



**WATER DEMAND CALCULATION FOR
SCRIPPS MERCY HOSPITAL
(PTS #658548)**

SAN DIEGO, CALIFORNIA

May 9, 2022

Prepared for:

SCRIPPS HEALTH

10140 Campus Point Drive, Suite 210

San Diego, California 92121

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Prepared By:

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KPFF Job #1700865

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1. Project Location and Scope

1.1 Project Location

The 17.7-acres Scripps Mercy Memorial Campus is located at the northeasterly corner of Washington Street and Fifth Avenue, in the City of San Diego, California. Access to the project site is provided on Lewis Street, Fifth Avenue, and Sixth Avenue. A site vicinity map is shown in Figure 1 below. The Scripps Mercy Memorial Campus also includes the Sixth Avenue parking structure between Sixth Avenue and Eighth Avenue.



Figure 1-1: Site Vicinity Map

1.2 Scope of Report

This report will focus on calculating the water demand of proposed developments on existing water system.

2. Study Objectives

The specific objectives of this water are:

- Access the existing water system around the Scripps Mercy campus and review the result of hydrant flow tests.
- Calculate the net increase in water demand under the proposed condition and identify potential Points of Connection (POCs) for Fire Water, Domestic Water, and Irrigation services.

3. Pre-Development Conditions

The existing improvements on the Scripps Mercy Hospital include college building, parking structures, surface parking lots, medical office buildings, emergency department, Chapel, various utility facilities, and the main hospital building.

Existing Water System Surrounding Campus

Along Fourth Ave, there is a 12" AC main which turns into an 8" AC line as it heads north and crosses Lewis Street. Fifth Ave contains a 10" AC line, which joins the 12" line on Fourth Ave as the streets merge. Near the intersection of Fifth Ave and Washington St, a 24" AC line transitions to a 12" AC line and runs west along Washington St. On Sixth Ave, there is a 12" PVC main which converts to an 8" PVC line as it heads south toward Washington St. See Appendix A for existing public water mains on Washington St., Fifth Ave., Fourth Ave., and Sixth Ave.

Hydrant Flow Test

To better understand the available water supply pressure around campus, we requested hydrant flow test at four locations listed below:

- Intersection of Fourth Ave & Lewis St
- Intersection of Fifth Ave & Fifth Ave
- Intersection of Fifth Ave & Washington St
- Intersection of Sixth Ave & Washington

See Appendix B for the completed Hydrant Flow Request forms, provided by the City of San Diego.

Existing Water Meter Data

The existing water meter data is summarized in the table below. The average monthly water usage is calculated to be 3510.7 kGal, which equates to 115,420 gallons per day. The average monthly irrigation water usage is calculated to be 166.7 kGal, which equates to 3,837 gallons per day.

Meter #	Address	Billing Duration	Total Usage	Avg Monthly Usage
34059177	4077 5th Ave	3/16/2019 – 3/16/2022	117,981 kGal	3,277 kGal
14211541 (Irrigation)	4087 05th Ave	4/5/2019 – 4/4/2022	553.5 kGal	15.4 kGal
13439275 (Irrigation)	4046 05th Ave 1/2	4/5/2019 - 1/6/2020	238.6 kGal	26.5 kGal
13680508 (Irrigation)	4079 5th Ave	3/16/2019 – 3/15/2022	3,630 kGal	100.8 kGal
18787548	4149 4th Ave	7/17/2021 - 3/15/2022	18.7 kGal	2.3 kGal
19005258 (Irrigation)	4077 5th Ave	3/22/2019 – 3/17/2021 5/18/2021 – 1/12/2022	792.1 kGal	24 kGal
19012314	4077 5th Ave	3/16/2019 – 4/14/2021 5/14/2021 – 3/15/2022	586.4 kGal	16.8 kGal
19012315	4079 5th Ave	3/16/2019 – 4/14/2021 5/14/2021 – 3/15/2022	7,163.6 kGal	204.7 kGal
99393643	4020 5th Ave	3/23/2019 – 1/13/2022	337 kGal	9.9 kGal

4. Post-Development Conditions

The proposed development will consist of Medical Office Building North at the intersection of Fourth Avenue and Lewis Street, Hospital 1 and Hospital Building north of Washington Street, and Hospital II at the center of campus. The existing Behavior Health Unit, 550 Washington MOB, Lot 4 Parking Structure, and Hospital will be demolished in phases to create space for the proposed developments.

All proposed buildings will comply with the California Green Building Standards Code and implement water conservation measures as required. Public restrooms are specified with low flow 0.5 gpm lavatory faucets and staff and public water closets will have 1.28 gallon per flush water closets that are Water Sense Listed.

Proposed Points of Connection

The proposed water connections to the public mains will occur on the west and south side of campus. MOB will connect to the city main along Fourth Ave, which transitions from 12" to 8" as it approaches the MOB. Water services proposed for Hospital I are located on Fifth Ave, which contains a 10" AC water main that transitions to a 12" PVC, then eventually joins the 12" line along Fourth Ave. The proposed water connections on Washington St will serve the proposed Hospital Building and will connect to a 12" main along Washington St. Lastly, the existing public water main in Lewis Street, east of Fourth Ave will be privatized and serve Hospital II.

See Appendix A for details on proposed fire water, domestic water, and irrigation connections to City water system.

5. Project Impacts

The anticipated water demand of the pre- and post-development conditions at the Scripps Mercy campus was calculated using the density conversion table in the City of San Diego Sewer Design Guide. The anticipated net increase in water demand is summarized in the table below.

	Water Demand per City of San Diego Sewer Design Guide
Existing Buildings to be Demolished	184,254 gpd
Existing Buildings to Remain	16,065 gpd
Proposed Additions	353,609 gpd
Net Increase	169,355 gpd

The density conversions of 150 populations/net-acre and 38.2 populations/net-acre were used for Hospital and non-hospital buildings, respectively, to estimate the equivalent populations. Then a per-capita sewage generation rate of 80 gpd was applied to calculate the average water demand. Table 1-1 of the City of San Diego Sewer Design Guide did not provide a density conversion for parking structures, therefore the water demand from existing and proposed Parking Structures were assumed to be negligible.

Please refer to the table in Appendix C for the detailed breakdown of water demand calculations.

5.1 Irrigation Demand

The proposed landscape areas are split into four zones based on planting materials and their water use.

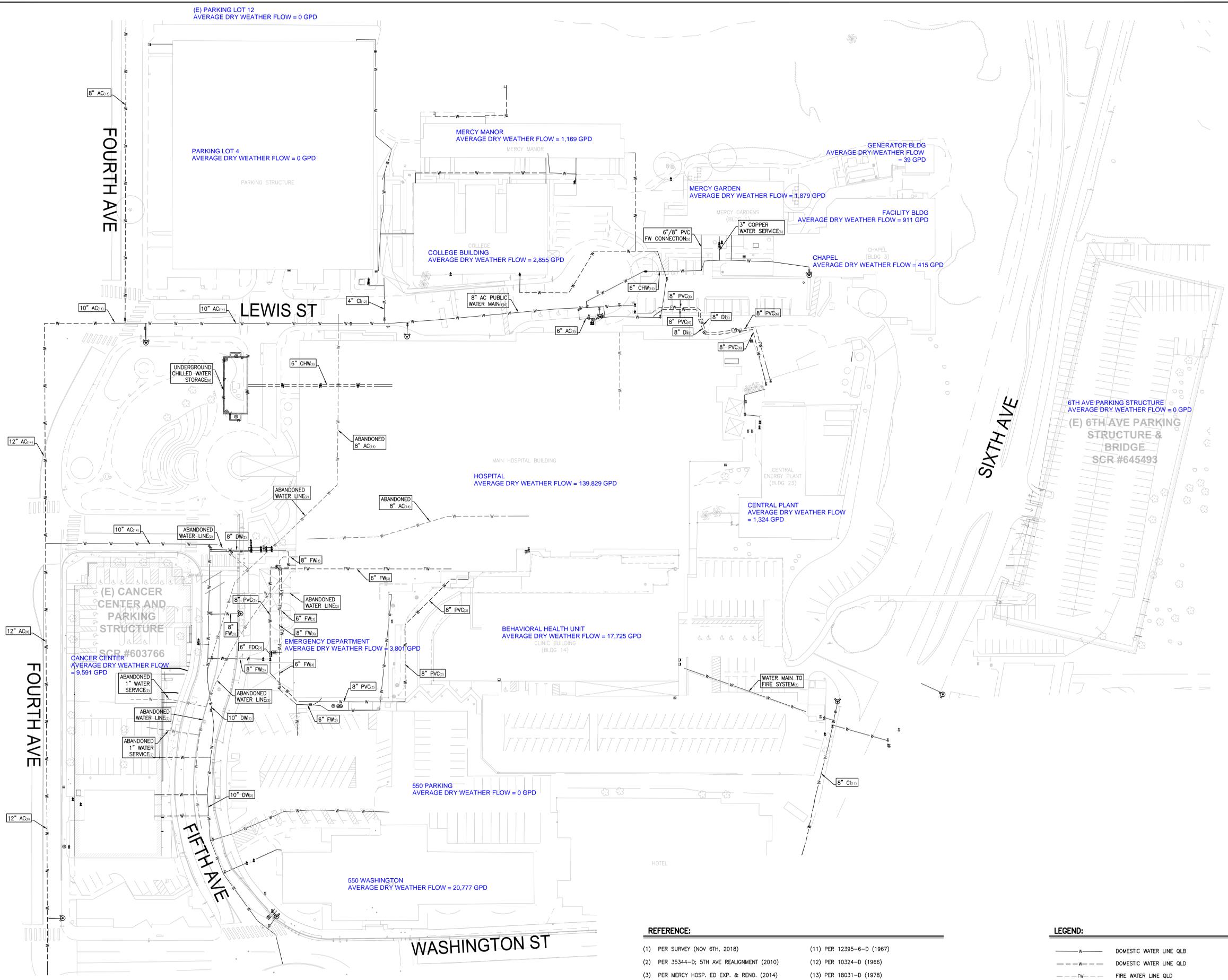
- Hydrozone 1: Moderate water use plants utilizing drip irrigation and includes all bio-filtration basins and the streetscape
- Hydrozone 2: Moderate water use plants utilizing high efficiency overhead irrigation and includes the existing park planting and warm season turf areas
- Hydrozone 3: Low water use plants utilizing drip irrigation and includes all remaining site planting
- Hydrozone 4: This is a Special Landscape Area capturing the existing water feature

The total irrigation demand from the proposed landscape area is calculated to be 1,662,612 gallons per year. The breakdown of annual irrigation demand is shown on CUP-16 and a copy of this sheet is included in Appendix A.

6. References

City of San Diego Sewer Design Guide 2015 - Density Conversion (Table 1-1, pages 1-17 and 1-18)

Appendix A Campus Water Map



- REFERENCE:**
- (1) PER SURVEY (NOV 6TH, 2018)
 - (2) PER 35344-D, 5TH AVE REALIGNMENT (2010)
 - (3) PER MERCY HOSP. ED EXP. & RENO. (2014)
 - (4) PER MHMC PARKING GARAGE (1967)
 - (5) PER 34497-D, MERCY GARDENS (2008)
 - (6) PER CEP REPLACEMENT (2010)
 - (7) PER EAST OF 6TH - MERCY HOSP. (1967)
 - (8) PER UTIL. YARD PLAN MHMC (1985)
 - (9) PER AMB. SERV. AREA ADDITION (1982)
 - (10) PER 5202-D (1959)
 - (11) PER 12395-6-D (1967)
 - (12) PER 10324-D (1966)
 - (13) PER 18031-D (1978)
 - (14) PER 19039-D (1980)
 - (15) PER DEMOLITION OF NORTH WING (1968)

- LEGEND:**
- W — DOMESTIC WATER LINE QLB
 - - - W - - - DOMESTIC WATER LINE QLD
 - - - FW - - - FIRE WATER LINE QLD
 - - - W - - - ABANDONED WATER LINE
 - ⊙ EXISTING FIRE HYDRANT



STAMP

REVISIONS	
DATE	ISSUED FOR
XXXXXX	DESCRIPTION

DATE	XX.XX.XX
PROJECT NUMBER	XXXXXX
DESIGNED BY	XX
DRAWN BY	XX
CHECKED BY	XX
SCALE	AS SPECIFIED
KEY MAP	

PROJECT DESCRIPTION
SCRIPPS MERCY HOSPITAL

XXXX LOS ANGELES AVENUE
LOS ANGELES, CA 900XX

DRAWING TITLE
CAMPUS DOMESTIC AND FIRE WATER MAP

SHEET NUMBER (EXHIBIT NUMBER)

EXH-001

NOTES:

1. THE PROPOSED PROJECT WILL COMPLY WITH ALL THE REQUIREMENTS OF THE CURRENT CITY OF SAN DIEGO STORM WATER STANDARDS MANUAL BEFORE A GRADING OR BUILDING PERMIT IS ISSUED. IT IS THE RESPONSIBILITY OF THE OWNER/DESIGNER/APPLICANT TO ENSURE THAT THE CURRENT STORM WATER PERMANENT BMP DESIGN STANDARDS ARE INCORPORATED INTO THE PROJECT.
2. IF A 3" OR LARGER WATER METER IS REQUIRED FOR THIS PROJECT, THE OWNER/PERMITEE SHALL CONSTRUCT THE NEW METER AND PRIVATE BACKFLOW DEVICE ON SITE, ABOVE GROUND, WITHIN AN ADEQUATELY SIZED WATER EASEMENT, IN A MANNER SATISFACTORY TO THE PUBLIC UTILITIES DIRECTOR AND THE CITY ENGINEER.

UTILITY CONSTRUCTION NOTES:

SANITARY SEWER

- (SS1) PROPOSED PRIVATE SEWER MAIN
- (SS2) PROPOSED SEWER LATERAL
- (SS3) PROPOSED PRIVATE SEWER MANHOLE
- (SS4) CONNECTION TO EXISTING PUBLIC SEWER
- (SS5) PROPOSED POINT OF CONNECTION TO ONSITE PRIVATE SEWER OR BUILDING PLUMBING.
- (SS6) PROPOSED PUBLIC SEWER MANHOLE

IRRIGATION WATER

- (I1) PROPOSED WATER SERVICE FOR IRRIGATION.
- (I2) PROPOSED POINT OF CONNECTION TO ONSITE PRIVATE IRRIGATION.
- (I3) PROPOSED BACKFLOW PREVENTION DEVICE WITH CONCRETE PAD PER CITY OF SAN DIEGO STANDARD PLANS.
- (I4) PROPOSED WATER METER FOR IRRIGATION.
- (I5) CONNECTION TO EXISTING PUBLIC WATER MAIN.

FIRE WATER

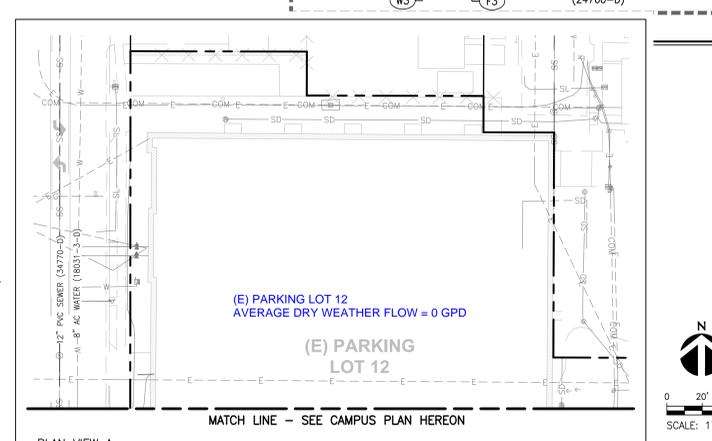
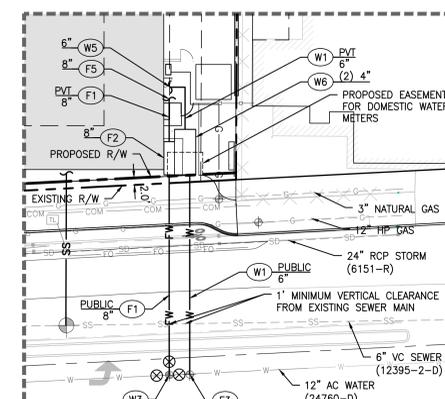
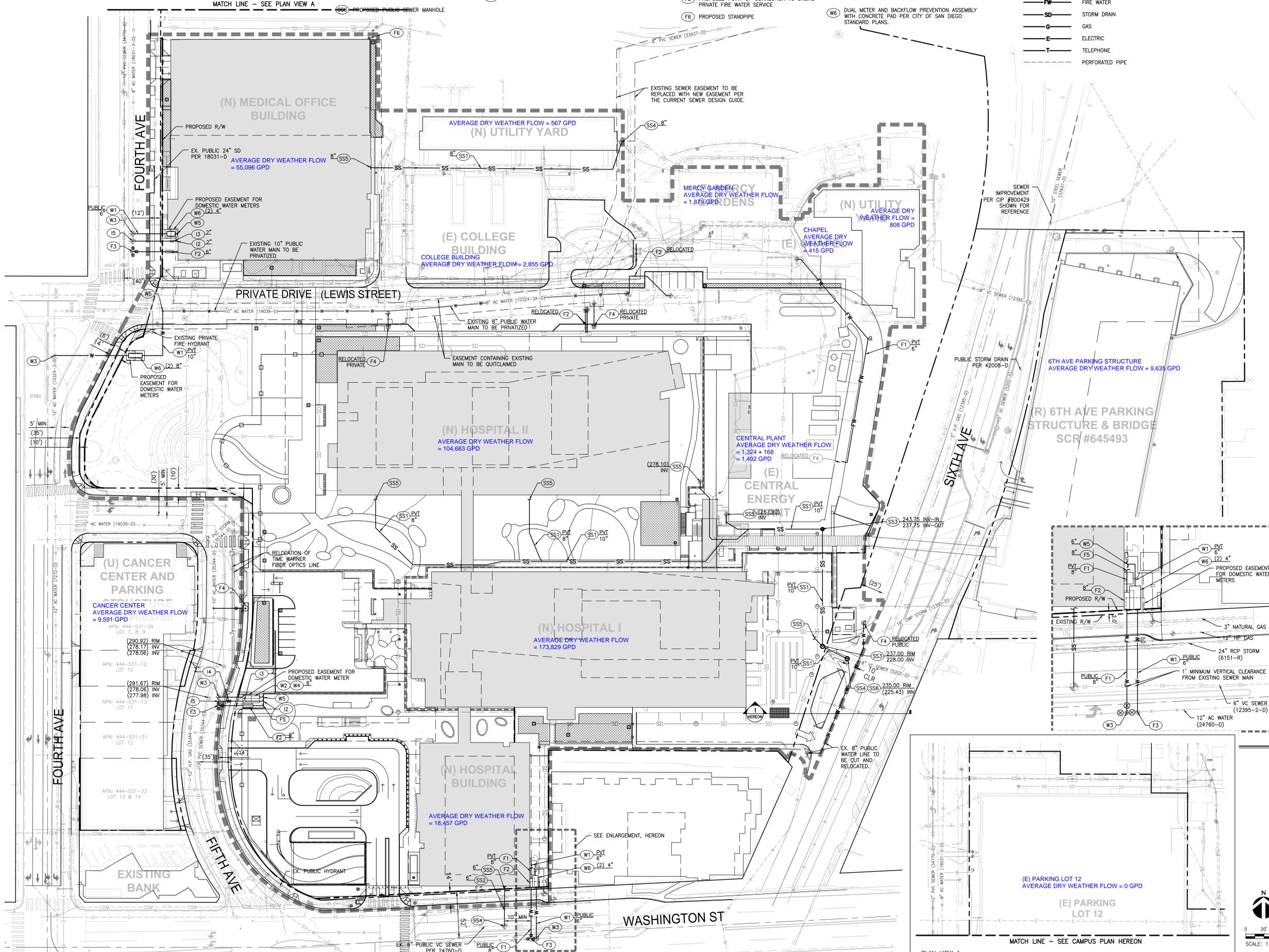
- (F1) PROPOSED FIRE SERVICE
- (F2) PROPOSED FIRE WATER METER/BACKFLOW PREVENTER
- (F3) CONNECTION TO EXISTING PUBLIC WATER MAIN
- (F4) PROPOSED FIRE HYDRANT
- (F5) PROPOSED POINT OF CONNECTION TO ONSITE PRIVATE FIRE WATER SERVICE
- (F6) PROPOSED STANDPIPE

DOMESTIC WATER

- (W1) PROPOSED WATER SERVICE
- (W2) PROPOSED BACKFLOW PREVENTER
- (W3) CONNECTION TO EXISTING PUBLIC WATER MAIN
- (W4) PROPOSED WATER METER
- (W5) PROPOSED POINT OF CONNECTION TO ONSITE PRIVATE WATER OR BUILDING PLUMBING.
- (W6) DUAL METER AND BACKFLOW PREVENTION ASSEMBLY WITH CONCRETE PAD PER CITY OF SAN DIEGO STANDARD PLANS.

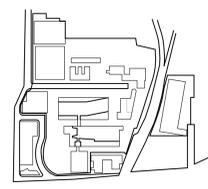
LEGEND:

- LIMIT OF WORK
- - - PROPERTY LINE
- SS SANITARY SEWER
- W WATER
- IRR IRRIGATION WATER
- FW FIRE WATER
- SD STORM DRAIN
- G GAS
- E ELECTRIC
- T TELEPHONE
- PERFORATED PIPE
- ⊙ FIRE HYDRANT
- ⊕ POINT OF CONNECTION
- ⊖ COORDINATION POINT
- ⊘ CAP OR PLUG



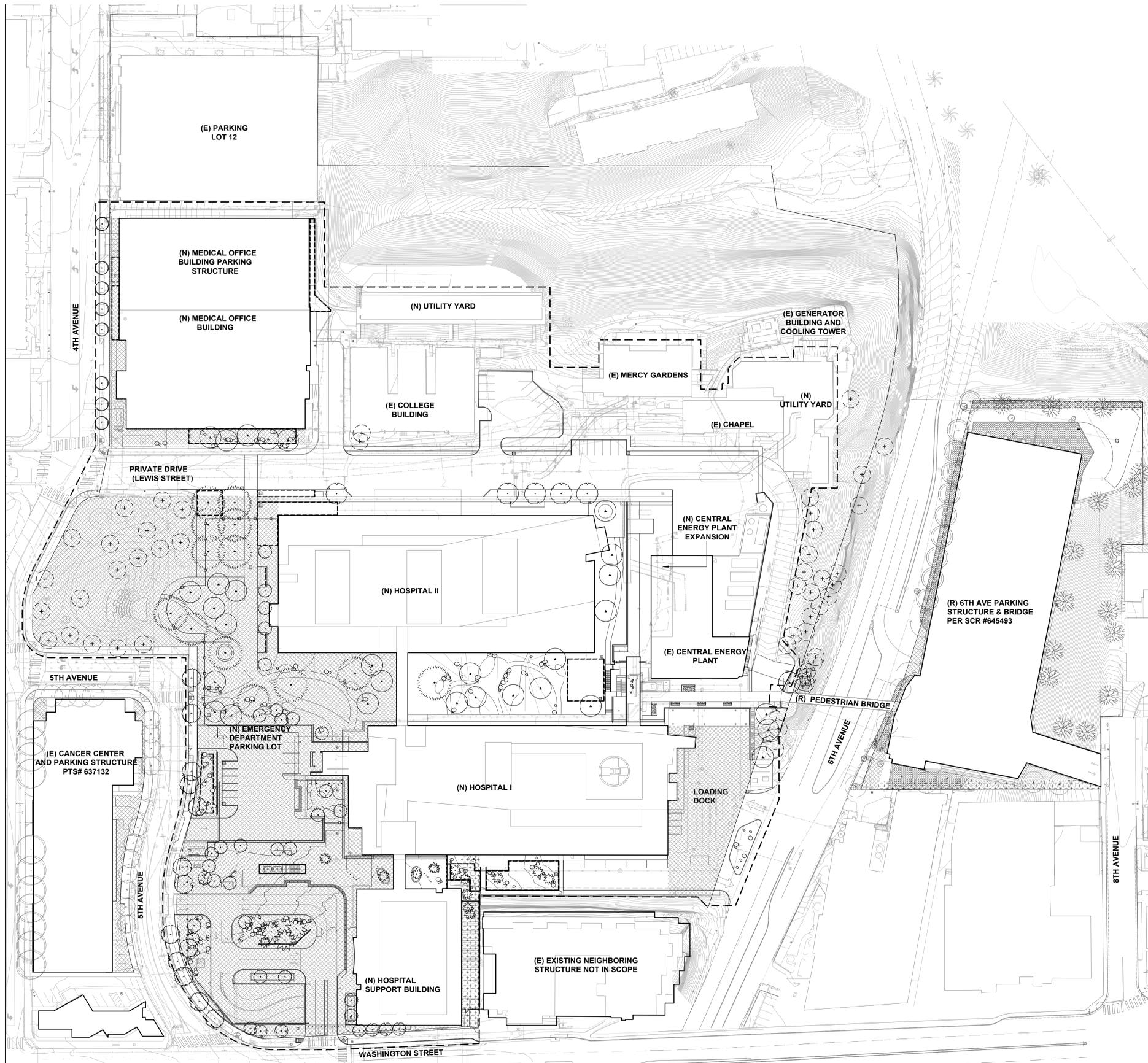
REVISIONS

1	4/10/20	REV 1
2	8/14/20	REV 2
3	11/18/20	REV 3
4	3/26/21	REV 4
5	6/11/21	REV 5
6	3/4/22	REV 6
7	5/27/22	REV 7



PROPOSED UTILITY PLAN

SCALE:
DATE OF ISSUE: 5/27/22



LANDSCAPE IRRIGATION WATER BUDGET

MAWA WATER BUDGET CALCULATION

ETo = 47 inch/year
 LANDSCAPE AREA(LA) = 121,902 SF
 SPECIAL LANDSCAPE AREA (SLA) = 4000 SF

MAWA WATER BUDGET = (ETo) (0.62) [(0.45 x LA) + (0.55 x SLA)] = **1,662,612**
 (Gallons Per Year)

THE ESTIMATED TOTAL WATER USE (ETWU)

HYDROZONE 1:
 ETo = 47 inch/year
 PLANT FACTOR (PF) = 0.4
 IRRIGATION EFFICIENCY (IE) = 0.81
 HYDROZONE 1 (HA) = 23,842 SF
 SPECIAL LANDSCAPE AREA (SLA) = 0 SF

ETWU = [(ETo)(0.62)] [(PF)(HA)/IE + SLA] = **343,089**
 (Gallons Per Year)

HYDROZONE 2:
 ETo = 47 inch/year
 PLANT FACTOR (PF) = 0.4
 IRRIGATION EFFICIENCY (IE) = 0.75
 HYDROZONE 2 (HA) = 20,122 SF
 SPECIAL LANDSCAPE AREA (SLA) = 0 SF

ETWU = [(47)(0.62)] [(0.4x20,122)/0.75 + SLA] = **312,723**
 (Gallons Per Year)

HYDROZONE 3:
 ETo = 47 inch/year
 PLANT FACTOR (PF) = 0.3
 IRRIGATION EFFICIENCY (IE) = 0.81
 HYDROZONE 3 (HA) = 77,938 SF
 SPECIAL LANDSCAPE AREA (SLA) = 0 SF

ETWU = [(47)(0.62)] [(0.3x77,938)/0.81 + SLA] = **841,153**
 (Gallons Per Year)

HYDROZONE 4:
 ETo = 47 inch/year
 PLANT FACTOR (PF) = 0.4
 IRRIGATION EFFICIENCY (IE) = 0.75
 HYDROZONE 4 (HA) = 4000 SF
 SPECIAL LANDSCAPE AREA (SLA) = 4000 SF

ETWU = [(47)(0.62)] [(0.4x0)/0.75 + 4000] = **116,560**
 (Gallons Per Year)

TOTAL ETWU = 1,613,525
 (Gallons Per Year)

THE ETWU (1,613,525 GALLONS/YEAR) IS LESS THAN THE MAWA (1,662,612 GALLONS/YEAR).

LANDSCAPE IRRIGATION WATER BUDGET - Existing Cancer Center

MAWA WATER BUDGET CALCULATION

ETo = 47 inch/year
 LANDSCAPE AREA(LA) = 5,966 SF
 SPECIAL LANDSCAPE AREA(SLA) = 0 SF

MAWA WATER BUDGET = (ETo) (0.62) [(0.45 x LA) + (0.55 x SLA)] = **78,232**
 (Gallons Per Year)

THE ESTIMATED TOTAL WATER USE (ETWU)

SHRUB / VINE
 ETo = 47 inch/year
 PLANT FACTOR(PF) = 0.3
 IRRIGATION EFFICIENCY(IE) = 0.81
 HYDROZONE(HA) = 5,966 SF
 SPECIAL LANDSCAPE AREA(SLA) = 0 SF

ETWU = [(ETo)(0.62)] [(PF)(HA)/IE + SLA] = **64,388**
 (Gallons Per Year)

TREE
 ETo = 47 inch/year
 PLANT FACTOR(PF) = 0.5
 IRRIGATION EFFICIENCY(IE) = 0.75
 HYDROZONE(HA) = 416 SF
 SPECIAL LANDSCAPE AREA(SLA) = 0 SF

ETWU = [(ETo)(0.62)] [(PF)(HA)/IE + SLA] = **13,034**
 (Gallons Per Year)

TOTAL ETWU = 77,422
 (Gallons Per Year)

THE ETWU (77,422 GALLONS/YEAR) IS LESS THAN THE MAWA (78,232 GALLONS/YEAR).

LANDSCAPE IRRIGATION WATER BUDGET - Existing Parking Structure, SCR #645493

MAWA WATER BUDGET CALCULATION

ETo = 47 inch/year
 LANDSCAPE AREA(LA) = 46,586 SF
 SPECIAL LANDSCAPE AREA(SLA) = 0 SF

MAWA WATER BUDGET = (ETo) (0.62) [(0.45 x LA) + (0.55 x SLA)] = **610,882**
 (Gallons Per Year)

THE ESTIMATED TOTAL WATER USE (ETWU)

ETo = 47 inch/year
 PLANT FACTOR(PF) = 0.3
 IRRIGATION EFFICIENCY(IE) = 0.75
 HYDROZONE(HA) = 46,586 SF
 SPECIAL LANDSCAPE AREA(SLA) = 0 SF

ETWU = [(ETo)(0.62)] [(PF)(HA)/IE + SLA] = **543,006**
 (Gallons Per Year)

THE ETWU (543,006 GALLONS/YEAR) IS LESS THAN THE MAWA (610,882 GALLONS/YEAR).

STREET YARD

Planting Area Required: 143,160 X 25 % = 35,790

143,160	35,790	65,984	30,194
Total Street Yard Area (s.f.)	Planting Area Required (s.f.)	Planting Area Provided (s.f.)*	Excess Area Provided (s.f.)*

Planting Points Required: 143,160 X 5 % = 7,158

143,160	7,158	19,637	12,479
Total Street Yard Area (s.f.)	Plant Points Required (to be achieved with trees only)	Plant Points Provide (Includes Street Trees)	Excess Plant Points Provided

* Per Municipal Codes section 142.0405.c.1 the required Street Yard (outside of the VUA) for commercial development may consist of hardscape or unattached pavers

STREET YARD - Existing Parking Structure, SCR #645493

Planting Area Required: 3,999 X 25 % = 999

3,999	999	2,939	1,940
Total Street Yard Area (s.f.)	Planting Area Required (s.f.)	Planting Area Provided (s.f.)*	Excess Area Provided (s.f.)*

Planting Points Required: 3,999 X 5 % = 199

3,999	199	650	451
Total Street Yard Area (s.f.)	Plant Points Required (to be achieved with trees only)	Plant Points Provide (Includes Street Trees)	Excess Plant Points Provided

* Per Municipal Codes section 142.0405.c.1 the required Street Yard (outside of the VUA) for commercial development may consist of hardscape or unattached

STREET YARD - Existing Cancer Center

Planting Area Required: 4,746 X 50 % = 2,373

4,746	2,373	2,652	279
Total Street Yard Area (s.f.)	Planting Area Required (s.f.)	Planting Area Provided (s.f.)*	Excess Area Provided (s.f.)*

Planting Points Required: 4,746 X 5 % = 237

4,746	237	270	33
Total Street Yard Area (s.f.)	Plant Points Required (to be achieved with trees only)	Plant Points Provide (Includes Street Trees)	Excess Plant Points Provided

* Per Municipal Codes section 142.0405.c.1 the required Street Yard (outside of the VUA) for commercial development may consist of hardscape or unattached

THE FOLLOWING CALCULATIONS HAVE BEEN DESIGNED INTO THE PROPOSED LANDSCAPE DEVELOPMENT PLAN IN ACCORDANCE WITH THE SAN DIEGO MUNICIPAL CODE

Commercial Development in All Zones

REMAINING YARD

Planting Area Required: 4,321 X 30% = 1,296

4,321	1,296	2,163	867
Total Area (s.f.)	Planting area required (s.f.)	Planting Area Provided (s.f.)	Excess Area Provided (s.f.)*

Planting Points Required: 4,321 X 0.05 = 216

4,321	216	784	568
Total Area (s.f.)	Planting Points Required	Plant Points Provided	Excess Points Provided

REMAINING YARD - Existing Parking Structure, SCR #645493

Planting Area Required: 4,337 X 30% = 1,301

4,337	1,301	3,897	2,596
Total Area (s.f.)	Planting area required (s.f.)	Planting Area Provided (s.f.)	Excess Area Provided (s.f.)*

Planting Points Required: 4,337 X 0.05 = 217

4,337	217	1,539	1,322
Total Area (s.f.)	Planting Points Required	Plant Points Provided	Excess Points Provided

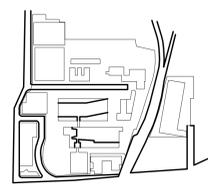


AGENCY STAMP

REVISIONS

1	4/10/20	REV 1
2	8/14/20	REV 2
3	11/18/20	REV 3
4	3/26/21	REV 4
5	6/11/21	REV 5
6	3/4/22	REV 6

Scripps
 CONDITIONAL USE PERMIT MERCY CAMPUS
 4077 Fifth Ave, San Diego, CA 92103
 SCRIPPS# 35-16060B DESIGN TEAM# 18003.000
 KEY PLAN



LANDSCAPE CALCULATIONS

SCALE: 1" = 50'-0"
 DATE OF ISSUE: 3/4/22

Appendix B Hydrant Flow Test Results



City of San Diego
Development Services
 Attention: **Hydrant Flow Request**
 1222 First Ave., MS-401
 San Diego, CA 92101
 (619) 446-5000

Hydrant Flow Request

FORM
DS-160
OCTOBER 2016

Fill out the information below completely for all sprinkler system flow requests, including NFPA 13, 13D and 13R systems. E-mail form to: DSDHydrantFlow@sandiego.gov, or mail request to the above address.

Please print or type legibly.

Company Requesting Hydrant Flow:
KPFF Consulting Engineers

Telephone No:
(213) 418-0201

Fax No:

E-mail Address:
daniel.kim@kpff.com

Project Number for the Building Permits:

Location of Hydrants:
32.751796, -117.161292

Cross Street:
4th Ave. & Lewis St.

City:
San Diego

State:
CA

ZIP Code:
92103

FOR CITY USE ONLY

Facility Sequence Number: (FSN): 527091

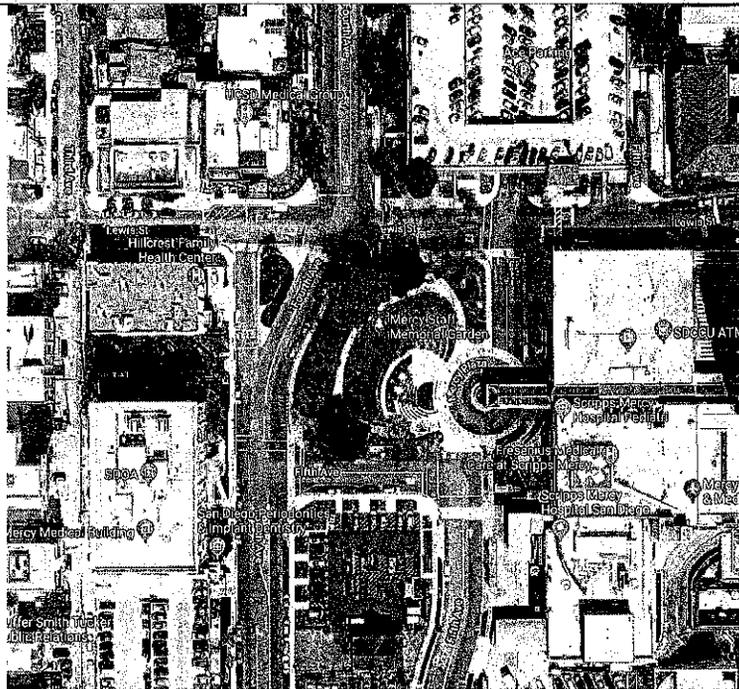
Static: 96.71 PSI Elevation: 276 FEET

Pitot: φ PSI Residual: 84.82 PSI

Date: 8/12/19 Flow: 1425.95 GPM

Researched in database by: Miguel Tamayo

The information provided above is based upon a water model. It is the contractor's responsibility to confirm the available static pressure at the system point of connection. If a discrepancy is noticed at that time, notify DSDHydrantFlow@sandiego.gov as soon as possible.



Printed on recycled paper. Visit our web site at www.sandiego.gov/development-services.

Upon request, this information is available in alternative formats for persons with disabilities.

Attribute	Value
Fire Hydrant Name	H527091
FSN	527091
Size (inches)	6
Location	SE FOURTH (ID)
Address	4100 04TH AV
Elevation (feet) at Street	276
Static Pressure (psi)	96.71
Flow (gpm)	1425.95
Residual Pressure (psi)	84.82





City of San Diego
Development Services
 Attention: **Hydrant Flow Request**
 1222 First Ave., MS-401
 San Diego, CA 92101
 (619) 446-5000

Hydrant Flow Request

FORM
DS-160
 OCTOBER 2016

Fill out the information below completely for all sprinkler system flow requests, including NFPA 13, 13D and 13R systems. E-mail form to: DSDHydrantFlow@sandiego.gov, or mail request to the above address.

Please print or type legibly.

Company Requesting Hydrant Flow:
KPFF Consulting Engineers

Telephone No:
(213) 418-0201

Fax No:

E-mail Address:
daniel.kim@kpff.com

Project Number for the Building Permits:

Location of Hydrants:
32.751001, -117.160931

Cross Street:
Fifth Ave. & Fifth Ave.

City:
San Diego

State:
CA

ZIP Code:
92103

FOR CITY USE ONLY

Facility Sequence Number: (FSN): 5672994

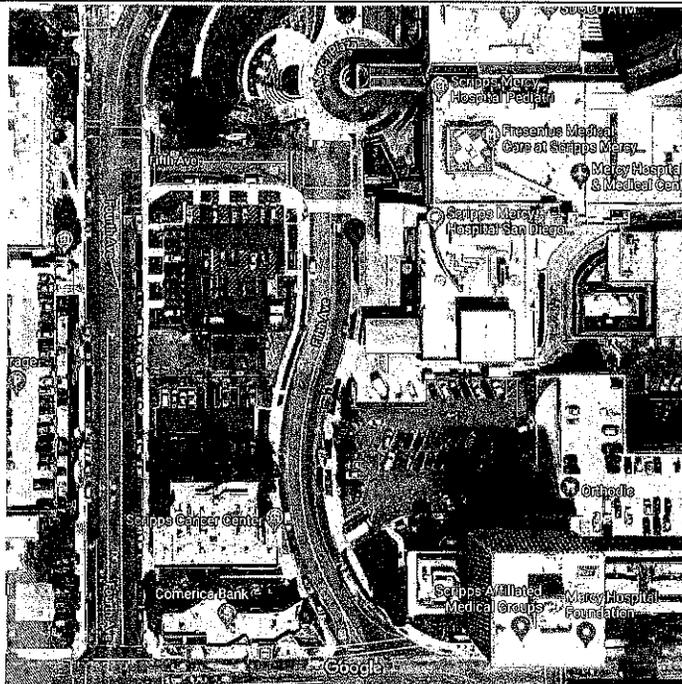
Static: 89.59 PSI Elevation: 292.5 FEET

Pitot: φ PSI Residual: 78.21 PSI

Date: 8/16/19 Flow: 1372.45 GPM

Researched in database by: Miguel Tamayo

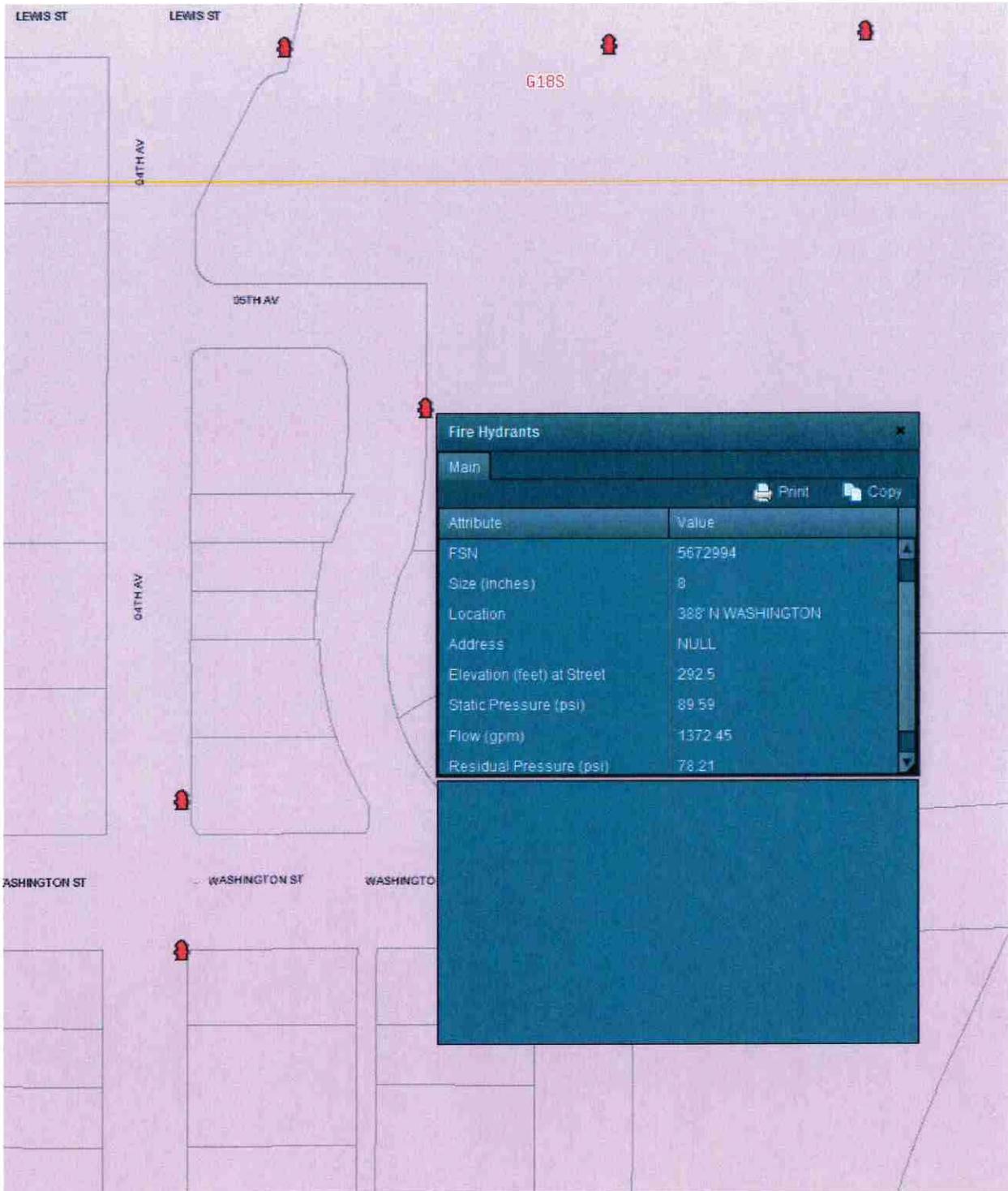
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Printed on recycled paper. Visit our web site at www.sandiego.gov/development-services.

Upon request, this information is available in alternative formats for persons with disabilities.

Attribute	Value
Fire Hydrant Name	H5672994
FSN	5672994
Size (inches)	8
Location	388' N WASHINGTON
Address	NULL
Elevation (feet) at Street	292.5
Static Pressure (psi)	89.59
Flow (gpm)	1372.45
Residual Pressure (psi)	78.21





City of San Diego
Development Services
 Attention: **Hydrant Flow Request**
 1222 First Ave., MS-401
 San Diego, CA 92101
 (619) 446-5000

Hydrant Flow Request

FORM
DS-160
 OCTOBER 2016

Fill out the information below completely for all sprinkler system flow requests, including NFPA 13, 13D and 13R systems. E-mail form to: DSDHydrantFlow@sandiego.gov, or mail request to the above address.

Please print or type legibly.

Company Requesting Hydrant Flow:

KPFF Consulting Engineers

Telephone No:

(213) 418-0201

Fax No:

E-mail Address:

daniel.kim@kpff.com

Project Number for the Building Permits:

Location of Hydrants:

32.751796, -117.161292

Cross Street:

Fifth Ave. & Fifth Ave.

City:

San Diego

State:

CA

ZIP Code:

92103

FOR CITY USE ONLY

Facility Sequence Number: (FSN):

527131

Static:

91.55

PSI

Elevation:

288

FEET

Pitot:

φ

PSI

Residual:

80.03

PSI

Date:

8/16/19

Flow:

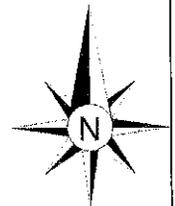
1387.39

GPM

Researched in database by:

Miguel Tamayo

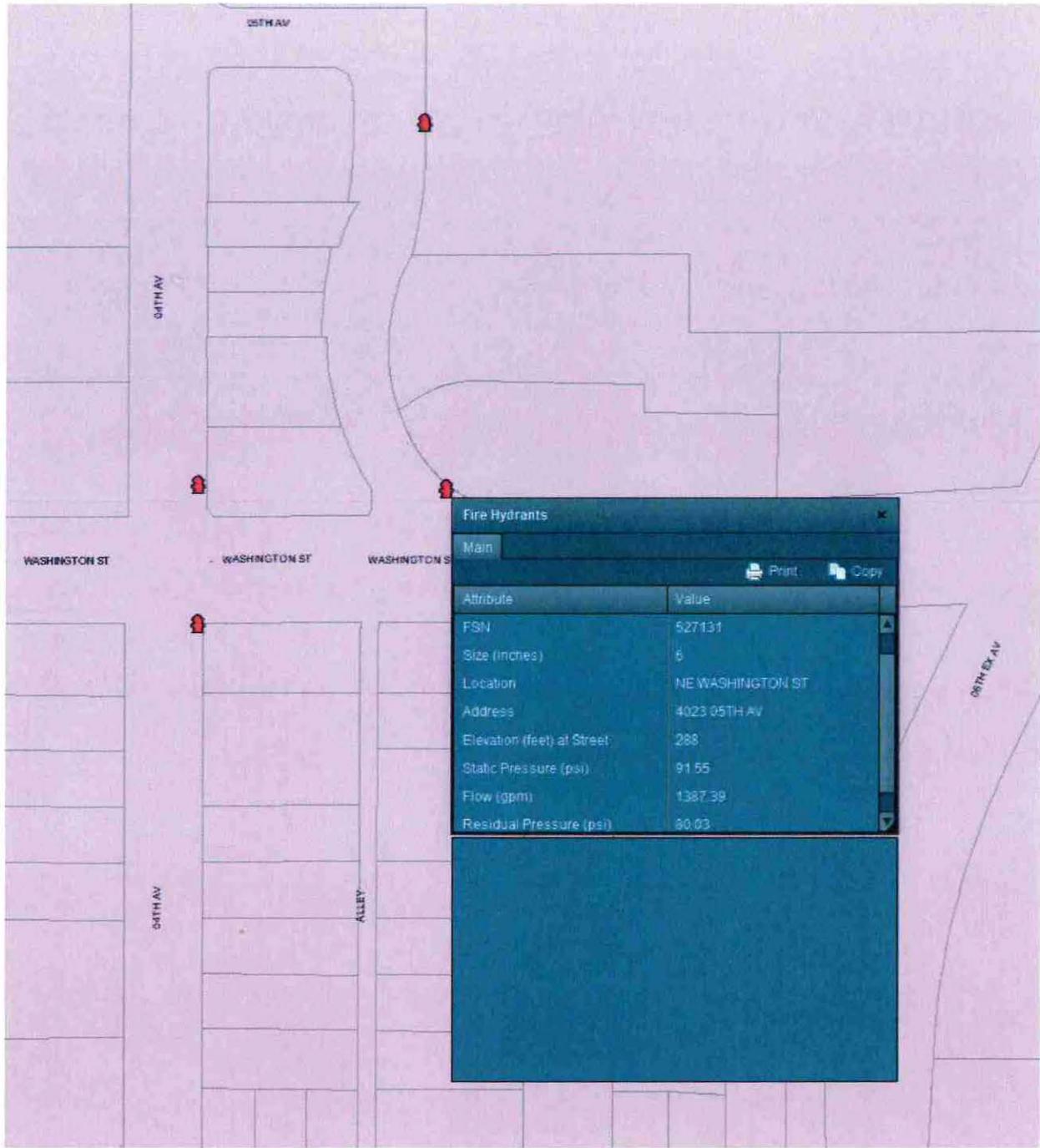
The information provided above is based upon a water model. It is the contractor's responsibility to confirm the available static pressure at the system point of connection. If a discrepancy is noticed at that time, notify DSDHydrantFlow@sandiego.gov as soon as possible.



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Upon request, this information is available in alternative formats for persons with disabilities.

Attribute	Value
Fire Hydrant Name	H527131
FSN	527131
Size (inches)	6
Location	NE WASHINGTON ST
Address	4023 05TH AV
Elevation (feet) at Street	288
Static Pressure (psi)	91.55
Flow (gpm)	1387.39
Residual Pressure (psi)	80.03



Fire Hydrants	
Main	
Attribute	Value
FSN	527131
Size (inches)	6
Location	NE WASHINGTON ST
Address	4023 05TH AV
Elevation (feet) at Street	288
Static Pressure (psi)	91.55
Flow (gpm)	1387.39
Residual Pressure (psi)	80.03

Attribute	Value
Fire Hydrant Name	H518997
FSN	518997
Size (inches)	6
Location	250 N WASHINGTON W
Address	4094 06TH EX ST
Elevation (feet) at Street	218
Static Pressure (psi)	121.95
Flow (gpm)	1601.25
Residual Pressure (psi)	108.23



Fire Hydrants	
Main	
Attribute	Value
FSN	518997
Size (inches)	6
Location	250 N WASHINGTON W
Address	4094 06TH EX ST
Elevation (feet) at Street	218
Static Pressure (psi)	121.95
Flow (gpm)	1601.25
Residual Pressure (psi)	108.23

Appendix C Projected Water Demands

Projected Water Demands

Building	Building Use	SQFT	Table 1-1 Density Conversion (Pop/NetAC)	Net Ac	Sewage Capita/Day (GPD)	Average Demand	Notes
<i>Existing Buildings to be Demolished</i>							
Facility Building	Utilities	12,984	38.20	0.30	80	911	
Generator Building	Utilities	555	38.20	0.01	80	39	
Behavioral Health Unit	Medical Office	64,341	150	1.48	80	17,725	
Hospital Building	Hospital	507,580	150	11.65	80	139,829	
550 Washington	Medical Office	75,420	150	1.73	80	20,777	
550 Parking	Parking Structure	30,364	-	0.70	80	-	
Mercy Manor	"Office"	16,668	38.20	0.38	80	1,169	Assumed as an office space.
Lot 4 Parking Structure	Parking Structure	161,939	-	3.72	80	-	
ED Building	Hospital	13,796	150	0.32	80	3,804	
GPD			Total			184,254	GPD
<i>Existing Buildings to Remain</i>							
College Building	Medical Office	40,700	38.20	0.93	80	2,855	
Mercy Gardens	Medical Office	26,790	38.20	0.62	80	1,879	
Chapel	Chapel	5,920	38.20	0.14	80	415	
Central Energy Plant	Utilities	18,869	38.20	0.43	80	1,324	
Lot 12 Parking Structure	Parking Structure	223,842	-	5.14	80	-	
Cancer Center & Parking Structure	Medical Office	34,817	150	0.80	80	9,591	
	Parking Structure	69,770	-	1.60	80	-	
Parking Structure 6th Ave	Parking Structure	481,728	-	11.06	80	-	
GPD			Total			16,065	GPD
<i>Proposed Additions</i>							
Hospital Building	Medical Office	67,000	150.0	1.5	80	18,457	
Hospital I	Hospital	631,000	150.0	14.4	80	173,829	
Hospital II	Hospital	380,000	150.0	8.7	80	104,683	
MOB	Medical Office	200,000	150.0	4.6	80	55,096	
Utility Yard	Utilities	8,078	38.20	0.19	80	567	
Utility Yard	Utilities	11,521	38.20	0.26	80	808	
CEP Expansion	Utilities	2,400	38.20	0.06	80	168	
GPD			Total			353,609	GPD