Appendix H Civil Engineering Report and Documentation

Existing Conditions

Topography and Drainage



The existing site area consisting of three parcels (approximately 1.18 acres pre-dedication) generally slopes southwest towards the intersection of Shatto Place and 6th Street at a rate of about 1.2%. There are on-site inlets for drainage that currently curb drain to Shatto Place. The existing site is 98% impervious, resulting in a volume of 4,244 cubic feet for an 85th Percentile storm. Based on a 50-year storm event the existing peak discharge is 3.38 cubic feet per second.

Storm Drain

Based on our existing utility research, there is no existing storm drain system in the adjacent public streets.

Sanitary Sewer

The existing public sanitary sewer main lines near the project are owned and maintained by the City of Los Angeles Sanitation Department. An existing main line exists in each street adjacent to the subject property and their information is summarized below:

- Shatto Place 8-inch vitrified clay pipe (VCP) running south towards 6th Street.
- 6th Street 8-inch vitrified clay pipe (VCP) running easterly

The City of Los Angeles Central District Sewer Wye Map 11789 and cover the subject area and shows these existing main lines and profiles.

Domestic/Fire Water

The existing water main lines near the project area are owned and maintained by the Los Angeles Department of Water & Power. An existing main line exists in each street adjacent to the subject property and their information is summarized below:

- Shatto Place 8-inch main line with a maximum pressure of 90 psi as of May 2, 2018.
- 6th Street 24-inch main line with a maximum pressure of 83 psi as of October 10, 2018

One existing fire hydrant is located immediately adjacent to the project site at the southwestern corner of the intersection of Shatto Place and 6th Street

Proposed Development

Storm Drain

The project will be designed to comply with the City of Los Angeles's Low Impact Development (LID) design standard. To facilitate this, the proposed stormwater Best Management Practice (BMP) that is considered are bio-infiltration flow-through planters. The entirety of the building's roof drains will be diverted to the bio-infiltration flow-through planters and the overflow discharge will be discharged to Shatto Place and 6th Street via

550 Shatto Civil Narrative C18-0008



a curb drain or parkway drain. Based on the Geotechnical Report provided by Geotechnologies, Inc., dated July 20, 2018, groundwater was encountered and infiltration is not feasible.

Post-dedication, the total site area is approximately 1.28 acres in size. Based on the proposed impervious area percentage of 94% the volume mitigated is 2,152 CF. The 50-year storm event peak discharge will be 3.38 cubic feet per second. The section of the bio-infiltration flow-through planter will consist of 12" of ponding, 3' of soil, and 12" of permeable material.

Sanitary Sewer

Based on input from the Developer and Client a facility description was submitted to the City of Los Angeles for generation of a Sewer Capacity Availability Report. The estimated proposed total flow based on the facility description is 44,271 gallons per day (gpd). The proposed points of connection to the existing public main lines will be determined by the Plumbing Engineer during design.

Domestic/Fire Water

The proposed sizes and locations for the domestic water and fire water points of connection will be determined by the Plumbing Engineer and Fire Sprinkler engineer, respectively, during design. The locations of the double detector check assembly and fire department connection will be determined based on feedback from the City of Los Angeles Fire Department. LADWP will be coordinated with accordingly based on the final location both domestic and fire water points of connection.

DPW ENGINEERING CENTRAL CR 25 39 189290 08/23/18 08:37/MM	City of Los Angeles Bureau of Engineering t y Availability Request (SCAR)						
51 704 SCARF 10,000-50,000 1.00 X \$1,300.00 \$1,300.00 34 502 DEVEL SERVCS CNTR SURCHARGE MIN 1.00 X \$39.00 \$39.00 34 503 EQUIP & TRAINING SURCHARGE MIN 1.00 X \$91.00 \$91.00	lested loca	alf of the applicant requesting to connect to the public sewer syste sted location for the proposed developments shown below. The ewer capacity approval from the Bureau of Sanitation. Sanitation Scar ID: Request Will Serve Letter? Yes					
SCAR 2338 Total Due: \$1,430.00 Check: \$1.430.00 HAVE A NICE DAY	CE.COM	City : Zip: Fax: BPA No. Wye Map:	LOS ANGELES 90020 PENDING 135A197-D				

SIMM Map - Maintenance Hole Locations

No.	Street Name	U/S MH	D/S MH	Diam. (in)	Approved Flow %	Notes
1	SHATTO PL	49316108	49316138	8	100.00	

No.	Proposed Use Description	Sewage Generation (GPD)	Unit	Qty	GPD
1	RESIDENTIAL: APT - BACHELOR	75	DU	2	150
2	RESIDENTIAL: APT - 1 BDRM, *6	110	DU	150	16,500
3	RESIDENTIAL: APT - 2 BDRMS *6	150	DU	92	13,800
4	RESIDENTIAL: APT - 3 BDRMS *6	190	DU	8	1,520
5	RESTAURANT: FULL SERVICE INDOOR SEAT	30	SEAT	380	11,400
6	RESIDENTIAL: DUPLEX/TOWNHOUSE-2BDRMS	150	DU	4	600
7	OFFICE BUILDING	120	KGSF	2,507	301
			Proposed 1	otal Flow (gpd):	44,271

Proposed Total Flow (gpd):

Remarks		· · · · · · · · · · · · · · · · · · ·	
Note: Results ar Date Processed		approval by the Bureau of Sanitation 502 704 CR Expires On: 23 20 1.00 25	
Processed by:	Bureau of Sanitation Phone: 323-342-6207 Reviewed by: on	Central District 000 270 Phone: 213-482-7030 Phone: 214 Ph	$ \vdash $
Fees Collected Scar Request N	Yes umber: 2338	SCAR FEE (W:37 / QC:704) \$1,430.00 G 11 / 330.00 G 11 / 330.00 G 11 / 330.00 G 11 / 330.00 00 00 00 00 00 00 00 00 00 00 00 00	



City of Los Angeles Los Angeles Department of Water and Power - Water System



SERVICE NUMBER 629070

SAR NUMBER 71305

Fire Service Pressure Flow Report

For:				550 SI	HATTO PI	L			Approved Date: 10-10-2018
Proposed	Service	3	B INCH	off of the					
24	inch n	nain in <u>6</u>	TH ST			on the	NORTH	side approximately	
150	feet	EAST	of	EAST	of SHAT	TO PL		The System maxim	um pressure is
83	psi ba	sed on s	treet curb	elevation of	264 fe	et above	sea level a	t this location.	

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

Residual	Flow/Pres	sure Table at this l	Meter Assembly Capacities			
Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Domestic Meters
0	67					1 inch = 56 gpm
-	66					1-1/2 inch = 96 gpm
2500	00					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 Service
						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.

Notes: OK to sell combo (8"FS + 8"DS).

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

This SAR is valid for one year from 10-10-18. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services SectiorCENTRAL (213) 367-1216

RUIPIN WANG Prepared by RUIPIN WANG



City of Los Angeles

Los Angeles Department of Water and Power - Water System



SAR NUMBER 67409 **Fire Service Pressure Flow Report** SERVICE NUMBER 627338 Approved Date: 5-2-2018 550 SHATTO PL For: Proposed Service 6 INCH off of the 8 inch main in SHATTO PL side approximately on the EAST 30 NORTH feet NORTH of of 6TH ST The System maximum pressure is 90 psi based on street curb elevation of 247 feet above sea level at this location. The distance from the DWP street main to the property line is 63 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						Meter Assembly Capacities
Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Flow (gpm)	Press. (psi)	Domestic Meters
0	76					1 inch = 56 gpm 1-1/2 inch = 96 gpm
965	75					2 inch = 160 gpm
1400	74					3 inch = 220 gpm
						4 inch = 400 gpm
						6 inch = 700 gpm
						8 inch = 1500 gpm
						10 inch = 2500 gpm
						Fire Service
						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.

Notes: OK to sell combo (6-in FS W/ 4-in DS)

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

This SAR is valid for one year from 05-02-18. Once the SAR expires, the applicant needs to re-apply and pay applicable processing fee.

For additional information contact the Water Distribution Services SectionCENTRAL (213) 367-1216

AIDA FITTON

Prepared by

AIDA FITTON

Approved by

134-198 Water Service Map



CUSTOMERS FIRST

Eric Garcetti, Mayor

Board of Commissioners Mel Levine, President William W. Funderburk Jr., Vice President Jill Banks Barad Christina E. Noonan Aura Vasquez Barbara E. Moschos, Secretary

David H. Wright, General Manager

August 15, 2018

Mr. Vince Bertoni Department of City Planning 200 North Spring Street, Room 721 Los Angeles, California 90012

Dear Mr. Bertoni:

Subject: Tract No. 82171 North of West 6TH Street and East of Shatto Place

This is in reply to your letter dated July 9, 2018. This tract can be supplied with water from the municipal system subject to the Los Angeles Department of Water and Power's (LADWP) Water System Rules and upon payment of regular service connection charges. All required water mains have been installed.

On the basis of the map submitted with your form letter, the LADWP's Water Services Organization (WSO) will not object to the recording of the subdivision map.

Questions regarding WSO clearance should be directed to the Los Angeles Department of Water and Power, Water Distribution Engineering, P.O. Box 51111, Room 1425, Los Angeles, California 90051-5700 or (213) 367-1120.

Sincerely,

Jesus Gonzalez, P.E. Engineer of Central District Water Distribution Engineering

RW:rp Enclosure

c: Bureau of Engineering (2) Land Developing and Mapping Division District Engineer Map No. 134-198 Brandow & Johnston/Attn: Ed Melo Los Angeles City Fire Department Water Service Representative



CUSTOMERS FIRST

Eric Garcetti, Mayor

Board of Commissioners Mel Levine, President William W. Funderburk Jr., Vice President Jill Banks Barad Christina E. Noonan Aura Vasquez Barbara E. Moschos, Secretary

David H. Wright, General Manager

August 15, 2018

Brandow & Johnston Attention: Ed Melo 700 South Flower Street, Suite 1800 Los Angeles, California 90017

Dear Mr. Melo:

Subject: Subdivision No. 82171

Enclosed is a copy of the Water System's letter to the Department of City Planning, setting forth the conditions under which water service can be provided to this subdivision. This response relates to the Water System's conditions only.

If improvements are proposed within existing dedicated streets, we must review your preliminary street improvement plans. If adjustments to water facilities are necessary, the developer may be required to pay for the cost of such adjustments. Please submit a copy of your street improvement plans after the City's District Engineer has signed them so that we can expedite determination of the need for adjustments.

After we receive the final plans and payment for the necessary adjustments, it will take us a minimum of 60 days to complete the design of the water facility adjustments and begin construction. Depending on our workload and permitting requirements, additional time may be required.

For additional information regarding the subdivision process, please refer to the enclosed fact sheet titled "Subdivisions" or contact the Water System at (213) 367-1120. Correspondence may be addressed to the Los Angeles Department of Water and Power, Water Distribution Engineering, P.O. Box 51111, Room 1425, Los Angeles, California 90051-5700.

Sincerely,

Jesus Gonzalez, P.E. Engineer of Central District Water Distribution Engineering

RW:rp Enclosures

CITY OF LOS ANGELES DEPARTMENT OF WATER AND POWER SUBDIVISIONS

The Department of Water and Power (DWP) receives copies of final tract maps submitted to the City Engineer's Office for review and determination of required facilities. The tract engineer will receive a copy of the letter DWP sends to the City Engineer detailing Water System requirements.

Arrangements for any required water facilities must be concluded before the DWP can release a tract for recordation. The Water System's Distribution Engineering Section can be contacted for any additional information regarding Water System requirements for your development. The telephone number is listed below.

TELEPHONE NUMBER

QUESTIONS REGARDING SUBDIVISIONS	(213) 367-2130
GENERAL INFORMATION FAX	(213) 367-1182
	(213) 367-4434
STATIC WATER PRESSURE INFO.	(213) 367-0973

Water System clearance for recordation will be issued upon the conclusion of arrangements for the installation of required facilities and payment of applicable charges.

Charges that may be due include those for new and existing water mains, new or existing extraordinary pump and storage facilities, new water services, and meters.

For tracts requiring a water main extension or replacement of a portion of the distribution system, the developer will be required to make financial arrangements with the DWP for design and installation of required facilities before tract recordation. Depending upon the Water System requirements for your tract, 2 to 6 months should be allowed to complete design, obtain permits, and schedule and complete construction of required installations for most tracts requiring new Water System facilities.

Should you wish to correspond with or visit the Distribution Engineering's main office, the address is:

LOS ANGELES DEPARTMENT OF WATER AND POWER DISTRIBUTION ENGINEERING SECTION - WATER 111 NORTH HOPE STREET, ROOM 1425 LOS ANGELES, CALIFORNIA 90012

BUSINESS HOURS: 8:00 A.M. TO 5:00 P.M. (MONDAY - FRIDAY, EXCLUDING HOLIDAYS)

Los Angeles

WATER SERVICE FOR MULTI-UNIT RESIDENTIAL STRUCTURES

Background on California Senate BHI 7

In September 26, 2016, Governor Jerry Brown signed Senate sill 7. Generally, this law requires new multi-unit residential tructure or new mixed-use residential and commercial tructures that submit a water service application after January , 2018, to include meters or sub-meters for every unit, so that enants can be billed for their water usage accordingly.

Purpose and Benefit of Individual Water Meters

Vater is a precious resource and the Los Angeles Department f Water and Power (LADWP) has taken a leadership role o protect and foster the sustainability of the City's limited vater resources. Responsible development in the City of Los ingeles will contribute to a sustainable environment and future. 'ast studies have shown that an effective way to encourage ndividuals to conserve water is if they receive a bill for their ctual water use. By metering each dwelling unit, the power of onservation is placed in the hands of tenants who will make etter decisions on their water use.

Iany multi-unit complexes have one master water meter from hich service is received. Water usage for these complexes s mostly bundled into the monthly rent and tenants never see neir usage or associated cost. By installing sub-meters in new nulti-unit residences, tenants can track and make adjustments o their water use with the goal of saving water and minimizing neir monthly water bill.

.os Angeles Municipal Code Requirements

ffective June 6, 2016, Los Angeles Municipal Code Section 9.04.303.3 requires the installation of separate meters or ub-meters within each individual dwelling unit and within ommon areas (such as recreation and laundry rooms) or multi-family dwellings not exceeding three stories and ontaining 50 units or less.

ADWP Requirements for Installation of Water iervice for Multi-unit Residential Structures

ADWP will approve water service only if customers are in ood billing payment standing. Additionally and as a result of B7, LADWP updated its process for approving water service oplication requests for new multi-unit residential structures for ew construction starting January 1, 2018. Location of Water Service and Meter: Requests for water service will need to be submitted with building plans and/or verification from City of Los Angeles Department of Building and Safety that the development will comply with Los Angeles Municipal Code Section 99.04.303.3 and SB 7 requirements. Location requirements for the water service and meter are as follows:

- Located within private property, not enclosed, and accessable to LADWP at all times
- Adjacent to property line nearest to water main serving the property
- Not located in driveways
- Cannot be inside of any buildings

Quantity of Meters: LADWP may provide up to a maximum of five (5) meters, as allowable by space within private property and as required by law. Developments requiring more than five meters will require a master meter from LADWP, and will require sub-metering by the property owner for each dwelling unit. Cost information can be found on the Schedule of Charges at www.ladwp.com.

Space Requirement: To expedite the request for water service, developers are encouraged to consult with LADWP to establish space requirement and location of water service meter(s). As a point of reference, space required for five 1-inch meters is approximately 15-feet long by 5-feet wide and adjacent to property line nearest to the water main that will provide service to the property.

Access Requirement: LADWP will require from the property owner access for the construction, operation and maintenance of the water service, meter, and appurtenant facilities. The property owner must execute a Service Access Agreement with LADWP.

Other Requirements: LADWP is not responsible for the restoration of any decorative paving or for maintenance of private property where water service is installed. LADWP will use asphalt or concrete for repaving after installation and maintenance of water service, meter, and appurtenant facilities.

LADWP employees will have access to the property at all times to perform repair and maintenance of meters and other appurtenance.

Questions or Comments: For questions or comments, please contact LADWP Water New Business Arrangements Group at 213-367-1178. SB7 Bill: https://leginfo.legislature.ca.gov/faces/ billTextClient.xhtml?bill_id=201520160SB7

LADINE

My ADWP com