor)	0.000 lb·ft²	Specific Speed	SI=25, US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

Pump Definition Detailed Report: Connection pressure loss curve



City of Monterey Park
320 West Newmark Avenue
Monterey Park, CA 91754

Public Works Department
Water Utility Division
Fire Flow Test Data

Project Address:	1977 Saturn St.
Test Date:	11/1/22
Test Outlet Size:	**2.5"**

Static Pressure:	110	**P.S.I.**
Residual Pressure:	95	**P.S.I.**
Pilot Tube Reading:	72	**P.S.I.**
Observed Flow:	1417	**G.P.M.**

Main Diameter:	**12" A.C.P.**
Flow Opening:	**2.5"**

Calculated Flow @ 20 P.S.I.	3729	**G.P.M.**

Test Performed by:	Josue Varela	Herman Magana

Telephone Number:	**(626) 307-1294**
Distribution Crew Supervisor:	**Jorge Medina**

Jorge Medina, Distribution Crew Supervisor

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Attachment D – Fire Flow Test

City of Monterey Park
320 West Newmark Avenue
Monterey Park, CA 91754

Public Works Department
Water Utility Division
Fire Flow Test Data

Project Address:	1977 Saturn St.
Test Date:	11/1/22
Test Outlet Size:	**2.5"**

Static Pressure:	110	**P.S.I.**
Residual Pressure:	95	**P.S.I.**
Pilot Tube Reading:	72	**P.S.I.**
Observed Flow:	1417	**G.P.M.**

Main Diameter:	**12" A.C.P.**
Flow Opening:	**2.5"**

Calculated Flow @ 20 P.S.I.	3729	**G.P.M.**

Test Performed by:	Josue Varela	Herman Magana

Telephone Number:	**(626) 307-1294**
Distribution Crew Supervisor:	**Jorge Medina**

Jorge Medina, Distribution Crew Supervisor

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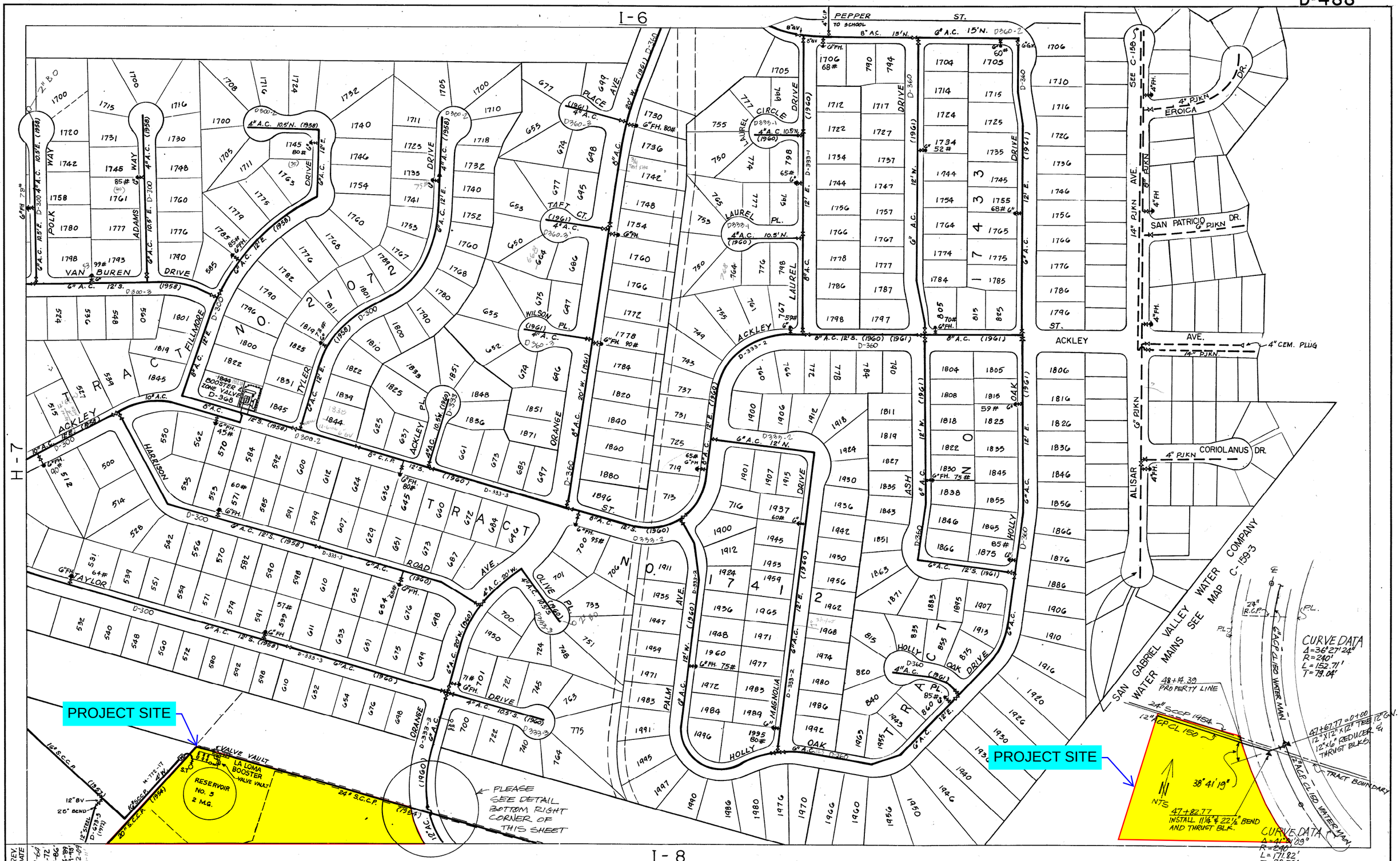
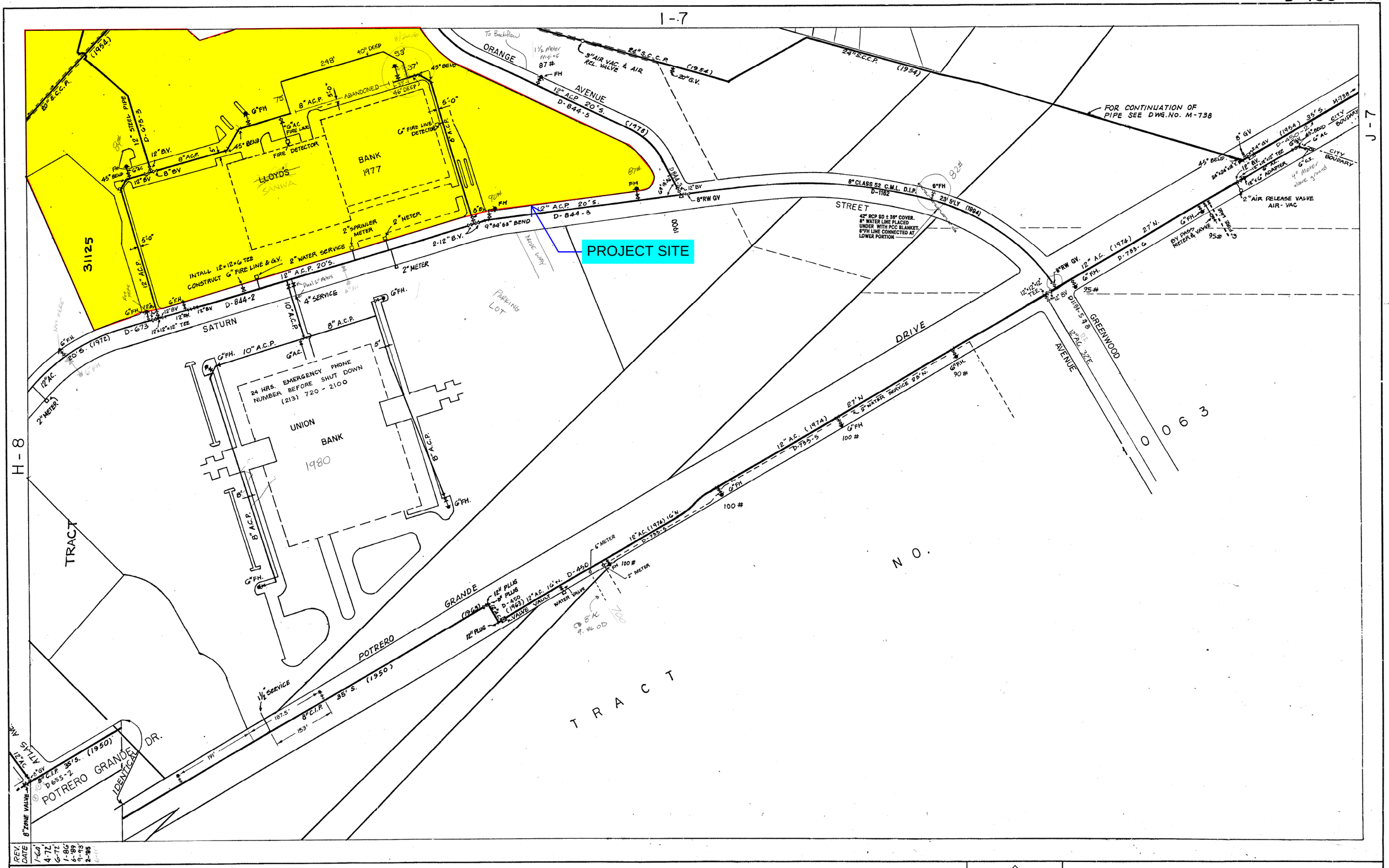
Attachment E – Water & Sewer Maps



CITY OF MONTEREY PARK – WATER DIVISION

N
SCALE 1" = 100'

ATLAS SHEET No. I-7

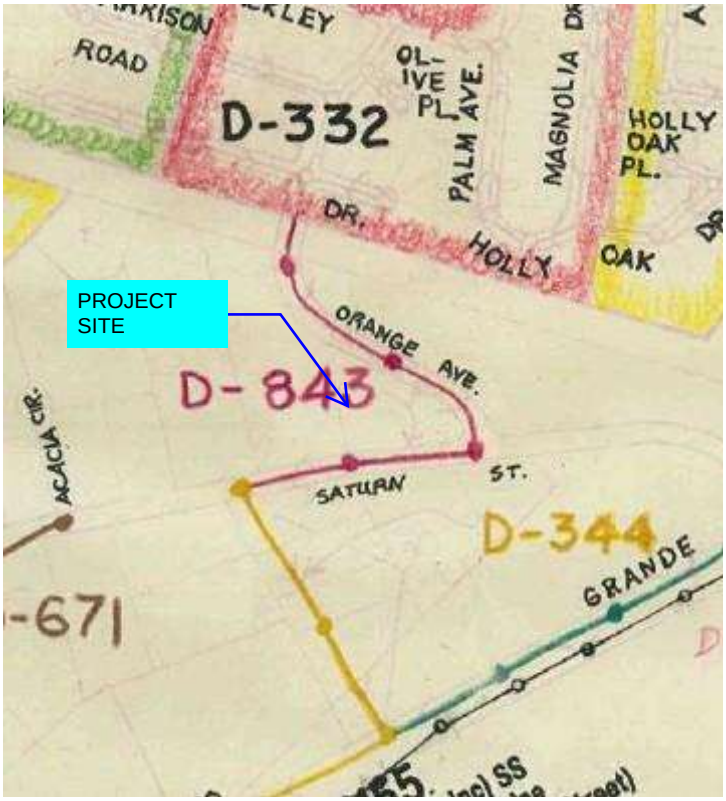


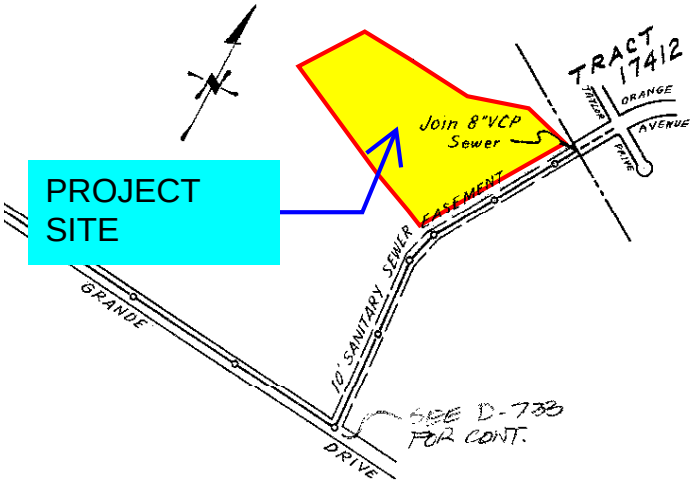
CITY OF MONTEREY PARK – WATER DIVISION

N
SCALE 1" = 100'

ATLAS SHEET No. I-8

Sewer Atlas Map





Attachment F – Sewer Flow-Depth Calculations

Monterey Park - Existing 8" Sewer in Saturn Street
Capacity at 50%-full

Cells that are highlighted can be changed

GIVEN:

Qgiven=	**0.500**	cfs	*<== Discharge*
n=	**0.014**		*<== Roughness coefficient*
S=	**0.0100**		*<== Slope V:H*
r=	**0.333**	ft	*<== Radius*

225 gpm

TRIAL DEPTH:

h=	**4.000**	in	*<== Vary this depth to get $Q_{assume} = Q_{given}$*
	0.333	ft	

CACULATIONS:

beta=	90.06	degree
R=	0.167	ft
C=	70.252	
V=	2.868	ft/sec
A=	0.174	sq. ft.
Q_{assume}=	0.500	cfs
$Q_{halffull}$ =	**0.50**	**cfs**

$Q_{3/4full}$ = 0.93 cfs

RESULT:

(Qgiven-Qassume) / Qgiven %= 0% **<======== OK**

Flow Depth (in) = 4.000

Capacity d/r = 100.10%

$Q_{capacity}$ = 0.500 cfs

Capacity $Q_{given}/Q_{capacity}$ = 99.92%

($Q_{halffull}$ =	0.50	**cfs**	**($Q_{3/4full}$ =**	0.93 **cfs**
$beta_{halffull}$=	90.000	degree	$beta_{3/4full}$=	120.00 degree
$R_{halffull}$ =	0.167	ft	$R_{3/4full}$=	0.201 ft
$C_{halffull}$ =	70.301	ft	$C_{3/4full}$=	74.163 ft
$A_{halffull}$ =	0.174	sq. ft.	$A_{3/4full}$=	0.280 sq. ft.
$V_{halffull}$ =	2.873	ft/sec)	$V_{3/4full}$=	3.324 ft/sec)

Monterey Park - Existing 8" Sewer in Saturn Street
Using Project Flows only. Note: manhole monitoring will be required to confirm existing sewer flows.

Cells that are highlighted can be changed

GIVEN:

Qgiven=	**0.025**	cfs	*<== Discharge*
n=	**0.014**		*<== Roughness coefficient*
S=	**0.0100**		*<== Slope V:H*
r=	**0.333**	ft	*<== Radius*

11 gpm

TRIAL DEPTH:

h=	**0.960**	in	*<== Vary this depth to get $Q_{assume} = Q_{given}$*
	0.080	ft	

CACULATIONS:

beta=	40.56	degree
R=	0.050	ft
C=	47.351	
V=	1.062	ft/sec
A=	0.024	sq. ft.
Q_{assume}=	0.025	cfs
$Q_{halffull}$ =	**0.50**	**cfs**

$Q_{3/4full}$ = 0.93 cfs

RESULT:

(Qgiven-Qassume) / Qgiven %= -1% **<======= OK**

Flow Depth (in) =	**0.960**
Capacity d/r =	**24.02%**
$Q_{capacity}$ =	**0.500 cfs**
Capacity $Q_{given}/Q_{capacity}$ =	**5.00%**

($Q_{halffull}$ =	0.50	**cfs**	**($Q_{3/4full}$ =**	0.93	**cfs**
$beta_{halffull}$=	90.000	degree	$beta_{3/4full}$=	120.00	degree
$R_{halffull}$ =	0.167	ft	$R_{3/4full}$=	0.201	ft
$C_{halffull}$ =	70.301	ft	$C_{3/4full}$=	74.163	ft
$A_{halffull}$ =	0.174	sq. ft.	$A_{3/4full}$=	0.280	sq. ft.
$V_{halffull}$ =	2.873	ft/sec)	$V_{3/4full}$=	3.324	ft/sec)