Appendix L
Sewer Area Study Plan

AECOM

WILSON MEANY

D & D ENGINEERING, INC.

SEWER AREA STUDY

Inglewood Basketball and Entertainment Center

April 30, 2019

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I. INTRODUCTION

The purpose of this report is to determine the following:

- The impact of the proposed project on the existing City of Inglewood sewer system and pipe network capacity. The pipe segments are analyzed from the proposed development to the Los Angeles County Sanitation District (LACSD) trunk sewer lines. The capacities of existing City and LACSD sewer lines were analyzed, and the adequacy of the existing sewer systems to convey the additional anticipated wastewater from the proposed project was confirmed. The adequacy of existing LACSD lines are defined including future peak flows from Los Angeles Stadium and Entertainment District Project (LASED) that is currently under construction.
- To size the proposed sewer lines appropriately for the expected peak sewer flows from the proposed project based on the development program.

II. SITE DESCRIPTION

"Inglewood Basketball and Entertainment Center" (IBEC) Project is comprised of three sites located near the intersection of Century Boulevard and Prairie Avenue in the city of Inglewood. The first and main project site is located to the southeast of the intersection the second parcel is located to the southwest of the intersection, and the third piece is southeast of Century and Doty intersection. The first site of the proposed development includes a multi-purpose sport arena, a parking structure and other miscellaneous-use buildings. The site is located on an approximately 17-acre site bound by Century Blvd. on the North, Prairie Avenue on the West, Doty Avenue on the East and 103th Street on the South. The second site includes proposed parking structure over an approximately 5.5-acre parcel, not contiguous to the main project site, just west of Prairie Avenue. The third site includes a proposed parking structure and a hotel over an approximately 5-acre parcel, not contiguous to the main project site, just east of Doty Avenue. Refer to the project site map, *Figure 1 — Vicinity Map,* for project site locations.

The existing site over the proposed main project site currently contains commercial buildings, a hotel, a fast-food restaurant and significant portions of vacant land. The existing site over the proposed parking structure, surface parking and a hotel consists of five parcels that are currently all vacant. The existing site over the proposed parking structure west of Prairie Avenue site consists of twenty-seven parcels that are currently all vacant.

The sites are zoned as Limited Manufacturing (M-1L) and Airport Commercial (C-2A) per the City of Inglewood Zoning Map. Please refer to Existing Zoning Map in *Appendix A — Zoning Map*.

III. EXISTING SEWER SYSTEMS DESCRIPTION

The proposed project is located within the jurisdictional boundaries of the Los Angeles County Sanitation District (LACSD) District No.5. Two separate sewer systems exist in the vicinity of the project area, LACSD trunk sewers and City of Inglewood local collector sewer lines. LACSD system includes two trunk sewers, Prairie Avenue Trunk Sewer and South Inglewood Orange Trunk Sewer. Please refer to *Figure 2 — Existing Sewer Systems* for existing sewer infrastructure.

The table below provides a summary of the existing sewer infrastructure in the vicinity of the proposed project. This summary is based on the latest available and reviewed record drawings. Please refer to *Appendix H As-Built Plans* for copies of the City of Inglewood and LACSD record drawings.

Location	Size	Notes
Freeman Avenue	LACSD 30" Prairie Trunk Sewer south of 102nd Street to 107th Street City of Inglewood 8" Sewer Line	Both LACSD and City sewers flow south.
Doty Avenue	LACSD 15" Orange Trunk Sewer Line	Flows south
Prairie Avenue	City of Inglewood 8" Sewer Line	Flows south
Century Boulevard	LACSD 8" Sewer Line east of Doty Avenue. City of Inglewood 8" Sewer Line west of Doty Avenue.	Flows west to MH at Century and Doty intersection Flows east to MH at Century and Doty intersection
102ND Street	City of Inglewood 8" Sewer Lines east and west from Doty Avenue. City of Inglewood 8" Sewer Line west of Prairie Ave	City line between Prairie Ave and Doty Ave flows in two directions. The sewer flows west towards Prairie Avenue and east to Doty Avenue. Flow directions is split from the second MH west of Doty Avenue. City line east of Doty flowing west to MH at Doty Avenue. City Line west of Prairie Ave flowing west to MH at Freeman Avenue.
103TH Street	City of Inglewood 8" Sewer Line between Prairie Avenue and Freeman Avenue	Flowing west to MH at Freeman Avenue

IV. PROJECT DESCRIPTION

Project IBEC is a mixed-use project that includes a multi-purpose sport arena with auxiliary structures including retail, office buildings, restaurants, hotel, parking structures and plaza areas. The project consists of 71,000 square feet of office space, 48,000 square feet of retail and food service space, a 150-room hotel, 85,000 square feet of practice facilities, a 25,000-square foot sports medicine clinic, 15,0000 square feet of community space, an 18,000-fixed seat arena with an additional 500 temporary seats, a parking structures and surface parking.

The proposed project will have five points of connection (POC) to the existing sewer systems. The first, POC #1, will be to the City of Inglewood sewer line at Prairie Avenue and 102nd Street. The second, POC #2, will be to the City of Inglewood sewer line at 102nd Street west of Doty Avenue. The third, POC #3, will ultimately be to the LACSD Prairie Trunk Sewer at Freeman Avenue and 103th Street, however existing City sewer main along 103th street would provide an intermediate point of connection with possibility of the line in between POC #3 and intermediate

connection being upsized to accommodate additional flows from the proposed project. The fourth, POC #4, will be to the City of Inglewood sewer line at 102nd Street east of Doty Avenue. The fifth, POC #5, will be to the City of Inglewood sewer line at Prairie Avenue and 101st Street. Please refer to *Figure 3 — Tributary Areas and Proposed Points of Connection Exhibit* for the location of proposed points of connection needed to serve the proposed project.

The proposed project's sewage demand is estimated based on LACSD sewage generation factors. Refer to LACSD Table 1, "Loadings for each class of land use," in *Appendix C — Estimated Average Daily Sewer Flows for Various Occupancies* for sewage generation factors. Sewage demands were calculated based on the seating capacity for the arena and by square footage for all other proposed structures within the site. The main project site is subdivided in three tributary areas (Areas 1, 2 & 3) based on contribution to proposed points of connection. In addition, there are two existing areas (Area 4a & 4b) outlined along 102nd Street. Area 4 is exiting area along 102nd Street contributing to 8" sewer line that flows east to manhole at Doty Avenue. Portion of this area (4a) is within the project site limits, Area 4b is presenting the remaining portion of the existing site that will continue to contribute to 8" sewer line that flows east to Doty Avenue. Area 5 is not contiguous to the main project site and consists of the proposed hotel site. Area 6 is existing area north of 101st Street and east of proposed west parking garage. Please note both parking structures west of Prairie Avenue and East of Doty Avenue are not part of this calculation, simply because they do not have any sewer demand. Refer to *Table 1 — Summary of Contributing Flow for Each Tributary Area* for calculations of proposed site and existing sewage demand.

Additionally, as part of this Sewer Area Study, we reviewed Related Project List Methodology for the proposed IBEC memorandum dated January 14, 2019 prepared by Trifiletti Consulting Inc. The Memorandum identified list of 146 reasonably foreseeable relevant projects. We reviewed the locations of the identified relevant projects to evaluate and if applicable to consider their impact to capacity of the existing sewer infrastructure surrounding IBEC Project. Please refer to Appendix I copy of the memorandum with relevant project list table B and maps 1-7 for the project locations. Based on identified project locations we classified the project into three major groups. Please refer to Figure 4 for Sanitation Districts Map.

1. Projects within cities outside of District 5 that contribute to relief trunk sewer lines not within the vicinity of IBEC Project. These projects contribute to relief trunk sewer downstream from the project site or to different districts sewer relief systems. Therefore, these projects will not impact the capacity of the trunk sewer lines surrounding the IBEC project. Projects located within Culver City, El Segundo and Los Angeles are in this group.
2. Projects within District 5 contributing to different trunk sewer lines or downstream from IBEC project. These projects will not impact the capacity of the trunk sewer lines surrounding the IBEC project. Projects located within City of Inglewood, Gardena and Hawthorne are in this group.
3. Projects within District 5 located upstream of the IBEC project. These projects will contribute to Prairie Trunk Sewer or Orange Trunk Sewer and will be considered in this report. There are four projects located within City of Inglewood that are in this group including Stadium at Hollywood Park project. The contribution of stadium project is based on the Inglewood NFL Stadium at Hollywood Park Sewer Area Study. Please refer to Appendix G for details. Estimated peak flows from other three projects 644 E. Manchester Terrace, 501 E. 99th Street and 333 N. Prairie Ave. are calculated in Table 1 and indicated in Figure 3, node C2.

Existing sewer infrastructure surrounding Project IBEC include 8" City of Inglewood collector sewer line along Century Blvd, 101st, 102nd, and 103rd Streets and two LACSD trunk sewer systems, a 24" and 30" Prairie Avenue Trunk Sewer systems on Freeman Avenue and a 15" South Inglewood-Orange Avenue trunk line on Doty Avenue. The capacities of the existing lines were determined based on as-built plans, will serve letter provided from LACSD,

existing peak flows and the LASED Project sewer area study findings. Existing peak flows are based on sewer monitoring data or calculated using LACSD sewage generation factors as shown in *Table 1 — Summary of Contributing Flow for Each Tributary Area*.

The estimated capacities, existing peak flows and available capacities of these sewer lines are as follows:

- City of Inglewood Prairie Avenue (8" diameter) – (POC #1 at 102nd Street and POC#5 at 101st Street)
    - ∞ Estimated capacity for this line is 0.23 MGD (per Appendix E FlowMaster calculations) and existing peak flow based on flow monitoring at that confluence by US3 Inc. shows an existing peak of 0.06 MGD. This results in an available capacity of **0.17 MGD** at POC #1 and POC #2.

      Please refer to *Appendix E* for pipe capacity calculations and *Appendix D* for existing peak flow.

- City of Inglewood 102nd Street at manhole west of Doty Ave. (8" diameter) – (POC #2)
    - ∞ Estimated capacity for this line is 0.33 MGD (per Appendix E FlowMaster calculations). Based on the zoning designation for the properties currently using this sewer connection, the estimated existing peak flow is 0.22 MGD. This results in an available capacity of **0.11 MGD** at POC #2. However, the estimated current peak flow includes 0.16 MGD from properties that will be replaced by the proposed IBEC project.

      Please refer to *Appendix E* for pipe capacity calculations and *Appendix D* for existing peak flow.

- South Inglewood – Orange Avenue Trunk (15" diameter) at Doty / 102nd Street

    1. The LASED Sewer Area Study (Inglewood NFL Stadium at Hollywood Park Sewer Area Study) shows a capacity of 2.6 MGD per the letter from LACSD dated March 4, 2016. The LASED project will contribute an additional flow of 1.78 MGD.

    2. The Will Serve Letter from LACSD shows a current peak flow of 0.8 MGD, as measured in 2011. However, this peak flow takes into account sewer flow from the former Hollywood Park Racetrack, which no longer exists since was demolished in 2016 and will be replaced by the LASED project. This report will instead use the proposed sewer flow of 1.78 MGD from the LASED Sewer Area Study.

    3. Flow Monitoring at confluence manhole at Doty and 102nd Street by US3, Inc., dated 10/31/2017 shows a peak inflow of 0.09 MGD from the east and peak outflow of 0.37 MGD to south. Therefore, this manhole peak outflow, as measured in 2017 will be used as current peak flow for trunk sewer capacities, since is measured after Hollywood Park Racetrack demolition and present the most current conditions. See Appendix G.

    4. Using the capacity of 2.6 MGD from the LACSD letter, and both the current measured peak outflow of 0.37 MGD and the additional proposed LASED peak flow of 1.78 MGD, results in an available capacity of **0.45 MGD** at this manhole location.

Please refer to *Appendix E* for pipe capacity calculations, *Appendix D* for existing peak flow and *Appendix G* for LASED project contributing peak flow.

- Prairie Avenue Trunk (30" diameter) at Freeman / 103rd St. (POC #3)
    - ∞ Per the Will Serve letter from LACSD, the capacity of the Prairie Avenue Trunk Sewer at Freeman / 103rd St. is 10.9 MGD and there is a current peak flow of 3.7 MGD, as measured in 2011.
    - ∞ Flow monitoring at that confluence manhole by US3 Inc. shows a south peak outflow of 2.93 MGD, as measured in 2017. The LASED project will contribute additional 4.67 MGD at this location per the LASED Sewer Area Study dated January 5, 2017.
    - ∞ Using the most conservative capacity calculation for current peak flow from the LACSD Will Serve Letter, this results in an available capacity of **2.53 MGD** at POC #3.

      Please refer to *Appendix D* for existing peak flow and *Appendix G* for LASED project contributing peak flow.
- City of Inglewood 102nd Street at manhole east of Doty Ave. (8" diameter) – (POC #4)
    - ∞ Estimated capacity for this line is 0.22 MGD (per Appendix E FlowMaster calculations) and existing peak flow based on flow monitoring by US3 Inc. shows a peak of 0.09 MGD, dated 10/31/2019. This results in an available capacity of **0.13 MGD** at POC #4.
- South Inglewood – Orange Avenue Trunk Extension No.3 (8" diameter) east of Doty

    1. A connection in Century Blvd. was not considered feasible from the proposed hotel site as the existing LACSD 8" Sewer Line along Century Blvd. does not have available additional capacity per LASED Sewer Area Study. Refer to Appendix G.

    Please refer to *Appendix E* for pipe capacity calculations, *Appendix D* for existing peak flow and *Appendix G* for LASED project contributing peak flow.

The locations of the existing sewer systems, the four proposed points of connection and capacities of the existing sewer systems can be found in *Figure 3 — Tributary Areas and Proposed Point of Connections Exhibit.*

A will serve letter request was submitted to LACSD for the proposed development to verify estimated existing peak flows and sewer lines capacities. Please see approved will serve letter from Sanitation District dated January 10, 2018 in Appendix B.

V. Sewer Pipe Capacity Analysis

Based on the existing sewer lines available capacities determinate in section above and estimated proposed IBEC project sewer demands calculated in Table 2 the existing sewer lines remaining capacities including contribution from proposed IBEC project are as follows:

- City of Inglewood Prairie Avenue (8" diameter) – (POC #1 at 102nd Street and POC#5 at 101st Street)
    - Estimated available capacity for this line is **0.17** MGD (per Section IV calculations) and proposed IBEC project estimated peak flow is **0.04** MGD at 101st Street and **0.07** MGD at 102nd Street. This results in remaining capacity of **0.13 MGD** at POC #5 and **0.06 MGD** at POC #1.
- City of Inglewood 102nd Street at manhole west of Doty Ave. (8" diameter) – (POC #2)
    - Estimated available capacity for this line is **0.11** MGD (per Section IV calculations) and proposed IBEC project estimated peak flow is **0.09** MGD. However, the proposed IBEC project will replace existing structures with a current existing peak flow of 0.16 MGD. Therefore, the reduction in proposed flow to this connection will result in an additional capacity of 0.07 MGD. This results in remaining capacity of **0.18 MGD** at POC #2.
- Prairie Avenue Trunk (30" diameter) at Freeman / 103rd St.
    - Estimated available capacity for this line is **2.53** MGD (per Section IV calculations) and proposed IBEC project estimated peak flow is **0.50** MGD. Additionally, existing peak flow of **0.04** MGD is estimated from existing 103th street sewer line and future peak flow of **0.21** MGD is estimated from proposed upstream projects. This results in remaining capacity of **1.78 MGD** for Prairie Avenue Trunk Sewer.
- South Inglewood – Orange Avenue Trunk (15" diameter) at Doty / 102nd Street
    - Estimated available capacity for this line is **0.45** MGD (per Section IV calculations) and proposed IBEC project estimated peak flow from west and east sewer lines is **0.14** MGD. This results in remaining capacity of **0.31 MGD** for South Inglewood-Orange Trunk Sewer.

Based on the proposed project site plan, a portion of the existing 8" sewer line along 102nd street will need to be removed or abandoned. New 8" and 10" pipelines will be constructed to serve the proposed on-site structures and their laterals. It is proposed that the northern portion of the proposed site will drain to City sewer lines at Prairie Ave and 102nd Street. Similarly, the eastern portion will drain to the existing sewer line along 102nd street and ultimately to the Orange Ave trunk sewer along Doty Ave. Wastewater contribution to the eastern portion includes a fraction of the wastewater generated by the proposed arena. The remaining portion of the site will drain to the Prairie Avenue trunk sewer along Freeman Ave. This includes the sewage generated from offices, the practice facility and the majority of proposed arena. Refer to *Figure 3 — Tributary Areas and Proposed Point of Connections Exhibit* and *Table 1 — Summary of Contributing Flow for Each Tributary Area* for a summary of tributary areas and proposed onsite sewer system.

Peak flow capacities and pipe sizes were determined by using Kutter's Formula. Refer to Pipe Size Capacity Calculations in *Appendix E — Pipe Size Capacity Calculations*. Each main line is sized based on the minimum slope (worst case scenario) and half or 3/4 full pipe depending on the pipe size based on Los Angeles County guidelines.

As shown on *Table 2 — Sewer Capacity Summary* and *Figure 3 — Tributary Areas and Proposed Point of Connections Exhibit* the existing City and LACSD sewer lines have adequate capacity except the 8" sewer line along 103th street. This sewer line does not have enough capacity to convey the additional sewage from the project site nor does it currently extend to the project site. Therefore, it is proposed that the existing 8" line be upsized to a 12" line and extended to the project site as shown in Figure 3.

VI. CONCLUSION

A summary of proposed pipe diameters and slopes can be found in *Table 1 — Summary of Contributing Flow for Each Tributary Area*. All sewer mains that will serve the project site were sized between 8" and 12" and meet the Los Angeles County capacity standards of no more than ½ full for mains under 15" diameter and no more than ¾ full for mains with a diameter of 15" and larger, refer to *Appendix E — Pipe Size Capacity Calculations*.

The impact to the existing sewer systems is summarized in *Figure 3 — Tributary Areas and Proposed Point of Connections Exhibit* and *Table 2 — Sewer Capacity Summary*. The project site will contribute 0.50 MGD to the Prairie Avenue Trunk Sewer, which does not exceed the available capacity of 1.78 MGD. The existing City of Inglewood 8" sewer line along 103th Street that will convey project peak flow to this location will be upsized to a 12" line and extended to the project site. The project site will contribute 0.11 MGD to the City collector sewer line at Prairie Avenue, which does not exceed the available capacity of 0.17 MGD. The project site contributes an additional 0.09 MGD to 102nd sewer line from the west and an additional 0.05 MGD from the east, which does not exceed the available capacity of 0.41 MGD.

The proposed improvement along 103th Street the existing City collector lines have adequate capacity for the proposed project. Additionally, the existing LACSD sewer system has enough available capacity to serve the proposed project.

Tables

TABLE 1 - SUMMARY OF CONTRIBUTING FLOWS FOR EACH TRIBUTARY AREA

POC	Tributary Area	Peak Flow to POC [MGD]	Existing or Proposed Tributary	Description of Contributing Factor	Development Type for Loading Factor	Daily Average Sewage Generating Factor [GPD]	Unit Contribution		Daily Average Flow [GPD]	Peak Flow (2.5x Average) [MGD]	Peak Flow [CFS]
1	1	0.07	Proposed	Food & Drink Building	RESTAURANT	1,000 GAL / 1,000 SQFT	24,000	SQFT	24,000	0.06	0.09
	1		Proposed	Mixed Use Building	STORE	100 GAL / 1,000 SQFT	24,000	SQFT	2,400	0.01	0.01
					Sub-Total		48,000		26,400	0.07	0.10
2	2	0.09	Proposed	20% Arena	ARENA	10 GAL/SEAT/DAY	3,700	SEAT	37,000	0.09	0.14
					Sub-Total		3,700		37,000	0.09	0.14
3	3	0.50	Proposed	80% Arena	ARENA	10 GAL/SEAT/DAY	14,800	SEAT	148,000	0.37	0.57
	3		Proposed	Practice Facility	GYMNASIUM W/O SHOWERS	300 GAL / 1,000 SQFT	85,000	SQFT	25,500	0.06	0.10
	3		Proposed	Office Space	OFFICE	200 GAL / 1,000 SQFT	71,000	SQFT	14,200	0.04	0.05
	3		Proposed	Sports Medicine Clinic	MEDICAL	300 GAL/1,000 SQFT	25,000	SQFT	7,500	0.02	0.03
	3		Proposed	Community Space	OFFICE	200 GAL/1,000 SQFT	15,000	SQFT	3,000	0.01	0.01
					Sub-Total				187,700	0.50	0.77
4	5	0.05	Proposed	Hotel	HOTEL	125 GAL/ROOM/DAY	150	ROOM	18,750	0.05	0.07
					Sub-Total				18,750	0.05	0.07
					PROJECT CONDOR TOTAL				**269,850**	**0.70**	**1.08**
NA	4a*		Existing	M1 - Light Manufacturing	MANUFACTURING	200 GAL / 1,000 SQFT	326,222	SQFT	65,244	0.16	0.25
B2	4b	0.06	Existing	M1 - Light Manufacturing	MANUFACTURING	200 GAL / 1,000 SQFT	120,711	SQFT	24,142	0.06	0.09
5	6	0.04	Existing	Restaurant	RESTAURANT	1,000 GAL / 1,000 SQFT	2,160	SQFT	2,160	0.01	0.01
5	6		Existing	Store	STORE	100 GAL / 1,000 SQFT	4,060	SQFT	406	0.00	0.00
5	6		Existing	Laundromat	LAUNDROMAT	3,825 GAL / 1,000 SQFT	3,350	SQFT	12,814	0.03	0.05
					Sub-Total				15,380	0.04	0.06
		0.002	Future	644 E. Manchester Terrace	CONDOMINIUMS	195 GAL/UNIT	4	UNITS	780	0.002	0.003
		0.01	Future	501 E. 99th Street	CONDOMINIUMS	195 GAL/UNIT	12	UNITS	2,340	0.01	0.01
		0.20	Future	333 N. Prairie Avenue	TOWNHOMES	260 GAL/UNIT	310	UNITS	80,600	0.20	0.31

*Existing flow from Area 4a will be replaced by portion of Project Site Flow represented by Area 2.

TABLE 2 - SEWER CAPACITY SUMMARY

POC	Pipe Segment	Contributing Areas	Pipe Diameter	Existing or Proposed Pipe	Pipe Slope*	Pipe Capacity** [CFS]	Cumulitive Contributing Flow [CFS]	Cumulitive Contributing Flow [MGD]	Capacity?	Normal Depth [FT]	Depth?	Velocity [FT/S]	Velocity?
POC #1	A to A1	Mixed Use	8	Proposed	2.00%	0.770	0.01	0.01	SUFFICIENT	0.04	SUFFICIENT	1.03	NO****
	A1 to A2	1/2 Food Service	8	Proposed	0.40%	0.340	0.06	0.04	SUFFICIENT	0.14	SUFFICIENT	1.14	NO****
	A2 to A3	1/2 Food Service	8	Proposed	0.40%	0.340	0.10	**0.07**	SUFFICIENT	0.18	SUFFICIENT	1.35	NO****
POC#2	B to B1	2/10 Arena	8	Proposed	1.00%	0.540	0.14	**0.09**	SUFFICIENT	0.17	SUFFICIENT	2.06	SUFFICIENT
NODE B2	B1 to B2	Manufacturing	8	Existing	0.88%	0.510	0.25	0.16	SUFFICIENT	0.23	SUFFICIENT	2.38	SUFFICIENT
NODE C1	C to C1	80% Arena, Parking Structure, Practice Facility, Office Space	12	Proposed	0.24%	0.830	0.77	**0.50**	SUFFICIENT	0.48	SUFFICIENT	2.07	SUFFICIENT
POC #3	C1 to C2†	Existing Residential, Commercial	12	Proposed†	0.24%	0.830	0.83	0.54	SUFFICIENT	0.50	SUFFICIENT	2.11	SUFFICIENT
POC #4	D to D1	Hotel	8	Proposed	2.00%	0.770	0.07	**0.05**	SUFFICIENT	0.10	SUFFICIENT	2.08	SUFFICIENT
NODE B2	D1 to B2	Existing Residential, Commercial	8	Existing	0.40%	0.340	0.21	0.14	SUFFICIENT	0.25	SUFFICIENT	1.72	NO****
POC#5	A4 to POC#5	Offsite Mixed Use	8	Proposed	0.40%	0.340	0.06	0.04	SUFFICIENT	0.14	SUFFICIENT	1.14	NO****
						TOTAL	**1.08**	**0.70**					
							CFS	**MGD**					

*Assumed pipe slopes are minimum allowed for proposed pipe size. Based on site grading pipe slopes can be steeper.

**Proposed sewer pipe design capacity was calculated as 1/2 full for pipe diameters of 12" or lower, and 3/4 full for pipe diameters of 15" or higher

***For pipe segments that have already been constructed, calculations were based on the minimum constructed slopes / sizes

****Velocities for these pipes are above 1.0 ft/s per Kutter's Formula calculations

†Existing line to be removed and reconstructed with new line, size as shown on table, please note 0.04 MGD = 0.062 CFS is existing flow from sewer monitoring result

Figures

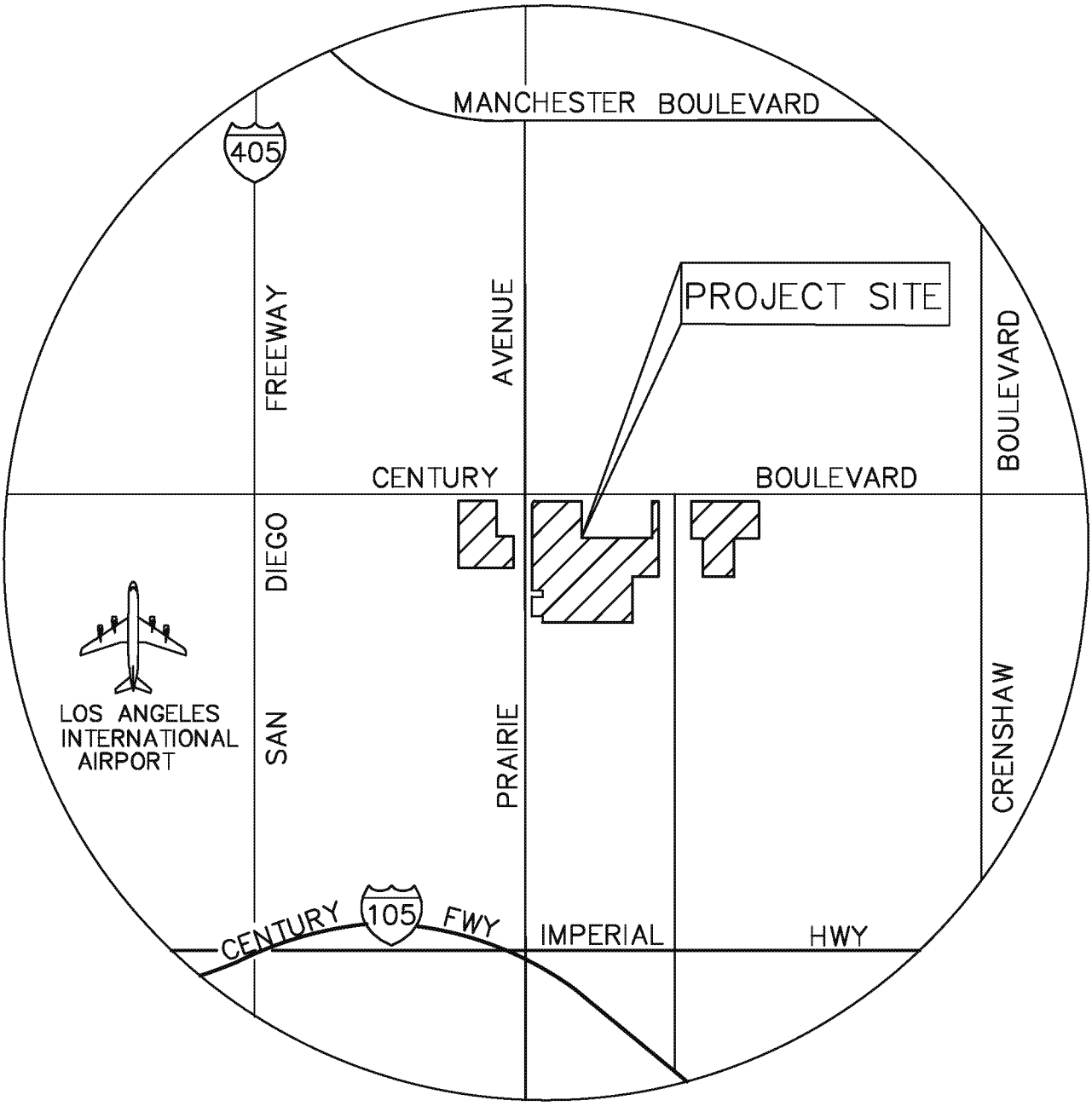

FIGURE 1

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INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

VICINITY MAP

SCALE: AS SHOWN

DATE: 05/01/19

SHT NO.: 01 OF 01

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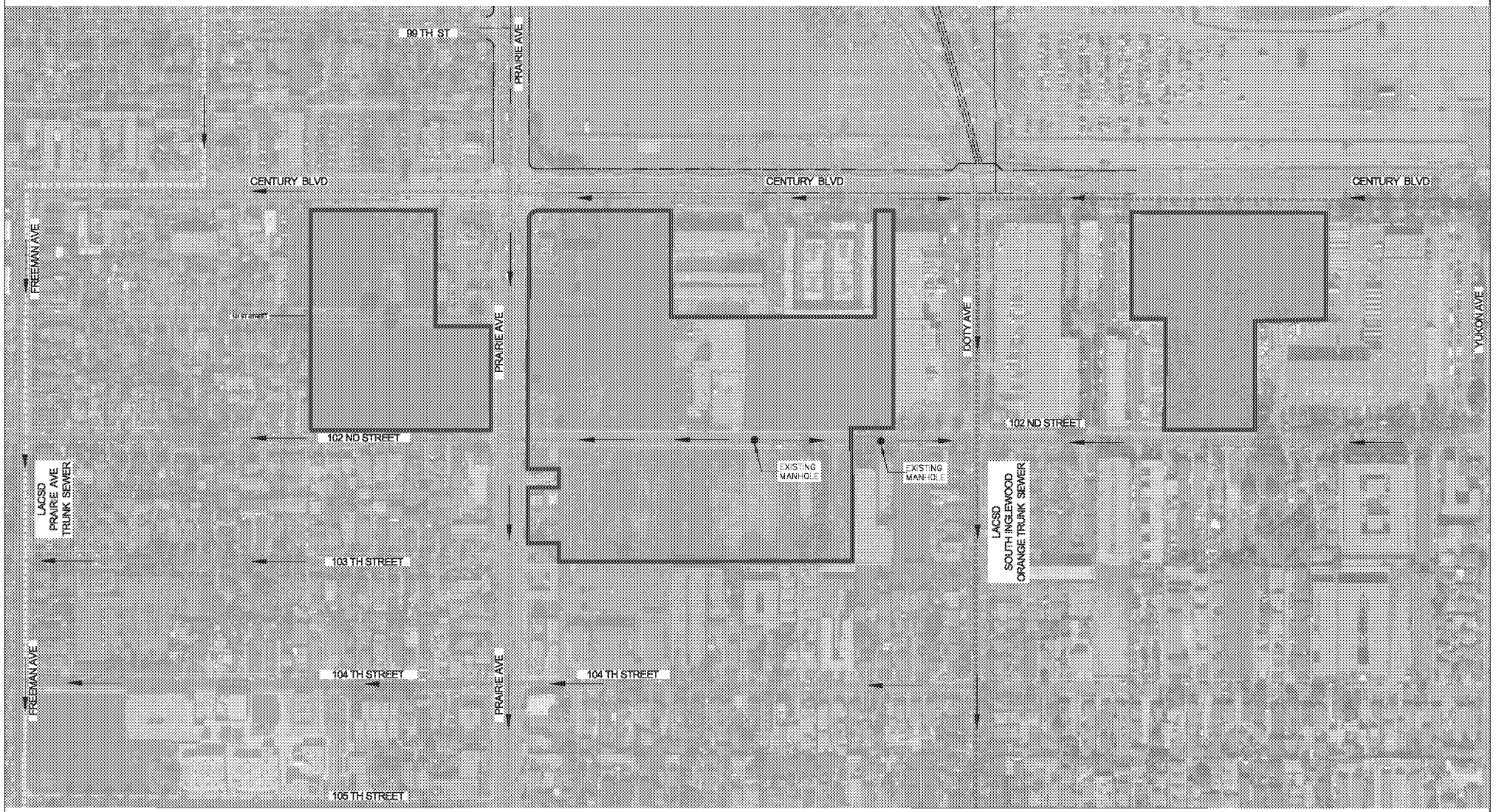

LEGEND

- PROJECT STUDY LIMITS
- EXISTING CITY SANITARY SEWER
- EXISTING LACSD PRAIRIE AVE TRUNK SANITARY SEWER
- EXISTING LACSD ORANGE TRUNK SANITARY SEWER

100 0 100 200
feet
1" = 100'

FIGURE 2

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INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

EXISTING SEWER SYSTEMS

SCALE: 1" = 100'
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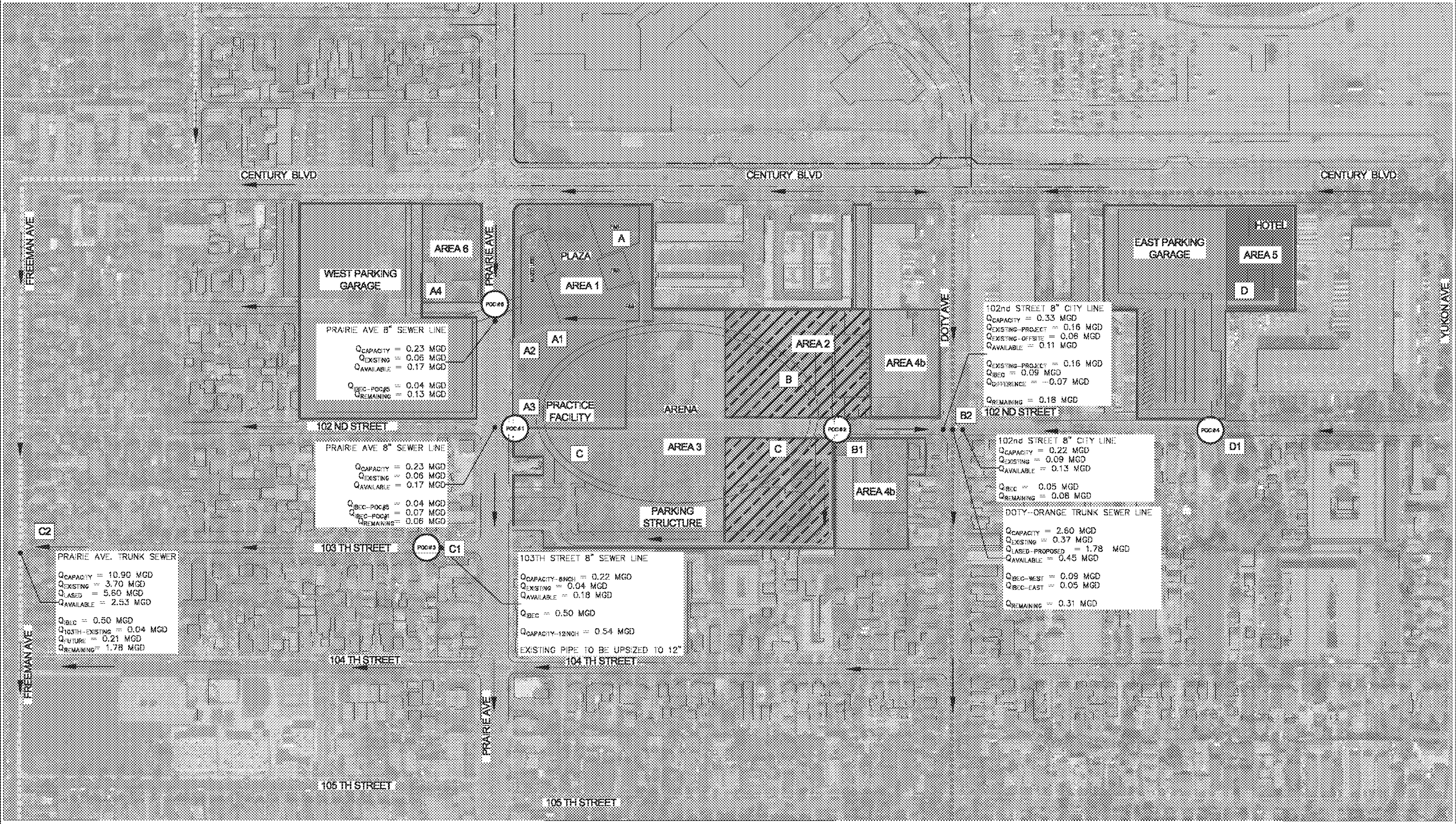
SHT NO: 1 OF 1



LEGEND

- PROJECT STUDY LIMITS
- EXISTING CITY SANITARY SEWER
- EXISTING LACSD PRAIRIE AVE TRUNK SANITARY SEWER
- EXISTING LACSD ORANGE TRUNK SANITARY SEWER
- EXISTING LINE TO BE UPSIZED
- PROPOSED SANITARY SEWER
- AREA 1 (PROJECT SITE)
- AREA 2 (PROJECT SITE)
- AREA 3 (PROJECT SITE)
- AREA 4a (EXISTING AREA)
- AREA 4b (REMAINING EXISTING AREA)
- AREA 5 (PROJECT SITE)
- POC#2 POINT OF CONNECTION
- C1 NODE

100 0 100 200
scale 1"= 100' feet

FIGURE 3

D & D ENGINEERING, INC.
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INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

TRIBUTARY AREAS AND PROPOSED POINT OF CONNECTIONS EXHIBIT

SCALE: 1" = 100'
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SHT NO.: 1 OF 1

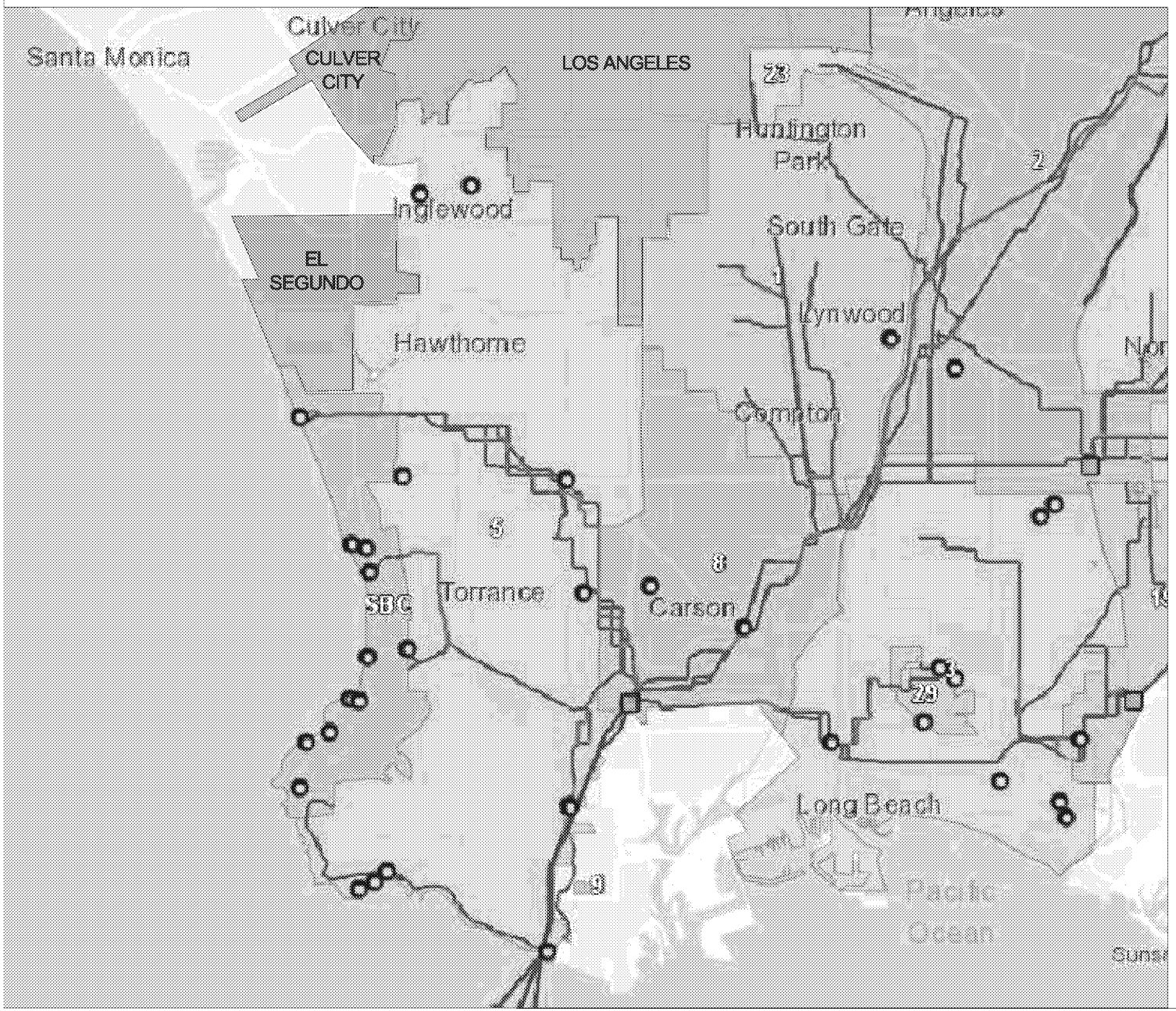


FIGURE 4

D & D ENGINEERING, INC. 6901 S. LA CIENEGA BLVD, SUITE 100 INGLEWOOD, CA 90301 Phone: 424-351-6900	INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER	SCALE: 1" = 1000'
	FIGURE 4: DISTRICT 5 TRIBUTARY MAP	DATE: 04/23/2018
		SHT NO: 1 OF 1

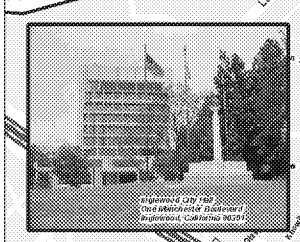
Appendix A

Existing Zoning Map

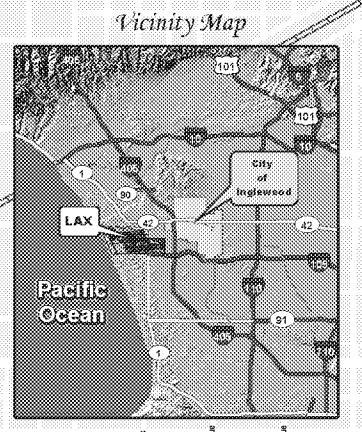
City of Inglewood Zoning

Inglewood
All-America City
2009

Inglewood GIS
Geographic Information System



Vicinity Map



Legend

- R-1, RESIDENTIAL SINGLE FAMILY
- HPSP, HOLLYWOOD PARK SPECIFC PLAN ZONE
- R- 1 1/2, RESIDENTIAL LIMITED TWO FAMILY
- R-1Z, RESIDENTIAL ONE FAMILY
- R-2, RESIDENTIAL LIMITED MULTI FAMILY
- R-2A, RESIDENTIAL LIMITED MULTI FAMILY
- R-3, RESIDENTIAL MULTIPLE FAMILY
- R-4, RESIDENTIAL MULTIPLE FAMILY
- R-M, RESIDENTIAL MEDICAL
- C-1, LIMITED COMMMERCIAL
- C-2, GENERAL COMMMERCIAL
- C-2A, AIRPORT COMMERCIAL
- C-3, HEAVY COMMERCIAL
- C-R, COMMERCIAL RECREATION
- C-S, COMMMERCIAL SERVICE
- M-1, LIGHT MANUFACTURING
- M-1L, LIMITED MANUFACTURING
- M-2, HEAVY MANUFACTURING
- P-1, PARKING
- C-C, CIVIC CENTER
- O-S, OPEN SPACE
- S-1, SPECIAL CEMETERY
- S-2, SPECIAL CEMET
- C-N, NEIGHBORHOOD COMMERCIAL
- HC, HISTORIC CORE
- MU-1, TOD MIXED USE 1
- MU-2, TOD MIXED USE 2
- MU-3, TOD MIXED USE 3
- MU-4, TOD MIXED USE 4
- MU-C, TOD MIXED USE CORRIDOR

Appendix B

Will Serve Letter from the County Sanitation District, dated January 10, 2018

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

January 10, 2018

Ref. Doc. No.: 4411341

Mr. Boris Tantchev
Senior Project Manager
D & D Engineering, Inc.
8901 South La Cienega Boulevard
Suite 106
Inglewood, CA 90301

Dear Mr. Tantchev:

Will Serve Letter for Project Condor

The Sanitation Districts of Los Angeles County (Districts) received your will serve letter request for the subject project on November 21, 2017. The proposed project is located within the jurisdictional boundaries of District No. 5. We offer the following comments regarding sewerage service:

1. The following is a list of Districts' trunk sewers that serve the project area:

Name	Location	Size (dia.)*	Capacity (mgd)**	Peak Flow (mgd)	Last Measured
South Inglewood-Orange Avenue Trunk Sewer	In Doty Avenue at 102nd Street	15	2.6	0.8	2011
Prairie Avenue Trunk Sewer	In the westbound Interstate 105 Prairie Avenue Exit	31.5	12.4	4.2	2011
Prairie Avenue Trunk Sewer	In Freeman Avenue at 103rd Street	30	10.9	3.7	2011

*diameter in inches
**million gallons per day

2. Availability of sewer capacity depends upon project size and timing of connection to the sewerage system. Because there are other proposed developments in the area, the availability of trunk sewer capacity should be verified as the project advances. Please submit a copy of the project's build-out schedule to the undersigned to ensure the project is considered when planning future sewerage system relief and replacement projects.

3. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a capacity of 400 mgd and currently produces an average recycled water flow of 256.4 mgd.

4. The expected average wastewater flow from the project, described in the application as mixed use development consisting of 37,100 square feet of retail space, 50,500 square feet of general office

space, 21,700 square feet of food services, a 78,800 square-foot performance center, and an 18,000 seat arena, is 71,438 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.

5. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. In determining the impact to the Sewerage System and applicable connection fees, the Districts' Chief Engineer and General Manager will determine the user category (e.g. Condominium, Single Family home, etc.) that best represents the actual or anticipated use of the parcel or facilities on the parcel. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at (562) 908-4288, extension 2727.

6. 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 CCA. 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 you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you 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 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: A. Schmidt
M. Tatalovich

DOC: #4416318.D05

Appendix C

Estimated Average Daily Sewer Flows for Various Occupancies per Los Angeles County

Estimated Average Daily Sewage Flows for Various Occupancies

Occupancy	Abbreviation	*Average daily flow	
Apartment Buildings:			
Bachelor or Single dwelling units	Apt	100	gal/D.U. → 150
1 bedroom dwelling units	Apt	150	gal/D.U. → 200
2 bedroom dwelling units	Apt	200	gal/D.U. → 250
3 bedroom or more dwelling units	Apt	250	gal/D.U. → use 300 GPD per 5MD
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	M	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:	
M1 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

TABLE 1

LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
RESIDENTIAL				
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
COMMERCIAL				
Hotel/Motel/Rooming House	Room	125	0.54	0.28
Store	1000 ft^2	100	0.43	0.23
Supermarket	1000 ft^2	150	2.00	1.00
Shopping Center	1000 ft^2	325	3.00	1.17
Regional Mall	1000 ft^2	150	2.10	0.77
Office Building	1000 ft^2	200	0.86	0.45
Professional Building	1000 ft^2	300	1.29	0.68
Restaurant	1000 ft^2	1,000	16.68	5.00
Indoor Theatre	1000 ft^2	125	0.54	0.28
Car Wash				
Tunnel - No Recycling	1000 ft^2	3,700	15.86	8.33
Tunnel - Recycling	1000 ft^2	2,700	11.74	6.16
Wand	1000 ft^2	700	3.00	1.58
Financial Institution	1000 ft^2	100	0.43	0.23
Service Shop	1000 ft^2	100	0.43	0.23
Animal Kennels	1000 ft^2	100	0.43	0.23
Service Station	1000 ft^2	100	0.43	0.23
Auto Sales/Repair	1000 ft^2	100	0.43	0.23
Wholesale Outlet	1000 ft^2	100	0.43	0.23
Nursery/Greenhouse	1000 ft^2	25	0.11	0.06
Manufacturing	1000 ft^2	200	1.86	0.70
Dry Manufacturing	1000 ft^2	25	0.23	0.09
Lumber Yard	1000 ft^2	25	0.23	0.09
Warehousing	1000 ft^2	25	0.23	0.09
Open Storage	1000 ft^2	25	0.23	0.09
Drive-in Theatre	1000 ft^2	20	0.09	0.05

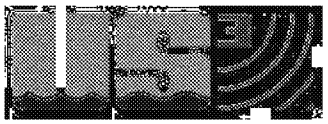
TABLE 1
(continued)
LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
COMMERCIAL				
Night Club	1000 ft^2	350	1.50	0.79
Bowling/Skating	1000 ft^2	150	1.76	0.55
Club	1000 ft^2	125	0.54	0.27
Auditorium, Amusement	1000 ft^2	350	1.50	0.79
Golf Course, Camp, and Park (Structures and Improvements	1000 ft^2	100	0.43	0.23
Recreational Vehicle Park	No. of Spaces	55	0.34	0.14
Convalescent Home	Bed	125	0.54	0.28
Laundry	1000 ft^2	3,825	16.40	8.61
Mortuary/Cemetery	1000 ft^2	100	1.33	0.67
Health Spa, Gymnasium				
With Showers	1000 ft^2	600	2.58	1.35
Without Showers	1000 ft^2	300	1.29	0.68
Convention Center, Fairground, Racetrack, Sports Stadium/Arena	Average Daily Attendance	10	0.04	0.02
INSTITUTIONAL				
College/University	Student	20	0.09	0.05
Private School	1000 ft^2	200	0.86	0.45
Church	1000 ft^2	50	0.21	0.11

Appendix D

Sewer Monitoring Report

1.Freeman and 103th Street (pages 1-74)
2. 103th Street west of Freeman (pages 75-147)
3.Prairie Ave and 102nd Street (pages 148-221)
4.Doty Ave and 102nd Street (pages 221-296)
5. 102nd Street east of Doty Ave (pages 297-371)



Site Report 12-05-2017

Confidential Proprietary Information

D & D Engineering, Inc ~10299 S. Freeman Av

2017.11 Freeman MH S Outflow Manhole No. 1

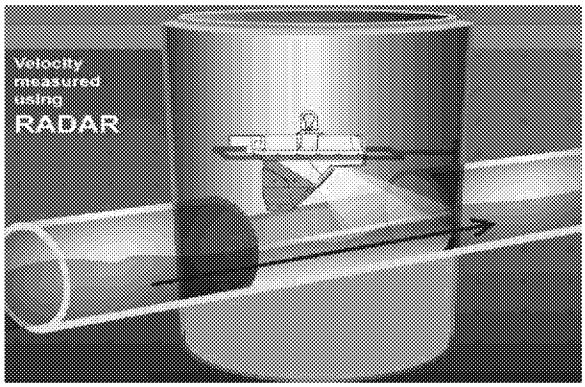
Access:
Manhole within intersection of S. Freeman Av & W. 103rd St

System Type:
Sanitary [X] Storm [ ]

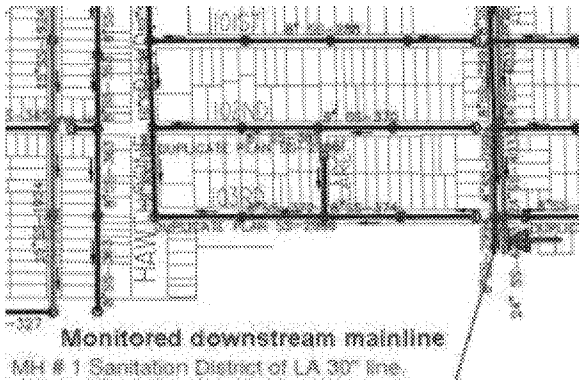
Install Date: 10/31/2017

Map

Technology



Sewer Plan



Flow Meter			
Meter Depth: 99"			
Map Coordinates: 33.942728, -118.348257			
Moderate open channel hydraulics			
Avg Velocity	Avg Measured Level		Multiplier
1.5 fps	12.33"		1
Gas			
O2	H2S	CO	LEL
20.9	0	0	0

Notes
Monitored downstream line per client direction.

Traffic Safety
Used cones & signs in accord with CA MUTCD requirements.

Land Use			
Residential	Commercial	Industrial	Trunk
X			

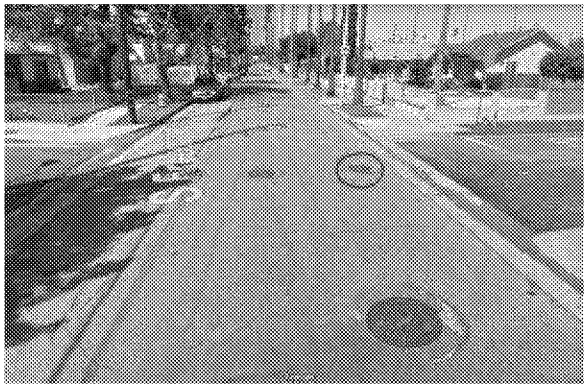
Manhole Depth	136"
Monitored Pipe Size	30"
Main Pipe Size (In/Out)	24"/30"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	36.51"
Sensor Dist. to Crown	6.51"
Sensor Direction	Downstream
Flow Heading	South

Meter Site Document

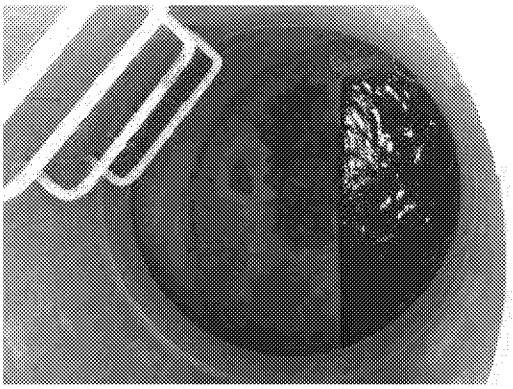
D & D Engineering, Inc

2017.11 Freeman MH S Outflow ~10299 S. Freeman Av

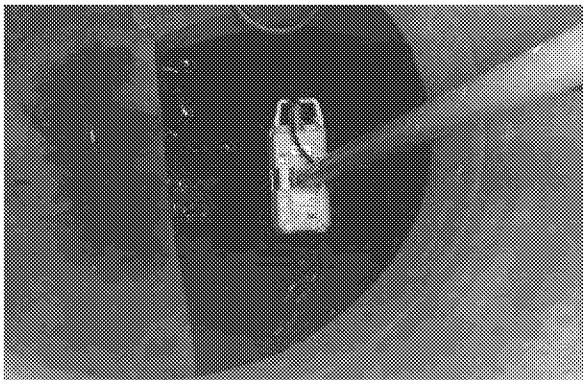
Site



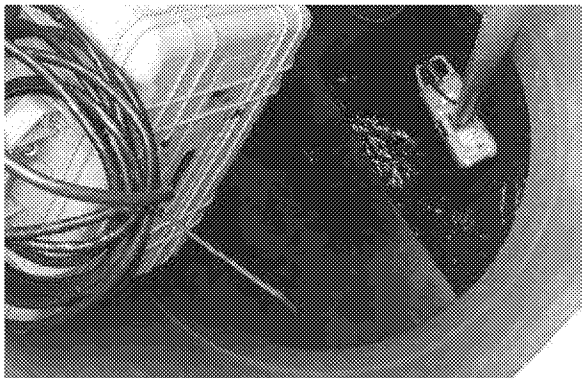
Manhole Before Install



Installation Process



Installed



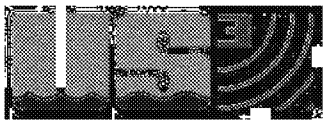
Utility Systems Science and Software

Report Date: 12/04/2017
Customer: D & D Engineering, Inc
Group: Inglewood
SiteID: 2956

Statistics for 2017.11 Freeman MH S Outflow: 10/31/2017 thru 11/30/2017

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
10/31/17	1269.02	1500.69	810.62	1.83	2.16	1.17	1.37	1.56	0.94	13.09	13.66	12.25	1,827,382	
11/1/17	1130.92	1769.93	660.55	1.63	2.55	0.95	1.30	1.82	0.98	12.38	14.20	9.30	1,628,521	
11/2/17	1099.45	1702.08	439.44	1.58	2.45	0.63	1.27	1.80	0.85	12.26	14.09	8.55	1,583,214	
11/3/17	1102.94	1663.12	502.57	1.59	2.40	0.72	1.27	1.66	0.84	12.40	14.23	9.04	1,588,233	
11/4/17	1180.70	1916.45	498.75	1.70	2.76	0.72	1.34	1.84	0.98	12.35	14.81	8.47	1,700,203	
11/5/17	1140.41	1728.68	535.41	1.64	2.49	0.77	1.28	1.61	0.89	12.48	15.01	8.47	1,642,189	
Week:	**1153.91**	**1916.45**	**439.44**	**1.66**	**2.76**	**0.63**	**1.31**	**1.84**	**0.84**	**12.49**	**15.01**	**8.47**	**9,969,741**	
11/6/17	1185.78	2031.31	539.72	1.71	2.93	0.78	1.36	1.92	1.01	12.36	14.77	8.62	1,707,521	
11/7/17	1171.82	1910.27	543.54	1.69	2.75	0.78	1.33	1.79	0.90	12.50	14.84	9.02	1,687,422	
11/8/17	1083.93	1849.09	388.82	1.56	2.66	0.56	1.22	1.70	0.78	12.40	14.88	8.30	1,560,866	
11/9/17	1130.15	1624.37	632.85	1.63	2.34	0.91	1.31	1.66	0.95	12.39	15.08	8.55	1,627,414	
11/10/17	1149.29	1652.49	569.23	1.66	2.38	0.82	1.31	1.64	0.95	12.47	14.66	8.40	1,654,972	
11/11/17	1185.11	1788.61	424.86	1.71	2.58	0.61	1.32	1.76	0.79	12.56	14.77	8.65	1,706,552	
11/12/17	1243.78	1873.54	491.25	1.79	2.70	0.71	1.38	1.80	0.88	12.56	14.80	8.66	1,791,043	
Week:	**1164.26**	**2031.31**	**388.82**	**1.68**	**2.93**	**0.56**	**1.32**	**1.92**	**0.78**	**12.46**	**15.08**	**8.30**	**11,735,790**	
11/13/17	1144.30	1596.11	438.05	1.65	2.30	0.63	1.32	1.67	0.85	12.34	14.56	8.52	1,647,791	
11/14/17	1091.55	1826.11	511.60	1.57	2.63	0.74	1.34	1.80	1.00	11.77	14.79	8.45	1,571,831	

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
11/15/17	1103.44	1668.33	535.28	1.59	2.40	0.77	1.30	1.71	0.98	12.19	14.37	8.26	1,588,950	
11/16/17	1157.66	1701.24	529.72	1.67	2.45	0.76	1.34	1.83	0.87	12.25	14.62	8.27	1,667,033	
11/17/17	1123.86	1789.92	490.76	1.62	2.58	0.71	1.29	1.72	0.95	12.34	14.37	8.44	1,618,353	
11/18/17	1151.41	1756.38	541.11	1.66	2.53	0.78	1.30	1.63	1.00	12.56	14.87	8.61	1,658,026	
11/19/17	1168.60	1733.40	526.60	1.68	2.50	0.76	1.32	1.70	0.99	12.56	14.93	8.51	1,682,791	
Week:	**1134.40**	**1826.11**	**438.05**	**1.63**	**2.63**	**0.63**	**1.31**	**1.83**	**0.85**	**12.29**	**14.93**	**8.26**	**11,434,775**	
11/20/17	1159.75	1728.74	535.62	1.67	2.49	0.77	1.32	1.78	1.01	12.39	14.29	8.50	1,670,043	
11/21/17	1126.58	1723.26	553.33	1.62	2.48	0.80	1.29	1.68	0.98	12.40	14.30	8.58	1,622,277	
11/22/17	1246.47	1882.84	589.30	1.80	2.71	0.85	1.38	1.78	0.89	12.75	14.73	8.79	1,794,913	
11/23/17	1198.51	1778.05	639.44	1.73	2.56	0.92	1.26	1.57	0.94	13.25	15.90	9.72	1,725,855	
11/24/17	1187.80	1835.34	547.15	1.71	2.64	0.79	1.30	1.84	0.92	12.80	14.97	9.32	1,710,429	
11/25/17	1258.33	1975.48	639.10	1.81	2.85	0.92	1.35	1.80	0.98	12.98	15.27	9.57	1,811,996	
11/26/17	1204.59	1889.16	567.29	1.74	2.72	0.82	1.31	1.85	0.99	12.92	15.04	9.13	1,734,616	
Week:	**1197.43**	**1975.48**	**535.62**	**1.73**	**2.85**	**0.77**	**1.32**	**1.85**	**0.89**	**12.79**	**15.90**	**8.50**	**12,070,130**	
11/27/17	1144.40	1728.61	596.53	1.65	2.49	0.86	1.27	1.70	1.06	12.68	14.68	8.86	1,647,939	
11/28/17	1153.36	1655.55	552.98	1.66	2.39	0.80	1.28	1.56	0.96	12.74	14.94	9.25	1,660,832	
11/29/17	1239.40	1757.91	703.68	1.79	2.53	1.01	1.35	1.62	1.12	12.95	15.05	9.50	1,784,732	
11/30/17	1026.78	1584.72	645.07	1.48	2.28	0.93	1.23	1.50	1.02	11.96	15.08	9.70	1,478,567	
Week:	**1140.98**	**1757.91**	**552.98**	**1.64**	**2.53**	**0.80**	**1.28**	**1.70**	**0.96**	**12.58**	**15.08**	**8.86**	**6,572,070**	
Totals:	**1160.00**	**2031.31**	**388.82**	**1.67**	**2.93**	**0.56**	**1.31**	**1.92**	**0.78**	**12.52**	**15.90**	**8.26**	**51,782,505**	



Site Report 12-05-2017

Confidential Proprietary Information

D & D Engineering, Inc ~4102 W. 103rd St

2017.11 W.103 MH W Outflow Manhole No. Unknown

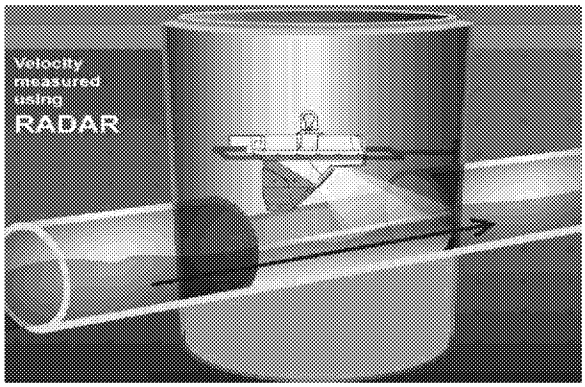
Access:
Manhole in street east of original monitoring site (MH 1)

System Type: Sanitary [X] Storm [ ]

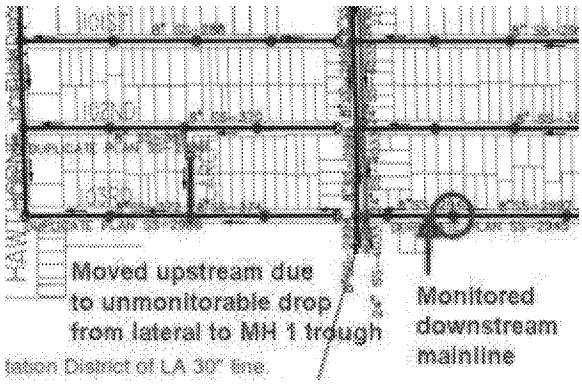
Install Date: 11/1/2017

Map

Technology



Sewer Plan



Flow Meter			
Meter Depth: 104"			
Map Coordinates: 33.942710, -118.346799			
Moderate open channel hydraulics			
Avg Velocity	Avg Measured Level		Multiplier
1.25 fps	0.66"		1
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
Monitored downstream line of eastern upstream MH due to unmonitorable drop in MH 1 lateral.			
Traffic Safety			
Used cones & signs in accord with CA MUTCD requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
X			

Manhole Depth	119"
Monitored Pipe Size	8"
Main Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	14.62"
Sensor Dist. to Crown	6.62"
Sensor Direction	Downstream
Flow Heading	West

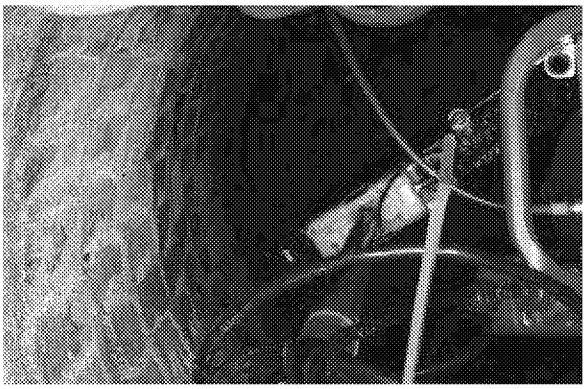
Meter Site Document

D & D Engineering, Inc

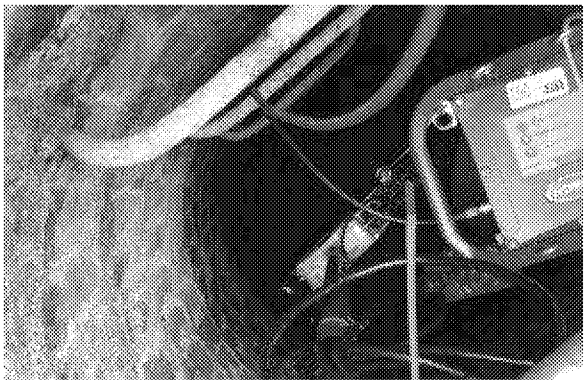
2017.11 W.103 MH W Outflow ~4102 W. 103rd St

Site

Manhole During Install

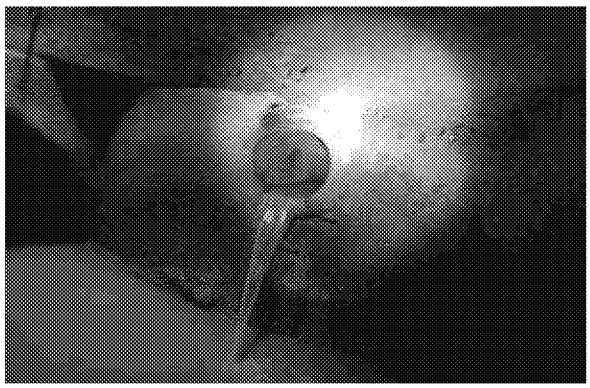


Installation Process

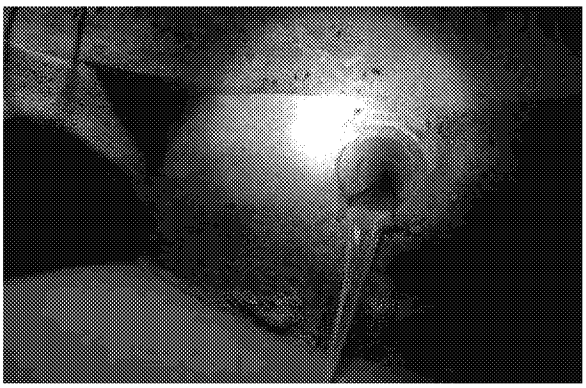


Installed

Downstream Drop



Downstream Drop



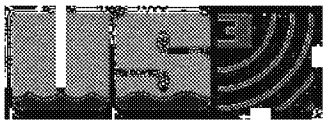
Utility Systems Science and Software

Report Date: 12/04/2017
Customer: D & D Engineering, Inc
Group: Inglewood
SiteID: 2955

Statistics for 2017.11 W.103 MH W Outflow: 11/01/2017 thru 11/30/2017

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
11/1/17	4.35	16.46	0.00	0.01	0.02	0.00	0.92	1.38	0.07	0.48	1.07	0.02	6,257	
11/2/17	3.12	9.31	0.00	0.00	0.01	0.00	0.85	1.27	0.10	0.41	0.87	0.06	4,494	
11/3/17	3.44	8.96	0.00	0.00	0.01	0.00	0.85	1.32	0.00	0.43	0.72	0.06	4,958	
11/4/17	3.78	11.87	0.00	0.01	0.02	0.00	0.89	1.31	0.03	0.45	0.88	0.08	5,443	
11/5/17	4.17	10.21	0.28	0.01	0.01	0.00	0.93	2.06	0.41	0.48	0.78	0.14	6,008	
Week:	**3.77**	**16.46**	**0.00**	**0.01**	**0.02**	**0.00**	**0.89**	**2.06**	**0.00**	**0.45**	**1.07**	**0.02**	**27,160**	
11/6/17	3.28	10.76	0.07	0.00	0.02	0.00	0.79	1.40	0.13	0.44	0.79	0.10	4,722	
11/7/17	4.04	12.29	0.00	0.01	0.02	0.00	0.90	1.36	0.00	0.49	0.91	0.02	5,815	
11/8/17	3.55	12.50	0.07	0.01	0.02	0.00	0.87	1.29	0.17	0.44	0.96	0.09	5,114	
11/9/17	3.06	9.51	0.00	0.00	0.01	0.00	0.82	1.35	0.00	0.42	0.77	0.07	4,406	
11/10/17	3.46	11.81	0.00	0.00	0.02	0.00	0.89	1.47	0.05	0.42	0.93	0.08	4,979	
11/11/17	4.45	22.64	0.00	0.01	0.03	0.00	0.90	2.85	0.00	0.52	1.22	0.10	6,403	
11/12/17	4.18	12.15	0.14	0.01	0.02	0.00	0.89	1.37	0.31	0.51	1.07	0.11	6,016	
Week:	**3.72**	**22.64**	**0.00**	**0.01**	**0.03**	**0.00**	**0.87**	**2.85**	**0.00**	**0.46**	**1.22**	**0.02**	**37,454**	
11/13/17	3.44	11.53	0.28	0.00	0.02	0.00	0.85	1.44	0.38	0.46	0.81	0.15	4,951	
11/14/17	4.27	12.08	0.07	0.01	0.02	0.00	0.91	1.36	0.10	0.50	0.85	0.09	6,151	
11/15/17	4.12	13.06	0.00	0.01	0.02	0.00	0.83	1.36	0.00	0.49	1.19	0.07	5,937	

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
11/16/17	3.83	13.61	0.07	0.01	0.02	0.00	0.84	1.37	0.15	0.50	1.14	0.11	5,522	
11/17/17	5.90	27.57	0.56	0.01	0.04	0.00	0.78	1.31	0.40	0.71	1.95	0.20	8,497	
11/18/17	6.43	29.93	0.76	0.01	0.04	0.00	0.93	2.01	0.26	0.71	1.46	0.25	9,258	
11/19/17	3.69	13.40	0.35	0.01	0.02	0.00	0.86	1.45	0.37	0.46	0.93	0.15	5,319	
Week:	**4.53**	**29.93**	**0.00**	**0.01**	**0.04**	**0.00**	**0.86**	**2.01**	**0.00**	**0.55**	**1.95**	**0.07**	**45,635**	
11/20/17	3.45	9.93	0.00	0.00	0.01	0.00	0.88	1.22	0.08	0.45	0.83	0.09	4,971	
11/21/17	3.85	14.24	0.14	0.01	0.02	0.00	0.88	1.26	0.17	0.50	1.40	0.11	5,551	
11/22/17	2.55	8.54	0.00	0.00	0.01	0.00	0.75	1.30	0.04	0.40	0.71	0.09	3,670	
11/23/17	4.45	10.14	0.28	0.01	0.01	0.00	0.91	1.36	0.43	0.51	1.00	0.12	6,411	
11/24/17	4.16	14.10	0.21	0.01	0.02	0.00	0.85	1.32	0.33	0.51	0.98	0.13	5,987	
11/25/17	4.52	9.72	0.97	0.01	0.01	0.00	0.94	1.40	0.43	0.53	0.73	0.26	6,509	
11/26/17	4.20	11.53	0.62	0.01	0.02	0.00	0.91	1.40	0.37	0.51	1.06	0.21	6,052	
Week:	**3.88**	**14.24**	**0.00**	**0.01**	**0.02**	**0.00**	**0.88**	**1.40**	**0.04**	**0.49**	**1.40**	**0.09**	**39,152**	
11/27/17	4.16	9.51	0.14	0.01	0.01	0.00	0.90	1.36	0.17	0.51	0.80	0.14	5,994	
11/28/17	5.20	17.22	0.42	0.01	0.02	0.00	0.93	2.04	0.34	0.56	1.10	0.22	7,495	
11/29/17	5.03	12.92	1.11	0.01	0.02	0.00	0.97	1.36	0.52	0.56	0.89	0.33	7,244	
11/30/17	3.51	17.15	0.62	0.01	0.02	0.00	0.69	1.37	0.42	0.50	1.07	0.24	5,054	
Week:	**4.48**	**17.22**	**0.14**	**0.01**	**0.02**	**0.00**	**0.87**	**2.04**	**0.17**	**0.53**	**1.10**	**0.14**	**25,786**	
Totals:	**4.06**	**29.93**	**0.00**	**0.01**	**0.04**	**0.00**	**0.87**	**2.85**	**0.00**	**0.49**	**1.95**	**0.02**	**175,188**	



Site Report 12-05-2017

Confidential Proprietary Information

D & D Engineering, Inc ~10201 S. Prairie Av

2017.11 Prairie MH S Outflow Manhole No. 3

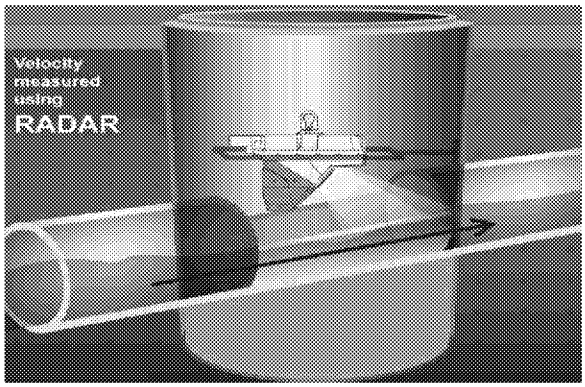
Access:
Manhole within intersection of S. Prairie Av & W. 102nd St

System Type:
Sanitary [X] Storm [ ]

Install Date: 10/31/2017

Map

Technology



Sewer Plan

Flow Meter			
Meter Depth: 102"			
Map Coordinates: 33.943639, -118.343944			
Moderate open channel hydraulics			
Avg Velocity	Avg Measured Level		Multiplier
2.0 fps	0.875"		1
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
Monitored downstream line per client direction.			
Traffic Safety			
Used arrow board, cones & signs in accord with CA MUTCD requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
	X		

Manhole Depth	117"
Monitored Pipe Size	8"
Main Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	14.93"
Sensor Dist. to Crown	6.93"
Sensor Direction	Downstream
Flow Heading	South

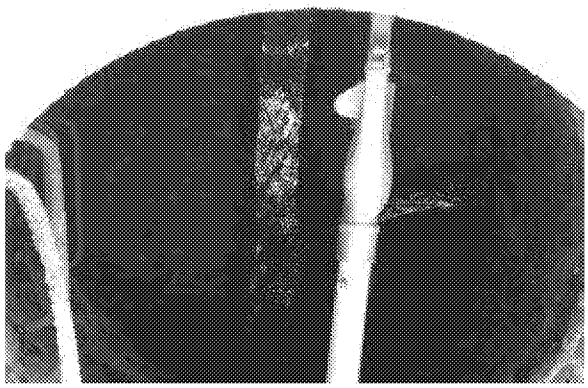
Meter Site Document

D & D Engineering, Inc

2017.11 Prairie MH S Outflow ~10201 S. Prairie Av

Site

Manhole During Install



Installation Process

Installed

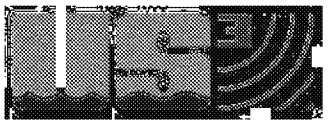
Utility Systems Science and Software

Report Date: 12/04/2017
Customer: D & D Engineering, Inc
Group: Inglewood
SiteID: 2954

Statistics for 2017.11 Prairie MH S Outflow: 10/31/2017 thru 11/30/2017

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
10/31/17	17.39	23.82	9.44	0.03	0.03	0.01	2.26	2.51	1.28	0.77	0.94	0.66	25,038	
11/1/17	15.10	22.99	9.31	0.02	0.03	0.01	2.17	2.51	1.70	0.71	0.89	0.61	21,751	
11/2/17	17.29	24.93	6.25	0.02	0.04	0.01	2.27	2.85	0.90	0.76	0.91	0.58	24,891	
11/3/17	14.01	20.97	8.19	0.02	0.03	0.01	2.11	2.42	1.44	0.69	0.90	0.51	20,170	
11/4/17	17.33	28.61	6.11	0.02	0.04	0.01	2.19	2.65	1.04	0.77	0.98	0.57	24,950	
11/5/17	17.69	34.65	7.78	0.03	0.05	0.01	2.24	3.05	1.32	0.77	1.14	0.53	25,474	
Week:	**16.47**	**34.65**	**6.11**	**0.02**	**0.05**	**0.01**	**2.21**	**3.05**	**0.90**	**0.74**	**1.14**	**0.51**	**142,273**	
11/6/17	15.46	21.81	8.82	0.02	0.03	0.01	2.21	2.80	1.78	0.72	0.84	0.54	22,261	
11/7/17	16.38	28.47	9.44	0.02	0.04	0.01	2.14	2.54	1.55	0.75	1.00	0.58	23,586	
11/8/17	16.88	29.17	10.69	0.02	0.04	0.02	2.21	2.70	1.94	0.76	0.98	0.59	24,309	
11/9/17	16.53	24.51	12.01	0.02	0.04	0.02	2.25	2.85	1.89	0.74	0.89	0.64	23,797	
11/10/17	15.58	22.57	11.11	0.02	0.03	0.02	2.19	2.54	1.79	0.73	0.89	0.65	22,441	
11/11/17	16.84	25.28	8.68	0.02	0.04	0.01	2.21	2.55	1.73	0.76	0.93	0.51	24,248	
11/12/17	17.67	27.36	10.49	0.03	0.04	0.02	2.25	2.82	1.93	0.77	0.93	0.61	25,451	
Week:	**16.48**	**29.17**	**8.68**	**0.02**	**0.04**	**0.01**	**2.21**	**2.85**	**1.55**	**0.75**	**1.00**	**0.51**	**166,093**	
11/13/17	16.40	22.15	11.18	0.02	0.03	0.02	2.19	2.40	1.91	0.75	0.93	0.62	23,623	
11/14/17	17.35	25.56	7.22	0.02	0.04	0.01	2.25	2.59	1.07	0.77	0.94	0.69	24,981	

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
11/15/17	16.34	25.97	10.00	0.02	0.04	0.01	2.23	2.56	1.94	0.74	0.97	0.58	23,535	
11/16/17	18.17	37.43	6.32	0.03	0.05	0.01	2.16	2.85	0.86	0.81	1.12	0.68	26,168	
11/17/17	21.47	38.96	8.54	0.03	0.06	0.01	2.30	2.97	1.26	0.87	1.11	0.68	30,912	
11/18/17	19.37	28.68	11.32	0.03	0.04	0.02	2.29	2.77	1.66	0.82	0.94	0.66	27,893	
11/19/17	20.46	27.64	13.19	0.03	0.04	0.02	2.32	2.85	1.88	0.84	0.93	0.69	29,459	
Week:	**18.51**	**38.96**	**6.32**	**0.03**	**0.06**	**0.01**	**2.25**	**2.97**	**0.86**	**0.80**	**1.12**	**0.58**	**186,571**	
11/20/17	20.79	31.04	14.24	0.03	0.04	0.02	2.34	2.87	1.74	0.85	0.97	0.72	29,933	
11/21/17	19.56	29.44	13.54	0.03	0.04	0.02	2.24	2.63	1.89	0.83	1.03	0.72	28,168	
11/22/17	17.08	25.14	9.51	0.02	0.04	0.01	2.11	2.59	1.28	0.79	0.94	0.65	24,599	
11/23/17	16.40	24.24	10.07	0.02	0.03	0.01	2.19	2.57	1.83	0.75	1.00	0.57	23,609	
11/24/17	16.77	24.03	8.54	0.02	0.03	0.01	2.19	2.53	1.67	0.75	0.91	0.55	24,155	
11/25/17	18.50	25.83	12.29	0.03	0.04	0.02	2.29	2.53	1.71	0.79	0.96	0.69	26,634	
11/26/17	20.81	35.69	9.31	0.03	0.05	0.01	2.40	3.04	1.93	0.82	1.16	0.55	29,970	
Week:	**18.56**	**35.69**	**8.54**	**0.03**	**0.05**	**0.01**	**2.25**	**3.04**	**1.28**	**0.80**	**1.16**	**0.55**	**187,068**	
11/27/17	18.35	25.00	12.71	0.03	0.04	0.02	2.26	2.64	1.99	0.79	0.94	0.68	26,421	
11/28/17	19.36	29.31	13.33	0.03	0.04	0.02	2.27	2.76	1.92	0.82	0.98	0.69	27,884	
11/29/17	17.19	27.36	10.76	0.02	0.04	0.02	2.19	2.86	1.54	0.77	0.97	0.64	24,751	
11/30/17	13.25	18.40	9.37	0.02	0.03	0.01	2.05	2.30	1.85	0.68	0.80	0.57	19,077	
Week:	**17.04**	**29.31**	**9.37**	**0.02**	**0.04**	**0.01**	**2.19**	**2.86**	**1.54**	**0.77**	**0.98**	**0.57**	**98,133**	
Totals:	**17.48**	**38.96**	**6.11**	**0.03**	**0.06**	**0.01**	**2.22**	**3.05**	**0.86**	**0.77**	**1.16**	**0.51**	**780,139**	



Site Report 12-05-2017

Confidential Proprietary Information

D & D Engineering, Inc ~3798 W. 102nd St

2017.11 Doty MH E Inflow Manhole No. 2

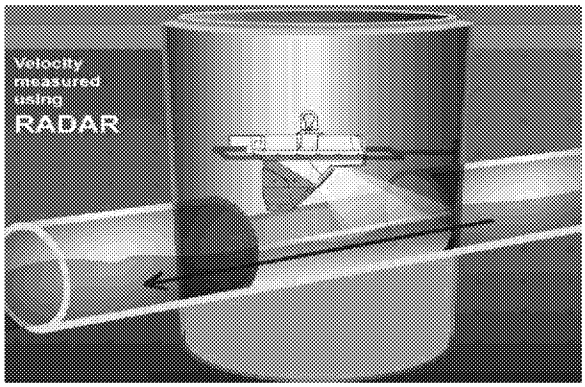
Access:
Manhole within intersection of S. Doty Av & W. 102nd St

System Type:
Sanitary [X] Storm [ ]

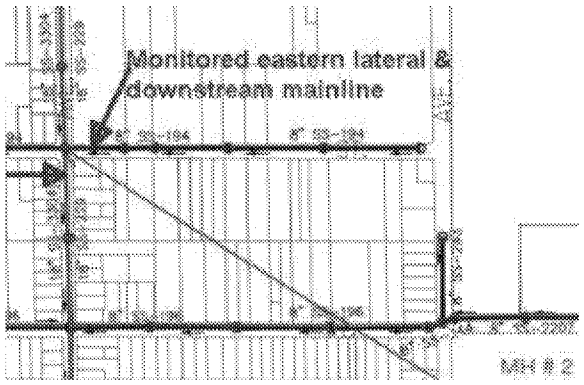
Install Date: 10/31/2017

Map

Technology



Sewer Plan



Flow Meter			
Meter Depth: 127"			
Map Coordinates: 33.943639, -118.339787			
Turbulent hydraulics due to drop in line as lateral connects to MH trough			
Avg Velocity	Avg Measured Level		Multiplier
1.0 fps	2.0"		1
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
Monitored lateral entering MH from east per client direction.			
Traffic Safety			
Used cones & signs in accord with CA MUTCD requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
X	X		

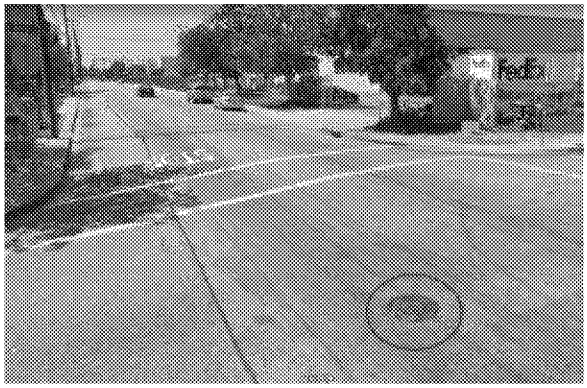
Manhole Depth	143"
Monitored Pipe Size	8"
Main Pipe Size (In/Out)	18"/18"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	15.72"
Sensor Dist. to Crown	7.72"
Sensor Direction	Upstream
Flow Heading	West

Meter Site Document

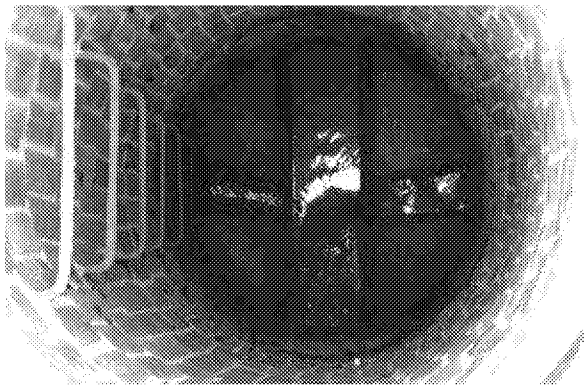
D & D Engineering, Inc

2017.11 Doty MH E Inflow ~3798 W. 102nd St

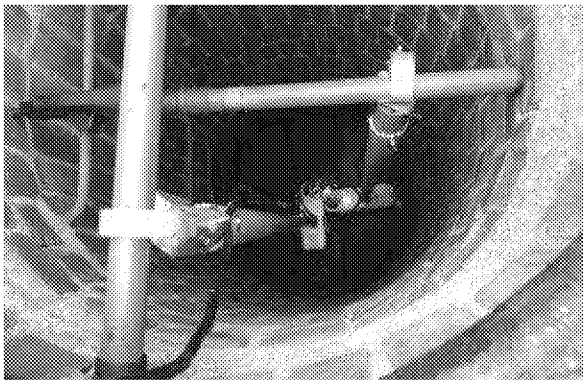
Site



Manhole Before Install



Installation Process



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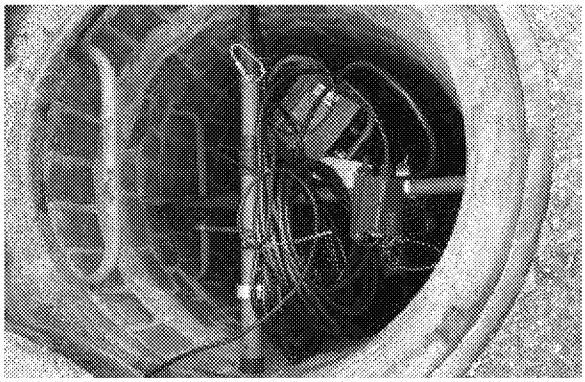


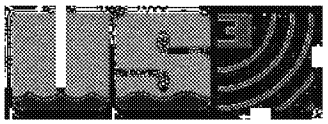
Utility Systems Science and Software

Report Date: 12/04/2017
Customer: D & D Engineering, Inc
Group: Inglewood
SiteID: 2952

Statistics for 2017.11 Doty MH E Inflow: 10/31/2017 thru 11/30/2017

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
10/31/17	32.74	39.44	27.29	0.05	0.06	0.04	1.09	1.23	0.98	1.97	2.08	1.86	47,152	
11/1/17	23.76	37.22	5.62	0.03	0.05	0.01	0.91	1.20	0.47	1.70	2.03	1.01	34,221	
11/2/17	28.31	47.01	10.07	0.04	0.07	0.01	1.01	1.38	0.62	1.83	2.18	1.28	40,773	
11/3/17	24.97	44.51	4.86	0.04	0.06	0.01	0.93	1.27	0.44	1.74	2.20	0.98	35,952	
11/4/17	28.24	54.03	4.37	0.04	0.08	0.01	0.99	1.44	0.43	1.79	2.32	0.93	40,670	
11/5/17	26.99	53.96	6.60	0.04	0.08	0.01	0.97	1.43	0.51	1.76	2.32	1.10	38,869	
Week:	**27.50**	**54.03**	**4.37**	**0.04**	**0.08**	**0.01**	**0.98**	**1.44**	**0.43**	**1.80**	**2.32**	**0.93**	**237,636**	
11/6/17	26.74	47.57	4.51	0.04	0.07	0.01	0.96	1.34	0.42	1.76	2.22	0.92	38,508	
11/7/17	28.44	52.43	5.97	0.04	0.08	0.01	0.98	1.33	0.48	1.84	2.48	1.07	40,953	
11/8/17	25.01	44.72	4.65	0.04	0.06	0.01	0.93	1.34	0.43	1.73	2.14	0.97	36,017	
11/9/17	29.19	49.37	10.14	0.04	0.07	0.01	1.02	1.35	0.62	1.85	2.29	1.27	42,036	
11/10/17	27.78	44.44	8.06	0.04	0.06	0.01	0.99	1.30	0.56	1.81	2.16	1.18	40,008	
11/11/17	26.88	43.96	5.35	0.04	0.06	0.01	0.97	1.34	0.45	1.76	2.22	1.04	38,704	
11/12/17	25.78	43.33	4.72	0.04	0.06	0.01	0.94	1.30	0.41	1.74	2.18	1.01	37,117	
Week:	**27.12**	**52.43**	**4.51**	**0.04**	**0.08**	**0.01**	**0.97**	**1.35**	**0.41**	**1.78**	**2.48**	**0.92**	**273,343**	
11/13/17	28.25	58.26	7.01	0.04	0.08	0.01	1.00	1.42	0.53	1.82	2.46	1.11	40,677	
11/14/17	26.57	45.07	7.15	0.04	0.06	0.01	0.94	1.31	0.53	1.81	2.28	1.08	38,261	

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
11/15/17	24.40	45.07	5.14	0.04	0.06	0.01	0.89	1.24	0.41	1.76	2.27	1.07	35,141	
11/16/17	24.85	44.24	5.76	0.04	0.06	0.01	0.88	1.18	0.43	1.79	2.31	1.10	35,777	
11/17/17	27.95	50.90	5.90	0.04	0.07	0.01	0.94	1.48	0.43	1.87	2.39	1.04	40,247	
11/18/17	29.82	62.29	7.22	0.04	0.09	0.01	0.96	1.35	0.46	1.93	2.69	1.20	42,938	
11/19/17	26.71	52.99	5.62	0.04	0.08	0.01	0.89	1.31	0.42	1.83	2.47	1.09	38,469	
Week:	**26.94**	**62.29**	**5.14**	**0.04**	**0.09**	**0.01**	**0.93**	**1.48**	**0.41**	**1.83**	**2.69**	**1.04**	**271,510**	
11/20/17	27.23	50.00	7.01	0.04	0.07	0.01	0.91	1.30	0.46	1.88	2.39	1.22	39,206	
11/21/17	27.76	50.00	5.76	0.04	0.07	0.01	0.91	1.30	0.41	1.89	2.36	1.17	39,973	
11/22/17	30.36	62.78	6.46	0.04	0.09	0.01	0.94	1.40	0.46	1.97	2.62	1.17	43,721	
11/23/17	28.62	53.96	3.19	0.04	0.08	0.00	0.90	1.27	0.23	1.94	2.53	1.11	41,210	
11/24/17	25.76	52.71	7.15	0.04	0.08	0.01	0.89	1.31	0.49	1.83	2.43	1.19	37,094	
11/25/17	32.21	52.43	11.11	0.05	0.08	0.02	0.99	1.34	0.61	2.01	2.46	1.39	46,385	
11/26/17	31.51	57.92	5.62	0.05	0.08	0.01	0.98	1.41	0.41	1.97	2.46	1.14	45,375	
Week:	**29.06**	**62.78**	**3.19**	**0.04**	**0.09**	**0.00**	**0.93**	**1.41**	**0.23**	**1.93**	**2.62**	**1.11**	**292,964**	
11/27/17	31.02	48.61	11.60	0.04	0.07	0.02	1.01	1.30	0.63	1.96	2.30	1.40	44,670	
11/28/17	27.39	46.32	6.67	0.04	0.07	0.01	0.98	1.36	0.50	1.79	2.15	1.08	39,443	
11/29/17	27.46	47.78	7.08	0.04	0.07	0.01	0.97	1.37	0.51	1.81	2.19	1.15	39,545	
11/30/17	24.13	49.17	6.60	0.03	0.07	0.01	0.93	1.33	0.53	1.68	2.29	1.06	34,751	
Week:	**27.50**	**49.17**	**6.60**	**0.04**	**0.07**	**0.01**	**0.97**	**1.37**	**0.50**	**1.81**	**2.30**	**1.06**	**158,408**	
Totals:	**27.64**	**62.78**	**3.19**	**0.04**	**0.09**	**0.00**	**0.95**	**1.48**	**0.23**	**1.83**	**2.69**	**0.92**	**1,233,860**	



Site Report 04-11-2019

Confidential Proprietary Information

D & D Engineering, Inc

2017.11 Doty MH S Outflow

~3798 W. 102nd St
Manhole No.2

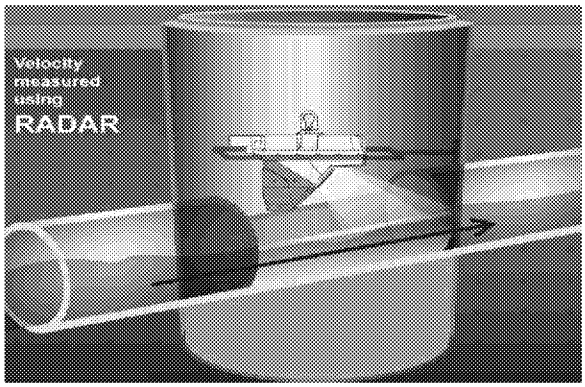
Access:
Manhole within intersection of S. Doty Av & W. 102nd St

System Type:
Sanitary [X] Storm [ ]

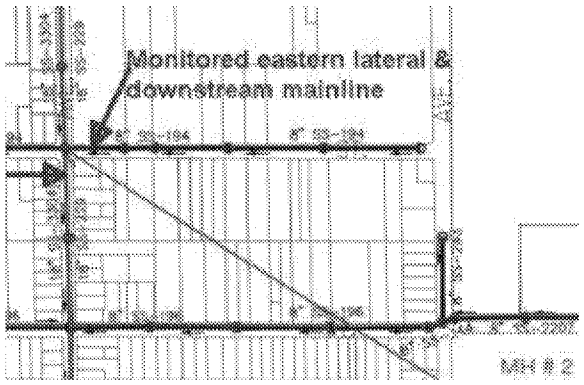
Install Date: 10/31/2017

Map

Technology



Traffic Plan



Flow Meter			
Meter Depth: 117"			
MH Coordinates: 33.943639, -118.339787			
Turbulent hydraulics due to drop in trough within the MH			
Avg Velocity	Avg Measured Level		Multiplier
2.66 fps	2.75"		1
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
Two 8-in laterals entering 15-in mainline; monitored downstream line per client direction.			
Traffic Safety			
Used cones & signs in accord with CA MUTCD requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
X	X		

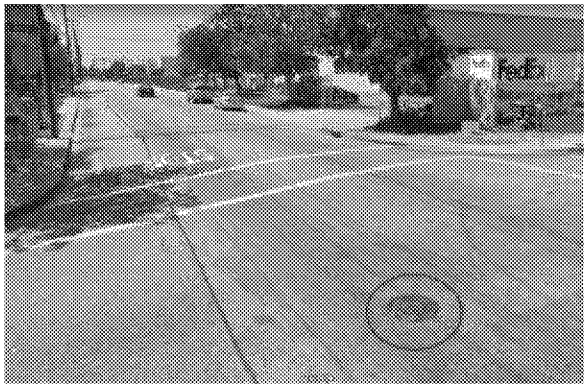
Manhole Depth	143"
Monitored Pipe Size	15"
Mainline Size (In/Out)	15"/15"
Pipe Shape	Round
Pipe Condition	Good
Manhole Material	Brick
Silt	0
Velocity Profile Data	*
Velocity Profile Taken	0.4 2-D
Sensor Offset	26.14"
Sensor Dist. to Crown	11.14"
Sensor Direction	Downstream
Flow Heading	South

Meter Site Document

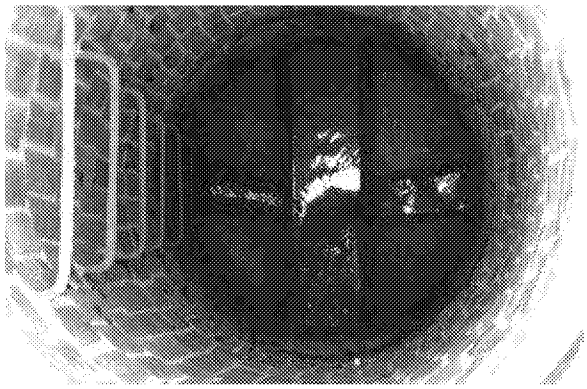
D & D Engineering, Inc

2017.11 Doty MH S Outflow ~3798 W. 102nd St

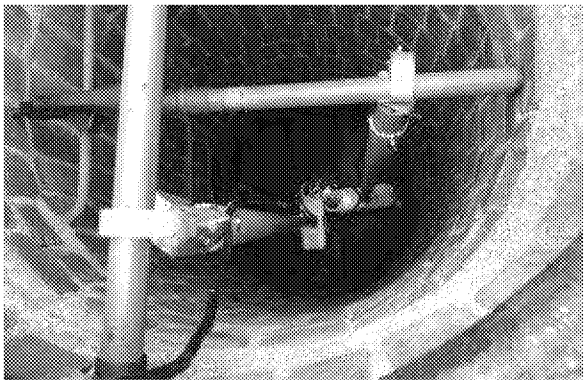
Site



Manhole Before Install



Installation Process



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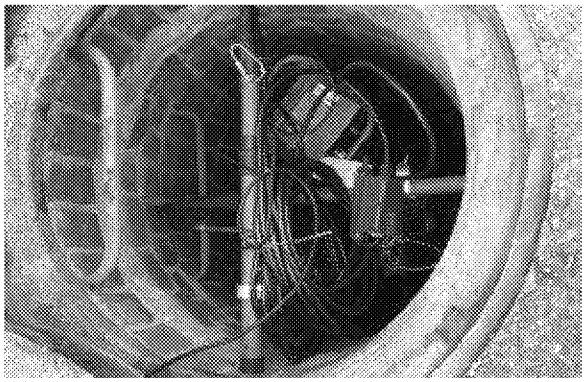
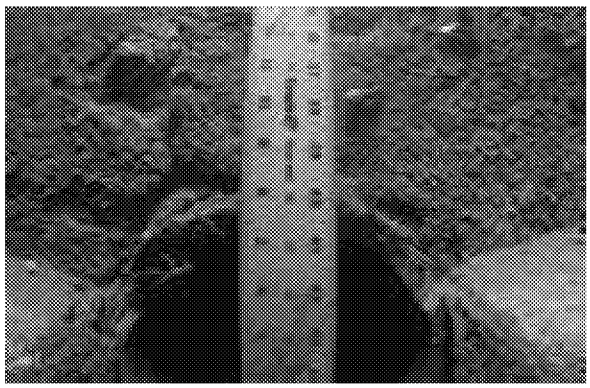
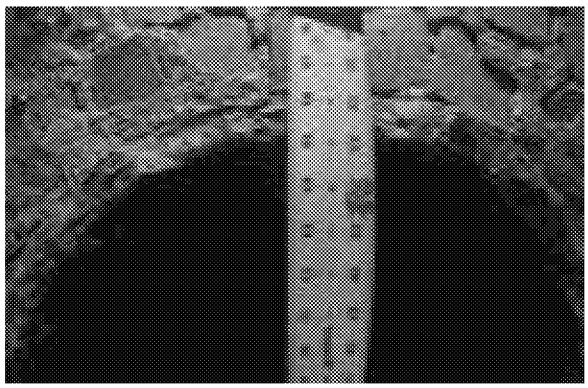


Upstream Lateral



Downstream Outflow



Utility Systems Science and Software

Report Date: 04/11/2019
Customer: US3
Group: Inglewood
SiteID: 2953

Statistics for 2017.11 Doty MH S Outflow: 10/31/2017 thru 11/30/2017

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
10/31/17	183.89	209.93	155.28	0.26	0.30	0.22	2.65	2.86	2.31	2.75	2.87	2.68	264,808	
11/1/17	169.60	221.80	96.67	0.24	0.32	0.14	2.56	2.84	2.06	2.65	3.07	2.10	244,223	
11/2/17	190.52	255.83	111.81	0.27	0.37	0.16	2.60	2.90	2.07	2.84	3.40	2.32	274,352	
11/3/17	167.46	244.03	84.24	0.24	0.35	0.12	2.49	2.82	1.77	2.66	3.24	2.12	241,142	
11/4/17	180.71	244.30	96.67	0.26	0.35	0.14	2.56	2.87	2.09	2.75	3.24	2.08	260,229	
11/5/17	173.63	254.10	84.24	0.25	0.37	0.12	2.49	2.93	1.69	2.72	3.27	2.15	250,029	
Week:	**177.64**	**255.83**	**84.24**	**0.26**	**0.37**	**0.12**	**2.56**	**2.93**	**1.69**	**2.73**	**3.40**	**2.08**	**1,534,784**	
11/6/17	170.59	238.68	90.07	0.25	0.34	0.13	2.55	2.87	1.79	2.66	3.16	2.08	245,647	
11/7/17	182.67	244.93	86.53	0.26	0.35	0.12	2.59	2.87	1.71	2.76	3.19	2.21	263,049	
11/8/17	165.29	243.47	92.99	0.24	0.35	0.13	2.51	2.87	1.93	2.63	3.19	2.12	238,019	
11/9/17	172.57	230.83	87.29	0.25	0.33	0.13	2.48	2.87	1.70	2.73	3.25	2.24	248,494	
11/10/17	176.48	250.49	79.72	0.25	0.36	0.11	2.52	2.88	1.62	2.74	3.26	2.14	254,132	
11/11/17	173.38	252.01	85.62	0.25	0.36	0.12	2.48	2.91	1.69	2.72	3.22	2.10	249,665	
11/12/17	163.35	221.39	83.96	0.24	0.32	0.12	2.50	2.86	1.87	2.61	3.03	2.04	235,227	
Week:	**172.05**	**252.01**	**79.72**	**0.25**	**0.36**	**0.11**	**2.52**	**2.91**	**1.62**	**2.69**	**3.26**	**2.04**	**1,734,233**	
11/13/17	169.88	232.71	80.90	0.24	0.34	0.12	2.51	2.84	1.67	2.67	3.12	2.12	244,628	
11/14/17	162.69	202.29	97.43	0.23	0.29	0.14	2.52	2.80	1.87	2.60	2.95	2.15	234,274	
11/15/17	165.99	228.33	80.00	0.24	0.33	0.12	2.50	2.77	1.75	2.64	3.16	2.05	239,032	

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Total Gal	Rain
11/16/17	178.48	234.79	91.46	0.26	0.34	0.13	2.54	2.79	1.93	2.75	3.17	2.09	257,010	
11/17/17	175.66	240.62	71.04	0.25	0.35	0.10	2.50	2.93	1.57	2.74	3.19	2.05	252,949	
11/18/17	184.77	241.11	110.97	0.27	0.35	0.16	2.52	2.85	1.81	2.84	3.26	2.27	266,071	
11/19/17	171.93	238.26	76.94	0.25	0.34	0.11	2.45	2.86	1.69	2.72	3.21	2.00	247,578	
Week:	**172.77**	**241.11**	**71.04**	**0.25**	**0.35**	**0.10**	**2.51**	**2.93**	**1.57**	**2.71**	**3.26**	**2.00**	**1,741,542**	
11/20/17	182.17	244.58	92.57	0.26	0.35	0.13	2.55	2.85	1.80	2.77	3.27	2.20	262,324	
11/21/17	182.52	247.85	98.12	0.26	0.36	0.14	2.55	2.84	2.11	2.77	3.26	2.06	262,824	
11/22/17	182.71	245.28	86.94	0.26	0.35	0.13	2.53	2.83	1.74	2.79	3.24	2.11	263,103	
11/23/17	176.68	245.49	77.78	0.25	0.35	0.11	2.44	2.89	1.65	2.78	3.24	2.10	254,423	
11/24/17	153.24	226.18	83.19	0.22	0.33	0.12	2.29	2.81	1.66	2.64	3.14	2.11	220,659	
11/25/17	182.72	231.67	92.50	0.26	0.33	0.13	2.56	2.87	1.64	2.78	3.11	2.28	263,113	
11/26/17	177.05	247.99	83.12	0.26	0.36	0.12	2.51	2.95	1.73	2.74	3.15	2.10	254,959	
Week:	**176.73**	**247.99**	**77.78**	**0.25**	**0.36**	**0.11**	**2.49**	**2.95**	**1.64**	**2.75**	**3.27**	**2.06**	**1,781,405**	
11/27/17	173.92	227.92	97.92	0.25	0.33	0.14	2.54	2.83	1.80	2.71	3.06	2.25	250,439	
11/28/17	171.62	238.19	87.43	0.25	0.34	0.13	2.53	2.79	1.84	2.68	3.23	2.12	247,137	
11/29/17	174.59	227.78	97.29	0.25	0.33	0.14	2.55	2.85	1.96	2.70	3.10	2.10	251,412	
11/30/17	161.87	222.78	85.56	0.23	0.32	0.12	2.43	2.76	1.68	2.65	3.12	2.22	233,090	
Week:	**170.50**	**238.19**	**85.56**	**0.25**	**0.34**	**0.12**	**2.51**	**2.85**	**1.68**	**2.69**	**3.23**	**2.10**	**982,078**	
Totals:	**174.15**	**255.83**	**71.04**	**0.25**	**0.37**	**0.10**	**2.52**	**2.95**	**1.57**	**2.72**	**3.40**	**2.00**	**7,774,042**	

Appendix E

Pipe Size Capacity Calculations

Worksheet for Pipe Segment A to A1

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02000	ft/ft
Diameter	0.67	ft
Discharge	0.01	ft^3/s

Results

Normal Depth	0.04	ft
Flow Area	0.01	ft^2
Wetted Perimeter	0.35	ft
Hydraulic Radius	0.03	ft
Top Width	0.33	ft
Critical Depth	0.04	ft
Percent Full	6.5	%
Critical Slope	0.01820	ft/ft
Velocity	1.03	ft/s
Velocity Head	0.02	ft
Specific Energy	0.06	ft
Froude Number	1.05	
Maximum Discharge	1.72	ft^3/s
Discharge Full	1.57	ft^3/s
Slope Full	0.00000	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	6.55	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment A to A1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.04	ft
Critical Depth	0.04	ft
Channel Slope	0.02000	ft/ft
Critical Slope	0.01820	ft/ft

Worksheet for Pipe Segment A1 to A2

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Diameter	0.67	ft
Discharge	0.06	ft^3/s

Results

Normal Depth	0.14	ft
Flow Area	0.05	ft^2
Wetted Perimeter	0.63	ft
Hydraulic Radius	0.08	ft
Top Width	0.54	ft
Critical Depth	0.11	ft
Percent Full	20.8	%
Critical Slope	0.01068	ft/ft
Velocity	1.14	ft/s
Velocity Head	0.02	ft
Specific Energy	0.16	ft
Froude Number	0.64	
Maximum Discharge	0.76	ft^3/s
Discharge Full	0.70	ft^3/s
Slope Full	0.00005	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	20.80	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment A1 to A2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.14	ft
Critical Depth	0.11	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.01068	ft/ft

Worksheet for Pipe Segment A2 to A3

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Diameter	0.67	ft
Discharge	0.10	ft^3/s

Results

Normal Depth	0.18	ft
Flow Area	0.07	ft^2
Wetted Perimeter	0.72	ft
Hydraulic Radius	0.10	ft
Top Width	0.59	ft
Critical Depth	0.14	ft
Percent Full	26.4	%
Critical Slope	0.00936	ft/ft
Velocity	1.35	ft/s
Velocity Head	0.03	ft
Specific Energy	0.20	ft
Froude Number	0.67	
Maximum Discharge	0.76	ft^3/s
Discharge Full	0.70	ft^3/s
Slope Full	0.00011	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	26.43	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment A2 to A3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.18	ft
Critical Depth	0.14	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00936	ft/ft

Worksheet for Pipe Segment B to B1

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Diameter	0.67	ft
Discharge	0.14	ft^3/s

Results

Normal Depth	0.17	ft
Flow Area	0.07	ft^2
Wetted Perimeter	0.70	ft
Hydraulic Radius	0.10	ft
Top Width	0.58	ft
Critical Depth	0.17	ft
Percent Full	24.9	%
Critical Slope	0.00885	ft/ft
Velocity	2.06	ft/s
Velocity Head	0.07	ft
Specific Energy	0.23	ft
Froude Number	1.06	
Maximum Discharge	1.21	ft^3/s
Discharge Full	1.11	ft^3/s
Slope Full	0.00020	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	24.92	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment B to B1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.17	ft
Critical Depth	0.17	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00885	ft/ft

Worksheet for Pipe Segment B1 to B2

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00880	ft/ft
Diameter	0.67	ft
Discharge	0.25	ft^3/s

Results

Normal Depth	0.23	ft
Flow Area	0.11	ft^2
Wetted Perimeter	0.83	ft
Hydraulic Radius	0.13	ft
Top Width	0.63	ft
Critical Depth	0.23	ft
Percent Full	34.1	%
Critical Slope	0.00824	ft/ft
Velocity	2.38	ft/s
Velocity Head	0.09	ft
Specific Energy	0.32	ft
Froude Number	1.03	
Maximum Discharge	1.14	ft^3/s
Discharge Full	1.04	ft^3/s
Slope Full	0.00055	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	34.06	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment B1 to B2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.23	ft
Critical Depth	0.23	ft
Channel Slope	0.00880	ft/ft
Critical Slope	0.00824	ft/ft

Worksheet for Pipe Segment C to C1

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00240	ft/ft
Diameter	1.00	ft
Discharge	0.77	ft^3/s

Results

Normal Depth	0.48	ft
Flow Area	0.37	ft^2
Wetted Perimeter	1.53	ft
Hydraulic Radius	0.24	ft
Top Width	1.00	ft
Critical Depth	0.37	ft
Percent Full	47.8	%
Critical Slope	0.00653	ft/ft
Velocity	2.07	ft/s
Velocity Head	0.07	ft
Specific Energy	0.54	ft
Froude Number	0.60	
Maximum Discharge	1.81	ft^3/s
Discharge Full	1.66	ft^3/s
Slope Full	0.00054	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	47.85	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment C to C1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.48	ft
Critical Depth	0.37	ft
Channel Slope	0.00240	ft/ft
Critical Slope	0.00653	ft/ft

Worksheet for Pipe Segment C1 to C2

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00240	ft/ft
Diameter	1.00	ft
Discharge	0.83	ft^3/s

Results

Normal Depth	0.50	ft
Flow Area	0.39	ft^2
Wetted Perimeter	1.57	ft
Hydraulic Radius	0.25	ft
Top Width	1.00	ft
Critical Depth	0.38	ft
Percent Full	50.0	%
Critical Slope	0.00650	ft/ft
Velocity	2.11	ft/s
Velocity Head	0.07	ft
Specific Energy	0.57	ft
Froude Number	0.59	
Maximum Discharge	1.81	ft^3/s
Discharge Full	1.66	ft^3/s
Slope Full	0.00063	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.98	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment C1 to C2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.50	ft
Critical Depth	0.38	ft
Channel Slope	0.00240	ft/ft
Critical Slope	0.00650	ft/ft

Worksheet for Pipe Segment D to D1

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02000	ft/ft
Diameter	0.67	ft
Discharge	0.07	ft^3/s

Results

Normal Depth	0.10	ft
Flow Area	0.04	ft^2
Wetted Perimeter	0.54	ft
Hydraulic Radius	0.06	ft
Top Width	0.49	ft
Critical Depth	0.12	ft
Percent Full	15.7	%
Critical Slope	0.00997	ft/ft
Velocity	2.08	ft/s
Velocity Head	0.07	ft
Specific Energy	0.17	ft
Froude Number	1.36	
Maximum Discharge	1.72	ft^3/s
Discharge Full	1.57	ft^3/s
Slope Full	0.00007	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	15.72	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment D to D1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.10	ft
Critical Depth	0.12	ft
Channel Slope	0.02000	ft/ft
Critical Slope	0.00997	ft/ft

Worksheet for Pipe Segment D1 to B2

Project Description

Friction Method	Kutter Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Diameter	0.67	ft
Discharge	0.21	ft^3/s

Results

Normal Depth	0.25	ft
Flow Area	0.12	ft^2
Wetted Perimeter	0.89	ft
Hydraulic Radius	0.14	ft
Top Width	0.65	ft
Critical Depth	0.21	ft
Percent Full	38.1	%
Critical Slope	0.00840	ft/ft
Velocity	1.72	ft/s
Velocity Head	0.05	ft
Specific Energy	0.30	ft
Froude Number	0.70	
Maximum Discharge	0.76	ft^3/s
Discharge Full	0.70	ft^3/s
Slope Full	0.00040	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	38.08	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pipe Segment D1 to B2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.25	ft
Critical Depth	0.21	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00840	ft/ft

Worksheet for Existing Prairie Ave (POC #1)

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00440	ft/ft
Normal Depth	0.33	ft
Diameter	0.67	ft

Results

Discharge	0.36	ft^3/s	= 0.23 MGD
Flow Area	0.17	ft^2	
Wetted Perimeter	1.04	ft	
Hydraulic Radius	0.17	ft	
Top Width	0.67	ft	
Critical Depth	0.28	ft	
Percent Full	49.3	%	
Critical Slope	0.00814	ft/ft	
Velocity	2.09	ft/s	
Velocity Head	0.07	ft	
Specific Energy	0.40	ft	
Froude Number	0.72		
Maximum Discharge	0.81	ft^3/s	
Discharge Full	0.74	ft^3/s	
Slope Full	0.00107	ft/ft	
Flow Type	SubCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.25	%
Downstream Velocity	Infinity	ft/s

Worksheet for Existing Prairie Ave (POC #1)

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.33	ft
Critical Depth	0.28	ft
Channel Slope	0.00440	ft/ft
Critical Slope	0.00814	ft/ft

Worksheet for Existing 102nd Street (POC #2)

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00880	ft/ft
Normal Depth	0.33	ft
Diameter	0.67	ft

Results

Discharge	0.51	ft^3/s	= 0.33 MGD
Flow Area	0.17	ft^2	
Wetted Perimeter	1.04	ft	
Hydraulic Radius	0.17	ft	
Top Width	0.67	ft	
Critical Depth	0.33	ft	
Percent Full	49.3	%	
Critical Slope	0.00837	ft/ft	
Velocity	2.96	ft/s	
Velocity Head	0.14	ft	
Specific Energy	0.47	ft	
Froude Number	1.03		
Maximum Discharge	1.15	ft^3/s	
Discharge Full	1.05	ft^3/s	
Slope Full	0.00213	ft/ft	
Flow Type	SuperCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.25	%
Downstream Velocity	Infinity	ft/s

Worksheet for Existing 102nd Street (POC #2)

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.33	ft
Critical Depth	0.33	ft
Channel Slope	0.00880	ft/ft
Critical Slope	0.00837	ft/ft

Worksheet for Existing 103th Street (POC #3 - C1)

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	0.33	ft
Diameter	0.67	ft

Results

Discharge	0.34	ft^3/s	= 0.22 MGD
Flow Area	0.17	ft^2	
Wetted Perimeter	1.04	ft	
Hydraulic Radius	0.17	ft	
Top Width	0.67	ft	
Critical Depth	0.27	ft	
Percent Full	49.3	%	
Critical Slope	0.00812	ft/ft	
Velocity	1.99	ft/s	
Velocity Head	0.06	ft	
Specific Energy	0.39	ft	
Froude Number	0.69		
Maximum Discharge	0.77	ft^3/s	
Discharge Full	0.71	ft^3/s	
Slope Full	0.00098	ft/ft	
Flow Type	SubCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.25	%
Downstream Velocity	Infinity	ft/s

Worksheet for Existing 103th Street (POC #3 - C1)

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.33	ft
Critical Depth	0.27	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00812	ft/ft

Worksheet for Existing Prairie Trunk Sewer (POC #3 - C2)

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00171	ft/ft
Normal Depth	1.88	ft
Diameter	2.50	ft

Results

Discharge	15.71	ft^3/s	= 10.15 MGD
Flow Area	3.95	ft^2	
Wetted Perimeter	5.24	ft	
Hydraulic Radius	0.75	ft	
Top Width	2.17	ft	
Critical Depth	1.34	ft	
Percent Full	75.0	%	
Critical Slope	0.00453	ft/ft	
Velocity	3.98	ft/s	
Velocity Head	0.25	ft	
Specific Energy	2.12	ft	
Froude Number	0.52		
Maximum Discharge	18.51	ft^3/s	
Discharge Full	17.12	ft^3/s	
Slope Full	0.00144	ft/ft	
Flow Type	SubCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	75.00	%
Downstream Velocity	Infinity	ft/s

Worksheet for Existing Prairie Trunk Sewer (POC #3 - C2)

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.88	ft
Critical Depth	1.34	ft
Channel Slope	0.00171	ft/ft
Critical Slope	0.00453	ft/ft

Worksheet for Existing 102nd Street E/O Doty (POC #4)

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	0.33	ft
Diameter	0.67	ft

Results

Discharge	0.34	ft^3/s	= 0.22 MGD
Flow Area	0.17	ft^2	
Wetted Perimeter	1.04	ft	
Hydraulic Radius	0.17	ft	
Top Width	0.67	ft	
Critical Depth	0.27	ft	
Percent Full	49.3	%	
Critical Slope	0.00812	ft/ft	
Velocity	1.99	ft/s	
Velocity Head	0.06	ft	
Specific Energy	0.39	ft	
Froude Number	0.69		
Maximum Discharge	0.77	ft^3/s	
Discharge Full	0.71	ft^3/s	
Slope Full	0.00098	ft/ft	
Flow Type	SubCritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.25	%
Downstream Velocity	Infinity	ft/s

Worksheet for Existing 102nd Street E/O Doty (POC #4)

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.33	ft
Critical Depth	0.27	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00812	ft/ft

Appendix F

Policies for Managing Available Sewer Capacity and Sewage Discharge in excess of Design Capacity

October 12, 2005

Approved

TO: Dean Efstathiou

FROM: Dennis Hunter
Land Development Division

POLICIES FOR MANAGING AVAILABLE SEWER CAPACITY AND SEWAGE DISCHARGE IN EXCESS OF DESIGN CAPACITY

The following will set forth Public Works' policies related to managing sewer infrastructure capacity. Design capacity of the sewer mainline is defined as follows:

< 15" diameter	½ full = 100% capacity (d/D)
≥ 15" diameter	¾ full = 100% capacity (d/D)

When Public Works determines there is available capacity in a mainline sewer for infill and redevelopment projects, the remaining available capacity shall be allocated on a first come – first serve basis.

Sewer Advisory Committee

A Sewer Advisory Committee (SAC) will be formed for the purpose of recommending courses of action to address proposed development connecting to existing sewers that will cause them to be operating beyond their design capacity. The SAC will make their recommendations to Dean Efstathiou, Assistant Director. The SAC will be chaired by Waterworks and Sewer Maintenance Division and will have representatives from Design and Land Development Divisions. Each Division will appoint a Principal Engineer or Senior Civil Engineer as a representative to the SAC and will convene whenever sewer decisions are required to address developmental impacts. Sewer Maintenance will maintain records of SAC meetings and will prepare recommendations to Administration for approval. The SAC may require other Division representatives to participate on a case-by-case basis when necessary, such as Building and Safety and Programs Development.

Divisional Responsibilities

Design Division

1. Support activities of the SAC.

2. Prepare sewer area studies when required.

3. Maintain records/archive of all approved sewer area studies and flow measurements.

Land Development Division

1. Support activities of the SAC.

2. Impose sewer area study requirements for private developments if necessary and review/approve all submittals.

3. Refer cases to SAC when both sewer area studies and flow measurements indicate that a potential overload situation exists or will exist based on criteria described below.

4. Provide copies of all approved sewer area studies and flow measurements to Design Division for archiving.

Waterworks and Sewer Maintenance Division

1. Chair the SAC, maintain meeting records and prepare position papers to Administration.

2. Advise the SAC when an overload condition is observed during maintenance activities.

3. Initiate effort to track and map all overload areas within the Consolidated Maintenance District.

4. Keep database of all flow measurement results.

Design Criteria

1. Capacity of sewer mainlines less than 15" in diameter are considered full (100 percent) when the ratio of the depth of flow (d) over the pipe diameter (D) is equal to 0.5, expressed as d/D = 0.5.

2. Capacity of sewer mainlines equal to or greater than 15" in diameter are considered full (100 percent) when the ratio of the depth of flow (d) over the pipe diameter (D) is equal to 0.75, expressed as d/D = 0.75.

3. When an area study indicates that flow conditions based on calculated discharges is between 101 percent to 150 percent of capacity, no flow measurements and no mitigation will be required. If maintenance records warrant, a flow test may be required.

4. When an area study for a development that proposes to increase the density or change the zoning indicates that flow conditions are between 151 to 200 percent of capacity, flow measurements shall be required. If the flow test indicates that the actual flow condition is below 151 percent, no mitigation will be required. If the flow test results indicate the actual flow is above 151 percent, the case shall be referred to the SAC to evaluate options and make recommendations to Administration for approval. These options may include, but are not limited to: requiring full mitigation from the development, assessing pro-rata shares, creation of a reimbursement district, or establishing a County Improvement (CI) district.

AHN:ca
P:\LDPUB\SUBPCHECK\SEWER\MISCELLANEOUS\SEWER INFRASTRUCTURE MANAGEMENT

cc: Administration (Kelly)
Building and Safety (Patel)
Design (Kumar)
Land Development (D'Antonio, Burger, Ruiz, Chong, Witler, Narag)
Programs Development (Afshari)
Waterworks and Sewer Maintenance (Del Real, Lehto)

Appendix G

Excerpt from Hollywood Park Sewer Area Study / Inglewood, NFL Stadium at Hollywood Park Sewer Area Study

WILSON MEANY

DAVID EVANS AND ASSOCIATES INC.

INGLEWOOD NFL STADIUM AT HOLLYWOOD PARK

Sewer Area Study

January 5, 2017

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TABLE OF CONTENTS

I. Introduction

The purpose of this report is to determine the sizes of the proposed sewer lines for the Stadium Alternative of the City of Champions Revitalization Project permitted as an option under the entitlements granted by the City of Inglewood for the redevelopment of the Hollywood Park development. This report estimates peak sewer flows based on not only the expected development, but also the possible future redevelopment of the parking lots.

II. Site Description

The existing Hollywood Park site is a now-closed recreational and equestrian facility located in the City of Inglewood, California. The 298-acre area consists of 12 parcels and is at the northeast intersection of Prairie Avenue and Century Boulevard within the Centinela Valley and South Bay region (see Figure 1). The surrounding development consists primarily of commercial and residential areas with the L.A. Forum to the north across Pincay Drive. Refer to Figure 2 for existing zoning.

III. Project Description

The Stadium Alternative of the City of Champions Revitalization Project is a proposed mixed-use community that includes residential, retail, office, gaming, and sports uses. The project is currently entitled for 2,500 residential dwelling units, 890,000 square feet of retail space, 780,000 square feet of general office space, 300 hotel rooms, a 120,000 square foot casino, an 80,000-seat stadium, a 6,000-seat performance venue, and substantial amounts of surface parking and other interim uses. Refer to Figure 3, "Land Use". Because the General Plan permits additional density on the site, however, for the purposes of this analysis, additional density was assumed on certain blocks in order to ensure that the proposed lines will be able to meet any future needs.

There are two sewer trunk systems within District No. 5 (South Inglewood – Orange Avenue Trunk and Prairie Avenue Trunk) that can be used by the proposed project per the letters from Sanitation Districts of Los Angeles County (LA County) found in Appendix A. The existing peak flow and capacity of these sewer trunks is as follows:

- Prairie Avenue Trunk (21" diameter) at Hardy / Osage (POC #1)
  - The letter from LA County dated March 4, 2016 shows a capacity of 9.3 MGD and an existing peak flow of 3.2 MGD. This results in an available capacity of 6.1 MGD at POC #1.

- Prairie Avenue Trunk (24" diameter) at Century / Flower (POC #2)
  - The letter from LA County dated November 13, 2007 shows a capacity of 9.2 MGD and an existing peak flow of 3.3 MGD. This results in an available capacity of 5.9 MGD at POC #2.

- South Inglewood – Orange Avenue Trunk (15" diameter) at Century / Doty (POC #s 3, 4, 5, and 6)
    - The letter from LA County dated March 4, 2016 shows a capacity of 2.6 MGD and an existing peak flow of 0.8 MGD. This results in an available capacity of 1.8 MGD for the combined total from POC #s 3-6.
    - Flow monitoring near the confluence manhole at Century and Doty by Downstream Services, Inc. shows a peak flow of 0.043 from the west and 0.486 MGD from the east for a total peak flow of 0.529 MGD (see Appendix C).
    - This report will use the most conservative value of 0.8 MGD as the existing peak flow. This results in an available capacity of 1.8 MGD at POC #s 3, 4, 5, and 6.

The proposed project will have six points of connection (POC) to the existing sewer system. POC #1 is located to the west near the intersection of Prairie Avenue and Arbor Vitae Street. POC #2 is located to the west near the intersection of Hardy Street and Flower Street. The other four (POC #s 3 through 6) are located to the south along Century Boulevard. The location of the existing sewer trunk system and the six points of connection are shown in Figure 4. The existing and proposed peak flows for the existing sewer trunks can be found in Figure 5.

A request was submitted to LA County for the proposed abandonment of the 10" and 12" diameter sewer along the western boundary of the project site between Pincay Drive and Arbor Vitae Street. Appendix F shows the confirmation from LA County for the abandonment of the sewer line and the CCTV report that was submitted as part of the request.

IV. Sewer Pipe Capacity Analysis

The entire proposed sewer system will consist of gravity lines with a range of 8" to 21" in diameter. The minimum allowable slope will be 0.12%, and the maximum allowable slope will be 6.00%. The pipe slopes shown in Table 2 have been calculated based on the pipe size and the street grades shown in Figure 6. The minimum design velocity is 2 f/s, except for upstream pipes where the minimum velocity is between 1.5 f/s and 2 f/s. The maximum design velocity is approximately 6.24 f/s.

Refer to Figure 5 for a summary of the tributary areas and the proposed onsite sewer system. The northern and eastern parts (yellow and blue areas) of the sewer system will drain to the Prairie Avenue Trunk Sewer. This includes sewage from the stadium, which will connect to this proposed sewer system at various points as shown in Figure 7. The southern part of the sewer system (orange, purple, green, and pink areas) will drain to the South Inglewood – Orange Avenue Trunk Sewer.

Table 1 shows the on-site peak flows calculated from the standard average daily flows for the proposed occupancies per County standards shown in Appendix B. Peak flow capacities and pipe sizes were determined by using Kutter's Formula. Refer to Pipe Size Capacity Calculations in Appendix D. Each main line is sized

based on the minimum slope (worst case scenario) and half or 3/4 full pipe depending on the pipe size based on LA County guidelines.

V. Conclusion

A summary of proposed pipe diameters and slopes can be found in Table 1 and Table 2. All on-site sewer mains were sized between 8" and 21" and meet the County capacity standards of no more than ½ full for mains under 15" diameter and no more than ¾ full for mains with a diameter of 15" and larger per Appendix E.

The impact to the existing County Trunk Sewer System is summarized in Figure 5 and Table 2. The northern and eastern portions of the project site contribute 5.6 MGD to the Prairie Avenue Trunk Sewer, which does not exceed the available capacity of 5.9 MGD. The southern portions of the project site contribute 1.5 MGD to the South Inglewood – Orange Avenue Trunk Sewer, which does not exceed the available capacity of 1.8 MGD. Therefore, existing sewer trunks have enough available capacity for the proposed project.

Tables

TABLE 1 - SUMMARY OF CONTRIBUTING FLOW FOR EACH TRIBUTARY AREA

MARCH 2015 OVERALL BUILD-OUT

Peak Flow to POC [MGD]	Tributary Area	Parcel Name	Development Type	Daily Average Sewage Generating Factor [GPM]	Unit Contribution		Daily Average Flow [GPD]	Peak Flow (2.5x Average) [MGD]	Peak Flow [CFS]
1.19	1	MU-13	HOTEL	150 / ROOM	203	ROOMS	30,450	0.08	0.12
	2		HOTEL	150 / ROOM	139	ROOMS	20,850	0.05	0.08
	3		HOTEL	150 / ROOM	251	ROOMS	37,650	0.09	0.15
	4	MU-12	OFFICE	200 / 1000 SQ.FT.	313,000	SF	62,600	0.16	0.24
	5	MU-4	OFFICE	200 / 1000 SQ.FT.	102,500	SF	20,500	0.05	0.08
	6	MU-14	OFFICE	200 / 1000 SQ.FT.	285,000	SF	57,000	0.14	0.22
	7	MU-15	OFFICE	200 / 1000 SQ.FT.	204,000	SF	40,800	0.10	0.16
	8		OFFICE	200 / 1000 SQ.FT.	476,960	SF	95,392	0.24	0.37
	9	MU-16	OFFICE	200 / 1000 SQ.FT.	327,000	SF	65,400	0.16	0.25
	10	STA-1, OS-4	STADIUM*	10 / SEAT	4,640	SEATS	46,400	0.12	0.18
4.41	11	MU-17	OFFICE	200 / 1000 SQ.FT.	174,700	SF	34,940	0.09	0.14
	12		OFFICE	200 / 1000 SQ.FT.	124,871	SF	24,974	0.06	0.10
	13		OFFICE	200 / 1000 SQ.FT.	220,801	SF	44,160	0.11	0.17
	14		OFFICE	200 / 1000 SQ.FT.	109,598	SF	21,920	0.05	0.08
	15	RES-1	RESIDENTIAL	250 / DU	58	DU	14,500	0.04	0.06
	16	MU-18	OFFICE	200 / 1000 SQ.FT.	124,000	SF	24,800	0.06	0.10
	17	RES-2	RESIDENTIAL	250 / DU	21	DU	5,250	0.01	0.02
	18		RESIDENTIAL	250 / DU	36	DU	9,000	0.02	0.03
	19		RESIDENTIAL	250 / DU	21	DU	5,250	0.01	0.02
	20	RES-3	RESIDENTIAL	250 / DU	36	DU	9,000	0.02	0.03
	21		RESIDENTIAL	250 / DU	24	DU	6,000	0.02	0.02
	22	RES-4	RESIDENTIAL	250 / DU	133	DU	33,250	0.08	0.13
	23	RES-5	RESIDENTIAL	250 / DU	89	DU	22,250	0.06	0.09
	24	RES-6	RESIDENTIAL	250 / DU	113	DU	28,250	0.07	0.11
	25	RES-7	RESIDENTIAL	250 / DU	22	DU	5,500	0.01	0.02
	26	RES-5	RESIDENTIAL	250 / DU	89	DU	22,250	0.06	0.09
	27	RES-6	RESIDENTIAL	250 / DU	68	DU	17,000	0.04	0.07
	28		RESIDENTIAL	250 / DU	45	DU	11,250	0.03	0.04
	29	RES-7	RESIDENTIAL	250 / DU	22	DU	5,500	0.01	0.02
	30	RES-8	RESIDENTIAL	250 / DU	18	DU	4,500	0.01	0.02
	31A	PK-3	BLUFF PARK (BUILDINGS)	100 / 1000 SQ.FT.	9,550	SF	955	0.00	0.00
	31B		BLUFF PARK (PARKING)	25 / 1000 SQ.FT.	71,980	SF	1,800	0.00	0.01
	32	RES-11	RESIDENTIAL	250 / DU	28	DU	7,000	0.02	0.03
	33	RES-10	RESIDENTIAL	250 / DU	37	DU	9,250	0.02	0.04
	34		RESIDENTIAL	250 / DU	37	DU	9,250	0.02	0.04
	35	RES-9	RESIDENTIAL	250 / DU	68	DU	17,000	0.04	0.07
	36		RESIDENTIAL	250 / DU	102	DU	25,500	0.06	0.10
	37	RES-15, RES-16	RESIDENTIAL	250 / DU	130	DU	32,500	0.08	0.13
	38	RES-14	RESIDENTIAL	250 / DU	182	DU	45,500	0.11	0.18
	39	RES-13	RESIDENTIAL	250 / DU	126	DU	31,500	0.08	0.12
	40		RESIDENTIAL	250 / DU	126	DU	31,500	0.08	0.12
	41	RES-12	RESIDENTIAL	250 / DU	52	DU	13,000	0.03	0.05
	42	MU-7	RESIDENTIAL	250 / DU	41	DU	10,250	0.03	0.04
	43		RESIDENTIAL	250 / DU	42	DU	10,500	0.03	0.04
	44	MU-6	HOTEL	150 / ROOM	149	ROOMS	22,350	0.06	0.09
	45	MU-5	HOTEL	150 / ROOM	116	ROOMS	17,400	0.04	0.07
	46	MU-2	RETAIL	100 / 1000 SQ.FT.	40,689	SF	4,069	0.01	0.02
	47	PK-1, PK-2, OS-1, OS-2	LAKE PARK (BUILDINGS)	100 / 1000 SQ.FT.	10,890	SF	1,089	0.00	0.00
	48	STA-1	VENUE	10 / SEAT	6,000	SEATS	60,000	0.15	0.23
	49A		STADIUM*	10 / SEAT	37,320	SEATS	373,200	0.93	1.44
	49B		STADIUM*	10 / SEAT	38,040	SEATS	380,400	0.95	1.47
	50	MU-4	OFFICE	200 / 1000 SQ.FT.	283,500	SF	56,700	0.14	0.22
	50A	CIVIC	SCHOOL	15 GPD / STUDENT	800	STUDENTS	12,000	0.03	0.05
	51	MU-3	RETAIL	100 / 1000 SQ.FT.	66,761	SF	6,676	0.02	0.03
	52		RETAIL	100 / 1000 SQ.FT.	100,842	SF	10,084	0.03	0.04
	53		RETAIL	100 / 1000 SQ.FT.	29,518	SF	2,952	0.01	0.01
	54		RETAIL	100 / 1000 SQ.FT.	65,218	SF	6,522	0.02	0.03
	55	MU-2	RETAIL	100 / 1000 SQ.FT.	59,198	SF	5,920	0.01	0.02
	56	MU-3	RETAIL	100 / 1000 SQ.FT.	251,661	SF	25,166	0.06	0.10
	57	MU-11	RESIDENTIAL	250 / DU	192	DU	48,000	0.12	0.19
	58		RESIDENTIAL	250 / DU	192	DU	48,000	0.12	0.19
	59		RESIDENTIAL	250 / DU	192	DU	48,000	0.12	0.19

	60	MU-10	RESIDENTIAL	250 / DU	164	DU	41,000	0.10	0.16
	61	RES-12	RESIDENTIAL	250 / DU	77	DU	19,250	0.05	0.07
	62	MU-7	RESIDENTIAL	250 / DU	40	DU	10,000	0.03	0.04
	63		RESIDENTIAL	250 / DU	40	DU	10,000	0.03	0.04
	64	MU-9	OFFICE	200 / 1000 SQ.FT.	165,620	SF	33,124	0.08	0.13
	65		OFFICE	200 / 1000 SQ.FT.	125,017	SF	25,003	0.06	0.10
	66		OFFICE	200 / 1000 SQ.FT.	304,333	SF	60,867	0.15	0.24
	67	MU-8	RESIDENTIAL	250 / DU	229	DU	57,250	0.14	0.22
	68		RESIDENTIAL	250 / DU	76	DU	19,000	0.05	0.07
	69		RESIDENTIAL	250 / DU	153	DU	38,250	0.10	0.15
1.20	70	MU-6	HOTEL	150 / ROOM	233	ROOMS	34,950	0.09	0.14
	71	MU-8	RESIDENTIAL	250 / DU	153	DU	38,250	0.10	0.15
	72	MU-5	HOTEL	150 / ROOM	157	ROOMS	23,550	0.06	0.09
	73		HOTEL	150 / ROOM	114	ROOMS	17,100	0.04	0.07
	74	MU-1	RETAIL	100 / 1000 SQ.FT.	228,073	SF	22,807	0.06	0.09
	75	MU-2	RETAIL	100 / 1000 SQ.FT.	36,299	SF	3,630	0.01	0.01
	76		RETAIL	100 / 1000 SQ.FT.	18,911	SF	1,891	0.00	0.01
	77	MU-1	RETAIL	100 / 1000 SQ.FT.	146,915	SF	14,692	0.04	0.06
	78	MU-2	RETAIL	100 / 1000 SQ.FT.	54,903	SF	5,490	0.01	0.02
	79	MU-8	RESIDENTIAL	250 / DU	153	DU	38,250	0.10	0.15
	80	MU-1	RETAIL	100 / 1000 SQ.FT.	51,012	SF	5,101	0.01	0.02
0.11	81		CASINO	410 / 1000 SQ.FT.	19,000	SF	7,790	0.02	0.03
	82		CASINO	410 / 1000 SQ.FT.	91,000	SF	37,310	0.09	0.14
0.03	83		PARKING LOT	25 / 1000 SQ.FT.	406,000	SF	10,150	0.03	0.04
0.20	84	RES-17	RESIDENTIAL	250 / DU	69	DU	17,250	0.04	0.07
	85		RESIDENTIAL	250 / DU	102	DU	25,500	0.06	0.10
	86	RES-18	RESIDENTIAL	250 / DU	142	DU	35,500	0.09	0.14
			TOTAL				**2,853,574**	**7.13**	**11.04**
							GPD	**MGD**	**CFS**

*The total stadium capacity is 80,000 seats, broken down as follows: 5.8% (4,640 seat equivalents) to Tributary Area 10, 46.7% (37,320 seat equivalents) to Tributary Area 49A, and 47.5% (38,040 seat equivalents) to Tributary Area 49B (see Figure 7).

Project: City of Champions Revitalization Project - Stadium Alternative
Project #: WIMEHPLC-2016

TABLE 2 - SEWER CAPACITY SUMMARY

MARCH 2015 OVERALL BUILD-OUT

Pipe Segment		Contributing Areas	Pipe Diameter	Min. Street Slope	Pipe Slope*	Pipe Capacity [CFS]	Contributing Flow [CFS]	Contributing Flow [MGD]	Capacity?	Normal Depth [FT]	Depth?	Velocity [FT/S]	Velocity?
POC #1	A1 to A	7, 8, 9, 10	12"	0.50%	0.50%	1.200	0.947	0.61	SUFFICIENT	0.44	SUFFICIENT	2.86	SUFFICIENT
	A2 to A	1, 6	8"	0.40%	0.45%	0.370	0.338	0.22	SUFFICIENT	0.32	SUFFICIENT	2.07	SUFFICIENT
	A3 to A**	2, 3, 4	12"	-2.98%	0.24%	0.830	0.468	0.30	SUFFICIENT	0.37	SUFFICIENT	1.78	NO****
	A to B	A, 5	15"	0.54%	0.50%	4.120	1.833	1.18	SUFFICIENT	0.56	SUFFICIENT	3.43	SUFFICIENT
	B to C**	B	15"	0.50%	0.16%	2.310	1.833	1.18	SUFFICIENT	0.79	SUFFICIENT	2.24	SUFFICIENT
	C to C'* **	**C**	**15"**	**0.60%**	**0.14%*** **	**2.160**	**1.833**	**1.18**	**SUFFICIENT**	**0.83**	**SUFFICIENT**	**2.12**	**SUFFICIENT**
	D1 to D	13	8"	1.80%	0.75%	0.470	0.171	0.11	SUFFICIENT	0.20	SUFFICIENT	2.00	SUFFICIENT
	D to E	D, 14, 15	8"	2.22%	2.00%	0.770	0.312	0.20	SUFFICIENT	0.21	SUFFICIENT	3.38	SUFFICIENT
	F1 to F	18, 19, 20, 21, 22, 23, 24, 25, 30, 31A, 31B	10"	0.65%	0.40%	0.650	0.486	0.31	SUFFICIENT	0.36	SUFFICIENT	2.19	SUFFICIENT
	G1 to G	27, 28, 29, 33	8"	1.60%	1.50%	0.670	0.166	0.11	SUFFICIENT	0.16	SUFFICIENT	2.50	SUFFICIENT
	G to J	G, 26	8"	3.12%	3.00%	0.950	0.252	0.16	SUFFICIENT	0.17	SUFFICIENT	3.62	SUFFICIENT
	H1 to H	32, 34, 37	8"	0.41%	0.70%	0.460	0.189	0.12	SUFFICIENT	0.21	SUFFICIENT	2.01	SUFFICIENT
	H to I	H, 35, 36, 38, 40	8"	1.62%	1.50%	0.670	0.651	0.42	SUFFICIENT	0.33	SUFFICIENT	3.84	SUFFICIENT
	I to K	I, 39, 41	10"	1.00%	1.00%	1.030	0.823	0.53	SUFFICIENT	0.37	SUFFICIENT	3.53	SUFFICIENT
	P1 to P	49B	15"	0.61%	0.60%	4.520	1.535	0.99	SUFFICIENT	0.49	SUFFICIENT	3.48	SUFFICIENT
	P2 to P	47, 48	8"	2.00%	0.70%	0.460	0.236	0.15	SUFFICIENT	0.23	SUFFICIENT	2.16	SUFFICIENT
POC #2	P to Q	P, 52, 53	15"	0.36%	0.36%	3.490	1.822	1.18	SUFFICIENT	0.61	SUFFICIENT	3.04	SUFFICIENT
	R2 to R	50A, 57	8"	0.50%	0.40%	0.340	0.232	0.15	SUFFICIENT	0.27	SUFFICIENT	1.77	NO****
	R1 to R	50	8"	1.75%	1.75%	0.720	0.219	0.14	SUFFICIENT	0.18	SUFFICIENT	2.89	SUFFICIENT
	R to S	R. 51, 56, 58, 59	10"	2.10%	1.25%	1.160	0.946	0.61	SUFFICIENT	0.37	SUFFICIENT	3.99	SUFFICIENT
	E1 to E	11, 12, 49A	15"	0.50%	0.40%	3.670	1.624	1.05	SUFFICIENT	0.56	SUFFICIENT	3.06	SUFFICIENT
	E to F	E, 16, 17	15"	0.50%	0.40%	3.670	2.052	1.33	SUFFICIENT	0.64	SUFFICIENT	3.27	SUFFICIENT
	F to J	F	15"	0.50%	0.40%	3.670	2.539	1.64	SUFFICIENT	0.72	SUFFICIENT	3.45	SUFFICIENT
	J to K	J	15"	0.50%	0.40%	3.670	2.791	1.80	SUFFICIENT	0.77	SUFFICIENT	3.53	SUFFICIENT
	K to N	K, 42, 43	15"	1.06%	0.95%	5.690	3.694	2.39	SUFFICIENT	0.70	SUFFICIENT	5.25	SUFFICIENT
	N to O	N, 44, 45	15"	0.62%	0.50%	4.120	3.848	2.49	SUFFICIENT	0.89	SUFFICIENT	4.12	SUFFICIENT
	O to Q	O, 46	15"	0.75%	0.60%	4.520	3.864	2.50	SUFFICIENT	0.83	SUFFICIENT	4.45	SUFFICIENT
	Q to S	Q, 54, 55	18"	0.40%	0.40%	6.040	5.733	3.71	SUFFICIENT	1.08	SUFFICIENT	4.22	SUFFICIENT
	S to T	S, 60	21"	0.44%	0.40%	9.170	6.838	4.42	SUFFICIENT	1.06	SUFFICIENT	4.49	SUFFICIENT
	T to T'	**T**	**24"**	**0.43%**	**0.12%**	**7.180**	**6.838**	**4.42**	**SUFFICIENT**	**1.44**	**SUFFICIENT**	**2.82**	**SUFFICIENT**
	U1 to U**	74, 75, 76, 77	8"	-0.60%	0.40%	0.340	0.166	0.11	SUFFICIENT	0.23	SUFFICIENT	1.59	NO****
	L2 to L	61, 62, 63, 64	8"	0.50%	0.50%	0.390	0.280	0.18	SUFFICIENT	0.28	SUFFICIENT	2.03	SUFFICIENT

Project: City of Champions Revitalization Project - Stadium Alternative
Project #: WIMEHPLC-2016

TABLE 2 - SEWER CAPACITY SUMMARY

MARCH 2015 OVERALL BUILD-OUT

Pipe Segment		Contributing Areas	Pipe Diameter	Min. Street Slope	Pipe Slope*	Pipe Capacity [CFS]	Contributing Flow [CFS]	Contributing Flow [MGD]	Capacity?	Normal Depth [FT]	Depth?	Velocity [FT/S]	Velocity?
	L3 to L	70	8"	2.92%	0.40%	0.340	0.135	0.09	SUFFICIENT	0.20	SUFFICIENT	1.49	NO****
POC #3	M1 to M	72	8"	2.10%	0.40%	0.340	0.091	0.06	SUFFICIENT	0.17	SUFFICIENT	1.31	NO****
	L1 to L	65, 66, 67, 68	10"	0.50%	0.40%	0.650	0.627	0.41	SUFFICIENT	0.41	SUFFICIENT	2.36	SUFFICIENT
	L to M	L, 69, 71	12"	1.78%	1.50%	2.090	1.338	0.86	SUFFICIENT	0.42	SUFFICIENT	4.83	SUFFICIENT
	M to U	M, 73, 78, 79	12"	2.20%	2.00%	2.410	1.665	1.08	SUFFICIENT	0.41	SUFFICIENT	5.52	SUFFICIENT
	U to V	U, 80	15"	2.17%	1.75%	7.730	1.851	1.20	SUFFICIENT	0.41	SUFFICIENT	5.36	SUFFICIENT
	V to V'* **	**V**	**15"**	**1.81%**	**0.64%*** **	**4.670**	**1.851**	**1.20**	**SUFFICIENT**	**0.53**	**SUFFICIENT**	**3.76**	**SUFFICIENT**
POC #4	**to X*** **	**81, 82**	**8"**	**0.40%**	**0.40%*** **	**0.340**	**0.174**	**0.11**	**SUFFICIENT**	**0.23**	**SUFFICIENT**	**1.62**	**NO**** **
POC #5	**to Y*** **	**83**	**8"**	**0.40%**	**2.00%*** **	**0.770**	**0.039**	**0.03**	**SUFFICIENT**	**0.08**	**SUFFICIENT**	**1.67**	**NO**** **
POC #6	**W1 to W*** **	**84, 85, 86**	**8"**	**1.72%**	**0.40%*** **	**0.340**	**0.303**	**0.20**	**SUFFICIENT**	**0.31**	**SUFFICIENT**	**1.92**	**NO**** **
						TOTAL	**11.038**	**7.13**					
							CFS	**MGD**					

*Pipe slopes were calculated to closely match proposed street grades. However, some pipes may be sloped higher to allow greater flow.

*Proposed sewer pipe design capacity was calculated as 1/2 full for pipe diameters of 12" or lower, and 3/4 full for pipe diameters of 15" or higher

**In cases where the sewer pipe slopes in the opposite direction of street grade, the calculations were based on the lowest allowed sewer pipe slope.

***For pipe segments that have already been constructed, calculations were based on the minimum constructed slopes / sizes

****Velocities for these pipes are above 1.0 ft/s per Kutter's Formula calculations

Figures

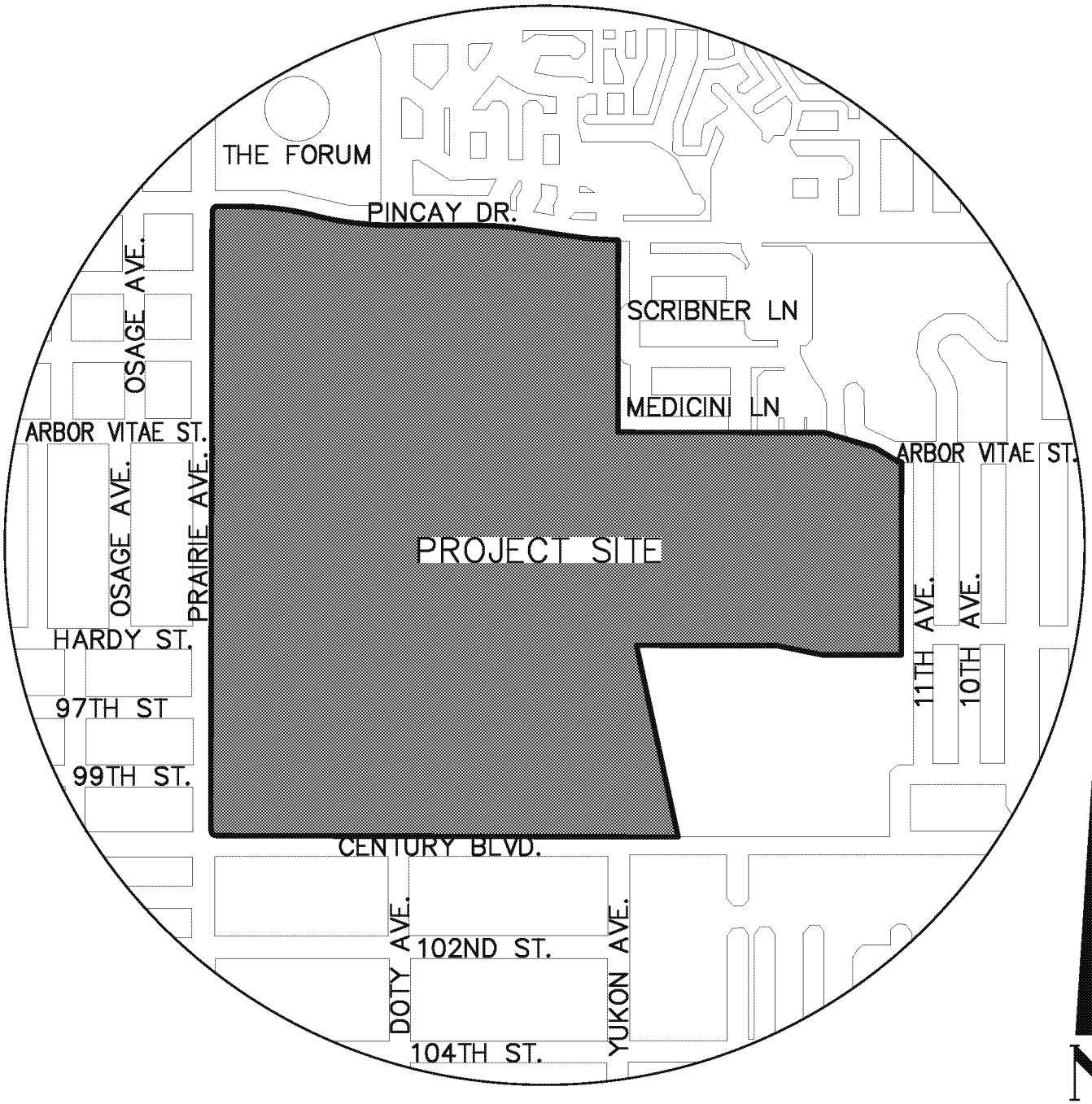


FIGURE 1 – VICINITY MAP

DAVID EVANS AND ASSOCIATES INC.
201 S. FIGUEROA STREET, SUITE 240
LOS ANGELES, CA 90012
Phone: 213.785.7887

Job Number:	WIMEHPLC2016
Date:	10–24–2016
Scale:	1"=1000'
Sheet	1 of 1 Sheets

Drawing Name: M:\07119\Admin\070119.2016 Ovis Infrastructure\Reports\Sewer Area Study\2016\2016-10-24, Revised Sewer Study Report\DWG & Editable Files\Figure 1 – Vicinity Map.dwg
Last Opened: Oct 24, 2016 – 1:05pm by: lxro

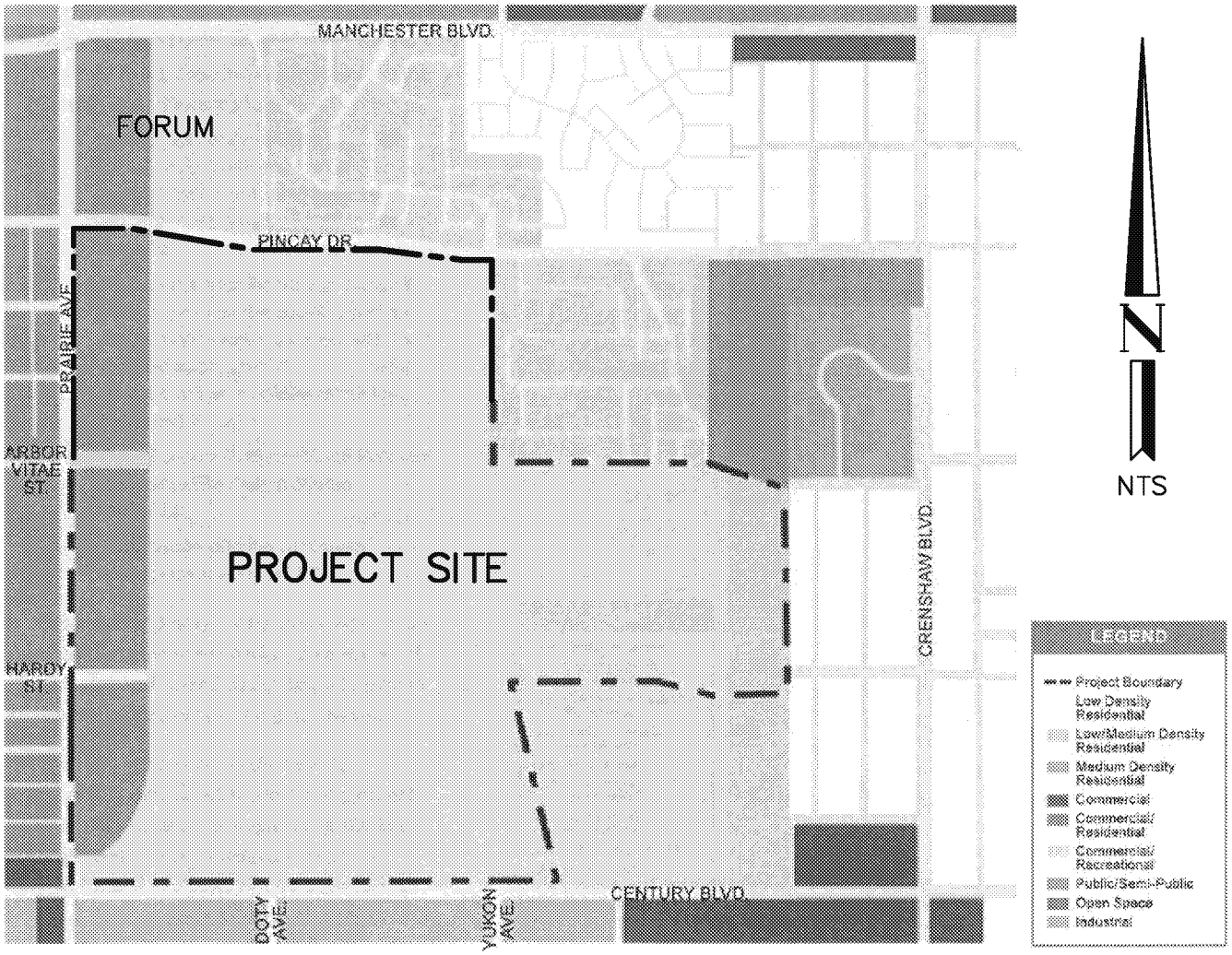


FIGURE 2–EXISTING ZONING

DAVID EVANS AND ASSOCIATES INC.
201 S. FIGUEROA STREET, SUITE 240
LOS ANGELES, CA 90012
Phone: 213.337.3680

Job Number:	WIMEHPLC2016
Date:	10–25–16
Scale:	NTS
Sheet	1
	1 Sheets

Drawing Name: M:\07119\Admin\070119.2016 Ovis Infrastructure\Reports\Sewer Area Study\2016\2016-10-24, Revised Sewer Study Report\DWG & Editable Files\Figure 2 – Zoning.dwg
Last Opened: Oct 25, 2016 – 1:49pm by: lxro

Figure 3 - Land Use

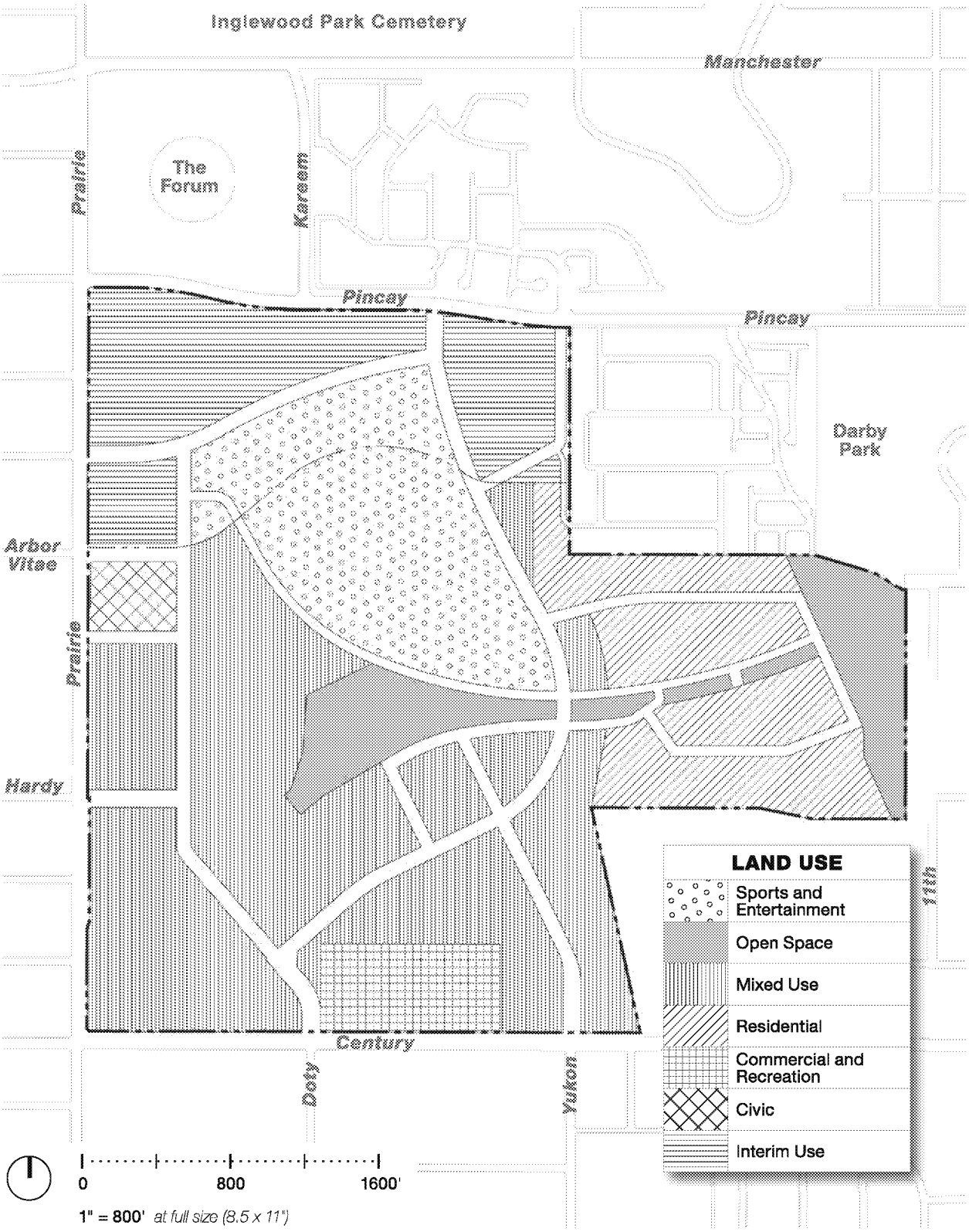
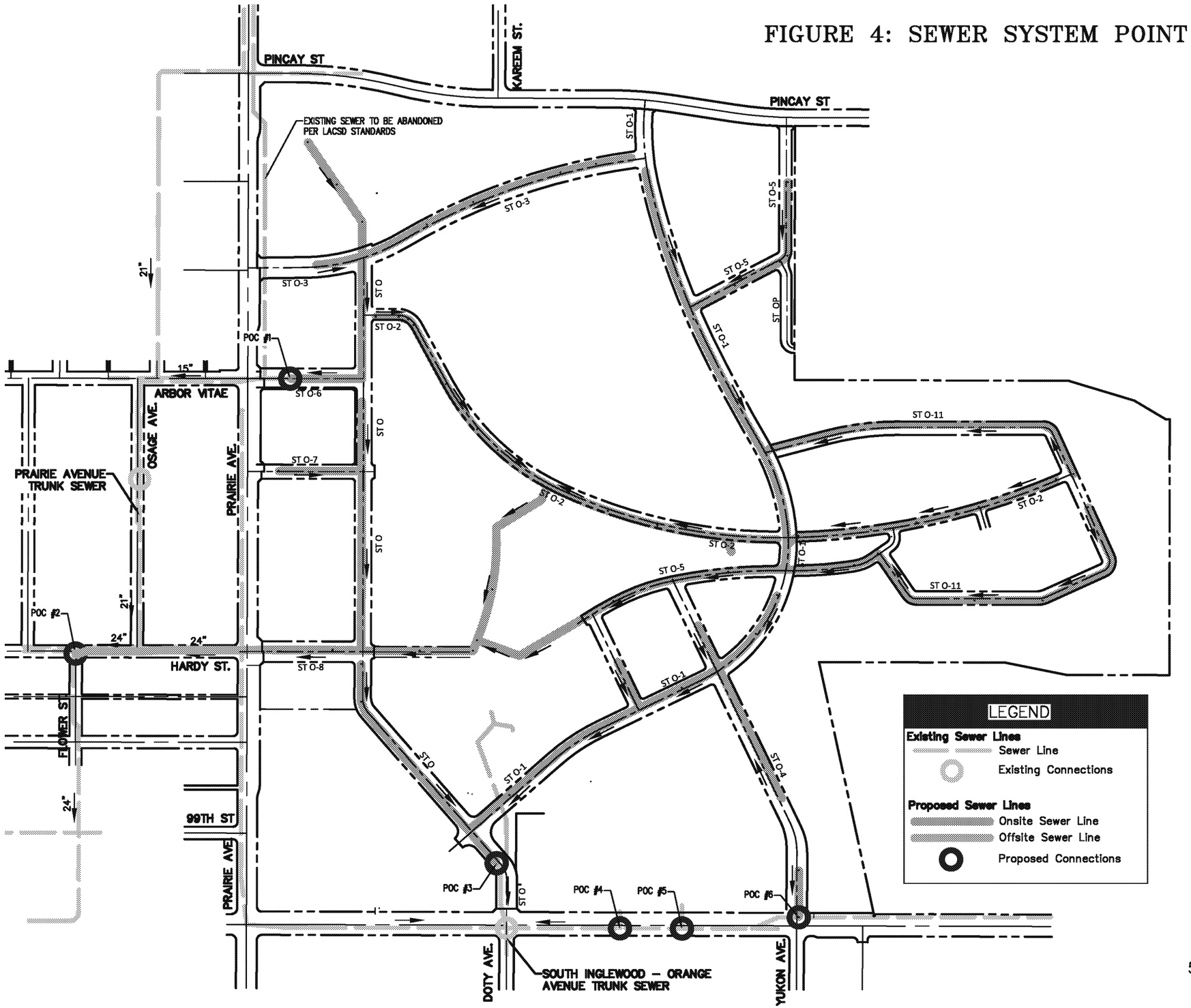


FIGURE 4: SEWER SYSTEM POINT OF CONNECTION



DAVID EVANS AND ASSOCIATES INC.
201 S. FIGUEROA STREET, SUITE 240
LOS ANGELES, CA 90012
Phone: 213.785.7887

Job Number:	WIMEHPLC2016
Date:	10–24–2016
Scale:	1"=500'
Sheet	1 of 1 Sheets

Drawing Name: M:\07119\Admin\070119.2016 Ovis Infrastructure\Reports\Sewer Area Study\2016\2016-10-24, Revised Sewer Study Report\DWG & Editable Files\Figure 4 – Sewer System.dwg
Last Opened: Oct 24, 2016 – 5:28pm By: lxro

FIGURE 5 – TRIBUTARY AREAS

DAVID EVANS AND ASSOCIATES INC.
201 S. FIGUEROA STREET, SUITE 240
LOS ANGELES, CA 90012
Phone: 213.337.3680

Job Number:	WIMEHPLC2016
Date:	01-05-2016
Scale:	1"=500'
Sheet	1 of 1 Sheets

KELSO ST.
PINCAY DR.
LA BREA DR.
BUCKTHORN ST.
ARBOR VITAE ST.
HARDY ST.
97TH ST.
99TH ST.
CENTURY BLVD.
101ST ST.
102ND ST.
OSAGE AVE.
FLOWER ST.
LAKE PARK
BLUFF PARK

POC #1
HARDY / OSAGE (21")
Qcapacity = 9.3 MGD
Qexisting = 3.2 MGD
Qavailable = 6.1 MGD
Qadditional = 1.2 MGD

POC #2
PRAIRIE AVENUE TRUNK SEWER

CENTURY / FLOWER (24")
Qcapacity = 9.2 MGD
Qexisting = 3.3 MGD
Qavailable = 5.9 MGD
Qadditional = 5.6 MGD

POC #3
CENTURY/DOTY (15")
Qcapacity = 2.6 MGD
Qexisting = 0.8 MGD
Qavailable = 1.8 MGD
Qadditional = 1.5 MGD

POC #4
POC #5
POC #6
SOUTH INGLEWOOD – ORANGE AVENUE TRUNK SEWER

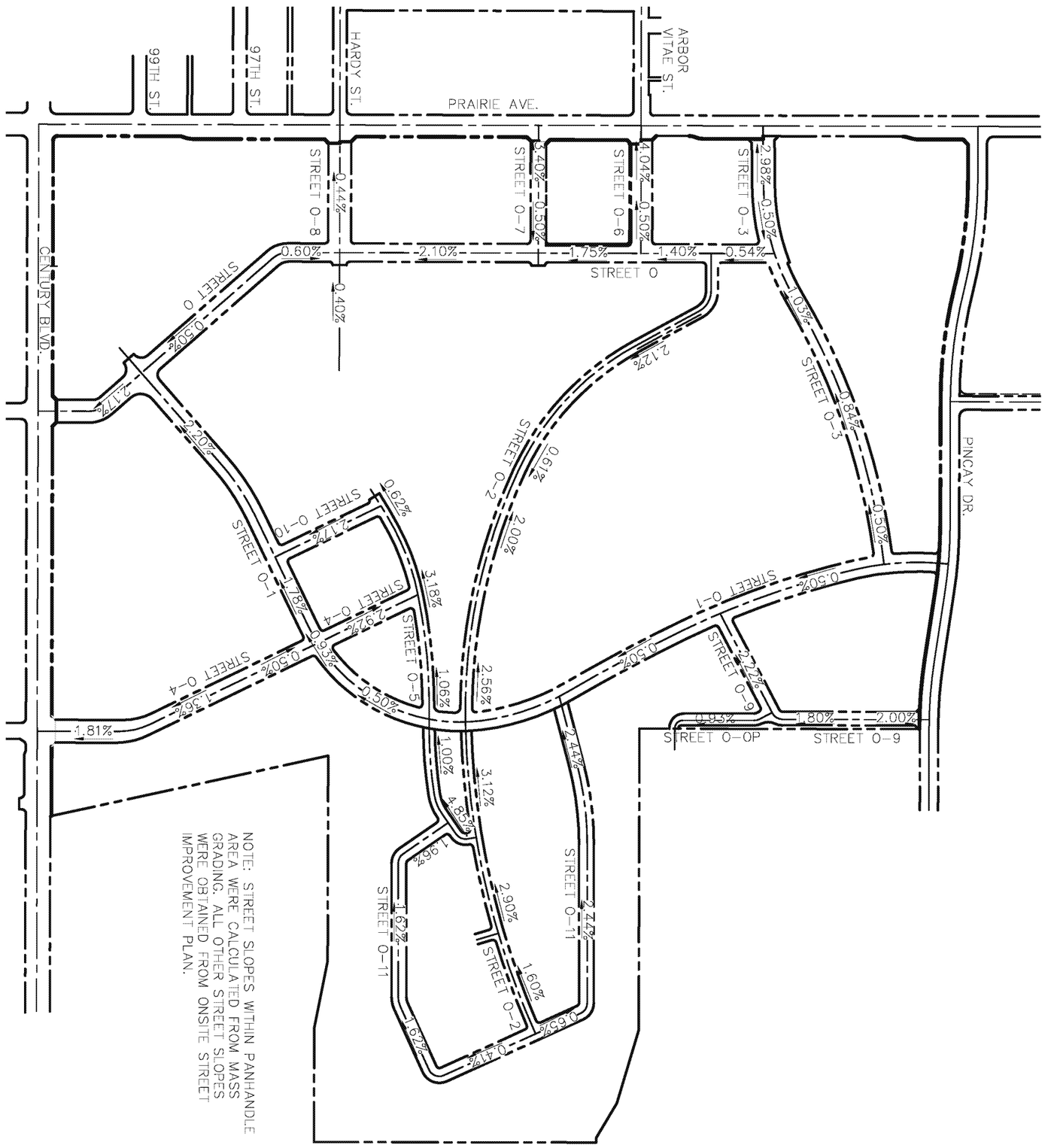
LEGEND

- PROPOSED ONSITE SEWER MAINS
- PROPOSED OFFSITE SEWER MAINS
- CONSTRUCTED SEWER MAINS
- EXISTING SEWER TRUNKS / MAINS
- 1 TRIBUTARY AREA NUMBER
- (A) NODE DESIGNATION
- 8" PIPE SIZE
- POC #1 TRIBUTARY AREA
- POC #2 TRIBUTARY AREA
- POC #3 TRIBUTARY AREA
- POC #4 TRIBUTARY AREA
- POC #5 TRIBUTARY AREA
- POC #6 TRIBUTARY AREA

N

500 0 500 1000
scale 1"= 500' feet

Drawing Name: M:\07119\Admin\070119.2016 Ovis Infrastructure\Reports\Sewer Area Study\2016\2017-01-05, Revised Sewer Study Report\DWG & Editable Files\Figure 5 – Tributary Areas.dwg
Last Opened: Jan 05, 2017 – 4:07pm by: lxro



scale 1" = 500'
500 0 500 1000 feet

N

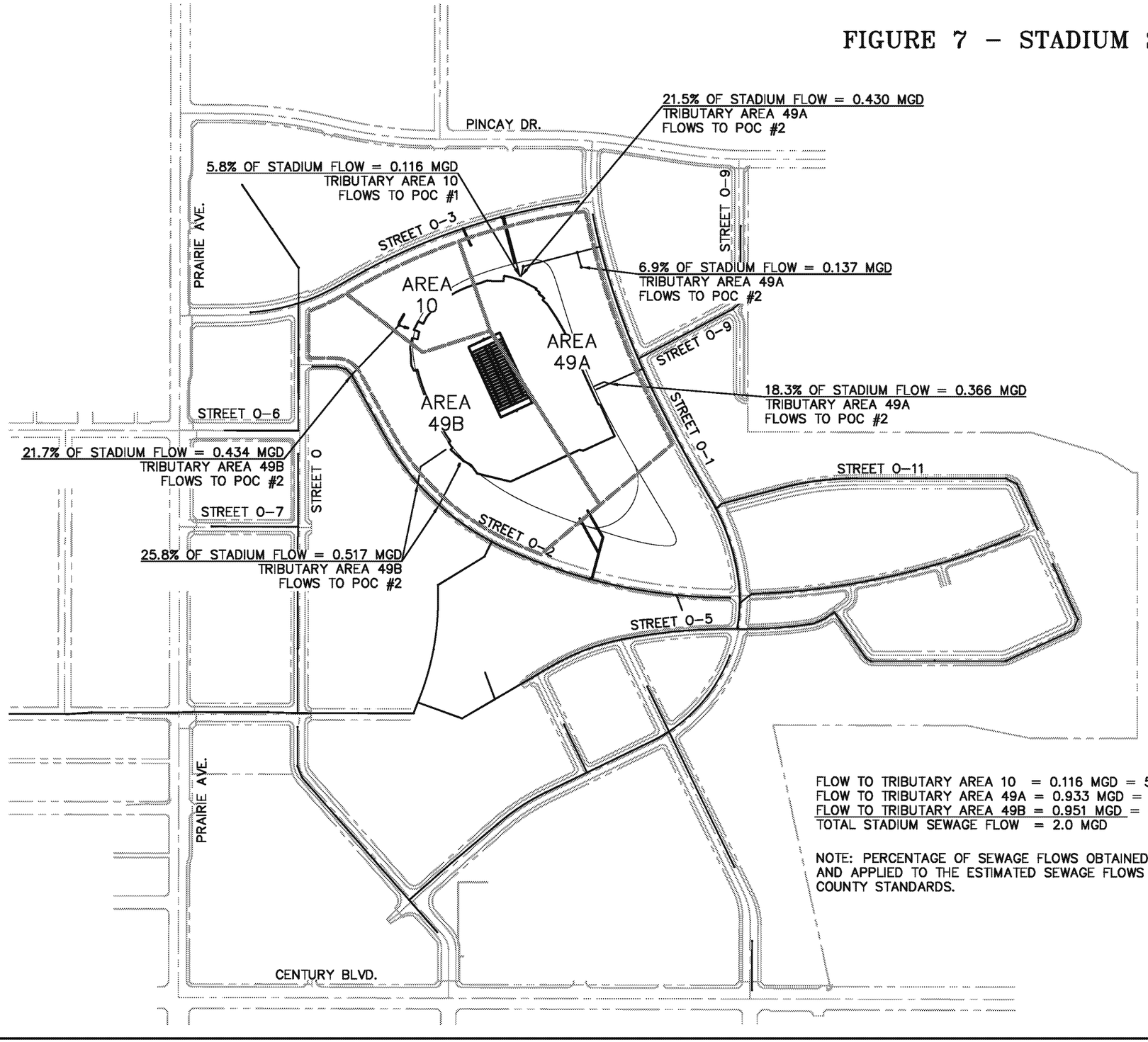
FIGURE 6 – PROPOSED STREET GRADES

DAVID EVANS AND ASSOCIATES INC.
201 S. FIGUEROA STREET, SUITE 240
LOS ANGELES, CA 90012
Phone: 213.337.3680

Job Number:	WMEHPLC2016
Date:	01-05-2017
Scale:	1"=500'
Sheet	1 of 1 Sheets

Drawing Name: M:\07119\Admin\070119.2016 Ovis Infrastructure\Reports\Sewer Area Study\2016\2017-01-05, Revised Sewer Study Report\DWG & Editable Files\Figure 6 - Street Grades.dwg
Last Opened: Jan 05, 2017 - 4:55pm by: lxro

FIGURE 7 – STADIUM SEWER CONNECTION FLOWS



FLOW TO TRIBUTARY AREA 10 = 0.116 MGD = 5.8% OF STADIUM TOTAL
FLOW TO TRIBUTARY AREA 49A = 0.933 MGD = 46.7% OF STADIUM TOTAL
FLOW TO TRIBUTARY AREA 49B = 0.951 MGD = 47.5% OF STADIUM TOTAL
TOTAL STADIUM SEWAGE FLOW = 2.0 MGD

NOTE: PERCENTAGE OF SEWAGE FLOWS OBTAINED FROM PLUMBING ENGINEER AND APPLIED TO THE ESTIMATED SEWAGE FLOWS CALCULATED PER LA COUNTY STANDARDS.

N

500 0 500 1000
scale 1"= 500' feet

Job Number:	WIMEHPLC2016
Date:	10–24–2016
Scale:	1"=500'
Sheet	1 of 1 Sheets

DAVID EVANS AND ASSOCIATES INC.
201 S. FIGUEROA STREET, SUITE 240
LOS ANGELES, CA 90012
Phone: 213.337.3680

Drawing Name: M:\07119\Admin\070119.2016 Ovis Infrastructure\Reports\Sewer Area Study\2016\2016–10–24, Revised Sewer Study Report\DWG & Editable Files\Figure 7 – Stadium Sewer Connection Flows.dwg
Last Opened: Oct 25, 2016 – 3:02pm by: lxro

Appendix

Appendix A

Letters from the County Sanitation District dated March 4, 2016, January 2, 2007, and November 13, 2007

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

March 4, 2016

Ref File No.: 3639788

Mr. Chris Holmquist
Director of Development
Wilson Meany
6100 Center Drive, Suite 1020
Los Angeles, CA 90045

Dear Mr. Holmquist:

Will Serve Letter for City of Champions Revitalization Project (Stadium Alternative)

This is in response to your request for a will serve letter for the subject project, which was received by the County Sanitation Districts of Los Angeles County (Districts) on February 25, 2016. The proposed development is located within the jurisdictional boundaries of District No. 5. We offer the following comments regarding sewerage service:

1. The wastewater flow originating from the proposed project will discharge directly or indirectly to the Districts' Prairie Avenue Trunk Sewer, located in Hardy Street east of Flower Street, or the Districts' South Inglewood-Orange Avenue Trunk Sewer, located in Doty Avenue at Century Boulevard. The Districts' 21–inch diameter Prairie Avenue Trunk Sewer has a full-pipe capacity of 9.3 million gallons per day (mgd) and conveyed a peak flow of 3.2 mgd when last measured in 2011. The Districts' 15–inch diameter South Inglewood-Orange Avenue Trunk Sewer has a full-pipe capacity of 2.6 mgd and conveyed a peak flow of 0.8 mgd when last measured in 2011.

2. Sewer plans shall be submitted to the Districts for review and approval prior to connecting any sewer for this development to the existing sewer system. For information regarding the sewer plan review and approval process, please contact Mr. Stan Pegadiotes, Project Engineer in the Districts' Sewer Design Section, at (562) 908-4288, ext. 1620.

3. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 400 mgd and currently processes an average flow of 258.4 mgd.

4. The expected average wastewater flow from the proposed project, described in the application as 2,500 residential dwelling units, 890,000 square feet of retail space, 780,000 square feet of general office space, 300 hotel rooms, a 120,000-square-foot card club, an 80,000 seat stadium, and a 6,000 seat performance venue, is 2,034,750 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.

DOC: #3639968.D05

5. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. In determining the impact to the Sewerage System and applicable connection fees, the Districts' Chief Engineer will determine the user category (e.g. Condominium, Single Family home, etc.) that best represents the actual or anticipated use of the parcel or facilities on the parcel. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at (562) 908-4288, extension 2727.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design 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 CCA. 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 you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you 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 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: R. Tremblay
P. Prestia
J. Gulledge
M. Sullivan
M. Tatalovich

TABLE 1

LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
RESIDENTIAL				
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
COMMERCIAL				
Hotel/Motel/Rooming House	Room	125	0.54	0.28
Store	1000 ft^2	100	0.43	0.23
Supermarket	1000 ft^2	150	2.00	1.00
Shopping Center	1000 ft^2	325	3.00	1.17
Regional Mall	1000 ft^2	150	2.10	0.77
Office Building	1000 ft^2	200	0.86	0.45
Professional Building	1000 ft^2	300	1.29	0.68
Restaurant	1000 ft^2	1,000	16.68	5.00
Indoor Theatre	1000 ft^2	125	0.54	0.28
Car Wash				
Tunnel - No Recycling	1000 ft^2	3,700	15.86	8.33
Tunnel - Recycling	1000 ft^2	2,700	11.74	6.16
Wand	1000 ft^2	700	3.00	1.58
Financial Institution	1000 ft^2	100	0.43	0.23
Service Shop	1000 ft^2	100	0.43	0.23
Animal Kennels	1000 ft^2	100	0.43	0.23
Service Station	1000 ft^2	100	0.43	0.23
Auto Sales/Repair	1000 ft^2	100	0.43	0.23
Wholesale Outlet	1000 ft^2	100	0.43	0.23
Nursery/Greenhouse	1000 ft^2	25	0.11	0.06
Manufacturing	1000 ft^2	200	1.86	0.70
Dry Manufacturing	1000 ft^2	25	0.23	0.09
Lumber Yard	1000 ft^2	25	0.23	0.09
Warehousing	1000 ft^2	25	0.23	0.09
Open Storage	1000 ft^2	25	0.23	0.09
Drive-in Theatre	1000 ft^2	20	0.09	0.05

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

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
COMMERCIAL				
Night Club	1000 ft^2	350	1.50	0.79
Bowling/Skating	1000 ft^2	150	1.76	0.55
Club	1000 ft^2	125	0.54	0.27
Auditorium, Amusement	1000 ft^2	350	1.50	0.79
Golf Course, Camp, and Park (Structures and Improvements	1000 ft^2	100	0.43	0.23
Recreational Vehicle Park	No. of Spaces	55	0.34	0.14
Convalescent Home	Bed	125	0.54	0.28
Laundry	1000 ft^2	3,825	16.40	8.61
Mortuary/Cemetery	1000 ft^2	100	1.33	0.67
Health Spa, Gymnasium				
With Showers	1000 ft^2	600	2.58	1.35
Without Showers	1000 ft^2	300	1.29	0.68
Convention Center, Fairground, Racetrack, Sports Stadium/Arena	Average Daily Attendance	10	0.04	0.02
INSTITUTIONAL				
College/University	Student	20	0.09	0.05
Private School	1000 ft^2	200	0.86	0.45
Church	1000 ft^2	50	0.21	0.11

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

November 13, 2007

File No: 05-00.04-00

Mr. Sheldon Curry, Director
Planning and Building Department
City of Inglewood
One Manchester Boulevard
Inglewood, CA 90301

Dear Mr. Curry:

Hollywood Park Mixed-Use Project

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on November 5, 2007. The proposed development is located within the jurisdictional boundaries of District No. 5. We offer the following comments regarding sewerage service:

1. The Districts maintain sewerage facilities within the project area that may be affected by the proposed project. Approval to construct improvements within a Districts' sewer easement and/or over or near a Districts' sewer is required before construction may begin. For a copy of the Districts' buildover procedures and requirements, go to www.lacsd.org, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the buildover procedure, please contact Mr. Ronnie Burtner at extension 2766.

2. The following is a list of Districts' trunk sewers that serve the project area.

Name	Location	Size (dia.)	Design Capacity (mgd)	Peak Flow (mgd)	Last Measured
Prairie Avenue Trunk Sewer	In Hardy Street at Osage Avenue	21"	14.4	2.7	2007
Prairie Avenue Trunk Sewer	In Century Boulevard at Flower Street	24"	9.2	3.3	2007
South Inglewood-Orange Avenue Trunk Sewer	In Doty Avenue at Century Boulevard	15"	2.59	0.4	2007

3. A direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit, issued by the Districts. For information regarding the permit, please contact the Public Counter at extension 1205.

Doc #: 890539.1

4. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 385 mgd and currently processes an average flow of 310.8 mgd.

5. The expected average wastewater flow from the project site is 875,025 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2.

6. The Districts are authorized by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

7. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design 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 you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you 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 2717.

Very truly yours,

Stephen R. Maguin

Ruth I. Frazen
Customer Service Specialist
Facilities Planning Department

RIF:rf
cc: R. Burtner

Doc #: 890539.1

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

January 2, 2007

File No: 05-00.00-00

JAN 05 '07

130694 6-02
BS BS
MB RFA
CN
PT PH
NC SCAN + File + E

Mr. Ben Straw
Senior Civil Engineer
ARUP
901 Market Street, Suite 260
San Francisco, CA 94103

Dear Mr. Straw:

Hollywood Park Master Plan

This is in reply to your letter, which was received by the County Sanitation Districts of Los Angeles County (Districts) on November 27, 2006. The proposed development is located within the jurisdictional boundaries of District No. 5. We offer the following comments regarding sewerage service:

1. The Districts maintain sewerage facilities within the project area that may be affected by the proposed project. Approval to construct improvements within a Districts' sewer easement and/or over or near a Districts' sewer is required before construction may begin. A copy of the Districts' buildover procedures and requirements is enclosed for your information. For additional information regarding the buildover procedure, please contact Mr. Ronnie Burtner at extension 2766.

2. The Districts' 21-inch diameter Prairie Avenue Trunk Sewer, located in Hardy Street at Osage Avenue (Connection Point A1), has a design capacity of 14.4 million gallons per day (mgd) and conveyed a peak flow of 3 mgd when last measured in 2003.

3. The Districts' 24-inch diameter Prairie Avenue Trunk Sewer, located in Century Boulevard at Flower Street (Connection Point B1), has a design capacity of 9.2 mgd and conveyed a peak flow of 3.5 mgd when last measured in 2003.

4. The Districts' 15-inch diameter South Inglewood-Orange Avenue Trunk Sewer, located in Doty Avenue at Century Boulevard (Connection Point C1), has a design capacity of 2.59 mgd and conveyed a peak flow of 0.7 mgd when last measured in 2002.

5. A direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit, issued by the Districts. For information regarding the permit, please contact the Public Counter at extension 1205.

6. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 385 mgd and currently processes an average flow of 317 mgd.

7. The expected average wastewater flow from the project site is 1,128,750 gallons per day.

8. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the existing strength and/or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is required to construct an incremental expansion of the Sewerage System to accommodate the proposed project, which will mitigate the impact of this project on the present Sewerage System. Payment of a connection fee will be required before a permit to connect to the sewer is issued. A copy of the Connection Fee Information Sheet is enclosed for your convenience. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

9. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design 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 you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you 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 2717.

Very truly yours,

Stephen R. Maguin

Ruth I. Frazen
Engineering Technician
Facilities Planning Department

RIF:rf

Enclosures

cc: R. Burtner

Appendix H

As-Built Plans

Sanitation District of Los Angeles (LACSD) As-Built Plans

1.Prairie Avenue Trunk Sewer

2.South Inglewood Orange Trunk Sewer

City of Inglewood As-Built Plans

1.Prairie Avenue Sewer Line

2.102nd Street Sewer Lines

3.103th Street Sewer Line

COUNTY SANITATION DISTRICT Nº 5
OF LOS ANGELES COUNTY, CALIF.
OFFICE OF CHIEF ENGINEER

CONTRACT DRAWINGS

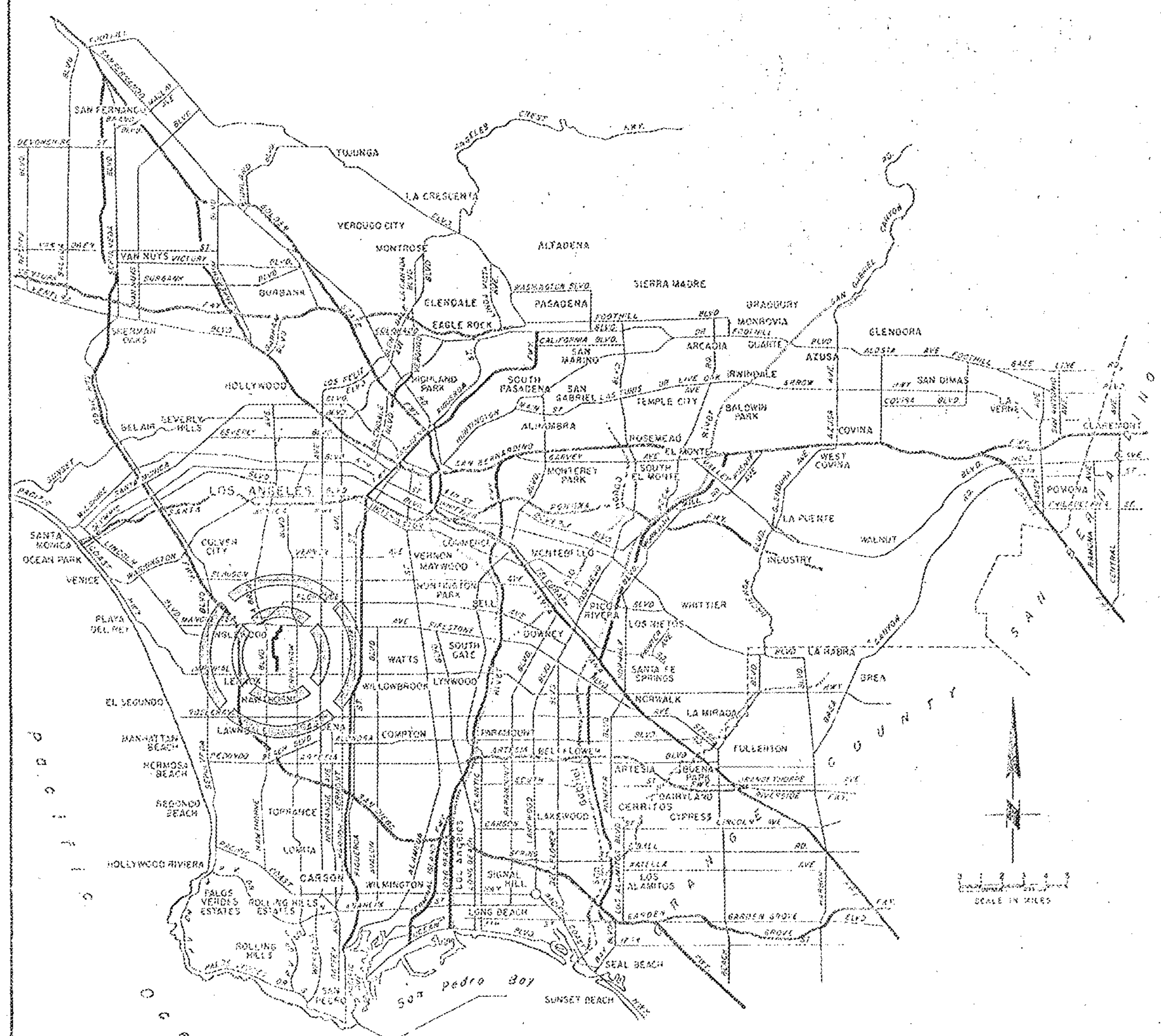
PRAIRIE AVE. TRUNK SEWER

SECTION 2

SUBMITTED E. P. Bennett (signature) ACTING OFFICE ENGINEER — DATED MARCH 8, 1972

RECOMMENDED ______ ASST. CHIEF ENGINEER — DATED MARCH 8, 1972

APPROVED W E Garrison (signature) ACTING CHIEF ENGINEER — DATED MARCH 8, 1972



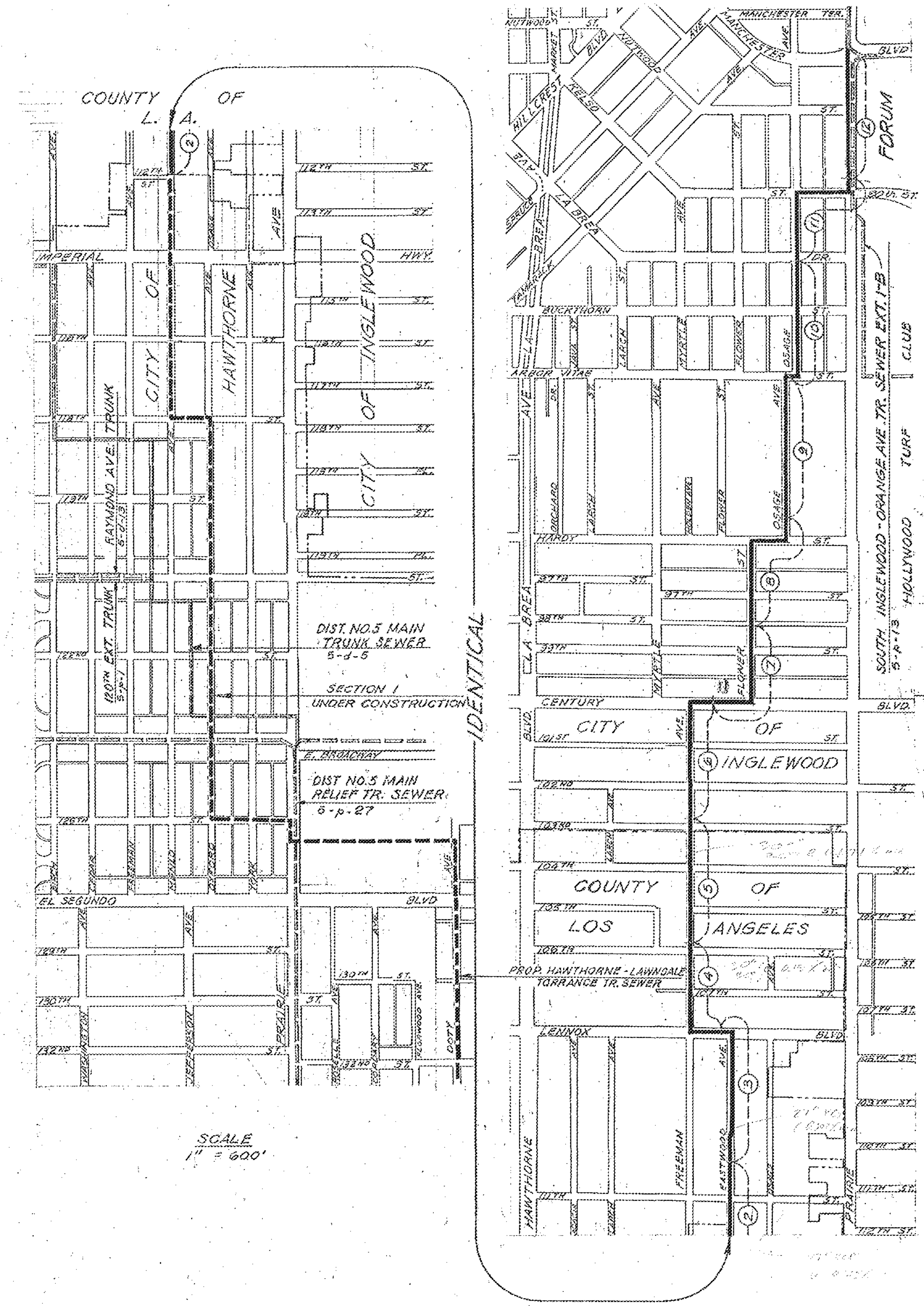
STANDARD DRAWINGS

WHERE REFERENCE IS MADE TO STANDARD DRAWINGS OR MANHOLES, THE FOLLOWING DRAWINGS AND DETAILS ARE INTENDED. THEY ARE HEREBY MADE A PART OF THE PLANS FOR THE WORK. COPIES ARE AVAILABLE AT THE DISTRICT OFFICE.

DRAWING Nº	TITLE	DATE OF DRAWING
S-a-201	STD. MANHOLE, TYPE "A"	OCTOBER, 1970
S-a-202	STD. MANHOLE, TYPE "B"	OCTOBER, 1970
S-a-203	STD. MANHOLE, TYPE "C"	OCTOBER, 1970
S-a-204	STD. MANHOLE, TYPE "D"	JANUARY, 1972
S-a-205	STD. DROP MANHOLE	OCTOBER, 1970
S-a-206	STD. MANHOLE, TYPE "E"	OCTOBER, 1970
S-a-207	STD. 24" MANHOLE FRAME & COVER	OCTOBER, 1970
S-a-208	STD. PRESSURE MANHOLE FRAME & COVER	OCTOBER, 1970
S-a-209	STD. MANHOLE STEP	OCTOBER, 1970
S-a-210	STD. TRAP MANHOLE BASE	OCTOBER, 1970
S-a-211	STD. TRAP CASTING	OCTOBER, 1970
S-a-212	STD. CONCRETE CRADLES & ENCASEMENTS	MARCH, 1972
S-a-213	STD. "T" FOUNDATION	OCTOBER, 1970
S-a-214	STD. CHIMNEY PIPE	OCTOBER, 1970
S-a-215	STD. 36" MANHOLE FRAME & COVER	OCTOBER, 1970
S-a-216	STD. HOUSE CONNECTION GAS TRAP	OCTOBER, 1970
S-a-217	CONCRETE PIPE SUPPORT	OCTOBER, 1970
S-a-218	ABANDONMENT OF EXISTING MANHOLES TYPE "A" OR "B"	OCTOBER, 1970
S-a-219	RECONSTRUCTION OF BRICK MANHOLES	OCTOBER, 1970
S-a-220	STD. PULL RING	OCTOBER, 1970
S-a-221	STD. PROJECT SIGN	OCTOBER, 1970
S-a-222	TEMPORARY SEWER SUPPORT	OCTOBER, 1970
S-a-223	STD. 30" MANHOLE FRAME & COVER	SEPTEMBER 1971
S-a-79	STD. METHOD OF INSTALLING SADDLES	JANUARY, 1962
S-a-86	STD. METHODS FOR CONNECTION TO PIPE & STRUCTURES	AUGUST, 1970
S-a-224	PIPE BARREL DETAIL	DECEMBER, 1971

LEGEND

- PROPOSED TRUNK SEWER
- EXISTING " "
- FUTURE OR UNDER CONSTRUCTION
- EXISTING LATERAL SEWER
- " WATER LINE
- " IRRIGATION LINE
- " STORM DRAIN
- " GAS LINE
- " OIL "
- " PIPE "
- " TELEPHONE CONDUIT
- " ELECTRICAL "
- " TELEPHONE POLE & DEAD MAN
- " POWER POLE " " " "
- " GUY "
- " LIGHT "
- " FIRE HYDRANT
- " WATER & GAS VALVE
- " " " " METER
- " FENCE
- " PAVING
- " CURB, PARKWAY & SIDEWALK
- " C. S. D. BOUNDARY
- " CITY "
- RIGHT OF WAY
- OCCUPATIONAL RIGHT OF WAY
- BENCH MARK
- PLAN & PROFILE SHEET INDEX

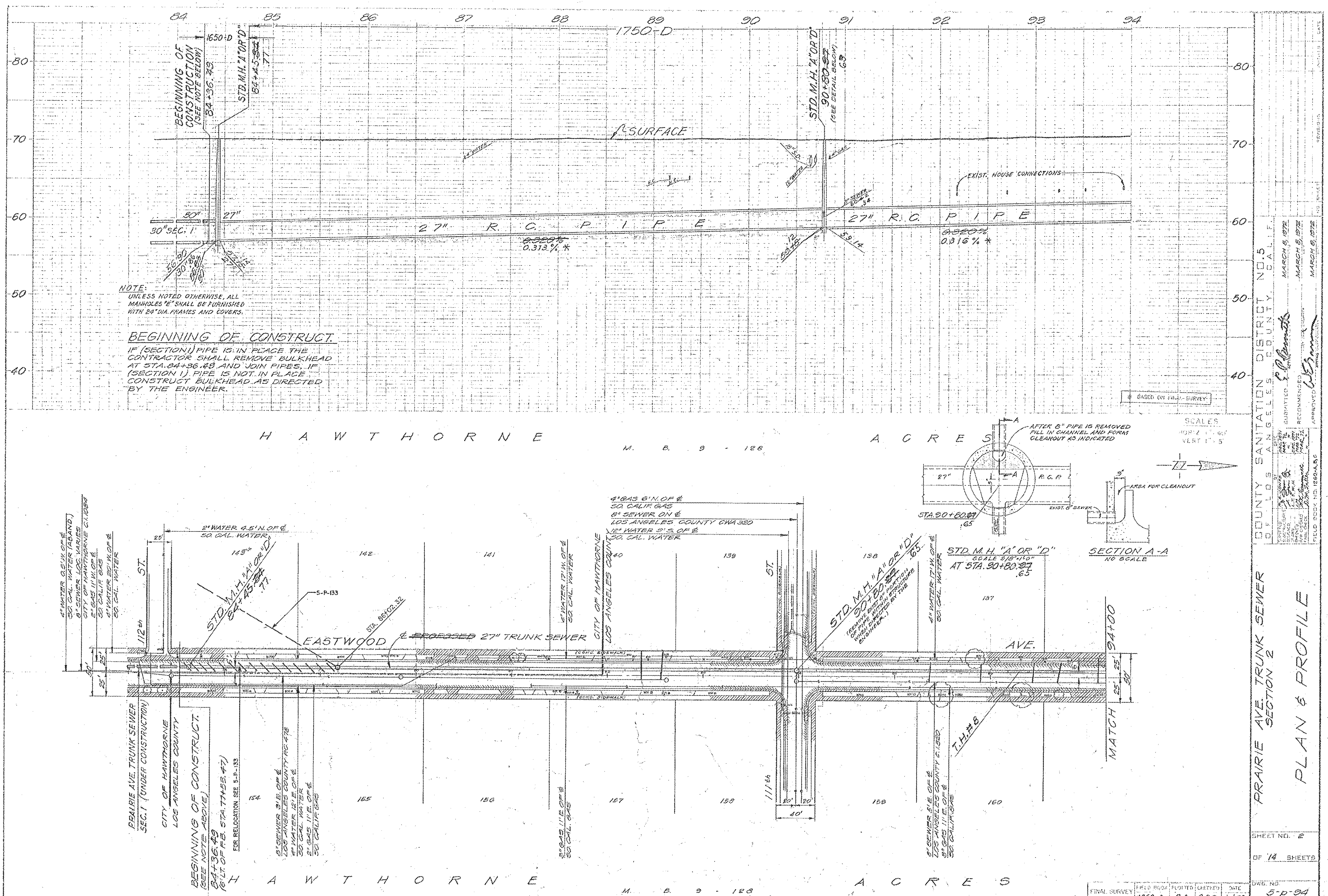


SHEET INDEX

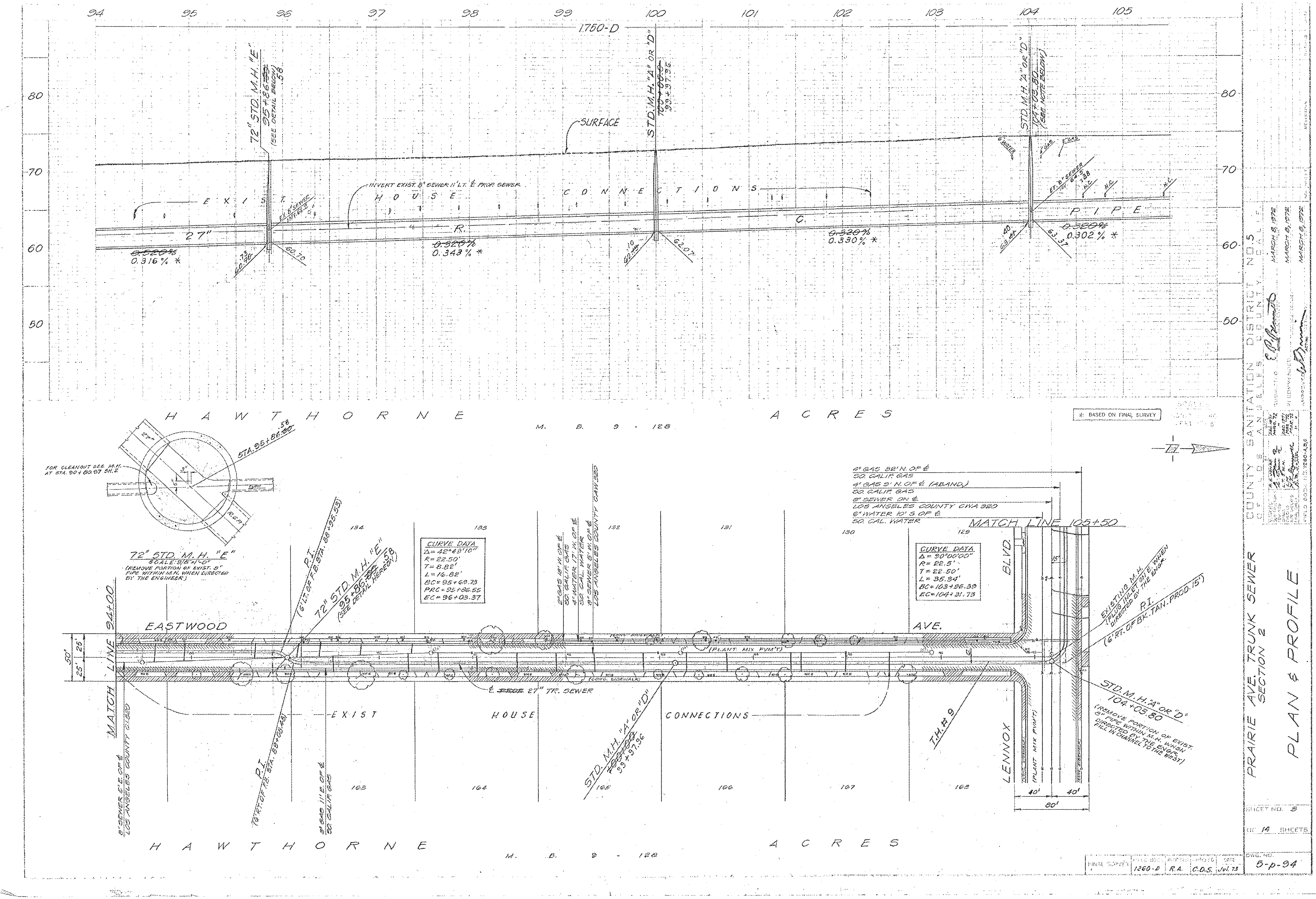
No.	SHEET	REVISION	INITIAL	DATE
2	5, 11 & 12	REVISED MTD @ 104TH ST. & FREEMAN AVE. AND H.C. @ 90TH ST. & PRAIRIE AVE.	DMT	5-15-72
1	4, 5, 8, 9, 11 & 14	VARIOUS CHANGES ON DWG'S & NOTES & SPECS.	DMT	4-15-72

5-p-94
SHEET No. 1
OF 14 SHEETS

FINAL SURVEY R.B. 1260-D R.A. C.D.S. JULY 1973.



1750-D
1650-D
BEGINNING OF CONSTRUCTION (SEE NOTE BELOW) 84+36.49
STD. M.H. "A" OR "D" 84+45.77
STD. M.H. "A" OR "D" 90+80.63 (SEE DETAIL BELOW)
SURFACE
EXIST. HOUSE CONNECTIONS
30" SEC. 1
27" R.C. PIPE
0.313% *
27" R.C. PIPE
0.316% *
NOTE:
UNLESS NOTED OTHERWISE, ALL MANHOLES "E" SHALL BE FURNISHED WITH 24" DIA. FRAMES AND COVERS.
BEGINNING OF CONSTRUCT.
IF (SECTION 1) PIPE IS IN PLACE THE CONTRACTOR SHALL REMOVE BULKHEAD AT STA. 84+36.49 AND JOIN PIPES. IF (SECTION 1) PIPE IS NOT IN PLACE CONSTRUCT BULKHEAD AS DIRECTED BY THE ENGINEER.
* BASED ON FINAL SURVEY
HAWTHORNE ACRES M.B. 9-126
AFTER 8" PIPE IS REMOVED FILL IN CHANNEL AND FORM CLEANOUT AS INDICATED
AREA FOR CLEANOUT
EXIST. 8" SEWER
STA. 90+80.65
STD. M.H. "A" OR "D" SCALE 3/8"=1'-0" AT STA. 90+80.65
SECTION A-A NO SCALE
SCALES HORIZ. 1"=40' VERT. 1"=5'
4" GAS 6' N. OF ℄ SO. CALIF. GAS
8" SEWER ON ℄ LOS ANGELES COUNTY CWA 320
12" WATER 8' S. OF ℄ SO. CAL. WATER
2" WATER 4.5' N. OF ℄ SO. CAL. WATER
112th ST.
EASTWOOD
℄ 27" TRUNK SEWER
AVE.
CITY OF HAWTHORNE
LOS ANGELES COUNTY
111th ST.
S-P-133
T.H. #8
MATCH 94+00
PRAIRIE AVE. TRUNK SEWER SEC. 1 (UNDER CONSTRUCTION)
BEGINNING OF CONSTRUCT. (SEE NOTE ABOVE) 84+36.49
FOR RELOCATION SEE S-P-133
COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY, CALIF.
SUBMITTED MARCH 8, 1972
RECOMMENDED MARCH 8, 1972
APPROVED MARCH 8, 1972
PRAIRIE AVE. TRUNK SEWER SECTION 2
PLAN & PROFILE
SHEET NO. 2 OF 14 SHEETS
FINAL SURVEY FIELD BOOK 1260-D PLOTTED R.A. CHECKED C.D.S. DATE Jul. 73
DWG. NO. 5-P-94


1750-D
SURFACE
72" STD. M.H. "E" 95+86.58 (SEE DETAIL BELOW)
STD. M.H. "A" OR "D" 99+97.96
STD. M.H. "A" OR "D" 104+03.80 (SEE NOTE BELOW)
INVERT EXIST. 8" SEWER 11' LT. ℄ PROP. SEWER
EXIST. HOUSE CONNECTIONS
27" R.C. PIPE
0.316% *
0.343% *
0.330% *
0.302% *
* BASED ON FINAL SURVEY
HAWTHORNE ACRES
M.B. 9 - 128
FOR CLEANOUT SEE M.H. AT STA. 90+80.97 SH. 2
72" STD. M.H. "E" SCALE: 3/8"=1'-0" (REMOVE PORTION OF EXIST. 8" PIPE WITHIN M.H. WHEN DIRECTED BY THE ENGINEER)
CURVE DATA
Δ = 42°43'10"
R = 22.50'
T = 8.82'
L = 16.82'
BC = 95+69.73
PRC = 95+86.55
EC = 96+03.37
CURVE DATA
Δ = 90°00'00"
R = 22.5'
T = 22.50'
L = 35.34'
BC = 103+96.39
EC = 104+31.73
4" GAS 32' N. OF ℄ SO. CALIF. GAS
4" GAS 9' N. OF ℄ (ABAND.) SO. CALIF. GAS
8" SEWER ON ℄ LOS ANGELES COUNTY CIWA 320
6" WATER 10' S. OF ℄ SO. CAL. WATER
MATCH LINE 105+50
MATCH LINE 94+00
EASTWOOD AVE.
LENNOX BLVD.
(PLANT MIX PVM'T)
(CONC. SIDEWALK)
℄ 27" TR. SEWER
T.H. #9
EXISTING M.H. (PLUG INLET ON ℄ WHEN DIRECTED BY THE ENGR.)
P.I. (6' RT. OF BK. TAN. PROD. 15')
STD. M.H. "A" OR "D" 104+03.80 (REMOVE PORTION OF EXIST. 8" PIPE WITHIN M.H. WHEN DIRECTED BY THE ENGR. FILL IN CHANNEL TO THE WEST)
8" SEWER 5' E. OF ℄ LOS ANGELES COUNTY CI.320
COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY, CALIF.
PRAIRIE AVE. TRUNK SEWER SECTION 2
PLAN & PROFILE
SHEET NO. 3 OF 14 SHEETS
FINAL SURVEY 1260-D R.A. C.D.S. Jul. 73
DWG. NO. 5-p-94
3

105 106 107 108 109 110 111 112 113 114 115 116

1750-D 1650-D

STD. M.H. "A" OR "D" 108+23 27.43

STD. M.H. "A" OR "D" 112+96.72

110+46± EXIST. INV. 4'-0"x3'-6" RC ARCH STORM DRAIN 11'W. & PROP. SEWER

EXIST. INV. 4'-0"x3'-6" RC ARCH STORM DRAIN 6'W. OF ℄ (L.A.C.F.C.D.)

113+71± 5'-6"x3'-0" STORM DRAIN

2-27" R.C.P.

30" R.C.P.

EX. 10" SEWER 5' LT. & PROP. SEWER

EX. 8" SEWER 10'+ E. OF ℄

EX. 8" SEWER 10'+ E. OF ℄

0.260% 0.302% *

0.150% 0.210% *

0.150% 0.150% *

64.78 27°E 30

64.69

65.66

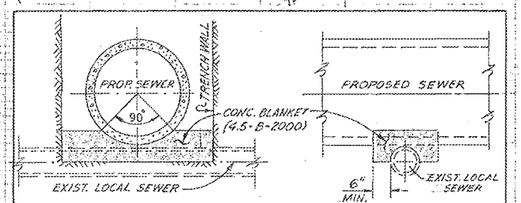
65.67

68.06

45° S.D. 58.71

55.66

* PRIOR TO CONSTRUCTION OF THE SEWER BETWEEN STA. 113+00 & STA. 116+75.9 THE CONTRACTOR SHALL EXPOSE THE 8" SEWER AT STA. 113+71± AND THE 12" STORM DRAIN AT STA. 113+95. THE ENGINEER WILL DETERMINE IF CONFLICT EXISTS AND IF NECESSARY ADJUST THE HORIZONTAL AND VERTICAL ALIGNMENTS. FOR ANY HORIZONTAL ADJUSTMENT THE CONTRACTOR SHALL PULL AND DEFLECT THE PIPE JOINTS.



CONCRETE BLANKET DETAIL

NOTE:
PRIOR TO LAYING PROPOSED 30" PIPE WITHIN 50 FEET OF LOCAL SEWERS AT STA. 110+46± ℄ STA. 113+71± THE ENGINEER WILL DETERMINE IF THERE IS BELL INTERFERENCE. IF INTERFERENCE EXISTS THE ENGINEER WILL ADJUST HORIZONTAL ALIGNMENT OF PROPOSED SEWER. AFTER PROPOSED PIPE IS IN PLACE THE CONTRACTOR SHALL CONSTRUCT CONCRETE BLANKET AS SHOWN ABOVE. COST TO BE ABSORBED IN APPROPRIATE BID ITEM.

* BASED ON FINAL SURVEY

SCALES
HORIZ. 1" = 50'
VERT. 1" = 5'

4" GAS 32' N. OF ℄
50. CALIF. GAS
4" GAS 11' N. OF ℄ (ABAND.)
50. CALIF. GAS
8" SEWER ON ℄
LOS ANGELES COUNTY CWA 320
6" WATER 10' S. OF ℄
50. CAL. WATER
4'-0" x 3'-6" S.D. 6' N. OF ℄
L.A.C.F.C.D.

P.I. 181'ST OF P.B. STA. 100+43.50

FREEMAN BLVD.

TRACT No 211

M.B. 15-50-1

WATER 2' S OF S ℄

8" SEWER 5' N/S ℄
LOS ANGELES COUNTY P.C. 5859
6" WATER 8' N/S ℄
50. CAL. WATER
3" GAS 9' S./N. ℄
50. CALIF. GAS

8" WATER 2' N. OF ℄
50. CAL. WATER

450 471

THE CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO 107TH STREET WEST OF FREEMAN AVE. AT ALL TIMES.

4'-0" x 3'-6" R.C. ARCH S.D. 6' W. OF ℄
2" GAS 13' N. OF ℄
50. CALIF. GAS

I.H. # 10

4'-0" WIDE x 3'-6" THICK R.C. ARCH STORM DRAIN 6' W. OF ℄ (L.A.C.F.C.D.)

4" WATER 11' S. OF ℄
50. CAL. WATER
8" WATER 8' S. OF ℄ (ABAND.)
AM. STATES WATER
8" SEWER ON ℄
LOS ANGELES COUNTY C1.767
5'-6" x 3'-0" S.D. 18.51' N. OF ℄
L.A.C.F.C.D. PROJ. No 534
2" GAS 4' N. OF ℄
50. CALIF. GAS

FREEMAN AVE.

MATCH LINE 115+00

EQ. F.B. STA. 100+48.5 BK. = STA. 0+00 AHD.

CURVE DATA
Δ = 89°59'39"
R = 80'
T = 80'
L = 47.12'
B.C. = 107+10.88
E.C. = 107+58.01

LENNOX

4" WATER 80' N. OF ℄
50. CAL. WATER
4" WATER 9' E. OF ℄ (ABAND.)
50. CAL. WATER

POSS. PIPE 8' E OF ℄

MATCH LINE 105+50

4" GAS 9' N. OF ℄ (ABAND.)
50. CALIF. GAS

107th ST.

106th ST.

EXIST. 30" TRUNK SEWER

10" SEWER ON ℄
LOS ANGELES COUNTY CWA 320
2" GAS 8' E. OF ℄
50. CALIF. GAS

4" WATER 8' S. OF ℄ (ABAND.)
50. CAL. WATER

2" WATER 18' E. OF ℄ (ABAND.)
50. CAL. WATER
STORM DRAIN (ABANDONED)
REMOVE INTERFERING PORTION
OF 6" x 3'-6" R.C.P. AND
OPEN 6' BELL AS DIRECTED BY
ENGINEER.

2" WATER 10' E. OF ℄ (ABAND.)
50. CAL. WATER

48" R.C.P. S.D.

2" WATER 4' E. OF ℄ (ABAND.)
50. CAL. WATER

2'-5" x 12'-0" S.D. 18.51' N. OF ℄
L.A.C.F.C.D. PROJ. No 534

2" GAS 4' N. OF ℄
50. CALIF. GAS
8" SEWER ON ℄
LOS ANGELES COUNTY CWA 320
4" WATER 8.5' S. OF ℄
50. CAL. WATER

TRACT No 211 M.B. 15-50-1

TRACT No 5221 M.B. 88-36

SANITATION DISTRICT NO. 5
OF LOS ANGELES COUNTY, CALIF.

PRAIRIE AVE. TRUNK SEWER
SECTION 2

PLAN & PROFILE

6	REVISE STA. OF ℄ FROM PROFILE	MARCH 5, 1973
5		MARCH 5, 1973
4		MARCH 5, 1973

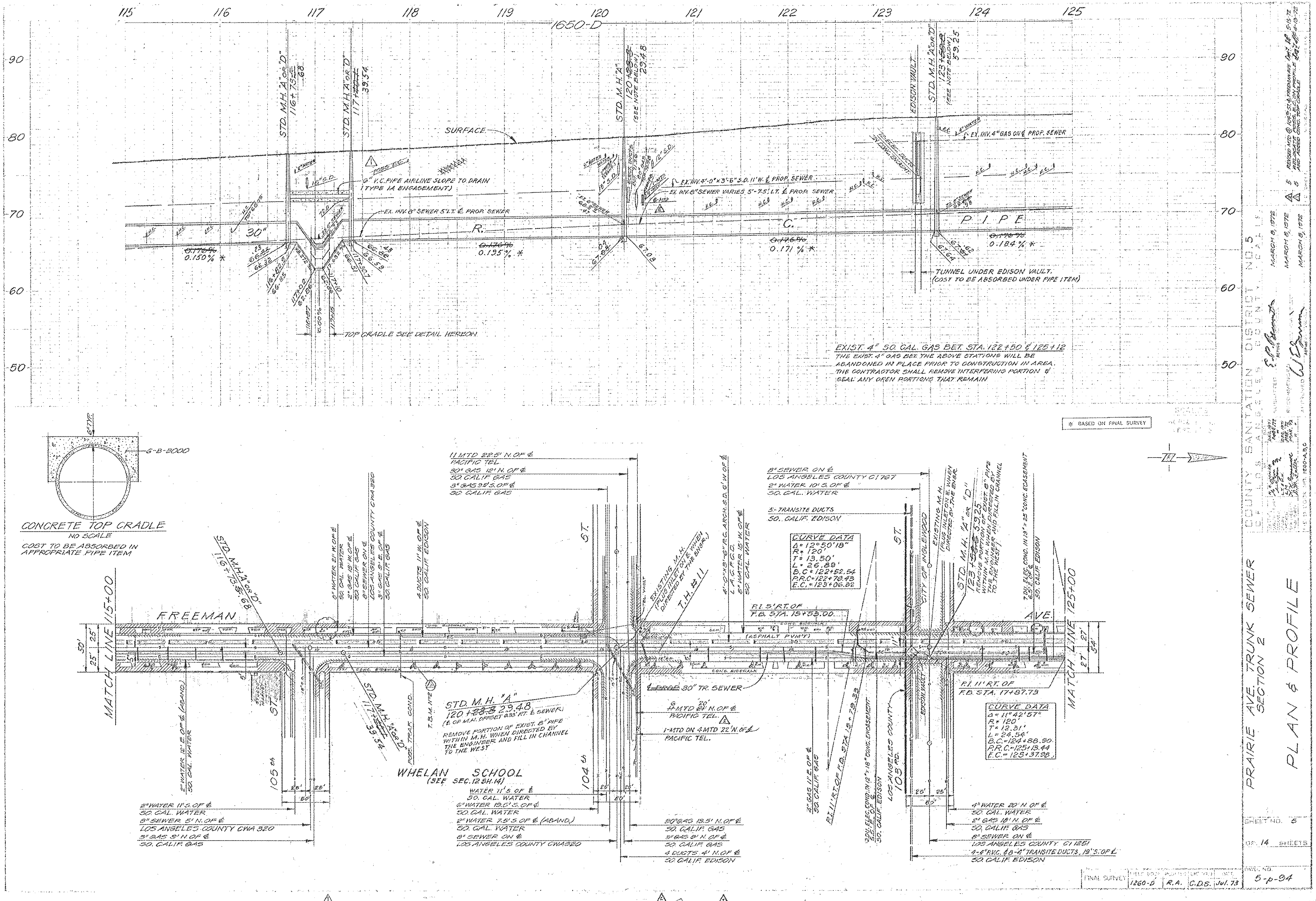
DESIGNED
DRAWN
TRACED
CHECKED
QUANTITIES
RECOMMENDED
APPROVED

FIELD BOOK NO. 1460 A & B

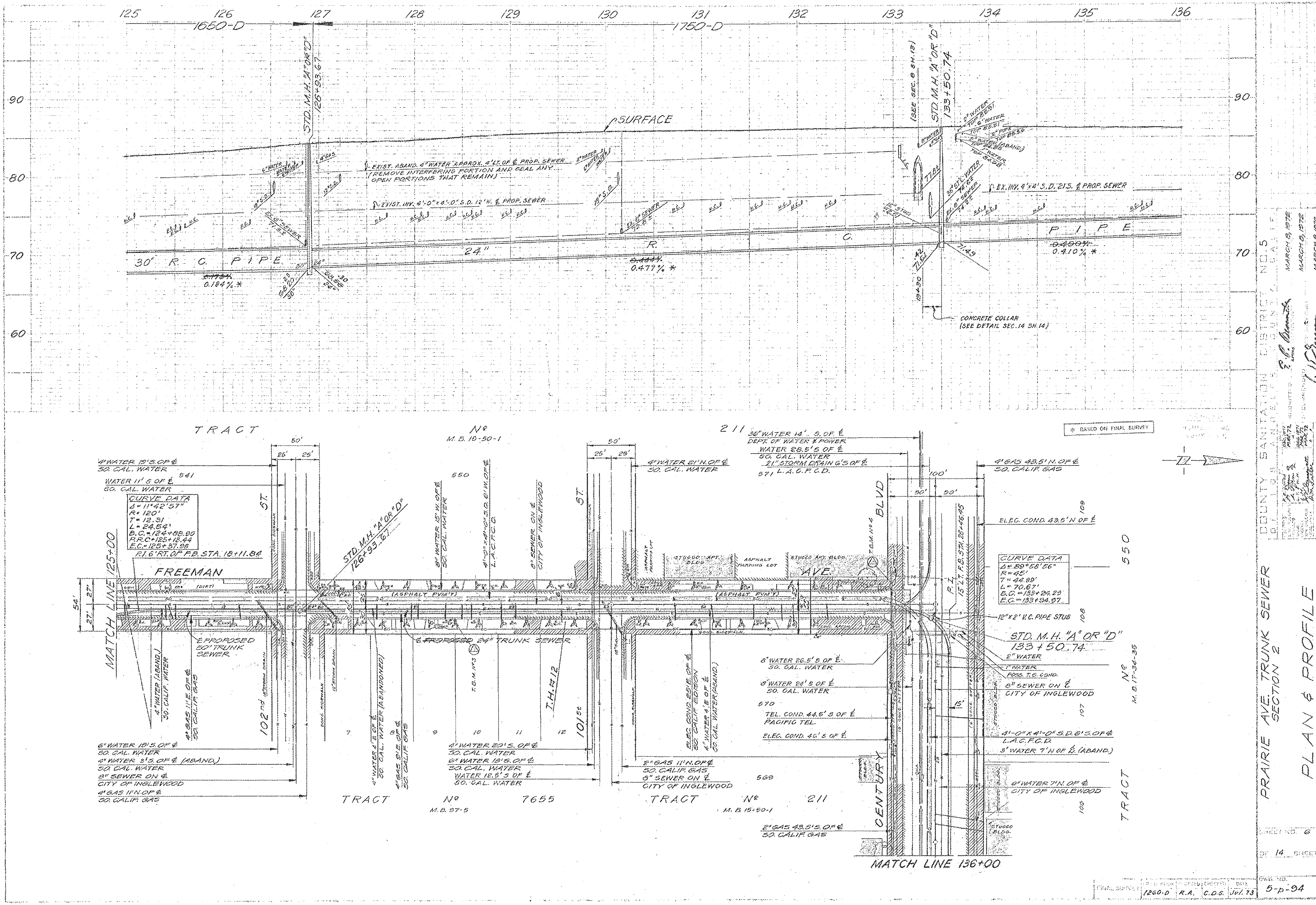
SHEET NO. 4
OF 14 SHEETS

GWE. NO. 5-p-94

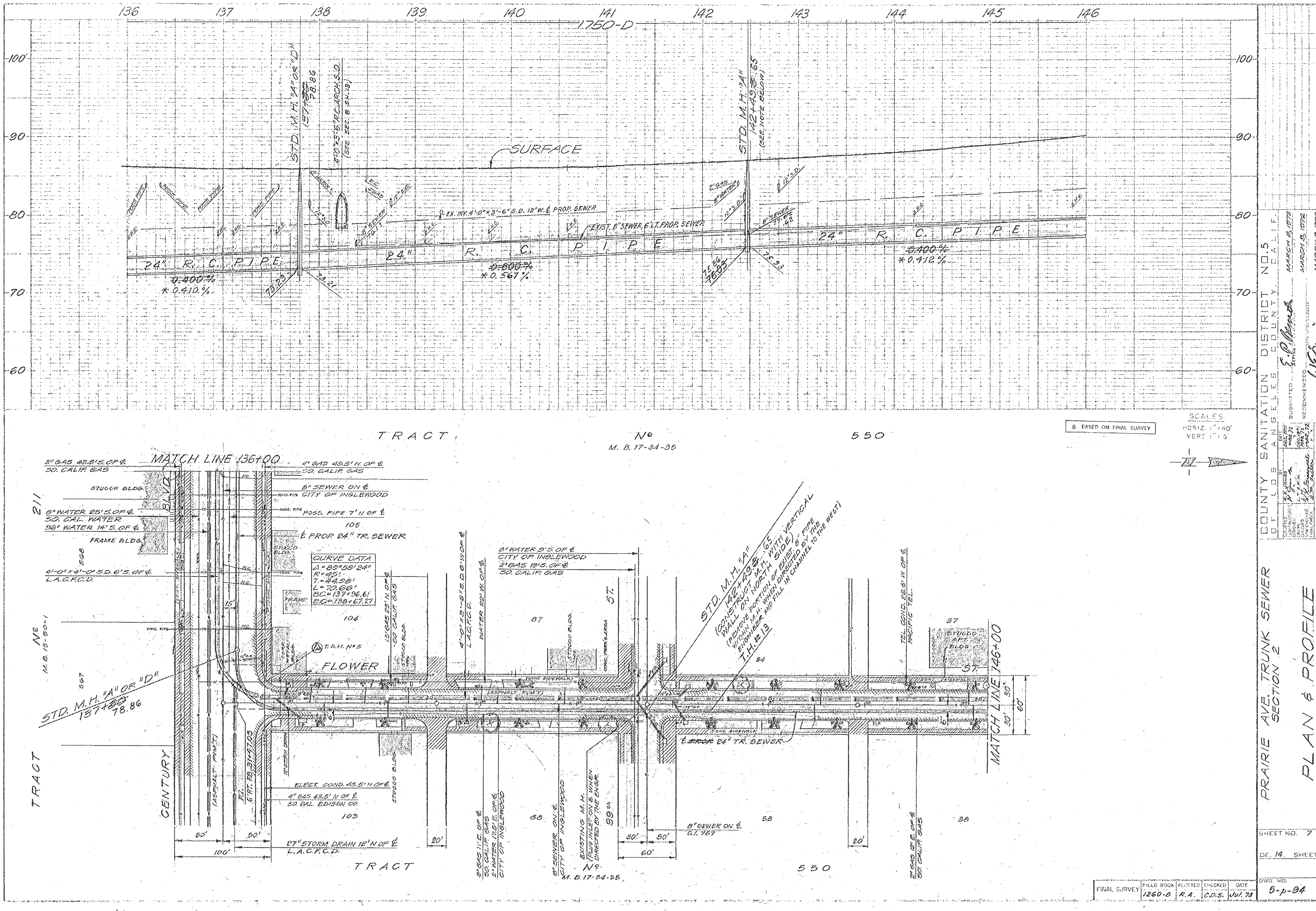
FINAL SURVEY | FIELD BOOK NO. | PLOTTED | CHECKED | DATE
1260-D | R.A. | C.D.S. | Jul. 73



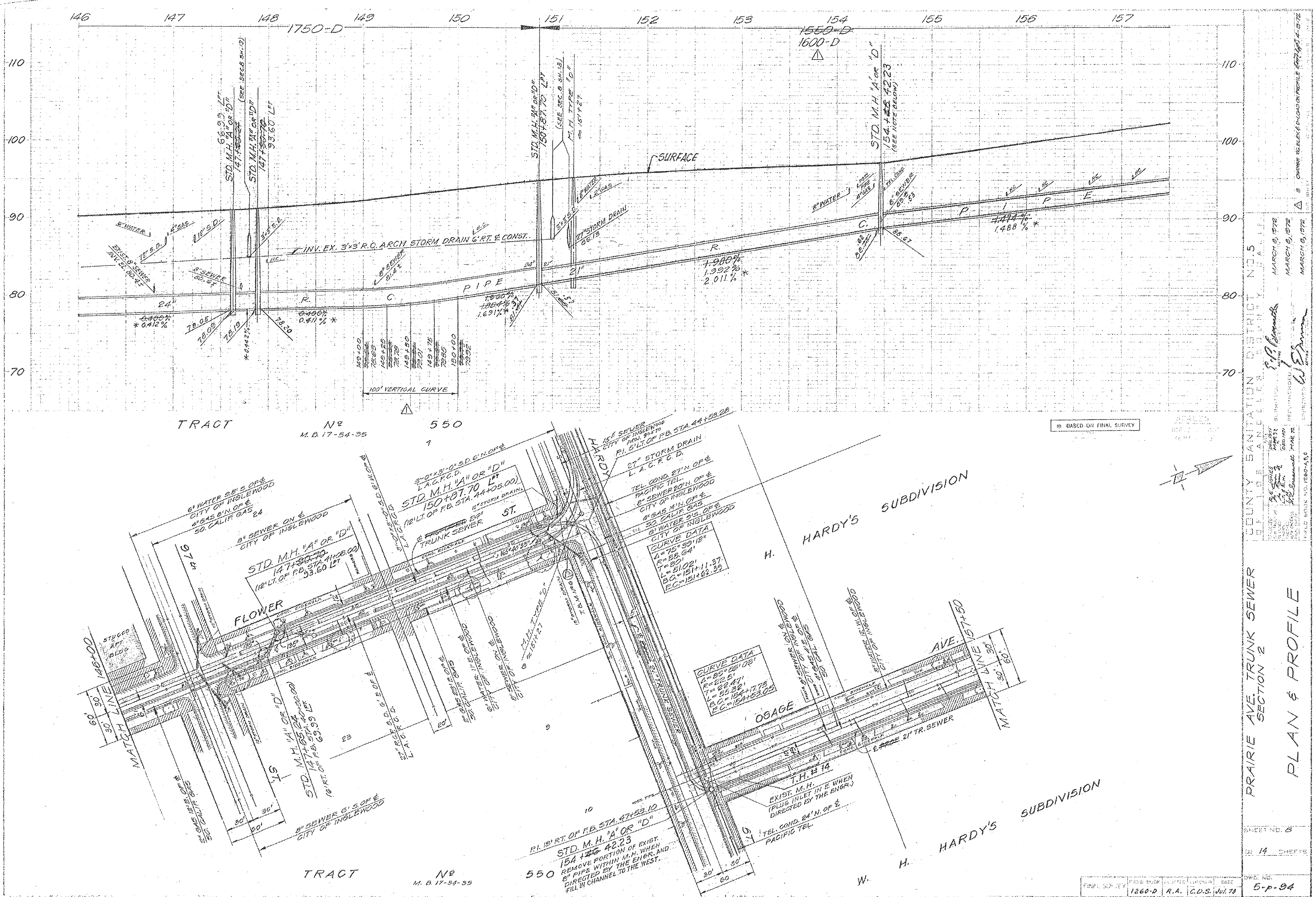
1650-D
115 116 117 118 119 120 121 122 123 124 125
STD. M.H. "A" or "D" 116+73.68
STD. M.H. "A" or "D" 117+39.54
STD. M.H. "A" 120+29.48 (SEE NOTE BELOW)
EDISON VAULT
STD. M.H. "A" or "D" 123+59.25 (SEE NOTE BELOW)
SURFACE
6" V.C. PIPE AIRLINE SLOPE TO DRAIN (TYPE IA ENCASEMENT)
EX. INV. 8" SEWER 5' LT. ℄ PROP. SEWER
EX. INV. 4'-0"×3'-6" S.D. 11' W. ℄ PROP. SEWER
EX. INV. 8" SEWER VARIES 5'-7.5' LT. ℄ PROP. SEWER
EX. INV. 4" GAS ON ℄ PROP. SEWER
30" R.C. PIPE
0.150% *
0.135% *
0.171% *
0.184% *
TOP CRADLE SEE DETAIL HEREON
TUNNEL UNDER EDISON VAULT. (COST TO BE ABSORBED UNDER PIPE ITEM)
EXIST. 4" SO. CAL. GAS BET. STA. 122+50 & 125+12
THE EXIST. 4" GAS BET. THE ABOVE STATIONS WILL BE ABANDONED IN PLACE PRIOR TO CONSTRUCTION IN AREA. THE CONTRACTOR SHALL REMOVE INTERFERING PORTION & SEAL ANY OPEN PORTIONS THAT REMAIN
* BASED ON FINAL SURVEY
CONCRETE TOP CRADLE
NO SCALE
COST TO BE ABSORBED IN APPROPRIATE PIPE ITEM
6-B-2000
FREEMAN
AVE.
MATCH LINE 115+00
MATCH LINE 125+00
WHELAN SCHOOL (SEE SEC. 12 SH. 14)
105th ST.
104th ST.
103rd ST.
CITY OF INGLEWOOD
LOS ANGELES COUNTY
EXISTING M.H. (PLUG INLET ON E. WHEN DIRECTED BY THE ENGR.)
T.H. #11
STD. M.H. "A" 120+29.48 (℄ OF M.H. OFFSET 0.33' RT. ℄ SEWER)
REMOVE PORTION OF EXIST. 8" PIPE WITHIN M.H. WHEN DIRECTED BY THE ENGINEER AND FILL IN CHANNEL TO THE WEST
PROP. 30" TR. SEWER
CURVE DATA
Δ = 12°50'18"
R = 120'
T = 13.50'
L = 26.89'
B.C. = 122+52.54
P.R.C. = 122+79.43
E.C. = 123+06.32
CURVE DATA
Δ = 11°42'57"
R = 120'
T = 12.31'
L = 24.56'
B.C. = 124+88.90
P.R.C. = 125+13.44
E.C. = 125+37.98
P.I. 5' RT. OF F.B. STA. 15+55.00
P.I. 11' RT. OF F.B. STA. 17+97.73
11 MTD 22.5' N. OF ℄ PACIFIC TEL.
30" GAS 12' N. OF ℄ SO. CALIF. GAS
3" GAS 22.5' S. OF ℄ SO. CALIF. GAS
8" SEWER ON ℄ LOS ANGELES COUNTY C1767
2" WATER 10' S. OF ℄ SO. CAL. WATER
5-TRANSITE DUCTS SO. CALIF. EDISON
2" WATER 11' S. OF ℄ SO. CAL. WATER
8" SEWER 5' N. OF ℄ LOS ANGELES COUNTY CWA 320
3" GAS 3' N. OF ℄ SO. CALIF. GAS
WATER 11' S. OF ℄ SO. CAL. WATER
6" WATER 19.5' S. OF ℄ SO. CAL. WATER
2" WATER 7.5' S. OF ℄ (ABAND.) SO. CAL. WATER
8" SEWER ON ℄ LOS ANGELES COUNTY CWA320
30" GAS 19.5' N. OF ℄ SO. CALIF. GAS
3" GAS 3' N. OF ℄ SO. CALIF. GAS
4 DUCTS 4' N. OF ℄ SO. CALIF. EDISON
4" WATER 20' N. OF ℄ SO. CAL. WATER
2" GAS 18' N. OF ℄ SO. CALIF. GAS
8" SEWER ON ℄ LOS ANGELES COUNTY C1 1251
4-6" P.V.C. & 8-4" TRANSITE DUCTS, 19' S. OF ℄ SO. CALIF. EDISON
1-MTD ON 4 MTD 22' N. OF ℄ PACIFIC TEL.
ASPHALT PVM'T
CONC. SIDEWALK
EDISON VAULT
COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY, CAL.
PRAIRIE AVE. TRUNK SEWER SECTION 2
PLAN & PROFILE
MARCH 8, 1972
SHEET NO. 5
OF 14 SHEETS
FINAL SURVEY
1260-D
R.A.
C.D.S.
Jul. 73
5-p-94



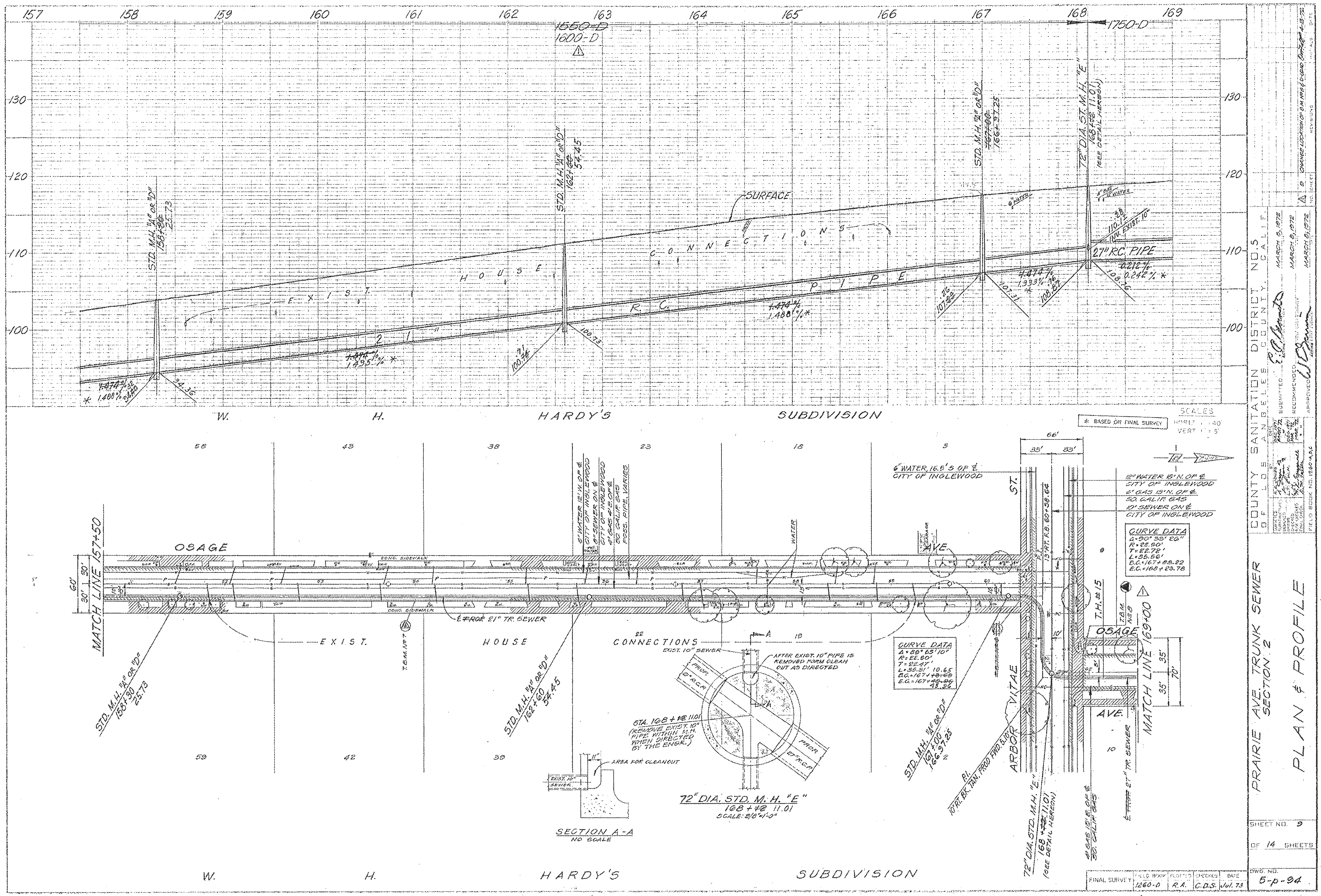
125
126
127
128
129
130
131
132
133
134
135
136
1650-D
1750-D
90
80
70
60
STD. M.H. "A" OR "D" 126+93.67
SURFACE
(SEE SEC. 8 SH.13)
STD. M.H. "A" OR "D" 133+50.74
EXIST. ABAND. 4" WATER APPROX. 4' LT. OF ℄ PROP. SEWER (REMOVE INTERFERING PORTION AND SEAL ANY OPEN PORTIONS THAT REMAIN)
EXIST. INV. 4'-0" x 4'-0" S.D. 12' W. ℄ PROP. SEWER
EX. INV. 4'x4' S.D. 21 S. ℄ PROP. SEWER
30" R.C. PIPE
24"
R.C. PIPE
0.184% *
0.477% *
0.410% *
CONCRETE COLLAR
(SEE DETAIL SEC.14 SH.14)
TRACT
Nº
M.B. 15-50-1
211
* BASED ON FINAL SURVEY
CURVE DATA
Δ=11°42'57"
R=120'
T=12.31
L=24.54'
B.C.=124+68.90
P.R.C.=125+12.44
E.C.=125+37.98
P.I. 6' RT. OF F.B. STA. 18+11.84
MATCH LINE 125+00
FREEMAN
AVE.
ST.
102nd
101st
BLVD
CENTURY
STD. M.H. "A" OR "D" 126+93.67
℄ PROPOSED 30" TRUNK SEWER
℄ PROPOSED 24" TRUNK SEWER
T.H.#12
4" WATER 15' S. OF ℄
SO. CAL. WATER
WATER 11' S OF ℄
SO. CAL. WATER
4" WATER 21' N. OF ℄
SO. CAL. WATER
36" WATER 14' S. OF ℄
DEPT. OF WATER & POWER
WATER 28.5' S OF ℄
SO. CAL. WATER
21" STORM DRAIN 6' S OF ℄
L.A.C.F.C.D.
4" GAS 43.5' N. OF ℄
SO. CALIF. GAS
ELEC. COND. 43.5' N OF ℄
CURVE DATA
Δ=89°56'56"
R=45'
T=44.99'
L=70.67'
B.C.=133+24.29
E.C.=133+94.97
12" x 2' V.C. PIPE STUB
STD. M.H. "A" OR "D"
133+50.74
6" WATER 26.5' S OF ℄
SO. CAL. WATER
6" WATER 24' S OF ℄
SO. CAL. WATER
TEL. COND. 44.5' S OF ℄
PACIFIC TEL.
ELEC. COND. 46' S OF ℄
6" SEWER ON ℄
CITY OF INGLEWOOD
4'-0" x 4'-0" S.D. 6' S. OF ℄
L.A.C.F.C.D.
3" WATER 7' N OF ℄ (ABAND.)
6" WATER 7' N. OF ℄
CITY OF INGLEWOOD
6" WATER 18' S. OF ℄
SO. CAL. WATER
4" WATER 3' S. OF ℄ (ABAND.)
SO. CAL. WATER
8" SEWER ON ℄
CITY OF INGLEWOOD
4" GAS 11' N. OF ℄
SO. CALIF. GAS
4" WATER 20' S. OF ℄
SO. CAL. WATER
6" WATER 18' S. OF ℄
SO. CAL. WATER
WATER 12.5' S OF ℄
SO. CAL. WATER
2" GAS 11' N. OF ℄
SO. CALIF. GAS
8" SEWER ON ℄
CITY OF INGLEWOOD
2" GAS 43.5' S. OF ℄
SO. CALIF. GAS
TRACT Nº 7655
M.B. 97-5
TRACT Nº 211
M.B. 15-50-1
TRACT
Nº
M.B. 17-34-35
MATCH LINE 136+00
COUNTY SANITATION DISTRICT NO. 5
OF LOS ANGELES COUNTY, CALIF.
MARCH 8, 1972
MARCH 8, 1972
MARCH 8, 1972
FIELD BOOK NO. 1860 A
PRAIRIE AVE. TRUNK SEWER
SECTION 2
PLAN & PROFILE
SHEET NO. 6
OF 14 SHEETS
1260-D
R.A.
C.D.S.
JUL. 73
DWG. NO.
5-P-94



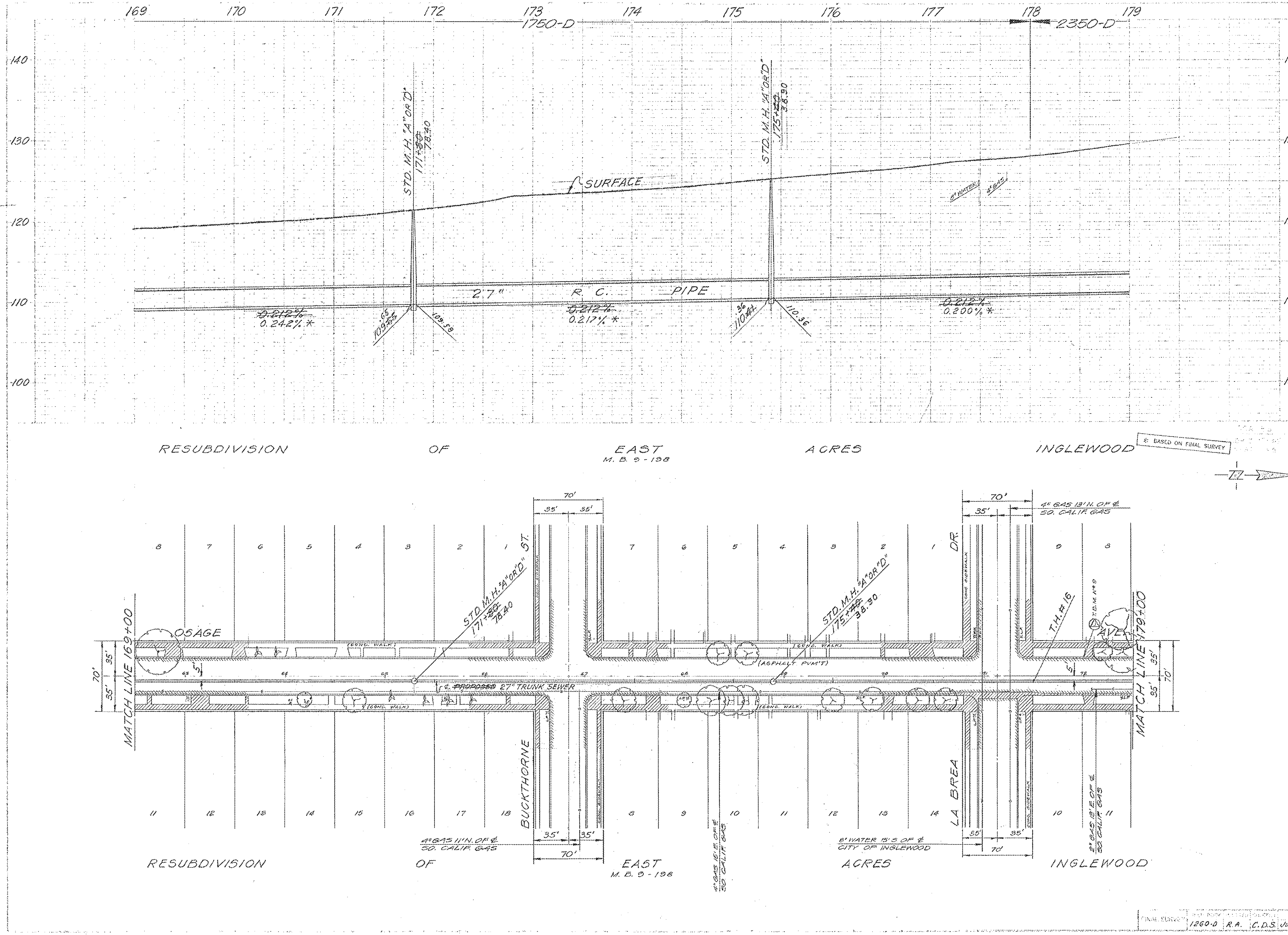
136
137
138
139
140
141
142
143
144
145
146
1750-D
100'
90
80
70
60
SURFACE
STD. M.H. "A" OR "D"
137+80
78.86
STD. M.H. "A"
142+49.65
(SEE NOTE BELOW)
24" R.C. PIPE
24" R. C. PIPE
24" R. C. PIPE
0.400%
* 0.410%
0.600%
* 0.567%
0.400%
* 0.412%
EXIST. 8" SEWER, 6' LT. PROP. SEWER
* BASED ON FINAL SURVEY
SCALES
HORIZ. 1"=40'
VERT. 1"=5'
TRACT
Nº
M. B. 17-34-35
550
MATCH LINE 136+00
MATCH LINE 146+00
8" GAS 43.5' S. OF ℄
SO. CALIF. GAS
4" GAS 43.5' N. OF ℄
SO. CALIF. GAS
8" SEWER ON ℄
CITY OF INGLEWOOD
POSS. PIPE 7' N OF ℄
STUCCO BLDG.
FRAME BLDG.
6" WATER 25' S. OF ℄
SO. CAL. WATER
36" WATER 14' S. OF ℄
4'-0" x 4'-0" S.D. 6' S. OF ℄
L.A.C.F.C.D.
℄ PROP. 24" TR. SEWER
CURVE DATA
Δ = 89°58'24"
R = 45'
T = 44.98'
L = 70.66'
BC = 137+96.61
EC = 138+67.27
6" WATER 9' S. OF ℄
CITY OF INGLEWOOD
2" GAS 18' S. OF ℄
SO. CALIF. GAS
FLOWER
ST.
T.B.M. No 5
CENTURY
BLVD.
TRACT
STD. M.H. "A"
142+49.65
(CONSTRUCT M.H. WITH VERTICAL WALL ON NORTH SIDE)
(REMOVE PORTION OF EXIST. 8" PIPE WITHIN M.H. WHEN DIRECTED BY THE ENGINEER AND FILL IN CHANNEL TO THE WEST)
T.H. # 13
EXISTING M.H.
(PLUG INLET ON E. WHEN DIRECTED BY THE ENGR.)
℄ PROP. 24" TR. SEWER
ELECT. COND. 43.5' N OF ℄
4" GAS 43.5' N OF ℄
SO. CAL. EDISON CO.
27" STORM DRAIN 12' N OF ℄
L.A.C.F.C.D.
8" SEWER ON ℄
CITY OF INGLEWOOD
8" SEWER ON ℄
C.I. 767
TEL. COND. 28.5' W. OF ℄
PACIFIC TEL.
STUCCO APT. BLDG.
50'
100'
30'
60'
20'
TRACT
Nº
M. B. 17-34-35
550
COUNTY SANITATION DISTRICT NO. 5
OF LOS ANGELES COUNTY CALIF.
SUBMITTED
RECOMMENDED
APPROVED
MARCH 8, 1972
PRAIRIE AVE. TRUNK SEWER
SECTION 2
PLAN & PROFILE
SHEET NO. 7
OF 14 SHEETS
FINAL SURVEY
FIELD BOOK 1260-D
PLOTTED R.A.
CHECKED C.D.S.
DATE JUL. 73
DWG. NO. 5-p-94



PRAIRIE AVE. TRUNK SEWER
SECTION 2
PLAN & PROFILE
COUNTY SANITATION DISTRICT NO. 5
SHEET NO. 8
OF 14 SHEETS
DWG. NO. 5-p-94
FINAL SURVEY
1260-D
R.A.
C.D.S.
Jul. 73
SURFACE
INV. EX. 3'x3' R.C. ARCH STORM DRAIN 6' RT. ℄ CONST.
STD. M.H. "A" OR "D" 147+93.60 LT.
STD. M.H. "A" OR "D" 150+87.70 LT.
STD. M.H. "A" OR "D" 154+42.23 (SEE NOTE BELOW)
100' VERTICAL CURVE
R.C. PIPE
24"
21"
27" STORM DRAIN
1750-D
1600-D
* BASED ON FINAL SURVEY
TRACT Nº 550
M.B. 17-54-35
FLOWER ST.
HARDY ST.
OSAGE AVE.
H. HARDY'S SUBDIVISION
W. H. HARDY'S SUBDIVISION
MATCH LINE 146+00
MATCH LINE 157+50
CURVE DATA
EXIST. M.H. (PLUG INLET IN E WHEN DIRECTED BY THE ENGR.)
T.H. # 14
TEL. COND. 24' N. OF ℄ PACIFIC TEL.
8" SEWER 6' S. OF ℄ CITY OF INGLEWOOD
REMOVE PORTION OF EXIST. 8" PIPE WITHIN M.H. WHEN DIRECTED BY THE ENGR. AND FILL IN CHANNEL TO THE WEST.



1600-D
1750-D
STD. M.H. "A" OR "D" 158+30 25.73
STD. M.H. "A" OR "D" 162+60 54.45
STD. M.H. "A" OR "D" 167+00 166+97.25
72" DIA. ST. M.H. "E" 168+12 11.01 (SEE DETAIL HEREON)
SURFACE
EXIST. HOUSE CONNECTIONS
21" R.C. PIPE
27" RC. PIPE
1.474 %
1.488 % *
1.495 % *
1.333 %
0.212 %
0.242 % *
W. H. HARDY'S SUBDIVISION
* BASED ON FINAL SURVEY
SCALES
OSAGE AVE.
ARBOR VITAE ST.
MATCH LINE 157+50
MATCH LINE 169+00
6" WATER, 16.5' S OF ℄ CITY OF INGLEWOOD
12" WATER 18' N. OF ℄ CITY OF INGLEWOOD
6" GAS 13' N. OF ℄ SO. CALIF. GAS
10" SEWER ON ℄ CITY OF INGLEWOOD
CURVE DATA
Δ=90°35'26"
R=22.50'
T=22.78'
L=35.56'
B.C.=167+88.22
E.C.=168+23.78
CURVE DATA
Δ=89°55'10"
R=22.50'
T=22.47'
L=35.31'
CONC. SIDEWALK
℄ PROP. 21" TR. SEWER
℄ PROP. 27" TR. SEWER
T.H. #15
EXIST. 10" SEWER
AFTER EXIST. 10" PIPE IS REMOVED FORM CLEAN OUT AS DIRECTED
STA. 168+12 11.01 (REMOVE EXIST. 10" PIPE WITHIN M.H. WHEN DIRECTED BY THE ENGR.)
PROP. 27" R.C.P.
72" DIA. STD. M.H. "E" 168+12 11.01
SCALE: 3/8"=1'-0"
AREA FOR CLEANOUT
SECTION A-A
NO SCALE
COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY, CALIF.
SUBMITTED MARCH 8, 1972
RECOMMENDED MARCH 8, 1972
APPROVED MARCH 9, 1972
PRAIRIE AVE. TRUNK SEWER SECTION 2
PLAN & PROFILE
SHEET NO. 9
OF 14 SHEETS
DWG. NO. 5-p-94
FINAL SURVEY
1260-D
R.A.
C.D.S.
Jul. 73



COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY, CALIF.

MARCH 8, 1972

MARCH 8, 1972

MARCH 8, 1972

FIELD BOOK NO. 1260-A,B,C

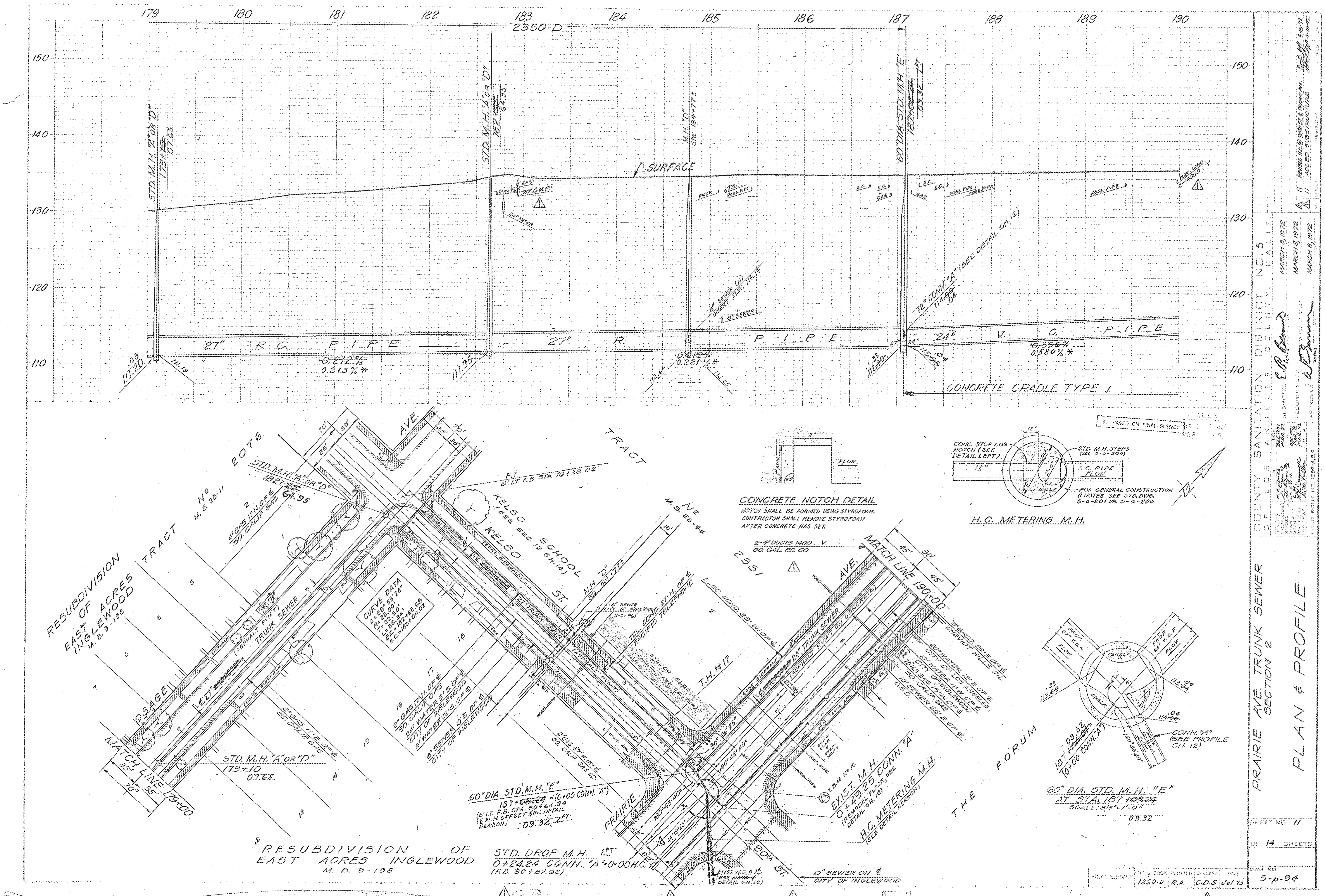
PRAIRIE AVE. TRUNK SEWER SECTION 2

PLAN & PROFILE

SHEET NO. 10 OF 14 SHEETS

FINAL SURVEY 1260-0 R.A. C.D.S. Jul. 73

DWG. NO. 5-p-94


2350-D
SURFACE
STD. M.H. "A" OR "D" 179+10 07.65
STD. M.H. "A" OR "D" 182+64.35
M.H. "D" STA. 184+77
60" DIA. STD. M.H. "E" 187+09.32 LT.
27" R.C. PIPE
0.212% 0.213% *
0.221% *
24" V.C. PIPE
0.580% *
CONCRETE CRADLE TYPE I
72" CONN. "A" (SEE DETAIL SH. 12)
* BASED ON FINAL SURVEY
CONCRETE NOTCH DETAIL
NOTCH SHALL BE FORMED USING STYROFOAM. CONTRACTOR SHALL REMOVE STYROFOAM AFTER CONCRETE HAS SET.
H.C. METERING M.H.
STD. M.H. STEPS (SEE S-a-209)
V.C. PIPE
FLOW
FOR GENERAL CONSTRUCTION & NOTES SEE STD. DWG. S-a-201 OR S-a-204
KELSO SCHOOL (SEE SEC. 12 SH. 14)
KELSO ST.
OSAGE AVE.
PRAIRIE AVE.
90th ST.
THE FORUM
RESUBDIVISION OF EAST ACRES INGLEWOOD M.B. 9-198
TRACT No 2076 M.B. 25-11
TRACT No 2351 M.B. 28-44
MATCH LINE 179+00
MATCH LINE 190+00
CURVE DATA
TRUNK SEWER
60" DIA. STD. M.H. "E" 187+09.32 = (0+00 CONN. "A")
EXIST. M.H. 0+49.25 CONN. "A" (REMODEL FLOOR, SEE DETAIL SH. 12)
H.C. METERING M.H. (SEE DETAIL HEREON)
STD. DROP M.H. LT. 0+24.24 CONN. "A" = 0+00 H.C. (F.B. 80+87.62)
10" SEWER ON ℄ CITY OF INGLEWOOD
60" DIA. STD. M.H. "E" AT STA. 187+09.32
SCALE: 3/8" = 1'-0"
CONN. 54" (SEE PROFILE SH. 12)
COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY
PRAIRIE AVE. TRUNK SEWER SECTION 2
PLAN & PROFILE
MARCH 8, 1972
SHEET NO. 11 OF 14 SHEETS
FINAL SURVEY 1260-D R.A. C.D.S. Jul. 73
DWG. NO. 5-p-94

* FILL AREA ESTIMATED FROM CITY OF INGLEWOOD PLAN Nº 2-M-6 DATED 1928 AND TEST HOLE DATED FEB. 29, 1972

REMOVED BRICK BULKHEAD FROM 12" CONN. TO THE SOUTH INGLEWOOD-ORANGE AVE TRUNK, AND ADDED PVC SLIDE GATE, PER WEEKLY REPORT OF SEWERAGE OPERATIONS 10/26/88

END CONSTRUCTION
(REMOVE BULKHEAD AND JOIN EXIST. 24" STUB)
199+~~15.62~~ 16.52

EXISTING M.H. 199+17.60
~~WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL BULKHEAD EXIST. 12" OUTLET AND FILL IN CHANNEL AS DIRECTED BY THE ENGINEER~~

* MAKE GRADE CHANGE AT STA. 0+36 BY USING MAX. 4' LEVEL PIPE

CONCRETE ENCASEMENT PER CONCRETE COLLAR DETAIL (SEE SEC. 14 SH. 14)

PLACE TEMPORARY BULKHEAD IN OUTLET AS DIRECTED BY THE ENGINEER.
REMOVE PORTION OF FLOOR AND CONSTRUCT OUTLET

~~PRIOR TO THE CONSTRUCTION OF CONNECTION "A" THE CONTRACTOR SHALL EXPOSE THE H.C. AT APPROX. STA. 0+72. THE ENGR. WILL VERIFY THE INVERT ELEV. AND THE REQUIRED PIPE LENGTH.~~

REMODEL DETAIL OF EXIST. M.H. CONNECTION "A"
0+49.25
SCALE: 3/8"=1'-0"

*: BASED ON FINAL SURVEY

SCALES
HORIZ. 1" = 40'
VERT. 1" = 5'

END OF CONSTRUCTION
(REMOVE BULKHEAD AND JOIN EXIST. 24" STUB
199+15.62
(22.96' LT. F.B. STA. 83+02.76)

FINAL SURVEY	FIELD BOOK	PLOTTED	CHECKED	DATE
	1260-D	R.A.	C.D.S.	Jul. 73

NO.	SHEET	REVISIONS	INITIALS	DATE
△	12	REVISED H.C. @ 90TH ST. & PRAIRIE AVE.		5-15-72

COUNTY SANITATION DISTRICT NO. 5
OF LOS ANGELES COUNTY, CALIF.

SUBMITTED E.C. [illegible] MARCH 8, 1972
RECOMMENDED MARCH 8, 1972
APPROVED [illegible] MARCH 8, 1972

FIELD BOOK NO. 1260-A,B,C

PRAIRIE AVE. TRUNK SEWER
SECTION 2

PLAN & PROFILE

SHEET NO. 12
OF 14 SHEETS

DWG. NO. 5-p-94

Section 1 - General

The notes and specifications contained on this drawing are supplemental to the "Standard Specifications for Public Works Construction, 1970 Edition, and Amendments as adopted by County Sanitation District No. 5 of Los Angeles County dated October, 1970. In all matters where conflict exists between the notes and specifications on the drawings and Standard Specifications, the notes and specifications on the drawings shall govern.

The Contractor shall not be responsible for the cost of removal, relocation or protection of existing utilities, if such utilities are not shown on the plans or are not identified in the specifications or, in case of service connections, are not located by the utility owners prior to construction.

The Contractor shall not be assessed damages for delay in completion of the project when such delay results from time required by the Contractor to protect a utility not shown on the plans or identified in the specifications, or when delay results from time required to remove or relocate said utility.

Unless otherwise allowed by the Engineer, the Contractor shall complete construction at each location including the permanent resurfacing within 45 days after commencement of construction at the location. Completion of construction shall include all work required on the drawings and in the specifications, including manholes, house connections, planting, and replacement or repair of damaged surface improvements. Failure on the part of the Contractor to complete construction at each location, including the permanent resurfacing within 45 days after commencement of construction at the location may result in a directive from the Engineer to cease progress on any or all parts of the work under contract until construction is completed including the permanent resurfacing on all portions of the project commenced more than 45 days prior to the date of the directive. No additional compensation will be allowed as a result of such directive.

Section 2 - Correction of Sanitation District Amendments to Standard Specifications for Public Works Construction, 1970 Edition

The third sentence of the second paragraph under 306-1.13 "House Connection Sewers" on page 14 of the above-named amendments is hereby deleted.

Section 3 - Sequence of Construction

To prevent interruption of traffic on major streets during the racing seasons at Hollywood Turf Club, the Contractor shall complete all construction, including permanent resurfacing, within Century Boulevard, Hardy Street, Arbor Vitae, Kelso Street and Prairie Avenue between the period of July 25, 1972 and September 6, 1972.

Section 4 - Notification

The Contractor shall notify the following agencies at least 48 hours prior to commencing construction:

Los Angeles County Flood Control District	223-2111
Mr. R. Kenis	Ext. 74211
Los Angeles County Road Department	
Permit Notification	773-4834
Traffic and Lighting	225-1677
Mr. Ed Cline	Ext. 75244
City of Hawthorne	
Mr. C. W. Smith	
Asst. City Engr. & Traffic Engineer	626-1181 Ext. 276
Fire Department	
Capt. J. Conner	675-0304
Police Department	
Chief C. B. Young	675-4446
City of Inglewood	
Mr. William Mahar	674-7111
Assistant City Engineer	Ext. 211
Mr. Paul Cook Traffic Engr.	Ext. 214
Mr. J. G. Smith Fire Department	Ext. 311
Sargeant Calderwood Police Department	Ext. 222
Mr. K. Duke Water Department	Ext. 201

The Contractor shall notify the following persons or firms at least 48 hours prior to commencing construction in the vicinity of their facilities:

Pacific Tel. & Tel. Mr. C. C. McLeod	296-8763
Southern Cal. Gas Co. Mr. Bob Fones	673-3020
Pacific Lighting Mr. V. L. Driver	623-7945
Dept. of Water & Power City of Los Angeles Mr. D. L. Georgeson	481-6978
Atlantic Richfield Oil Corp. for Cheviot Hills Pipeline Co. Mr. H. P. Smolich	629-4111
Southern Calif. Ed. Co. Mr. W. M. Burton	572-2539
Southern Calif. Water Co. Mr. Walter Paltz	386-7800

Section 5 - D-Load and Allowable Trench Width for R. C. Pipe

The D-load shown on the profile portion of the drawing is the minimum D-load required using normal bedding as defined in Section 306-2.1 of the Standard Specifications. The table below indicates the allowable trench widths for varying amounts of cover over the pipe for pipe with minimum D-load for (1) normal bedding and (2) gravel bedding. Gravel bedding shall be at the option of the Contractor. The gravel bedding shall be crushed rock 1/4" to 3/4" size conforming to ASTM C33 Size 67. The crushed rock shall extend from the bottom of the pipe to the top of the pipe. The cost for gravel bedding shall be absorbed in the appropriate pipe bid item. Allowable trench widths for cover between the amounts shown in the table shall be obtained by interpolation.

ΔW, shown in the table below, is to be used to determine allowable trench width for pipe with D-load in excess of the minimum required where normal bedding is used. ΔW represents the amount the allowable trench width will be increased over that shown in the table for each 100 D-load in excess of the minimum.

ALLOWABLE TRENCH WIDTH IN INCHES FOR MINIMUM D-LOAD

Cover Over Pipe in Feet	REINFORCED CONCRETE PIPE SIZE AND D-LOAD									
	21" - 1500-D		24" - 1750-D		27" - 1750-D		27" - 2350-D		30" - 1650-D	
	Bedding Normal	Material Gravel	Bedding Normal	Material Gravel	Bedding Normal	Material Gravel	Bedding Normal	Material Gravel	Bedding Normal	Material Gravel
6	48	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
7	48	"	"	"	"	"	"	"	"	"
8	46	"	55	"	61	"	"	"	63	"
9	44	51	52	"	57	"	"	"	59	70
10	43	49	50	59	56	64	"	"	58	68
11	42	48	49	57	54	62	68	"	56	65
12	41	46	47	54	52	59	65	75	54	62
13			46	52	50	57	62	72	52	59
14			45	51	49	55	60	69		
15					48	54	58	66		
16							56	64		
17							55	63		
18							54	61		
19							53	60		
20							52	59		
21							51	58		
ΔW	3		2		2		1		2	

Section 6 - Allowable Trench Widths for V.C. Pipe

The table below indicates the allowable trench widths for varying amounts of cover over the pipe for (1) normal bedding and (2) gravel bedding. Gravel bedding shall be at the option of the Contractor. The gravel bedding shall be crushed rock 1/4" to 3/4" size conforming to ASTM C33 Size 67. The crushed rock shall extend from the bottom of the pipe to the top of the pipe. The cost for gravel bedding shall be absorbed in the appropriate pipe bid item. Allowable trench widths for cover between the amounts shown in the table shall be obtained by interpolation.

ALLOWABLE TRENCH WIDTH IN INCHES FOR 24" V.C. PIPE

Cover Over Pipe in Feet	Normal	Gravel
11	54	62
12	53	60
14	49	55
16	47	53
18	45	51
20	44	49

Section 7 - Traffic Requirements In and Across Streets

Traffic shall be handled in accordance with the Standard Specification for Public Works Construction, 1970 Edition, as adopted by the Los Angeles County Road Department.

Where traffic striping is not to be relocated, delineators shall be placed to divert and separate two-way traffic. Cones shall be placed to separate two lanes moving in the same direction.

A. In County Streets

Eastwood Ave. and Freeman Ave.
The Contractor may close to thru traffic, block by block, provided two adjacent intersecting streets are not closed concurrently.

Lennox Blvd.
The Contractor shall maintain a minimum of two 10-foot traffic lanes, one in each direction at all times, when construction is in progress in the street.

Intersecting Streets and Alleys: 111th Street, 107th Street, 106th Street, 105 Street, 104th Street, 103rd Street:
The Contractor may close to thru traffic when construction is in progress at the above intersections provided two adjacent intersecting streets or alleys are not closed concurrently.

To close a county street, the Contractor shall apply in writing for a road closure permit to the Road Commissioner, Los Angeles County Road Dept. to comply with Highway Permit Ordinance No. 3597, Sections 142, 143 and 316, at least three weeks prior to the proposed date of closure. The letter shall state the dates of closure that are requested by the Contractor. The Road Department will determine the authorized period of closure and the Contractor shall deposit with the Road Commissioner an amount equal to $50.00 for each day of authorized closure.

The Road Commissioner will authorize the closure by a rider to the permit stipulating the period of closure. If the road is reopened within the time authorized, the cash deposit will be refunded to the Contractor. If the Contractor fails to open the road after the period of authorized closure, $100.00 per day will be deducted from his cash deposit. Extensions of time may be authorized as set forth in the Standard Spec for Public Works Construction, 1970 Edition, as adopted by the Los Angeles County Road Dept.

B. In City of Hawthorne Streets

Eastwood Ave. and Intersection 112th Street
The Contractor may close to thru traffic when construction is in progress.

To close any street or alley in Hawthorne, the Contractor shall notify the Hawthorne Traffic Engineer at 676-1181, Ext. 276; Fire Dept. at 675-0304 and Police Dept. at 675-4446 three days in advance of closure.

C. In City of Inglewood Streets

Manchester Blvd. (State Hwy.)
The Contractor shall maintain all existing traffic lanes.

Freeman Ave., Flower Street and Osage Avenue
The Contractor may close to thru traffic, block by block, provided two adjacent intersecting streets are not closed concurrently.

Intersecting Streets: 103rd Street, 102nd Street, 101st Street, 99th Street, 97th Street, Buckthorne, LaBrea Drive and Intersecting Alleys:
The Contractor may close to thru traffic when construction is in progress at the above intersections provided two adjacent intersecting streets or alleys are not closed concurrently.

Century Blvd.
The Contractor shall maintain 4 10-foot traffic lanes at all times except when crossing Century Blvd. at Freeman Ave. between approx. Sta. 133+00 and 134+00, the Contractor may reduce traffic to 3 10-foot traffic lanes, two in one direction and one in the other direction, as determined by the City of Inglewood Traffic Engineer.

Hardy Street, Arbor Vitae St. and Kelso St.
The Contractor shall maintain a minimum of one flagmen controlled traffic lane.

Prairie Ave.
The Contractor shall maintain 4 10-foot traffic lanes at all times except, when constructing Connection "A" and the house connection, traffic may be reduced to 3 10-foot traffic lanes, two in one direction and one in the other direction, as determined by the City of Inglewood Traffic Engineer.

To close any street or alley in Inglewood, the Contractor shall notify the City of Inglewood Traffic Engineer at 674-7111, Ext. 211; Fire Dept. at 674-7111, Ext. 311 and Police Dept. at 674-7111, Ext. 222 three days in advance of closure.

Section 8 - Construction Requirements For Work Under Storm Drains of The Los Angeles County Flood Control District

Prior to commencing construction, the Contractor shall obtain approval of the Los Angeles County Flood Control District for his methods of temporary and permanent support of the storm drains.

All construction work in the immediate vicinity of the storm drains shall conform to the requirements of the Los Angeles County Flood Control District.

Construction under the storm drains at approximate Stations 133+25, 138+23, 147+80 and 151+00 shall be accomplished by the tunneling method.

Construction under the 27" storm drain at approximate Station 151+18 and the 60" storm drain at approximate Station 195+55 shall be accomplished by providing an approved temporary support and a permanent concrete support per S-a-217. The Contractor shall submit to and obtain approval from the Engineer of his proposed method of temporary support prior to any construction in the vicinity of the 27" and 60" storm drain.

All storm drain pipes to catch basins shall be temporarily supported per S-a-222 and permanently supported per S-a-217.

All work to be absorbed under the appropriate pipe item.

COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY, CALIF.

DESIGNED [signature] MAR. 1972 | DRAWN HARVILL " " | CHECKED [signature] " " | FIELD BOOK NO. 1260, A, B, C

SUBMITTED [signature] ACTING OFFICE ENGINEER MARCH 8, 1972 DATE
RECOMMENDED ASST. CHIEF ENGINEER MARCH 8, 1972 DATE
APPROVED [signature] ACTING CHIEF ENGINEER MARCH 8, 1972 DATE

NO. | SHEET | REVISIONS | INITIALS | DATE

PRAIRIE AVE. TRUNK SEWER SECTION 2
NOTES & SPECIFICATIONS

SCALE:
SHEET NO. 13
OF 14 SHEETS
DWG. NO. 5-P-94

Section 9 - Resurfacing Requirements

Materials and methods of construction for repaving shall conform to the Standard Specifications for Public Works Construction, 1970 Edition, as adopted by the Los Angeles County Road Department.

Unless otherwise authorized by the Engineer, temporary resurfacing shall be placed and maintained in all locations where sidewalks, driveways or paving are removed. If the Engineer directs that temporary resurfacing be deleted, the contract price will be reduced by an amount representing the reduction in temporary resurfacing cost based on the actual area of temporary resurfacing omitted at the unit pride of fifteen cents per square foot of resurfacing. If the Contractor is allowed to place the base course of the permanent resurfacing in lieu of temporary resurfacing, he shall maintain it to the satisfaction of the Engineer until the permanent wearing surface has been placed.

Temporary resurfacing shall be replaced with permanent resurfacing including wearing surface when, in the opinion of the Engineer, the backfill is suitable for permanent resurfacing, but within thirty (30) calendar days after the temporary resurfacing was placed.

Permanent resurfacing shall be one inch greater in thickness than existing paving except as follows:

Eastwood Ave. (from County Boundary north to 111th St.)
Replace with 3" of Type 1 A.C. on 4" of aggregate base.

Eastwood Ave. (111th St. to Lennox Blvd.)
Replace with 4" of Type 1 A.C.

Lennox Ave.
Replace with 9" of Type 1 A.C.

Freeman Ave. (Lennox Blvd. to 103rd St.)
Replace with 4" Type 1 A.C.

Freeman Ave. (103rd St. to Century Blvd.), Flower St., Hardy St., and Osage St.
Replace with 2" Type 1 A.C. on 4" of aggregate base.

Century Blvd., Prairie Ave. and Arbor Vitae Street
Replace with 6" of Type 1 A.C. on 8" of aggregate base.

Kelso Street
Replace with 3" of Type 1 A.C. on 4" of aggregate base material.

Manchester Blvd.
Replace pavement section in kind plus one inch of thickness.

△ Eastwood Avenue (From 112th Street to County Bdry.-Approx. Sta. 88+75)
Replace with 4" of Type I A.C. on 8" of aggregate base.

Section 10 - Existing House Connections

The house connections as shown on the plans were obtained from the best information available, however, the information may not be complete nor entirely accurate.

House connections that conflict with the proposed sewer shall be relaid to the local sewer if sufficient grade is available. If sufficient grade is not available to connect directly to the local sewer, the Contractor shall temporarily connect the house connection to the local sewer, using a flexible pipe, either under or over the proposed sewer. The Contractor shall maintain the temporary connection until permanent connection is made. When the proposed sewer is placed in service, the Contractor shall permanently connect the house connection to the proposed sewer (see standard plan S-a-86).

The relaying of house connections, both temporary and permanent, will be paid under the house connection bid item. The unit price of the bid item paid shall be only for the laying length of the permanent connection.

Section 11 - Dewatering

All water encountered in constructing the sewer shall be disposed of by the Contractor in such manner as will not damage public or private property or create a nuisance or health menace. The Contractor shall furnish, install, and operate pumps, pipes, appliances and equipment of sufficient capacity to keep all sewer excavations free from water until the sewer is backfilled, unless otherwise authorized by the Engineer. The Contractor shall provide all means or facilities necessary to conduct water to the pumps. Water, if odorless and stable, may be discharged into an existing storm drain, channel, or street gutter in a manner approved by the Engineer. When required by the Engineer, a means of desilting the water before discharging it shall be provided.

Section 12 - Requirements for Work in Vicinity of Whelan School and Kelso School

During construction past the Whelan and Kelso Schools, the Contractor shall erect temporary 5-foot high chain link fences to enclose completely all open excavations left overnight or when excavations are left unattended. The fencing shall be used for open excavations up to 300 feet in each direction from limits of the school or up to 50 feet beyond the nearest pedestrian crossing, whichever distance is the greater. Fencing shall be fastened to posts driven in place and suitably spaced, as approved by the Engineer, to adequately support the fencing and provide security, in the opinion of the Engineer, against children entering the construction excavation. All costs of temporary fencing shall be absorbed in the appropriate pipe bid item.

The Engineer will notify Mr. Albert Aialouf, Principal of Whelan School, at 673-3110 and Mr. John Posterling, Principal of Kelso School, at 673-3110 at least 72 hours prior to commencing construction and shall furnish notices to the schools warning parents of the hazards and dangers present in the construction areas.

Section 13 - Construction Under Manchester Blvd., State Highway

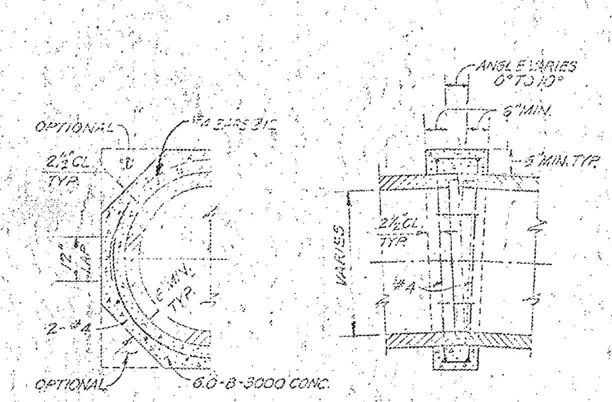
All work shall be done in accordance with the requirements of the California State Division of Highways. The Contractor shall submit to and obtain approval of the Engineer of his method of jacking and tight sheeting of jacking pit prior to commencing construction.

The State Highway Encroachment permit will be obtained by the District. The Contractor will not be required to apply for a construction permit; however, the Contractor will be required to post a P-4 form bond in the amount of $2,000.00 with the State Division of Highways, and to incur the State inspection fees. Inspection fees may amount to approximately $150.00. The State will bill the Contractor directly.

Between the jacking limits, as indicated on the drawing, the Contractor shall jack into place a 48" diameter steel casing having a minimum wall thickness of 3/8" and shall install the pipe within the casing. All voids outside of the casing and between the casing and the sewer pipe shall be filled with cement-sand grout placed under pressure. All cement-sand grout shall have 8 sacks of cement per cubic yard of grout.

The jacking pit perimeter and the backface at the end of the jacked casing shall be solid sheeted and the timbers used for sheeting shall extend 3-1/2 feet above the ground surface.

Section 14 - Concrete Collar



(NO SCALE)

Construct concrete collar where required on the drawings and at all pipe joints where there is a change in the type of joint or a change in the thickness of the walls of adjacent pipes.

If a water line is less than 3 feet above the proposed sewer, the pipe joints within 4 feet horizontally of the water line shall be encased as detailed hereon.

(All costs to be absorbed in the appropriate pipe bid item.)

Section 15 - Bench Marks

BM P.T.S. #4	Set Chis. "□" ℄ C.R. @ N.E. cor.
El. = 72.175	Prairie Ave & 111th St. East.
BM P.T.S. #5	Fd. L.&T.B. curb Prairie Ave.
El. = 76.115	& ℄ Prod. Lennox Blvd.
BM P.T.S. #6	Fd. City of Inglewood survey tag
El. = 87.650	℄ C.R. @ S.E. cor. Prairie Ave.
	& Century Blvd.
BM P.T.S. #7	Fd. City of Inglewood Survey Tag
El. = 119.195	℄ C.R. @ N.E. cor. Prairie Ave. &
	Arbor Vitae St.
BM P.T.S. #8	Fd. City of Inglewood Survey Tag
El. = 135.045	℄ C.R. @ N.E. cor. Prairie Ave.
	& 90th ST.
BM P.T.S. #8	in F.B. 1125-47 L.&T.B. curb on
El. = 159.185	Prairie Ave. on ℄ Prod. Manchester
	Drive.

Section 16 - Special Trench Excavation Requirements

In advance of commencement of excavation for all excavation of trenches five feet or more in depth, the Contractor shall submit a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trenches. If said plan varies from the shoring system standards established by Industrial Safety Division, Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer. The Contractor shall not commence excavation of such trenches until the detailed plan submitted by the Contractor has been accepted and approved in writing by the Engineer.

△ Section 17 - Backfill of Trenches

Trench backfill in Eastwood Avenue from the beginning of construction to Bounty Boundary - approximate Station 88+75 shall conform with the following:

"All trench backfill material from 3' below the finish grade to the bottom of the trench shall be placed and consolidated in accordance with Section 306-1.9.3 of the Standard Specifications for Public Works Construction, with Amendments of the County Sanitation Districts of Los Angeles County dated October 1970. All trench backfill material above 3' below the finish grade shall be mechanically compacted to a relative density of 95%."

NO.	SHEET	REVISIONS	INITIALS	DATE
△	14	REVISED SECT. 9 & ADDED SECT. 17		4-10-72

COUNTY SANITATION DISTRICT NO. 5 OF LOS ANGELES COUNTY, CALIF.

DESIGNED: MAR. 1972
DRAWN: HARVILL
CHECKED: A.M. Fuller
FIELD BOOK NO. 1260, A,B,C

SUBMITTED: ACTING OFFICE ENGINEER — MARCH 8, 1972
RECOMMENDED: ASST. CHIEF ENGINEER — MARCH 8, 1972
APPROVED: ACTING CHIEF ENGINEER — MARCH 8, 1972

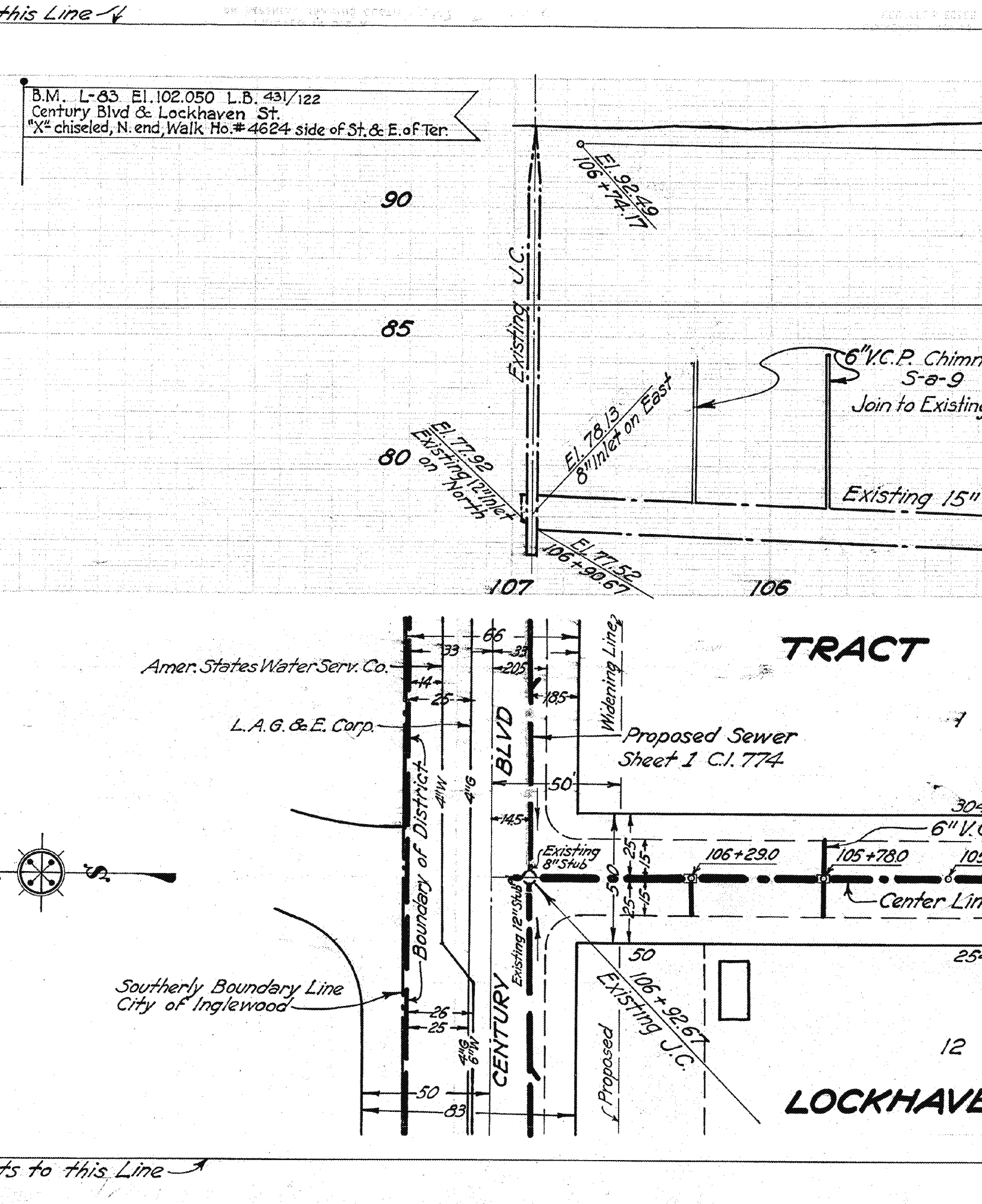
PRAIRIE AVE. TRUNK SEWER
SECTION 2
NOTES & SPECIFICATIONS

SCALE:
SHEET NO. 14
OF 14 SHEETS
DWG. NO. 5-P-94

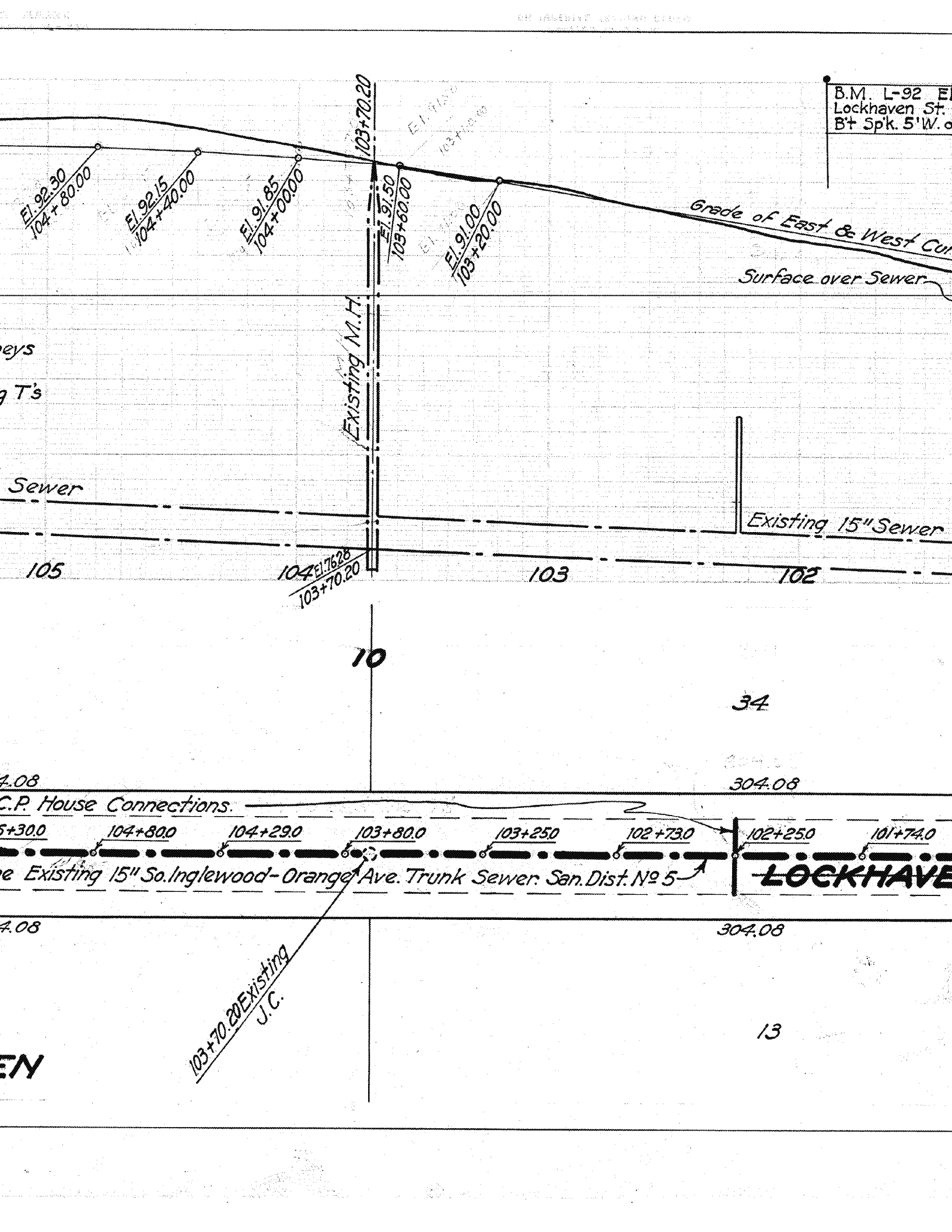
Trim Prints to

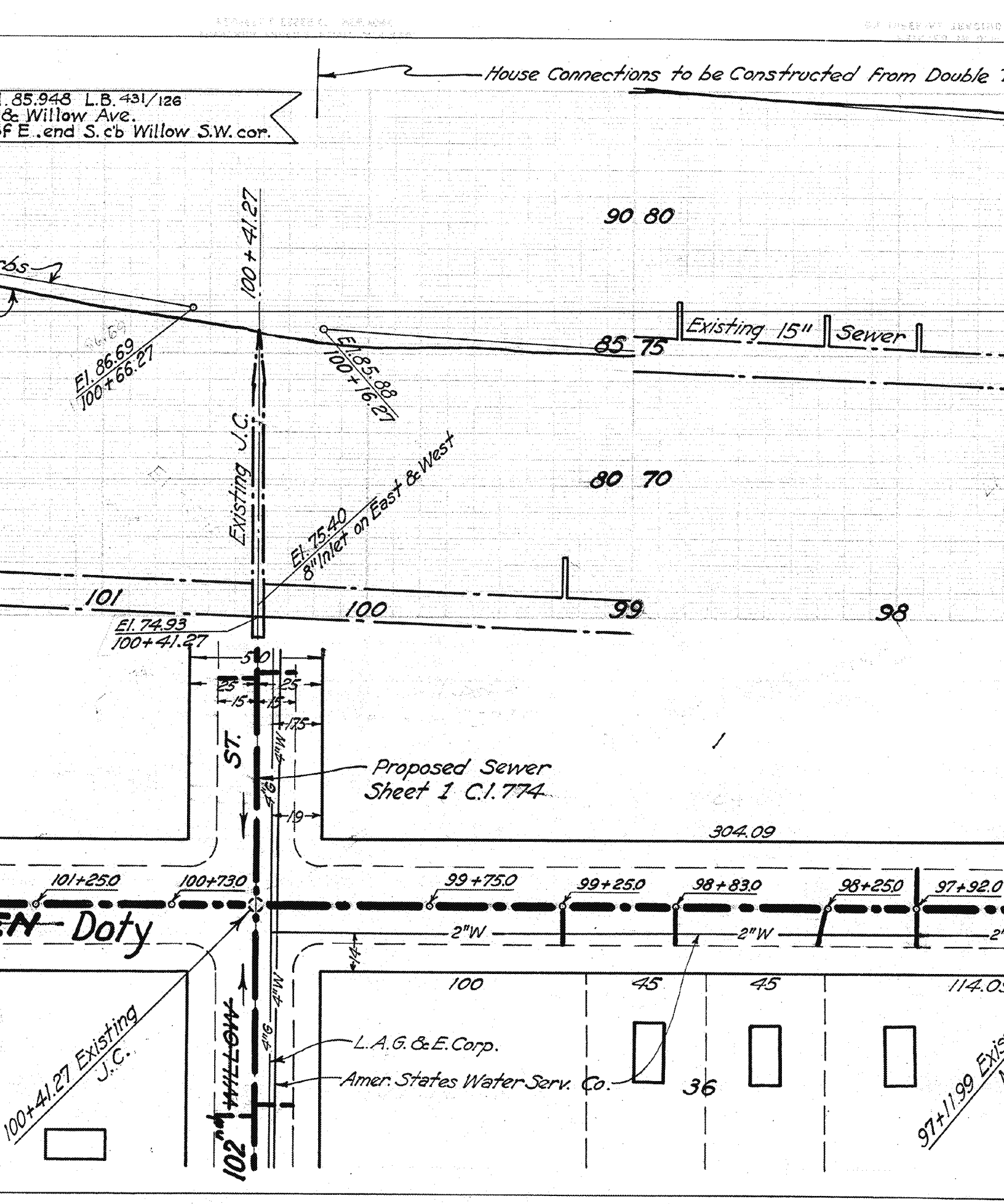
Trim Print

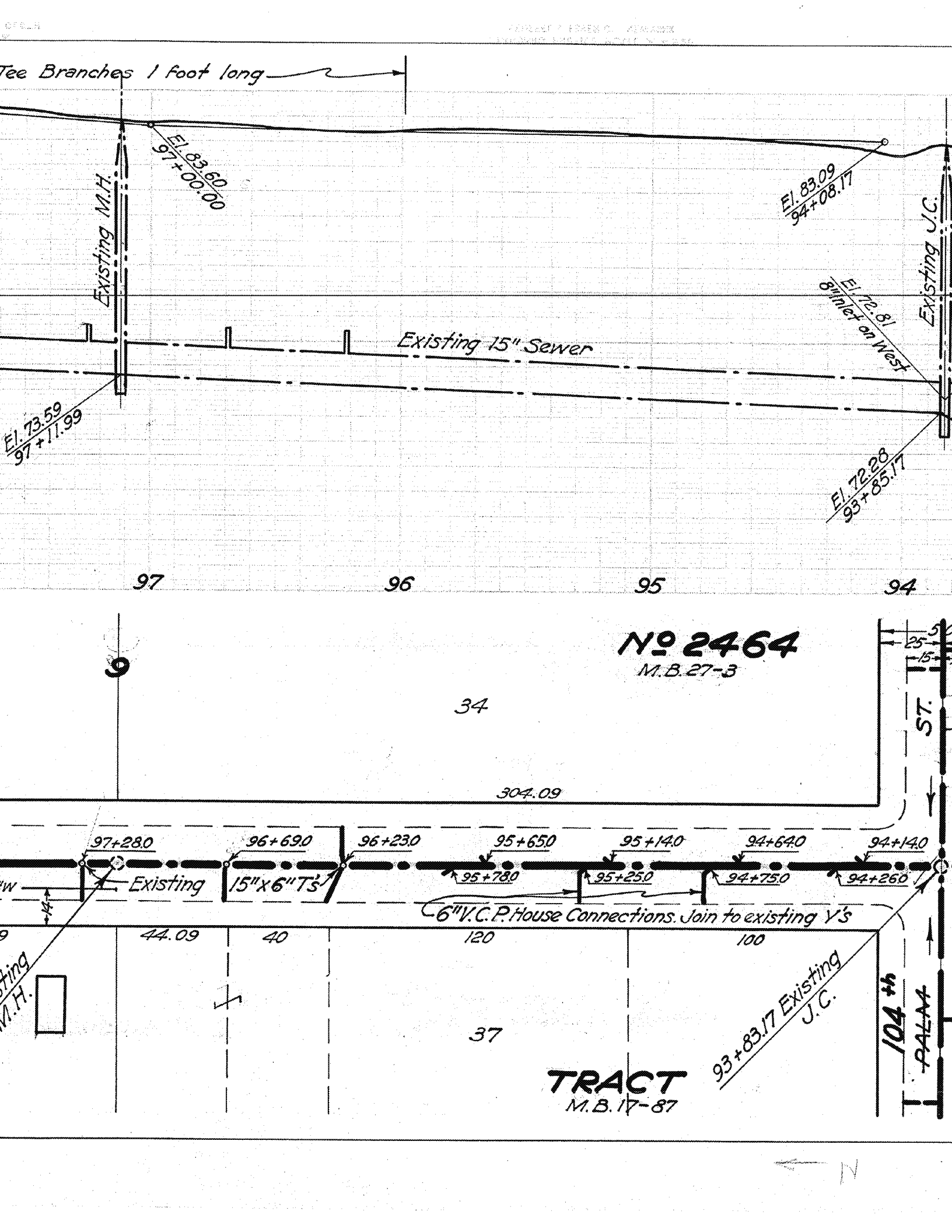
this Line

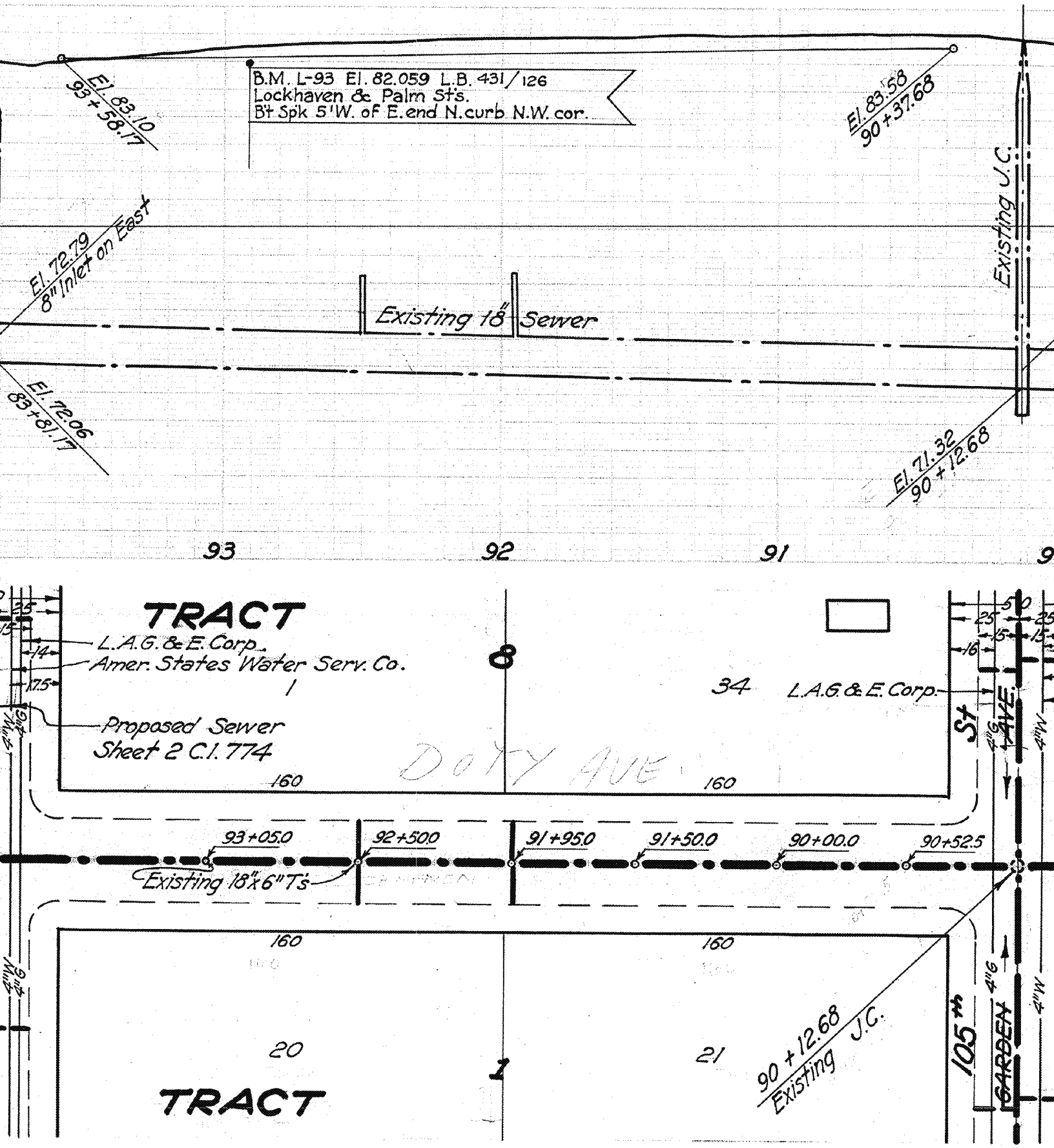


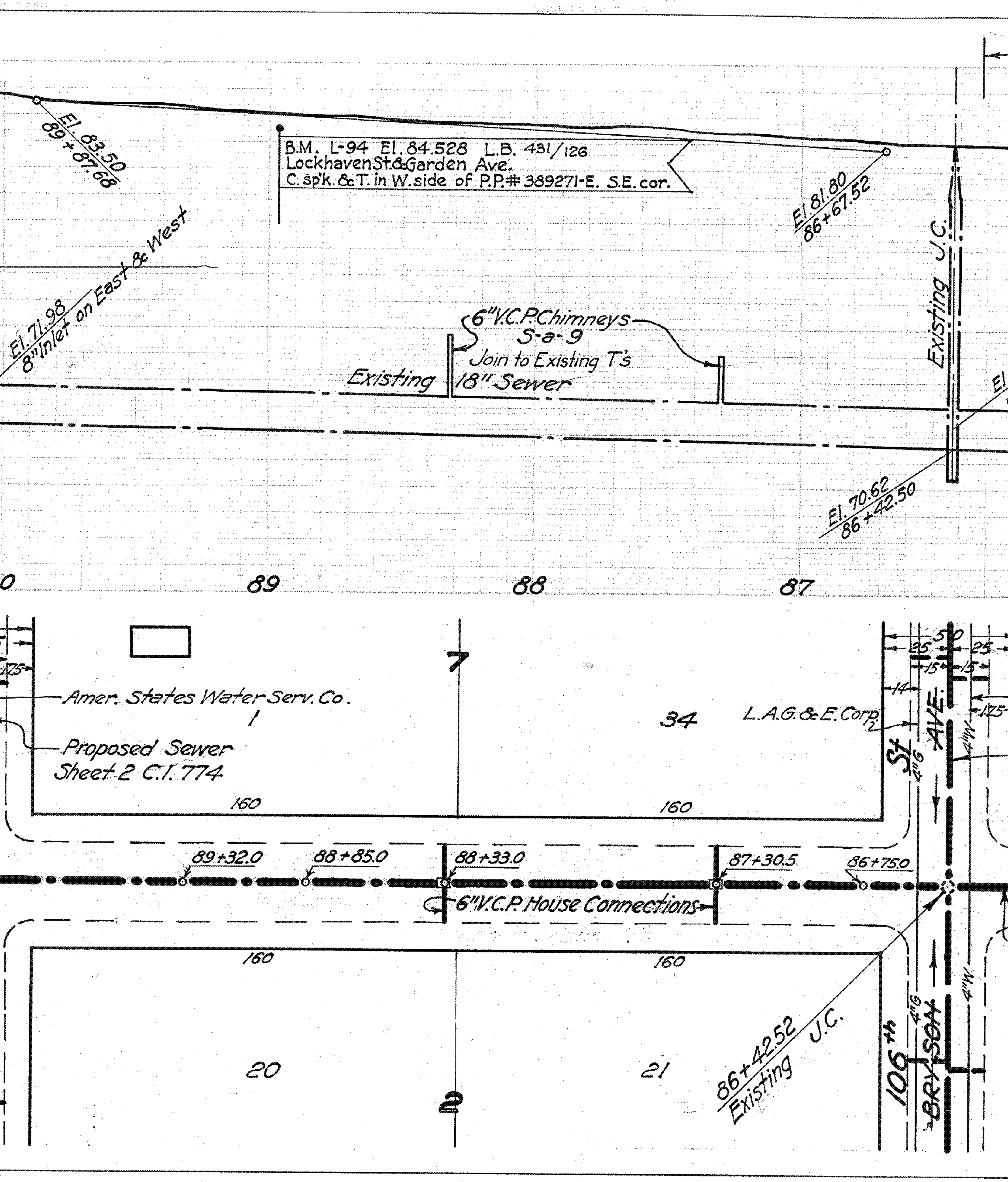
ts to this Line

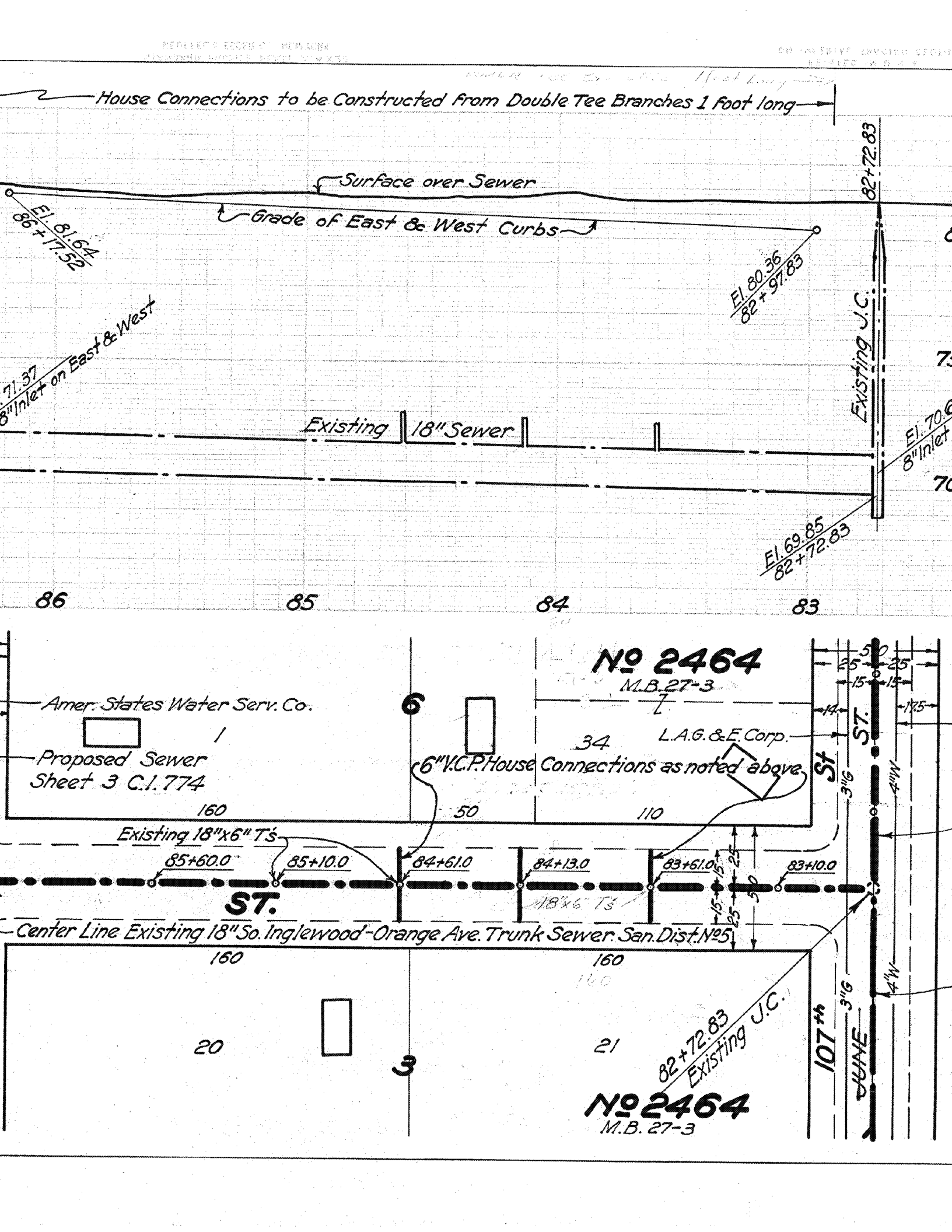

B.M. L-92 El
Lockhaven St.
B't Sp'k. 5'W. o
El. 92.30
104+80.00
El. 92.15
104+40.00
El. 91.85
104+00.00
103+70.20
El. 91.50
103+60.00
El. 91.00
103+20.00
Grade of East & West Cur
Surface over Sewer
Existing M.H.
eys
g T's
Sewer
Existing 15" Sewer
105
104
El. 76.28
103+70.20
103
102
10
34
4.08
304.08
C.P. House Connections.
5+30.0
104+80.0
104+29.0
103+80.0
103+25.0
102+73.0
102+25.0
101+74.0
e Existing 15" So. Inglewood-Orange Ave. Trunk Sewer: San. Dist. Nº 5
LOCKHAVE
4.08
304.08
103+70.20 Existing
J.C.
13
EN

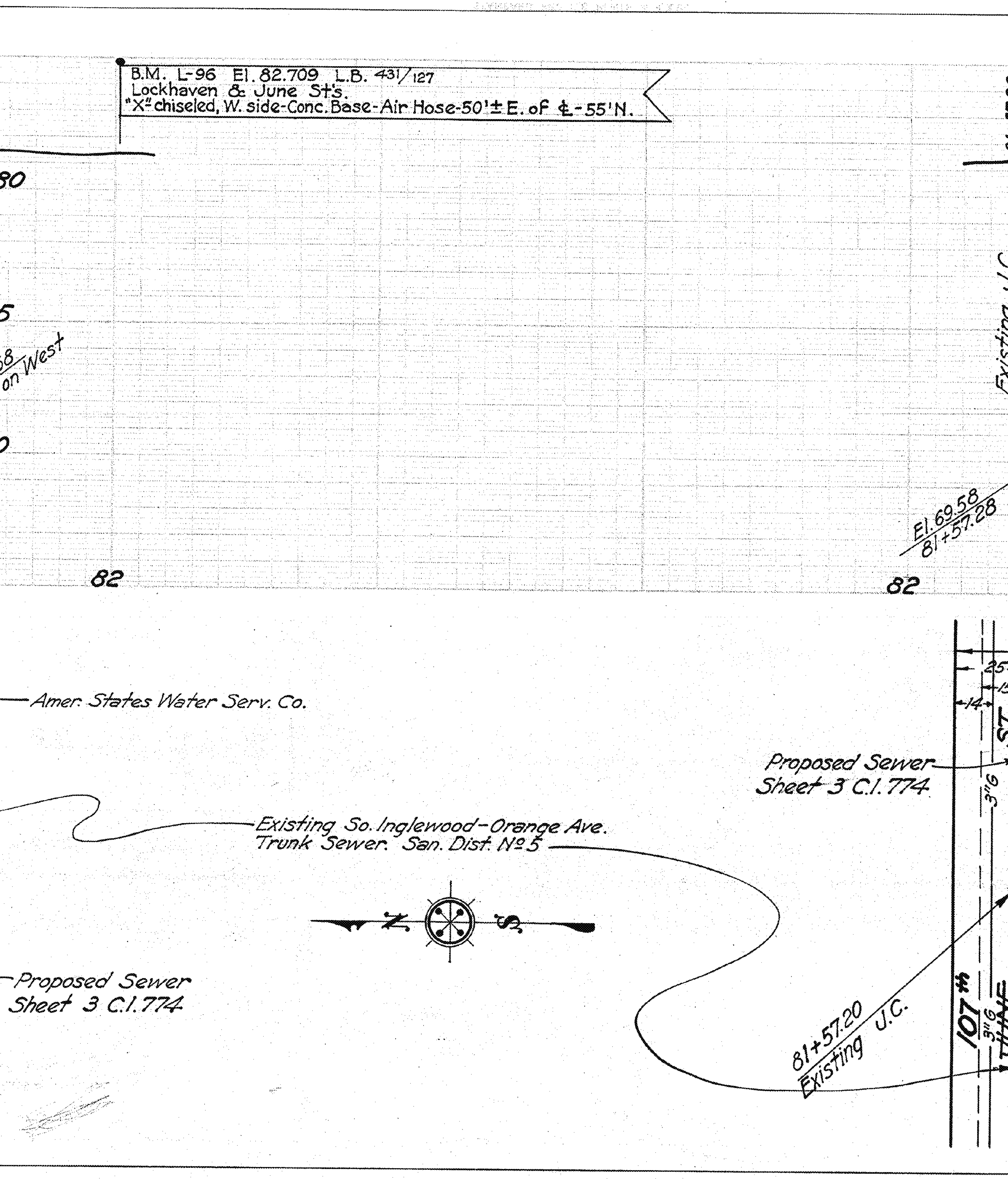

House Connections to be Constructed From Double
1. 85.948 L.B. 431/126
& Willow Ave.
of E. end S. c'b Willow S.W. cor.
90 80
100+41.27
El. 86.69
100+66.27
El. 85.88
100+16.27
Existing 15" Sewer
85 75
Existing J.C.
80 70
El. 75.40
8" Inlet on East & West
101
100
99
98
El. 74.93
100+41.27
50
25
15
17.5
ST.
Proposed Sewer
Sheet 1 C.I. 774
304.09
101+25.0
100+73.0
99+75.0
99+25.0
98+83.0
98+25.0
97+92.0
Doty
2"W
2"W
100
45
45
114.0
100+41.27 Existing J.C.
L.A.G. & E. Corp.
Amer. States Water Serv. Co.
36
97+11.99 Exis
102"
WILLOW

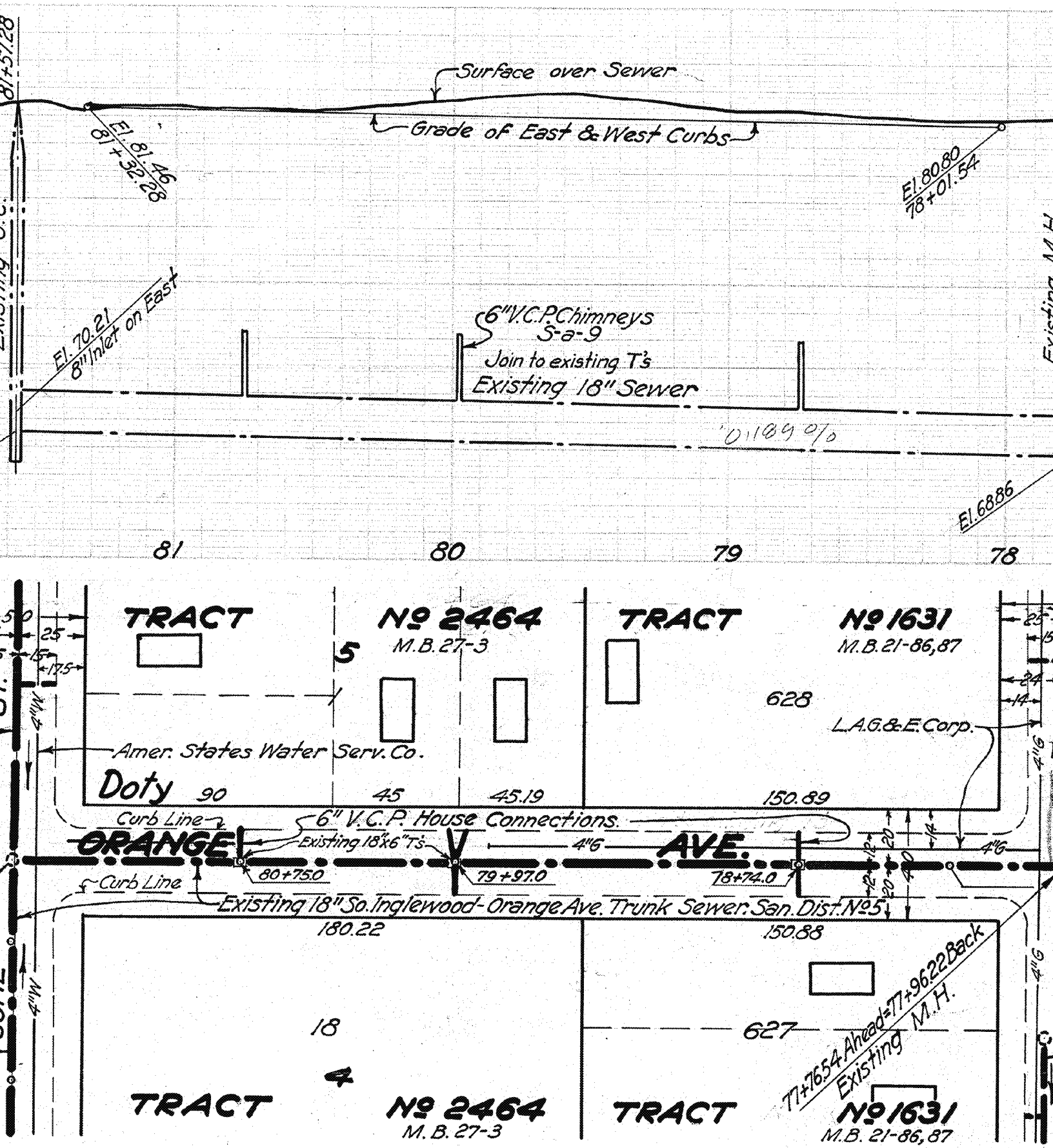

Tee Branches 1 foot long
El. 83.60
97+00.00
Existing M.H.
El. 83.09
94+08.17
Existing J.C.
El. 72.81
8" Inlet on West
Existing 15" Sewer
El. 73.59
97+11.99
El. 72.28
93+85.17
97
96
95
94
No 2464
M.B. 27-3
9
34
304.09
ST.
25
15
97+28.0
96+69.0
96+23.0
95+65.0
95+14.0
94+64.0
94+14.0
95+78.0
95+25.0
94+75.0
94+26.0
Existing
15" x 6" T's
6" V.C.P. House Connections. Join to existing Y's
44.09
40
120
100
37
93+83.17 Existing J.C.
104 th
PALM
TRACT
M.B. 17-87
N

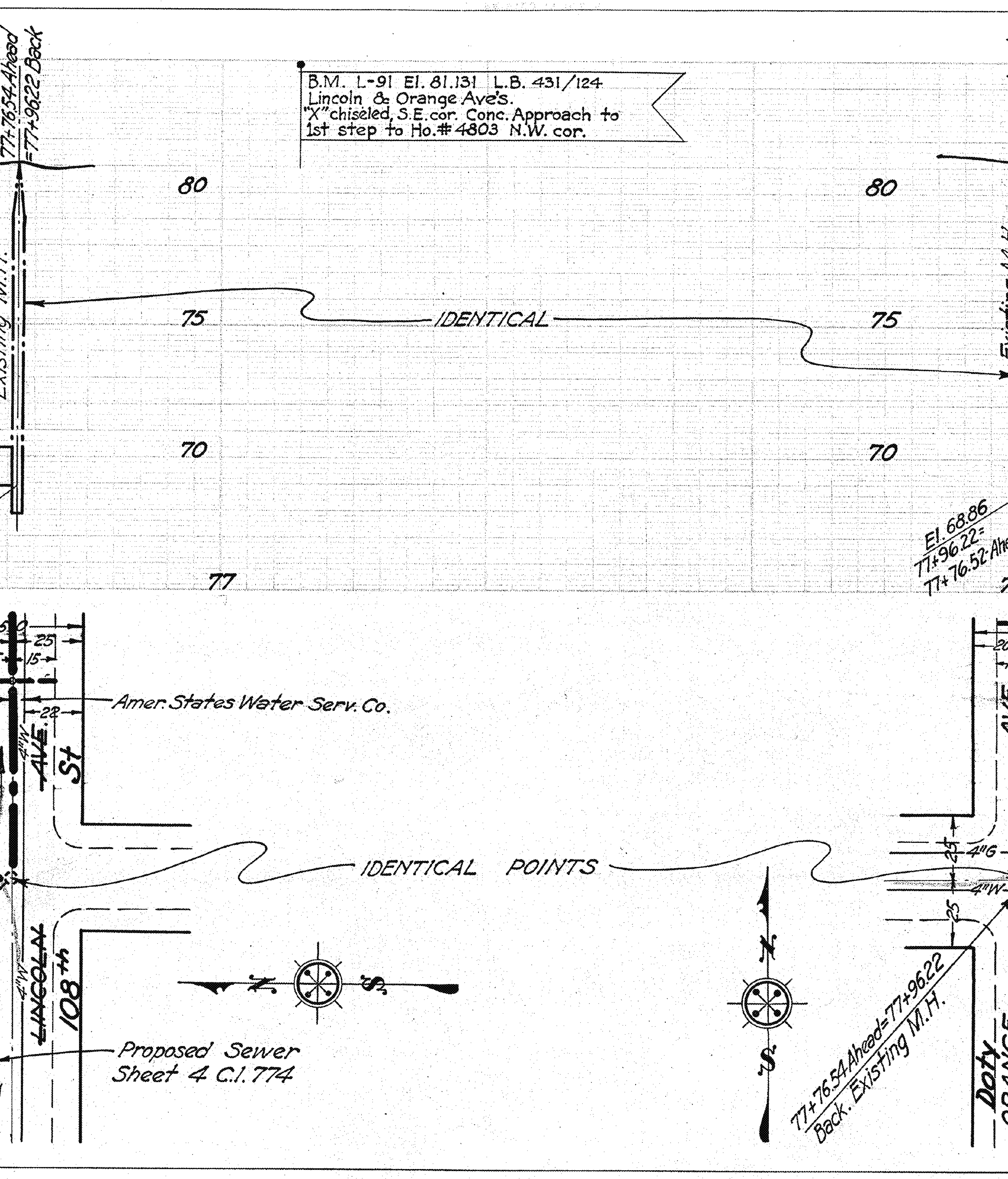

El. 83.10
93+58.17
B.M. L-93 El. 82.059 L.B. 431/126
Lockhaven & Palm Sts.
Bit Spk 5' W. of E. end N. curb N.W. cor.
El. 83.58
90+37.68
Existing U.C.
El. 72.79
8" Inlet on East
Existing 18" Sewer
El. 72.06
83+81.17
El. 71.32
90+12.68
93
92
91
TRACT
L.A.G. & E. Corp.
Amer. States Water Serv. Co.
Proposed Sewer
Sheet 2 C.I. 774
8
1
34
L.A.G. & E. Corp.
DOTY AVE.
160
160
93+05.0
92+500
91+95.0
91+50.0
90+00.0
90+52.5
Existing 18"x6" T's
160
160
20
1
21
TRACT
90+12.68
Existing U.C.
105th
GARDEN
AVE
ST


El. 83.50
89+87.68
B.M. L-94 El. 84.528 L.B. 431/126
Lockhaven St.& Garden Ave.
C. sp'k. & T. in W. side of P.P.# 389271-E. S.E. cor.
El. 81.80
86+67.52
Existing J.C.
El. 71.98
8" Inlet on East & West
6" V.C.P. Chimneys
S-a-9
Join to Existing T's
Existing 18" Sewer
El. 70.62
86+42.50
89
88
87
7
Amer. States Water Serv. Co.
1
Proposed Sewer
Sheet 2 C.I. 774
34
L.A.G. & E. Corp.
2
160
160
4"G
4"W
AVE.
St
89+32.0
88+85.0
88+33.0
87+30.5
86+75.0
6" V.C.P. House Connections
160
160
20
21
2
86+42.52
Existing J.C.
106th
BRYSON
4"G
4"W

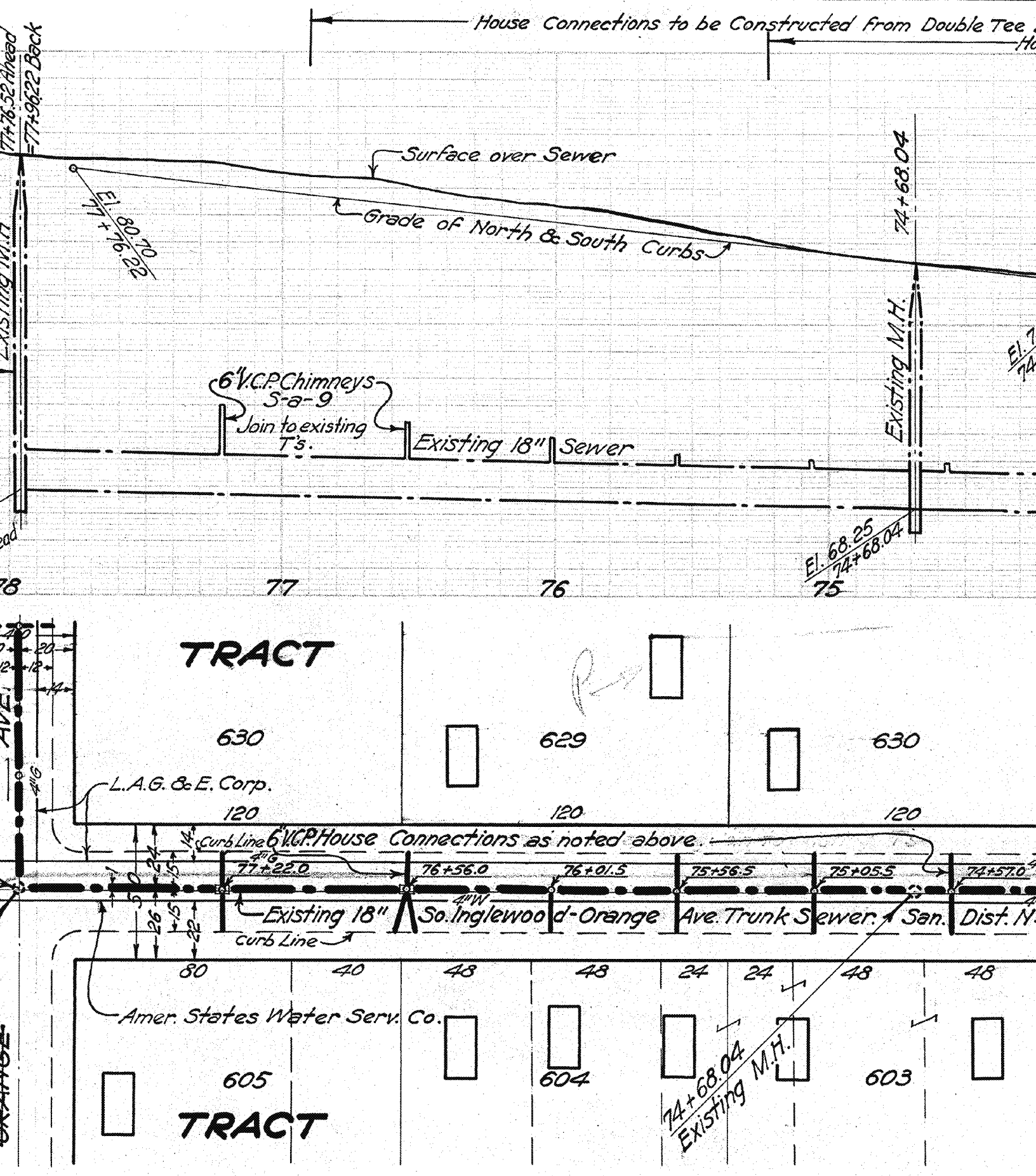

House Connections to be Constructed from Double Tee Branches 1 foot long
Surface over Sewer
Grade of East & West Curbs
El. 81.64
86+17.52
El. 80.36
82+97.83
82+72.83
Existing J.C.
El. 71.37
8" Inlet on East & West
Existing 18" Sewer
El. 70.6
8" Inlet
El. 69.85
82+72.83
86
85
84
83
No. 2464
M.B. 27-3
Amer. States Water Serv. Co.
Proposed Sewer
Sheet 3 C.I. 774
6
7
34
L.A.G. & E. Corp.
6" V.C.P. House Connections as noted above
St.
160
50
110
Existing 18"x6" T's
85+60.0
85+10.0
84+61.0
84+13.0
83+61.0
83+10.0
ST.
18"x6" T's
Center Line Existing 18" So. Inglewood-Orange Ave. Trunk Sewer San. Dist. No. 5
160
160
20
3
21
82+72.83
Existing J.C.
107th
No. 2464
M.B. 27-3


B.M. L-96 El. 82.709 L.B. 431/127
Lockhaven & June Sts.
"X" chiseled, W. side-Conc. Base-Air Hose-50'± E. of ℄-55'N.
80
5
on West
El. 69.58
81+57.28
82
82
Amer. States Water Serv. Co.
Proposed Sewer
Sheet 3 C.I. 774
Existing So. Inglewood-Orange Ave.
Trunk Sewer. San. Dist. Nº 5
N
S
Proposed Sewer
Sheet 3 C.I. 774
81+57.20
Existing J.C.
25
14
3"G
3"G
107"

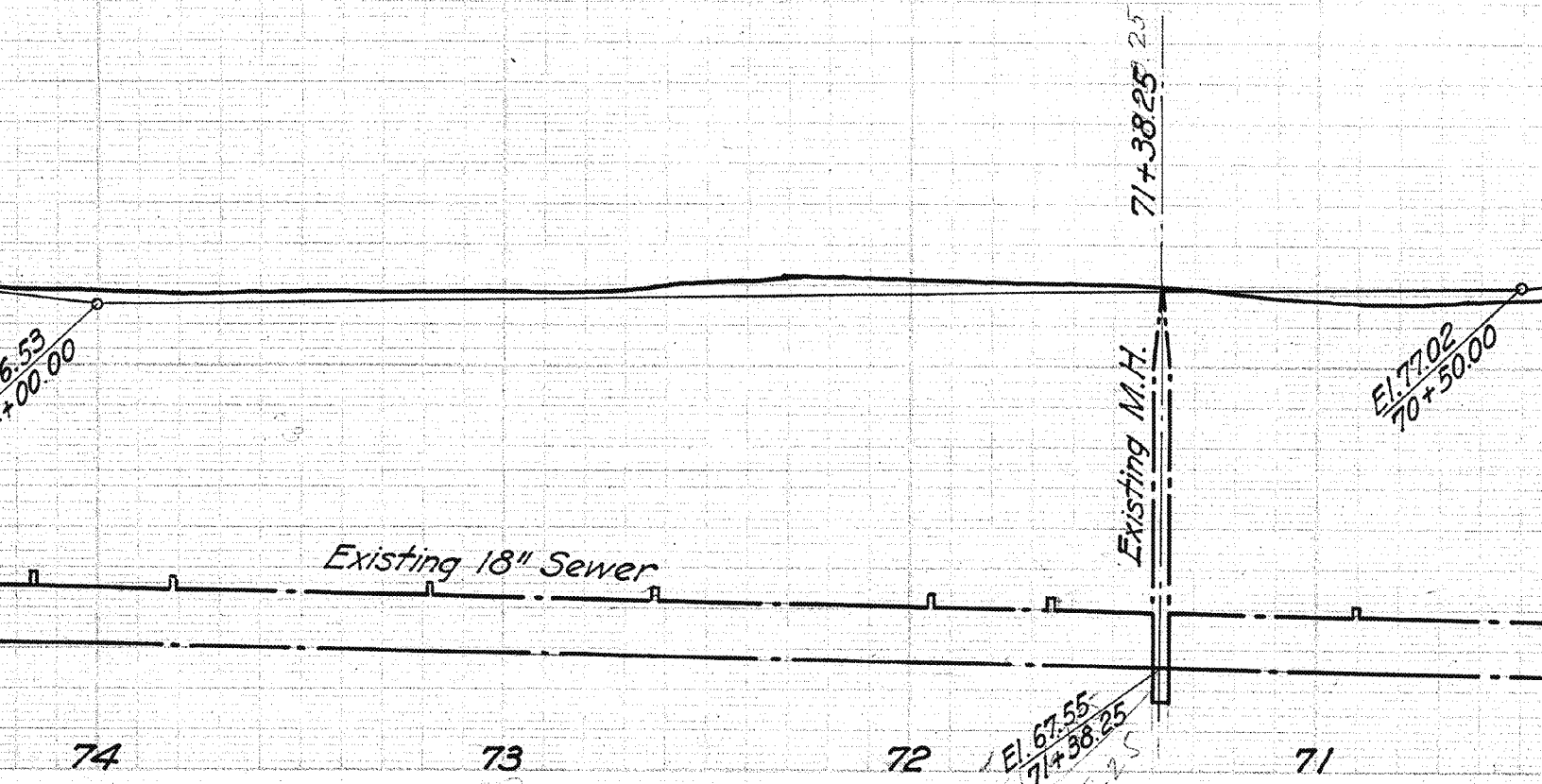

81+37.28
Surface over Sewer
Grade of East & West Curbs
El. 81.46
81+32.28
El. 80.80
78+01.54
El. 70.21
8" Inlet on East
6" V.C.P. Chimneys
S-a-9
Join to existing T's
Existing 18" Sewer
0.109 %
El. 68.86
81
80
79
78
TRACT
No 2464
M.B. 27-3
5
TRACT
No 1631
M.B. 21-86,87
628
L.A.G. & E. Corp.
Amer. States Water Serv. Co.
Doty
90
45
45.19
150.89
Curb Line
6" V.C.P. House Connections.
ORANGE
Existing 18"x6" T's
AVE.
4"G
80+75.0
79+97.0
78+74.0
Curb Line
Existing 18" So. Inglewood-Orange Ave. Trunk Sewer. San. Dist. No. 5
180.22
150.88
18
627
4
77+76.54 Ahead = 77+96.22 Back
Existing M.H.
TRACT
No 2464
M.B. 27-3
TRACT
No 1631
M.B. 21-86,87

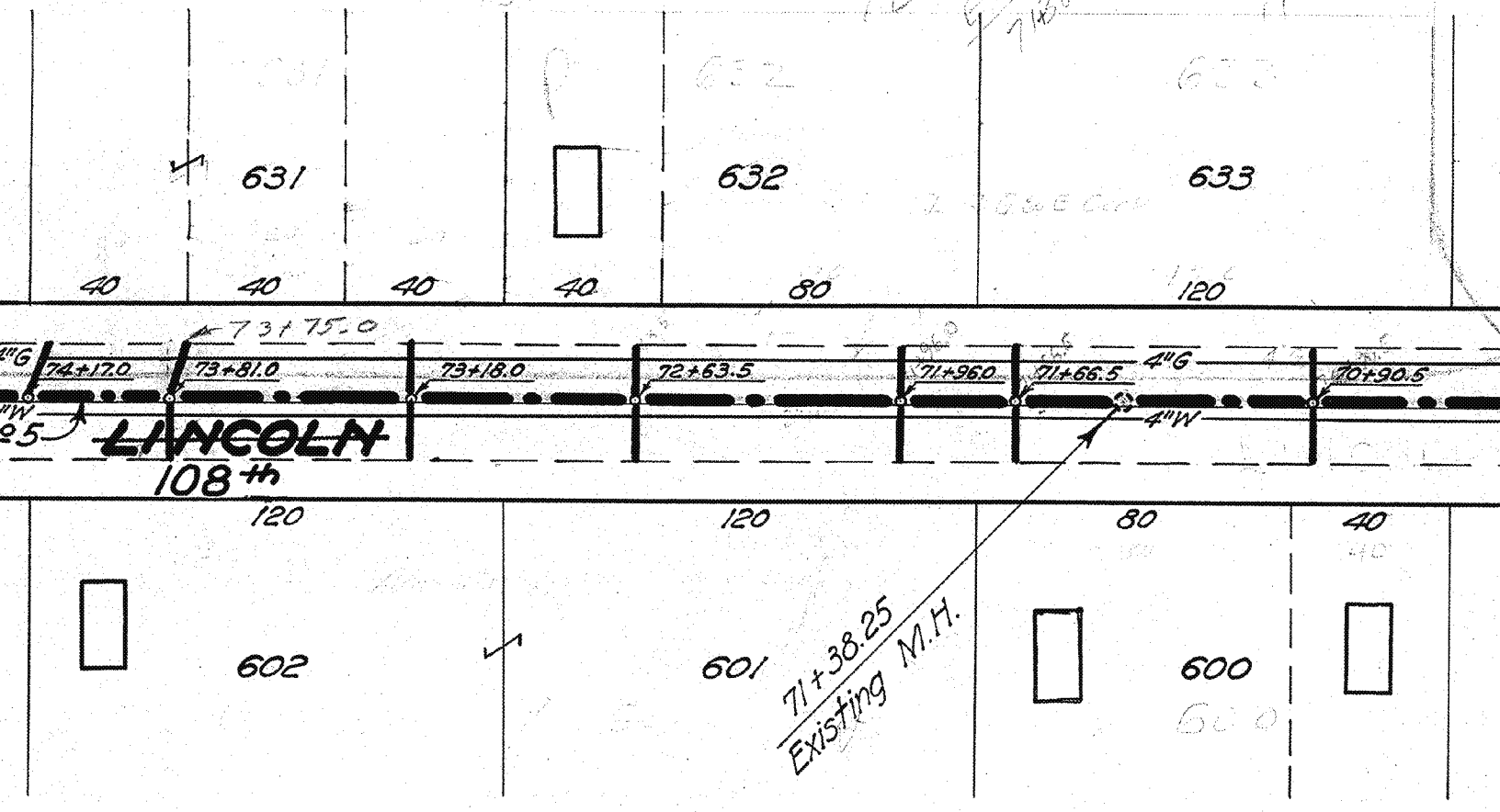


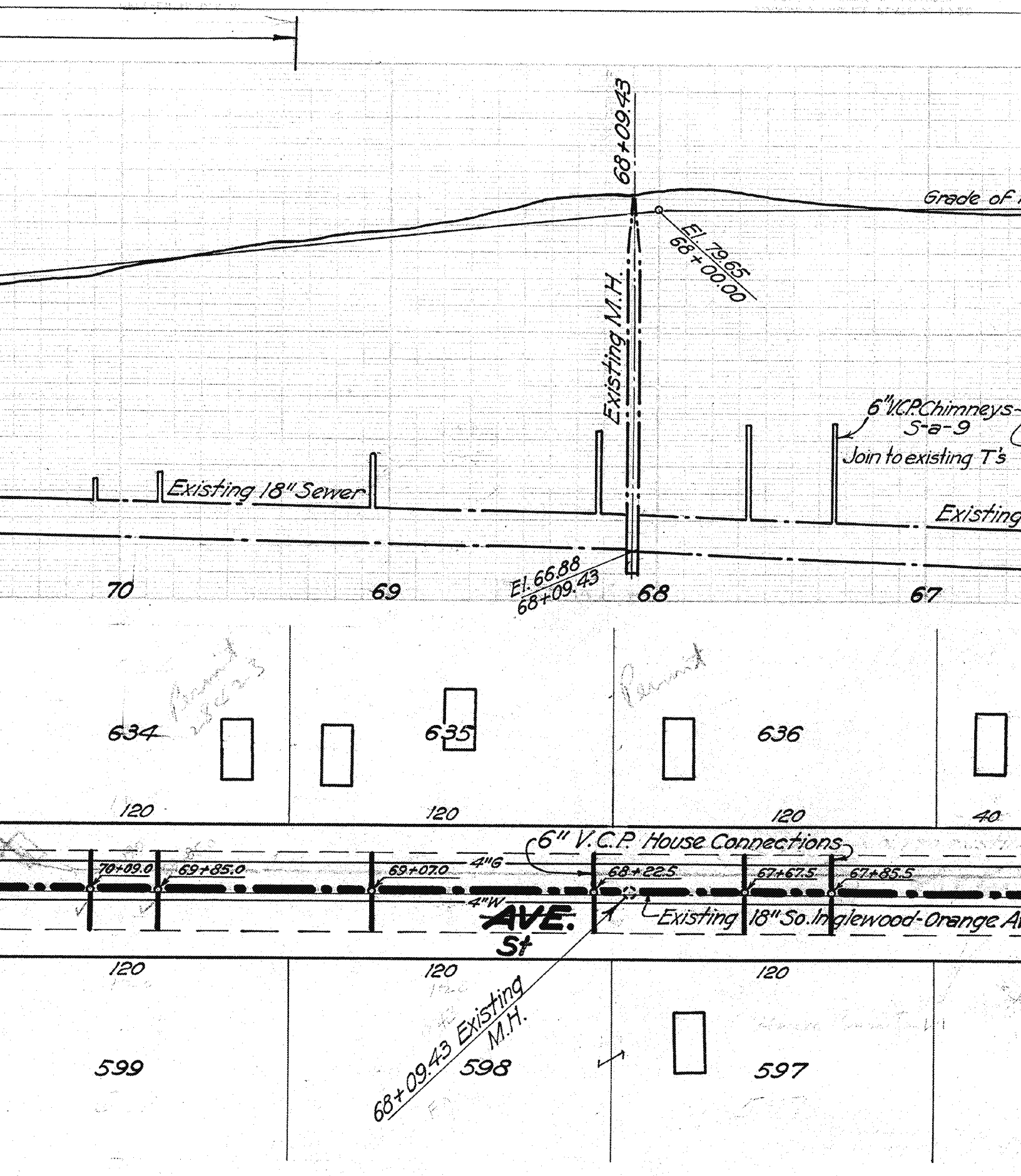
B.M. L-91 El. 81.131 L.B. 431/124
Lincoln & Orange Ave's.
"X" chiseled, S.E. cor. Conc. Approach to
1st step to Ho.# 4803 N.W. cor.
77+76.54 Ahead
=77+96.22 Back
Existing M.H.
80
75
IDENTICAL
70
El. 68.86
77+96.22=
77+76.52 Ahe
77
25
15
22
Amer. States Water Serv. Co.
4"W
AVE.
St
IDENTICAL POINTS
LINCOLN
108th
N
S
Proposed Sewer
Sheet 4 C.I. 774
4"G
4"W
25
77+76.54 Ahead=77+96.22
Back. Existing M.H.
Doty

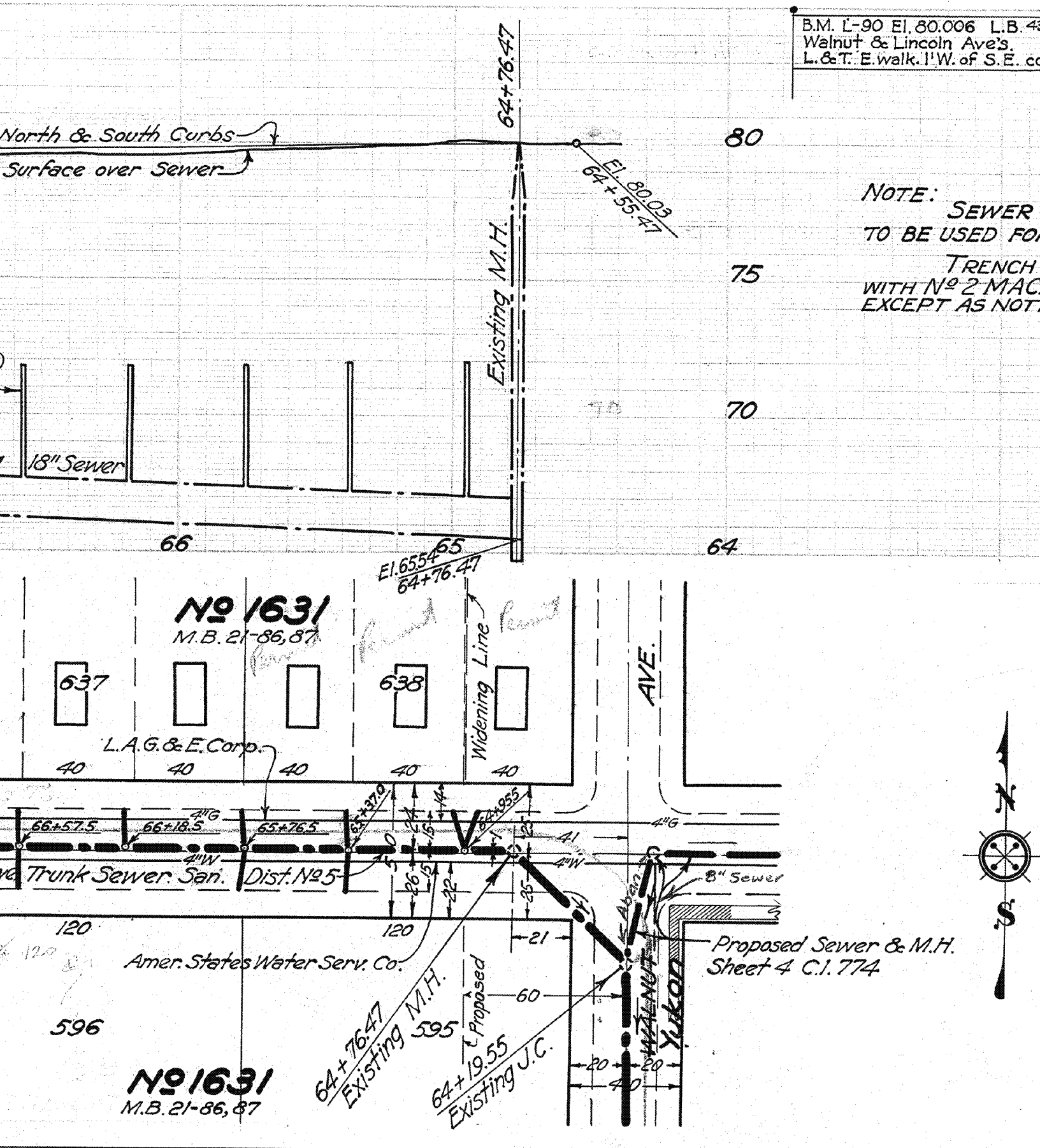

House Connections to be Constructed from Double Tee
77+76.52 Ahead
=77+96.22 Back
Surface over Sewer
El. 80.70
77+76.22
Grade of North & South Curbs
74+68.04
Existing M.H.
6"V.C.P. Chimneys
S-a-9
Join to existing
T's.
Existing 18" Sewer
El. 68.25
74+68.04
78
77
76
75
TRACT
630
629
630
L.A.G. & E. Corp.
120
120
120
Curb Line
6"V.C.P. House Connections as noted above
77+22.0
76+56.0
76+01.5
75+56.5
75+05.5
74+57.0
Existing 18"
So. Inglewood-Orange Ave. Trunk Sewer.
San. Dist. N.
Curb Line
80
40
48
48
24
24
48
48
Amer. States Water Serv. Co.
605
604
603
74+68.04
Existing M.H.
TRACT

Branches 1 foot long
House Connections to be extended on 1/4" rise per Foot to Curb Line






68+09.43
Grade of
El. 79.65
68+00.00
Existing M.H.
6" V.C.P. Chimneys-
S-a-9
Join to existing T's
Existing 18" Sewer
Existing
El. 66.88
68+09.43
70
69
68
67
634
635
636
120
120
120
40
6" V.C.P. House Connections
70+09.0
69+85.0
69+07.0
4"G
4"W
68+22.5
67+67.5
67+85.5
AVE.
St
Existing 18" So. Inglewood-Orange A
120
120
120
68+09.43 Existing M.H.
599
598
597


B.M. L-90 El. 80.006 L.B. 43
Walnut & Lincoln Ave's.
L. & T. E. walk. 1' W. of S.E. co
NOTE:
SEWER
TO BE USED FOR
TRENCH
WITH Nº 2 MAC
EXCEPT AS NOT
North & South Curbs
Surface over Sewer
64+76.47
El. 80.03
64+55.47
Existing M.H.
80
75
70
64
18" Sewer
66
65
El. 65.54
64+76.47
Nº 1631
M.B. 21-86, 87
637
638
Widening Line
AVE.
L.A.G. & E. Corp.
40
40
40
40
40
66+57.5
66+18.5
65+76.5
4"G
4"W
Trunk Sewer San. Dist. Nº 5
120
120
Amer. States Water Serv. Co.
596
Nº 1631
M.B. 21-86, 87
64+76.47
Existing M.H.
595
Proposed
64+19.55
Existing J.C.
60
21
41
4"G
4"W
8" Sewer
Abandon
Proposed Sewer & M.H.
Sheet 4 C.I. 774
WALNUT
Yukon
20
20
40
N
S

Trim Prints to this Line

31/124
or.

JOINT COMPOUND
R ALL PIPE JOINTS.

TO BE RESURFACED
ADAM PAVEMENT
ED.

COUNTY IMPROV
NO. 774

PROFILE, ALIGNMENT AND GR

SANITARY SEWER HOUSE CO

TO BE CONSTRUCTED

LINCOLN AVENU

BETWEEN WALNUT AVE. AND ORA

ORANGE AVENU

BETWEEN LINCOLN AVE. AND JU

LOCKHAVEN STR

BETWEEN JUNE ST. AND CENTUR

SHEET 14 OF 14 SHEE

SCALE VERT. 1"=4'
HORIZ. 1"=40'

COUNTY OF LOS ANGELES, CA
J. E. ROCKHOLD — COUNTY S

RECOMMENDED _____ APPROVED
CHIEF DEPUTY

APPROVED AS TO FORM
EVERETT W. MATTOON
COUNTY COUNSEL

APPROVED

BY _____ _____
DEPUTY

FOR LEGEND
SEE PLAN NO. S-a-64

NOTE:

Grades to which this improvement is to be constructed shown on Pla shown by circles. Elevations are in feet, refer to top of curb, center line are above U.S.G.S. or mean sea level datum. At all points between design lished so as to conform to a straight line drawn between said designated p

Unit prices for additional work which may be required, but which ca be submitted in the proposal.

This drawing and the data hereon are hereby made a part of the spec

REFERENCES	C.
W. S. 24	DESIGNED Be
A. B. 770	TRACED Spe
L. B. 241-431	CHECKED Co

L.B. 431-241. D.D.1. #24 Design - Bemis - June 1933

VEMENT (14)

ADE OF

ONNECTIONS

IN

UE

NGE AVE.

UE

UNE ST.

EET

Y. BLVD.

TS

1933

LIFORNIA.

SURVEYOR

COUNTY SURVEYOR

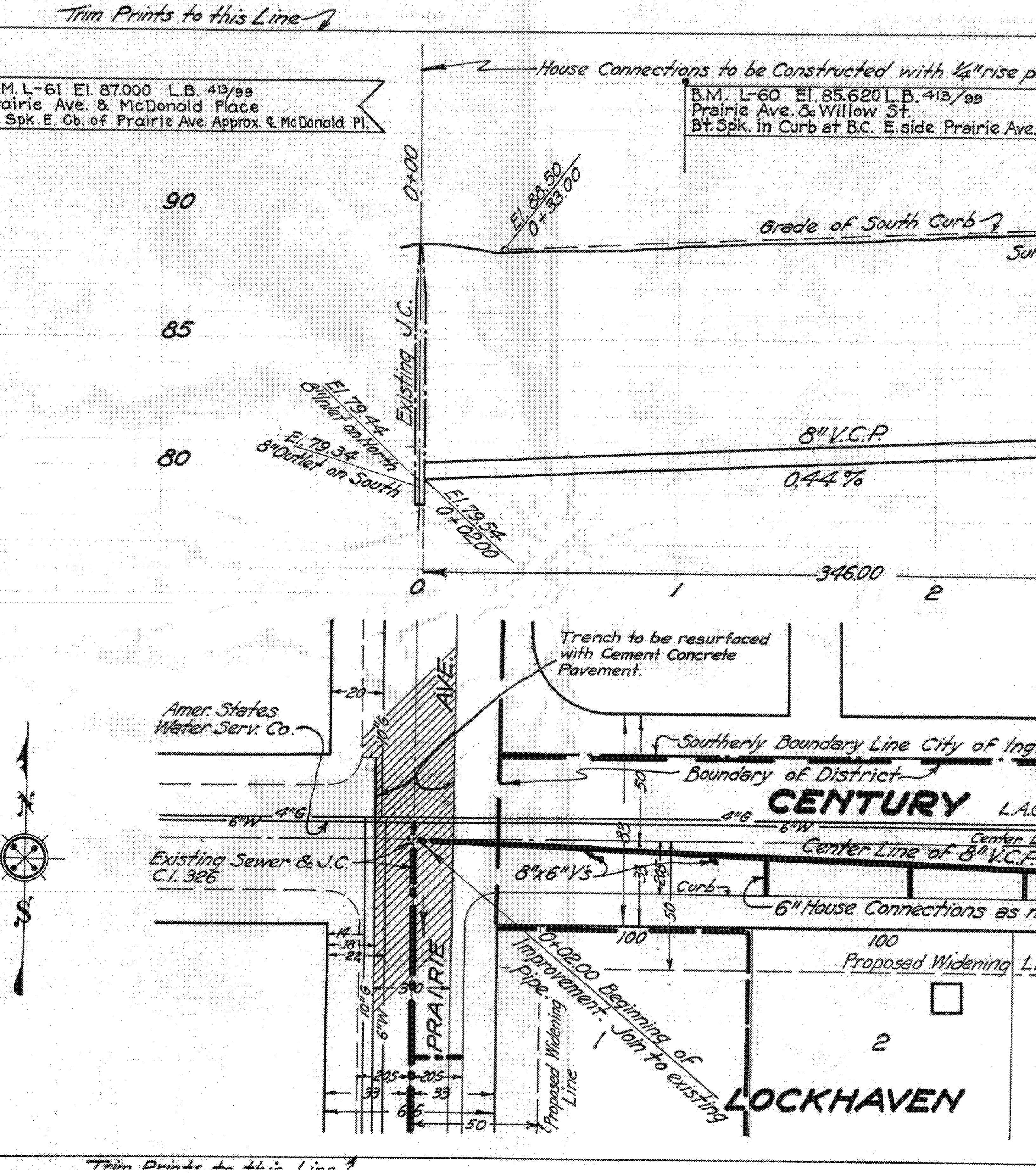
CHIEF ENGINEER OF COUNTY
SANITATION DISTRICT No. 5

ns and Profiles. Grade elevations are
e of street or center line of alley, and
nated points the grade shall be estab-
points.
nnot be ascertained in advance, shall

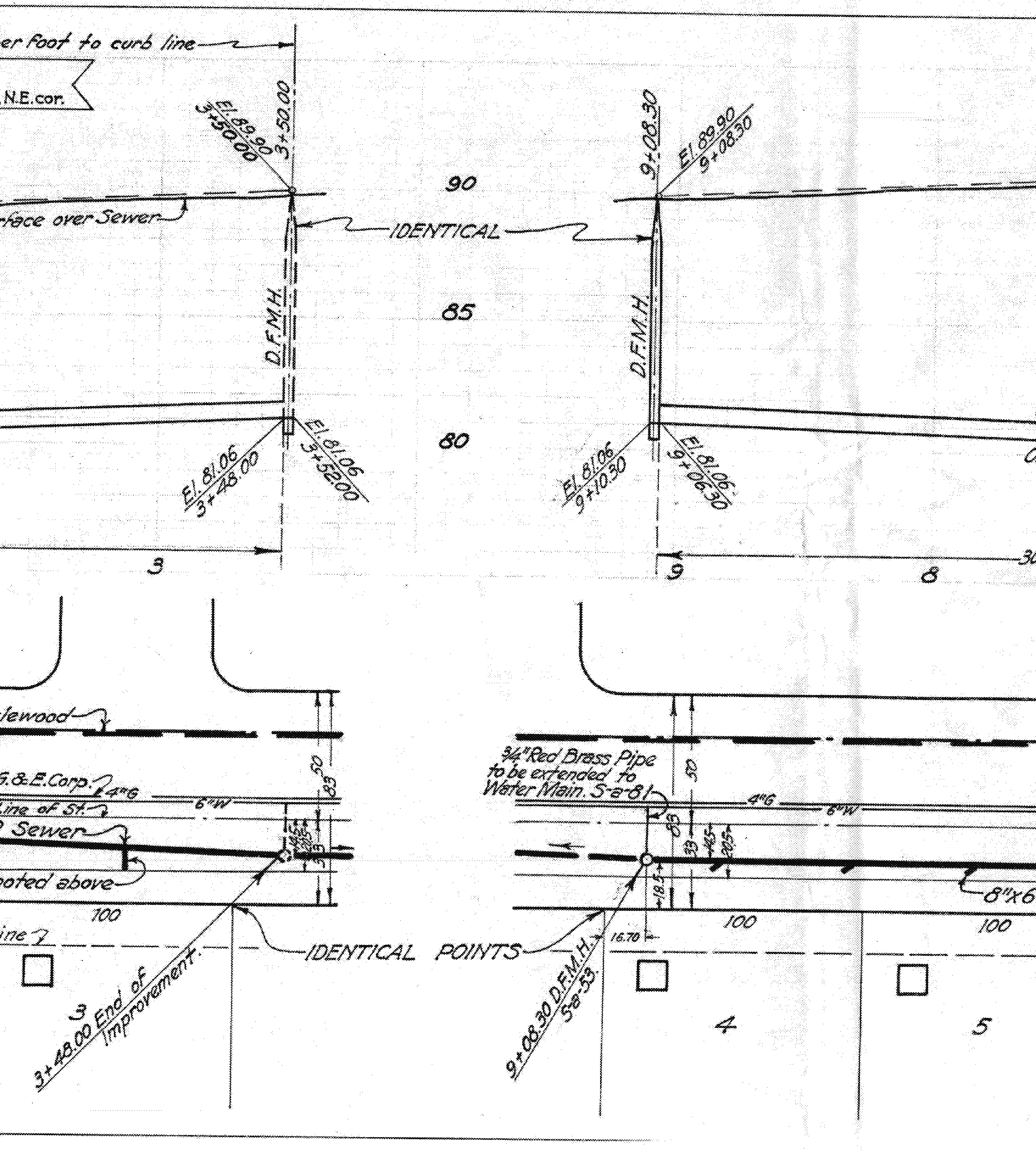
ifications.

l. No. 774	
emis	JUNE 1933
rling	JULY 1933
llins	JULY 1933

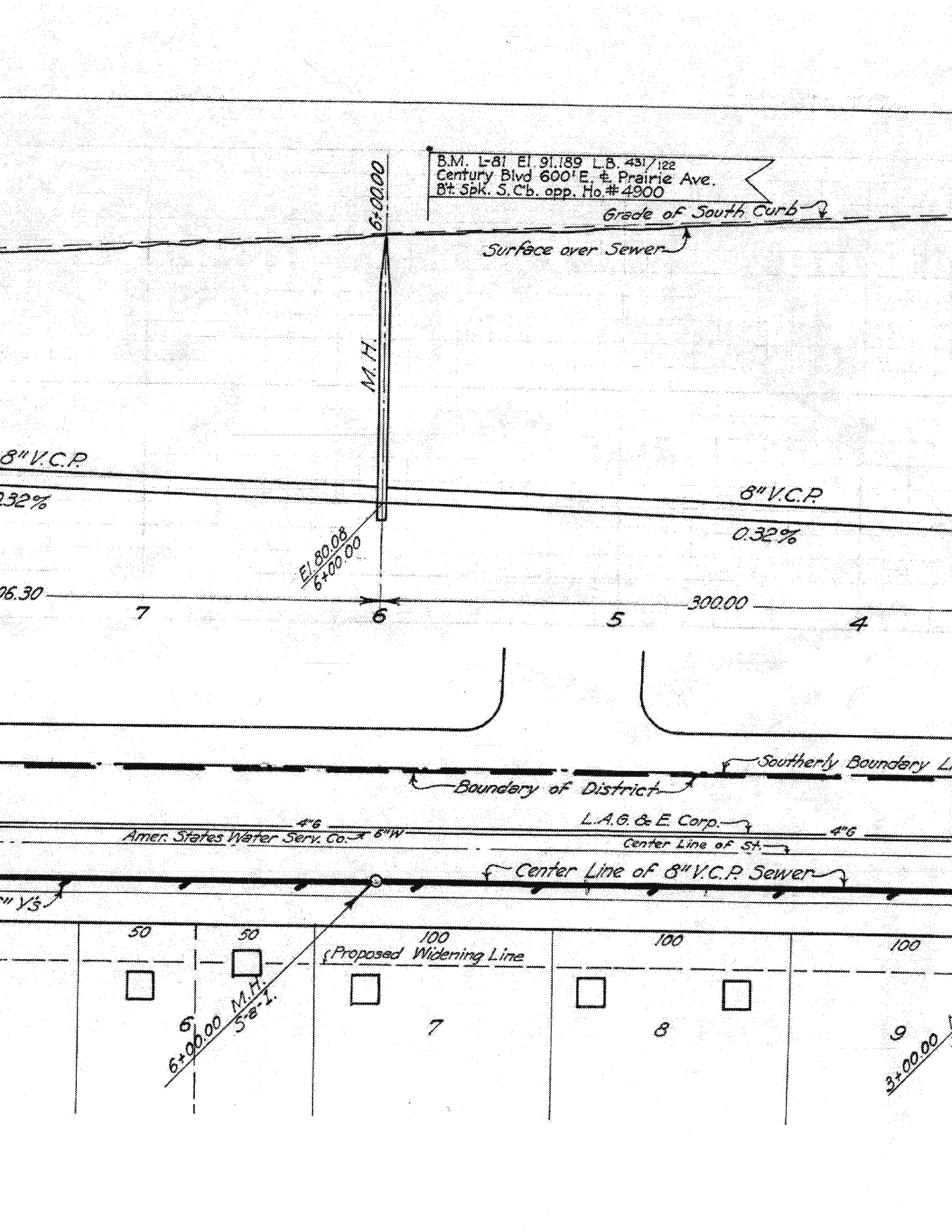
Trim Prints to this Line

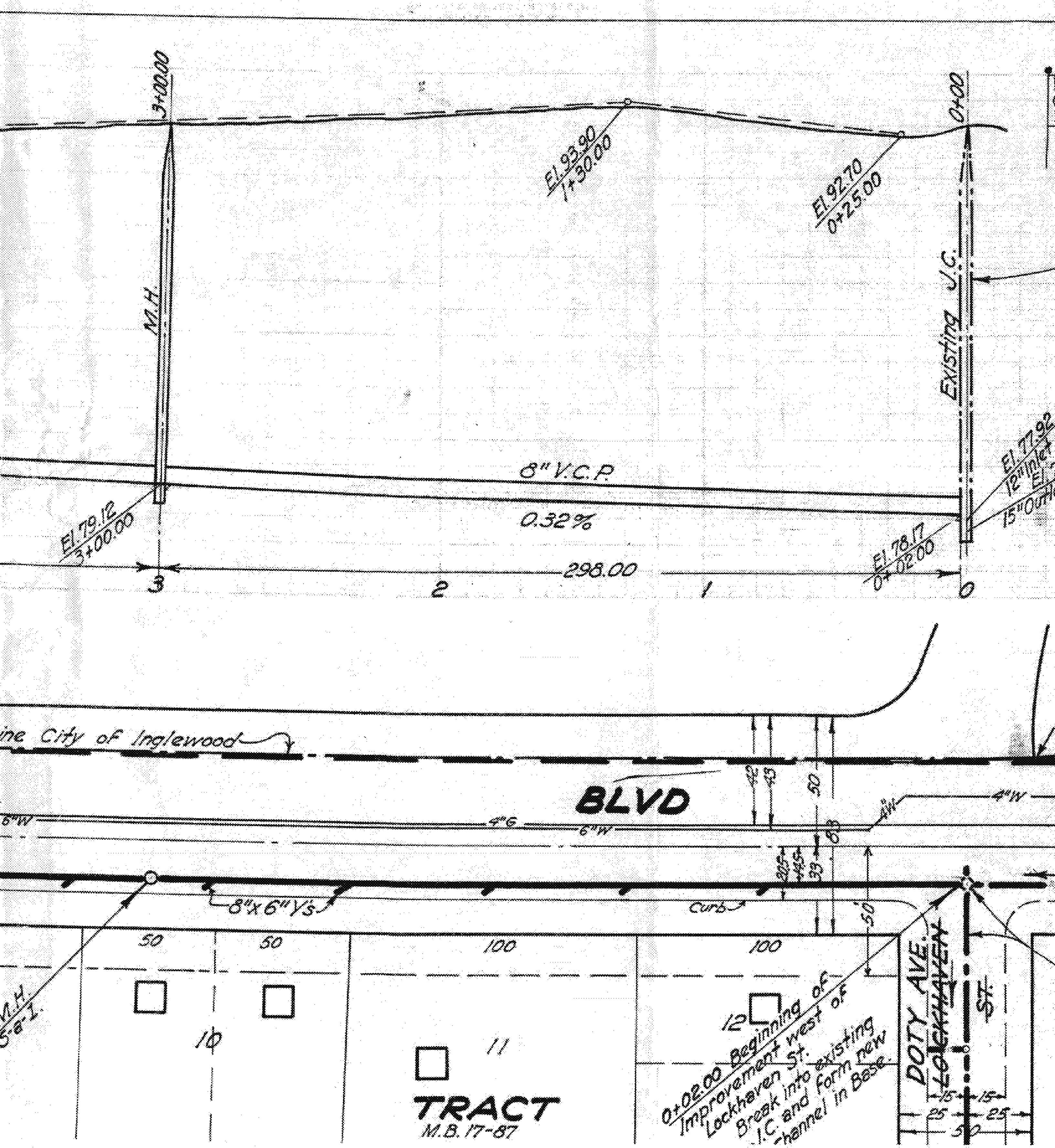


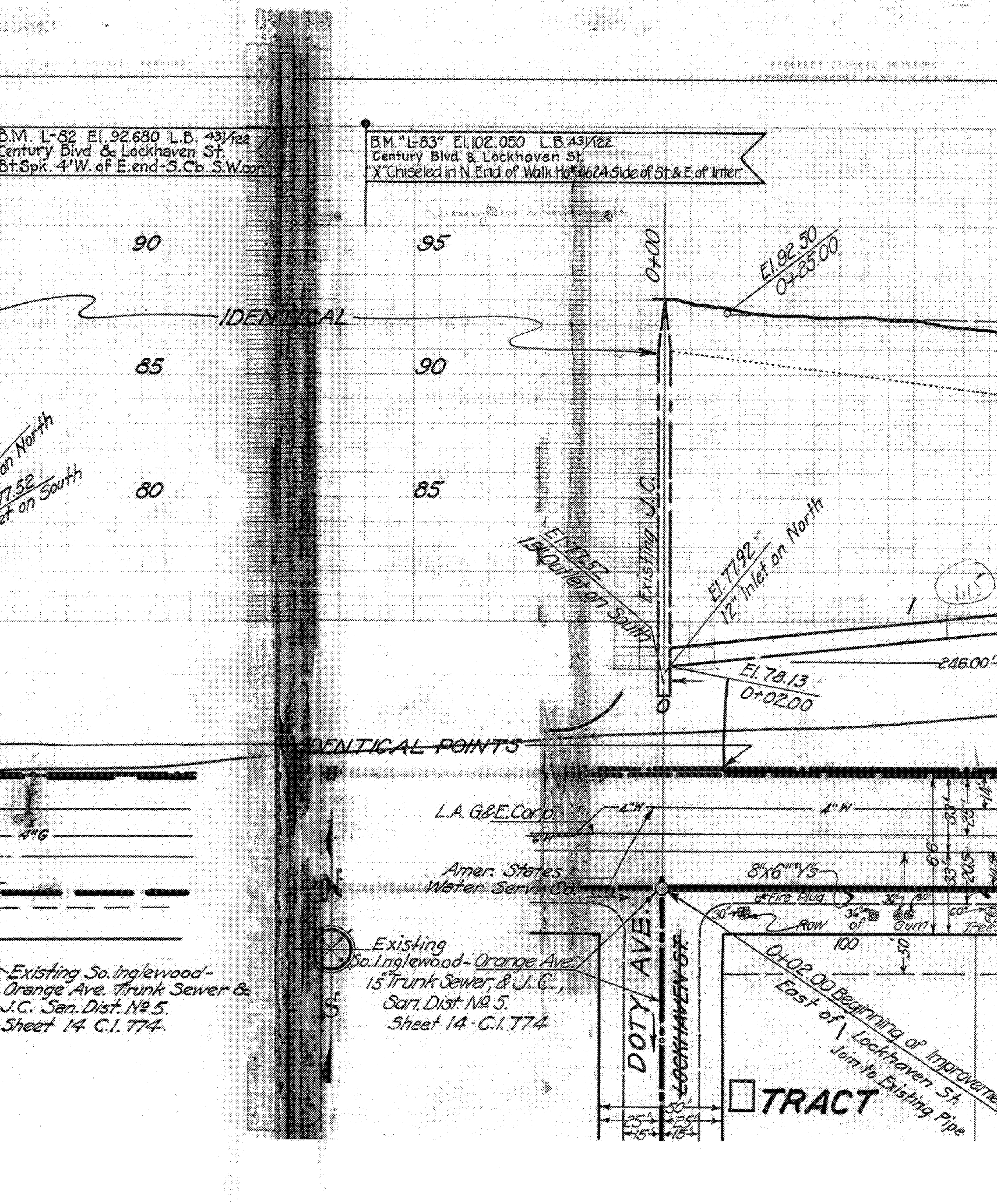
Trim Prints to this Line
House Connections to be Constructed with ¼" rise p
M. L-61 El. 87.000 L.B. 413/99
airie Ave. & McDonald Place
Spk. E. Cb. of Prairie Ave. Approx. ℄ McDonald Pl.
B.M. L-60 El. 85.620 L.B. 413/99
Prairie Ave. & Willow St.
Bt. Spk. in Curb at B.C. E. side Prairie Ave.
90
85
80
0+00
El. 88.50
0+33.00
Grade of South Curb
Existing J.C.
El. 79.44
8" Inlet on North
El. 79.34
8" Outlet on South
8" V.C.P.
0.44 %
El. 79.54
0+02.00
346.00
0
1
2
Trench to be resurfaced with Cement Concrete Pavement.
Amer. States Water Serv. Co.
AVE.
Southerly Boundary Line City of Ing
Boundary of District
CENTURY
6" W
4" G
Existing Sewer & J.C.
C.I. 326
8"x6" Y's
Center Line of 8" V.C.P.
Curb
6" House Connections as n
100
0+02.00 Beginning of Improvement. Join to existing Pipe.
Proposed Widening Line
Proposed Widening
PRAIRIE
2
LOCKHAVEN



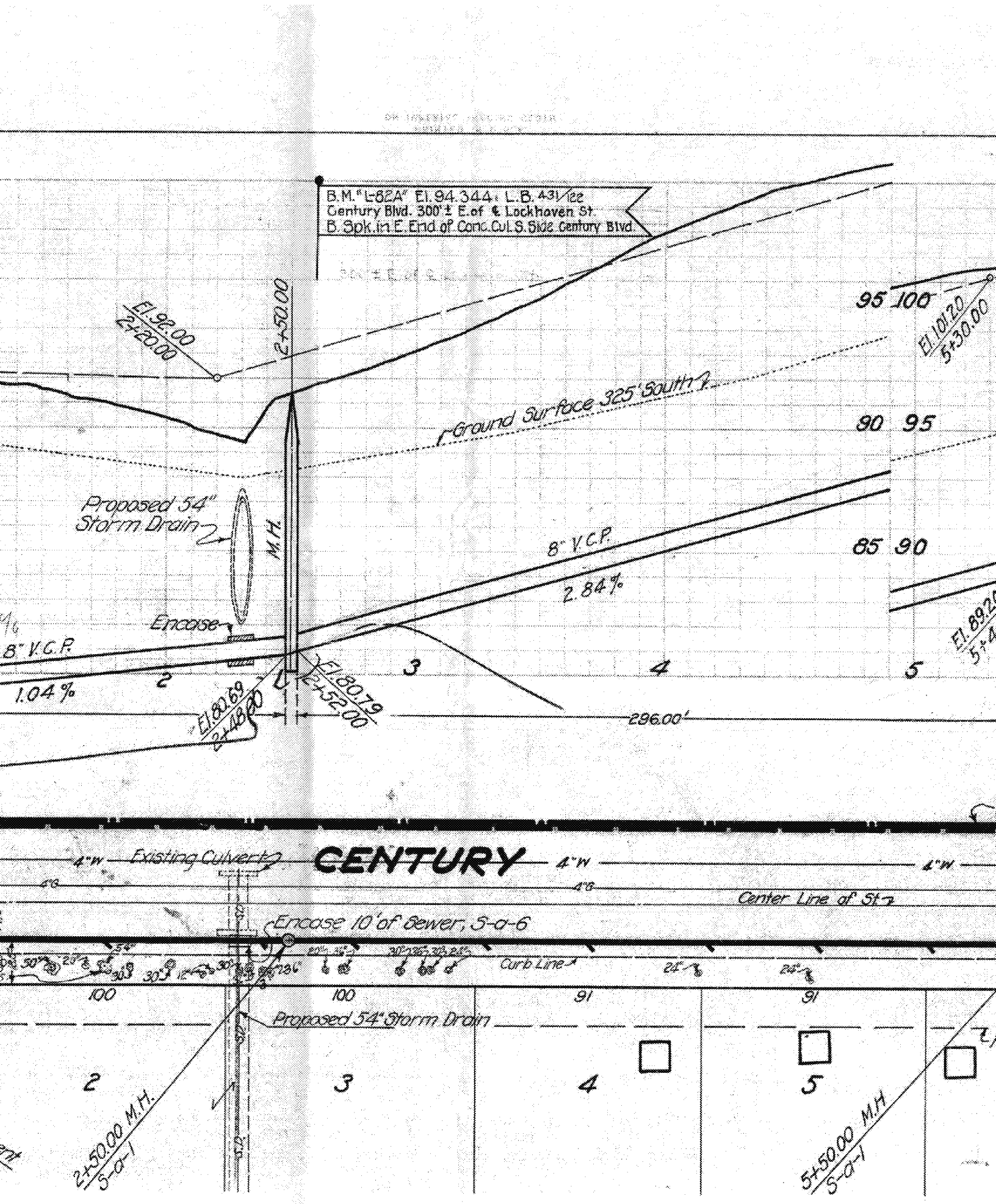
er foot to curb line
N.E. cor.
El. 89.90
3+50.00
3+50.00
9+08.30
El. 89.90
9+08.30
90
rface over Sewer
IDENTICAL
85
D.F.M.H.
D.F.M.H.
80
El. 81.06
3+48.00
El. 81.06
3+52.00
El. 81.06
9+10.30
El. 81.06
9+06.30
3
9
8
lewood
G.&E. Corp.
4"G
Line of St.
6"W
Sewer
noted above
50
83
3/4" Red Brass Pipe to be extended to Water Main. S-a-81
4"G
6"W
50
83
33
18.5
16.70
100
100
100
IDENTICAL POINTS
3
3+48.00 End of Improvement.
9+08.30 D.F.M.H. S-a-53.
4
5
8"x6

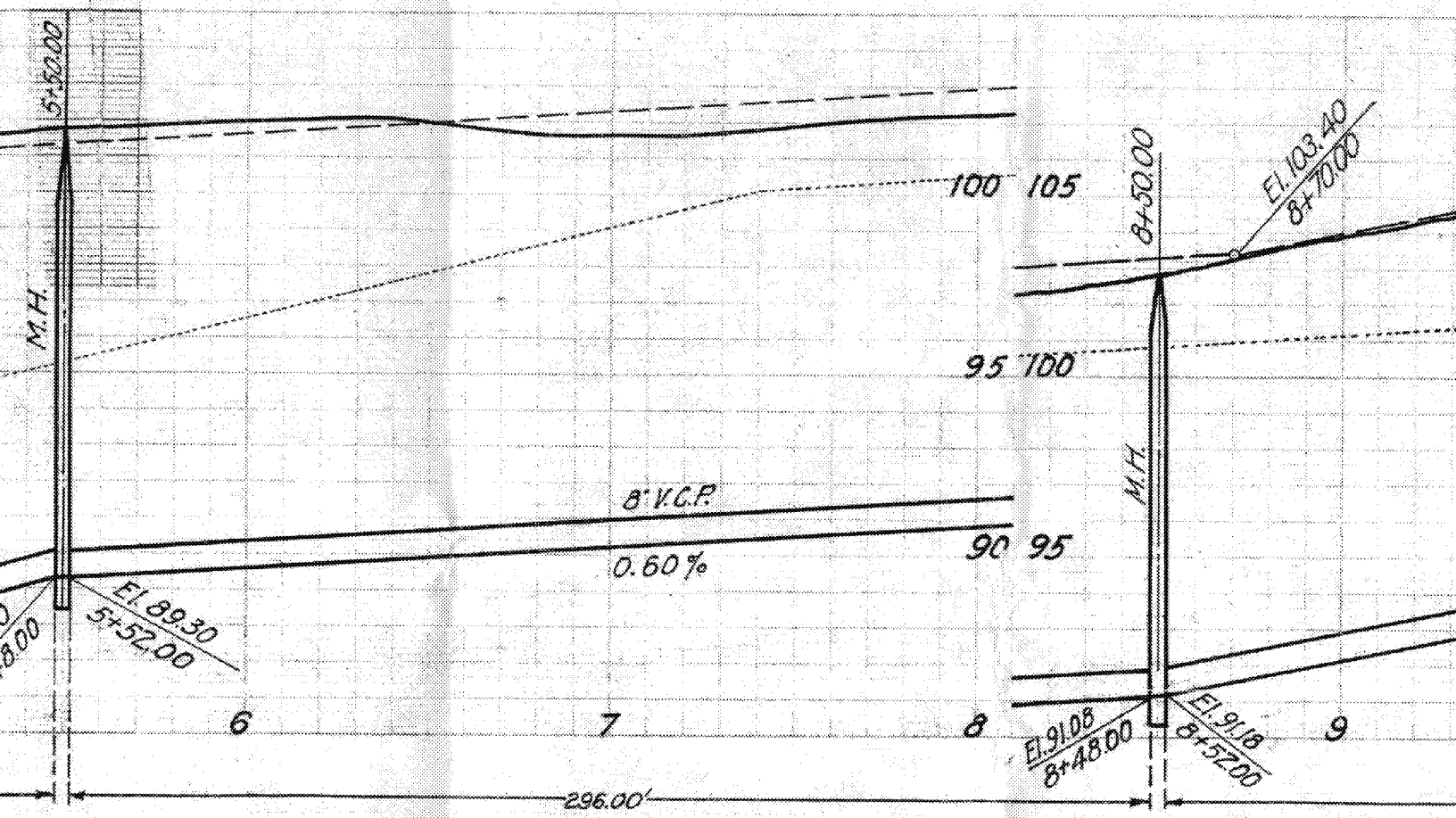

B.M. L-81 El. 91.189 L.B. 431/122
Century Blvd 600' E. ℄ Prairie Ave.
Bit. Spk. S. C'b. opp. Ho. #4900
6+00.00
Grade of South Curb
Surface over Sewer
M.H.
8" V.C.P.
0.32%
8" V.C.P.
0.32%
El. 80.08
6+00.00
06.30
7
6
5
30.00
4
Southerly Boundary L
Boundary of District
4"G
Amer. States Water Serv. Co.
8"W
L.A.G. & E. Corp.
4"G
Center Line of St.
Center Line of 8" V.C.P. Sewer
50
50
100
Proposed Widening Line
100
100
6
6+00.00 M.H.
5-8" L.
7
8
9
3+00.00

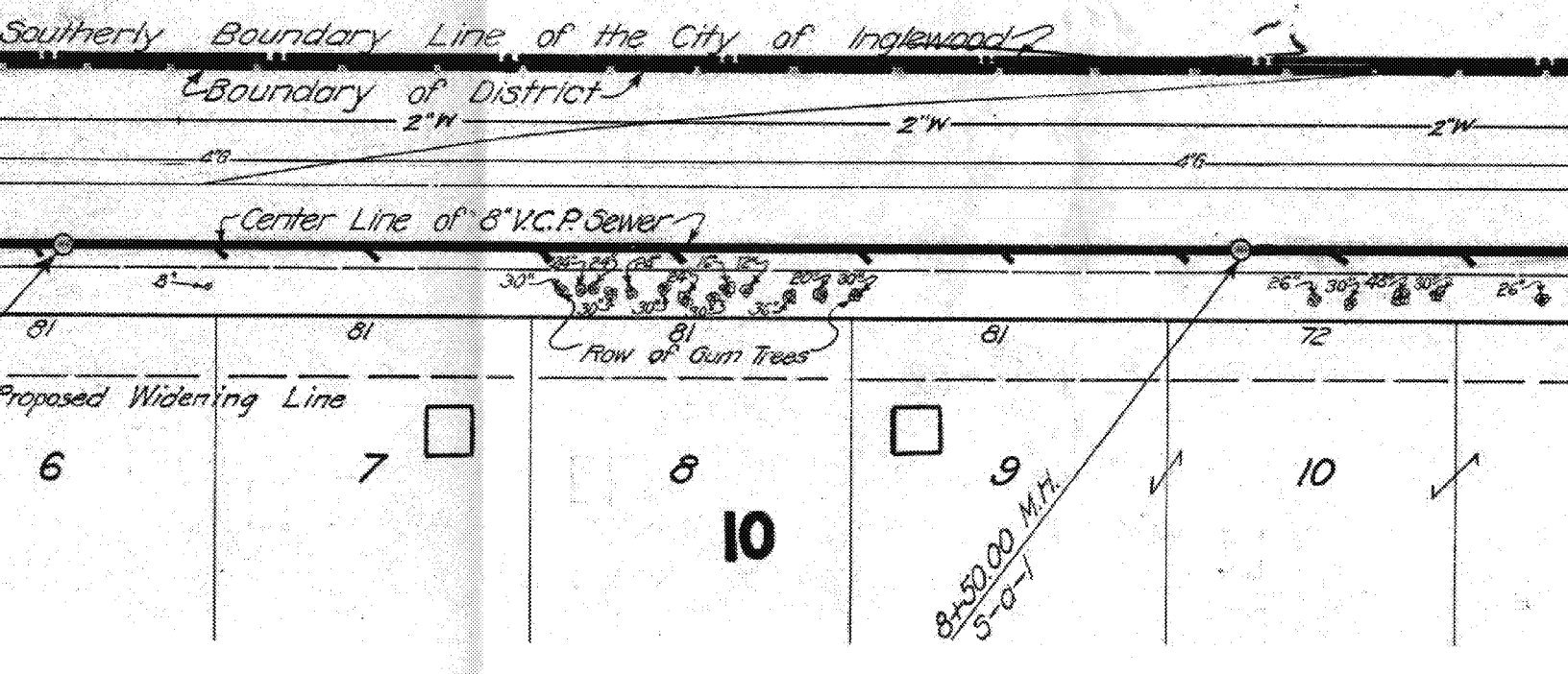

3+00.00
0+00
El. 93.90
1+30.00
El. 92.70
0+25.00
M.H.
Existing J.C.
8" V.C.P.
0.32%
El. 79.12
3+00.00
El. 78.17
0+02.00
El. 77.92
12" Inlet
15" Outlet
298.00
3
2
1
0
City of Inglewood
BLVD
4"G
6"W
4"W
8"x 6" Y's
Curb
50
100
10
11
12
TRACT
M.B. 17-87
0+02.00 Beginning of Improvement west of Lockhaven St. Break into existing J.C. and form new Channel in Base.
DOTY AVE.
LOCKHAVEN
ST.
15
25

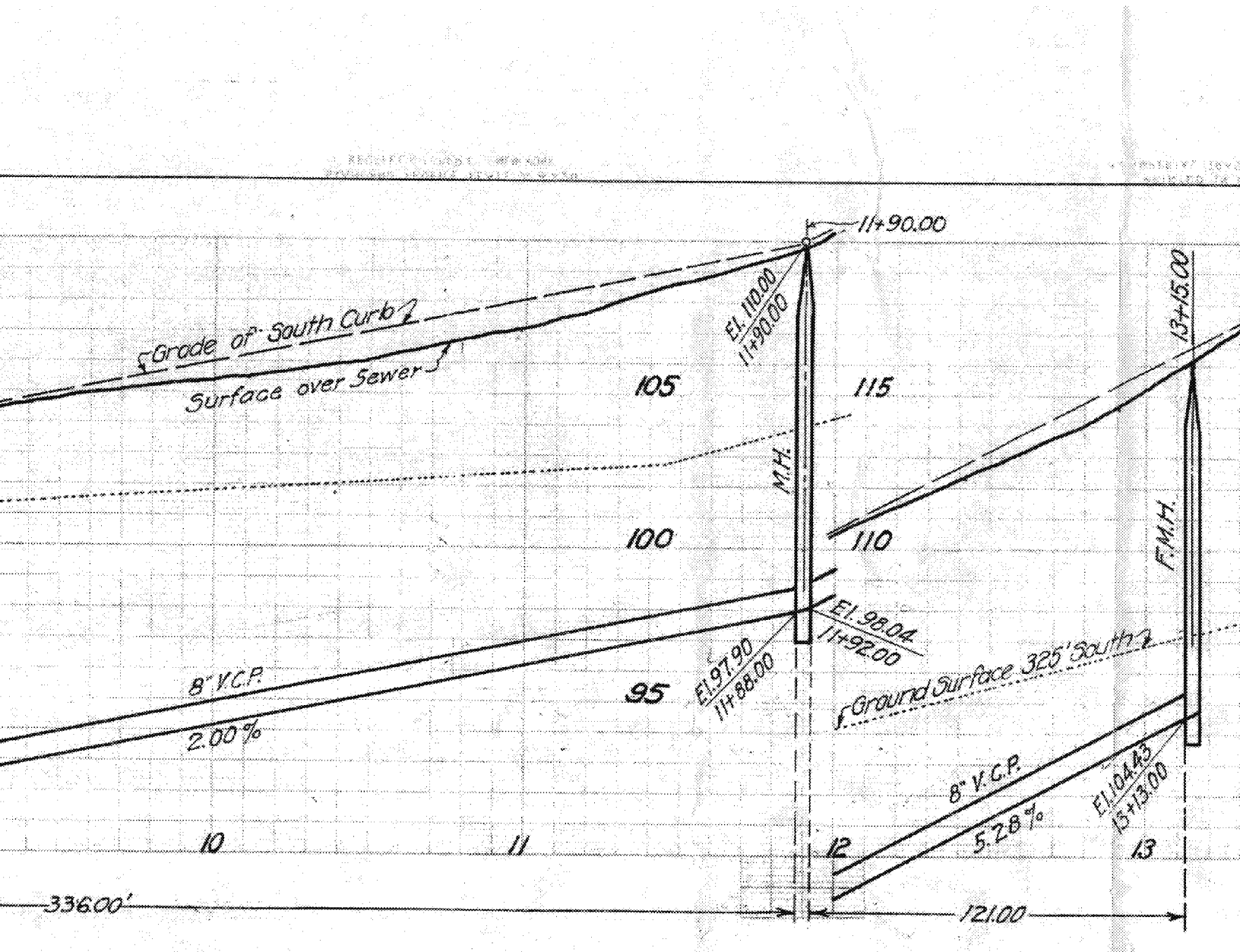


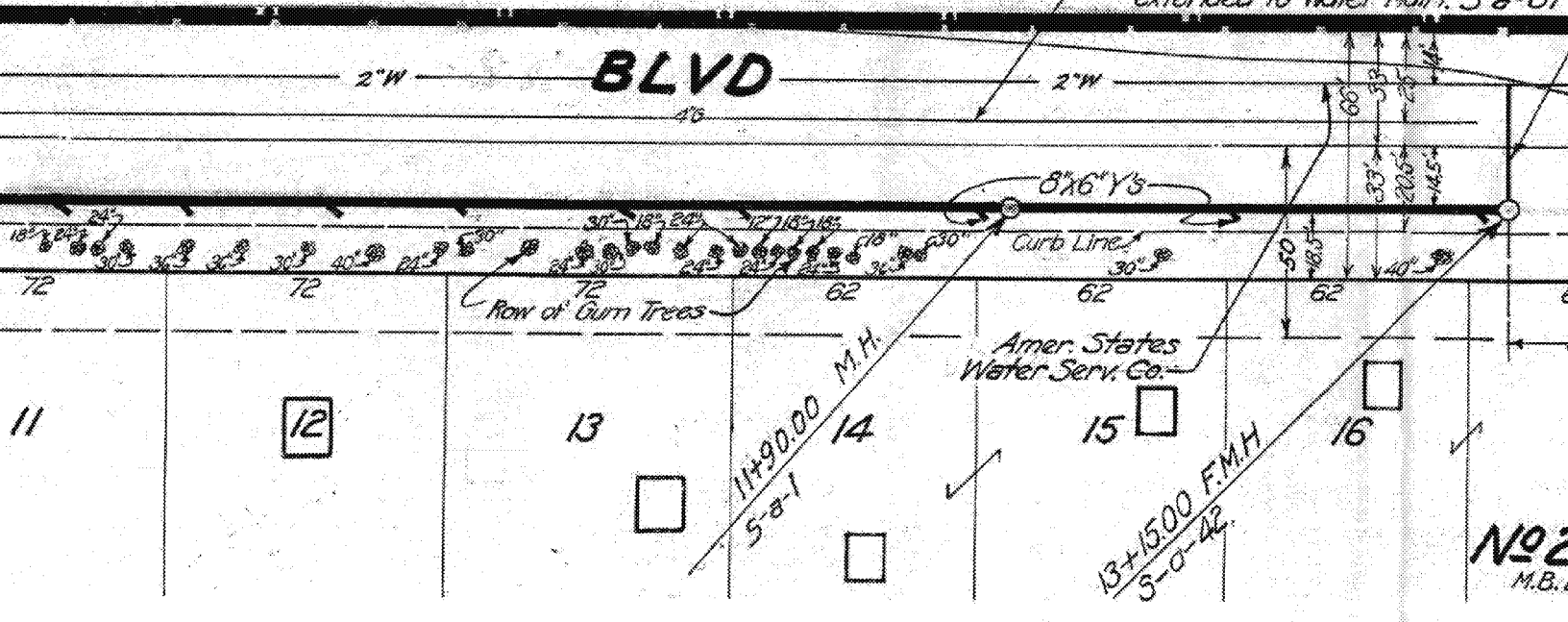
B.M. L-82 El. 92.680 L.B. 431/122
Century Blvd. & Lockhaven St.
Bt.Spk. 4'W. of E.end-S.Cb. S.W.cor.
B.M. "L-83" El. 102.050 L.B. 431/122
Century Blvd. & Lockhaven St.
"X" Chiseled in N. End of Walk Ho.# 1624 Side of St. & E. of Inter.
90
95
85
90
80
85
IDENTICAL
0+00
El. 92.50
0+25.00
on North
77.52
et on South
Existing J.C.
El. 77.52
15" Outlet on South
El. 77.92
12" Inlet on North
El. 78.13
0+02.00
246.00'
IDENTICAL POINTS
L.A. G.&E. Corp.
4"H
4"W
4"G
Amer. States
Water Serv. Co.
8"x6" Y's
Fire Plug
Row
Gum
100
Existing So. Inglewood-
Orange Ave. Trunk Sewer &
J.C. San. Dist. No 5.
Sheet 14 C.I. 774.
Existing
So. Inglewood- Orange Ave.
15" Trunk Sewer, & J.C.,
San. Dist. No 5.
Sheet 14 - C.I. 774
DOTY AVE.
LOCKHAVEN ST.
0+02.00 Beginning of Improveme
East of Lockhaven St.
Join to Existing Pipe
TRACT
50'
25'
25'
15'
15'

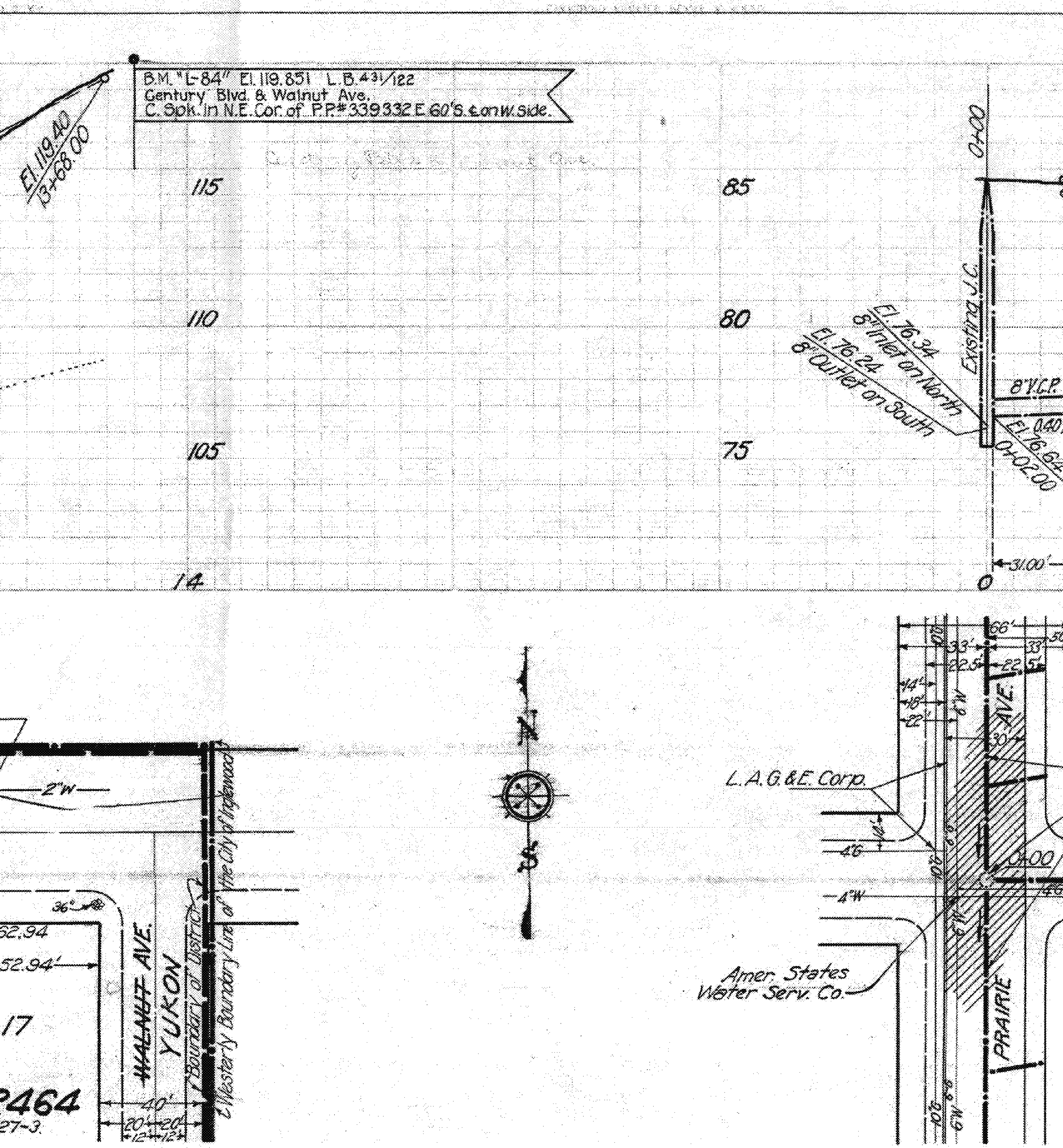

B.M. "L-62A" El. 94.344 : L.B. 431/122
Century Blvd. 300'± E. of & Lockhaven St.
B. Spk. in E. End of Conc. Cul. S. Side Century Blvd.
El. 92.00
2+20.00
2+50.00
95 100
El. 101.20
5+30.00
Ground Surface 325' South ?
90 95
Proposed 54" Storm Drain
M.H.
8" V.C.P.
2.84%
85 90
Encase
8" V.C.P.
1.04%
El. 80.69
2+48.00
El. 80.79
2+52.00
296.00'
CENTURY
4"W Existing Culvert
4"W
Center Line of St.
Encase 10' of Sewer, S-a-6
Curb Line
100
100
91
91
Proposed 54" Storm Drain
2
3
4
5
2+50.00 M.H.
S-a-1
5+50.00 M.H.
S-a-1

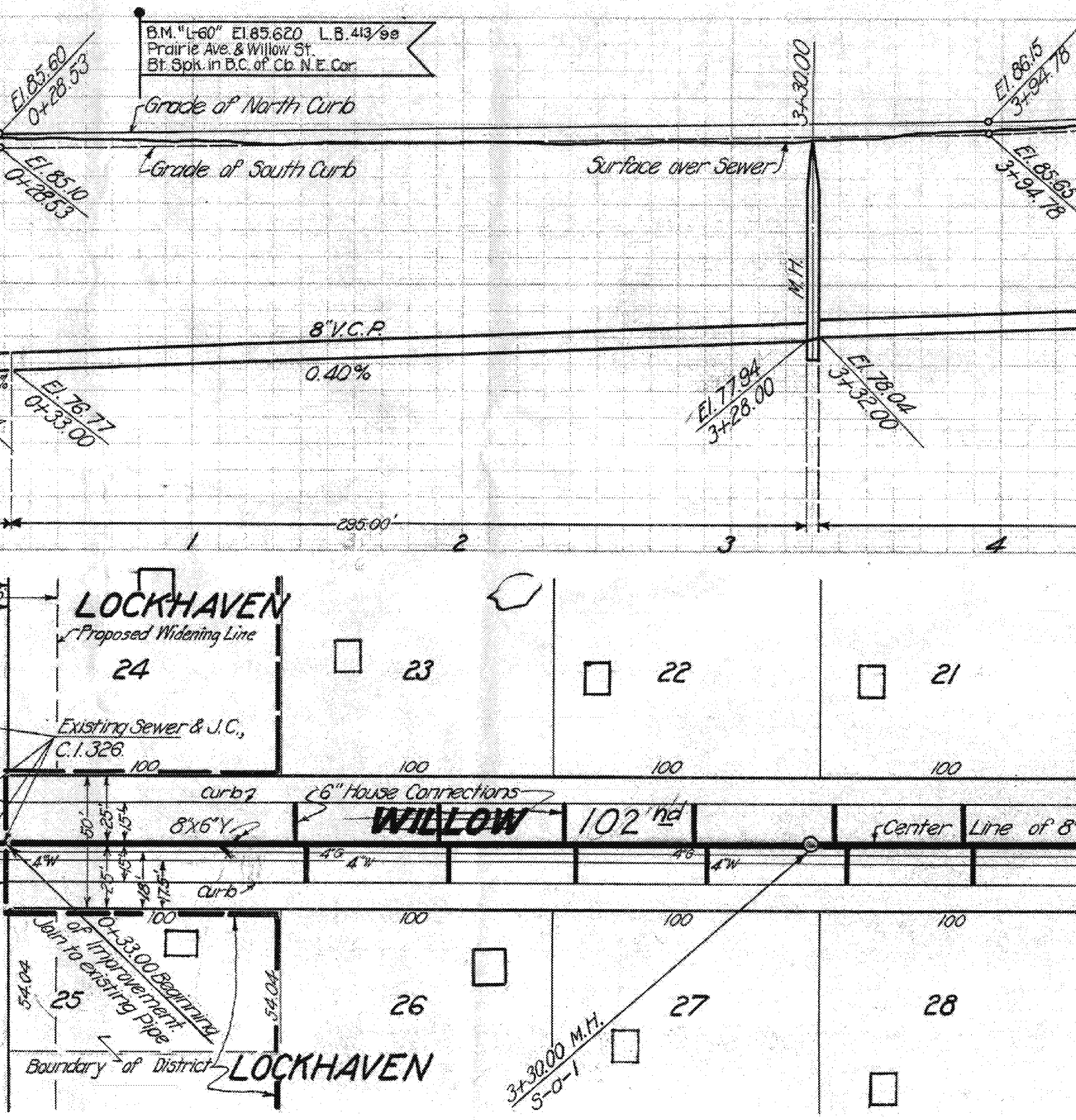

5+52.00
M.H.
100
105
8+50.00
El. 103.40
8+70.00
95
100
8" V.C.P.
0.60 %
90
95
M.H.
El. 89.30
5+52.00
6
7
8
El. 91.08
8+48.00
El. 91.18
8+52.00
9
296.00'

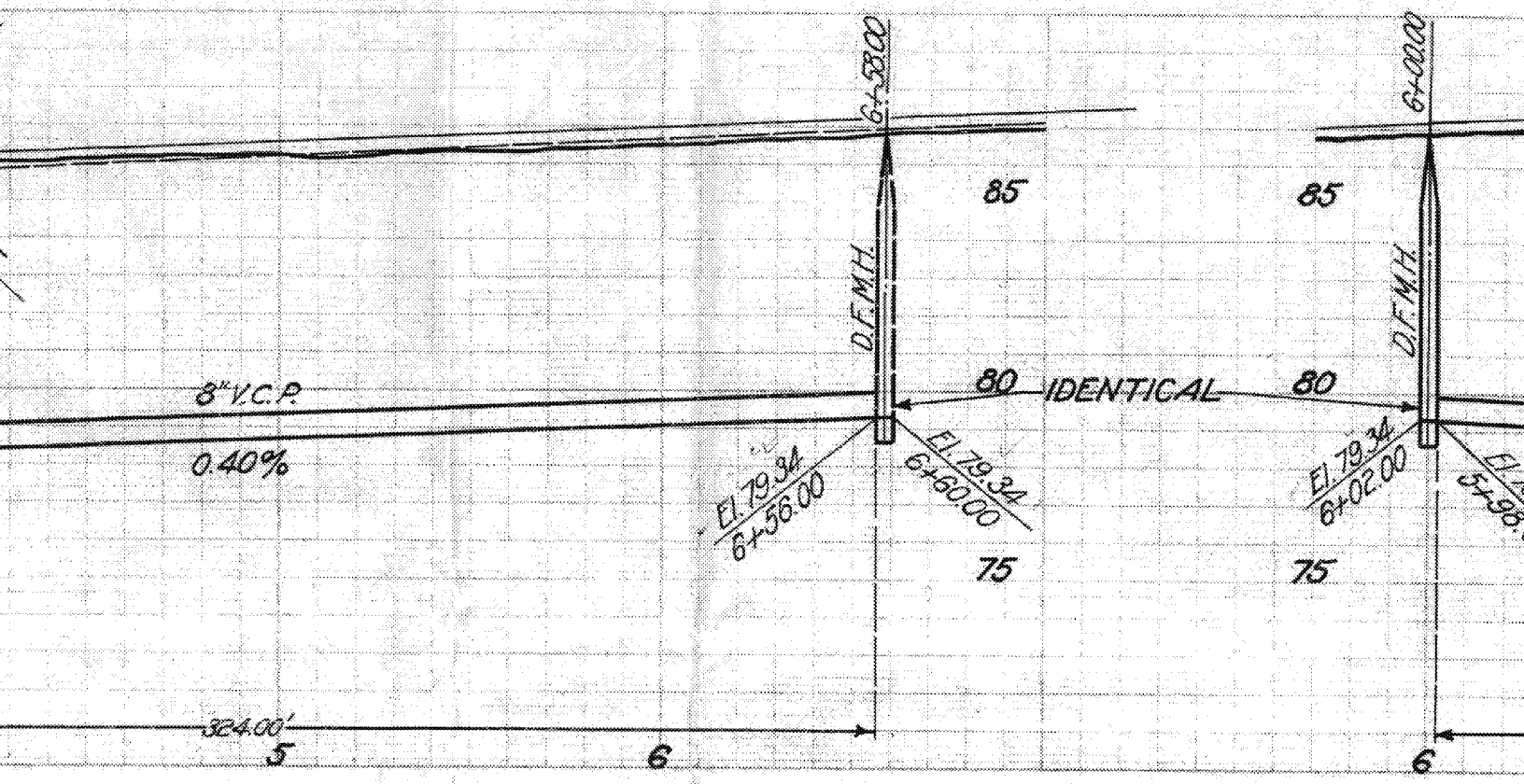

Southerly Boundary Line of the City of Inglewood
Boundary of District
2"W
2"W
2"W
Center Line of 8" V.C.P. Sewer
81
81
81
81
72
Row of Gum Trees
Proposed Widening Line
6
7
8
9
10
10
8+50.00 M.H.
5'-0"

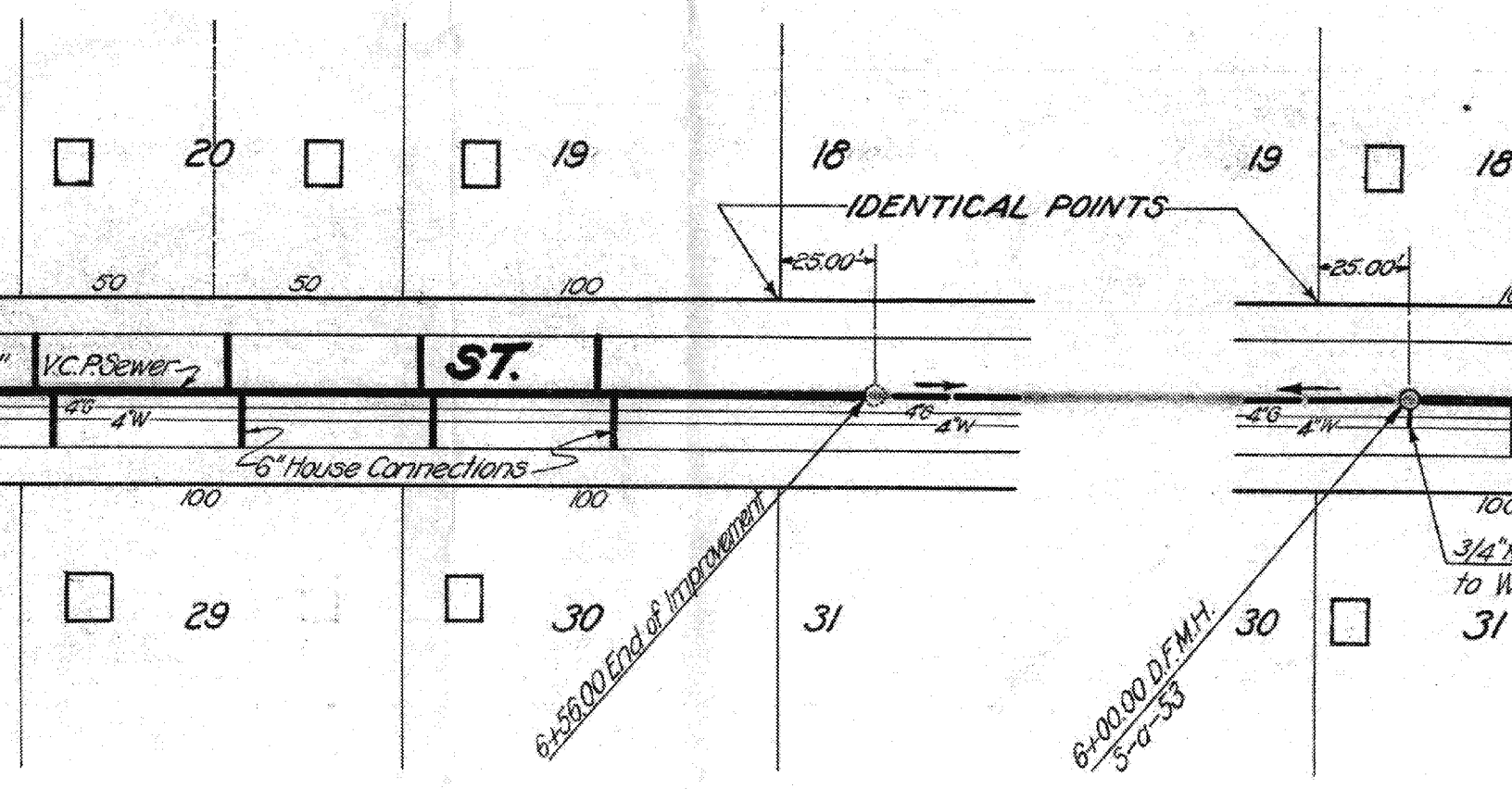

11+90.00
Grade of South Curb
Surface over Sewer
El. 110.00
11+90.00
105
115
M.H.
13+15.00
F.M.H.
100
110
El. 98.04
11+92.00
8" V.C.P.
El. 97.90
11+88.00
95
Ground Surface 325' South
2.00%
8" V.C.P.
5.28%
El. 104.43
13+13.00
10
11
12
13
336.00'
121.00

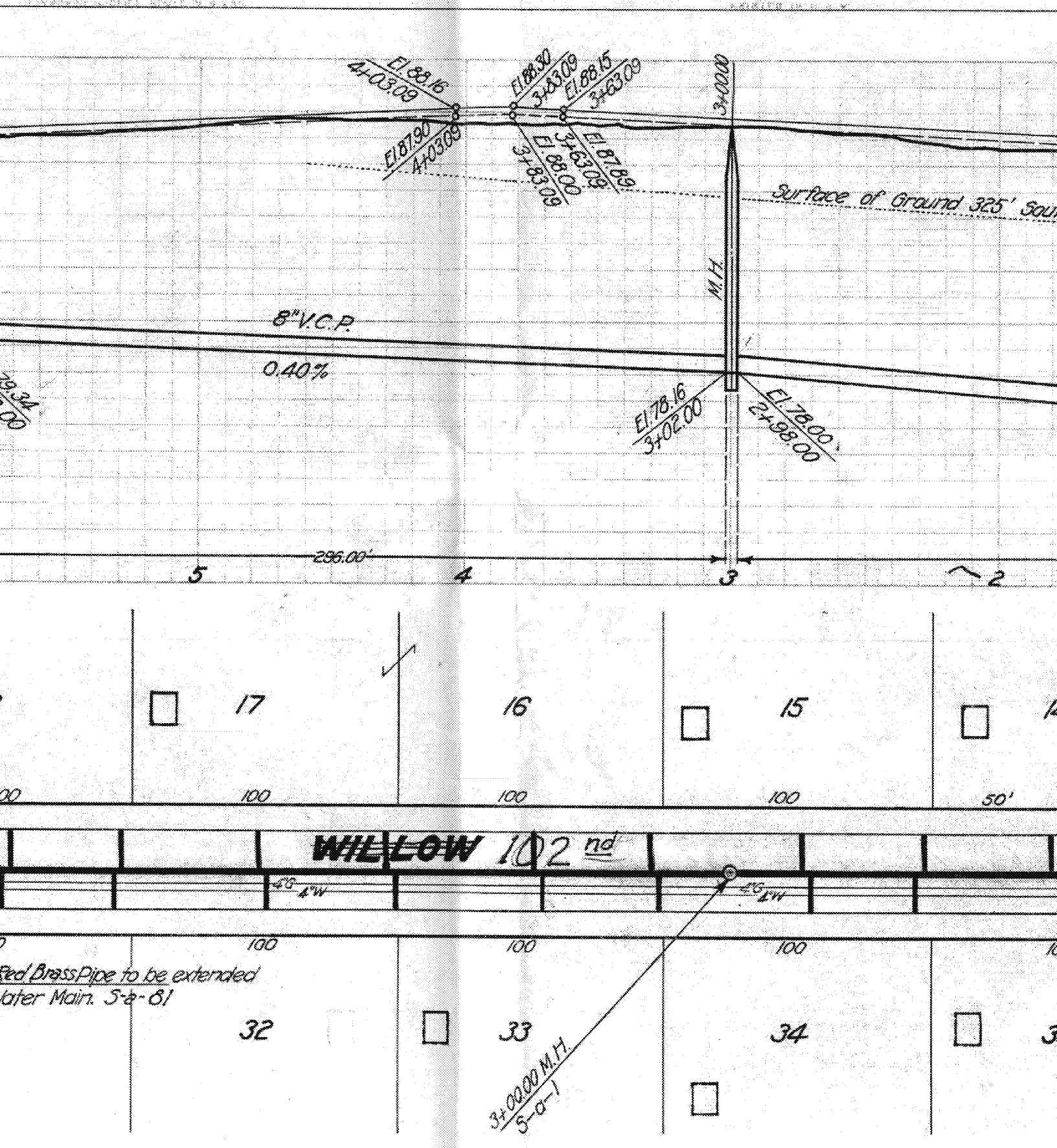

L.A.G.&E. Corp.
3/4" Red Brass Pipe to be extended to Water Main. S-a-81
2"W
BLVD
2"W
4'6
8"x6" Y's
Curb Line
Row of Gum Trees
Amer. States Water Serv. Co.
11+90.00 M.H.
S-a-1
13+15.00 F.M.H.
S-a-42
11
12
13
14
15
16

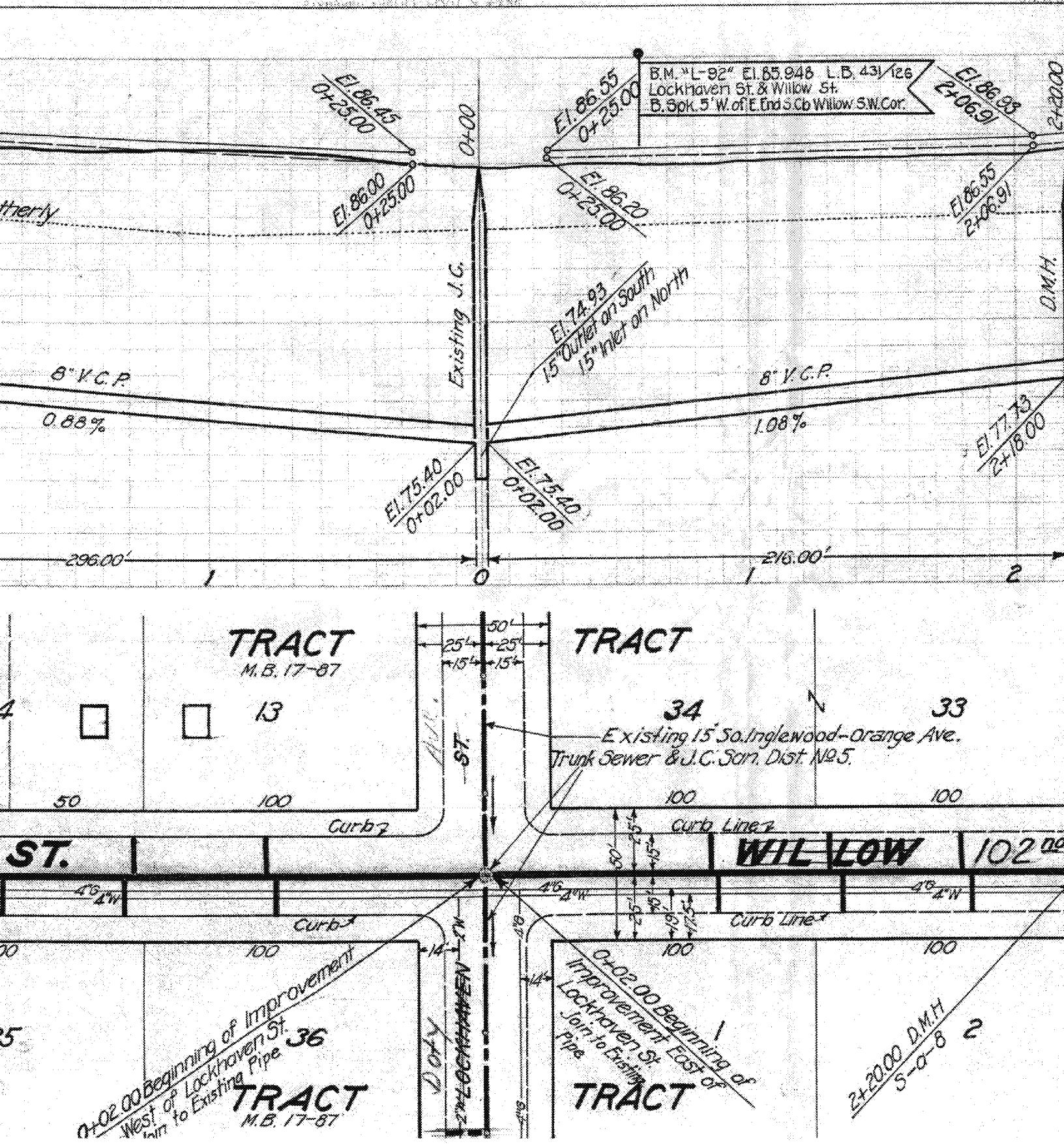

B.M. "L-84" El. 119.851 L.B. 431/122
Century Blvd. & Walnut Ave.
C. Spk. in N.E. Cor. of P.P.# 339332 E. 60'S. ℄ on W. Side.
El. 119.40
13+68.00
115
110
105
14
85
80
75
0
0+00
Existing J.C.
El. 76.34
8" Inlet on North
El. 76.24
8" Outlet on South
8" V.C.P.
El. 76.64
0+02.00
31.00'
L.A.G.&E. Corp.
Amer. States
Water Serv. Co.
2"W
4"W
6"W
AVE.
PRAIRIE
0+00
N
S
52.94
52.94'
17
P464
27-3.
WALNUT AVE.
YUKON
Boundary of District
℄ Westerly Boundary Line of the City of Inglewood
40'
20'
20'
12'
12'
66'
33'
33'
22.5'
22.5'
30'

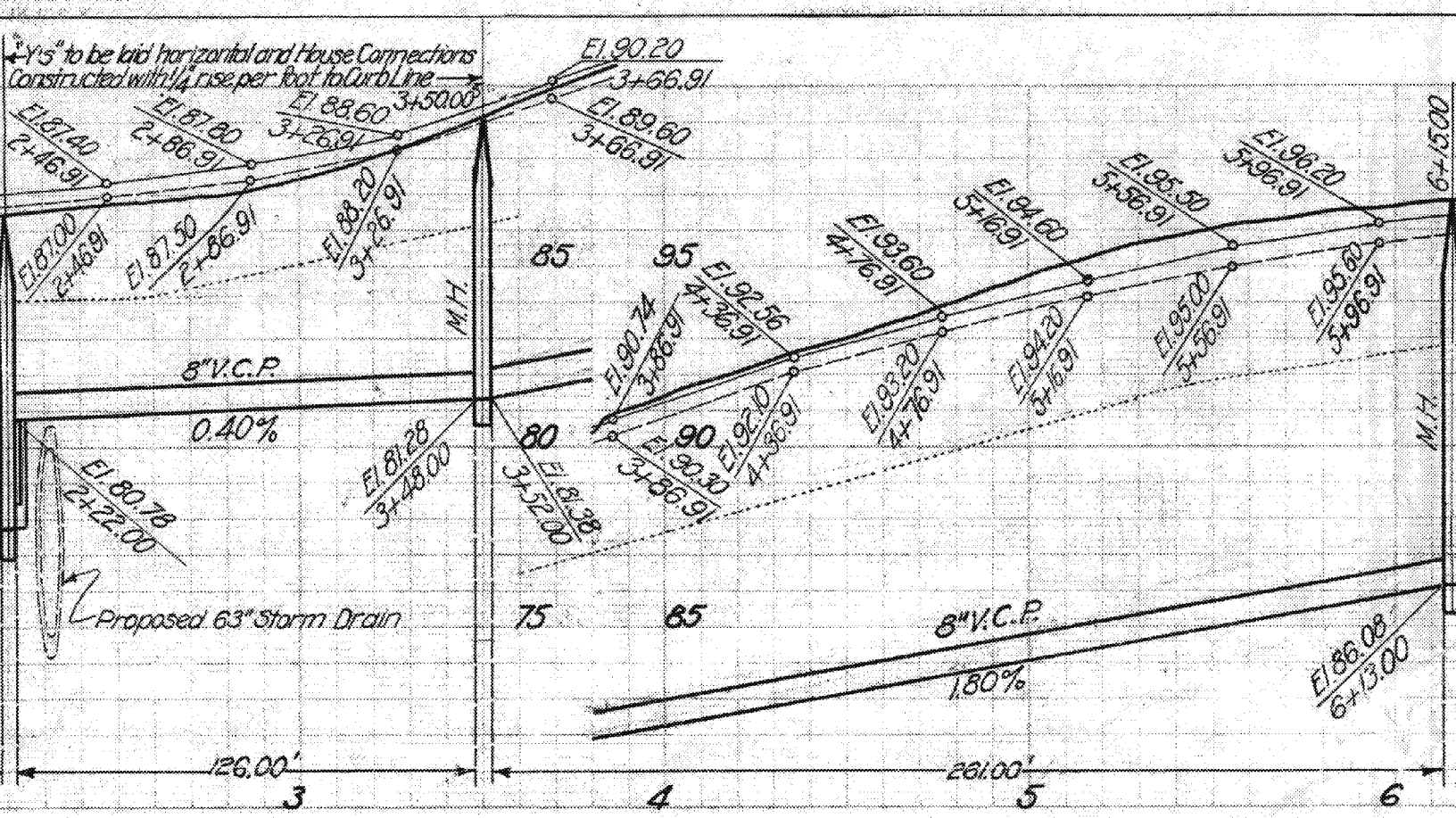

B.M. "L-60" El. 85.620 L.B. 413/98
Prairie Ave. & Willow St.
Bt. Spk. in B.C. of Cb. N.E. Cor.
El. 85.60
0+28.53
Grade of North Curb
3+30.00
El. 86.15
3+94.78
El. 85.10
0+28.53
Grade of South Curb
Surface over Sewer
El. 85.63
3+94.78
M.H.
8" V.C.P.
0.40%
El. 76.77
0+33.00
El. 77.94
3+28.00
El. 78.04
3+32.00
295.00'
1
2
3
4
LOCKHAVEN
Proposed Widening Line
24
23
22
21
Existing Sewer & J.C.,
C.I. 326
100
100
100
100
Curb
6" House Connections
WILLOW
102 nd
Center Line of 8
8"x6" Y
4"W
4"W
4"W
4"W
Curb
100
100
100
100
0+33.00 Beginning of Improvement
Main to Existing Pipe
54.04
54.04
25
26
27
28
Boundary of District
LOCKHAVEN
3+30.00 M.H.
S-O-I

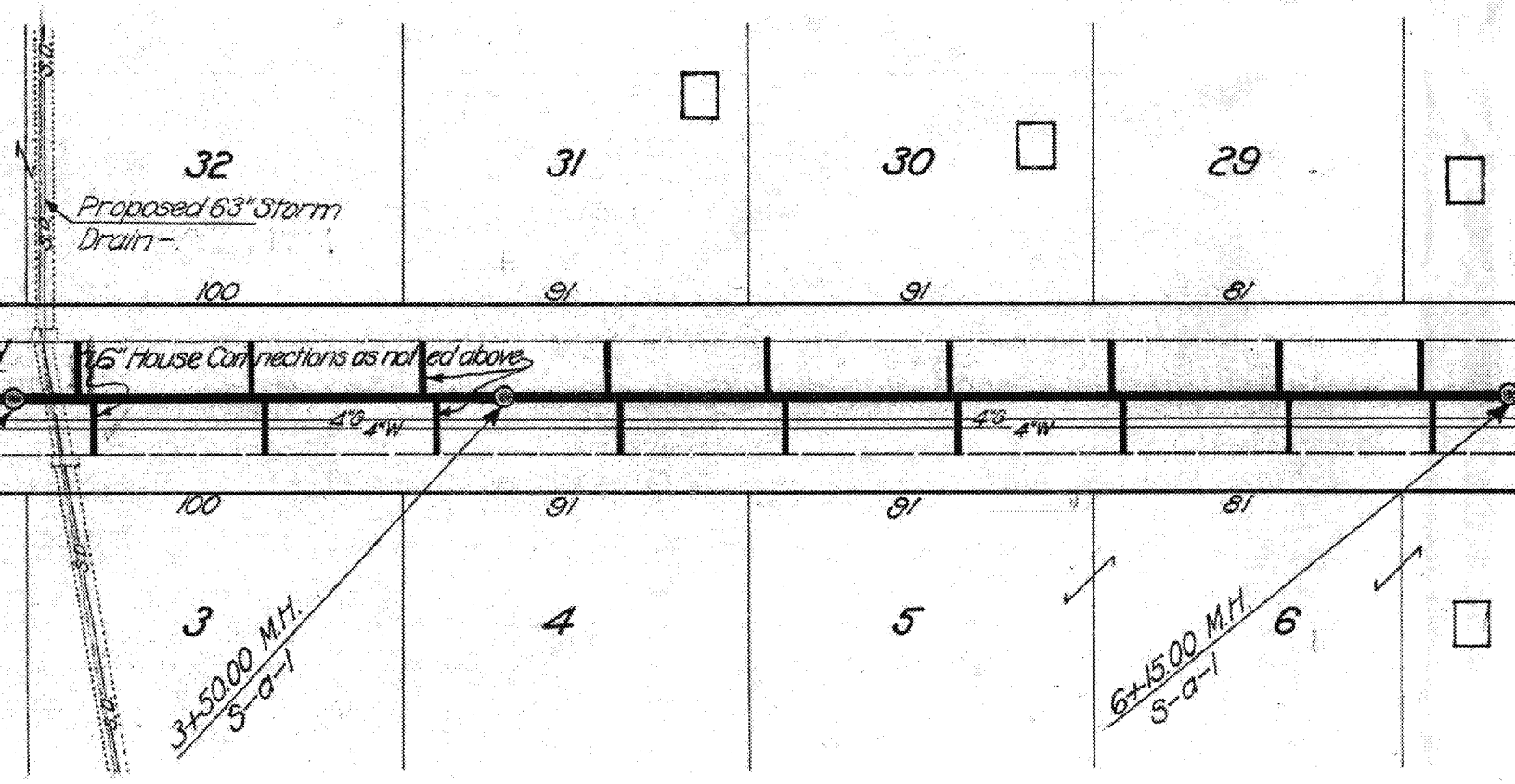

6+38.00
6+00.00
85
85
D.F.M.H.
D.F.M.H.
8" V.C.P.
80 IDENTICAL
80
0.40%
El. 79.34
6+56.00
El. 79.34
6+60.00
El. 79.34
6+02.00
75
75
324.00'
5
6
6

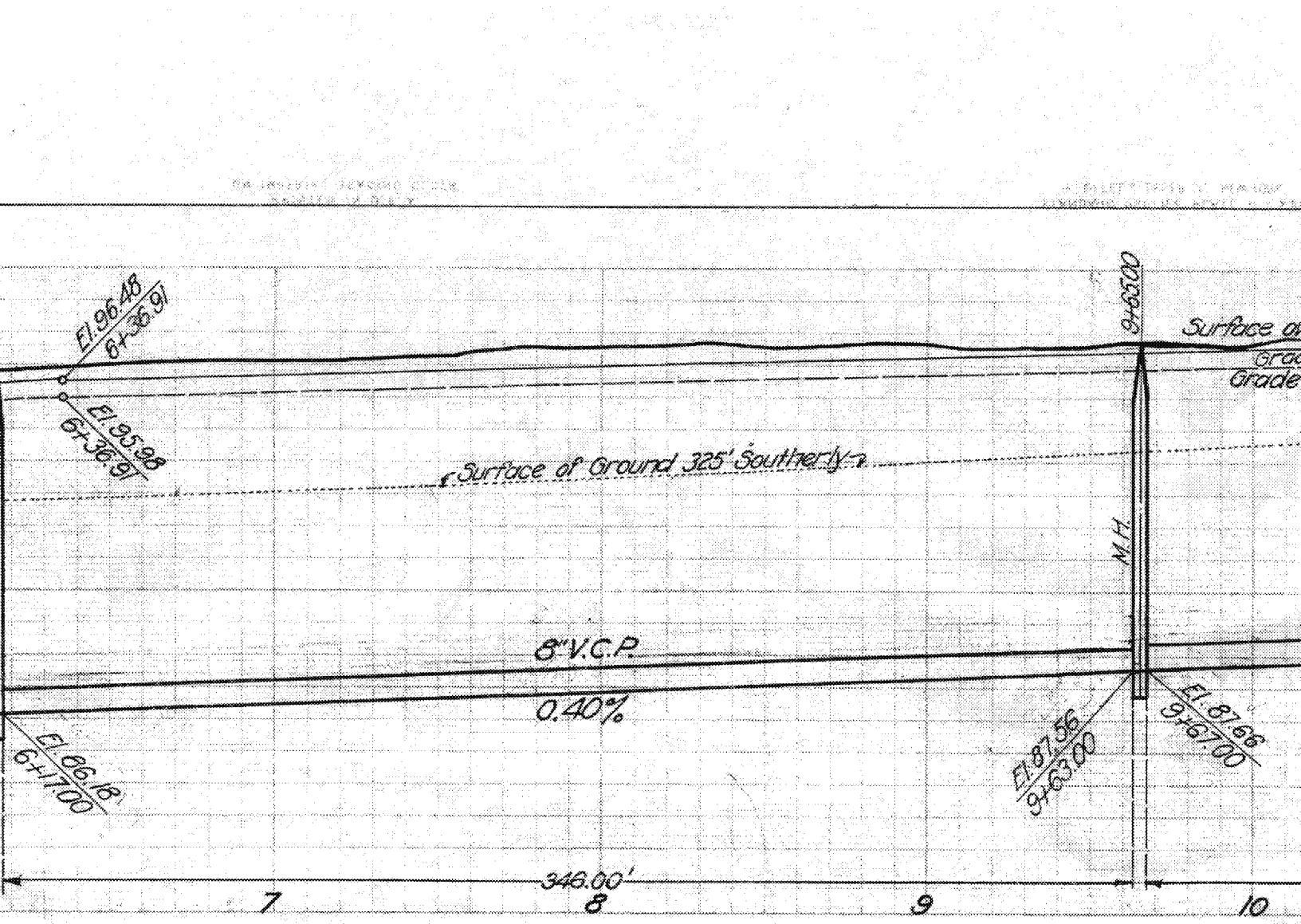

20
19
18
19
18
IDENTICAL POINTS
25.00'
25.00'
50
50
100
V.C.P. Sewer
ST.
4"W
4"W
4"W
6" House Connections
100
100
100
29
30
31
30
31
6+56.00 End of Improvement
6+00.00 D.F.M.H.
5-0-53
3/4"
to W

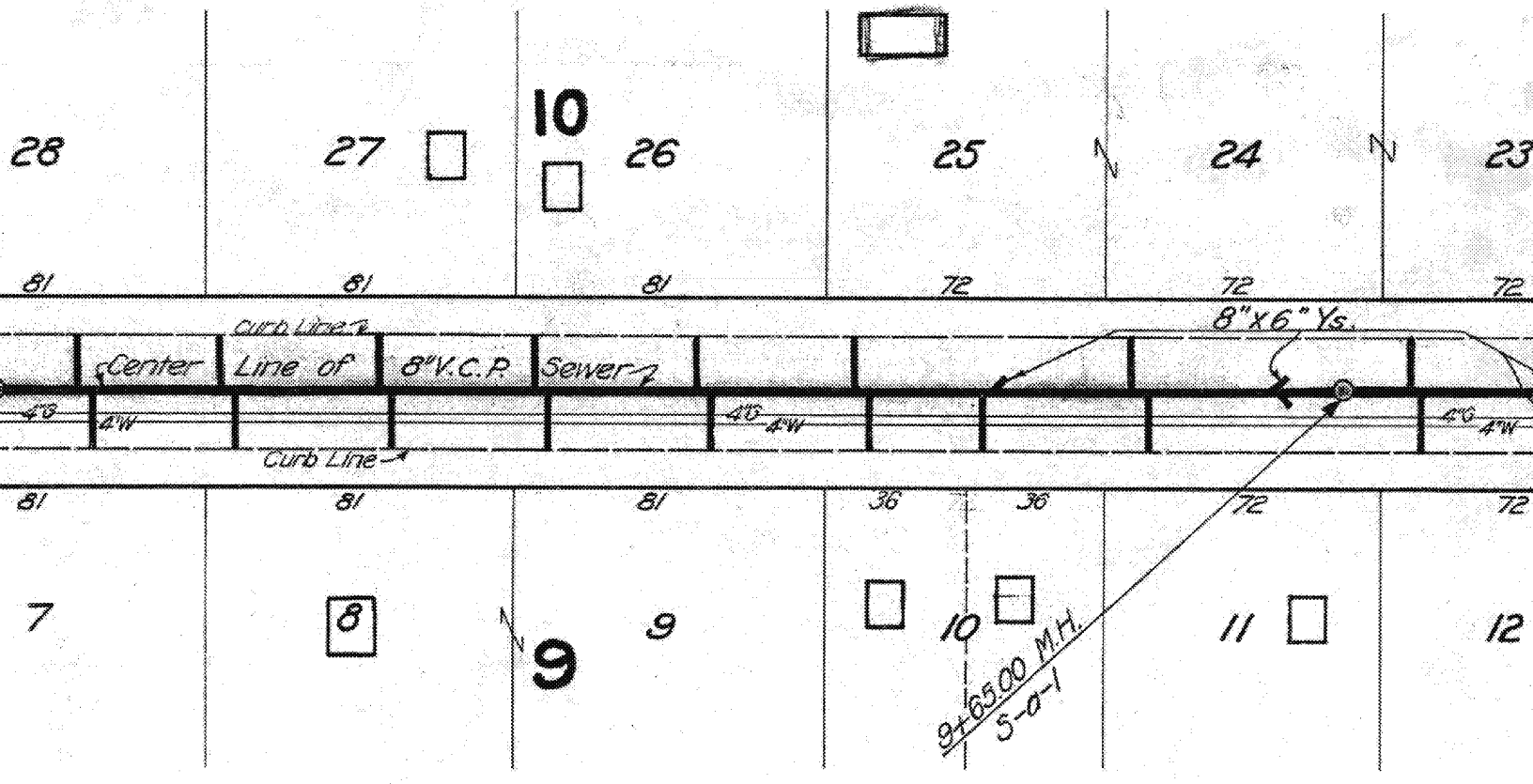

El. 88.16
4+03.09
El. 87.90
4+03.09
El. 88.30
3+63.09
El. 88.00
3+83.09
El. 88.15
3+63.09
El. 87.89
3+63.09
3+00.00
Surface of Ground 325' Sou
M.H.
8" V.C.P.
0.40%
El. 78.16
3+02.00
El. 78.00
2+98.00
296.00'
5
4
3
2
17
16
15
100
100
100
50'
WILLOW
102 nd
46 4"W
46 4"W
100
100
100
Red Brass Pipe to be extended
Water Main. 5-a-61
32
33
34
3+00.00 M.H.
5-a-1

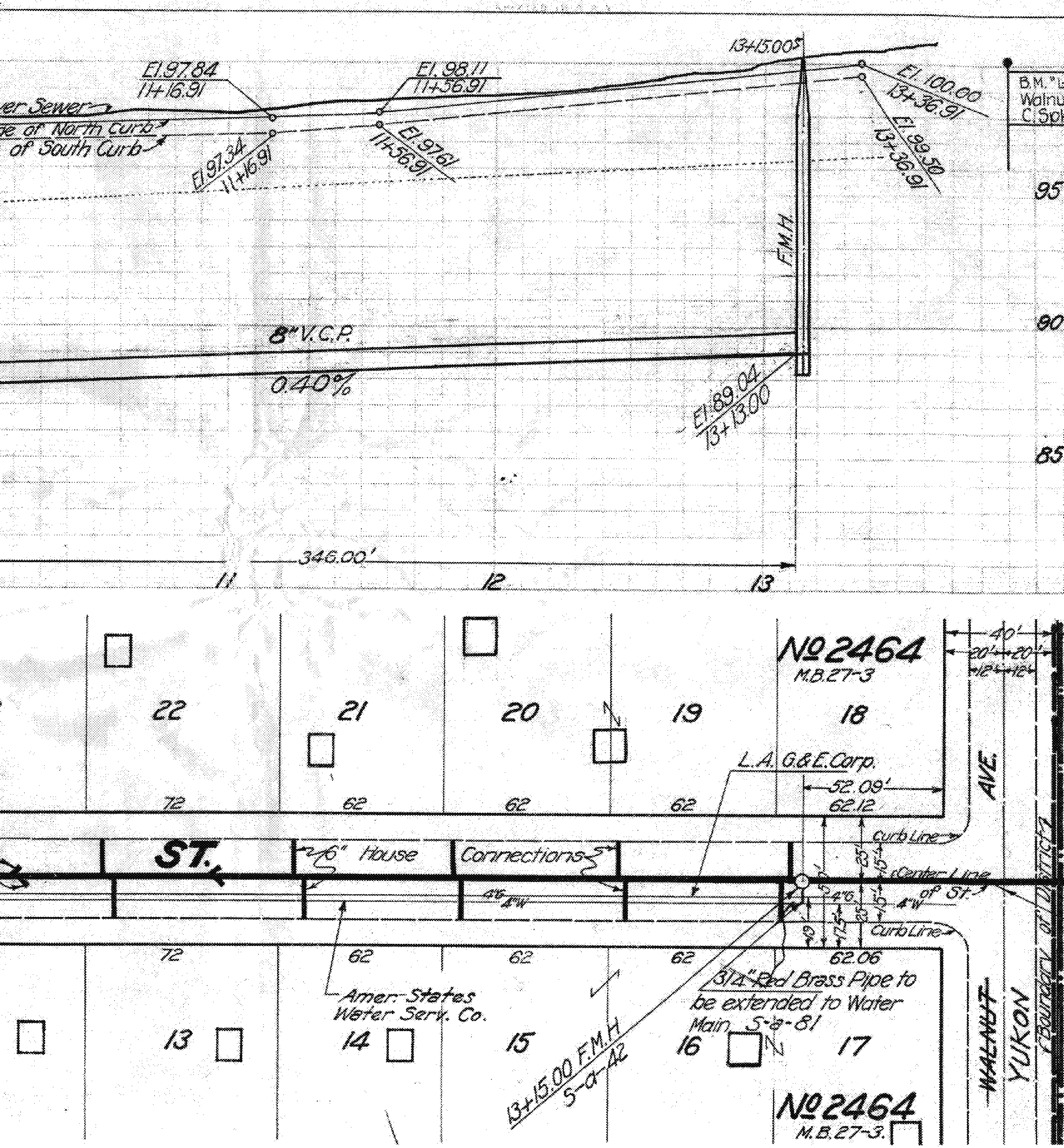

El. 86.45
0+25.00
0+00
El. 86.55
0+25.00
B.M. "L-92" El. 85.948 L.B. 431/126
Lockhaven St. & Willow St.
8.90k. 5' W. of E. End S.Cb Willow S.W.Cor.
El. 86.98
2+06.91
2+20.00
El. 86.00
0+25.00
El. 86.20
0+25.00
El. 86.55
2+06.91
Existing J.C.
El. 74.93
15" Outlet on South
15" Inlet on North
D.M.H.
8" V.C.P.
0.88%
8" V.C.P.
1.08%
El. 77.73
2+16.00
El. 75.40
0+02.00
El. 75.40
0+02.00
296.00'
216.00'
1
0
1
2
TRACT
M.B. 17-87
13
TRACT
34
33
Existing 15" So. Inglewood-Orange Ave.
Trunk Sewer & J.C. San. Dist. No. 5.
ST.
50
100
100
100
Curb
Curb Line
WILLOW
102.00
Curb
Curb Line
100
100
100
14'
NEW MANHOLE No. 2
0+02.00 Beginning of Improvement
West of Lockhaven St.
Join to Existing Pipe
36
TRACT
M.B. 17-87
0+02.00 Beginning of
Improvement East of
Lockhaven St.
Join to Existing
Pipe
TRACT
2+20.00 D.M.H.
S-a-8
2


"Y's" to be laid horizontal and House Connections Constructed with 1/4" rise per foot to Curb Line
El. 87.40 2+46.91
El. 87.80 2+86.91
El. 88.60 3+26.91
3+50.00
El. 90.20 3+66.91
El. 89.60 3+66.91
El. 87.00 2+46.91
El. 87.30 2+86.91
El. 88.20 3+26.91
M.H.
65
95
El. 92.56 4+36.91
El. 90.74 3+86.91
El. 93.60 4+76.91
El. 94.60 5+16.91
El. 95.50 5+56.91
El. 96.20 5+96.91
6+15.00
8" V.C.P.
0.40%
El. 81.28 3+48.00
80
El. 82.38 3+52.00
90
El. 90.30 3+86.91
El. 92.10 4+36.91
El. 93.20 4+76.91
El. 94.20 5+16.91
El. 95.20 5+56.91
El. 95.60 5+96.91
M.H.
El. 80.78 2+22.00
Proposed 63" Storm Drain
75
65
8" V.C.P.
1.80%
El. 86.08 6+13.00
126.00'
261.00'
3
4
5
6


32
31
30
29
Proposed 63" Storm Drain
100
91
91
81
6" House Connections as noted above
4"ø 4"W
4"ø 4"W
100
91
91
81
3
4
5
6
3+50.00 M.H. S-0-1
6+15.00 M.H. S-0-1


El. 96.48
6+36.91
El. 95.98
6+36.91
9+65.00
Surface of Ground 325' Southerly
M.H.
8" V.C.P.
0.40%
El. 87.56
9+63.00
El. 87.66
9+67.00
El. 66.18
6+17.00
346.00'
7
8
9
10


28
27
10
26
25
24
23
81
81
81
72
72
72
Curb Line
Center Line of 8" V.C.P. Sewer
8" X 6" Ys.
40
4W
40
4W
40
4W
Curb Line
81
81
81
36
36
72
72
7
8
9
9
10
11
12
9+65.00 M.H.
5-0-1

 El. 97.84
11+16.91
El. 98.11
11+56.91
13+15.00±
El. 100.00
13+36.91
B.M. "L
Walnu
C. Spi
ver Sewer
ge of North Curb
of South Curb
El. 97.34
11+16.91
El. 97.61
11+56.91
El. 99.50
13+36.91
95
F.M.H.
90
8" V.C.P.
0.40%
El. 89.04
13+13.00
85
346.00'
11
12
13
No 2464
M.B. 27-3
40'
20'
20'
12'
12'
22
21
20
19
18
L.A. G.&E. Corp.
52.09'
AVE.
72
62
62
62
62.12
ST.
6" House
Connections
Curb Line
Center Line
of St.
4"G.
4"W.
Curb Line
72
62
62
62
62.06
3/4" Red Brass Pipe to
be extended to Water
Main S-a-81
Amer. States
Water Serv. Co.
13
14
15
16
17
13+15.00 F.M.H.
S-a-42
WALNUT
YUKON
(Boundary of District)
No 2464
M.B. 27-3.

Trim Prints to this li

-85" El. 102.564 L.B. 431/123
t Ave & Willow St.
K. & T. in W. Side of Guy P.# 260969E on E. Side

NOTE:
SEWER JOINT COMPOUND TO BE USED FOR ALL PIPE JOINTS.
TRENCH TO BE RESURFACED WITH № 2 MACADAM PAVEMENT EXCEPT AS NOTED.

COUNTY IMPROVE
NO. 774

PROFILE, ALIGNMENT AND GRADE O
SANITARY SEWERS
TO BE CONSTRUCTED IN

102nd WILLOW STREE
CENTURY BOULEVA
BETWEEN ~~WALNUT~~ AVE. AND PRA
YUKON
AND IN A PORTION OF
PRAIRIE AVENU

SHEET 1 OF 14 SHEETS

SCALE { HORIZ. 1"=40'
VERT. 1"= 4'

COUNTY OF LOS ANGELES, CALIFORNI
J. E. ROCKHOLD, COUNTY ~~SURVEYO~~

Recommended Alfred Jones
CHIEF DEPUTY

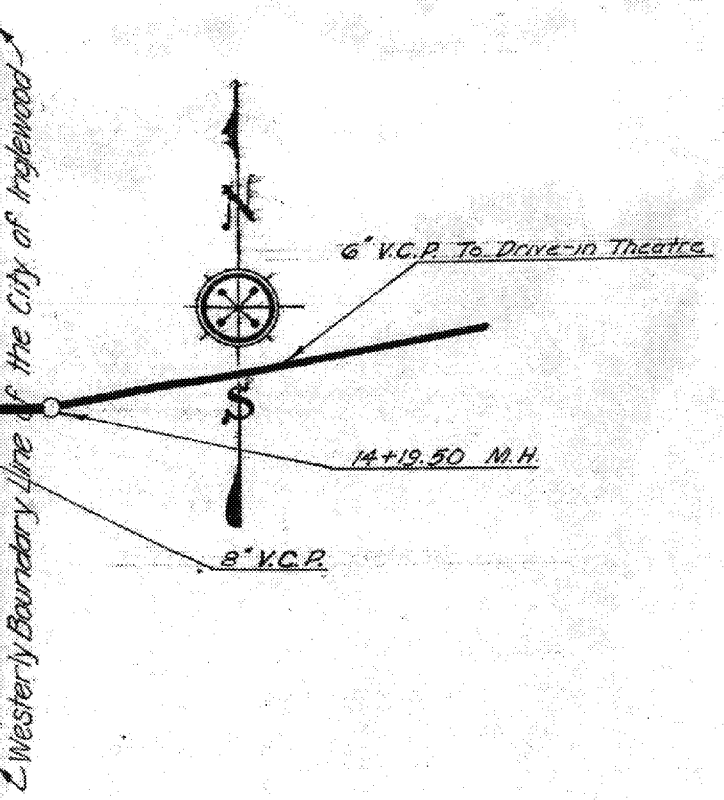
Approved

Approved as to form
Everett W. Mattoon
County Counsel

Approved

By
DEPUTY

FOR LEGEND
SEE PLAN NO. S-a-64



NOTE:

Grades to which this improvement is to be constructed shown on Plans shown by circles. Elevations are in feet, refer to top of curb, center line of are above U.S.G.S. or mean sea level datum. At all points between designat lished so as to conform to a straight line drawn between said designated poi

Unit prices for additional work which may be required, but which cann be submitted in the proposal.

This drawing and the data hereon are hereby made a part of the specific

REFERENCES	
W. S. 24	DESIGNED K.
A.B. 770	TRACED Co
L.B. 24/... - 43/... D.D./№ 24	

ne 7

1

.MENT

F

ET
ARD
AIRIE AVE.
UE

19

A
OR

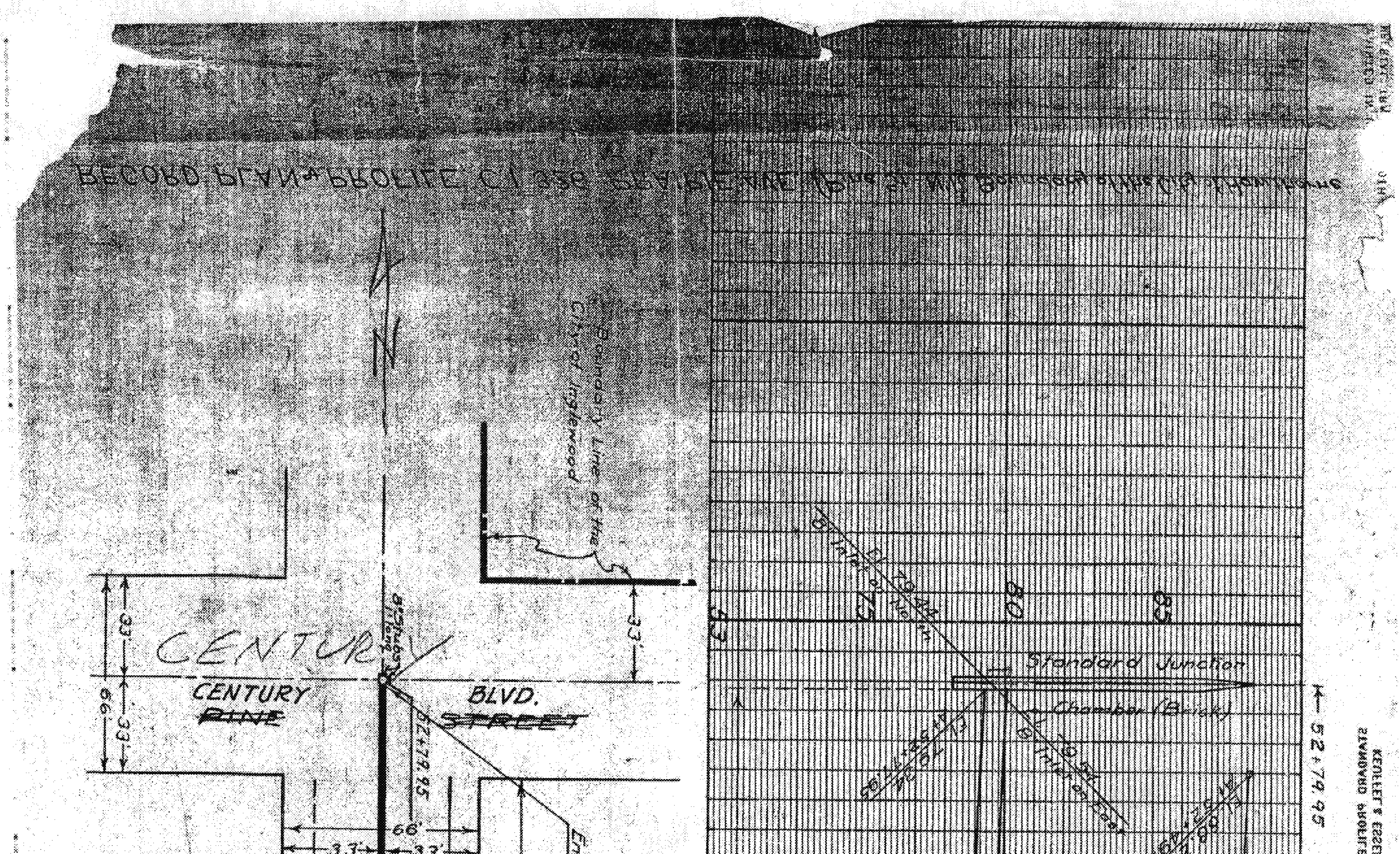
F. A. Rockhold
COUNTY SURVEYOR

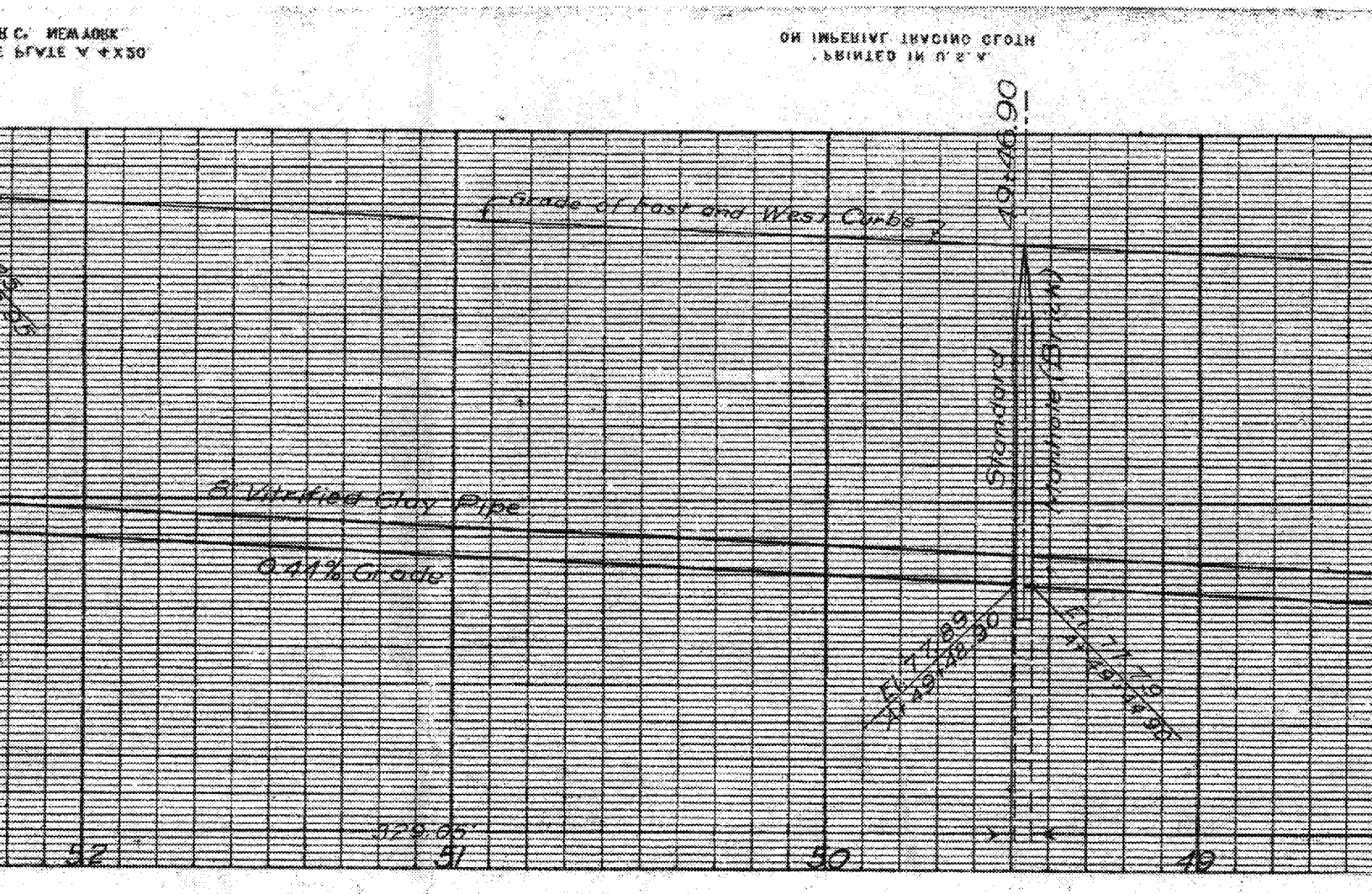
HIEF ENGINEER OF COUNTY
ANITATION DISTRICT NO. 5

and Profiles. Grade elevations are
street or center line of alley, and
ed points the grade shall be estab-
nts.
ot be ascertained in advance, shall

ations.

C. I. NO. 774	
relle	JULY 1928
ook	JULY 1928
	AUG


RECORD PLAN & PROFILE C.I. 326
52+79.95
Standard Junction
Chamber (Brick)
85
80
75
53
El. 79.44
8" Inlet at North
El. 79.54
8" Inlet at East
Boundary Line of the
City of Inglewood
33'
66'
CENTURY
CENTURY
BLVD.
52+79.95
8" Stubs
1' long
N



LOCKHAVEN SHEET

d of 8" Vitrified
Clay Pipe

154.08' | 33.33' | 33.34' | 33.33' | 50 | 118'

304.08

51+99 | 51+53 | 50+99 | 50+63 | 50+27 | 49+95 | 49+56

51+97 | 51+50 | 50+96 | 50+61 | 50+26 | 49+90 | 49+55 | 49+46.90

51+47 | 51+01 | 50+56 | 50+03 | 49+75

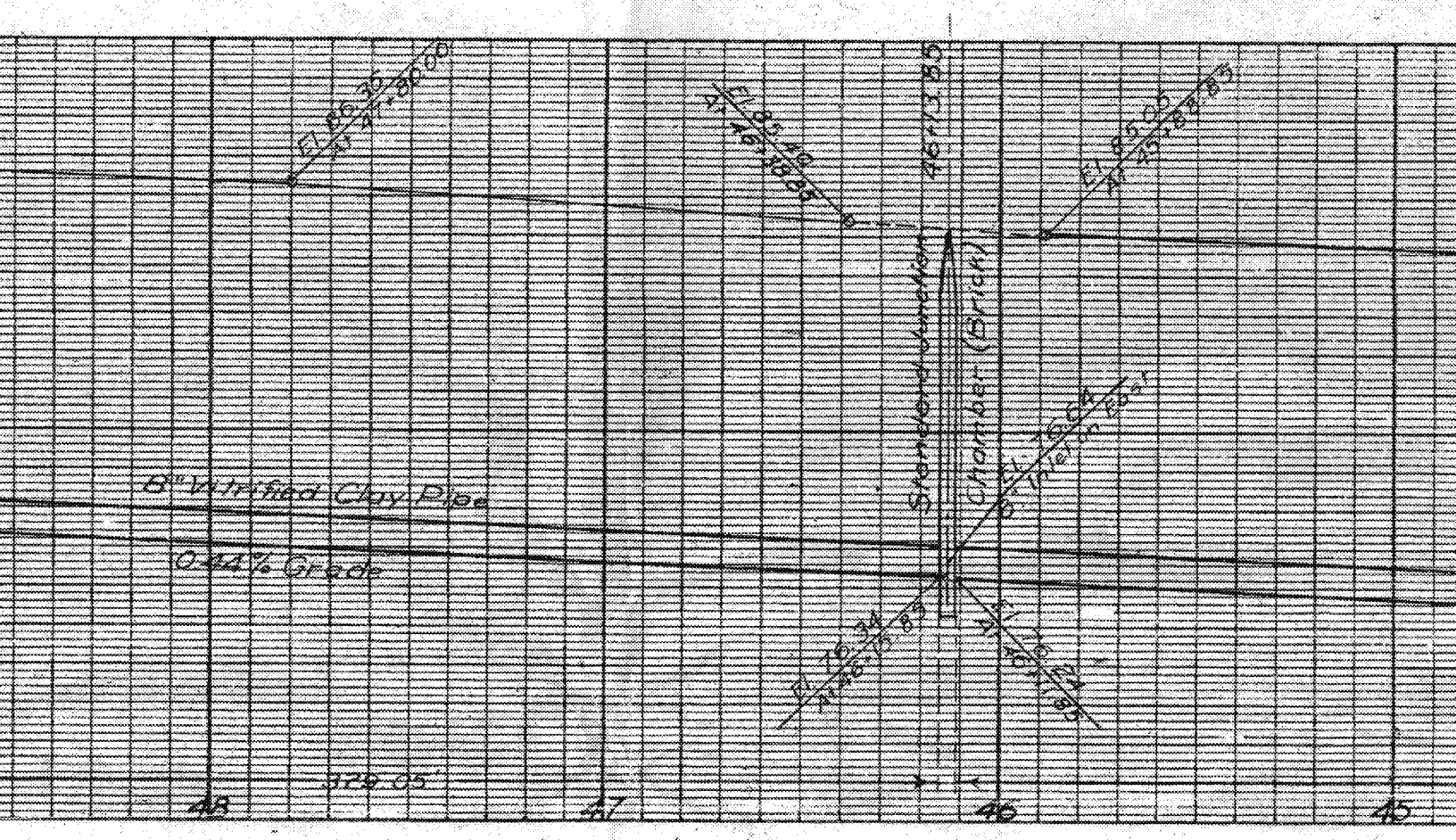
51+97 | 51+02 | 50+52 | 50+03 | 49+75

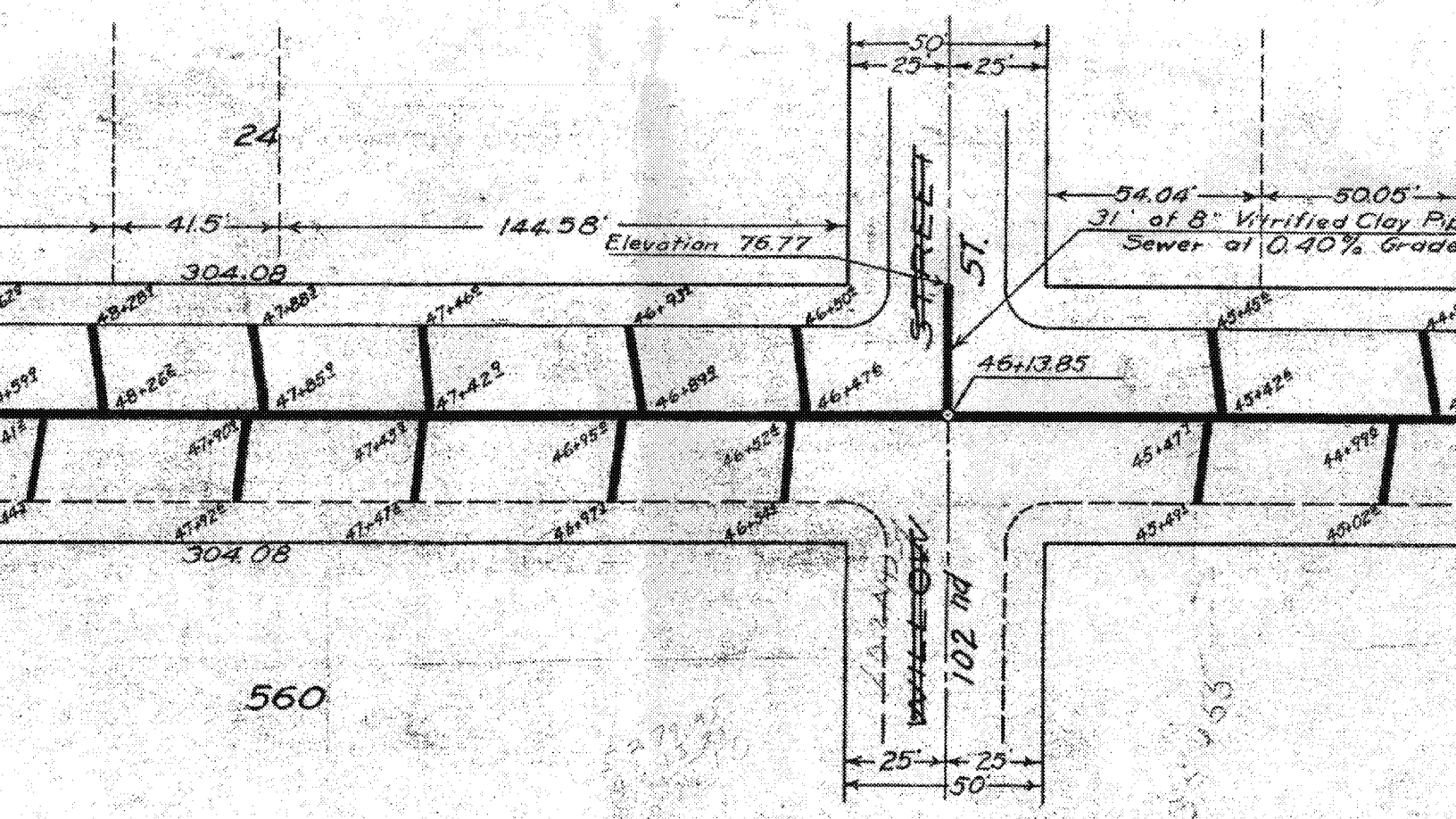
PRAIRIE

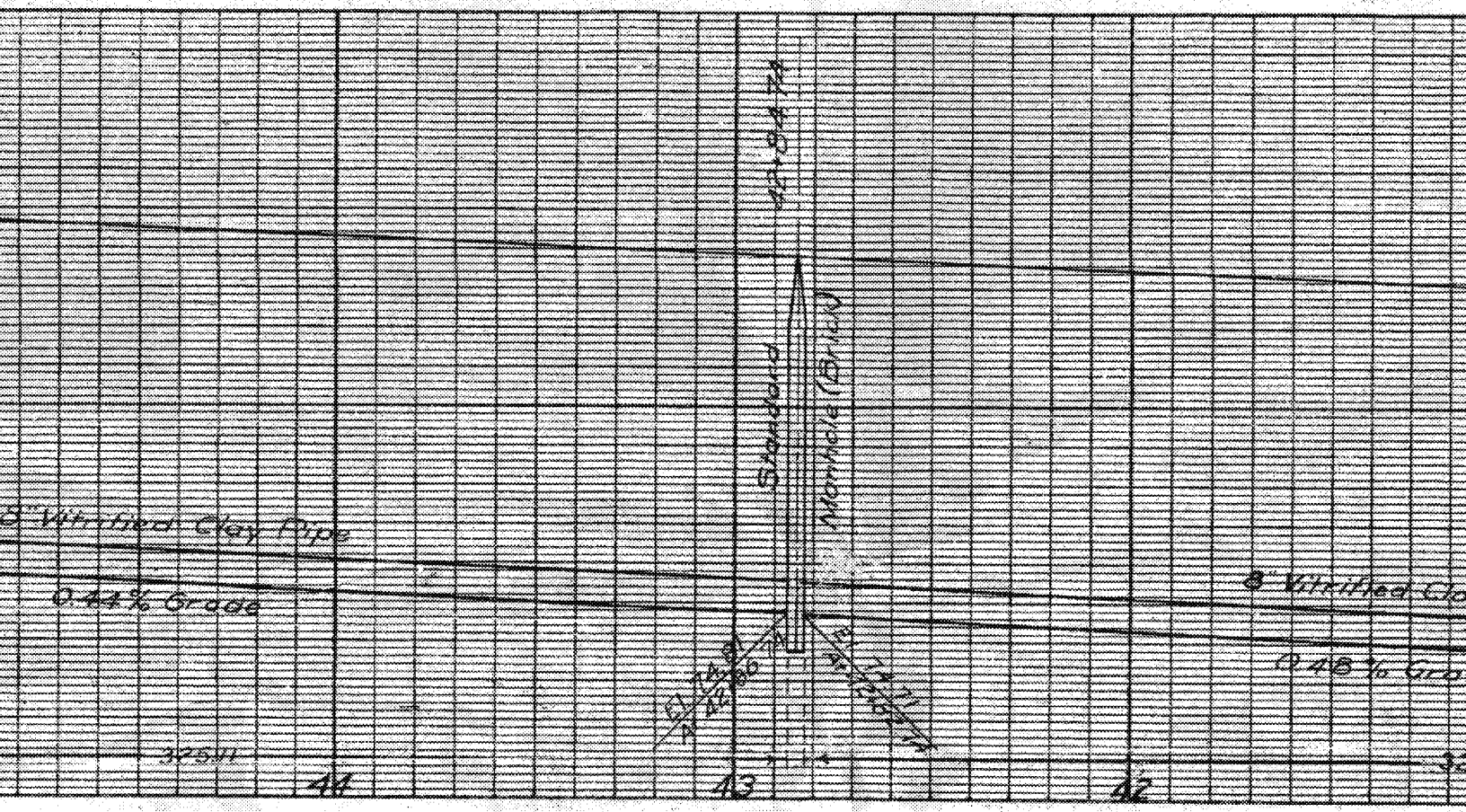
304.08

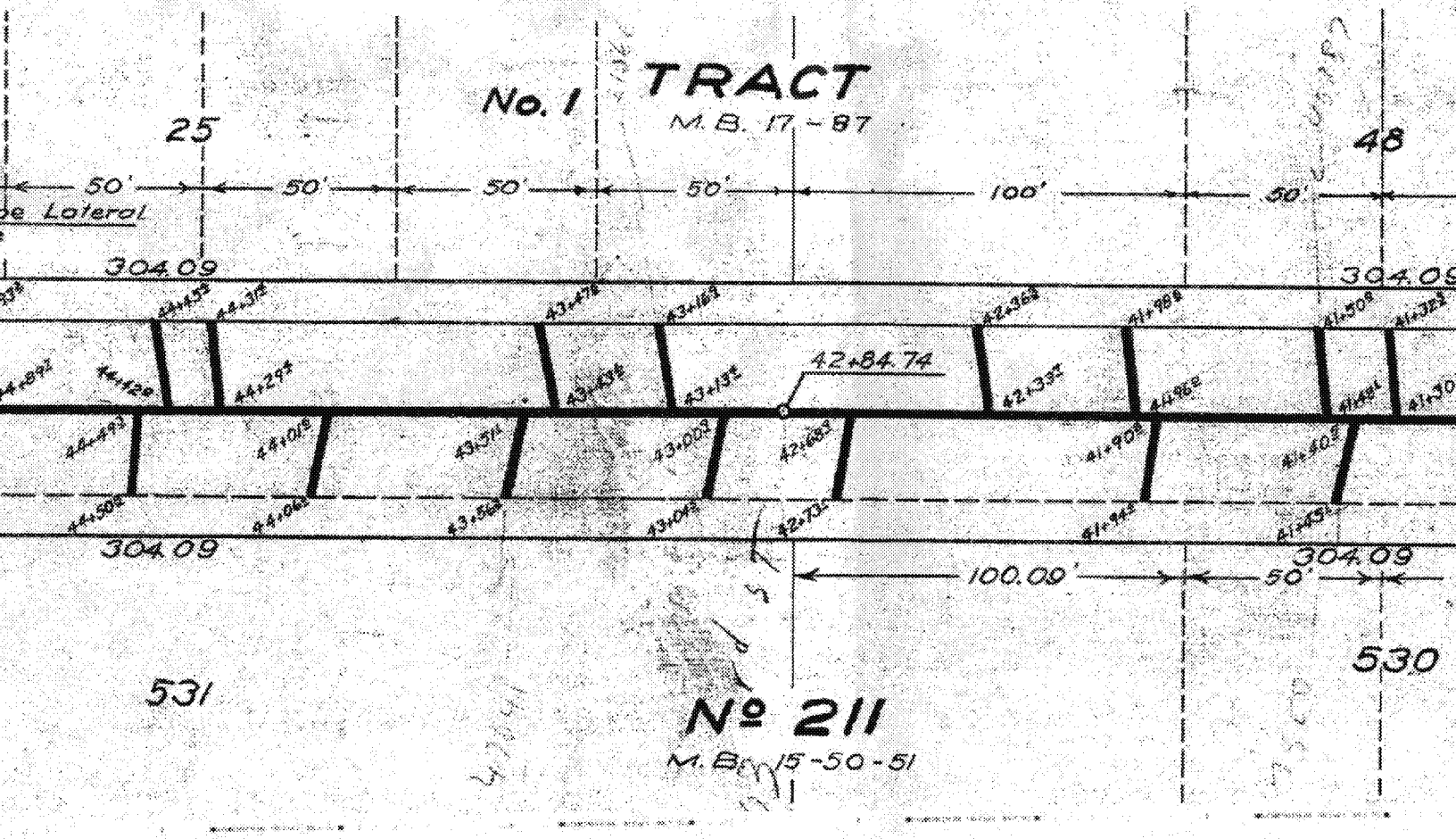
561

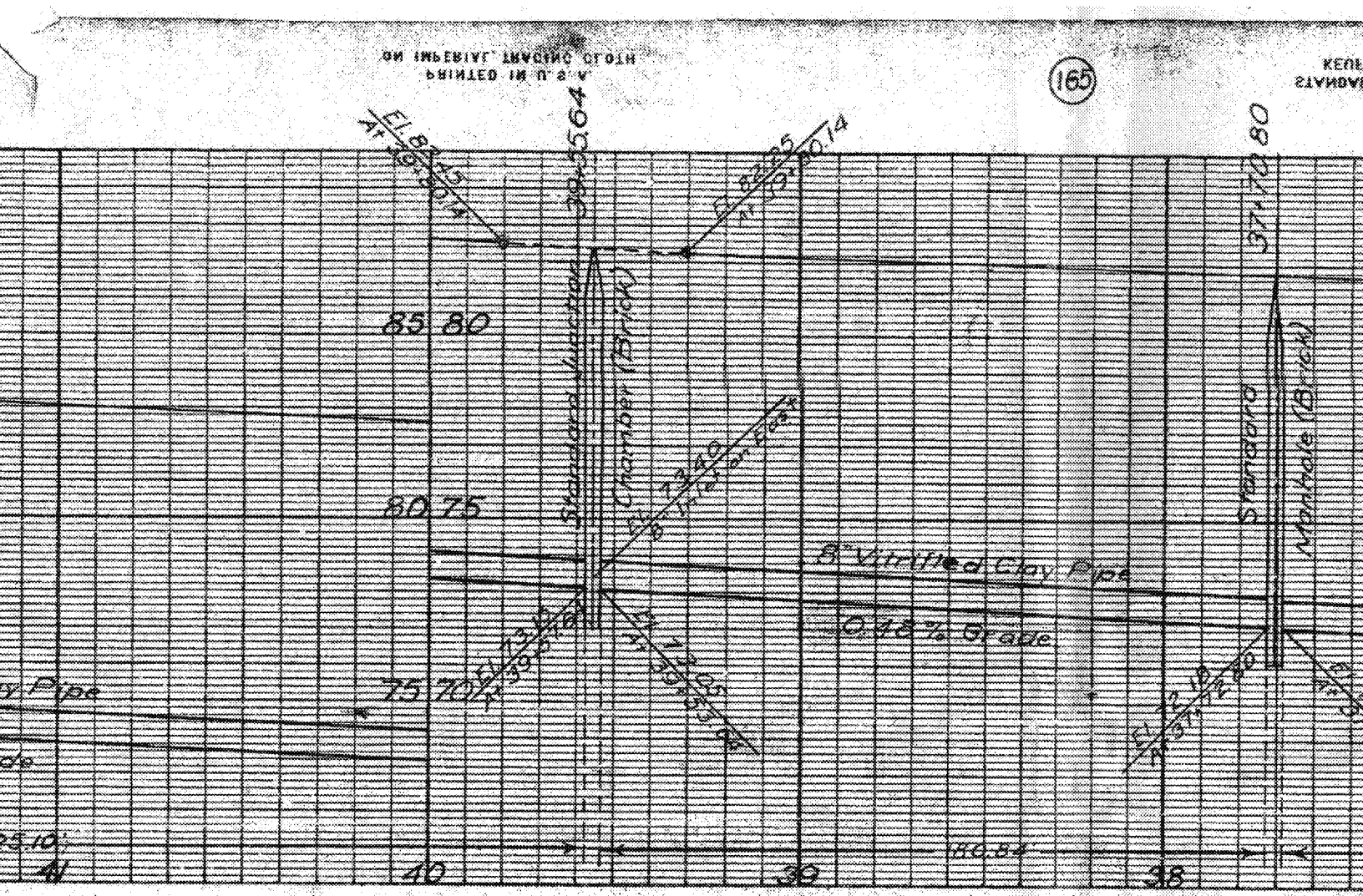
TRACT

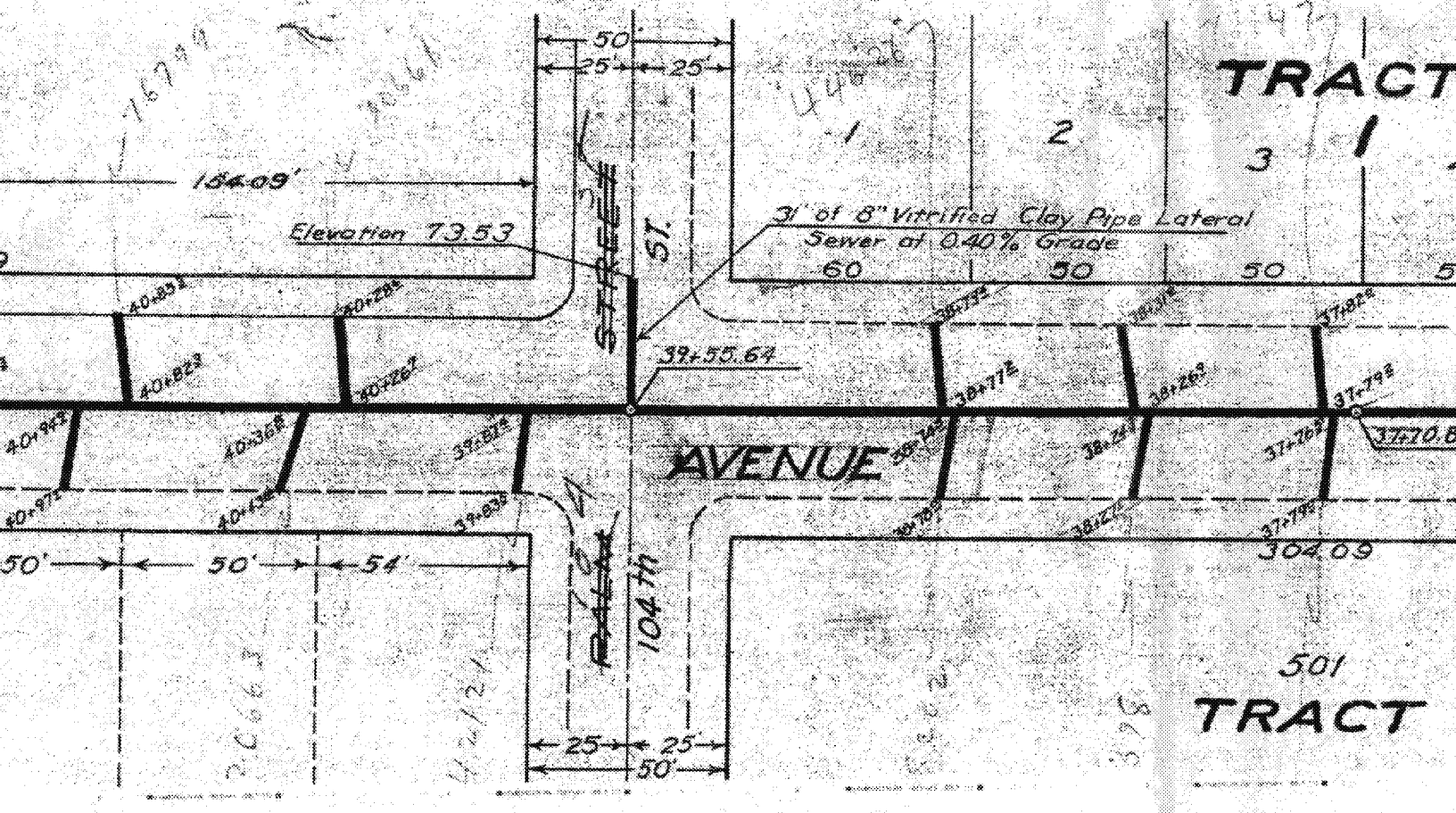


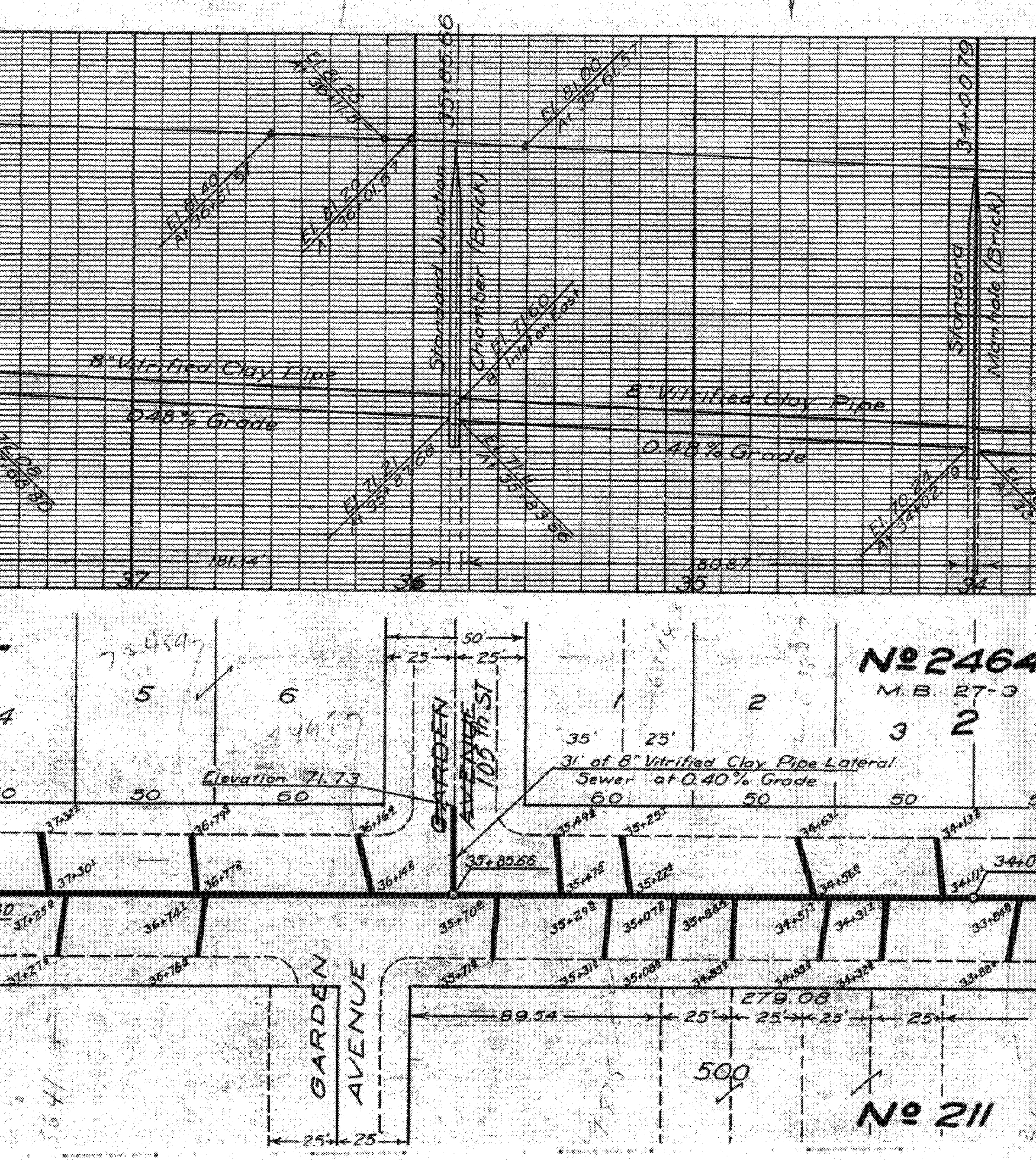



Manhole (Typ.)
42+84.74
8" Vitrified Clay Pipe
0.44% Grade
0.48% Grade
41
43
42

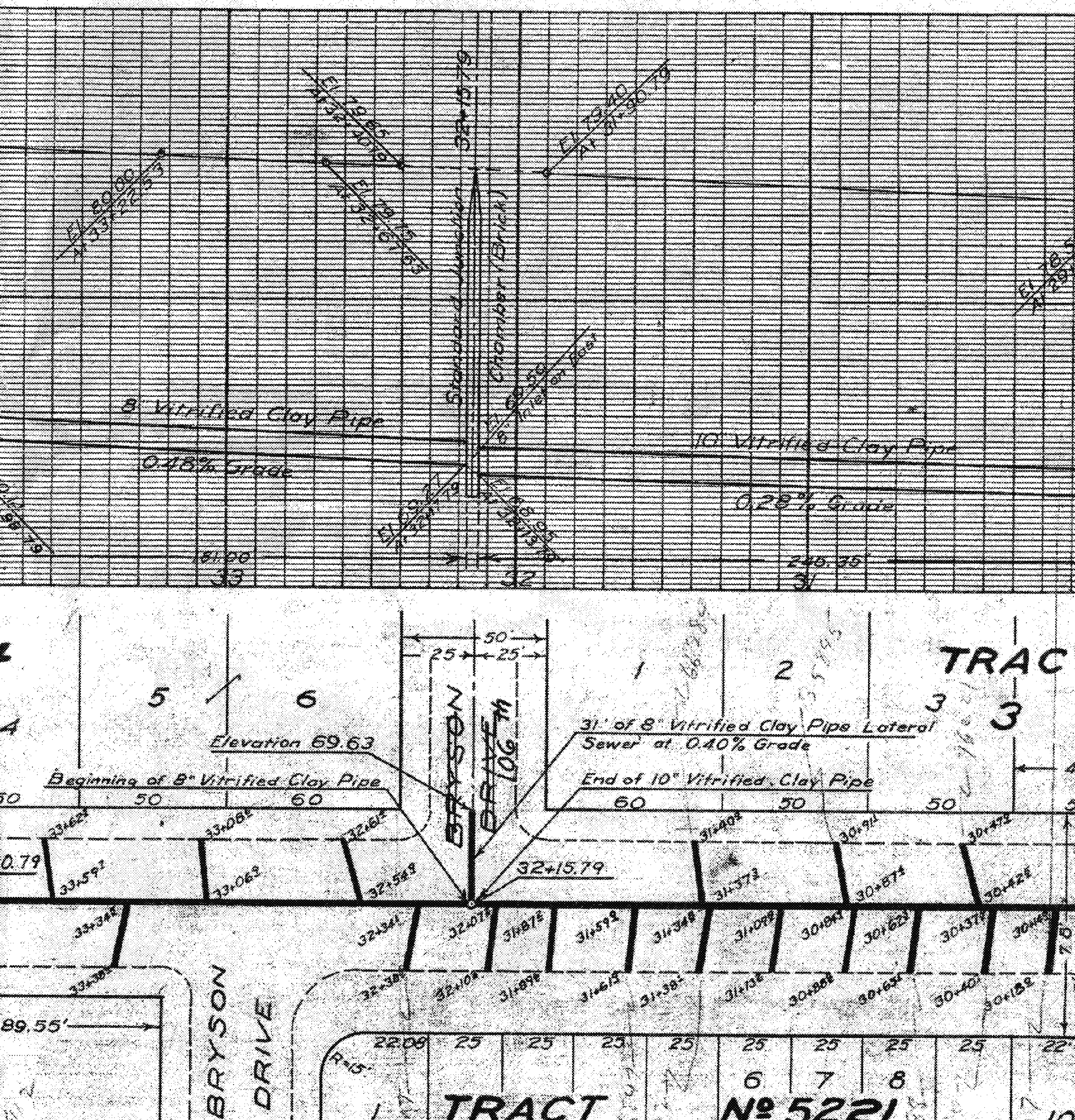

No. 1 TRACT
M. B. 17 - 87
25
48
50'
50'
50'
50'
100'
50'
304.09
42+84.74
100.00'
50'
304.09
531
530
No 211
M. B. 15 - 50 - 51

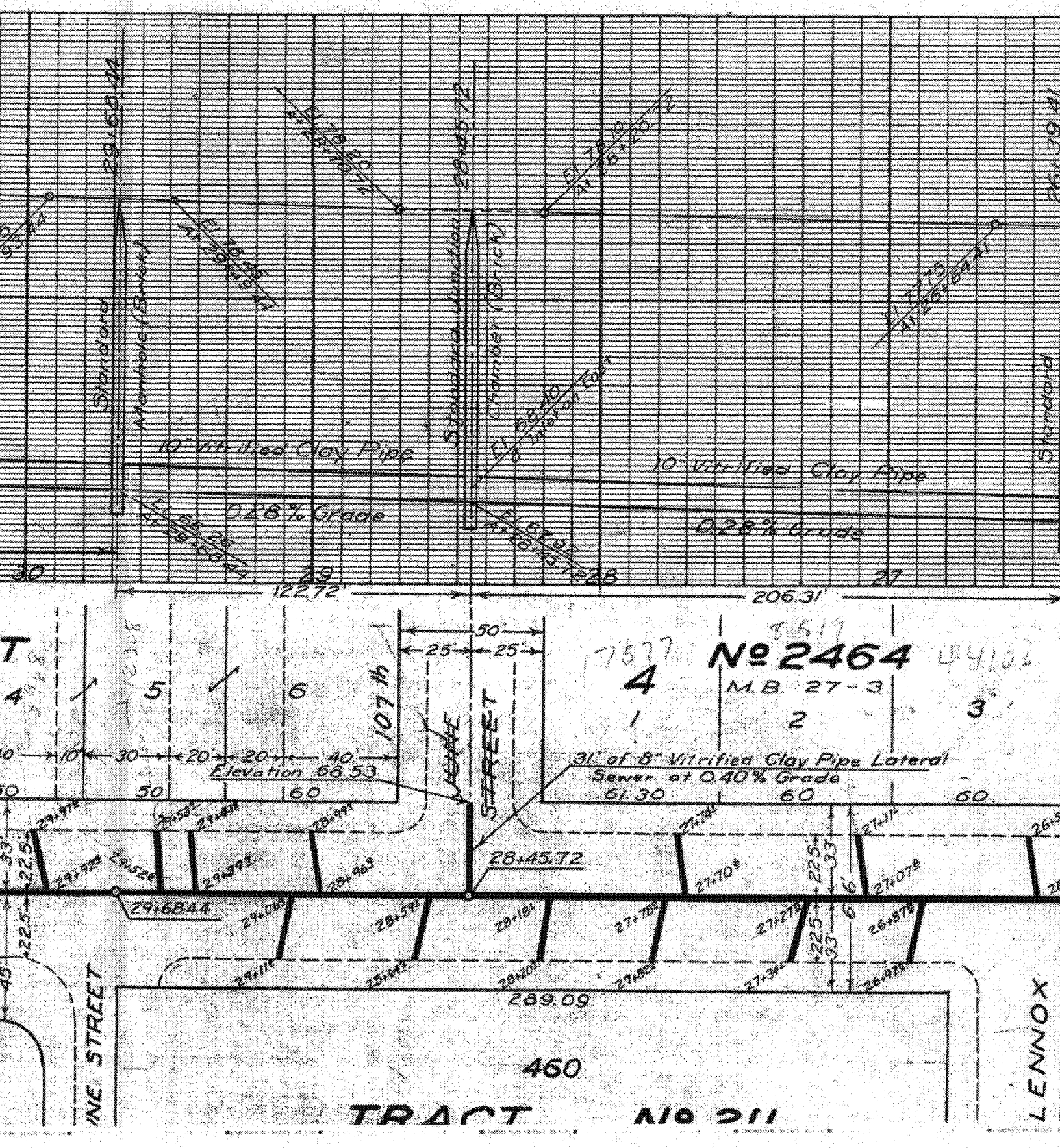


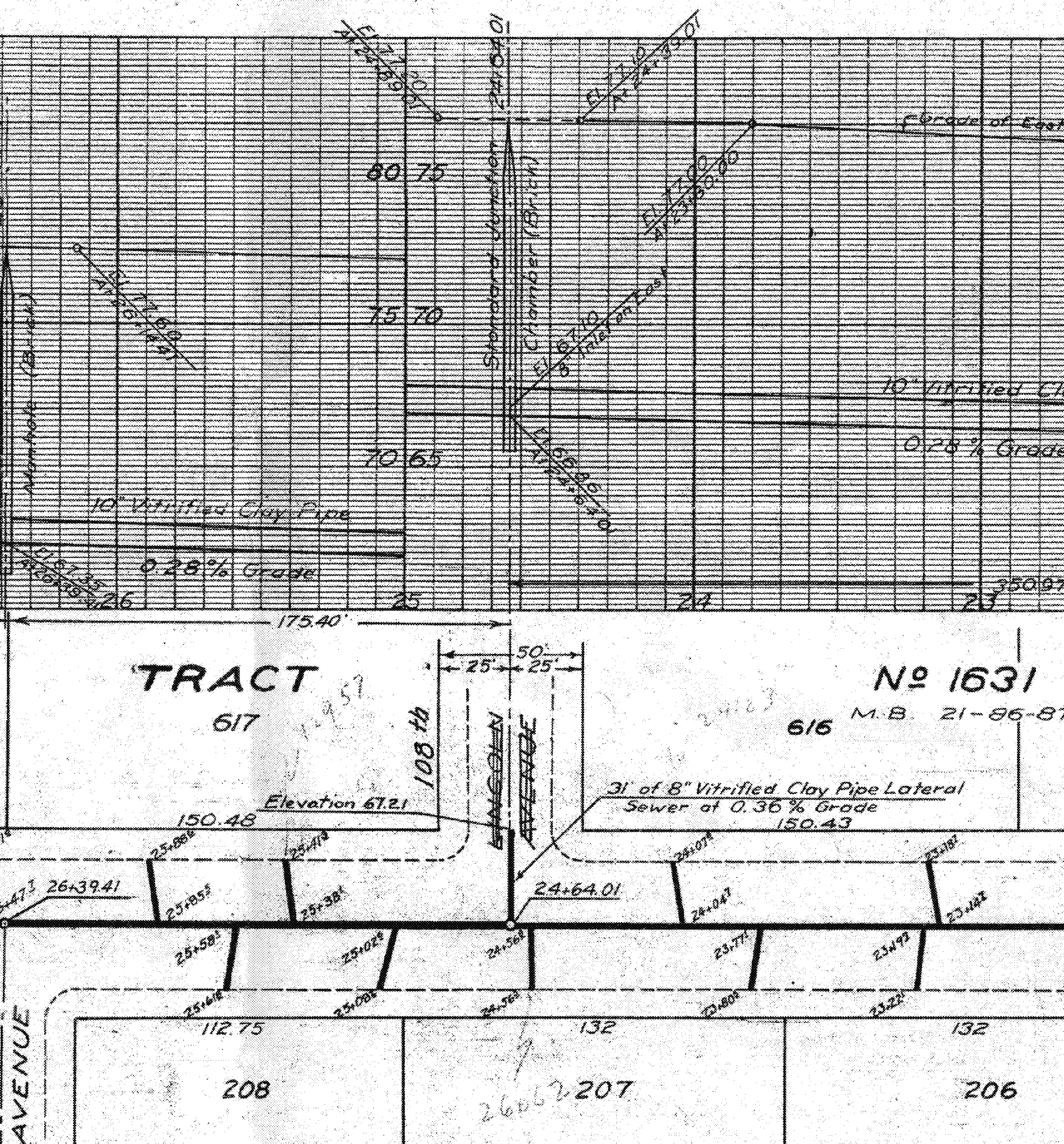


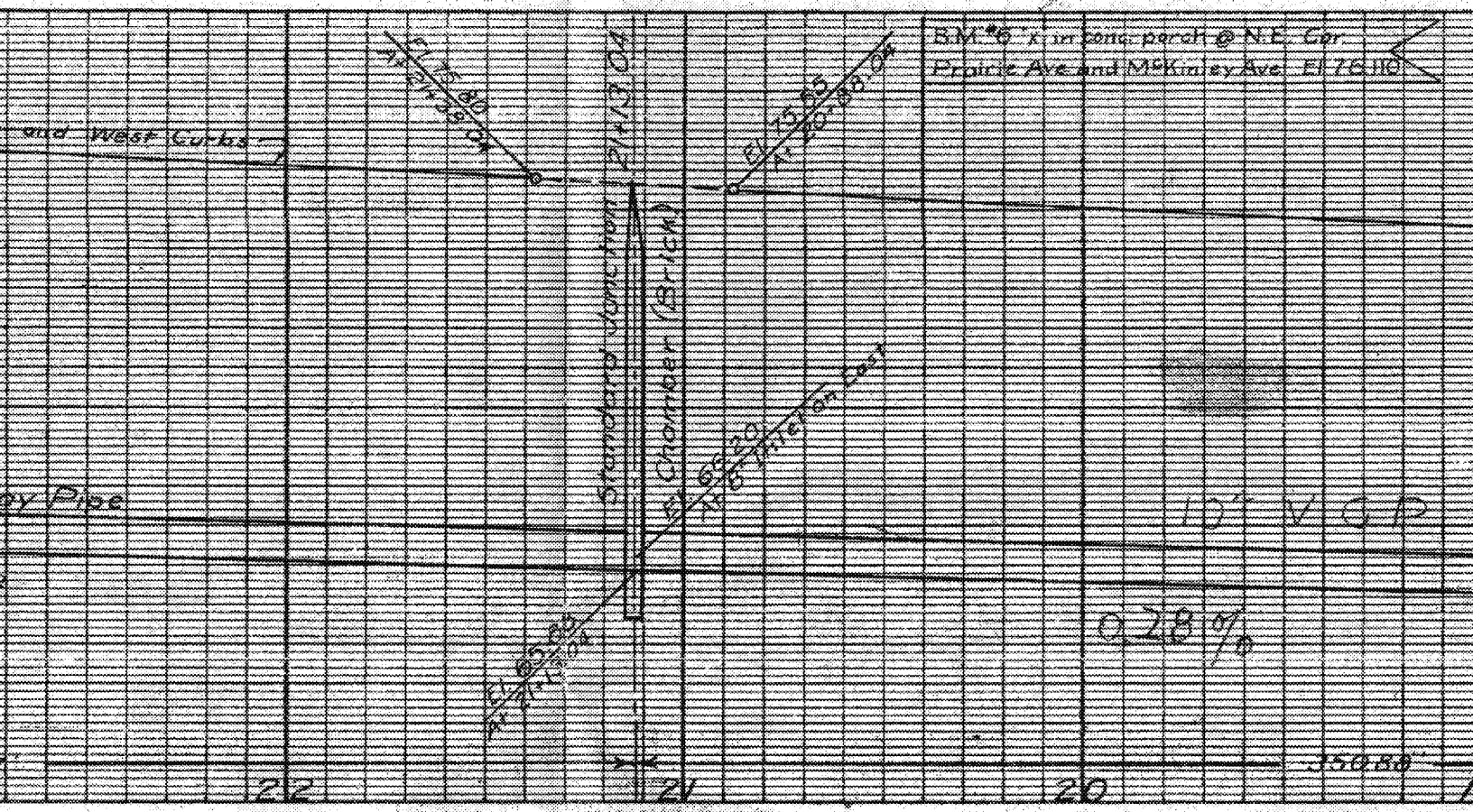


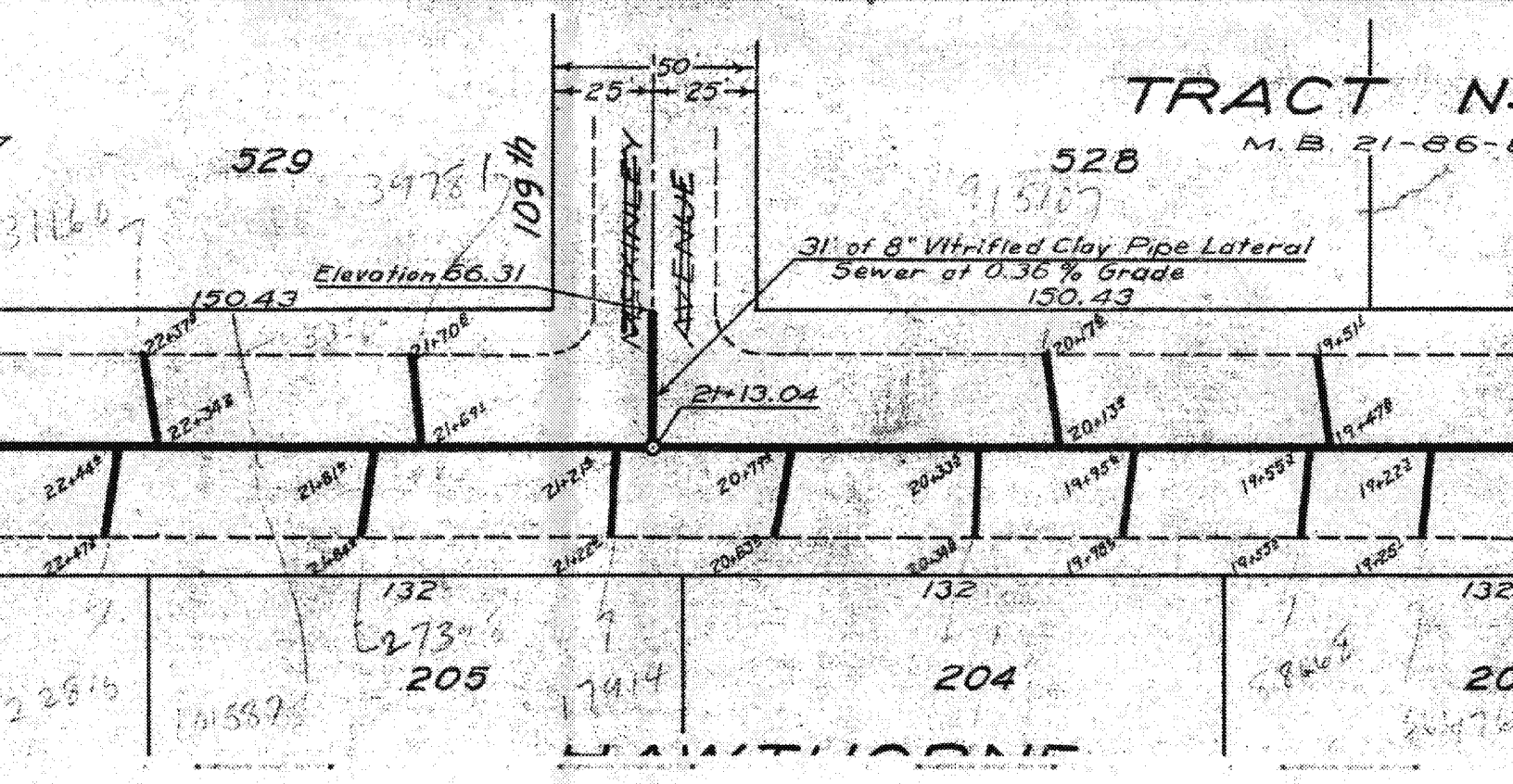
35+85.66
34+00.79
Standard Junction Chamber (Brick)
Standard Manhole (Brick)
8" Vitrified Clay Pipe
0.48% Grade
8" Vitrified Clay Pipe
0.48% Grade
181.14
80.87
37
36
35
34
№ 2464
M.B. 27-3
50'
25'
25'
GARDEN AVENUE
105th ST
Elevation 71.73
31' of 8" Vitrified Clay Pipe Lateral Sewer at 0.40% Grade
35+85.66
35'
25'
60
50
50
60
50
5
6
1
2
3
2
GARDEN AVENUE
279.08
89.54
25'
25'
25'
25'
25'
25
500
№ 211

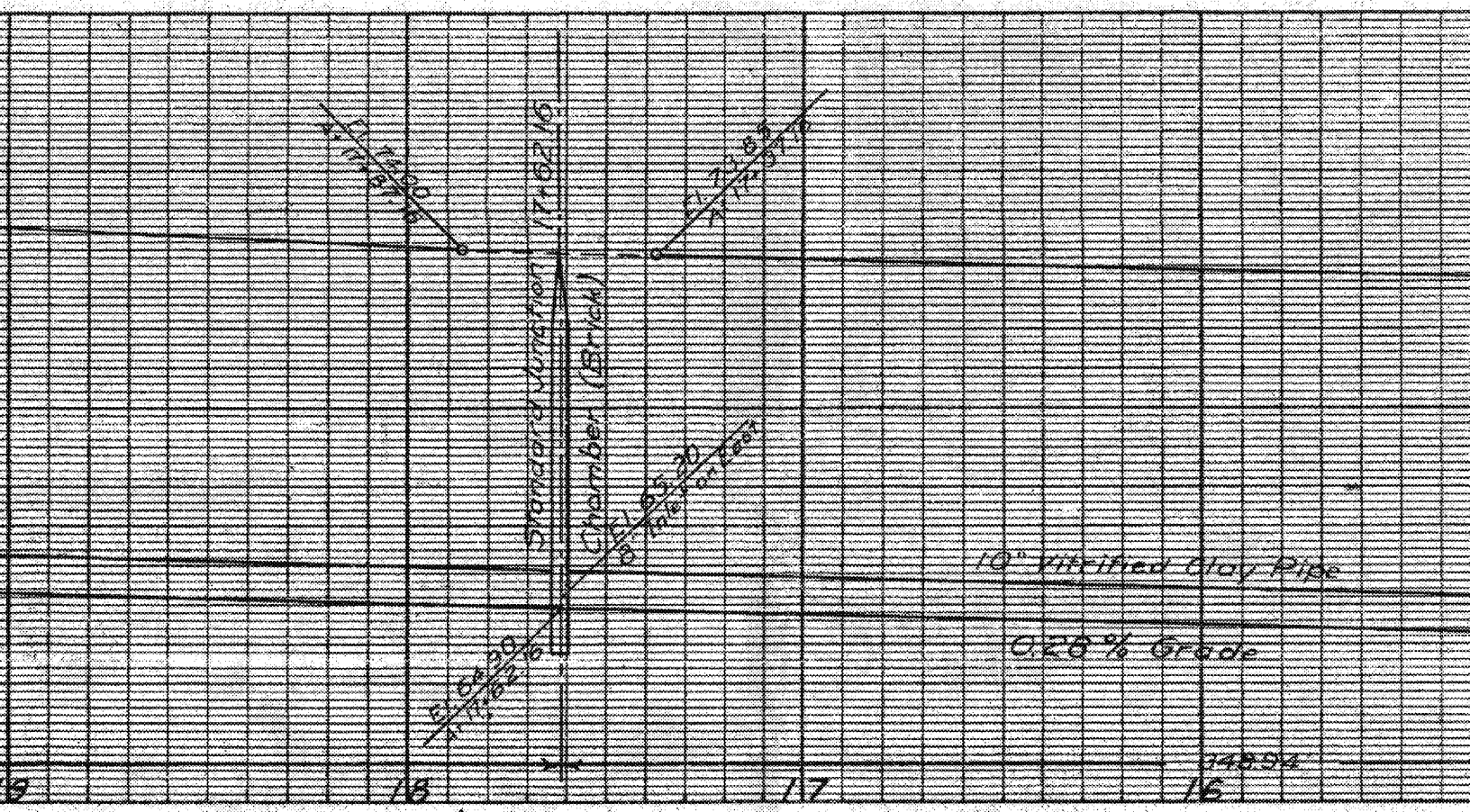

8" Vitrified Clay Pipe
0.48% Grade
10" Vitrified Clay Pipe
0.28% Grade
Standard Junction Chamber (Brick)
32+15.79
181.00
33
32
31
50'
25
25
5
6
1
2
3
TRACT
3
Elevation 69.63
Beginning of 8" Vitrified Clay Pipe
31' of 8" Vitrified Clay Pipe Lateral
Sewer at 0.40% Grade
End of 10" Vitrified Clay Pipe
60
50
60
60
50
50
32+15.79
89.55'
BRYSON
DRIVE
R=15'
22.08
25
25
25
25
25
25
25
25
6
7
8
TRACT
№ 5221
M.B. 88-36

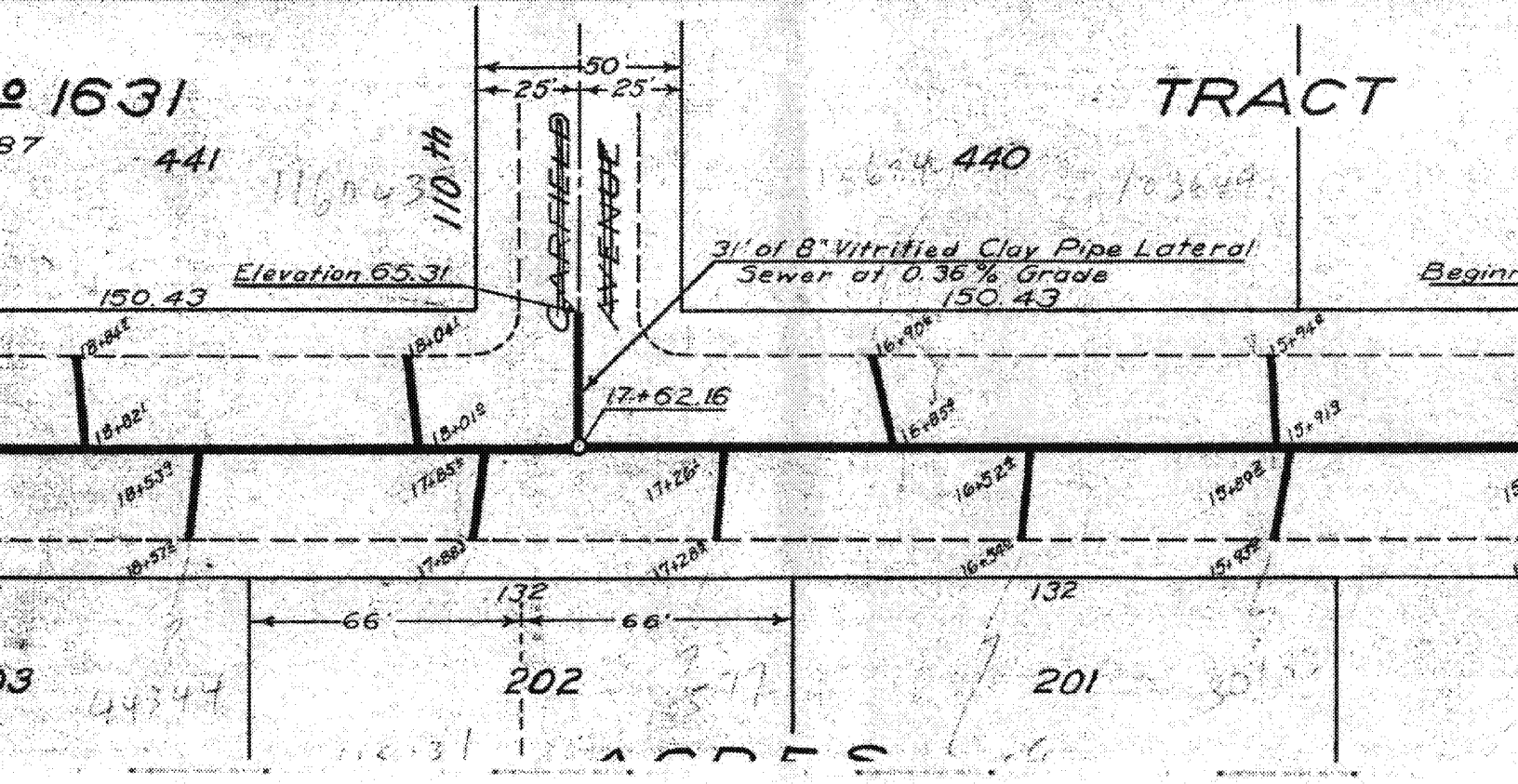


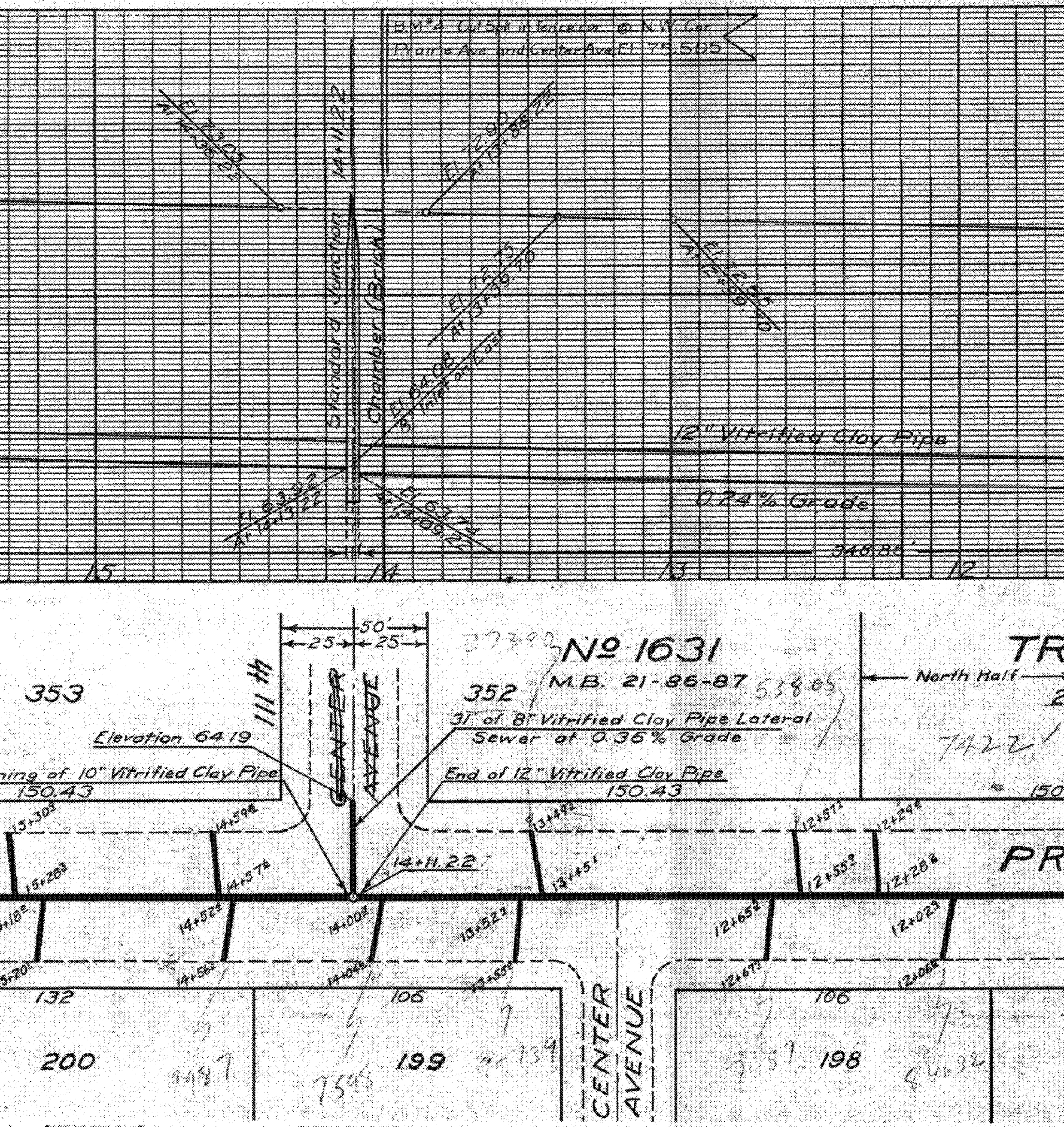

El. 77.20
At 25+89.0
24+64.01
El. 77.10
At 24+39.01
Grade of East
80 75
El. 77.00
At 23+50.00
El. 77.60
At 26+14.41
75 70
Standard Junction Chamber (Brick)
El. 67.10
8" Inlet on East
10" Vitrified Clay
0.28% Grade
El. 66.86
At 24+64.01
70 65
Manhole (Brick)
10" Vitrified Clay Pipe
El. 67.35
0.28% Grade
26
25
24
23
350.97
175.40'
50'
25'
25'
TRACT
617
108 th
LINCOLN AVENUE
Nº 1631
M.B. 21-86-87
616
31' of 8" Vitrified Clay Pipe Lateral
Sewer at 0.36% Grade
Elevation 67.21
150.48
150.43
26+39.41
24+64.01
AVENUE
112.75
132
132
208
207
206

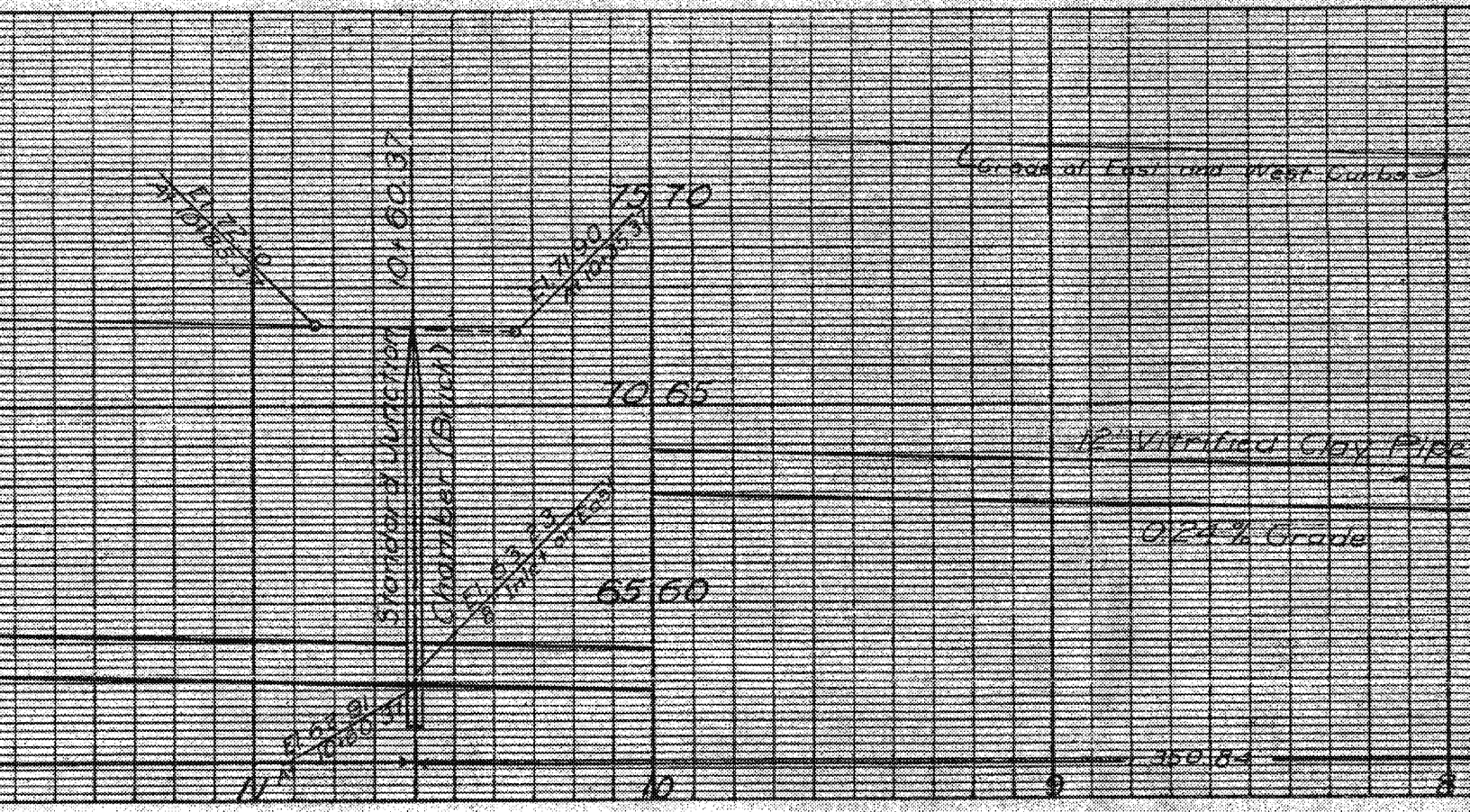


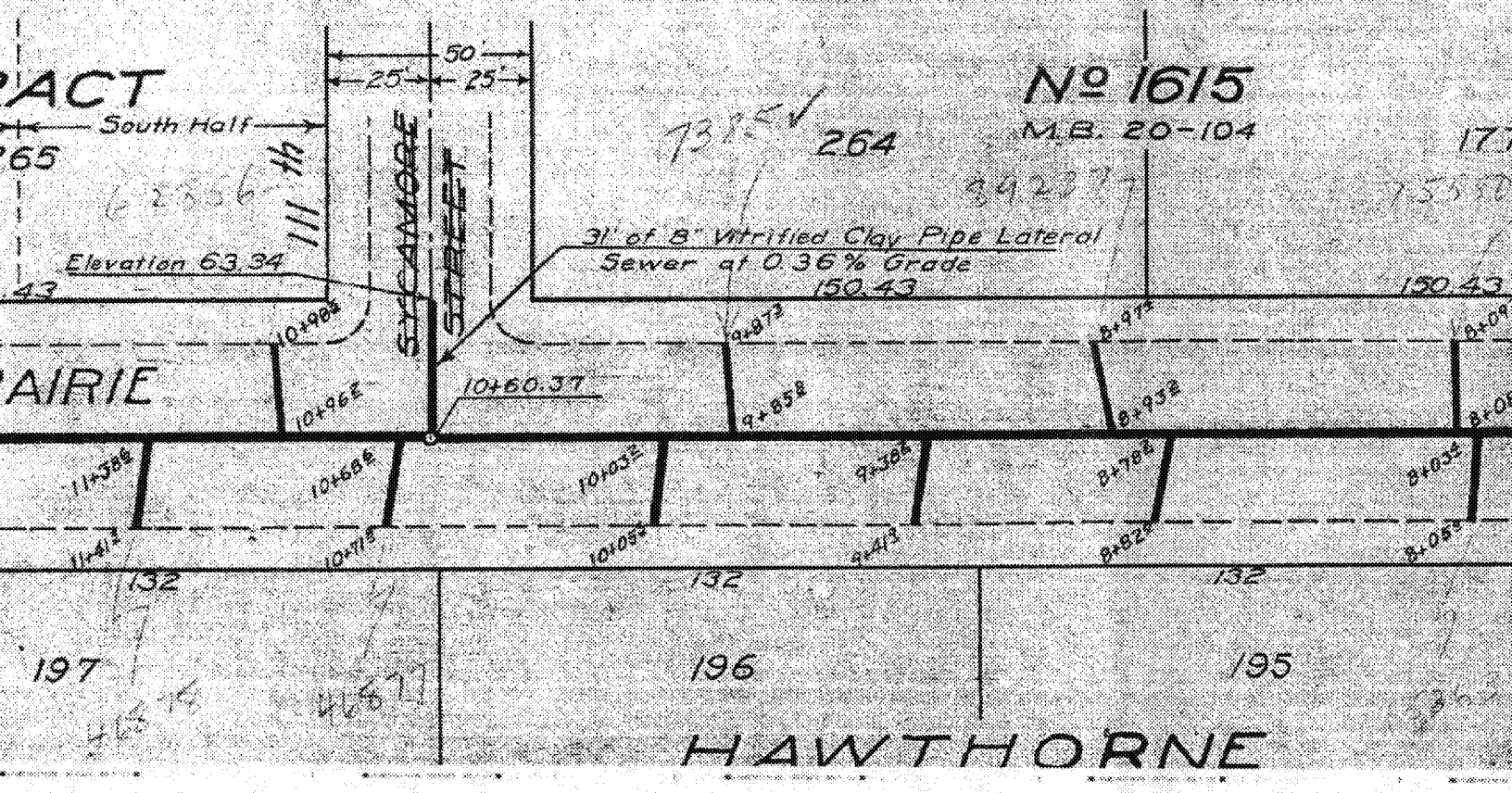


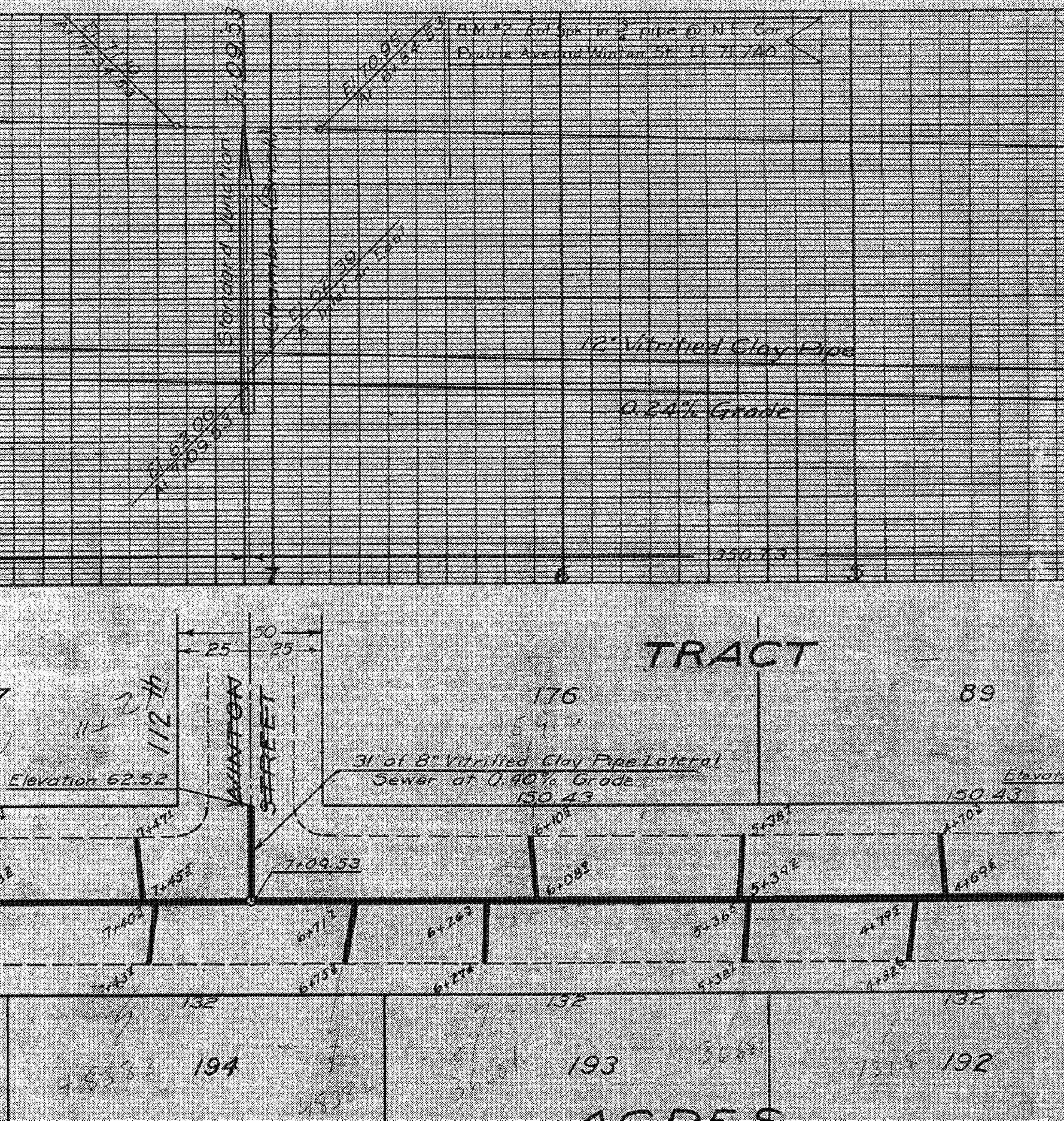




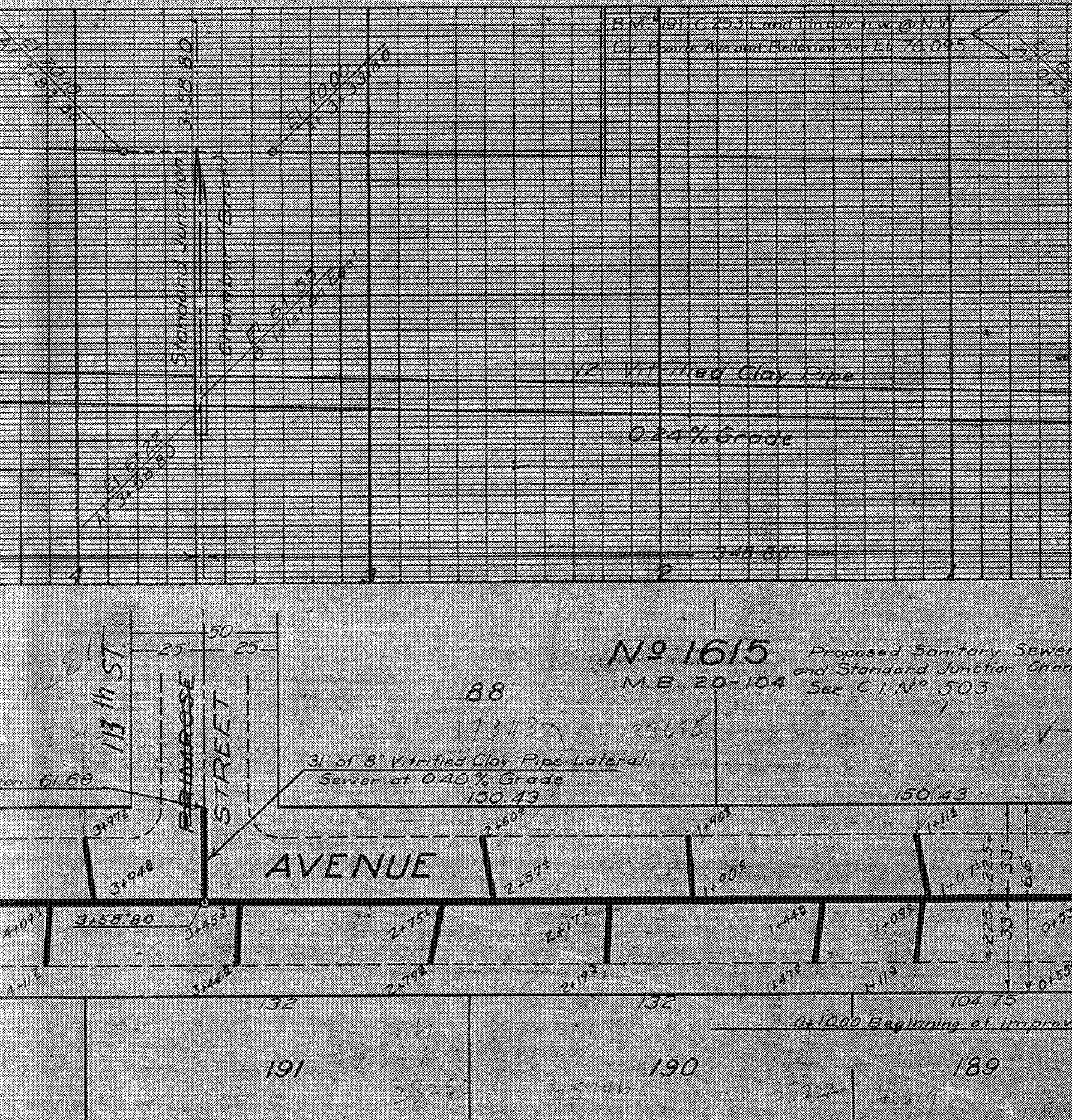

B.M.#4 Cut Spk in fence cor. @ N.W. Cor.
Prairie Ave. and Center Ave. El. 75.505
Standard Junction 14+11.22
Chamber (Brick)
12" Vitrified Clay Pipe
0.24% Grade
348.85
15
14
13
12
№ 1631
M.B. 21-86-87
353
352
50'
25'
25'
CENTER AVENUE
Elevation 64.19
ning of 10" Vitrified Clay Pipe
150.43
31' of 8" Vitrified Clay Pipe Lateral
Sewer at 0.36% Grade
End of 12" Vitrified Clay Pipe
150.43
14+11.22
North Half
TR
PR
132
106
106
200
199
198
CENTER
AVENUE

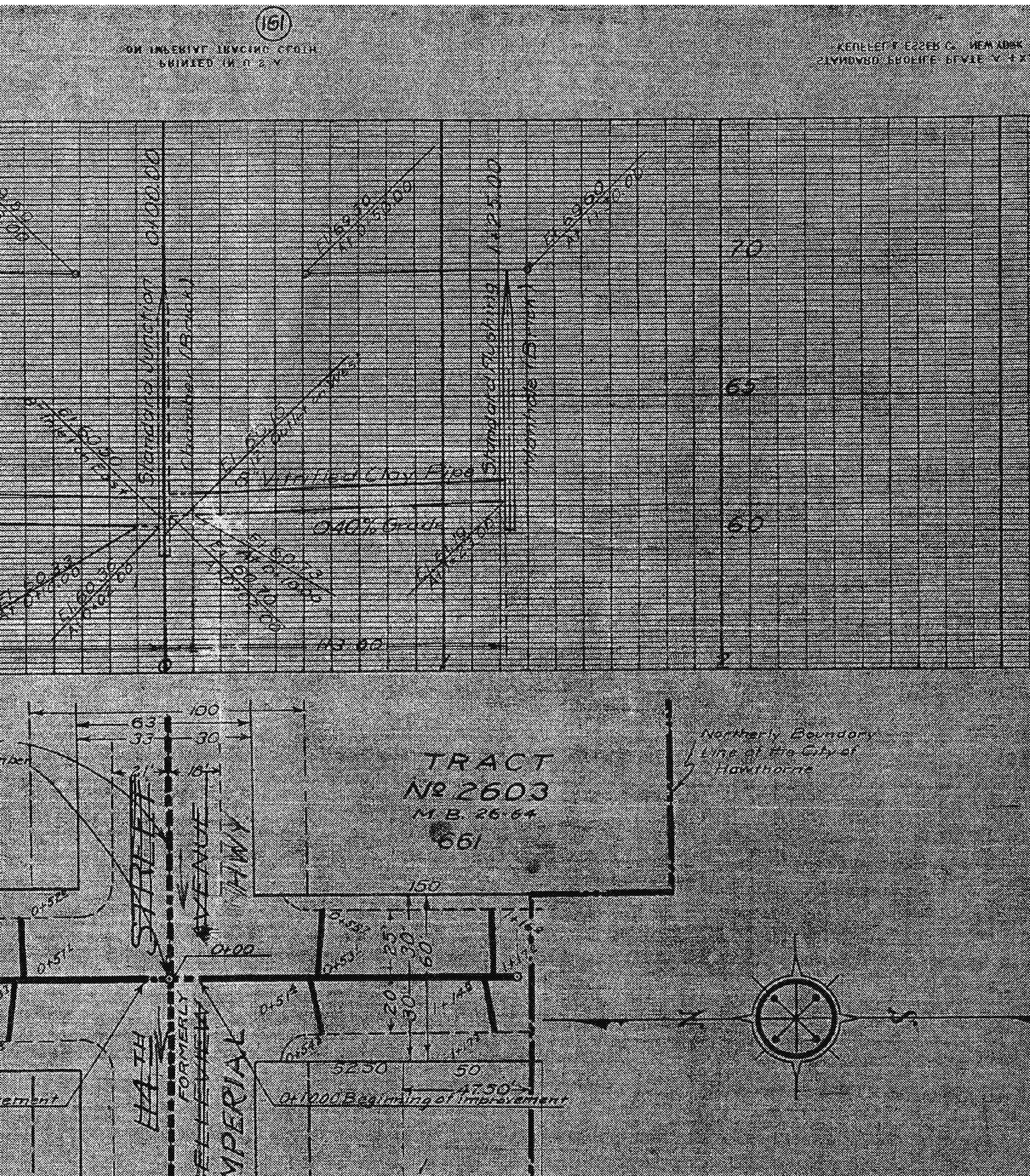






B.M. #2 Gal Spk in 3/4 pipe @ N.E. Cor. Prairie Ave and Winton St. El. 71.740
Standard Junction 7+09.53
12" Vitrified Clay Pipe
0.24% Grade
El. 62.06
7+09.53
El. 70.95
350.73
TRACT
176
89
WINTON STREET
112th
Elevation 62.52
50
25
25
31' of 8" Vitrified Clay Pipe Lateral Sewer at 0.40% Grade
150.43
150.43
7+09.53
132
132
132
194
193
192
ACRES


B.M. #191 C 253 L and Lincoln n.w. @ N.W.
Cor. Prairie Ave and Bellevue Ave. El. 70.095
Standard Junction 3+58.80
Chamber (Brick)
El. 70.02
El. 61.53
12" Vitrified Clay Pipe
0.24% Grade
3+48.80
№ 1615 Proposed Sanitary Sewer
and Standard Junction Cham
M.B. 20-104 See C.I. № 503
113 th ST.
PRIMROSE
STREET
88
31' of 8" Vitrified Clay Pipe Lateral
Sewer at 0.40% Grade
150.43
150.43
AVENUE
3+58.80
132
132
104.75
0+10.00 Beginning of improv
191
190
189


161
Standard Junction 0+00.00
Manhole (Brick)
Standard Flushing 1+25.00
Manhole (Brick)
8" Vitrified Clay Pipe
0.40% Grade
113.00
70
65
60
TRACT
Nº 2603
M.B. 26-64
661
Northerly Boundary
Line of the City of
Hawthorne
150
0+00
144TH STREET
FORMERLY
BELLE AVENUE
IMPERIAL HWY.
0+10.00 Beginning of Improvement
52.50
50
47.50
TRACT
Nº 6713
M.B. 71-41-42
100
63
33
30
18'
21'

SS-302

3-A-28

PLAN No.

COUNTY IMPROVEMENT
Nº 326

RECORD PLAN AND PROFILE
OF
SANITARY SEWER
IN
PRAIRIE AVENUE

CENTURY BLVD BETWEEN TO IMPERIAL
PINE STREET AND THE NORTHERLY BOUNDARY
LINE OF THE CITY OF HAWTHORNE
AND ALSO IN A PORTION OF
CENTURY **PINE STREET**

SCALE 1" = 40'

COUNTY OF LOS ANGELES
CALIFORNIA

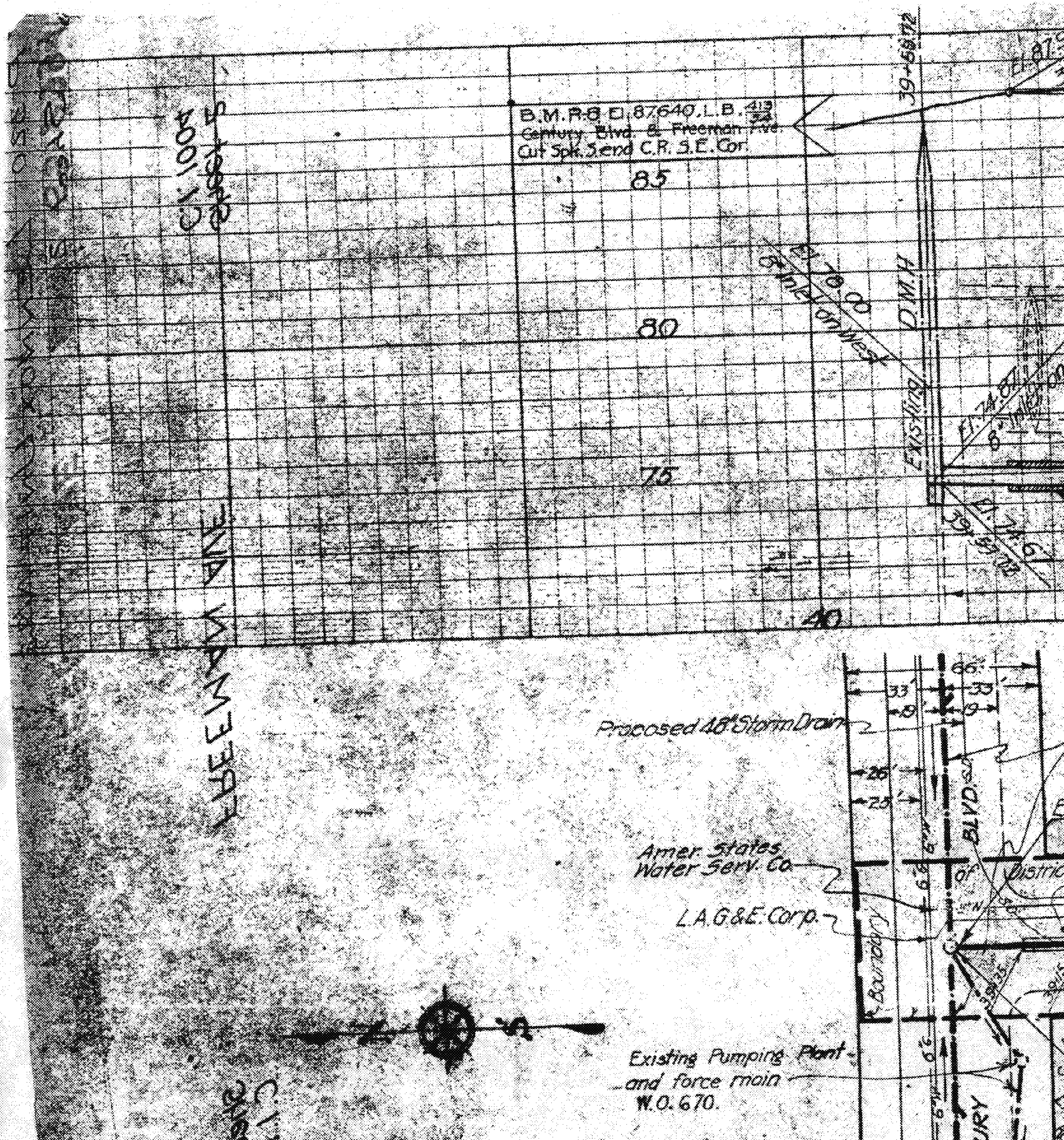
OFFICE OF
COUNTY SURVEYOR

J. E. ROCKHOLD
County Surveyor

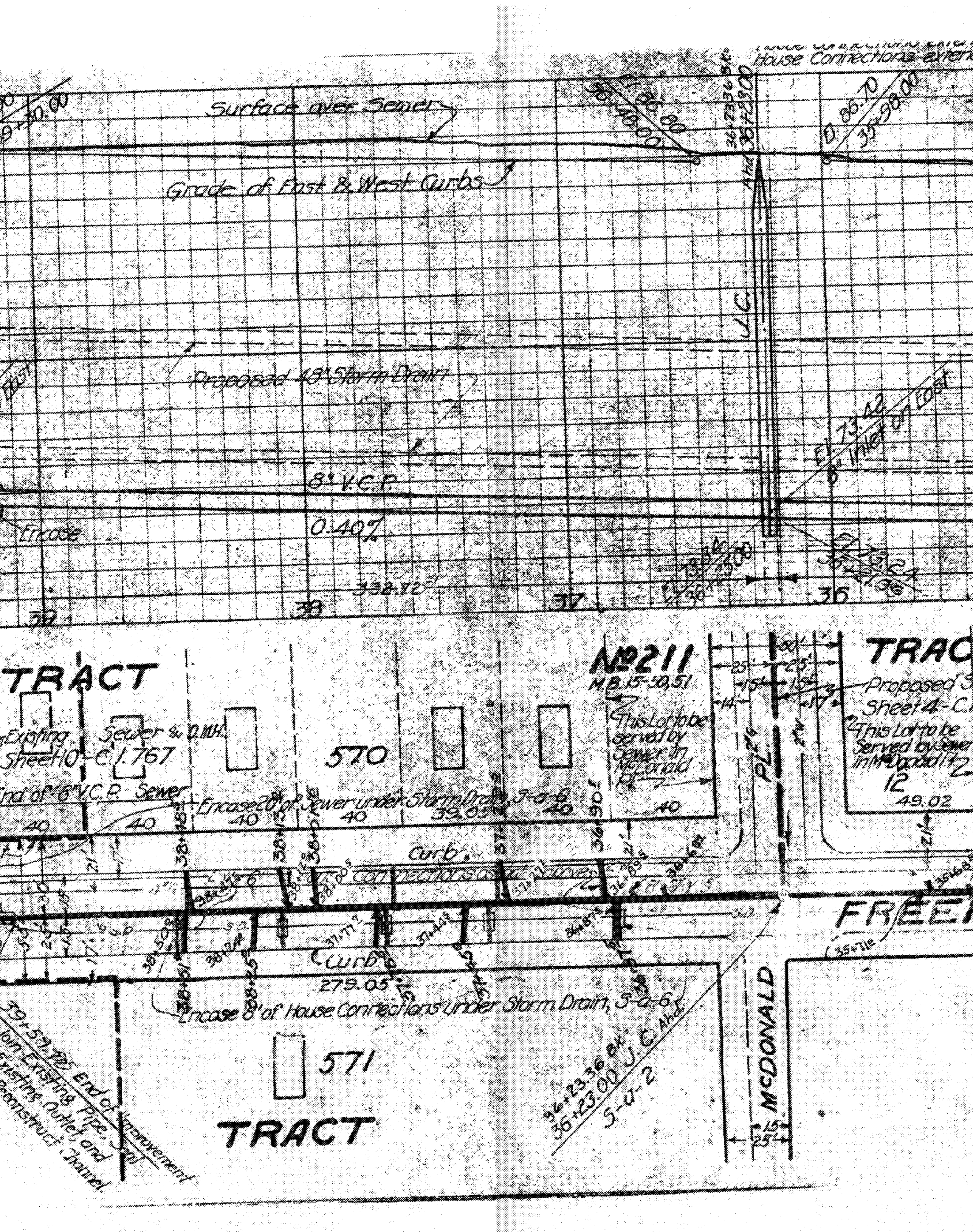
ALFRED J. JONES
Chief Deputy

NOTE:
Invert Elevations at House Connections are 6.0' below top of curb.
Elevations are given in feet above U.S.C.S. or mean sea level datum.

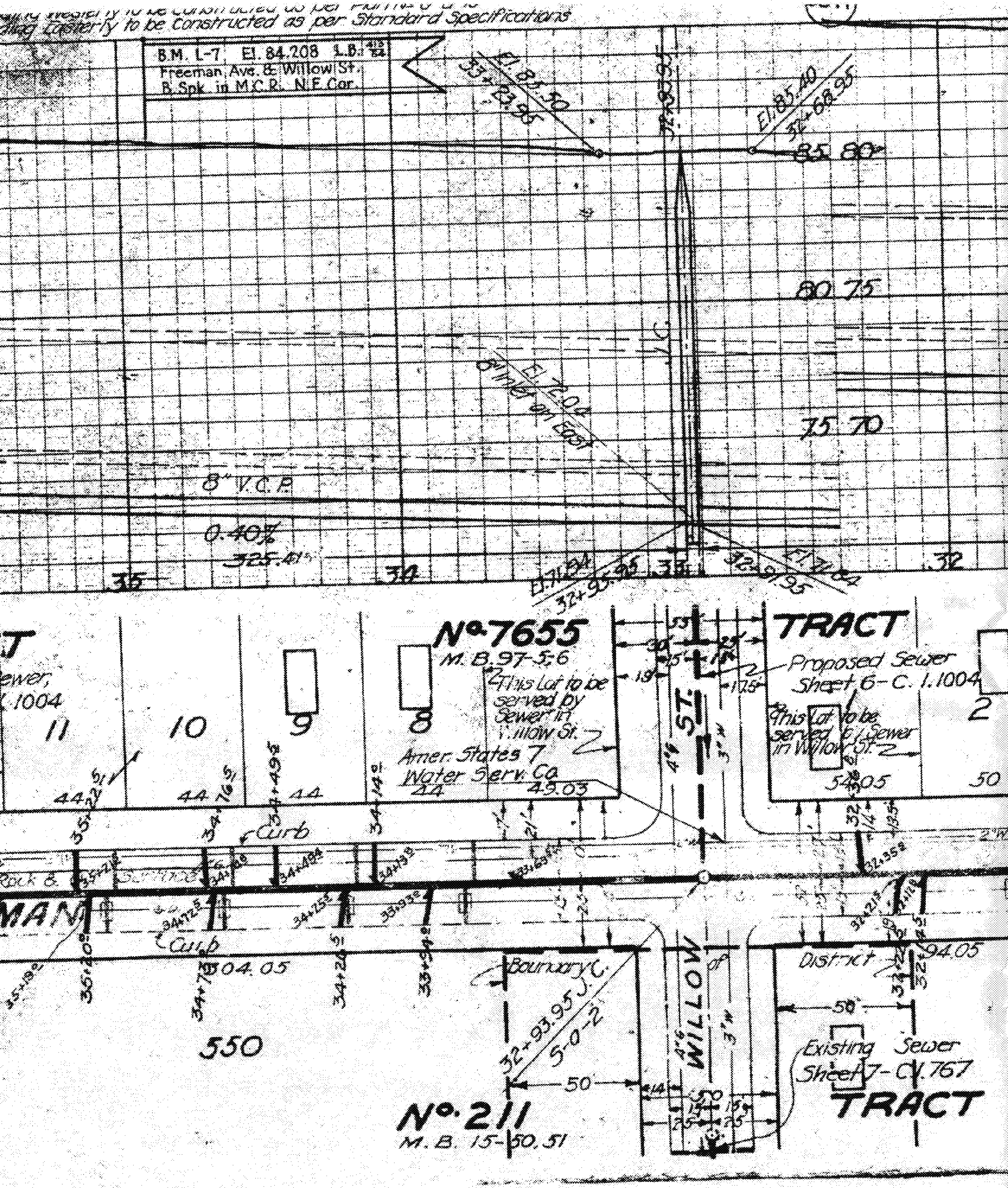
REFERENCES	C.J. 326		
Wall Sheet Nº 24 Assessor's Books Nos 515-96 and 410	DRAWN	White	Approved



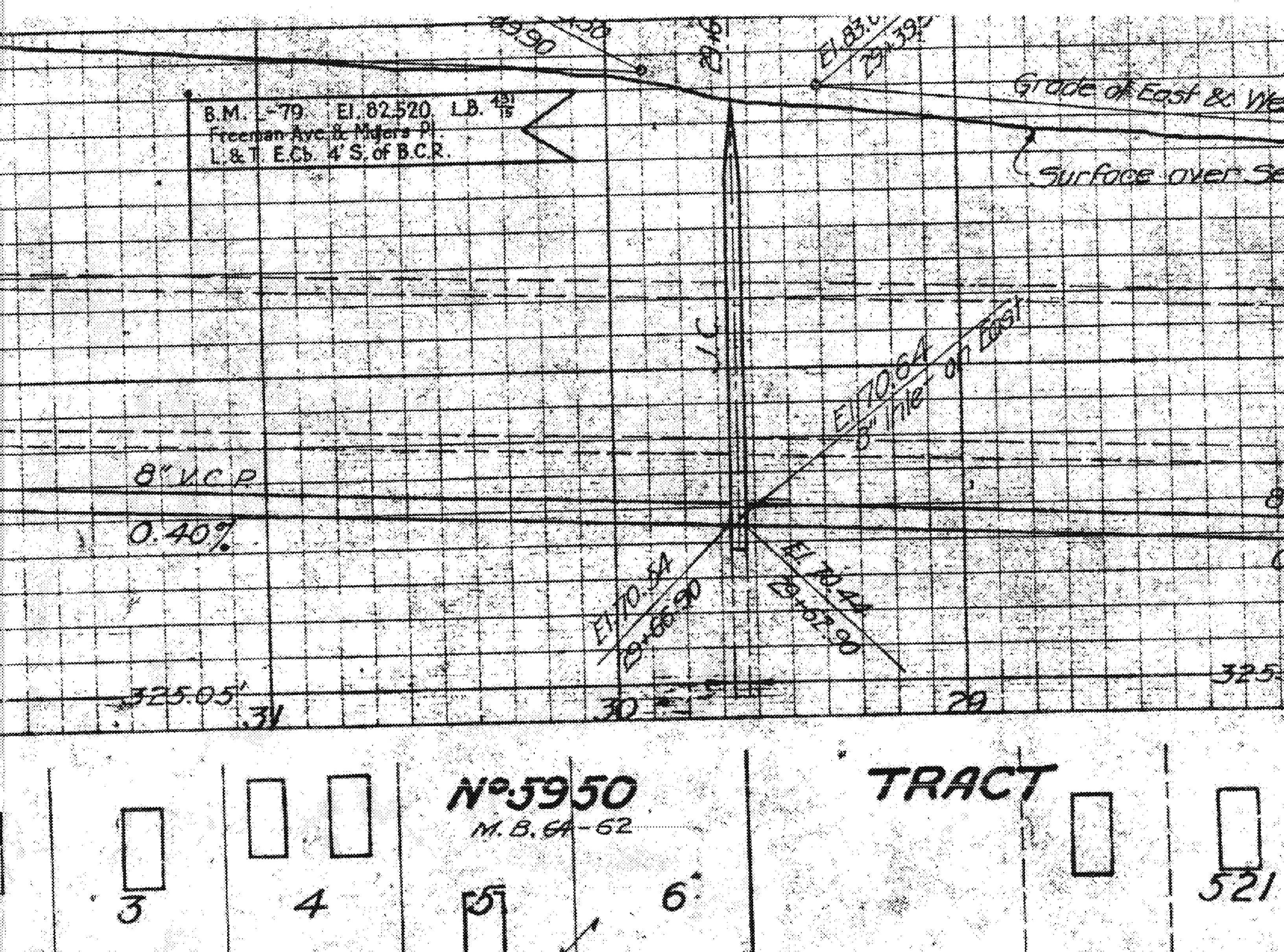
B.M. R-8 El. 87.640, L.B. 419
Century Blvd. & Freeman Ave.
Cut Spk. S. end C.R. S.E. Cor.
85
80
75
40
39+68.72
Existing D.M.H.
El. 78.00
8" Inlet on West
El. 74.6
39+95.78
C.I. 1004
Proposed 48" Storm Drain
Amer. States
Water Serv. Co.
L.A.G.&E. Corp.
Existing Pumping Plant
and force main
W.O. 670.
CENTURY
BLVD.
Boundary
of
District
66'
33'
26'
25'
C.I. 1004



House Connections extend
Surface over Sewer
Grade of East & West Curbs
J.C.
Proposed 48" Storm Drain
El. 73.42
6" Inlet on East
8" V.C.P.
Encase
0.40%
332.72
38
37
36
TRACT
№211
M.B. 15-50,51
This Lot to be served by Sewer in McDonald Pl.
Existing
Sheet 10 - C.I. 767
Sewer & D.M.H.
End of 6" V.C.P. Sewer
Encase 20' of Sewer under Storm Drain, S-a-6
570
39.05
40
Curb
Connections as above
PL. 26
TRAC
Proposed
Sheet 4 - C.
This Lot to be Served by Sewer in McDonald Pl.
12
49.02
FREE
Curb
279.05
Encase 8' of House Connections under Storm Drain, S-a-6
571
TRACT
36+23.36 P.C.
36+23.00 J.C. Ahd.
S-a-2
McDONALD
39+59.72± End of Improvement
Join Existing Pipe
Existing Outlet and
Reconstruct Channel



to be constructed as per Standard Specifications
B.M. L-7 El. 84.208 L.B. 413/54
Freeman Ave. & Willow St.
B. Spk. in M.C.R. N.E. Cor.
El. 85.50
33+23.95
32+95.95
El. 85.40
32+68.95
85.80
80.75
75.70
El. 72.04
Bumped on East
J.C.
8" V.C.P.
0.40%
325.41
35
34
33
32
El. 71.84
32+95.95
32+91.95
El. 71.84
No. 7655
M.B. 97-5,6
This Lot to be served by Sewer in Willow St.
TRACT
Proposed Sewer Sheet 6-C. 1.1004
This Lot to be served by Sewer in Willow St.
11
10
9
8
2
Amer. States Water Serv. Co.
44
44
44
44
49.03
54.05
50
ST.
Curb
Rock & Service
MAN
Curb
504.05
Boundary C.
32+93.95 J.C.
5-0-2
WILLOW
District
594.05
550
50'
50'
Existing Sewer Sheet 7-C. 1.767
TRACT
No. 211
M.B. 15-50,51



B.M. L-79 El. 82.520 L.B. 431/15
Freeman Ave. & Myers Pl.
L. & T. E.Cb. 4' S. of B.C.R.
Grade of East & We
Surface over Se
J.C.
El. 70.64
8" Inlet on East
8" V.C.P.
0.40%
El. 70.54
29+66.90
El. 70.40
29+62.90
325.05'
31
30
29
No. 5950
M.B. 64-62
TRACT
3
4
5
6
521
50
50
50
50
79
42
Curb
V.C. Pipe Sewer
Curb
44
44
44
53
Boundary of District
541
MYERS
PL.
50'
29+64.90 J.C.
5-0-2
Existing Sewer
Sheet 7-C.I. 767

COUNTY IM
NO. 1

PROFILE, ALIGNME
SANITARY
TO BE CONS

FREEMAN

BETWEEN IMPERIAL HW

AND IN A PO

CENTUF

SHEET 2 O

SCALE { HORIZ. 1"=40'
VERT. 1"=4'

COUNTY OF LOS A

J. E. ROCKHOLD,

Recommended Alfred Jones
CHIEF DEPUTY

Approved as to form
Everett W. Mattoon
County Counsel

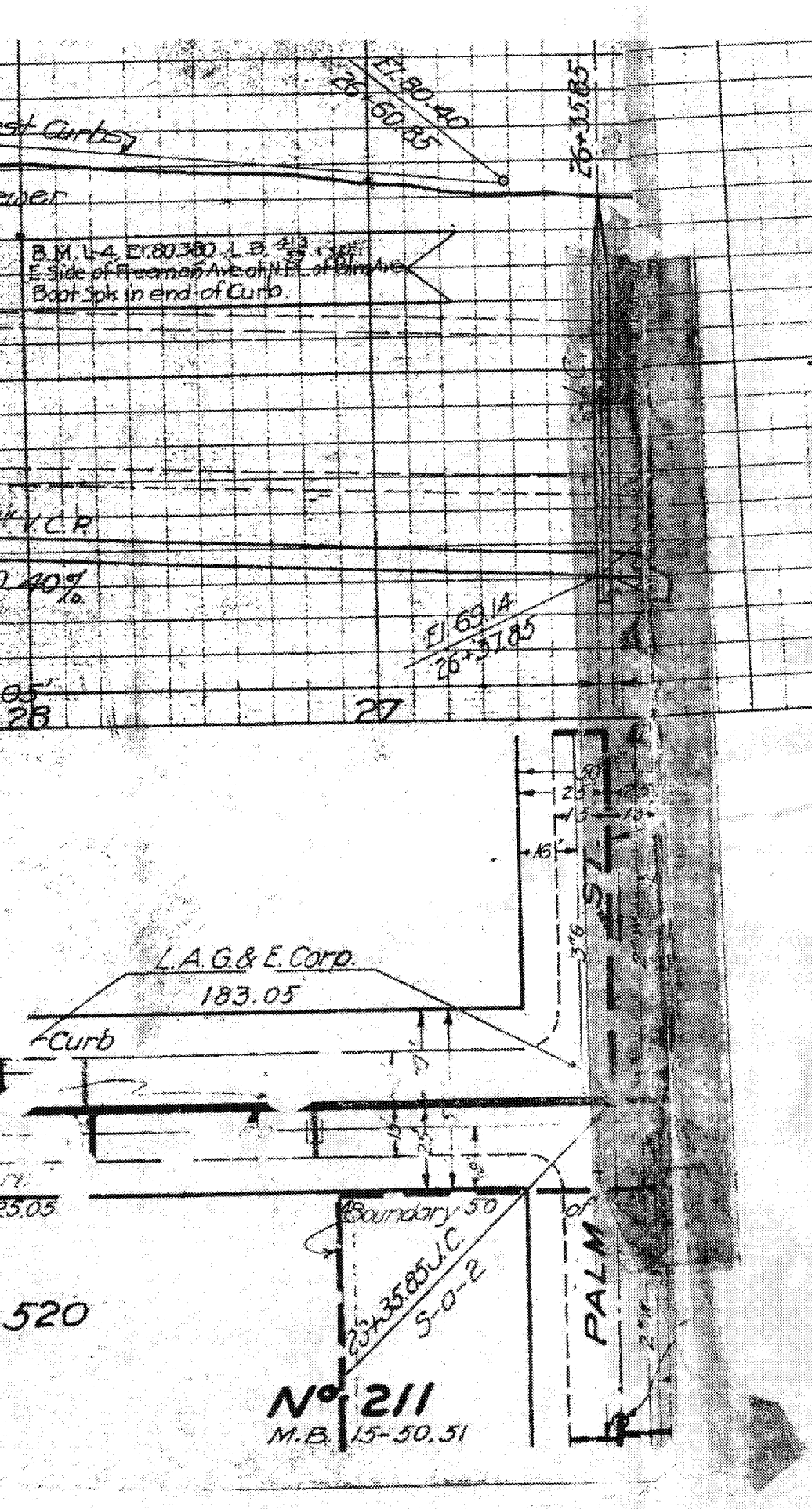
By Ellis Kennedy
DEPUTY

FOR
SEE PLA

NOTE:

GRADES TO WHICH THIS IMPROVEMENT IS TO
GRADE POINTS FOR TOP OF CURB, CENTER LINE
CIRCLES ON PROFILES. AT ALL POINTS BETWEEN
SO AS TO CONFORM TO A STRAIGHT LINE DRAWN
ELEVATIONS ARE IN FEET ABOVE U. S. G. S. D
UNIT PRICES FOR ADDITIONAL WORK WHICH
IN ADVANCE, SHALL BE SUBMITTED IN THE PROPO
THIS DRAWING AND THE DATA HEREON ARE

REFERENCES
W. S. 24
A.B. 469
L. B. 413 - 431



PROVEMENT

004

NT AND GRADE OF
SEWERS
TRUCTED IN

AVENUE

VY AND CENTURY BLVD.

ORTION OF

RY BLVD.

F 6 SHEETS

NOV. 1928

NGELES, CALIFORNIA
COUNTY SURVEYOR

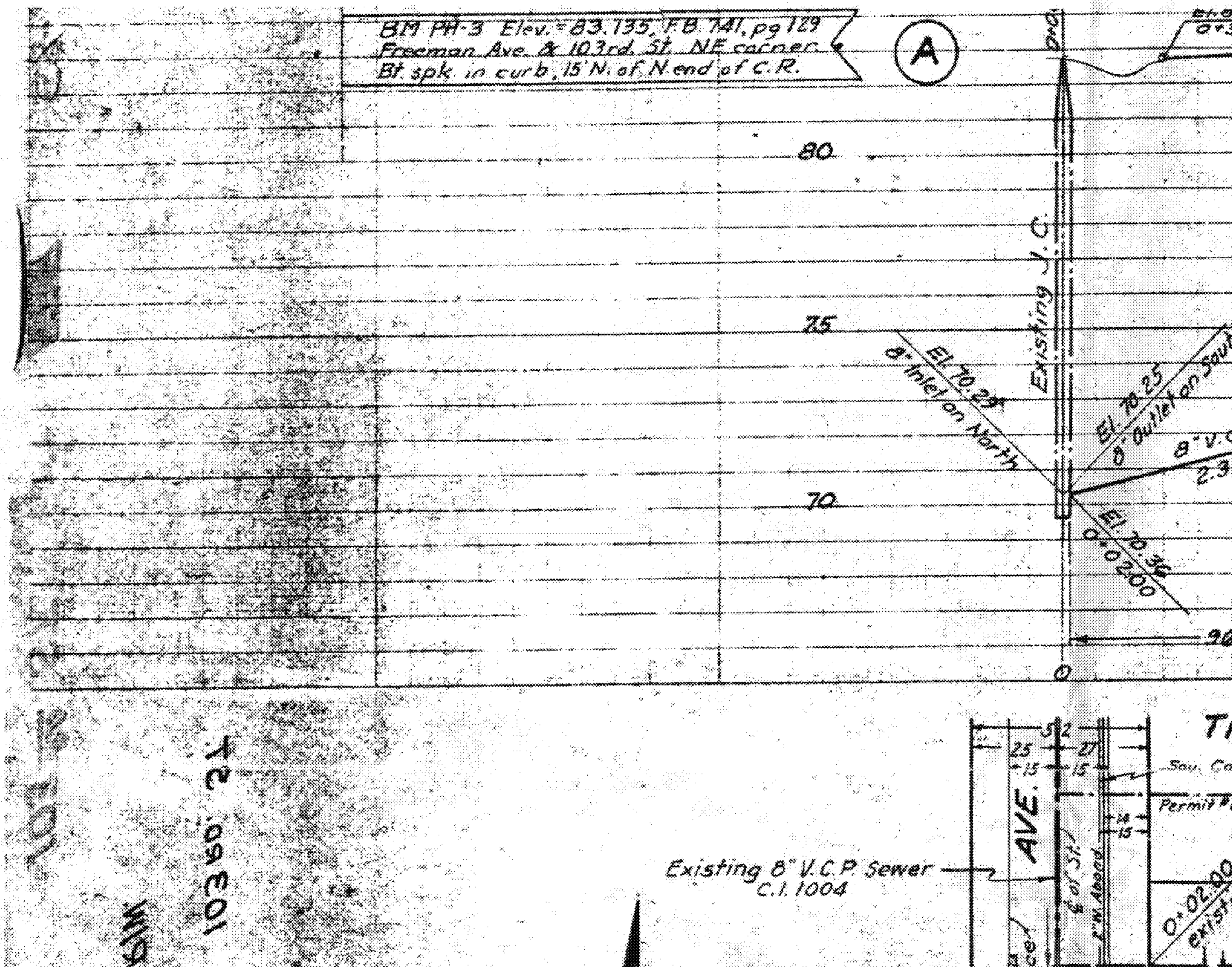
Approved J. G. Rockhold
COUNTY SURVEYOR

Approved A. Alvarez
CHIEF ENGINEER OF COUNTY
SANITATION DISTRICT NO.5

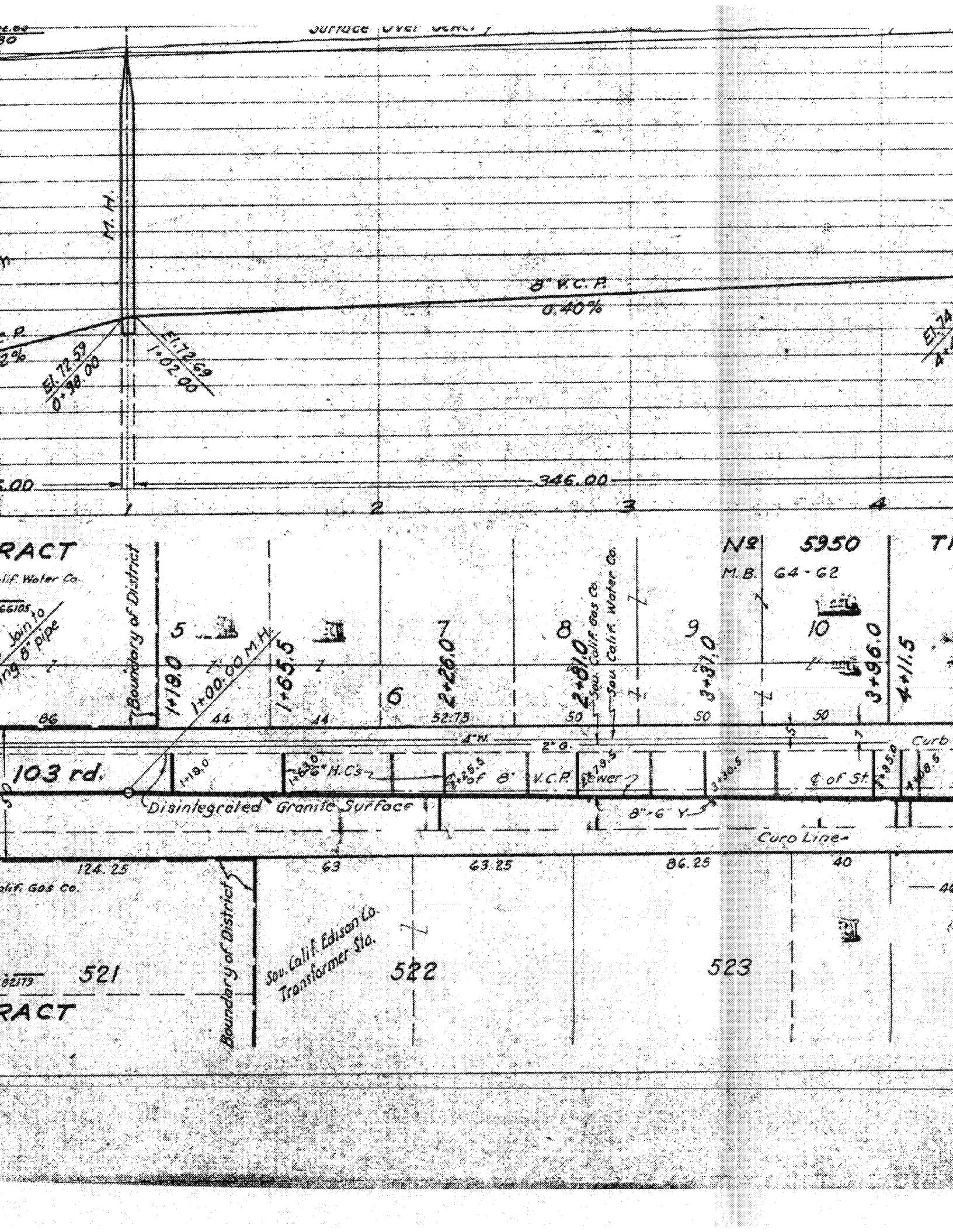
LEGEND
N NO. S-a-64

BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES.
OF STREET OR CENTER LINE OF ALLEY ARE SHOWN BY
DESIGNATED POINTS THE GRADE SHALL BE ESTABLISHED
BETWEEN SAID DESIGNATED POINTS.
ATUM OR MEAN SEA LEVEL.
MAY BE REQUIRED BUT WHICH CANNOT BE ASCERTAINED
SAL.
HEREBY MADE A PART OF THE SPECIFICATIONS.

	C. I. NO. 1004	
DESIGNED	Hayes	APR. 1928
TRACED	Delano	JUL. 1928
CHECKED	Pickett	OCT. 1928



BM PH-3 Elev. = 83.135, F.B. 741, pg 129
Freeman Ave. & 103rd. St. NE corner
Bt. spk. in curb, 15' N. of N. end of C.R.
A
80
75
70
Existing J.C.
El. 70.29 8" Inlet on North
El. 70.25 8" Outlet on South
El. 70.30 0+02.00
0
Existing 8" V.C.P. Sewer C.I. 1004
FREEMAN AVE.
Rock & Oil Surface
0+00.00 Existing J.C.
Resurface Trench with premix Rock & Oil 3" in Thickness.
TRIM LINE


M. H.
8" V.C.P.
0.40%
El. 72.59
0+98.00
El. 72.69
1+02.00
346.00
1
2
3
4
Boundary of District
1+18.0
1+00.00 M.H.
1+65.5
2+26.0
2+81.0
3+31.0
3+96.0
4+11.5
Sou. Calif. Gas Co.
Sou. Calif. Water Co.
5
6
7
8
9
10
86
44
44
52.75
50
50
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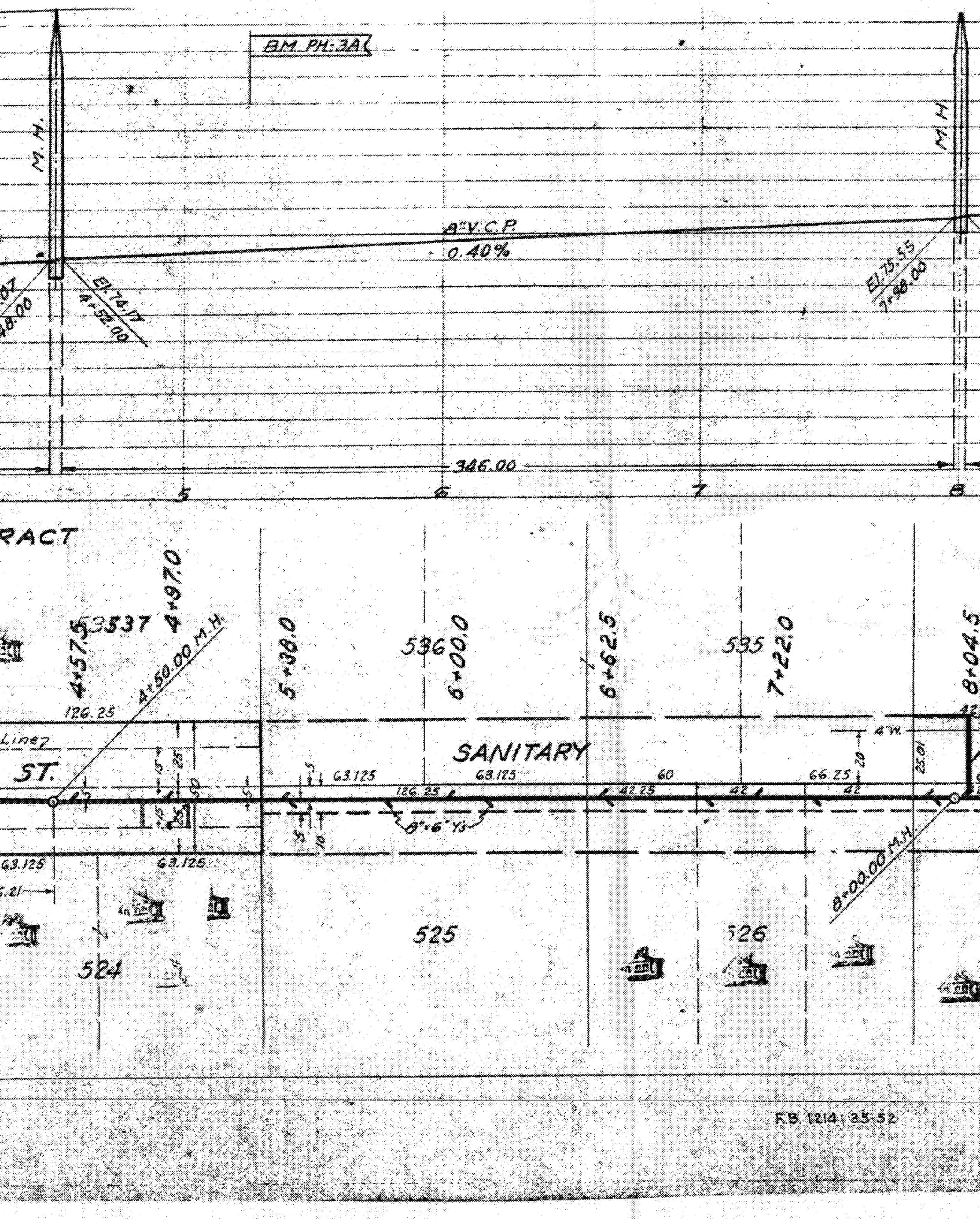
M.B. 64 - 62
5950
103 rd.
Disintegrated Granite Surface
8"-6" Y
Curb Line
124.25
63
63.25
86.25
40
Sou. Calif. Edison Co. Transformer Sta.
521
522
523


BM PH-3A
M.H.
M.H.
8"V.C.P.
0.40%
El. 74.17
4+52.00
El. 75.55
7+98.00
346.00
5
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8
RACT
537
4+57.5
4+97.0
4+50.00 M.H.
5+38.0
536
6+00.0
6+62.5
535
7+22.0
8+04.5
126.25
Line
ST.
SANITARY
63.125
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60
42.25
42
66.25
42
4'W.
20
25.01
8"×6" Y's
63.125
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8+00.00 M.H.
524
525
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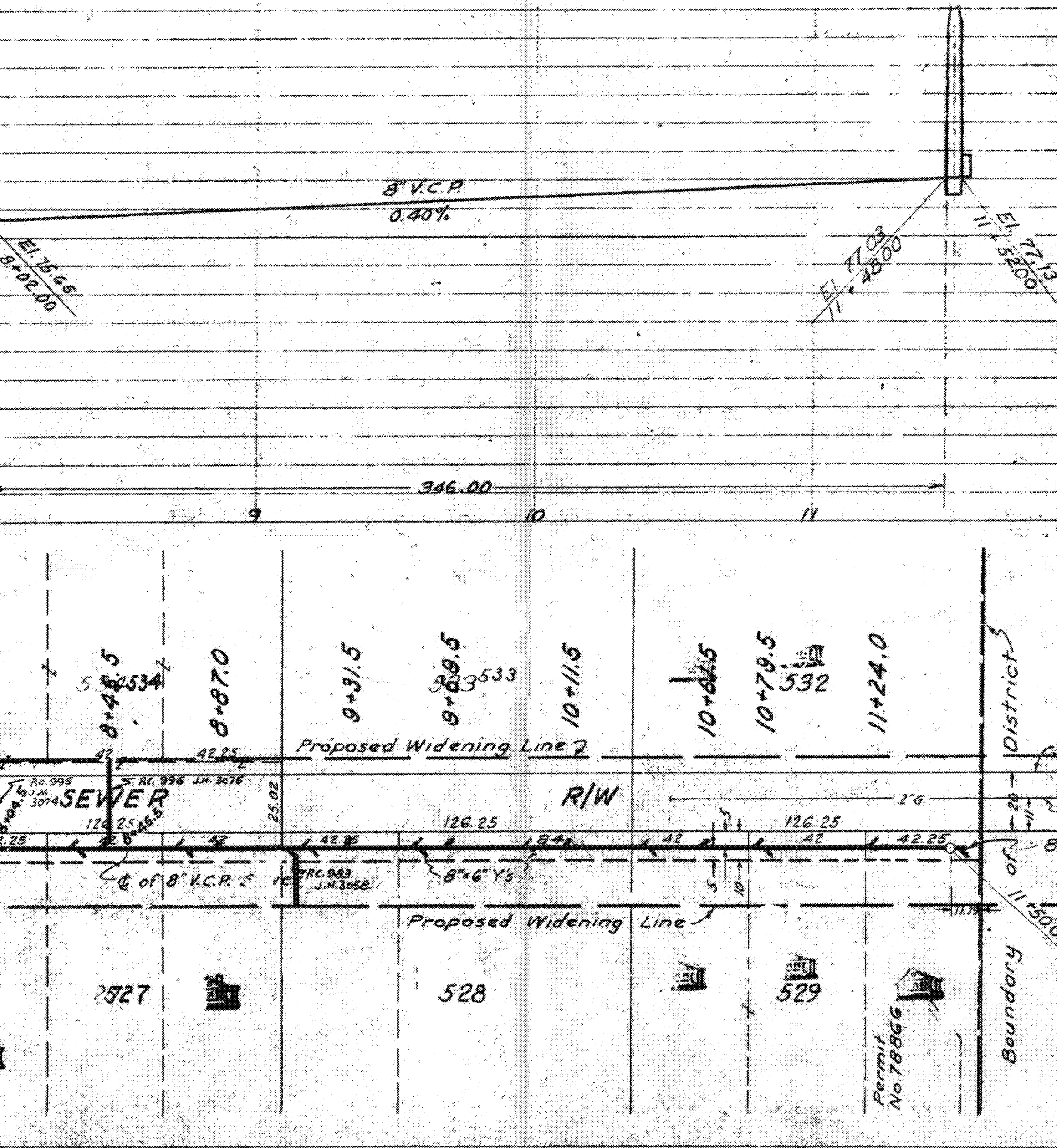
F.B. 1214: 35-52


8" V.C.P.
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8+02.00
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10
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8+45.5
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10+11.5
10+79.5
11+24.0
534
533
532
Proposed Widening Line
SEWER
R/W
2'G
126.25
42
42.25
25.02
℄ of 8" V.C.P. Sewer
8"×6" Y's
Proposed Widening Line
527
528
529
Permit No. 78866
Boundary of District

Bl. spk. in end of walk to No. # 4105

80

75

70

12

USE STANDARD
USE CEMENT MO
TAGS AS SPECI
SHALL BE C
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PLAN NO. S-
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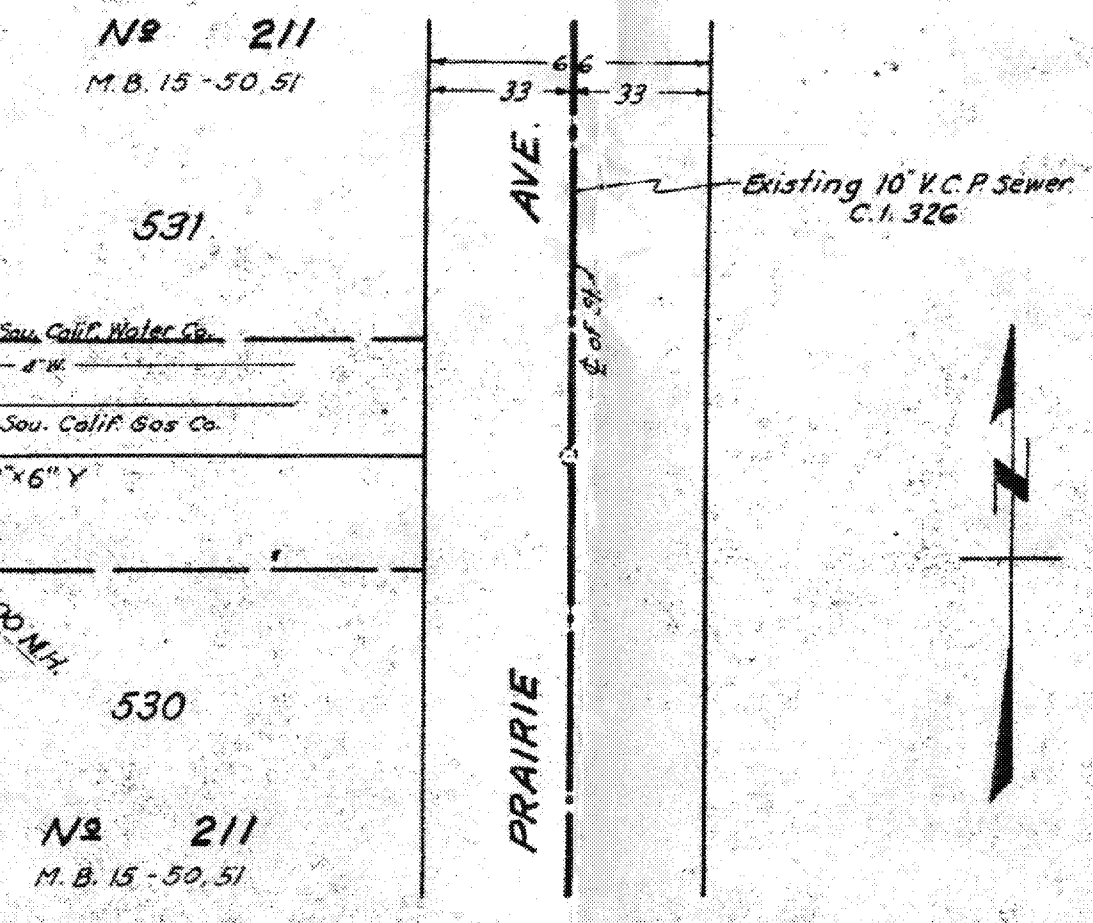


SANITARY

TO BE CONS

103 RD.

BETWEEN FREEMAN AVE. AND

SANITARY SEWER

IN LOTS 525 TO 529

STRENGTH PIPE EXCEPT AS NOTED

ORTAR FOR ALL VITRIFIED CLAY PIPE JOINTS

FIED IN SECTION 48 OF THE SPECIFICATIONS

OMITTED

SE CONNECTIONS WITH INVERT AT CURB LINE

ELOW CURB GRADE

S SHALL BE BRICK SEWER STRUCTURES AS PER

-a-104

MANHOLE FRAMES AND COVERS AS PER PLAN

NCH WITHIN PAVED AREA WITH DISINTEG. ROCK

CKNESS EXCEPT AS NOTED

ONE

VERT. 1"=4'

SCALE: HORIZ. 1"=40'

COUNTY OF LOS AN

C. E. ARNOLD

RECOMMENDED W. L. Gregory
CHIEF DEPUTY

APPROVED AS TO FORM
H. W. KENNEDY
COUNTY COUNSEL
BY John D. Wadsworth
DEPUTY

FOR LE

SEE PLAN

NOTE:
GRADES TO WHICH THIS IMPROVEMENT IS TO BE
GRADE POINTS FOR TOP OF CURB, CENTER LINE O
CIRCLES ON PROFILES. AT ALL POINTS BETWEEN DE
SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BET
ELEVATIONS ARE IN FEET ABOVE U. S. G. S DAT
UNIT PRICES FOR ADDITIONAL WORK WHICH MA
IN ADVANCE SHALL BE SUBMITTED IN THE PROPOSAL.
THIS DRAWING AND THE DATA HEREON ARE HE

REFERENCES	
W. S. 24	DES
A. B. 469	TR
F. B. 1214	CHE

1-2-47

TRIM LINE

Y SEWERS

STRUCTED IN

STREET

A POINT 515 FT. EAST THEREOF

R RIGHTS OF WAY

INCL. OF TRACT NO. 211

SHEET

AUG. 1948 .

GELES, CALIFORNIA.

COUNTY ENGINEER

APPROVED [signature] COUNTY ENGINEER

APPROVED [signature] CHIEF ENGINEER OF COUNTY SANITATION DISTRICT No 5.

EGEND.

NO. S-A-84

CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES.
F STREET OR CENTER LINE OF ALLEY ARE SHOWN BY
SIGNATED POINTS THE GRADE SHALL BE ESTABLISHED
WEEN SAID DESIGNATED POINTS.
UM OR MEAN SEA LEVEL.
Y BE REQUIRED BUT WHICH CANNOT BE ASCERTAINED

REBY MADE A PART OF THE SPECIFICATIONS.

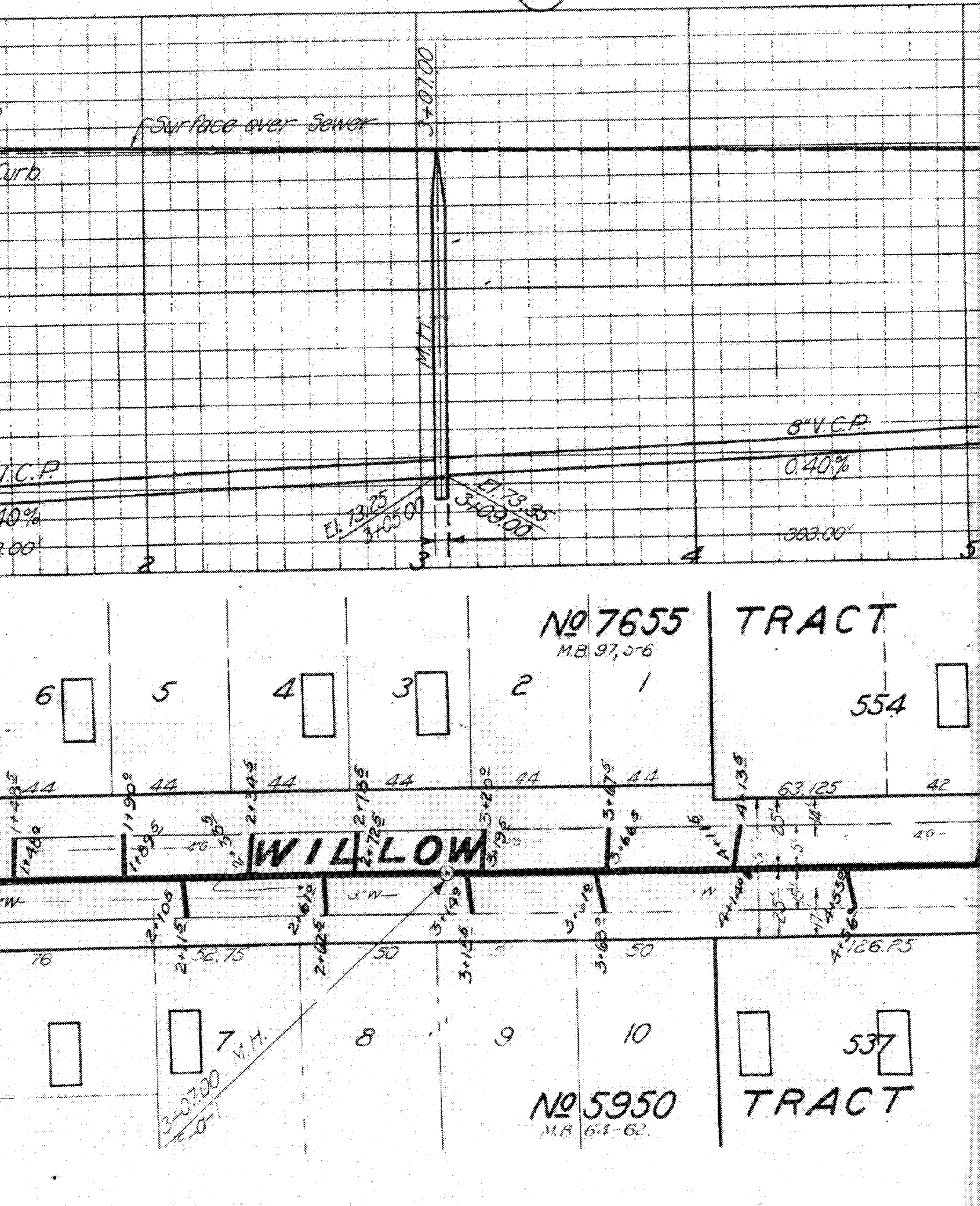
IGNED	WOOD	JUNE 1948
ACED	WOOD	JUNE 1948
CKED	SHELSER - ESTERBROOKS	JULY 1948

C 11521

103 80 - 31

C.I. No. 1004
Sheet 6

B.M. "L-7" El. 84.208 L.B. 418/54
Willow St. & Freeman Ave.
Bt. Spk. M.C.B. N.E. Cor.
0+00
El. 85.50
0+25.00
Grade of North Curb
El. 85.40
0+25.00
Grade of South C
85
Constructed as
Part of Sewer in Freeman
Ave.
80
75
J.C.
El. 71.94
8" Inlet on North
El. 71.84
8" Outlet on South
El. 72.04
0+02.00
8"
TRACT 8
7
L.A. G.&E. Corp.
Amer. States Water Serv. Co.
N
S
Sewer & J.C.
Sheet 2, C.I. 1004
FREEMAN AVE.
Center Line of St.
Curb
3"W
98
0+02.00 Beginning of
Impr. ovement
TRACT


Surface over Sewer
Curb
3+07.00
M.H.
8" V.C.P.
0.40%
El. 73.25
3+05.00
El. 73.35
3+09.00
303.00'
2
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5
No 7655
M.B. 97, 5-6
TRACT
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5
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3
2
1
554
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42
WILLOW
76
32.75
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7
8
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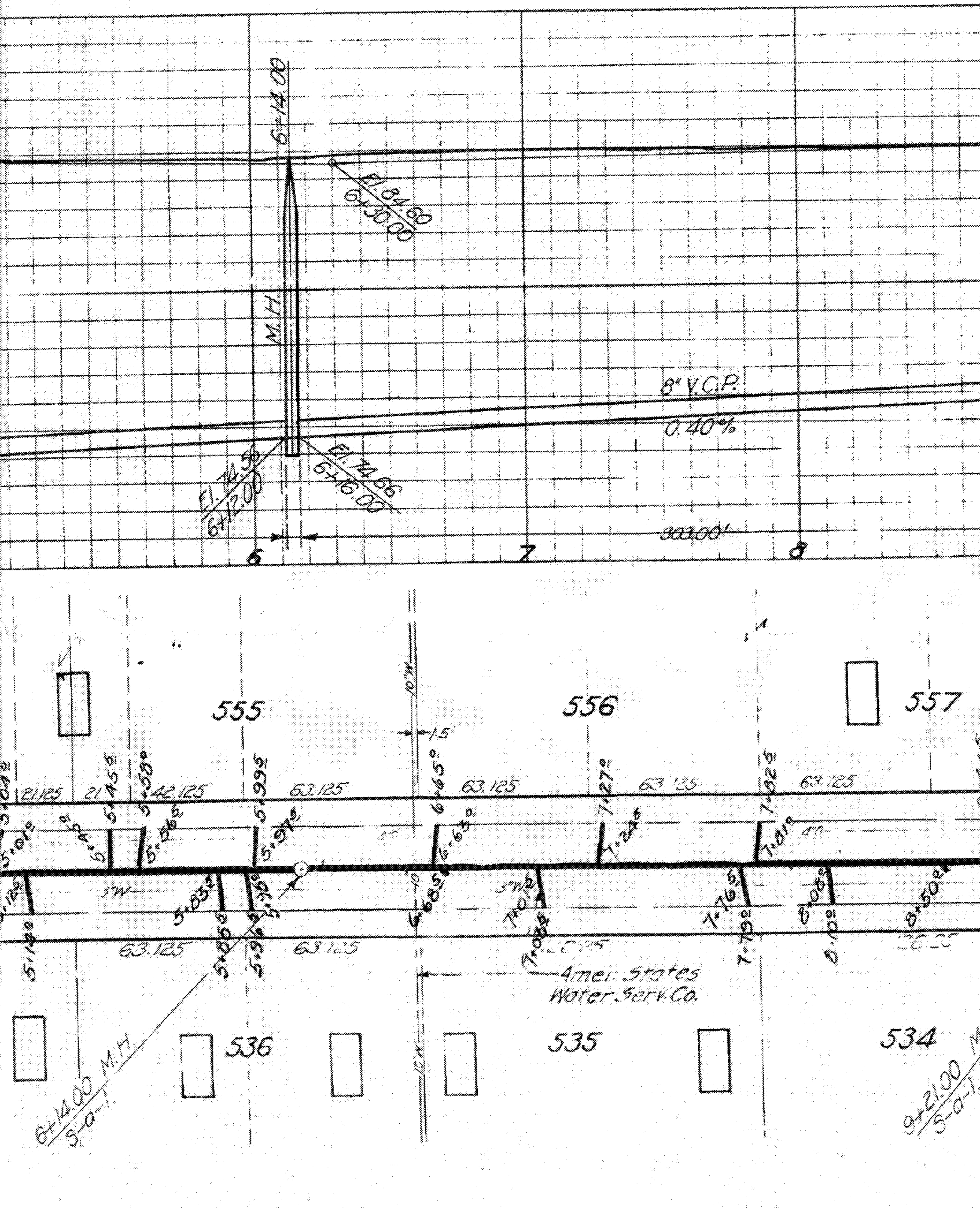
537
M.H.
3+07.00
No 5950
M.B. 64-62.
TRACT



6+14.00
El. 84.60
6+30.00
M.H.
8" V.C.P.
0.40%
El. 74.56
6+12.00
El. 74.66
6+16.00
303.00'
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556
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1.5
63.125
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Water Serv. Co.
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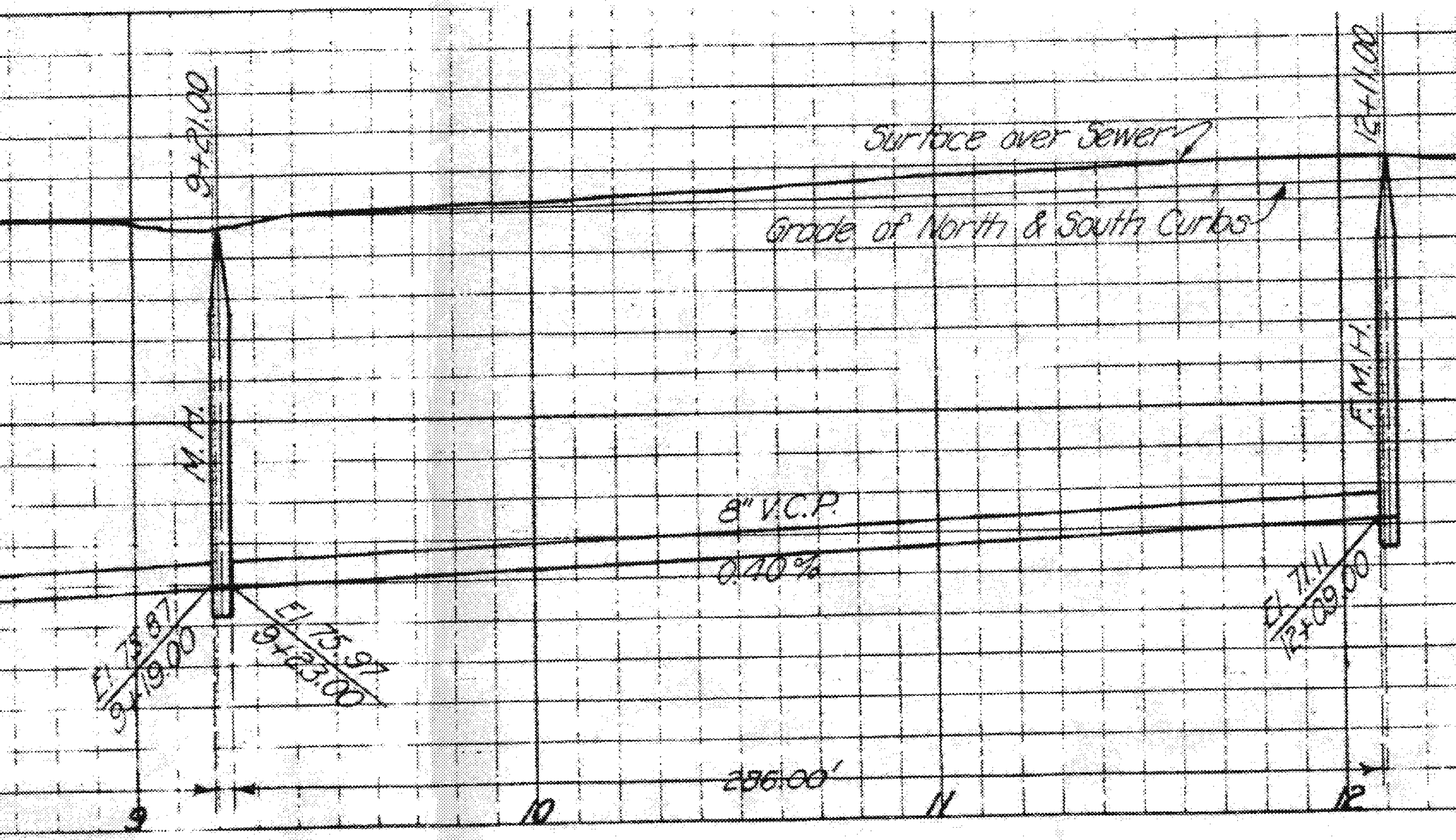
9+21.00
5-0-1.



9+21.00
Surface over Sewer
Grade of North & South Curbs
12+11.00
M.H.
F.M.H.
8" V.C.P.
0.40%
El. 73.87
9+19.00
El. 75.97
9+23.00
El. 71.11
12+09.00
286.00'
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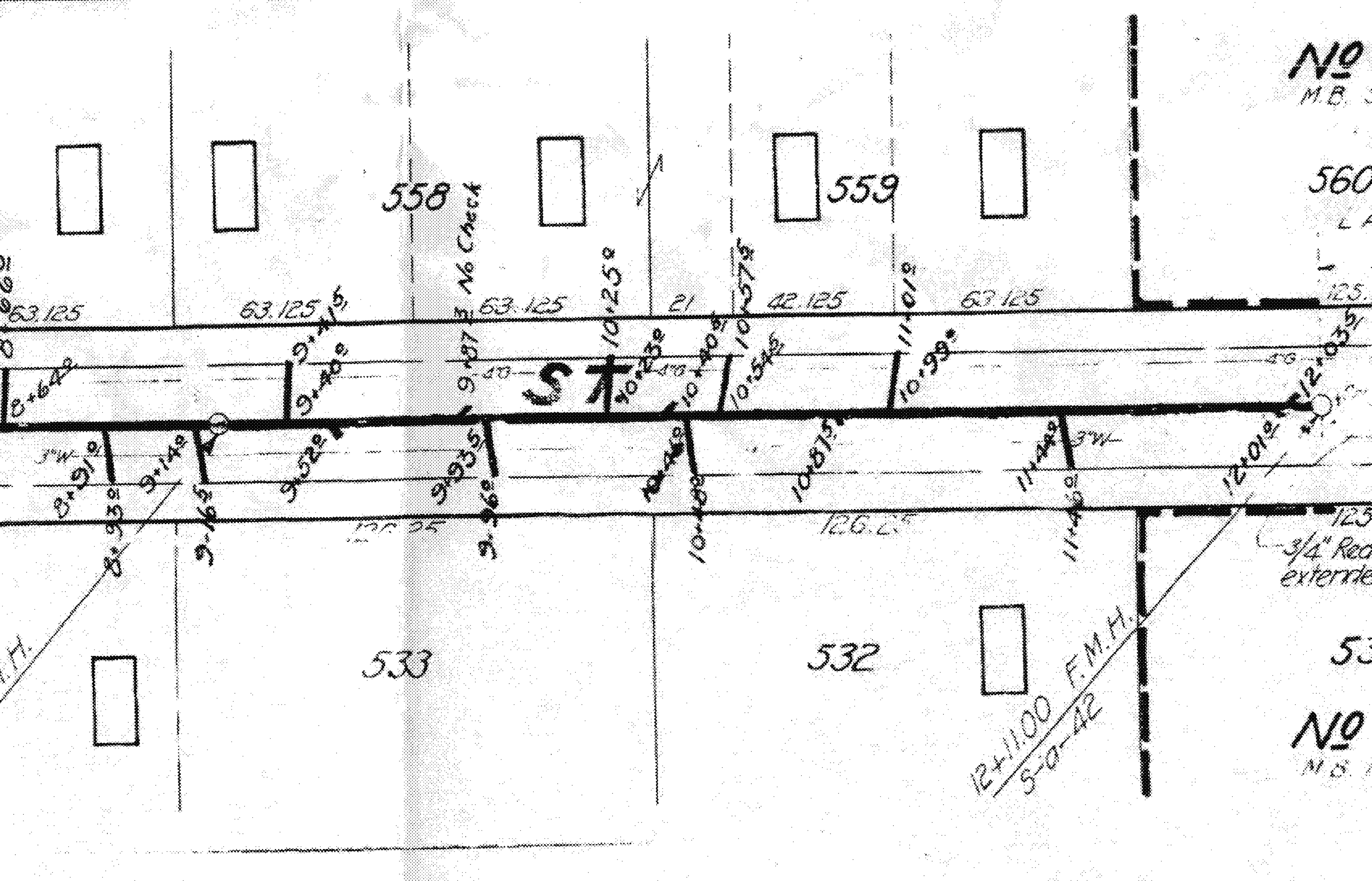

558
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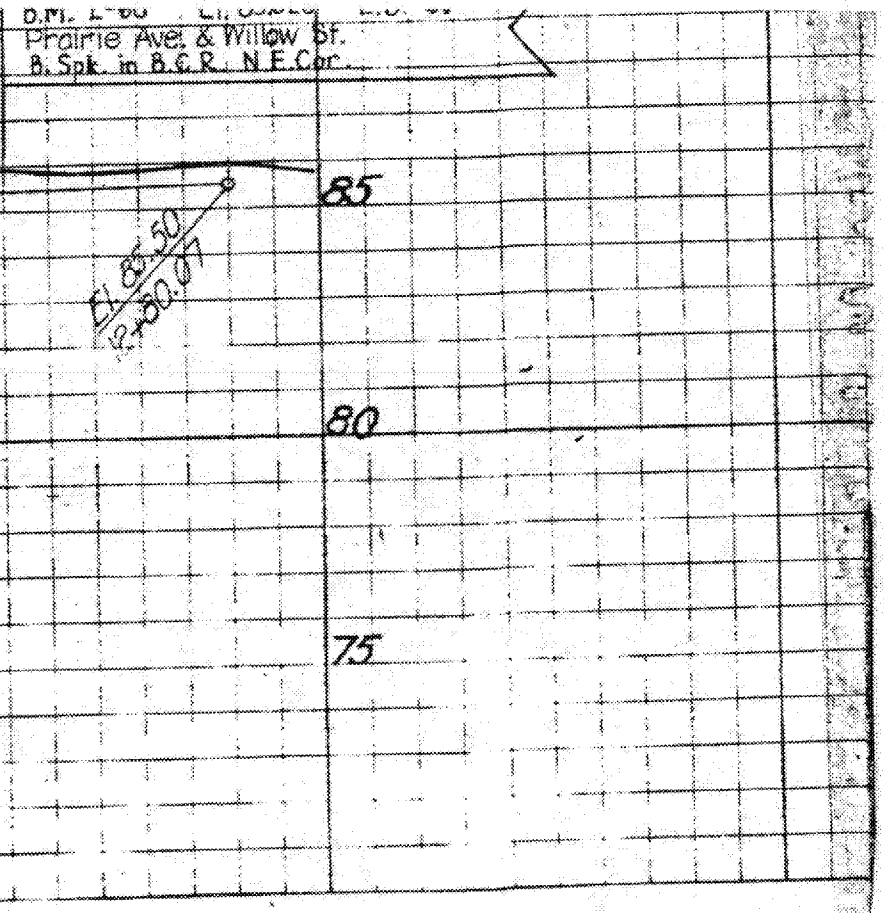
Prairie Ave. & Willow St.
B. Spk. in B.C.R. N.E. Cor.
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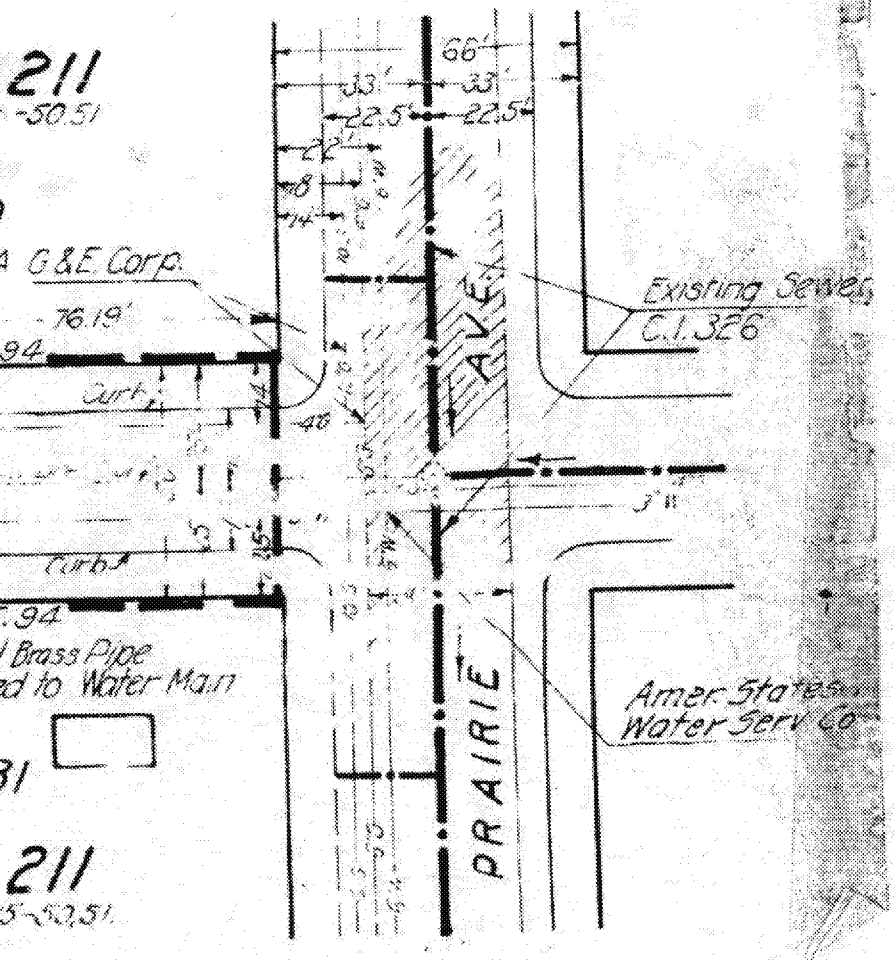
80
75


66'
33'
33'
22.5'
22.5'
G&E Corp.
76.19'
Existing Sewer
C.I. 326
PRAIRIE AVE.
Amer. States Water Serv. Co.

Appendix I

Related Projects Memorandum.
Future Related Project Locations

01 – Culver City Projects
02 – El Segundo Projects
03 – Gardena Projects
04 – Hawthorne Projects
05 – Inglewood Projects
06 – Los Angeles Projects
07 – Los Angeles County Projects

TRIFILETTI
CONSULTING INC

MEMORANDUM

Date:	July 12, 2019
To:	Christina Erwin and Brian Boxer, Environmental Science Associates (ESA) Whit Manley and Tiffany Wright, Remy, Moose, Manley (RMM)
From:	Lisa Trifiletti, Trifiletti Consulting Inc.
Subject:	Related Project List Methodology for the proposed Inglewood Basketball and Entertainment Center (IBEC)

To support the environmental analysis of the Inglewood Basketball and Entertainment Center (IBEC) project, the project team prepared a cumulative projects list to support analytical assumptions made in the environmental impact report (EIR). The purpose of this documentation is to identify reasonably foreseeable projects anticipated to be constructed in the near term in order to form a basis for analysis of cumulative impacts in the EIR.

Identification of cumulative projects focused on projects that were proposed as of May 2018. This time frame coincides with the commencement of the City's environmental review process for the Proposed Project. The project team established several parameters for projects included on this list. Projects on this list consist of development projects within the City or surrounding jurisdictions. The projects have pending development applications, are approved, are under construction, and/or would be a significant traffic generator. Certain plan documents are included on the list if they have applications pending for specific projects proposed within the plan area.

The project team contacted planning staff from the cities of Inglewood, Los Angeles, Culver City, El Segundo, Manhattan Beach, Lawndale, Hawthorne, and Gardena. Additionally, Los Angeles County planning staff was contacted regarding pending projects in the unincorporated areas of the County of Los Angeles and the communities of Baldwin Hills, Del Aire, Gardena Valley, Lennox, View Park, West Athens, and Westmont. Outreach to these jurisdictions was conducted via email, phone calls, and/or in-person meetings with relevant planning staff. These contacts provided information regarding pending projects in their respective jurisdiction including project name, address, types of uses and sizes of development including number of dwelling units and square footages, project phase, and estimated completion date. Once input

from each of these jurisdictions was received, the project team reviewed the list of all projects; removed projects that were duplicative, already constructed, had development applications that had lapsed, or that did not have a development application pending (such as plan-level documents); cross-checked the list with projects included in the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) model; and field verified whether projects had already been constructed.

This outreach effort resulted in a cumulative project list of 145 relevant projects (see Table B). The projects listed in Table B include:

- The LAX Northside Plan is included because it has obtained project-level environmental clearance and projects listed in the plan are currently being constructed.

- The LAX Landside Access Modernization Program is included because the program authorizes 900,000 square feet of commercial development. This development is also included in the approved LAX Specific Plan. This aspect of the LAX Landside Access Modernization Program authorizes commercial development projects in the remaining land adjacent to LAMP facilities.

Table B also includes the proposed Inglewood Transit Connector (ITC) Project. The City of Inglewood issued a Notice of Preparation for the ITC Project in July 2018 and is preparing a project-level environmental analysis and clearance documentation. The ITC is expected to be included in the SCAG list of strategic projects in the Southern California Association of Governments 2020 Regional Transportation Plan.

Table B does not include the Inglewood Transit Oriented Development (TOD) plans because they are program-level plans that govern future development within certain areas around transit stations, but they do not assume specific development projects within those areas. If applications have been submitted for specific development projects within the TOD areas, then those proposed projects are included in Table B.

Hollywood Park Specific Plan (HPSP) Area

The HPSP encompasses approximately 238 acres. The City approved the HPSP in 2009. As approved at that time, the HPSP authorized the redevelopment of the Hollywood Park property, including the racetrack Grandstand and the Pavilion/Casino and the construction of a new mixed-use development. The HPSP authorized up to approximately 2,995 dwelling units, 620,000 square feet of retail space, 75,000 square feet of office/commercial space, a 300- room hotel, and 10,000 square feet of community space.

In February 2015, the City approved a voter-sponsored initiative entitled the "City of Champions Revitalization Initiative." The initiative amended the HPSP. The HPSP, as amended, authorizes the following uses: an NFL stadium of up to 80,000 seats; a performance venue of up to 6,000 seats; up to 890,000 square feet of retail uses; up to 780,000 square feet of office; up to 300 hotel rooms; up to 2,500 residential units; and approximately 25 acres of public parks and open space. Thus, the initiative builds upon, and adds to, the uses authorized by the City in the 2009 HPSP.

The initiative provides the landowner with a vested right to proceed with the development outlined above. The approval process for individual projects covered by the initiative is ministerial and does not require further CEQA review. The initiative also requires that the landowner implement the mitigation measures adopted by the City when it approved the HPSP in 2009. These measures include various, specific transportation improvements, and contributions to other transportation improvements.

The initiative also encompassed an additional, 60-acre parcel immediately north of the HPSP, generally referred to as the "Northern Parcel." The initiative designated the entire 298 acres (both the original HPSP area and the Northern Parcel) as "Major Mixed Use." A portion of the stadium is being constructed on the Northern Parcel. The Northern Parcel is also accommodating roadways and other improvements needed by the stadium project. Further development of the Northern Parcel will require performing CEQA review and amending the HPSP. The initiative provides that the overall floor area ratio for the entire site "shall not exceed 2:1 averaged over the 298-acre site." (City of Champions Revitalization Initiative, § 3.A.2.) The "entire site" includes both the 238-acre HPSP area, and the 60-acre Northern Parcel.

Construction of the stadium is now underway. In addition, the landowner has submitted plans for the specific development projects on the 238-acre HPSP area. The City is actively engaged in performing ministerial review of these projects. The landowner has reported that all of these projects are expected to be completed and operational well before 2024. Table A summarizes the status of development on the HPSP. This table has been prepared based on applications submitted to the City Planning Department as of November 2018.

Table A - Hollywood Park Specific Plan					
Land Use	**Adjusted Baseline**	**Remaining Development in Mixed-Use and Residential Areas**	**2.0 FAR in Interim Use Areas**	**Total Cumulative**	**Total HPSP Development Assumptions**
Retail	518,077 sf	371,923 sf	- sf	371,923 sf	890,000 sf
Office	466,000 sf	314,000 sf	3,253,314 sf	3,567,314 sf	4,033,314 sf
Residential	314 units	2,186 units	- units	2,186 units	2,500 units
Hotel	- rooms	300 rooms	- rooms	300 rooms	300 rooms
Stadium	70,000 seats	- seats	- seats	- seats	70,000 seats
Perform. Venue	6,000 seats	- seats	- seats	- seats	6,000 seats
Open Space	11.89 acres	13.06 acres	- acres	13.06 acres	24.95 acres
Civic Use	4 acres		- acres		4 acres

For projects that are either under construction or have plot plan applications underway (shown in Table A, "Adjusted Baseline" column), the projects will not be included in the cumulative projects list. Rather, these projects will be considered as part of the baseline environmental setting. The environmental setting generally consists of physical conditions as they exist at the time the lead agency commences the environmental review process. (CEQA Guidelines, § 15125, subd. (a).)

In response to its Notice of Preparation, the City received a letter regarding other development in the area that should be considered in the City's analysis. The letter stated that the "baseline analysis scenario" for purposes of traffic analysis should include the anticipated development of 5.25 million square feet of commercial development on a 60-acre parcel generally referred to as the "Hollywood Park Northern Parcel." (Letter from Amy Forbes to Mindy Wilcox (March 22, 2018).)
At the time the City commenced the environmental review process for the IBEC, the Hollywood Park Northern Parcel did not contain 5.25 million square feet of commercial development. As noted above, the development of the Northern Parcel requires amending the HPSP. An application to amend the HPSP has not been filed with the City. Nonetheless, to be conservative, the development of the Northern Parcel is included as part of the City's analysis of cumulative effects. The City has concluded that the development capacity of the Northern Parcel should be adjusted to reflect the fact that the NFL stadium is located on a portion of the Northern Parcel, as are certain roads and infrastructure. For this reason, the entire 60 acres may not be available for development. The City Planning Department estimates that, once the stadium and roads are constructed, the remaining

land on the Northern Parcel available for development will be approximately 37.3 acres. The Department estimates that, if a 2:1 floor area ratio is applied to this amount of land, then the Northern Parcel could accommodate up to 3.25 million square feet. (Memorandum from Mindy Wilcox to Christopher Jackson re: Hollywood Park 60-acre Site (January 10, 2019).) Accordingly, 3.25 million square feet of development in the Northern Parcel is included in the cumulative projects list. This cumulative scenario also assumes that all of the mitigation measures adopted as part of the initiative will be implemented.

The cumulative project "list method" reflected in Table B may overstate the level of development assumed in the cumulative impact analysis. Many of the projects on this list may not go forward. Others may be disapproved or approved at densities and intensities less than those sought by the landowner. Others may not be constructed by 2030, the cumulative development year analyzed in the EIR. Table B nevertheless lists the development as currently requested by the site landowner or project applicant, at full build-out. In this respect, Table B is conservative. The inclusion of all proposed or approved projects in Table B, assuming full build- out, ensures that the City will not underestimate the level of development expected to exist as of 2030.

Table B: IBEC Related Projects					
No.	**Project Location**	**Jurisdiction**	**Land Use**	**Size**	
1	6161 W. Centinela Boulevard	Culver City	Office	281.209	ksf
2	12712-12718 Washington Boulevard	Culver City	Apartments	5	units
			Retail	3.414	ksf
			Commercial	2.340	ksf
3	6002 Centinela Avenue	Culver City	Service Bays	14.668	ksf
			Parts and Service	12.900	ksf
4	6201 Bristol Parkway	Culver City	Commercial	16.000	ksf
			Apartments	775	units
			Commercial	-60.000	ksf
5	888, 892 and 898 N. Sepulveda Boulevard	El Segundo	Hotel	190	rooms
6	EL Segundo South Campus Specific Plan	El Segundo	Office	1,751.921	ksf
			Warehouse	73.577	ksf
			Retail	148.960	ksf
7	199 Continental Boulevard	El Segundo	Hotel	152.000	rooms
8	2265 E. El Segundo Boulevard	El Segundo	Warehouse	-3.050	ksf
			Office	3.050	ksf
9	400 Duley Road	El Segundo	Office	73.000	ksf
10	2275 Mariposa Avenue	El Segundo	Corporate Office	52.000	ksf
			Athletic Training Facility	68.300	ksf
11	201 N. Douglas	El Segundo	High School	1,200	students
			High School (ksf)	-90.000	ksf
12	2125 Campus Drive	El Segundo	Hotel	121.450	ksf
			Office	63.550	ksf
13	535 Indiana Street	El Segundo	Condominiums	4	units
14	1700 E. Imperial Avenue	El Segundo	Office	96.898	ksf
15	710 N. Nash Street	El Segundo	Office	611.545	ksf
			Retail	13.660	ksf
16	1950 E. Grand Avenue	El Segundo	Office	93.569	ksf
17	445 N Douglas Street	El Segundo	Office	106.000	ksf
			Warehouse Industrial Data Center	117.000	ksf
18	101 Continental Boulevard	El Segundo	Hotel	167	rooms
19	444 N. Nash Street	El Segundo	Data Center	180.422	ksf
20	SE Aviation Boulevard	El Segundo	Condominiums	525	units
			Office	-835.000	ksf
21	425-429 Indiana Street	El Segundo	Apartments	8	units
22	NE Sepulveda Boulevard	El Segundo	Retail	67.000	ksf
23	455 Continental Boulevard and 1955 E. Grand Avenue	El Segundo	Office Tower	300.000	ksf
24	1960 E. Grand Avenue	El Segundo	Hotel	150	rooms
25	525 N. Sepulveda Boulevard	El Segundo	Hotel Expansion	6.952	ksf
26	900, 950 Sepulveda Boulevard	El Segundo	Warehouse	20.819	ksf
			Office	139.558	ksf
			Manufacturing	14.025	ksf
27	600-630 N. Sepulveda Boulevard	El Segundo	Fast food restaurant with drive-through	3.714	ksf
28	2130 E. Maple Avenue	El Segundo	Office	20.955	ksf
29	555 N. Nash Street	El Segundo	Ice Skating Rink	17.315	ksf
30	14321 Van Ness Ave	Gardena	Townhomes	40	townhomes
31	1720 West 135th Street	Gardena	Industrial	100.438	ksf
32	13919 Normandie Ave	Gardena	Single Room Occupancy	20	units
33	525 E Rosecrans Avenue	Gardena	Retail	3.140	ksf
34	Aviation Boulevard/El Segundo Boulevard	Hawthorne	Condominiums	610	units
35	4500 West 116th Street	Hawthorne	Condominiums	116	units
36	13806 Hawthorne Boulevard	Hawthorne	Apartments	171	units
			Office	32.500	ksf
37	Crenshaw Boulevard/Jack Northop Avenue	Hawthorne	Dwelling Units	230	units
			Restaurant	3.700	ksf
38	14000 Yukon Avenue	Hawthorne	Apartments	6	units
39	4427 El Segundo Blvd	Hawthorne	Hotel	350	rooms
40	11519 Acacia Ave	Hawthorne	Hotel	119	rooms

Table B: IBEC Related Projects					
No.	**Project Location**	**Jurisdiction**	**Land Use**	**Size**	
41	14135 Cersie Avenue	Hawthorne	Apartments	241	units
42	664 E. Manchester Terrace	Inglewood	Condominiums	4	units
43	844 N. Centinela Avenue	Inglewood	Apartments	4	units
44	501 E. 99th Street	Inglewood	Condominiums	12	units
45	921 N. Edgewood Street	Inglewood	Apartments	38	units
46	222 W Spruce Avenue	Inglewood	Apartments	10	units
47	961 E 68th Street	Inglewood	Condominiums	3	units
48	417 N Market Street	Inglewood	Condominiums	12	units
49	819 E La Palma Drive	Inglewood	Apartments	5	units
50	814 N Market Street	Inglewood	Congregate Living Facility	18	beds
51	411 E Hazel Street	Inglewood	Apartments	18	units
52	329 E. Hazel Street	Inglewood	Condominiums	4	units
53	11111 S. Prairie Avenue	Inglewood	Hotel	120	rooms
54	3920 W 108th Street	Inglewood	Apartments	3	units
55	125 E. Spruce Avenue	Inglewood	Apartments	7	units
56	704 N. Market Street	Inglewood	Apartments	12	units
57	408 E. Warren Lane	Inglewood	Commercial	2.542	ksf
58	508 S. Eucalyptus Avenue	Inglewood	Senior Housing	40	units
59	417-433 Centinela Avenue	Inglewood	Apartments	116	units
60	721 N. La Brea Avenue	Inglewood	Commercial	1.312	ksf
			Commercial	-1.210	ksf
61	101,125,139,140,150 Market Street	Inglewood	Retail	40.000	ksf
62	113-133 Plymouth Street	Inglewood	Townhomes	20	units
63	333 N. Prairie Avenue	Inglewood	Townhomes	310	units
64	705-715 N. Centinela Avenue	Inglewood	Self-Storage	81.613	ksf
65	3660 W. 107th Street	Inglewood	Dwelling Units	3	units
66	614 E. Hyde Park Boulevard	Inglewood	Congregate Living Facility	18	beds
67	1050 S. Prairie Avenue	Inglewood	Dwelling Units	2,186	units
			Retail	371,923	sf
			Office	3,567,314	sf
			Hotel	300	rooms
			Open Space	13.06	acres
68	D3 SITE (La Brea Avenue/Florence Avenue)	Inglewood	Apartments	243	units
			Retail	40.000	ksf
69	101 S La Brea	Inglewood	Philharmonic Association	25.500	ksf
70	316 Hardy Street	Inglewood	Condominiums	5	units
71	943-959 W Hyde Park Boulevard	Inglewood	Self-Storage	159.498	ksf
72	8911 Aviation Boulevard	Inglewood	Car Rental	173.804	ksf
73	3900 W. Century Blvd	Inglewood	Hotel (Renovation of existing 178 room hotel)	4	rooms
74	Market Street/Manchester Blvd/Prairie Ave	Inglewood	Inglewood Transit Connector Project	1.8 mile electric train system, 5 stations, 1 Maintenance Storage Facility (MSF) Site and 1 potential Intermodal Transit Facility (ITF) Site	
75	5206 W. Thornburn Street	Los Angeles	Elementary to Middle Private School	50	students
76	9800 S. Sepulveda Boulevard	Los Angeles	Hotel	178	rooms
77	10701 S. La Cienega Boulevard	Los Angeles	Bus Facility	1,006.236	ksf
78	7407 S. La Tijera Boulevard	Los Angeles	Apartments	140	units
			Retail	2.600	ksf

Table B: IBEC Related Projects					
No.	**Project Location**	**Jurisdiction**	**Land Use**	**Size**	
79	8740 S. La Tijera Boulevard	Los Angeles	Apartments	137	units
80	8521 S. Sepulveda Boulevard	Los Angeles	Fast food restaurant with drive-through	3.999	ksf
81	6801 Center Drive	Los Angeles	Apartments	600	units
82	1 World Way	Los Angeles	Land Access Modernization Program	2.2 mile electric train system, 6 APM Stations including connection to Crenshaw/LAX Line, consolidated rental car facility, 2 Intermodal Transit Facilities	
83	8721 S Broadway	Los Angeles	Senior Housing	108	units
			Retail	4.000	ksf
84	5975 S Western Avenue	Los Angeles	Industrial	225.000	ksf
85	1636 W Manchester Avenue	Los Angeles	Office	68.250	ksf
86	8540 S. La Tijera Boulevard	Los Angeles	Middle School	525	students
87	8705 S Western Avenue	Los Angeles	Middle School	616	students
88	8400 S Vermont Avenue	Los Angeles	Shopping Center	740.000	ksf
89	9402 S Broadway	Los Angeles	Senior Housing	49	units
90	8415 S Hoover Street	Los Angeles	Condominiums	142	units
			Apartments	57	units
			Recreational Center	11.550	ksf
			Retail	7.500	ksf
			Bank	1.500	ksf
			Office	15.400	ksf
91	5816 S Western Avenue	Los Angeles	Fueling Positions	4	positions
			Convenience Store	1.835	ksf
92	505 W Century Boulevard	Los Angeles	Fueling Positions	6	positions
93	6733 Sepulveda Boulevard	Los Angeles	Apartments	176	units
94	5208 W Centinela Avenue	Los Angeles	Fast food restaurant with drive-through	4.642	ksf
95	6711 S Sepulveda Boulevard	Los Angeles	Apartments	180	units
96	6855 S La Cienega Boulevard	Los Angeles	Supermarket	22.590	ksf
97	11604 Aviation Boulevard	Los Angeles	Condominiums	281	units
			Retail/Commercial	26.500	ksf
			Apartments	112	units
98	1248 W 105th Street	Los Angeles	Apartments	74	units
99	3816 W 54th Street	Los Angeles	Office Expansion	1.196	ksf
100	1252 W 105th Street	Los Angeles	Apartments	74	units
101	11814 Aviation Boulevard	Los Angeles	Hotel	128	rooms
102	11034 S Western Avenue	Los Angeles	Laundromat	4.983	ksf
103	5550 S La Brea Avenue	Los Angeles	Apartments	32	units
104	12000 S Western Avenue	Los Angeles	Hotel	44	rooms
105	1743 Imperial Highway	Los Angeles	Apartments	39	units
106	10601 S Vermont Street	Los Angeles	Laundromat	4.500	ksf
107	1423 W 120th Street	Los Angeles	Condominiums	57	units
108	1509 W 102nd Street	Los Angeles	Apartments	12	units
109	1539 102nd Street	Los Angeles	Apartments	10	units
110	10501 S Buford Avenue	Los Angeles	Townhomes	11	units
111	11824 Aviation Boulevard	Los Angeles	Apartments	36	units
112	10505 Hawthorne Boulevard	Los Angeles	Apartments	32	units
113	10609 S Inglewood Avenue	Los Angeles	Apartments	9	units
114	10907 S Inglewood Avenue	Los Angeles	Apartments	4	units
115	8910 S Normandie Avenue	Los Angeles	Apartments	6	units
116	10136 Felton Avenue	Los Angeles	Apartments	19	units
117	5053 E 109 Street	Los Angeles	Condominiums	17	units
118	9223 S Vermont Avenue	Los Angeles	Auto Repair	2.858	ksf
119	5301 W Centinela Avenue	Los Angeles	Restaurant	1.640	ksf

Table B: IBEC Related Projects					
No.	**Project Location**	**Jurisdiction**	**Land Use**	**Size**	
120	3838 W Slauson Avenue	Los Angeles	Convenience Store	1.060	ksf
121	5101 Overhill Drive	Los Angeles	Condominiums	88	units
122	1240 W 105th St	Los Angeles	Apartments	42	units
123	6109 Overhill Drive	Los Angeles	Duplex	2	units
124	1034 W 109th Place	Los Angeles	Apartments	9	units
125	11408 - 11412 S New Hampshire Avenue	Los Angeles	Gas Station with Convenience Store	2.900	ksf
126	10335 S Vermont Avenue	Los Angeles	Church (ksf)	1.324	ksf
127	10401 S Vermont Avenue	Los Angeles	Commercial	0.250	ksf
			Apartments	1	units
128	1023 W 107 Street	Los Angeles	Apartments	8	units
129	LAX Northside Project Westchester Parkway b/t Pershing Drive and Sepulveda Boulevard	Los Angeles	Office	612.500	ksf
			Playing Fields	5	fields
			Dog Park	1	field
			Retail	270.000	ksf
			Research and Development	612.500	ksf
			Civic Site	215.000	ksf
			Park	130.680	ksf
130	Bounded by Century Boulevard, La Cienega Boulevard, Arbor Vitae Street and Vicksburg Avenue	Los Angeles	Office	300	ksf
			Hotel	400	rooms
			Retail	200	ksf
			Conference Center	100	ksf
131	10341 Graham Avenue	Los Angeles	Theater	1,000	seats
			Education Center	12.417	ksf
132	3831 W Stocker St	Los Angeles	Apartments	127	units
133	3900 W Martin Luther King Boulevard	Los Angeles	Office	50.000	ksf
			Condominiums	200	units
			College	3,600	students
134	4018 S Buckingham Rd	Los Angeles	Senior Housing	130	units
135	4115 W Martin Luther King Boulevard	Los Angeles	Middle School	500	students
136	4252 S Crenshaw Boulevard	Los Angeles	Apartments	111	units
137	5950 W Jefferson Boulevard	Los Angeles	Office	64.000	ksf
			Retail	4.000	ksf
			Quality Restaurant	2.000	ksf
			High-Turn Over Restaurant	2.000	ksf
138	6024 W Jefferson Boulevard	Los Angeles	Office	123.572	ksf
			Manufacturing	64.206	ksf
			Coffeeshop with drive thru	2.2	ksf
139	6100 S Hoover St	Los Angeles	Laundromat	6.500	ksf
			Self-Service Car Wash	2.328	ksf
140	2178 Firestone Boulevard	Los Angeles County	Residential Care	16	beds
141	905 E El Segundo Boulevard	Los Angeles County	Community Center	1.000	ksf
			Amphitheater and Lawn	1,100	seats
			Music Center	1.000	ksf
			Nature Lab	1.000	ksf
			Museum- Gallery	1.000	ksf
			Museum- Art Storage	1.000	ksf
			Aquatic Center	1.000	ksf
			Gymnasium	1.000	ksf
			Multi-Purpose Stadium	3,000	seats
			Outdoor Athletic Fields	3	fields
			Equestrian Center	85	stables
142	1854 E 118th Street	Los Angeles County	Apartments	100	units
143	13200 S Avalon Boulevard	Los Angeles County	Homeless Shelter	79	rooms
144	11735 Holmes Avenue	Los Angeles County	Apartments	61	units
145	14733 S Stanford Avenue	Los Angeles County	Apartments	85	units

Culver City Projects

Legend

Culver City Project Location

El Segundo Projects

Legend

El Segundo Project Location

Gardena Projects

Legend

Gardena Project Location

Hawthorne Projects

Legend

Hawthorne Project Location

Inglewood Projects

Legend

Inglewood Project Location

W Slauson Ave

S Western Ave

W 92nd St

W 108th St

S Van Ness Ave

Crenshaw Blvd

4000 ft

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Los Angeles Projects
Legend
Los Angeles Project Location
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Los Angeles County Projects

Legend

Los Angeles County Project Location

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142

143

141

145

E 92nd St

W Century Blvd

E Century Blvd

E 102nd St

W 108th St

E 108th St

S Olive St

S Central Ave

Imperial Hwy

Firestone Blvd

Southern Ave

Tweedy Blvd

Santa Ana Blvd N

Century Blvd

Martin Luther King Jr Blvd

Abbott Rd

Otis St

Salt Lake Ave

Compton Ave

S Vermont Ave

W 135th St

Broadway

S San Pedro St

E 135th St

El Segundo Blvd

W Stockwell St

S Main St

W Rosecrans Ave

Central Ave

Alameda St

State St

N Santa Fe Ave

Long Beach Blvd

Glenn Anderson Fwy

Atlantic Ave

Carlin Ave

N Bullis Rd

E Rosecrans Ave

E Redondo Beach Blvd

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