Appendix J

Sewer Report

SEWER CAPACITY STUDY

For:
The Arts Club, West Hollywood
8920 Sunset Boulevard
West Hollywood, California

Prepared by:
KPFF Consulting Engineers
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Los Angeles, CA 90017
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Date:
6/12/17

Submitted To:
City of West Hollywood Department of Public Works
Engineering Division

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APPENDICES

1. Site Description

The project site is approximately 0.46 acres and is located at 8920 Sunset Boulevard in the City of West Hollywood. Refer to Appendix A for the Project Vicinity Map. The lot currently consists of an existing two-story building with retail, office, and gym/fitness center space and subterranean parking and a surface parking lot.

2. Project Description

The proposed project is a mixed-use building consisting of subterranean parking, and nine levels of mixed-use space above including retail, office, and entertainment, among other uses. The development will span approximately to the property line. The majority of the site is zoned Sunset Specific Plan (SSP) per the City of West Hollywood Zoning Map and General Land Use Plan (Appendix B). The southern portion of the site is zoned Multi-family High Density Residential (R4B) and Parking Overlay (PK) and designated by the General Plan as High Density Residential (R4B) -- both of these will be changed to SSP as part of the Project.

3. Existing Sewer Pipe Capacity Analysis

Per the City of West Hollywood Sewer System Management Plan (see Appendix C), there is an existing public sewer main that runs north to south on Hilldale Avenue before heading east on Harratt Street. As requested by the City of West Hollywood, MH #0056, which is located south of the intersection of Harratt Street and San Vicente Boulevard, was examined to ensure that the proposed project will not overload any sewer lines. Flow monitoring radars were installed in the manhole and data was collected over a two-week period, from March 28, 2016 to April 11, 2016 (see Appendix D for the Sewer Flow Monitoring Report compiled by Utility Systems Science & Software).

During the monitoring period, no silt buildup was observed and the line was in good condition with steady hydraulics.

City of West Hollywood plans indicate that the monitored sewer is an 8" main and the field measurements verified this pipe diameter. Slope of the main is shown in the West Hollywood Sewer System Management Plan (SSMP) to be 6.6%. The capacity of the pipe was analyzed using Bentley FlowMaster V8i.

Existing Sewer Pipe Capacity Analysis		
Flow Condition	**Average**	**Peak**
Pipe Diameter (in)	8	
Level (in)	2.48	2.98
Flow, Q (mgd)	0.45	0.71
Flow, Q (cfs)	0.696	1.099
Slope (%)	6.600	
Capacity (mgd)	1.003	
Capacity (cfs)	1.552	

4. Proposed Flow Generation

Per City of West Hollywood Sewer Capacity Study Requirements (see Appendix F), the anticipated peak daily flow generated by the proposed development was calculated using the County Sanitation District No. 4 of Los Angeles Mean Loading Table and the peak flow (Q_{PF}) rate is calculated by multiplying Q_{AF} by a peaking factor of 2.5.

See the table on the following page for a summary of the proposed flow generation calculations.

Anticipated Sewer Generation and Demand (Arts Club - 8920 Sunset)						
Facility Description	**Building Program**	**Units**	**Flow (gpd) per unit***	**Avg Load, Q_{AF} (gpd)**	**Avg Load, Q_{AF} (cfs)**	**Peak Flow, Q_{PF} (cfs)**
Arts Club – Proposed 8920 Sunset						
Lobby/Support Area/Reception*	53,678	SF	0.08	4,294	0.007	0.017
Retail Space	6,853	SF	0.08	548	0.001	0.002
Art Gallery*	2,192	SF	0.15	329	0.001	0.001
Office	37,900	SF	0.15	5,685	0.009	0.022
Health Club/Spa	6,794	SF	0.8	5,435	0.008	0.021
Theatre: Cinema*	98	Seats	4	392	0.001	0.002
Hotel*	15	Rooms	130	1,950	0.003	0.008
Lounge	6,216	SF	0.08	497	0.001	0.002
Restaurant*	433	Seats	30	12,990	0.020	0.050
Bar: Cocktail, Public Table Area	1,502	SF	0.5	751	0.001	0.003
Sub-Total				32,872	0.051	0.127
Existing Building - 8920 Sunset						
Retail Space	-5,600	SF	0.08	-448	-0.001	-0.002
Cafe/Coffee House	-3,200	SF	0.28	-896	-0.001	-0.003
Office	-4,000	SF	0.15	-600	-0.001	-0.002
Health Club/Spa	-5,250	SF	0.8	-4,200	-0.006	-0.016
Lobby/Common Area	-1,620	SF	0.08	-130	0.000	-0.001
Sub-Total				-6,274	-0.010	-0.024
TOTAL				**26,598**	**0.041**	**0.103**

NOTES

*Flow per unit determined from County Sanitation District No. 4 of Los Angeles County Mean Loading Table.

* Lobby category rate is the same as the general Commercial Use category rate under the Los Angeles County Mean Loading Table.

*Calculations are based on a "Museum" use category under the Los Angeles Mean Loading Table, as it is the most applicable category.

*"Theater: Cinema" category used for the (2) screening rooms. 49 seats estimated for each screening room by Gensler.

*Guestrooms classified as hotel as it is the most applicable category use under the Los Angeles County Mean Loading Table, but the Project's guestrooms are not anticipated to generate the same level of demand as a typical hotel. The hotel classification is used to provide a conservative estimate of the Project's potential sewer generation and demand.

*Number of restaurant seats currently unknown. Assumed 15 sf/seat per general seating guidelines. Figure includes supper club and restaurant uses.

5. Conclusion

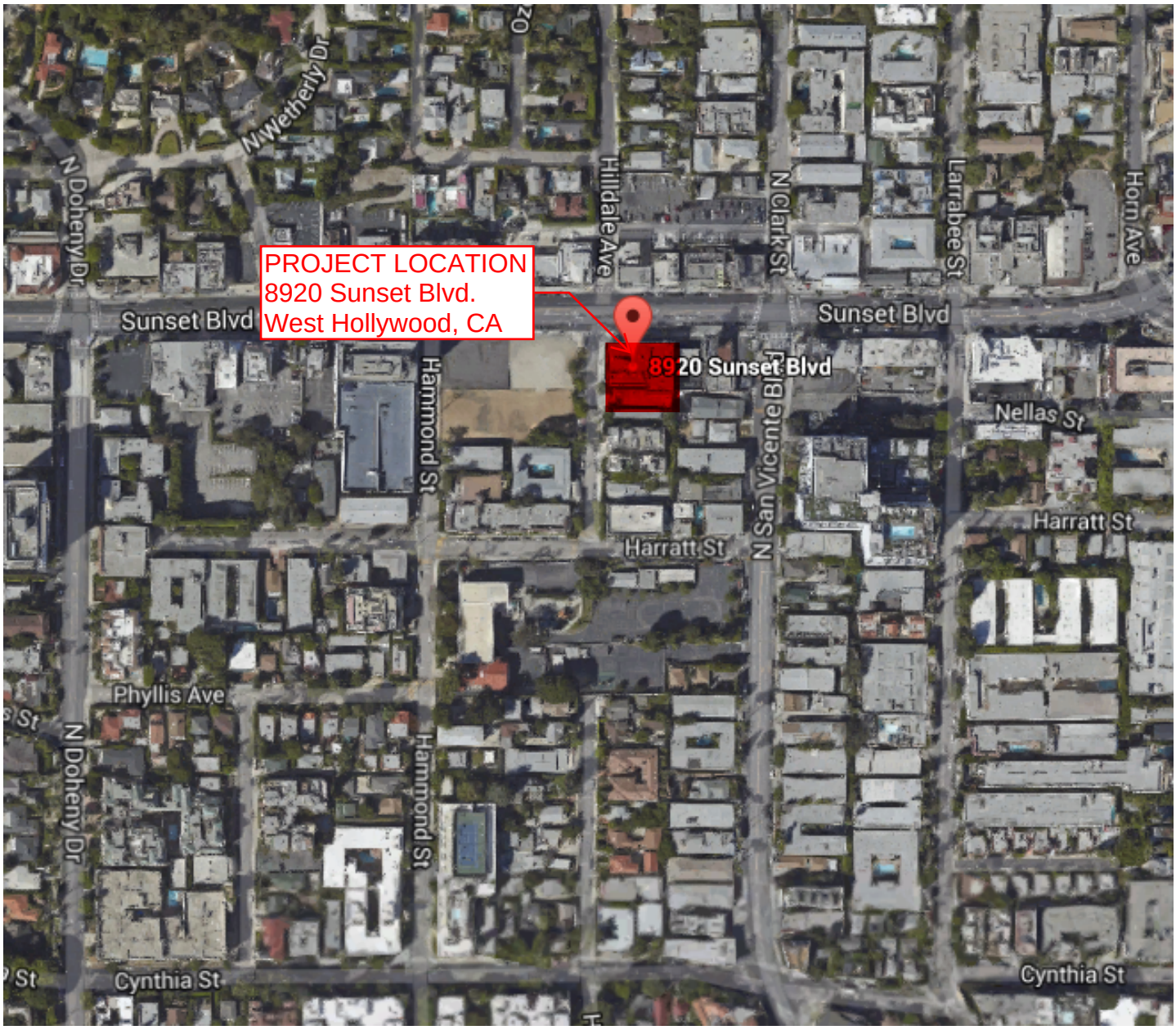
Below is a summary of the existing sewer analysis, additional generated load, and future condition hydraulics. Refer to Appendix G for the Proposed Sewer Flow Analysis.

Sewer Analysis Summary Table		
	Average Flow	**Peak Flow**
Slope (%)	6.6	
Pre-Development Flow (cfs)	0.696	1.099
Anticipated Sewer Generation (cfs)	0.041	0.103
Post-Development Flow (cfs)	0.737	1.202
Capacity (cfs)	1.552	1.552
Level (in)	2.65	3.45
Proposed % Full	33.1	43.2
Sufficient Capacity? (<50% full)	OK	OK

At both average and peak flow conditions, the sewer system is below the 50% full capacity required by the City of West Hollywood. Therefore, MH #0056 has adequate capacity to serve the proposed development.

APPENDIX A

Project Vicinity Map



PROJECT VICINITY MAP

APPENDIX B

City of West Hollywood Zoning Map and General Land Use Plan

City of West Hollywood Zoning Districts

Residential Zoning Districts

Residential, Single-Family or Two-Unit Low Density

- R1A - 25' 2 Stories - 1 du/lot
- R1B - 25' 2 Stories - 2 du/lot of less than 8499 SF
- R1C - 15' 1 Story - 1 du/lot

Residential, Low Density

- R2 - 25' 2 Stories - 2 du/lot of less than 4000 SF
  - 3 du/lot between 4000 and 7999 SF
  - 4 du/lot between 8000 and 9999 SF plus 1 additional unit/lot for each 2000 SF or fraction thereof in excess of 9999 SF

Residential, Multi-Family Medium Density

- R3A - 25' 2 Stories - 1 du/1210 SF of lot area
- R3B - 35' 3 Stories - 1 du/1210 SF of lot area
- R3C - 45' 4 Stories - 1 du/1210 SF of lot area

Residential, Multi-Family High Density

- R4A - 35' 3 Stories - 1 du/872 SF of lot area
- R4B - 45' 4 Stories - 1 du/872 SF of lot area

Combination Zones

- SSP - Sunset Specific Plan
- SSP CN - Sunset Specific Plan Commercial, Neighborhood
- SSP R2 - Sunset Specific Plan Residential, Low Density
- SSP R4 - Sunset Specific Plan Residential, Multi-Family High Density

Commercial and Public Zoning Districts

	Density (FAR)	Height
CN1 - Commercial, Neighborhood 1	1.0	25 ft/2 stories
CN2 - Commercial, Neighborhood 2	1.0	25 ft/2 stories
CC1 - Commercial, Community 1	1.5	35 ft/3 stories
CC2 - Commercial, Community 2	2.0	45 ft/4 stories
CA - Commercial, Arterial	2.5	60 ft/5 stories
CR - Commercial, Regional Center	3.0	90 ft/8 stories

Overlay Zoning Districts

- Mixed-Use Incentive Overlay Zone
- PK - Parking Overlay
- Development Agreement Overlay
- Commercial-Only Overlay Zone

Other Zoning Districts

- PDCSP - Pacific Design Center Specific Plan
- PF - Public Facilities
- MSP - Movietown Specific Plan

du = dwelling unit

Map Date: November 3, 2011

APPENDIX C

City of West Hollywood Master Plan of Sewers

CITY OF LOS ANGELES

SITE

SEWER MANHOLE FOR FLOW MONITORING

SCALE 1"=500'

0' 250' 500'

LEGEND

- Service Area Boundary
- Drainage Subarea Boundary
- 0126 Tributary Manhole Number
- City of West Hollywood (Sewer Pipes That are Modeled)
- City of West Hollywood Sewer (Sewer Pipes That are Not Modeled)
- CSDLAC Sewer (Sewer Pipes That are Modeled)
- CSDLAC Sewer (Sewer Pipes That are Not Modeled)
- City of Los Angeles Sewer
- 0147 Sewer Manhole

CITY OF WEST HOLLYWOOD MASTER PLAN OF SEWERS

TRUNK SEWER MAP SERVICE AREAS 10 and 11

Boyle Engineering Corporation

ID	Street/Comments	Drawing No	Year Inst	Size (in)	Material	Manning N	Length (ft)	Ground Elev USMH	Invert Elev USMH	Invert Elev DSMH	Given Slope
110055-110390	CLARK	CI-140-10A	1926	8.00	VCP	0.013	227	352.00	343.11	320.93	0.09760
110056-110057	CLARK	CI-140-10A	1926	8.00	VCP	0.013	251	301.00	288.05	271.48	0.06600
110057-110058	CLARK	CI-140-10A	1926	8.00	VCP	0.013	247	285.00	271.23	258.18	0.05280
110058-110059	CLARK/CYNTHIA	CI-140-10A	1926	8.00	VCP	0.013	37	272.00	257.96	256.15	0.04400
110059-110061	CYNTHIA	PC-5420-P2	1960	15.00	VCP	0.013	108	269.50	255.72	254.34	0.01280
110060-110059	CYNTHIA	PC-6074-P5	1966	15.00	VCP	0.013	46	272.00	258.24	255.64	0.05600
110061-110067	CYNTHIA	PC-5568-P2	1960	15.00	VCP	0.013	127	262.00	253.78	246.02	0.06200
110062-110061	LARRABEE	JN-6707	1949	8.00	VCP	0.013	86	264.00	258.18	254.50	0.04280
110063-110062	LARRABEE	JN-6707	1949	8.00	VCP	0.013	55	269.00	263.13	258.83	0.07800
110064-110063	LARRABEE	JN-6707	1949	8.00	VCP	0.013	57	271.00	264.14	263.33	0.01600
110065-110066	LARRABEE	JN-6707	1949	8.00	VCP	0.013	54	260.00	254.27	252.27	0.03720
110066-110067	LARRABEE	JN-6707	1949	8.00	VCP	0.013	102	257.00	251.97	246.60	0.05280
110067-110070	CYNTHIA	PC-5420-P2	1960	15.00	VCP	0.013	91	254.00	245.73	240.50	0.05760
110068-110032	HILLDALE	PC-6074-P5	1926	8.00	VCP	0.013	244	300.00	290.11	275.56	0.06000
110070-110072	CYNTHIA	PC-5420-P2	1960	15.00	VCP	0.013	108	251.00	240.28	236.04	0.03920
110071-110070	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	27	253.00	241.05	240.98	0.01800
110072-110106	CYNTHIA	PC-6074-P5	1966	15.00	VCP	0.013	231	246.00	236.20	222.22	0.06000
110073-110071	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	272	265.00	252.93	241.20	0.04320
110074-110073	LARRABEE	CI-140-9CD	1926	8.00	VCP	0.013	271	286.00	277.04	253.19	0.08800
110075-110074	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	270	314.00	303.37	277.42	0.09600
110076-110075	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	280	345.00	336.97	303.76	0.11880
110077-110092	SUNSET	CI-140-14D	1926	8.00	VCP	0.013	239	351.00	338.37	333.30	0.02120
110078-110077	LARRABEE	CI-140-9B	1926	8.00	VCP	0.013	314	384.00	374.82	338.64	0.11520
110079-110078	LARRABEE	CI-140-9B	1926	8.00	VCP	0.013	312	420.00	410.85	375.28	0.11400
110080-110079	LARRABEE	CI-140-9B	1926	8.00	VCP	0.013	312	456.00	446.88	411.31	0.11400
110083-110084	HORN		1926	8.00	VCP	0.013	20	453.00	447.93	443.85	0.20400
110084-110085	HORN	CI-140-12A	1926	8.00	VCP	0.013	161	451.00	443.85	411.08	0.20400
110085-110086	HORN	CI-140-12A	1926	8.00	VCP	0.013	142	420.00	410.42	392.85	0.12400
110086-110087	HORN	CI-140-12A	1926	8.00	VCP	0.013	233	400.00	392.00	368.17	0.10200
110087-110088	HORN	CI-140-12A	1966	18.00	VCP	0.013	77	375.00	367.75	359.60	0.10600
110088-110089	HORN	PC-6074-P9	1966	18.00	VCP	0.013	12	366.00	359.20	357.50	0.14160
110089-110090	HORN	PC-6074-P9	1966	8.00	VCP	0.013	163	364.00	357.06	327.69	0.18010
110090-110094	HORN	PC-6074-P4	1966	12.00	VCP	0.013	86	343.00	326.79	322.26	0.05310
110091-110090	HORN/SUNSET	PC-6074-P4	1966	12.00	VCP	0.013	56	343.00	335.10	327.36	0.13900
110092-110093	SUNSET	CI-140-14D	1926	8.00	VCP	0.013	76	344.00	333.20	331.59	0.02120
110093-110094	SUNSET/HORN	PC-6074-P4	1966	8.00	VCP	0.013	22	342.00	331.59	322.67	0.36000
110094-110095	SUNSET	PC-6074-P4	1966	12.00	VCP	0.013	138	340.00	322.09	317.69	0.03200
110095-110096	PALM	PC-6074-P3	1966	12.00	VCP	0.013	156	336.00	317.44	301.65	0.00400
110096-110102	PALM	PC-6074-P3	1966	12.00	VCP	0.013	201	316.00	300.90	281.20	0.09800
110097-110096	PALM	PC-6074-P3	1966	8.00	VCP	0.013	24	316.00	310.41	301.66	0.36440
110098-110097	ALLEY, SO OF SUNSET	CI-140-8A	1926	8.00	VCP	0.013	180	325.00	317.17	310.62	0.03640
110099-110098	ALLEY, SO OF SUNSET	CI-140-8A	1926	8.00	VCP	0.013	193	333.00	324.33	317.32	0.03640
110100-110101	HARPATT	PC-6074-P3	1926	8.00	VCP	0.013	340	308.00	299.25	286.06	0.03880
110101-110102	HARPATT	PC-6074-P3	1966	8.00	VCP	0.013	19	293.00	286.04	281.21	0.25440
110102-110103	PALM	PC-6074-P3	1966	12.00	VCP	0.013	251	293.00	280.80	254.30	0.10560
110103-110104	PALM	PC-6074-P3	1966	12.00	VCP	0.013	271	267.00	253.82	227.80	0.09600
110104-110105	PALM	PC-6074-P2	1966	12.00	VCP	0.013	294	241.00	227.50	212.11	0.05240
110105-110587	PALM	PC-6074-P2	1966	18.00	VCP	0.013	213	225.00	211.97	209.02	0.01400
110106-110105	CYNTHIA	PC-6074-P5	1966	15.00	VCP	0.013	159	234.00	222.10	212.57	0.06000
110107-110106	PALM	CI-140-9C	1926	8.00	VCP	0.013	240	243.00	238.21	263.81	0.06000
110108-110107	PALM	CI-140-9C	1926	8.00	VCP	0.013	240	265.00	258.17	238.49	0.08200
110109-110108	PALM	CI-140-9C	1926	8.00	VCP	0.013	246	288.00	280.32	258.51	0.09000
110110-110091	SHERBOURNE	CI-140-12D	1926	8.00	VCP	0.013	100	350.00	338.58	335.40	0.03180

APPENDIX D

Utility Systems Science & Software Sewer Flow Monitoring Report

Site Report 04-13-2016

Confidential Proprietary Information

Carlin Projects	~949 N. San Vicente Blvd
San Vicente MH	34.088754, -118.385617

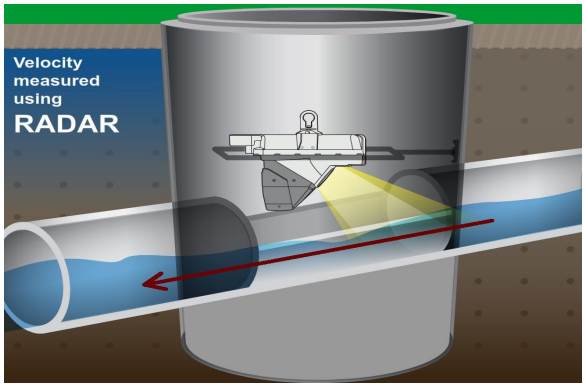
Access:
Manhole in the northbound left-hand lane

System Type: Sanitary [X] Storm [ ]

Install Date: 3/28/2016

Map

Technology



Traffic Plan

Flow Meter			
Meter Depth: 133"			
Meter SN:*			
Rapid open channel hydraulics			
Avg Velocity	Avg Measured Level		Multiplier
8.5 fps	2.9"		0.90
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
Fast downhill velocities			
Traffic Safety			
Used cones, signs & a flagger.			
Land Use			
Residential	Commercial	Industrial	Trunk
X			

Manhole Depth	148"
Pipe Size	8"
Inner Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	*
Sensor Offset	14.67"
Sensor Dist. to Crown	6.67"
Flow Direction	Upstream
Flow Heading	South

Meter Site Document

Carlin Projects

San Vicente MH ~949 N. San Vicente Blvd

Site

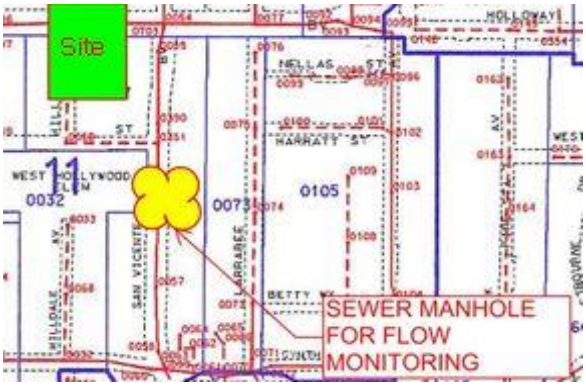
Manhole Before Install

Installation Process

Installed

Traffic Control

Sewer Map



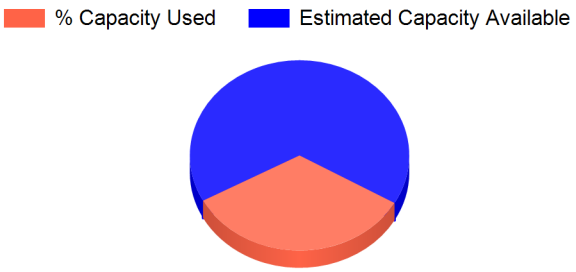
Temporary Flow Study

Carlin Projects

San Vicente MH

Meter Start Date		From	3/28/2016
Meter Stop Date		To	4/11/2016
Velocity (fps)		Level (in)	Flow (mgd)
Average	7.379	2.476	0.446
Maximum	9.320	2.980	0.711
Minimum	5.210	2.000	0.240
Pipe Size		8.000	
Estimated Capacity (mgd)		2.104	
Capacity Used		33.78 %	
Sensor Type		Hach - Flodar	

Estimated Capacity Usage

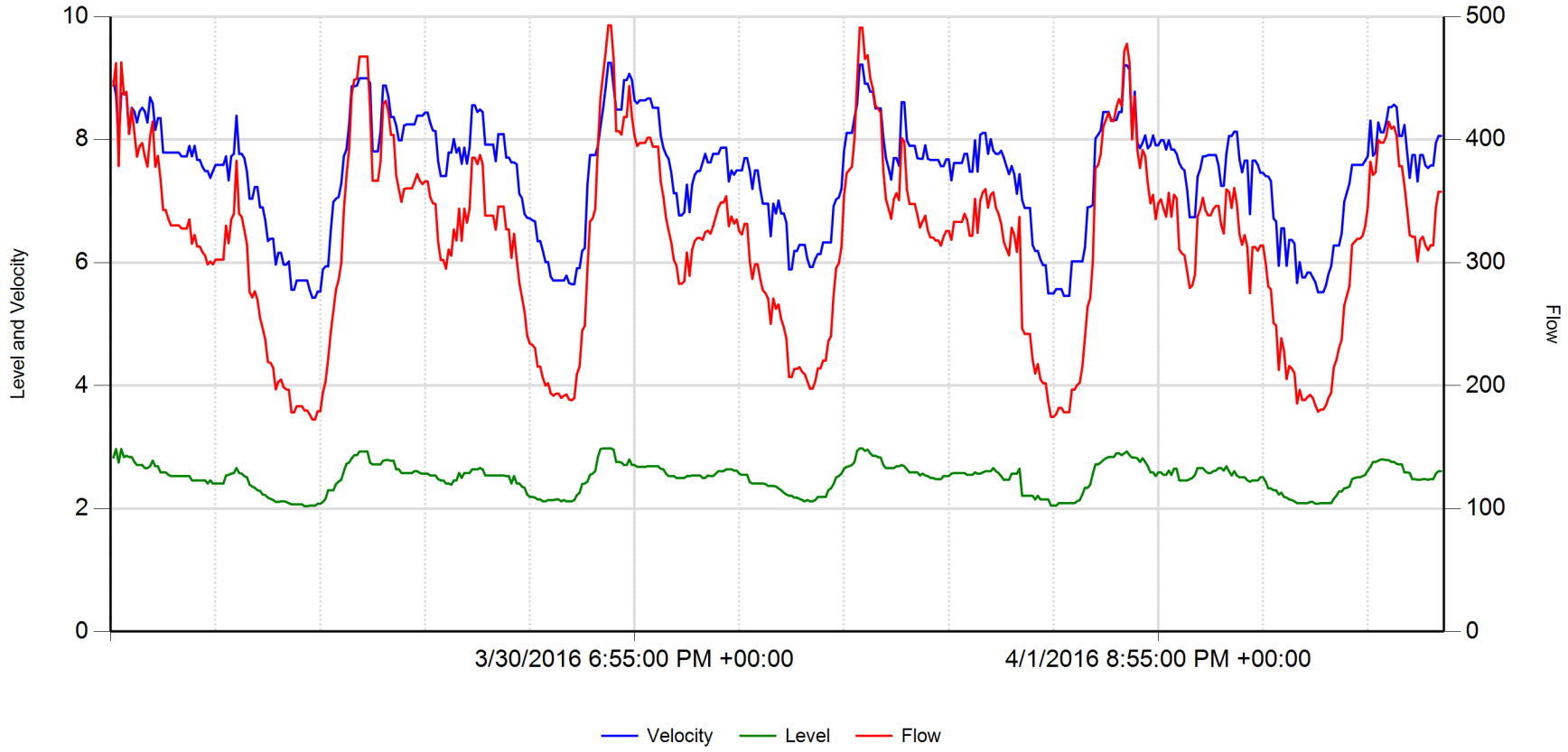


Utility Systems, Science and Software

1250 Pioneer Ave. Suite F
El Cajon, CA 92020

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

San Vicente MH



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	7.444	2.497	316.186	**RainFall**	Inches
Maximum	9.250	2.980	492.915		
Minimum	5.430	2.040	172.499		

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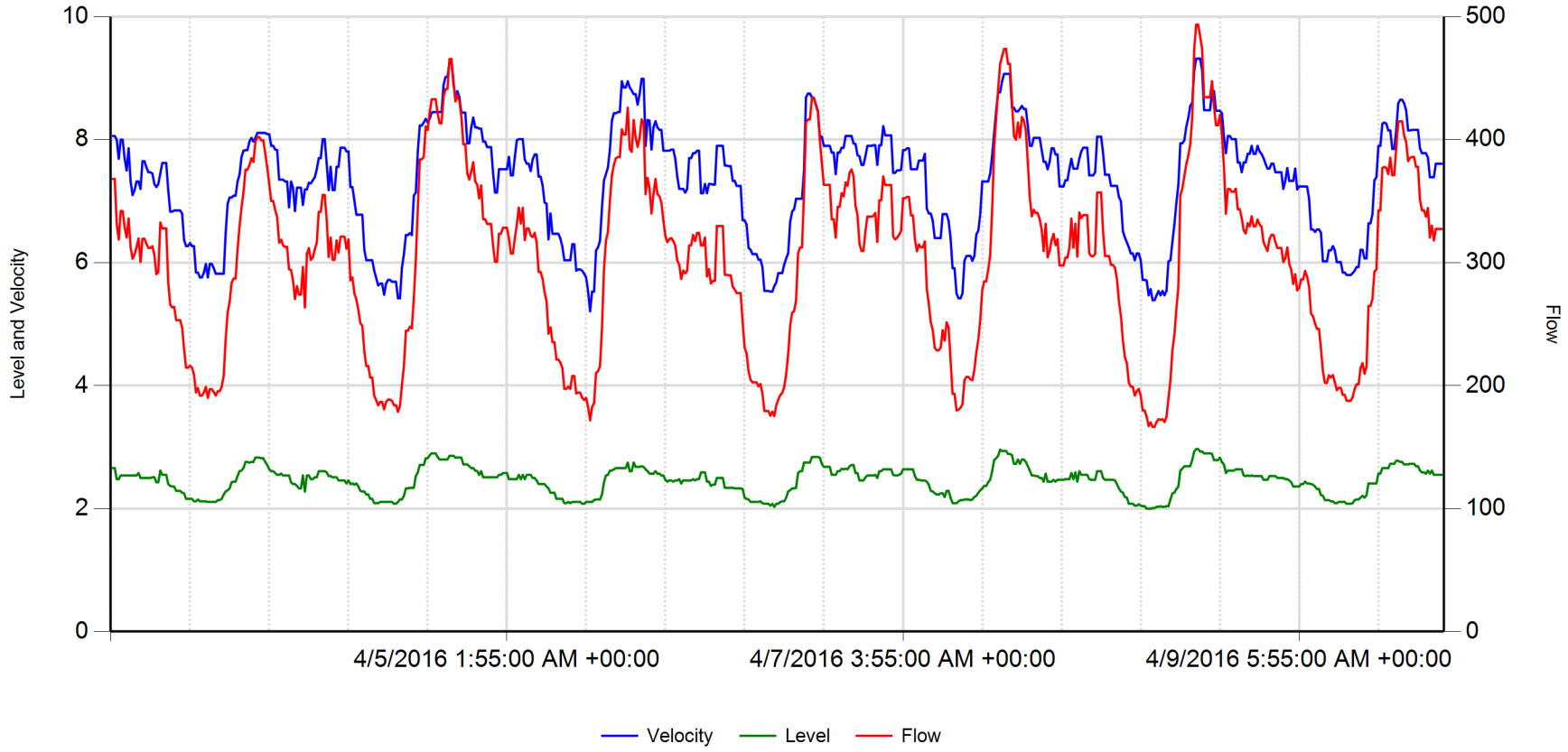
San Vicente MH



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	7.321	2.459	304.362	**RainFall**	Inches
Maximum	9.320	2.970	493.471		
Minimum	5.210	2.000	166.527		

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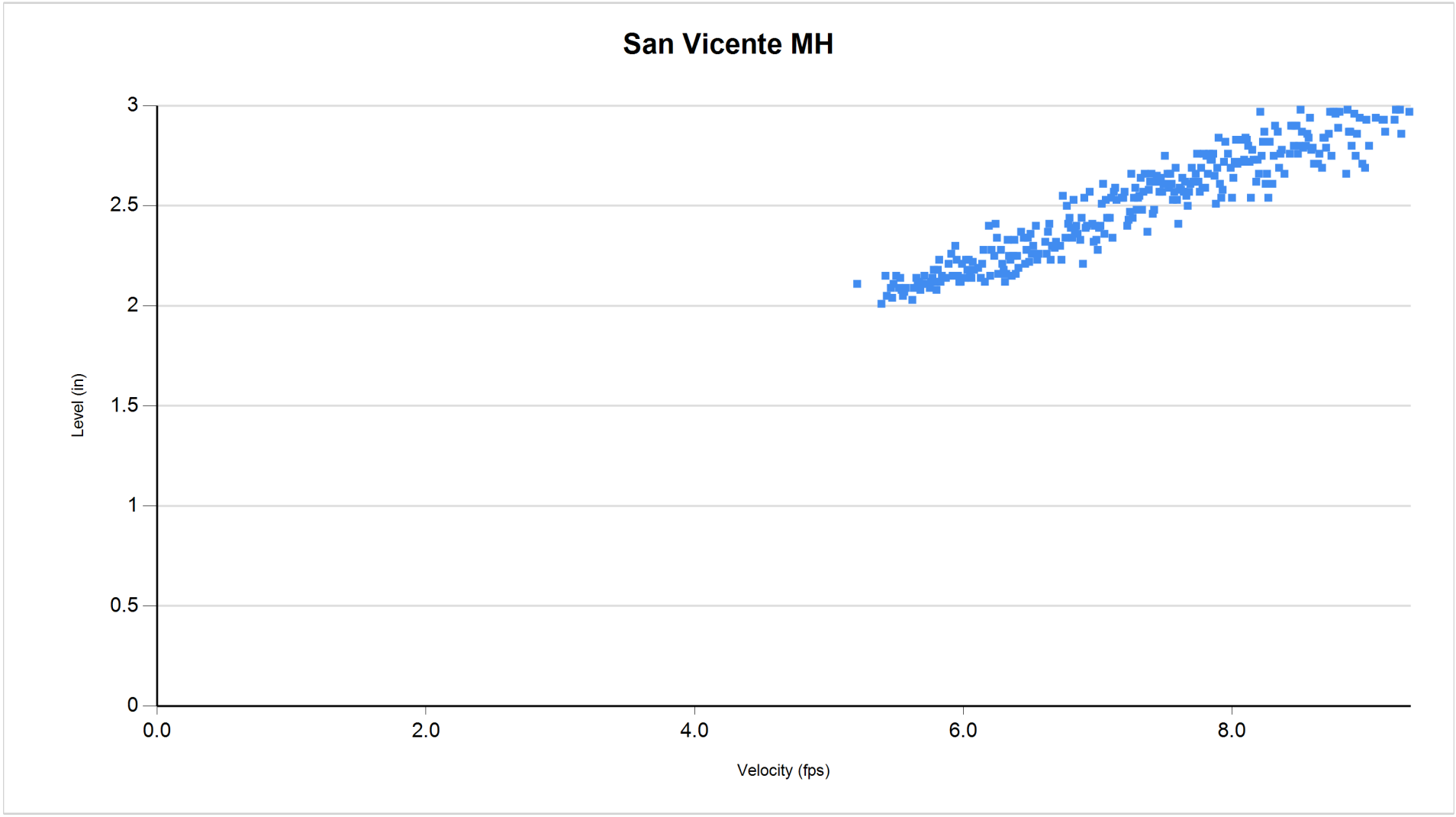

3/28/2016 thru 4/11/2016

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APPENDIX E

Existing Sewer Flow Analysis

Pipe Capacity at 50% Full

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.60000	%
Normal Depth	4.00	in
Diameter	8.00	in

Results

Discharge	1.552	ft³/s
Flow Area	0.17	ft²
Wetted Perimeter	1.05	ft
Hydraulic Radius	2.00	in
Top Width	0.67	ft
Critical Depth	0.58	ft
Percent Full	50.0	%
Critical Slope	0.01504	ft/ft
Velocity	8.89	ft/s
Velocity Head	1.23	ft
Specific Energy	1.56	ft
Froude Number	3.06	
Maximum Discharge	3.34	ft³/s
Discharge Full	3.10	ft³/s
Slope Full	0.01650	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.00	%
Downstream Velocity	Infinity	ft/s

Pipe Capacity at 50% Full

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.00	in
Critical Depth	0.58	ft
Channel Slope	6.60000	%
Critical Slope	0.01504	ft/ft

APPENDIX F

City of West Hollywood Sewer Capacity Study Requirements

City of West Hollywood
California 1984

City of West Hollywood
Department of Public Works
Engineering Division

Sewer Capacity Study Requirements

1. The sewer capacity study shall be certified by a California licensed Civil Engineer.

2. Project Description: The study should have a project description describing what is being proposed on the development site. The current land uses and proposed land uses of the development shall also be indentified.

3. Site Description: The site description shall describe the project's location, the approximate acreage of the project site, and contain a vicinity map to identify the project's location.

4. Existing Sewer Pipe Capacity Analysis: This section shall identify any existing connections to the sewer system. A 7-day flow monitoring study will be required to obtain the existing flow capacity. This shall be done at the downstream sewer manhole, or at a location that makes sense to adequately determine existing flow capacity. Additional monitoring locations may be required to verify downstream capacity of the local sewer network as well as if the project will connect to a nearby trunk line. The City of Los Angeles sewers located downstream may be impacted by a proposed development project. Therefore, the sewer study may need to include monitoring locations in the City of Los Angeles. The existing average daily flow (Q_{exist}) and peak flow shall be determined in cubic feet per second.

5. Proposed Flow Generation: This section shall include the proposed land use(s). Flow generation shall be determined by the user category that most closely matches the County Sanitation District No. 4 of Los Angeles County mean loading table. This will determine your average daily flow (Q_{AF}) in gallons per day (gpd) that shall then be converted to cubic feet per second (cfs).

   The City of West Hollywood was an unincorporated area of Los Angeles County until 1984; therefore the sewer system was designed to the County of Los Angeles Department of Public Works standards, where all pipes are designed for peak flow.

   n = 0.013
   D/d ≤ 0.50 for d ≤ 15"
   D/d ≤ 0.75 for d> 15"

   These assumptions will determine the Q_{cap} = Sewer pipe capacity.

The peak flow (Q_{PF}) for this study shall be calculated in cubic feet per second (cfs) by $Q_{PF} = 2.5 \times Q_{AF}$ where 2.5 is the peaking factor used to determine the maximum peak flow rate for sewer diameters less than 15". The peaking factor shall be 2.0 for diameters greater than 15".

6. Conclusion: The conclusion shall identify the sewer capacity of the pipe as a flow rate (Q_{cap}). The calculations shall demonstrate that the sewer mainline has the capacity for the existing flow and the added flow at average and peak conditions. If the sewer is found to be inadequate, recommendations shall be provided to handle the increase in sewer flow. If this is a large site that has several sewer connection options, the conclusion shall address those options and make a recommendation for the project. The recommendations will be incorporated into the mitigation measures for the project.

AN ORDINANCE PRESCRIBING THE CONNECTION FEE RATE AND MEAN LOADINGS PER UNIT OF USAGE FOR COUNTY SANITATION DISTRICT NO. 4 OF LOS ANGELES COUNTY

THE BOARD OF DIRECTORS OF COUNTY SANITATION DISTRICT NO. 4 OF LOS ANGELES COUNTY ORDAINS AS FOLLOWS:

SECTION 1.0 - USER CATEGORIES AND MEAN LOADINGS

Pursuant to Section 3.03(2) of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the following shall constitute the User Categories and mean loadings per Unit of Usage for flow, Biochemical Oxygen Demand (BOD), and Suspended Solids:

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Acupuncture Office/Clinic	1000 Sq.Ft.	150	0.16	0.10
Arcade - Video Games	1000 Sq.Ft.	80	0.10	0.10
Auditorium	Seat	4	0.01	0.01
Auto Parking	1000 Sq.Ft.	20	0.03	0.03
Auto Body/Mech. Repair Shop	1000 Sq.Ft.	80	0.12	0.19
Bakery	1000 Sq.Ft.	280	2.34	1.40
Bank: Headquarters	1000 Sq.Ft.	150	0.16	0.10
Bank: Branch	1000 Sq.Ft.	80	0.10	0.10
Banquet Room/Ballroom	1000 Sq.Ft.	800	6.67	4.00
Bar: Cocktail, Fixed Seat	Seat	18	0.03	0.03
Bar: Juice, No Baking Facilities	1000 Sq.Ft.	120	0.20	0.20
Bar: Juice, With Baking Facilities	1000 Sq.Ft.	280	2.34	1.40
Bar: Cocktail, Public Table Area	1000 Sq.Ft.	500	4.17	2.50
Barber Shop	1000 Sq.Ft.	100	0.13	0.13
Beauty Parlor	1000 Sq.Ft.	280	0.35	0.35
Bldg. Const/Field Office	Office	150	0.19	0.19
Bowling Alley: Alley, Lanes & Lobby Area	1000 Sq.Ft.	80	0.10	0.10
Cafeteria: Fixed Seat	Seat	30	0.25	0.15
Car Wash: Wand Type	1000 Sq.Ft.	700	3.00	1.58
Car Wash: Tunnel - Recycling Type	1000 Sq.Ft.	2700	11.74	6.16
Car Wash: Tunnel - Non-Recycling Type	1000 Sq.Ft.	3700	15.86	8.33
Chapel: Fixed Seat	Seat	4	0.01	0.01
Chiropractic Office	1000 Sq.Ft.	150	0.16	0.10

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Church: Fixed Seat	Seat	4	0.01	0.01
Church School: Day Care/Elem	Occupant	8	0.01	0.01
Church School: One Day Use	1000 Sq.Ft.	200	0.22	0.17
Cocktail Lounge: Fixed Seat	Seat	18	0.03	0.03
Coffee House: No Pastry Baking & No Food Preparation	1000 Sq.Ft.	120	0.20	0.20
Coffee House: Pastry Baking Only	1000 Sq.Ft.	280	2.34	1.40
Coffee House: Serves Prepared Food	Seat	30	0.25	0.15
Cold Storage: No Sales	1000 Sq.Ft.	20	0.03	0.03
Cold Storage: Retail Sales	1000 Sq.Ft.	80	0.10	0.10
Comfort Station: Public	Fixture	100	0.13	0.13
Commercial Use	1000 Sq.Ft.	80	0.10	0.10
Community Center	Occupant	4	0.01	0.01
Counseling Center	1000 Sq.Ft.	150	0.16	0.10
Credit Union	1000 Sq.Ft.	150	0.19	0.19
Dairy: Retail Area	1000 Sq.Ft.	80	0.10	0.10
Dancing Area (of Bars or Nightclub)	1000 Sq.Ft.	600	1.00	1.00
Dance Studio	1000 Sq.Ft.	80	0.10	0.10
Dental Office/Clinic	1000 Sq.Ft.	250	0.27	0.17
Doughnut Shop	1000 Sq.Ft.	280	2.34	1.40
Drug Rehabilitation Center	1000 Sq.Ft.	150	0.16	0.10
Equipment Booth	1000 Sq.Ft.	20	0.03	0.03
Film Processing - 1 Hour Photo, Etc.	1000 Sq.Ft.	100	0.13	0.13
Gas Station: Self Service	Fixture	100	0.15	0.23
Gas Station: Four Bays Max	Station	430	0.65	1.00
Gymnasium - Basketball, Volleyball	1000 Sq.Ft.	250	0.31	0.31
Hanger (Aircraft)	1000 Sq.Ft.	80	0.12	0.19
Health Club/Spa	1000 Sq.Ft.	800	1.00	1.00
Homeless Shelter	Bed	75	0.13	0.13
Hospital: Convalescent	Bed	75	0.16	0.06
Hospital: Animal	1000 Sq.Ft.	280	0.35	0.35
Hotel: Use Guest Rooms Only	Room	130	0.34	0.13
Jail	Inmate	85	0.22	0.09
Kennel: Dog Kennel/Open	1000 Sq.Ft.	100	0.13	0.13
Laundromat	Machine	170	0.21	0.16
Library: Public Area	1000 Sq.Ft.	80	0.10	0.10

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Library: Stacks, Storage	1000 Sq.Ft.	25	0.03	0.03
Lobby Of Retail Area	1000 Sq.Ft.	80	0.10	0.10
Lodge Hall	Seat	4	0.01	0.01
Lounge	1000 Sq.Ft.	80	0.13	0.13
Machine Shop	1000 Sq.Ft.	80	0.10	0.10
Manufacturing (Dry) Facility	1000Gr.Sq.Ft.	80	0.10	0.10
Massage Parlor	1000 Sq.Ft.	275	0.34	0.34
Medical Building	1000 Sq.Ft.	250	0.27	0.17
Medical: Lab In Hospital	1000 Sq.Ft.	250	0.69	0.31
Medical Office/Clinic	1000 Sq.Ft.	250	0.27	0.17
Mini-Mall	1000 Sq.Ft.	80	0.40	0.27
Mortuary: Chapel	Seat	4	0.01	0.01
Mortuary: Embalming	1000 Sq. Ft.	715	4.77	4.77
Mortuary: Living Area	1000 Sq.Ft.	80	0.14	0.14
Motel: Use Guest Rooms Only	Room	130	0.34	0.13
Museum: All Area	1000 Sq.Ft.	20	0.03	0.03
Museum: Office Over 15%	1000 Sq.Ft.	150	0.19	0.19
Museum: Sales Area	1000 Sq.Ft.	80	0.10	0.10
Office Building	1000 Sq.Ft.	150	0.16	0.10
Office Bldg W/ Cooling Tower	1000 Sq.Ft.	180	0.16	0.10
Pool Hall (No Alcohol)	1000 Sq.Ft.	80	0.10	0.10
Post Office: Full Service	1000 Sq.Ft.	150	0.19	0.19
Post Office: Private Mail Box Rental	1000 Sq.Ft.	80	0.10	0.10
Prisons	Inmate	175	0.45	0.18
Residential Dorm: College Or Residential	Student	75	0.13	0.13
Residential: Boarding House	Bed	75	0.13	0.13
Residential: Apt - Bachelor	Dwelling Unit	80	0.14	0.14
Residential: Apt - 1 Bedroom	Dwelling Unit	120	0.22	0.21
Residential: Apt - 2 Bedroom	Dwelling Unit	160	0.29	0.27
Residential: Apt - 3 Bedroom	Dwelling Unit	200	0.36	0.34
Residential: Apt - >3 Bedroom	Additional Bedroom	40	0.07	0.07
Residential: Condo - 1 Bedroom	Dwelling Unit	120	0.22	0.21
Residential: Condo - 2 Bedroom	Dwelling Unit	160	0.29	0.27
Residential: Condo - 3 Bedroom	Dwelling Unit	200	0.36	0.34

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Residential: Condo - >3 Bedroom	Additional Bedroom	40	0.07	0.07
Residential: Duplex/Townhouse/SFD - 1 Bedroom	Dwelling Unit	130	0.23	0.22
Residential: Duplex/Townhouse/SFD - 2 Bedroom	Dwelling Unit	180	0.32	0.31
Residential:Duplex/Townhouse/SFD - 3 Bedroom	Dwelling Unit	230	0.41	0.39
Residential:Duplex/Townhouse/SFD - >3 Bedroom	Additional Bedroom	50	0.09	0.09
Residential Room Addition: Bedroom	Bedroom	50	0.09	0.09
Residential Room Conversion: Into A Bedroom	Bedroom	50	0.09	0.09
Residential: Mobile Home	Dwelling Unit	160	0.29	0.27
Residential: Artist (2/3 Area)	Dwelling Unit	250	0.45	0.43
Residential: Artist Residence	Dwelling Unit	80	0.14	0.14
Residential: Guest Home w/ Kitchen	Same as Residential Apt			
Residential: Guest Home w/o Kitchen	Bedroom	50	0.06	0.06
Rest Home	Bed	75	0.16	0.06
Restaurant: Drive-In	Stall	40	0.33	0.20
Restaurant: Drive-In	Seat	20	0.17	0.10
Restaurant: Fast Food - Indoor Seat	Seat	20	0.17	0.10
Restaurant: Fast Food - Outdoor Seat	Seat	12	0.10	0.06
Restaurant: Full Service - Indoor Seat	Seat	30	0.25	0.15
Restaurant: Full Service - Outdoor Seat	Seat	18	0.15	0.09
Restaurant: Take-Out	1000 Sq.Ft.	300	2.50	1.50
Retail Area	1000 Sq.Ft.	80	0.10	0.10
Rifle Range: Shooting Stalls, Shooting Lanes, Lobby Area	1000 Sq.Ft.	80	0.10	0.10
School: Arts/Dancing/Music	1000 Sq.Ft.	80	0.09	0.07
School: Day Care Center	Child	8	0.01	0.01
School: Elementary/Jr. High	Student	8	0.01	0.01
School: High School	Student	12	0.01	0.01
School: Kindergarten	1000 Sq.Ft.	200	0.22	0.17
School: Martial Arts	1000 Sq.Ft.	80	0.09	0.07
School: Nursery-Day Care	Child	8	0.01	0.01

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
School: Special Class	Student	8	0.01	0.01
School: Trade Or Vocational	Student	12	0.01	0.01
School: Training	Student	12	0.01	0.01
School: University/College	Student	18	0.02	0.02
School: Dormitory	Student	75	0.13	0.13
School: Stadium, Pavilion	Seat	4	0.01	0.01
Storage: Building/Warehouse	1000 Sq.Ft.	20	0.03	0.03
Storage: Self Storage Bldg.	1000 Sq.Ft.	20	0.03	0.03
Store: Ice Cream/Yogurt	1000 Sq.Ft.	80	0.67	0.40
Store: Retail	1000 Sq.Ft.	80	0.10	0.10
Studio: Film/TV - Audience Viewing Room	Seat	4	0.01	0.01
Studio: Film/TV - Regular Use - Indoor Filming Area	1000 Sq.Ft.	80	0.10	0.10
Studio: Film/TV - Industrial Use (Domestic)	1000 Sq.Ft.	80	0.00	0.00
Studio: Recording	1000 Sq.Ft.	80	0.10	0.10
Tanning Salon: Independent, No Shower	1000 Sq.Ft.	80	0.10	0.10
Tanning Salon: Within A Health Spa/Club	1000 Sq.Ft.	800	1.00	1.00
Theater: Drive-In	Vehicle	10	0.01	0.01
Theater: Live/Music/Opera	Seat	4	0.01	0.01
Theater: Cinema	Seat	4	0.01	0.01
Tract: Commercial/Residential	Acre	1	0.00	0.00
Trailer - Const/Field Office	Office	150	0.19	0.19
Veterinary Clinic/Office	1000 Sq.Ft.	280	0.30	0.19
Warehouse	1000 Sq.Ft.	20	0.03	0.03
Waste Dump: Recreational	Station	430	0.54	0.54
Wine Tasting Room: Kitchen	1000 Sq.Ft.	215	0.27	0.27
Wine Tasting Room: All Area	1000 Sq.Ft.	80	0.10	0.10

SECTION 2.0 - CONNECTION FEE RATE

Pursuant to Section 3.02 of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the Connection Fee Rate shall be $1,710.00 per capacity unit.

SECTION 3.0 - COST ALLOCATION FACTORS

Pursuant to Section 3.03(2) of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the proportions of the capital improvement component of the connection fee rate which are attributable to flow, BOD, and Suspended Solids, designated as X, Y, and Z, respectively, shall be:

$X = 0.6567$ $Y = 0.1992$ $Z = 0.1441$

SECTION 4.0 - BASIC RESIDENTIAL UNIT

Pursuant to Section 3.03(2) of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the loadings from a basic residential unit shall be:

$Flow_{bru}$ = 260 gallons per day of Wastewater flow
BOD_{bru} = 0.466 pounds per day of BOD
SS_{bru} = 0.445 pounds per day of Suspended Solids.

SECTION 5.0 - EFFECTIVE DATE

This Ordinance shall become effective on July 1, 1999.

Chairperson, Board of Directors
County Sanitation District No. 4
of Los Angeles County

ATTEST:

Clerk, Board of Directors
County Sanitation District No. 4
of Los Angeles County

APPENDIX G

Proposed Sewer Flow Analysis

Post-Development Average % Full

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.60000	%
Diameter	8.00	in
Discharge	0.74	ft³/s

Results

Normal Depth	2.65	in
Flow Area	0.10	ft²
Wetted Perimeter	0.82	ft
Hydraulic Radius	1.48	in
Top Width	0.63	ft
Critical Depth	0.41	ft
Percent Full	33.1	%
Critical Slope	0.00790	ft/ft
Velocity	7.29	ft/s
Velocity Head	0.83	ft
Specific Energy	1.05	ft
Froude Number	3.20	
Maximum Discharge	3.34	ft³/s
Discharge Full	3.10	ft³/s
Slope Full	0.00372	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	33.15	%
Downstream Velocity	Infinity	ft/s

Post-Development Average % Full

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	2.65	in
Critical Depth	0.41	ft
Channel Slope	6.60000	%
Critical Slope	0.00790	ft/ft

Post-Development Peak % Full

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.60000	%
Diameter	8.00	in
Discharge	1.20	ft³/s

Results

Normal Depth	3.45	in
Flow Area	0.14	ft²
Wetted Perimeter	0.96	ft
Hydraulic Radius	1.81	in
Top Width	0.66	ft
Critical Depth	0.52	ft
Percent Full	43.2	%
Critical Slope	0.01092	ft/ft
Velocity	8.33	ft/s
Velocity Head	1.08	ft
Specific Energy	1.37	ft
Froude Number	3.14	
Maximum Discharge	3.34	ft³/s
Discharge Full	3.10	ft³/s
Slope Full	0.00990	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	43.17	%
Downstream Velocity	Infinity	ft/s

Post-Development Peak % Full

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.45	in
Critical Depth	0.52	ft
Channel Slope	6.60000	%
Critical Slope	0.01092	ft/ft

SEWER CAPACITY STUDY

For:
The Arts Club, West Hollywood
8920 Sunset Boulevard
West Hollywood, California

With additional analysis of:

The West Hollywood Hotel
8950 Sunset Boulevard
West Hollywood, California

Prepared by:
KPFF Consulting Engineers
700 S. Flower Street, Suite 2100
Los Angeles, CA 90017
213.418.0201

Date:
6/12/17

Submitted To:
City of West Hollywood Department of Public Works
Engineering Division

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APPENDICES

1. Site Description

The project site is approximately 0.46 acres and is located at 8920 Sunset Boulevard in the City of West Hollywood. Refer to Appendix A for the Project Vicinity Map. The lot currently consists of an existing two-story building with retail, office, and gym/fitness center space and subterranean parking and a surface parking lot.

2. Project Description

The proposed project is a mixed-use building consisting of subterranean parking, and nine levels of mixed-use space above including retail, office, and entertainment, among other uses. The development will span approximately to the property line. The majority of the site is zoned Sunset Specific Plan (SSP) per the City of West Hollywood Zoning Map and General Land Use Plan (Appendix B). The southern portion of the site is zoned Multi-family High Density Residential (R4B) and Parking Overlay (PK) and designated by the General Plan as High Density Residential (R4B) -- both of these will be changed to SSP as part of the Project.

In addition to the proposed project, there is an approved 169-room hotel to be constructed across the street at 8950 Sunset Boulevard that will have additional impact to the existing sewer system.

3. Existing Sewer Pipe Capacity Analysis

Per the City of West Hollywood Sewer System Management Plan (see Appendix C), there is an existing public sewer main that runs north to south on Hilldale Avenue before heading east on Harratt Street. As requested by the City of West Hollywood, MH #0056, which is located south of the intersection of Harratt Street and San Vicente Boulevard, was examined to ensure that the proposed project will not overload any sewer lines. Flow monitoring radars were installed in the manhole and data was collected over a two-week period, from March 28, 2016 to April 11, 2016 (see Appendix D for the Sewer Flow Monitoring Report compiled by Utility Systems Science & Software).

During the monitoring period, no silt buildup was observed and the line was in good condition with steady hydraulics.

City of West Hollywood plans indicate that the monitored sewer is an 8” main and the field measurements verified this pipe diameter. Slope of the main is shown in the West Hollywood Sewer System Management Plan (SSMP) to be 6.6%. The capacity of the pipe was analyzed using Bentley FlowMaster V8i.

Existing Sewer Pipe Capacity Analysis		
Flow Condition	**Average**	**Peak**
Pipe Diameter (in)	8	
Level (in)	2.48	2.98
Flow, Q (mgd)	0.45	0.71
Flow, Q (cfs)	0.696	1.099
Slope (%)	6.600	
Capacity (mgd)	1.003	
Capacity (cfs)	1.552	

4. Proposed Flow Generation

Per City of West Hollywood Sewer Capacity Study Requirements (see Appendix F), the anticipated peak daily flow generated by the proposed development, including the approved 169-room hotel at 8950 Sunset Boulevard, was calculated using the County Sanitation District No. 4 of Los Angeles Mean Loading Table and the peak flow (Q_{PF}) rate is calculated by multiplying Q_{AF} by a peaking factor of 2.5.

See the table on the following page for a summary of the proposed flow generation calculations.

Anticipated Sewer Generation and Demand (Arts Club - 8920 Sunset)						
Facility Description	**Building Program**	**Units**	**Flow (gpd) per unit***	**Avg Load, Q_{AF} (gpd)**	**Avg Load, Q_{AF} (cfs)**	**Peak Flow, Q_{PF} (cfs)**
Arts Club – Proposed 8920 Sunset						
Lobby/Support Area/Reception*	53,678	SF	0.08	4,294	0.007	0.017
Retail Space	6,853	SF	0.08	548	0.001	0.002
Art Gallery*	2,192	SF	0.15	329	0.001	0.001
Office	37,900	SF	0.15	5,685	0.009	0.022
Health Club/Spa	6,794	SF	0.8	5,435	0.008	0.021
Theatre: Cinema*	98	Seats	4	392	0.001	0.002
Hotel*	15	Rooms	130	1,950	0.003	0.008
Lounge	6,216	SF	0.08	497	0.001	0.002
Restaurant*	433	Seats	30	12,990	0.020	0.050
Bar: Cocktail, Public Table Area	1,502	SF	0.5	751	0.001	0.003
Sub-Total				32,872	0.051	0.127
8950 Sunset Hotel						
Hotel	169	Rooms	130	21,970	0.034	0.085
Restaurant	29,710	SF	0.5	14,855	0.023	0.057
Office	36,701	SF	0.15	5,505	0.009	0.021
Health Club/Spa	9,230	SF	0.8	7,384	0.011	0.029
Sub-Total				49,714	0.077	0.192
Existing Building - 8920 Sunset						
Retail Space	-5,600	SF	0.08	-448	-0.001	-0.002
Cafe/Coffee House	-3,200	SF	0.28	-896	-0.001	-0.003
Office	-4,000	SF	0.15	-600	-0.001	-0.002
Health Club/Spa	-5,250	SF	0.8	-4,200	-0.006	-0.016
Lobby/Common Area	-1,620	SF	0.08	-130	0.000	-0.001
Sub-Total				-6,274	-0.010	-0.024
TOTAL				**76,312**	**0.118**	**0.295**

NOTES

*Flow per unit determined from County Sanitation District No. 4 of Los Angeles County Mean Loading Table.

* Lobby category rate is the same as the general Commercial Use category rate under the Los Angeles County Mean Loading Table.

*Calculations are based on a "Museum" use category under the Los Angeles Mean Loading Table, as it is the most applicable category.

*"Theater: Cinema" category used for the (2) screening rooms. 49 seats estimated for each screening room by Gensler.

*Guestrooms classified as hotel as it is the most applicable category use under the Los Angeles County Mean Loading Table, but the Project's guestrooms are not anticipated to generate the same level of demand as a typical hotel. The hotel classification is used to provide a conservative estimate of the Project's potential sewer generation and demand.
*Number of restaurant seats currently unknown. Assumed 15 sf/seat per general seating guidelines. Figure includes supper club and restaurant uses.

5. Conclusion

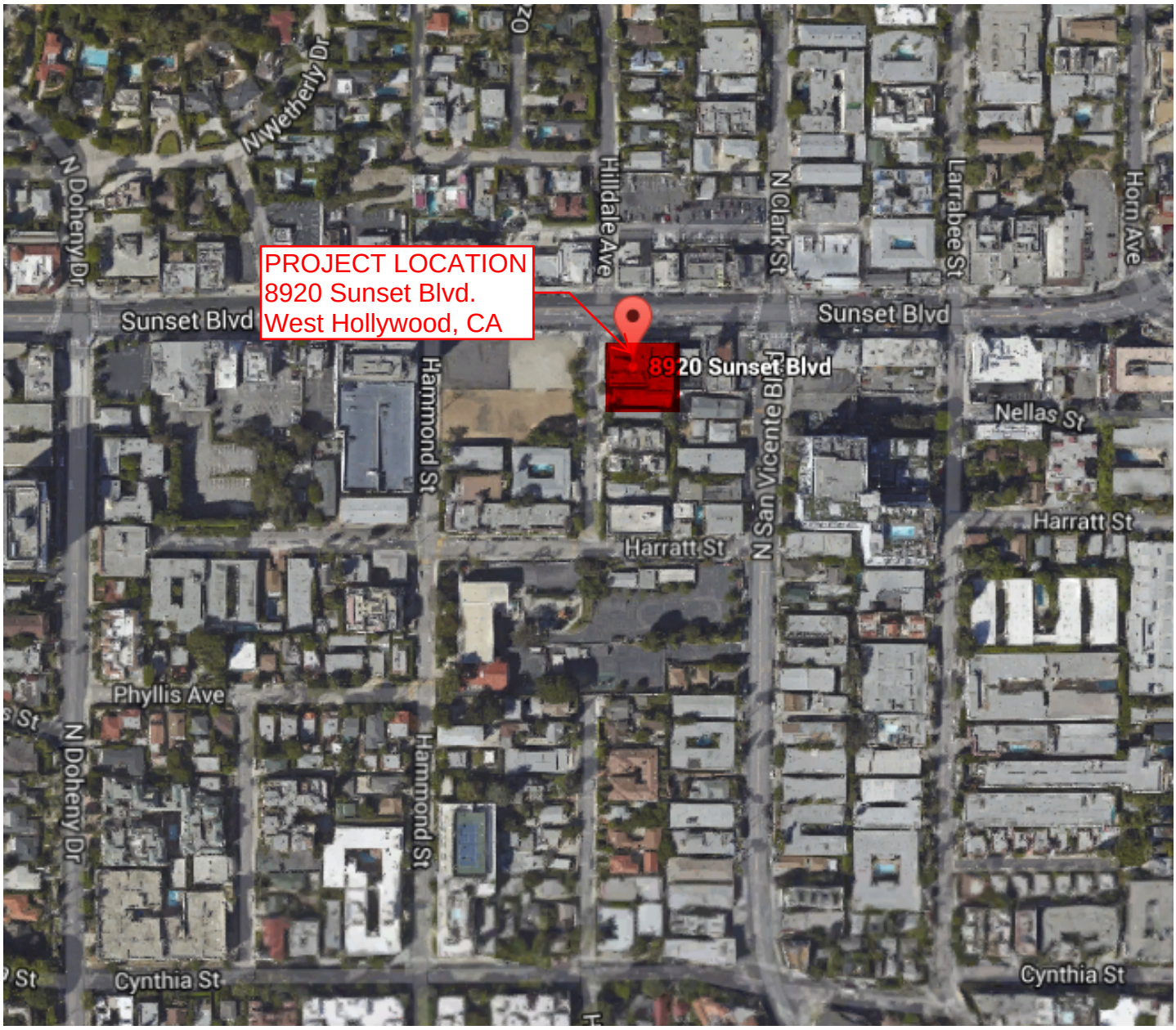
Below is a summary of the existing sewer analysis, additional generated load, and future condition hydraulics. Refer to Appendix G for the Proposed Sewer Flow Analysis.

Sewer Analysis Summary Table		
	Average Flow	**Peak Flow**
Slope (%)	6.6	
Pre-Development Flow (cfs)	0.696	1.099
Anticipated Sewer Generation (cfs)	0.118	0.295
Post-Development Flow (cfs)	0.814	1.394
Capacity (cfs)	1.552	1.552
Level (in)	2.80	3.76
Proposed % Full	35.0	47.0
Sufficient Capacity? (<50% full)	OK	OK

At both average and peak flow conditions, the sewer system is below the 50% full capacity required by the City of West Hollywood. Therefore, MH #0056 has adequate capacity to serve the proposed development.

APPENDIX A

Project Vicinity Map



PROJECT VICINITY MAP

APPENDIX B

City of West Hollywood Zoning Map and General Land Use Plan

City of West Hollywood Zoning Districts

Residential Zoning Districts

Residential, Single-Family or Two-Unit Low Density

- R1A - 25' 2 Stories - 1 du/lot
- R1B - 25' 2 Stories - 2 du/lot of less than 8499 SF
- R1C - 15' 1 Story - 1 du/lot

Residential, Low Density

- R2 - 25' 2 Stories - 2 du/lot of less than 4000 SF
  - 3 du/lot between 4000 and 7999 SF
  - 4 du/lot between 8000 and 9999 SF plus 1 additional unit/lot for each 2000 SF or fraction thereof in excess of 9999 SF

Residential, Multi-Family Medium Density

- R3A - 25' 2 Stories - 1 du/1210 SF of lot area
- R3B - 35' 3 Stories - 1 du/1210 SF of lot area
- R3C - 45' 4 Stories - 1 du/1210 SF of lot area

Residential, Multi-Family High Density

- R4A - 35' 3 Stories - 1 du/872 SF of lot area
- R4B - 45' 4 Stories - 1 du/872 SF of lot area

Combination Zones

- SSP - Sunset Specific Plan
- SSP CN - Sunset Specific Plan Commercial, Neighborhood
- SSP R2 - Sunset Specific Plan Residential, Low Density
- SSP R4 - Sunset Specific Plan Residential, Multi-Family High Density

Commercial and Public Zoning Districts

	Density (FAR)	Height
CN1 - Commercial, Neighborhood 1	1.0	25 ft/2 stories
CN2 - Commercial, Neighborhood 2	1.0	25 ft/2 stories
CC1 - Commercial, Community 1	1.5	35 ft/3 stories
CC2 - Commercial, Community 2	2.0	45 ft/4 stories
CA - Commercial, Arterial	2.5	60 ft/5 stories
CR - Commercial, Regional Center	3.0	90 ft/8 stories

Overlay Zoning Districts

- Mixed-Use Incentive Overlay Zone
- PK - Parking Overlay
- Development Agreement Overlay
- Commercial-Only Overlay Zone

Other Zoning Districts

- PDCSP - Pacific Design Center Specific Plan
- PF - Public Facilities
- MSP - Movietown Specific Plan

du = dwelling unit

Map Date: November 3, 2011

APPENDIX C

City of West Hollywood Master Plan of Sewers

CITY OF LOS ANGELES

SITE

SEWER MANHOLE FOR FLOW MONITORING

SCALE 1"=500'

0' 250' 500'

LEGEND

- Service Area Boundary
- Drainage Subarea Boundary
- 0126 Tributary Manhole Number
- City of West Hollywood (Sewer Pipes That are Modeled)
- City of West Hollywood Sewer (Sewer Pipes That are Not Modeled)
- CSDLAC Sewer (Sewer Pipes That are Modeled)
- CSDLAC Sewer (Sewer Pipes That are Not Modeled)
- City of Los Angeles Sewer
- 0147 Sewer Manhole

CITY OF WEST HOLLYWOOD MASTER PLAN OF SEWERS

TRUNK SEWER MAP SERVICE AREAS 10 and 11

Boyle Engineering Corporation

ID	Street/Comments	Drawing No	Year Inst	Size (in)	Material	Manning N	Length (ft)	Ground Elev USMH	Invert Elev USMH	Invert Elev DSMH	Given Slope
110055-110390	CLARK	CI-140-10A	1926	8.00	VCP	0.013	227	352.00	343.11	320.93	0.09760
110056-110057	CLARK	CI-140-10A	1926	8.00	VCP	0.013	251	301.00	288.05	271.48	0.06600
110057-110058	CLARK	CI-140-10A	1926	8.00	VCP	0.013	247	285.00	271.23	258.18	0.05280
110058-110059	CLARK/CYNTHIA	CI-140-10A	1926	8.00	VCP	0.013	37	272.00	257.96	256.15	0.04400
110059-110061	CYNTHIA	PC-5420-P2	1960	15.00	VCP	0.013	108	269.50	255.72	254.34	0.01280
110060-110059	CYNTHIA	PC-6074-P5	1966	15.00	VCP	0.013	46	272.00	258.24	255.64	0.05600
110061-110067	CYNTHIA	PC-5568-P2	1960	15.00	VCP	0.013	127	262.00	253.78	246.02	0.06200
110062-110061	LARRABEE	JN-6707	1949	8.00	VCP	0.013	86	264.00	258.18	254.50	0.04280
110063-110062	LARRABEE	JN-6707	1949	8.00	VCP	0.013	55	269.00	263.13	258.83	0.07800
110064-110063	LARRABEE	JN-6707	1949	8.00	VCP	0.013	57	271.00	264.14	263.33	0.01600
110065-110066	LARRABEE	JN-6707	1949	8.00	VCP	0.013	54	260.00	254.27	252.27	0.03720
110066-110067	LARRABEE	JN-6707	1949	8.00	VCP	0.013	102	257.00	251.97	246.60	0.05280
110067-110070	CYNTHIA	PC-5420-P2	1960	15.00	VCP	0.013	91	254.00	245.73	240.50	0.05760
110068-110032	HILLDALE	PC-6074-P5	1926	8.00	VCP	0.013	244	300.00	290.11	275.56	0.06000
110070-110072	CYNTHIA	PC-5420-P2	1960	15.00	VCP	0.013	108	251.00	240.28	236.04	0.03920
110071-110070	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	27	253.00	241.05	240.98	0.01800
110072-110106	CYNTHIA	PC-6074-P5	1966	15.00	VCP	0.013	231	246.00	236.20	222.22	0.06000
110073-110071	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	272	265.00	252.93	241.20	0.04320
110074-110073	LARRABEE	CI-140-9CD	1926	8.00	VCP	0.013	271	286.00	277.04	253.19	0.08800
110075-110074	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	270	314.00	303.37	277.42	0.09600
110076-110075	LARRABEE	CI-140-9A	1926	8.00	VCP	0.013	280	345.00	336.97	303.76	0.11880
110077-110092	SUNSET	CI-140-14D	1926	8.00	VCP	0.013	239	351.00	338.37	333.30	0.02120
110078-110077	LARRABEE	CI-140-9B	1926	8.00	VCP	0.013	314	384.00	374.82	338.64	0.11520
110079-110078	LARRABEE	CI-140-9B	1926	8.00	VCP	0.013	312	420.00	410.85	375.28	0.11400
110080-110079	LARRABEE	CI-140-9B	1926	8.00	VCP	0.013	312	456.00	446.88	411.31	0.11400
110083-110084	HORN		1926	8.00	VCP	0.013	20	453.00	447.93	443.85	0.20400
110084-110085	HORN	CI-140-12A	1926	8.00	VCP	0.013	161	451.00	443.85	411.08	0.20400
110085-110086	HORN	CI-140-12A	1926	8.00	VCP	0.013	142	420.00	410.42	392.85	0.12400
110086-110087	HORN	CI-140-12A	1926	8.00	VCP	0.013	233	400.00	392.00	368.17	0.10200
110087-110088	HORN	CI-140-12A	1966	18.00	VCP	0.013	77	375.00	367.75	359.60	0.10600
110088-110089	HORN	PC-6074-P9	1966	18.00	VCP	0.013	12	366.00	359.20	357.50	0.14160
110089-110090	HORN	PC-6074-P9	1966	8.00	VCP	0.013	163	364.00	357.06	327.69	0.18010
110090-110094	HORN	PC-6074-P4	1966	12.00	VCP	0.013	86	343.00	326.79	322.26	0.05310
110091-110090	HORN/SUNSET	PC-6074-P4	1966	12.00	VCP	0.013	56	343.00	335.10	327.36	0.13900
110092-110093	SUNSET	CI-140-14D	1926	8.00	VCP	0.013	76	344.00	333.20	331.59	0.02120
110093-110094	SUNSET/HORN	PC-6074-P4	1966	8.00	VCP	0.013	22	342.00	331.59	322.67	0.36000
110094-110095	SUNSET	PC-6074-P4	1966	12.00	VCP	0.013	138	340.00	322.09	317.69	0.03200
110095-110096	PALM	PC-6074-P3	1966	12.00	VCP	0.013	156	336.00	317.44	301.65	0.00400
110096-110102	PALM	PC-6074-P3	1966	12.00	VCP	0.013	201	316.00	300.90	281.20	0.09800
110097-110096	PALM	PC-6074-P3	1966	8.00	VCP	0.013	24	316.00	310.41	301.66	0.36440
110098-110097	ALLEY, SO OF SUNSET	CI-140-8A	1926	8.00	VCP	0.013	180	325.00	317.17	310.62	0.03640
110099-110098	ALLEY, SO OF SUNSET	CI-140-8A	1926	8.00	VCP	0.013	193	333.00	324.33	317.32	0.03640
110100-110101	HARPATT	PC-6074-P3	1926	8.00	VCP	0.013	340	308.00	299.25	286.06	0.03880
110101-110102	HARPATT	PC-6074-P3	1966	8.00	VCP	0.013	19	293.00	286.04	281.21	0.25440
110102-110103	PALM	PC-6074-P3	1966	12.00	VCP	0.013	251	293.00	280.80	254.30	0.10560
110103-110104	PALM	PC-6074-P3	1966	12.00	VCP	0.013	271	267.00	253.82	227.80	0.09600
110104-110105	PALM	PC-6074-P2	1966	12.00	VCP	0.013	294	241.00	227.50	212.11	0.05240
110105-110587	PALM	PC-6074-P2	1966	18.00	VCP	0.013	213	225.00	211.97	209.02	0.01400
110106-110105	CYNTHIA	PC-6074-P5	1966	15.00	VCP	0.013	159	234.00	222.10	212.57	0.06000
110107-110106	PALM	CI-140-9C	1926	8.00	VCP	0.013	240	243.00	238.21	263.81	0.06000
110108-110107	PALM	CI-140-9C	1926	8.00	VCP	0.013	240	265.00	258.17	238.49	0.08200
110109-110108	PALM	CI-140-9C	1926	8.00	VCP	0.013	246	288.00	280.32	258.51	0.09000
110110-110091	SHERBOURNE	CI-140-12D	1926	8.00	VCP	0.013	100	350.00	338.58	335.40	0.03180

APPENDIX D

Utility Systems Science & Software Sewer Flow Monitoring Report

Site Report 04-13-2016

Confidential Proprietary Information

Carlin Projects	~949 N. San Vicente Blvd
San Vicente MH	34.088754, -118.385617

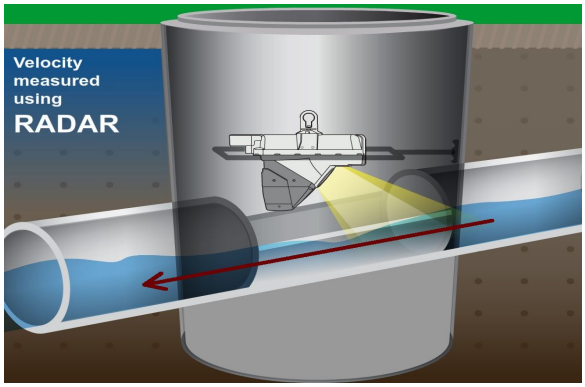
Access:
Manhole in the northbound left-hand lane

System Type: Sanitary [X] Storm [ ]

Install Date: 3/28/2016

Map

Technology



Traffic Plan

Flow Meter			
Meter Depth: 133"			
Meter SN:*			
Rapid open channel hydraulics			
Avg Velocity	Avg Measured Level		Multiplier
8.5 fps	2.9"		0.90
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
Fast downhill velocities			
Traffic Safety			
Used cones, signs & a flagger.			
Land Use			
Residential	Commercial	Industrial	Trunk
X			

Manhole Depth	148"
Pipe Size	8"
Inner Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	*
Sensor Offset	14.67"
Sensor Dist. to Crown	6.67"
Flow Direction	Upstream
Flow Heading	South

Meter Site Document

Carlin Projects

San Vicente MH ~949 N. San Vicente Blvd

Site

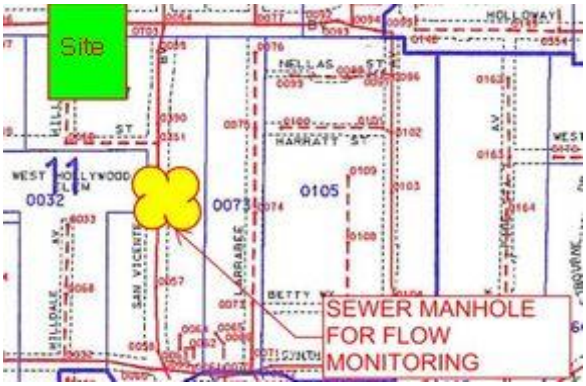
Manhole Before Install

Installation Process

Installed

Traffic Control

Sewer Map



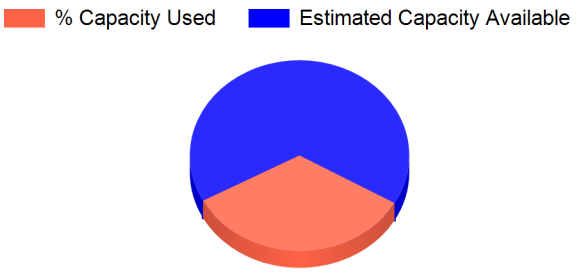
Temporary Flow Study

Carlin Projects

San Vicente MH

Meter Start Date		From	3/28/2016
Meter Stop Date		To	4/11/2016
Velocity (fps)		Level (in)	Flow (mgd)
Average	7.379	2.476	0.446
Maximum	9.320	2.980	0.711
Minimum	5.210	2.000	0.240
Pipe Size		8.000	
Estimated Capacity (mgd)		2.104	
Capacity Used		33.78 %	
Sensor Type		Hach - Flodar	

Estimated Capacity Usage

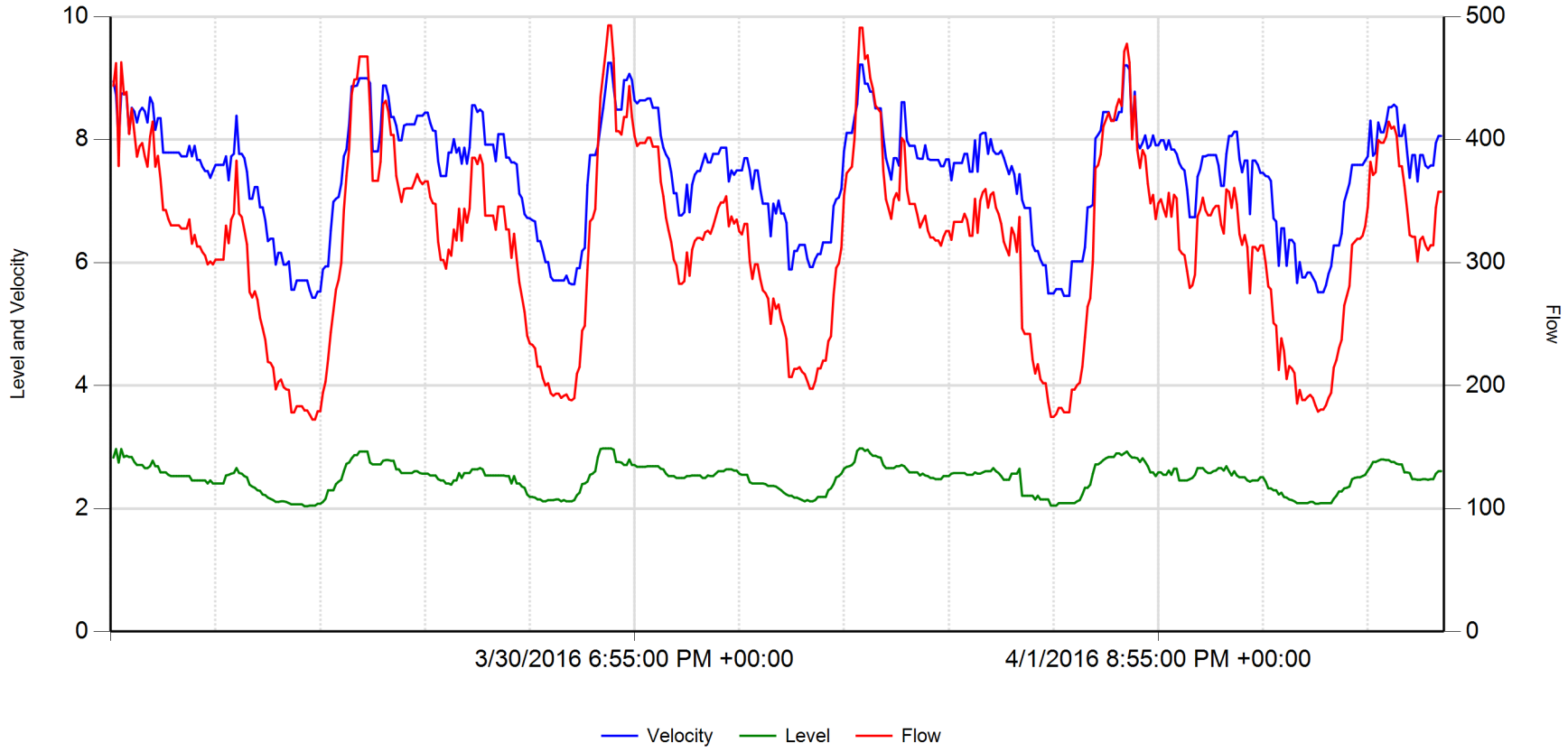


Utility Systems, Science and Software

1250 Pioneer Ave. Suite F
El Cajon, CA 92020

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

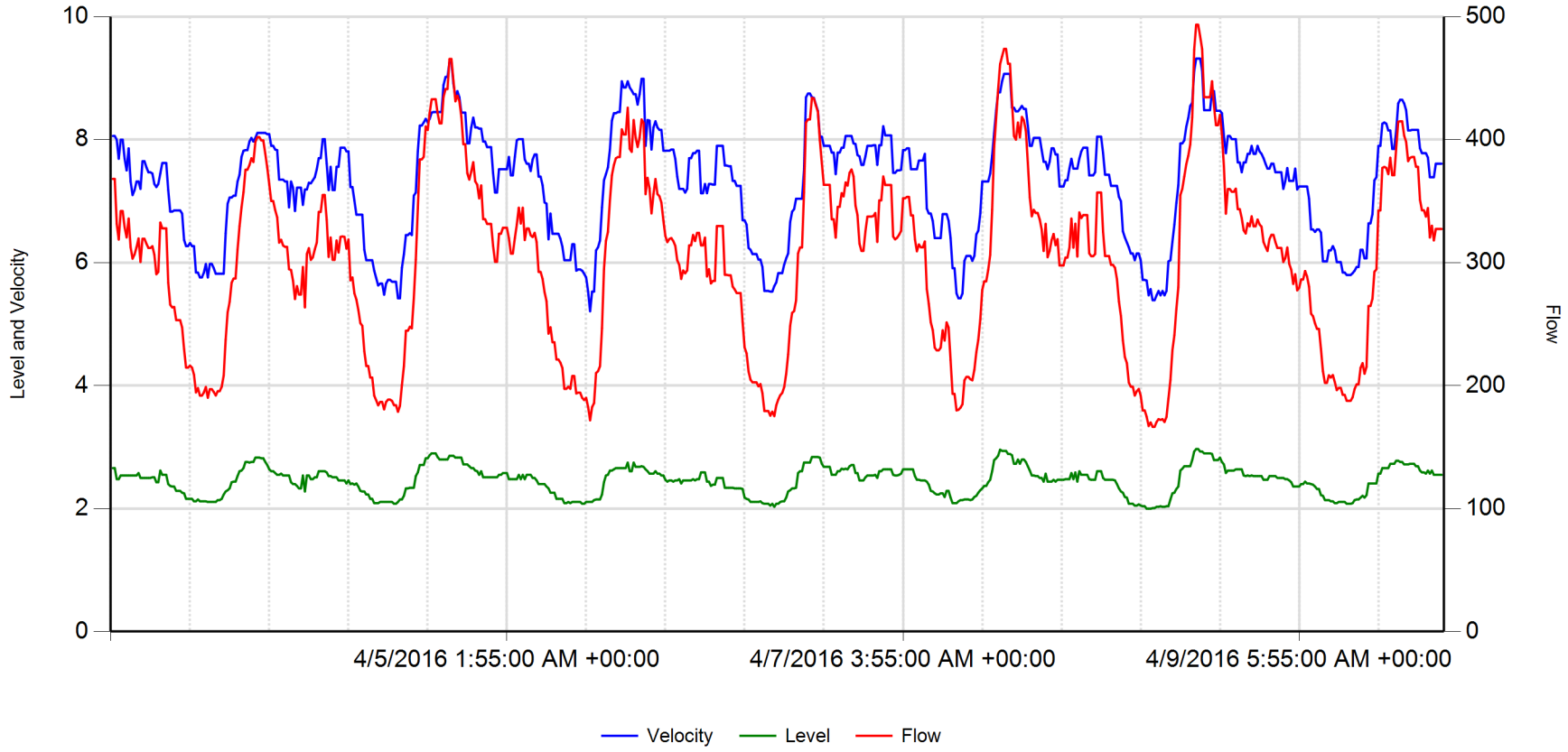
San Vicente MH



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	7.444	2.497	316.186	**RainFall**	Inches
Maximum	9.250	2.980	492.915		
Minimum	5.430	2.040	172.499		

4/12/2016 11:26:52 AM

San Vicente MH



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	7.321	2.459	304.362	**RainFall**	Inches
Maximum	9.320	2.970	493.471		
Minimum	5.210	2.000	166.527		

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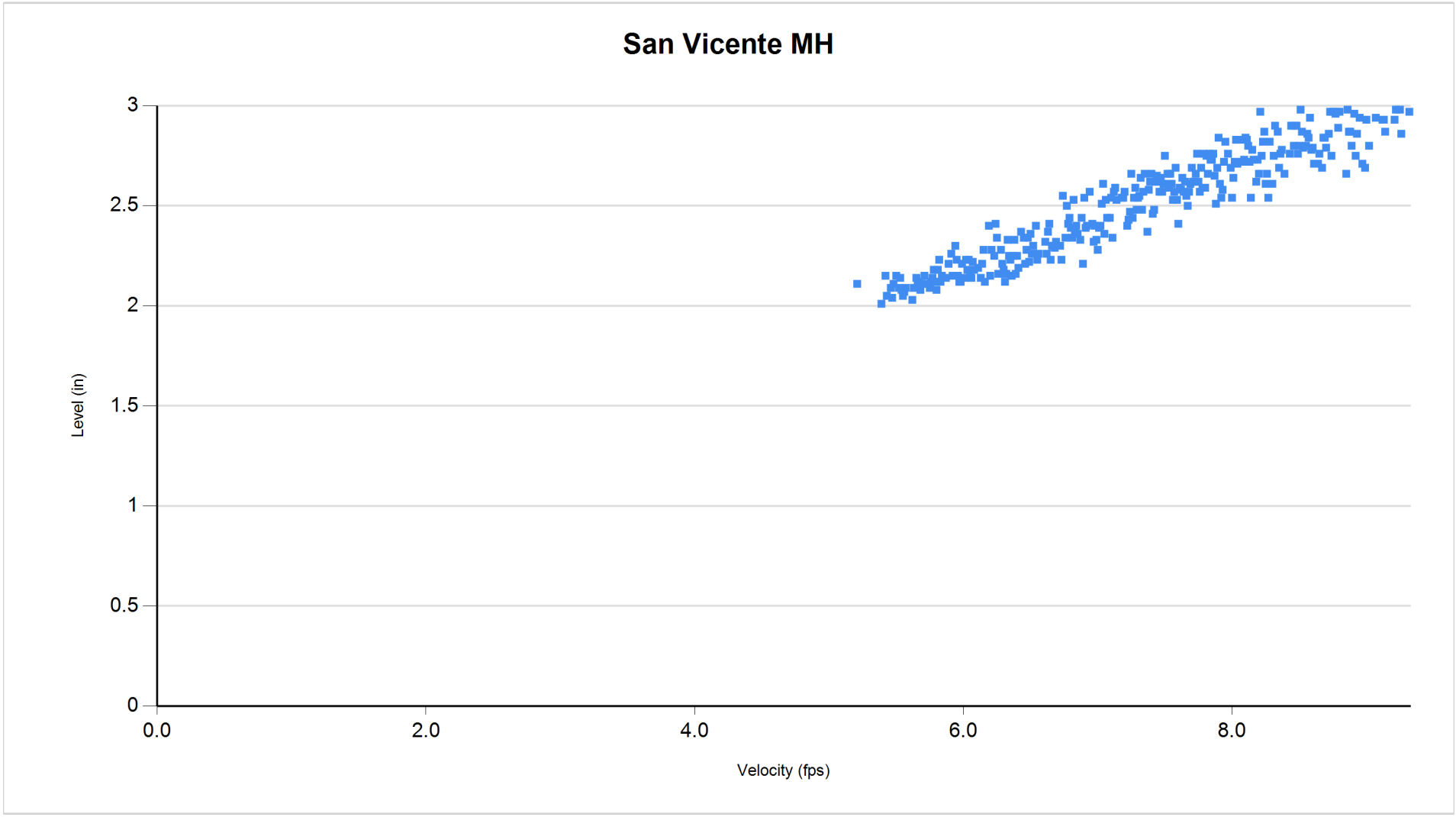

3/28/2016 thru 4/11/2016

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APPENDIX E

Existing Sewer Flow Analysis

Pipe Capacity at 50% Full

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.60000	%
Normal Depth	4.00	in
Diameter	8.00	in

Results

Discharge	1.552	ft³/s
Flow Area	0.17	ft²
Wetted Perimeter	1.05	ft
Hydraulic Radius	2.00	in
Top Width	0.67	ft
Critical Depth	0.58	ft
Percent Full	50.0	%
Critical Slope	0.01504	ft/ft
Velocity	8.89	ft/s
Velocity Head	1.23	ft
Specific Energy	1.56	ft
Froude Number	3.06	
Maximum Discharge	3.34	ft³/s
Discharge Full	3.10	ft³/s
Slope Full	0.01650	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.00	%
Downstream Velocity	Infinity	ft/s

Pipe Capacity at 50% Full

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	4.00	in
Critical Depth	0.58	ft
Channel Slope	6.60000	%
Critical Slope	0.01504	ft/ft

APPENDIX F

City of West Hollywood Sewer Capacity Study Requirements

City of West Hollywood
California 1984

City of West Hollywood
Department of Public Works
Engineering Division

Sewer Capacity Study Requirements

1. The sewer capacity study shall be certified by a California licensed Civil Engineer.

2. Project Description: The study should have a project description describing what is being proposed on the development site. The current land uses and proposed land uses of the development shall also be indentified.

3. Site Description: The site description shall describe the project's location, the approximate acreage of the project site, and contain a vicinity map to identify the project's location.

4. Existing Sewer Pipe Capacity Analysis: This section shall identify any existing connections to the sewer system. A 7-day flow monitoring study will be required to obtain the existing flow capacity. This shall be done at the downstream sewer manhole, or at a location that makes sense to adequately determine existing flow capacity. Additional monitoring locations may be required to verify downstream capacity of the local sewer network as well as if the project will connect to a nearby trunk line. The City of Los Angeles sewers located downstream may be impacted by a proposed development project. Therefore, the sewer study may need to include monitoring locations in the City of Los Angeles. The existing average daily flow (Q_{exist}) and peak flow shall be determined in cubic feet per second.

5. Proposed Flow Generation: This section shall include the proposed land use(s). Flow generation shall be determined by the user category that most closely matches the County Sanitation District No. 4 of Los Angeles County mean loading table. This will determine your average daily flow (Q_{AF}) in gallons per day (gpd) that shall then be converted to cubic feet per second (cfs).

   The City of West Hollywood was an unincorporated area of Los Angeles County until 1984; therefore the sewer system was designed to the County of Los Angeles Department of Public Works standards, where all pipes are designed for peak flow.

   n = 0.013
   D/d ≤ 0.50 for d ≤ 15"
   D/d ≤ 0.75 for d> 15"

   These assumptions will determine the Q_{cap} = Sewer pipe capacity.

The peak flow (Q_{PF}) for this study shall be calculated in cubic feet per second (cfs) by $Q_{PF} = 2.5 \times Q_{AF}$ where 2.5 is the peaking factor used to determine the maximum peak flow rate for sewer diameters less than 15". The peaking factor shall be 2.0 for diameters greater than 15".

6. Conclusion: The conclusion shall identify the sewer capacity of the pipe as a flow rate (Q_{cap}). The calculations shall demonstrate that the sewer mainline has the capacity for the existing flow and the added flow at average and peak conditions. If the sewer is found to be inadequate, recommendations shall be provided to handle the increase in sewer flow. If this is a large site that has several sewer connection options, the conclusion shall address those options and make a recommendation for the project. The recommendations will be incorporated into the mitigation measures for the project.

AN ORDINANCE PRESCRIBING THE CONNECTION FEE RATE AND MEAN LOADINGS PER UNIT OF USAGE FOR COUNTY SANITATION DISTRICT NO. 4 OF LOS ANGELES COUNTY

THE BOARD OF DIRECTORS OF COUNTY SANITATION DISTRICT NO. 4 OF LOS ANGELES COUNTY ORDAINS AS FOLLOWS:

SECTION 1.0 - USER CATEGORIES AND MEAN LOADINGS

Pursuant to Section 3.03(2) of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the following shall constitute the User Categories and mean loadings per Unit of Usage for flow, Biochemical Oxygen Demand (BOD), and Suspended Solids:

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Acupuncture Office/Clinic	1000 Sq.Ft.	150	0.16	0.10
Arcade - Video Games	1000 Sq.Ft.	80	0.10	0.10
Auditorium	Seat	4	0.01	0.01
Auto Parking	1000 Sq.Ft.	20	0.03	0.03
Auto Body/Mech. Repair Shop	1000 Sq.Ft.	80	0.12	0.19
Bakery	1000 Sq.Ft.	280	2.34	1.40
Bank: Headquarters	1000 Sq.Ft.	150	0.16	0.10
Bank: Branch	1000 Sq.Ft.	80	0.10	0.10
Banquet Room/Ballroom	1000 Sq.Ft.	800	6.67	4.00
Bar: Cocktail, Fixed Seat	Seat	18	0.03	0.03
Bar: Juice, No Baking Facilities	1000 Sq.Ft.	120	0.20	0.20
Bar: Juice, With Baking Facilities	1000 Sq.Ft.	280	2.34	1.40
Bar: Cocktail, Public Table Area	1000 Sq.Ft.	500	4.17	2.50
Barber Shop	1000 Sq.Ft.	100	0.13	0.13
Beauty Parlor	1000 Sq.Ft.	280	0.35	0.35
Bldg. Const/Field Office	Office	150	0.19	0.19
Bowling Alley: Alley, Lanes & Lobby Area	1000 Sq.Ft.	80	0.10	0.10
Cafeteria: Fixed Seat	Seat	30	0.25	0.15
Car Wash: Wand Type	1000 Sq.Ft.	700	3.00	1.58
Car Wash: Tunnel - Recycling Type	1000 Sq.Ft.	2700	11.74	6.16
Car Wash: Tunnel - Non-Recycling Type	1000 Sq.Ft.	3700	15.86	8.33
Chapel: Fixed Seat	Seat	4	0.01	0.01
Chiropractic Office	1000 Sq.Ft.	150	0.16	0.10

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Church: Fixed Seat	Seat	4	0.01	0.01
Church School: Day Care/Elem	Occupant	8	0.01	0.01
Church School: One Day Use	1000 Sq.Ft.	200	0.22	0.17
Cocktail Lounge: Fixed Seat	Seat	18	0.03	0.03
Coffee House: No Pastry Baking & No Food Preparation	1000 Sq.Ft.	120	0.20	0.20
Coffee House: Pastry Baking Only	1000 Sq.Ft.	280	2.34	1.40
Coffee House: Serves Prepared Food	Seat	30	0.25	0.15
Cold Storage: No Sales	1000 Sq.Ft.	20	0.03	0.03
Cold Storage: Retail Sales	1000 Sq.Ft.	80	0.10	0.10
Comfort Station: Public	Fixture	100	0.13	0.13
Commercial Use	1000 Sq.Ft.	80	0.10	0.10
Community Center	Occupant	4	0.01	0.01
Counseling Center	1000 Sq.Ft.	150	0.16	0.10
Credit Union	1000 Sq.Ft.	150	0.19	0.19
Dairy: Retail Area	1000 Sq.Ft.	80	0.10	0.10
Dancing Area (of Bars or Nightclub)	1000 Sq.Ft.	600	1.00	1.00
Dance Studio	1000 Sq.Ft.	80	0.10	0.10
Dental Office/Clinic	1000 Sq.Ft.	250	0.27	0.17
Doughnut Shop	1000 Sq.Ft.	280	2.34	1.40
Drug Rehabilitation Center	1000 Sq.Ft.	150	0.16	0.10
Equipment Booth	1000 Sq.Ft.	20	0.03	0.03
Film Processing - 1 Hour Photo, Etc.	1000 Sq.Ft.	100	0.13	0.13
Gas Station: Self Service	Fixture	100	0.15	0.23
Gas Station: Four Bays Max	Station	430	0.65	1.00
Gymnasium - Basketball, Volleyball	1000 Sq.Ft.	250	0.31	0.31
Hanger (Aircraft)	1000 Sq.Ft.	80	0.12	0.19
Health Club/Spa	1000 Sq.Ft.	800	1.00	1.00
Homeless Shelter	Bed	75	0.13	0.13
Hospital: Convalescent	Bed	75	0.16	0.06
Hospital: Animal	1000 Sq.Ft.	280	0.35	0.35
Hotel: Use Guest Rooms Only	Room	130	0.34	0.13
Jail	Inmate	85	0.22	0.09
Kennel: Dog Kennel/Open	1000 Sq.Ft.	100	0.13	0.13
Laundromat	Machine	170	0.21	0.16
Library: Public Area	1000 Sq.Ft.	80	0.10	0.10

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Library: Stacks, Storage	1000 Sq.Ft.	25	0.03	0.03
Lobby Of Retail Area	1000 Sq.Ft.	80	0.10	0.10
Lodge Hall	Seat	4	0.01	0.01
Lounge	1000 Sq.Ft.	80	0.13	0.13
Machine Shop	1000 Sq.Ft.	80	0.10	0.10
Manufacturing (Dry) Facility	1000Gr.Sq.Ft.	80	0.10	0.10
Massage Parlor	1000 Sq.Ft.	275	0.34	0.34
Medical Building	1000 Sq.Ft.	250	0.27	0.17
Medical: Lab In Hospital	1000 Sq.Ft.	250	0.69	0.31
Medical Office/Clinic	1000 Sq.Ft.	250	0.27	0.17
Mini-Mall	1000 Sq.Ft.	80	0.40	0.27
Mortuary: Chapel	Seat	4	0.01	0.01
Mortuary: Embalming	1000 Sq. Ft.	715	4.77	4.77
Mortuary: Living Area	1000 Sq.Ft.	80	0.14	0.14
Motel: Use Guest Rooms Only	Room	130	0.34	0.13
Museum: All Area	1000 Sq.Ft.	20	0.03	0.03
Museum: Office Over 15%	1000 Sq.Ft.	150	0.19	0.19
Museum: Sales Area	1000 Sq.Ft.	80	0.10	0.10
Office Building	1000 Sq.Ft.	150	0.16	0.10
Office Bldg W/ Cooling Tower	1000 Sq.Ft.	180	0.16	0.10
Pool Hall (No Alcohol)	1000 Sq.Ft.	80	0.10	0.10
Post Office: Full Service	1000 Sq.Ft.	150	0.19	0.19
Post Office: Private Mail Box Rental	1000 Sq.Ft.	80	0.10	0.10
Prisons	Inmate	175	0.45	0.18
Residential Dorm: College Or Residential	Student	75	0.13	0.13
Residential: Boarding House	Bed	75	0.13	0.13
Residential: Apt - Bachelor	Dwelling Unit	80	0.14	0.14
Residential: Apt - 1 Bedroom	Dwelling Unit	120	0.22	0.21
Residential: Apt - 2 Bedroom	Dwelling Unit	160	0.29	0.27
Residential: Apt - 3 Bedroom	Dwelling Unit	200	0.36	0.34
Residential: Apt - >3 Bedroom	Additional Bedroom	40	0.07	0.07
Residential: Condo - 1 Bedroom	Dwelling Unit	120	0.22	0.21
Residential: Condo - 2 Bedroom	Dwelling Unit	160	0.29	0.27
Residential: Condo - 3 Bedroom	Dwelling Unit	200	0.36	0.34

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
Residential: Condo - >3 Bedroom	Additional Bedroom	40	0.07	0.07
Residential: Duplex/Townhouse/SFD - 1 Bedroom	Dwelling Unit	130	0.23	0.22
Residential: Duplex/Townhouse/SFD - 2 Bedroom	Dwelling Unit	180	0.32	0.31
Residential:Duplex/Townhouse/SFD - 3 Bedroom	Dwelling Unit	230	0.41	0.39
Residential:Duplex/Townhouse/SFD - >3 Bedroom	Additional Bedroom	50	0.09	0.09
Residential Room Addition: Bedroom	Bedroom	50	0.09	0.09
Residential Room Conversion: Into A Bedroom	Bedroom	50	0.09	0.09
Residential: Mobile Home	Dwelling Unit	160	0.29	0.27
Residential: Artist (2/3 Area)	Dwelling Unit	250	0.45	0.43
Residential: Artist Residence	Dwelling Unit	80	0.14	0.14
Residential: Guest Home w/ Kitchen	Same as Residential Apt			
Residential: Guest Home w/o Kitchen	Bedroom	50	0.06	0.06
Rest Home	Bed	75	0.16	0.06
Restaurant: Drive-In	Stall	40	0.33	0.20
Restaurant: Drive-In	Seat	20	0.17	0.10
Restaurant: Fast Food - Indoor Seat	Seat	20	0.17	0.10
Restaurant: Fast Food - Outdoor Seat	Seat	12	0.10	0.06
Restaurant: Full Service - Indoor Seat	Seat	30	0.25	0.15
Restaurant: Full Service - Outdoor Seat	Seat	18	0.15	0.09
Restaurant: Take-Out	1000 Sq.Ft.	300	2.50	1.50
Retail Area	1000 Sq.Ft.	80	0.10	0.10
Rifle Range: Shooting Stalls, Shooting Lanes, Lobby Area	1000 Sq.Ft.	80	0.10	0.10
School: Arts/Dancing/Music	1000 Sq.Ft.	80	0.09	0.07
School: Day Care Center	Child	8	0.01	0.01
School: Elementary/Jr. High	Student	8	0.01	0.01
School: High School	Student	12	0.01	0.01
School: Kindergarten	1000 Sq.Ft.	200	0.22	0.17
School: Martial Arts	1000 Sq.Ft.	80	0.09	0.07
School: Nursery-Day Care	Child	8	0.01	0.01

USER CATEGORY	UNIT OF USAGE	FLOW (Gallons per Day)	BOD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
School: Special Class	Student	8	0.01	0.01
School: Trade Or Vocational	Student	12	0.01	0.01
School: Training	Student	12	0.01	0.01
School: University/College	Student	18	0.02	0.02
School: Dormitory	Student	75	0.13	0.13
School: Stadium, Pavilion	Seat	4	0.01	0.01
Storage: Building/Warehouse	1000 Sq.Ft.	20	0.03	0.03
Storage: Self Storage Bldg.	1000 Sq.Ft.	20	0.03	0.03
Store: Ice Cream/Yogurt	1000 Sq.Ft.	80	0.67	0.40
Store: Retail	1000 Sq.Ft.	80	0.10	0.10
Studio: Film/TV - Audience Viewing Room	Seat	4	0.01	0.01
Studio: Film/TV - Regular Use - Indoor Filming Area	1000 Sq.Ft.	80	0.10	0.10
Studio: Film/TV - Industrial Use (Domestic)	1000 Sq.Ft.	80	0.00	0.00
Studio: Recording	1000 Sq.Ft.	80	0.10	0.10
Tanning Salon: Independent, No Shower	1000 Sq.Ft.	80	0.10	0.10
Tanning Salon: Within A Health Spa/Club	1000 Sq.Ft.	800	1.00	1.00
Theater: Drive-In	Vehicle	10	0.01	0.01
Theater: Live/Music/Opera	Seat	4	0.01	0.01
Theater: Cinema	Seat	4	0.01	0.01
Tract: Commercial/Residential	Acre	1	0.00	0.00
Trailer - Const/Field Office	Office	150	0.19	0.19
Veterinary Clinic/Office	1000 Sq.Ft.	280	0.30	0.19
Warehouse	1000 Sq.Ft.	20	0.03	0.03
Waste Dump: Recreational	Station	430	0.54	0.54
Wine Tasting Room: Kitchen	1000 Sq.Ft.	215	0.27	0.27
Wine Tasting Room: All Area	1000 Sq.Ft.	80	0.10	0.10

SECTION 2.0 - CONNECTION FEE RATE

Pursuant to Section 3.02 of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the Connection Fee Rate shall be $1,710.00 per capacity unit.

SECTION 3.0 - COST ALLOCATION FACTORS

Pursuant to Section 3.03(2) of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the proportions of the capital improvement component of the connection fee rate which are attributable to flow, BOD, and Suspended Solids, designated as X, Y, and Z, respectively, shall be:

$X = 0.6567$ $Y = 0.1992$ $Z = 0.1441$

SECTION 4.0 - BASIC RESIDENTIAL UNIT

Pursuant to Section 3.03(2) of the *Master Connection Fee Ordinance for County Sanitation District No. 4 of Los Angeles County*, the loadings from a basic residential unit shall be:

$Flow_{bru}$ = 260 gallons per day of Wastewater flow
BOD_{bru} = 0.466 pounds per day of BOD
SS_{bru} = 0.445 pounds per day of Suspended Solids.

SECTION 5.0 - EFFECTIVE DATE

This Ordinance shall become effective on July 1, 1999.

Chairperson, Board of Directors
County Sanitation District No. 4
of Los Angeles County

ATTEST:

Clerk, Board of Directors
County Sanitation District No. 4
of Los Angeles County

APPENDIX G

Proposed Sewer Flow Analysis

Post-Development Average % Full

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.60000	%
Diameter	8.00	in
Discharge	0.81	ft³/s

Results

Normal Depth	2.80	in
Flow Area	0.11	ft²
Wetted Perimeter	0.84	ft
Hydraulic Radius	1.55	in
Top Width	0.64	ft
Critical Depth	0.43	ft
Percent Full	35.0	%
Critical Slope	0.00826	ft/ft
Velocity	7.48	ft/s
Velocity Head	0.87	ft
Specific Energy	1.10	ft
Froude Number	3.19	
Maximum Discharge	3.34	ft³/s
Discharge Full	3.10	ft³/s
Slope Full	0.00454	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	34.97	%
Downstream Velocity	Infinity	ft/s

Post-Development Average % Full

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	2.80	in
Critical Depth	0.43	ft
Channel Slope	6.60000	%
Critical Slope	0.00826	ft/ft

Post-Development Peak % Full

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	6.60000	%
Diameter	8.00	in
Discharge	1.39	ft³/s

Results

Normal Depth	3.76	in
Flow Area	0.16	ft²
Wetted Perimeter	1.01	ft
Hydraulic Radius	1.92	in
Top Width	0.67	ft
Critical Depth	0.56	ft
Percent Full	47.0	%
Critical Slope	0.01293	ft/ft
Velocity	8.65	ft/s
Velocity Head	1.16	ft
Specific Energy	1.48	ft
Froude Number	3.10	
Maximum Discharge	3.34	ft³/s
Discharge Full	3.10	ft³/s
Slope Full	0.01331	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	46.98	%
Downstream Velocity	Infinity	ft/s

Post-Development Peak % Full

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	3.76	in
Critical Depth	0.56	ft
Channel Slope	6.60000	%
Critical Slope	0.01293	ft/ft