

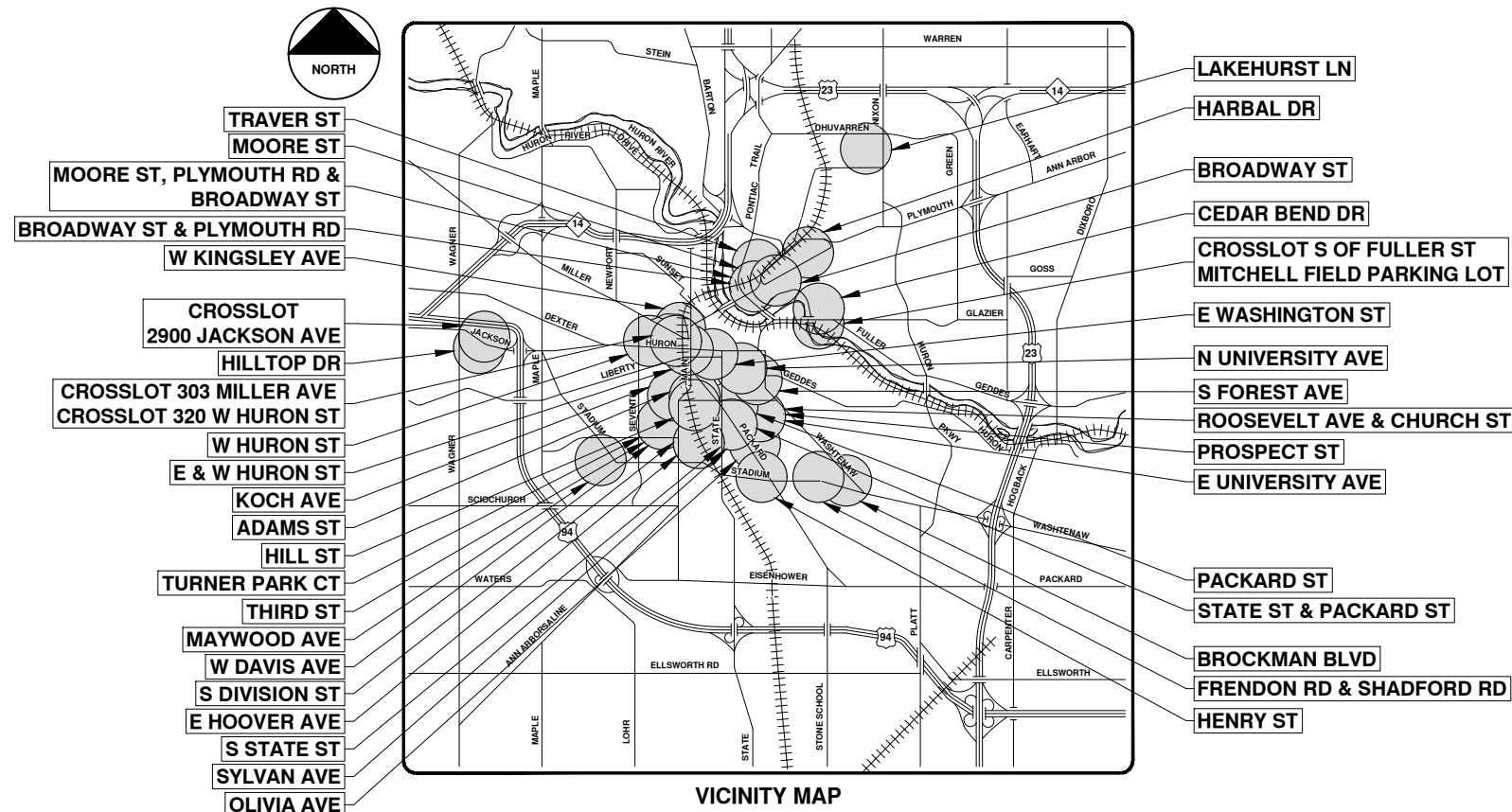


# CITY OF ANN ARBOR ENGINEERING

## 2020 SEWER LINING PROJECT

BID No. ITB 4643, FILE No. 2020039

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2 - 4	ADAMS ST
5 - 10	BROADWAY ST
11 - 13	CEDAR BEND DR
14 - 16	CROSSLOT 2900 JACKSON AVE
17 - 19	CROSSLOT 303 MILLER AVE CROSSLOT 320 W HURON ST
20 - 22	CROSSLOT S OF FULLER ST MITCHELL FIELD PARKING LOT
23 - 25	E HOOVER AVE
26 - 28	E & W HURON ST
29 - 33	E WASHINGTON ST
34 - 36	HARBAL DR
37 - 39	HILL ST
40 - 43	HILLTOP DR
44 - 46	KOCH AVE
47 - 49	LAKEHURST LN
50 - 52	MOORE ST
53 - 55	N UNIVERSITY AVE
56 - 63	OLIVIA AVE
64 - 67	PACKARD ST
68 - 70	S DIVISION ST
71 - 73	S FOREST AVE
74 - 79	S STATE ST
80 - 83	SYLVAN AVE
84 - 88	THIRD ST
89 - 91	TRAVER ST
92 - 94	TURNER PARK CT
95 - 101	W DAVIS AVE
102 - 113	W HURON ST
114 - 117	MAYWOOD AVE
118 - 127	HENRY ST
128 - 131	FRENDON RD & SHADFORD RD
132 - 136	BROCKMAN BLVD
137 - 142	MOORE ST, PLYMOUTH RD & BROADWAY ST
143 - 147	BROADWAY ST & PLYMOUTH RD
148 - 152	ROOSEVELT AVE & CHURCH ST
153 - 158	PROSPECT ST
159 - 162	E UNIVERSITY AVE
163 - 166	STATE ST & PACKARD ST
167 - 170	W KINGSLEY AVE
171 - 177	E HOOVER AVE STORM



### NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IVK

CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST HURON STREET  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
PROJECT DESCRIPTION AND LIMITS  
SCALE  
DRAWING No.  
2020039-1  
SHEET No.  
1 OF 177

PREPARED UNDER THE SUPERVISION OF  
*Igor V. Kotlyar*  
IGOR V. KOTLYAR, P.E. - MI LICENSE No. 43287  
PROJECT ENGINEER  
8/4/2020  
DATE

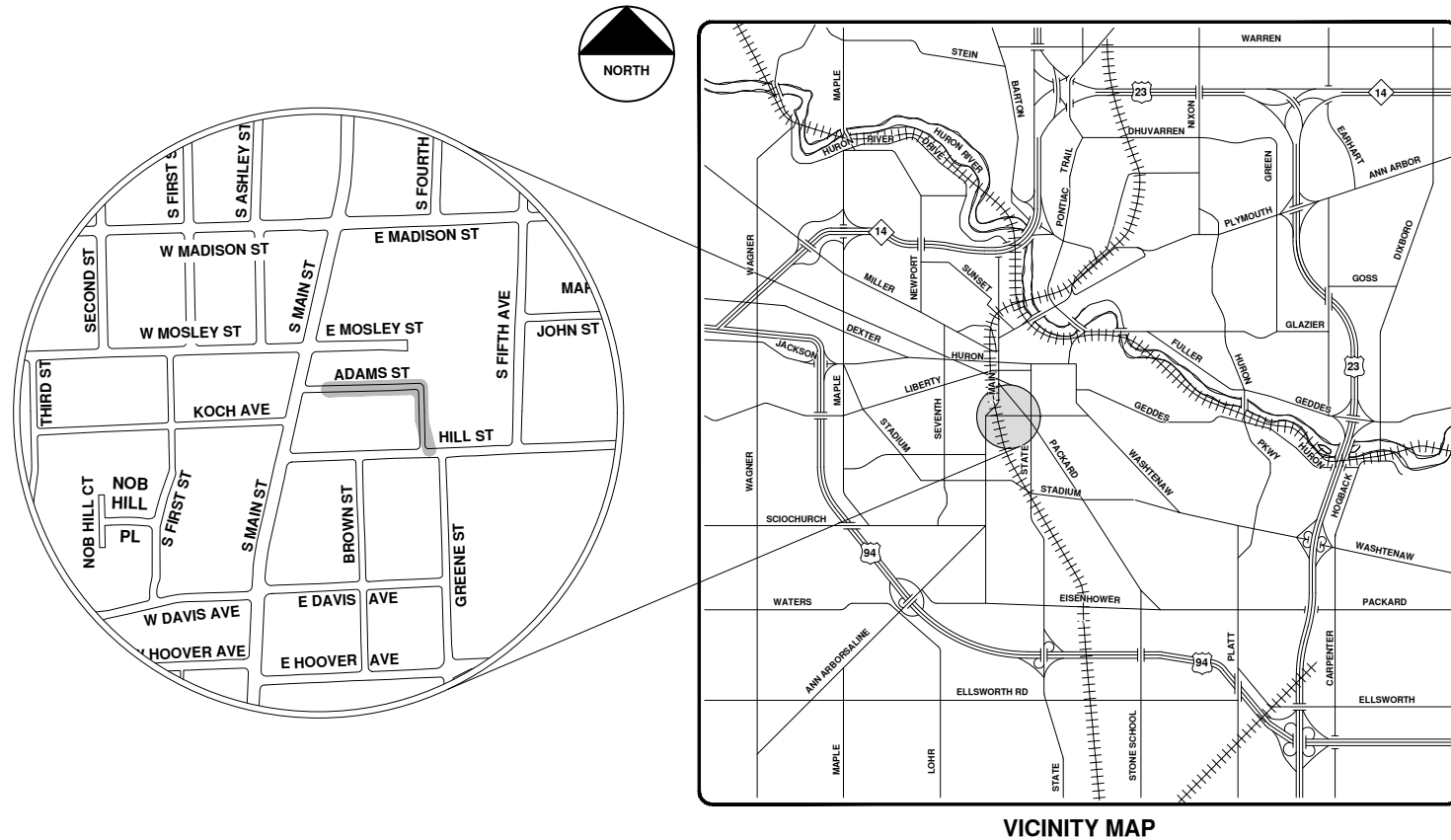






# 2020 SEWER LINING PROJECT

## ADAMS ST



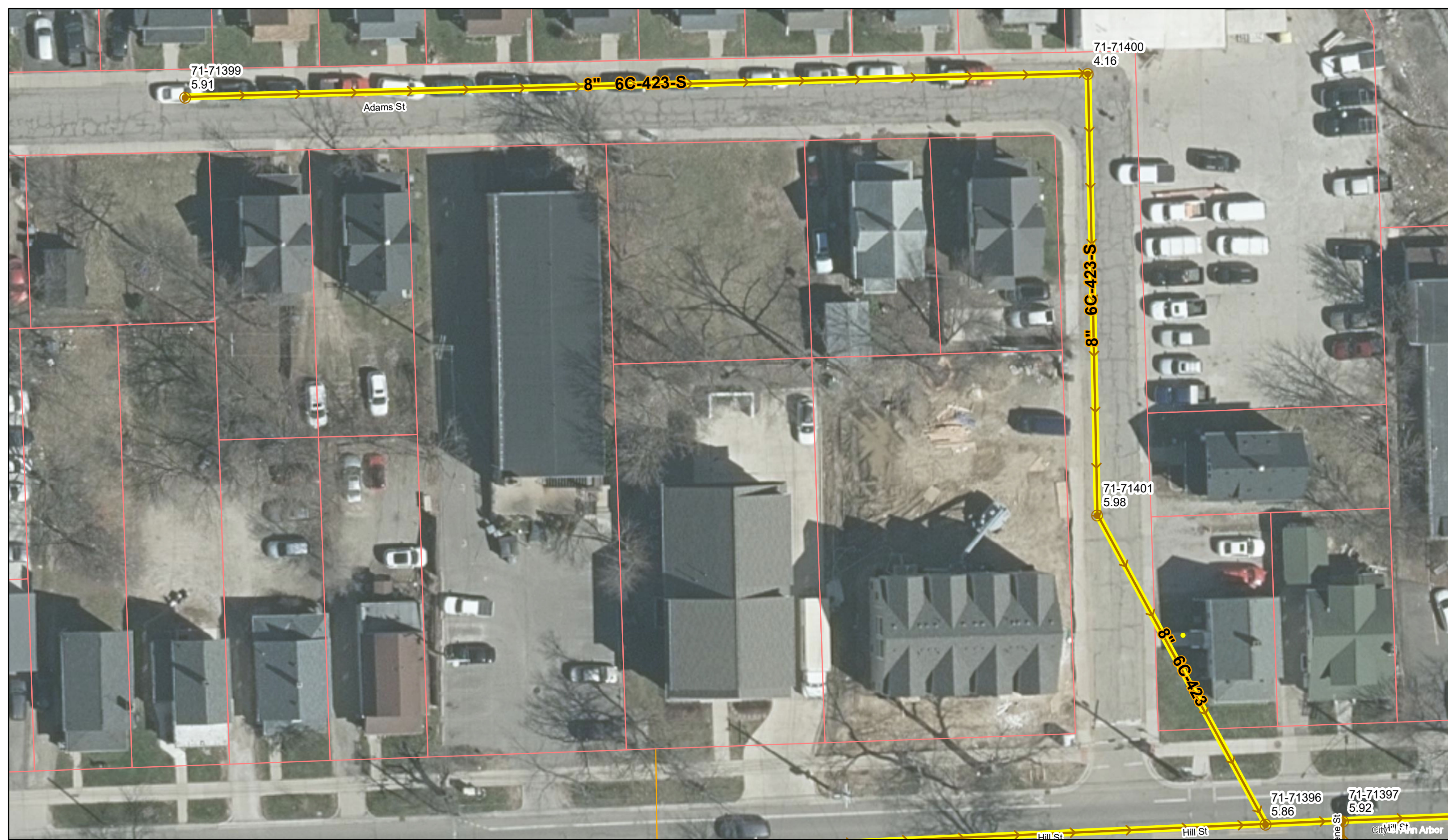
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 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING			
SCALE	DRAWING No.	CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 734-794-6410 www.a2gov.org	
SHEET No.	2020039-2	DESCRIPTION	REV.
2 OF 177		BID SET	00
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		DRAWN	ARG
		CHECKED	IVK



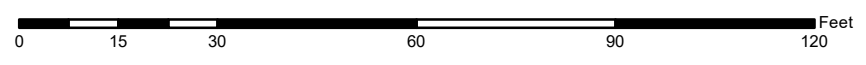


# Adams St.



	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

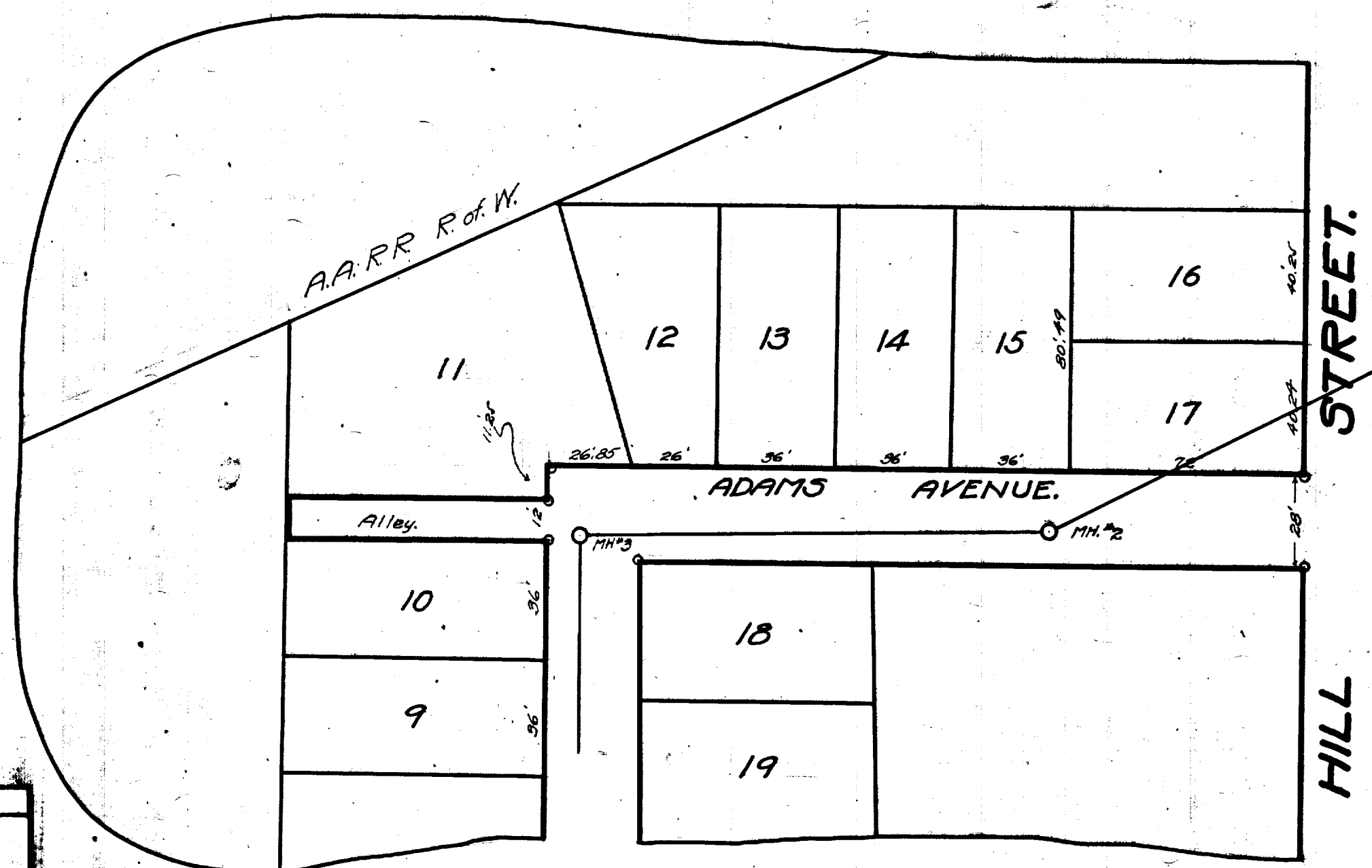
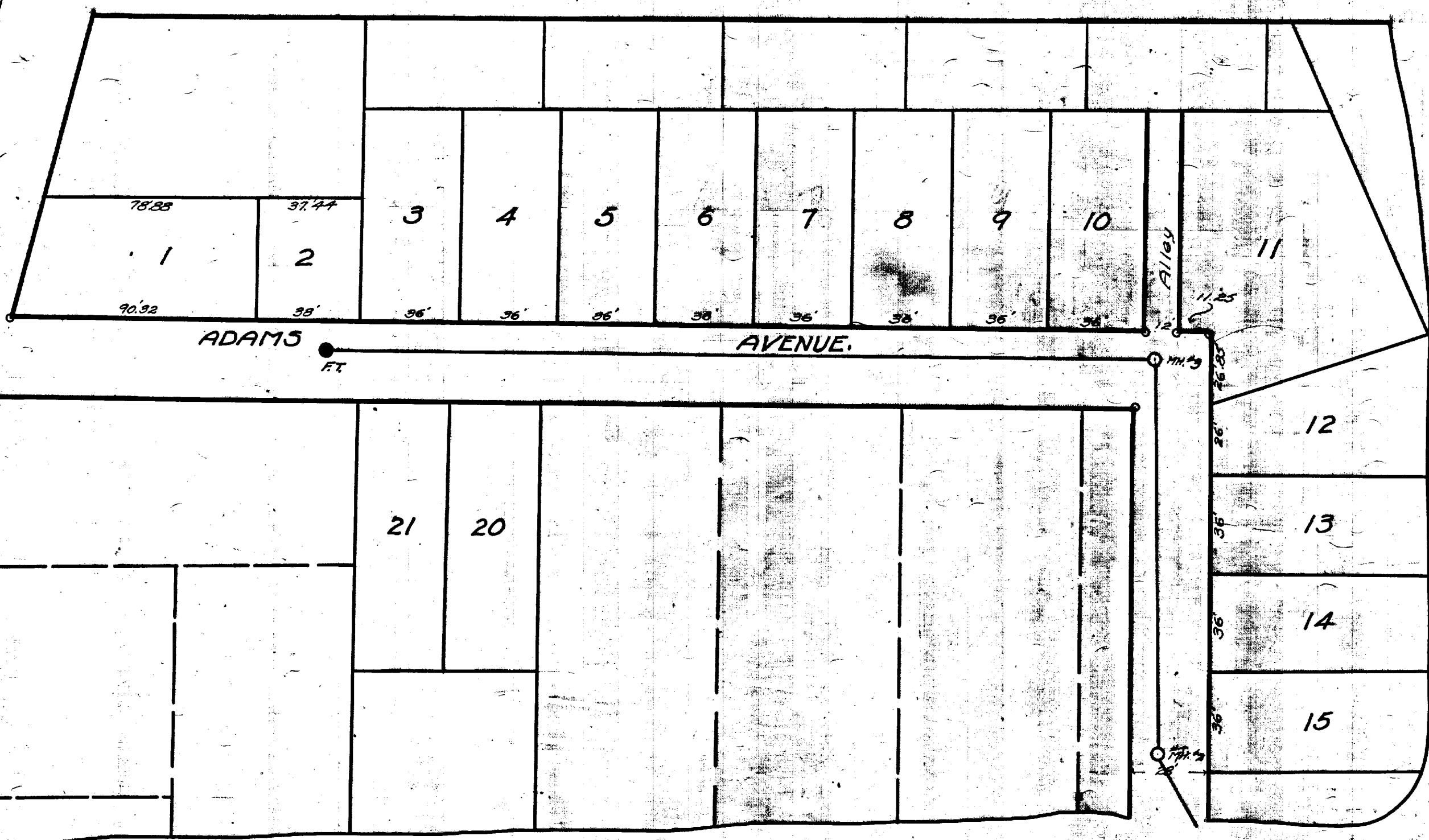


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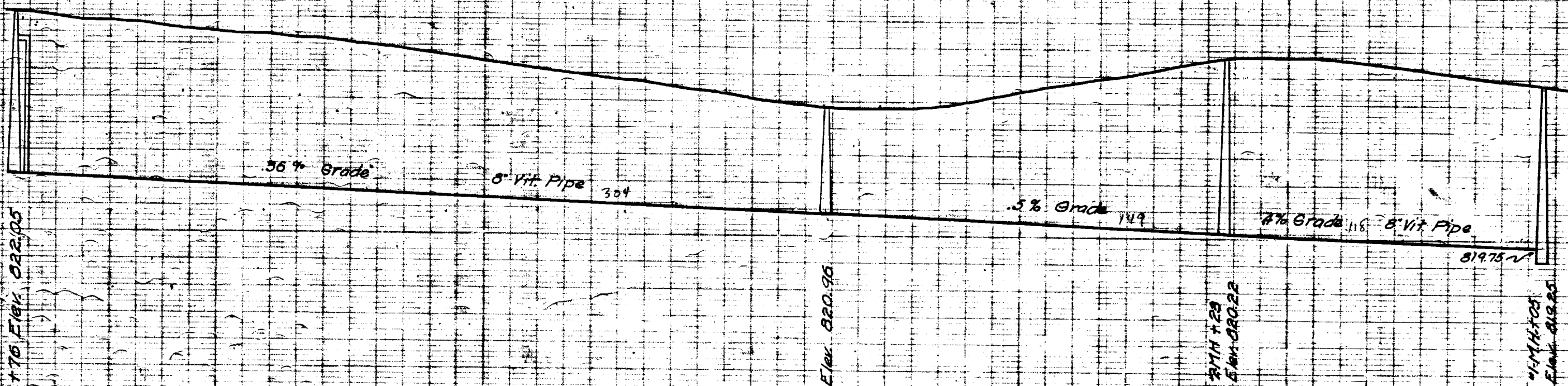
MOSELEY STREET

MAIN STREET



HILL STREET

REFERENCE LINE FOR  
TWO INCHES  
PHOTOGRAPHED DRAWINGS



Digital Status  
Scanned On: 9-7-04  
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Vectors:  
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Checked by

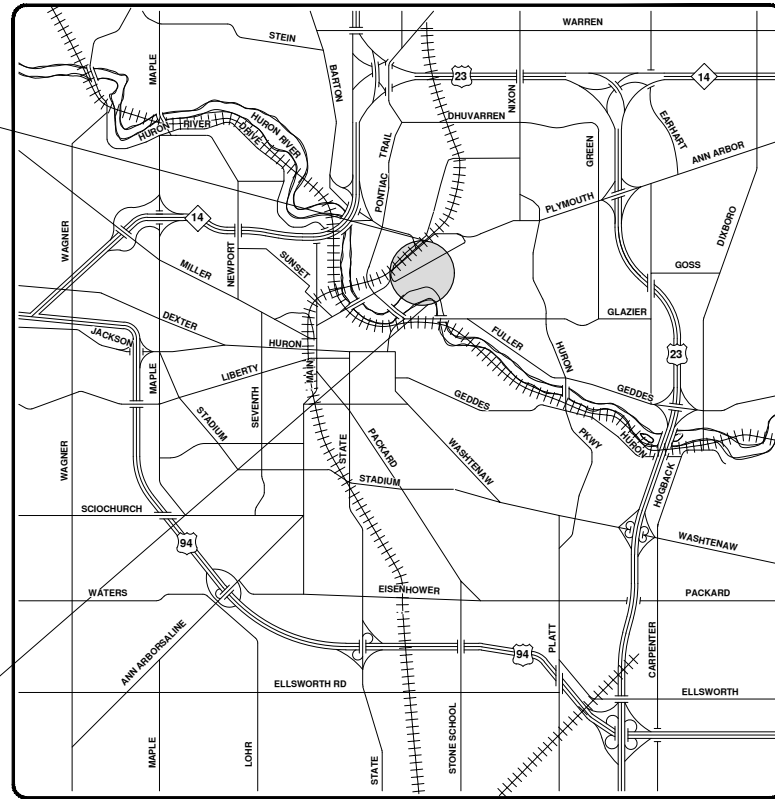
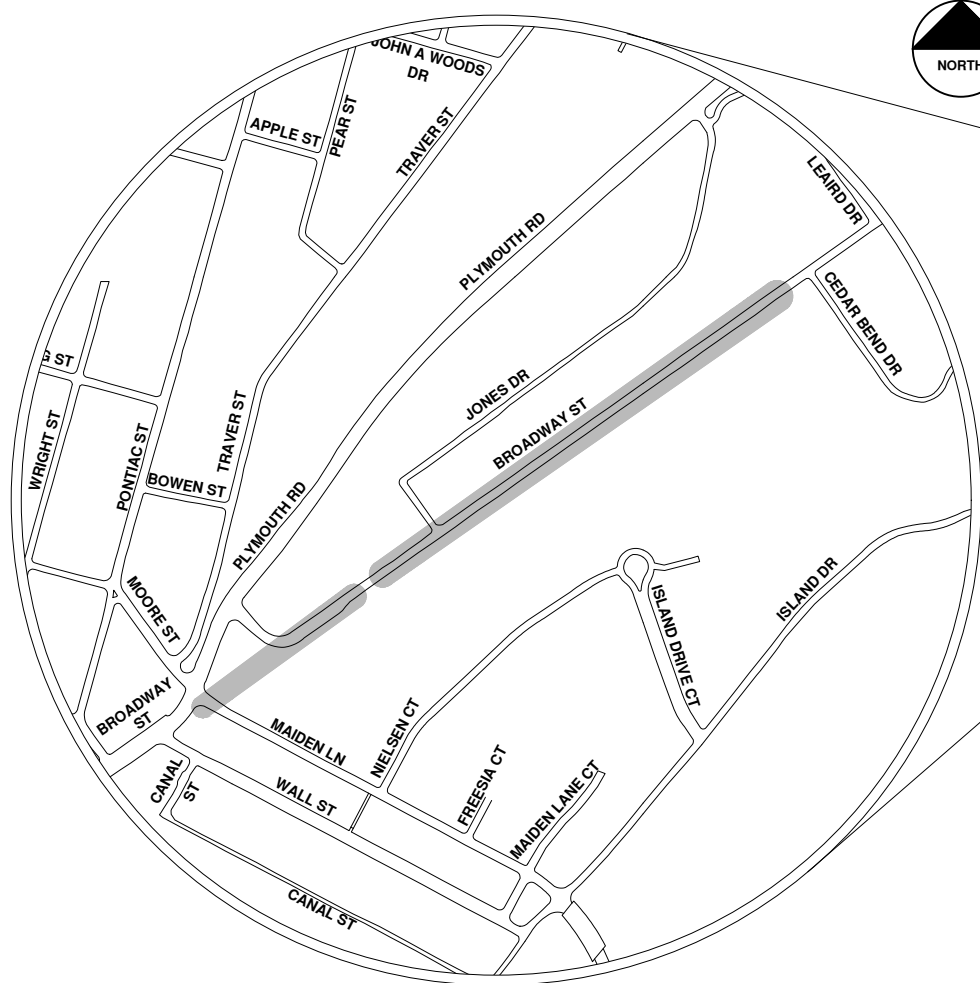
CITY ENGINEERS OFFICE  
ANN ARBOR, MICH.  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
**ADAMS AVE.**  
HILL ST. TO MAIN ST.  
Geo. H. Sandenburgh, City Eng.  
1918  
Scale - Plan 1" = 40' Profile 1" = 40' Ver. 1" = 4'





# 2020 SEWER LINING PROJECT

## BROADWAY ST



VICINITY MAP

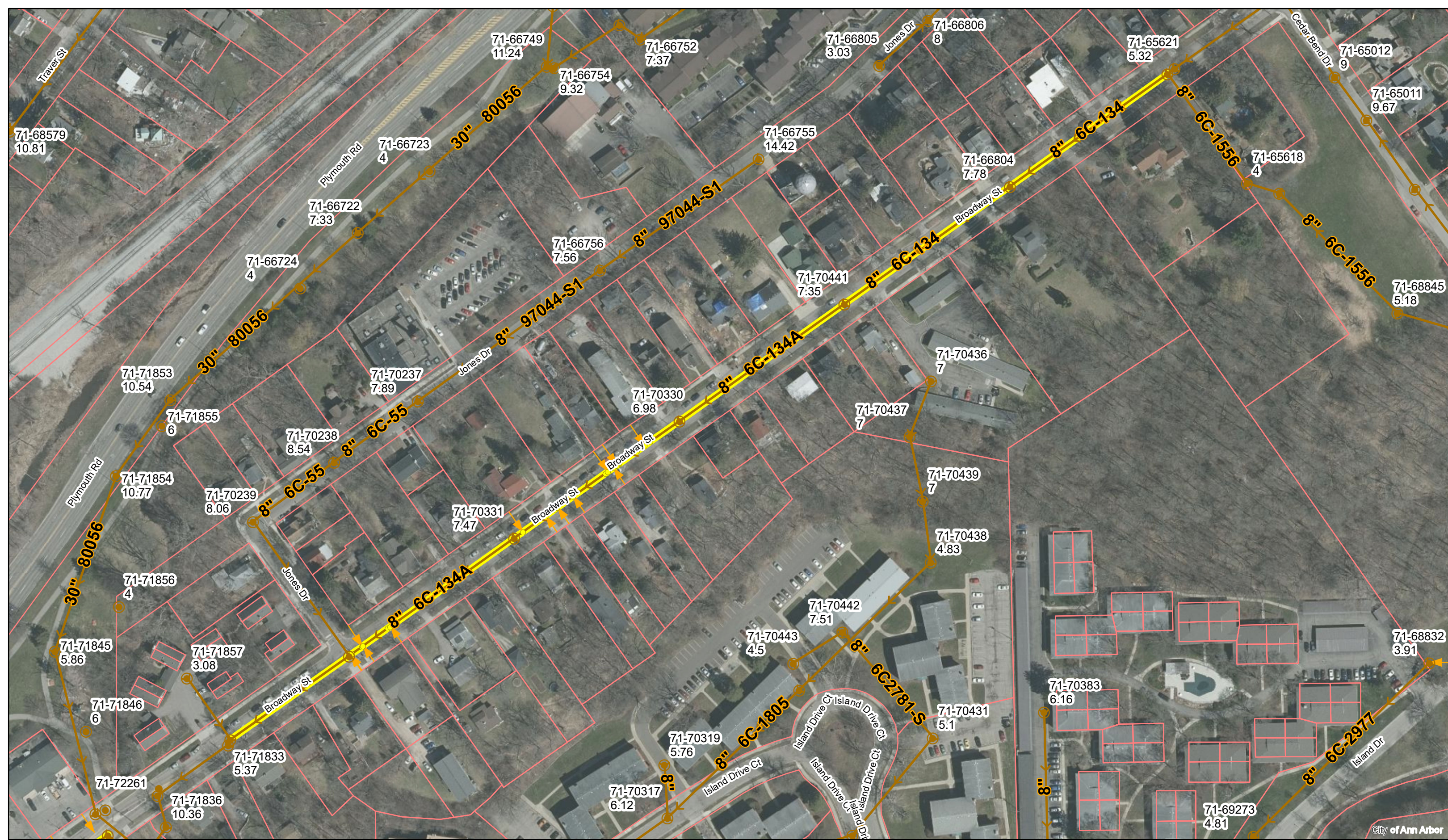
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		CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 734-794-6410 www.a2gov.org	
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE	DRAWING No. 2020039-5	SHEET No. 5 OF 177	CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 734-794-6410 www.a2gov.org
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1	ARG	DRAWN	CHECKED
1	IVK	CHECKED	811 Know what's below. Call before you dig.



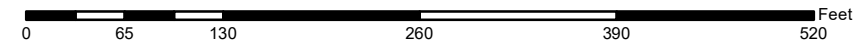


# Broadway St.



	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

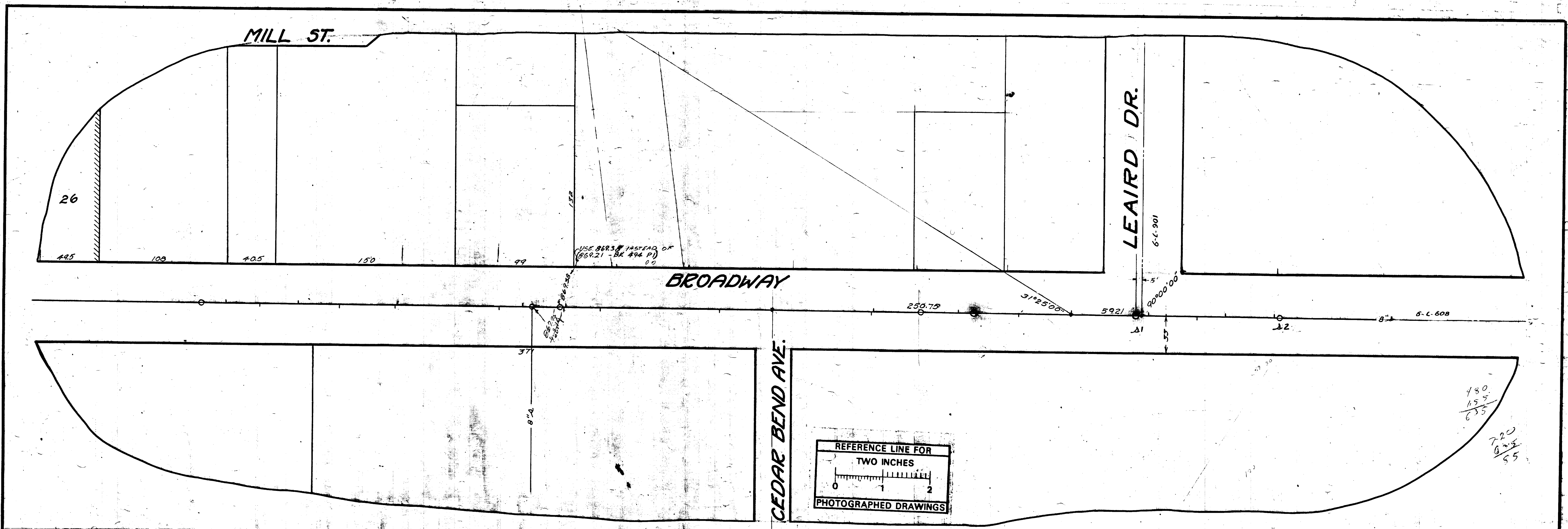
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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City of Ann Arbor

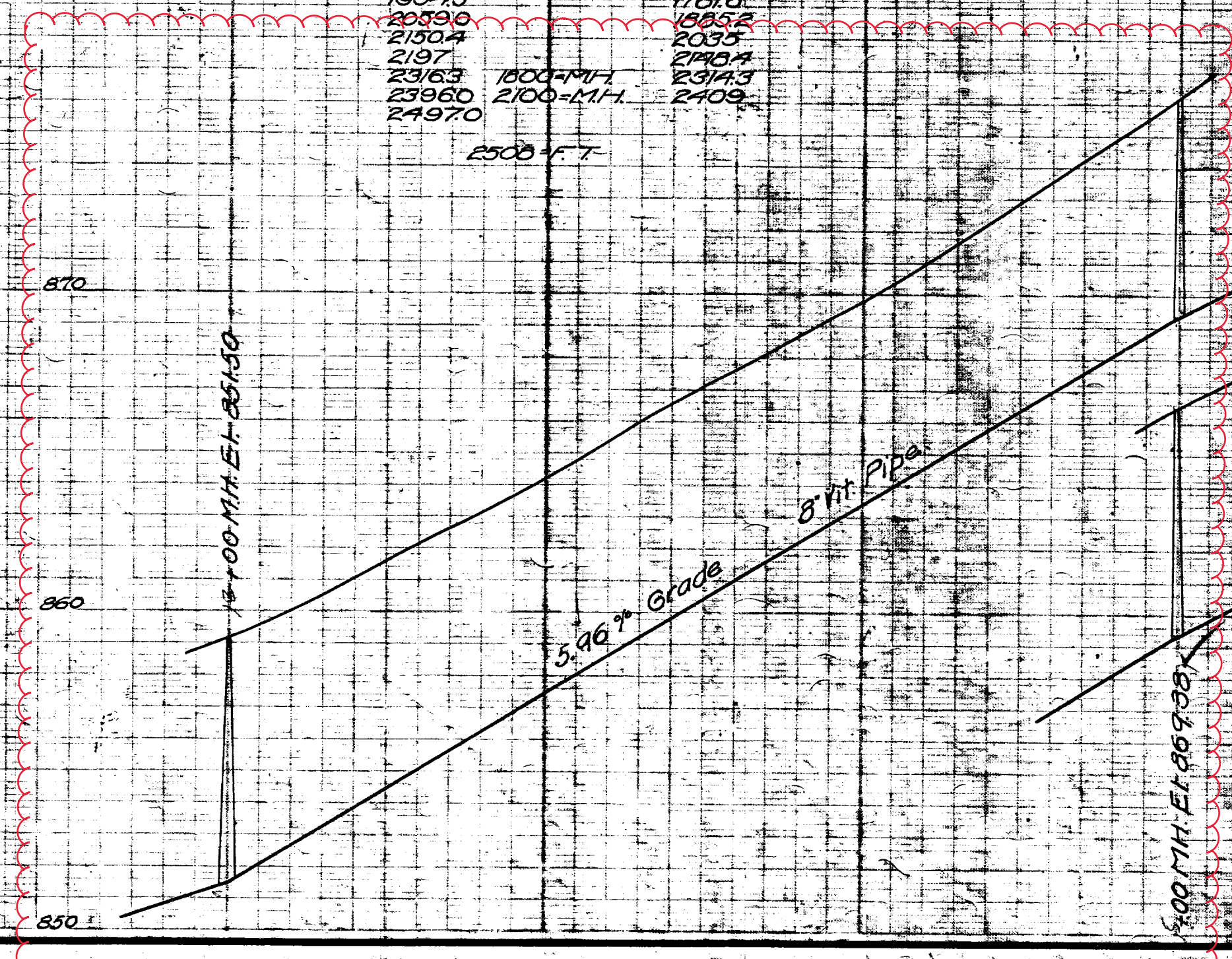




MEASUREMENTS TO HOUSE CONNECTIONS On Broadway from M.H. 1200 NE of Jones St to A.T. Sta. O-M.H. @ Jones St.

North	1200-M.H.	South
1220.8	16 Only	1279.3
1201.3		1302.3
1307.3		1400.0
1483.4		1530.8
1503.8	1500-M.H.	1581.0
1634.0		1634.0
1694.5		1701.0
1839.0		1803.2
2180.4		2035.3
2197.1		2100.4
2316.3	1800-M.H.	2314.3
2386.0	2100-M.H.	2409.1
2497.0		

2500 FT.

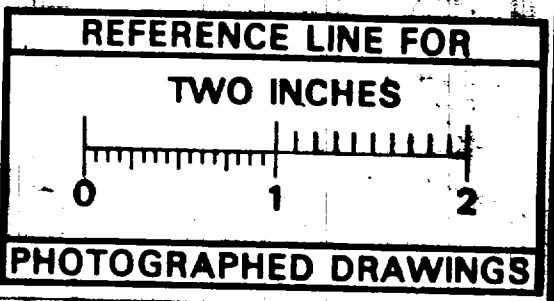
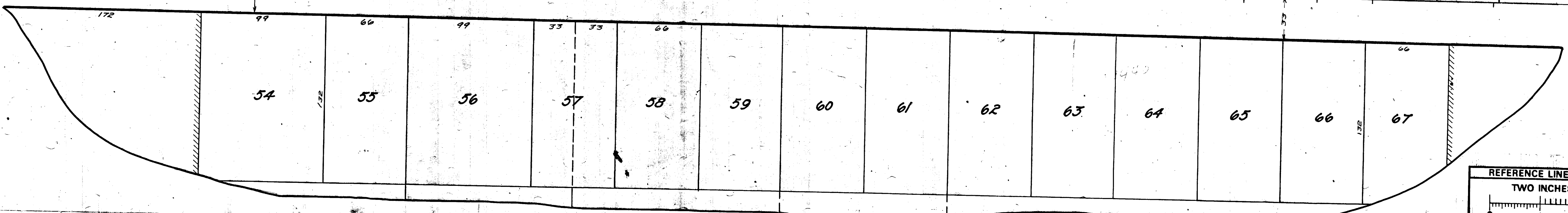
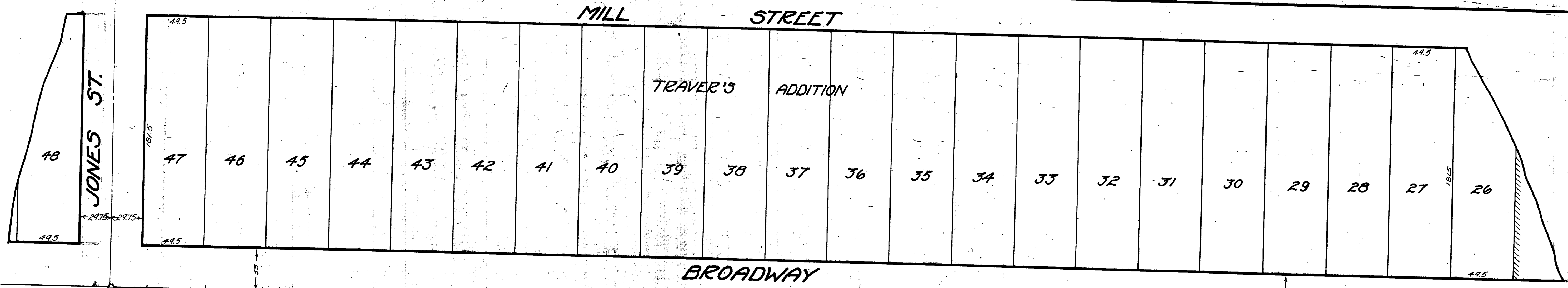


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SHEET No. 45 INDEX No. 749 SHELF No. G SIZE C SUB. No. 134 Drawn by Traced by W.E.C. Checked by

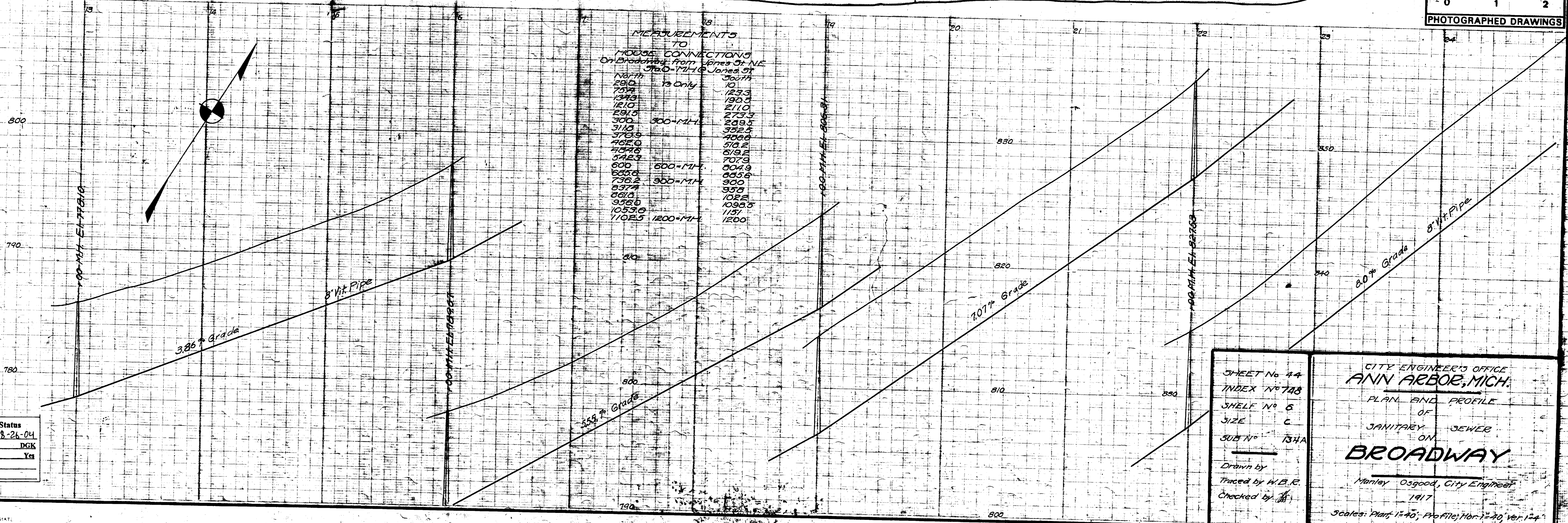
CITY ENGINEER'S OFFICE ANN ARBOR, MICH. PLAN AND PROFILE OF SANITARY SEWER ON BROADWAY Manley Osgood, City Engineer 1917 Scales: Plan: 1"=40', Profile: 1"=20'





MEASUREMENTS TO HOOD CONNECTIONS ON Broadway from Jones St NE

North	10 Only	10
29.0		123.3
75.4		190.3
134.8		211.0
121.0		273.3
291.5		289.5
300	300-M.H.	352.5
311.0		400.0
370.9		510.2
458.0		519.2
754.8		707.9
342.3		804.9
600	600-M.H.	855.9
650.6		900
730.3	900-M.H.	959
837.7		1052
861.0		1095.5
956.0		1151
1053.0		1200
1102.5	1200-M.H.	



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SIZE C  
SUB No 134A

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
ON  
**BROADWAY**

Drawn by  
Traced by W.B.R.  
Checked by

Manley Osgood, City Engineer  
1917

Scales: Plan: 1"=40'; Profile: Hor: 1"=40', Ver: 1"=4'





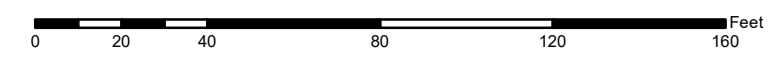
City of Ann Arbor

# Broadway St.



	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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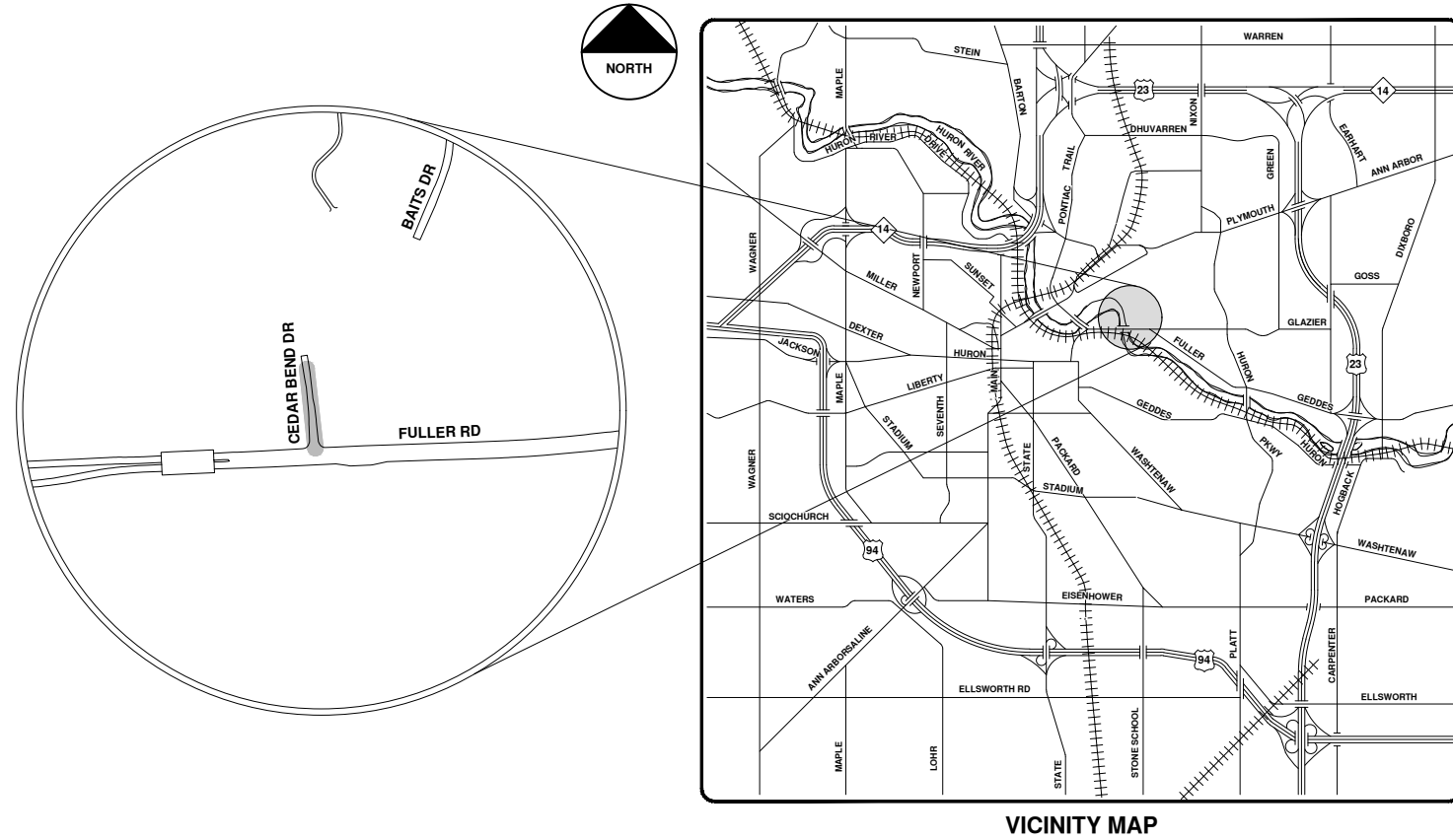






# 2020 SEWER LINING PROJECT

## CEDAR BEND DR



VICINITY MAP

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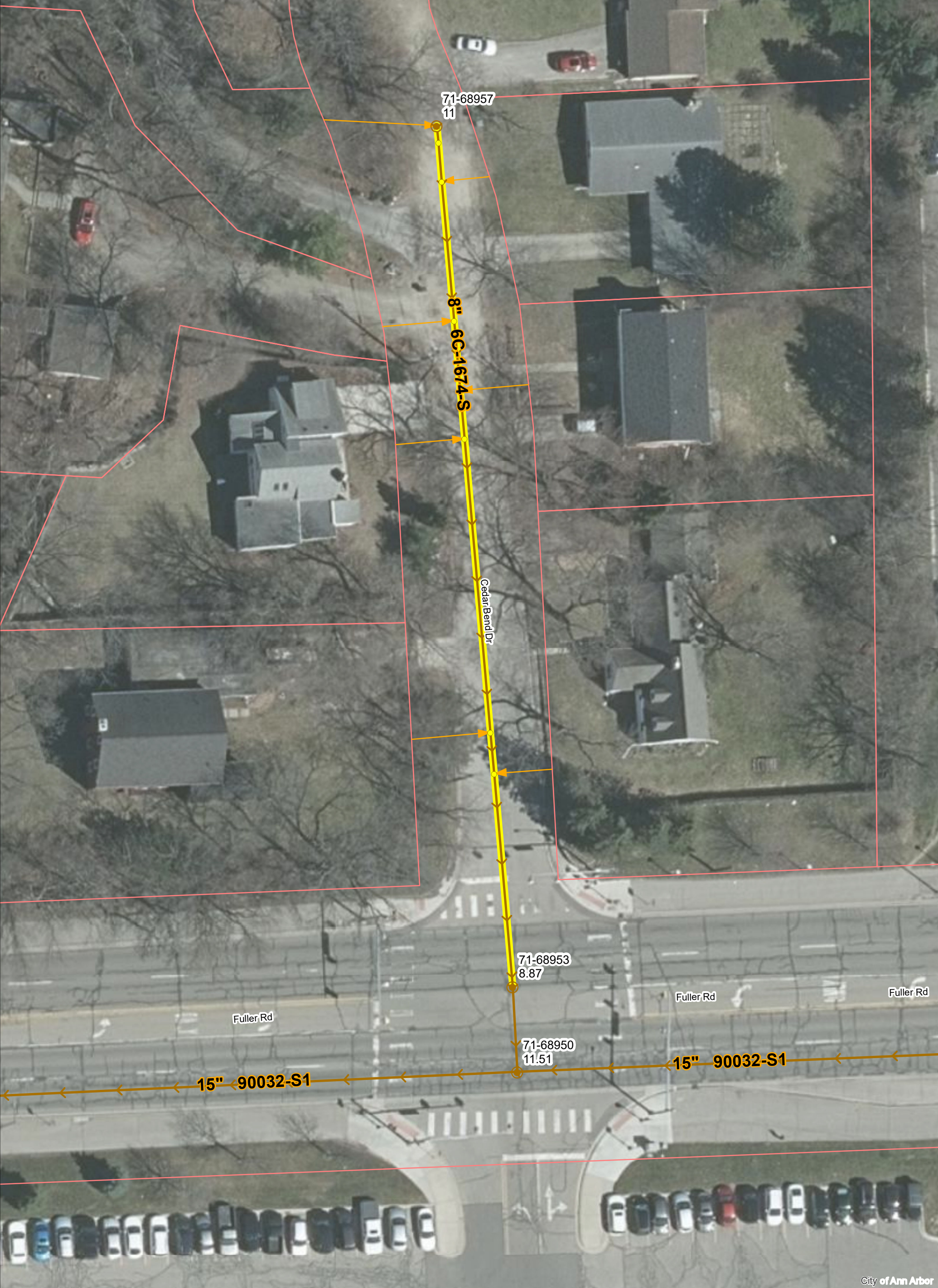


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-11

SHEET No.  
 11 OF 177



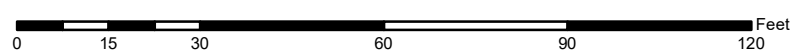


# Cedar Bend Dr.



	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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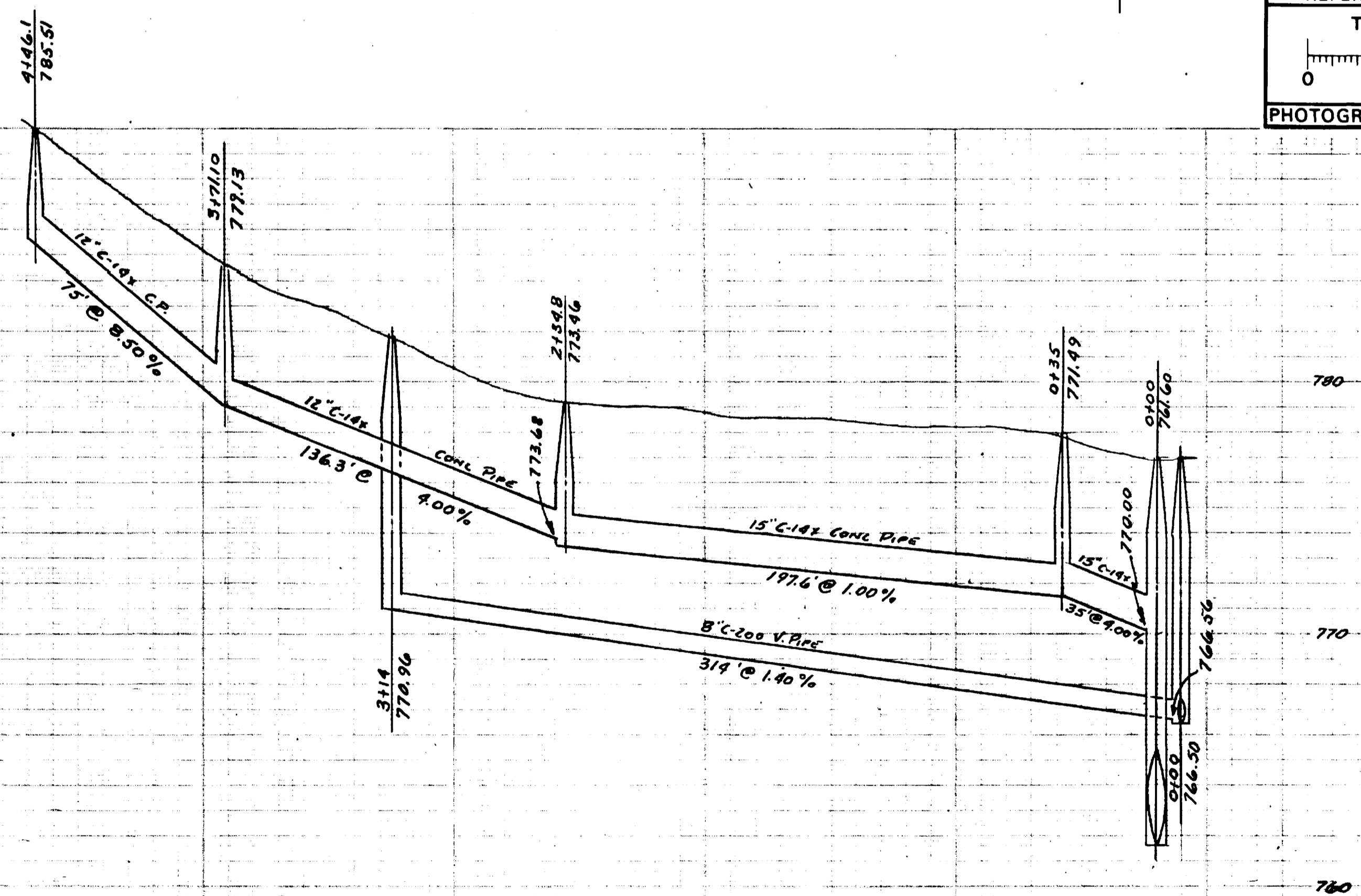
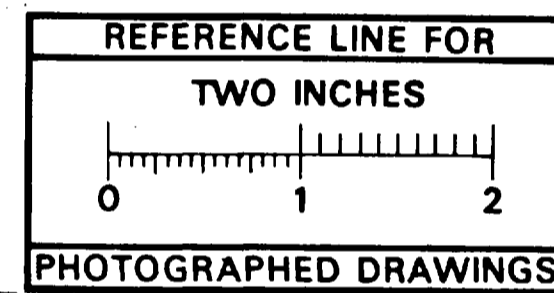
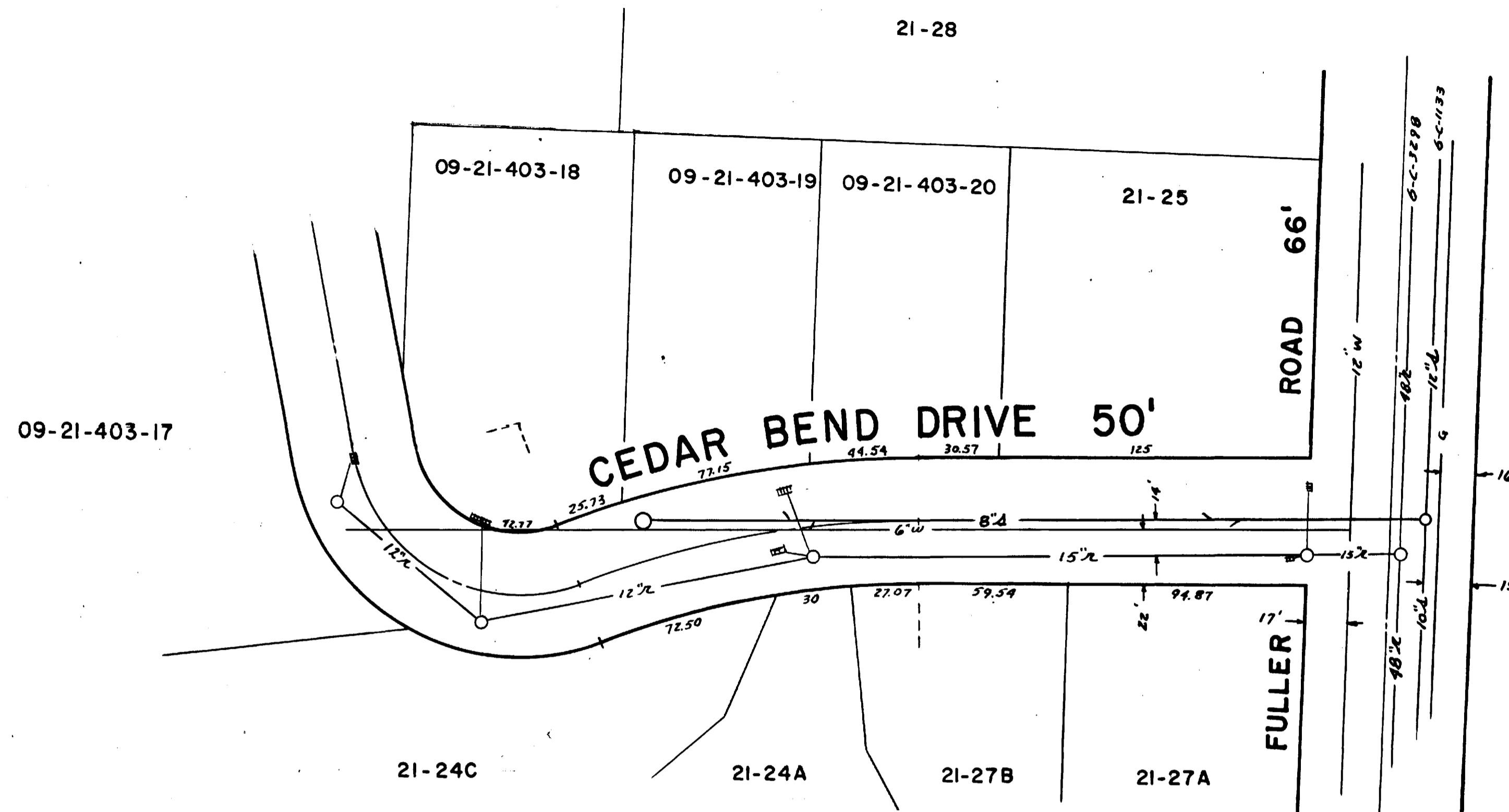
City of Ann Arbor





NOTE:

SANITARY SEWER BUILT IN 1951 UNDER PRIVATE CONTRACT AND PAID FOR BY THE LOT OWNERS ADJACENT TO THE SEWER IN CEDAR BEND DRIVE. BASED ON FORMER "CITY ORDINANCE NO. 63"



Digital Status  
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By: JSM  
Despeckled: YES  
Vectors:  
O.C.R.:

DR. BY	d.	DATE	2-64	SHEET NO.	
TR. BY				INDEX NO.	3453
CH. BY				SHELF NO.	
REVISIONS					
			<b>6-C-1674</b>		
			SCALE: HORIZONTAL 1" = 40' VERTICAL 1" = 4'		

**SANITARY AND STORM SEWERS**  
**CEDAR BEND DRIVE**  
 FULLER ROAD NORTHERLY  
 FREDRICK A. MAMMEL  
 SUPERINTENDENT OF PUBLIC WORKS

<b>LEGEND:</b>	—○—○—	EXISTING SANITARY	—○—○—	EXISTING STORM	G	EXISTING GAS
	—●—●—	PROPOSED SANITARY	—●—●—	PROPOSED STORM	W	EXISTING WATER
PROFILES	—	CENTER LINE	- - - -	RIGHT PROPERTY LINE		
	- - - -	LEFT PROPERTY LINE				

<b>REFERENCES:</b>	BENCH MARK	PROFILES BY
	DRAWINGS	FIELD BOOK 872

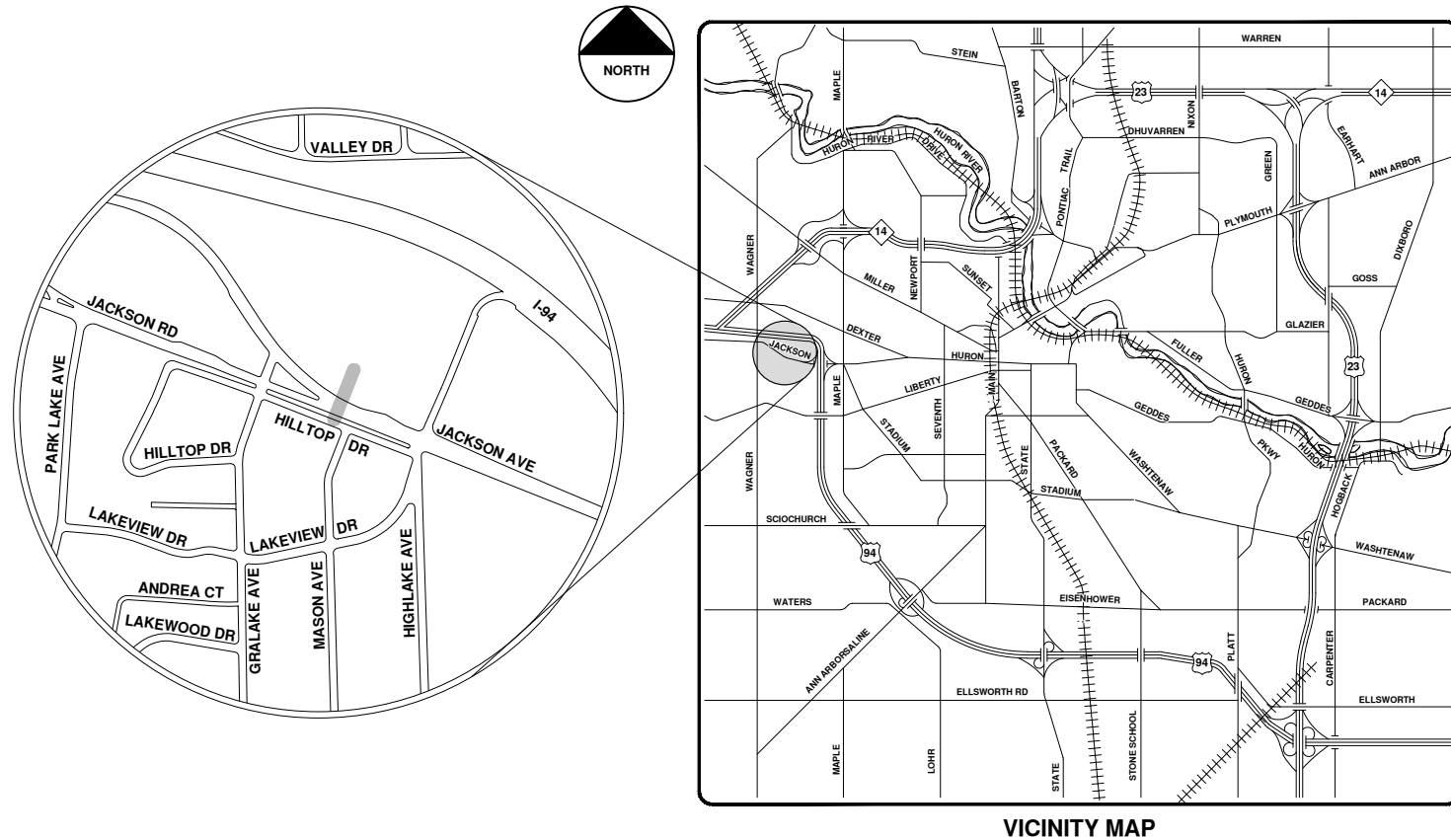
JOB	DIST.	PREPARED BY
JOB	DIST.	
JOB	DIST.	APPROVED BY
JOB	DIST.	





# 2020 SEWER LINING PROJECT

## CROSSLOT 2900 JACKSON AVE



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		ARG
		DRAWN
		CHKD

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SCALE  
 DRAWING No.  
 2020039-14

SHEET No.  
 14 OF 177

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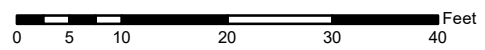
City of Ann Arbor

# Crosslot 2900 Jackson Ave.



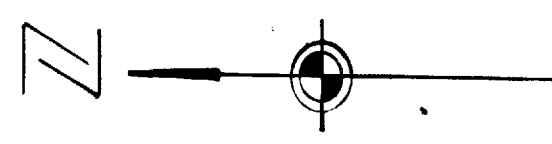
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	Proposed Lining		

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

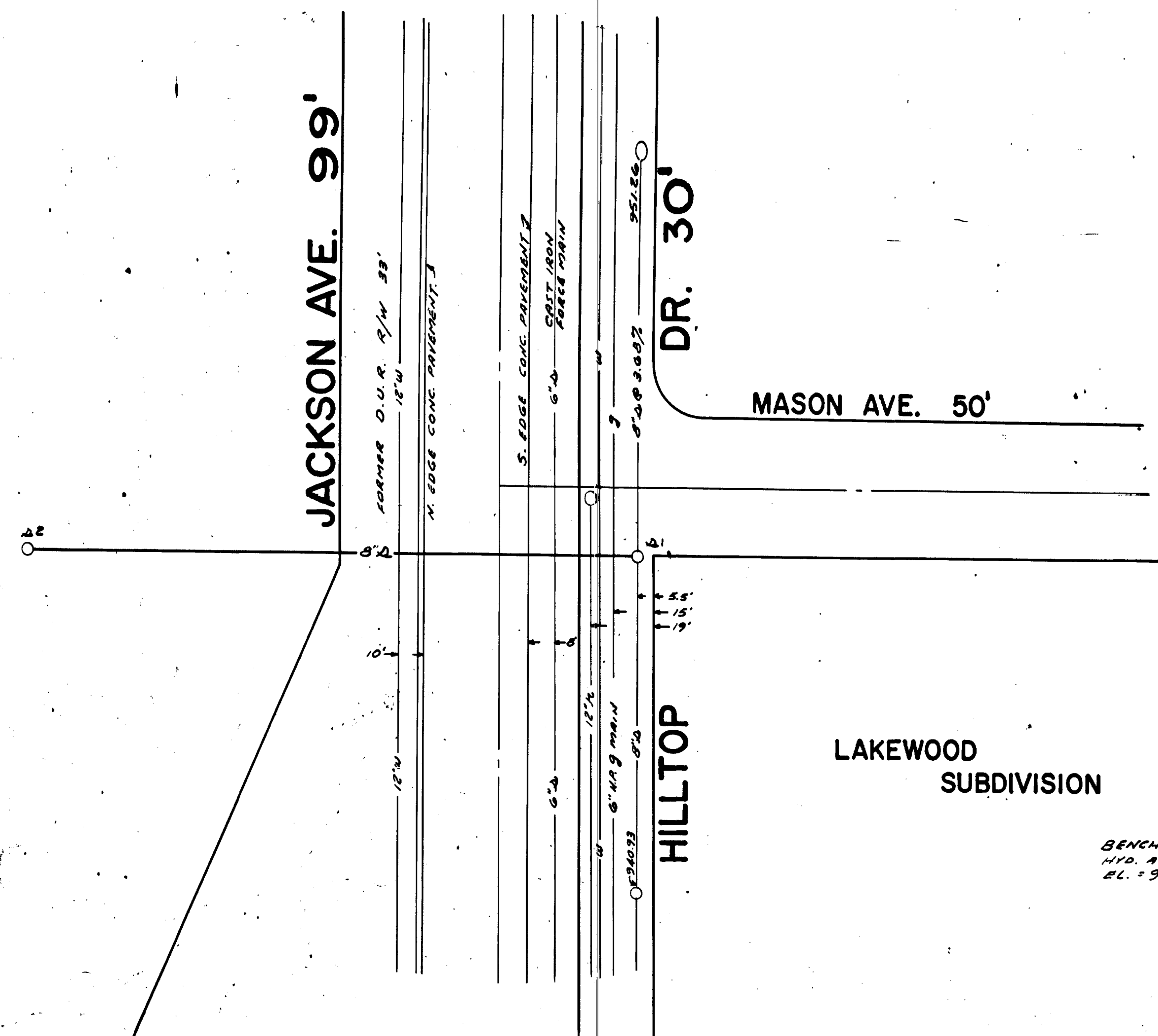


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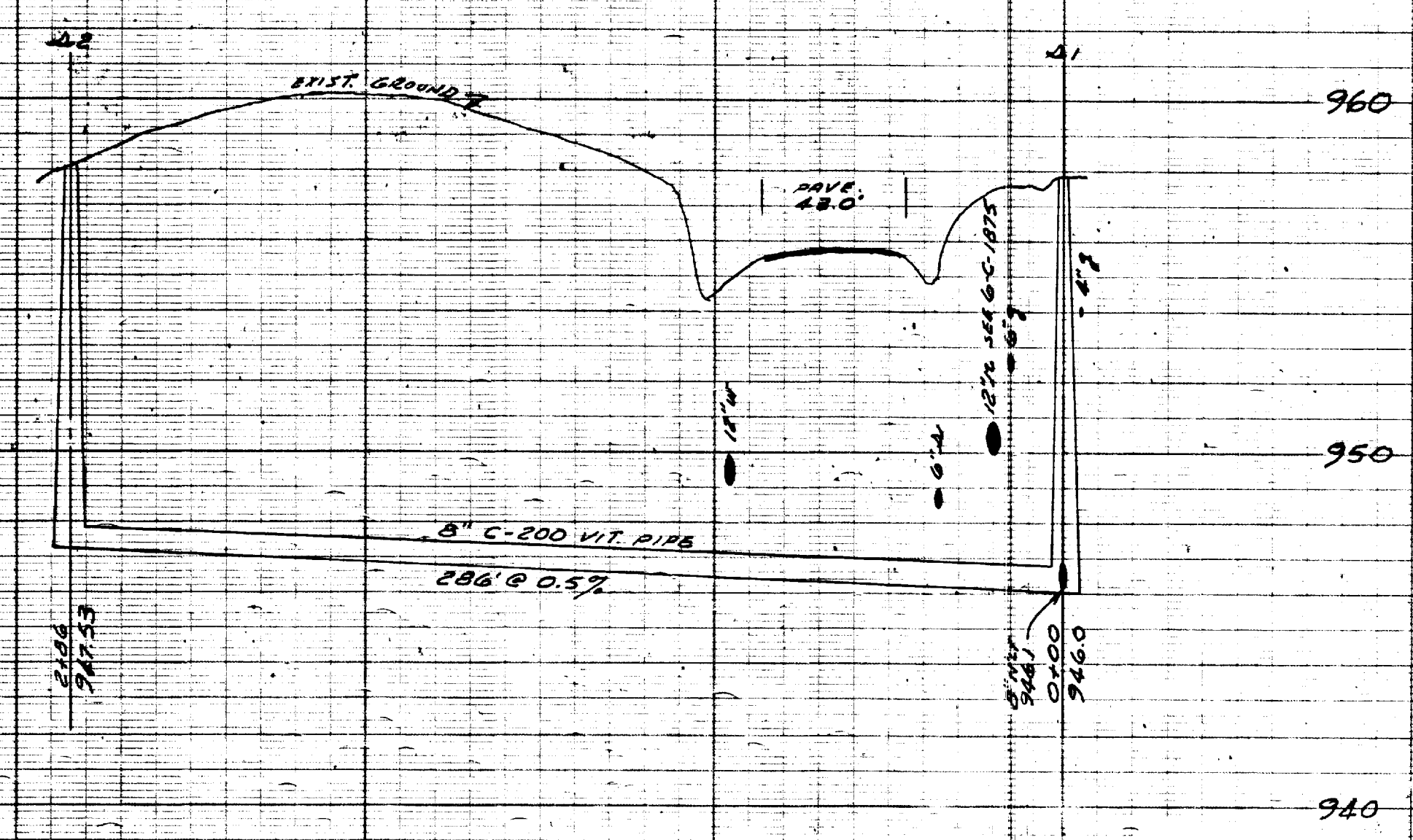
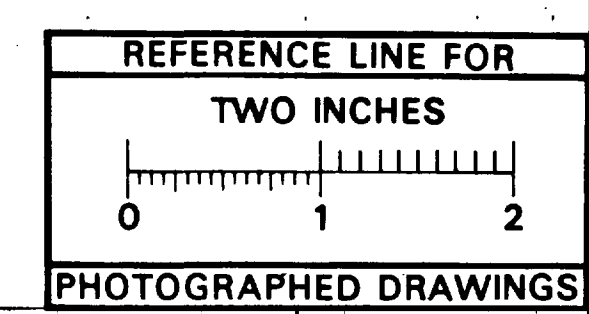


BUILDING EL. = 9520



LAKESWOOD SUBDIVISION

BENCHMARK: 1/16" AT SW CORNER OF HILLTOP & MASON EL. = 957.58



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 By: DGK  
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 Vectors:  
 O.C.R.:

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TR. BY	W.B.M.	6/61	SHEET NO.	
CH. BY	T.H.	6/61		
REVISIONS				
AS BUILT JUNE 1962				
SCALE: HORIZONTAL		1" = 40'		
VERTICAL		1" = 4'		

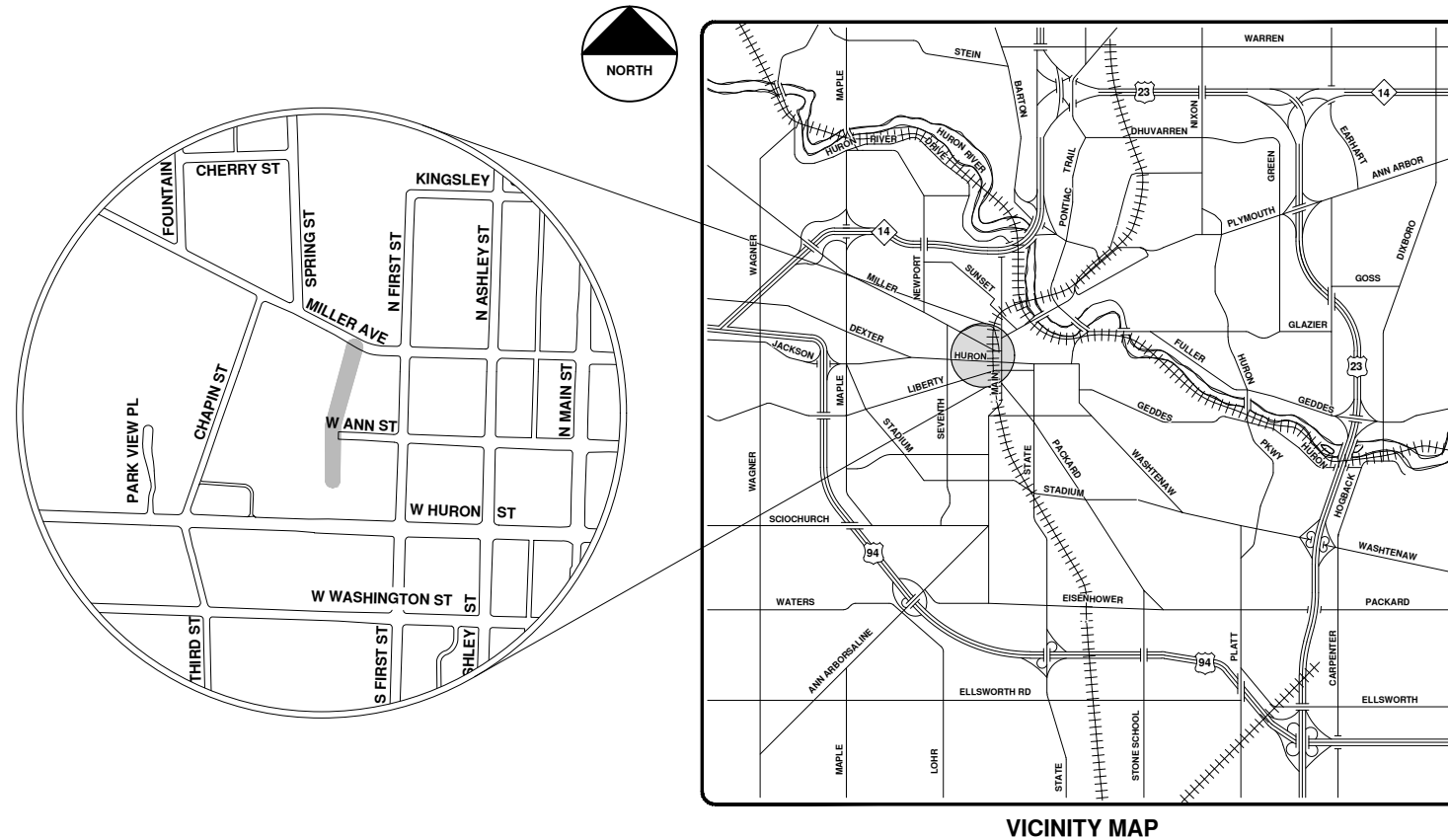
PREPARED BY ATWELL-HICKS, INC.  
 SANITARY SEWER  
**CROSSLOTS**  
 HILLTOP DR. TO HOLIDAY INN  
 FREDERICK A. MAMMEL  
 SUPERINTENDENT OF PUBLIC WORKS  
 PUBLIC WORKS DEPARTMENT - ANN ARBOR, MICHIGAN





# 2020 SEWER LINING PROJECT

## CROSSLOT 303 MILLER AVE CROSSLOT 320 W HURON ST



VICINITY MAP

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REV.	DATE	DESCRIPTION
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		DRAWN
		ARG
		CHKD

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
DRAWING No.  
2020039-17

SHEET No.  
17 OF 177

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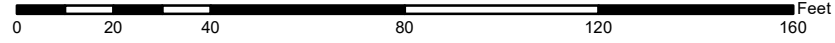


# Crosslot 303 Miller Ave. Crosslot 320 W Huron St.



	Manhole		Sanitary Main
	Proposed Lining		

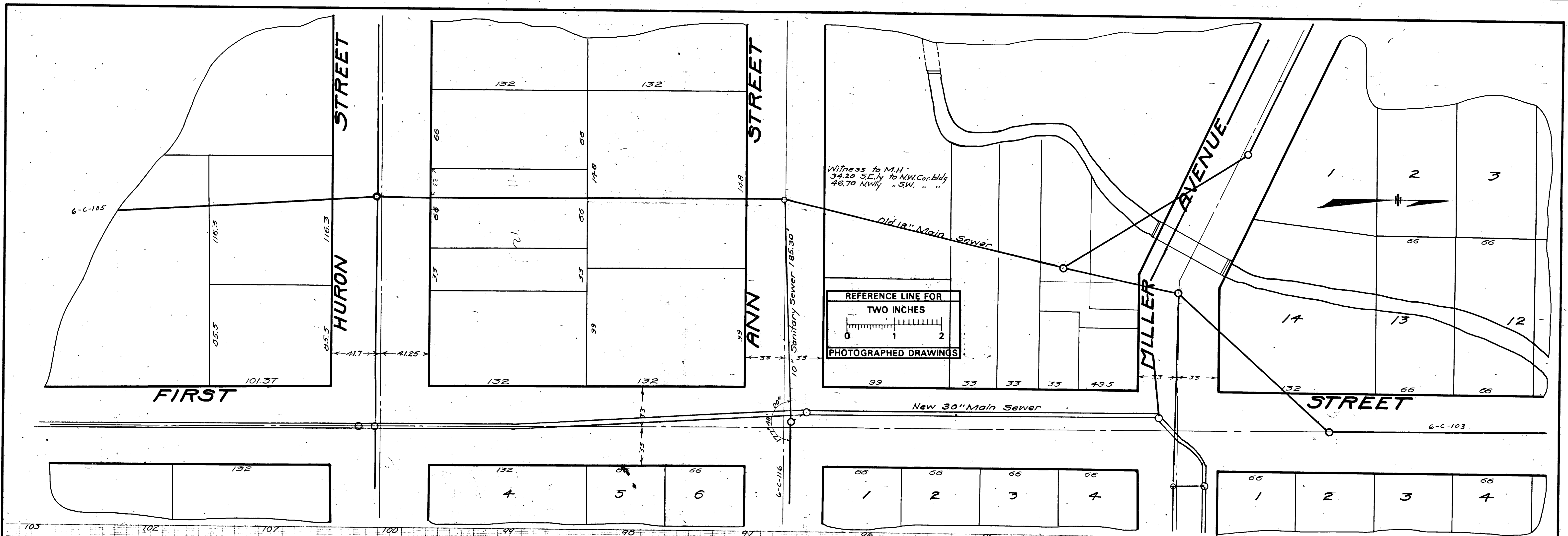
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1.00 (Manhole Depth)



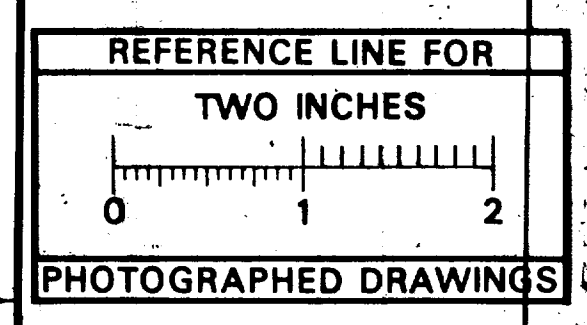
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City of Ann Arbor

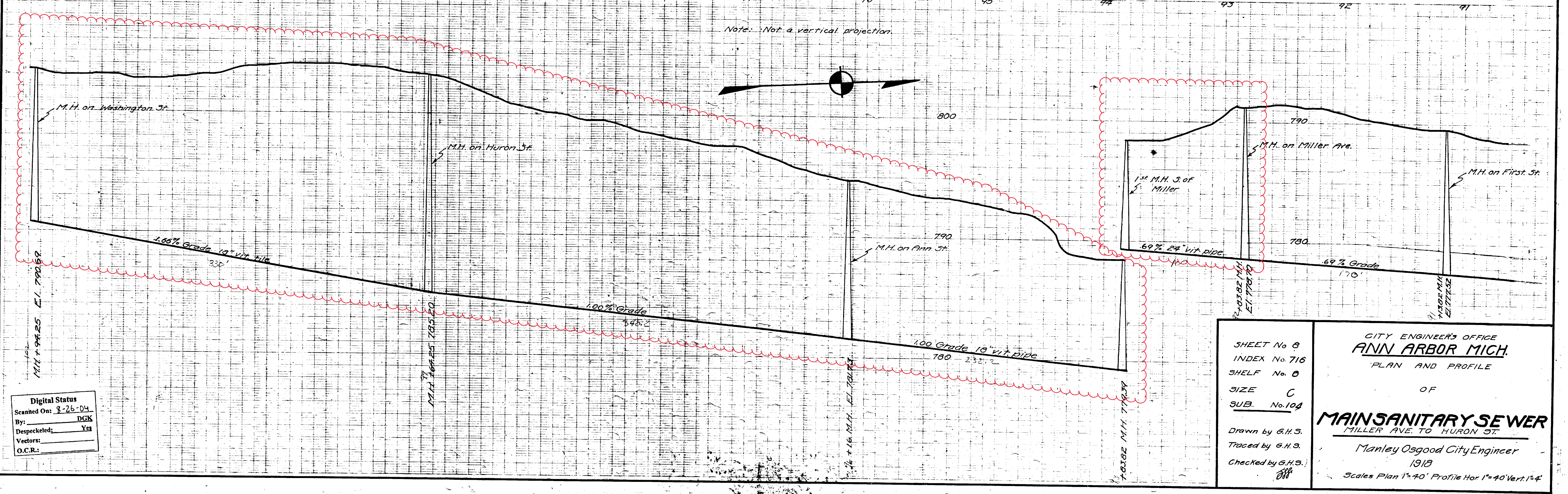




Witness to M.H.  
34.20 S.E. 1/4 to NW Cor. bldg  
46.70 NW 1/4 S.W. ...



Note: Not a vertical projection.



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Despeckled: Yes  
Vectors:  
O.C.R.:

SHEET No 8  
INDEX No 716  
SHELF No 0  
SIZE C  
SUB. No. 104  
Drawn by G.H.S.  
Traced by G.H.S.  
Checked by G.H.S.

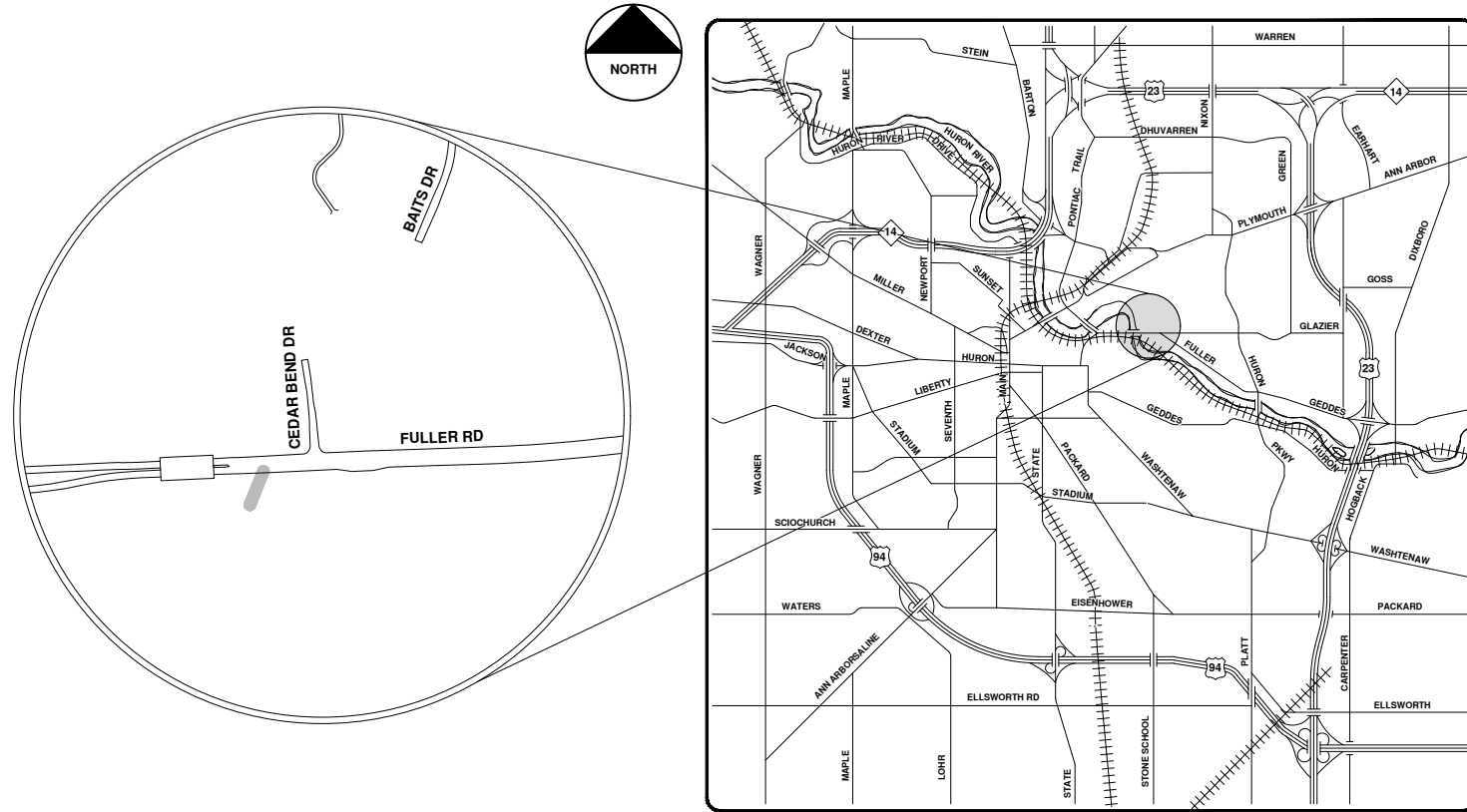
CITY ENGINEER'S OFFICE  
**ANN ARBOR MICH.**  
PLAN AND PROFILE  
OF  
**MAINSANITARY SEWER**  
MILLER AVE. TO HURON ST.  
Manley Osgood City Engineer  
1918  
Scale: Plan 1"=40' Profile Hor 1"=40' Vert 1"=4'





# 2020 SEWER LINING PROJECT

## CROSSLOT S OF FULLER ST MITCHELL FIELD PARKING LOT




VICINITY MAP

R:\2020039 Sewer Lining\2020\Plan Production\2020039Cov.dwg - \_o2\_standard bw.stb - Plot Date: 9/14/2020 12:04:49 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

		CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE: _____ DRAWING No. 2020039-20 SHEET No. 20 OF 177	
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 www.a2gov.org		CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 www.a2gov.org	
REV.	DESCRIPTION	DATE	CHECKED
00	BID SET	9-14-20	ARG
			IVK





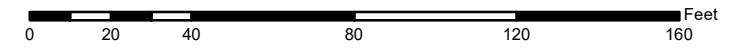
City of Ann Arbor

## Crosslot S of Fuller St. Mitchell Field Parking Lot



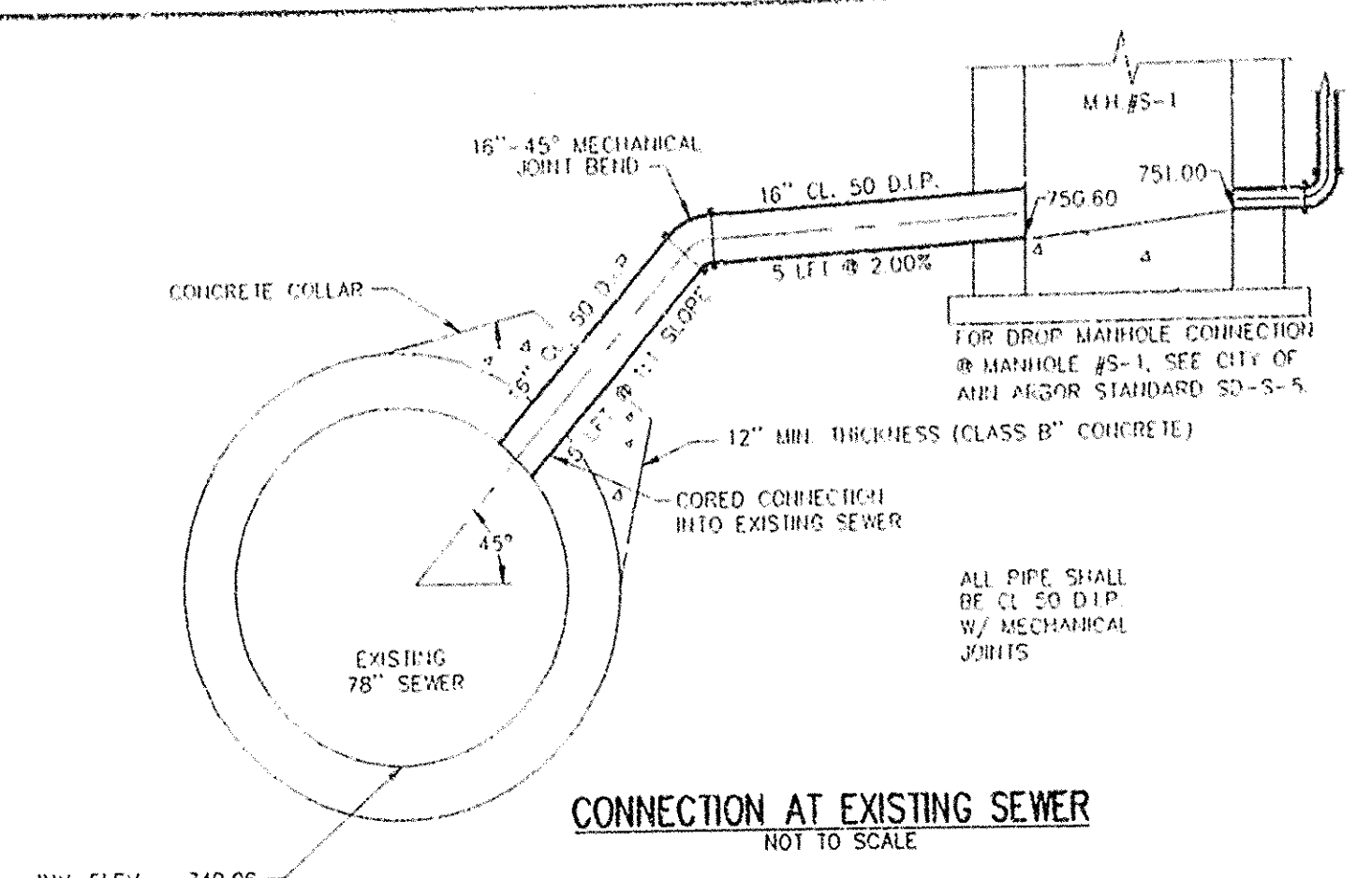
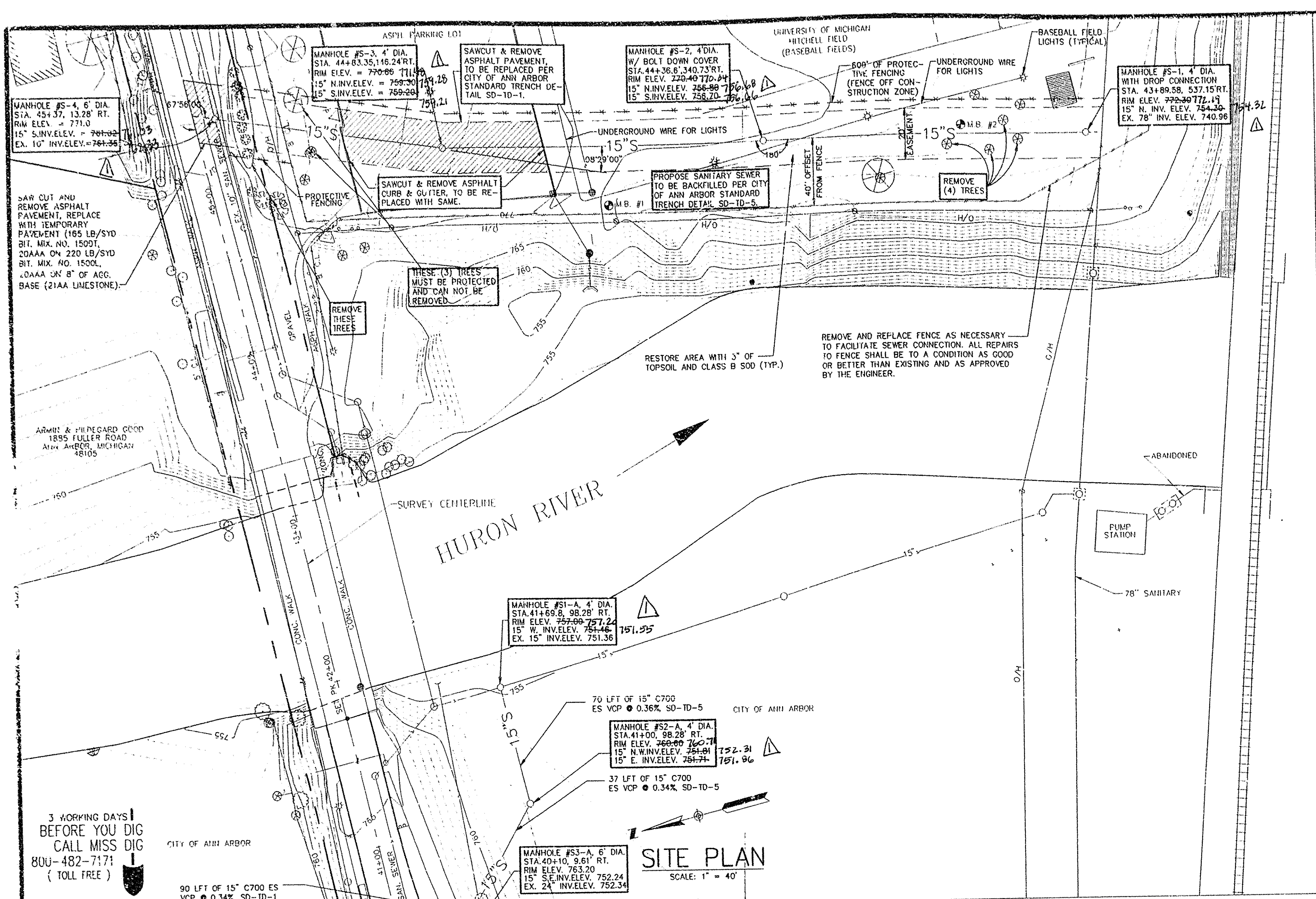
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

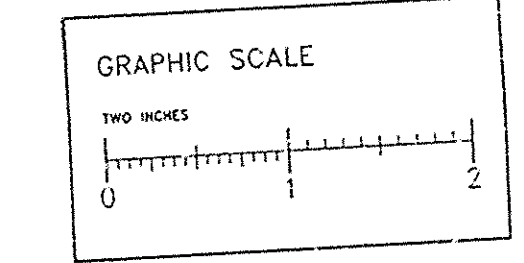


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NOTE  
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.



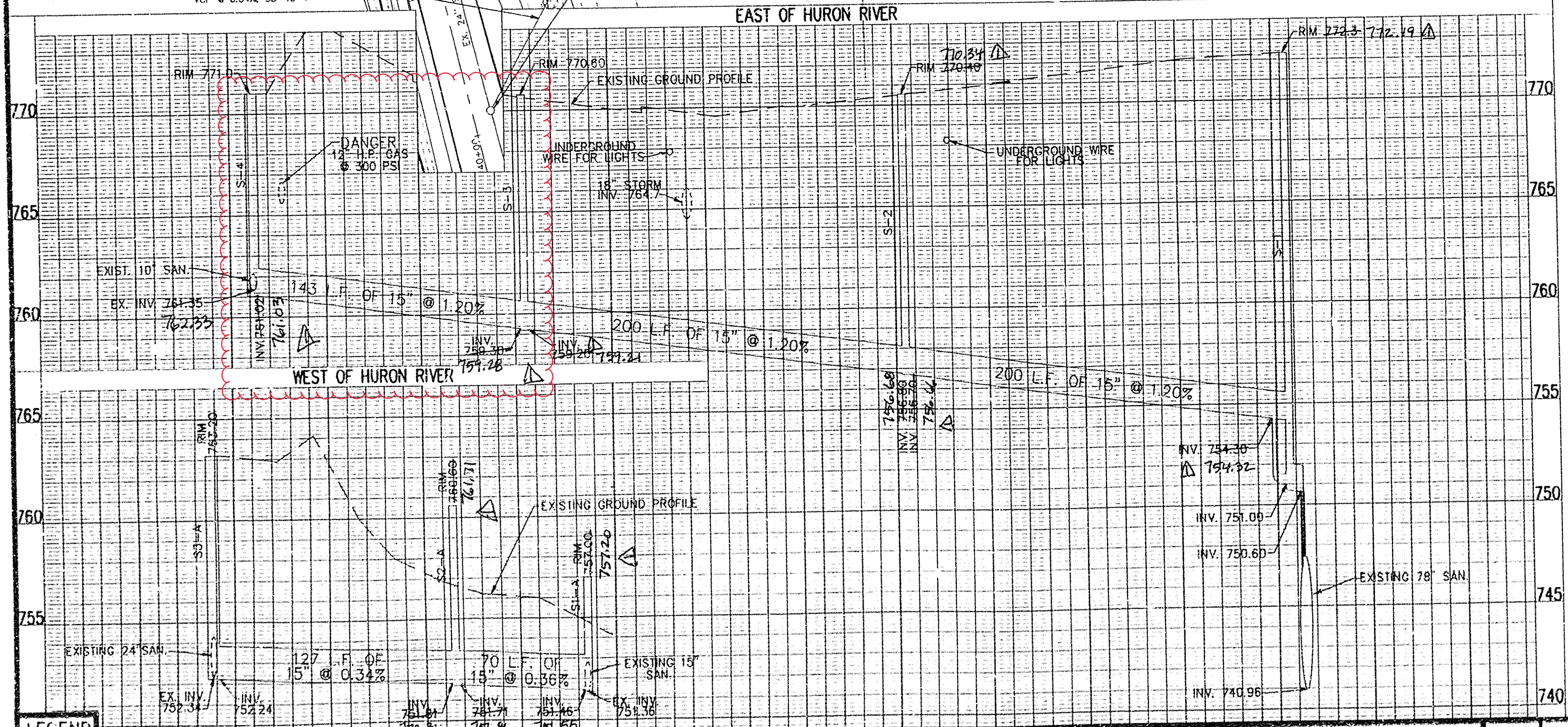
3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

SITE PLAN  
SCALE: 1" = 40'

SUMMARY OF SANITARY SEWER QUANTITIES			
ITEM	PAY UNIT	QUANTITY	NOTES
TYPE I MANHOLE (0-10' DEEP)	EACH	5	4" DIAMETER STRUCTURES ANN ARBOR STANDARD SD-S-1
TYPE I MANHOLE ADDITIONAL DEPTH	LFT	14	
TYPE II MANHOLE 6" DIA (0-10' DEEP)	EACH	2	ANN ARBOR STANDARD SD-S-2
TYPE II MANHOLE 6" DIA ADDITIONAL DEPTH	LFT	1	
C700 ES VCP, 15" DIA, SD-TD-1	LFT	265	UNDER PROPOSED AND EXISTING PAVEMENTS
C700 ES VCP, 15" DIA, SD-TD-5	LFT	475	
DROP CONNECTION 8" DIA	LFT	3.3	ANN ARBOR STANDARD SD-S-5
SEWER TAP, 78"	EACH	1	PAY ITEM INCLUDES ALL FITTINGS D.I.P., MATERIALS EQUIPMENT AND LABOR
PROTECTIVE FENCING	LFT	600	
TOPSOIL SURFACE, 3"	SYD	1000	
CLASS B SODDING	SYD	1000	

NOTES:

- ALL SANITARY SEWER WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS APPLICABLE UNLESS OTHERWISE INDICATED IN THE PLANS OR SPECIFICATIONS. PAY ITEMS SHALL BE PER CITY OF ANN ARBOR P.S.D. DESCRIPTIONS AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
- 15" DIA. PIPE SHALL BE V.C.P. IN ACCORDANCE WITH ASTM C700, EXTRA STRENGTH WITH COMPRESSION JOINTS CONFORMING TO ASTM C425.
- ALL MANHOLES SHALL BE PRECAST REINFORCED CONCRETE SECTIONS AS SPECIFIED IN THE CITY OF ANN ARBOR D.P.S. STANDARD SPECIFICATIONS WITH APPROVED PIPE TO MANHOLE CONNECTION DEVICES.
- SEWER TESTING SHALL BE IN ACCORDANCE WITH THE CITY OF ANN ARBOR D.P.S. SPECIFICATIONS.
- ALL STATION AND OFFSET ARE FROM SURVEY CENTERLINE.
- ALL MANHOLE COVERS SHALL BE E.J.I.W. 1040 WT AND SHALL BE INCLUDED IN THE PAY ITEM FOR THE RESPECTIVE MANHOLE STRUCTURE.
- THE CONTRACTOR SHALL SHEET AND SHORE AS NECESSARY TO KEEP THEIR CONSTRUCTION ACTIVITIES WITHIN THE CONSTRUCTION ZONE AS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL PERFORM HIS OPERATIONS SUCH THAT DISRUPTION TO THE MITCHELL FIELD IS MINIMIZED. THE WORK AREA SHALL BE CLEANED DAILY BY REMOVING STOCKPILES OF EXCAVATED MATERIAL AND SHALL BE MADE SAFE FOR USERS OF THIS AREA.
- THE CONTRACTOR SHALL LIMIT HIS ACTIVITIES TO THE AREA BETWEEN THE EXISTING FENCE AND THE TEMPORARY CONSTRUCTION FENCE.
- THE EXCAVATED AREA FOR THE SEWER TRENCH MUST BE RESTORED IMMEDIATELY UPON COMPLETION OF ALL SEWER TESTING WITH 3" OF TOPSOIL AND CLASS B SOD.
- THE CONTRACTOR MUST MAINTAIN AT LEAST ONE LANE OF THROUGH TRAFFIC AT ALL TIMES DURING THE "TIE IN" OF THE PROPOSED SEWER IN FULLER ROAD.



LEGEND		EXISTING TELEPHONE		EXISTING PD. & GRADE		PROPOSED SANITARY SEWER & MANHOLE		PROPOSED CURB & GUTTER	
EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING PD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER	EXISTING PD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER	EXISTING PD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE
15" SANITARY SEWER	15" TELEPHONE	LEFT EDGE/HD. GRADE	15" SANITARY SEWER	15" SANITARY SEWER	RIGHT EDGE/HD. GRADE	15" SANITARY SEWER	15" SANITARY SEWER	LEFT EDGE/HD. GRADE	15" SANITARY SEWER
15" STORM SEWER	15" TELEPHONE	RIGHT EDGE/HD. GRADE	15" STORM SEWER	15" STORM SEWER	CONTOUR	15" STORM SEWER	15" STORM SEWER	RIGHT EDGE/HD. GRADE	15" STORM SEWER
15" GAS	15" TELEPHONE	CONTOUR	15" GAS	15" GAS	ROAD & GRADE	15" GAS	15" GAS	CONTOUR	15" GAS
15" WATER MAIN	15" TELEPHONE	ROAD & GRADE	15" WATER MAIN	15" WATER MAIN	CONTOUR	15" WATER MAIN	15" WATER MAIN	ROAD & GRADE	15" WATER MAIN
15" VALVE	15" TELEPHONE	CONTOUR	15" VALVE	15" VALVE	CONTOUR	15" VALVE	15" VALVE	CONTOUR	15" VALVE
15" FIRE HYDRANT	15" TELEPHONE	CONTOUR	15" FIRE HYDRANT	15" FIRE HYDRANT	CONTOUR	15" FIRE HYDRANT	15" FIRE HYDRANT	CONTOUR	15" FIRE HYDRANT
15" LIGHT POLE	15" TELEPHONE	CONTOUR	15" LIGHT POLE	15" LIGHT POLE	CONTOUR	15" LIGHT POLE	15" LIGHT POLE	CONTOUR	15" LIGHT POLE
15" END SECTION	15" TELEPHONE	CONTOUR	15" END SECTION	15" END SECTION	CONTOUR	15" END SECTION	15" END SECTION	CONTOUR	15" END SECTION

REV. NO.	DESCRIPTION	DATE	DR. BY	CHK. BY
1	AS BUILT	8/14	D.P.E.	C.S.

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

FULLER ROAD BRIDGE over the HURON RIVER  
PHASE J  
SANITARY SEWER DETAILS

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

DRAWING NO.  
92050-SS-1

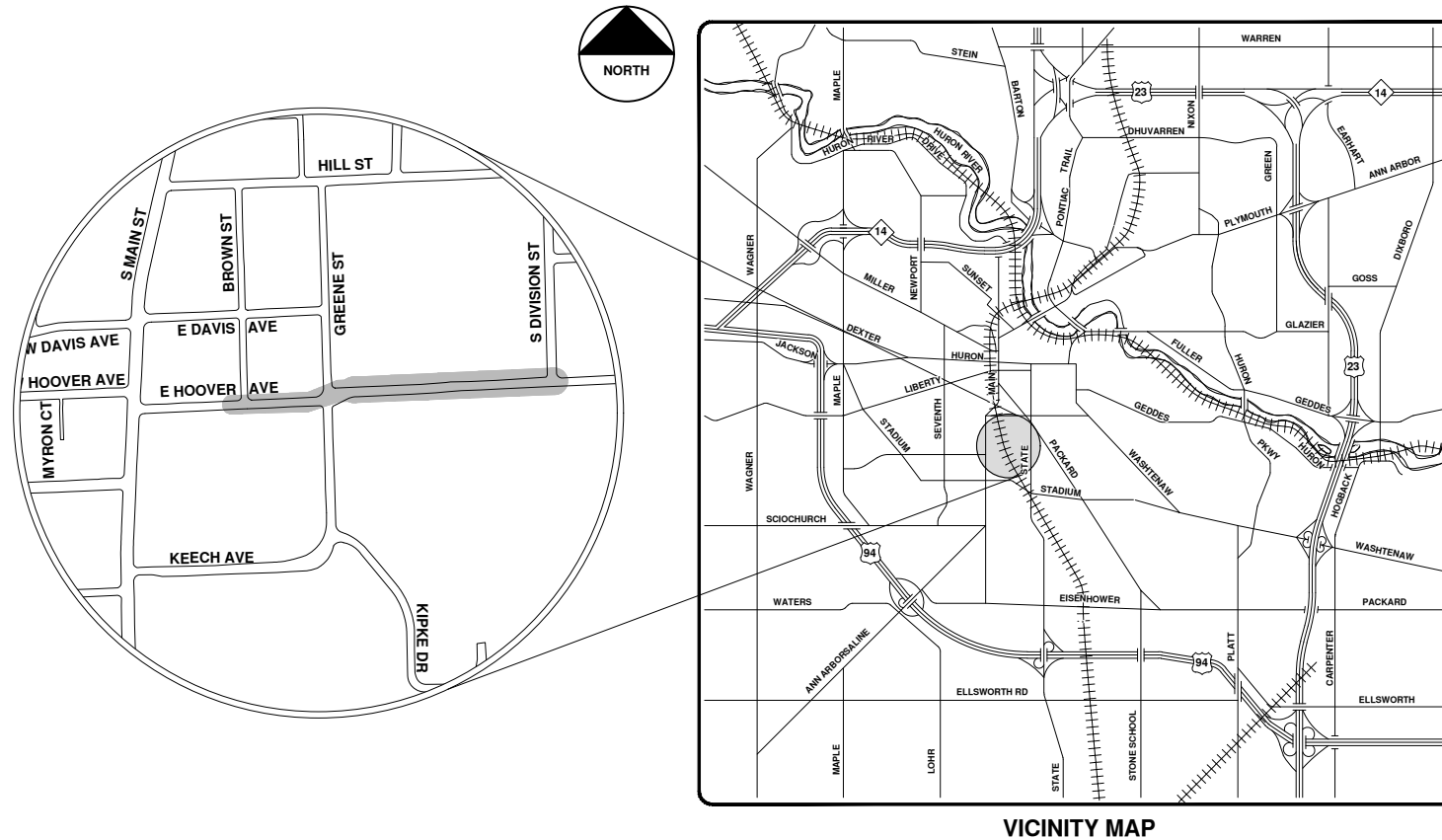
SHEET NO.  
8 OF 36





# 2020 SEWER LINING PROJECT

## E HOOVER AVE




VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard bw.stb - Plot Date: 9/14/2020 12:04:54 PM

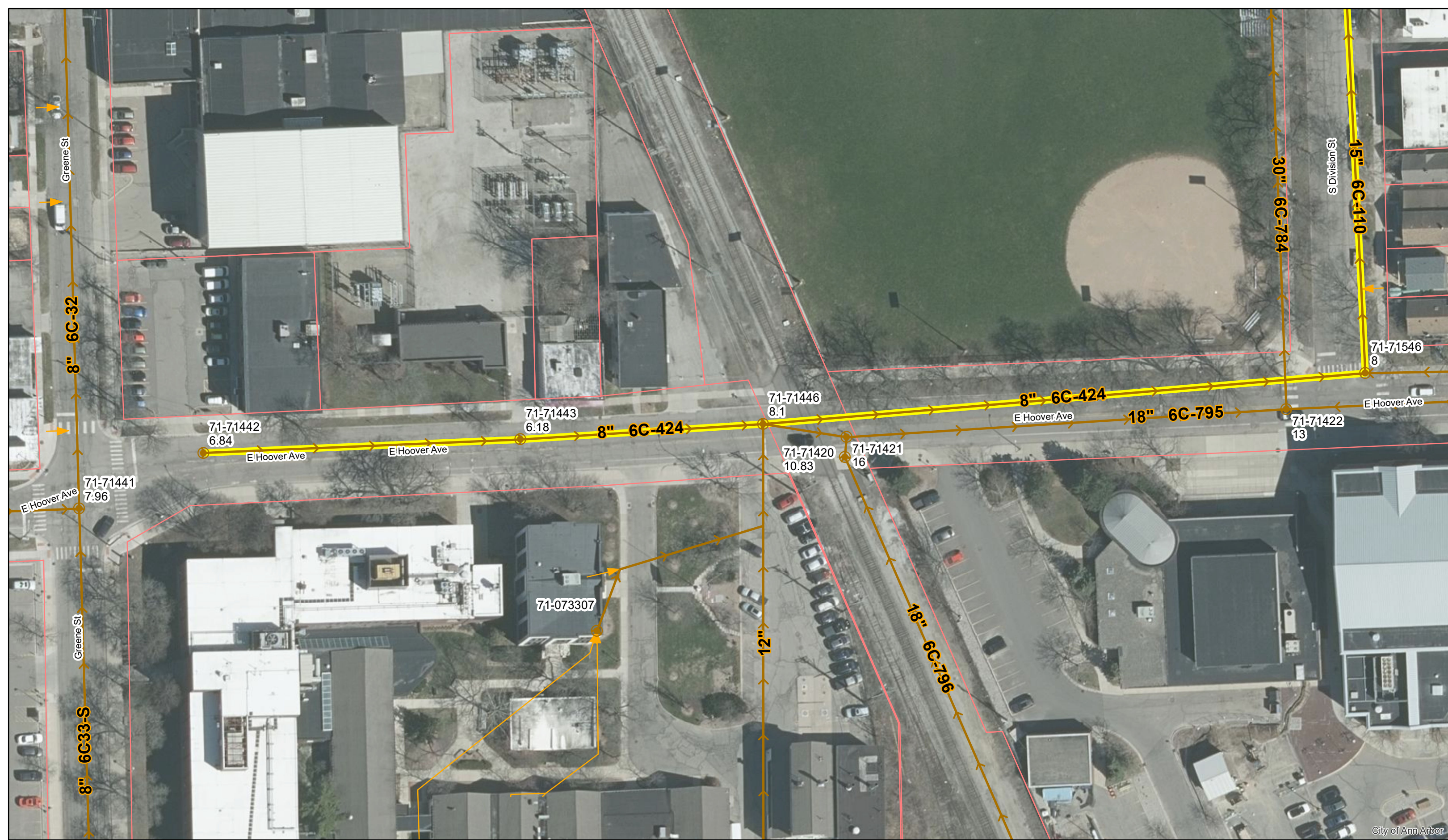


**ENGINEERING**  
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 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

		CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE DRAWING No. 2020039-23		SHEET No. 23 OF 177	
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 734-794-6410 www.a2gov.org		CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 734-794-6410 www.a2gov.org		DESCRIPTION BID SET DATE 9-14-20 ARG DRAWN IVK CHECKED	





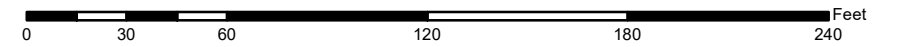


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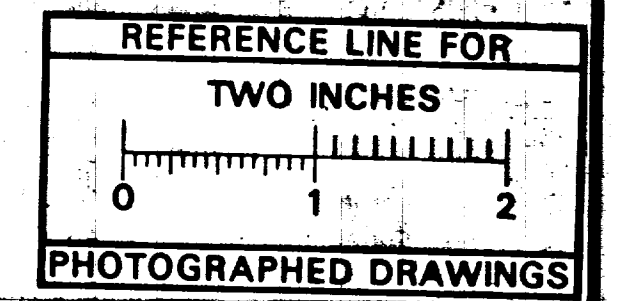
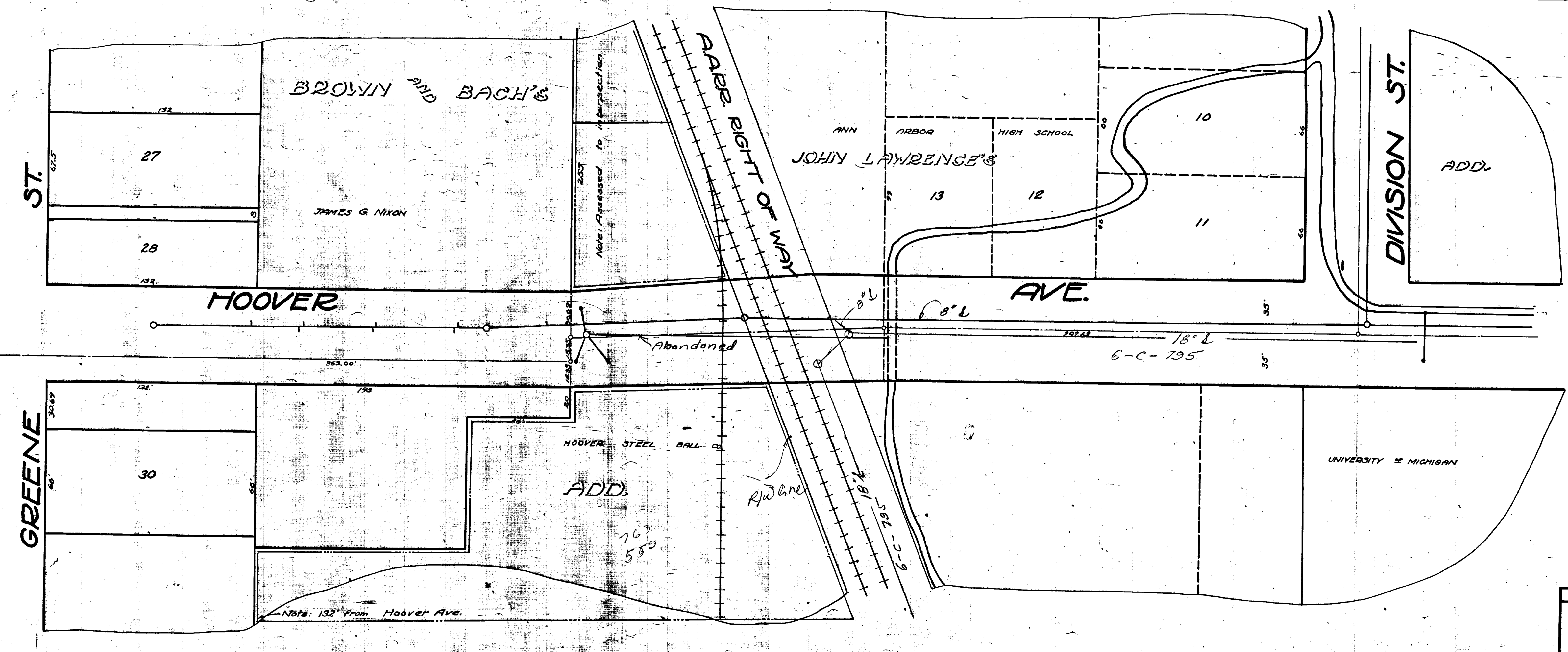
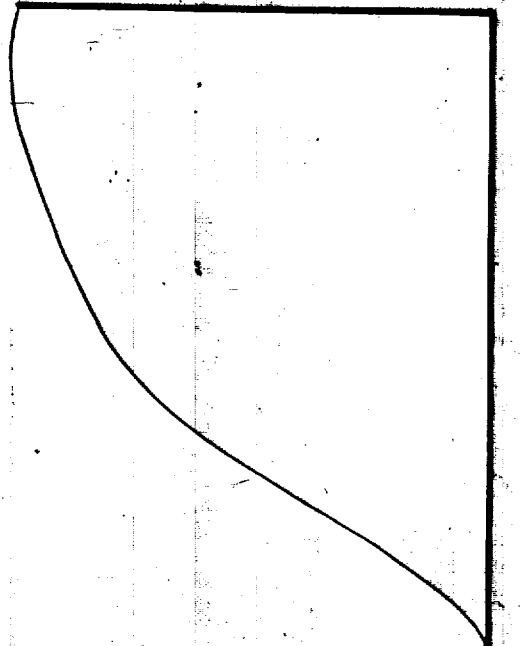
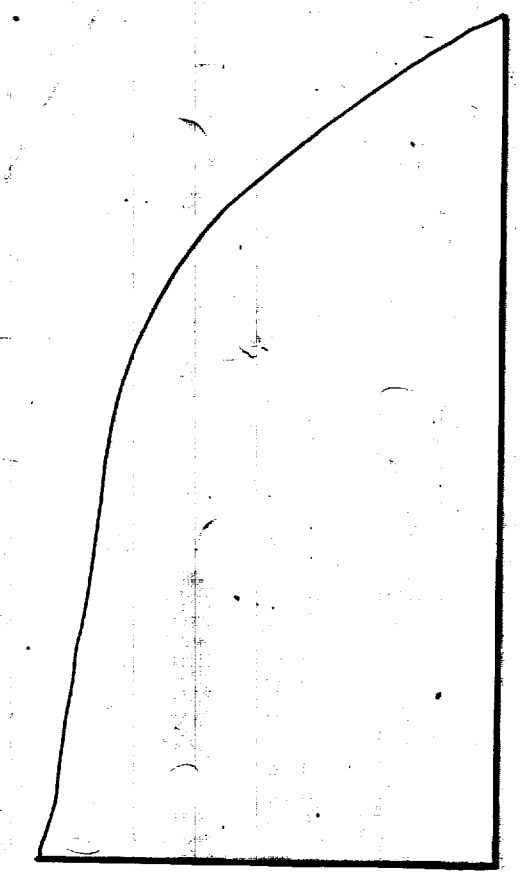
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



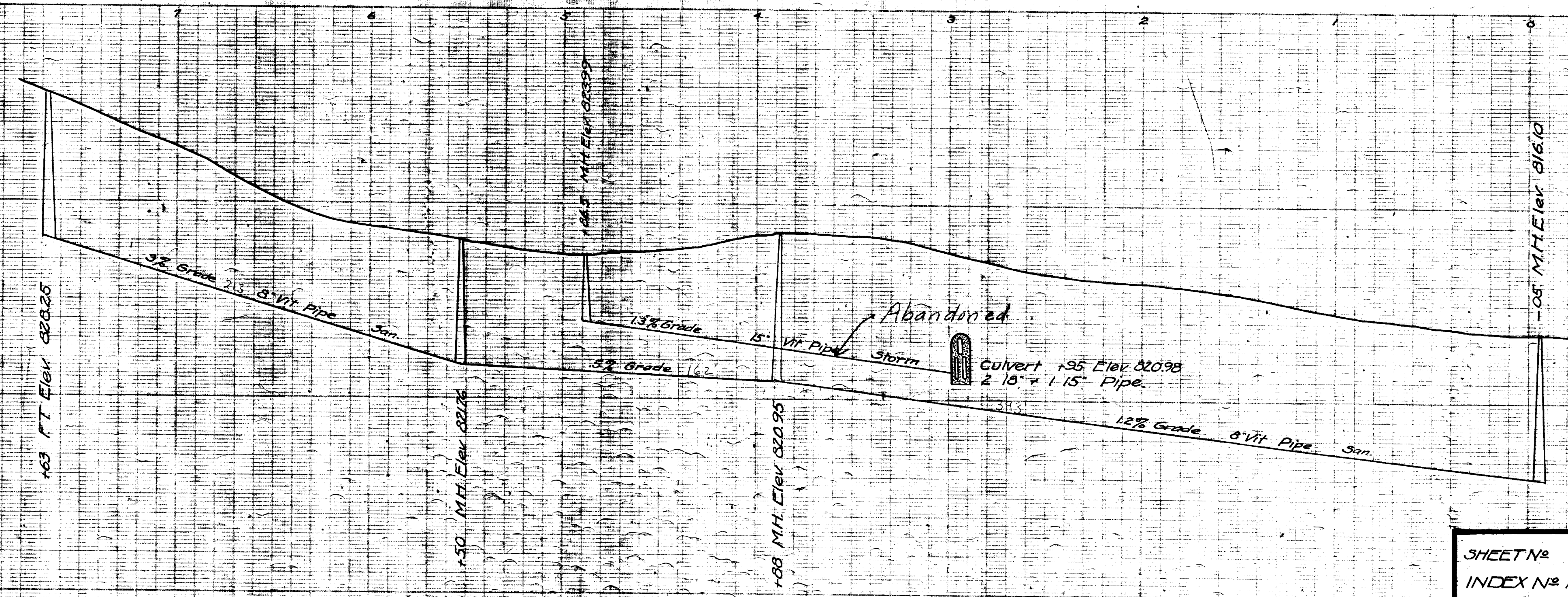
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MEASUREMENTS TO HOUSE CONNECTIONS Y's only

North	South
126	183
181	236.7
234.4	290.4
292.4	312



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Scanned On: 9-7-04  
By: DGGK  
Despeckled: Yes  
Vector: Yes  
O.C.R.:

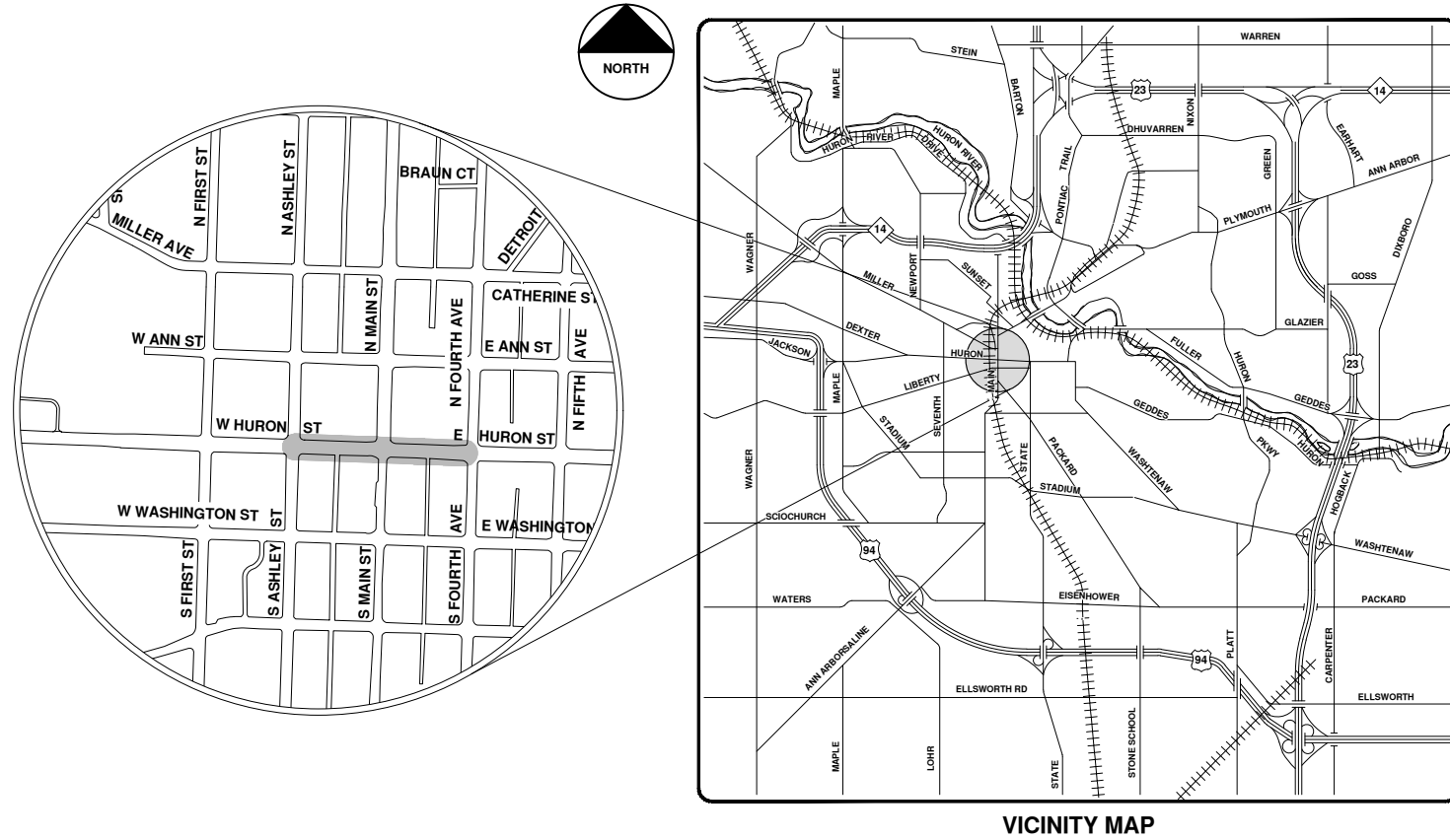
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INDEX NO 1054	ANN ARBOR, MICH.
SHELF NO 6	PLAN AND PROFILE
SIZE C	STORM AND SANITARY SEWERS
SUB NO 424	<b>HOOPER AVE.</b>
Drawn by	DIVISION TO GREENE
Traced by K.W.D.	Geo. M. Sandenburgh City Engineer.
Checked by	1926-3-18
	Scales Plan 1"=40' Prof Vert 1"=4'





# 2020 SEWER LINING PROJECT

## E & W HURON ST



VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:04:59 PM



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 ANN ARBOR, MICHIGAN 48107-8647  
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
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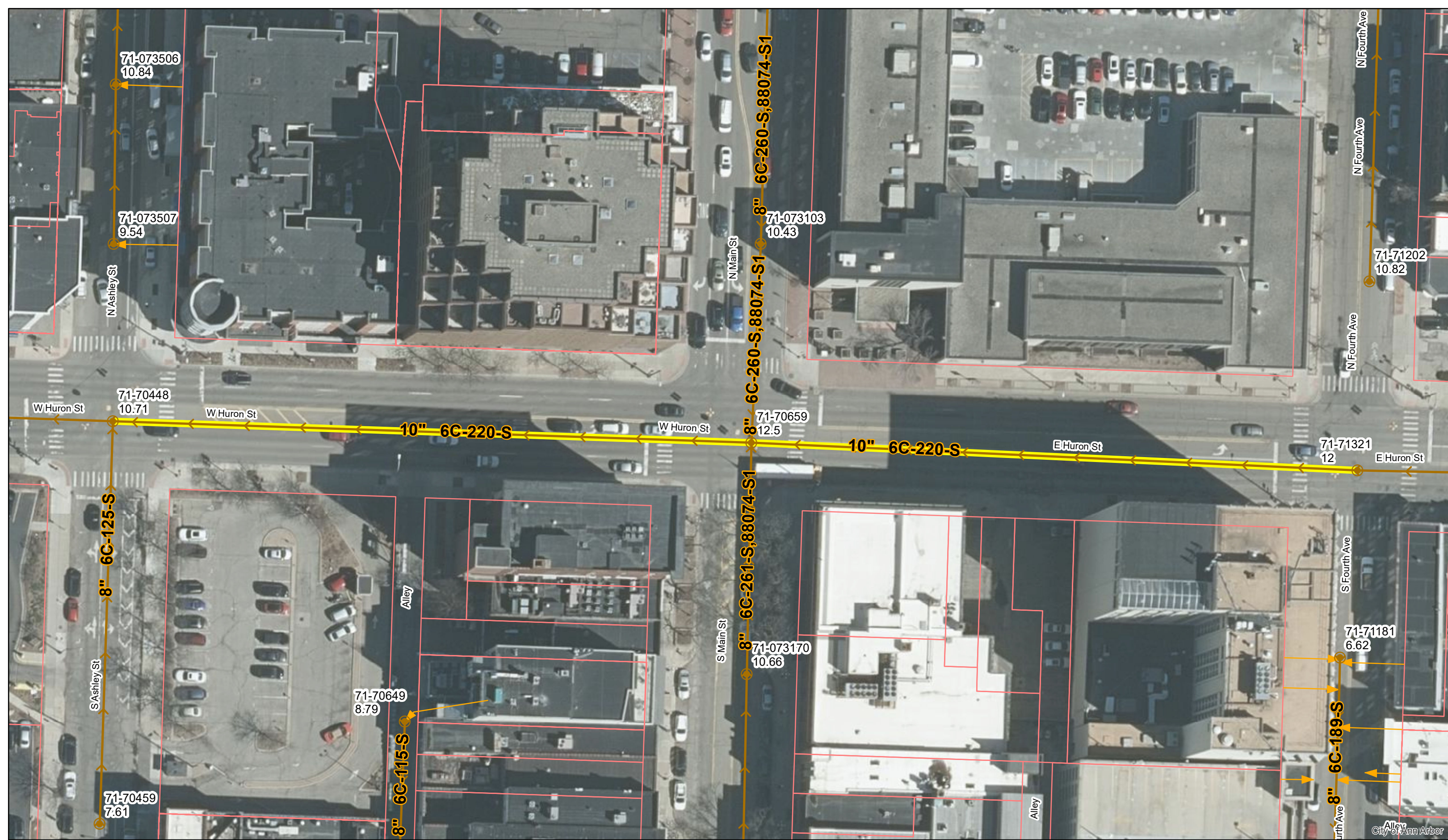
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-26

SHEET No.  
 26 OF 177

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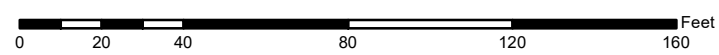


# E & W Huron St.



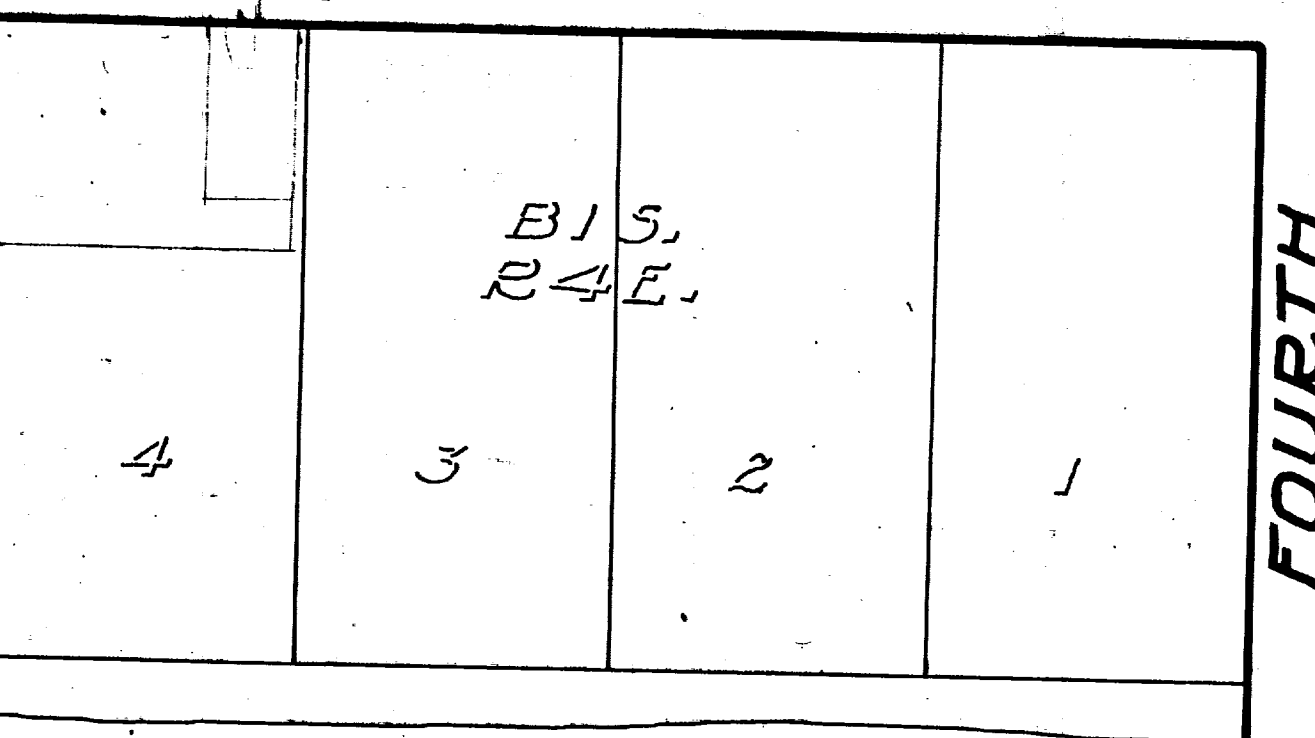
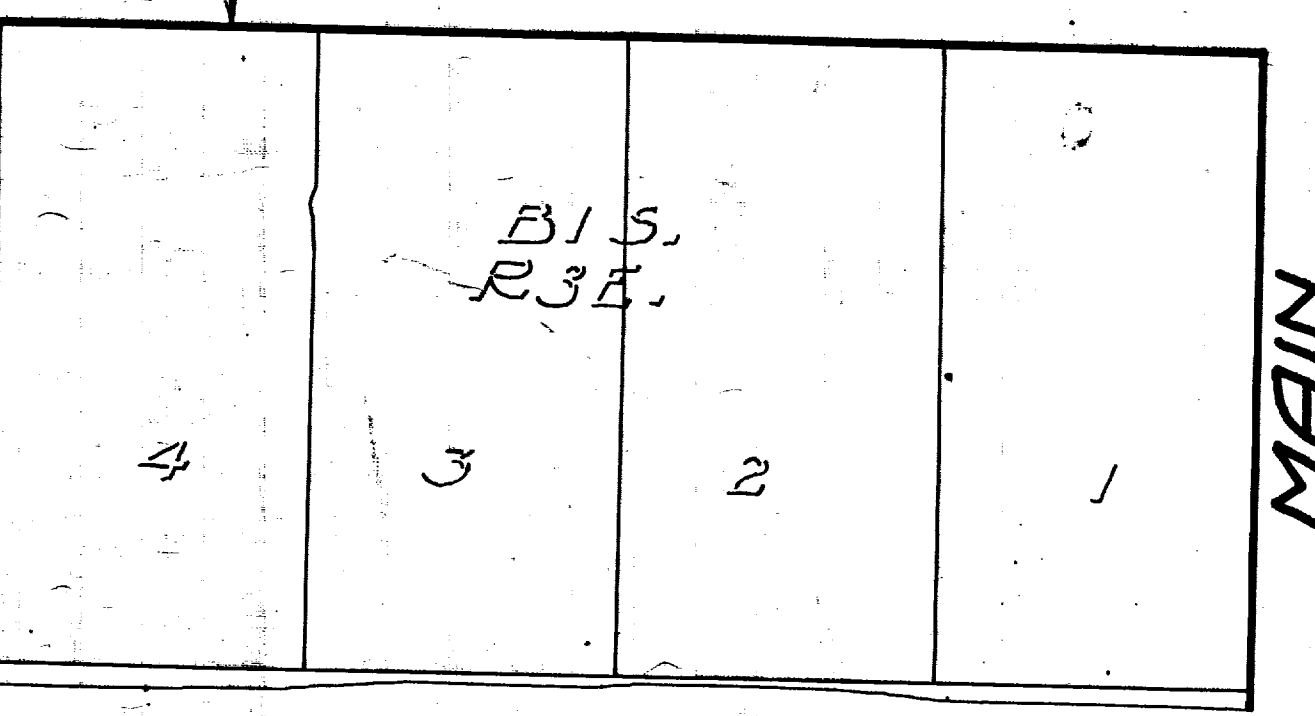
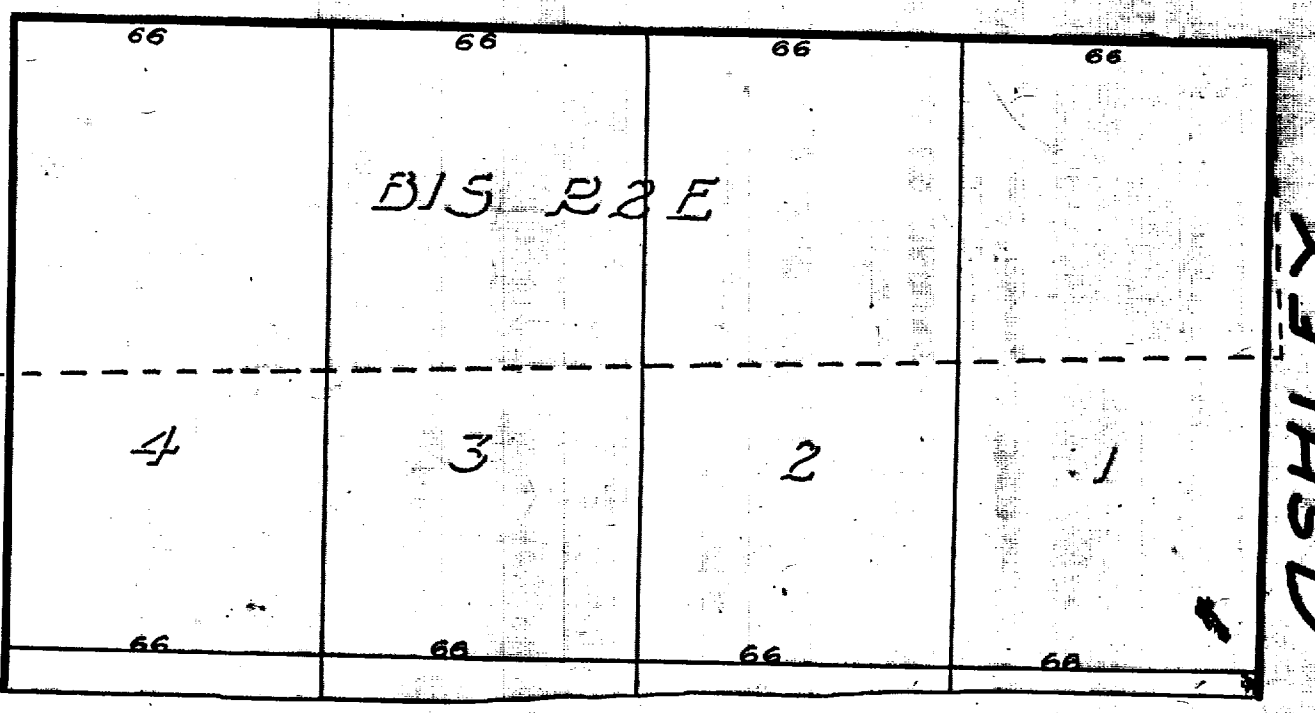
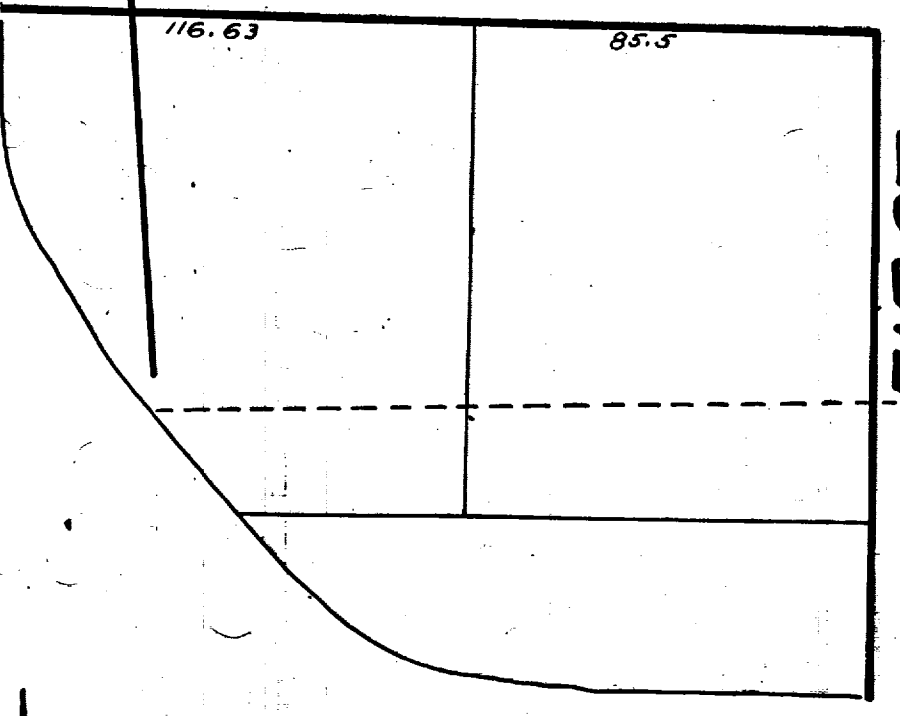
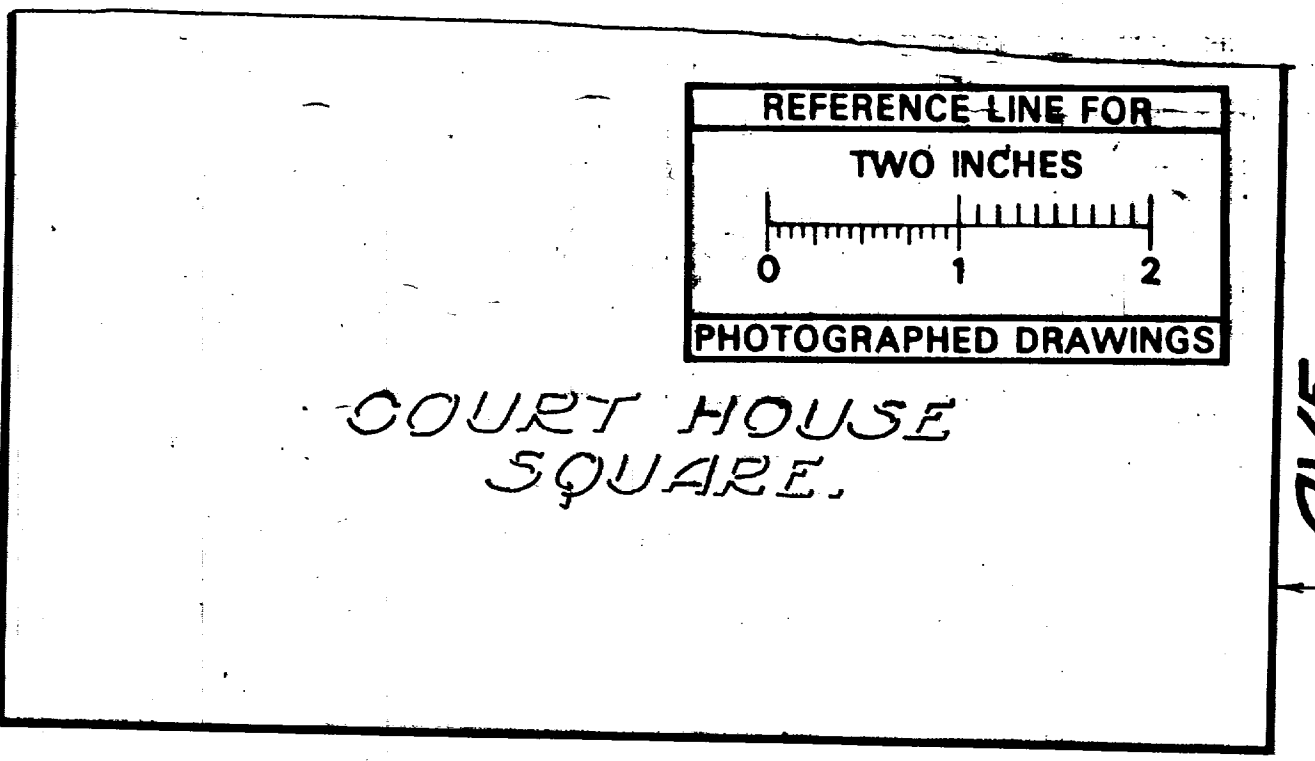
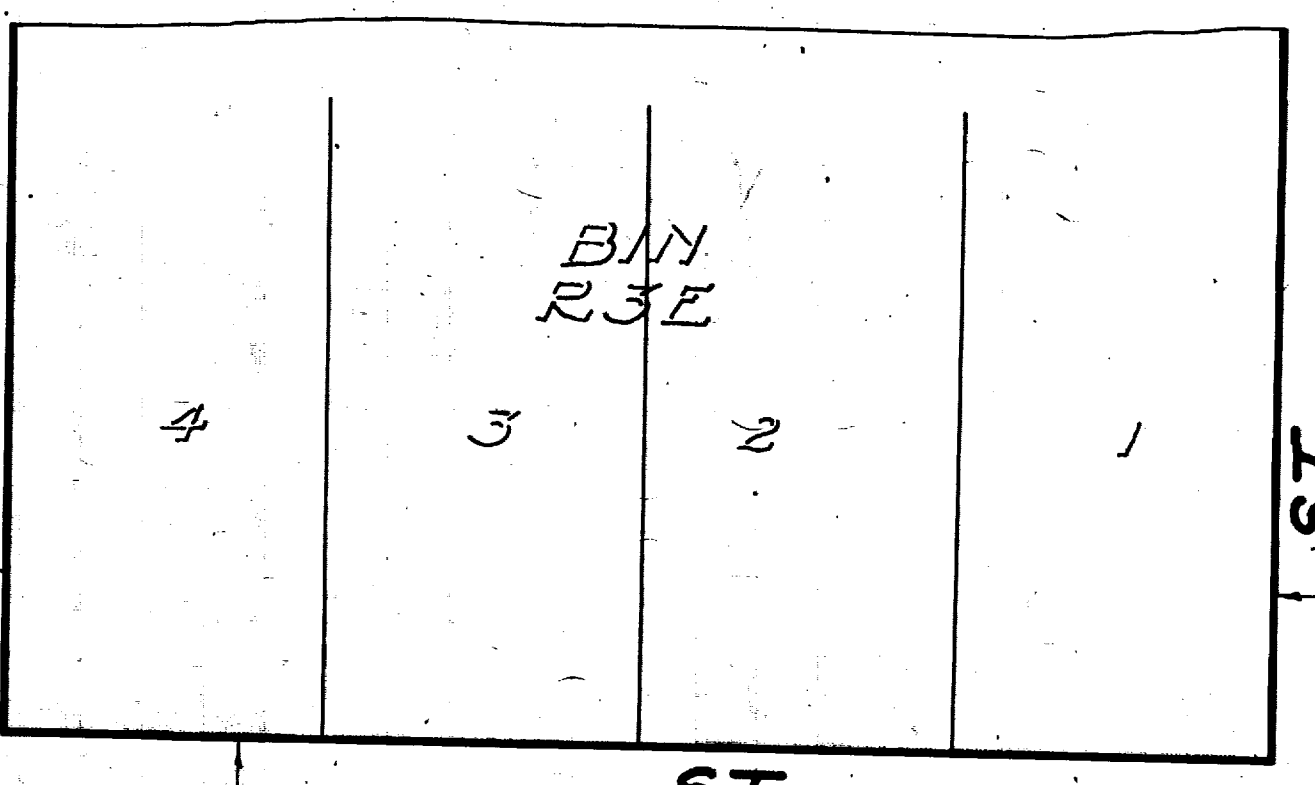
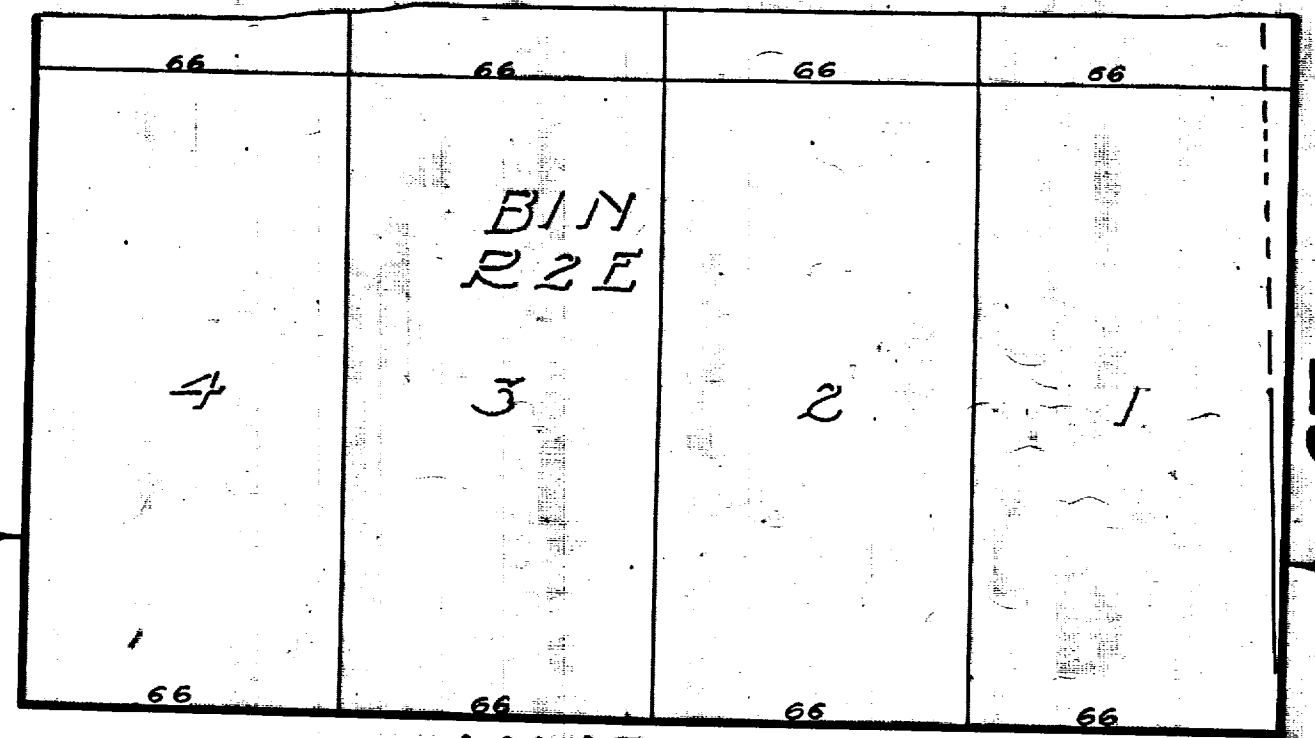
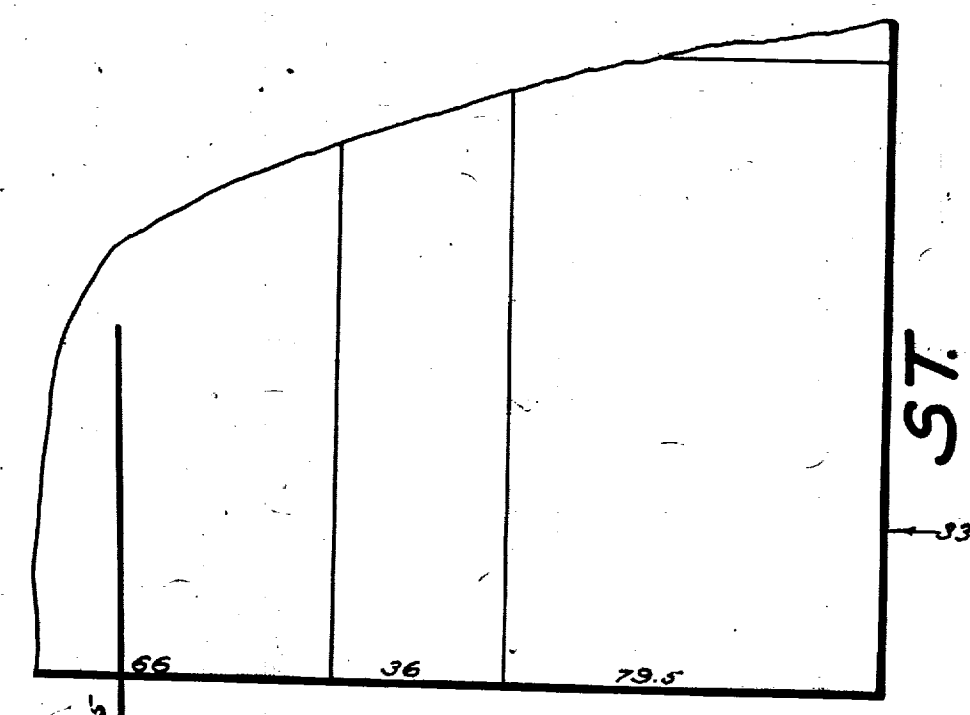
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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Measurements to house connections

North	South
483	763
1117	1003
1157	1005
1704	1475
2036	1711
238	763
2642	2539

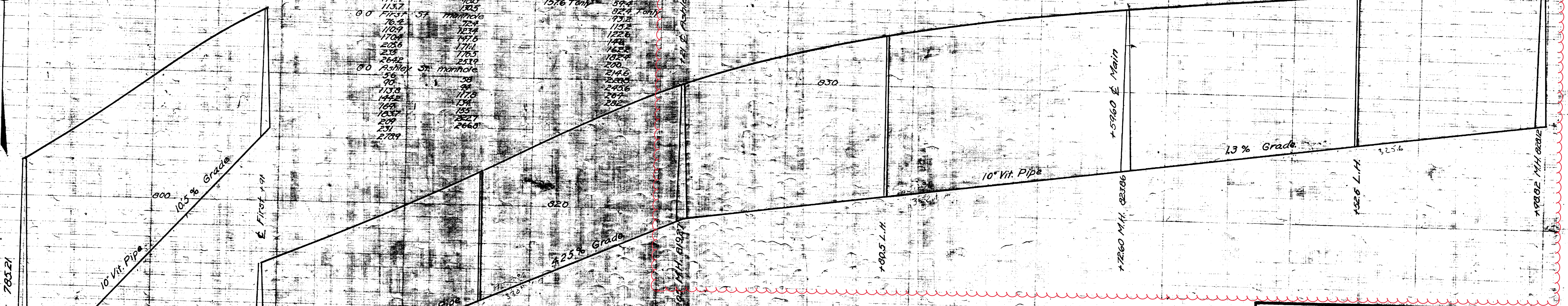
0.0 Main St. Sewer

North	South
33014	33014
594	594
824	824
952	952
1152	1152
1376	1376
148	148
1628	1628
1828	1828
200	200
2410	2410
2480	2480
2486	2486
264	264
285	285

0.0 Ashley St. manhole

North	South
56	56
1138	56
1442	1175
1678	134
1937	185
204	1827
2709	2660

BENCH MARKS (U.S.G.S.)  
 Plate 8 S.E. corner Court House 842.00  
 Hyd. 6 x of Huron and First St. 81.689



M.H. at Main Sewer 78321

Digital Status  
 Scanned On: 8-27-04  
 By: DGK  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:

SHEET No. 164  
 INDEX No. 836  
 SHELF No. 6  
 SIZE C  
 SUB No. 220  
 Drawn by  
 Traced by  
 Checked by JF

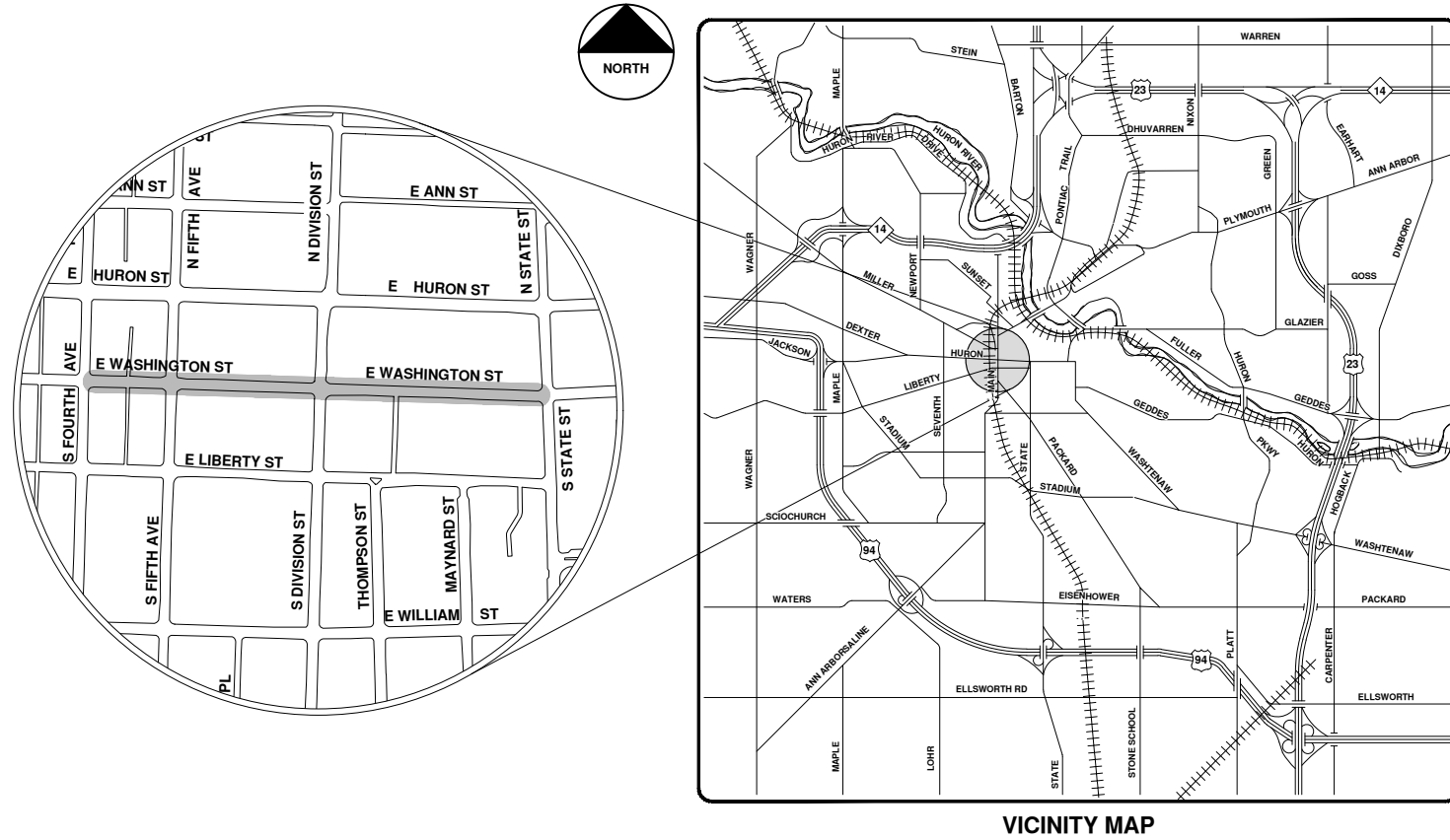
CITY ENGINEERS OFFICE  
**ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 OF  
 SANITARY SEWER  
 DISTRICT NO. 4  
**HURON ST.**  
 FIRST ST. TO FOURTH AVE.  
 Manley Osgood, City Engineer.  
 1916.  
 Scales - Plan 1"=40' Profile Hor. 1"=40' Ver. 1"=4'





# 2020 SEWER LINING PROJECT

## E WASHINGTON ST



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:05:04 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

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 ANN ARBOR, MI 48107-8647  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-29

SHEET No.  
 29 OF 177

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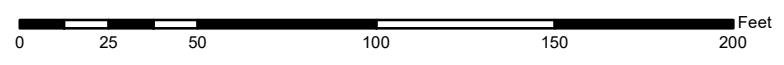


# E Washington St.



	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

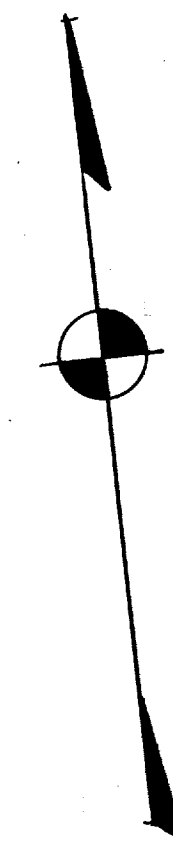
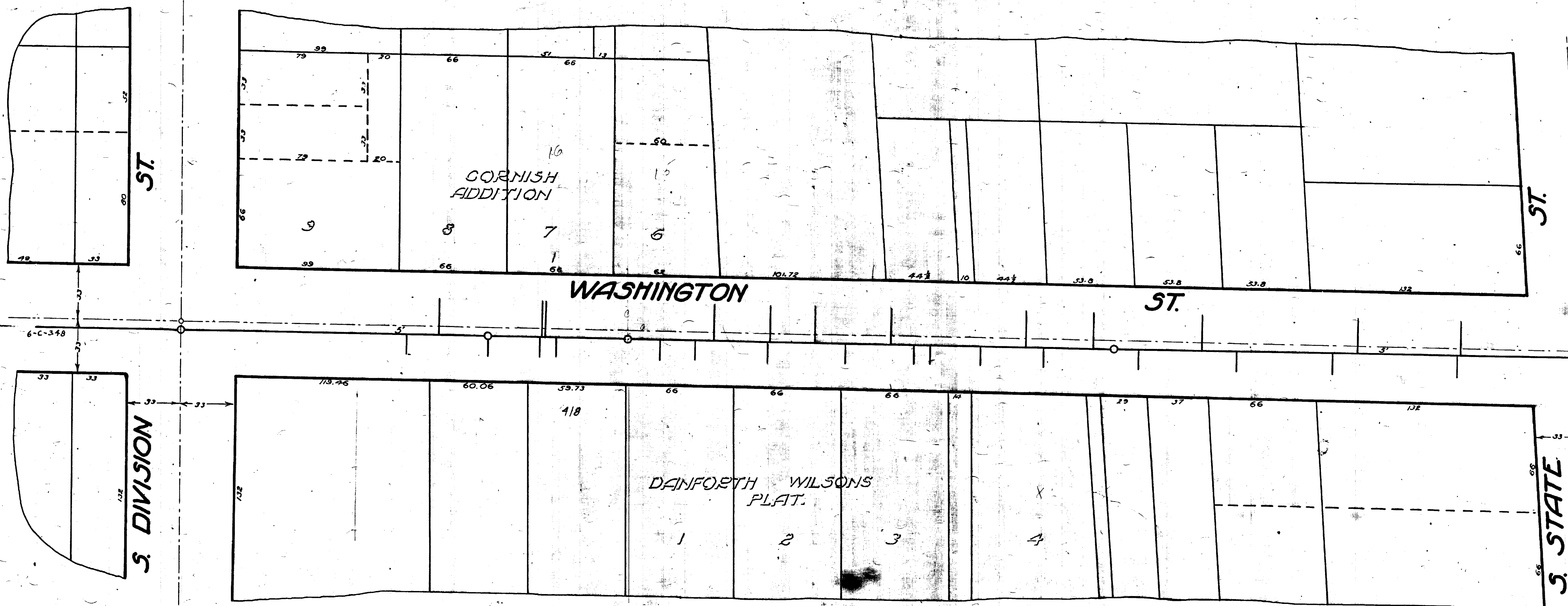
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



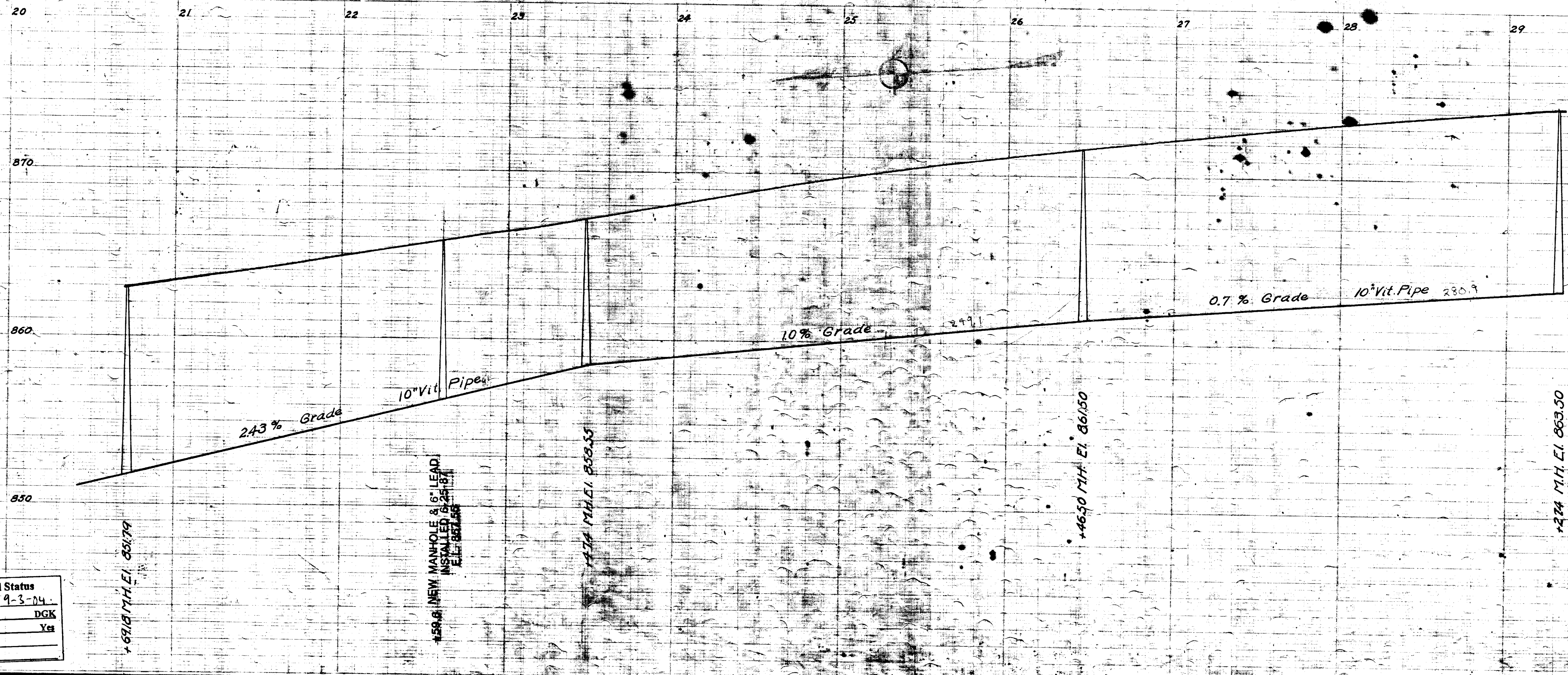
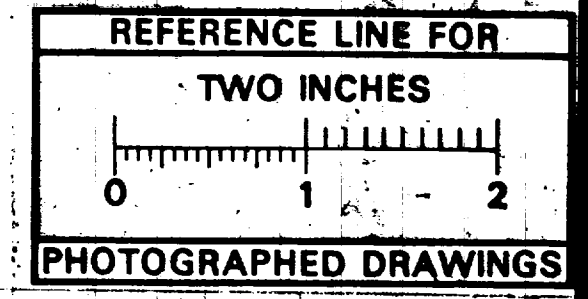
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City of Ann Arbor





NOTE  
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MEASUREMENTS TO HOUSE CONNECTIONS  
Division to State  
Sta. 0 = M.H. @ STATE

North	South
71.9	13.9
134.6	143.0
230.0	209.0
296.5	269.3
378.0	327.0
421.5	366.7
467.1	397.2
494.4	407.4
529.0	448.3
632.0	496.2
634.0	541.0
670.7	562.4
	626.0
	636.0
	710.9
	884.0

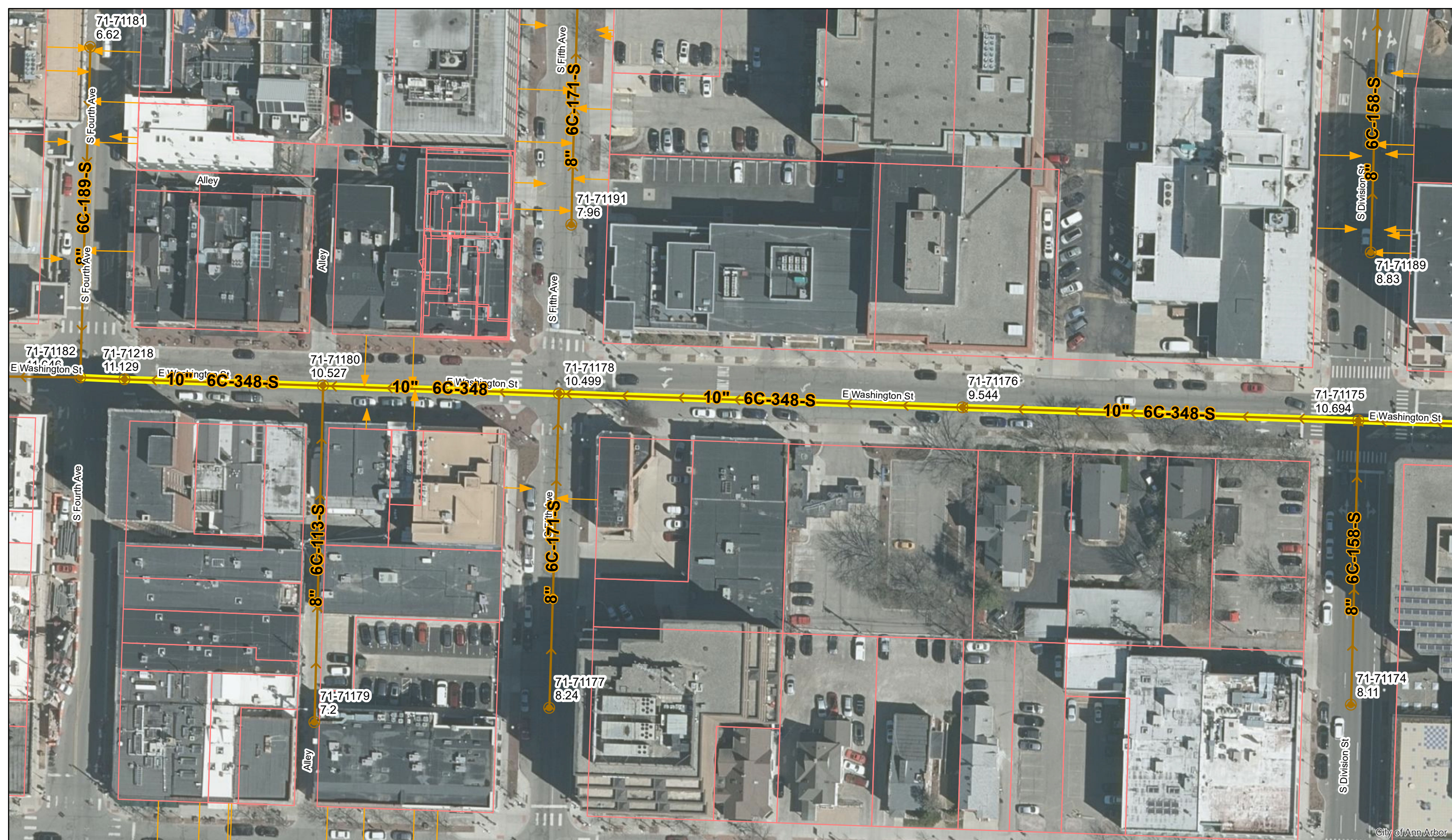
278 = M.H.  
578 = M.H.  
878 = M.H.  
884.0 = M.H.

Digital Status  
Scanned On: 9-3-04  
By: DGK  
Despeckled: Yst  
Vectors:  
O.C.R.:

SHEET NO. 320  
INDEX NO. 964  
SHELF NO. 6  
SIZE C  
SUB NO. 349  
Drawn by AAB  
Traced by  
Checked by J

CITY ENGINEERS OFFICE,  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
DISTRICT NO. 2  
**WASHINGTON ST.**  
DIVISION ST. TO STATE ST.  
Manley Osgood, City Engineer  
1916.  
Scales-Plan 1"=40' Profile-Hor. 1"=40' Ver. 1"=4'





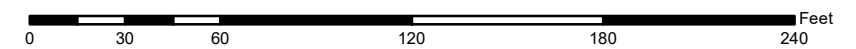
City of Ann Arbor

# E Washington St.



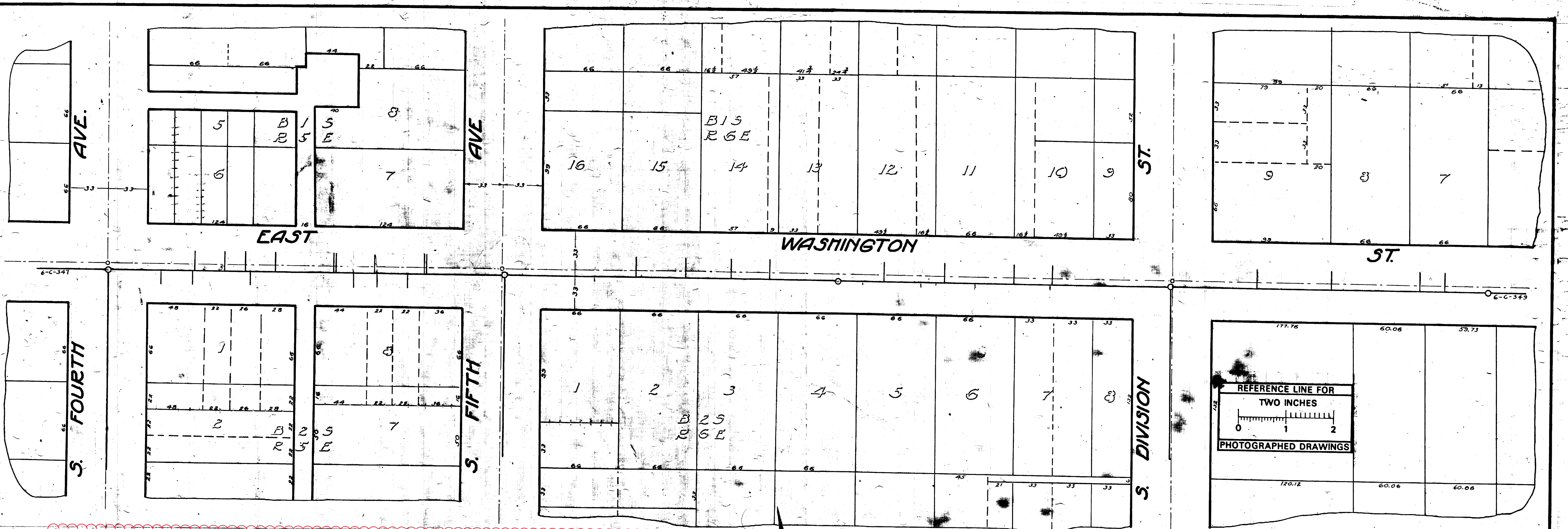
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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**MEASUREMENTS TO HOUSE CONNECTIONS**

Fourth Ave. to Fifth Ave.  
Sra O = M.H. at Fourth Ave.

North	South
73	44
98	74
115	100
140	119
189	206
191	225
223	251
265	
267	

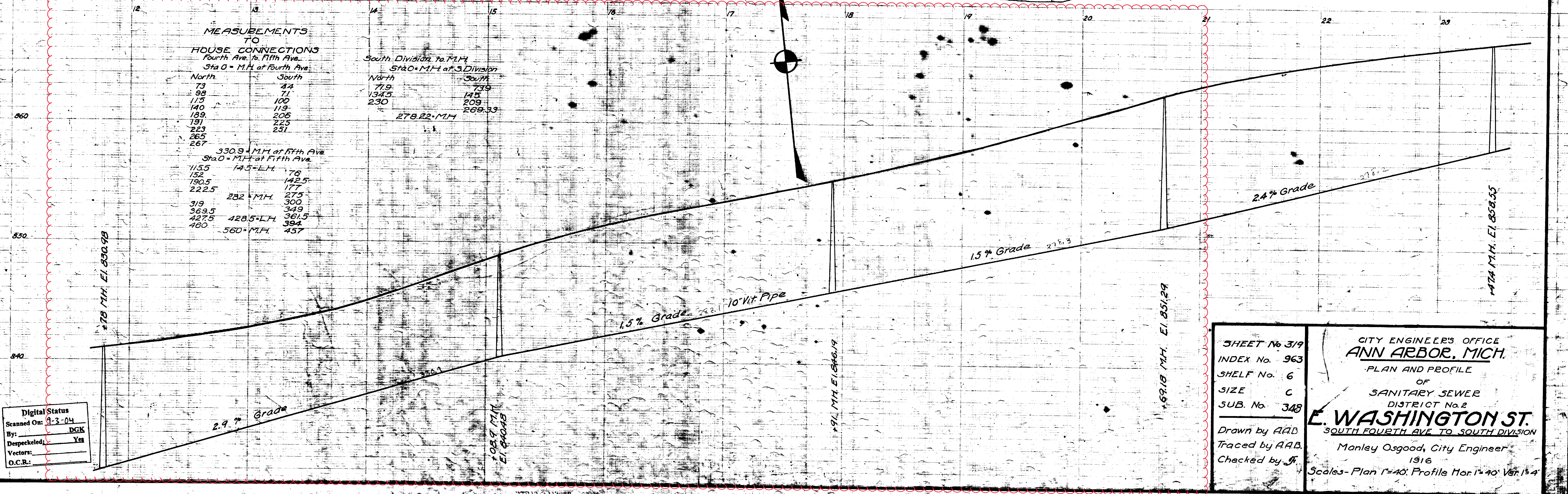
330.9 M.H. at Fifth Ave.  
Sra O = M.H. at Fifth Ave.

North	South
1155	148.5-L.H. 76
132	142.5
130.5	177
222.5	275
	282 M.H. 300
319	349
363.5	428.5-L.H. 361.5
427.5	394
460	560 M.H. 457

South Division to M.H.  
Sra O = M.H. at S. Division

North	South
719	739
1345	145
230	203

278.22 M.H. 268.33



Digital Status  
Scanned On: 9-3-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:

SHEET No 319  
INDEX No. 963  
SHELF No. 6  
SIZE C  
SUB. No. 348

Drawn by AAD  
Traced by AAB  
Checked by JF

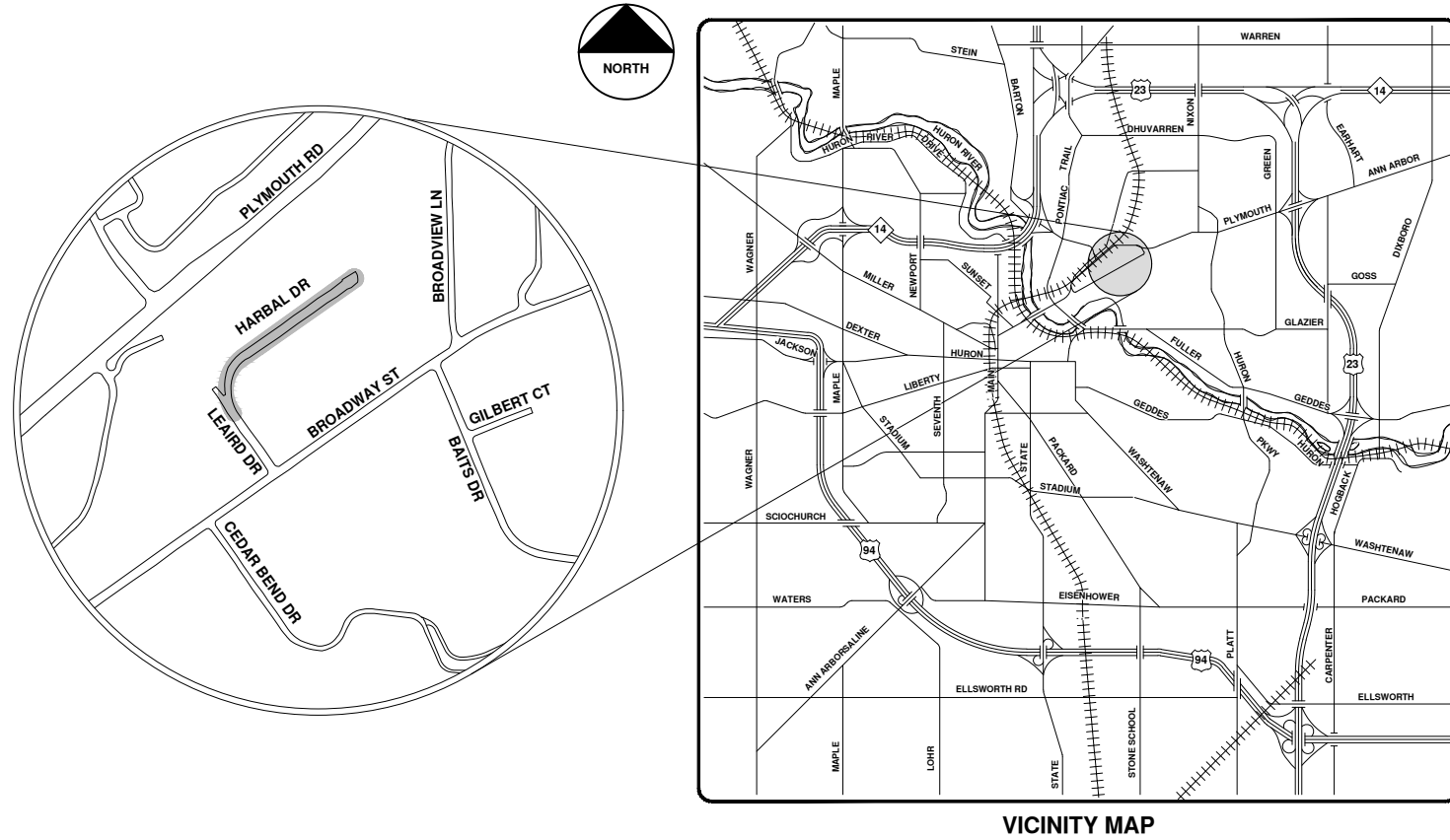
CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
DISTRICT No. 2  
**E. WASHINGTON ST.**  
SOUTH FOURTH AVE TO SOUTH DIVISION  
Manley Osgood, City Engineer  
1916  
Scale - Plan 1"=40' Profile Hor 1"=40' Ver 1"=4'





# 2020 SEWER LINING PROJECT

## HARBAL DR




VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_a2\_standard\_bw.stb - Plot Date: 9/14/2020 12:05:09 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING			
SCALE	DRAWING No.	2020039-34	
SHEET No.	34 OF 177		
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 www.a2gov.org		9-14-20 DATE	ARG DRAWN
DO	BID SET	ARG	CHECKED
REV.	REV.	DATE	REV.



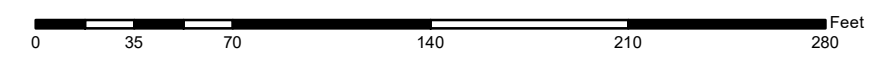


# Harbal Dr.



	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

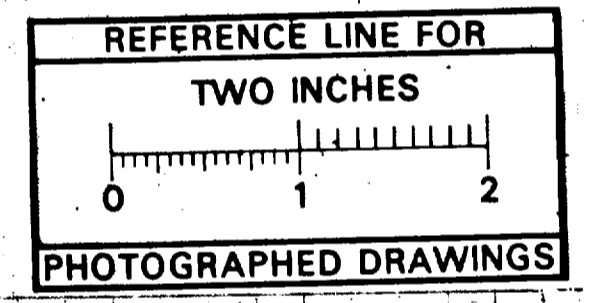
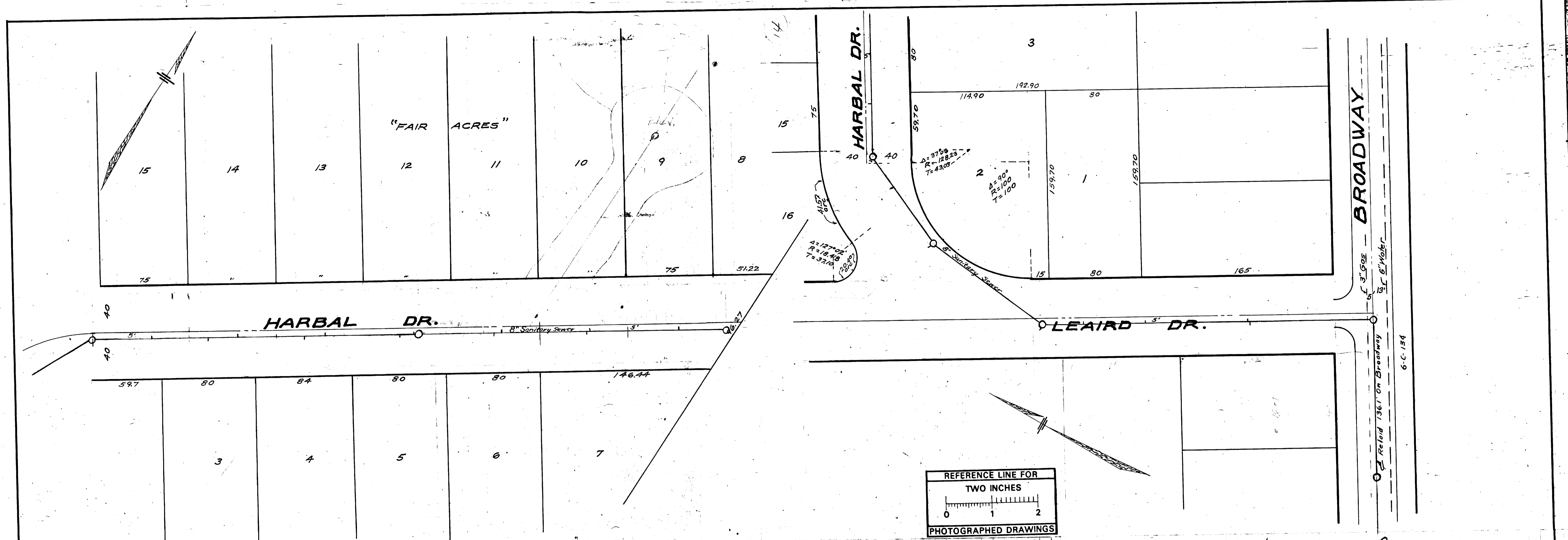
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



For terms and conditions please visit [www.a2gov.org/terms](http://www.a2gov.org/terms)

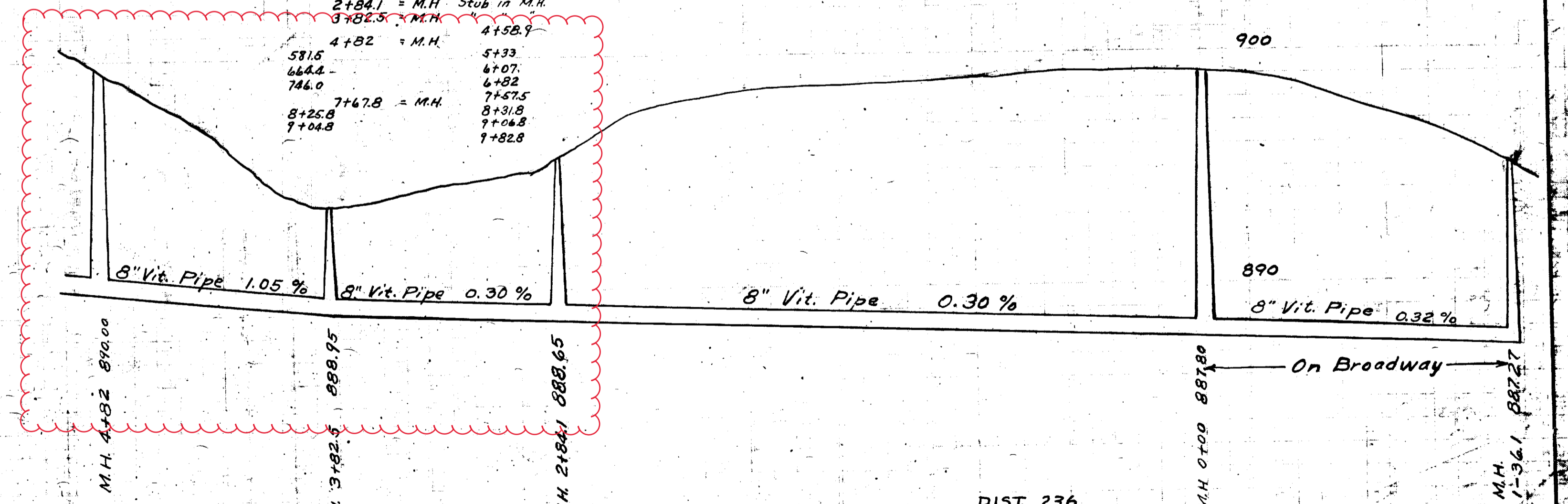
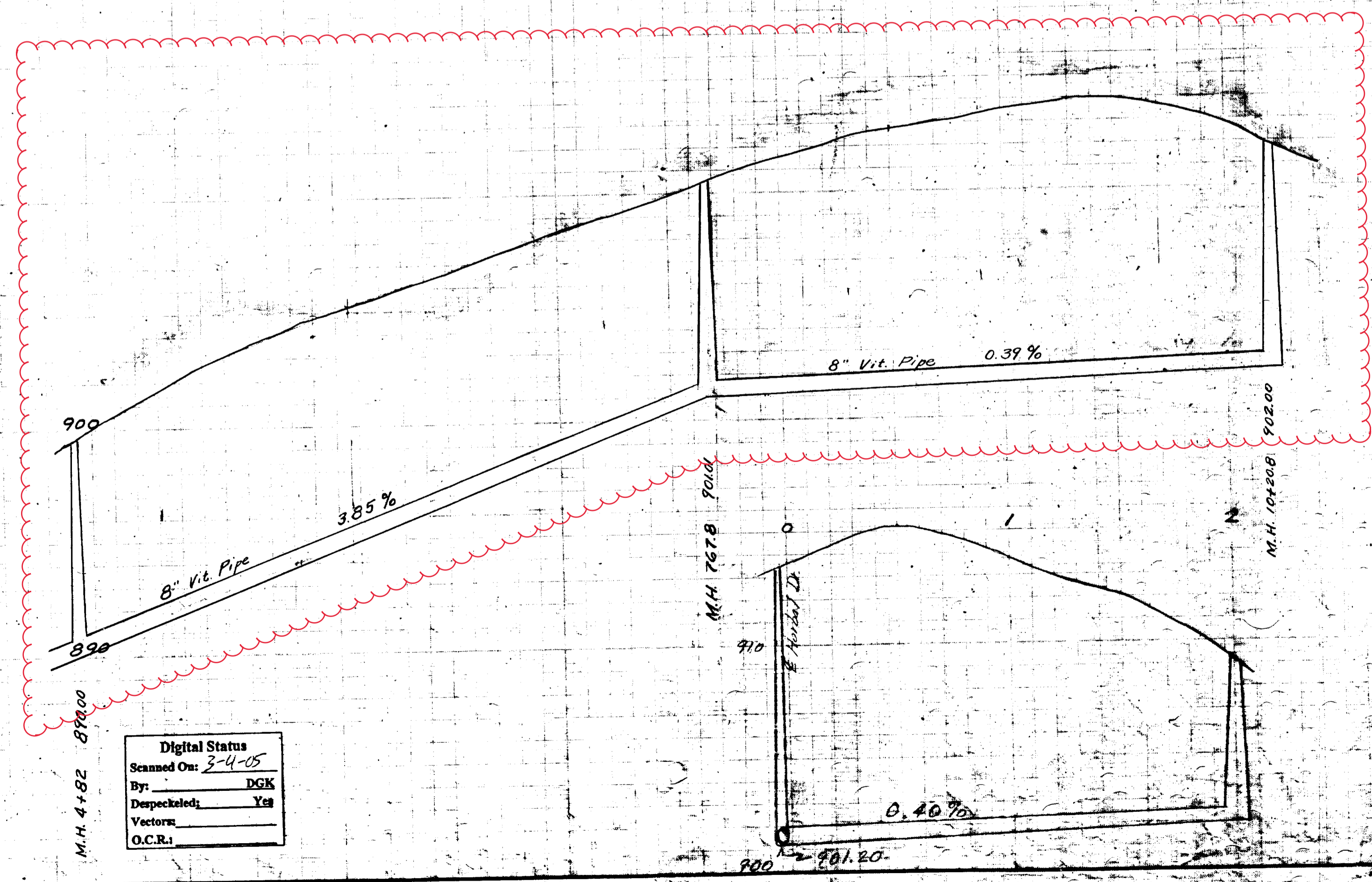
City of Ann Arbor





MEASUREMENTS FOR HOUSE CONNECTIONS

EAST	WEST
0+00 - MANHOLE ON BROADWAY	1+05
1+07	2+21.2
1+95	
2+48	
2+84.1 = M.H. Stub in M.H.	4+52.9
3+82.5 = M.H.	
4+82 = M.H.	
5+15	5+33
6+42	6+07
7+46.0	7+82
7+67.8 = M.H.	8+75
8+25.8	8+31.8
9+04.8	9+04.8
	9+82.8



Digital Status  
 Scanned On: 3-4-05  
 By: DGK  
 Despatched: Yes  
 Vector:  
 O.C.R.:

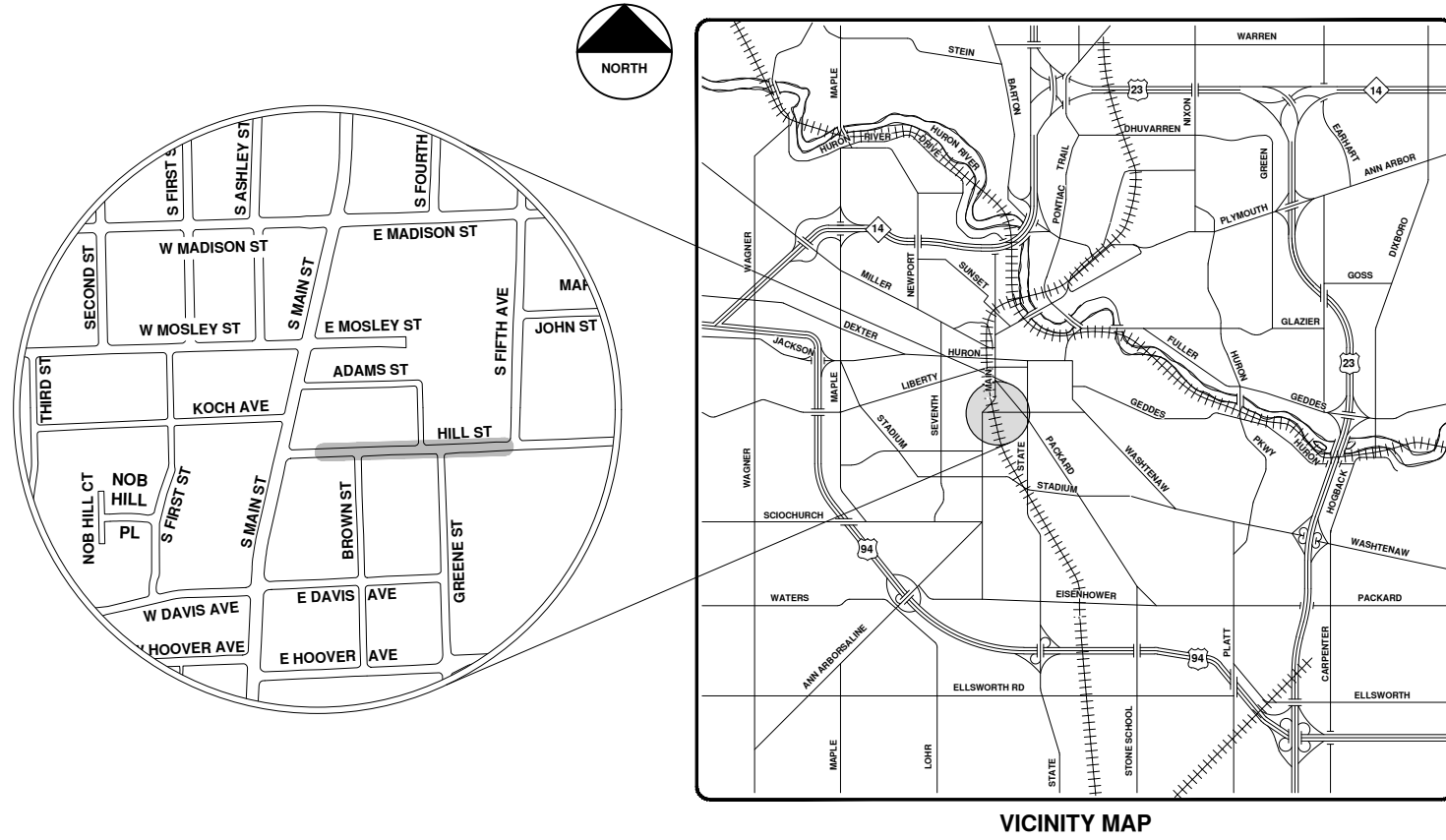
DIST. 236  
 SWEET No. 2438  
 INDEX No. 2438  
 SHELF No. 6  
 SIZE C  
 SUB No. 901  
 CITY ENGINEERS' OFFICE  
 ANN ARBOR, MICH.  
 PLAN AND PROFILE  
 SANITARY SEWER  
**HARBAL DR.**  
**LEAIRD DR.**  
 BROADWAY ST. N.Y.  
 Geo. H. Sondenburgh City Engineer  
 194  
 3/20/06 PLAN 1"=30' PROF. VERT. 1"=10'





# 2020 SEWER LINING PROJECT

## HILL ST



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2\_standard bw.stb - Plot Date: 9/14/2020 12:05:14 PM



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00	9-14-20	BID SET
		DRAWN
		ARG
		CHKD

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SCALE  
 DRAWING No.  
 2020039-37

SHEET No.  
 37 OF 177

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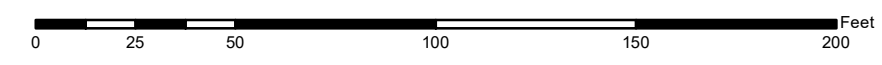


# Hill St.



	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

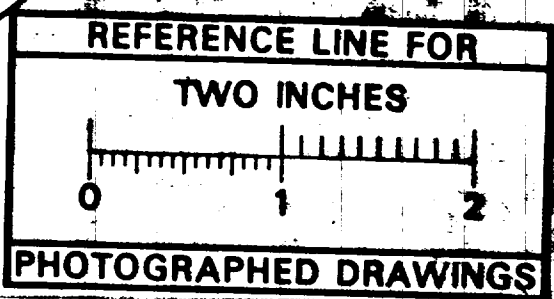
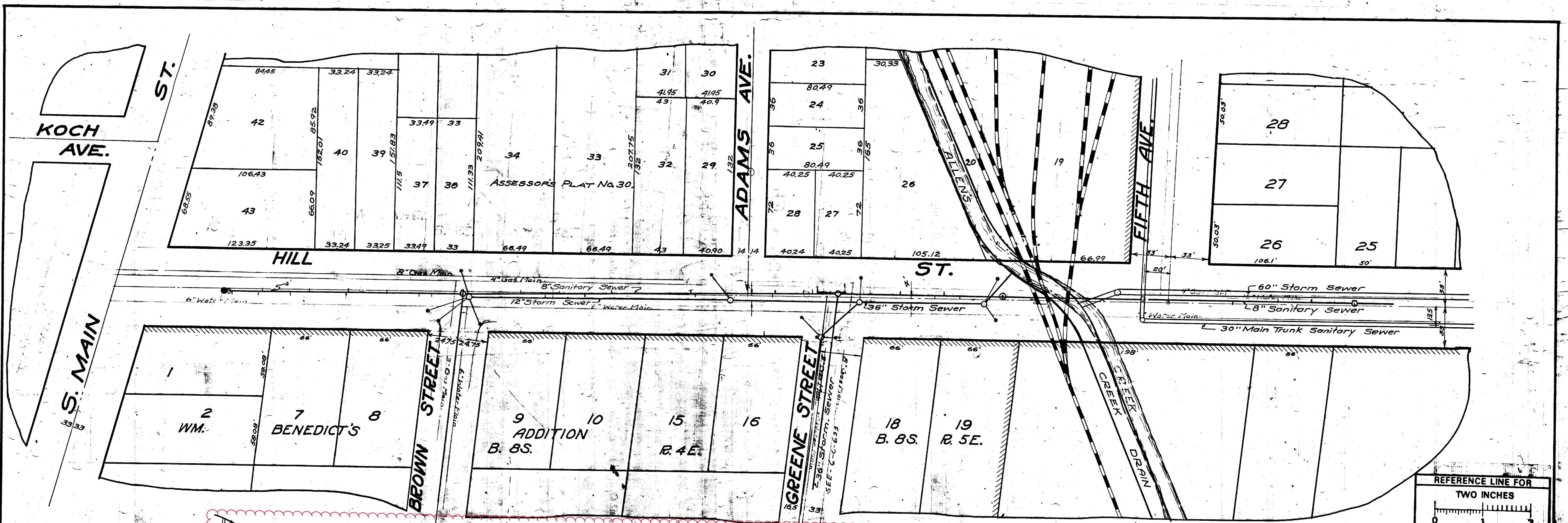
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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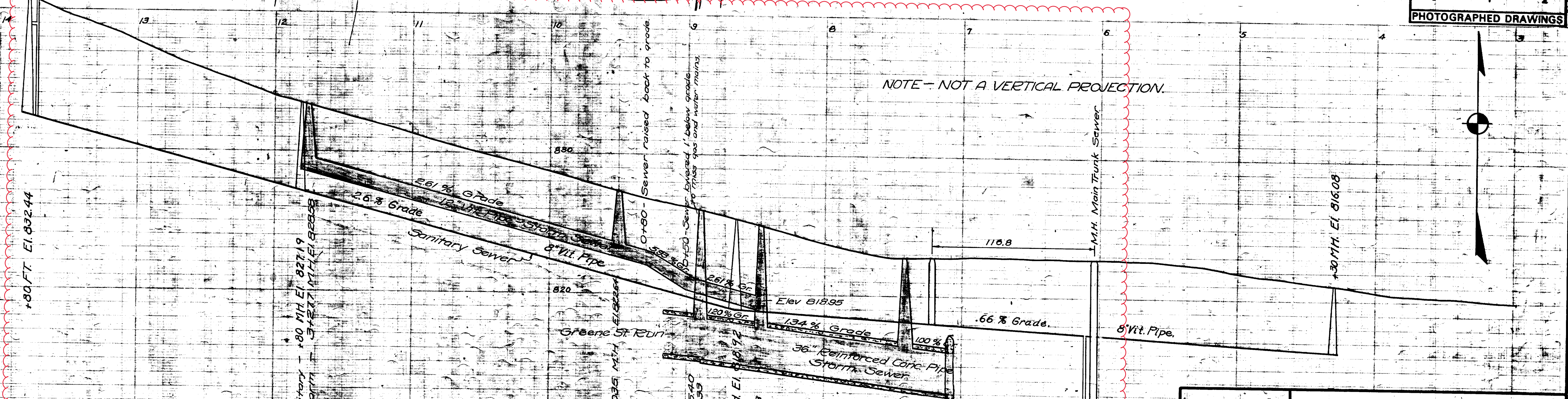
City of Ann Arbor





MEASUREMENTS TO HOUSE CONNECTIONS  
O= M.H. 135' E of 5th Ave

North	South
36.0	112.8
64.3	210.0
344.5	390.5
380.5	485.7
454.5	489.0 M.H.
486.5	553.0
557.0	645.5
629.0	679.0
699.0	714.0
811.0	746.5 M.H.
844.0	786.4
876.0	846.5
918.7	893.0
	919.0
	941.5



NOTE - NOT A VERTICAL PROJECTION.

Digital Status  
Scanned On: 6-27-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:

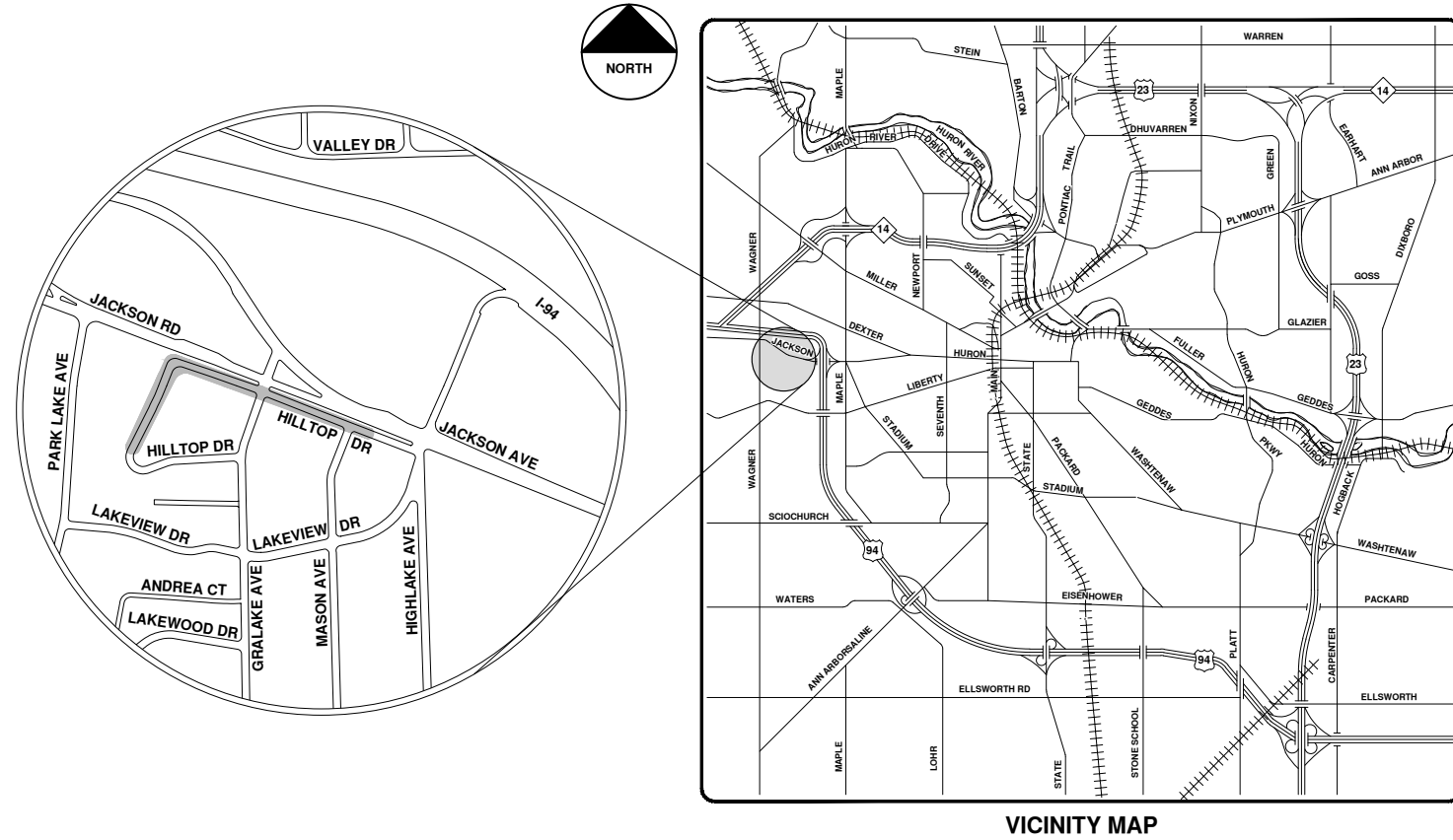
SHEET No. 149	CITY ENGINEER'S OFFICE ANN ARBOR, MICH. PLAN AND PROFILE OF SANITARY SEWER AND STORM SEWER HILL STREET MAIN ST. TO FIFTH AVE. Manley Osgood, City Engineer 1917 Scales - Plan 1"=40' Profile - Hor. 1"=40' Vert. 1"=4'
INDEX No. 826	
SHELF No. 6	
SIZE C	
SUB No. 210	
Drawn by	
Traced by Feiner	
Checked by J. J.	





# 2020 SEWER LINING PROJECT

## HILLTOP DR



R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard bw.stb - Plot Date: 9/14/2020 12:05:19 PM



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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

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 ANN ARBOR, MI 48107-8647  
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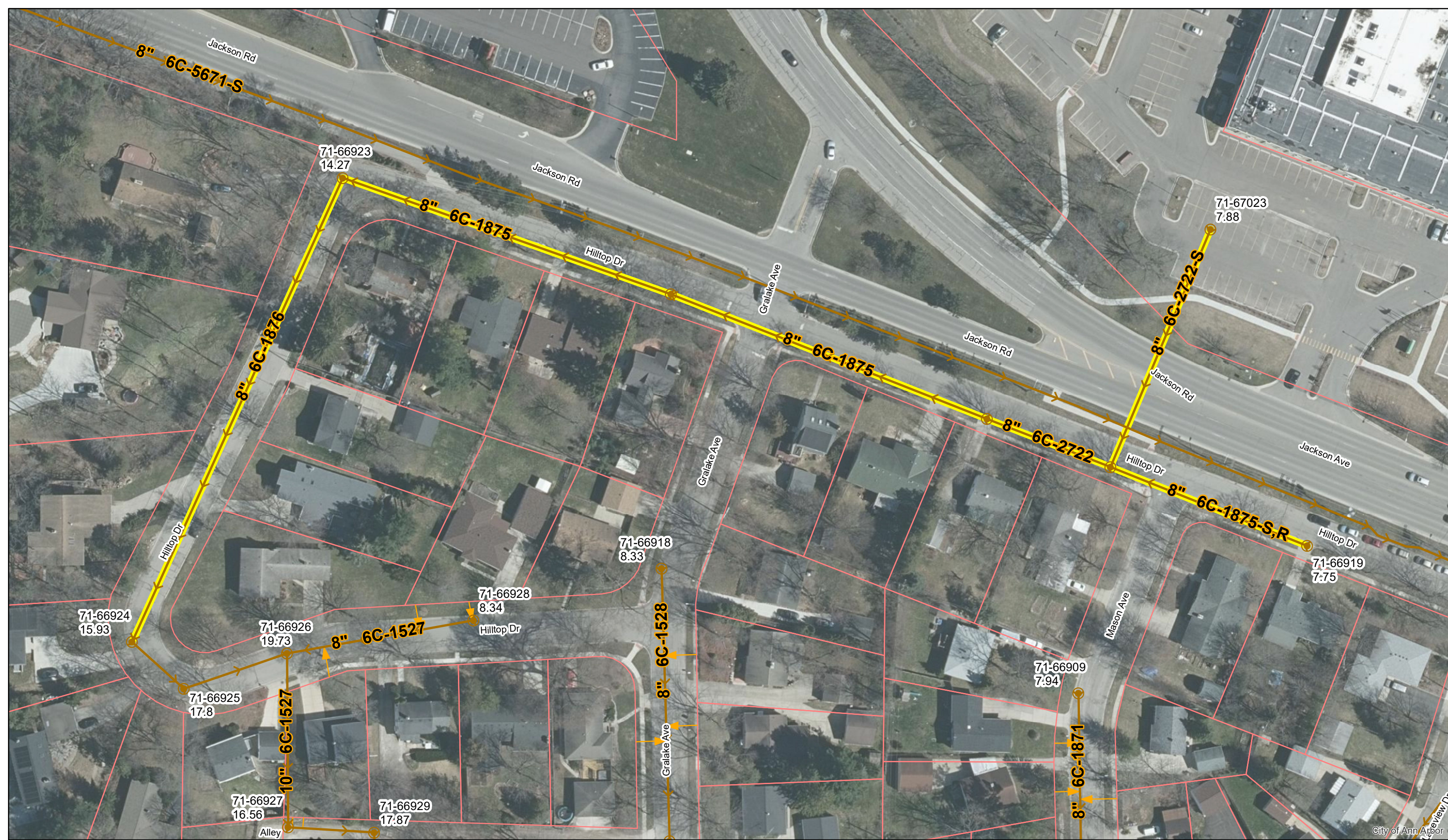
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-40

SHEET No.  
 40 OF 177

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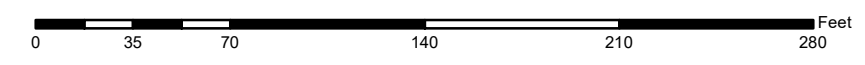


# Hilltop Dr.



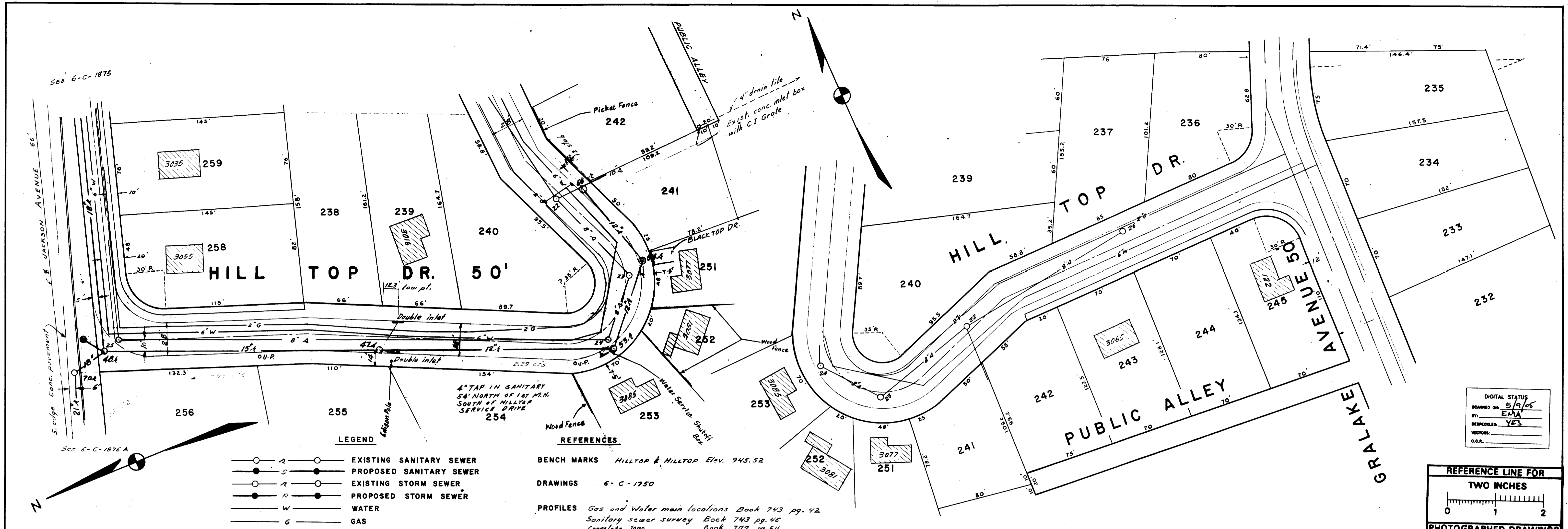
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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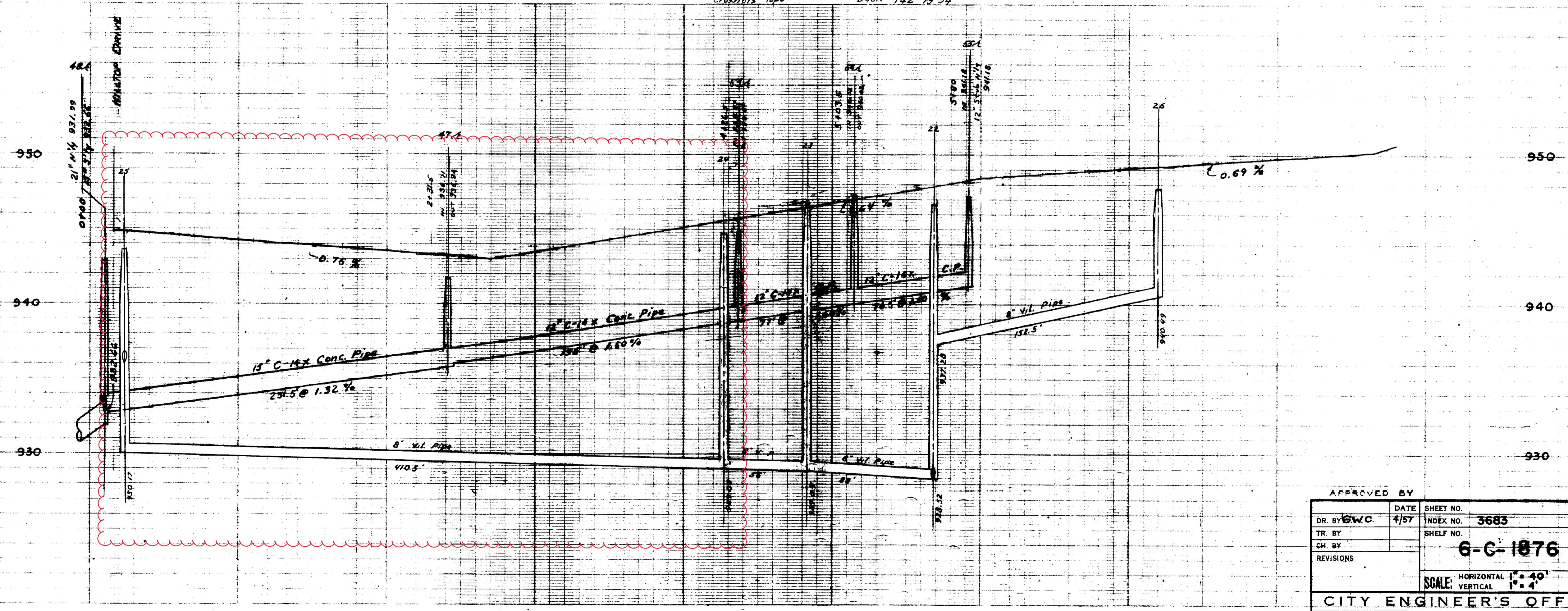
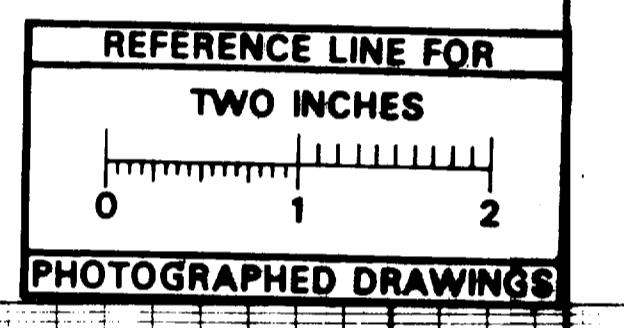




- LEGEND**
- EXISTING SANITARY SEWER
  - PROPOSED SANITARY SEWER
  - EXISTING STORM SEWER
  - PROPOSED STORM SEWER
  - W — WATER
  - G — GAS

- REFERENCES**
- BENCH MARKS Hilltop & Hilltop Elev. 945.52
- DRAWINGS 6-C-1750
- PROFILES Gas and Water main locations Book 743 pg. 42  
 Sanitary sewer survey Book 743 pg. 46  
 Crosslots Topo Book 742 pg. 54

DIGITAL STATUS  
 SCANNED ON: 5/19/05  
 BY: EMA  
 REPRODUCTION: YES  
 VECTORS:  
 O.C.R.:



Job No 2798R DIST 26 (PARTIAL-BALANCE 4E DISTRICT)

APPROVED BY		DATE	SHEET NO.	<b>STORM AND SANITARY SEWERS</b> <b>LAKEWOOD SUBDIVISION</b> <b>HILL TOP DRIVE</b> FROM BRALAKE AVENUE TO JACKSON AVENUE FREDRICK A. MAMMEL SUPERINTENDENT OF PUBLIC WORKS
DR. BY	DATE	INDEX NO.	3685	
TR. BY	DATE	SHEET NO.	6-C-1876	
CH. BY	DATE	SCALE:	HORIZONTAL 1" = 40' VERTICAL 1" = 4'	
CITY ENGINEER'S OFFICE — ANN ARBOR, MICHIGAN				



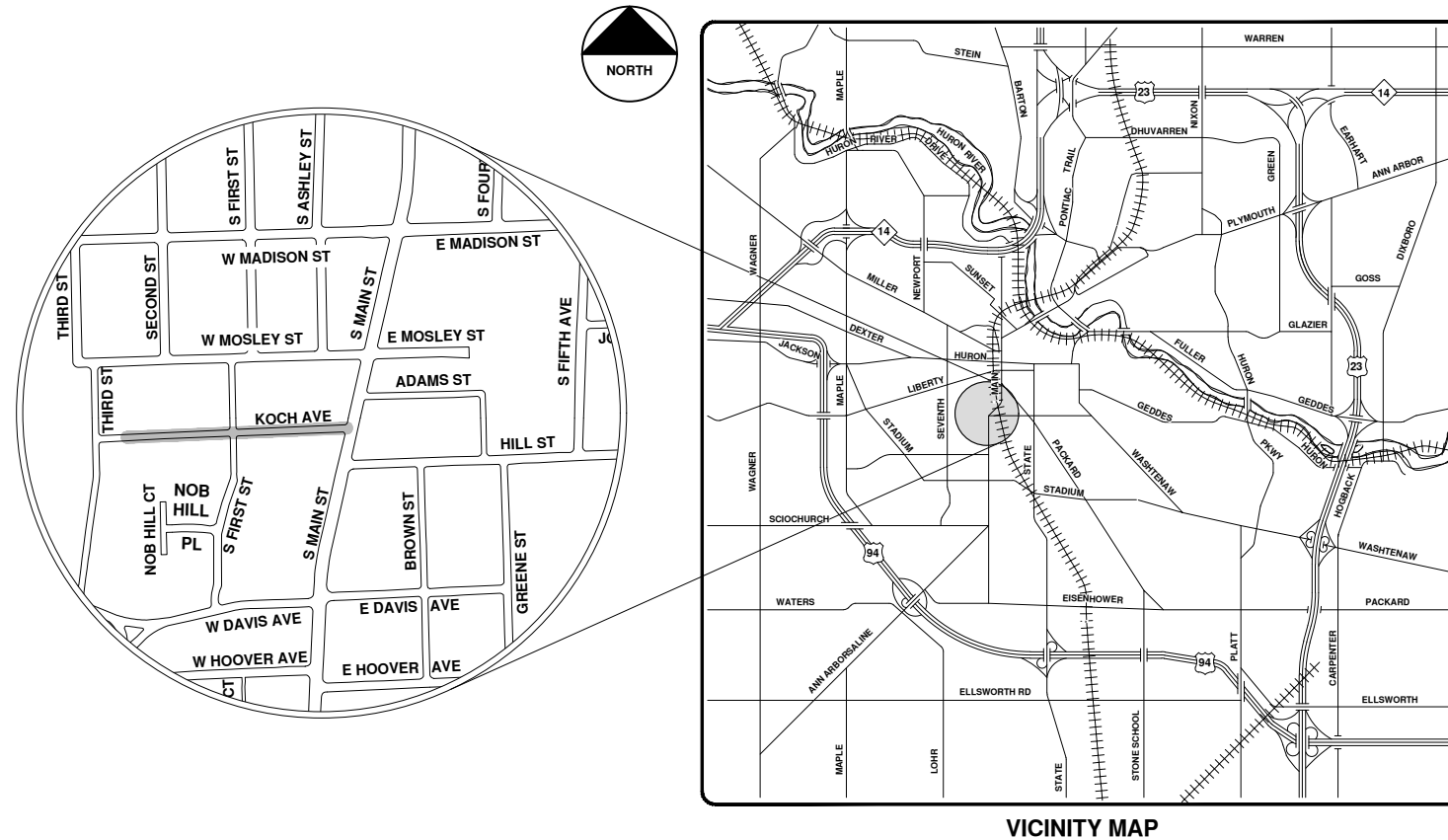






# 2020 SEWER LINING PROJECT

## KOCH AVE



VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard bw.stb - Plot Date: 9/14/2020 12:05:24 PM



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-44

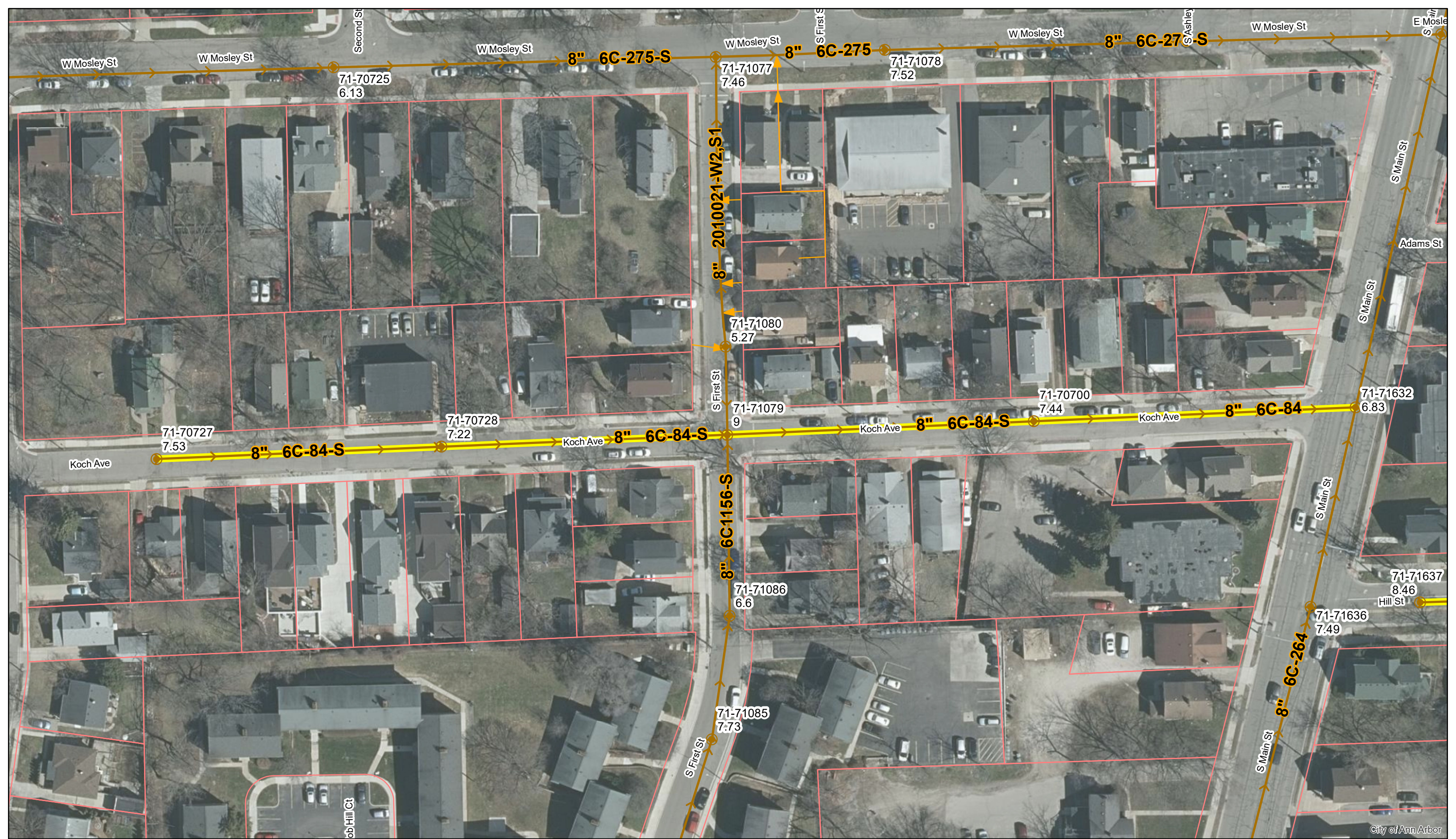
SHEET No.  
 44 OF 177

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK





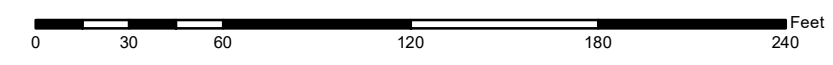


# Koch Ave.



	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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City of Ann Arbor



MOSLEY

STREET

WILLIAM S. MAYNARD'S

SECOND ADDITION

16 15 14 13 12 11 10 9

7 6 5 4 3 2 1

17 20 19 18 17 16 15 14 13 12

10 3 7 6 5 4 3 2 1

JOHN KOCH'S

SUB-DIVISION

SANITARY SEWER

SANITARY SEWER

21 22 23 24 25 26 27 28

KOCH

31

34

AVENUE

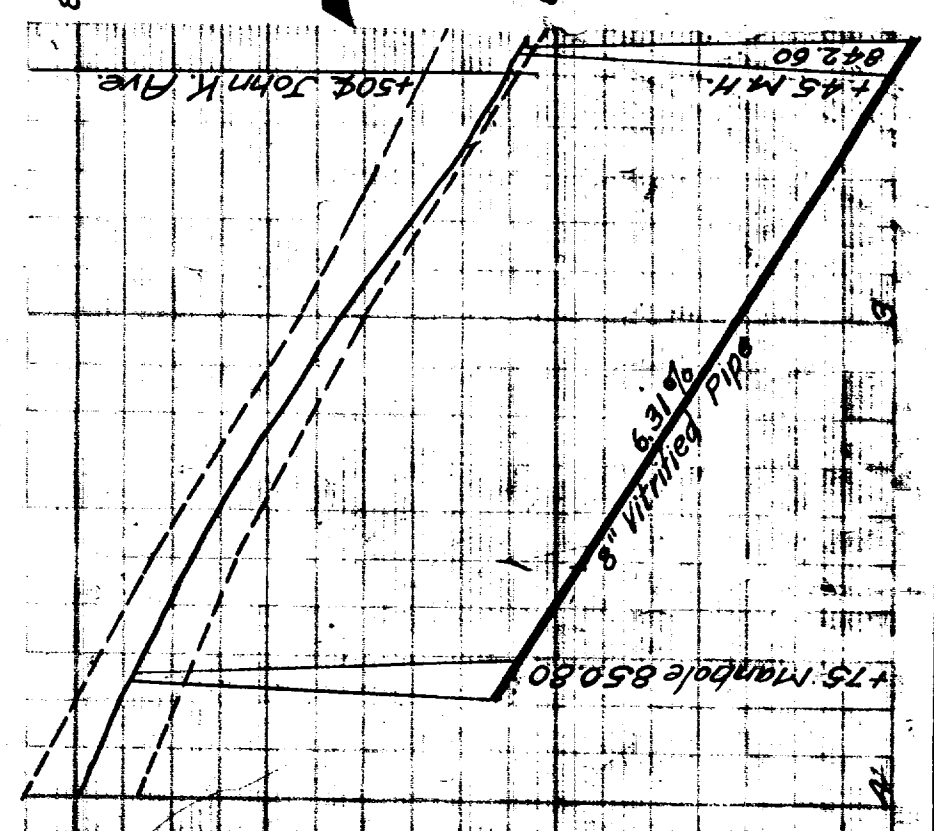
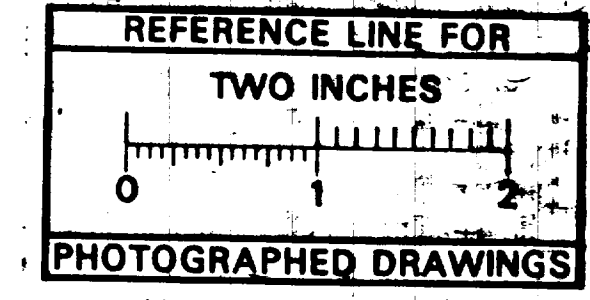
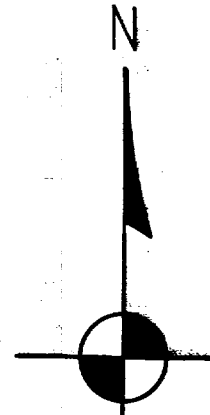
40'

33

35

36

SOUTH



MEASUREMENTS TO HOUSE CONNECTIONS

Manhole	North	South
00	150	143
238	177	177
238	215	211
230	230	236
273	273	277
275	323	315
323	400	395
400	403.7	401.7
431	496.5	494.5
431	493.5	491.5
587.5	625.3	623.3
625.3	671.5	669.5
671.5	706.0	704.0
706.0	746.5	744.5
746.5	787.1	785.1
787.1	827.7	825.7
827.7	856.3	853.3

Manhole	North	South
480	496	498
537	537	539
569	571	571

EXCAVATION & BACKFILLING

432 cu. yds.	0'-6" deep
104	6'-8"
6	8'-10"

LEGEND

- M & North Walk
- E & South Walk
- Center Line

BILL OF MATERIALS

- 925 lin. ft. 8" pipe
- 36 8" x 8" manholes
- 1 manhole 10' x 10'
- 2 6' x 6'
- 1 8' x 8'
- 2 flush tanks 6' x 8'

132 805 1/10

Digital Status  
Scanned On: 8-25-04  
By: DGK  
Despatched: Yes  
Vectors:  
O.C.R.:

SHEET No. 182  
INDEX No. 659  
SHELF No. 6  
SIZE C  
SUB No. 94  
Drawn by  
Traced by McMillen  
Checked by JHS

CITY ENGINEER'S OFFICE  
ANN ARBOR MICH.  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
DISTRICT NO.  
**KOCH AVE.**  
FROM MAIN ST WEST TO END  
Manley Osgood, City Engineer  
1916-5-6  
Scale - Plan 1" = 40' Profile - Hor. 1" = 40' Vert. 1" = 4'  
One Sheet

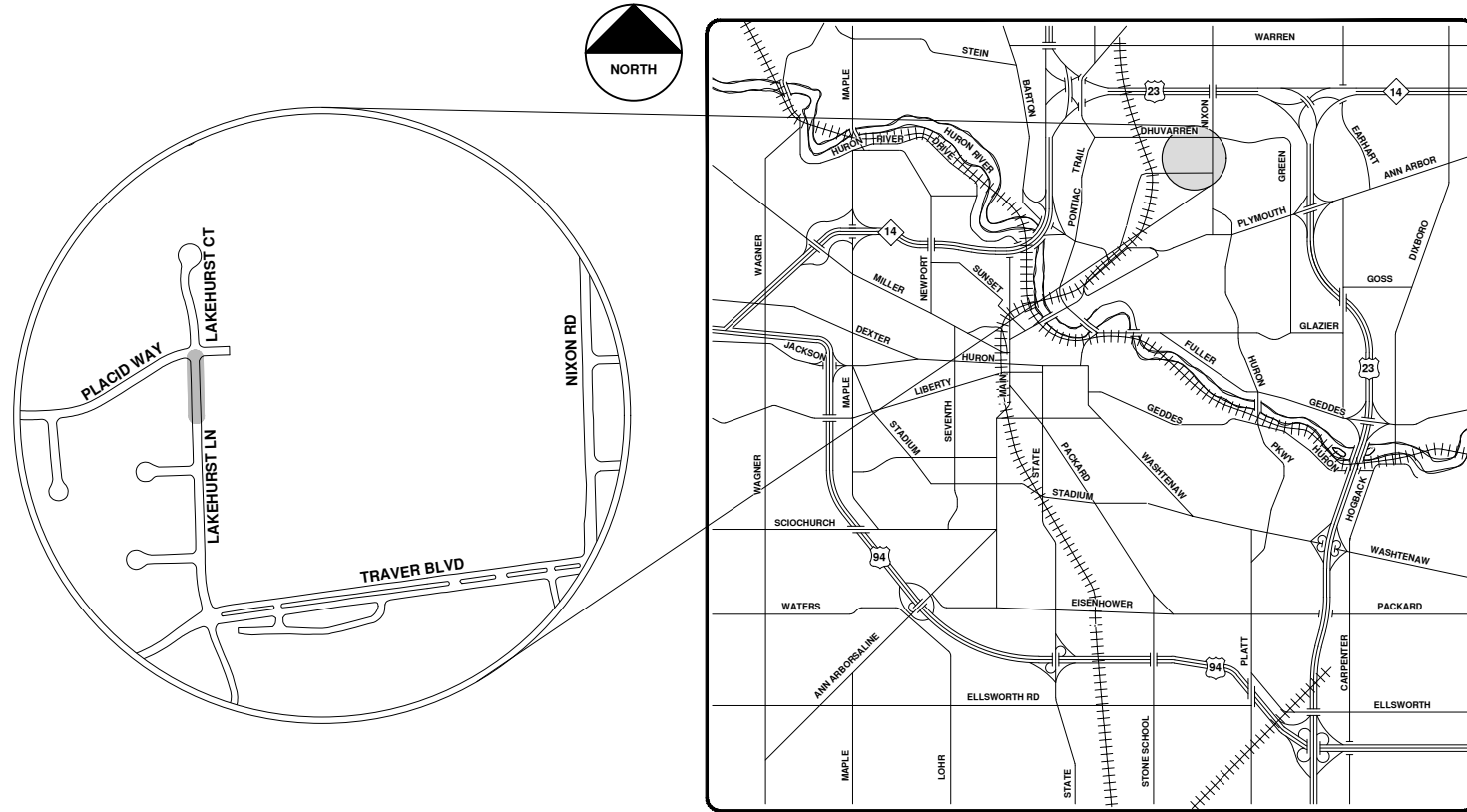
Corrected to final measurements W.D.R. 1917-2-13





# 2020 SEWER LINING PROJECT

## LAKEHURST LN



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:05:29 PM



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00	BID SET	9-14-20	ARG	IVK

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-47

SHEET No.  
 47 OF 177



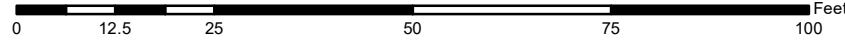


# Lakehurst Ln.



	Manhole		Sanitary Main
	Proposed Lining		

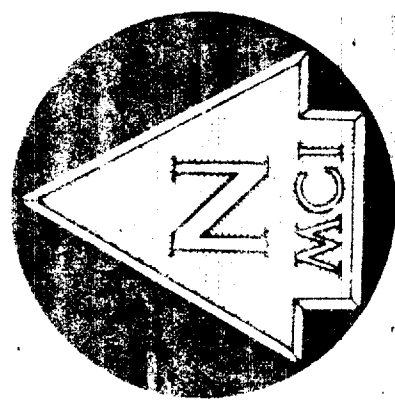
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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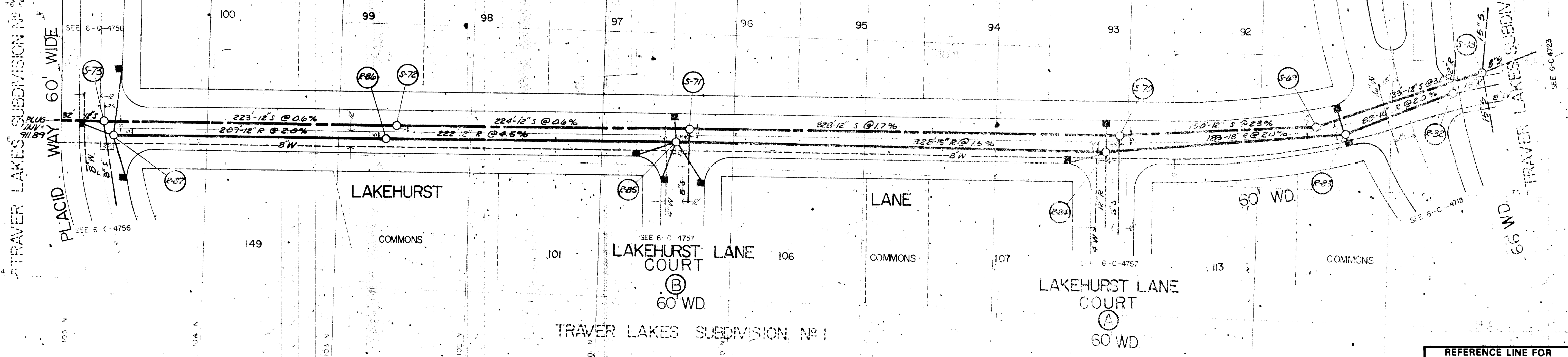
City of Ann Arbor



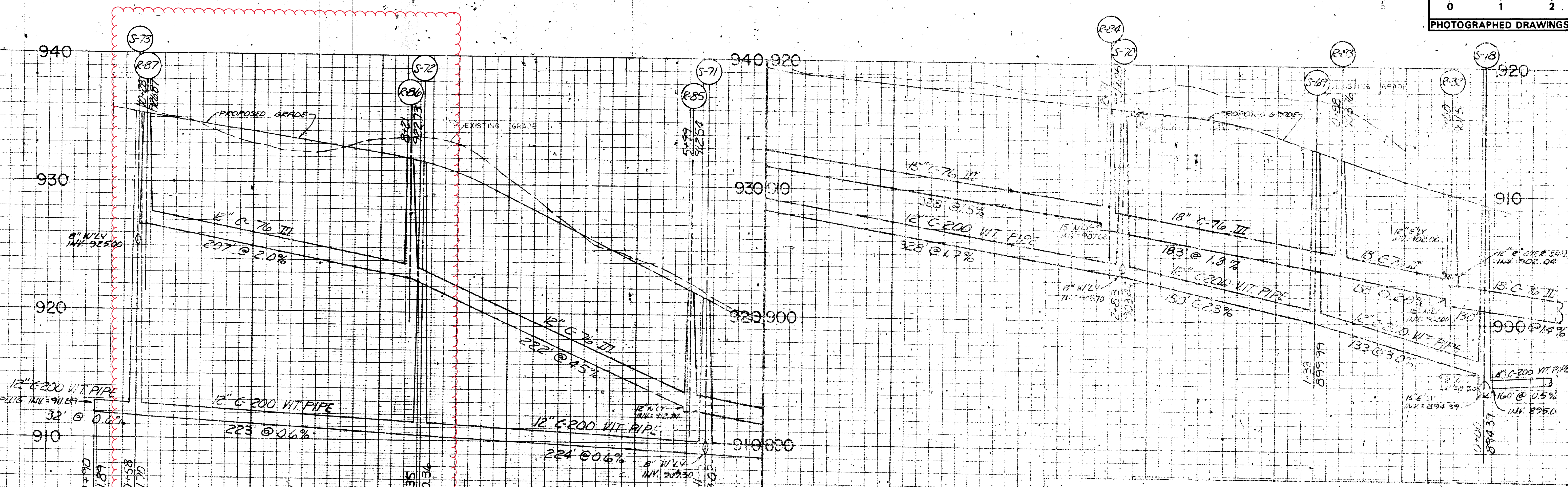


TRAVER LAKES SUBDIVISION NO. 2  
PLACID WAY 60' WIDE

### TRAVER LAKES SUBDIVISION NO. 1



REFERENCE LINE FOR  
TWO INCHES  
0 1 2  
PHOTOGRAPHED DRAWINGS



Digital Status  
Scanned On: 12/23/05  
By: JLS

**LEGEND:**

—	UNDERGROUND UTILITIES	—	EXISTING SANITARY	—	EXISTING STORM	—	EXISTING GAS	—	EXISTING WATER
—	PROPOSED SANITARY	—	PROPOSED STORM	—	PROPOSED GAS	—	PROPOSED WATER	—	PROPOSED CENTER LINE
—	PROPOSED CENTER LINE	—	RIGHT PROPERTY LINE	—	LEFT PROPERTY LINE	—		—	

REFERENCES  
M.D.P.H. PERMIT NO. 710511 8/24/71

JF 7-71  
HCC 7-71  
6-C-4755  
SANITARY AND STORM SEWERS  
LAKEHURST LANE  
FROM TRAVER BLVD. TO PLACID WAY  
TRAVER LAKES SUBDIVISION NO. 1  
ANN ARBOR, MICHIGAN

70072 -16  
70073 -16

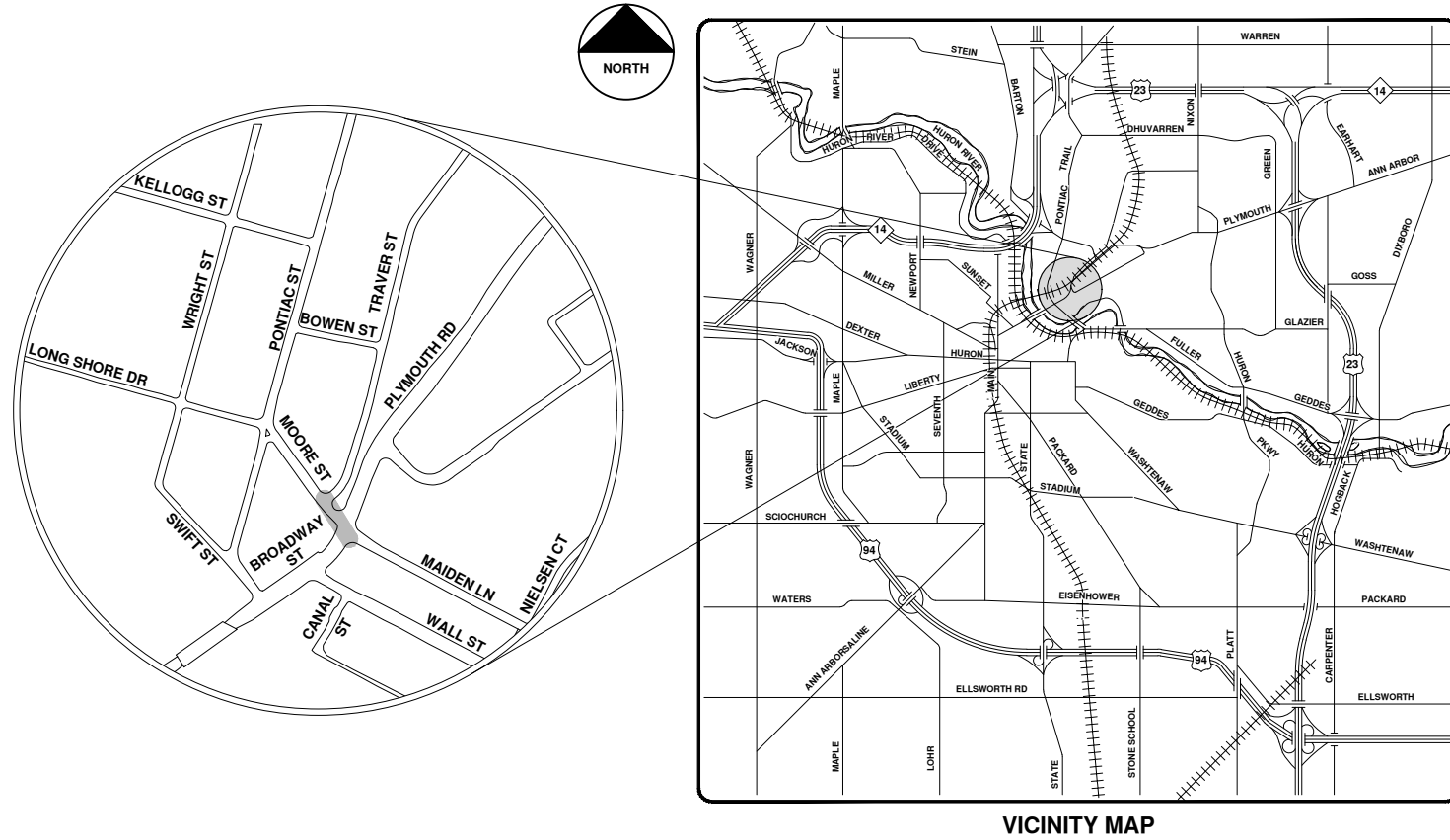
PREPARED BY: CHARLES W. MICHELS  
APPROVED BY: MICHELS CONSULTING, INC.





# 2020 SEWER LINING PROJECT

## MOORE ST



VICINITY MAP

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00	BID SET	9-14-20	ARG	IWK

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-50

SHEET No.  
 50 OF 177





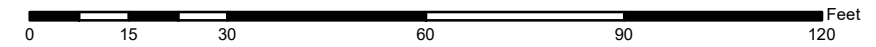
City of Ann Arbor

# Moore St.



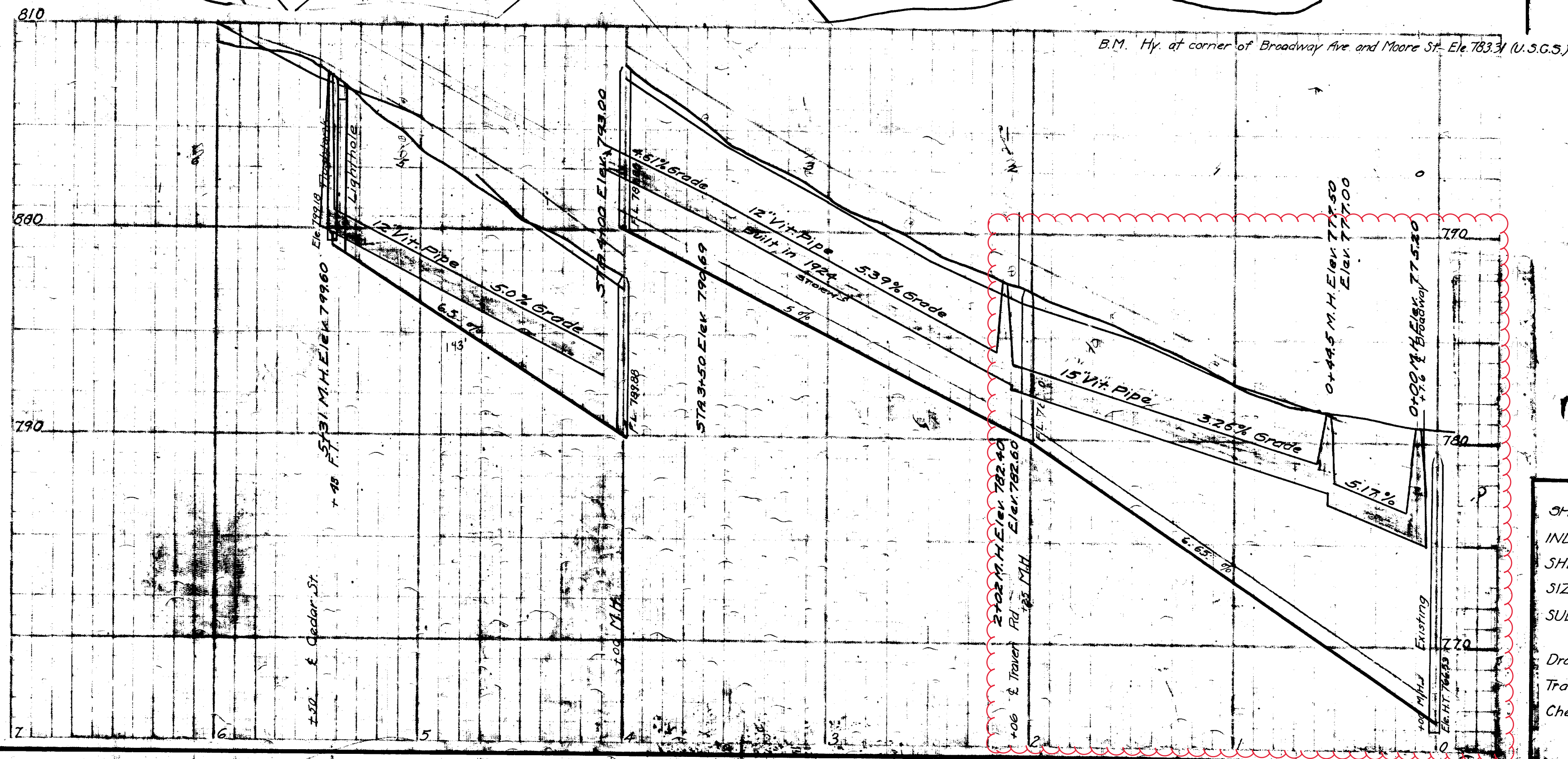
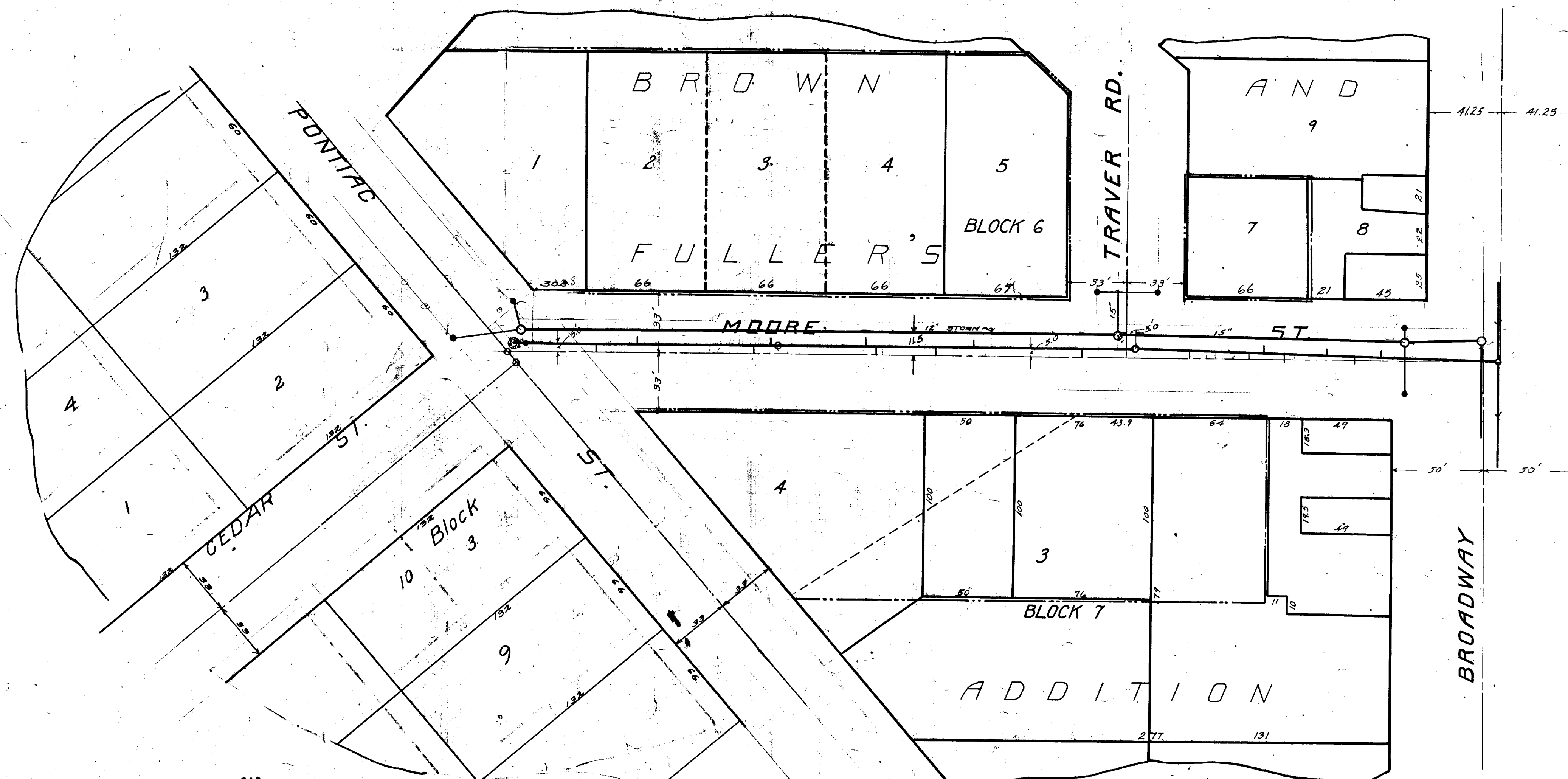
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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**BILL OF MATERIALS**  
 312 Lineal Ft. of 8" Tile.  
 16 - 8" Sanitary Tees.  
 2 - 8" Branches.  
 2 - Manholes.  
 1 - Flushpank.  
 1 - Lighthole Cover.

**EXCAVATION + BACKFILLING**  
 345.0 Lineal Ft. of 6'-8" Ft. Depth.  
 110.0 - - - - 8-10 -  
 90.0 - - - - 10-13 -

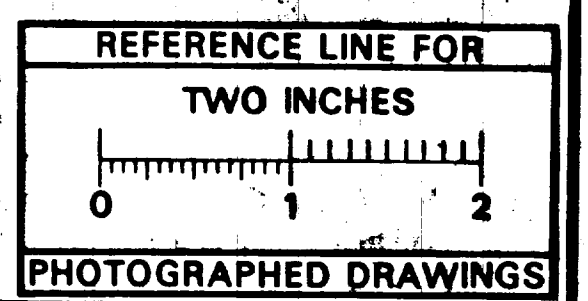
**FINAL MEASUREMENTS**

CONV. N.	CONV. S.
65.0	0 - M.H. @ Broadway
95.5	22.7
131.5	119.2
	137.6
	171.8
292.8	202.9 M.H. @ Traver St.
349.4	229.0
	310.0
	344.4
413.0	401.0 M.H. @
477.5	411.0
	499.0
	539.7
	545.0

Lighthole  
Flushpank

**Digital Status**  
 Scanned On: 8-25-04  
 By: DGK  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:

**LEGEND**  
 North Walk  
 South Walk  
 Center Line  
 Flow line  
 of sewer  
 District boundary



SHEET No. 22A  
 INDEX No. 498  
 SHELF No. 6  
 SIZE C  
 SUB No. 56  
 Drawn by S<sup>2</sup>  
 Traced by S<sup>2</sup>  
 Checked by MLD

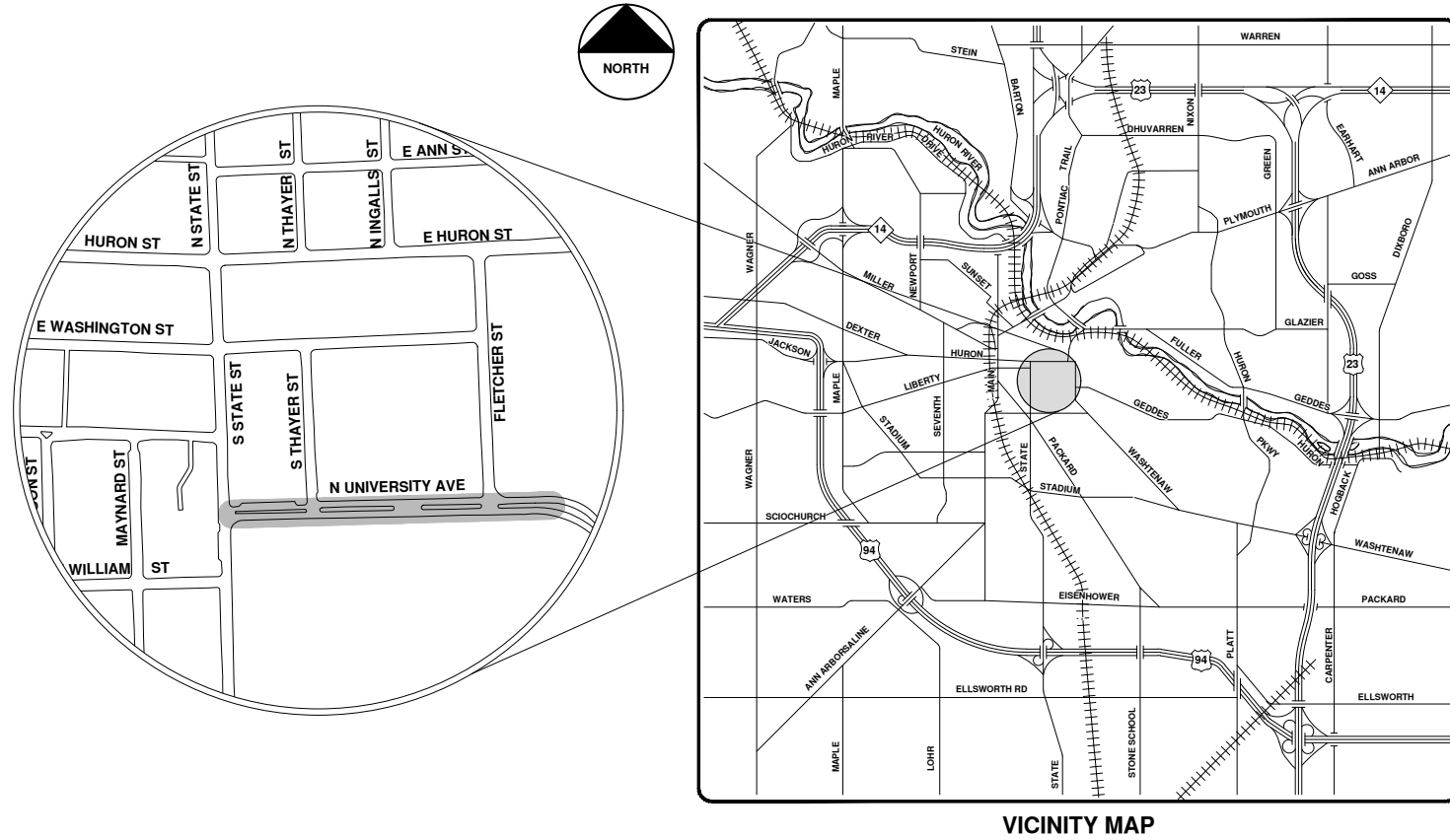
**CITY ENGINEER'S OFFICE  
 ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 OF  
 SANITARY SEWER  
 DISTRICT No. 67  
**MOORE ST.**  
 FROM BROADWAY TO PONTIAC ST.  
 Manley Osgood, City Engineer  
 1914-8-31  
 Scales: Plan 1"=40' Profile 1"=40' Ver. 1"=4'  
 One Sheet Sheet "A"





# 2020 SEWER LINING PROJECT

## N UNIVERSITY AVE



VICINITY MAP

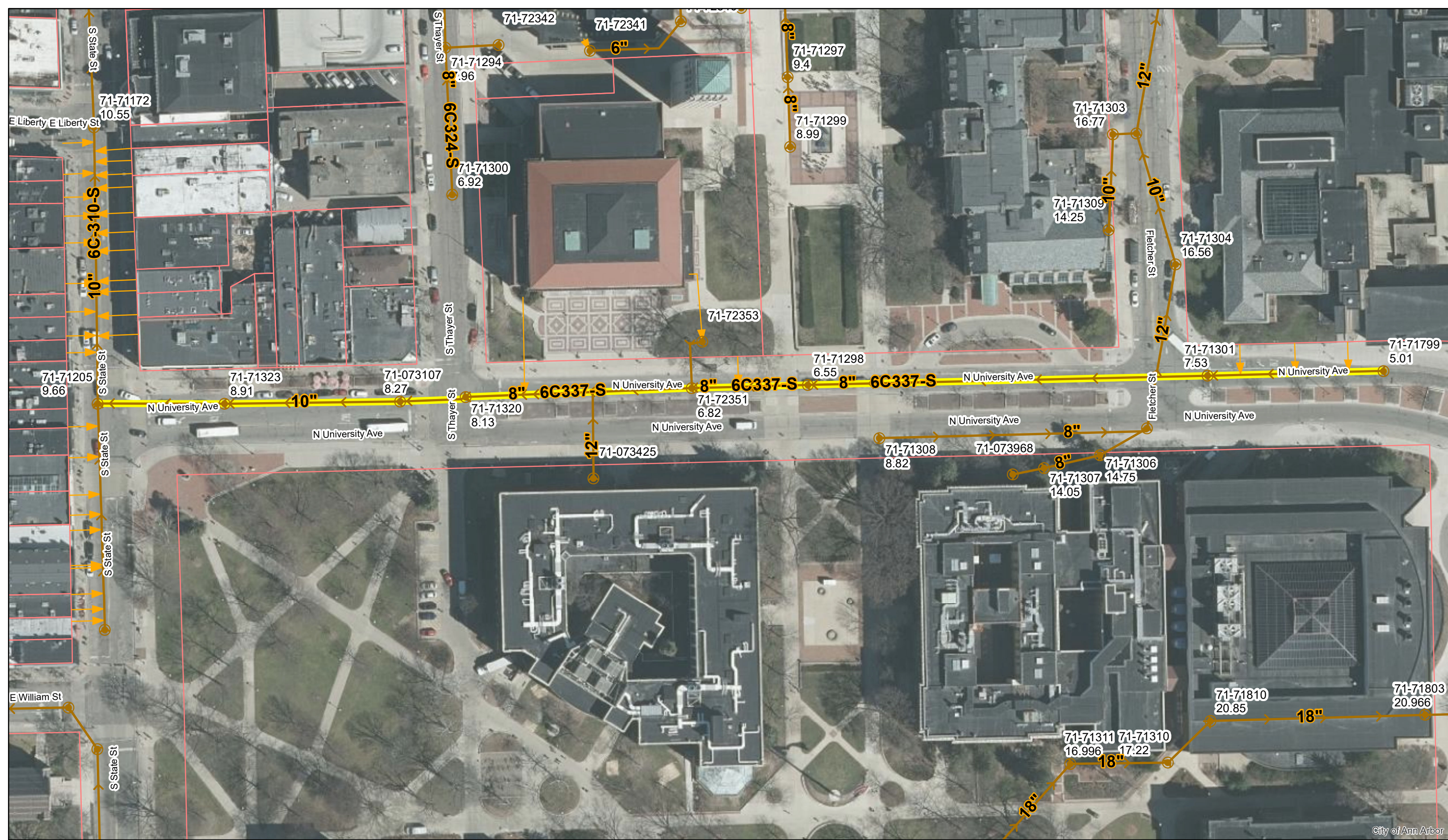
R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:05:39 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

		CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE	
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 www.a2gov.org		SHEET No. <b>53 OF 177</b>	
DO REV.	BID SET REV.	DESCRIPTION DATE	CHECKED DRAWN DATE
			ARG DATE 9-14-20
			IVK CHECKED





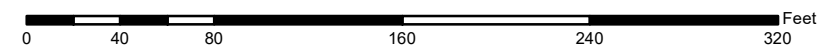
City of Ann Arbor

# N University Ave.



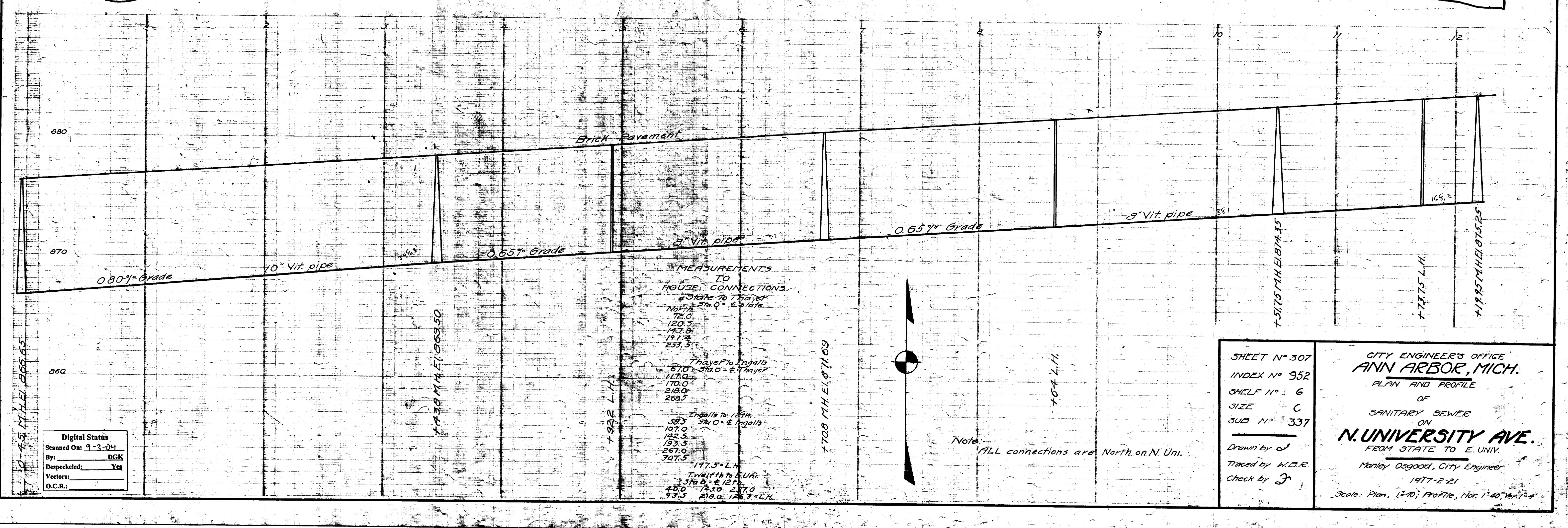
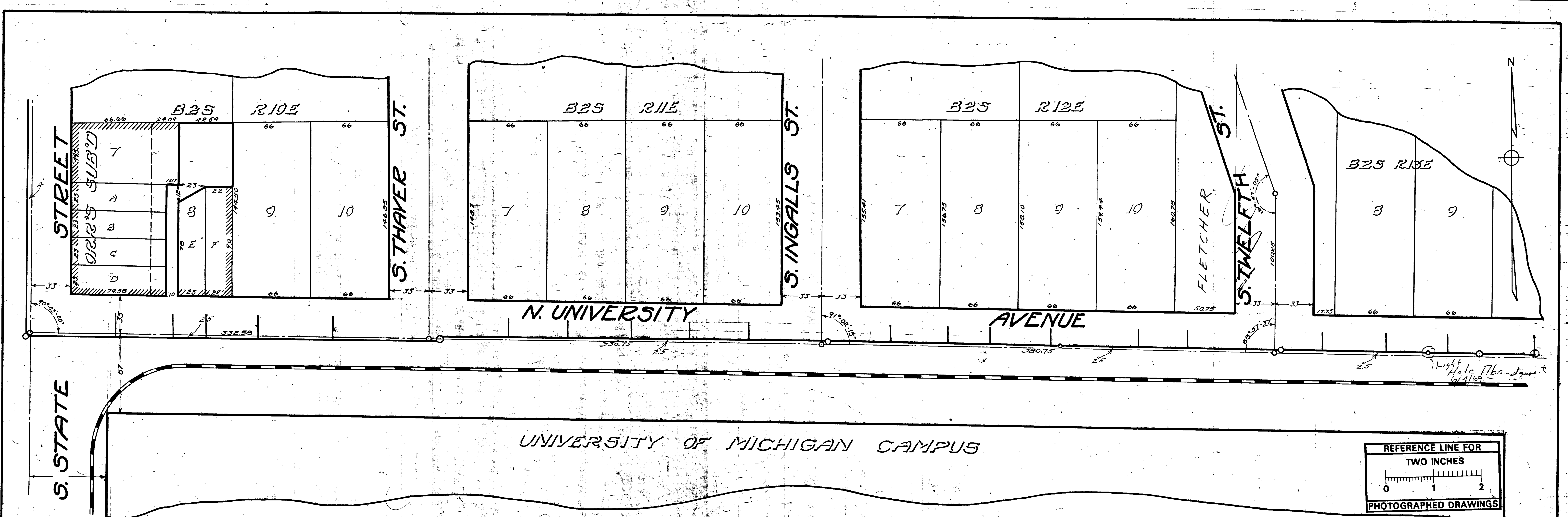
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



For terms and conditions please visit [www.a2gov.org/terms](http://www.a2gov.org/terms)





MEASUREMENTS TO HOUSE CONNECTIONS

State to Thayer  
 74.0  
 120.5  
 147.8  
 191.4  
 233.3

Thayer to Ingalls  
 610.0  
 117.0  
 170.0  
 219.0  
 269.7

Ingalls to Thelwellth  
 583.0  
 107.0  
 142.5  
 193.5  
 267.0  
 301.5

Thelwellth to E. Univ.  
 370.0  
 40.0  
 74.50  
 127.0  
 170.0

SHEET N° 307  
 INDEX N° 952  
 SHELF N° 6  
 SIZE C  
 SUB N° 337

CITY ENGINEER'S OFFICE  
 ANN ARBOR, MICH.  
 PLAN AND PROFILE  
 OF  
 SANITARY SEWER  
 ON  
 N. UNIVERSITY AVE.  
 FROM STATE TO E. UNIV.

Manley Osgood, City Engineer  
 1917-2-21  
 Scale: Plan, 1"=40'; Profile, Hor. 1"=40', Vert. 1"=4'

Drawn by J  
 Traced by W.B.R.  
 Check by J

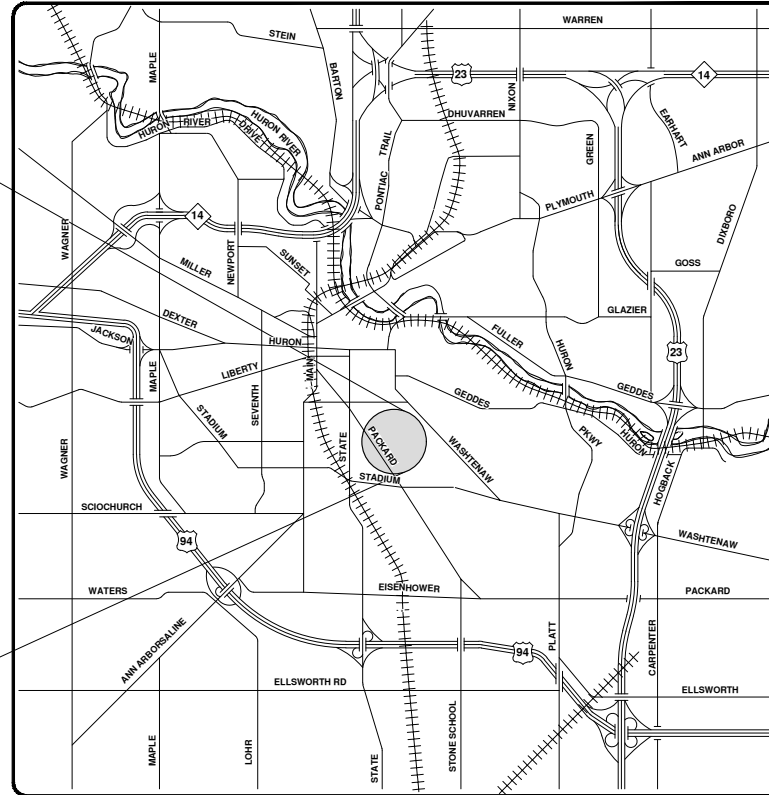
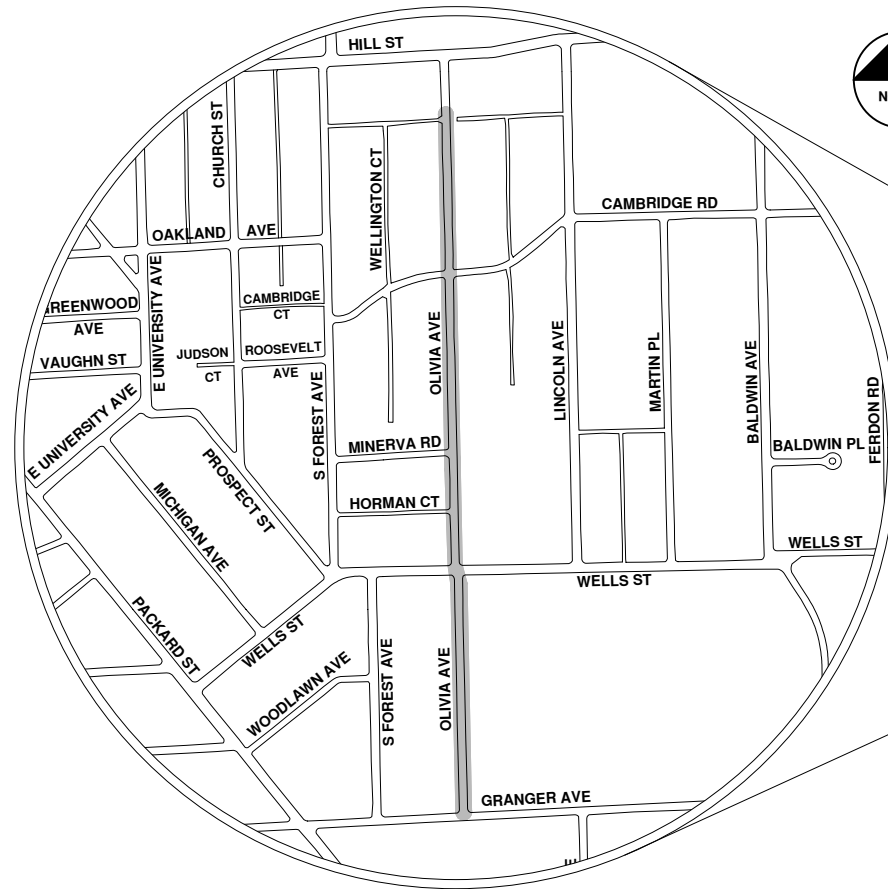
Digital Status  
 Scanned On: 9-3-04  
 By: DGK  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:





# 2020 SEWER LINING PROJECT

## OLIVIA AVE



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - Plot Date: 9/14/2020 12:05:44 PM



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 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MICHIGAN 48107-8647  
 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

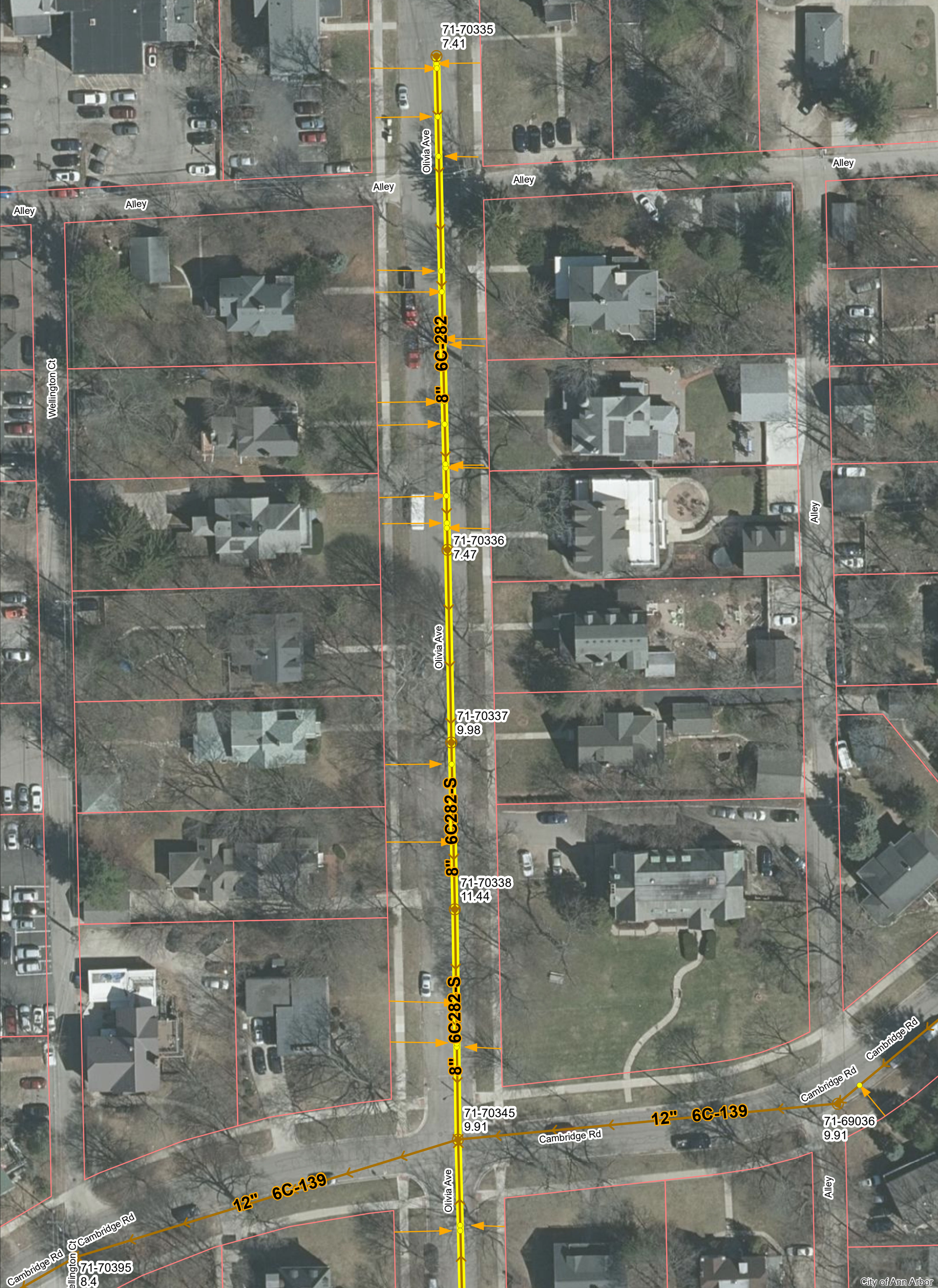
SCALE  
 DRAWING No.  
 2020039-56

SHEET No.  
 56 OF 177

REV.	DATE	DESCRIPTION
00	9-14-20	BID SET
01		DRAWN
02		ARG
03		CHKD





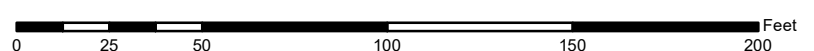


# Olivia Ave.



	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

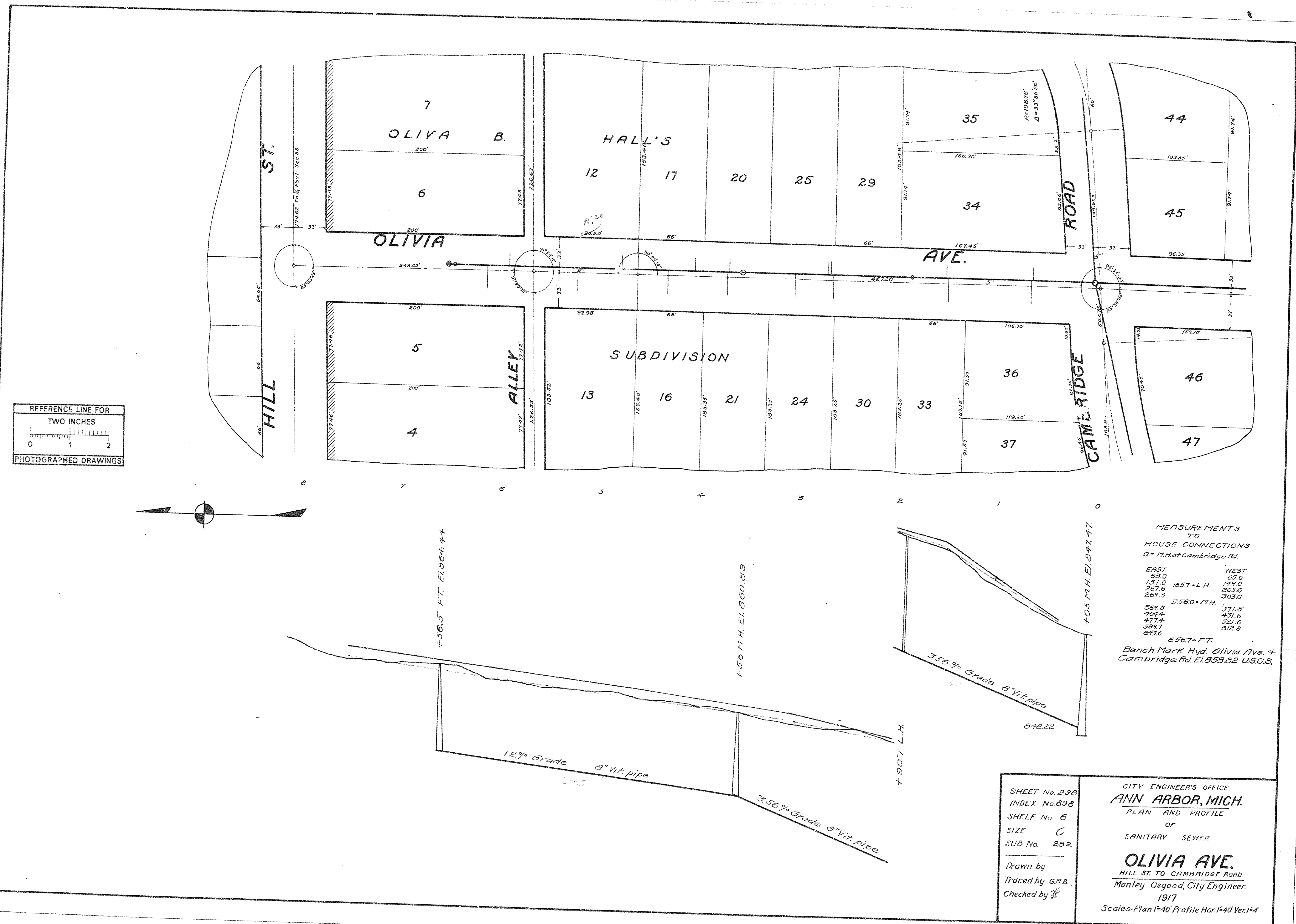
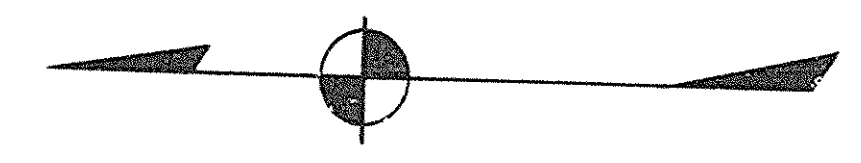
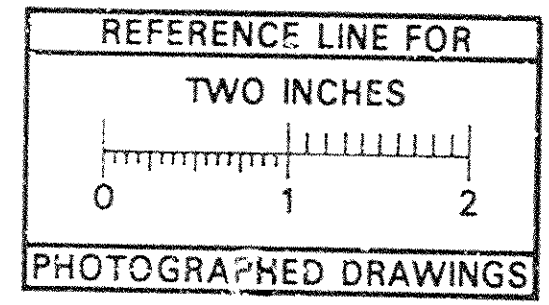
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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City of Ann Arbor





MEASUREMENTS TO HOUSE CONNECTIONS  
0 = M.H. at Cambridge Rd.

EAST	WEST
63.0	65.0
151.0	149.0
267.6	263.6
269.5	303.0
369.5	371.5
404.4	431.6
477.4	521.6
589.7	612.8
643.6	

6567 FT.  
Bench Mark Hyd. Olivia Ave. + Cambridge Rd. E.I. 858.82 U.S.G.S.

SHEET No. 238  
INDEX No. 838  
SHELF No. 6  
SIZE C  
SUB No. 232

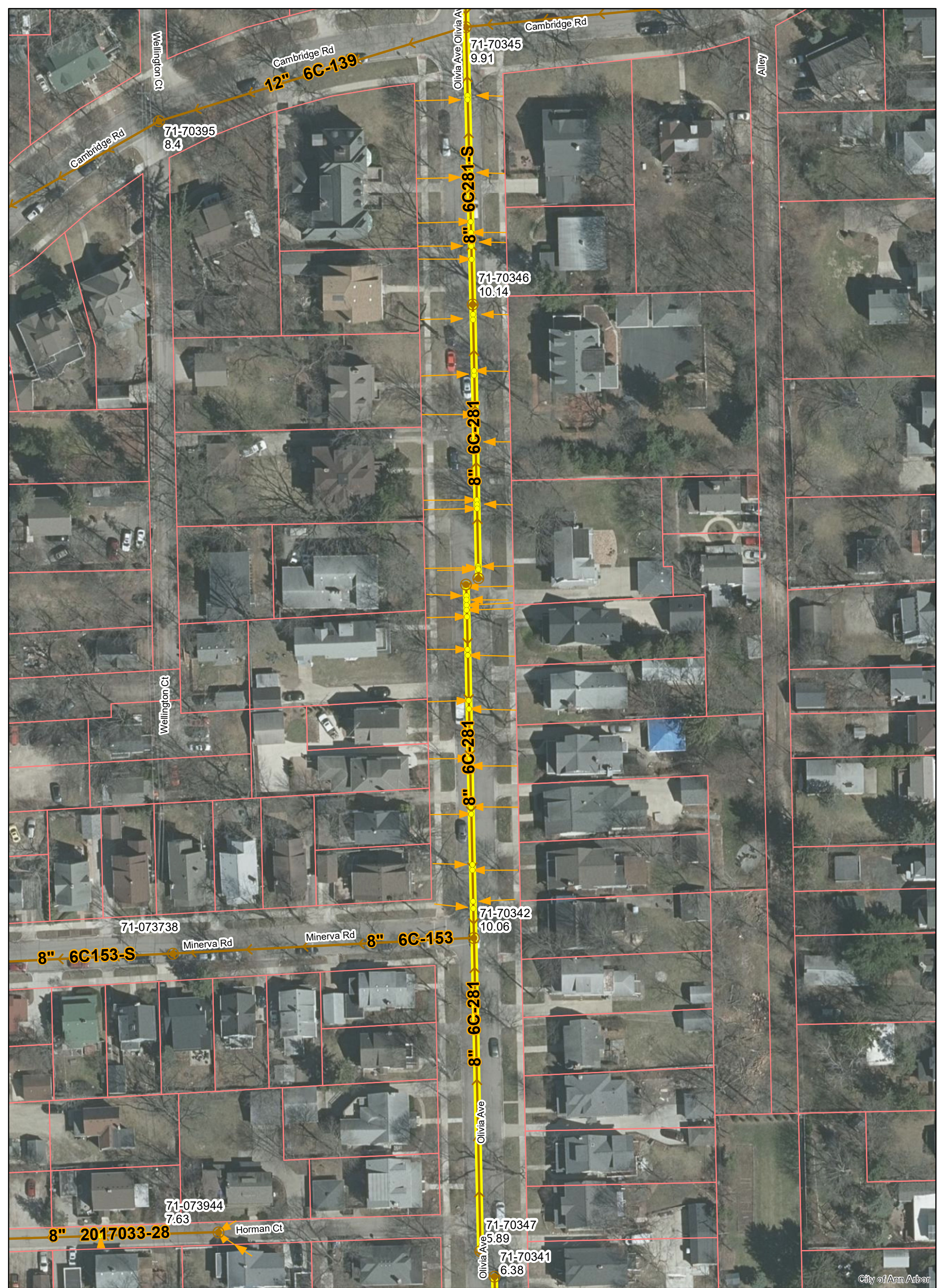
Drawn by  
Traced by G.M.B.  
Checked by

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
SANITARY SEWER

**OLIVIA AVE.**  
HILL ST. TO CAMBRIDGE ROAD.  
Manley Osgood, City Engineer.  
1917

Scales - Plan 1"=40' Profile Hor. 1"=40' Ver. 1"=4'



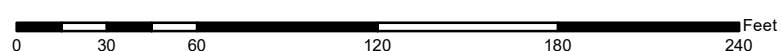


# Olivia Ave.



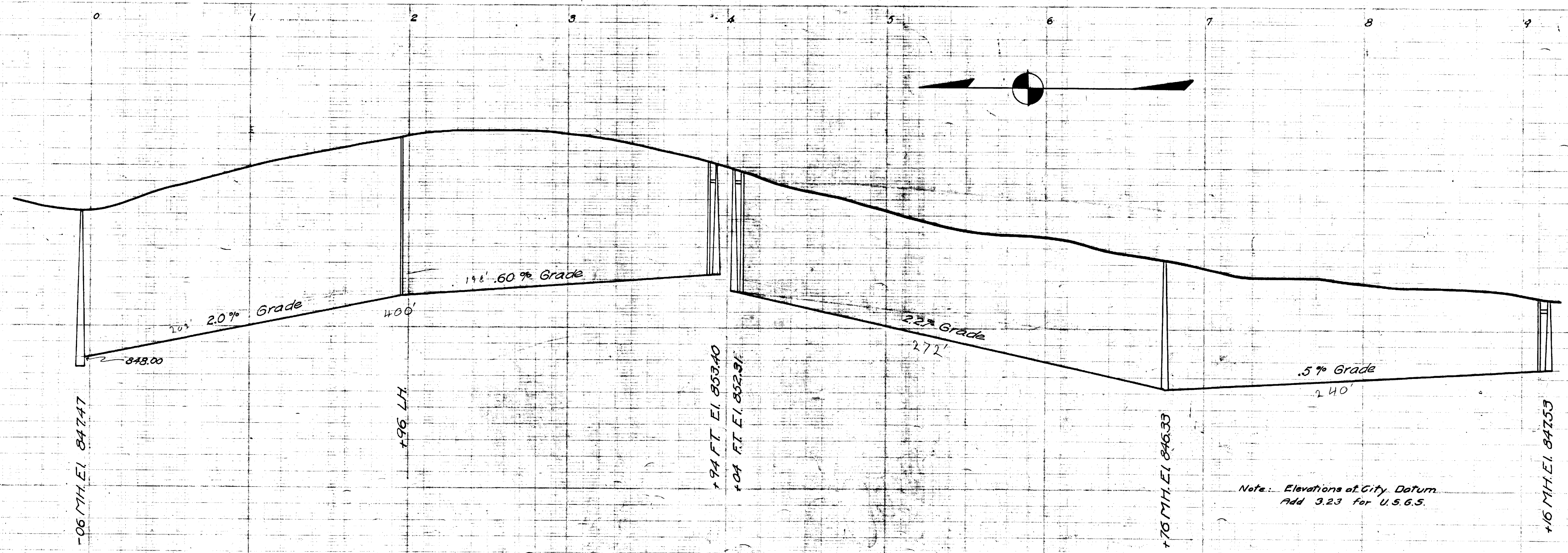
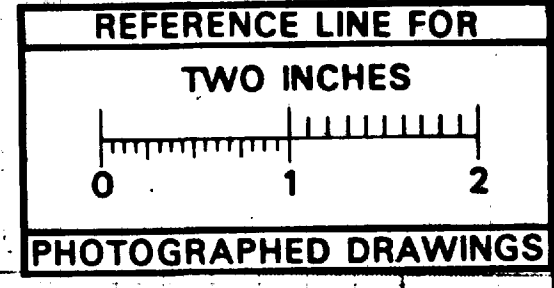
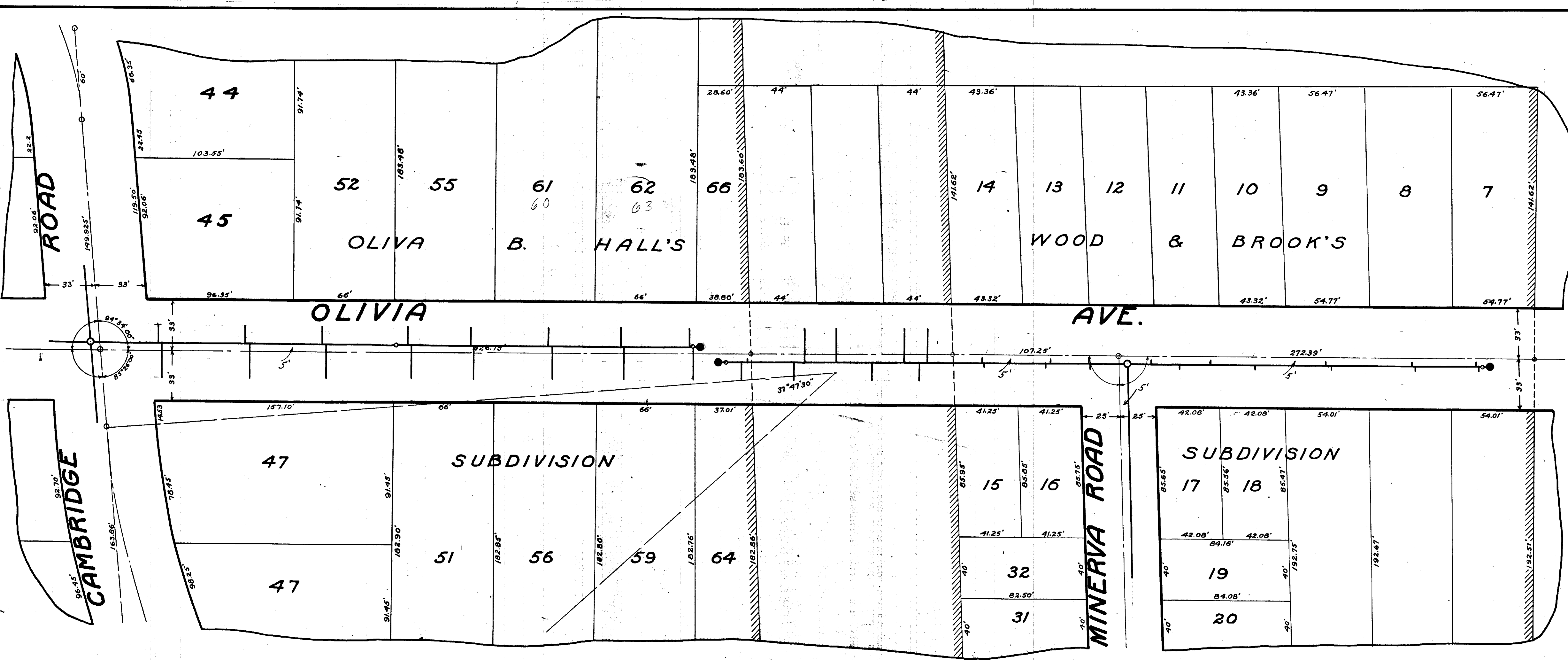
	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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MEASUREMENTS TO HOUSE CONNECTIONS On Olivia Ave From Cambridge Southerly Sta 0+M.H. @ Cambridge Rd.

East	West
454	474
1010	1030
152A 200-L.H.	154A
208E	210E
249	251
300	302
3473	349
3947 400-F.T.	396.7
From Minerva Rd. Northerly	
265	247
510	532
95.6	93.7
131A	135A
1470	
1711	
218.0	
2497	
From Minerva Rd Southerly Sta 0+M.H. @ Minerva Rd.	
156	340
74.1	840
128.9	1330
185.9	187.8
228.5	230.1

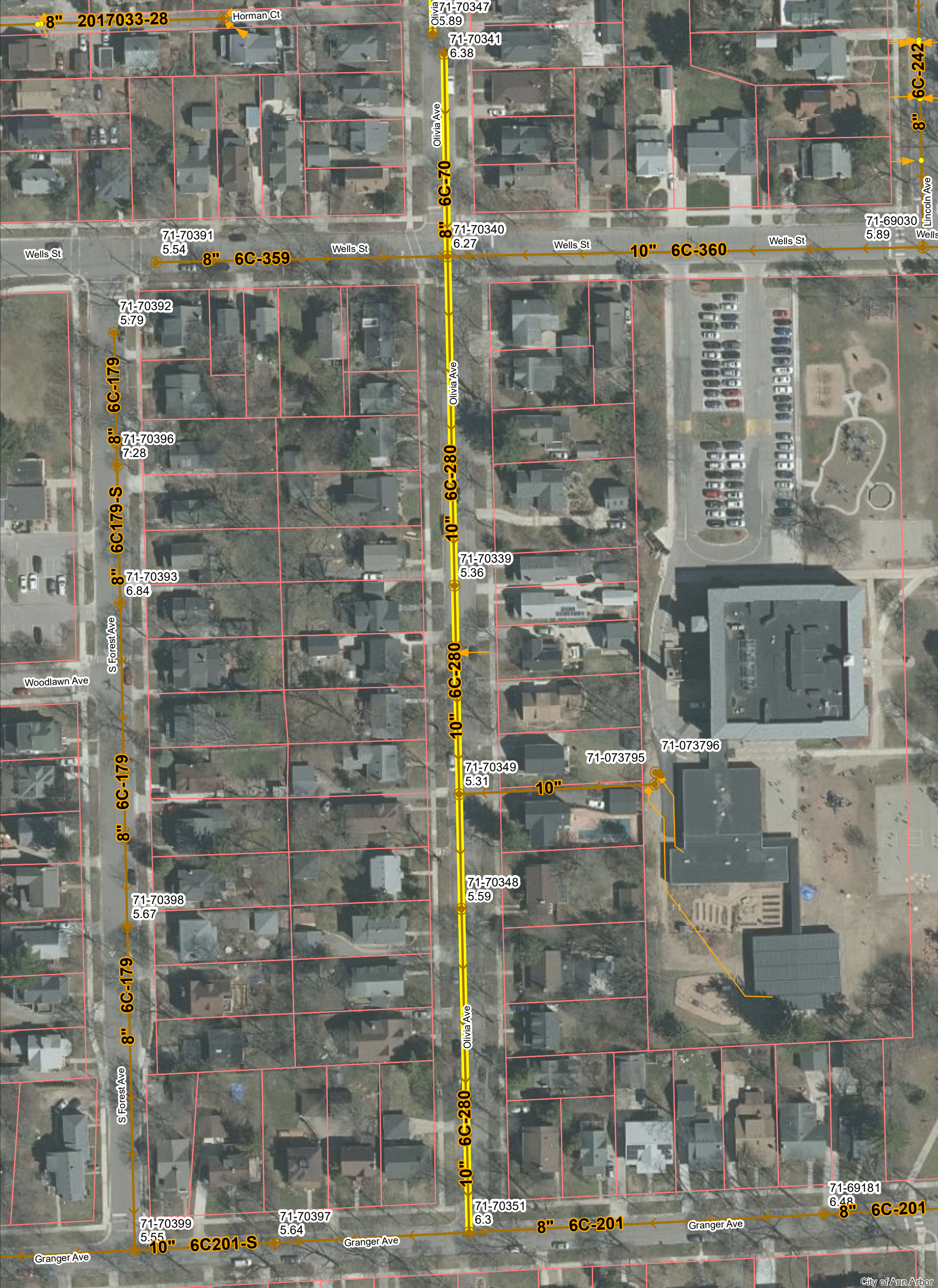
239'-FT.

Note: Elevations at City Datum. Add 3.23 for U.S.G.S.

Digital Status Scanned On: 6-25-05 By: JLV

SHEET No 237 INDEX No 897 SHELF No 6 SIZE C SUB. No 281 Drawn by Traced by a.m.b. Checked by	CITY ENGINEER'S OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF SANITARY SEWER <b>OLIVIA AVE.</b> CAMBRIDGE ROAD TO MINERVA RD. Manley Osgood, City Engineer 1917 Scales-Plan 1"=40' Profile Hor. 1"=40' Ver. 1"=4'
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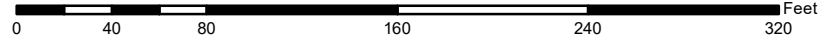


# Olivia Ave.



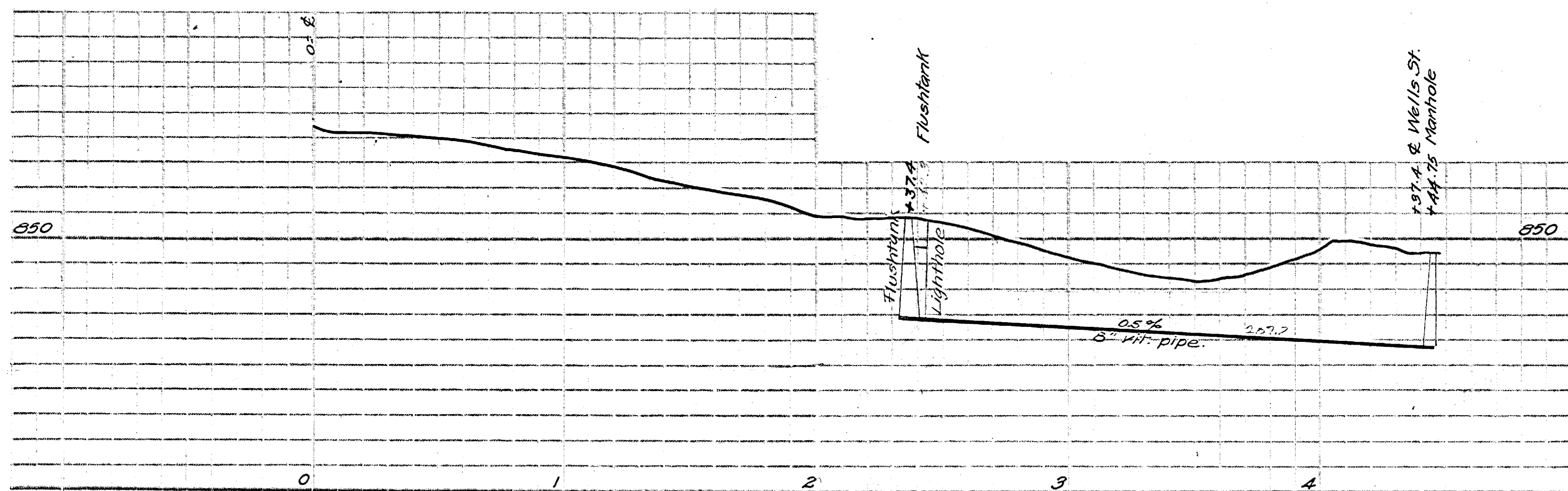
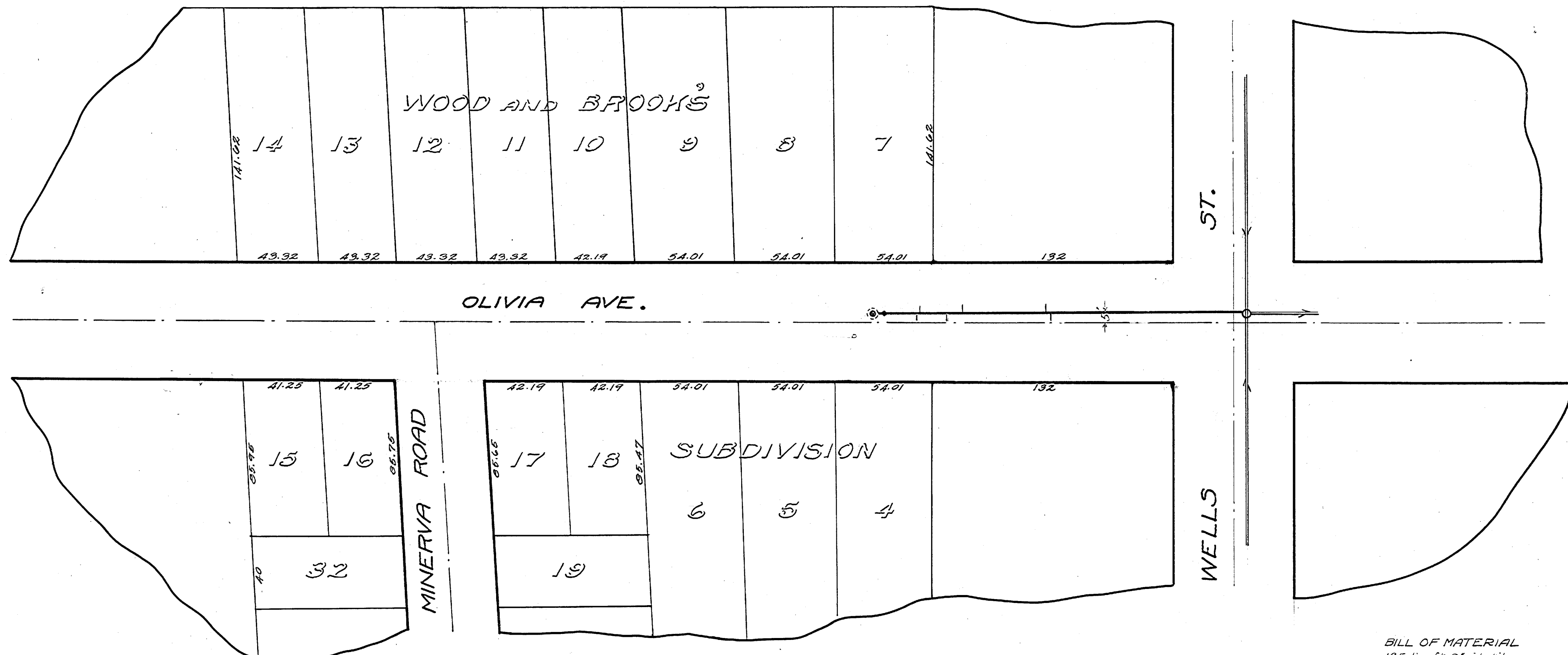
	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXXX (Manhole ID)  
1.00 (Manhole Depth)



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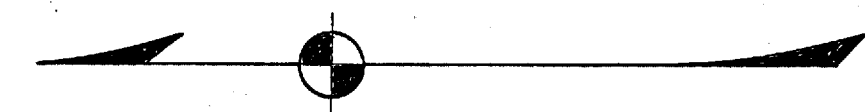
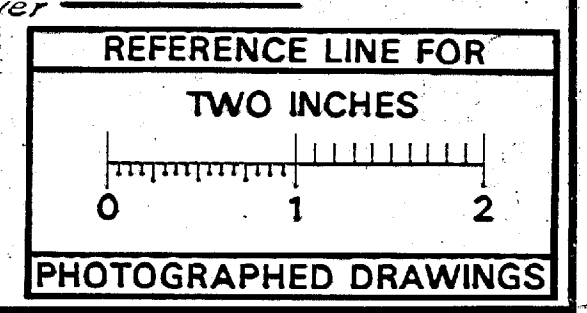




**BILL OF MATERIAL**  
 195 lin. ft. 8" vit. tile  
 6 san tees  
 1 flush tank  
 EXCAVATION + BACKFILLING  
 207.3 lin. ft., 0-6 ft deep.

**Final Measurements**  
 0' M.H. at Wells St. E.  
 108.0 connection. W E.  
 110.0 " " E.  
 156.0 " " W E.  
 184.0 " " W E.  
 178.0 " " E.  
 180.0 " " W.

**LEGEND**  
 Center line of street  
 Grade line of sewer



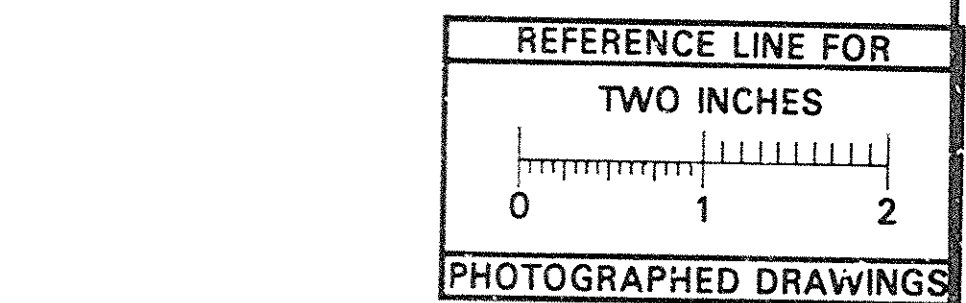
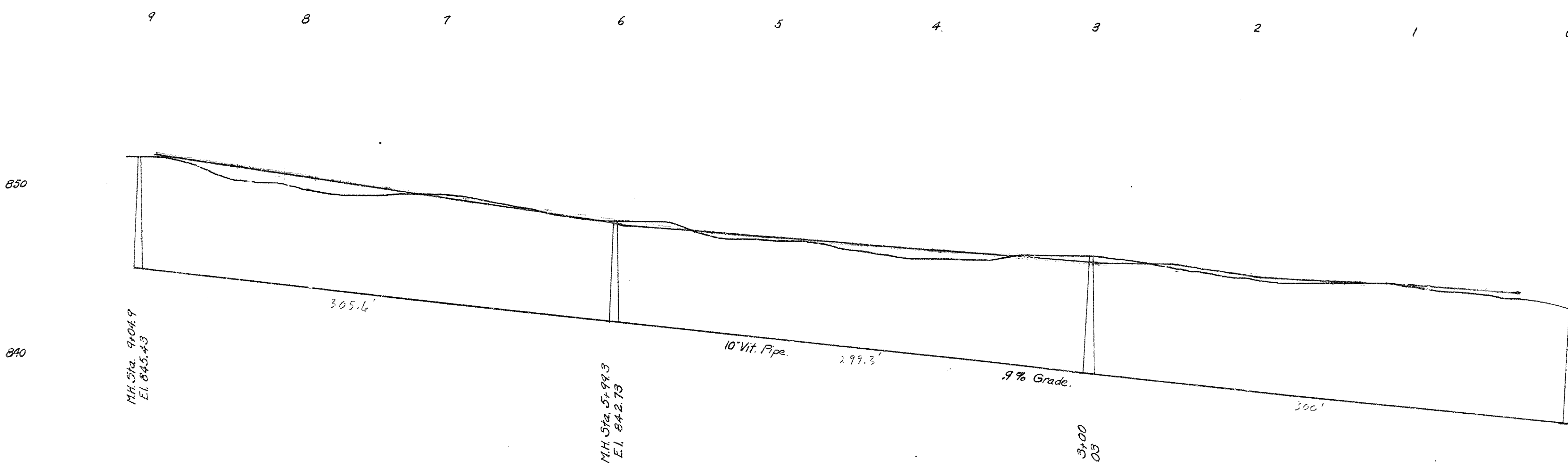
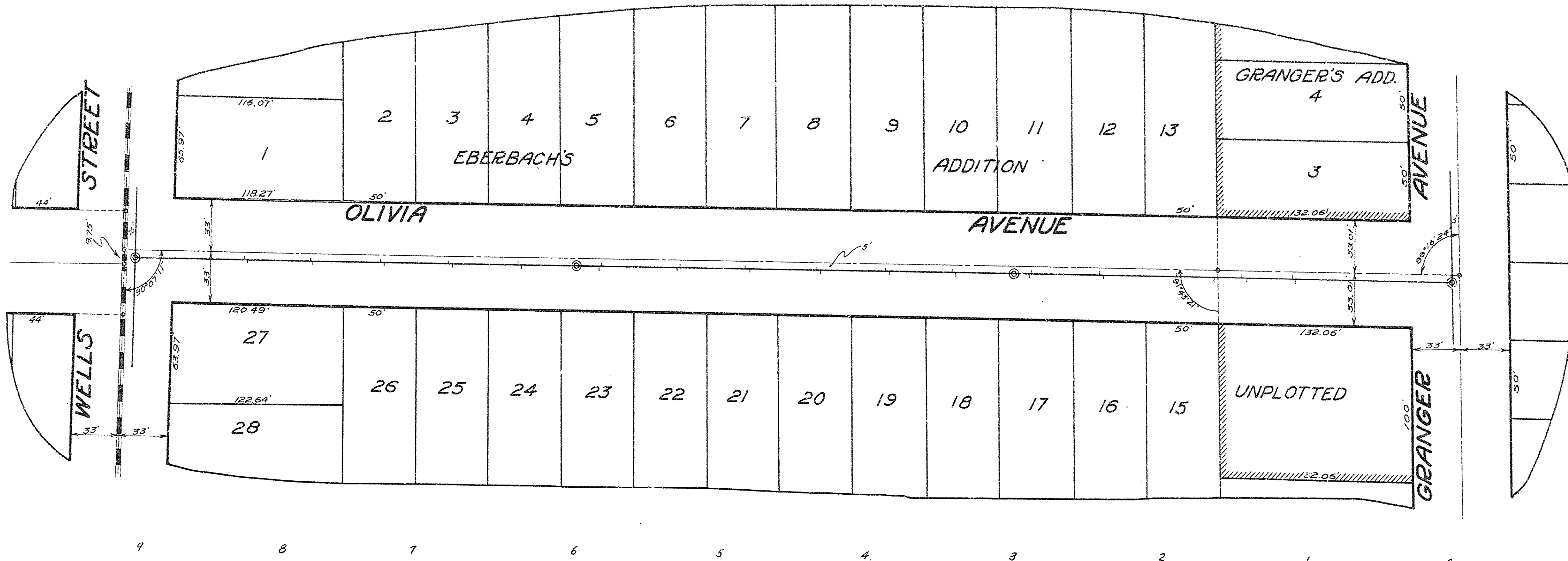
Digital Status  
 Scanned On: 10/20/06  
 By: EMA

**NOTE:**  
 Data contained on this page  
 was drawn from City records.  
 No guarantee is made as to  
 its accuracy or completeness.

SHEET No. 235  
 INDEX No. 571  
 SHELF No. 6  
 SIZE C  
 SUB No. 70  
 Drawn by SIEMAN  
 Traced by SIEMAN  
 Checked by WLD

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 OF  
 SANITARY SEWER  
 DISTRICT No.  
**OLIVIA AVE.**  
 BETWEEN WELLS + MINERVA ROAD.  
 Manley Osgood, City Engineer  
 1915-6-1  
 Scales: Plan 1"=40' Profile Hor. 1"=40' Ver. 1"=4'  
 One Sheet Sheet # 1





MEASUREMENTS to HOUSE CONNECTIONS 0+00 = M.H. at Granger

850	EAST	WEST
	y's Only	
	110.0	108.0
	144.0	142.0
	189.0	183.0
	241.6	239.6
	287.8	289.8
	300' M.H.	
	342.3	340.3
	387.5	385.3
	433.5	433.5
	484.0	482.0
	529.0	531.0
	583.3	585.3
	599.3' M.H.	
840	640.0	638.0
	688.0	686.0
	734.7	732.7
	784.0	782.0
	824.0	827.0

904.3 = M.H. at Wells

SHEET No. 234  
INDEX No. 896  
SHELF No. 6  
SIZE C  
SUB No. 280

Drawn by  
Traced by Feiner.  
Checked by [Signature]

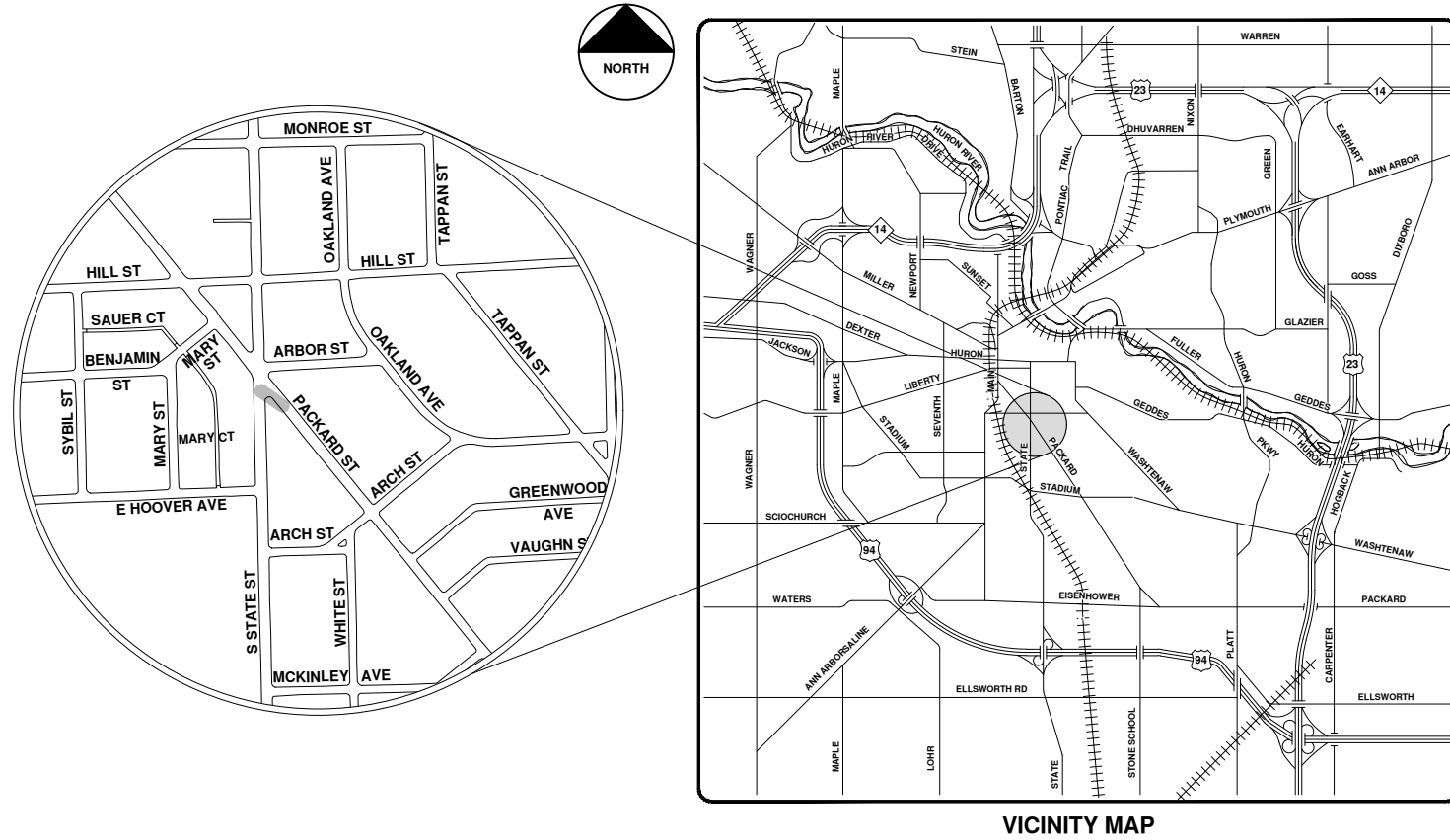
CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
**OLIVIA AVE.**  
WELLS ST. TO GRANGER AVE.  
Manley Osgood, City Engineer.  
1917  
Scales - Plan 1" = 40' Profile Hor. 1" = 4'





# 2020 SEWER LINING PROJECT

## PACKARD ST



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:05:49 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

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 PUBLIC SERVICES  
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 ANN ARBOR, MI 48107-8647  
 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-64

SHEET No.  
 64 OF 177



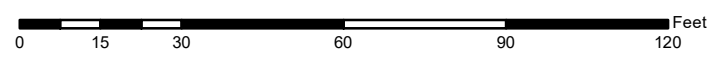


# Packard St.



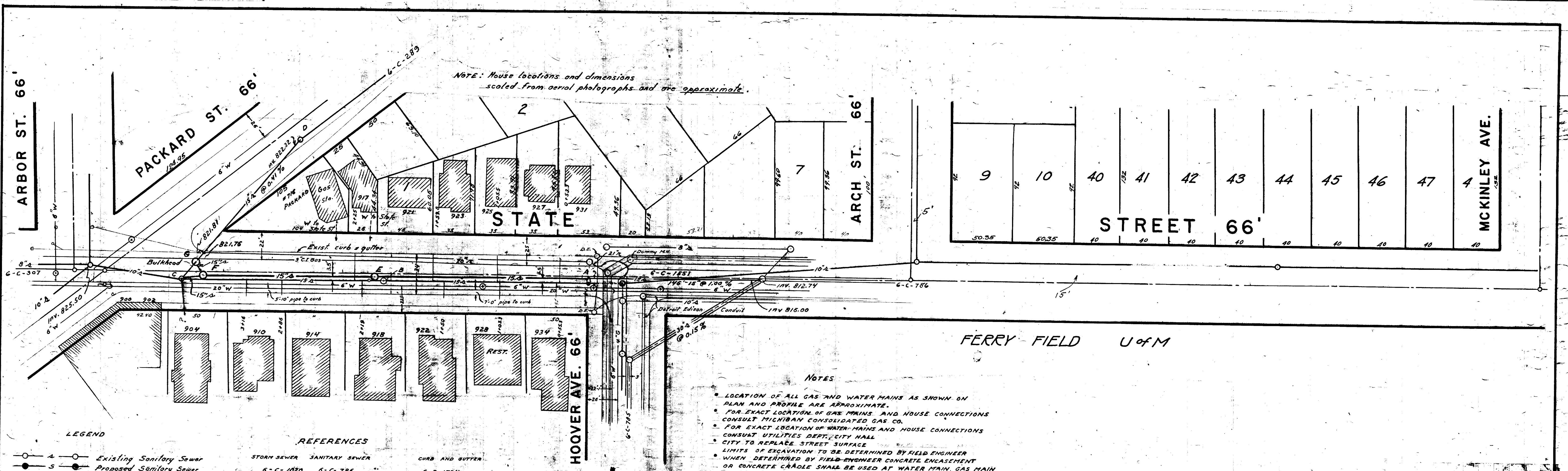
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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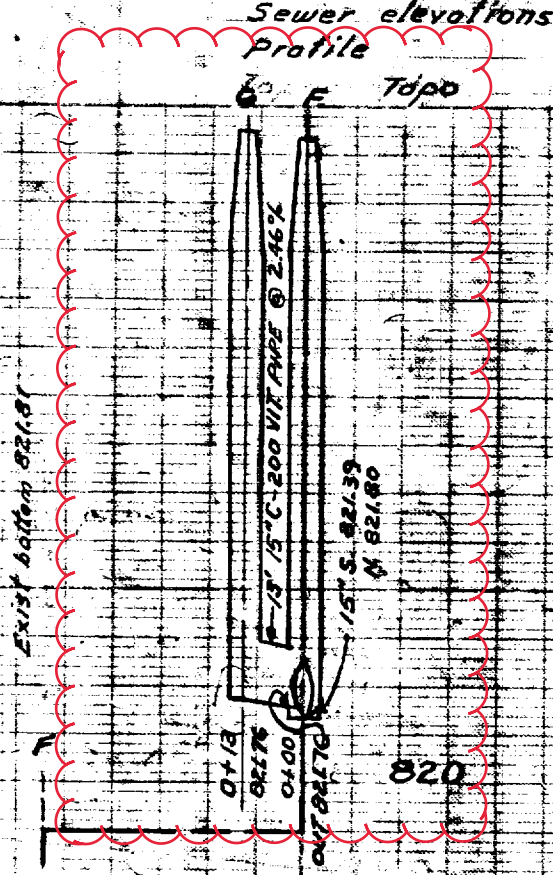
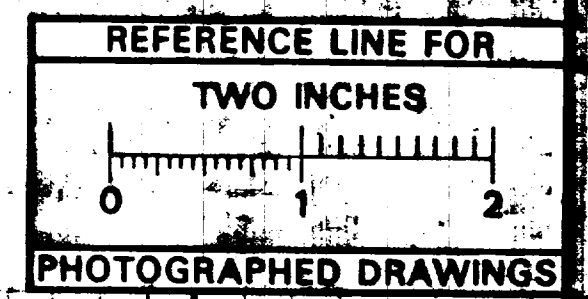
NOTE: House locations and dimensions scaled from aerial photographs and are approximate.

- LEGEND**
- Existing Sanitary Sewer
  - Proposed Sanitary Sewer
  - Existing Storm Sewer
  - Proposed Storm Sewer
  - Gas Main
  - Water Main

**REFERENCES**

STORM SEWER	SANITARY SEWER	CURB AND GUTTER
6-C-1080	6-C-786	6-C-1724
6-C-1530	6-C-288	6-C-1722
6-C-1403	6-C-289	5-C-110
6-C-1331	6-C-307	
	6-C-783	

- NOTES**
- LOCATION OF ALL GAS AND WATER MAINS AS SHOWN ON PLAN AND PROFILE ARE APPROXIMATE.
  - FOR EXACT LOCATION OF GAS MAINS AND HOUSE CONNECTIONS CONSULT MICHIGAN CONSOLIDATED GAS CO.
  - FOR EXACT LOCATION OF WATER MAINS AND HOUSE CONNECTIONS CONSULT UTILITIES DEPT., CITY HALL.
  - CITY TO REPLACE STREET SURFACE.
  - LIMITS OF EXCAVATION TO BE DETERMINED BY FIELD ENGINEER.
  - WHEN DETERMINED BY FIELD ENGINEER CONCRETE ENCASMENT OR CONCRETE CRADLE SHALL BE USED AT WATER MAIN, GAS MAIN, SANITARY SEWER OR ANY OTHER PLACE WHEN NECESSARY. TO BE PAID FOR PER CUBIC YARD AS PER BID PRICE IN PROPOSAL.
  - CONSULT DETROIT EDISON CO FOR EXACT LOCATION OF ALL UNDERGROUND CONDUITS BEFORE ANY WORK BELOW GROUND IS BEGUN.
  - EXISTING 15" SANITARY SEWER AND LINES FROM HOUSES MUST BE MAINTAINED DURING CONSTRUCTION.



**MEASUREMENTS TO HOUSE CONNECTIONS**

Hoover Ave. to Packard St.		O.M.H. at Hoover Ave.	
EAST	WEST	EAST	WEST
43.3	53.3	104.5	103.3
105.5	103.3	139.5	150.0
159.8	150.0	225.0	219.0
225.0	219.0	285.0	276.0
370.0 M.H.			
Hoover Ave. to Arch St.		O.M.H. at Hoover Ave.	
EAST	WEST	EAST	WEST
104.5	103.3	139.5	150.0
139.5	103.3	247.3 M.H.	
Arch St. to McKinley Ave.		O.M.H. at Arch St.	
EAST	WEST	EAST	WEST
39.3	303.0 M.H.	389.0	431.0
149.7	431.0	470.0	539.0
167.8	470.0		
225.0	539.0		
285.0			
605.0 M.H.			

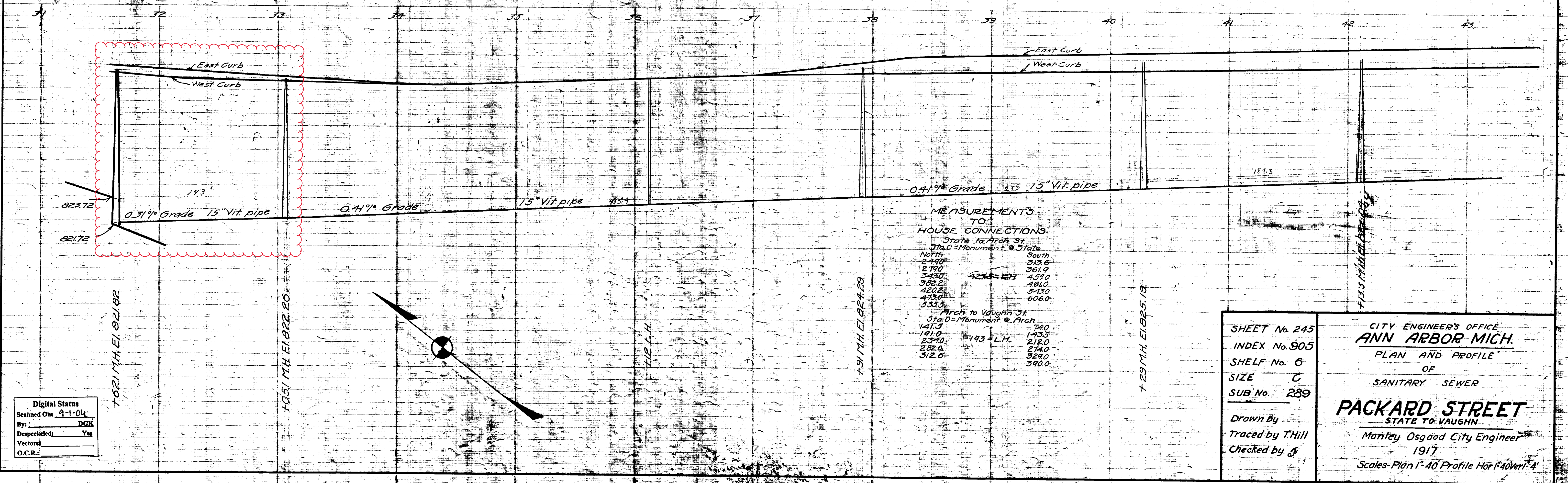
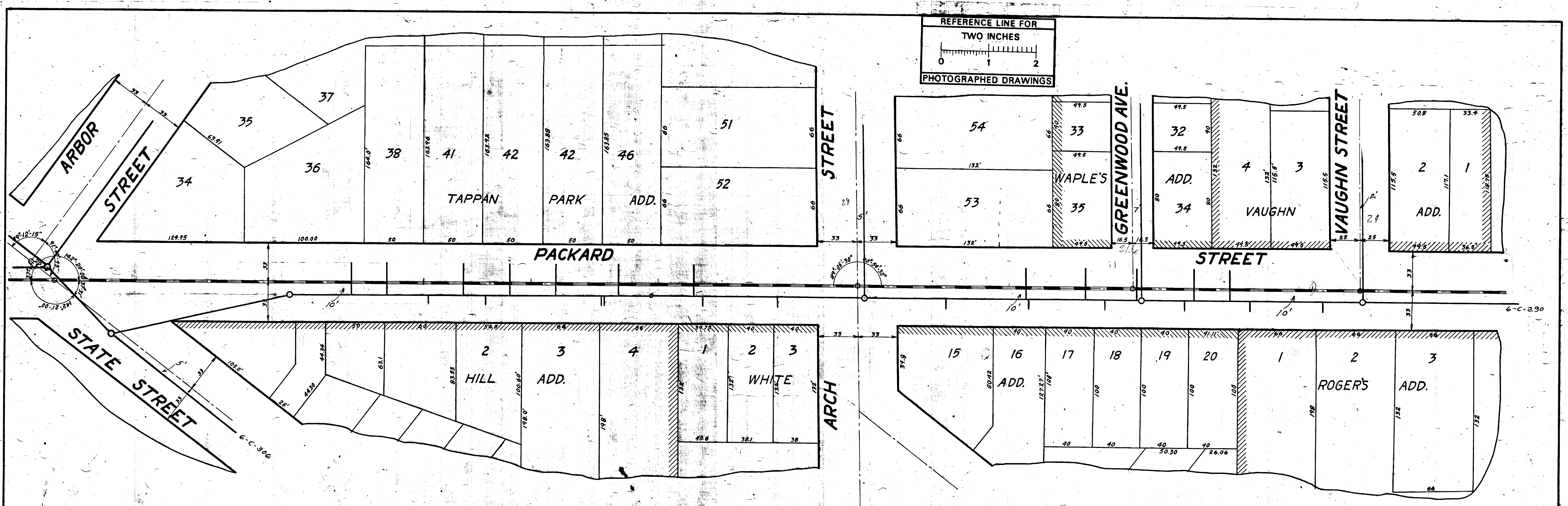
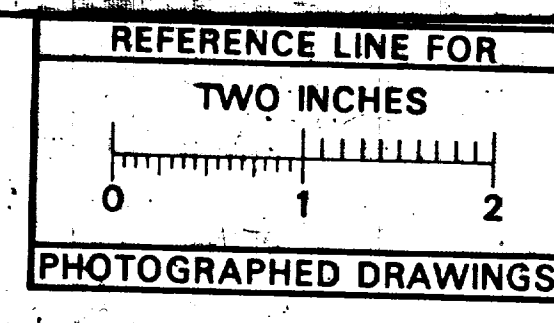
Note: Connections to Curb. No Connections West South of Hoover Ave.

320  
M.D.H. PERMIT NO. 18069 4/2/59  
JOB No 2442 DIST  
**STATE STREET**  
REBUILDING SANITARY SEWER  
1938  
FREDERICK A. MANTZEL SUFF. PUB. WORKS  
PUBLIC WORKS DEPT. ANN ARBOR, MICHIGAN

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
**STATE STREET**  
PACKARD ST. TO MCKINLEY AVE.  
G.H. Sandenburgh, City Engineer  
1918  
Scales: Plan, 1"=40', Profile, Vertical Curve, 1"=10'

Digital Status  
Scanned On: 7-5-04  
By: DKG  
Despeckled: Yes  
Vectors:  
O.C.R.:





MEASUREMENTS TO HOUSE CONNECTIONS

State to Arch St	
Sta. 0 = Monument @ State	
North	South
2440	313.6
2190	361.9
3430	423.3 = L.H.
3822	459.0
4202	461.0
4182	543.0
533.3	606.0
Arch to Vaughn St	
Sta. 0 = Monument @ Arch	
141.0	74.0
191.0	143.5
2190	212.0
2820	274.0
312.6	329.0
	390.0

Digital Status  
Scanned On: 9-1-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:

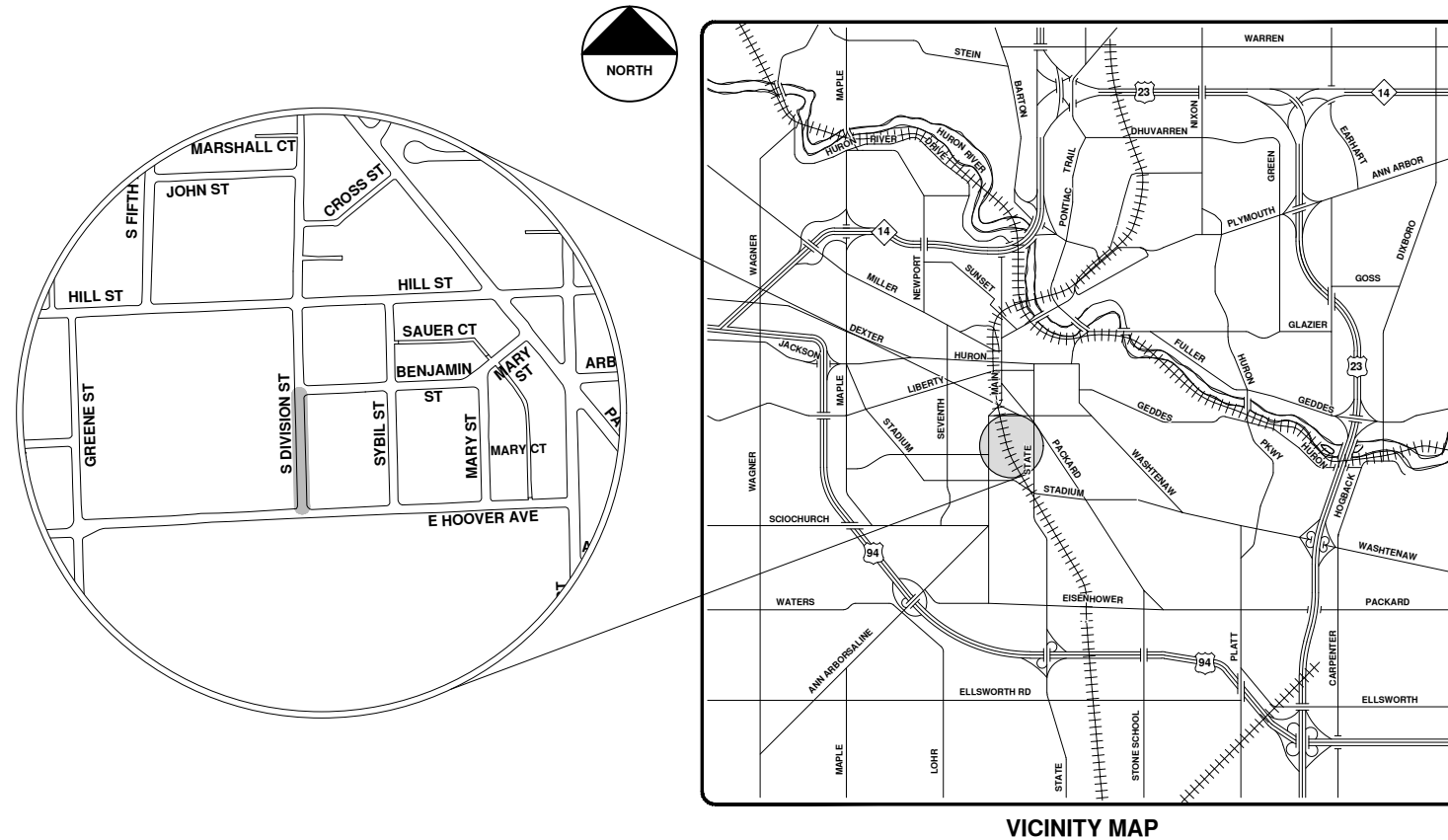
SHEET No. 245	CITY ENGINEER'S OFFICE <b>ANN ARBOR MICH.</b> PLAN AND PROFILE OF SANITARY SEWER
INDEX No. 905	
SHELF No. 6	
SIZE C	
SUB No. 289	<b>PACKARD STREET</b> STATE TO VAUGHN Manley Osgood City Engineer 1917 Scale - Plan 1"=40' Profile Hor 1"=40' Ver 1"=4'
Drawn By	
Traced by T.Hill	
Checked by J.	





# 2020 SEWER LINING PROJECT

## S DIVISION ST



VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:05:54 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

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 ANN ARBOR, MI 48107-8647  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-68





SHEET No.  
 68 OF 177



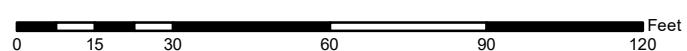


# S Division St.



-  Manhole
-  Sanitary Main
-  Proposed Lining
-  Sanitary Lateral

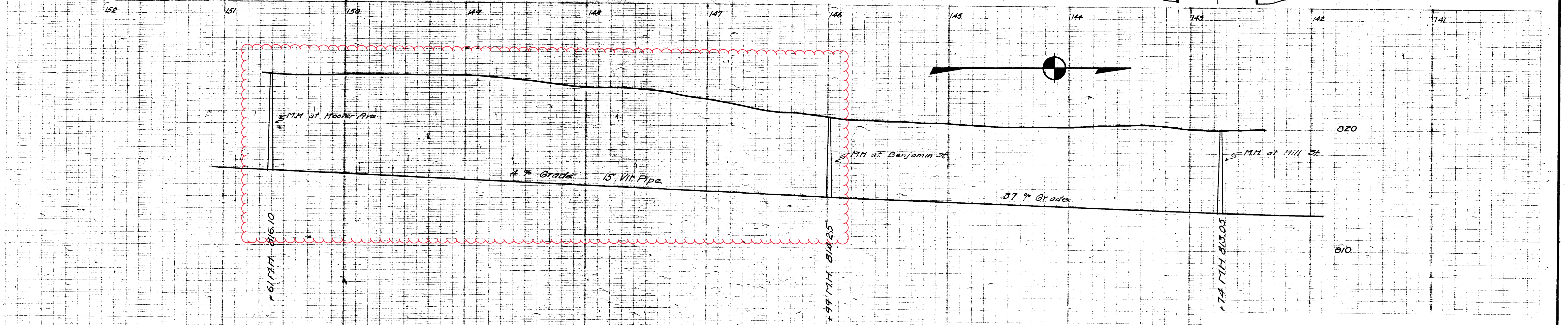
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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REFERENCE LINE FOR  
TWO INCHES  
0 1 2  
PHOTOGRAPHED DRAWINGS



Digital Status  
Scanned On: 8-26-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:

SHEET No 14  
INDEX No. 722  
SHELF No. C  
SIZE C  
SUB No. 110  
Drawn by G.H.S.  
Traced by G.H.S.  
Checked by

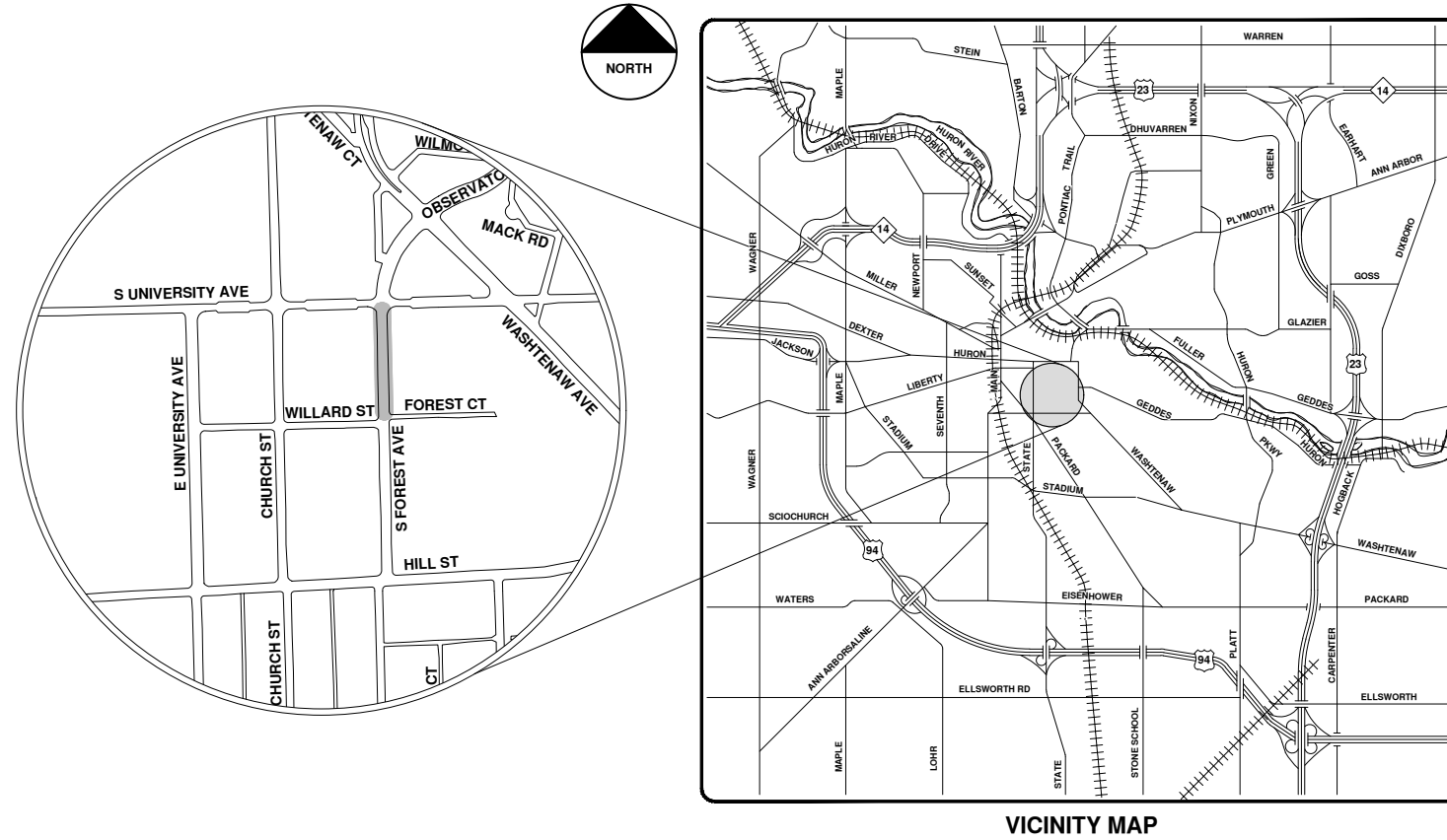
CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
**MAINSANITARY SEWER**  
HILL ST TO HOOVER AVE.  
Manley Osgood City Engineer.  
1918  
Scale Plan 1"=40' Profile Hor 1"=40' Vert 1"=4'





# 2020 SEWER LINING PROJECT

## S FOREST AVE



R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:05:59 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



REV.	DATE	DESCRIPTION	DRAWN	CHECKED
00	9-14-20	BID SET	ARG	IWK

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-71

SHEET No.  
 71 OF 177

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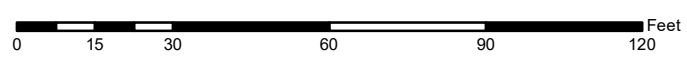


# S Forest Ave.



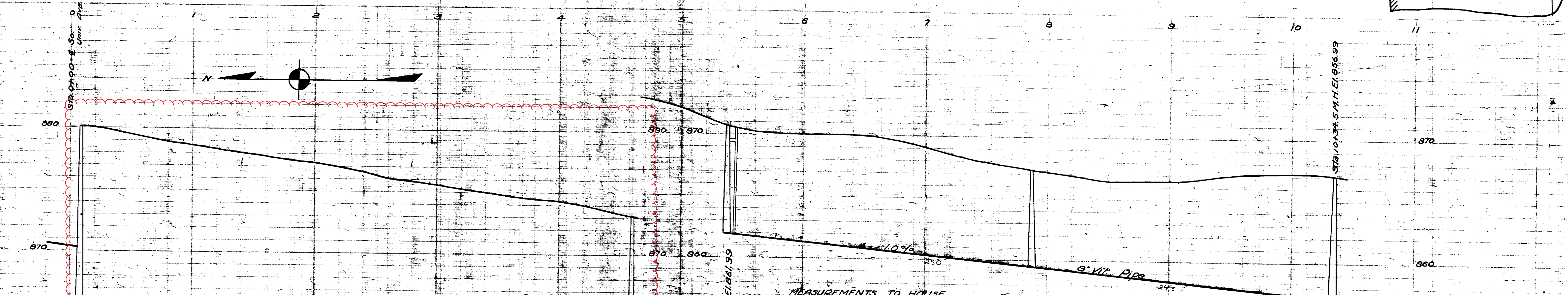
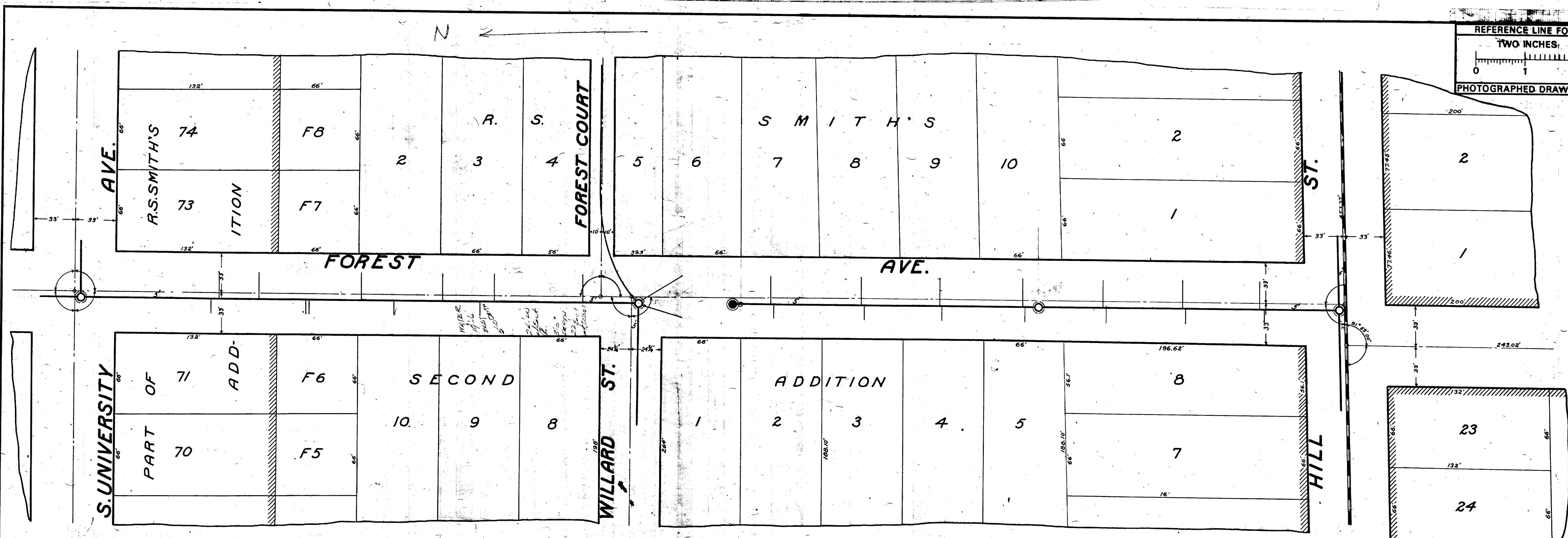
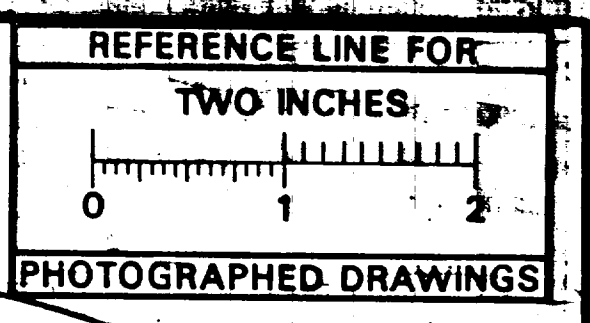
	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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MEASUREMENTS TO HOUSE CONNECTIONS

Willard to S. Univ.		Hill to Willard	
WEST	M.H. @ Willard - 00	EAST	M.H. @ Hill - 00
123.0		117.5	
193.0		153.0	
268.0		160.3	
270.0		226.0	
343.0		310.0	
		342.0	
81.0		65.0	
125.5		127.5	
191.0		153.0	
245.0		245.0	
255.5	Manhole	326.5	
324.5		390.0	
398.0		454.0	
462.0		528.3	
495.0	Flush Tank	455.0	

BENCH MARKS (U.S.G.S.)  
Hyd. @ Willard - Elev. 874.33  
Top of Conc. Post - N.E. Cor. Hill - Elev. 868.29

Digital Status  
Scanned On: 8-28-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:

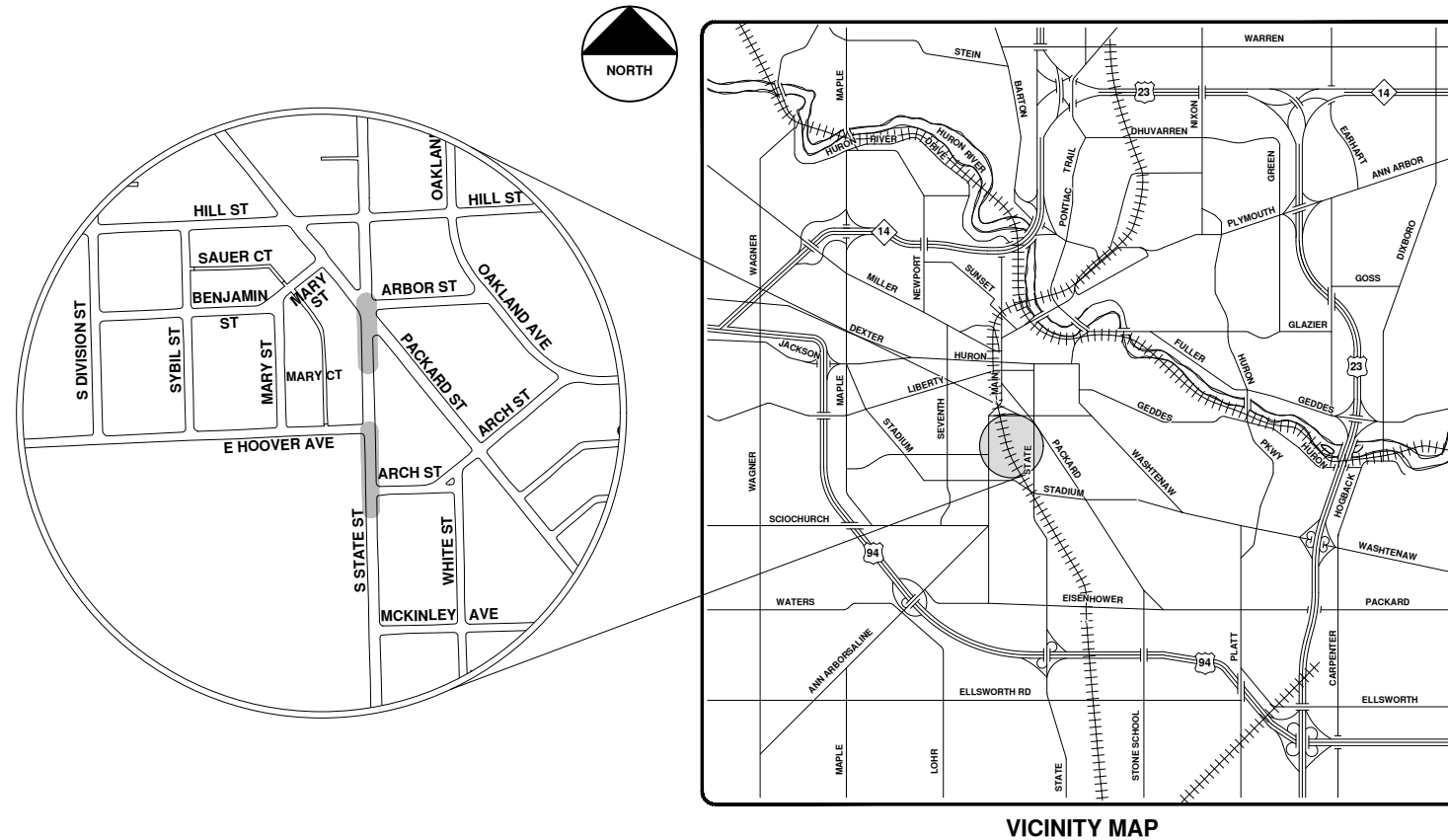
SHEET No. 111	CITY ENGINEER'S OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF SANITARY SEWER <b>FOREST AVE.</b> S. UNIVERSITY AVE. TO HILL ST. Manley Osgood, City Engineer. 1917 SCALES - Plan 1"=40' Profile Hor. 1"=40' Ver. 1"=4'
INDEX No. 797	
SHELF No. 6	
SUB No. 182	
Drawn by	
Traced by g.m.s.	
Checked by	





# 2020 SEWER LINING PROJECT

## S STATE ST



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:06:05 PM



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 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

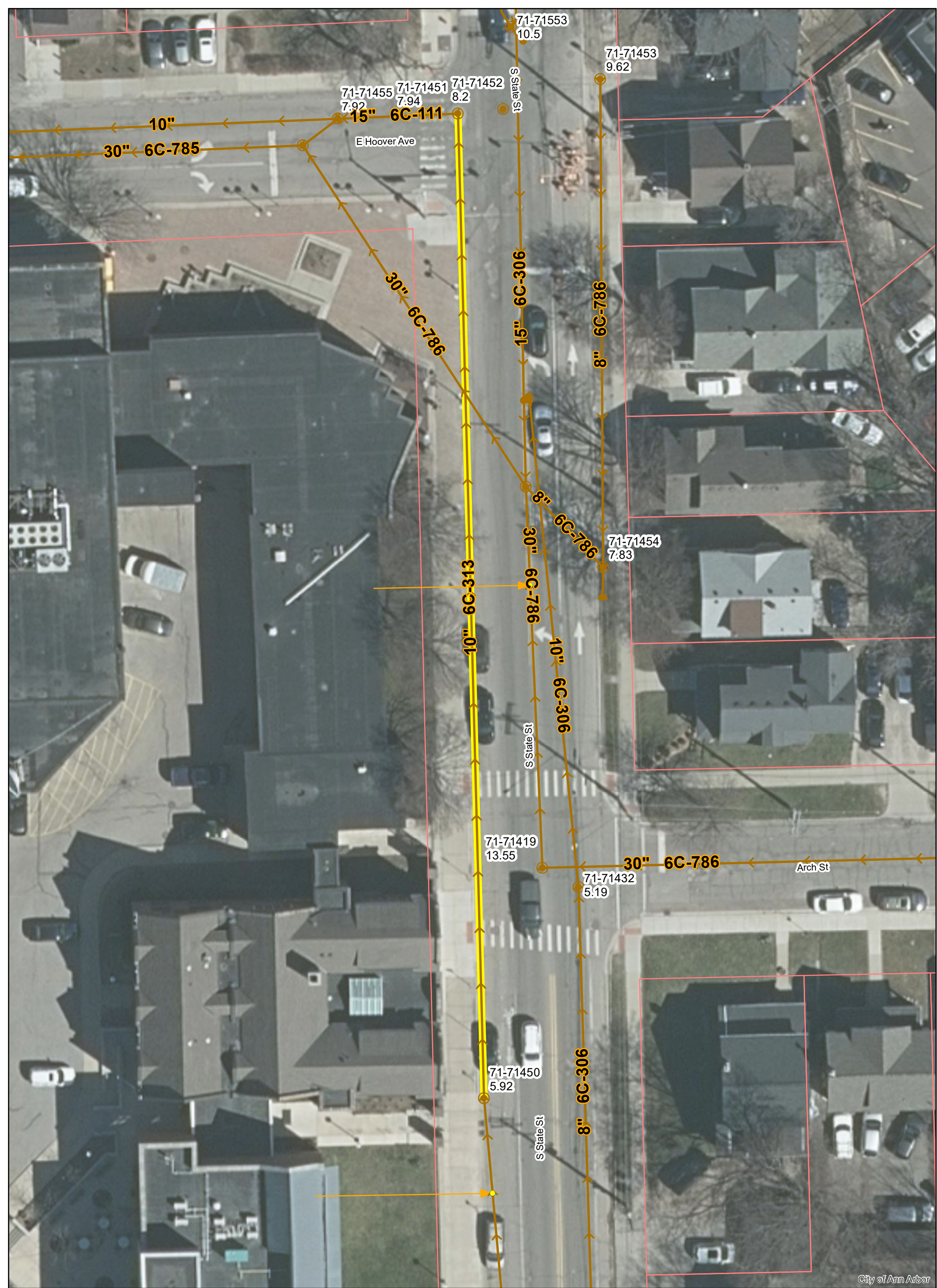
SCALE  
 DRAWING No.  
 2020039-74

SHEET No.

74 OF 177

© 2020 SEWER LINING PROJECT; BID No. ITB 4643; 2020039



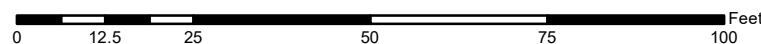


# S State St.



	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

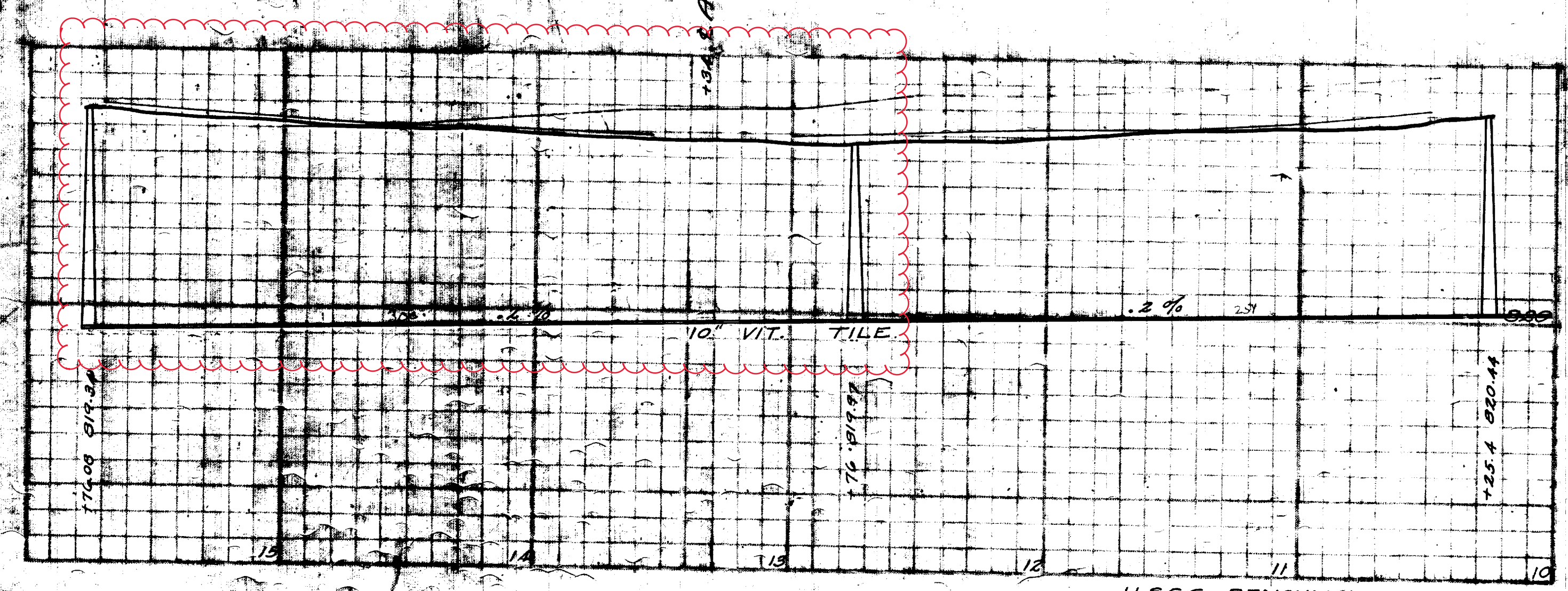
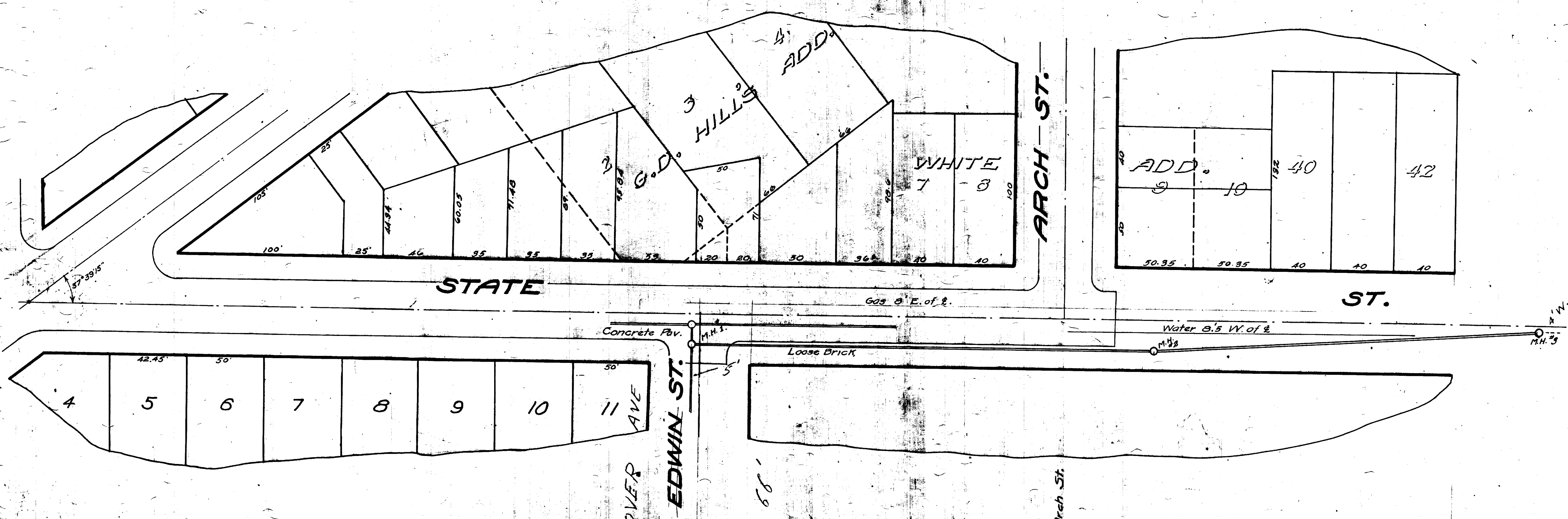
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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City of Ann Arbor

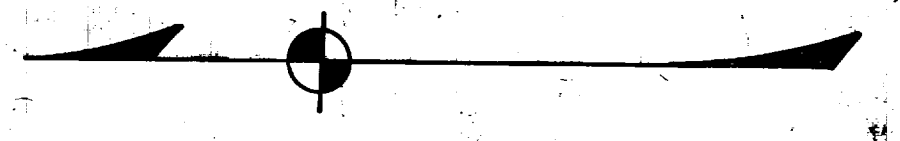




NOTE.  
The tile to be used in this district is to be of size shown on plans, and of 3 ft. lengths and laid on plank when ordered so by the City Engineer.

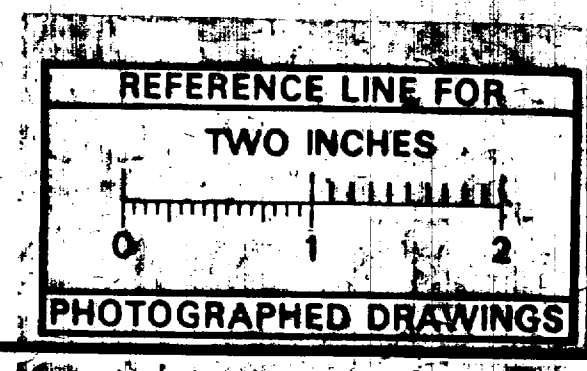
NOTE - NO HOUSE CONNECTIONS ON THIS SEWER SEE SHEET 273

U.S.G.S. BENCHMARKS.  
830.82 Hyd. at Mc Kinley & State.  
828.79 " " Edwin " "  
837.62 " " Dewey " "



DISTRICT SHEET No. 2.

Digital Status  
Scanned On: 9-3-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:



SHEET No. 280  
INDEX No. 929  
SHELF No. 6  
SIZE C  
SUB. No. 313

CITY ENGINEER'S OFFICE  
ANN ARBOR, MICH.  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
DISTRICT No. SHEET No. 2.  
**STATE ST.**  
MC KINLEY TO EDWIN.  
Manley Osgood, City Engineer  
1913-7  
Scale: Plan 1"=40' Profile - Hor 1"=40' Ver 1"=5'  
Four Sheets Sheet No. 2

Drawn by Sherman  
Traced by Sherman  
Checked by J.F.



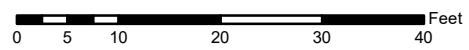


S State St.



	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

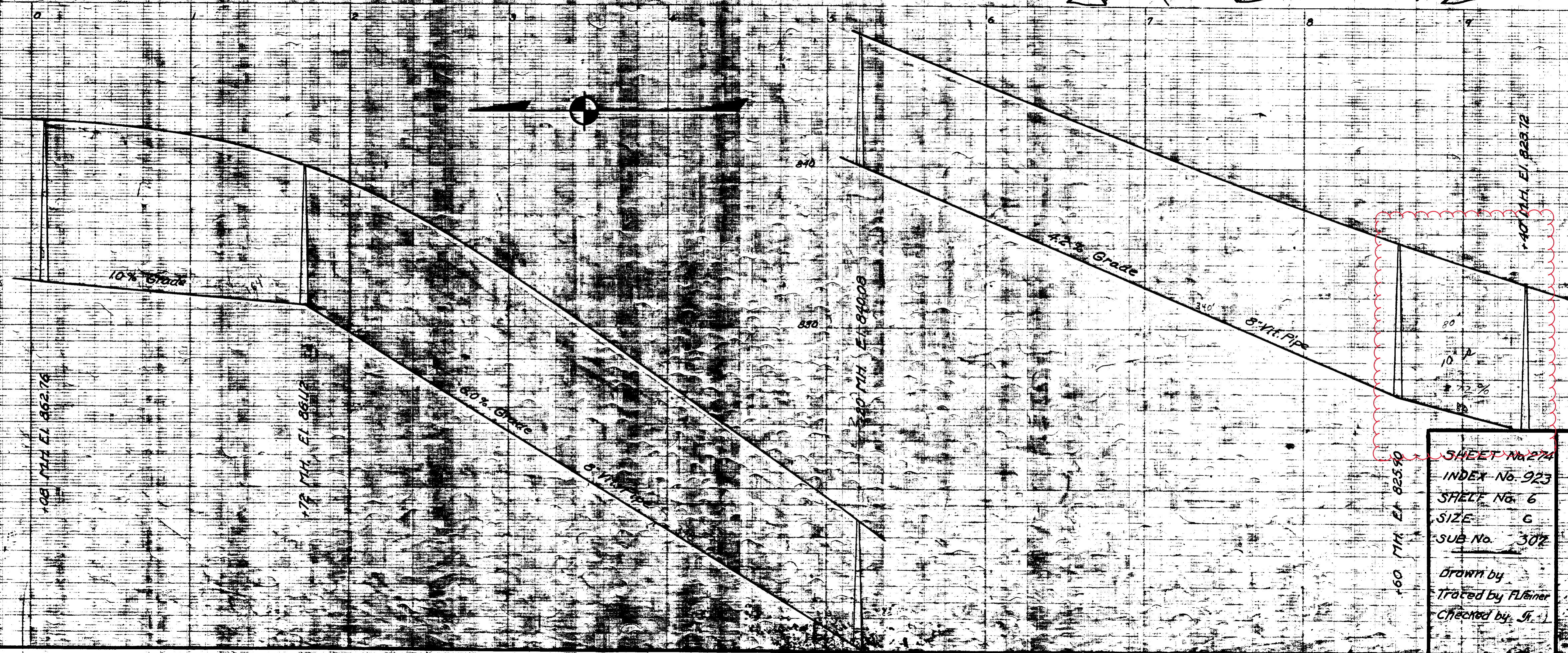
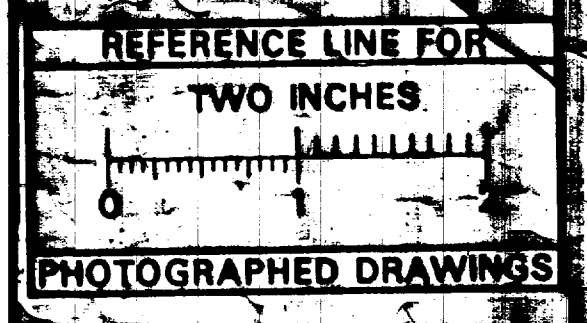
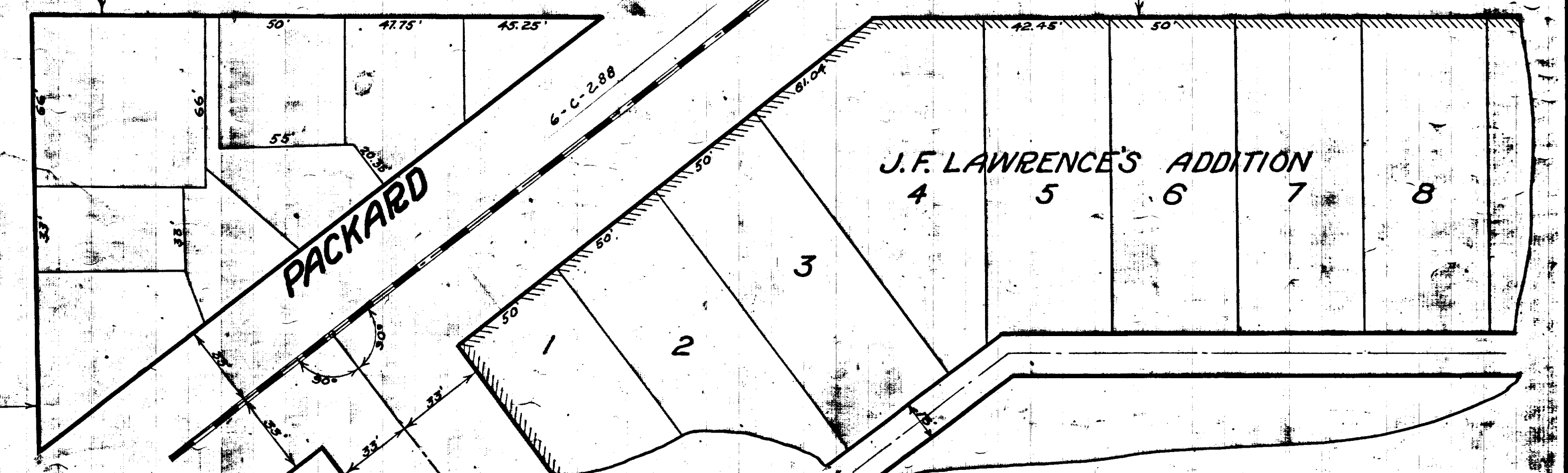
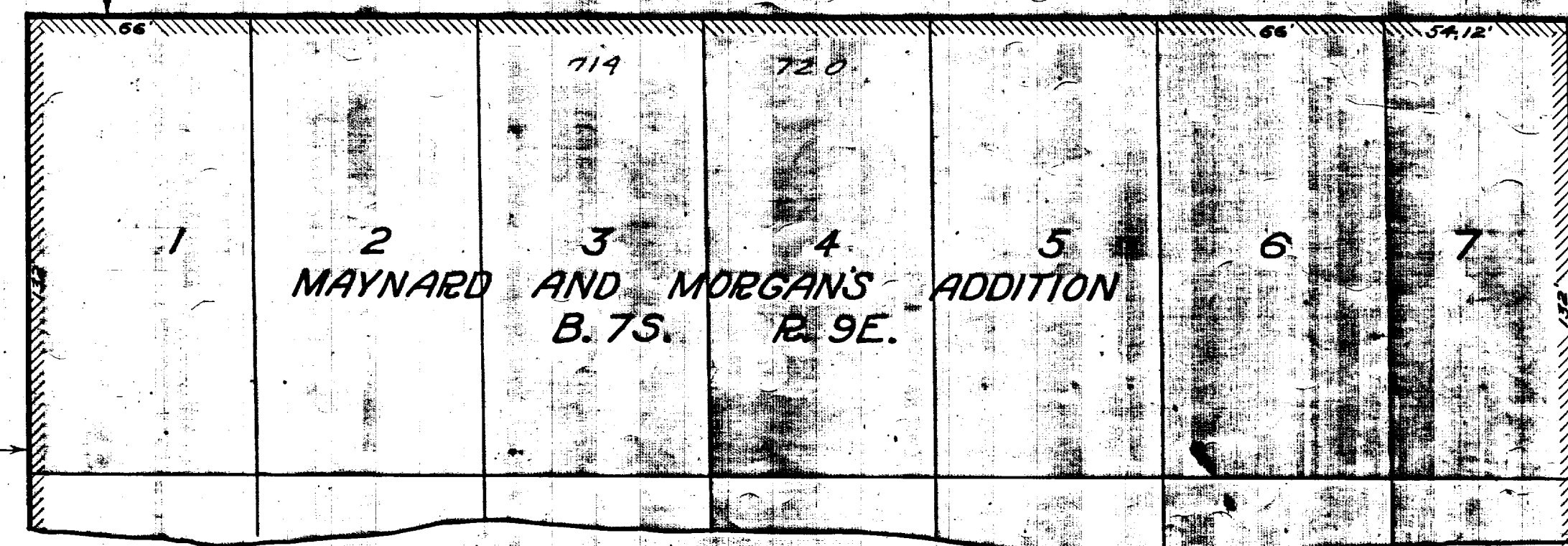
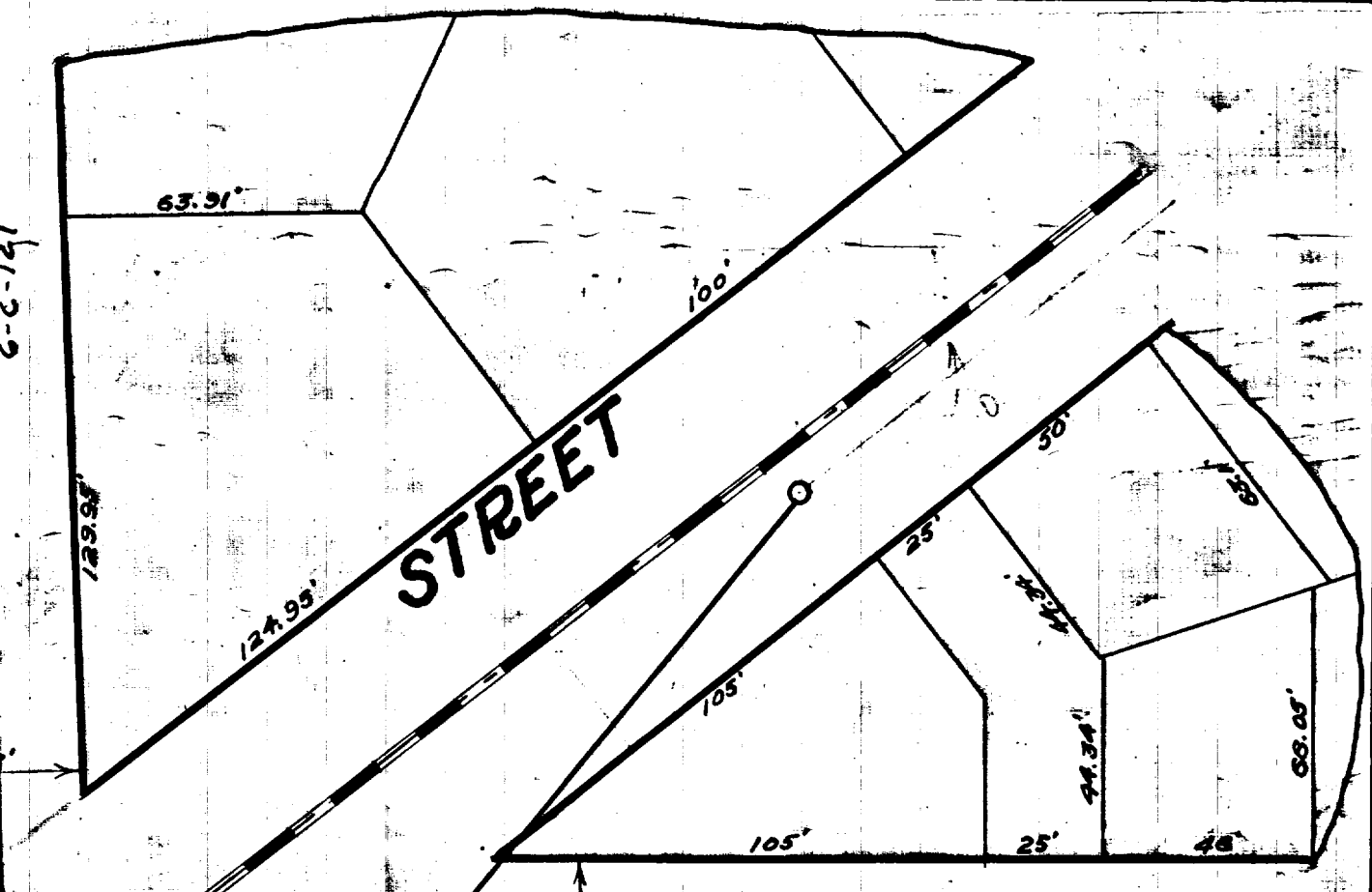
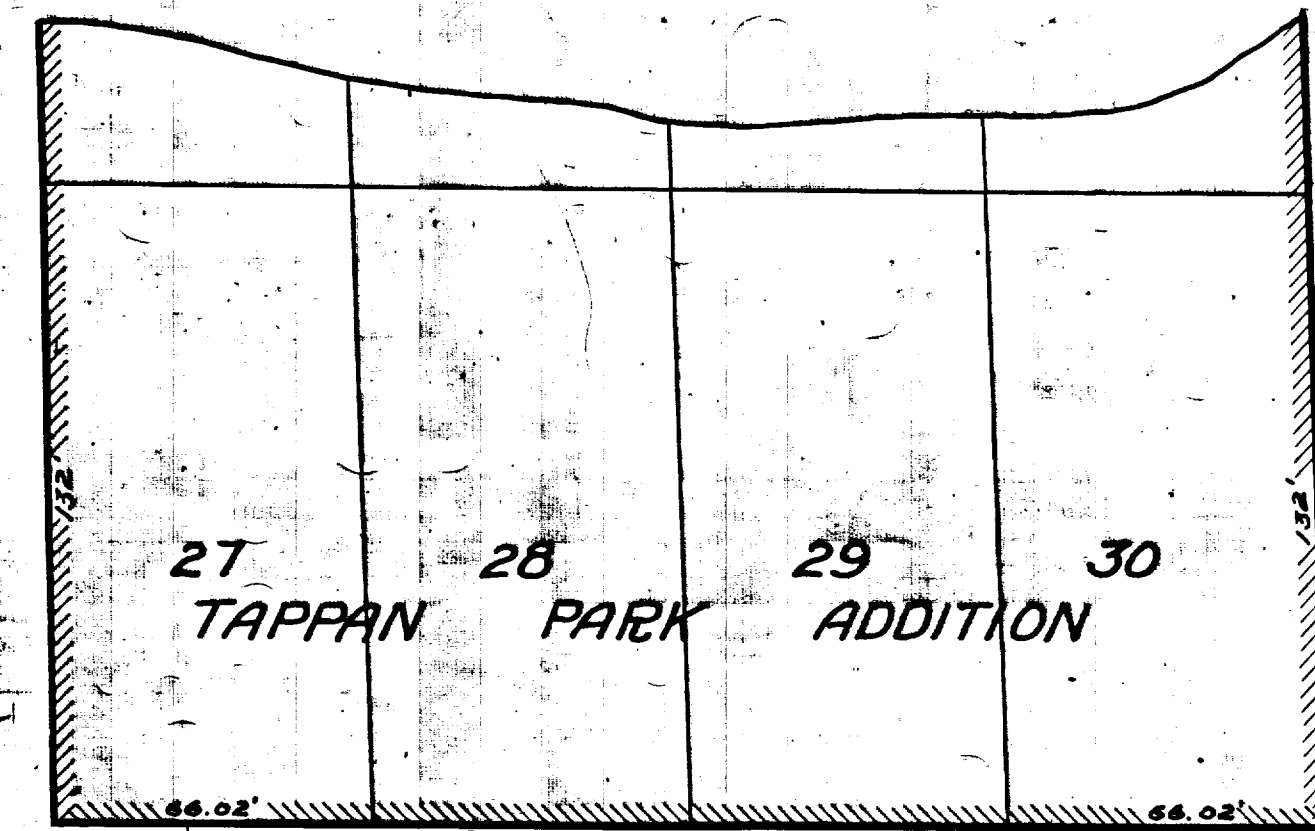
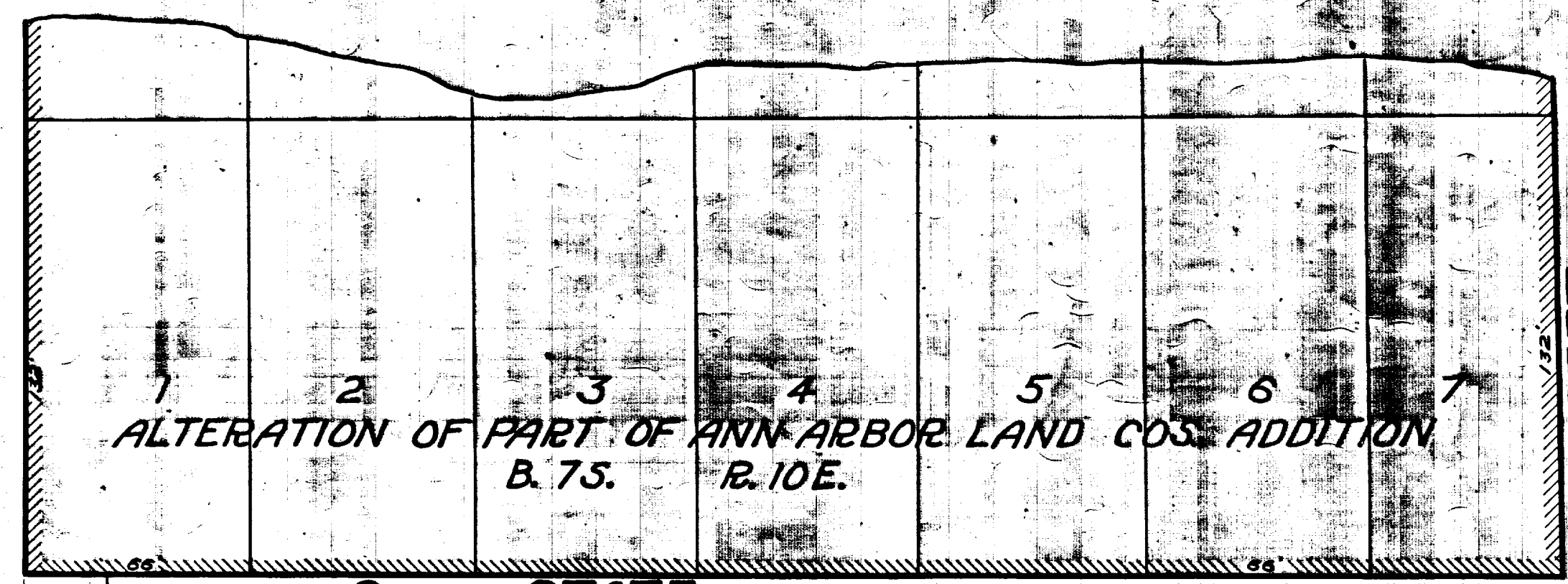
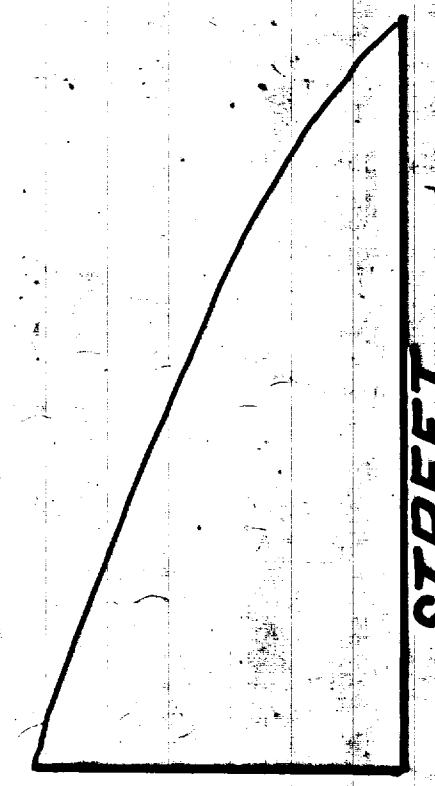
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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City of Ann Arbor





MEASUREMENTS TO HOUSE CONNECTIONS

From M.P. N66 at angle in 1/2" pipe to M.P. at State, Arbor and Packard.

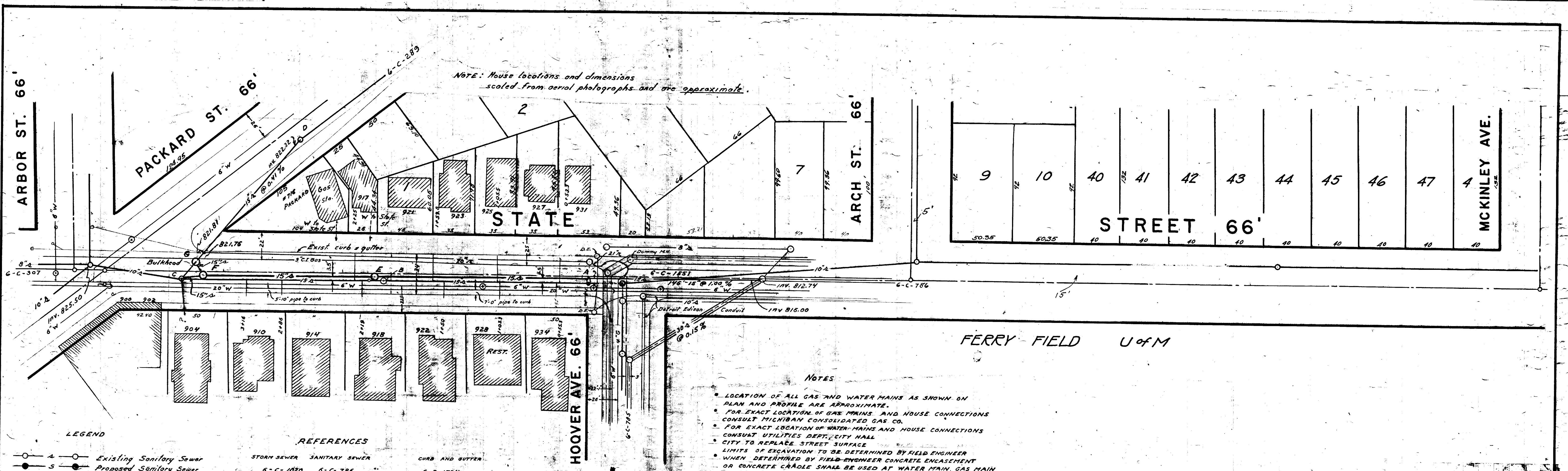
East	West
Packard to Hill St	20.0
Sta. 0 = Monument at State and Packard St	19.0
670	
1000	156.8 = L.H.
1750	
Hill to Monroe St	
1468	Sta. 0 = Monument
1547	576 = Hill
1220	156.8
3330	183.2 = L.H.
3790	29.0
	29.0
	375.0
	443.0

Digital Status  
Scanned On: 9-3-04  
By: DGK  
Despeckled: Yes  
Vector: Yes  
O.C.R.: Yes

SHEET No. 274  
INDEX No. 923  
SHEET No. 6  
SIZE C  
SUB No. 307  
Drawn by  
Traced by F. L. Miller  
Checked by J. J.

CITY ENGINEER'S OFFICE  
ANN ARBOR, MICH.  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
S. STATE ST.  
MONROE ST. TO PACKARD ST.  
Manley Osgood, City Engineer  
1917  
States Plan 1540 Profile No. 10174





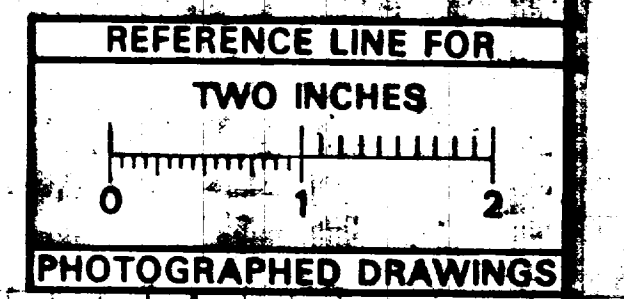
- LEGEND**
- Existing Sanitary Sewer
  - Proposed Sanitary Sewer
  - Existing Storm Sewer
  - Proposed Storm Sewer
  - Gas Main
  - Water Main

**REFERENCES**

STORM SEWER	SANITARY SEWER	CURB AND GUTTER
6-C-1080	6-C-786	6-C-1724
6-C-1530	6-C-288	6-C-1722
6-C-1403	6-C-289	6-C-110
6-C-1331	6-C-307	
	6-C-783	

Sewer elevations - Book 746 pg 41  
 Profile - Book 717 pg 45-50  
 6-C-7dpo - Book 709 pg 34-37

- NOTES**
- LOCATION OF ALL GAS AND WATER MAINS AS SHOWN ON PLAN AND PROFILE ARE APPROXIMATE.
  - FOR EXACT LOCATION OF GAS MAINS AND HOUSE CONNECTIONS CONSULT MICHIGAN CONSOLIDATED GAS CO.
  - FOR EXACT LOCATION OF WATER MAINS AND HOUSE CONNECTIONS CONSULT UTILITIES DEPT., CITY HALL.
  - CITY TO REPLACE STREET SURFACE.
  - LIMITS OF EXCAVATION TO BE DETERMINED BY FIELD ENGINEER.
  - WHEN DETERMINED BY FIELD ENGINEER CONCRETE ENCASMENT OR CONCRETE CRADLE SHALL BE USED AT WATER MAIN, GAS MAIN OR SANITARY SEWER OR ANY OTHER PLACE WHEN NECESSARY. TO BE PAID FOR PER CUBIC YARD AS PER BID PRICE IN PROPOSAL.
  - CONSULT DETROIT EDISON CO FOR EXACT LOCATION OF ALL UNDERGROUND CONDUITS BEFORE ANY WORK BELOW GROUND IS BEGUN.
  - EXISTING 15" SANITARY SEWER AND LINES FROM HOUSES MUST BE MAINTAINED DURING CONSTRUCTION.



**MEASUREMENTS TO HOUSE CONNECTIONS**

Hoover Ave. to Packard St. 0" M.H. at Hoover Ave.	
EAST	WEST
43.3	53.3
105.5	103.3
159.8	150.0
225.0	219.0
	225.0
	316.0

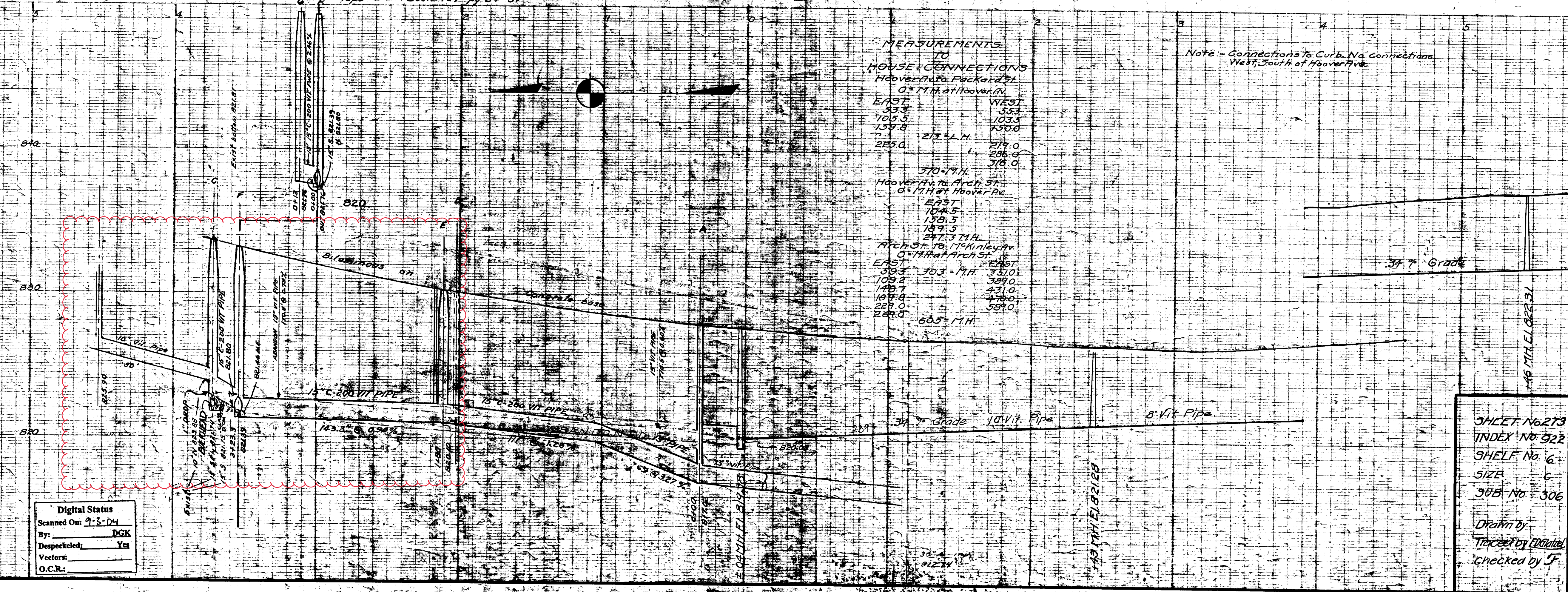
  

370" M.H. Hoover Ave. to Arch St. 0" M.H. at Hoover Ave.	
EAST	WEST
104.5	53.3
139.5	103.3
183.3	150.0
247.3	219.0
	225.0
	316.0

Arch St. to McKinley Ave. 0" M.H. at Arch St.	
EAST	WEST
39.3	33.0
109.2	389.0
149.7	431.0
197.8	470.0
225.0	539.0
	605" M.H.

Note - Connections to Curb. No Connections West South of Hoover Ave.



320  
 M.D.H. PERMIT NO. 18069 4/2/59  
 Job No 2442 DIST  
**STATE STREET**  
 REBUILDING SANITARY SEWER  
 1938  
 FREDERICK A. MANTZEL SUFF. PUB. WORKS  
 PUBLIC WORKS DEPT. ANN ARBOR, MICHIGAN

SHEET No 273  
 INDEX No 922  
 SHELF No 6  
 SIZE C  
 JOB No 306  
 Drawn by  
 Traced by  
 Checked by

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 OF  
 SANITARY SEWER  
**STATE STREET**  
 PACKARD ST. TO MCKINLEY AVE.  
 G.H. Sandenburgh, City Engineer  
 1918  
 Scales: Plan, 1"=40' Profile, Vertical Curve, 1"=10'

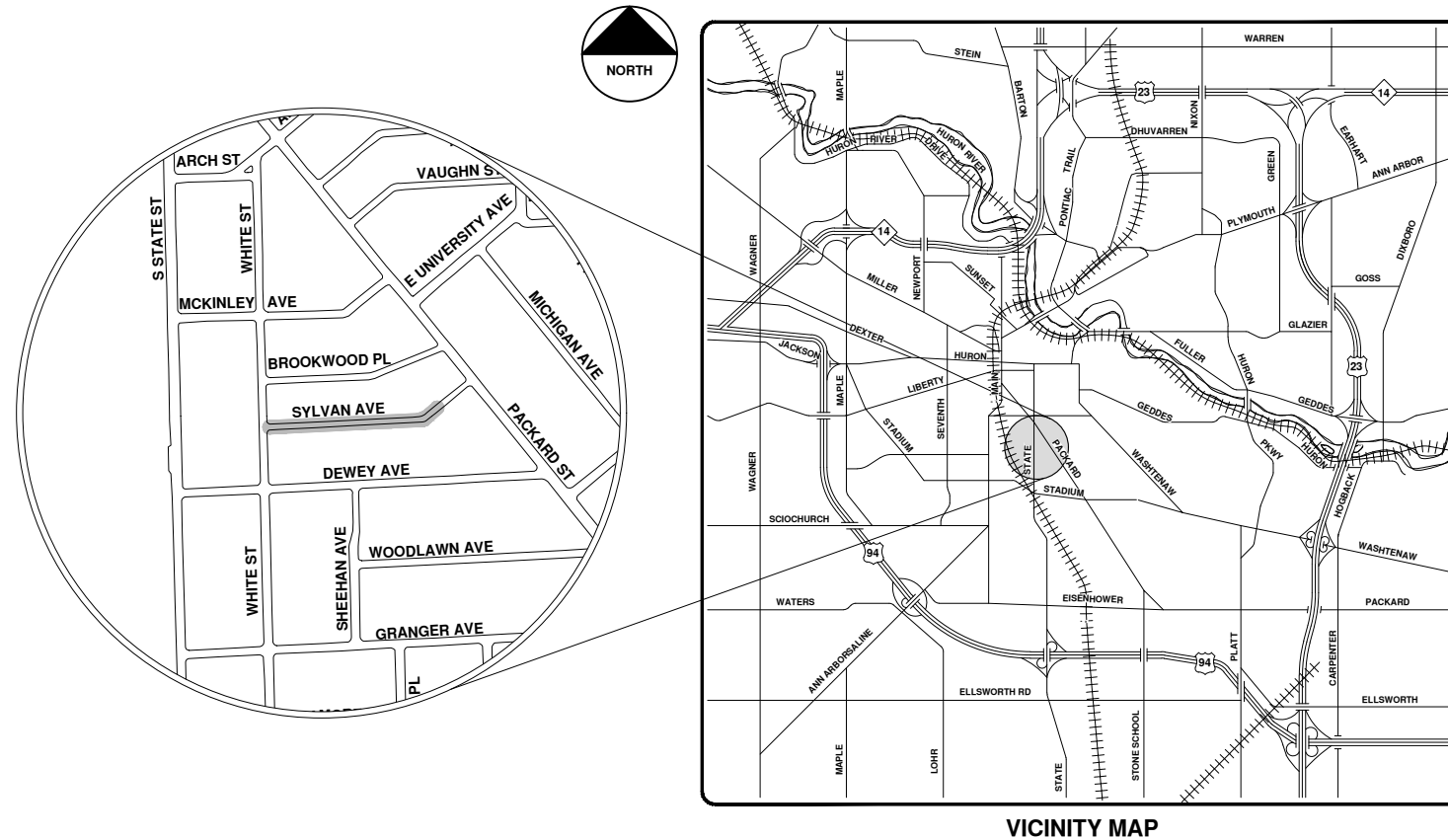
Digital Status  
 Scanned On: 7-5-04  
 By: DKG  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:





# 2020 SEWER LINING PROJECT

## SYLVAN AVE



VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard bw.stb - Plot Date: 9/14/2020 12:06:09 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
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00	BID SET	9-14-20	ARG	IWK

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 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-80

SHEET No.  
 80 OF 177





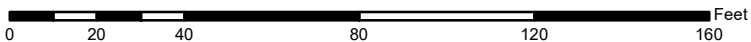
City of Ann Arbor

# Sylvan Ave.



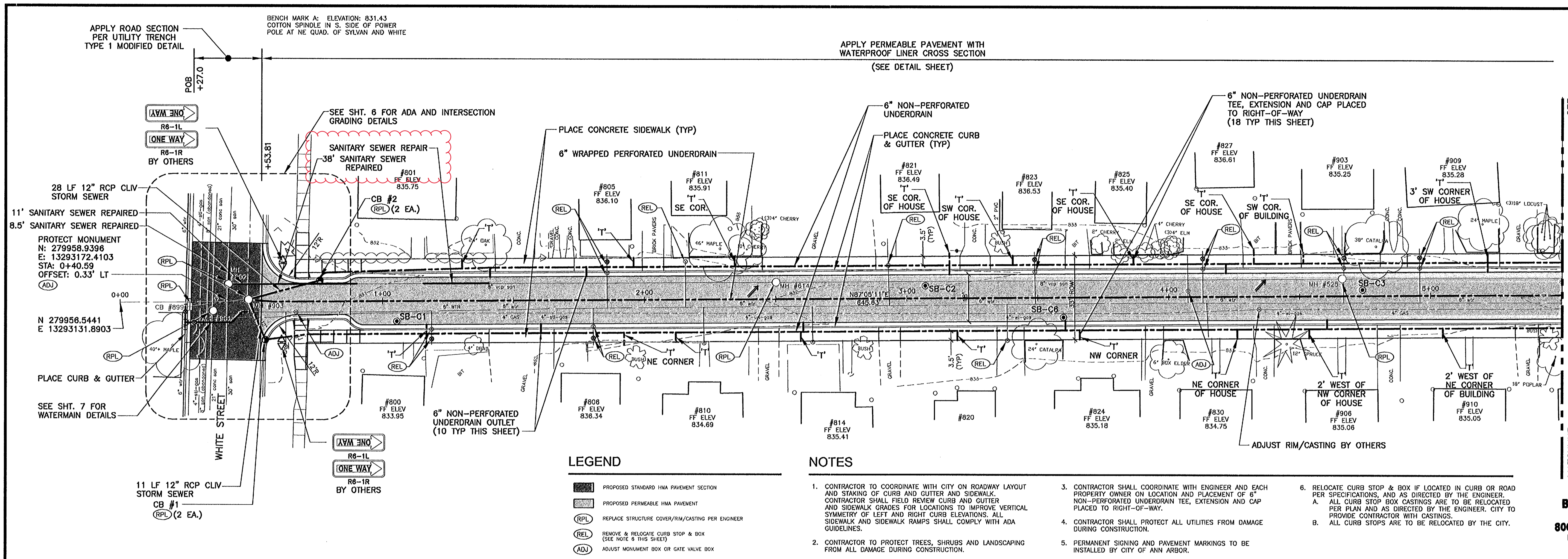
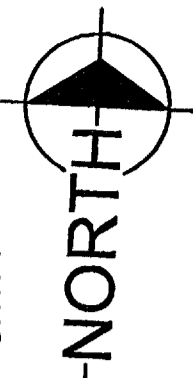
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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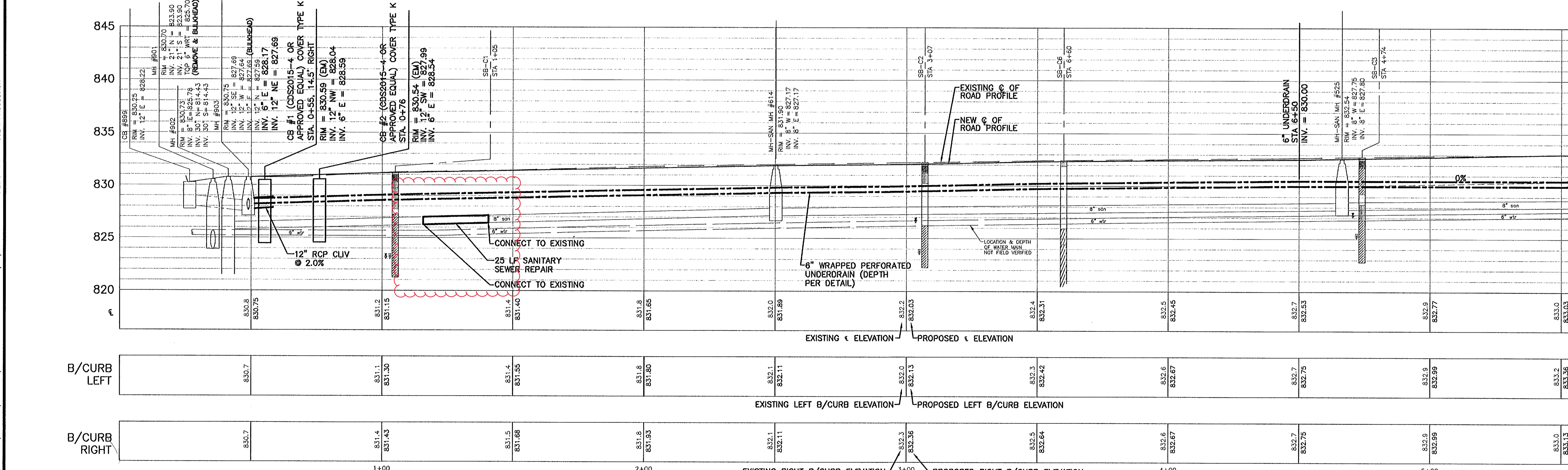
LEGEND

- PROPOSED STANDARD HMA PAVEMENT SECTION
- PROPOSED PERMEABLE HMA PAVEMENT
- REPLACE STRUCTURE COVER/RIM/CASTING PER ENGINEER
- REMOVE & RELOCATE CURB STOP & BOX (SEE NOTE & THIS SHEET)
- ADJUST MONUMENT BOX OR GATE VALVE BOX

NOTES

1. CONTRACTOR TO COORDINATE WITH CITY ON ROADWAY LAYOUT AND STAKING OF CURBS AND GUTTER AND SIDEWALK. CONTRACTOR SHALL FIELD REVIEW CURB AND GUTTER AND SIDEWALK GRADES FOR LOCATIONS TO IMPROVE VERTICAL SYMMETRY OF LEFT AND RIGHT CURB ELEVATIONS. ALL SIDEWALK AND SIDEWALK RAMP SHALL COMPLY WITH ADA GUIDELINES.
2. CONTRACTOR TO PROTECT TREES, SHRUBS AND LANDSCAPING FROM ALL DAMAGE DURING CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND EACH PROPERTY OWNER ON LOCATION AND PLACEMENT OF 6" NON-PERFORATED UNDERDRAIN TEE, EXTENSION AND CAP PLACED TO RIGHT-OF-WAY.
4. CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
5. PERMANENT SIGNING AND PAVEMENT MARKINGS TO BE INSTALLED BY CITY OF ANN ARBOR.
6. RELOCATE CURB STOP & BOX IF LOCATED IN CURB OR ROAD PER SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER.
  - A. ALL CURB STOP BOX CASTINGS ARE TO BE RELOCATED PER PLAN AND AS DIRECTED BY THE ENGINEER. CITY TO PROVIDE CONTRACTOR WITH CASTINGS.
  - B. ALL CURB STOPS ARE TO BE RELOCATED BY THE CITY.

**3 WORKING DAYS**  
**BEFORE YOU DIG**  
**CALL MISS DIG**  
**800-482-7171**  
**(TOLL FREE)**



NOTE:  
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

DIGITAL STATUS  
SCANNED ON: 11/11  
BY: ALG

LEGEND

- SHRUBS
- DECIDUOUS TREE
- CONIFEROUS TREE
- HEDGE
- EDGE OF WOODS
- CURB & GUTTER
- TITLE LINE / PROPERTY LINE
- ROW LINE
- GRAVEL SURFACE
- 8" SAN. SANITARY SEWER & MANHOLE
- 12" STM. STORM SEWER & MANHOLE
- CATCH BASIN CURB TYPE
- ROOF DRAIN
- VALVE
- HYDRANT
- 6" WTR. WATER MAIN
- 2" GAS GAS MAIN
- UNDERGROUND ELECTRIC
- FIBER OPTICS
- UNDERGROUND TELEPHONE
- CABLE TELEVISION
- 12" STORM STORM SEWER & MANHOLE
- CATCH BASIN
- PROPOSED CURB & GUTTER
- MISC. GROUND WATER FLOW DIRECTION (PER CITY RECORDS) BENCHMARK PROPOSED GATE VALVE IN BOX PROTECTIVE FENCING

PLAN & PROFILE  
STA 0+00 TO 5+00

2/28/2010 BIDS AND CONSTRUCTION  
Drawn By: MJA  
Designer: CEW  
Reviewer: CEW  
Manager: CEW

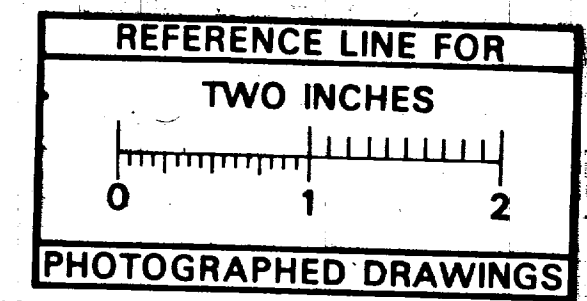
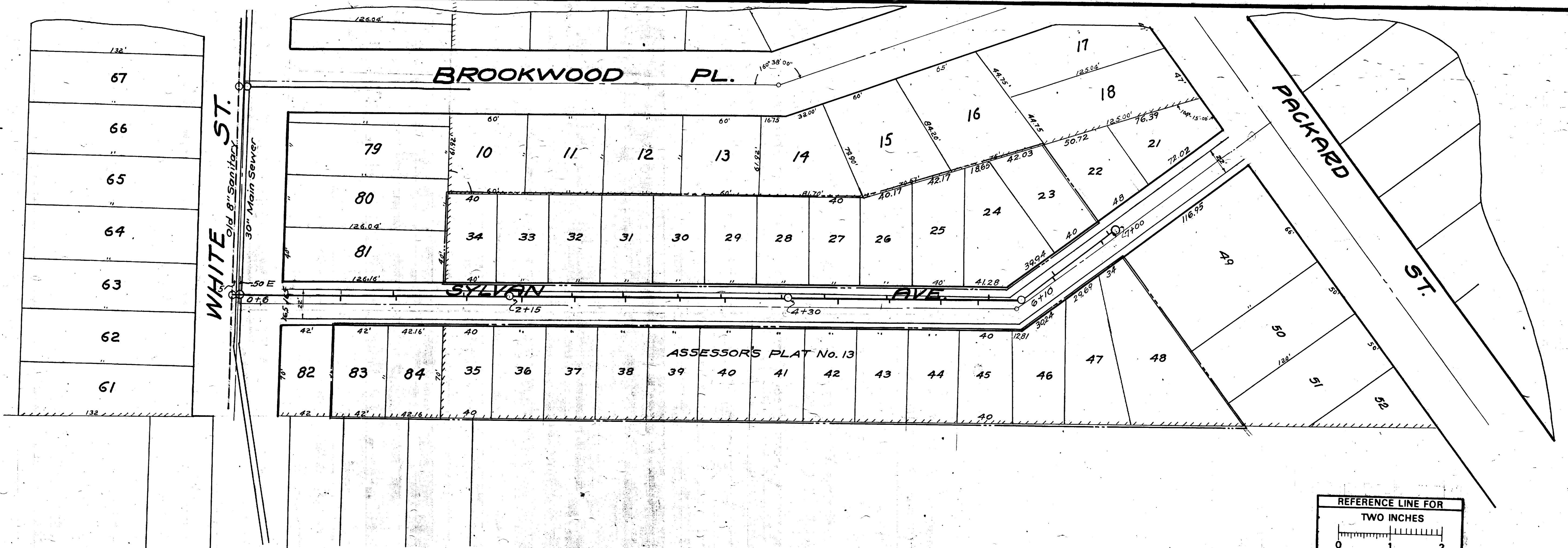
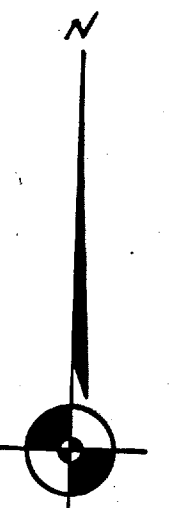
PROJECT NO.  
G090663

CITY OF ANN ARBOR - PROJECT MANAGEMENT SERVICES UNIT

PERMEABLE PAVEMENT PROJECT		SCALE HORIZ. 1"=20' VERT. 1"=4'	
SYLVAN AVENUE		DRAWING FILE: C004090663.dwg	
WHITE ST. TO PACKARD ST.		SHEET NO. 4 OF 8	
BENCH MARK	SURVEY BOOK	AS-BUILT ORIGINAL ISSUE	11/2011 ARG
REV. NO.	DESCRIPTION	DATE	DR. BY
			CH. BY

PLOT INFO: S:\PROJECT MANAGEMENT\DRAWING\AUTOCAD\2009034-AS-BUILT\2009034-R1.DWG DATE: 11/29/2011 TIME: 10:20:04 AM USER: ARCOSSNAUX



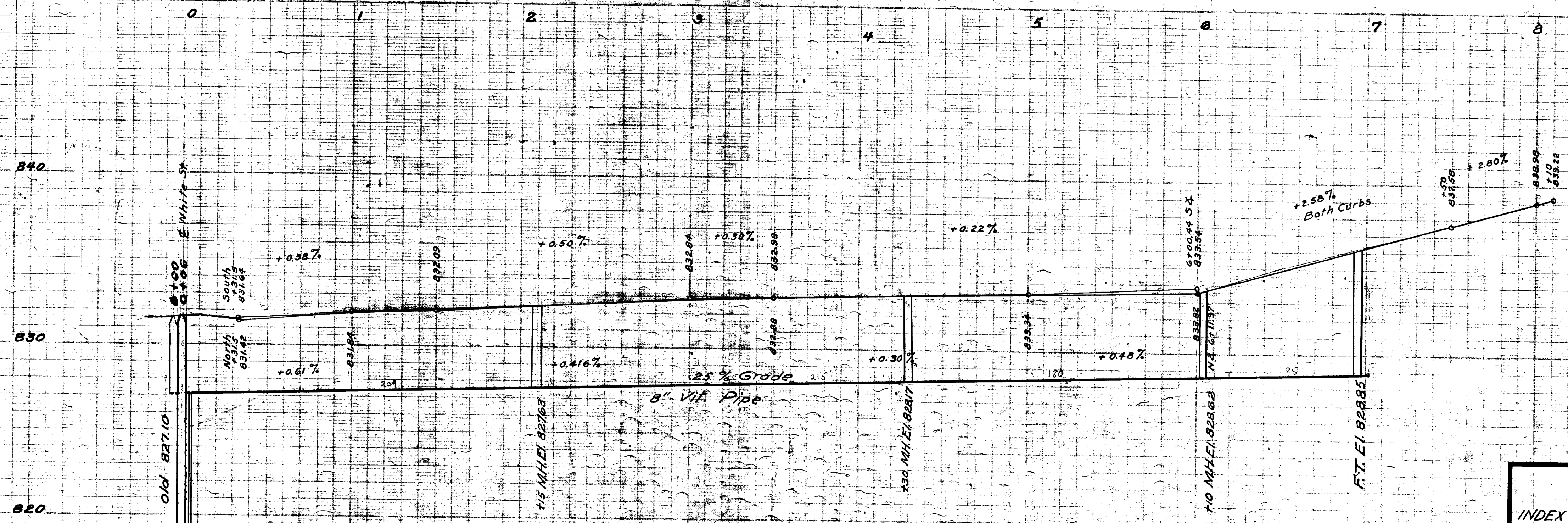


**MEASUREMENTS TO HOUSE CONNECTIONS**

Sanitary Tees

North	South
0 = M.H. Old 8" of White St.	0 = M.H. New 30"
125	127
180	182
7	9
49	50
87	89
131	133
164.5	166.5
212	214
30	40
78	80
118	120
157	149
315	295
84	70

FT. of 7+00



Digital Status  
 Scanned On: 9-17-04  
 By: DGC  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:

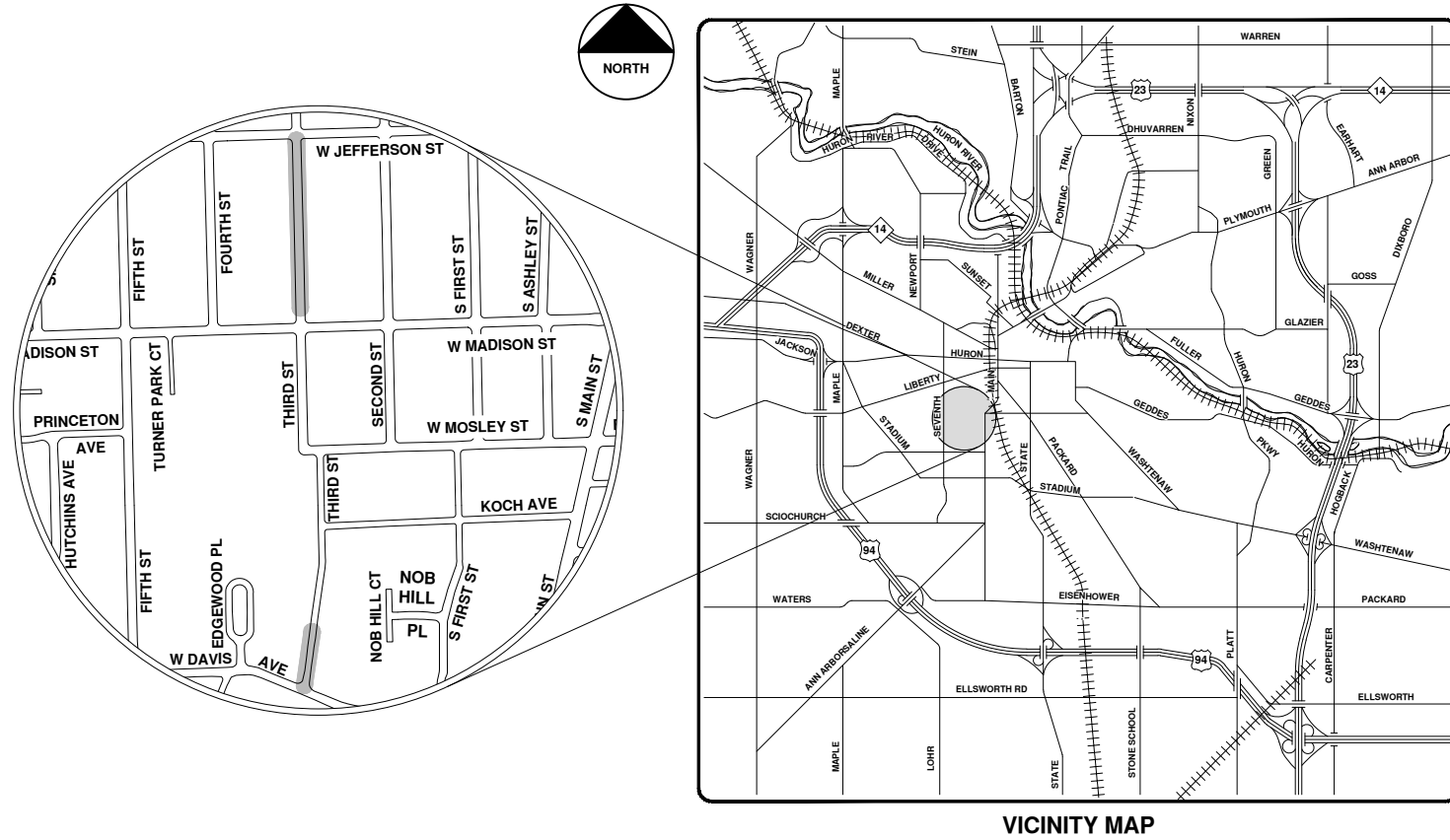
INDEX No.	1201	CITY ENGINEER'S OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF SANITARY AND SEWER CURB & GUTTER <b>SYLVAN AVE.</b> WHITE TO PACKARD Geo. H. Sandenburgh, City Engineer. 1921-9-24. Scales: Hor. 1"=40' Ver. 1"=4'
SHELF No.	6	
SIZE	C	
SUB No.	474	
Drawn By		
Traced By	cwa	
Checked By	H.R.S.	





# 2020 SEWER LINING PROJECT

## THIRD ST



VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:06:14 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-64

SHEET No.  
 84 OF 177

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410  
 www.a2gov.org

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK





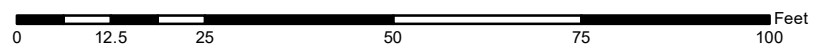


# Third St.



	Manhole		Sanitary Main
	Proposed Lining		

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

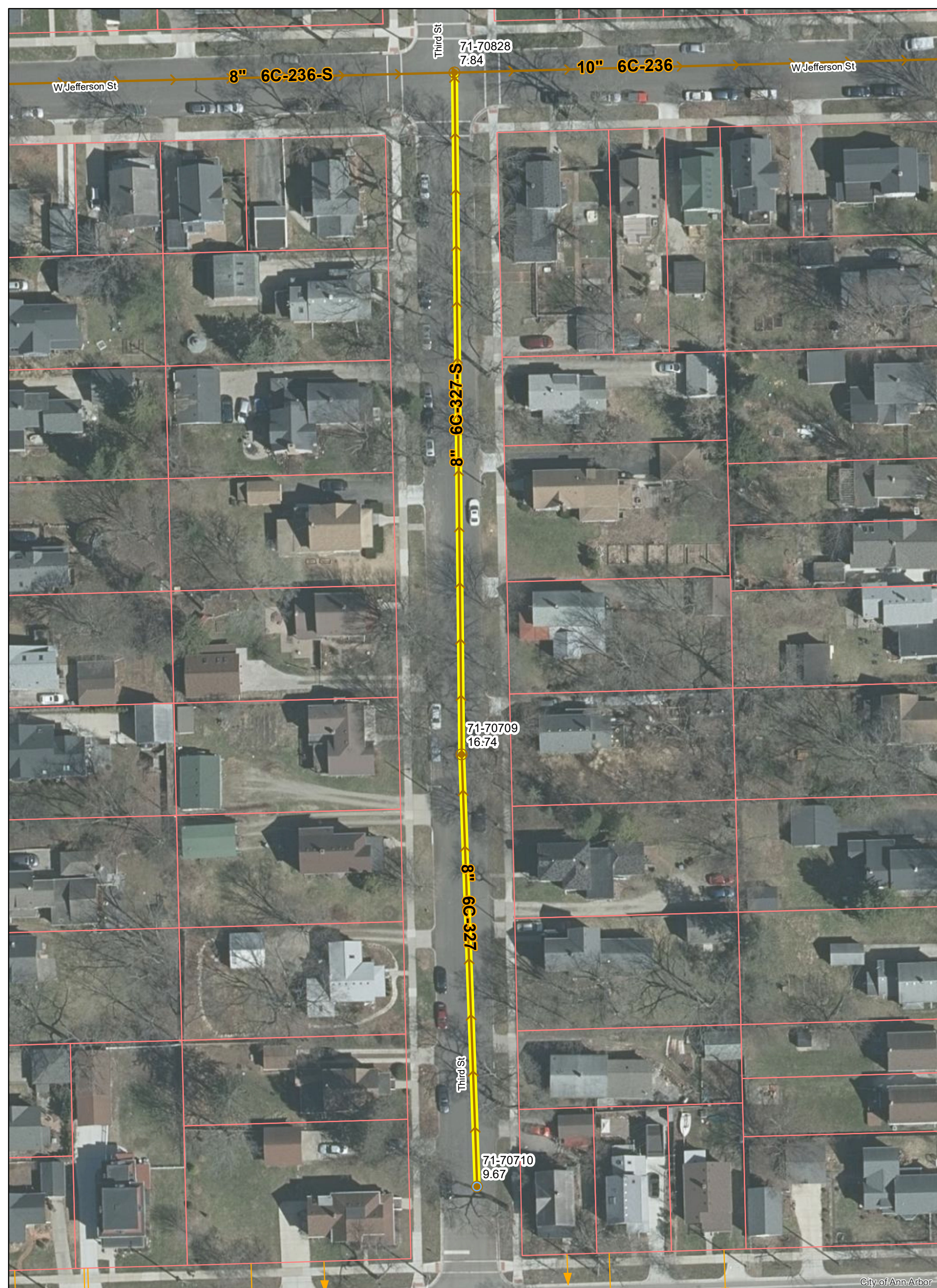


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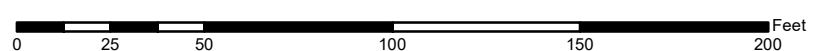


# Third St.



	Manhole		Sanitary Main
	Manhole, Flush Tank		Sanitary Lateral
	Proposed Lining		

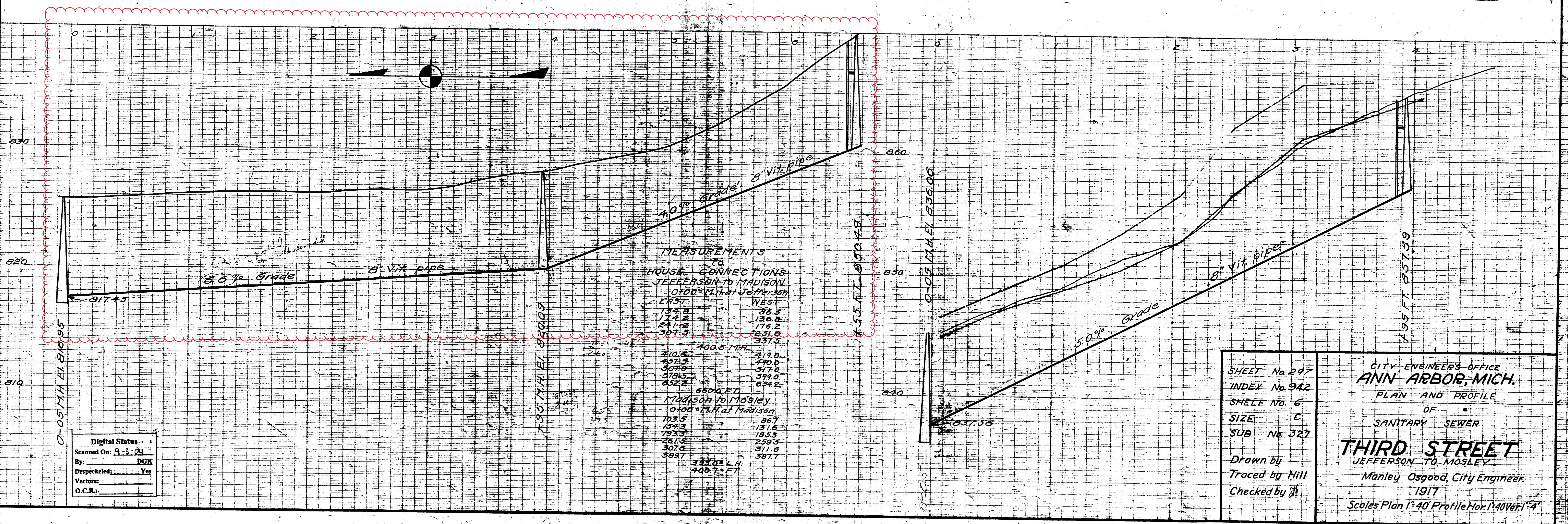
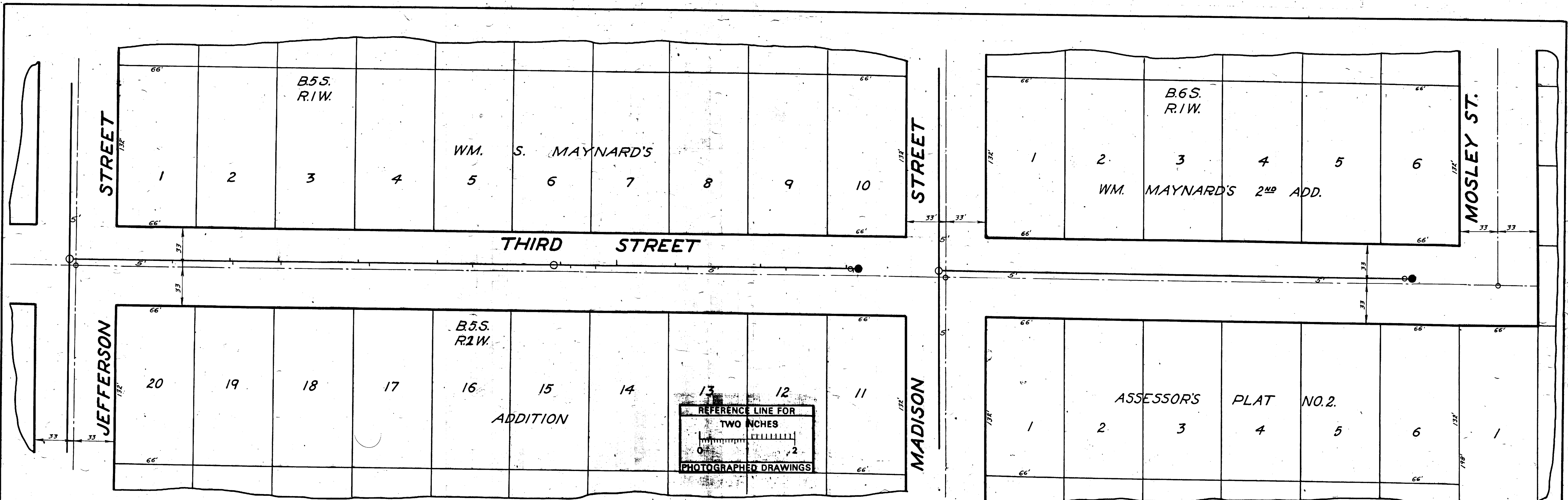
71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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City of Ann Arbor





SHEET No. 297  
INDEX No. 942  
SHELF No. 6  
SIZE C  
SUB No. 327

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
**THIRD STREET**  
JEFFERSON TO MOSLEY  
Manley Osgood, City Engineer.  
1917  
Scale Plan 1"=40' Profile Hor. 1"=40' Vert. 1"=4'

Drawn by  
Traced by Hill  
Checked by

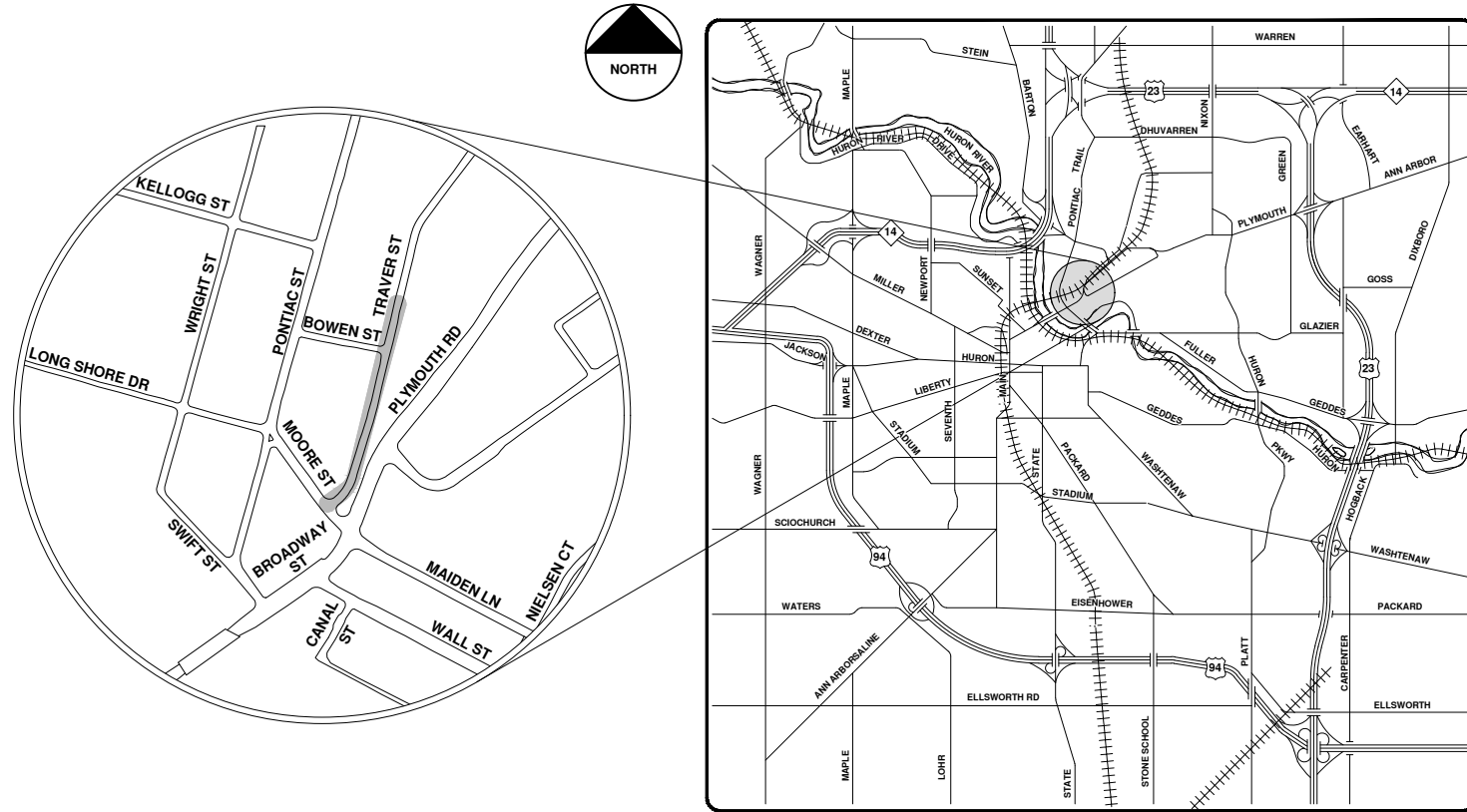
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By: DKG  
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Vectors:  
O.C.R.:





# 2020 SEWER LINING PROJECT

## TRAVER ST




VICINITY MAP

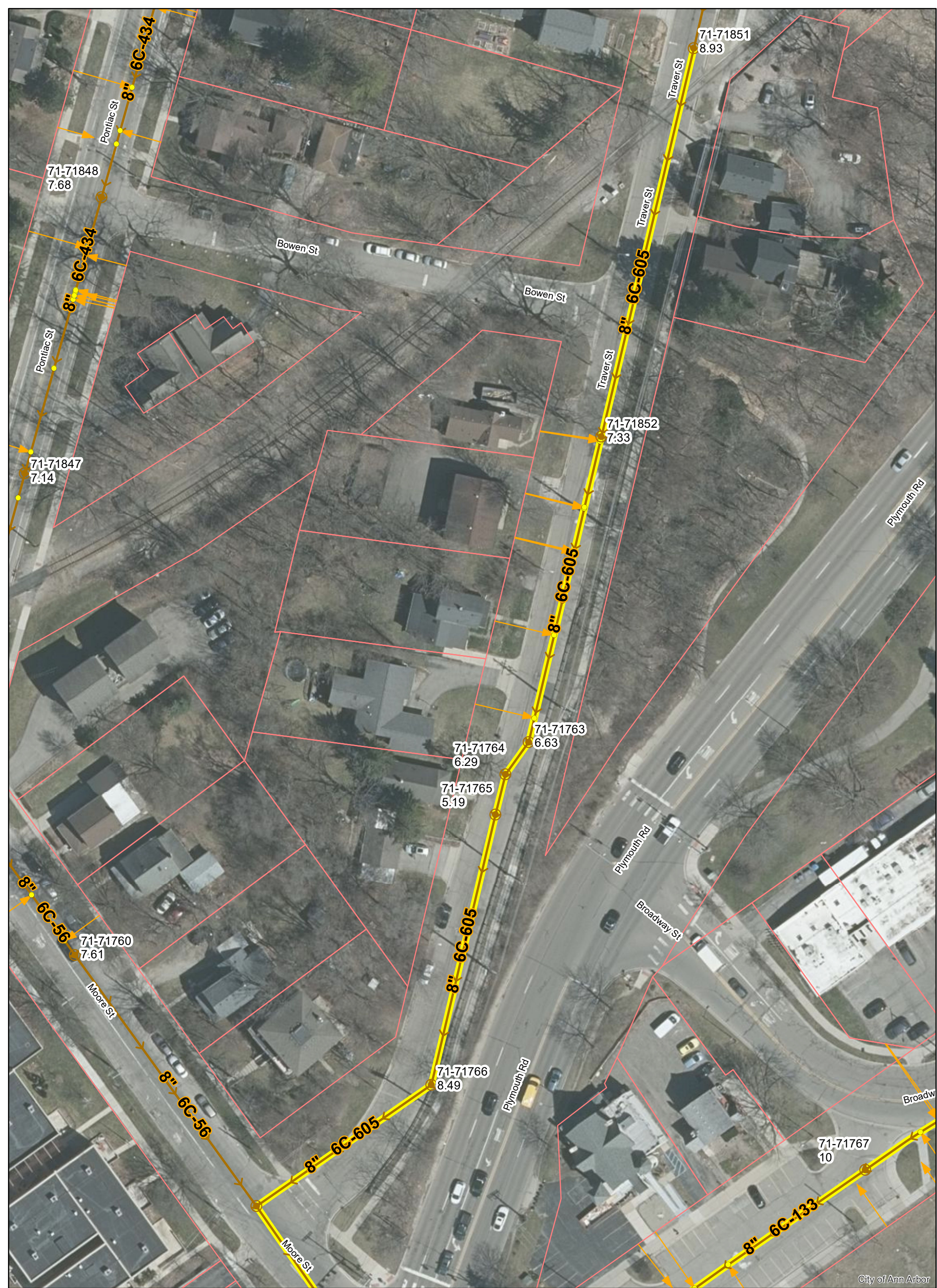
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**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
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 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

		CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE	
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 www.a2gov.org		SHEET No. <b>89 OF 177</b>	
REV.	DESCRIPTION	DATE	CHECKED
00	BID SET	9-14-20	ARG
01	DRAWN	9-14-20	ARG
02	CHECKED	9-14-20	ARG



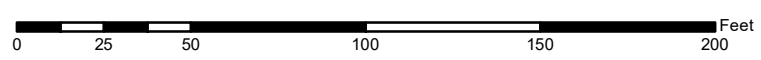


# Traver St.



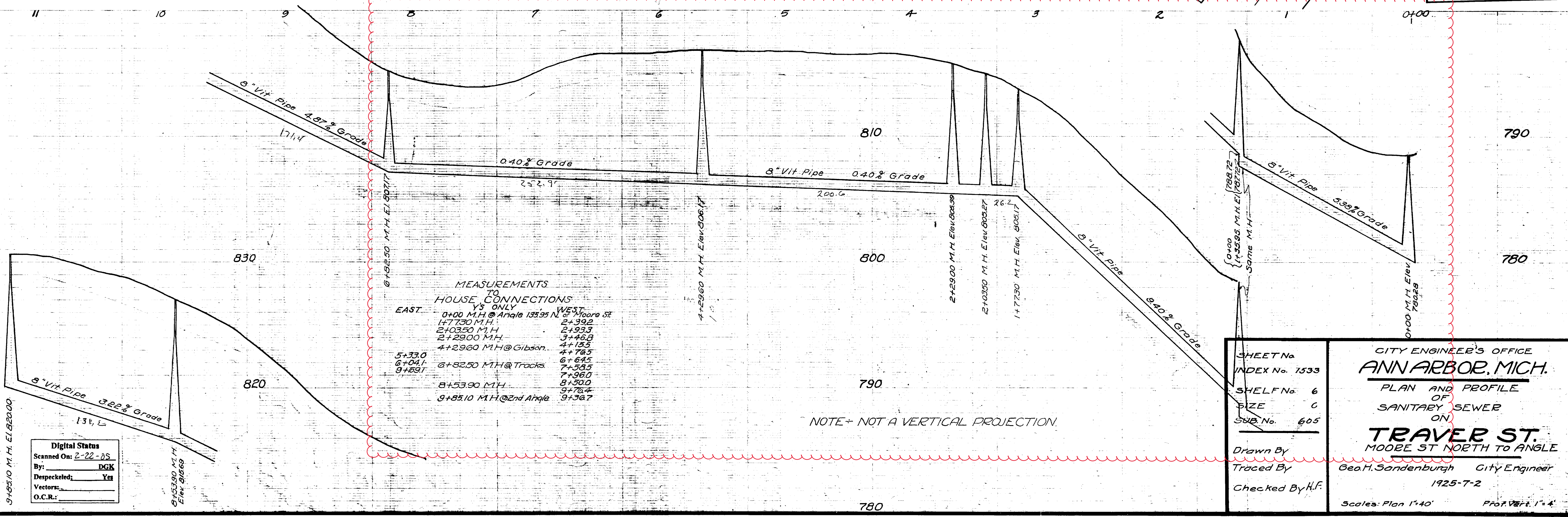
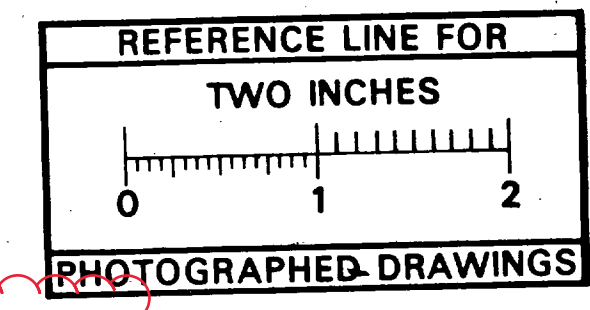
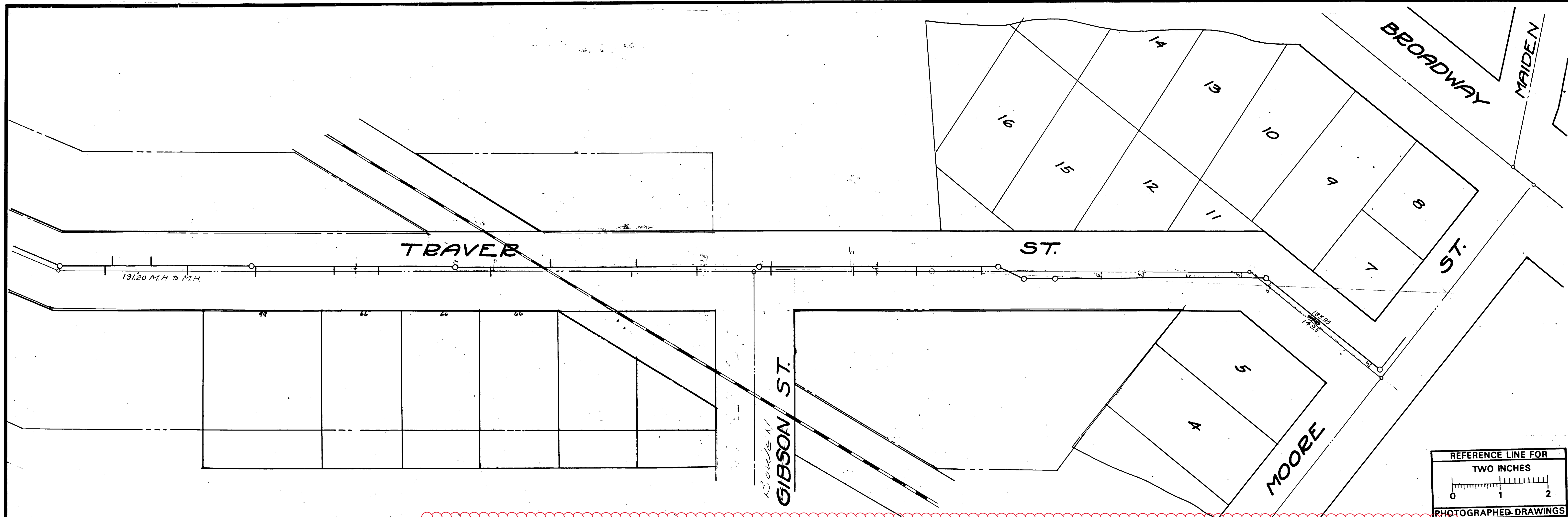
	Manhole		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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MEASUREMENTS TO HOUSE CONNECTIONS VS ONLY

EAST	WEST
0+00 M.H. @ Angle 135.95 N	1+7730 M.H. @ Moore St 2+392
1+7730 M.H.	2+0350 M.H. 2+933
2+0350 M.H.	2+2900 M.H. 3+468
2+2900 M.H.	4+195 4+195
4+2960 M.H. @ Gibson	4+765 4+765
5+330 6+645	6+645 6+645
6+645 7+565	7+565 7+565
7+565 8+5390 M.H.	8+5390 8+5390
8+5390 M.H.	9+767 9+767
9+85.10 M.H. @ 2nd Angle	9+367 9+367

NOTE - NOT A VERTICAL PROJECTION.

SHEET No. 1533  
 INDEX No. 605  
 SHELF No. 6  
 SIZE C  
 SUB No. 605  
 Drawn By  
 Traced By  
 Checked By H.F.

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 OF  
 SANITARY SEWER  
 ON  
**TRAVES ST.**  
 MOORE ST NORTH TO ANGLE  
 Geo. H. Sandenburgh City Engineer  
 1925-7-2  
 Scale: Plan 1"=40' Prof. Vert. 1"=4'

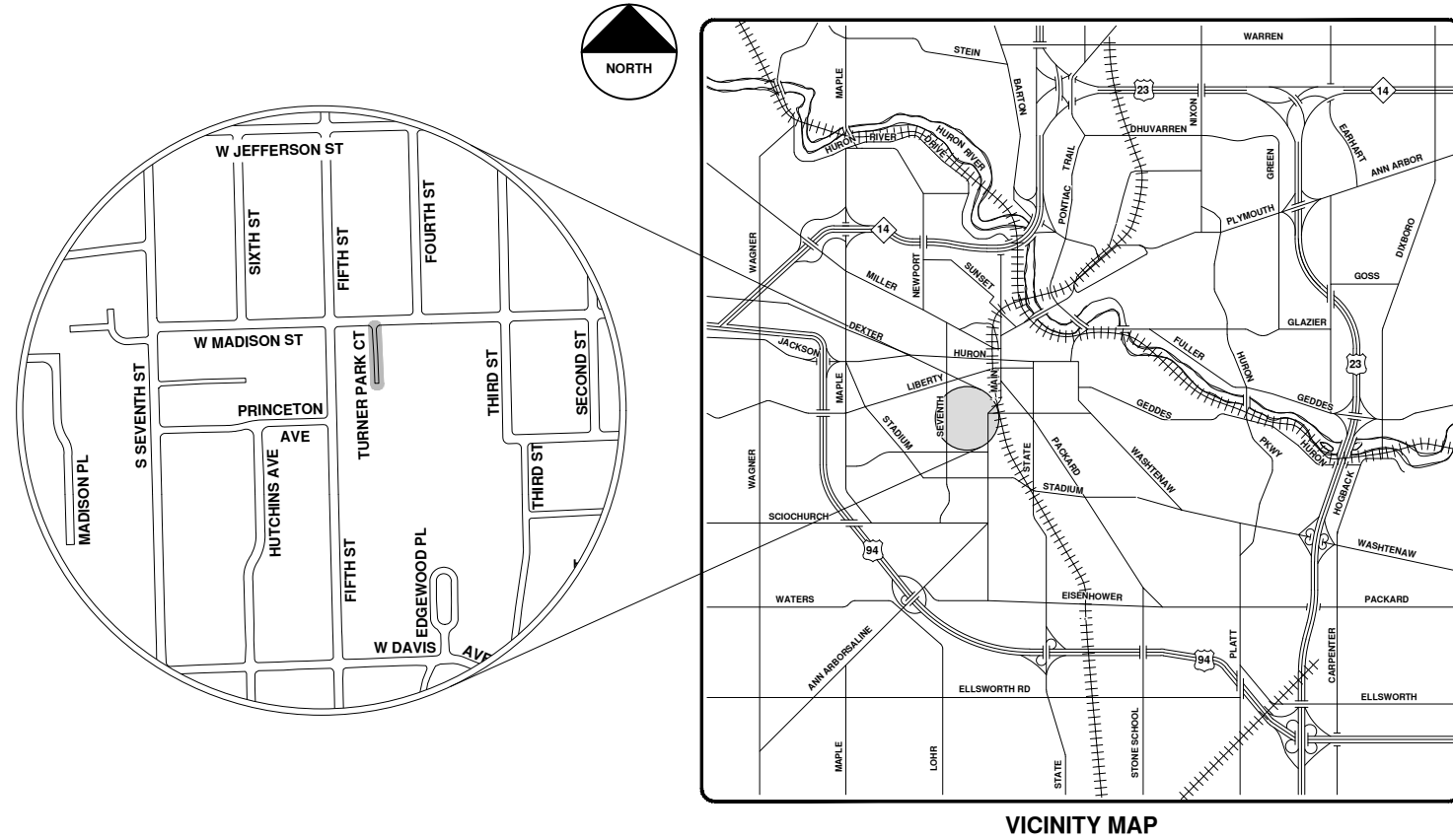
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 By: DGK  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:





# 2020 SEWER LINING PROJECT

## TURNER PARK CT



VICINITY MAP

R:\2020039 Sewer Lining, 2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:06:24 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
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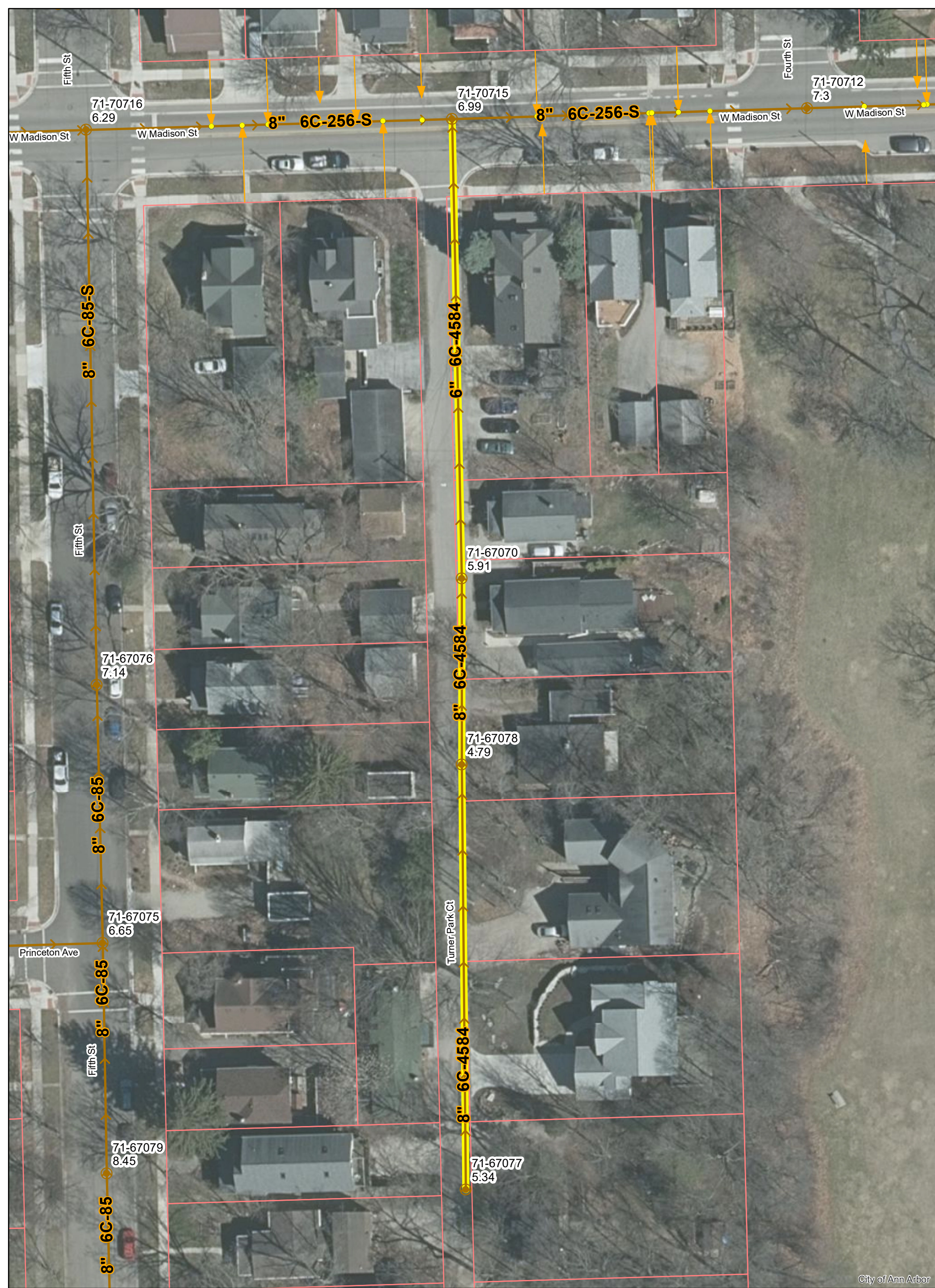
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-92

SHEET No.

92 OF 177





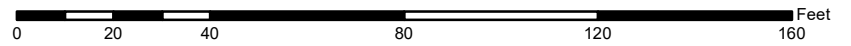
City of Ann Arbor

# Turner Park Ct.



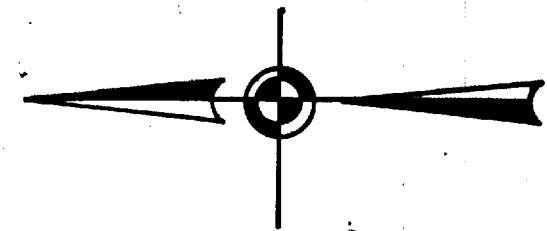
	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



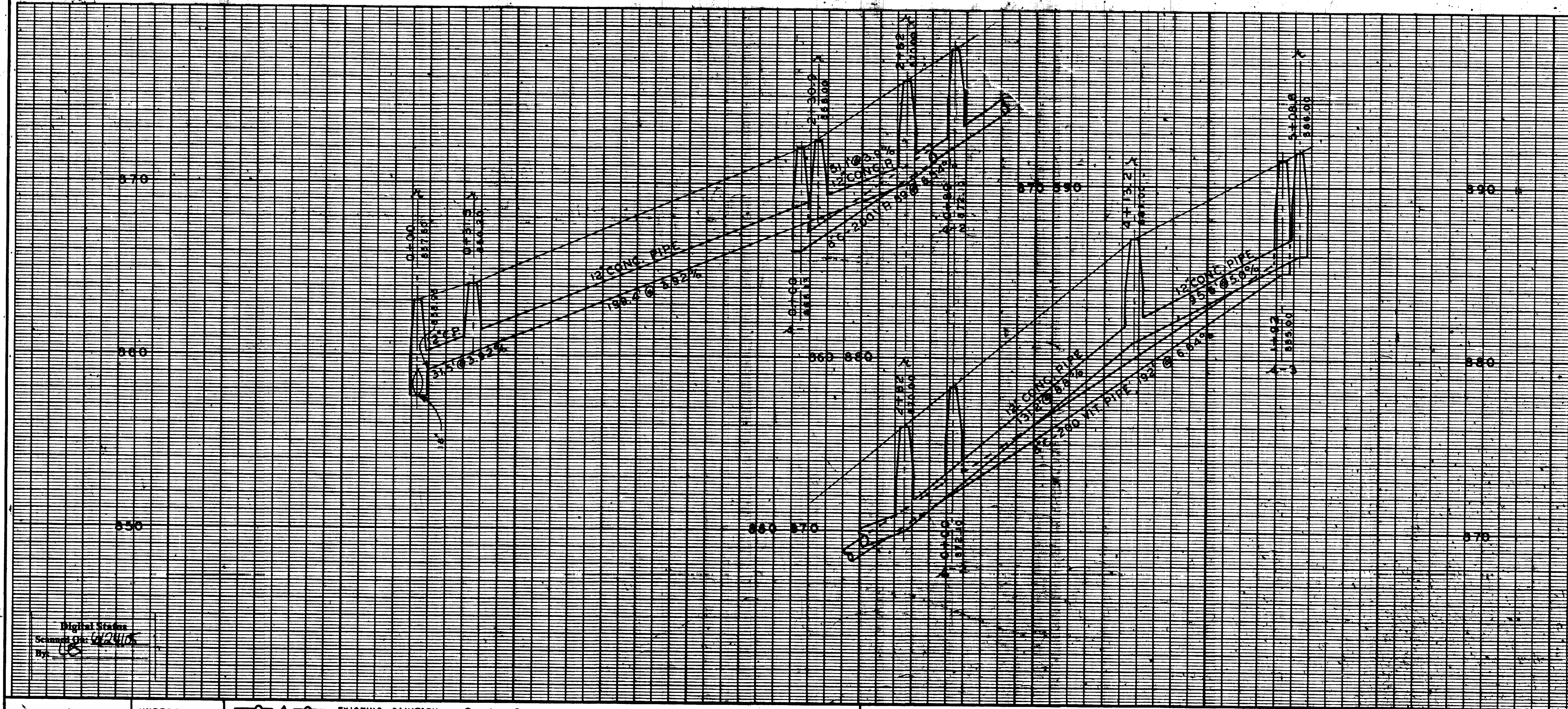
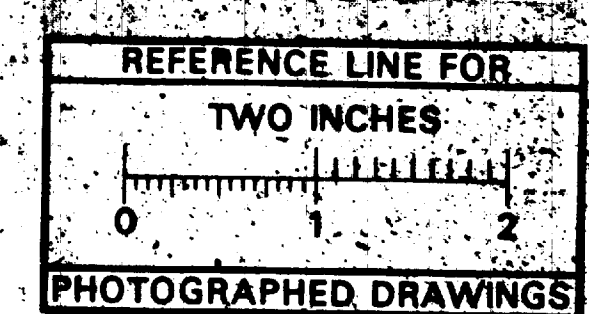
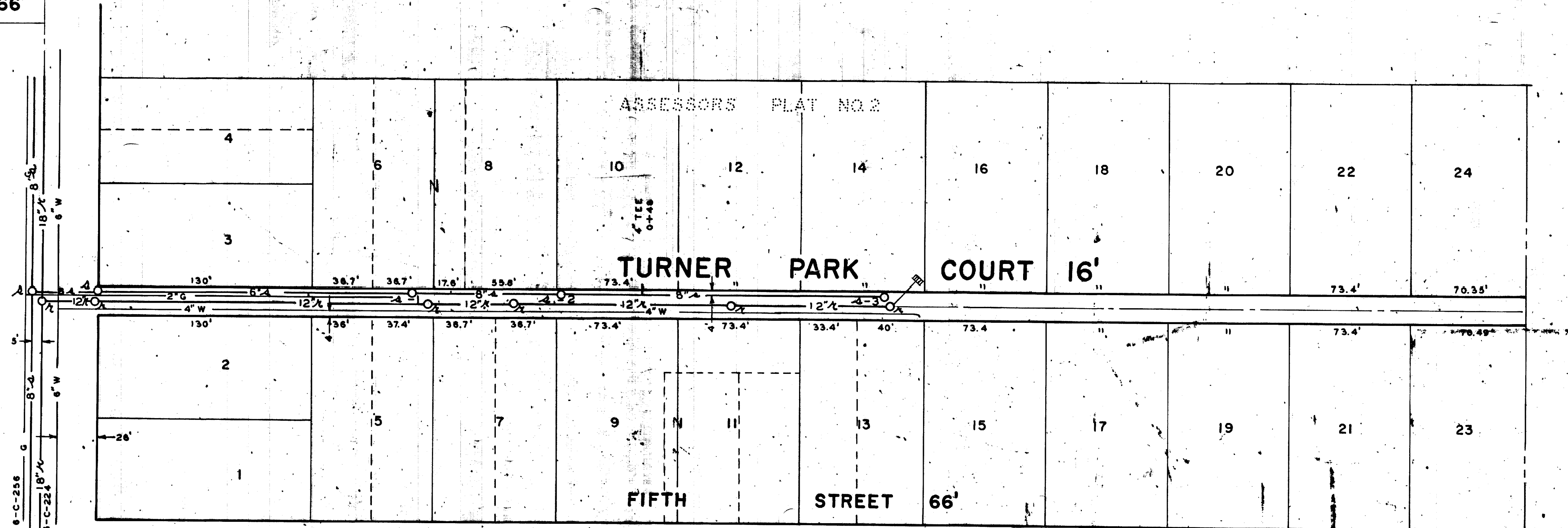
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FOURTH ST. 66'

MADISON STREET 66'



DR. BY D. A. M.	DATE 2/70	SHEET NO. 6923
W. BY L. F. S.	2/71	INDEX NO.
PL BY		REVISIONS

SANITARY AND STORM SEWER  
**6-C-4584 TURNER PARK COURT**  
 FROM MADISON TO 500' SOUTH  
 FREDRICK A. MAMMEL SUPERINTENDENT OF PUBLIC WORKS

**LEGEND:**

—○—○—	EXISTING SANITARY	—○—○—	EXISTING STORM	—G—	EXISTING GAS
—●—●—	PROPOSED SANITARY	—●—●—	PROPOSED STORM	—W—	EXISTING WATER
—	CENTER LINE	---	RIGHT PROPERTY LINE		
---	LEFT PROPERTY LINE				

**REFERENCES:** **SENSOR MARK** \_\_\_\_\_ **PROFILES BY:** \_\_\_\_\_  
 DRAWINGS 6-C-694-R 6-C-258-S **FIELD BOOK** \_\_\_\_\_  
 M.D.P.H. PERMIT NO. 706434 8/11/70

JOB 13-700-3849	DIST. _____
JOB _____	DIST. _____
JOB _____	DIST. _____
JOB _____	DIST. _____

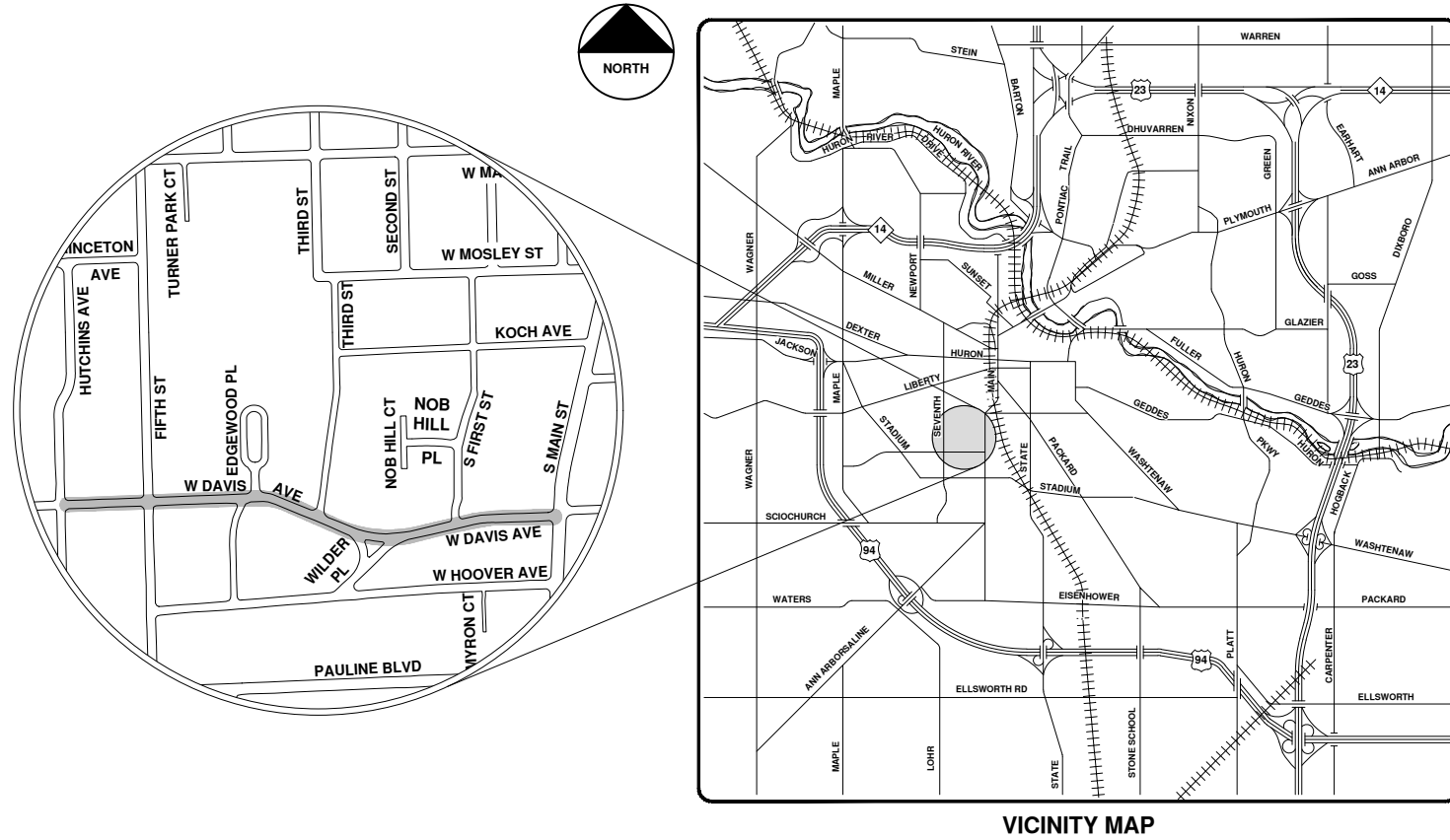
PREPARED BY L.O.F. BLDG. TOLEDO, OHIO 43624  
 APPROVED BY HOWARD F. RUSSELL 6/4/70





# 2020 SEWER LINING PROJECT

## W DAVIS AVE



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:06:30 PM



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		CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE	
SHEET No. 95 OF 177		DRAWING No. 2020039-95	
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48107-8647 www.a2gov.org		DESCRIPTION BID SET	DATE 9-14-20
REV.	DO	DRAWN ARG	CHECKED IVK



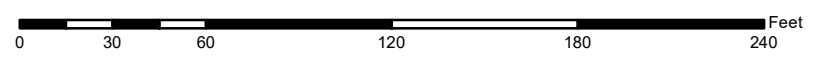


# W Davis Ave.



	Manholes		Sanitary Main
	Proposed Lining		Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



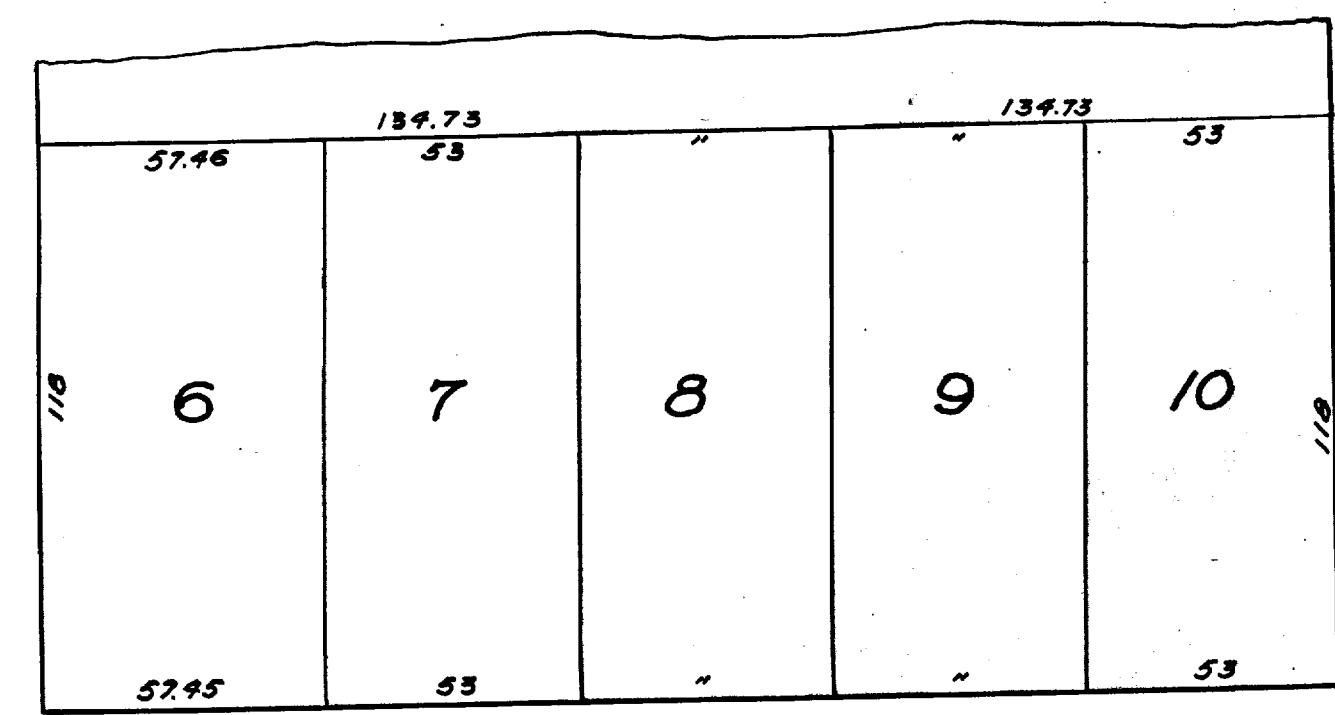
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City of Ann Arbor

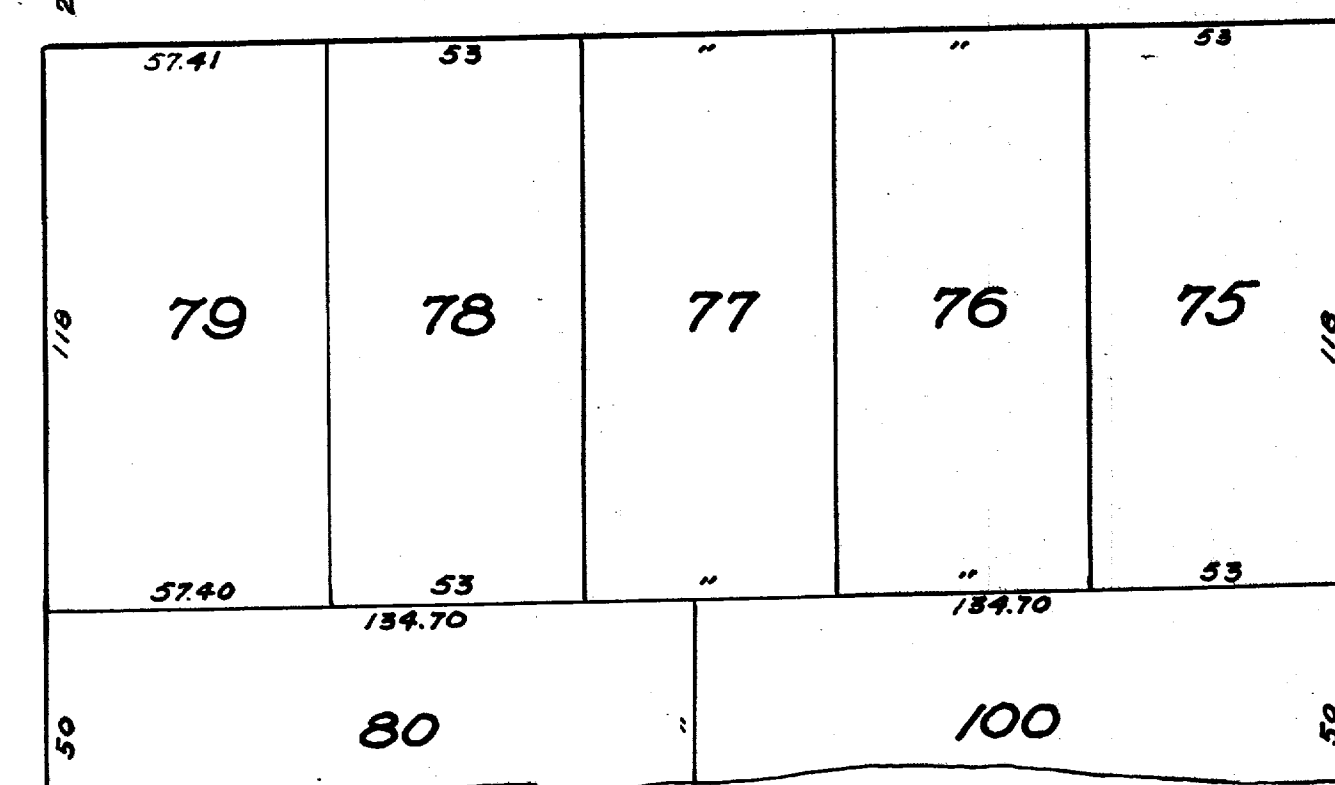




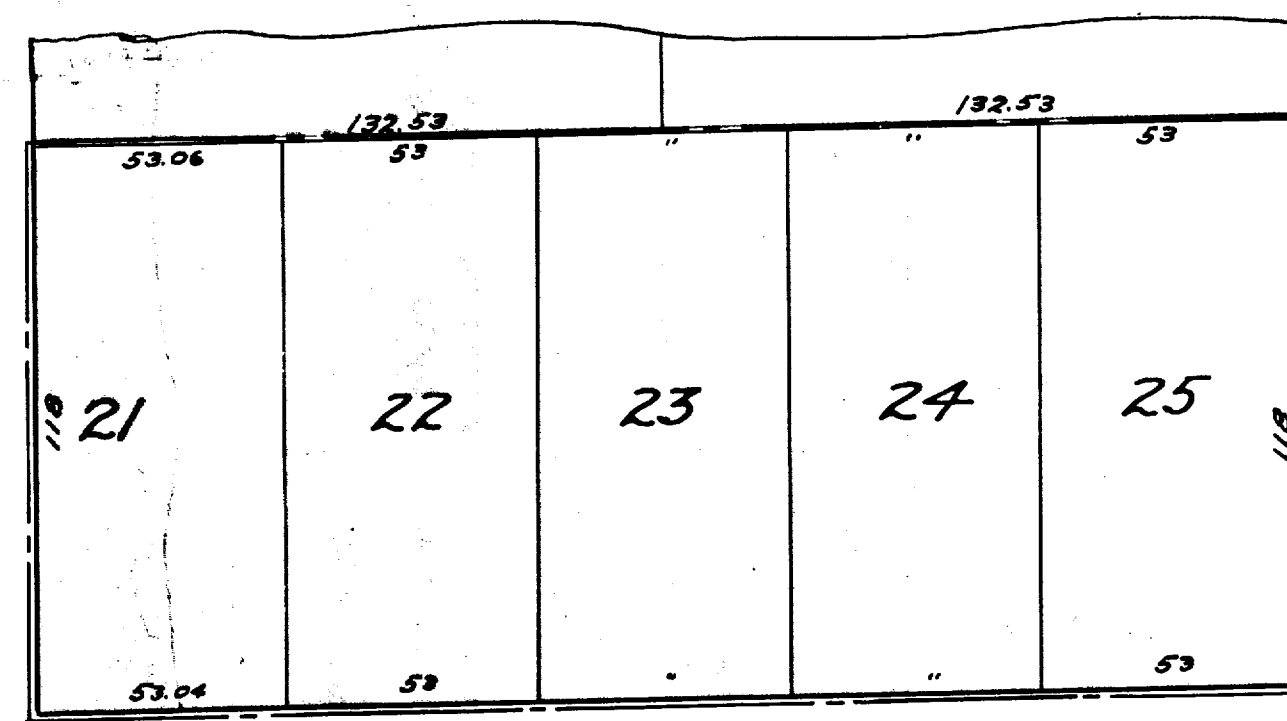
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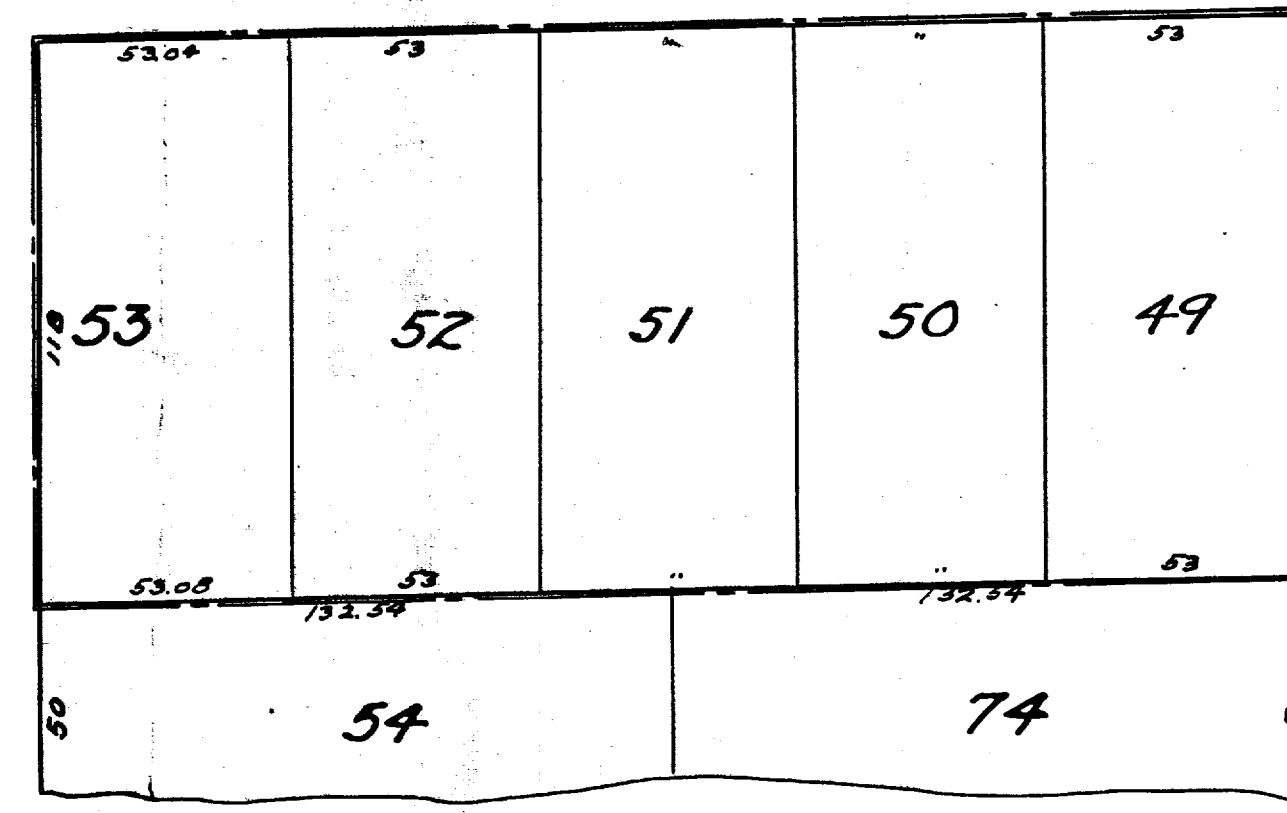
DAVIS AVE.



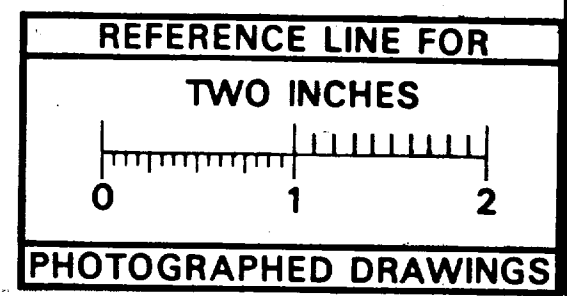
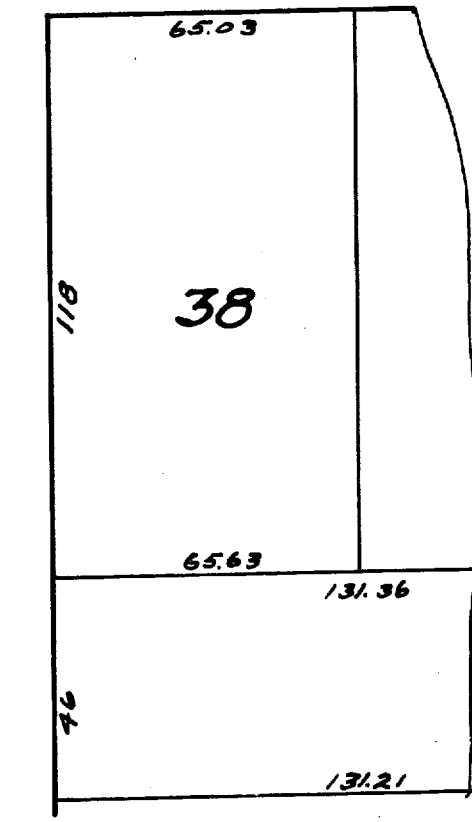
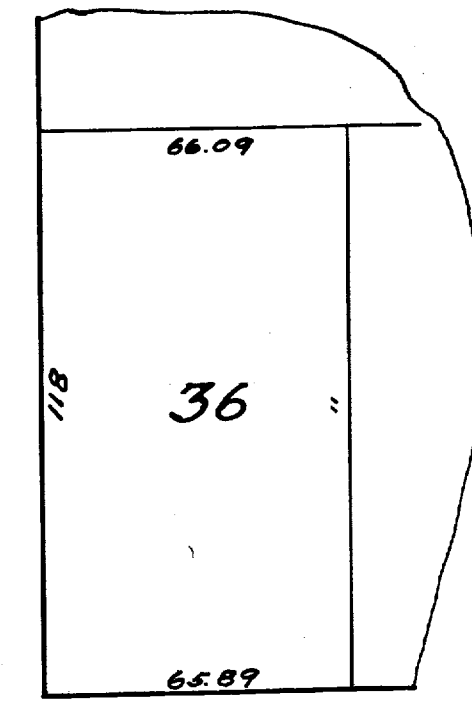
HUTCHINS AVE.



FIFTH ST.



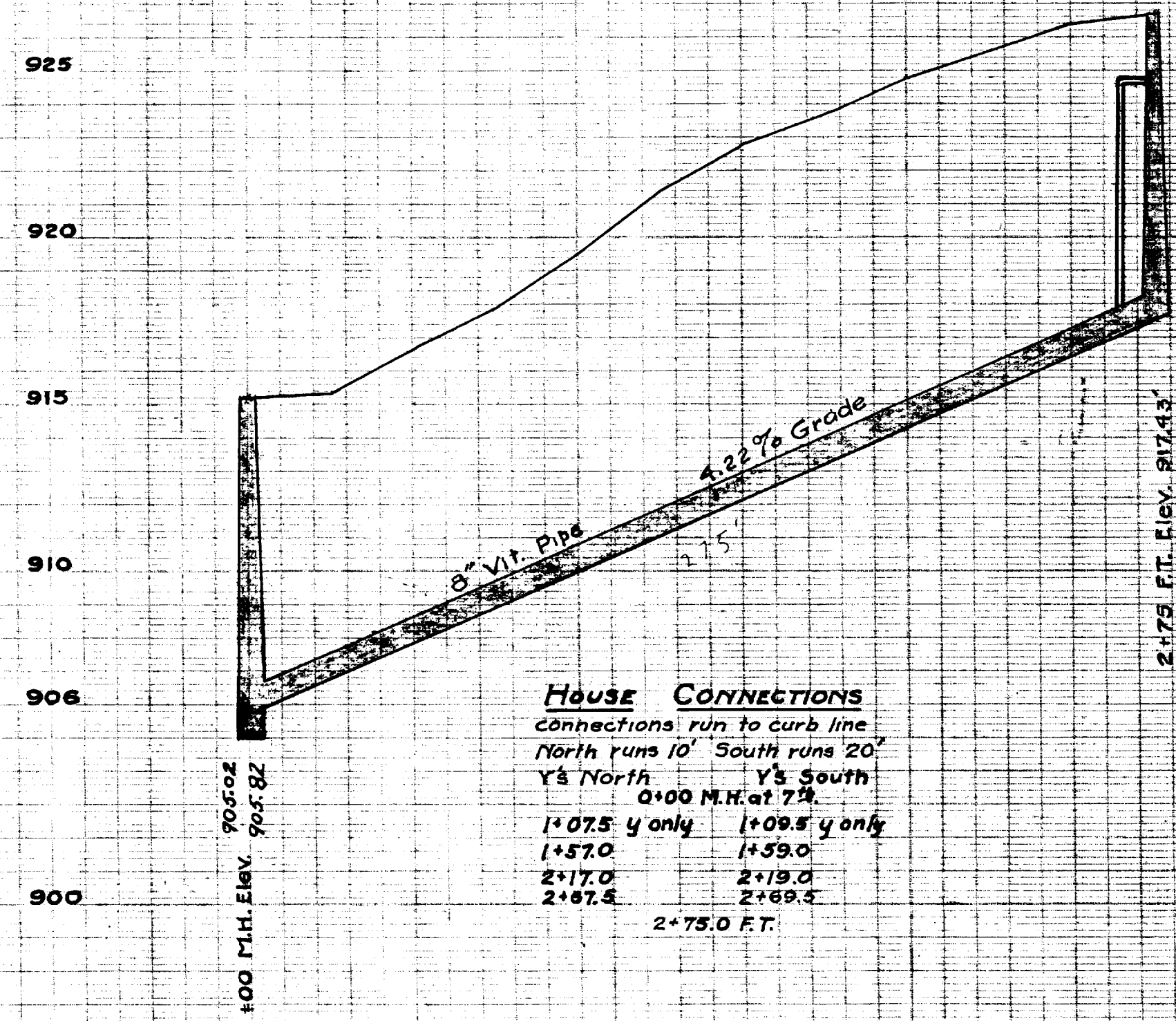
FIFTH ST.



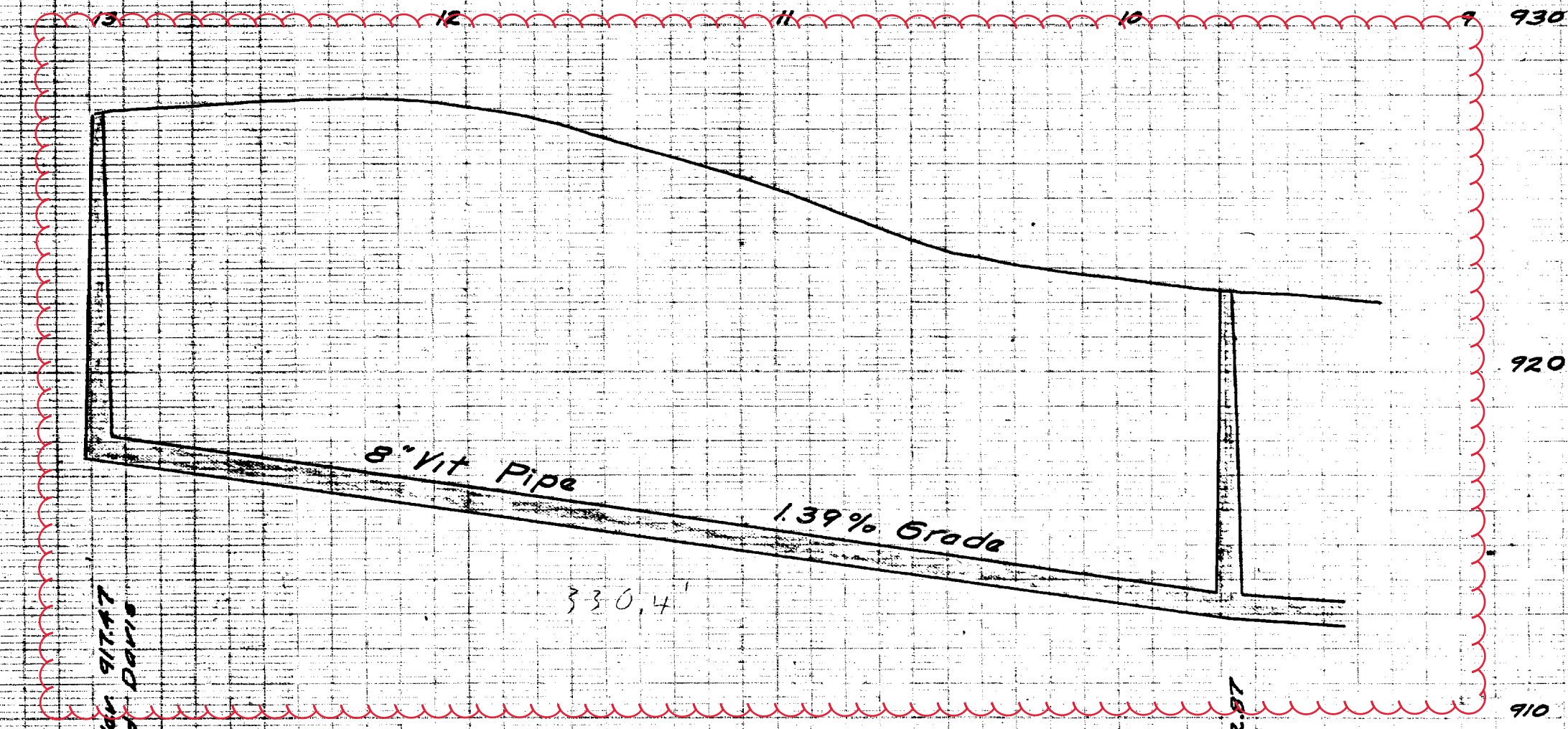
MEASUREMENTS TO HOUSE CONNECTIONS Y's Only 0+00 M.H. @ Wider Place

North	South
1037	1035
1087	1089
1145	1147
1186	1188
1239	1241

968 M.H. @ Fifth  
1298.4 M.H.



House CONNECTIONS  
Connections run to curb line  
North runs 10' South runs 20'  
Y's North Y's South  
0+00 M.H. at 7%  
1+07.5 y only 1+09.5 y only  
1+57.0 1+59.0  
2+17.0 2+19.0  
2+67.5 2+69.5  
2+75.0 FT.



12+00 M.H. @ Hutchins and Davis

9+68 M.H. @ Fifth and Davis

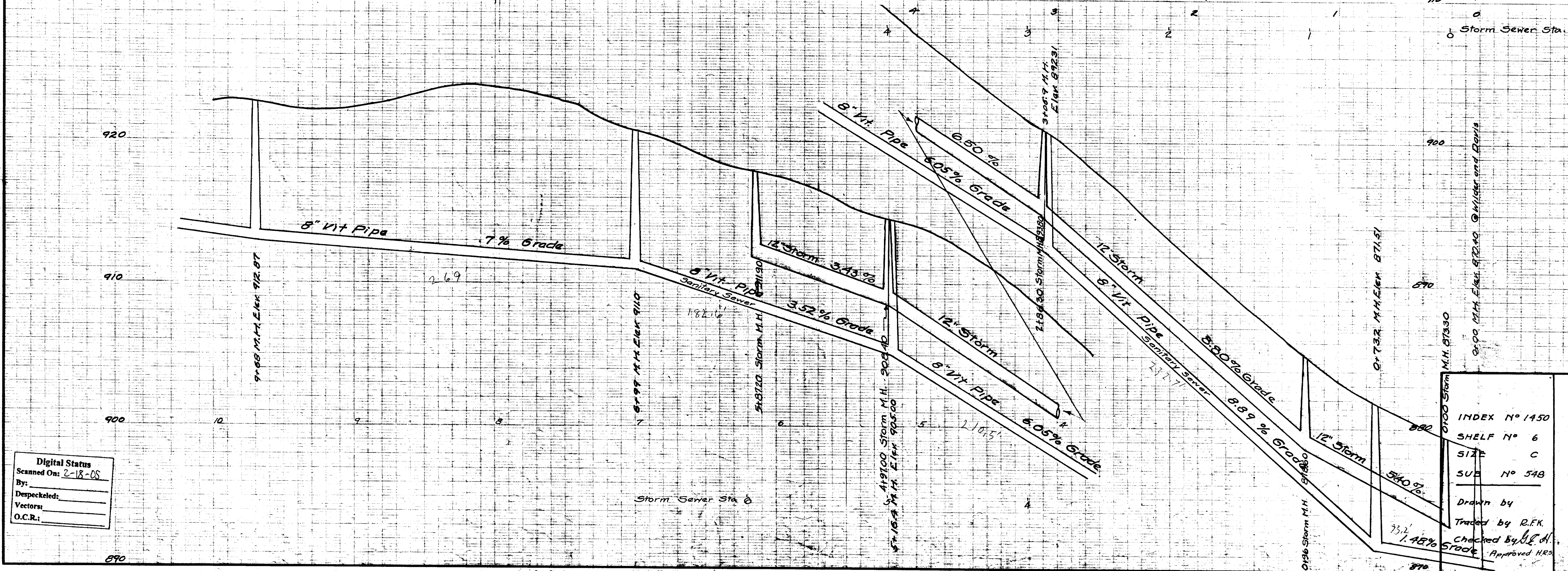
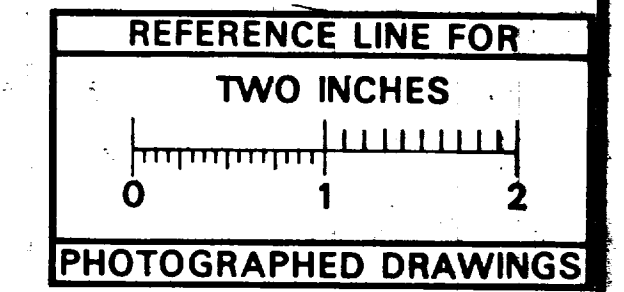
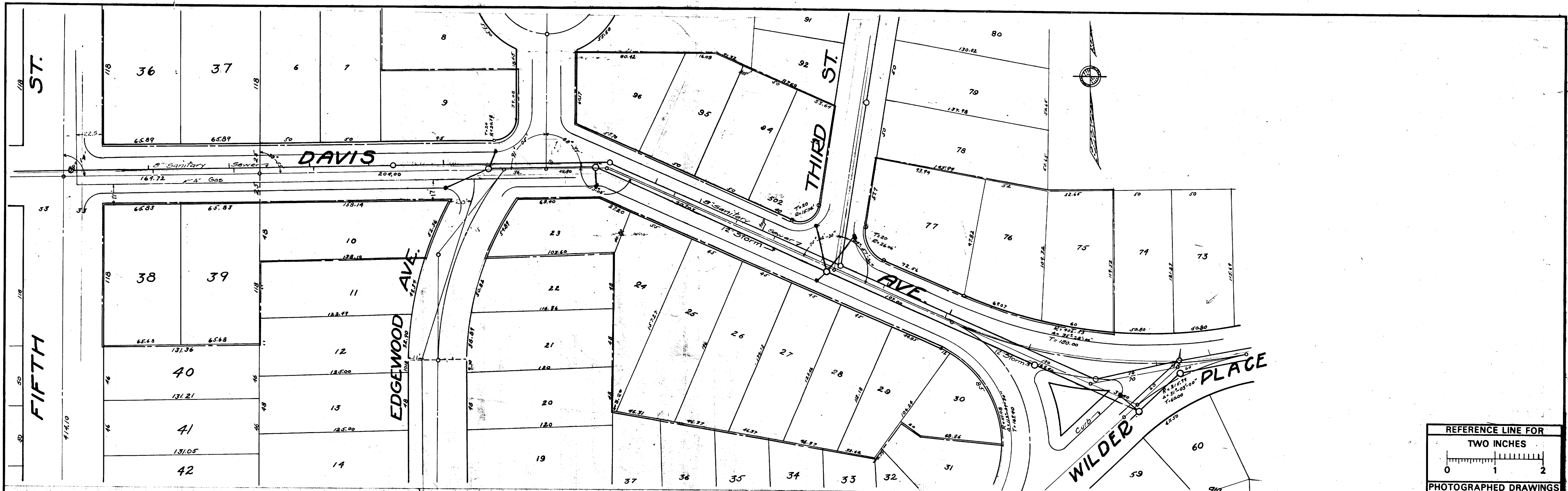
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By: DGM  
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Vector: Yes  
O.C.R.:

SHEET NO.  
INDEX NO. 1449  
SHELF NO. 6  
SIZE C  
SUB NO. 547

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH**  
PLAN AND PROFILE  
OF  
SANITARY SEWER  
ON  
**DAVIS AVENUE**  
SEVENTH ST. TO FIFTH ST.  
Geo. H. Sandenburgh City Engineer  
1924-5-28  
Scale: Plan 1"=40' Profile, Hor. 1"=40' Ver. 1"=4'

Drawn by  
Traced by R.F.J.  
Checked by R.L.A.





MEASUREMENTS TO HOUSE CONNECTIONS Y's Only

0+00 M.H. @ Wilder Place	
North	South
19	0+00 M.H.
133.5	732 M.H. @ 4
205.5	207.5
263	265
376	306 M.H. @ Third
434	321.5
475	365
	400
	458
656.5	516.4 M.H. @ 4
	571
719	699 M.H.
768.5	766.5
835.5	800
903	833.5
	901
	968 M.H. @ Fifth

Digital Status  
Scanned On: 2-18-08  
By:  
Despeckled:  
Vectored:  
O.C.R.:

INDEX N° 1450  
SHELF N° 6  
SIZ C  
SUB N° 548  
Drawn by  
Traced by R.F.K.  
Checked by J.L. d.  
Approved H.R.

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
STORM-SANITARY SEWER  
ON  
**DAVIS AVE.**  
FIFTH ST. TO WILDER PL.  
Geo. H. Sandenburgh City Engineer  
1924-6-14  
Scale: Plan 1"=40' Profile Hor: 1"=40' Vert: 1"=4'



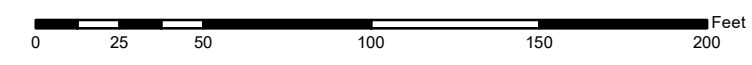


# W Davis Ave.



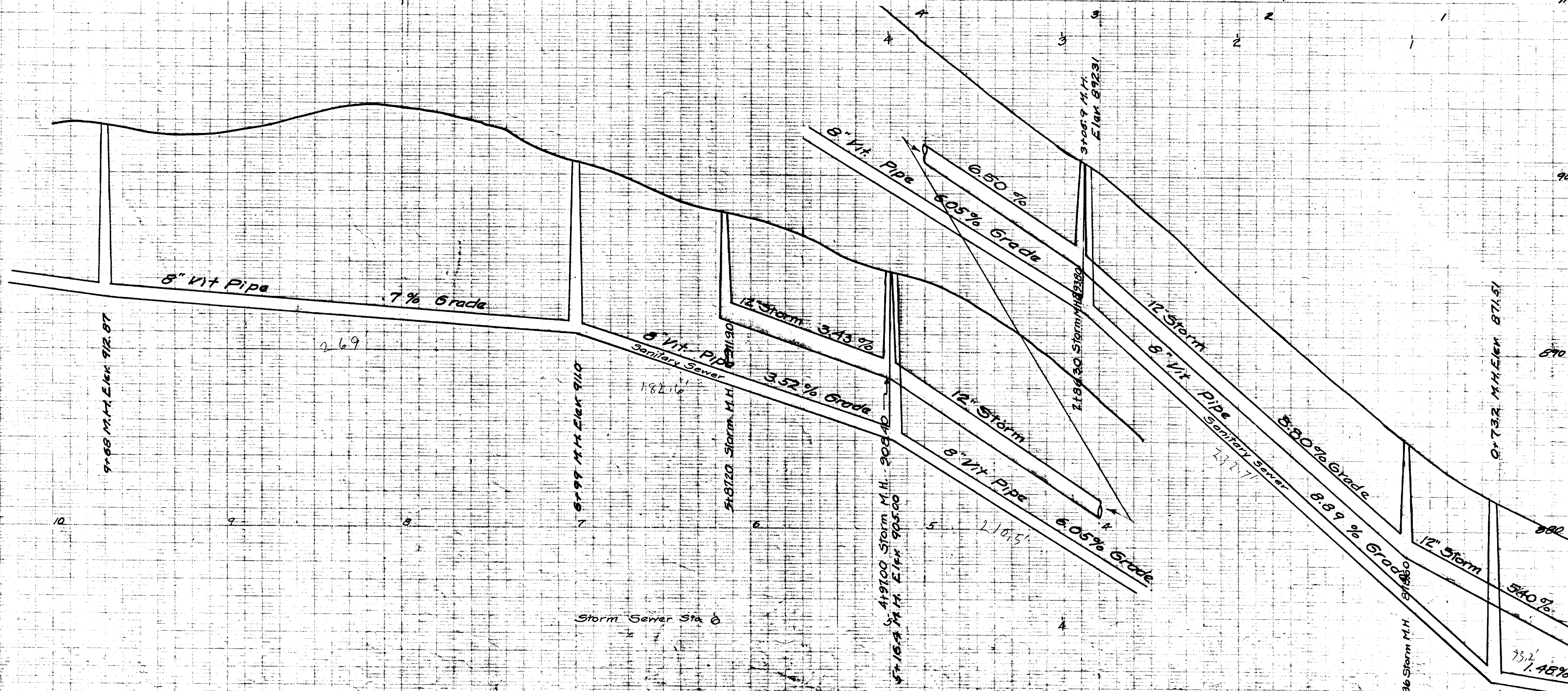
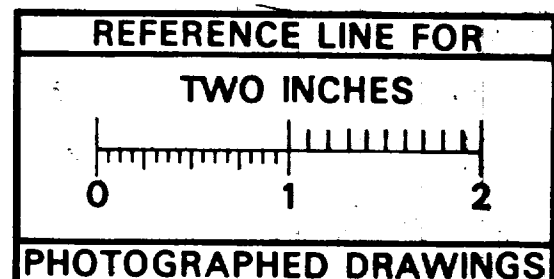
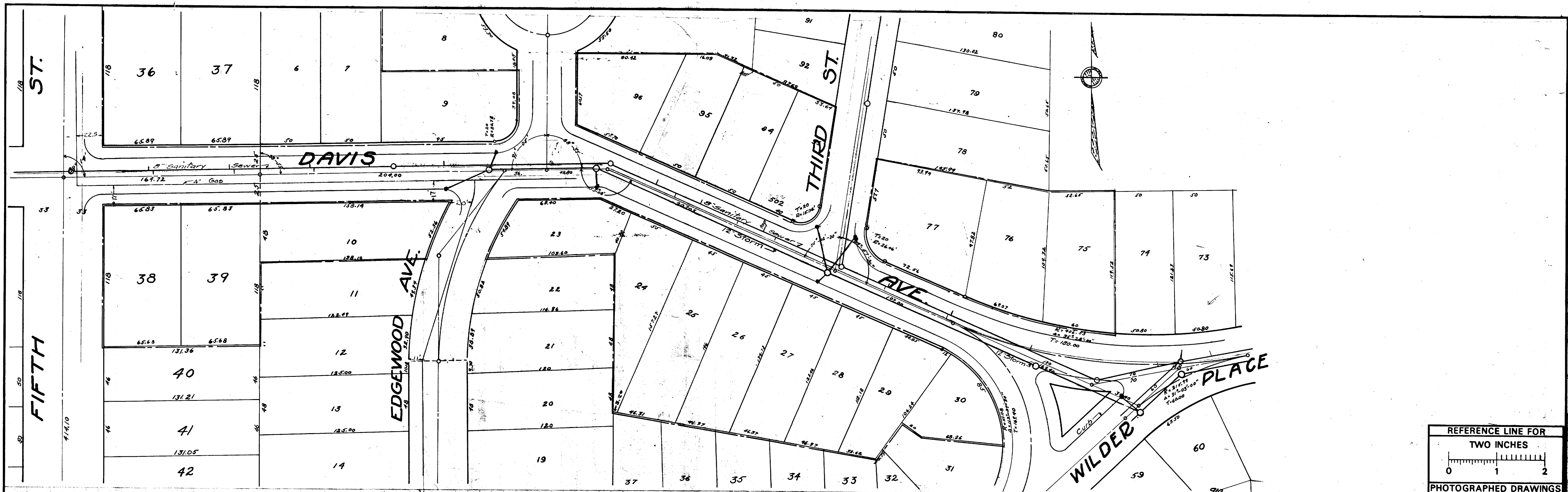
- Manholes
- Sanitary Main
- Proposed Lining
- Sanitary Lateral

71-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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MEASUREMENTS TO HOUSE CONNECTIONS Y's Only 0+00 M.H. @ Wilder Place

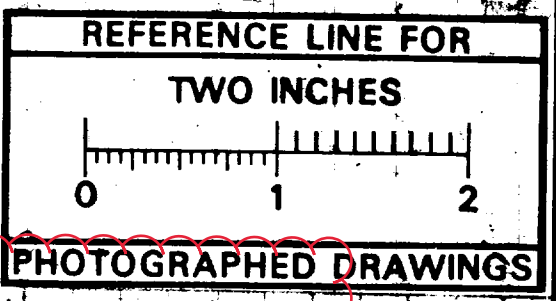
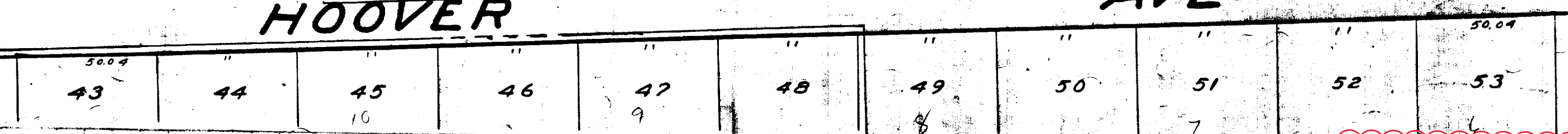
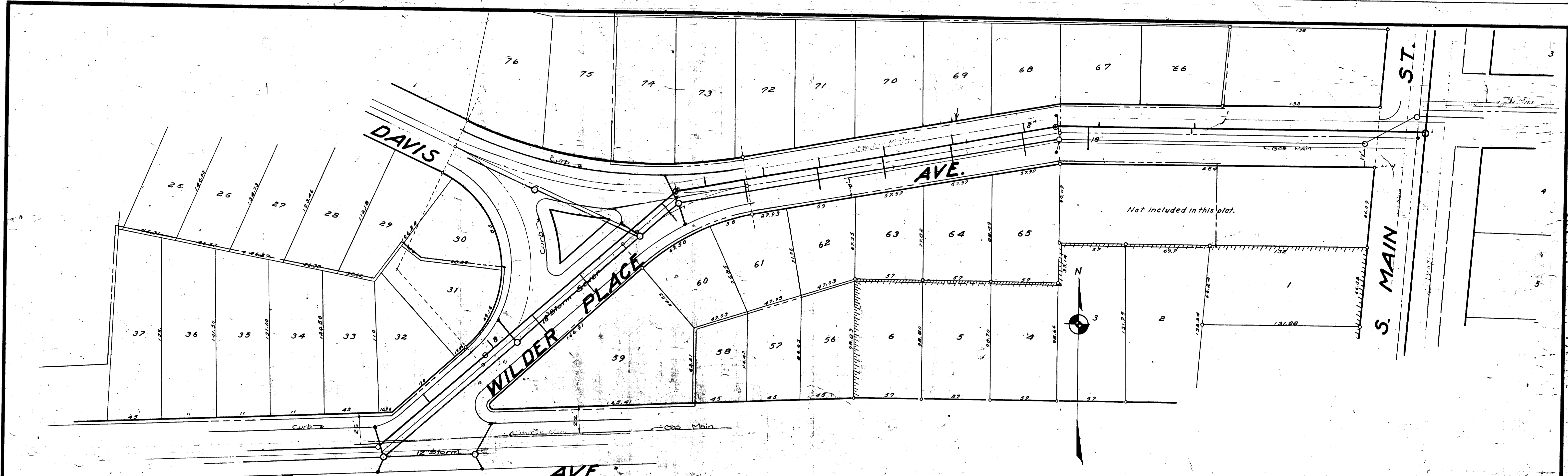
North	0+00 M.H.	South
19	732 M.H. @ 4	2075
133.5		265
205.5		
263	306 M.H. @ Third	3215
376		365
434		400
475		458
	516.4 M.H. @ 4	
656.5	699 M.H.	571
719		766.5
768.5		800
835.5		833.5
903	969 M.H. @ Fifth	901

Digital Status  
Scanned On: 2-18-08  
By:  
Despeckled:  
Vectored:  
O.C.R.:

INDEX N° 1450  
SHELF N° 6  
SIZ C  
SUB N° 548  
Drawn by  
Traced by R.F.K.  
Checked by J.L. d.  
Approved H.R.S.

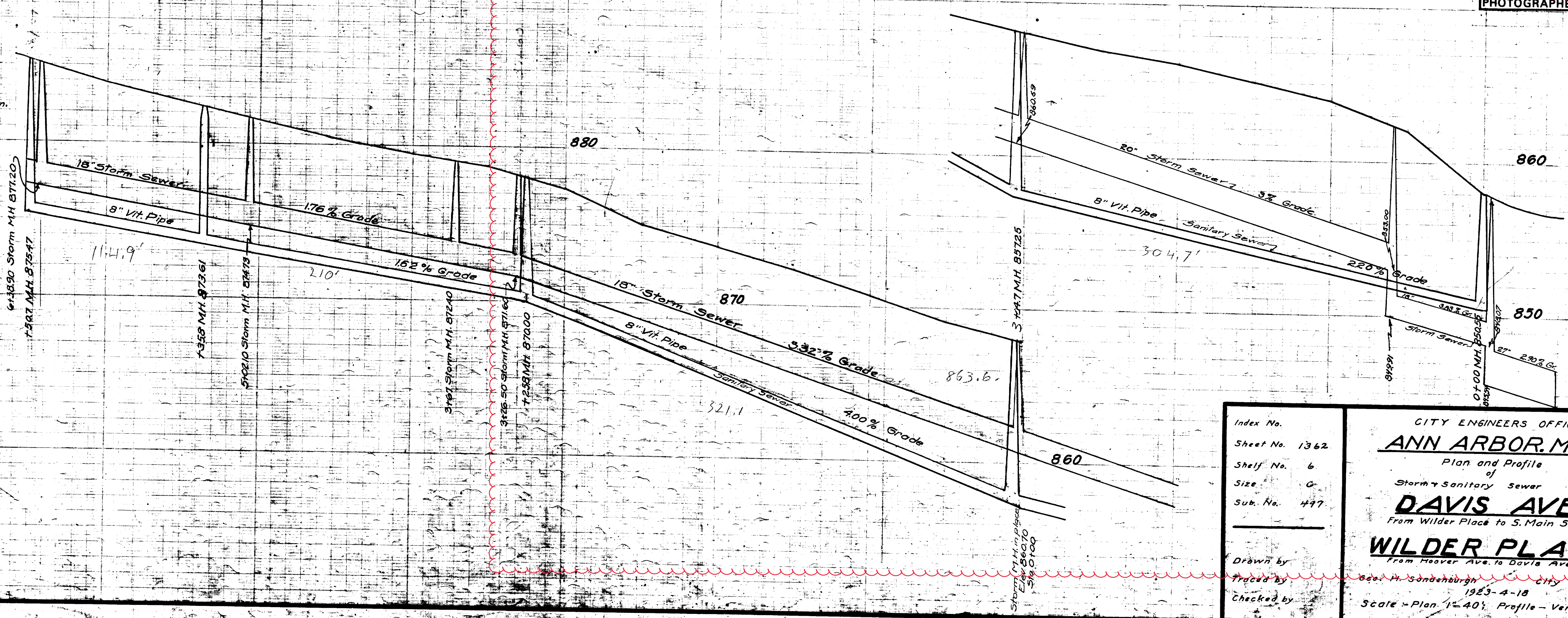
CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
STORM-SANITARY SEWER  
ON  
**DAVIS AVE.**  
FIFTH ST. TO WILDER PL.  
Geo. H. Sandenburgh City Engineer  
1924-6-14  
Scale: Plan 1"=40' Profile Hor: 1"=40' Vert: 1"=4'





**MEASUREMENTS TO HOUSE CONNECTIONS**  
Connections are to curbs where shown.

vs North	vs South
0700 is MH at S. Main St.	1935
273	2825
3058 is MH at Hoover Ave.	
0700	
27	29
882	905
1415	1475
201	203
2485	2645
297	
3202 MH at Wilder & Davis.	
0700 is	
201	15
210 MH.	1035
271	158
3249 - MH at Wilder & Hoover	



Digital Status  
Scanned On: 9-21-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:

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Sheet No.	1362
Shelf No.	6
Size	0
Sub. No.	497
Drawn by	
Traced by	
Checked by	

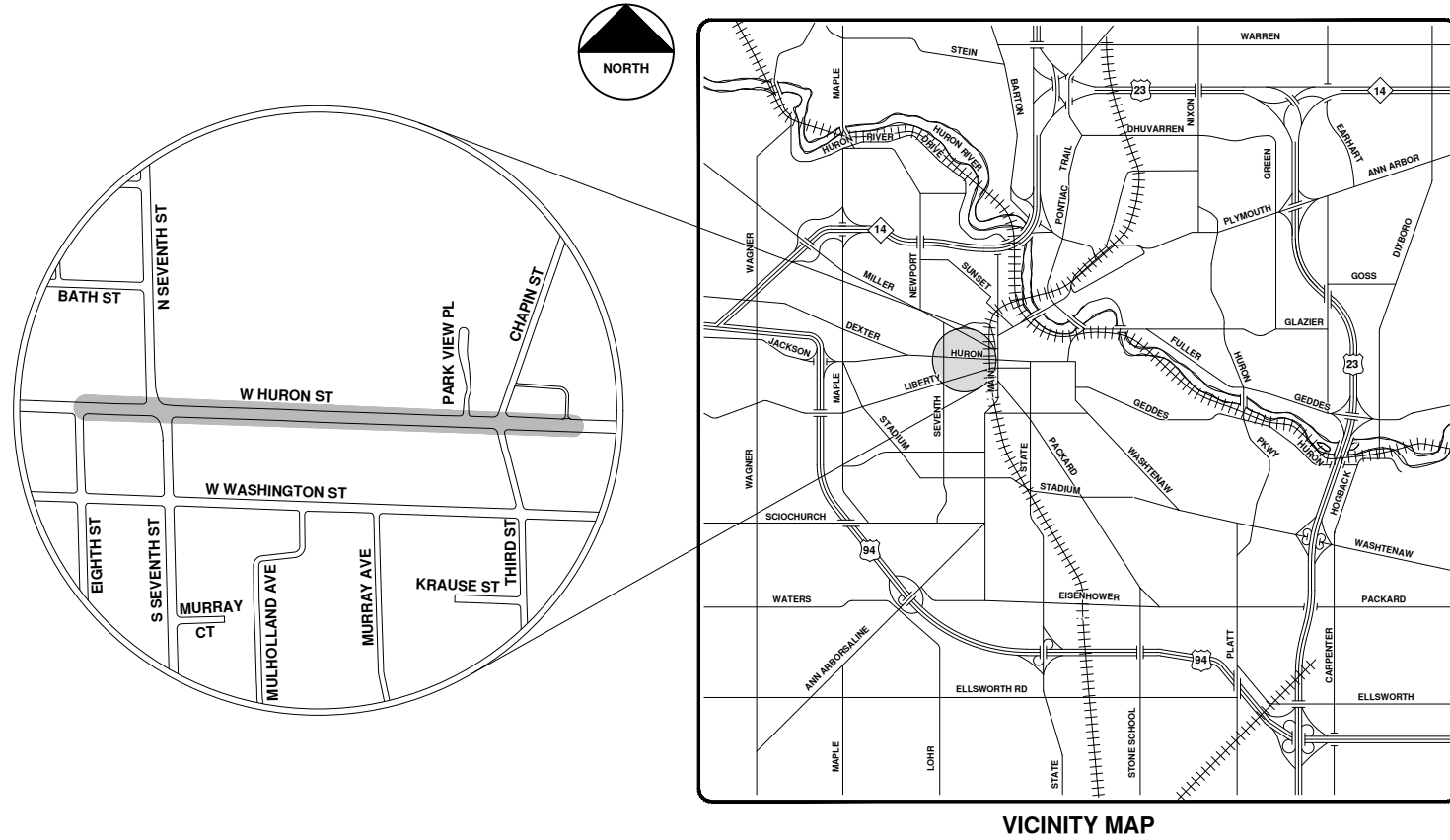
CITY ENGINEERS OFFICE  
**ANN ARBOR, MICH.**  
Plan and Profile  
of  
Storm & Sanitary Sewer  
**DAVIS AVE.**  
From Wilder Place to S. Main Street  
**WILDER PLACE**  
From Hoover Ave. to Davis Ave.  
City Engineer  
1923-4-18  
Scale - Plan 1"=40', Profile - Vertical 1"=4'





# 2020 SEWER LINING PROJECT

## W HURON ST



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:06:35 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-102

SHEET No.  
 102 OF 177





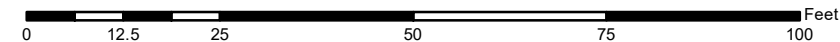
City of Ann Arbor

# W Huron St.



- Manhole
- Not found Manhole
- Catchbasin
- > Storm Main
- AA Proposed Lining
- MDOT Proposed Lining

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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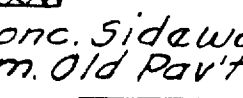



B.M. G - Elev. 839.92  
 M.S.H.D. 789 in SW Root of 18" Elm  
 47' Lt. of Sta. 86+66

Auth. 2004 - 2005  
 This Sheet

Bit. Contr.  
 46 Sqds. Rem. Asp.  
 Surf.

Bit. Contr.  
 46 Sqds. Rem. Asp.  
 Surf.

This Sheet  
 246 sq. yds. Rem. Sidewalk  
 Shown thus   
 1905 sq. ft. 4" Conc. Sidewalk  
 316 sq. yds. Rem. Old Pavt.  
 Shown thus 

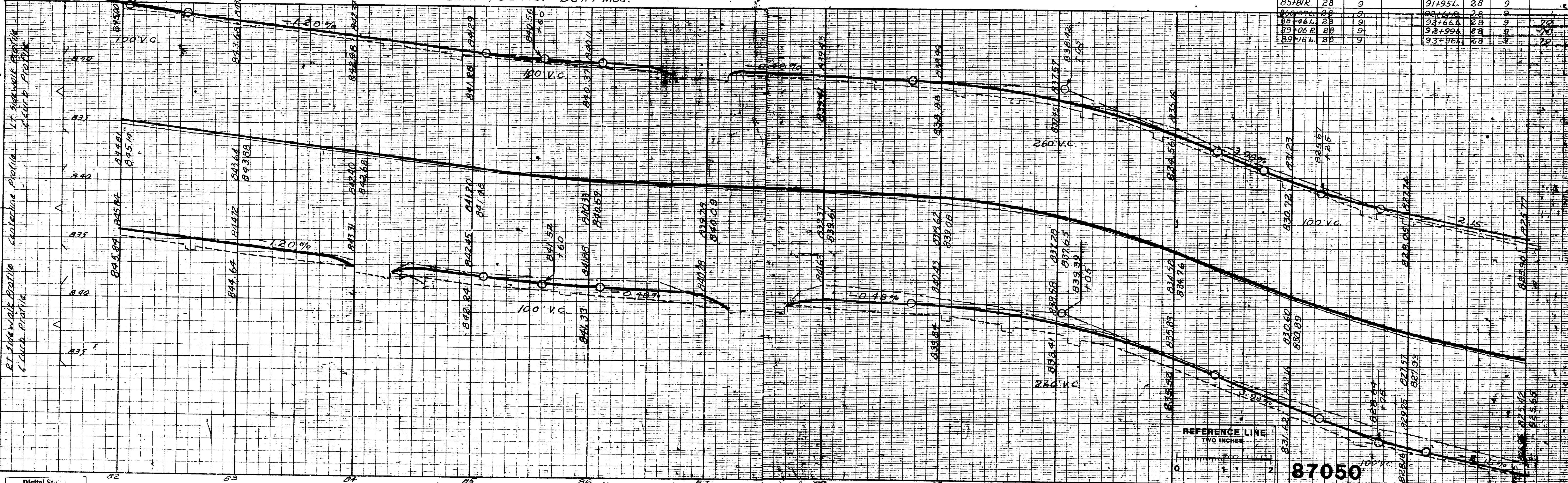
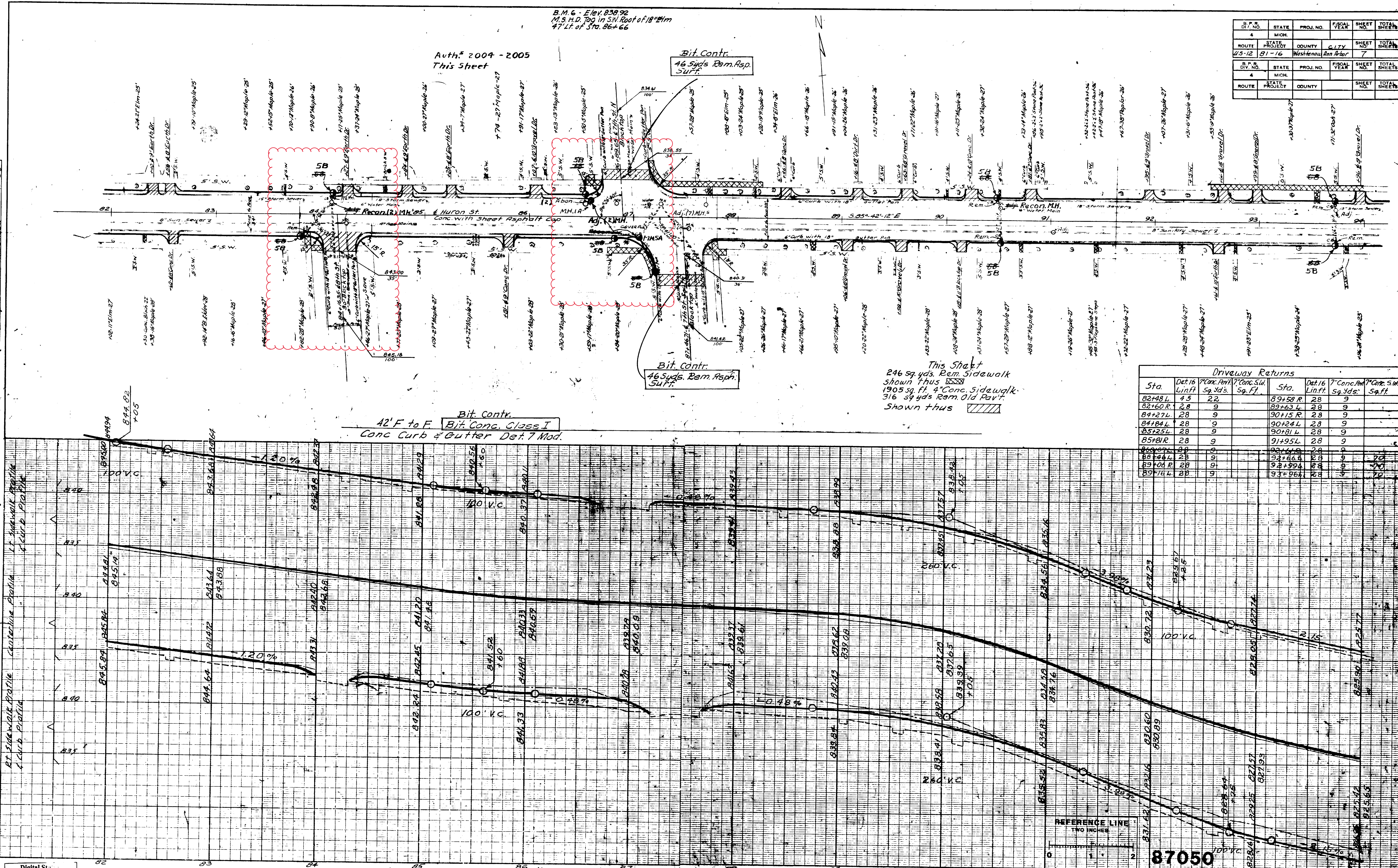
42' F to F Bit. Conc. Class I  
 Conc. Curb & Gutter Det. 7 Mod.

B.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
15-12	01-16	Washtenaw	Ann Arbor	7	
B.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS

OPERATION	DATE
PRELIMINARY R.O.W. CHECKED	
FINAL DESIGN CHECKED	
TRACKED	
FINAL R.O.W. CHECKED	
QUANTITIES CHECKED	
SQUAD	W.W. DeZell
	7-53

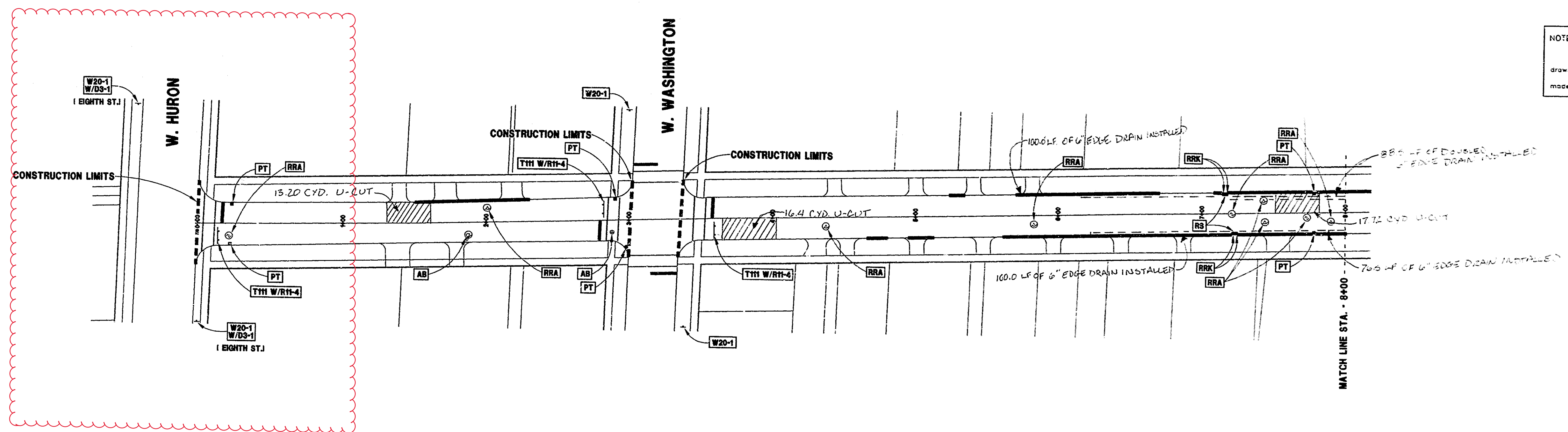
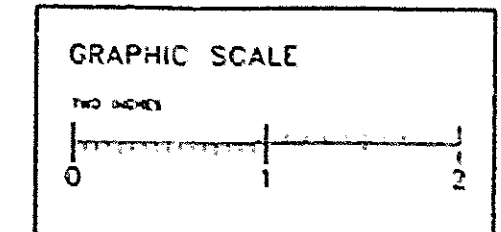
OPERATION	DATE
SURVEYED	
PLAN PLOTTED	
PLAN CHECKED	
PROFILES CHECKED	
PRELIMINARY GRADE	
GRADE INSPECTION	
FINAL INSPECTION	

Driveway Returns							
Sta.	Det. 16 Lin. Ft.	1" Conc. Pavt. Sq. Yds.	1" Conc. Sid. Sq. Ft.	Sta.	Det. 16 Lin. Ft.	1" Conc. Pavt. Sq. Yds.	1" Conc. Sid. Sq. Ft.
82+48 L	4.5	2.2		89+58 R	2.8	9	9
82+60 R	2.8	9		89+63 L	2.8	9	9
84+27 L	2.8	9		90+15 R	2.8	9	9
84+84 L	2.8	9		90+24 L	2.8	9	9
85+25 L	2.8	9		90+81 L	2.8	9	9
85+81 R	2.8	9		91+95 L	2.8	9	9
86+07 L	2.8	9		92+41 R	2.8	9	9
88+46 L	2.8	9		92+86 L	2.8	9	9
89+04 R	2.8	9		92+99 L	2.8	9	9
89+74 L	2.8	9		93+96 L	2.8	9	9





**EIGHTH ST.**  
EM. TO EM. =27.0'



**NOTE**  
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**STREET AS-BUILT INFORMATION**  
THIS STREET WAS MILLED TO A DEPTH OF 3" +/- FULL WIDTH TO EXPOSE A GRAVEL OR BLACK BASE WHICH WAS IN SATISFACTORY CONDITION. FAILING AREAS WERE CUT OUT, REMOVED, UNDERCUT, AND PATCHED. A 4B LEVELING COURSE WAS PLACED AT 1-1/2" DEPTH. THEN A 4C WEARING COURSE WAS PLACED, AT 1-1/2" DEPTH.

**CONSTRUCTION METHOD AND SEQUENCING**

THE WORK TO BE COMPLETED ON THIS STREET SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING ITEMS. THE ORDER OF CONSTRUCTION SHALL BE AS GIVEN UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER.

- IMPLEMENT TRAFFIC MAINTENANCE, AND SOIL EROSION CONTROLS IN ACCORDANCE WITH THE PLANS, AND AS DIRECTED BY THE ENGINEER.
- INSTALL ANY PROPOSED STORM SEWER AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, IN ACCORDANCE WITH THE PLANS, AND AS DIRECTED BY THE ENGINEER.
- LOWER ALL STRUCTURE COVERS, INCLUDING VALVE AND MONUMENT BOXES.
- MILL THREE-INCHES OF MATERIAL FROM EXISTING ROADWAY. THIS MAY INCLUDE GRANULAR ROAD BASE MATERIAL.
- PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND RECOMPACT THE EXISTING ROADBASE AS REQUIRED, AND AS DIRECTED BY THE ENGINEER.
- PAVE 1-1/2 INCHES OF MDO\* 1300L-20AAA LEVELING COURSE IN ONE LIFT.
- ADJUST ALL STRUCTURE COVERS, MONUMENT BOXES, AND VALVE BOXES TO THEIR FINISHED ELEVATIONS.
- PAVE 1-1/2 INCHES OF MDO\* 1300T-20AAA WEARING COURSE IN ONE LIFT.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING ALL CLEAN-UP AND FINAL RESTORATION.
- REMOVE ALL TRAFFIC CONTROL DEVICES.

**ESTIMATED CONSTRUCTION QUANTITIES FOR EIGHTH ST.**

ITEM	ITEM DESCRIPTION	ITEM	EST. QUANTITY
206.	COLD MILL BIT. PAVEMENT	TON	600.00
211.	SUBGRADE UNDERCUTTING TYPE II	CY.	230.00
212.	REMOVE CONCRETE CURB & GUTTER - (ANY)	LF.	1000.00
214.	REM. CONC. SIDEWALK & DRIVE - (ANY)	SF.	260.00
226.	BIT. PVMT. LEVELING, 2C OR 3C	TON	675.00
227.	BIT. PVMT. WEARING, 4B OR 4C	TON	385.00
230.	2 1/2" AA LIMESTONE - C.J.P.	CY.	230.00
240.	CONC. CURB & GUTTER - (ANY)	LF.	700.00
241.	CONC. CURB & GUTTER - (R.E.)	LF.	300.00
244.	6" SIDEWALK OR RAMP - (R.E.)	SF.	160.00
254.	ADJUST DRAINAGE STRU. COVER	EA.	17.00
255.	ADJUST GAS & GATE VALVE BOX	EA.	5.00
257.	LOWER DRAINAGE STRU. COVER	EA.	13.00
258.	LOWER GAS & GATE VALVE BOX	EA.	5.00
260.	DRAINAGE STRUCTURE COVERS	LB.	7160.00
261.	POINT DRAINAGE STRUCTURE	EA.	5.00
262.	TYPE II BARR. - LIGHTED/FURNISH	EA.	68.00
263.	TYPE II BARR. - LIGHTED/OPERATE	EA.	68.00
264.	TYPE III BARR. LIGHTED/FURNISH/OPERATE	EA.	4.00
265.	TEMPORARY SIGNS - TYPE B	SF.	132.00
266.	NO PARKING SIGNS	EA.	40.00

CONSTRUCTION KEY	
C/G	REMOVE AND REPLACE CURB AND GUTTER
C/GHE	REMOVE CURB AND GUTTER, REPLACE WITH CONCRETE CURB AND GUTTER I.E.
C4HE	REMOVE EXISTING RAMP OR SIDEWALK. REPLACE WITH 4" SIDEWALK OR TYPE 1 SIDEWALK RAMP I.E.
CR	REMOVE SIDEWALK, DRIVE OR RAMP.
AA	ADJUST MDOT TYPE A CASTING.
AB	ADJUST GATE VALVE BOX OR MONUMENT BOX.
ADSR	ADDITIONAL DEPTH STRUCTURE REPAIR.
RRA	REMOVE AND REPLACE MDOT TYPE A CASTING ADJUST TO FINISH GRADE.
CPRM	CONCRETE PAVEMENT REPAIR, I.E.
DS	CONSTRUCT 2, 3 OR 4' DIAM. DRAINAGE STRUCTURE.
PT	POINT STRUCTURE.
C4	REMOVE EXISTING RAMP OR SIDEWALK. REPLACE WITH 4" SIDEWALK OR RAMP.
C HE	REMOVE EXISTING DRIVE APPROACH, RAMP OR SIDEWALK. REPLACE WITH 6" OR 8" APPROACH, RAMP, OR SIDEWALK, I.E.
CP	PLACE 4" SIDEWALK OR RAMP.
AK	ADJUST MDOT TYPE K CASTING.
TM	MDOT TYPE II BARRICADE.
TR	MDOT TYPE II BARRICADE.
RRK	REMOVE AND REPLACE MDOT TYPE K CASTING. ADJUST TO FINISH GRADE.
RS	RECONSTRUCT STRUCTURE.
RCP	REMOVE CONC. PAVEMENT - ANY THICKNESS.

TRAFFIC CONTROL & SIGN LEGEND		
QTY.	TYPE	DESCRIPTION
7	W20-1	'CONSTRUCTION AHEAD'
	W20-2	'DETOUR AHEAD'
	W20-5	'RIGHT LANE CLOSED AHEAD'
	W4-2	LANE DROP SYMBOL, RIGHT
	W20-1a	WORKER SYMBOL
	W13-1	'SPEED LIMIT'
	M4-9 L&R	DETOUR (LEFT OR RIGHT ARROW)
4	DS-1	CONVENTIONAL GUIDE
	M4-9a	'DETOUR ENDS'
	M4-10	'DETOUR'
	R0-1 L&R	'ONE WAY' (LEFT & RIGHT)
4	TYPE III	TYPE III LIGHTED BARRICADE
68	TYPE II	TYPE II LIGHTED BARRICADE (DRUM)
4	R11-4	'ROAD CLOSED TO THRU TRAFFIC'
	TYPE A	LIGHTED ARROW, TYPE A
	TYPE B	LIGHTED ARROW, TYPE B

DRAWING SYMBOL LEGEND	
SYMBOL	DESCRIPTION
⊙	EXISTING SANITARY SEWER MANHOLE
⊙	EXISTING STORM SEWER MANHOLE
⊙	EXISTING WATER MAIN VALVE IN WELL
⊙	AMERITECH TELEPHONE VAULT
⊙	MICHCON GAS CO. VALVE BOX/WELL
⊙	WATER MAIN GATE VALVE IN BOX
⊙	SOIL BORING
⊙	EXISTING STORM SEWER INLET
■	MONUMENT BOX
▨	REMOVE AND REPLACE CONC. SIDEWALK
▨	PLACE CONCRETE SIDEWALK
▨	REMOVE & REPLACE CONC. CURB & GUTTER
▨	CONSTRUCTION LIMITS

LEGEND	
EXISTING FENCE	CONTOUR
STORM SEWER & CAT. BAS.	UTILITY POLE & GUY
WATER MAIN & VALVE-IN-WELL	FIRE HYDRANT ASSEMBLY
WATER MAIN & VALVE-IN-BOX	LIGHT POLE
	END SECTION

EXISTING TELEPHONE	
— mbl —	GAS LINE
— g —	CABLE T.V.
— e —	ELECTRIC

EXISTING RD. & GRADE	
—	LEFT EDGE/RD. GRADE
—	RIGHT EDGE/RD. GRADE
—	CURB & GUTTER

PROPOSED SANITARY SEWER & MANHOLE	
— S —	STORM SEWER & CAT. BAS.
— W —	WATER MAIN W/T.H. ASSEM.
—	CONTOUR
—	ROAD & GRADE

PROPOSED CURB & GUTTER	
—	CONTOUR
—	ROAD & GRADE

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	LR. BY	CH. BY
			AS-BUILT	1-98	WAG	
			ORIGINAL ISSUE	1/97	JTB	

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

**EIGHTH ST.**  
W. HURON TO STA. 8+00

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

DRAWING NO.  
**97004-50**

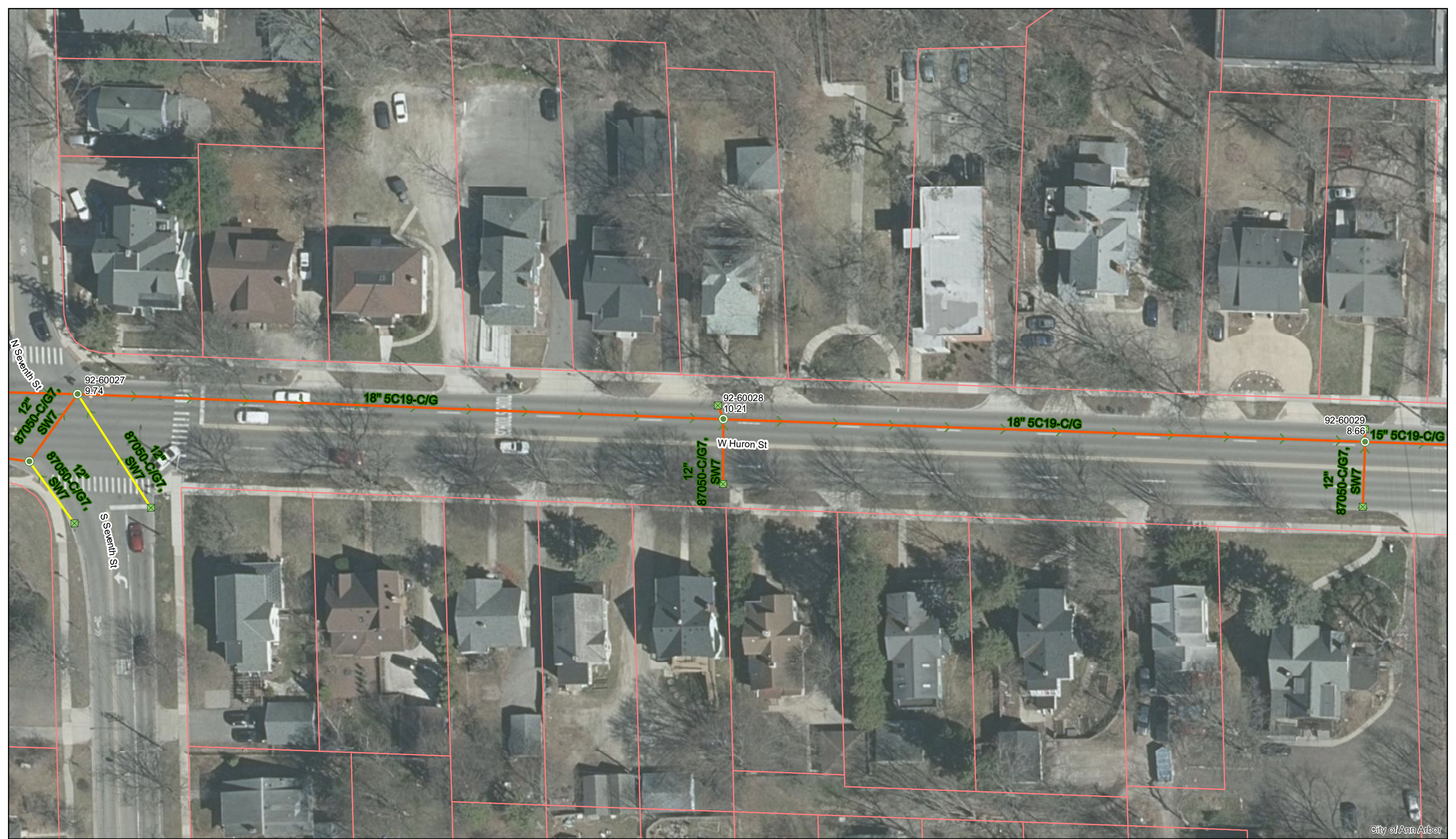
SHEET NO. 50 OF 58

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City of Ann Arbor

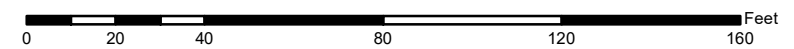
# W Huron St.



- Manhole
- Catchbasin
- Storm Main
- AA Proposed Lining
- MDOT Proposed Lining

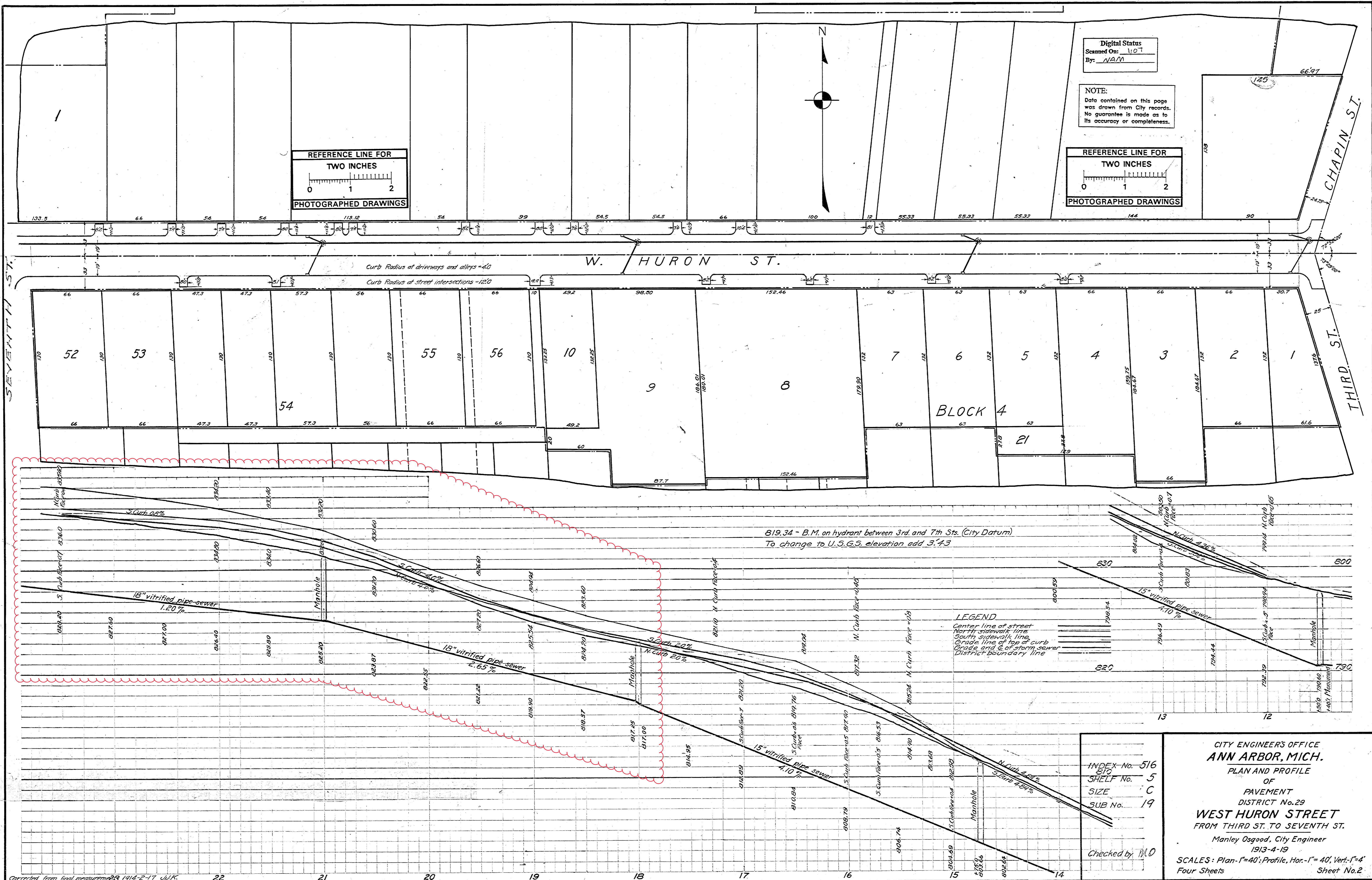
92-XXXXX (Manhole ID)

1.00 (Manhole Depth)



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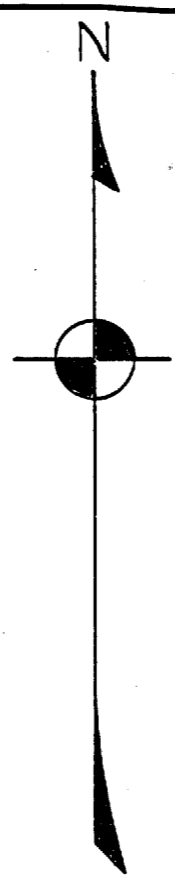


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 By: NAM

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REFERENCE LINE FOR  
 TWO INCHES  
 PHOTOGRAPHED DRAWINGS

REFERENCE LINE FOR  
 TWO INCHES  
 PHOTOGRAPHED DRAWINGS



819.34 - B.M. on hydrant between 3rd and 7th Sts. (City Datum)  
 To change to U.S.G.S. elevation add 3.43

LEGEND  
 Center line of street  
 North sidewalk line  
 South sidewalk line  
 Grade line of top of curb  
 Grade and 2' of storm sewer  
 District boundary line

INDEX No. 516  
 SHELF No. 5  
 SIZE C  
 SUB No. 19

Checked by MLO

CITY ENGINEERS' OFFICE  
 ANN ARBOR, MICH.  
 PLAN AND PROFILE  
 OF  
 PAVEMENT  
 DISTRICT No. 29  
**WEST HURON STREET**  
 FROM THIRD ST. TO SEVENTH ST.  
 Manley Osgood, City Engineer  
 1913-4-19  
 SCALES: Plan-1"=40'; Profile, Hor.-1"=40', Vert.-1"=4'  
 Four Sheets Sheet No. 2

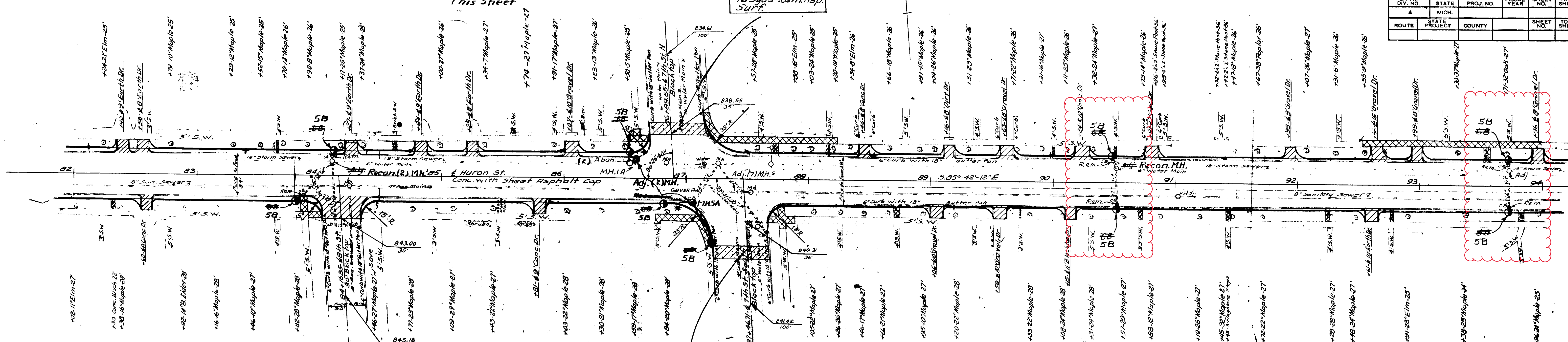


B.M. G - Elev. 839.92  
 M.S.H.D. 789 in S.W. Root of 18" Elm  
 47' Lt. of Sta. 86+66

Auth. 2004 - 2005  
 This Sheet

STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MICH.	01-16	Western	7	7
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.
4	01-16	Western	Ann Arbor	7

OPERATION	DATE
PRELIMINARY R.O.W. CHECKED	
FINAL DESIGN CHECKED	
TRACKED	
FINAL R.O.W. CHECKED	
QUANTITIES CHECKED	
SQUAD	W.D. DeZell



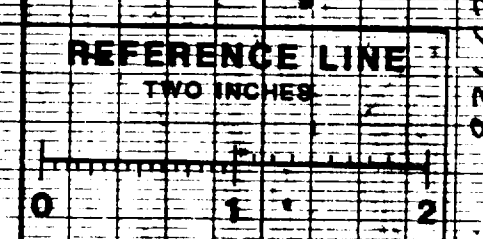
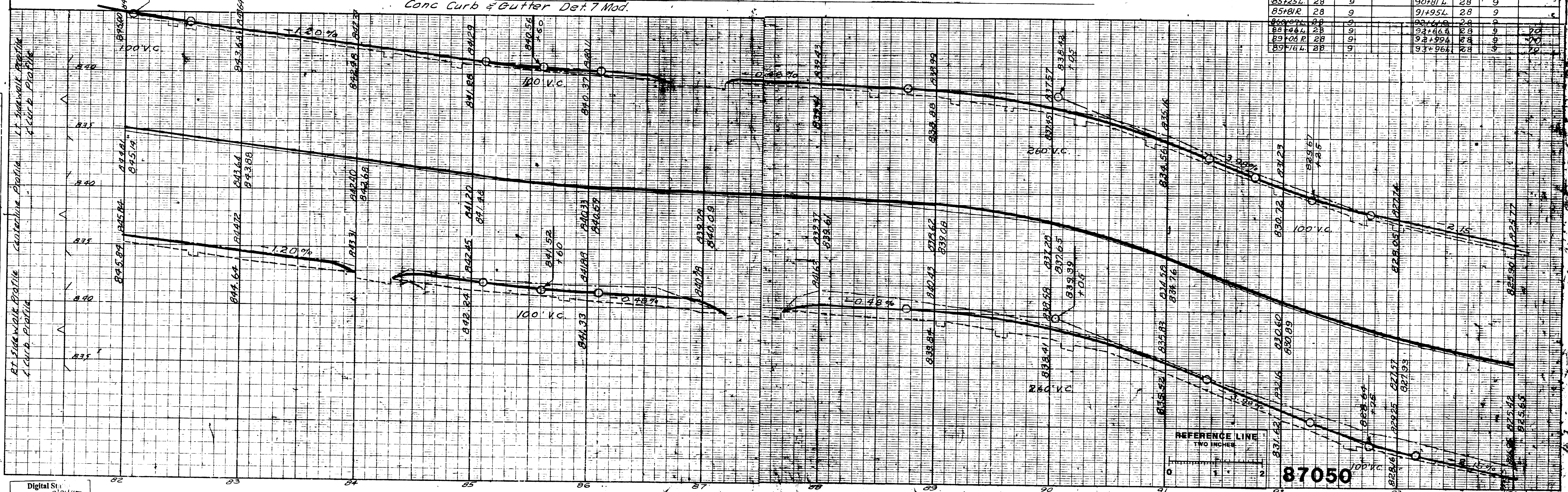
Bit. Contr.  
 46 Sqds. Rem. Asp. Surf.

This Sheet  
 246 sq. yds. Rem. Sidewalk  
 Shown thus   
 1905 sq. ft. 4" Conc. Sidewalk  
 316 sq. yds. Rem. Old Pavt.  
 Shown thus

42' F to F Bit. Contr. Class I  
 Conc. Curb & Gutter Det. 7 Mod.

Sta.	Det. 16 Lin. Ft.	1" Conc. Pavt. Sq. Yds.	1" Conc. Sid. Sq. Ft.	Sta.	Det. 16 Lin. Ft.	1" Conc. Pavt. Sq. Yds.	1" Conc. Sid. Sq. Ft.
82+48 L	4.5	2.2		89+58 R	2.8	9	
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86+07 L	2.8	9		92+41 R	2.8	9	
88+46 L	2.8	9		92+86 L	2.8	9	70
89+04 R	2.8	9		92+99 R	2.8	9	70
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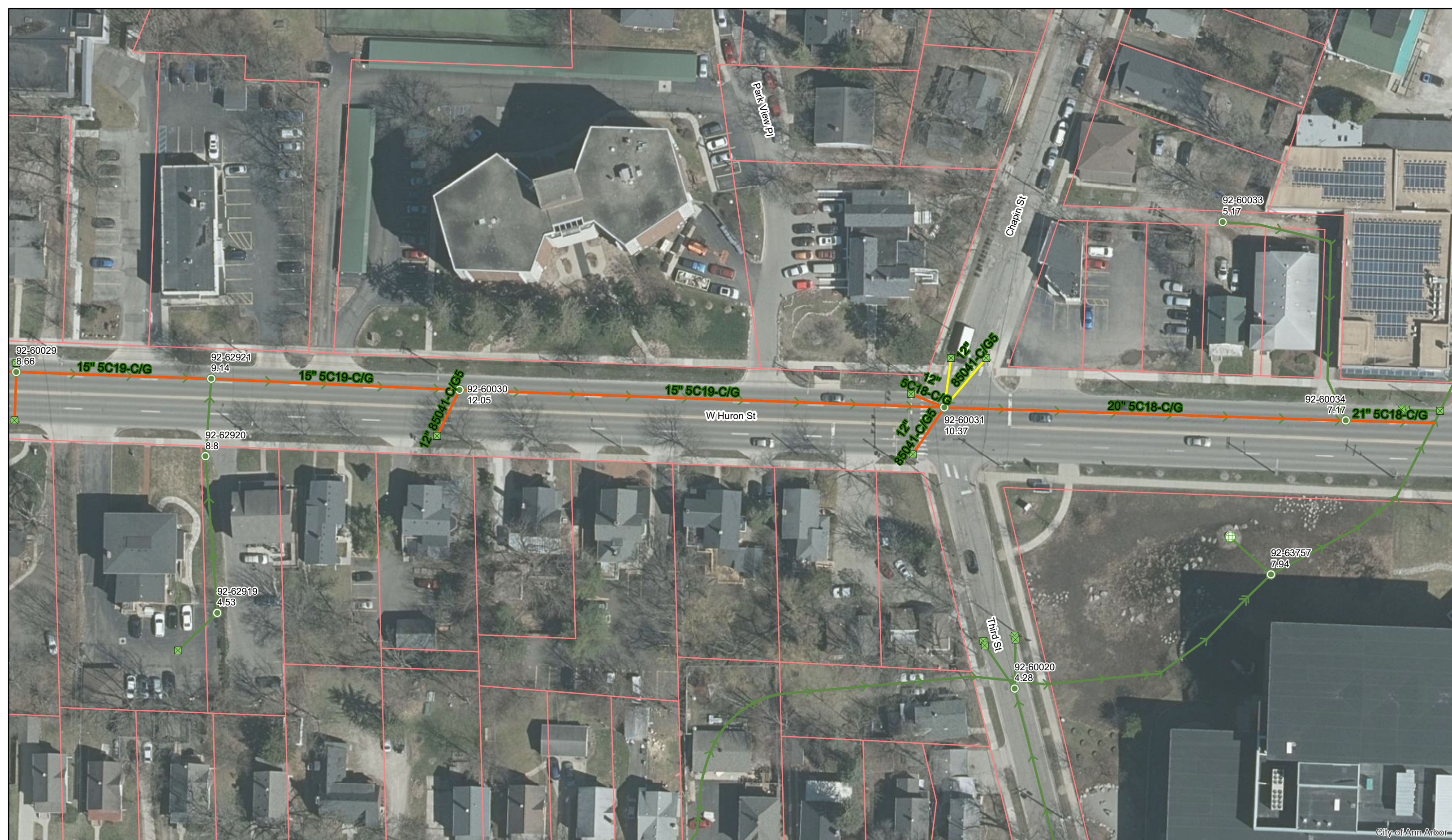
OPERATION	DATE
PLAN PLOTTED	12-22-05
PLAN CHECKED	M. J. Anderson
PROPOSED	M. J. Anderson
PRELIMINARY GRADE	
GRADE INSPECTION	
FINAL INSPECTION	



87050

Digital St.  
 Scanned On: 8/24/05  
 By: LLS



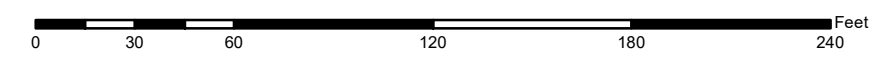


# W Huron St.



	Manhole		Storm Main
	Catchbasin		AA Proposed Lining
			MDOT Proposed Lining

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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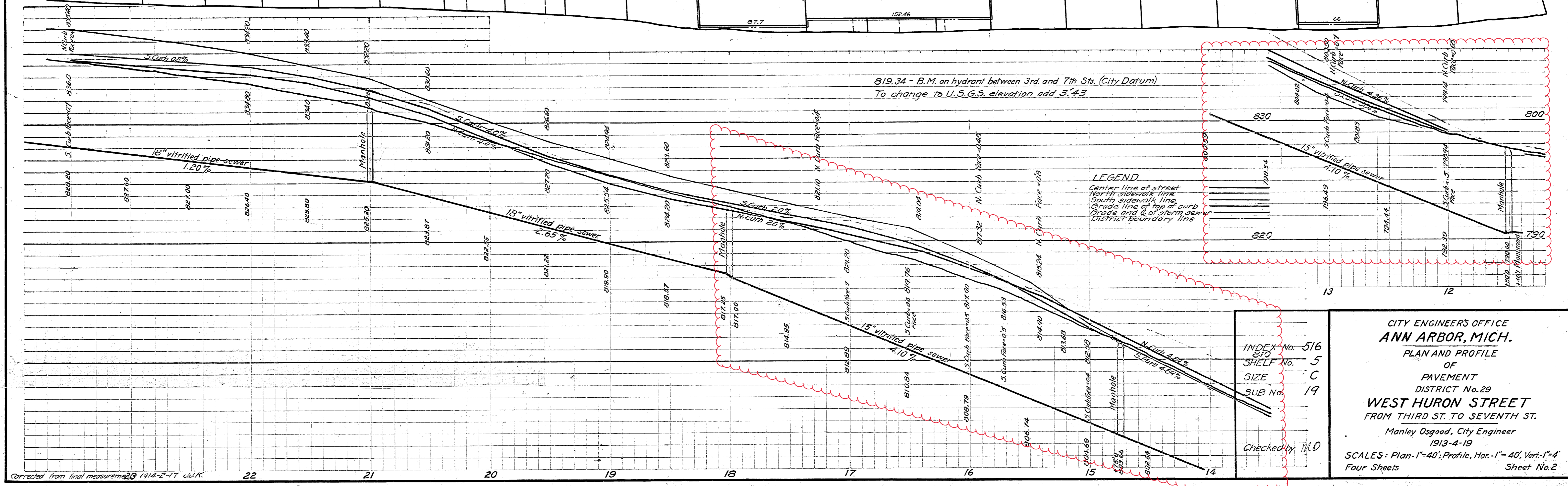


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By: NAM

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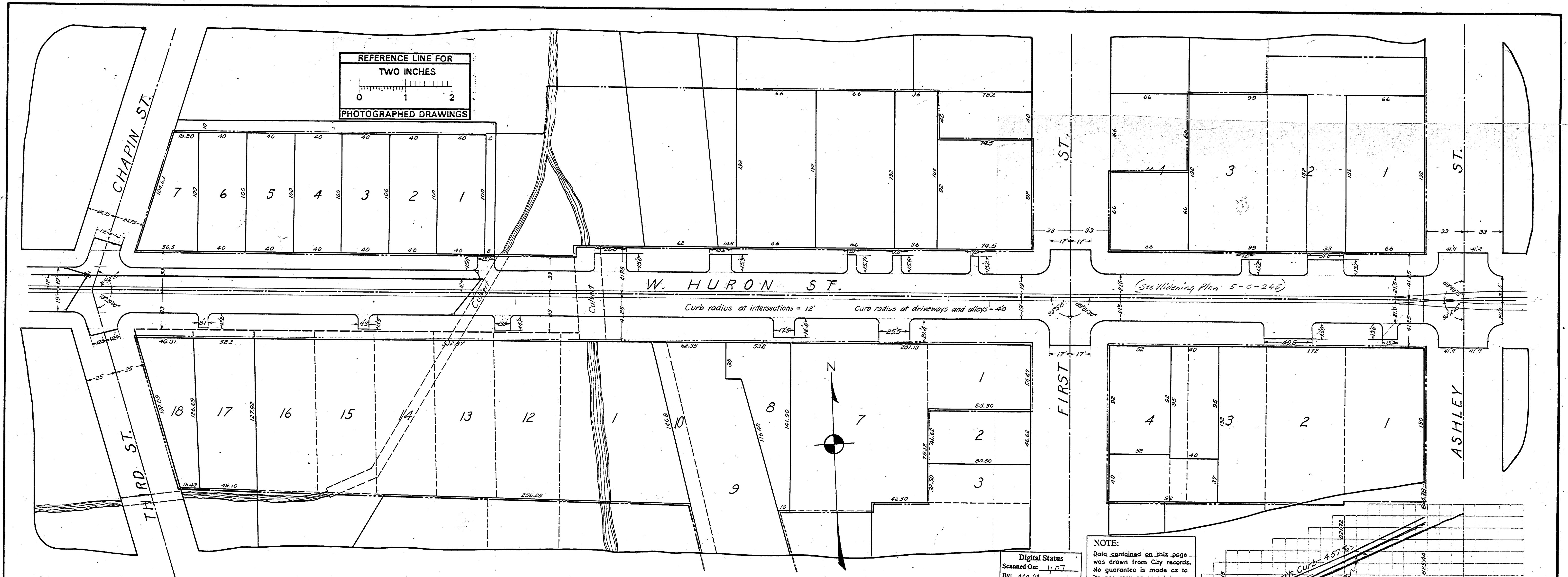
LEGEND  
Center line of street  
North sidewalk line  
South sidewalk line  
Grade line of top of curb  
Grade and 2' of storm sewer  
District boundary line

INDEX No. 516  
SHELF No. 5  
SIZE C  
SUB No. 19

Checked by MLD

CITY ENGINEER'S OFFICE  
ANN ARBOR, MICH.  
PLAN AND PROFILE  
OF  
PAVEMENT  
DISTRICT No. 29  
**WEST HURON STREET**  
FROM THIRD ST. TO SEVENTH ST.  
Manley Osgood, City Engineer  
1913-4-19  
SCALES: Plan-1"=40'; Profile, Hor.-1"=40', Vert.-1"=4'  
Four Sheets Sheet No. 2





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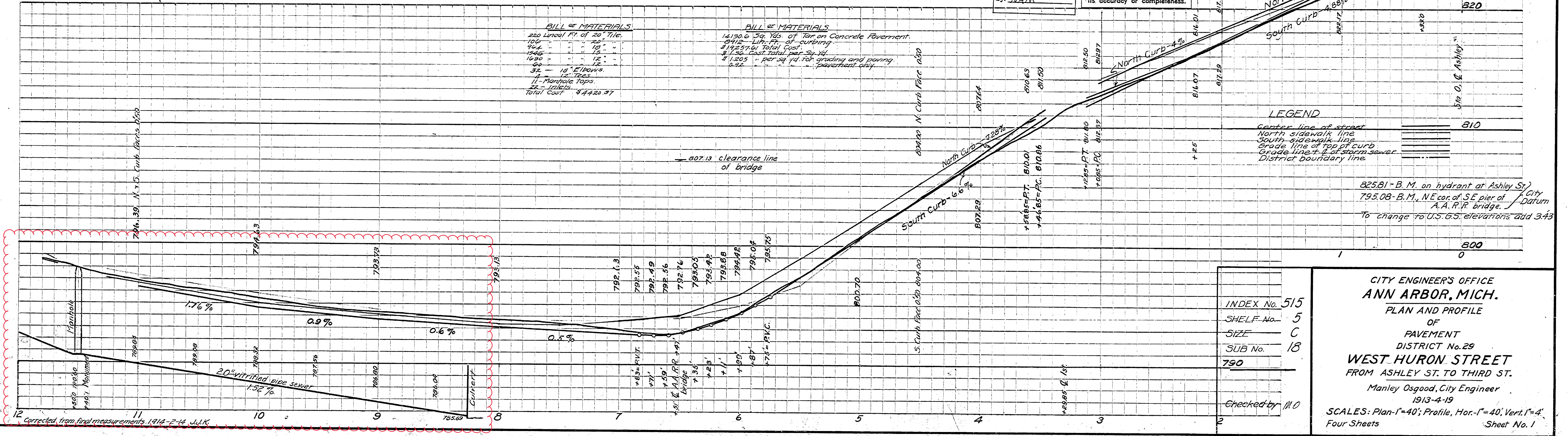
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BILL OF MATERIALS

220	Linear Ft. of 20" Pipe
100	" " " " " "
404	" " " " " "
1040	" " " " " "
60	" " " " " "
34	" " " " " "
11	" " " " " "
24	" " " " " "
Total Cost \$4742.97	

BILL OF MATERIALS

14190.6	Sq. Yds. of Top on Concrete Pavement
2914	Lin. Ft. of Curbing
\$12571.61 Total Cost	
\$1.26 Cost total per sq. yd.	
\$1.205 per sq. yd. for grading and paving	
.234 " " " " " " " " " " " "	



INDEX No. 515  
SHELF No. 5  
SIZE C  
SUB No. 18  
750

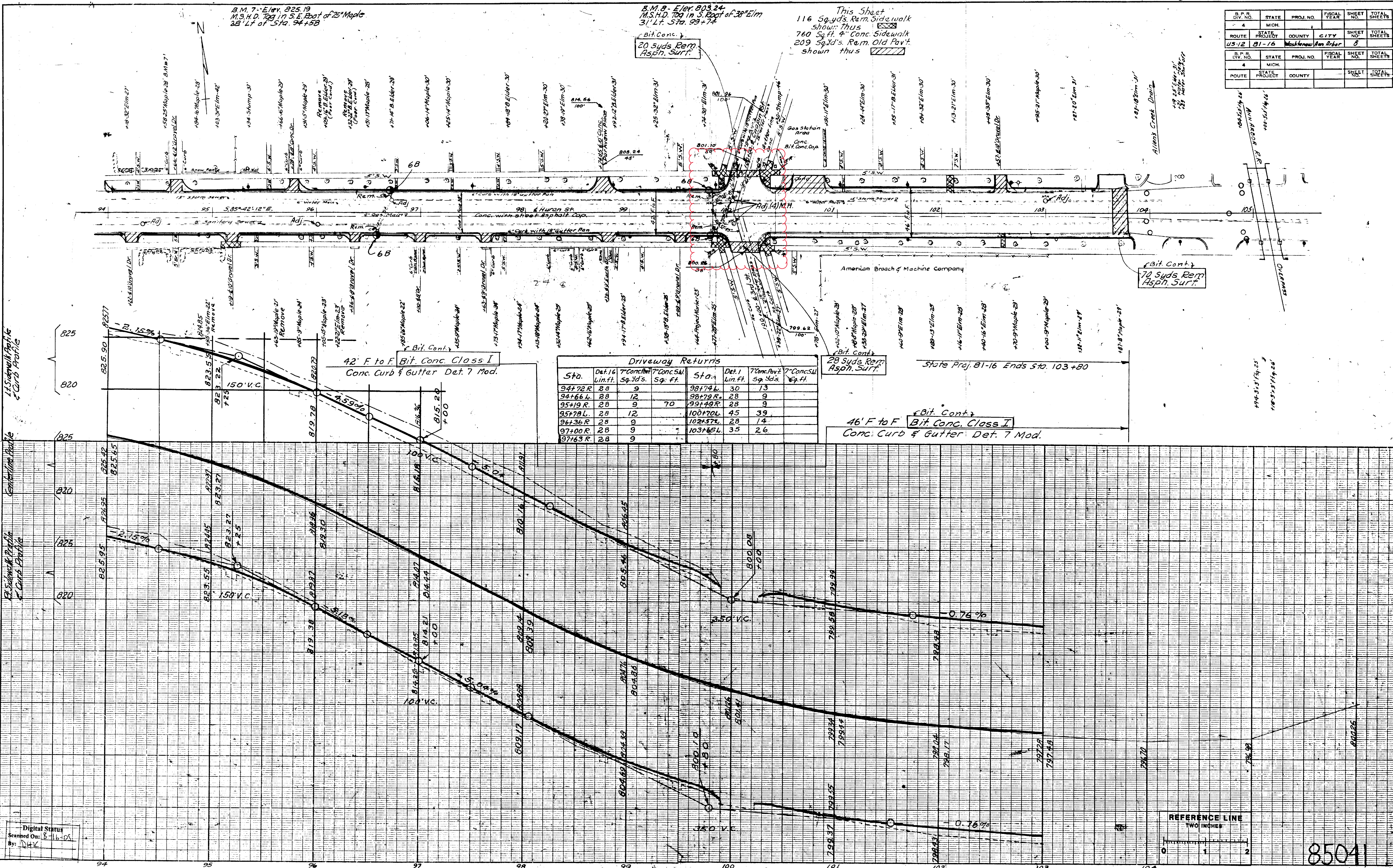
CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
PAVEMENT  
DISTRICT No. 29  
**WEST HURON STREET**  
FROM ASHLEY ST. TO THIRD ST.  
Manley Osgood, City Engineer  
1913-4-19  
SCALES: Plan-1"=40'; Profile, Hor.-1"=40', Vert.-1"=4'  
Four Sheets Sheet No. 1

Corrected from final measurements 1914-2-14 J.W.K.



OPERATION	DATE
PRELIMINARY A.O.W. CHECKED	
FINAL DESIGN CHECKED	
FRAGED	
FINAL R.O.W. CHECK	
QUANTITIES CHECKED	
SQUAD	W. W. DeLuz

OPERATION	DATE
PLAN PLOTTED	2-52
PLAN CHECKED	2-52
PROFILE PLOTTED	1-53
PRELIMINARY GRADE	3-53
GRADE INSPECTION	
FEDERAL INSPECTION	



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
US-12	81-16	Washtenaw	Ann Arbor	8	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS

REFERENCE LINE  
TWO INCHES

85041

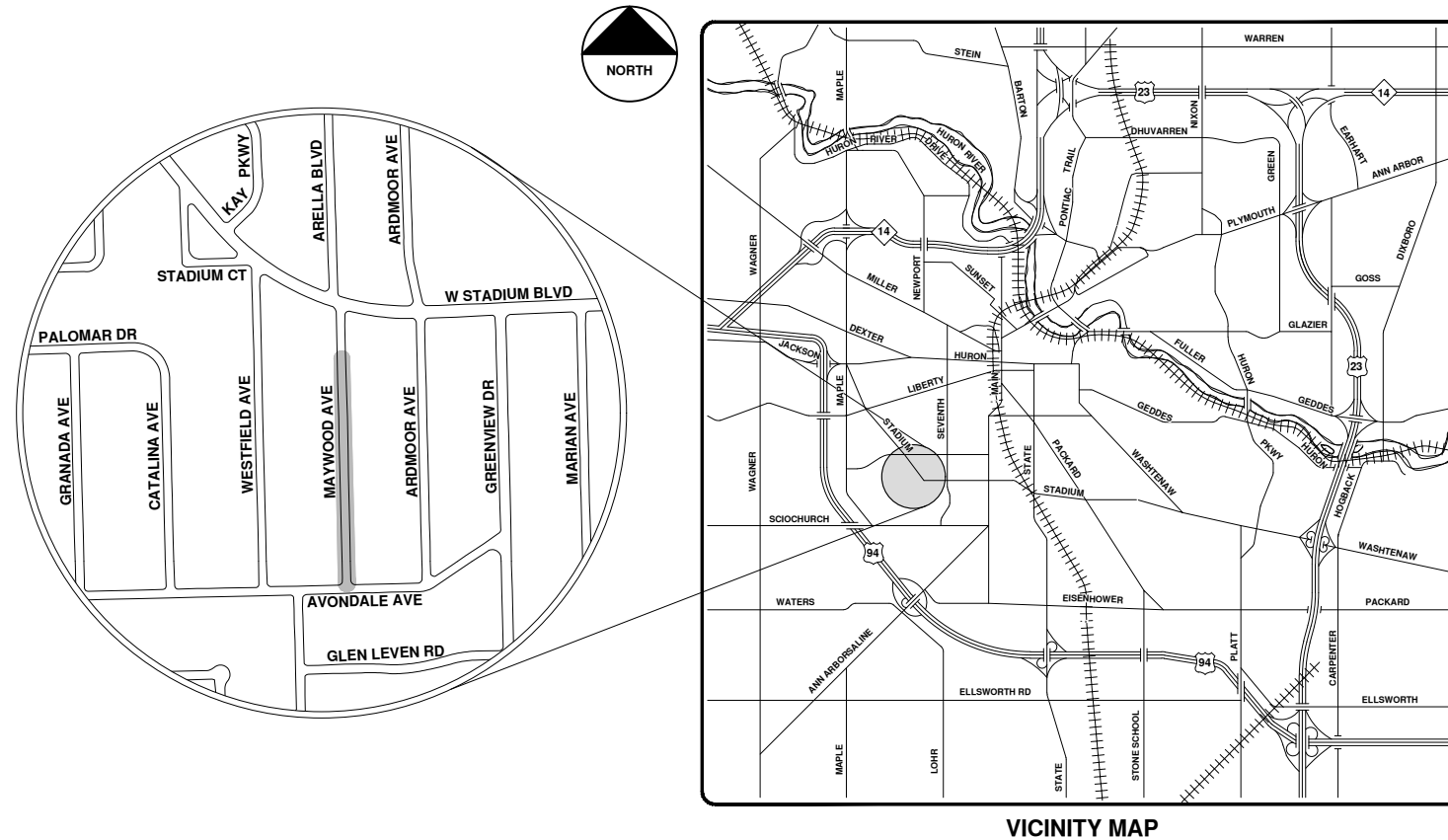
FILE NO. 81-16-06  
SHEET 8





# 2020 SEWER LINING PROJECT

## MAYWOOD AVE



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:06:40 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IVK

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
 www.a2gov.org

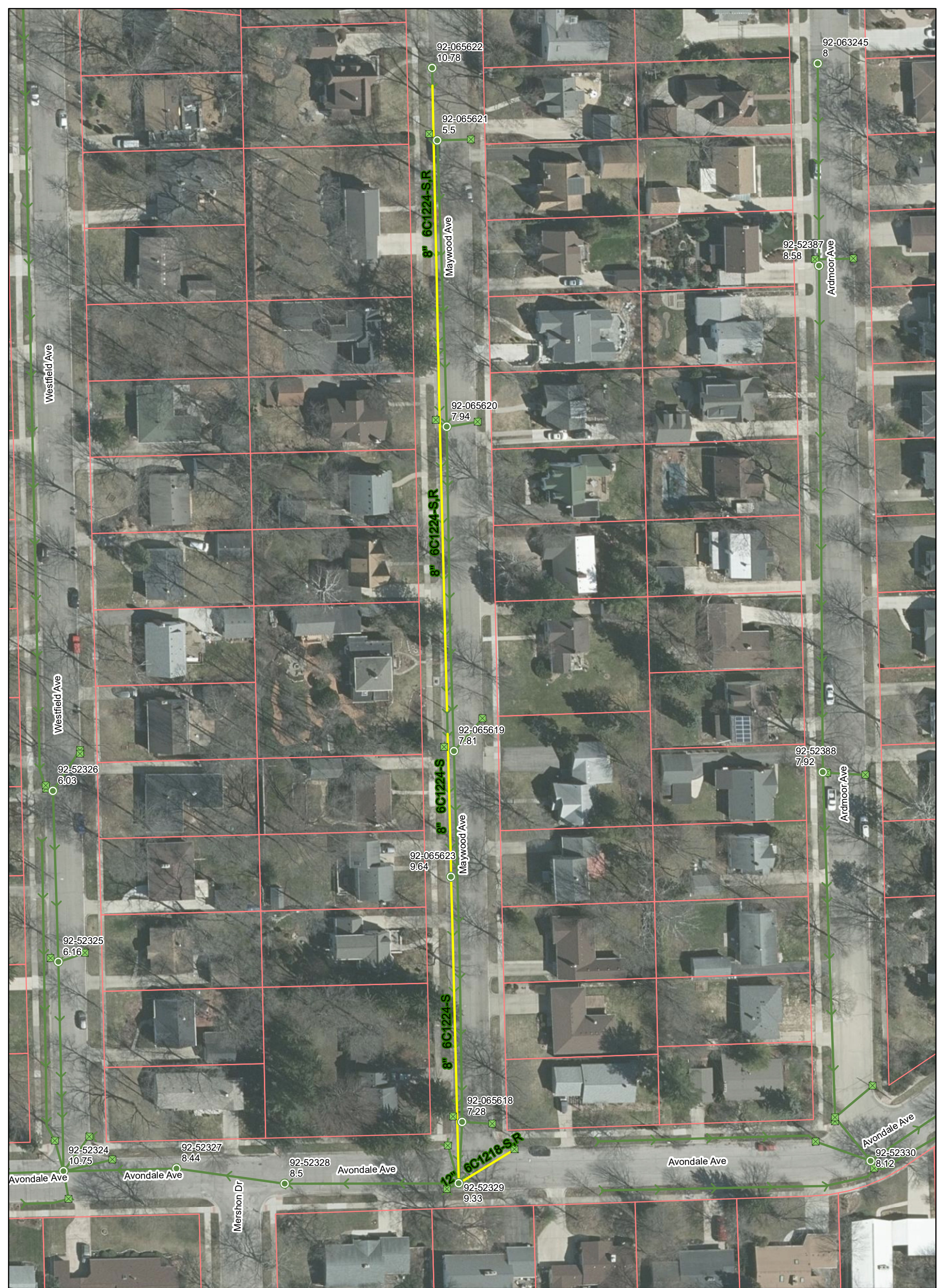


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-114

SHEET No.  
 114 OF 177



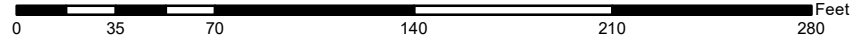


# Maywood Ave.



	Manhole		Storm Main
	Catchbasin		AA Proposed Lining

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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AVE.

AVONDALE

BARNARD HEIGHTS SUBDIVISION

MAYWOOD AVE.

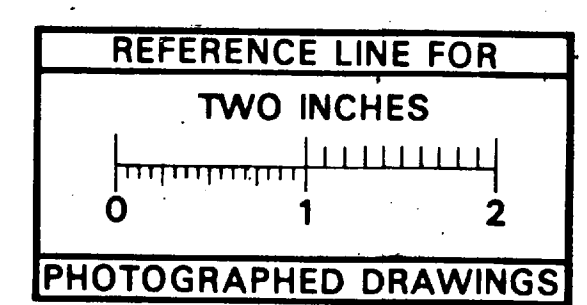
BARNARD HEIGHTS SUBDIVISION

LOT 60

1617 BASEMENT ELEV. 961.19

1611 BASEMENT ELEV. 960.28

STADIUM BLVD.

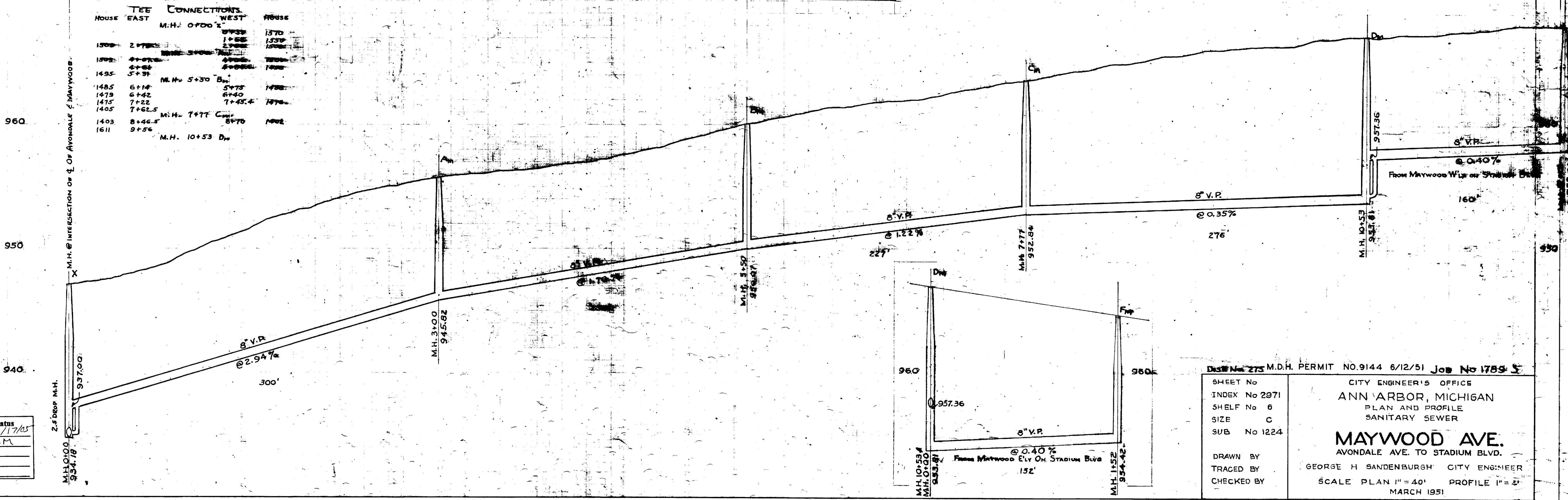


REFERENCES  
 BENCH MARKS MAYWOOD AT STADIUM 968.14.  
 DRAWINGS PROFILE BK. 507 PG. 49-51

TEST BORING  
 WATER LEVEL @ SURFACE  
 SOFT VARIED COLORED CLAY CLAY FILL (DISTURBED)  
 HARD VARIED COLORED CLAY SOME SAND & GRAVEL

LEGEND  
 4 EXISTING SANITARY SEWER  
 5 PROPOSED SANITARY SEWER  
 A EXISTING STORM SEWER  
 R PROPOSED STORM SEWER  
 G GAS  
 W WATER

HOUSE EAST	CONNECTIONS	HOUSE WEST
1509	2" V.P.	1570
1502	4" V.P.	1550
1495	5" V.P.	1508
1485	6" V.P.	1498
1479	6" V.P.	1496
1475	7" V.P.	1488
1465	7" V.P.	1476
1403	8" V.P.	1408
1611	9" V.P.	1402



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Dist. No. 273 M.D.H. PERMIT NO. 9144 6/12/51 Job No 1785 S  
 SHEET No CITY ENGINEER'S OFFICE  
 INDEX No 2971 ANN ARBOR, MICHIGAN  
 SHELF No 6 PLAN AND PROFILE  
 SIZE C SANITARY SEWER  
 SUB No 1224  
 DRAWN BY  
 TRACED BY  
 CHECKED BY  
 GEORGE H. SANDENBURGH CITY ENGINEER  
 SCALE PLAN 1" = 40' PROFILE 1" = 2'  
 MARCH 1951



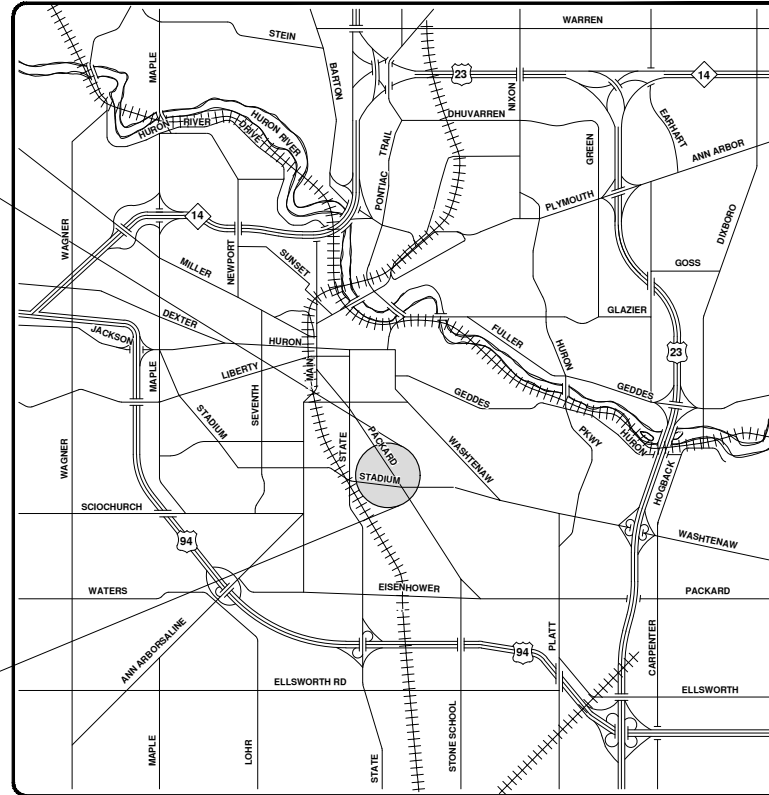
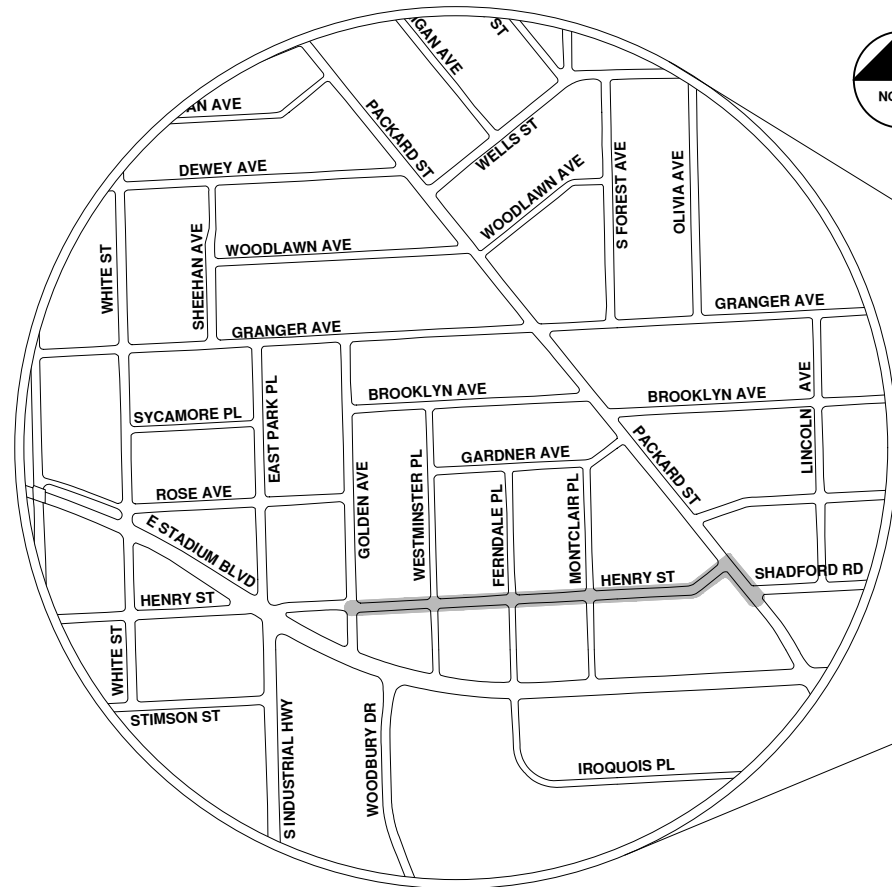






# 2020 SEWER LINING PROJECT

## HENRY ST



VICINITY MAP

R:\2020039 Sewer Lining\_2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:06:45 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

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 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
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SCALE  
 DRAWING No.  
 2020039-118

SHEET No.  
 118 OF 177

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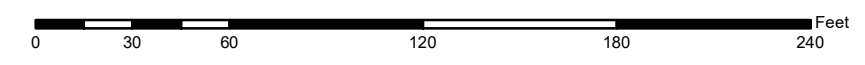


# Henry St.



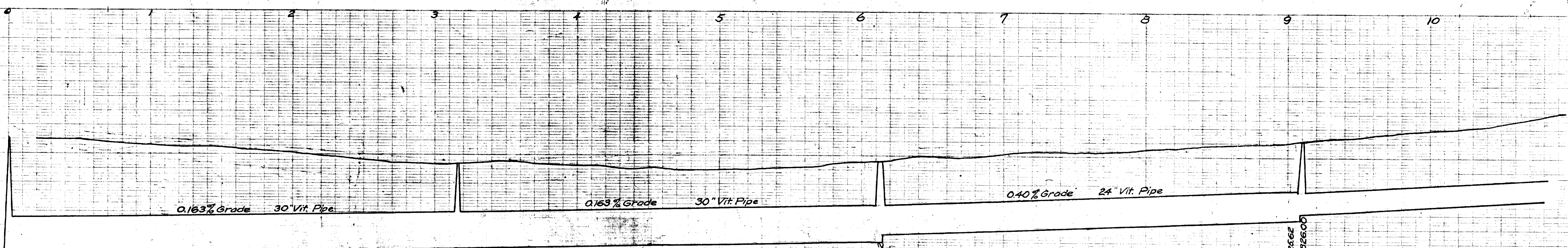
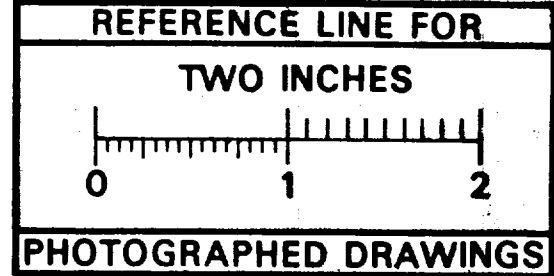
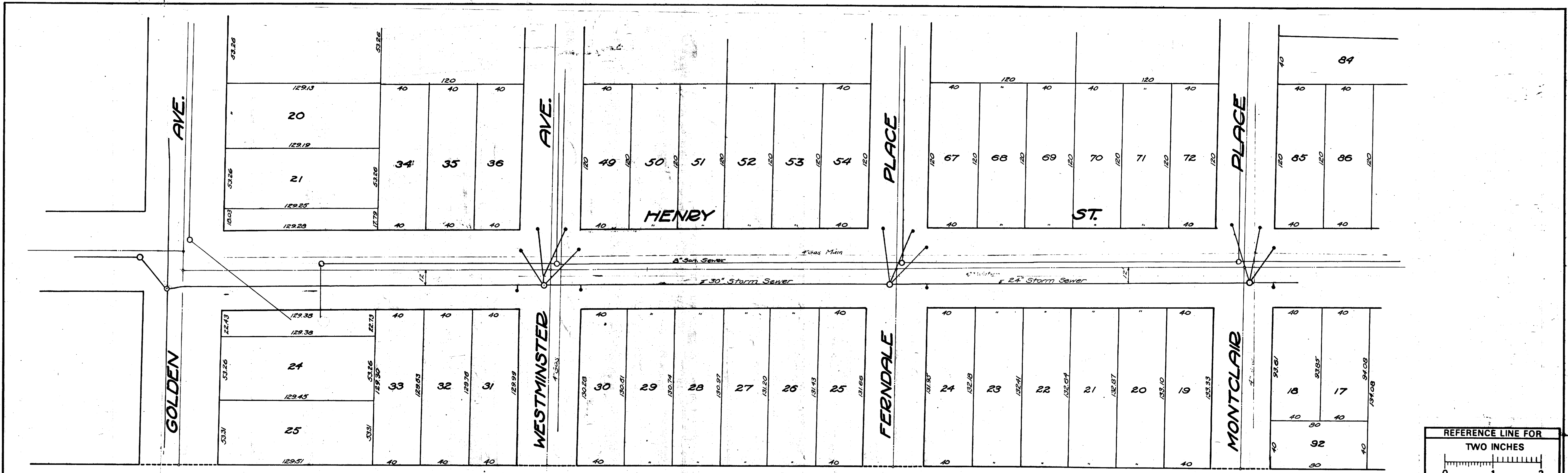
	Manhole		Storm Main
	Catchbasin		AA Proposed Lining

92-XXXXX (Manhole ID)  
 1.00 (Manhole Depth)



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 SHELF No. 6  
 SIZE C  
 SUB. No. 648

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 STORM SEWER  
**HENRY ST.**  
 GOLDEN TO MONTCLAIR

Drawn by  
 Traced by K.D.  
 Checked by

Geo. H. Sandenburgh  
 City Engineer  
 1927-1-20  
 Scales: Plan Hor. 1"=40' Prof. Vert. 1"=4'





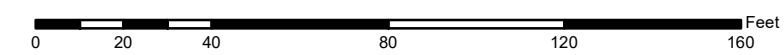
City of Ann Arbor

# Henry St.



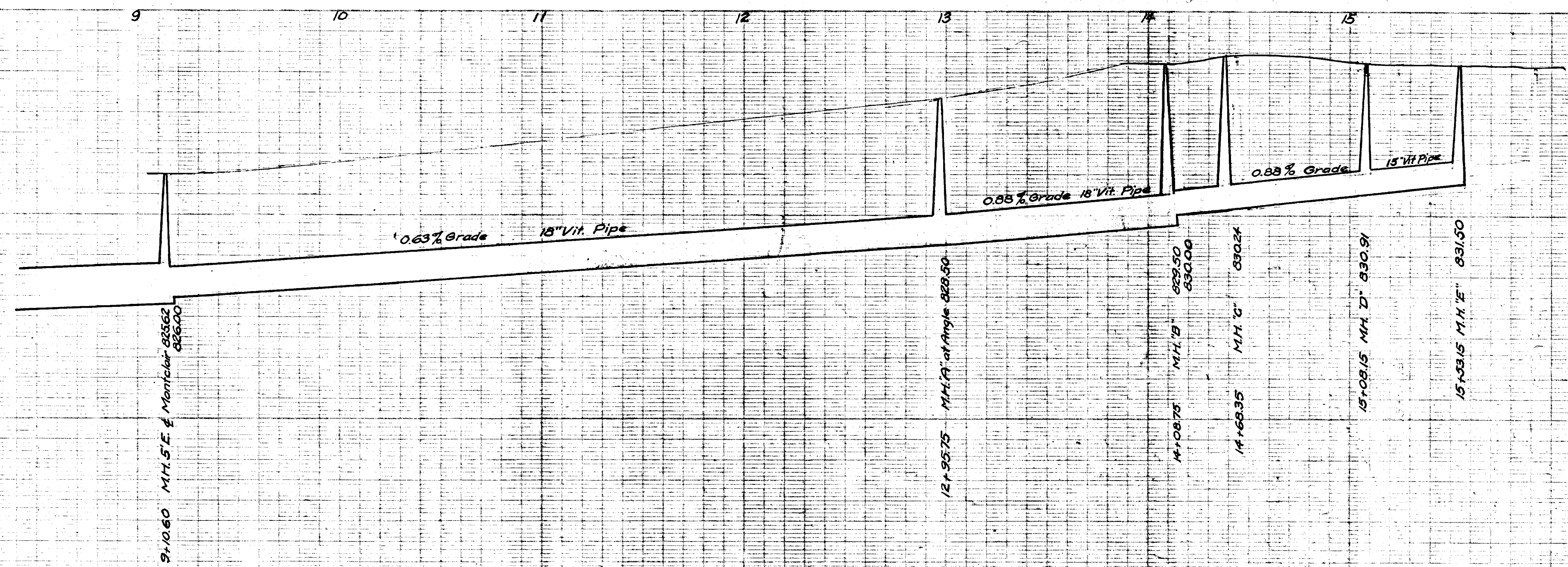
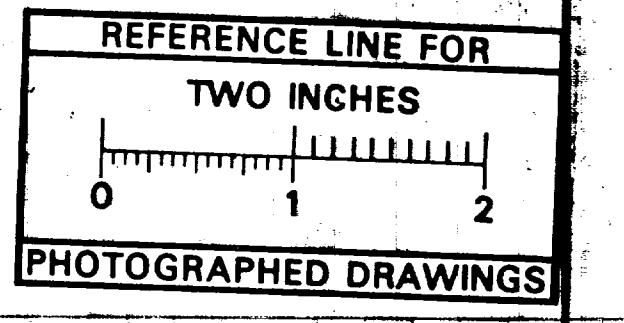
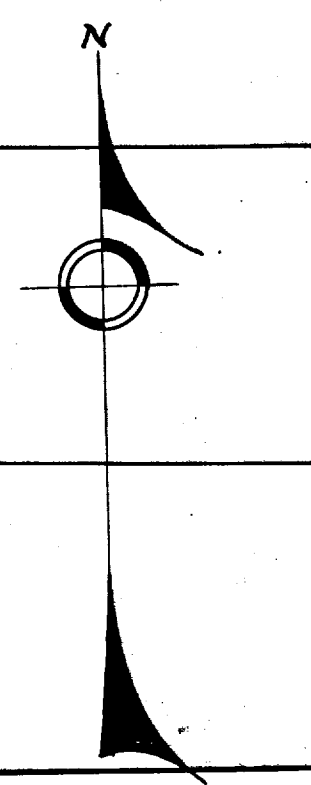
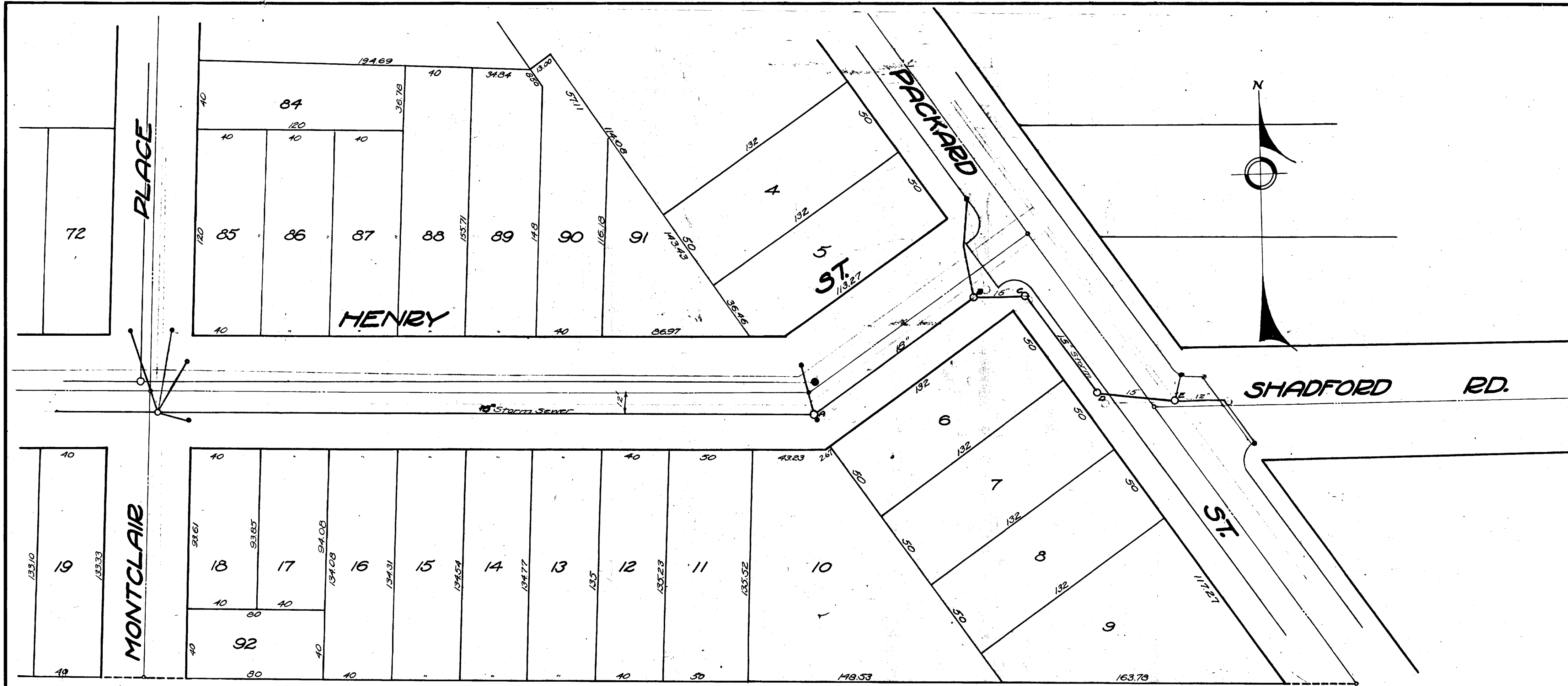
	Manhole		Storm Main
	Catchbasin		AA Proposed Lining

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



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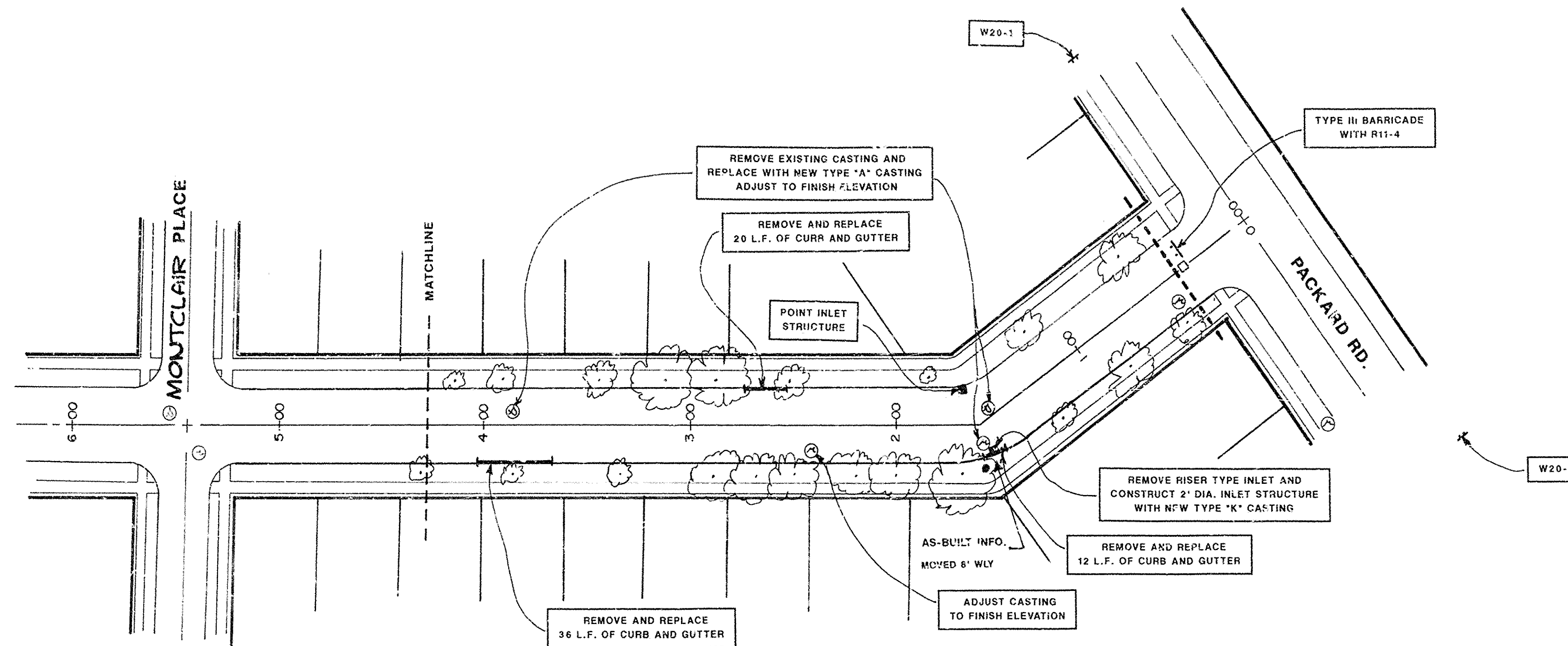
SHEET No.	CITY ENGINEER'S OFFICE
INDEX No. 1639	<b>ANN ARBOR, MICH.</b>
SHELF No. 6	PLAN AND PROFILE
SIZE C	or
SUB No. 649	STORM or SEWER
	<b>HENRY ST.</b>
	MONTCLAIR to PACKARD
DRAWN BY	
TRACED BY XGD	Geo. H. Sandenburgh City Engineer
CHECKED BY	1927-1-2
	Scales: Plan Hor. 1"=40' Prof. Vert. 1"=4'

3.17 FROM VERT. STAK  
 4.37 FROM VERT. STAK



# HENRY ST.

31' E/M TO E/M



### STREET AS-BUILT INFORMATION

THIS STREET WAS CUT, PATCHED AND OVERLAYED. EXISTING FAILED AREAS WERE CUT OUT AND PATCHED, THEN A 1" THICKNESS OF 1300L-20AAA LEVELING COURSE WAS PLACED. THE FINAL COURSE WAS A 1 1/2" THICKNESS OF 1300T-20AAA WEARING COURSE WHICH INCLUDED THE OVERLAYING OF THE CONCRETE GUTTERPAN.

**NOTE**  
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

### SIGN LEGEND

QTY	TYPE	DESCRIPTION
8	W20-1	'CONSTRUCTION AHEAD'
	W20-2	'DETOUR AHEAD'
	W20-3	'STREET CLOSED AHEAD'
	W20-5	RIGHT LANE CLOSED AHEAD
	W4-2	RIGHT LANE DROP SYMBOL
	W21-1a	WORKER SYMBOL
	M4-9	DETOUR (LEFT ARROW)
	M4-9	DETOUR (RIGHT ARROW)
	M4-9	DETOUR (STRAIGHT ARROW)
	D3-1	CONVENTIONAL GUIDE
	M4-8a	'DETOUR ENDS'
	M4-10	'DETOUR'
	R6-1	'ONE WAY' (LEFT)
8	TYPE III	TYPE III LIGHTED BARRICADE
56	TYPE II	TYPE II LIGHTED BARRICADE (DRUM)
8	R11-4	'ROAD CLOSED TO TRNG TRAFFIC'
	TYPE 'A'	TYPE 'A' LIGHTED ARROW BOARD

### GENERAL CONSTRUCTION NOTES

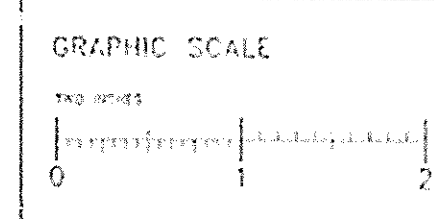
- All work shall conform to current City of Ann Arbor Standards and Specifications.
- The Contractor shall maintain access to all drives during the course of construction, and in no case shall a drive be permitted to remain closed during non-working hours.
- The Contractor shall completely restore all existing site features to better than, or equal to, their existing condition. This activity will be closely monitored by the Engineering Department.
- The Contractor shall be aware that there are buried utilities in these streets which include, but are not limited to, gas mains, watermains, vitrified clay storm sewer, sanitary sewer and other utilities. The contractor shall conduct his work on these streets and all streets in such a fashion so not to damage or alter in any way, existing utilities except where called for on the plans or as directed by the Engineer. The city has inspected by television cameras and cleaned all sanitary and storm sewers, including storm leads and has found them to be in good condition except where being replaced.
- The Contractor is solely responsible for any delays, damages, costs and/or charges incurred due to and/or by reason of any utility, structure, feature and/or site condition whether shown on the plans or not, and the Contractor shall repair and/or replace, at his sole expense, to as good or better condition, any and all utilities, structures, features and/or site conditions which are impacted by reason of the work or injured by him during his operations or injured during the operations of his subcontractors or suppliers.
- No extra payments or adjustments to unit prices will be made for damages, delays, costs and/or charges due to existing utilities, structures, features and/or site conditions not shown or being incorrectly shown or represented on the plans.

### CONSTRUCTION METHOD AND SEQUENCE

- The work to be completed on Henry St. shall include but not be limited to the following items. The order of construction shall be as given below unless otherwise authorized by the Engineer.
- Implementation of the traffic control and traffic maintenance plan.
  - Perform concrete removals and replacements as shown on the plans or as directed by the Engineer.
  - Remove and replace bituminous pavement as directed by the Engineer.
    - Pave 1 inch M.D.O.T. 1300L-20AAA scratch leveling course.
  - Adjust structure covers, valve boxes and monument boxes to their finished elevations.
  - Pave 1 1/2 inches M.D.O.T. 1300T-10AAA wearing course.
  - Complete miscellaneous construction including restoration.
  - Remove traffic control.

### ESTIMATED CONSTRUCTION QUANTITIES FOR HENRY ST.

ITEM	ITEM DESCRIPTION	UNIT	EST. QUANTITY
2.	REMOVE BITUMINOUS PAVEMENT	SY	904.00
8.	SUBGRADE UNDERCUTTING TYPE II	CY	226.00
9.	REMOVE CONCRETE CURB OR CURB & GUTTER - ANY TYPE	LF	622.00
11.	REMOVE CONCRETE SIDEWALK AND DRIVE - ANY THICKNESS	SF	942.00
12.	BITUMINOUS PATCHING - M.D.O.T. NO. 700-10C OR NO. 1300T-20AAA	TCN	154.00
14.	BITUMINOUS PAVEMENT LEVELING M.D.O.T. NO. 1300L-20AAA	TON	408.00
15.	BITUMINOUS PAVEMENT WEARING M.D.O.T. NO. 1300T-20AAA	TON	384.00
17.	BITUMINOUS PAVEMENT FINISH WEDGING M.D.O.T. 1300T-15A	TON	15.00
20.	2 1/2" AGGREGATE - C.I.P.	CY	226.00
27.	CONCRETE CURB AND GUTTER ANY TYPE	LF	622.00
29.	4" SIDEWALK OR RAMP	SF	942.00
36.	ADJUST DRAINAGE STRUCTURE COVER	EA	14.00
37.	ADJUST MONUMENT BOX OR GATE VALVE BOX	EA	6.00
42.	DRAINAGE STRUCTURE COVERS	LBS	3290.00
43.	POINT DRAINAGE STRUCTURE	EA	6.00
44.	RECONSTRUCT GATE VALVE BOX	EA	3.00
60.	BARRICADE TYPE II (DRUM) LIGHTED - OPERATE	EA	56.00
61.	BARRICADE TYPE III - LIGHTED FURNISH AND OPERATE	EA	8.00
62.	TEMPORARY SIGN - TYPE B	SF	228.00
63.	NO PARKING SIGN	EA	35.00



BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
(TOLL FREE)

### LEGEND

⊙	EXISTING SANITARY SEWER
⊕	EXISTING STORM SFWER
⊗	EXISTING WATERMAIN
⊙	MICHIGAN BELL TELEPHONE
⊕	GAS CO. VALVE
⊕	GATE VALVE IN BOX
⊙	SOIL BORING
⊕	EXISTING CURB INLET
⊕	MONUMENT BOX
---	REMOVE AND REPLACE SIDEWALK
---	CONSTRUCTION LIMITS
---	REMOVE AND REPLACE CONCRETE CURB

### LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATERMAIN W/F.H. ASSEM.	
WATERMAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	
WATERMAIN & VALVE-IN-BOX	END SECTION			ROAD & GRADE	

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

## HENRY ST.

PACKARD TO STA. 4+27

1993 ANNUAL STREET RESURFACING PROJECT

SCALE  
HORIZ. 1"=40'  
VERT. 1"=4'  
DRAWING NO.  
**93004-29**  
SHEET NO. OF

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
			AS-BUILT	1-11-94	RAG	
			ORIGINAL ISSUE	12-92	WAGS	DWT

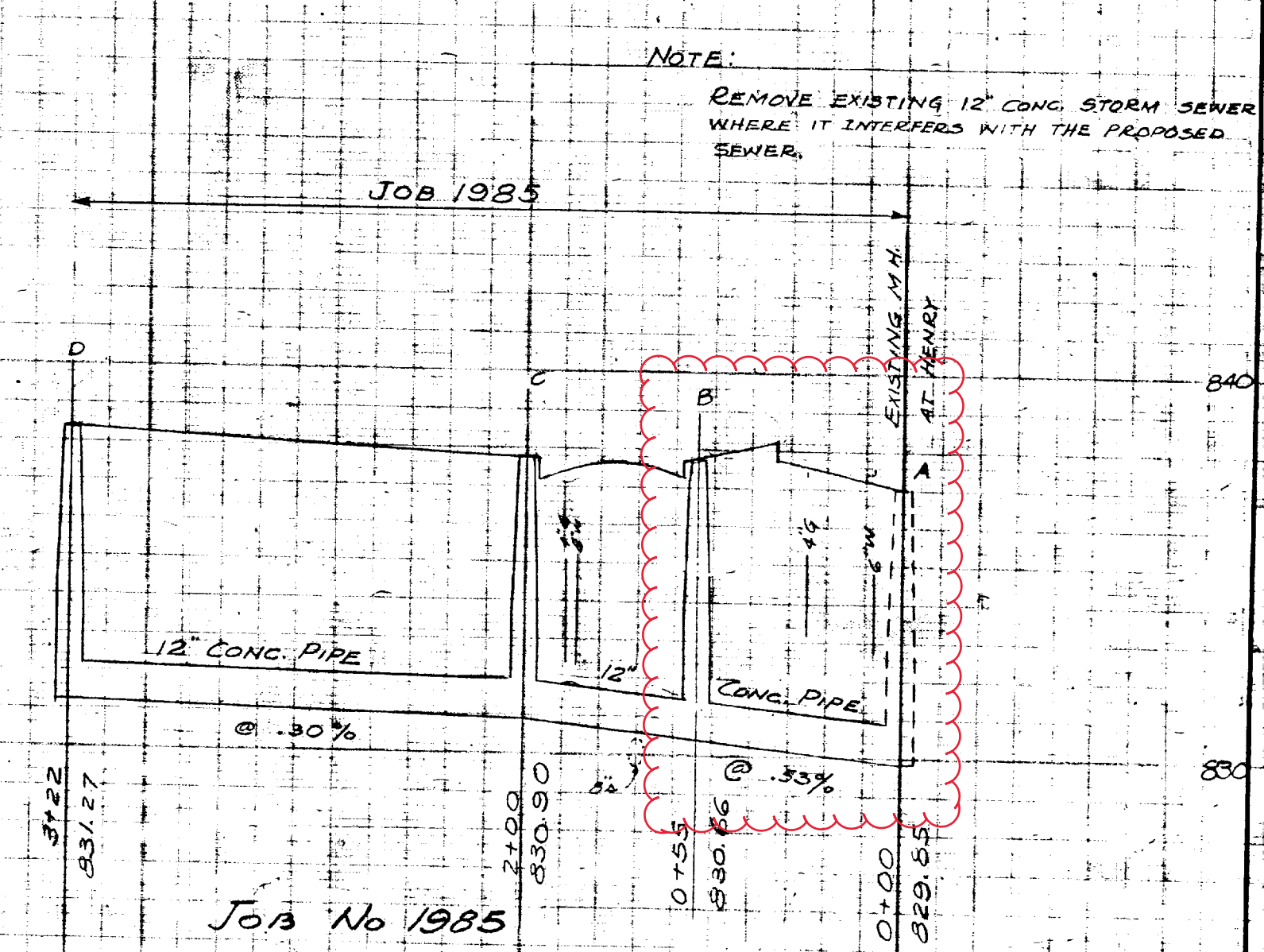
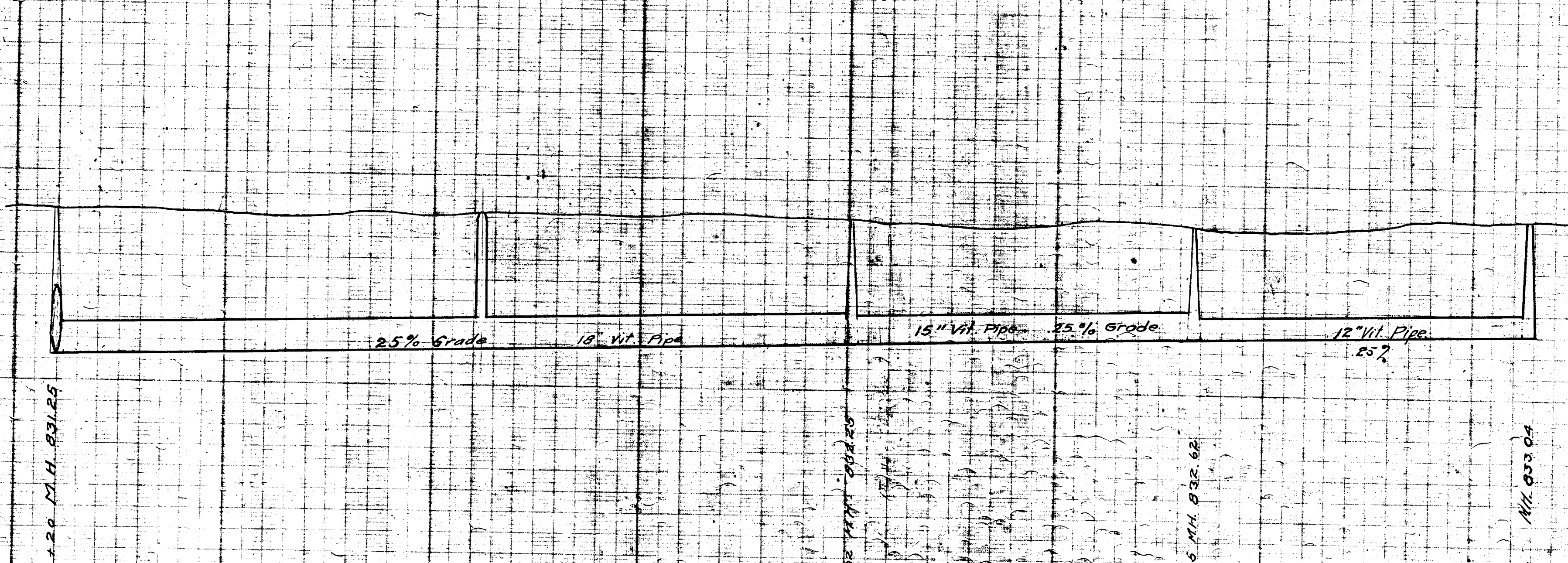
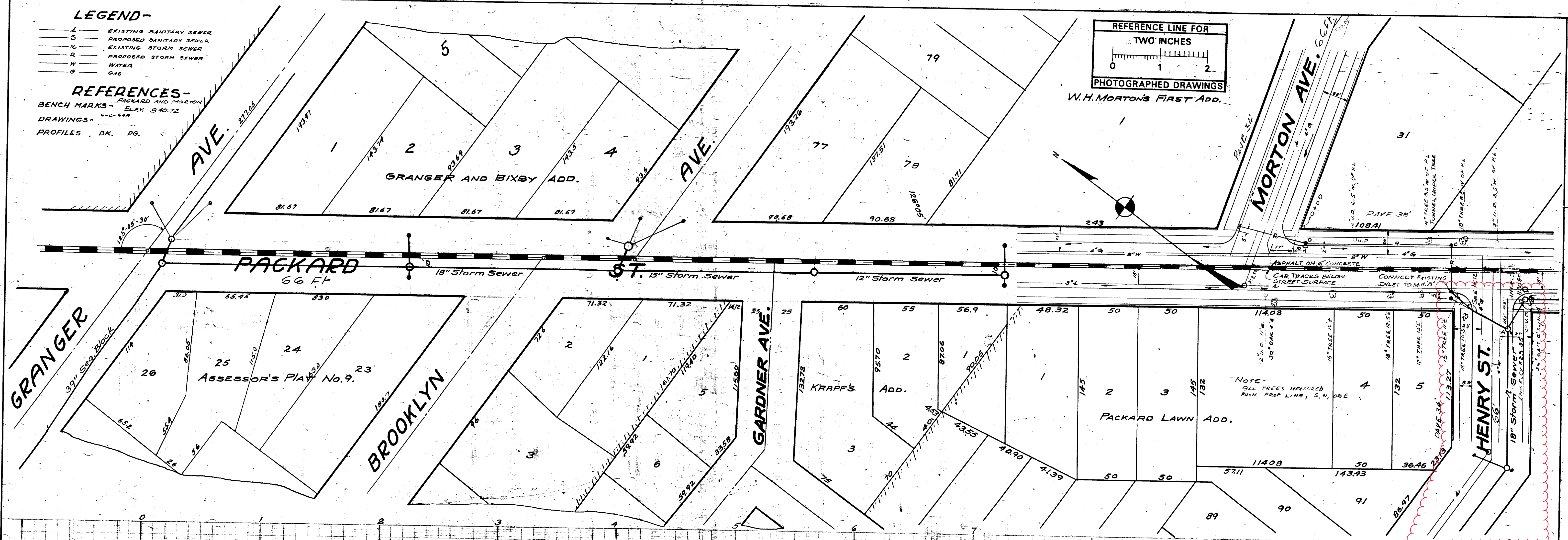
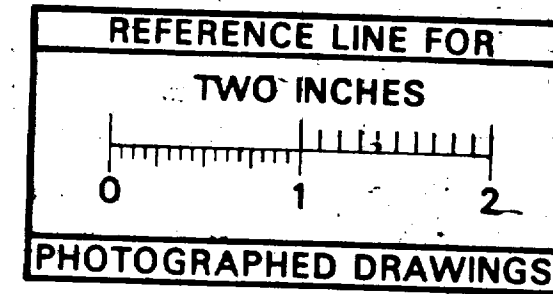


**LEGEND-**

- S — EXISTING SANITARY SEWER
- S — PROPOSED SANITARY SEWER
- K — EXISTING STORM SEWER
- K — PROPOSED STORM SEWER
- W — WATER
- G — GAS

**REFERENCES-**

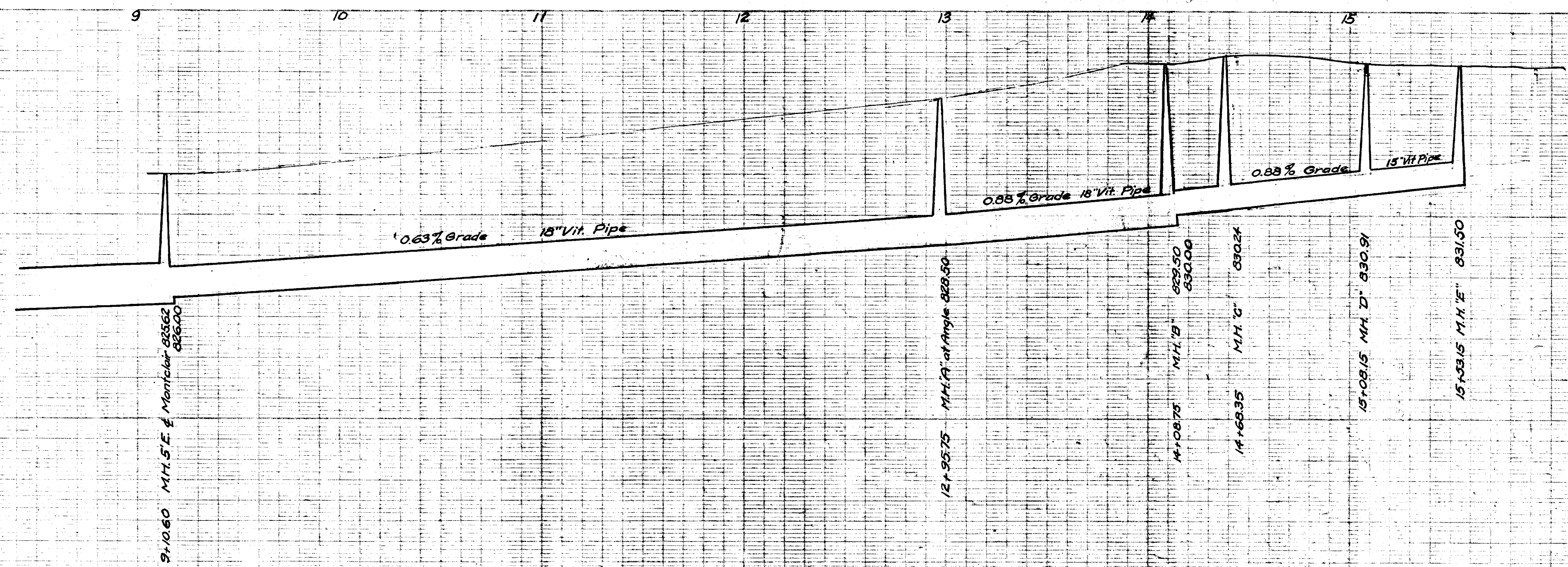
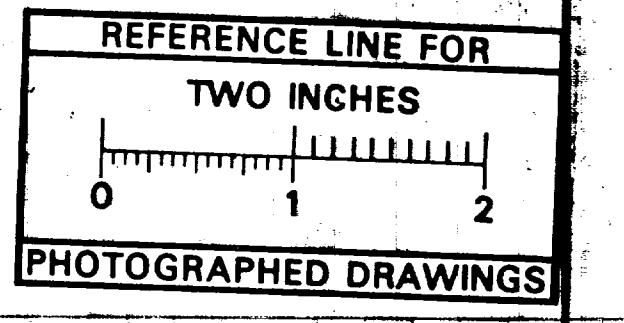
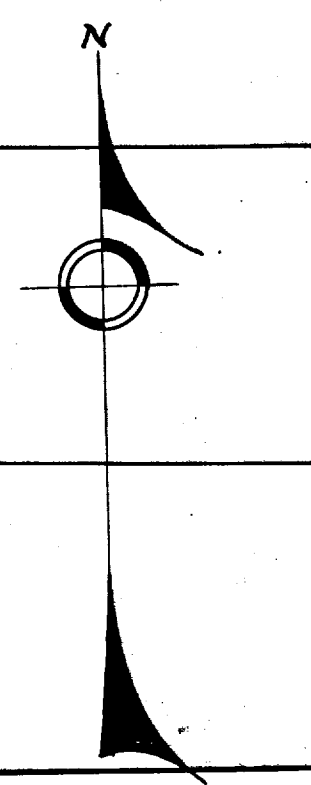
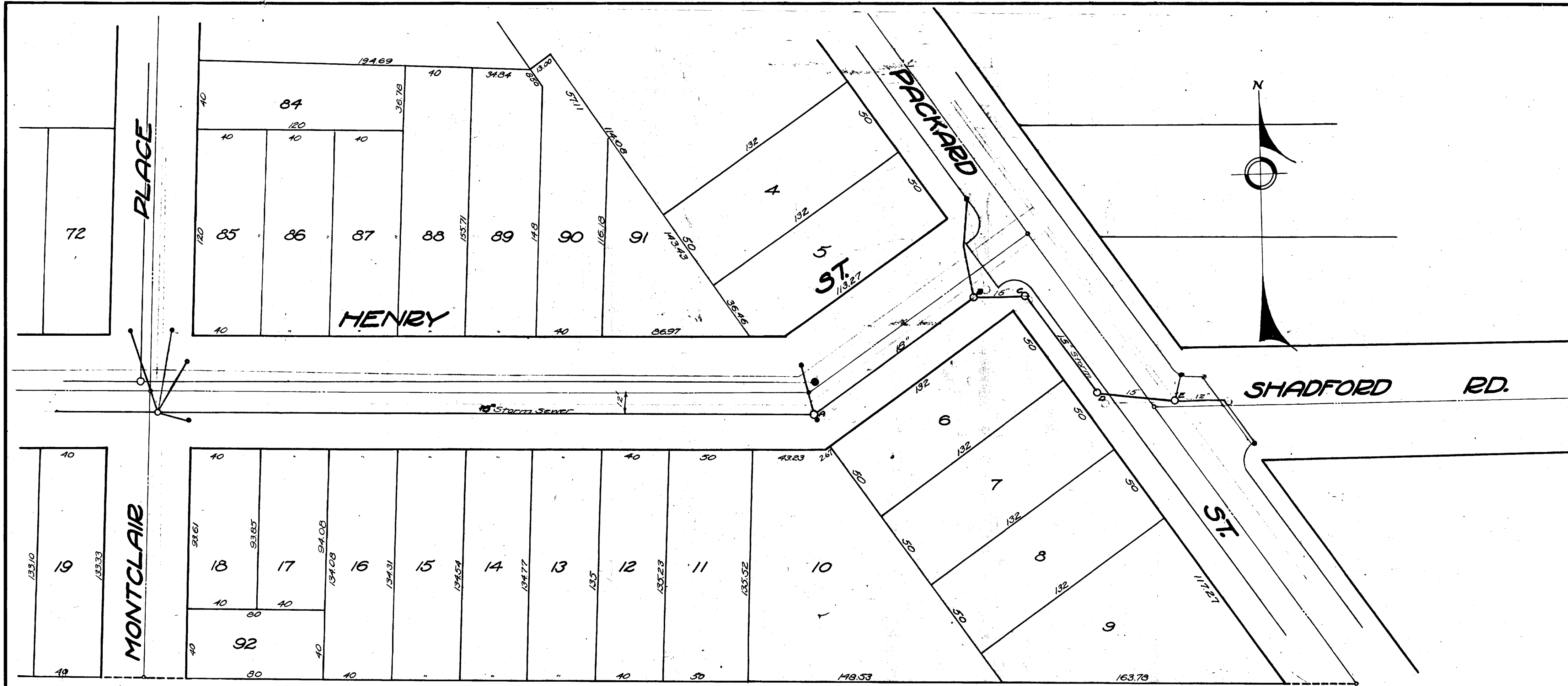
- PACKARD AND MORTON
- BENCH MARKS - ELEV. 840.72
- C.C. 649
- DRAWINGS -
- PROFILES - BK. PG.



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INDEX No. 1197 SHELF No. 6 SIZE C SUB No. 470 Designed by Herb Dohr Drawn by H.R.S. Traced by H.R.S. Checked by H.R.S.	CITY ENGINEER'S OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF STORM ON SEWER <b>PACKARD ST.</b> FROM GRANGER TO S. OF GARDNER AVE. Geo. H. Sandenburgh, City Engineer 1920-4-6 Scales - Plan 1"=40' Profile Hor. 1"=40' Ver. 1"=4'
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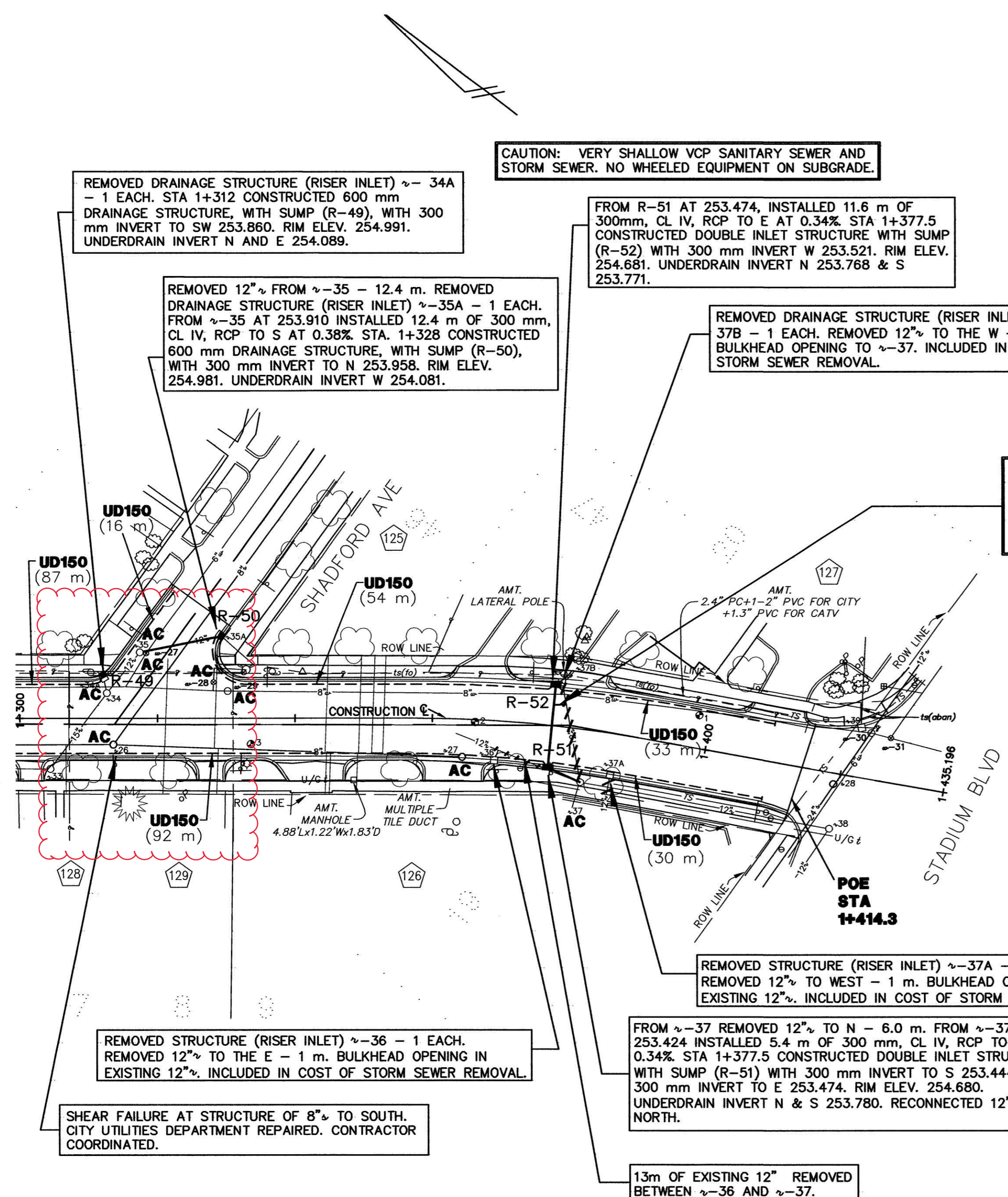
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SHELF No. 6	PLAN AND PROFILE
SIZE C	or
SUB No. 649	STORM or SEWER
	<b>HENRY ST.</b>
	MONTCLAIR to PACKARD
DRAWN BY	
TRACED BY RGD	Geo. H. Sandenburgh City Engineer
CHECKED BY	1927-1-2
	Scales: Plan Hor. 1"=40' Prof. Vert. 1"=4'

3.17 FROM VERT. STAK  
 4.37 FROM VERT. STAK









**CASTING SCHEDULE**  
FOR PACKARD STREET  
FILE NO. 2000 045

PLEASE NOTE: FOR PURPOSES OF THIS TABLE, PACKARD STREET IS CONSIDERED TO RUN NORTH AND SOUTH.

STRUCTURE/STATION	CASTING ELEVATION	INVERT ELEV.	PIPE SIZE	DIRECTION	DEPTH (METERS)	STRUCTURE SIZE	DETAIL	APPLICATION/CONSTRUCTION
~-271+318 #1817	255.119	253.657	6"	E & W	1.462	T/P	---	GVIB ADJUSTED TO FINISH GRADE
~-281+328 #1554	255.055	253.529	6"	E & W	1.528	T/P	---	GVIB ADJUSTED TO FINISH GRADE
~-291+330.5 #1554	255.044	---	8"	N & S	---	5' DIA	SD-W-3	GVWV ADJUSTED TO FINISH GRADE
~-301+423.5 #1898	254.823	---	8"	N & S	---	5' DIA	SD-W-3	GVWV OUTSIDE LIMITS
~-311+426 #1898	254.797	253.377	6"	N & S	1.420	T/P	5' DIA	GVIB OUTSIDE LIMITS
~-281+313	254.999	253.089	8"	E	1.900	4' DIA	SD-S-1	ADJUSTED TO FINISH GRADE
~-271+364	254.880	253.250	8"	N	1.430	4' DIA	SD-S-1	ADJUSTED TO FINISH GRADE
~-281+419	254.753	250.393	12"	E	4.360	4' DIA	SD-S-1	OUTSIDE LIMITS
~-331+304 R	255.206	253.151	15"	N	2.055	4' DIA	SD-S-1	STORM MH ADJUSTED TO FINISH GRADE
~-341+313 LI	255.069	253.759	12"	NE	1.310	4' DIA	SD-S-1	STORM MH ADJUSTED TO FINISH GRADE
~-341+312 LI	255.016	253.866	12"	SW	1.150	RISER	SD-S-1	RISER INLET/REMOVED
~-351+317 LI	255.132	253.892	12"	S	1.240	4' DIA	SD-S-1	STORM MH ADJUSTED TO FINISH GRADE
~-351+328 LI	254.947	254.227	12"	N	0.720	RISER	SD-S-1	RISER INLET/REMOVED
~-361+368 R	254.608	253.578	12"	N	1.030	2'	SD-S-1	INLET/REMOVED
~-371+383 R	254.944	253.424	12"	N	1.520	4' DIA	SD-S-1	STORM MH/ADJUSTED TO FINISH GRADE
~-371+387 R	254.790	253.470	12"	W	1.320	2'	SD-S-1	INLET/REMOVED
~-378+378 LI	254.822	253.702	12"	N	0.920	2'	SD-S-1	INLET/REMOVED
~-381+420 R	254.670	253.270	12"	N	1.400	4' DIA	SD-S-1	OUTSIDE LIMITS
~-381+422 LI	254.703	254.113	12"	E	0.590	4' DIA	SD-S-1	OUTSIDE LIMITS
R -451+312 LI	254.991	253.869	300 mm	SW	1.131	600mm	SD-S-10M	DRAINAGE STRUCTURE WITH SUMP/NEW
R -451+328 LI	254.991	253.858	300 mm	N	1.023	600mm	SD-S-10M	DRAINAGE STRUCTURE WITH SUMP/NEW
R -411+377.5 R	254.680	253.444	300 mm	S	1.236	DOUBLE INLET	SD-S-11M	DRAINAGE STRUCTURE WITH SUMP/NEW
R -521+377.5 LI	254.681	253.521	300 mm	W	1.160	DOUBLE INLET	SD-S-11M	DRAINAGE STRUCTURE WITH SUMP/NEW

PROPOSED GRADES / WORK IN BOLD TEXT

Note: For Specific Casting Model See Standard Casting Schedule.

- BENCH MARKS:**
- BM #1 SE CORNER OF CONCRETE BASE OF TRAFFIC SIGNAL AT THE SW CORNER OF PACKARD AND STATE STREETS. ELEVATION IN METERS = 254.158
  - BM #2 BOLT ON COLLAR OF FIRE HYDRANT 10' NORTH OF DRIVE TO 811 PACKARD ST, EAST SIDE OF PACKARD STREET. ELEVATION IN METERS = 255.289
  - BM #3 BOLT ON COLLAR OF FIRE HYDRANT AT STREET ADDRESS 1003 PACKARD, EAST SIDE OF PACKARD STREET. ELEVATION IN METERS = 255.950
  - BM #4 BOLT ON COLLAR OF FIRE HYDRANT NE CORNER OF PACKARD AND WELLS STREETS. ELEVATION IN METERS = 256.042
  - BM #5 BOLT ON COLLAR OF FIRE HYDRANT SW CORNER OF PACKARD STREET AND WOODLAWN AVENUE. ELEVATION IN METERS = 255.707
  - BM #6 BOLT ON COLLAR OF FIRE HYDRANT NE CORNER OF PACKARD STREET AND GRANGER AVENUE. ELEVATION IN METERS = 256.383
  - BM #7 BOLT ON COLLAR OF FIRE HYDRANT SE CORNER OF PACKARD STREET AND BROOKLYN AVENUE. ELEVATION IN METERS = 256.149
  - BM #8 BOLT ON COLLAR OF FIRE HYDRANT NE CORNER OF PACKARD STREET AND MORTON AVENUE. ELEVATION IN METERS = 256.368
  - BM #9 US COAST AND GEODETIC SURVEY DISC SET IN CONCRETE, STAMPED: "11 1" NE CORNER OF PACKARD ROAD AND STADIUM BLVD, 2.3' NORTH OF SIDEWALK. ELEVATION IN METERS = 255.370

AS-BUILT WATER DRAWING  
CORRECTED 10/2001  
MDEQ PERMIT No. N/A (HYD. ONLY)  
IN SERVICE DATE (MO/YR) 8/2001  
CONTRACTOR FONSON CONST.

AS-BUILT STORM DRAWING  
CORRECTED 1/2002  
IN SERVICE DATE (Mo/Yr) 9/2001  
CONTRACTOR FONSON CONST.

**NOTE:**  
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

INDEX NO	Parcel Number	Prop Address	Owner Name	Owner Address	MI	ZIP
125	09-09-33-416-020	1408 SHADFORD AVE	HURDIS CHARLES J & IRENE M	2075 MERSHON DR	MI	48103 6042
126	09-09-33-415-001	1423 E STADIUM BLVD	FOOD & DRUG MART	1423 E STADIUM BLVD	MI	48104 4408
127	09-09-33-416-001	1501 E STADIUM BLVD	NDB BANK N A	* P O BOX 33580	MI	48232 5580
128	09-09-33-311-003	1706 PACKARD ST	SHAPIRO LETITIA R	1706 PACKARD ST	MI	48104
129	09-09-33-311-002	1710 PACKARD ST	REGIER MELODY TRUST	1710 PACKARD ST	MI	48108

**CONSTRUCTION KEY**

- ABO ADJUST BY OTHERS
- AC ADJUST CASTING (INCLUDES GATE WELL, MONUMENT BOX, & VALVE BOX)
- UD150 PLACE UNDERDRAIN, 150 mm

**LEGEND:**

795.7	EXISTING SPOT ELEV.	8" g	EXISTING GAS MAIN	12" R	NEW STORM SEWER	NEW FENCE	NEW STOPBAR
x	EXISTING CONTOUR	O/H/e	EXISTING OVERHEAD ELECTRIC	8" S	NEW SANITARY SEWER	SOIL BORING	NEW WALK CROSSING
x	EXISTING FENCE	O/H/t	EXISTING OVERHEAD TELEPHONE	8" W	NEW WATER MAIN	SB #20	NEW PAVEMENT
U	EXISTING UTILITY POLE	U/G/e	EXISTING UNDERGROUND ELECTRIC	8" W	NEW FIRE HYDRANT	AMT	NEW SIDEWALKS & DRIVE APPROACHES
U	EXISTING GUY WIRE	U/G/t	EXISTING UNDERGROUND TELEPHONE	8" W	NEW GATE VALVE	U/G/t	
U	EXISTING LIGHT POLE		EXISTING WATER SHUTOFF		NEW CONTOUR		

BENCH MARK	SURVEY BOOK	REV.NO.	DESCRIPTION	DATE	DR.BY	CH.BY
			AS-BUILT	9-02	MLL	PWJ
			REVISIONS	02-12-01	KLW	ROC
			CITY/MDOT REVIEW	01-19-01	KLW	REL
			ORIGINAL ISSUE	11-28-00	KLW	REL

**ENGINEERING DEPARTMENT - CITY OF ANN ARBOR**

**PACKARD STREET RECONSTRUCTION, PHASE I**

sheet UTILITIES  
title: (STA. 1+300 TO STA. 1+414.1)

consultants: WASHTEAW ENGINEERING CO. ROBERT E. LINDSTROM, P.E., MI No. 36093

**DRAWING NO. 2000 045 R5,S5**

**SHEET NO. 10 OF 51**

SCALE: HORIZONTAL 1:500, VERTICAL 1:50

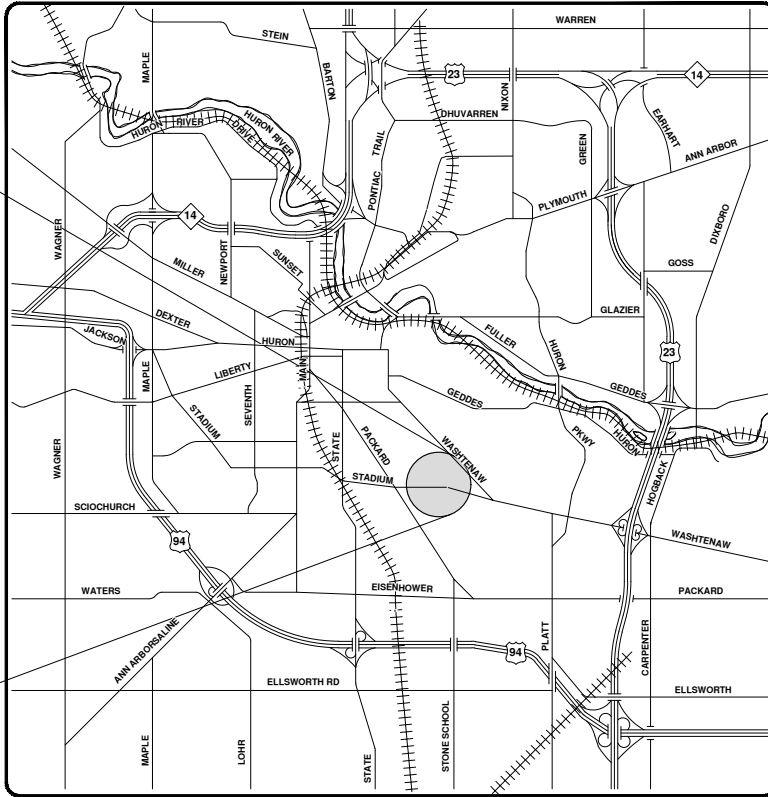
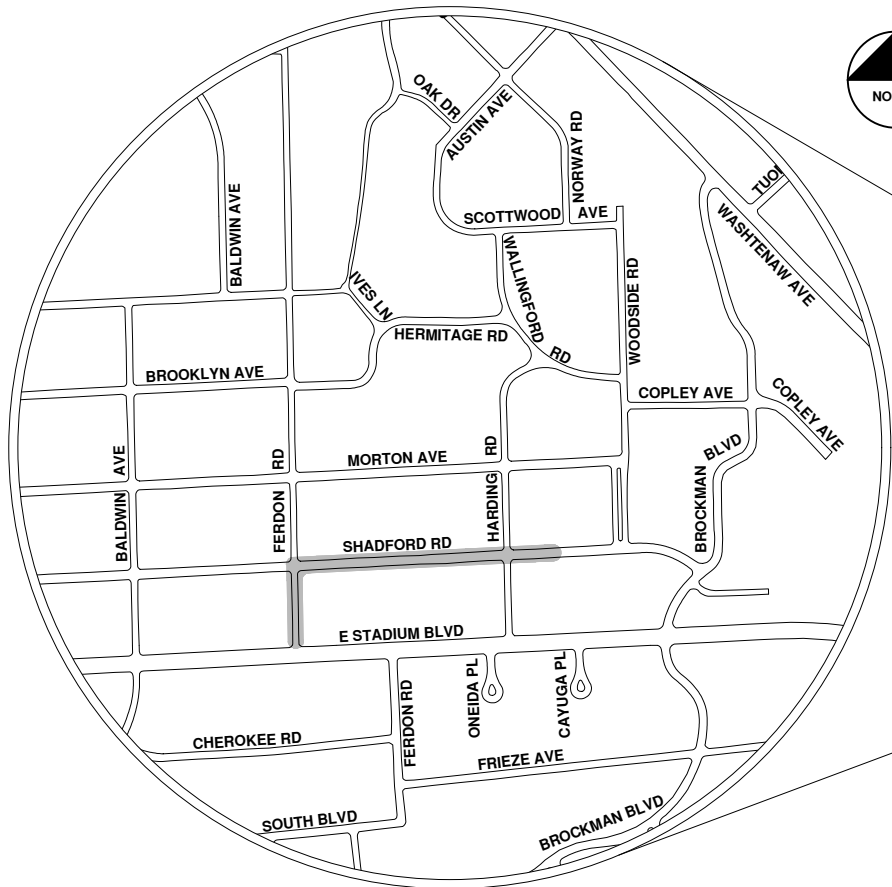
72 HOURS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)





# 2020 SEWER LINING PROJECT

## FRENDON RD & SHADFORD RD



VICINITY MAP

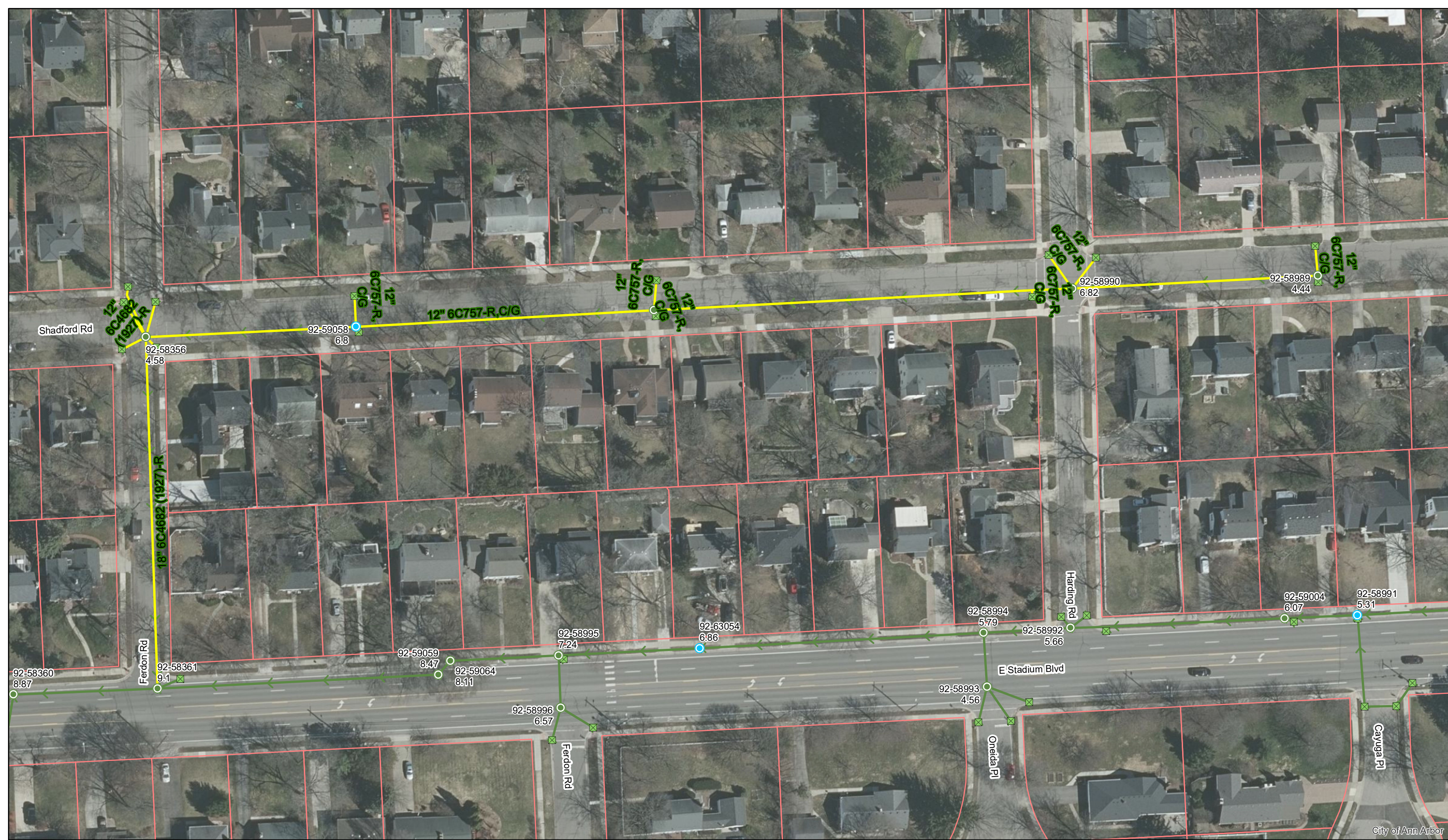
R:\2020039 Sewer Lining\_2020\Plan Production\2020039Cov.dwg - \_o2\_standard\_bw.stb - Plot Date: 9/14/2020 12:06:50 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org

		CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE	
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 734-794-6410 www.a2gov.org		SHEET No. <b>128 OF 177</b>	
DO REV.	BID SET REV.	DATE 9-14-20	DESCRIPTION DRAWN ARG CHECKED IVK





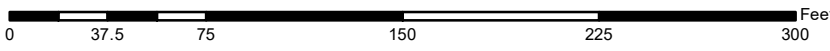
City of Ann Arbor



	Manhole		Storm Main
	Not found Manhole		AA Proposed Lining
	Catchbasin		

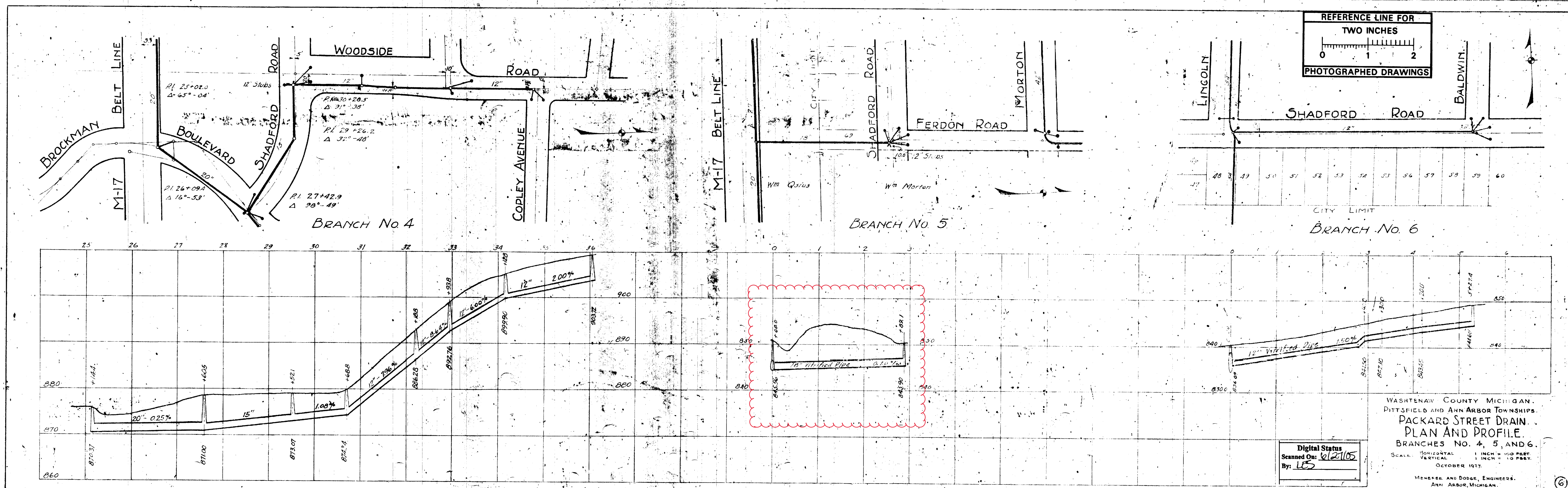
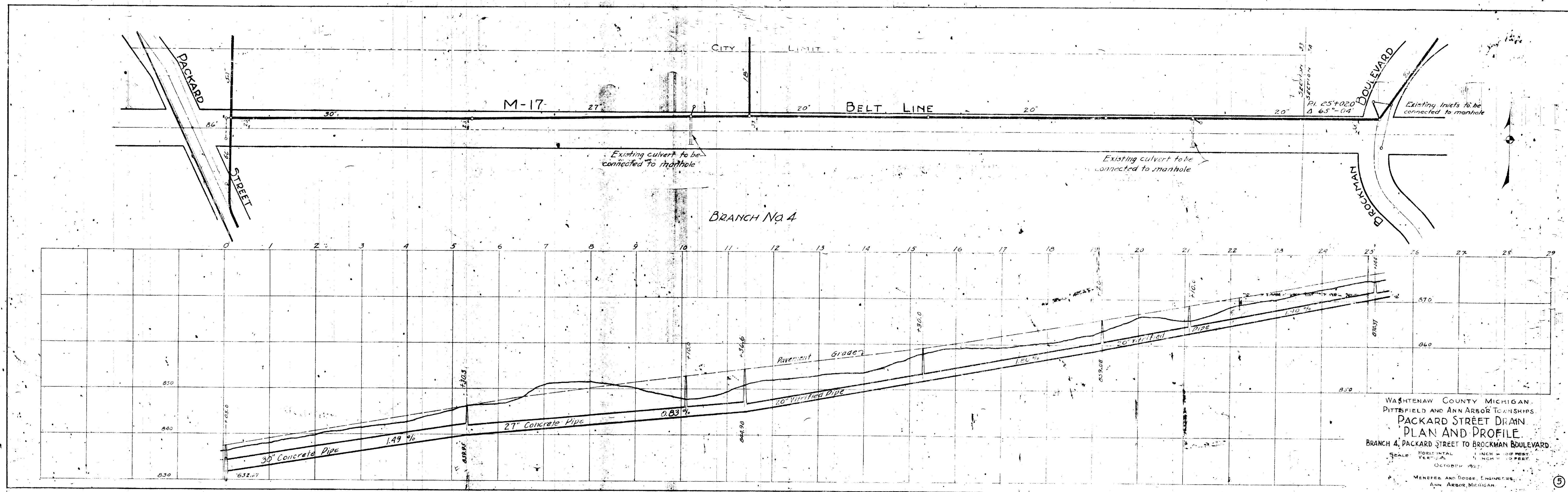
92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

# Frendon Rd. & Shadford Rd.

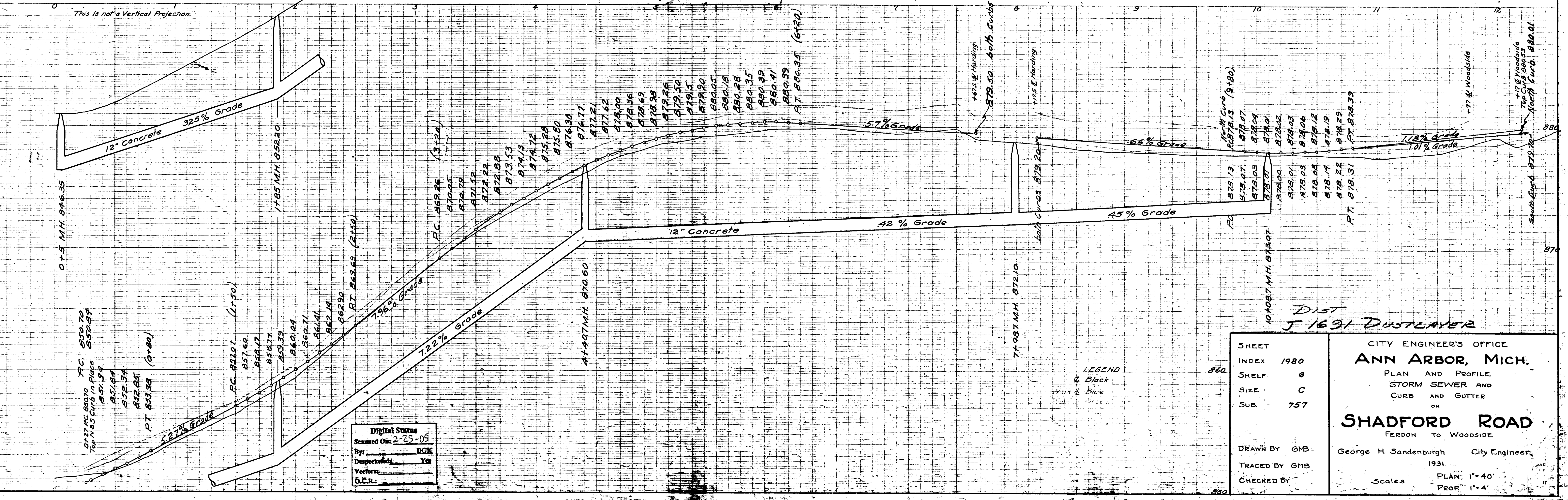
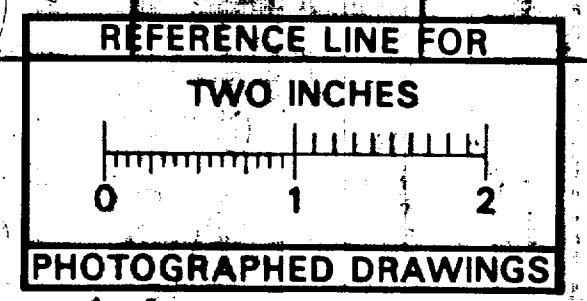
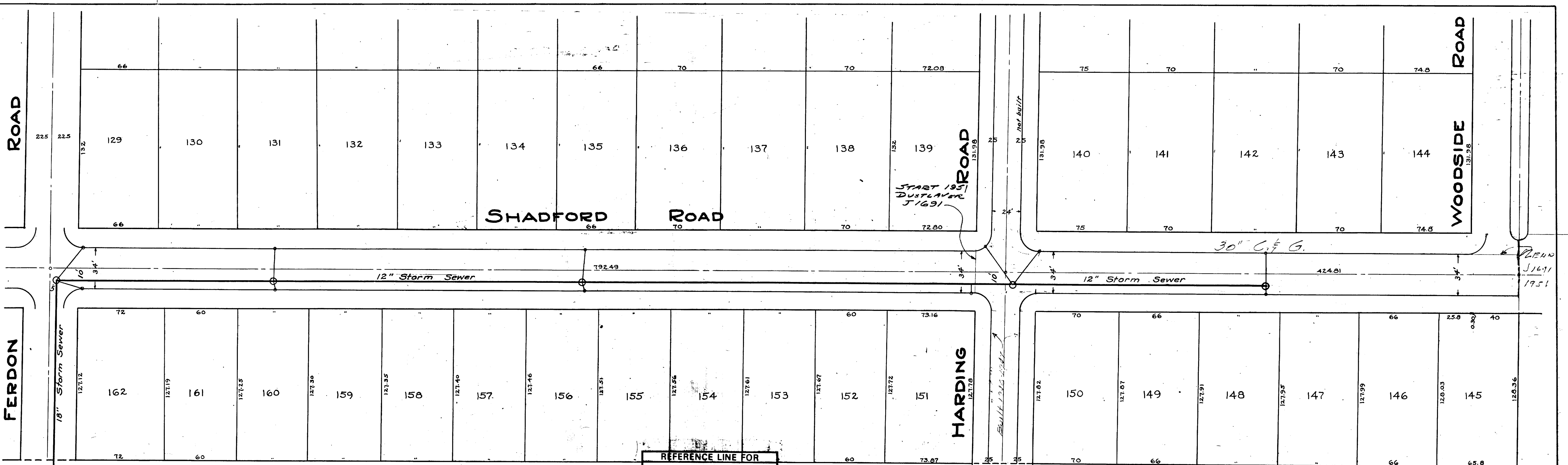


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Digital Status  
Scanned On: 2-25-09  
By: DGK  
Despeckled: Yes  
Vector: Yes  
D.C.R.:

LEGEND  
& Black  
Pink & Blue

SHEET INDEX 1980  
SHELF 6  
SIZE C  
SUB. 757

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
STORM SEWER AND  
CURB AND GUTTER  
ON  
**SHADFORD ROAD**  
FERDON TO WOODSIDE  
George H. Sandenburgh City Engineer  
1931  
Scales PLAN: 1"=40'  
PROF: 1"=4'

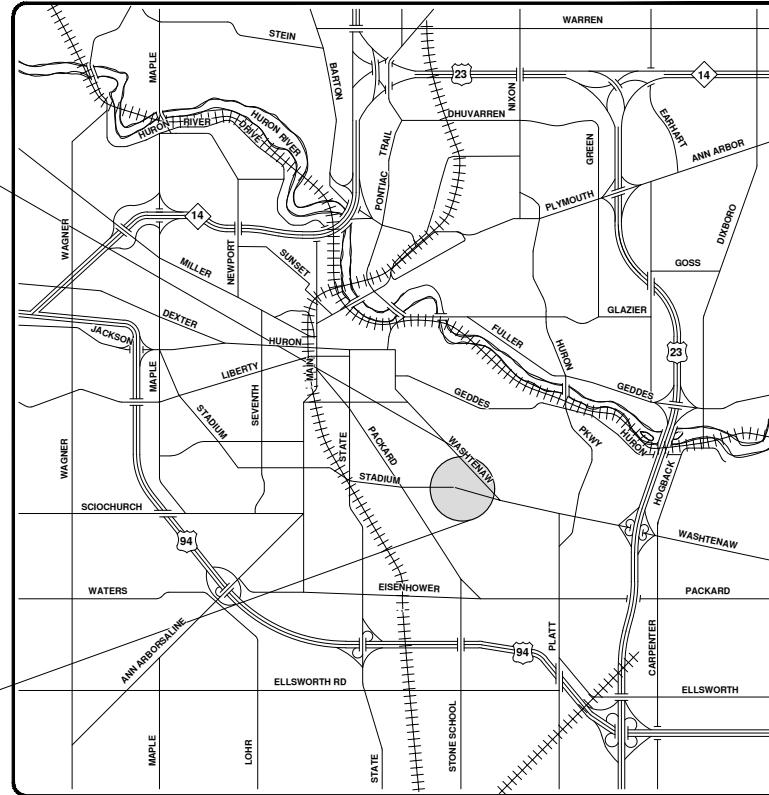
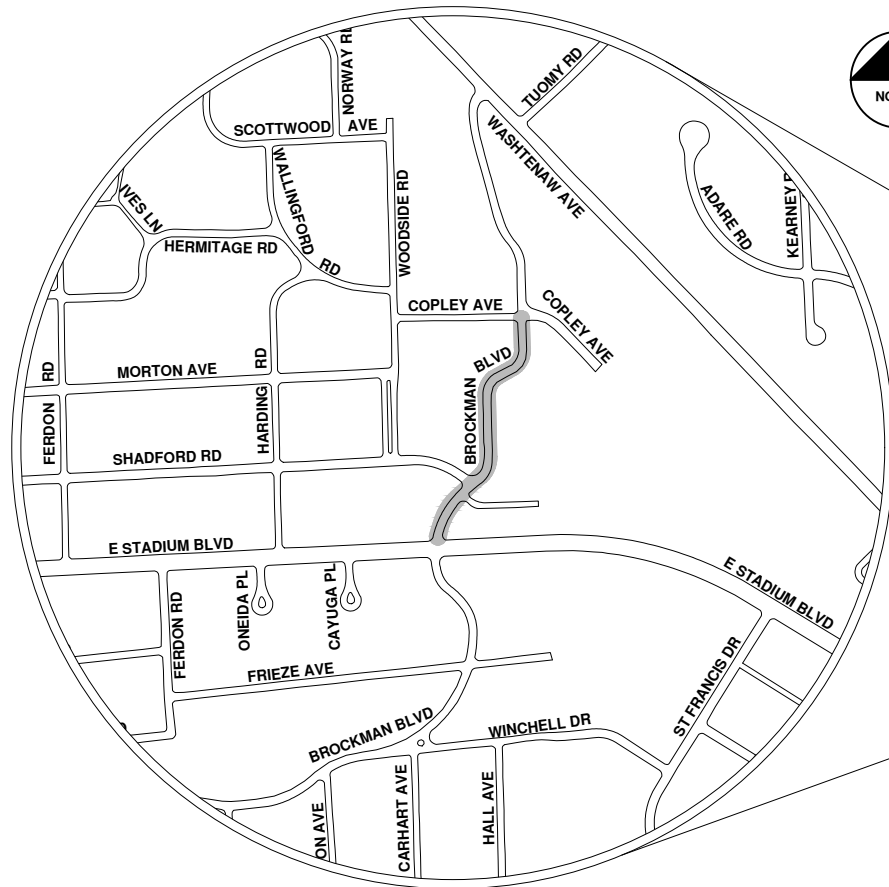
DIST J 1691 DUSTLAYER





# 2020 SEWER LINING PROJECT

## BROCKMAN BLVD



VICINITY MAP

R:\2020039 Sewer Lining\_2020\Plan Production\2020039Cov.dwg - \_o2\_standard bw.stb - Plot Date: 9/14/2020 12:06:55 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IWK

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
 734-794-6410  
 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-132

SHEET No.

132 OF 177

© 2020 SEWER LINING PROJECT; BID No. ITB 4643; 2020039





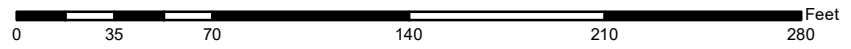
City of Ann Arbor

# Brockman Blvd.



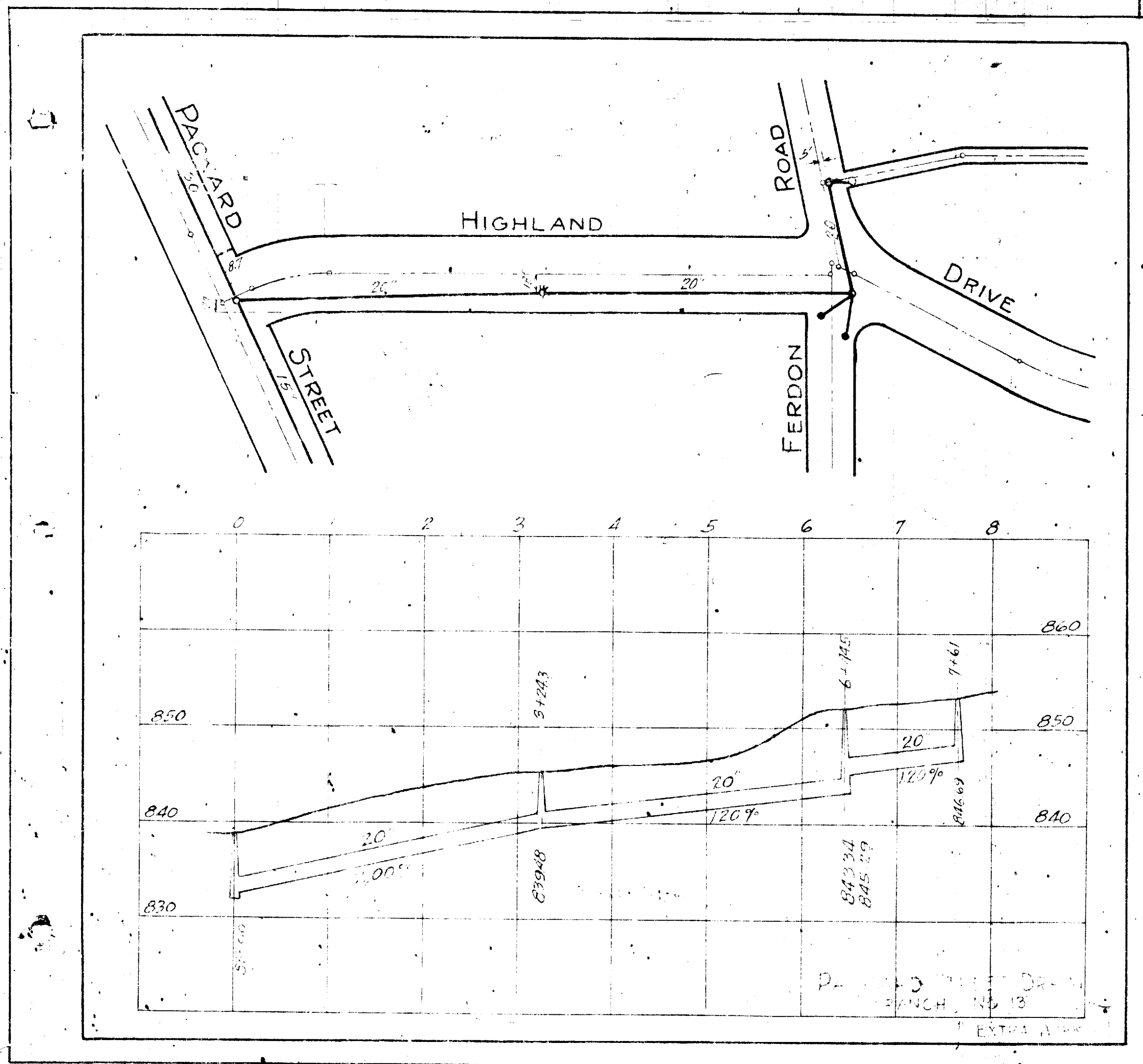
	Manhole		Storm Main
	Catchbasin		AA Proposed Lining

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



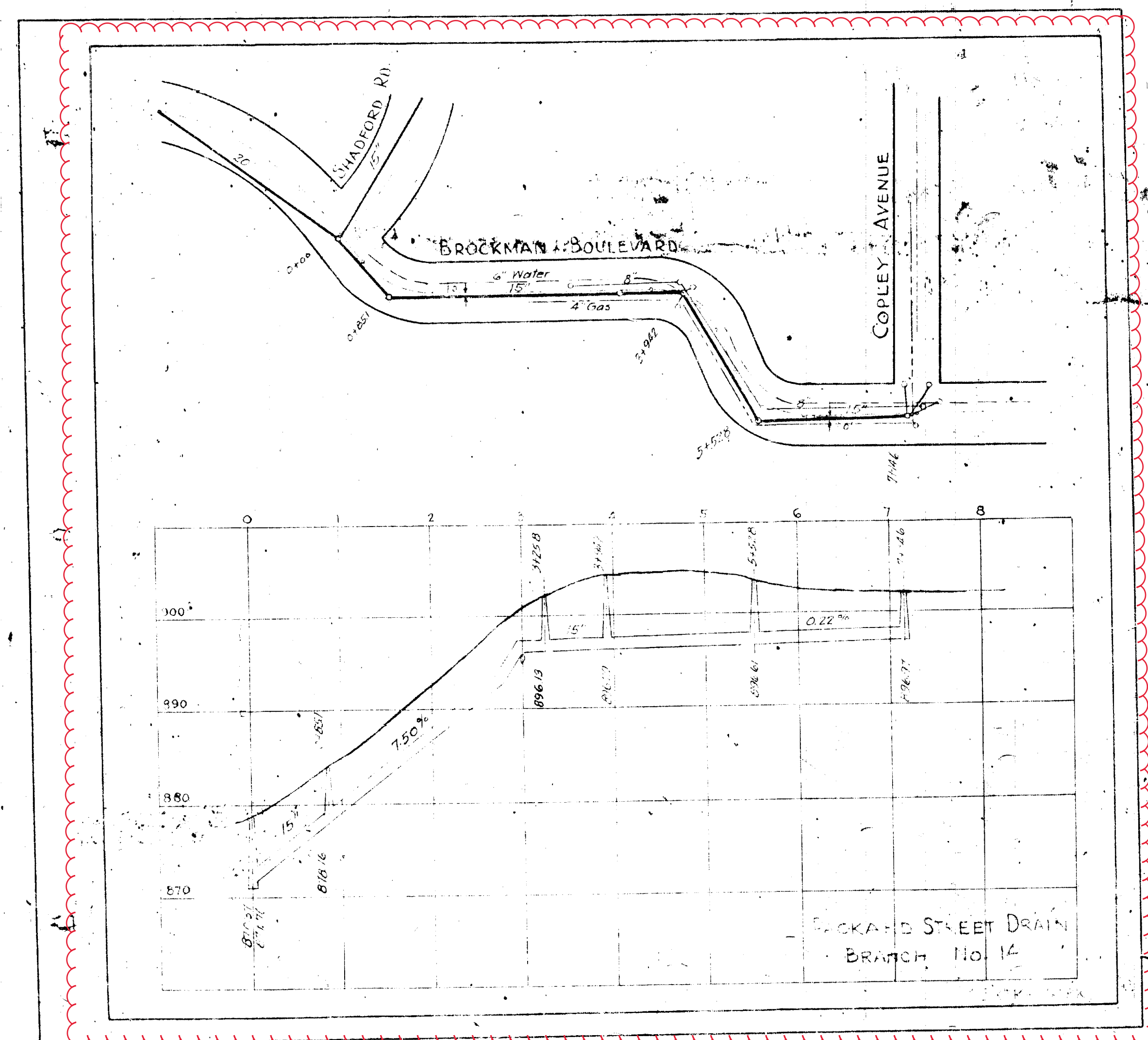
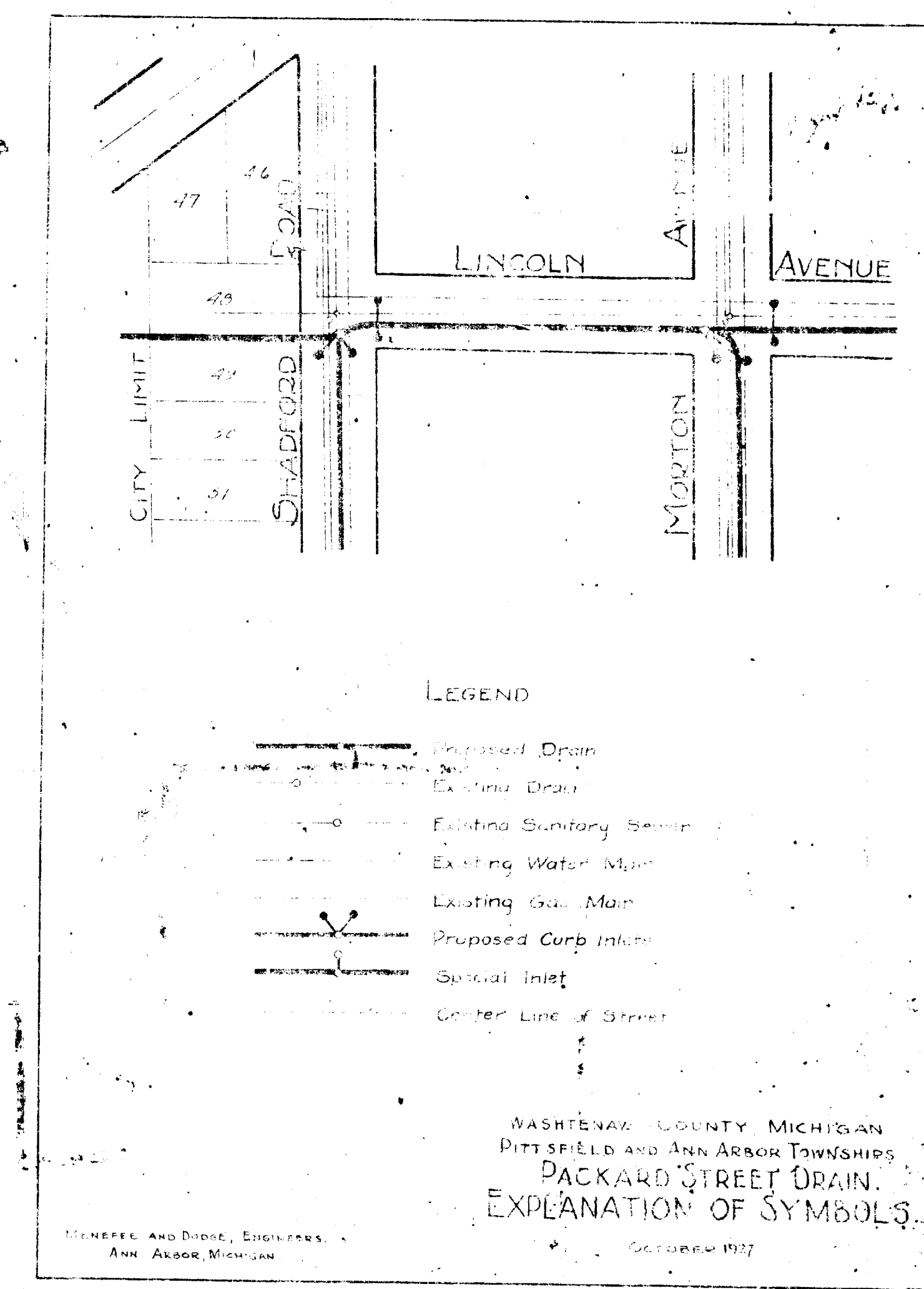
For terms and conditions please visit [www.a2gov.org/terms](http://www.a2gov.org/terms)



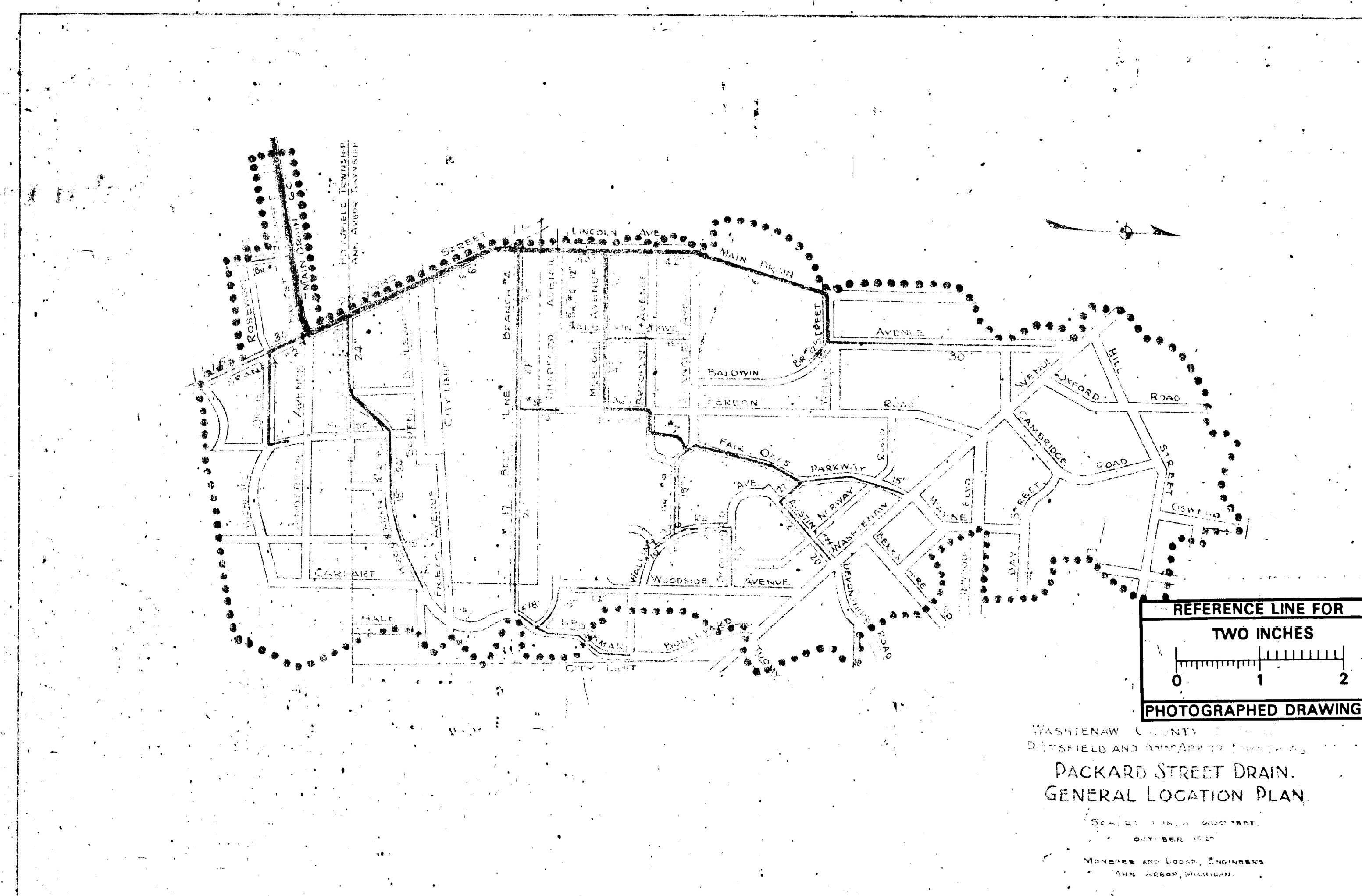


WASHTENAW COUNTY, MICHIGAN,  
 PITTSFIELD AND ANN ARBOR TOWNSHIPS  
**PLANS FOR PACKARD STREET DRAIN.**  
 OCTOBER 1927.

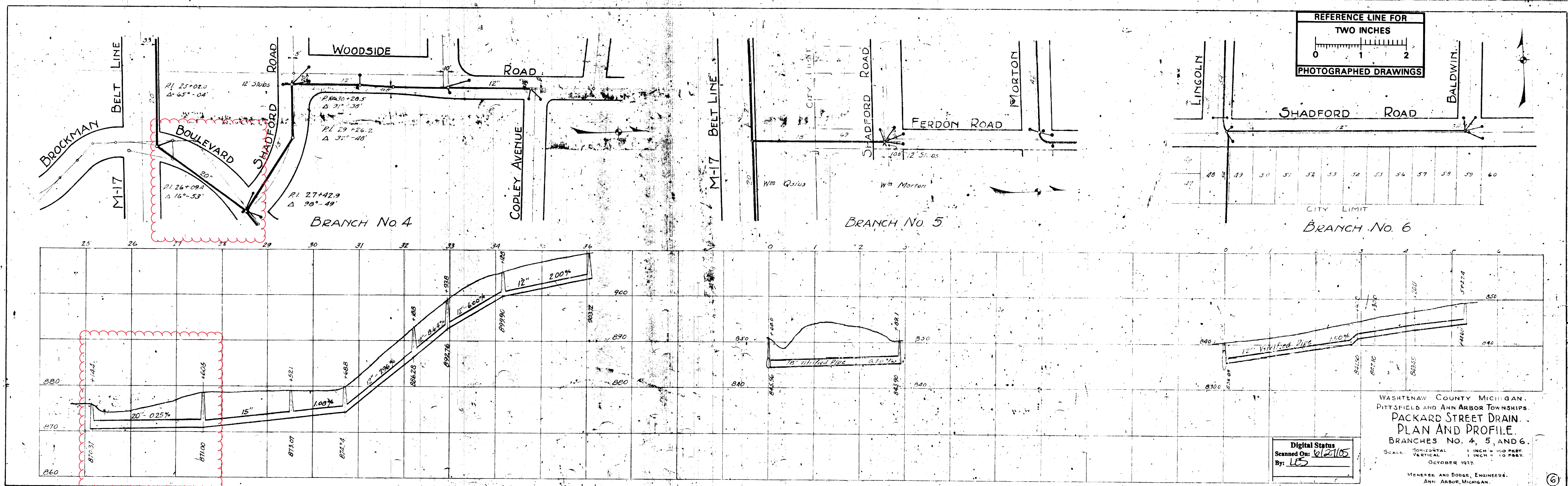
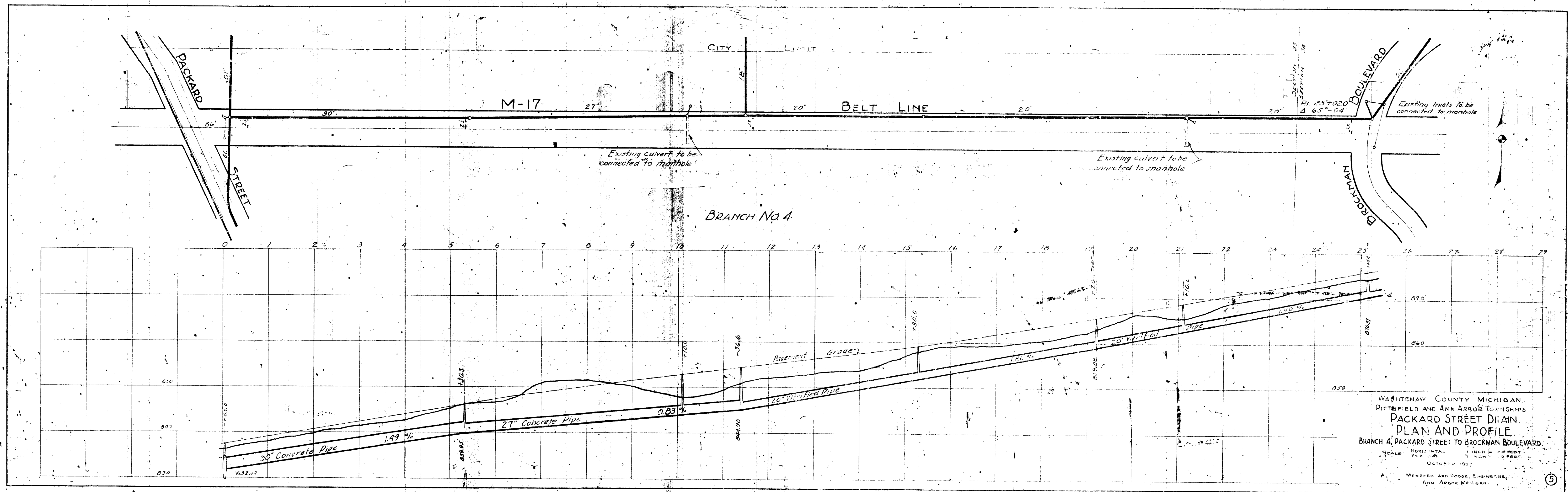
CLAYTON E. DEAKE, DRAIN COMMISSIONER,  
 MENEFEE AND DODGE, ENGINEERS,  
 ANN ARBOR, MICHIGAN.



Digital Status  
 Scanned On: 06/27/10  
 By: 60







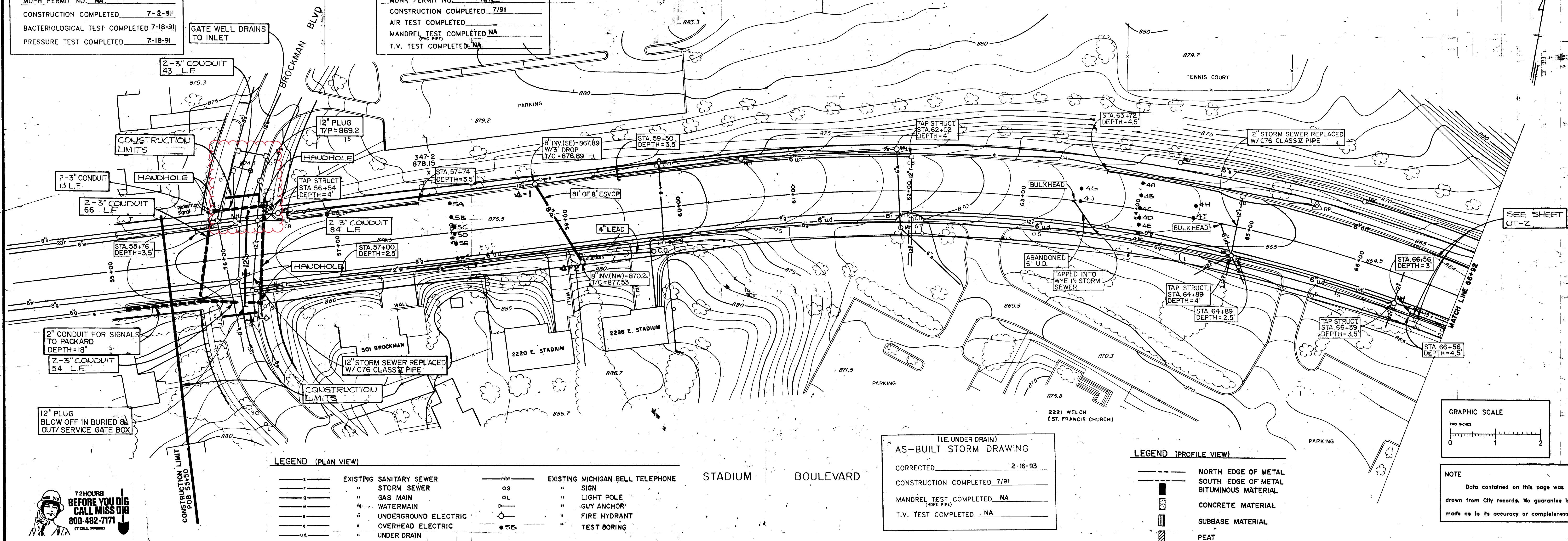


**AS-BUILT WATER DRAWING**

CORRECTED 2-16-93  
 MDPH PERMIT NO. NA  
 CONSTRUCTION COMPLETED 7-2-91  
 BACTERIOLOGICAL TEST COMPLETED 7-18-91  
 PRESSURE TEST COMPLETED 7-18-91

**AS-BUILT SANITARY DRAWING**

CORRECTED 2-16-93  
 MDNR PERMIT NO. N/A  
 CONSTRUCTION COMPLETED 7/91  
 AIR TEST COMPLETED  
 MANDREL TEST COMPLETED NA  
 T.V. TEST COMPLETED NA



**LEGEND (PLAN VIEW)**

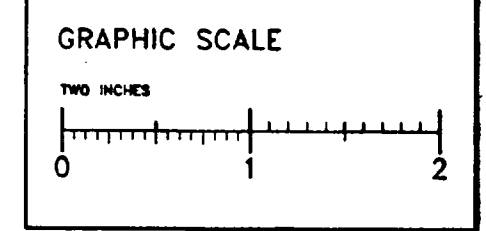
- |   |                         |      |                                  |
|---|-------------------------|------|----------------------------------|
| — | EXISTING SANITARY SEWER | —mb1 | EXISTING MICHIGAN BELL TELEPHONE |
| — | STORM SEWER             | OS   | SIGN                             |
| — | GAS MAIN                | OL   | LIGHT POLE                       |
| — | WATERMAIN               | —    | GUY ANCHOR                       |
| — | UNDERGROUND ELECTRIC    | —    | FIRE HYDRANT                     |
| — | OVERHEAD ELECTRIC       | —    | TEST BORING                      |
| — | UNDER DRAIN             | —    |                                  |

**AS-BUILT STORM DRAWING**

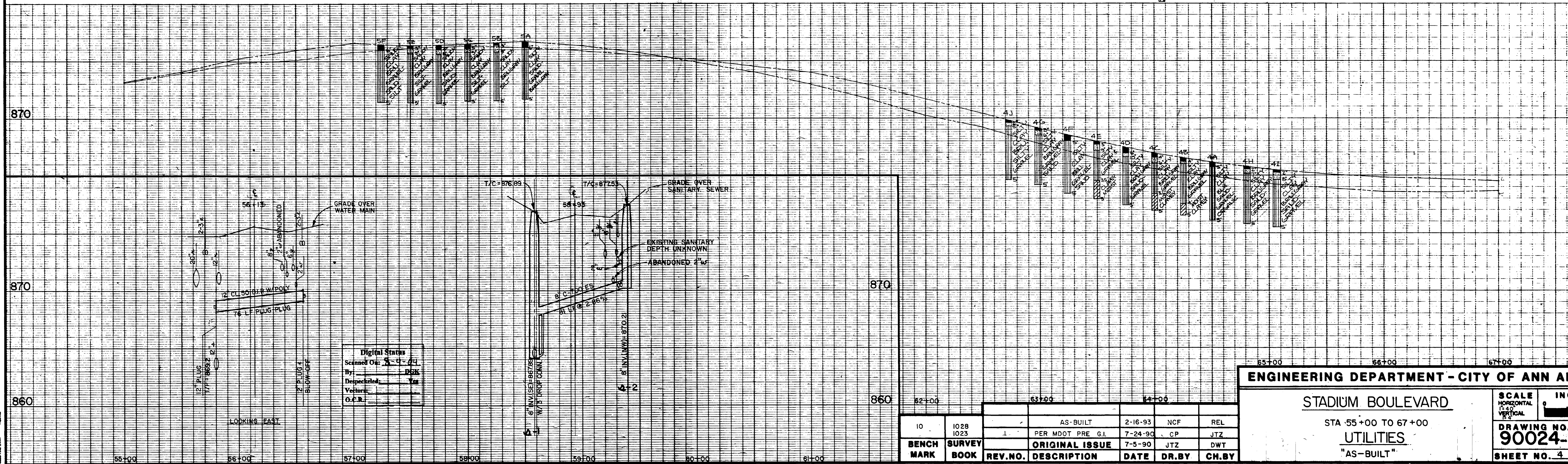
(I.E. UNDER DRAIN)  
 CORRECTED 2-16-93  
 CONSTRUCTION COMPLETED 7/91  
 MANDREL TEST COMPLETED NA  
 T.V. TEST COMPLETED NA

**LEGEND (PROFILE VIEW)**

- NORTH EDGE OF METAL
- SOUTH EDGE OF METAL
- BITUMINOUS MATERIAL
- CONCRETE MATERIAL
- SUBBASE MATERIAL
- PEAT



**NOTE**  
 Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.



**ENGINEERING DEPARTMENT - CITY OF ANN ARBOR**

**STADIUM BOULEVARD**

STA 55+00 TO 67+00

**UTILITIES**

"AS-BUILT"

SCALE 1" = 40' 1" CONTOUR INTERVAL  
 HORIZONTAL 1" = 40' VERTICAL 1" = 4'  
**DRAWING NO. 90024-UT-1**  
**SHEET NO. 4 OF 24**

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
10	1028	1	AS-BUILT	2-16-93	NCF	REL
	1023		PER MDOT PRE G.I.	7-24-90	CP	JTZ
			ORIGINAL ISSUE	7-5-90	JTZ	DWT







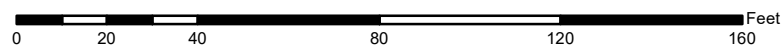


# Moore St., Plymouth Rd. & Broadway St.



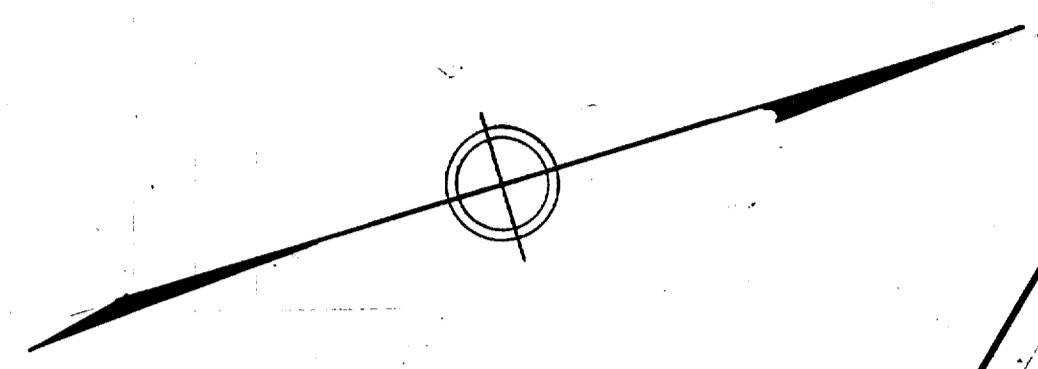
92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

	Manhole		Storm Main
	Not found Manhole		AA Proposed Lining
	Catchbasin		

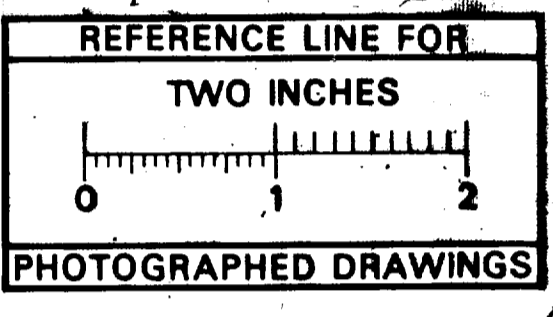


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See dwg E-F-19  
See Agreement with W. Moore &  
L. Moore 8-7-41 to cut bank  
15' Easement (Stone Wall Job 1117)



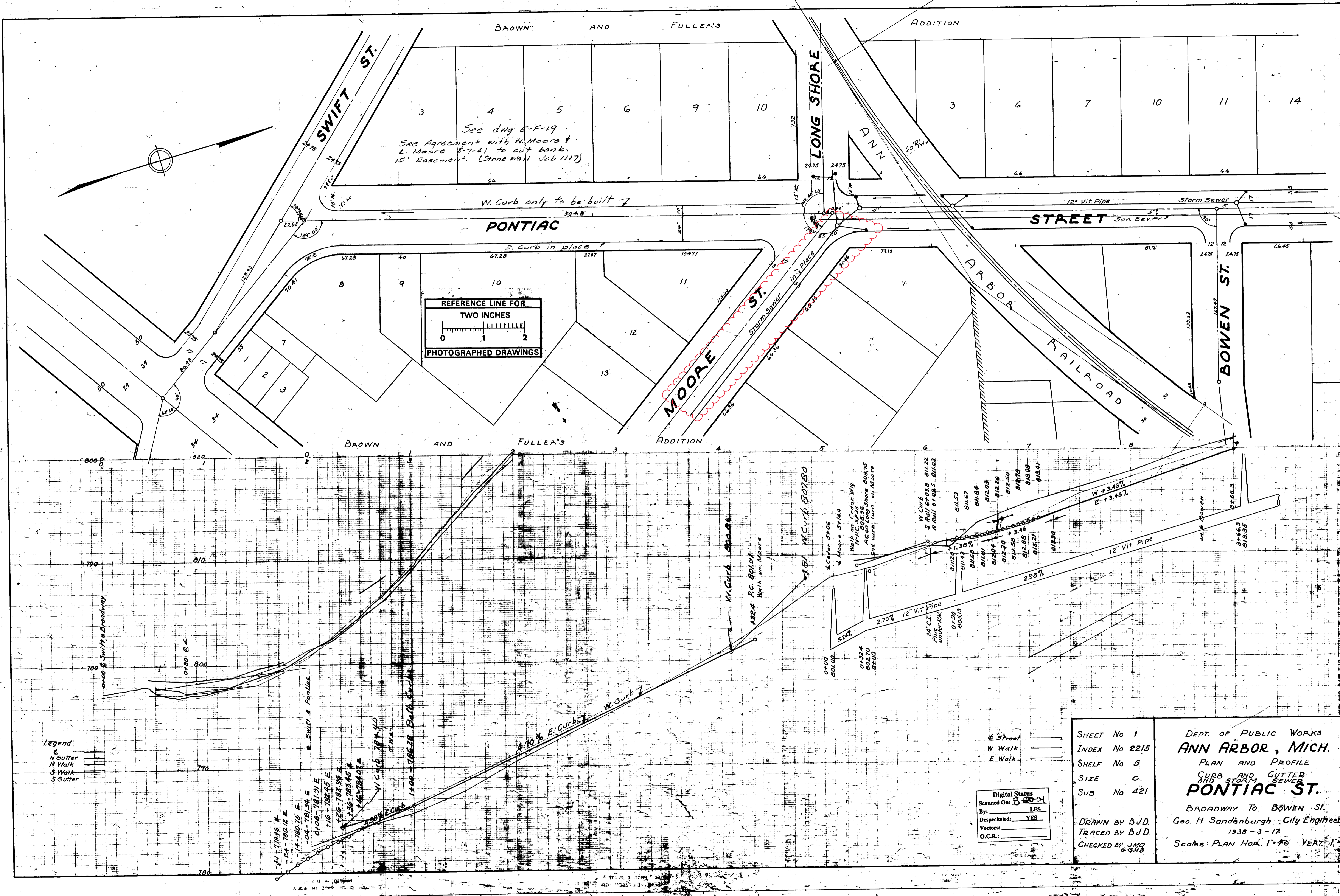
Legend  
N Gutter  
N Walk  
S Walk  
S Gutter

Digital Status  
Scanned On: 8-20-04  
By: LES  
Despeckled: YES  
Vectors: YES  
O.C.R.: YES

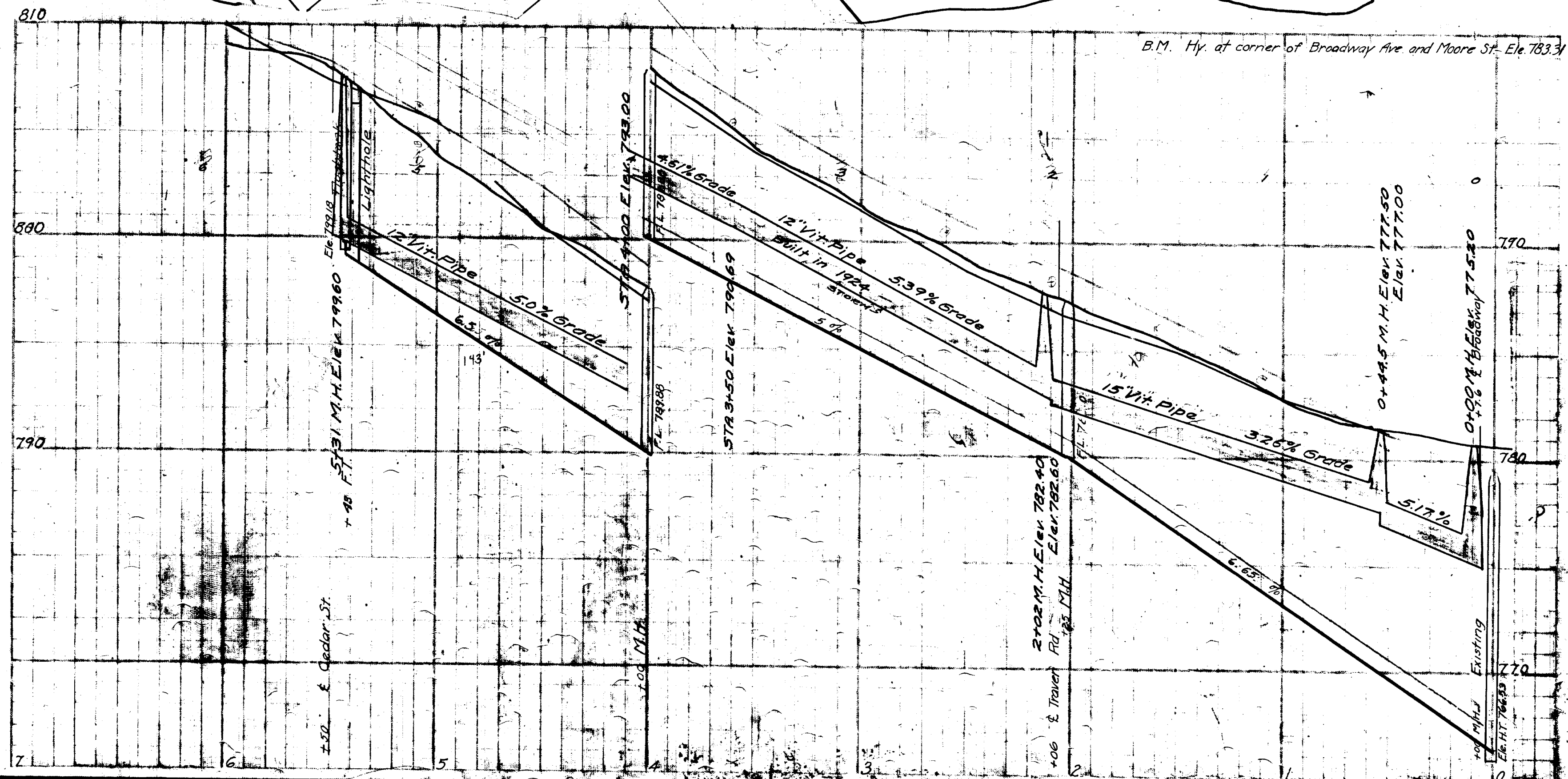
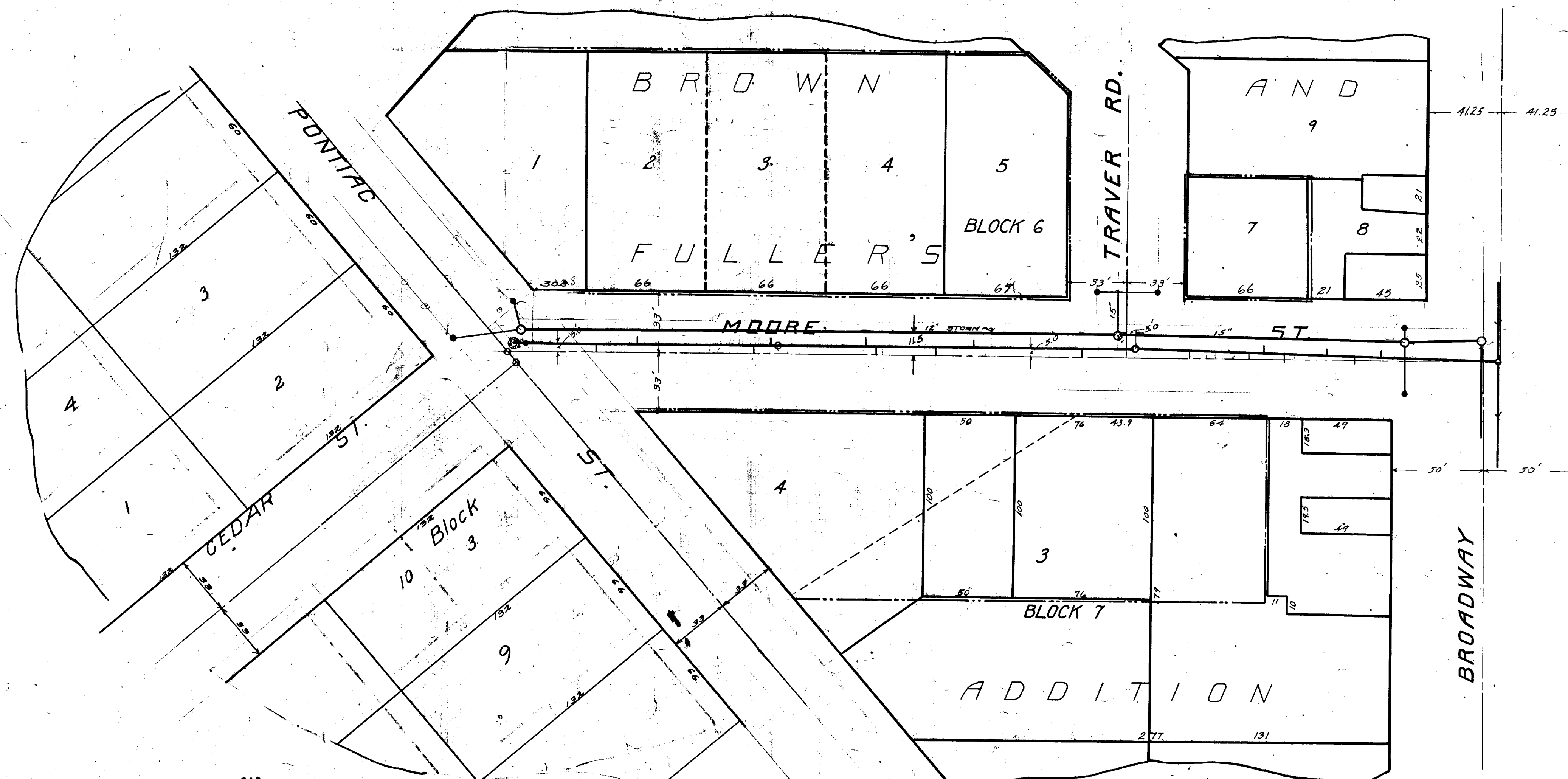
SHEET No 1  
INDEX No 2215  
SHELF No 5  
SIZE C  
SUB No 421

DEPT. OF PUBLIC WORKS  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
CURB AND GUTTER  
AND STORM SEWER  
**PONTIAC ST.**  
BROADWAY TO BOWEN ST.  
Geo. H. Sandenburgh, City Engineer  
1938-3-17  
Scale: PLAN HOR. 1"=40' VERT. 1"=4'

DRAWN BY B.J.D.  
TRACED BY B.J.D.  
CHECKED BY J.M.G.  
G.M.B.







**BILL OF MATERIALS**  
 312 Lineal Ft. of 8" Tile.  
 16 - 8" Sanitary Tees.  
 2 - 8" Branches.  
 2 - Manholes.  
 1 - Flushpank.  
 1 - Lighthole cover.

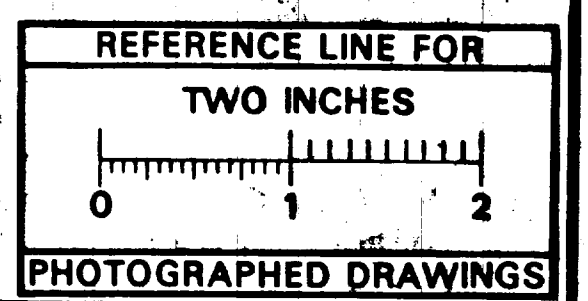
**EXCAVATION + BACKFILLING**  
 345.0 Lineal Ft. of 6-8 Ft. Depth.  
 110.0 - - - 8-10 -  
 90.0 - - - 10-13 -

**FINAL MEASUREMENTS**

CONV. N.	CONV. S.
65.0	0 - M.H. @ Broadway
95.5	22.7
131.5	119.2
	137.6
	171.8
292.8	202.9 M.H. @ Traver St.
349.4	229.0
	310.0
	344.4
413.0	401.0 M.H. @
477.5	411.0
	499.0
539.7	Lighthole
545.0	Flushpank

**Digital Status**  
 Scanned On: 8-25-04  
 By: DGK  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:

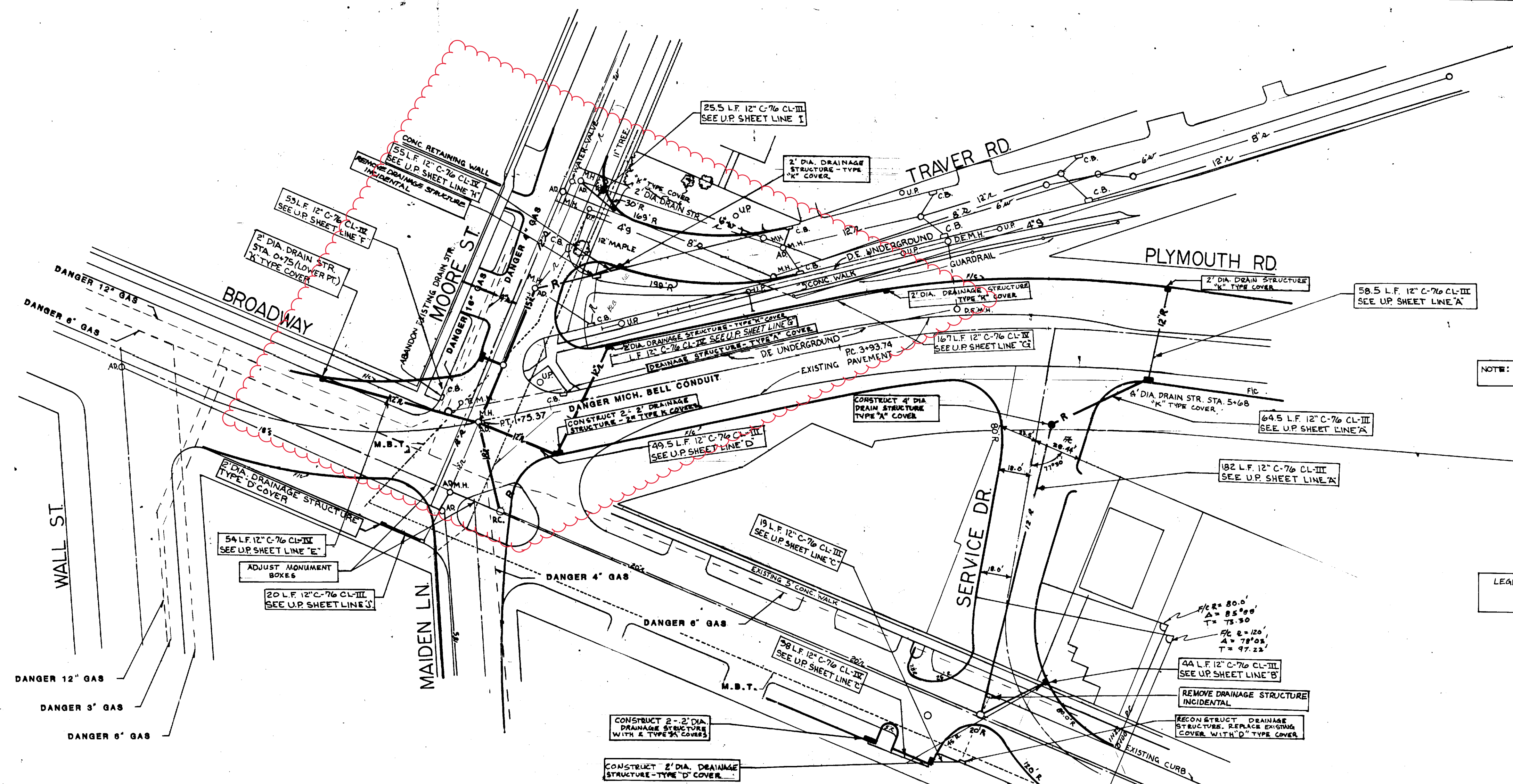
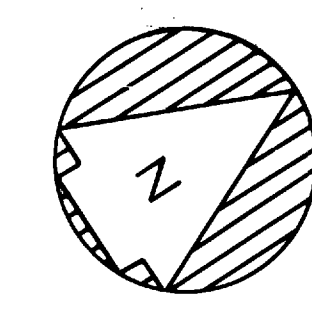
**LEGEND**  
 North Walk  
 South Walk  
 Center Line  
 Flow line  
 Flow line of sewer  
 District boundary



SHEET No. 22A  
 INDEX No. 498  
 SHELF No. 6  
 SIZE C  
 SUB No. 56  
 Drawn by S<sup>2</sup>  
 Traced by S<sup>2</sup>  
 Checked by MLD

CITY ENGINEER'S OFFICE  
 ANN ARBOR, MICH.  
 PLAN AND PROFILE  
 OF  
 SANITARY SEWER  
 DISTRICT No. 67  
**MOORE ST.**  
 FROM BROADWAY TO PONTIAC ST.  
 Manley Osgood, City Engineer  
 1914-8-31  
 Scales: Plan 1"=40' Profile 1"=40' Ver. 1"=4'  
 One Sheet Sheet "A"





NOTE: UTILITIES TO BE ADJUSTED BY OTHERS

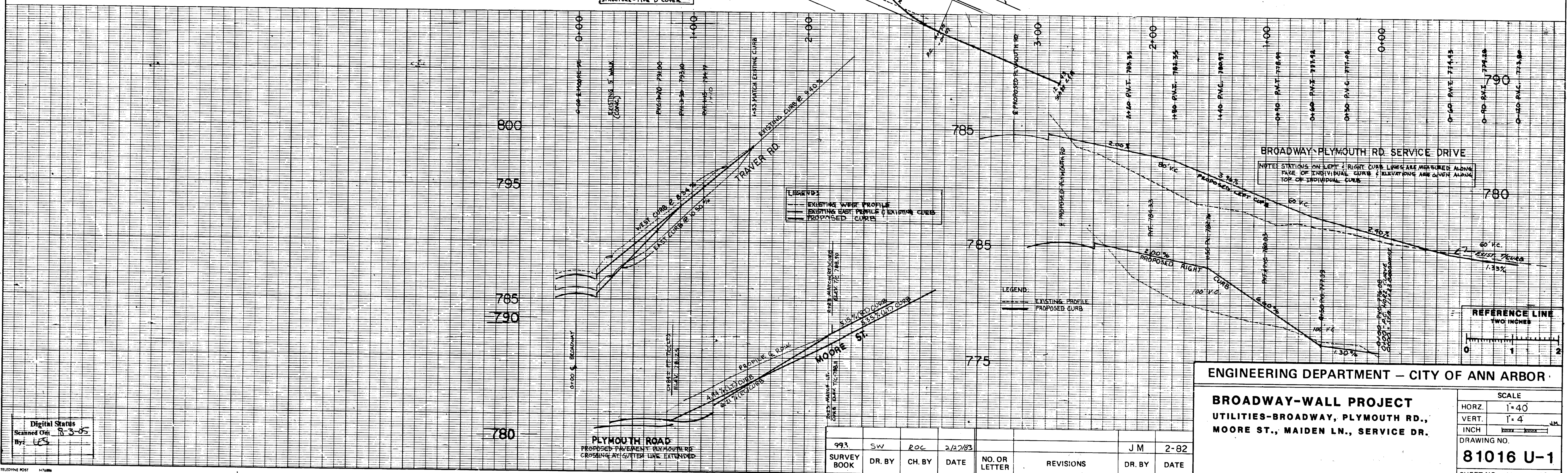
LEGEND: AD-ADJUST STRUCTURE COVER  
RC-RECONSTRUCT DRAINAGE STRUCTURE

LEGEND:  
 --- ROAD  
 --- CURB (RT)  
 --- WALK (LT)

DANGER 12" GAS  
 DANGER 3" GAS  
 DANGER 6" GAS

CONSTRUCT 2" DIA. DRAINAGE STRUCTURE WITH A TYPE "A" COVER  
 CONSTRUCT 2" DIA. DRAINAGE STRUCTURE-TYPE "D" COVER

44 L.F. 12" C-76 CL-III SEE UP SHEET LINE "B"  
 REMOVE DRAINAGE STRUCTURE INCIDENTAL  
 RECONSTRUCT DRAINAGE STRUCTURE. REPLACE EXISTING COVER WITH "D" TYPE COVER



ENGINEERING DEPARTMENT - CITY OF ANN ARBOR

**BROADWAY-WALL PROJECT**  
 UTILITIES-BROADWAY, PLYMOUTH RD.,  
 MOORE ST., MAIDEN LN., SERVICE DR.

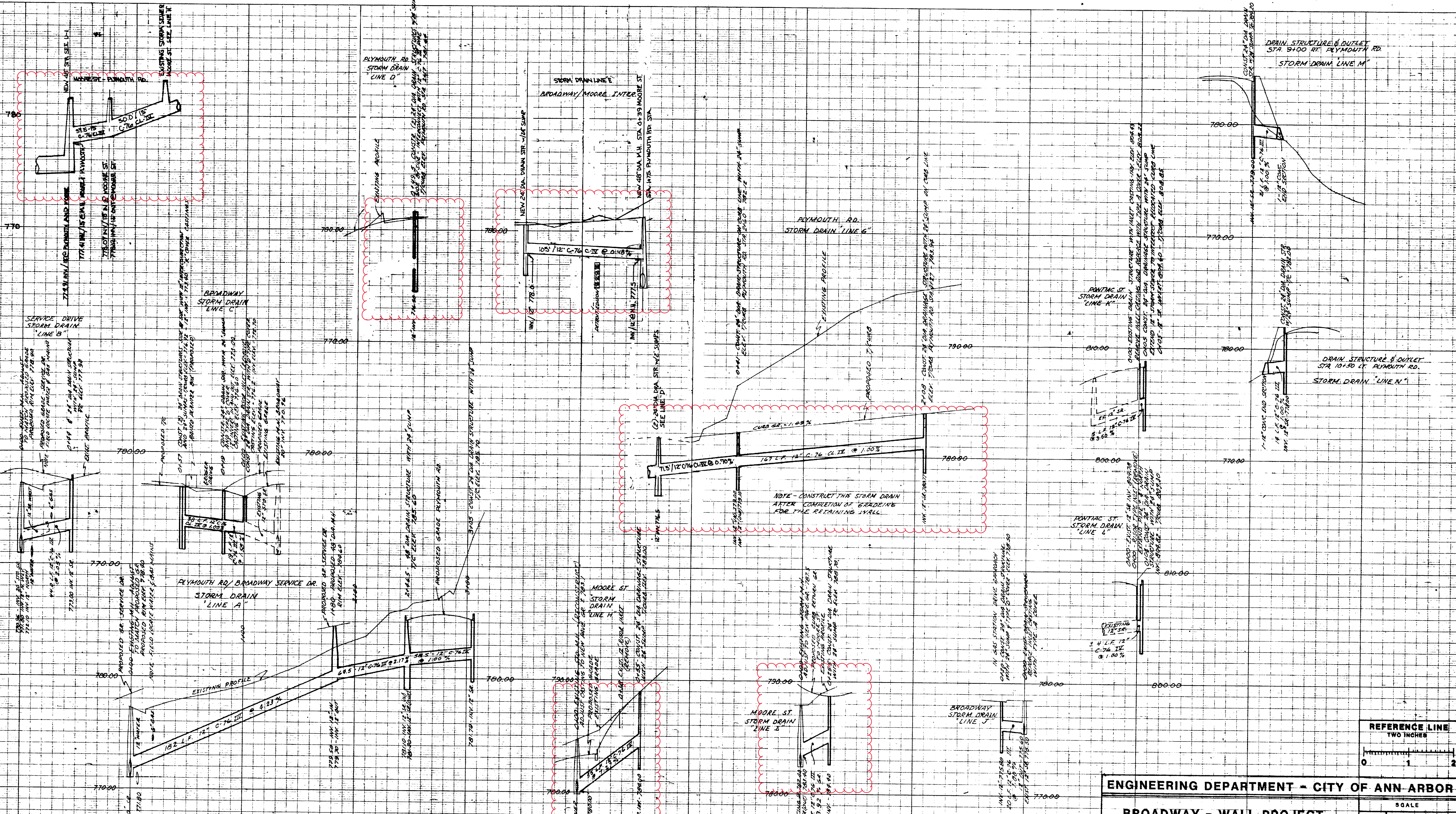
SCALE  
 HORZ. 1"=40'  
 VERT. 1"=4'  
 INCH 1/8"=1'-0"  
 DRAWING NO. **81016 U-1**  
 SHEET NO. 12 OF 32

SURVEY BOOK	DR. BY	CH. BY	DATE	NO. OR LETTER	REVISIONS	DR. BY	DATE
993	SW	ROC	2/2/83			JM	2-82

Digital Status  
 Scanned On 8-3-05  
 By: LGS

HES 2006 (036)

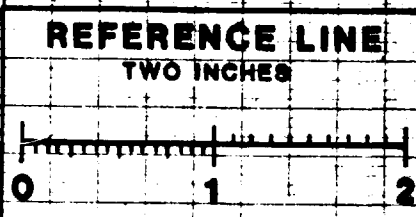




Digital Stamp  
 Scanned On: 9-3-05  
 By: JES

**ENGINEERING DEPARTMENT - CITY OF ANN ARBOR**  
**BROADWAY - WALL PROJECT**  
 UTILITY PROFILE -  
 BROADWAY - PLYMOUTH RD.  
 SERVICE DR. - MOORE ST.

SCALE	
HORZ.	1" = 40'
VERT.	1" = 4'
DRAWING NO.	
81016 UP	











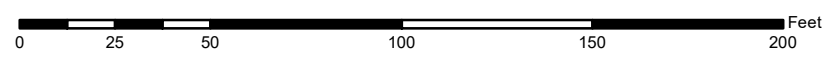
City of Ann Arbor



- Manhole
- Not found Manhole
- Catchbasin
- Storm Main
- AA Proposed Lining

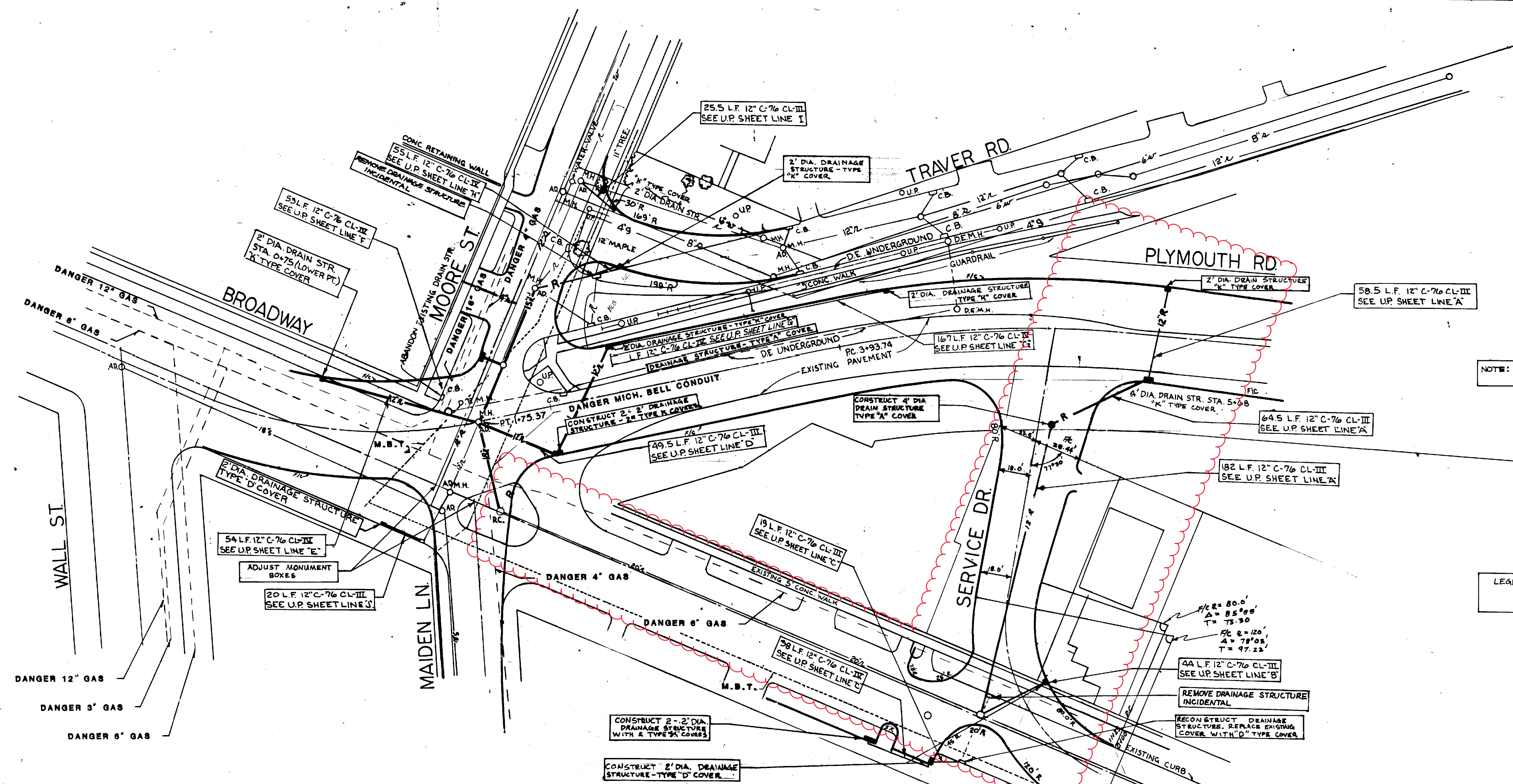
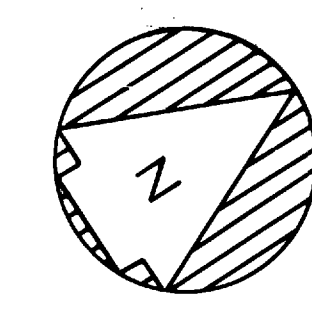
92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

# Broadway St. & Plymouth Rd.



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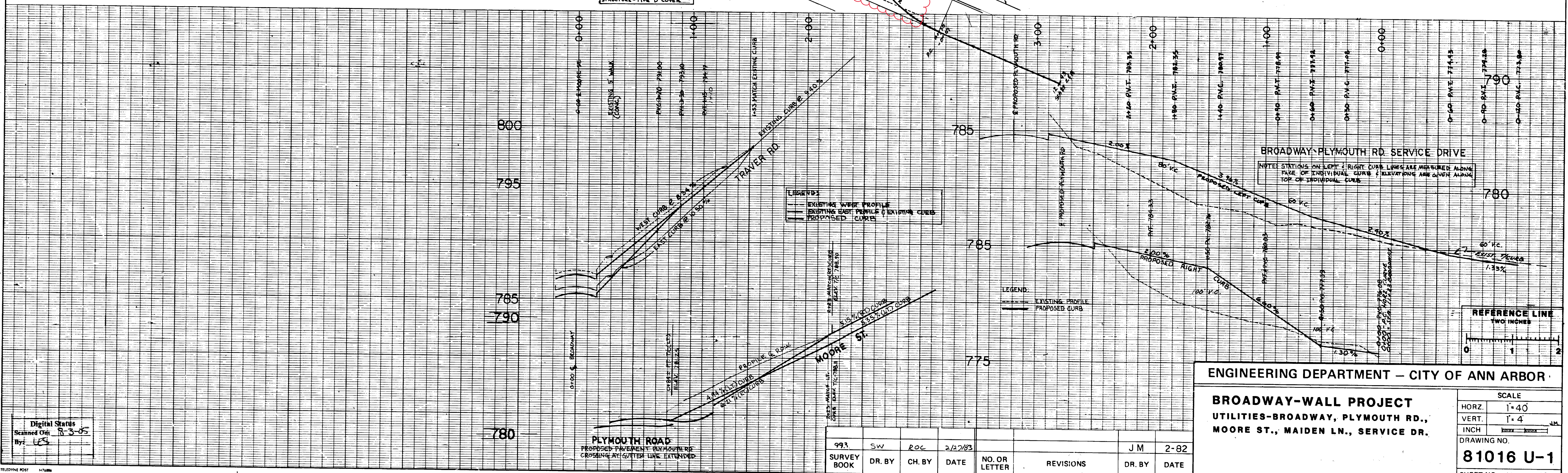


NOTE: UTILITIES TO BE ADJUSTED BY OTHERS

LEGEND: AD-ADJUST STRUCTURE COVER  
RC-RECONSTRUCT DRAINAGE STRUCTURE

LEGEND:  
R ROAD  
T/CURB (RT)  
F/WALK (LT)

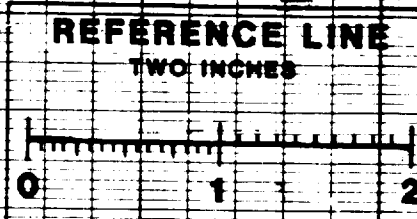
DANGER 12" GAS  
DANGER 8" GAS  
DANGER 6" GAS



LEGEND:  
--- EXISTING W/VE PROFILE  
--- EXISTING ELEV PROFILE & EXISTING CURBS  
--- PROPOSED CURBS

LEGEND:  
--- EXISTING PROFILE  
--- PROPOSED CURBS

BROADWAY-PLYMOUTH RD. SERVICE DRIVE  
NOTE: STATIONS ON LEFT & RIGHT CURB LINES ARE MEASURED ALONG FACE OF INDIVIDUAL CURBS. ELEVATIONS ARE GIVEN ALONG TOP OF INDIVIDUAL CURBS.



ENGINEERING DEPARTMENT - CITY OF ANN ARBOR

**BROADWAY-WALL PROJECT**  
UTILITIES-BROADWAY, PLYMOUTH RD.,  
MOORE ST., MAIDEN LN., SERVICE DR.

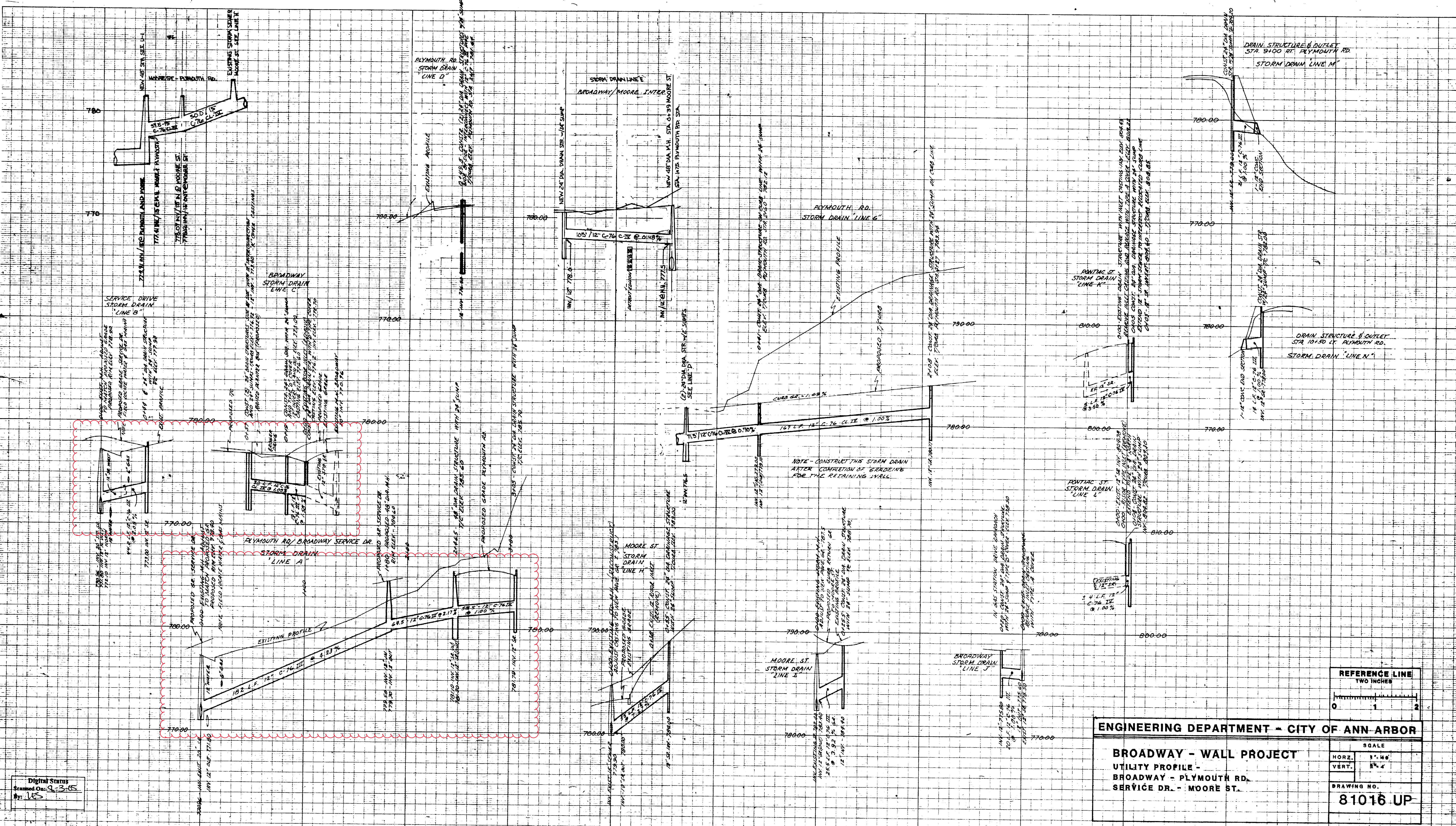
SCALE	
HORZ.	1"=40'
VERT.	1"=4'
INCH	1/4"=1'-0"
DRAWING NO.	
<b>81016 U-1</b>	
SHEET NO. 12 OF 32	

993	SW	ROC	2/2/83		JM	2-82
SURVEY BOOK	DR. BY	CH. BY	DATE	NO. OR LETTER	REVISIONS	DR. BY DATE

Digital Status  
Scanned On 8-3-05  
By: LGS

HES 2006 (036)





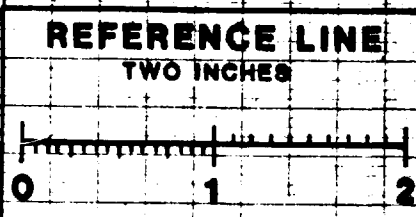
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By: JES

ENGINEERING DEPARTMENT - CITY OF ANN ARBOR

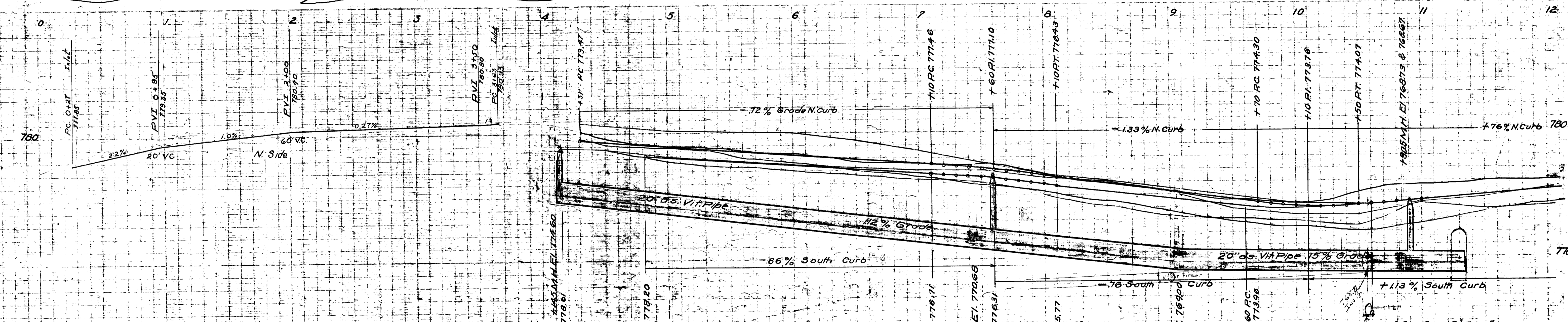
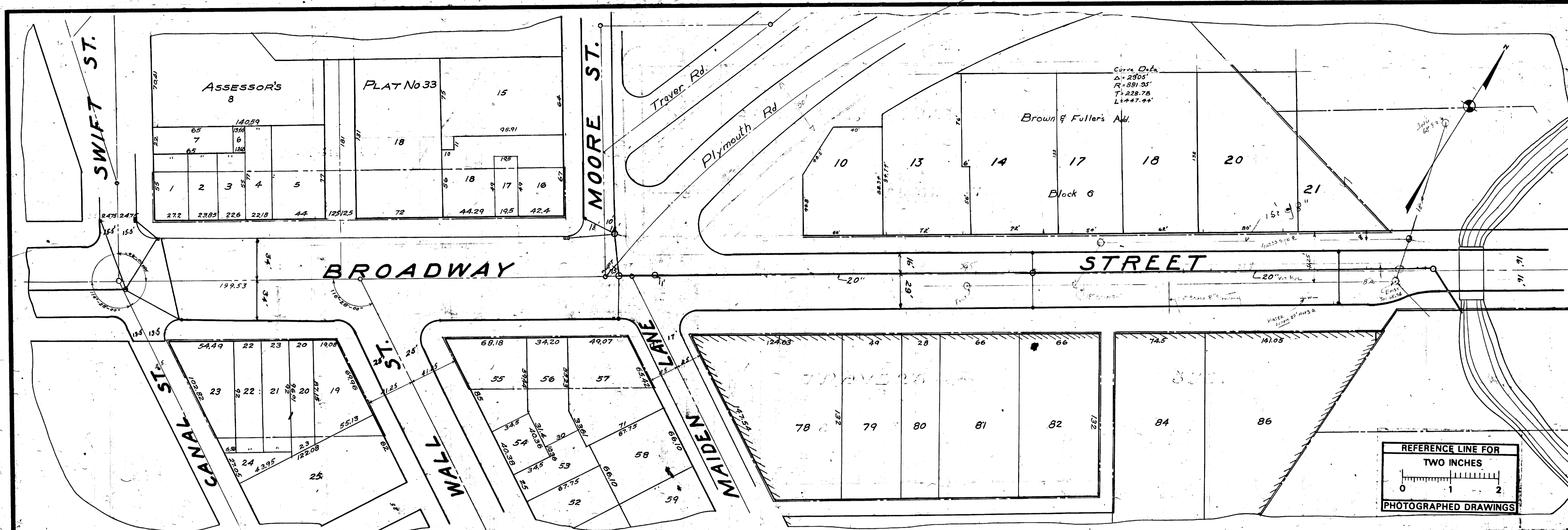
**BROADWAY - WALL PROJECT**  
UTILITY PROFILE - BROADWAY - PLYMOUTH RD. SERVICE DR. - MOORE ST.

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

DRAWING NO.  
**81016 UP**







Digital Status  
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 By: LES  
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 Vectors:  
 O.C.R.:

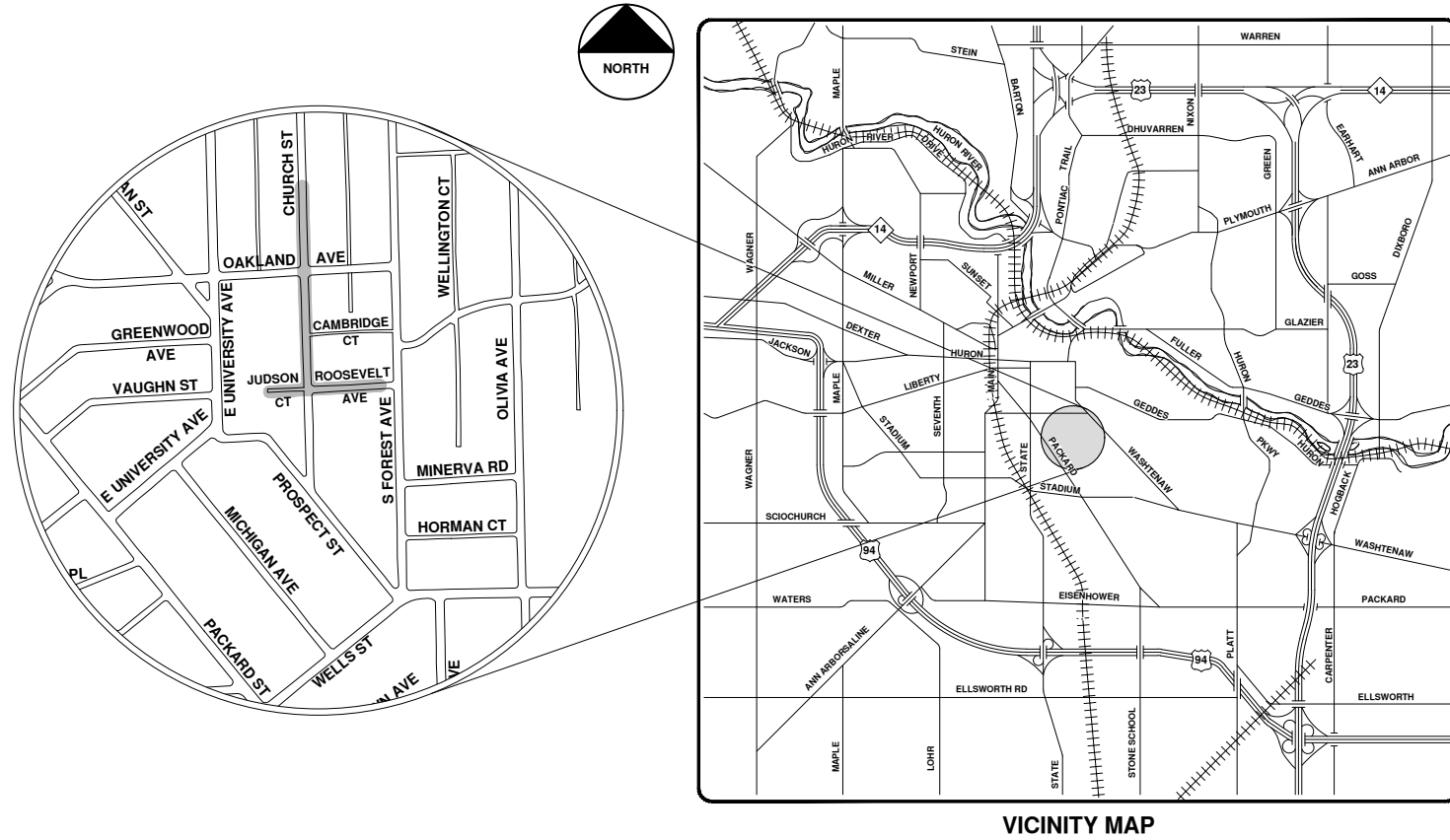
INDEX No. 1340	CITY ENGINEER'S OFFICE
SHELF 5	<b>ANN ARBOR, MICH.</b>
SIZE C	PLAN AND PROFILE
SUB No. 149	OF
	CURB AND GUTTER
	AND
	STORM SEWER
	<b>BROADWAY ST.</b>
	SWIFT TO TRAVER CREEK
	Geo. H. Sandenburgh, City Engineer
	1923-1-30
	Scale: Hor. 1"=40' Vert. 1"=4'





# 2020 SEWER LINING PROJECT

## ROOSEVELT AVE & CHURCH ST



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**ENGINEERING**  
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 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



REV.	DATE	DESCRIPTION
00	9-14-20	BID SET
		ARG
		IVK
		CHECKED

CITY OF ANN ARBOR  
 PUBLIC SERVICES  
 301 EAST HURON STREET  
 ANN ARBOR, MI 48107-8647  
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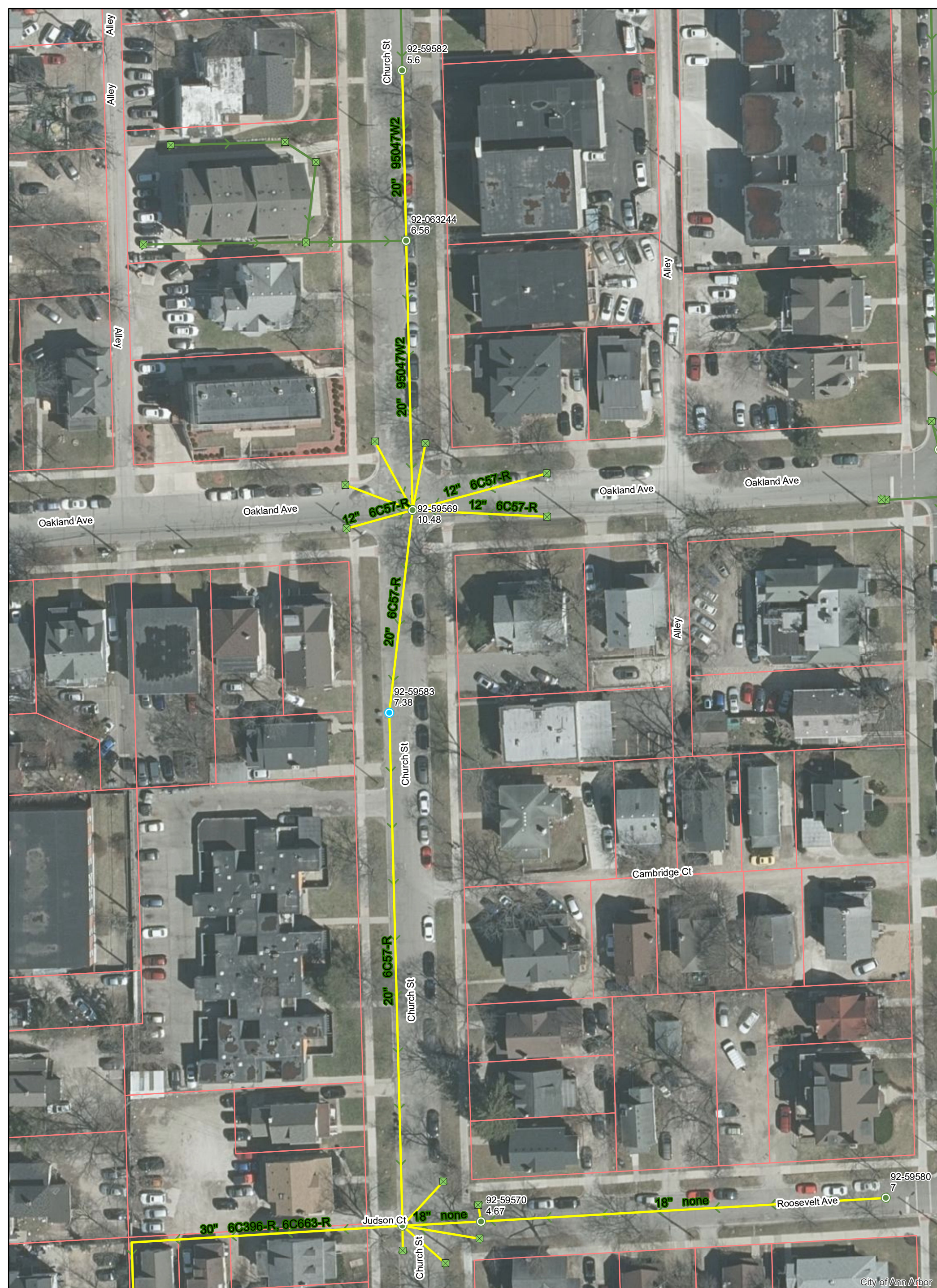
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-148

SHEET No.  
 148 OF 177

© 2020 SEWER LINING PROJECT; BID No. ITB 4643; 2020039



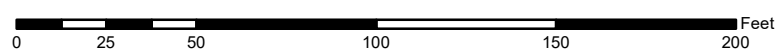


# Roosevelt Ave. & Church St.



92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

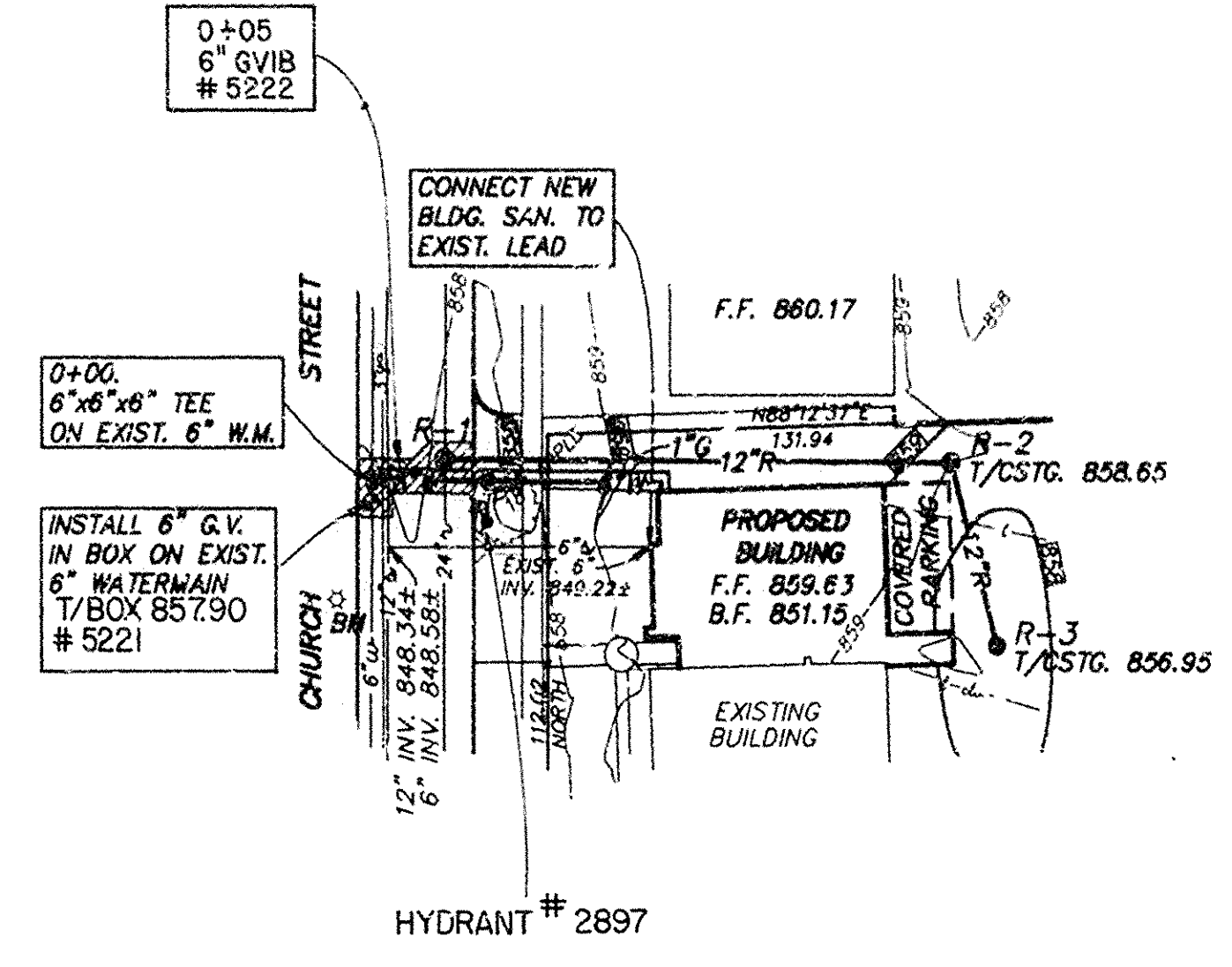
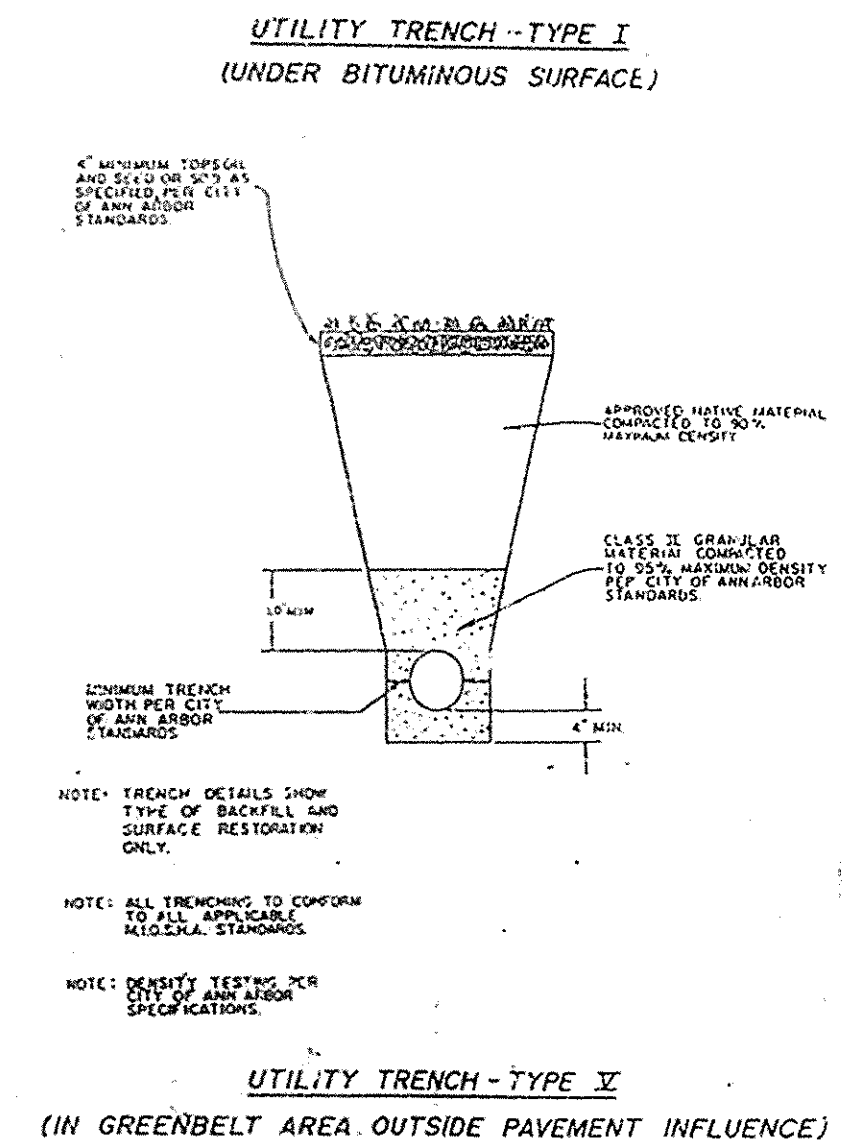
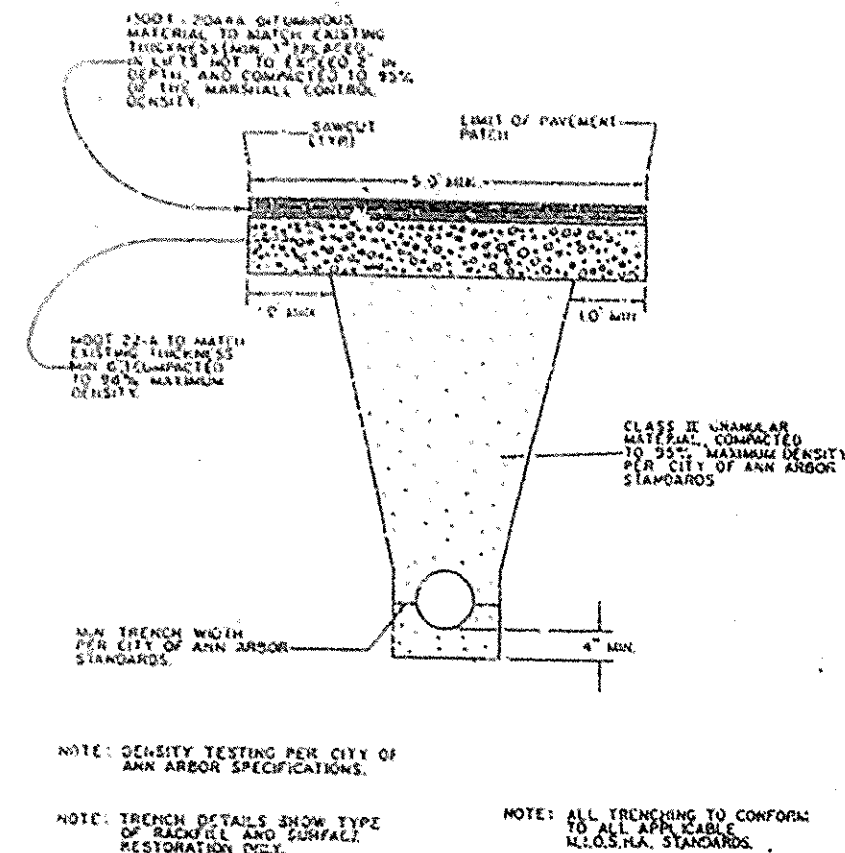
	Manhole		Storm Main
	Not found Manhole		AA Proposed Lining
	Catchbasin		



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City of Ann Arbor



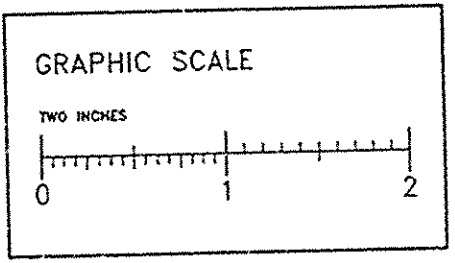


**CONSTRUCTION NOTES - WATERMAIN & STORM SEWER**

- 1) ALL WATERMAIN CONSTRUCTION AND MATERIALS SHALL CONFORM TO CURRENT CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS
- 2) ALL WATERMAIN PIPE SHALL BE CLASS 52 POLYWRAPPED DUCTILE IRON PIPE CONFORMING TO CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS.
- 3) ALL STORM SEWER PIPE SHALL BE SMOOTH LINED CORRUGATED PLASTIC PIPE CONFORMING TO CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS
- 4) ALL WATERMAIN AND STORM SEWER SHALL BE INSTALLED ON CLASS II BEDDING ACCORDING TO THE APPROPRIATE DETAIL INCLUDED IN THESE PLANS.
- 5) ALL TRENCHES UNDER OR WITHIN 1.1 INFLUENCE OF PIPE AND 5 FEET OF THE EXISTING AND/OR PROPOSED PAVEMENT SHALL BE BACKFILLED TO GRADE WITH THOROUGHLY COMPACTED, APPROVED SAND. THE BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS
- 6) ALL CASTING ELEVATIONS SHALL BE VERIFIED PRIOR TO FINAL GRADING OR PAVING. CASTINGS SHALL BE ADJUSTED A MAXIMUM OF 0.5 FT. PRIOR TO FINAL GRADING OR PAVING. ADJUSTMENTS SHALL BE INCLUDED IN THE PRICE OF WATERMAIN & STORM SEWER CONSTRUCTION
- 7) ALL DISTURBED AREAS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER AND SHALL BE INCLUDED IN THE PRICE FOR SEWER CONSTRUCTION.
- 8) PAVEMENT RESTORATION & REPLACEMENT OF EXISTING BITUMINOUS CURB SHALL MATCH EXISTING AND SHALL BE INCLUDED IN THE PRICE FOR SEWER CONSTRUCTION
- 9) CITY OF ANN ARBOR ENGINEERING DIVISION IS TO BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO DELIVERY OF PIPE AND FITTINGS. THE ENGINEERING DIVISION IS TO WITNESS SUCH DELIVERIES.

**CASTING SCHEDULE**

STRUCTURE	TYPE / DIA.	E. JORDAN FOUNDRY CASTING	CASTING ELEVATION	INVERT	DEPTH
R-1	1 / 4 FT. COVER	1040(TYPE A)	857.90	851.39	6.51
R-2	INLET / 3 FT. GRATE	1040(TYPE M1)	858.80	852.82	5.98
R-3	INLET / 2 FT. GRATE	1040(TYPE M1)	857.70	853.15	4.55



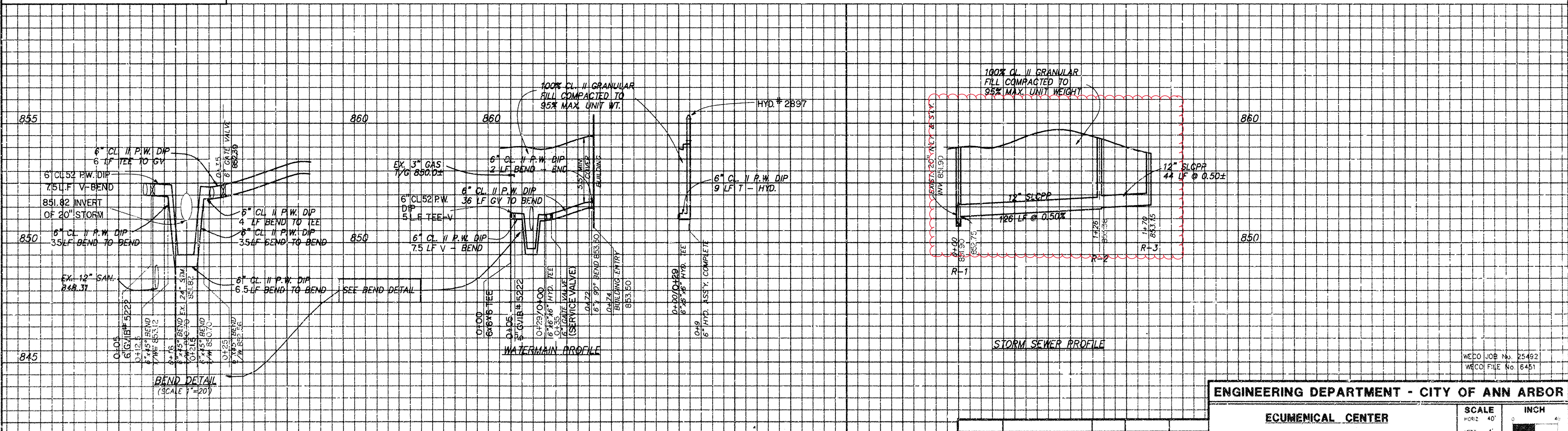
**NOTE**  
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.



CIVIL ENGINEERS PLANNERS  
SURVEYORS

72 HOURS BEFORE YOU DIG  
CALL MISS DIG  
300-482-7171  
(TOLL FREE)

P.O. BOX 1204 3250 WEST LIBERTY RD ANN ARBOR MICHIGAN 48106  
TELEPHONE 313-761-8800



**LEGEND**

	EXISTING PAVEMENT		EXISTING CONTOUR		EXISTING STORM		EXISTING WATER
	PROPOSED PAVEMENT		PROPOSED CONTOUR		EXISTING STORM		PROPOSED WATER
	EXISTING SIDEWALK		EXISTING FIRE HYDRANT		EXISTING SANITARY		EXISTING TELEPHONE
	EXISTING UTILITY POLE		PROPOSED FIRE HYDRANT		EXISTING ELECTRIC		EXISTING GAS
	EXISTING CATCH BASIN		PROPOSED CATCH BASIN		EXISTING CATCH BASIN		

**BENCHMARK** NAIL IN EAST SIDE OF LIGHT POLE ON WEST SIDE OF CHURCH ST ACROSS FROM HSE #917. ELEV. 859.31

PREPARED BY WALTER F. LEWIS P.E., MICH. NO. 143.95

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
		2	ASBUILT	9-27-95	KRS	DPF
		1		7-19-90	SNV	WFL
			ORIGINAL ISSUE	4-12-95	SJB	WFL

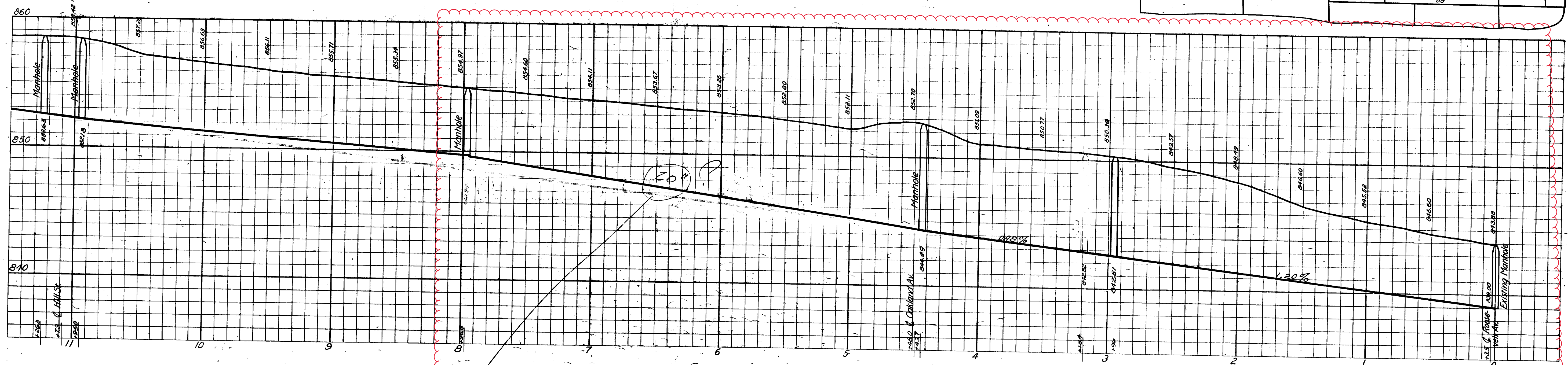
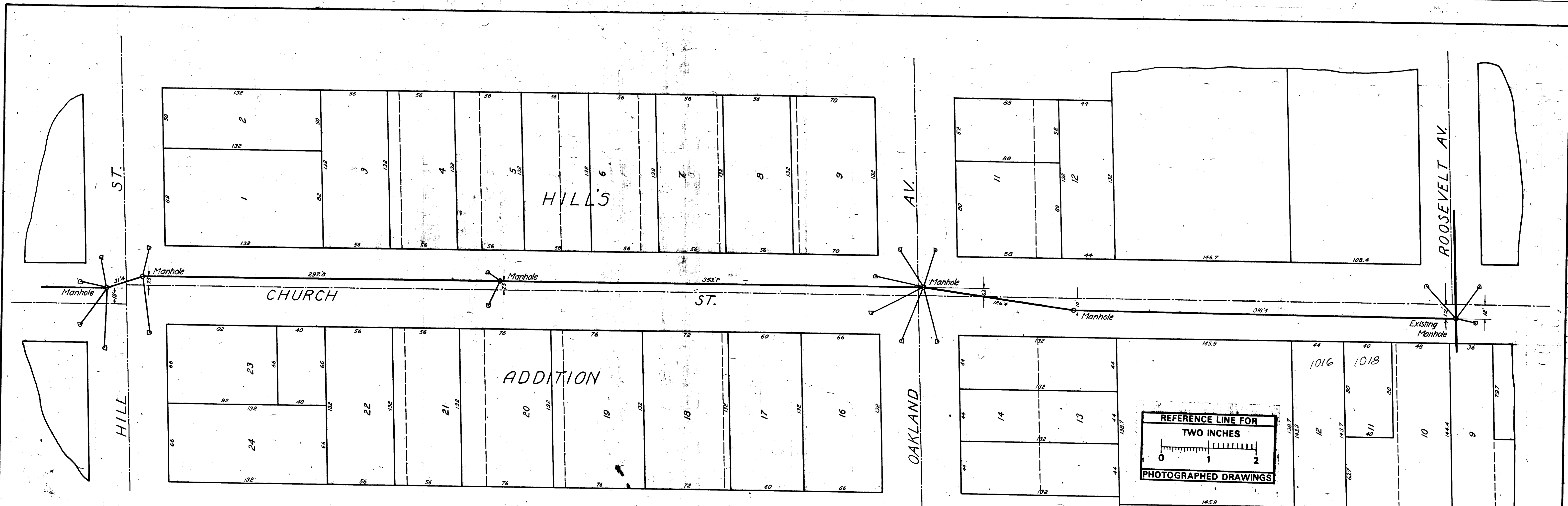
**ENGINEERING DEPARTMENT - CITY OF ANN ARBOR**

**ECUMENICAL CENTER**  
**STORM SEWER**  
**WATERMAIN**

SCALE: HORIZ 40' 1" INCH, VERT 4' 1" INCH  
DRAWING NO. 95047-W2  
SHEET NO. 2 OF 2

WEDO JOB No. 25492  
WEDO FILE No. 6451





**BILL OF MATERIAL**  
 1236' - 20" sewer tile  
 720' - 12" sewer tile  
 220' - 15" sewer tile  
 8 - Manholes complete  
 22 - Inlets  
 On Willard St.  
 144' - 15" sewer tile  
 28' - 12" sewer tile  
 1 - Manhole  
 2 - Inlets

**LEGEND**  
 Center line of Street  
 Grade line of sewer

Digital Status  
 Scanned On: 8-25-04  
 By: DGK  
 Despeckled: Yes  
 Vectors:  
 O.C.R.:

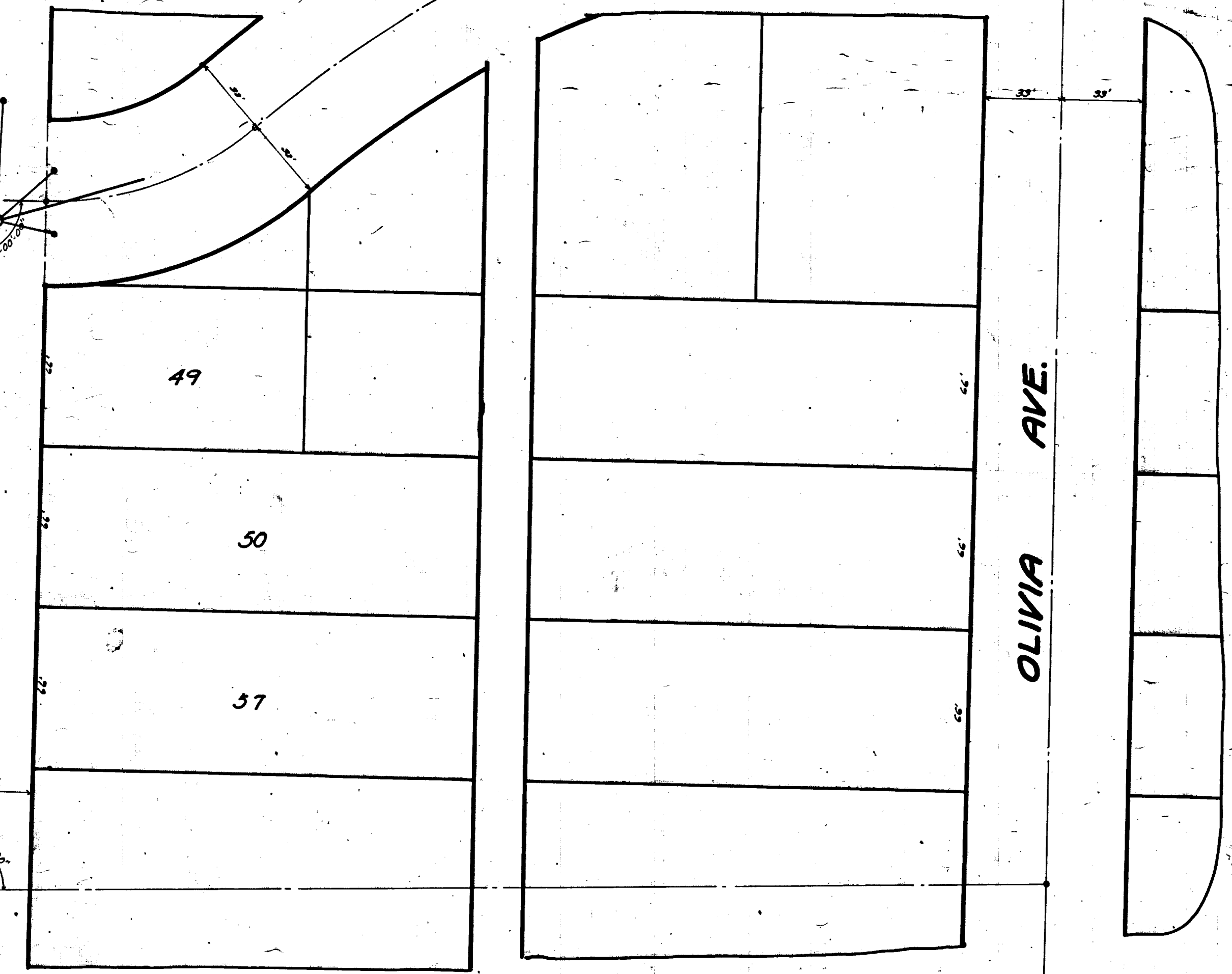
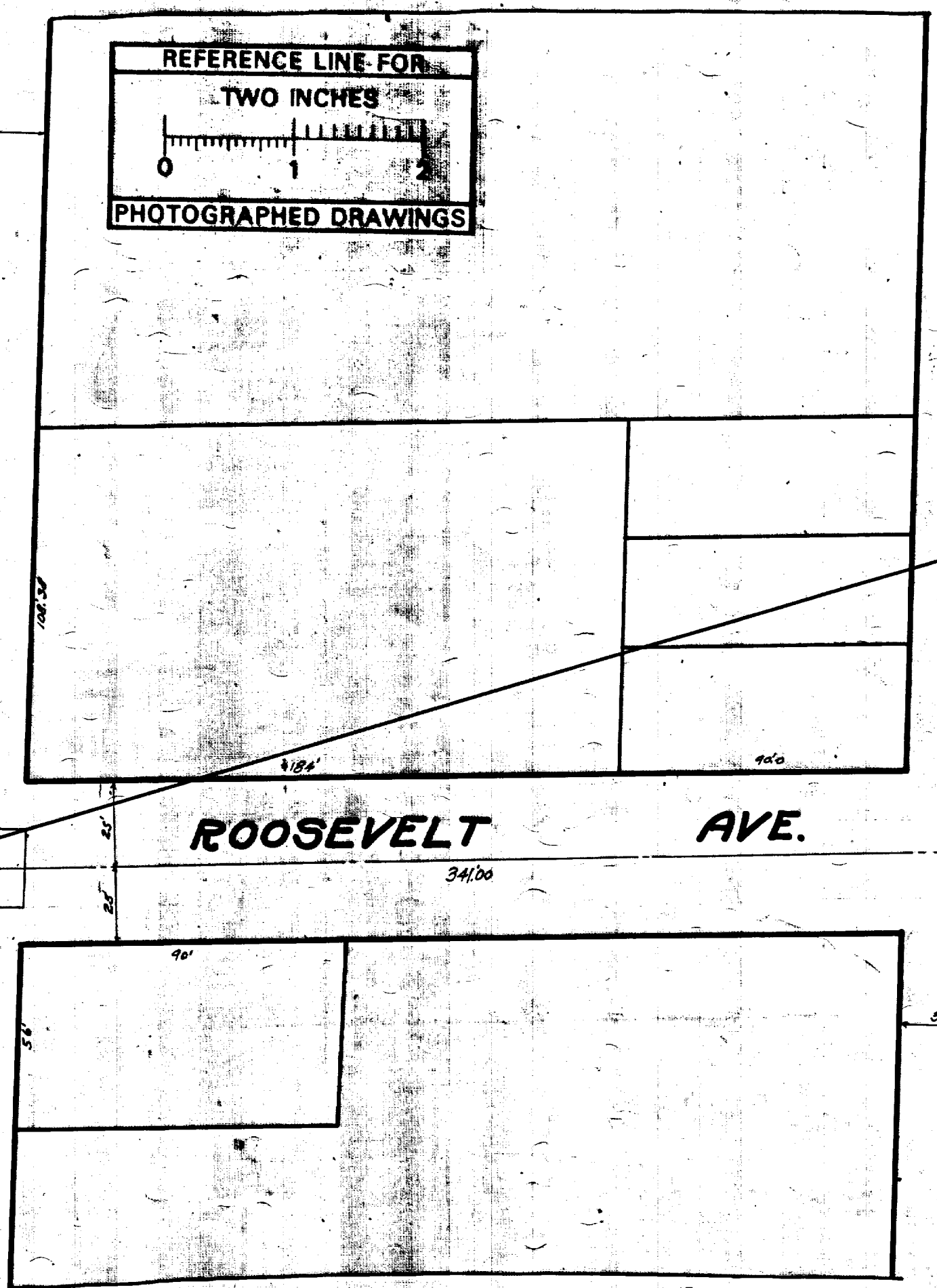
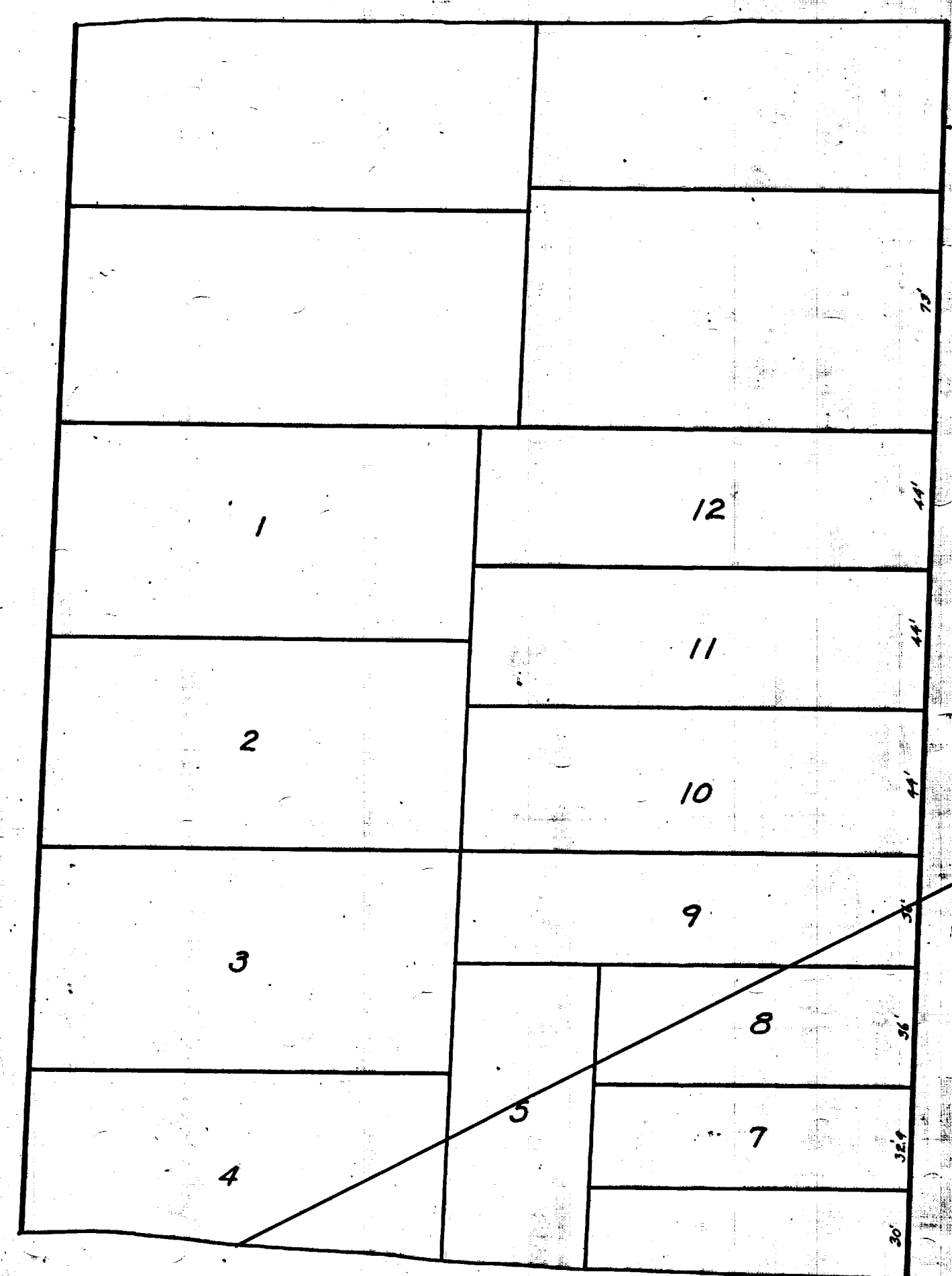
INDEX No. 499  
 SHELF No. 6  
 SIZE C  
 SUB No. 57

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 OF  
 STORM SEWER  
 ON  
**CHURCH STREET**  
 FROM ROOSEVELT AVENUE TO HILL STREET  
 Manley Osgood, City Engineer  
 1912-12-31  
 SCALES: Plan-1"=40'; Profile; Hor.-1"=40'; Vert.-1"=4'  
 Two Sheets  
 Sheet No. 1

Checked by mlg

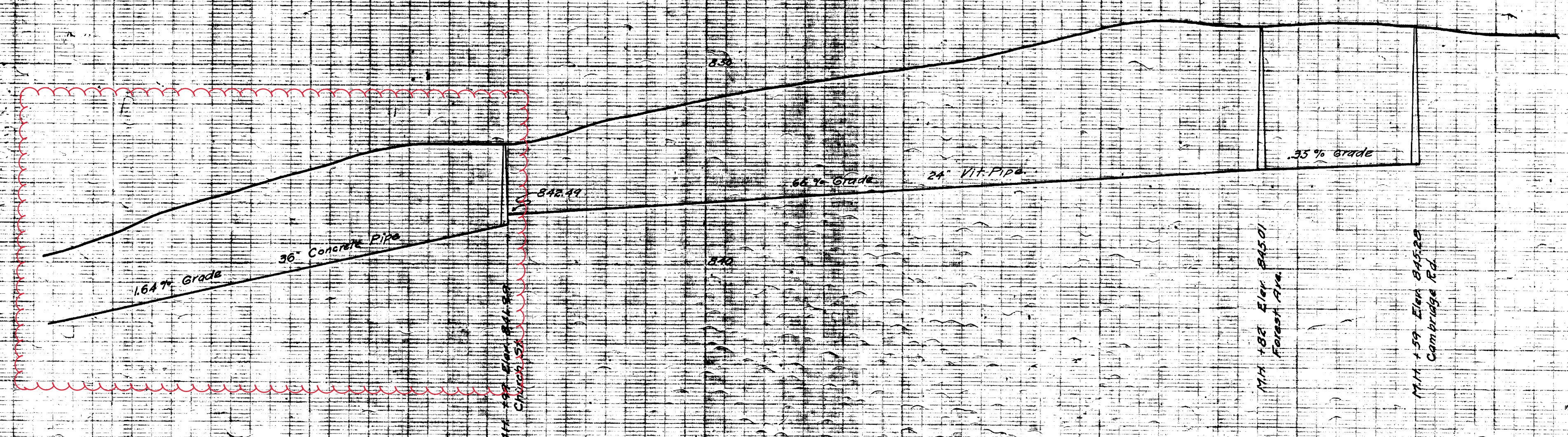
Corrected to Final Measurements 1915-1-18 by S1022AN.





REFERENCE LINE FOR  
TWO INCHES  
PHOTOGRAPHED DRAWINGS

NOTE: Not a vertical projection



M.H. 185 Elev. 945.01  
Forest Ave.

M.H. 199 Elev. 945.23  
Cambridge Rd.

Digital Status  
Scanned On: 9-3-04  
By: DSK  
Despeckled: yel  
Vectors:  
O.C.R.:

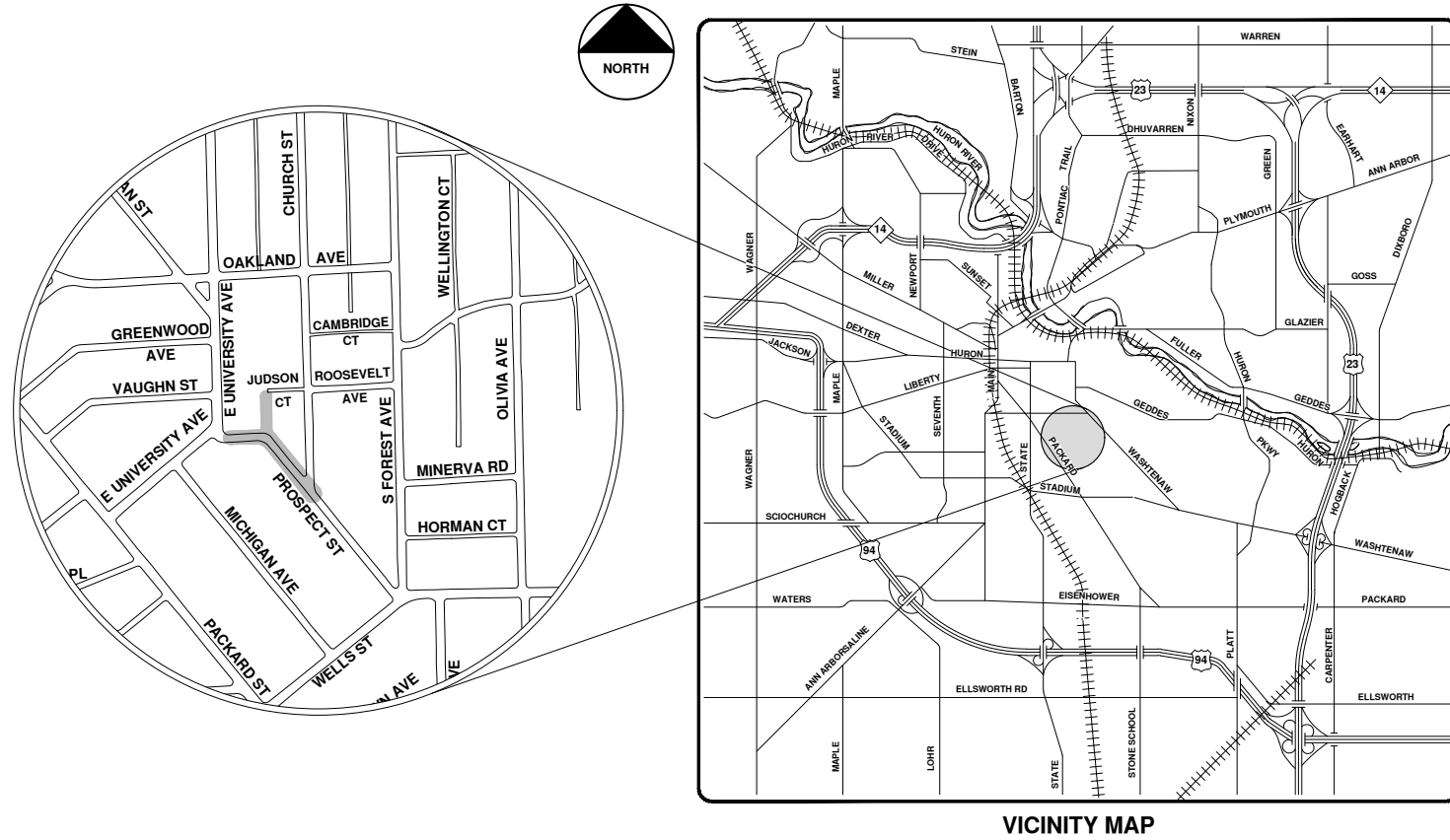
INDEX No. 1026 SHEET No. 6 SIZE C SUB No. 396 Drawn by <i>lemer</i> Traced by <i>lemer</i> Checked by	CITY ENGINEER'S OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF STORM SEWER <b>JUDSON PROPERTY</b> UNIVERSITY AVE TO CAMBRIDGE RD. Geo. H. Sandenburgh, City Engineer. 1918 Scale: Plan, 1" = 40'; Profile, Not to Scale
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# 2020 SEWER LINING PROJECT

## PROSPECT ST



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 734-794-6410 www.a2gov.org

		CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING SCALE	
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MICHIGAN 48107-8647 www.a2gov.org		DRAWING No. 2020039-153	
SHEET No. 153 OF 177		© 2020 SEWER LINING PROJECT; BID No. ITB 4643; 2020039	
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01	REV.	9-14-20	ARG IVK





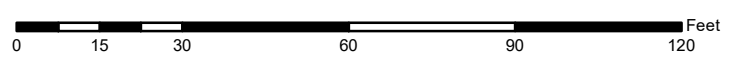


# Prospect St.



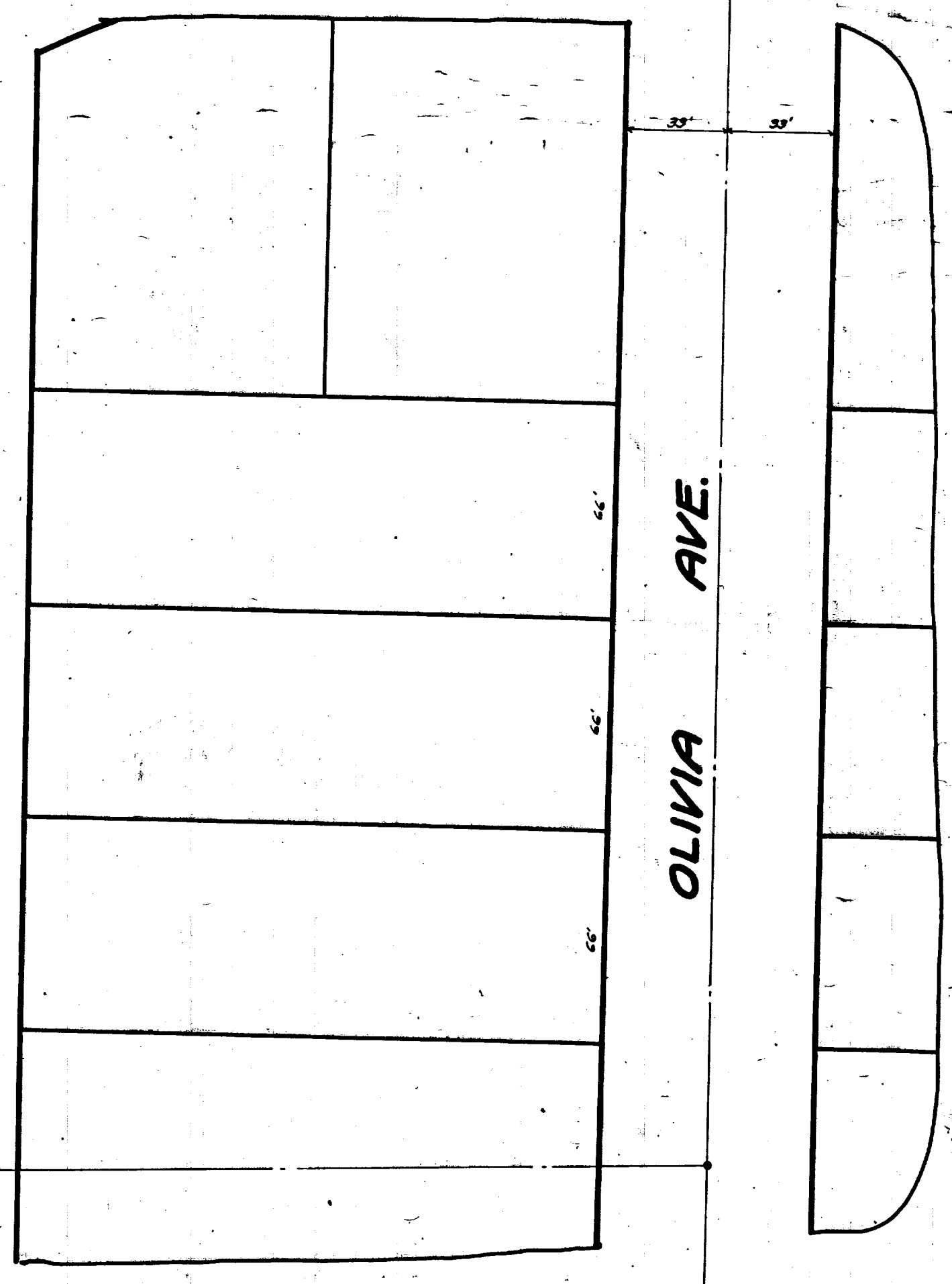
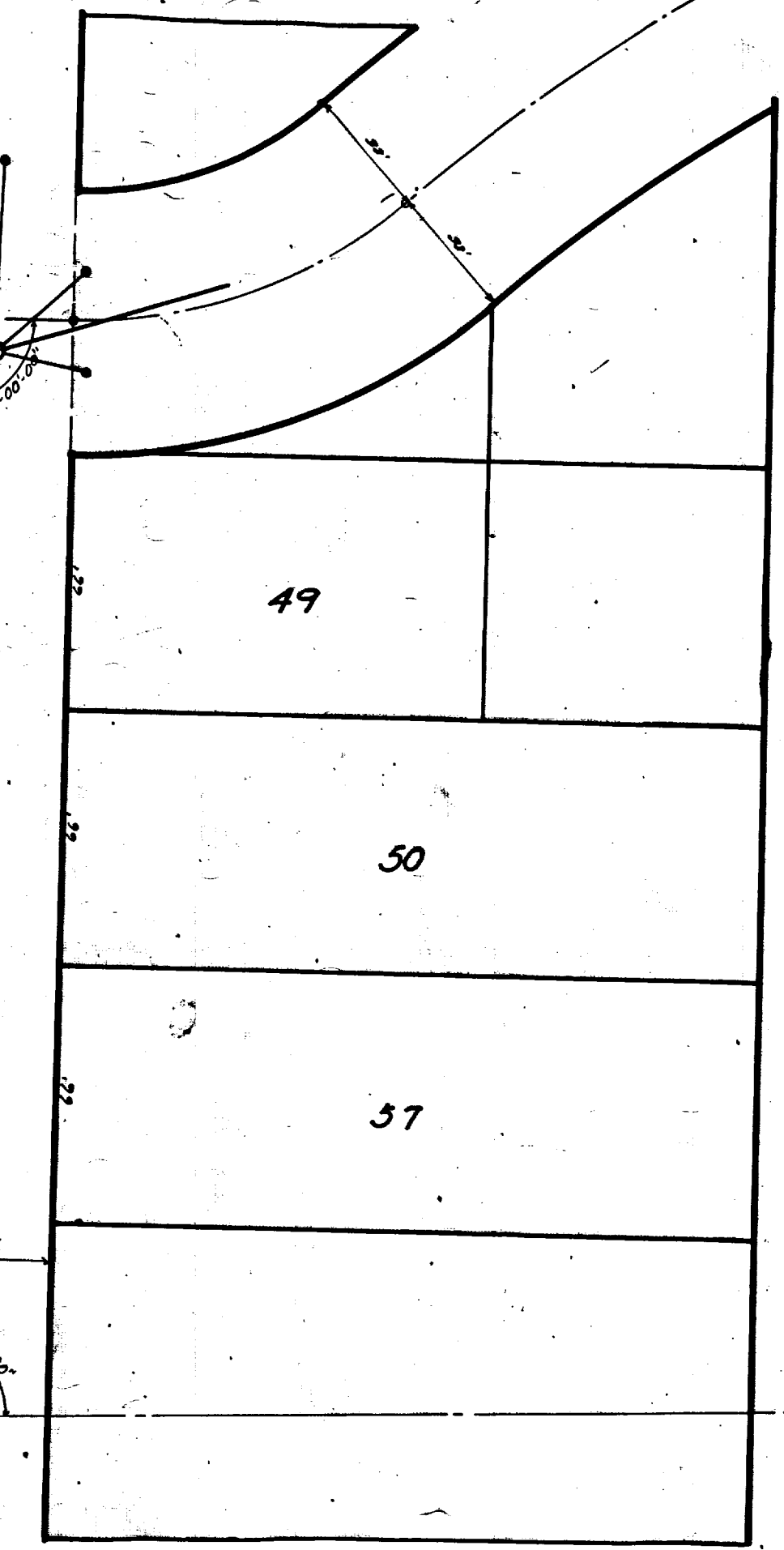
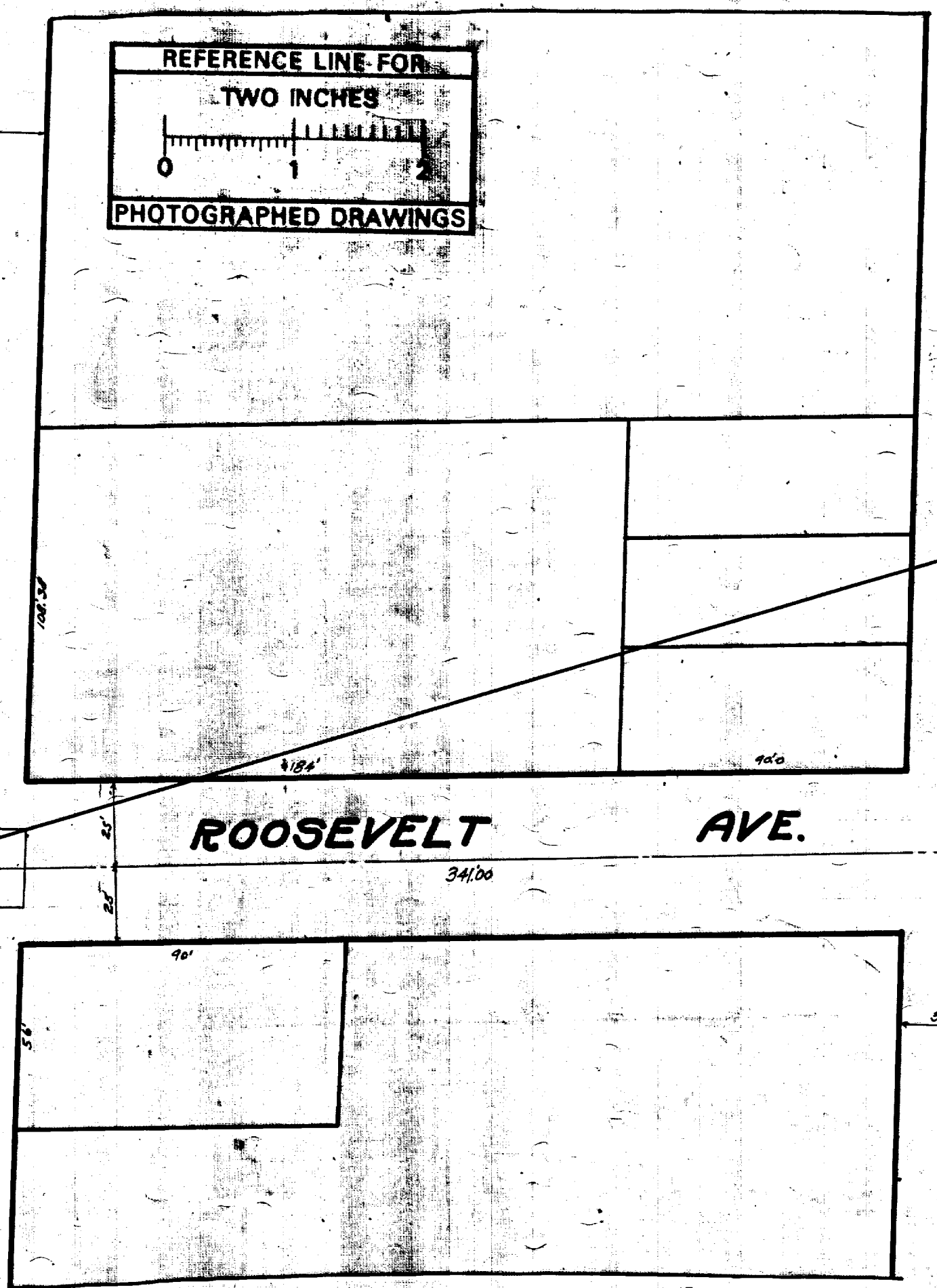
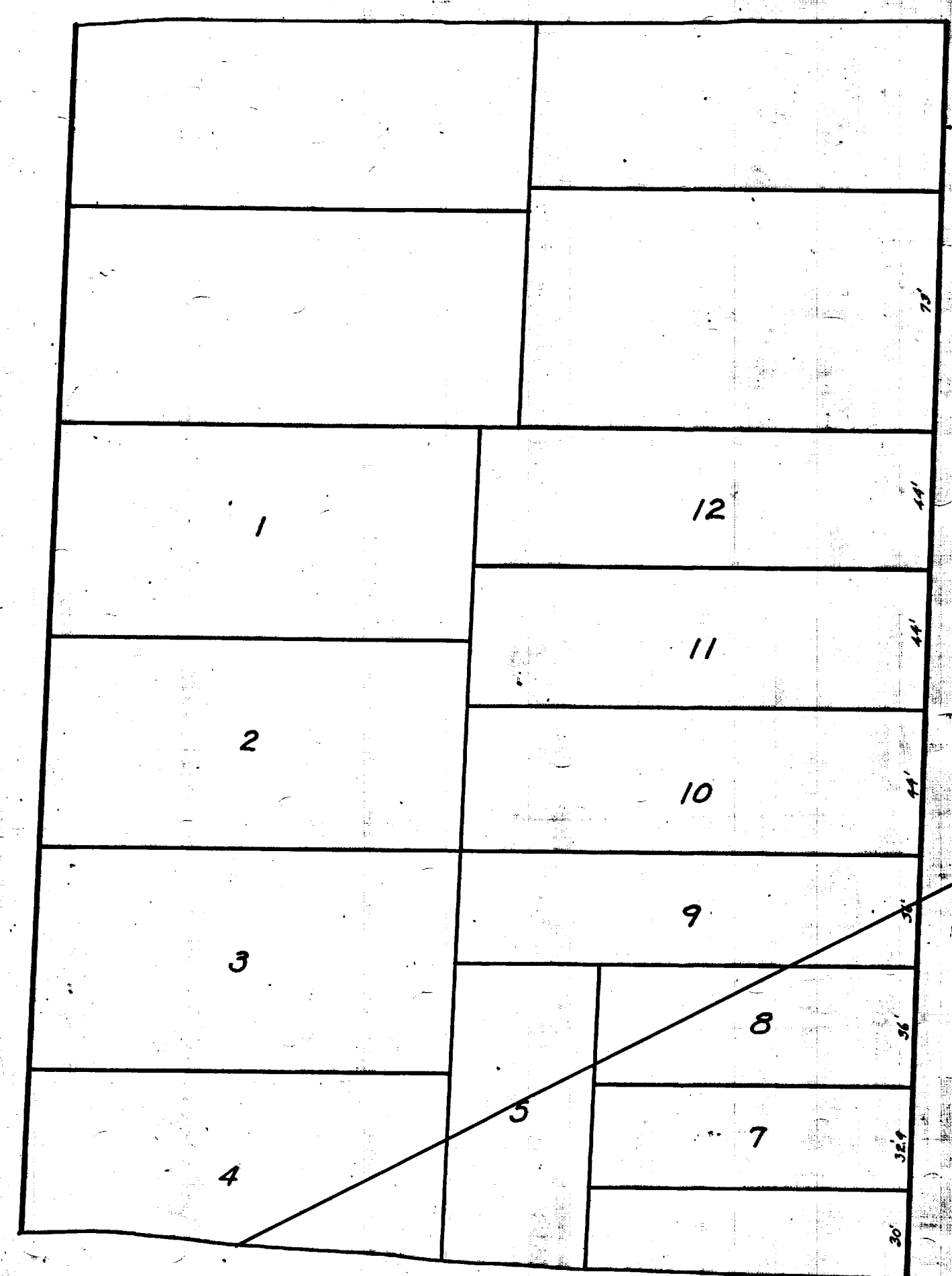
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	Not found Manhole		AA Proposed Lining
	Catchbasin		

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



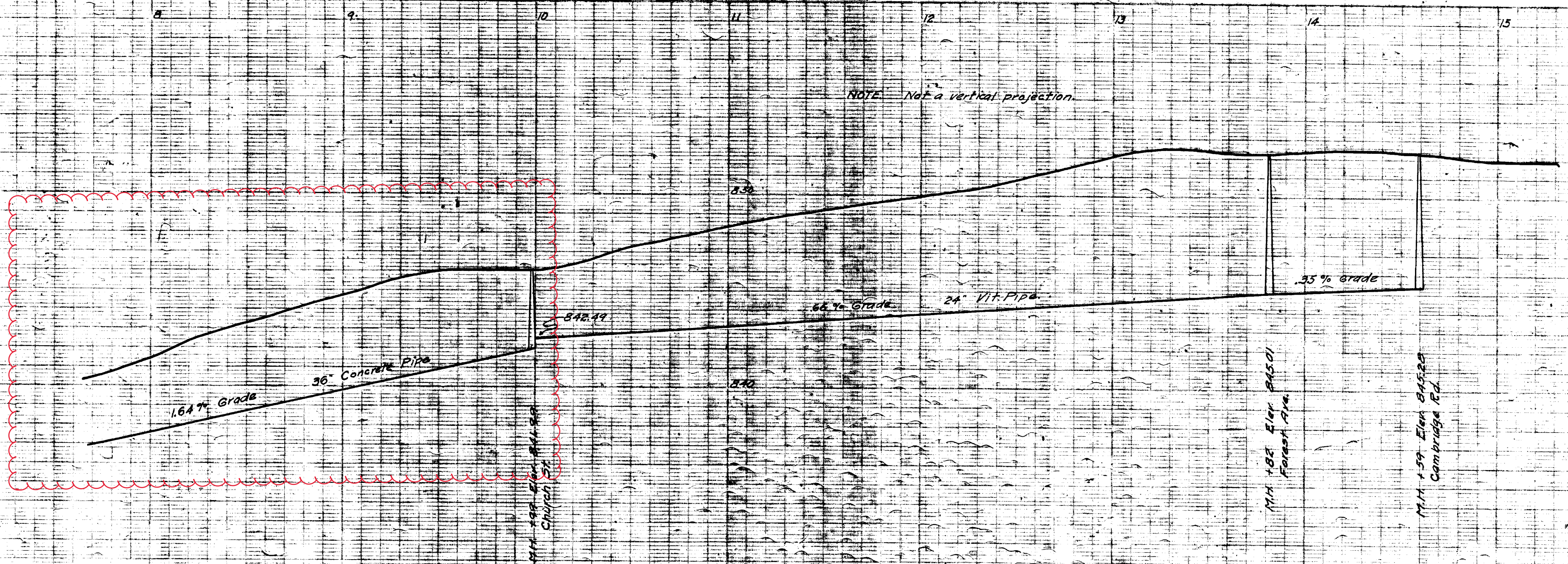
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REFERENCE LINE FOR  
TWO INCHES  
PHOTOGRAPHED DRAWINGS

NOTE: Not a vertical projection



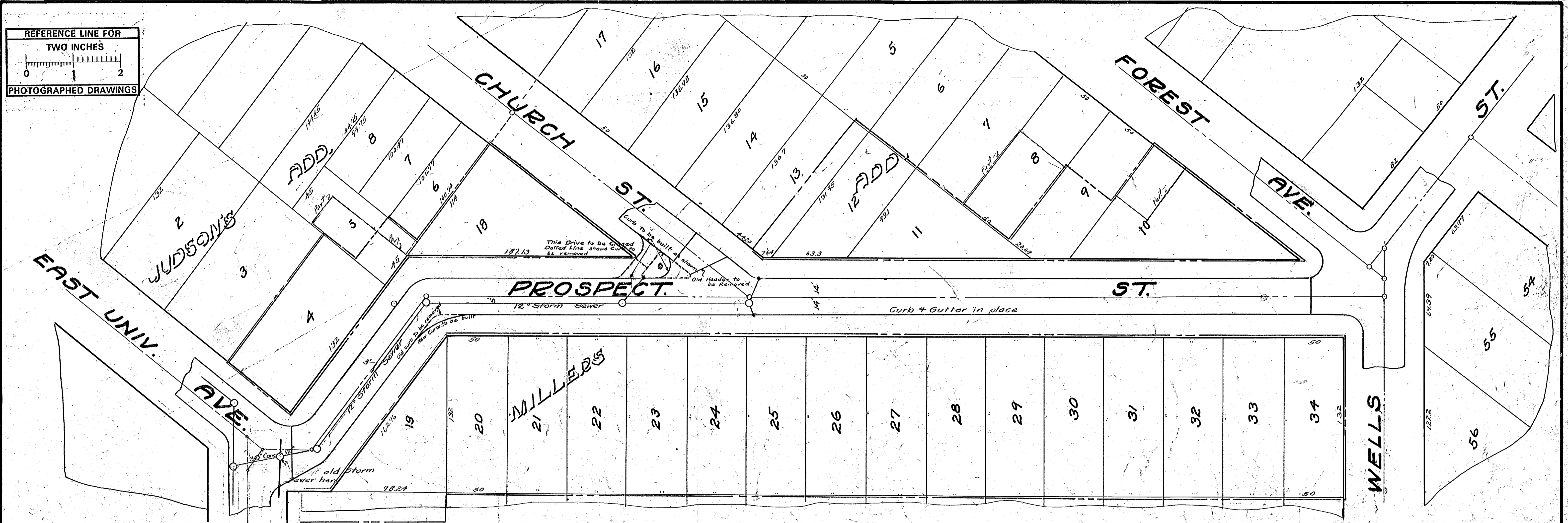
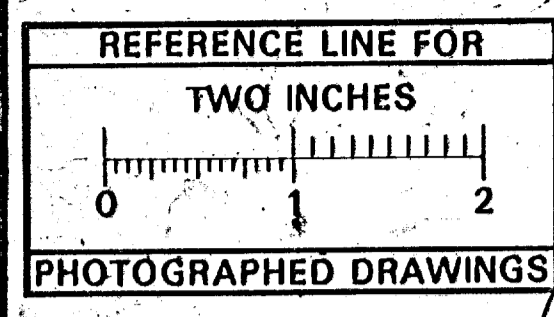
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By: DSK  
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Vectors:  
O.C.R.:

INDEX No. 1026 SHEET No. 6 SIZE C SUB No. 396 Drawn by <i>lemer</i> Traced by <i>lemer</i> Checked by	CITY ENGINEER'S OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF STORM SEWER <b>JUDSON PROPERTY</b> UNIVERSITY AVE TO CAMBRIDGE RD. Geo. H. Sandenburgh, City Engineer. 1918 Scale: Plan, 1" = 40'; Profile, Not to Scale
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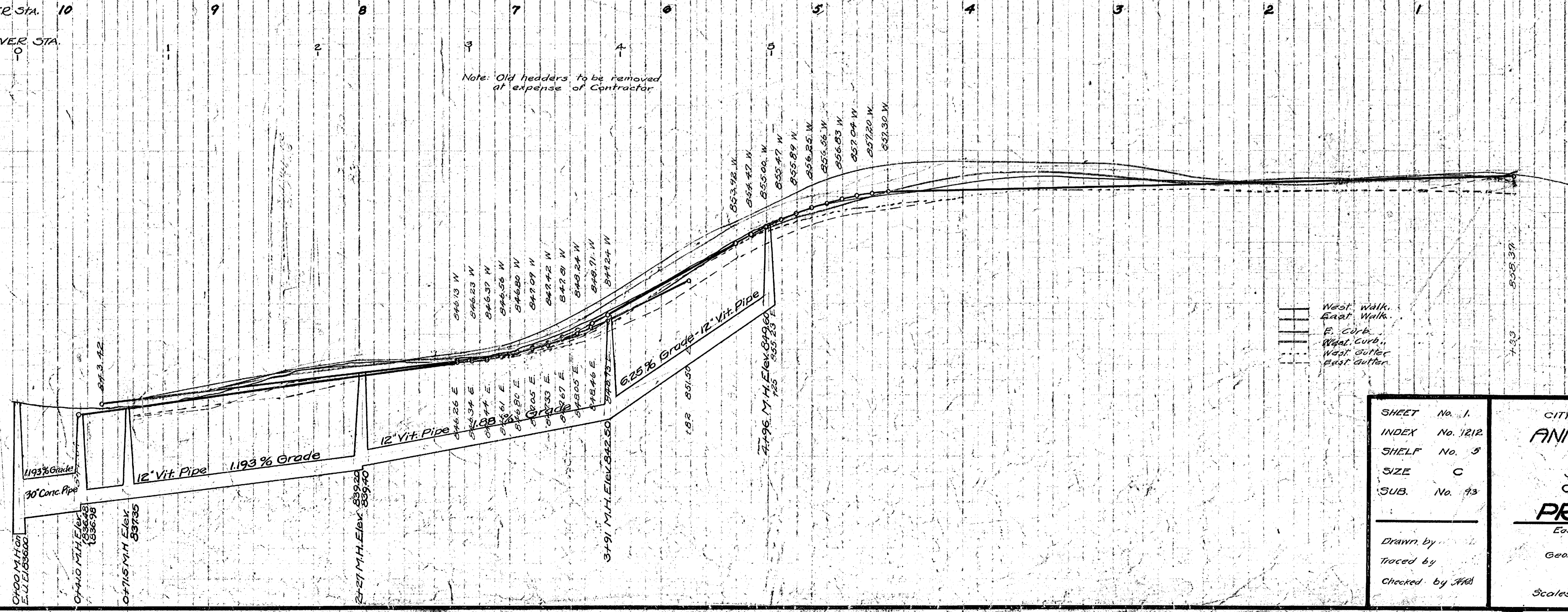






CURB & GUTTER STA. 10  
 STORM SEWER STA. 9

Note: Old hoppers to be removed at expense of Contractor



West Walk  
 East Walk  
 F. Curb  
 West Curb  
 West Gutter  
 East Gutter

DIGITAL STATUS  
 Scanned On: 3/10  
 By: ALW

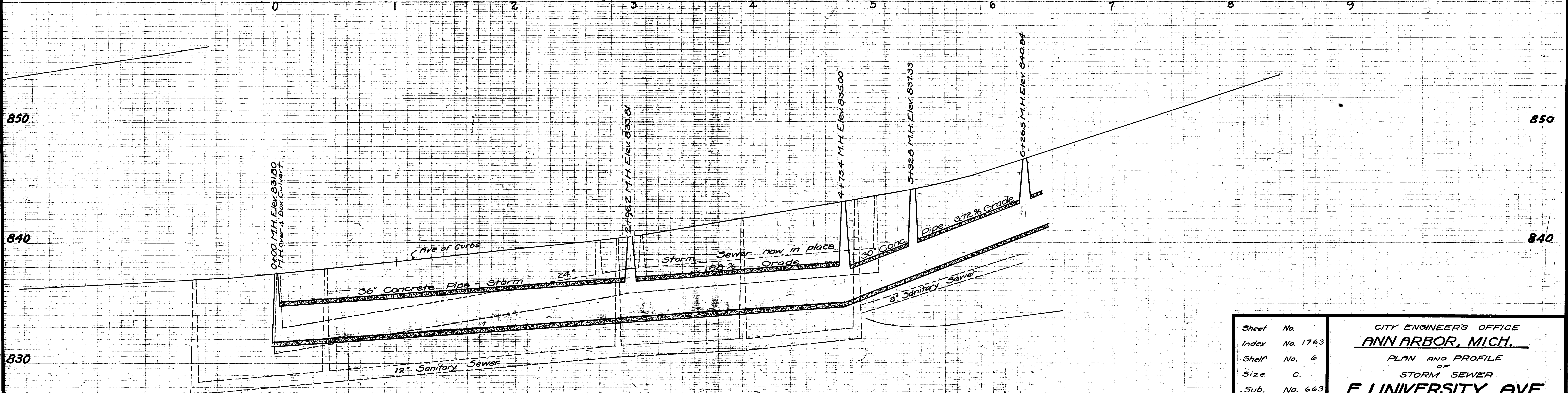
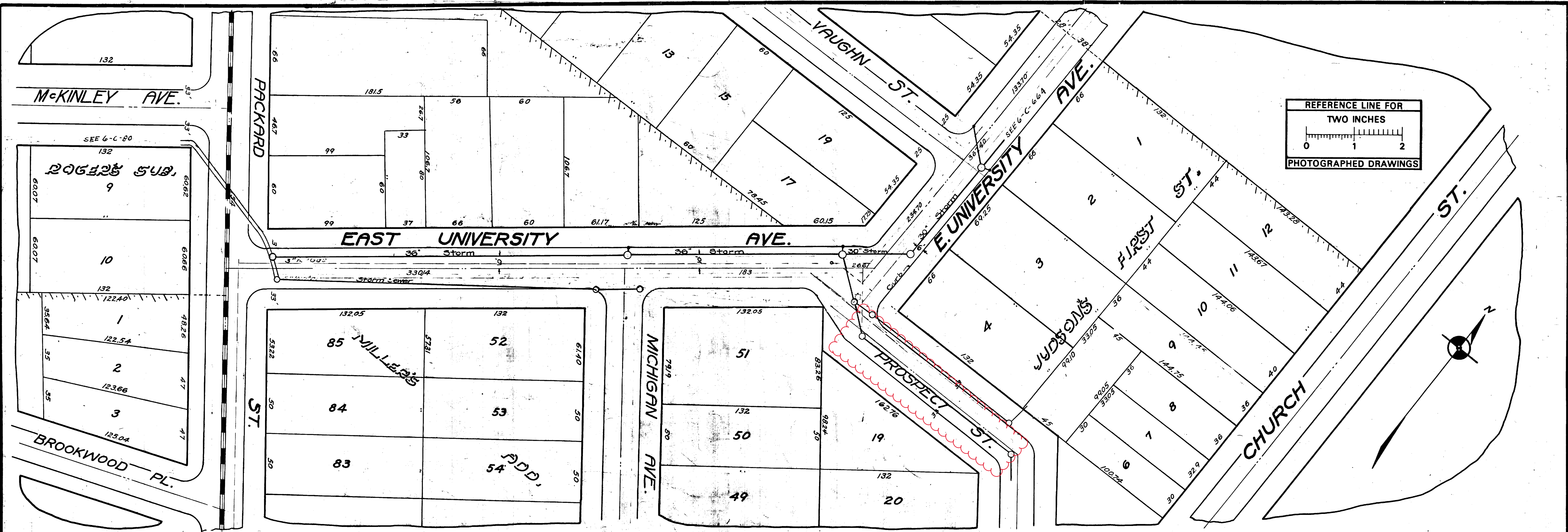
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 SHELF No. 5  
 SIZE C  
 SUB. No. 23

Drawn by  
 Traced by  
 Checked by ALW

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
 PLAN AND PROFILE  
 PAVEMENT (Dist. No. 110)  
 STORM SEWER AND  
 CURB AND GUTTER (Dist. No. 20)  
**PROSPECT ST.**  
 East University Ave. to Forest Ave.  
 Geo. H. Sandenburgh, City Engineer.  
 1930-1-5  
 Scales: - Plan 1"=40' Profile Vert. 1"=40'





Digital Status  
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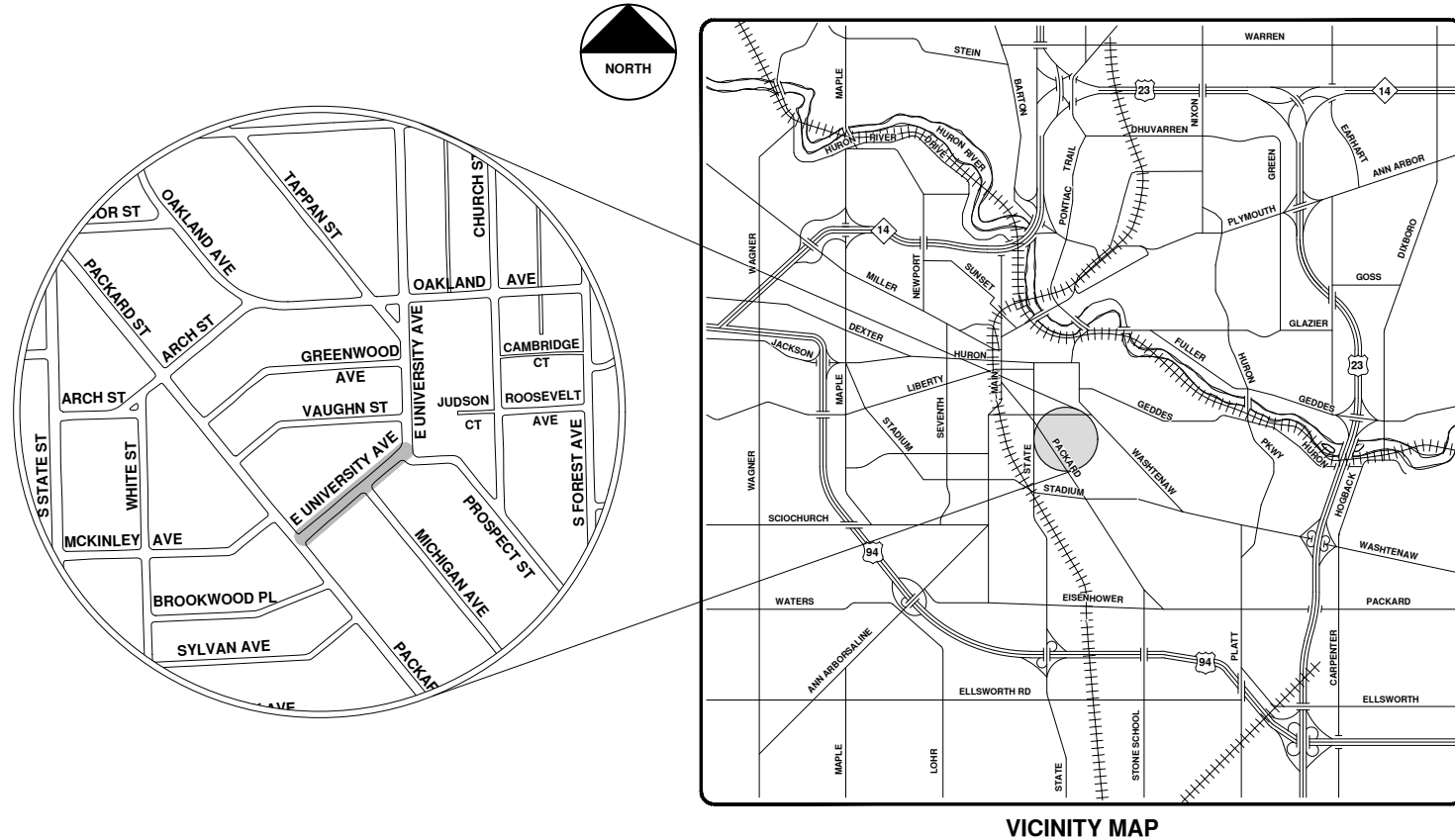
Sheet No.		CITY ENGINEER'S OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF <b>STORM SEWER</b> <b>E. UNIVERSITY AVE.</b> Packard St to Vaughn St Geo. H. Sandenburgh, City Engineer 1928 - 4 - 20 Scales: - Plan 1"=40', Profile, Vert. 1"=4'
Index No.	1763	
Sheet No.	6	
Size	C.	
Sub.	No. 663	
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# 2020 SEWER LINING PROJECT

## E UNIVERSITY AVE



VICINITY MAP

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SCALE  
 DRAWING No.  
 2020039-159

SHEET No.  
 159 OF 177





City of Ann Arbor

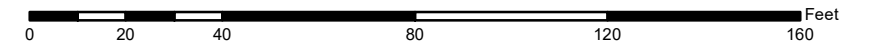
# E. University Ave.



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	Not found Manhole		AA Proposed Lining
	Catchbasin		

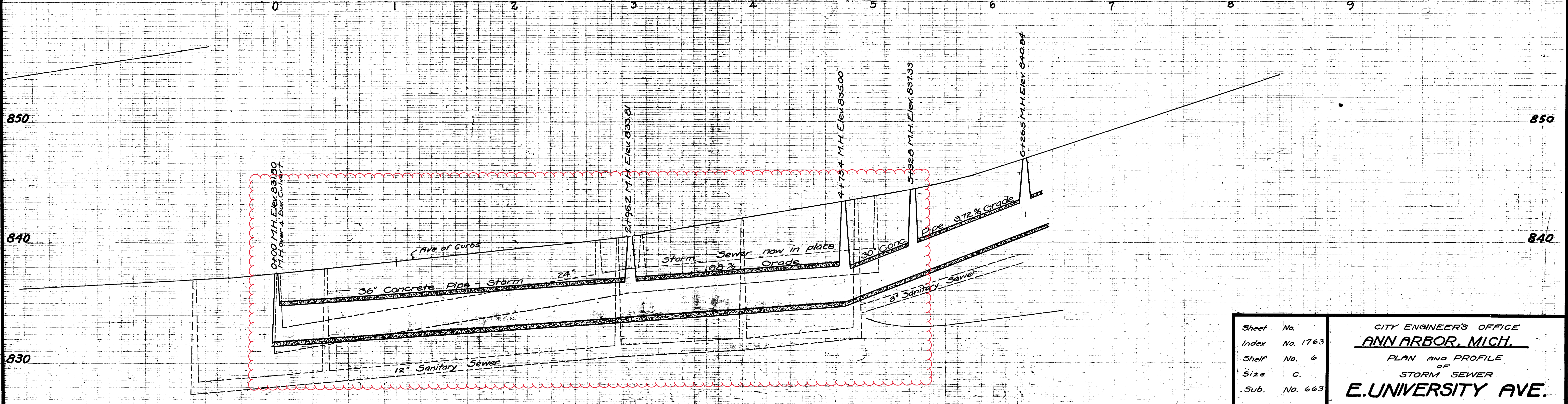
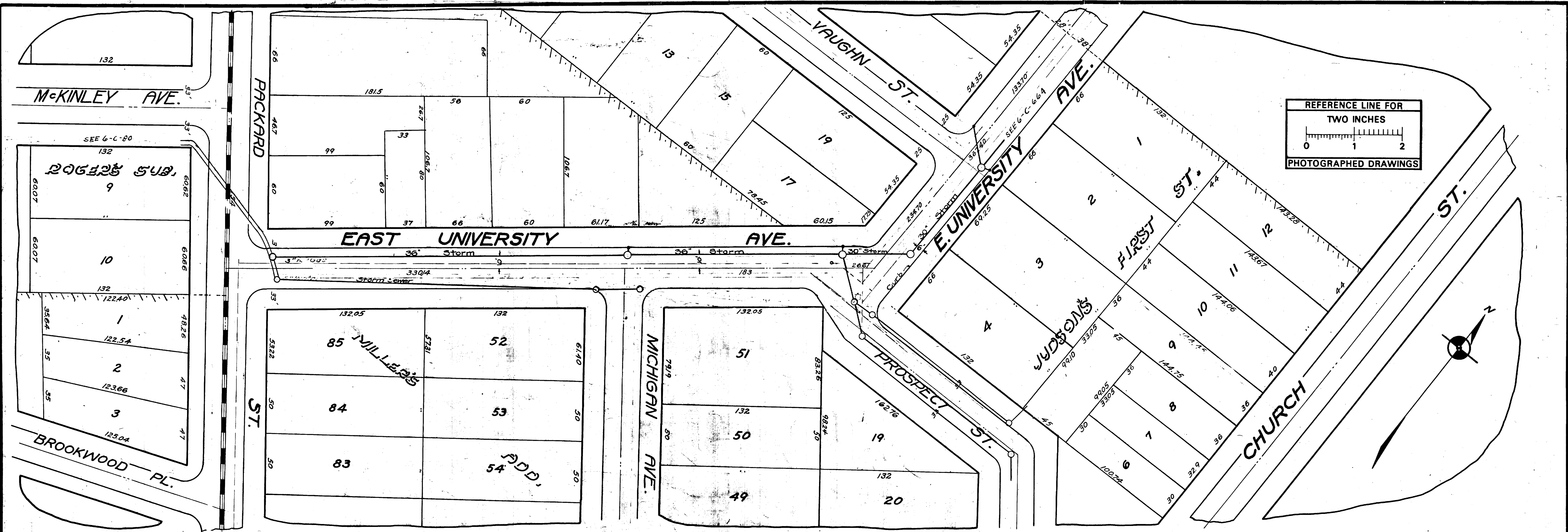
92-XXXXX (Manhole ID)

1.00 (Manhole Depth)



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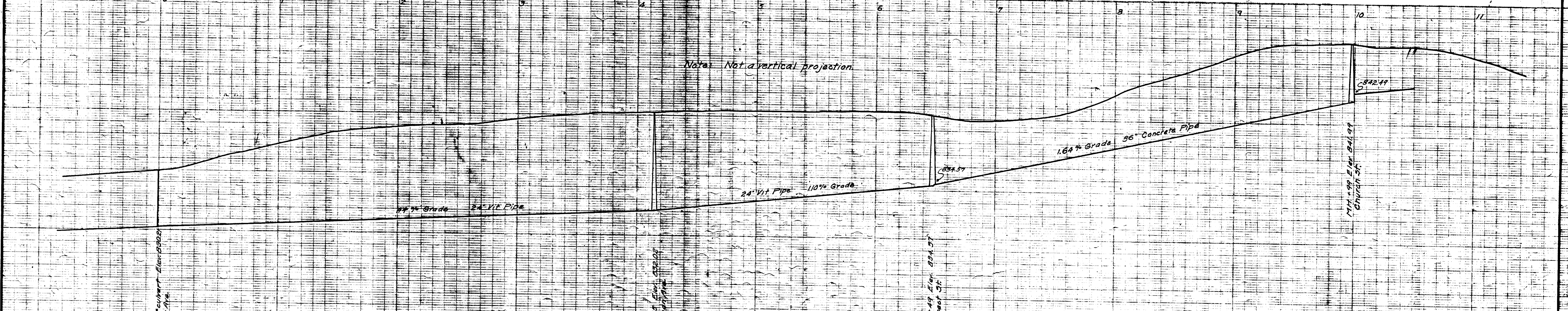
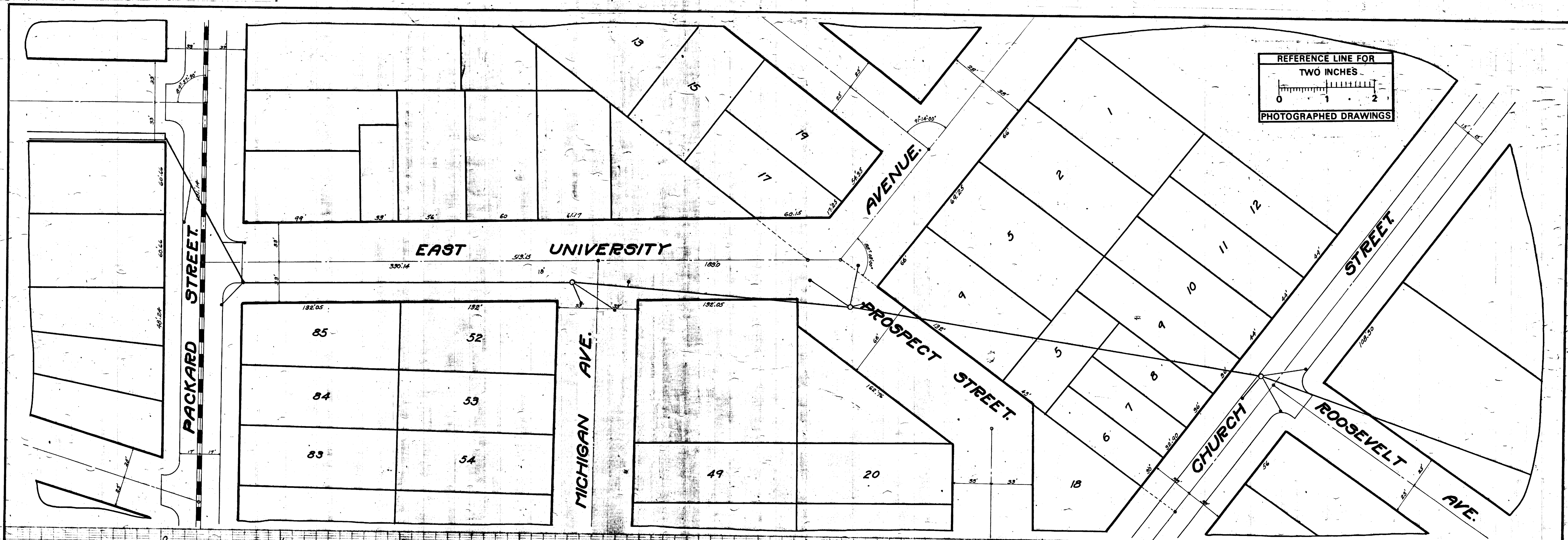




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Index No. 1763	<b>ANN ARBOR, MICH.</b>
Sheet No. 6	PLAN AND PROFILE
Size C.	OF
Sub. No. 663	<b>STORM SEWER</b>
	<b>E. UNIVERSITY AVE.</b>
	Packard St. to Vaughn St.
Drawn by	Geo. H. Sandenburgh, City Engineer
Traced by	1928 - 4 - 20
Checked by	Scales: - Plan 1"=40', Profile, Vert. 1"=4'





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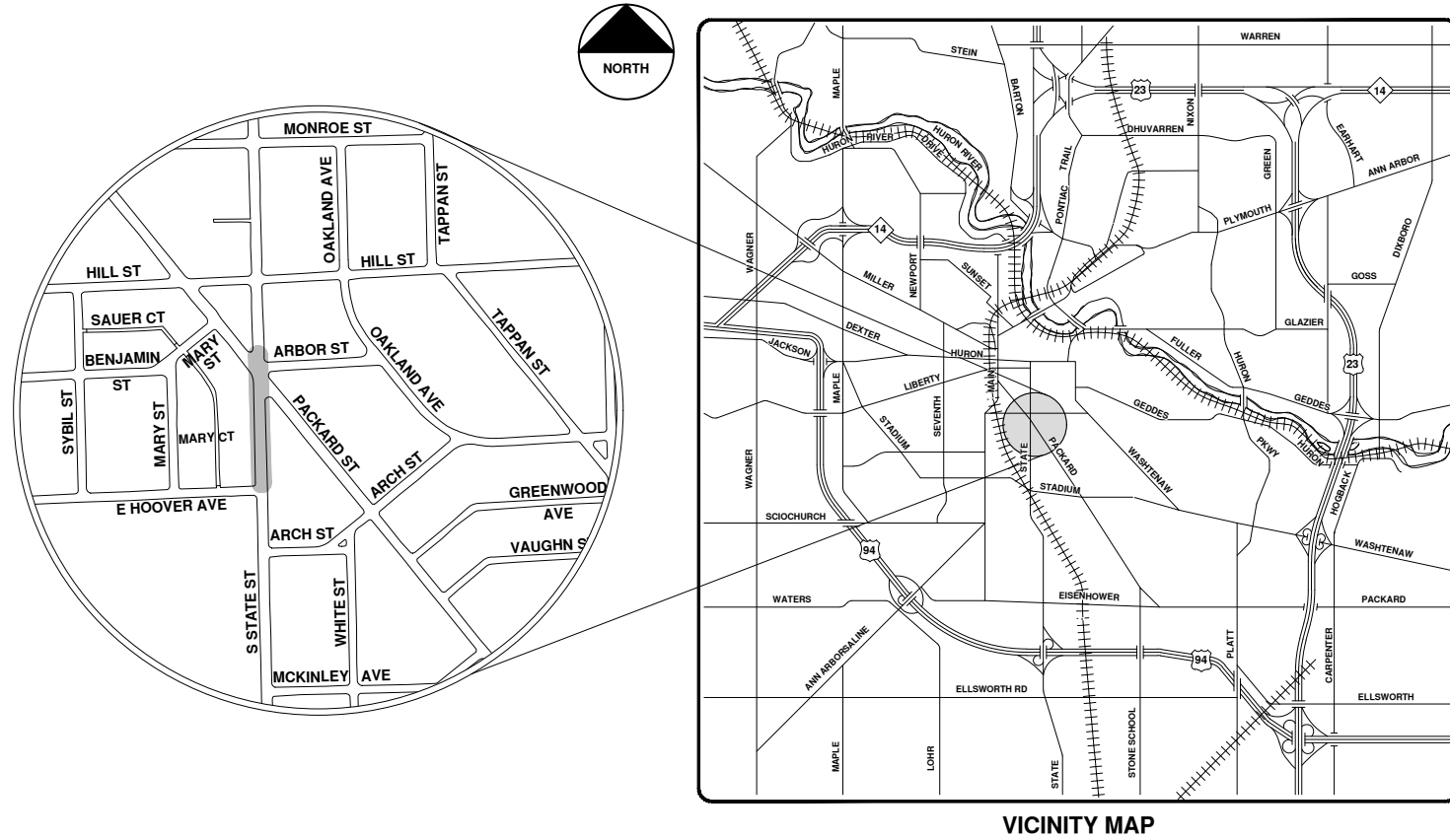
INDEX No. 1091	CITY ENGINEERS OFFICE <b>ANN ARBOR, MICH.</b> PLAN AND PROFILE OF STORM SEWER <b>E. UNIV. AVE. &amp; PRW.</b> PACKARD ST. TO CHURCH ST. Geo. H. Sandenburgh, City Engineer. 1918 30 x 45 Plan, 1" = 40' Profile, HOR. 1" = 100'
SHELF No. 6	
SIZE C	
SUB No. 101	
Drawn by 1076	
Traced by 1076	
Checked by	





# 2020 SEWER LINING PROJECT

## STATE ST & PACKARD ST



VICINITY MAP

R:\2020039 Sewer Lining 2020\Plan Production\2020039Cov.dwg - \_o2 standard bw.stb - Plot Date: 9/14/2020 12:07:24 PM



**ENGINEERING**  
 CITY OF ANN ARBOR PUBLIC SERVICES  
 301 EAST HURON STREET, P.O. BOX 8647  
 ANN ARBOR, MICHIGAN 48107-8647  
 734-794-6410 www.a2gov.org



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	9-14-20	ARG	IVK

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 PUBLIC SERVICES  
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 ANN ARBOR, MI 48107-8647  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-163

SHEET No.

163 OF 177



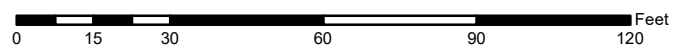


# State St. & Packard St.



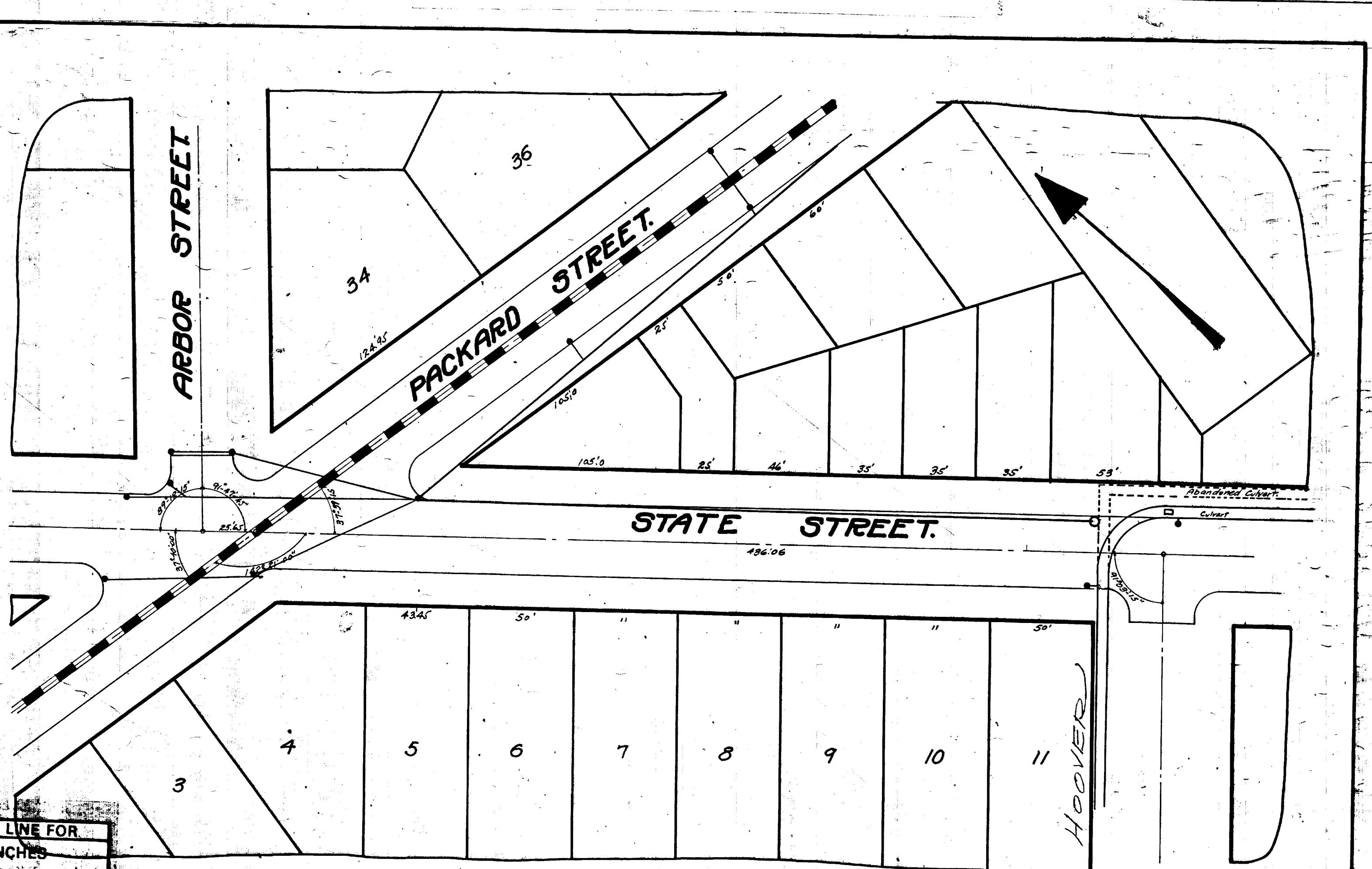
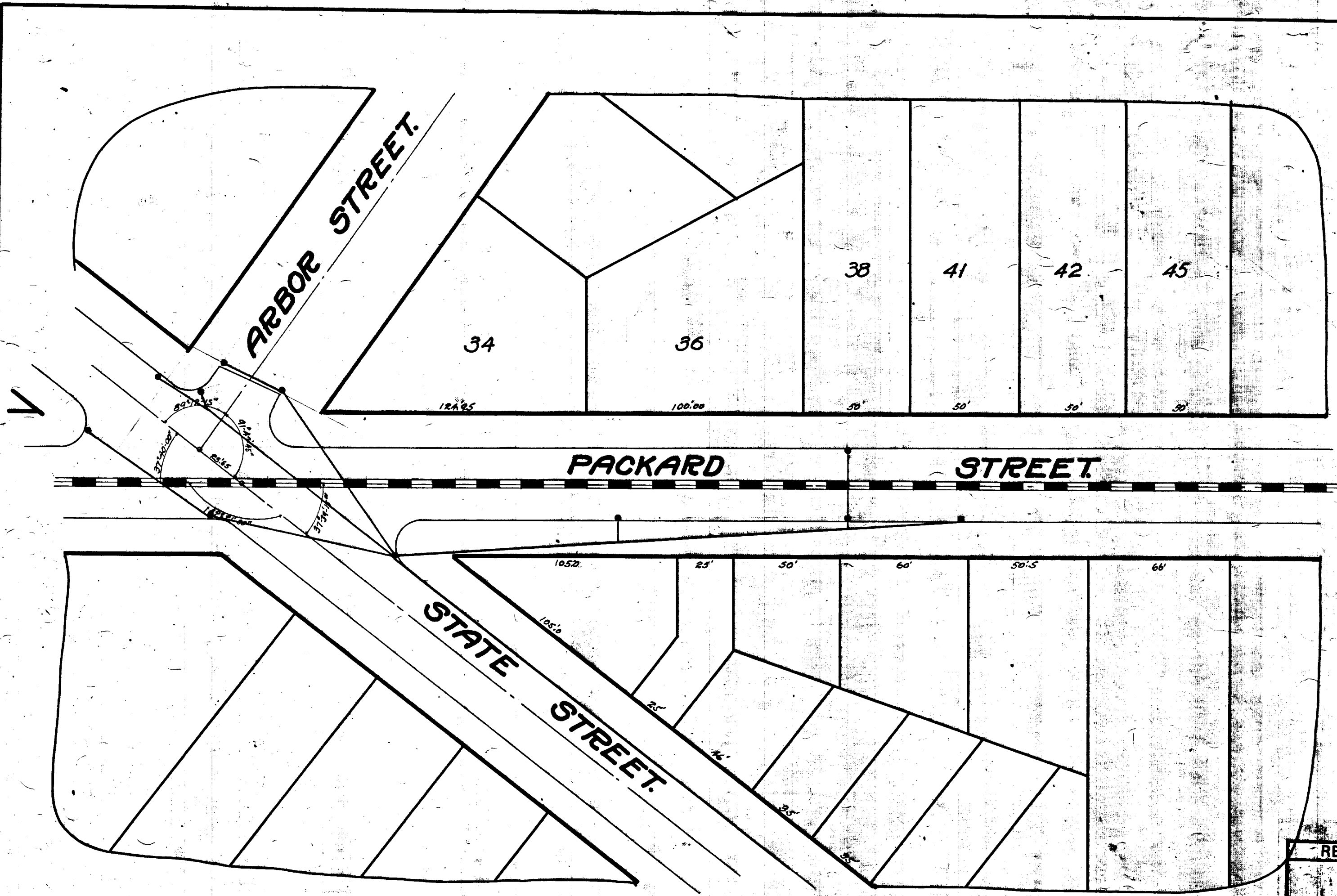
92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

	Manhole		Storm Main
	Not found Manhole		AA Proposed Lining
	Catchbasin		

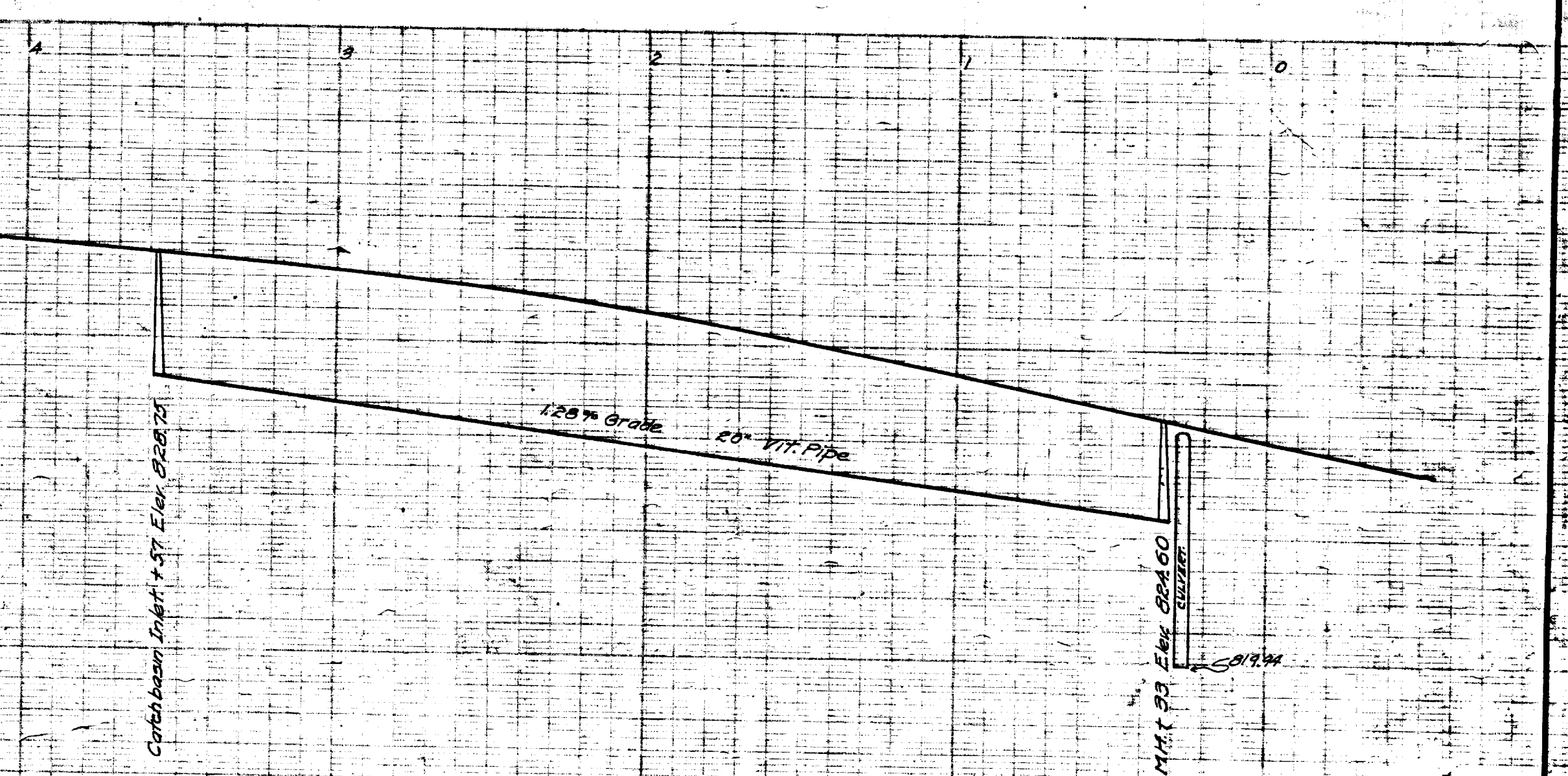
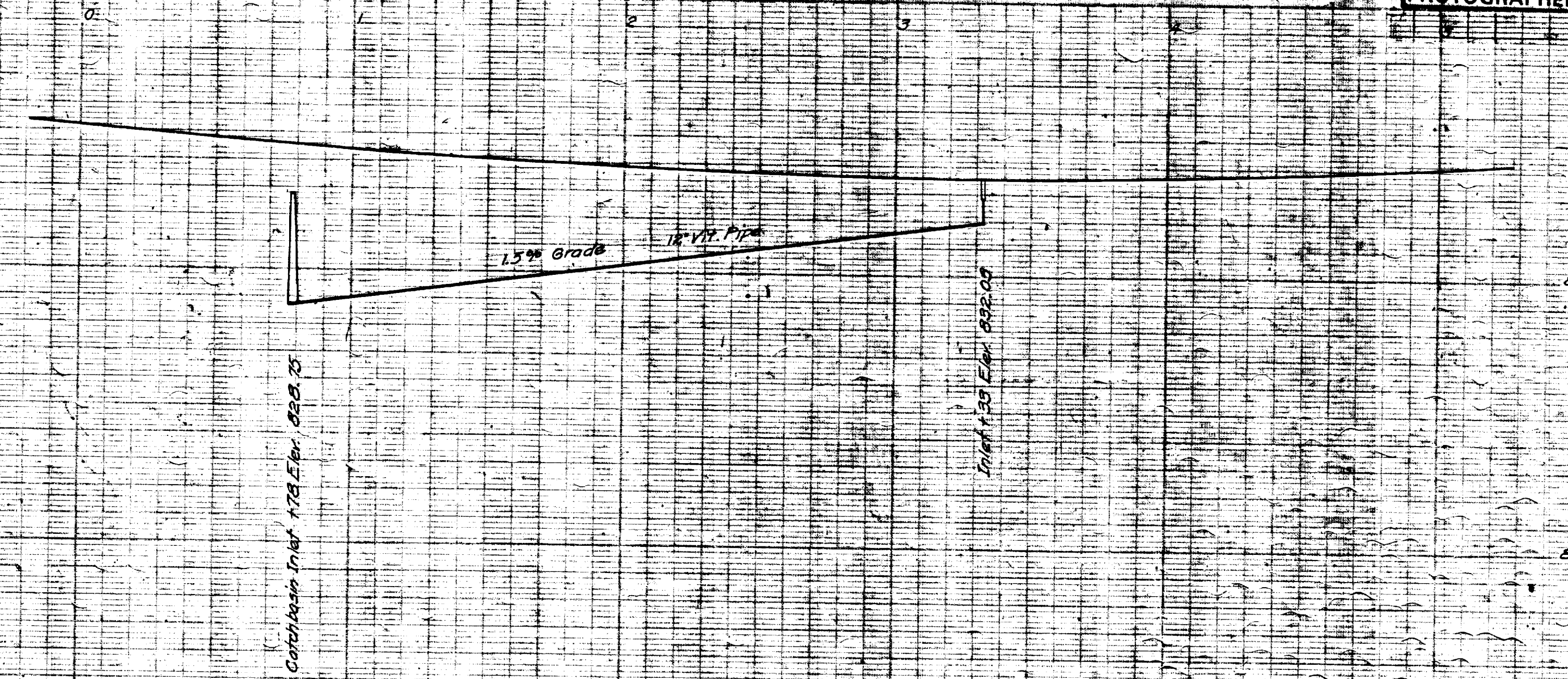


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REFERENCE LINE FOR  
TWO INCHES  
PHOTOGRAPHED DRAWINGS



Digital Status  
Scanned On: 9-7-04  
By: DGM  
Despeckled: Yes  
Vectors:  
O.C.R.:

INDEX No. 1093  
SHELF No. 6  
SIZE C  
SUB No. 429  
Drawn by Biner  
Traced by Biner  
Checked by

CITY ENGINEERS' OFFICE  
ANN ARBOR, MICH.  
PLAN AND PROFILE  
OF  
STORM SEWER  
**PACKARD STREET.**  
AT CORNER OF STATE STREET  
**STATE STREET.**  
PACKARD ST. TO HOOVER AVE.  
Geo. H. Sandenburgh, City Engineer.  
1918  
Scale: Plan, 1"=40'; Profile, Hor. 1"=40' Vert. 1"=4'



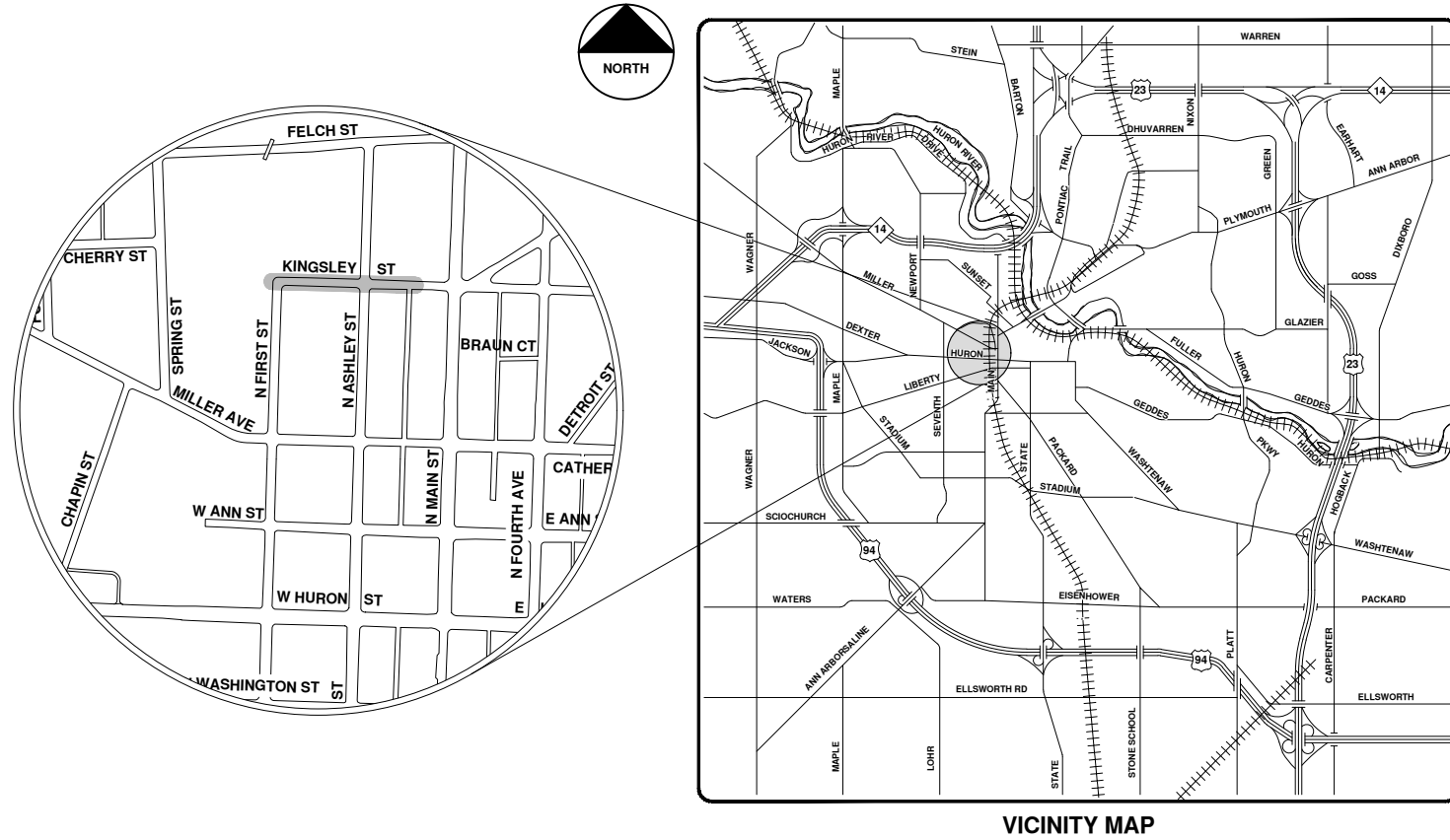






# 2020 SEWER LINING PROJECT

## W KINGSLEY AVE



VICINITY MAP

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		IVK
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 PUBLIC SERVICES  
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 ANN ARBOR, MI 48107-8647  
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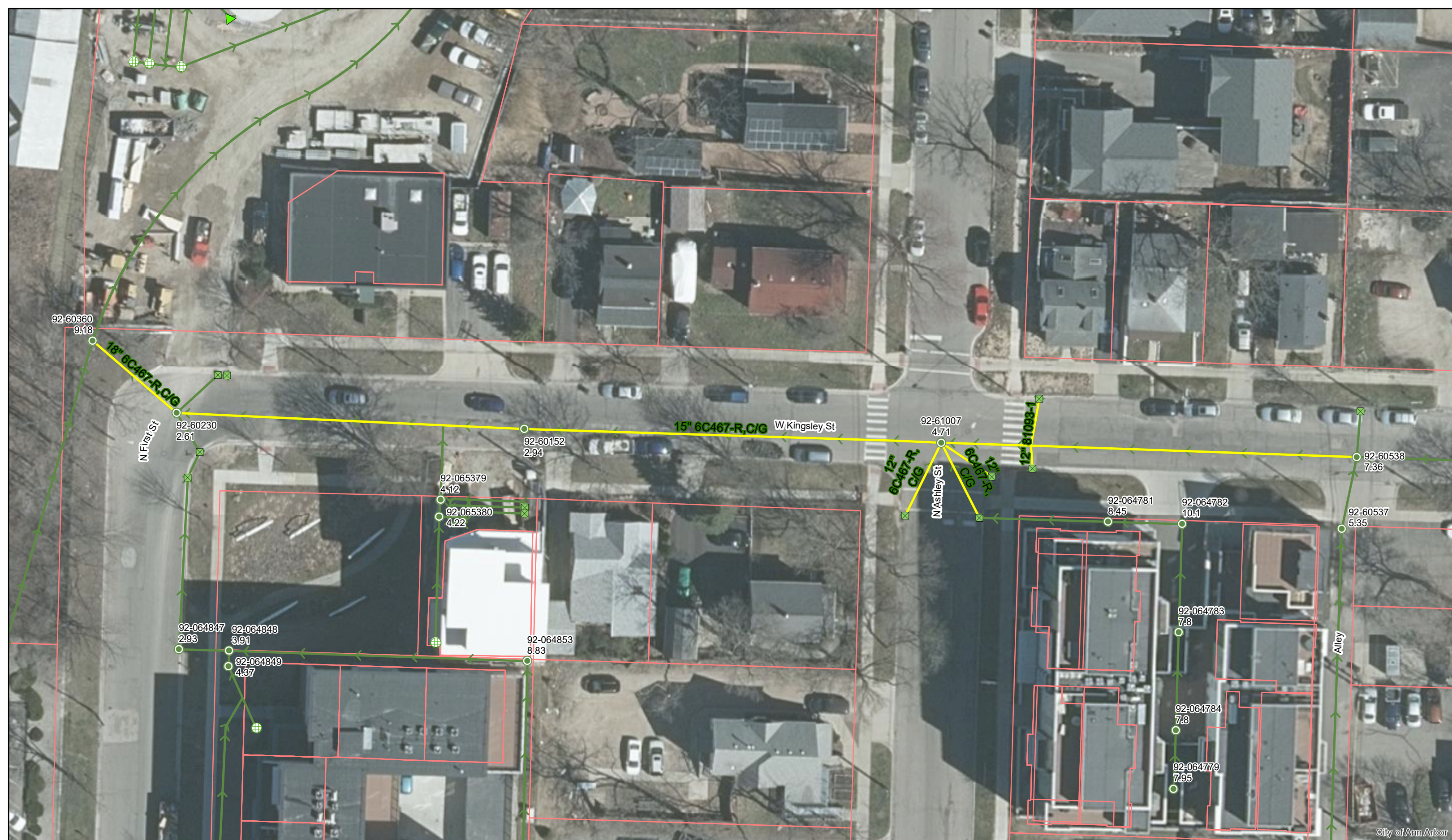


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-167

SHEET No.  
 167 OF 177





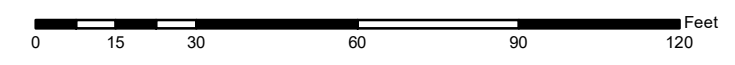
City of Ann Arbor

# W. Kingsley Ave.



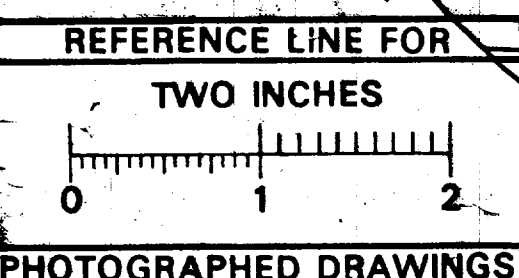
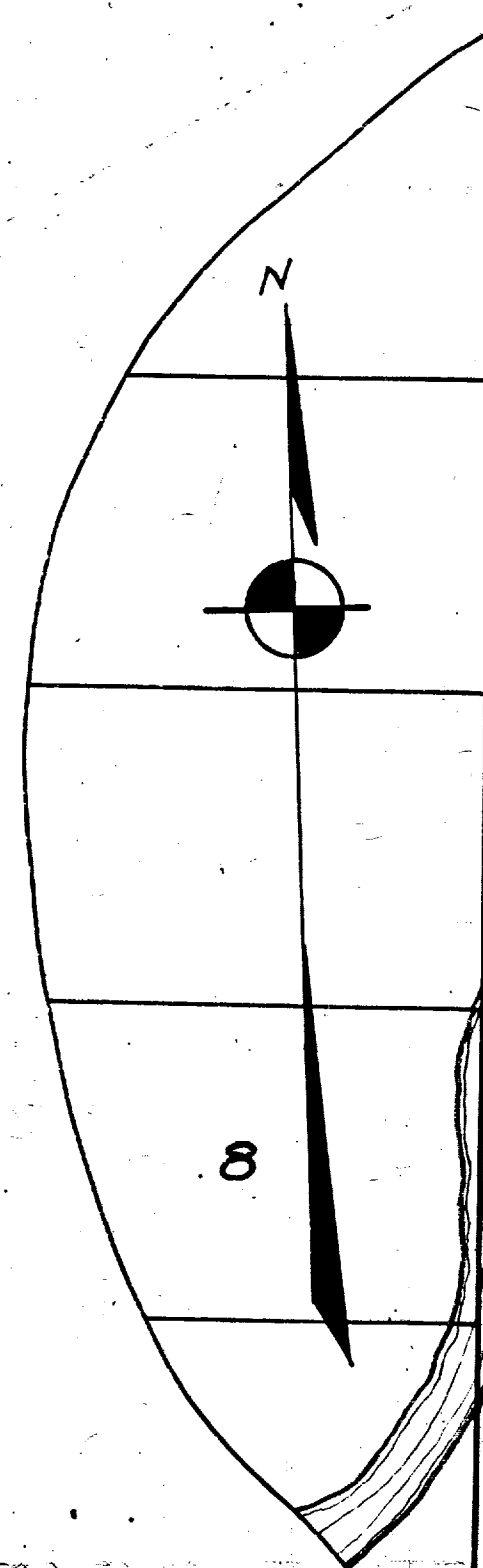
	Manhole		Storm Main
	Catchbasin		AA Proposed Lining

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)

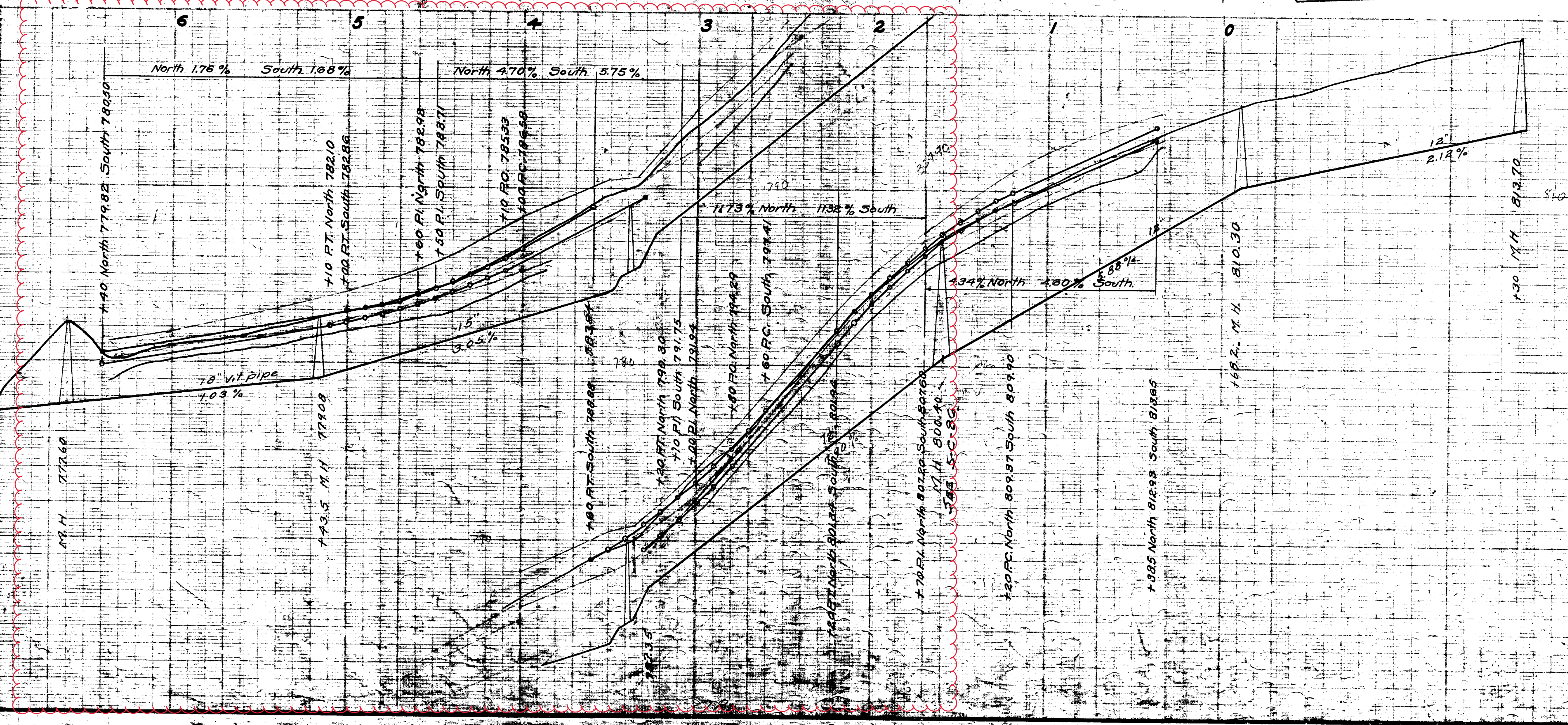
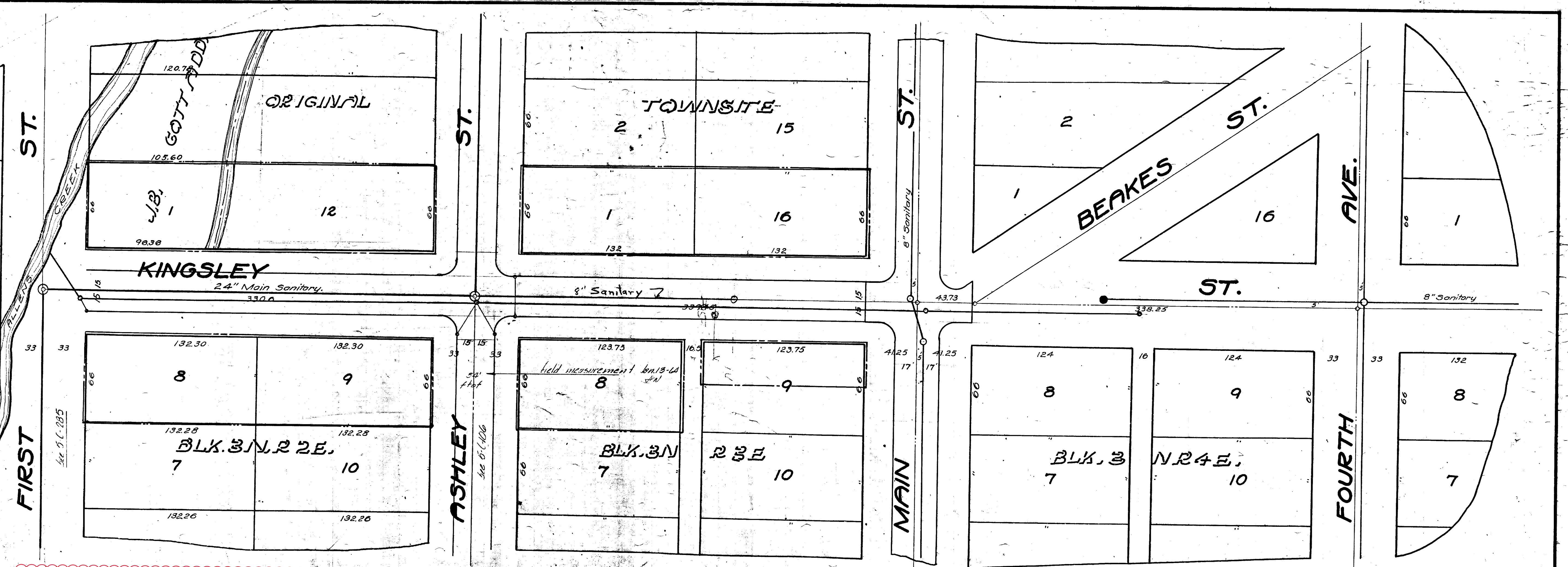


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PHOTOGRAPHED DRAWINGS



Digital Status  
Scanned On: 9-17-04  
By: DGK  
Despeckled: Yes  
Vectors:  
O.C.R.:

SHEET	No. 1
INDEX	No. 1181
SHELF	No. 6
SIZE	C
SUB	No. 467

Drawn by VWM.  
Traced by VWM.  
Checked by

CITY ENGINEER'S OFFICE  
**ANN ARBOR, MICH.**  
PLAN AND PROFILE  
OF  
STORM SEWER  
CURB and GUTTER  
**KINGSLEY ST.**  
ALLENS CREEK TO FOURTH AVE.  
Geo. H. Sandenburgh, Engineer.  
1921-1-7.  
Scale's: - Plan, 1"=40', Profile, 1"=4'



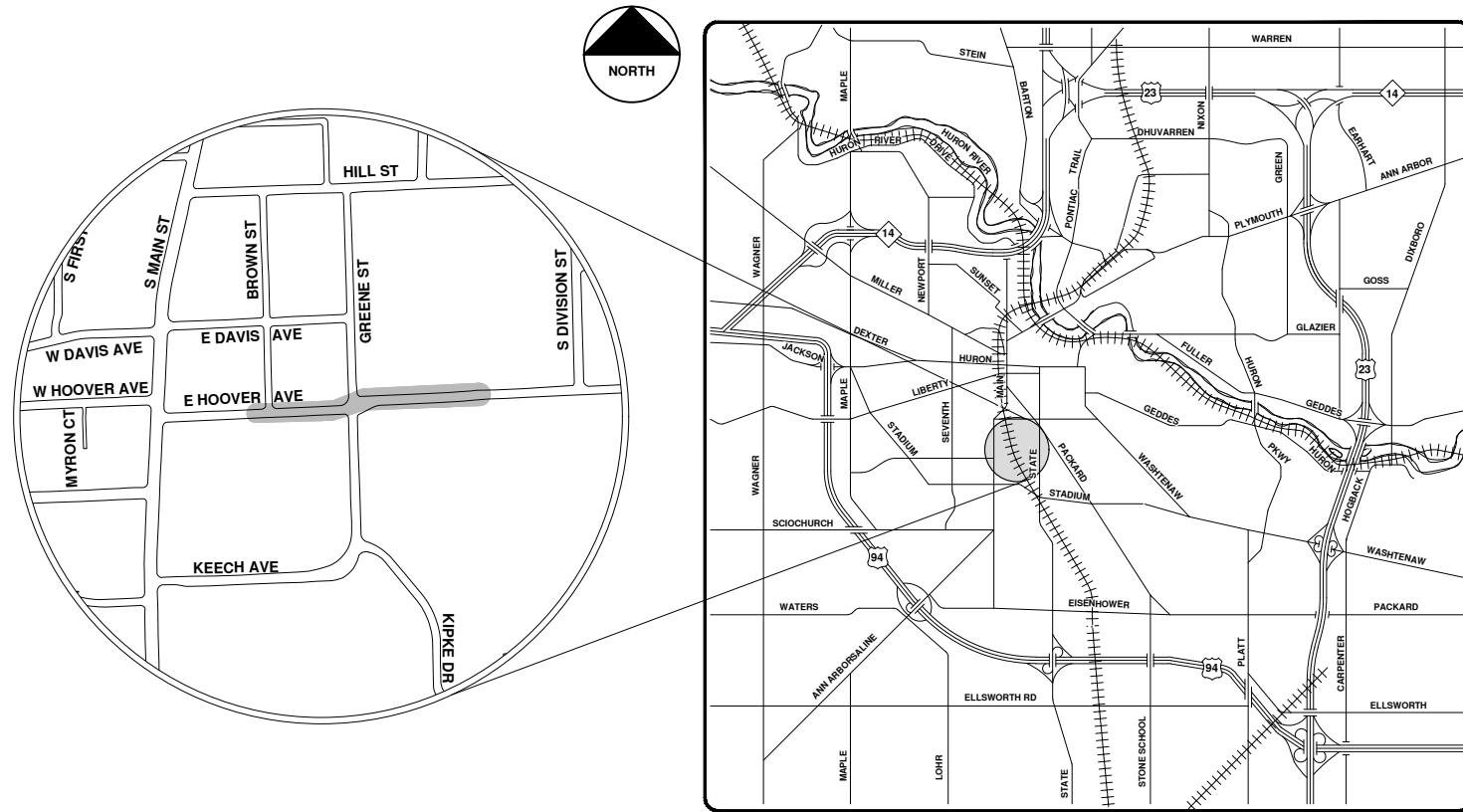






# 2020 SEWER LINING PROJECT

## E HOOVER AVE STORM



VICINITY MAP

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE  
 DRAWING No.  
 2020039-171

SHEET No.  
 171 OF 177





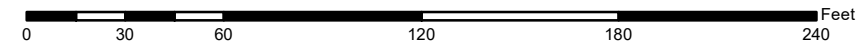
City of Ann Arbor

# E. Hoover Ave.



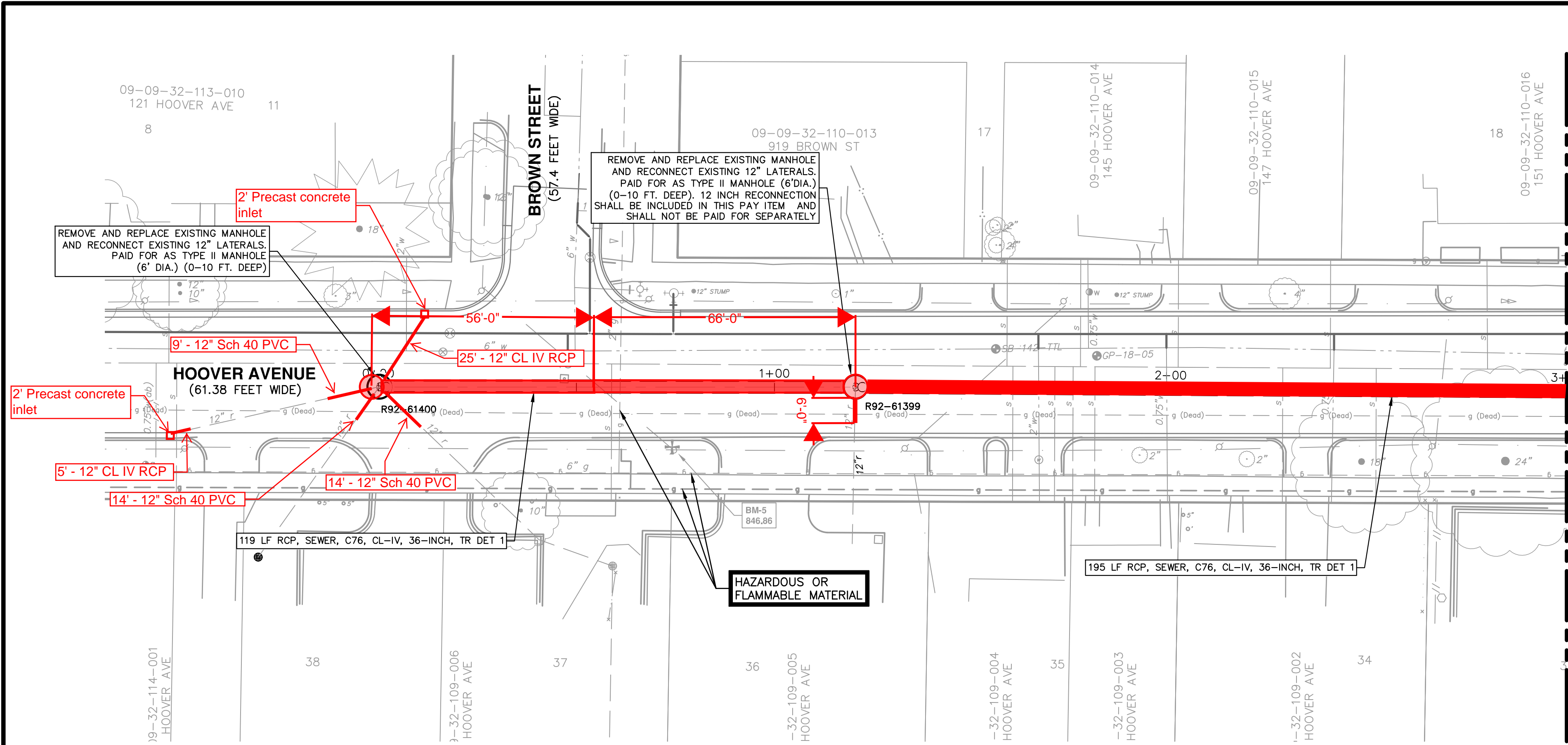
	Manhole		Storm Main
	Not found Manhole		AA Proposed Lining
	Catchbasin		

92-XXXXX (Manhole ID)  
1.00 (Manhole Depth)



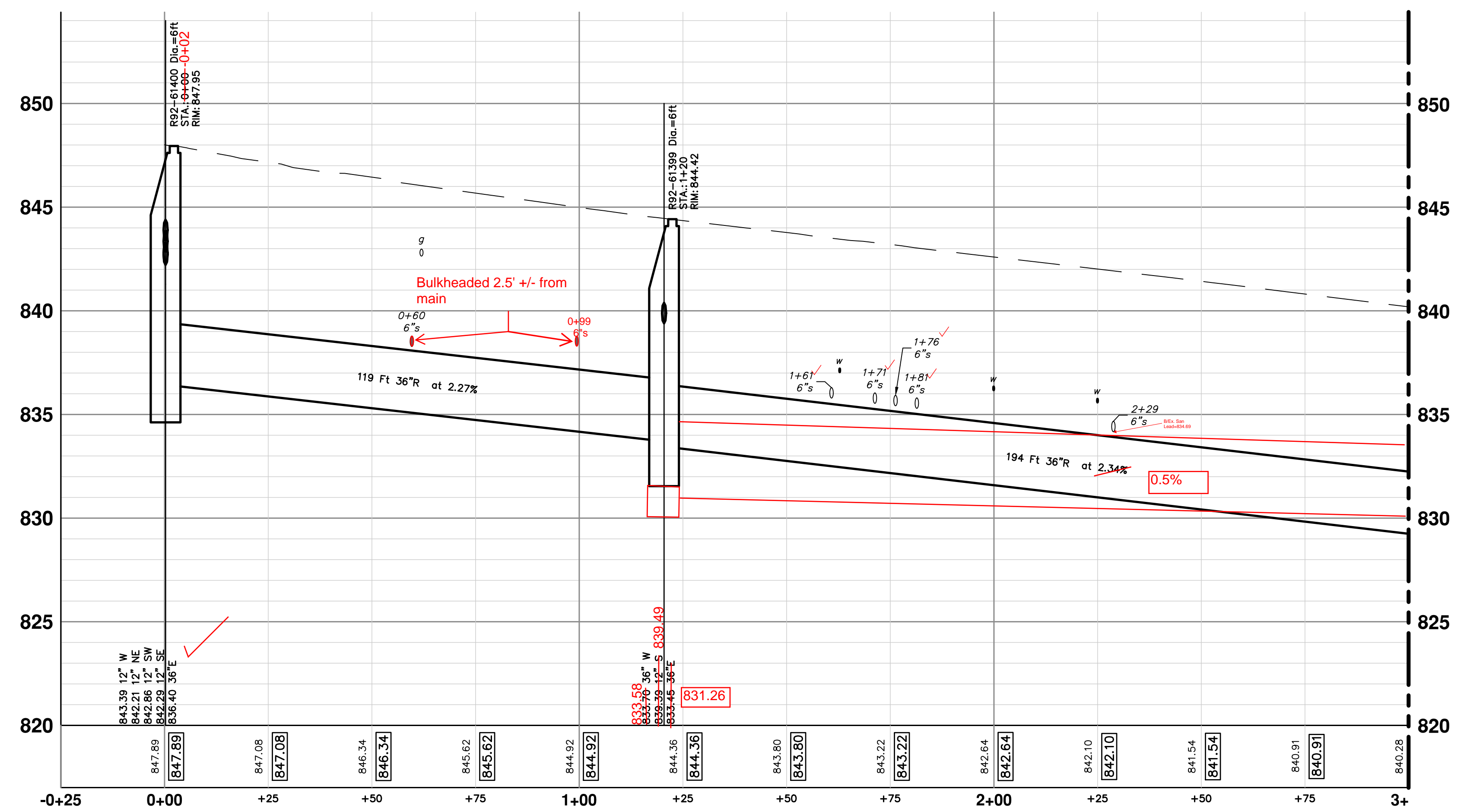
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MATCH LINE STA 3+00  
SEE SHEET 44

STORM SEWER STRUCTURE TABLE						
STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/CONSTRUCTION
R92-61399	1+20	36" W 833.70 P 12" S 839.39 36" E 833.45 P	844.42	12.21	72" Dia.	TYPE B COVER
R92-61400	0+00	12" W 843.39 12" NE 842.21 12" SW 842.86 12" SE 842.29 36" E 836.40 P	847.95	12.67	72" Dia.	TYPE B COVER



MATCH LINE STA 3+00  
SEE SHEET 44

**CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING**

**HOOVER, GREENE, & HILL IMPROVEMENT PROJECT**

STORM PLAN & PROFILE - HOOVER AVE STA 0+00 TO STA 3+50

SCALE PLAN: 1" = 20'  
PROFILE: 1" = 4'

DRAWING No. 2018-031-43

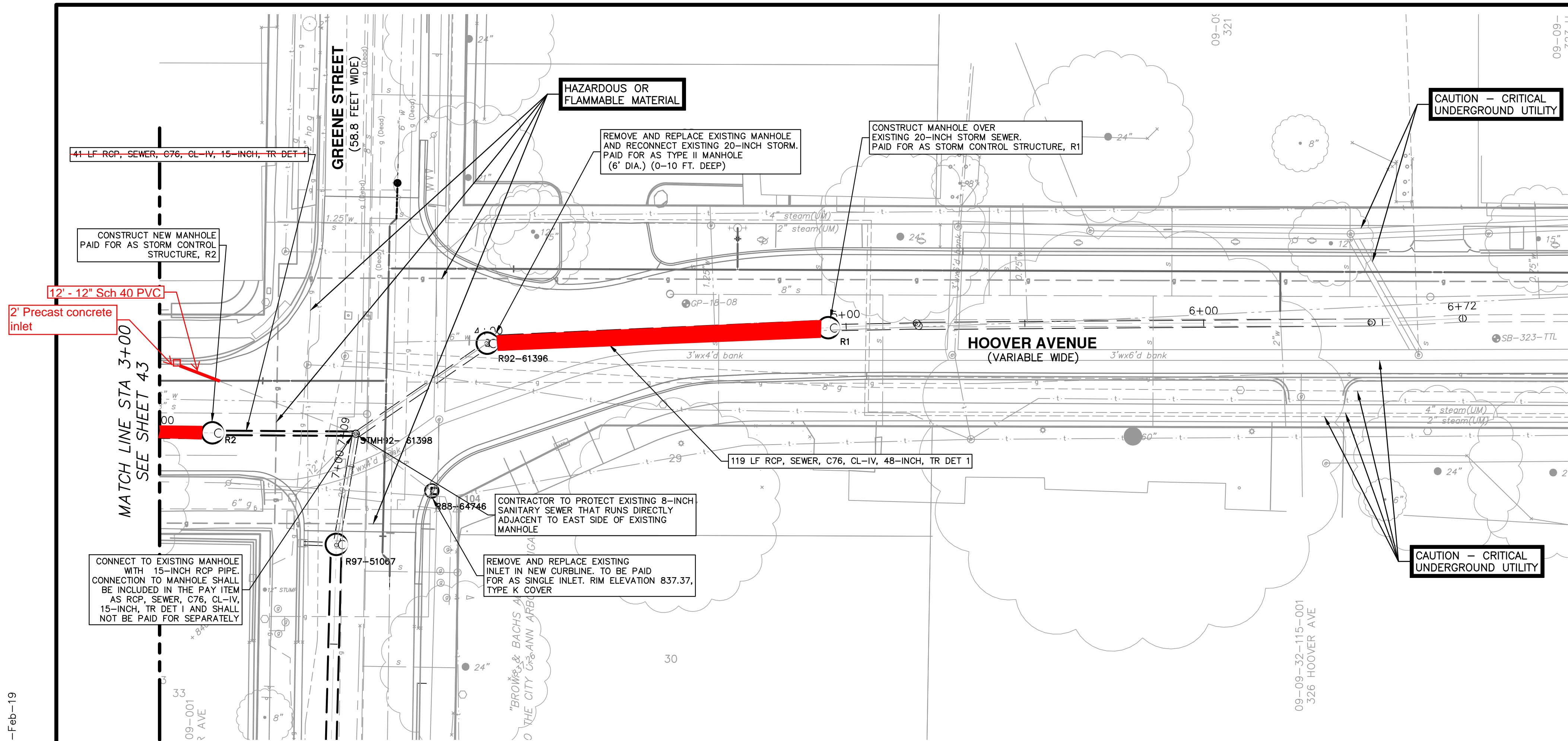
SHEET No. 43 OF 83

ANN ARBOR MICHIGAN

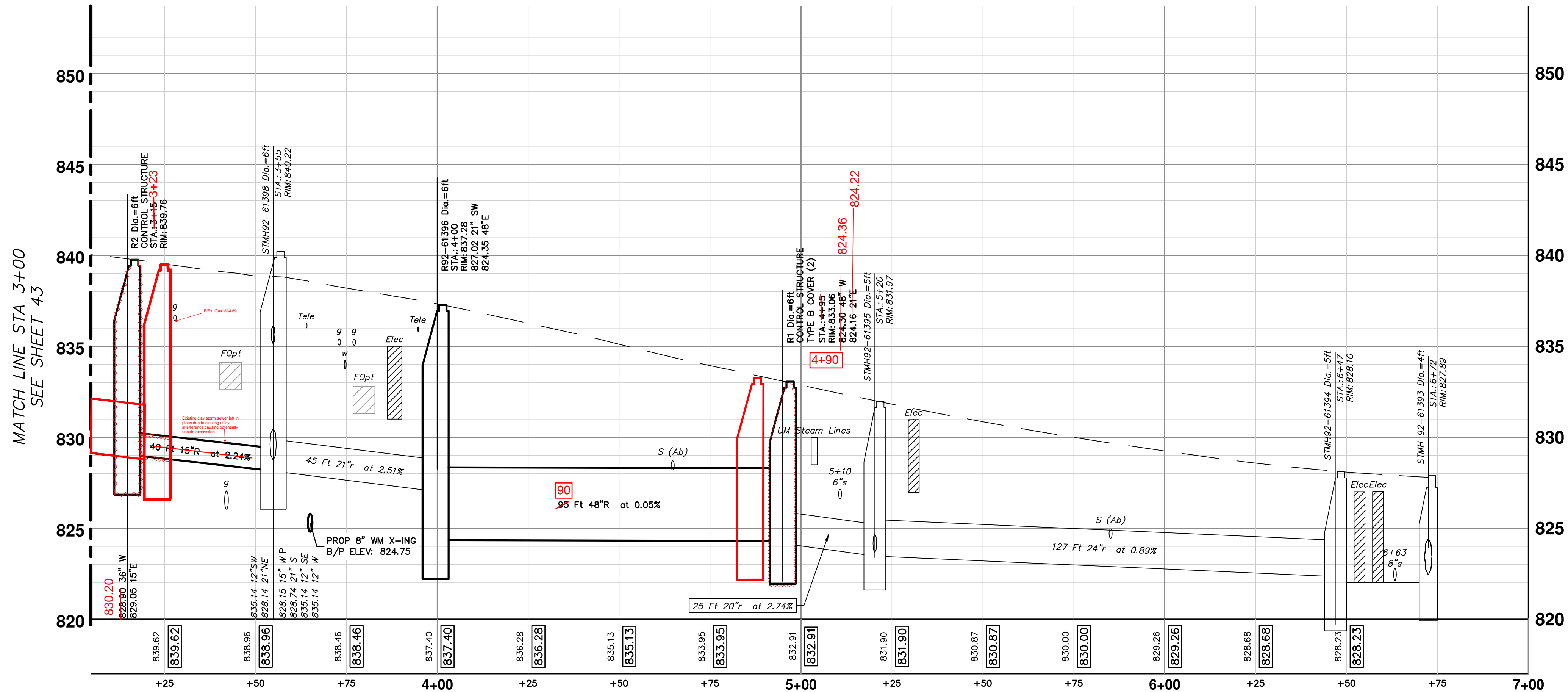
CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST HURON STREET  
ANN ARBOR MI 48106-6647  
www.a2gov.org

REV.	DESCRIPTION	DATE	DRAWN	CHECKED





STORM SEWER STRUCTURE TABLE						
STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION / CONSTRUCTION
R1	4+95	48" W 824.30 P 21" E 824.16	833.06	10.44	72" Dia.	CONTROL STRUCTURE TYPE B COVER (2)
R2	3+15	36" W 828.90 P 15" E 829.05 P	839.76	12.25	72" Dia.	CONTROL STRUCTURE TYPE B COVER (2)
R88-64746	3+63	12" NW 835.62 P	837.37	3.75	48" Dia.	TYPE K COVER
R92-61396	4+00	21" SW 827.02 48" E 824.35 P	837.28	14.42	72" Dia.	TYPE B COVER
STMH92-61398	3+55	15" W 828.15 P 21" S 828.74 12" SE 835.14 12" SW 835.14 21" NE 828.14	840.22	13.51	72" Dia.	TYPE B COVER



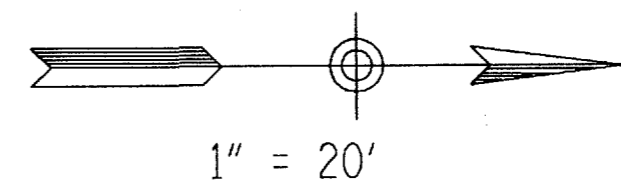
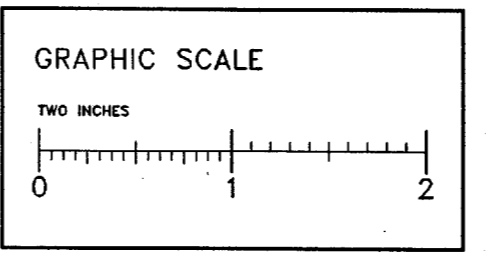
REV.	DATE	DRAWN	CHECKED

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PUBLIC SERVICES  
301 EAST HURON STREET  
ANN ARBOR, MI 48106-0647  
ANN ARBOR 734-754-4110  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
HOOPER, GREENE, & HILL  
IMPROVEMENT PROJECT  
STORM PLAN & PROFILE - HOOPER AVE STA 3+50 TO STA 6+72

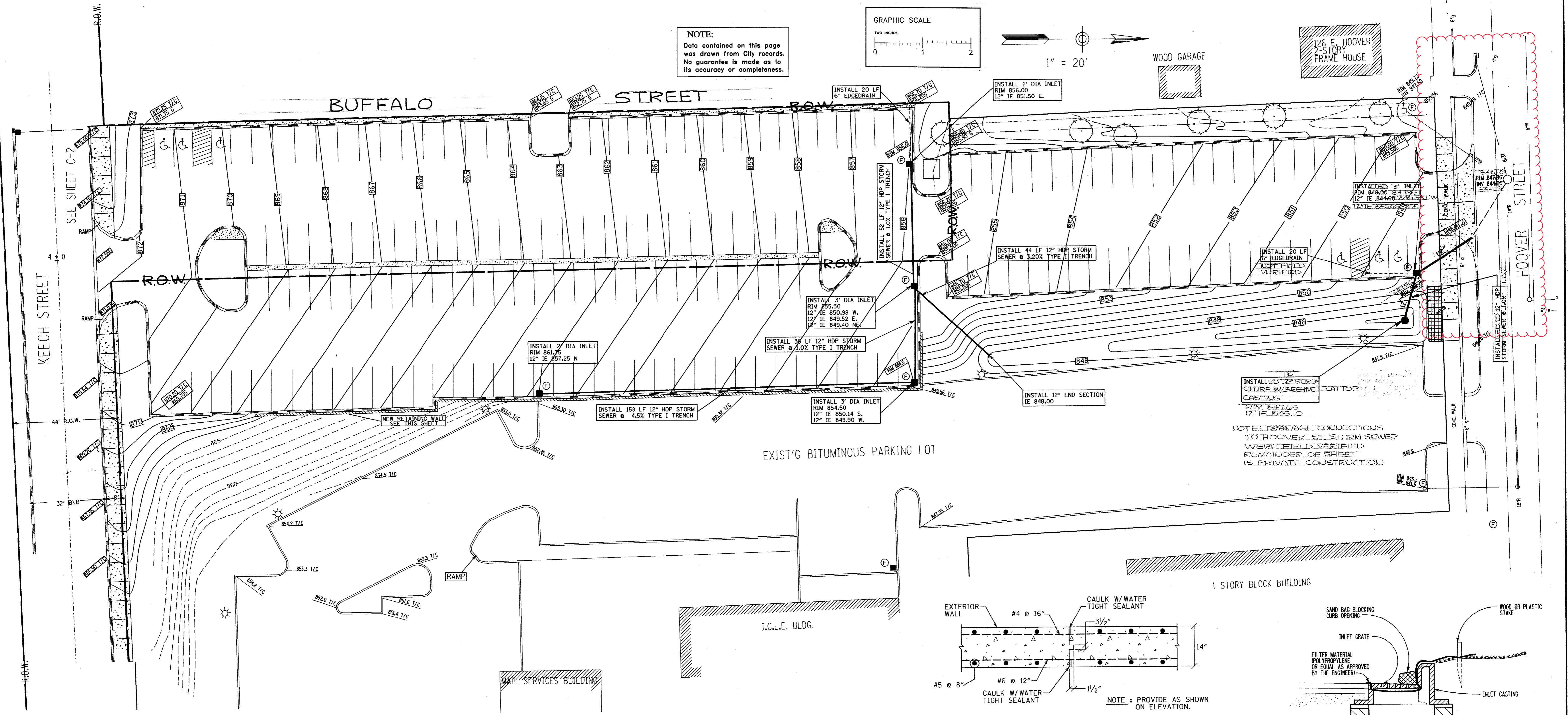


**NOTE:**  
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.



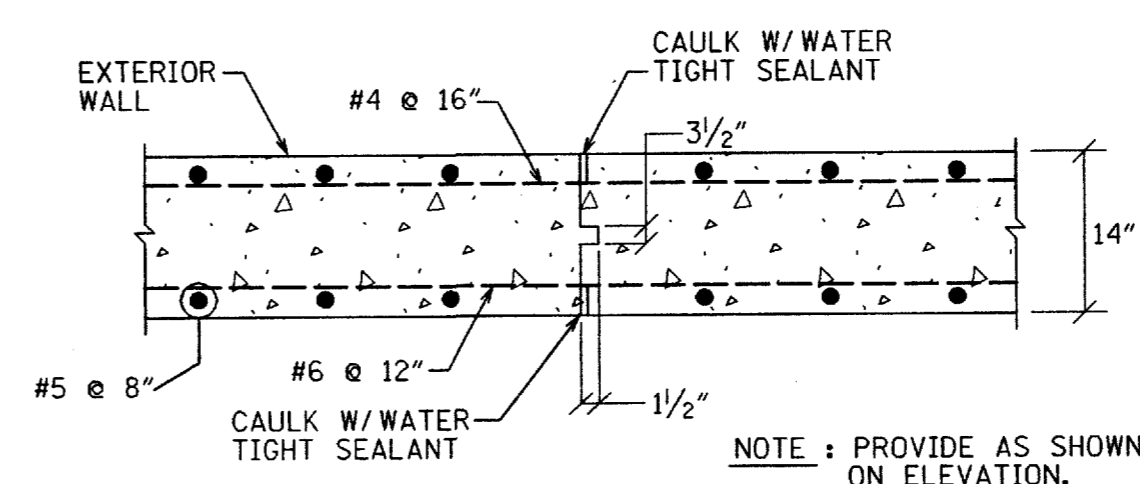
WOOD GARAGE

126 E. HOOVER  
3-STORY  
FRAME HOUSE

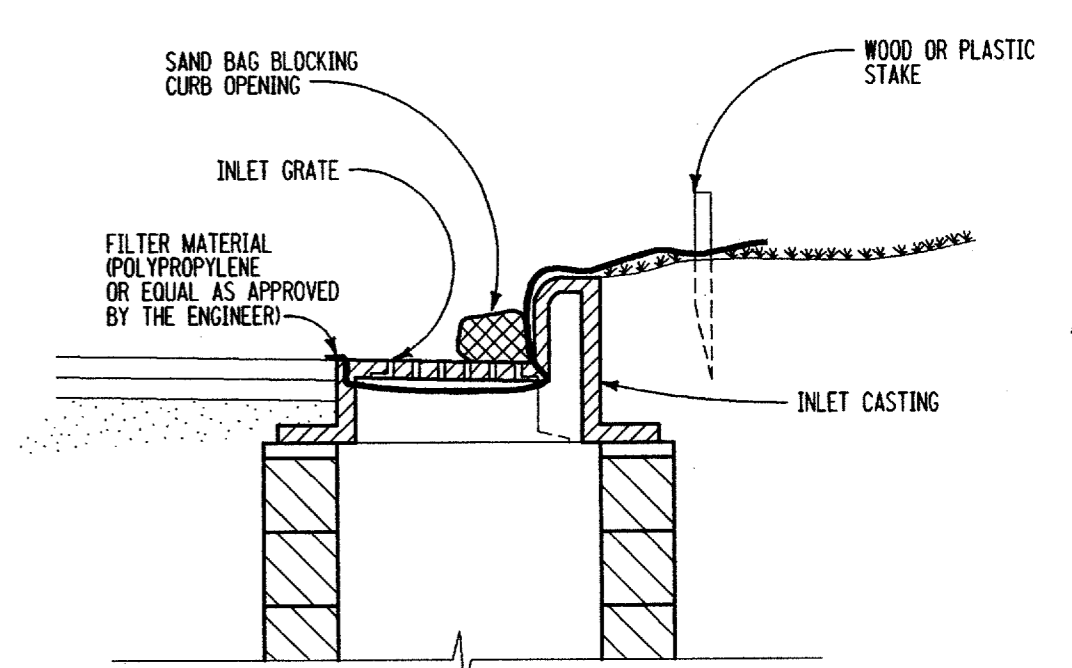


NOTE: DRAINAGE CONNECTIONS TO HOOVER ST. STORM SEWER WERE FIELD VERIFIED. REMAINDER OF SHEET IS PRIVATE CONSTRUCTION.

EXIST'G BITUMINOUS PARKING LOT



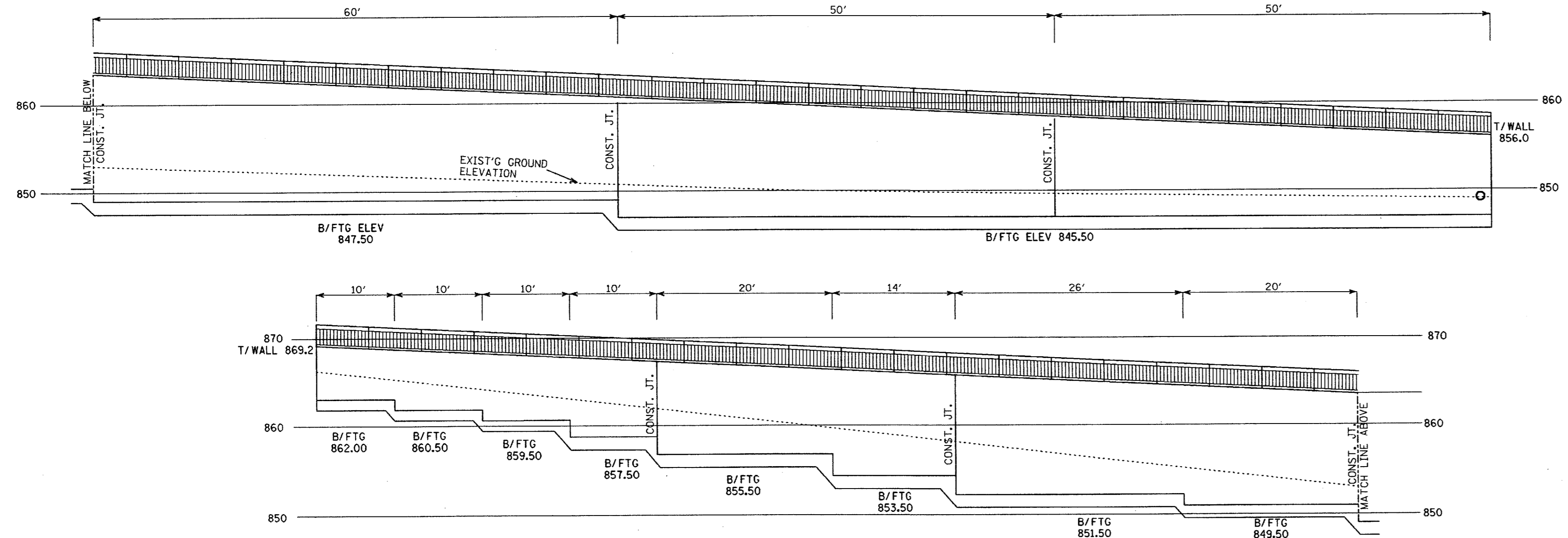
TYPICAL RETAINING WALL CONSTRUCTION JOINT DETAIL  
NO SCALE



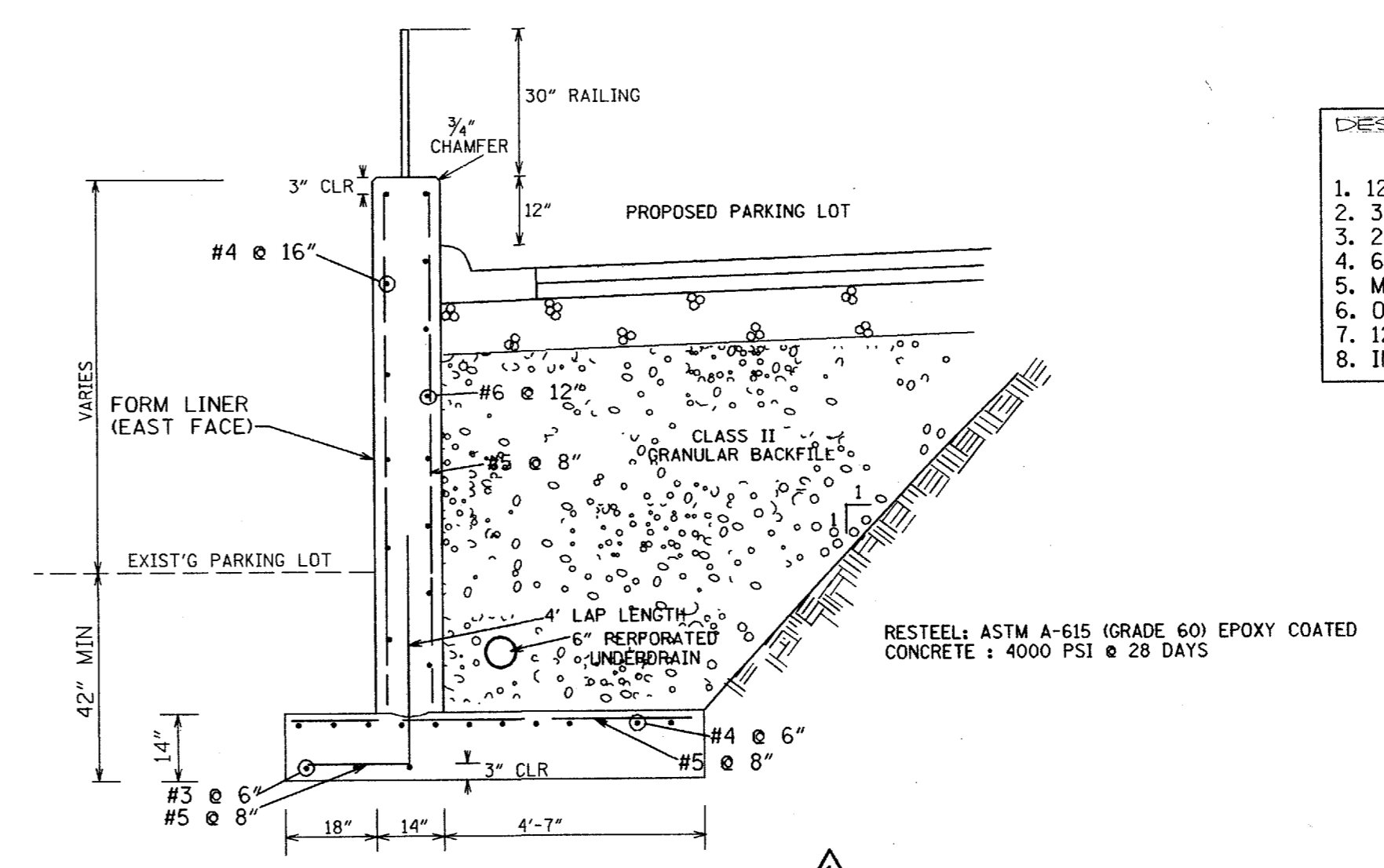
INLET FILTER (F)  
NOT TO SCALE

DESIGNED ONLY - NOT AS-BUILT ESTIMATED QUANTITIES (THIS SHEET)

1. 12" HDP STORM SEWER TYPE I TRENCH	302 LF
2. 3" DIA INLET	2 EA
3. 2" DIA INLET	3 EA
4. 6" EDGEDRAIN	40 LF
5. MANHOLE	1 EA
6. OUTLET FILTER	1 EA
7. 12" HDP END SECTION	1 EA
8. INLET FILTER	9 EA



RETAINING WALL ELEVATION-EAST FACE  
SCALE: 1" = 10'-0"

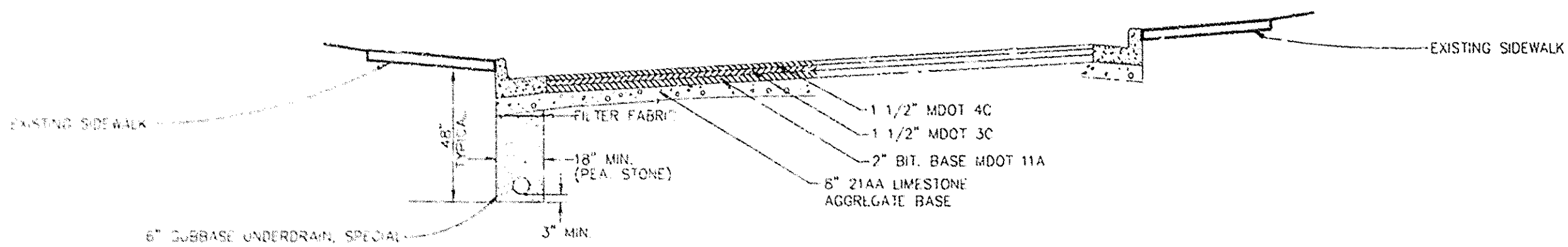


RETAINING WALL SECTION  
SCALE: 3/8" = 1'-0"

AS-BUILT JTZ		12-01
BULLETIN #1 - REVISED LAYOUT		5-11-98
RELEASED FOR BID		3-27-98
UNIVERSITY OF MICHIGAN FACILITIES PLANNING AND DESIGN		
PROJECT NAME	PLANNING	PAGE 7 OF 10
DESIGNED	TAH	SHEET NO. C-6
DRAWN	TAH	16916.001
CHECKED	TMB	9965-98-028
WORK ORDER	1691	G-6534

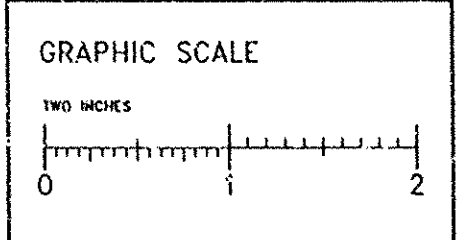
98032-RZ





PROPOSED  
**GREENE ST. - LOOKING SOUTH**  
P.O.B. TO P.O.E.  
N.T.S.

THIS STREET WAS RECONSTRUCTED AS PART OF THE 1996 ANNUAL STREET RESURFACING PROJECT



NOTE  
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

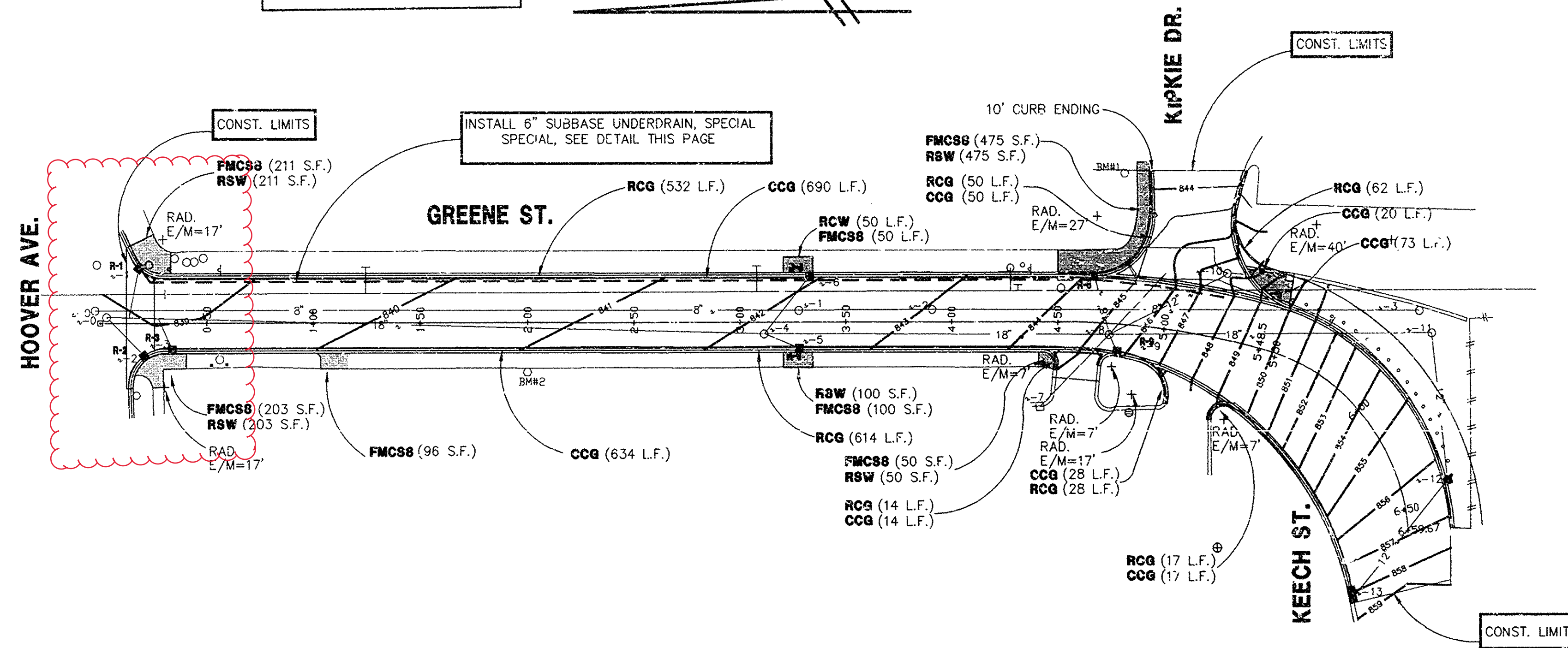
BENCH MARKS  
Bench Mark #1: Concrete base of light post on North side of Greene, by entrance to parking lot - (Sta. 4+50) elev=844.64  
Bench Mark #2: Concrete base of light post on West side of Greene (Sta 2+00) elev=843.93

PROPOSED CASTING SCHEDULE

STRUCTURE/STATION	TOP-OF-CASTING ELEVATION	INVERT ELEV. SIZE DIRECTION	DEPTH (FEET)	SIZE	DETAIL	APPLICATION/CONSTRUCTION
R-1/0+17	838.23	836.2 12" W 836.3 6" S	2.0'	2'DIA.	SD-5-10	INLET W/ 2' SUMP NEW
R-2/0+19	839.20	836.7 12" NE	2.5'	2'DIA.	SD-5-10	INLET W/ 2' SUMP NEW
R-3/0+34	839.32	836.9 12" E	2.4'	2'DIA.	SD-5-10	INLET W/ 2' SUMP NEW
R-6/0+28	842.60	839.7 12" NE 839.9 6" S	2.9'	2'DIA.	SD-5-10	INLET W/ 2' SUMP NEW
R-6/0+33	841.93	839.7 12" NW 839.9 6" S	2.1'	2'DIA.	SD-5-10	INLET W/ 2' SUMP NEW
R-9/0+78	845.80	841.7 12" NW	4.1'	2'DIA.	SD-5-10	INLET W/ 2' SUMP NEW
R-10/0+88	844.21	841.17 12" SW 841.3 6" S	3.04'	2'DIA.	SD-5-10	INLET W/ 2' SUMP NEW

EXISTING CASTING SCHEDULE

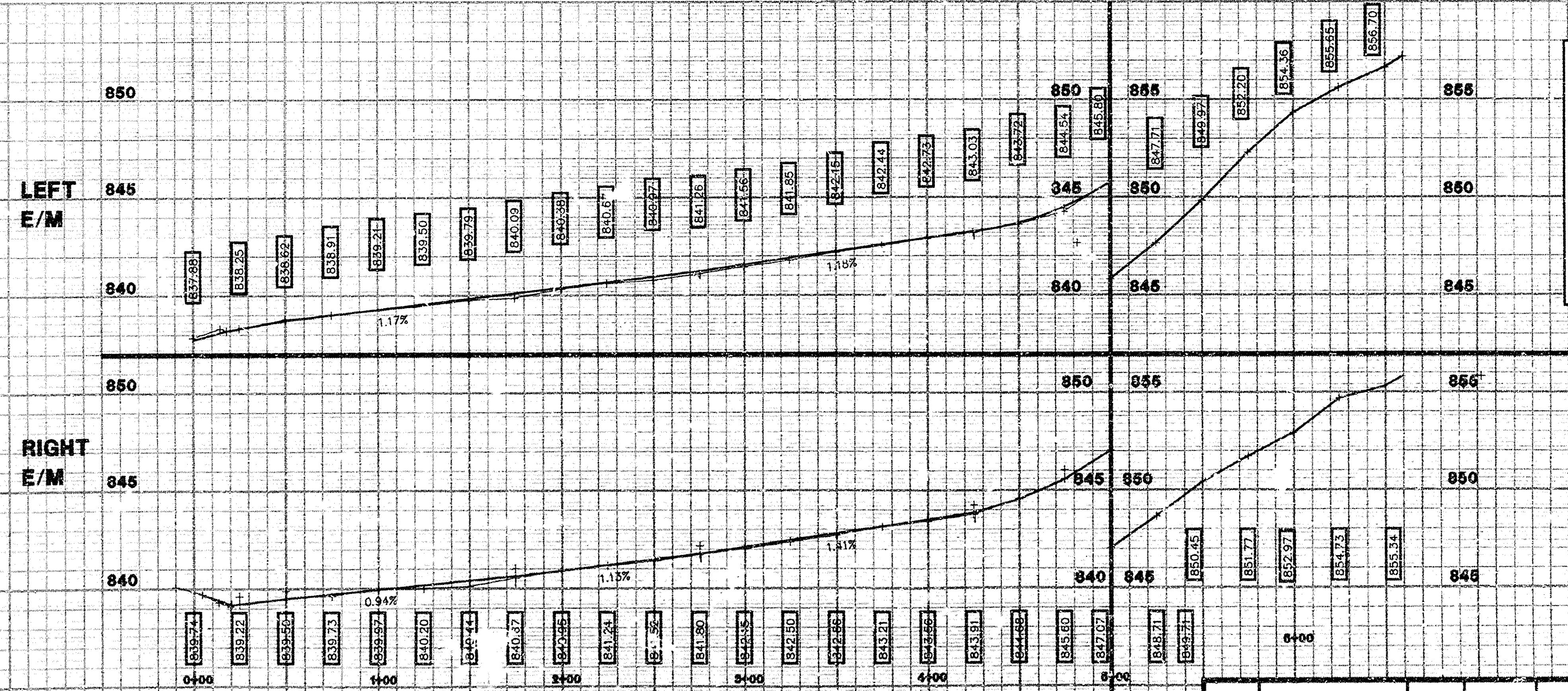
STRUCTURE/STATION	TOP-OF-CASTING ELEVATION	INVERT ELEV. SIZE DIRECTION	DEPTH (FEET)	SIZE	DETAIL	APPLICATION/CONSTRUCTION
-0/0+02	839.30	834.6 12" SW 828.8 18" E	9.5'	4'DIA.	EXISTING	NONE
-1/0+17	838.23	836.2 12" W	2.1	RISER	EXISTING	REMOVE EXISTING RISER INLET, NEW INLET W/ 2' SUMP
-2/0+19	839.14	836.7 12" NE	2.5	RISER	EXISTING	REMOVE EXISTING RISER INLET, NEW INLET W/ 2' SUMP
-3/0+34	839.43	836.9 12" E	2.5	RISER	EXISTING	REMOVE EXISTING RISER INLET, NEW INLET W/ 2' SUMP
-4/3+12	842.67	833.2 18" N 835.6 18" S 837.8 12" SE 837.8 12" SW	9.5	4'DIA.	EXISTING	REMOVE AND REPLACE CASTING, ADJUST TO FINISH GRADE
-5/3+28	842.44	836.7 12" NE	2.7	RISER	EXISTING	REMOVE EXISTING RISER INLET, NEW INLET W/ 2' SUMP
-6/3+33	841.90	839.7 12" NW	2.2	RISER	EXISTING	REMOVE EXISTING RISER INLET, NEW INLET W/ 2' SUMP
-7/4+42	845.88	842.4 12" SE	3.5	2'DIA.	EXISTING	BARRIER CURB INLET
-8/4+75	845.87	841.0 12" NW 840.9 12" W 837.9 18" N&S 845.9 12" S	8.0	4'DIA.	ING	REMOVE AND REPLACE CASTING, ADJUST TO FINISH GRADE
-9/4+78	845.75	841.7 12" NE	4.0	2'DIA.	EXISTING	REMOVE EXISTING RISER INLET, NEW INLET W/ 2' SUMP
-10/4+98	845.41	843.4 12" NW	2.0	DRAIN	EXISTING	REMOVE DRAINAGE STRUCTURE AND PIPE TO r-8
-11/6+00	855.17	847.5 18" N 848.1 12" W 851.5 12" W	7.3	4'DIA.	EXISTING	NONE
-12/6+41	856.20	852.7 8" E	3.5	2'DIA.	EXISTING	ROTATE EXISTING CASTING, ADJUST TO FINISH GRADE
-13/6+84	857.98	857.77		DOUBLE INLET	EXISTING	NONE



3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

-1/3+28	843.00	834.5 8" N&S	8.5	4'DIA.	EXISTING	REMOVE AND REPLACE CASTING, ADJUST TO FINISH GRADE
-2/3+90	843.74	835.1 8" N&S	8.6	4'DIA.	EXISTING	REMOVE AND REPLACE CASTING, ADJUST TO FINISH GRADE
-3/5+88	854.75	838.1 8" N	16.7	4'DIA.	EXISTING	NONE

NOTE: FOR SPECIFIC CASTING MODEL SEE STANDARD CASTING SCHEDULE, DETAIL SD-CU-5



CONSTRUCTION KEY

AC	ADJUST CASTING (INCLUDES GATE WELL, MONUMENT BOX AND VALVE BOX).	FMCSB	PLACE 8" FIBER MESH REINFORCED CONCRETE SIDEWALK
RSW	REMOVE EXISTING CONCRETE SIDEWALK OR RAMP - ANY THICKNESS	RCG	REMOVE EXISTING CONCRETE CURB AND GUTTER - ANY TYPE
RCA	REMOVE EXISTING CONCRETE DRIVE APPROACH - ANY THICKNESS		
CCG	CITY OF ANN ARBOR STANDARD CURB & GUTTER		
LC	LIMIT OF CONSTRUCTION		

LEGEND

EXISTING FINISH	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	SEE ABOVE
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	C/S&E T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/T.H. / SSEM.	1062
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	BENCH MARK
WATER MAIN & VALVE-IN-BOX	END SECTION			ROAD & GRADE	BOOK

SEE ABOVE	1062	AS-BUILT	1/98	WAGS	
BENCH MARK	SURVEY BOOK	ORIGINAL ISSUE	6/96	JPB/DCO	GFD
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

**1996 STREET RESURFACING GREENE STREET RECONSTRUCTION PAVING AND UTILITY P.O.B. TO P.O.E.**

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

DRAWING NO. 96004-P,UT-1

SHEET NO. 1 OF 2



