P S O M A S

LOS ANGELES SPORTS AND ENTERTAINMENT DISTRICT

WATER, SEWER, AND STORM DRAIN INFRASTRUCTURE REPORT

September 13, 2000

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Psomas Project No: 1LAE0101
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Prepared for:

LOS ANGELES ARENA COMPANY, LLC
1111 South Figueroa Street, Suite 3100
Los Angeles, California 90017
Telephone: (213) 742-7871

Prepared by:

Mike J. Zukoski, PE
PSOMAS
11444 West Olympic Blvd, Suite 750
West Los Angeles, California 90064
Telephone: (310) 954-3700
Fax: (310) 954-3777

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1.0 OVERVIEW

The Los Angeles Sports and Entertainment District ("the District") is a proposed development of 27 acres ± adjacent to the new Staples Center. The District will include two hotels; 1,115,000 square feet of retail, dining & entertainment facilities; 165,000 square feet of office space; 260,000 square feet of health, medical & sports medicine facilities; 800 residential units; parking and an open-air plaza. The District consists of two areas: the "Olympic Properties" (18 acres) and "Figueroa Properties" (9 acres), see Figure 1. The area currently is used for at-grade parking.

Olympic Properties

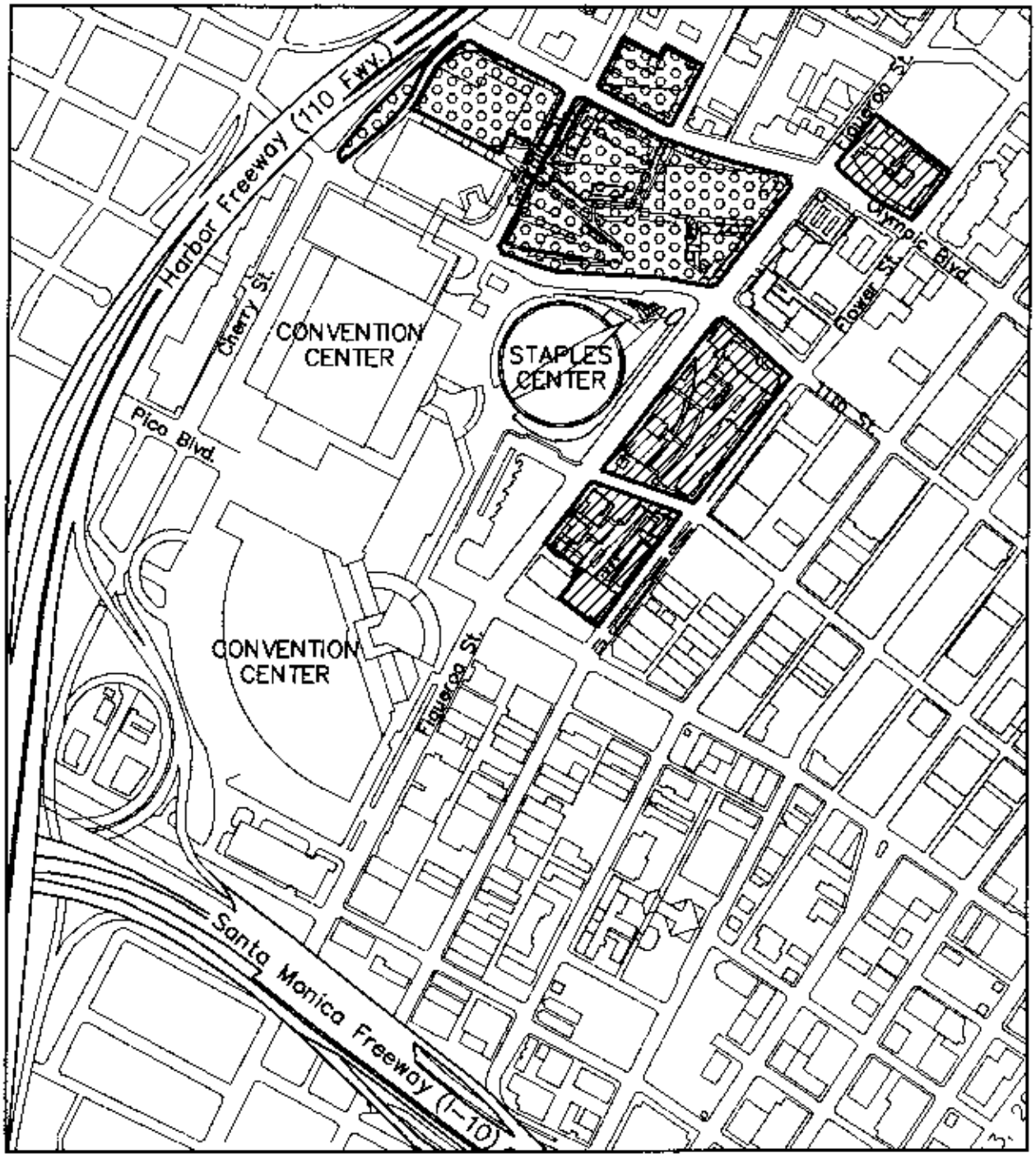
This area is located north of the Los Angeles Convention Center (LACC)/Staples Center between 11th Street and Olympic Boulevard. It is roughly bounded by the 110 Freeway on the west and Figueroa on the east.

The Olympic Properties will include a Convention Hotel (1,200 rooms); a Retail/Dining/Entertainment (RDE) Center (580,000 GSF); Health Club (125,000 GSF); Office space (75,000 GSF) and parking. The development is to include an open-air plaza to feature a year-round events venue.

Figueroa Properties

This area consists of parcels located along the east side of the LACC/Staples Center. The main parcel is located between Pico Boulevard on the south, 11th Street on the north, Figueroa Street on the west and Flower Street on the East. A second parcel fronts Olympic Boulevard between Figueroa Street and Flower Street.

The Figueroa Properties will include an additional Hotel (600 rooms); 800 Residential Units (RUs); a Retail/Entertainment Center (535,000 GSF); Office space (90,000 GSF); Sports Medicine/Medical Clinic (135,000 GSF); and parking.



VICINITY MAP

KEY

A – OLYMPIC PROPERTIES

B – FIGUEROA PROPERTIES

PSOMAS

FIGURE 1

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2.0 WATER

2.1 Environmental Setting

The City of Los Angeles Department of Water and Power (DWP) provides water service to the project site. DWP currently has a system of interconnected domestic water lines varying in size from eight-inch to 20-inch diameter surrounding the project (see Figure 2). There are no reclaimed water lines in the area nor are any planned in the foreseeable future.

The water system provides both domestic (drinking) water and fire flows. There are two pressure zones that supply this section of downtown. The first zone extends as far south as Olympic Boulevard. This area is know as Zone 448 and has a static water pressure of approximately 90 psi at the site. The second zone includes the area from Olympic Boulevard south and encompasses most of the site. The southern zone has a static water pressure of approximately 63 psi at the site

Based on land use prior to the construction of the Staples Center and on generation rates consistent with historic plumbing and construction standards, the table identified as Figure 3, "Historic Water and Sewer Demands", was compiled. The demand of the pre-project condition is estimated to be 85,500 gallons per day (gpd). This represents pre-1998 conditions, prior to when the area was converted to parking for The Staples Center. Currently, the majority of the land is parking lots and has minimal water usage.

Together with local groundwater sources, the DWP operates the Los Angeles Owens River Aqueduct and is a member of the Metropolitan Water District of Southern California (MWD). These three sources supply the City's present water needs and are

programmed to meet the City's domestic water needs into the future. According to DWP's projections, the City's water demand for the year 2020 is 900 cubic feet per second (cfs). Approximately 800 cfs of this demand is to be met by the Owens River Aqueduct and groundwater sources. The remainder will be provided from the City's MWD entitlement, which, if exercised, would bring the total water supply to 1,700 cfs. Based on these entitlements, it is anticipated that the City will have an adequate water supply over the next 20 years.

2.2 Environmental Impacts

Based on the proposed project land use and on generation rates established by the City of Los Angeles for public and commercial facilities, the project is estimated have a build-out water demand of 1,666,000 gpd. This represents an increase of 1,598,000 gpd over estimated historic usage (pre-Staples Center). Figures 4 and 5, "Los Angeles Sports And Entertainment District Water and Sewer Demand", tabulate the total estimated water demand for the project.

For the purposes of this report, historic usage was used as the base-line. This is in order to evaluate the change in usage within the project area from prior to the start of redevelopment (pre-Staples Center) to build-out (completion of the District). Currently the site consists of temporary at-grade parking.

The water infrastructure, as shown on Figure 2, is believed to be adequate to provide for the increase in domestic water demand. The Water Engineering & Technical Services Business Unit of DWP has reviewed the demand and flow calculations and has indicated that the existing system is adequate for the domestic water demand.

L.A. SPORTS AND ENTERTAINMENT COMPLEX
HISTORIC SEWER AND WATER DEMANDS

No.	Use*	Size	Units	Sewer Generation Factor (gpd/unit)	Sewer (gpd)	Sewer (Non-Peak) (gpm)	Sewer (Peak) (gpm)	Water Demand (gpd)
1	Single Family Residential	2	RU	180	360 gpd	0.3 gpm	0.8 gpm	450 gpd
2	Multiple Family Residential	182	RU	160	29,120 gpd	20.2 gpm	40.1 gpm	36,400 gpd
3	Retail/Commercial	53,100	sf	0.080	4,248 gpd	3.0 gpm	7.0 gpm	5,310 gpd
4	Industrial**	5,000	sf	0.080	400 gpd	0.3 gpm	0.8 gpm	500 gpd
5	Medical/Dental Office	5,600	sf	0.250	1,400 gpd	1.0 gpm	2.6 gpm	1,750 gpd
6	Pre-School	2,500	sf	0.200	500 gpd	0.3 gpm	1.0 gpm	625 gpd
7	Office	2,000	sf	0.150	300 gpd	0.2 gpm	0.6 gpm	375 gpd
8	Auto Repair**	3,500	sf	0.080	280 gpd	0.2 gpm	0.6 gpm	350 gpd
9	Warehouse	2,500	sf	0.020	50 gpd	0.0 gpm	0.1 gpm	63 gpd
10	Motel	138	room	130	17,940 gpd	12.5 gpm	25.9 gpm	22,425 gpd
Total for Olympic Properties					54,598 gpd	38.0 gpm	79.5 gpm	68,248 gpd
11	Office	49,000	sf	0.150	7,350 gpd	5.1 gpm	11.5 gpm	9,188 gpd
12	Commercial	2,250	sf	0.080	180 gpd	0.1 gpm	0.4 gpm	225 gpd
13	Warehouse	215,000	sf	0.020	4,300 gpd	3.0 gpm	7.1 gpm	5,375 gpd
Total for Figueroa Properties					11,830 gpd	8.2 gpm	19.0 gpm	14,788 gpd
Total for all Properties					66,428 gpd	46.2 gpm	98.5 gpm	83,036 gpd
Confluenced Total for Olympic Properties							70.9 gpm	
Confluenced Total for Figueroa Properties							17.8 gpm	
Confluenced Totals							86.9 gpm	

NOTES

*Building sizes and uses per Planning Consultants Research February 24, 1997, modified Februrary 25, 1997

**Flows shown include domestic flow only. The average flow resulting from industrial processes varies with the process and cannot be determined at this time.

Los Angeles Sports and Entertainment District Water And Sewer Demands

AREA A - OLYMPIC PROPERTIES

Use	Size	Units	Sewer Generation Factor (gpd/unit)	Sewer (Non-Peak) (gpd) ADWF	Sewer (Non-Peak) (gpm) ADWF	Sewer (Peak) (gpm) Office hours	Sewer (Peak) (gpm) non-office hours	Water (Peak) (gpm)	Water Demand (Non-Peak) (gpd)
Retail	110,000	sf	0.08	8,800 gpd	6 gpm	14 gpm	6 gpm	7 gpm	10,560 gpd
Dining	85,000	sf	2	170,000 gpd	118 gpm	198 gpm	198 gpm	238 gpm	204,000 gpd
Entertainment	125,000	sf	1.30	162,500 gpd	113 gpm	190 gpm	190 gpm	228 gpm	195,000 gpd
Entertainment - Live Theater	8,000	seats	5	40,000 gpd	28 gpm	53 gpm	28 gpm	33 gpm	48,000 gpd
Entertainment - Museums	75,000	sf	0.02	1,500 gpd	1 gpm	3 gpm	1 gpm	1 gpm	1,800 gpd
Health Club	125,000	sf	0.80	100,000 gpd	69 gpm	123 gpm	123 gpm	147 gpm	120,000 gpd
Office	75,000	sf	0.18	13,500 gpd	9 gpm	20 gpm	9 gpm	11 gpm	16,200 gpd
Hotel	1,200	rooms	130	156,000 gpd	108 gpm	183 gpm	183 gpm	220 gpm	187,200 gpd
Hotel - Meeting/Ball Rooms	100,000	sf	0.71	71,000 gpd	49 gpm	90 gpm	49 gpm	59 gpm	85,200 gpd
TOTAL:				**723,300 gpd**	**502 gpm**	**874 gpm**	**788 gpm**	**945 gpm**	**867,960 gpd**

Assumptions:

1. Building size and usage is based upon RTKL Associates, Inc. draft dated 5.24.00
2. Restaurant sewer generation factor is for a "Full Service/Indoor Seat"
   The square footage was converted to seats by applying the occupant load of 15sf/person per Table 33-A of the UBC.
   per table F227 30 gpd/seat/15 sf/seat = 2.0 gpd/sf
3. Water demand is based on 120% of the sewer load at highest demand period.
4. Peak water demand is based on the largest sewer peak demand.

ADWF = Average Dry Weather Flow - flow generated by the project with no infiltration.
PDWF = 2.64*ADWF^0.905

Los Angeles Sports and Entertainment District Water And Sewer Demands

AREA B - FIGUEROA PROPERTIES

Use	Size	Units	Sewer Generation Factor (gpd/unit)	Sewer (Non-Peak) (gpd) ADWF	Sewer (Non-Peak) (gpm) ADWF	Sewer (Peak) (gpm) Office hours	Sewer (Peak) (gpm) non-office hours	Water (Peak) (gpm)	Water Demand (Non-Peak) (gpd)
Residential	800	DU	160	128,000 gpd	89 gpm	153 gpm	153 gpm	184 gpm	153,600 gpd
Retail	315,000	sf	0.08	25,200 gpd	18 gpm	35 gpm	18 gpm	21 gpm	30,240 gpd
Dining	140,000	sf	2.0	280,000 gpd	194 gpm	311 gpm	311 gpm	373 gpm	336,000 gpd
Entertainment	80,000	sf	1.30	104,000 gpd	72 gpm	127 gpm	127 gpm	152 gpm	124,800 gpd
Office/Sports Medicine Ctr.	135,000	sf	0.25	33,750 gpd	23 gpm	46 gpm	23 gpm	28 gpm	40,500 gpd
Office	90,000	sf	0.18	16,200 gpd	11 gpm	24 gpm	11 gpm	14 gpm	19,440 gpd
Hotel	600	rooms	130	78,000 gpd	54 gpm	98 gpm	98 gpm	117 gpm	93,600 gpd
TOTAL:				**665,150 gpd**	**462 gpm**	**794 gpm**	**741 gpm**	**890 gpm**	**798,180 gpd**

Assumptions:

1. Building size and usage is based upon RTKL Associates, Inc. draft dated 5.24.00
2. Restaurant sewer generation factor is for a "Full Service/Indoor Seat"
   The square footage was converted to seats by applying the occupant load of 15sf/person per Table 33-A of the UBC.
   per table F227 30 gpd/seat/15 sf/seat = 2.0 gpd/sf
3. Water demand is based on 120% of the sewer load at highest demand period.
4. Peak water demand is based on the largest sewer peak demand.

ADWF = Average Dry Weather Flow - flow generated by the project with no infiltration.
PDWF = 2.64*ADWF^0.905

FIGURE 5

Los Angeles Sports and Entertainment District Water And Sewer Demands

RELATED PROJECTS

Use	Size	Units	Sewer Generation Factor (gpd/unit)	Sewer (Non-Peak) (gpd) ADWF	Sewer (Non-Peak) (gpm) ADWF	Sewer (Peak) (gpm) Office hours	Sewer (Peak) (gpm) non-office hours	Water (Peak) (gpm)	Water Demand (Non-Peak) (gpd)
LACC Expansion	280,000	sf	0.18	50,400 gpd	35 gpm	66 gpm	35 gpm	79 gpm	60,480 gpd
Toy Center									
retail	4,050	sf	0.08	324 gpd	0.2 gpm	1 gpm	0.2 gpm	1 gpm	389 gpd
restaurant	17,000	sf	2	34,000 gpd	24 gpm	46 gpm	46 gpm	55 gpm	40,800 gpd
office (additional)	6,000	sf	1.80	10,800 gpd	8 gpm	16 gpm	8 gpm	20 gpm	12,960 gpd
Bronson Building	115,000	sf	0.18	20,700 gpd	14 gpm	29 gpm	14 gpm	35 gpm	24,840 gpd
Flower/Pico Parking Center	40,000	sf	0.08	3,200 gpd	2 gpm	5 gpm	2 gpm	7 gpm	3,840 gpd
11th & Flower									
retail	20,000	sf	0.08	1,600 gpd	1 gpm	3 gpm	1 gpm	3.5 gpm	1,920 gpd
residential	200	units	160	32,000 gpd	22 gpm	22 gpm	78 gpm	93 gpm	38,400 gpd
615 Olympic - residential	66	units	160	10,560 gpd	7 gpm	7 gpm	26 gpm	31 gpm	12,672 gpd
Holiday Inn	300	rooms	130	39,000 gpd	27 gpm	27 gpm	95 gpm	114 gpm	46,800 gpd
TOTAL:				**202,584 gpd**	**141 gpm**	**232 gpm**	**305 gpm**	**366 gpm**	**243,101 gpd**

Assumptions:

1. Building size and usage is based upon RTKL Associates, Inc. draft dated 5.24.00
2. Restaurant sewer generation factor is for a "Full Service/Indoor Seat"
   The square footage was converted to seats by applying the occupant load of 15sf/person per Table 33-A of the UBC.
   per table F227 30 gpd/seat/15 sf/seat = 2.0 gpd/sf
3. Water demand is based on 120% of the sewer load at highest demand period.
4. Peak water demand is based on the largest sewer peak demand.

ADWF = Average Dry Weather Flow - flow generated by the project with no infiltration.
PDWF = 2.64*ADWF^0.905

Fire flow requirements cannot be determined at this time. Fire flow requirements are based on the final configuration of the project. When the final design is submitted, the LA Fire Department will dictate fire flow requirements in terms of flow and pressure required. At this time it is estimated that the fire flow requirement would be roughly 9,000 to 15,000 gpm. In order to determine if the existing water system is adequate to meet fire flow demand, the Water Operations Division of DWP has conducted several flow studies (see Appendix 3). Based on the results of these flow studies and fire department requirements, further expansion of the existing system and site-specific fire suppression improvements will likely be required. Preliminary calculations indicate that upsizing of approximately 900 feet ± of the eight-inch Olympic water line to 12-inch line, and installing about 500 feet of eight-inch line in Cherry Street may be required.

The size and location of the laterals cannot be determined at this time. It is expected that additional fire hydrants will be required both on public right-of-way and possibly on private property.

A flow report has been performed at five locations as part of this report. The results are included in Appendix 3.

2.3 Cumulative Impacts

No significant cumulative impacts on the domestic water infrastructure are anticipated from implementation of this and other projects in the vicinity.

2.4 Mitigation Measures

The applicant shall incorporate water conservation measures as imposed by the City of Los Angeles Department of Building and Safety in accordance with the City's Water Conservation Ordinances as follows:

- Incorporate Phase I of the City of Los Angeles "Emergency Water Conservation Plan" into project design and operations. Measures of this plan prohibit hose watering of driveways and associated walkways, mandate decorative fountains to use recycled water, drinking water to be served upon request only, and provide that water leaks are repaired in a timely manner.

- Comply with any additional mandatory water use restrictions imposed as a result of drought conditions.

- Install automatic sprinkler systems to irrigate landscaping during morning hours or during the evening to reduce water losses from evaporation and reset sprinklers to water less often in cooler months and during the rainfall season so that water is not wasted by excessive landscape irrigation.

- Pay prior to issuance of building permits, appropriate fees as may be imposed by the Building and Safety Department. A percentage of building permit fees is contributed to the fire hydrant fund, which provides for City-wide fire protection improvements.

- Have the Department of Water and Power conduct a flow test to determine if the existing water system meets fire flow requirements imposed by the Fire Department for the proposed project. Applicant shall undertake and complete those required improvements, identified by the Department of Water and Power resulting from the findings of the flow test.

2.5 Adverse Impacts

With implementation of the mitigation measures, no adverse effects related to domestic water service or to the water infrastructure system are expected for the project or cumulative development. Existing water infrastructure is adequate to serve the proposed project.

3.0 SEWERS

3.1 Environmental Setting

The existing sewer infrastructure in the vicinity of the proposed project includes a 66-inch diameter trunk sewer built in 1972 at the time of construction of the Los Angeles Convention Center (see Figure 7). The line runs easterly along 11th Street turning south at the intersection with Georgia Street. From this point the line travels between the Staples Center and the LACC. It makes several turns until it comes to the intersection of 12th Street and Figueroa Street. At the intersection of 12th and Figueroa, there is a diversion structure that is connected to a 48-inch line that travels to Flower Street. Besides the 66-inch sewer there are several existing local sewer mains ranging in size from eight inches to 15 inches in diameter that serve the project site. They are located in Olympic Boulevard, Pico Boulevard, 11th Street, 12th Street, Flower Street and Figueroa Street.

The existing site has no sewer connections; however, the main lines adjoining the site were sized to accommodate major development. Prior to the existing parking lot, the site contained several facilities. The estimated dry weather flows from these facilities were 68,428 gallons per day as indicated in Figure 3. Due to the existence of the trunk sewer as well as the number of local sewers adjoining the project site, the existing sewer system adequately serves present day sewage flows.

Sewage treatment for the proposed project will be provided by the Hyperon Wastewater Treatment Plant, which is located near the coastline at the southern extremity of Playa del Rey, directly south of the Los Angeles International Airport. This plant presently treats in excess of 430 million gallons per day (MGD) and has the capacity to treat 480 MGD under current operating parameters. The plant treats wastewater from almost all of the City of Los Angeles, as well as effluent from the cities of Beverly Hills, Burbank, Culver City, El Segundo, Glendale, San Fernando, Santa Monica, and portions of the unincorporated territory of Los Angeles County.

3.2 Environmental Impacts

The estimated sewage generated from the proposed project, based on projected land uses and on generation rates established by the City of Los Angeles, is 1.39 MGD average daily flow. Figures 4 and 5, " Los Angeles Sports And Entertainment District Water and Sewer Demand", tabulate the total sewage flows for the planned project land uses. The estimated sewage flow from the proposed project represents an increase over existing flows from the project site.

The existing sewer infrastructure is believed to be adequate to provide for the proposed project. This is due to the existing infrastructure:

- 66-inch diameter trunk sewer traversing adjacent to the project site
- 42-inch/66-inch relief sewer
- availability of local sewers for lateral connections

The existing lines and their current depths of flow are shown in Appendix Four. Calculations showing current flow and proposed flow in the 66 inch line is shown in Appendix Five.

Prior to the acceptance of plans and specifications, the Department of Building and Safety and the Bureau of Sanitation will again review and determine if there is allotted sewer capacity available.

Ordinances enacted by the City Council of the City of Los Angeles mandate the use of low flow devices in new construction and encourage the conservation of water to reduce wastewater flows to the sewerage system.

3.3 Cumulative Impacts

No significant cumulative impacts on the sewer infrastructure are anticipated from implementation of this and other projects in the vicinity. There are no other known planned projects in the vicinity that will have major a impact on the sanitary sewer infrastructure system serving the project site. Figure 6 show related projects that are in the vicinity of the property. Do to their location they could be expected to have an impact on the water and sewer distribution system serving the LASED. Appendices 4 and 5 show that the existing distribution system is capable of handling the additional flows.

3.4 Mitigation Measures

- In accordance with Bureau of Sanitation procedures, the applicant shall comply with City ordinances limiting connections to the city sewer system.

- A sewer availability study may be required in order to determine the remaining capacity in the local sewer lines that service the proposed project.

- The applicant shall install low flow water fixtures and further encourage reduction of water consumption to minimize wastewater flow to the sewer system in accordance with City water conservation requirements.

3.5 Adverse Impacts

With implementation of the mitigation measures, no adverse effects related to sanitary sewer service or to the sewer infrastructure system are expected for the project or cumulative development. Existing sewer infrastructure is adequate to serve the proposed project.

4.0 STORMWATER RUNOFF

4.1 Environmental Setting

As mentioned in the Overview (Section 1), the District will be located adjacent to the Los Angeles Convention / Staples Center Complex. The District will be divided into two main areas. The area to the north of LACC is known as the "Olympic Properties". This area is roughly bounded by the110 Freeway to the west, Olympic Boulevard to the north, Figueroa Street to the east and 11th Street to the south. The other main area is referred to as "Figueroa Properties". This area is roughly bounded by 11th Street on the north, Figueroa Street to the west, Pico Boulevard to the south and Flower Street to the east. These properties, along with an area on the northeast corner of Olympic Boulevard and Figueroa Street, are currently made up of parking lots.

Under existing conditions, runoff from the parking lots sheet flows to large catch basins that are distributed throughout the property. The catch basins are connected either directly to the storm drain system or are piped to parkway drains in the curb. The runoff flows from the parkway drains though the gutters to the public catch basins and into the storm drain system.

The existing storm drain system, shown on Figure 8, collects stormwater runoff from a tributary area of approximately 210 acres north of the proposed project site and traverses through the site from north to south. The tributary area consists of both residential and commercial land uses and includes a 4,000-foot segment of the Harbor Freeway. As the storm drain traverses the site it intercepts the runoff generated from the project area.

In the early 1970s, as part of the infrastructure rerouting for the construction of the Los Angeles Convention Center, an existing 45-inch diameter storm drain crossing the convention center site from Georgia Street was rerouted. The line's capacity was augmented by upsizing to the current existing six-foot-wide by six-foot-high reinforced concrete box (RCB) that traverses south in Georgia Street, then east in 11th Street. The line is then routed between the Staples Center and the LACC as a four-foot by 10-foot RCB. Then the line runs along Figueroa Street as a six-foot by eight-foot RCB. The existing storm drain infrastructure is further augmented by a second pipeline. The second line is a 63-inch reinforced concrete pipe (RCP), which picks up runoff on the west side of Georgia Street, north of 11th Street and traverses south in Georgia Street. It then heads west in 11th Street to Cherry Street, then south in Cherry Street, along the west side of the Convention Center. These two large drains convey stormwater flows around the convention center grounds.

The project site produces a number of typical urban pollutants, especially those related to automobiles. Oil, grease, rubber, metals and hydrocarbons are washed from the streets, parking lots and driveways into the storm drain system. Unpaved areas contribute dust, which increases the turbidity of runoff. Humans spread herbicides, pesticides and fertilizer in landscape areas. Finally, litter collects in gutters and is washed into drain inlets.

4.2 Environmental Impacts

The proposed project will cause an increase in automobile traffic and parking, which will likely result in an increased concentration of related contaminants in the stormwater runoff. While there is a likely increase of pollutants generated by automobiles, the nature of the pollutants is similar to the existing use and the overall quality of the stormwater runoff is not anticipated to change significantly from the existing conditions.

Stormwater runoff from commercial, residential and industrial areas contains concentrations of petroleum product pollutants, heavy metals, coliform bacteria, oxygen-demanding substances and total suspended solids. The presence of these constituents in urban runoff has contributed to degradation of the receiving waters. Pursuant to the Clean Water Act, Federal regulations require certain storm drain discharges be authorized by National Pollution Discharge Elimination System (NPDES) permits to protect water quality of Federal and State waters.

In 1996 the Regional Water Quality Control Board (RWQCB), Los Angeles Region, adopted Order No. 96-054. Order No. 96.054 is the NPDES permit governing municipal stormwater and urban runoff discharges within the County of Los Angeles. The permit required the permitee to develop and implement, by July 30,1999, programs to meet the Model Programs.

One specific requirement from the Development Planning Model Program is the Standard Urban Stormwater Mitigation Plan (SUSMP). The SUSMP outlines the necessary Best Management Practices (BMPs) that must be incorporated into the design plans. To meet these SUSMP requirements, the City requires that the first three-quarters of an inch (.075 inches) of rainfall from each storm event be treated. As part of the final design, all requirements under the SUSMP and NPDES permits will be met to ensure clean stormwater runoff.

4.3 Cumulative Impacts

No significant cumulative impacts on stormwater drainage, hydrology or stormwater runoff water quality are anticipated from implementation of this or related projects in the vicinity. Stormwater runoff from the project is expected to be very nearly the same as runoff occurring from the project site under existing conditions. There are no other known planned projects in the vicinity that are tributary to the storm drain system serving the project site.

4.4 Mitigation Measures

The project shall comply with the requirements of a National Pollution Discharge Elimination System permit for stormwater discharge and with the policies of the State Water Resources Board, EPA and local agencies having jurisdiction.

The project applicant shall use best management practices to control contact of pollutants with stormwater runoff, and to control stormwater that contains pollutants, such as:

- Properly locate and store hazardous materials to prevent contact with precipitation runoff.
- Maintain effective monitoring and cleanup programs of spills and leaks of hazardous materials.
- Monitor water quality of runoff before discharge.
- Treat the first three-quarter inch of rainfall (first flush) before flows enter the municipal system.

4.5 Adverse Impacts

The environmental setting, environmental impact, cumulative impact, mitigation measures, and adverse impacts of this project have been addressed in the "Storm Drainage Environmental Impact Report" prepared by PSOMAS, dated September 2000.

LA SPORTS
AND
ENTERTAINMENT
DISTRICT

CONTACT LIST

Nick Trotta	LA Dept. of Building & Safety	213.977.6208
Ifa Kashefi	LA Dept. of Building & Safety	213.977.6446
BRUCE LACKOW	PCR	310.451.4488
Barry Dong	LA DWP	213-367-1203
Mr. Netto	LA San Dept, Hyperion	310-648-5365
Ti Mai Wang	LA Public Works, Bureau of Sanitation	213-473-8178
Phil Tran	LA Public Works, Bureau of Sanitation	213-473-8201
Lora Canales	LA DWP	213.367.1311
Alan Lee	LA Public Works, Bureau of Engineering	213.977.6063
Terry O'Connell	LA Fire Department	213.485.5964
Paul Liu	LA DWP - Planning	213.367.0761
Milal Taghavi	LA DWP	213.367.1211
Joe Porras	LA DWP - Planning	213.367.1204
Valentin Amezquita	LA DWP	213.367.0429

SEWERAGE FACILITIES CHARGE
SEWAGE GENERATION FACTORS FOR
RESIDENTIAL AND COMMERCIAL CATEGORIES

EFFECTIVE DATE: June 6, 1996

FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
ACUPUNCTURE OFFICE/CLINIC	150/1000 GR.SQ.FT.	130	80
ARCADE - VIDEO GAMES	80/1000 GR.SQ.FT.	150	150
AUDITORIUM	4/SEAT	150	150
AUTO PARKING	20/1000 GR.SQ.FT.	150	150
AUTO BODY/MECH. REPAIR SHOP [7]	80/1000 GR.SQ.FT. (DOMESTIC) Avg. Process Flow (INDUSTRIAL)	180	280
BAKERY	280/1000 GR.SQ.FT.	1000	600
BANK: HEADQUARTERS	150/1000 GR.SQ.FT.	150	150
BANK: BRANCH	80/1000 GR.SQ.FT.	130	80
BANQUET ROOM/BALLROOM	800/1000 GR.SQ.FT.	1000	600
BAR: COCKTAIL, FIXED SEAT [4]	18/SEAT	200	200
BAR: JUICE, NO BAKING FACILITIES[15]	120/1000 GR.SQ.FT.	200	200
BAR: JUICE, WITH BAKING FACILITIES[15]	280/1000 GR.SQ.FT.	1000	600
BAR: COCKTAIL, PUBLIC TABLE AREA [4]	500/1000 GR.SQ.FT.	1000	600
BARBER SHOP	100/1000 GR.SQ.FT.	150	150
BEAUTY PARLOR	280/1000 GR.SQ.FT.	150	150
BLDG. CONST/FIELD OFFICE [3]	150/OFFICE	150	150
BOWLING ALLEY: ALLEY, LANES & LOBBY AREA	80/1000 GR.SQ.FT.	150	150
BOWLING FACILITY: ARCADE/BAR/RESTAURANT/DANCING	SFC = Sum of SFC's for all areas, based on individual SGF's	1000	600
CAFETERIA: FIXED SEAT	30/SEAT	1000	600
CAR WASH: AUTOMATIC [7]	Avg. Process Flow	20	150
CAR WASH: COIN OPERATED BAYS [7]	Avg. Process Flow	20	150
CAR WASH: HAND WASH [7]	Avg. Process Flow	20	150

CAR WASH: COUNTER & SALE AREA	80/1000 GR.SQ.FT.	20	150
CHAPEL: FIXED SEAT	4/SEAT	150	150
CHIROPRACTIC OFFICE	150/1000 GR.SQ.FT.	130	80
CHURCH: FIXED SEAT	4/SEAT	150	150
CHURCH SCHOOL: DAY CARE/ELEM	8/OCCUPANT	130	100
CHURCH SCHOOL: ONE DAY USE	200/1000 GR.SQ.FT.	130	100
COCKTAIL LOUNGE: FIXED SEAT [16]	18/SEAT	200	200
COFFEE HOUSE: NO PASTRY BAKING & NO FOOD PREPARATION [15]	120/1000 GR.SQ.FT.	200	200
COFFEE HOUSE: PASTRY BAKING ONLY [15]	280/1000 GR.SQ.FT.	1000	600
COFFEE HOUSE: SERVES PREPARED FOOD [15]	30/SEAT	1000	600
COLD STORAGE: NO SALES [3]	20/1000 GR.SQ.FT.	150	150
COLD STORAGE: RETAIL SALES [3]	80/1000 GR.SQ.FT.	150	150
COMFORT STATION: PUBLIC	100/FIXTURE	150	150
COMMERCIAL USE	80/1000 GR.SQ.FT.	150	150
COMMUNITY CENTER	4/OCCUPANT	150	150
CONFERENCE ROOM OF OFFICE BLDG.	Same as other areas in an office bldg.	130	80
COUNSELING CENTER [5]	150/1000 GR.SQ.FT.	130	80
CREDIT UNION	150/1000 GR.SQ.FT.	130	80
DAIRY [7]	Avg. Process Flow	Avg. BOD	Avg. SS
DAIRY: BARN [7]	Avg. Process Flow	Avg. BOD	Avg. SS
DAIRY: RETAIL AREA	80/1000 GR.SQ.FT.	150	150
DANCING AREA [4] (OF BARS OR NIGHTCLUB)	600/1000 GR.SQ.FT.	200	200
DANCE STUDIO [9]	80/1000 GR.SQ.FT.	150	150
DENTAL OFFICE/CLINIC	250/1000 GR.SQ.FT.	130	80
DOUGHNUT SHOP	280/1000 GR.SQ.FT.	1000	600
DRUG REHABILITATION CENTER [5]	150/1000 GR.SQ.FT.	130	80
EQUIPMENT BOOTH	20/1000 GR.SQ.FT.	150	150
FILM PROCESSING - 1 HOUR PHOTO, etc.	100/1000 GR.SQ.FT.	150	150

FILM PROCESSING - INDUSTRIAL	80/1000 GR.SQ.FT. (DOMESTIC) Avg. Process Flow (INDUSTRIAL)	150	150
FOOD PROCESSING PLANT [7]	80/1000 GR.SQ.FT. (DOMESTIC) Avg. Process Flow (INDUSTRIAL)	150	150
GAS STATION: SELF SERVICE	100/W.C.	180	280
GAS STATION: FOUR BAYS MAX	430/STATION	180	280
GOLF COURSE: 18-HOLE/9-HOLE GREEN AREA	0	150	150
GOLF COURSE: DRIVING RANGE	0	150	150
GOLF COURSE FACILITY: LOBBY/OFFICE/RESTAURANT/BAR	SFC = Sum of SFC's for all areas, based on individual SGF's	1000	600
GYMNASIUM - BASKETBALL, VOLLEYBALL [10]	250/1000 GR.SQ.FT.	150	150
HANGER (AIRCRAFT)	80/1000 GR.SQ.FT.	150	150
HEALTH CLUB/SPA [10]	800/1000 GR.SQ.FT.	150	150
HOMELESS SHELTER	75/BED	215	205
HOSPITAL	75/BED	250	100
HOSPITAL: CONVALESCENT	75/BED	250	100
HOSPITAL: ANIMAL	280/1000 GR.SQ.FT.	150	150
HOSPITAL: PSYCHIATRIC	75/BED	215	205
HOSPITAL: SURGICAL	450/BED	250	100
HOTEL: USE GUEST ROOMS ONLY	130/ROOM	310	120
JAIL	85/INMATE	310	120
KENNEL: DOG KENNEL/OPEN	100/1000 GR.SQ.FT.	150	150
LABORATORY: COMMERCIAL	250/1000 GR.SQ.FT.	150	150
LABORATORY: INDUSTRIAL [7]	Avg. Process Flow	Avg. BOD	Avg. SS
LAUNDROMAT	170/MACHINE	150	110
LIBRARY: PUBLIC AREA	80/1000 GR.SQ.FT.	150	150
LIBRARY: STACKS, STORAGE	25/1000 GR.SQ.FT.	150	150
LOBBY OF RETAIL AREA [1]	80/1000 GR.SQ.FT.	150	150
LODGE HALL	4/SEAT	150	150
LOUNGE [1]	80/1000 GR.SQ.FT.	200	200

MACHINE SHOP [7]	80/1000 GR.SQ.FT. (DOMESTIC) Avg. Process Flow (INDUSTRIAL)	150	150
MANUFACTURING OR INDUSTRIAL FACILITY [7]	80/1000 GR.SQ.FT. (DOMESTIC) Avg. Process Flow (INDUSTRIAL)	150	150
MASSAGE PARLOR	275/1000 GR.SQ.FT.	150	150
MEDICAL BUILDING	250/1000 GR.SQ.FT.	130	80
MEDICAL: LAB IN HOSPITAL	250/1000 GR.SQ.FT.	250	100
MEDICAL OFFICE/CLINIC	250/1000 GR.SQ.FT	130	80
MINI-MALL	80/1000 GR.SQ.FT.	600	400
MORTUARY: CHAPEL	4/SEAT	800	800
MORTUARY: LIVING AREA	80/1000 GR.SQ.FT.	215	205
MOTEL: USE GUEST ROOMS ONLY	130/ROOM	310	120
MUSEUM: ALL AREA	20/1000 GR.SQ.FT.	150	150
MUSEUM: OFFICE OVER 15%	150/1000 GR.SQ.FT	150	150
MUSEUM: SALES AREA	80/1000 GR.SQ.FT.	150	150
OFFICE BUILDING	150/1000 GR.SQ.FT.	130	80
OFFICE BLDG W/ COOLING TOWER	180/1000 GR.SQ.FT.	130	80
PLATING PLANT [7]	80/1000 GR.SQ.FT. (DOMESTIC) Avg. Process Flow (INDUSTRIAL)	150	150
POOL HALL (NO ALCOHOL)	80/1000 GR.SQ.FT.	150	150
POST OFFICE: FULL SERVICE [14]	150/1000 GR.SQ.FT.	150	150
POST OFFICE: PRIVATE MAIL BOX RENTAL	80/1000 GR.SQ.FT.	150	150
PRISONS	175/INMATE	310	120
RESIDENTIAL DORM: COLLEGE OR RESIDENTIAL [12]	75/STUDENT	215	205
RESIDENTIAL: BOARDING HOUSE	75/BED	215	205
RESIDENTIAL: APT - BACHELOR	80/DU	215	205
RESIDENTIAL: APT - 1 BDR [6]	120/DU	215	205
RESIDENTIAL: APT - 2 BDR [6]	160/DU	215	205
RESIDENTIAL: APT - 3 BDR [6]	200/DU	215	205
RESIDENTIAL: APT - >3 BDR [6]	40 PER ADDITIONAL BEDROOM	215	205
RESIDENTIAL: CONDO - 1 BDR [6]	120/DU	215	205

RESIDENTIAL: CONDO - 2 BDR [5]	160/DU	215	205
RESIDENTIAL: CONDO - 3 BDR [5]	200/DU	215	205
RESIDENTIAL: CONDO - >3 BDR [5]	40 PER ADDITIONAL BEDROOM	215	205
RESIDENTIAL: DUPLEX/TOWNHOUSE/SFD - 1 BDR [6]	130/DU	215	205
RESIDENTIAL: DUPLEX/TOWNHOUSE/SFD - 2 BDR [6]	180/DU	215	205
RESIDENTIAL: DUPLEX/TOWNHOUSE/SFD - 3 BDR [6]	230/DU	215	205
RESIDENTIAL: DUPLEX/TOWNHOUSE/SFD - >3 BDR [6]	50 PER ADDITIONAL BDR	215	205
RESIDENTIAL ROOM ADDITION: BEDROOM [4]	50/BDR	215	205
RESIDENTIAL ROOM ADDITION: OTHER THAN BEDROOM [4]	0	0	0
RESIDENTIAL ROOM CONVERSION: INTO A BEDROOM [4]	50/BDR	215	205
RESIDENTIAL ROOM CONVERSION: INTO A ROOM OTHER THAN BEDROOM [4]	0	0	0
RESIDENTIAL: MOBILE HOME	160/DU	215	205
RESIDENTIAL: ARTIST (2/3 AREA)	250/DU	215	205
RESIDENTIAL: ARTIST RESIDENCE	80/DU	215	205
RESIDENTIAL: GUEST HOME W/ KITCHEN	Same as Residential Apartment	215	205
RESIDENTIAL: GUEST HOME W/O KITCHEN	50 PER BDR	150	150
REST HOME	75/BED	250	100
RESTAURANT: DRIVE-IN	40/STALL	1000	600
RESTAURANT: DRIVE-IN	20/SEAT	1000	600
RESTAURANT: FAST FOOD INDOOR SEAT	20/SEAT	1000	600
RESTAURANT: FAST FOOD OUTDOOR SEAT	12/SEAT	1000	600
RESTAURANT: FULL SERVICE INDOOR SEAT	30/SEAT	1000	600

RESTAURANT: FULL SERVICE OUTDOOR SEAT	18/SEAT	1000	600
RESTAURANT: TAKE-OUT	300/1000 GR.SQ.FT.	1000	600
RETAIL AREA	80/1000 GR.SQ.FT.	150	150
RIFLE RANGE: SHOOTING STALLS, SHOOTING LANES, LOBBY AREA	80/1000 GR.SQ.FT.	150	150
RIFLE RANGE FACILITY: BAR/RESTAURANT	SFC = Sum of SFC's for all areas, based on individual SGF's	1000	600
SCHOOL: ARTS/DANCING/MUSIC [6]	80/1000 GR.SQ.FT.	130	100
SCHOOL: DAY CARE CENTER [6]	8/CHILD	130	100
SCHOOL: ELEMENTARY/JR. HIGH [6]	8/STUDENT	130	100
SCHOOL: HIGH SCHOOL [6]	12/STUDENT	130	100
SCHOOL: KINDERGARTEN	200/1000 GR.SQ.FT.	130	100
SCHOOL: MARTIAL ARTS [6]	80/1000 GR.SQ.FT.	130	100
SCHOOL: NURSERY-DAY CARE [6]	8/CHILD	130	100
SCHOOL: SPECIAL CLASS [6]	8/STUDENT	130	100
SCHOOL: TRADE OR VOCATIONAL [6]	12/STUDENT	130	100
SCHOOL: TRAINING [6]	12/STUDENT	130	100
SCHOOL: UNIVERSITY/COLLEGE [6]	18/STUDENT	130	100
SCHOOL: DORMITORY [12]	75/STUDENT	215	205
SCHOOL: STADIUM, PAVILION	4/SEAT	150	150
SPA/JACUZZI (Commercial, with backwash filters) [7]	Avg. Backwash Flow	150	150
SPA/JACUZZI (Residential, with replaceable filter cartridges)	0	215	205
STORAGE: BUILDING/WAREHOUSE	20/1000 GR.SQ.FT.	150	150
STORAGE: SELF STORAGE BLDG.	20/1000 GR.SQ.FT.	150	150
STORE: ICE CREAM/YOGURT	80/1000 GR.SQ.FT.	1000	600
STORE: RETAIL [1]	80/1000 GR.SQ.FT.	150	150
STUDIO: FILM / TV - AUDIENCE VIEWING ROOM [13]	4/SEAT	150	150
STUDIO: FILM / TV - REGULAR USE [13] INDOOR FILMING AREA	80/1000 GR.SQ.FT.	150	150

STUDIO: FILM / TV - INDUSTRIAL USE [1] FILM PROCESS./MACHINE SHOP	80/1000 GR.SQ.FT. (DOMESTIC) Avg. Process Flow (INDUSTRIAL)	150	150
STUDIO: RECORDING	80/1000 GR.SQ.FT.	150	150
SWIMMING POOL (Commercial, with backwash filters)	Avg. Backwash Flow		
SWIMMING POOL (Residential, with replaceable filter cartridges)	0	0	0
TANNING SALON: INDEPENDENT, NO SHOWER [1]	80/1000 GR.SQ.FT.	150	150
TANNING SALON: WITHIN A HEALTH SPA/CLUB	800/1000 GR.SQ.FT.	150	150
THEATER: DRIVE-IN	10/VEHICLE	150	150
THEATER: LIVE/MUSIC/OPERA	4/SEAT	150	150
THEATER: CINEMA	4/SEAT	150	150
TRACT: COMMERCIAL/RESIDENTIAL	1/ACRE	215	205
TRAILER - CONST/FIELD OFFICE [3]	150/OFFICE	150	150
VETERINARY CLINIC/OFFICE	280/1000 GR.SQ.FT.	130	80
WAREHOUSE	20/1000 GR.SQ.FT.	150	150
WAREHOUSE W/ OFFICE	CHARGE EACH FACILITY SEPARATELY	150	150
WASTE DUMP: RECREATIONAL	430/STATION	5400	12000
WINE TASTING ROOM: KITCHEN	215/1000 GR.SQ.FT.	150	150
WINE TASTING ROOM: ALL AREA	80/1000 GR.SQ.FT.	150	150

FOOTNOTES

1 Lobby of retail includes lounges, holding rooms, or waiting area, etc.

2 Cold storage facilities are categorized as follow:

A. No Sales - the cold storage facility is used only for temporary storage, no selling is involved. For example, cold storage facilities at the harbor temporarily store seafood until it is distributed.

B. Cold storage w/ retail sales - the primary function of this facility is to support the wholesale/retail operation of a store, such as supermarket freezers, refrigerators, etc.

3 Building construction includes trailers, field offices, etc.

4 The SFC for a bar shall be the sum of SFC's for all areas based on the SGF for each area (ex. fixed seat area, public table area, dancing area).

5 Counseling centers include marriage counseling centers, alcohol/drug rehabilitation /dependency centers, nutrition centers, diet centers, etc.

6 A bedroom is defined as an enclosed subdivision with 50 sq.ft. or more floor area in a residential building commonly used for sleeping purpose, and is partitioned off to form a habitable room.

7 Bureau of Sanitation will determine the flow base on the information given by applicants for facilities with industrial discharge. The flow will be redetermined by Sanitation inspectors annually base on water bills. If the actual flow exceeds the previous year determined flow, the applicants will be charged for the difference.

Please refer to the Sewerage Facilities Charge for industrial customers.

If this type of facility is exempt from an industrial discharge permit, only the domestic SFC will be assessed.

8 The SGF for schools based on the student capacity, covers the following facilities:

A. classrooms and lecture halls
B. professors' offices
C. administration offices
D. laboratories for classes or research
E. libraries
F. bookstores

G. student/professor lounges
H. school cafeterias
I. warehouses and storage areas
J. auditoriums
K. gymnasiums

When a school files an application for addition of any of the foregoing facilities, the student population will be reassessed and the total gpd for the new facility will be based on the number of students increased since the last SFC was paid or when the City implemented the SFC for the first time. The SFC for any school facility (ex. stadium, dormitory, etc.) not listed above, will be based on the designated SGF for that category.

9 Part-time basis schools or dance studios should be charged as retail area - 80 gpd /1000 gr.sq.ft. Full-time basis schools should be charged by the number of students.

10 Bureau of Sanitation will determine if an industrial permit is needed for health spas. The first year flow is based on 800 gpd/1000 gr.sq.ft., and the Sanitation inspectors will redetermine the flow annually base on water bill from the previous year. The applicants are responsible for paying the difference of SFC.

Health club/spa includes lobby area, workout floors, aerobic rooms, swimming pools, Jacuzzi, sauna, locker rooms, showers, and restrooms. If a health club/spa has a gymnasium type of facility, this portion should be charged separately at the gymnasium SFC rate.

Gymnasiums include basketball court, volleyball court, and any other large open space with low occupancy density.

11 No independent tanning salons with shower was encountered during survey.

12 The SGF for a college dormitory based on student capacity also includes the SGF for the dormitory cafeterias.

13 The SFC for a TV or motion picture studio shall be the sum of SFC's for different facilities in the studio, based on the SGF for each facility. A studio may include one or more of the following facilities: audience viewing room, filming room, film processing, storage area, etc.

14 Full service post offices include U.S. Postal Service, UPS, Federal Express, DHL, and etc.

15 The determination of SGF for juice bars and coffee houses depends on the extent of the actual food preparation in house, <u>not</u> by the types of food provided.

1) SGF for <u>no</u> pastry baking and <u>no</u> food preparation is 120 gpd/1000 gr.sq.ft.

2) SGF for pastry baking only and no food preparation is 280 gpd/1000 gr.sq.ft.
3) SGF for complete food preparation is 30 gpd/seat.

For example, a juice bar that offers doughnuts or pastries purchased from food wholesale dealers, should be considered as a facility with no pastry baking.

Juice bars and coffee houses do not serve any alcoholic drinks.

16 Cocktail lounge usually does not serve prepared food.

SGFRE&CO.WPD
Revised 05/13/96
Disk no.3D

CITY OF LOS ANGELES

Los Angeles Department of Water & Power - Water System

Service Advisory Request

SERVICE NUMBER 557796

For : 926 WEST OLYMPIC BOULEVARD Date: 7-31-2000

Prop. : 8 -inch Fire Service and 8 -inch Domestic Service off of the 8 -inch main in OLYMPIC BOULEVARD on the NORTH side approximately 100 feet EAST of the EAST OF GEORGIA STREET . The System Maximum Pressure is 92 psi based on street curb elevation of 240 feet above level at this location. The distance from the DWP main to the property line i 19 feet.

System maximum pressure should be used only for determining class of piping and fittings.

Residual Flow/Pressure Table for Water System Street Main at this Location.

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	75	1440	57	2095	39
300	74	1485	56	2125	38
440	73	1525	55	2155	37
545	72	1565	54	2185	36
640	71	1605	53	2215	35
720	70	1645	52	2245	34
795	69	1680	51	2275	33
865	68	1720	50	2305	32
930	67	1755	49	2335	31
990	66	1790	48	2360	30
1050	65	1830	47	2390	29
1105	64	1865	46	2420	28
1155	63	1895	45	2445	27
1210	62	1930	44	2475	26
1255	61	1965	43	2500	25
1305	60	2000	42		
1350	59	2030	41		
1395	58	2060	40		

Meter Assembly Capacities

Domestic Meters		
1 inch	=	56 gpm
1-1/2 inch	=	96 gpm
2 inch	=	160 gpm
3 inch	=	220 gpm
4 inch	=	400 gpm
6 inch	=	700 gpm
8 inch	=	1500 gpm
10 inch	=	2500 gpm

Fire Services		
2 inch	=	250 gpm
4 inch	=	600 gpm
6 inch	=	1400 gpm
8 inch	=	2500 gpm
10 inch	=	5000 gpm

FM Services		
8 inch	=	2500 gpm
10 inch	=	5000 gpm

These values are subject to change due to changes in system facilities or demands.

Comments: _____

This information will be sent to the Department of Building and Safety for plan checking.

This SAR is valid for one year from the date above. Call DWP for recalculation or for reissue if no system changes have occurred.

For additional information contact the Water Engineering Services Sectio - Central Squad

Printed: 7-31-2000 (213) 367-1216

M TAGHAVI — Prepared by

Approved by — 7/31/00

128-207 — Water Service Map

CITY OF LOS ANGELES

Los Angeles Department of Water & Power - Water System

Service Advisory Request

SERVICE NUMBER 557788

For : 940 SOUTH FIGUEROA STREET Date: 7-31-2000

Prop. : 8 -inch Fire Service and 8 -inch Domestic Service off of the 12 -inch main in OLYMPIC BOULEVARD on the NORTH side approximately 100 feet EAST of the EAST OF FIGUEROA STREET. The System Maximum Pressure is 91 psi based on street curb elevation of 243 feet above level at this location. The distance from the DWP main to the property line i 24 feet.

System maximum pressure should be used only for determining class of piping and fittings.

Residual Flow/Pressure Table for Water System Street Main at this Location.

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	74				
765	73				
1110	72				
1380	71				
1615	70				
1820	69				
2010	68				
2185	67				
2345	66				
2500	65				

Meter Assembly Capacities

Domestic Meters		
1 inch	=	56 gpm
1-1/2 inch	=	96 gpm
2 inch	=	160 gpm
3 inch	=	220 gpm
4 inch	=	400 gpm
6 inch	=	700 gpm
8 inch	=	1500 gpm
10 inch	=	2500 gpm

Fire Services		
2 inch	=	250 gpm
4 inch	=	600 gpm
6 inch	=	1400 gpm
8 inch	=	2500 gpm
10 inch	=	5000 gpm

FM Services		
8 inch	=	2500 gpm
10 inch	=	5000 gpm

These values are subject to change due to changes in system facilities or demands.

Comments: _____

This information will be sent to the Department of Building and Safety for plan checking.

This SAR is valid for one year from the date above. Call DWP for recalculation or for reissue if no system changes have occurred.

For additional information contact the Water Engineering Services Sectio - Central Squad (213) 367-1216

Printed: 7-31-2000

M. TAGHAVI
Prepared by

Taghavi 7/31/00
Approved by

128-207
Water Service Map

(3)

CITY OF LOS ANGELES

Los Angeles Department of Water & Power - Water System

Service Advisory Request

SERVICE NUMBER 557789

For : 780 WEST 11TH STREET Date: 7-31-2000

Prop. : 8 -inch Fire Service and 8 -inch Domestic Service off of the 20 -inch main in 11TH STREET on the NORTH side approximately 200 feet WEST of the WEST OF FIGUEROA STREET . The System Maximum Pressure is 63 psi based on street curb elevation of 240 feet above level at this location. The distance from the DWP main to the property line i 90 feet.

System maximum pressure should be used only for determining class of piping and fittings.

Residual Flow/Pressure Table for Water System Street Main at this Location.

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	47				
875	46				
1270	45				
1580	44				
1850	43				
2085	42				
2300	41				
2500	40				

Meter Assembly Capacities

Domestic Meters		
1 inch	=	56 gpm
1-1/2 inch	=	96 gpm
2 inch	=	160 gpm
3 inch	=	220 gpm
4 inch	=	400 gpm
6 inch	=	700 gpm
8 inch	=	1500 gpm
10 inch	=	2500 gpm

Fire Services		
2 inch	=	250 gpm
4 inch	=	600 gpm
6 inch	=	1400 gpm
8 inch	=	2500 gpm
10 inch	=	5000 gpm

FM Services		
8 inch	=	2500 gpm
10 inch	=	5000 gpm

These values are subject to change due to changes in system facilities or demands.

Comments: _____

This information will be sent to the Department of Building and Safety for plan checking.

This SAR is valid for one year from the date above. Call DWP for recalculation or for reissue if no system changes have occurred.

For additional information contact the Water Engineering Services Sectio - Central Squad (213) 367-1216

Printed: 7-31-2000

M. TAGHAVI
Prepared by

Taghavi 7/31/00
Approved by

128-207
Water Service Map

CITY OF LOS ANGELES

Los Angeles Department of Water & Power - Water System

Service Advisory Request

SERVICE NUMBER 557787

For: 1130 SOUTH FIGUEROA STREET Date: 7-6-2000

Prop.: 8 -inch Fire Service and 8 -inch Domestic Service off of the 12 -inch main in FIGUEROA STREET on the EAST side approximately 50 feet SOUTH of the SOUTH OF 11TH STREET. The System Maximum Pressure is 63 psi based on street curb elevation of 240 feet above level at this location. The distance from the DWP main to the property line is 58 feet.

System maximum pressure should be used only for determining class of piping and fittings.

Residual Flow/Pressure Table for Water System Street Main at this Location.

Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)
0	49				
1720	48				
2500	47				

Meter Assembly Capacities

Domestic Meters		
1 inch	=	56 gpm
1-1/2 inch	=	96 gpm
2 inch	=	160 gpm
3 inch	=	220 gpm
4 inch	=	400 gpm
6 inch	=	700 gpm
8 inch	=	1500 gpm
10 inch	=	2500 gpm

Fire Services		
2 inch	=	250 gpm
4 inch	=	600 gpm
6 inch	=	1400 gpm
8 inch	=	2500 gpm
10 inch	=	5000 gpm

FM Services		
8 inch	=	2500 gpm
10 inch	=	5000 gpm

These values are subject to change due to changes in system facilities or demands.

Comments: _____

This information will be sent to the Department of Building and Safety for plan checking.

This SAR is valid for one year from the date above. Call DWP for recirculation or for reissue if no system changes have occurred.

For additional information contact the Water Engineering Services Sectio - Central Squad (213) 367-1216

Printed: 8-1-2000

Barry Dong 7/6/2000
M. TAGHAVI
Prepared by

Taghavi 8/1/00
Approved by

128-207
Water Service Map

Dear Michael;

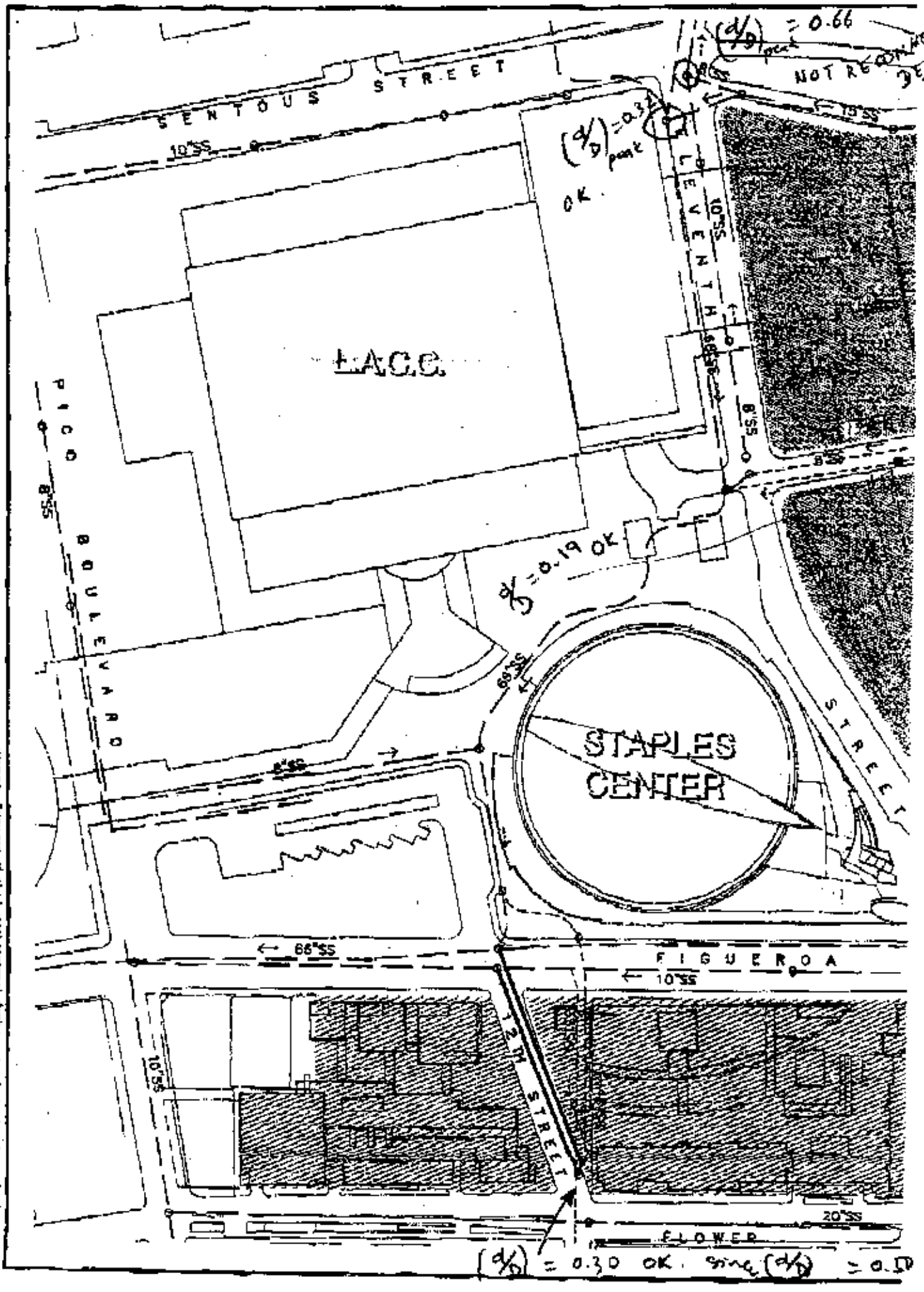
Per your request, I have reviewed the existing sewer capacities in the Staples areas and, the followings are our findings:

- The connection of 66" Sanitary Sewer (SS) at Eleven St. is OK at the present time since the ratio d/D peak is only 32%.
- The connection of 8" SS at the intersection of Cherry & 11th St. are not recommended at this time since its d/D peak is already 66%. The City's design d/D is at 50%. Any depth of flow above 50% is considering excessive and not desirable since we need room for wet weather flow and we don't want any overflow problem during rainy season.
- The connection of 10" SS at 12th St. is OK since its d/D reading is about 30%.
- The connection of 66" SS at the intersection of 11th and Georgia St. is OK since its d/D is only 19%.
- The gauging information of 10, 42 and 66 inches SS at Figueroa St are not available at the present time since the access to the area is prohibit due to the DNC Convention.
- Also, the gauging information of the two 8" SS at the Olympic Blvd are not available yet due to the same reason mentioned above (DNC Convention).

I hope that the above information will be helpful for your project. If you have any questions, please feel free to contact me. My telephone number is 213/473-8201.

Sincerely,

Phil


SENTOUS STREET
10"SS
L.A.C.C.
PICO BOULEVARD
8"SS
LEVENTH STREET
10"SS
8"SS
(d/D)peak = 0.66
NOT RECOMMENDED
(d/D)peak = 0.32
OK
d/D = 0.19 OK
STAPLES CENTER
FIGUEROA
10"SS
66"SS
12TH STREET
10"SS
20"SS
FLOWER
(d/D) = 0.30 OK. since (d/D) = 0.5D

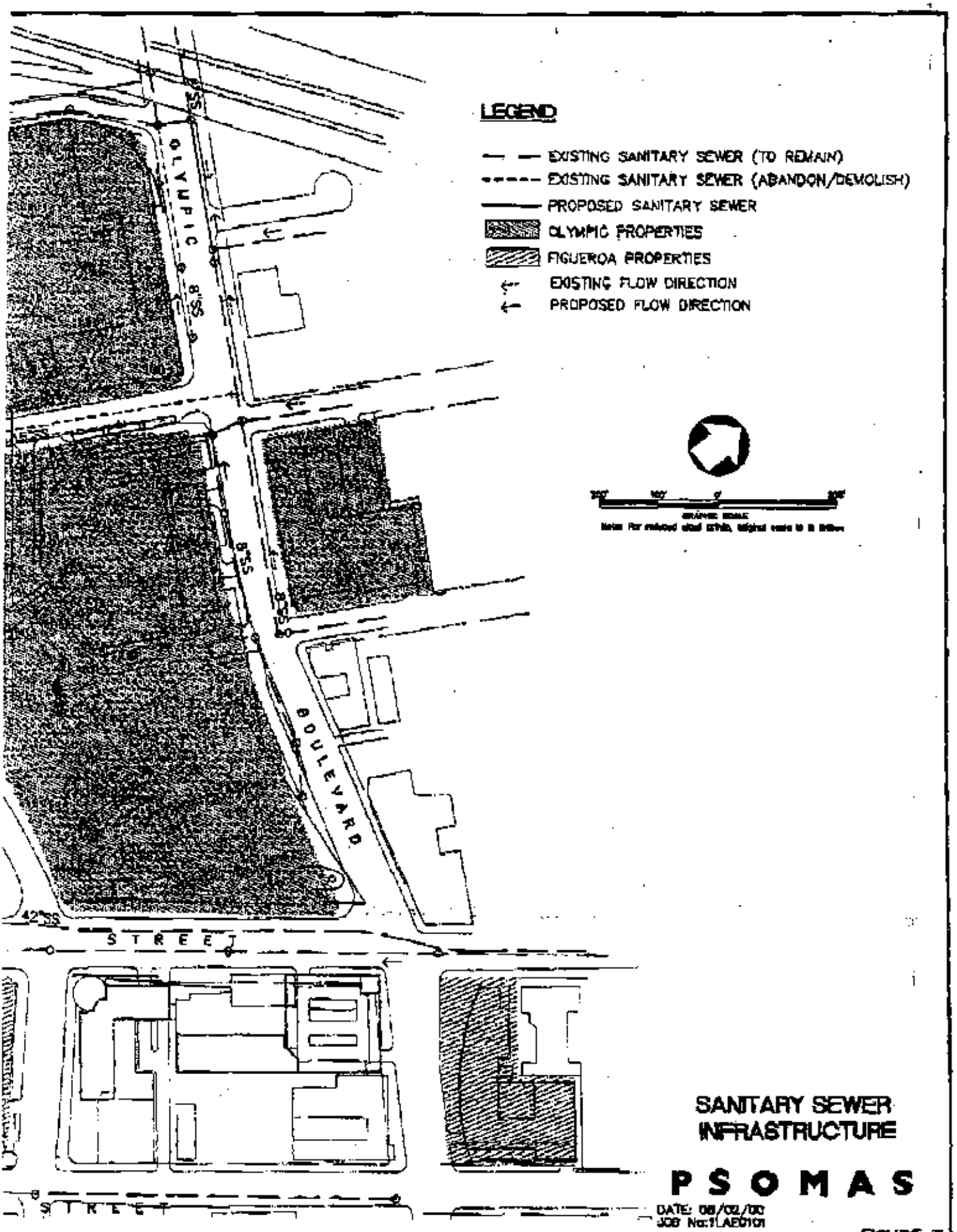
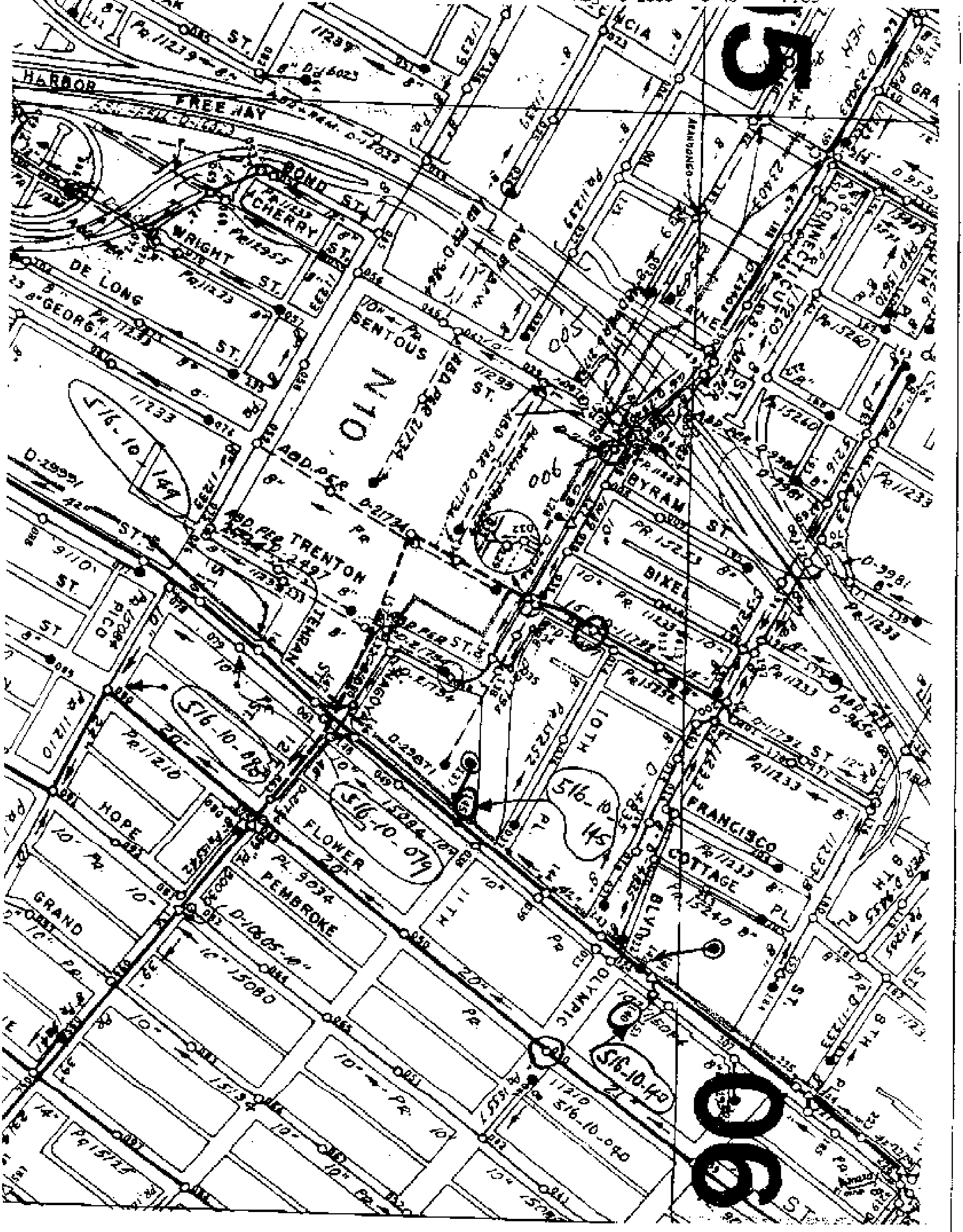

LEGEND
EXISTING SANITARY SEWER (TO REMAIN)
EXISTING SANITARY SEWER (ABANDON/DEMOLISH)
PROPOSED SANITARY SEWER
OLYMPIC PROPERTIES
FIGUEROA PROPERTIES
EXISTING FLOW DIRECTION
PROPOSED FLOW DIRECTION
OLYMPIC BOULEVARD
42ND STREET
STREET
SANITARY SEWER INFRASTRUCTURE
PSOMAS
DATE: 08/02/00
JOB No:1LAE0101

FIGURE 7


HARBOR
FREE WAY
BOND ST.
CHERRY ST.
WRIGHT ST.
DE LONG
GEORGIA ST.
SENTOUS
TRENTON
BYRAM ST.
BIXEL
FRANCISCO
COTTAGE PL.
OLYMPIC
FLOWER
PEMBROKE
HOPE
GRAND
N10
516-10-145
516-10-079
516-10-143

Project Summary Report

Project Description	
Worksheet	66" EXISTING
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	007000	ft/ft
Depth	1.76	ft
Diameter	66	in

Results		
Discharge	23,294	gal(Imp)/m
Flow Area	6.6	ft²
Wetted Perime	6.61	ft
Top Width	5.13	ft
Critical Depth	2.16	ft
Percent Full	32.0	%
Critical Slope	0.003249	ft/ft
Velocity	9.51	ft/s
Velocity Head	1.40	ft
Specific Energ	3.16	ft
Froude Numbe	1.49	
Maximum Disc	112,946	gal(Imp)/m
Discharge Full	104,997	gal(Imp)/m
Slope Full	0.000344	ft/ft
Flow Type	Supercritical	

$= d/D$ EXISTING CONDITION < 50% OK ✓

Project Summary Report

Project Description	
Worksheet	66" PROPOSE
Flow Element	Circular Chann
Method	Manning's For
Solve For	Channel Depth

Input Data		
Mannings Coeffic	0.013	
Slope	007000	ft/ft
Diameter	66	in
Discharge	24,952	gal(Imp)/m

Results		
Depth	1.82	ft
Flow Area	6.9	ft²
Wetted Perime	6.75	ft
Top Width	5.18	ft
Critical Depth	2.24	ft
Percent Full	33.2	%
Critical Slope	0.003270	ft/ft
Velocity	9.69	ft/s
Velocity Head	1.46	ft
Specific Energ	3.28	ft
Froude Numbe	1.48	
Maximum Disc	112,946	gal(Imp)/m
Discharge Full	104,997	gal(Imp)/m
Slope Full	0.000395	ft/ft
Flow Type	Supercritical	

$d/D < 50\%$ ✓ PROPOSED - THIS PROJECT ONLY

Project Summary Report

Project Description	
Worksheet	66" TOTAL
Flow Element	Circular Chanr
Method	Manning's For
Solve For	Channel Depth

Input Data		
Mannings Coeffic	0.013	
Slope	007000	ft/ft
Diameter	66	in
Discharge	25,257	gal(Imp)/m

Results		
Depth	1.84	ft
Flow Area	6.9	ft²
Wetted Perime	6.78	ft
Top Width	5.19	ft
Critical Depth	2.25	ft
Percent Full	33.4	%
Critical Slope	0.003274	ft/ft
Velocity	9.72	ft/s
Velocity Head	1.47	ft
Specific Energ	3.31	ft
Froude Numbe	1.48	
Maximum Disc	112,946	gal(Imp)/m
Discharge Full	104,997	gal(Imp)/m
Slope Full	0.000405	ft/ft
Flow Type	Supercritical	

= d/D < 50% ✓ THIS PROJECT PLUS RELATED PROJECTS PER FIGURE #6.