Appendix 9.13
Utilities and Service Systems Data

FUSCOE ENGINEERING

GARDENA TOD SPECIFIC PLAN

INFRASTRUCTURE ASSESSMENT FOR WATER AND SEWER

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1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The proposed Gardena TOD Specific Plan Project ("Project", "Gardena Project") will redevelop 1.33 acres located at 12850 & 12900 Crenshaw Boulevard ("Project Site") in the City of Gardena (City), within the County of Los Angeles. The Project site is bounded by Crenshaw Boulevard to the west, the Dominguez Drainage Channel to the east, and existing commercial land uses to the north and south.

The Project will consist of redevelopment of an existing parking lot and industrial/warehouse building into a multi-story apartment complex. The complex will be 8 stories in total, with 5.5 stories dedicated to apartment units and associated amenities and 2.5 levels dedicated to parking. Proposed amenities include a pool and outdoor lounge area. A total of up to 265 apartment-style units are proposed.

1.2 SCOPE OF WORK

As part of the environmental impact report (EIR) for the Project, the purpose of this report is to analyze the potential impacts of the Project upon the existing water and wastewater infrastructure systems. The current location of existing water and wastewater infrastructure, analysis of potential Project impacts related to this infrastructure, and any applicable mitigation measures are discussed in this technical report.

2. REGULATORY FRAMEWORK

2.1 WATER

The Project Site receives water supply from the Golden State Water Company Southwest region (GSWC), the primary water purveyor for the City. As the primary supplier of water to the City, GSWC must comply with all applicable regulations at the State and Federal level.

Applicable regulations affecting GSWC 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 the 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. GSWC's most recent UWMP update was in 2015 and identified adequate supplies to match modeled demands through 2040. SB 610 requires 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 it proposes under 500 dwelling units.

The City of Gardena has adopted the Los Angeles County Fire Code, including its associated fire flow requirements. Pursuant to County of Los Angeles Code Chapter 20.16.060, minimum fire flow requirements shall be determined by the Fire Chief or Fire Marshall based on land use, assuming a minimum operating pressure of 20 pounds per square inch (psi). Site-specific fire flow requirements of 3,000 gpm have been provided as a part of Appendix D of this report.

2.2 WASTEWATER

The Project is located within the City of Gardena, and is subject to Gardena Municipal Code Chapter 13.04. The City does not provide will-serve letters for new sewer connections, but instead requires a sewer study/flow capacity analysis. New connections are subject to sewer connection fees.

As the Project site is located in the County of Los Angeles, it falls under the jurisdiction of the Los Angeles County Sanitation Districts (LACSD). The LACSD consists of 24 independent special districts and serves 5.6 million people in Los Angeles County. The service areas cover approximately 850 square miles and encompass 78 cities and unincorporated areas in the county. The sewer system is comprised of 1,400 miles of sewer lines, 49 pumping plants, and 11 wastewater treatment plants. The Project Site lies within the Joint Water Pollution Control Plant Sanitary Sewer System service area (JWPCP).

3. ENVIRONMENTAL SETTING

3.1 WATER

3.1.1 REGIONAL

GSWC maintains water infrastructure serving the Project area and provides domestic water service to the Project Site. GSWC is an investor-owned public utility company, which owns 39 water systems throughout California regulated by the California Public Utilities Commission (CPUC). An Urban Water Management Plan (UWMP) has been prepared for the Southwest System. Located in Los Angeles County, the Southwest System serves the Cities of Gardena and Lawndale, parts of the cities of Carson, Compton, El Segundo, Redondo Beach, Hawthorne and Inglewood, and portions of unincorporated parts of Los Angeles County.

Water is purchased from the Central Basin Municipal Water District (CBMWD) and the West Basin Municipal Water District (WBMWD), which are both large purveyors of water in southern California that obtain their imported water supplies from the Metropolitan Water District of Southern California (Metropolitan). CBMWD and WBMWD provide water to several agencies, including GSWC. GSWC obtains water from these districts for several systems including the Southwest System.

3.1.2 LOCAL

The Project Site is currently served entirely by a public GSWC 8" water line that runs underneath Crenshaw Blvd. See Appendix A for an excerpt from the Water Atlas Map showing the Project location.

3.1.3 ON-SITE

As described above, the Project Site is currently occupied by an existing light industrial/warehouse building (commercial) and a parking lot. Table 1 shows the estimated existing water demand for the Project Site, prepared based on the Los Angeles County Sanitation Districts (LACSD) wastewater generation factors for Commercial Shops and Stores. In order to reflect the existing low-intensity land use, 50% of the standard Commercial Shops and Stores generation factor was used for existing condition demand estimates. This lower flow factor results in a larger estimated increase from existing to proposed Project buildout conditions, ensuring that impact analysis is conservative.

Table 1 – Estimated Existing Water Demand

Land Use	Building Square Footage	Est Avg. Daily Sewage Flow Factor (gal/1000 SF gross area)[1]	Total Average Daily Consumption (gpd)
Commercial	25,530	50	1,277
		Total Existing Water Demand	**1,277**

Notes

[1] Based on "Estimated Average Daily Sewage Flows for Various Occupancies" document. The specific occupancy type does not exist in the tables. Commercial shops and stores was used as the basis of design. To ensure

conservative existing flow estimates and reflect the low-intensity usage, the existing sewer generation factor reduced by 50%.

There is currently one (1) existing fire hydrant located within the vicinity of the Project Site boundary. The existing fire hydrant is located 40' north of the public GSWC 8" water line.

3.2 WASTEWATER

3.2.1 REGIONAL

Regional wastewater service is provided by LACSD. Flows from the Project Site drain to the JWPCP in Carson. The JWPCP currently treats an average of 260 million gallons of wastewater per day, and has a total permitted capacity of 400 million gallons per day (MGD). LACSD's 2019 Annual Report notes that a pilot project to provide up to 500,000 gallons per day of recycled water for indirect potable reuse was implemented at the JWPCP, with plans for full implementation in the future.

3.2.2 LOCAL

Wastewater at the Project Site is conveyed via an existing 8" public sewer line owned and maintained by the City of Gardena. The 8" sewer line continues underneath Crenshaw Blvd to the south, and enters into a 10" LACSD trunk line at the intersection of Crenshaw Blvd and W 135th St. Sewer flows ultimately drain to the JWPCP.

3.2.3 ON-SITE

There is currently one existing sewer lateral connecting from the City's public sewer system to the Project Site. This sewer line connects underneath Crenshaw Blvd and W 135th St.

Table 2 shows the estimated existing wastewater generation for the Project Site, based on LACSD wastewater generation factors. As LACSD does not have a specific designation for warehouse space, the sewer generation factor for Commercial Shops and Stores was used to calculate total existing daily wastewater flows. As noted in Section 3.1.3, this generation factor was then reduced by 50% to ensure that the largest increase in flows from existing conditions to proposed conditions was modeled, resulting in a more conservative impact analysis. This methodology is consistent with the sewer capacity study shown in Attachment B.

Table 2 – Estimated Existing Wastewater Generation

Land Use	Building Square Footage	Est Avg. Daily Sewage Flow Factor (gal/1000 SF gross area)[1]	Total Wastewater Generation (gpd)	*Est. Daily PEAK Flow (gpd) = Avg. Daily Flow * 2.5
Commercial	25,530	50	1,277	3,191
		Total Existing Sewer Demand	**1,277**	**3,191**

Notes

[1] Based on "Estimated Average Daily Sewage Flows for Various Occupancies" document. The specific occupancy type does not exist in the tables. Commercial shops and stores were used as the basis of design. To ensure conservative existing flow estimates and reflect the low-intensity usage, the existing sewer generation factor was reduced by 50%.

4. SIGNIFICANCE THRESHOLDS

California Environmental Quality Act (CEQA) significance criteria are used to evaluate the degree of impact caused by a development project on environmental resources such as hydrology and water quality. According to Appendix G, Section XIX of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would impact the thresholds listed for each utility below:

4.1 WATER

Would the project:

A. Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects?

B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

4.2 WASTEWATER

Would the project:

A. Require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects?

C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

5. METHODOLOGY

5.1 WATER

This report analyzes the potential impacts of the Project on the existing public water infrastructure by comparing the estimated Project water demand with the calculated available capacity of the existing facilities. As sewer flows and water demands are correlated and similar for indoor water usage, the existing and proposed water demands are based on LACSD sewer generation factors. Additional water demands as a result of proposed landscaping features were calculated using the Estimated Total Water Use Equation (ETWU). The ETWU utilizes planting and irrigation efficiency estimates to calculate total annual water use for landscaping. GSWC will also provide confirmation of water supplies available for the proposed Project and adequate capacity to deliver water to the Project. Fire flows were tested on 10/9/2019 at Hydrant #163 for a total duration of 2 hours in order to determine adequate flow at the minimum requirement of 20 psi.

5.2 WASTEWATER

This report analyzes the potential impacts of the Project on the existing private and public sewer infrastructure by comparing the estimated Project sewer flows with the available capacity of the existing facilities. LACSD sewer generation factors will be utilized to estimate existing and proposed sewer flows.

□

6. PROJECT IMPACTS

6.1 CONSTRUCTION

6.1.1 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. Construction water demands are typically less than the long-term operational water demand of a project and are temporary. It is anticipated that existing water infrastructure would be sufficient to meet the limited, temporary water demand associated with construction of the Project. Therefore, impacts to water infrastructure due to construction activity are considered less than significant.

The Project will require construction of new, on-site water distribution lines to serve new buildings, as well as the potential relocation of existing lines. Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the lines below surface. When considering impacts resulting from the installation of any required water infrastructure, all impacts are of a relatively short-term duration (i.e., months) and would cease to occur once the installation is complete. Installation of new 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 are anticipated. Prior to ground disturbance, Project contractors would coordinate with GSWC to identify the locations and depth of all lines. Further, GSWC and the City of Gardena would be notified in advance of proposed ground disturbance activities to avoid water lines and disruption of water service. Therefore, Project impacts on water associated with construction activities would be temporary and less than significant.

6.1.2 WASTEWATER

Construction activities for the Project could result in temporary wastewater generation on-site. However, such use would be temporary and nominal 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 connections to the public main. No upgrades to the public main are anticipated. Any work that may affect services to the existing sewer lines will be coordinated with the City of Gardena. 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. Therefore, Project impacts on wastewater associated with construction activities would be less than significant.

6.2 OPERATION

6.2.1 WATER

6.2.1.1 WATER CONSUMPTION

Based on the Project's proposed land uses, the Project's estimated water consumption is approximately 50,506 gallons per day (gpd), resulting in a net increased water demand of approximately 49,229 gpd over existing conditions. These demand numbers were calculated using 100 percent of LACSD wastewater generation factors in addition to the ETWU equation for proposed landscaping.

Table 3 – Estimated Proposed Water Demand

Land Use	Units	Avg. Generation Factor (gpd/unit)[1]	Total Water Demand (gpd)
Studio Unit	92 units	150 gpd/unit	13,800
1 Bedroom Unit	133 units	200 gpd/unit	26,600
2 Bedroom Unit	40 units	250 gpd/unit	10,000
Landscaping	1,550 SF	ETWU Method[2]	106
Total Proposed Water Demand			**50,506**
Total Existing Water Demand			**1,277**
Project Net Water Demand (Proposed – Existing)			**+ 49,229**

Notes
[1] Based on 100% of the LACSD sewer generation factors.
[2] Demands 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.

GSWC's 2015 Urban Water Management Plan (UWMP) projects water demands to increase from 33,266 acre-feet per year (AFY) in 2020 to 34,975 AFY in 2040 for both normal and dry years representing an increase in demand of 1,709 AF. The proposed increase in demand from the Project of 49,229 gpd (55 AFY) represents approximately 3% of the total increase in demand from 2020 to 2040 in the UWMP. The UWMP also projects adequate supplies to meet all future demands.

6.2.1.2 WATER INFRASTRUCTURE ASSESSMENT

A Will Serve Letter and Service Map was received from GSWC on 10/1/2019, which confirmed the availability of water service for the project (see Attachment C).

6.2.1.3 FIRE FLOW REQUIREMENTS

Los Angeles County Fire Code requirements (Chapter 20.16.060) allow the fire chief or fire marshal to determine the minimum fire flow for proposed projects. The site-specific conditions of approval require a demonstration of 3,000 gpm at 20 psi residual pressure for a duration of 3 hours.

A fire flow test for the Project site was conducted on 10/9/2019, using the 6" hydrant located nearest the Project Site (Hydrant 163) to determine if adequate capacity exists within the 8" water main as well as the hydrants serving the Project. At the required residual pressure of 20 psi, a fire flow of 7,124 gpm was provided for the duration of the test (3 hours). The available flow of 7,124 gpm satisfies and exceeds the site-specific requirements of 3,000 gpm. Under proposed conditions, and additional public fire hydrant will be installed on Crenshaw Boulevard along the southern end of the Site frontage. The fire flow results indicate adequate fire flow availability and infrastructure capacity within the 8" water main for the proposed Project. See Attachment D for fire flow test results.

Based on the adequate water supply capacity, GSWC's will serve letter, and the satisfactory results of the fire flow test, impacts on water infrastructure would be less than significant.

6.2.2 WASTEWATER

6.2.2.1 SEWER GENERATION

The Project's estimated sewer flows were based on LACSD sewer flow factors. Based on the proposed uses and generation factors, the Project's projected wastewater generation is approximately 50,400 gpd, representing a net increase in wastewater generation at the Project Site of approximately 49,123 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)
Studio Unit	92 units	150 gpd/unit	13,800
1 Bedroom Unit	133 units	200 gpd/unit	26,600
2 Bedroom Unit	40 units	250 gpd/unit	10,000
Total Proposed Wastewater Flow			**50,400**
Total Existing Wastewater Flow			**1,277**
Project Net Wastewater Flow (Proposed – Existing)			**+ 49,123**

Notes
[1] Based on 100% of the LACSD sewer generation factors.

6.2.2.2 INFRASTRUCTURE CAPACITY

The Project will be served by the 8" line located on Crenshaw Boulevard. The City of Gardena will require a sewer connection permit with LACSD and associated connection fees. These fees will be utilized to cover any infrastructure improvements required as a result of Project implementation. The proposed Project allows for up to 265 units, as presented in this report which results in a d/D of 0.51. With a measured d/D at the bottom end of the 0.5-0.75 reference range for on-site analysis, the sewer main in Crenshaw is anticipated to have adequate capacity, and additional sewer main improvements will not be required. A site-specific Sewer Study was submitted to the City (Sewer Area Study dated 10/22/2020 was previously approved by the City, see Appendix B for most up to date Sewer Area Study).

City flows drain to LACSD wastewater infrastructure, and are ultimately conveyed to the JWPCP. The JWPCP has a capacity of 400 mgd and currently treats approximately 260 mgd. The Project's estimated wastewater generation increase of 49,123 gpd or 0.0 mgd comprises less than 0.03 percent of the remaining available capacity of the JWPCP. In addition, a Will-Serve Letter dated 6/25/2020 was provided by LACSD for the proposed project (Appendix E). Therefore, based on LACSD's will serve letter and the available wastewater treatment capacity, impacts on wastewater infrastructure would be less than significant.
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7. IMPACT ASSESSMENT

7.1 WATER

Impact A. Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects?

The proposed Project will increase the water demands for the site by 49,229 gpd. A will serve letter was provided for the Project by GSWC on 10/1/2019, and it is not anticipated that the 8" line located in Crenshaw Boulevard will need to be upsized as a result of Project buildout. As noted in Section 6.2.1.3, a fire flow test was performed for the site and returned a fire flow of 7,124 gpm at 20 psi for the 3-hour test duration, exceeding the site-specific requirement of 3,000 gpm. This also indicates adequate infrastructure capacity in the 8" water main serving the site. In the case of any modifications to water transmission lines or laterals, all applicable local, regional, and state-level construction management ordnances shall be followed, minimizing environmental impact. Impacts to water infrastructure will be less than significant.

Impact B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

As noted in Sections 6.1.1 and 6.1.2, the Project is anticipated to increase water demands by 55 AFY under buildout conditions. This represents 3% of the total increase in demands (1,709 AFY) anticipated for the GSWC service area from 2020 to 2040 identified in the 2015 UWMP for both normal years and dry years. Based on the above, it is anticipated that GSWC would be able to supply the demands of the Project and future growth. Therefore, impacts on water supply will be less than significant.

7.2 WASTEWATER

Impact A. Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects?

Under proposed conditions, the Project site will be served by the same City of Gardena infrastructure as under existing conditions. Flows are anticipated to increase under Project buildout by 49,123 gallons per day. A site-specific Sewer Study dated 10/22/2020 was previously approved by the City and LACSD has provided a will-serve letter for the Project site. The d/D of the sewer main is 0.51. Since the measured d/D is at the bottom end of the 0.5-0.75 reference range for on-site analysis, it is not anticipated that any City or County sewer lines will need to be upsized as a result of the Project. In the case where infrastructure needs to be upsized, the City of Gardena utilizes sewer impact fees to fund construction of new lines. For any new connections, laterals, or trenching that is required as a part of Project construction, all pertinent local, regional, and state-level regulations will be followed, minimizing environmental impact. Impacts to wastewater facilities will be less than significant.

Impact C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Wastewater generated by the Project would be conveyed via the existing wastewater conveyance systems for treatment at the JWPCP. As noted in Section 3.2.1, existing design capacity of the JWPCP is approximately 400 million gallons per day (mgd) and the existing average daily flow for the system is approximately 260 mgd. The Project's total estimated wastewater generation increase of 49,123 gpd summarized in Table 4 comprises less than 0.03 percent of the available 140 mgd capacity in the system (250 mgd). Through appropriate planning such as Sewer Master Plans and long-term flow projections, LACSD will be able to effectively serve the Project and update sewer infrastructure as needed. Impacts to services provided by the wastewater treatment provider will be less than significant.
□

8. CUMULATIVE IMPACTS ASSESSMENT

8.1 WATER

The Project has a will serve letter from GSWC for the 8-inch water line along Crenshaw Boulevard that serves the Project Site. Analysis of more detailed development plans may require that the Project construct additional facilities prior to the provision of water service. However, at this time GSWC has not indicated that this is needed. Regarding potential cumulative impacts on water supply within the GSWC Southwest System service area that serves the Project, GSWC is required to prepare and periodically update a UWMP to plan and provide for water supplies to serve existing and projected demands. The 2015 UWMP prepared by GSWC for the Southwest System, accounts for existing development within the City, as well as projected growth through the year 2040. The increase in water demands of 49,229 gpd gpd or 55 AFY from the proposed Project is well within the planned increases in water demands within the GSWC service area (1,709 AFY anticipated from 2020 to 2040 for both normal and dry year scenarios). Therefore, it is anticipated that GSWC would be able to supply the demands of the Project as well as future growth.

Additionally, GSWC keeps records of proposed capital improvements within the Southwest System area[1] to account for various infrastructure upgrades to support existing service and new developments. This highlights the GSWC's ability to successfully track and manage infrastructure needs of its service area. Twelve projects relating to water distribution, 18 projects relating to water treatment, and 2 projects relating to ongoing improvements, are either currently in development or planning. Of those listed, none are within proximity to the Project Site. GSWC regularly updates this list of projects and can request additional upgrades to infrastructure if necessary. GSWC is able to account for changes in development around the Project Site and can mitigate for deficiencies as needed. Therefore, cumulative impacts on water supply would be less than significant.

8.2 WASTEWATER

The Project will result in the additional generation of sewer flow. However, as discussed above, a sewer area study completed by Fuscoe Engineering (Attachment B) is currently under review by the City with approval anticipated, and a will-serve letter has been provided by LACSD for the Project site. The sewer area study concluded that adequate capacity within the sewer infrastructure exists to serve the Project.

Additionally, the City keeps records of all proposed developments in the City and the immediately adjacent area. Of the 22 projects currently in development or planning within the City or immediately adjacent areas, only two are within a mile of the Project Site. Both of these Projects are located within the City of Hawthorne. The first project is a 62,000 square foot industrial warehouse located on Cerise to the northwest of the Project site, and the second is a mixed-use project consisting of 238 dwelling units and 3,100 square feet of restaurant space located on Crenshaw immediately north of the Project site (Hawthorne Green Line Mixed Use Specific Plan). Flows from both of these sites connect to the El Segundo trunk line located north

[1] 2020 GSWC Capital Project List of Improvements. June 23, 2020. https://www.gswater.com/sites/main/files/file-attachments/region_ii_-_southwest__planned_improvements_2020.pdf?1592515356

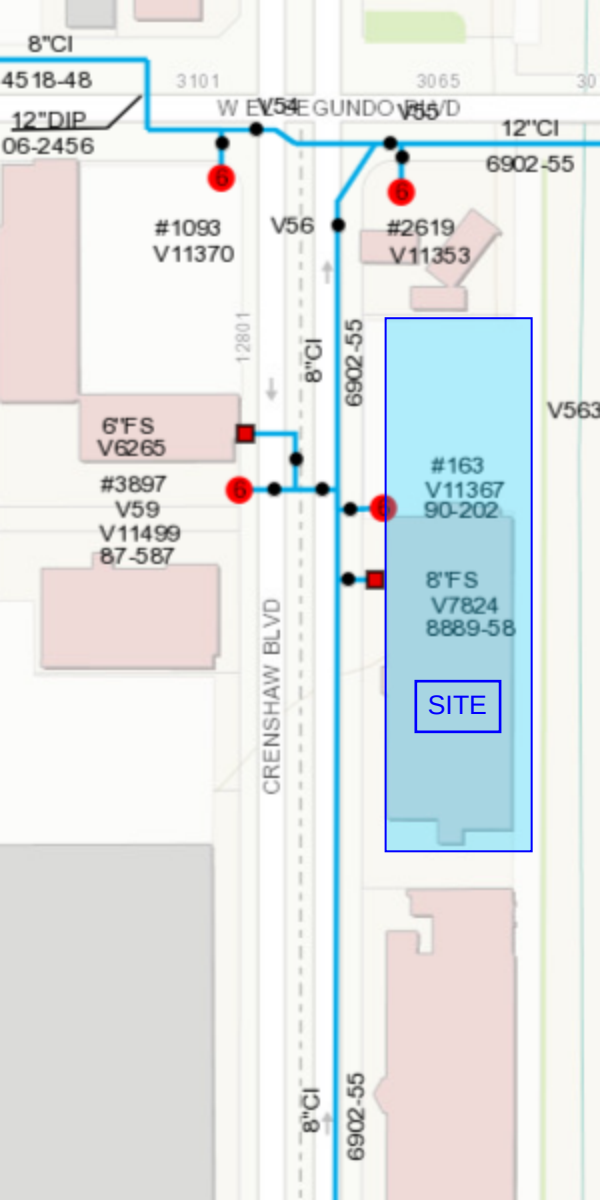
of the Project site. Neither of these sites drain through the 8" line located in Crenshaw Blvd that serves as the connection point for the Project into City and regional sewer systems. Therefore, no cumulative impacts to the sewer infrastructure serving the Project site are anticipated.

The City regularly updates this spreadsheet to keep track of various developments that may impact infrastructure. The City has the ability to charge impact fees and can request additional upgrades to infrastructure if necessary. The City is also able to account for changes in development around the Project Site and can mitigate for deficiencies as they arise.

The City also corresponds periodically with regional wastewater providers such as LACSD to confirm regional infrastructure capacity exists. Wastewater generated by the Project would be conveyed via the existing City wastewater conveyance systems for ultimate treatment at the JWPCP owned and maintained by LACSD. The Project's total estimated wastewater generation increase of 49,123 gpd comprises less than 0.03 percent of the available capacity in the JWPCP system (250 mgd). Based on these forecasts, the Project's increase in wastewater generation would be adequately accommodated by the JWPCP. Related projects must go through the same analysis to determine if any facilities will need to be upgraded to accommodate for the increase in capacity. It is not anticipated that increases in sewer flows from Project buildout, or redevelopment of the area surrounding the Project Site, including the 22 projects currently under review by the City, will adversely impact the capacity of local or regional wastewater infrastructure or the wastewater treatment plant. Therefore, cumulative impacts would be less than significant.

ATTACHMENT A

WATER ATLAS EXCERPT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ATTACHMENT B

SEWER AREA STUDY

FUSCOE ENGINEERING

SEWER AREA STUDY

12850 Crenshaw Blvd., Gardena

City of Gardena
County of Los Angeles, California

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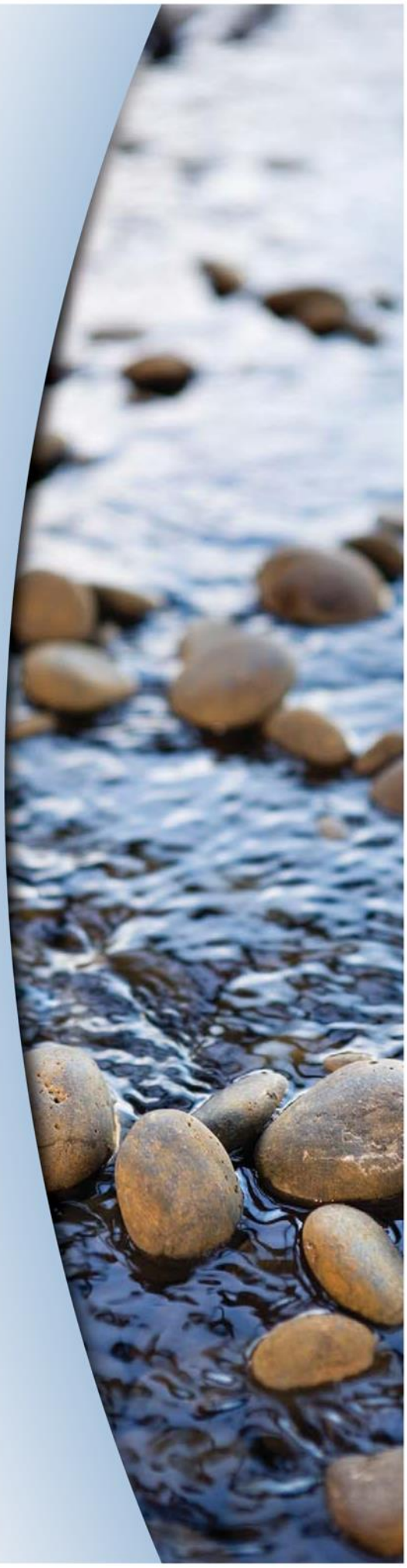

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APPENDICES

1.0 INTRODUCTION

The following Sewer Area Study has been prepared by FUSCOE ENGINEERING INC. to:

a.) Determine and illustrate the capacity of the existing sewer segments from the proposed development site to the City of Gardena maintained sewer facility.

b.) Determine and assess the existing sewer facilities' capacity to adequately service the proposed development's demand.

The project site address is 12850 Crenshaw Blvd. The site is bound by Crenshaw Blvd to the west, a gas station to the north, the Dominguez Channel to the east, and a commercial property to the south. The study area is delineated by the existing sewer system within Crenshaw Blvd. The study begins at a manhole at the intersection of El Segundo Blvd. and Crenshaw Blvd. and ends at the intersection of 135th Street and Crenshaw Blvd.

This sewer study is based on concept plans prepared by Architects Orange, dated November 15, 2019. This analysis will include tributary flow data collected through field investigations/monitoring of the sewer system from the proposed development.

2.0 PROJECT DESCRIPTION

The proposed development will be an 8-story multifamily apartment building consisting of up to 265 residential units with 2.5 levels of parking consisting of 250 stalls. The project will connect to the 8" VCP sewer main in Crenshaw Blvd. The proposed project site will mimic the existing site topography where the majority of the site will be graded from the northeast boundary to the southwest boundary.

3.0 SITE DESCRIPTION

The limits of the area study consider the flows measured at the manholes within Crenshaw Blvd from El Segundo Blvd down to 135th Street as well as the proposed site development area.

The project site is within the existing APN #4060-004-039, found in the records of the County of Los Angeles, State of California. The proposed 265 Residential Unit project consists of the redevelopment a 1.33-acre parcel which previously served as a commercial/industrial center. The site is situated on the east side of Crenshaw Blvd about 130 feet south from the intersection of El Segundo Blvd and Crenshaw Blvd in the City of Gardena. The project site is approximately 0.7 miles south of the 105 Freeway.

Refer to **Figure 1, Vicinity Map**, for the project location and general vicinity context.

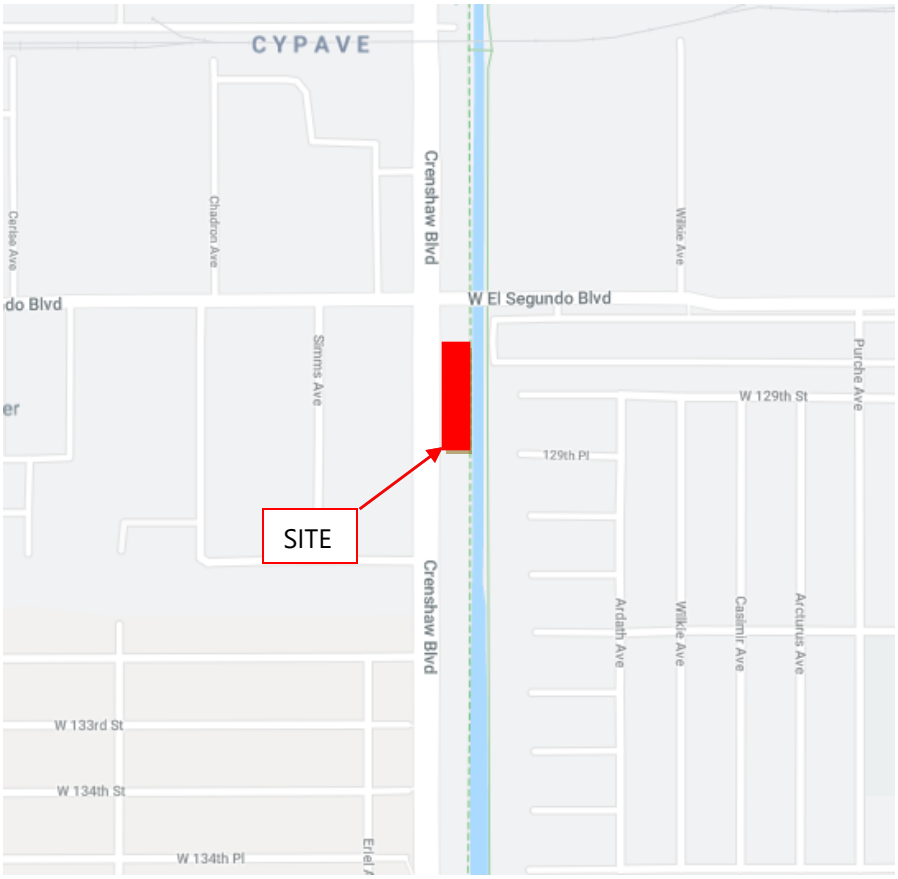


FIGURE 1 - VICINITY MAP

4.0 SEWAGE SYSTEM DESCRIPTION

4.1 EXISTING SEWER SYSTEM

An existing 8-inch VCP sewer main serving the site, under the local jurisdiction of the City of Gardena, is located 34' east of the centerline of Crenshaw Blvd and to the west of the project site. Utility Systems, Science, and Software (US^3) performed sewer flow monitoring on the 8-inch VCP sewer line starting at the intersection of El Segundo Blvd and Crenshaw Blvd and ending at the intersection of 135th Street and Crenshaw Blvd. Per city direction, this portion of the sewer main (about 2,580 feet long) consisting of 9 manholes was cleaned and video recorded. The flow monitoring took place at manhole #1 within the intersection of Crenshaw Blvd and El Segundo Blvd. This sewer main currently serves the properties on the east side of Crenshaw Blvd between the above mentioned intersections. (**See Appendix C for the existing sewer as-built plans**).

The 8" sewer main has a southerly flow conveyance toward the Moneta Trunk Sewer in West Rosecrans Ave. This sewer main has a slope of 0.0024. The report completed by US^3 gives a maximum flow depth during the study period of 1.36". The measured peak flow rate in the 8-inch pipe is 24,500 GPD. The average flow depth during the study period is 0.76" (d/D = 0.095) with an average flow rate of 5,000 GPD. This average flow rate was calculated using Kutter's formula, with a roughness coefficient of n=0.015, slope of 0.0024, and a flow depth of 0.76". (**See Appendix E for the complete US^3 Report**).

Any existing on-site sewer lines uncovered during demolition and excavation shall be capped and abandoned at the right of way.

4.2 PROPOSED SEWER SYSTEM

The project site will be served by its own private sewer. No new public sewers are proposed onsite or offsite for this project. The proposed residential building will collectively discharge to the existing 8-inch VCP sewer main between manholes 2 and 4 as outlined in the US[3] Flow Monitoring Report dated December 18, 2019 (See Appendix E). The proposed building will discharge an average daily flow of 50,400 GPD (d/D = 0.29) and a peak discharge of 126,000 GPD (d/D = 0.47). See Section 5.0 – Methodologies for complete calculations.

The City of Gardena does not provide will serve letters for new sewer connections; however a Los Angeles County Sewer District will serve has been provided for the project (See Appendix D). Approval of this sewer study shall act as the City of Gardena will serve for this project.

5.0 METHODOLOGIES

5.1 SEWER FLOW DETERMINATION

The tributary sewer flow rates (Q) for the studied sewer lines are analyzed based on LA County sewer generation factor methodology. (See Appendix A)

By using Sewer Generation Factors based on occupancy for the apartments – the "average" estimated flows are determined by the product of the summation of occupancies by its corresponding daily flows. The daily "PEAK" flows are obtained by multiplying the prescribed county "Average" daily flows by a peak flow factor of 2.5.

The proposed apartment building consists of 92 studio apartments which have a sewer generation factor of 150 GPD, 133 one-bedroom apartments which have a sewer generation factor of 200 GPD, and 40 two-bedroom apartments which have a sewer generation factor of 250 GPD. See Tables 1 below for the GPD totals.

TABLE 1 - PROPOSED SEWER GENERATION FACTOR ANALYSIS

Name	Occupancy Type	City/County Jurisdiction	# of Units (DU)	*Est. Avg. Daily Sewage Flow Factor (gal/day)	Est. Avg. Daily Flow (gal/day)	**Est. Daily PEAK Flow (gal/day) = Avg. Daily Flow x 2.5
12850 Crenshaw	Residential Dwelling Units (Studio)	City of Gardena	92	150	13,800	34,500
12850 Crenshaw	Residential Dwelling Units (1-BR)	City of Gardena	133	200	26,600	66,500
12850 Crenshaw	Residential Dwelling Units (2-BR)	City of Gardena	40	250	10,000	25,000
Total					**50,400**	**126,000**

* Based on "Estimated Average Daily Sewage Flows for Various Occupancies" document

** Peak Flow is obtained from multiplying the Average Flow x 2.5

The existing onsite warehouse, to be demolished, has an estimated flow rate of 3,191 GPD (d/D = 0.07) using LA County flow calculation methods. See Table 2. This flow will be subtracted from the total proposed flows in order to generate that final build out condition d/D of the pipe.

TABLE 2 - EXISTING SEWER GENERATION FACTOR ANALYSIS

Name	Occupancy Type	City/County Jurisdiction	Building Square Footage	*Est. Avg. Daily Sewage Flow Factor (gal/1000 SF area)	*Est. Daily PEAK Flow (gal/day)	**Est. Daily PEAK Flow (gal/day) = Avg. Daily Flow x 2.5
Existing Warehouse	Commercial	City of Gardena	25530	50	1,277	3,191
Total					**1,277**	**3,191**

* Based on "Estimated Average Daily Sewage Flows for Various Occupancies" document. The specific ocupancy type that exists at the site is not shown in the table. Commercial shops and stores was used as our basis, however to be conservative, the averae daily flow was reduced to half the 100 gal/GSF advertised in the table.

5.2 SEWER PIPE CAPACITY ANALYSIS

The existing sewer pipes were analyzed per LA County Standard S-C4 based on a reference range of d/D = 0.5 – d/D=0.75 maximum design flow depths.

The design capacity for the existing pipes were obtained by using Kutter's formula with a roughness coefficient "n=0.015" for VCP pipes as shown in the flow diagram for the design of circular sanitary sewer system. Flowmaster was used to calculate the flows within the sewer main. See Appendix F for the Flowmaster calculations.

Tables 3 below summarizes the Flowmaster findings for the pipe capacities for the peak flow condition.

TABLE 3 - PROPOSED PIPE IMPACT - PEAK DAILY FLOW

	Peak GPD	Max Pipe Ht. (in)	d/D
Existing Flow Rate	24,500	1.36	0.17
Warehouse Flow Removed	(3,191)		
New Project Add. Flow	126,000		
Total	147,309	4.06	0.51

6.0 CONCLUSIONS

The results of the sewer calculations (with the use of existing flow data information) show that the existing 8-inch sewer is flowing at 17% full (24,500 GPD) under peak conditions. Table 3 shows that the addition of the proposed development's peak flows to the existing 8" sewer line will result in flows at the bottom end of the 0.5-0.75 d/D reference range for on-site analysis in Los Angeles County. The existing sewer main will experience a peak daily flow of 147,309 GPD with a max flow height of 4.06" (d/D = 0.51).

In Conclusion, the existing local 8-inch sewer is anticipated to have capacity to serve the proposed project and the tributary areas upstream.

APPENDICES

APPENDIX A

Estimated Average Daily Sewage Flows for Various Occupancies

Occupancy	Abbreviation	*Average daily flow	
Apartment Buildings:			
Bachelor or Single dwelling units	Apt	150	gal/D.U.
1 bedroom dwelling units	Apt	200	gal/D.U.
2 bedroom dwelling units	Apt	250	gal/D.U.
3 bedroom or more dwelling units	Apt	300	gal/D.U.
Auditoriums, churches, etc.	Aud	5	gal/seat
Automobile parking	P	25	gal/1000 sq ft gross floor area
Bars, cocktails lounges, etc.	Bar	20	gal/seat
Commercial Shops & Stores	CS	100	gal/1000 sq ft gross floor area
Hospitals (surgical)	HS	500	gal/bed
Hospitals (convalescent)	HC	85	gal/bed
Hotels	H	150	gal/room
Medical Buildings	MB	300	gal/1000 sq ft gross floor area
Motels	MB	150	gal/unit
Office Buildings	Off	200	gal/1000 sq ft gross floor area
Restaurants, cafeterias, etc.	R	50	gal/seat
Schools:			
Elementary or Jr. High	S	10	gal/student
High Schools	HS	15	gal/student
Universities or Colleges	U	20	gal/student
College Dormitories	CD	85	gal/student

*Multiply the average daily flow by 2.5 to obtain the peak flow

Zoning Coefficients

Zone	Coefficient (cfs/Acre)
Agriculture ----------	0.001
Residential*:	
R-1 ----------	0.004
R-2 ----------	0.008
R-3 ----------	0.012
R-4 ----------	0.016*
Commercial:	
C-1 through C-4 ----------	0.015*
Heavy Industrial:	
M-1 through M-4 ----------	0.021*

* Individual building, commercial or industrial plant capacities shall be the determining factor when they exceed the coefficients shown

* Use 0.001 (cfs/unit) for condominiums only

APPENDIX B

October 12, 2005

Approved

TO: Dean Efstathiou

FROM: Dennis Hunter
Land Development Division

POLICIES FOR MANAGING AVAILABLE SEWER CAPACITY AND SEWAGE DISCHARGE IN EXCESS OF DESIGN CAPACITY

The following will set forth Public Works' policies related to managing sewer infrastructure capacity. Design capacity of the sewer mainline is defined as follows:

< 15" diameter	½ full = 100% capacity (d/D)
≥ 15" diameter	¾ full = 100% capacity (d/D)

When Public Works determines there is available capacity in a mainline sewer for infill and redevelopment projects, the remaining available capacity shall be allocated on a first come – first serve basis.

Sewer Advisory Committee

A Sewer Advisory Committee (SAC) will be formed for the purpose of recommending courses of action to address proposed development connecting to existing sewers that will cause them to be operating beyond their design capacity. The SAC will make their recommendations to Dean Efstathiou, Assistant Director. The SAC will be chaired by Waterworks and Sewer Maintenance Division and will have representatives from Design and Land Development Divisions. Each Division will appoint a Principal Engineer or Senior Civil Engineer as a representative to the SAC and will convene whenever sewer decisions are required to address developmental impacts. Sewer Maintenance will maintain records of SAC meetings and will prepare recommendations to Administration for approval. The SAC may require other Division representatives to participate on a case-by-case basis when necessary, such as Building and Safety and Programs Development.

Divisional Responsibilities

Design Division

1. Support activities of the SAC.

2. Prepare sewer area studies when required.

3. Maintain records/archive of all approved sewer area studies and flow measurements.

Land Development Division

1. Support activities of the SAC.

2. Impose sewer area study requirements for private developments if necessary and review/approve all submittals.

3. Refer cases to SAC when both sewer area studies and flow measurements indicate that a potential overload situation exists or will exist based on criteria described below.

4. Provide copies of all approved sewer area studies and flow measurements to Design Division for archiving.

Waterworks and Sewer Maintenance Division

1. Chair the SAC, maintain meeting records and prepare position papers to Administration.

2. Advise the SAC when an overload condition is observed during maintenance activities.

3. Initiate effort to track and map all overload areas within the Consolidated Maintenance District.

4. Keep database of all flow measurement results.

Design Criteria

1. Capacity of sewer mainlines less than 15" in diameter are considered full (100 percent) when the ratio of the depth of flow (d) over the pipe diameter (D) is equal to 0.5, expressed as d/D = 0.5.

2. Capacity of sewer mainlines equal to or greater than 15" in diameter are considered full (100 percent) when the ratio of the depth of flow (d) over the pipe diameter (D) is equal to 0.75, expressed as d/D = 0.75.

3. When an area study indicates that flow conditions based on calculated discharges is between 101 percent to 150 percent of capacity, no flow measurements and no mitigation will be required. If maintenance records warrant, a flow test may be required.

4. When an area study for a development that proposes to increase the density or change the zoning indicates that flow conditions are between 151 to 200 percent of capacity, flow measurements shall be required. If the flow test indicates that the actual flow condition is below 151 percent, no mitigation will be required. If the flow test results indicate the actual flow is above 151 percent, the case shall be referred to the SAC to evaluate options and make recommendations to Administration for approval. These options may include, but are not limited to: requiring full mitigation from the development, assessing pro-rata shares, creation of a reimbursement district, or establishing a County Improvement (CI) district.

AHN:ca
P:\LDPUB\SUBPCHECK\SEWER\MISCELLANEOUS\SEWER INFRASTRUCTURE MANAGEMENT

cc: Administration (Kelly)
Building and Safety (Patel)
Design (Kumar)
Land Development (D'Antonio, Burger, Ruiz, Chong, Witter, Narag)
Programs Development (Afshari)
Waterworks and Sewer Maintenance (Del Real, Lehto)

APPENDIX C

S-1646

SEE SHT. NO. S-1645

C-57
C-59
C-60

CHESTER L WASHINGTON GOLF COURSE

CITY OF LOS ANGELES

CITY OF HAWTHORNE

CITY OF GARDENA

COUNTY

PROJECT SITE

THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

SEE SHT. NO. S-1592

SEE SHT. NO. S-1701

SEE SHT. NO. S-1647

E 4,187,000
N 4,076,500

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 94

MAP REV
04-26-12

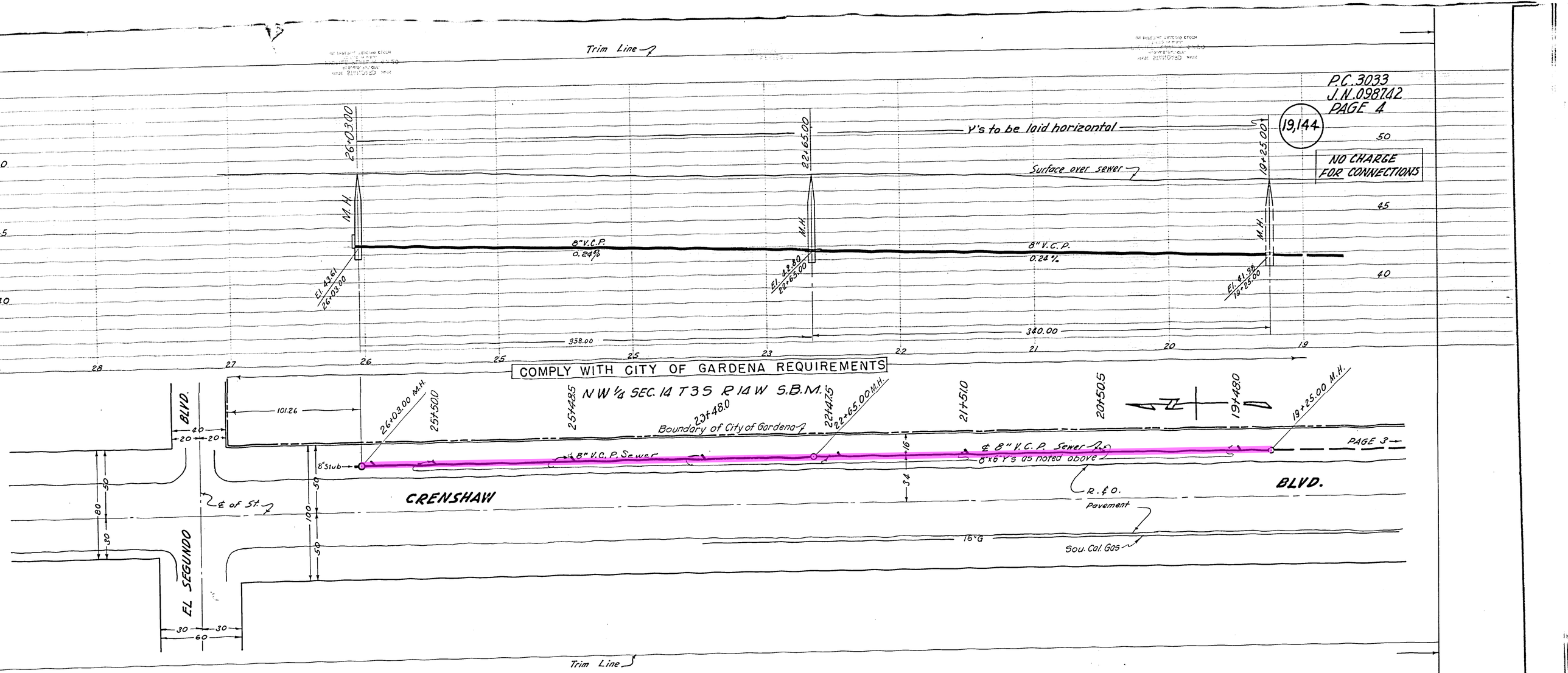
DATA BASE REV
09-23-97

CONSOLIDATED S.M.D.

S-1646

T: 733 H-2

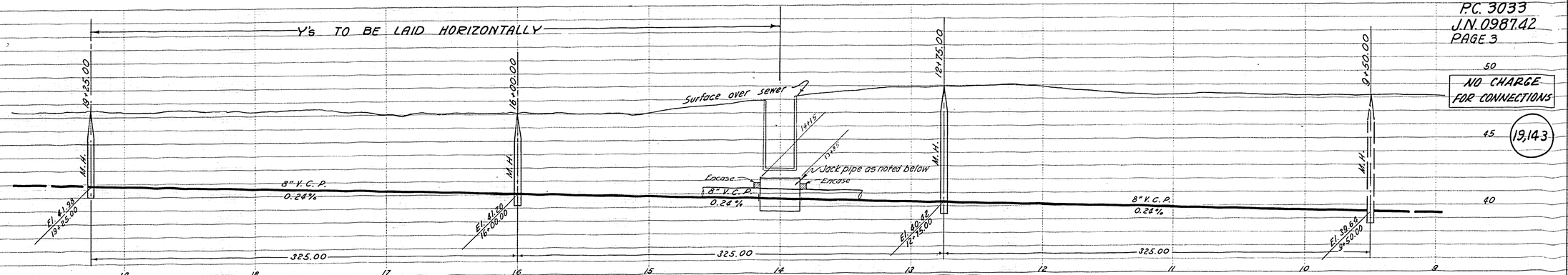
0515.0617.1646


Trim Line
P.C. 3033
J.N. 098142
PAGE 4
19,144
NO CHARGE FOR CONNECTIONS
V's to be laid horizontal
Surface over sewer
26+03.00
22+65.00
19+25.00
M.H.
8" V.C.P.
0.24%
El. 43.61
26+03.00
El. 42.80
22+65.00
El. 41.98
19+25.00
358.00
340.00
50
45
40
28
27
26
25
25
23
22
21
20
19
COMPLY WITH CITY OF GARDENA REQUIREMENTS
NW 1/4 SEC. 14 T3S R14W S.B.M.
26+03.00 M.H.
25+50.0
25+48.5
23+48.0
22+65.00 M.H.
22+47.5
21+51.0
20+50.5
19+48.0
19+25.00 M.H.
Boundary of City of Gardena
101.26
8" Stub
8" V.C.P. Sewer
8" V.C.P. Sewer
8"x6" Y's as noted above
PAGE 3
BLVD.
40
20
20
80
50
30
100
50
50
34
16
℄ of St.
CRENSHAW
EL SEGUNDO
30
30
60
R. & O.
Pavement
16"G
Sou. Cal. Gas
Trim Line

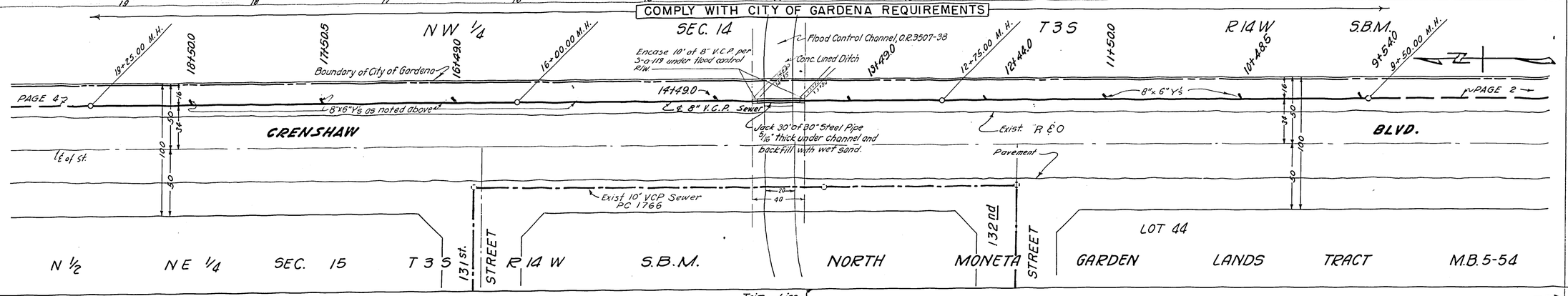
P.C. 3033
J.N. 0987.42
PAGE 3

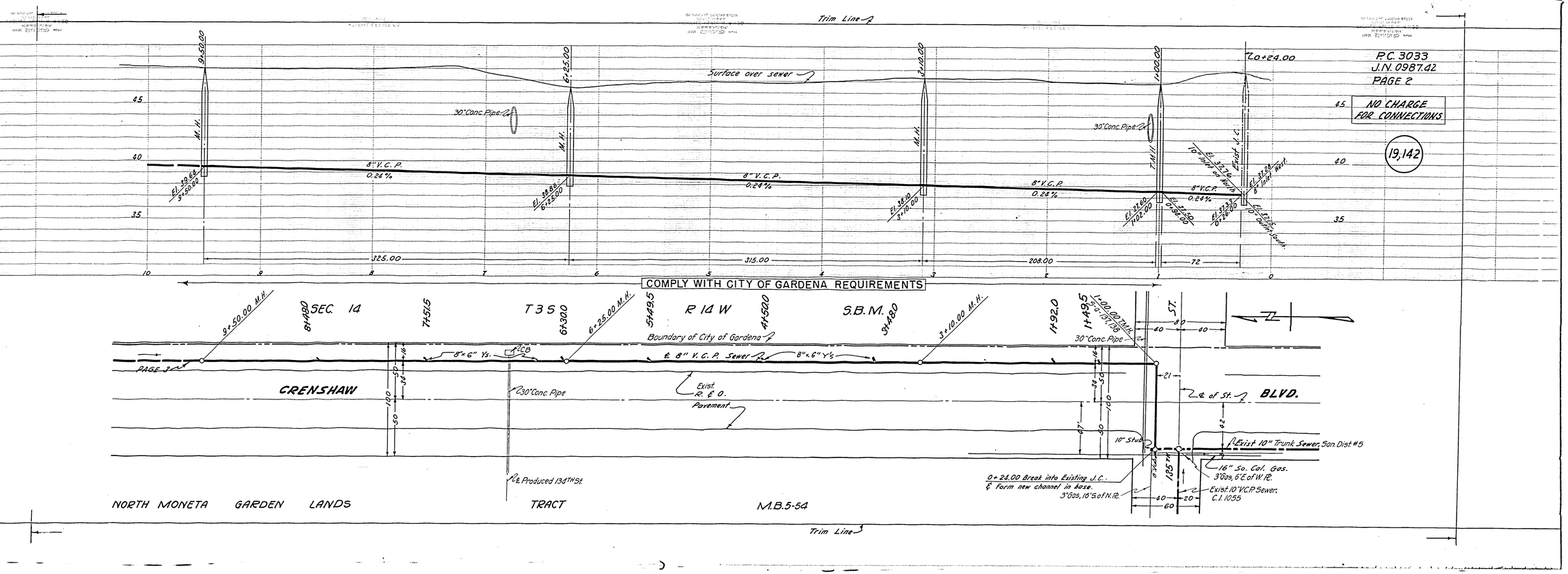
NO CHARGE FOR CONNECTIONS

19,143



COMPLY WITH CITY OF GARDENA REQUIREMENTS



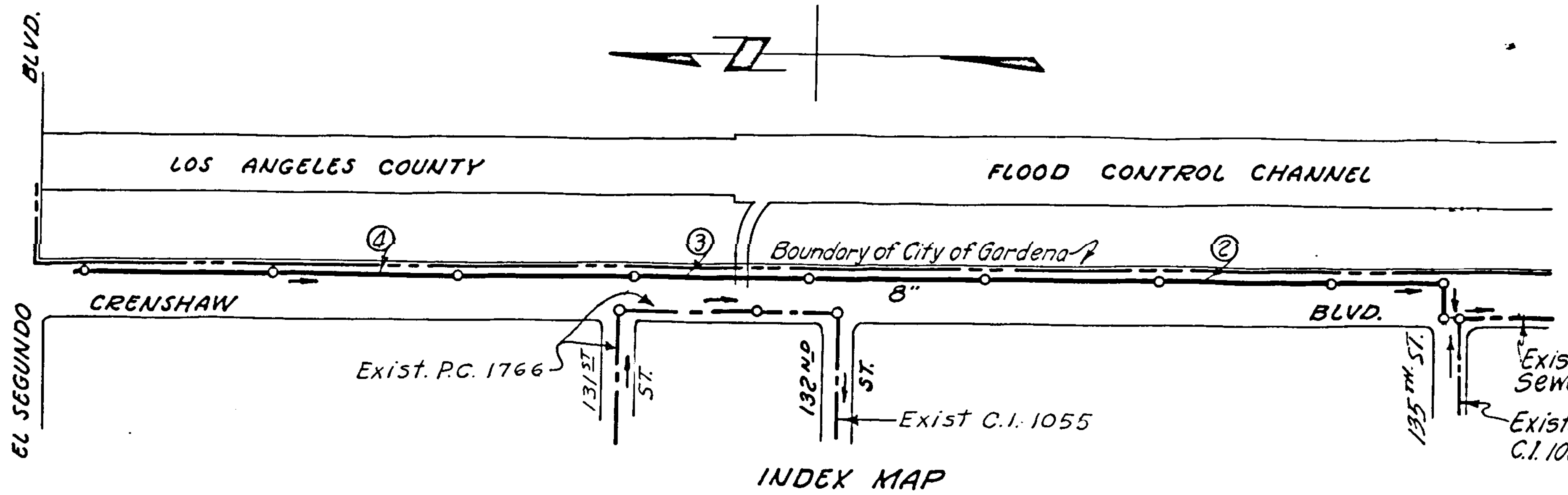

Trim Line
9+50.00
6+25.00
3+10.00
1+00.00
0+24.00
P.C. 3033
J.N. 0987.42
PAGE 2
NO CHARGE FOR CONNECTIONS
19,142
Surface over sewer
30" Conc. Pipe
M.H.
8" V.C.P.
0.24%
El. 39.65
9+50.00
El. 38.85
6+25.00
El. 38.10
3+10.00
El. 37.60
1+00.00
El. 37.28
0+24.00
10" Invert on North
Exist. J.C.
8" Inlet West
0° Curve South
45
40
35
325.00
315.00
208.00
72
10
9
8
7
6
5
4
3
2
1
0
COMPLY WITH CITY OF GARDENA REQUIREMENTS
9+50.00 M.H.
6+25.00 M.H.
3+10.00 M.H.
1+00.00 M.H.
SEC. 14
T 3 S
R 14 W
S.B.M.
81+80
74+15
69+30
54+95
41+50
31+80
17+92.0
11+49.5
Boundary of City of Gardena
8"x6" Y's
E 8" V.C.P. Sewer
8"x6" Y's
PAGE 3
CRENSHAW
30" Conc. Pipe
Exist. R.E.O. Pavement
30" Conc. Pipe
℄ Produced 134TH St.
NORTH MONETA GARDEN LANDS TRACT M.B. 5-54
ST.
℄ of ST.
BLVD.
10" Stub
Exist 10" Trunk Sewer, San. Dist. #5
16" So. Cal. Gas. 3'Ggs, 6'E of W.P.
Exist. 10" V.C.P. Sewer, C.I. 1055
0+24.00 Break into Existing J.C. & form new channel in base.
3'Ggs, 16'S. of N.P.
135°
Trim Line

BENCH MARK ELEV. 49.636
Lead & bench nail at S.W. corner of catch basin at N.E. corner of Crenshaw Blvd. & El Segundo Blvd. SY # 997 (Vol. # 2 pg. 398).

LENNOX BLDG. DIST. No. 7

NO CHARGE FOR CONNECTIONS
L. Curtis 7-21-54

SHEETS	PAGES
1	1-4



INDEX MAP
Scale 1" = 300'
P.C. 3033
J.N. 0987.41

NOTE:
NO REPRESENTATIVE OF THE COUNTY ENGINEER WILL SURVEY OR LAY OUT ANY PORTION OF THE WORK.
THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL FURNISH THE COUNTY ENGINEER WITH GRADE SHEETS AND STATIONS FOR ALL HOUSE LATERALS AND Y BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ANY CHANGE OF LOCATION SHALL BE REQUESTED IN WRITING BY THE OWNER OR HIS REPRESENTATIVE.
NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT APPROVAL OF THE COUNTY ENGINEER.

1. USE STANDARD MANHOLE FRAMES AND COVERS, S-a-117.
2. USE STANDARD STRENGTH PIPE EXCEPT AS NOTED.
3. USE CEMENT MORTAR FOR ALL VITRIFIED CLAY PIPE JOINTS.
4. RESURFACE ALL TRENCH WITHIN PAVED AREA TO MEET L. A. COUNTY ROAD DEPT. REQUIREMENTS IN ACCORDANCE WITH PERMIT.
5. ENCASE FOUR FEET OF SEWER AT POINTS OF INTERFERENCE WITH POLES, S-a-119.
6. ALL STRUCTURES SHALL BE BRICK SEWER STRUCTURES, S-a-104, EXCEPT AS NOTED.
7. PROVIDE STAKES ON THE PROPERTY LINES OR PROPERTY LINES PRODUCED, AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTER LINE OF EACH MANHOLE.
8. FOR ALLOWABLE LEAKAGE TEST USE FORMULA NO. 1 SPECS. SEC. 51.

Before breaking into any existing structure and before final acceptance of this work, County Sanitation District should be notified in order that [illegible] inspection may be made.

ENGINEERING SERVICE CORPORATION
1127 W. WASHINGTON BLVD.
LOS ANGELES 15, CALIF. PR. 7281

REVISIONS

TRACED BY A. J. L.
DESG'D BY c. d.
CK'D BY
SUBMITTED

SUB STRUCTURES OK'D

W. O. NO.	DWG. NO.	DATE	SCALE	L. B.	F. B.
5676-66		March 1954	As Noted	803	

Checked 10-25-54 McLaren

APPROVED BY
CITY OF GARDENA
Charles Albert Smith
ASST. CITY ENGINEER

PROFILE, ALIGNMENT AND GRADE OF
SANITARY SEWERS
TO BE CONSTRUCTED IN
CRENSHAW BLVD.
BETWEEN 135TH ST. & EL SEGUNDO BLVD.
PRIVATE CONTRACT NO. 3033
W. S. 25
SHEET 1 OF 1 SHEET

P. C. 3033
J. N. 0987.42
PAGE 1

19,141

SCALE: VERT. 1" = 4'
HOR. 1" = 40'

MARCH 1954

PREPARED IN THE OFFICES OF
ENGINEERING SERVICE CORPORATION

BY E. F. Horn
REG. C/E. NO. 3692

FOR LEGEND
SEE PLAN NO. S-a-64

(4)

NOTE:
GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURB, CENTER LINE OF STREETS, OR CENTER LINE OF ALLEY ARE SHOWN BY CIRCLES ON PROFILES. AT ALL POINTS BETWEEN DESIGNATED POINTS THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGNATED POINTS.
ELEVATIONS ARE IN FEET ABOVE U. S. G. S. DATUM OR MEAN SEA LEVEL.
THIS DRAWING AND THE DATA HEREON ARE HEREBY MADE A PART OF THE SPECIFICATIONS.
WORK SHALL BE CONSTRUCTED ACCORDING TO SPECIFICATIONS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.
BEFORE WORK CAN BE STARTED THE CONTRACTOR MUST OBTAIN A PERMIT TO EXCAVATE IN COUNTY STREETS FROM THE L. A. COUNTY ROAD DEPT. 108 W. 2ND ST. AND MAKE A DEPOSIT WITH THE COUNTY ENGINEER, 733 COUNTY ENGINEERING BUILDING SUFFICIENT TO COVER THE COST OF CONSTRUCTION INSPECTION AND RECORD PLANS.
APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF, THE LOCATION OF, OR THE EXISTENCE OR NON-EXISTENCE OF, ANY UNDERGROUND UTILITY, PIPE, OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT.

COUNTY OF LOS ANGELES, CALIFORNIA

APPROVED
WILLIAM J. FOX
COUNTY ENGINEER
BY A. P. Collins
SANITATION ENG'R.

APPROVED, A. M. RAWN
CHIEF ENGINEER OF COUNTY SANITATION DISTRICT NO. 5
BY D. Prothman
OFFICE ENGINEER

CHECKED BY R. Kuhn 7-22-54
OFFICE OF COUNTY ENGINEER
REG. C. E. NO. 7860

CRENSHAW BLVD.
135TH TO EL SEGUNDO
HAYDEN-LEE

P.C. 3033
P.C. 3033
J.N. 0987.42

Trim Line
Trim Line

B.M. Elev. 49.636
Lead & bench nail at S.W. corner of catch basin at N.E. corner of CRENSHAW BLVD. & El Segundo Blvd. SY. #997 (Vol. #2 pg. 398)

BENCH MARK ELEV. 49.636
Lead & bench nail at S.W. corner of catch basin at N.E. Corner of Crenshaw Blvd. & El Segundo Blvd. Sy# 997 (Vol. #2 pg. 398).

LENNOX BLDG. DIST. NO. 7

NOTES

PROVIDE STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTER LINE OF EACH MANHOLE

NO REPRESENTATIVE OF THE COUNTY ENGINEER WILL SURVEY OR LAYOUT ANY PORTION OF THE WORK

THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL FURNISH THE COUNTY ENGINEER WITH GRADE SHEETS AND STATION FOR ALL HOUSE LATERALS AND Y BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATION ING PLAINLY MARKED. ANY CHANGE IN LOCATION SHALL BE REQUESTED IN WRITING BY THE OWNER OR HIS REPRESENTATIVE

NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER

1. USE STANDARD MANHOLE FRAMES AND COVERS, S.A.117, EXCEPT AS NOTED
2. USE STANDARD STRENGTH PIPE EXCEPT AS NOTED
3. USE CEMENT MORTAR FOR ALL VITRIFIED CLAY PIPE JOINTS
4. RESURFACE ALL TRENCH WITHIN PAVED AREA TO MEET L.A. COUNTY ROAD DEPT., OR CALIF. STATE HIGHWAY DEPT. REQUIREMENTS IN ACCORDANCE WITH PERMITS.
5. ENCASE FOUR FEET OF SEWER AT POINTS OF INTERFERENCE WITH POLES, S.A.119
6. ~~HOUSE LATERALS TO BE CONSTRUCTED WITH INVERTS AT PROPERTY LINE ____ FEET BELOW CURB GRADE EXCEPT AS NOTED~~
7. ALL STRUCTURES SHALL BE BRICK SEWER STRUCTURES, S.A.104, EXCEPT AS NOTED
8. FOR ALLOWABLE LEAKAGE TEST USE FORMULA NO. 1 SPEC'S, SEC. 51
9. ~~MANHOLE TOPS IN UNIMPROVED RIGHTS-OF-WAY TO BE 6" ABOVE FINISHED GRADE~~

PROFILE ALIGNMENT AND GRADE OF

SANITARY SEWERS

TO BE CONSTRUCTED IN

CRENSHAW BOULEVARD FROM EL SEGUNDO BLVD. TO P.E. RY.

P.C. 3971 PAGE 1

23,497

(3)

7-278-A

PRIVATE CONTRACT NO. 3971

W.S. 25

2 SHEETS; 3 PAGES

SCALE: VERT. 1" = 4' HORIZ. 1" = 40' April, 1956

PREPARED IN THE OFFICES OF

ENGINEERING SERVICE CORP.

By E. F. Koenig REG. C.E. NO. 3692

FOR LEGEND SEE PLAN NO. S-A-64

NOTE

GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURBS, CENTER LINE OF STREETS, OR CENTER LINE OF ALLEYS ARE SHOWN BY CIRCLES ON PROFILES. AT ALL POINTS BETWEEN DESIGNATED POINTS THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGNATED POINTS

ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. Sea Level Datum of 1929

THIS DRAWING AND THE DATA HEREON ARE HEREBY MADE A PART OF THE SPECIFICATIONS.

WORK SHALL BE CONSTRUCTED ACCORDING TO SPECIFICATIONS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER

BEFORE WORK CAN BE STARTED, THE CONTRACTOR MUST OBTAIN A PERMIT TO EXCAVATE IN COUNTY STREETS FROM THE L.A. COUNTY ROAD DEPT., 108 W. 2ND ST. AND MAKE A DEPOSIT WITH THE COUNTY ENGINEER, ROOM 324 PAN AMERICAN BUILDING, 253 SO. BROADWAY SUFFICIENT TO COVER THE COST OF CONSTRUCTION INSPECTION AND RECORD PLANS.

APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OF OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE, OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES

IF WORK IS TO BE DONE IN A STATE HIGHWAY, A PERMIT MUST BE OBTAINED FROM THE STATE OF CALIFORNIA, DIVISION OF HIGHWAYS, 120 SOUTH SPRING STREET

COUNTY OF LOS ANGELES, CALIFORNIA

APPROVED, JOHN A. LAMBIE, COUNTY ENGINEER

APPROVED, A. M. RAWN, CHIEF ENGINEER

CO. SAN. DIST. NO. 5

BY A. P. Collins SANITATION ENGINEER

BY D. Posthumus OFFICE ENGINEER

CHECKED BY R. S. Kuhn 6-22-56

OFFICE OF COUNTY ENGINEER, REG. C.E. NO. 7360

Revision Approved by City of Gardena

Charles Albert Smith

Assist. City Engineer R.C.E. 5408

Revision Approved by City of Hawthorne

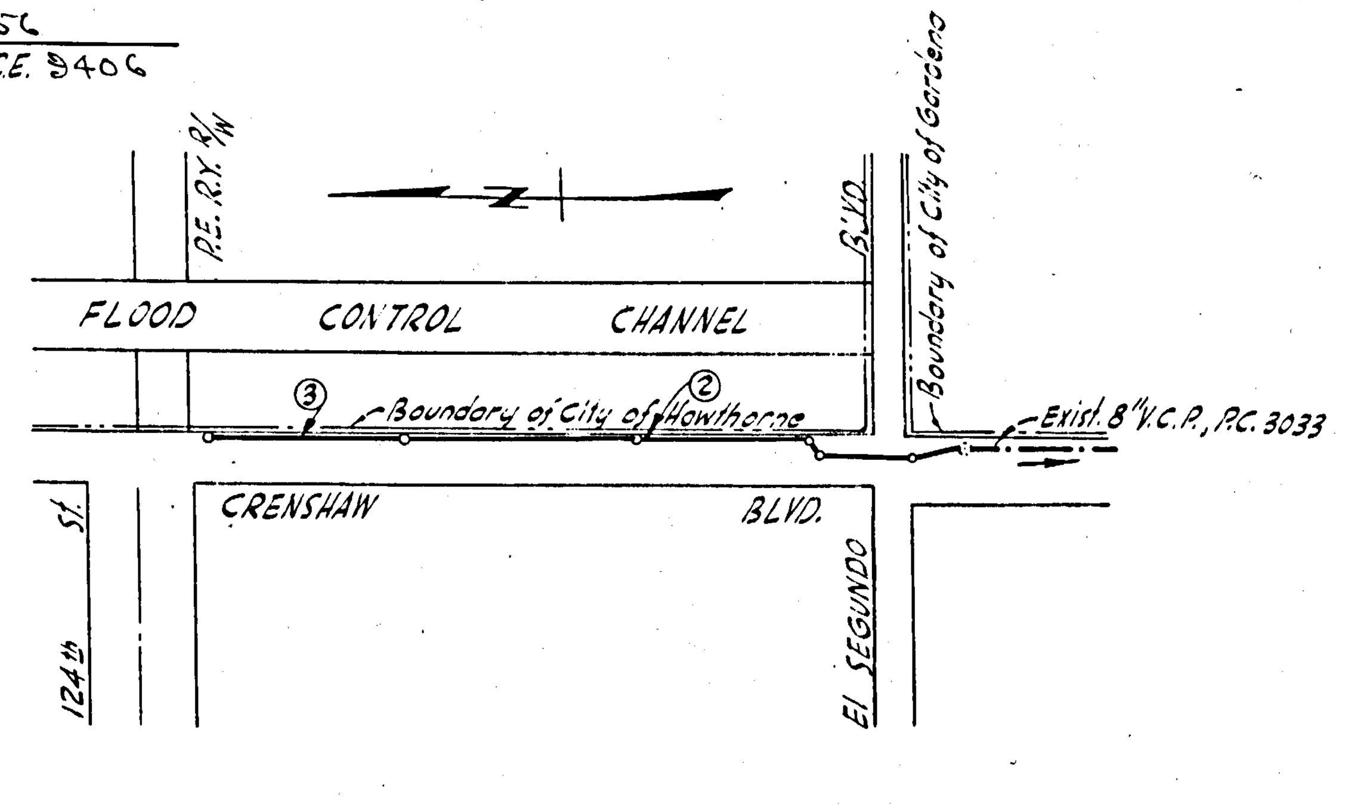
Charles R. Handy

City Engineer R.C.E. 9766

REVISED: Sewer alignment Sta. 0102 to 2173.68, sewer stations & grades 0102 to 1116434, added utilities on plan and profile.

Checked by: S K Oneda 9-6-56

Office of County Engineer R.C.E. 3406



CRENSHAW BLVD.

Scale 1" = 300'

P.C. 3971

NO CHARGE FOR CONNECTIONS

S K Oneda 6-22-56

Approved by City of Gardena

Charles Albert Smith

Asst. City Engineer R.E. 5408

Approved by City of Hawthorne

5-29-56

[illegible]

Asst. City Engineer RCE [illegible]

SHEETS	PAGES
1	1-2
2	3

REVISED: Sewer alignment Sta. 0100 to Sta. 3100 addition M.H., Changed location of M.H.'s, added utilities & Curbs.

Checked by: S K Oneda 8-27-56

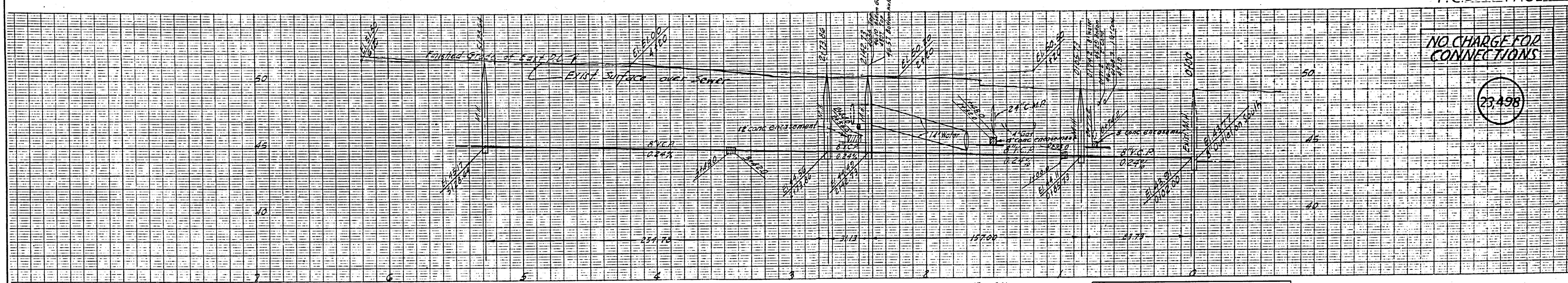
Office of County Engineer Reg. C.E. No. 3406

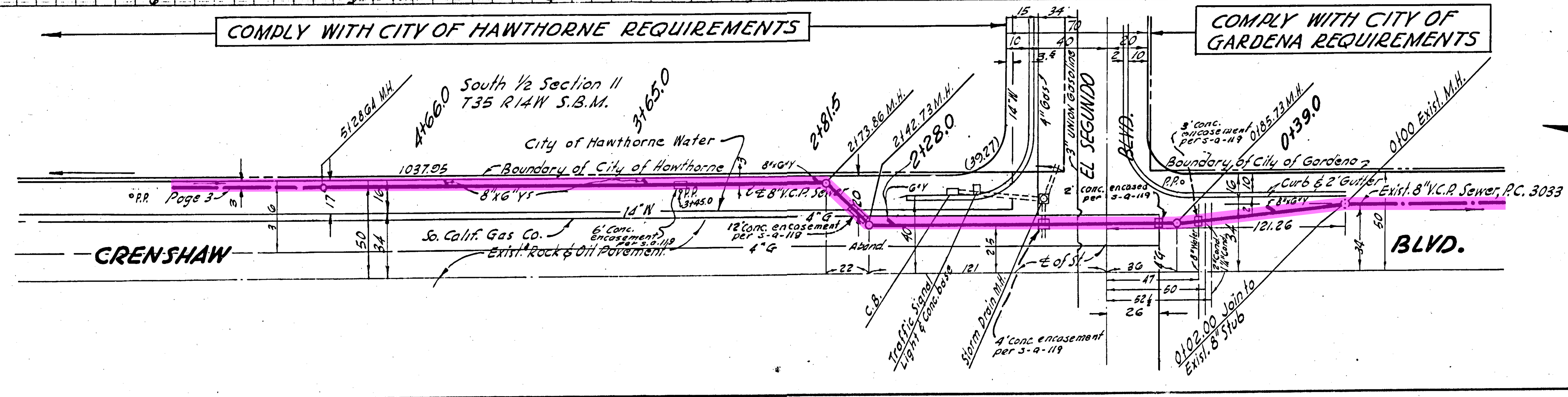
Trim Line

P.C. 3971 PAGE 2

NO CHARGE FOR CONNECTIONS

23,498





7-278-A

7-278-B

APPENDIX D

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

June 25, 2020

Ref. DOC 5770024

Mr. Rob Spagnuolo
Senior Engineer I
Fuscoe Engineering, Inc.
600 Wilshire Boulevard, Suite 1470
Los Angeles, CA 90017

Dear Mr. Spagnuolo:

Will Serve Letter Update
for 12850 Crenshaw Residential Development

The Sanitation Districts of Los Angeles County (Districts) received your will serve letter update request for the subject project on June 12, 2020. The proposed project is located within the jurisdictional boundary of District No. 5. Previous comments submitted by the Districts in correspondence dated October 23, 2019 (copy enclosed) still apply to the subject project with the following updated information:

- The expected increase in average wastewater flow from increasing the proposed residential apartments from 253 units to 265 units is 41,027 gallons per day, after all structures on the project site are demolished.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717 or at araza@lacsd.org.

Very truly yours,

Adriana Raza

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:dc

Enclosure

cc: A. Schmidt
A. Howard

SANITATION DISTRICTS OF LOS ANGELES COUNTY

Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager
1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

October 23, 2019

Ref. DOC 5339554

Mr. Rob Spagnuolo, Engineer
Fuscoe Engineering, Inc.
600 Wilshire Boulevard, Suite 1470
Los Angeles, CA 90017

Dear Mr. Spagnuolo:

Will Serve Letter for the 12850 Crenshaw Residential Development

The Sanitation Districts of Los Angeles County (Districts) received your will serve letter request for the subject project on October 1, 2019. The proposed project is located within the jurisdictional boundaries of District No. 5. 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' Moneta Extension Trunk Sewer Section 1, located in Crenshaw Boulevard at 135th Street. The Districts' 10-inch diameter trunk sewer has a capacity of 0.5 million gallons per day (mgd) and conveyed a peak flow of 0.1 mgd when last measured in 2016.

2. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a capacity of 400 mgd and currently produces an average flow of 261.1 mgd.

3. The expected increase in average wastewater flow from the project, described in the request as 253 multi-family residential units, is 39,155 gallons per day, after the structure on the project site is demolished. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, click on 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 for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will 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, Wastewater & Sewer Systems, and click on Connection Fee, Service Charge and More. 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, the developer should 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 CCA. 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 developer that the Districts intend to provide this service up to the levels that are legally permitted and to inform the developer 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 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: A. Schmidt
A. Howard

APPENDIX E

Site Report 12/18/2019

Confidential Proprietary Information

Fuscoe

2019.12 Crenshaw MH

MH at ~13498 Crenshaw Blvd
Gardena, CA 90249
MH # unknown

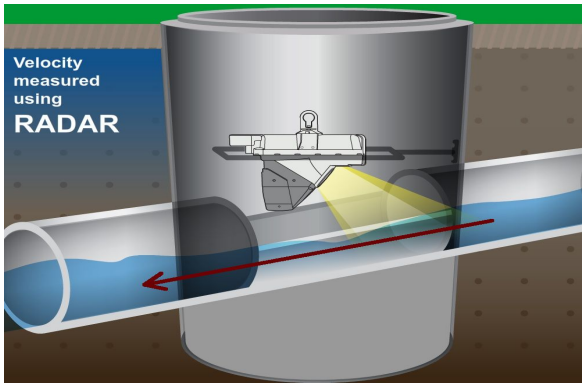
Access:
MH in NE corner of intersection (Crenshaw/135th)

System Type:
Sanitary [X] Storm [ ]

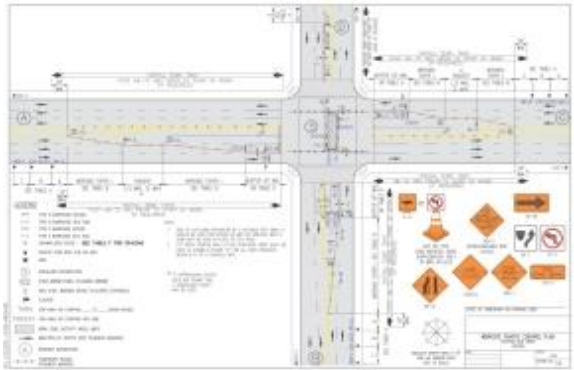
Install Date: 12/06/2019

Map

Technology



Traffic Plan



Flow Meter			
Meter Depth: 120"			
MH Coordinates: 33.909254, -118.326421			
Slow to moderate open channel hydraulics with some turbulence due to bend in trough			
Avg Velocity	Avg Measured Level		Multiplier
0.5 fps	0.75"		1.0
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
No laterals; monitored the upstream line as it provided the best hydraulics.			
Traffic Safety			
Used arrow boards, cones & signs in accord with site-specific CA MUTCD TC requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
	X		

Manhole Depth	135"
Monitored Pipe Size	8"
Inner Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	14.84"
Sensor Dist. to Crown	6.84"
Sensor Direction	Upstream
Flow Heading	West

Meter Site Document

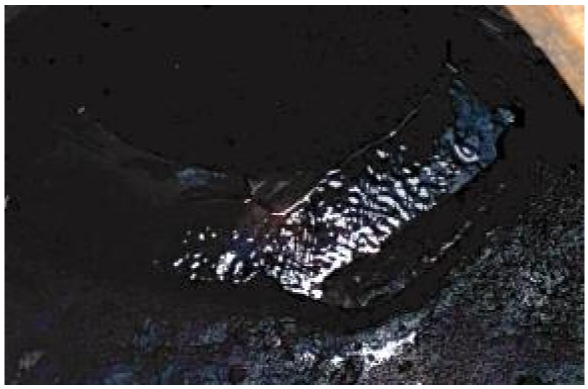
2019.12 Crenshaw MH

MH at ~13498 Crenshaw Blvd

Gardena, CA 90249

Site

Manhole Before Install



Installation Process

Installed

Upstream

stream ipe Size

Temporary Flow Study

Fuscoe

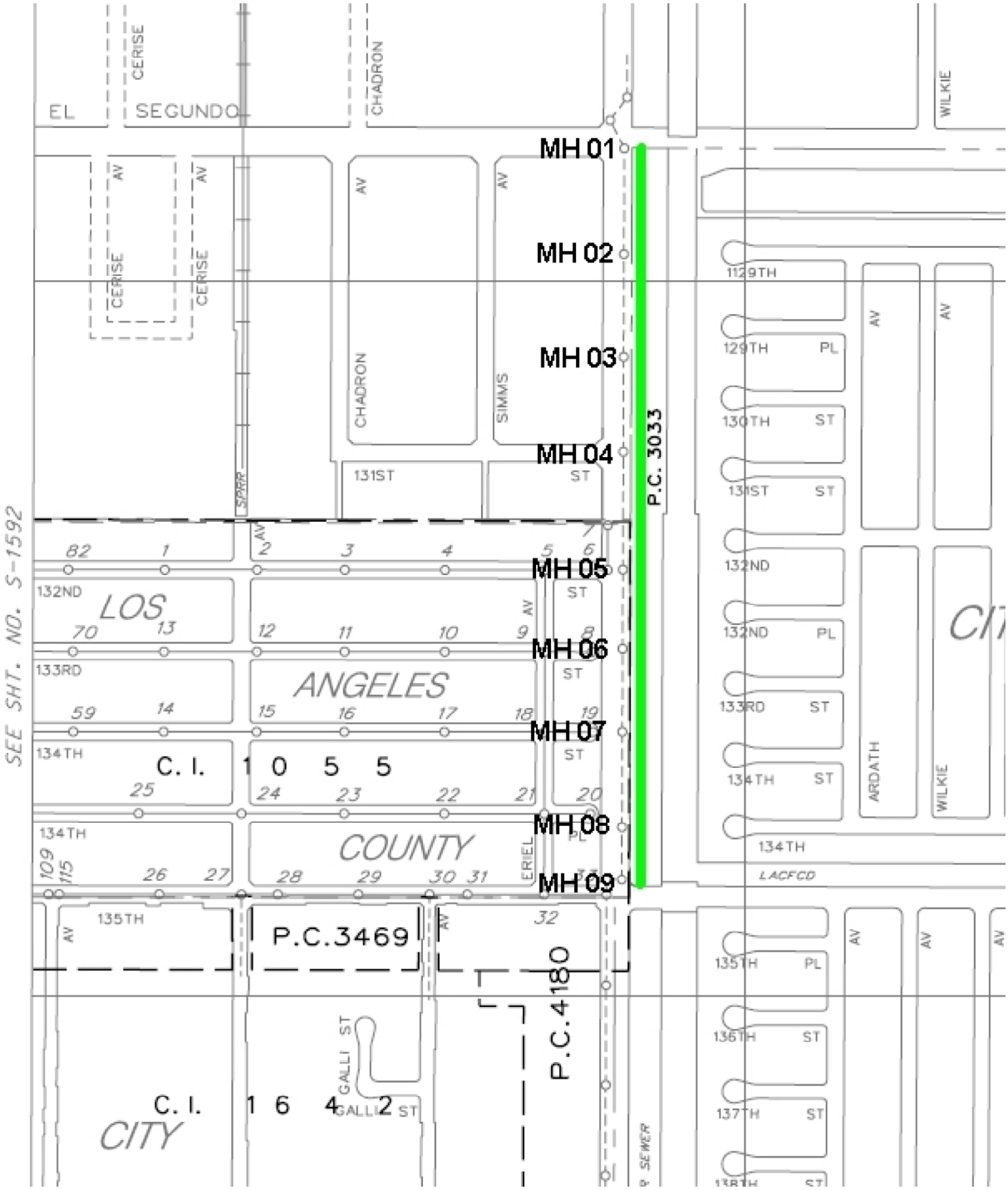
2019.12 Crenshaw MH

Meter Start Date		From	12/6/2019
Meter Stop Date		To	12/16/2019
Velocity (fps)		Level (in)	Flow (mgd)
Average	0.447	0.759	0.005
Maximum	1.480	1.360	0.024
Minimum	0.100	0.260	0.000
Pipe Size		8.000	
Estimated Capacity (mgd)			
Capacity Used			
Sensor Type		Hach - Flodar	

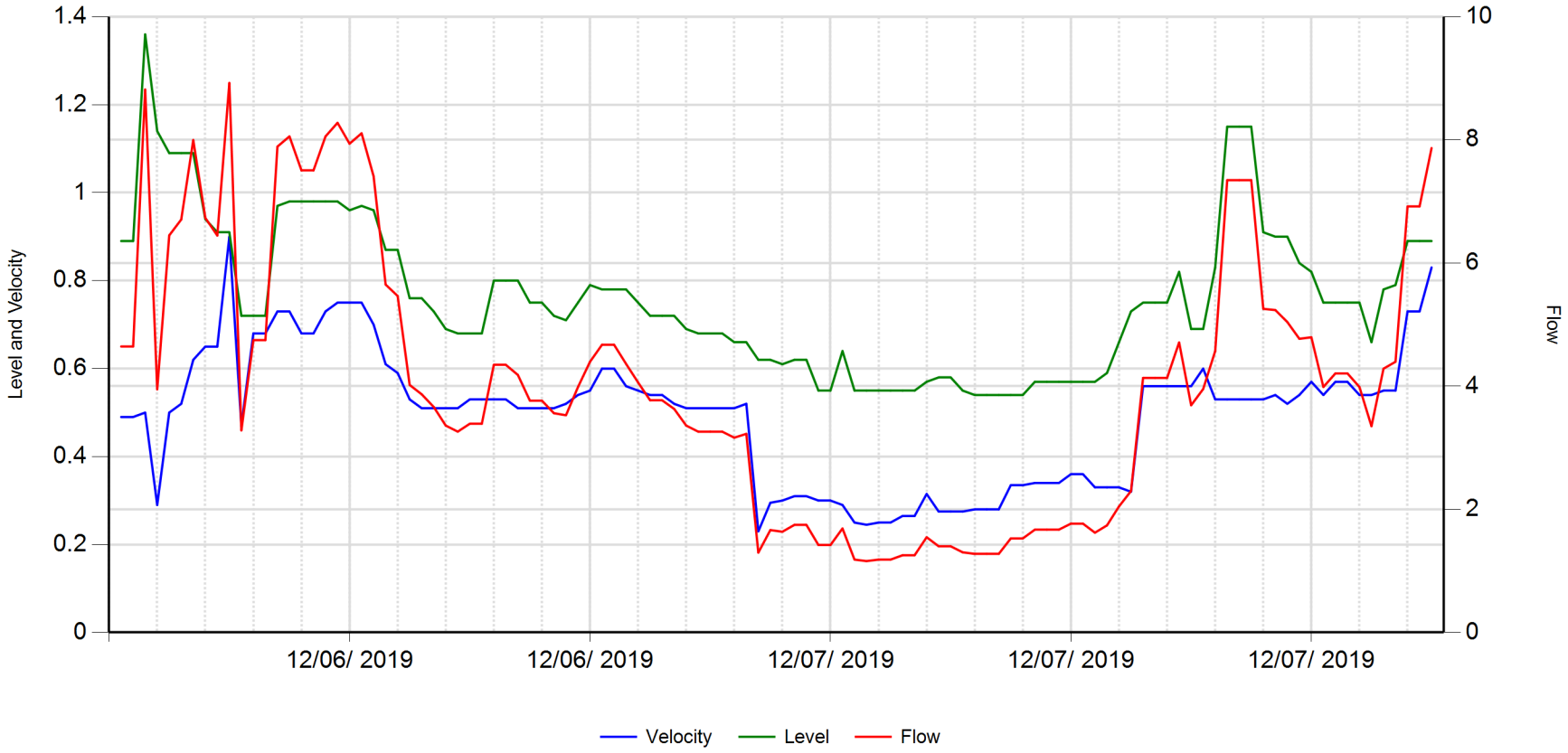
Utility Systems, Science and Software

9314 Bond Ave. Suite A
El Cajon, CA 92021

601 N. Parkcenter Drive Suite 209
Santa Ana, CA 92705


EL SEGUNDO
CERISE
CHADRON
WILKIE
MH 01
MH 02
MH 03
MH 04
MH 05
MH 06
MH 07
MH 08
MH 09
P.C. 3033
P.C.3469
P.C. 4180
LOS ANGELES COUNTY CITY
C. I. 1055
C. I. 1642
SEE SHT. NO. S-1592
129TH PL
130TH ST
131ST ST
132ND
132ND PL
133RD ST
134TH ST
135TH PL
136TH ST
137TH ST
ARDATH
GALLI ST
ERIEL
LACFCD

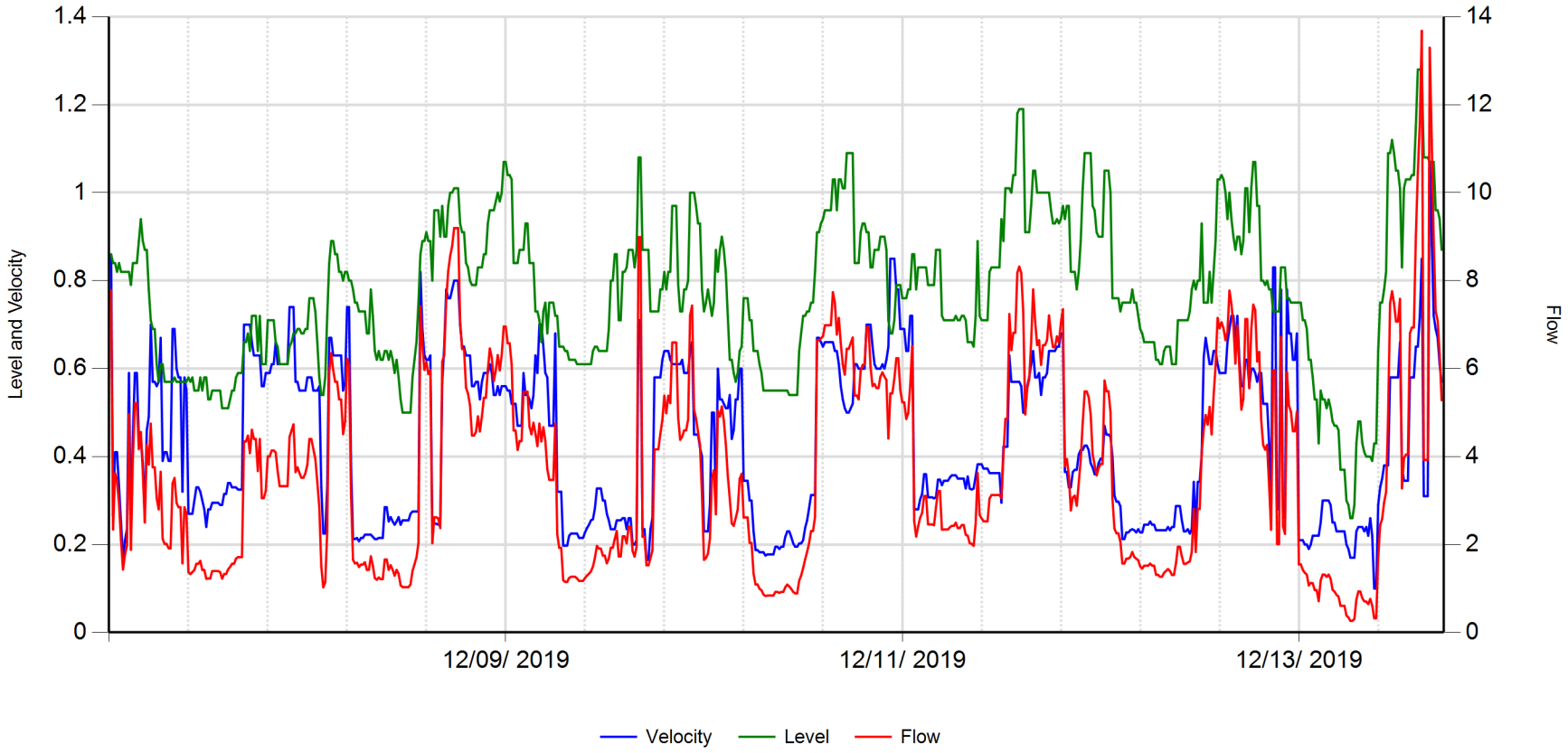
2019.12 Crenshaw MH



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	0.494	0.760	4.041	**RainFall**	Inches
Maximum	0.900	1.360	8.925		
Minimum	0.230	0.540	1.160		

12/18/2019

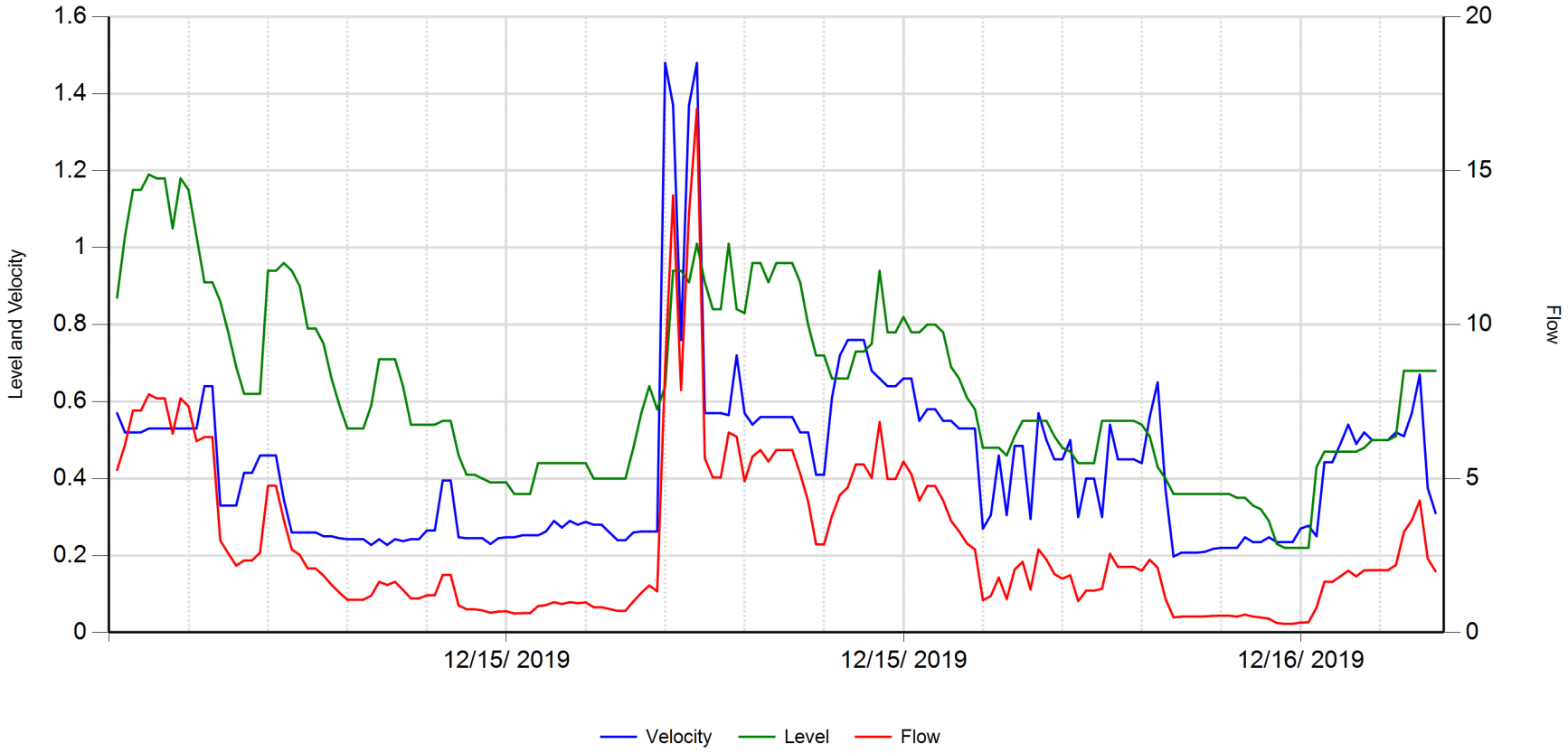
2019.12 Crenshaw MH



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	0.437	0.772	3.681	**RainFall**	Inches
Maximum	1.070	1.280	13.681		
Minimum	0.100	0.260	0.265		

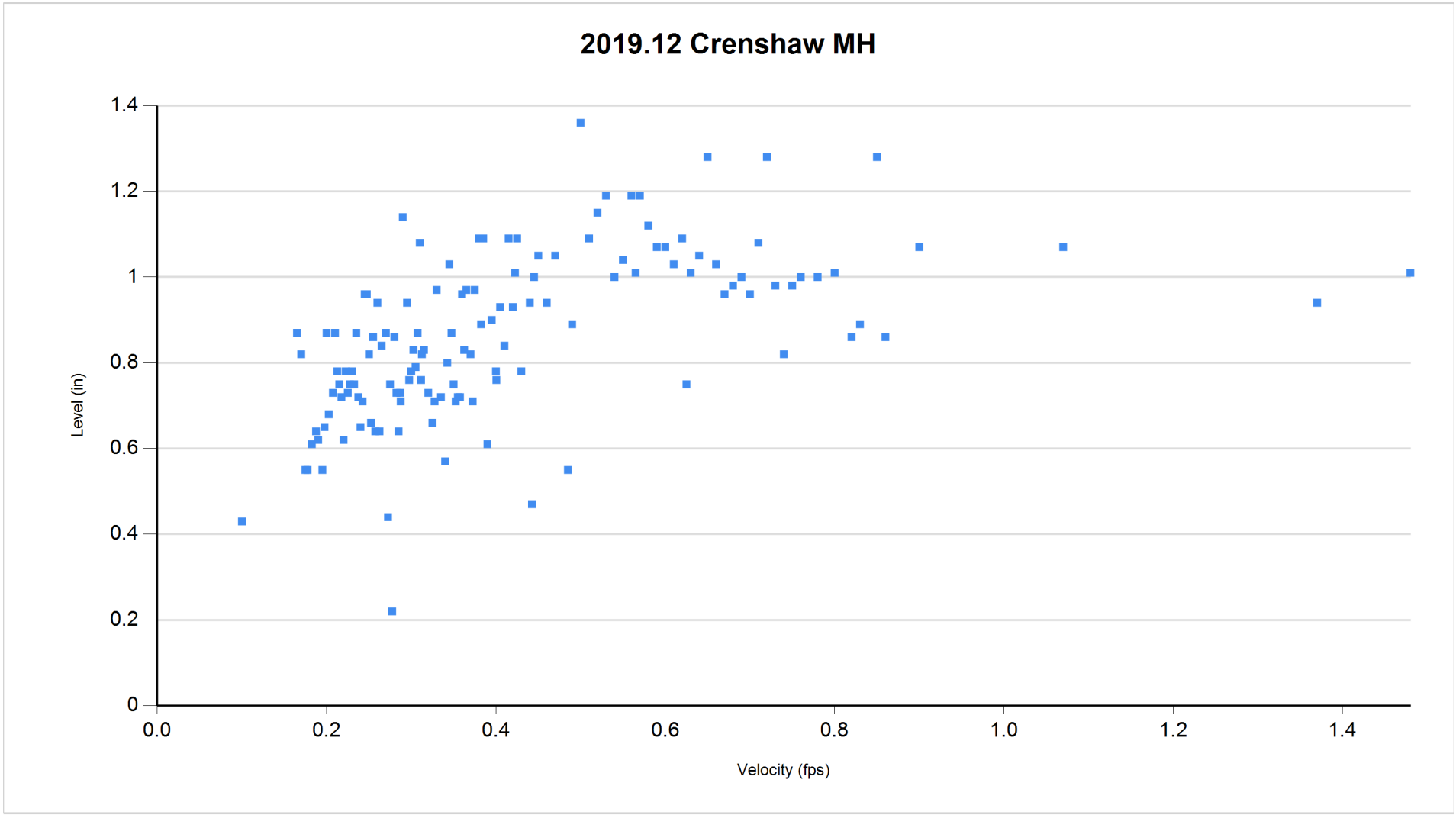
12/18/2019

2019.12 Crenshaw MH



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	0.432	0.628	2.945	**RainFall**	Inches
Maximum	1.480	1.190	17.011		
Minimum	0.198	0.220	0.283		

12/18/2019



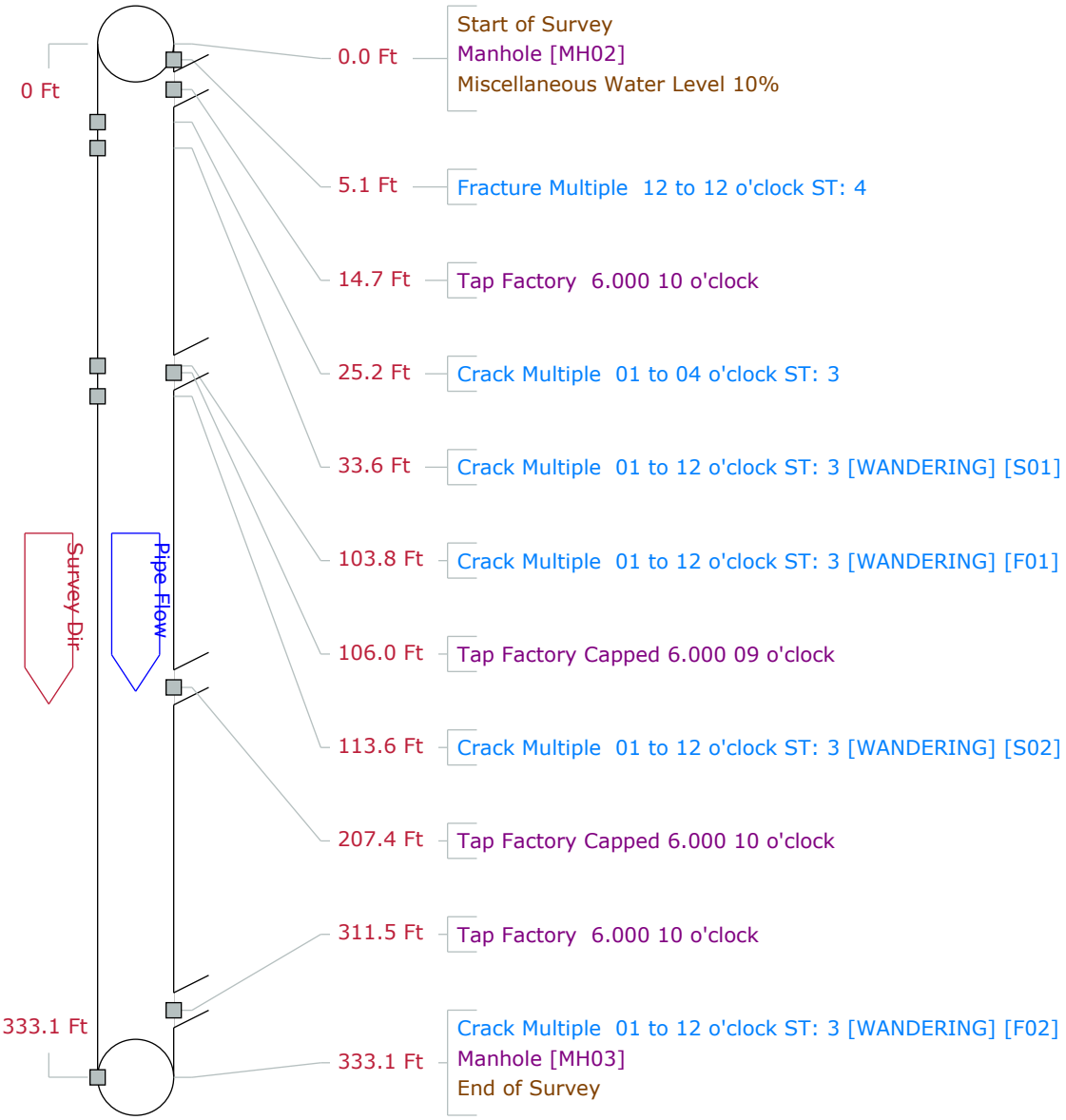
12/06/2019 thru 12/16/2019

12/18/2019 10:30:34 AM

Pipe Graphic Report of PLR MH02_MH03 for US CUBED

Setup	2	Surveyed By	A. SHAMMAS	Certificate #	U0319-070305182
Owner	CITY OF GARDENA	Reviewed By		Reviewer #	
Work Order		Customer	US CUBED	P/O #	
Media Label		Project	GARDENA CCTV -12/6/2019		
Date	2019/12/06	Time	7:40	Weather	
Pre-Cleaning	L	Date Cleaned	2019/12/06	Flow control	
Survey Purpose		Direction	Downstream		
Street	CRENSHAW BLVD	City	GARDENA	Drainage area	
Location Code		Pipe Use	Sanitary Sewage Pipe	Location details	
Height	8	Width	ins	Shape	Circular
Material	Vitrified Clay Pipe	Lining		Coating	
Pipe Joint length	Ft	Total length	333.1 Ft	Length Surveyed	333.10 Ft
Year Constructed		Year Renewed			

Structural	O & M				
Miscellaneous	Constructional				
Up	MH02	Rim to invert		Grade to invert	Rim to grade Ft
Down	MH03	Rim to invert		Grade to invert	Rim to grade Ft



Innerline Engineering
Phone:800-209-0000

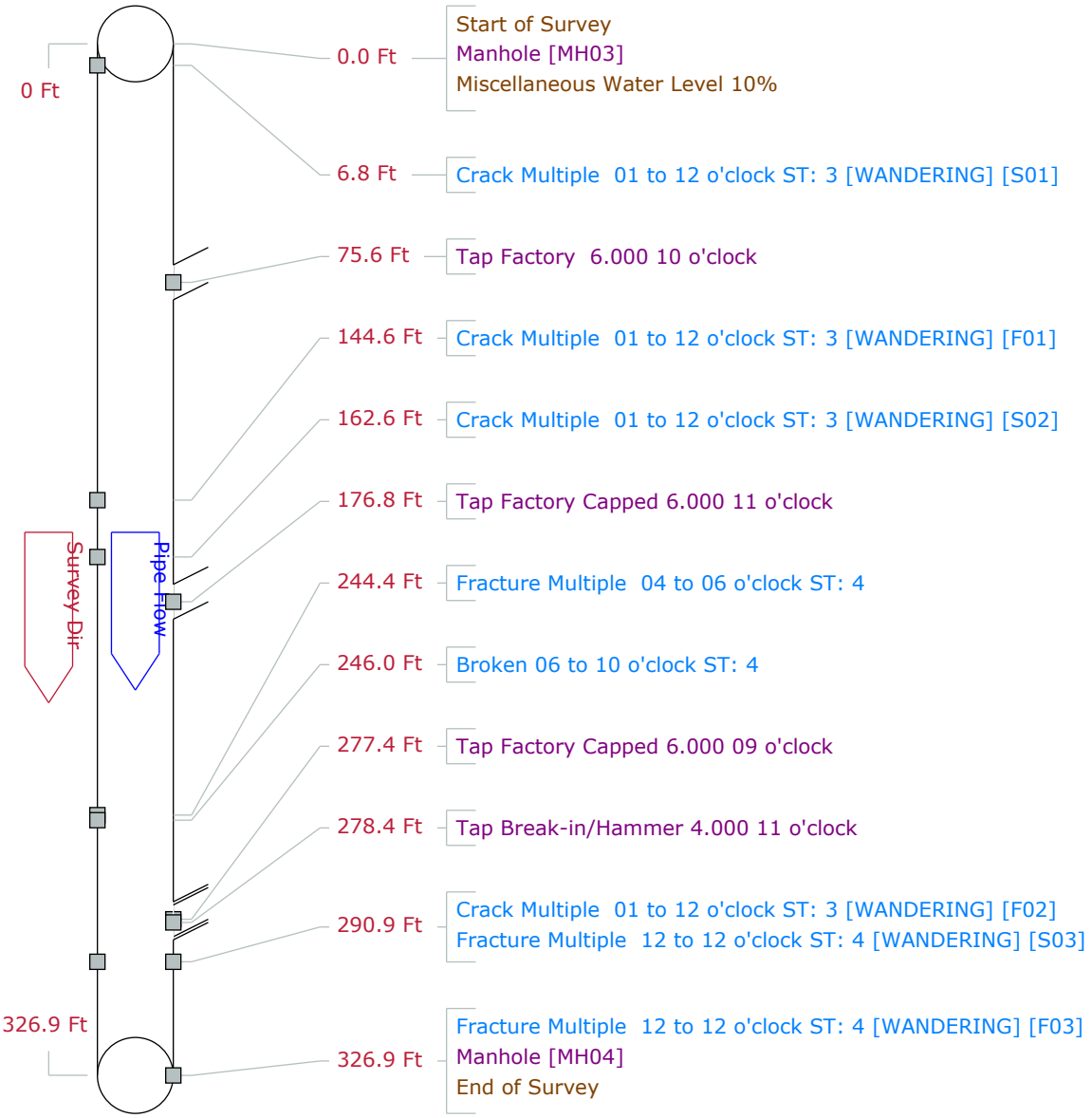
Pipe Graphic Report of PLR MH03_MH04 for US CUBED

Setup	3	Surveyed By	A. SHAMMAS	Certificate #	U0319-070305182
Owner	CITY OF GARDENA	Reviewed By		Reviewer #	
Work Order		Customer	US CUBED	P/O #	
Media Label		Project	GARDENA CCTV -12/6/2019		
Date	2019/12/06	Time	8:04	Weather	
Pre-Cleaning	L	Date Cleaned	2019/12/06	Flow control	
Survey Purpose		Direction	Downstream		

Street	CRENSHAW BLVD	City	GARDENA	Drainage area	
Location Code		Pipe Use	Sanitary Sewage Pipe		
Location details		Height	8	Width	ins
Shape	Circular	Material	Vitrified Clay Pipe	Lining	
Coating		Pipe Joint length	Ft	Total length	326.9 Ft
Length Surveyed	326.90 Ft	Year Constructed		Year Renewed	

Structural	O & M
Miscellaneous	Constructional

Up	MH03	Rim to invert		Grade to invert	Rim to grade Ft
Down	MH04	Rim to invert		Grade to invert	Rim to grade Ft



Innerline Engineering
Phone:800-209-0000

Tabular Report of PSR MH02_MH03 for US CUBED

Setup 2 Surveyed By A. SHAMMAS Certificate # U0319-070305182 Owner CITY OF GARDENA
Reviewed By Reviewer # Work Order
Customer US CUBED P/O #
Media Label Project GARDENA CCTV -12/6/2019
Date 2019/12/06 Time 7:40 Weather Pre-Cleaning L Date Cleaned 2019/12/06
Flow control Survey Purpose Direction Down
Inspection Status Complete Inspection Consequence Of Failure Pressure
Inspection Technology Used ☐ CCTV ☐ Laser ☐ Sonar ☐ Sidewall ☐ Zoom ☐ Other

Street CRENSHAW BLVD City GARDENA Drainage area
Location Code Pipe Use Sanitary Sewage Pipe
Location details Height 8 Width ins
Shape Circular Material Vitrified Clay Pipe Lining
Coating Pipe Joint length Ft Total length 333.1 Ft
Length Surveyed 333.1 Ft Year Constructed Year Renewed

Up MH02 Rim to invert Grade to invert Rim to grade Ft
Northing Easting Elevation

Down MH03 Rim to invert Grade to invert Rim to grade Ft
Northing Easting Elevation

Coordinate System Vertical Datum
GPS Accuracy
Additional info

Structural	O & M
Miscellaneous	Constructional

Count	Video	CD	Code		Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AMH	Manhole								MH02
0.0			MWL	Miscellaneous Water Level			10.000					
5.1			FM	Fracture Multiple					12	12		
14.7			TF	Tap Factory	6.000				10			
25.2			CM	Crack Multiple					01	04		
33.6		S01	CM	Crack Multiple					01	12		WANDERING
103.8		F01	CM	Crack Multiple					01	12		WANDERING
106.0			TFC	Tap Factory Capped	6.000				09			
113.6		S02	CM	Crack Multiple				J	01	12		WANDERING
207.4			TFC	Tap Factory Capped	6.000				10			
311.5			TF	Tap Factory	6.000				10			
333.1		F02	CM	Crack Multiple				J	01	12		WANDERING
333.1			AMH	Manhole								MH03
333.1			FH	End of Survey								

333.1 Ft Total Length Surveyed

Scores

Structural:	Pipe Rating	181	Pipe Ratings Index	3	Quick Rating	413J
O&M:	Pipe Rating	0	Pipe Ratings Index	0	Quick Rating	0000
Overall	Pipe Rating	181	Pipe Ratings Index	3	Quick Rating	413J

Innerline Engineering
Phone:800-209-0000

Tabular Report of PSR MH03_MH04 for US CUBED

Setup 3 Surveyed By A. SHAMMAS Certificate # U0319-070305182 Owner CITY OF GARDENA
Reviewed By Reviewer # Work Order
Customer US CUBED P/O #
Media Label Project GARDENA CCTV -12/6/2019
Date 2019/12/06 Time 8:04 Weather Pre-Cleaning L Date Cleaned 2019/12/06
Flow control Survey Purpose Direction Down
Inspection Status Complete Inspection Consequence Of Failure Pressure
Inspection Technology Used ☐ CCTV ☐ Laser ☐ Sonar ☐ Sidewall ☐ Zoom ☐ Other

Street CRENSHAW BLVD City GARDENA Drainage area
Location Code Pipe Use Sanitary Sewage Pipe
Location details Height 8 Width ins
Shape Circular Material Vitrified Clay Pipe Lining
Coating Pipe Joint length Ft Total length 326.9 Ft
Length Surveyed 326.9 Ft Year Constructed Year Renewed

Up MH03 Rim to invert Grade to invert Rim to grade Ft
Northing Easting Elevation

Down MH04 Rim to invert Grade to invert Rim to grade Ft
Northing Easting Elevation

Coordinate System Vertical Datum
GPS Accuracy
Additional info

Structural O & M
Miscellaneous Constructional

Count	Video	CD	Code		Val1	Val2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey								
0.0			AMH	Manhole								MH03
0.0			MWL	Miscellaneous Water Level			10.000					
6.8		S01	CM	Crack Multiple				J	01	12		WANDERING
75.6			TF	Tap Factory	6.000				10			
144.6		F01	CM	Crack Multiple				J	01	12		WANDERING
162.6		S02	CM	Crack Multiple				J	01	12		WANDERING
176.8			TFC	Tap Factory Capped	6.000				11			
244.4			FM	Fracture Multiple					04	06		
246.0			B	Broken					06	10		
277.4			TFC	Tap Factory Capped	6.000				09			
278.4			TB	Tap Break-in/Hammer	4.000				11			
290.9		F02	CM	Crack Multiple				J	01	12		WANDERING
290.9		S03	FM	Fracture Multiple					12	12		WANDERING
326.9		F03	FM	Fracture Multiple					12	12		WANDERING
326.9			AMH	Manhole								MH04
326.9			FH	End of Survey								

326.9 Ft Total Length Surveyed

Scores

Structural:	Pipe Rating 198	Pipe Ratings Index 3.1	Quick Rating 493I
O&M:	Pipe Rating 0	Pipe Ratings Index 0	Quick Rating 0000
Overall	Pipe Rating 198	Pipe Ratings Index 3.1	Quick Rating 493I

Innerline Engineering
Phone:800-209-0000

APPENDIX F

Cross Section for 265 units Pipe Condition - Peak Kutter

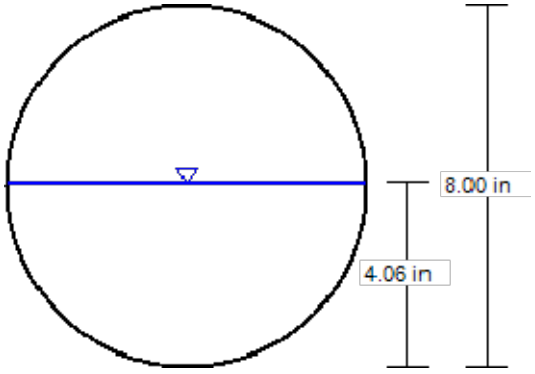
Project Description

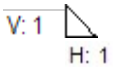
Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.015	
Channel Slope	0.00240	ft/ft
Normal Depth	4.06	in
Diameter	8.00	in
Discharge	147309.00	gal/day

Cross Section Image





Worksheet for 265 units Pipe Condition - Peak Kutter

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.015	
Channel Slope	0.00240	ft/ft
Diameter	8.00	in
Discharge	147309.00	gal/day

Results

Normal Depth	4.06	in
Flow Area	0.18	ft²
Wetted Perimeter	1.06	ft
Hydraulic Radius	2.02	in
Top Width	0.67	ft
Critical Depth	0.22	ft
Percent Full	50.8	%
Critical Slope	0.01240	ft/ft
Velocity	1.28	ft/s
Velocity Head	0.03	ft
Specific Energy	0.36	ft
Froude Number	0.44	
Maximum Discharge	0.49	ft³/s
Discharge Full	0.44	ft³/s
Slope Full	0.00066	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.753	%
Downstream Velocity	Infinity	ft/s

Worksheet for 265 units Pipe Condition - Peak Kutter

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.06	in
Critical Depth	0.22	ft
Channel Slope	0.00240	ft/ft
Critical Slope	0.01240	ft/ft

ATTACHMENT C

GOLDEN STATE WATER COMPANY WILL SERVE LETTER

Golden State
Water Company
A Subsidiary of American States Water Company

October 1, 2019

Keith Malloy (consultant)
Fuscoe Engineering Inc.
600 Wilshire Blvd, Suite 1470
Los Angeles, CA 90017

Re: Will Serve Letter for 12850 Crenshaw Blvd., Gardena CA 90249

To Whom it May Concern:

This letter is to inform you that water service is available to the above referenced address from Golden State Water Company's (GSWC) Southwest District water system located in Los Angeles County. Service to the address can be provided from our existing water facilities within Crenshaw Boulevard.

Upon completion and execution of an agreement between Golden State Water Company (GSWC) and the applicant that contains satisfactory financial arrangements and other provisions governing the extension of water service under the Water Service Agreement, GSWC will begin providing water service for the referenced address once all owner obligations have been satisfied. Analysis of more detailed development plans may require the owner to participate in the construction of special facilities prior to the Company providing water service.

GSWC is committed to providing water service to all customers within its service area, consistent with the company's obligations under rules, statutes and regulations of both the California Department of Public Health and the California Public Utilities Commission.

Unless modified or extended by GSWC, this Will Serve Letter shall terminate and be of no further force and effect one year from the date indicated above.

If you have any questions concerning the issues addressed in this letter, please let us know.

Sincerely,

Joseph Zhao, P.E., PhD.
Operations Engineer Southwest District

1600 W. Redondo Beach Blvd., Suite 101, Gardena, CA 90247
Tel: (310) 767-8200 Fax: (310) 436-6065

ATTACHMENT D

FIRE FLOW TEST RESULTS AND REQUIREMENTS

□

PLAN CORRECTIONS REPORT FEPC2020-0370
FOR REPORT TEXT LIBRARY: MUNICIPALITY_NAME

PLAN ADDRESS: 12850 Crenshaw Boulevard
Gardena, CA 90249

PARCEL: 4060004039

APPLICATION DATE: 05/19/2020

SQUARE FEET: 0.00

DESCRIPTION: Mixed use development comprised of multi-family residential, ground level, second and third parking.

EXPIRATION DATE:

VALUATION: $0.00

CONTACTS	Name	Company	Address
Applicant	Bernard McDuel	Innovative Code Solutions	21515 Hawthorne Boulevard, 200 Torrance, CA 90503
Developer	Lynton Smith	The Dinerstein Companies	3411 Richmond Avenue, 500 Houston, TX 77046

FBU - Water & Access

Fire Engineer Building Review

REVIEW ITEM	STATUS	REVIEWER
Fire Engineering - FBU v.1 Fire Engineering - Fire Building Unit	Not Cleared	Marion Jaikowski Ph: (310) 963-3981 email: Marion.JAIKOWSKI@fire.la

Correction: 013 - Fire fighting operations under HTVLs - Marion Jaikowski (5/28/20) - Not Resolved
Comments: The area of fire fighting operations, as determined by the fire code official, shall not be located underneath High Voltage Transmission Lines. Fire Code 503.2.9

ACTION REQUIRED: Provide verbatim note on site plan; and indicate on the site plan the location of all drip lines and provide the dimension from the drip line(s) to all proposed structures and proximity to fire apparatus access roadways.

Correction: 018 - Multi-unit address display - Marion Jaikowski (5/28/20) - Not Resolved
Comments: Multiple residential and commercial buildings having entrances to individual units not visible from the street or road shall have unit numbers displayed in groups for all units within each structure. Such numbers may be grouped on the wall of the structure or mounted on a post independent of the structure and shall be positioned to be plainly visible from the street or road as required by Fire Code 505.3 and in accordance with Fire Code 505.1.

ACTION REQUIRED: Provide a detail of the selected display method, and identify the display location(s) on the site plan.

Correction: 027 - 6 X 4 X 2 1/2 fire hydrants - Marion Jaikowski (5/28/20) - Not Resolved
Comments: All fire hydrants shall measure 6"" x 4"" x 2-1/2"", brass or bronze, conforming to American Water Works Association Standard C503, or approved equal.

ACTION REQUIRED: Provide verbatim note on site plan.

Correction: 012 - High voltage transmission lines - Marion Jaikowski (5/28/20) - Not Resolved
Comments: Structures and outdoor storage underneath High Voltage Transmission Lines (66 kilovolts or greater) shall comply with Fire Code 316.6 and County of Los Angeles Fire Department Regulation 27. Any proposed construction or land use within 100 feet of the drip line of High Voltage Transmission lines shall be subject to review by the Fire Marshal.

ACTION REQUIRED: Provide verbatim note and indicate on the Site Plan the location of all drip lines and provide the dimension from the drip line(s) to all proposed structures and property lines.

Correction: 025 - Hydrant spacing requirements - Marion Jaikowski (5/28/20) - Not Resolved
Comments: Spacing of fire hydrants shall not exceed the distances specified in Fire Code C105.2 & C106.

ACTION REQUIRED: Show all existing public and private on-site fire hydrants on the site plan. Include the location of all public fire hydrants within 300 feet of the lot frontage on both sides of the street. Specify size of fire hydrant(s) and dimension(s) to property lines. Additional fire hydrant requirements may be necessary after this information is provided.

Correction: 016 - Roof top barriers and parapets - Marion Jaikowski (5/28/20) - Not Resolved
Comments: Security barriers, visual screen barriers or other obstructions shall not be installed on the roof of any building in such a manner as to obstruct firefighter access or egress in the event of fire or other emergency. Parapets shall not exceed 48 inches from the top of the parapet to the roof surface on more than two sides. Fire Code 504.5

ACTION REQUIRED: Clearly indicate the height of all parapets in a section view.

Correction: 014 - Overhead HVTL Signage - Marion Jaikowski (5/28/20) - Not Resolved
Comments: Fire apparatus access roads and structures located near high-voltage transmission lines shall be posted with approved signs stating CAUTION OVERHEAD HIGH-VOLTAGE TRANSMISSION LINES as required by Fire Code 503.3.1. Specific sign locations shall be determined by the Fire Inspector.

ACTION REQUIRED: Provide verbatim note on the site plan.

Correction: 017 - Building address numbers - Marion Jaikowski (5/28/20) - Not Resolved

Comments: Approved building address numbers, building numbers or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. The numbers shall contrast with their background, be Arabic numerals or alphabet letters, and be a minimum of 4 inches high with a minimum stroke width of 0.5 inch. Fire Code 505.1

ACTION REQUIRED: Provide verbatim note on site plan

Correction: 019 - FD access road signs - Marion Jaikowski (5/28/20) - Not Resolved

Comments: Fire apparatus access roads shall be identified with approved signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an approved size, weather resistant and be maintained until replaced by permanent signs. Fire Code 505.2

ACTION REQUIRED: Provide verbatim note on site plan.

Correction: 004 - 28 feet FD access roads >30 feet high - Marion Jaikowski (5/28/20) - Not Resolved

Comments: Provide a minimum unobstructed width of 28 feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance ""clear to sky"" Fire Department vehicular access to within 150 feet of all portions of the exterior walls of the first story of the building, as measured by an approved route around the exterior of the building when the height of the building above the lowest level of the Fire Department vehicular access road is more than 30 feet high, or the building is more than three stories. The access roadway shall be located a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official. Fire Code 503.1.1 & 503.2.2.

ACTION REQUIRED: Cross-hatch the Fire Department vehicle access on the site plan, and clearly show the required width.

Correction: 029 - Public hydrants installed prior to const - Marion Jaikowski (5/28/20) - Not Resolved

Comments: All required PUBLIC fire hydrants shall be installed, tested and accepted prior to beginning construction. Fire Code 501.4

ACTION REQUIRED: Provide verbatim note on site plan.

Correction: 023 - Public fire flow requirement _____ - Marion Jaikowski (5/28/20) - Not Resolved

Comments: The required fire flow for fire hydrants at this location is _3,000_____gpm, at 20 psi residual pressure, for a duration of __3_ hours over and above maximum daily domestic demand. Fire Code 507.3 and Appendix B.

ACTION REQUIRED: Provide the following calculation on site plan. The required fire flow is based on the following calculation:

Type of construction per the Building Code Type___111A_____

Fire-flow calculation area Area_203,395_____sq. ft

Fire flow based on the fire-flow calculation area__6,000_____gpm

Reduction for fire sprinklers (maximum 50%) _____3,000_____gpm

Total fire flow required _____gpm

Correction: 020 - Key box - Marion Jaikowski (5/28/20) - Not Resolved

Comments: An approved key box, listed in accordance with UL 1037 shall be provided as required by Fire Code 506. The location of each key box shall be determined by the Fire Inspector.

ACTION REQUIRED: Provide verbatim note on site plan.

Correction: 015 - 5 foot walking FD access - Marion Jaikowski (5/28/20) - Not Resolved

Comments: A minimum 5 foot wide approved firefighter access walkway leading from the fire department access road to all required openings in the buildings exterior walls shall be provided for firefighting and rescue purposes. Fire Code 504.1

ACTION REQUIRED: Clearly identify firefighter walkway access routes on the site plan. Indicate the slope and walking surface material. Clearly show the required width.

Correction: 021 - Fire flow form 195 / 196 - Marion Jaikowski (5/28/20) - Not Resolved

Comments: Every application for a building permit shall be accompanied by evidence indicating that the proposed structure is provided with a reliable water supply capable of supplying the required fire flow as required by Fire Code 507.1.1

ACTION REQUIRED: Complete and return the ""Fire Flow Availability"" Form 195 / 196, with fire flow information provided by the water purveyor from the closest fire hydrant along the lot frontage.

Correction: 026 - Public / private hydrant quantity _____ - Marion Jaikowski (5/28/20) - Not Resolved

Comments: The fire hydrant requirements for this project are as follows:

Install _____ PUBLIC fire hydrant(s). Upgrade ____ PUBLIC fire hydrant(s).

Relocate ___ PUBLIC fire hydrant(s). Install ____ ON-SITE fire hydrant(s).

Location(s): _____

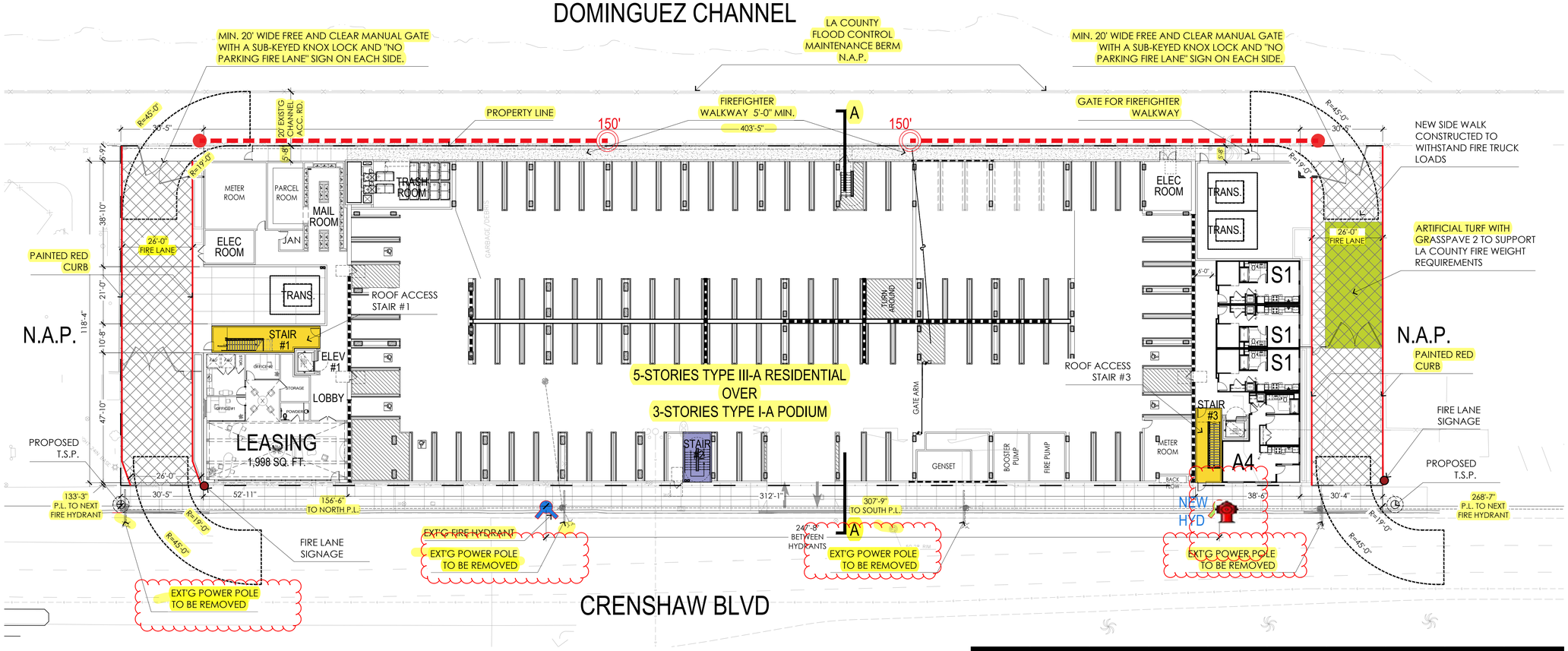
Fire Code 507.5, C105.2.2, C106.

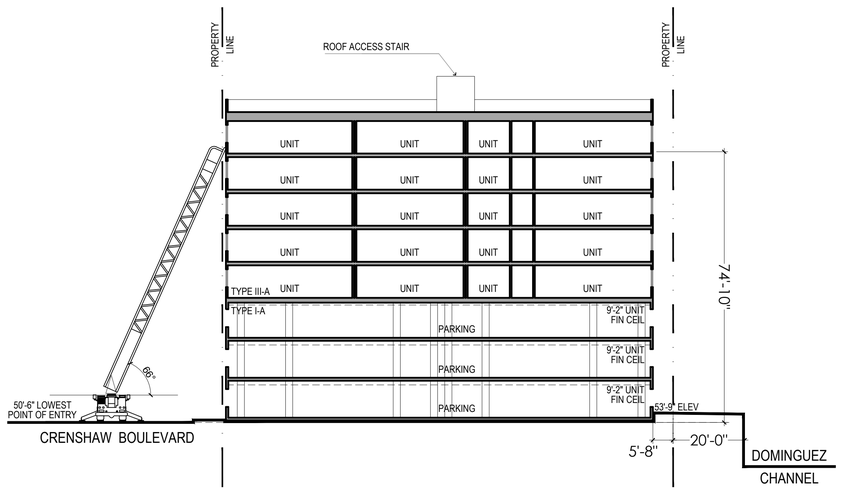
ACTION REQUIRED: Show new/upgraded/relocated hydrant locations on site plan.

Correction: 028 - Water co proof of payment / installation - Marion Jaikowski (5/28/20) - Not Resolved

Comments: A receipt from the water purveyor that shows that all funds have been paid for the installation and/or upgrade of the required public fire hydrants is required. Also, a letter from the water purveyor or installing contractor that indicates the approximate date the work will be started and completed for the fire hydrants is required.

ACTION REQUIRED: Provide proof of payment and letter stating the time of installation from the water purveyor





SECTION - AA

Install 1 Public
Install 0 On-Site
6" x 4" x 2 ½" Fire Hydrants
Conforming to American Waterworks Association Standard C503

BUILDING DATA

BUILDING TYPE	STORIES	CONSTRUCTION TYPE	SQUARE FOOTAGE	FIRE FLOW REQUIREMENT AT 20 PSI/DURATION
RESIDENTIAL BUILDING	3	I-A	39,727	
	5	III-A	203,395	
PARKING STRUCTURE	2.5	I-A	95,291	

OCCUPANCY GROUP

RESIDENTIAL UNITS	R-2
PARKING STRUCTURE	S-2

NON-COMBUSTIBLE CONSTRUCTION ACTIVITIES SHALL BE ALLOWED TO COMMENCE PRIOR TO THE COMPLETION OF THE UNDERGROUNDING OF THE OVERHEAD LINES ALONG CRENSHAW BLVD. ADJACENT TO THE SITE

SEPARATE APPROVAL REQUIRED FOR:

- ☐ Underground fire line plans
- ☑ Fire sprinkler plans
- ☑ Fire alarm plans

SUBMIT PLANS TO:

- ☑ Fire Sprinkler Plan Check Unit
- ☑ Fire Alarm Plan Check Unit

3,000 **REQUIRED FIRE FLOW**

_____GPM @ 20 PSI FOR____HOURS

LEGEND:

- 150' HOSE PULL
- 26 FT. WIDE FIRE ACCESS LANE
- ARTIFICIAL TURF W/ GRASSPAVE2 TO SUPPORT LA COUNTY FIRE WEIGHT REQ.
- STAIR TOWERS WITH ROOF ACCESS
- STAIR TOWERS
- FIRE LANE ENTRANCE SIGN
- FIRE APPARATUS TURNING RADIUS

NORTH
1"=20'-0" 0 10' 20' 40' 60'

GARDENA T.O.D.

GARDENA, CA

BUILDING PLANS
GROUND LEVEL

A-1.1

DATE: 05-13-2020
JOB NO.: 2019-446

Din/Cal 4, Inc.
1010 S. COAST HWY 101, STE 106, ENCINITAS, CA 92024
(858) 847-9311

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860
Architecture. Design. Relationships.

FORM 196
Rev. 04/03

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Fire Prevention Engineering
5823 Rickenbacker Road
Commerce, CA 90040
Telephone (323) 890-4125 Fax (323) 890-4129

Information on Fire Flow Availability for Building Permit

For All Buildings Other Than Single Family Dwellings (R-3)

INSTRUCTIONS:

Complete parts I, II (A) when:
Verifying fire flow, fire hydrant location and fire hydrant size.

Complete parts I, II (A), & II (B) when:
For buildings equipped with fire sprinkler systems, and/or private on-site fire hydrants.

PROJECT INFORMATION
(To Be Completed By Applicant)

PART I

Building Address: 12850 CRENSHAW BLVD

City or Area: GARDENA

Nearest Cross Street: EL SEGUNDO BLVD TO THE NORTH

Distance of Nearest Cross Street: 330 FEET

Applicant: KEITH MALLOY Telephone: (213) 988-8802

Address: 600 WILSHIRE BLVD

City: LOS ANGELES

Occupancy (Use of Building): AUTO STORE (CURRENTLY) Sprinklered: Yes [X] No [ ]

Type of Construction: MIXED-USE APARTMENT BUILDING (PROPOSED)

Square Footage: APPROX. 52,100 SF FOR BLDG Number of Stories: 2.5 PARKING, 5 RESIDENTIAL

Present Zoning: C3

Applicant's Signature

10/2/2019
Date

PART II-A **INFORMATION ON FIRE FLOW AVAILABILITY**
(To be completed by Water Purveyor)

Location On Crenshaw Blvd ~323' S/o W. El Segundo Blvd

Hydrant Number 163

Distance from Nearest Property Line ~ 30' Size of Hydrant 6" Size of Water main 8"

Static PSI 88 Residual PSI 74 Orifice size 4" Pitot 50 psi

Fire Flow at 20 PSI 7124 gpm Duration 3 Hours Flow Test Date / Time 10/9/19 @ 4:13 PM

Location

Hydrant Number

Distance from Nearest Property Line Size of Hydrant Size of Water main

Static PSI Residual PSI Orifice size Pitot

Fire Flow at 20 PSI Duration Flow Test Date / Time

Location

Hydrant Number

Distance from Nearest Property Line Size of Hydrant Size of Water main

Static PSI Residual PSI Orifice size Pitot

Fire Flow at 20 PSI Duration Flow Test Date / Time

PART II-B **SPRINKLERED BUILDINGS/PRIVATE FIRE HYDRANTS ONLY**

Detector Location (check one) ☐ Above Grade ☐ Below Grade ☐ Either

Backflow Protection Required (Fire Sprinklers/Private Hydrant) (check one) ☐ Yes ☐ No

Minimum Type of Protection Required (check one) ☐ Single Check Detector Assembly

☐ Double Check Detector Assembly ☐ Reduced Pressure Principle Detector Assembly

---

Golden State Water Company
Water Purveyor

Signature

6/12/2020
Date

Operations Engineering Technician
Title

This Information is Considered Valid for Twelve Months

Fire Department approval of building plans shall be required prior to the issuance of a Building Permit by the jurisdictional Building Department. Any deficiencies in water systems will need to be resolved by the Fire Prevention Division only prior to this department's approval of building plans.

PROJECT ADDRESS: 12850 Crenshaw Blvd

Golden State
Water Company
A Subsidiary of American States Water Company

FIRE FLOW TEST APPLICATION FF-1

Golden State Water Company (GSWC) charges $300.00 for each fire flow test that is performed or witnessed by GSWC personnel. Discounts for multiple tests being requested are not available. The $300.00 fee is due in advance of GSWC performing or witnessing the fire flow test.

(This section is to be completed by the Applicant (One fire flow test request per Application Form)

Print Applicant or Contact First and Last Name: Include Company Name if Applicable

KEITH MALLOY, FUSCOE ENGINEERING INC.

Print Applicant or Contact Mailing Address: Street or PO Box

600 WILSHIRE BLVD, SUITE 1470

Print Applicant or Contact City, State, Zip

LOS ANGELES, CA 90017

Print Applicant or Contact Phone Number and E-mail Address

(213) 988-8802 KMALLOY@FUSCOE.COM, RSPAGNUOLO@FUSCOE.COM

Print Address/Location where Fire Flow Test is requested (Use back of page section for additional location information)

12850 CRENSHAW BLVD, GARDENA, CA 90249

Check the appropriate box below and provide the information needed to indicate how the test results are to be sent by GSWC. Please note that some local fire agencies require original signed forms, in which case the test results will be returned by mail.

- ☐ Mailing Address: _____
- ☑ E-Mail: KMALLOY@FUSCOE.COM, RSPAGNUOLO@FUSCOE.COM
- ☐ Fax No: _____

Signature _____ Date 10/2/19

Please make check or money order payable to Golden State Water Company
Return completed form, fee and include the Fire Department fire flow test form to:
Golden State Water Company (Check www.gswater.com for the office nearest you or call 1-800-999-4033)

ATTACHMENT E

LACSD WILL SERVE LETTER

□

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

June 25, 2020

Ref. DOC 5770024

Mr. Rob Spagnuolo
Senior Engineer I
Fuscoe Engineering, Inc.
600 Wilshire Boulevard, Suite 1470
Los Angeles, CA 90017

Dear Mr. Spagnuolo:

Will Serve Letter Update
for 12850 Crenshaw Residential Development

The Sanitation Districts of Los Angeles County (Districts) received your will serve letter update request for the subject project on June 12, 2020. The proposed project is located within the jurisdictional boundary of District No. 5. Previous comments submitted by the Districts in correspondence dated October 23, 2019 (copy enclosed) still apply to the subject project with the following updated information:

- The expected increase in average wastewater flow from increasing the proposed residential apartments from 253 units to 265 units is 41,027 gallons per day, after all structures on the project site are demolished.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717 or at araza@lacsd.org.

Very truly yours,

Adriana Raza

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:dc

Enclosure

cc: A. Schmidt
A. Howard

SANITATION DISTRICTS OF LOS ANGELES COUNTY

Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager
1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

October 23, 2019

Ref. DOC 5339554

Mr. Rob Spagnuolo, Engineer
Fuscoe Engineering, Inc.
600 Wilshire Boulevard, Suite 1470
Los Angeles, CA 90017

Dear Mr. Spagnuolo:

Will Serve Letter for the 12850 Crenshaw Residential Development

The Sanitation Districts of Los Angeles County (Districts) received your will serve letter request for the subject project on October 1, 2019. The proposed project is located within the jurisdictional boundaries of District No. 5. 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' Moneta Extension Trunk Sewer Section 1, located in Crenshaw Boulevard at 135th Street. The Districts' 10-inch diameter trunk sewer has a capacity of 0.5 million gallons per day (mgd) and conveyed a peak flow of 0.1 mgd when last measured in 2016.

2. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a capacity of 400 mgd and currently produces an average flow of 261.1 mgd.

3. The expected increase in average wastewater flow from the project, described in the request as 253 multi-family residential units, is 39,155 gallons per day, after the structure on the project site is demolished. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, click on 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 for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will 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, Wastewater & Sewer Systems, and click on Connection Fee, Service Charge and More. 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, the developer should 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 CCA. 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 developer that the Districts intend to provide this service up to the levels that are legally permitted and to inform the developer 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 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: A. Schmidt
A. Howard

ATTACHMENT F

CITY OF GARDENA CUMULATIVE PROJECTS LIST

GARDENA TOD CUMULATIVE PROJECTS LIST						
Type	**ID#**	**Location (Project Name)**	**Project Description**	**Status**	**Non-Residential (SF)**	**Residential (DU)**
CITY OF GARDENA						
Residential	0	12850 Crenshaw Boulevard[1] (Gardena TOD SP Project)	265 DU, Apartments/Studio Apartments	Planning Review		265
Residential		1333 West 168th Street	3 DU, Condominiums	Entitlements Received		3
Mixed-Use		1112 Gardena Boulevard	12 DU, Apartments & 3,986 SF Commercial	Entitlements Received	3,986	12
Residential		1515 West 178th Street (Melia 178th Street Project)	114 DU Townhomes	Building & Safety Plan Check		114
Residential		1932 West 145th Street	4 DU, Apartments, with 2 DU existing	Building & Safety Plan Check		4
Residential		1348 West 168th Street (Normandie Courtyard Project)	9 DU, Small Lot Subdivision, 3-story	Entitlements received		9
Residential		1017 West 141st Street & 14031 South Vermont Avenue (KB Home Stonefield Project)	63 DU, Townhomes, 3-story	Under Construction		63
Residential		13919 Normandie Avenue	20 DU, Single-Room Occupancy	Building & Safety Plan Check		20
Mixed-Use		1341 West Gardena Boulevard	14 DU, Townhomes & 3,385 SF Retail/Office	Under Construction	3,385	14
Residential		16819 Normandie Avenue	63 DU, Single-Room Occupancy	Entitlements Received (Not yet submitted to Building and Safety)		63
Mixed-Use		14321 Van Ness Avenue	35 DU, Townhomes & 5 DU Live/Work with 1,835 SF Commercial	Under Construction	1,835	35
Industrial		1528 West 134th Street	62,960 SF Industrial	Building & Safety Plan Check	62,960	
~~Residential~~		~~2315, 2401, 2403, 2415, 2421, & 2545 Marine Avenue (Gardner Marine Avenue Project)~~	~~64 DU, Townhomes + 10 Live/Work~~	~~Entitlement Application Withdrawn~~		
Commercial		2169 West Redondo Beach Boulevard	3,486 SF Commercial (drive thru restaurant)	Planning Review	3,486	
Residential		1938 West 146th Street	6 DU, Townhomes	Planning Review		6
Residential		1621 West 147th Street	6 DU, Townhome, Three-story	Planning Review		6
Residential		1335 West 141st Street	50 DU, Townhomes, Three-story	Planning Review		50
Residential		1515 West 178th Street (Melia 178th St. Townhomes Project)	114 DU, Townhomes	Building & Safety Plan Check		114
Residential		13615, 13619, 13633 Vermont Avenue	84 DU, Townhomes (2 DU affordable)	Planning Review		84
Mixed-Use		2129 West Rosecrans Avenue (Rosecrans Place Project)	113 DU Townhomes, 3-Story, including 15 Live/Work with 3,969 SF Commercial	Planning Review	3,969	113
CITY OF HAWTHORNE						
Mixed-Use		3670 Imperial Highway	96 DU and approximately 6,200 SF Commercial (retail and office)	Under Construction	6,200	96
Mixed-Use		12540 Crenshaw Boulevard	238 DU and approximately 3,100 SF of restaurant space	Under Construction	3,100	238
Mixed-Use		14128 Kornblum	100 DU and approximately 15,000 SF of Commercial (retail and office space)	Grading	15,000	100
Industrial		12515 Cerise	62,000 SF Warehouse	Finalizing Plan Check	62,000	
23		***Total***			***165,921***	***1,409***
22		***Total Excluding Project***			***165,921***	***1,144***

Note:
1. Proposed Project

Kimley»Horn

TECHNICAL MEMORANDUM

To: Ray Barragan and Lisa Kranitz, City of Gardena

From: Jason Marechal and Rita Garcia

Date: January 14, 2021

Subject: **Gardena Transit Oriented Development Specific Plan, 12850 and 12900 Crenshaw Boulevard, Infrastructure Assessment for Sewer and Water Peer Review**

Kimley-Horn has conducted a follow-up third-party peer review of the Project's *Infrastructure Assessment for Sewer and Water* (Fuscoe Engineering, Inc., revised January 2021) on behalf of the City of Gardena to verify that Kimley-Horn's July 27, 2020 third-party peer review Technical Memo (TM) recommendations have been incorporated. The revised January 2021 report addressed the third-party peer review comments and thus is in compliance with the TM recommendations. The analysis, as revised, meets the applicable provisions of CEQA and the State CEQA Guidelines and is adequate for inclusion in the Project EIR.

Please do not hesitate to contact Jason Marechal at 714.705.1305 or jason.marechal@kimley-horn.com with any questions.

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

September 10, 2020

Ref. DOC 5878192

Mr. John Signo, AICP, Senior Planner
Community Development Department
City of Gardena
1700 West 162nd Street
Gardena, CA 90247-3732

Dear Mr. Signo:

NOP Response Letter for Gardena
Transit-Oriented Development Specific Plan Project

The Los Angeles County Sanitation Districts (Districts) received a Notice of Preparation of a Draft Environmental Impact Report (NOP) for the subject project on August 20, 2020. The proposed project is located within the jurisdictional boundary of District No. 5. 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' Moneta Extension Trunk Sewer Section 1, located in Crenshaw Boulevard at 135th Street. The Districts' 10-inch diameter trunk sewer has a capacity of 0.5 million gallons per day (mgd) and conveyed a peak flow of 0.1 mgd when last measured in 2016.

2. The wastewater generated by the proposed project will be treated at 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 261.1 mgd.

3. The expected increase in average wastewater flow from the project site, described in the notice as 265 dwelling units, is 41,027 gallons per day, after the structure on the project site is demolished. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, under Services, then Wastewater Program and Permits, select Will Serve Program, and scroll down to 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 a capital facilities fee that is used by the Districts to upgrade or expand the Sewerage System. Payment of a connection fee will 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, the developer should 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 CCA. 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 developer that the Districts intend to provide this service up to the levels that are legally permitted and to inform the developer 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 2717 or at araza@lacsd.org.

Very truly yours,

Adriana Raza

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: A. Schmidt
A. Howard