

# **SEWER AREA STUDY**

**VTTM No. 83705**

**C.I. 1228, PC 2930, PC 1309, PC 8922**

**SMD Index E-2018, E-2019**

**Prepared for:**

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**Property:**

**VTTM No. 83705**

**APNs 5389-009-029, 5389-009-030, 5389-009-031**

**8601 Mission Drive**

**City of Rosemead, CA 91770**

**Prepared by:**

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**Dane P. McDougall      R.C.E. 80705**

**February 2022**

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## **INTRODUCTION**

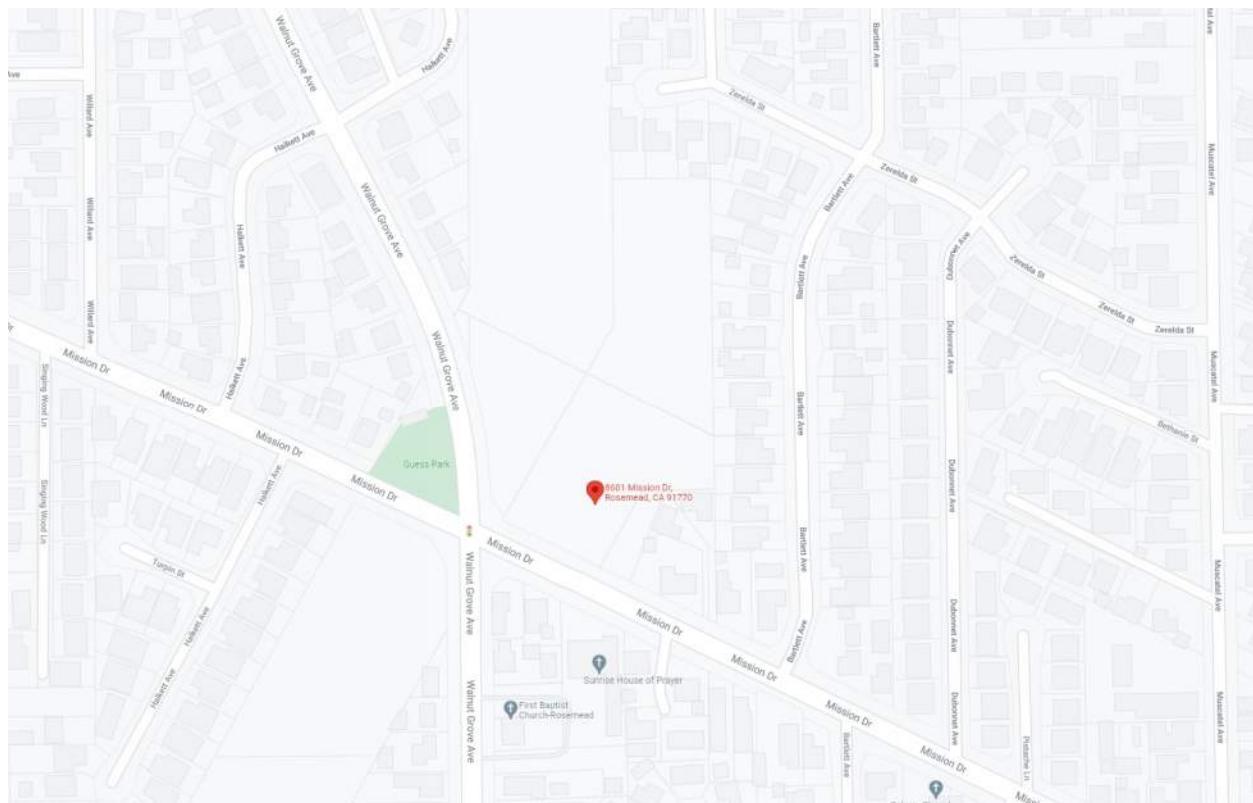
The following Area Study has been prepared by C&V Consulting, Inc. to determine and show:

- A.** The capacity of the existing sewer segments from proposed development site to the Los Angeles County Sanitation District (LACSD) maintained trunk sewers.
- B.** The existing sewer facility will adequately service the proposed development.

This analysis will include any and all tributary flow to the sewer system from the proposed development to the LACSD trunk line downstream of the proposed development. All tributary area within this area study has been developed.

## **SITE DESCRIPTION**

The project is located at 8601 Mission Drive, in the City of Rosemead, California. The site is bounded by single family houses to the north, Mission Drive to the south, undeveloped land and a planting nursery to the west, and more single-family homes to the east. The project site is currently vacant with no visible traces of impervious coverage. Thus, pervious coverage is assumed to be 100% for the existing condition of the site.



## **PROJECT DESCRIPTION**

The proposed development encompasses 3 parcels as shown on the Assessor's Parcel Map at approximately 3.435 acres. The project proposes the construction of thirty-seven (37) dwelling units, (29 single family homes and 4 duplexes) with private garages, private drive aisles, hardscape, associated landscaping, and guest parking areas. The private drive aisle provides access to the residences via one driveway entrance/exit along Mission Drive. Drive aisles and parking areas will be composed of asphalt concrete pavement, and landscaping will be incorporated in open space areas. The proposed sewer system will be gravity fed and flow will be towards a local sewer line located along Mission Drive, which conveys and connects to the Los Angeles County Sanitation District No. 15 18" sewer trunk.

AP Number	Size (ac)
5389-009-029	0.17
5389-009-030	1.48
5389-009-031	1.73

## **METHODOLOGY**

This study will investigate the sewerage discharge route along Mission Drive from the proposed development (VTTM No. 83705) to the Los Angeles Sanitation District No. 15 existing 18" sewer trunk located on Mission Drive near Ivar Avenue. The subject route of the sewer main will be analyzed by segments based on sewer pipe size, slope, and tributary area.

Reach #1A segment is along Mission Drive, from the connection of the project site Manhole 396 to Manhole 397 and consisting of an existing 8" VCP sewer main with a slope of 0.40%. This segment includes the project site (Area #1A) and the upstream tributary Area #1.

Reach #1B segment is along Mission Drive, from Manhole 397 to Manhole 398 and consisting of an existing 8" VCP sewer main with a slope of 0.76%. This segment includes the upstream tributary areas of Reach #1A.

Reach #2A segment is along Mission Drive, from the connection of the project site Manhole 398 to Manhole 551 and consisting of an existing 8" VCP sewer main with a slope of 0.76%. This segment includes the upstream tributary Area #2 and the upstream tributary areas of Reach #1B.

Reach #3A segment is along Mission Drive, from the connection of the project site Manhole 551 to Manhole 508 and consisting of an existing 8" VCP sewer main with a slope of 0.76%. This segment includes the upstream tributary Area #3 and the upstream tributary areas of Reach #2A.

Reach #4A segment is along Mission Drive, from the connection of the project site Manhole 508 to Manhole 515 and consisting of an existing 8" VCP sewer main with a slope of 0.76%. This segment includes the upstream tributary Area #4 and the upstream tributary areas of Reach #3A.

Reach #4B segment is along Mission Drive, from the connection of the project site Manhole 515 to Manhole 543 and consisting of an existing 8" VCP sewer main with a slope of 1.00%. This segment includes the upstream tributary areas of Reach #4A.

Reach #5A segment is along Mission Drive, from the connection of the project site Manhole 543 to Manhole 540 and consisting of an existing 8" VCP sewer main with a slope of 0.64%. This segment includes the upstream tributary Area #5 and the upstream tributary areas of Reach #3A.

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Reach #5B segment is along Mission Drive, from the connection of the project site Manhole 540 to Manhole # connecting to the Los Angeles Sanitation District No. 15 existing 18" sewer trunk and consisting of an existing 8" VCP sewer main with a slope of 14.76%. This segment includes the upstream tributary areas of Reach #5A.

## **SEWER PIPE CAPACITY ANALYSIS**

The existing sewer pipes were analyzed per County Standard S-C4 for a maximum design depth at half full for pipes less than 15" and three fourths full for pipes 15" and greater. The design depth for the existing pipe was obtained by using the Manning's Equation with "n=0.013".

To calculate the pipe capacity, Kutter's formula was utilized as shown below:

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)

R = Hydraulic Radius (ft)

S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

Detailed results for each segment have been tabulated in Appendix B. Details of calculations for each reach of pipe has been included in Appendix B following the table. Data were obtained from corresponding Sewer As-Built plans atlas map in Appendix C for the analysis.

The tributary sewer flow rate (Q) for the studied sewer lines are analyzed based on County standards as follows:

For Tributary Areas:

$$Q = Z * A$$

A = Tributary Area (Acre)

Z = Zoning Coefficients (Refer to the LACDPW guideline information within Appendix E)

For the Project Site

$$Q = (0.001 \text{ cfs/unit}) \times (37 \text{ units}) = 0.037 \text{ cfs}$$

(0.001 cfs/unit for proposed condominiums per County standard zoning coefficient within Appendix E)

The tributary areas were calculated by reference scaling the County of Los Angeles Sewer Maintenance Division's Atlas Index Maps and referencing County of Los Angeles Assessor's map. The zoning coefficients were referencing the LACDPW guidelines and the Zoning Map provided by the City of Rosemead in Appendix G. City of Rosemead's classification of Single Family Residential matches the density description

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of Los Angeles County Zone R-1, so the zoning coefficient of R-1 is used for Rosemead's zoning area of Single Family Residential. Medium-Density Residential applies to the County R-3 coefficient value.

Churches were taken into consideration of separate calculation. Per County requirements, sewage flow from churches were calculated based on square footage (refer to Exhibit E).

Formula: (Area in square feet/1000ft<sup>2</sup>) \* (50 gallons per day) \* (0.0000015 cfs per 1 gallon a day)

For the Project Site (Proposed: 37 Units)

$Q = 0.001 \text{ cfs} / \text{Dwelling Unit} = 0.037 \text{ cfs}$  (worst case density)

(Refer to the LACDPW guideline information within Appendix E)

City of Rosemead's classification of Light Industrial will utilize LA County's M-1 industrial coefficient.

## **CONCLUSION**

The existing sewer system being analyzed in this area study has a design capacity above the calculated cumulative flow. The peak discharge at the downstream end of the sewer system 8" pipe entering the County Sanitation District No. 15 existing 18.3" sewer trunk main is calculated to be a rate of 0.3514 cfs with a flow depth of 1.63 inches. Reach #5A has the highest flow depth and cumulative flow percentages of 88% and 79% respectively. Refer to Appendix B for calculations and tabulated results. Therefore, we conclude that the existing sewer system has adequate capacity for the proposed development.

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## **Appendix A**

### **SEWER AREA STUDY EXHIBIT**



PREPARED BY:



TR 83705  
8601 MISSION DRIVE, ROSEMEAD

**SEWER AREA STUDY EXHIBIT**

SCALE: 1"=200' DATE: 02/2022 DRAWN BY: ES SHEET 1 OF 1 SHEETS

## **Appendix B**

# **SEWER AREA STUDY TABLE & DEPTH OF FLOW CALCULATIONS**

**Sewer Area Study Table**

**TR 83705  
8601 Mission Drive**

\* Calculated using the Kutter's Formula with n=0.013 and assuming 1/2 full for pipe (<15") and 3/4 full for pipe (>15")  
 \*\* Based on current land use and coefficients per LA County. (Attach supporting calculations)  
 \*\*\*Flow depth and Cumulative flow capacity is based on the assumption of 1/2 full for pipe (<15") and 3/4 full for pipe (>15")  
 \*\*\*\*Calculations for pipe flow, and flow depth shown on following sheets

LASD = Los Angeles Sanitation District  
 POC = Point of Connection

Street Name	Segment		Pipe		*Capacity (cfs)		Tributary Area #	Tributary Area (Acres)	Zone	Zoning Coefficient	Calculated Flow (cfs)	**Cumulative Calculated Flow (cfs)	****Cumulative Depth (in)	As-Built Construction Plan #	Comments	***Percentage Full / Capacity	
	MH #	MH #	Size (in.)	Slope (%)	1/2 Full (<15")	3/4 Full (>15")										Flow Depth	Cumulative Flow
<b>Reach #1 Upstream Tributary Area Mission Drive</b>	396	PROP MH	8	0.40	0.349		1	10.36	Single-Family Residence (R-1)	0.004	0.0414						
							1	7.53	Open Space/Park/Agriculture	0.001	0.0075						
							1	1.25	Light Industrial	0.021	0.0263	<b>0.0752</b>	1.86	C.I. 1226	Rosemead	46%	22%
<b>Reach #1A Mission Drive</b>	PROP MH	397	8	0.40	0.349		1A	3.435	Single Family Residence Proposed 37 Units x 0.001		0.0370						
								0.60	Church (26,225 ft^2 / 1000ft^2) * 50 gal/day * 0.0000015cfs)		0.0020						
								0.63	Single-Family Residence (R-1)	0.004	0.0025	<b>0.1167</b>	2.28	C.I. 1226	<b>Project Site</b> Rosemead 37 Units	57%	33%
<b>Reach #1B Mission Drive</b>	397	398	8	0.76	0.472		1	0.32	Single-Family Residence (R-1)	0.004	0.0013	<b>0.1180</b>	1.97	C.I. 1226	Rosemead	49%	25%
<b>Reach #2A Mission Drive</b>	398	551	8	0.76	0.482		2	14.79	Single-Family Residence (R-1)	0.004	0.0592						
								0.22	Church (9,580 ft^2 / 1000ft^2) * 50 gal/day * 0.0000015cfs)		0.0007	<b>0.1779</b>	2.39	C.I. 1226	Rosemead	60%	37%
<b>Reach #3A Mission Drive</b>	551	508	8	0.76	0.482		3	3.06	Single-Family Residence (R-1)	0.004	0.0122	<b>0.1901</b>	2.47	C.I. 1226	Rosemead	62%	39%
<b>Reach #4A Mission Drive</b>	508	515	8	0.76	0.482		4	3.55	Single-Family Residence (R-1)	0.004	0.0142	<b>0.2043</b>	2.56	C.I. 1226	Rosemead	64%	42%
<b>Reach #4B Mission Drive</b>	515	543	8	1.00	0.553		4	1.11	Single-Family Residence (R-1)	0.004	0.0044	<b>0.2087</b>	2.42	C.I. 1226	Rosemead	60%	38%
<b>Reach #5A Mission Drive</b>	543	540	8	0.64	0.442		5	19.31	Single-Family Residence (R-1)	0.004	0.0772						
								3.62	Medium Multiple Residential (R-3)	0.012	0.0434						
								1.36	Neighborhood Commercial	0.015	0.0204	<b>0.3498</b>	3.52	C.I. 1226	Rosemead	88%	79%
<b>Reach #5B Mission Drive</b>	540	LASD POC	8	14.76	2.129		5	0.07	Single-Family Residence (R-1)	0.004	0.0003						
								0.09	Neighborhood Commercial	0.015	0.0014	<b>0.3514</b>	1.63	C.I. 1226	Rosemead	41%	17%

8601 Mission Drive  
Rosemead, CA 91770

### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$c = \frac{41.685 + \frac{0.00281}{s} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{s})n}{\sqrt{R}}}$$

#### Reach 1 Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.004	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.349	cfs

#### Reach 1 Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.15	ft
Depth of Flow	1.86	in
Slope, S	0.004	ft/ft
Manning's n	0.013	(unitless)
Central Angle	4.273	radians
Flow Area, A	0.061	sf
Wetted Perimeter	0.670	ft
Hydraulic Radius, R	0.092	ft
Cumulative Flow, Q	0.076	cfs

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## Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$c = \frac{\frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}}$$

### Reach 1A Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.004	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.349	cfs

### Reach 1A Cumulative Depth of Flow

#### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.19	ft
Depth of Flow	2.28	in
Slope, S	0.004	ft/ft
Manning's n	0.013	(unitless)
Central Angle	4.031	radians
Flow Area, A	0.082	sf
Wetted Perimeter	0.751	ft
Hydraulic Radius, R	0.109	ft
Cumulative Flow, Q	0.117	cfs

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### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

#### Reach 1B Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.0076	ft/ft
Manning's Coefficient, n	0.0132	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.472	cfs

#### Reach 1B Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.16	ft
Depth of Flow	1.97	in
Slope, S	0.0076	ft/ft
Manning's n	0.013	(unitless)
Central Angle	4.207	radians
Flow Area, A	0.067	sf
Wetted Perimeter	0.692	ft
Hydraulic Radius, R	0.096	ft
Cumulative Flow, Q	0.119	cfs

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Rosemead, CA 91770

### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

#### Reach 2A Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.0076	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.482	cfs

#### Reach 2A Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.20	ft
Depth of Flow	2.39	in
Slope, S	0.0076	ft/ft
Manning's n	0.013	(unitless)
Central Angle	3.970	radians
Flow Area, A	0.088	sf
Wetted Perimeter	0.771	ft
Hydraulic Radius, R	0.114	ft
Cumulative Flow, Q	0.178	cfs

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### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

#### Reach 3A Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.0076	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.482	cfs

#### Reach 3A Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.21	ft
Depth of Flow	2.47	in
Slope, S	0.0076	ft/ft
Manning's n	0.013	(unitless)
Central Angle	3.927	radians
Flow Area, A	0.092	sf
Wetted Perimeter	0.785	ft
Hydraulic Radius, R	0.117	ft
Cumulative Flow, Q	0.190	cfs

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### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

#### Reach 4A Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.0076	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.482	cfs

#### Reach 4A Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.21	ft
Depth of Flow	2.56	in
Slope, S	0.0076	ft/ft
Manning's n	0.013	(unitless)
Central Angle	3.880	radians
Flow Area, A	0.096	sf
Wetted Perimeter	0.801	ft
Hydraulic Radius, R	0.120	ft
Cumulative Flow, Q	0.204	cfs

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### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

#### Reach 4B Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.0100	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.553	cfs

#### Reach 4B Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.20	ft
Depth of Flow	2.42	in
Slope, S	0.0100	ft/ft
Manning's n	0.013	(unitless)
Central Angle	3.956	radians
Flow Area, A	0.089	sf
Wetted Perimeter	0.776	ft
Hydraulic Radius, R	0.115	ft
Cumulative Flow, Q	0.209	cfs

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### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

#### Reach 5A Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.0064	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	0.442	cfs

#### Reach 5A Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.29	ft
Depth of Flow	3.52	in
Slope, S	0.0064	ft/ft
Manning's n	0.013	(unitless)
Central Angle	3.382	radians
Flow Area, A	0.148	sf
Wetted Perimeter	0.967	ft
Hydraulic Radius, R	0.153	ft
Cumulative Flow, Q	0.350	cfs

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### Kutter's Formula

$$Q = Ac\sqrt{RS}$$

Where A = Flow area (sf)  
R = Hydraulic Radius (ft)  
S = Pipe slope (ft/ft)

$$C = \frac{41.685 + \frac{0.00281}{S} + \frac{1.811}{n}}{1 + \frac{(41.65 + \frac{0.00281}{S})n}{\sqrt{R}}}$$

#### Reach 5B Pipe Capacity

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow (50% full)	0.333	ft
Slope	0.1476	ft/ft
Manning's Coefficient, n	0.013	(unitless)
Central Angle	3.142	radians
Flow Area	0.175	sf
Wetted Perimeter	1.047	ft
Hydraulic Radius	0.167	ft
Pipe Capacity	2.129	cfs

#### Reach 5B Cumulative Depth of Flow

##### "What-If Analysis"

Pipe Diameter	8	in
Pipe Diameter	0.667	ft
Depth of Flow	0.14	ft
Depth of Flow	1.63	in
Slope, S	0.1476	ft/ft
Manning's n	0.013	(unitless)
Central Angle	4.408	radians
Flow Area, A	0.051	sf
Wetted Perimeter	0.625	ft
Hydraulic Radius, R	0.082	ft
Cumulative Flow, Q	0.352	cfs

Sewer Area Study

Rosemead, VTTM No. 83705

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## **Appendix C**

# **SEWER AS-BUILTS, SEWER MAINTENANCE DIVISION MAPS, & SEWER ATLAS MAPS**

C.I. 1226

4-B

## CITY OF ROSEMEAD

Pacific Tel. & Tel. Installation  
under P.C. 4402

BM WM-92, Elev. - 355.783, F.B. 1247, pg 68  
Mission Dr. (S.side) 160' E. of Walnut Grove Ave.  
Bl. spk. in N. end conc. drive to ho. # 1208

B

10.189

2012420

Grade of North &amp; South Curbs

355

Elev. 231.6500

M.H.

TEL. M.T.D.

9 M.T.D.

350

345

Elev. 231.6500

M.H.

8" V.C.P. E. 37.10' S 14' EL. 213.15.00  
0.40%  
E. 85.11.10' S 14' EL. 212.22.00

24

23

336.30

21

20

EDISON CO. R/W

10'

10'

10'

10'

10'

10'

10'

10'

10'

10'

10'

10'

ROSEMEAD

M.B. 12-194, 1950

SITE

22028-S

23-59.0K

23+0.0

22+68.0

22+27.0

21+97.5

21+86.23

190

60

10

10

10

10

10

10

10

10

10

10

40918-S

22028-S

23-59.0K

23+0.0

22+68.0

22+27.0

21+97.5

21+86.23

190

60

10

10

10

10

10

10

10

10

10

10

4119

8637

4120

8639

20+64.5

20+26.0

21+26.0

20+24.5

21+24.5

20+24.5

21+24.5

20+24.5

21+24.5

20+24.5

21+24.5

20+24.5

21+24.5

20+24.5

21+24.5

20+24.5

169.87

229.87

169.87

229.87

169.87

229.87

169.87

229.87

169.87

229.87

169.87

229.87

169.87

229.87

169.87

229.87

169.87

229.87

169.87

229.87

DR

6"

H

6"

161.1

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

20+56.5

21+16.5

No. 3895  
M.B. 39.54-55

126804

8618

2

21+29.5

20+56.5

21+16.5

20+56.5

21+16.5

Encase 4' of 6" V.C.P. Under  
TEL. Conduit per 8-a-119

33.5

13.5

13.5

13.5

13.5

13.5

13.5

13.5

33.5

13.5

13.5

13.5

13.5

13.5

13.5

13.5

13.5

Proposed Widening Line  
Ord. No. 2326

SOU. CALIF. GAS CO.

Proposed Widening  
Line Ord. No. 2326

TRACT

CALIF. WATER &amp; TEL. CO.

10.189

F.B. 1415, Pg. 12

Upper curv. m-will serve  
and 53' net cut off West End of Lot 12.

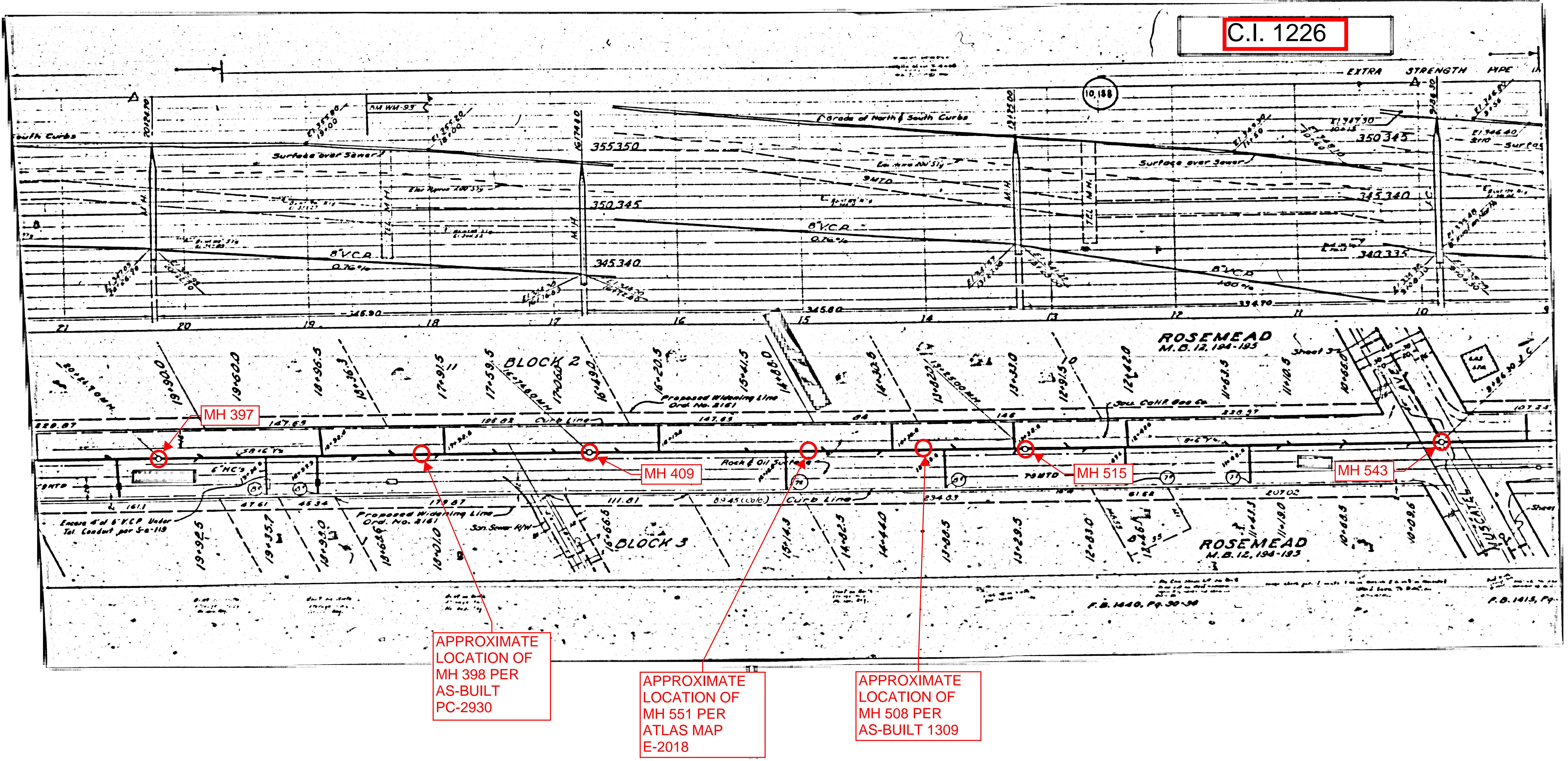
in Spec. reg.

H. C'S. 6 FT. DEEP

EXCEPT AS NOTED

2018

C.I. 1226



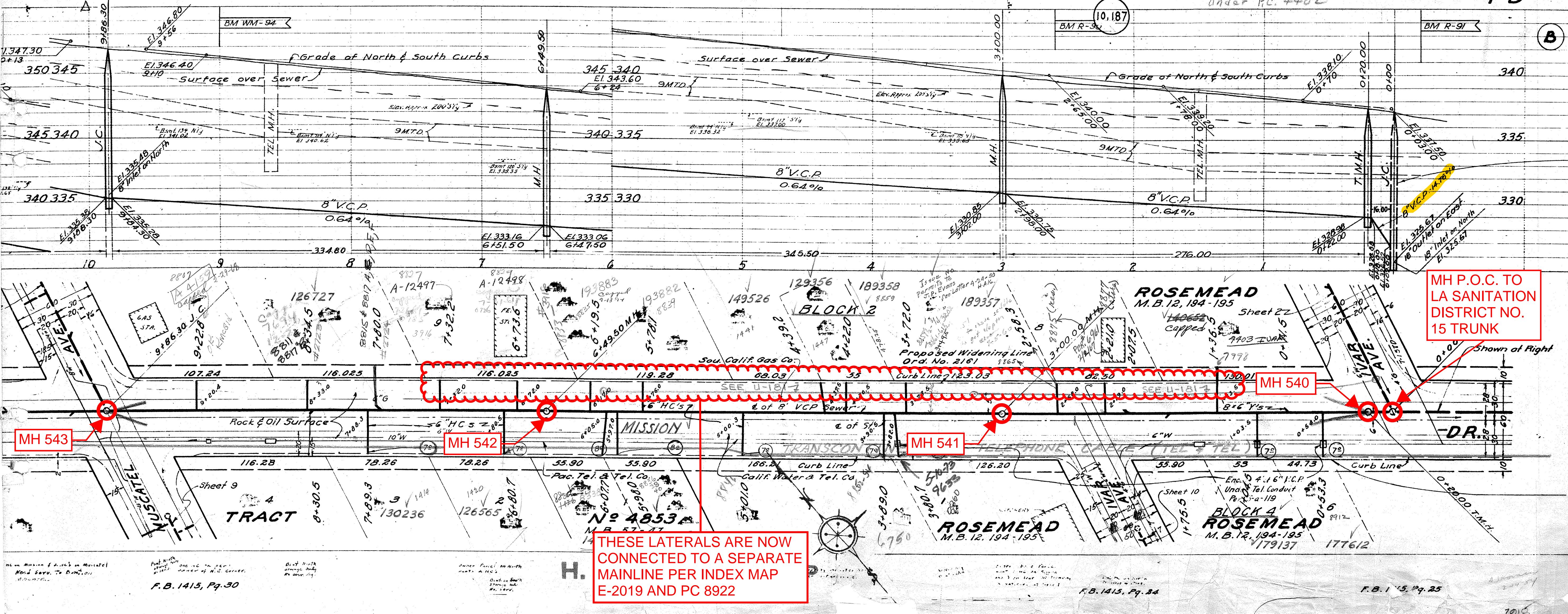
# OF ROSEMEAD

C.I. 1226.

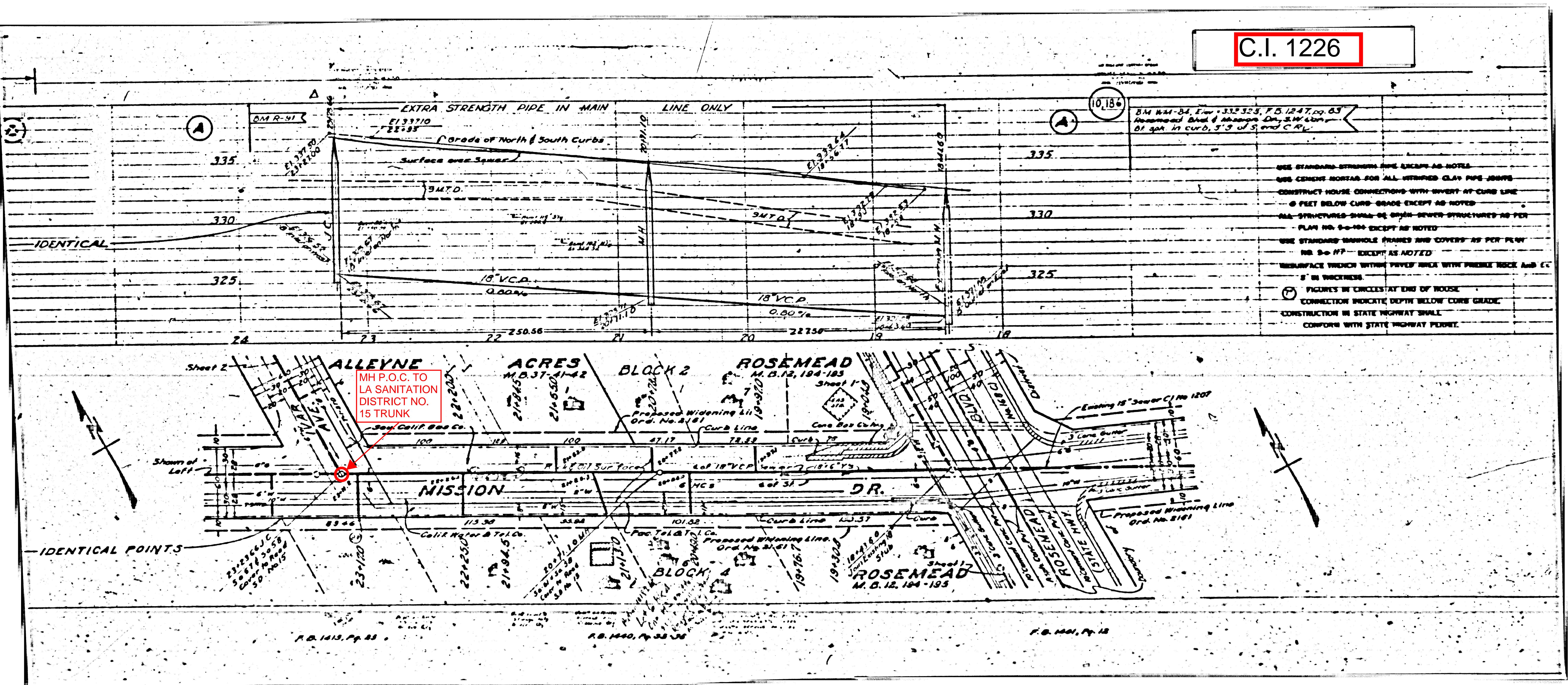
*A-B*

fire Tel. & Tel. Installation  
under P.C. 4402

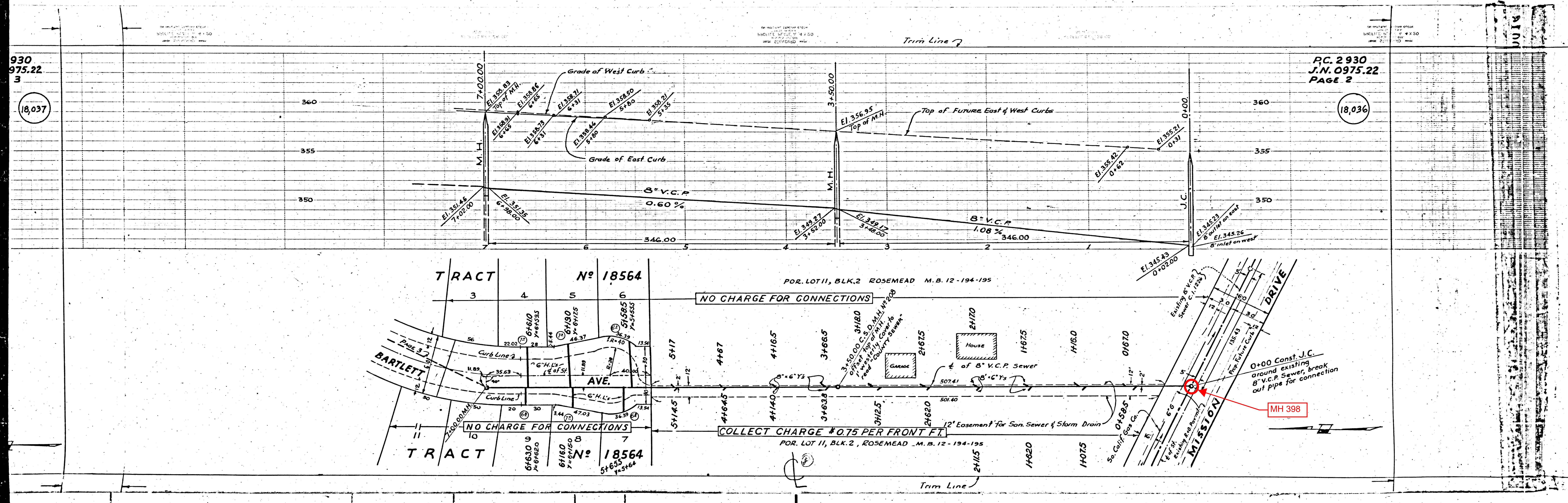
**EXTRA STRENGTH PIPE IN MAIN LINE AND HOUSE CONNECTIONS**



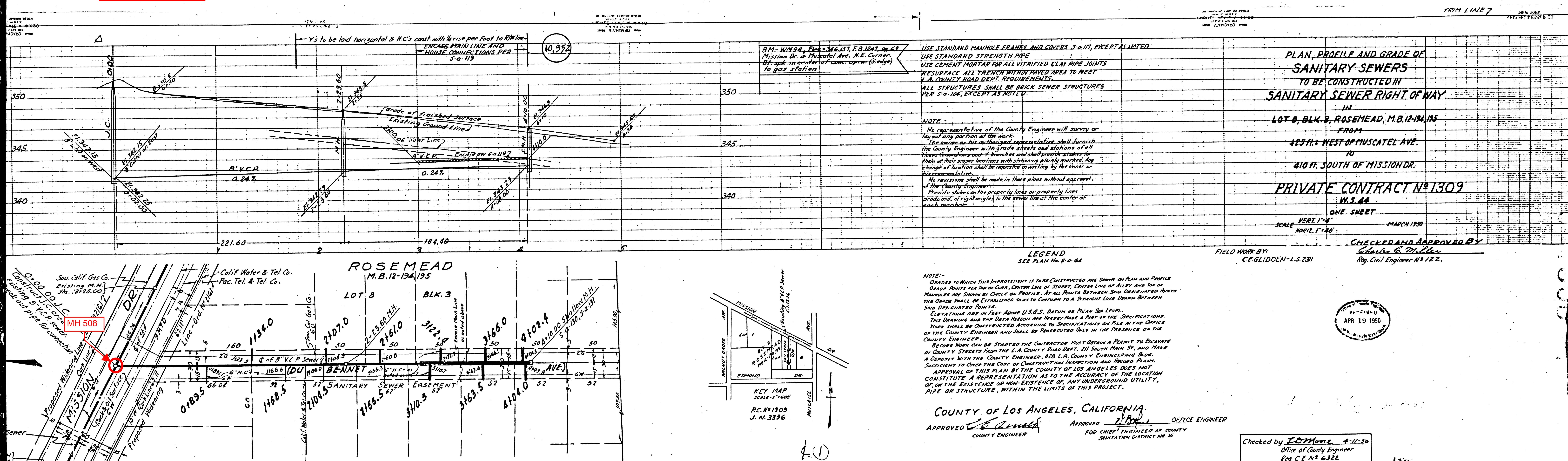
C.I. 1226



C.I. 2930



**PC 1309**









Sewer Area Study

Rosemead, VTTM No. 83705

---

## **Appendix D**

# **VESTING TENTATIVE TRACT MAP (PROJECT SITE)**

**LEGAL DESCRIPTION:**  
THE LAND REFERRED TO IS SITUATED IN THE COUNTY OF LOS ANGELES, CITY OF ROSEMEAD, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

**PARCEL 1:**  
THAT PORTION OF LOT 12 IN BLOCK 2 OF ROSEMEAD, IN THE CITY OF ROSEMEAD, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 12 PAGE 194 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT POINT IN THE SOUTHWESTERLY LINE OF SAID LOT, DISTANT THEREON NORTH 64° 21' 00" WEST 229.87 FEET FROM THE SOUTHEAST CORNER OF SAID LOT; THENCE NORTH 28° 53' 15" EAST 162.14 FEET; THENCE NORTH 89° 02' 15" EAST, 124.80 FEET TO A POINT IN THE EASTERLY LINE OF SAID LOT; THENCE ALONG SAID EASTERLY LINE, NORTH 00° 57' 45" WEST 457.92 FEET, MORE OR LESS, TO THE MOST SOUTHERLY CORNER OF THE LAND DESCRIBED IN DEED TO THEODORE SWAN, RECORDED IN BOOK 14446, PAGE 314, OFFICIAL RECORDS OF SAID COUNTY; THENCE ALONG THE SOUTHWESTERLY LINE OF THE LAND DESCRIBED IN SAID DEED, NORTH 64° 21' 00" WEST 194.56 FEET TO A POINT IN THE EASTERLY LINE OF THE SOUTHERN CALIFORNIA EDISON COMPANY'S RIGHT OF WAY, SHOWN AS PARCEL NO. 19 ON LICENSED SURVEYOR'S MAP FILED IN BOOK 30 PAGE 4, RECORD OF SURVEYS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY; THENCE ALONG SAID EASTERLY LINE, SOUTH 00° 22' 01" EAST 254.20 FEET TO AN ANGLE POINT IN SAID EASTERLY LINE OF SAID PARCEL NO. 19; THENCE CONTINUING ALONG SAID EASTERLY LINE AND THE PROLATION THEREOF SOUTH 28° 53' 15" WEST, 399.39 FEET TO A POINT IN THE SOUTHWESTERLY LINE OF SAID LOT 12; THENCE ALONG SAID SOUTHWESTERLY LINE SOUTH 64° 21' 00" EAST 190.00 FEET TO THE POINT OF BEGINNING.

APN's: 5389-009-030 AND A PORTION OF 5389-009-031

**PARCEL 2:**  
THAT PORTION OF LOT 12 IN BLOCK 2 OF ROSEMEAD, IN THE CITY OF ROSEMEAD, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 12 PAGE 194 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE EASTERLY LINE OF SAID LOT 12, DISTANT THEREON SOUTH 0° 35' 49" EAST 254.68 FEET FROM THE NORTHEAST CORNER OF SAID LOT 12; THENCE NORTH 64° 04' 21" WEST, PARALLEL WITH THE NORTHERLY LINE OF SAID LOT, A DISTANCE OF 194.56 FEET, MORE OR LESS, TO THE INTERSECTION WITH THE EASTERLY LINE OF THE RIGHT OF WAY OF THE SOUTHERN CALIFORNIA EDISON COMPANY AS SHOWN ON MAP OF RECORDS OF SURVEY FILED IN BOOK 30 PAGES 1 TO 7, INCLUSIVE OF RECORDS OF SURVEYS, RECORDS OF SAID COUNTY; THENCE NORTH 89° 55' 39" EAST 173.95 FEET TO A POINT IN THE EASTERLY LINE OF SAID LOT DISTANT THEREON NORTH 0° 35' 49" EAST 85.23 FEET FROM THE POINT OF BEGINNING; THENCE SOUTH 0° 35' 49" WEST 85.23 FEET TO THE POINT OF BEGINNING.

APN: 5389-009-031 (REMAINDER OF)

**PARCEL 3:**  
THAT PORTION OF PARCEL 2, IN THE CITY OF ROSEMEAD, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN ON THE RECORD OF SURVEY MAP FILED IN BOOK 52 PAGE 27 OF RECORD OF SURVEYS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHWEST LINE OF SAID PARCEL WHICH IS DISTANT NORTH 64° 21' 00" WEST 169.87 FEET FROM THE SOUTHEAST CORNER OF SAID PARCEL; THENCE CONTINUING ALONG SAID SOUTHWEST LINE NORTH 64° 21' 00" WEST 60.00 FEET TO THE SOUTHWESTERLY CORNER OF SAID PARCEL 2; THENCE ALONG THE WESTERLY LINE OF SAID PARCEL NORTH 28° 53' 15" EAST 162.14 FEET TO THE NORTHWESTERLY CORNER OF SAID PARCEL 2; THENCE ALONG THE NORTHERLY LINE OF SAID PARCEL NORTH 89° 02' 15" EAST 38.00 FEET TO A POINT IN THE SAID NORTHERLY LINE WHICH IS SOUTH 89° 02' 15" WEST 86.80 FEET FROM THE NORTHEAST CORNER OF SAID PARCEL; THENCE SOUTHWESTERLY IN A DIRECT LINE TO THE POINT OF BEGINNING.

APN: 5389-009-029

**SITE ADDRESS:**  
8601 MISSION DRIVE, ROSEMEAD, CA 91770

**VESTED OWNER:**  
CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST LATTER DAY SAINTS, A UTAH CORPORATION SOLE, AS TO PARCEL 1;

CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, A UTAH CORPORATION SOLE, AS TO PARCEL 2; AND

CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, AS TO PARCEL 3.

#### BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING NORTH 84°33'56" WEST BETWEEN CALIFORNIA SPATIAL REFERENCE CENTER, CSRS, CONTINUOUSLY OPERATING REFERENCE STATIONS, CORS, "WNRA" AND "GVR".

#### DATUM STATEMENT:

ALL COORDINATES SHOWN HEREON ARE GRID VALUES BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE V, NORTH AMERICAN DATUM OF 1983, 2010 EPOCH, IN ACCORDANCE WITH THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819. ALL DISTANCES SHOWN HEREON ARE GROUND VALUES UNLESS OTHERWISE NOTED. A GENERALIZED COMBINATION SCALE FACTOR OF 0.999977 WAS USED FOR THIS PROJECT AT NORTHING 1854566.862, EASTING 6537139.963 TO OBTAIN GRID DISTANCES, MULTIPLY GROUND DISTANCES BY THE COMBINATION SCALE FACTOR.

#### BENCHMARK STATEMENT:

LA COUNTY PUBLIC WORKS BENCHMARK NO. 1C4146  
ELEV: 356.863 (NAVD88)  
DESCRIBED AS: CSBM MON IN WELL 21FT W/O BCR @ NW COR MISSION DR & BARTLETT AVE MKD (19-2A 1971 RE 7078)

#### FLOOD NOTE:

THE SUBJECT PROPERTY FALLS WITHIN "ZONE X - AREA OF MINIMAL FLOOD HAZARD" PER FEMA MAP NO. 06037C1675F, NOT PRINTED, EFFECTIVE SEPTEMBER 26, 2008.

#### LAND USE SUMMARY:

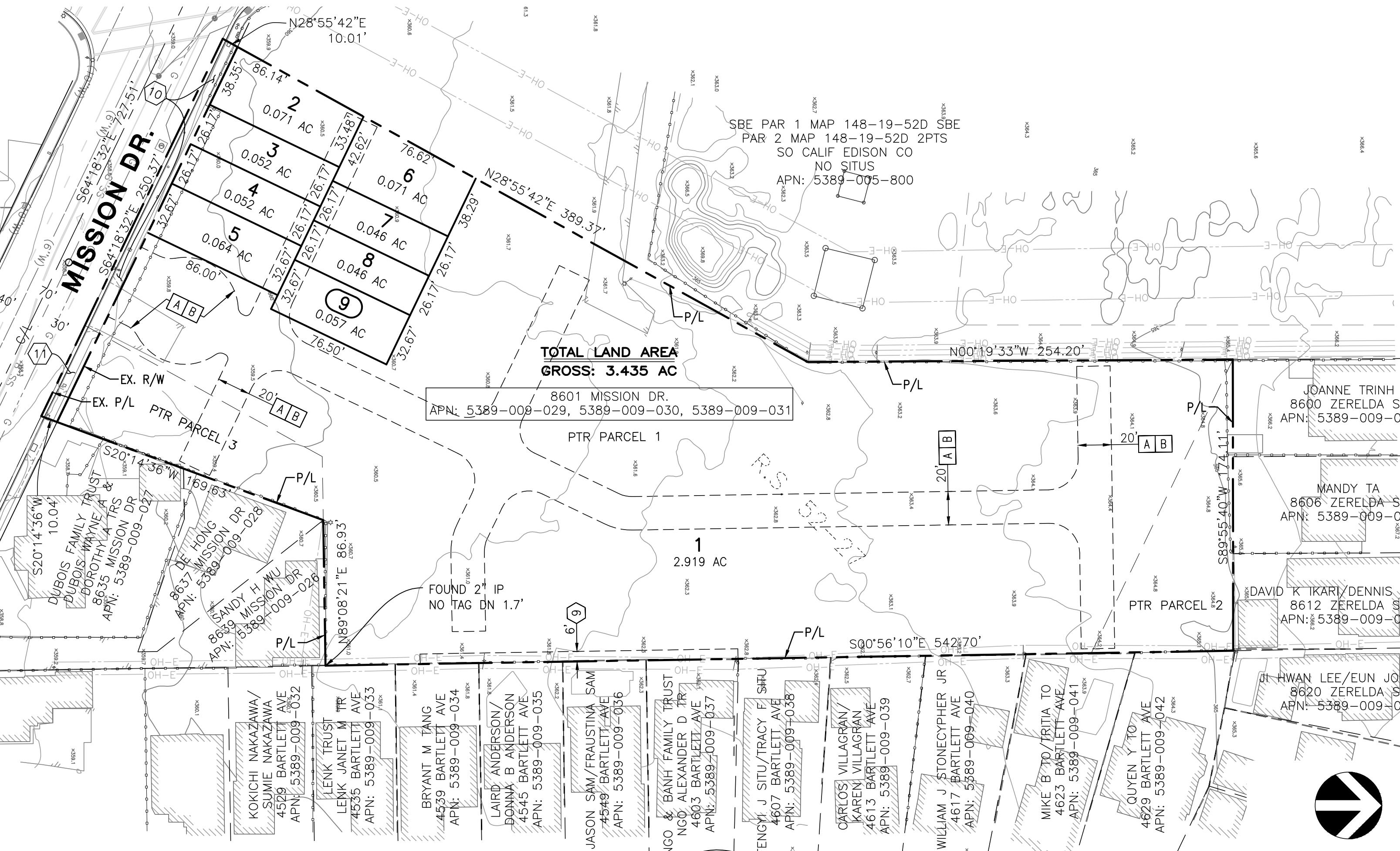
GROSS AREA: 3,435 AC  
NET AREA: 3,378 AC  
TOTAL PROPOSED RESIDENTIAL LOTS: 9  
TOTAL PROPOSED DWELLING UNITS: 37 CONDOS

NUMBERED LOT SUMMARY	
LOT	AREA
1	127,151 S.F.
2	3,089 S.F.
3	2,250 S.F.
4	2,250 S.F.
5	2,809 S.F.
6	3,095 S.F.
7	2,002 S.F.
8	2,002 S.F.
9	2,499 S.F.

# VESTING TENTATIVE TRACT MAP NO. 83705

## FOR CONDOMINIUM PURPOSES

### IN THE CITY OF ROSEMEAD, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA



#### EXISTING EASEMENTS:

THE FOLLOWING TITLE INFORMATION WAS DERIVED FROM A PRELIMINARY TITLE REPORT ISSUED BY OLD REPUBLIC TITLE COMPANY, ORDER NO.: 2607186878A-19 DATED SEPTEMBER 22, 2021.

- ① DENOTES PLOTTED ITEM
- 5 ALL WATER DEVELOPED THEREON IN EXCESS OF THAT WHICH CAN BE REASONABLY USED FOR IRRIGATION AND DOMESTIC USE THEREON, AS RESERVED IN DEED FROM SAN MARINO LAND COMPANY, RECORDED IN BOOK 4179, PAGE 217 OF DEEDS.
- 6 AN EASEMENT FOR WATER MAINS AND CONNECTIONS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 4179 OF DEEDS, PAGE 217. IN FAVOR OF: SAN MARINO LAND COMPANY. EASEMENT LOCATION IS INDETERMINATE FROM RECORD.
- 8 AN EASEMENT FOR LAYING OF AND MAINTENANCE OF WATER PIPE AND INCIDENTAL PURPOSES, RECORDED NOVEMBER 05, 1936 AS BOOK 14446, PAGE 314 OF OFFICIAL RECORDS. IN FAVOR OF: ELLINOR M. TIMM. EASEMENT LOCATION IS INDETERMINATE FROM RECORD.
- 9 AN EASEMENT FOR AN ELECTRIC LINE, CONSISTING OF POLES, NECESSARY GUYS AND ANCHORS, CROSS-ARMS, WIRES AND OTHER FIXTURES AND APPLIANCES, FOR CONVEYING ELECTRIC ENERGY TO BE USED FOR LIGHT, HEAT, POWER, TELEPHONE AND/OR OTHER PURPOSES AND INCIDENTAL PURPOSES, RECORDED MARCH 04, 1960 AS INSTRUMENT NO. 1960-3377 OF OFFICIAL RECORDS. IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION, ITS SUCCESSORS AND ASSIGNS
- 10 AN EASEMENT FOR PUBLIC ROAD AND HIGHWAY PURPOSES AND INCIDENTAL PURPOSES, RECORDED JULY 30, 1971 AS INSTRUMENT NO. 1971-5248 OF OFFICIAL RECORDS. IN FAVOR OF: CITY OF ROSEMEAD
- 11 AN EASEMENT FOR PUBLIC ROAD AND HIGHWAY PURPOSES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 03, 1972 AS INSTRUMENT NO. 1972-3016 OF OFFICIAL RECORDS. IN FAVOR OF: CITY OF ROSEMEAD

#### PROPOSED EASEMENTS:

- [A] INDICATES AN EASEMENT FOR INGRESS AND EGRESS FOR EMERGENCY AND PUBLIC SERVICE VEHICLES
- [B] INDICATES AN EASEMENT FOR PUBLIC UTILITIES [SEWER/WATER/ETC.]

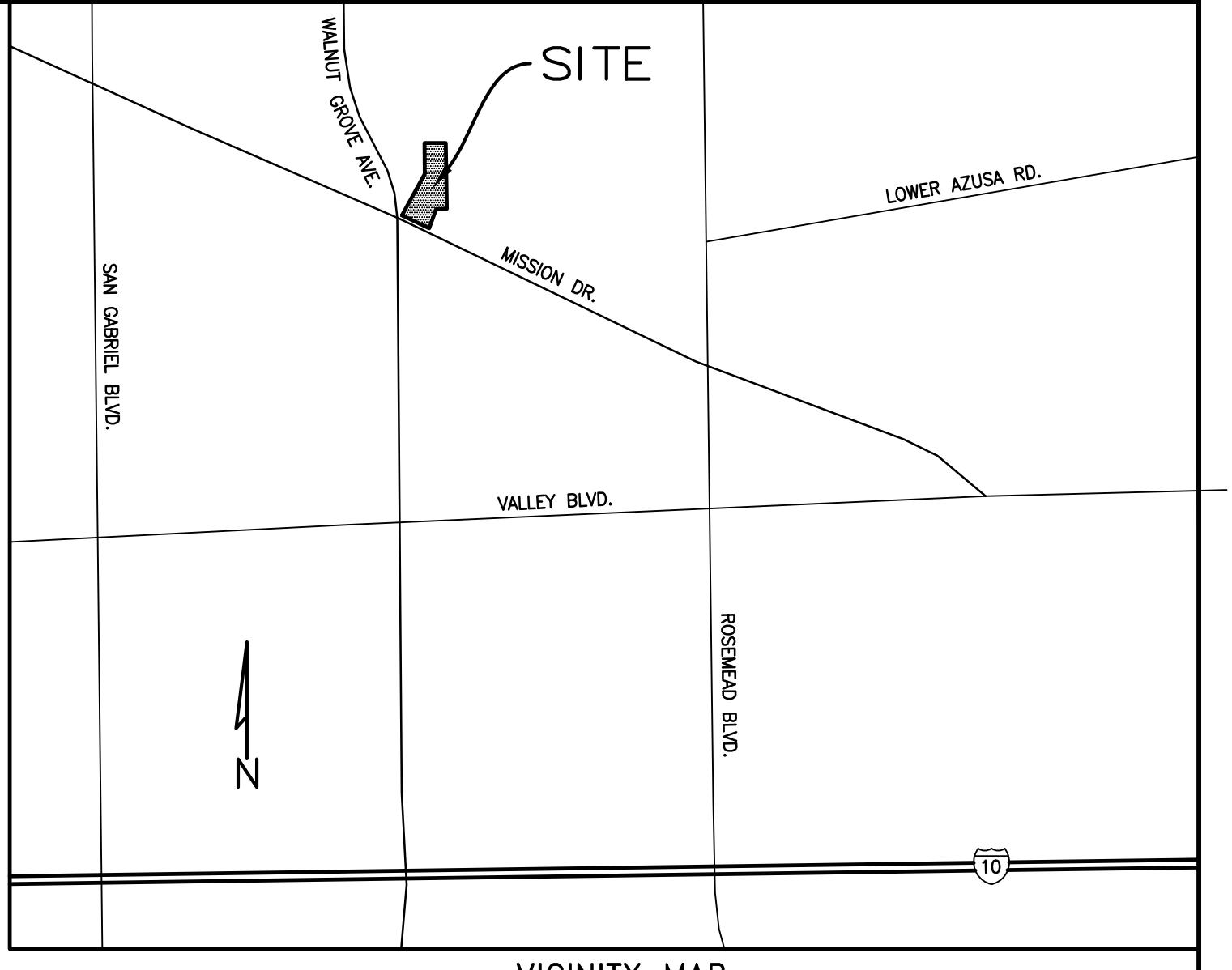
#### UTILITY PURVEYORS & SERVICES:

WATER: CALIFORNIA AMERICAN WATER 1-(888) 237-1333	VERIZON: (800) 483-5000 FRONTIER: (833) 747-9645 CHARTER/SPECTRUM: 1 (888) 438-2427
SEWER: LOS ANGELES COUNTY SANITATION DISTRICT (562) 699-7411	TRASH/REFUSE: CONSOLIDATED DISPOSAL SERVICES: (626) 288-7466 CONSOLIDATED - BULKY ITEMS PICK UP: 1 (800) 299-4898
ELECTRIC: SOUTHERN CALIFORNIA EDISON (800) 655-4555	GAS: SOUTHERN CALIFORNIA GAS COMPANY (800) 427-2200
GAS: SOUTHERN CALIFORNIA GAS COMPANY (800) 427-2200	SCHOOL DISTRICT: ROSEMEAD SCHOOL DISTRICT (626) 312-2900
TELEPHONE/CABLE: AT&T: (800) 310-2355	STREET LIGHT TRASH ENCLOSURE TEMPORARY TRANSFORMER WF WL WM VALVE

- SHEET INDEX:  
1 - TENTATIVE MAP  
2 - PRELIMINARY GRADING PLAN  
3 - PRELIMINARY UTILITY PLAN  
4 - FIRE ACCESS & HYDRANT LOCATION PLAN

THIS TENTATIVE MAP WAS PREPARED BY ME, OR  
UNDER MY DIRECTION ON FEBRUARY 16, 2022.

RYAN J. BITTNER, R.C.E. 68167



#### DEVELOPER:

BORSTEIN ENTERPRISES  
11766 WILSHIRE BOULEVARD, SUITE 820  
LOS ANGELES, CA 90025  
(310) 582-1991  
CONTACT: ERIK PFAHLER

#### CIVIL ENGINEER:

C&V CONSULTING, INC.  
9830 IRVINE CENTER DRIVE  
IRVINE, CA 92618  
(949) 916-3800  
CONTACT: RYAN BITTNER, P.E.

#### ARCHITECT:

ARCHITEK  
29222 DAKOTA DRIVE  
VALENCIA, CA 91354  
(949) 939-1310

#### EXISTING LAND USE:

LAND USE: UNDEVELOPED LAND  
EXISTING ZONING: R-1 SINGLE FAMILY  
RESIDENTIAL

#### PROPOSED LAND USE:

- SINGLE FAMILY RESIDENTIAL  
- DUPLEXES - AFFORDABLE  
PROPOSED ZONING: P-D, PLANNED DEVELOPMENT

#### ASSESSORS PARCEL NUMBER:

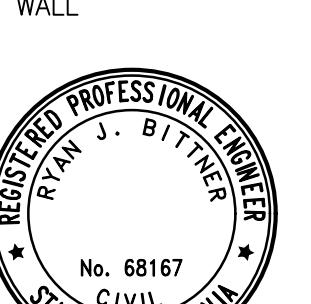
5389-009-029, 5389-009-030, & 5389-009-031

#### LEGEND:

AP	ANGLE POINT
ASPH	ASPHALT PAVEMENT
RC	BUILDING CORNER
BEG	BEGIN
BO	BLOW-OFF VALVE
BLDG	BUILDING
BW	BLOCK WALL
C&G	CURB AND GUTTER
CB	CATCH BASIN
CF	CURB FACE
CLF	CHAIN LINK FENCE
CMF	CORROUGATED METAL FENCE
CONC	CONCRETE PAVEMENT
DI	DRAIN INLET
DWY	DRIVEWAY
FH	FIRE HYDRANT
GM	GAS METER
DW	DRIVEWAY
LS	LANDSCAPING
MH	MANHOLE
MTR	METER
PWKY	PARKWAY
P/L	PROPERTY LINE
RET	RETAINING
ROW	RIGHT-OF-WAY
SFH	SINGLE-FAMILY HOME
ST LT	STREET LIGHT
TE	TRASH ENCLOSURE
TEMP	TEMPORARY
TF	TRANSFORMER
WF	WOOD FENCE
WL	WALL
WM	WATER METER
V	VALVE

#### ENGINEER'S STATEMENT:

THIS TENTATIVE MAP WAS PREPARED BY ME, OR  
UNDER MY DIRECTION ON FEBRUARY 16, 2022.



#### REVISIONS

APP'D

DATE

INITIALS

#### CITY OF ROSEMEAD:

APPROVED BY:

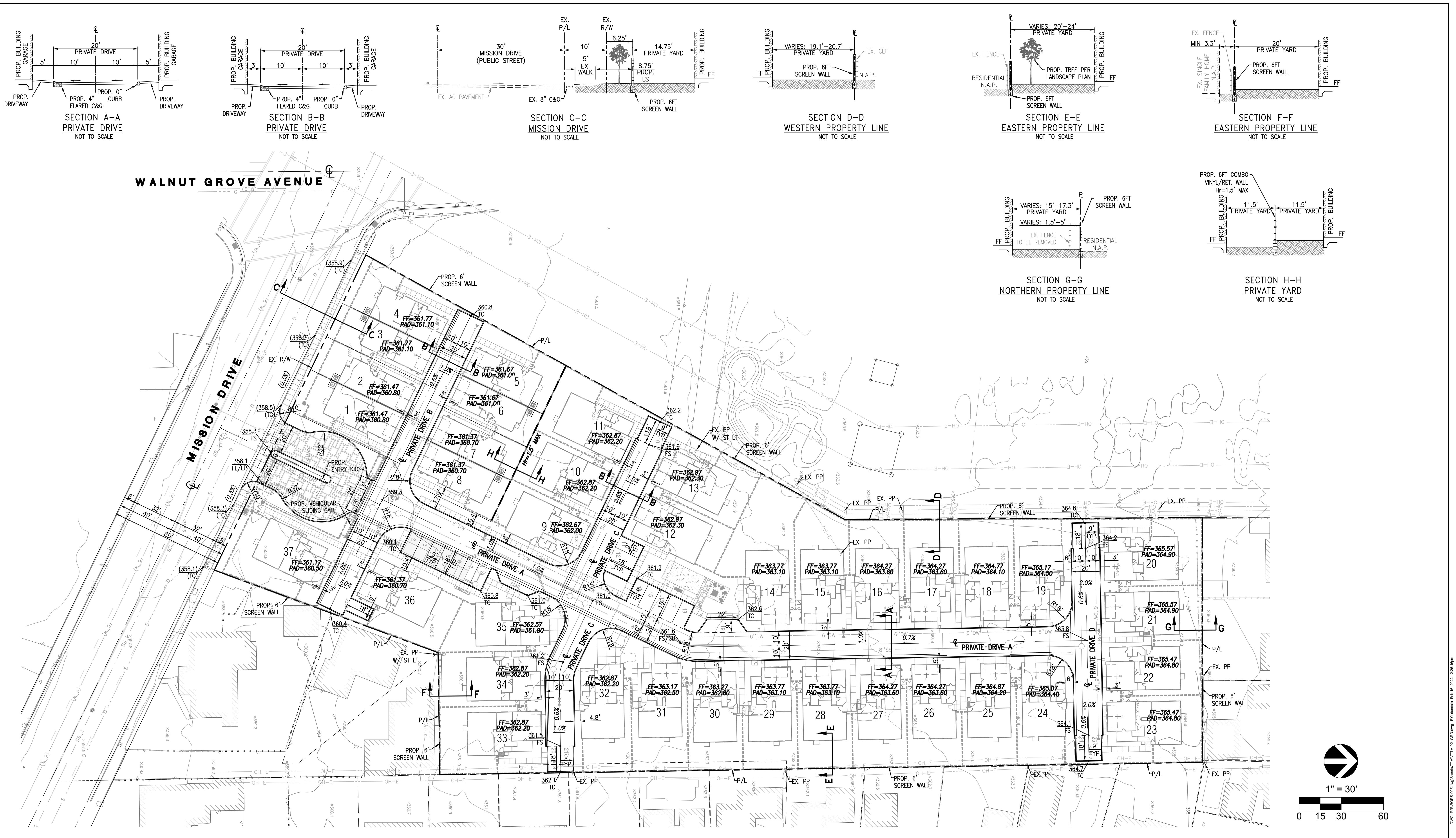
DATE \_\_\_\_\_

MICHAEL CHUNG, P.E.  
DIRECTOR OF PUBLIC WORKS

#### PLANS PREPARED BY:

**C&V CONSULTING, INC.**  
9830 IRVINE CENTER DRIVE  
IRVINE, CALIFORNIA 92618  
(949) 916-3800  
INFO@CVC-INC.NET  
WWW.CVC-INC.NET

DESIGN BY: DA DATE: 02/2022



# REVISIONS

1

		CITY OF _____
		APPROVED: _____
		<hr/>
		MICHAEL DIRECTOR
DATE: _____		DATE: _____

**F ROSEMEAD:  
VED BY:  
EL CHUNG, P.E.  
OR OF PUBLIC WORKS**

PLANS PREPARED BY:	
 <p><b>C&amp;V</b>  <b>CONSULTING, INC.</b>  <b>CIVIL ENGINEERING</b>  <b>LAND PLANNING &amp; SURVEYING</b></p>	
<p><b>9830 IRVINE CENTER DRIVE            IRVINE, CALIFORNIA 92618</b></p> <hr/> <p><b>(949) 916-3800</b></p> <hr/> <p><b>INFO@CVC-INC.NET</b></p> <hr/> <p><b>WWW.CVC-INC.NET</b></p>	
DESIGN BY: DA	MONTH: 02/2022
DRAWN BY: DA	MONTH: 02/2022
CHECKED BY: MM	MONTH: 02/2022

**8601 MISSION DRIVE**

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**VESTING TENTATIVE TRACT MAP NO. 83705**

**PRELIMINARY GRADING PLAN**

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**CITY OF ROSEMEAD**

	DWG. NO.	PROJ.: BORS-003
		PLAN SET: PS01
	SHEET 2 OF 4	

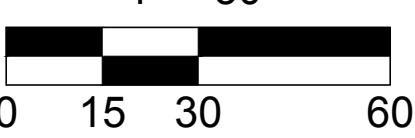


## PROPOSED EASEMENTS:

**B** INDICATES AN EASEMENT FOR PUBLIC UTILITIES [SEWER/WATER/ETC.]



$|'' = 30'$



	<p>CITY OF ROSEMEAD:</p> <p>APPROVED BY:</p> <hr/> <p>MICHAEL CHUNG, P.E. DIRECTOR OF PUBLIC WORKS</p> <p>DATE: _____</p>
--	---

PLANS PREPARED BY:	
 <b>CONSULTING, INC.</b> <b>CIVIL ENGINEERING</b> <b>LAND PLANNING &amp; SURVEYING</b>	
<b>9830 IRVINE CENTER DRIVE</b> <b>IRVINE, CALIFORNIA 92618</b>	
<b>(949) 916-3800</b> <b>INFO@CVC-INC.NET</b>	
<b>WWW.CVC-INC.NET</b>	
DESIGN BY: DA	MONTH: 02/2022
DRAWN BY: DA	MONTH: 02/2022
CHECKED BY: MM	MONTH: 02/2022

**8601 MISSION DRIVE**

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# CITY OF ROSEMEAD

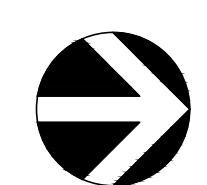
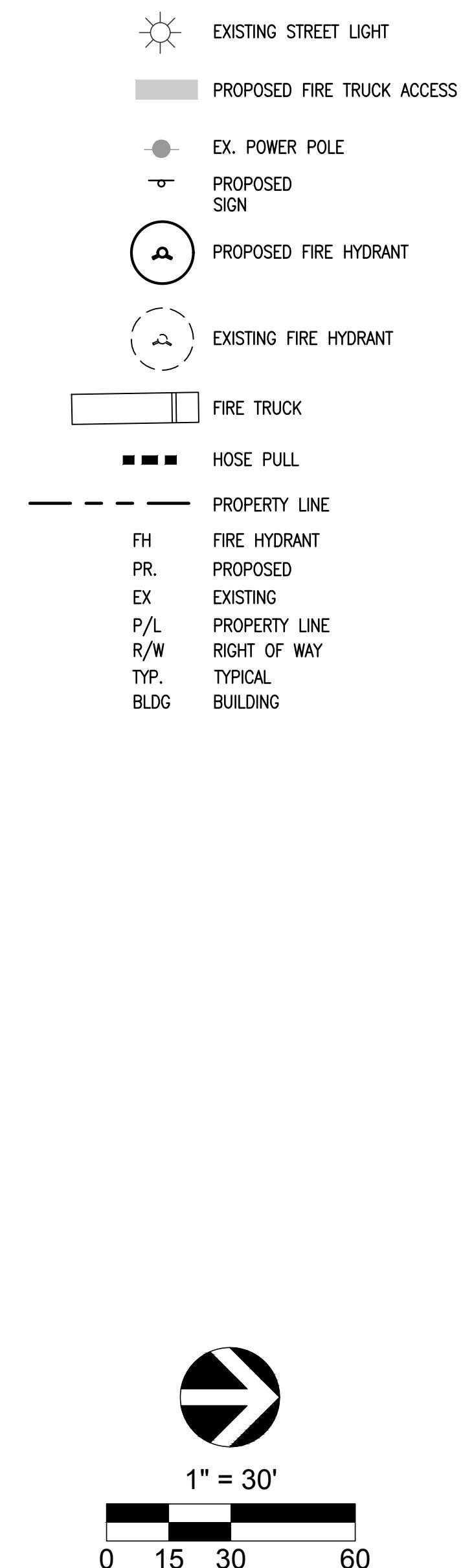
DWG. NO.  
SHEET 3 OF 4

# WALNUT GROVE AVENUE

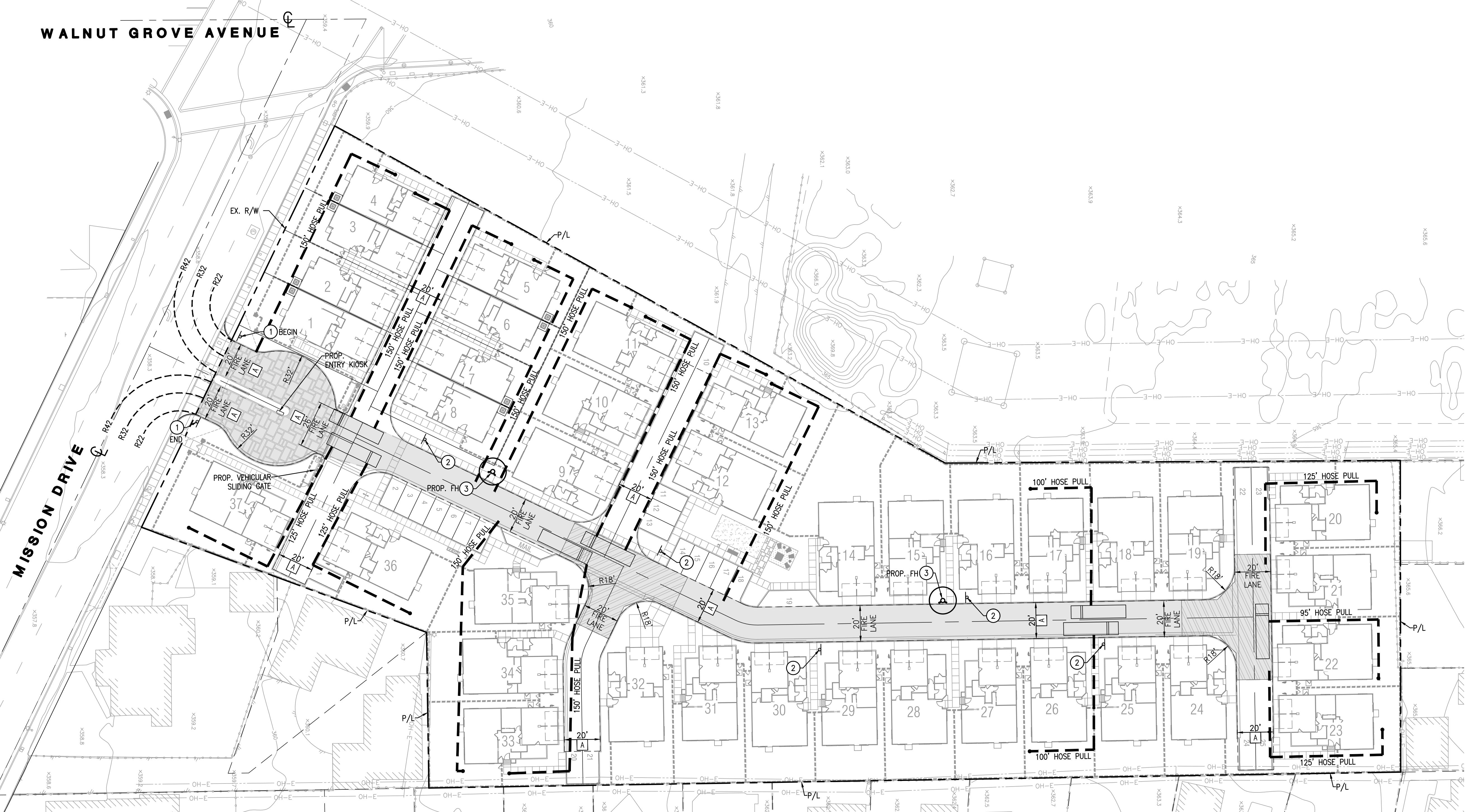
## CONSTRUCTION NOTES:

- ① INSTALL "FIRE LANE" SIGN BEGIN OR END PER DETAIL 1 HEREON.
- ② INSTALL "FIRE LANE" SIGN PER DETAIL 2 HEREON.
- ③ PROPOSED PUBLIC FIRE HYDRANT

## LEGEND

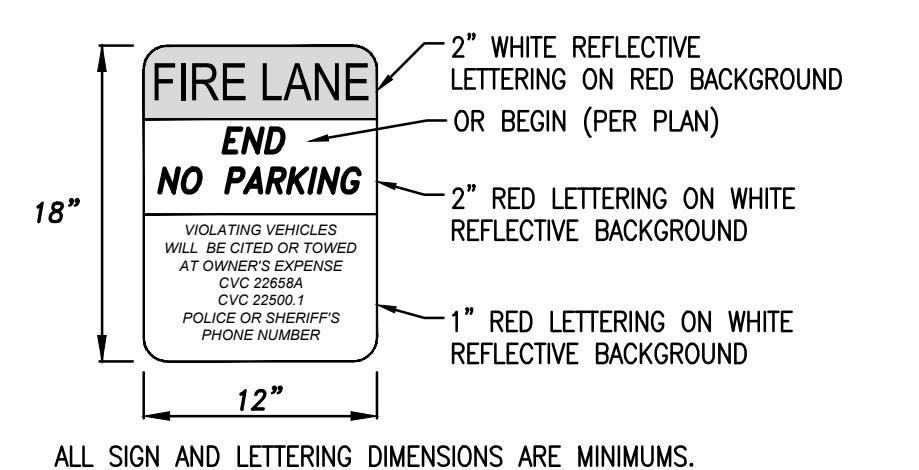


1" = 30'  
0 15 30 60

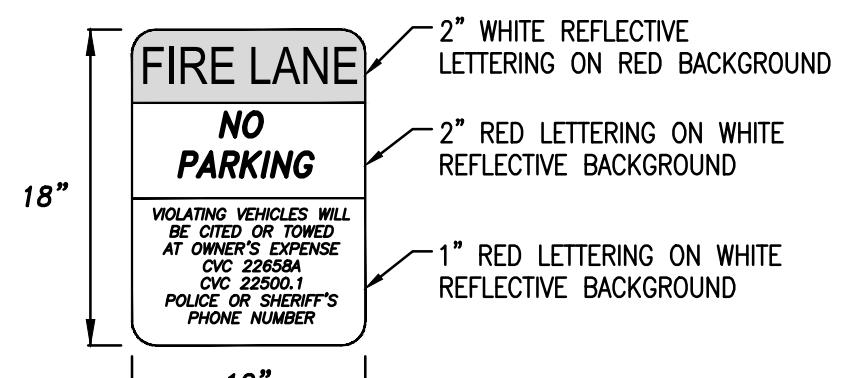


## PROPOSED EASEMENTS:

A indicates an easement for ingress and egress for emergency and public service vehicles



1 BEGIN & END NO PARKING SIGN  
OR BEGIN (PER PLAN)  
NOT TO SCALE



2 NO PARKING SIGN  
NOT TO SCALE

## REVISIONS

NUMBER	DATE	INITIALS	APPROVED

CITY OF ROSEMEAD:  APPROVED BY:  MICHAEL CHUNG, P.E. DIRECTOR OF PUBLIC WORKS  DATE _____
--

PLANS PREPARED BY:  <b>C&amp;V CONSULTING, INC.</b> CIVIL ENGINEERING LAND PLANNING & SURVEYING 9630 IRVINE CENTER DRIVE IRVINE, CALIFORNIA 92618 949.916.3800 INFO@CVC-INC.NET WWW.CVC-INC.NET
DESIGN BY: DA      MONTH: 02/2022
DRAWN BY: DA      MONTH: 02/2022
CHECKED BY: MM      MONTH: 02/2022

## 8601 MISSION DRIVE

VESTING TENTATIVE TRACT MAP NO. 83705  
FIRE ACCESS & HYDRANT LOCATION PLAN

CITY OF ROSEMEAD

DWG. NO.  
DWG. #83705-01

PLAN SET PGD  
PRINTED: 02/16/2022  
DWG. #83705-01

Sewer Area Study

Rosemead, VTTM No. 83705

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## **Appendix E**

# **LACDPW SEWER AREA STUDY GUIDELINES**

LOS ANGELES COUNTY  
DEPARTMENT OF PUBLIC WORKS  
LAND DEVELOPMENT DIVISION

AREA STUDY

An area study must be made for all private contract sewer projects. See attached sample. The area study must include the following items:

1. Area being served - In Acres
2. Determined Tributary area to main line being designed (incl. areas of future devel.)- In Acres
3. Existing and Land Use Zoning
4. Anticipated Sewer Discharge in cfs of total area based on zoning, and/or heavy water users
5. Existing or proposed utilities if in conflict
6. Existing and proposed sewers showing pipe size and grade leading up to the trunk line in order for you to evaluate the impact of your proposed development on the existing system
7. Direction of sewer flow
8. Contour lines
9. Scale not to be less than 1"=600'
10. North arrow pointing up or to the left

ZONING COEFFICIENTS

<u>ZONE</u>	<u>COEFFICIENT (cfs/Acre)</u>
Agriculture	0.001
Residential	
R-1	0.004
R-2	0.008
R-3	0.012
R-4	0.016 *
Commercial	
C-1 through C-4	0.015 *
Heavy Industrial	
M-1 through M-4	0.021 *

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

The coefficient to be used for any zoned areas not listed will be determined by the County based upon the intended development and use.

The County shall determine which of the coefficients or combination of coefficients shall be used for design as determined by the established or proposed zoning in the study area. Any modifications to these coefficients due to topography, development, or hazard areas, shall be approved by the Department of Public Works.

### Estimated Average Daily Sewage Flows for Various Occupancies

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

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

### Zoning Coefficients

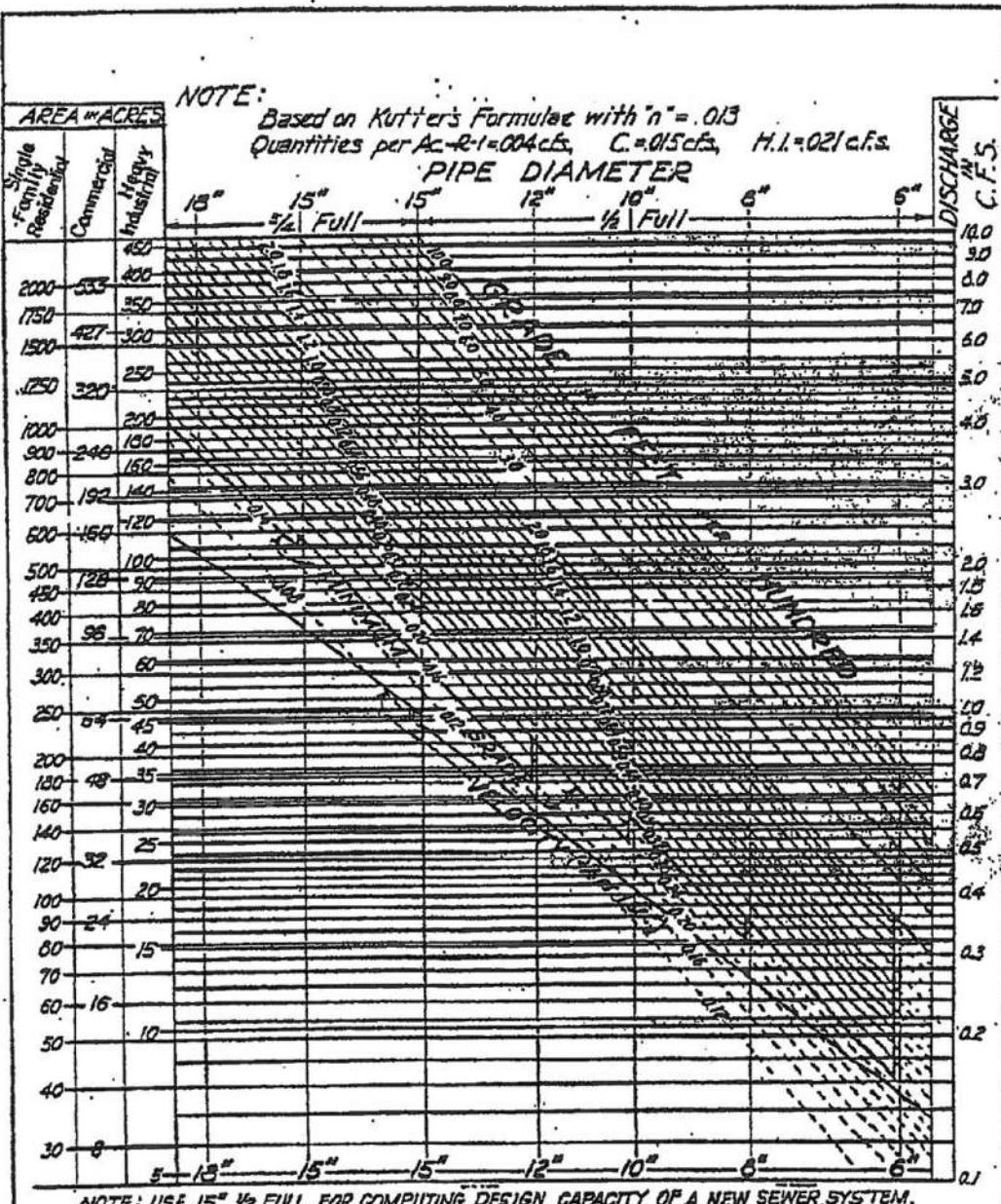
Zone	Coefficient (cfs/Acre)
Agriculture -----	0.001
Residential*:	
R-1 -----	0.004
R-2 -----	0.008
R-3 -----	0.012
R-4 -----	0.016*
Commercial:	
C-1 through C-4 -----	0.015*
Heavy Industrial:	
M-1 through M-4 -----	0.021*

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

\* Use 0.001 (cfs/unit) for condominiums only

*NOTE:*

Based on Kutter's Formulas with "n" = .013  
 Quantities per Acre- $R=1.004 \text{ cfs}$ ,  $C=0.015 \text{ cfs}$ ,  $H.I.=0.021 \text{ cfs}$



**NOTE: USE 15" 1/2 FULL FOR COMPUTING DESIGN CAPACITY OF A NEW SEWER SYSTEM.  
USE 15" 3/4 FULL FOR CHECKING CAPACITY OF EXIST. SEWER SYSTEM.**

## FLOW DIAGRAM FOR THE DESIGN OF CIRCULAR SANITARY SEWERS

COUNTY OF LOS ANGELES

**DEPARTMENT OF PUBLIC WORKS**

COUNTY ENGINEER  
STANDARD

DATE: 3/80 5-C4

DESIGN - 2

ASSISTANT DEPUTY -

**TABLE 1**  
**LOADINGS FOR EACH CLASS OF LAND USE**

<u>DESCRIPTION</u>	<u>UNIT OF MEASURE</u>	<u>FLOW (Gallons Per Day)</u>	<u>COD (Pounds Per Day)</u>	<u>SUSPENDED SOLIDS (Pounds Per Day)</u>
<b>R E S I D E N T I A L</b>				
Single Family Home	Parcel	260	1.22	0.59
Duplex	Parcel	312	1.46	0.70
Triplex	Parcel	468	2.19	1.05
Fourplex	Parcel	624	2.92	1.40
Condominiums	Parcel	195	0.92	0.44
Single Family Home (reduced rate)	Parcel	156	0.73	0.35
Five Units or More	No. of Dwlg. Units	156	0.73	0.35
Mobile Home Parks	No. of Spaces	156	0.73	0.35
<b>C O M M E R C I A L</b>				
Hotel/Motel/Rooming House	Room	125	0.54	0.28
Store	1000 ft <sup>2</sup>	100	0.43	0.23
Supermarket	1000 ft <sup>2</sup>	150	2.00	1.00
Shopping Center	1000 ft <sup>2</sup>	325	3.00	1.17
Regional Mall	1000 ft <sup>2</sup>	150	2.10	0.77
Office Building	1000 ft <sup>2</sup>	200	0.86	0.45
Professional Building	1000 ft <sup>2</sup>	300	1.29	0.68
Restaurant	1000 ft <sup>2</sup>	1,000	16.68	5.00
Indoor Theatre	1000 ft <sup>2</sup>	125	0.54	0.28
Car Wash				
Tunnel - No Recycling	1000 ft <sup>2</sup>	3,700	15.86	8.33
Tunnel - Recycling	1000 ft <sup>2</sup>	2,700	11.74	6.16
Wand	1000 ft <sup>2</sup>	700	3.00	1.58
Financial Institution	1000 ft <sup>2</sup>	100	0.43	0.23
Service Shop	1000 ft <sup>2</sup>	100	0.43	0.23
Animal Kennels	1000 ft <sup>2</sup>	100	0.43	0.23
Service Station	1000 ft <sup>2</sup>	100	0.43	0.23
Auto Sales/Repair	1000 ft <sup>2</sup>	100	0.43	0.23
Wholesale Outlet	1000 ft <sup>2</sup>	100	0.43	0.23
Nursery/Greenhouse	1000 ft <sup>2</sup>	25	0.11	0.06
Manufacturing	1000 ft <sup>2</sup>	200	1.86	0.70
Dry Manufacturing	1000 ft <sup>2</sup>	25	0.23	0.09
Lumber Yard	1000 ft <sup>2</sup>	25	0.23	0.09
Warehousing	1000 ft <sup>2</sup>	25	0.23	0.09
Open Storage	1000 ft <sup>2</sup>	25	0.23	0.09
Drive-in Theatre	1000 ft <sup>2</sup>	20	0.09	0.05

**TABLE 1**  
 (continued)  
**LOADINGS FOR EACH CLASS OF LAND USE**

<u>DESCRIPTION</u>	<u>UNIT OF MEASURE</u>	<u>FLOW (Gallons Per Day)</u>	<u>COD (Pounds Per Day)</u>	<u>SUSPENDED SOLIDS (Pounds Per Day)</u>
<b>COMMERCIAL</b>				
Night Club	1000 ft <sup>2</sup>	350	1.50	0.79
Bowling/Skating Club	1000 ft <sup>2</sup>	150	1.76	0.55
Auditorium, Amusement	1000 ft <sup>2</sup>	125	0.54	0.27
Golf Course, Camp, and Park (Structures and Improvements)	1000 ft <sup>2</sup>	350	0.43	0.23
Recreational Vehicle Park	No. of Spaces	100	0.34	0.14
Convalescent Home	Bed	125	0.54	0.28
Laundry	1000 ft <sup>2</sup>	3,825	16.40	8.61
Mortuary/Cemetery	1000 ft <sup>2</sup>	100	1.33	0.67
Health Spa, Gymnasium				
With Showers	1000 ft <sup>2</sup>	600	2.58	1.35
Without Showers	1000 ft <sup>2</sup>	300	1.29	0.68
Convention Center, Fairground, Racetrack, Sports Stadium/Arena	Average Daily Attendance	10	0.04	0.02
<b>INSTITUTIONAL</b>				
College/University	Student	20	0.09	0.05
Private School	1000 ft <sup>2</sup>	200	0.86	0.45
Church	1000 ft <sup>2</sup>	50	0.21	0.11

## **Appendix F**

# **LOS ANGELES COUNTY SANITATION DISTRICT – WILL SERVE LETTER**



November 8, 2021

Ref. DOC 6338995

Mr. Marco Midence  
Senior Project Engineer  
C&V Consulting, Inc.  
9830 Irvine Center Drive  
Irvine, CA 92618

Dear Mr. Midence:

**Will Serve Letter for 8601 Mission Drive**

The Los Angeles County Sanitation Districts (Districts) received your will serve letter request for the subject project on October 8, 2021. The proposed project is located within the jurisdictional boundary of District No. 15. We offer the following comments regarding sewerage service:

1. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the Districts, for conveyance to the Districts' Grand Avenue Trunk Sewer, located in Mission Drive at Ivar Avenue. The Districts' 18-inch diameter trunk sewer has a capacity of 5.9 million gallons per day (mgd) and conveyed a peak flow of 0.7 mgd when last measured in 2013.
2. The wastewater generated by the proposed project will be treated at the San Jose Creek Water Reclamation Plant (WRP) located adjacent to the City of Industry, which has a capacity of 100 mgd and currently processes an average flow of 66.9 mgd. All biosolids and wastewater flows that exceed the capacity of the San Jose Creek WRP are diverted to and treated at the Joint Water Pollution Control Plant in the City of Carson.
3. The expected average wastewater flow from the project site, described in the application as 35 single-family homes, is 9,100 gallons per day. For a copy of the Districts' average wastewater generation factors, go to [www.lacsd.org](http://www.lacsd.org), under Services, then Wastewater Program and Permits, select Will Serve Program, and scroll down to click on the [Table 1, Loadings for Each Class of Land Use](#) link.
4. The Districts are empowered by the California Health and Safety Code to charge a fee to connect facilities (directly or indirectly) to the Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities. This connection fee is used by the Districts for its capital facilities. Payment of a connection fee may be required before this project is permitted to discharge to the Districts' Sewerage System. For more information and a copy of the Connection Fee Information Sheet, go to [www.lacsd.org](http://www.lacsd.org), under Services, then Wastewater (Sewage) and select Rates & Fees. In determining the impact to the Sewerage System and applicable connection fees, the Districts will determine the user category (e.g. Condominium, Single Family home, etc.) that best represents the actual or anticipated use of the parcel(s) or facilities on the parcel(s) in the development. For more specific information regarding the connection fee application procedure and fees, the developer should contact the Districts' Wastewater Fee Public Counter at (562) 908-4288, extension 2727.

5. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise the developer that the Districts intend to provide this service up to the levels that are legally permitted and to inform the developer of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2708 or at [dcurry@lacsd.org](mailto:dcurry@lacsd.org).

Very truly yours,



Donna J. Curry  
Customer Service Specialist  
Facilities Planning Department

DC:dc

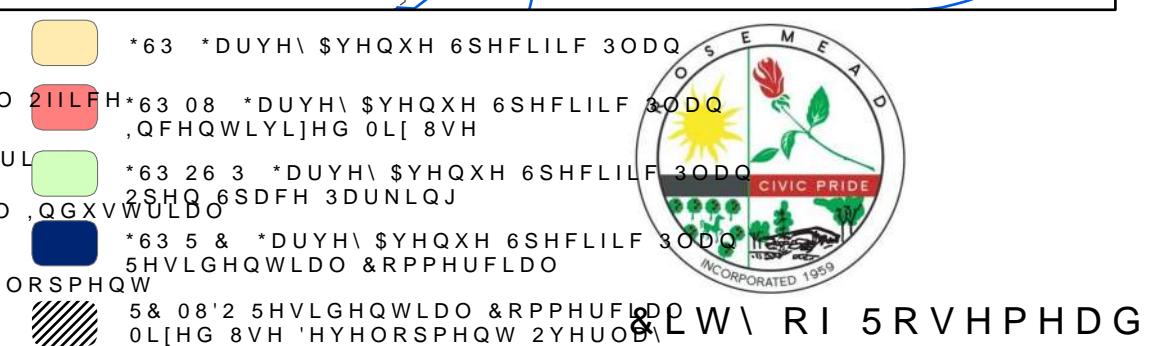
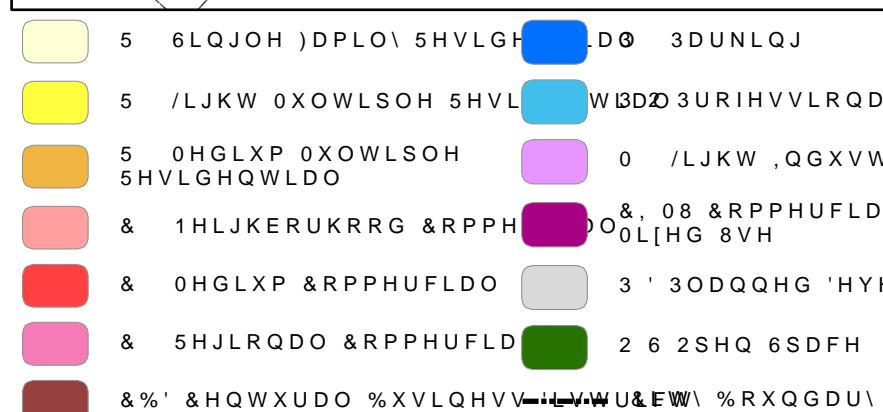
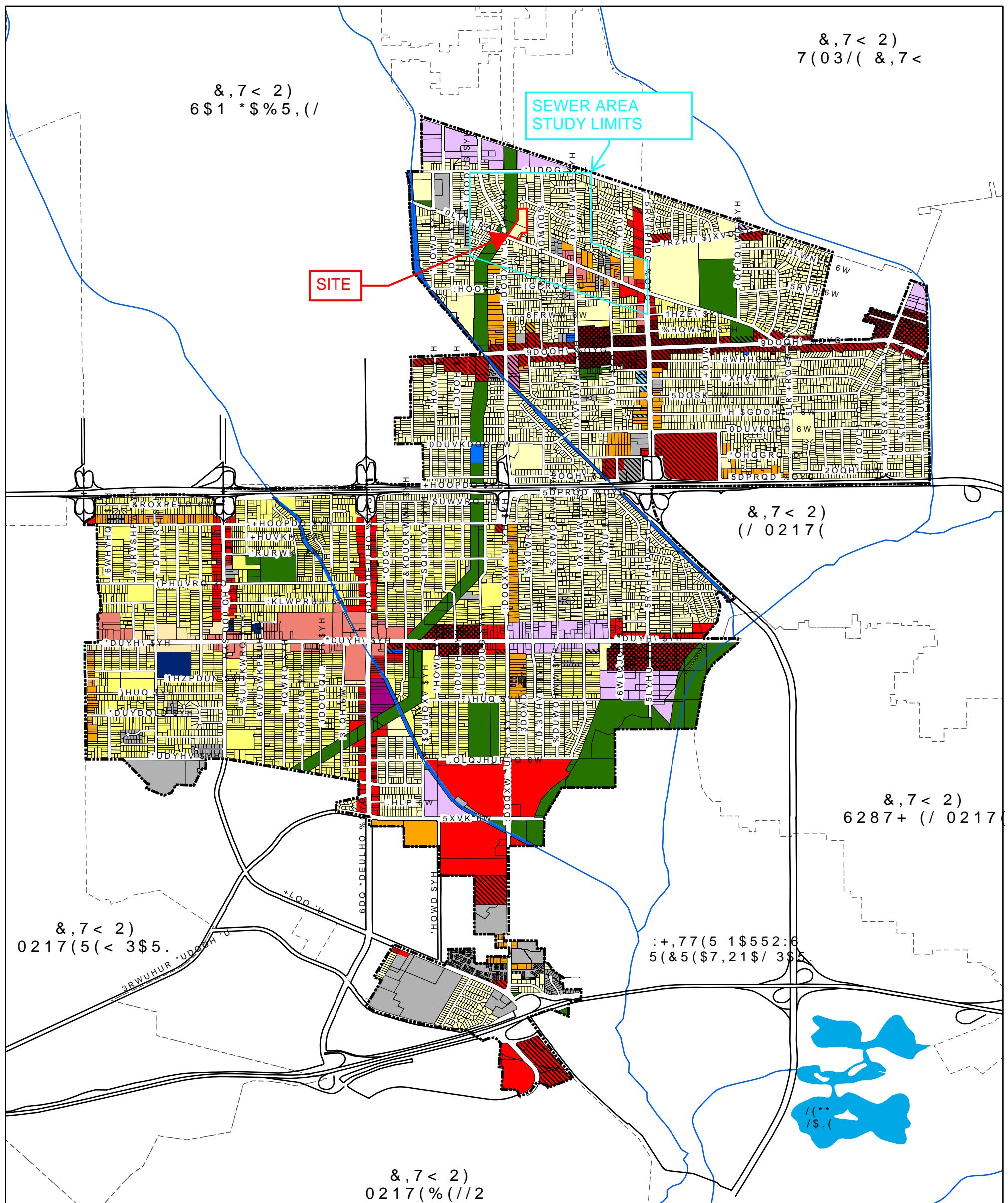
Sewer Area Study

Rosemead, VTTM No. 83705

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## **Appendix G**

### **CITY OF ROSEMEAD ZONING MAP**



= RQLQJ 0DS

\$GRSWHG E\ 2UGLQDQFH 1R  
\$PHQGHG E\ 2UGLQDQFH 1R

:KLOH WKH & LW\ RI 5RVPHDG PDNHV HYHU\ HIRUW WR PDLQWDLQ DQG GLVWULEXWH DFFXUDWH LQIRUPDWLRQ QR ZDUUDQWLHV DQ  
, QR HYHQW VKDOO WKH & LW\ RI 5RVPHDG EH OLDEOH LQ DQ\ ZD\ WR WKH XVHUV RI WKH GDWD 8VHUV RI WKLV GDWD VKDOO KROG WK

0 LOHV