APPENDIX I

SEWER ASSESSMENT

Kimley»Horn

SANITARY SEWER CAPACITY STUDY

for

Shapell Norwalk Apartments

Norwalk, California

At the corner of Alondra Blvd and Maidstone Ave

December 30, 2021

Prepared for:
Shapell Properties
11200 Corbin Ave. Suite 201
Porter Ranch, CA 91326

KHA Project # 094896004

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I. Project Description

The Norwalk Apartments (hereinafter referenced as the proposed Project) is located on the South-east corner of Alondra Blvd and Maidstone Ave, Norwalk, California. The Site was initially used for a commercial multi-tenant building with parking lot surrounding the building. That building has since been demolished with only the pad remaining. Now, the site is currently used as a storage lot.

II. Existing Conditions

The 8.07 acre site is bound by Alondra Blvd. to the North, Maidstone Ave. and existing Weinerschnitzel to the west, single family residential to the south, and a parking lot to the east. The existing project site is a building pad from the previous development and surrounding parking stalls. Most of the site is impervious with gentle slopes that generally run from Northwest to Southeast. A portion of the site slopes to the southwest to Maidstone.

There is an existing 8" sewer line running down Maidstone Ave that runs south down to Harvard Dr. (Note: Harvard Dr. was previously 165th St.) where it connects to sewer manhole B5-NW6439 (See Exhibit 2 in Appendix 1). On the southwest end of the project, there is an existing 8" sewer main that runs south down Flallon Ave. to Harvard Dr. where it connects the Harvard Dr. sewer main at manhole B5-NW6436(See Exhibit 2 in Appendix 1). Flallon Ave. and Maidstone Ave. sewer mains connect to an existing 8" sewer main in Harvard Dr. The Harvard Dr. main then sizes up from a 8" to a 10" sewer main at the McRae intersection and that 10" main continues west until it reaches a lift station at the Gridley Rd at manhole B5-MO2185. Existing sewer system information has been taken from as-builts as well as from the Norwalk Sewer Master Plan. The Sewer Master Plan provided crucial information about the existing sewer system such as flow in each sewer segment (GPM) as well as flow depth in each sewer segment (d/D). The sewer system in this area was sized with the assumption that the City Master Plan analyzed this site as commercial.

III. Proposed Conditions

The Proposed Site will install a 8-inch sewer line, connecting to the existing 8" sewer line in Flallon Ave. The proposed sewer connects to each building and runs down towards Flallon Ave. The minimum sewer slope in the proposed onsite sewer system is 0.5%. Given the minimum slope, and a max d/D of 0.5, the maximum capacity allowable for the private sewer system is 166 GPM. (See Flowmaster calculations in Appendix 3)

IV. Analysis

The purpose of this report is to conduct a sewer study on the impact of use change from commercial to multi-family residential on the existing public sewer system. Based on the city master plan flow rate Table 3-72, the proposed use change will generate an additional 5.4 GPM peak flow. Refer to calculations in Appendix 3. As shown in the Flowmaster calculations in Appendix 3, the max allowed capacity for an 8 in pipe with a d/D of 0.5 maximum would be 166 GPM, this far exceeds our proposed 13.79 GPM produced by the multi-family site. Excerpts from the Norwalk master plan (See Appendix 4) provided flows, velocities, and d/D ratios for every pipe segment in the sewer system in the general vicinity of the proposed project. Adding the additional flow produced as a result of the zoning change (see table below), to the flows provided in the excerpts from the master plan, we can determine if the existing sewer system has the additional capacity to take the additional flow.

Table 1: Produced Flow Table

City of Norwalk Adjusted Generation Rates	
High Density Residential	2461 GPD
Commercial	1500 GPD
Project Area	8.07 AC
Peak Flow Factor	3
Residential Peak Flow	13.79 GPM
Commercial Peak Flow	8.41 GPM
Flow Difference from Conversion	5.39 GPM

V. Conclusion

Knowing the size and slope of the existing sewer lines in Flallon and Harvard Dr., and utilizing the data pulled from the Norwalk Sewer Master Plan (See Appendix 4), we can determine the affects of the additional flow on the sewer system as well as the new d/D ratios for all of the sewer segments. The maximum d/D is 0.5 for pipes 6" to 15" from Table 6-2 of City Sewer Master Plan.

Table 2: System Load Check

City of Norwalk Sewer Station B5-NW7307		
	d/D Ratio	Flow (GPM)
Pre-Use Change	0.25	166.48
Post-Use Change	0.47	171.87
Station at Capacity	0.50	190.56

The only pipe segment close to max capacity is the segment between manholes B5-NW6451 and B5-NW7307 which has a d/D ratio of 0.25 including the anticipated flow produced from the project site commercially zoned (Refer to Appendix 3 for calculations and Appendix 4 for the Master plan sewer Map with manhole labels). With the addition of the 5.39 GPM produced due to the use change, and knowing that this 10" sewer line has a slope of 0.24% the d/D ratio of this segment only rises to 0.47. The existing pump station has a capacity for an additional 5.0 GPM flow. In conclusion, since the d/D ratio remains under 0.5, and this was the only segment of concern in the vicinity, the existing sewer system has the capacity to accommodate the zoning change for the proposed project.

Appendix 1

Aerial of Project Area and Existing Sewer Lines

NORTH

SCALE: 1"=150'

ALONDRA BLVD ℄

ALONDRA BLVD

RIGHT-OF-WAY

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

RIGHT-OF-WAY

MAIDSTONE AVE ℄

MAIDSTONE AVE

COLLEGE DR.

FLALLON AVE

BUILDING 1
9,300 SF

BUILDING 2
9,300 SF

BUILDING 3
12,600 SF

BUILDING 4
12,600 SF

BUILDING 5
12,600 SF

BUILDING 6
12,600 SF

BUILDING 7
6,700 SF

BUILDING 8
6,700 SF

BUILDING 9
6,700 SF

BUILDING 10
6,700 SF

BUILDING 11
6,700 SF

SS 18"SS SS 18"SS SS 18"SS SS 18"SS SS 18"SS SS 18"SS SS 18"SS SS

8"SS 8"SS

8"SS 8"SS 8"SS 8"SS 8"SS 8"SS 8"SS 8"SS 8"SS 8"SS

LEGEND

- PROPERTY LINE
- 8"SS — PROPOSED 8" SEWER
- 8"SS — EXISTING 8" SEWER
- 18"SS — EXISTING 18" SEWER
- 48"SS — EXISTING 48" SEWER
- PROPOSED BUILDING

SITE INFORMATION

LOT SIZE: 8.07 AC
BUILDING: 102,516 SF

EXHIBIT A: PROPOSED ONSITE SEWER LAYOUT

NORTH

SCALE: 1"=500'

LEGEND

- PROPERTY LINE
- PROPOSED 8" SEWER
- EXISTING 8" SEWER
- EXISTING 18" SEWER
- EXISTING 48" SEWER
- PROPOSED BUILDING

SITE INFORMATION

LOT SIZE: 8.07 AC
BUILDING: 102,516 SF

PROPERTY LINE
ALONDRA BLVD
RIGHT-OF-WAY
PROPERTY LINE
PROPERTY LINE
RIGHT-OF-WAY
B5-NW9050
B5-NW6410
B5-NW6413
COLLEGE DR.
MAIDSTONE AVE
B5-NW63895
B5-NW6397
B5-NW6418
B5-NW6407
B5-NW6435
B5-NW6434
B5-NW6423
B5-NW6433
B5-NW6427
B5-NW6438
FLALLON AVE
PIONEER BLVD
B5-MO2186
B5-NW7307
B5-MO2185
B5-MO2183
B5-NW6436
B5-NW6437
166TH ST
B5-NW6451
B5-NW6452
B5-NW6439

EXHIBIT B: EXISTING OFFSITE SEWER LAYOUT

Appendix 2

City of Norwalk Sewer Master Plan
Sanitary Sewer Typical Loading Table

CHAPTER 3 – FLOW MONITORING

Table 3-7. Ultimate Wastewater Generation Factors and Average Flows

Land Use Category	Acres	Wastewater Generation Factor[(a)] (gpd/ac)	Flow (gpd)
Residential			
Low Density Residential	2,615.1	1,231	3,217,881
Medium Residential	32.0	1,712	54,784
High Density Residential	331.3	2,461	815,206
Subtotal	2,978.4	1,373	4,087,871
Commercial	467.6	1,500	701,370
Industrial			
Light Industrial	155.8	1,500	233,670
Heavy Industrial	139.6	1,500	209,460
Subtotal	295.4	1,500	443,130
Institutional			
Institutional/Public Facility/School	435.9	550	239,729
Church	12.4	550	6,809
Subtotal	448.3	550	246,538
Hospitals			
LD Residential Hospital	155.5	1,800	279,972
Commercial Hospital	15.1	1,800	27,216
Subtotal	170.7	1,800	307,188
Other			
LD Resident. Fuel Storage Facility	47.3	500	23,650
Open Space	74.8	-	-
Streets	1,775.9	-	-
Subtotal	1,898.0	12	23,650
Total	6,258.2	928	5,809,746

(a) Ultimate System residential unit wastewater generation factors were calculated by multiplying Existing System residential unit wastewater generation factors by the estimated year 2035 population increase of 7.0%

Appendix 3

Calculations and Results

Onsite 8" Sewer Line Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.015	
Channel Slope	0.0050	ft/ft
Normal Depth	4.0	in
Diameter	8.0	in

Results		
Discharge	166.18	gpm
Flow Area	0.2	ft²
Wetted Perimeter	1.0	ft
Hydraulic Radius	2.0	in
Top Width	0.67	ft
Critical Depth	3.4	in
Percent Full	50.0	%
Critical Slope	0.0089	ft/ft
Velocity	2.12	ft/s
Velocity Head	0.07	ft
Specific Energy	0.40	ft
Froude Number	0.731	
Maximum Discharge	357.52	gpm
Discharge Full	332.36	gpm
Slope Full	0.0013	ft/ft
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.0	in
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	in
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	50.0	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	4.0	in
Critical Depth	3.4	in
Channel Slope	0.0050	ft/ft
Critical Slope	0.0089	ft/ft

Offsite Harvard 8" Sewer line Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.015	
Channel Slope	0.0024	ft/ft
Normal Depth	4.0	in
Diameter	8.0	in

Results		
Discharge	115.13	gpm
Flow Area	0.2	ft²
Wetted Perimeter	1.0	ft
Hydraulic Radius	2.0	in
Top Width	0.67	ft
Critical Depth	2.8	in
Percent Full	50.0	%
Critical Slope	0.0086	ft/ft
Velocity	1.47	ft/s
Velocity Head	0.03	ft
Specific Energy	0.37	ft
Froude Number	0.506	
Maximum Discharge	247.70	gpm
Discharge Full	230.27	gpm
Slope Full	0.0006	ft/ft
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.0	in
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	in
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	50.0	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	4.0	in
Critical Depth	2.8	in
Channel Slope	0.0024	ft/ft
Critical Slope	0.0086	ft/ft

Offsite Harvard 10" Sewer line Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.015	
Channel Slope	0.0020	ft/ft
Normal Depth	5.0	in
Diameter	10.0	in

Results		
Discharge	190.56	gpm
Flow Area	0.3	ft²
Wetted Perimeter	1.3	ft
Hydraulic Radius	2.5	in
Top Width	0.83	ft
Critical Depth	3.4	in
Percent Full	50.0	%
Critical Slope	0.0080	ft/ft
Velocity	1.56	ft/s
Velocity Head	0.04	ft
Specific Energy	0.45	ft
Froude Number	0.480	
Maximum Discharge	409.98	gpm
Discharge Full	381.13	gpm
Slope Full	0.0005	ft/ft
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.0	in
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.0	in
Profile Description	N/A	
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.0	%
Normal Depth Over Rise	50.0	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	5.0	in
Critical Depth	3.4	in
Channel Slope	0.0020	ft/ft
Critical Slope	0.0080	ft/ft

City of Norwalk Adjusted Generation Rates	2015 Master plan	2009 Eval
	Flow (gpd/ac)	Flow (gpd/ac)
High Density Residential (23-30 DU/AC)	2461	3300
Commerical	1500	1050

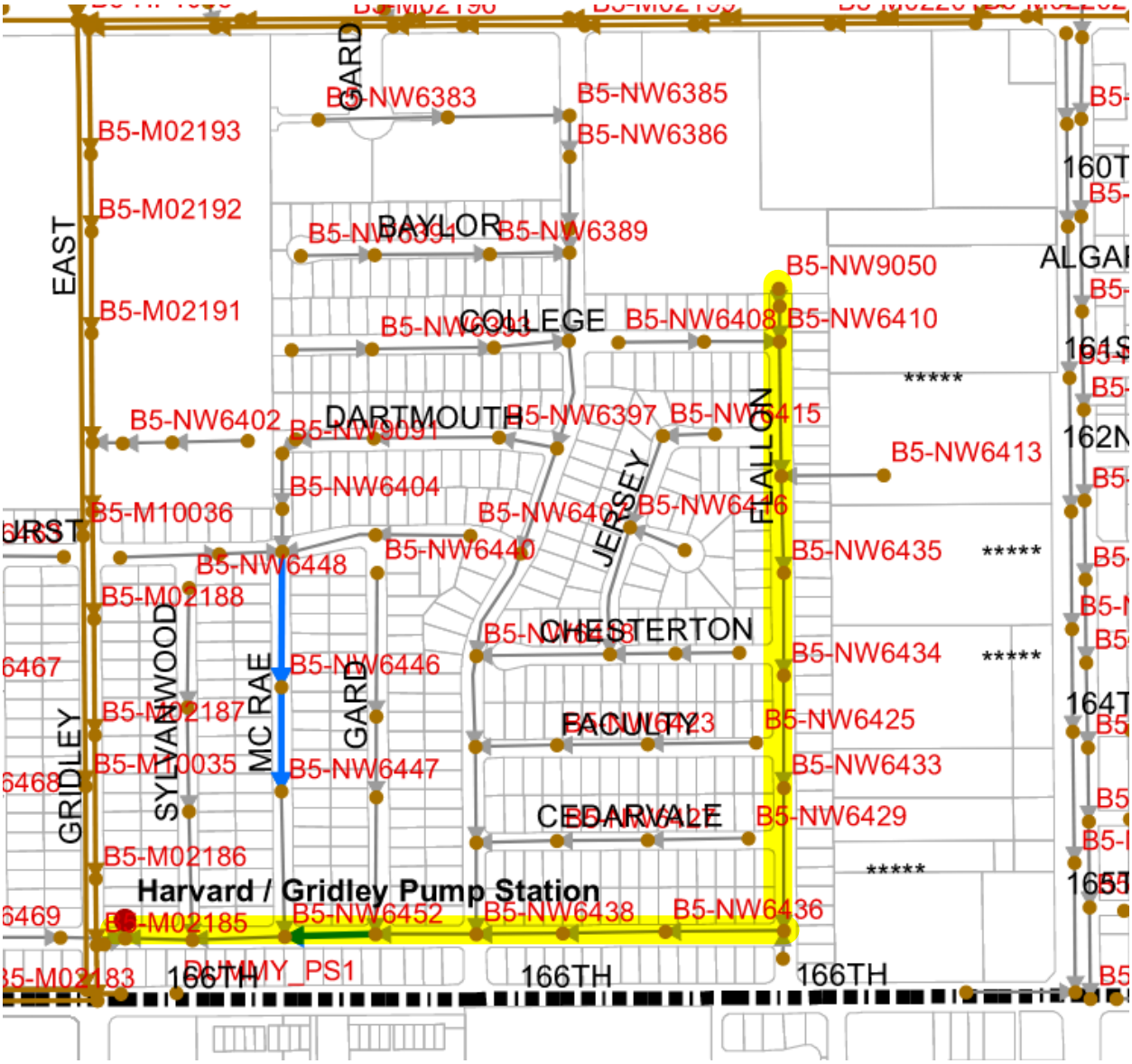
Sewer Analysis Assumptions		
Manning N Used	0.015	
Peak Factor	3	
Peak flow from Commerical	8.41	GPM
Peak flow from Resi	13.79	GPM
Difference from Conversion	5.39	GPM
Project Area (No Dedication)	8.07	AC
Project Area with 10' Dedicatiopn	7.94	AC

Street name	Start	End	GPM	Velocity	d/D	Flow Area from velocity	Theta (rad)	Calculated Pipe Diameter (inch)	Expected Diameter	Calculated Hydraulic radius	Flow Area from d/D	Calced Slope	Actual Slope	Additional flow changing from Commerical to	Total Pipe Flow	New d/D from flow master
Flallon Ave.	B5-NW9050	B5-NW6411	9.4713	0.5575	0.1486	0.037851	1.582940945	8.6	8	0.06138518	0.032389705	0.18%	0.24%	5.39	14.86	0.17
Flallon Ave.	B5-NW6411	B5-NW6410	11.2377	0.3326	0.1858	0.075278	1.782603347	10.4	8	0.075259846	0.044719484	0.10%	0.24%	5.39	16.62	0.18
Flallon Ave.	B5-NW6410	B5-NW6412	17.4795	0.6992	0.2166	0.055698	1.936359723	8.0	8	0.086281938	0.055690956	0.13%	0.24%	5.39	22.87	0.21
Flallon Ave.	B5-NW6412	B5-NW6435	27.4332	0.1751	0.2252	0.349065	1.977821922	19.5	8	0.089283361	0.058862196	0.27%	0.24%	5.39	32.82	0.26
Flallon Ave.	B5-NW6435	B5-NW6434	30.3215	0.1935	0.2402	0.349129	2.048827205	18.6	8	0.09443815	0.064495817	0.26%	0.24%	5.39	35.71	0.27
Flallon Ave.	B5-NW6434	B5-NW6433	34.1892	0.2182	0.2665	0.3491	2.169802556	17.3	8	0.103227996	0.074661457	0.22%	0.24%	5.39	39.57	0.28
Flallon Ave.	B5-NW6433	B5-NW6432	38.7021	1.059	0.2835	0.081424	2.245956043	8.0	8	0.108739803	0.081408273	0.22%	0.24%	5.39	44.09	0.30
Flallon Ave.	B5-NW6432	B5-NW6436	42.3365	0.7762	0.2865	0.121523	2.259247639	9.7	8	0.109698521	0.082612042	0.25%	0.24%	5.39	47.72	0.31
Flallon Ave and Harvard Dr Intersection	B5-NW6436	B5-NW6437	44.0757	1.1353	0.2961	0.086498	2.30150603	8.0	8	0.112738143	0.086489172	0.24%	0.24%	5.39	49.46	0.31
Harvard Dr.	B5-NW6437	B5-NW6438	45.6078	0.2911	0.3591	0.34907	2.570253407	14.1	8	0.131601442	0.112749685	0.12%	0.24%	5.39	50.99	0.32
Harvard Dr.	B5-NW6438	B5-NW6439	84.8785	1.0709	0.4326	0.176589	2.871169419	8.8	8	0.151159668	0.144668339	0.22%	0.24%	5.39	90.26	0.44
Harvard Dr. and Maidstone Ave.	B5-NW6439	B5-NW6452	91.5718	1.1343	0.44	0.179866	2.901012889	8.8	8	0.152978015	0.147930397	0.24%	0.24%	5.39	96.96	0.45
Harvard Dr.	B5-NW6452	B5-NW6451	120.7724	0.4934	0.371	0.545361	2.619689561	17.2	10	0.168687194	0.184128367	0.23%	0.20%	5.39	126.16	0.40
Harvard Dr.	B5-NW6451	B5-NW7307	126.6731	1.4545	0.3857	0.194038	2.680313934	10.0	10	0.173737452	0.194029548	0.22%	0.20%	5.39	132.06	0.41
Harvard Dr.	B5-NW7307	B5-9088b	166.4796	2.4353	0.2486	0.152309	2.087922722	12.0	10	0.121600055	0.105788133	2.07%	0.20%	5.39	171.87	0.47

Appendix 4

Record Drawings and Norwalk Sewer Master Plan References

City of Norwalk Sewer Master Plan Layout



Norwalk Sewer Master Plan: Manhole Stations Data Extract

Norwalk Wastewater Hydraulic Model

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2969		B5-NW6332_B5-NW7306	B5-NW6332	B5-NW7306	6.1378	0.0392	0.1300
2970		B5-NW6333_B5-NW6332	B5-NW6333	B5-NW6332	1.9745	0.6884	0.0493
2971		B5-NW6334_B5-NW6333	B5-NW6334	B5-NW6333	0.7212	0.0045	0.0417
2972		B5-NW6335_B5-NW6332	B5-NW6335	B5-NW6332	3.6881	0.0235	0.1026
2973		B5-NW6336_B5-NW6335	B5-NW6336	B5-NW6335	2.7257	0.0174	0.0851
2974		B5-NW6337_B5-NW7306	B5-NW6337	B5-NW7306	3.5843	0.0229	0.1017
2975		B5-NW6338_B5-NW6329	B5-NW6338	B5-NW6329	6.3615	0.0406	0.1533
2976		B5-NW6339_B5-NW6336	B5-NW6339	B5-NW6336	1.2340	0.0078	0.0635
2977		B5-NW6340_B5-NW6337	B5-NW6340	B5-NW6337	1.9372	0.0122	0.0726
2978		B5-NW6341_B5-NW6338	B5-NW6341	B5-NW6338	4.1935	0.0265	0.0968
2979		B5-NW6342_B5-NW6343	B5-NW6342	B5-NW6343	0.9380	0.0059	0.0524
2980		B5-NW6343_B5-NW6344	B5-NW6343	B5-NW6344	2.0681	0.0132	0.0777
2981		B5-NW6344_B5-NW6345	B5-NW6344	B5-NW6345	3.6807	0.0235	0.0989
2982		B5-NW6345_B5-NW6346	B5-NW6345	B5-NW6346	5.4082	0.0345	0.1118
2983		B5-NW6346_B5-NW6347	B5-NW6346	B5-NW6347	6.7610	0.0432	0.3518
2984		B5-NW6347_B5-NW7319	B5-NW6347	B5-NW7319	267.3552	1.8163	0.3126
2985		B5-NW6349_B5-NW6347	B3-NW6349	B5-NW6347	260.5994	1.6810	0.3246
2986		B5-NW6356_B5-NW6358	B5-NW6356	B5-NW6358	2.5595	0.0163	0.0780
2987		B5-NW6357_B5-NW6356	B5-NW6357	B5-NW6356	1.6451	0.0102	0.0562
2988		B5-NW6358_B5-NW6360	B5-NW6358	B5-NW6360	5.0912	0.0325	0.1038
2989		B5-NW6359_B5-NW6358	B5-NW6359	B5-NW6358	1.5635	0.5031	0.0518
2990		B5-NW6360_B5-NW6362	B5-NW6360	B5-NW6362	7.6383	0.0488	0.1171
2991		B5-NW6361_B5-NW6360	B5-NW6361	B5-NW6360	1.8452	0.5694	0.0533
2992		B5-NW6362_B5-NW6363	B5-NW6362	B5-NW6363	8.0421	0.0513	0.1250
2993		B5-NW6363_B5-NW6364	B5-NW6363	B5-NW6364	9.8075	0.8152	0.1305
2994		B5-NW6364_B5-M02195	B5-NW6364	B5-NW7210	10.0536	1.3656	0.0933
2995		B5-NW6365_B5-NW7319	B5-NW6365	B5-NW7319	0.9480	0.3955	0.0435
2996		B5-NW6366_B5-NW6363	B5-NW6366	B5-NW6363	1.1650	0.4737	0.0442
2997		B5-NW6367_B5-NW6368	B5-NW6367	B5-NW6368	17.8657	0.8310	0.1949
2998		B5-NW6368_B5-NW9037	B5-NW6368	B5-NW9037	17.9503	0.9994	0.1720
2999		B5-NW6369_B5-NW6367	B5-NW6369	B5-NW6367	2.1466	0.0137	0.1310
3000		B5-NW6370_B5-NW6369	B5-NW6370	B5-NW6369	0.9050	0.0057	0.0566
3001		B5-NW6371_B5-NW6367	B5-NW6371	B5-NW6367	14.6137	0.0933	0.1732
3002		B5-NW6372_B5-NW6371	B5-NW6372	B5-NW6371	10.9232	0.0697	0.1398
3003		B5-NW6373_B5-NW6372	B5-NW6373	B5-NW6372	6.3566	0.0406	0.1136
3004		B5-NW6374_B5-NW6373	B5-NW6374	B5-NW6373	2.9485	0.0188	0.0832
3005		B5-NW6375_B5-NW6374	B5-NW6375	B5-NW6374	1.8689	0.0119	0.0613
3006		B5-NW6376_B5-NW6373	B5-NW6376	B5-NW6373	2.1481	0.5796	0.0586
3007		B5-NW6377_B5-NW6372	B5-NW6377	B5-NW6372	3.3167	0.6672	0.0714
3008		B5-NW6378_B5-NW6371	B5-NW6378	B5-NW6371	2.3772	0.0152	0.1062
3009		B5-NW6379_B5-NW6375	B5-NW6379	B5-NW6375	0.7845	0.0049	0.0464
3010		B5-NW6380_B5-NW6376	B5-NW6380	B5-NW6376	0.8646	0.0054	0.0490
3011		B5-NW6381_B5-NW6377	B5-NW6381	B5-NW6377	2.0420	0.0129	0.0655
3012		B5-NW6382_B5-NW6378	B5-NW6382	B5-NW6378	1.0924	0.0068	0.0527
3013		B5-NW6383_B5-NW6384	B5-NW6383	B5-NW6384	5.0707	0.0320	0.1017
3014		B5-NW6384_B5-NW6385	B5-NW6384	B5-NW6385	8.5593	0.0546	0.1353
3015		B5-NW6385_B5-NW6386	B5-NW6385	B5-NW6386	10.7960	0.0689	0.1591
3016		B5-NW6386_B5-NW6387	B5-NW6386	B5-NW6387	13.5456	0.8329	0.1606
3017		B5-NW6387_B5-NW6388	B5-NW6387	B5-NW6388	15.3207	0.4636	0.1776
3018		B5-NW6388_B5-NW6395	B5-NW6388	B5-NW6395	23.2989	0.1487	0.2726
3019		B5-NW6389_B5-NW6388	B5-NW6389	B5-NW6388	6.8164	0.6931	0.1136
3020		B5-NW6390_B5-NW6389	B5-NW6390	B5-NW6389	4.8258	0.0308	0.1094
3021		B5-NW6391_B5-NW6390	B5-NW6391	B5-NW6390	2.5767	0.0163	0.0881
3022		B5-NW6392_B5-NW6393	B5-NW6392	B5-NW6393	1.5696	0.0098	0.0665
3023		B5-NW6393_B5-NW6394	B5-NW6393	B5-NW6394	3.0779	0.0196	0.0837
3024		B5-NW6394_B5-NW6395	B5-NW6394	B5-NW6395	4.5861	0.6919	0.0869

Norwalk Sewer Master Plan: Manhole Stations Data Extract

Norwalk Wastewater Hydraulic Model

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3025		B5-NW6395_B5-NW6396	B5-NW6395	B5-NW6396	28.5261	0.6245	0.3331
3026		B5-NW6396_B5-NW6397	B5-NW6396	B5-NW6397	14.4252	0.0921	0.1568
3027		B5-NW6396_B5-NW6419	B5-NW6396	B5-NW6419	15.2340	0.0972	0.1474
3028		B5-NW6397_B5-NW6398	B5-NW6397	B5-NW6398	15.7874	0.8402	0.1775
3029		B5-NW6398_B5-NW6399	B5-NW6398	B5-NW6399	17.3018	1.0164	0.1657
3030		B5-NW6399_B5-NW9091	B5-NW6399	B5-NW9091	17.9448	0.5823	0.1331
3031		B5-NW6400_B5-NW6403	B5-NW6400	B5-NW6403	0.6300	0.0040	0.0435
3032		B5-NW6401_B5-M02189	B5-NW6401	B5-M02189	976.6387	2.1668	0.5537
3033		B5-NW6402_B5-NW6401	B5-NW6402	B5-NW6401	1.9571	0.6649	0.0502
3034		B5-NW6403_B5-NW6402	B5-NW6403	B5-NW6402	1.5398	0.5149	0.0507
3035		B5-NW6404_B5-NW6405	B5-NW6404	B5-NW6405	19.1181	0.1220	0.1916
3036		B5-NW6405_B5-NW6446	B5-NW6405	B5-NW6446	23.6692	0.9206	0.2209
3037		B5-NW6406_B5-NW6405	B5-NW6406	B5-NW6405	2.2114	0.7543	0.0500
3038		B5-NW6407_B5-NW6406	B5-NW6407	B5-NW6406	1.4096	0.0087	0.0474
3039		B5-NW6408_B5-NW6409	B5-NW6408	B5-NW6409	1.4437	0.0091	0.0685
3040		B5-NW6409_B5-NW6410	B5-NW6409	B5-NW6410	3.2779	0.5246	0.0835
3041		B5-NW6410_B5-NW6412	B5-NW6410	B5-NW6412	17.4795	0.6992	0.2166
3042		B5-NW6411_B5-NW6410	B5-NW6411	B5-NW6410	11.2377	0.3326	0.1858
3043		B5-NW6412_B5-NW6435	B5-NW6412	B5-NW6435	27.4332	0.1751	0.2252
3044		B5-NW6413_B5-NW6412	B5-NW6413	B5-NW6412	8.5057	0.0536	0.1641
3045		B5-NW6414_B5-NW6415	B5-NW6414	B5-NW6415	1.1693	0.0074	0.0584
3046		B5-NW6415_B5-NW6416	B5-NW6415	B5-NW6416	2.4332	0.0155	0.0871
3047		B5-NW6416_B5-NW6417	B5-NW6416	B5-NW6417	5.2390	0.0334	0.1181
3048		B5-NW6417_B5-NW6418	B5-NW6417	B5-NW6418	8.8196	0.7301	0.1308
3049		B5-NW6418_B5-NW6422	B5-NW6418	B5-NW6422	27.1724	0.1734	0.2094
3050		B5-NW6419_B5-NW6418	B5-NW6419	B5-NW6418	16.5676	0.1057	0.1787
3051		B5-NW6420_B5-NW6421	B5-NW6420	B5-NW6421	0.9423	0.0059	0.0525
3052		B5-NW6421_B5-NW6417	B5-NW6421	B5-NW6417	2.0671	0.0132	0.0970
3053		B5-NW6422_B5-NW6426	B5-NW6422	B5-NW6426	32.4366	0.2070	0.2275
3054		B5-NW6423_B5-NW6422	B5-NW6423	B5-NW6422	4.0505	0.7023	0.0790
3055		B5-NW6424_B5-NW6423	B5-NW6424	B5-NW6423	2.5183	0.0161	0.0720
3056		B5-NW6425_B5-NW6424	B5-NW6425	B5-NW6424	1.0150	0.0063	0.0538
3057		B5-NW6426_B5-NW6438	B5-NW6426	B5-NW6438	38.1462	1.2059	0.2578
3058		B5-NW6427_B5-NW6426	B5-NW6427	B5-NW6426	4.3372	0.7420	0.0824
3059		B5-NW6428_B5-NW6427	B5-NW6428	B5-NW6427	2.9454	0.0188	0.0749
3060		B5-NW6429_B5-NW6428	B5-NW6429	B5-NW6428	1.4100	0.0088	0.0599
3061		B5-NW6430_B5-NW6416	B5-NW6430	B5-NW6416	1.5119	0.4433	0.0553
3062		B5-NW6431_B5-NW6432	B5-NW6431	B5-NW6432	1.1913	0.3133	0.1640
3063		B5-NW6432_B5-NW6436	B5-NW6432	B5-NW6436	42.3365	0.7662	0.2865
3064		B5-NW6433_B5-NW6432	B5-NW6433	B5-NW6432	38.7021	1.0590	0.2835
3065		B5-NW6434_B5-NW6433	B5-NW6434	B5-NW6433	34.1892	0.2182	0.2665
3066		B5-NW6435_B5-NW6434	B5-NW6435	B5-NW6434	30.3215	0.1935	0.2402
3067		B5-NW6436_B5-NW6437	B5-NW6436	B5-NW6437	44.0757	1.1353	0.2961
3068		B5-NW6437_B5-NW6438	B5-NW6437	B5-NW6438	45.6078	0.2911	0.3591
3069		B5-NW6438_B5-NW6439	B5-NW6438	B5-NW6439	84.8785	1.0709	0.4326
3070		B5-NW6439_B5-NW6452	B5-NW6439	B5-NW6452	91.5718	1.1343	0.4400
3071		B5-NW6440_B5-NW6444	B5-NW6440	B5-NW6444	1.5933	0.0099	0.0608
3072		B5-NW6441_B5-M10042	B5-NW6441	B5-M10042	78.6583	0.5760	0.0548
3073		B5-NW6442_B5-NW6441	B5-NW6442	B5-NW6441	64.3963	3.6139	0.1711
3074		B5-NW6443_B5-NW6442	B5-NW6443	B5-NW6442	0.8947	0.4354	0.0392
3075		B5-NW6444_B5-NW6445	B5-NW6444	B5-NW6445	3.2649	0.0208	0.0765
3076		B5-NW6445_B5-NW6439	B5-NW6445	B5-NW6439	5.0166	0.6159	0.1852
3077		B5-NW6446_B5-NW6447	B5-NW6446	B5-NW6447	25.6450	0.1637	0.2261
3078		B5-NW6447_B5-NW6452	B5-NW6447	B5-NW6452	27.5255	0.7567	0.2750
3079		B5-NW6448_B5-NW6449	B5-NW6448	B5-NW6449	1.1295	0.0070	0.0559
3080		B5-NW6449_B5-NW6450	B5-NW6449	B5-NW6450	2.8579	0.0182	0.0678

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Norwalk Wastewater Hydraulic Model

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3081		B5-NW6450_B5-NW6451	B5-NW6450	B5-NW6451	4.7232	0.9530	0.0878
3082		B5-NW6451_B5-NW7307	B5-NW6451	B5-NW7307	126.6731	1.4545	0.3857
3083		B5-NW6452_B5-NW6451	B5-NW6452	B5-NW6451	120.7724	0.4934	0.3710
3084		B5-NW6453_B5-NW7307	B5-NW6453	B5-NW7307	39.6575	0.2531	0.3229
3085		B5-NW6454_B5-M02185	B5-NW6454	B5-M02185	381.4435	4.6168	0.3707
3086		B5-NW6455_B5-NW6453	B5-NW6455	B5-NW6453	39.0078	0.2490	0.2493
3087		B5-NW6456_B5-NW6455	B5-NW6456	B5-NW6455	4.6842	1.0328	0.0702
3088		B5-NW6457_B5-NW6456	B5-NW6457	B5-NW6456	2.9473	0.6545	0.0668
3089		B5-NW6458_B5-NW6457	B5-NW6458	B5-NW6457	1.1804	0.0073	0.0556
3090		B5-NW6459_B5-NW6462	B5-NW6459	B5-NW6462	0.5935	0.0037	0.0408
3091		B5-NW6460_B5-NW6461	B5-NW6460	B5-NW6461	0.6809	0.0042	0.0345
3092		B5-NW6461_B5-NW6405	B5-NW6461	B5-NW6405	1.5654	0.7398	0.0402
3093		B5-NW6462_B5-NW6463	B5-NW6462	B5-NW6463	2.0704	0.0132	0.0887
3094		B5-NW6463_B5-NW6467	B5-NW6463	B5-NW6467	10.9055	0.0696	0.1316
3095		B5-NW6464_B5-NW6463	B5-NW6464	B5-NW6463	6.0493	0.0386	0.1136
3096		B5-NW6465_B5-NW6464	B5-NW6465	B5-NW6464	2.8475	0.0180	0.0842
3097		B5-NW6465_B5-NW6473	B5-NW6465	B5-NW6473	2.8478	0.0180	0.0816
3098		B5-NW6466_B5-NW6472	B5-NW6466	B5-NW6472	1.6020	0.0100	0.0627
3099		B5-NW6467_B5-NW6468	B5-NW6467	B5-NW6468	12.8231	0.0818	0.1427
3100		B5-NW6468_B5-NW6469	B5-NW6468	B5-NW6469	14.7093	0.9980	0.1500
3101		B5-NW6469_B5-NW9052	B5-NW6469	B5-NW9052	32.5718	1.0514	0.2157
3102		B5-NW6470_B5-NW6469	B5-NW6470	B5-NW6469	16.9646	0.1083	0.1848
3103		B5-NW6471_B5-NW6470	B5-NW6471	B5-NW6470	5.2005	0.8694	0.0810
3104		B5-NW6472_B5-NW6471	B5-NW6472	B5-NW6471	3.3548	0.0214	0.0765
3105		B5-NW6473_B5-NW6474	B5-NW6473	B5-NW6474	5.7894	0.0370	0.1036
3106		B5-NW6474_B5-NW6475	B5-NW6474	B5-NW6475	8.6232	0.0550	0.1180
3107		B5-NW6475_B5-NW6470	B5-NW6475	B5-NW6470	10.3273	0.0659	0.1405
3108		B5-NW6478_B5-NW6477	B5-NW6478	B5-NW6477	28.1753	0.9756	0.2398
3109		B5-NW6479_B5-NW6478	B5-NW6479	B5-NW6478	21.5011	0.1372	0.2254
3110		B5-NW6480_B5-NW6481	B5-NW6480	B5-NW6481	0.2977	0.0019	0.0495
3111		B5-NW6481_B5-NW6482	B5-NW6481	B5-NW6482	2.8668	0.0183	0.1048
3112		B5-NW6482_B5-NW6483	B5-NW6482	B5-NW6483	8.6728	0.0554	0.1483
3113		B5-NW6483_B5-NW6484	B5-NW6483	B5-NW6484	12.3128	0.0786	0.1655
3114		B5-NW6484_B5-NW6485	B5-NW6484	B5-NW6485	14.6007	0.0932	0.1753
3115		B5-NW6485_B5-NW6479	B5-NW6485	B5-NW6479	17.7710	0.1134	0.1959
3116		B5-NW6487_B5-NW6488	B5-NW6487	B5-NW6488	0.7102	0.3273	0.0690
3117		B5-NW6488_B5-NW6495	B5-NW6488	B5-NW6495	6.8819	0.0439	0.1358
3118		B5-NW6489_B5-NW6488	B5-NW6489	B5-NW6488	3.5464	0.6537	0.0758
3119		B5-NW6490_B5-NW6489	B5-NW6490	B5-NW6489	2.1861	0.0138	0.0695
3120		B5-NW6491_B5-NW6488	B5-NW6491	B5-NW6488	2.1838	0.5662	0.0602
3121		B5-NW6492_B5-NW6491	B5-NW6492	B5-NW6491	1.1334	0.0071	0.0514
3122		B5-NW6493_B5-NW6494	B5-NW6493	B5-NW6494	1.9671	0.0124	0.0738
3123		B5-NW6494_B5-NW6495	B5-NW6494	B5-NW6495	3.6173	0.5318	0.0884
3124		B5-NW6495_B5-NW6500	B5-NW6495	B5-NW6500	17.6638	0.1127	0.1815
3125		B5-NW6496_B5-NW6495	B5-NW6496	B5-NW6495	5.9830	0.7955	0.0947
3126		B5-NW6497_B5-NW6496	B5-NW6497	B5-NW6496	4.9241	0.6432	0.0958
3127		B5-NW6498_B5-NW6499	B5-NW6498	B5-NW6499	1.7980	0.0113	0.0729
3128		B5-NW6499_B5-NW6500	B5-NW6499	B5-NW6500	3.5715	0.5277	0.0881
3129		B5-NW6500_B5-NW6584	B5-NW6500	B5-NW6584	24.7279	0.1578	0.2073
3130		B5-NW6501_B5-NW6500	B5-NW6501	B5-NW6500	2.3211	0.6651	0.0563
3131		B5-NW6502_B5-NW6501	B5-NW6502	B5-NW6501	1.2815	0.0080	0.0521
3132		B5-NW6503_B5-NW6497	B5-NW6503	B5-NW6497	3.7959	0.0242	0.0954
3133		B5-NW6504_B5-NW6503	B5-NW6504	B5-NW6503	0.9671	0.3851	0.0450
3134		B5-NW6505_B5-NW6503	B5-NW6505	B5-NW6503	2.1229	0.0135	0.0797
3135		B5-NW6506_B5-NW9066	B5-NW6506	B5-NW9066	0.2651	0.2174	0.0321
3136		B5-NW6507_B5-NW6509	B5-NW6507	B5-NW6509	1.1690	0.0075	0.0655

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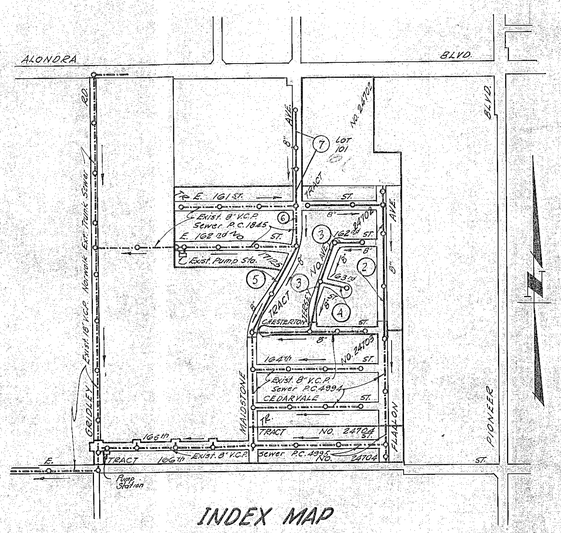
Norwalk Wastewater Hydraulic Model

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3753		B5-NW7144_B5-NW9238	B5-NW7144	B5-NW9238	141.8614	1.3698	0.3350
3754		B5-NW7145_B5-NW7144	B5-NW7145	B5-NW7144	8.0045	1.8160	0.0659
3755		B5-NW7146_B5-NW7145	B5-NW7146	B5-NW7145	6.3398	0.7380	0.1036
3756		B5-NW7147_B5-NW7146	B5-NW7147	B5-NW7146	4.8800	0.0311	0.0976
3757		B5-NW7148_B5-NW7147	B5-NW7148	B5-NW7147	4.4560	0.2580	0.0893
3758		B5-NW7149_B5-NW7148	B5-NW7149	B5-NW7148	4.0464	0.0258	0.0862
3759		B5-NW7150_B5-NW7149	B5-NW7150	B5-NW7149	3.2292	0.0206	0.0790
3760		B5-NW7151_B5-NW7150	B5-NW7151	B5-NW7150	2.2499	0.0143	0.0636
3761		B5-NW7152_B5-NW7151	B5-NW7152	B5-NW7151	0.9658	0.0061	0.0490
3762		B5-NW7153_B5-NW7154	B5-NW7153	B5-NW7154	0.8586	0.0053	0.0495
3763		B5-NW7154_B5-NW7155	B5-NW7154	B5-NW7155	2.4620	0.0157	0.0728
3764		B5-NW7155_B5-NW7156	B5-NW7155	B5-NW7156	4.4597	0.7293	0.0822
3765		B5-NW7156_B5-NW7157	B5-NW7156	B5-NW7157	6.2124	0.0397	0.0773
3766		B5-NW7157_B5-NW7168	B5-NW7157	B5-NW7168	7.3713	0.9825	0.0945
3767		B5-NW7168_B5-M15159	B5-NW7168	B5-M15159	340.7258	0.9403	0.1062
3768		B5-NW7174_B5-NW6731	B5-NW7174	B5-NW6731	2.2255	0.0142	0.0826
3769		B5-NW7175_B5-M10059	B5-NW7175	B5-M10059	2,563.9462	1.6474	0.3200
3770		B5-NW7178_B5-NW6706	B5-NW7178	B5-NW6706	1.0991	0.0070	0.0596
3771		B5-NW7179_B5-M10056	B5-NW7179	B5-M10056	2,562.7493	1.0354	0.3149
3772		B5-NW7196_B5-NW6748	B5-NW7196	B5-NW6748	42.0769	0.2686	0.2882
3773		B5-NW7197_B5-NW6634	B5-NW7197	B5-M02210	799.1649	1.0070	0.5603
3774		B5-NW7198_B5-NW6634	B5-NW6632	B5-M02210	138.1044	1.0481	0.5004
3775		B5-NW7210_B5-HF1015	B5-NW7210	B5-M10037	2,563.1306	2.4474	0.2403
3776		B5-NW7215_B5-NW7216	B5-NW7215	B5-NW7216	1.4728	0.0094	0.0798
3777		B5-NW7216_B5-NW6176	B5-NW7216	B5-NW6176	18.6877	1.8253	0.1168
3778		B5-NW7218_B5-NW6243	B5-NW7218	B5-NW6243	0.1878	0.0012	0.0227
3779		B5-NW7219_B5-NW6245	B5-NW7219	B5-NW6245	28.0011	0.1787	0.2881
3780		B5-NW7220_B5-NW6244	B5-NW7220	B5-NW6244	3.6043	0.6477	0.0771
3781		B5-NW7222_B5-M10139	B5-NW7222	B5-M10139	123.9112	0.8353	0.1047
3782		B5-NW7249_B5-NW6789	B5-NW7249	B5-NW6789	7.0755	0.0452	0.1997
3783		B5-NW7252_B5-M02219	B5-NW7252	B5-NW6783	550.2088	2.0466	0.3720
3784		B5-NW7253_B5-M02220	B5-NW7253	B5-NW7252	541.1271	1.7623	0.4108
3785		B5-NW7257_B5-NW7222	B5-NW7257	B5-NW7222	116.7781	1.1800	0.3241
3786		B5-NW7259_B5-NW6829	B5-NW7259	B5-NW6829	28.4180	1.0996	0.2217
3787		B5-NW7263_B5-NW5083	B5-NW7263	B5-NW5083	82.9726	1.5847	0.3682
3788		B5-NW7264_B5-NW7263	B5-NW7264	B5-NW7263	1.5628	0.6651	0.0811
3789		B5-NW7265_B5-NW5025	B5-NW7265	B5-NW5025	2.7479	0.5349	0.0729
3790		B5-NW7269_B5-M10176	B5-NW7269	B5-M10176	646.6326	1.9902	0.3409
3791		B5-NW7280_B5-NW6978	B5-NW7280	B5-NW6978	31.6696	0.3210	0.3341
3792		B5-NW7283_B5-NW7284	B5-NW7283	B5-NW7284	51.7976	0.3306	0.3699
3793		B5-NW7284_B5-NW7285	B5-NW7284	B5-NW7285	52.0548	0.7397	0.4600
3794		B5-NW7285_B5-NW6569	B5-NW7285	B5-NW6569	52.2678	0.3336	0.3129
3795		B5-NW7287_B5-NW7072	B5-NW7287	B5-NW7072	0.9487	0.0061	0.1509
3796		B5-NW7288_B5-NW7289	B5-NW7288	B5-NW7289	0.5716	0.0036	0.0454
3797		B5-NW7289_B5-NW7290	B5-NW7289	B5-NW7290	1.3518	0.3681	0.0648
3798		B5-NW7290_B5-NW7122	B5-NW7290	B5-NW7122	34.5878	1.2920	0.2250
3799		B5-NW7298_B5-NW6801	B5-NW7298	B5-NW6801	0.4782	0.3738	0.0663
3800		B5-NW7302_B5-NW7303	B5-NW7302	B5-NW7303	97.2116	1.5463	0.2343
3801		B5-NW7303_B5-NW6783	B5-NW7303	B5-NW6783	98.5391	1.5978	0.2311
3802		B5-NW7304_B5-NW7302	B5-NW7304	B5-NW7302	96.3083	0.8362	0.2229
3803		B5-NW7305_B5-NW7304	B5-NW7305	B5-NW7304	95.1701	1.3862	0.2493
3804		B5-NW7306_B5-NW6330	B5-NW7306	B5-NW6330	10.6614	0.0681	0.1723
3805		B5-NW7307_B5-9088b	B5-NW7307	B5-9088b	166.4796	2.4353	0.2486
3806		B5-NW7308_B5-NW6507	B5-NW7308	B5-NW6507	0.3202	0.4192	0.0351
3807		B5-NW7308_B5-NW7309	B5-NW7308	B5-NW7309	0.0878	0.0006	0.0290
3808		B5-NW7309_B5-NW6505	B5-NW7309	B5-NW6505	0.7443	0.3434	0.0408

Norwalk Sewer Master Plan: Manhole Stations Data Extract

Norwalk Wastewater Hydraulic Model

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3809		B5-NW7310_B5-NW5074	B5-NW7310	B5-NW5074	1.4144	0.0088	0.0575
3810		B5-NW7312_B5-M10008	B5-NW7312	B5-M10008	715.6443	1.2051	0.5670
3811		B5-NW7314_B5-M02225	B5-NW7314	B5-M02225	403.3962	1.7959	0.3261
3812		B5-NW7318_B5-NW6319	B5-NW7318	B5-NW6319	1.9056	0.0122	0.0879
3813		B5-NW7319_B5-HF1015	B5-NW7319	B5-M10038	268.6924	2.0365	0.2889
3814		B5-NW7320_B5-NW6367	B5-NW7320	B5-NW6367	0.5805	0.0037	0.1168
3815		B5-NW7324_B5-NW7325	B5-NW7324	B5-NW7325	2.1292	0.0136	0.0617
3816		B5-NW7325_B5-NW5086	B5-NW7325	B5-NW5086	3.7445	0.0239	0.0754
3817		B5-NW7327_B5-M09989	B5-NW7327	B5-M09989	521.0744	1.0240	0.3895
3818		B5-NW7328_B5-NW7329	B5-NW7328	B5-NW7329	530.4317	1.2135	0.5402
3819		B5-NW7329_B5-NW7330	B5-NW7329	B5-NW7330	542.7001	1.0913	0.4766
3820		B5-NW7330_B5-NW7331	B5-NW7330	B5-NW7331	552.9065	1.4751	0.4785
3821		B5-NW7331_B5-M09984	B5-NW7331	B5-M09984	562.4246	1.2544	0.4683
3822		B5-NW7332_B5-NW7333	B5-NW7332	B5-NW7333	585.6301	1.4901	0.4963
3823		B5-NW7333_B5-NW7334	B5-NW7333	B5-NW7334	588.9051	1.5035	0.4951
3824		B5-NW7334_B5-M09981	B5-NW7334	B5-M09981	597.3054	2.2804	0.3650
3825		B5-NW7335_B5-NW5472	B5-NW7335	B5-NW5472	15.3605	0.2964	0.2703
3826		B5-NW7336_B5-NW5431	B5-NW7336	B5-NW5431	0.5824	0.0037	0.0868
3827		B5-NW7347_B5-NW5423	B2-NW7347	B5-NW5423	3.2375	0.5557	0.0796
3828		B5-NW7351_B5-NW5290	B5-NW7351	B5-NW5290	14.6227	0.8816	0.1628
3829		B5-NW7351_B5-NW9090	B5-NW7351	B5-NW9090	29.1377	1.7567	0.1628
3830		B5-NW7352_B5-NW5600	B5-NW7352	B5-NW5600	36.4129	1.0659	0.2426
3831		B5-NW7354_B5-NW5546	B5-NW7354	B5-NW5546	837.1621	0.3796	0.2516
3832		B5-NW7358_B5-NW7351	B5-NW7358	B5-NW7351	43.4844	1.2467	0.2742
3833		B5-NW9010_B5-NW5609	B5-NW9010	B5-NW5609	1.3122	0.0083	0.0564
3834		B5-NW9011_B5-NW5294	B5-NW9011	B5-NW5294	6.4672	0.0413	0.1257
3835		B5-NW9012_B5-NW7354	B5-NW9012	B5-NW7354	39.4825	0.8194	0.3464
3836		B5-NW9017_B5-NW5199	B5-NW9017	B5-NW5199	4.8313	0.0308	0.0992
3837		B5-NW9018_B5-NW5202	B5-NW9018	B5-NW5202	2.3404	0.0149	0.1002
3838		B5-NW9019_B5-NW5172	B5-NW9019	B5-NW5172	3.0536	0.4492	0.0995
3839		B5-NW9025_B5-NW5000	B5-NW9025	B5-NW5000	688.8938	0.8676	0.4447
3840		B5-NW9034_B5-NW6180	B5-NW9034	B5-NW6180	0.7557	0.3545	0.0403
3841		B5-NW9037_B5-M02196	B5-NW9037	B5-M02196	963.8485	1.2150	0.6219
3842		B5-NW9039_B5-NW6115	B5-NW9039	B5-NW6115	22.2275	0.8024	0.2328
3843		B5-NW9050_B5-NW6411	B5-NW9050	B5-NW6411	9.4713	0.5575	0.1486
3844		B5-NW9052_B5-NW6455	B5-NW9052	B5-NW6455	33.5204	1.0000	0.2228
3845		B5-NW9061_B5-NW6677	B5-NW9061	B5-NW6677	4.0034	0.0256	0.1057
3846		B5-NW9065_B5-NW6847	B5-NW9065	B5-NW6847	0.6045	0.0017	0.1076
3847		B5-NW9066_B5-NW6505	B5-NW9066	B5-NW6505	0.7443	0.0047	0.0524
3848		B5-NW9067_B5-NW6523	B5-NW9067	B5-NW6523	2.5418	0.1630	0.1001
3849		B5-NW9068_B5-NW5387	B5-NW9068	B5-NW5387	2.1360	0.0136	0.0825
3850		B5-NW9069_B5-NW5390	B5-NW9069	B5-NW5390	0.6486	0.2404	0.0445
3851		B5-NW9089_B5-M14998	B5-NW9089	B5-M14998	272.0747	0.6583	0.1237
3852		B5-NW9090_B5-NW5254	B5-NW9090	B5-NW5254	945.5661	2.0684	0.2608
3853		B5-NW9091_B5-NW6404	B5-NW9091	B5-NW6404	18.2293	0.7377	0.1611
3854		B5-NW9092_B5-NW7220	B5-NW9092	B5-NW7220	3.4586	0.5471	0.0841
3855		B5-NW9094_B5-NW1895	B5-NW9094	B5-HF1008	5.9532	0.6402	0.1094
3856		B5-NW9095_B5-NW1396	B5-NW9095	B5-NW1396	1.7356	0.4652	0.0587
3857		B5-NW9096_B5-NW7269	B5-NW9096	B5-NW7269	0.8344	1.1354	0.0197
3858		B5-NW9099_B5-NW5645	B5-NW9099	B5-NW5645	13.9694	0.3119	0.2089
3859		B5-NW9100_B5-NW9099	B5-NW9100	B5-NW9099	12.7681	0.0813	0.1330
3860		B5-NW9101_B5-NW9100	B5-NW9101	B5-NW9100	10.1016	0.7140	0.1458
3861		B5-NW9102_B5-NW1894	B5-NW9102	B5-NW1894	8.0840	0.0516	0.1192
3862		B5-NW9108_B5-NW5371	B5-NW9108	B5-NW5371	9.1732	0.0585	0.1390
3863		B5-NW9109_B5-NW9110	B5-NW9109	B5-NW9110	75.6703	0.2147	0.2601
3864		B5-NW9110_B5-NW1466	B5-NW9110	B5-NW1466	76.0133	0.8044	0.3134



INDEX MAP
TRACT No 24702
P.C. 4993 SCALE: 1"=500'

NORWALK BLDG. DIST. NO. 4.06

NOTES:

PROVIDE STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTER LINE OF EACH MANHOLE.

NO REPRESENTATIVE OF THE CITY ENGINEER WILL SURVEY OR LAYOUT ANY PORTION OF THE WORK.

THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL FURNISH THE CITY ENGINEER WITH GRADE SHEETS AND STATION FOR ALL HOUSE LATERALS AND Y BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ANY CHANGE IN LOCATION SHALL BE REQUESTED IN WRITING BY THE OWNER OR HIS REPRESENTATIVE.

NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE CITY ENGINEER.

1. USE STANDARD MANHOLE FRAMES AND COVERS, S-A-117,
2. USE STANDARD STRENGTH PIPE
3. ~~USE CEMENT MORTAR, "WEDGE LOCK" OR "SPEED SEAL" FOR ALL VITRIFIED CLAY PIPE JOINTS, PER SPECS. SEC. 30 & 40~~
4. RESURFACE ALL TRENCH WITHIN PAVED AREA TO MEET L. A. COUNTY ROAD DEPT., OR CALIF. STATE HIGHWAY DEPT. REQUIREMENTS IN ACCORDANCE WITH PERMITS.
5. ENCASE FOUR FEET OF SEWER AT POINTS OF INTERFERENCE WITH POLES, S-A-171, CASE III
6. HOUSE LATERALS TO BE CONSTRUCTED WITH INVERTS AT PROPERTY LINE G FEET BELOW CURB GRADE EXCEPT AS NOTED.
7. ALL STRUCTURES SHALL BE BRICK SEWER STRUCTURES, S-A-104, EXCEPT AS NOTED.
8. FOR ALLOWABLE LEAKAGE TEST USE FORMULA NO. 2 SPEC'S., SEC. 4
9. MANHOLE TOPS IN UNIMPROVED RIGHTS-OF-WAY TO BE 6" ABOVE FINISHED GRADE.
10. THE PRIVATE ENGINEER IS TO FURNISH THE HOUSE LATERAL DEPTH AT THE PROPERTY LINE BELOW THE TOP OF CURB ELEVATION FOR EACH HOUSE LATERAL ON THE GRADE SHEET.
11. USE JOINT COMPOUND FOR ALL VITRIFIED CLAY PIPE JOINTS PER SPECS. 38 UNLESS GROUND WATER IS ENCOUNTERED AND TRENCH CANNOT BE DRIED TO THE SATISFACTION OF THE CITY ENGR. IN WHICH CASE "WEDGE LOCK" OR "SPEED SEAL" PRECISION GROUND JOINTS PER V.C.P. WITH NATURAL OR SYNTHETIC RUBBER GASKETS OR METAL FORMS & GASKETS SHALL BE USED PER SPECS. SEC. 34, 36 & 40.
11. USE JOINT COMPOUND, "WEDGE-LOCK", OR "SPEED-SEAL", FOR ALL VITRIFIED CLAY PIPE JOINTS, PER SPEC'S SEC'S. 34 & 40. IF GROUND WATER IS ENCOUNTERED, METAL FORMS & GASKETS, OR WEDGE-LOCK, OR "SPEED-SEAL" SHALL BE USED PER SPEC'S, SEC'S 34, 35, 36 & 40.

NOTE:
THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION AND STORM DRAIN DIVISION BY TELEPHONE, MADISON 9-4747, EXT. 362, AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.

Revision: Page 2, Extend sewer from M.H. at Sta. 16+81.00 to Sta. 17+22.68. Add Page 7 showing sewer extension of ± 64' and 3 M.H's.
Approved by: E. Acevedo 3-18-59
Office of the City Engineer R.E. #10915

B.M. 5'x 2"Ø Spike & Lead ± 45' East of curb return at N.E. Cor. Alondra Blvd & Moidstone Ave. ELEV. 71.679
ARTESIA QUAD, 1955 Adj.

NO CHARGE FOR CONNECTIONS
E. Acevedo 1-9-59

Revision:
Delete Sewer in Chesterton St. Page 4 B.
Delete 12 Feet of sewer on Flallon Ave. Page 5 between station 7+02 & station 7+12

Approved By: H.K. Linda 1-20-59
Office of the City Engineer R.E. No. 9486
NOTE: Revision made before prints received.

PROFILE ALIGNMENT AND GRADE OF P.C. 4993
SANITARY SEWERS PAGE 1
TO BE CONSTRUCTED IN

TRACT NO. 24702

PRIVATE CONTRACT NO. 4993

W.S. 33
4 SHEETS; 7 PAGES
SCALE: VERT. 1"=5' HORIZ. 1"=40' NOV., 1958
PREPARED IN THE OFFICES OF
KEMMERER ENGINEERING CO., INC.
By: Hans C. Thomsen
REG. C. E. NO. 9244

27,777

FOR LEGEND SEE PLAN NO. S-A-64

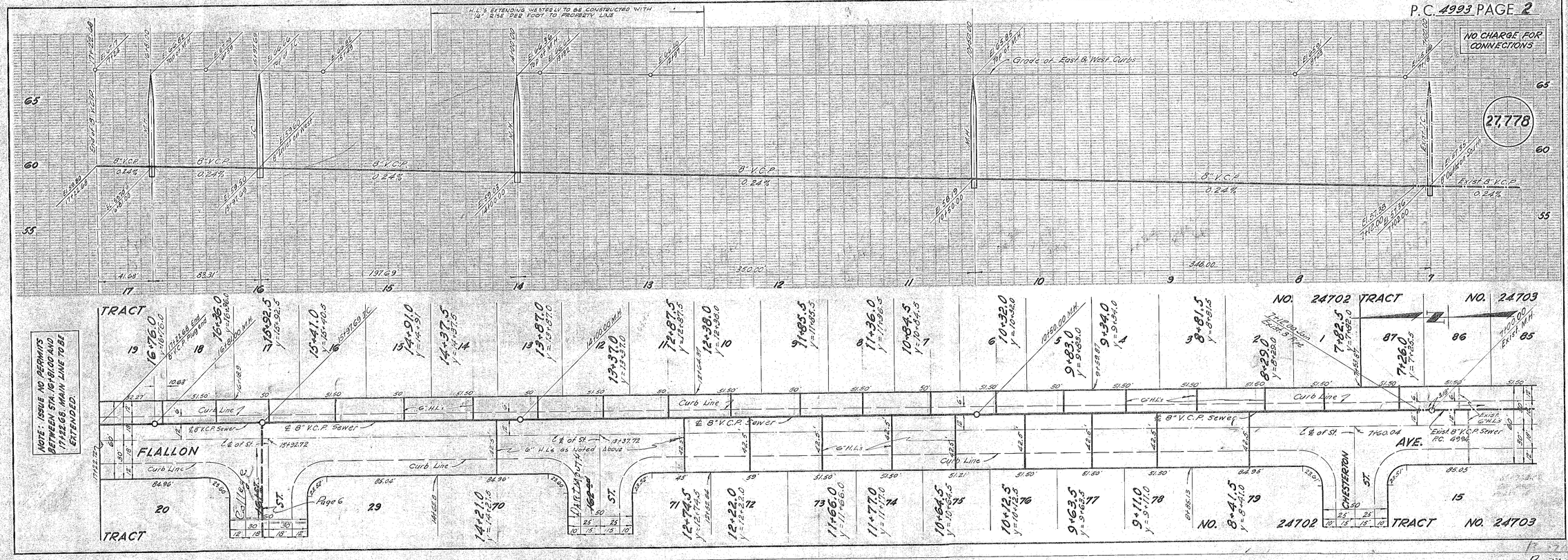
NOTE:
GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURBS, CENTER LINE OF STREETS, OR CENTER LINE OF ALLEYS ARE SHOWN BY CIRCLES ON PROFILES. AT ALL POINTS BETWEEN DESIGNATED POINTS THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGNATED POINTS.
ELEVATIONS ARE IN FEET ABOVE U.S.C.& G.S. SEA LEVEL DATUM OF 1929.
THIS DRAWING AND THE DATA HEREON ARE HEREBY MADE A PART OF THE SPECIFICATIONS.
WORK SHALL BE CONSTRUCTED ACCORDING TO SPECIFICATIONS ON FILE IN THE OFFICE OF THE CITY ENGINEER AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE CITY ENGINEER.
BEFORE WORK CAN BE STARTED, THE CONTRACTOR MUST OBTAIN A PERMIT TO EXCAVATE IN CITY STREETS FROM THE L.A. COUNTY ROAD DEPT. DIST. NO. 4 AND MAKE A DEPOSIT WITH THE CITY OF NORWALK, TO COVER THE COST OF CONSTRUCTION INSPECTION AND SECOND PLANS.
APPROVAL OF THIS PLAN BY THE CITY OF NORWALK DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE, OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.
IF WORK IS TO BE DONE IN A STATE HIGHWAY, A PERMIT MUST BE OBTAINED FROM THE STATE OF CALIFORNIA, DIVISION OF HIGHWAYS, 120 SOUTH SPRING STREET.

CITY OF NORWALK, CALIFORNIA

APPROVED, JOHN A. LAMBIE, CITY ENGINEER
APPROVED, C.R. COMPTON, CHIEF ENGINEER
CO. SAN. DIST. NO. 2
BY C.H. Hughes SANITATION ENGINEER
BY E.R. Bennett for OFFICE ENGINEER
CHECKED BY H.K. Linda 1-13-59
OFFICE OF CITY ENGINEER, REG. C. E. NO. 9486

SUBMITTED BY: John L. Eaton 1-7-59
LOS CERRITOS REGIONAL ENGINEER REG. C.E. NO. 3871

P.C. 4993 PAGE 2



P.C. 4993 PAGE 5

NO CHARGE FOR CONNECTIONS

27,781

M.H. BASE DETAIL
At Intersection of Maidstone Ave. & 161st St. (See Page No. 6)

Place Concrete to plug Exist. chamber. Form cave to meet Exist. base.

Exist. Inlet on North

New outlet on South

Exist. curved conc. invert

Grade of East & West Curbs

Subgrade Over Sewer

Exist. 8" V.C.P. 0.27%

8" V.C.P. 0.40%

Exist. 8" V.C.P. 0.40%

TRACT

No. 17125 M.B. 415-8,9

RANCHO

No. 24702

LOS COYOTES P.I. 493-484

COLLEGE DR.

MAIDSTONE

DAM ROAD

AVE.

Curb Line

Exist. R.&O. Pavmt.

Exist. 8" V.C.P. Sewer P.C. 1845

8" V.C.P. Sewer

Exist. 8" V.C.P. Sewer P.C. 4994

Exist. 8" V.C.P. Sewer P.C. 4993

Page 6

Page 5

Page 7

Page 2

P.C. 4993 PAGE 6

NO CHARGE FOR CONNECTIONS

27,782

H.L.'S TO BE CONSTRUCTED WITH 1/4" RISE PER FOOT TO PROPERTY LINE

Grade of Exist. East & West Curbs

Grade of North & South Curbs

Exist. 8" V.C.P. 0.27%

8" V.C.P. 0.24%

8" V.C.P. 0.24%

Shown right

This lot to be served by Sewer in 161st St.

TRACT

No. 24702

No. 17125 M.B. 415-8,9

RANCHO

MAIDSTONE

AVE.

College Dr. 161st St.

Dr. St.

FALLON

Exist. 8" V.C.P. Sewer P.C. 1845

8" V.C.P. Sewer

6" H.L.'s as noted above, inclusive

Curb Line

Exist. R.&O. Pavmt.

Page 7

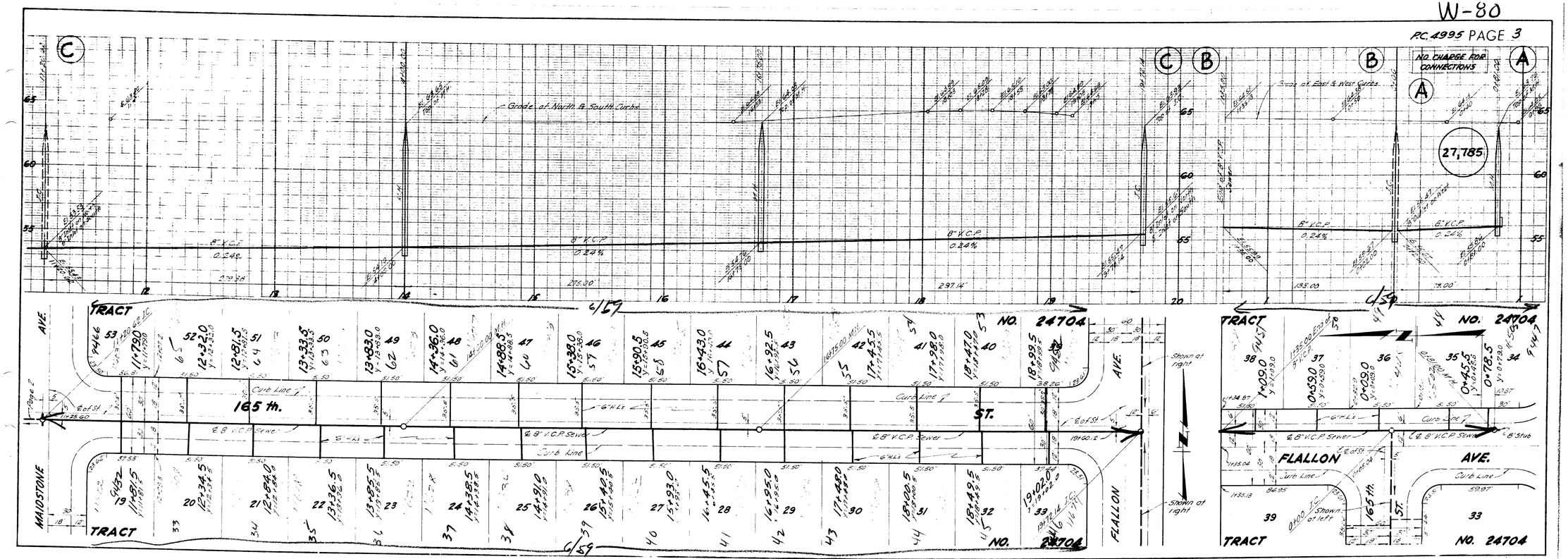
Page 2

B-371F

B-371F

W-80

P.C. 4995 PAGE 3



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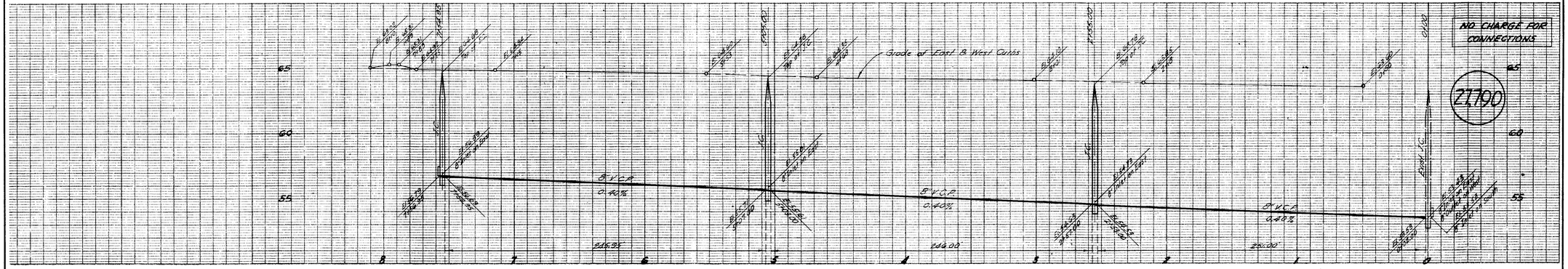
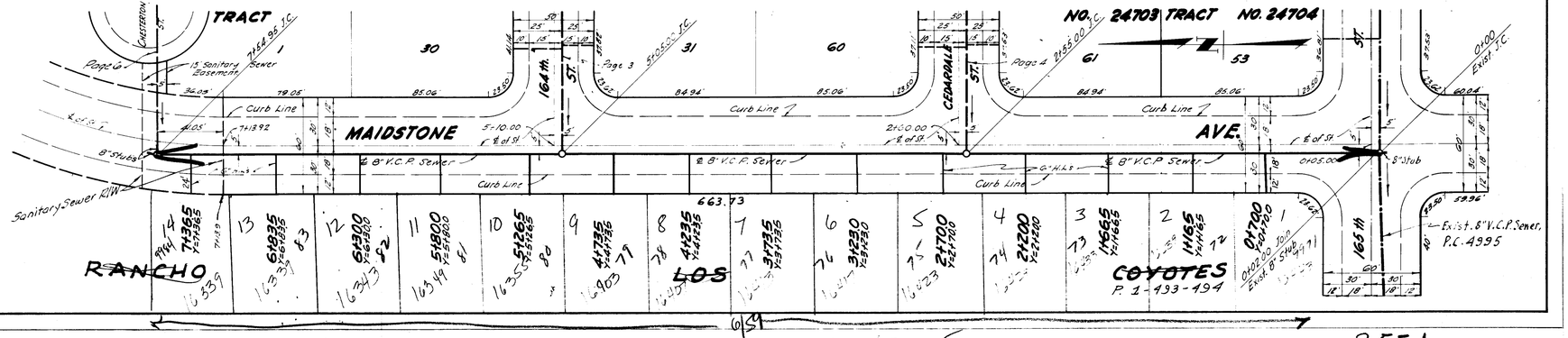
W-73

P.C. 4994 PAGE 2





TRACT 24705

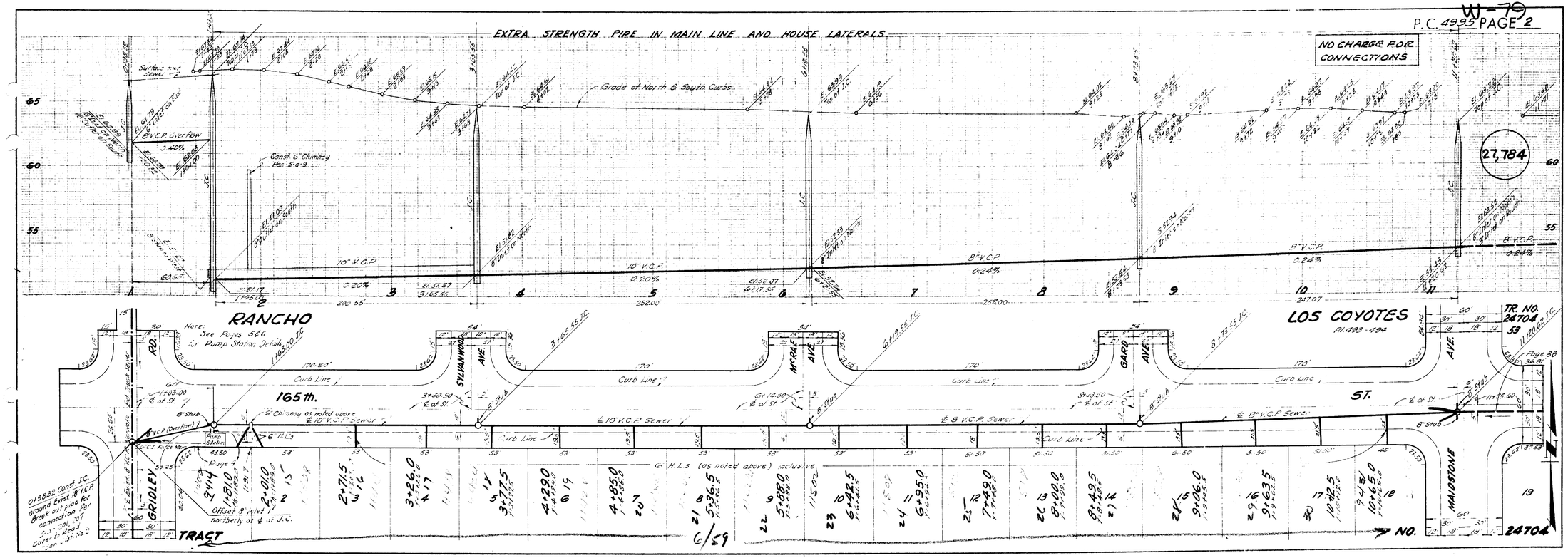
3551

W-79

P.C. 4995 PAGE 2

EXTRA STRENGTH PIPE IN MAIN LINE AND HOUSE LATERALS

NO CHARGE FOR CONNECTIONS



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3551