

Addendum 2

City of Canton, Ohio
Purchasing Department
218 Cleveland Ave. SW, 4th floor
Canton, Ohio 44702

Construction administration and construction management for STA-11th St SE and Market St. S,
GP 1144, PID No. 90465

Item/Project

Engineering Department

Responsible Department

Tuesday, February 28, 2023, 4:00 PM local time

Proposals Due By

Proposal Submitted By:

Company Name

Street Address

City

State

Zip

Contact Person

Phone No.

Email Address

Attached are the current plans for the STA-11th St SE and Market St. S, GP 1144, PID No. 90465 project, for reference purposes.

CITY OF CANTON ENGINEERING DEPARTMENT

STA - 11TH STREET SE IMPROVEMENTS

CITY OF CANTON STARK COUNTY

PROJECT DESCRIPTION

IMPROVEMENTS CONSIST OF A ROUNDABOUT AT THE INTERSECTION OF 11TH STREET SE/MARKET AVENUE S, STREETSCAPING WITH TREES, UPGRADED PEDESTRIAN LIGHTING, UPGRADED SIGNALS, ADA IMPROVEMENTS AT CROSSWALKS, BRICK INTERSECTION, A SHARED-USE PATH AND BIKE LANES THAT ALIGN WITH THE CITY'S MASTER BIKE ROUTES. 11TH STREET SE WILL ALSO BE REALIGNED TO ELIMINATE THE SUBSTANDARD DEFLECTION IN THE EXISTING ALIGNMENT.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 5.97 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.67 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 6.64 ACRES

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

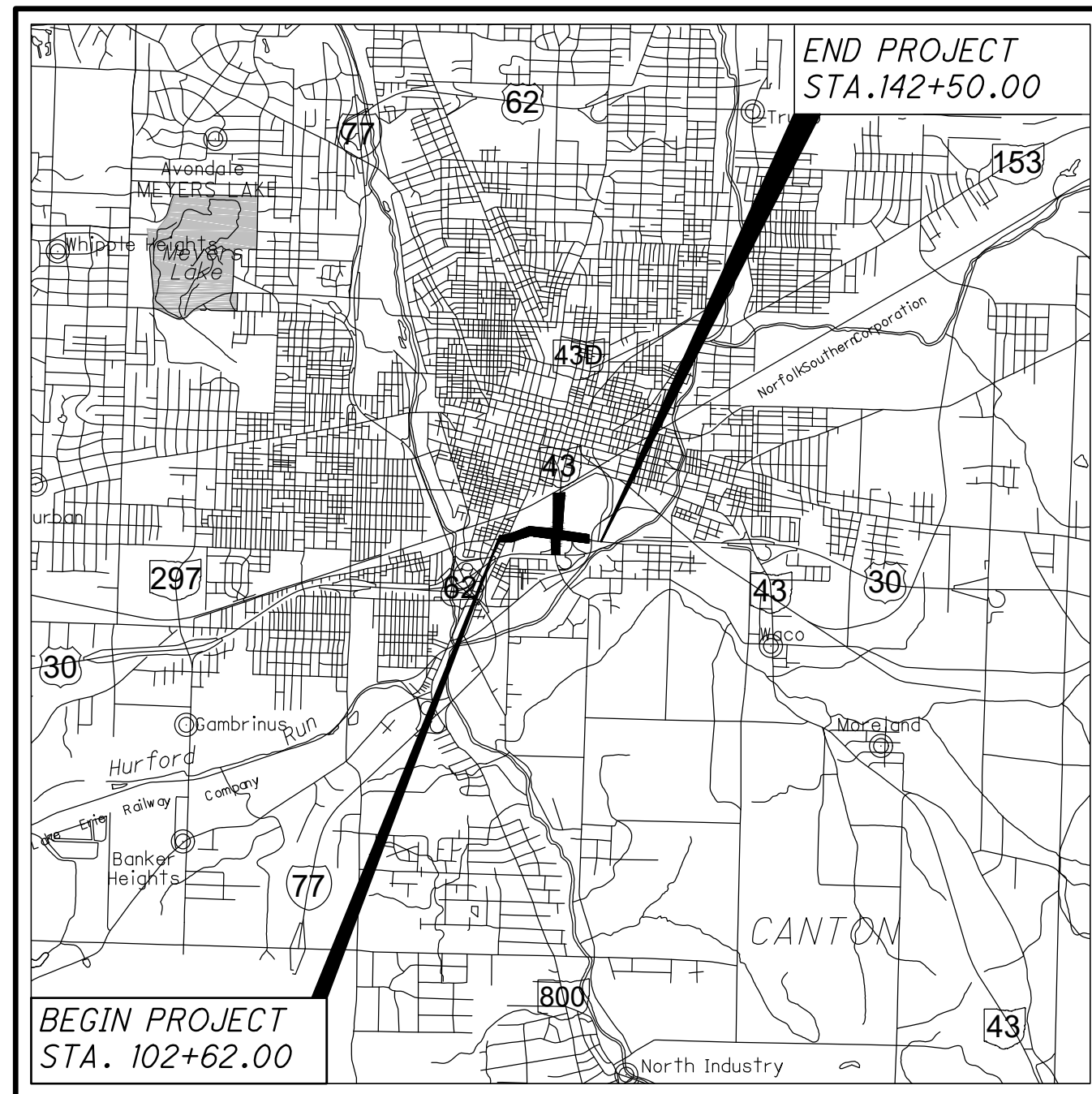
SANITARY SEWER 'PERMIT TO INSTALL' APPROVED BY THE OHIO EPA PURSUANT TO LETTER DATED _____.

**STAGE 3 RE-SUBMITTAL
11/11/2022**

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 25-32, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

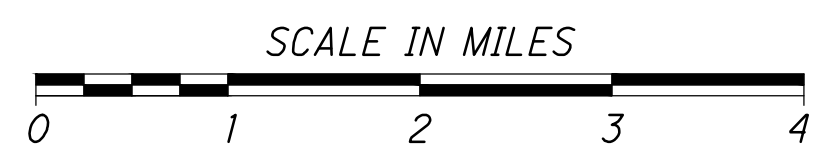
APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: N40°47'22" LONGITUDE: W81°22'36"



PORTION TO BE IMPROVED	—————
INTERSTATE HIGHWAY	—————
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

DESIGN DESIGNATION

CURRENT ADT (2023)	12,830
DESIGN YEAR ADT (2043)	13,320
DESIGN HOURLY VOLUME (2043)	1,332
DIRECTIONAL DISTRIBUTION	0.70
TRUCKS (24 HOUR B&C)	10%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
05 MAJOR COLLECTOR ROAD (URBAN)	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

**Contact Two Working Days
Before You Dig**

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:

AECOM

AKRON CINCINNATI CLEVELAND COLUMBUS
564 WHITE POND DRIVE AKRON, OHIO 44320-1100
(330) 836-9111

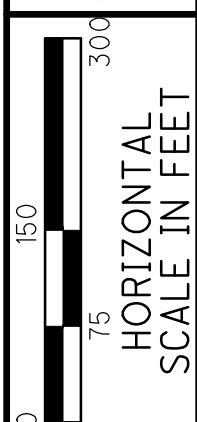
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ENGINEERS SEAL	CITY OF CANTON STANDARD CONSTRUCTION DRAWINGS		ODOT STANDARD CONSTRUCTION DRAWINGS		ODOT SUPPLEMENTAL SPECIFICATIONS			
		CE-1	3/12	I-2A	7/16/21	MT-105.10	1/17/20	800
CE-10		1/12					832	10/19/18
CE-11		1/12	DM-1.2	7/16/21	TC-41.20	10/18/13	895	4/18/14
CE-12		12/8/17			TC-41.30	10/18/13	995	7/17/15
CE-13		4/15	BP-3.1	1/17/20	TC-41.50	10/18/13		
CE-18		1/12			TC-42.20	10/18/13		
CE-21		11/11	HL-10.11	1/15/21	TC-52.10	10/18/13		
CE-27		8/15/17	HL-10.12	1/20/17	TC-52.20	1/15/21		
CE-28		8/15/17	HL-30.11	1/15/21	TC-71.10	7/16/21		
CE-30		11/20/19	HL-30.22	1/15/21	TC-81.22	7/16/21		
CE-31		11/20/19	HL-30.31	4/17/20	TC-82.10	7/19/19	SS01-00	5/12/20
CE-33		1/15	HL-60.11	7/21/17	TC-83.10	1/17/20	SS03-00	7/18/08
CE-34		11/20/19	HL-60.12	7/16/21	TC-85.10	4/17/20	SS04-01	4/01
CE-40		2/26/19						
CE-42		2/26/19	MT-97.10	4/19/19				
CE-43	12/17	MT-99.20	4/19/19					
		MT-101.60	1/17/20					

SIGNED: *Jeffrey A. Noble*
DATE: 11/11/2022

FEDERAL PROJECT NO. E110 (520)
 PID NO. 90465
 GENERAL PROJECT NO. G.P. 1144
 RAILROAD INVOLVEMENT WHEELING & LAKE ERIE
 STA - 11TH STREET SE IMPROVEMENTS (PID 90465)
 1/302

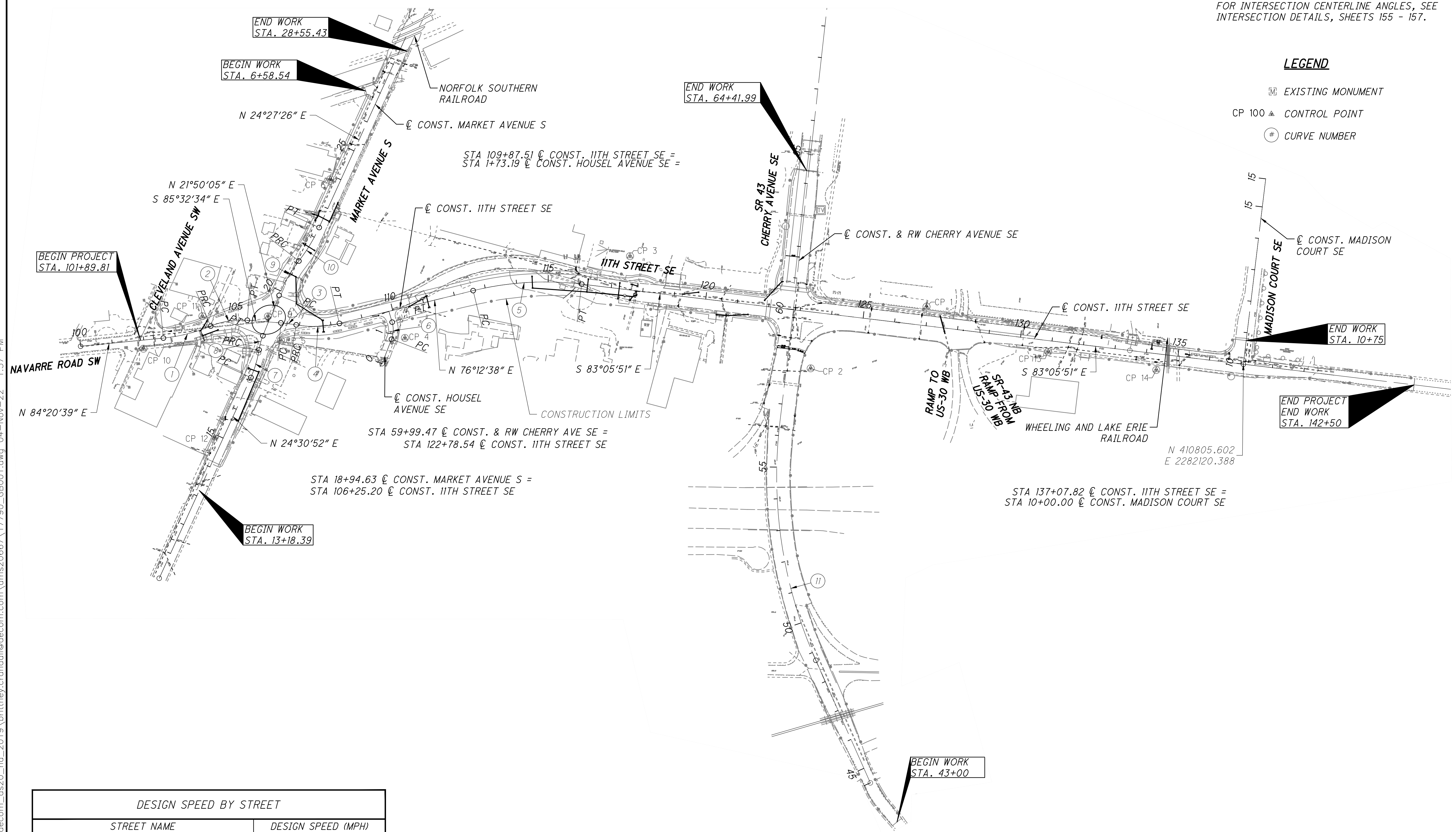
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CALCULATED JPK CHECKED JES

NOTES
FOR CONTROL POINT TABLE, SEE SHEET 3.
FOR CENTERLINE CURVE DATA, SEE SHEET 3.
FOR INTERSECTION CENTERLINE ANGLES, SEE INTERSECTION DETAILS, SHEETS 155 - 157.

LEGEND
◻ EXISTING MONUMENT
▲ CP 100 CONTROL POINT
⊕ CURVE NUMBER



DESIGN SPEED BY STREET	
STREET NAME	DESIGN SPEED (MPH)
MARKET AVENUE S	35
11TH STREET SE	35
CHERRY AVENUE SE	35

SCHEMATIC PLAN

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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PROPOSED CENTERLINE CURVE DATA

CURVE	ALIGNMENT	P.I.			DELTA	Dc	R	T	L	E	eMAX	P.C. OR P.R.C.			P.T. OR P.R.C.		
		STA.	NORTHING	EASTING								STA.	NORTHING	EASTING	STA.	NORTHING	EASTING
1	CONST. 11TH STREET SE	103+39.97	410,895.709	2,278,791.974	16° 58' 07" (LT)	10° 59' 50"	521.00'	77.72'	154.30'	5.77'		102+62.25	410,888.05	2,278,714.63	104+16.55	410,925.61	2,278,863.71
2	CONST. 11TH STREET SE	104+76.76	410,948.768	2,278,919.287	27° 04' 55" (RT)	22° 55' 06"	150.00'	60.21'	118.17'	7.15'		104+16.55	410,925.61	2,278,863.71	105+34.71	410,944.09	2,278,979.31
3	CONST. 11TH STREET SE	106+65.27	410,933.943	2,279,109.475	5° 35' 44" (RT)	11° 27' 33"	500.00'	24.44'	48.83'	0.6'		106+40.84	410,935.84	2,279,085.11	106+89.67	410,929.68	2,279,133.54
4	CONST. 11TH STREET SE	107+59.34	410,917.516	2,279,202.135	20° 41' 32" (LT)	17° 21' 44"	330.00'	69.67'	137.32'	15.78'		106+89.67	410,929.68	2,279,133.54	108+26.99	410,934.12	2,279,269.80
5	CONST. 11TH STREET SE	114+35.45	411,079.153	2,279,860.722	20° 41' 32" (RT)	6° 00' 00"	954.93'	174.33'	344.87'	15.78'		112+61.12	411,037.60	2,279,691.41	116+05.99	411,058.20	2,280,033.79
6	CONST. HOUSEL AVENUE SE	1+11.21	410,911.061	2,279,444.218	37° 48' 36" (LT)	69° 01' 52"	83.00'	28.43'	54.77'	4.73'		0+82.78	410,884.52	2,279,434.03	1+37.55	410,938.27	2,279,436.00
7	CONST. MARKET AVENUE S	17+56.03	410,805.322	2,279,009.469	15° 56' 53" (LT)	17° 31' 18"	327.00'	45.81'	91.02'	3.19		17+10.23	410,763.65	2,278,990.46	18+01.25	410,850.62	2,279,016.29
8	CONST. MARKET AVENUE S	18+24.51	410,873.618	2,279,019.757	13° 16' 06" (RT)	28° 38' 52"	200.00'	23.26'	46.32'	1.35		18+01.25	410,850.62	2,279,016.29	18+47.56	410,895.21	2,279,028.41
9	CONST. MARKET AVENUE S	20+48.07	411,081.332	2,279,102.983	16° 08' 12" (RT)	12° 52' 32"	445.00'	63.08'	125.33'	4.45		19+84.99	411,022.78	2,279,079.52	21+10.32	411,131.06	2,279,141.80
10	CONST. MARKET AVENUE S	21+72.52	411,180.068	2,279,180.068	13° 30' 51" (LT)	10° 54' 49"	525.00'	62.20'	123.83'	3.67'		21+10.32	411,131.06	2,279,141.80	22+34.15	411,236.72	2,279,205.82
11	CONST. & RW CHERRY AVENUE SE	52+68.23	410,232.361	2,280,611.635	30° 50' 21" (LT)	4° 00' 00"	1,432.35'	395.06'	770.96'	53.48'		48+73.17	409,871.35	2,280,772.09	56+44.12	410,624.58	2,280,658.93

CONTROL POINTS

POINT NO.	NORTHING	EASTING	ELEVATION	STATION/OFFSET	DESCRIPTION
1	410986.903	2281121.007	1032.025	126+93.89, 59.88' LT. 11TH STREET SE	5/8" CAPPED REBAR SET
2	410792.414	2280755.813	1030.127	123+54.72, 117.09' RT. 11TH STREET SE	5/8" CAPPED REBAR SET
3	411146.528	2280185.984	1028.944	117+46.46, 105.98' LT. 11TH STREET SE	5/8" CAPPED REBAR SET
4	410888.325	2279476.298	1032.291	110+16.62, 93.70' RT. 11TH STREET SE	5/8" CAPPED REBAR SET
5	410880.617	2279084.954	1034.233	106+45.48, 55.05' RT. 11TH STREET SE	5/8" CAPPED REBAR SET
6	411389.259	2279241.237	1031.882	23+87.66, 30.92' LT. MARKET AVENUE S	5/8" CAPPED REBAR SET
7	411950.725	2279576.778	1037.124	30+37.67, 17.41' RT. MARKET AVENUE S	5/8" CAPPED REBAR SET
8	412229.282	2280475.089			8" MAG NAIL SET
9	410956.546	2279044.323	1033.633	105+98.56, 17.47' LT. 11TH STREET SE	5/8" CAPPED REBAR SET
10	410854.545	2278651.795	1032.676	101+96.41, 27.15' RT. 11TH STREET SE	8" MAG NAIL SET
11	410956.827	2278837.527	1033.514	104+03.41, 38.74' LT. 11TH STREET SE	8" MAG NAIL SET
12	410574.683	2278875.652	1032.726	14+90.66, 26.06' LT. MARKET AVENUE S	8" MAG NAIL SET
13	410844.67	2281504.66	1031.507	130+91.86, 35.21' RT. 11TH STREET SE	8" MAG NAIL SET
14	410787.315	2281845.528	1030.177	134+37.15, 51.19' RT. 11TH STREET SE	5/8" CAPPED REBAR SET

CALCULATED
JPK
CHECKED
JES

CONTROL POINTS AND CENTERLINE DATA

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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WL1 STA 103+50.00, 6.00' LT. 11TH STREET SE =
STA 10+00.00 REF LINE WL
N 410909.78
E 2278799.24

WL2 STA 12+03.11 REF LINE WL =
STA 1+11.81 REF LINE CC
N 410978.03
E 2278990.48

NL1 STA 70+00.00 REF LINE NL =
STA 1+97.62 REF LINE CC
N 411009.40
E 2279065.98

NL2 STA 21+00.00, 5.00' LT. MARKET AVENUE S =
STA 71+34.02 REF LINE NL
N 411125.84
E 2279131.53

STA 106+25.20 @ CONST. 11TH STREET SE =
STA 18+94.63 @ CONST. MARKET AVENUE S
N 410938.90
E 2279045.91

NOTES

FOR CENTERLINE CURVE DATA, SEE SHEET 3.

FOR REFERENCE LINE CURVE DATA, SEE SHEET 5.

NR1 STA 80+00.00 REF LINE NR =
STA 2+22.69 REF LINE CC
N 411001.72
E 2279089.70

NR2 STA 21+00.00, 6.00' RT. MARKET AVENUE S =
STA 81+30.60 REF LINE NR
N 411119.28
E 2279140.36

EL1 STA 30+00.00 REF LINE EL =
STA 2+88.92 REF LINE CC
N 410945.62
E 2279116.80

EL2 STA 108+10.54, 5.50' LT. 11TH STREET SE =
STA 31+39.18 REF LINE EL
N 410936.00
E 2279252.69

CC1 STA 0+00.00 REF LINE CC =
STA 4+23.33 REF LINE CC
N 410886.162
E 2279013.787

SL1 STA 17+10.23, 5.00 LT. MARKET AVENUE S =
STA 50+00.00 REF LINE SL
N 410765.72
E 2278985.91

SL2 STA 51+26.21 REF LINE SL =
STA 0+04.73 REF LINE CC
N 410887.83
E 2279009.36

WR1 STA 103+50.00, 6.00 RT. 11TH STREET SE =
STA 20+00.00 REF LINE WR
N 410898.21
E 2278802.40

WR2 STA 21+80.52 REF LINE WR =
STA 0+64.57 REF LINE CC
N 410934.08
E 2278976.16

ER1 STA 40+00.00 REF LINE ER =
STA 3+15.19 REF LINE CC
N 410921.21
E 2279107.55

ER2 STA 108+10.54, 5.50' RT. 11TH STREET SE =
STA 41+47.90 REF LINE ER
N 410925.20
E 2279254.77

SR1 STA 17+10.23, 5.00' RT. MARKET AVENUE S =
STA 60+00.00 REF LINE SR
N 410761.57
E 2278995.01

SR2 STA 61+27.72 REF LINE SR =
STA 4+02.40 REF LINE CC
N 410882.27
E 2279034.30

NW1 STA 103+50.00, 19.00' LT. 11TH STREET SE =
STA 110+00.00 REF LINE NW
N 410922.32
E 2278795.80

NW2 STA 21+00.00, 17.00' LT. MARKET AVENUE S =
STA 114+07.43 REF LINE NW
N 411133.00
E 2279121.90

NE1 STA 21+00.00, 21.00' RT. MARKET AVENUE S =
STA 130+00.00 REF LINE NE
N 411110.32
E 2279152.39

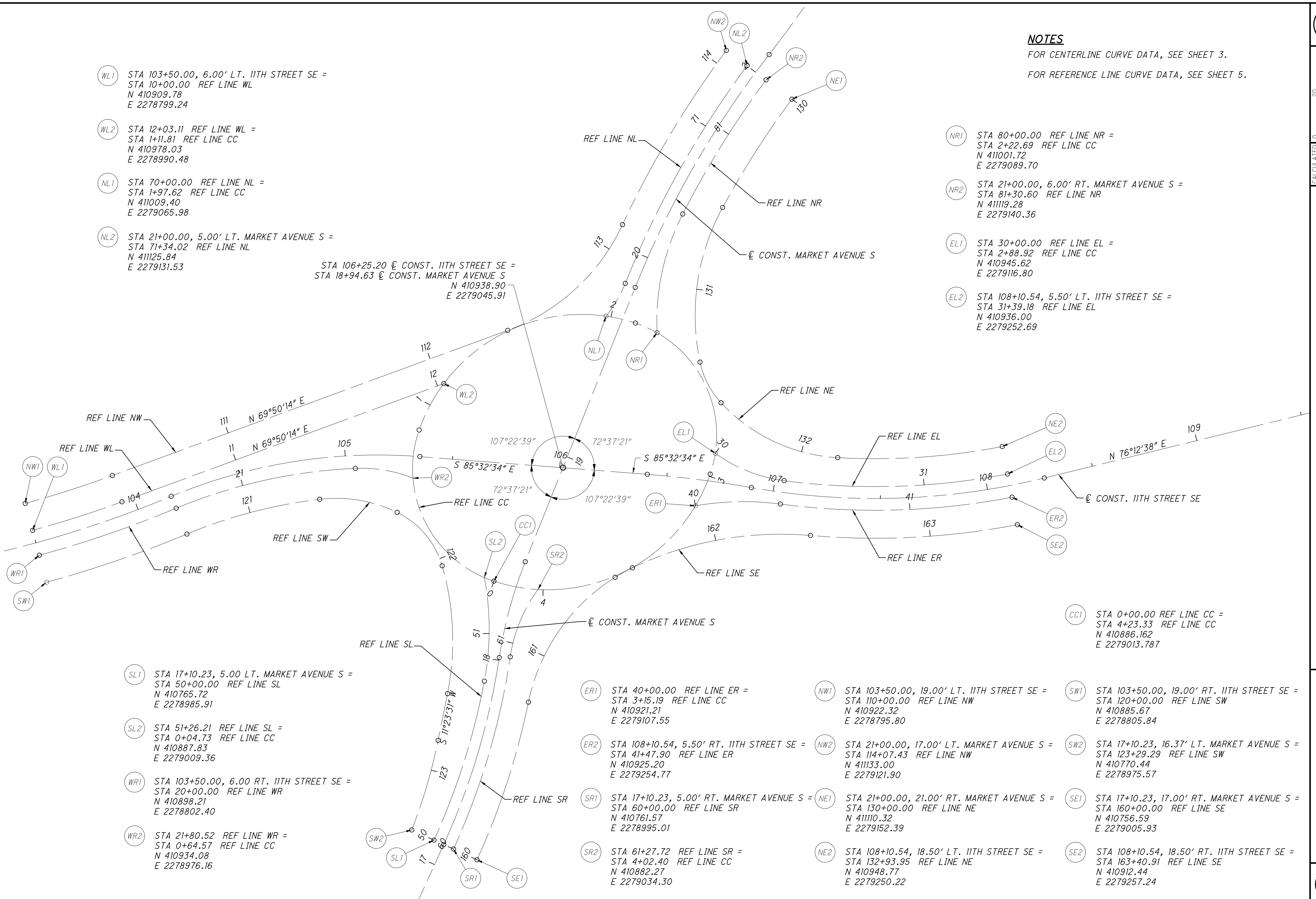
NE2 STA 108+10.54, 18.50' LT. 11TH STREET SE =
STA 132+93.95 REF LINE NE
N 410948.77
E 2279250.22

SW1 STA 103+50.00, 19.00' RT. 11TH STREET SE =
STA 120+00.00 REF LINE SW
N 410885.67
E 2278805.84

SW2 STA 17+10.23, 16.37' LT. MARKET AVENUE S =
STA 123+29.29 REF LINE SW
N 410770.44
E 2278975.57

SE1 STA 17+10.23, 17.00' RT. MARKET AVENUE S =
STA 160+00.00 REF LINE SE
N 410756.59
E 2279005.93

SE2 STA 108+10.54, 18.50' RT. 11TH STREET SE =
STA 163+40.91 REF LINE SE
N 410912.44
E 2279257.24



CALCULATED JPK CHECKED JES

ROUNDABOUT GEOMETRIC LAYOUT

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

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REFERENCE LINE CURVE DATA

REF. LINE	P.I.			DELTA	Dc	TANGENT LENGTH (FT)	ARC LENGTH (FT)	RADIUS (FT)	BEGIN CURVE	END CURVE
	STA.	NORTHING	EASTING							
CC	0+55.87	410,903.640	2,278,960.722	90°53' 55" (RT)	104°10' 27"	55.87'	87.26	55.00	0+00.00	0+87.26
	1+66.01	410,030.831	2,279,004.838	89°06' 05" (RT)	71°37' 11"	78.76'	124.41	80.00	0+87.26	2+11.67
	2+67.53	410,988.715	2,279,132.705	90°53' 55" (RT)	104°10' 27"	55.87'	87.26	55.00	2+11.67	2+98.92
	3+77.68	410,861.524	2,279,088.589	89°06' 05" (RT)	71°37' 11"	78.76'	124.41	80.00	2+98.92	4+23.33
	10+21.84	410,915.546	2,278,820.300	04°51' 23" (RT)	11°07' 31"	21.84	43.65	515.00	10+00.00	10+43.65
WR	20+33.70	410,907.103	2,278,834.911	07°19' 06" (LT)	10°52' 19"	33.70	67.31	527.00	20+00.00	20+67.31
	21+10.67	410,936.747	2,278,906.038	20°09' 02" (RT)	23°28' 55"	43.35	85.81	244.00	20+67.31	21+53.13
	21+85.60	410,940.020	2,278,981.792	53°05' 18" (RT)	88°08' 50"	32.47	60.23	65.00	21+53.13	22+13.35
EL	30+03.71	410,937.717	2,279,112.129	55°38' 14"	81°51' 04"	36.94	67.97	70.00	29+66.77	30+34.75
	30+87.42	410,926.011	2,279,200.969	18°26' 22"	17°39' 24"	52.67	104.43	324.50	30+34.75	31+39.18
ER	40+00.32	410,927.558	2,279,105.298	35°53' 23"	44°04' 25"	42.10	81.43	130.00	39+58.22	40+39.65
	40+94.25	410,914.845	2,279,201.162	18°29' 14"	17°04' 40"	54.60	108.25	335.50	40+39.65	41+47.90
SL	50+39.06	410,801.259	2,279,002.121	13°49' 58"	17°47' 37"	39.06	77.74	322.00	50+00.00	50+77.74
	51+21.54	410,882.681	2,279,017.479	37°14' 19"	44°04' 25"	43.80	84.49	130.00	50+77.74	51+62.23
SR	60+47.06	410,804.390	2,279,014.540	16°08' 10"	17°15' 28"	47.06	93.50	332.00	60+00.00	60+93.50
	61+32.70	410,889.733	2,279,027.109	58°29' 58"	81°51' 04"	39.20	71.47	70.00	60+93.50	61+64.97
NL	69+92.81	410,997.901	2,279,064.168	51°17' 00"	95°29' 35"	28.80	53.70	60.00	69+64.01	70+17.71
	70+76.19	411,078.919	2,279,096.630	14°48' 31"	12°43' 57"	58.48	116.31	450.00	70+17.71	71+34.02
NR	80+13.79	411,013.122	2,279,079.263	48°08' 46"	52°05' 13"	49.14	92.43	110.00	79+64.65	80+57.08
	80+93.93	411,089.709	2,279,118.365	09°35' 46"	13°03' 46"	36.85	73.53	439.00	80+57.08	81+30.60
NW	110+21.29	410,927.939	2,278,816.336	04°51' 23"	11°24' 49"	21.29	42.55	110.00	110+00.00	110+42.55
	112+77.71	411,016.334	2,279,057.070	44°54' 56"	60°18' 41"	39.27	74.47	95.00	112+38.44	113+12.92
	113+60.34	411,094.952	2,279,093.600	11°43' 17"	12°24' 06"	47.42	94.51	462.00	113+12.92	114+07.43
SW	119+89.60	410,877.081	2,278,796.667	16°58' 07"	10°36' 37"	80.55	159.93	540.00	119+09.05	120+68.97
	121+01.20	410,920.468	2,278,900.771	15°53' 10"	24°48' 12"	32.23	64.05	231.00	120+68.97	121+33.02
	121+52.05	410,926.482	2,278,951.674	32°37' 48"	88°08' 50"	19.03	37.02	65.00	121+33.02	121+70.04
	121+87.83	410,910.406	2,278,984.794	47°57' 10"	143°14' 22"	17.79	33.48	40.00	121+70.04	122+03.52
	122+34.16	410,863.887	2,278,998.270	27°32' 51"	45°50' 12"	30.64	60.10	125.00	122+03.52	122+63.62
	123+07.59	410,790.743	2,278,983.532	10°00' 44"	23°00' 37"	21.81	43.51	249.00	122+85.78	123+29.29
NE	130+29.99	411,086.263	2,279,134.497	08°05' 26"	13°30' 47"	29.99	59.87	424.00	130+00.00	130+59.87
	130+98.58	411,025.922	2,279,101.662	40°28' 31"	54°34' 03"	38.71	74.18	105.00	130+59.87	131+34.05
	131+45.09	410,977.246	2,279,111.940	30°51' 16"	143°14' 22"	11.04	21.54	40.00	131+34.05	131+55.59
	131+87.92	410,945.414	2,279,141.392	44°00' 29"	71°37' 11"	32.33	61.45	80.00	131+55.59	132+17.03
	132+55.69	410,941.433	2,279,212.265	14°08' 53"	18°23' 37"	38.66	76.92	311.50	132+17.03	132+93.95
SE	160+38.79	410,791.889	2,279,022.028	12°52' 07"	16°39' 21"	38.79	77.26	344.00	160+00.00	160+77.26
	161+15.69	410,867.522	2,279,037.616	46°14' 31"	63°39' 43"	38.43	72.64	90.00	160+77.26	161+49.90
	161+54.48	410,890.386	2,279,074.047	06°33' 34"	71°37' 11"	4.58	9.16	80.00	161+49.90	161+59.06
	162+02.69	410,911.186	2,279,117.551	30°30' 37"	35°48' 36"	43.64	85.20	160.00	161+59.06	162+44.26
	169+92.90	410,903.212	2,279,209.481	15°53' 26"	16°26' 26"	48.64	96.65	348.50	162+44.26	163+40.91

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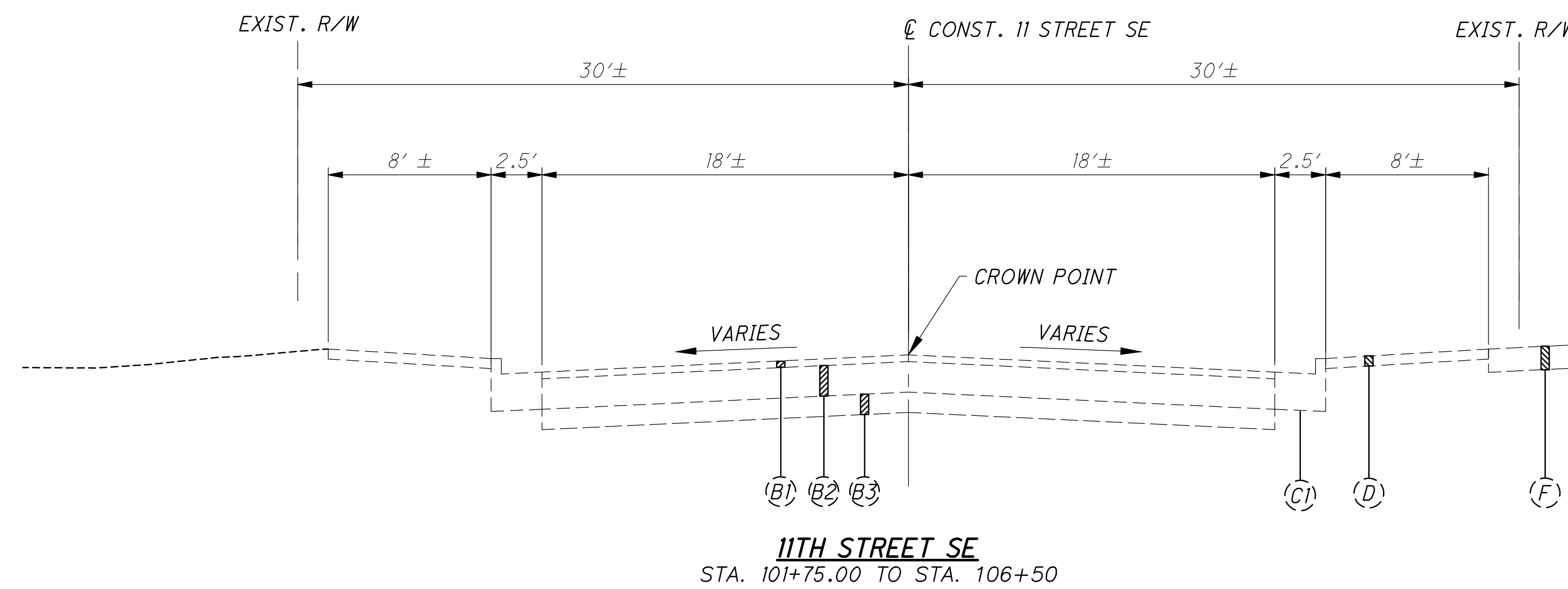
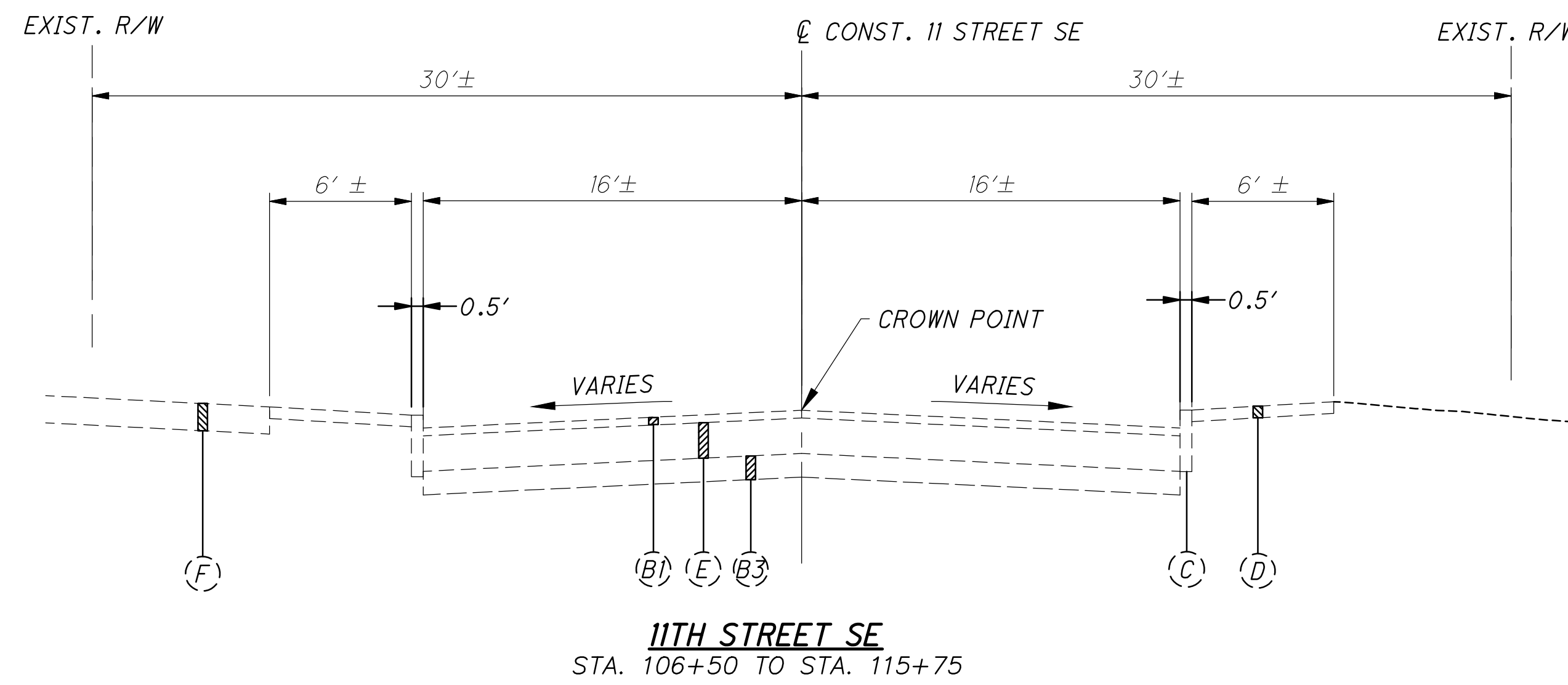
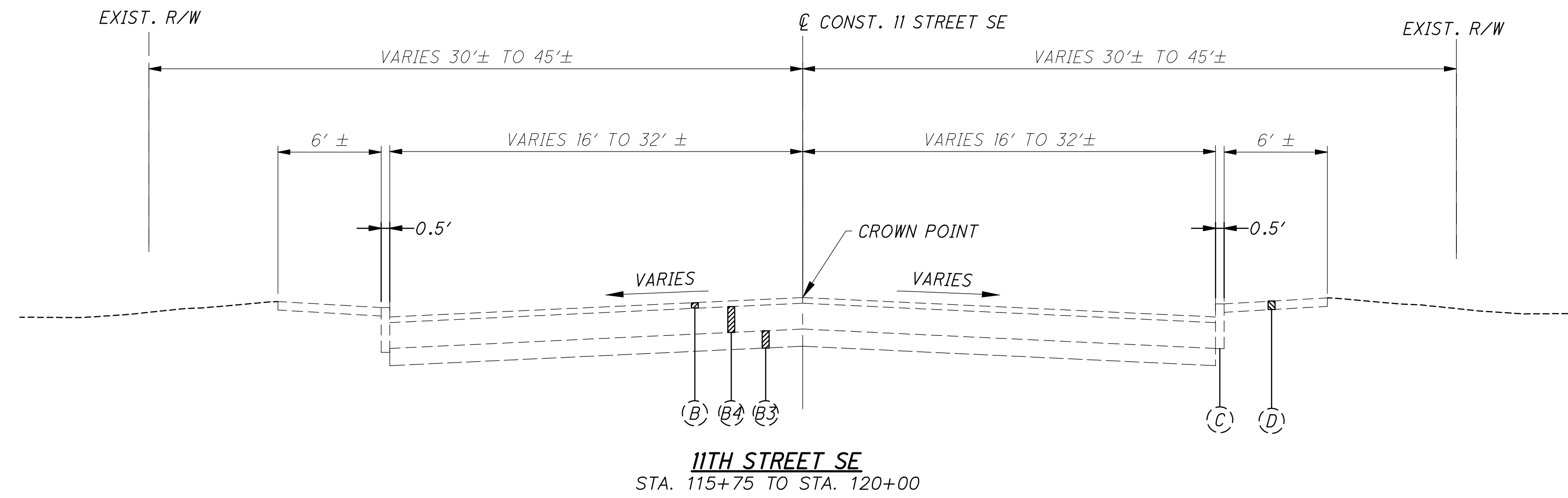
ROUNDABOUT GEOMETRIC LAYOUT

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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EXISTING LEGEND

- (A) BRICK [T=4'±]
- (A1) SAND BASE [T=2"]
- (B) ASPHALT PAVEMENT [T=1 1/2" TO 2 1/2"±]
- (B1) ASPHALT PAVEMENT [T=3"]
- (B2) ASPHALT BASE [T=8"]
- (B3) AGGREGATE BASE
- (B4) REINFORCED CONCRETE PAVEMENT [T=9"]
- (C) CONCRETE CURB
- (C1) CONCRETE CURB AND GUTTER
- (D) CONCRETE SIDEWALK
- (E) CONCRETE PAVEMENT [T=9"±]
- (E1) CONCRETE PAVEMENT [T=5"±]
- (F) ASPHALT PAVEMENT, DEPTH UNKNOWN

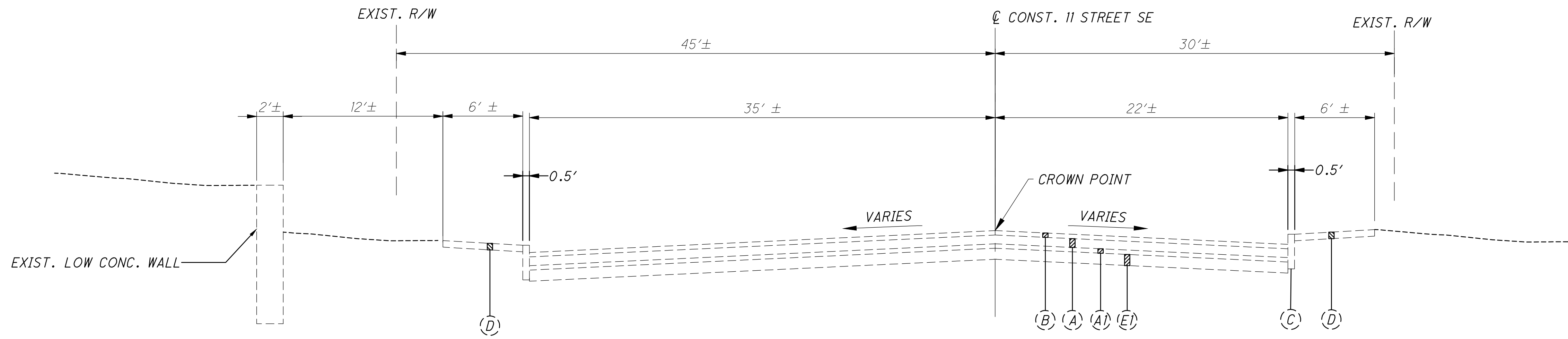


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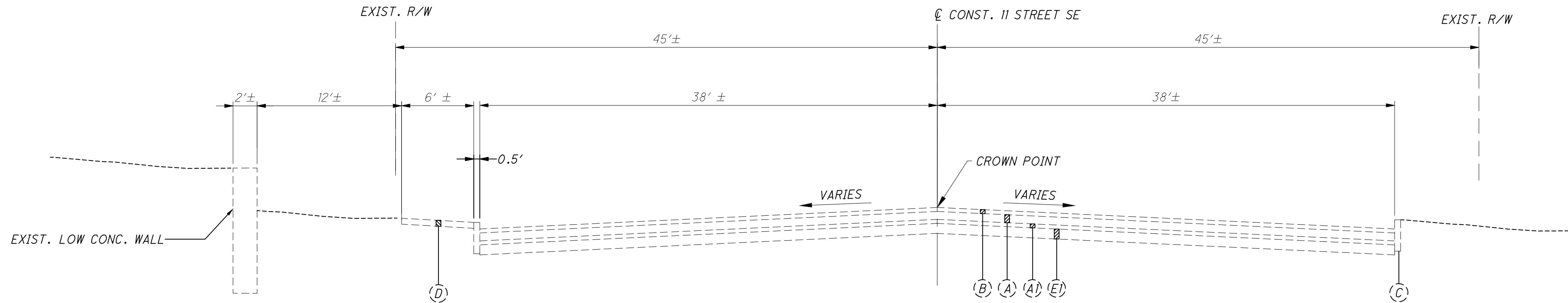
EXISTING TYPICAL SECTIONS - 11TH STREET SE

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

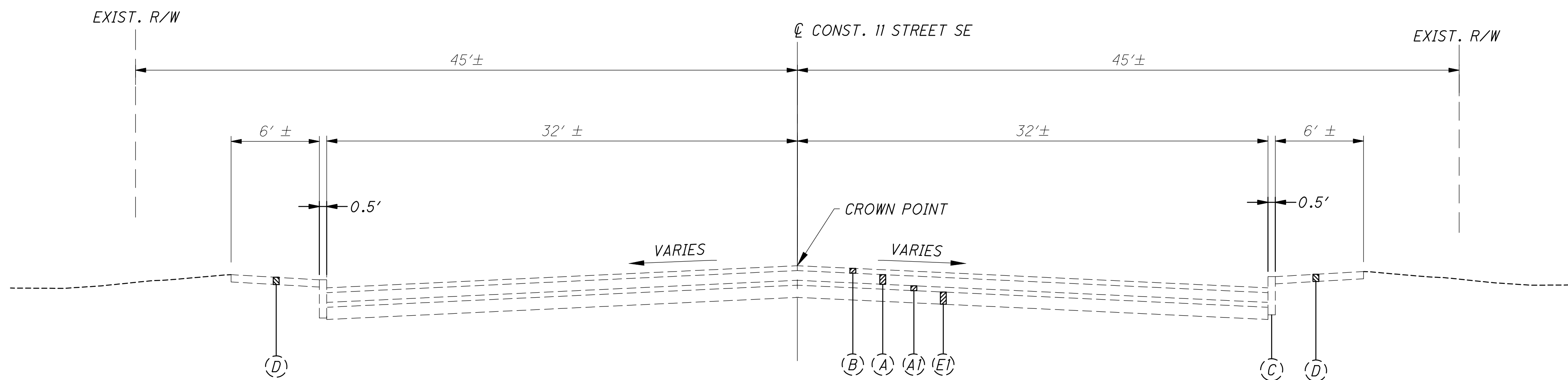
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11TH STREET SE
STA. 128+00 TO STA. 132+25



11TH STREET SE
STA. 123+00 TO STA. 128+00



11TH STREET SE
STA. 120+00 TO STA. 123+00

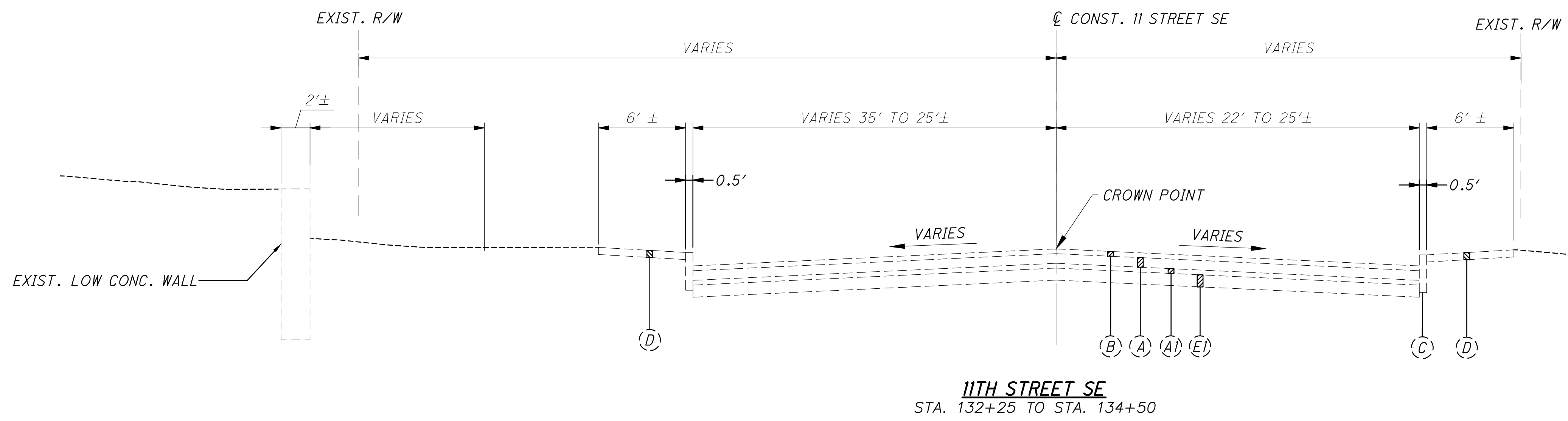
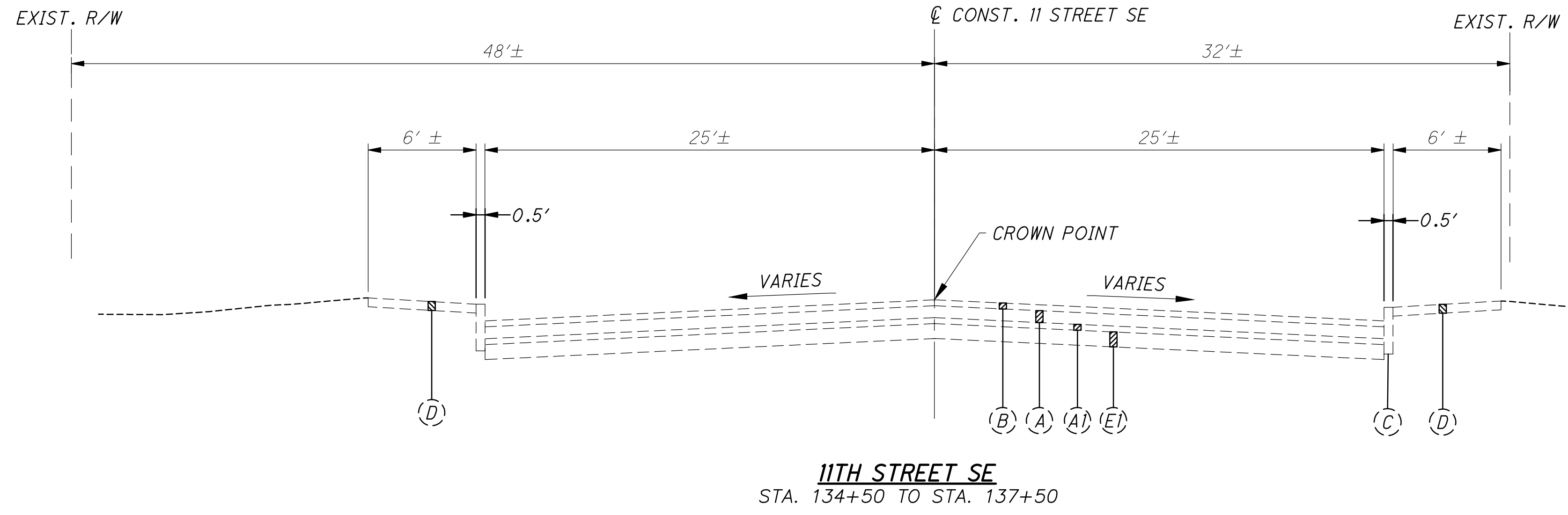
FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6.

CALCULATED
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EXISTING TYPICAL SECTIONS - 11TH STREET SE

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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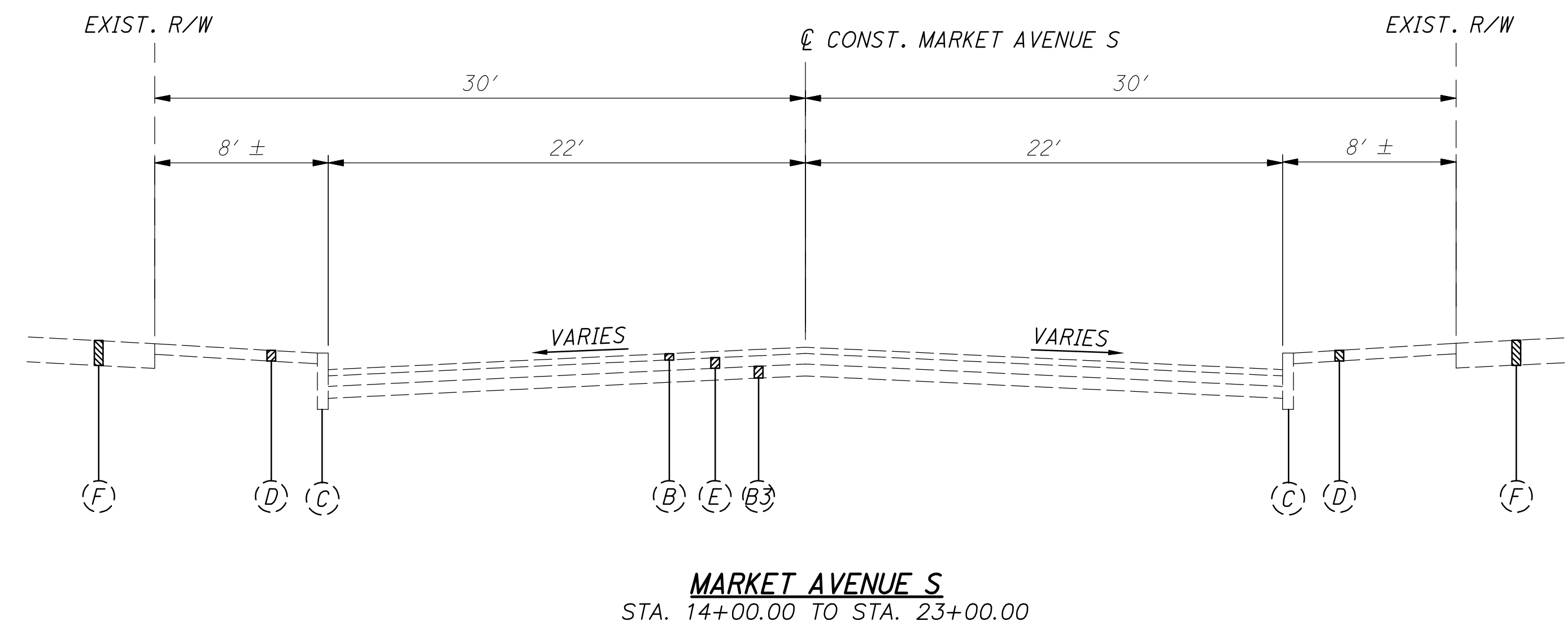
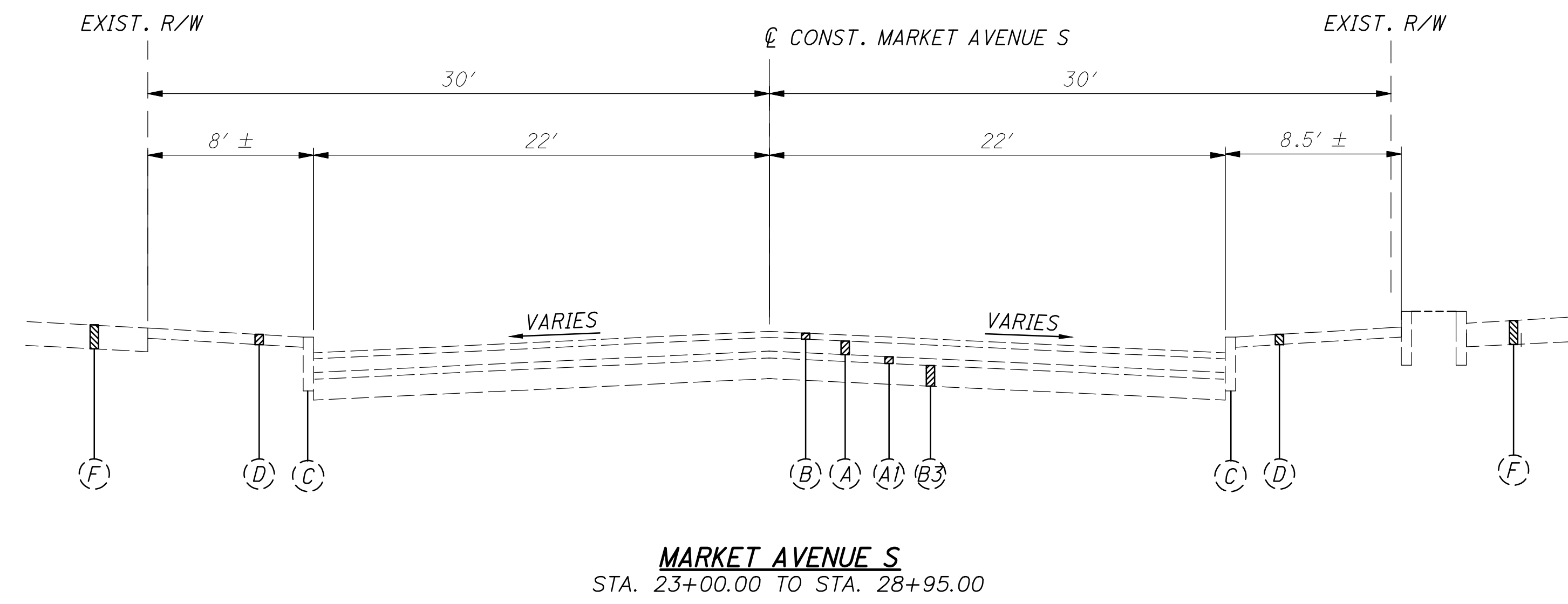
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EXISTING TYPICAL SECTIONS - 11TH STREET SE

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6.

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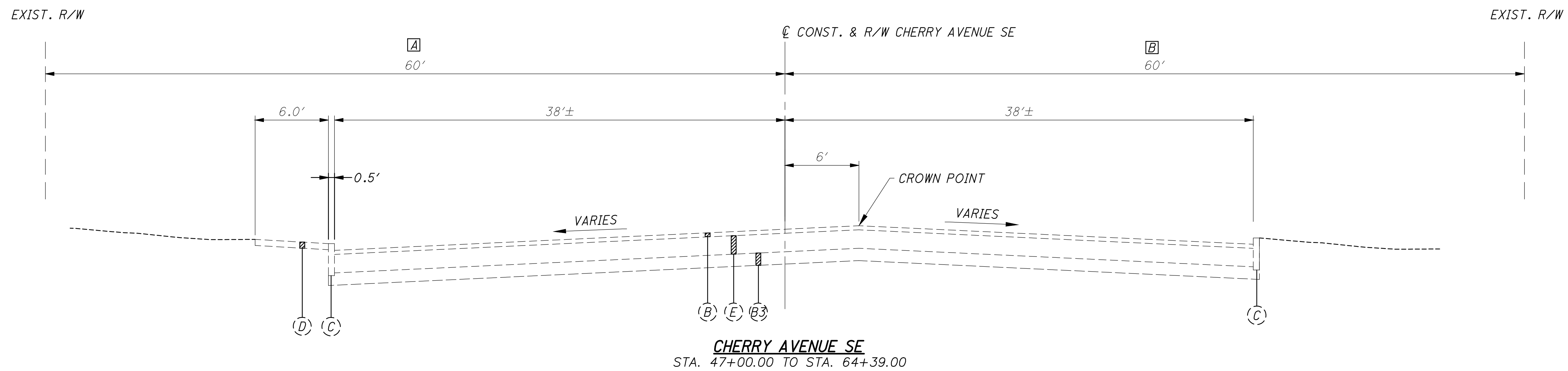
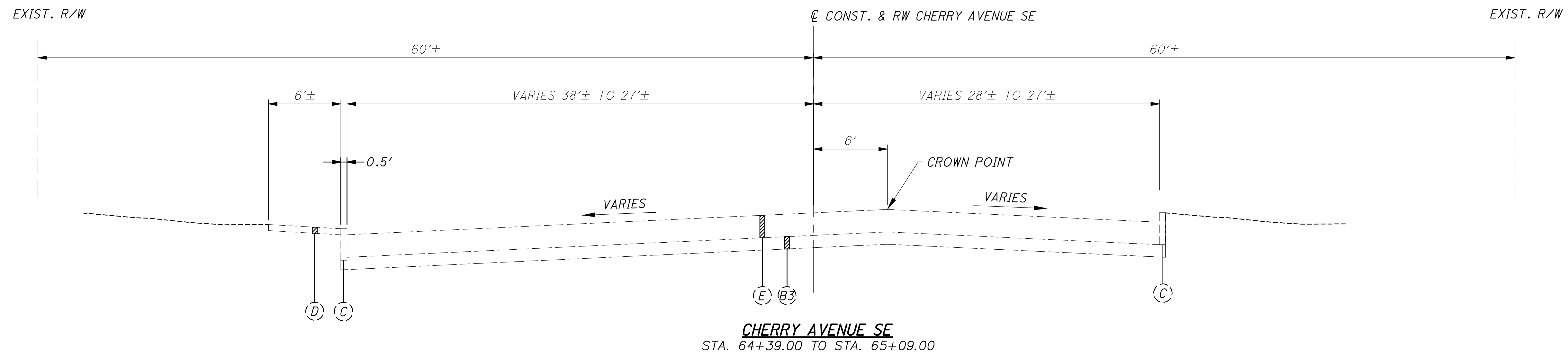
FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6.

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EXISTING TYPICAL SECTIONS - MARKET AVENUE S

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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- Ⓐ VARIES - 45'± TO 60' STA 58+80 TO STA 63+00
- Ⓑ VARIES - 46'± TO 60' STA 60+75 TO STA 63+00

FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6.

CALCULATED
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EXISTING TYPICAL SECTIONS - CHERRY AVENUE SE

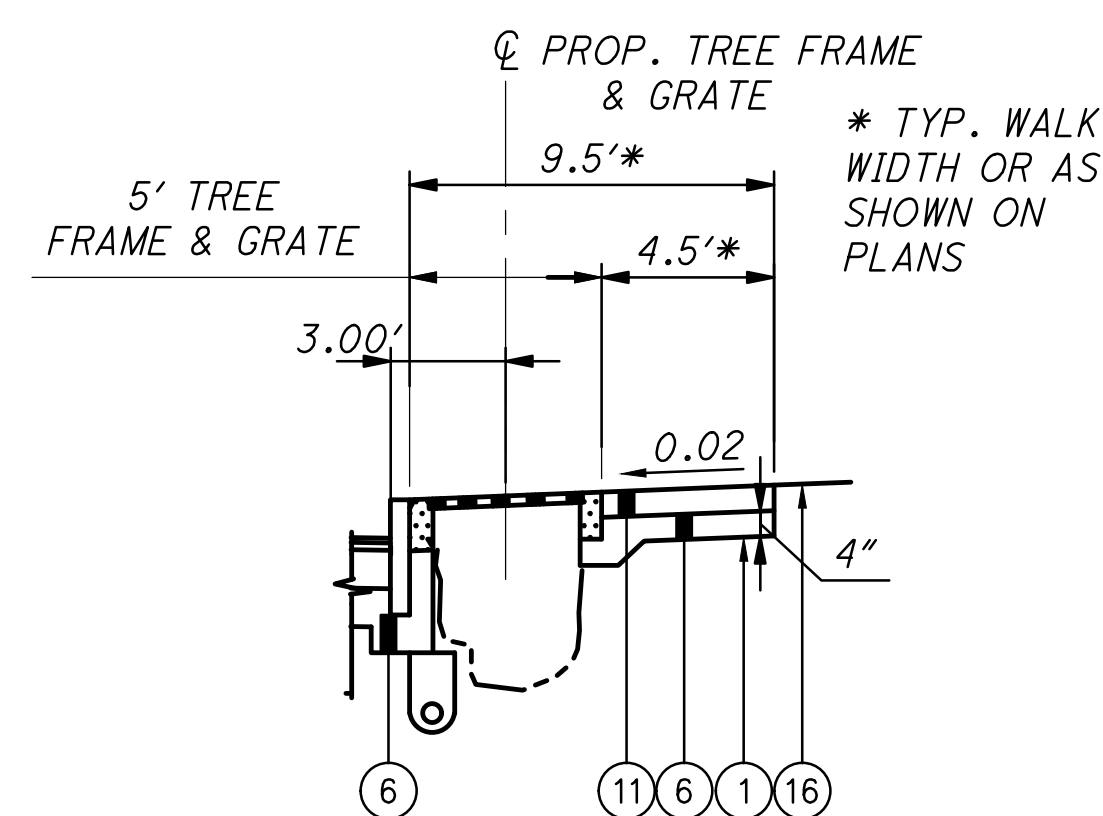
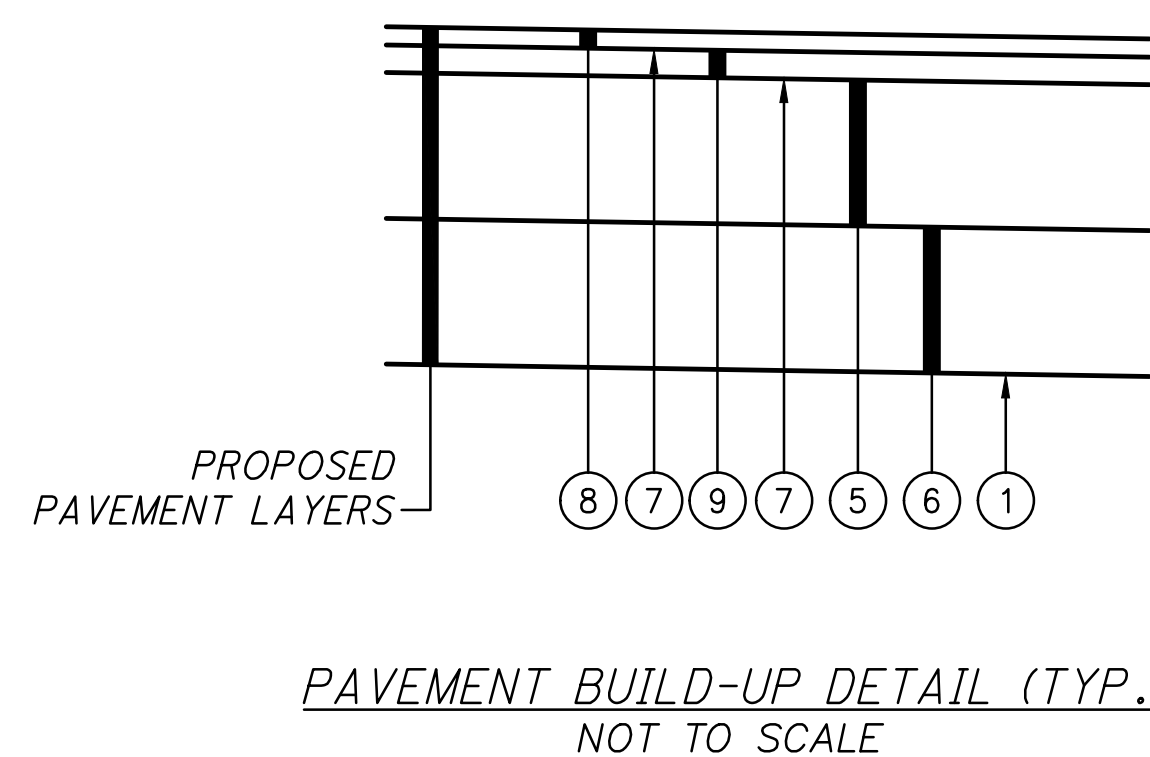
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

PROPOSED LEGEND

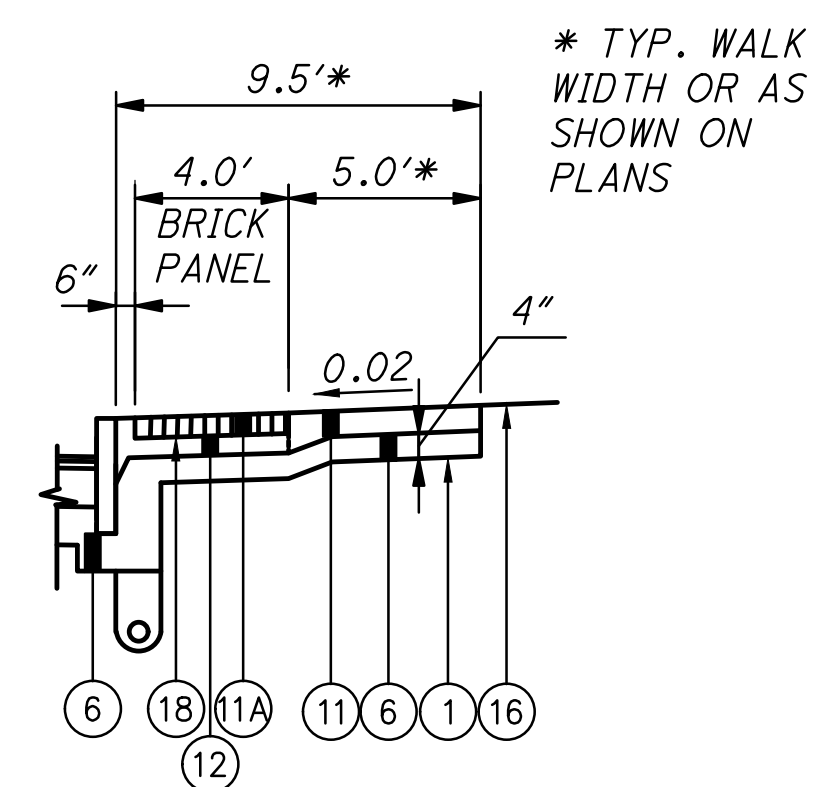
- ① ITEM 204 - SUBGRADE COMPACTION
- ② ITEM 204 - EXCAVATION OF SUBGRADE (T=36")
- ③ ITEM 203 - GRANULAR MATERIAL, TYPE B, 703.16C
- ④ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE [T=3"]
- ⑤ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449) (T=6")
- ⑥ ITEM 304 - AGGREGATE BASE (T=6", UNLESS OTHERWISE SHOWN)
- ⑦ ITEM 407 - TACK COAT
- ⑧ ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, (449) [T=3/4"]
- ⑨ ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449) [T=2 1/4"]
- ⑩ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- ⑪ ITEM 608 - 5" CONCRETE WALK, AS PER PLAN (CITY OF CANTON SCD NO. 29)
- ⑪A ITEM 608 - WALKWAY MISC.: BRICK WALKWAY PAVERS
- ⑫ ITEM 608 - WALKWAY MISC.: CONCRETE BASE
- ⑬ ITEM 609 - CURB, MISC.: CONCRETE CURB, CANTON TYPE 1
- ⑬A ITEM 609 - CURB, MISC.: CONCRETE CURB, CANTON TYPE 1 - 18"X18"
- ⑭ ITEM 609 - CURB, TYPE 3-B, AS PER PLAN (SEE DETAIL ON SHEET 14)
- ⑮ ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- ⑯ ITEM 659 - SEEDING AND MULCHING, CLASS 1
- ⑰ ITEM SPECIAL - ROADWAY BRICK PAVERS
- ⑱ ITEM SPECIAL - 1 INCH COMPACTED SAND BASE, 703.02
- ⑲ ITEM 305 - CONCRETE BASE [T=6"]

NOTES:

- 1. IN PAVEMENT WIDENING SECTIONS WITH EXISTING ASPHALT SURFACE OVER BRICK OR CONCRETE BASE PAVEMENT, MATCH THE TOP ELEVATION OF THE EXISTING BASE MATERIAL WITH THE TOP ELEVATION OF THE PROPOSED BASE MATERIAL.
- 2. FOR SUBGRADE TREATMENT SEE SHEETS 12 AND 19.
- 3. FOR LOCATIONS OF PROPOSED STREETScape ITEMS IN DETAILS A & B BELOW (TREE PLANTING FRAME & GRATE AND BRICK SIDEWALK PANELS) SEE LIGHTING PLAN SHEETS.

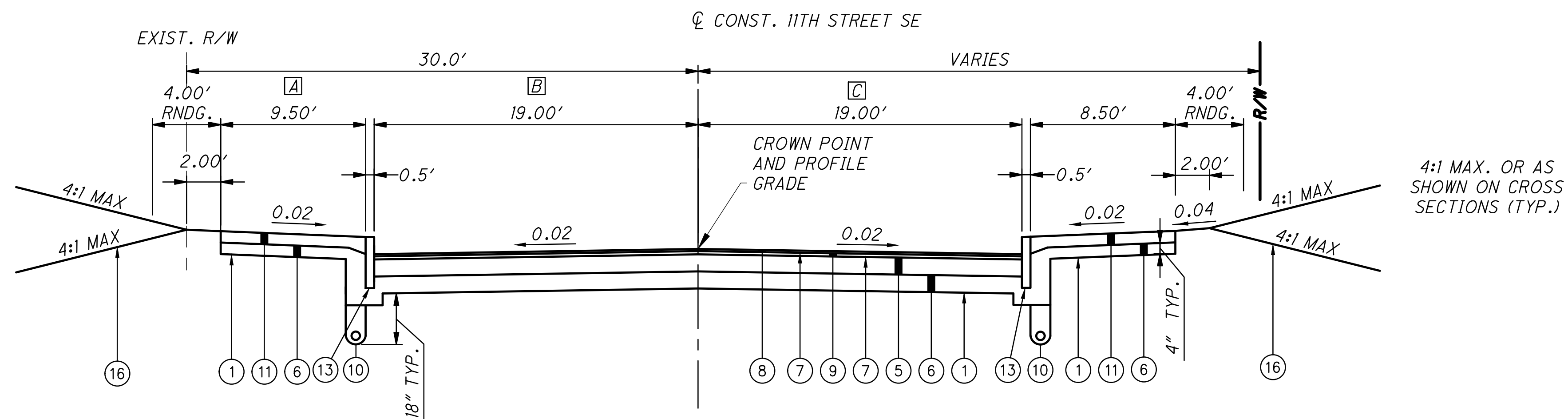


DETAIL A
FOR TREE FRAME & GRATE
DETAILS SEE CITY OF CANTON
SCD NO. 43



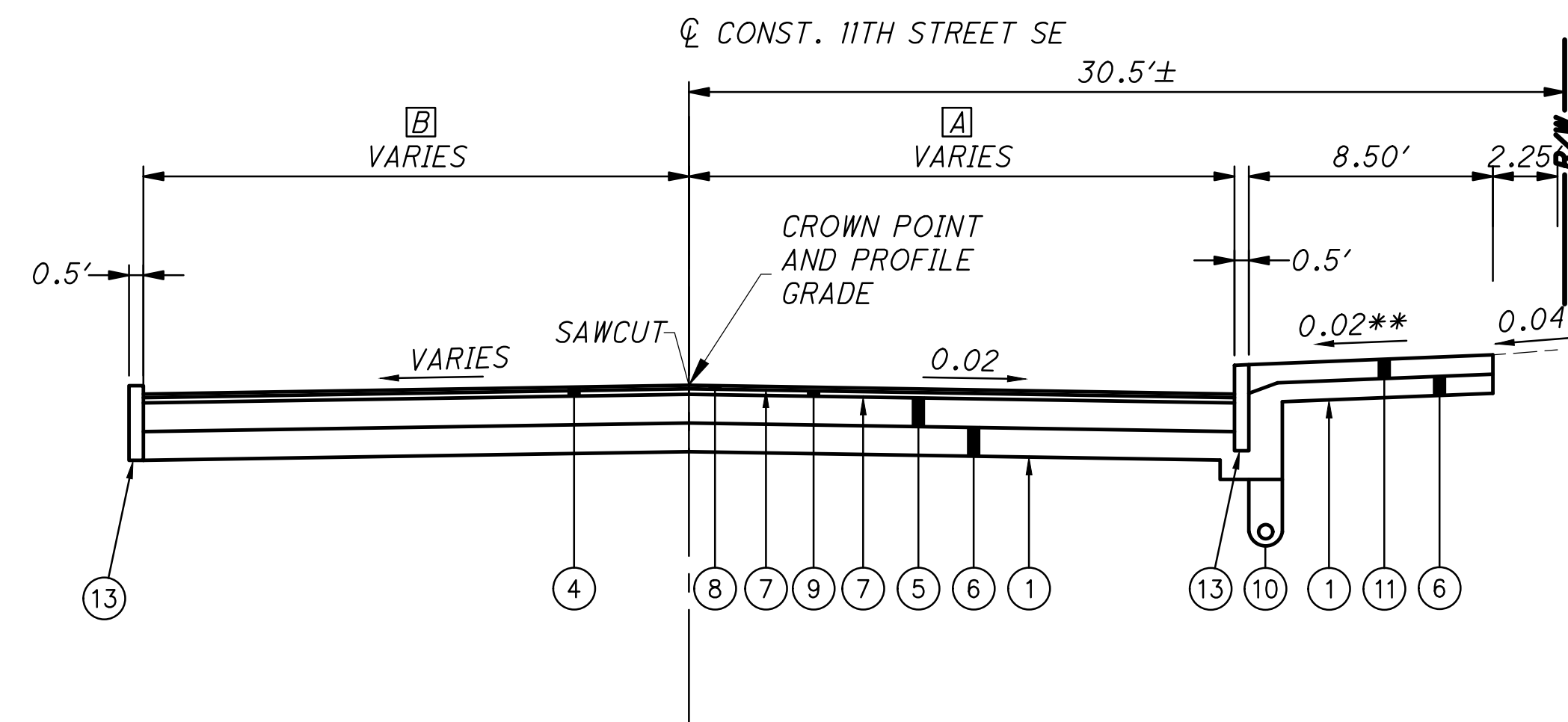
DETAIL B
BRICK PAVER SIDEWALK PANELS
SEE CITY OF CANTON SCD NO. 40
(LOCATIONS SHOWN ON PLANS)

** WALK CROSS SLOPE SHALL VARY TO MATCH EXISTING AT THE EX. R/W AND TO PROVIDE POSITIVE DRAINAGE AS DIRECTED BY THE ENGINEER



11TH STREET SE
STA. 102+85.00 TO STA. 104+18.34

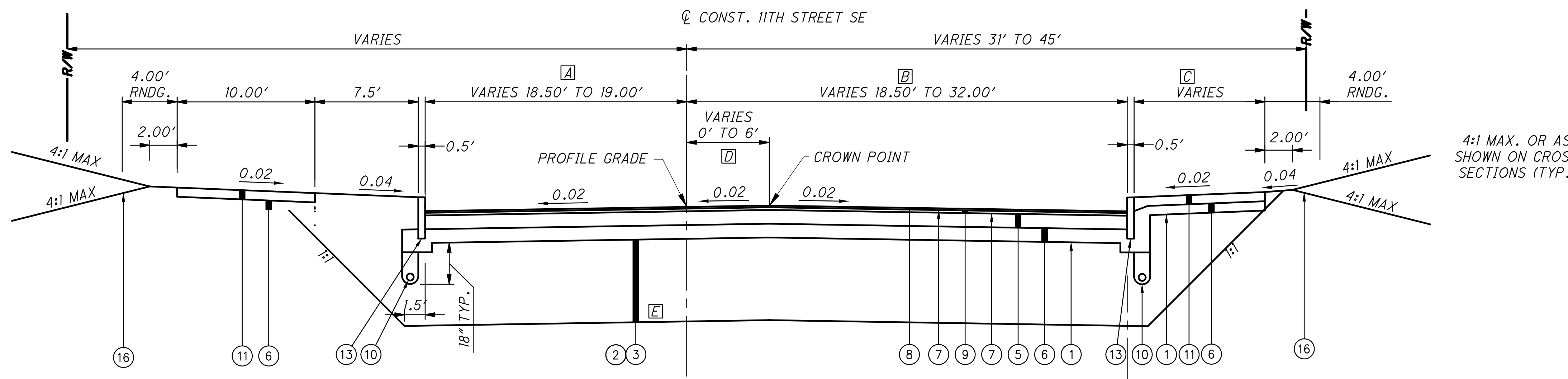
- A VARIES - 8.76' @ STA 102+85.00 TO 9.50' @ STA 102+90.00
9.50' @ STA. 102+90.00 TO STA. 104+18.34
- B VARIES - 19.36' @ STA 102+85.00 TO 19.00' @ STA 102+90.00,
19.00' @ STA 102+90.00 TO STA 103+94.16
19.00' @ STA 103+94.16 TO 18.46' @ STA 104+18.34
- C VARIES - 19.33' @ STA 102+85.00 TO 19.00' @ STA 103+12.00



11TH STREET SE
STA. 101+75.00 TO STA. 102+85.00

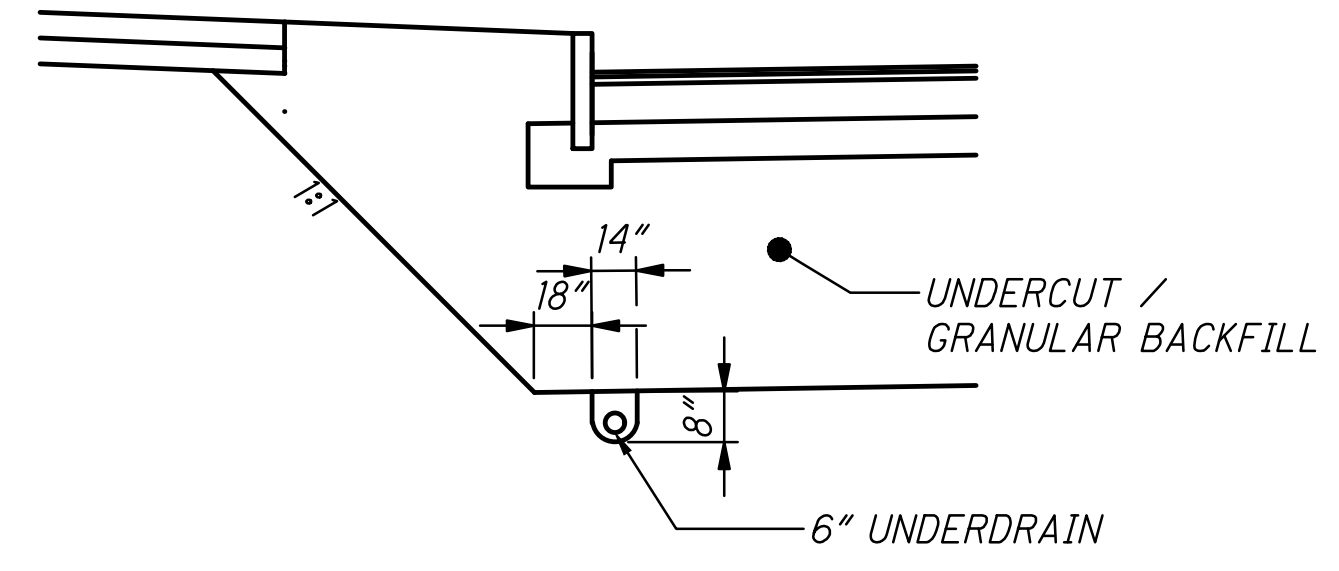
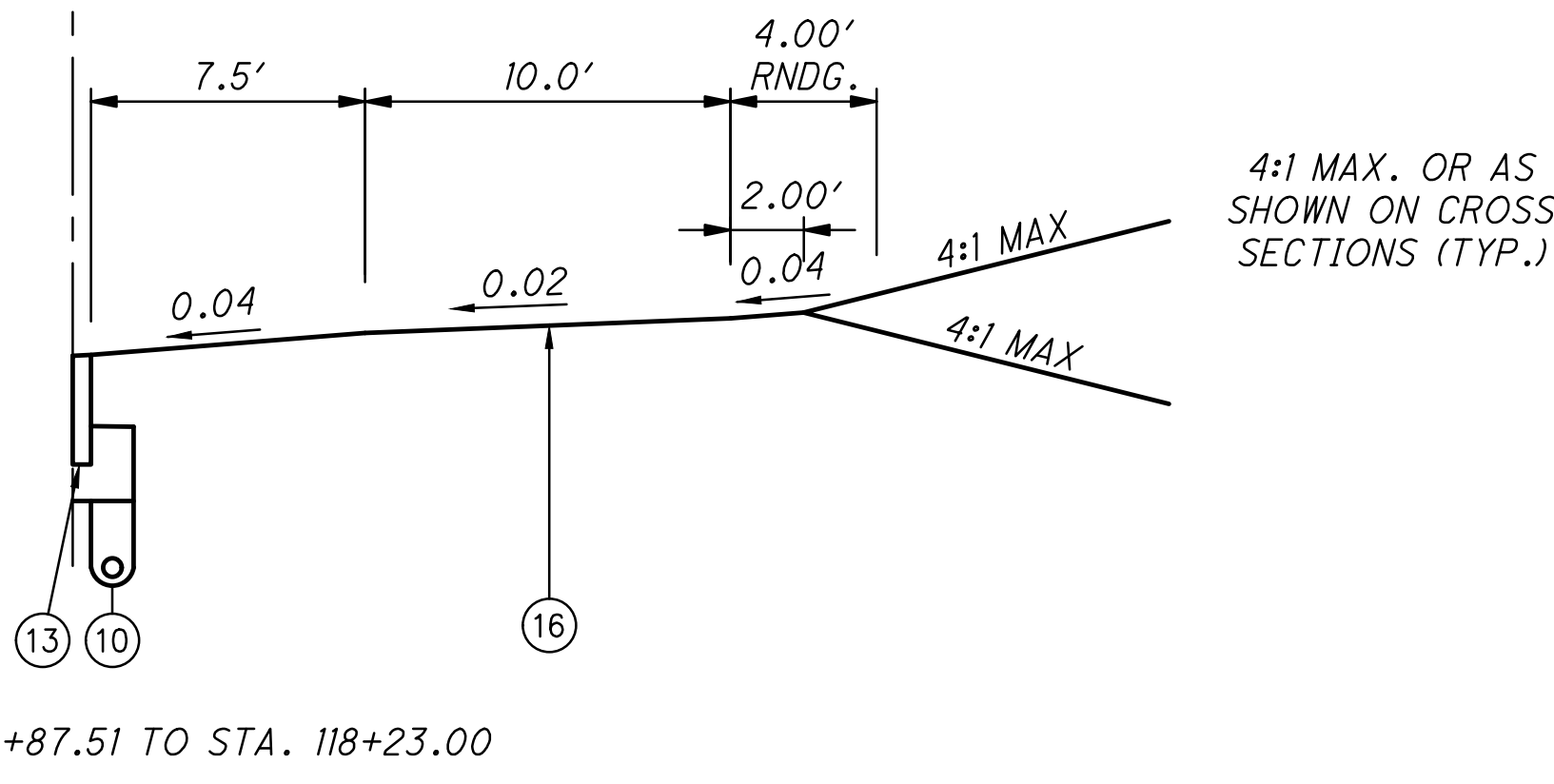
- A VARIES - 20.17' @ STA 102+62.00 TO 19.33' @ STA 102+85.00
- B VARIES - 28.55' @ STA 102+62.00 TO 19.36' @ STA 102+85.00

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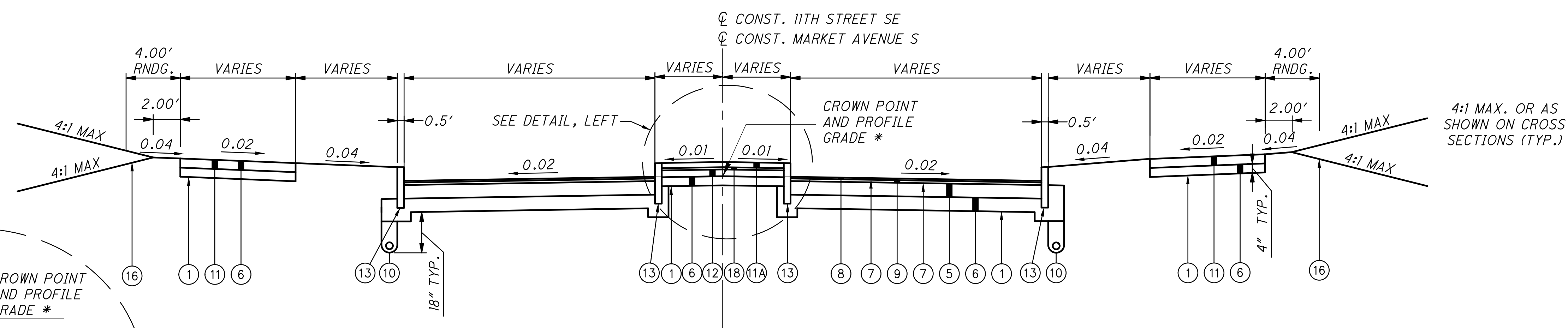


11TH STREET SE
STA. 107+75.18 TO STA. 121+93.68

- [A] VARIES - 18.50' @ STA 118+39.13 TO 19.00' @ STA 119+43.13
- [B] VARIES - 18.50' @ STA 116+10.00 TO 32.00' @ STA 116+60.00
- [C] VARIES - 9.5' FROM STA 107+75.18 TO STA 109+87.51
9.0' FROM STA 118+23.00 TO STA 121+93.68
- [D] VARIES - 0.00' @ STA 116+75.00 TO 6.00' @ STA 117+75.00
- [E] APPLIES TO STA. 110+00.00 TO STA. 111+50.00

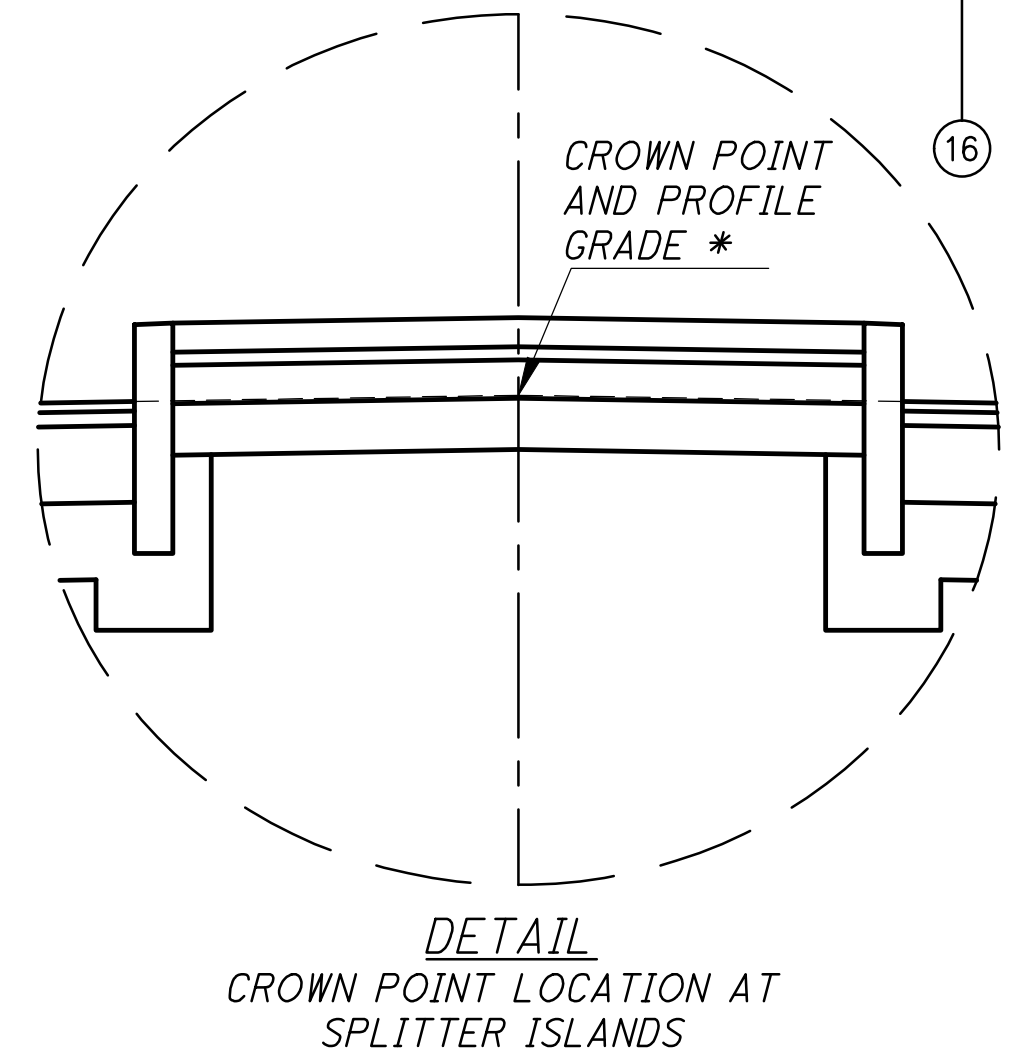


DETAIL
ITEM 605 - 6" PIPE UNDERDRAINS
IN UNDERCUT AREAS
NTS



ROUNDABOUT SPLITTER ISLANDS
 11TH STREET SE - STA. 104+18.34 - STA 105+30.03
 11TH STREET SE - STA. 105+30.03 - STA 106+71.87 - SEE
 ROUNDABOUT SECTION ON SHEET 14
 11TH STREET SE - STA. 106+71.87 - STA 107+75.18
 MARKET AVENUE S - STA 17+31.24 - STA 18+32.96
 MARKET AVENUE S - STA 18+32.96 - STA 19+71.08 - SEE
 ROUNDABOUT SECTION ON SHEET 14
 MARKET AVENUE S - STA. 19+71.08 - STA 20+74.72
 FOR VARYING WIDTHS SEE ROUNDABOUT INTERSECTION DETAIL
 FOR OUTSIDE TRUCK APRON DETAIL SEE SHEET 14.

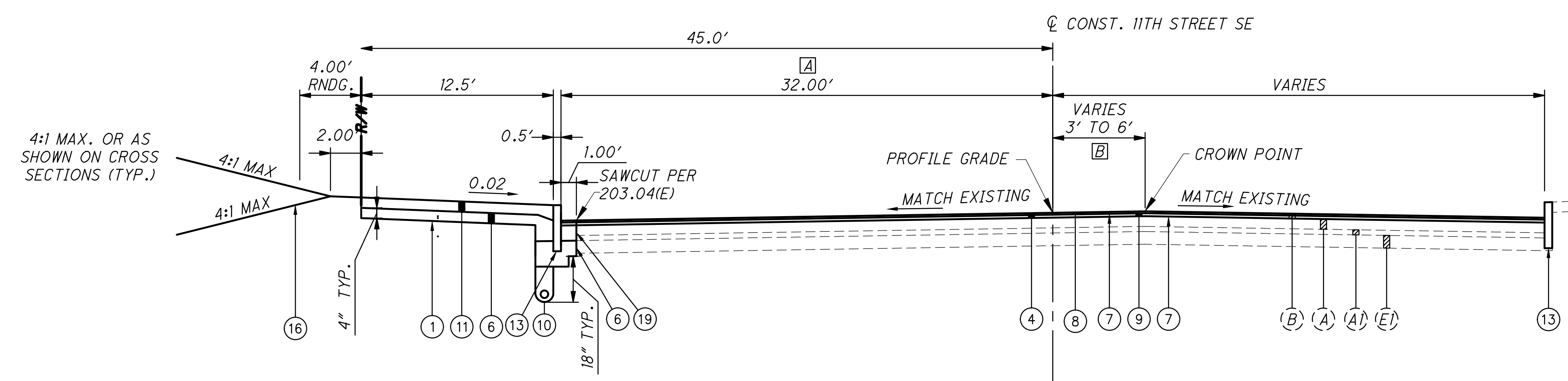
* PROFILE GRADE IS LOCATED AT THE PROJECTED CROWN POINT OF THE INTERSECTION OF THE ASPHALT SURFACE WITH THE CENTERLINE OF CONSTRUCTION.



DETAIL
CROWN POINT LOCATION AT
SPLITTER ISLANDS

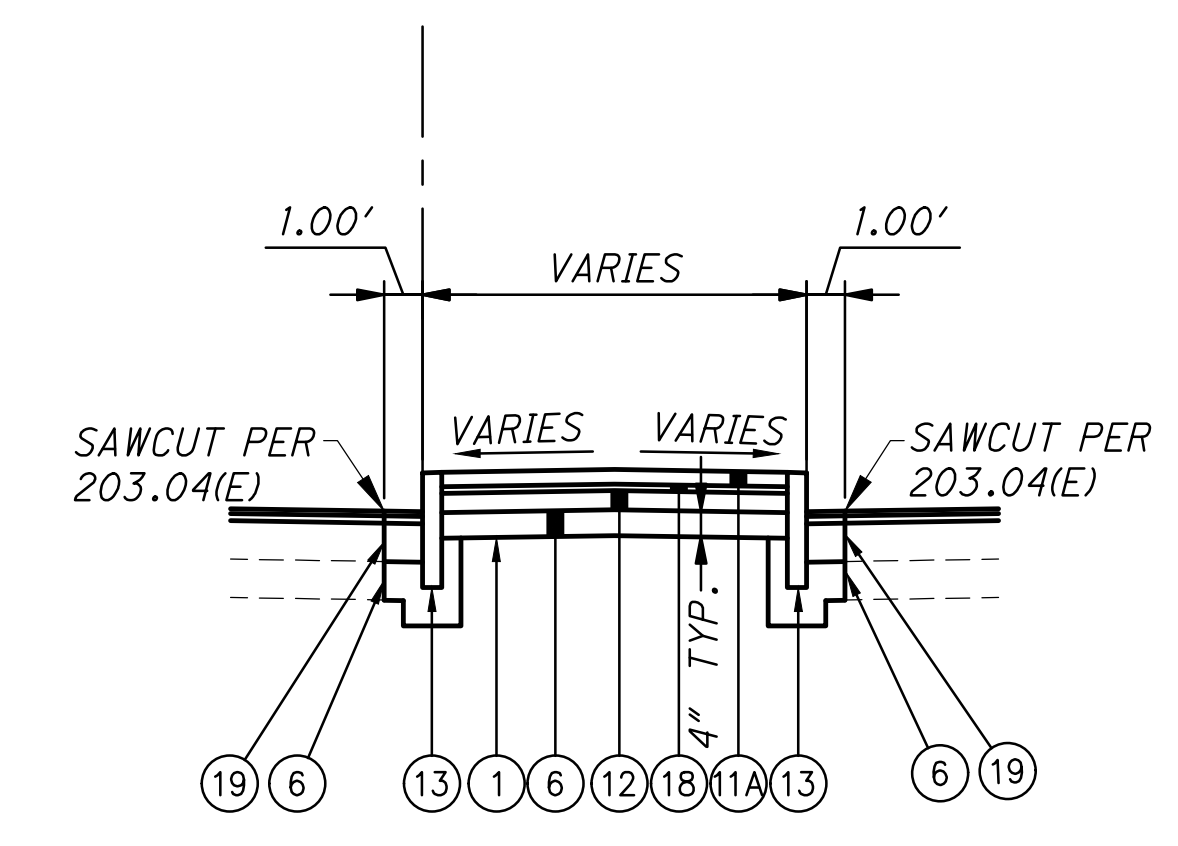
FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6, FOR PROPOSED LEGEND AND NOTES SEE SHEET 11.

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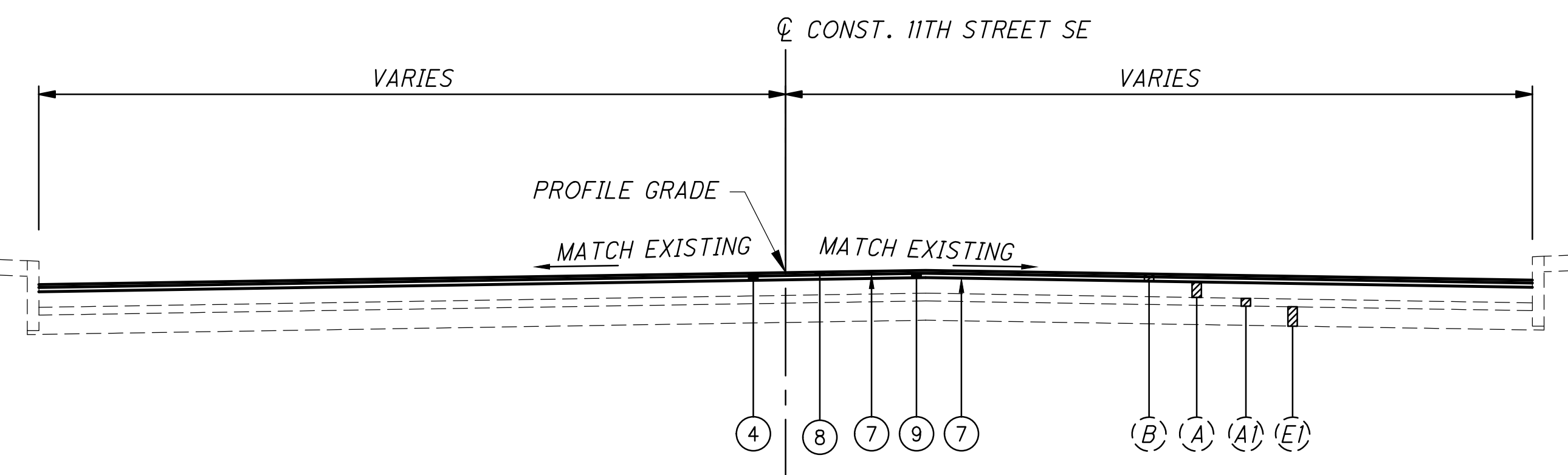


NOTE: LEFT SIDE WIDENING ENDS AT
MADISON COURT SE

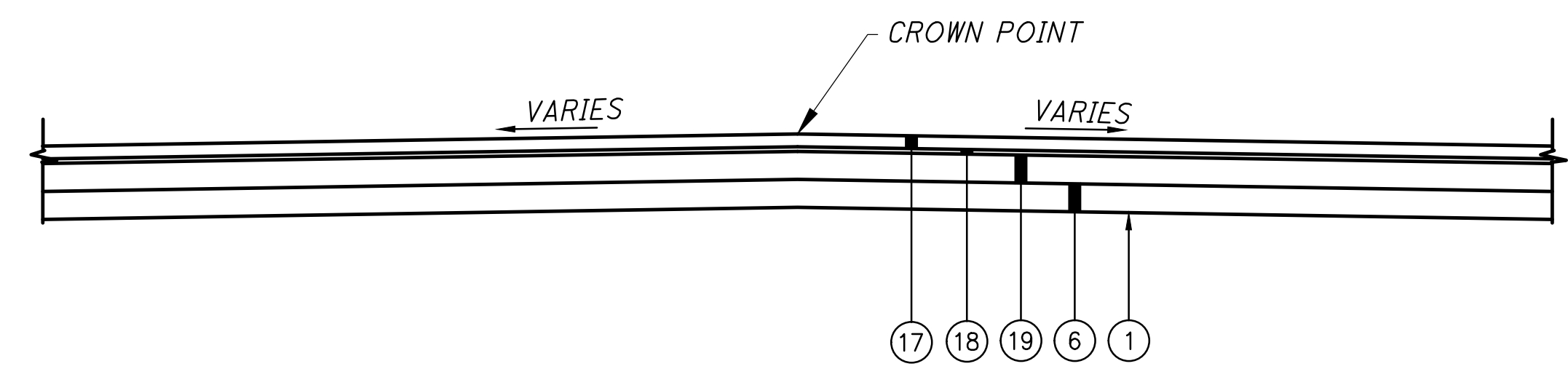
- 11TH STREET SE**
STA. 123+71.23 TO STA. 137+50.00
- Ⓐ VARIES - 32.00' @ STA 132+12.00 TO 11.00' @ STA 134+37.00
11.00' @ STA 134+37.00 TO 9.16' @ STA 136+13.14
 - Ⓑ VARIES - 6.00' @ STA 127+70.00 TO 3.00' @ STA 131+50.00
3.00' @ STA 134+37.00 TO 5.00' @ STA 136+28.00



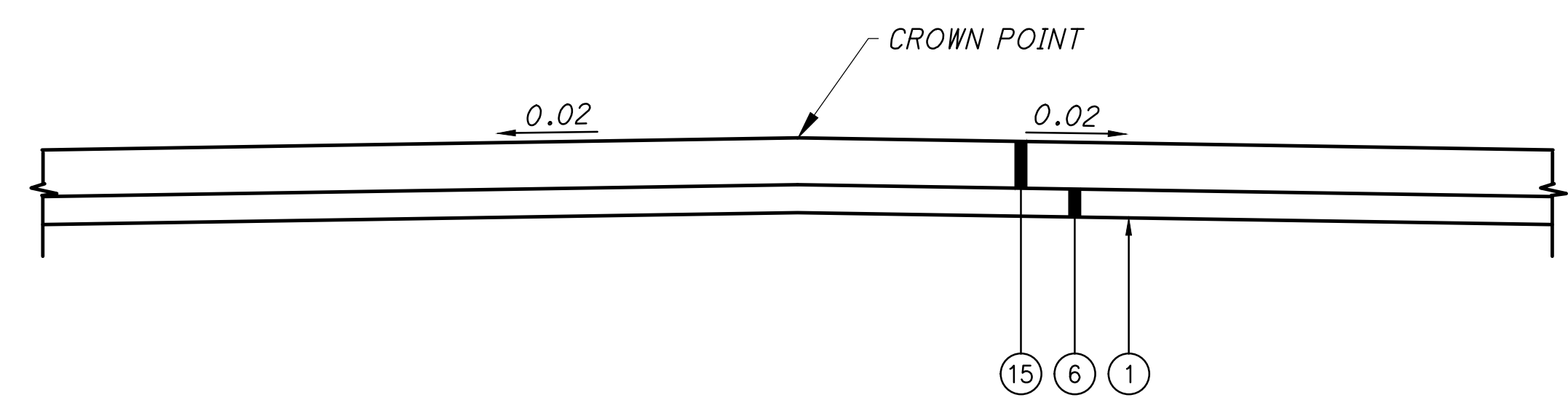
**BRICK TRAFFIC ISLAND
DETAIL**
11TH STREET SE - STA. 123+10.06 TO STA. 123+78.25
CHERRY AVENUE SE - STA 59+01.08 TO STA 59+67.48



11TH STREET SE
STA. 137+50.00 TO STA. 142+50.00



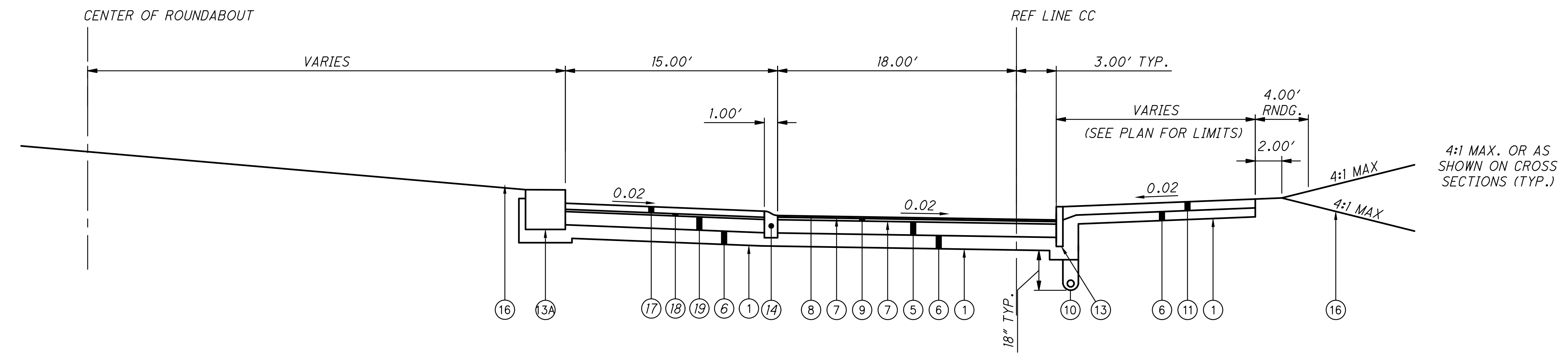
11TH STREET SE / CHERRY AVENUE SE INTERSECTION BRICK PAVEMENT
11TH STREET SE - STA. 122+05.68 TO STA. 123+59.23
CHERRY AVENUE SE - STA 59+48.84 TO STA 60+58.96



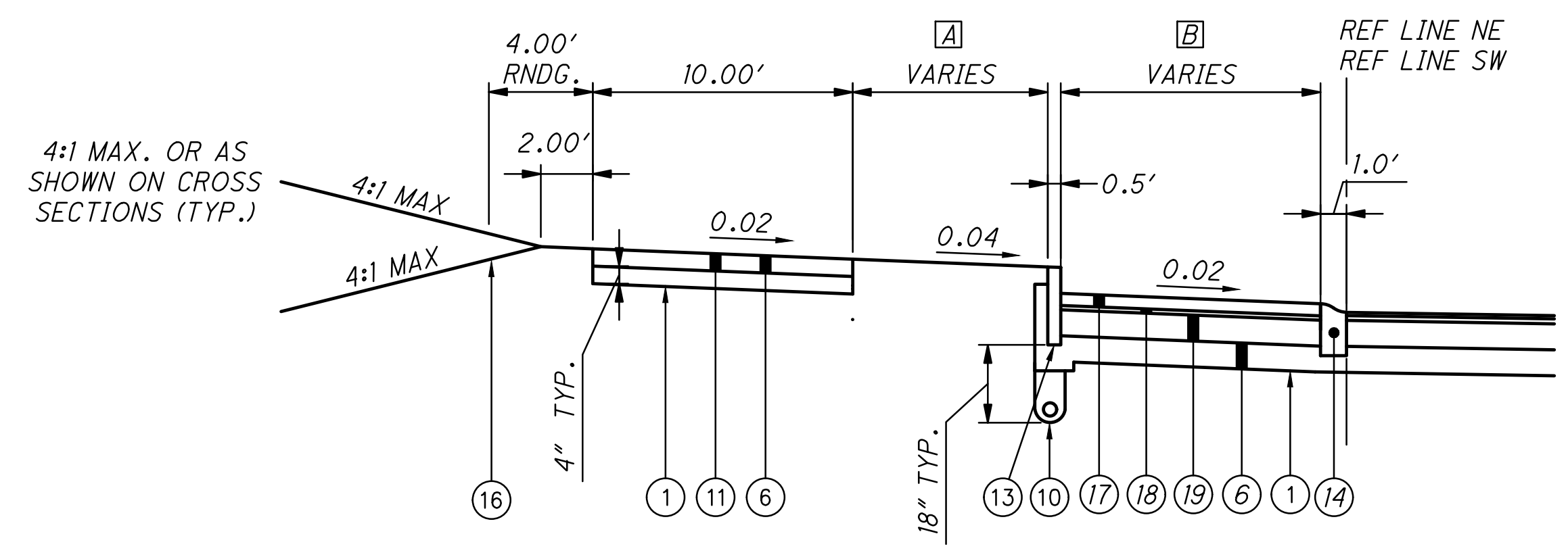
CONCRETE CROSSWALK/HEADER BUILD-UP
SEE CITY OF CANTON SCD NO. 41
11TH STREET SE - STA 121+93.68 TO STA 122+05.68
11TH STREET SE - STA 123+59.23 TO 123+71.23
CHERRY AVENUE SE - STA 59+36.81 TO 59+48.81
CHERRY AVENUE SE - STA 60+58.46 TO STA 60+70.46

FOR TYPICAL SECTION EXISTING LEGEND SEE
SHEET 6, FOR PROPOSED LEGEND AND NOTES
SEE SHEET 11.

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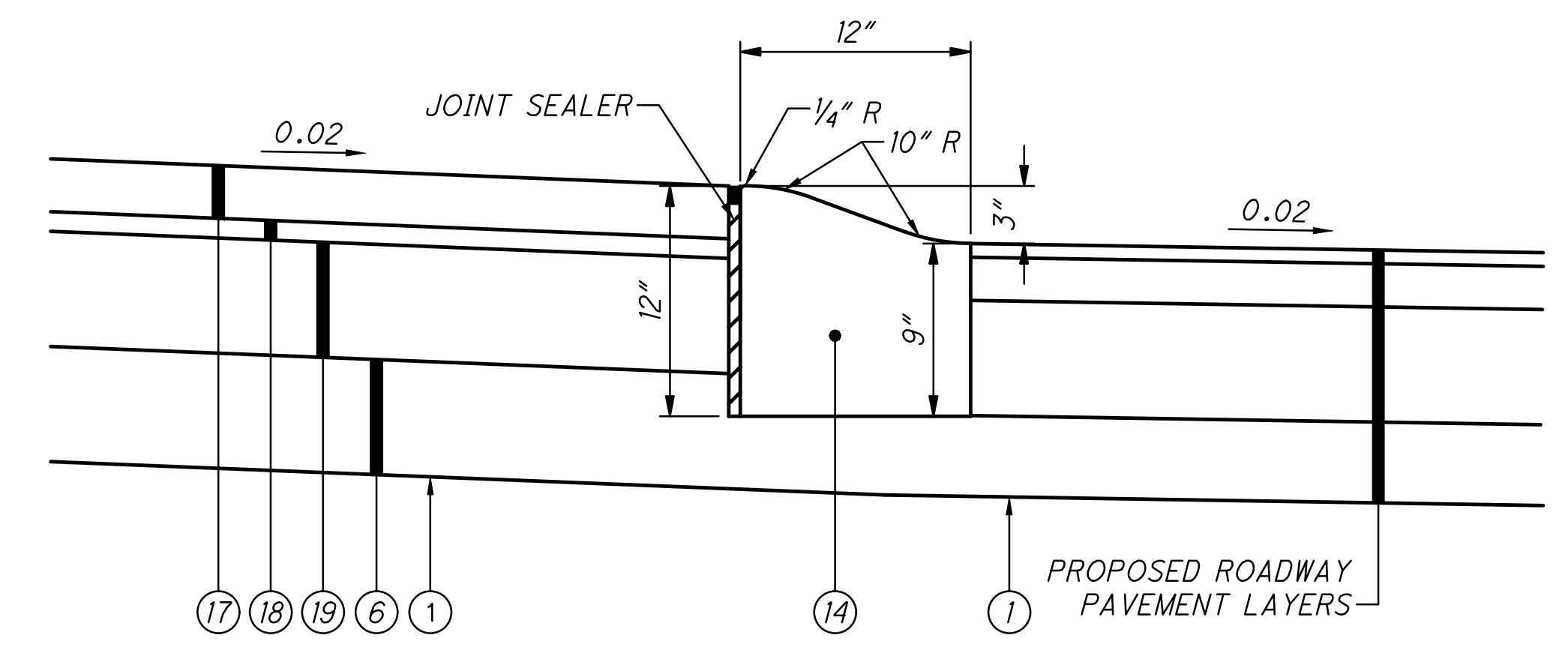


ROUNDABOUT SECTION
11TH STREET SE AND MARKET AVENUE S



ROUNDABOUT OUTSIDE TRUCK APRON SECTION
11TH STREET SE AND MARKET AVENUE S

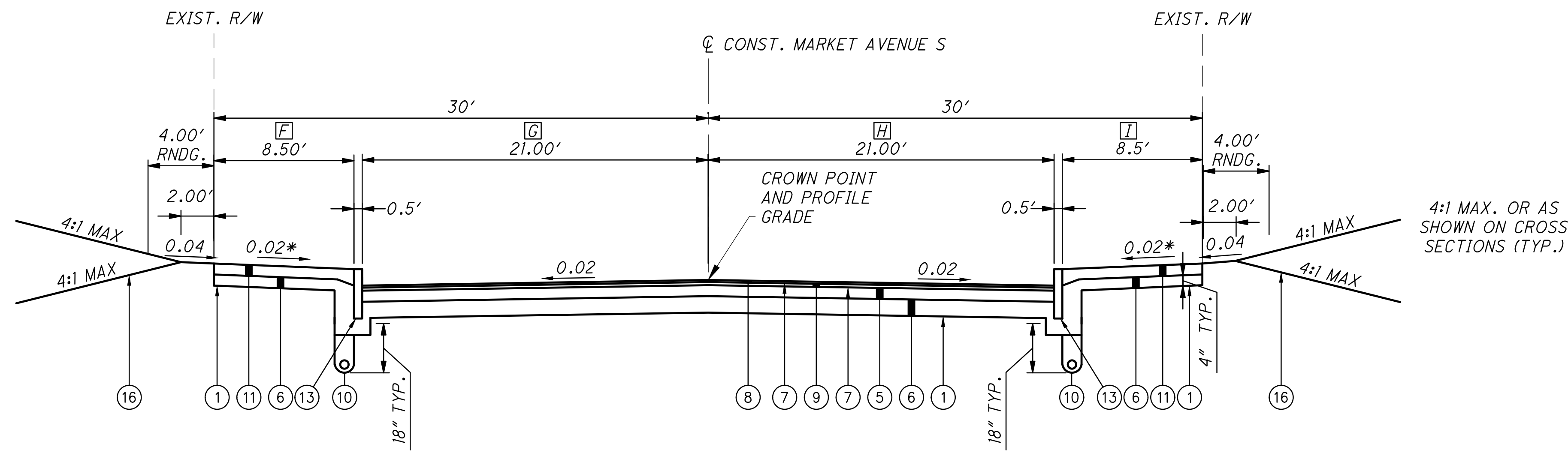
- SW QUADRANT - STA. 121+02.23 TO STA. 122+75.00 - REF LINE SW (MIRROR IMAGE)
- [A] MIN. 2.50' - MAX. 4.00'
 - [B] MIN. 2.00' - MAX. 8.00'
- NE QUADRANT - STA. 130+49.48 TO STA. 132+39.52 - REF LINE NE
- [A] MIN. 6.00' - MAX. 34.13'
 - [B] 5.00' TYPICAL



CURB, TYPE 3-B, AS PER PLAN
NOT TO SCALE

FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6, FOR PROPOSED LEGEND AND NOTES SEE SHEET 11.

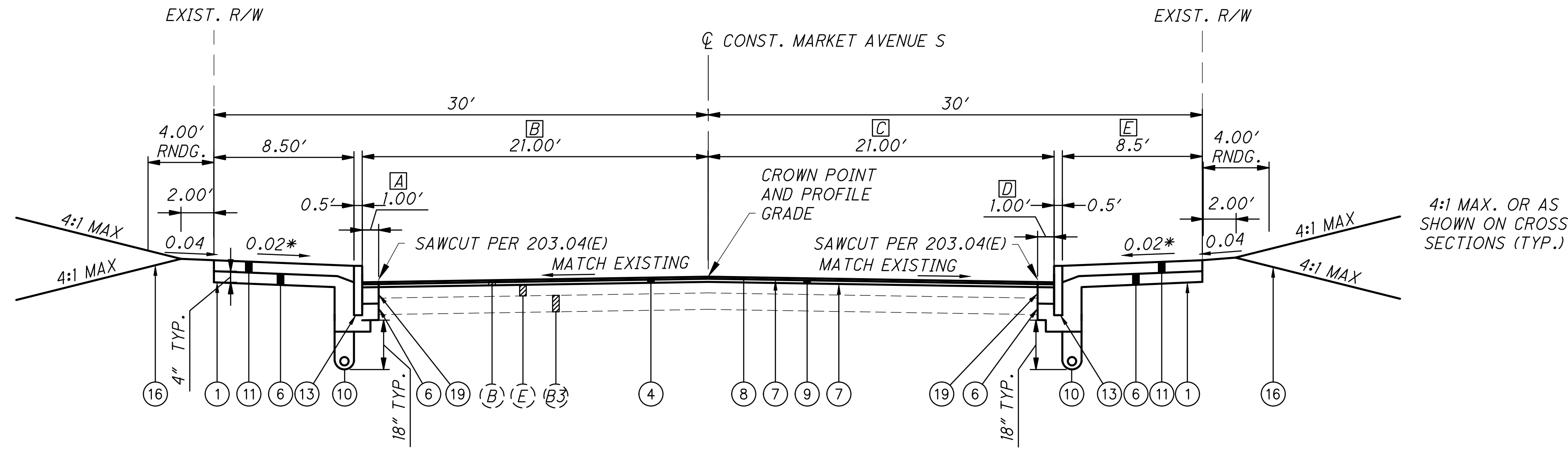
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MARKET AVENUE S
STA. 16+40.00 TO STA. 17+31.24

- F** VARIES - 8.50' @ STA 16+85.00 TO 13.53' @ STA 17+10.00
10.00' STA 17+10.00 O STA 17+31.24
- G** VARIES - 21.00' @ STA 16+85.00 TO 16.35' @ STA 17+10.00
16.35' @ STA 17+10.00 TO 17.61' @ STA 17+31.24
- H** VARIES - 21.00' @ STA 16+40.00 TO STA 16+46.00
21.00' @ STA 16+46.00 TO 17.00' @ STA 16+86.00
- I** VARIES - 8.50' @ STA 16+46.00 TO 12.50' @ STA 16+86.00
12.50' @ STA 16+86.00 TO 13.24' @ STA 17+31.24

* WALK CROSS SLOPE SHALL VARY TO MATCH EXISTING AT THE EX. R/W AND TO PROVIDE POSITIVE DRAINAGE AS DIRECTED BY THE ENGINEER



MARKET AVENUE S
STA. 14+19.00 TO STA. 16+40.00

- A** VARIES - 2.20' @ STA 14+19.00 TO 1.00' @ STA 14+44.00
- B** VARIES - 22.20' @ STA 14+19.00 TO 21.00' @ STA 14+44.00
- C** VARIES - 21.96' @ STA 14+19.00 TO 21.00' @ STA 14+44.00
- D** VARIES - 1.96' @ STA 14+19.00 TO 1.00' @ STA 14+44.00
- E** VARIES - 5.98' @ STA 14+19.00 TO 8.50' @ STA 14+44.00

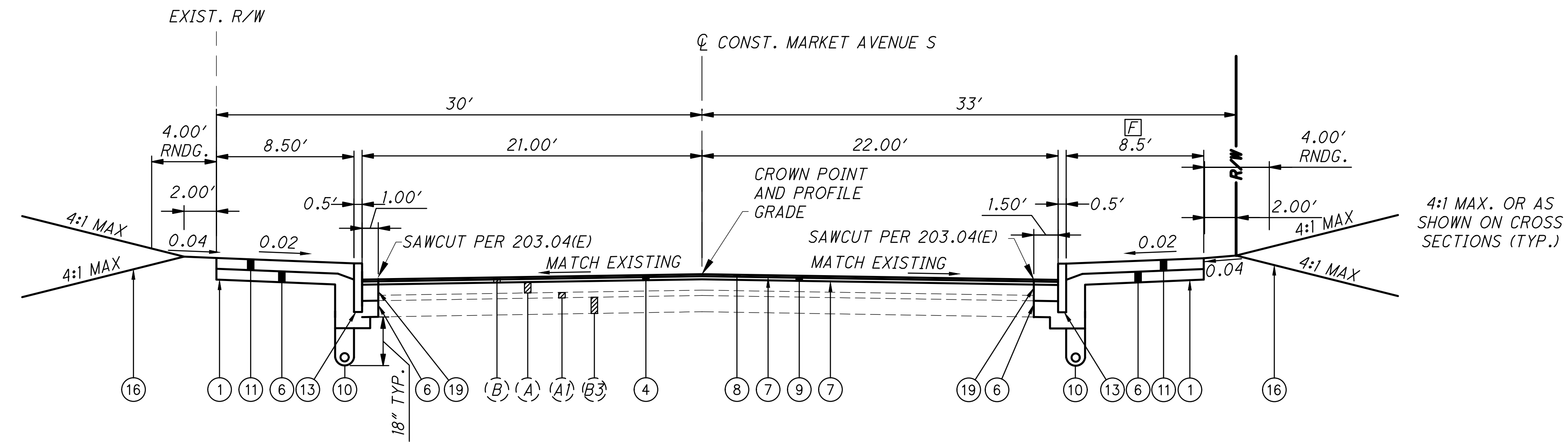
4:1 MAX. OR AS SHOWN ON CROSS SECTIONS (TYP.)

FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6, FOR PROPOSED LEGEND AND NOTES SEE SHEET 11.

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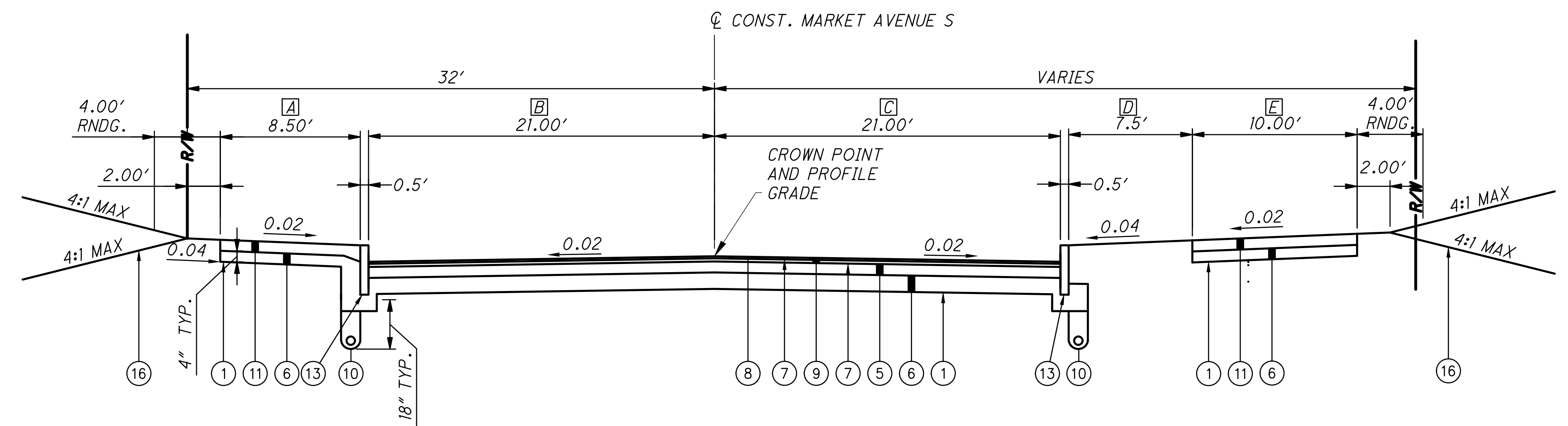
TYPICAL SECTIONS - MARKET AVENUE S

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



MARKET AVENUE S
STA. 22+35.00 TO STA. 23+06.00

[F] VARIES - 9.54' @ STA 22+35.00 TO 8.50' @ STA 22+49.85



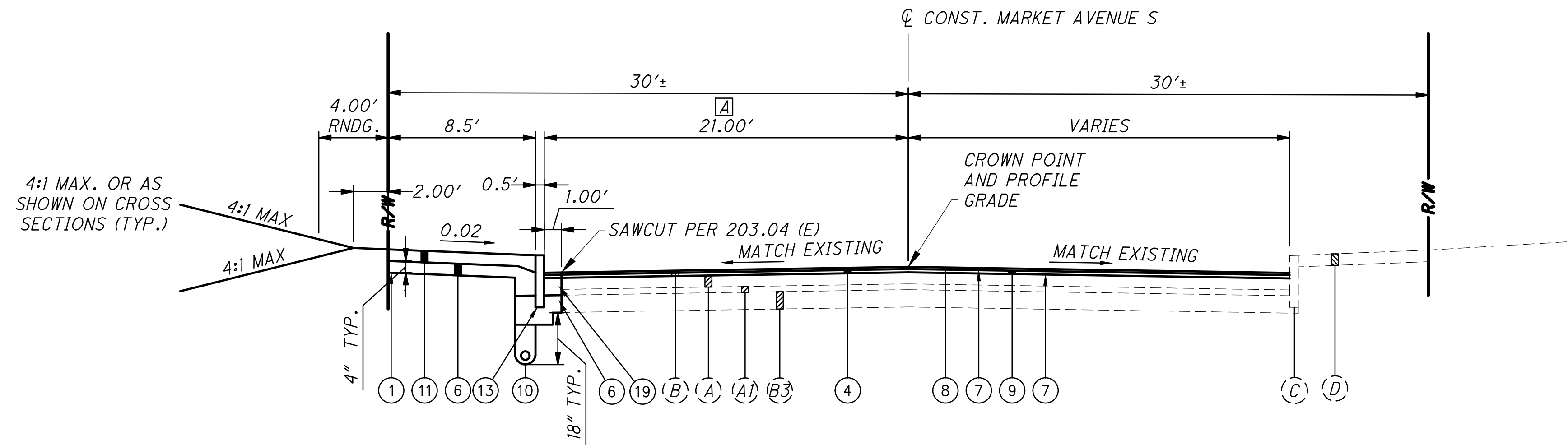
MARKET AVENUE S
STA. 20+74.72 TO STA. 22+35.00

- [A] VARIES - 9.50' @ STA 20+77.52 TO 8.50' @ STA 20+86.59
- [B] VARIES - 17.00' @ STA 20+77.52 TO 21.00' @ STA 21+06.04
- [C] VARIES - 21.00' @ STA 21+12.02 TO 22.00' @ STA 22+38.39
- [D] VARIES - 7.67' @ STA 20+74.72 TO 7.50' @ STA 20+80.88
7.50' @ STA 21+90.78 TO 0.00' @ STA 22+23.23
- [E] VARIES - 10.00' @ STA 22+23.23 TO 9.54' @ STA 22+35.00

FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6, FOR PROPOSED LEGEND AND NOTES SEE SHEET 11.

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NOTE: WIDENING, SIDEWALK AND CURB REPLACEMENT END AT BUCKEYE PLACE SW.

MARKET AVENUE S
STA. 23+06.00 TO STA. 28+55.43

Ⓐ MATCH EX. FROM BUCKEYE PLACE SW TO STA 28+55.43

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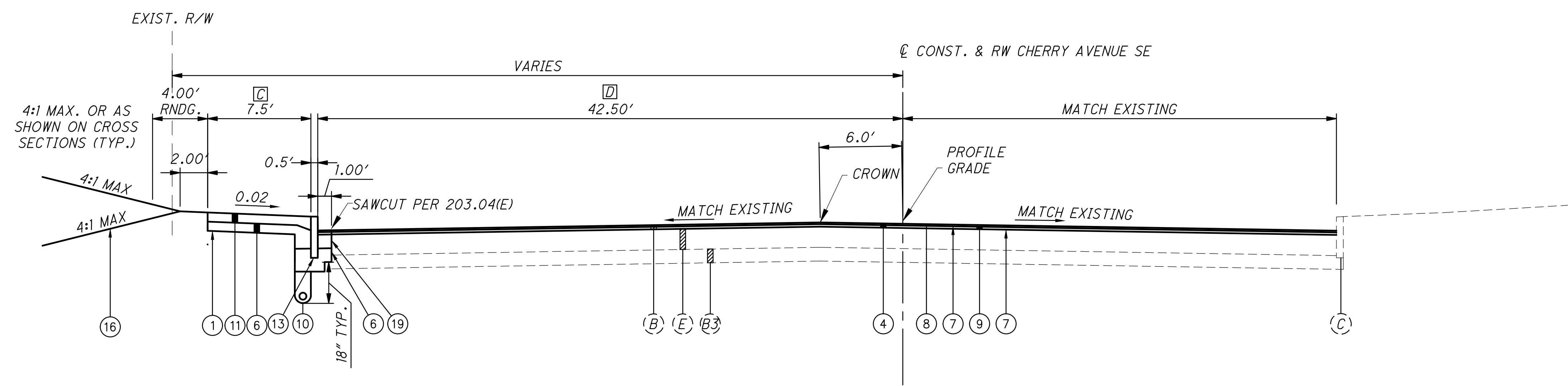
TYPICAL SECTIONS - MARKET AVENUE S

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6, FOR PROPOSED LEGEND AND NOTES SEE SHEET 11.

TYPICAL SECTIONS - CHERRY AVENUE SE

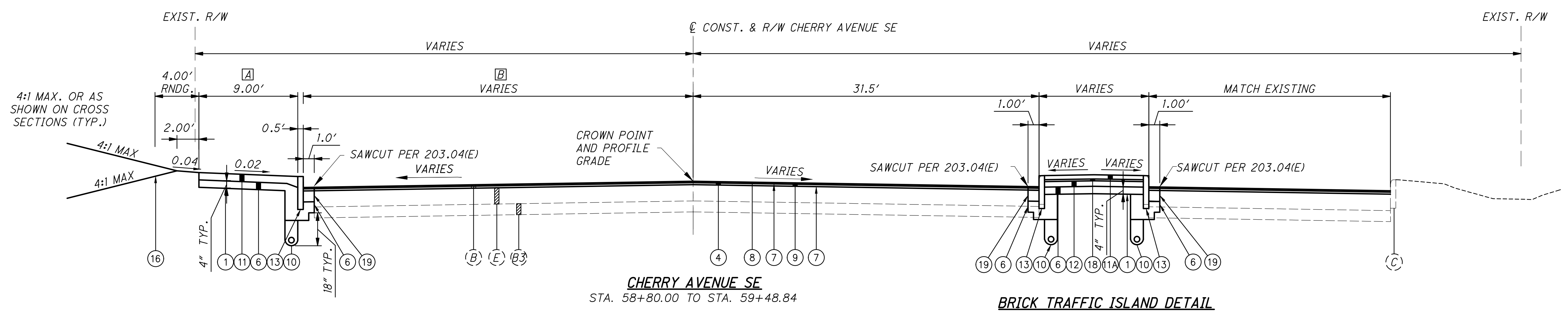
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



CHERRY AVENUE SE
STA. 60+70.46 TO STA. 64+41.99

C VARIES - 17.50' @ STA 60+92.97 TO 7.50' @ STA 61+45.58
7.50' FROM STA. 61+45.58 TO STA. 64+41.99

D VARIES - 42.50' FROM STA. 60+70.46 TO STA. 64+11.39
42.50' @ STA 64+11.39 TO 37.44' @ STA 64+40.93

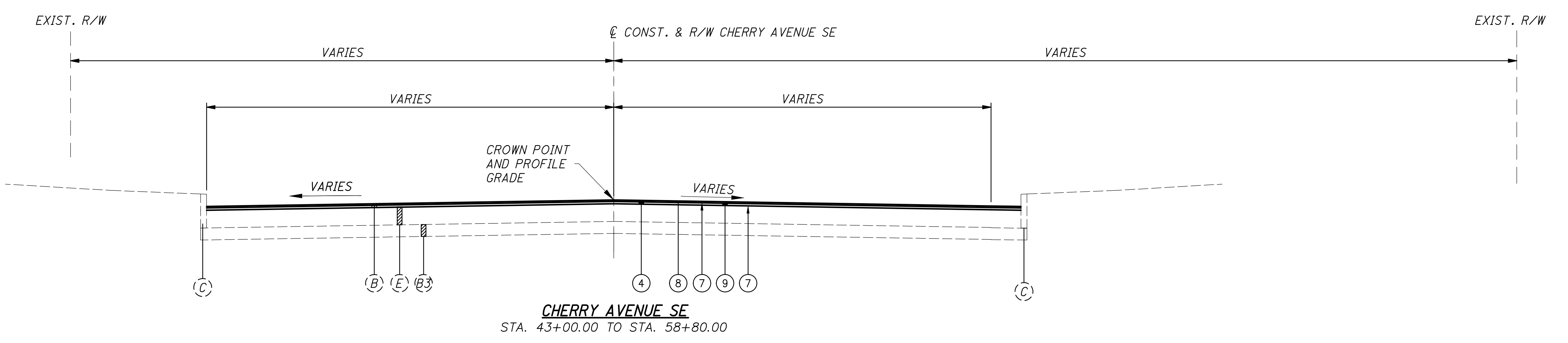


CHERRY AVENUE SE
STA. 58+80.00 TO STA. 59+48.84

A VARIES - 5.81' @ STA 58+80.00 TO 9.00' @ STA 59+15.00

B VARIES - 35.50' TO 46.51'

BRICK TRAFFIC ISLAND DETAIL
CHERRY AVENUE SE - STA 59+01.08 TO STA 59+67.48



CHERRY AVENUE SE
STA. 43+00.00 TO STA. 58+80.00

FOR TYPICAL SECTION EXISTING LEGEND SEE SHEET 6, FOR PROPOSED LEGEND AND NOTES SEE SHEET 11.

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GENERAL

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

NATURAL GAS DIST./TRANS.
DOMINION EAST OHIO GAS
320 SPRINGSIDE DR.
AKRON, OHIO 44333
330-664-2541
ATTN: KEVIN BIRT
RELOCATION@DOM.COM
EMERGENCY NO.
1-800-521-4400

TELEPHONE
AT&T
50 W. BOWERY STREET
FLOOR 6
AKRON, OHIO 44308
ATTN: STEVE HYLTON
330-384-3055
EMERGENCY NO. - 24 HRS
1-800-572-4545 OPTION #4

CABLE TV
SPECTRUM
ATTN: COREY RICHARDSON
530 S. MAIN STREET,
SUITE 1751
AKRON, OHIO 44311
(330) 490-2506

ELECTRIC
AMERICAN ELECTRIC POWER
301 CLEVELAND AVE. SW
P.O. BOX 24400
CANTON, OHIO 44701-4400
330-438-7739
ATTN: KEITH SCHALMO
330-438-7999

SANITARY AND STORM SEWER
CITY ENGINEER'S OFFICE
2436-30TH ST. N.E.
CANTON, OHIO 44705
ATTN: JAMES BENEKOS
330-489-3381

AEP TRANSMISSION
8600 SMITHS MILL RD
NEW ALBANY, OH 43054
ATTN: MICHAEL D. CARR
380-205-5072

TRAFFIC INTERCONNECT
CITY ENGINEER'S OFFICE
2436-30TH ST. N.E.
CANTON, OHIO 44705
ATTN: NICK LOUKAS
330-489-3381

WATER
CANTON WATER DEPT.
2664 HARRISBURG RD. N.E.
CANTON, OHIO 44708
ATTN: BRENT BURRIER OR
LEWI MILLER
330-489-3310

THE CITY ENGINEER'S OFFICE IS TO BE CONTACTED DIRECTLY FOR SANITARY AND STORM SEWER AND TRAFFIC INTERCONNECT FACILITIES LOCATION: 330-489-3381

WORK ADJACENT TO DOMINION EAST OHIO PIPELINE(S)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P. (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION EAST OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUER (330-478-3757).

DEO = THE EAST OHIO GAS COMPANY, DBA DOMINION EAST OHIO, 1-800-362-7557.

COORDINATION OF WORK WITH UTILITY COMPANIES

RELOCATION OF EXISTING OVERHEAD AND UNDERGROUND FACILITIES BY THE AFFECTED UTILITY OWNERS IS REQUIRED FOR COMPLETION OF THE WORK. IF EXISTING UTILITY FACILITIES ARE NOT CLEARED FROM THE CONSTRUCTION AREA AT THE TIME OF CONTRACT AWARD AND NOTICE TO PROCEED, THE CONTRACTOR WILL BE REQUIRED TO COORDINATE THIS WORK WITH THAT OF THE AFFECTED UTILITY OWNERS AND SHALL REFLECT THIS IN THE SCHEDULE, MAINTENANCE OF TRAFFIC PLANS, AND UNIT COSTS.

SURVEY PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 3 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL
POSITIONING METHOD: STATIC
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
2012

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (CORS2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99990679
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH ODOT CMS 623.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR:
1 METER = 3.2808333333 U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 7 HOURS

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

- SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
- EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

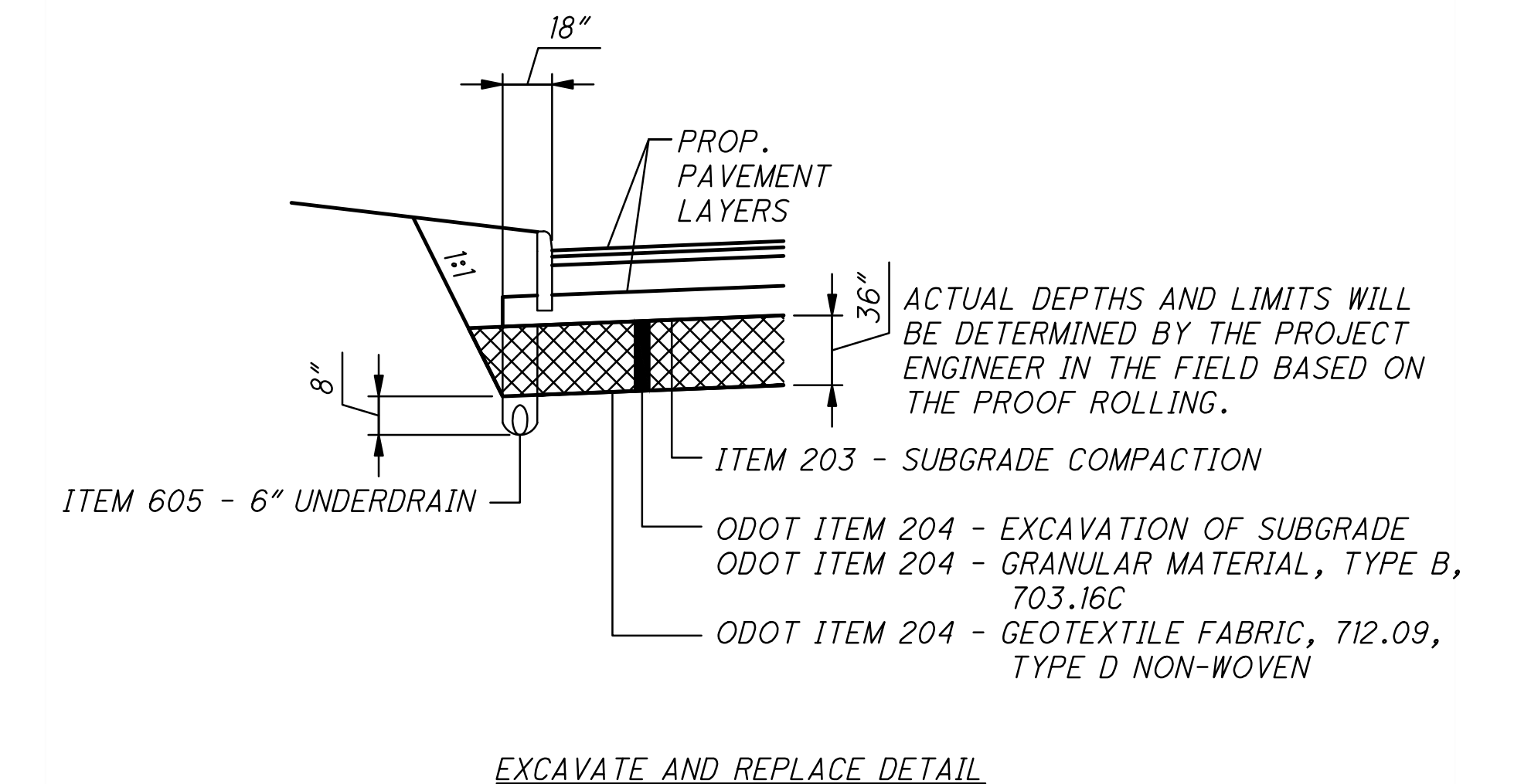
IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
- COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.
- EXCAVATION OF UNSTABLE SUBGRADE IS ANTICIPATED TO BE REQUIRED FOR APPROXIMATELY 30% OF THE FULL-DEPTH PAVEMENT AREAS WITHIN THE PROJECT LIMITS. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.
- EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO THE DETAIL BELOW. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
- PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.
- FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITY FOR EXCAVATING THE UNSUITABLE SUBGRADE IS PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ODOT ITEM 204 - EXCAVATION OF SUBGRADE	584 CY
ODOT ITEM 204 - GRANULAR MATERIAL, TYPE B, 703.16C	1761 CY
ODOT ITEM 204 - GEOTEXTILE FABRIC, 712.09, TYPE D NON-WOVEN	534 SY



CALCULATED
JPK
CHECKED
JES

GENERAL NOTES

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659 - SOIL ANALYSIS TEST	2	EACH
ITEM 659 - TOPSOIL	1258	CY
ITEM 659 - REPAIR SEEDING AND MULCHING	567	SY
ITEM 659 - INTER-SEEDING	567	SY
ITEM 659 - COMMERCIAL FERTILIZER	1.53	TON
ITEM 659 - LIME	2.34	ACRE
ITEM 659 - WATER	62	M GAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

PAVEMENT

PART-WIDTH CONSTRUCTION

IF THE CONTRACTOR ELECTS TO BUILD FULL-DEPTH REPLACEMENT SECTIONS OF THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

DRAINAGE

ITEM 611 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN

THE WORK ITEMS ABOVE SHALL BE PERFORMED AND PAID FOR IN ACCORDANCE WITH ODOT ITEM 611, EXCEPT THAT ALL ADJUSTMENTS TO GRADE SHALL INCLUDE NEW CASTINGS AND FRAMES. PAYMENT FOR THE NEW CASTINGS AND FRAMES IS TO BE INCLUDED IN THE UNIT COST PER EACH CATCH BASIN OR MANHOLE ADJUSTED TO GRADE. REFER TO CITY OF CANTON STANDARD DRAWING NO. 13 FOR MANHOLE ADJUSTMENTS.

ENVIRONMENTAL

ENVIRONMENTAL STUDIES INDICATED THAT PETROLEUM CONTAMINATED SOILS (PCS) [AND UST] WILL BE ENCOUNTERED DURING EXCAVATIONS WITHIN THE PROJECT LIMITS AT RMR SITE NO. RMR-008 (219 NAVARRE ROAD SW). ENVIRONMENTAL STUDIES ARE AVAILABLE AT THE CITY OF CANTON ENGINEERING DEPARTMENT. THE CONTRACTOR MUST DETERMINE THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT FOR THOSE WHO CONDUCT WORK WITHIN THE LIMITS OF THE PCS.

ALL EXCAVATED PCS THAT CANNOT BE REUSED AS PROJECT FILL PER CMS 203.03(J), SHALL BE MANAGED AND DISPOSED OF AT A LICENSED LANDFILL. THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED PCS INTO TRUCKS FOR TRANSPORT AND DISPOSAL. AS AN ALTERNATE, THE ENGINEER MAY PERMIT THE CONTRACTOR TO TEMPORARILY STOCKPILE THE EXCAVATED PCS ON AN IMPERMEABLE MEMBRANE, IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE STOCKPILE SHOULD BE SURROUNDED BY STRAW BALES TO REDUCE RUNOFF. THE CONTRACTOR WILL PROVIDE COMPLETED LOG FORMS AND MANIFESTS FOR TRANSPORT AND DISPOSAL TO THE ENGINEER FOR SIGNATURE. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL TESTING THAT THE LANDFILL MAY REQUIRE FOR DISPOSAL.

IF THE EXCAVATIONS WITHIN THE PCS REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER, CONTAINERIZE AND DISPOSE OF THE WATERS BY A METHOD APPROVED OF BY THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS NEEDED TO STORE, TRANSPORT AND DISPOSE OF WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL TESTING REQUIRED FOR DISPOSAL. ALL EXCAVATED AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN ACCORDANCE WITH PROJECT PLANS, APPLICABLE ODOT SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROPERLY MANAGE, STORE (IF NECESSARY), TEST FOR DISPOSAL, TRANSPORT AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS OR FEES WITHIN THE IDENTIFIED LIMITS.

ALSO ENVIRONMENTAL STUDIES INDICATED THAT SOLID WASTE WILL BE ENCOUNTERED DURING EXCAVATIONS WITHIN THE PROJECT LIMITS AT RMR SITE NO.S RMR-010 (104 NAVARRE ROAD SW); RMR-016 (220 11TH STREET, MARKET AVENUE S); RMR-024/025/026 (101 11TH STREET, CHERRY STREET). ENVIRONMENTAL STUDIES ARE AVAILABLE AT THE CITY OF CANTON ENGINEERING DEPARTMENT. THE CONTRACTOR MUST DETERMINE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT FOR THOSE WHO CONDUCT WORK WITHIN THE LIMITS OF SOLID WASTE.

ALL EXCAVATED SOLID WASTE THAT CANNOT BE REUSED AS PROJECT FILL SHALL BE MANAGED AND DISPOSED OF AT A LICENSED LANDFILL. THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED SOLID WASTE INTO TRUCKS FOR TRANSPORT AND DISPOSAL. AS AN ALTERNATE, THE ENGINEER MAY PERMIT THE CONTRACTOR TO TEMPORARILY STOCKPILE THE EXCAVATED SOLID WASTE ON AN IMPERMEABLE MEMBRANE, IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE STOCKPILE SHOULD BE SURROUNDED BY STRAW BALES TO REDUCE RUNOFF. THE CONTRACTOR WILL PROVIDE COMPLETED LOG FORMS AND MANIFESTS FOR TRANSPORT AND DISPOSAL TO THE ENGINEER FOR SIGNATURE. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL TESTING THAT THE LANDFILL MAY REQUIRE FOR DISPOSAL. IF EXCAVATIONS WITHIN THE SOLID WASTE AREA REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER, CONTAINERIZE AND DISPOSE OF WATERS BY A METHOD APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS NEEDED TO STORE, TRANSPORT AND DISPOSE OF WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL TESTING REQUIRED FOR DISPOSAL.

ALL EXCAVATED AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN ACCORDANCE WITH PROJECT PLANS, APPLICABLE ODOT SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROPERLY MANAGE, STORE (IF NECESSARY), TEST FOR DISPOSAL, TRANSPORT AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS OR FEES WITHIN THE IDENTIFIED LIMITS.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

(690 65000)	ITEM SPECIAL - WORK INVOLVING NON-REGULATED MATERIALS	50 TON
(690 65016)	ITEM SPECIAL - WORK INVOLVING PETROLEUM CONTAMINATED SOILS	2,521 TON
(690 65010)	ITEM SPECIAL - WORK INVOLVING SOLID WASTE	50 TON
(690 65022)	ITEM SPECIAL - WORK INVOLVING NON-REGULATED WATER	1,000 GALLON
(690 65024)	ITEM SPECIAL - WORK INVOLVING REGULATED WATER	1,000 GALLON

CALCULATED
JPK
CHECKED
JES

GENERAL NOTES

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

CITY OF CANTON GENERAL NOTES

I. PRECONSTRUCTION INCIDENTALS

(A) PROJECT SPECIFICATIONS/REQUIREMENTS:

ALL WORK REQUIRED TO COMPLETE THIS IMPROVEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS/REQUIREMENTS OF THE CITY OF CANTON AND THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, EXCEPT AS HEREIN AMENDED. IN THE CASE OF A CONFLICT BETWEEN THE CITY OF CANTON AND THE OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS/REQUIREMENTS, THE CITY OF CANTON REQUIREMENTS WILL TAKE PRECEDENCE, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL COMPLY WITH THE CITY OF CANTON SUPPLEMENTAL SPECIFICATION 01-00 PROJECT DOCUMENTATION AND SUBMITTAL REQUIREMENTS.

(B) ADMINISTRATIVE REQUIREMENTS:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY COMPLYING WITH ALL THE ADMINISTRATIVE DUTIES HEREIN CONTAINED.

THE DEVELOPER/CONTRACTOR SHALL DESIGNATE TO THE CITY AN EMPLOYEE RESPONSIBLE FOR CORRESPONDENCE, NOTIFICATIONS, AND SUBMITTALS PERTINENT TO THE PROJECT.

(C) PRECONSTRUCTION MEETING:

A PRECONSTRUCTION MEETING WITH THE DEVELOPER, CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, THE CITY OF CANTON ENGINEERING DEPARTMENT AND THE CITY OF CANTON WATER DEPARTMENT IS REQUIRED FOR THIS PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

THE CITY ENGINEER WILL CONTACT THE CONTRACTOR TO ARRANGE A MEETING DATE. THE CITY ENGINEER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.

IF THE PROPOSED PROJECT LAND-DISTURBANCE AREA IS ONE (1) OR MORE ACRES, A SEPARATE PRE-CONSTRUCTION MEETING IS ALSO REQUIRED. THIS MEETING SHALL OCCUR ON-SITE BETWEEN THE CONTRACTOR AND THE STARK SOIL & WATER CONSERVATION DISTRICT (SWCD). THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THIS MEETING. NO LAND-DISTURBANCE ACTIVITIES SHALL START UNTIL SAID MEETING HAS OCCURRED AND APPROVAL HAS BEEN GRANTED BY STARK SWCD.

(D) PROJECT SAFETY:

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. APPROPRIATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING AND CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

(E) UNDERGROUND UTILITIES:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT; HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

(H) EXPLORATORY BORINGS:

EXPLORATORY SOIL BORING INFORMATION IS NOT THE RESPONSIBILITY OF THE CITY OF CANTON. IT IS THE DEVELOPER/CONTRACTOR RESPONSIBILITY TO REVIEW ANY AND ALL INFORMATION AVAILABLE. IF DEVELOPER/CONTRACTOR REQUESTS TO DRILL AND OR EXCAVATE WITHIN THE CITY'S R/W, THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO THIS WORK. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY NOTIFICATION, AS SPECIFIED, ALL TRAFFIC CONTROL, PREMIUM BACKFILL, AND COMPACTION AND RESTORATION, AS NECESSARY.

(I) CONTINGENCY QUANTITIES:

WHEN SPECIFIED ON PLANS OR SPECIFICATIONS, CONTINGENCY QUANTITIES ARE TO BE PERFORMED ONLY UNDER DIRECTION OF THE CITY ENGINEER. THE DEVELOPER/CONTRACTOR SHALL NOT ORDER ANY CONTINGENCY MATERIAL OR PERFORM ANY WORK UNTIL DIRECTED BY THE ENGINEER. THE ACTUAL WORK LOCATION AND QUANTITIES FOR SUCH ITEMS SHALL BE DOCUMENTED BY THE DEVELOPER/CONTRACTOR AND THE ENGINEER.

II. CONSTRUCTION INCIDENTALS

(A) PLAN DISCREPANCIES:

ANY DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION OR THE CONTINUATION OF THE SAME.

FAILURE BY THE DEVELOPER/CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

(B) VERIFICATION OF UNDERGROUND UTILITIES:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.)

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO INSTALL THE PROPOSED CONDUIT.

(C) PROTECTION OF UTILITIES:

THE DEVELOPER/CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT AND SUPPORT EXISTING UTILITIES ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AS APPROVED BY THE OWNERS OF THE UTILITY AND THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY COORDINATE THEIR WORK WITH ALL UTILITY COMPANIES; ANY POTENTIAL DELAYS WILL NOT BE THE RESPONSIBILITY OF THE CITY.

THE CONTRACTOR SHOULD EXPECT AT A MINIMUM ONE SANITARY SEWER LATERAL, ONE ROOF DRAIN, ONE WATER SERVICE, AND ONE GAS SERVICE FOR EACH LOT. ANY OF THE ABOVE UTILITIES DAMAGED DUE TO THE CONTRACTOR'S WORK SHALL BE RESTORED TO THE UTILITY OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

(D) MAINTENANCE OF UTILITY SERVICES:

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICES AT ALL TIMES.

WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS (4 HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. NO SHUT DOWN SHALL OCCUR WITHOUT WRITTEN PERMISSION OF THE CITY OF CANTON WATER DEPARTMENT. PROPERTY OWNERS AFFECTED BY APPROVED INTERRUPTED SERVICE SHALL BE NOTIFIED 48 HOURS IN ADVANCE BY THE CONTRACTOR.

STORM SEWER AND SANITARY SEWER SERVICES SHALL BE MAINTAINED WITHOUT INTERRUPTION, UNLESS APPROVED BY THE CITY ENGINEER.

IN THE EVENT THAT CONSTRUCTION DISRUPTS THE FLOW OF A SANITARY SEWER, THE CONTRACTOR SHALL IMMEDIATELY RECTIFY THE DISRUPTED SEWER BY EITHER TEMPORARILY FLUMING WITH MATERIALS ACCEPTABLE TO THE ENGINEER OR BYPASSING WITH PUMPS. COST OF MAINTAINING AND REPAIR OF SANITARY SEWERS DISTURBED BY CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

(E) CONSTRUCTION NOISE:

CONSTRUCTION NOISE ASSOCIATED WITH ANY IMPROVEMENT PROJECT SHALL BE LIMITED TO LEVELS COMMENSURABLE WITH ADJOINING LAND AND THEIR ASSOCIATED USAGE AS DETERMINED BY THE CITY ENGINEER. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M. UNLESS AUTHORIZED BY THE CITY ENGINEER.

(F) OPEN TRENCH CONSTRUCTION:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION/TRENCHING PRACTICES FOR THE PROPOSED IMPROVEMENT, OR AS FURTHER SHOWN ON THE PLANS AND SPECIFICATIONS.

THE DEVELOPER/CONTRACTOR SHALL FOLLOW ALL APPLICABLE LOCAL AND STATE SAFETY REGULATIONS, INCLUDING CODE OF FEDERAL REGULATIONS, PART 1926 (SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION), SUBPART P (EXCAVATIONS), FOR ALL APPLICABLE REQUIREMENTS AND RESPONSIBILITIES.

PRIOR TO COMMENCING CONSTRUCTION, THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY ENGINEER OF THE PROJECT'S ASSIGNED "COMPETENT PERSON" IN OSHA EXCAVATION STANDARDS.

(G) TRENCH CLOSING AND TEMPORARY TOPPING:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF ALL OPEN TRENCHES, WHEN WORK IS EITHER COMPLETED AT THE END OF THE DAY OR SUSPENDED FOR ANY OTHER REASON.

FOR TRENCH SURFACE REQUIREMENTS, REFER TO NOTE 4 ON CITY STANDARD DRAWING NO. 19.

FOR TRENCH SURFACE REQUIREMENTS, REFER TO THE MISCELLANEOUS DETAILS.

(H) DUST CONTROL:

THE DEVELOPER/CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL.

(I) TESTING OF UTILITIES:

REFER TO SECTION V. SANITARY SEWERS/STORM SEWERS & SECTION VIII. WATER MAIN/SERVICES

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II. CONSTRUCTION INCIDENTALS (continued)

(J) PRESERVATION AND RESTORATION OF DISTURBED FEATURES:

EXISTING DRIVES, BERMS, LAWNS, PAVEMENTS, CURBS, SIDEWALKS, SIGNS, MAILBOXES, FENCES, RETAINING WALLS, LANDSCAPING ITEMS, OR OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED BY THE DEVELOPER/CONTRACTOR AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO DISTURBANCE AND TO THE COMPLETE SATISFACTION OF THE CITY ENGINEER.

RESTORATION OF EXISTING ROADWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY, TOWNSHIP, COUNTY, AND/OR OTHER AGENCIES HAVING AUTHORITY. COST FOR THE RESTORATION OF THESE ITEMS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR SPECIFICATIONS. NO PUBLIC ROADWAY SHALL BE DISTURBED WITHOUT PRIOR WRITTEN APPROVAL FROM THE GOVERNING AGENCY AND ACQUISITION OF NECESSARY PERMITS.

(K) SALVAGED CASTINGS:

WHEN DIRECTED BY THE CITY ENGINEER, ALL METAL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED ON SITE OR DELIVERED TO A LOCATION DESIGNATED BY THE CITY ENGINEER.

(L) PLUG EXISTING CONDUIT:

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT TO BE ABANDONED.

BULKHEADS SHALL CONSIST OF BRICK AND/OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PAYMENT FOR PLUGGING OF EXISTING CONDUIT FOR ABANDONMENT SHALL BE INCLUDED IN THE UNIT BID OF THE VARIOUS ITEMS OF THE PROJECT.

(M) CONSTRUCTION LAYOUT:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT UTILIZING PERTINENT PLAN DATA. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR STAKING HORIZONTAL OR VERTICAL CONTROL. CONSTRUCTION LAYOUT SHALL BE IN ACCORDANCE WITH ODOT 623 CONSTRUCTION LAYOUT STAKES.

AT THE CITY ENGINEER'S REQUEST, THE CONTRACTOR SHALL MAKE AVAILABLE ALL SURVEY FIELD NOTES FOR REVIEW.

(N) EXISTING MONUMENTATION:

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS AND/OR ANY TYPE OF LAND MONUMENT. THE CONTRACTOR SHALL HAVE ALL MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. THE CONTRACTOR SHALL REPLACE/RESET ANY DISTURBED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

(O) ELEVATION DATUM:

ALL ELEVATIONS ARE BASED ON THE **NAVD 1988 DATUM.**

(P) DEWATERING OPERATIONS:

WHEN DEEMED NECESSARY, THE DEVELOPER/CONTRACTOR MAY INSTALL DEWATERING EQUIPMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

THE PROPOSED LOCATION OF WELL POINTS, HEADER PIPE, ELECTRICAL DISTRIBUTION, GENERATORS AND DISCHARGE PIPES, ETC. SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR.

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS FOR THE INSTALLATION AND SUBSEQUENT REMOVAL OF DEWATERING EQUIPMENT AS WELL AS PROPER WATER DISCHARGE PROCEDURES AS MAY BE REQUIRED PER STATE AND LOCAL GOVERNING AGENCIES.

INSTALLATION OF ALL ELECTRICAL EQUIPMENT, INCLUDING GROUNDING AND PROTECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR.

DEVELOPER/CONTRACTOR SHALL PROVIDE ALL COMBUSTIBLE ENGINE DRIVEN GENERATORS WITH "HOSPITAL GRADE" MUFFLERS. MUFFLERS SHALL BE RATED, AT A MAXIMUM OF 67 dB AT 23 FEET AWAY RUNNING FULL LOAD.

(Q) INSPECTION:

FOLLOWING THE PRE-CONSTRUCTION MEETING(S) AND ESTABLISHMENT OF AN APPROVED SCHEDULE, THE CONTRACTOR SHALL GIVE A MINIMUM 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE. ALL WORK REQUIRED FOR THIS IMPROVEMENT SHALL BE SUBJECT TO INSPECTION BY THE CITY OF CANTON OR THEIR DESIGNATED REPRESENTATIVE. NO WORK SHALL BE PERFORMED WITHOUT AN AUTHORIZED INSPECTOR PRESENT, UNLESS OTHERWISE APPROVED.

(R) FIELD OFFICE:

IF A PAY ITEM IS PROVIDED, THE DEVELOPER/CONTRACTOR SHALL PROVIDE A FIELD OFFICE IN ACCORDANCE WITH ODOT 619. THE FIELD OFFICE SHALL BE TYPE 'A', UNLESS OTHERWISE SPECIFIED.

ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ARCHAEOLOGICAL DISCOVERIES

CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVISED CODE (O.R.C.) SECTION 149.53 TO NOTIFY OHIO'S STATE HISTORIC PRESERVATION OFFICE (SHPO), AND TO COOPERATE WITH THAT OFFICE IN ARCHAEOLOGICAL AND HISTORIC SURVEYS AND MITIGATION EFFORTS IF SUCH DISCOVERIES ARE UNCOVERED WITHIN THE PROJECT AREA.

CONTACT: OHIO STATE HISTORIC PRESERVATION OFFICE

DIANA WELLING, RESOURCE PROTECTION & REVIEW DEPARTMENT MANAGER

PHONE: 1-614-298-2000

EMAIL: DWELLING@OHIOHISTORY.ORG

PROHIBITED CONSTRUCTION ACTIVITIES (WPCLF REQUIREMENTS)

- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER;
- LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS;
- INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS;
- PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE;
- DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO;
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM;
- DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA;
- DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS;
- OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT;
- DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION;
- STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES;
- RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER;
- OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OR 8:00 AM AND 5:00 P.M. OR OUTSIDE THE HOURS ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS; AND

14. CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER, AND CLOSING CLEAR ACCESS:

- BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;
- BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR
- BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.

III. EARTHWORK / SITE WORK

(A) EASEMENTS AND RIGHT-OF WAY:

THE DEVELOPER/CONTRACTOR SHALL STAY WITHIN THE DESIGNATED PROPERTIES, EASEMENTS, AND/OR RIGHT-OF-WAY PROVIDED FOR THE PROJECT AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED. DISTURBANCE OF EXISTING FEATURES AND/OR IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND AS APPROVED BY THE CITY ENGINEER/PROPERTY OWNER.

(B) SUITABILITY OF SITE:

THE CITY OF CANTON SHALL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE DEVELOPER/CONTRACTOR MUST APPRAISE THEMSELVES OF ANY EXISTING SITE CONDITIONS WHICH MAY AFFECT THEIR BID OR THE PERFORMANCE OF THE REQUIRED WORK. THE DEVELOPER/CONTRACTOR SHALL PERFORM ANY INVESTIGATIONS AND/OR TESTING NECESSARY TO ADEQUATELY DETERMINE/ESTIMATE TO THEIR SATISFACTION ALL SITE CONDITIONS WHICH COULD AFFECT THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE, BUT NOT BE LIMITED TO, UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, ETC.

(C) REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL:

THE DEVELOPER/CONTRACTOR SHALL UNDERCUT AND REPLACE UNSUITABLE MATERIAL ENCOUNTERED DURING INSTALLATION OF THE PROPOSED UTILITIES AND ROADWAY UNTIL SUCH CONDITIONS ARE CORRECTED AND APPROVED BY THE PROJECT ENGINEER.

THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE UTILITY UNLESS THE PLANS ALLOW FOR A CONTINGENCY ITEM FOR REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL. IF SO, THE CITY WILL DOCUMENT THE LOCATION OF SUCH AREAS FOR FINAL QUANTITY TABULATION.

IV. ROADWAY / DRIVE APPROACHES / WALK / CURB

(A) RESTRICTED WORK SCHEDULE:

NO CONCRETE FINISH WORK OR PERMANENT ASPHALT SHALL BE PLACED FROM NOVEMBER 15TH TO APRIL 15TH UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY ENGINEER.

(B) ASPHALT/CONCRETE:

IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE OF BEGINNING WORK WHICH REQUIRES COMPACTION TESTING AND/OR PRE-POUR INSPECTION PRIOR TO PLACEMENT OF ASPHALT OR CONCRETE. WORK SHALL NOT PROCEED UNTIL TESTING AND/OR INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE CITY ENGINEER.

V. SANITARY SEWERS / STORM SEWERS

SANITARY SEWER AND DRAINAGE STRUCTURE GENERAL NOTES

ALL SANITARY SEWER CONDUIT AND SANITARY MANHOLES SHALL BE CONSTRUCTED ACCORDING TO ODOT 611 WITH THE FOLLOWING AS PER PLAN MODIFICATIONS, AS APPLICABLE. ALL COSTS ASSOCIATED WITH THE FOLLOWING AS PER PLAN MODIFICATIONS SHALL BE INCLUDED IN THE APPLICABLE CONDUIT OR DRAINAGE STRUCTURE PAY ITEM UNLESS A SEPARATE PAY ITEM IS DESCRIBED AND PROVIDED.

UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR SHOWN IN THE PLANS, THE ONLY ACCEPTABLE PIPE MATERIALS ARE AS FOLLOWS:

- POLYVINYL CHLORIDE (PVC) SOLID WALL PIPE (707.45)
- POLYVINYL CHLORIDE LARGE-DIAMETER SOLID WALL PIPE (707.48)
- VITRIFIED CLAY PIPE (VCP) - EXTRA STRENGTH ONLY (706.08)
- FIBER GLASS REINFORCED POLYMER MORTAR (FRPM) PIPE (707.75)
- MINIMUM PIPE STIFFNESS: 36 PSI

PVC CONDUIT SHALL BE A MINIMUM WALL THICKNESS BASED ON DEPTH TO INVERT AS DEFINED IN THE FOLLOWING:

PIPE DEPTH TO INVERT	MINIMUM SDR
12' OR LESS	SDR 35
12'-24'	SDR 26
24' AND GREATER	SDR 21

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V. SANITARY SEWERS / STORM SEWERS (continued)

WHEN REQUIRED SDR PARAMETERS CHANGE BETWEEN MANHOLES DUE TO DEPTH, THE MORE STRINGENT (LARGER WALL THICKNESS) SHALL BE UTILIZED FOR THE ENTIRE LENGTH OR AN APPROVED TRANSITION COUPLER SPECIFICALLY MADE FOR PVC PIPE OF TWO DIFFERENT SDR'S SHALL BE PROVIDED. ALL COSTS, REGARDLESS OF REQUIRED WALL THICKNESS, SHALL BE INCLUDED IN THE APPLICABLE LINEAR FOOT COST.

THE FOLLOWING PIPE MATERIALS SHALL ONLY BE UTILIZED WHEN APPROVED BY THE CITY ENGINEER OR SPECIFICALLY CALLED FOR IN THE PLANS.

- DUCTILE IRON PIPE - SANITARY (748.01) WITH THE CLASSIFICATION NOTED ON THE PLANS AND THE FOLLOWING REQUIREMENTS / MODIFICATIONS:
 - LINING FOR ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLYAMINE CERAMIC EPOXY.
 - ALL DUCTILE IRON PIPE SHALL HAVE AN ASPHALTIC EXTERIOR COATING APPLIED AT THE POINT OF MANUFACTURE.
 - ALL DUCTILE IRON PIPE, INCLUDING FITTINGS AND APPARATUS BURIED UNDERGROUND, SHALL BE ENCASED WITH 8 MIL. POLYETHYLENE FILM CONFORMING TO ODOT 748.07.
- REINFORCED CONCRETE PIPE (RCP), EPOXY COATED (706.03) WITH THE WALL TYPE NOTED ON THE PLANS AND THE FOLLOWING REQUIREMENTS / MODIFICATIONS:
 - CONCRETE USED TO CONSTRUCT SANITARY CONDUIT SHALL BE PROVIDED WITH AN APPROVED CORROSION INHIBITING ADMIXTURE (PER THE ODOT QUALIFIED PRODUCT LIST, SPEC REFERENCE 515.15) AT THE APPROVED DOSAGE.
 - DOCUMENT THE APPROVED DOSAGE INCORPORATED INTO EACH BATCH OF CONCRETE.
- POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO AWWA C900 (748.02)
 - MINIMUM PRESSURE CLASS: 165 PSI (DR 25)
- HIGH DENSITY POLYPROPYLENE (HDPP) TRIPLE WALL PIPE (707.69)

PIPE MATERIALS MUST MEET THE FOLLOWING MINIMUM REQUIREMENTS, AS APPLICABLE:

MATERIAL	SIZE	PIPE MATERIAL SPECIFICATION	JOINT SPECIFICATION	BEDDING CLASSIFICATION /INSTALLATION SPECIFICATION
PVC	4"-15"	ASTM D3034	ASTM D3212	ASTM D2321
PVC	18"-36"	ASTM F679	ASTM D3212	ASTM D2321
PVC	4"-12"	AWWA C900	ASTM D3139	ASTM D2321
VCP	4"-42"	ASTM C700	ASTM C425	ASTM C12
DUCTILE IRON	4"-64"	ASTM A746	AWWA C111	AWWA C600
HDPP	30"-60"	ASTM F2764	ASTM D3212	ASTM D2321
RCP	12"-144"	ASTM C76	ASTM C443	ASTM C12
FRMP	30"-60"	ASTM 3262	ASTM D4161	ASTM D3839

PIPES ONE SIZE LARGER THAN THE SPECIFIED CONDUIT TYPE SHALL ONLY BE USED WITH THE APPROVAL OF THE CITY ENGINEER.

CONDUIT INCLUDES GRAVITY SANITARY SEWER MAINS AND SANITARY LATERALS. SANITARY CONDUITS SHALL BE CLASSIFIED AS TYPE B AND TYPE C ONLY.

THE CONTRACTOR SHALL FURNISH AN INSTALLATION PLAN AS PER ODOT 611 THAT CONFORMS WITH THE FOLLOWING CITY OF CANTON SPECIFICATIONS FOR ALLOWABLE BEDDING AND BACKFILL IN SANITARY SEWER TRENCHES:

BEDDING AND STRUCTURAL BACKFILL - FURNISH MATERIALS CONFORMING TO:

ODOT 703.11 TYPE 3 (AKA AASHTO M43 SIZE NO 57 OR 67) EXCEPT NO SAND, AIR-COOLED BLAST FURNACE SLAG, OR RECYCLED PORTLAND CEMENT CONCRETE ALLOWED.

FINAL BACKFILL - FURNISH MATERIALS CONFORMING TO:

GRANULAR STRUCTURAL BACKFILL - 703.11, TYPE 2 ONLY WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR GRAVEL ONLY EXCEPT NO SAND, AIR-COOLED BLAST FURNACE SLAG, OR RECYCLED PORTLAND CEMENT CONCRETE ALLOWED; OR

ITEM 304 - 703.17 WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR CRUSHED GRAVEL ONLY EXCEPT NO CRUSHED AIR-COOLED BLAST FURNACE SLAG OR STEEL SLAG ALLOWED; OR

ITEM 411 - 703.18 AS APPLICABLE TO ITEM 411 WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR GRAVEL ONLY EXCEPT NO AIR-COOLED BLAST FURNACE SLAG, GRANULATED SLAG, OPEN HEARTH SLAG, BASIC OXYGEN FURNACE SLAG, ELECTRIC ARC FURNACE SLAG, RECYCLED PORTLAND CEMENT CONCRETE, OR RECLAIMED ASPHALT PAVEMENT DIRECTED BY THE CITY ENGINEER. ALLOWED; OR

ITEM 613 LOW STRENGTH MORTAR BACKFILL - ALLOWABLE ONLY UNDER SPECIAL CIRCUMSTANCES AS APPROVED BY THE CITY ENGINEER.

FINAL BACKFILL COMPACTION DENSITY SHALL BE A MINIMUM OF 98%.

BACKFILL MATERIAL WITHIN FOUR (4) FEET OF THE FINISHED SURFACE SHALL BE FREE OF SAND, RECYCLED PORTLAND CEMENT CONCRETE, OR SLAG OF ANY FORM.

CENTER PIPE, MANHOLES, AND OTHER STRUCTURES HORIZONTALLY WITHIN THE BEDDING AREA.

MINIMUM BEDDING AND STRUCTURAL BACKFILL WIDTHS AND CORRESPONDING DEPTH BELOW / HEIGHT ABOVE THE PIPE SHALL BE AS STATED IN THE FOLLOWING TABLE:

CONDUIT TYPE	MINIMUM WIDTH	MAXIMUM WIDTH	BEDDING DEPTH BELOW BOTTOM OF PIPE	STRUCTURAL BACKFILL HEIGHT ABOVE TOP OF PIPE
FLEXIBLE CONDUIT*	PIPE I.D. x 1.25 + 1'-0"	PIPE O.D. + 2'-0"	6"	12"
RIGID CONDUIT*	PIPE I.D. x 1.33	PIPE O.D. + 2'-0"	3"	1"

* - FLEXIBLE AND RIGID CONDUIT PER TYPE B AND/OR TYPE C AS APPLICABLE IN 611.02.B.

THE DIMENSIONS NOTED ABOVE SHALL PROVIDE THE BASIS FOR MINIMUM AND MAXIMUM PAY LIMITS WHEN APPLICABLE, HOWEVER, BEDDING AND STRUCTURAL BACKFILL MATERIAL SHALL EXTEND THE FULL WIDTH OF THE EXCAVATED TRENCH REGARDLESS OF THE MAXIMUM WIDTHS NOTED ABOVE. ADDITIONAL WIDTH OF BEDDED MATERIAL SHALL BE INCLUDED IN THE COST OF THE APPLICABLE 611 CONDUIT PAY ITEM.

WHERE WATER IS ENCOUNTERED IN THE TRENCH, REMOVE IT DURING PIPE-LAYING OPERATIONS AND MAINTAIN THE TRENCH WATER FREE UNTIL THE ENDS OF THE PIPE ARE SEALED AND PROVISIONS ARE MADE TO PREVENT FLOATING OF THE PIPE. DO NOT ALLOW TRENCH WATER OR OTHER DELETERIOUS MATERIALS TO ENTER THE PIPE AT ANY TIME. ALL WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A SILT BAG PRIOR TO DISCHARGE TO A STORM SEWER CONVEYANCE SYSTEM. WATER REMOVED FROM THE TRENCH SHALL NOT DISCHARGE TO THE SANITARY SEWER. ALL ASSOCIATED COSTS ARE TO BE INCLUDED IN THE UNIT PRICE COST OF THE CONDUIT AND / OR STRUCTURE.

AS NOTED, CONTRACTOR IS REQUIRED TO MAINTAIN FLOWS AND DRAINAGE AT ALL TIMES. REFER TO ADDITIONAL SANITARY SEWER BYPASS PUMPING REQUIREMENTS UNDER ITEM 690 - SPECIAL.

WHEN JOINING CONDUITS OF DIFFERING MATERIALS, PROVIDE RESILIENT, DURABLE, AND FLEXIBLE COUPLERS WITH STAINLESS STEEL SHIELDS AND CLAMPS WHICH ARE MANUFACTURED SPECIFICALLY FOR THE PIPE MATERIALS AND SIZES BEING JOINED. ACCEPTABLE PRODUCTS INCLUDE FERNCO STRONG BACK RC SERIES, FERNCO 5000 RC SERIES, OR APPROVED EQUAL.

CONCRETE MASONRY COLLARS ARE ONLY PERMITTED FOR REINFORCED CONCRETE PIPE AND ONLY WHEN APPROVED BY THE CITY ENGINEER OR SPECIFICALLY CALLED FOR IN THE PLANS.

FOR RIGID CONDUIT, PROVIDE ONLY RESILIENT, DURABLE, AND FLEXIBLE JOINTS AND TEST EACH JOINT PER ASTM C969.

FOR PLASTIC CONDUIT PROVIDE ONLY COUPLING BANDS WITH STAINLESS STEEL SHIELDS AND CLAMPS. ACCEPTABLE COUPLING BAND PRODUCTS INCLUDE FERNCO STRONG BACK RC SERIES, FERNCO 5000 RC SERIES, OR APPROVED EQUAL.

ALL NEW SANITARY MANHOLES SHALL BE REINFORCED PRECAST CONCRETE PER ASTM C-478 WITH JOINT SPECIFICATIONS PER ASTM C-443. FOLLOW ODOT STANDARD CONSTRUCTION DRAWING MH-3 WITH MODIFICATIONS AS NOTED IN CITY OF CANTON STANDARD DRAWING NO. 10, UNLESS NOTED OTHERWISE IN THE PLANS. PRECAST CONCRETE SUPPLIERS SHALL BE APPROVED BY THE CITY ENGINEER.

RECONSTRUCTION OF EXISTING SANITARY MANHOLES OR STRUCTURES SHALL FOLLOW CITY OF CANTON STANDARD DRAWINGS FOR MANHOLES, MANHOLE COVERS, MANHOLE ADJUSTMENTS, OR OTHER CITY OF CANTON STANDARDS, UNLESS NOTED OTHERWISE IN THE PLANS OR AS

PROVIDE REMOTE INSPECTIONS FOR ALL NEW SANITARY SEWER MAINS. IF DEBRIS HAS TO BE REMOVED IN ACCORDANCE WITH 107.19, THE CITY OF CANTON MAY REQUIRE, AT THE CITY'S SOLE DISCRETION, ANOTHER REMOTE INSPECTION AT NO ADDITIONAL COST TO THE CITY OF CANTON.

ALL FLEXIBLE CONDUITS SHALL BE DEFLECTION TESTED. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. PERFORM A MANDREL TEST UTILIZING EQUIPMENT ACCORDING TO ODOT SS 902.03 AND CRAWLER MOUNTED CAMERA UTILIZING EQUIPMENT ACCORDING TO ODOT SS 902.01 WITH CRACK AND DEFECT MEASURING CAPABILITIES ACCORDING TO ODOT SS 902.02 C. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. CRAWLER MOUNTED CAMERA WITH LASER PROFILING IN LIEU OF MANDREL TESTS AND CRAWLER MOUNTED CAMERA INSPECTION SHALL ONLY BE PERFORMED WITH THE APPROVAL OF THE CANTON CITY ENGINEER.

THE FOLLOWING MODIFICATIONS SHALL APPLY TO SS902.03:

TABLE 902.03 - SUMMARY OF MANDREL EFFECTIVE DIAMETER SIZES SHALL BE BASED ON 5% DEFLECTION. THE TABLE SHALL BE ADJUSTED ACCORDINGLY BASED ON THE AVERAGE INSIDE DIAMETER OF THE PIPE BEING TESTED AND AS APPROVED BY THE CANTON CITY ENGINEER.

PLASTIC CONDUIT - REPLACE THE LAST TWO LISTED REQUIREMENTS IN TABLE 611.13 WITH THE FOLLOWING:

REPAIR OR REPLACE CONDUIT IF PERFORMANCE INSPECTION PER 611.12 INDICATES A DEFLECTION > 5.0%

REPLACE CONDUIT IF THE PERFORMANCE INSPECTION PER 611.12 INDICATES A DEFLECTION > 7.5%

ADDITIONAL TESTING REQUIREMENTS

SANITARY MANHOLES - PER CITY OF CANTON STANDARD DRAWING NO. 10, SHALL BE TESTED ACCORDING TO CANTON SUPPLEMENTAL SPECIFICATION 04-01 STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE TEST AND CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C 1244.

SANITARY CONDUITS - IN ADDITION TO ANY TESTING REQUIREMENTS NOTED HEREIN OR ON THE PLANS, ALL NEW SANITARY SEWERS (INCLUDING LATERALS) SHALL BE AIR TESTED IN ACCORDANCE WITH THE FOLLOWING STANDARDS, AS APPLICABLE:

ASTM F 1417 - TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR. REFER TO CITY OF CANTON SUPPLEMENTAL SPECIFICATION SS 03-00: TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESSURE, THERMOPLASTIC SEWER PIPE (7/18/2008)

ASTM C 828 - PRACTICE FOR LOW-PRESSURE AIR TEST OF VITRIFIED CLAY PIPE LINES.

ASTM C 924 - PRACTICE FOR TESTING CONCRETE SEWER LINES BY LOW-PRESSURE AIR TEST METHOD.

HYDROSTATIC TEST IN LIEU OF AIR TESTING MUST BE APPROVED BY THE CITY ENGINEER AND SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM BEING TESTED.

THE REQUIREMENTS NOTED ABOVE MUST BE SPECIFICALLY IDENTIFIED IN THE INSTALLATION PLAN AND SHOP DRAWINGS, AS APPLICABLE. ANY DEVIATIONS TO THESE REQUIREMENTS MUST BE APPROVED BY THE CITY ENGINEER.

REGULATORY REQUIREMENTS

SANITARY SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN, MEASURED FROM THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. IN LOCATIONS WHERE AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN CANNOT BE MAINTAINED, WATERTIGHT SANITARY CONDUIT SHALL BE INSTALLED. THE WATERTIGHT SANITARY CONDUIT SHALL BE PVC PIPE CONFORMING TO AWWA C900 (748.02) WITH JOINTS AND FITTINGS CONFORMING TO ASTM D3139 AND BEDDING CLASSIFICATION AND INSTALLATION SPECIFICATIONS PER ASTM D2321.

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GENERAL NOTES

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V. SANITARY SEWERS / STORM SEWERS (continued)

SANITARY SEWERS CROSSING WATER MAINS SHALL BE LAID TO A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE DISPOSAL SYSTEM ARE PROHIBITED.

STORM SEWER AND DRAINAGE STRUCTURE GENERAL NOTES

ALL STORM PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES CONSTRUCTED AS PART OF THE PROJECT SHALL CONFORM WITH ODOT 611 WITH THE FOLLOWING MODIFICATIONS:

UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR SHOWN IN THE PLANS, ALL TYPE A, TYPE B, TYPE C, TYPE D, TYPE E, AND TYPE F STORM CONDUITS SHALL BE CORRUGATED POLYETHYLENE SMOOTH LINED PIPE (707.33).

CATCH BASINS AND MANHOLES WITHIN CITY RIGHT-OF-WAY SHALL BE CONSTRUCTED PER APPLICABLE CITY ENGINEERING STANDARD DRAWINGS.

THE CONTRACTOR SHALL FURNISH AN INSTALLATION PLAN AS PER ODOT 611 THAT CONFORMS WITH THE FOLLOWING CITY OF CANTON SPECIFICATIONS FOR ALLOWABLE BEDDING AND BACKFILL IN STORM SEWER TRENCHES:

BEDDING AND STRUCTURAL BACKFILL - FURNISH MATERIALS CONFORMING TO:

ODOT 703.11 TYPE 3 (AKA AASHTO M43 SIZE NO 57 OR 67) EXCEPT NO SAND, AIR-COOLED BLAST FURNACE SLAG, OR RECYCLED PORTLAND CEMENT CONCRETE ALLOWED.

FINAL BACKFILL - FURNISH MATERIALS CONFORMING TO:

GRANULAR STRUCTURAL BACKFILL - 703.11, TYPE 2 ONLY WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR GRAVEL ONLY EXCEPT NO SAND, AIR-COOLED BLAST FURNACE SLAG, OR RECYCLED PORTLAND CEMENT CONCRETE ALLOWED; OR

ITEM 304 - 703.17 WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR CRUSHED GRAVEL ONLY EXCEPT NO CRUSHED AIR-COOLED BLAST FURNACE SLAG OR STEEL SLAG ALLOWED; OR

ITEM 411 - 703.18 AS APPLICABLE TO ITEM 411 WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR GRAVEL ONLY EXCEPT NO AIR-COOLED BLAST FURNACE SLAG, GRANULATED SLAG, OPEN HEARTH SLAG, BASIC OXYGEN FURNACE SLAG, ELECTRIC ARC FURNACE SLAG, RECYCLED PORTLAND CEMENT CONCRETE, OR RECLAIMED ASPHALT PAVEMENT ALLOWED; OR

ITEM 613 LOW STRENGTH MORTAR BACKFILL - ALLOWABLE ONLY UNDER SPECIAL CIRCUMSTANCES AS APPROVED BY THE CITY ENGINEER.

FINAL BACKFILL COMPACTION DENSITY SHALL BE A MINIMUM OF 98%.

BACKFILL MATERIAL WITHIN FOUR (4) FEET OF THE FINISHED SURFACE SHALL BE FREE OF SAND, RECYCLED PORTLAND CEMENT CONCRETE, OR SLAG OF ANY FORM.

UNRECORDED SANITARY AND STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ANY UNRECORDED SANITARY AND STORM WATER DRAINAGE ENCOUNTERED AS DIRECTED BY THE CITY ENGINEER.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO INSTALL THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR EXISTING APPURTENANCE TO BE CONNECTED DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 ITEM OR AS OTHERWISE DIRECTED BY THE CITY ENGINEER.

VI. STORM WATER AND EROSION CONTROL:

NPDES CONSTRUCTION STORM WATER PERMIT

THIS PROJECT'S PROPOSED EARTH-DISTURBANCE IS ONE (1) OR MORE ACRES. THEREFORE, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION STORM WATER PERMIT IS REQUIRED FROM OHIO EPA. THE CONTRACTOR SHALL OBTAIN CO-PERMITTEE COVERAGE FROM OHIO EPA AND SHALL COORDINATE WITH THE CITY OF CANTON AND/OR STARK SWCD AS DIRECTED FOR ANY ADDITIONAL RELATED REQUIREMENTS. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE NPDES CONSTRUCTION STORM WATER PERMIT, THE CURRENT OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL, THE CURRENT CITY OF CANTON STORM WATER MANAGEMENT MANUAL, AND THE CURRENT STARK COUNTY STORMWATER QUALITY REGULATIONS.

STORM WATER POLLUTION PREVENTION

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE PROPER MANAGEMENT OF EROSION, SEDIMENT, AND OTHER CONSTRUCTION POLLUTANTS FROM THE PROJECT SITE.

THE CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES (BMPs) AS NECESSARY OR AS DIRECTED BY THE CITY TO CONTROL SEDIMENT, EROSION, AND OTHER CONSTRUCTION-RELATED POLLUTANTS ON THE SITE AND TO PREVENT THE DISCHARGE OF POLLUTANTS FROM ENTERING DRAINAGE SYSTEMS, STREETS, AND ADJACENT PROPERTIES. UNLESS SEPARATE PAY ITEMS ARE PROVIDED, THE USE OF BMPs ARE CONSIDERED INCIDENTAL TO THE PROJECT.

UPON DISCOVERY OF ANY HAZARDOUS MATERIALS ENTERING ANY STORM DRAINAGE SYSTEMS, THE CONTRACTOR SHALL CALL 911 IMMEDIATELY AND SUBSEQUENTLY NOTIFY THE CITY'S PROJECT REPRESENTATIVE.

STORM WATER PRECONSTRUCTION MEETING

A SEPARATE PRECONSTRUCTION MEETING SHALL OCCUR ON-SITE BETWEEN THE CONTRACTOR AND THE STARK SOIL & WATER CONSERVATION DISTRICT (SWCD). THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THIS MEETING. NO LAND-DISTURBANCE ACTIVITIES SHALL START UNTIL SAID MEETING HAS OCCURRED AND APPROVAL HAS BEEN GRANTED BY STARK SWCD.

INSPECTIONS FOR COMPLIANCE WITH STORM WATER REGULATIONS

THIS PROJECT IS SUBJECT TO INSPECTION BY THE CITY OF CANTON AND/OR ITS AUTHORIZED REPRESENTATIVES (I.E. STARK SWCD) TO ENSURE COMPLIANCE WITH PERMIT AND STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS AND LOCAL STORM WATER QUALITY REGULATIONS.

THE CONTRACTOR AND HIS REPRESENTATIVES SHALL COMPLY WITH ALL REQUIREMENTS AND CONDITIONS OF THE APPROVED STORM WATER POLLUTION PREVENTION PLAN AS WELL AS ANY ASSOCIATED ORDERS BY REGULATORY AGENCIES. PAYMENT OF ANY FEES/FINES ASSOCIATED WITH NON-COMPLIANCE BY THE CONTRACTOR ARE THE CONTRACTOR'S RESPONSIBILITY AND WILL NOT BE PAID BY THE CITY OF CANTON.

CONTINUATION OF STORM SEWER SERVICE

STORM SEWERS SHALL BE MAINTAINED WITHOUT INTERRUPTION UNLESS APPROVED BY THE CITY ENGINEER.

REVIEW OF STORM DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTION PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT AS DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT ODOT 611 CONDUIT ITEMS, AS APPLICABLE. IF A PAY ITEM IS NOT AVAILABLE, THE WORK IS CONSIDERED INCIDENTAL TO THE PROJECT.

VII. TRAFFIC:

(A) MAINTAINING TRAFFIC:

THE CONTRACTOR SHALL MAINTAIN TRAFFIC ADJACENT TO AND THROUGH THE PROJECT AS DESCRIBED IN THESE PLANS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 614 MAINTAINING TRAFFIC. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGS, FLAGMEN, WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, OR BARRIERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES.

ANY TEMPORARY ROADWAY CLOSING MUST BE APPROVED IN WRITING BY THE CITY TRAFFIC ENGINEER AND ANY OTHER PUBLIC AGENCY HAVING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEER AT LEAST 72 HOURS IN ADVANCE OF ANY SUCH CLOSINGS FOR PUBLICATION AND EMERGENCY AGENCY NOTIFICATION.

(B) RESIDENTIAL AND BUSINESS AREAS:

THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL RESIDENCES AND BUSINESSES DURING CONSTRUCTION. IN THE EVENT A DRIVE ACCESS NEEDS TO BE CLOSED, THE CONTRACTOR SHALL GIVE NOTICE OF CLOSURE AND DURATION TO THE PROPERTY OWNER 24 HOURS IN ADVANCE. CONTRACTOR SHALL ARRANGE FOR ALTERNATE PARKING AND REASONABLE ACCESS FOR THOSE PROPERTY OWNERS AFFECTED BY DRIVE CLOSURES.

(C) EXISTING STREET NAME AND TRAFFIC CONTROL SIGNS:

WHERE WORK REQUIRES THE MOVEMENT OF EXISTING SIGNS (STOP SIGNS, SPEED LIMIT SIGNS, NO PARKING SIGNS, ETC.). THE CONTRACTOR IS REQUIRED TO MAINTAIN THE FUNCTION OF ALL TRAFFIC CONTROL SIGNS. ALL SIGNS REMOVED BY THE CONTRACTOR SHALL BE STORED ON SITE AND REINSTALLED BY THE CONTRACTOR.

(D) NEW STREET NAME & TRAFFIC CONTROL SIGNS:

ALL STREET NAME AND TRAFFIC CONTROL SIGNS SHALL COME COMPLETE AND BE MADE IN ACCORDANCE WITH THE CITY OF CANTON SIGN AND PAINT DEPARTMENT SPECIFICATIONS. GENERALLY, ALL SIGNS SHALL HAVE HI-INTENSITY SHEETING AND BE MADE WITH .080 50/52 ALUMINUM. STREET NAME SIGNS SHALL BE MADE WITH WHITE UPPER AND LOWER CASE LETTERING ON GREEN BACKGROUND USING 9" BLANKS, BE DOUBLED SIDED W/RADIUS CORNERS AND HAVE 6" NAME AND 3" SUFFIXES. ALL SIGN RELATED HARDWARE IS TO BE INCLUDED, SUCH AS 6" HEAVY DUTY U-CHANNEL CAPS AND STREET NAME CROSSES.

FOR SUBDIVISION DEVELOPMENTS, ALL PERMANENT STREET NAME SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER/CONTRACTOR.

(E) EXISTING TRAFFIC SIGNALS:

WHERE WORK REQUIRES INTERFERENCE WITH EXISTING SIGNALIZATION IN THE INTERSECTIONS, ALL WORK SHALL BE COORDINATED THROUGH THE CITY ENGINEER. THE CONTRACTOR SHALL NOT ALTER ANY SIGNALIZATION WITHOUT THE CITY ENGINEER'S AUTHORIZATION.

(F) NEW TRAFFIC SIGNALIZATION:

ALL NEW OR MODIFIED TRAFFIC SIGNALIZATION AT INTERSECTIONS SHALL BE IN ACCORDANCE WITH CITY TRAFFIC ENGINEERING TRAFFIC CONTROL GENERAL NOTES AND ODOT SPECIFICATIONS; WITH SPECIAL EMPHASIS ON ODOT ITEMS 625, 632, 633, 732, AND 733 WHICH DEALS WITH TRAFFIC CONTROL.

VIII. WATER MAIN / SERVICES:

- ALL WATER MAINS, SERVICES AND APPURTENANCES SHALL BE DESIGNED AND CONSTRUCTED ACCORDING TO THE CITY OF CANTON WATER DEPARTMENT REQUIREMENTS AND SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL (EXCEPT THE CITY WILL PROVIDE THE PIPE AND FITTINGS), EXCAVATION, BEDDING, BACKFILL, AND OTHER ITEMS NECESSARY FOR THE RELOCATION AND INSTALLATION OF THE WATER MAINS, SERVICES, AND APPURTENANCES. THESE COSTS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL THE ITEMS IN THE PROPOSAL.
- MAINS - WATER MAINS PROVIDED BY THE CITY WILL BE CLASS 52 (8" AND UNDER), CLASS 53 (12") OR CLASS 54 (OVER 12") DUCTILE IRON, MEETING AWWA C151 WITH PUSH JOINTS. THE OUTSIDE SURFACE OF ALL DUCTILE IRON PIPE, FITTINGS AND APPURTENANCES SHALL BE SHOP COATED WITH EITHER ASPHALTIC MATERIAL. IF THE COATING MATERIAL IS FOUND TO BE DAMAGED PRIOR TO THE PIPE TRENCH BEING BACKFILLED, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL APPROVED MATERIAL AS REQUIRED TO REPAIR AS DIRECTED. THE CONTRACTOR SHALL HAVE SUFFICIENT COATING MATERIALS AVAILABLE AT THE JOB SITE PRIOR TO LAYING THE PIPE. THE INTERIOR OF ALL PIPES AND FITTINGS SHALL BE LINED WITH CEMENT MORTAR AND SEAL COATED IN COMPLETE CONFORMANCE WITH AWWA C104, OR THE LATEST REVISION.

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VIII. WATER MAIN / SERVICES (continued):

- 3. ALL DUCTILE IRON PIPE PROVIDED BY THE CITY, INCLUDING FITTINGS, BENDS, TEES, VALVES AND APPURTENANCES BURIED UNDERGROUND, SHALL BE ENCASED WITH 8 MIL. POLYETHYLENE FILM CONFORMING TO AWWA C105.
- 4. PLASTIC PIPE LARGER THAN 2" SHALL BE JM EAGLE, ULTRA BLUE PVCO AWWA C909 PRESSURE PIPE, PRESSURE CLASS 235, OR APPROVED EQUAL AND INSTALLED PER MANUFACTURER RECOMMENDATION.
- 5. WHEN PLASTIC PIPE IS USED, A TRACER WIRE SHALL BE INSTALLED ON TOP OF THE PIPE.
 - A. THE TRACER WIRE SHALL BE #14 AWG COPPER CLAD STEEL WIRE WITH 30 MILS OF HIGH-DENSITY POLYETHYLENE (HDPE) INSULATION.
 - B. THE TRACER WIRE SHALL BE INSTALLED IN A CONTINUOUS FASHION WITH THE WIRE ON TOP OF THE WATER MAIN AND SECURE TO THE MAIN EVERY FIVE (5) FEET WITH TAPE.
 - C. THE TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT EVERY VALVE BOX AND/OR AS CALLED OUT IN THE DRAWINGS. TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT LEAST EVERY ONE THOUSAND (1,000) FEET.
 - D. IF THE WIRE COATING GETS DAMAGED, REPAIR DAMAGED COATING WITH ELECTRICAL TAPE.
 - E. THE TRACER WIRE SHALL PASS A CONTINUITY TEST BEFORE THE WATERLINE INSTALLATION IS ACCEPTED.
- 6. THE MINIMUM COVER OVER WATER MAINS SHALL BE 4'-6" FROM GROUND SURFACE TO THE BARREL OF THE PIPE.
- 7. PIPE LENGTHS MAY BE DEFLECTED AT THE JOINT, IF REQUIRED, AT ONE-HALF THE DEGREE RECOMMENDED BY THE MANUFACTURER.
- 8. FITTINGS PROVIDED BY THE CITY WILL BE DUCTILE IRON AND BE RATED FOR 250 PSI WORKING PRESSURE IN ACCORDANCE WITH AWWA C10 OR AWWA C153. FITTINGS SHALL INCLUDE, BUT NOT LIMITED TO BENDS, TEES, SLEEVES, COUPLINGS, CROSSES, REDUCERS AND CAPS.
- 9. ANY FITTINGS OR VALVES ADJACENT TO A TEE OR CROSS SHALL BE ANCHORED TO THE TEE OR CROSS WITH EITHER THE USE OF AN ANCHOR TEE OR ANCHOR CROSS AND/OR ANCHOR COUPLINGS.
- 10. VALVES (PROVIDED BY THE CITY) - THE ITEMS COVERED BY THIS SPECIFICATION SHALL MEET ALL APPLICABLE AWWA C509 OR C515 STANDARDS AND THE FOLLOWING: ALL VALVES SHALL BE NON-RISING STEM, IRON BODY, RESILIENT WEDGE DISC. THE DESIGN OF THE THRUST COLLAR SHALL BE SUCH THAT THE THRUST COLLAR IS SEALED FROM LINE PRESSURE BY MEANS OF AN "O" RING SEAL. ALL VALVES SHALL BE FURNISHED WITH A TWO (2) INCH SQUARE OPERATING NUT, OPEN RIGHT. ALL VALVES SHALL BE FURNISHED WITH MECHANICAL JOINT END CONNECTIONS. THE STEM SHALL BE PROTECTED FROM EXTERNAL GRIT BY A WEATHER SHIELD AND AN UPPER "O" RING. STEM SHALL BE LUBRICATED. GATE COATING SHALL HAVE A MINIMUM THICKNESS OF 10 MILS. VALVE SHALL BE TESTED AT THE RATED WORKING PRESSURE OF 250 PSI WITH NO LEAKAGE. SHELL TEST OF 500 PSI SHALL BE APPLIED TO BODY WITH VALVE IN THE OPEN POSITION WITH NO LEAKAGE THROUGH THE METAL, STEM SEALS OR JOINTS. VALVE MUST HAVE TRADITIONAL STUFFING BOX. ALL BOLTING MATERIAL IN THE THRUST COLLAR AND BONNET SHALL BE #316 SS BOLTS. ALL VALVES WITH ACCESSORIES PACK (FLANGES, RUBBERS, NUTS, BOLTS)
- 11. ALL VALVE BOXES PROVIDED BY THE CITY WILL BE HEAVY DUTY, THREE (3) PIECE SCREW TYPE, WITH "WATER" LIDS.
- 12. FLUSHING AND DISINFECTION OF WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C651.
- 13. ALL WATER LINE PRESSURE TESTING SHALL CONFORM TO AWWA C600.
- 14. WATER MAINS SHALL BE INSTALLED AND BACKFILLED PER O.D.O.T. ITEM 638.
- 15. WATER LINES LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER WATER MAINS SHALL BE INSTALLED AS TYPE C CONDUITS. BEDDING SHALL BE AS SPECIFIED, EXCEPT THAT SLAG WILL NOT BE PERMITTED.
- 16. ALL FITTINGS (BENDS, TEES, VALVES, DEAD ENDS, ETC.) SHALL BE RESTRAINED UTILIZING MEGALUGS, FIELD LOK GASKETS OR APPROVED EQUAL. POURED-IN-PLACE CONCRETE THRUST BLOCKS MAY ALSO BE REQUIRED AT/FOR EACH FITTING. THIS BLOCKING SHALL BE CAREFULLY PLACED TO ENSURE IT IS POSITIONED PROPERLY TO WITHSTAND THE RESULTANT FORCES AT EACH FITTING AND SHALL BEAR ON STABLE UNDISTURBED GROUND CAPABLE OF WITHSTANDING THE POTENTIAL LOADING. WHEN DIRECTED BY THE CITY, TIE RODS ARE TO BE 3/4 INCH DIAMETER. TWO TIE RODS ARE REQUIRED FOR AN 8 INCH PIPE, AND FOUR TIE RODS ARE REQUIRED FOR 12 INCH AND GREATER PIPE. THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FITTINGS.
- 17. IN ADDITION TO THE RESTRAINT OF ALL BENDS, FITTINGS, TEES, VALVES, DEAD ENDS, ETC. THE CONTRACTOR SHALL ALSO SECURE/RESTRAIN ALL JOINTS FOR AT LEAST THREE (3) PIPE JOINTS (50 LF MIN.) BEYOND EACH DEAD END, BEND, FITTING, VALVE, TEE, ETC. UTILIZING MEGALUGS, FIELD LOK GASKETS, OR APPROVED EQUALS.

- 18. THE CONTRACTOR SHALL PROVIDE 18" VERTICAL CLEARANCE BETWEEN PROPOSED WATERLINES AND ANY SANITARY OR STORM SEWERS. WHEN 18" CLEARANCE CANNOT BE OBTAINED:
 - FOR STORM SEWERS, CONCRETE ENCASE THE STORM SEWER PIPE, 6 FT. ON EACH SIDE OF WATER MAIN.
 - FOR SANITARY SEWERS, REPLACE THE SANITARY SEWER PIPE WITH PVC C900 PIPE, 10 FT. ON EACH SIDE OF THE WATER MAIN. APPROVED COUPLINGS SHALL BE USED TO TIE ONTO THE EXISTING SEWER.
 THE CONTRACTOR SHALL MAINTAIN TEN (10) FOOT HORIZONTAL CLEARANCE BETWEEN WATERLINES/SERVICES AND SANITARY OR STORM SEWERS.
- 19. HYDRANTS - THE FIRE HYDRANT SETTING SHALL INCLUDE THE HYDRANT, ANCHOR TEE, VALVE, VALVE BOX, 6 INCH DUCTILE IRON (CLASS 52) PIPING AND ALL FITTINGS NEEDED FOR PROPER INSTALLATION TO FINAL GRADE. FIRE HYDRANTS SHALL BE MUELLER A423 MEETING THE CITY OF CANTON WATER DEPARTMENT STANDARDS AND REQUIREMENTS. ALL COSTS FOR THE 6" PIPING ASSOCIATED WITH THE INSTALLATION OF FIRE HYDRANTS SHALL BE INCLUDED WITH THE FIRE HYDRANT PAY ITEM. ALL HYDRANTS SHALL BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET. ALL FIRE HYDRANT THREADS SHALL BE LUBRICATED WITH A FOOD GRADE LUBRICANT AND OPERATED UPON INSTALLATION.
- 20. CUT-IN SLEEVES FOR TIE-IN TO EXISTING WATER MAINS SHALL BE SMITH BLAIR 441 SLEEVES WITH #316 SS BOLTS.
- 21. ALL WATER TAPS AND SERVICES MUST BE INSTALLED BEFORE ANY PAVEMENT FOR THE PROPOSED ROADWAY HAS BEEN PLACED. THE CONTRACTOR SHALL MAKE ALL SERVICE TAPS ON THE WATER MAIN.
- 22. PRIOR TO MAKING THE TAP, THE CONTRACTOR SHALL EXPOSE THE EXISTING CURB BOX AND VERIFY THE SIZE OF THE WATER SERVICE LINE ON THE OWNER'S SIDE. THE PROPOSED TAP AND SERVICE SHALL MATCH THE SIZE OF THE OWNER'S SERVICE LINE, WITH 1" BEING A MINIMUM. AN EXISTING 1/4" SERVICE SHALL BE REPLACED WITH A 1/2" SERVICE AND TAP.
- 23. THE PROPOSED WATER SERVICES AND TAPS SHALL BE 1" UNLESS NOTED OTHERWISE ON THE PLANS OR DETERMINED OTHERWISE PER PREVIOUS NOTE.
- 24. ANY SERVICE TO THE FAR SIDE OF THE STREET SHALL BE PUSHED OR BORED UNDER THE PAVEMENT. TRENCHING ACROSS THE ROAD IS NOT PERMITTED.
- 25. THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN IN SERVICE, ANY EXISTING WATER MAINS AND/OR SERVICES EXPOSED DURING CONSTRUCTION. IF THE CONTRACTOR BREAKS A WATER MAIN AND/OR SERVICE, HE SHALL BE RESPONSIBLE TO REPAIR THE BREAK, AT HIS OWN EXPENSE, AND WILL NOT BE COMPENSATED FOR ANY DOWNTIME.
- 26. ANY WATER SERVICE LINE THAT IS BROKEN, CUT OR OTHERWISE DAMAGED, SHALL BE REPLACED FROM THE CORPORATION STOP TO THE CURB STOP WITH A SINGLE PIECE OF HDPE TUBING, CTS, PE4710. NO SPLICING OF THE SERVICE LINE WILL BE PERMITTED.
- 27. SERVICE BRANCHES WILL BE INSTALLED AS PER O.D.O.T ITEM 638.16, WITH THE FOLLOWING EXCEPTIONS:
 - 1. WHEN A SERVICE BRANCH IS DISTURBED FOR LOWERING, RAISING, EXTENDING OR SHORTENING ON THE PROPERTY SIDE ON THE SERVICE STOP, IT SHALL BE REPLACED WITH NEW MATERIALS FROM THE CORPORATION STOP TO THE SERVICE STOP.
- 28. IN A STREET IMPROVEMENT, NO EXISTING WATER CURB BOX WILL BE LEFT IN THE PAVEMENT, CURB AND GUTTER OR SIDEWALK. THE CURB BOX WILL BE MOVED TO A SUITABLE LOCATION DETERMINED BY THE CANTON WATER DEPARTMENT. WHEN THE CURB BOX IS MOVED, ALL NEW MATERIAL WILL BE USED FROM THE CORPORATION STOP TO THE CURB STOP WHICH IS A SINGLE PIECE OF HDPE TUBING CTS, PE4710. NO SPLICING OF THE SERVICE LINE WILL BE PERMITTED. A NEW TAP (CORPORATION STOP) AND CURB STOP AND BOX MAY ALSO BE REQUIRED. THE DETERMINATION WILL BE MADE BY THE CANTON WATER DEPARTMENT.
- 29. POLYETHYLENE WATER MAIN AND SERVICE TUBING 2" AND UNDER SHALL BE COPPER TUBE SIZE, SDR 9, WITH A MINIMUM PRESSURE CLASS OF 200 PSI AND MEET STANDARDS ASTM-D2737 PE4710 AND AWWA C901. THE ACCEPTABLE TUBING IS CP CHEM PERFORMANCE PIPE DRISCOPLEX 5100-ULTRA-LINE, CHARTER PLASTICS INC. BLUE ICE, ENDOT ENDOPURE AND ADS POLYFLEX.
- 30. REGARDLESS OF THE SERVICE LINE SIZE, THE WATER SERVICE FROM THE CURB BOX TO THE FACILITY, MUST BE INSTALLED BY A CITY OF CANTON LICENSED PLUMBER. A CITY OF CANTON PLUMBING PERMIT MUST BE ISSUED TO THE PLUMBER INSTALLING THE SERVICE LINE BEFORE THE WATER SERVICE CAN BE INSTALLED.
- 31. THE PROPOSED FACILITIES SHALL MAINTAIN A MINIMUM 35 PSI PRESSURE DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.
- 32. A MINIMUM PRESSURE OF 20 PSI AT GROUND LEVEL SHALL BE MAINTAINED AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW.
- 33. BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.

- 34. ALL WATER MAINS WILL BE INSTALLED UNDER THE PAVEMENT WITH A MINIMUM OF FEET FROM THE EDGE OF PAVEMENT OR THE CURB AND/OR GUTTER. IN EXISTING STREETS, A SAW CUT WILL BE MADE TO ENSURE A CLEAN EDGE.
- 35. WHEN AN EXISTING WATER MAIN MUST BE SHUT DOWN TO PERFORM REQUIRED WORK, THE CONTRACTOR SHALL NOTIFY THE PROPERTIES TO BE AFFECTED A MINIMUM OF 24 HOURS IN ADVANCE OF SAID SHUT DOWN. THE WORK WILL BE SCHEDULED AND COORDINATED TO MINIMIZE THE TIME THE MAIN IS OUT OF SERVICE.
- 36. THE CONTRACTOR SHALL NOTIFY THE CITY 48 HOURS IN ADVANCE OF ANY SHUT DOWN OF AN EXISTING MAIN. THE CONTRACTOR WILL NOT OPERATE ANY VALVES. VALVES WILL BE OPERATED BY CANTON WATER DEPARTMENT PERSONNEL ONLY. VALVES DAMAGED BY THE CONTRACTOR'S OPERATION WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 37. ALL VALVE BOXES WILL BE ADJUSTED TO FINAL GRADE OF SURROUNDING PAVEMENT OR FINISHED SURFACE TREATMENTS WHEN THE PROJECT IS COMPLETED.
- 38. ANY DIGGING WITHIN THE RIGHT-OF-WAY OF ANY STREET REQUIRES A ROAD OPENING PERMIT. PLEASE CONTACT THE APPROPRIATE GOVERNMENTAL ENTITY FOR INFORMATION REGARDING THE PERMITTING PROCESS AND/OR FEES DUE.
- 39. THE CONTRACTOR SHALL REPLACE ANY TRAFFIC SIGNAL LOOP DETECTOR WIRE DAMAGED DURING THE WATERLINE INSTALLATION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- 40. THE CONTRACTOR SHALL REPLACE ANY ROADWAY PAVEMENT MARKINGS DAMAGED OR REMOVED DURING THIS PROJECT. THE PAVEMENT MARKINGS SHALL BE PER THE GOVERNING AUTHORITY'S SPECIFICATIONS. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- 41. THE CONTRACTOR SHALL REPLACE ANY PRIVATE IRRIGATION SYSTEMS AND/OR UNDERGROUND ELECTRIC FENCES THAT ARE DAMAGED OR REMOVED DURING THE WATERLINE CONSTRUCTION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- 42. VALVES THAT ARE CALLED OUT TO BE ABANDONED SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO ABANDON EXISTING WATER VALVES. THIS ITEM SHALL ALSO INCLUDE ANY NECESSARY EXCAVATION AND BACKFILL REQUIRED. VALVES SHALL BE CLOSED AND HAVE THE TOP 6" OF THE CASTING REMOVED. VALVES IN PAVEMENT SHALL BE FILLED WITH CONCRETE WITH THE TOP 6" MATCHING THE EXISTING PAVEMENT COMPOSITION. VALVES IN YARD AREA SHALL BE FILLED WITH SAND.
- 43. FIRE HYDRANTS THAT ARE CALLED OUT TO BE REMOVED SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO REMOVE THE FIRE HYDRANT, HYDRANT VALVE AND PLUG THE HYDRANT TEE.
- 44. FOR WATERLINES CALLED OUT TO BE ABANDONED, THE CONTRACTOR SHALL PLUG AND ABANDON THE EXISTING WATERLINE WITH A DUCTILE IRON PLUG OR AS DIRECTED BY THE CANTON WATER DEPARTMENT.
- 45. REMOVAL OF ANY EXISTING THRUST BLOCKS WILL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT COST.

IX. POST CONSTRUCTION INCIDENTALS

(A) AS-BUILT DRAWINGS:

AS-BUILT REPRODUCIBLE MYLARS SHALL BE PROVIDED TO THE CITY OF CANTON BY THE DESIGN ENGINEER AT THE COMPLETION OF THE PROJECT. AS-BUILT INFORMATION CONSISTS OF POST-CONSTRUCTION FIELD SURVEY DATA OF THE LOCATION, FLOWLINE ELEVATIONS, AND TOP-OF-GRATE/RIM ELEVATIONS FOR ALL STORM AND SANITARY STRUCTURES CONSTRUCTED AND/OR IMPACTED BY THE PROJECT.

FOR PRIVATE PROJECTS, THE CONSTRUCTION BOND WILL NOT BE RELEASED UNTIL THE AS-BUILT DRAWINGS HAVE BEEN ACCEPTED.

(B) PROPOSED MONUMENTATION:

THE DEVELOPER'S/CONTRACTOR'S SURVEYOR SHALL NOTIFY THE CITY ENGINEER IN WRITING UPON THE COMPLETION OF MONUMENTS BEING SET AS PER PLAN OR RECORD PLAT.

(C) RELEASE OF RETAINER/BONDS:

PRIOR TO THE RELEASE OF RETAINER/CONSTRUCTION BOND BY THE CITY OF CANTON, THE CONTRACTOR SHALL HAVE COMPLETED THE ENGINEER'S PROJECT PUNCHLIST AND SUBMIT FINAL WAIVER OF LIEN, IN ACCORDANCE WITH CITY SS 01-00.

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IX. POST CONSTRUCTION INCIDENTALS (continued)

ADDITIONAL AS PER PLAN NOTES:

ITEM 202 - ABANDON MISC.: SANITARY MANHOLE, AS PER PLAN

THIS ITEM SHALL CONSIST OF ABANDONING SANITARY SEWER MANHOLES AT LOCATIONS SHOWN IN THE PLANS. REMOVE THE UPPER PORTION OF CONCRETE AND/OR MASONRY MANHOLES INCLUDING TOP SLAB, CONE, FRAME, GRATE, COVER, GRADE RINGS, ETC., AS APPLICABLE, TO A MINIMUM DEPTH OF 4 FEET BELOW FINAL GRADE.

BULKHEAD ALL PIPE PENETRATIONS WITHIN THE MANHOLE. BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

FILL MANHOLES WITH ODOT 613 - LOW STRENGTH MORTAR TO THE BOTTOM OF PROPOSED PAVEMENT. IN UNPAVED AREAS, FILL WITH ODOT 613 - LOW STRENGTH MORTAR TO A DEPTH 12" BELOW FINAL GRADE.

ALL COSTS SHALL BE INCLUDED WITH UNIT PRICE BID (EACH) FOR ITEM 202 - ABANDON MISC.: SANITARY MANHOLE.

ITEM 202 - PLUG 8" AND SMALLER SANITARY CONDUIT, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT TO BE ABANDONED, FOR CONDUITS 8" AND SMALLER.

BULKHEADS SHALL CONSIST OF BRICK AND/OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

ITEM 202 - ABANDON MISC.: BULKHEAD, GROUT AND ABANDON SANITARY SEWER, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE ABANDONMENT OF VARIOUS SIZED SANITARY SEWERS CONDUITS AT LOCATIONS SHOWN IN THE PLANS WITH CONSTRUCTION OF BULKHEADS IN THE EXISTING CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH FILLED AND PLUGGED CONDUITS TO BE PAID SHALL BE THE NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

ITEM 609 - CURB, MISC.: CONCRETE CURB, CANTON TYPE 1

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE CITY OF CANTON STANDARD CONSTRUCTION DRAWINGS CE 30.

ITEM 611 - CONDUIT

THIS ITEM SHALL CONSIST OF CONSTRUCTING AND TESTING CONDUIT OF THE SIZE AND TYPE AT THE LOCATIONS, GRADES, AND ELEVATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH "SANITARY SEWER AND DRAINAGE STRUCTURE GENERAL NOTES"

SURFACE RESTORATION WITHIN NON-PAVEMENT AREAS SHALL CONSIST OF ITEM 659-TOPSOIL AND ITEM 659-SEEDING AND MULCHING WITHIN THE DISTURBED AREA AND THE COST SHALL BE INCIDENTAL TO THE COST OF THE CONDUIT.

ITEM 611 - MANHOLE, COMPLETE, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING AND TESTING SANITARY MANHOLES OF THE SIZE AND AT THE LOCATIONS AND ELEVATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH "SANITARY SEWERS AND DRAINAGE STRUCTURES GENERAL NOTES".

ITEM 611 - MANHOLE WITH OUTSIDE DROP CONNECTION, COMPLETE, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING AND TESTING NEW SANITARY MANHOLES WITH DROP CONNECTIONS OF THE SIZE AND AT THE LOCATIONS AND ELEVATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH "SANITARY SEWERS AND DRAINAGE STRUCTURES GENERAL NOTES" AND CITY STANDARD DRAWING NO. 10 FOR ADDITIONAL DETAILS.

ITEM 611 - 4" SANITARY LATERAL RECONNECTED, COMPLETE, AS PER PLAN

THIS ITEM SHALL CONSIST OF RECONNECTING 4" SANITARY LATERALS AT LOCATIONS AND ELEVATIONS SHOWN IN THE PLANS. THIS SHALL INCLUDE ALL BENDS, FITTINGS AND COUPLINGS NECESSARY TO COMPLETE IN PLACE AND SHALL BE IN ACCORDANCE WITH "SANITARY SEWERS AND DRAINAGE STRUCTURES GENERAL NOTES".

THE EXISTING LATERAL SHALL BE REPLACED FROM UNDISTURBED SOIL AT THE EDGE OF THE EXCAVATION TO THE WYE AT THE MAIN LINE GRAVITY SEWER. SLOPE OF LATERALS AT THE POINT OF CONNECTION WITH THE MAINLINE SEWER SHALL BE NO LESS THAN 1/8" PER FOOT

(1%) AND NO MORE THAN 12" PER FOOT (45°).

SANITARY WYES SHALL MATCH THE MATERIAL COMPOSITION OF THE MAINLINE GRAVITY SEWER.

LATERALS MUST BE LAID IN A MANNER TO MINIMIZE USE OF BENDS. HOWEVER, WHEN NECESSARY, USE TWO 45° BENDS IN LIEU OF 90° BENDS.

THE FOLLOWING INDIVIDUAL COMPONENTS ARE INCLUDED AS SEPARATE BID ITEMS ASSOCIATED WITH THIS ITEM:

SANITARY WYE (SIZES AS NOTED IN THE PLANS)

ANY ADDITIONAL BENDS, FITTINGS, REDUCERS, COUPLINGS, PIPE, BEDDING, BACKFILL, ETC. NECESSARY TO COMPLETE THE LATERAL RECONNECTION SHALL BE CONSIDERED INCIDENTAL TO THE "ITEM 611 - 4" SANITARY LATERAL RECONNECTED, COMPLETE, AS PER PLAN" COST.

ITEM 611 - RECONSTRUCTION TO GRADE (SANITARY MANHOLE), AS PER PLAN

RECONSTRUCTION TO GRADE OF EXISTING SANITARY MANHOLES SHALL FOLLOW CITY OF CANTON STANDARD DRAWINGS FOR MANHOLES, MANHOLE COVERS, MANHOLE ADJUSTMENTS, OR OTHER CITY OF CANTON STANDARDS, UNLESS NOTED OTHERWISE IN THE PLANS OR AS DIRECTED BY THE CITY ENGINEER.

ITEM 611 - RECONSTRUCTION TO GRADE (SANITARY LAMPHOLE), AS PER PLAN

RECONSTRUCTION TO GRADE OF EXISTING SANITARY MANHOLES SHALL FOLLOW CITY OF CANTON STANDARD DRAWINGS FOR MANHOLES, MANHOLE COVERS, MANHOLE ADJUSTMENTS, OR OTHER CITY OF CANTON STANDARDS, UNLESS NOTED OTHERWISE IN THE PLANS OR AS DIRECTED BY THE CITY ENGINEER.

ITEM 611 - CONDUIT, TYPE B, PVC PER AWWA C900 (748.02) PIPE AND FITTINGS, AS PER PLAN

THIS ITEM SHALL BE PROVIDED AS DIRECTED OR IN LOCATIONS NOTED IN THE PLANS AND SHALL CONSIST OF THE SIZES NOTED ON THE PLANS. ALL PIPE SHALL CONFORM TO THE REQUIREMENTS NOTED IN THE SANITARY GENERAL NOTES FOR LOCATIONS WHERE THE REGULATORY REQUIREMENT OF AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN CANNOT BE MAINTAINED.

ITEM 638 - X" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN

WATER MAIN SHALL BE IN ACCORDANCE WITH SECTION VIII. WATER MAIN/SERVICES OF THE GENERAL NOTES. THE CITY WILL SUPPLY THE PIPE, VALVES, FITTINGS, AND HYDRANTS.

ITEM 638 - X" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN

WATER MAIN SHALL BE IN ACCORDANCE WITH SECTION VIII. WATER MAIN/SERVICES OF THE GENERAL NOTES. THE CITY WILL SUPPLY THE PIPE, VALVES, FITTINGS, AND HYDRANTS.

ITEM 638 - X" GATE VALVE AND VALVE BOX, AS PER PLAN

WATER MAIN SHALL BE IN ACCORDANCE WITH SECTION VIII. WATER MAIN/SERVICES OF THE GENERAL NOTES. THE CITY WILL SUPPLY THE PIPE, VALVES, FITTINGS, AND HYDRANTS.

ITEM 690 - SPECIAL - SANITARY SEWER BYPASS PUMPING, AS PER PLAN

THE CONTRACTOR SHALL PROVIDE TEMPORARY BYPASS PUMPING WITHIN THE LIMITS OF THE SEWER REPLACEMENT / IMPROVEMENT AREA SHOWN ON THE PLANS

UNDER THIS ITEM, THE CONTRACTOR IS REQUIRED TO FURNISH ALL LABOR, MATERIALS, MAINTENANCE, ETC. TO IMPLEMENT A TEMPORARY BYPASS PUMPING SYSTEM FOR THE PURPOSE OF DIVERTING THE EXISTING FLOW WHENEVER FLOW IN ANY SEWER IS DISRUPTED BY THE REPLACEMENT OR CONSTRUCTION OF NEW SEWER SEGMENTS, LATERALS, MANHOLES, OR ASSOCIATED ACTIVITIES FOR THE DURATION OF THE SAID WORK.

THE BYPASS PUMPING SYSTEM MUST REMAIN OPERATIONAL UNTIL THE WORK IS COMPLETE, WHICH INCLUDES POST-CONSTRUCTION INSPECTION TO VERIFY COMPLETION AND QUALITY OF WORK.

THE TEMPORARY BYPASS PUMPING SYSTEM SHALL BE SIZED TO HANDLE FULL PIPE FLOW CONDITIONS.

THE SURCHARGE OF THE SEWERS SHALL NOT BE ALLOWED DUE TO INSUFFICIENT PUMPING OR NON-FUNCTIONING EQUIPMENT. THE CONTRACTOR MUST ALSO BE AWARE THAT

ADJACENT SEWERS MAY NOT BE AVAILABLE FOR BYPASS DISCHARGE DUE TO SURCHARGED CONDITIONS IN THOSE SEWERS DURING HEAVY RAINS. NO FLOW MONITORING DATA IS AVAILABLE FOR THIS PROJECT AREA. THE DESIGN, INSTALLATION, AND OPERATION OF THE TEMPORARY BYPASS PUMPING SYSTEM SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

THE CONTRACTOR SHALL DEMONSTRATE OR EMPLOY THE SERVICES OF A VENDOR WHO CAN DEMONSTRATE TO THE CITY ENGINEER THAT THE CONTRACTOR OR VENDOR SPECIALIZES IN THE DESIGN AND OPERATION OF TEMPORARY BYPASS PUMPING SYSTEMS. THE CONTRACTOR/VENDOR SHALL PROVIDE AT LEAST THREE (3) REFERENCES OF PROJECTS OF A SIMILAR SIZE AND COMPLEXITY AS THIS PROJECT PERFORMED BY THEIR WITHIN THE PAST FOUR YEARS.

BYPASS PUMPING PLAN ITEMS:

THE CONTRACTOR SHALL PREPARE AN INDIVIDUAL TEMPORARY BYPASS PUMPING PLAN WITH ASSOCIATED SCHEDULE FOR EACH AREA REQUIRING BYPASS PUMPING AND SUBMIT THREE (3) COPIES TO THE CITY ENGINEER FOR APPROVAL. NO WORK SHALL BE PERFORMED PRIOR TO OBTAINING APPROVAL OF THE SUBMITTED PLANS AND SCHEDULE. THE PLANS SHALL INCLUDE BUT NOT BE LIMITED TO THE DETAILS OF THE FOLLOWING:

1. STAGING AREAS FOR PUMPS
2. SEWER PLUGGING METHOD AND TYPES OF PLUGS
3. SIZE AND LOCATION OF MANHOLES OR ACCESS POINTS FOR SUCTION AND DISCHARGE HOSE OR PIPING
4. SIZE OF PIPELINE OR CONVEYANCE SYSTEM TO BE BYPASSED
5. NUMBER, SIZE, MATERIAL, LOCATION AND METHOD OF INSTALLATION OF SUCTION PIPING
6. NUMBER, SIZE, MATERIAL, LOCATION AND METHOD OF INSTALLATION AND LOCATION OF INSTALLATION OF DISCHARGE PIPING
7. BYPASS PUMP SIZES, CAPACITY, NUMBER OF EACH SIZE TO BE ON SITE AND POWER REQUIREMENTS, INCLUDING BACK-UP PUMPS TO PRIMARY PUMPS.
8. CALCULATIONS OF STATIC LIFT, FRICTION LOSSES, AND FLOW VELOCITY (PUMP CURVES SHOWING PUMP OPERATING RANGE SHALL BE SUBMITTED)
9. STANDBY POWER GENERATOR SIZE, LOCATION
10. DOWNSTREAM DISCHARGE PLAN
11. METHOD OF PROTECTING DISCHARGE MANHOLES OR STRUCTURES FROM EROSION AND DAMAGE
12. THRUST AND RESTRAINT BLOCK SIZES AND LOCATIONS
13. SECTIONS SHOWING SUCTION AND DISCHARGE PIPE DEPTH, EMBEDMENT, SELECT FILL, AND SPECIAL BACKFILL
14. METHOD OF NOISE CONTROL FOR EACH PUMP AND / OR GENERATOR. PUMPS AND GENERATORS SHALL BE CRITICALLY SILENCED. NOISE FROM THE PUMP AND / OR GENERATOR OPERATION SHALL NOT EXCEED 70 DECIBELS AT A DISTANCE OF 30 FEET FROM THE EQUIPMENT.
15. ANY TEMPORARY PIPE SUPPORTS AND ANCHORING REQUIREMENTS
16. DESIGN PLANS AND COMPUTATION FOR ACCESS TO BYPASS PUMPING LOCATIONS
17. CALCULATIONS FOR SELECTION OF BYPASS PUMPING PIPE SIZE
18. RECOMMENDED SEQUENCE OF OPERATIONS
19. SCHEDULE FOR INSTALLATION OF AND MAINTENANCE OF BYPASS SUCTION AND PUMPING LINES
20. PLAN THAT SHOWS THE LOCATION OF BYPASS PUMPING LINES

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ADDITIONAL AS PER PLAN NOTES (continued):

21. MAINTENANCE OF TRAFFIC DETAILS FOR BYPASS PIPING LOCATED WITHIN ROADWAYS AND DRIVEWAYS. SEE "BYPASS PUMPING MAINTENANCE OF TRAFFIC" BELOW FOR MORE DETAILS.
22. CONTINGENCY PLAN TO PROVIDE ADEQUATE MAINTENANCE OF FLOWS IN ORDER TO PREVENT SURCHARGING AND DAMAGE DURING HIGH FLOWS. THE CONTINGENCY PLAN SHALL INCLUDE PROCEDURES AND ESTIMATED DURATIONS TO REMOVE BYPASS PUMPING EQUIPMENT AND RELATED ITEMS IN ORDER TO OPEN THE AFFECTED SEWERS BACK UP TO CONVEYING FLOW WHEN REQUIRED TO PREVENT DAMAGE DURING HIGH FLOW EVENTS. THE CITY WILL NOT BE RESPONSIBLE FOR DAMAGES DUE TO HIGH FLOWS.
23. BYPASS PUMPING PLAN SUBMITTED FOR REVIEW AND APPROVAL SHALL BE STAMPED BY AN OHIO LICENSED P.E.

IMPACT ON EXISTING SYSTEM AND / OR PROPERTY

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEANS TO SAFELY CONVEY THE SEWAGE PAST THE SEWER INSTALLATION / IMPROVEMENT AREA. THE CONTRACTOR WILL NOT BE PERMITTED TO STOP OR IMPEDE THE MAIN FLOWS UNDER ANY CIRCUMSTANCES.

THE CONTRACTOR SHALL DIVERT THE FLOW AROUND THE WORK AREA IN A MANNER THAT WILL NOT CAUSE DAMAGE TO, OR SURCHARGE THE CITY'S SEWER SYSTEM AND WILL PROTECT PUBLIC AND PRIVATE PROPERTY FROM DAMAGE AND FLOODING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PHYSICAL DAMAGE AND / OR FLOODING TO THE CITY'S SEWER SYSTEM AND PUBLIC AND PRIVATE PROPERTY CAUSED BY HUMAN OR MECHANICAL FAILURE.

BACKUP EQUIPMENT

THE CONTRACTOR SHALL HAVE A BACKUP PUMP ON SITE AT ALL TIMES FOR ALL PUMPS INCLUDED IN THE BYPASS SYSTEM. THE CONTRACTOR SHALL HAVE A BACKUP POWER SYSTEM IN PLACE AND OPERATIONAL AT ALL TIMES DURING THE BYPASS PUMPING.

ALTERNATIVE ROUTING

THE CONTRACTOR MAY SUGGEST ALTERNATE ROUTING OR METHODS OF CONTROLLING THE SEWAGE, BUT, SHALL SUBMIT THEIR RECOMMENDATIONS TO THE CITY ENGINEER IN WRITING COMPLETE WITH SKETCHES OR DRAWINGS SHOWING LOCATIONS OF THE BYPASS SEWER AND CONSTRUCTION PROCEDURES FOR CROSSING STREETS, EXCAVATIONS FOR BENCHING ALONG WITH SUPPORT METHODS, ALL REQUIRED PERMIT INFORMATION, APPLICATIONS, FEES, ETC. THE CITY ENGINEER WILL REVIEW THE PROPOSED ALTERATIONS TO DETERMINE THAT THE RECEIVING SEWERS CAN ACCEPT THE FLOW AND THAT NO ACCESS OR STREET INTERFERENCE IS CREATED. THE CITY RESERVES THE RIGHT TO REJECT ANY, AND ALL, ALTERNATIVE ROUTING SUGGESTIONS OR OTHER METHODS IN LIEU OF BYPASS PUMPING AT THE CITY'S SOLE DISCRETION.

OPERATION REQUIREMENTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE BYPASS PUMPING OPERATIONS AND LEVELS IN TRIBUTARY SEWERS THAT ARE PLUGGED AND / OR USED FOR DIVERSION, IN ORDER TO PREVENT FLOODING OF CUSTOMERS AND BUILDINGS UPSTREAM FROM THE SEWER SECTIONS BEING INSTALLED / IMPROVED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO HEALTH AND / OR PROPERTY DUE TO HIGH FLOWS, INSUFFICIENT / MALFUNCTIONING EQUIPMENT, TEMPORARY BLOCKAGES, ETC. FOR THE DURATION OF THE CONTRACT.

THE TEMPORARY BYPASS PUMPING SYSTEM SHALL BE LOCATED WITHIN THE CITY'S RIGHT-OF-WAY AND EASEMENTS.

THE BYPASS PUMPING SYSTEM DESIGN AND INSTALLATION SHALL MEET THE REQUIREMENTS OF ALL CODES AND REGULATORY AGENCIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROTECT WATER RESOURCES, WETLANDS, AND OTHER NATURAL RESOURCES.

THE CONTRACTOR SHALL NOTIFY THE CITY AND AFFECTED PROPERTY OWNERS SURROUNDING THE PROJECT LIMITS OF THE SHORT-TERM INTERRUPTIONS TO SEWAGE SERVICE AND THE NOISE ASSOCIATED WITH THE BYPASS PUMPING OPERATION AT LEAST 72 HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF THE BYPASS PUMPING. THE NOTICE SHALL CLEARLY STATE THE APPROXIMATE TIME WHEN SEWAGE CANNOT BE RECEIVED BY THE COLLECTION SYSTEM AS WELL AS WHEN THE SEWER WILL BE AVAILABLE AGAIN FOR RECEIVING SEWAGE, AND THE PURPOSE OF THE WORK. IT SHALL ALSO ADVISE ALL AFFECTED CUSTOMERS AGAINST WATER USAGE UNTIL THE SANITARY SEWER LINE IS PLACED BACK IN SERVICE, AND SHALL CLEARLY STATE THE POTENTIAL CONSEQUENCES OF THE USE OF RESIDENTIAL WATER AND WASTEWATER GENERATING FACILITIES DURING THE TIME WHEN THE BUILDING SEWER SERVICE WILL BE OUT OF SERVICE (I.E. SEWER BACK-UP).

PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT BYPASS PUMPING AND FLOW CONTROL OPERATIONS SHALL NOT CAUSE FLOODING, OVERFLOWS, BASEMENT BACKUPS OR DAMAGE TO PUBLIC OR PRIVATE PROPERTIES. IN THE EVENT FLOODING, OVERFLOWS, BASEMENT BACKUPS OR DAMAGE OCCURS, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER IMMEDIATELY AND MAKE PROVISIONS TO CORRECT SUCH DAMAGE AT NO ADDITIONAL COST TO THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO PUBLIC OR

PRIVATE PROPERTY, FLOODING AND OVERFLOWS FROM THE SEWER SYSTEM AND VIOLATIONS RESULTING IN FINES AS A RESULT OF THE BYPASS OPERATION.

BYPASS PUMPING OPERATIONS SHALL BE SHUT DOWN AND WASTEWATER FLOWS FROM ALL SEWERS AND LATERALS SHALL BE DIRECTED INTO THE NEWLY INSTALLED AND APPROVED SEWERS AND EXISTING SEWERS AT THE END OF THE WORKDAY, UNLESS APPROVED BY THE CITY ENGINEER.

UNDER NO CIRCUMSTANCES WILL THE DISCHARGE OR DUMPING OF WASTEWATER ONTO PRIVATE PROPERTY, INTO STORM SEWERS, DRAINAGE COURSES, BODIES OF WATER, WETLANDS, ONTO THE GROUND, OR ONTO CITY STREETS BE ALLOWED. RAW WASTEWATER SPILLAGE SHALL BE CLEANED AND DISINFECTED BY THE CONTRACTOR USING MEANS, METHODS, AND DISINFECTANTS APPROVED BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY.

UNDER NO CIRCUMSTANCES WILL BYPASS PUMPING BE PERMITTED AT TIMES OTHER THAN AND DURING THE HOURS OF TYPICAL WORKDAY. THE CONTRACTOR / VENDOR WILL NOT BE PERMITTED TO RUN BYPASS PUMPS OVERNIGHT UNLESS APPROVED BY THE CITY ENGINEER.

PUMPS SHALL BE FULLY AUTOMATIC, SELF PRIMING SOLIDS HANDLING TYPE AND SUITABLE FOR WASTEWATER FLOW OPERATIONS. ALL SUCTION AND DISCHARGE PIPING SHALL BE FREE OF LEAKS.

BYPASS PUMPING MAINTENANCE OF TRAFFIC

THE BYPASS PUMPING SYSTEM SHALL NOT INTERRUPT THE FLOW OF TRAFFIC IN EITHER DIRECTION INCLUDING ACCESS FOR MAIL, SCHOOL, POLICE, FIRE, AND EMERGENCY VEHICLES, AND SHALL ALLOW ACCESS AT ALL TIMES TO ALL RESIDENTIAL AND BUSINESS DRIVEWAYS AND SIDE STREETS WITHIN THE BYPASS LIMITS. TEMPORARY BYPASS LINES SHALL BE BURIED OR CONVEYED VIA ROAD RAMPS RATED FOR LOCAL TRAFFIC WHERE CROSSING PRIVATE ACCESS DRIVES OR PUBLIC STREETS AND SHALL EITHER HAVE TEMPORARY PAVEMENT OR BE SECURELY PLATED (IF APPROVED BY THE CITY OF CANTON). THE CONTRACTOR SHALL PREPARE AND SUBMIT A PROPOSED MAINTENANCE OF TRAFFIC PLAN THAT WILL BE FOLLOWED DURING THE INSTALLATION OF THE PUMPING SYSTEM FOR THE CITY ENGINEER'S APPROVAL.

TESTING

THE CONTRACTOR SHALL PERFORM LEAKAGE AND PRESSURE TESTS OF THE BYPASS PUMPING SYSTEM PIPING ONCE FULLY ASSEMBLED AT THE PROJECT SITE USING CLEAN WATER PRIOR TO BRINGING BYPASS SYSTEM ON LINE. THE CITY ENGINEER SHALL BE GIVEN 24 HOURS NOTICE PRIOR TO TESTING.

INSPECTION

THE CONTRACTOR AND VENDOR SHALL INSPECT THE BYPASS PUMPING SYSTEM ON A CONTINUOUS BASIS TO ENSURE THE SYSTEM IS WORKING CORRECTLY.

MAINTENANCE SERVICE

THE CONTRACTOR SHALL ENSURE THE TEMPORARY BYPASS PUMPING SYSTEM IS PROPERLY MAINTAINED AND A RESPONSIBLE OPERATOR SHALL BE ON SITE AT ALL TIMES WHEN PUMPS ARE OPERATING. THE CONTRACTOR SHALL MONITOR PUMP FUEL LEVELS, AND MAKE ARRANGEMENTS FOR TIMELY REFUELING.

EXTRA MATERIALS

SPARE PARTS FOR PUMPS, PIPING, AND GENERATORS SHALL BE KEPT ON SITE. ADEQUATE EQUIPMENT FOR HOISTING FOR EACH PUMP AND ACCESSORIES SHALL BE MAINTAINED ON THE SITE.

PRECAUTIONS

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ANY EXISTING UTILITIES IN THE AREA SELECTED FOR THE BYPASS PIPELINES. THE CONTRACTOR SHALL LOCATE THE BYPASS PIPELINES TO MINIMIZE ANY DISTURBANCE TO EXISTING UTILITIES AND SHALL OBTAIN APPROVAL OF THE PIPELINE LOCATIONS FROM THE CITY ENGINEER. ANY COSTS ASSOCIATED WITH RELOCATING UTILITIES AND OBTAINING ALL APPROVALS SHALL BE PAID BY THE CONTRACTOR.

DURING ALL BYPASS PUMPING OPERATIONS, THE CONTRACTOR SHALL PROTECT THE CITY'S SEWER SYSTEM (MANHOLES, CONVEYANCE SYSTEM, ETC.) AS APPLICABLE FROM DAMAGE INFLICTED BY ANY EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PHYSICAL DAMAGE TO THE CITY'S SEWER SYSTEM CAUSED BY HUMAN OR MECHANICAL FAILURE.

INSTALLATION AND REMOVAL

THE CONTRACTOR SHALL REMOVE MANHOLE SECTIONS OR MAKE CONNECTIONS TO THE EXISTING CONVEYANCE SYSTEM AND CONSTRUCT TEMPORARY BYPASS PUMPING STRUCTURES AS SPECIFIED IN THE TEMPORARY BYPASS PUMPING PLAN APPROVED BY THE CITY ENGINEER. WHEN REQUIRED, THE CONTRACTOR SHALL ALSO BYPASS LATERALS BY PUMPING FROM A CLEANOUT. IF A NEW CLEANOUT IS REQUIRED IT SHALL BE INSTALLED PER CITY

STANDARD DRAWING.

PLUGGING OR BLOCKING OF FLOWS SHALL INCORPORATE A PRIMARY AND SECONDARY PLUGGING DEVICE. WHEN PLUGGING OR BLOCKING IS NO LONGER NEEDED FOR PERFORMANCE AND ACCEPTANCE OR WORK, IT IS TO BE REMOVED IN A MANNER THAT PERMITS THE SEWAGE FLOW TO SLOWLY RETURN TO NORMAL WITHOUT SURGE, TO PREVENT SURCHARGING OR CAUSING OTHER MAJOR DISTURBANCES DOWNSTREAM.

AFTER ALL CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED THE CONTRACTOR SHALL PURGE THE BYPASS SEWER SYSTEM OF ALL SEWAGE BEFORE DISCONNECTING THE PUMPS AND PIPING WITH WATER. ALL WATER USED FOR PURGING THE BYPASS SYSTEM SHALL EITHER BE COLLECTED AND DISPOSED OF OFFSITE OR ROUTED INTO THE SANITARY SEWER. UNDER NO CIRCUMSTANCES WILL THE DUMPING OF RAW SEWAGE ON PRIVATE PROPERTY, STREETS AND ROADS BE ALLOWED DUE TO PURGING THE SYSTEM.

WHEN WORKING INSIDE MANHOLE OR SANITARY SEWER, THE CONTRACTOR SHALL EXERCISE CAUTION AND COMPLY WITH OSHA REQUIREMENTS WHEN WORKING IN THE PRESENCE OF SEWER GASES, COMBUSTIBLE OR OXYGEN-DEFICIENT ATMOSPHERES, AND CONFINED SPACES.

SITE RESTORATION

THE CONTRACTOR SHALL BE AWARE OF THE CONDITIONS AT EACH SITE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO TREES, SHRUBBERY, WETLANDS, LANDSCAPING, STRUCTURES, FENCES, MAILBOXES, DRIVEWAYS, CURBS, SIDEWALKS, PAVEMENTS, ETC. THE CONTRACTOR SHALL VIDEOTAPE ALL RIGHT-OF-WAY AREAS PRIOR TO USE. ALL PRE-CONSTRUCTION CONDITIONS SHALL BE FULLY RESTORED AS CLOSE OR BETTER TO ITS ORIGINAL CONDITION AS PRACTICABLE.

METHOD OF PAYMENT

ALL LABOR, MATERIALS, EQUIPMENT, PIPING, UTILITY CONNECTIONS, MAINTENANCE OF TRAFFIC, PERMIT FEES, TESTING, INSPECTION, MISCELLANEOUS ITEMS, AND RESTORATION COSTS AS REQUIRED FOR THE CONSTRUCTION, OPERATION, AND REMOVAL OF A FULLY OPERATIONAL TEMPORARY BYPASS PUMPING SYSTEM SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR APPLICABLE "ITEM 690-SPECIAL-SANITARY SEWER BYPASS PUMPING" PAY ITEM BASED ON THE LARGEST DOWNSTREAM PIPE DIAMETER. IF MULTIPLE BYPASS PUMP SETUPS ARE REQUIRED FOR ANY SANITARY SEWER BYPASS PUMPING PAY ITEM, ALL COSTS FOR EACH SETUP SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR THE APPLICABLE PAY ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 690 - SPECIAL - SANITARY SEWER BYPASS PUMPING, AS PER PLAN 1 LUMP SUM

ODOT ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL APPLICABLE REQUIREMENTS FOR STORM WATER POLLUTION PREVENTION PLAN (SWP3) IN THE CURRENT ODOT SUPPLEMENTAL SPECIFICATION 832 WITH THE FOLLOWING MODIFICATIONS:

1) THE SWP3 MUST BE REVIEWED AND APPROVED BY THE STARK SOIL & WATER CONSERVATION DISTRICT (SWCD). THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE SWP3 TO STARK SWCD AND FOR ALL RELATED COORDINATION. UPON APPROVAL BY STARK SWCD, THE CONTRACTOR SHALL SUBMIT A COPY OF THE APPROVED SWP3 TO THE CITY OF CANTON.

2) THE CONTRACTOR SHALL PAY ALL REVIEW AND INSPECTION FEES AS REQUIRED BY STARK SOIL & WATER CONSERVATION DISTRICT (330-451-SOIL) AS PART OF THIS ITEM. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FEES AMOUNTS PRIOR TO BID.

3) THE CONTRACTOR SHALL PROVIDE STORM WATER POLLUTION PREVENTION PLAN INSPECTIONS REQUIRED BY ODOT SUPPLEMENTAL SPECIFICATION 832 AS PART OF THIS ITEM.

4) THE STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE PER ODOT SUPPLEMENTAL SPECIFICATION 832 IS NOT REQUIRED FOR THIS PROJECT.

ALL WORK DESCRIBED IN THIS NOTE SHALL BE INCLUDED IN ITEM 832- STORM WATER POLLUTION PREVENTION PLAN, AS PER PLAN. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN, AS PER PLAN 1 LUMP SUM

CALCULATED
JPK
CHECKED
JES

GENERAL NOTES

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

23A
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SUPPLEMENTAL SPECIFICATION 01-00 - PROJECT DOCUMENTATION AND SUBMITTAL REQUIREMENTS FOR ALL PUBLIC WORK PROJECTS AND SUBDIVISION DEVELOPMENTS (LATEST REVISION 5/12/2020):

PROJECT SUBMITTALS: THE FOLLOWING LISTED ITEMS ARE THE FULL RESPONSIBILITY OF THE CONTRACTOR. THESE ITEMS BECOME PART OF THE ADMINISTRATIVE DUTIES IMPOSED UPON THIS CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING ALL DETAIL ITEMS PRIOR TO THE CONTRACT NOTICE OF COMMENCEMENT, OR AS DIRECTED BY THE CITY'S PROJECT MANAGER. A TYPEWRITTEN LETTER SHALL ACCOMPANY ALL ITEMS, ON COMPANY LETTERHEAD; CLEARLY DESCRIBE EACH ITEM SUBMITTED. IF CONTRACTOR ELECTS TO FAX ANY DOCUMENTATION DUE TO EXPEDIENCY, THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING HARD COPY FOR PROJECT DOCUMENTATION. THE CITY WILL REJECT ANY INFORMATION NOT CLEARLY LEGIBLE. SUBMIT FOUR COPIES OF THE PROJECT SUBMITTALS.

CONTRACTOR WILL CLEARLY AFFIX A LABEL OR STAMP IDENTIFYING THE SUBMITTAL AND ITS STATUS FOR PROJECT REVIEW. ALL ACTIONS OTHER THAN "NO EXCEPTION TAKEN" WILL REQUIRE SUPPORTING NOTATION OR INFORMATION FOR PROJECT REVIEW.

ALLOW AT LEAST 10 BUSINESS DAYS FOR CITY'S REVIEW AND EXECUTION. THE CITY PROJECT MANAGER SHALL ASSIST THE CONTRACTOR WITH ANY QUESTIONS OR CLARIFICATION DURING THIS PROCESS TO ENSURE TIMELY RESPONSE TO THE CONTRACTOR.

UNLESS SEPARATE PAY ITEMS ARE PROVIDED, THE FOLLOWING ARE INCIDENTAL OBLIGATIONS OF THE CONTRACTOR:

1. SHOP DRAWINGS
2. PRECONSTRUCTION VIDEO
3. PROGRESS SCHEDULE
4. RELEASE STATEMENT FOR DISPOSAL OF EXCAVATED MATERIAL
5. MAINTENANCE OF TRAFFIC PLAN
6. CONTRACTOR AND SUBCONTRACTOR EMERGENCY CONTACT LIST
7. STATEMENTS OF FINAL COMPLIANCE

SHOP DRAWINGS

UPON WRITTEN REQUEST FROM THE ENGINEER, THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS, ACCEPTABLE CATALOG DATA, SPECIFICATION AND MATERIAL CERTIFICATIONS FOR ALL MATERIALS AND/OR EQUIPMENT SPECIALIZED OR REQUIRED FOR THE PROPER COMPLETION OF THE WORK.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS IN NOT LESS THAN FOUR (4) HARD COPIES TO THE ENGINEER OR ONE (1) DIGITAL SUBMITTAL IS ACCEPTABLE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS IN PROPER SEQUENCE OF CONSTRUCTION TO CAUSE NO DELAY IN THE WORK. THE ENGINEER WILL HAVE TEN (10) BUSINESS DAYS TO REVIEW SUBMITTALS. THE CONTRACTOR'S FAILURE TO TRANSMIT APPROPRIATE SUBMITTALS TO THE ENGINEER SUFFICIENTLY IN ADVANCE OF WORK SHALL NOT BE GROUNDS FOR TIME EXTENSION. NO WORK SHALL BE PERFORMED REQUIRING SHOP DRAWINGS UNTIL SAME THE ENGINEER HAS APPROVED THESE SHOP DRAWINGS.

LABEL EACH SHOP DRAWING WITH THE FOLLOWING:

1. PROJECT NAME
2. NAME OF CONTRACTOR
3. NAME OF SUBCONTRACTOR (IF APPLICABLE)
4. NAME AND ADDRESS OF SUPPLIER AND/OR MANUFACTURER
5. LOG REFERENCE NUMBER

THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND APPROVING ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. THE ENGINEER'S REVIEW DOES NOT MAKE HIM RESPONSIBLE FOR THE ACCURACY OF SAID DRAWINGS.

PRECONSTRUCTION VIDEO:

PRIOR TO ACTUAL CONSTRUCTION, THE CONTRACTOR SHALL TAKE VIDEO RECORDING OF THE ENTIRE LENGTH AND WIDTH OF THE WORK SITE. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DEPARTMENT PRIOR TO SCHEDULING THE VIDEO RECORDING OF THE SITE. A REPRESENTATIVE OF THE ENGINEERING DEPARTMENT SHALL BE PRESENT WHEN THE RECORDING THIS VIDEO. THE VIDEO AND AUDIO RECORDINGS SHALL BE ON DVD OR PRE-APPROVED ALTERNATIVE FOR REPLAY. CONTRACTOR MUST SUBMIT ALTERNATIVE MEDIUM TO THE ENGINEER AND APPROVAL RECEIVED PRIOR TO SCHEDULING. THE VIDEO PORTION SHALL HAVE CONTINUOUS TIME AND DATE INCORPORATED INTO IT, LOCATIONS AND PERSON(S) DOING THE WORK. AUDIO COMMENTS DURING THE RECORDING MUST ADDRESS EACH ITEM IN THE FIELD OF VIEW AS IT MAY PERTAIN TO THE PROJECT CONSTRUCTION. THE RECORDING TECHNICIAN WILL NEED TO BECOME FAMILIAR WITH THE PROJECT PLANS TO KNOW WHAT SUBJECT MATTER IS PERTINENT. FURTHER, CONTRACTOR MUST INCORPORATE A POST RECORDING REVIEW AND AUDIO COMMENTS INTO THE RECORDING. SUBMITTED COPIES OF ALL RECORDINGS ARE THE PROPERTY OF THE ENGINEER. CONTRACTOR MUST SUBMIT THE RECORDING AND BE ACCEPTED IN FULL BY THE ENGINEERING DEPARTMENT PRIOR TO THE START OF CONSTRUCTION.

PROGRESS SCHEDULE:
REFER TO G.C. 2.03 & 4.04

THE CONTRACTOR SHALL PROVIDE TO THE CITY A PROGRESS SCHEDULE, WHICH SHALL MEET

THE FOLLOWING REQUIREMENTS AND / OR INCLUDE THE FOLLOWING ITEMS:

1. GRAPHICAL FORMAT IN CRITICAL PATH METHOD (CPM) FORMAT, UNLESS AGREED OTHERWISE BY THE CITY ENGINEER.
2. 11" X 17" (MINIMUM) FORMAT
3. ALL WORK ACTIVITIES RELATIVE TO THE PROJECT
4. ACTIVITIES AND RATE OF EXPECTED PROGRESS TO SECURE SUBSTANTIAL COMPLETION AS SET FORTH IN THE CONTRACT.
5. ALL MILESTONES AND SUBSTANTIAL / FINAL COMPLETION DATES.

SCHEDULES SHALL BE UPDATED, AT A MINIMUM, EVERY 30 DAYS, OR AS AGREED TO BY THE CITY'S PROJECT MANAGER.

RELEASE STATEMENT FOR DISPOSAL OF EXCAVATED MATERIALS

THE CONTRACTOR SHALL PROVIDE TO THE CITY A WRITTEN CONSENT STATEMENT FROM ALL PROPERTY OWNERS WHOSE PROPERTY IS A LANDFILL DEPOSITORY FOR ALL SURPLUS OR UNSUITABLE EXCAVATED MATERIAL FROM THE PROJECT SITE. THE CONTRACTOR SHALL FOLLOW ODOT 105.16 FOR SPECIFIC GUIDELINES AND NAME THE "CITY OF CANTON" IN LIEU OF "THE DEPARTMENT" ON ALL FORWARDED DOCUMENTS. THE CITY REQUIRES A CONTRACT OR PERMIT THAT CONTAINS THE LANGUAGE STATING THAT THE CITY IS NOT PARTY TO THE CONTRACT OR PERMIT, THE MATERIAL IS NOT THE CITY'S, AND THAT THE CONTRACTOR AND THE PROPERTY OWNER WILL HOLD THE CITY HARMLESS FROM CLAIMS THAT MAY ARISE FROM THIS CONTRACT OR PERMIT.

A SAMPLE COPY CAN BE REQUESTED FROM THE CANTON CITY ENGINEER FOR REFERENCING PURPOSES.

MAINTENANCE OF TRAFFIC PLAN:

CONTRACTOR SHALL SUBMIT A GRAPHICAL PRESENTATION OR WRITTEN DOCUMENT DETAILING THE SIGNAGE TO BE USED AND ITS LOCATION FOR MAINTENANCE OF TRAFFIC. IF TRAFFIC CONTROL WILL BE PERFORMED IN STAGES, SUBMIT A PLAN FOR EACH STAGE. ANY PROPOSED DETOURS SHOULD BE APPROVED BY THE ENGINEER PRIOR TO PLAN SUBMISSION.

CONTRACTOR AND SUBCONTRACTOR EMERGENCY CONTACT LIST: CONTRACTOR SHALL SUBMIT TO THE ENGINEER, PRIOR TO COMMENCING CONSTRUCTION, A COMPLETE LIST OF THE CONTRACTOR'S PERSONNEL ASSOCIATED WITH THE PROJECT. LIST SHOULD INCLUDE NAME, TITLE, AND EMERGENCY CONTACT PHONE NUMBERS FOR EACH INDIVIDUAL.

STATEMENTS OF FINAL COMPLIANCE:

THE CONTRACTOR SHALL SUBMIT TO THE CITY THE FOLLOWING DOCUMENTATION, IN ADDITION TO THE PROJECT'S GENERAL CONDITIONS. ALL SUBMITTALS SHALL BE COMPLETED AND APPROVED PRIOR TO THE RELEASE OF THE FINAL RETAINER.

CERTIFICATES OF SUBSTANTIAL AND FINAL COMPLETION: CONTRACTOR SHALL SUBMIT IN WRITING, THE DATE ON WHICH WORK IS SUBSTANTIALLY COMPLETED AND UPON FINAL COMPLETION. ANY DEVIATION FROM THE STATED CONTRACT COMPLETION DATE TO WHAT IS BEING SUBMITTED SHALL BE EXPLAINED FURTHER BY THE CONTRACTOR. THE CITY, AT THEIR DISCRETION, WILL FURTHER REVIEW THIS SUBJECT, AS NEEDED.

FINAL WAIVER OF LIEN: CONTRACTOR SHALL FURNISH A WRITTEN REPORT INDICATING THE RESOLUTION OF ANY AND ALL PROPERTY DAMAGE CLAIMS FILED WITH CONTRACTOR BY ANY PARTY DURING THE CONTRACT PERIOD. THE INFORMATION SHALL INCLUDE THE NAME OF CLAIMANT; DATE FILED WITH CONTRACTOR; NAME OF INSURANCE COMPANY AND/OR ADJUSTOR HANDLING THE CLAIM; HOW THE CLAIM WAS RESOLVED; IF CLAIM WAS NOT RESOLVED FOR THE FULL AMOUNT, A STATEMENT INDICATING THE REASON FOR SUCH ACTION. IF THERE WERE NO DAMAGE CLAIMS FILED WITH THE CONTRACTOR, THEN THIS SHALL BE SO STATED IN THE REPORT.

ENTIRE AGREEMENT:

IT IS AGREED THAT THE TERMS AND CONDITIONS OF THIS AGREEMENT ARE FULLY COVERED IN THE FOREGOING, AND THAT ANY ORAL OR WRITTEN STATEMENTS MADE BY EITHER PARTY, OR AGENTS CLAIMING TO REPRESENT EITHER PARTY, NOT SET FORTH HEREIN, ARE NOT BINDING ON THE PARTIES AND ARE NOT CONSIDERED AS PART OF THIS AGREEMENT.

DISCLAIMER:

THE CITY OF CANTON IS NOT A PARTY TO THE HERE ABOVE AGREEMENT. THE CONTRACTOR AND LANDOWNER SHALL INDEMNIFY AND SAVE HARMLESS THE CITY OF CANTON FROM ANY CLAIM THAT MAY ARISE FROM THE HERE ABOVE AGREEMENT. THE WASTE MATERIAL IS THE PROPERTY OF THE CONTRACTOR, NOT THE CITY OF CANTON.

SUPPLEMENTAL SPECIFICATION 03-00: TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESSURE, THERMOPLASTIC SEWER PIPE SEPTEMBER, 2000 WITH REVISIONS 7/18/08

DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING ALL LABOR, MATERIAL AND EQUIPMENT TO COMPLETE THIS TEST FOR APPROVAL BY THE CITY.

THE COST FOR ALL WORK RELATED TO THIS ITEM SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE NEW SEWER. NO SEPARATE PAYMENT WILL BE MADE BY THE CITY.

ALL MAIN LINES AND LATERALS SHALL BE TESTED FOR AIR LEAKS AND THEIR ASSOCIATED LEVEL OF ACCEPTANCE.

AIR TESTING OF NEW MAIN LINE AND LATERALS MAY BE DONE AT ANY TIME DURING THE INSTALLATION OF THE NEW SEWERS, FOLLOWING THE INITIAL BEDDING, BACKFILLING AND SECURING ARE COMPLETED.

HOWEVER, IN THE EVENT DEFLECTION TESTING REQUIRES A REPAIR OR REPLACEMENT OF NEW SEWER, THE CONTRACTOR SHALL BE OBLIGATED TO RE-AIR TEST THE REPAIRED SECTION OF THE SEWER.

EQUIPMENT/SAFETY

PLUG DESIGN: EITHER MECHANICAL OR PNEUMATIC PLUGS MAY BE USED. ALL PLUGS SHALL BE DESIGNED TO RESIST INTERNAL TESTING PRESSURES WITHOUT THE AID OF EXTERNAL BRACING OR BLOCKING. HOWEVER, THE CONTRACTOR SHOULD INTERNALLY RESTRAIN OR EXTERNALLY BRACE THE PLUGS TO THE MANHOLE WALL AS AN ADDED SAFETY PRECAUTION THROUGHOUT THE TEST.

SINGULAR CONTROL PANEL: TO FACILITATE TEST VERIFICATION BY THE CITY, ALL AIR USED SHALL PASS THROUGH A SINGLE, ABOVE GROUND CONTROL PANEL.

EQUIPMENT CONTROLS: THE ABOVE GROUND AIR CONTROL EQUIPMENT SHALL INCLUDE A SHUT-OFF VALVE, PRESSURE REGULATING VALVE, PRESSURE RELIEF VALVE, IN-PUT PRESSURE GAUGE AND A CONTINUOUS MONITORING PRESSURE GAUGE HAVING A PRESSURE RANGE FROM 0 TO AT LEAST 10 PSI. THE CONTINUOUS MONITORING GAUGE SHALL BE NO LESS THAN 4 INCHES IN DIAMETER WITH MINIMUM DIVISIONS OF 0.10 PSI AND AN ACCURACY OF +/-0.04 PSI.

SEPARATE HOSES: TWO SEPARATE HOSES SHALL BE USED TO: (1) CONNECT THE CONTROL PANEL TO THE SEALED LINE FOR INTRODUCING LOW-PRESSURE AIR, AND (2) A SEPARATE HOSE CONNECTION FOR CONSTANT MONITORING OF AIR PRESSURE BUILD-UP IN THE LINE. THIS REQUIREMENT GREATLY DIMINISHES ANY CHANCE FOR OVER-PRESSURIZING THE LINE.

PNEUMATIC PLUGS: IF PNEUMATIC PLUGS ARE UTILIZED, A SEPARATE HOSE SHALL ALSO BE REQUIRED TO INFLATE THE PNEUMATIC PLUGS FROM THE ABOVE GROUND CONTROL PANEL.

AIR SOURCE: AS APPROVED BY THE CITY.

TESTING FOR LEAKS.

THE CONTRACTOR SHALL ARRANGE WITH THE CITY'S PROJECT REPRESENTATIVE AT LEAST 48 HOURS IN ADVANCE TO THE COMMENCEMENT OF TEST.

THE CONTRACTOR SHALL ASSIGN PERSONNEL OR FIRM FAMILIAR WITH TESTING PROCEDURES AND THEIR REQUIREMENTS SET FORTH.

THE CONTRACTOR AND CITY'S PROJECT REPRESENTATIVE SHALL BE PRESENT AT ALL TIMES DURING THE TESTING PROCEDURE. ALL TESTING RESULTS SHALL BE DOCUMENTED AND RECORDED, AT THE TIME OF TEST, ON THE CITY'S APPROVED TEST FORM.

AFTER BACKFILLING, AIR TESTS SHALL BE CONDUCTED BETWEEN TWO CONSECUTIVE MANHOLES.

EACH END OF THE SECTION TO BE TESTED AND ALL PIPE OUTLETS IN THE SECTION SHALL BE PLUGGED WITH APPROVED TEST PLUGS. ONE PLUG USED AT A MANHOLE SHALL HAVE AN INLET TAP OR OTHER PROVISION FOR CONNECTING AN AIR HOSE FROM THE AIR SUPPLY EQUIPMENT. THE EQUIPMENT SHALL INCLUDE VALVES TO CONTROL THE RATE AT WHICH AIR FLOWS INTO THE TEST SECTION AND PRESSURE GAUGES WITH MINIMUM GRADUATIONS OF 0.1 PSI AND AN ACCURACY OF +/- 0.04 PSI TO MONITOR THE AIR PRESSURE WITHIN THE TEST SECTION.

AIR PRESSURE SHALL BE APPLIED SLOWLY TO THE TEST SECTION UNTIL THE PRESSURE REACHES 4.0 PSI, PLUS AN ADJUSTMENT OF 0.433 PSI FOR EACH FOOT OF GROUND WATER ABOVE THE CROWN OF THE PIPE BEING TESTED. INTERNAL AIR PRESSURE, INCLUDING ADJUSTMENT FOR GROUND WATER, SHOULD NEVER EXCEED 5.0 PSI.

WHEN THE PRESSURE REACHES 4.0 PSI, PLUS ADJUSTMENT FOR GROUND WATER, THE AIR SUPPLY SHALL BE THROTTLED SO THAT THE INTERNAL PRESSURE IS MAINTAINED BETWEEN 4.0 AND 3.5 PSI FOR AT LEAST TWO MINUTES TO PERMIT TEMPERATURE STABILIZATION. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE 3.5 PSI, THE AIR SUPPLY SHALL BE DISCONNECTED AND A STOP WATCH STARTED AND ALLOWED TO RUN UNTIL THE PRESSURE HAS DROPPED 1.0 PSI

CALCULATED
JPK
CHECKED
JES

GENERAL NOTES

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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SUPPLEMENTAL SPECIFICATION 03-00: TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESSURE, THERMOPLASTIC SEWER PIPE SEPTEMBER, 2000 WITH REVISIONS 7/18/08 (continued):

THE PERMISSIBLE TIME ALLOCATED FOR THE 1.0 PSI PRESSURE DROP SHALL BE CALCULATED ON THE BASIS OF THE DIAMETER AND LENGTH OF MAIN SEWER TESTED AND NO ADJUSTMENT SHALL BE MADE FOR SERVICE CONNECTIONS INCLUDED IN THE TEST SECTION. THE AIR TEST FOR A SECTION SHALL BE CONSIDERED ACCEPTABLE IF THE TIME ELAPSED FOR THE 1.0 PSI PRESSURE DROP IS EQUAL TO OR GREATER THAN THE TIME INDICATED, AND SHALL BE CONSIDERED UNACCEPTABLE IF THE ELAPSED TIME IS LESS THAN THAT INDICATED IN THE FOLLOWING TABLE:

MINIMUM HOLDING TIME IN MINUTES:SECONDS REQUIRED FOR 1.0 PSI PRESSURE DROP **								
PIPE DIAMETER	LENGTH OF MAIN LINE TESTED *							
	100'	150'	200'	250'	300'	350'	400'	450'
4"	3:46	3:46	3:46	3:46	3:46	3:46	3:42	3:46
6"	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8"	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10"	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12"	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15"	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18"	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21"	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24"	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27"	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48

* INTERPOLATE TIME FOR INTERMEDIATE LENGTHS.

** IF THE TEST SECTION FAILS AND SERVICE CONNECTIONS WERE INCLUDED IN THE TEST, RE-COMPUTE TEST TIME TO INCLUDE SERVICE CONNECTIONS IN ACCORDANCE WITH 9.6 OF ASTM F1417.

CORRECTING OR REPAIRING.

IF AIR TESTING PROCEDURE FAILS FOR ANY REASON, BASED ON LIMITATION PREVIOUSLY SET FORTH, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY PROJECT REPRESENTATIVE.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORRECTIVE PROCEDURES, METHODS AND OPERATIONAL TECHNIQUES. FOLLOWING CORRECTIVE PROCEDURE, AS APPROVED BY THE CITY, THE CONTRACTOR SHALL BE OBLIGATED TO RETEST THE SECTION OF PIPE, AS PREVIOUSLY TESTED. IF REPAIR NECESSITATED A REPLACEMENT OF PIPE, THE CITY RESERVES THE RIGHT TO RETEST THE SAID SECTION, 30 DAYS FOLLOWING THIS REPAIR. ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY FOR CORRECTING ANY NEW SECTION OF SEWER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

BASIS OF ACCEPTANCE

IN ORDER FOR THE CITY TO CONSIDER A SYSTEM, IN PART OR WHOLE, APPROVED IN THIS TESTING PROCEDURE, ALL AIR TESTING METHODS, AS APPROVED, SHALL BE PROOFED FROM MANHOLE STRUCTURE TO MANHOLE STRUCTURE.

REFERENCE MATERIAL

THE CITY MAY REFERENCE UNI-BELL PVC PIPE ASSOCIATION, UNI-B-6-90 FOR SUPPLEMENTAL INFORMATION.

SUPPLEMENTAL SPECIFICATION 04-01: STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE TEST (APRIL 2001)

SCOPE:

THIS TEST METHOD COVERS PROCEDURES FOR TESTING PRECAST CONCRETE MANHOLE SECTIONS WHEN USING THE VACUUM TEST METHOD TO DEMONSTRATE THE INTEGRITY OF THE INSTALLED MATERIALS AND THE CONSTRUCTION PROCEDURES. THIS TEST METHOD IS USED FOR TESTING CONCRETE MANHOLE SECTIONS UTILIZING MORTAR, MASTIC, OR GASKETED JOINTS.

THIS TEST METHOD IS INTENDED TO BE USED AS A PRELIMINARY TEST TO ENABLE THE INSTALLER TO DEMONSTRATE THE CONDITION OF THE CONCRETE MANHOLES PRIOR TO BACKFILL. IT MAY ALSO BE USED TO TEST MANHOLES AFTER BACKFILLING; HOWEVER, TESTING SHOULD BE CORRELATED WITH THE CONNECTOR SUPPLIER.

THIS STANDARD DOES NOT PURPORT TO ADDRESS ALL OF THE SAFETY PROBLEMS, IF ANY, ASSOCIATED WITH ITS USE. IT IS THE RESPONSIBILITY OF THE USER OF THIS STANDARD TO ESTABLISH APPROPRIATE SAFETY AND HEALTH PRACTICES AND DETERMINE THE APPLICABILITY OF REGULATORY LIMITATIONS PRIOR TO USE.

DESCRIPTION:

SEE ASTM C 1244

CALCULATED
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GENERAL NOTES

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LINE STYLE LEGEND

	CONSTRUCTION LIMITS
	EXISTING ELECTRIC
	EXISTING FENCE OR GATE
	EXISTING FIBER OPTIC
	EXISTING DEO GAS
	EXISTING GUARDRAIL
	EXISTING SANITARY
	EXISTING STORM SEWER
	EXISTING STORM SEWER TO BE REMOVED
	EXISTING TELEPHONE
	EXISTING WATERLINE
	PROPERTY LINE
	PROPOSED WATER LINE
	PROPOSED DEO GAS (BY OTHERS)
	EXISTING RIGHT-OF-WAY
	EXISTING UTILITY EASEMENT
	EXISTING STANDARD HIGHWAY EASEMENT
	PROPOSED RIGHT OF WAY
	PROPOSED SEWER EASEMENT
	PROPOSED TEMPORARY EASEMENT

QUANTITY BALLOON LEGEND

	DRAINAGE ITEM
	DRIVEWAY
	REMOVAL ITEM
	SANITARY SEWER ITEM
	UNDERDRAIN ITEM
	WATER WORK ITEM

ITEM LEGEND

	EXISTING UTILITY POLE - TO BE REMOVED/RELOCATED (BY OTHERS)
	APPROXIMATE LOCATION OF PROPOSED UTILITY POLE (BY OTHERS)
	LIGHT POLE, SEE LIGHTING PLANS
	CONTROL CENTER, SEE LIGHTING PLANS
	PULL BOX, SEE LIGHTING PLANS
	EXISTING STORM MANHOLE
	EXISTING CATCH BASIN
	PROPOSED SIGNAL POLE

HATCH PATTERN LEGEND

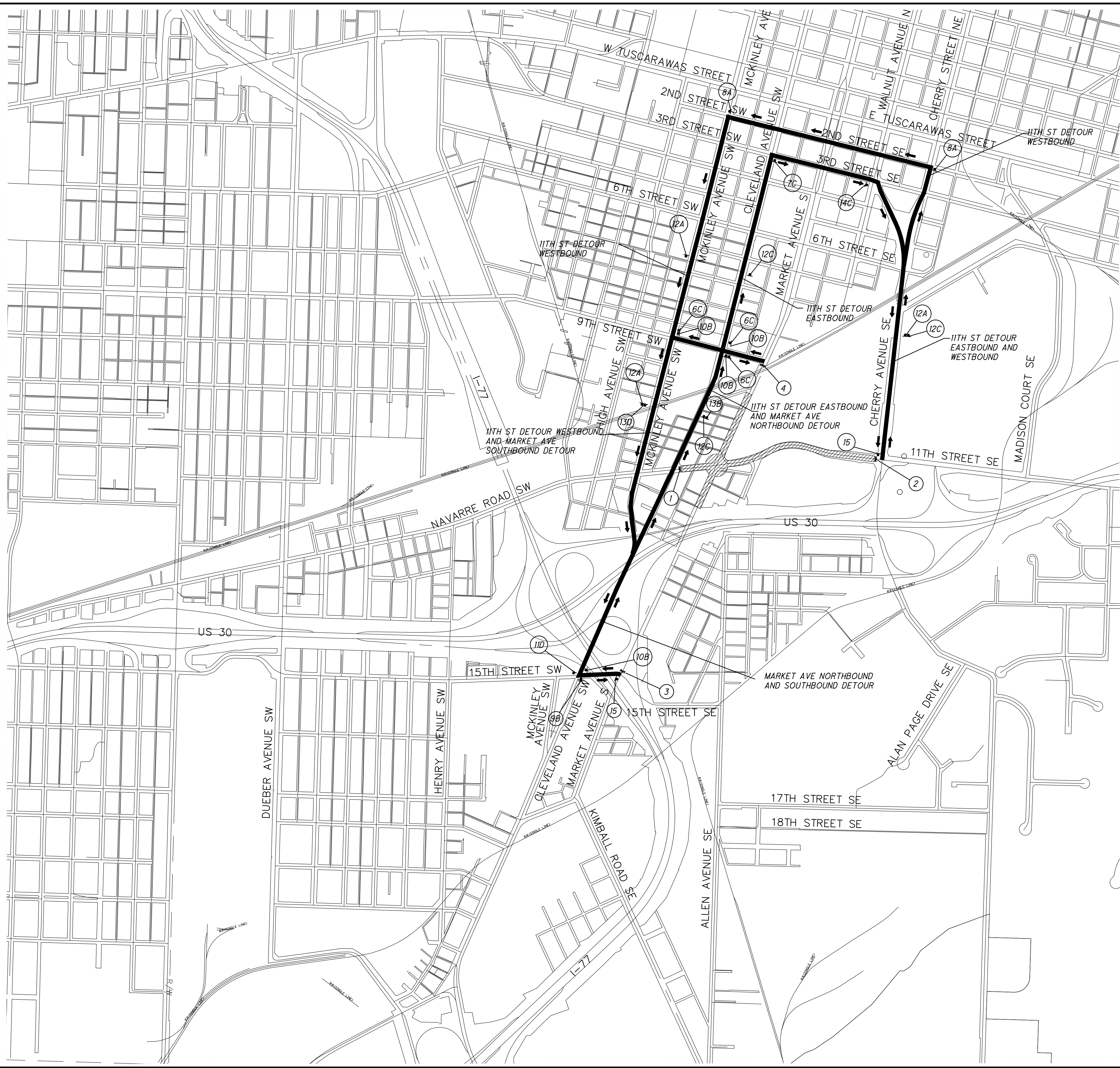
	ITEM SPECIAL - ROADWAY BRICK PAVERS
	ITEM 608 - WALKWAY MISC.: BRICK WALKWAY PAVERS
	LIMITS OF PAVEMENT REMOVAL
	LIMITS OF PAVEMENT PLANING AND RESURFACING
	PIPE ABANDONED

ABBREVIATIONS

TBR = TO BE REMOVED
 ATG = ADJUSTED TO GRADE
 TBA = TO BE ABANDONED

SUGGESTED SEQUENCE OF CONSTRUCTION		
PHASE/STAGE	CONSTRUCTION ACTIVITY	MAINTENANCE OF TRAFFIC
PRE-PHASE 1	NONE	ESTABLISH DETOUR
PHASE 1	CONSTRUCT ROUNDABOUT. CONSTRUCT FULL-DEPTH PAVEMENT SECTIONS ON MARKET AVENUE AND ON 11TH STREET FROM BEGIN PROJECT TO STA. 109+50 AND PORTIONS OF 11TH STREET TO CHERRY AVENUE WHILE MAINTAINING ACCESS TO HOUSEL AVENUE SE, NAVARRE ROAD SE, AND EFFINGER PLACE SE AND LOCAL DRIVEWAYS AND COMPLETE ALL WATER AND SANITARY RELOCATIONS.	DETOUR MARKET AVENUE S / 11TH STREET SE INTERSECTION (120 DAY LIMIT)
PHASE 2A	CONSTRUCT 11TH STREET SE FROM STA. 109+50 TO CHERRY AVENUE SE EASTBOUND.	MAINTAIN TWO-WAY TRAFFIC ON EXISTING PAVEMENT WITH USE OF PART WIDTH CONSTRUCTION AND FLAGGERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES TO PRIVATE DRIVES AND BUSINESSES.
PHASE 2B	CONSTRUCT 11TH STREET SE FROM STA. 109+50 TO CHERRY AVENUE SE WESTBOUND.	MAINTAIN TWO-WAY TRAFFIC ON NEW PAVEMENT CONSTRUCTED IN PHASE 2A WITH USE OF PART WIDTH CONSTRUCTION AND FLAGGERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES TO PRIVATE DRIVES AND BUSINESSES.
PHASE 2C	REPAINT WORK ZONE AS PER PAVEMENT MARKING PLANS.	AS PER MT-99.20
PHASE 3	CONSTRUCT 11TH STREET SE & CHERRY AVENUE INTERSECTION.	DETOUR 11TH STREET SE/CHERRY AVENUE INTERSECTION (30 DAY LIMIT)
PHASE 4A	CONSTRUCT MARKET STREET RESURFACING SECTIONS.	MAINTAIN TRAFFIC WITH USE OF PART WIDTH CONSTRUCTION AND FLAGGERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES TO PRIVATE DRIVES AND BUSINESSES.
PHASE 4B	CONSTRUCT 11TH STREET SE AND CHERRY AVENUE RESURFACING SECTIONS.	MAINTAIN TRAFFIC WITH USE OF PART WIDTH CONSTRUCTION AND FLAGGERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES TO PRIVATE DRIVES AND BUSINESSES.
PHASE 4C	REPAINT WORK ZONE AS PER PAVEMENT MARKING PLANS.	AS PER MT-99.20

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LEGEND

- WORK AREA
- DETOUR ROUTE
- TRAFFIC DIRECTION
- TYPE III BARRICADE

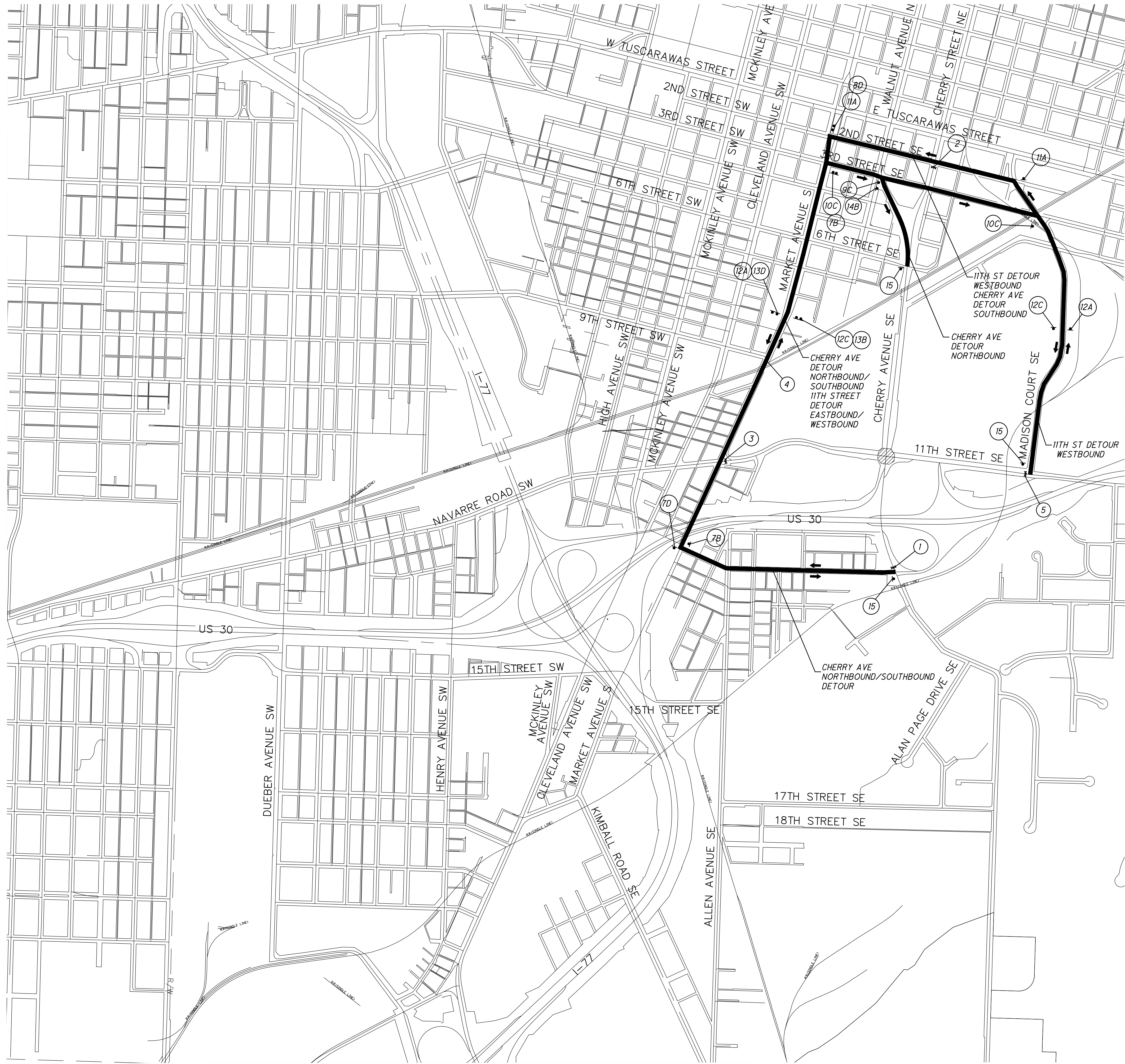
HORIZONTAL SCALE IN FEET

<p>① R11-2-60 ROAD CLOSED DETOUR M4-10L-48 MOUNTED ON TYPE III BARRICADE</p>	<p>② R11-3A-60 ROAD CLOSED 0.23 MILES AHEAD LOCAL TRAFFIC ONLY DETOUR M4-10R-48 MOUNTED ON TYPE III BARRICADE</p>	<p>③ R11-3A-60 ROAD CLOSED 0.3 MILES AHEAD LOCAL TRAFFIC ONLY DETOUR M4-10L-48 MOUNTED ON TYPE III BARRICADE</p>
<p>⑤ R11-3A-60 ROAD CLOSED 0.1 MILES AHEAD LOCAL TRAFFIC ONLY DETOUR M4-10R-48 MOUNTED ON TYPE III BARRICADE</p>	<p>⑥ M4-8-12 DETOUR 11TH STREET D3-1-12 M6-3-12</p>	<p>⑦ M4-8-12 DETOUR 11TH STREET D3-1-12 M4-1-12</p>
<p>⑧ M4-8-12 DETOUR 11TH STREET D3-1-12 M4-1-12</p>	<p>⑨ M4-8-12 DETOUR MARKET AVE D3-1-12 M6-3-12</p>	<p>⑩ M4-8-12 DETOUR MARKET AVE D3-1-12 M4-1-12</p>
<p>⑪ M4-8-12 DETOUR MARKET AVE D3-1-12 M4-1-12</p>	<p>⑫ M4-8-12 DETOUR 11TH STREET D3-1-12</p>	<p>⑬ M4-8-12 DETOUR MARKET AVE D3-1-12</p>
<p>⑭ M4-8-12 DETOUR MARKET AVE D3-1-12 M5-2-12</p>	<p>⑮ END DETOUR M4-8-12</p>	<p>A WEST M4-8-12</p> <p>B NORTH M3-8-24</p>
<p>C EAST M3-2-24</p>	<p>D SOUTH M4-3-24</p>	

**MAINTENANCE OF TRAFFIC
PHASE 1 DETOUR MAP**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

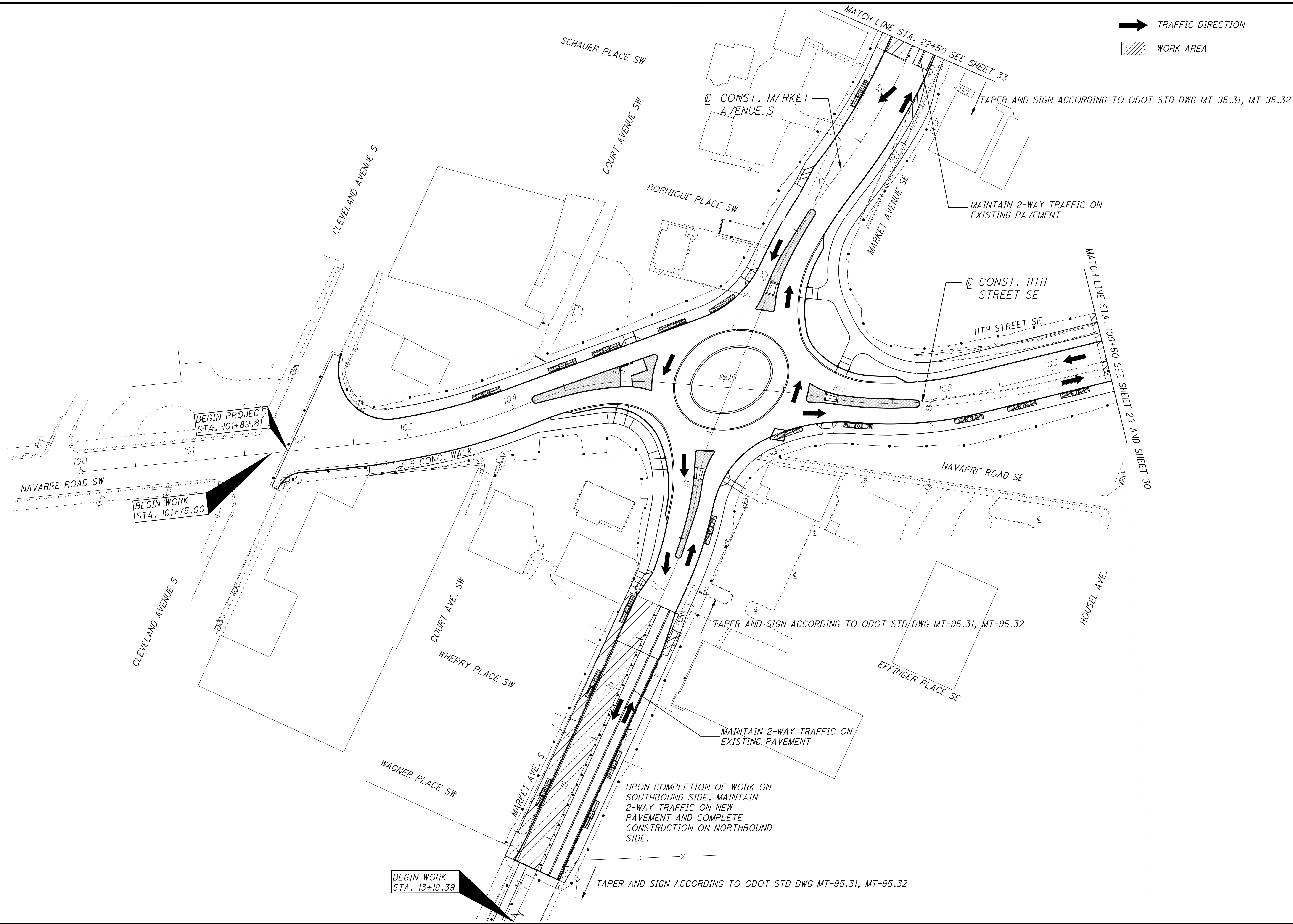
DETOUR - 120 DAY LIMIT



- | | | |
|--|--|---|
| <p>①
R11-3A-60
ROAD CLOSED
0.21 MILES AHEAD
LOCAL TRAFFIC ONLY</p> <p> DETOUR</p> <p>M4-10L-48
MOUNTED ON
TYPE III BARRICADE</p> | <p>②
R11-3A-60
ROAD CLOSED
0.59 MILES AHEAD
LOCAL TRAFFIC ONLY</p> <p> DETOUR</p> <p>M4-10R-48
MOUNTED ON
TYPE III BARRICADE</p> | <p>③
R11-3A-60
ROAD CLOSED
0.3 MILES AHEAD
LOCAL TRAFFIC ONLY</p> <p> DETOUR</p> <p>M4-10L-48
MOUNTED ON
TYPE III BARRICADE</p> |
| <p>④
R11-3A-60
ROAD CLOSED
0.23 MILES AHEAD
LOCAL TRAFFIC ONLY</p> <p> DETOUR</p> <p>M4-10R-48
MOUNTED ON
TYPE III BARRICADE</p> | <p>⑤
M4-8-12
DETOUR</p> <p>CHERRY AVE</p> <p>D3-1-12</p> <p> M6-3-12</p> | <p>⑥
M4-8-12
DETOUR</p> <p>CHERRY AVE</p> <p>D3-1-12</p> <p> M4-1-12</p> |
| <p>⑦
M4-8-12
DETOUR</p> <p>CHERRY AVE</p> <p>D3-1-12</p> <p> M4-1-12</p> | <p>⑧
M4-8-12
DETOUR</p> <p>11TH STREET</p> <p>D3-1-12</p> <p> M6-3-12</p> | <p>⑨
M4-8-12
DETOUR</p> <p>11TH STREET</p> <p>D3-1-12</p> <p> M4-1-12</p> |
| <p>⑩
M4-8-12
DETOUR</p> <p>11TH STREET</p> <p>D3-1-12</p> <p> M4-1-12</p> | <p>⑪
M4-8-12
DETOUR</p> <p>11TH STREET</p> <p>D3-1-12</p> <p> M6-3-12</p> | <p>⑫
M4-8-12
DETOUR</p> <p>11TH STREET</p> <p>D3-1-12</p> <p> M4-1-12</p> |
| <p>⑬
M4-8-12
DETOUR</p> <p>CHERRY AVE</p> <p>D3-1-12</p> <p> M4-1-12</p> | <p>⑭
M4-8-12
DETOUR</p> <p>CHERRY AVE</p> <p>D3-1-12</p> <p> M5-2-12</p> | <p>⑮
END
DETOUR
M4-8-12</p> <p>A WEST
M4-8-12</p> <p>B NORTH
M3-8-24</p> |
| <p>⑯
M4-8-12
DETOUR</p> <p>CHERRY AVE</p> <p>D3-1-12</p> <p> M5-2-12</p> | <p>⑰
EAST
M3-2-24</p> | <p>⑱
SOUTH
M4-3-24</p> |

DETOUR - 30 DAY LIMIT

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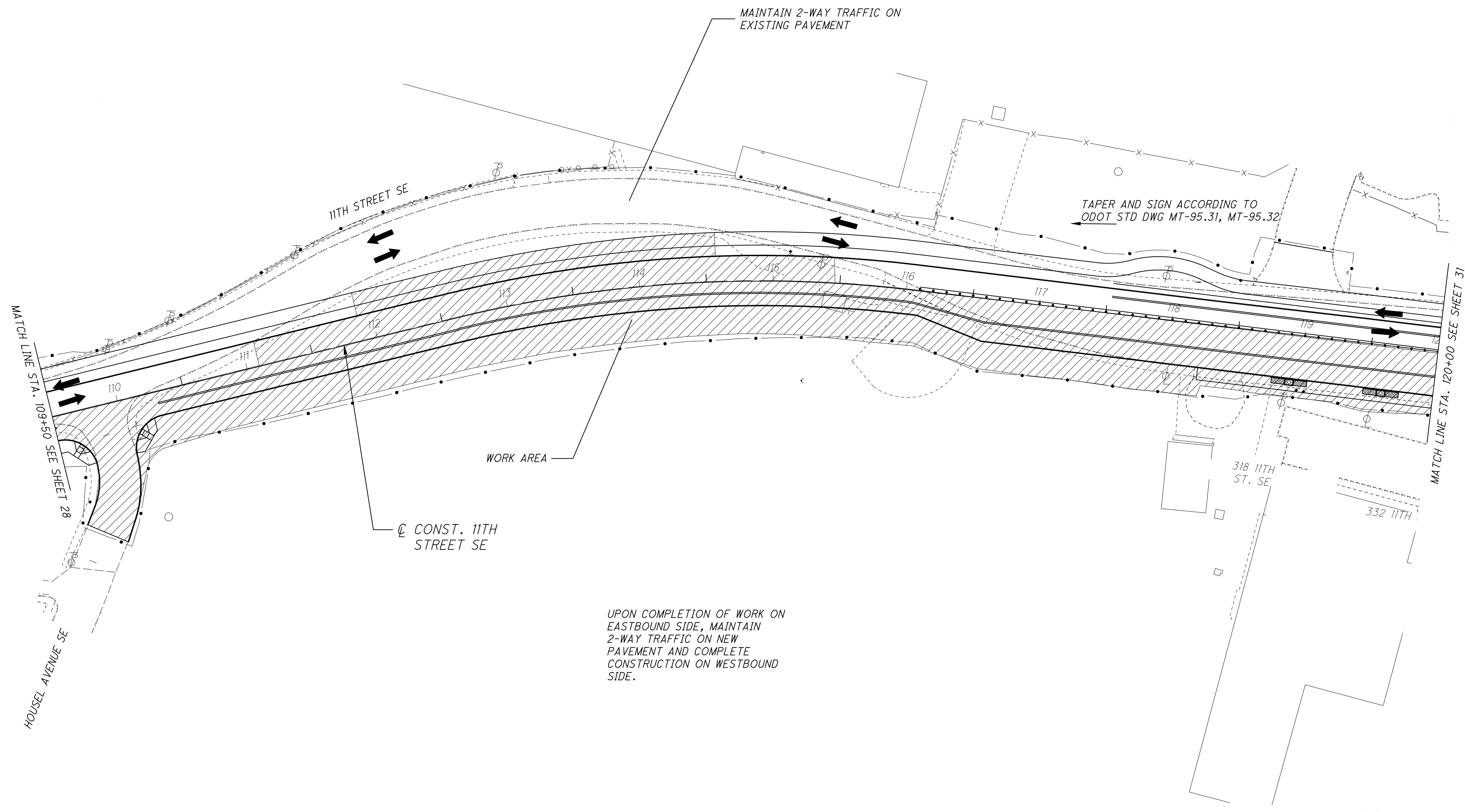
TRAFFIC DIRECTION
 WORK AREA


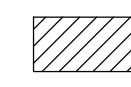
0 20 40 60
 HORIZONTAL
 SCALE IN FEET
 CALCULATED
 TKI
 CHECKED
 JES


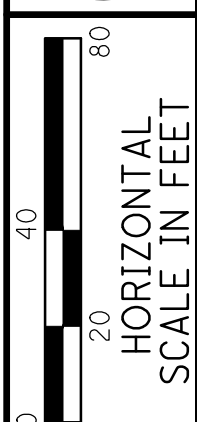
**MAINTENANCE OF TRAFFIC
PHASE 1 STAGE 2**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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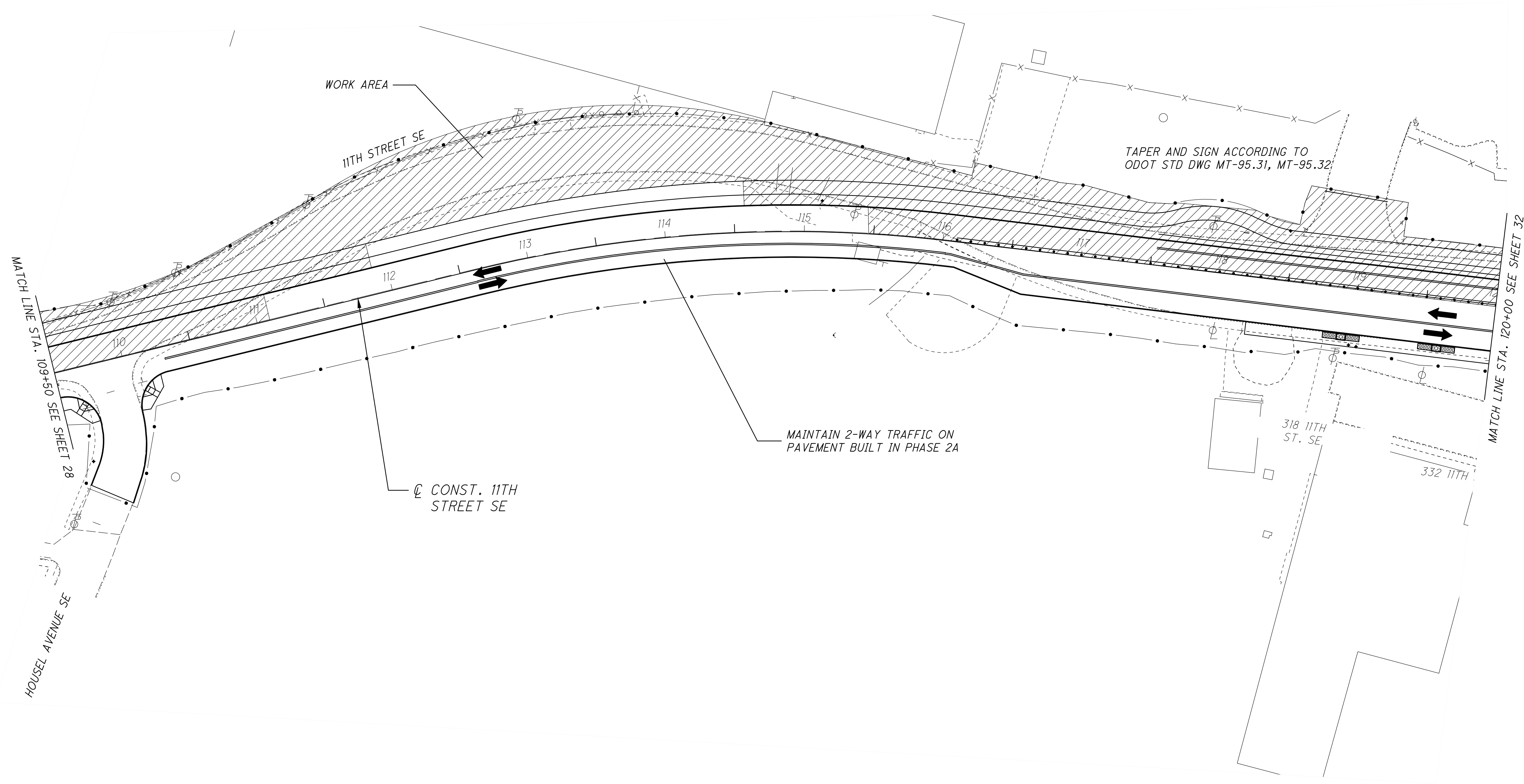
 TRAFFIC DIRECTION
 WORK AREA


 HORIZONTAL SCALE IN FEET
 0 20 40 80
 CALCULATED TKI
 CHECKED JES

**MAINTENANCE OF TRAFFIC
PHASE 2A**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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➔ TRAFFIC DIRECTION
 ▨ WORK AREA

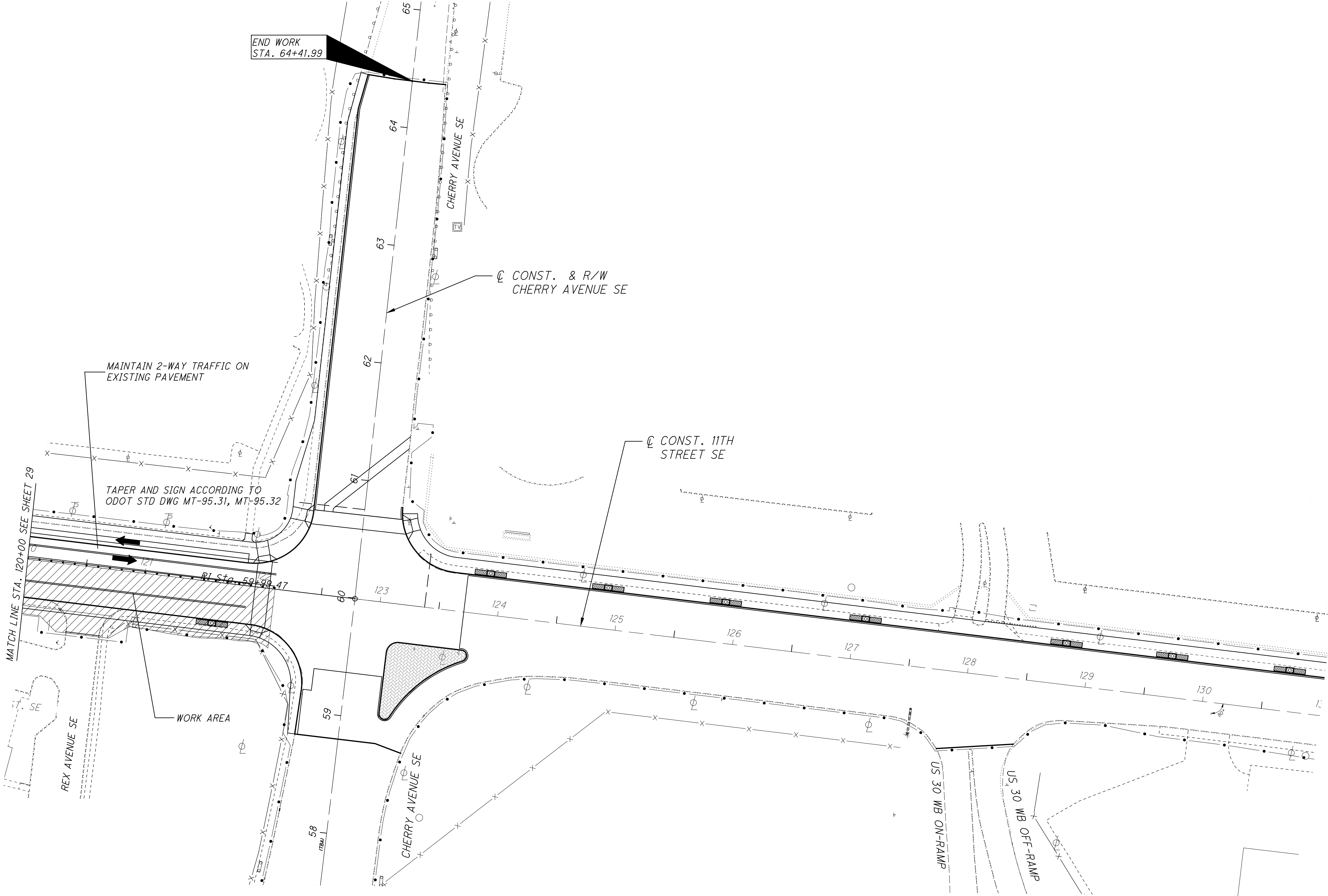
CALCULATED
TKI
CHECKED
JES


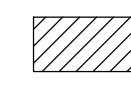
0 20 40 60
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC
 PHASE 2B**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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 TRAFFIC DIRECTION
 WORK AREA

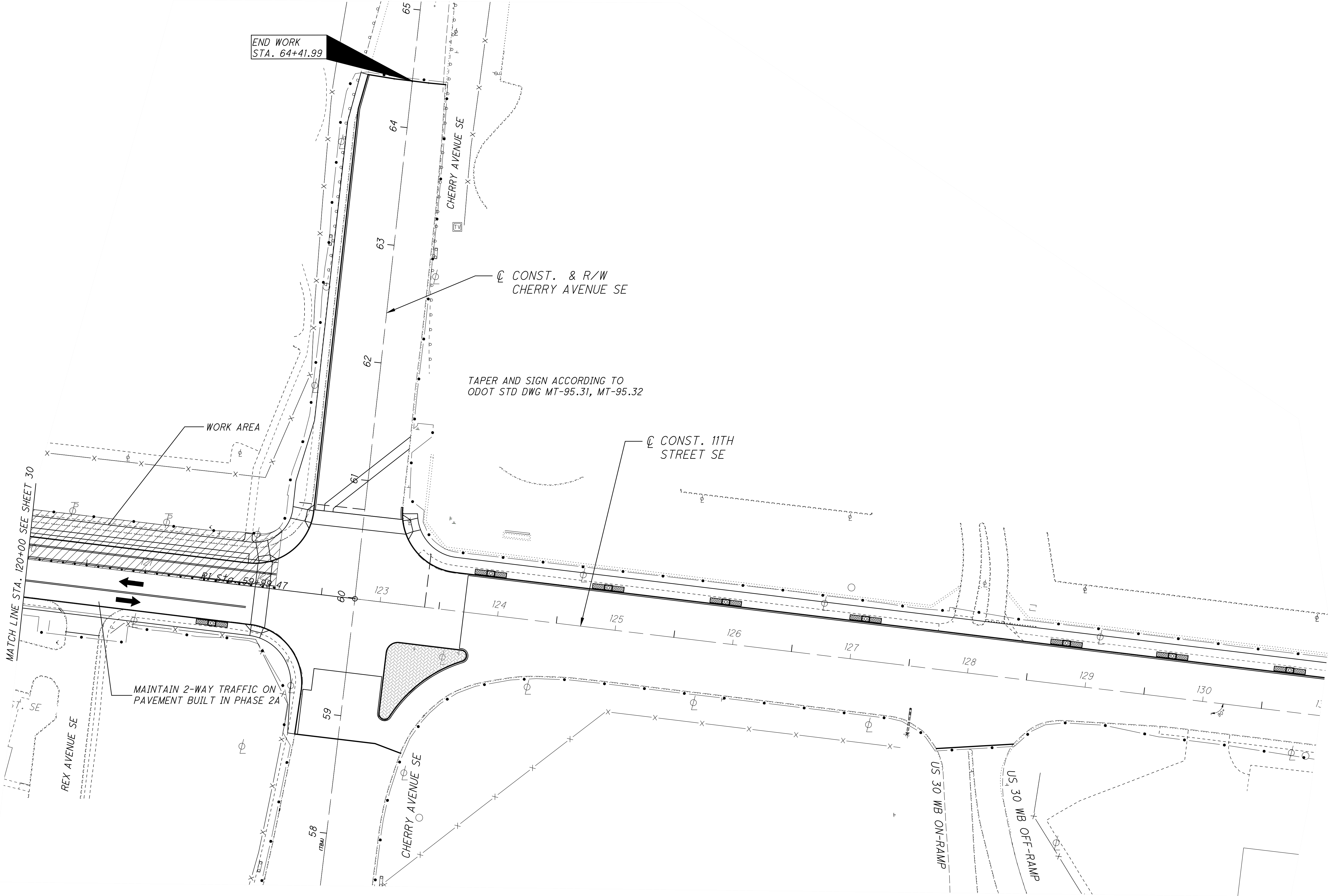
CALCULATED
 TKI
 CHECKED
 JES

0 20 40 60 80
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC
 PHASE 2A**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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CALCULATED
 TKI
 CHECKED
 JES

**MAINTENANCE OF TRAFFIC
 PHASE 2B**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

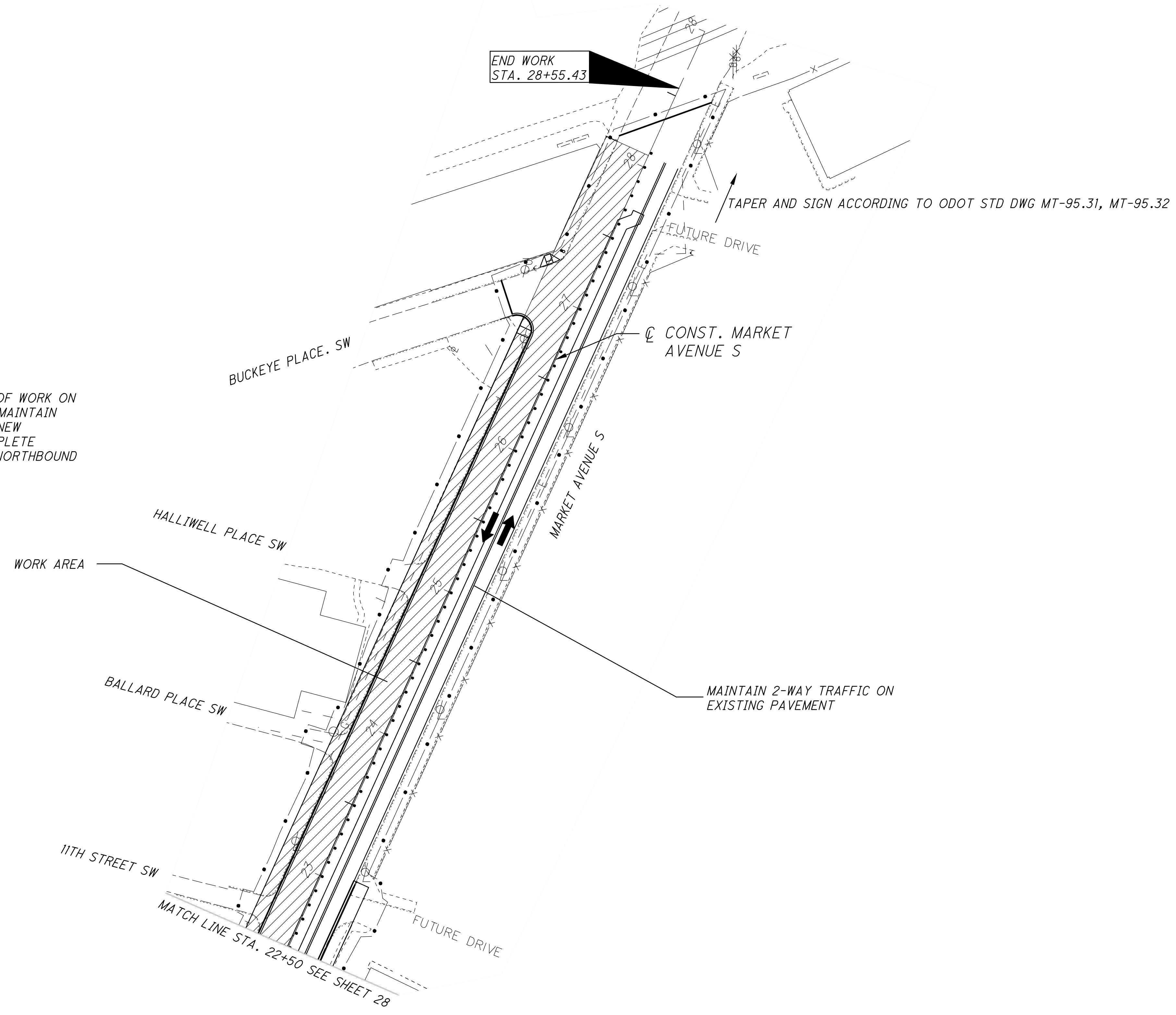
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TRAFFIC DIRECTION
WORK AREA

CALCULATED
TKI
CHECKED
JES

0 20 40 60
HORIZONTAL
SCALE IN FEET

UPON COMPLETION OF WORK ON SOUTHBOUND SIDE, MAINTAIN 2-WAY TRAFFIC ON NEW PAVEMENT AND COMPLETE CONSTRUCTION ON NORTHBOUND SIDE.



MAINTENANCE OF TRAFFIC
PHASE 1 STAGE 2

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	JPK	CHECKED	JES
229	234	242	217	218	219	220						OFFICE CALC		EXT	TOTAL								
				147	232									644	00500	379	FT	STOP LINE					
				95	515	34								644	00620	644	FT	CROSSWALK LINE, 12"					
			124		46									644	00621	170	FT	CROSSWALK LINE, 12", AS PER PLAN		211			
			270		245	387								644	00700	902	FT	TRANSVERSE/DIAGONAL LINE					
					25									644	00900	25	SF	ISLAND MARKING					
					5	3								644	01000	8	EACH	RAILROAD SYMBOL MARKING					
			12	12	36	9								644	01300	69	EACH	LANE ARROW					
			141											644	01510	141	FT	DOTTED LINE, 6"					
						150								644	01514	150	FT	DOTTED LINE, 8"					
				137										644	01520	137	FT	DOTTED LINE, 12"					
				5		5								644	01630	10	EACH	BIKE LANE SYMBOL MARKING					
				1	3									644	19000	4	EACH	SHARED LANE MARKING					
				72										644	20800	72	FT	YIELD LINE					
																		TRAFFIC SIGNALS					
55	23													625	25402	78	FT	CONDUIT, 2", 725.05					
92														625	25403	92	FT	CONDUIT, 2", 725.05, AS PER PLAN		222			
81	46	2,036												625	25502	2,163	FT	CONDUIT, 3", 725.05					
427	371													625	25503	798	FT	CONDUIT, 3", 725.05, AS PER PLAN		222			
427	371	617												625	25603	1,415	FT	CONDUIT, 4", 725.05, AS PER PLAN		222			
554	430	101												625	29000	1,085	FT	TRENCH					
6	3													625	31600	9	EACH	PULL BOX, MISC.: 725.06 (17" X 30")		222			
1	1	16												625	31600	18	EACH	PULL BOX, MISC.: 725.06 (36" X 36")		222			
6	4													625	32000	10	EACH	GROUND ROD					
554	430	101												625	36010	1,085	FT	UNDERGROUND WARNING/MARKING TAPE					
1	1													625	76000	2	EACH	ARC FLASH CALCULATIONS AND LABEL		221			
7	4													630	79101	11	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN		221			
41.5	23													630	80100	64.5	SF	SIGN, FLAT SHEET					
3	7													632	05007	10	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN		222			
7	2													632	05087	9	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN		222			
4	2													632	20731	6	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN		222			
10	9													632	25000	19	EACH	COVERING OF VEHICULAR SIGNAL HEAD		221			
4	2													632	25010	6	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD					
4	2													632	26001	6	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN		222			
2,387	1,639													632	40700	4,026	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG					
4	4													632	64011	8	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN		223			
2														632	64021	2	EACH	PEDESTAL FOUNDATION, AS PER PLAN		223			
296	76													632	68101	372	FT	POWER CABLE, 1 CONDUCTOR, NO. 6 AWG, AS PER PLAN		221			
1	1													632	70001	2	EACH	POWER SERVICE, AS PER PLAN		221			
	1													632	81700	1	EACH	COMBINATION SIGNAL SUPPORT, MISC.: NOSTALGIA SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2		223			
3	3													632	81700	6	EACH	COMBINATION SIGNAL SUPPORT, MISC.: NOSTALGIA SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12		223			
1														632	81700	1	EACH	COMBINATION SIGNAL SUPPORT, MISC.: NOSTALGIA SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14		223			
2														632	90010	2	EACH	PEDESTAL, MISC.: NOSTALGIA PEDESTAL 8'		223			
1	1													632	90101	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN		221			
1	1													633	67100	2	EACH	CABINET FOUNDATION					
1	1													633	67200	2	EACH	CONTROLLER WORK PAD					
1	1													633	75001	2	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN		222			
1	1													633	99000	2	EACH	CONTROLLER ITEM, MISC.: CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1		224			
		3,081												804	20050	3,081	FT	FIBER OPTIC CABLE, ARMORED, 48 FIBER					
		4												804	30010	4	EACH	FAN-OUT KIT, 12 FIBER					
		2												804	32010	2	EACH	DROP CABLE, 12 FIBER					
		4												804	33990	4	EACH	FIBER OPTIC PATCH CORD, 1 FIBER					
		2												804	34022	2	EACH	FIBER TERMINATION PANEL, 24 FIBER					
		24												804	35000	24	EACH	FUSION SPLICE					
		2												804	37000	2	EACH	SPLICE ENCLOSURE, BUTT STYLE					
		4												804	37500	4	EACH	FIBER OPTIC CONNECTOR					
		LS												804	37700	LS		FIBER OPTIC CABLE TESTING					
		2												804	38000	2	EACH	FIBER OPTIC CABLE MODEM					

GENERAL SUMMARY

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

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REF NO.	SHEET NO.	STATION TO STATION	202	202	202	202	202	202	202	202	608										
			CATCH BASIN REMOVED	TRAFFIC ISLAND REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	FENCE REMOVED	REMOVAL MISC.:BILLBOARD REMOVED	CURB RAMP	EACH	SF								
		TO	EACH	SY	FT	FT	FT	FT	FT	EACH	SF										
		11th Street																			
CR-1	49	105+01.47 RT.									325										
CR-2	49	105+7.00 RT./LT.									376										
CR-3	49	105+11.76 LT.									130										
CR-4	49	106+93.88 RT.									135										
CR-5	49	106+94.13 RT./LT.									118										
CR-6	49	106+98.97 LT.									176										
CR-7	51	109+67.59 RT.									78										
CR-8	51	110+11.43 RT.									78										
CR-9	57	121+99.68 LT.									212										
CR-10	57	121+99.68 RT.									118										
CR-11	57	123+12.25 LT.									172										
CR-12	63	134+55.00 LT.									150										
CR-13	63	134+79.00 LT.									150										
CR-14	63	136+51.18 LT.									61										
CR-15	63	137+30.16 LT.									43										
CR-16	63	137+54.00 LT.									43										
CR-17	63	137+54.00 RT.									45										
		Market Ave																			
CR-18	105	16+53.86 RT.									225										
CR-19	105	16+97.33 LT.									200										
CR-20	49	18+11.21 RT.									85										
CR-21	49	18+11.50 RT./LT.									95										
CR-22	49	18+15.26 LT.									254										
CR-23	49	19+92.88 RT./LT.									131										
CR-24	49	19+95.05 LT.									130										
CR-25	49	19+99.89 RT.									177										
CR-26	49	20+98.63 LT.									150										
CR-27	108	26+74.44 LT.									84										
CR-28	108	27+18.68 LT.									53										
SUBTOTAL FROM PREVIOUS SHEET			16	72	6997	663	715	66	644	1											
TOTALS CARRIED TO GENERAL SUMMARY			16	72	6997	663	715	66	644	1	3994										

CALCULATED	JPK
CHECKED	JES

ROADWAY SUBSUMMARY

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

39
302

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REF NO.	SHEET NO.	STATION TO STATION				202	638	638	638	638	638	638	638	638	638	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	638			
						VALVE BOX REMOVED	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN	8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN	10" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN	6" GATE VALVE AND VALVE BOX, AS PER PLAN	8" GATE VALVE AND VALVE BOX, AS PER PLAN	10" GATE VALVE AND VALVE BOX, AS PER PLAN	12" GATE VALVE AND VALVE BOX, AS PER PLAN	6" FIRE HYDRANT, AS PER PLAN	FIRE HYDRANT REMOVED	VALVE BOX ADJUSTED TO GRADE	1" POLYETHYLENE WATER SERVICE LINE AND APPURTENANCES, CITY OF CANTON STANDARD, AS PER PLAN	1 1/2" POLYETHYLENE WATER SERVICE LINE AND APPURTENANCES, CITY OF CANTON STANDARD, AS PER PLAN	2" POLYETHYLENE WATER SERVICE LINE AND APPURTENANCES, CITY OF CANTON STANDARD, AS PER PLAN	CUT AND PLUG EXISTING 4" WATER LINE	CUT AND PLUG EXISTING 6" WATER LINE	CUT AND PLUG EXISTING 8" WATER LINE	CUT AND PLUG EXISTING 10" WATER LINE	CUT AND PLUG EXISTING 12" WATER LINE	WATER WORK, MISC.: CONNECTION FOR EX. 30" CONCRETE PIPE AND PR. 12" DIP
					EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	LS			
TO																										
11th Street																										
W1	171	102+01	LT.	106+20	RT.	2																				
W1A	171	101+89	RT.	103+75	RT.					193				1						1						
W2	171	103+74	RT.																							
W2A	173	103+88	LT.			1											23									
W3	173	103+91	RT.	104+06	LT.		59							1												
W3A	173	104+32	LT.											1												
W4	173	103+75	RT.	108+25	LT.					448																
W7	173	105+47	RT.	105+55	RT.	1																				
W8	173	106+06	RT.	106+10	RT.					1				1												
W8A	173	106+11	RT.	109+51	RT.																1					
Market Ave																										
W9	173	17+05	LT.	18+44	RT.		142																			
W9A	173	17+05	LT.	22+93	RT.	5															1					
W9B	173	16+57	RT.																							
W9C	173	16+76	RT.											1												
W9D	173	16+95	LT.											1												
11th Street																										
W10	173	106+69	RT.																							
W11	173	107+01	RT.	107+10	RT.									3												
W12	175	108+25	RT.	112+75	RT.					450																
W13	175	109+51	RT.	110+38	RT.																					
W13A	175	110+38	RT.	111+54	LT.																					
W14	175	110+10	RT.	110+62	RT.		6							1	1											
W14A	175	112+44	LT.												1											
W15	177	112+75	RT.	116+25	RT.					348																
W16	177	114+64	RT.	114+70	LT.									1												
W17	177	115+11	LT.	115+16	LT.	2																				
W17A	177	115+87	LT.			2																				
W18	179	116+92	RT.				16																			
W19	179	116+25	RT.	120+75	RT.					451				1												
W19A	179	118+04	RT.																							
W20	179	118+94	RT.	119+10	RT.									1	14											
W20A	179	MARKET		120+48	LT.	1																				
W21	181	120+75	RT.	124+20	LT.					359											1					
W21A	181	122+10	LT.												1											
W22	181	122+48	RT.	123+19	LT.																					
W23	181	122+48	RT.	123+15	LT.																	1				
W23A	181	123+19	LT.	123+23	LT.	1																1				
W24	181	MARKET		124+20	LT.	1																	1			
Market Ave																										
W25	173	18+90	RT.	21+00	RT.					242																
W26	173	20+37	LT.	20+40	RT.	1																				
W27	173	20+64	RT.	20+70	RT.		20																			
W28	184	21+00	RT.	25+00	RT.					407				1	1											
W29	184	22+51	LT.	22+52	RT.																					
W30	184	22+66	LT.	22+70	RT.																					
W31	184	22+93	RT.	25+57	RT.	4																				
W32	184	23+31	RT.																							
W33	184	24+19	LT./RT.											1	1											
W34	185	23+25	RT.	25+47	RT.	1					2												LS			
W35	185	25+00	RT.	27+63	RT.																					
W36	185	25+47	RT.	27+63	RT.	4																				
W37	185	27+29	LT.	27+52	RT.	1																				
W38	185	27+52	RT.																							
W39	185	27+54	RT.											1												
W40	185	28+23	RT.	28+40	RT.		23							1	1	1										
TOTALS CARRIED TO GENERAL SUMMARY						27	328	293	19	3165	3	2	1	8	7	7	10	115	73	46	1	5	3	2	2	LS

WATER WORK SUBSUMMARY

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

CALCULATED
JPK
CHECKED
JES

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REF NO.	SHEET NO.	STATION TO STATION				202	202	202	611	611	611	611	611	611	202	611	611	202	202	611	611	202	611			
						ABANDON MISC.: PLUG 8" AND SMALLER SANITARY CONDUIT, AS PER PLAN	PIPE REMOVED	MANHOLE REMOVED	4" CONDUIT, TYPE B	6" CONDUIT, TYPE B	8" CONDUIT, TYPE B	12" CONDUIT, TYPE B	18" CONDUIT, TYPE B	21" CONDUIT, TYPE B	30" CONDUIT, TYPE B	ABANDON MISC.: LAMP HOLE	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	DRAINAGE STRUCTURE, MISC.: CITY OF CANTON MANHOLE	ABANDON MISC.: SANITARY MANHOLE, AS PER PLAN	ABANDON MISC.: PIPE ABANDONED IN PLACE	DRAINAGE STRUCTURE, MISC.: MANHOLE WITH OUTSIDE DROP CONNECTION, COMPLETE, AS PER PLAN	CONDUIT, MISC.: 4" SANITARY LATERAL RECONNECTED, COMPLETE, AS PER PLAN	ABANDON MISC.: BULKHEAD, GROUT AND ABANDON SANITARY SEWER, AS PER PLAN	8" CONDUIT, TYPE B, AS PER PLAN, 748.02		
					EACH	FT	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	EACH	FT	EACH	FT				
TO																										
11th Street																										
S2	47	102+05.00	LT.	103+55.00	RT.						151								1							
S2A	47	103+55.00	RT.	104+25.00	RT.						71								1							
S3	49	103+77.00	RT.	104+25.00	LT.		8	1													61					
S3A	49	103+77.00	RT.				8				8								1							
S3B	49	104+25.00	LT.				8				30								1							
S3C	49	104+25.00	RT.	106+75.00	LT.						248								1							
S4	49	106+75.00	LT.	109+90.00	LT.							306							1							
S5	51	109+88.11	RT.	109+90.00	LT.										83											
S6	51	109+88.11	RT.	110+44.41	RT.			1																		
S7	51	110+44.41	RT.	110+75.14	LT.	2	10	1													50					
S7A	51	110+75.14	LT.	111+13.90	LT.	1												1	63							
S7B	51	111+13.90	LT.	112+03.69	LT.	1															128					
S7C	51	109+90.00	LT.	112+00.00	LT.										210				1							
S8	53	112+00.00	LT.	114+30.00	LT.										231				1							
S8A	53	114+30.00	LT.	115+95.00	LT.										166				1							
S9	53	115+52.65	LT.												1											
S10	53	115+94.50	LT.	115+95.00	LT.		8	1			26								1							
S10A	55	115+95.00	LT.	117+65.00	RT.		71						71	171					1							
S10B	55	117+63.66	RT.	119+43.72	RT.	1									1						185					
S10C	53	115+94.50	LT.	116+10.27	LT.		16	1																		
S11	55	116+10.27	LT.	117+63.66	RT.		49	1													160					
S11A	55	117+65.00	RT.	118+00.00	RT.									35					1				24		2	
S12	55	118+00.00	RT.	120+42.84	RT.	1	8	1			8			243					1				26			
S12A	57	120+42.84	RT.	121+70.00	RT.									127					1							
S12B	55	120+42.66	LT.	121+93.21	LT.																1	151				
S12C	57	121+70.00	RT.	122+10.00	LT.									51					1							
S13	57	122+77.35	RT.			1														1	182					
S13A	57	123+43.47	LT.	125+13.87	RT.														1		170					
S14	57	125+13.87	RT.																2		277					
S14A	57	122+10.00	LT.	125+14.41	LT.	2								304					1							
S15	59	125+41.41	LT.	127+35.00	LT.									221					1							
S15A	59	125+13.87	RT.	126+76.46	RT.															1	163					
S16	61	129+86.75	RT.	55+28.64	RT.			1													873					
S16A	61	127+35.00	LT.	129+86.52	LT.		10			10				252					1							
S17	61	129+86.75	RT.	130+38.45	LT.		10												1	91						
S18	61	129+86.52	LT.	131+71.38	LT.		25																			
S18A	61	129+86.75	RT.	131+74.16	RT.				1												194					
S19	61	130+38.45	LT.	132+26.36	LT.															1	187					
S20	61	131+74.16	RT.	133+59.34	RT.															1	185					
S21	63	132+26.36	LT.	134+33.02	LT.		15	1			5		10		30					1	207					
S21A	63	133+59.34	RT.	134+33.00	RT.																					
S21B	63	131+71.38	LT.	134+33.01	LT.		5				26									1	74					
S22	63	135+21.86	RT.	137+28.23	LT.		236	1			236				262					1						
S23	63	135+43.14	LT.					1																		
S24	63	137+28.23	LT.				20	1												1						
TOTAL CARRIED TO NEXT SHEET					9	507	13	0	35	783	332	10	71	2571	1	1	24	10	3401	1	50	2	0			

CALCULATED JPK CHECKED JES	SANITARY SUBSUMMARY	STA - 11TH STREET SE IMPROVEMENTS (PID 90465)	44 302
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				202	202	202	611	611	611	611	611	611	611	611	202	202	611	611	202	611					
				ABANDON MISC.:PLUG 8" AND SMALLER SANITARY CONDUIT, AS PER PLAN	PIPE REMOVED	MANHOLE REMOVED	4" CONDUIT, TYPE B	6" CONDUIT, TYPE B	8" CONDUIT, TYPE B	12" CONDUIT, TYPE B	18" CONDUIT, TYPE B	21" CONDUIT, TYPE B	30" CONDUIT, TYPE B	ABANDON MISC.: LAMPHOLE	MANHOLE ADJUSTED TO GRADE	DRAINAGE STRUCTURE, MISC.:CITY OF CANTON MANHOLE	ABANDON MISC.: MANHOLE ABANDONED IN PLACE	ABANDON MISC.: PIPE ABANDONED IN PLACE	DRAINAGE STRUCTURE, MISC.:MANHOLE WITH OUTSIDE DROP CONNECTION, COMPLETE, AS PER PLAN	CONDUIT, MISC.:4" SANITARY LATERAL RECONNECTED, COMPLETE, AS PER PLAN	ABANDON MISC.:BULKHEAD, GROUT AND ABANDON SANITARY SEWER, AS PER PLAN	8" CONDUIT, TYPE B, AS PER PLAN, 748.02			
				EACH	FT	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	EACH	FT	EACH	FT				
Market Ave																									
S25	105	14+50.00	LT.		108	1										1								108	
S25A	105	14+50.00	LT.		15				15							1									
S25B	49	15+50.49	LT.		160	1			160							1					8				
S26	49	17+02.68	LT.		34	1												80							
S26A	49	17+02.68	LT.		17		9	117								1									
S27	49	19+22.74	RT.		93	1												101							
S28	49	20+25.00	RT.								104					1									
S29	103	21+18.69	LT.		174	1																			
S30	103	20+25.00	LT.							268						1									
S31	103	22+94.27	LT.		2										1			44							
S32	107	23+03.44	RT.		1	149	1											58							
S32A	107	22+99.27	LT.							204						1					8				
S32B	107	24+98.39	LT.		25				25						1										
S33	108	24+93.24	LT.		196	1																			
S34	108	24+98.74	LT.		124	1				315					1										
Cherry Ave																									
S35																									
S36	128	48+37.25	LT.												1										
S37																									
S38																									
S39	128	50+02.10	LT.												1										
S40	128	50+36.45	LT.												1										
S41																									
S42	129	52+61.20	RT.												1			225							
S43	129	55+28.64	LT.														1	267							
S44	130	56+35.05	LT.														1	107							
S45	130	58+16.41	LT.														1	181							
SUBTOTALS FROM PREVIOUS SHEET				9	507	13	0	35	783	332	10	71	2571	1	1	24	10	3401	1	50	2	0			
TOTALS CARRIED TO GENERAL SUMMARY				12	1602	21	9	152	983	1223	10	71	2571	1	6	33	13	4464	1	66	2	108			





CALCULATED JPK CHECKED JES	SANITARY SUBSUMMARY	STA - 11TH STREET SE IMPROVEMENTS (PID 90465)	45 302
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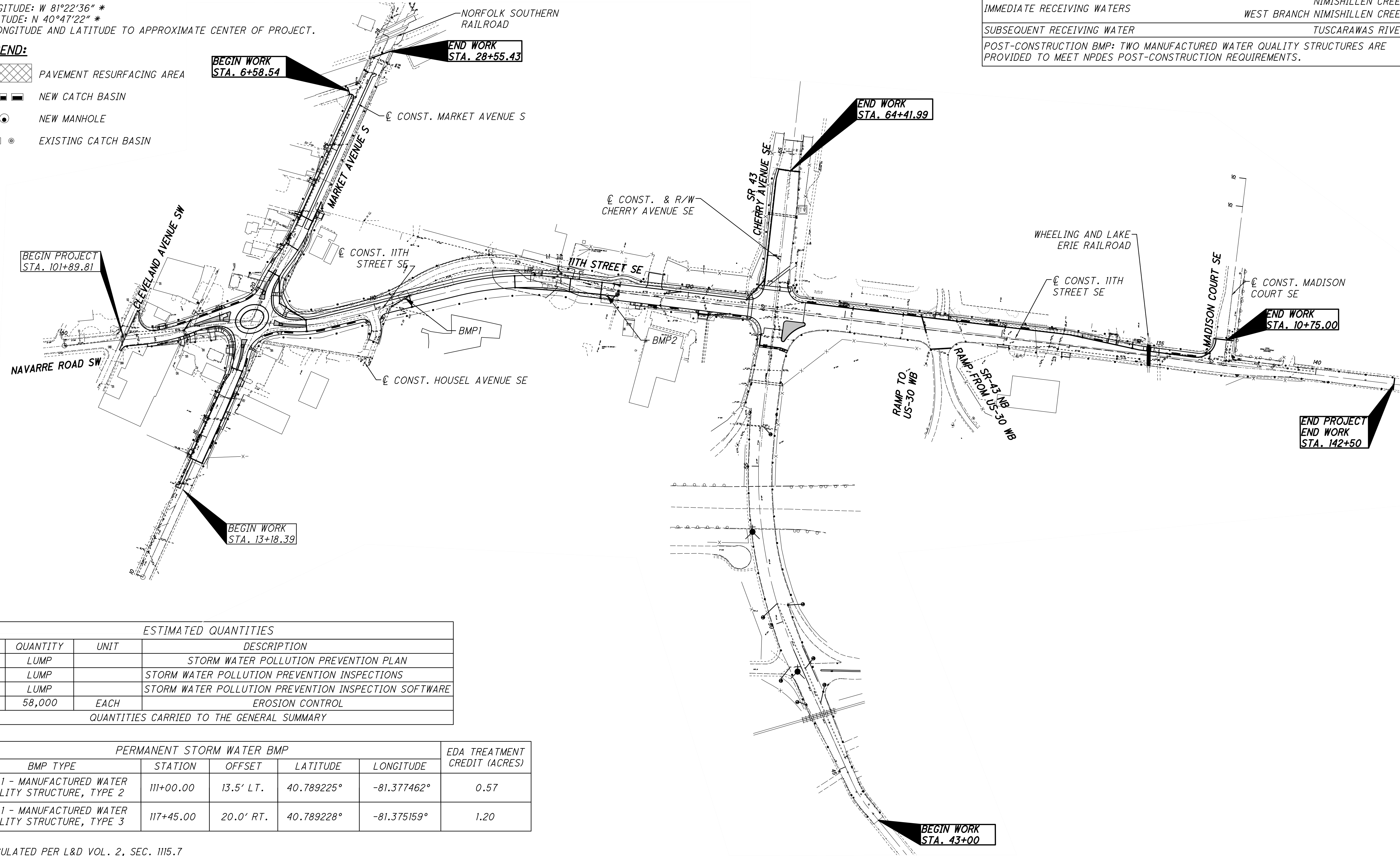
PROJECT DESCRIPTION:
 IMPROVEMENTS WILL INCLUDE THE INSTALLATION OF A ROUNDABOUT AT THE INTERSECTION OF 11TH STREET SE / MARKET AVENUE S, STREETSCAPING WITH TREES, UPGRADED PEDESTRIAN LIGHTING, UPGRADED SIGNALS, ADA IMPROVEMENTS AT CROSSWALKS, BRICK INTERSECTION, A SHARED-USE PATH AND BIKE LANES THAT ALIGN WITH THE CITY'S MASTER BIKE ROUTES, 11TH STREET SE WILL ALSO BE REALIGNED TO ELIMINATE THE SUBSTANDARD DEFLECTION IN THE EXISTING ALIGNMENT.

USGS QUADRANT: KENT QUADRANGLE
 KENT, OHIO

LONGITUDE: W 81°22'36" *
 LATITUDE: N 40°47'22" *
 * LONGITUDE AND LATITUDE TO APPROXIMATE CENTER OF PROJECT.

LEGEND:

-  PAVEMENT RESURFACING AREA
-  NEW CATCH BASIN
-  NEW MANHOLE
-  EXISTING CATCH BASIN



PROJECT DATA	
TOTAL AREA (RIGHT OF WAY)	10.25 ACRES
PROJECT EARTH DISTURBED AREA	5.97 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.67 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	6.64 ACRES
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	15.79 ACRES
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	15.95 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.71
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.76
IMMEDIATE RECEIVING WATERS	NIMISHILLEN CREEK WEST BRANCH NIMISHILLEN CREEK
SUBSEQUENT RECEIVING WATER	TUSCARAWAS RIVER
POST-CONSTRUCTION BMP: TWO MANUFACTURED WATER QUALITY STRUCTURES ARE PROVIDED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS.	

N
↑

300'
15'
0'

HORIZONTAL
SCALE IN FEET

CALCULATED: JPK
CHECKED: AMP

PROJECT SITE PLAN

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
832	LUMP		STORM WATER POLLUTION PREVENTION PLAN
832	LUMP		STORM WATER POLLUTION PREVENTION INSPECTIONS
832	LUMP		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE
832	58,000	EACH	EROSION CONTROL

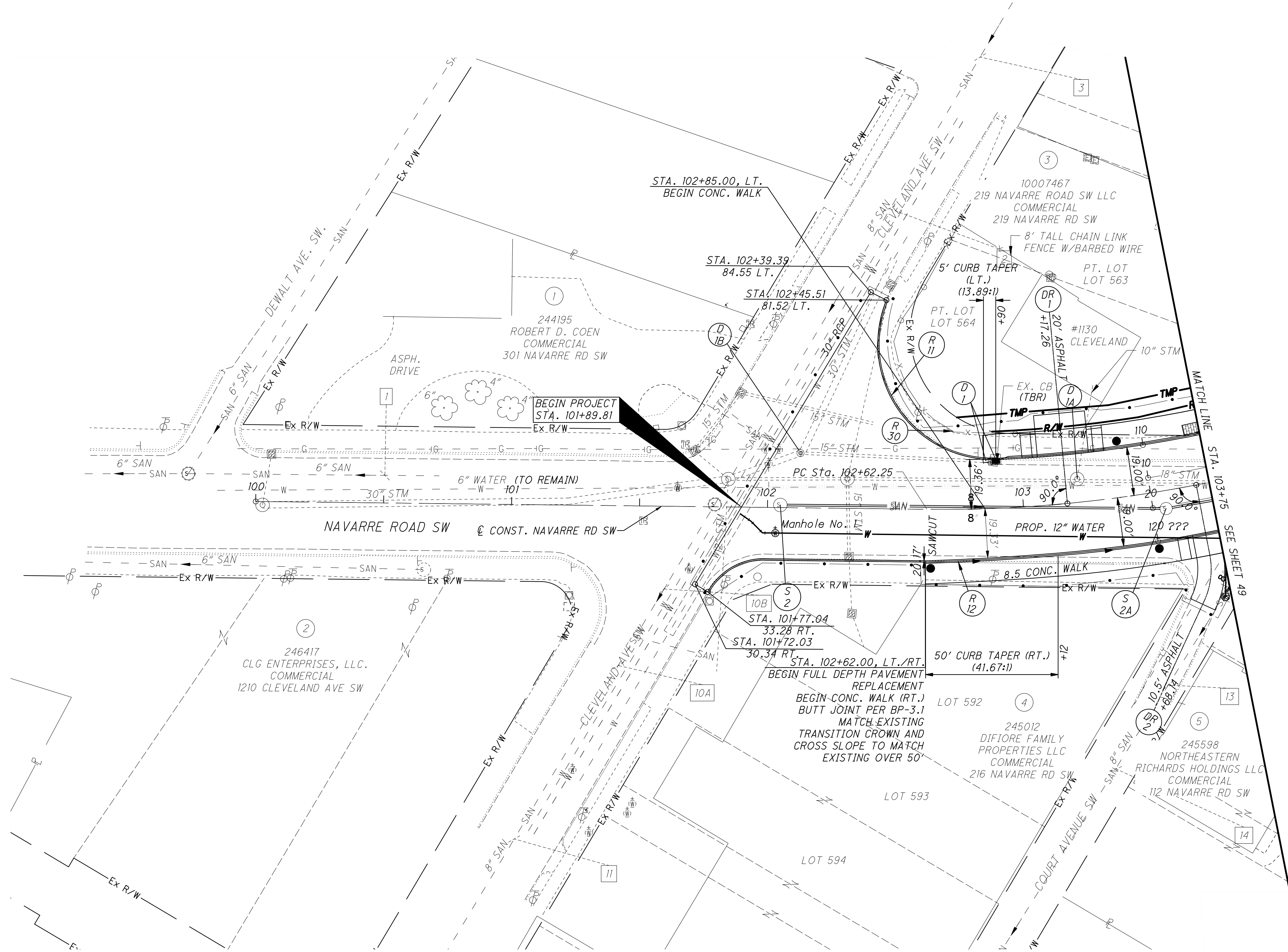
QUANTITIES CARRIED TO THE GENERAL SUMMARY

PERMANENT STORM WATER BMP

BMP TYPE	STATION	OFFSET	LATITUDE	LONGITUDE	EDA TREATMENT CREDIT (ACRES)
BMP 1 - MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2	111+00.00	13.5' LT.	40.789225°	-81.377462°	0.57
BMP 1 - MANUFACTURED WATER QUALITY STRUCTURE, TYPE 3	117+45.00	20.0' RT.	40.789228°	-81.375159°	1.20

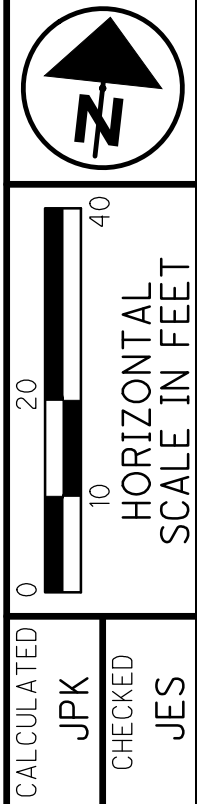
* CALCULATED PER L&D VOL. 2, SEC. 1115.7

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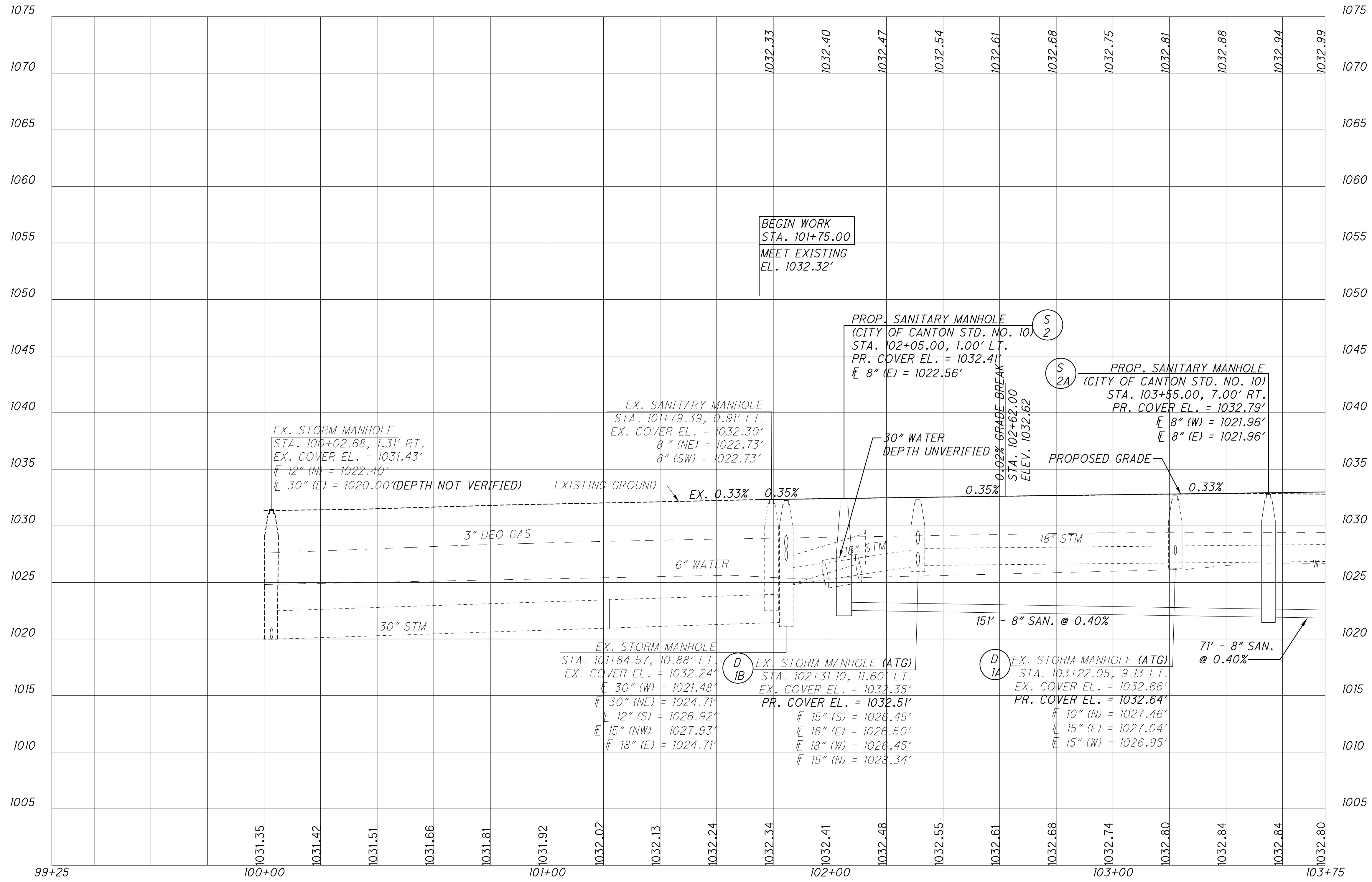
NOTES:
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR 11TH STREET SE PROFILE, SEE SHEET 48.
 FOR 11TH STREET SE CROSS SECTIONS, SEE SHEETS 65-104.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.

- SANITARY LATERAL CONNECTIONS:**
- 1 - 301 NAVARRE RD SW
 - 2 - 1130 CLEVELAND AVE SW
 - 3 - 219 NAVARRE RD SW
 - 10A - 216 NAVARRE RD SW (#1)
 - 10B - 216 NAVARRE RD SW (#2)
 - 11 - 216 NAVARRE RD SW (#3)
 - 13 - 112 NAVARRE RD SW
 - 14 - 1213 MARKET AVE SW



**PLAN - 11TH STREET SE
 BEGINNING TO STA. 103+75.00**

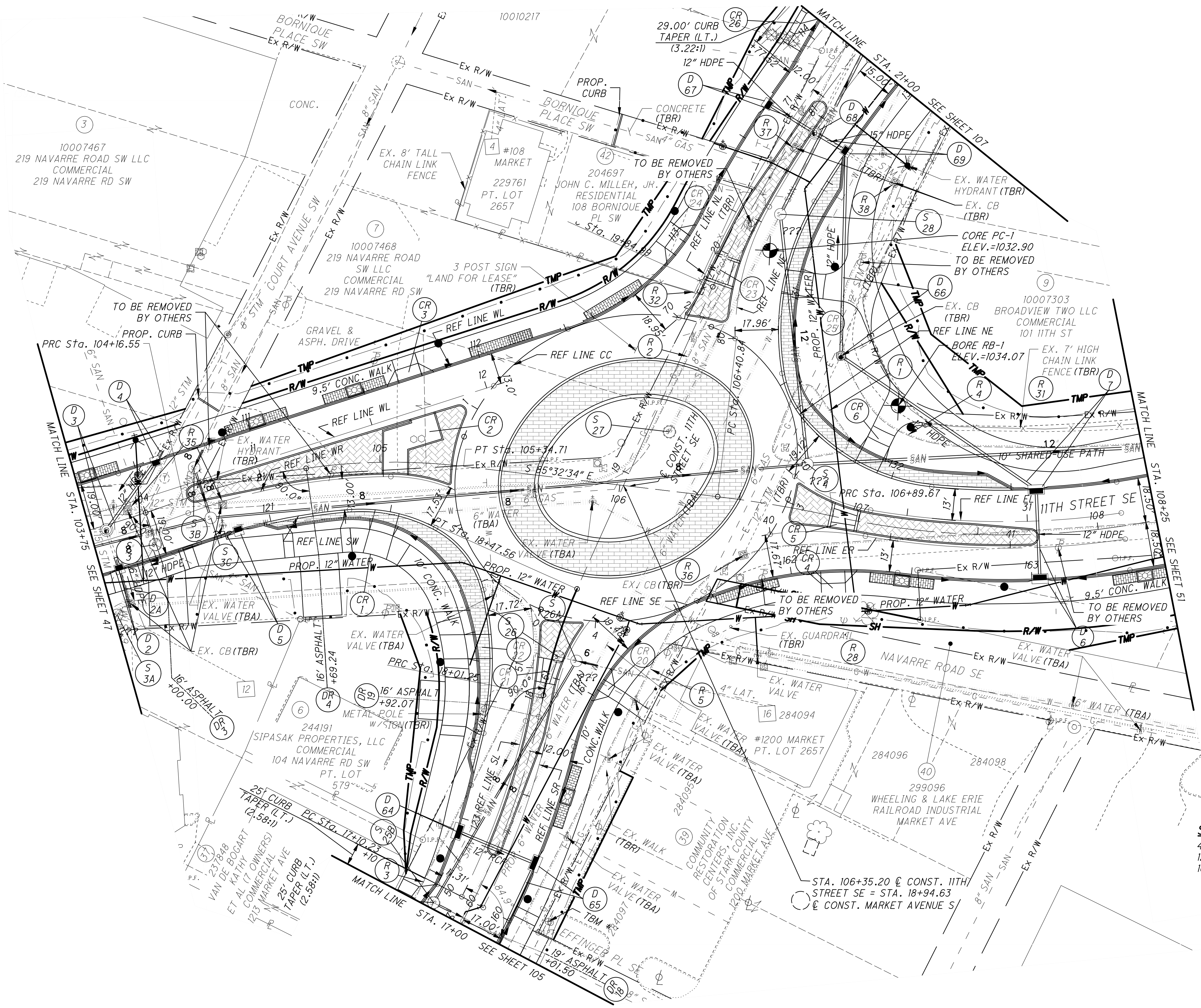
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**



**PROFILE - 11TH STREET SE
BEGINNING TO STA. 103+75.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

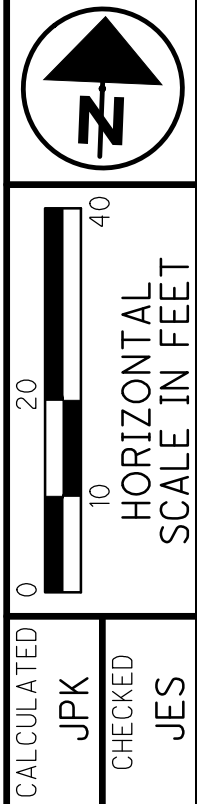
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■ BENCHMARK TBM #7
CHISELED SQUARE ON 18"
CONC. FOUNDATION FOR
LIGHT POLE, SOUTH OF
11TH ST., 34' EAST OF E
OF MARKET AVENUE STA.
17+17, 32' RT.
ELEV. 1036.05

- NOTES:**
- PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 - FOR ROUNDABOUT GEOMETRIC DETAILS, SEE SHEETS 4-5.
 - FOR 11TH STREET SE CROSS SECTIONS, SEE SHEETS 65-104.
 - FOR MARKET AVENUE S PROFILE, SEE SHEET 106.
 - FOR MARKET AVENUE S CROSS SECTIONS, SEE SHEETS 109-127.
 - FOR ROUNDABOUT INSCRIBED CIRCLE PROFILE, SEE SHEET 151.
 - FOR INTERSECTION DETAILS, SEE SHEETS 155-157.
 - FOR 11TH STREET SE PROFILE, SEE SHEET 50.
 - FOR ROUNDABOUT AND SPLITTER ISLAND DETAILS, SEE SHEETS 152-154.
 - FOR PLAN VIEW LEGEND, SEE SHEET 24.

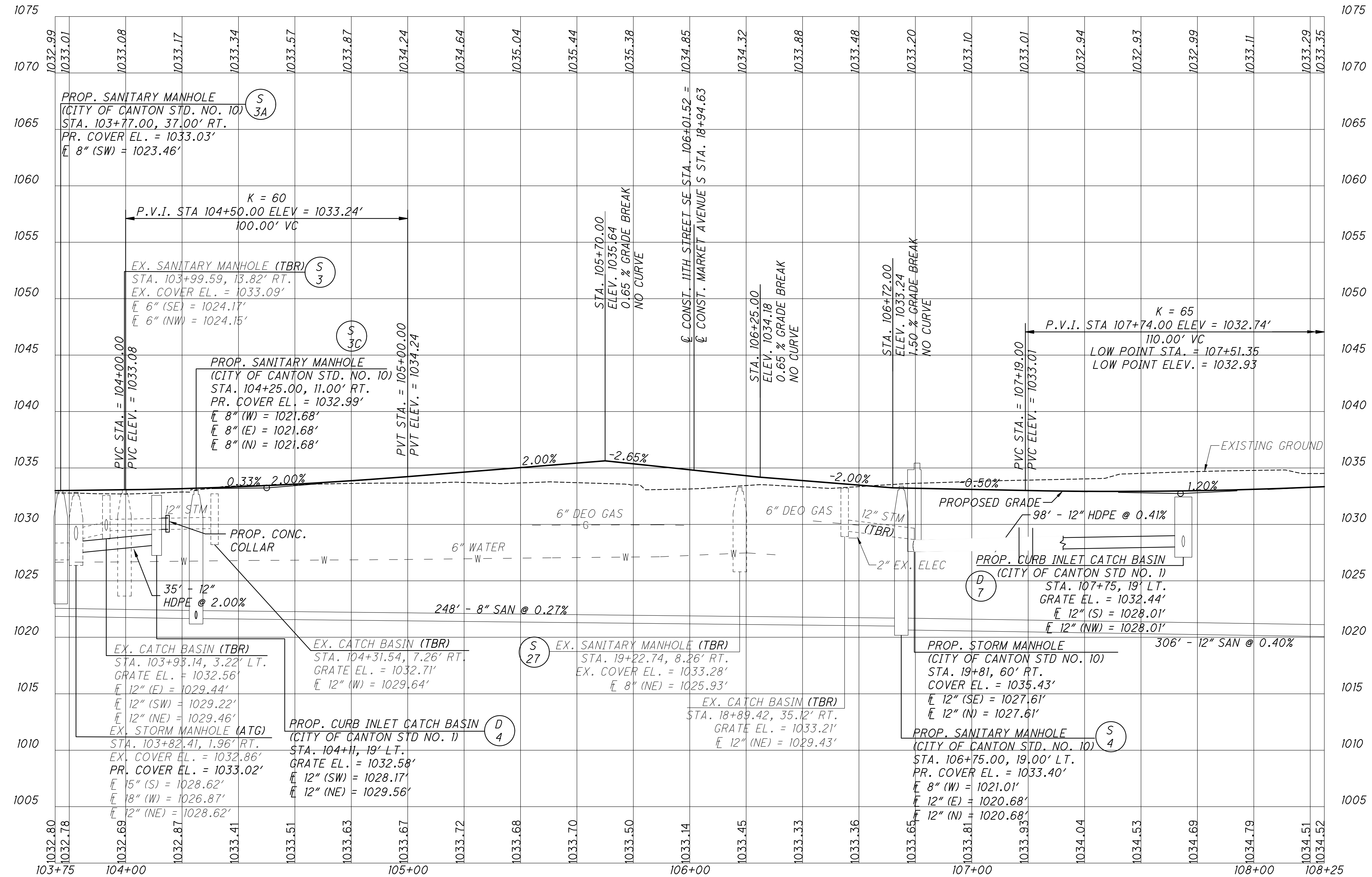
SANITARY LATERAL CONNECTIONS:
4 - 108 BORNIQUE PL SW
12 - 104 NAVARRE RD SW
16 - 1200 MARKET AVE S



**PLAN - 11TH STREET SE
STA. 103+75.00 TO STA. 108+25.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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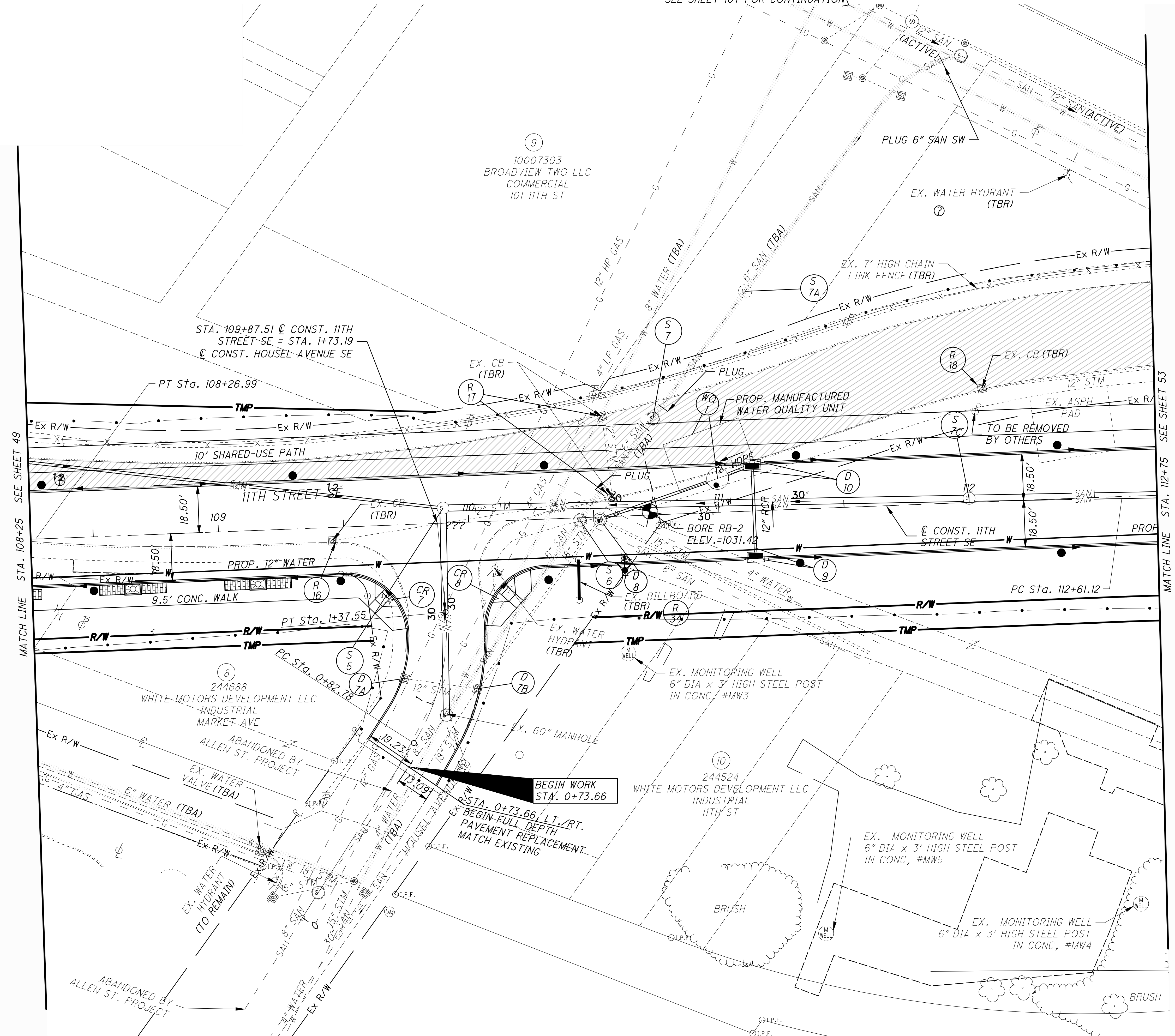
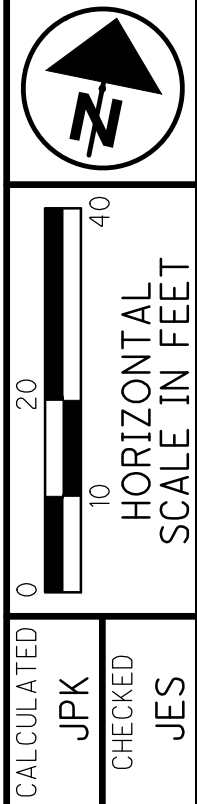
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JPK
CHECKED
JES

**PROFILE - 11TH STREET SE
STA. 103+75.00 TO STA. 108+25.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

SEE SHEET 107 FOR CONTINUATION

NOTES:
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR 11TH STREET SE CROSS SECTIONS, SEE SHEETS 65-104.
 FOR HOUSEL AVENUE SE PROFILE, SEE SHEET 150.
 FOR INTERSECTION DETAILS, SEE SHEETS 155-157.
 FOR 11TH STREET SE PROFILE, SEE SHEET 52.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.



MATCH LINE STA. 108+25 SEE SHEET 49

MATCH LINE STA. 112+75 SEE SHEET 53

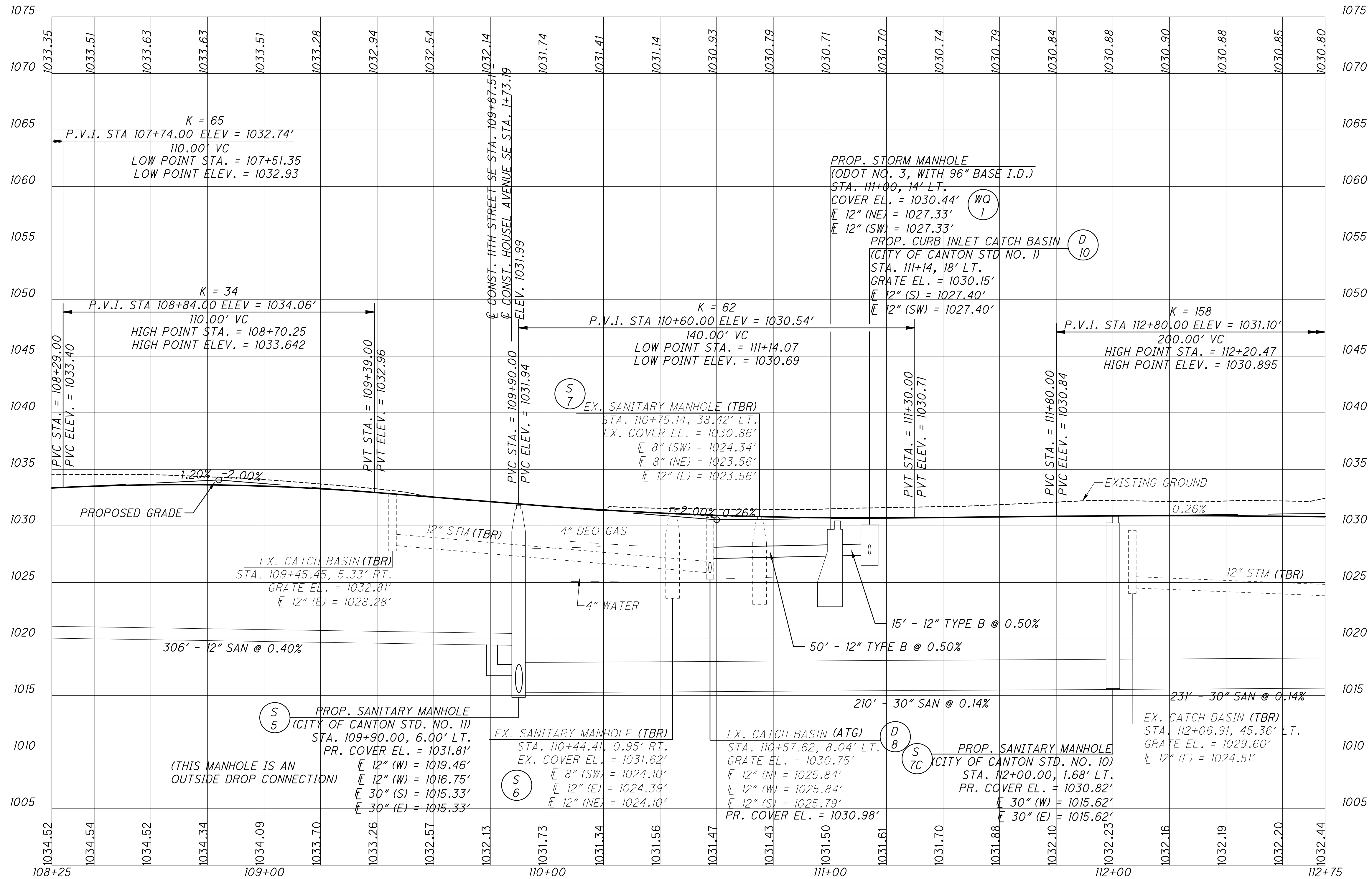
BEGIN WORK STA. 0+73.66

EX. BEGIN-FULL DEPTH PAVEMENT REPLACEMENT MATCH EXISTING

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PLAN - 11TH STREET SE
STA. 108+25.00 TO STA. 112+75.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



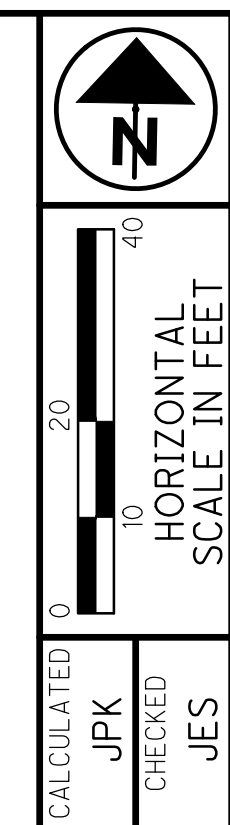
CALCULATED
JPK
CHECKED
JES

**PROFILE - 11TH STREET SE
STA. 108+25.00 TO STA. 112+75.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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■ BENCHMARK TBM #6
RAILROAD SPIKE SET 8"
UP ON S. SIDE OF LIGHT
POLE, 25' N. OF E 11TH
STREET SE, 4' E. OF SE
CORNER OF 6' H CHAIN
LINK FENCE
STA. 113+90, 183' LT.
ELEV. 1030.61

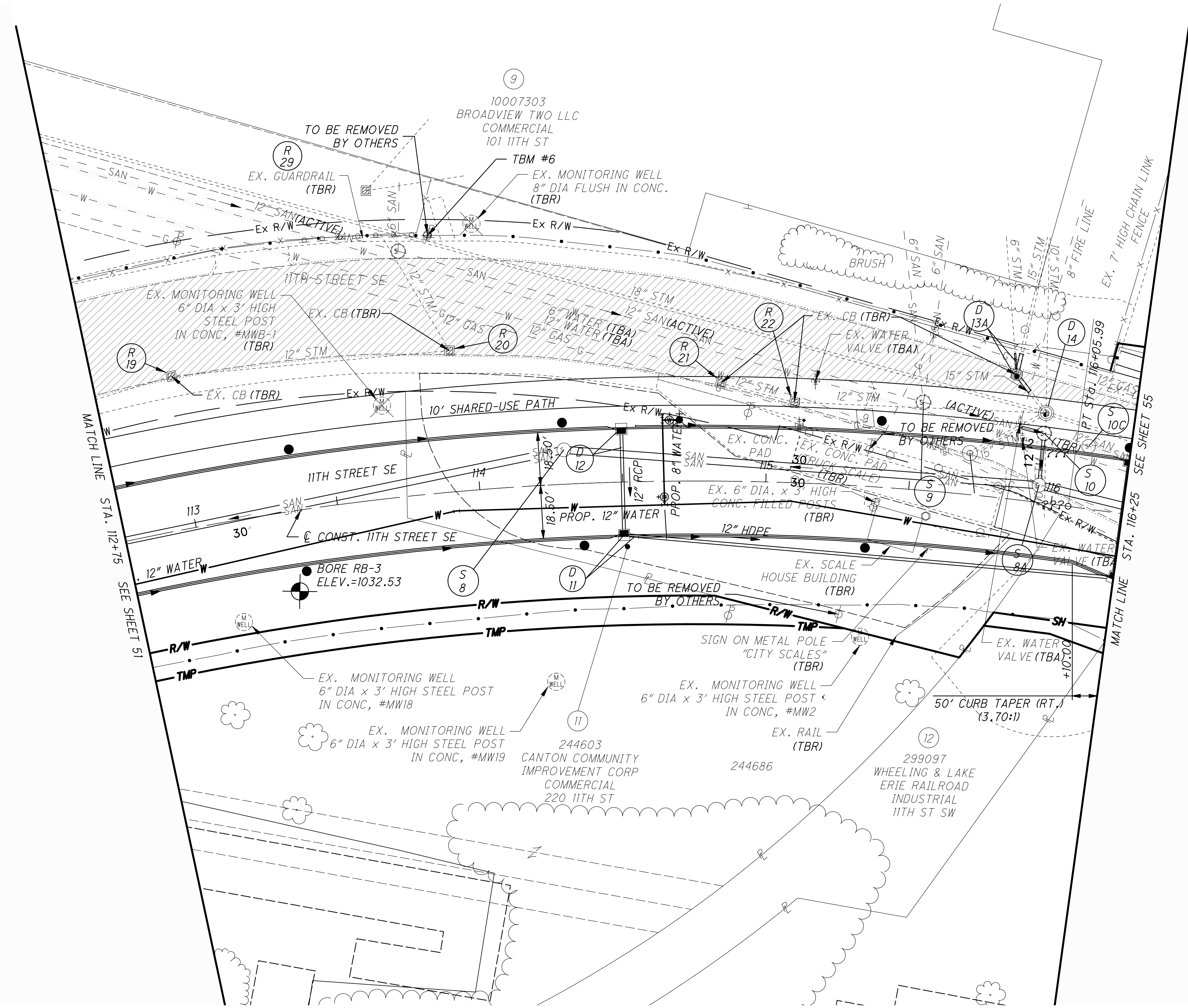


NOTES:
PAVEMENT DIMENSIONS ARE
MEASURED TO THE FACE OF CURB.

FOR 11TH STREET SE CROSS
SECTIONS, SEE SHEETS 65-104.

FOR 11TH STREET SE PROFILE, SEE
SHEET 54.

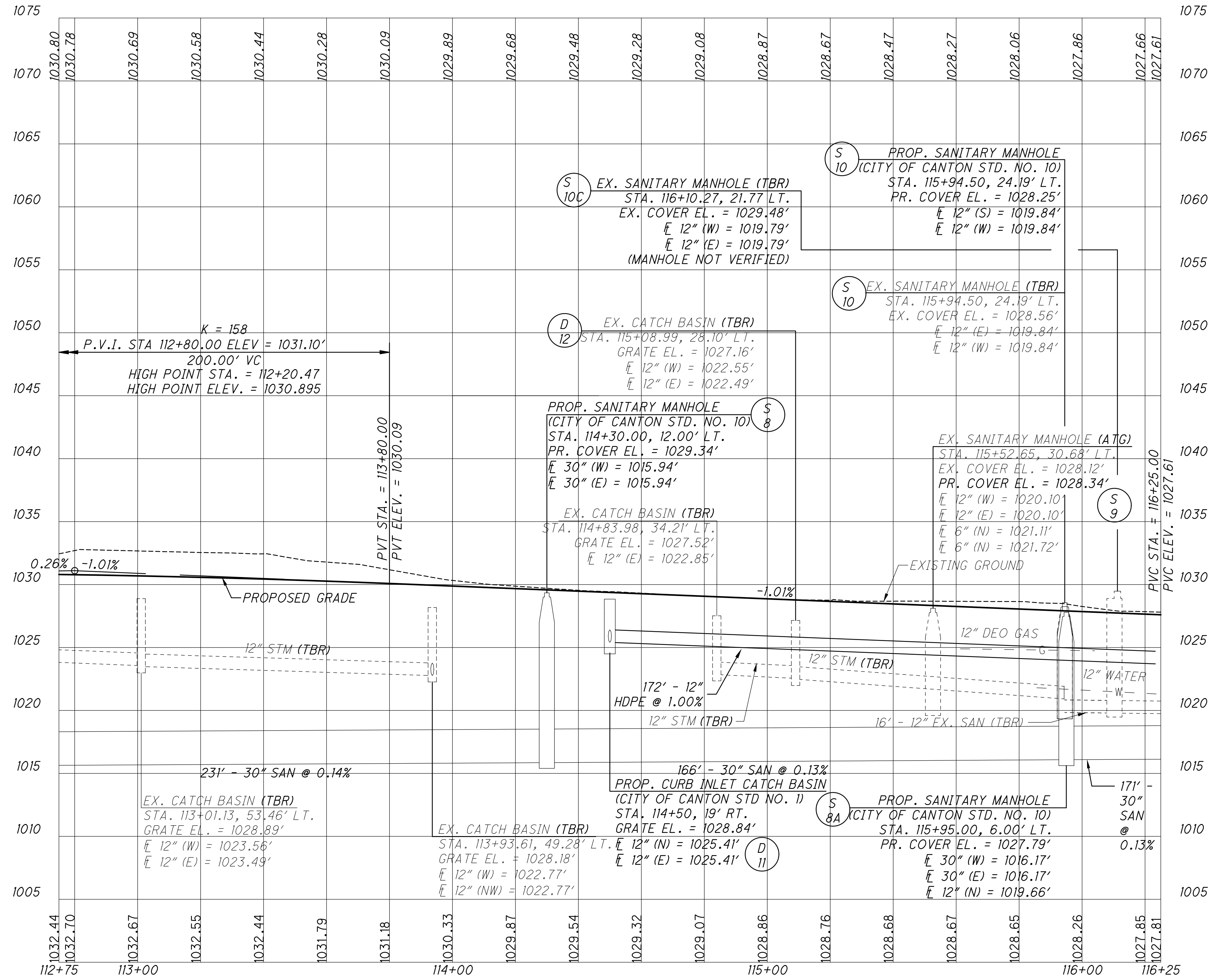
FOR PLAN VIEW LEGEND, SEE
SHEET 24.



**PLAN - 11TH STREET SE
STA. 112+75.00 TO STA. 116+25.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

SANITARY LATERAL CONNECTIONS:
9 - 240 11TH ST SE (SCALE BUILDING)
- TO BE REMOVED/PLUGGED



**PROFILE - 11TH STREET SE
 STA. 112+75.00 TO STA. 116+25.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

CURVE	P.I.		DELTA	Dc	TANGENT LENGTH (FT)	ARC LENGTH (FT)	RADIUS (FT)	P.C.		P.T.	
	STA.	OFFSET						STA.	OFFSET	STA.	OFFSET
SW1	117+50.86	36.50' LT	20°36'48"	89°31'29"	11.64'	23.03'	64'	117+39.22	36.50' LT	117+61.76	40.60' LT
SW2	117+91.87	51.93' LT	38°09'21"	68°12'33"	29.05'	55.94'	84'	117+64.68	41.70' LT	118+19.57	43.17' LT
SW3	118+40.65	36.51' LT	17°49'01"	77°25'36"	11.60'	23.01'	74'	118+29.59	40.00' LT	118+52.25	36.56' LT
SW4	117+52.68	26.50' LT	20°36'48"	77°25'36"	13.46'	26.62'	74'	117+39.22	26.50' LT	117+65.28	31.24' LT
SW5	117+92.16	41.35' LT	38°09'21"	77°25'36"	25.59'	49.28'	74'	117+68.20	32.34' LT	118+16.56	33.63' LT
SW6	118+39.13	26.50' LT	17°49'01"	77°25'36"	11.60'	23.01'	74'	118+28.07	30.00' LT	118+50.73	26.56' LT

BENCHMARK TBM #5
 CHISELED SQUARE ON S.E.
 CORNER OF CONC.
 FOUNDATION TIMKEN SIGN,
 45' N. & 11TH STREET SE,
 38' E. OF & DRIVE STA.
 119+27, 49' LT. ELEV.
 1029.73

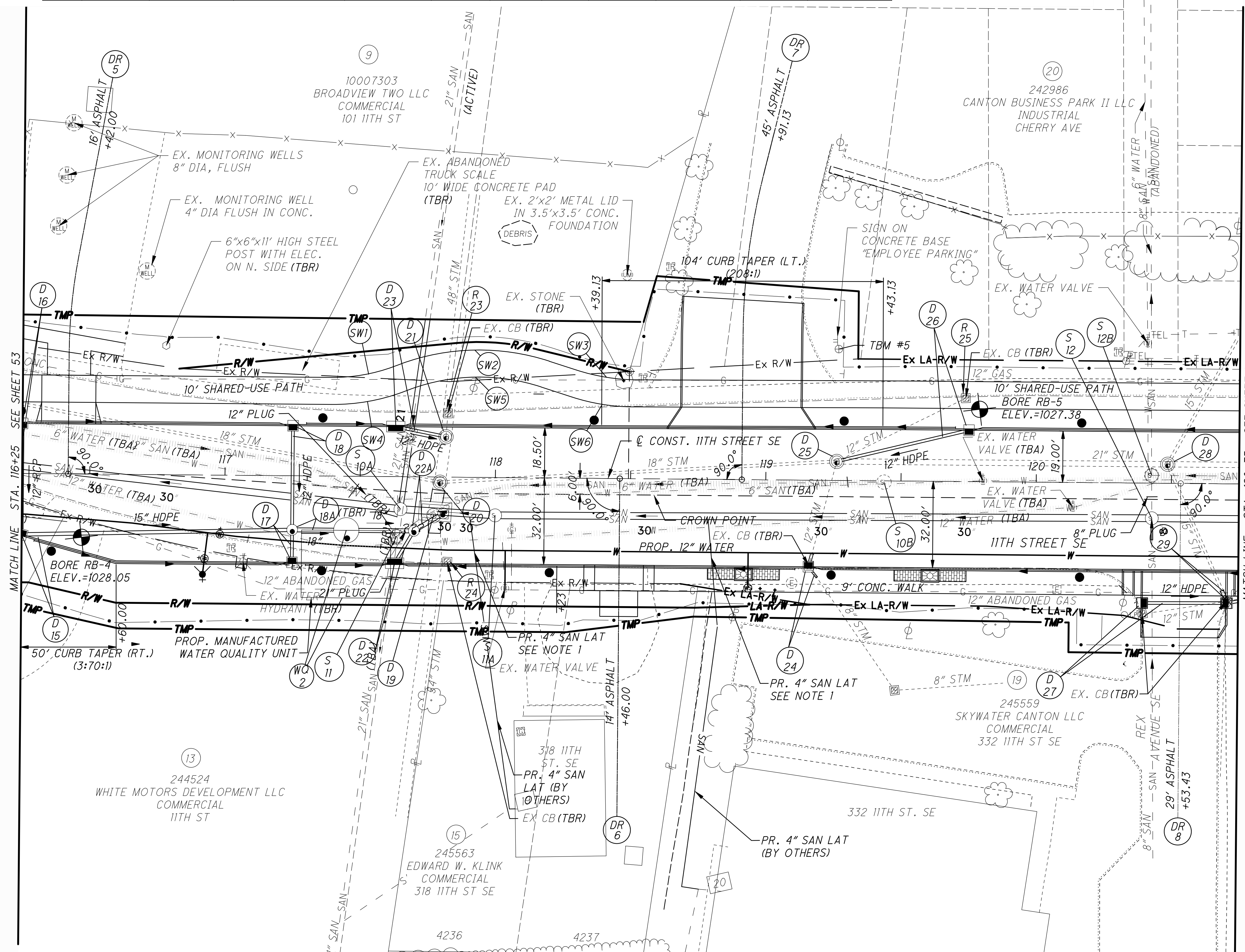
NOTES:
 PAVEMENT DIMENSIONS ARE
 MEASURED TO THE FACE OF CURB.

FOR 11TH STREET SE CROSS
 SECTIONS, SEE SHEETS 65-104.

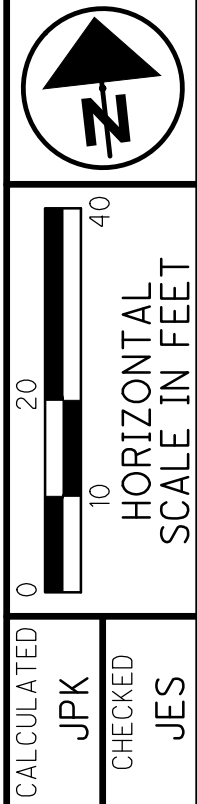
FOR 11TH STREET SE PROFILE, SEE
 SHEET 56.

FOR PLAN VIEW LEGEND, SEE
 SHEET 24.

NOTE 1: CONTRACTOR SHALL
 INSTALL 4" LATERAL TO EX. R/W.
 CAP/PLUG 4" LATERAL AND MARK
 END LOCATION WITH 4"x4"
 HARDWOOD.



SANITARY LATERAL CONNECTIONS:
 19 - 318 11TH ST SE
 20 - 332 11TH ST SE

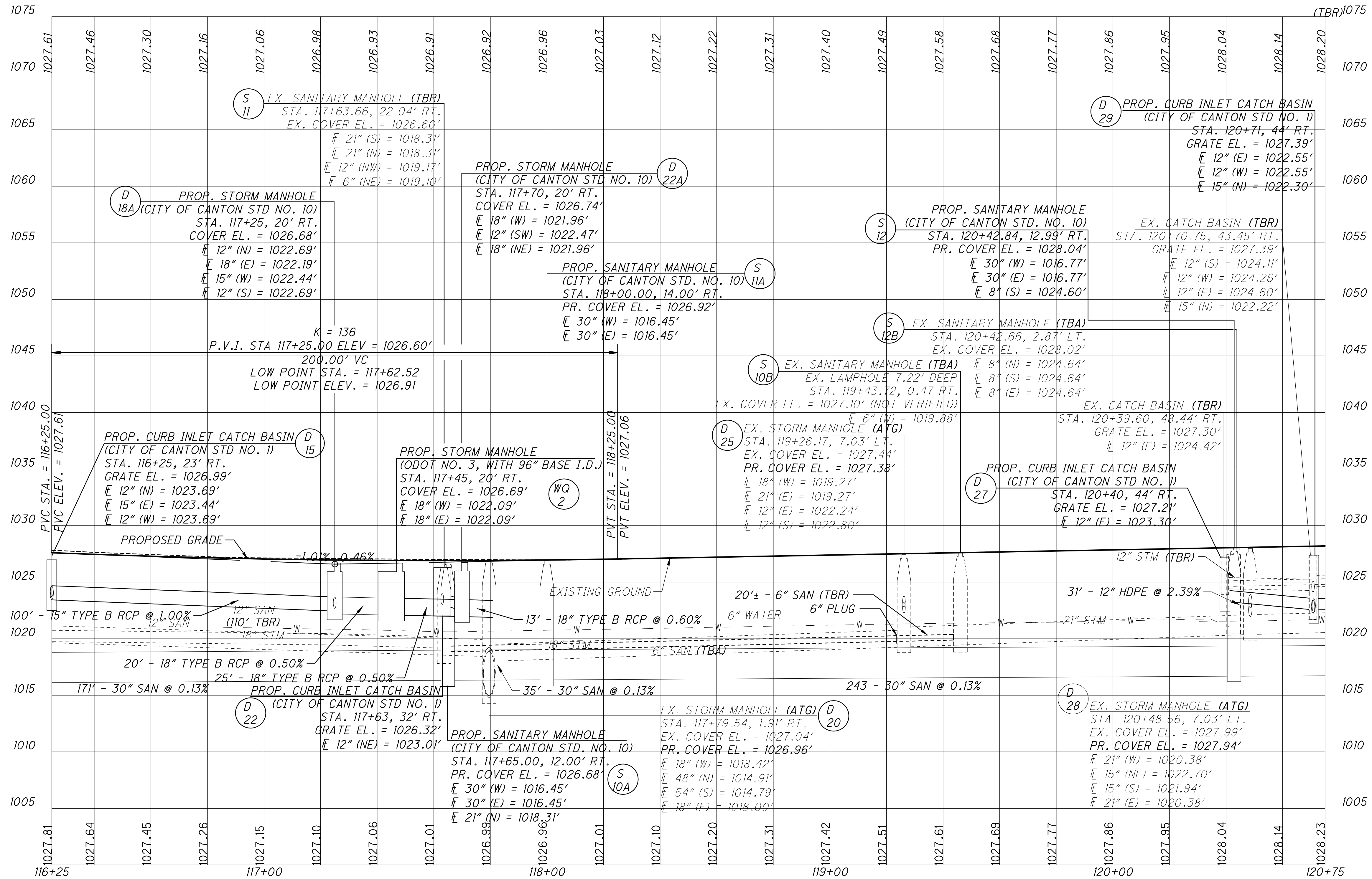


PLAN - 11TH STREET SE
 STA. 116+25.00 TO STA. 120+75.00

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

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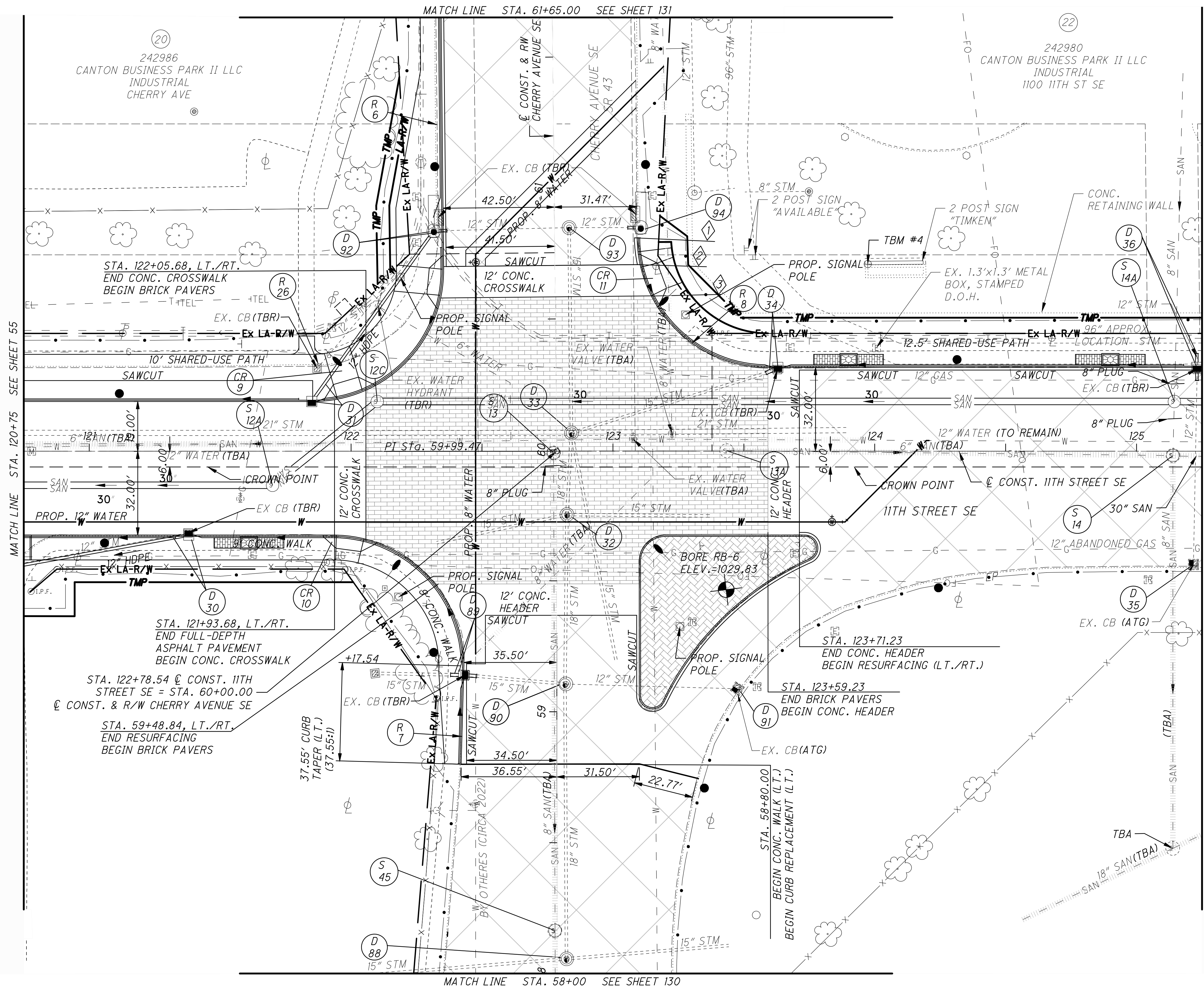


CALCULATED
JPK
CHECKED
JES

PROFILE - 11TH STREET SE
STA. 116+25.00 TO STA. 120+75.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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■ BENCHMARK TBM #4
 CHISELED SQUARE ON
 S.W. CORNER OF CONC.
 FOUNDATION OF TIMKEN
 SIGN, 138' N.E. OF
 CHERRY AVE. SE & 11TH
 ST. SE INTERSECTION
 STA. 123+97, 71' LT.
 ELEV. 1032.44

NOTES:
 PAVEMENT DIMENSIONS ARE
 MEASURED TO THE FACE OF CURB.
 FOR 11TH STREET SE CROSS
 SECTIONS, SEE SHEETS 65-104.
 FOR INTERSECTION DETAILS, SEE
 SHEETS 155-157.
 FOR 11TH STREET SE PROFILE, SEE
 SHEET 58.
 FOR CHERRY AVENUE SE PLAN AND
 PROFILE, SEE SHEETS 128-131
 FOR PLAN VIEW LEGEND, SEE
 SHEET 24.

- ① STA. 60+80.69, LT.
END PROP. CONC. CURB (RT.)
- ② STA. 60+70.46, LT./RT.
BEGIN RESURFACING
END CONC. CROSSWALK
BEGIN PROP. CONC. CURB (RT.)
- ③ STA. 60+58.46, LT./RT.
BEGIN CONC. CROSSWALK (RT.)
END BRICK PAVERS
- ④ PIPE IDENTIFIED IN STRUCTURE,
DIP INFORMATION, BUT
LOCATION UNKNOWN

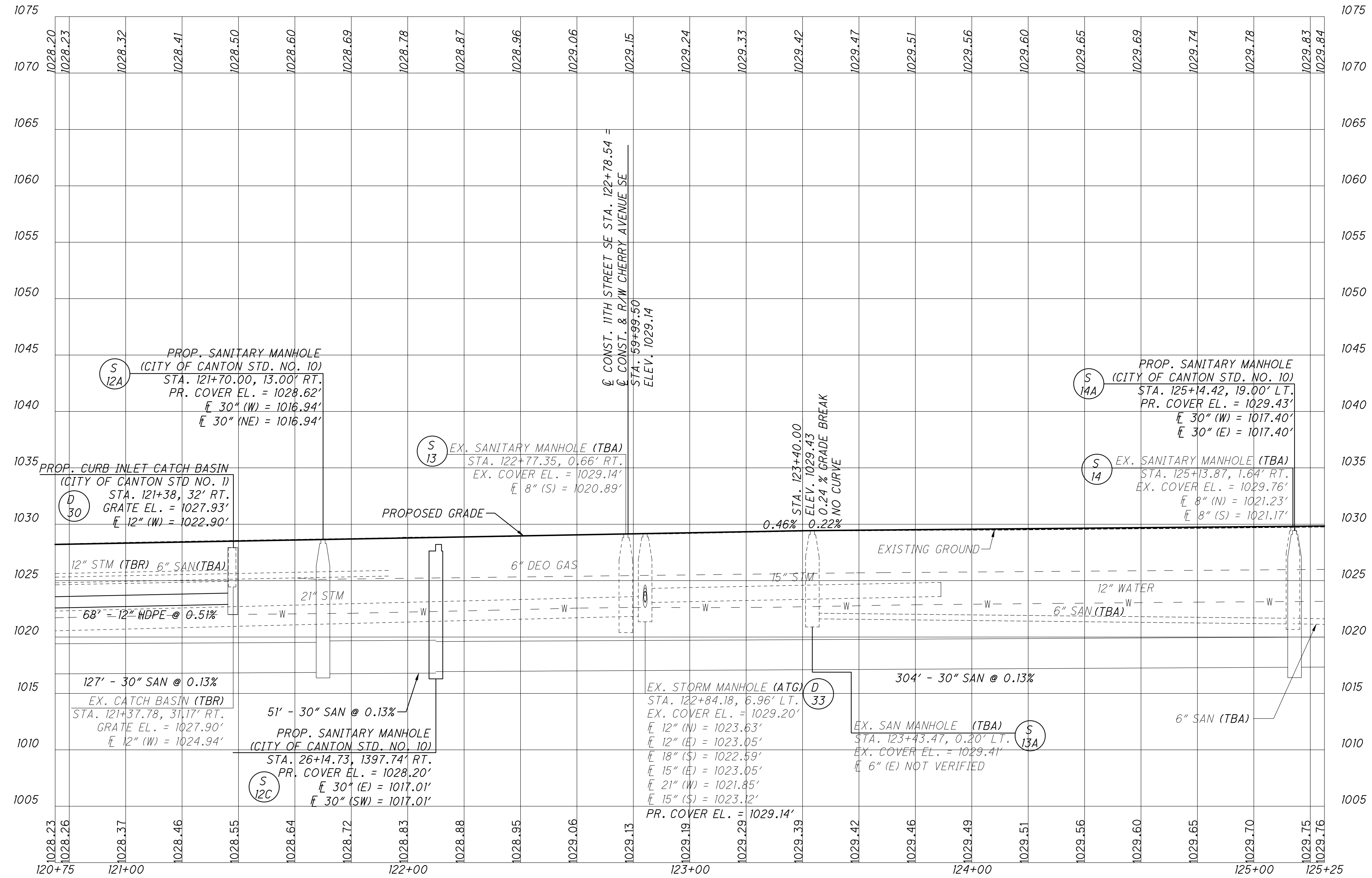
PLAN - 11TH STREET SE
STA. 120+75.00 TO STA. 125+25.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

57
302

HORIZONTAL
SCALE IN FEET

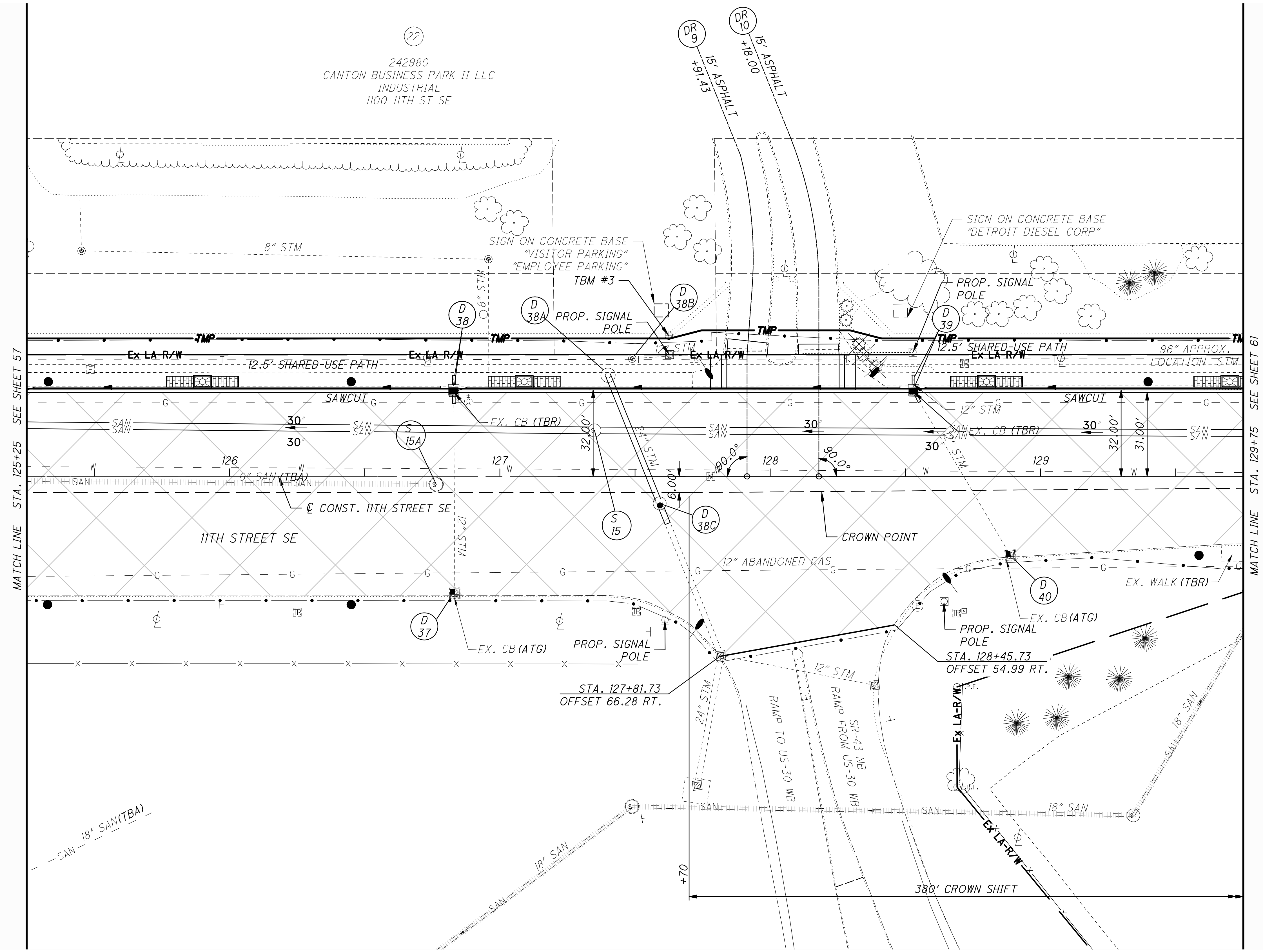
CALCULATED JPK
CHECKED JES



**PROFILE - 11TH STREET SE
STA. 120+75.00 TO STA. 125+25.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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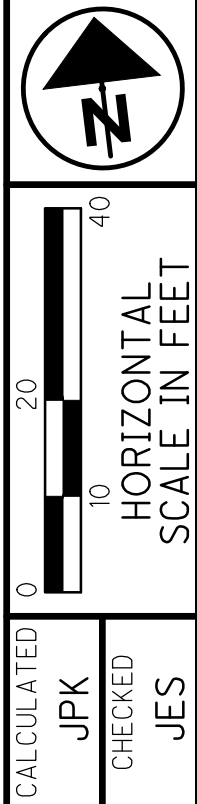
■ BENCHMARK TBM #3
 CHISELED SQUARE AT
 ANGLE POINT ON
 RETAINING WALL, 43' W
 OF € ASPH. DRIVE TO
 TIMKEN PARKING LOT,
 58' N OF € OF 11TH
 STREET SE.
 STA. 127+62, 52' LT.
 ELEV. 1031.97

NOTES:
 PAVEMENT DIMENSIONS ARE
 MEASURED TO THE FACE OF CURB.

 FOR 11TH STREET SE CROSS
 SECTIONS, SEE SHEETS 65-104.

 FOR 11TH STREET SE PROFILE, SEE
 SHEET 60.

 FOR PLAN VIEW LEGEND, SEE
 SHEET 24.

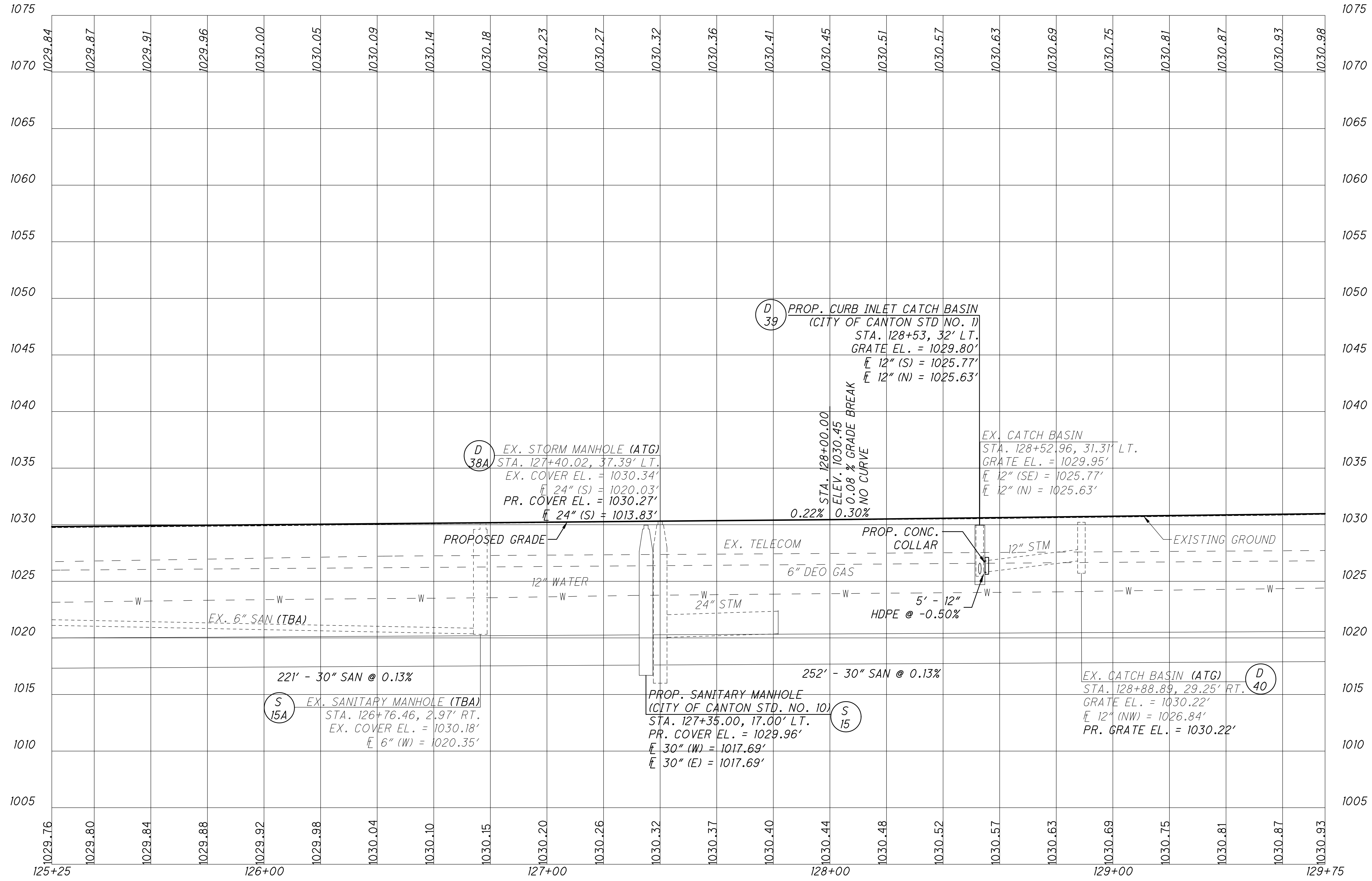


CALCULATED	JPK	CHECKED	JES
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PLAN - 11TH STREET
 STA. 125+25.00 TO STA. 129+75.00

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

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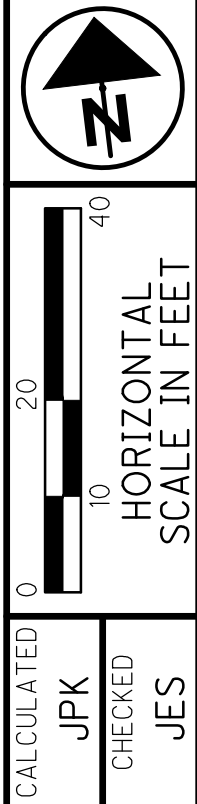
CALCULATED
JPK
CHECKED
JES

**PROFILE - 11TH STREET SE
STA. 125+25.00 TO STA. 129+75.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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■ BENCHMARK TBM #2
RR SPIKE SET 8" UP ON
N. SIDE OF POWER
POLE, 31' S. OF E 11TH
STREET SE IN FRONT OF
GEXPRO, ADDRESS 800
STA. 131+46, 34' RT.
ELEV. 1032.68



NOTES:
PAVEMENT DIMENSIONS ARE
MEASURED TO THE FACE OF CURB.

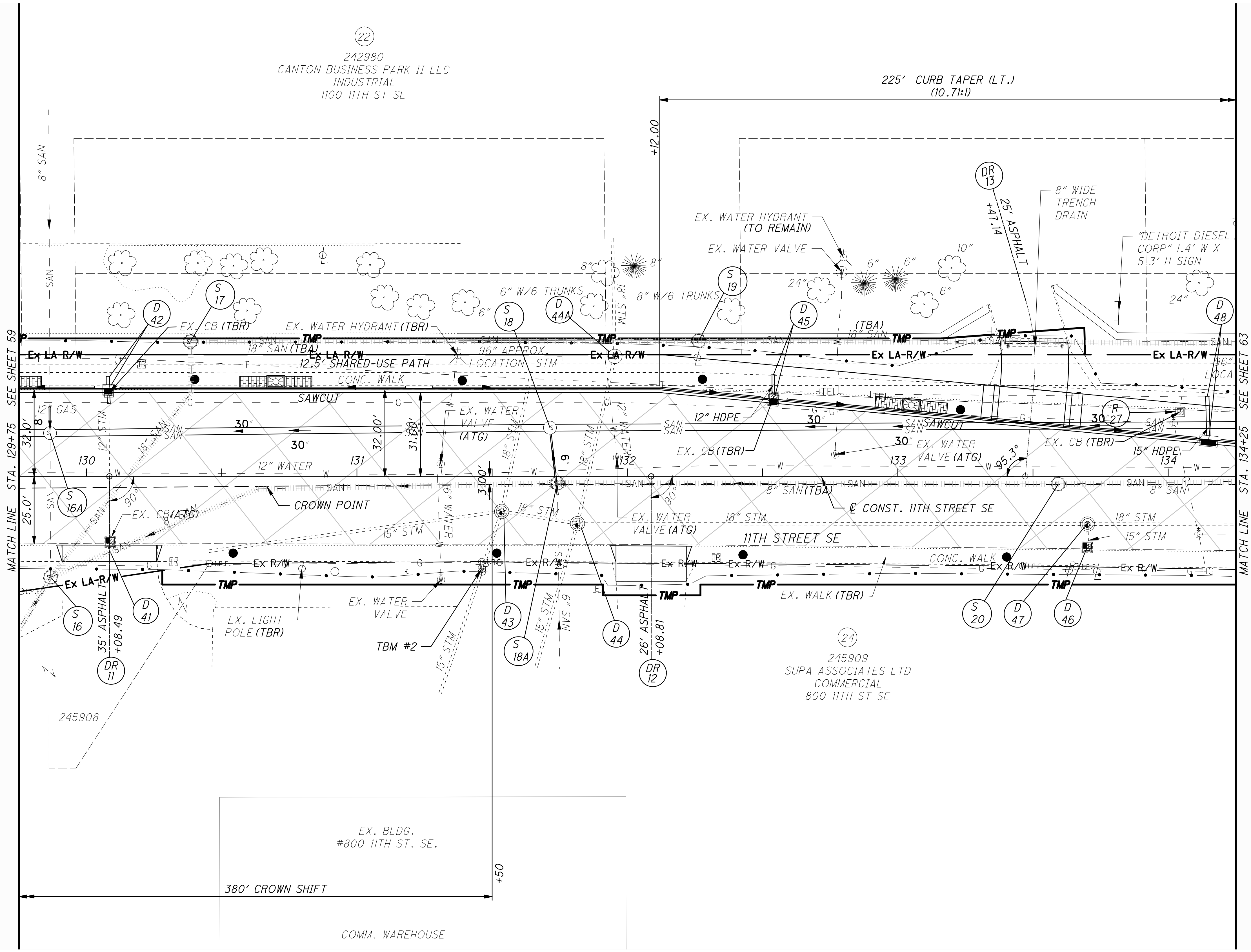
FOR 11TH STREET SE CROSS
SECTIONS, SEE SHEETS 65-104.

FOR 11TH STREET SE PROFILE, SEE
SHEET 62.

FOR PLAN VIEW LEGEND, SEE
SHEET 24.

PLAN - 11TH STREET SE
STA. 129+75.00 TO STA. 134+25.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



242980
CANTON BUSINESS PARK II LLC
INDUSTRIAL
1100 11TH ST SE

225' CURB TAPER (LT.)
(10.71:1)

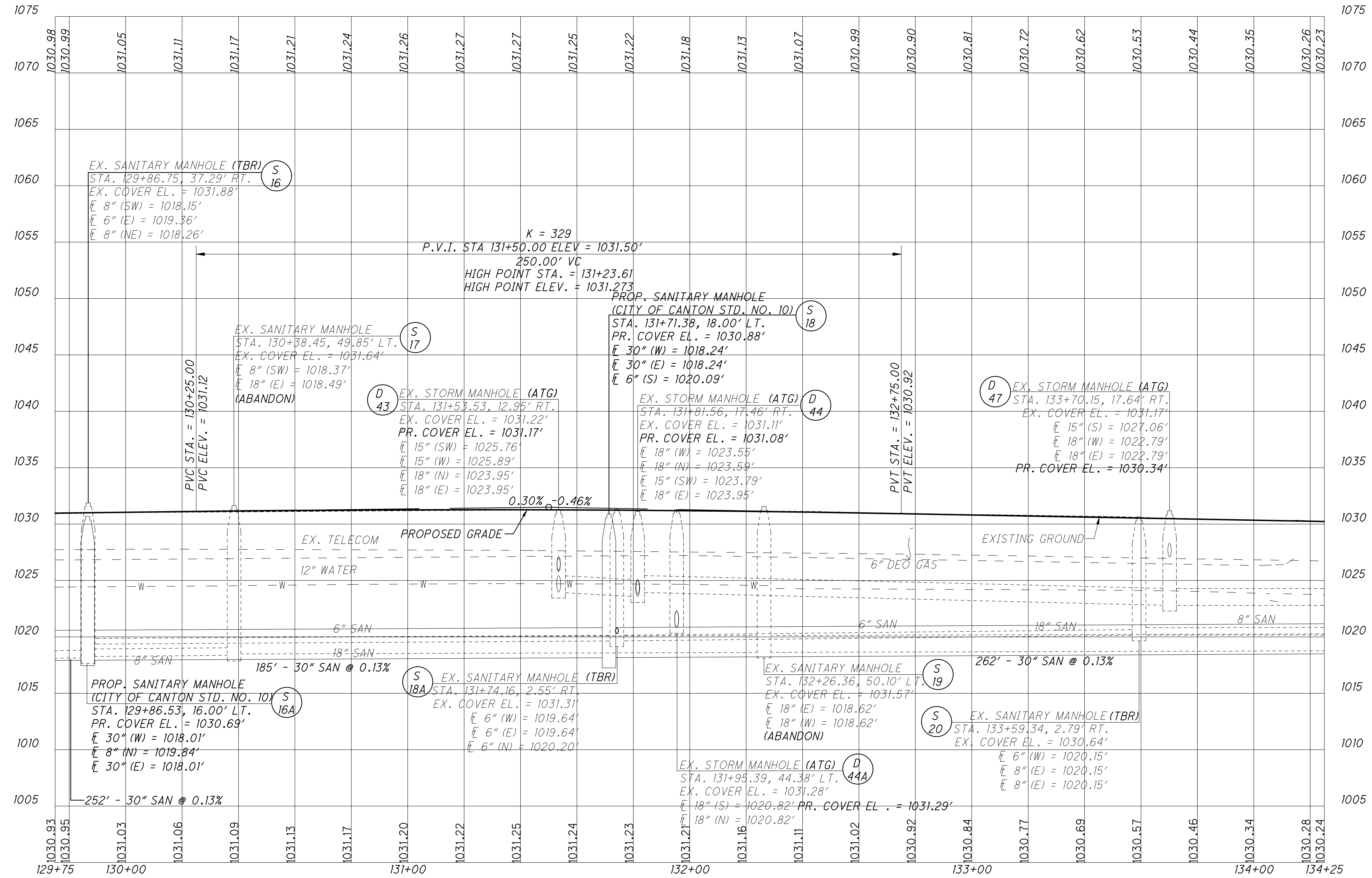
EX. BLDG.
#800 11TH ST. SE.

380' CROWN SHIFT

COMM. WAREHOUSE

245909
SUPA ASSOCIATES LTD
COMMERCIAL
800 11TH ST SE

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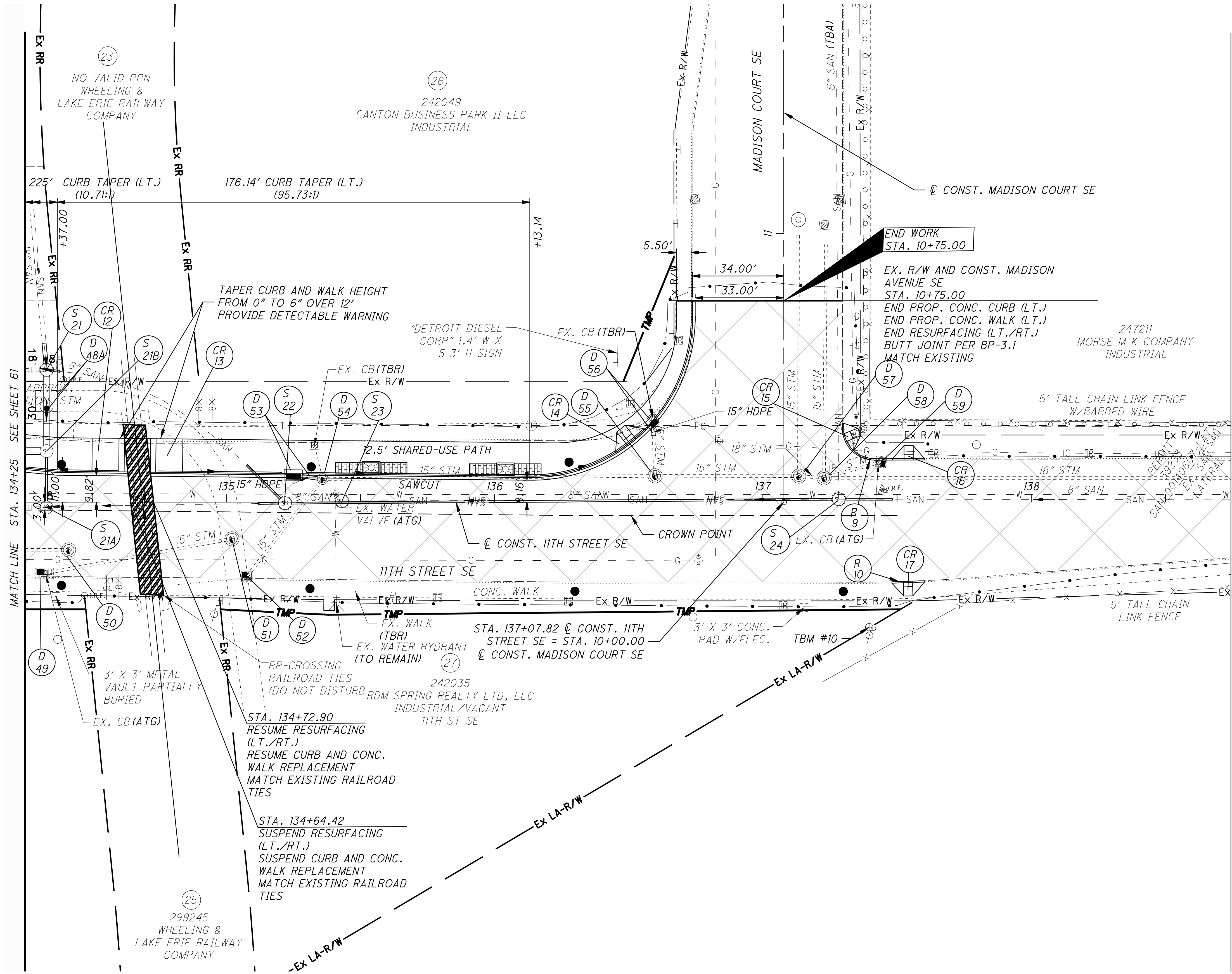


CALCULATED
JPK
CHECKED
JES

**PROFILE - 11TH STREET SE
STA. 129+75.00 TO STA. 134+25.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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■ BENCHMARK TBM #10
 CHISELED "X" IN
 NORTHERLY BOLT, 44'
 SOUTH OF € OF 11TH
 STREET SE & 32' EAST
 OF € OF MADISON COURT
 SE
 STA. 137+40, 47' RT.
 ELEV. 1031.37

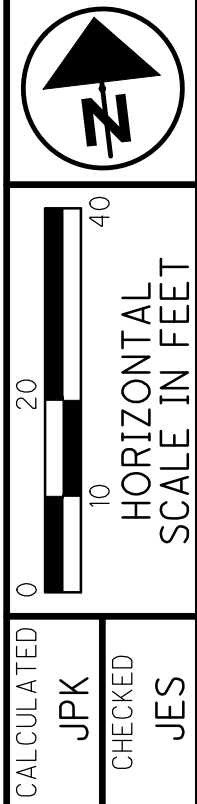
NOTES:
 PAVEMENT DIMENSIONS ARE
 MEASURED TO THE FACE OF CURB.

 FOR 11TH STREET SE CROSS
 SECTIONS, SEE SHEETS 65-104.

 FOR 11TH STREET SE PROFILE, SEE
 SHEET 64.

 FOR PLAN VIEW LEGEND, SEE
 SHEET 24.

 SEE SHEET 99 FOR SANITARY
 PROFILE S-21A TO S-21.



CALCULATED
 JPK
 CHECKED
 JES

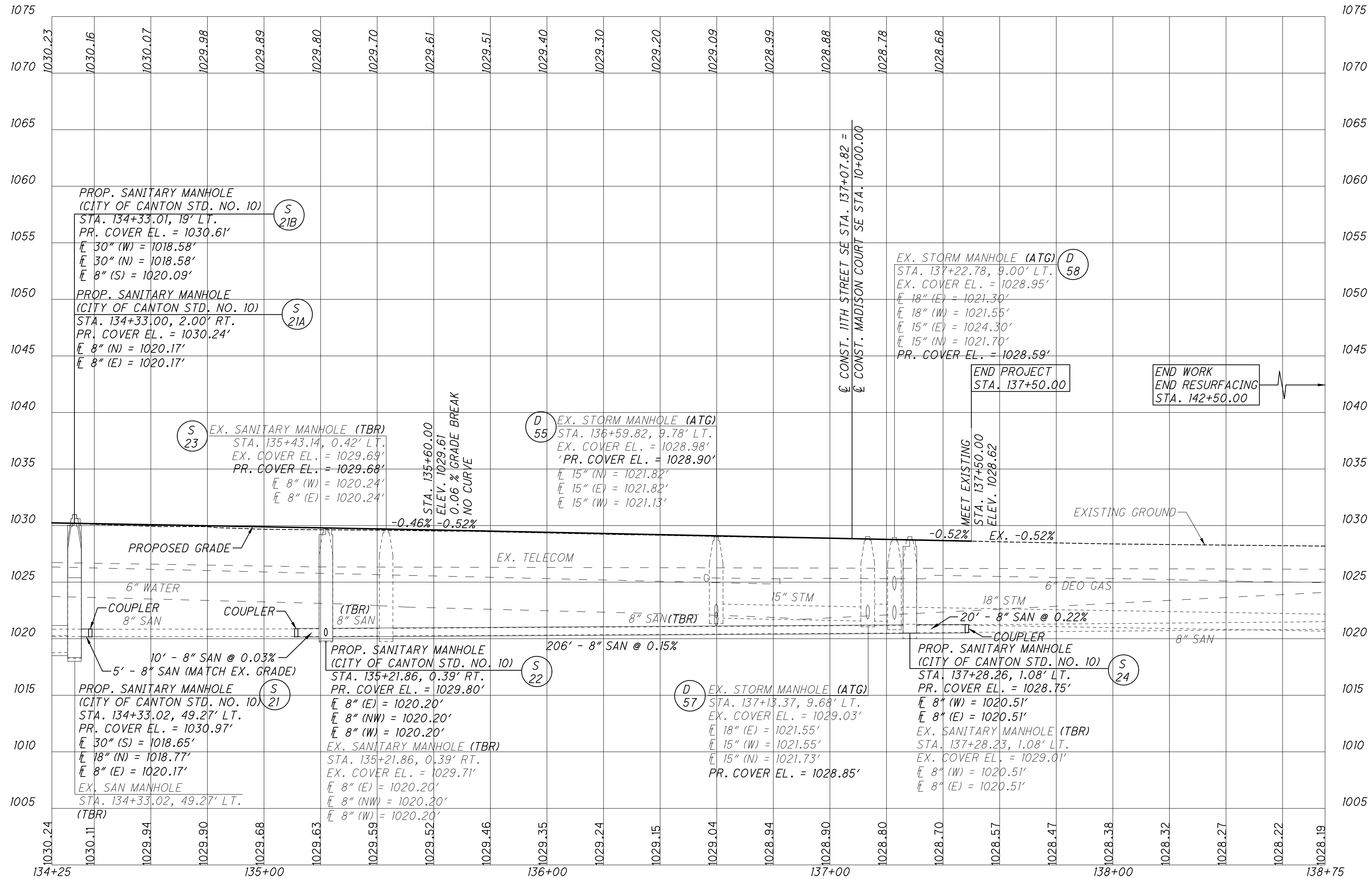
MATCH LINE STA. 134+25 SEE SHEET 61

MATCH LINE STA. 138+75 SEE SHEET 64A

PLAN - 11TH STREET SE
STA. 134+25.00 TO STA. 138+75.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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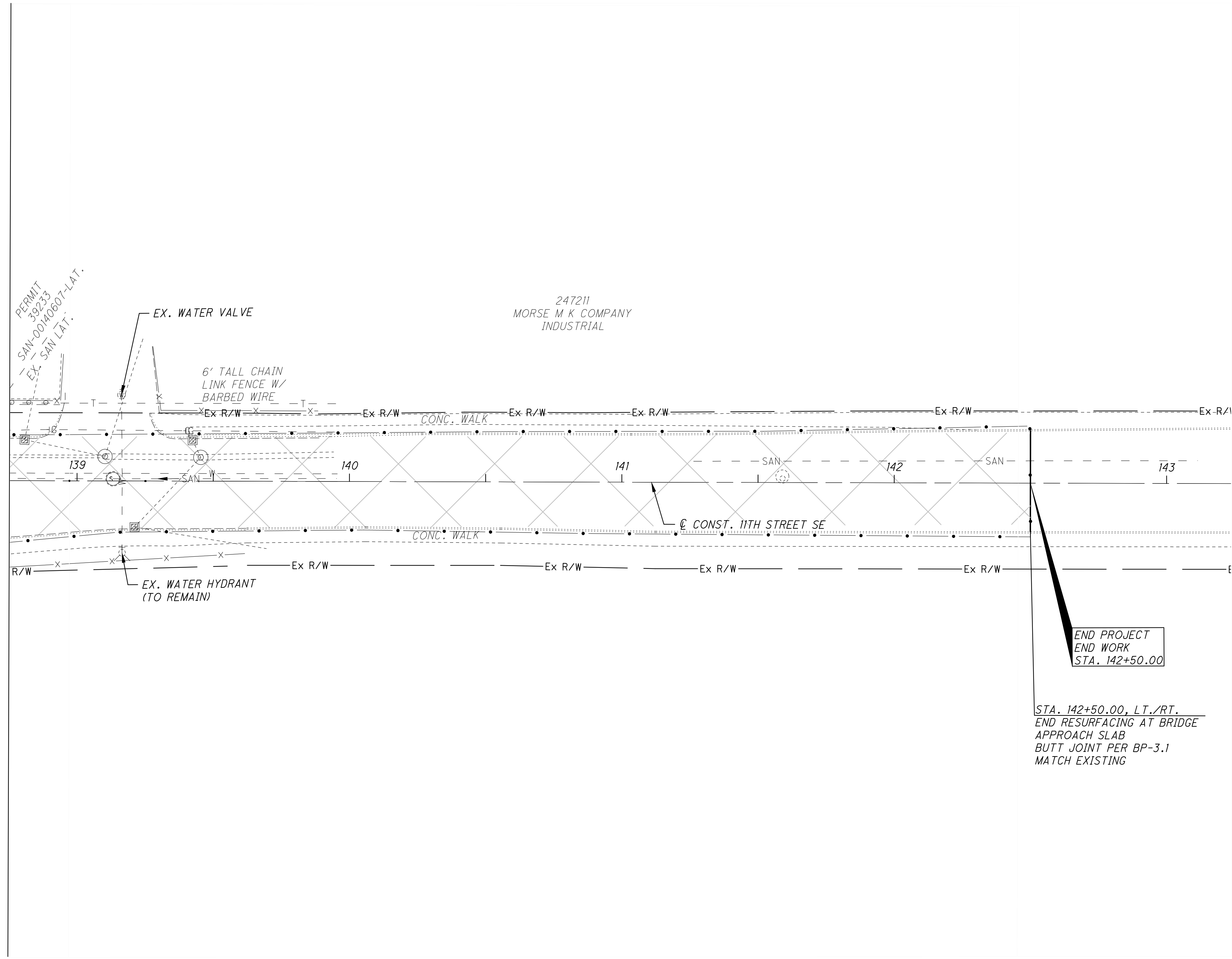
CALCULATED
JPK
CHECKED
JES

**PROFILE - 11TH STREET SE
STA. 134+25.00 TO STA. 138+75.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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MATCH LINE STA. 138+75 SEE SHEET 63



END PROJECT
 END WORK
 STA. 142+50.00

STA. 142+50.00, LT./RT.
 END RESURFACING AT BRIDGE
 APPROACH SLAB
 BUTT JOINT PER BP-3.1
 MATCH EXISTING

NOTES:
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR 11TH STREET SE CROSS SECTIONS, SEE SHEETS 65-104.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.

CALCULATED
 CHECKED
 CHECKED

0 20 40
 HORIZONTAL SCALE IN FEET

PLAN - 11TH STREET SE
 STA. 138+75.00 TO END

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

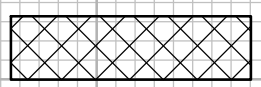
64A
 302


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SEEDING

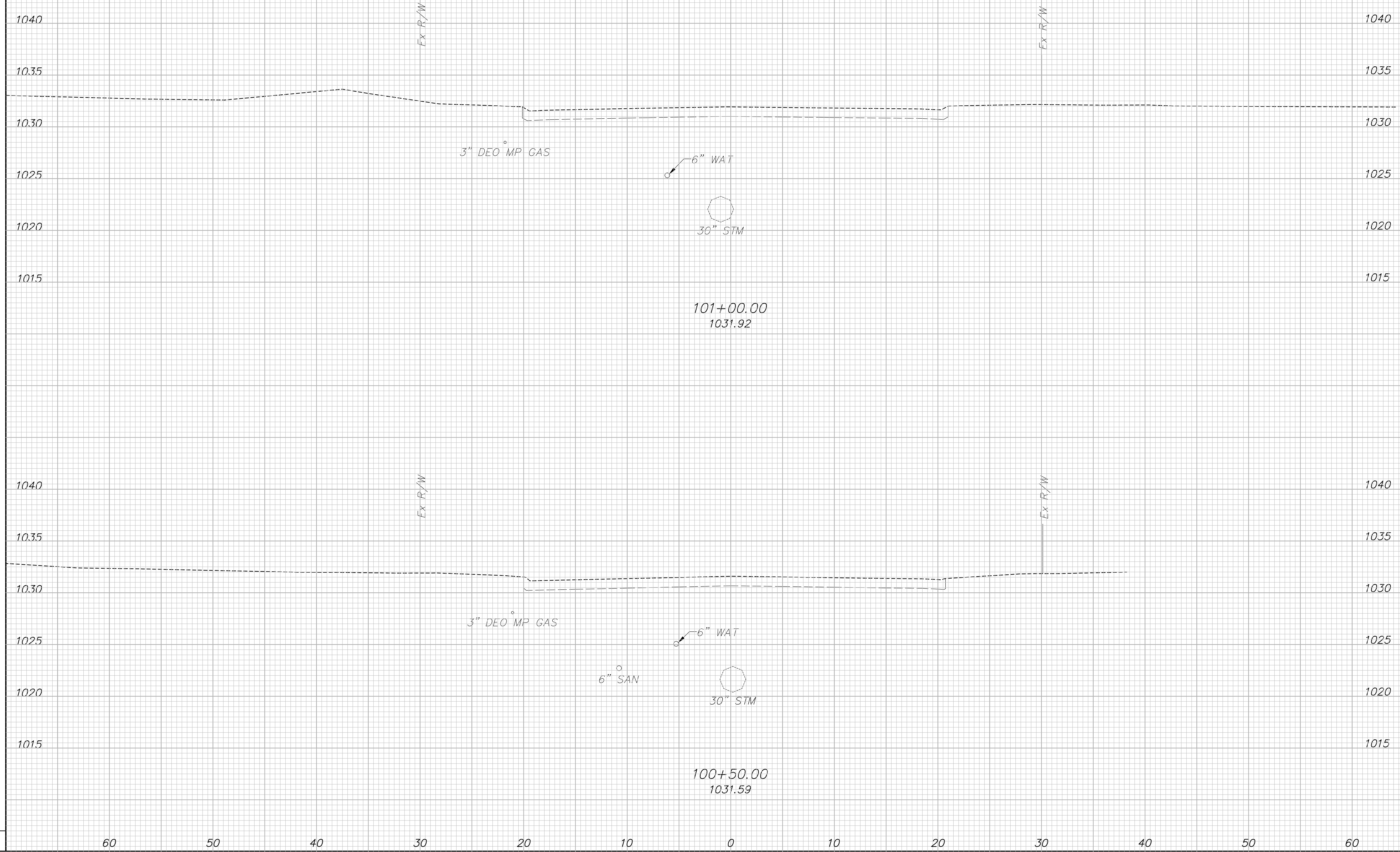
END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



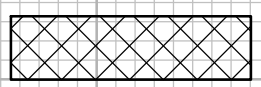

CROSS SECTIONS - 11TH STREET SE
STA. 100+50.00 TO STA. 101+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

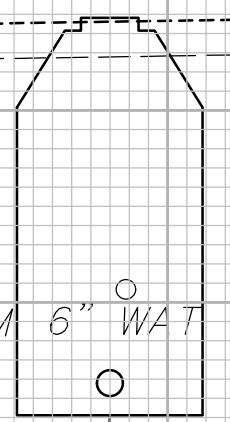
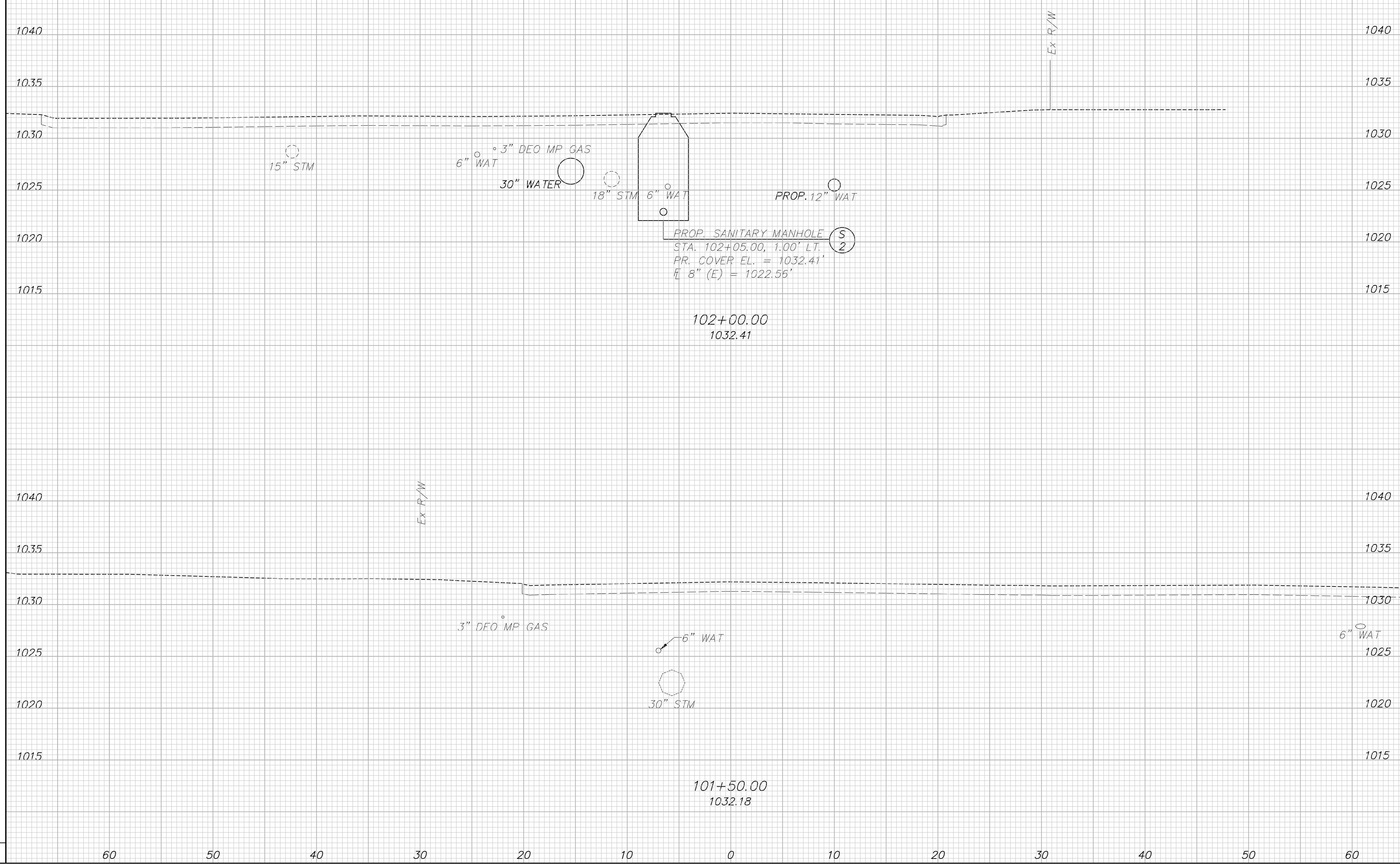
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SEEDING

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		



PROP. SANITARY MANHOLE (S)
 STA. 102+05.00, 1.00' LT. (2)
 PR. COVER EL. = 1032.41'
 8" (E) = 1022.56'

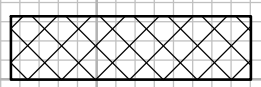

CROSS SECTIONS - 11TH STREET SE
STA. 101+50.00 TO STA. 102+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

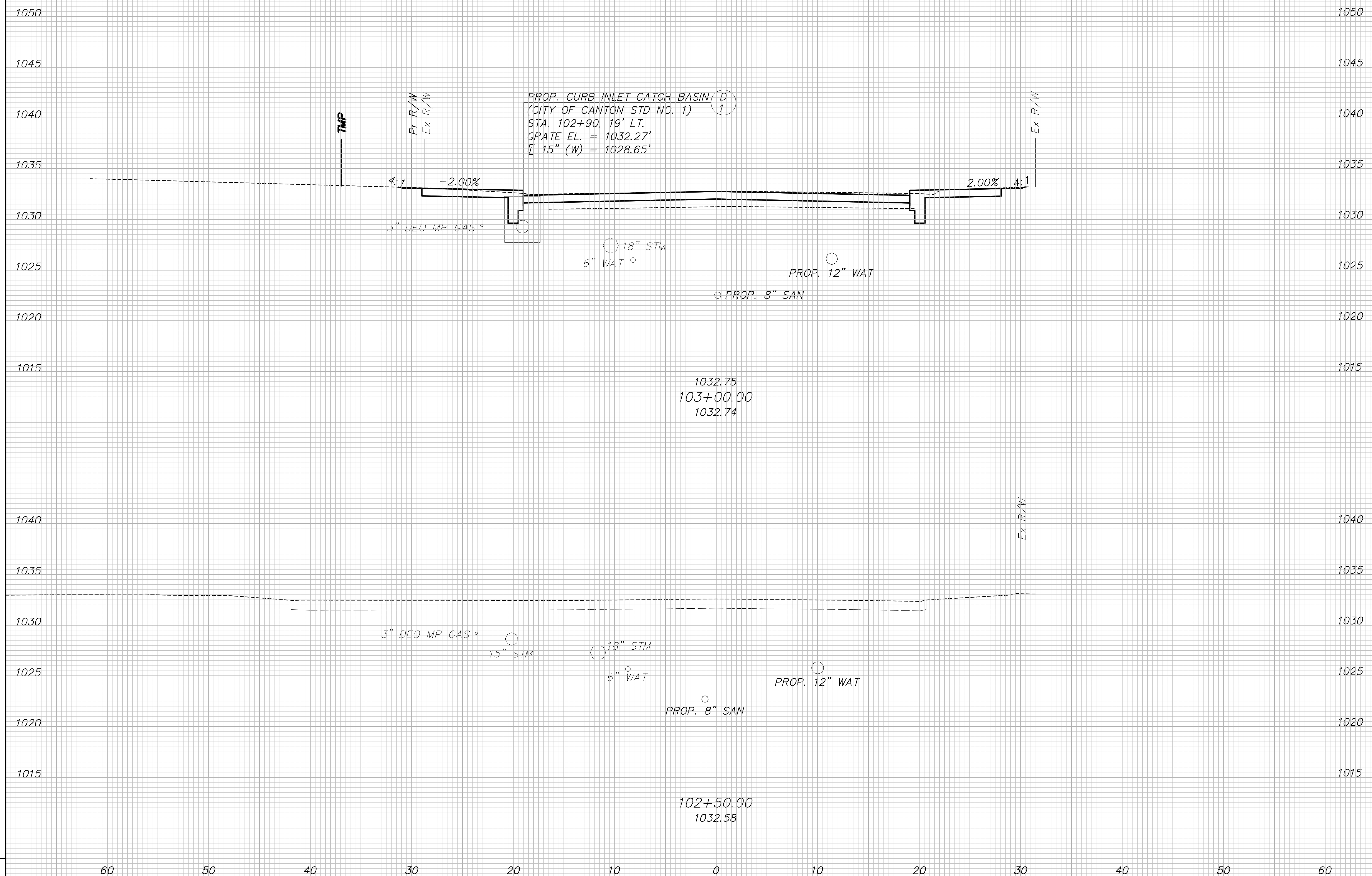
66
302

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5001.dwg 04-Nov-22 1:57 PM

SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
 STA. 102+50.00 TO STA. 103+00.00**

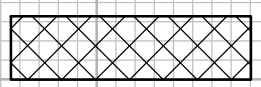
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**


67
302

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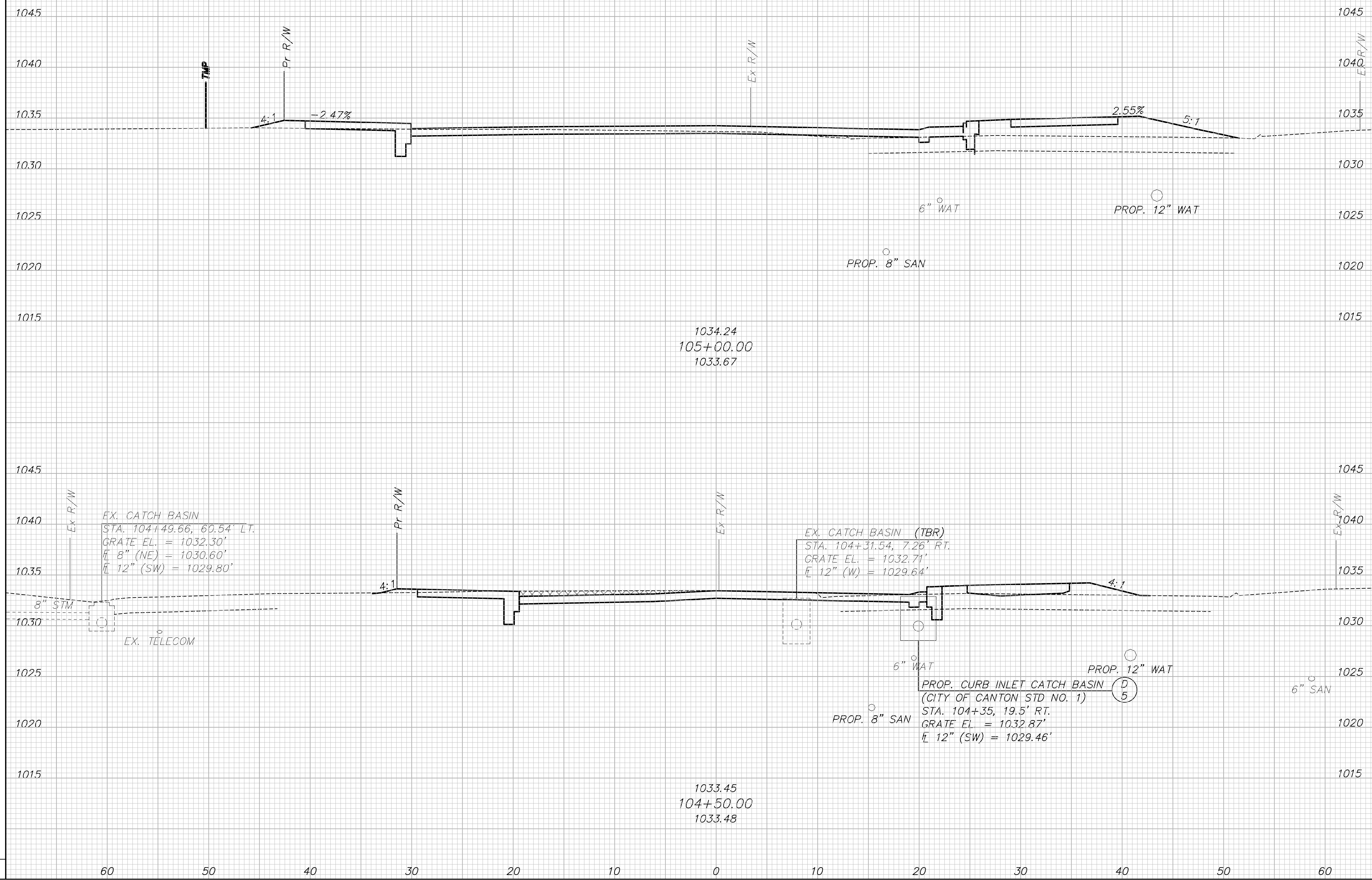
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES

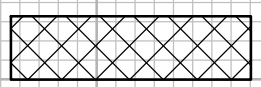



**CROSS SECTIONS - 11TH STREET SE
STA. 104+50.00 TO STA. 105+00.00**

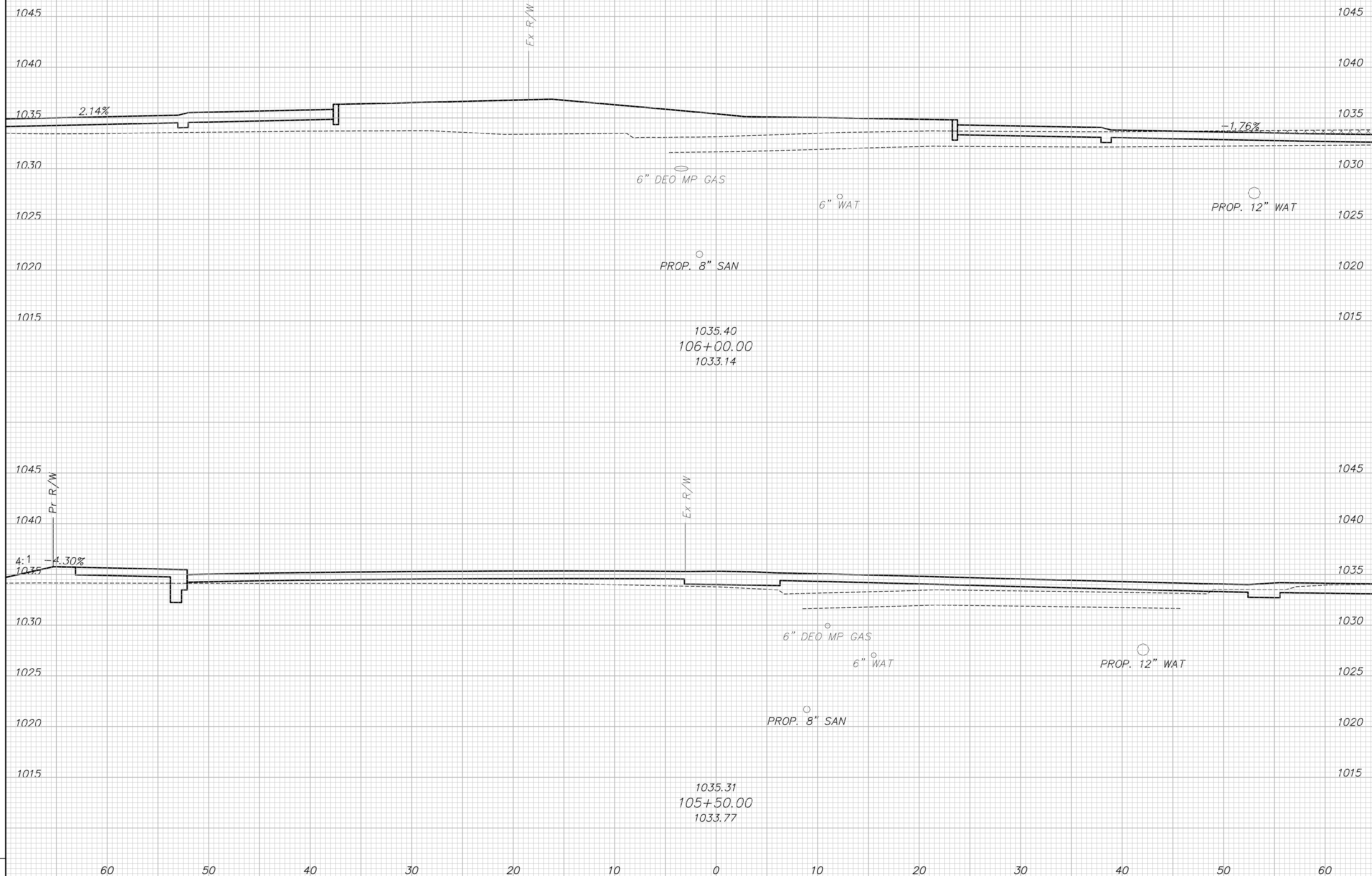
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



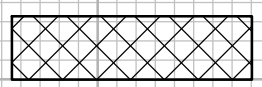

**CROSS SECTIONS - 11TH STREET SE
 STA. 105+50.00 TO STA. 106+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

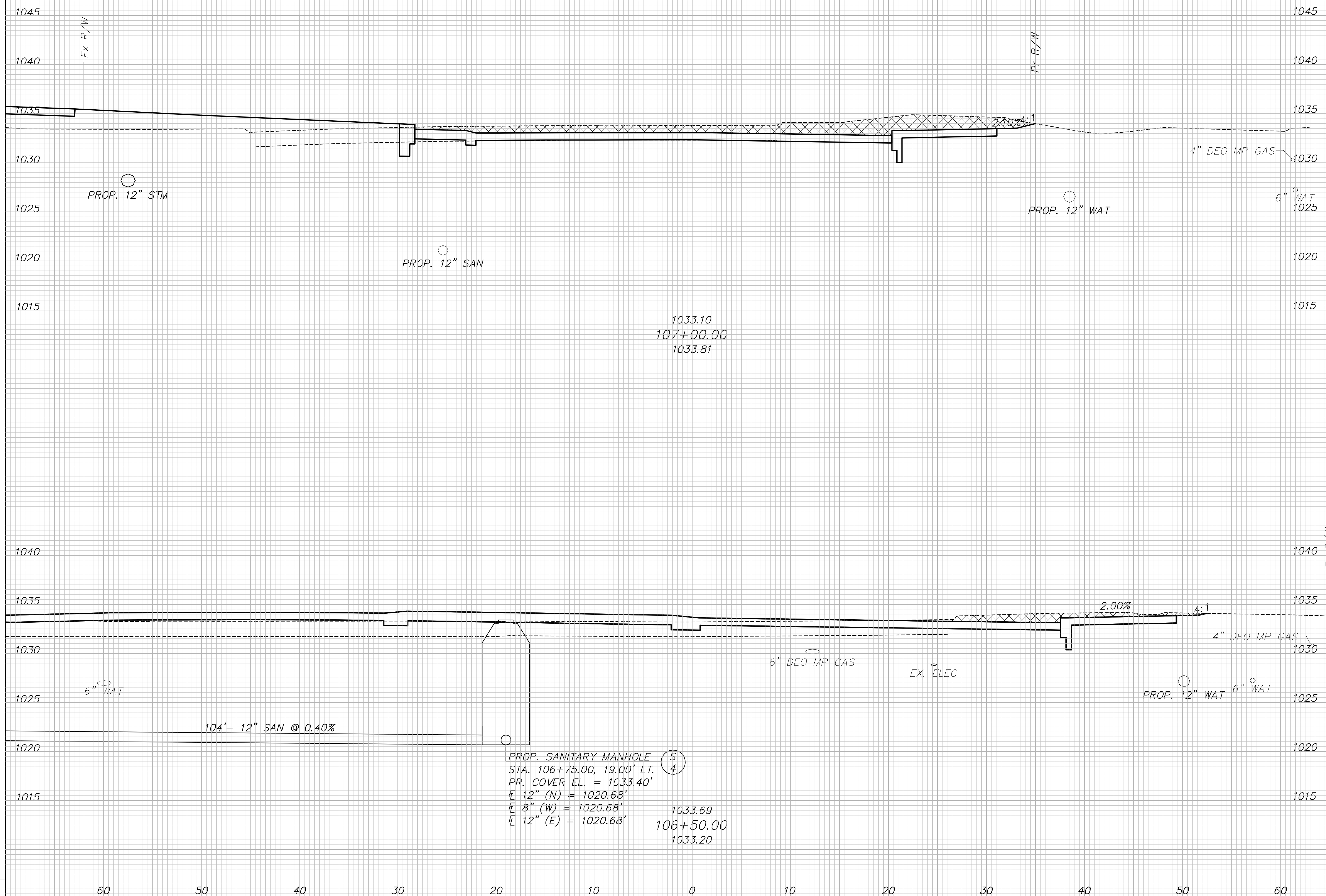
70
302

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
 STA. 106+50.00 TO STA. 107+00.00**

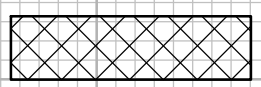
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**


71
302

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5001.dwg 04-Nov-22 1:58 PM

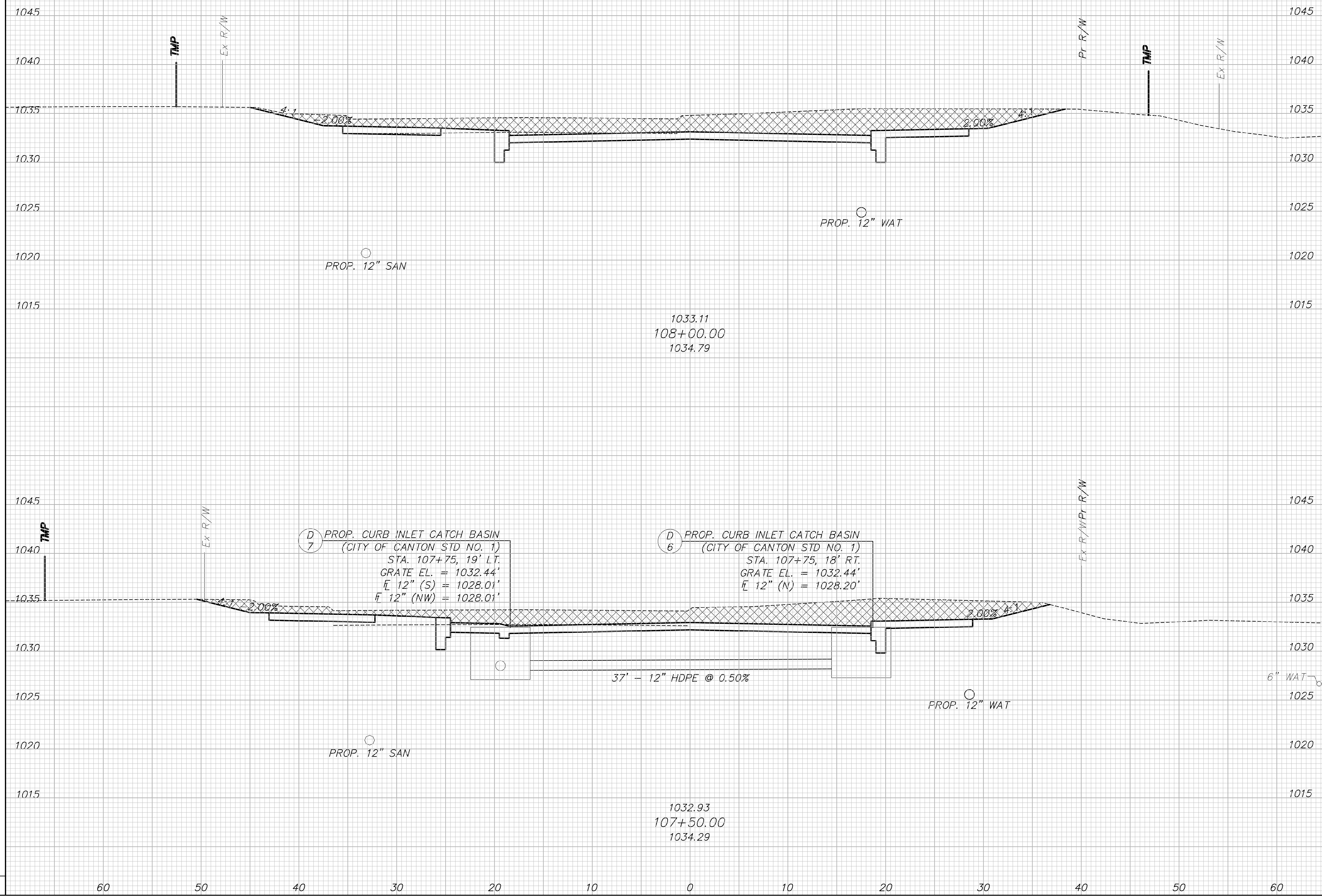
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES

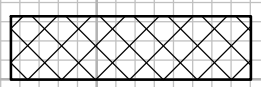



**CROSS SECTIONS - 11TH STREET SE
STA. 107+50.00 TO STA. 108+00.00**

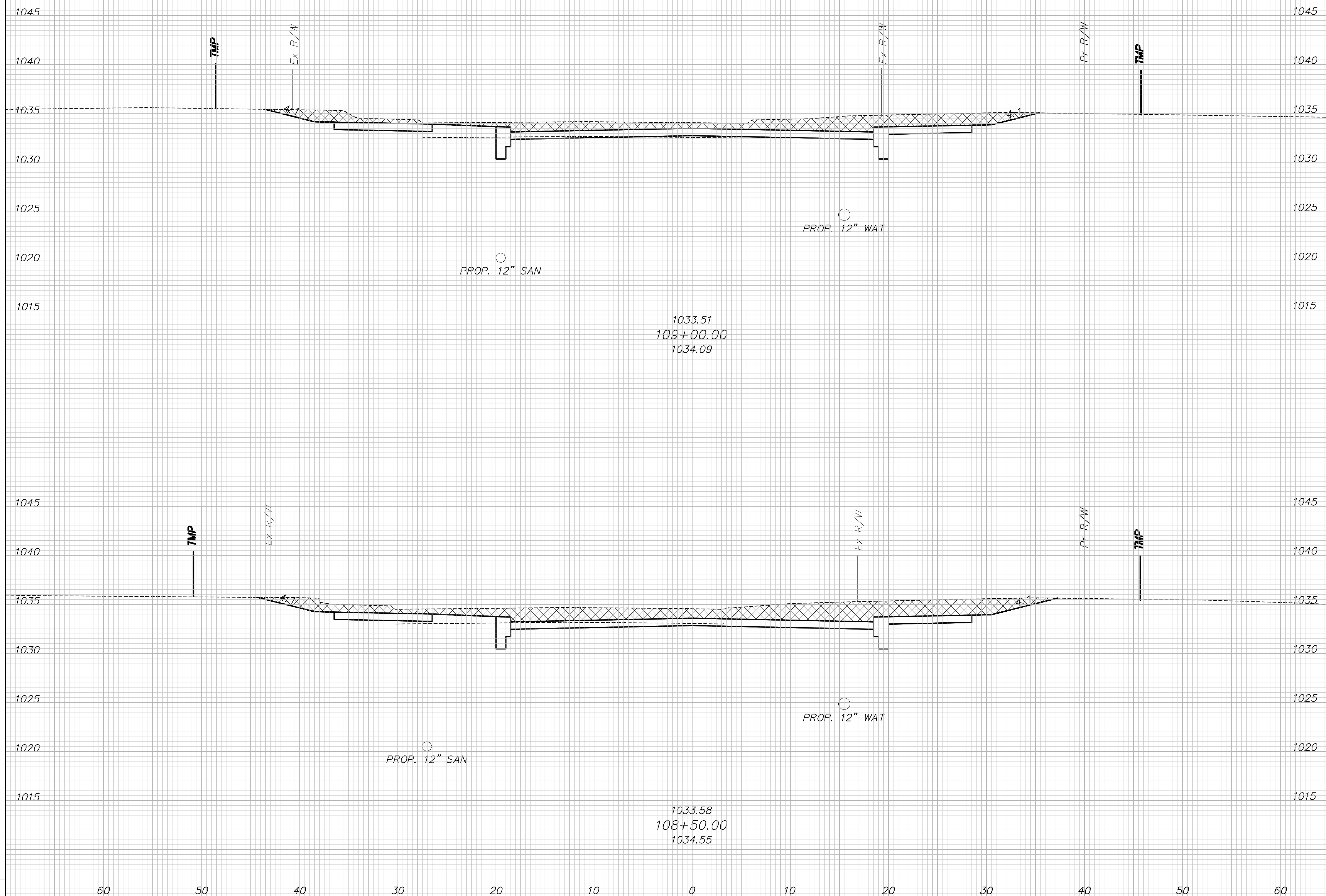
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



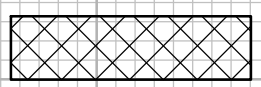

**CROSS SECTIONS - 11TH STREET SE
 STA. 108+50.00 TO STA. 109+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

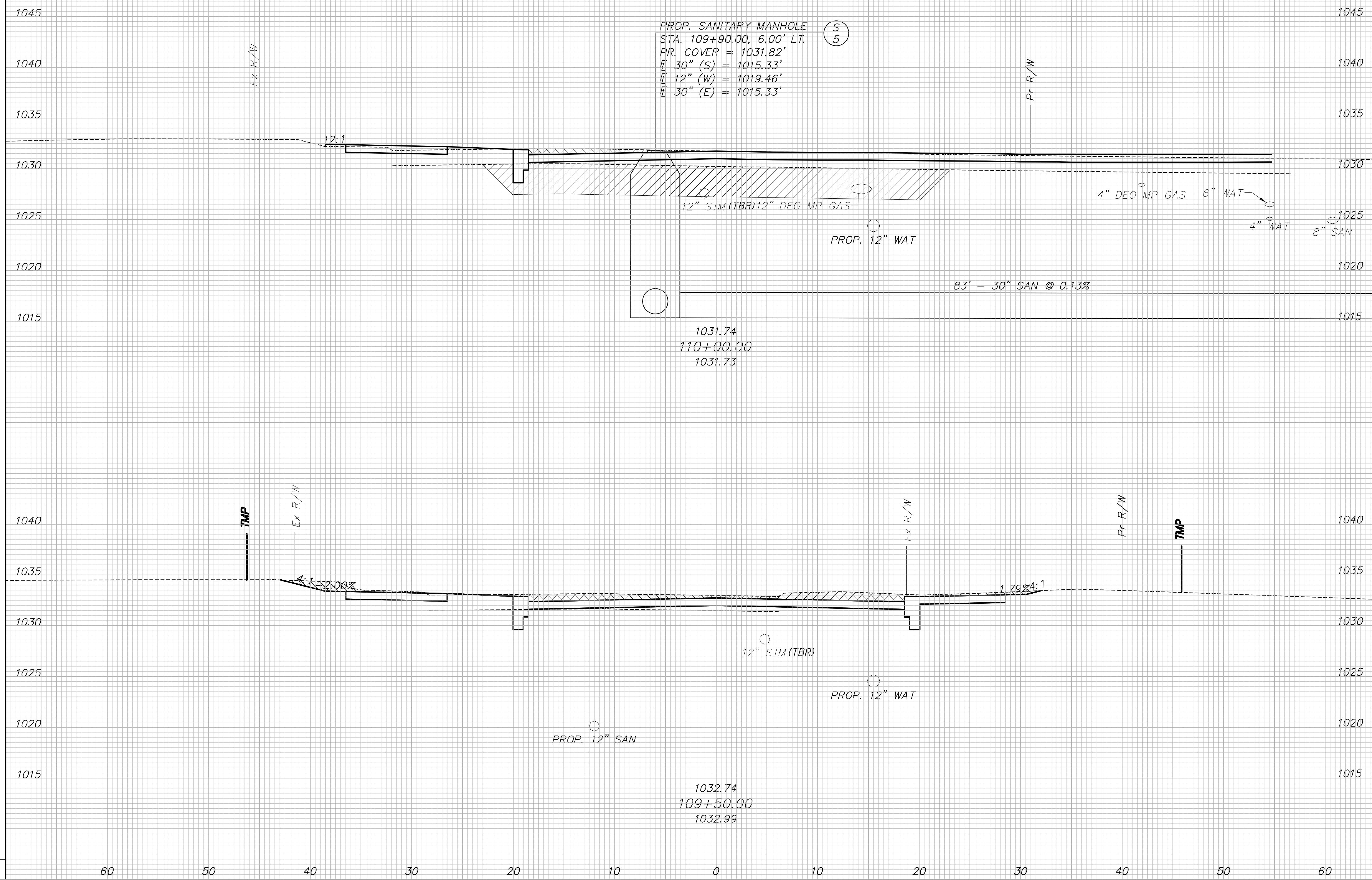
73
302

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5001.dwg 04-Nov-22 1:58 PM

SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
 REMOVAL
 UNSUITABLE
 SUBGRADE
 TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



PROP. SANITARY MANHOLE (S5)
 STA. 109+90.00, 6.00' LT.
 PR. COVER = 1031.82'
 E 30" (S) = 1015.33'
 E 12" (W) = 1019.46'
 E 30" (E) = 1015.33'

1031.74
 110+00.00
 1031.73

1032.74
 109+50.00
 1032.99

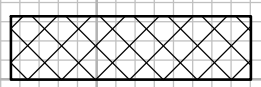

CROSS SECTIONS - 11TH STREET SE
 STA. 109+50.00 TO STA. 110+00.00

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

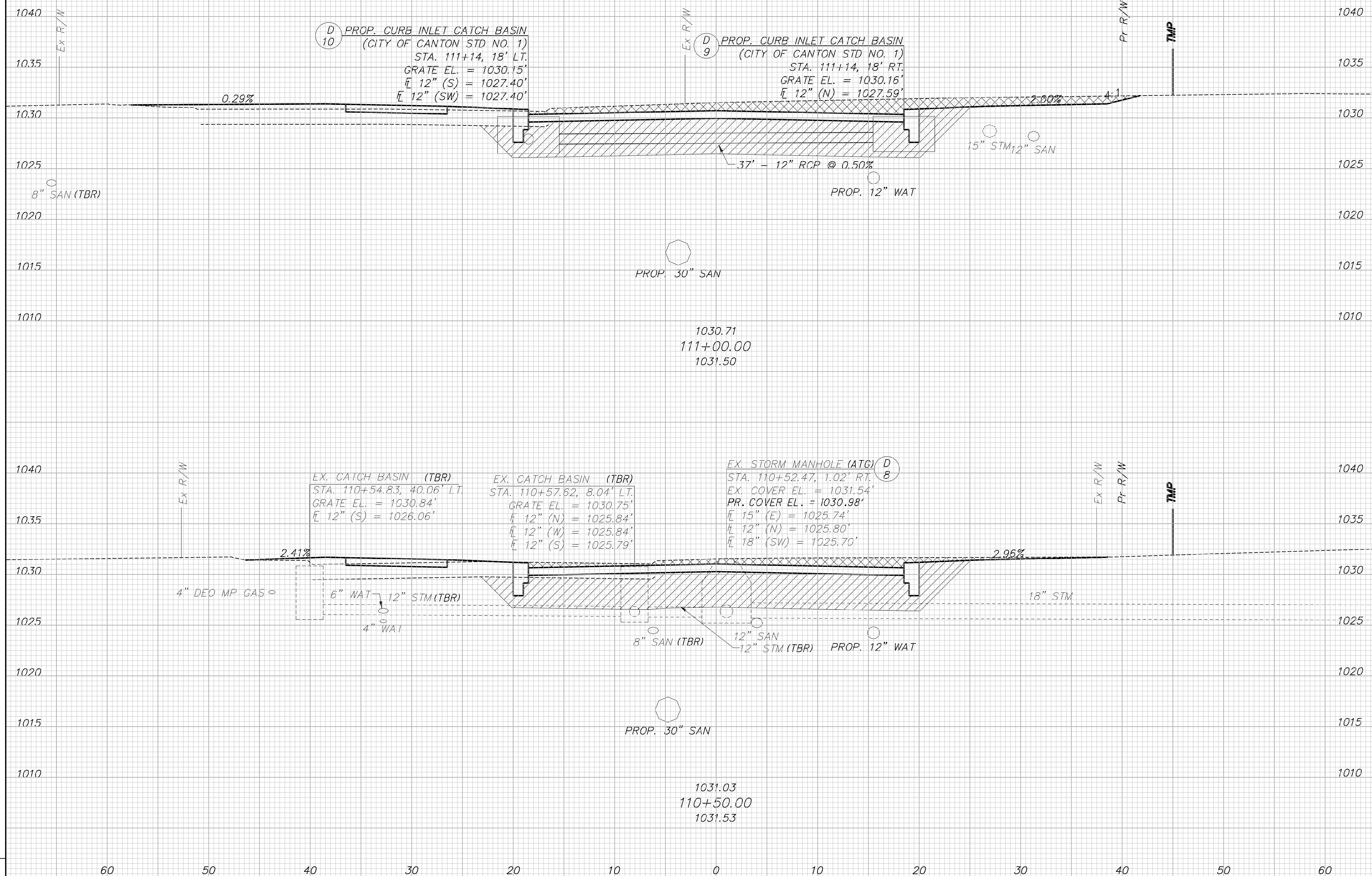
74
 302

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
 REMOVAL
 UNSUITABLE
 SUBGRADE
 TREATMENT

END AREA		VOLUME		CALCULATED	JPK	CHECKED	JES
CUT	FILL	CUT	FILL				



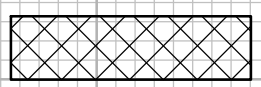

**CROSS SECTIONS - 11TH STREET SE
 STA. 110+50.00 TO STA. 111+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

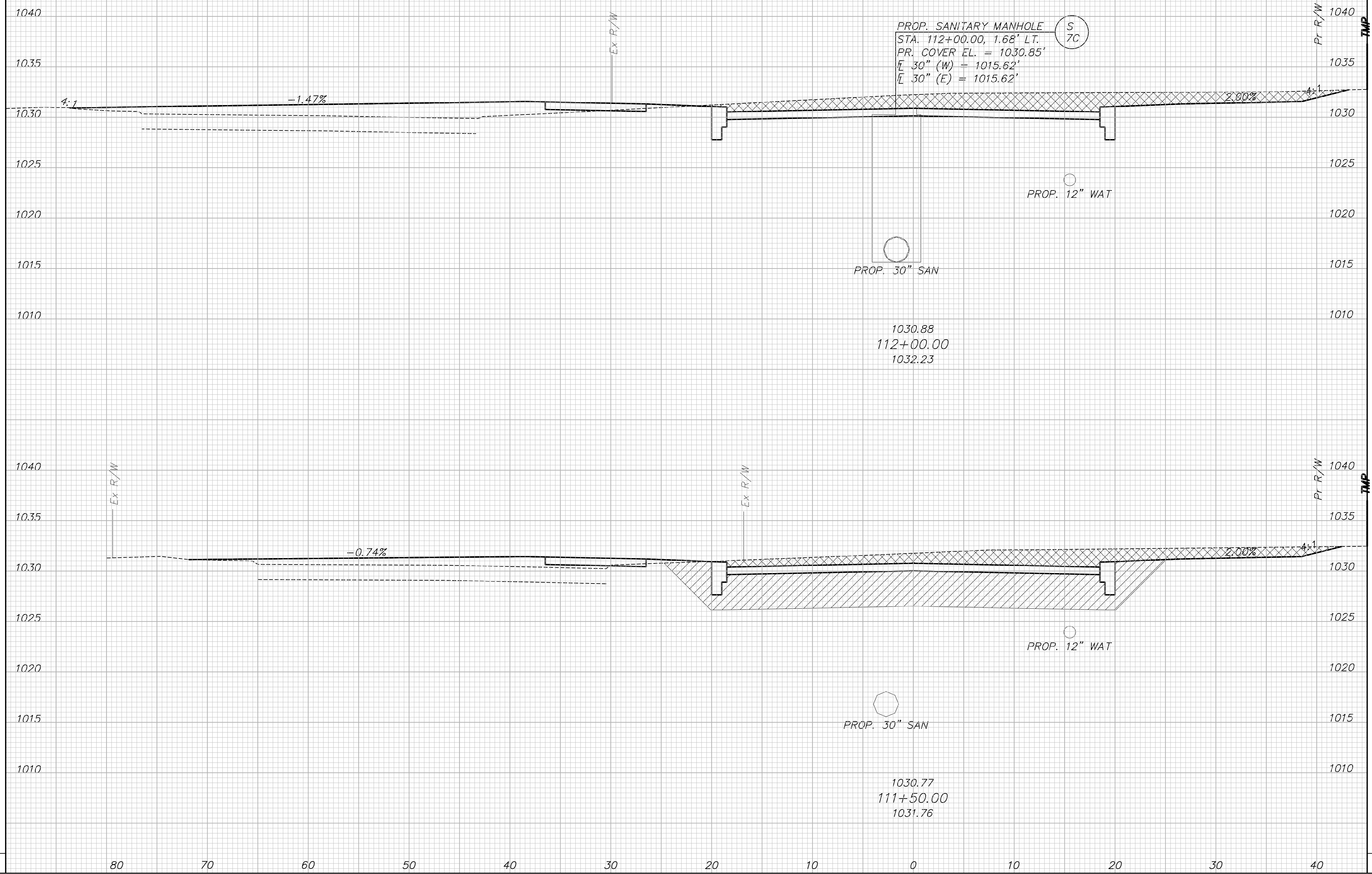
75
302

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
 REMOVAL
 UNSUITABLE
 SUBGRADE
 TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



CROSS SECTIONS - 11TH STREET SE
STA. 111+50.00 TO STA. 112+00.00

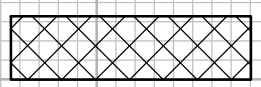
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)


76
 302

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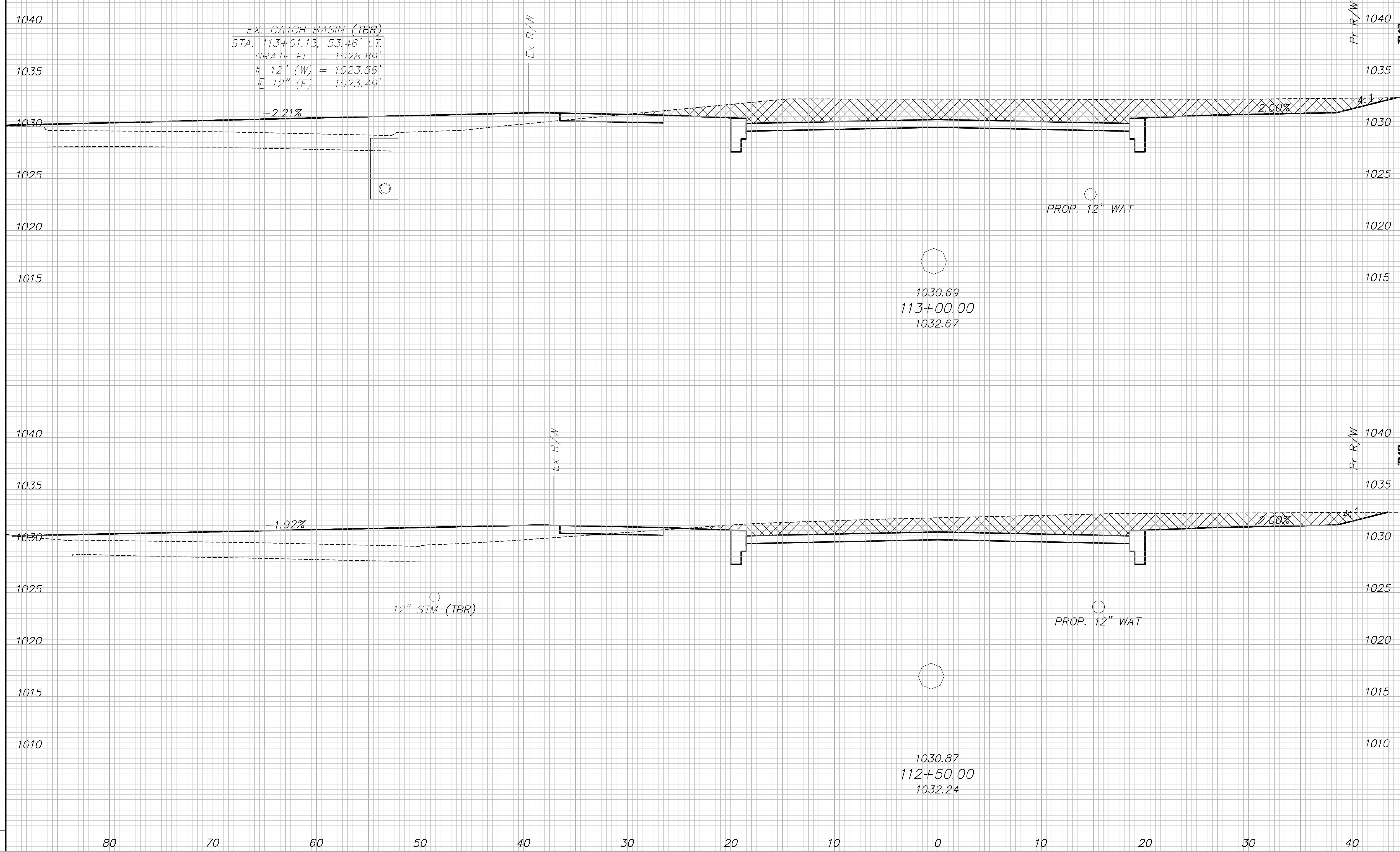
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
STA. 112+50.00 TO STA. 113+00.00**

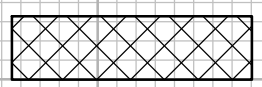

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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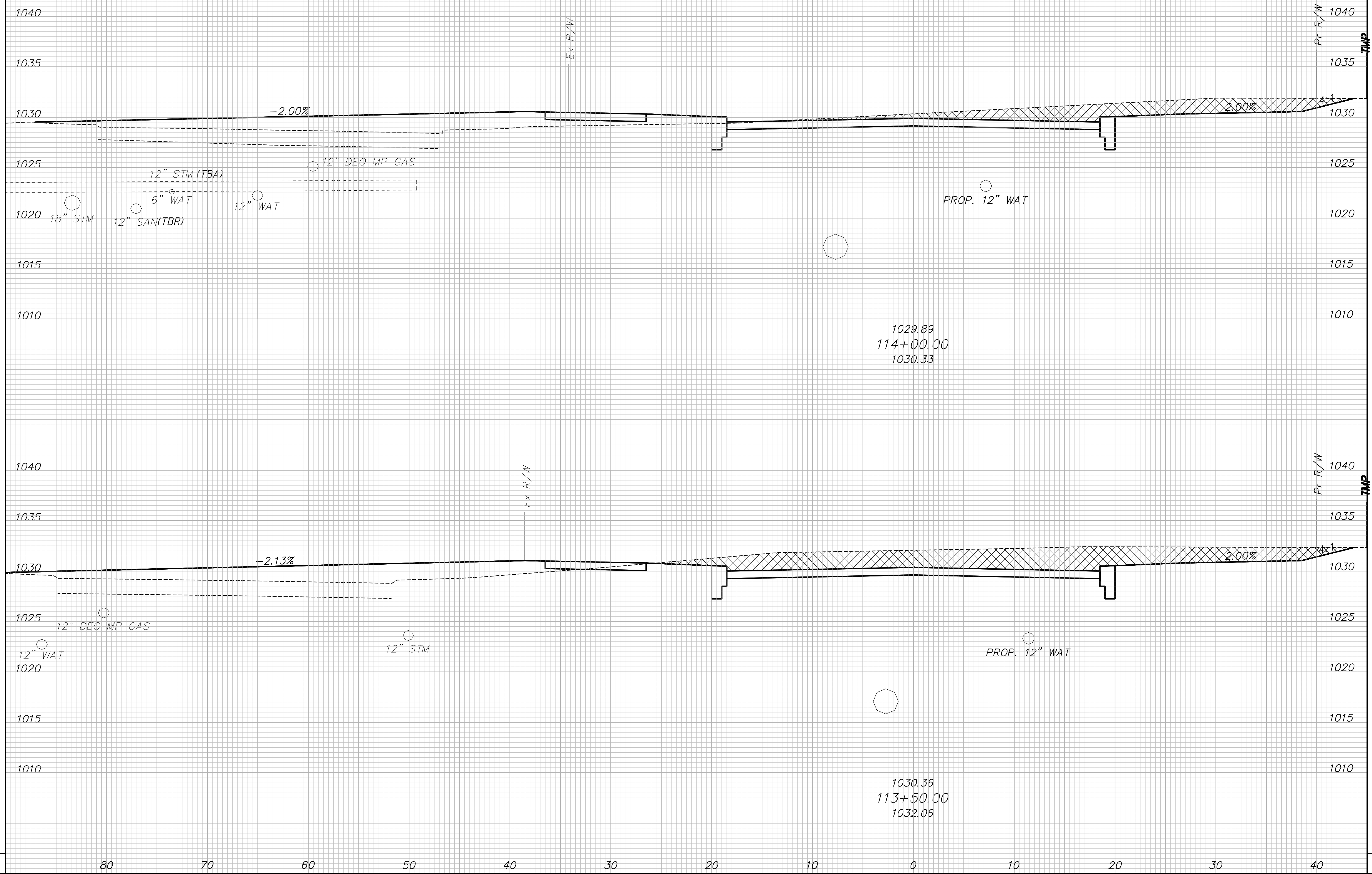
SEEDING

END WIDTH	SO. YDS.

LEGEND

-  EXISTING PAVEMENT REMOVAL
-  UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES

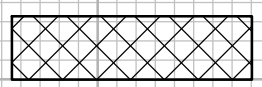



**CROSS SECTIONS - 11TH STREET SE
STA. 113+50.00 TO STA. 114+00.00**

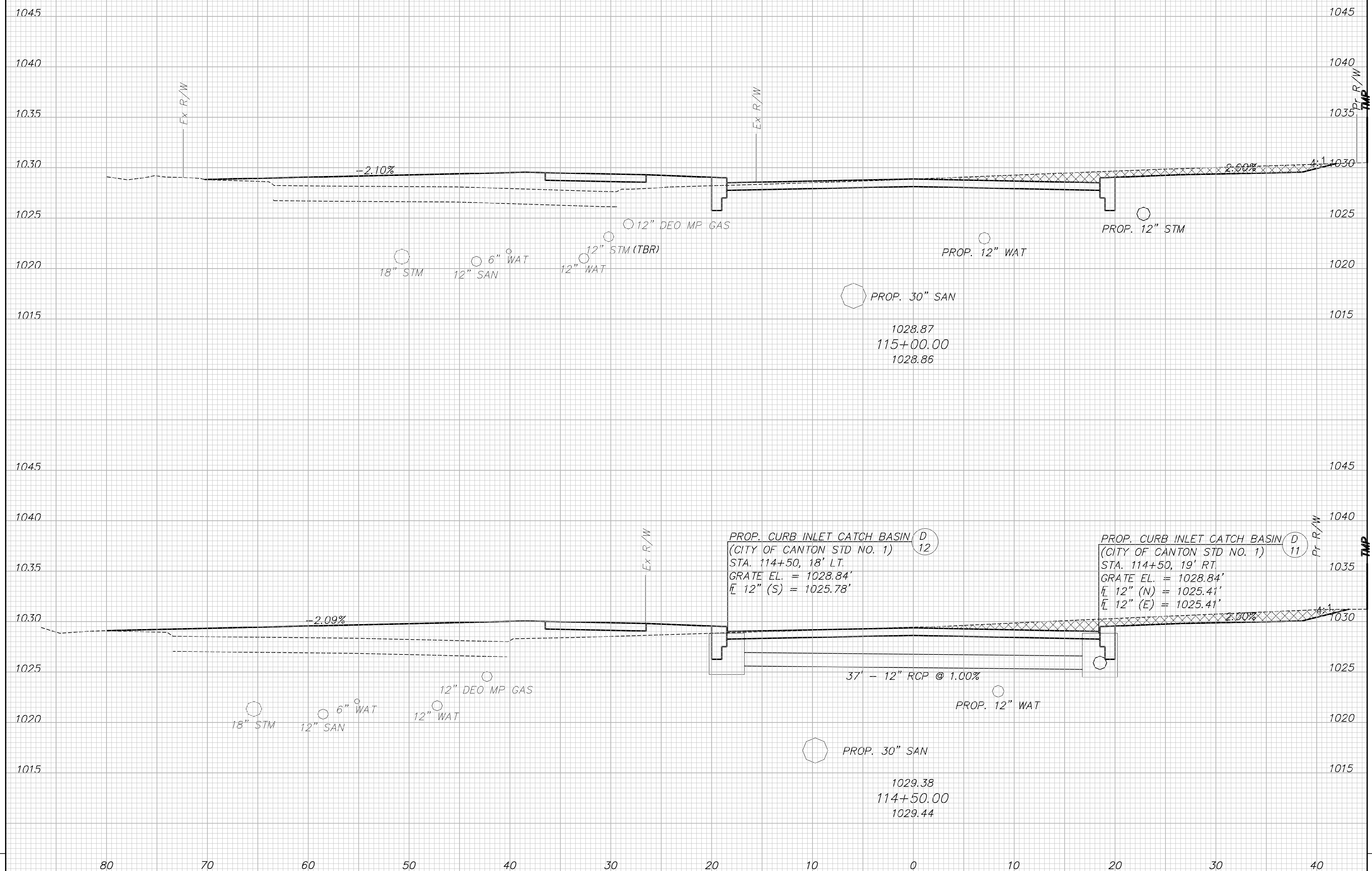
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
 STA. 114+50.00 TO STA. 115+00.00**

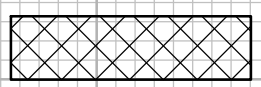
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**


79
302

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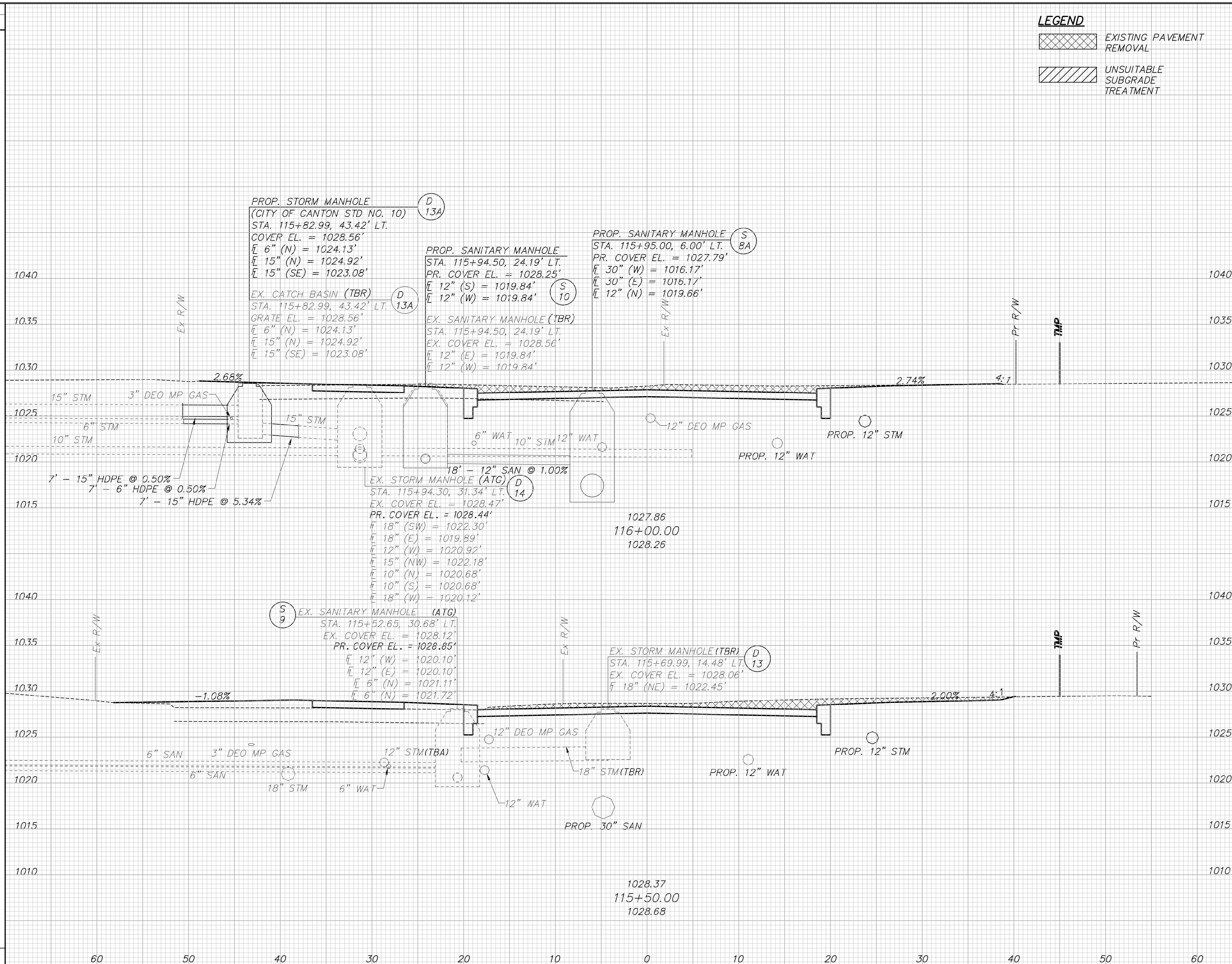
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED				
				CUT	FILL	CUT	FILL



PROP. STORM MANHOLE
 (CITY OF CANTON STD NO. 10) **(D 13A)**
 STA. 115+82.99, 43.42' LT.
 COVER EL. = 1028.56'
 6" (N) = 1024.13'
 15" (N) = 1024.92'
 15" (SE) = 1023.08'

PROP. SANITARY MANHOLE
 STA. 115+94.50, 24.19' LT.
 PR. COVER EL. = 1028.25'
 12" (S) = 1019.84' **(S 10)**
 12" (W) = 1019.84'

PROP. SANITARY MANHOLE **(S 8A)**
 STA. 115+95.00, 6.00' LT.
 PR. COVER EL. = 1027.79'
 30" (W) = 1016.17'
 30" (E) = 1016.17'
 12" (N) = 1019.66'

EX. CATCH BASIN (TBR) **(D 13A)**
 STA. 115+82.99, 43.42' LT.
 GRATE EL. = 1028.56'
 6" (N) = 1024.13'
 15" (N) = 1024.92'
 15" (SE) = 1023.08'

EX. SANITARY MANHOLE (TBR)
 STA. 115+94.50, 24.19' LT.
 EX. COVER EL. = 1028.56'
 12" (E) = 1019.84'
 12" (W) = 1019.84'

EX. STORM MANHOLE (ATC) **(D 14)**
 STA. 115+94.30, 31.34' LT.
 EX. COVER EL. = 1028.47'
 PR. COVER EL. = 1028.44'
 18" (SW) = 1022.30'
 18" (E) = 1019.89'
 12" (W) = 1020.92'
 15" (NW) = 1022.18'
 10" (N) = 1020.68'
 10" (S) = 1020.68'
 18" (W) = 1020.12'

EX. SANITARY MANHOLE (ATC) **(S 9)**
 STA. 115+52.65, 30.68' LT.
 EX. COVER EL. = 1028.12'
 PR. COVER EL. = 1028.85'
 12" (W) = 1020.10'
 12" (E) = 1020.10'
 6" (N) = 1021.11'
 6" (N) = 1021.72'

EX. STORM MANHOLE (TBR) **(D 13)**
 STA. 115+69.99, 14.48' LT.
 EX. COVER EL. = 1028.06'
 18" (NE) = 1022.45'

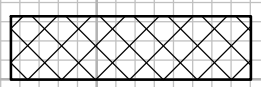

CROSS SECTIONS - 11TH STREET SE
STA. 115+50.00 TO STA. 116+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

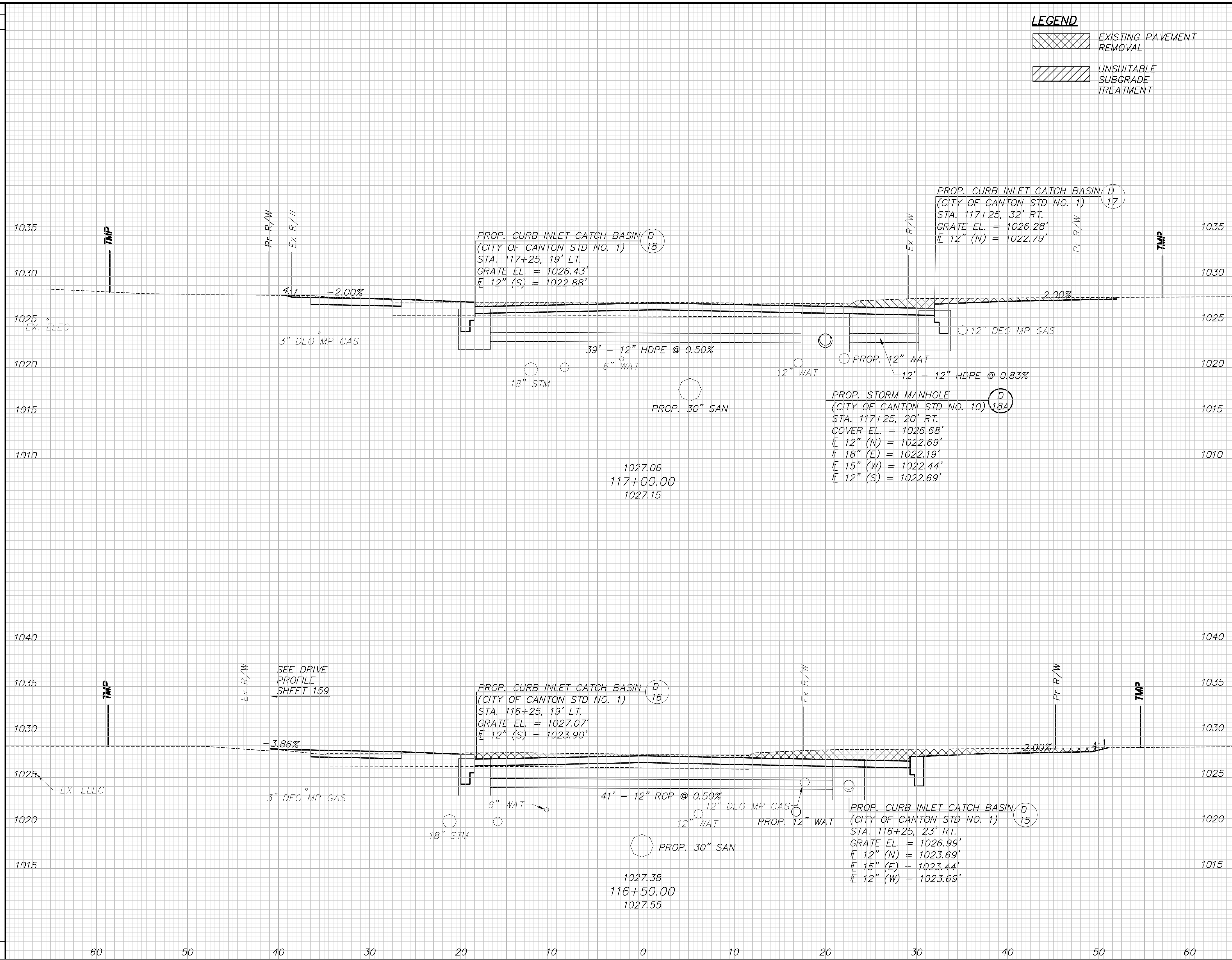
80
302

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
 REMOVAL
 UNSUITABLE
 SUBGRADE
 TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



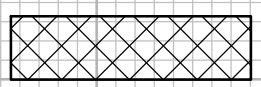
CROSS SECTIONS - 11TH STREET SE
STA. 116+50.00 TO STA. 117+00.00
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)
 81
 302


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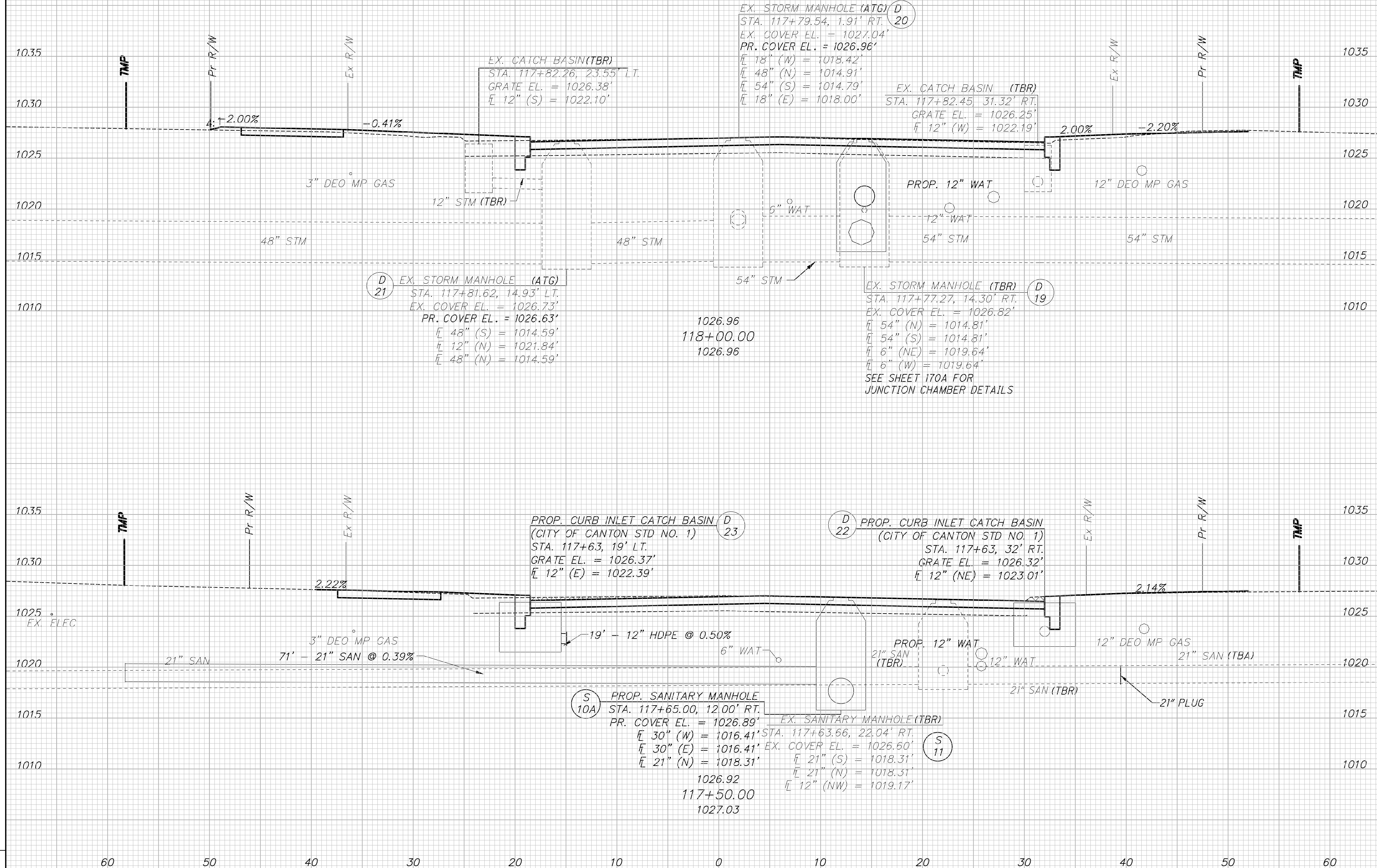
SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT



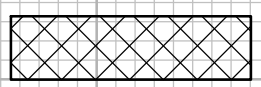

CROSS SECTIONS - 11TH STREET SE
STA. 117+50.00 TO STA. 118+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

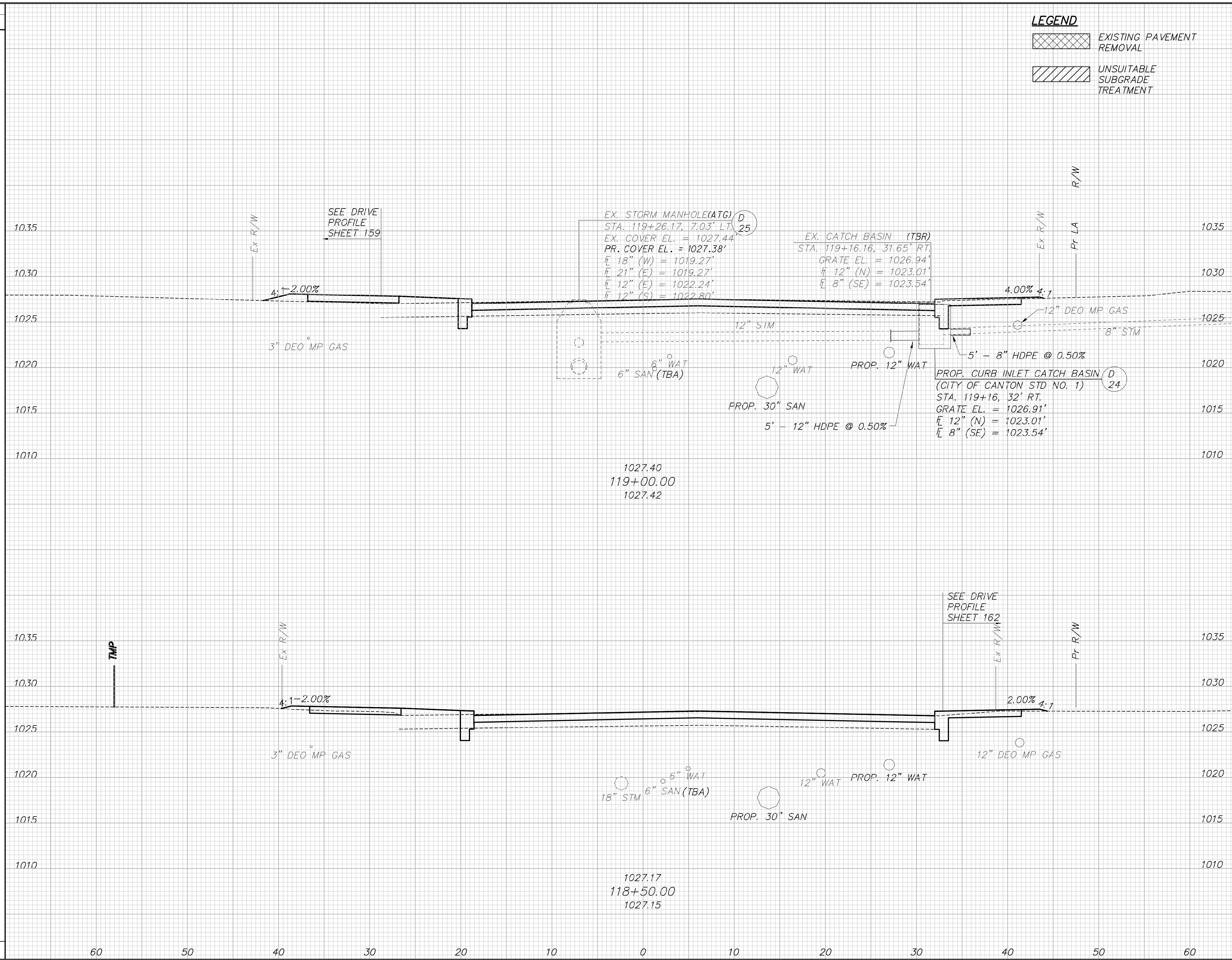
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SEEDING	
END WIDTH	SO. YDS.

LEGEND

	EXISTING PAVEMENT REMOVAL
	UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES

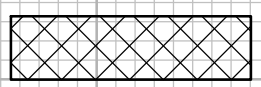



**CROSS SECTIONS - 11TH STREET SE
STA. 118+50.00 TO STA. 119+00.00**

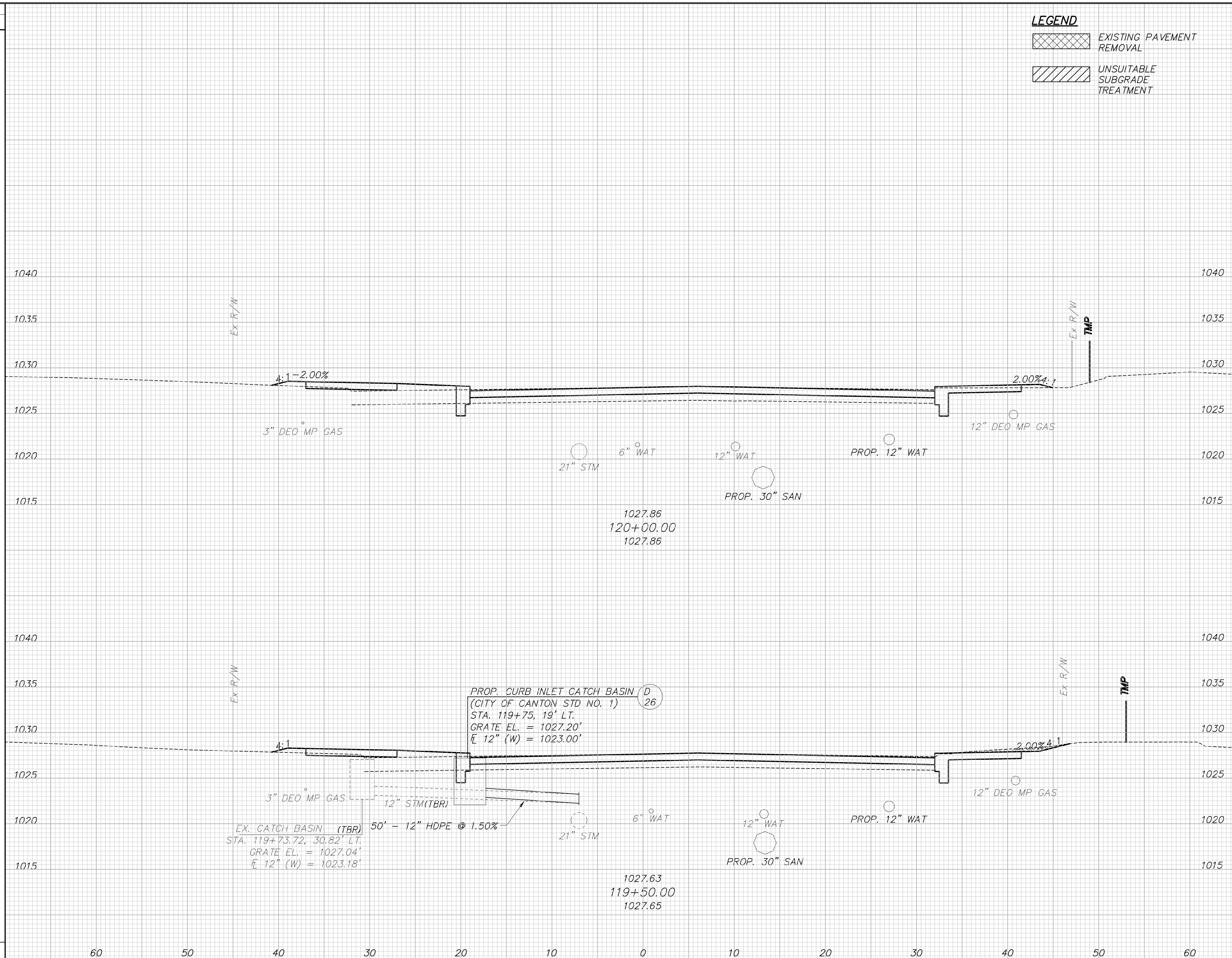
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
 STA. 119+50.00 TO STA. 120+00.00**

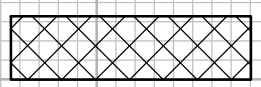
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**


84
302

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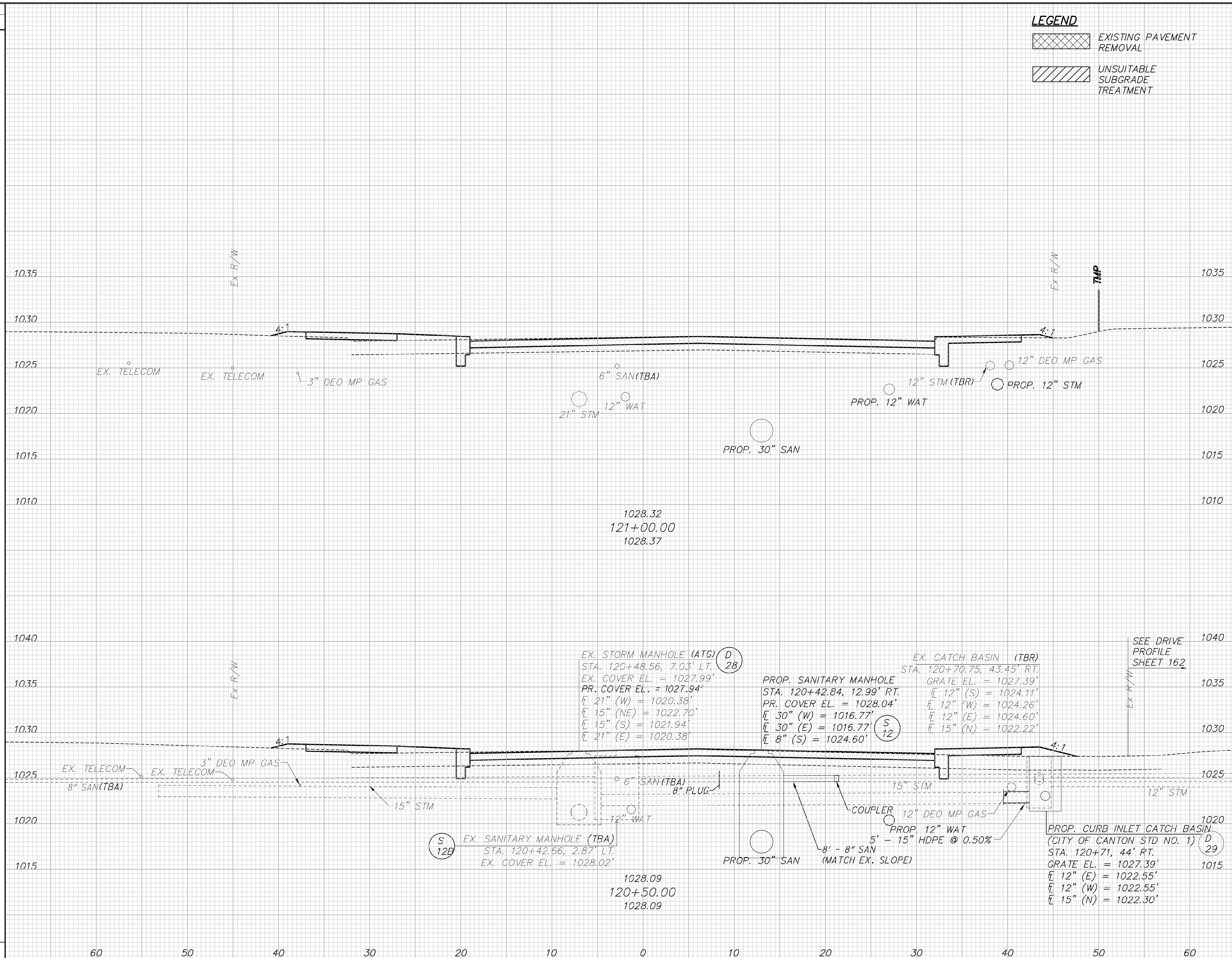
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



EX. STORM MANHOLE (ATG) **(D 28)**
 STA. 120+48.56, 7.03' LT.
 EX. COVER EL. = 1027.99'
 PR. COVER EL. = 1027.94'
 12' (W) = 1020.38'
 15' (NE) = 1022.70'
 15' (S) = 1021.94'
 21' (E) = 1020.38'

PROP. SANITARY MANHOLE
 STA. 120+42.84, 12.99' RT.
 PR. COVER EL. = 1028.04'
 30' (W) = 1016.77'
 30' (E) = 1016.77' **(S 12)**
 8' (S) = 1024.60'

EX. CATCH BASIN (TBR)
 STA. 120+70.75, 43.45' RT.
 GRATE EL. = 1027.39'
 12' (S) = 1024.11'
 12' (W) = 1024.26'
 12' (E) = 1024.60'
 15' (N) = 1022.22'

(S 12B) EX. SANITARY MANHOLE (TBA)
 STA. 120+42.66, 2.87' LT.
 EX. COVER EL. = 1028.02'

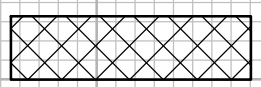

PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1) **(D 29)**
 STA. 120+71, 44' RT.
 GRATE EL. = 1027.39'
 12' (E) = 1022.55'
 12' (W) = 1022.55'
 15' (N) = 1022.30'

CROSS SECTIONS - 11TH STREET SE
 STA. 120+50.00 TO STA. 121+00.00

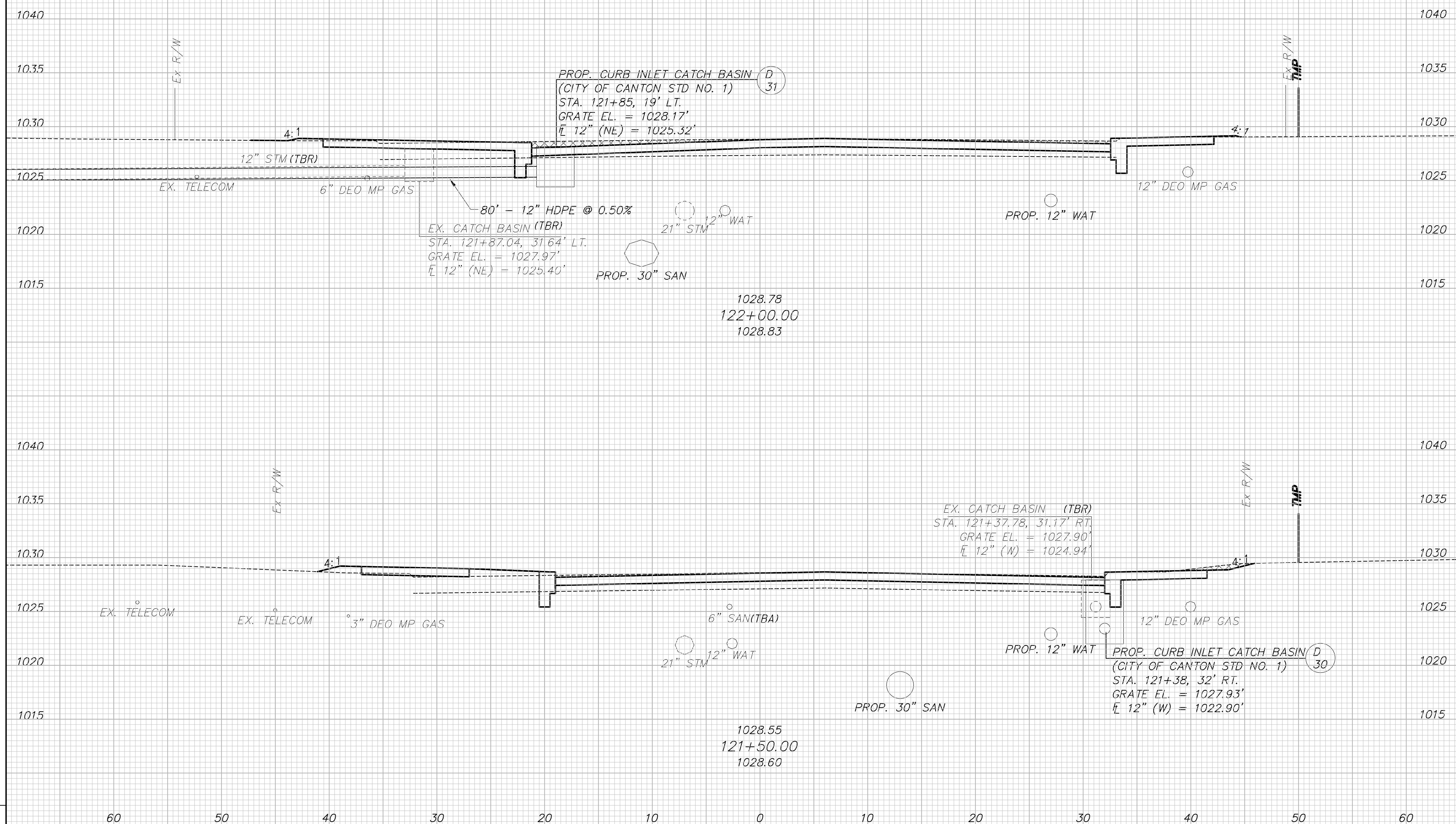
STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
 STA. 121+50.00 TO STA. 122+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

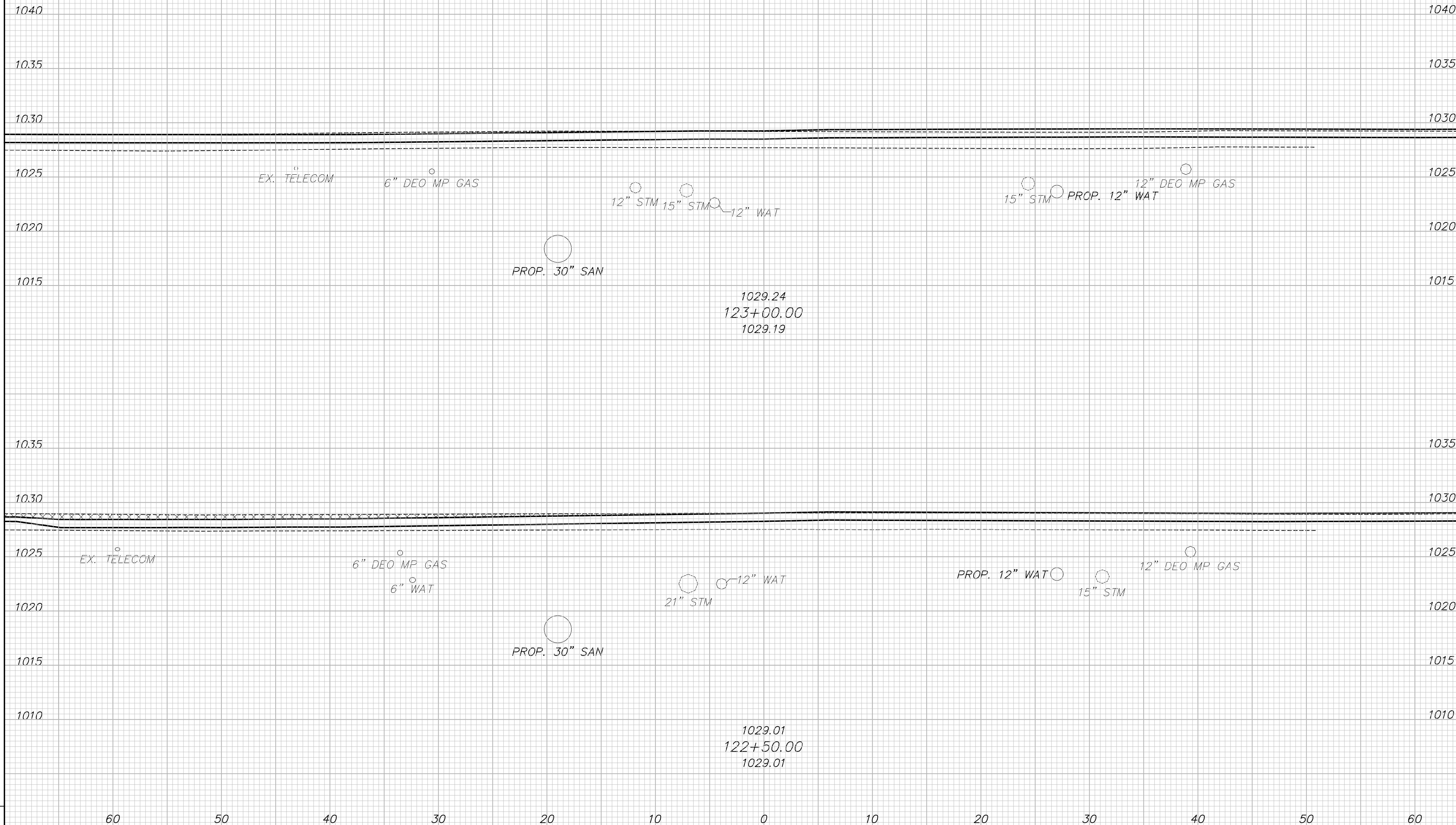
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302

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SEEDING
END SO.
WIDTH YDS.

LEGEND
EXISTING PAVEMENT
REMOVAL
UNSUITABLE
SUBGRADE
TREATMENT

END AREA
CUT FILL
VOLUME
CUT FILL
CALCULATED
JPK
CHECKED
JES



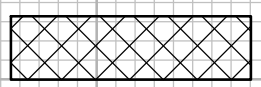

**CROSS SECTIONS - 11TH STREET SE
 STA. 122+50.00 TO STA. 123+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

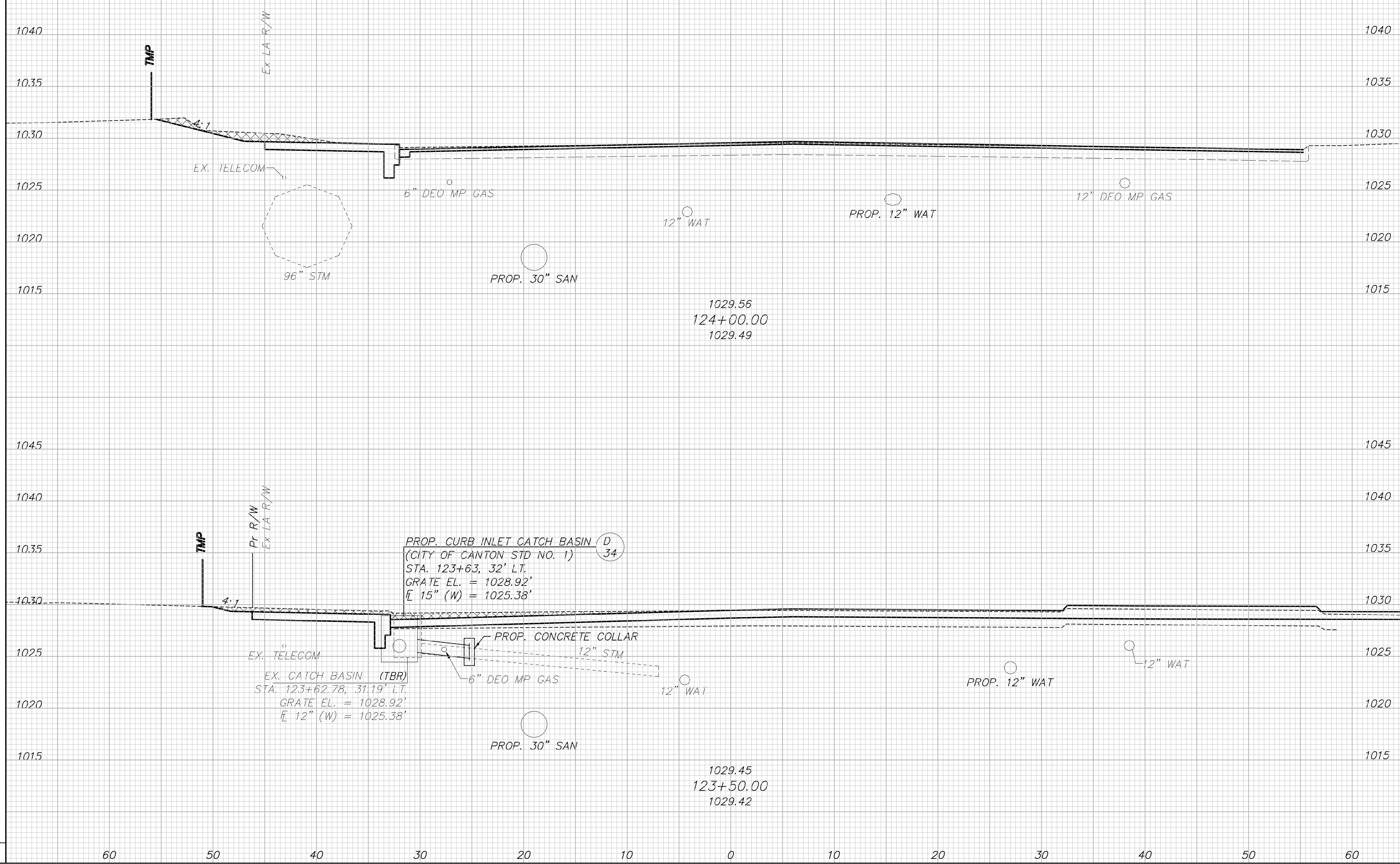
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302

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
 REMOVAL
 UNSUITABLE
 SUBGRADE
 TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
 STA. 123+50.00 TO STA. 124+00.00**

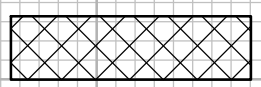
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**


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302

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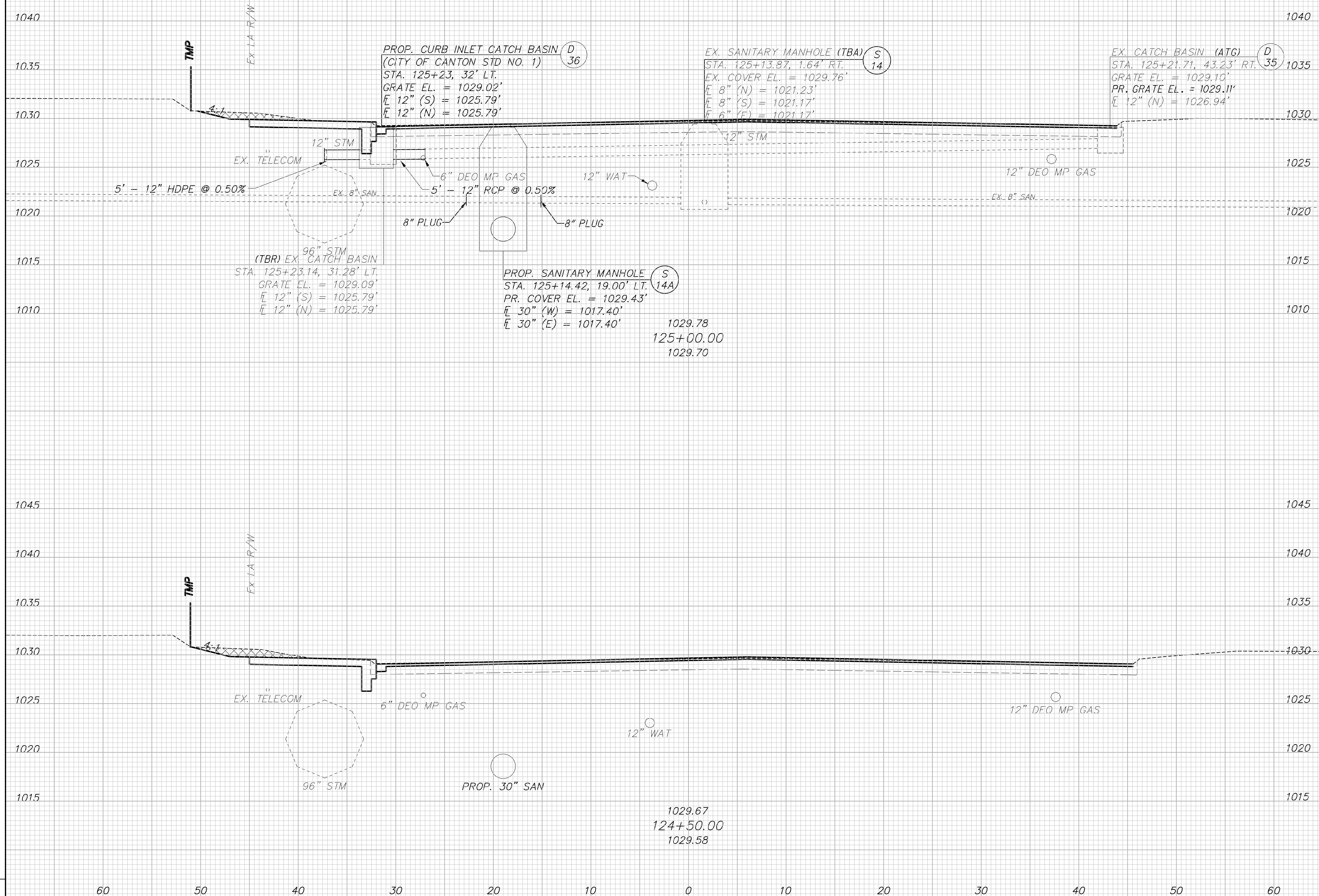
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES

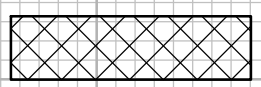



**CROSS SECTIONS - 11TH STREET SE
STA. 124+50.00 TO STA. 125+00.00**

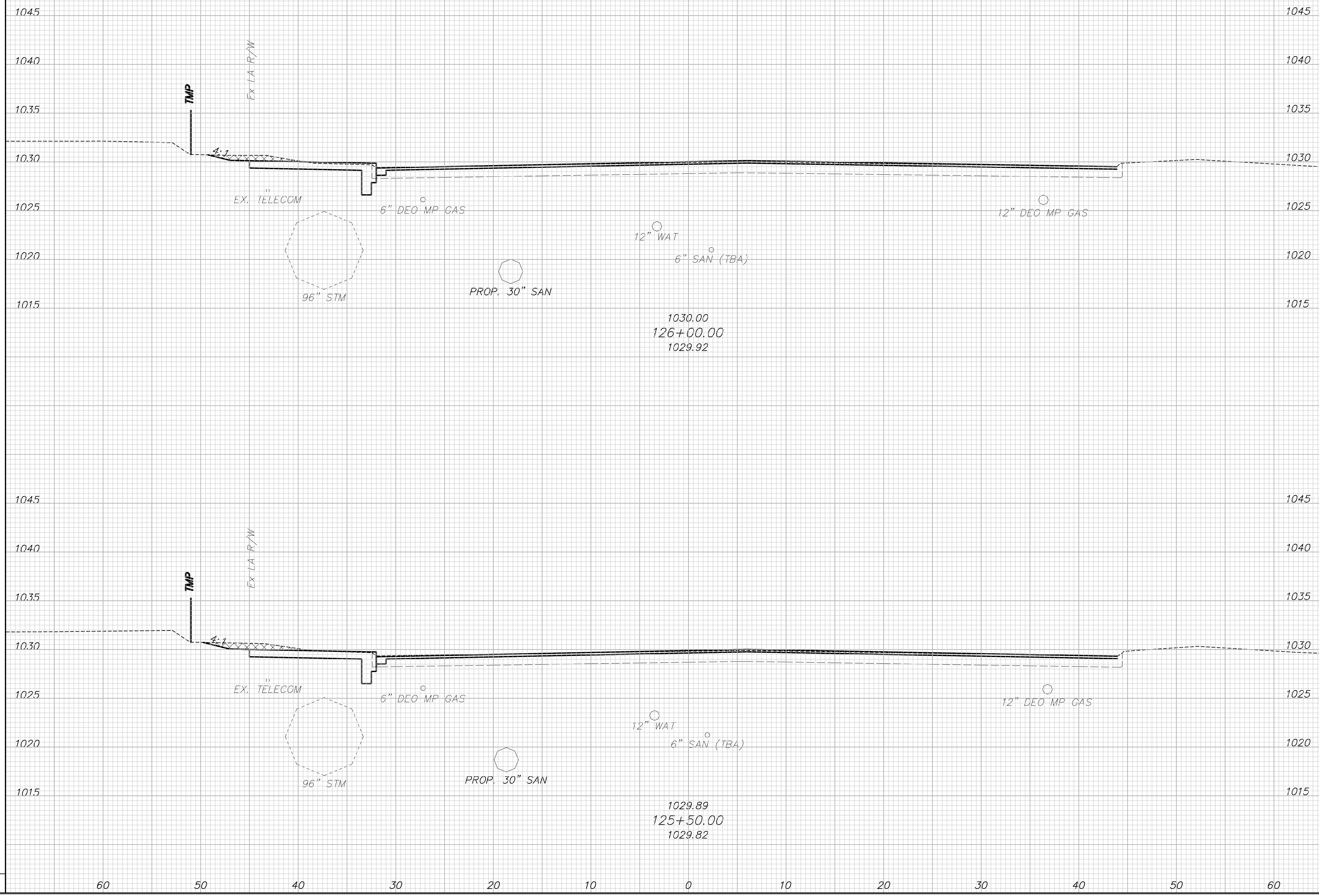
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



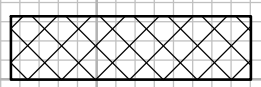

CROSS SECTIONS - 11TH STREET SE
STA. 125+50.00 TO STA. 126+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

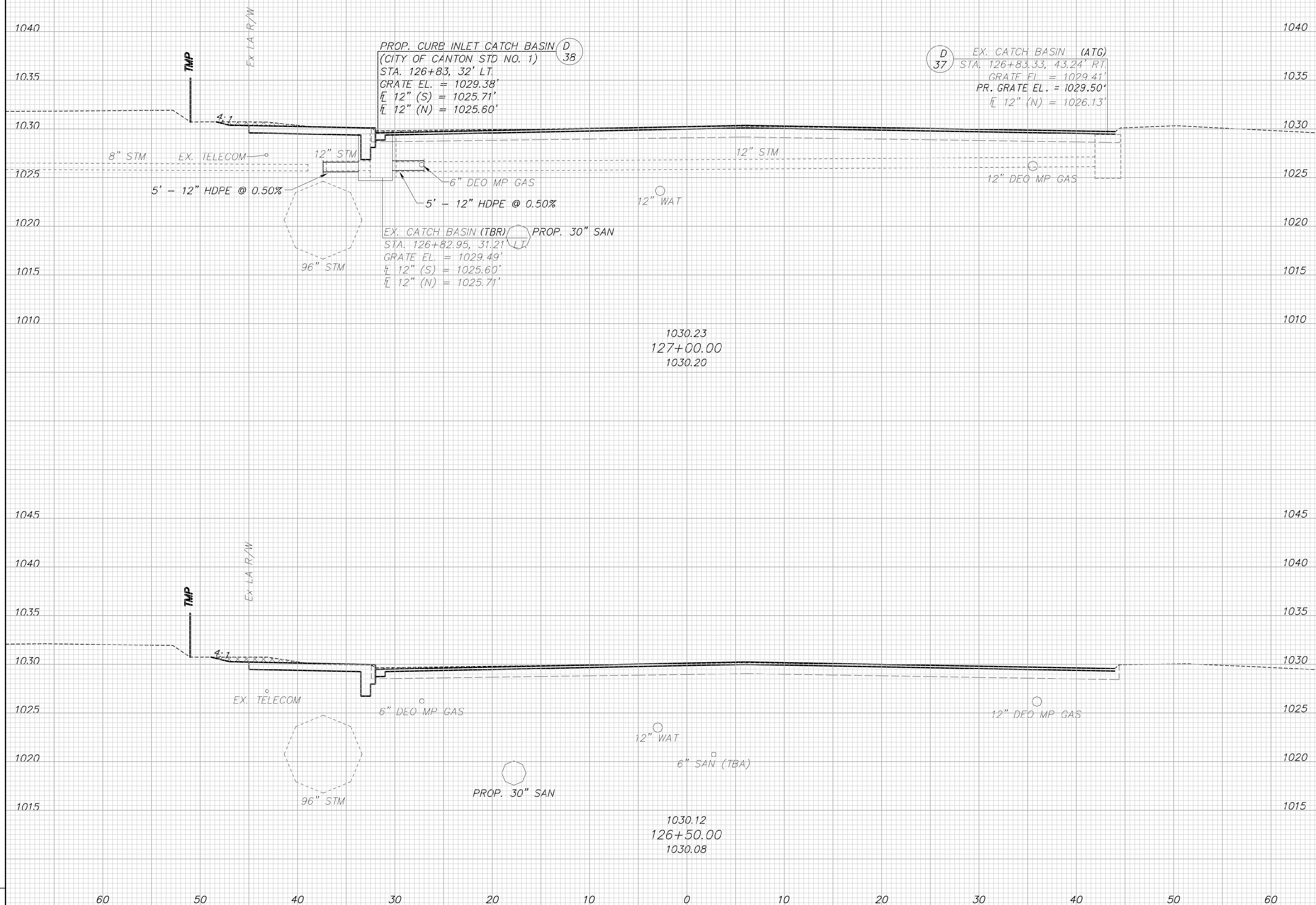
90
302

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SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
STA. 126+50.00 TO STA. 127+00.00**

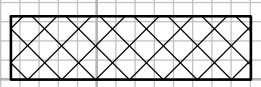

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

91
302

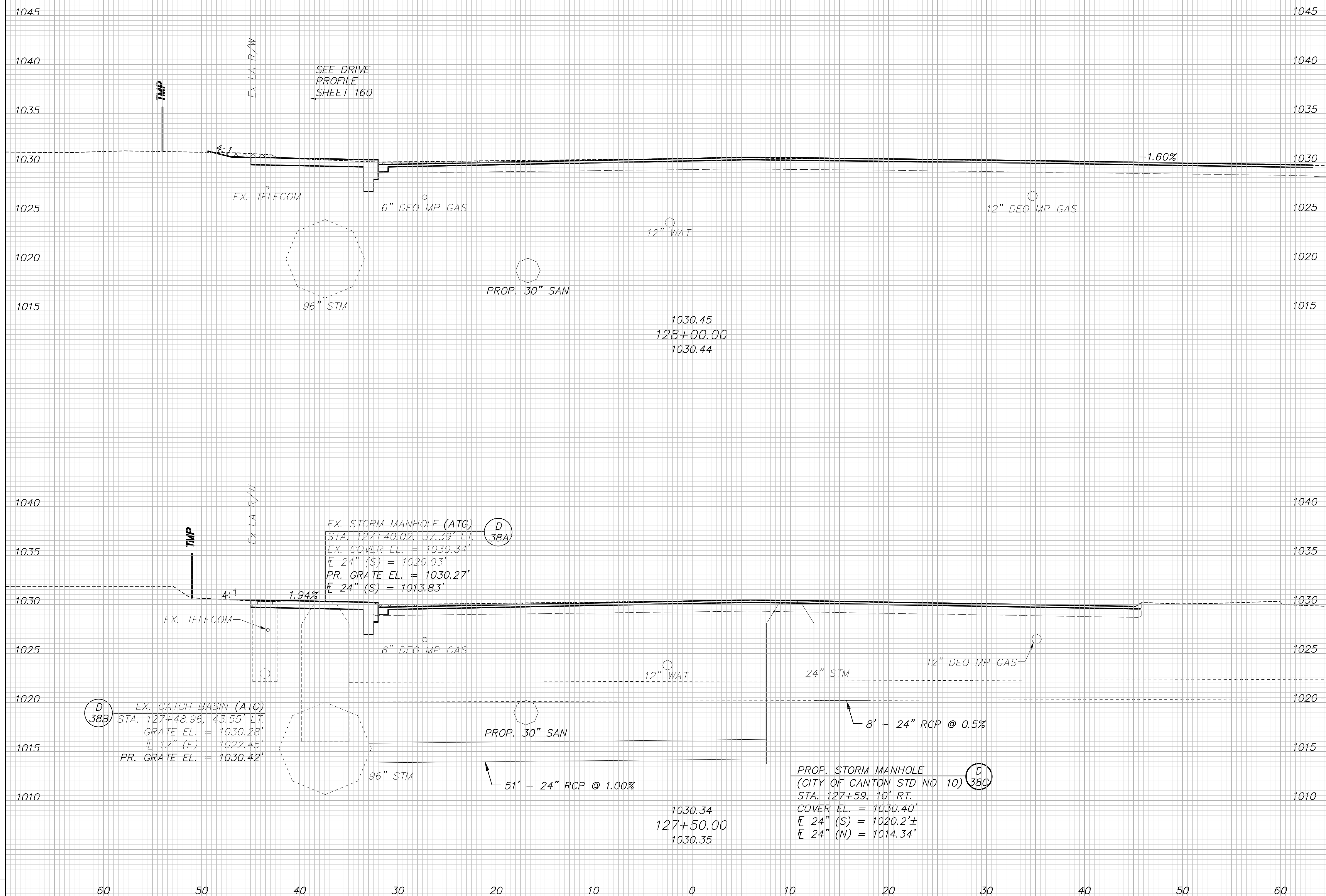
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SEEDING	
END WIDTH	SO. YDS.

LEGEND

	EXISTING PAVEMENT REMOVAL
	UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
STA. 127+50.00 TO STA. 128+00.00**

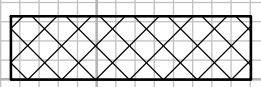

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

92
302

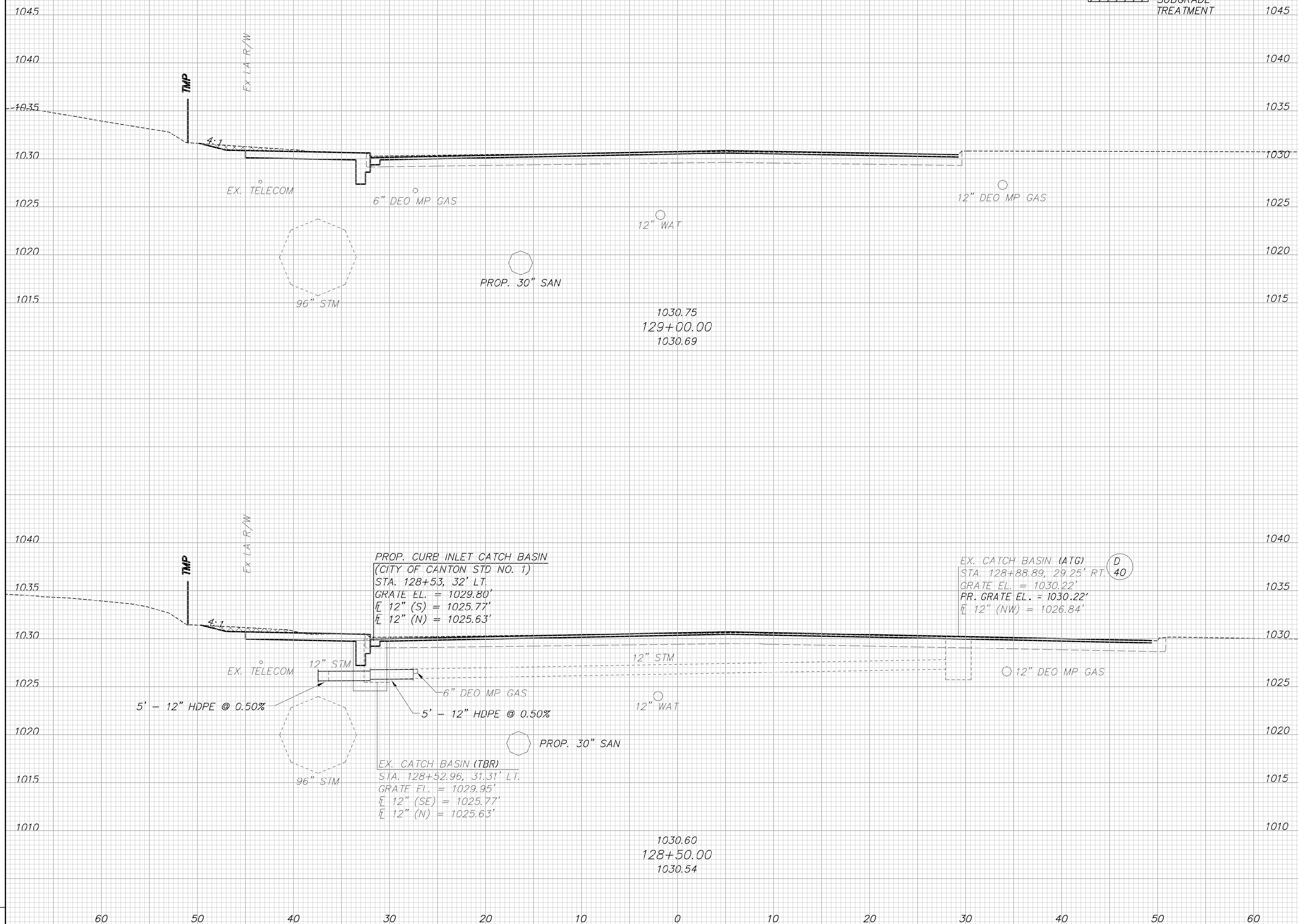
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SEEDING	
END WIDTH	SO. YDS.

LEGEND

	EXISTING PAVEMENT REMOVAL
	UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	JPK	JES



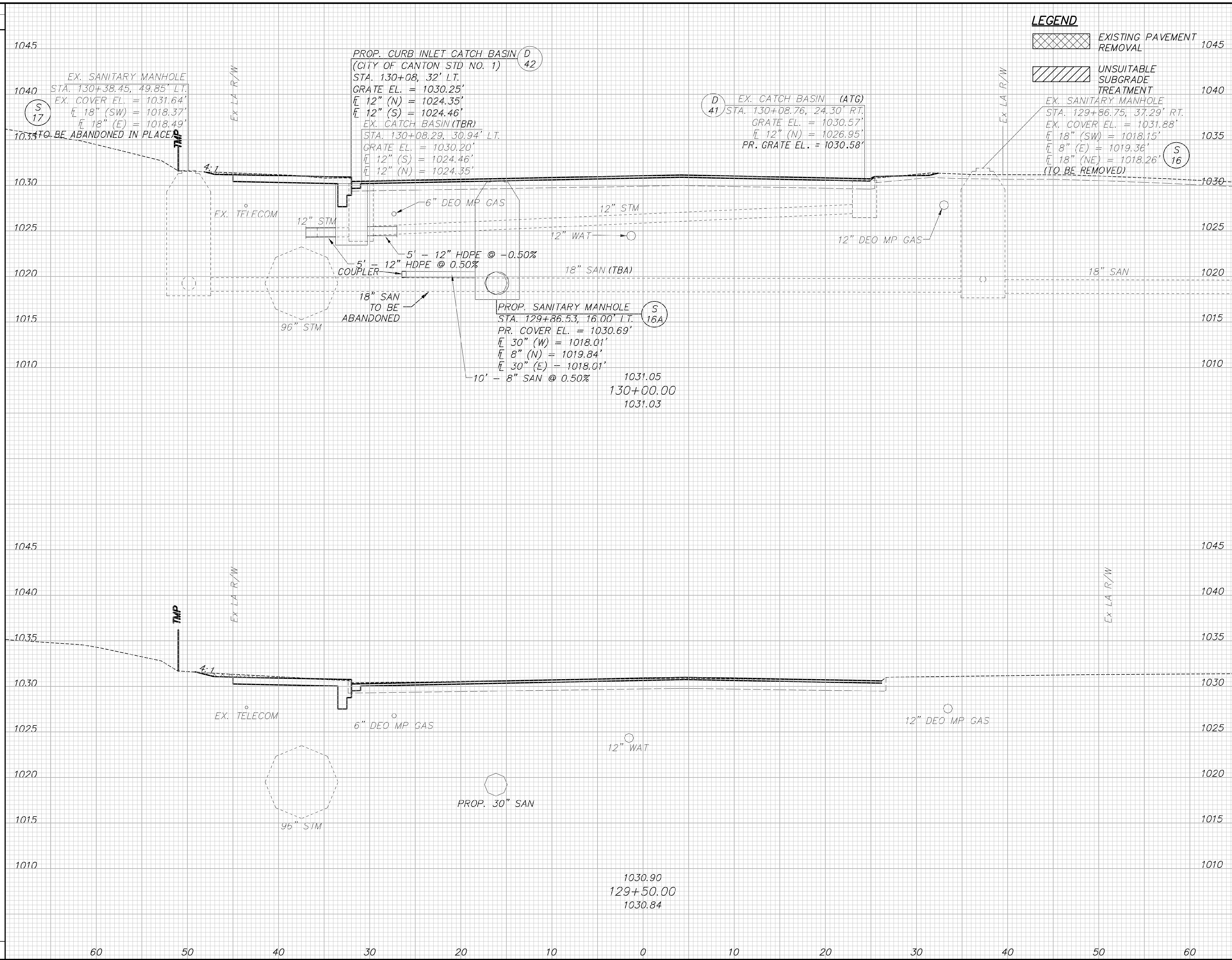
**CROSS SECTIONS - 11TH STREET SE
STA. 128+50.00 TO STA. 129+00.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

93
302

c:\pwworking\ocom_ds20_na_2019\brittney.crandall@ocom.com\dms20667\17790_X5001.dwg 04-Nov-22 2:03 PM

SEEDING	
END WIDTH	SO. YDS.



LEGEND

- EXISTING PAVEMENT REMOVAL
- UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED				
				CUT	FILL	CUT	FILL
				JPK	JES		

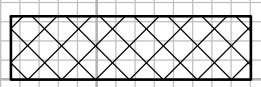

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

CROSS SECTIONS - 11TH STREET SE STA. 129+50.00 TO STA. 130+00.00

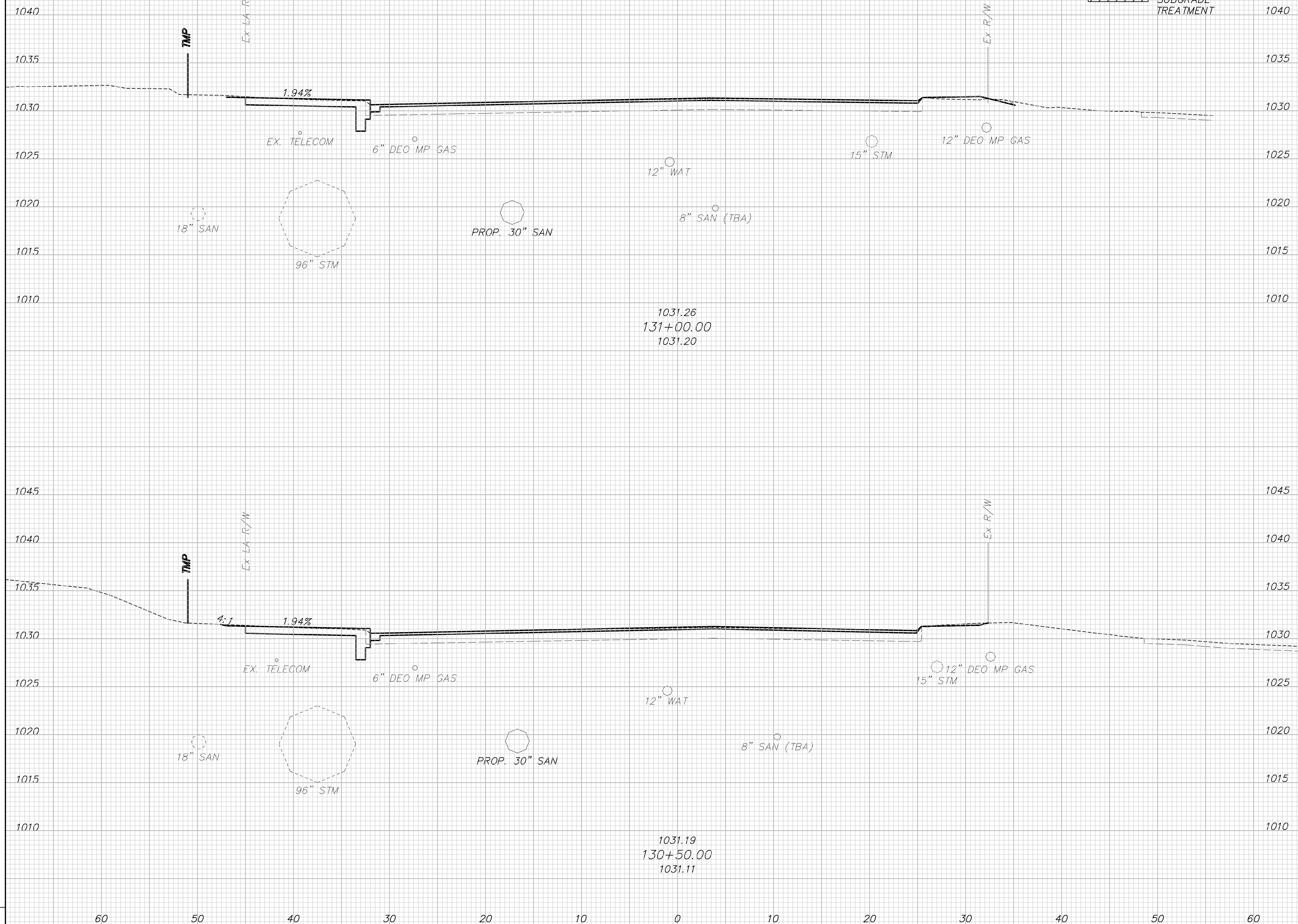
94
302

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5001.dwg 04-Nov-22 2:03 PM

SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



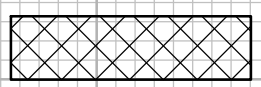
**CROSS SECTIONS - 11TH STREET SE
 STA. 130+50.00 TO STA. 131+00.00**


**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

c:\pwworking\ocom_ds20_na_2019\brittney.crandall@ocom.com\dms20667\17790_X5001.dwg 04-Nov-22 2:03 PM

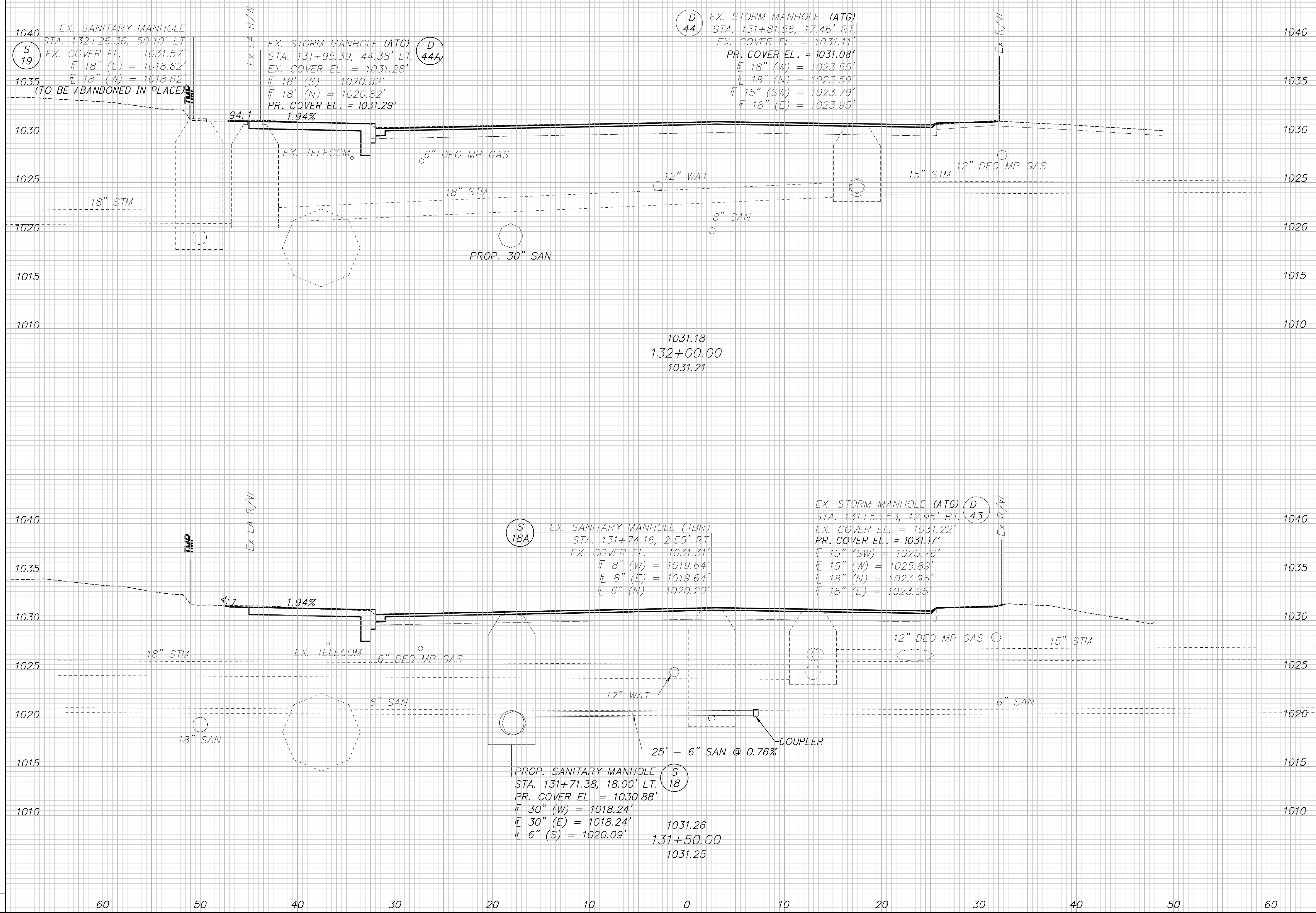
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES





**CROSS SECTIONS - 11TH STREET SE
STA. 131+50.00 TO STA. 132+00.00**

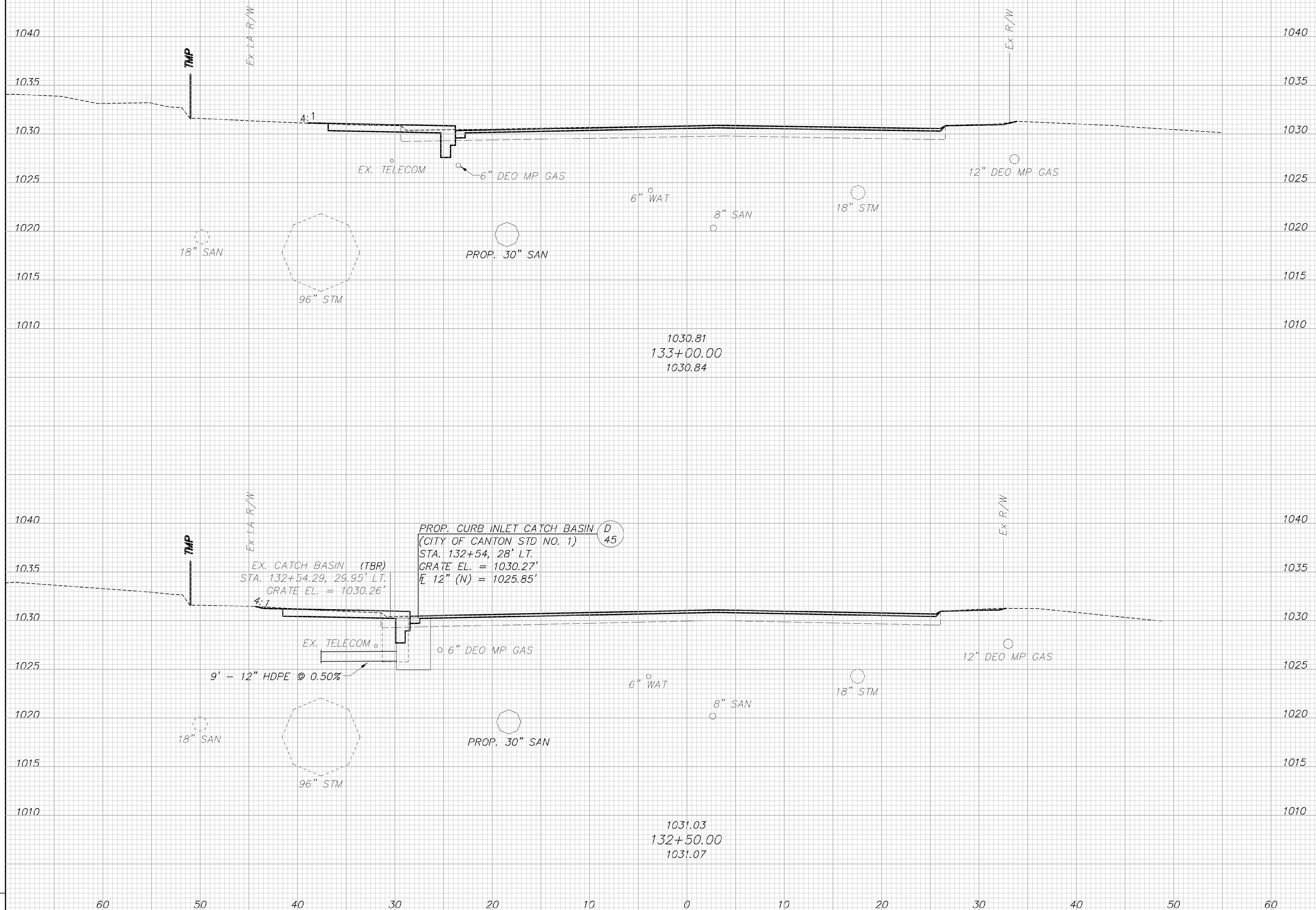
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

c:\pwworking\aecom_ds20_na_2019\brittney.crandall@aecom.com\dms20667\17790_X5001.dwg 04-Nov-22 2:03 PM

SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



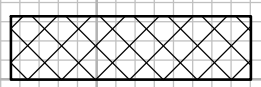
**CROSS SECTIONS - 11TH STREET SE
 STA. 132+50.00 TO STA. 133+00.00**


**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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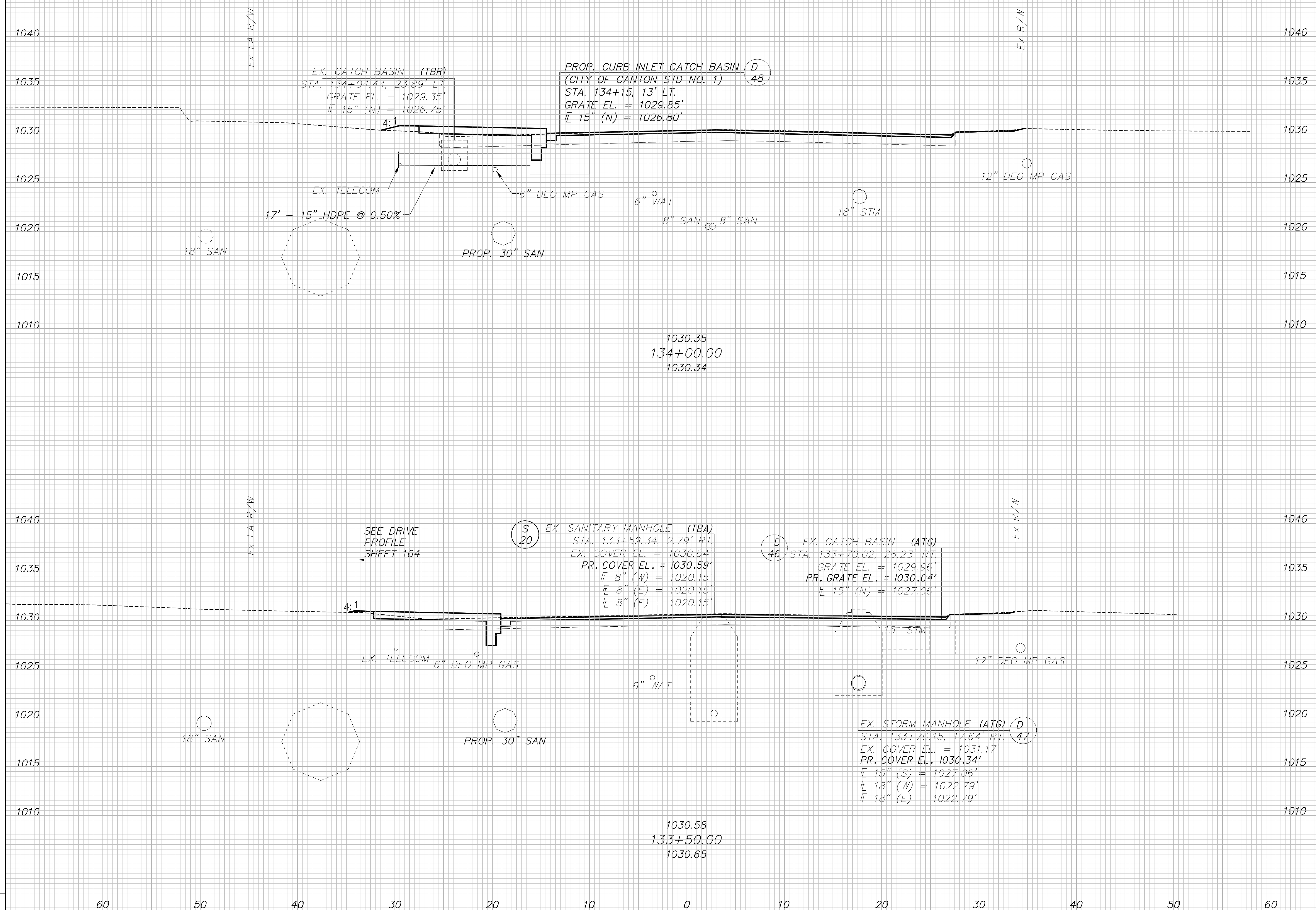
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



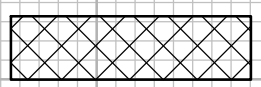
**CROSS SECTIONS - 11TH STREET SE
STA. 133+50.00 TO STA. 134+00.00**


**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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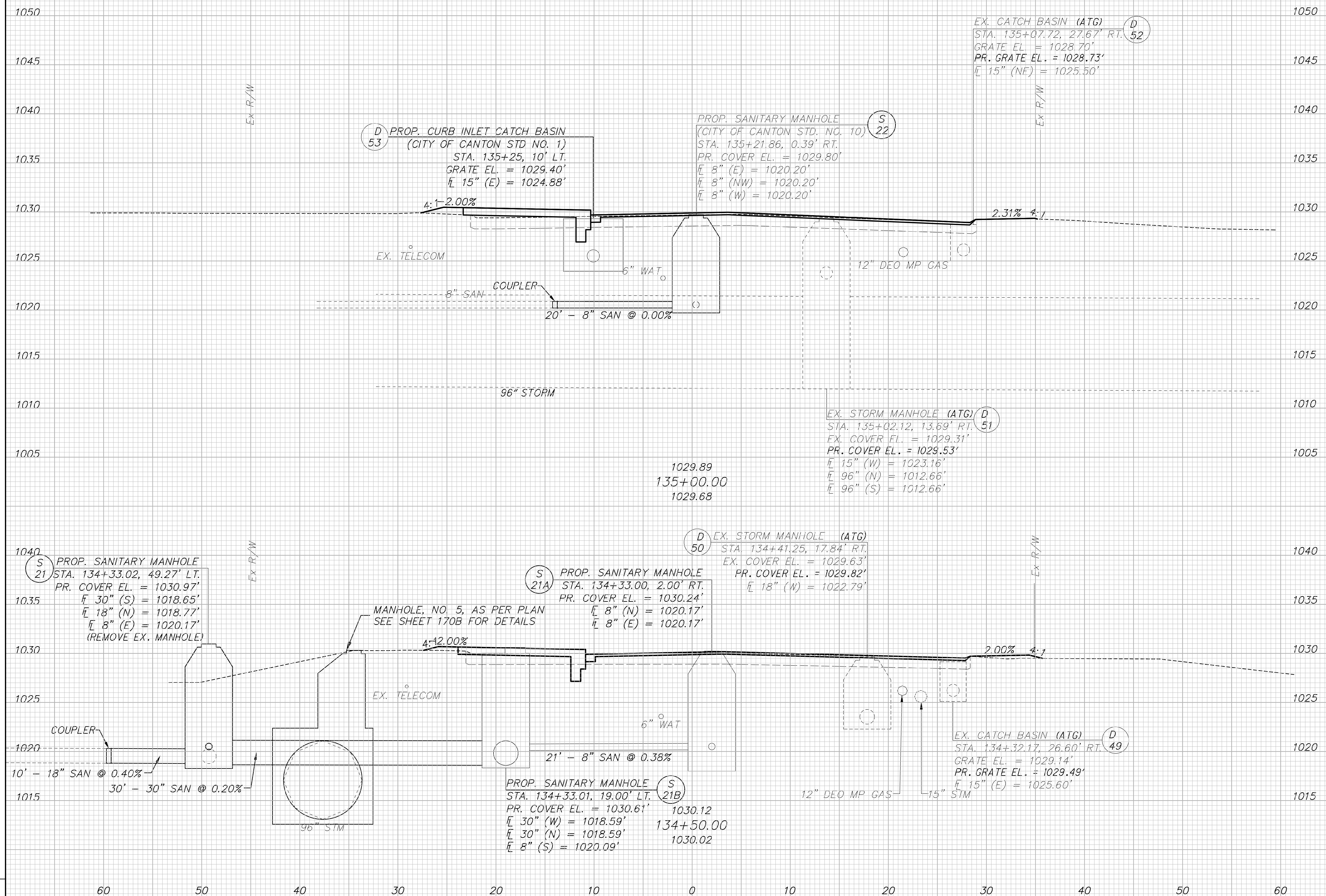
SEEDING	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES

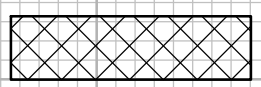



CROSS SECTIONS - 11TH STREET SE
STA. 134+50.00 TO STA. 135+00.00

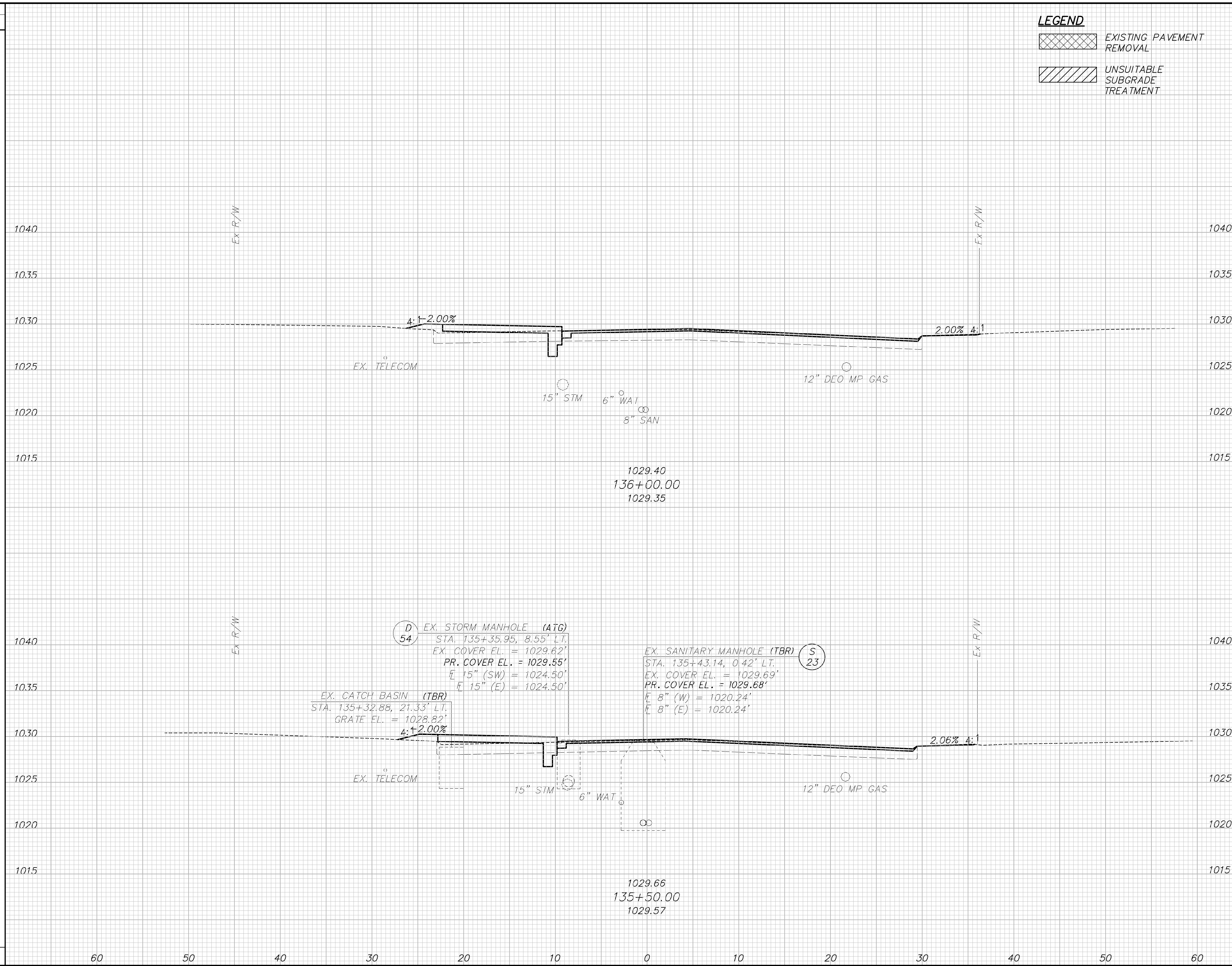
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5001.dwg 04-Nov-22 2:04 PM

SEEDING
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



CROSS SECTIONS - 11TH STREET SE
STA. 135+50.00 TO STA. 136+00.00

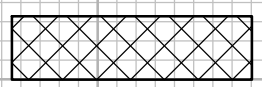

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

100
302

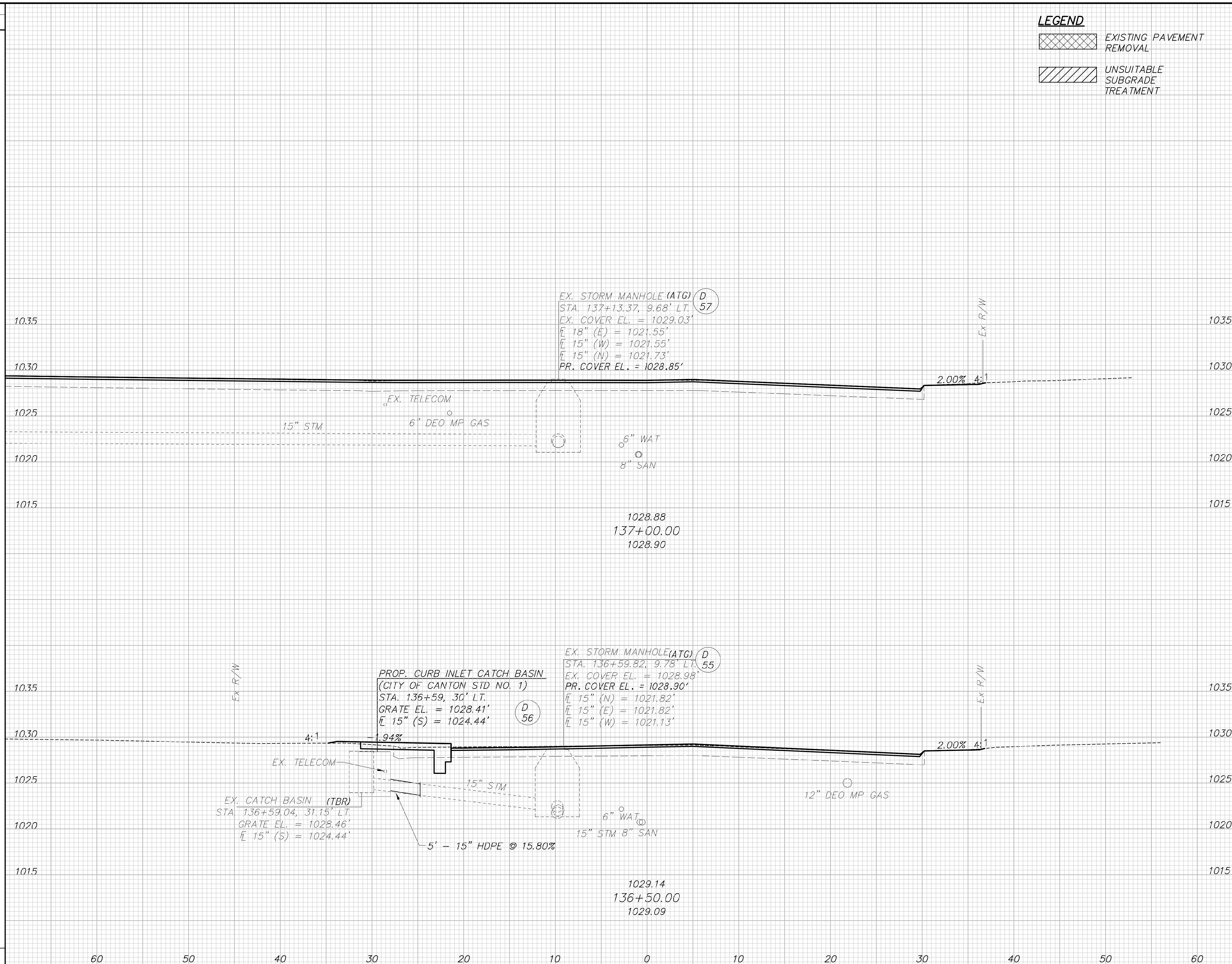
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SEEDING	
END WIDTH	SO. YDS.

LEGEND

	EXISTING PAVEMENT REMOVAL
	UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



EX. STORM MANHOLE (ATG) (D 57)
 STA. 137+13.37, 9.68' LT.
 EX. COVER EL. = 1029.03'
 18" (E) = 1021.55'
 15" (W) = 1021.55'
 15" (N) = 1021.73'
 PR. COVER EL. = 1028.85'

1028.88
 137+00.00
 1028.90

EX. STORM MANHOLE (ATG) (D 55)
 STA. 136+59.82, 9.78' LT.
 EX. COVER EL. = 1028.98'
 PR. COVER EL. = 1028.90'
 15" (N) = 1021.82'
 15" (E) = 1021.82'
 15" (W) = 1021.13'

1029.14
 136+50.00
 1029.09

PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 136+59, 30' LT.
 GRATE EL. = 1028.41' (D 56)
 15" (S) = 1024.44'

EX. CATCH BASIN (TBR)
 STA. 136+59.04, 31.15' LT.
 GRATE EL. = 1028.46'
 15" (S) = 1024.44'

CROSS SECTIONS - 11TH STREET SE
 STA. 136+50.00 TO STA. 137+00.00

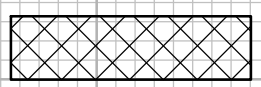

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

101
 302

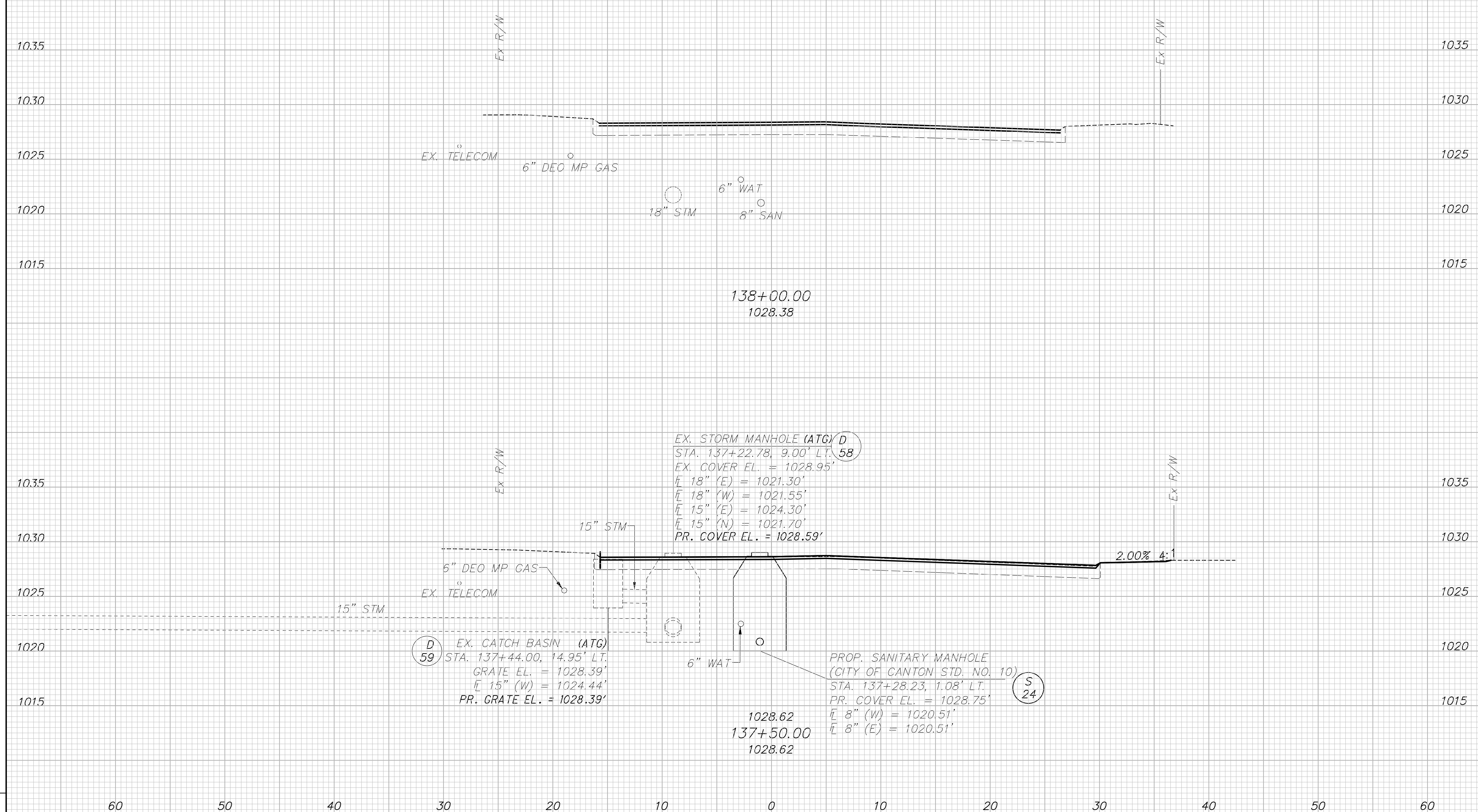
c:\pwworking\aecom_ds20_na_2019\brittney.randall@aecom.com\dms20667\17790_X5001.dwg_04-Nov-22 2:04 PM

SEEDING

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		



CROSS SECTIONS - 11TH STREET SE
 STA. 137+50.00 TO STA. 138+00.00

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

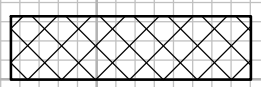
102
 302


c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5001.dwg 04-Nov-22 2:05 PM

SEEDING

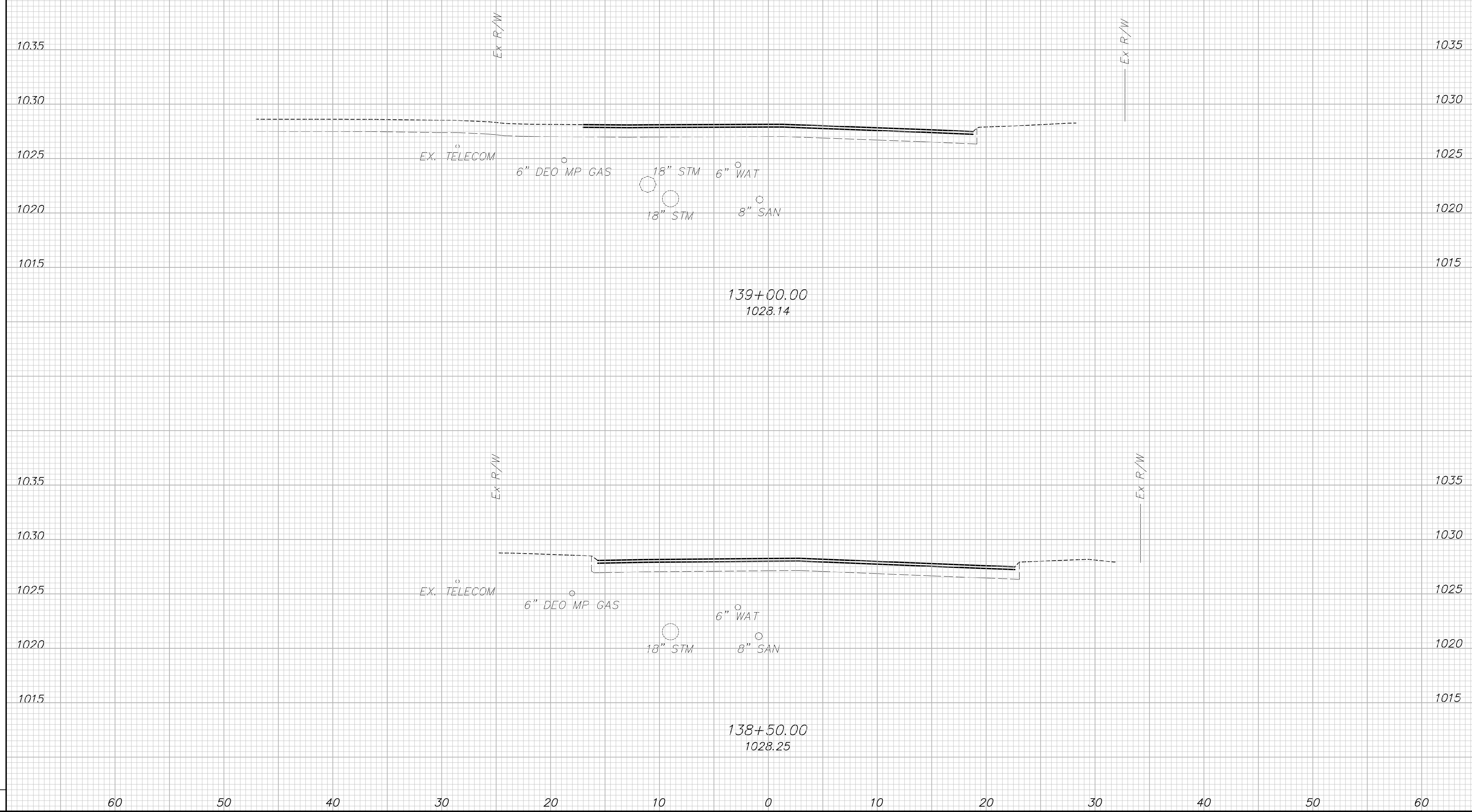
END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



**CROSS SECTIONS - 11TH STREET SE
STA. 138+50.00 TO STA. 139+00.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**



103
302

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5001.dwg_04-Nov-22 2:05 PM

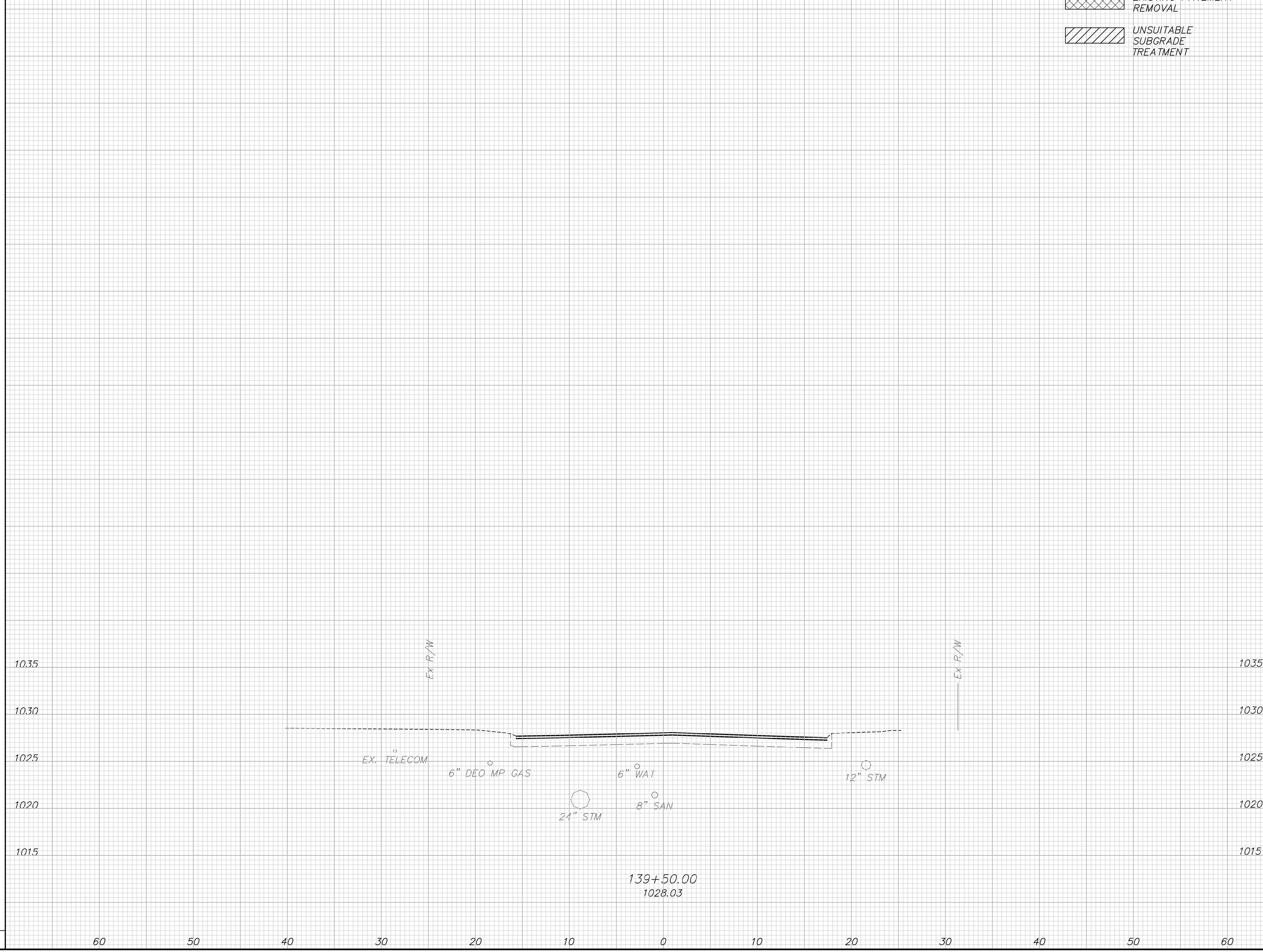
SEEDING

END WIDTH	SO. YDS.

LEGEND

-  EXISTING PAVEMENT REMOVAL
-  UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		

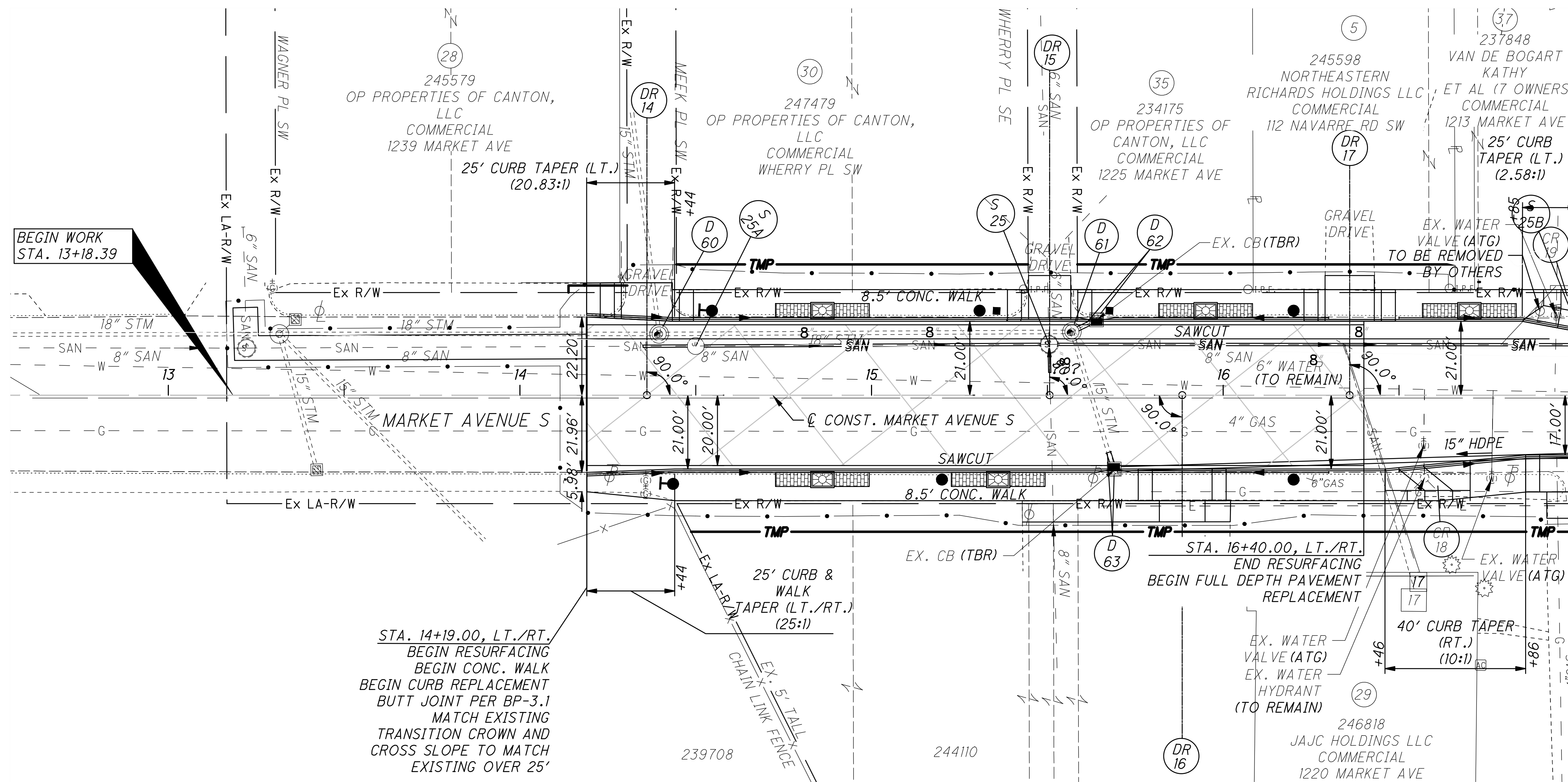


CROSS SECTIONS - 11TH STREET SE
STA. 139+50.00

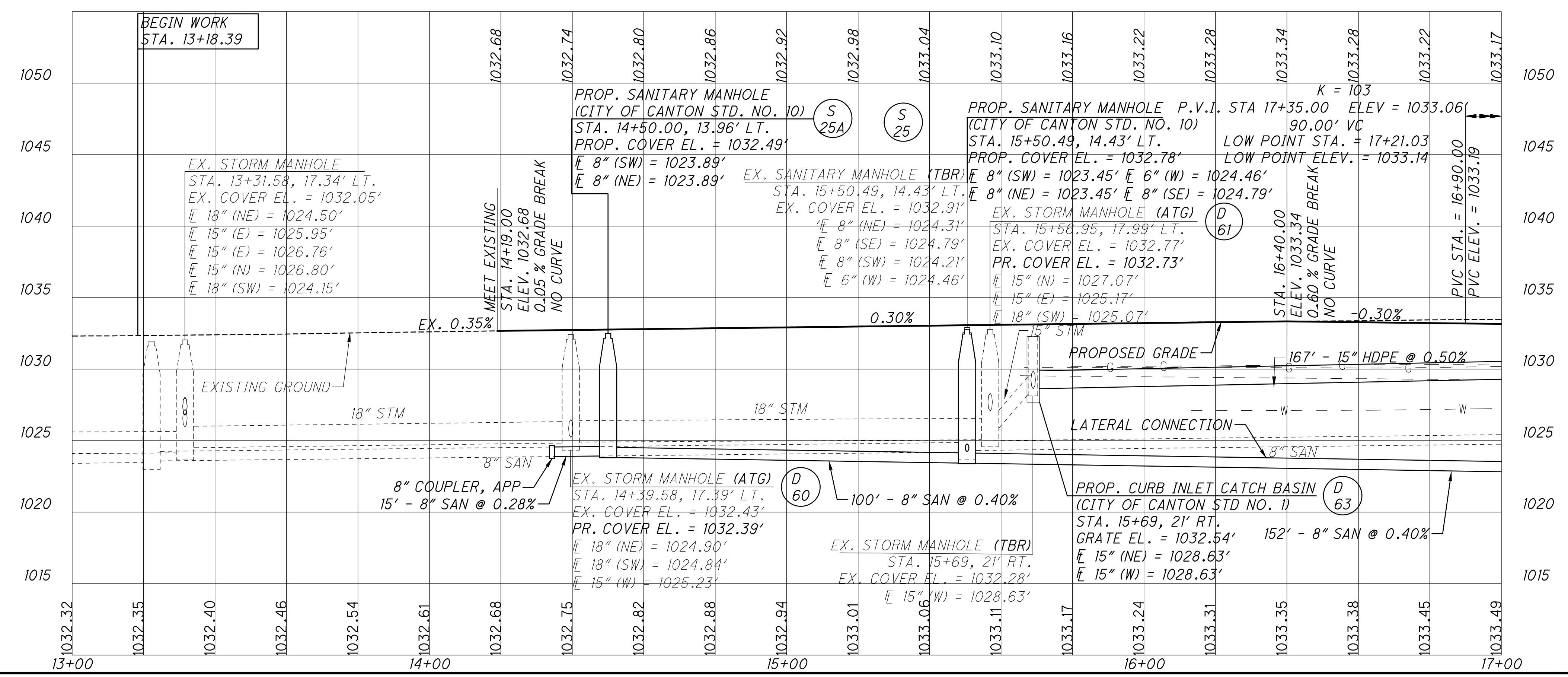
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

104
302

c:\pwworking\acem_ds20_na_2019\brittney.crandall@acem.com\dms20667\17790_GP002.dwg 04-Nov-22 2:06 PM

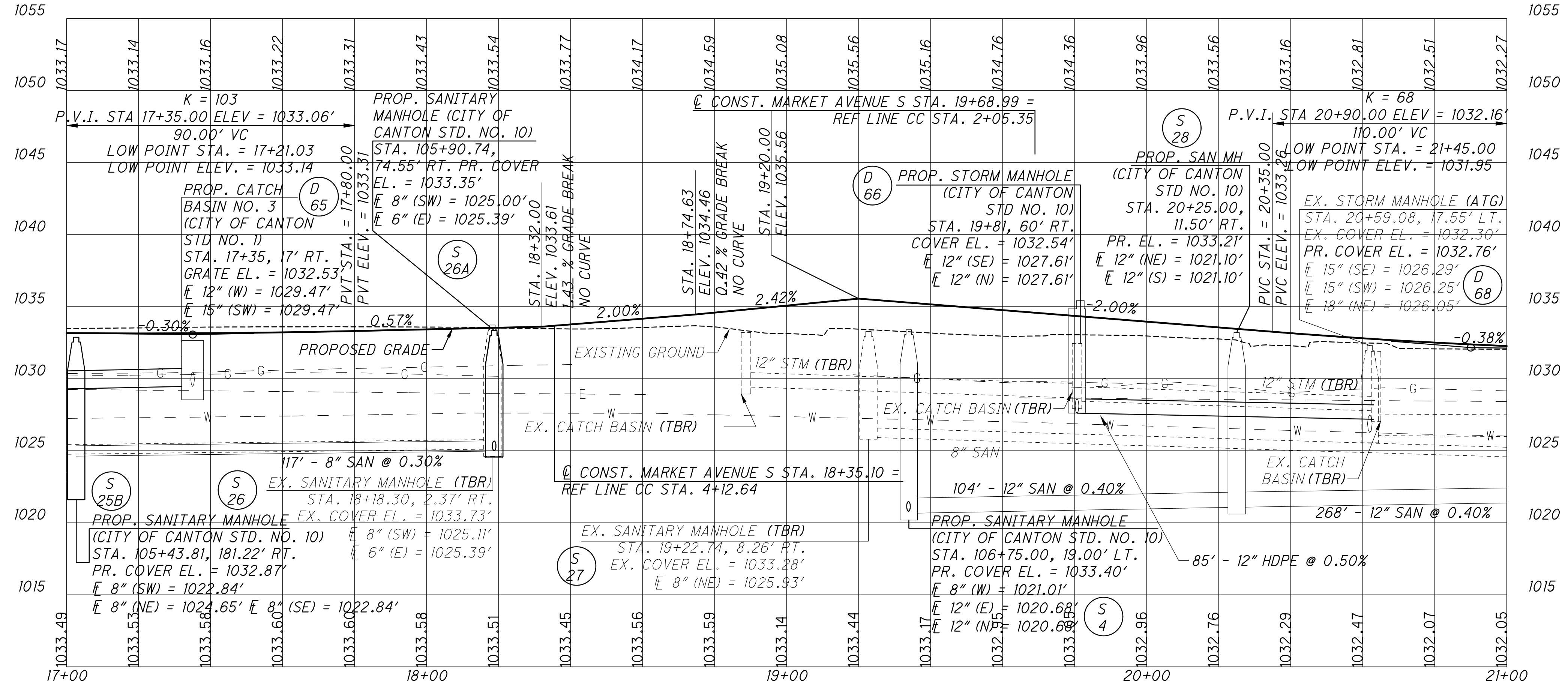


NOTES:
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR MARKET AVENUE S CROSS SECTIONS, SEE SHEETS 109-127.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.
 SANITARY LATERAL CONNECTIONS: 17 - 1220 MARKET AVE S



PLAN AND PROFILE - MARKET AVENUE S BEGINNING TO STA. 17+00.00

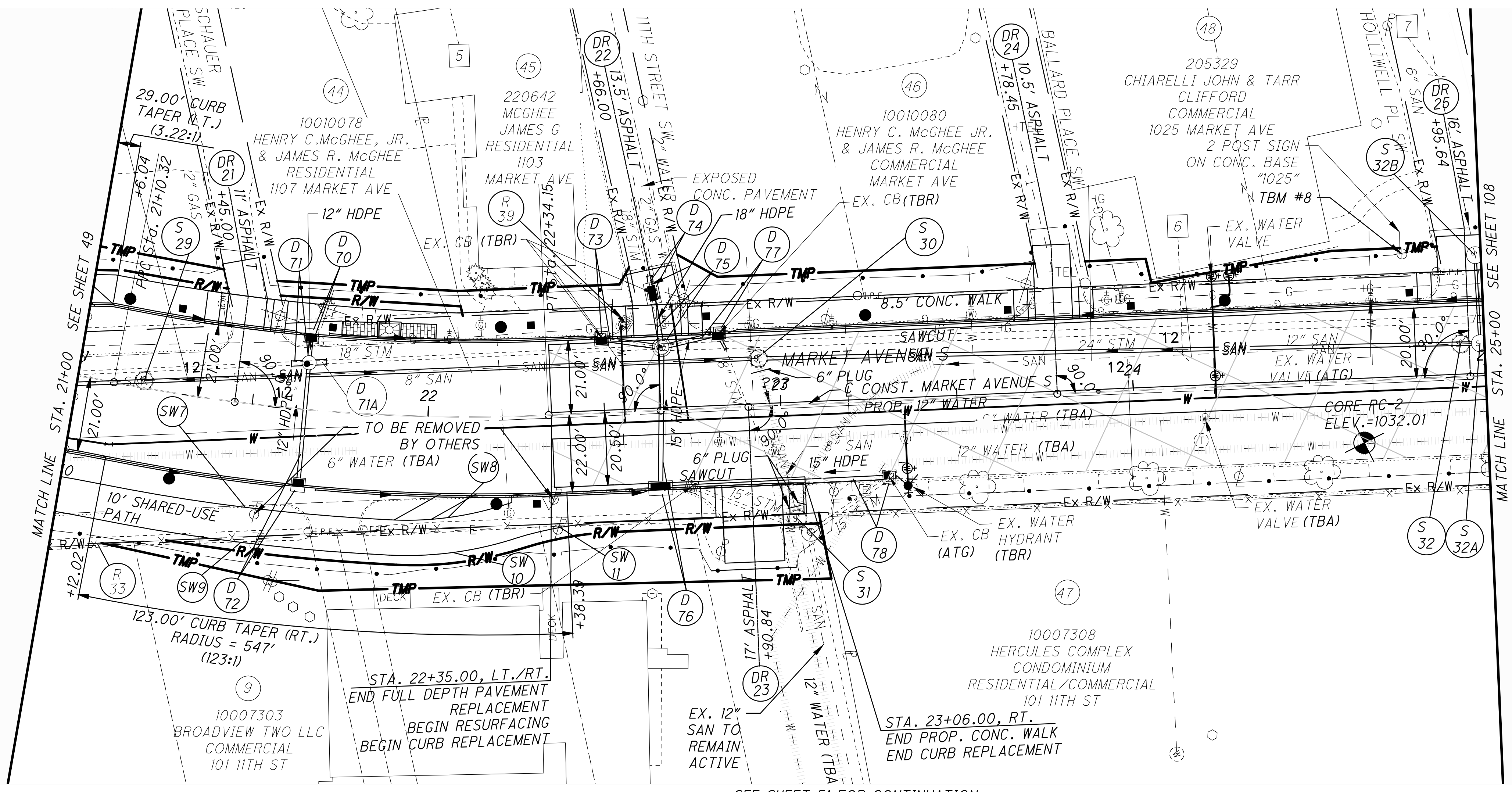
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)



**PROFILE - MARKET AVENUE S
STA. 17+00.00 TO STA. 21+00.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

c:\pwworking\acem_ds20_na_2019\brittney.crandall@acem.com\dms20667\17790_GP002.dwg 04-Nov-22 2:06 PM



BENCHMARK TBM #8
 CHISELED SQUARE ON
 N.E. CORNER OF
 CONCRETE FOUNDATION
 FOR SIGN, 36' W. OF
 MARKET AVENUE, 19' S.
 OF € HALLIWELL PLACE
 SW
 STA. 24+78, 35' LT.
 ELEV. 1032.88

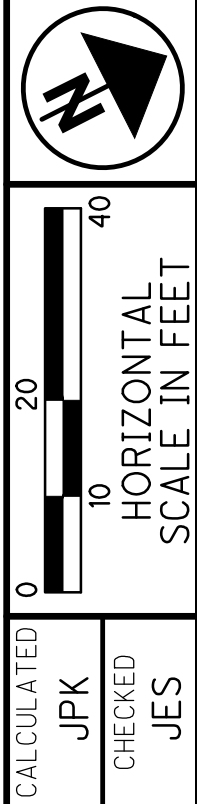
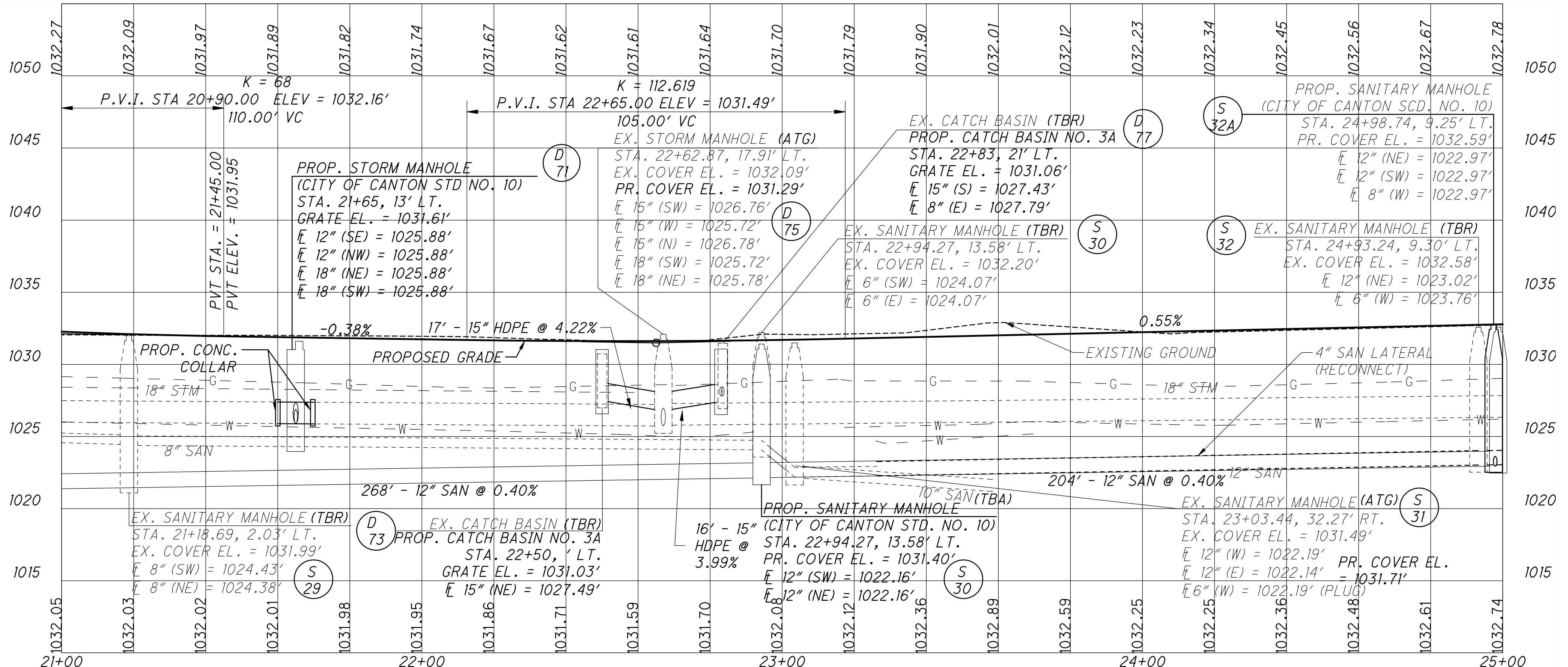
NOTES:
 PAVEMENT DIMENSIONS ARE
 MEASURED TO THE FACE OF CURB.

FOR MARKET AVENUE S CROSS
 SECTIONS, SEE SHEETS 109-127.

FOR PLAN VIEW LEGEND, SEE
 SHEET 24.

SANITARY LATERAL CONNECTIONS:
 5 - 1103 MARKET AVE S*
 6 - 1025 MARKET AVE S
 7 - 925 MARKET AVE S
 * CONNECTED TO COURT AVE SW

SEE SHEET 51 FOR CONTINUATION

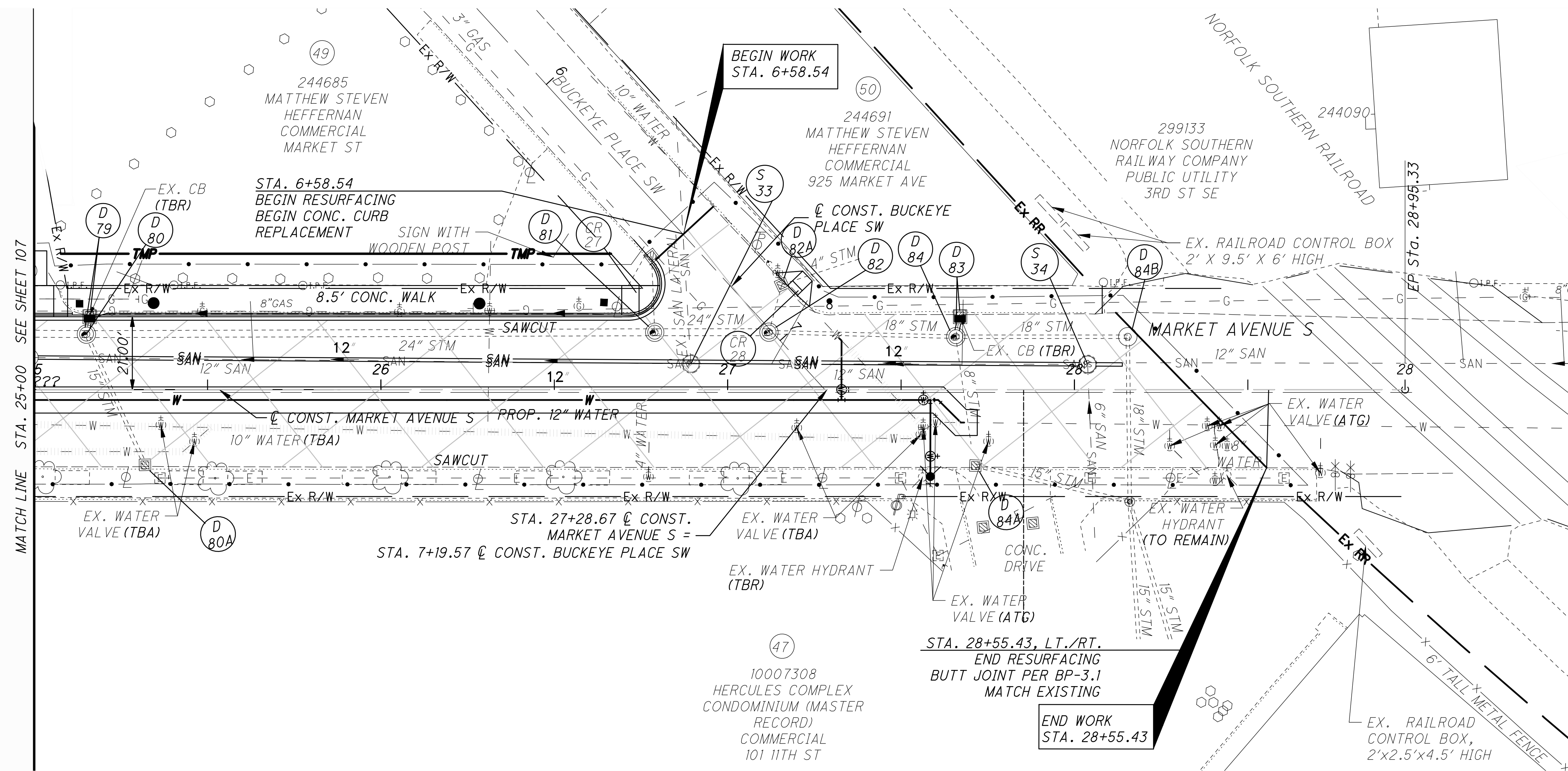


PLAN AND PROFILE - MARKET AVENUE S
STA. 21+00.00 TO STA. 25+00.00

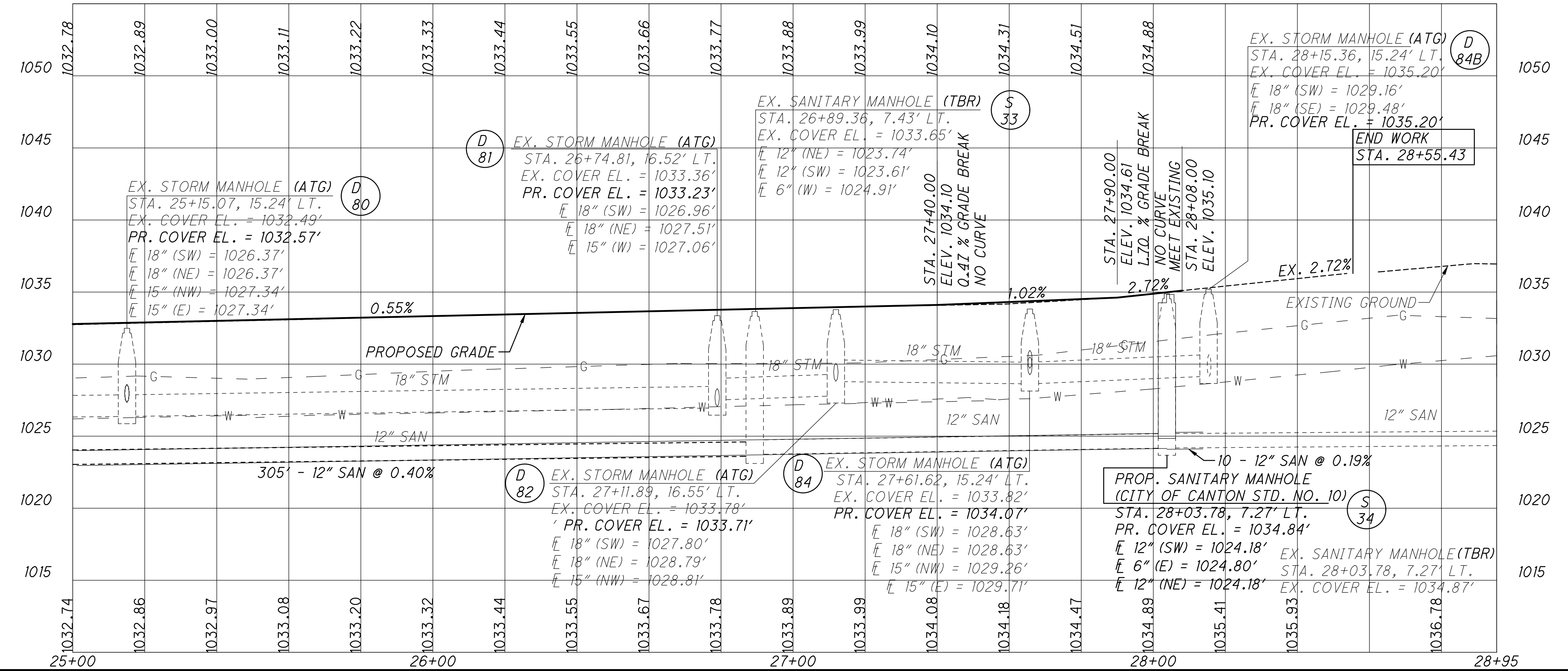
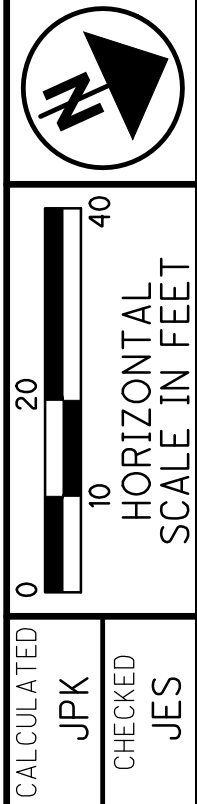
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

107
 302

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NOTES:
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR MARKET AVENUE S CROSS SECTIONS, SEE SHEETS 109-127.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.



**PLAN AND PROFILE - MARKET AVENUE S
 STA. 25+00.00 TO ENDING**


**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**


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SEEDING/
GEOGRID

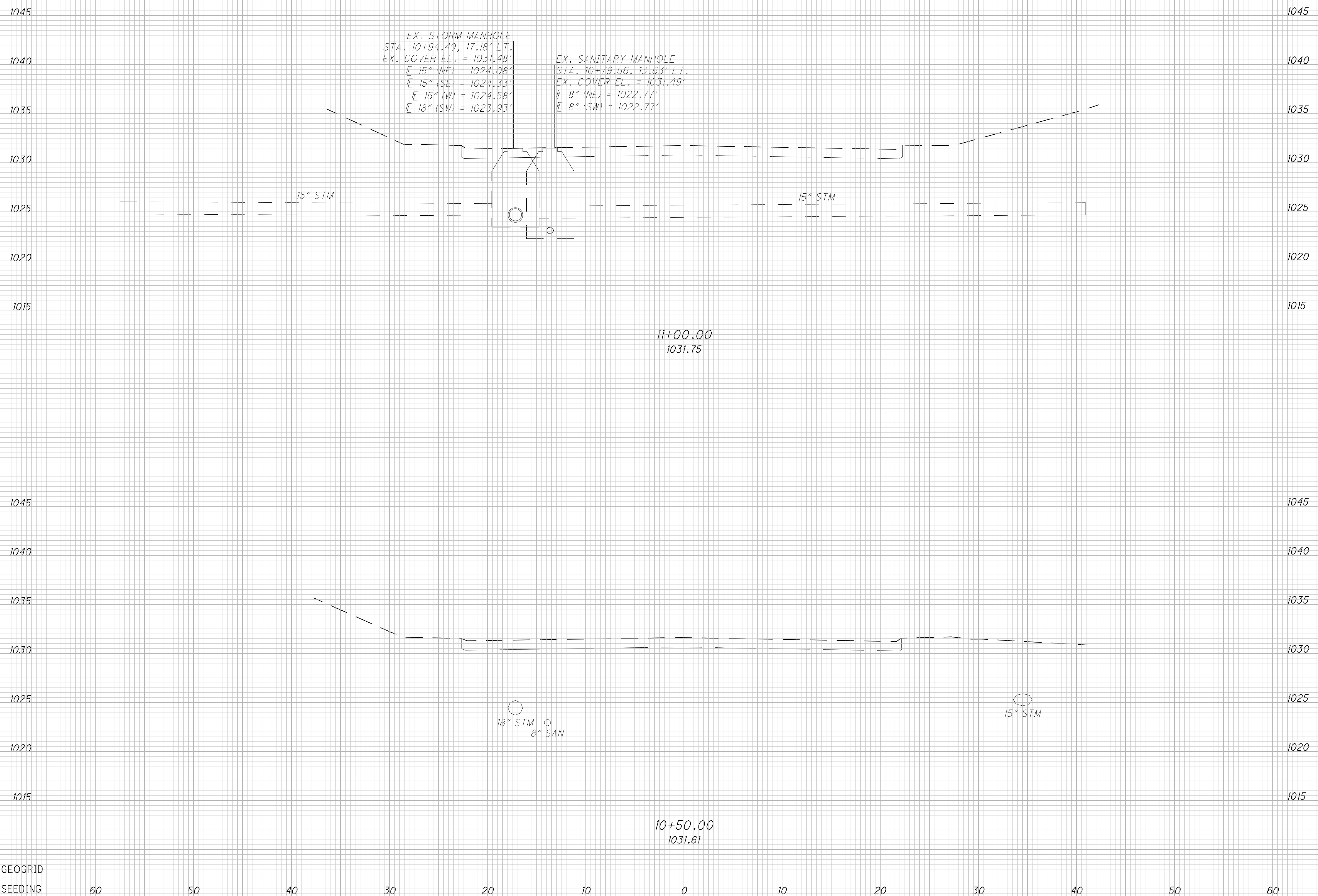
END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



CROSS SECTIONS - MARKET AVENUE S
STA. 10+50.00 TO STA. 11+00.00



STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

109
302

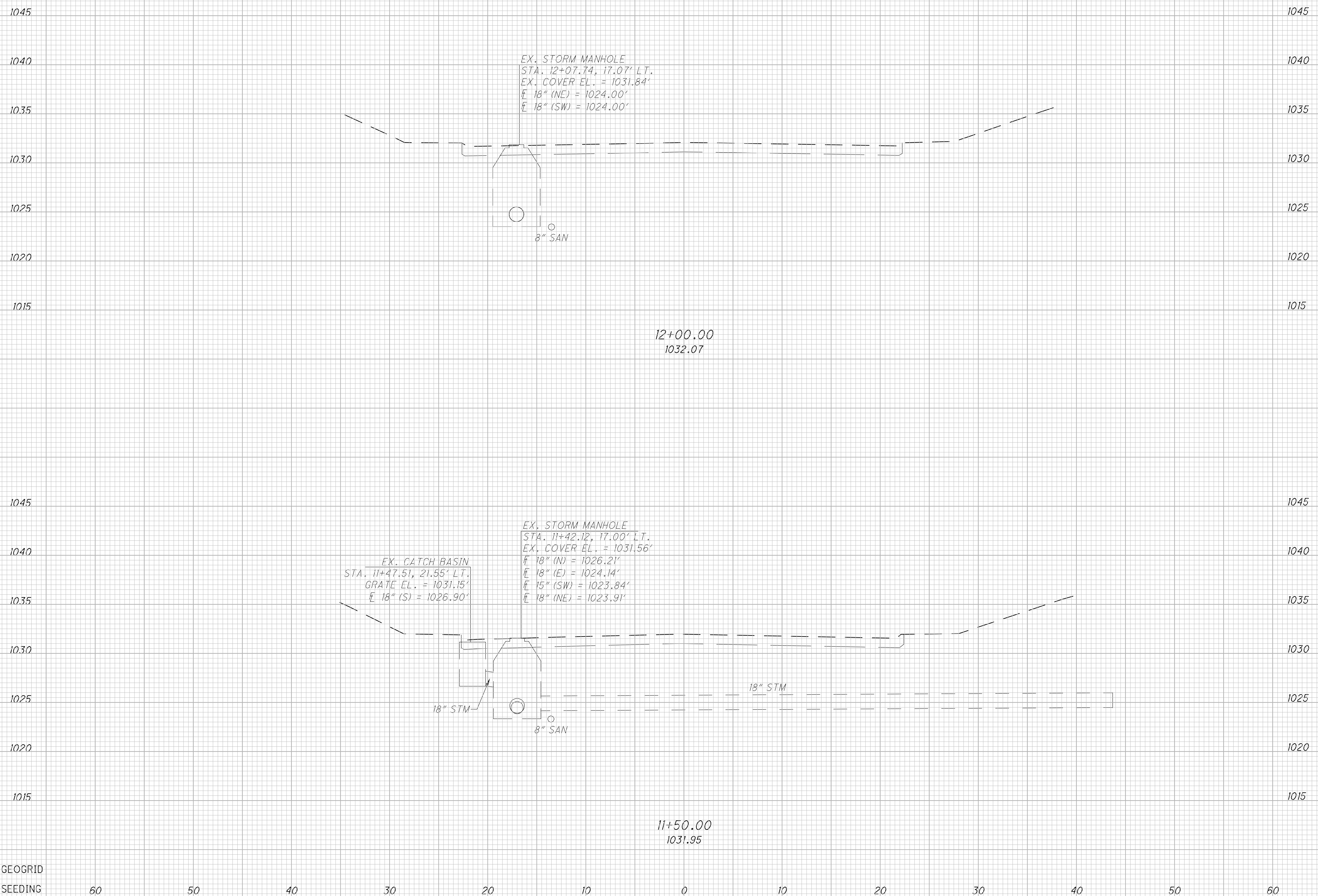
c:\pwworking\ocom_ds20_na_2019\brittney.crandall@ocom.com\dms20667\17790_X5002.dwg 04-Nov-22 2:08 PM

SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		



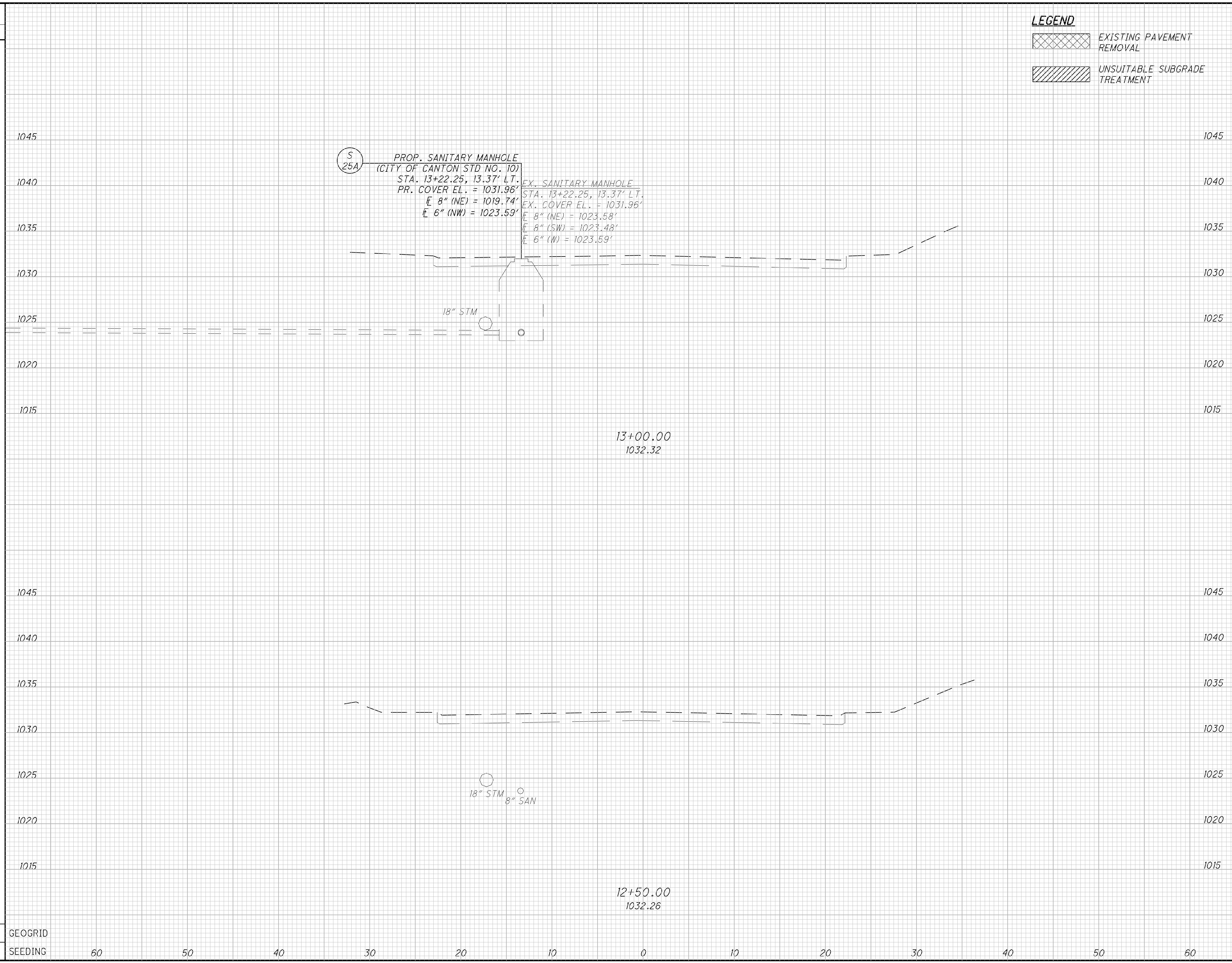
**CROSS SECTIONS - MARKET AVENUE S
 STA. 11+50.00 TO STA. 12+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	



END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)



**CROSS SECTIONS - MARKET AVENUE S
STA. 12+50.00 TO STA. 13+00.00**

111
302

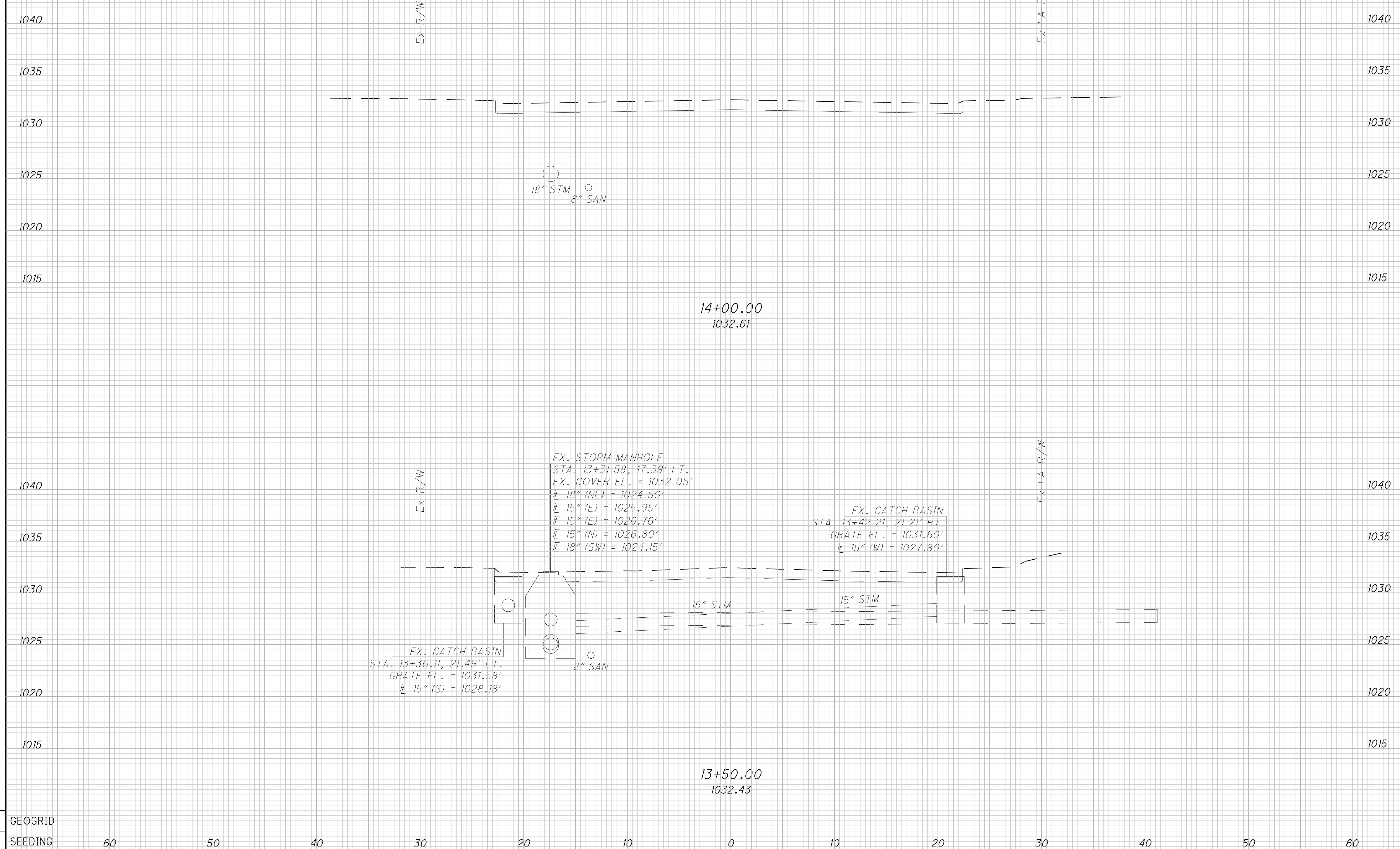
c:\pwworking\ocom_ds20_na_2019\brittney.crandall@ocom.com\dms20667\17790_X5002.dwg 04-Nov-22 2:08 PM

SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		





CROSS SECTIONS - MARKET AVENUE S
STA. 13+50.00 TO STA. 14+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

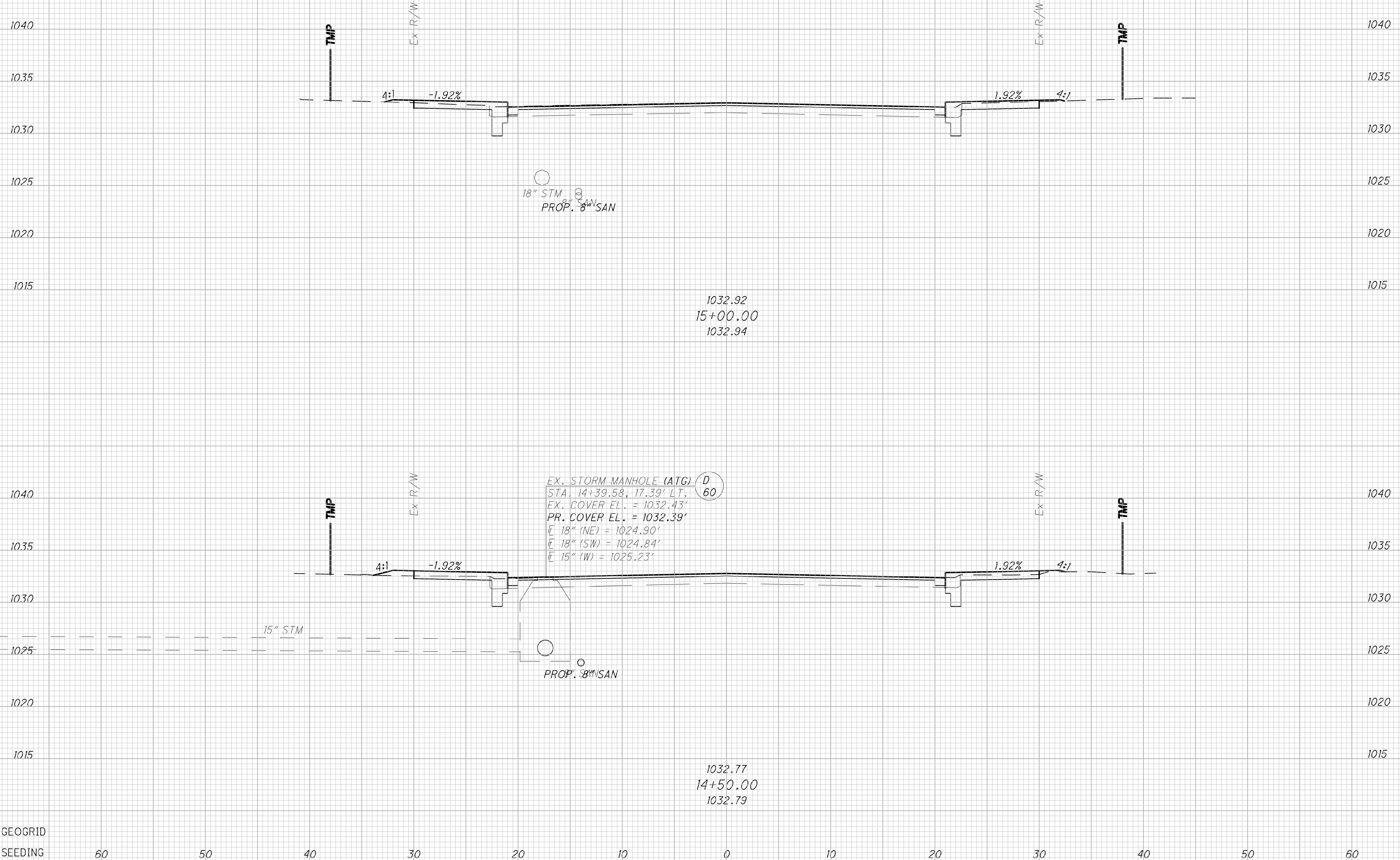
c:\pwworking\ocom_ds20_na_2019\brittney.crandall@ocom.com\dms20667\17790_X5002.dwg 04-Nov-22 2:08 PM

SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		





**CROSS SECTIONS - MARKET AVENUE S
 STA. 14+50.00 TO STA. 15+00.00**

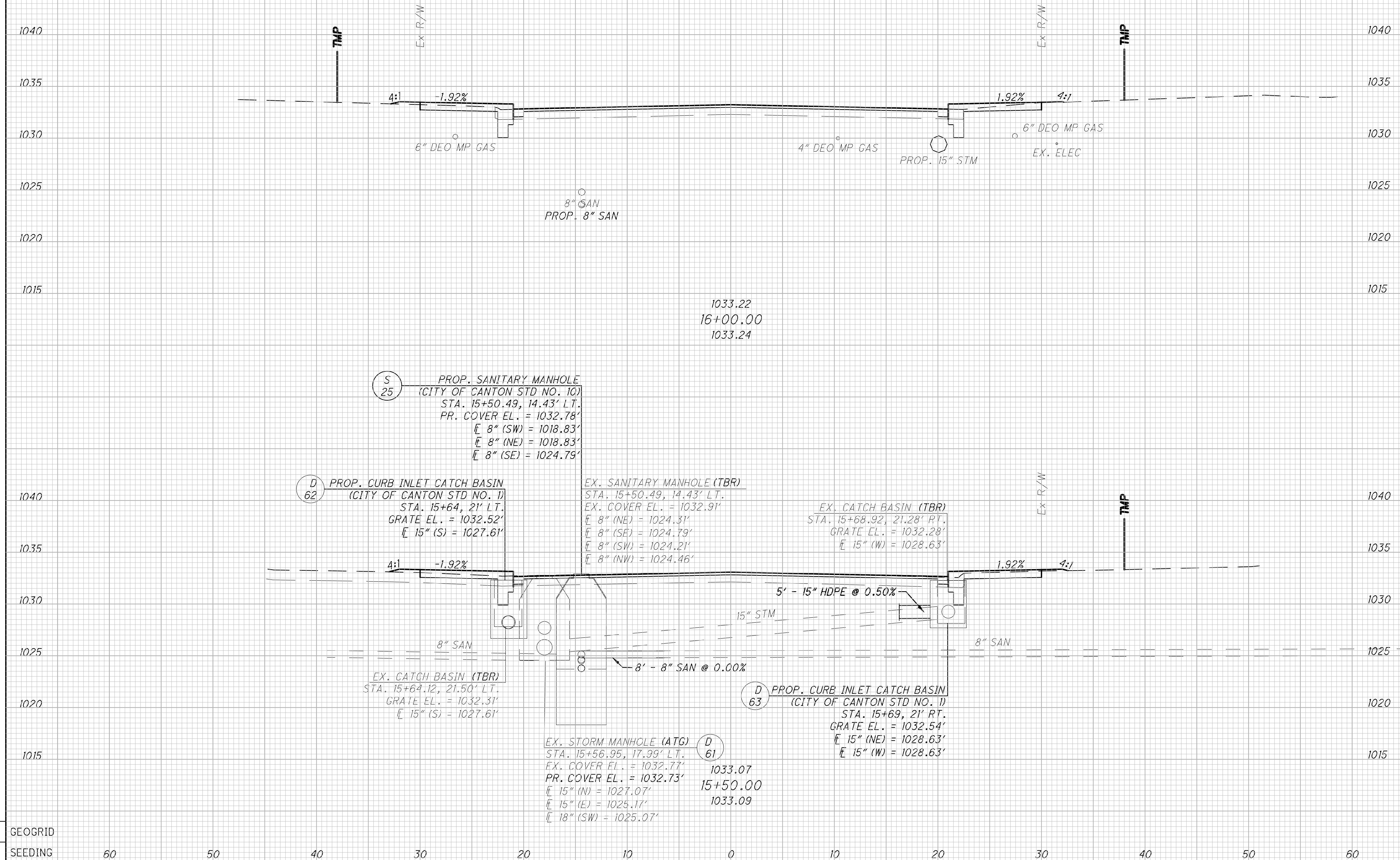
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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SEEDING/
GEOGRID
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
REMOVAL
 UNSUITABLE SUBGRADE
TREATMENT



END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		



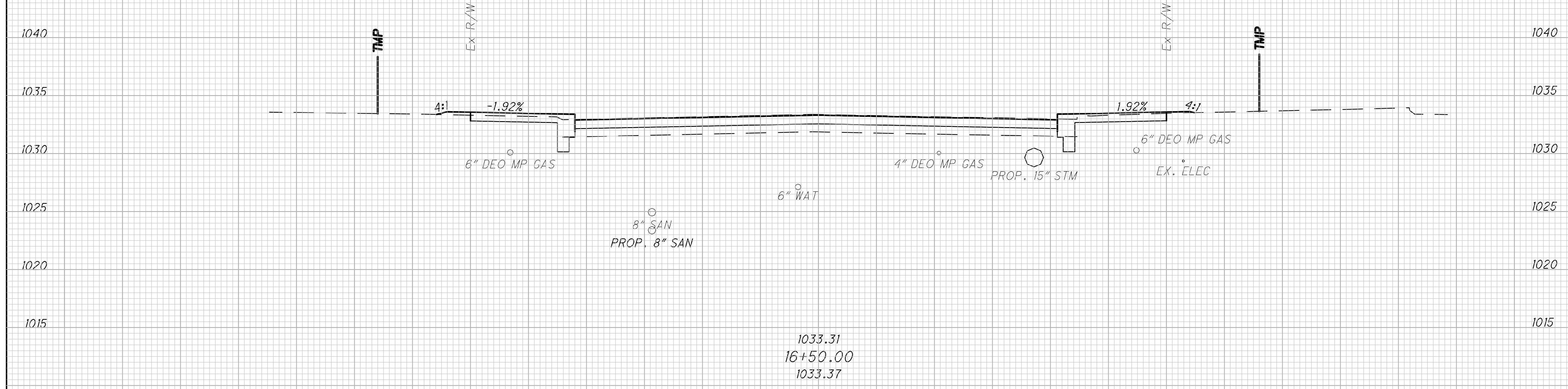
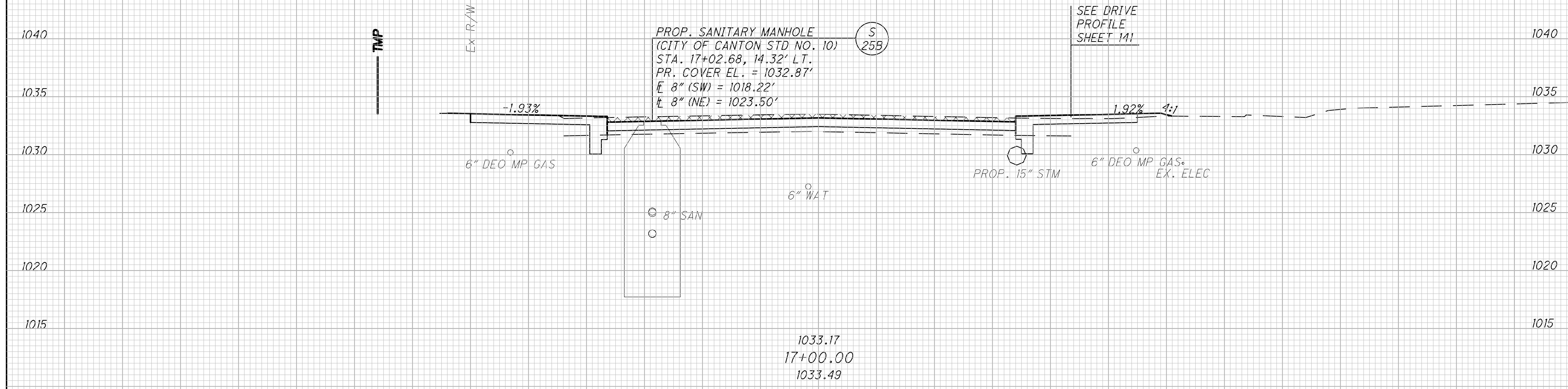
**CROSS SECTIONS - MARKET AVENUE S
STA. 15+50.00 TO STA. 16+00.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

SEEDING/
GEOGRID
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
REMOVAL
 UNSUITABLE SUBGRADE
TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



SEEDING	60	50	40	30	20	10	0	10	20	30	40	50	60
GEOGRID													

CROSS SECTIONS - MARKET AVENUE S
STA. 16+50.00 TO STA. 17+00.00



STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

115
302

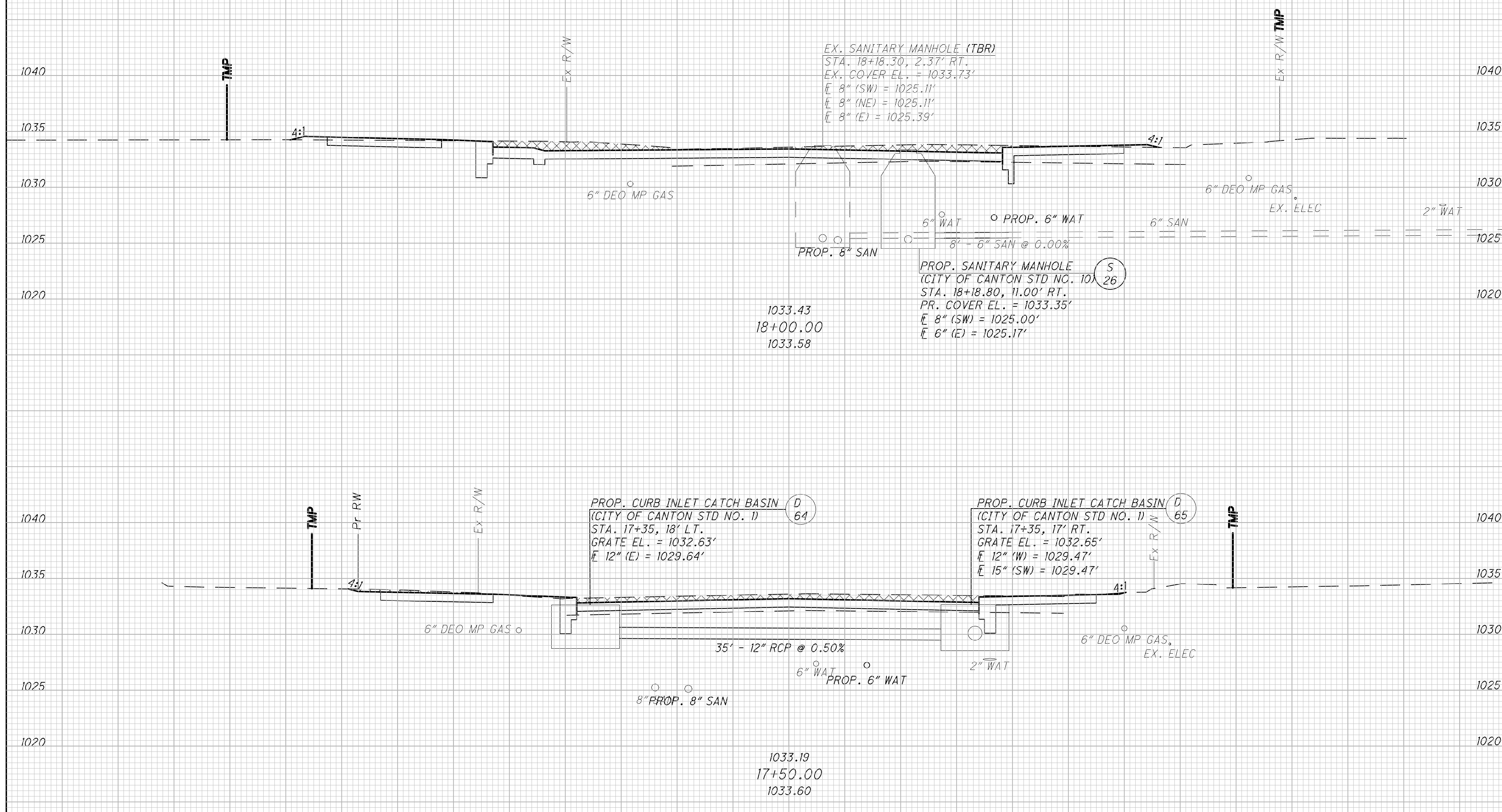
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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



CROSS SECTIONS - MARKET AVENUE S
STA. 17+50.00 TO STA. 18+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)


116
302

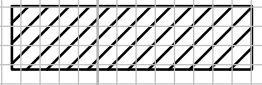
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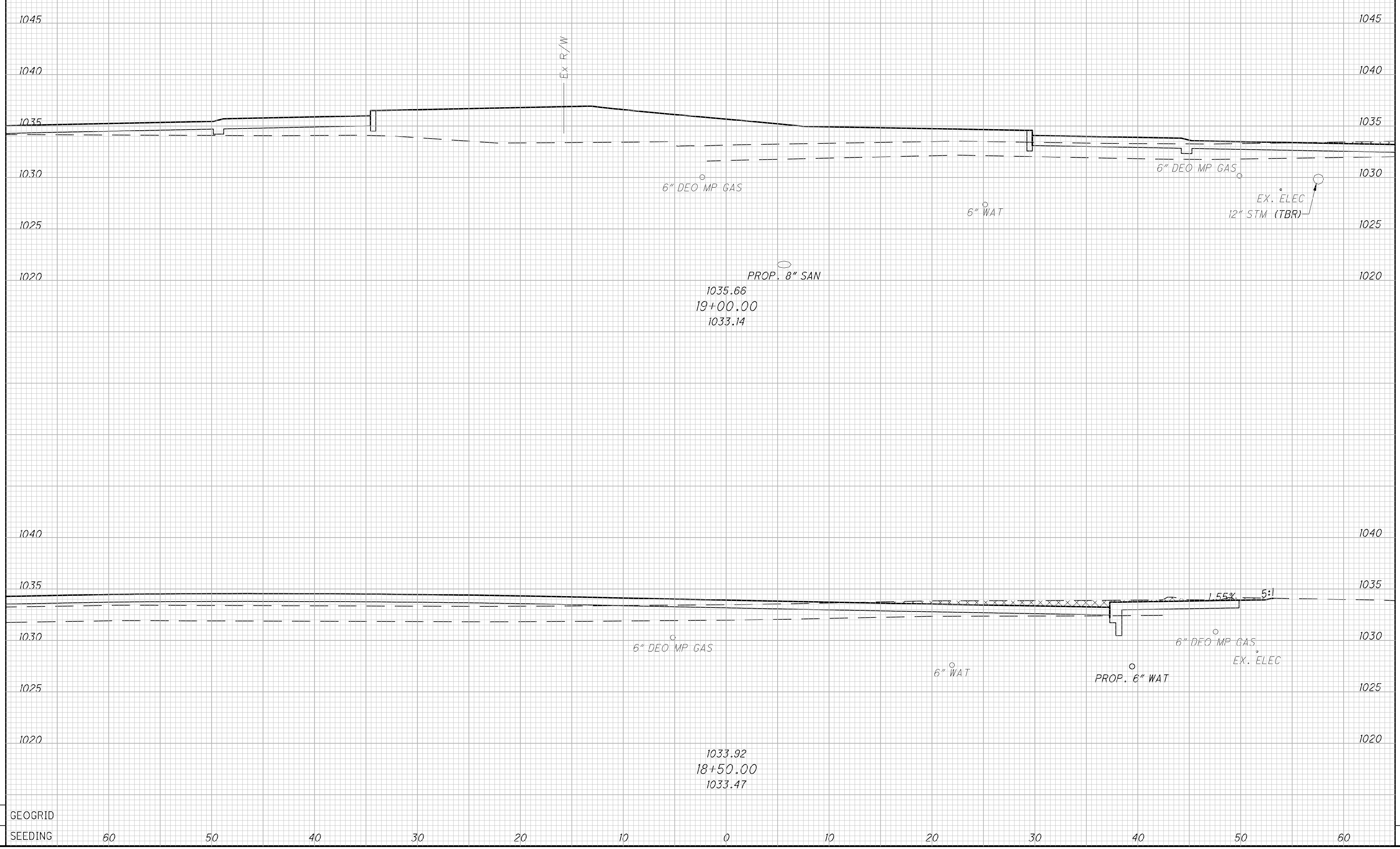
SEEDING/ GEOGRID	END WIDTH	SO. YDS.
GEOGRID	60	
SEEDING	50	

LEGEND

 EXISTING PAVEMENT
REMOVAL

 UNSUITABLE SUBGRADE
TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES





CROSS SECTIONS - MARKET AVENUE S
STA. 18+50.00 TO STA. 19+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

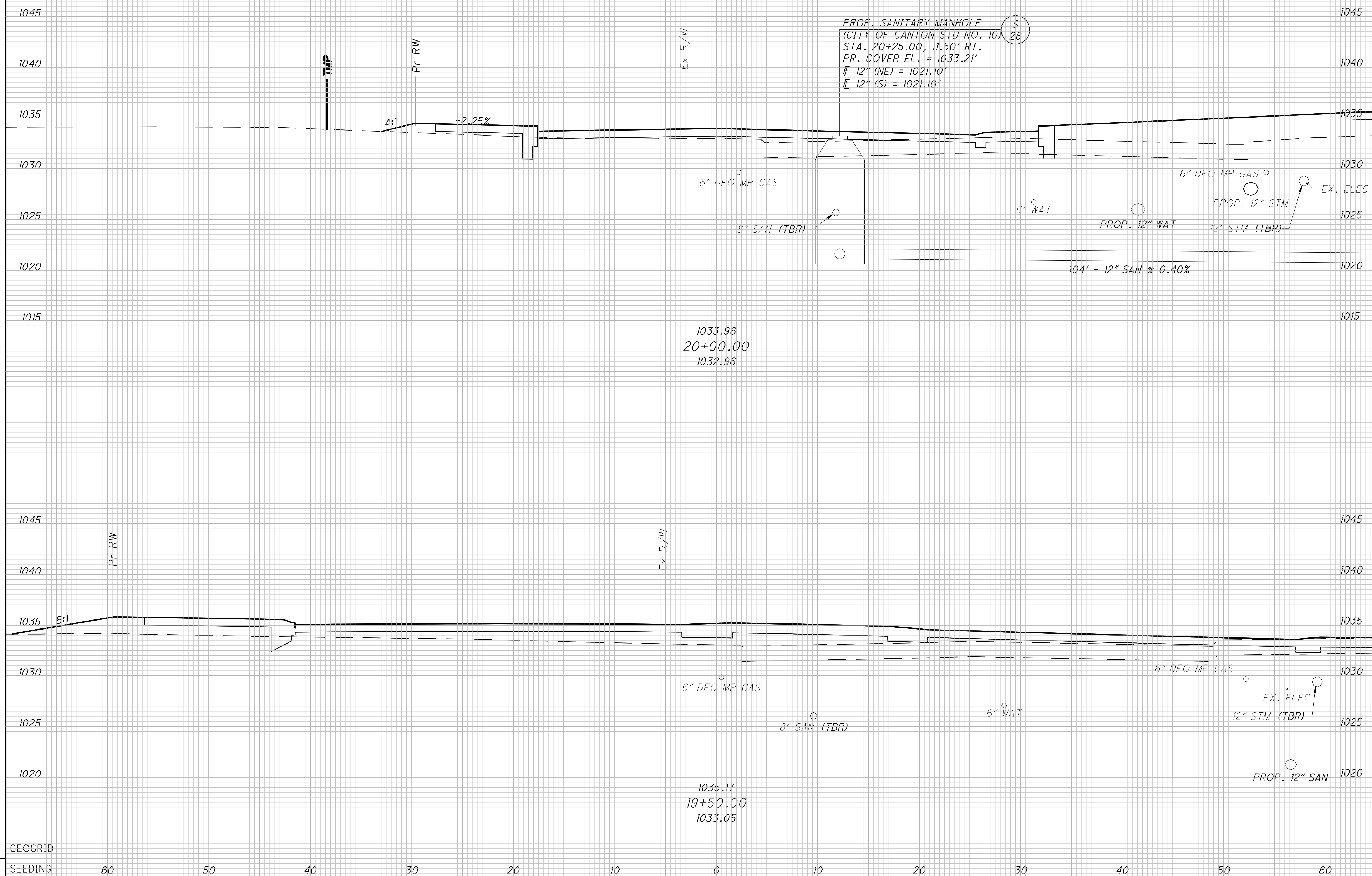
117
302

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SEEDING/
GEOGRID
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
REMOVAL
 UNSUITABLE SUBGRADE
TREATMENT

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		





CROSS SECTIONS - MARKET AVENUE S
 STA. 19+50.00 TO STA. 20+00.00

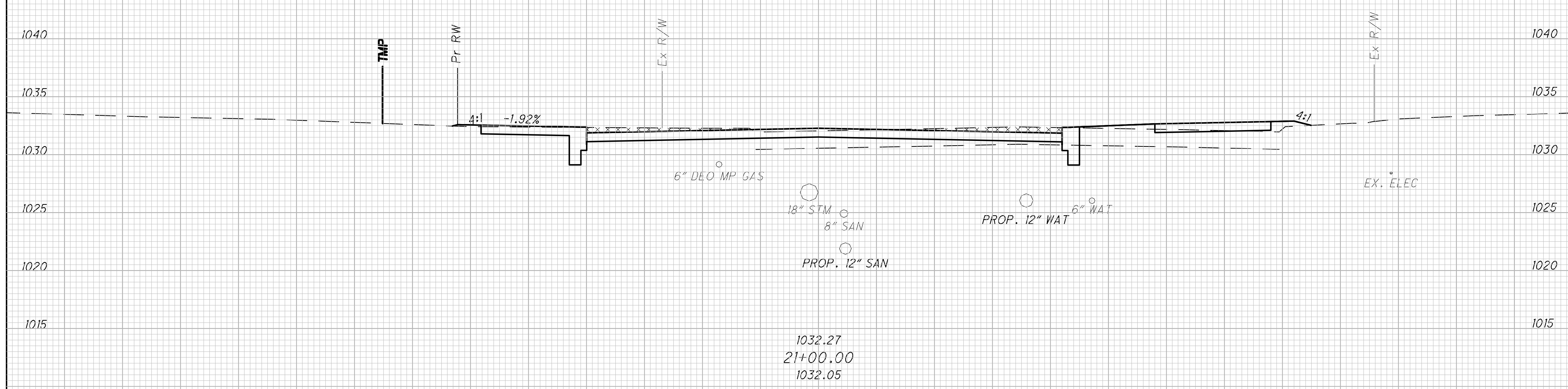
STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

118
302

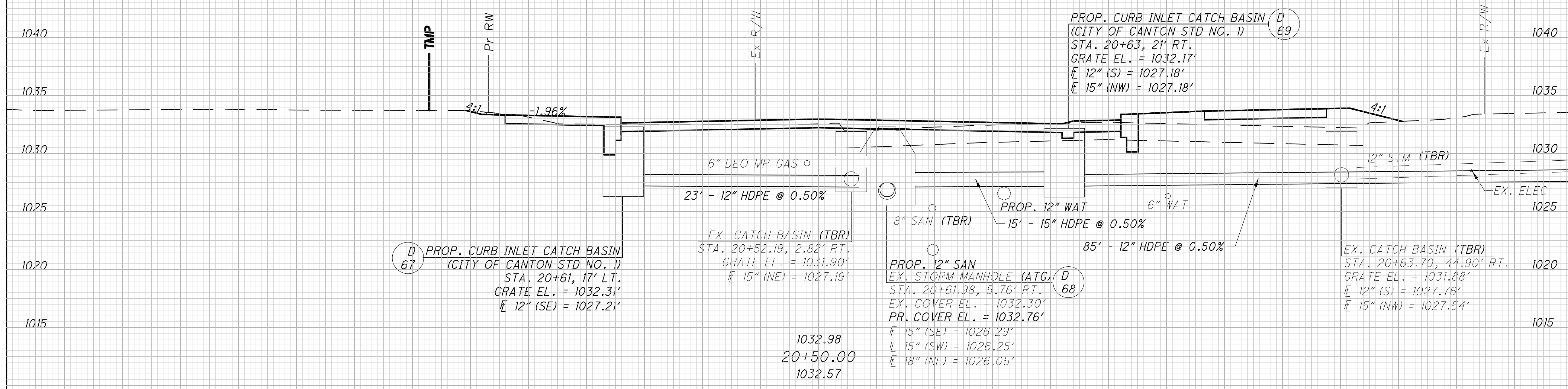
SEEDING/
GEOGRID
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
REMOVAL
 UNSUITABLE SUBGRADE
TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



1032.27
21+00.00
1032.05



D 67 PROP. CURB INLET CATCH BASIN
(CITY OF CANTON STD NO. 1)
STA. 20+61, 17' LT.
GRATE EL. = 1032.31'
E 12" (SE) = 1027.21'

EX. CATCH BASIN (TBR)
STA. 20+52.19, 2.82' RT.
GRATE EL. = 1031.90'
E 15" (NE) = 1027.19'

PROP. 12" SAN
EX. STORM MANHOLE (ATG) **D 68**
STA. 20+61.98, 5.76' RT.
EX. COVER EL. = 1032.30'
PR. COVER EL. = 1032.76'
E 15" (SE) = 1026.29'
E 15" (SW) = 1026.25'
E 18" (NE) = 1026.05'

PROP. CURB INLET CATCH BASIN **D 69**
(CITY OF CANTON STD NO. 1)
STA. 20+63, 21' RT.
GRATE EL. = 1032.17'
E 12" (S) = 1027.18'
E 15" (NW) = 1027.18'

EX. CATCH BASIN (TBR)
STA. 20+63.70, 44.90' RT.
GRATE EL. = 1031.88'
E 12" (S) = 1027.76'
E 15" (NW) = 1027.54'

1032.98
20+50.00
1032.57

SEEDING	GEOGRID	60	50	40	30	20	10	0	10	20	30	40	50	60

**CROSS SECTIONS - MARKET AVENUE S
STA. 20+50.00 TO STA. 21+00.00**


**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**


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SEEDING/
GEOGRID
END SO.
WIDTH YDS.

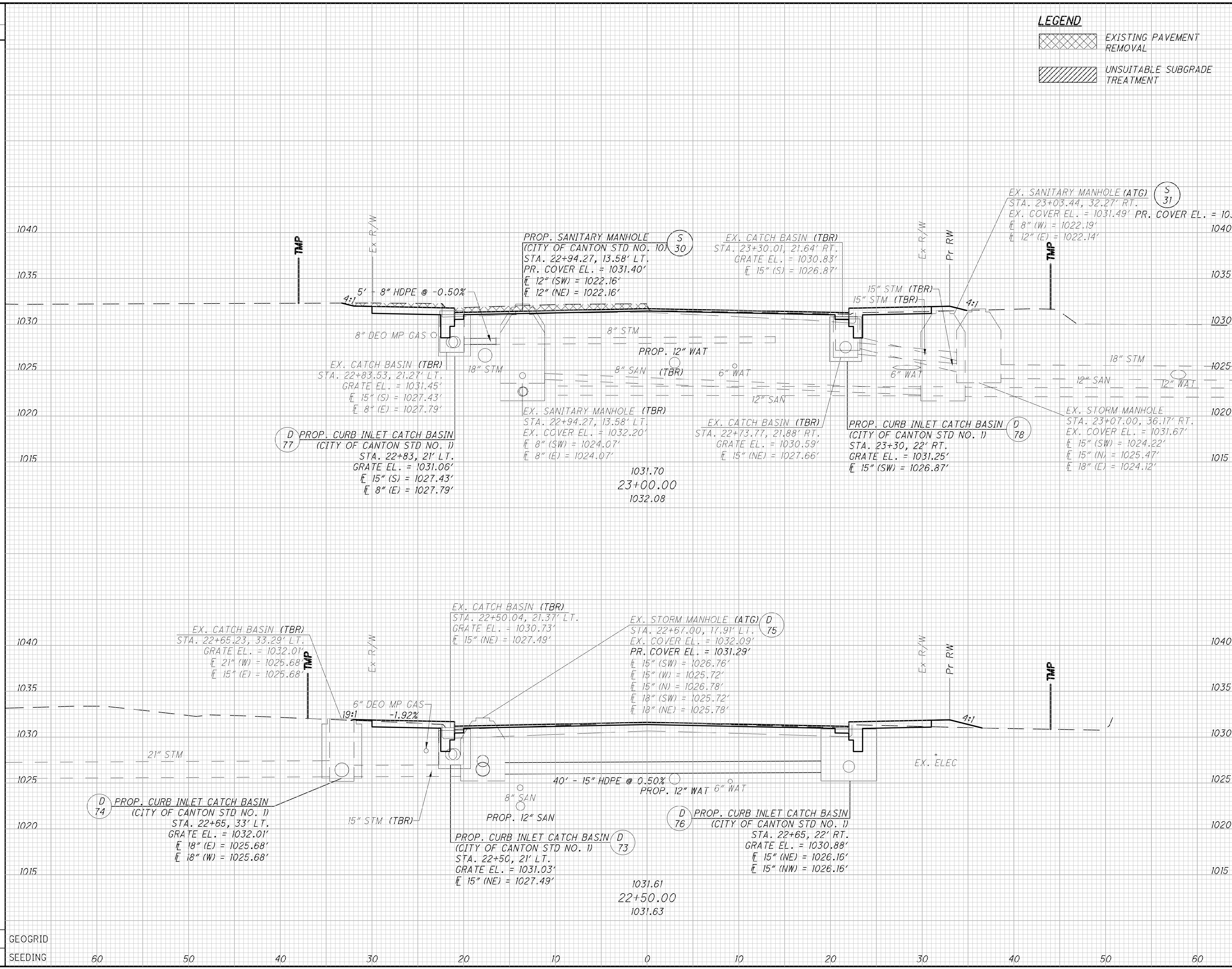
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LEGEND

 EXISTING PAVEMENT
REMOVAL

 UNSUITABLE SUBGRADE
TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



GEOGRID
SEEDING 60 50 40 30 20 10 0 10 20 30 40 50 60



**CROSS SECTIONS - MARKET AVENUE S
STA. 22+50.00 TO STA. 23+00.00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

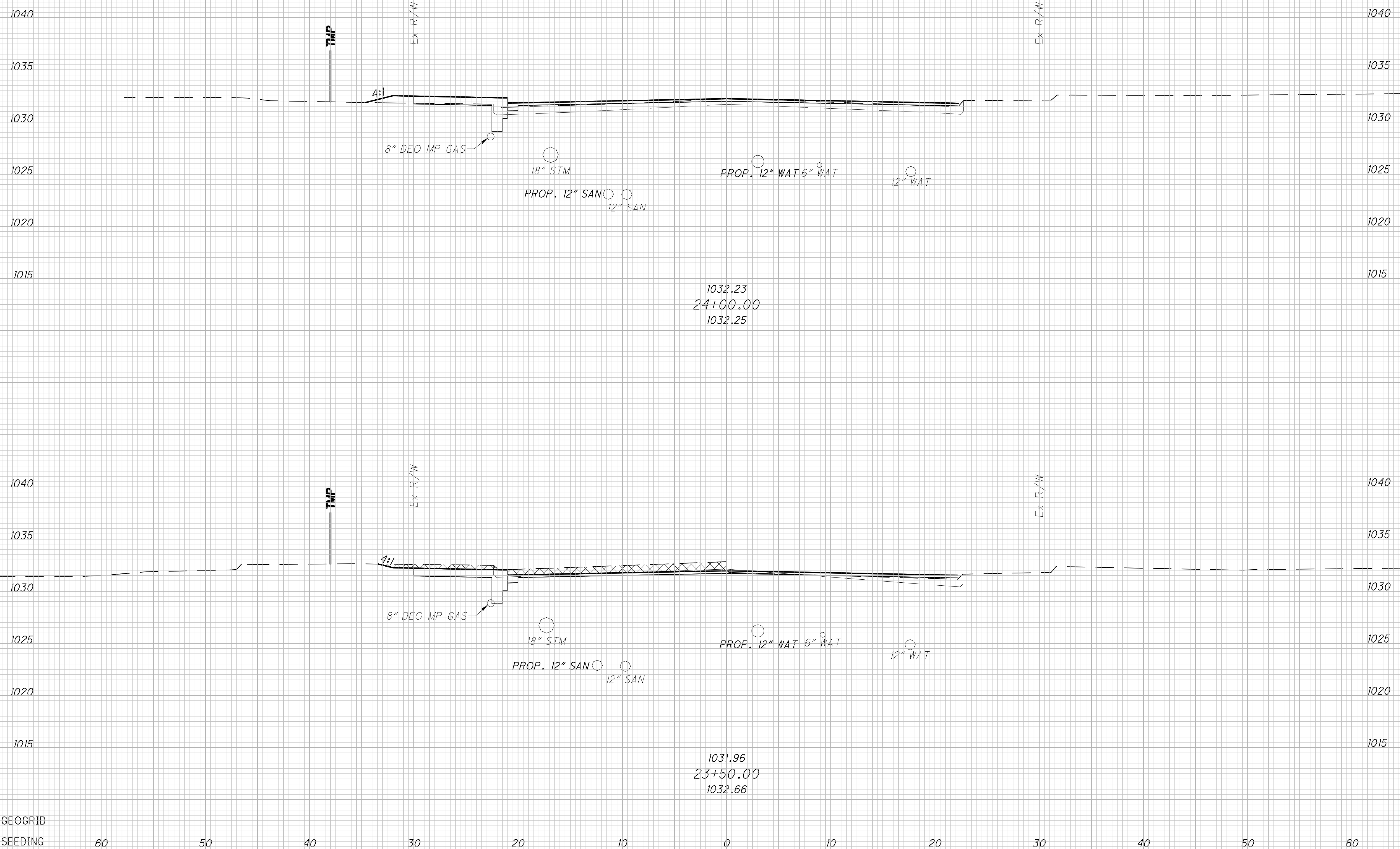
121
302

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SEEDING/
GEOGRID
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
REMOVAL
 UNSUITABLE SUBGRADE
TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



GEOGRID
SEEDING

60 50 40 30 20 10 0 10 20 30 40 50 60



CROSS SECTIONS - MARKET AVENUE S
STA. 23+50.00 TO STA. 24+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

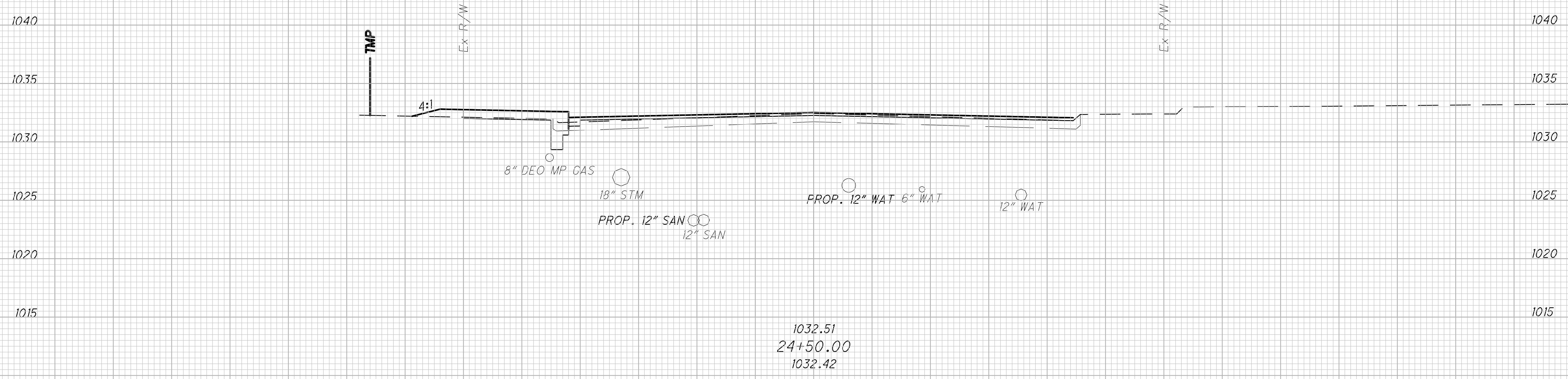
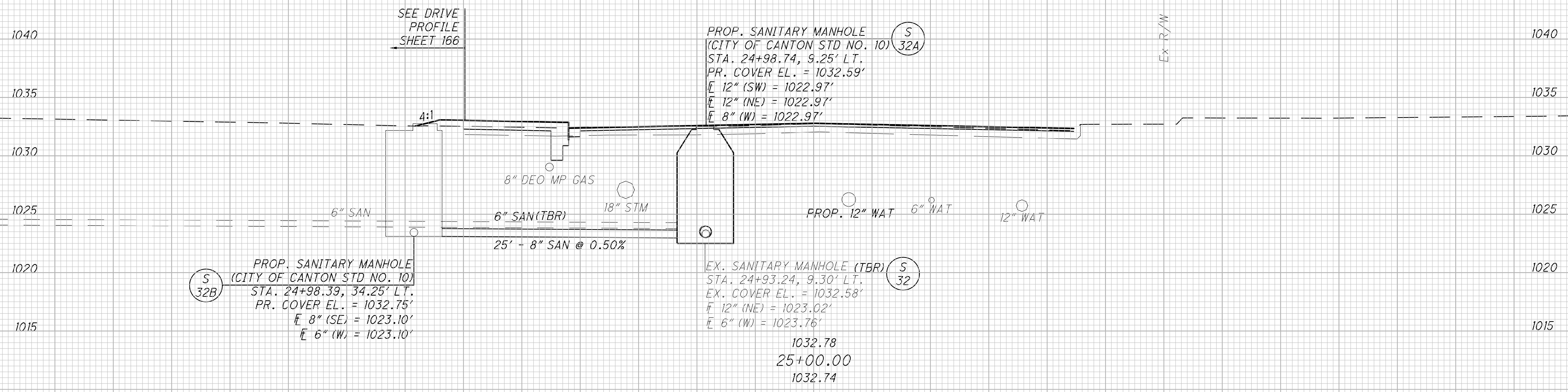
122
302

SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



SEEDING	GEOGRID

**CROSS SECTIONS - MARKET AVENUE S
 STA. 24+50.00 TO STA. 25+00.00**



**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

123
302

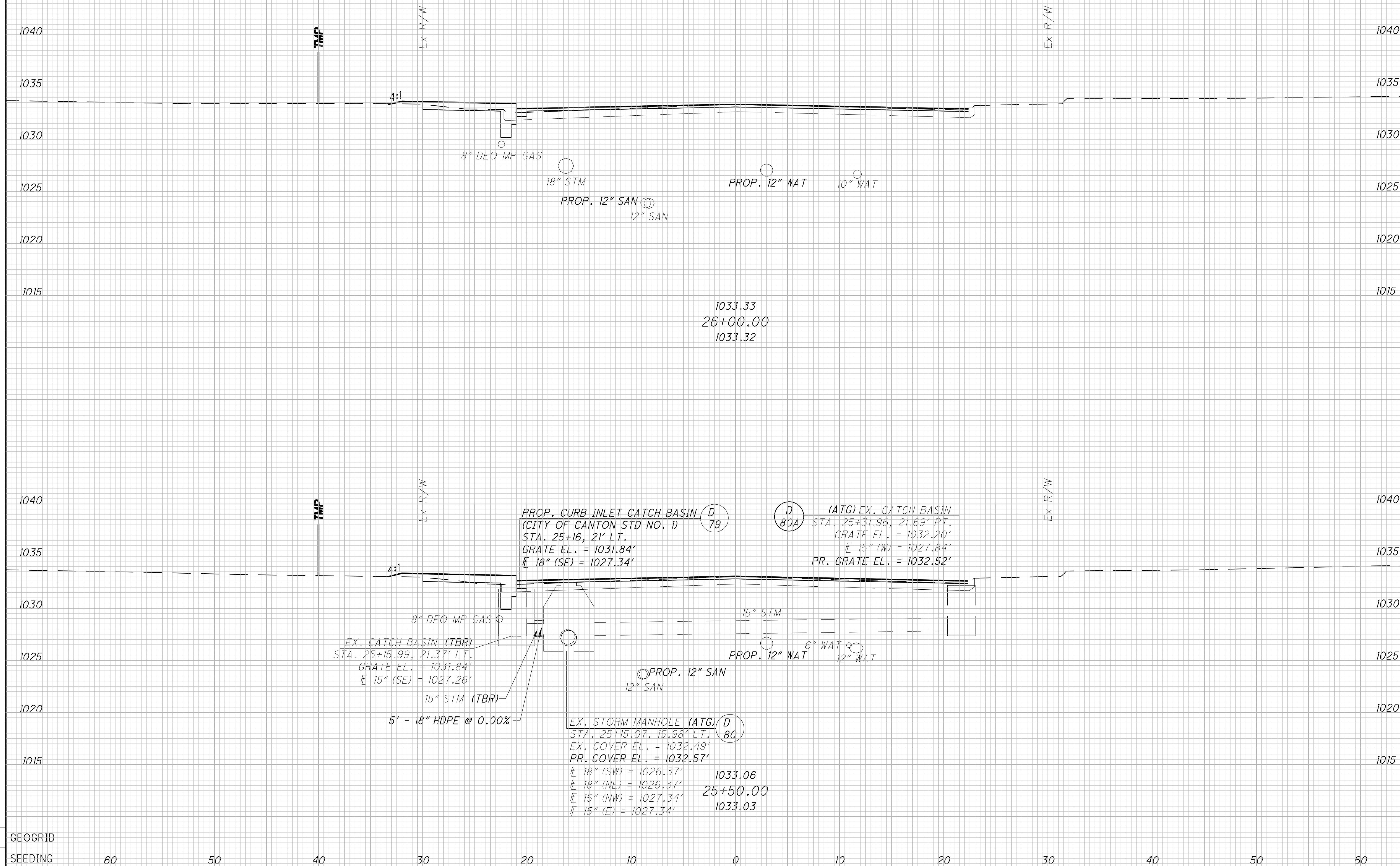
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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		




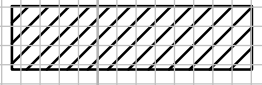
CROSS SECTIONS - MARKET AVENUE S
STA. 25+50.00 TO STA. 26+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

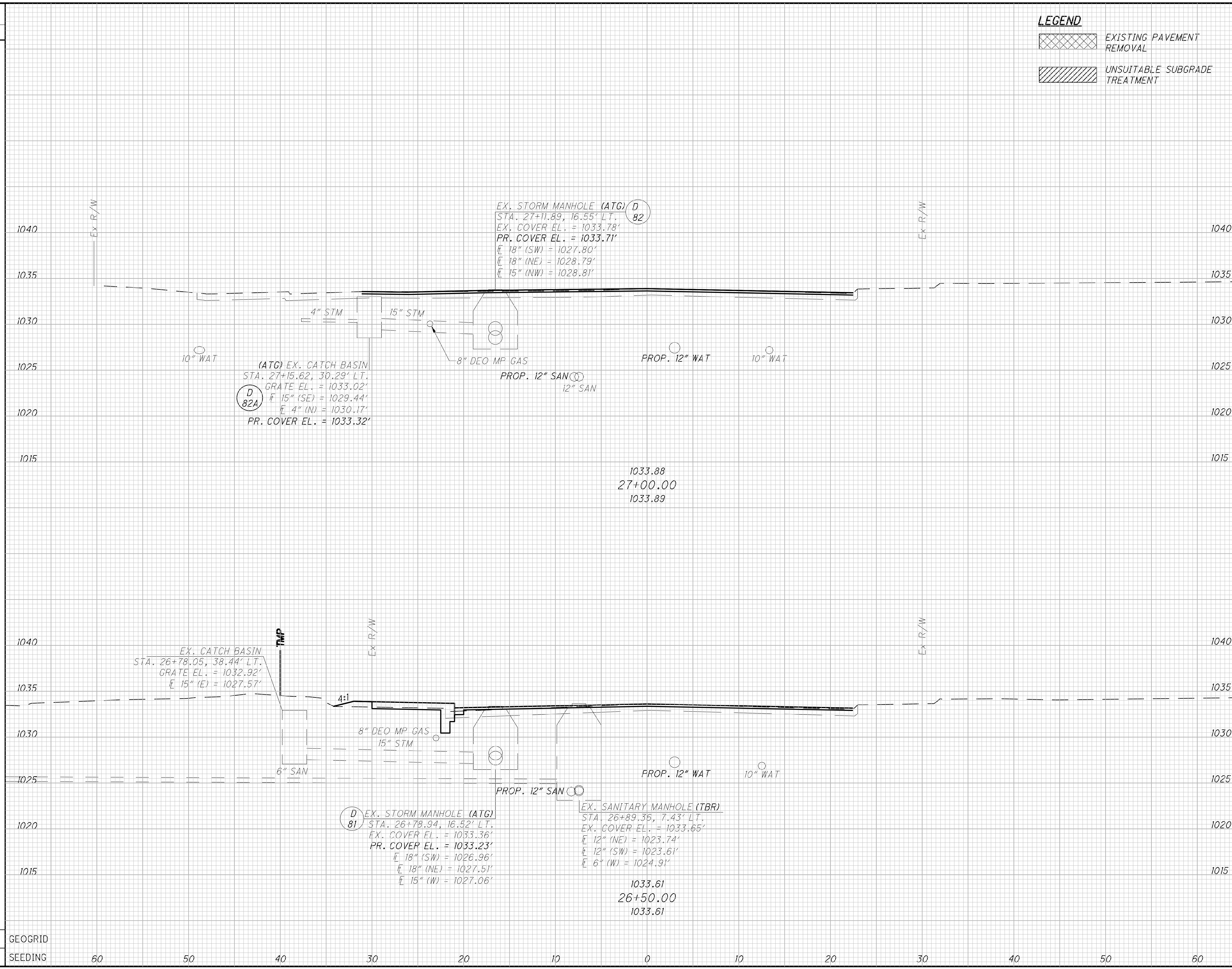
124
302

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SEEDING/
GEOGRID
END SO.
WIDTH YDS.

LEGEND
 EXISTING PAVEMENT
REMOVAL
 UNSUITABLE SUBGRADE
TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



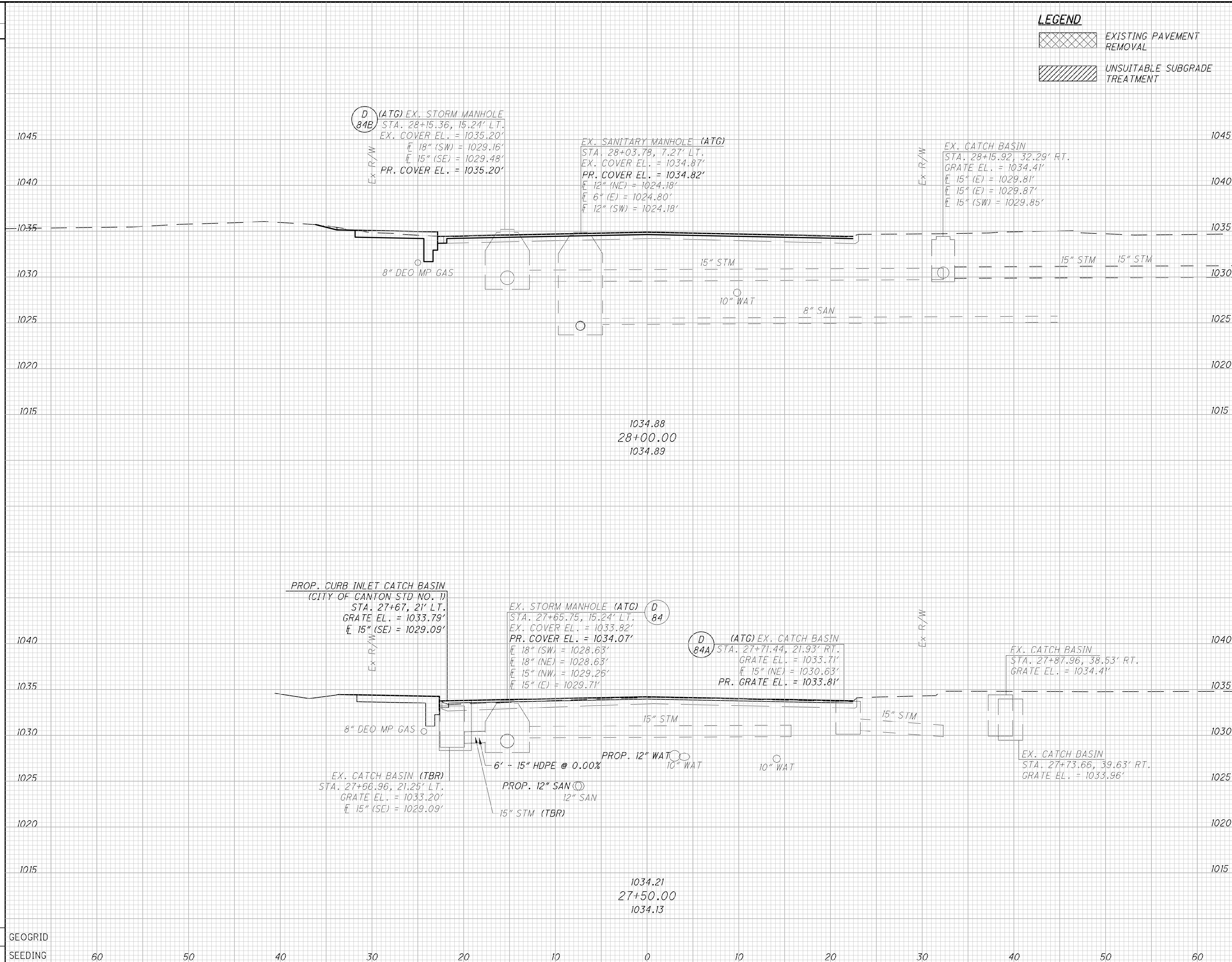
CROSS SECTIONS - MARKET AVENUE S
STA. 26+50.00 TO STA. 27+00.00
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)
 125
 302

GEOGRID 60 50 40 30 20 10 0 10 20 30 40 50 60
 SEEDING

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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	



LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES

CROSS SECTIONS - MARKET AVENUE S
STA. 27+50.00 TO STA. 28+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)


126
302


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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND

 EXISTING PAVEMENT REMOVAL

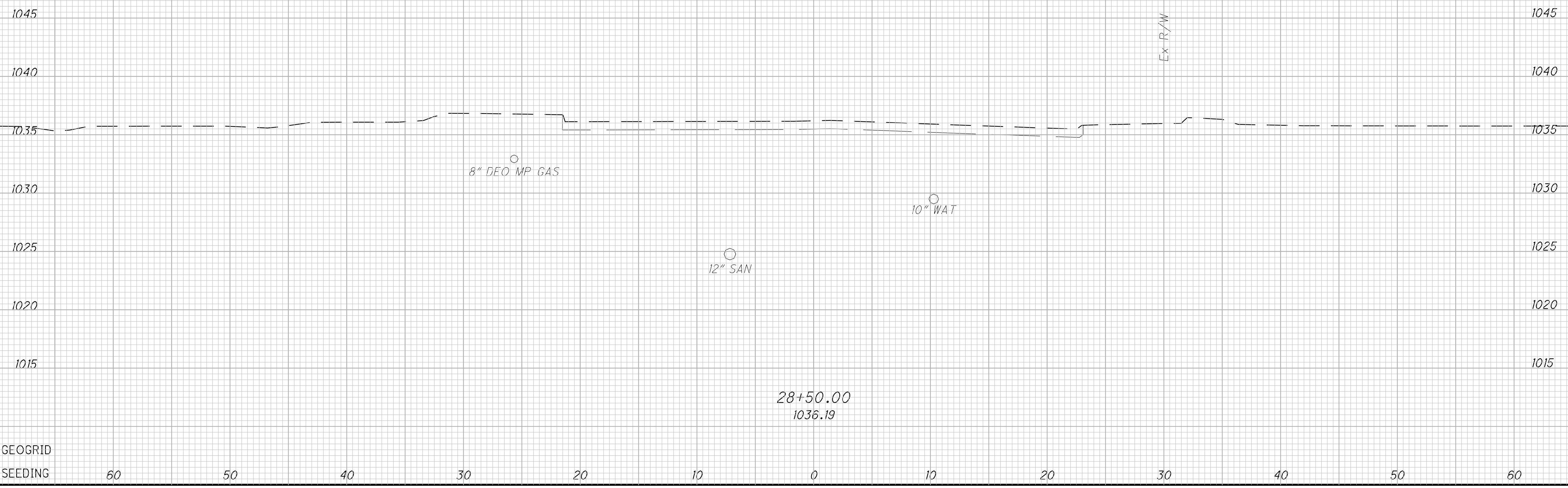
 UNSUITABLE SUBGRADE TREATMENT

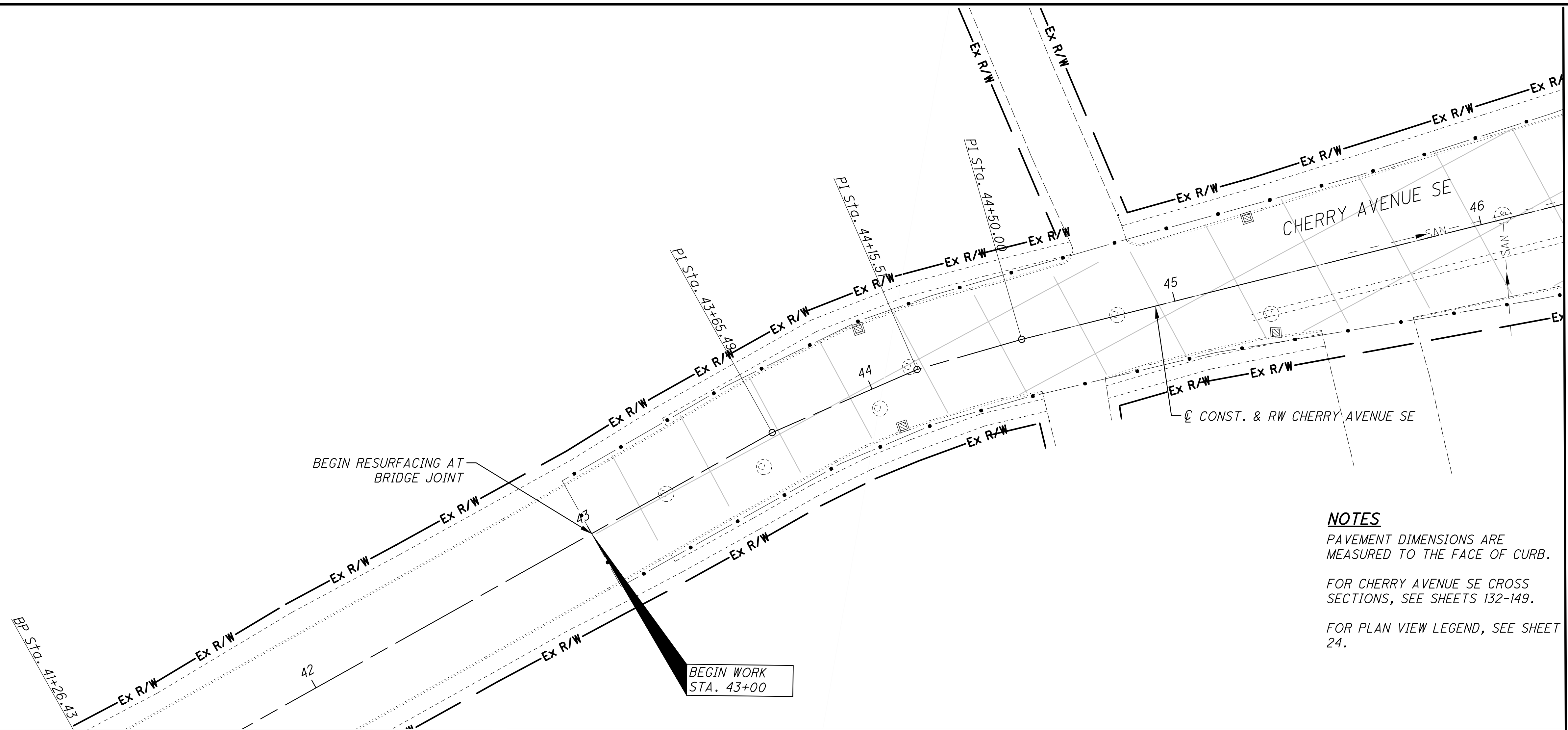
END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

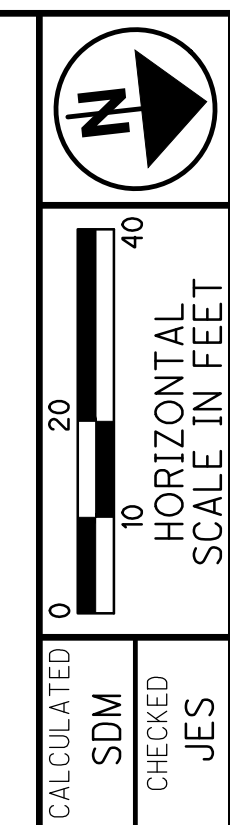
CROSS SECTIONS - MARKET AVENUE S STA. 28+50.00

127
302





NOTES
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR CHERRY AVENUE SE CROSS SECTIONS, SEE SHEETS 132-149.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.

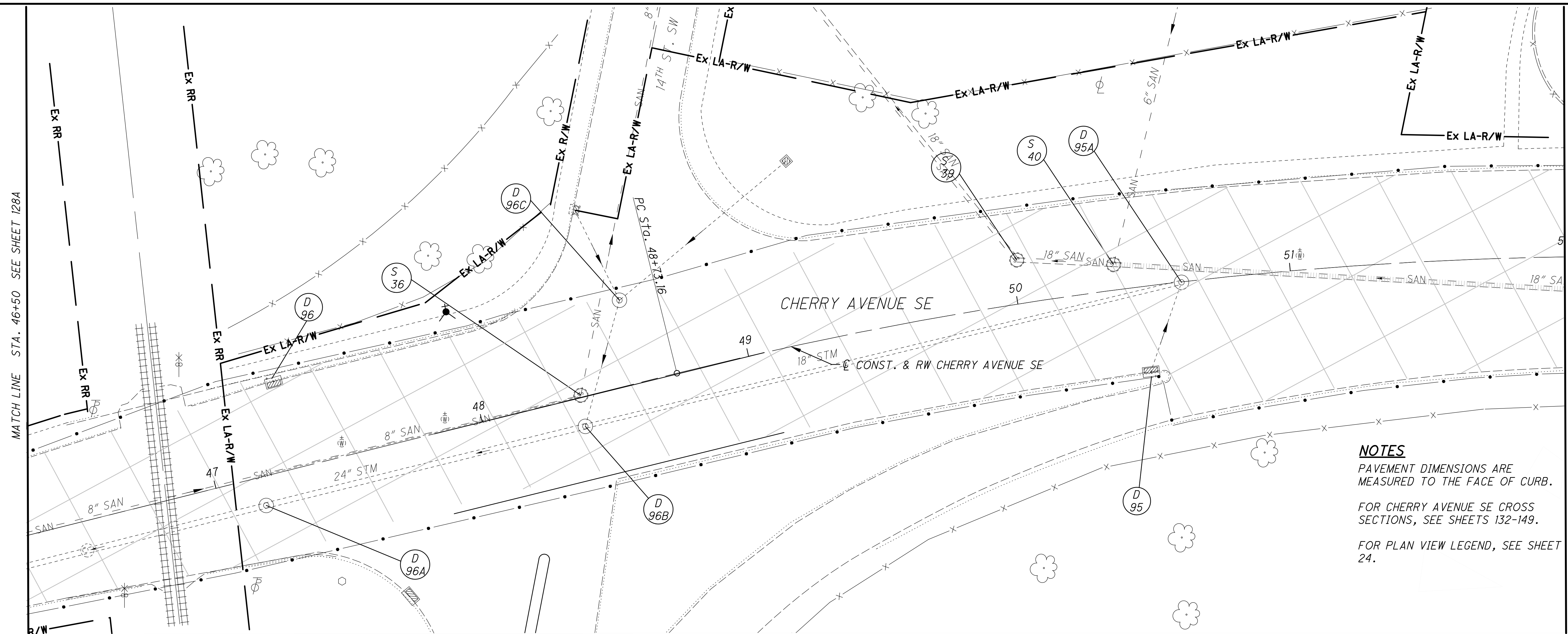


CALCULATED
 SDM
 CHECKED
 JES

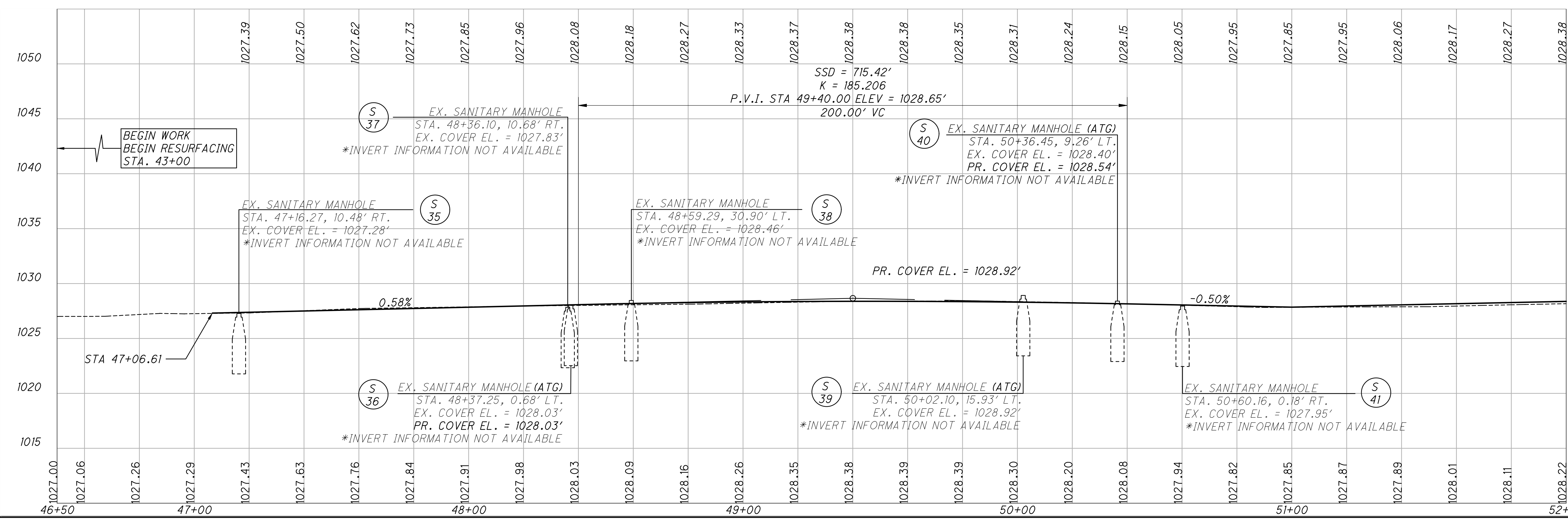
**PLAN AND PROFILE - CHERRY AVENUE SE
 BEGINNING TO STA. 46+50.00**

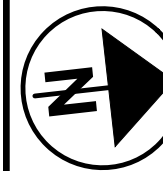
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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NOTES
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR CHERRY AVENUE SE CROSS SECTIONS, SEE SHEETS 132-149.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.





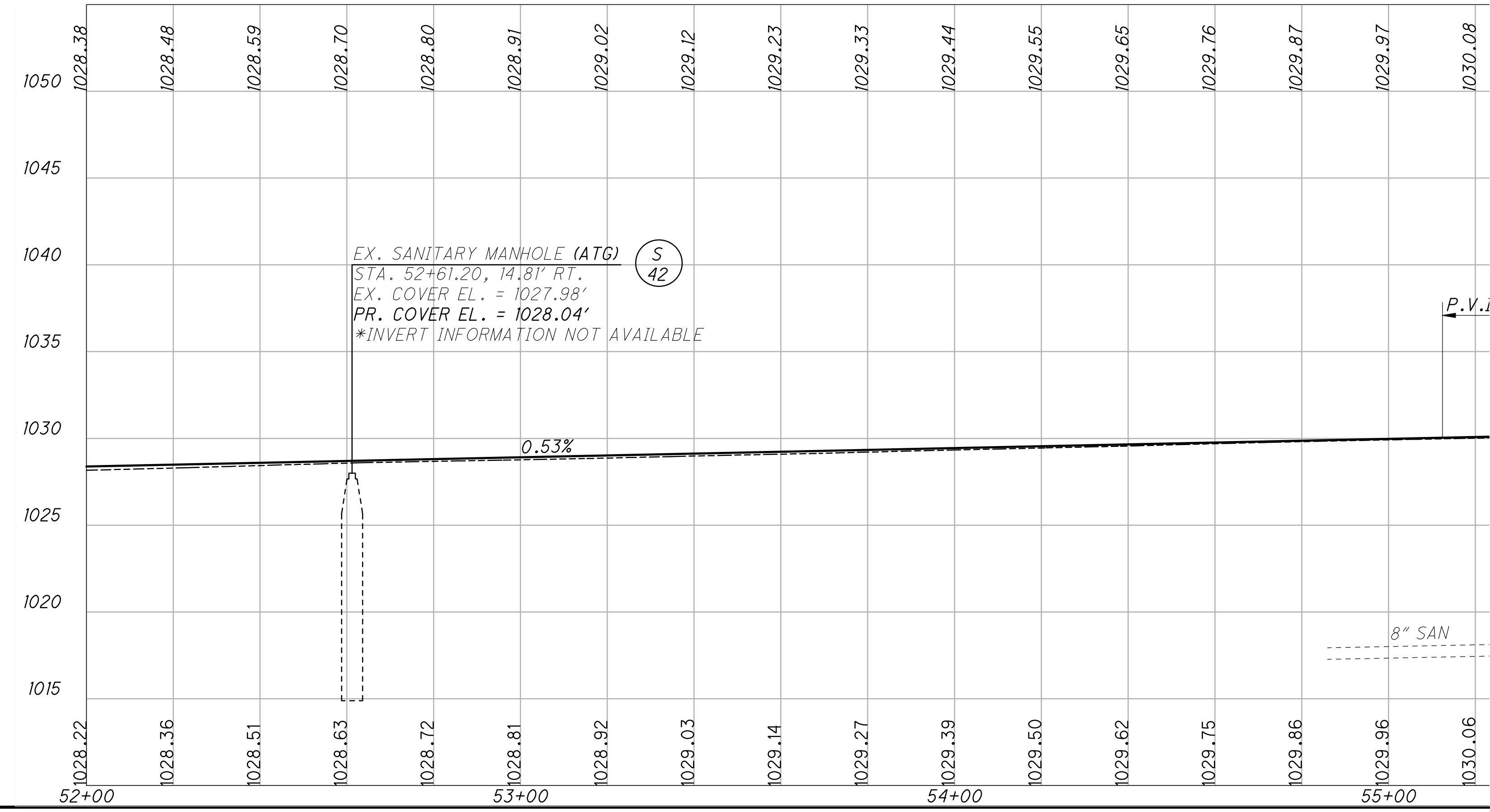
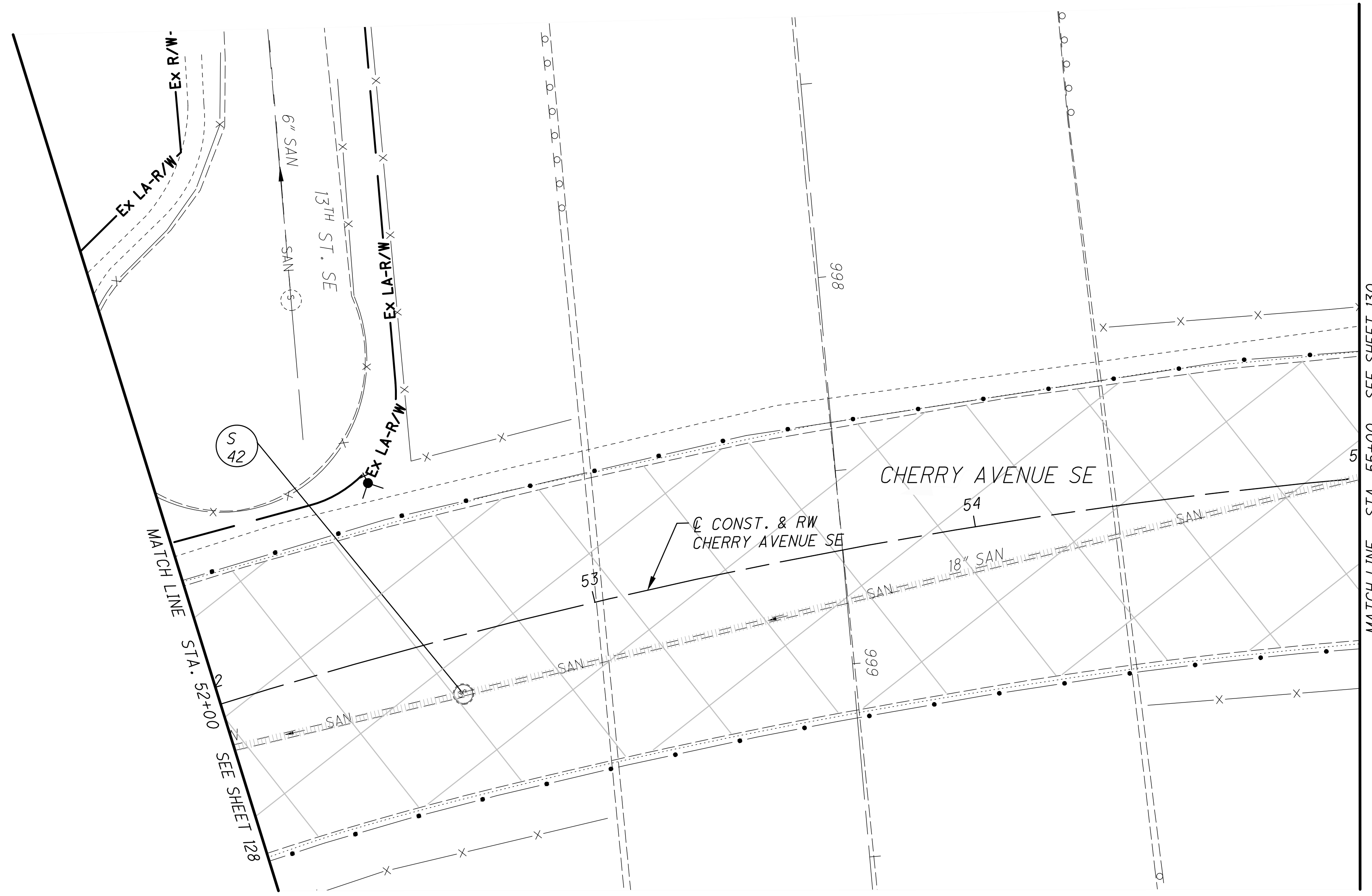
0 10 20 30 40
 HORIZONTAL SCALE IN FEET

CALCULATED
 SDM
 CHECKED
 JES

PLAN AND PROFILE - CHERRY AVENUE SE
STA. 46+50.00 TO STA. 52+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

128
 302



NOTES
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR CHERRY AVENUE SE CROSS SECTIONS, SEE SHEETS 132-149.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.

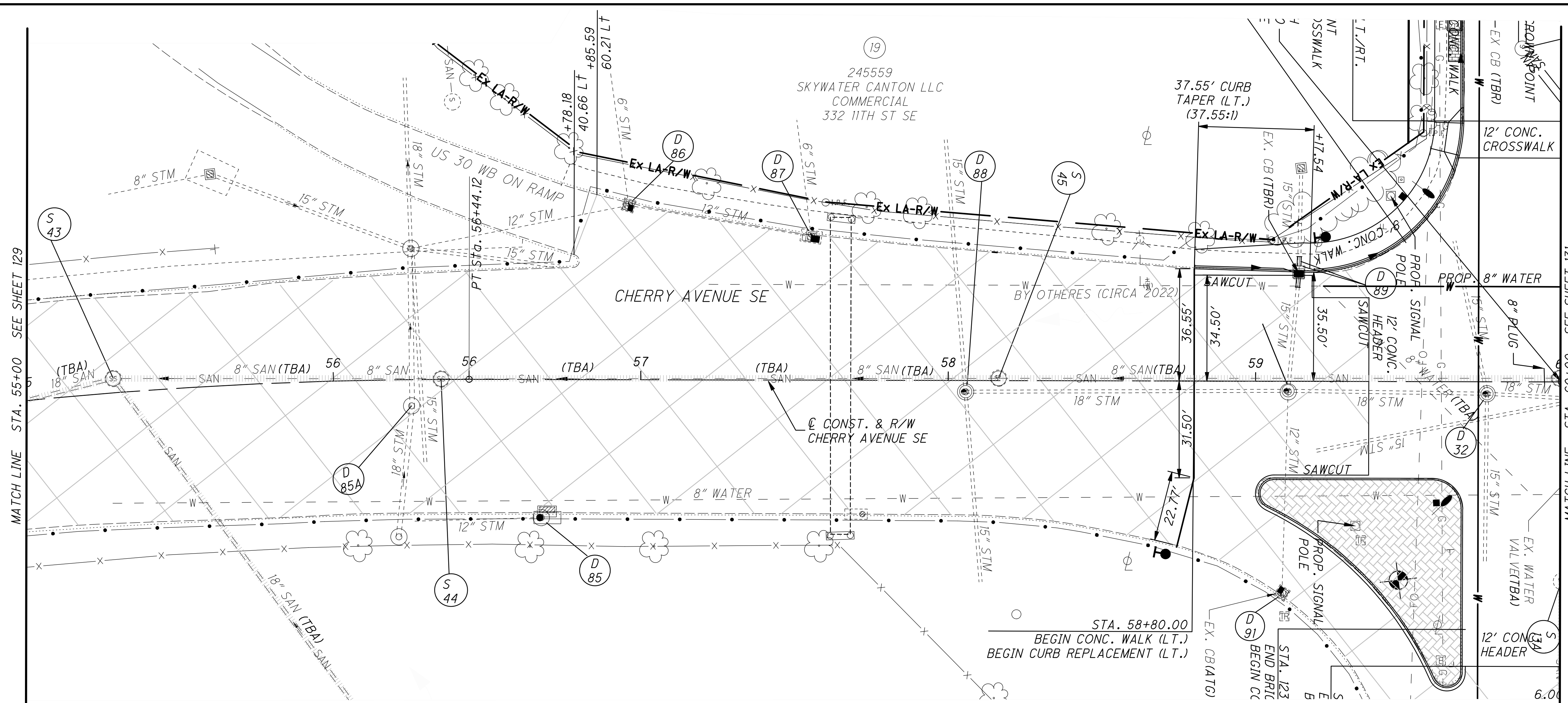
CALCULATED
 SDM
 CHECKED
 JES

0 10 20 30 40
 HORIZONTAL SCALE IN FEET

**PLAN AND PROFILE - CHERRY AVENUE SE
 STA. 52+00.00 TO STA. 56+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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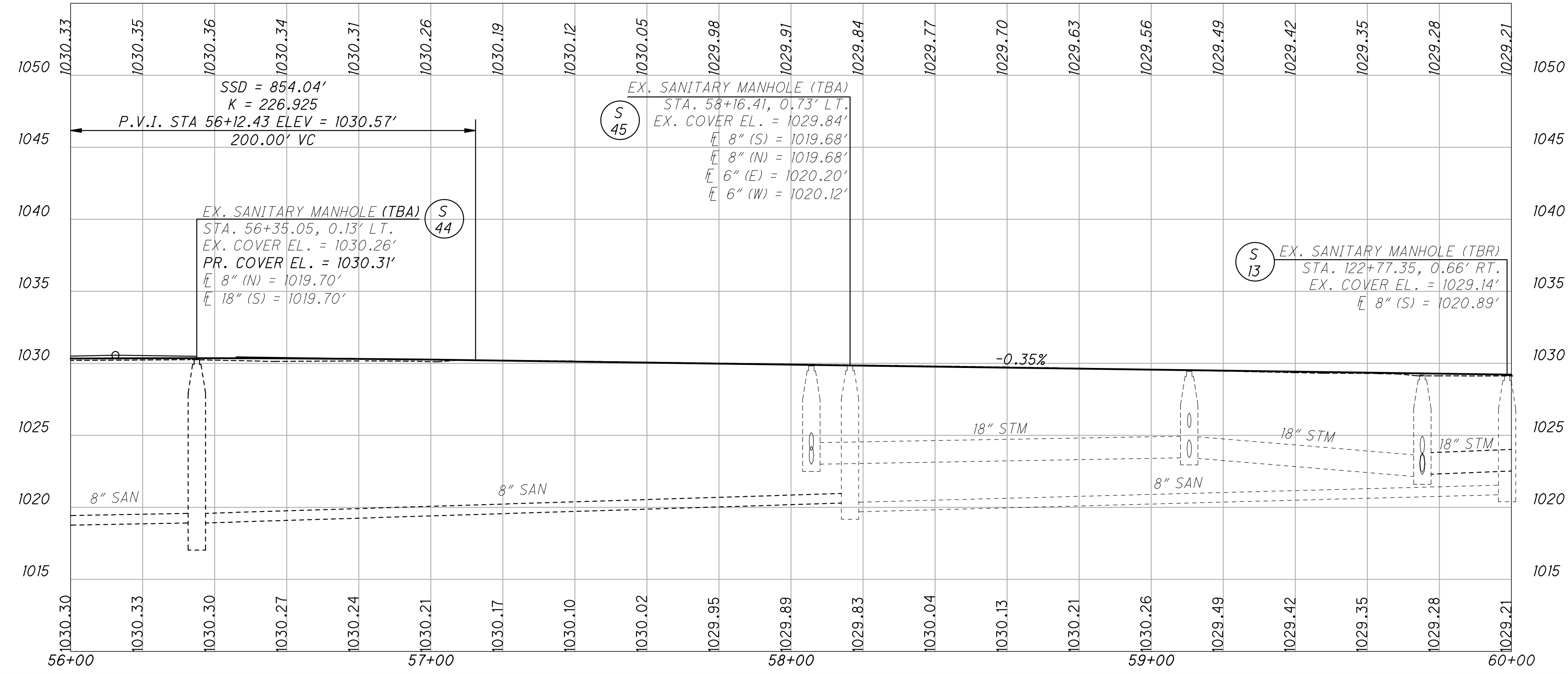
NOTES
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR CHERRY AVENUE SE CROSS SECTIONS, SEE SHEETS 132-149.
 FOR INTERSECTION DETAILS, SEE SHEETS 155-157.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.



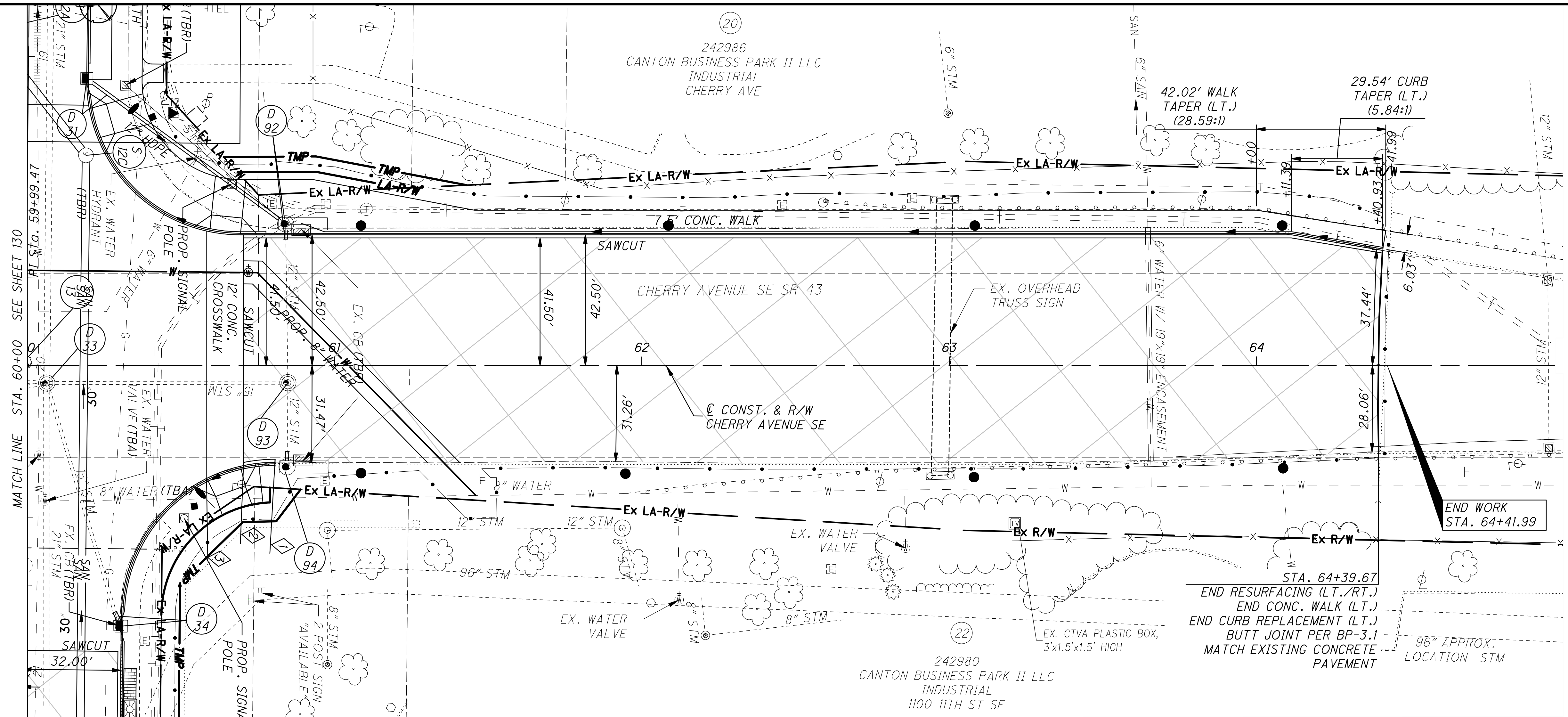
**PLAN AND PROFILE - CHERRY AVENUE SE
 STA. 56+00.00 TO STA. 61+00.00**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

130
302



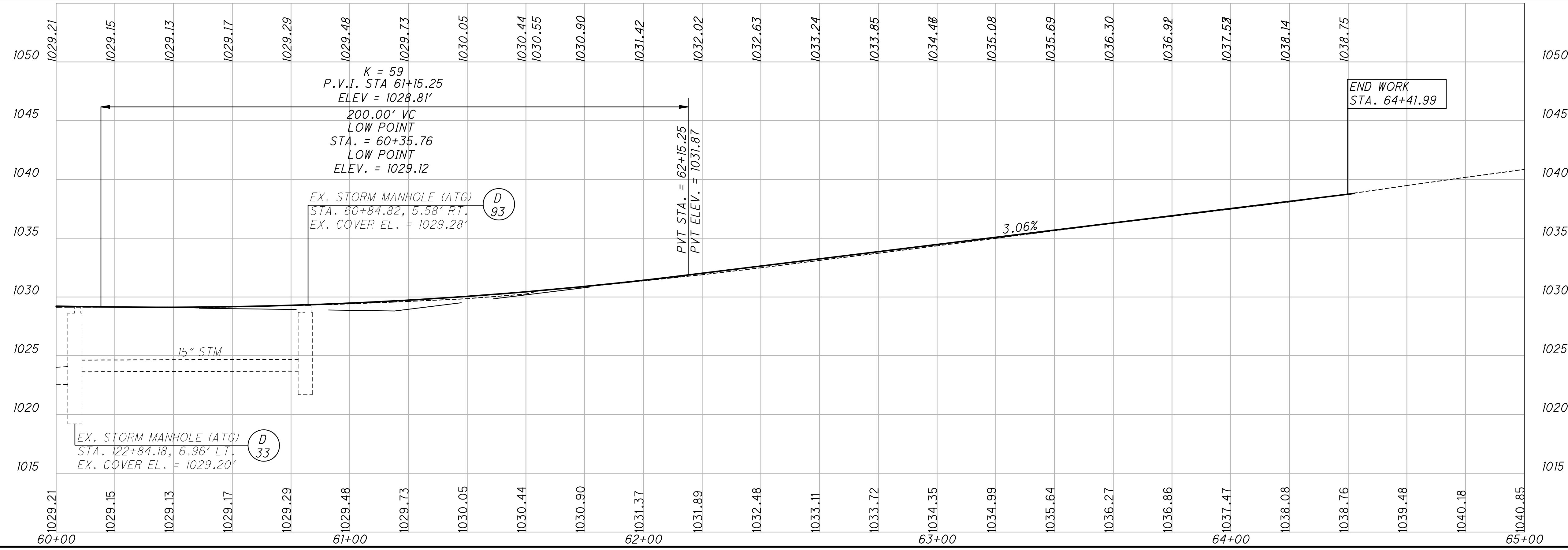
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NOTES
 PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB.
 FOR CHERRY AVENUE SE CROSS SECTIONS, SEE SHEETS 132-149.
 FOR PLAN VIEW LEGEND, SEE SHEET 24.

CALCULATED JPK CHECKED JES

**PLAN AND PROFILE - CHERRY AVENUE SE
 STA. 61+00.00 TO END**




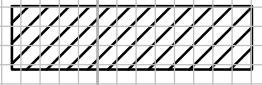
**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

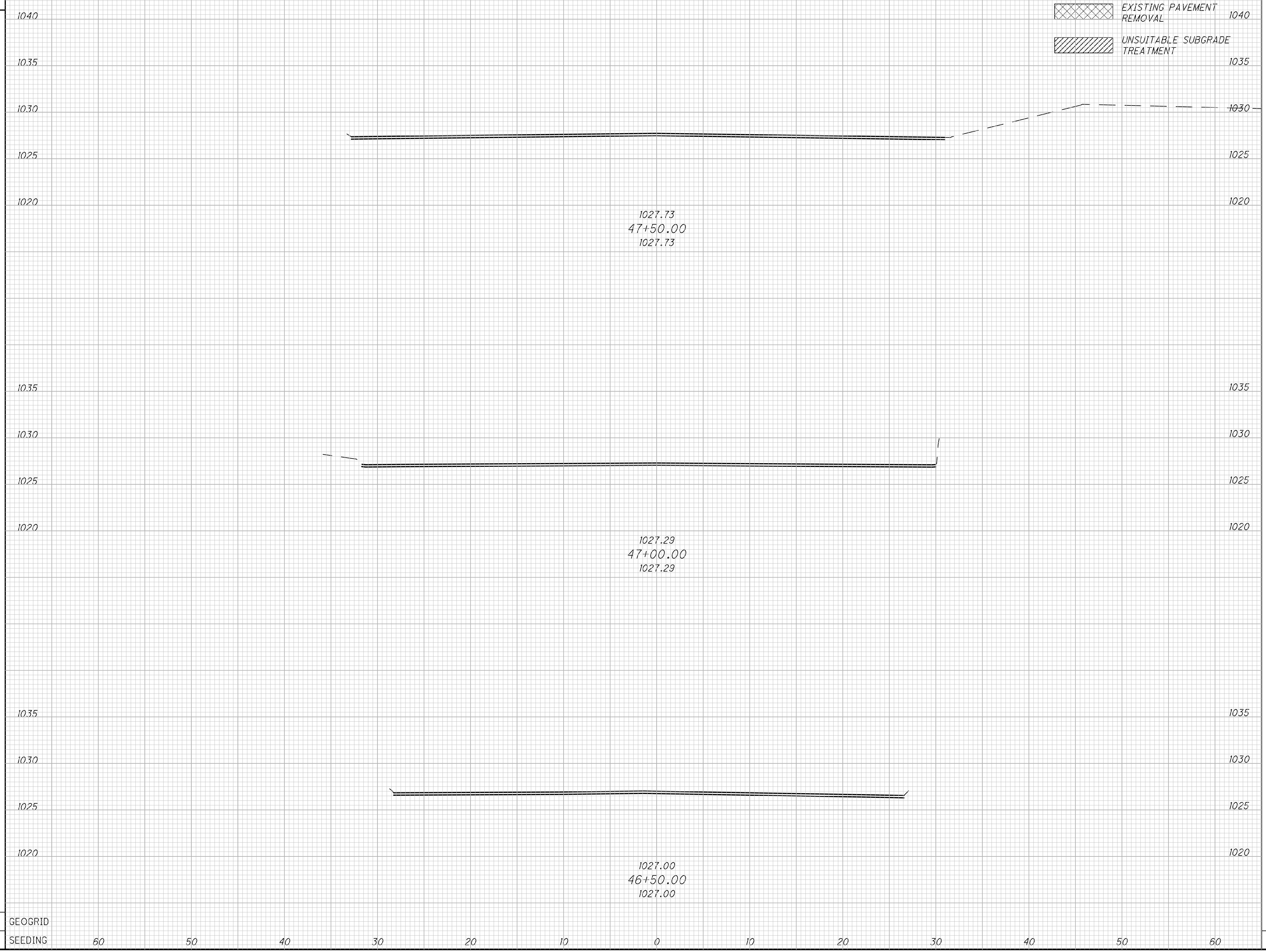
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SEEDING/ GEOGRID	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED JPK	CHECKED JES
			CUT	FILL	CUT	FILL		
GEOGRID								
SEEDING	60							

LEGEND

 EXISTING PAVEMENT
REMOVAL 1040

 UNSUITABLE SUBGRADE
TREATMENT 1035



CROSS SECTIONS - CHERRY AVENUE SE
STA. 46+50.00 TO STA. 47+50.00


STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)


132
302

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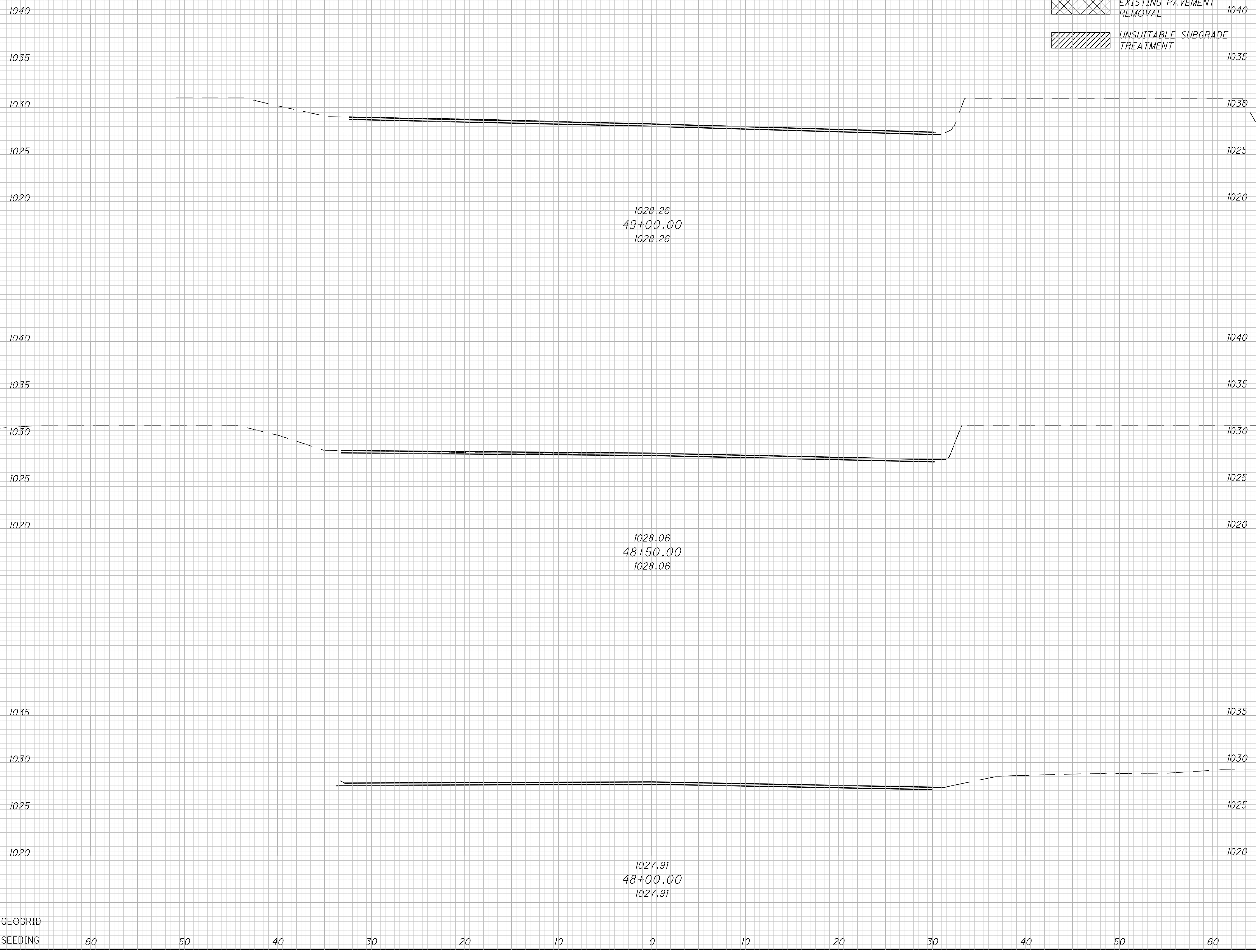
SEEDING/ GEOGRID		END SO. WIDTH YDS.	
SEEDING	60	50	40
GEOGRID	30	20	10

LEGEND

 EXISTING PAVEMENT
REMOVAL 1040

 UNSUITABLE SUBGRADE
TREATMENT 1035

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		




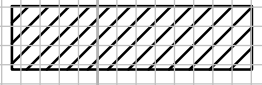
CROSS SECTIONS - CHERRY AVENUE SE
STA. 48+00.00 TO STA. 49+00.00

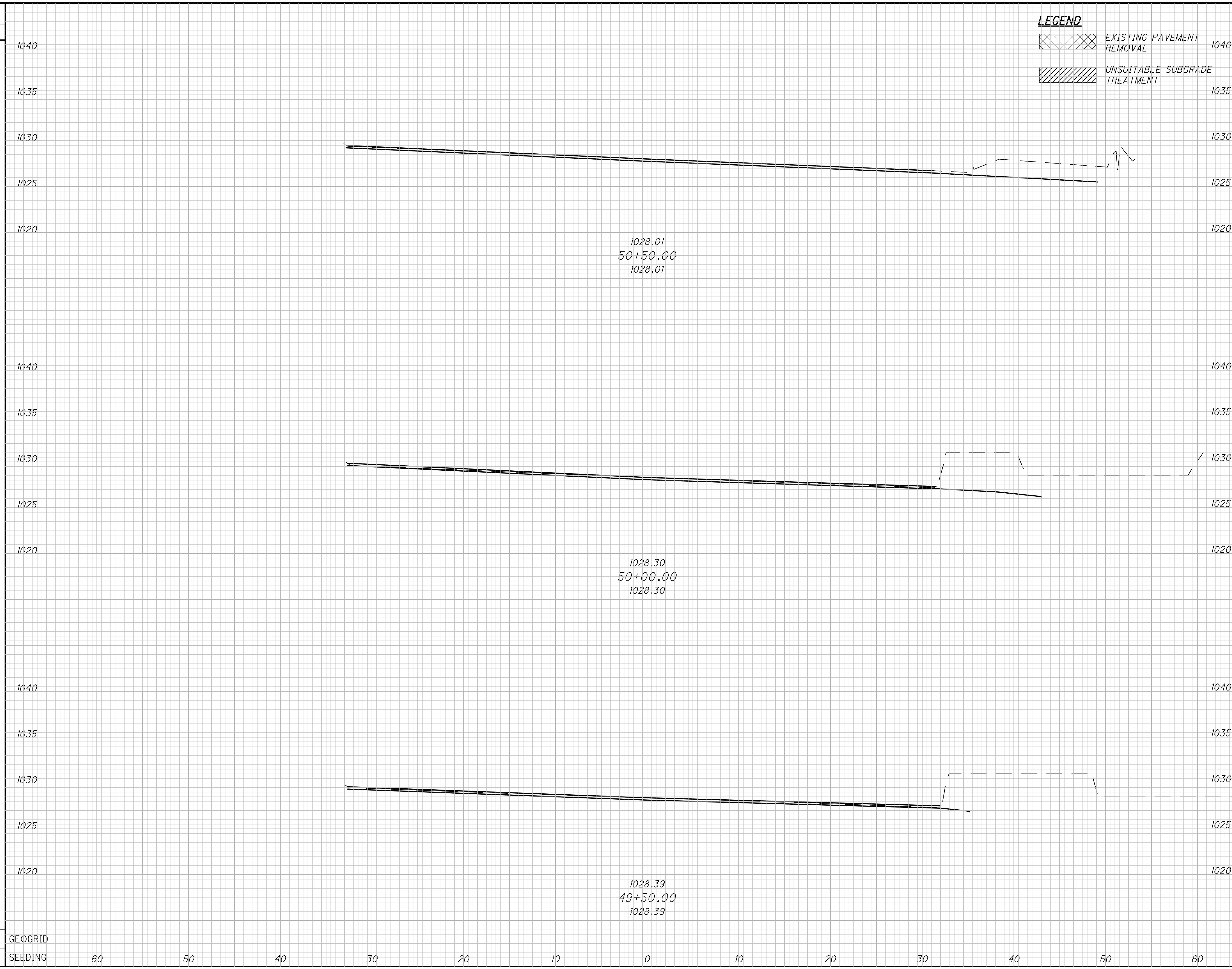
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

133
302

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SEEDING/ GEOGRID	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED JPK	CHECKED JES
			CUT	FILL	CUT	FILL		
GEOGRID	60							
SEEDING	60							

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT



CROSS SECTIONS - CHERRY AVENUE SE
STA. 49+50.00 TO STA. 50+50.00


STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)


134
302

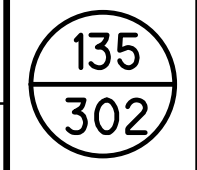
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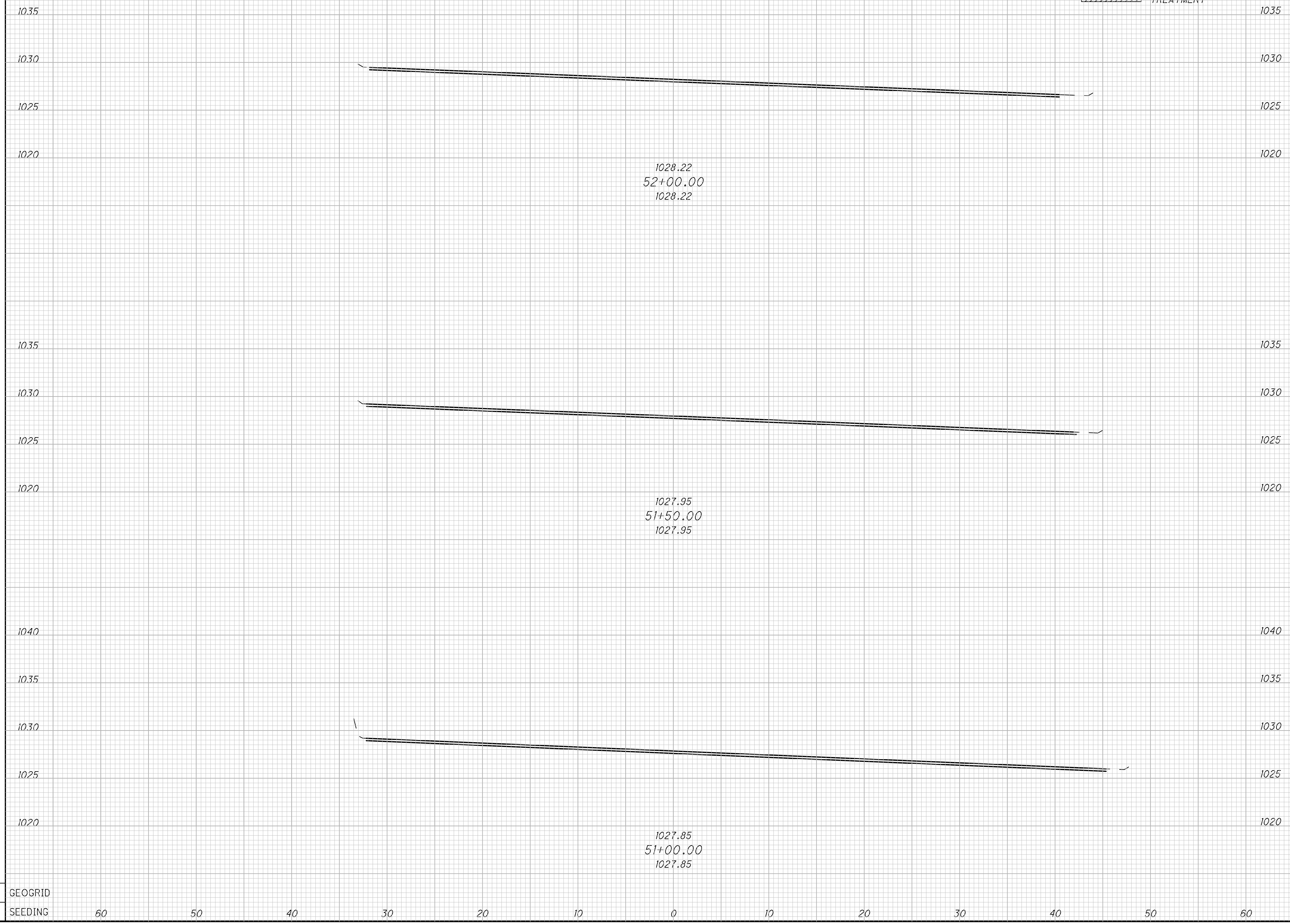
SEEDING/ GEOGRID	
END WIDTH	SO. YDS.

LEGEND

 EXISTING PAVEMENT
REMOVAL

 UNSUITABLE SUBGRADE
TREATMENT

END AREA		VOLUME		CALCULATED JPK	CHECKED JES
CUT	FILL	CUT	FILL		
CROSS SECTIONS - CHERRY AVENUE SE STA. 51+00.00 TO STA. 52+00.00					
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)					
					





GEOGRID	
SEEDING	

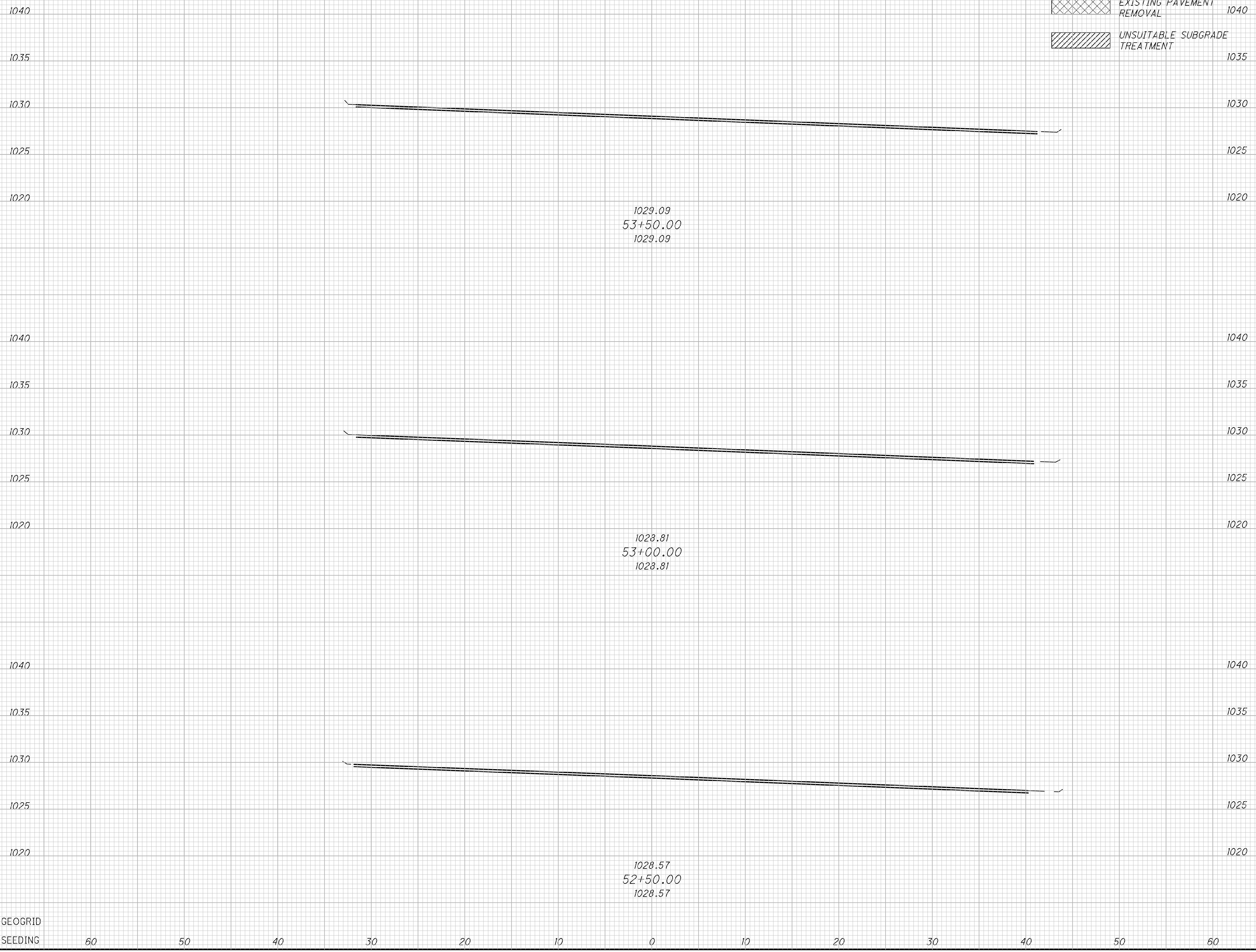
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SEEDING/ GEOGRID	END WIDTH	SO. YDS.	END AREA		VOLUME	
			CUT	FILL	CUT	FILL
GEOGRID						
SEEDING	60					

LEGEND

 EXISTING PAVEMENT
REMOVAL 1040

 UNSUITABLE SUBGRADE
TREATMENT 1035



CROSS SECTIONS - CHERRY AVENUE SE
STA. 52+50.00 TO STA. 53+50.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

136
302


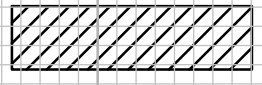
CALCULATED
JPK
CHECKED
JES

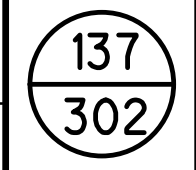
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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

GEOGRID
SEEDING

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES
CROSS SECTIONS - CHERRY AVENUE SE STA. 54+00.00 TO STA. 54+50.00					
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)					
					

1040
1035
1030
1025
1020

1040
1035
1030
1025
1020

1040
1035
1030
1025
1020

1040
1035
1030
1025
1020

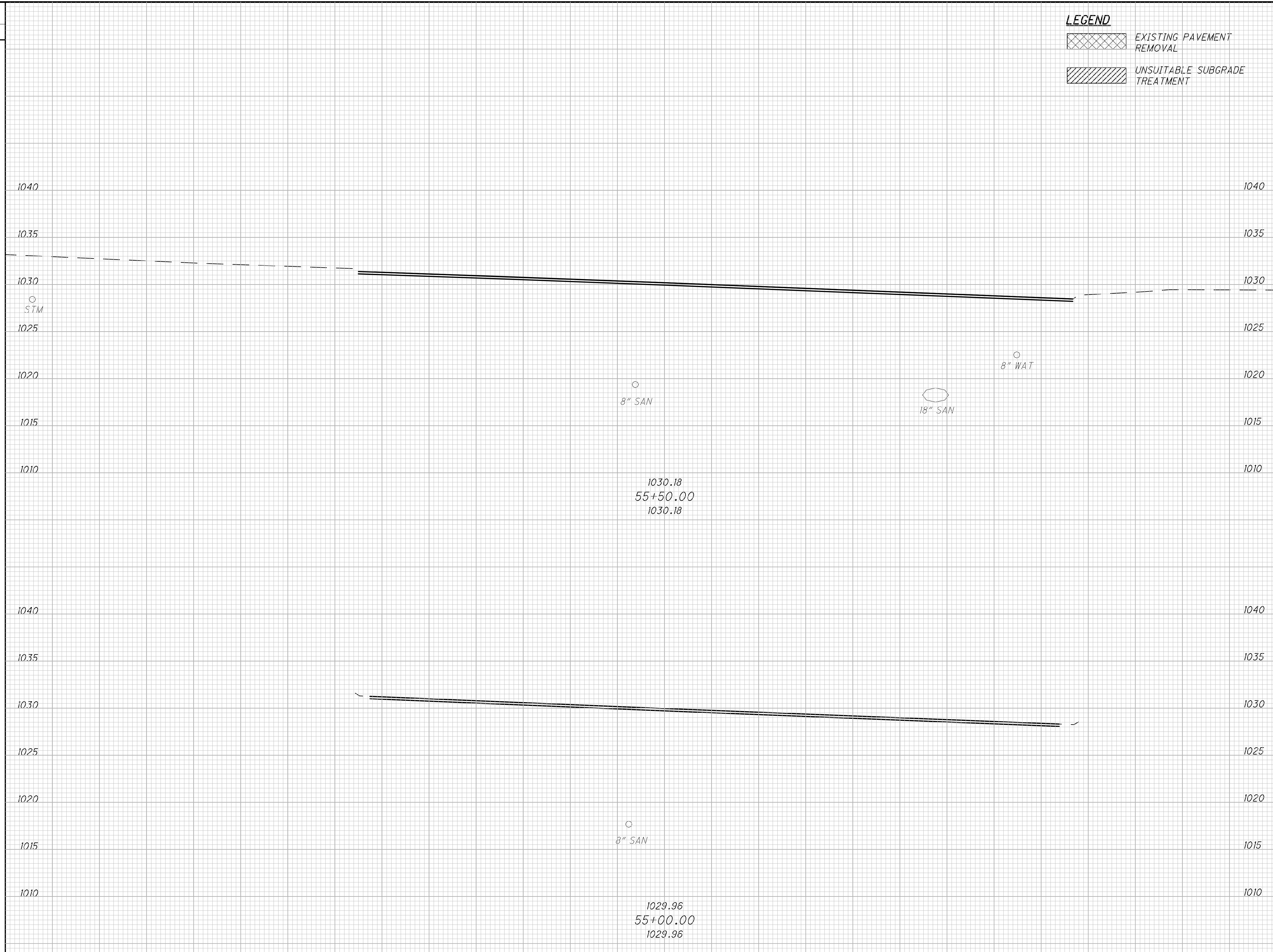
1029.69
54+50.00
1029.69

1029.39
54+00.00
1029.39

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5003.dwg 04-Nov-22 2:14 PM

SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	



END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		

CROSS SECTIONS - CHERRY AVENUE SE
STA. 55+00.00 TO STA. 55+50.00


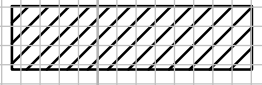
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

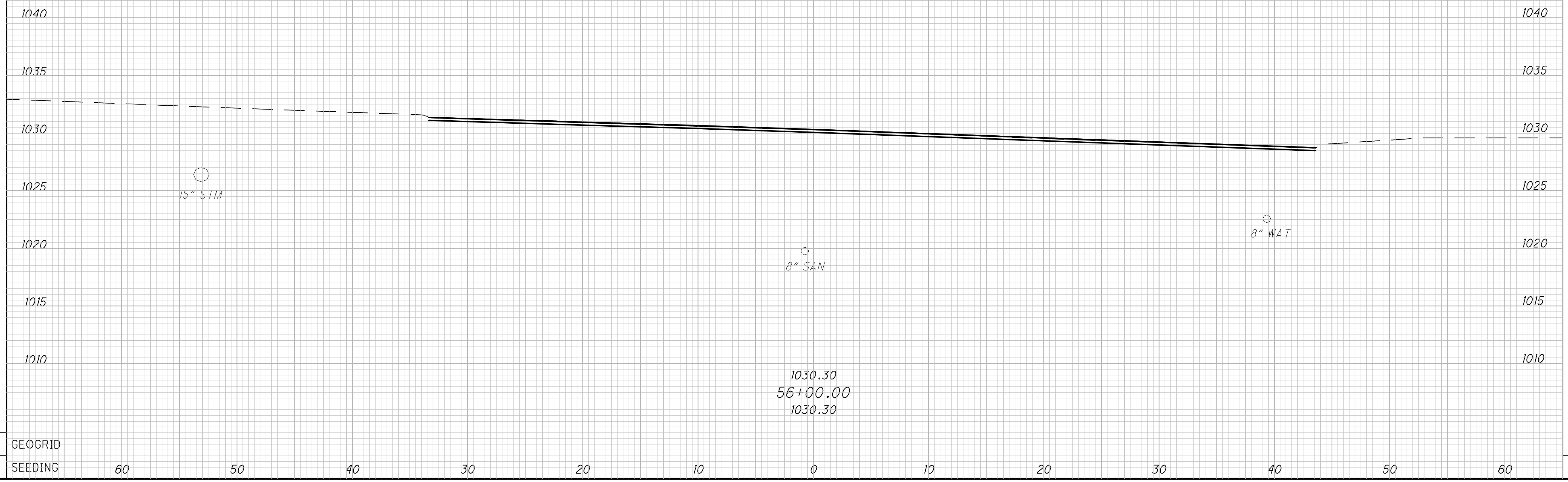
138
302

GEOGRID
SEEDING

c:\pwworking\oecom_ds20_na_2019\brittney.crandall@oecom.com\dms20667\17790_X5003.dwg 04-Nov-22 2:14 PM

SEEDING/ GEOGRID	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED JPK	CHECKED JES
			CUT	FILL	CUT	FILL		
GEOGRID	60	50						
SEEDING	60	50						

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT



CROSS SECTIONS - CHERRY AVENUE SE
STA. 56+00.00



STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

139
302

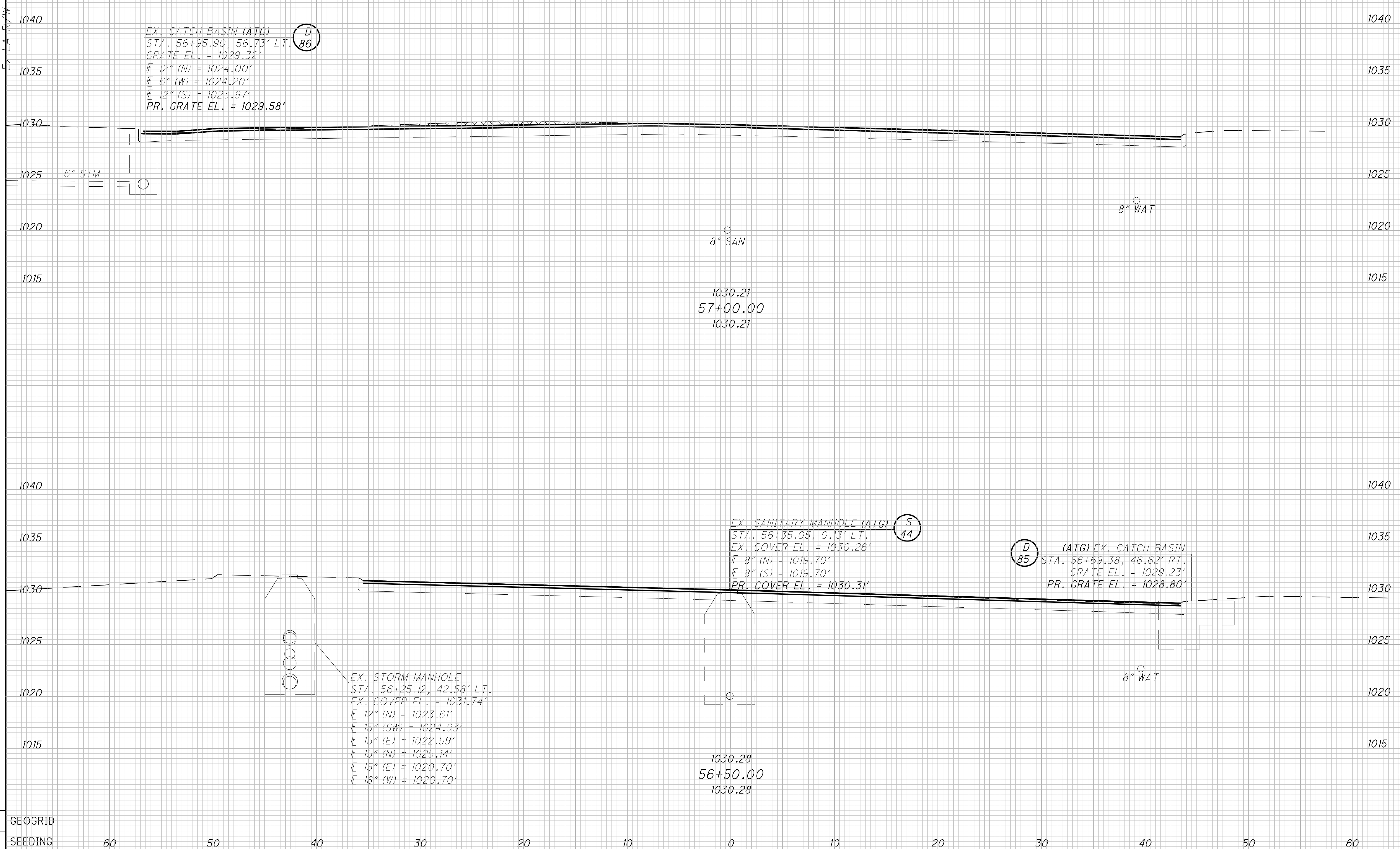
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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	50
50	40
40	30
30	20
20	10
10	0
0	10
10	20
20	30
30	40
40	50
50	60

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		
				JPK	JES

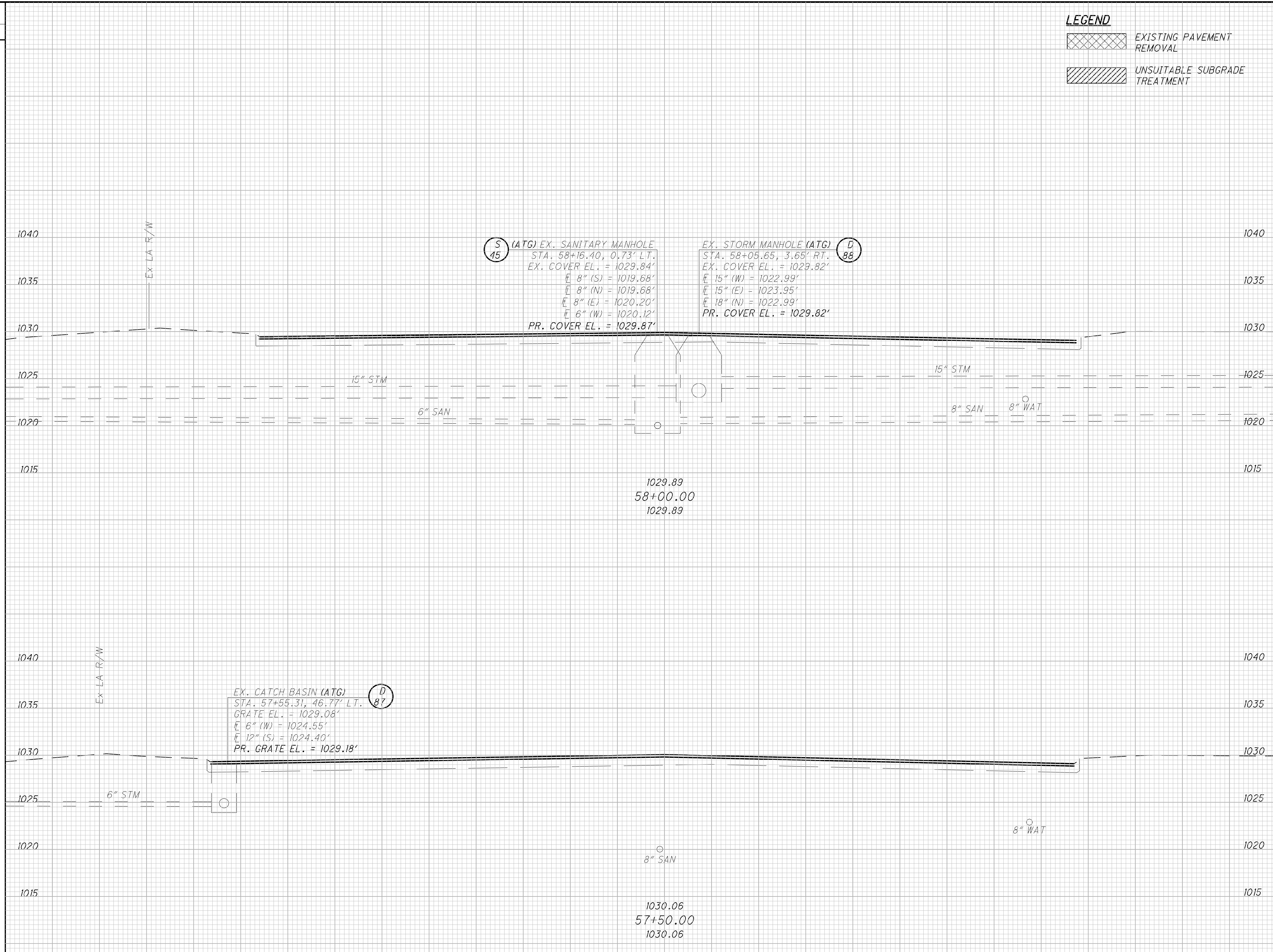


CROSS SECTIONS - CHERRY AVENUE SE
STA. 56+50.00 TO STA. 57+00.00
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)
140
302

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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	



LEGEND

- EXISTING PAVEMENT REMOVAL
- UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

CROSS SECTIONS - CHERRY AVENUE SE STA. 57+50.00 TO STA. 58+00.00


141
302

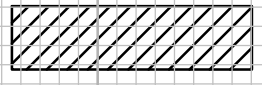
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SEEDING/
GEOGRID

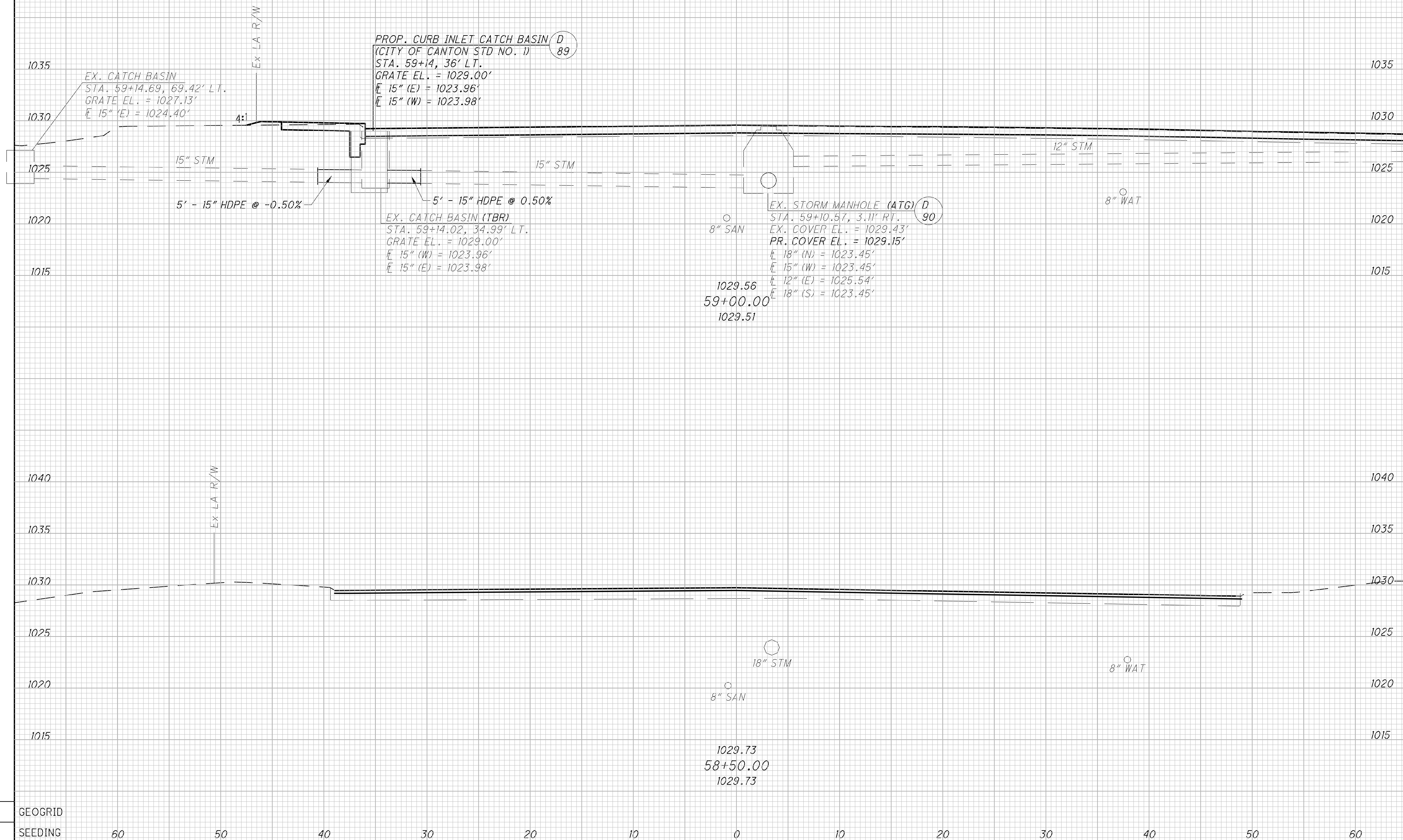
END WIDTH	SO. YDS.
60	50
50	40
40	30
30	20
20	10
10	0
0	10
10	20
20	30
30	40
40	50
50	60

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		
				JPK	JES
CROSS SECTIONS - CHERRY AVENUE SE STA. 58+50.00 TO STA.59+00.00					
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)					
				142	302



EX. CATCH BASIN
STA. 59+14.69, 69.42' LT.
GRATE EL. = 1027.13'
E 15" (E) = 1024.40'

PROP. CURB INLET CATCH BASIN (D 89)
(CITY OF CANTON STD NO. 1)
STA. 59+14, 36' LT.
GRATE EL. = 1029.00'
E 15" (E) = 1023.96'
E 15" (W) = 1023.98'

EX. CATCH BASIN (TBR)
STA. 59+14.02, 34.99' LT.
GRATE EL. = 1029.00'
E 15" (W) = 1023.96'
E 15" (E) = 1023.98'

EX. STORM MANHOLE (ATG) (D 90)
STA. 59+10.57, 3.11' RT.
EX. COVER EL. = 1029.43'
PR. COVER EL. = 1029.15'
E 18" (N) = 1023.45'
E 15" (W) = 1023.45'
E 12" (E) = 1025.54'
E 18" (S) = 1023.45'

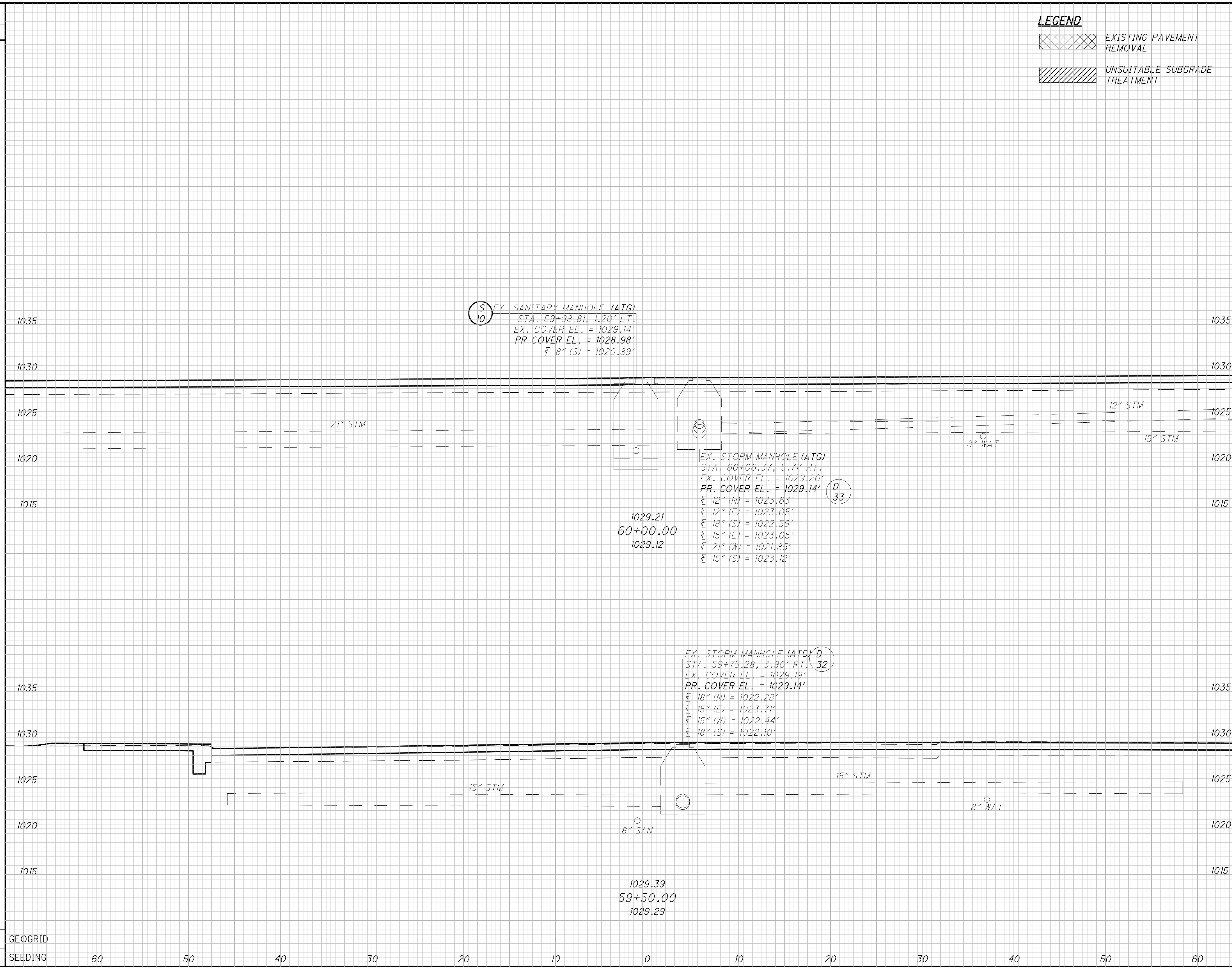
1029.56
59+00.00
1029.51

1029.73
58+50.00
1029.73

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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	



END AREA	VOLUME	CALCULATED	CHECKED				
				CUT	FILL	CUT	FILL
				JPK	JES		

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)


CROSS SECTIONS - CHERRY AVENUE SE STA. 59+50.00 TO STA. 60+00.00

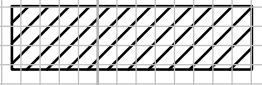
143
302

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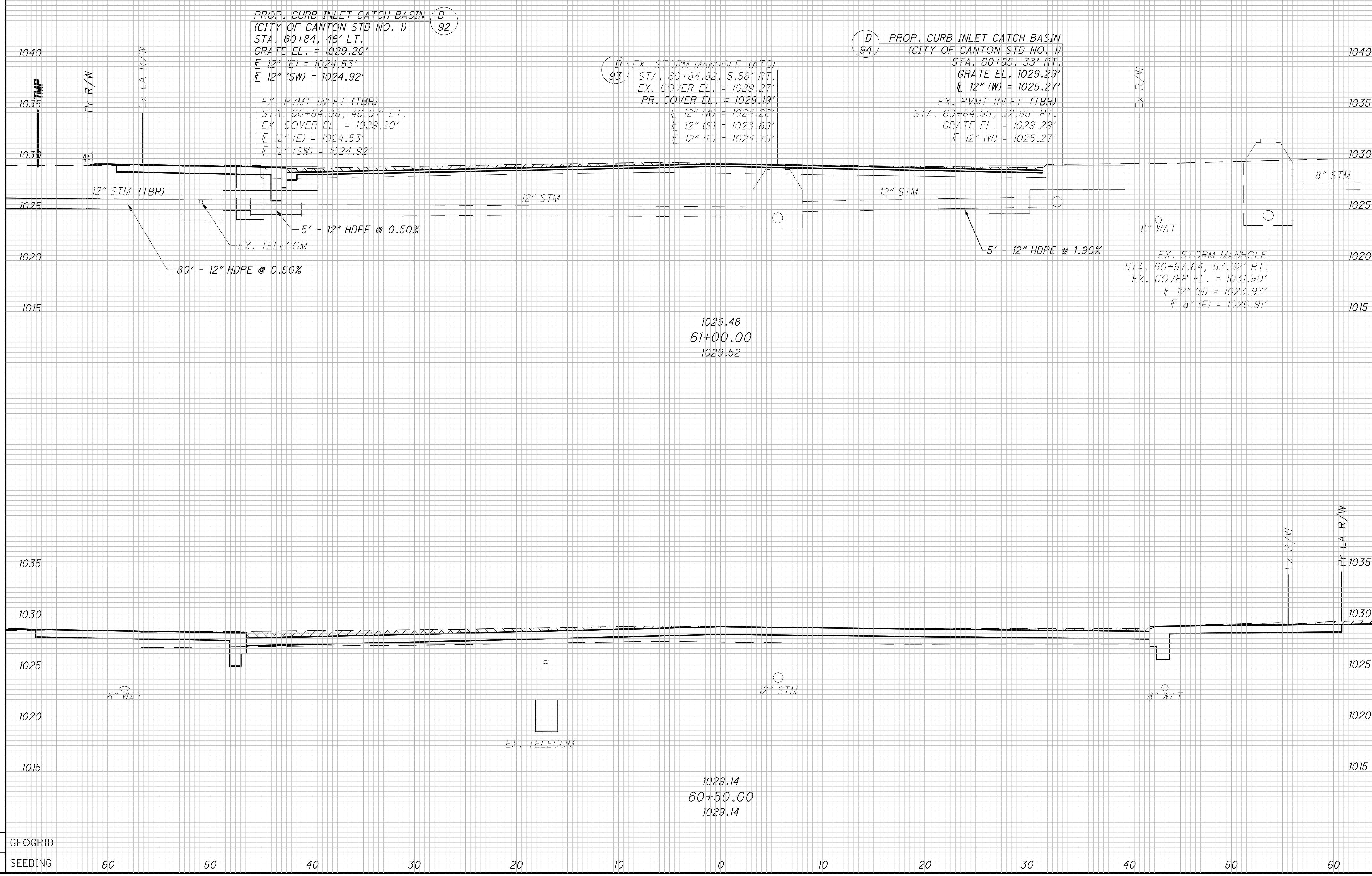
SEEDING/ GEOGRID	END SO. WIDTH YDS.
GEOGRID	60
SEEDING	50
	40
	30
	20
	10
	0
	10
	20
	30
	40
	50
	60

LEGEND

 EXISTING PAVEMENT REMOVAL

 UNSUITABLE SUBGRADE TREATMENT

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES



CROSS SECTIONS - CHERRY AVENUE SE
STA. 60+50.00 TO STA. 61+00.00
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)
 144
 302

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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	50
50	40
40	30
30	20
20	10
10	0
0	10
10	20
20	30
30	40
40	50
50	60



LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

EX. STORM MANHOLE
 STA. 61+93.61, 52.86' RT.
 EX. COVER EL. = 1031.68'
 12" (S) = 1023.45'
 8" (E) = 1027.78'

1031.42
 62+00.00
 1031.37

1030.24
 61+50.00
 1030.26

END AREA	VOLUME	CALCULATED	CHECKED						
				CUT	FILL	CUT	FILL	JPK	JES

**CROSS SECTIONS - CHERRY AVENUE SE
 STA. 61+50.00 TO STA. 62+00.00**



**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

145
 302

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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

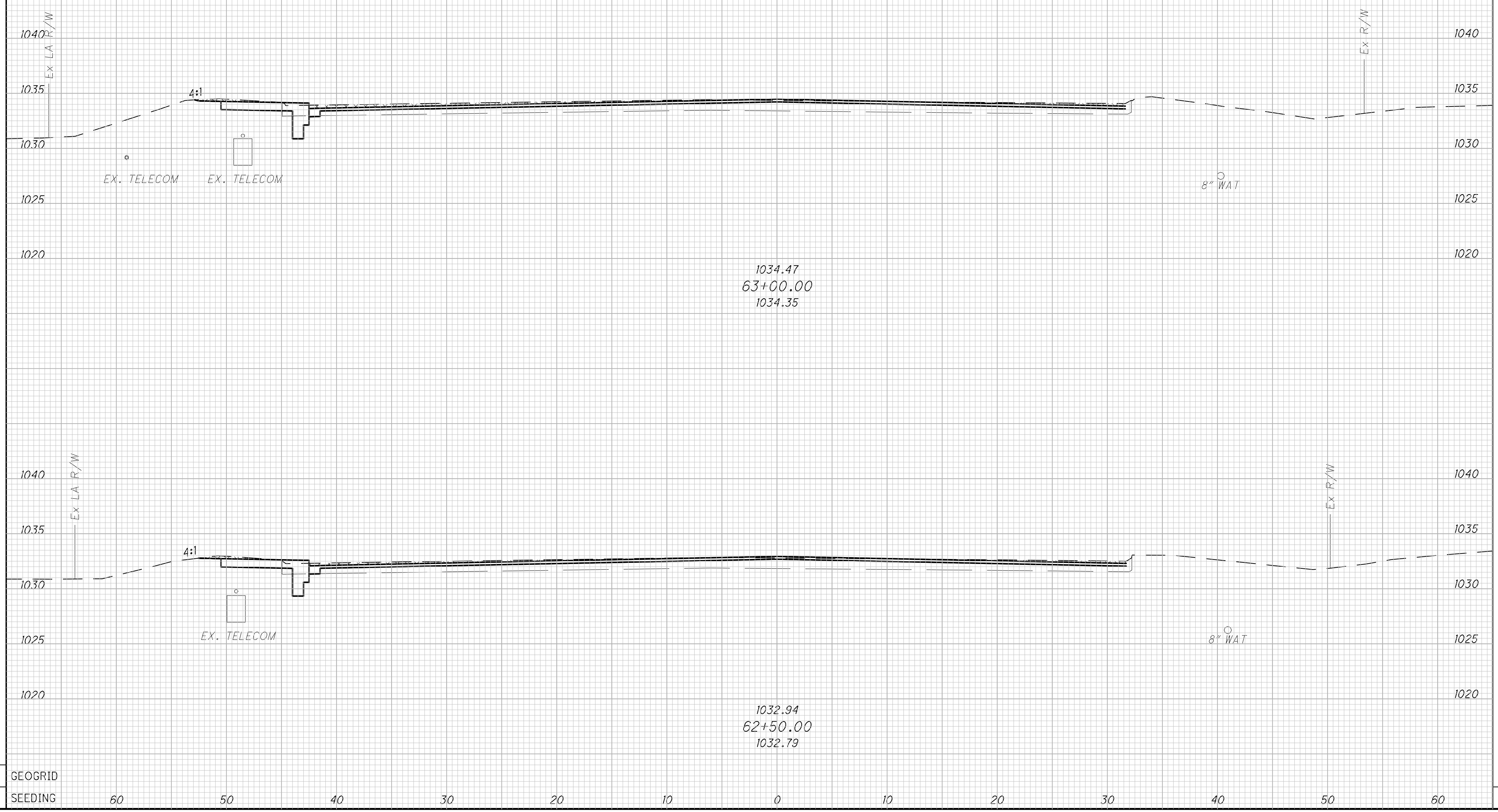
LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES

CROSS SECTIONS - CHERRY AVENUE SE
STA. 62+50.00 TO STA. 63+00.00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



146
302



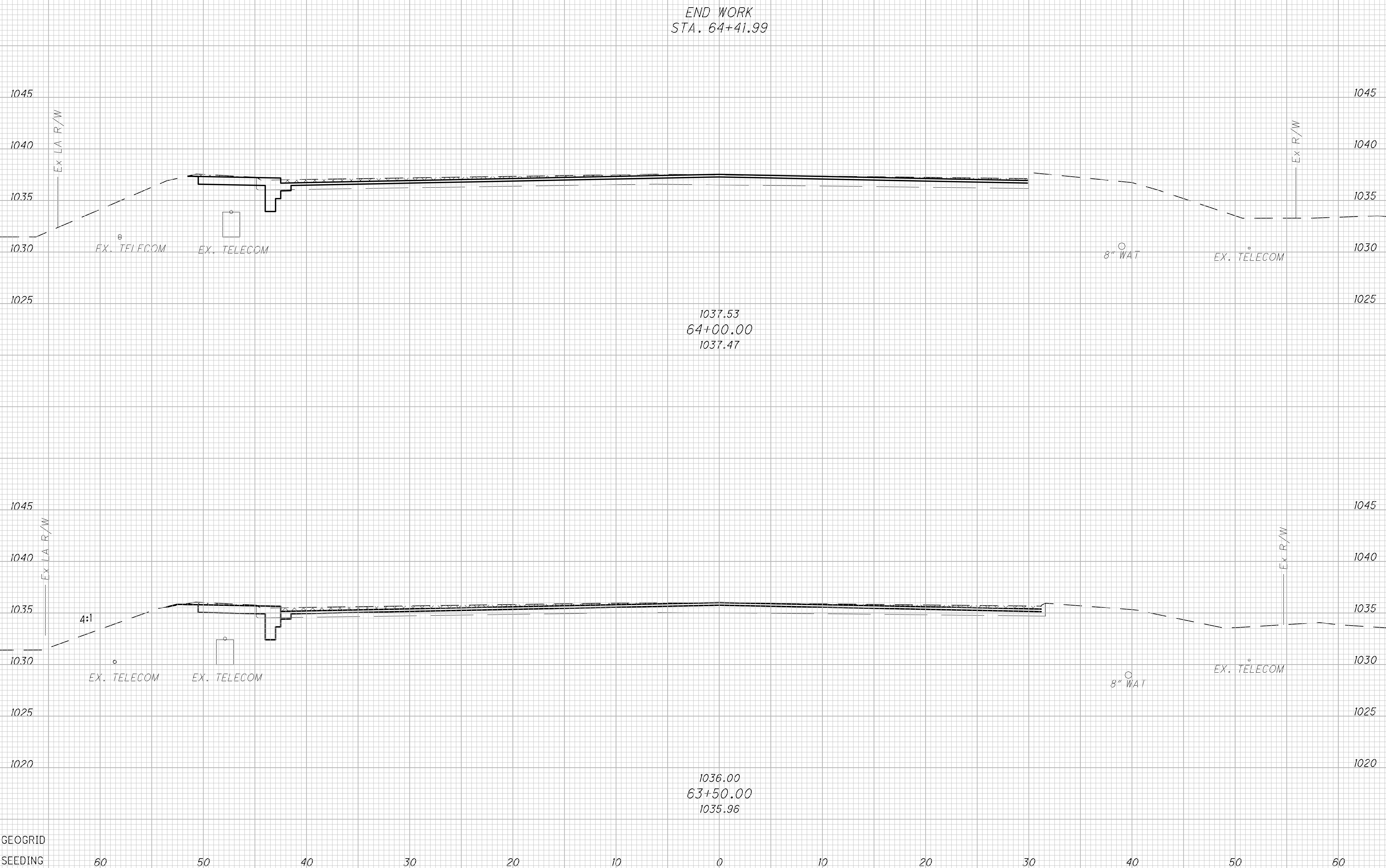
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SEEDING/
GEOGRID

END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES



END WORK
STA. 64+41.99

1037.53
64+00.00
1037.47

1036.00
63+50.00
1035.96

**CROSS SECTIONS - CHERRY AVENUE SE
STA. 63+50.00 TO STA. 64+00.00**



**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

147
302

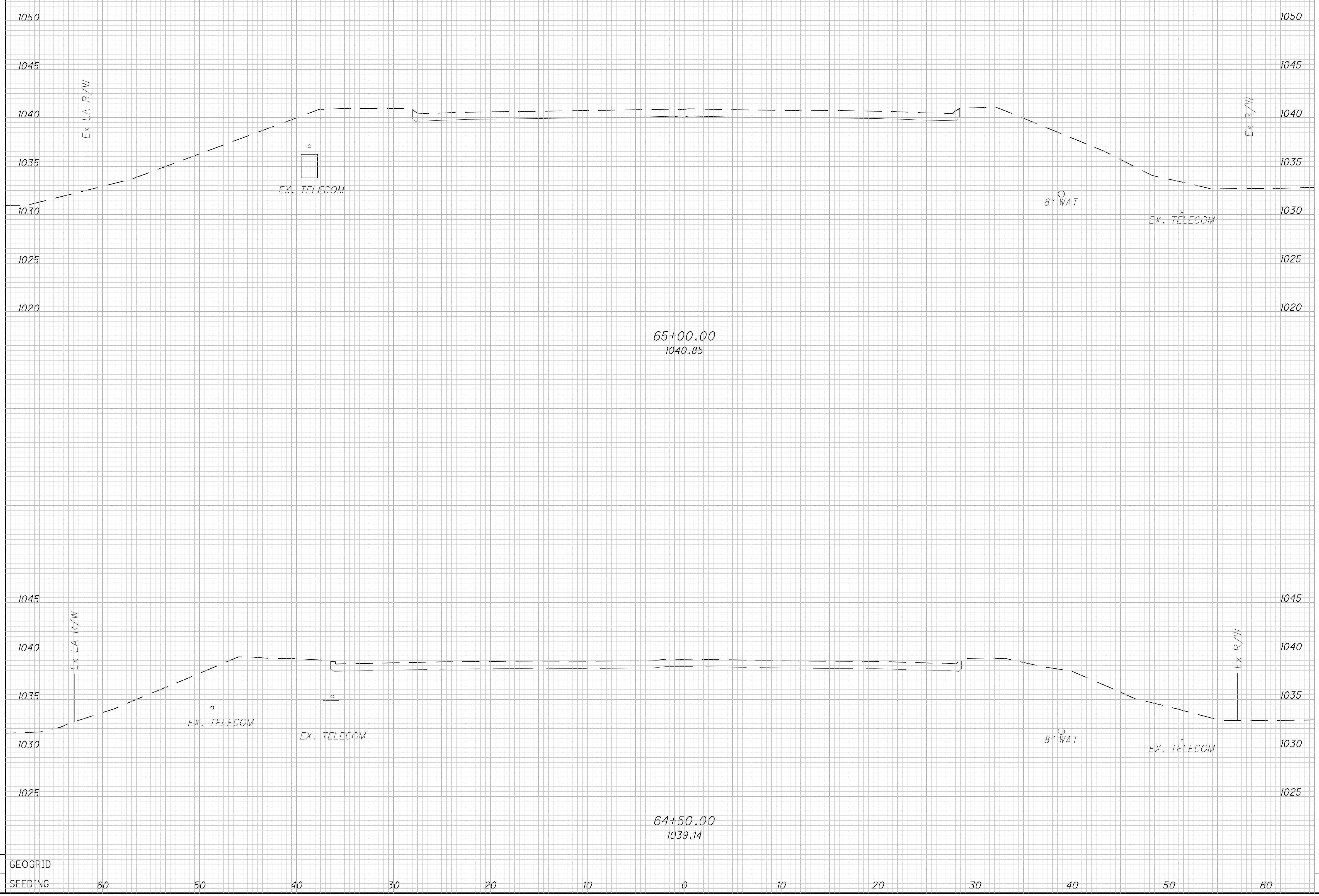
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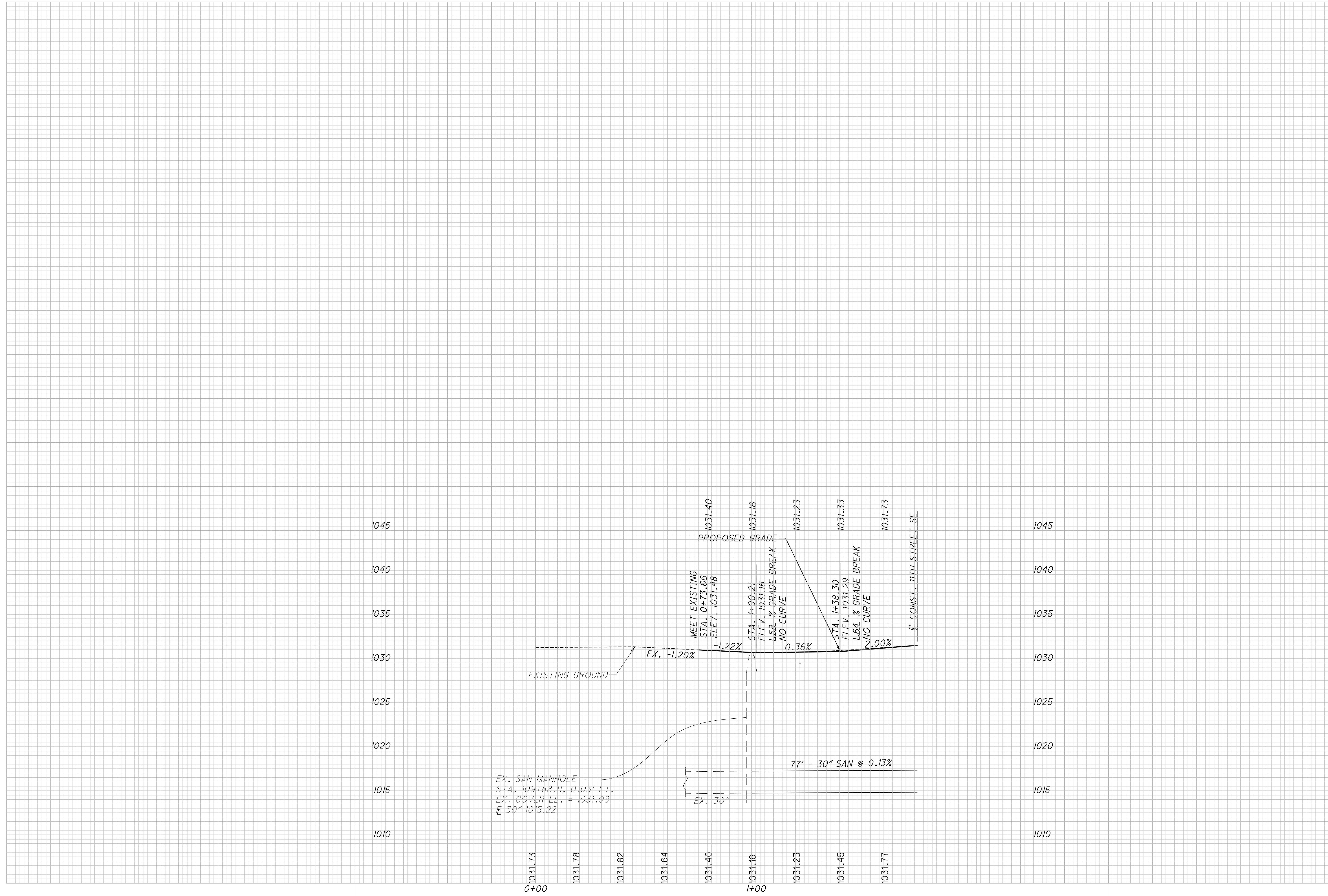
SEEDING/
GEOGRID

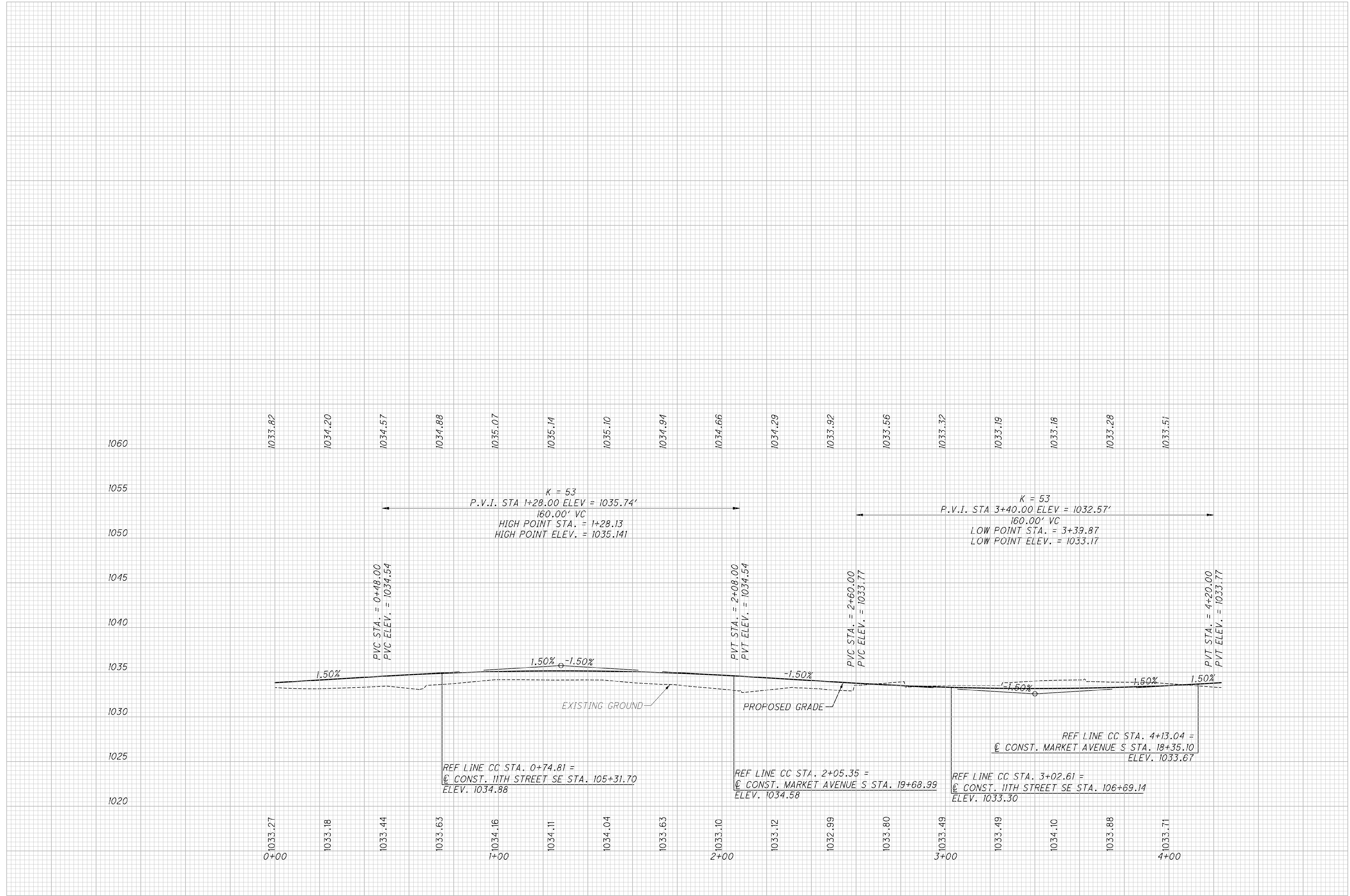
END WIDTH	SO. YDS.
60	
50	
40	
30	
20	
10	
0	
10	
20	
30	
40	
50	
60	

LEGEND
 EXISTING PAVEMENT REMOVAL
 UNSUITABLE SUBGRADE TREATMENT

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JPK	JES
CROSS SECTIONS - CHERRY AVENUE SE STA. 64+50.00 TO STA. 65+00.00					
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)					
				148	302







D-67
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 20+61.00, 16.98' LT
 GRATE EL. = 1032.22'

D-68
 PROP. PRECAST STORM MANHOLE
 (CITY OF CANTON STD NO. 10)
 STA. 20+61.98, 5.76' RT
 COVER EL. = 1032.30'

D-69
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 20+63.00, 21.00' RT
 GRATE EL. = 1032.22'

D-66
 PROP. PRECAST STORM MANHOLE
 (CITY OF CANTON STD NO. 10)
 STA. 19+80.64, 60.25' RT
 COVER EL. = 1032.45'

D-7
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 107+51.00, 18.50' LT
 GRATE EL. = 1032.39'

D-4
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 104+11.00, 18.74' LT
 GRATE EL. = 1032.58'

D-3
 PROP. PRECAST STORM MANHOLE
 (CITY OF CANTON STD NO. 10)
 STA. 103+82.41, 1.96' LT
 COVER EL. = 1032.98'

D-2
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 103+83.00, 19.00' RT
 GRATE EL. = 1032.47'

D-5
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 104+35.00, 19.50' RT
 GRATE EL. = 1032.90'

D-64
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 17+35.00, 17.86' LT
 GRATE EL. = 1032.53'

D-65
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 17+35.00, 17.00' RT
 GRATE EL. = 1032.53'

D-6
 PROP. CURB INLET CATCH BASIN
 (CITY OF CANTON STD NO. 1)
 STA. 107+51.00, 18.50' RT
 GRATE EL. = 1032.39'

NOTES
 FOR REFERENCE LINE CURVE DATA,
 SEE SHEET 5.

FOR CENTERLINE CURVE DATA, SEE
 SHEET 3.

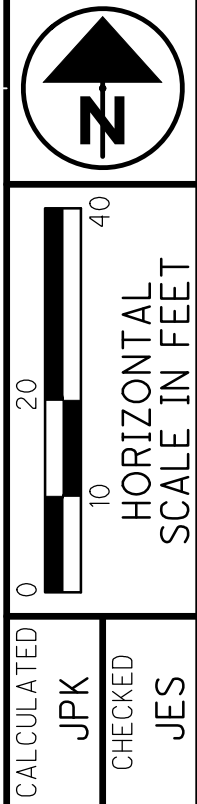
ALL ELEVATIONS AT 10' INTERVAL
 UNLESS OTHERWISE NOTED.

ALL ELEVATIONS ALONG THE CURB
 ARE $\frac{1}{2}$ ELEVATIONS. ADD 6-INCHES
 IN AREAS OF FULL HEIGHT CURB
 AND 1-INCH IN AREAS OF DROP CURB
 TO OBTAIN TOP OF CURB
 ELEVATIONS AT FACE OF CURB

CENTERLINE ELEVATIONS ARE AT
 25' INTERVALS, UNLESS OTHERWISE
 NOTED

ALL STATIONING SHOWN IS ALONG
 THE CENTERLINE OF CONSTRUCTION

(A) STA. 106+01.52 @ CONST. 11TH
 STREET SE =
 STA. 18+94.63 @ CONST. MARKET
 AVENUE S

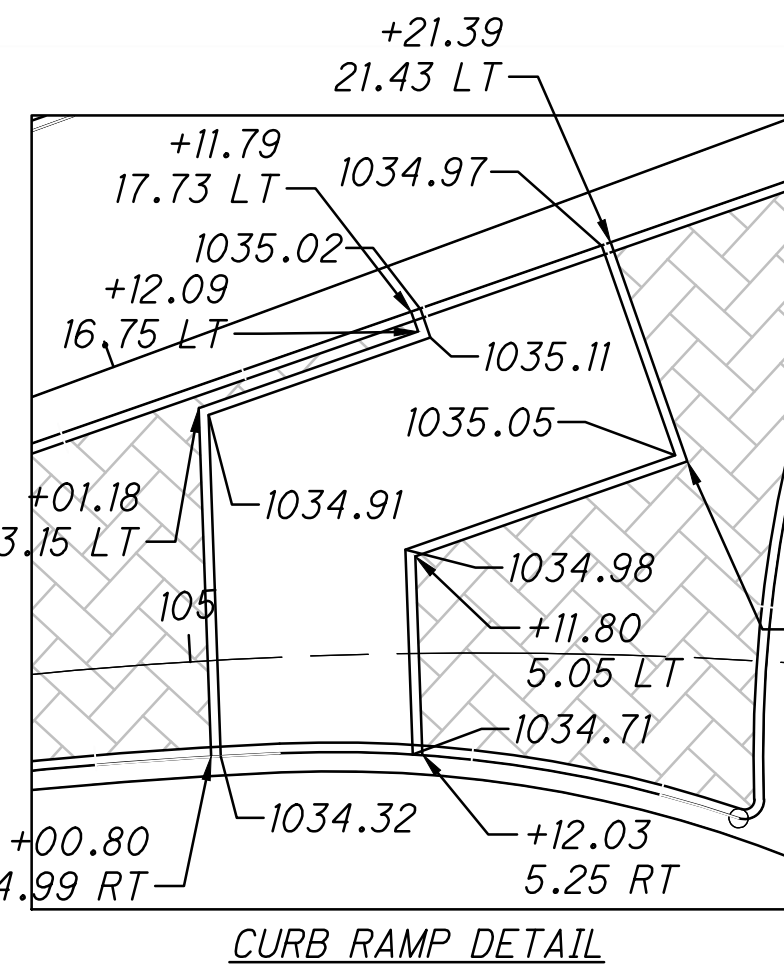
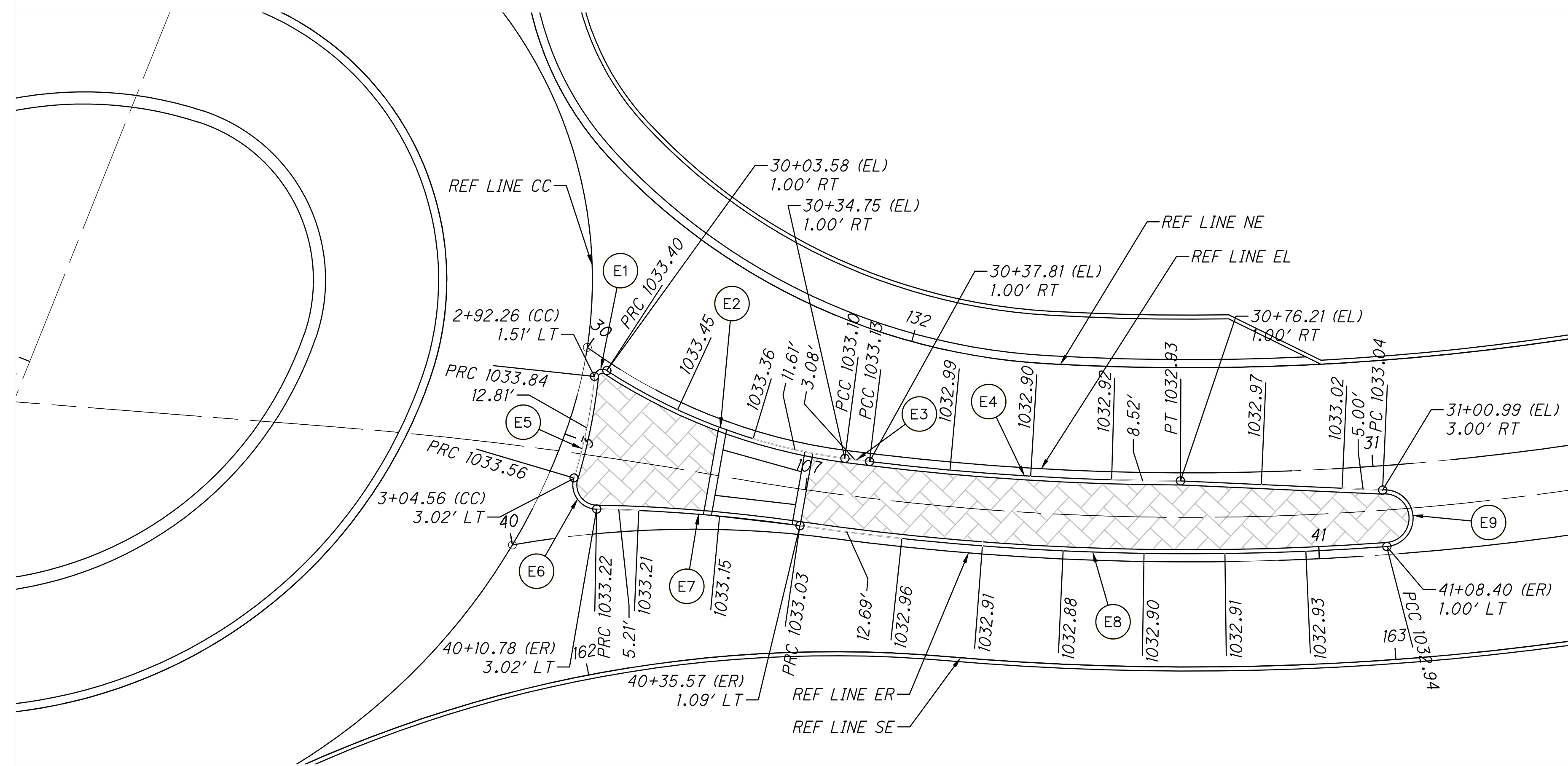


ROUNDABOUT DETAILS

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

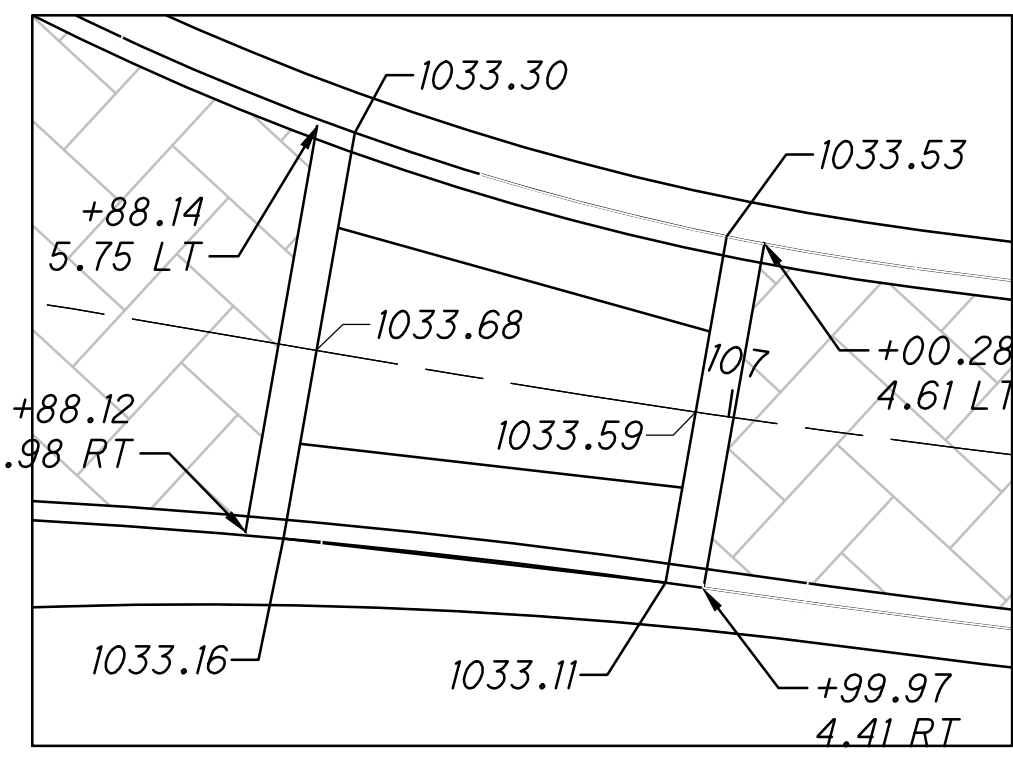
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NOTES:
 FOR REFERENCE LINE CURVE DATA, SEE SHEET 5.
 FOR CENTERLINE CURVE DATA, SEE SHEET 3.
 ALL ELEVATIONS AT 10' INTERVAL UNLESS OTHERWISE NOTED.
 ALL ELEVATIONS AT FACE OF CURB UNLESS OTHERWISE NOTED.

WEST ISLAND		
W1 CURVE DATA D = 180° 00' 00" R = 3.673 T = INFINITY' L = 11.54'	W2 CURVE DATA D = 130° 51' 20" R = 3.000 T = 6.56' L = 6.85'	W3 CURVE DATA D = 23° 38' 16" R = 70.000 T = 14.65' L = 28.88'
W4 CURVE DATA D = 11° 36' 17" R = 245.000 T = 24.90' L = 49.62'	W5 CURVE DATA D = 21° 03' 14" R = 66.000 T = 12.26' L = 24.25'	W6 CURVE DATA D = 110° 26' 15" R = 1.000 T = 1.44' L = 1.93'



EAST ISLAND		
E1 CURVE DATA D = 116° 51' 56" R = 1.000 T = 1.63' L = 2.04'	E2 CURVE DATA D = 25° 30' 40" R = 71.000 T = 16.07' L = 31.61'	E3 CURVE DATA D = 0° 32' 29" R = 325.500 T = 1.54' L = 3.08'
E4 CURVE DATA D = 6° 46' 47" R = 325.500 T = 19.28' L = 38.52'	E5 CURVE DATA D = 10° 29' 10" R = 70.000 T = 6.42' L = 12.81'	E6 CURVE DATA D = 105° 35' 44" R = 3.000 T = 3.95' L = 5.53'
E7 CURVE DATA D = 7° 13' 15" R = 200.000 T = 12.62' L = 25.21'	E8 CURVE DATA D = 12° 27' 08" R = 334.500 T = 36.49' L = 72.70'	E9 CURVE DATA D = 180° 00' 00" R = 3.500 T = INFINITY' L = 11.00'

SPLITTER ISLAND DETAILS - EAST AND WEST

NOTES:

FOR REFERENCE LINE CURVE DATA, SEE SHEET 5.

FOR CENTERLINE CURVE DATA, SEE SHEET 3.

ALL ELEVATIONS AT 10' INTERVAL UNLESS OTHERWISE NOTED.

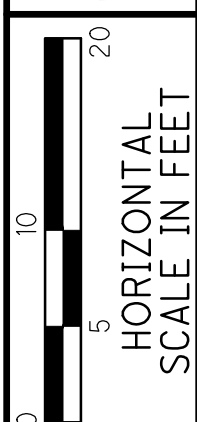
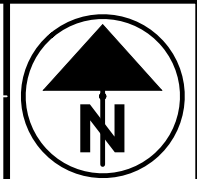
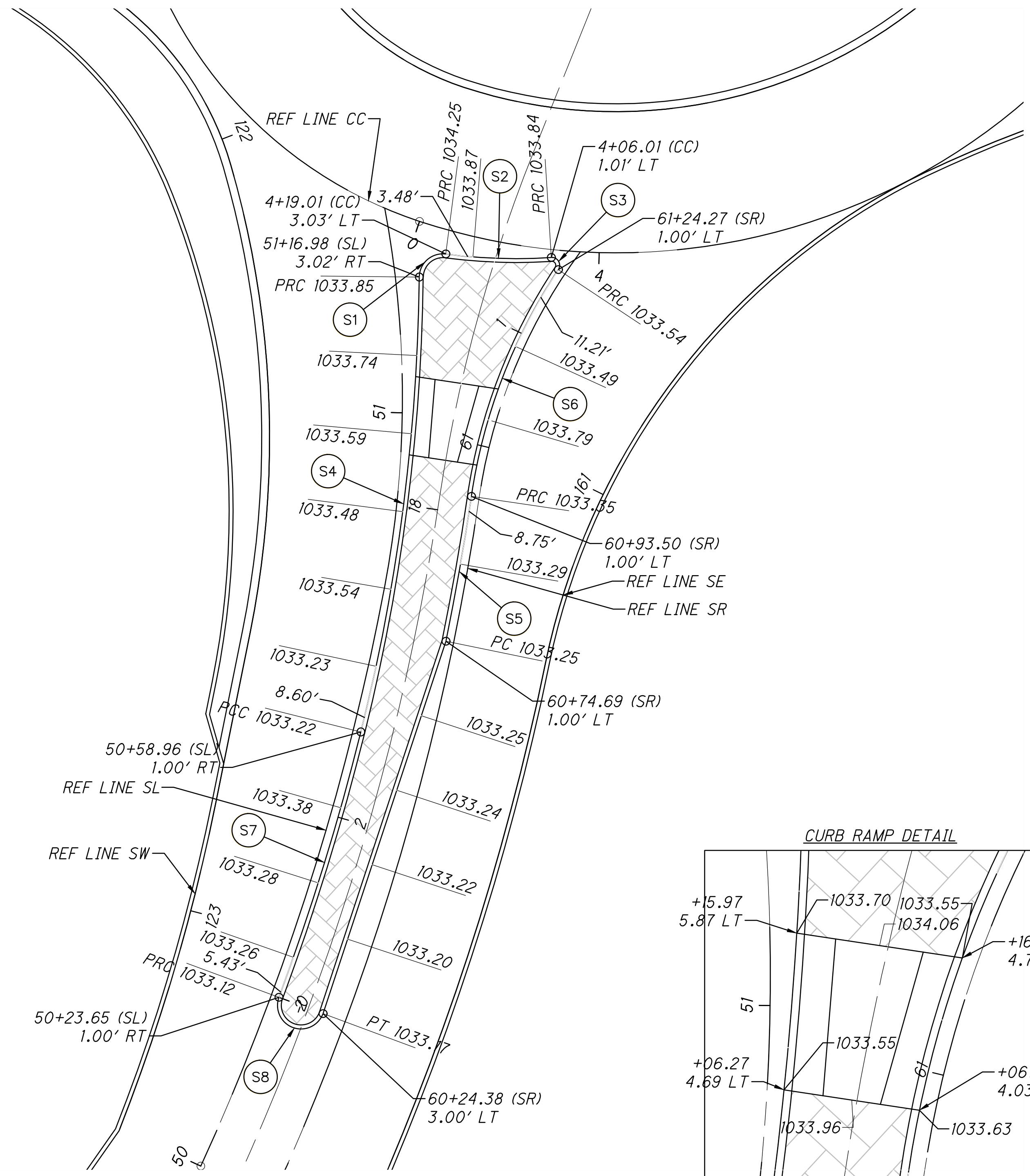
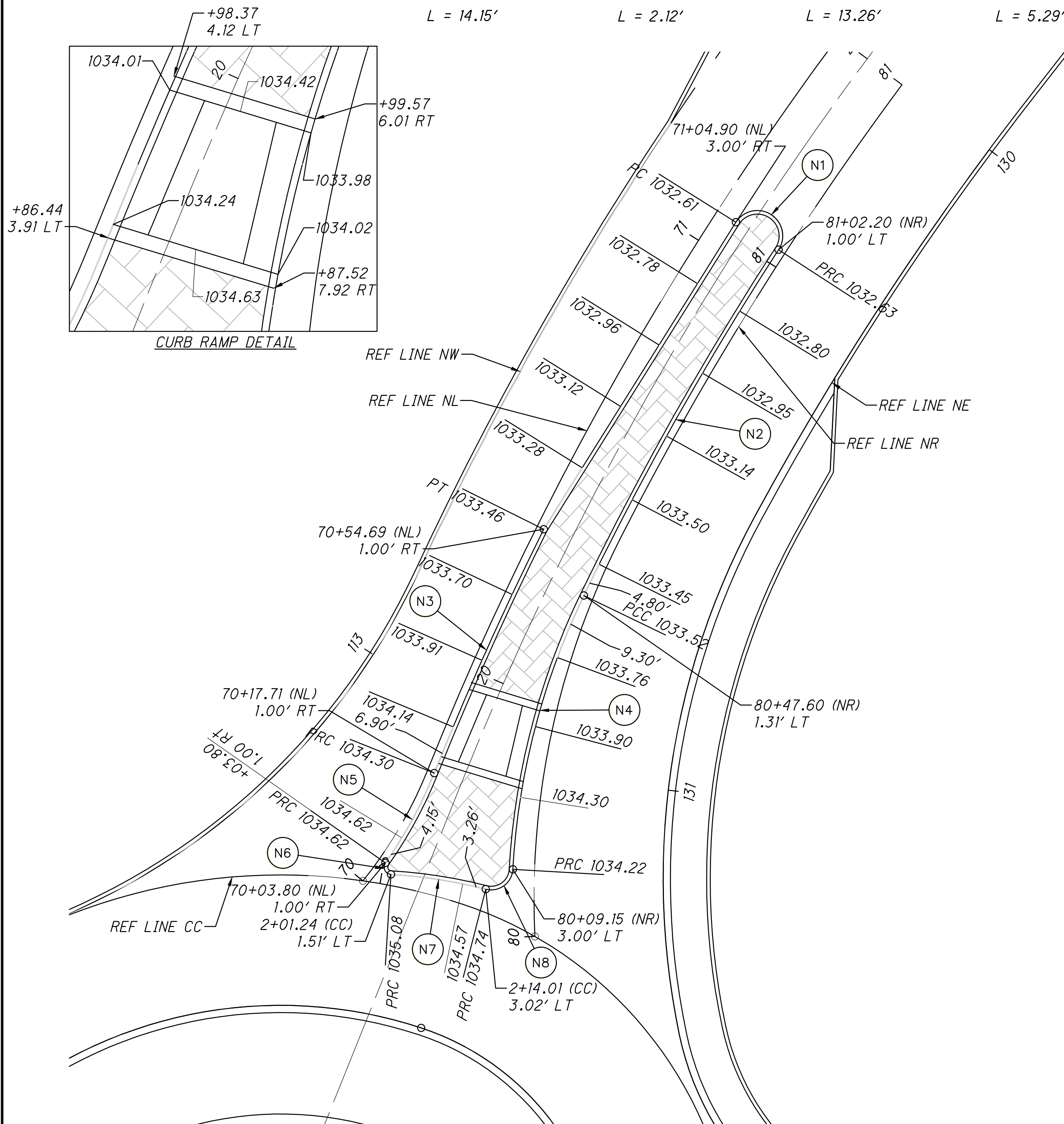
ALL ELEVATIONS AT FACE OF CURB UNLESS OTHERWISE NOTED.

NORTH ISLAND

N1 CURVE DATA D = 180° 00' 00" R = 3.500 T = INFINITY' L = 11.00'	N2 CURVE DATA D = 7° 08' 10" R = 440.000 T = 27.44' L = 54.80'	N3 CURVE DATA D = 4° 42' 31" R = 449.000 T = 18.46' L = 36.90'	N4 CURVE DATA D = 22° 31' 04" R = 100.000 T = 19.91' L = 39.30'
N5 CURVE DATA D = 13° 17' 16" R = 61.000 T = 7.11' L = 14.15'	N6 CURVE DATA D = 121° 39' 20" R = 1.000 T = 1.79' L = 2.12'	N7 CURVE DATA D = 10° 51' 12" R = 70.000 T = 6.65' L = 13.26'	N8 CURVE DATA D = 101° 02' 17" R = 3.000 T = 3.64' L = 5.29'

SOUTH ISLAND

S1 CURVE DATA D = 96° 49' 54" R = 3.000 T = 3.38' L = 5.07'	S2 CURVE DATA D = 11° 01' 57" R = 70.000 T = 6.76' L = 13.48'	S3 CURVE DATA D = 127° 10' 13" R = 1.000 T = 2.01' L = 2.22'	S4 CURVE DATA D = 13° 25' 51" R = 250.000 T = 29.44' L = 58.60'
S5 CURVE DATA D = 3° 14' 44" R = 331.000 T = 9.38' L = 18.75'	S6 CURVE DATA D = 25° 10' 58" R = 71.000 T = 15.86' L = 31.21'	S7 CURVE DATA D = 6° 17' 02" R = 323.000 T = 17.73' L = 35.43'	S8 CURVE DATA D = 180° 00' 00" R = 3.000 T = INFINITY' L = 9.42'



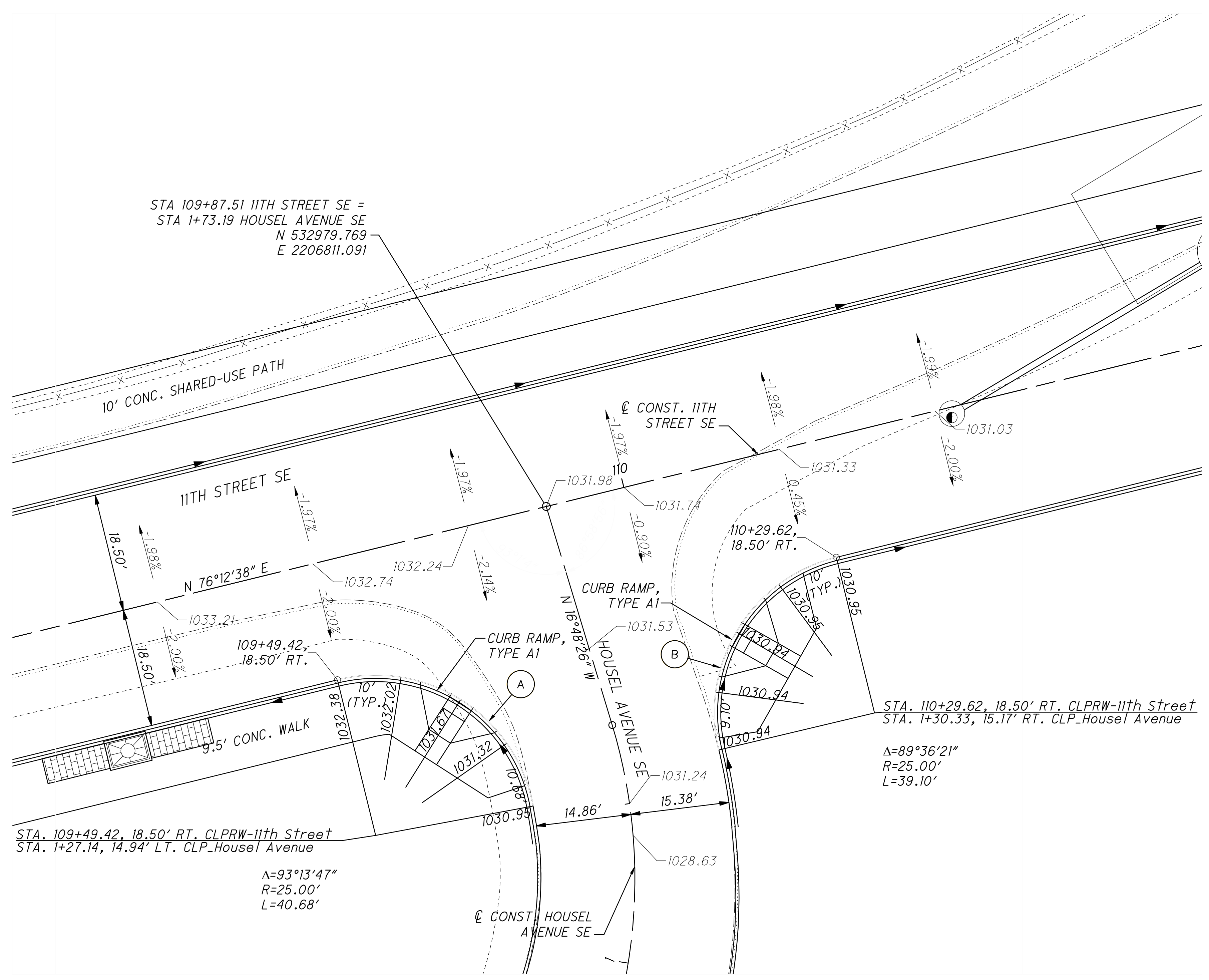
CALCULATED JPK
CHECKED JES

SPLITTER ISLAND DETAILS - NORTH AND SOUTH

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

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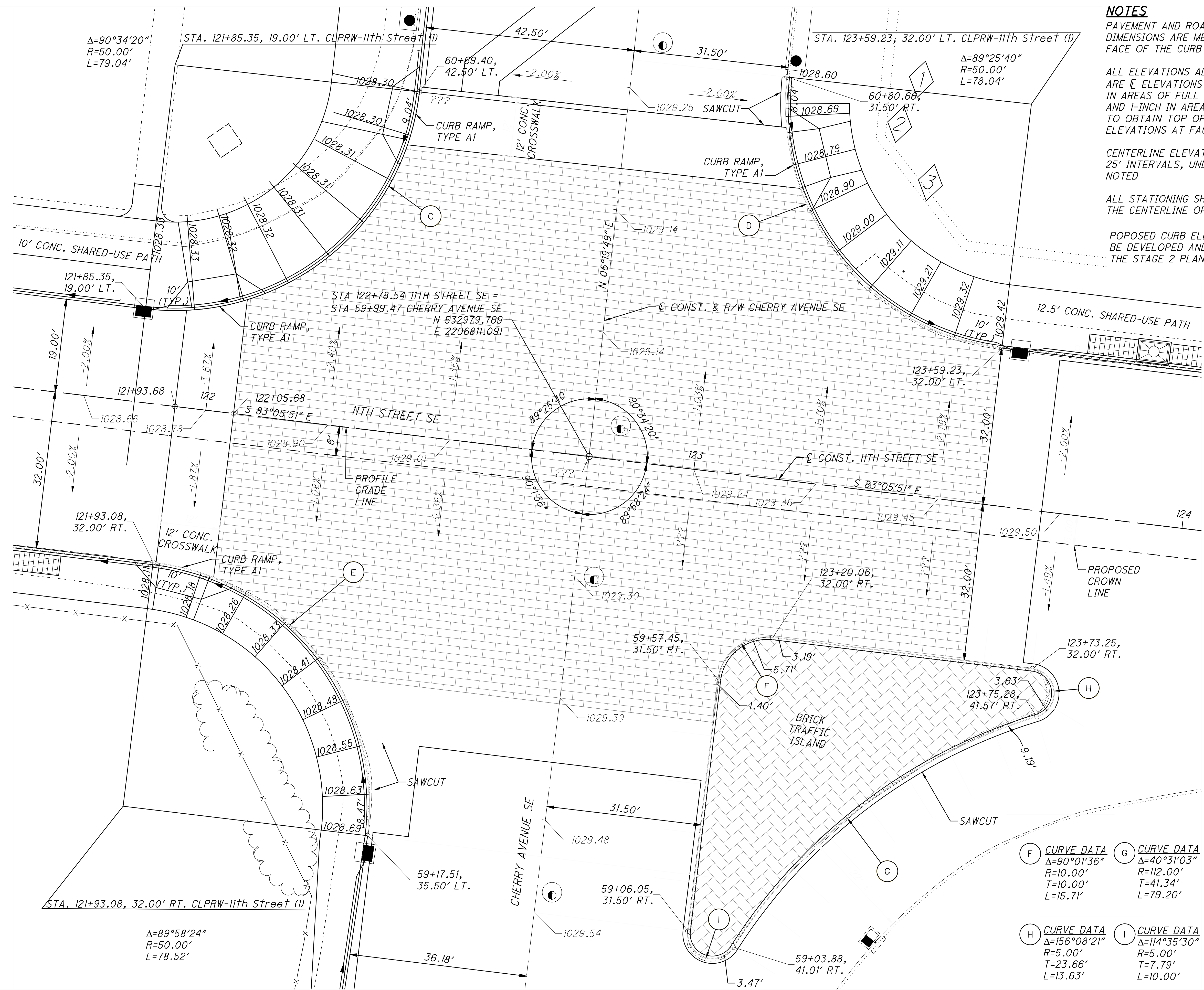
NOTES
 PAVEMENT AND ROADWAY DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB
 ALL ELEVATIONS ALONG THE CURB ARE \bar{E} ELEVATIONS. ADD 6-INCHES IN AREAS OF FULL HEIGHT CURB AND 1-INCH IN AREAS OF DROP CURB TO OBTAIN TOP OF CURB ELEVATIONS AT FACE OF CURB
 CENTERLINE ELEVATIONS ARE AT 25' INTERVALS, UNLESS OTHERWISE NOTED
 ALL STATIONING SHOWN IS ALONG THE CENTERLINE OF CONSTRUCTION

HORIZONTAL SCALE IN FEET	
CALCULATED	JPK
CHECKED	JES

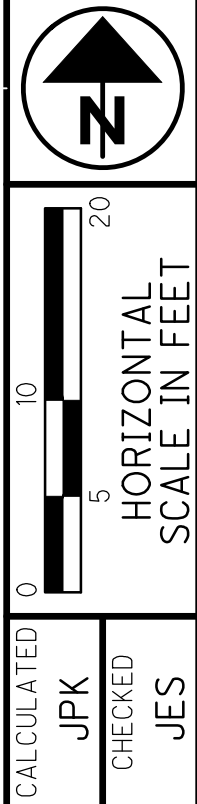
**INTERSECTION DETAIL
 11TH STREET SE AND HOUSE AVENUE SE**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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NOTES
 PAVEMENT AND ROADWAY DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB
 ALL ELEVATIONS ALONG THE CURB ARE \bar{E} ELEVATIONS. ADD 6-INCHES IN AREAS OF FULL HEIGHT CURB AND 1-INCH IN AREAS OF DROP CURB TO OBTAIN TOP OF CURB ELEVATIONS AT FACE OF CURB
 CENTERLINE ELEVATIONS ARE AT 25' INTERVALS, UNLESS OTHERWISE NOTED
 ALL STATIONING SHOWN IS ALONG THE CENTERLINE OF CONSTRUCTION.
 POPOSED CURB ELEVATIONS WILL BE DEVELOPED AND INCLUDED WITH THE STAGE 2 PLANS.



**INTERSECTION DETAIL
 11TH STREET SE AND CHERRY AVENUE SE**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

$\Delta=90^{\circ}34'20''$
 $R=50.00'$
 $L=79.04'$

$\Delta=89^{\circ}25'40''$
 $R=50.00'$
 $L=78.04'$

$\Delta=89^{\circ}58'24''$
 $R=50.00'$
 $L=78.52'$

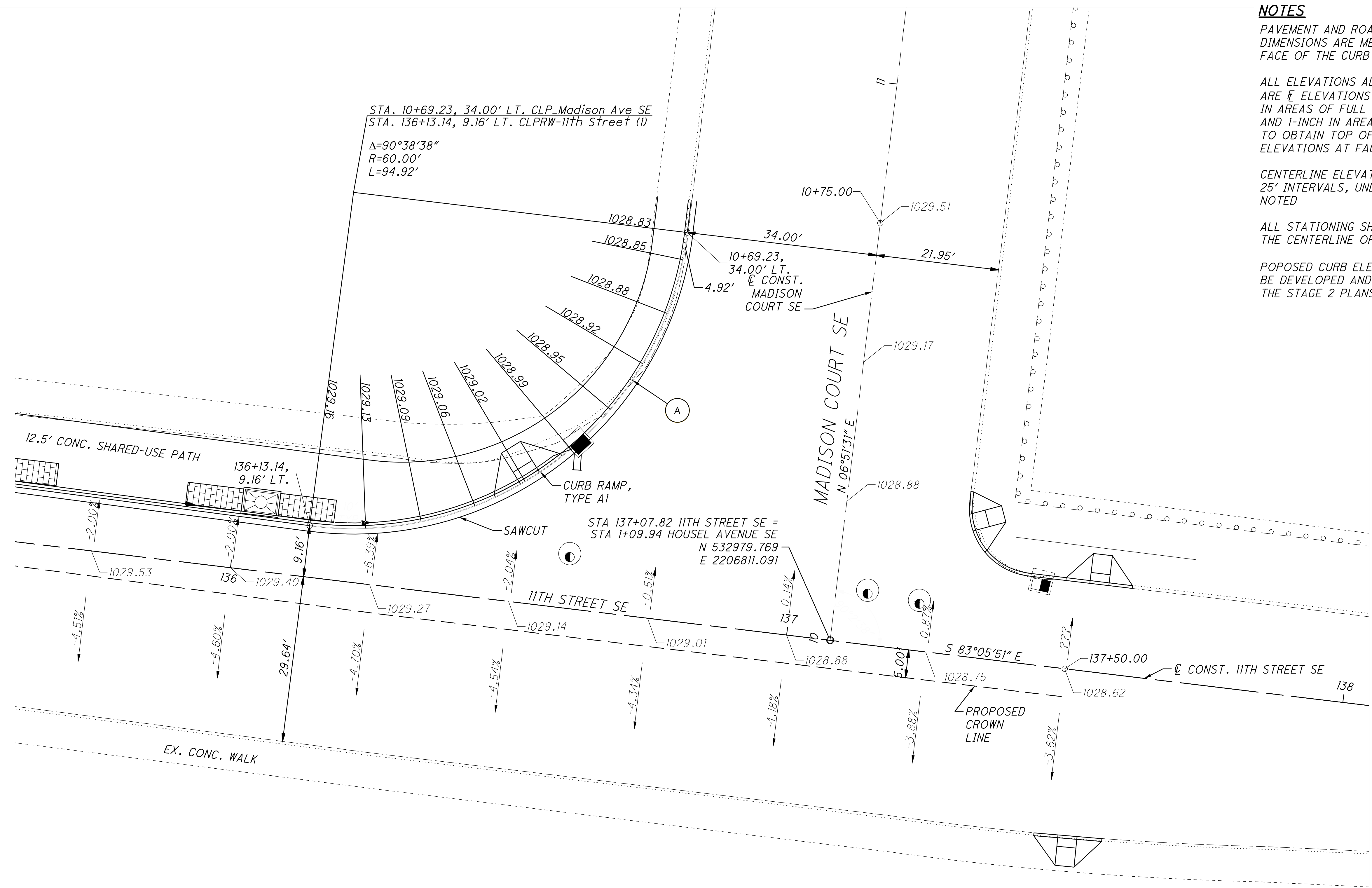
F CURVE DATA
 $\Delta=90^{\circ}01'36''$
 $R=10.00'$
 $T=10.00'$
 $L=15.71'$

G CURVE DATA
 $\Delta=40^{\circ}31'03''$
 $R=112.00'$
 $T=41.34'$
 $L=79.20'$

H CURVE DATA
 $\Delta=156^{\circ}08'21''$
 $R=5.00'$
 $T=23.66'$
 $L=13.63'$

I CURVE DATA
 $\Delta=114^{\circ}35'30''$
 $R=5.00'$
 $T=7.79'$
 $L=10.00'$

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NOTES

PAVEMENT AND ROADWAY DIMENSIONS ARE MEASURED TO THE FACE OF THE CURB

ALL ELEVATIONS ALONG THE CURB ARE \bar{C} ELEVATIONS. ADD 6-INCHES IN AREAS OF FULL HEIGHT CURB AND 1-INCH IN AREAS OF DROP CURB TO OBTAIN TOP OF CURB ELEVATIONS AT FACE OF CURB

CENTERLINE ELEVATIONS ARE AT 25' INTERVALS, UNLESS OTHERWISE NOTED

ALL STATIONING SHOWN IS ALONG THE CENTERLINE OF CONSTRUCTION.

PROPOSED CURB ELEVATIONS WILL BE DEVELOPED AND INCLUDED WITH THE STAGE 2 PLANS.

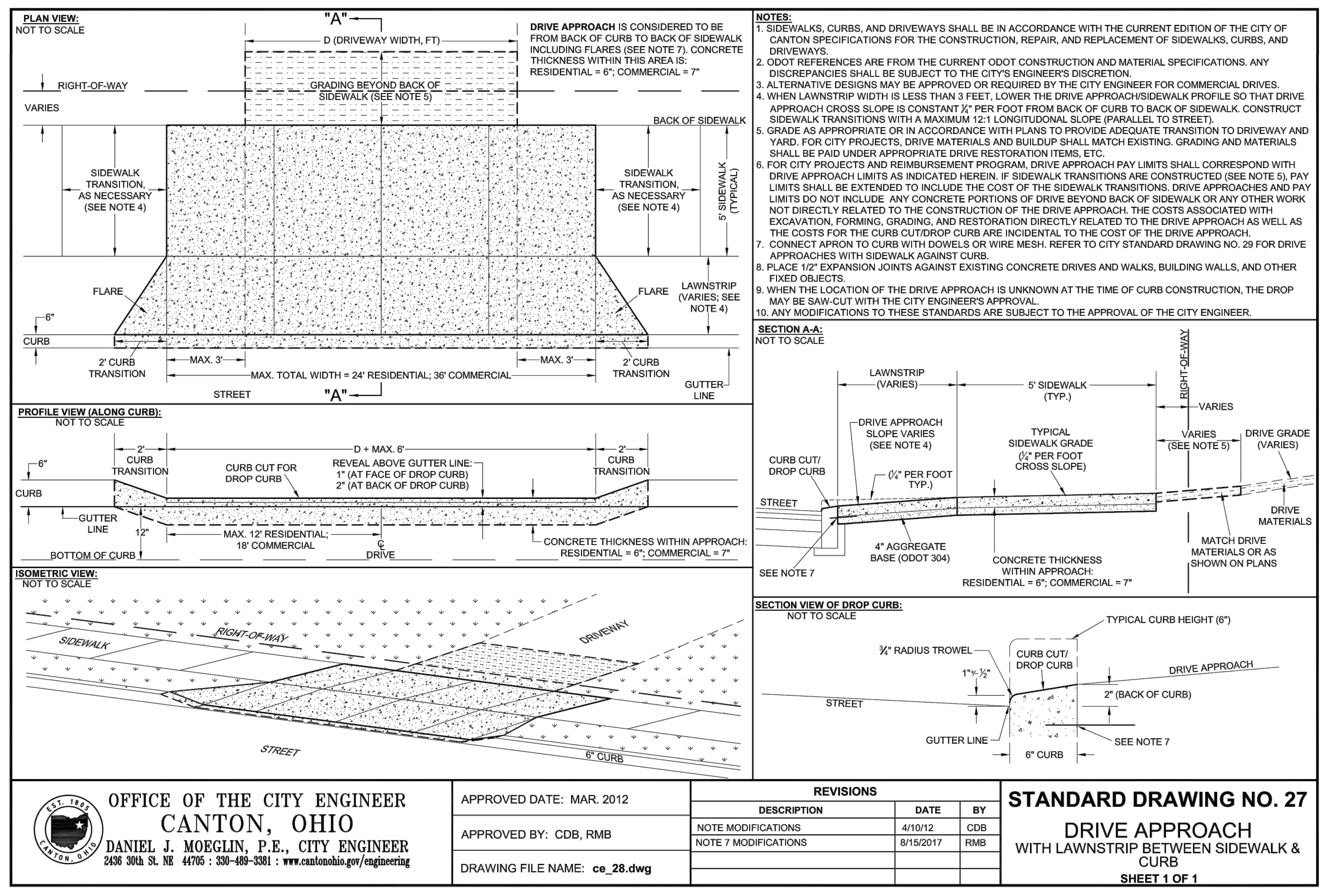
CALCULATED JPK
 CHECKED JES

0 5 10 20
 HORIZONTAL SCALE IN FEET

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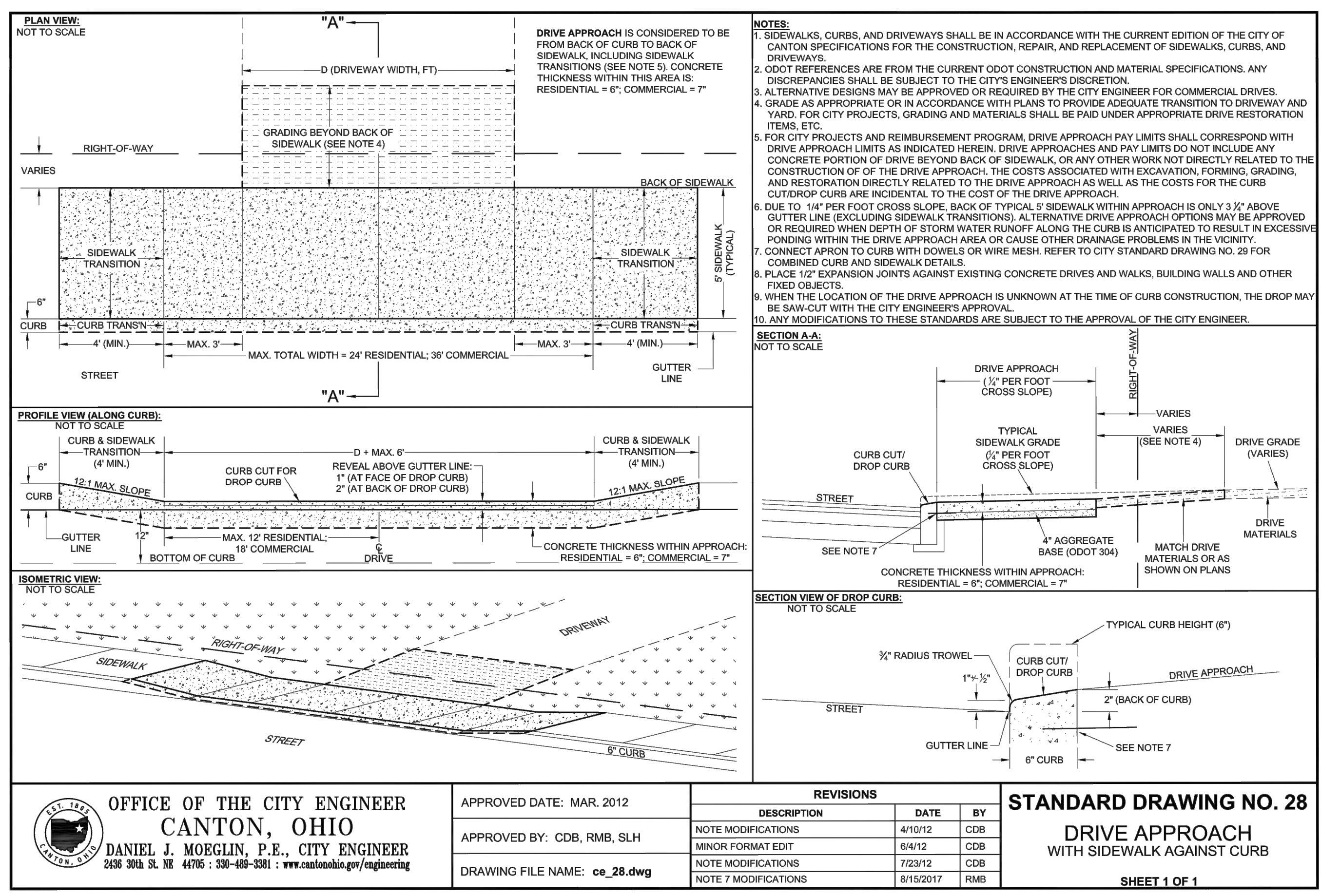
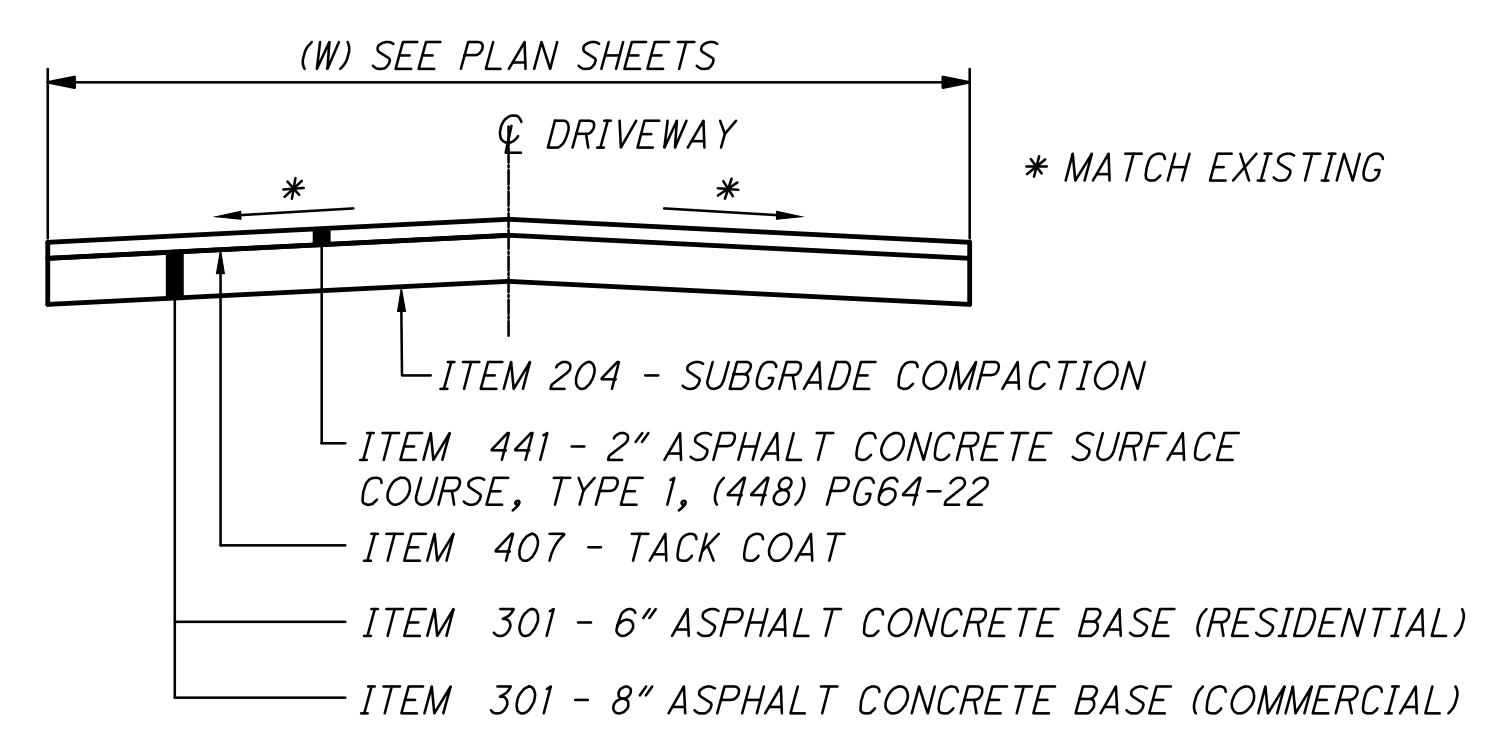
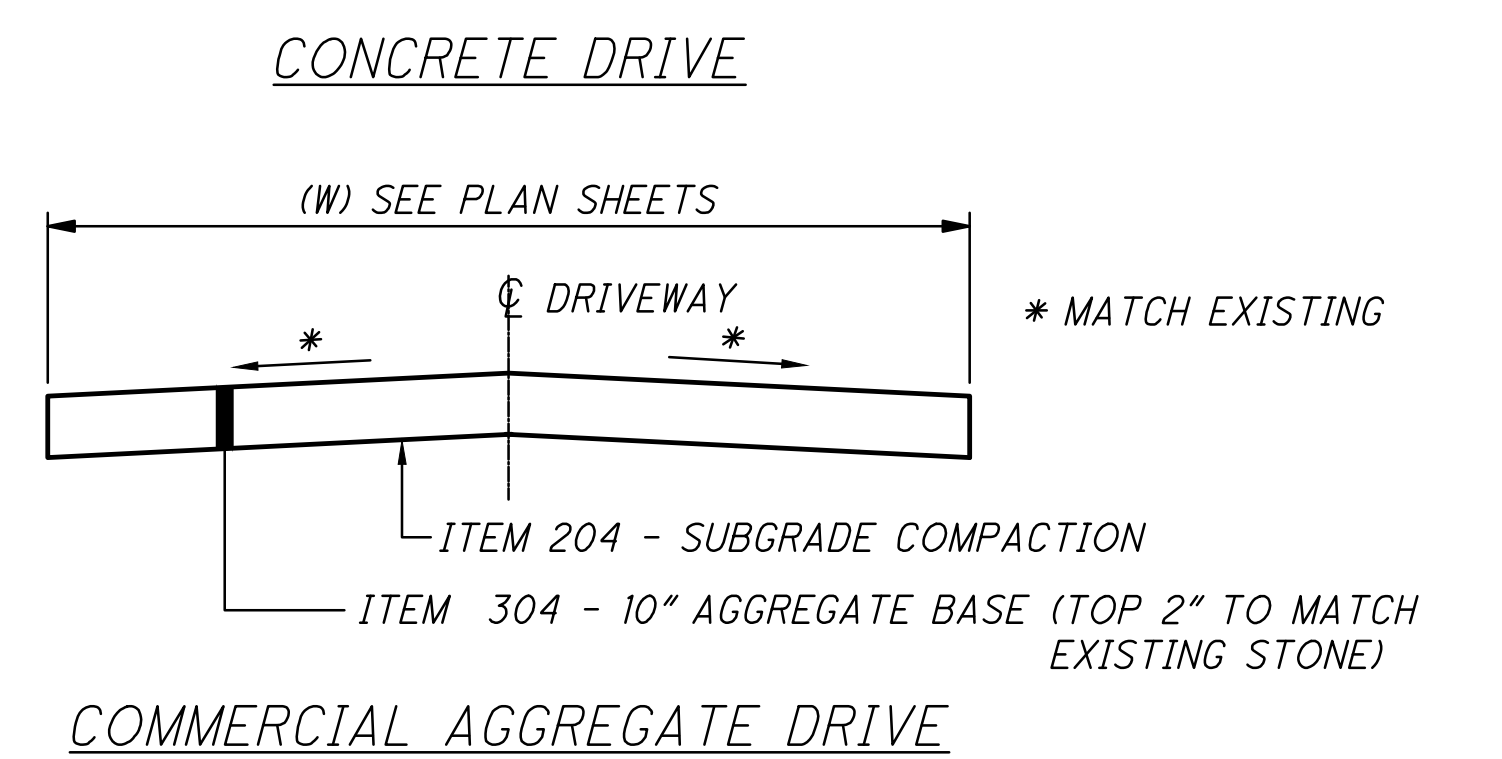
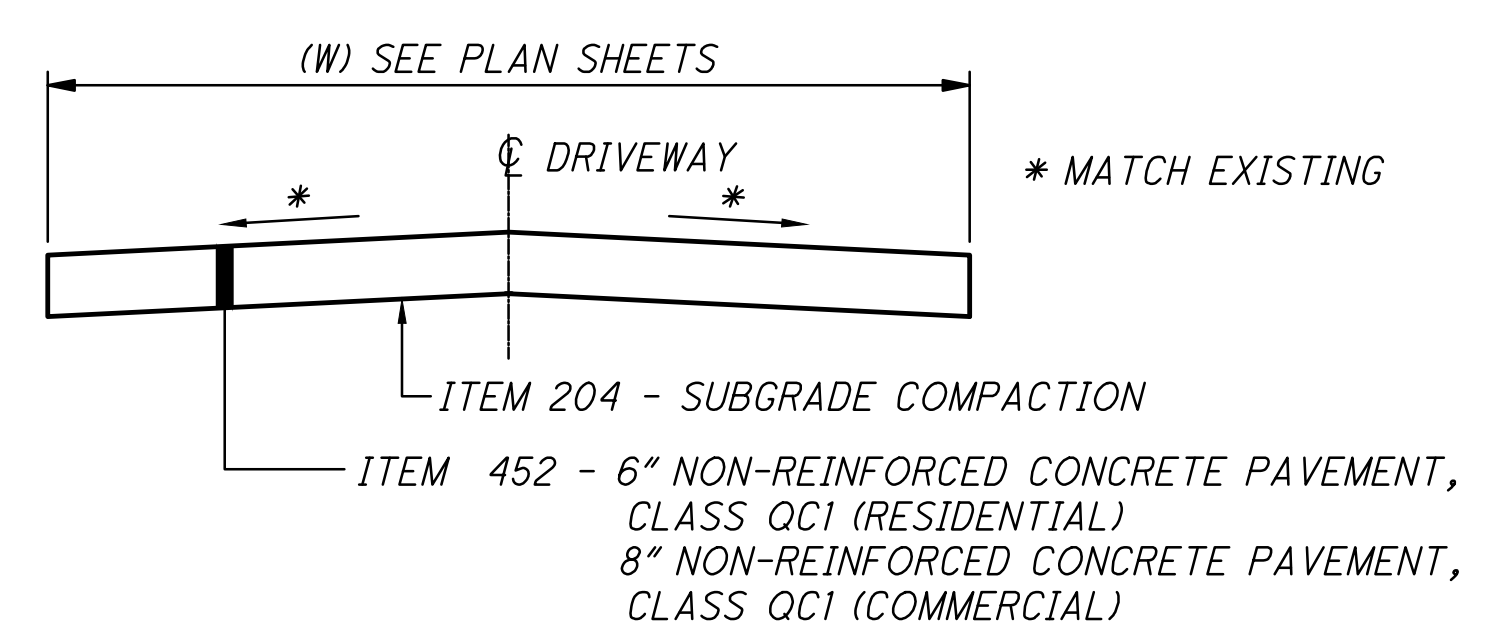
**INTERSECTION DETAIL
 11TH STREET SE AND MADISON COURT SE**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**



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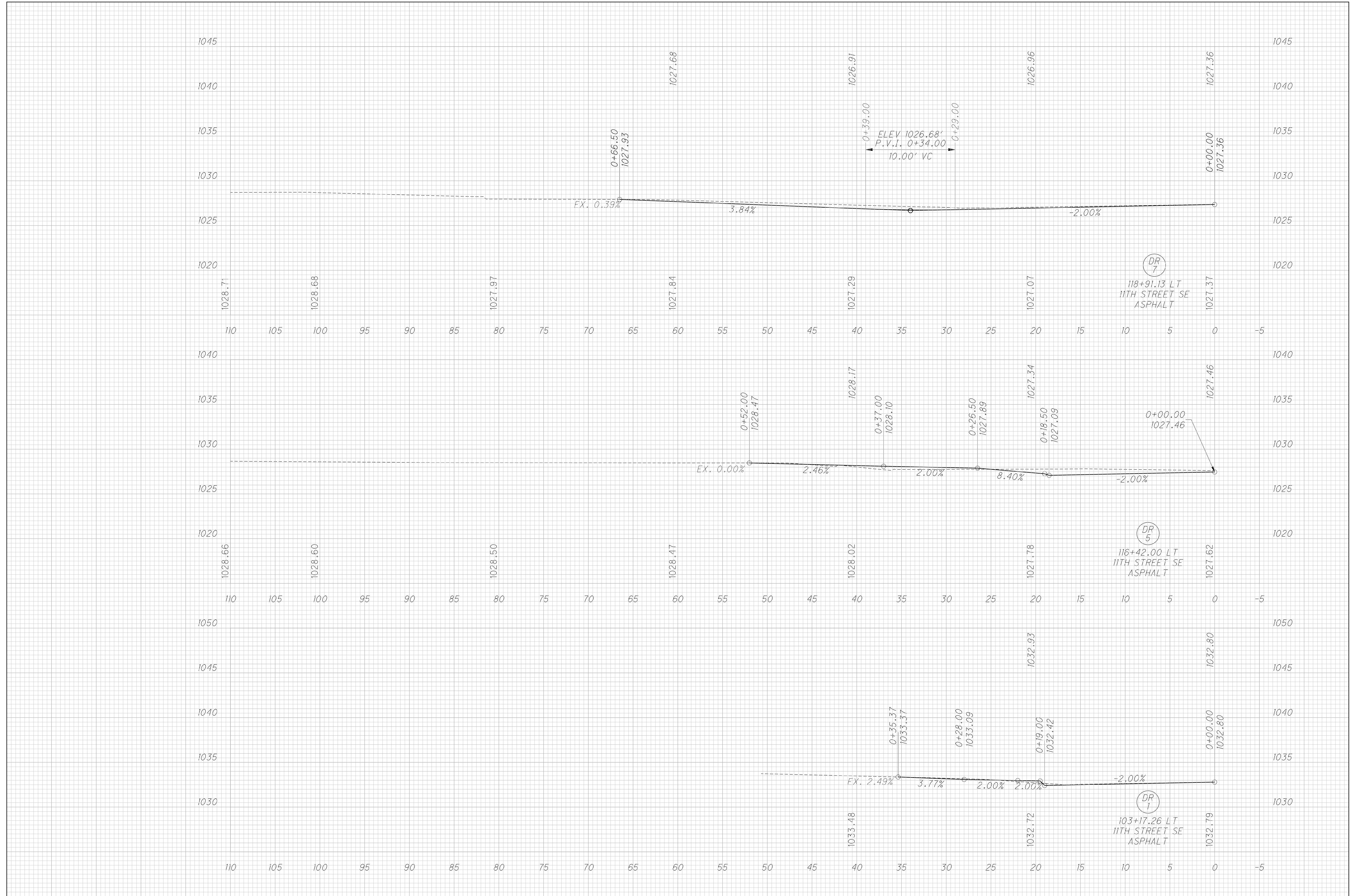
APPROVED DATE: MAR. 2012
APPROVED BY: CDB, RMB
DRAWING FILE NAME: ce_28.dwg



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2436 30th St. NE 44705 • 330-489-3381 • www.cantonohio.gov/engineering

APPROVED DATE: MAR. 2012
APPROVED BY: CDB, RMB, SLH
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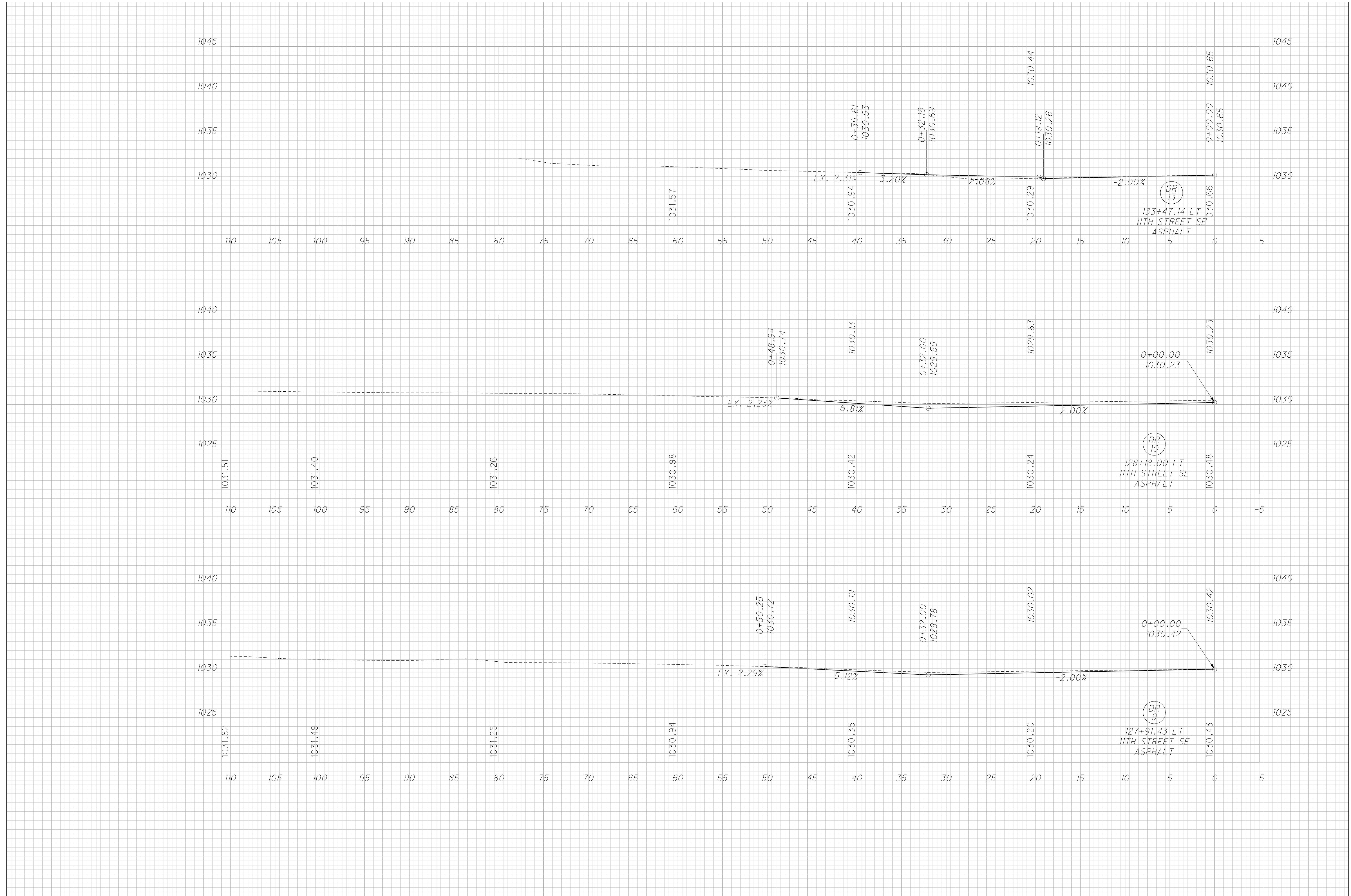
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JES

DRIVE PROFILES - 11TH STREET SE - LEFT

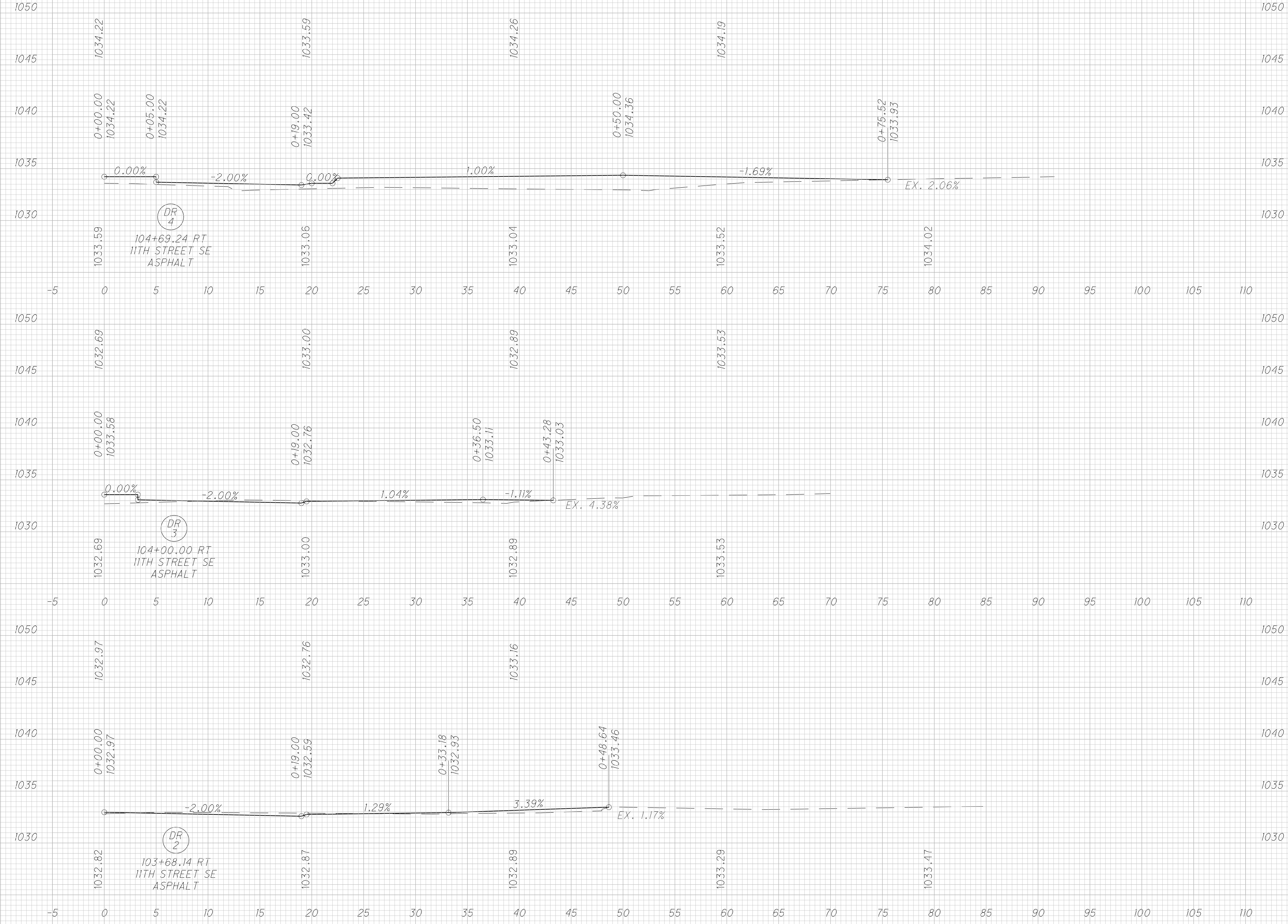
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)



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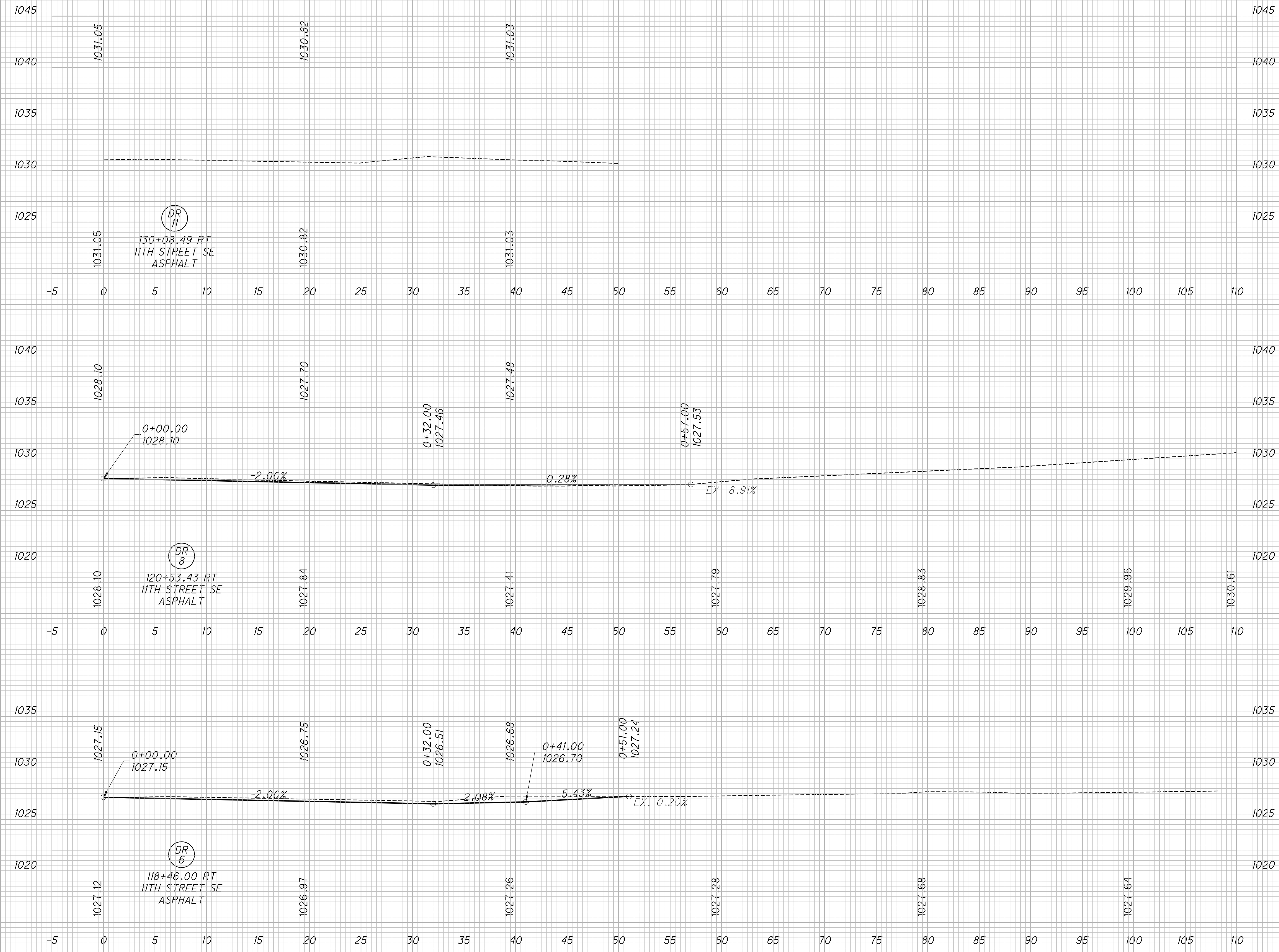
DRIVE PROFILES - 11TH STREET SE - LEFT

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**



DRIVE PROFILES - 11TH STREET SE - RIGHT

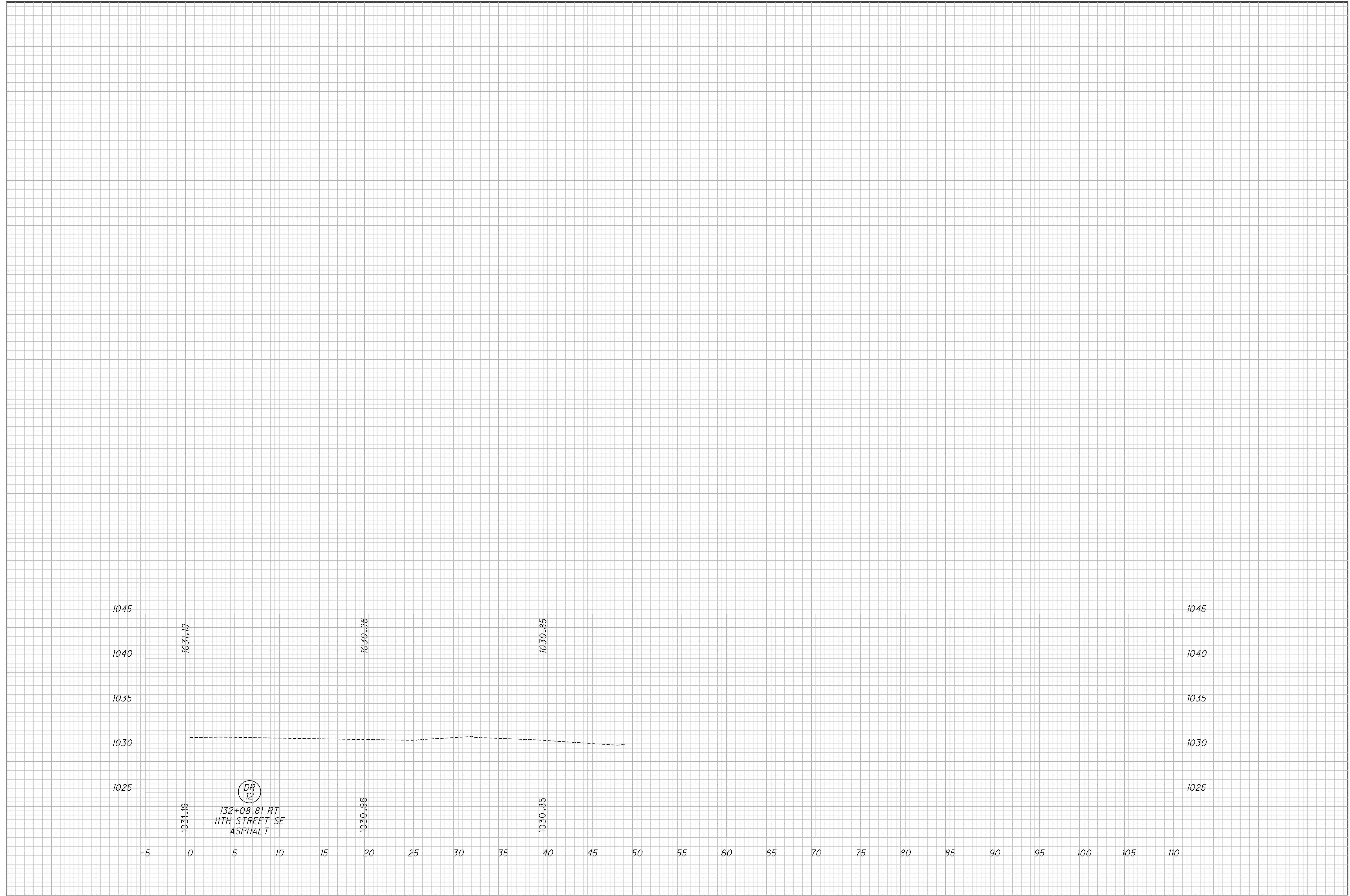
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)



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JPK
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JES

DRIVE PROFILES - 11TH STREET SE - RIGHT

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

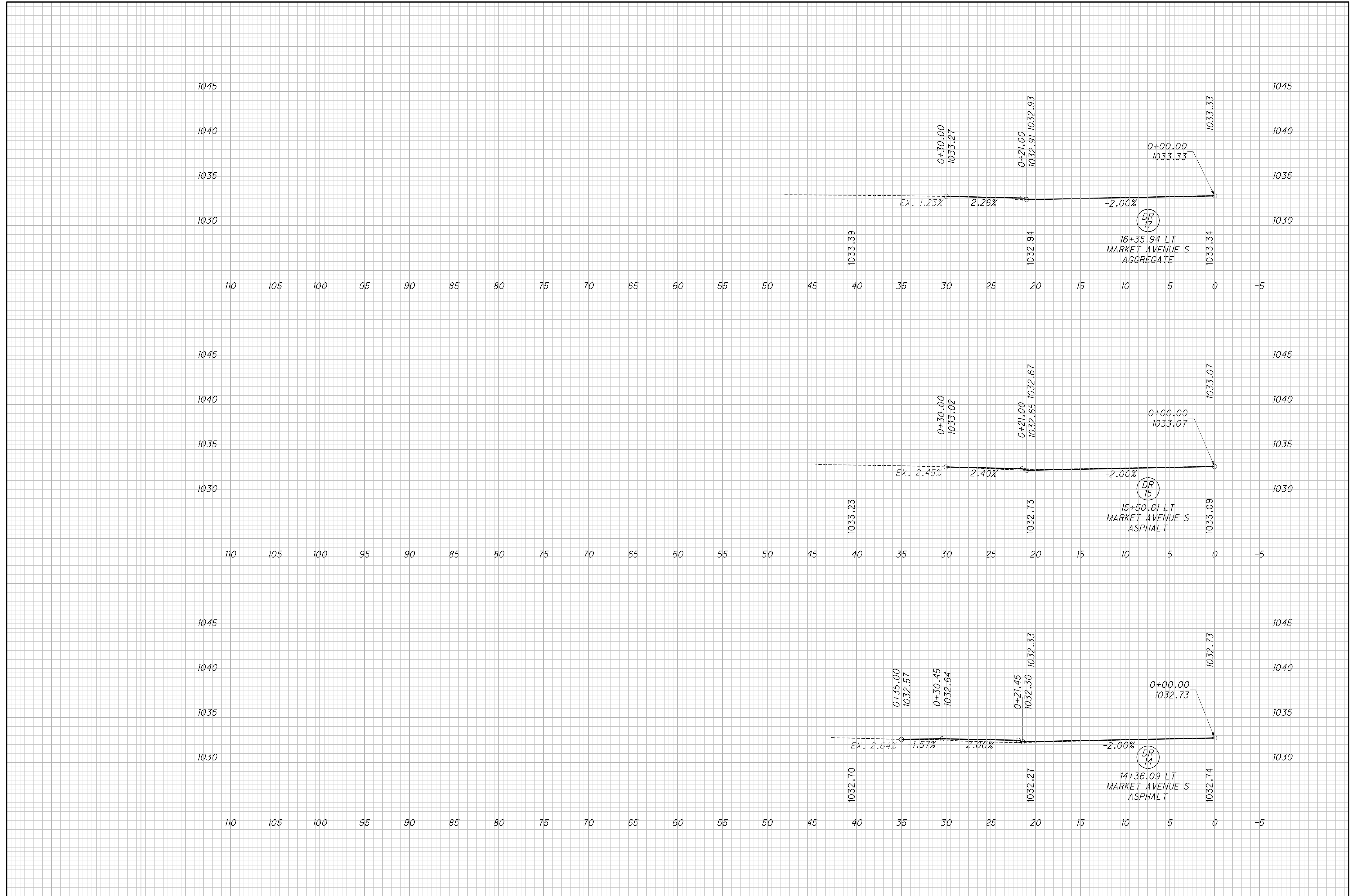


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DRIVE PROFILES - 11TH STREET SE - RIGHT

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

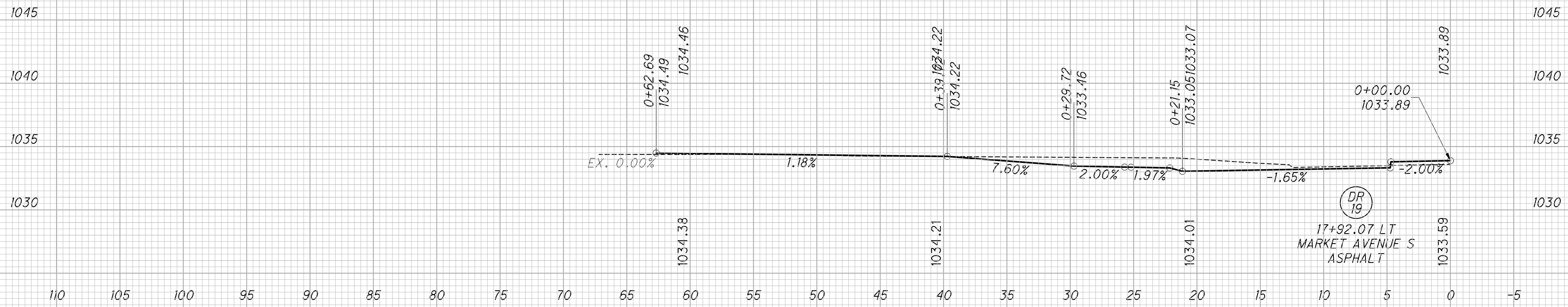
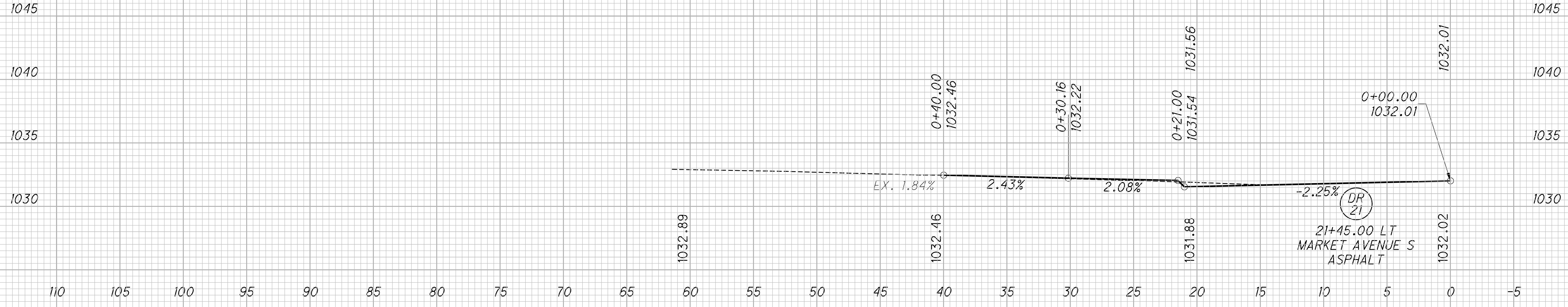
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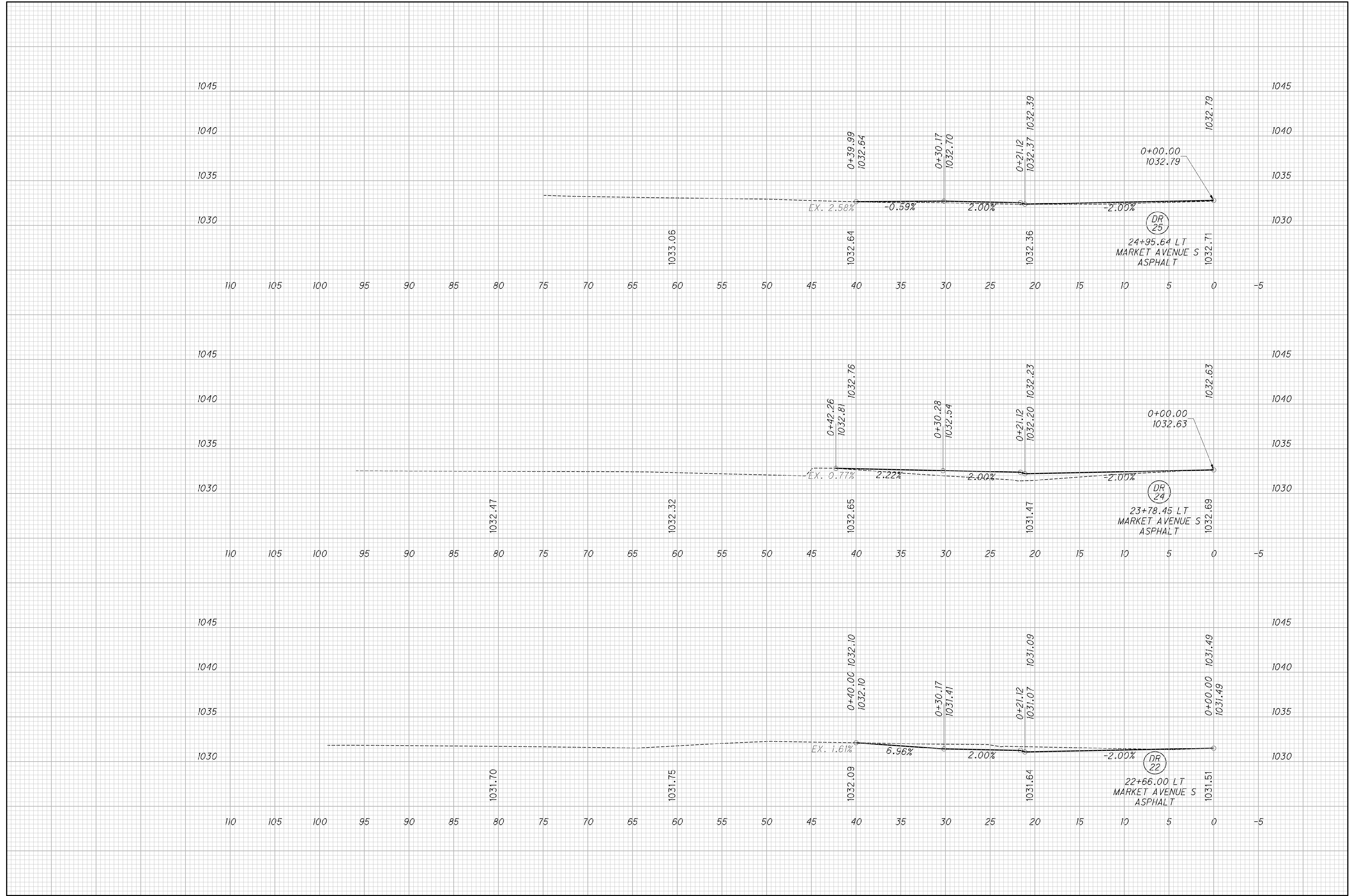
DRIVE PROFILES - MARKET AVENUE S - LEFT

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



DRIVE PROFILES - MARKET AVENUE S - LEFT

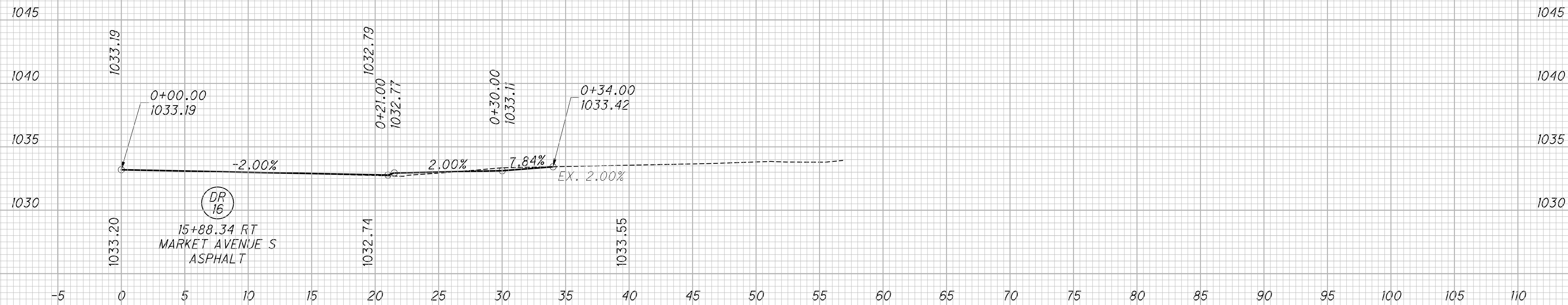
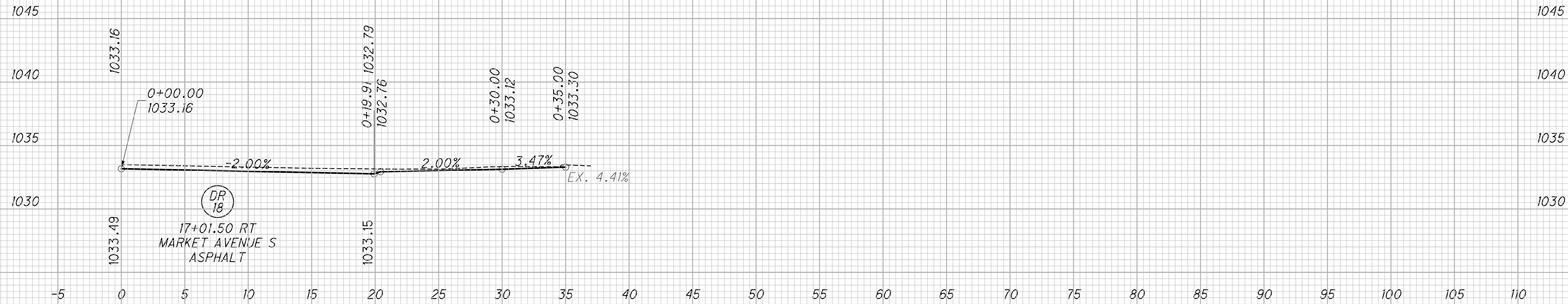
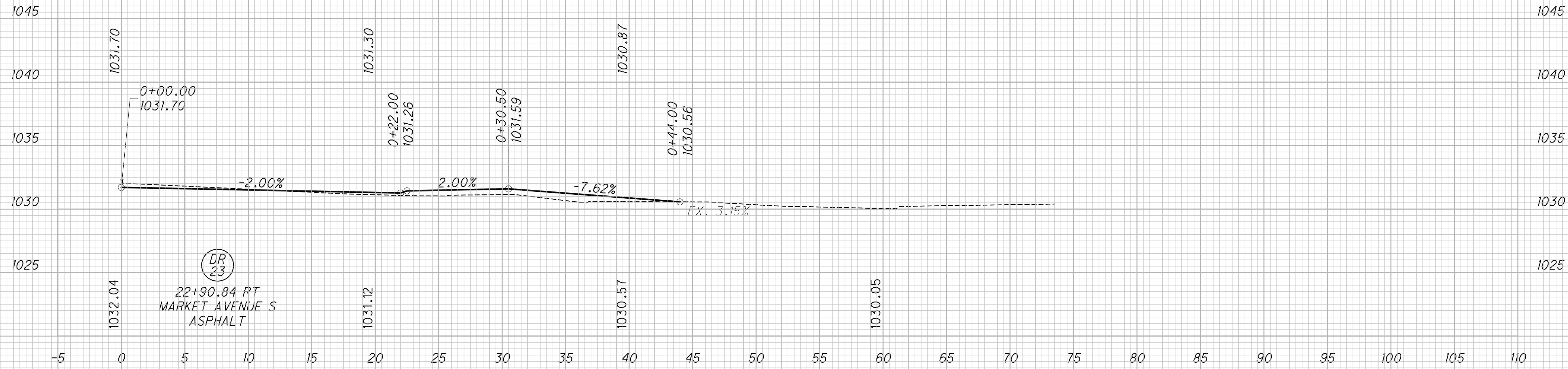
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



CALCULATED
JPK
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JES

DRIVE PROFILES - MARKET AVENUE S - LEFT

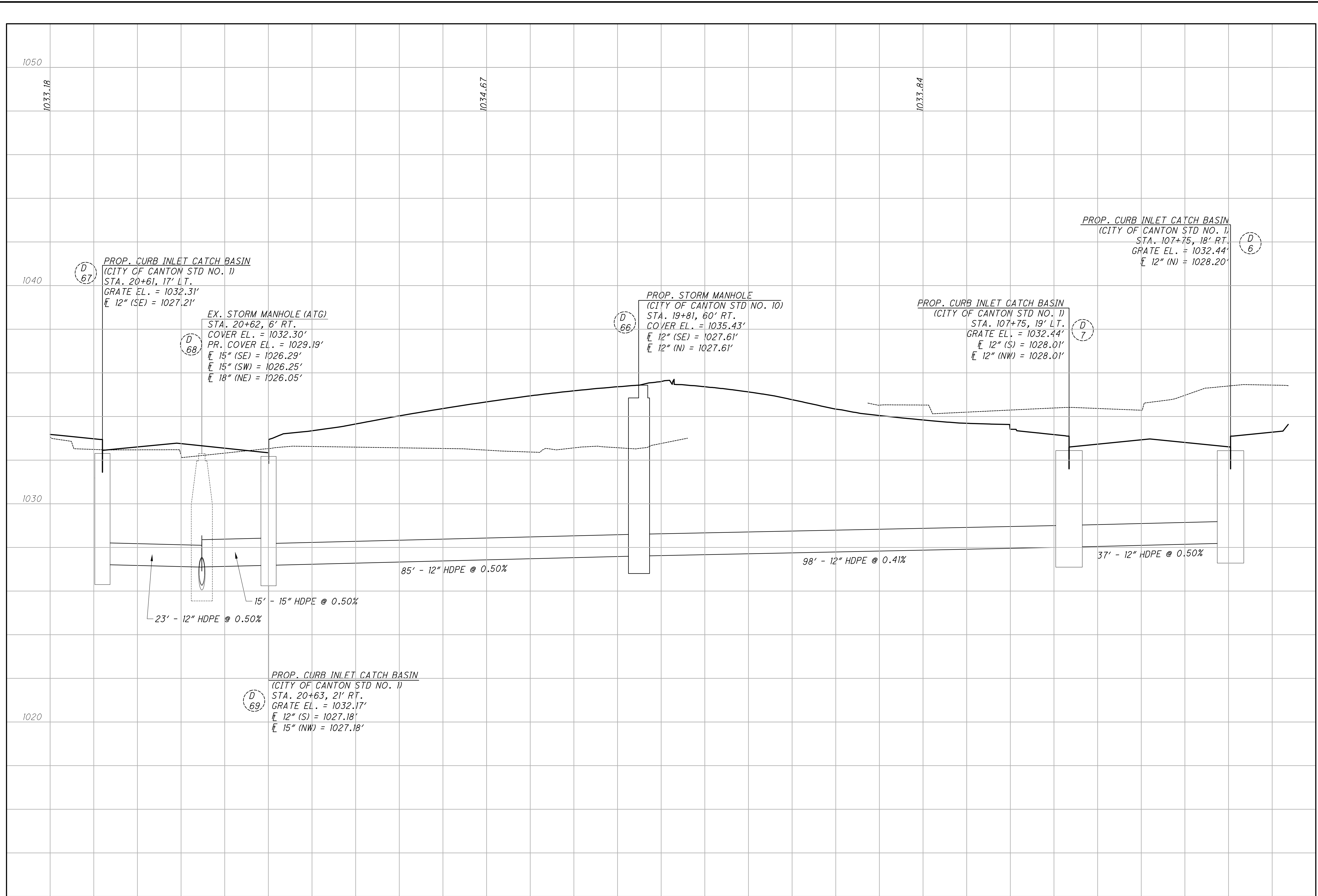
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



DRIVE PROFILES - MARKET AVENUE S - RIGHT

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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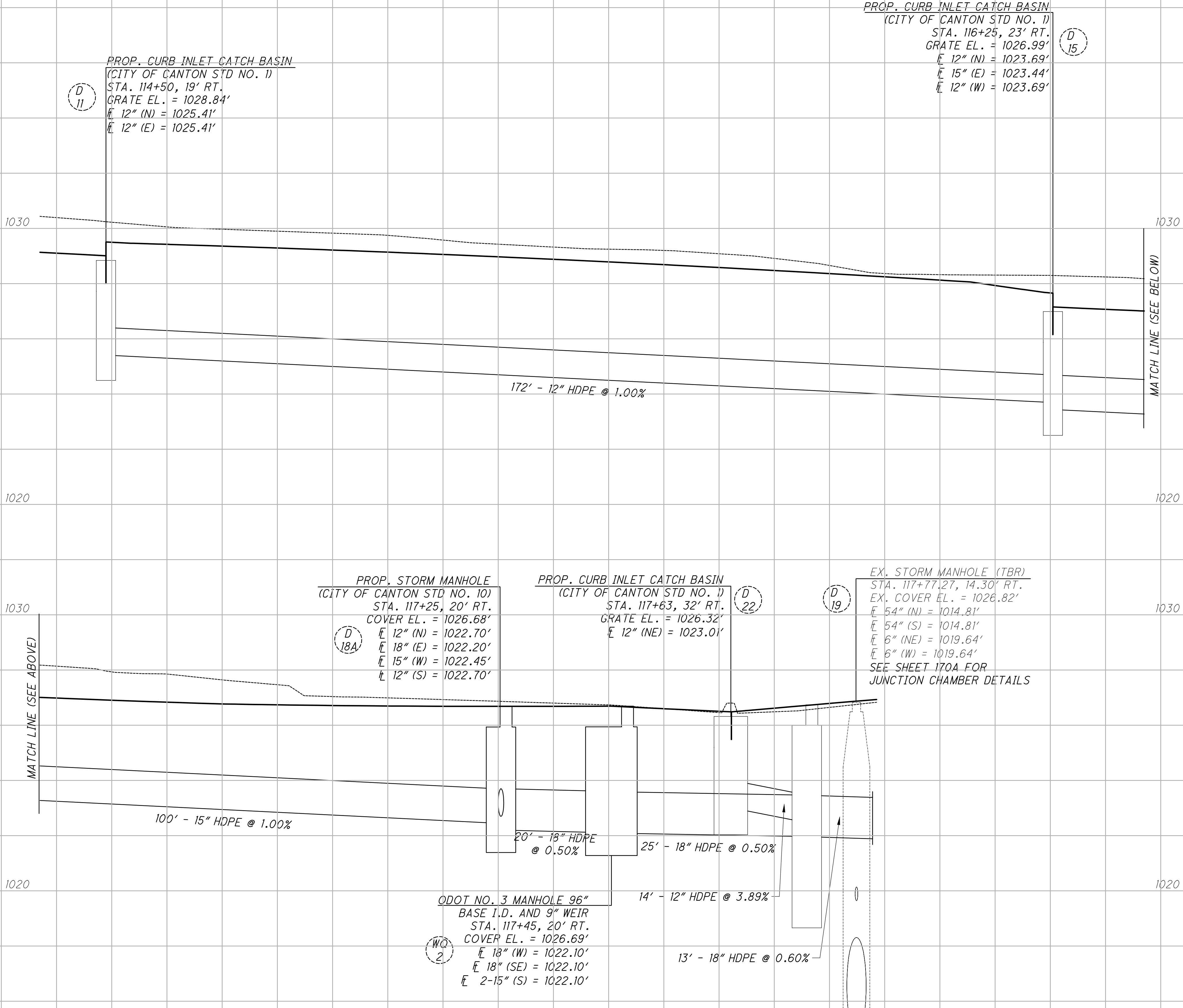


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STORM SEWER PROFILE - D6 TO D67

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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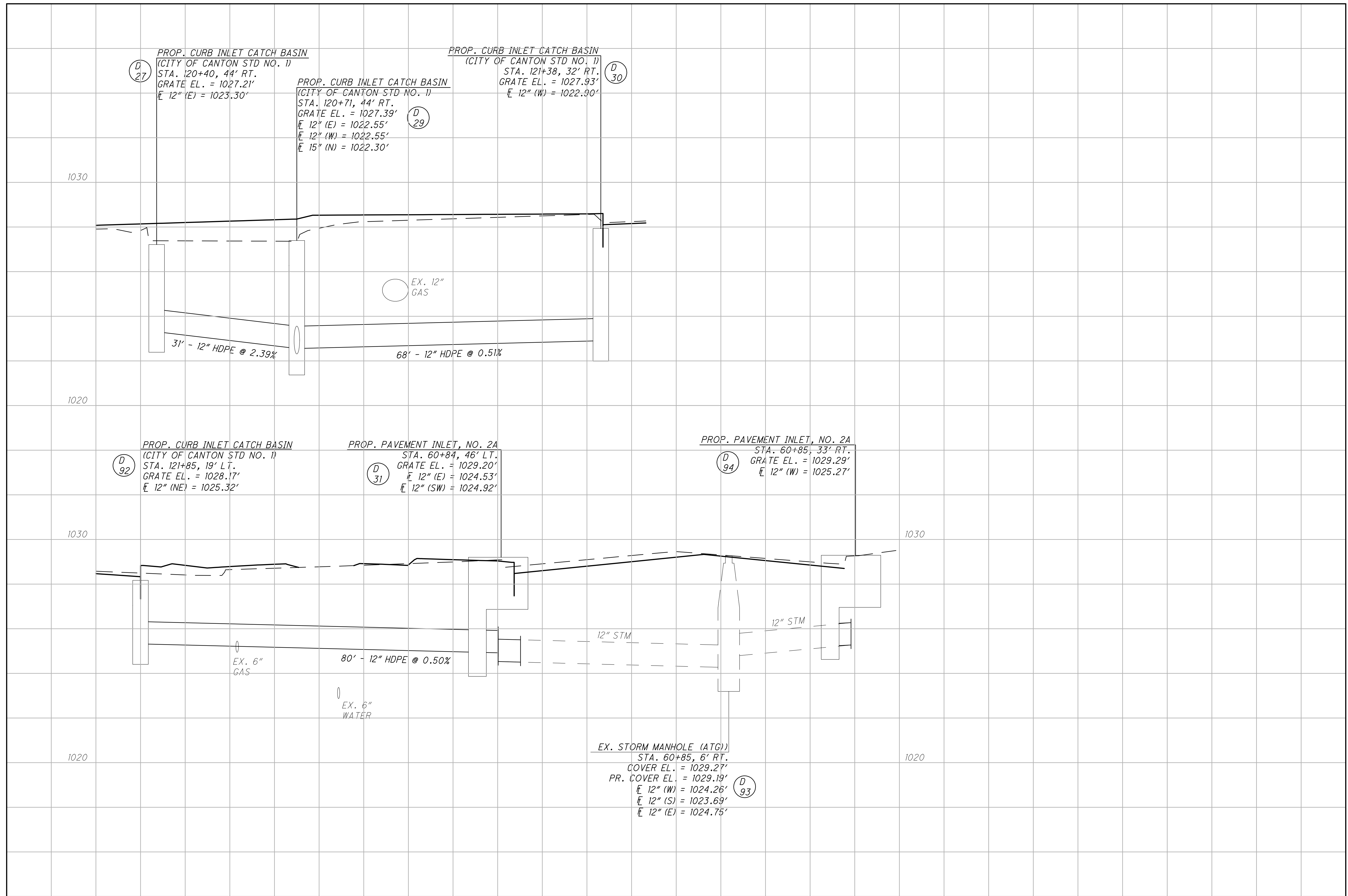


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MAW

STORM SEWER PROFILE - D11 TO D22

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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CALCULATED
JES
CHECKED
MAW

STORM SEWER PROFILES - D27 TO D30 & D31 TO D94

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

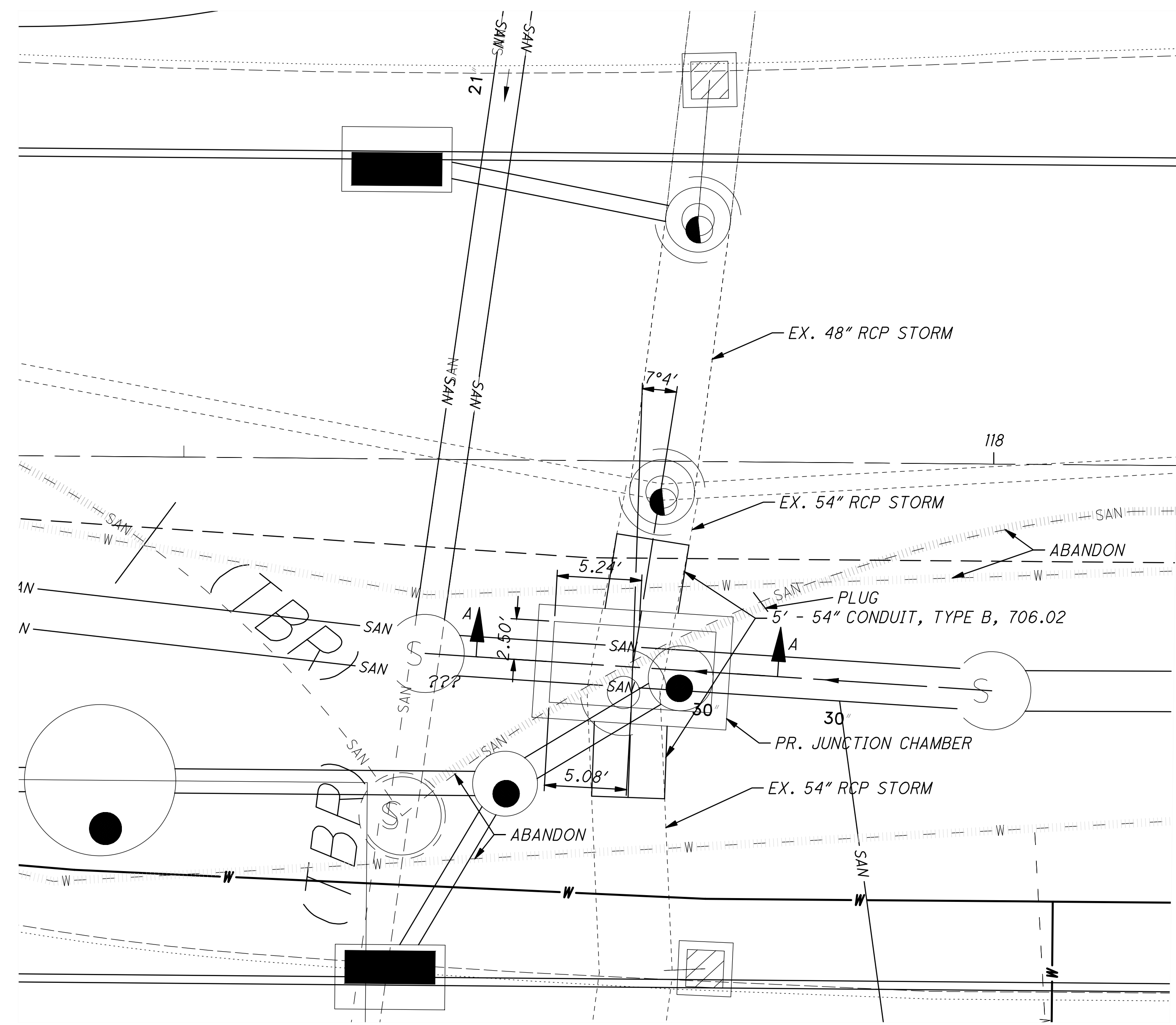
NOTES:
FOR 11TH STREET SE PLAN AND PROFILES, SEE SHEETS 47-64.

CALCULATED
CHECKED
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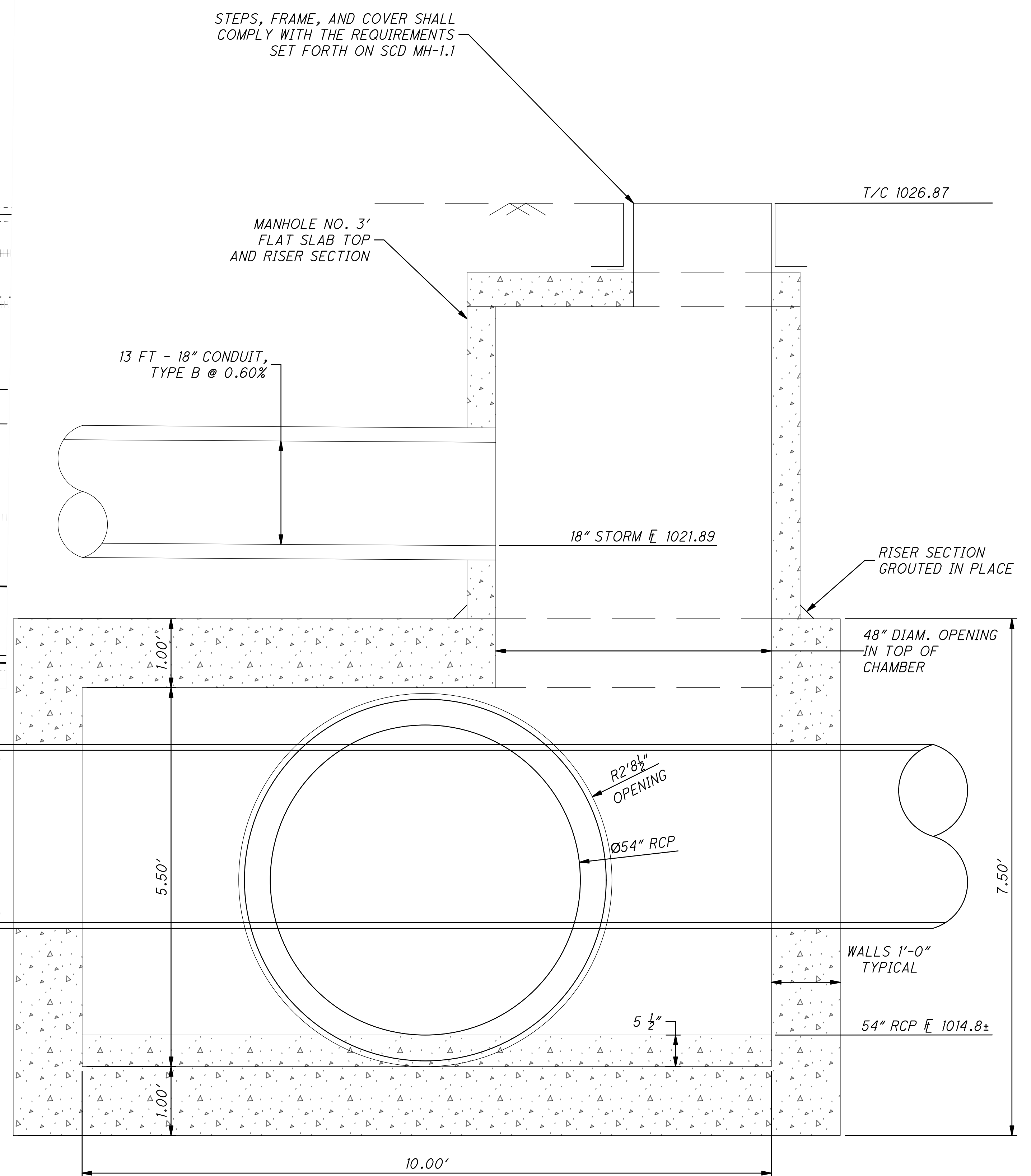
0 5 10
2.5'
HORIZONTAL
SCALE IN FEET

DRAINAGE DETAILS
STA. 117+78.50 JUNCTION CHAMBER

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



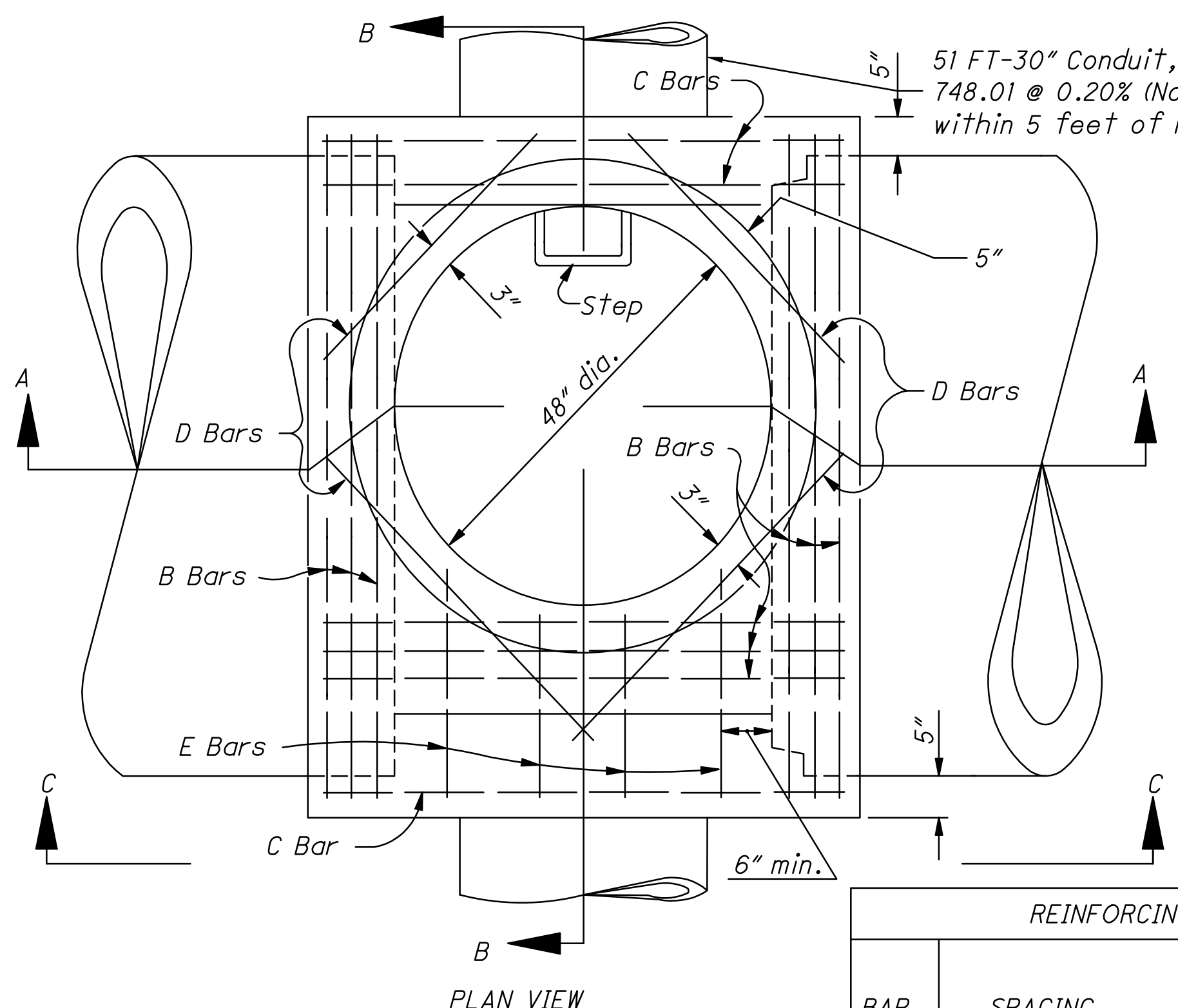
ITEM 611 - DRAINAGE STRCUTRUE, MISC.: JUNCTION CHAMBER (PLAN)



ITEM 611 - DRAINAGE STRCUTRUE, MISC.: JUNCTION CHAMBER (SECTION A-A)

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PLAN VIEW

REINFORCING STEEL LIST

BAR	SPACING	BAR SIZES FOR SEWERS
		84" to 96"
A	12" c/c both ways	#7
B	3" c/c both ways	#7
C	as shown	#7
D	as shown	#5
E	12" c/c	#5
F	as shown	#7

Included for estimating purposes only. The cost of furnishing and placing all reinforcing steel is included in Item 611 for payment.

T = Wall thickness of intercepting sewer pipe

NOTES

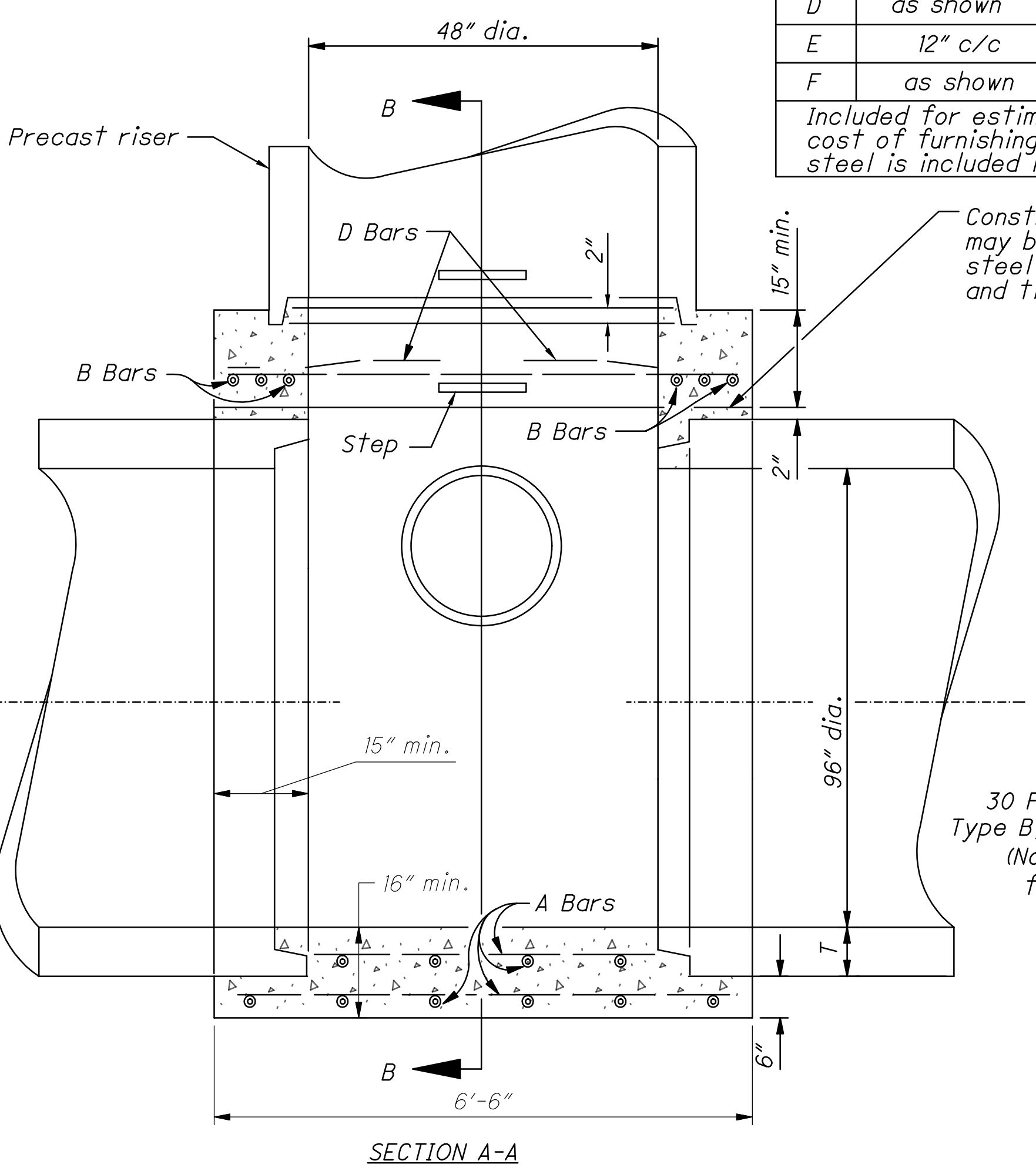
MANHOLE: Manhole No. 5 consists of a base or bottom as detailed here and other manhole components as detailed or specified on

Instead of the tongue and groove junction between the riser and the base, the base may have a flat surface and the riser may have a square end set in a bed of mortar on the base.

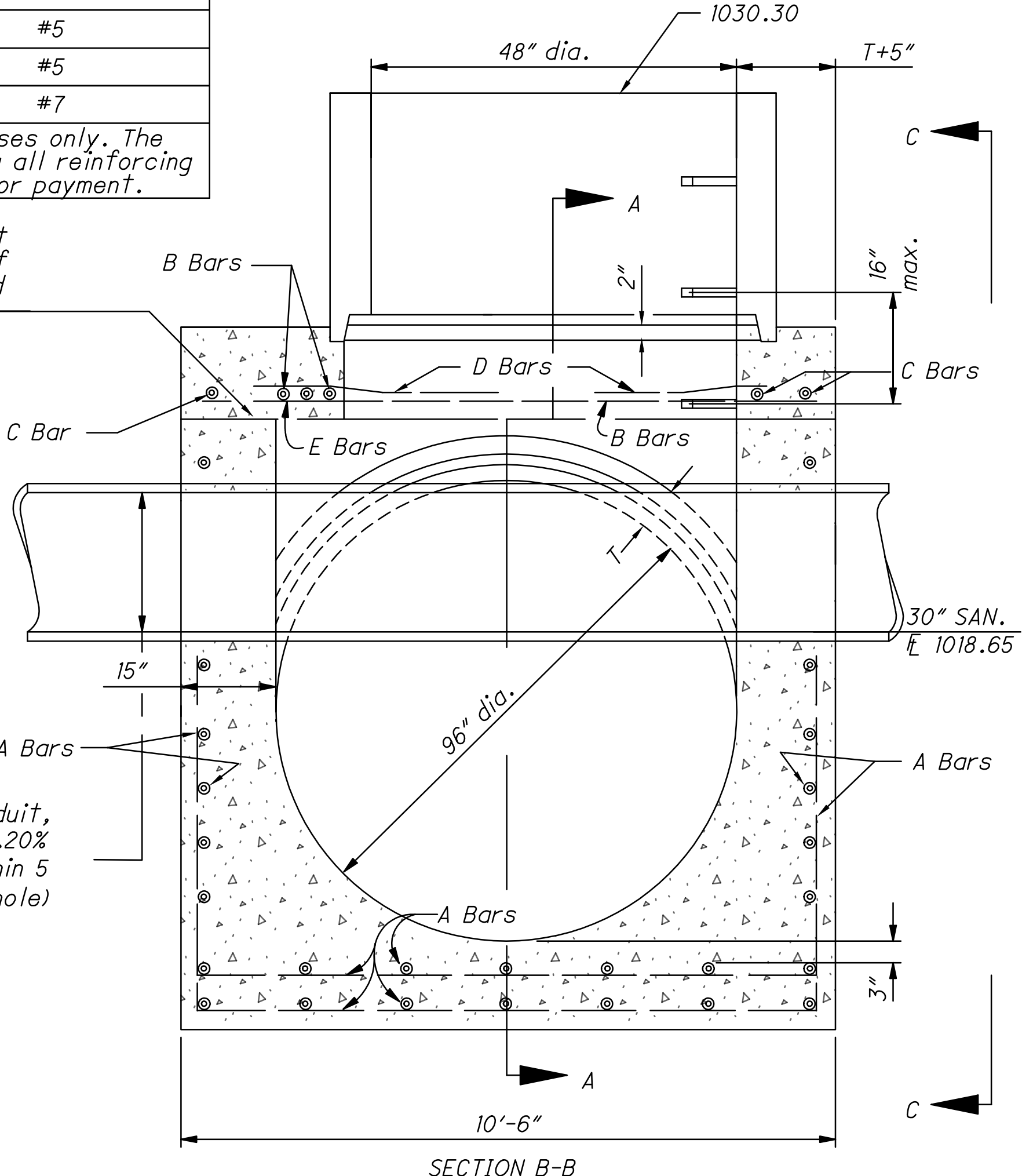
OPENINGS: Provide prefabricated openings for 42" and under inlet and outlet sewer pipes in the riser section unless the base is built to an elevation 2" above the manhole top of the inlet and outlet pipes.

CONCRETE: Use 4000 psi compressive strength concrete for the bases or meet the requirements of CMS 706.13. The bases may be precast or cast-in-place. If precast, provide a base on sewers 42" and under with sufficient steel reinforcement to permit shipping and placement without damage to the base. Reinforce the base on sewers 48" and over as shown.

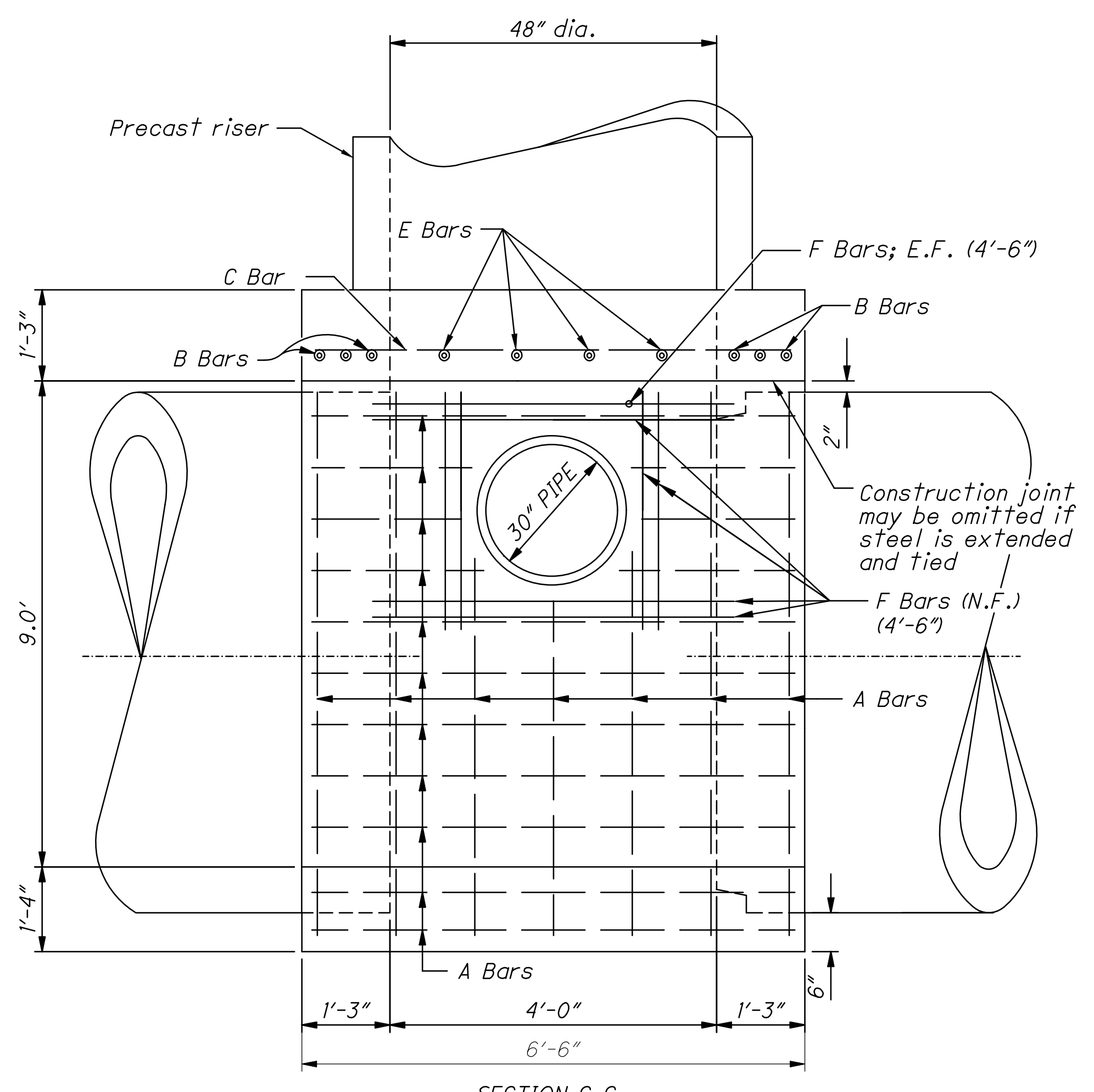
STEPS: Provide steps that meet the requirements set forth on SCD MH-1.



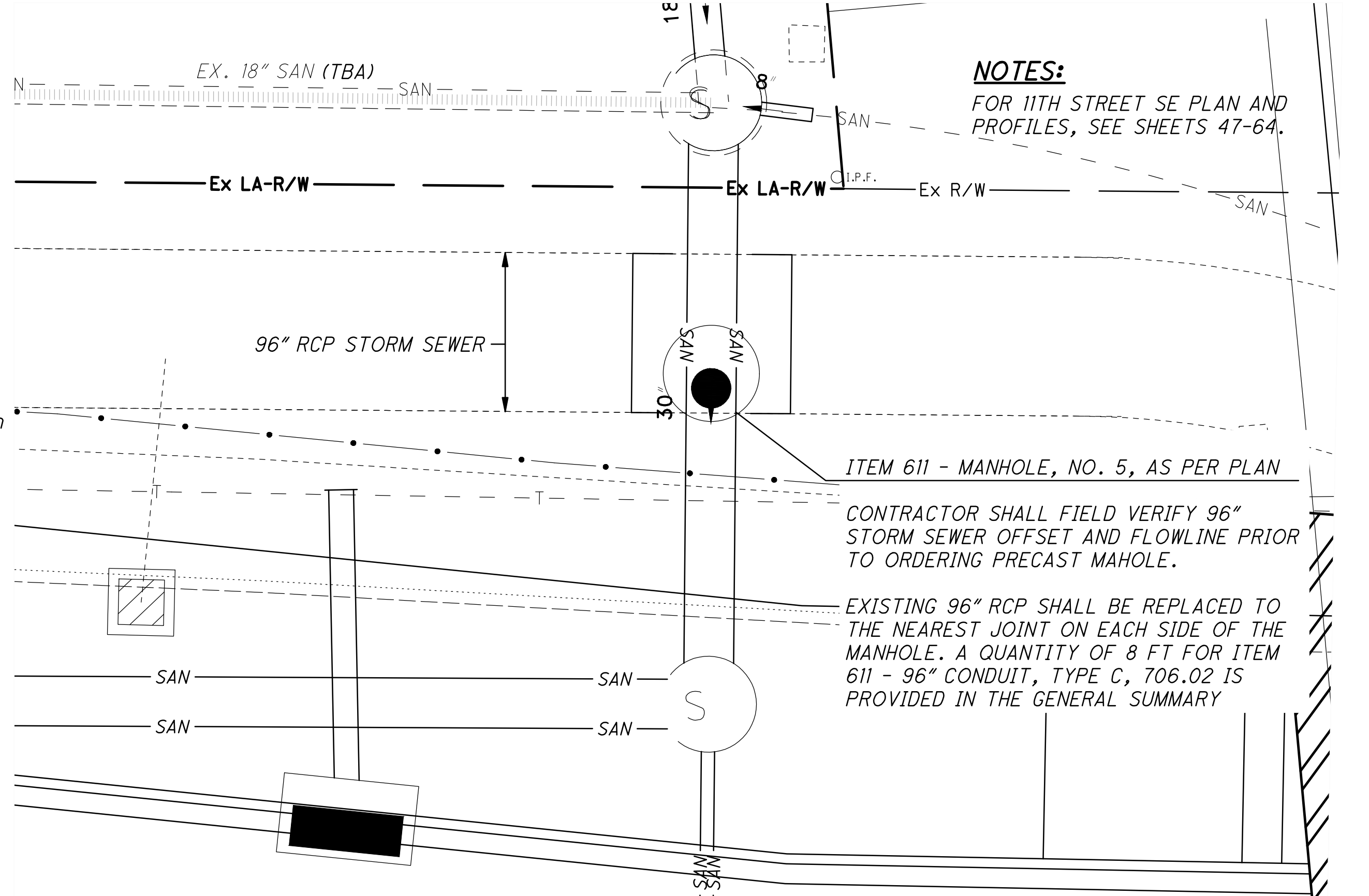
SECTION A-A



SECTION B-B



SECTION C-C



NOTES:
FOR 11TH STREET SE PLAN AND PROFILES, SEE SHEETS 47-64.

ITEM 611 - MANHOLE, NO. 5, AS PER PLAN

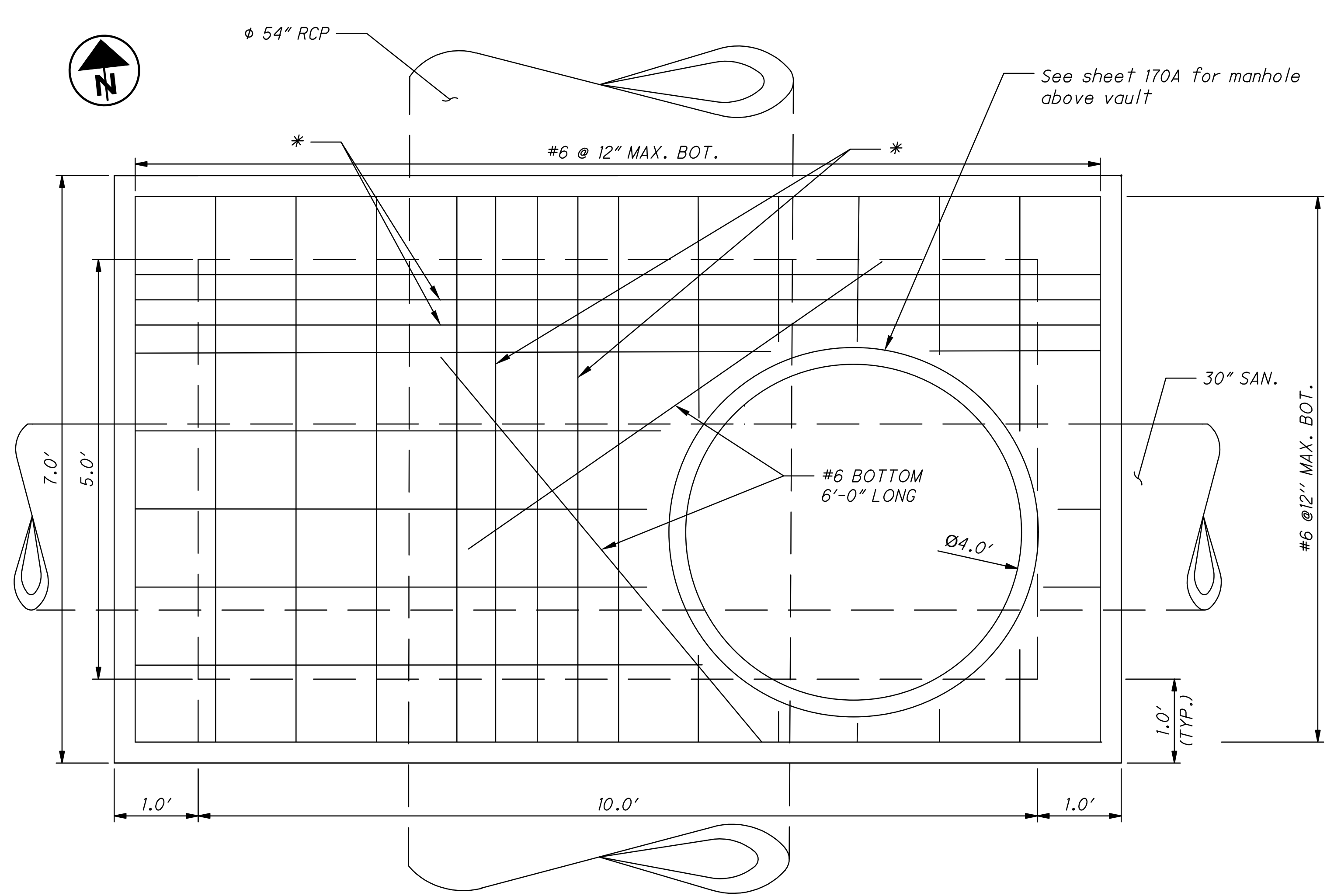
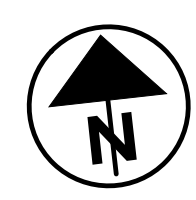
CONTRACTOR SHALL FIELD VERIFY 96" STORM SEWER OFFSET AND FLOWLINE PRIOR TO ORDERING PRECAST MAHOLE.

EXISTING 96" RCP SHALL BE REPLACED TO THE NEAREST JOINT ON EACH SIDE OF THE MANHOLE. A QUANTITY OF 8 FT FOR ITEM 611 - 96" CONDUIT, TYPE C, 706.02 IS PROVIDED IN THE GENERAL SUMMARY

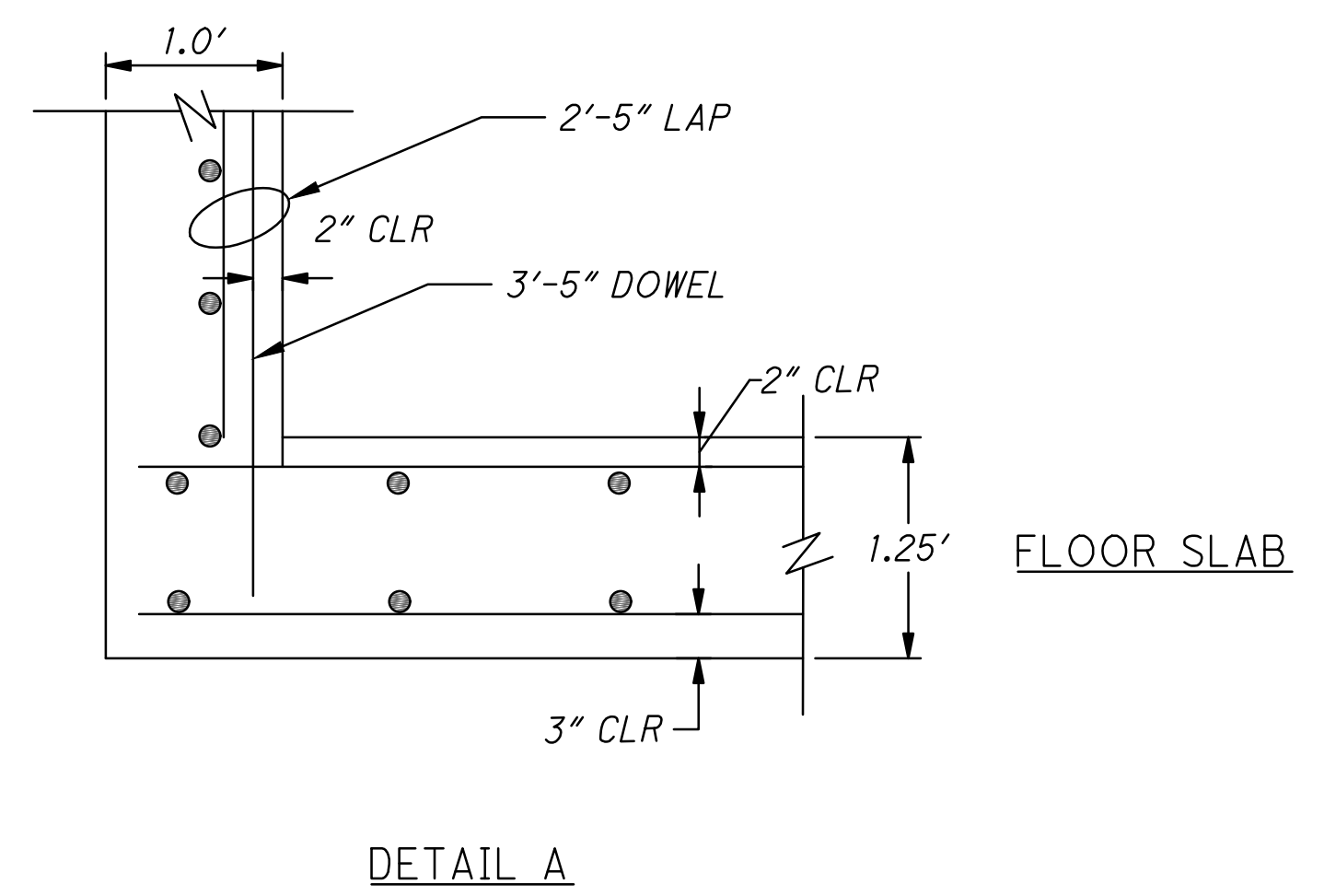
NOTE

- Cut A Bars to clear 30" pipe.
- Replace cut A Bars W/F as shown

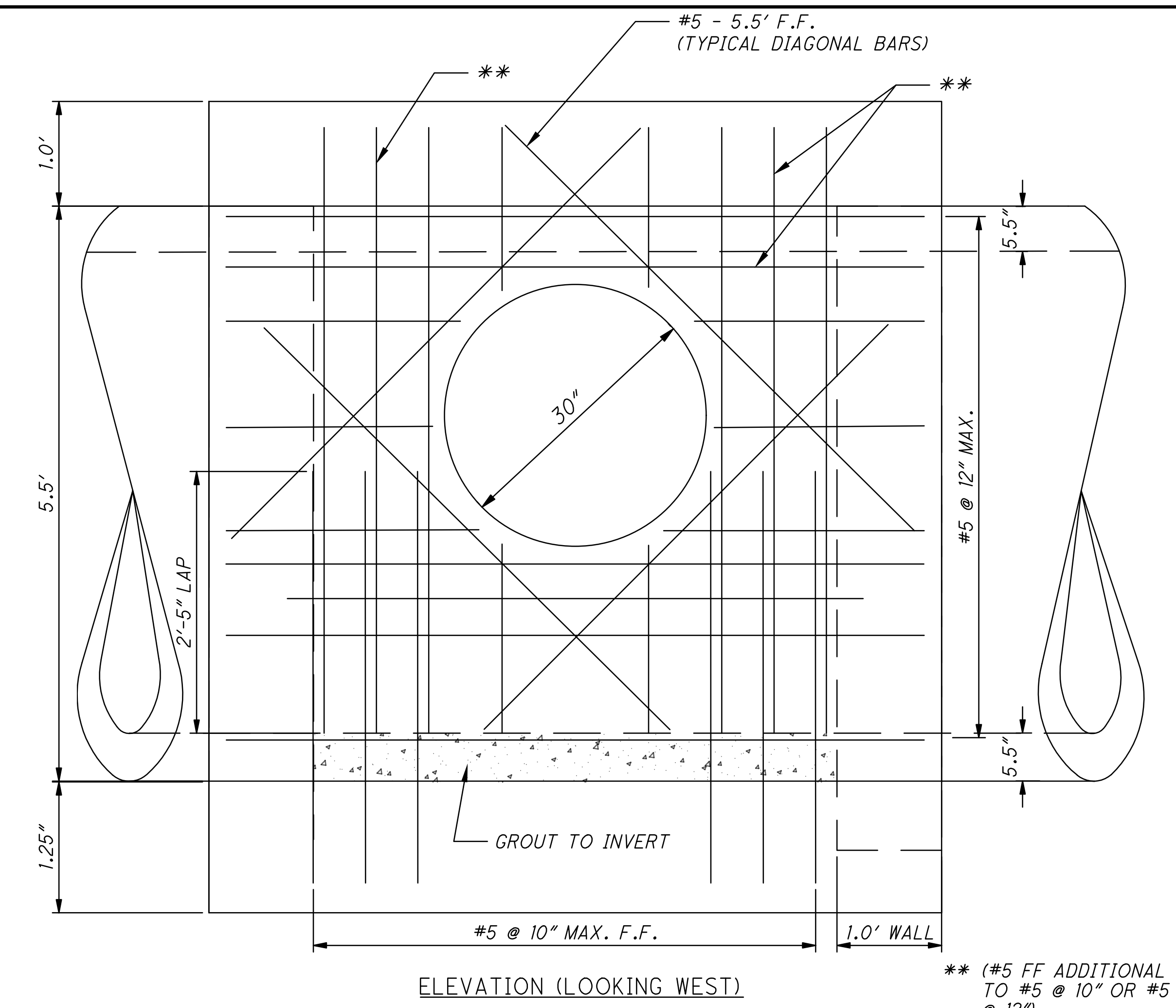
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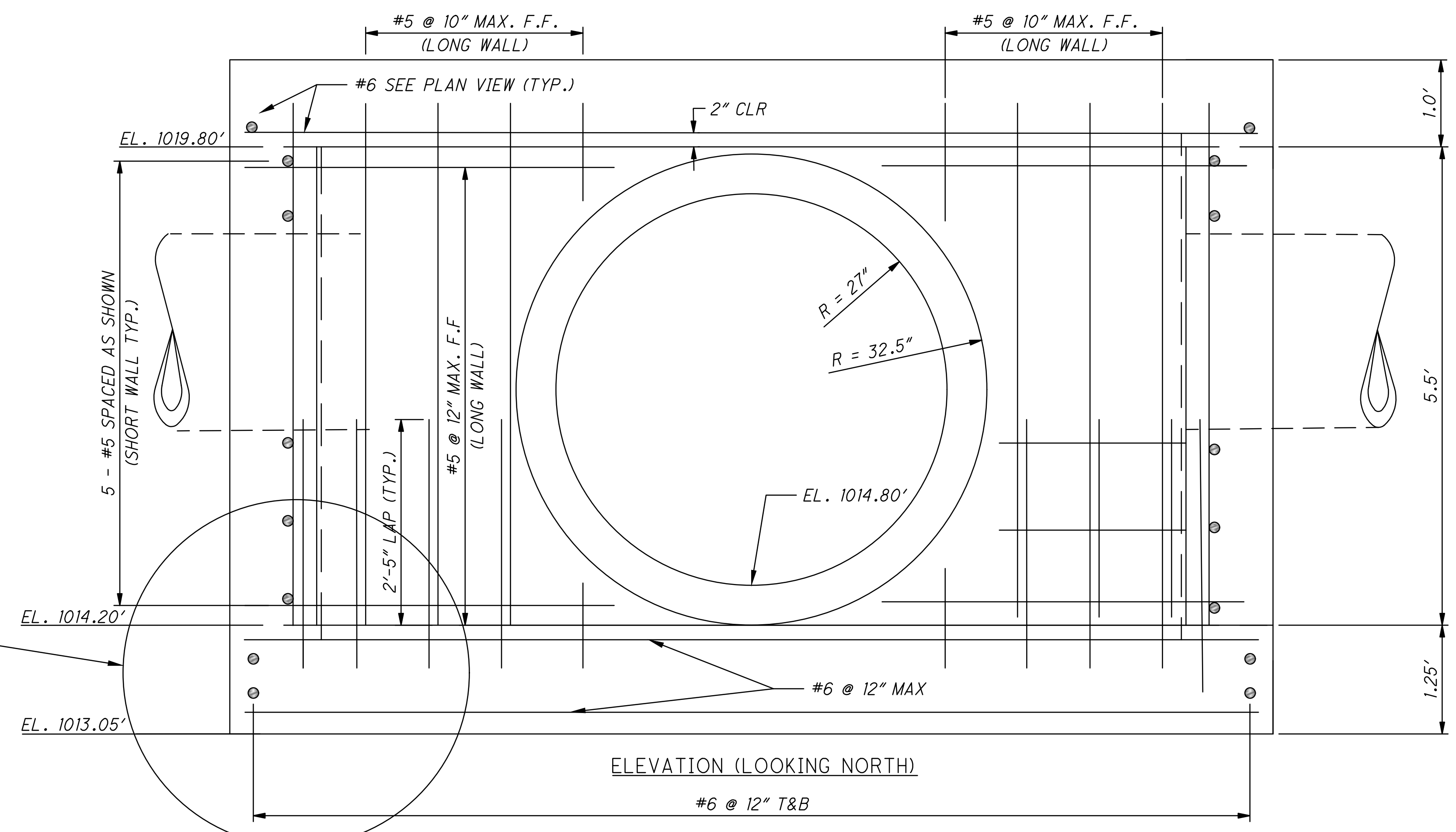
#6 BOT SLAB IN ADDITION TO #6 @ 12"
 PLAN VIEW (TOP SLAB)
 (THIS DETAIL FORMS PART OF THE JUNCTION BOX)



- NOTES:
1. Limit backfill to 3' above invert of 54" pipe until top slab is placed.
 2. #5 lap= 2'-5". Cut no 5 bars to clear 30" pipe.
- Place additional #5's as shown to replace bars cut.



ELEVATION (LOOKING WEST)
 ** (#5 FF ADDITIONAL TO #5 @ 10" OR #5 @ 12")



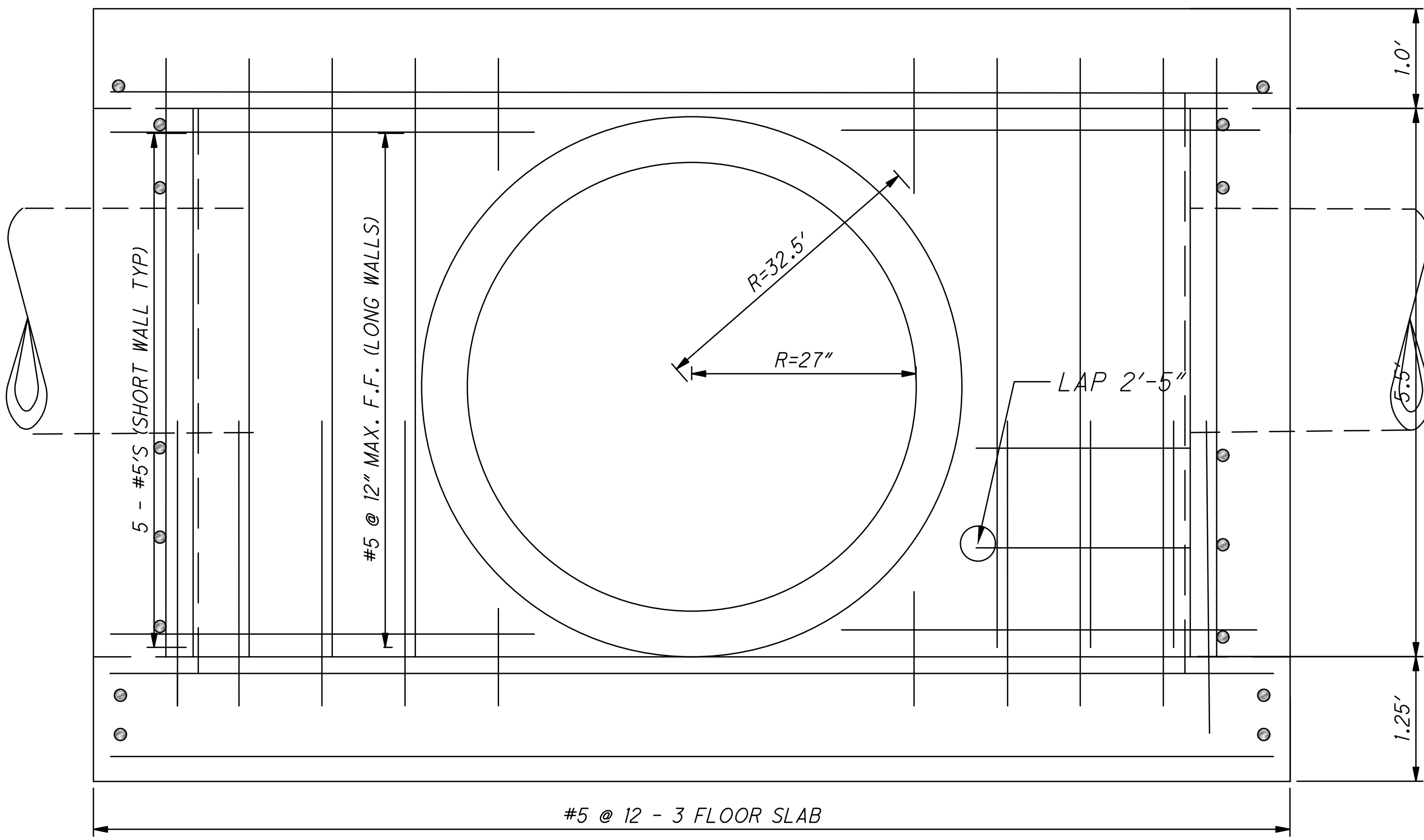
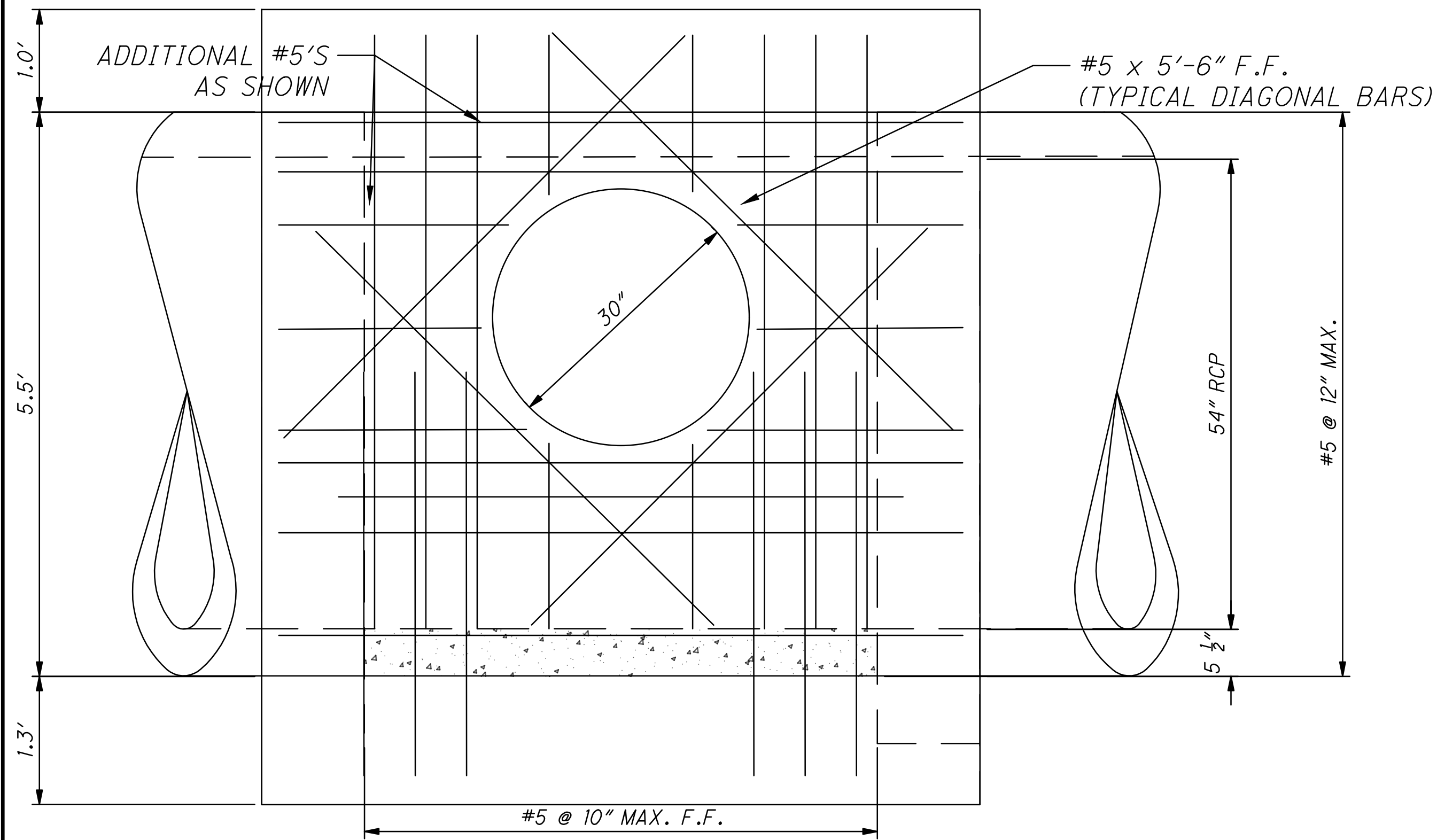
ELEVATION (LOOKING NORTH)
 #6 @ 12" T&B

CALCULATED
 JTH
 CHECKED
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DRAINAGE DETAILS
 STA. 117+78.50 JUNCTION BOX

STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)

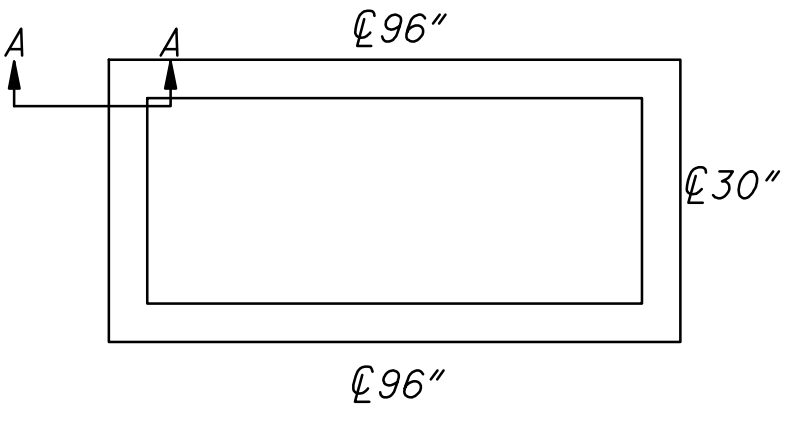
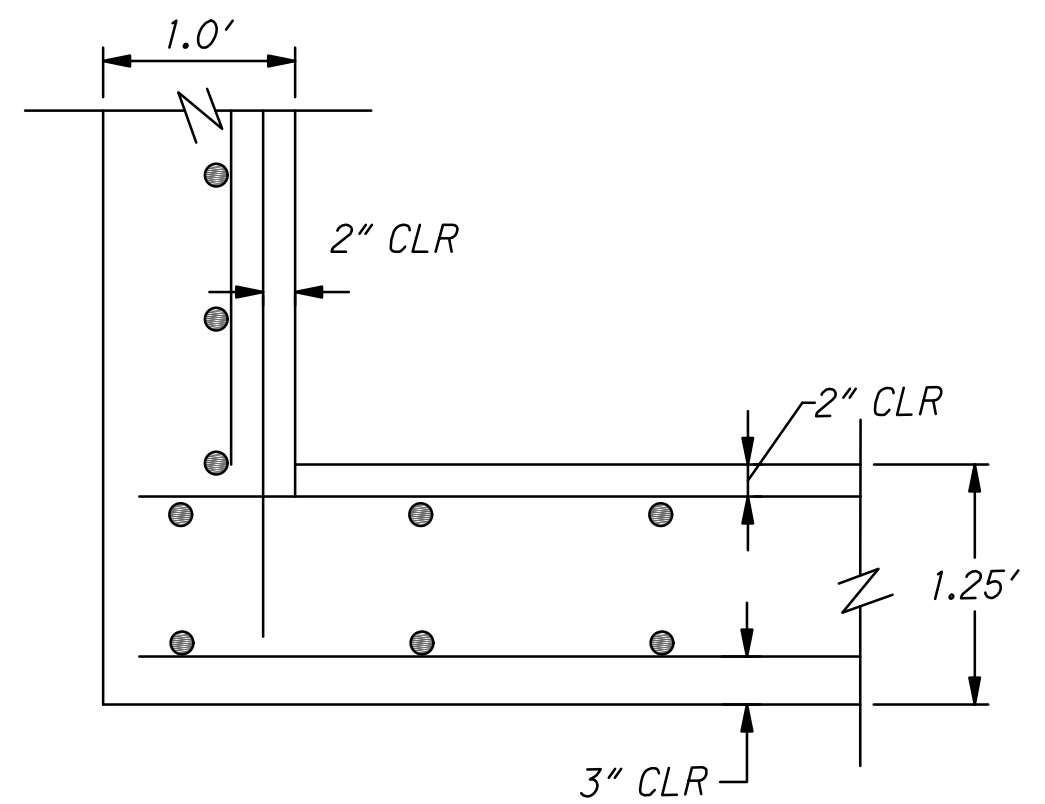
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ELEVATION (FLOOR SLAB)

1. Limit backfill to 3' above invert until top slab is placed.
2. #5 lap= 2'-5". Cut no 5 bars to clear 30" pipe.

Place additional #5's as shown to replace bars cut.



PART SECTION A-A

CALCULATED
-
CHECKED
JLN

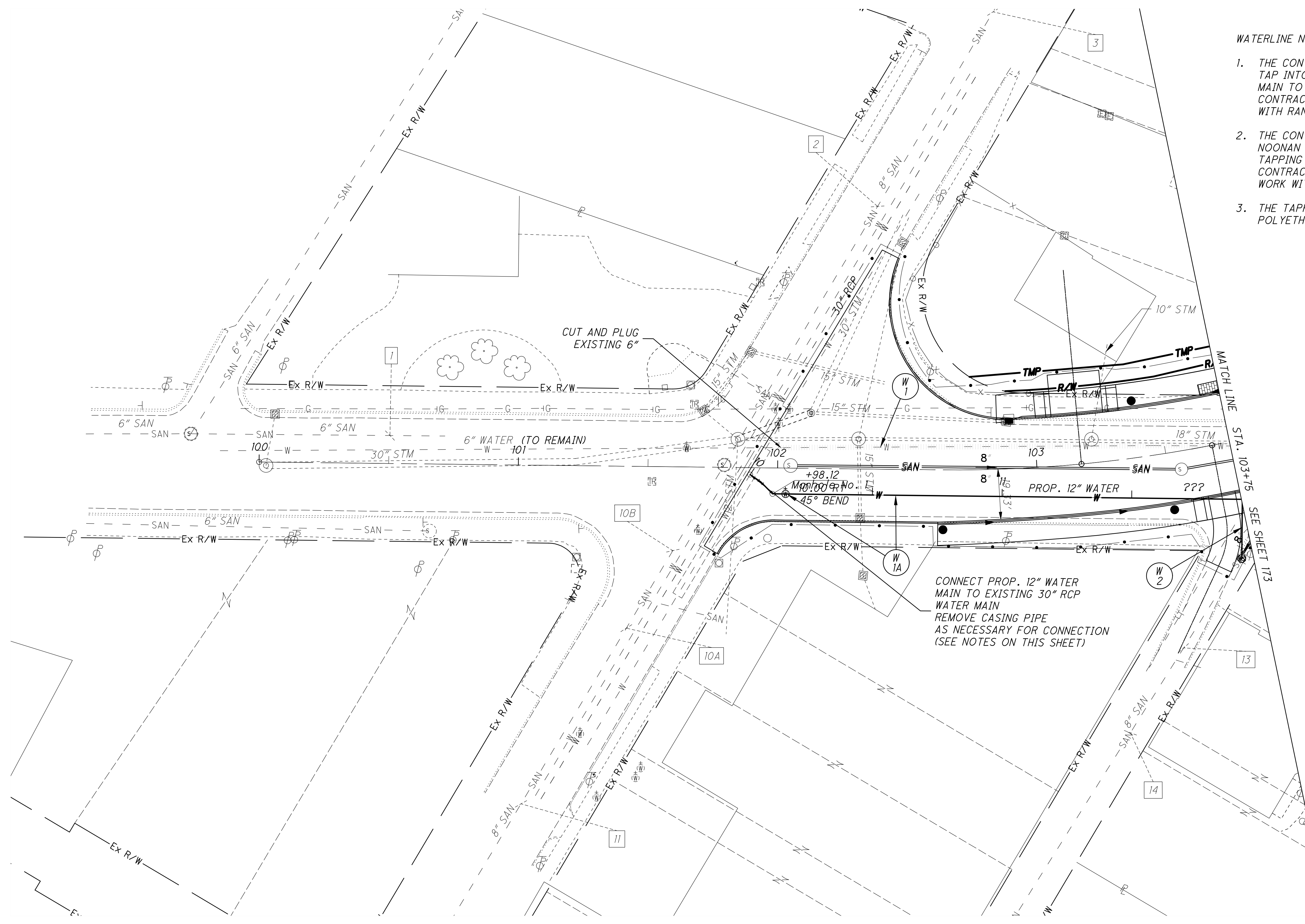
**DRAINAGE DETAILS
MANHOLE, NO. 5, AS PER PLAN**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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NOTES:
FOR 11TH STREET SE PLAN AND
PROFILES, SEE SHEETS 47-64.

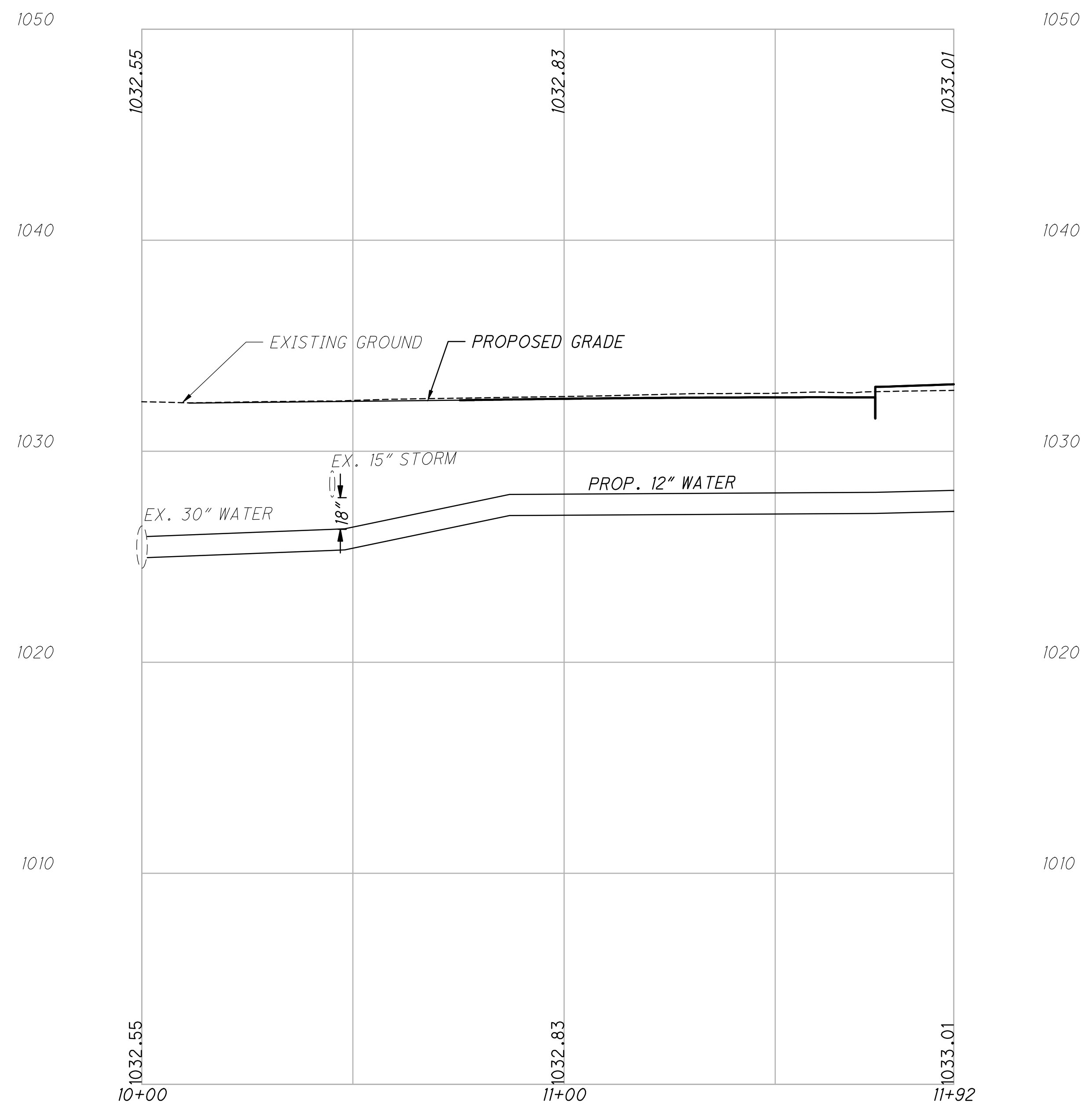
CALCULATED 0 20 40
 JPK
 CHECKED JES
 HORIZONTAL SCALE IN FEET



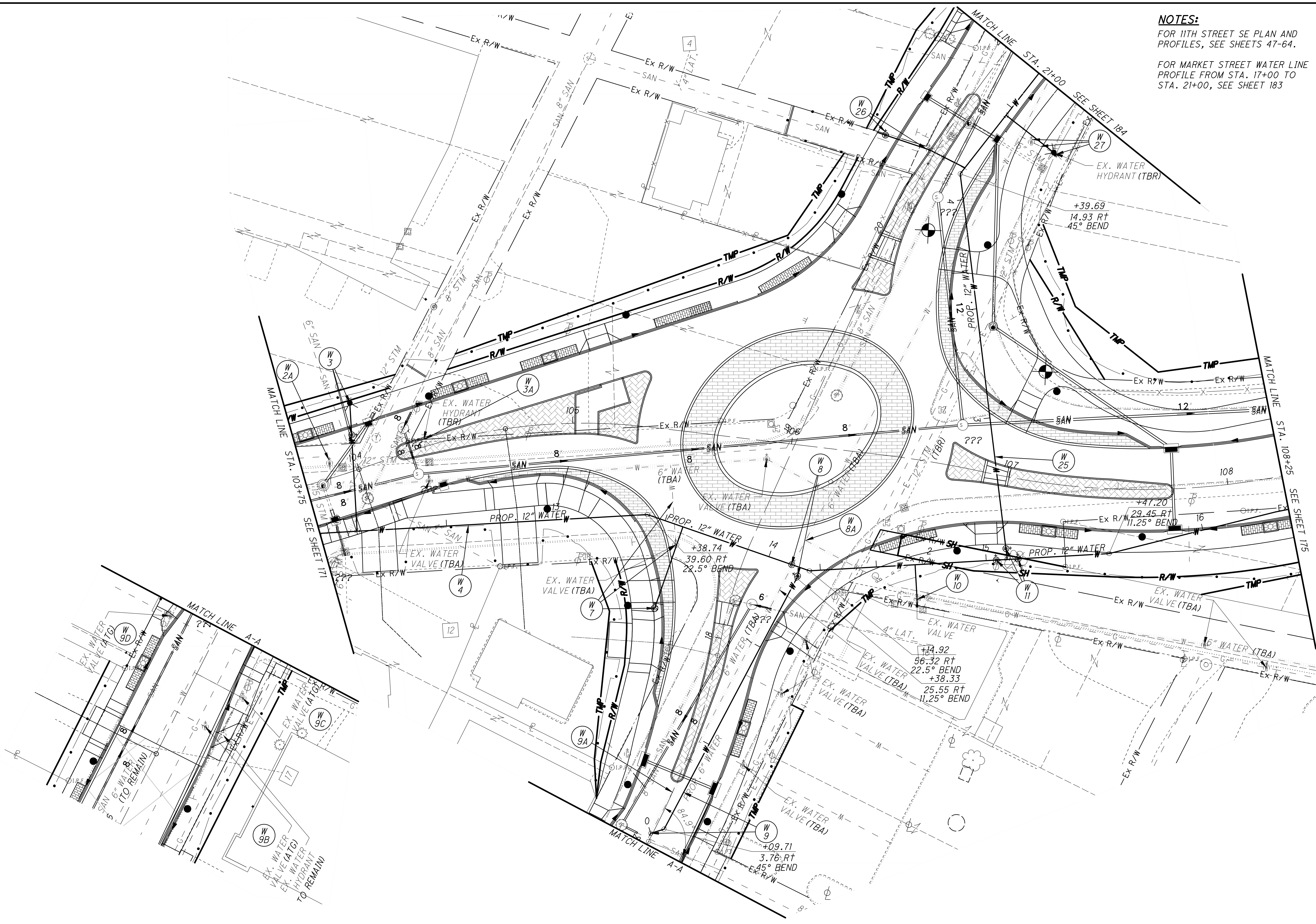
- WATERLINE NOTES (30" RCP WATER):**
1. THE CONTRACTOR SHALL SUBCONTRACT THE 12" TAP INTO THE EXISTING 30" CONCRETE WATER MAIN TO RANGELINE, OR APPROVED EQUAL. THE CONTRACTOR SHALL CONTACT SCOTT NOONAN WITH RANGELINE AT 419-806-6547.
 2. THE CONTRACTOR SHALL CONTACT SCOTT NOONAN WITH RANGELINE TO SCHEDULE THE TAPPING SLEEVE AND VALVE INSTALLATION. THE CONTRACTOR SHALL ALSO COORDINATE THIS WORK WITH THE CANTON WATER DEPARTMENT.
 3. THE TAPPING SLEEVE SHALL BE WRAPPED WITH POLYETHYLENE AND CONCRETE ENCASED.

**WATER WORK PLAN - 11TH STREET SE
BEGINNING TO STA. 103+75**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**



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NOTES:
 FOR 11TH STREET SE PLAN AND PROFILES, SEE SHEETS 47-64.
 FOR MARKET STREET WATER LINE PROFILE FROM STA. 17+00 TO STA. 21+00, SEE SHEET 183

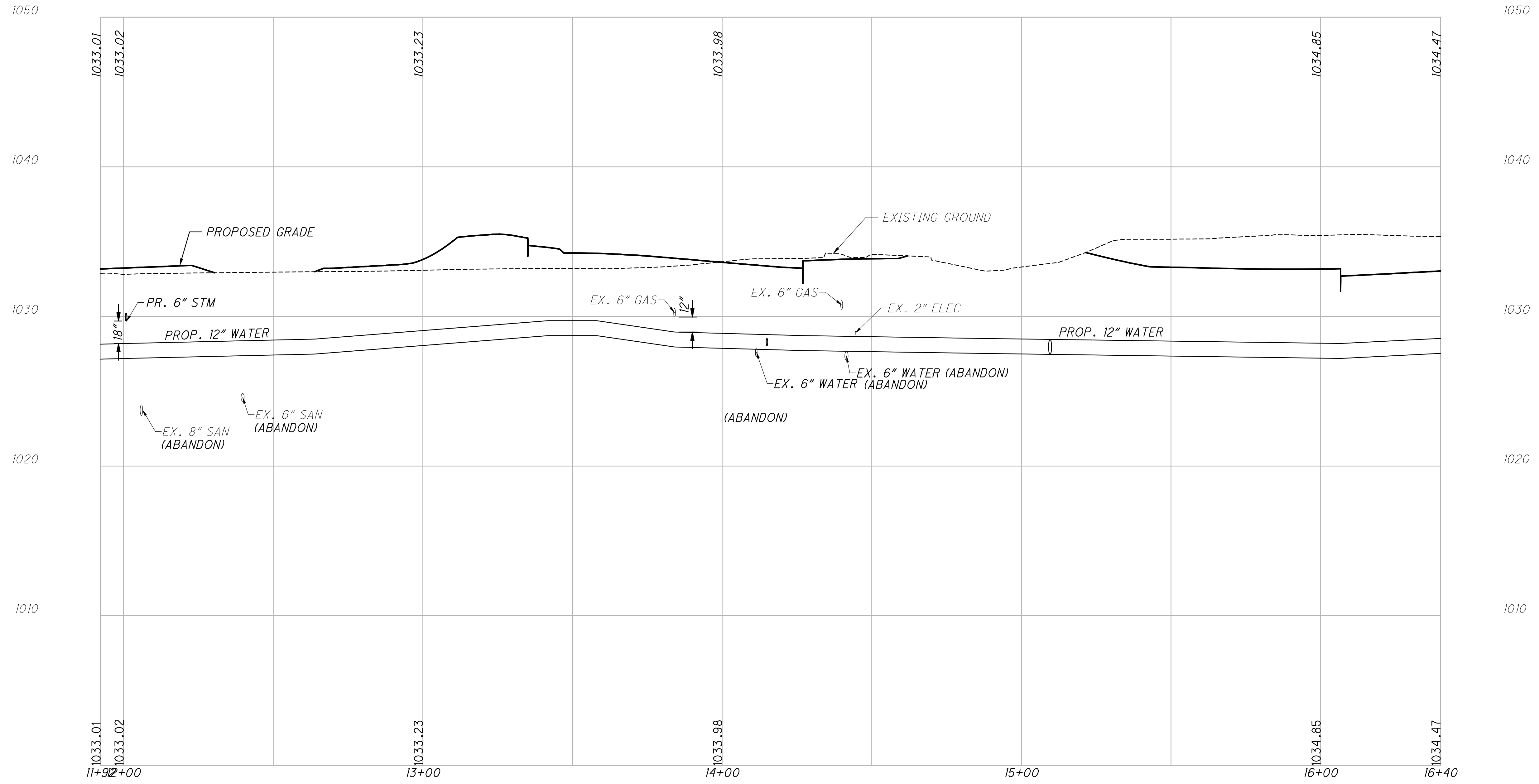
CALCULATED JPK CHECKED JES

HORIZONTAL SCALE IN FEET

**WATER WORK PLAN - 11TH STREET SE
 STA. 103+75 TO STA. 108+25**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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JES

**WATER WORK PROFILE - 11TH STREET SE
STA. 103+75 TO STA. 108+25**

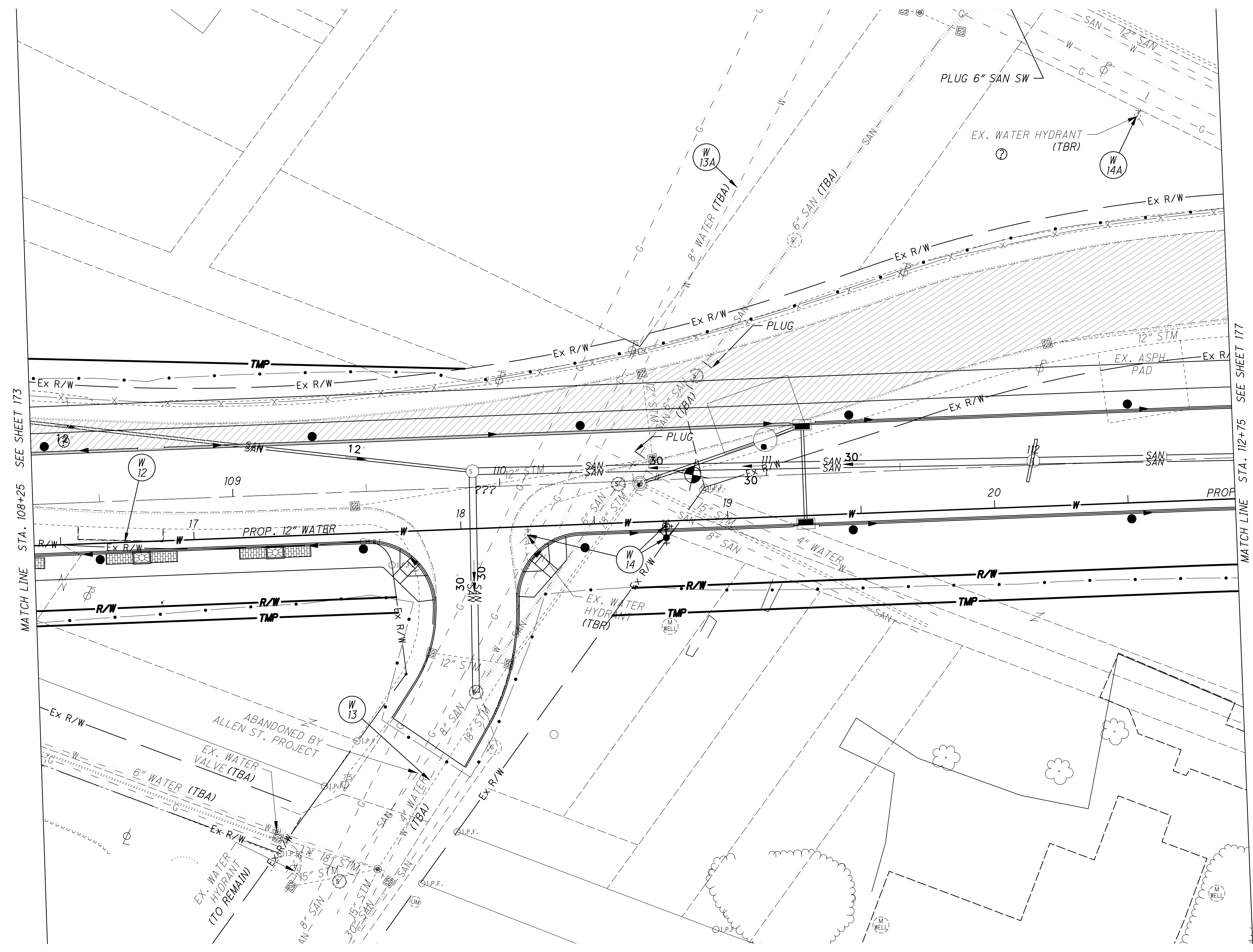
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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NOTES:
FOR 11TH STREET SE PLAN AND
PROFILES, SEE SHEETS 47-64.

CALCULATED JPK
CHECKED JES

HORIZONTAL SCALE IN FEET



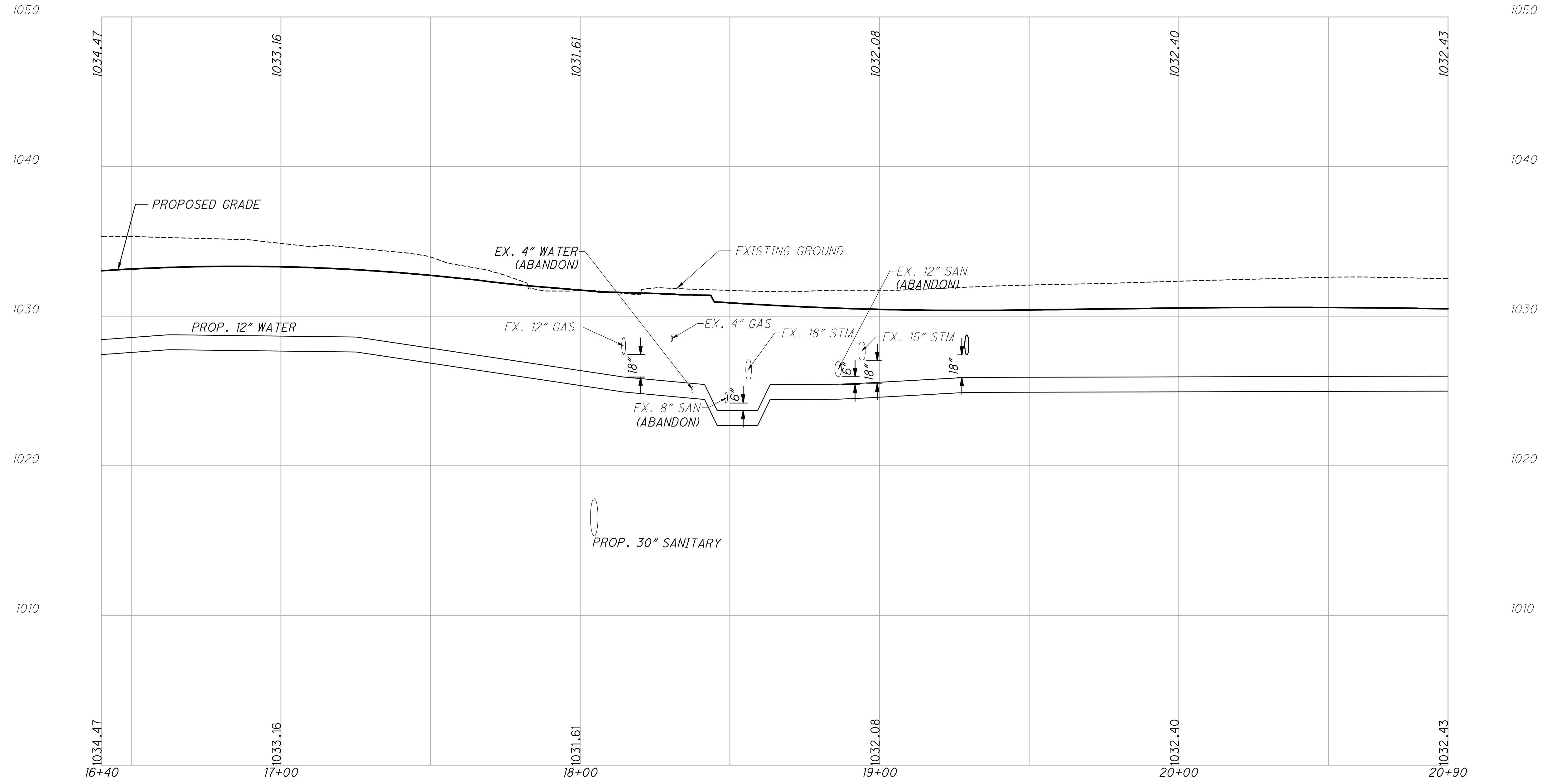
MATCH LINE STA. 108+25 SEE SHEET 173

MATCH LINE STA. 112+75 SEE SHEET 171

**WATER WORK PLAN - 11TH STREET SE
STA. 108+25 TO 112+75**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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CALCULATED
JPK
CHECKED
JES

**WATER WORK PROFILE - 11TH STREET SE
STA. 108+25 TO STA. 112+75**

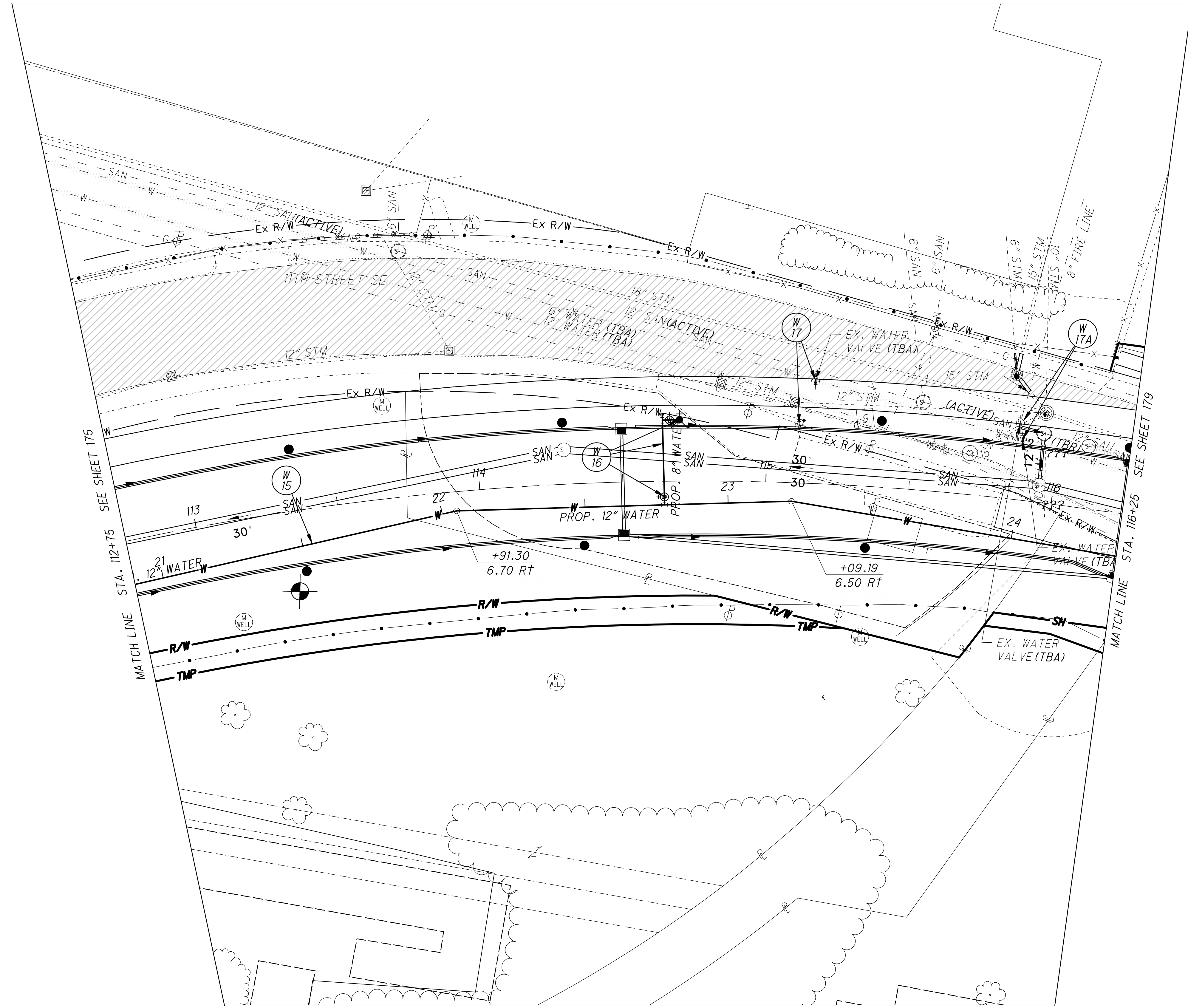
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IMPROVEMENTS (PID 90465)**

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NOTES:
FOR 11TH STREET SE PLAN AND
PROFILES, SEE SHEETS 47-64.

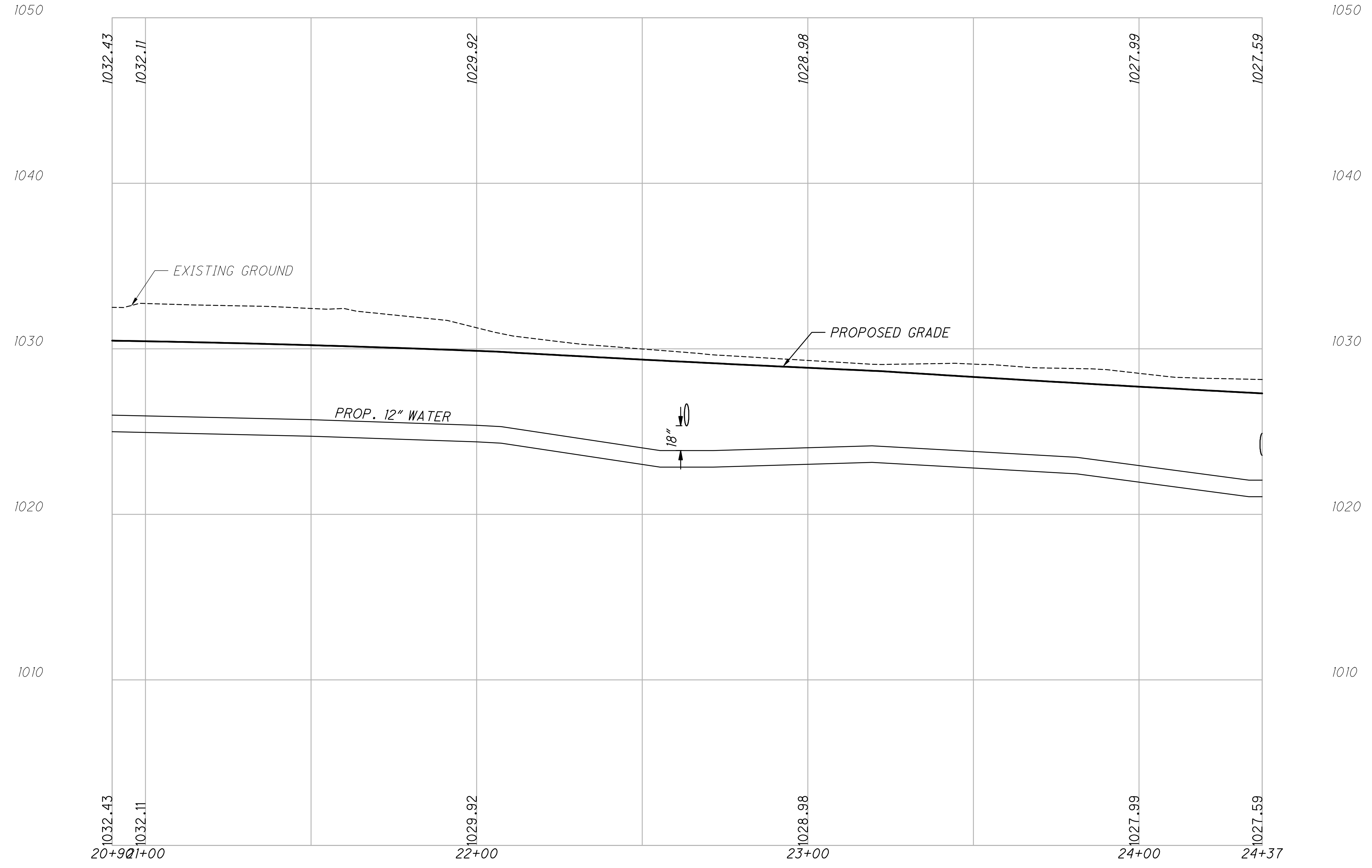
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HORIZONTAL
SCALE IN FEET



**WATER WORK PLAN - 11TH STREET SE
STA. 112+75 TO 116+25**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**



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**WATER WORK PROFILE - 11TH STREET SE
STA. 112+75 TO STA. 116+25**

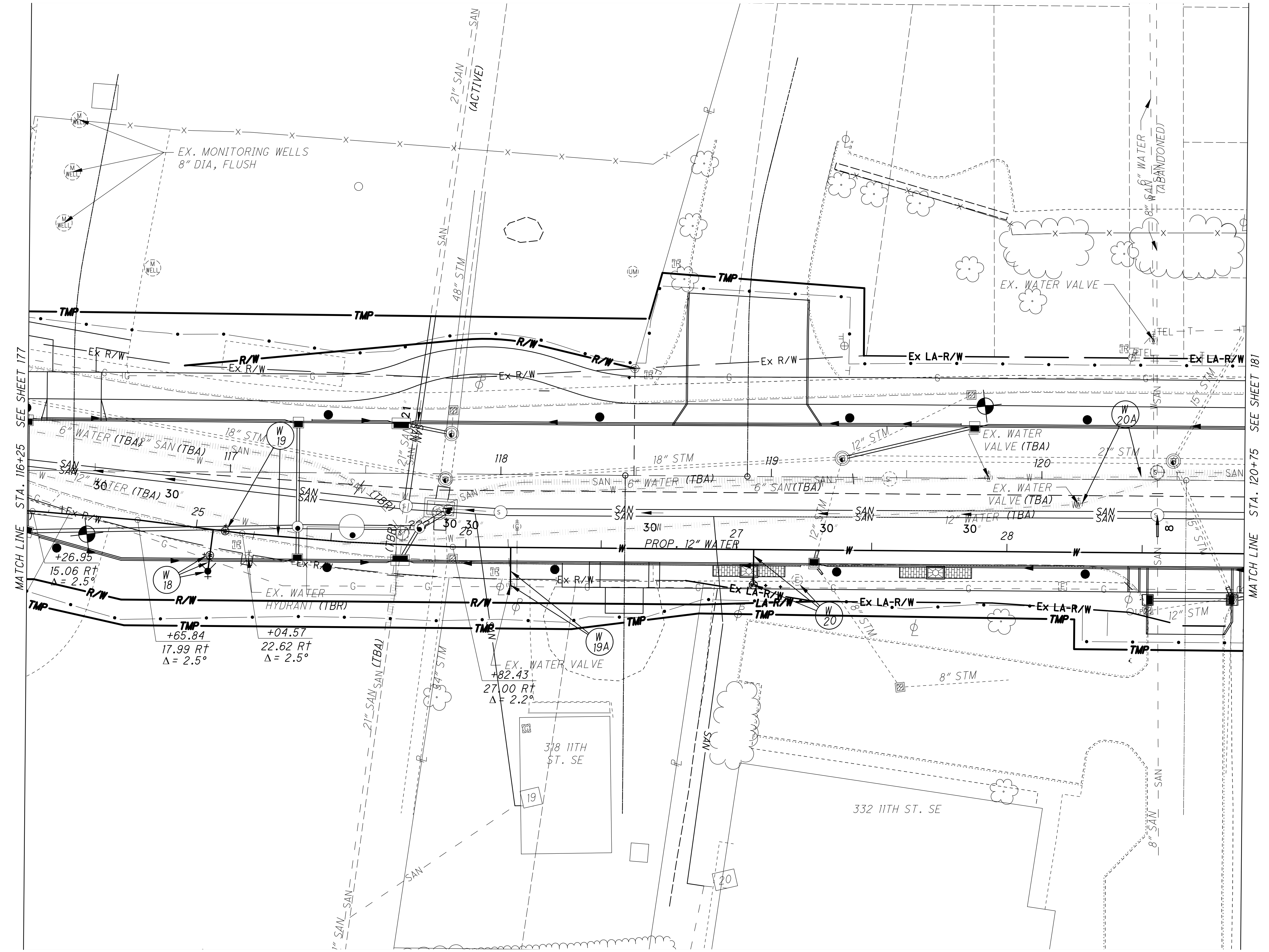
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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NOTES:
FOR 11TH STREET SE PLAN AND
PROFILES, SEE SHEETS 47-64.

CALCULATED JPK
CHECKED JES

HORIZONTAL
SCALE IN FEET



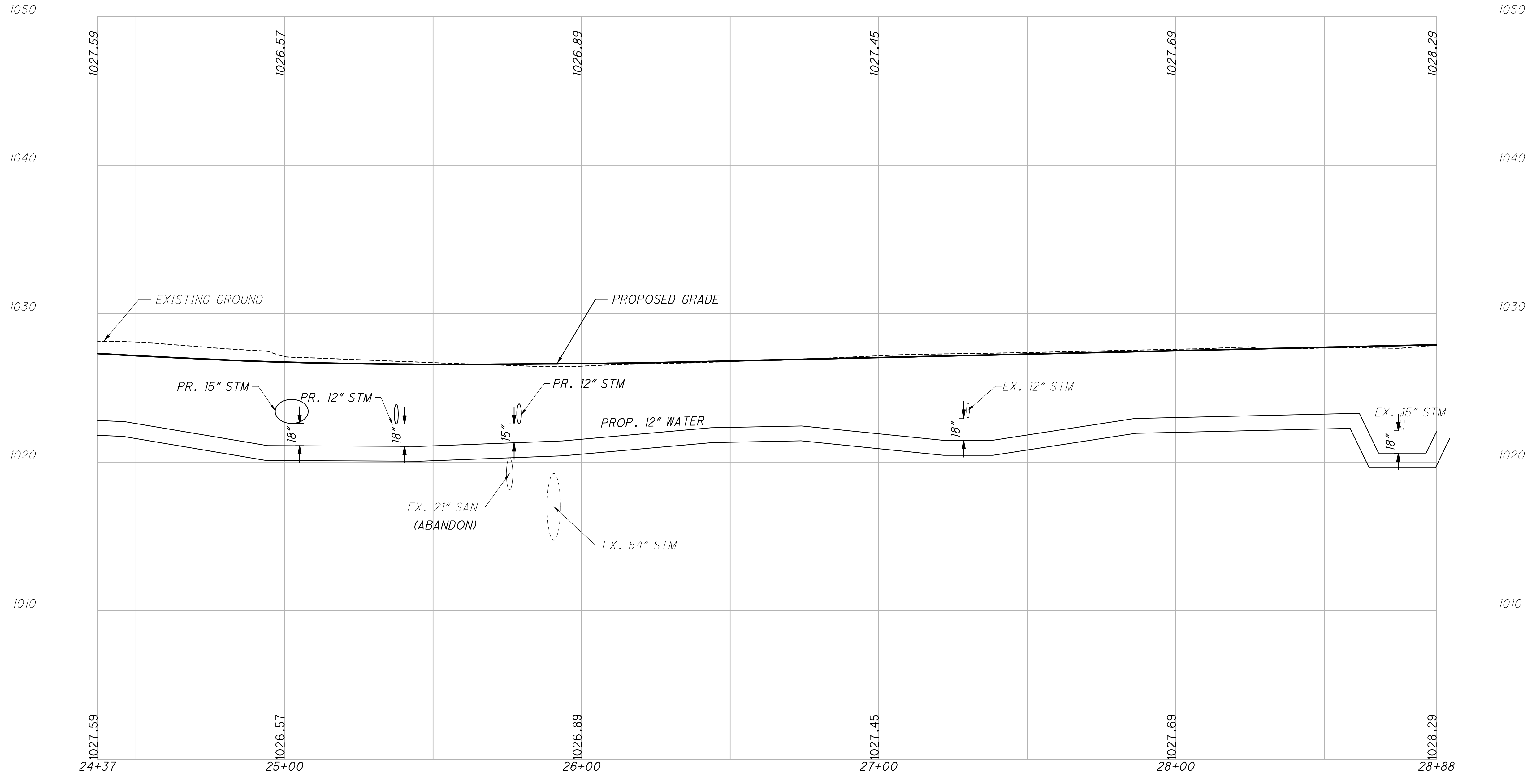
MATCH LINE STA. 116+25 SEE SHEET 177

MATCH LINE STA. 120+75 SEE SHEET 181

**WATER WORK PLAN - 11TH STREET SE
STA. 116+25 TO 120+75**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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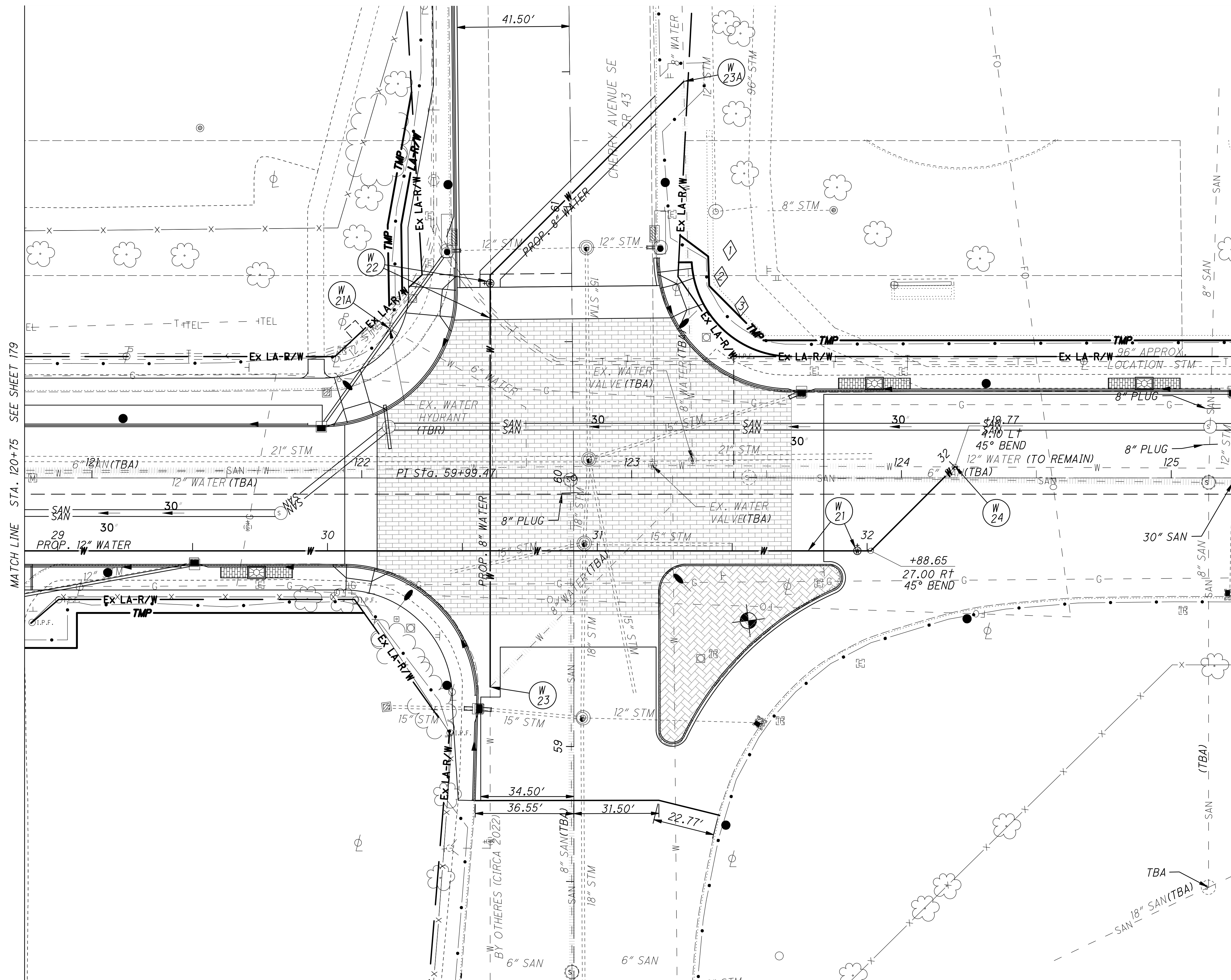
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**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

**WATER WORK PROFILE - 11TH STREET SE
STA. 116+25 TO STA. 120+75**

180
302

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MATCH LINE STA. 120+75 SEE SHEET 179

NOTES:
 FOR 11TH STREET SE PLAN AND
 PROFILES, SEE SHEETS 47-64.

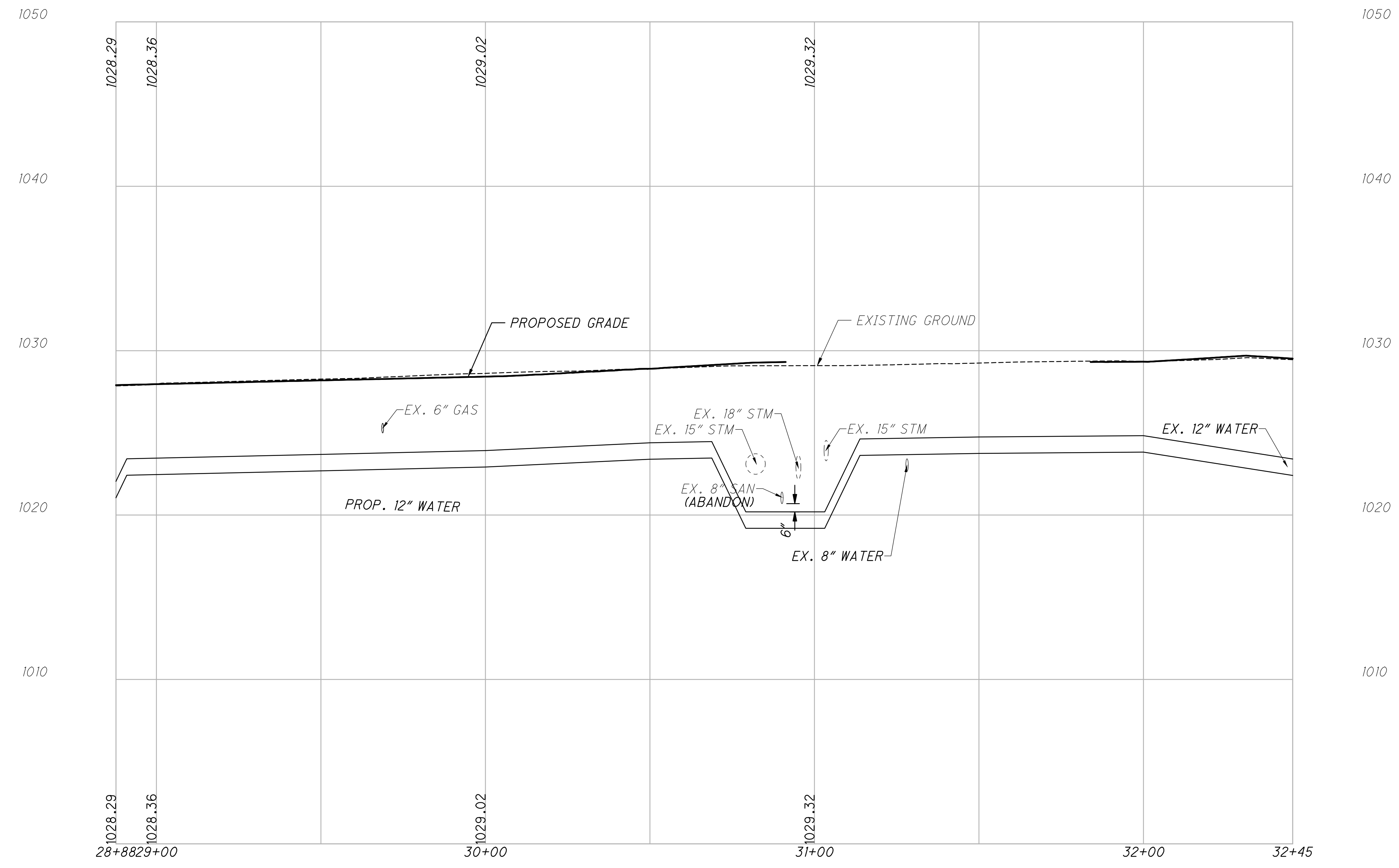
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 CHECKED JES

0 10 20 40
 HORIZONTAL
 SCALE IN FEET

**WATER WORK PLAN - 11TH STREET SE
 STA. 120+75 TO 125+25**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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CALCULATED
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**WATER WORK PROFILE - 11TH STREET SE
STA. 120+75 TO STA. 125+25**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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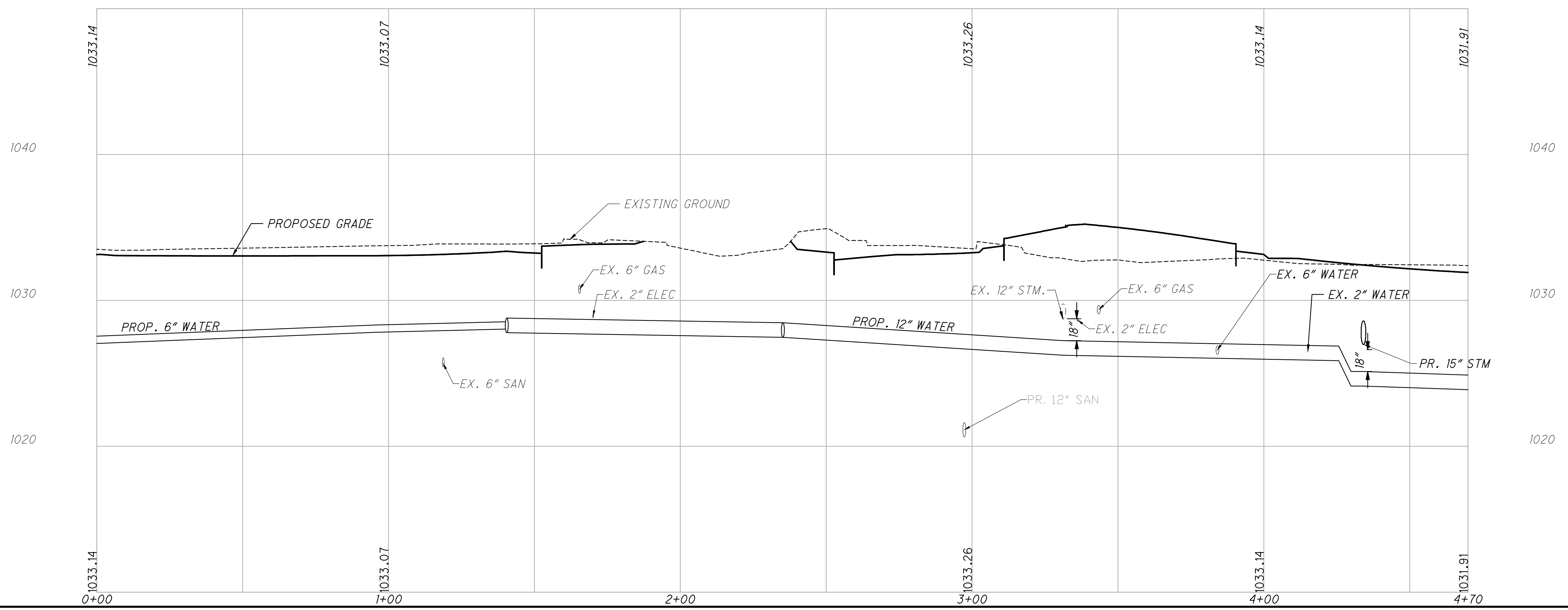
NOTES:
FOR MARKET AVENUE S PLAN AND PROFILES, SEE SHEETS 105-108.
FOR MARKET AVENUE S WATER LINE PLAN VIEW FROM STA. 17+00 TO 21+00, SEE SHEET 173

CALCULATED
JPK
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JES

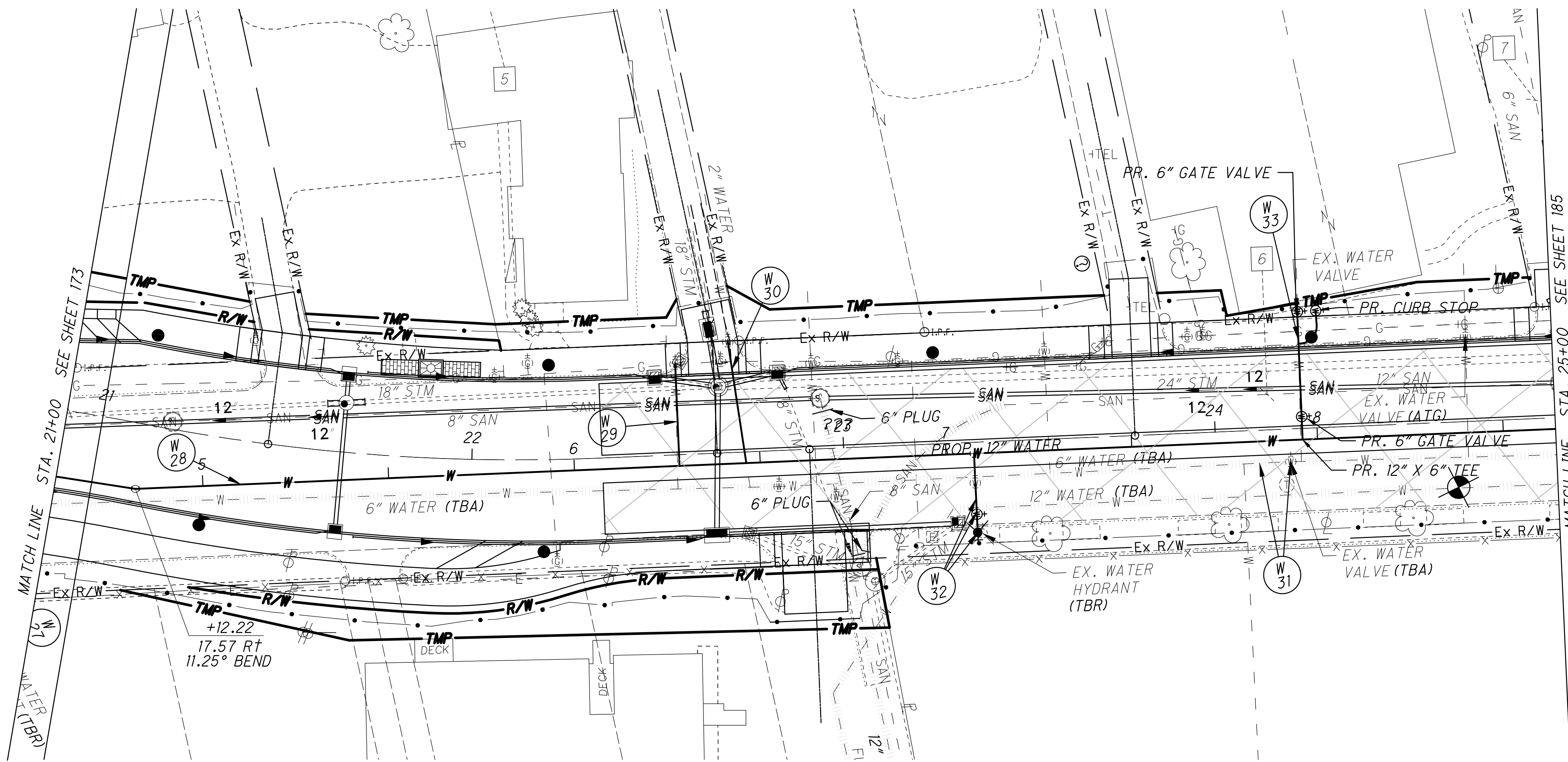
0 10 20 40
HORIZONTAL SCALE IN FEET

**WATER WORK PROFILE - MARKET AVENUE S
STA. 17+00 TO STA. 21+00**

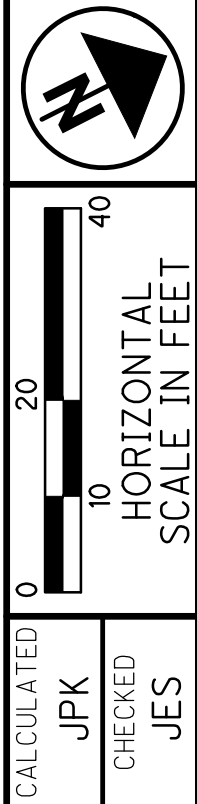
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**



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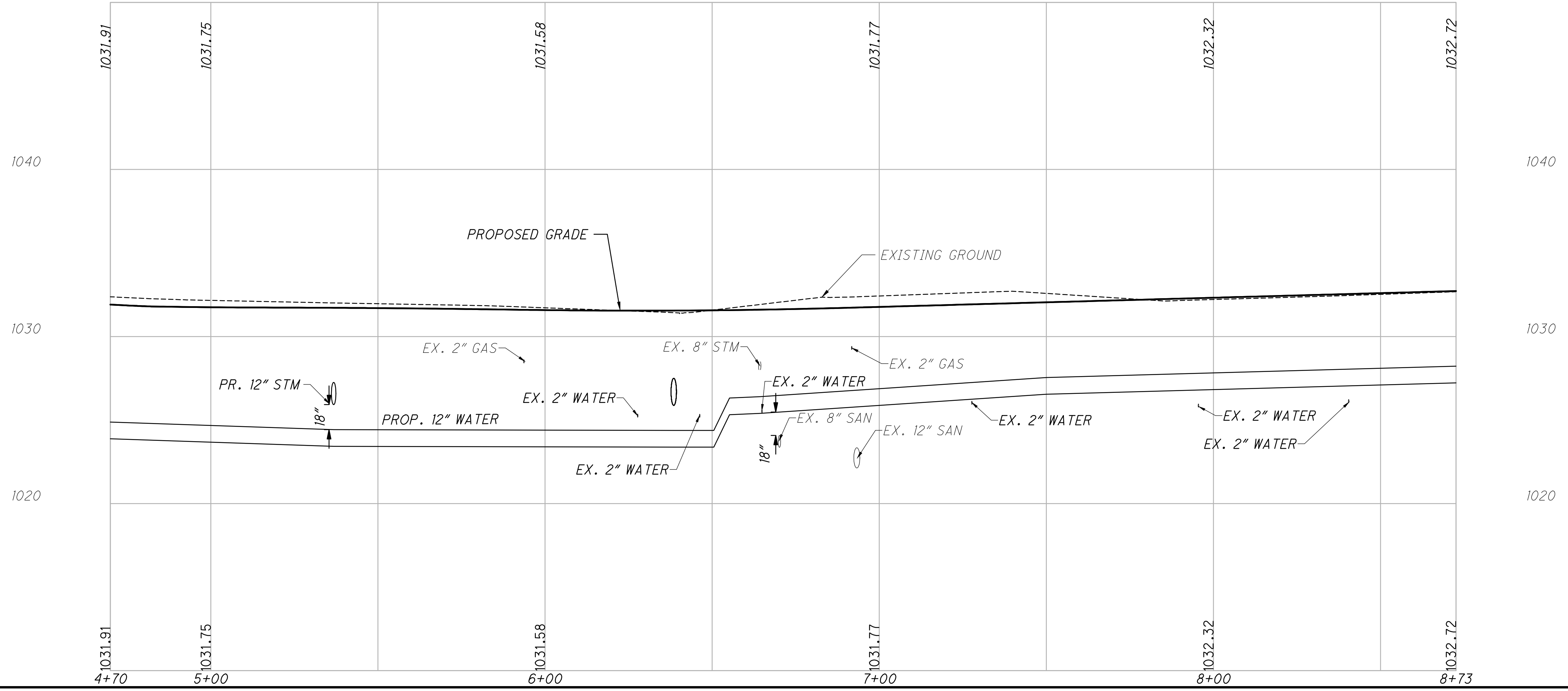
NOTES:
 FOR MARKET AVENUE S PLAN AND
 PROFILES, SEE SHEETS 105-108.



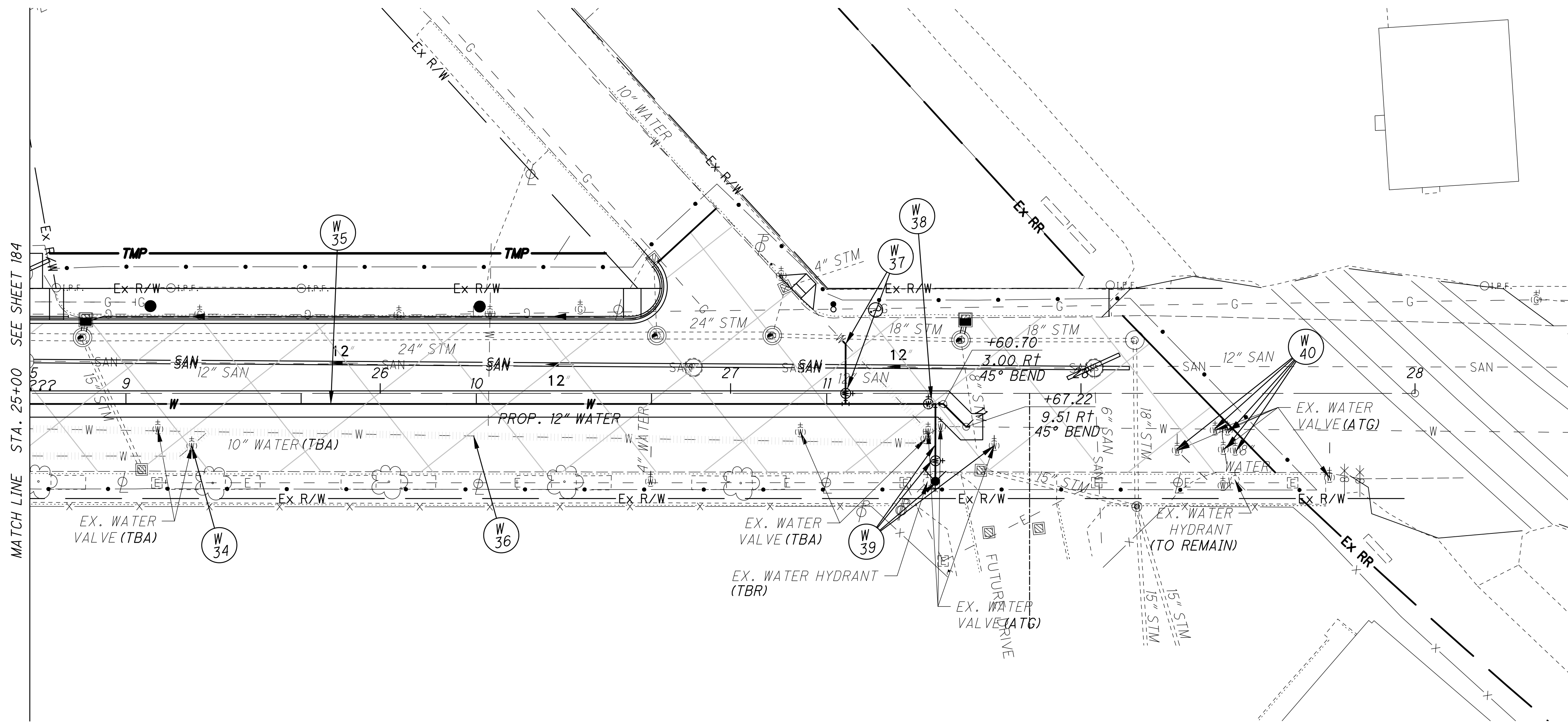
WATER WORK PLAN AND PROFILE
MARKET AVENUE S STA. 21+00 TO STA. 25+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

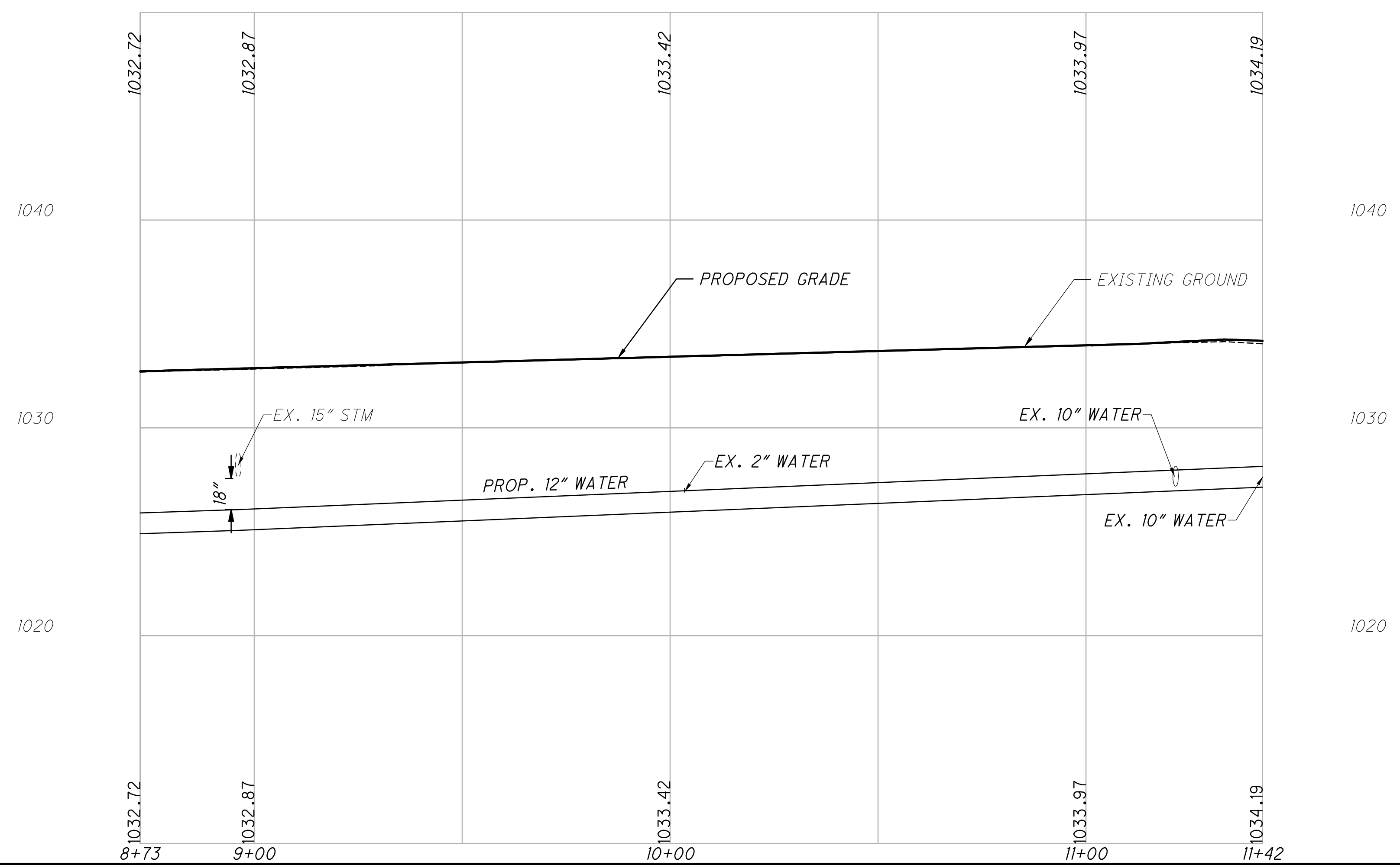
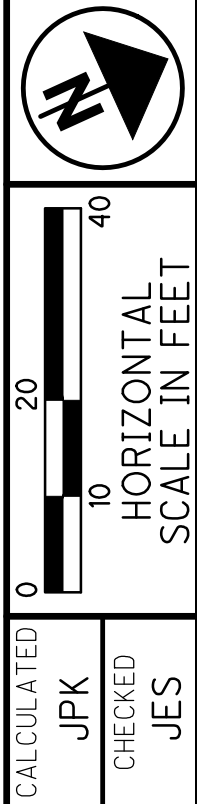
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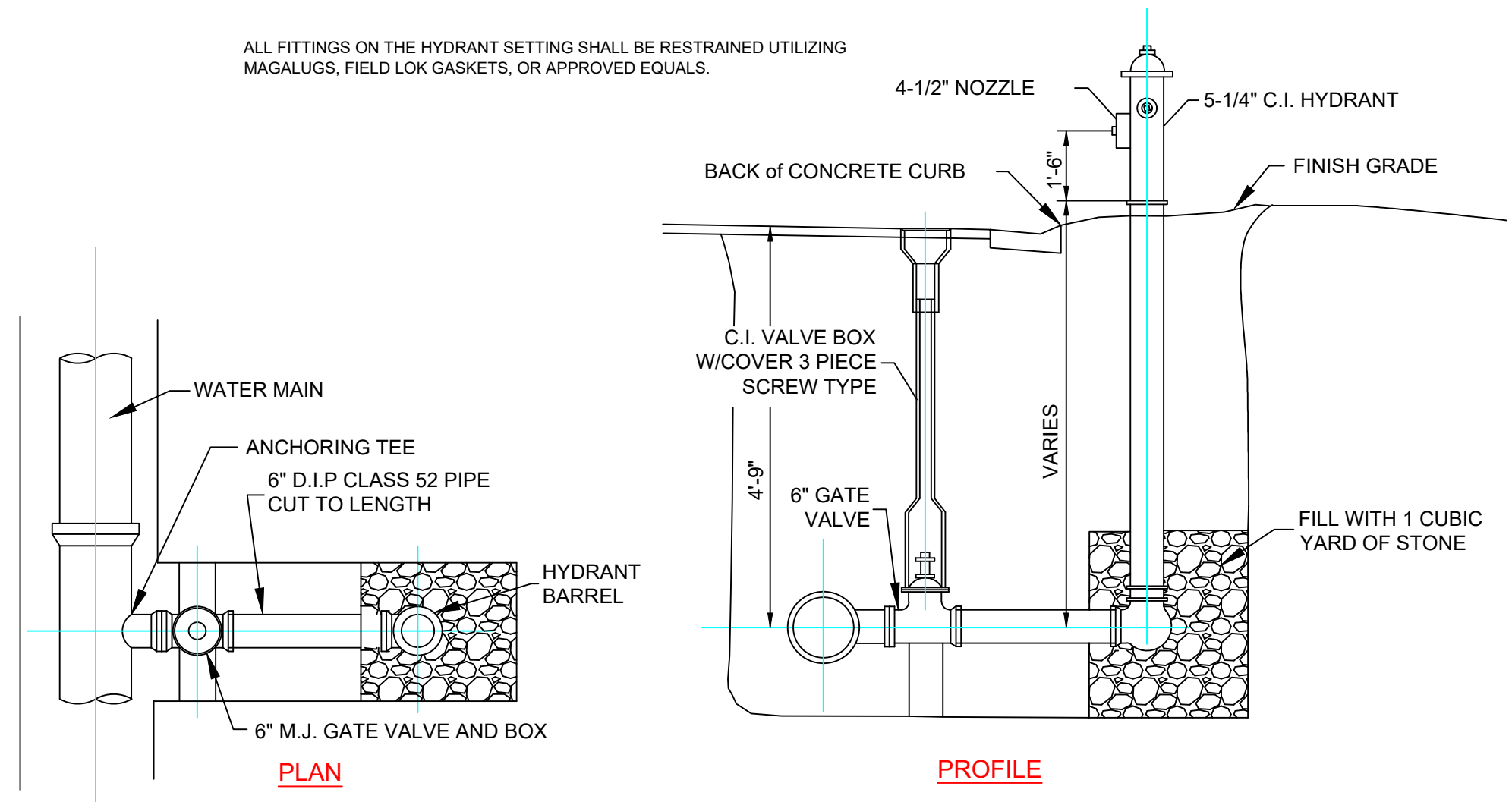
NOTES:
 FOR MARKET AVENUE S PLAN AND
 PROFILES, SEE SHEETS 105-108.



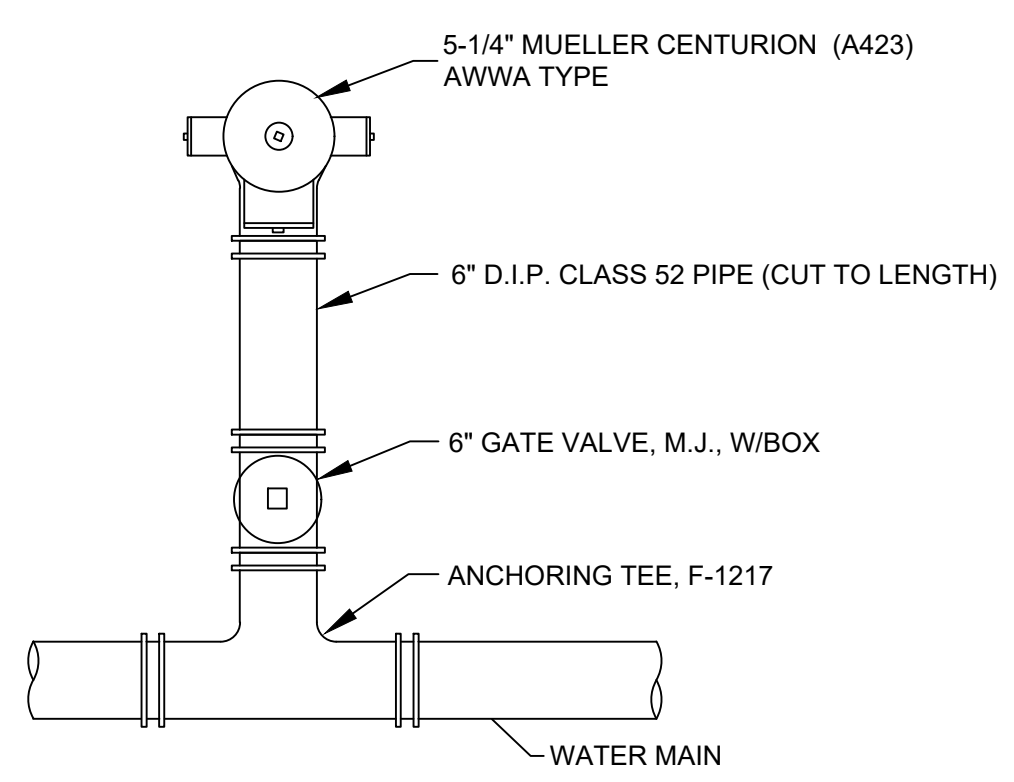
**WATER WORK PLAN AND PROFILE
 MARKET AVENUE S STA. 25+00 TO STA. 28+50**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

ALL FITTINGS ON THE HYDRANT SETTING SHALL BE RESTRAINED UTILIZING MAGALUGS, FIELD LOK GASKETS, OR APPROVED EQUALS.

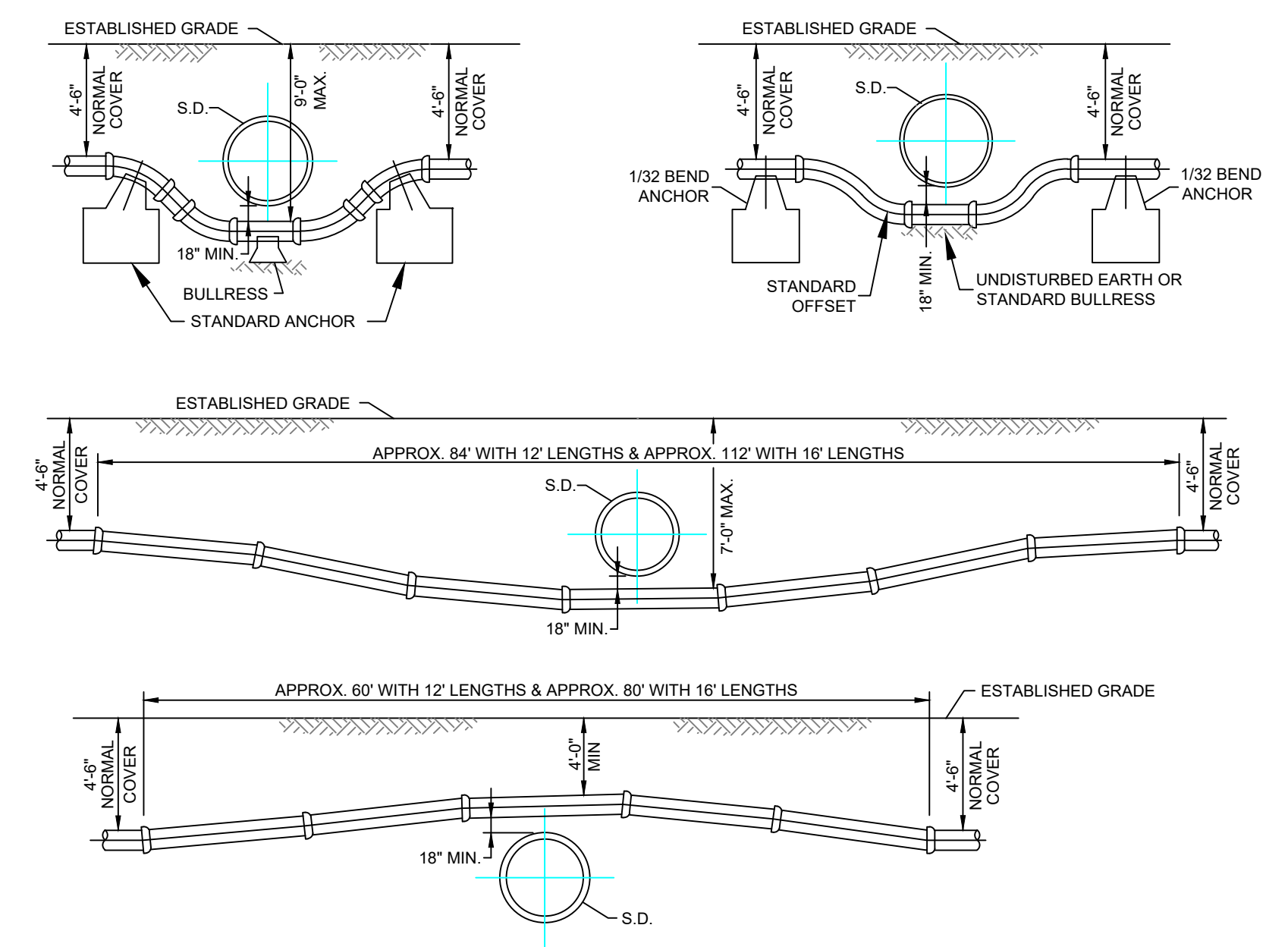


HYDRANT SETTING
(C71)
REV 4/6/1989

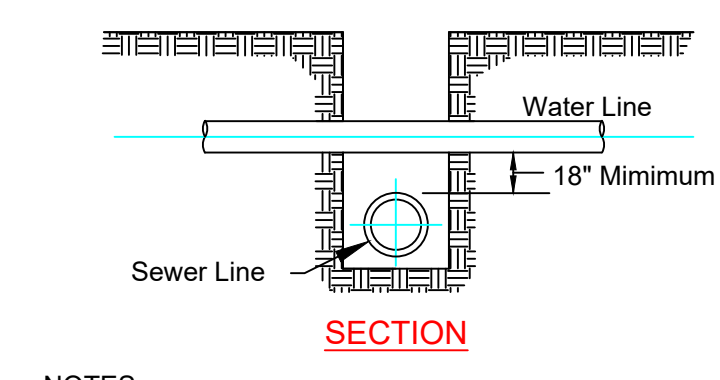


HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.
SEE SPECIFICATIONS FOR MORE INFORMATION ABOUT MATERIALS, SETTING HYDRANTS AND DRAINAGE REQUIREMENTS.
IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) TIE RODS AND (4) EYE BOLTS WITH NUTS AND WASHERS MUST BE USED.
FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAND OR APPROVED EQUAL.
ALL HYDRANTS ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

HYDRANT CONNECTION
(C70)
REV 4/5/1989

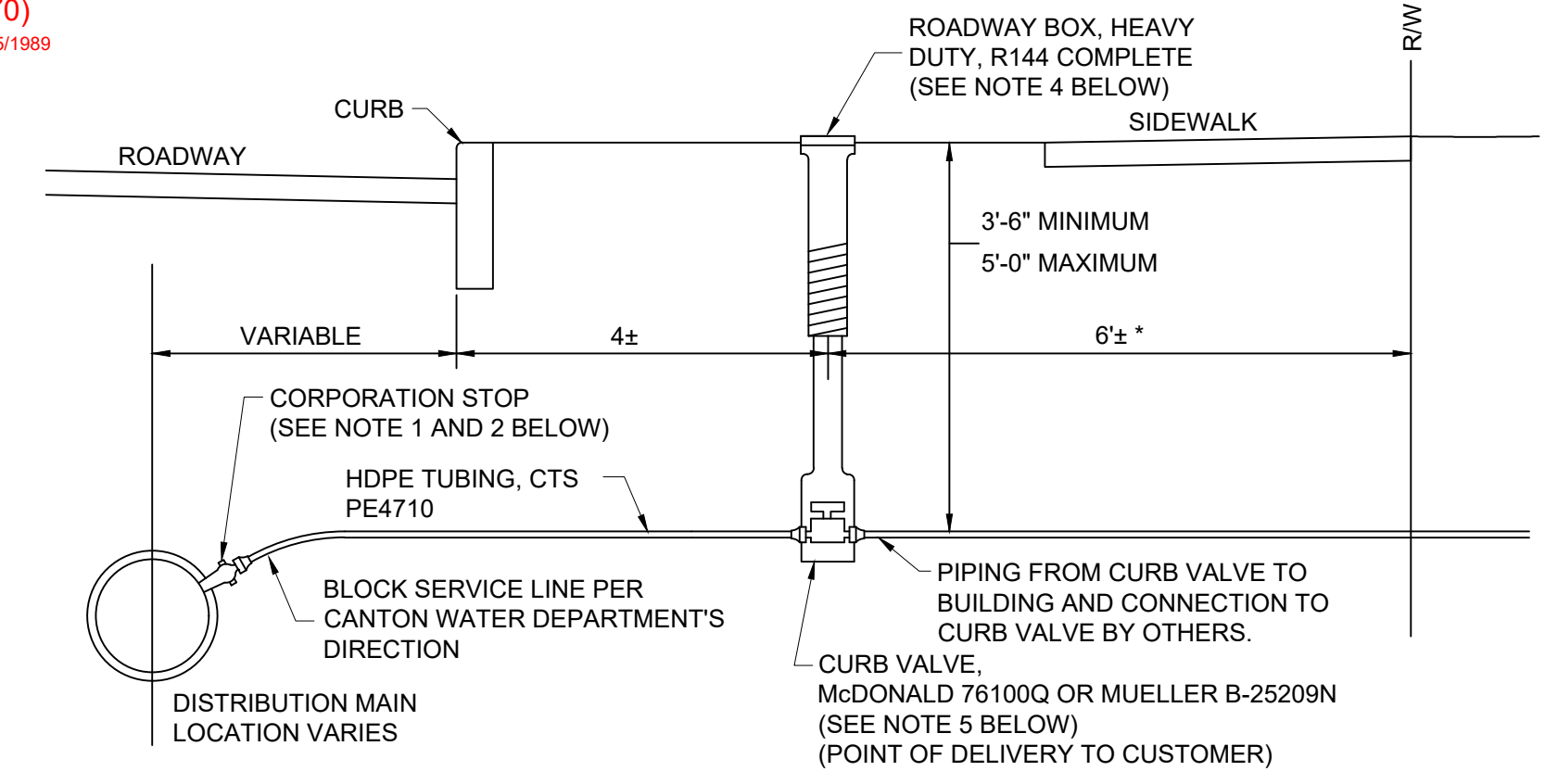


WATER MAIN CROSSING STORM DRAIN
(C187)
REV 10/22/2013



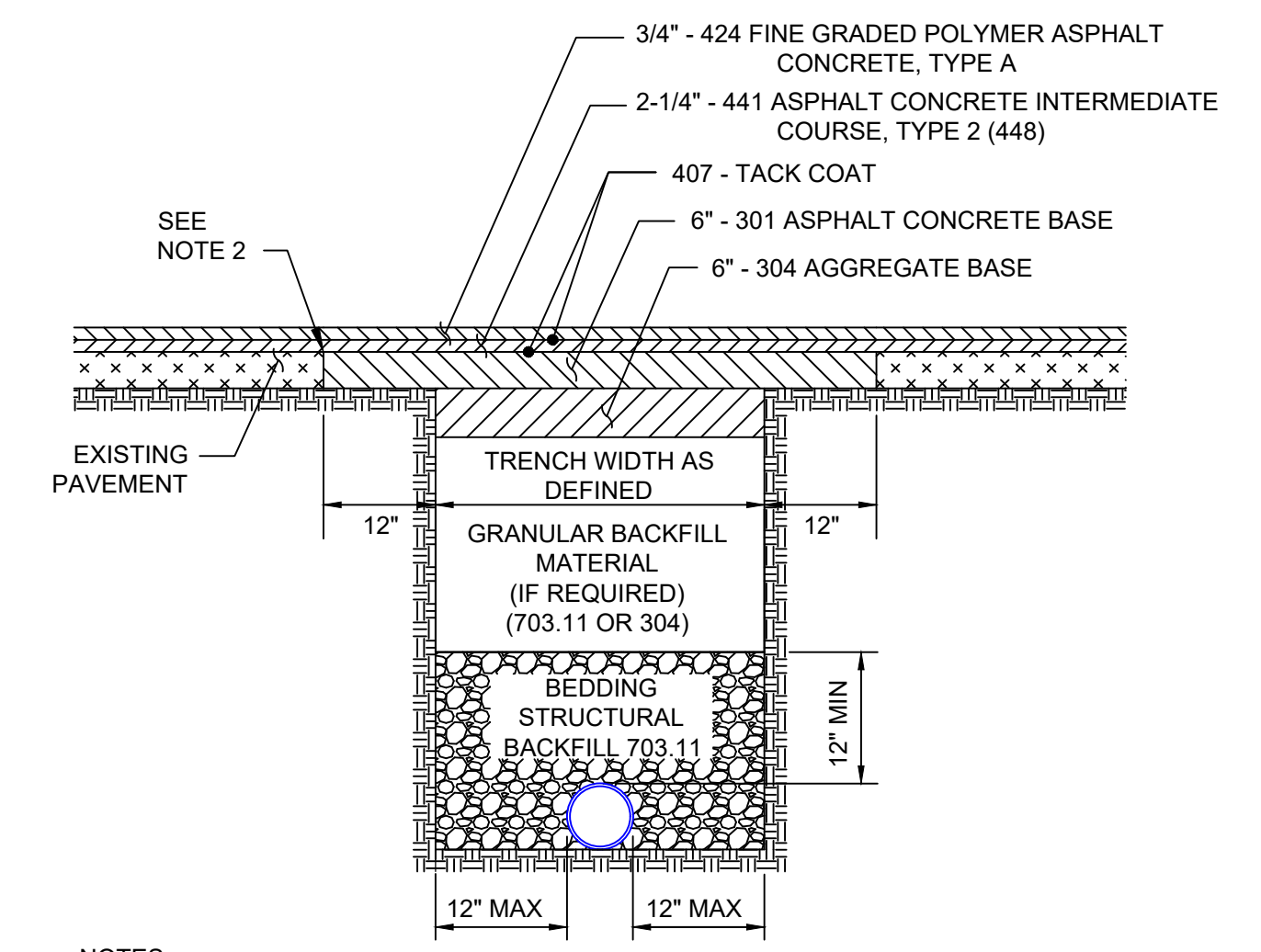
VERTICAL WATER MAIN CLEARANCE
(C186)
REV 5/26/1994

NOTES:
1. If joint on water main is within limits of sewer trench, install mechanical bell joint clamp.
2. If clearance is less than 18":
- For Storm sewers, concrete encase the storm sewer pipe, 6 ft. on each side of water main.
- For Sanitary sewers, replace the sanitary sewer pipe with PVC C900 pipe, 10 ft. on each side of water main.
Approved couplings shall be used to tie onto the existing sewer.
Cost for the above shall be included in the unit prices bid for all items in the proposal.
3. In no case shall the sewer pipe contact any water main, service line or appurtenance.



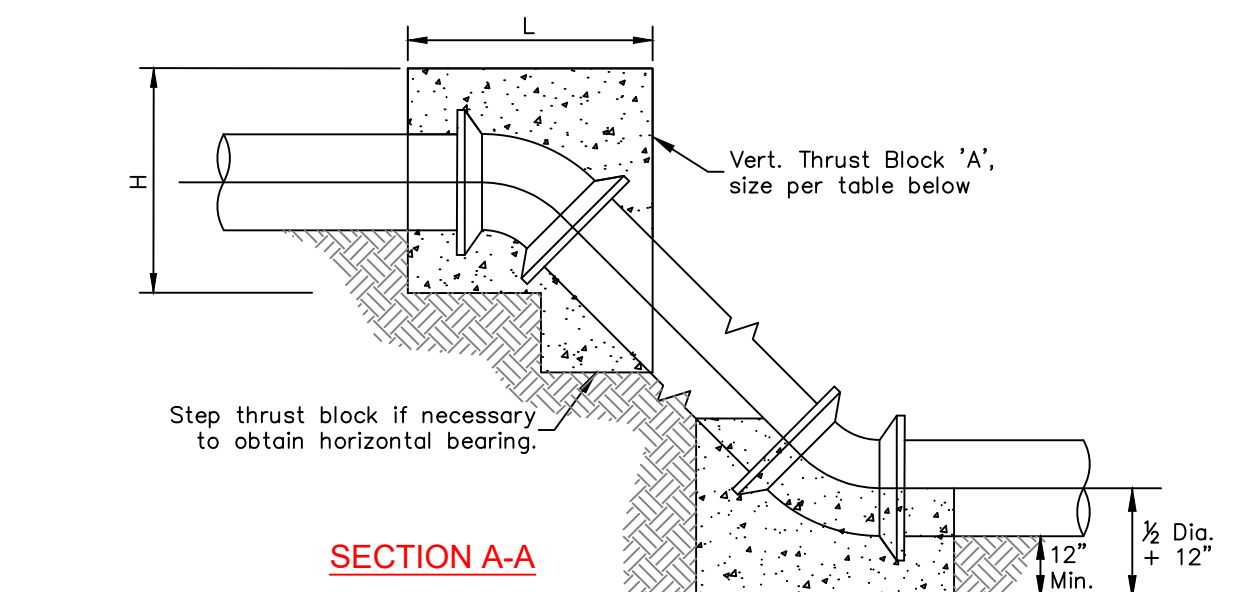
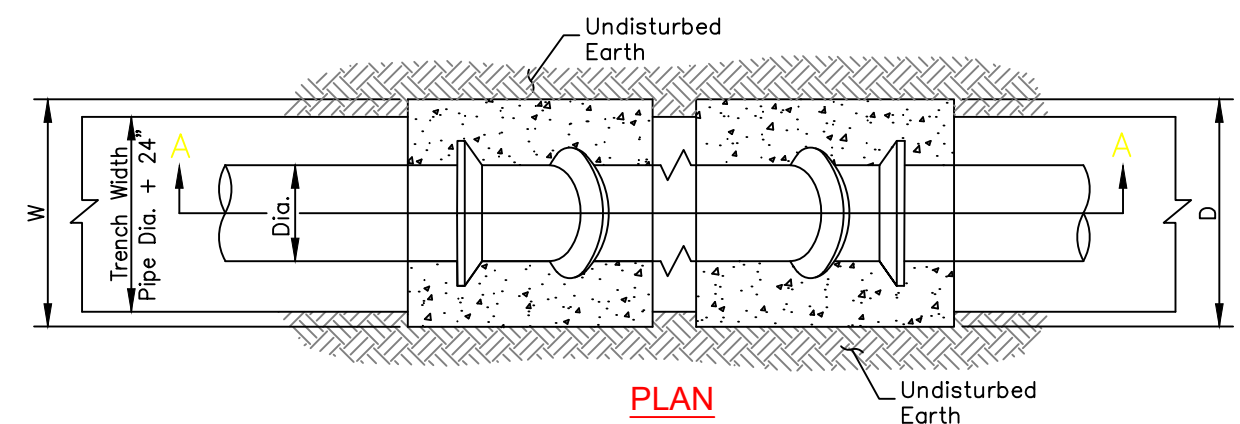
TYPICAL WATER SERVICE
(C94)
REV 4/12/2021

NOTES:
1.) A 1" SERVICE ON A 6" OR 8" MAIN SHALL CONSIST OF A 3/4" TAP WITH A 3/4" X 1" CORP.
2.) CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:
3/4" X 1" CORP. STOP ON DIP (6" AND 8" MAINS):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
3/4" X 1" CORP. STOP ON PVC C909 (6" AND 8" MAINS):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
1" CORP. STOP ON DIP (MAINS 12" AND UP):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
1" CORP. STOP ON PVC C909 (MAINS 12" AND UP):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
1 1/2" CORP. STOP (ALL MAIN SIZES):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
1 1/2" X 2" CORP. STOP (ALL MAIN SIZES):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
3.) A SERVICE CLAMP MUST BE USED WHEN THE MAIN SIZE IS 2 INCH OR SMALLER.
4.) HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN THE CURB VALVE IS LOCATED IN ROADWAYS OR ASPHALT DRIVES.
5.) WHEN CONNECTING A NEW 1" SERVICE TO AN EXISTING 3/4" SERVICE, THE CURB VALVE SIZE SHALL BE A 1" X 3/4" REDUCING CURB VALVE.
6.) BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.
7.) APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.



PAY LIMITS - TRENCH & ROADWAY DETAIL FOR D.I.P.

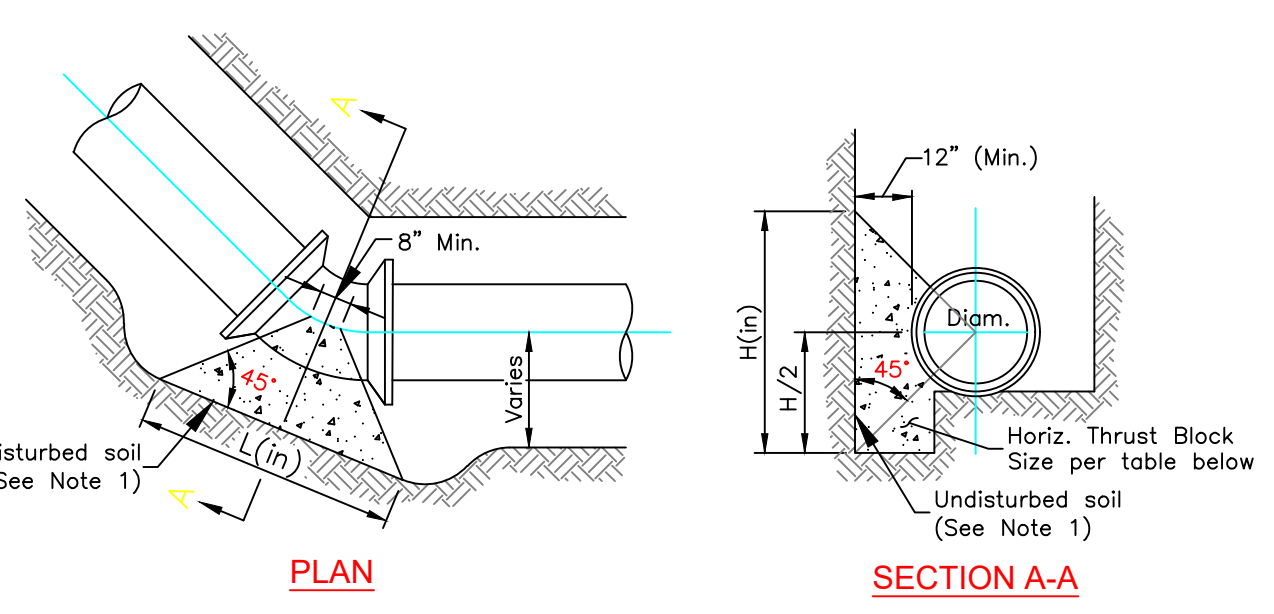
NOTES:
1. NO FOUNDRY SAND OR SLAG IS PERMITTED. ALTERNATE BACKFILL MATERIAL PERMITTED ONLY IF APPROVED BY CITY ENGINEER.
2. SAW CUT EXISTING PAVEMENT, SEAL JOINT PER ODOT ITEM 423 - CRACK SEALING, TYPE IV. INCLUDE COST IN BID PRICE FOR THE PROPOSED PAVEMENT.
3. IF ADJACENT PAVEMENT IS DAMAGED OR UNDERMINED DURING CONSTRUCTION, ADDITIONAL PAVEMENT SHALL BE SAW CUT AND REMOVED OR MILLED IN ORDER TO PROVIDE A SOUND PAVEMENT EDGE AT NO ADDITIONAL COST TO THE PROJECT.
4. IN THE EVENT THAT THE SAW CUT WOULD LIE WITHIN 3 FEET OF THE EDGE OF PAVEMENT OR FACE OF CURB, THE PAVEMENT REPLACEMENT SHALL EXTEND TO THE EDGE OF PAVEMENT OR FACE OF CURB.



CONCRETE THRUST BLOCKS FOR VERTICAL BENDS ON WATER MAINS (POURED IN PLACE, CLASS C)
(C147)
REV 4/22/2015

NOTES:
Pipe, bolts, nuts and fittings shall be wrapped with polyethylene film to prevent corrosion and concrete adhesion.
Thrust blocks to be centered on bend horizontally.
Thrust block 'A' shall be off centered on bend vertically to shift the majority of the block above the fitting.
All joints to be Megalugged.
Concrete thrust blocks to be placed on all vertical bends.

SIZE OF PIPE	DEGREE OF BEND											
	11 1/4°				22 1/2°				45°			
	L	W	H	V (cy)	L	W	H	V (cy)	L	W	H	V (cy)
6"	12	48	18	0.2	15	43	36	0.5	28	55	24	0.8
8"	12	63	24	0.4	18	57	34	0.7	36	57	33	1.4
12"	20	54	36	0.8	37	62	37	1.7	48	62	51	3.1
16"	31	65	38	1.6	55	65	39	3.0	65	65	65	5.6
20"	40	56	50	2.4	57	66	59	4.8	82	74	68	8.8
24"	48	60	60	3.5	67	72	66	6.9	91	91	72	12.7

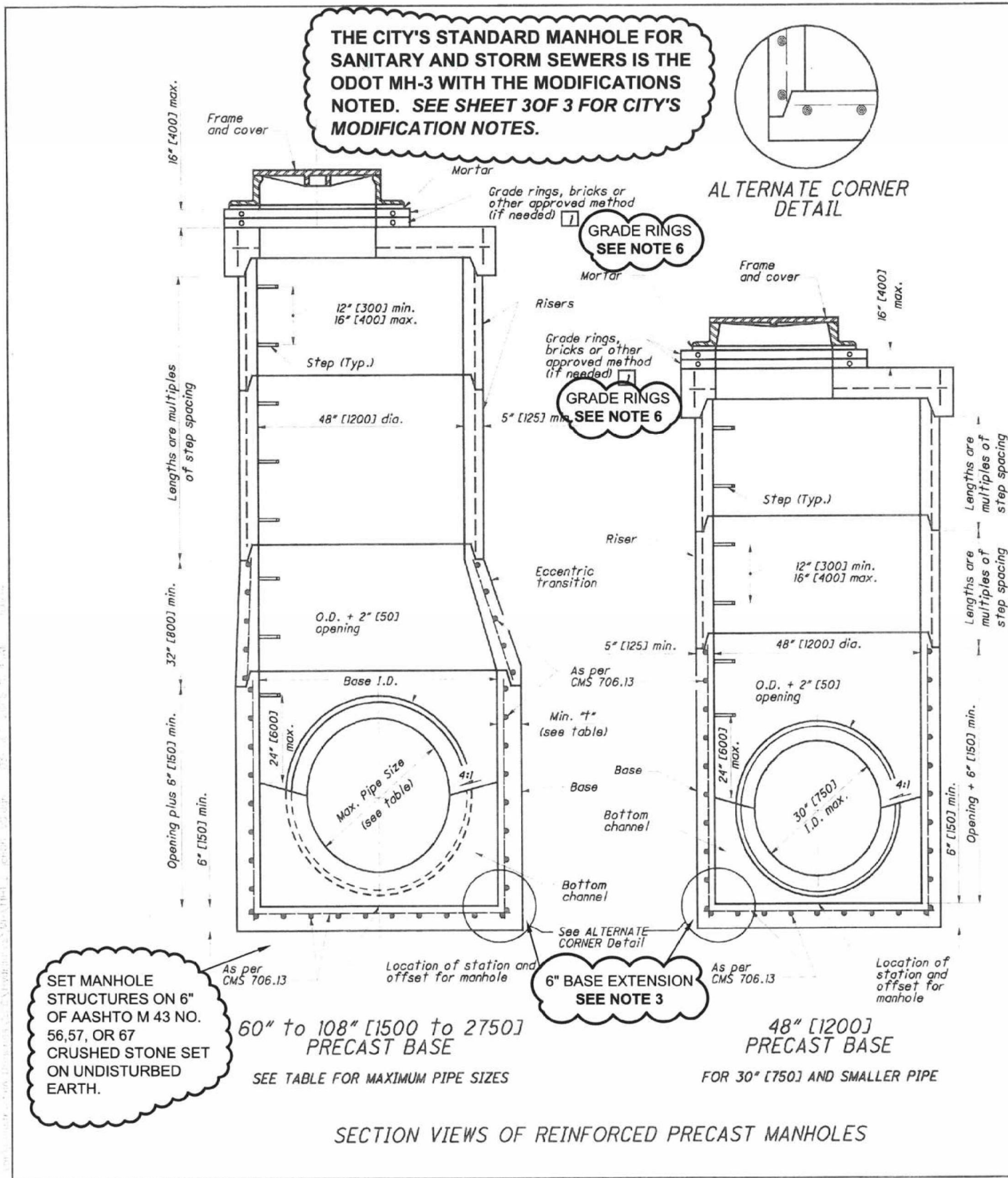


HORIZONTAL THRUST BLOCKS
(C130)
REV 3/7/2016

SIZE OF PIPE	DEGREE OF BEND							
	11 1/4°		22 1/2°		45°		90°	
	L	H	L	H	L	H	L	H
6"	16	8	16	10	24	14	32	18
8"	16	10	21	14	31	18	44	24
12"	21	16	32	20	48	26	66	36
16"	29	20	42	28	66	34	90	46
20"	37	24	50	36	73	48	107	60
24"	46	28	64	40	93	54	128	72

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THE CITY'S STANDARD MANHOLE FOR SANITARY AND STORM SEWERS IS THE ODOT MH-3 WITH THE MODIFICATIONS NOTED. SEE SHEET 30F 3 FOR CITY'S MODIFICATION NOTES.

ALTERNATE CORNER DETAIL

SET MANHOLE STRUCTURES ON 6" OF AASHTO M 43 NO. 56,57, OR 67 CRUSHED STONE SET ON UNDISTURBED EARTH.

6" BASE EXTENSION SEE NOTE 3

60" to 108" [1500 to 2750] PRECAST BASE SEE TABLE FOR MAXIMUM PIPE SIZES

48" [1200] PRECAST BASE FOR 30" [750] AND SMALLER PIPE

SECTION VIEWS OF REINFORCED PRECAST MANHOLES

NOTES

- GENERAL: With normal soil and site conditions, this standard precast manhole may be used for any required manhole depth. Sections of the precast manhole shall be cast and assembled with either all tongue or all groove ends up. Lift holes may be provided in each section for handling. Handling device for the flat slab shall be left in place.
- TOP: This section shall be a flat slab, unless an eccentric cone is specified.
- TRANSITION (OR REDUCER): This section can be either eccentric cone or flat slab.
- BASE: Manhole No. 3 is shown with a monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and ship the floor and barrel separately. Openings for inlet and outlet pipes shall be provided, either when the unit is cast or later, to meet project requirements. Bottom channels may be formed of concrete, precast in the base or field constructed as shown on SCD MH-1.1 and MH-3.1.
- RISER SECTIONS: Openings for 18" [450] and smaller inlet pipes may be either prefabricated, or cut in the field provided the sides of the pipe or the springline do not project into the manhole.
- CONNECTIONS: Connections between precast manhole sections, and pipes on sanitary sewers, may be sealed with resilient connectors conforming to ASTM C 923.
- JOINT SEAL: Seal between precast manhole sections on sanitary sewers shall be resilient and flexible gasket joints per CMS 706.11.
- OPENINGS: The maximum pipe opening shall be the O.D. of the pipe being supplied plus 2" [50] when fabricated or field cuts. Fill any voids per CMS 601.
- MATERIALS: Materials for bases and other precast sections, including reinforcement not specified hereon, shall comply with the requirements of CMS 706.13.
- DROP PIPE: When specified on the plans, drop pipe shall be constructed as shown on SCD MH-1.1.
- STEPS, FRAMES AND COVERS: Shall comply with the requirements set forth on SCD MH-1.1.
- TOP SLAB REBAR: Reinforcing steel used within the top slab shall be epoxy coated.

- SEE NOTE 1
- SEE NOTE 2
- SEE NOTE 2
- SEE NOTE 3
- SEE NOTE 4
- SEE NOTE 4
- SEE NOTE 4
- SEE NOTE 4
- SEE NOTE 4
- SEE NOTE 5

LEGEND

1 Reconstruction to grade only. Approved materials are kept on file by the Office of Materials Management.

MAXIMUM PIPE SIZES		
BASE I.D.	MIN. #"	MAX. PIPE SIZE
60" [1500]	5" [125]	36" [900]
72" [1800]	6" [150]	48" [1200]
84" [2100]	7" [175]	54" [1350]
90" [2250]	7 1/2" [190]	60" [1500]
96" [2400]	8" [200]	66" [1650]
108" [2750]	9" [230]	72" [1800]

MANHOLE No. 3
MH-1.2
1 / 2

OFFICE OF THE CITY ENGINEER
CANTON, OHIO

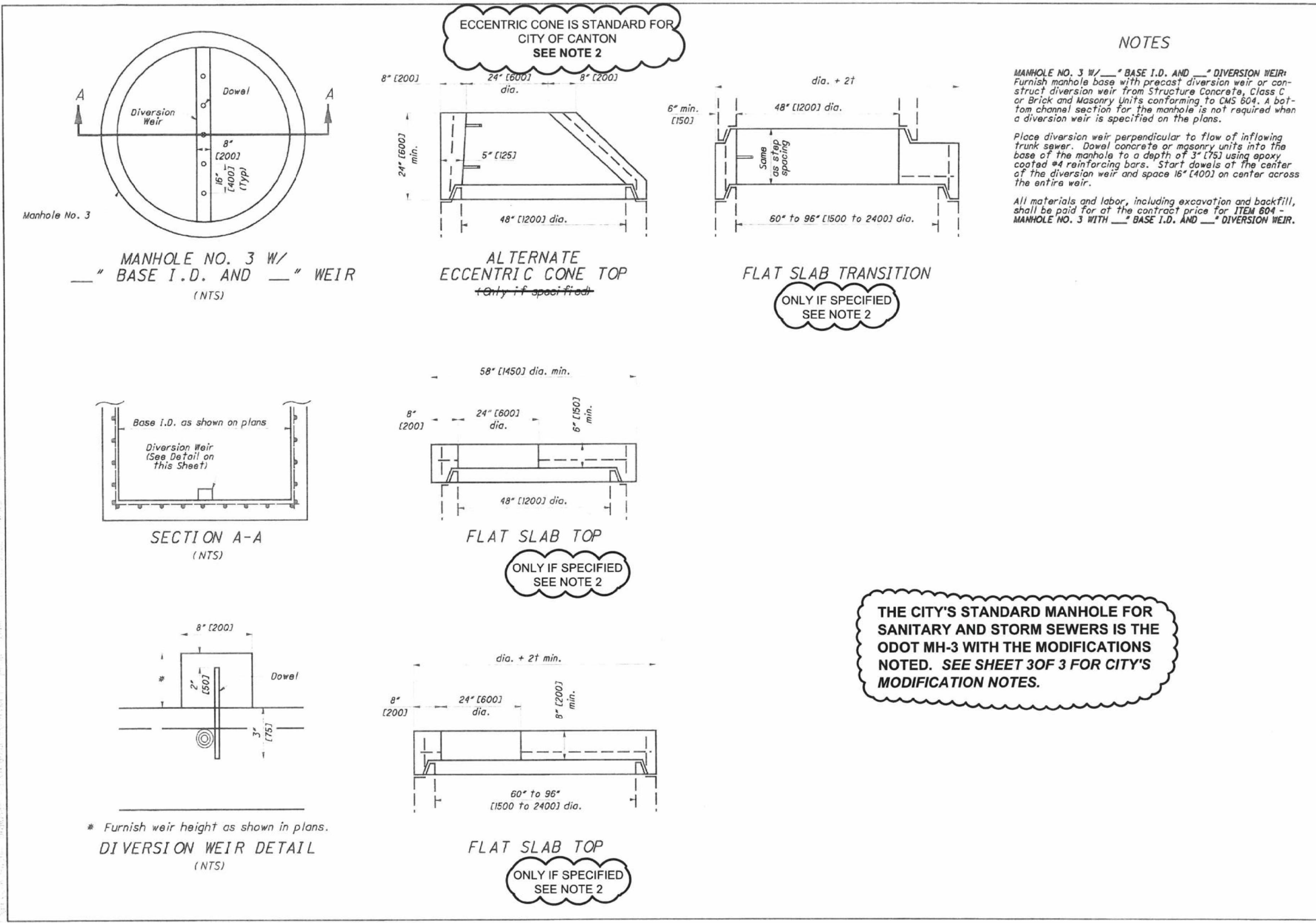
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

STANDARD DRAWING NO. 10
PRECAST STORM OR
SANITARY MANHOLE
CE_10_20210226.DWG

DESCRIPTION	DATE	BY
CAD DRAWING	JAN 2012	CDB
MODIFIED GRADE RING NOTE 6	09/23/2020	RMB
TITLE BLOCK REVISION	02/26/2021	GML



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DATE	7-20-01
DATE	7-19-02
DATE	7-15-06
DATE	7-20-06
DESIGNED BY	J. Stains
CHECKED BY	J. Stains
SCALE	AS SHOWN
PROJECT NO.	MANHOLE No. 3
DRAWING NO.	MH-1.2
SHEET NO.	2 / 2

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

DESCRIPTION	DATE	BY
CAD DRAWING	JAN 2012	RMB
TITLE BLOCK REVISION	02/26/2021	GML

STANDARD DRAWING NO. 10
PRECAST STORM OR SANITARY MANHOLE
 CE_10_20210226.DWG

CANTON CONSTRUCTION STANDARDS NOTES FOR MODIFIED ODOT MANHOLE 3 (SCD MH-1.2)

- NOTE 1. LIFT HOLES INSIDE THE MANHOLES MUST BE SEALED WITH GROUT.
- NOTE 2. TOP AND TRANSITION SECTIONS MUST BE ECCENTRIC CONE ONLY. USE FLAT SLAB FOR SHALLOW MANHOLE APPLICATIONS OR SPECIAL CIRCUMSTANCES AS DIRECTED BY THE CITY.
- NOTE 3. 6" EXTENDED BASE IS STANDARD FOR ALL SANITARY AND STORM MANHOLES. SET MANHOLE BASE ON 6" OF AASHTO M 43 NO. 56, 57, OR 62 CRUSHED STONE SET ON UNDISTURBED EARTH.
- NOTE 4. PIPE CONNECTIONS INTO THE MANHOLES MUST NOT EXTEND INTO THE MANHOLE MORE THAN 2" AT THE SIDES OF THE PIPE AT THE SPRING-LINE OF SAID PIPE.

SANITARY CONNECTIONS

SANITARY SEWER PIPE INLETS, WITH FLOWLINES MORE THAN 2' HIGHER THAN THE CHANNEL BENCH MUST BE OUTSIDE DROP CONNECTIONS. DROP CONNECTIONS MUST BE FABRICATED AND CAST INTEGRALLY WITH THE MANHOLE SECTIONS OR INSTALLED PER CITY STANDARD DWG. 11, OUTSIDE DROP CONNECTION FOR SANITARY MANHOLES. NO INSIDE DROPS PERMITTED FOR PRIVATE SEWER CONNECTIONS. INSIDE DROP FOR CITY-OWNED SEWERS ARE SUBJECT TO THE CITY ENGINEER'S APPROVAL.

SANITARY PIPE INLETS MUST BE FLUMED OVER THE BENCH, DIRECTING FLOW INTO THE CHANNEL, USING CONCRETE AND/OR CLAY SEWER BRICK AND MORTAR.

CAST OPENINGS MUST BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 2 INCHES WITH A BUTYL RUBBER A-LOK, X-CEL GASKET, OR APPROVED EQUAL.

CORED OPENINGS MUST BE MACHINE CORED, THE OPENING SHALL BE PER PIPE-TO-MANHOLE CONNECTOR SPECS. USE "KOR-N-SEAL" FLEXIBLE PIPE-TO-MANHOLE CONNECTOR WITH STAINLESS WEDGE ASSEMBLY OR APPROVED EQUAL CONFORMING TO ASTM C-923.

STORM CONNECTION

OPENINGS FOR STORM PIPE INLETS MAY BE CAST OR MACHINE CORED. OPENINGS SHALL NOT EXCEED THE O.D. OF PIPE + 2". MAKE WATER-TIGHT JOINTS WITH NON-SHRINK CEMENT OR CLASS 'C' CONCRETE APPLIED FROM INSIDE AND OUTSIDE OF MANHOLE.

- NOTE 5. STEPS SHALL BE 1/2" STEEL REINFORCED POLYPROPYLENE STEPS 12" W X 5-3/4" BY AMERICAN STEP CO., INC. OR APPROVED EQUAL, MEETING ASTM 478.

FRAMES AND COVER SHALL CONFORM WITH CITY OF CANTON STD. DWG. NO. 12.

- NOTE 6. GRADE RINGS FOR NEW MANHOLES MAY BE PRECAST CONCRETE, RUBBER COMPOSITE, OR *CLAY BRICK AND MORTAR. CONCRETE BRICK IS NOT PERMITTED. *CLAY BRICK AND MORTAR IS NOT PERMITTED WITH SANITARY MANHOLES.

HEIGHT OF GRADE RINGS COLLECTIVELY SHALL NOT EXCEED 12".

PRECAST CONCRETE GRADE RINGS MUST BE REINFORCED CLASS 'C' CONCRETE AND CONNECTED USING TWO CONCENTRIC RINGS OF 1/2" TO 1" BEADS OF BUTYL RUBBER SEALANT CON-SEAL OR APPROVED EQUAL. SEAL OUTSIDE JOINTS WITH 1/2" NON SHRINK CEMENT PLASTER.

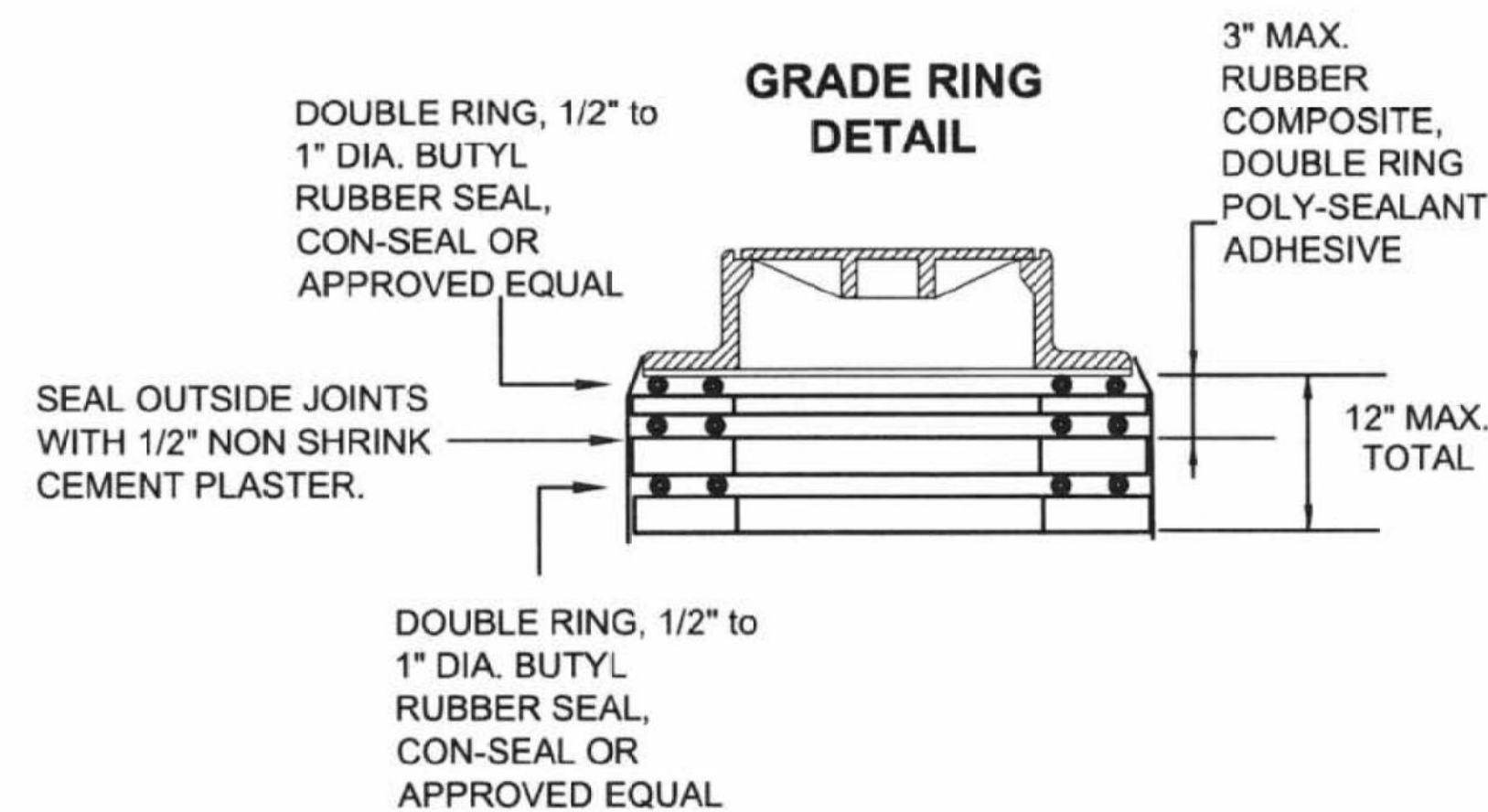
RUBBER COMPOSITE GRADE RINGS MUST BE "INFRA-RISER" BY EJIW OR APPROVED EQUAL, AND CONNECTED USING TWO PARALLEL BEADS OF POLY-SEALANT ADHESIVE PER MANUFACTURER RECOMMENDATION. RUBBER COMPOSITE GRADE RINGS HEIGHT MUST NOT EXCEED 3" AND MUST BE PLACED DIRECTLY UNDER MANHOLE FRAME.

BRICK AND MORTAR RINGS MUST BE BELDEN BRICK, FINE GRIND, ASTM C32-90, OR APPROVED EQUAL WITH HIGH STRENGTH, AIR ENTRAINED, MORTAR. SEAL OUTSIDE JOINTS WITH 1/2" NON SHRINK CEMENT PLASTER. *CLAY BRICK AND MORTAR IS NOT PERMITTED WITH SANITARY MANHOLES.

USE TWO PARALLEL 3/4" BEADS OF BUTYL RUBBER SEALANT CON-SEAL OR APPROVED EQUAL, BETWEEN GRADE RINGS OF DIFFERENT MATERIAL AND BETWEEN GRADE RINGS AND MANHOLE FRAME.

- NOTE 7. FOR BACKFILL MATERIAL AND COMPACTION, AND ROCK EXCAVATION, IF APPLICABLE, REFER TO CITY STD.DWG. NO. 19.

- NOTE 8. SANITARY MANHOLES TO BE TESTED ACCORDING TO CITY ENGINEER'S SPECIFICATION 04-01 (NEGATIVE AIR PRESSURE TEST).



OPTIONAL MANHOLE BID ITEMS

ITEM	QTY.	UNIT	DESCRIPTION OPTION "A"
604		V.F.	MH WATERPROOFING, COAL TAR, A.P.P.

IF REQUESTED BY THE CITY ENGINEER, OR SPECIFIED IN THE PLAN, THE CONTRACTOR SHALL PROVIDE UNIT PRICE FOR WATERPROOFING THE EXTERIOR OF DESIGNATED MANHOLES. THIS ITEM IS "CITY OPTIONAL" AND THE PRICE IS PAID PER VERTICAL FOOT OF EACH MANHOLE WATERPROOFED AS DIRECTED BY THE ENGINEER. THIS OPTION IS A CONTINGENCY BID ITEM UNLESS SPECIFIED OTHERWISE.

APPLY IN THE FIELD A COAL TAR EPOXY TO THE OUTSIDE OF THE MANHOLE PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS FROM THE TOP OF THE EXTENDED BASE TO THE BOTTOM OF THE MANHOLE COVER CASTING.

ITEM	QTY.	UNIT	DESCRIPTION OPTION "B"
604		EACH	NEW MH, POLYMER LINING, A.P.P.
604		V.F.	EXISTING MH, POLYMER LINING, A.P.P.

IF REQUESTED BY THE CITY ENGINEER, OR SPECIFIED IN THE PLAN, THE CONTRACTOR SHALL PROVIDE UNIT PRICE FOR CORROSION RESISTANT POLYMER LININGS AS DESIGNATED. THIS ITEM IS "CITY OPTIONAL" AND THE PRICE IS PAID PER VERTICAL FOOT OR PER EACH MANHOLE LINED AS DIRECTED BY THE ENGINEER. THE UNIT COST FOR THIS ITEM INCLUDES ALL COSTS FOR LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR SUPPLYING AND INSTALLING THE LININGS INCLUDING THE COST FOR BYPASSING EXISTING SEWER FLOWS FOR THE DURATION OF THE INSTALLATION AND CURING TIME AS SPECIFIED. THIS OPTION IS INCLUDED AS A CONTINGENCY BID ITEM. UNLESS SPECIFIED OTHERWISE.

APPLY IN THE FIELD A CORROSION RESISTANT POLYMER LINING (PLASITE 5371 BY CARBOLINE OR APPROVED EQUAL) TO THE INSIDE OF THE NEW OR EXISTING MANHOLE PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. APPLY FROM THE TOP OF THE BENCH TO THE BOTTOM OF THE MANHOLE COVER CASTING.

FOR EXISTING MANHOLES, PRIOR TO POLYMER LINING APPLICATION, RESTORE INSIDE WALLS AS PER LINING MANUFACTURER'S RECOMMENDATIONS OR AS DIRECTED BY THE CITY ENGINEER.

THE CITY'S STANDARD MANHOLE FOR SANITARY AND STORM SEWERS IS THE ODOT MH-3 WITH THE MODIFICATIONS NOTED.

STANDARD DRAWING NO. 10

PRECAST STORM OR SANITARY MANHOLE

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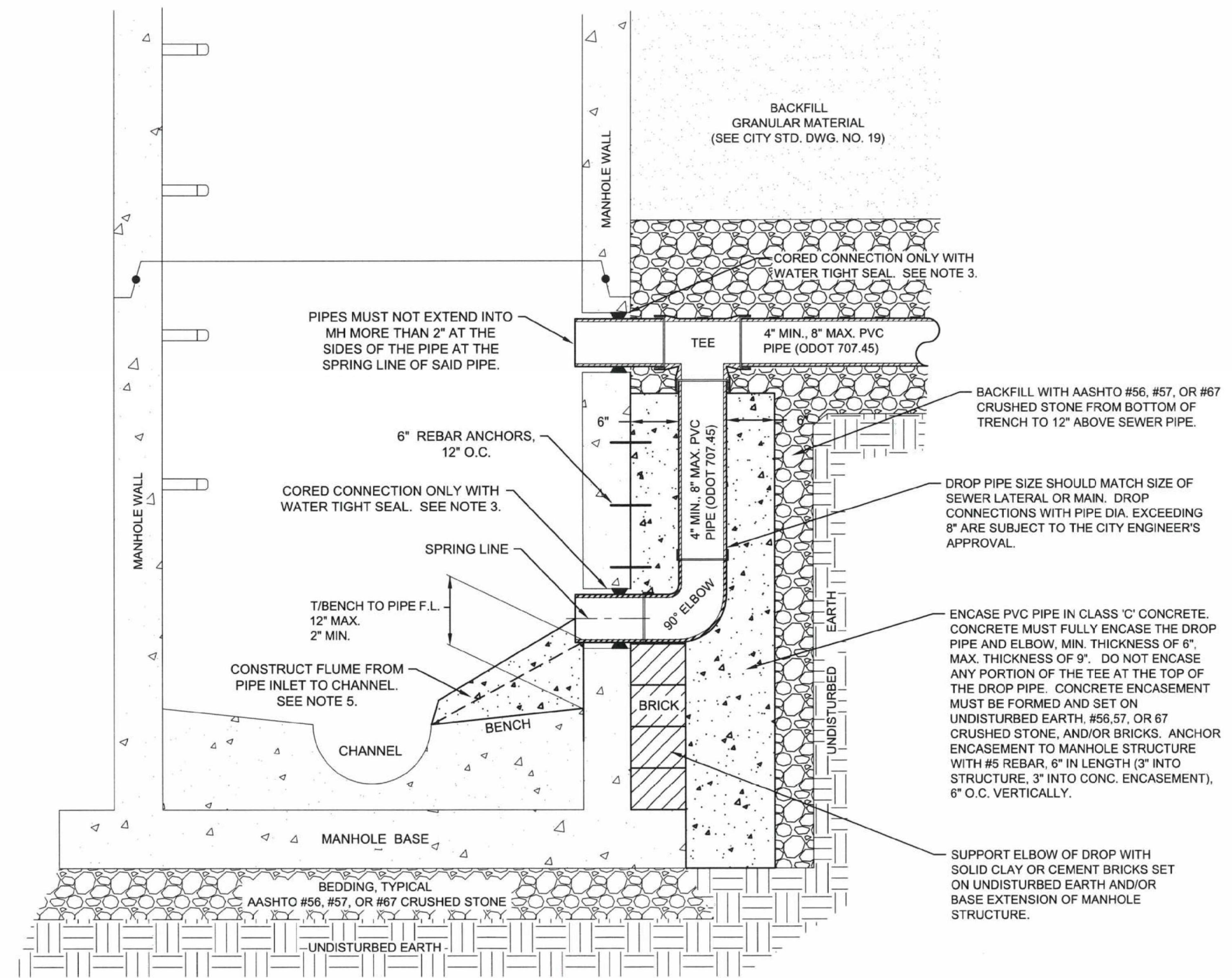
DESCRIPTION	DATE	BY
CAD DRAWING	JAN 2012	RMB
MODIFIED NOTE 4 & 6	09/23/2021	RMB
TITLE BLOCK REVISION	02/26/2021	GML

3 OF 3

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

NOTES:

1. DROP CONNECTIONS INSTALLED WITH NEW MANHOLE STRUCTURES MUST BE CAST INTEGRAL WITH PRECAST CONCRETE MANHOLES.
2. DROP CONNECTIONS INSIDE MANHOLE STRUCTURES ARE NOT PERMITTED FOR SANITARY SEWER LATERALS. DROP CONNECTIONS INSIDE MANHOLE STRUCTURES FOR SANITARY SEWER MAINS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
3. CORED OPENINGS MUST BE MACHINE CORED, THE OPENING SHALL BE PER PIPE-TO-MANHOLE CONNECTOR SPECS. USE "KOR-N-SEAL" FLEXIBLE PIPE-TO-MANHOLE CONNECTOR WITH STAINLESS WEDGE ASSEMBLY OR APPROVED EQUAL CONFORMING TO ASTM C-930 OR ASTM C-923.
4. PIPE CONNECTIONS INTO THE MANHOLE MUST NOT EXTEND INTO THE MANHOLE MORE THAN 2" AT THE SIDES OF THE PIPE AT THE SPRING-LINE OF SAID PIPE. PIPE CONNECTIONS ARE NOT PERMITTED WITHIN 3" OF JOINTS BETWEEN MANHOLE RISER SECTIONS.
5. SANITARY PIPE INLETS MUST BE FLUMED OVER THE BENCH, DIRECTING FLOW INTO THE CHANNEL, USING CONCRETE AND/OR CLAY SEWER BRICK AND MORTAR.
6. ODOT REFERENCES ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.



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DESCRIPTION	DATE	BY
CAD DRAWING	JAN 2012	RMB
TITLE BLOCK REVISION	FEB 2021	GML

STANDARD DRAWING NO. 11
OUTSIDE DROP CONNECTION
FOR SANITARY MANHOLE
CE_11_20210224.DWG

1 OF 1

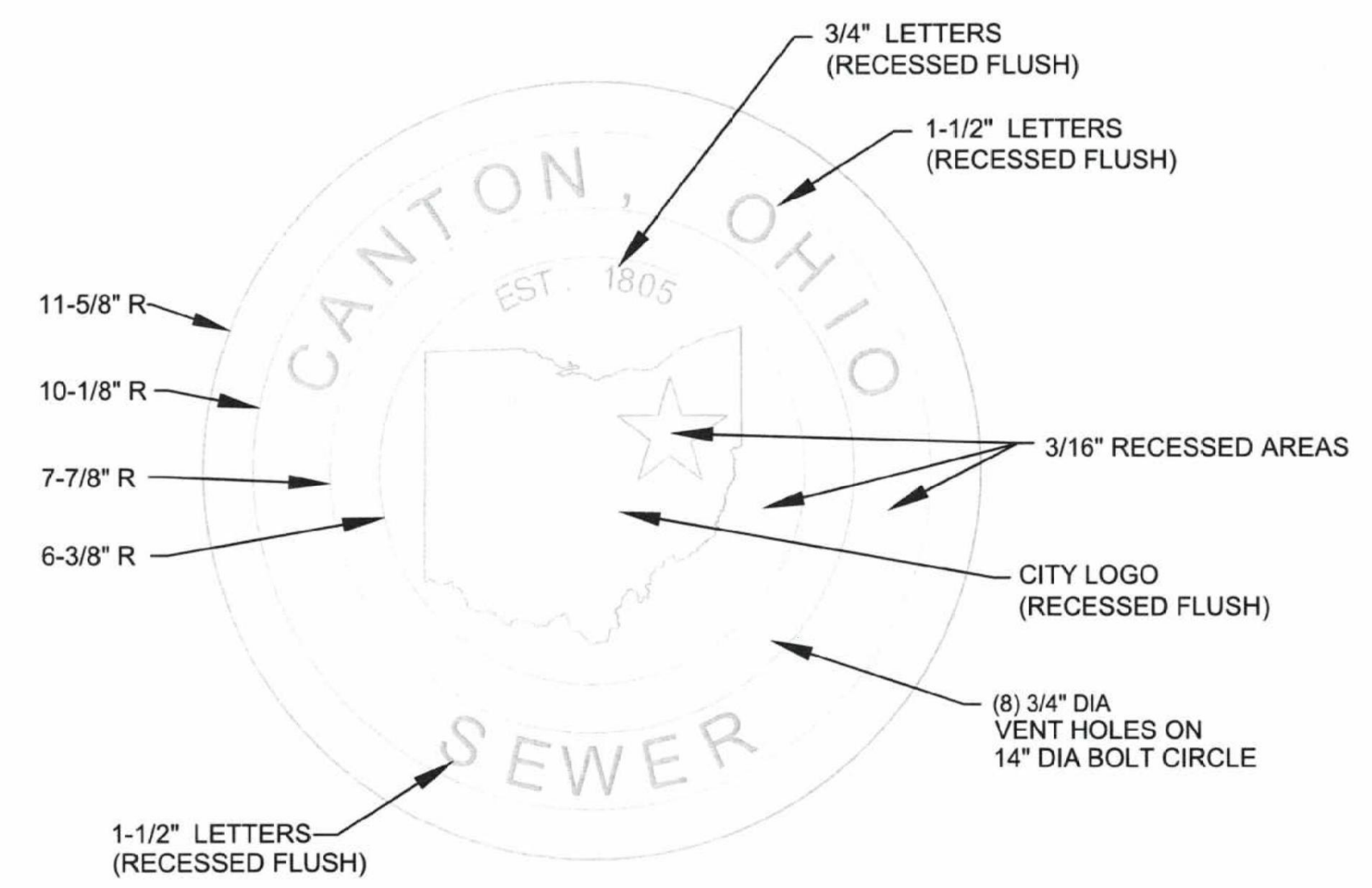
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TOP OF SANITARY SEWER MANHOLE COVER
(SEE NOTE 2 FOR STORM SEWER COVER)

NOTES:

1. COVER AND FRAME TO BE CAST OF GRAY IRON IN COMPLIANCE WITH ASTM SPEC. ASTM A-48 CLASS 35 AND AASHTO M 306. CASTINGS SHALL BE OF THE HEAVY DUTY RATING.
2. SANITARY MANHOLE COVER/FRAME
 -EAST JORDAN 1850 B VENTED COVER (PRODUCT NO. 185026) AND 1850 FRAME.
 -NEENAH R-1654 FRAME AND VENTED COVER.
 -OR EQUAL APPROVED BY CITY ENGINEER.

STORM MANHOLE COVER/FRAME
 -EAST JORDAN 1850 M GRATED COVER AND 1850 FRAME.
 -NEENAH R-1654 FRAME AND GRATED COVER.
 -USE THE VENTED COVER WITH CITY LOGO WITHIN CROSSWALKS.
3. MACHINE BEARING SURFACES BETWEEN LID AND FRAME.
4. CONTACT CITY ENGINEER FOR CAD DRAWING OF CITY LOGO.
5. CASTINGS ARE NOT REQUIRED TO BE PAINTED.
6. **ALTERNATE FRAMES**, SUITABLE WITH EJ 1850 COVER, FOR USE AS DIRECTED BY THE CITY ENGINEER:
 EAST JORDAN 2015 (10-1/2" FRAME HEIGHT)
 EAST JORDAN 1622 (5" FRAME HEIGHT, OR FLAT IF FRAME IS INVERTED)



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DESCRIPTION	DATE	BY
CAD DRAWING	JAN 2012	CDB
MH COVER CITY LOGO	02/28/2014	RMB
NOTE 2 REVISED, ADD GRATED COVER	01/17/2015	RMB
REMOVED OLD CITY LOGO COVER	12/08/2017	RMB
TITLE BLOCK REVISION	02/26/2021	GML

STANDARD DRAWING NO. 12
MANHOLE COVER

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1. CUT AND REMOVE THE ASPHALT PAVEMENT, AROUND THE EXISTING MANHOLE CASTING, IN A CIRCULAR FASHION WITH A MINIMUM DIAMETER OF 54" AND CENTERED ABOUT THE FRAME. DISPOSE OF ALL ASPHALT, CONCRETE, BRICK AND ROAD DEBRIS.
2. REMOVE THE CASTING (MANHOLE RIM AND COVER) FROM THE TOP OF THE MANHOLE. INSPECT THE RIM AND COVER FOR DEFECTS. IF DEFECTS ARE PRESENT, REPLACE WITH NEW RIM/COVER AS NEEDED. IF DEFECTS ARE NOT PRESENT, CLEAN & RETAIN FOR USE IN RECONSTRUCTION.
3. **CONCRETE MANHOLE**
REMOVE ALL ADJUSTING RINGS TO THE TOP OF THE CONCRETE CONE. DISPOSE OF THIS MATERIAL
MASONRY MANHOLE
REMOVE MASONRY TO THE LEVEL SPECIFIED IN FIG. 2.M. DISPOSE OF THIS MATERIAL.
4. REMOVE ALL AGGREGATE AROUND THE MANHOLE THAT HAS BEEN EXPOSED BY THE ASPHALT REMOVAL AND DISPOSE OF THIS AGGREGATE. THE AGGREGATE MUST BE REMOVED TO A MINIMUM OF 3" BELOW THE LEVEL OF THE TOP OF THE CONCRETE CONE/REMAINING MASONRY.
5. **CONCRETE MANHOLE**
CLEAN AND INSPECT THE TOP SURFACE OF THE CONCRETE CONE SECTION. THE SURFACE SHOULD BE SMOOTH AND FREE OF BUMPS AND PITS THAT MAY PREVENT A GOOD WATER TIGHT SEAL. GRIND THE SURFACE AS NEEDED TO REMOVE PROTRUSIONS. UTILIZE COMPRESSED AIR TO BLOW DUST AND DEBRIS FROM THE SURFACE AFTER GRINDING. UTILIZE A HYDRAULIC CEMENT, ACCORDING TO MANUFACTURERS RECOMMENDATIONS, TO FILL IN DEPRESSIONS.
MASONRY MANHOLE
CLEAN AND INSPECT THE TOP SURFACE OF THE MASONRY. THE SURFACE MUST BE STRUCTURALLY SOUND. UTILIZE COMPRESSED AIR TO BLOW DUST AND DEBRIS FROM THE SURFACE. THE ENGINEER SHALL INSPECT THE MASONRY MANHOLE FOR STRUCTURAL INTEGRITY.
6. BRING THE AREA AROUND THE CONE/MASONRY BACK TO FLUSH WITH THE TOP OF THE MASONRY USING ODOT 703.01 #57 AGGREGATE.

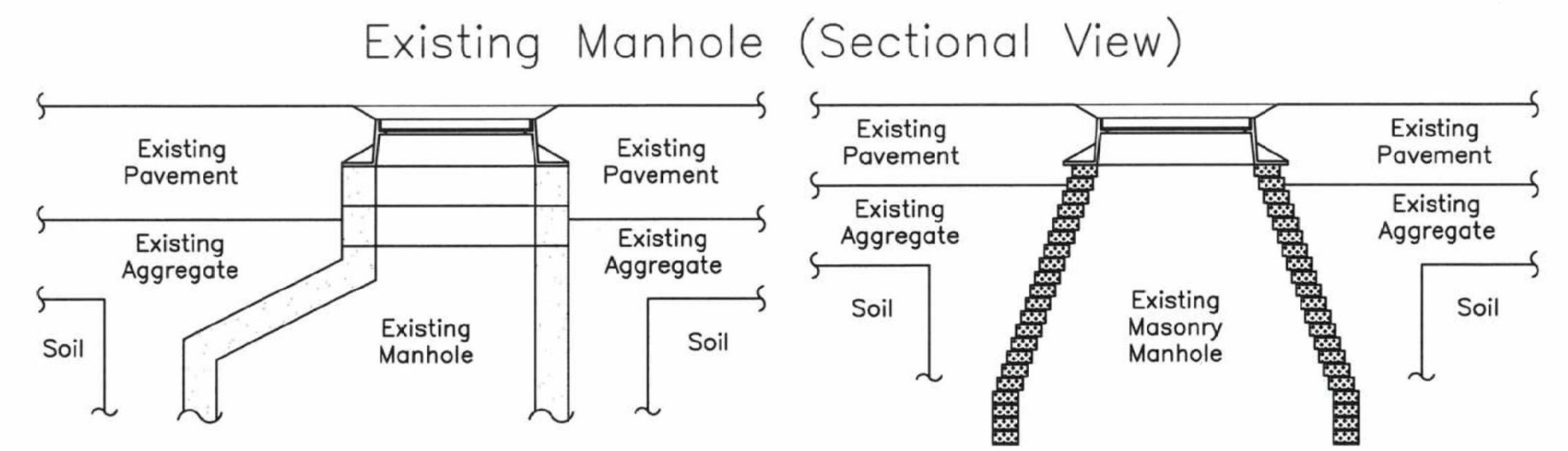


FIG. 1.C

FIG. 1.M

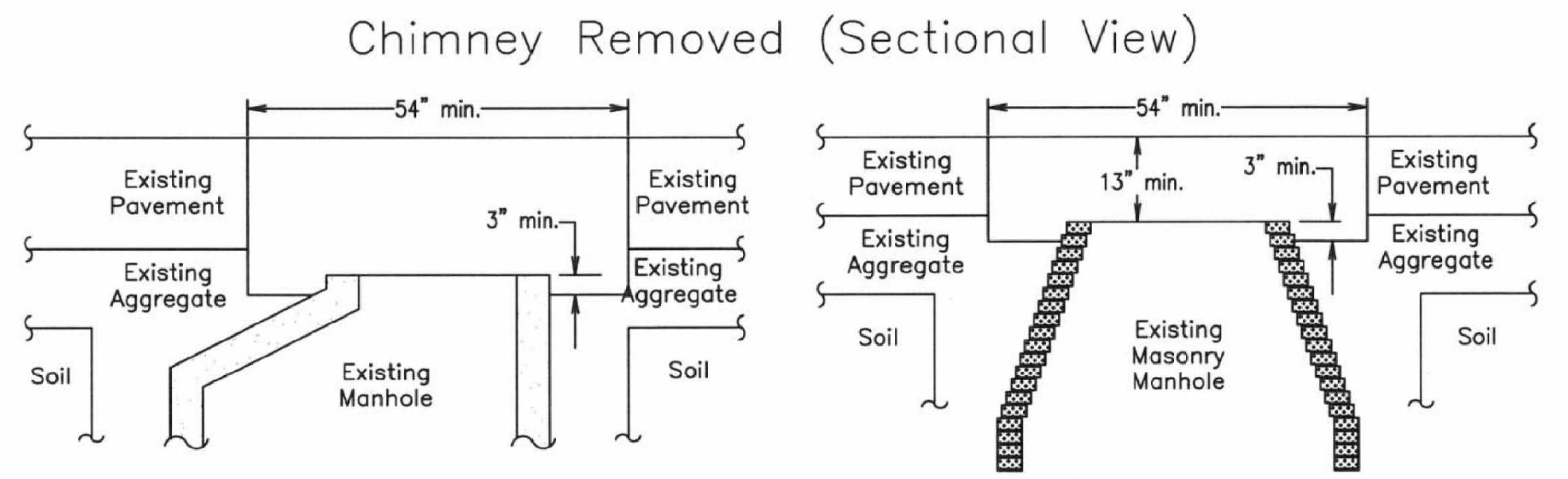
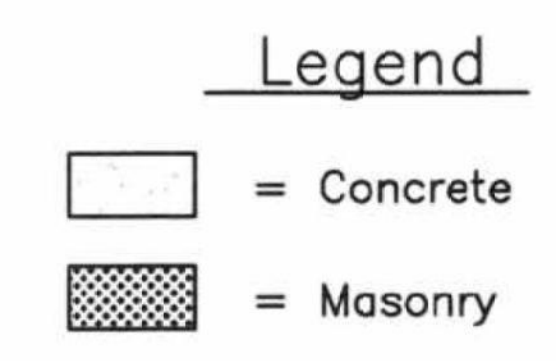


FIG. 2.C

FIG. 2.M



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TITLE BLOCK REVISION	02/26/2021	RMB

STANDARD DRAWING NO. 13
MANHOLE ADJUSTMENTS

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7. APPLY MORTAR TO THE TOP OF THE MASONRY AND IMMEDIATELY INSTALL A CONCRETE COLLAR/ADJUSTING RING (2" MIN. THICKNESS) ON TOP OF THE MORTAR. THE CONCRETE COLLAR/ADJUSTING RING MUST HAVE AN INSIDE DIAMETER OF 24 INCHES. THE OUTSIDE DIAMETER MUST BE SUCH THAT THERE IS A MINIMUM OF 3 INCHES OF THE CONCRETE COLLAR/ADJUSTING RING BEARING ON MASONRY ALL THE WAY AROUND THE MANHOLE. (MASONRY MANHOLES ONLY)
8. A PVC PIPE SHALL BE USED AS A CHIMNEY LINER (SEE CHIMNEY LINER SPECIFICATIONS) AND MUST BE CUT TO THE EXACT PROFILE OF THE ROAD IN ALL DIRECTIONS SUCH THAT WHEN THE MANHOLE RIM AND COVER ARE RESTING ON TOP OF THE LINER, THE TOP OF THE CASTING SHALL BE EXACTLY 0.25" BELOW FLUSH WITH THE PAVEMENT SURFACE IN ALL DIRECTIONS.
9. THE LINER SHALL BE MARKED IN SUCH A WAY, UPON COMPLETION OF THE CUTTING PROCESS, THAT ROTATION DOES NOT OCCUR, WHICH COULD BE DETRIMENTAL TO THE END PRODUCT. THE TOP AND/OR BOTTOM OF THE LINER SHALL ALSO BE MARKED TO PREVENT THE LINER FROM BEING INSTALLED UP SIDE DOWN, WHICH COULD BE DETRIMENTAL TO THE END PRODUCT.
10. APPLY A LIBERAL AMOUNT OF SEALANT TO THE BOTTOM OF THE LINER AND SET IN PLACE ON TOP OF THE CONCRETE COLLAR/ADJUSTING RING WHILE MAKING SURE IT IS PROPERLY ALIGNED. THIS WILL CREATE A WATER TIGHT SEAL BETWEEN THE LINER AND THE CONCRETE COLLAR/ADJUSTING RING.
11. APPLY A LIBERAL AMOUNT OF SEALANT TO THE TOP OF THE LINER. SET THE MANHOLE RIM CASTING ON THE LINER WHILE MAKING SURE IT IS PROPERLY ALIGNED. THIS WILL CREATE A WATER TIGHT SEAL BETWEEN THE LINER AND THE MANHOLE RIM CASTING.
12. PLACE THE MANHOLE LID ON THE RIM CASTING TO LESSEN THE POSSIBILITY OF DEBRIS ENTERING THE MANHOLE.
13. PLACE EPOXY COATED #3 REBARS AS SHOWN IN FIG. 3.C & 3.M. THE CIRCULAR SHAPED REBARS SHALL HAVE A 6" MINIMUM OVERLAP.
14. APPLY WATERSTOP AS SHOWN IN FIG. 3.C & 3.M AND SPECIFIED IN THIS STANDARD DRAWING. THIS WILL ADD AN ADDITIONAL WATER TIGHT SEAL WHERE THE LINER MEETS THE CONCRETE COLLAR/ADJUSTING RING.
15. UTILIZE ODOT-CLASS C CONCRETE WITH BLACK DYE TO CAST A CONCRETE COLLAR AROUND THE RIM CASTING AND LINER. THE SURFACE OF THE CONCRETE SHALL BE FINISHED FROM FLUSH WITH THE PAVEMENT TO FLUSH WITH THE RIM CASTING. THE EDGE OF THE CONCRETE SHALL BE ROUNDED (1/4" RADIUS) WHERE IT MEETS THE ASPHALT. THIS WILL CREATE A SMALL GROOVE FOR A JOINT SEALER AT THIS LOCATION.
16. FILL THE GROOVE WITH A COLD POUR CRACK SEALER. THIS WILL PREVENT WATER FROM ENTERING THE CIRCULAR SEAM WHERE THE CONCRETE COLLAR MEETS THE ASPHALT.
17. APPLY AN ACRYLIC POLYMER CONCRETE CURING AND SEALING COMPOUND TO THE SURFACE OF THE CONCRETE COLLAR.
18. BARRICADE THE AREA AROUND THE CONCRETE TO PROTECT IT UNTIL THE CONCRETE ATTAINS A MODULUS OF RUPTURE OF 400 POUNDS PER SQUARE INCH. A CHEMICAL ADMIXTURE THAT ACTS AS A CONCRETE ACCELERATOR MAY BE USED TO SPEED UP THE PROCESS IF THE ROADWAY NEEDS TO BE OPENED SOONER.
19. IN ORDER TO MINIMIZE INCONVENIENCE TO MOTORISTS, THE CONTRACTOR PERFORMING THE WORK DESCRIBED IN THIS SPECIFICATION MUST BE CAPABLE OF PERFORMING ALL OF BOTH STEPS OF THIS SPECIFICATION IN 1.5 HOURS OR LESS.
20. THE CONTRACTOR SHALL WARRANT THE RECONSTRUCTED MANHOLE CHIMNEY TO BE LEAK FREE AND STRUCTURALLY SOUND FOR A MINIMUM OF 5 YEARS FROM THE DATE OF RECONSTRUCTION.

Chimney Reconstruction (Sectional View)

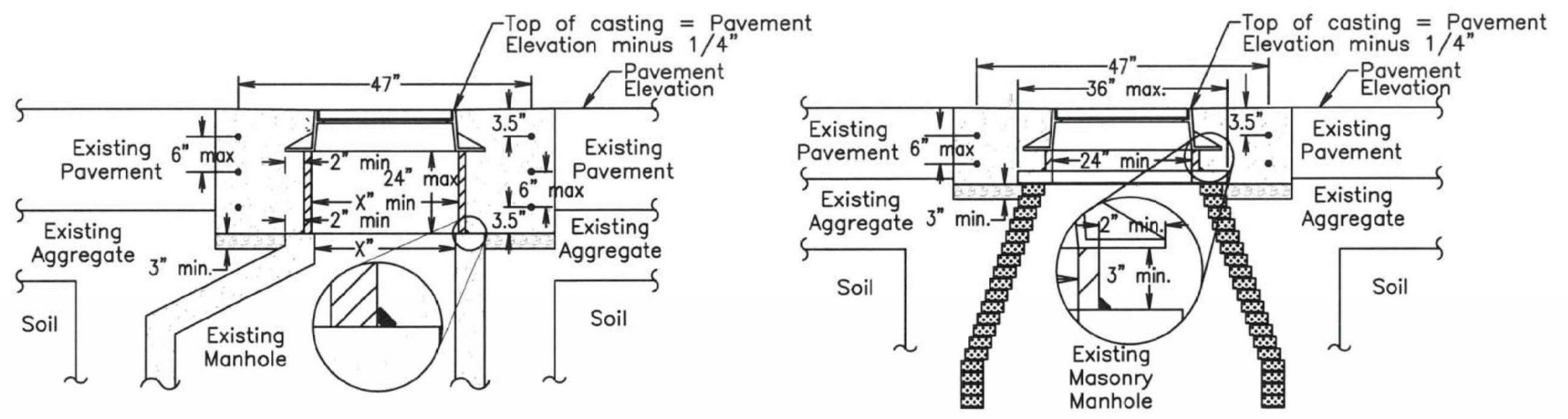


FIG. 3.C

FIG. 3.M

Legend

- = Concrete
- = ODOT #57 Aggregate
- = Epoxy Coated #3 Rebar
- = Waterstop
- = PVC pipe
- = Masonry

CHIMNEY LINER SPECIFICATIONS:

THE CHIMNEY LINER MUST BE MADE FROM POLYVINYL CHLORIDE COMPOUNDS WHICH COMPLY WITH THE REQUIREMENTS FOR A MINIMUM CELL CLASSIFICATION OF 12364 AS DEFINED BY ASTM D-1784.

THE CHIMNEY LINER MUST ALSO MEET ALL THE FOLLOWING PHYSICAL REQUIREMENTS:

PIPE STIFFNESS - MINIMUM PIPE STIFFNESS SHALL BE 46 PSI WHEN TESTED IN ACCORDANCE WITH ASTM D-2412

IMPACT RESISTANCE - NO VISUAL CRACKING OR SPLITTING OF THE WATERWAY WALL SHALL BE EVIDENCED WHEN TESTED IN ACCORDANCE WITH ASTM D-2444 WITH A 20 LB. WEIGHT, TUP B, FLAT PLATE HOLDER B TO A LEVEL OF 220 FT. LBS.

FUSION QUALITY - THERE SHALL BE NO SIGN OF FLAKING OR DISINTEGRATION WHEN IMMERSED IN ANHYDROUS ACETONE FOR 20 MINUTES AS DESCRIBED IN ASTM D-2152.

DUCTILITY - THERE SHALL BE NO EVIDENCE OF CRACKING OR SPLITTING WHEN PIPE IS FLATTENED IN A CIRCUMFERENTIAL ORIENTATION BETWEEN TWO FLAT PLATES BY SIXTY PERCENT (60%) OF THE ORIGINAL DIAMETER.

AIR TIGHTNESS - EACH LENGTH OF PIPE SHALL PASS A FACTORY 3.5 PSI AIR TEST AS DESCRIBED IN ASTM F-1803.

WATERSTOP SPECIFICATIONS:

THE WATERSTOP MUST MEET ALL OF THE FOLLOWING PHYSICAL REQUIREMENTS:

SPECIFIC GRAVITY - SHALL BE 1.55 +/- 5% WHEN TESTED IN ACCORDANCE WITH ASTM D-71.

VOLATILE MATTER - SHALL NOT EXCEED 1% WHEN TESTED IN ACCORDANCE WITH ASTM D-6.

APPLICATION TEMPERATURE - MUST BE ABLE TO BE APPLIED FROM -10 DEGREES F TO 125 DEGREES F AS A MINIMUM.

SERVICE TEMPERATURE - MUST BE ABLE TO FUNCTION PROPERLY IN SERVICE FROM -30 DEGREES F TO 180 DEGREES F AS A MINIMUM.



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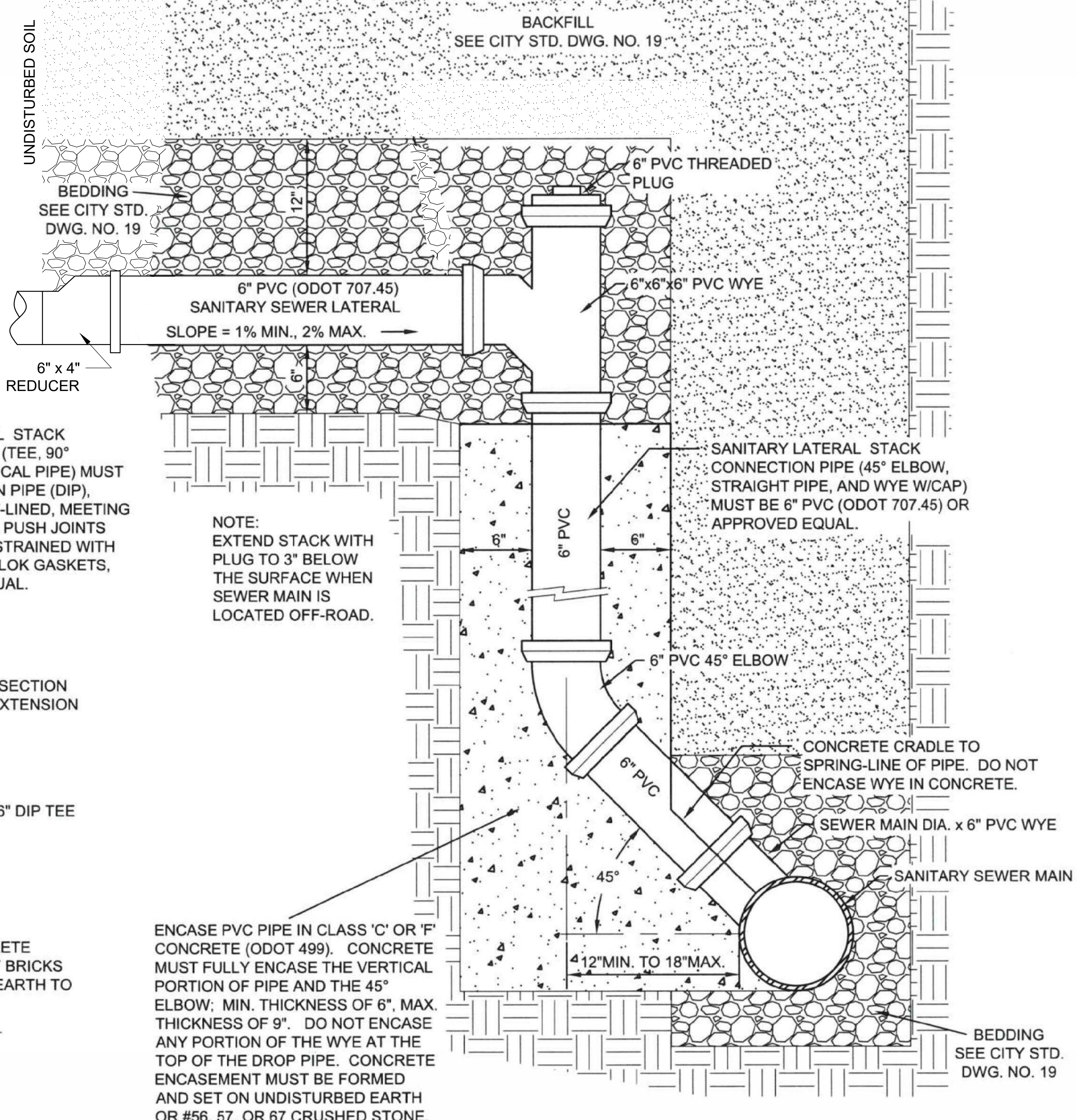
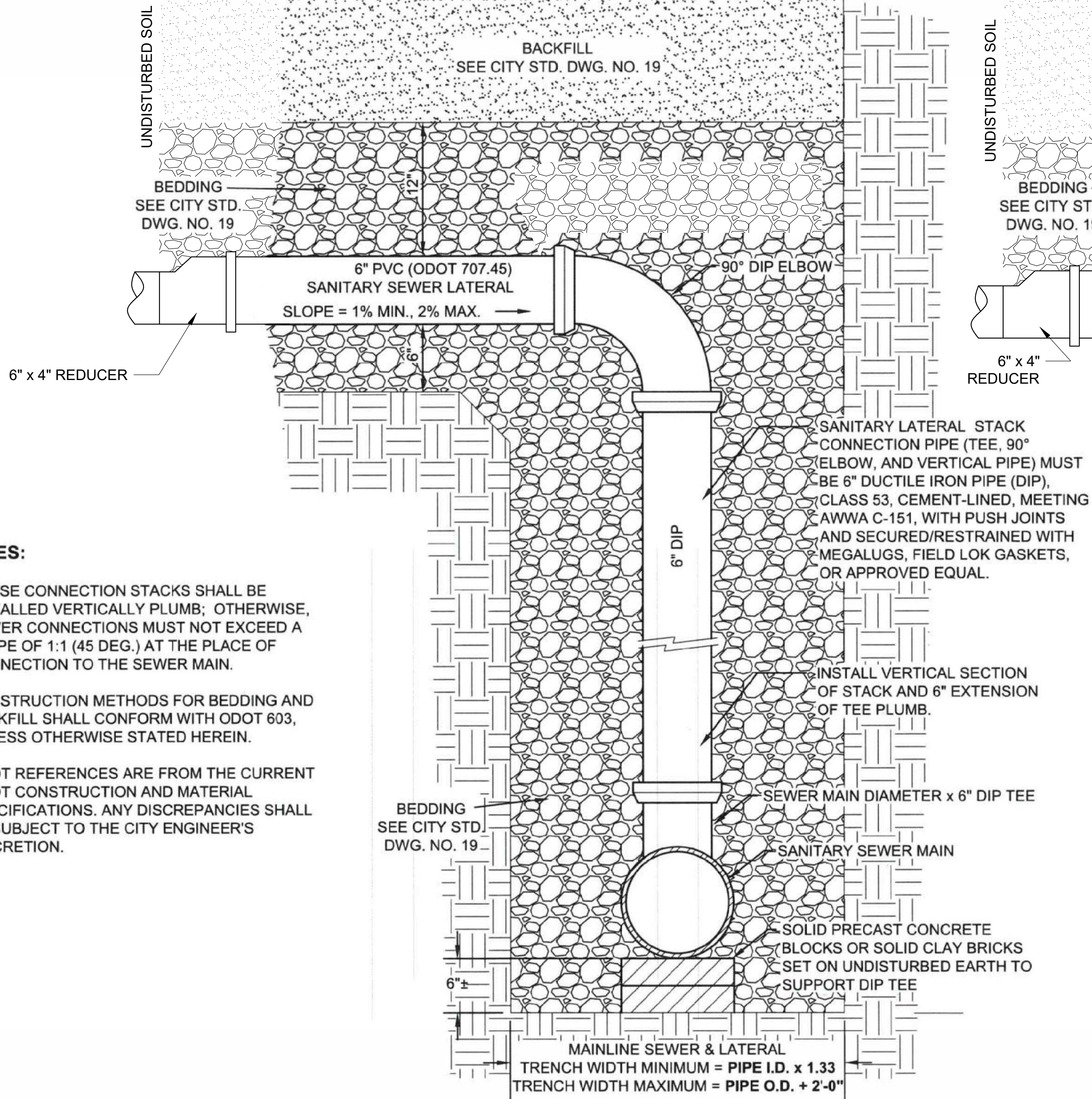
STANDARD DRAWING NO. 13
MANHOLE ADJUSTMENTS

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HOUSE CONNECTION STACK, OPTION 1

HOUSE CONNECTION STACK, OPTION 2



NOTES:

1. HOUSE CONNECTION STACKS SHALL BE INSTALLED VERTICALLY PLUMB; OTHERWISE, SEWER CONNECTIONS MUST NOT EXCEED A SLOPE OF 1:1 (45 DEG.) AT THE PLACE OF CONNECTION TO THE SEWER MAIN.
2. CONSTRUCTION METHODS FOR BEDDING AND BACKFILL SHALL CONFORM WITH ODOT 603, UNLESS OTHERWISE STATED HEREIN.
3. ODOT REFERENCES ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.

NOTE:
EXTEND STACK WITH PLUG TO 3" BELOW THE SURFACE WHEN SEWER MAIN IS LOCATED OFF-ROAD.

ENCASE PVC PIPE IN CLASS 'C' OR 'F' CONCRETE (ODOT 499). CONCRETE MUST FULLY ENCASE THE VERTICAL PORTION OF PIPE AND THE 45° ELBOW; MIN. THICKNESS OF 6", MAX. THICKNESS OF 9". DO NOT ENCASE ANY PORTION OF THE WYE AT THE TOP OF THE DROP PIPE. CONCRETE ENCASEMENT MUST BE FORMED AND SET ON UNDISTURBED EARTH OR #56, 57, OR 67 CRUSHED STONE.



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CAD DRAWING	JAN 2012	RMB
TITLE BLOCK REVISION	2/24/2021	RMB

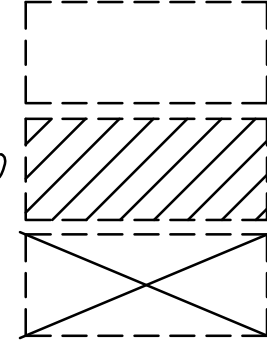
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HOUSE CONNECTION STACK
AS PER PLAN
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SIGN LEGEND

EXISTING, TO REMAIN



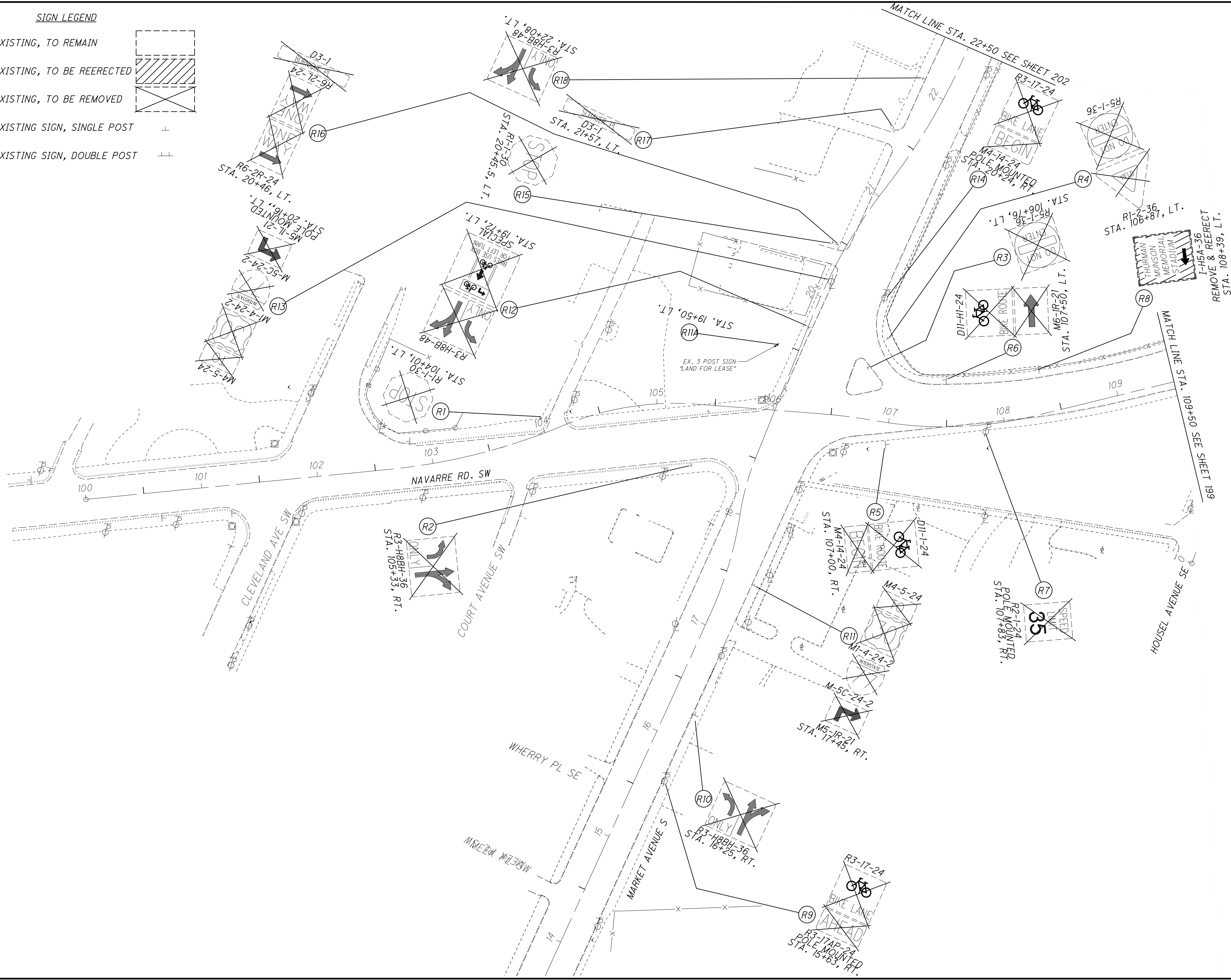
EXISTING, TO BE REERECTED

EXISTING, TO BE REMOVED

EXISTING SIGN, SINGLE POST



EXISTING SIGN, DOUBLE POST



CALCULATED TKI
CHECKED JMB

HORIZONTAL SCALE IN FEET

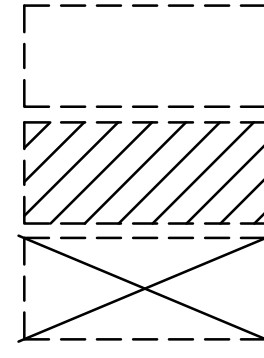
**EXISTING SIGNING PLAN - 11TH STREET SE
BEGINNING TO STA. 109+50**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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SIGN LEGEND

EXISTING, TO REMAIN



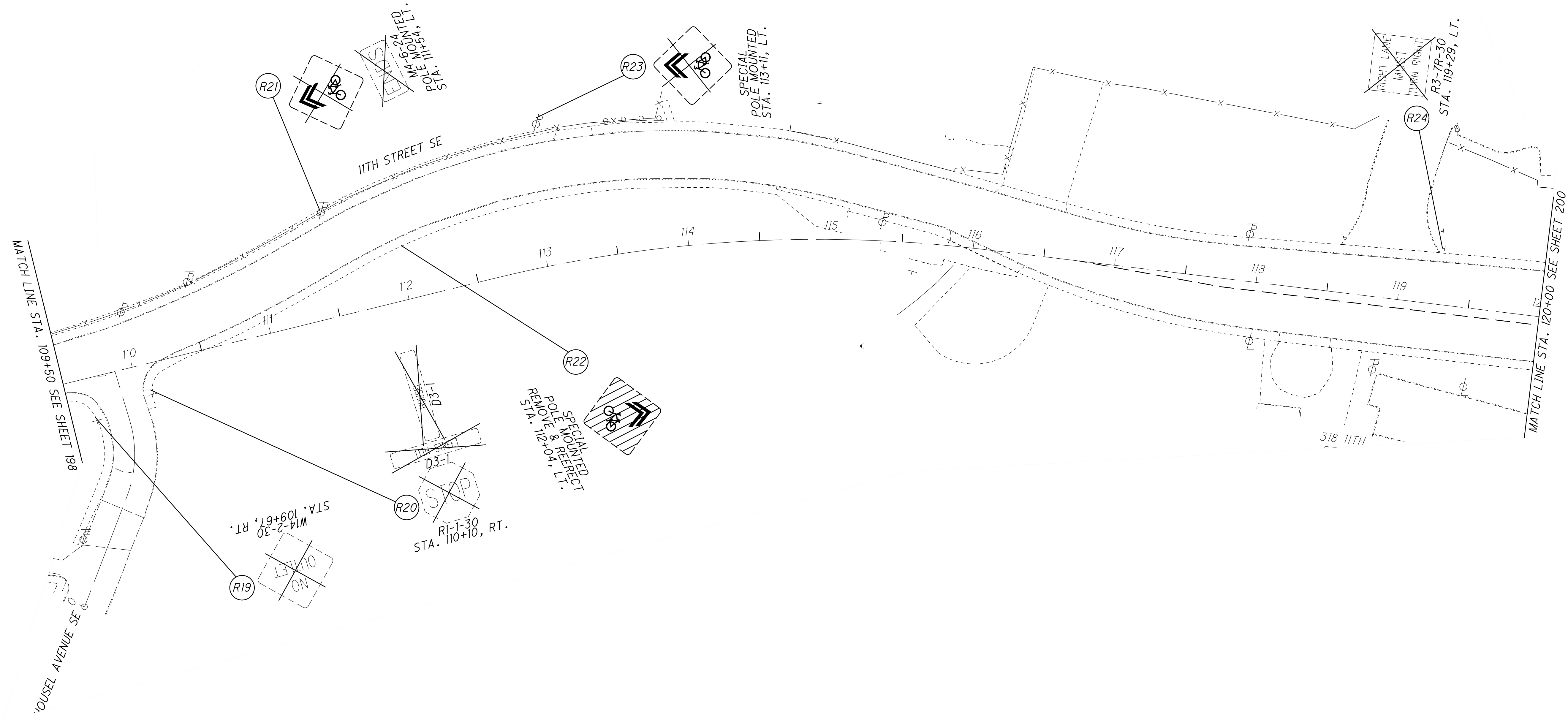
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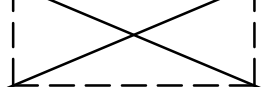


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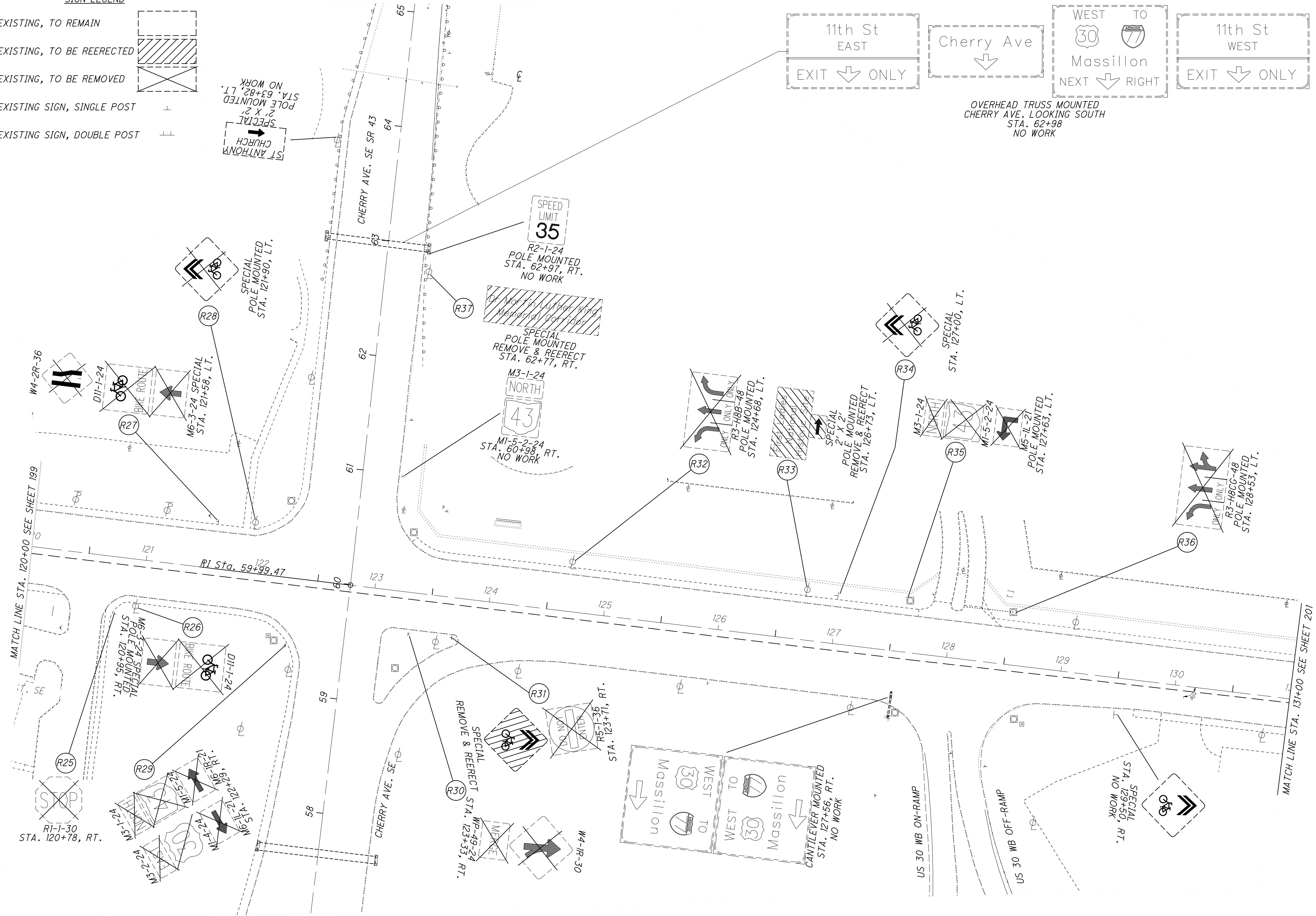
**EXISTING SIGNING PLAN - 11TH STREET SE
STA. 109+50 TO STA. 120+00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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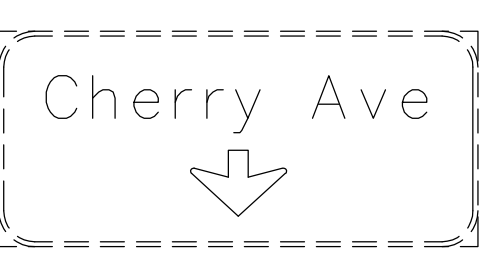
SIGN LEGEND

- EXISTING, TO REMAIN 
- EXISTING, TO BE REERECTED 
- EXISTING, TO BE REMOVED 
- EXISTING SIGN, SINGLE POST 
- EXISTING SIGN, DOUBLE POST 



MATCH LINE STA. 120+00 SEE SHEET 199

MATCH LINE STA. 131+00 SEE SHEET 201



OVERHEAD TRUSS MOUNTED
CHERRY AVE. LOOKING SOUTH
STA. 62+98
NO WORK

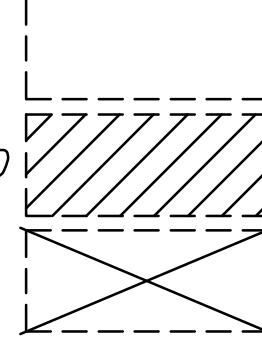
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CHECKED JMB

**EXISTING SIGNING PLAN - 11TH STREET SE
STA. 120+00 TO STA. 131+00**

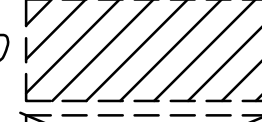
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

SIGN LEGEND

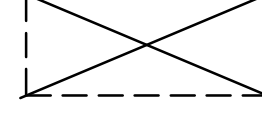
EXISTING, TO REMAIN



EXISTING, TO BE REERECTED



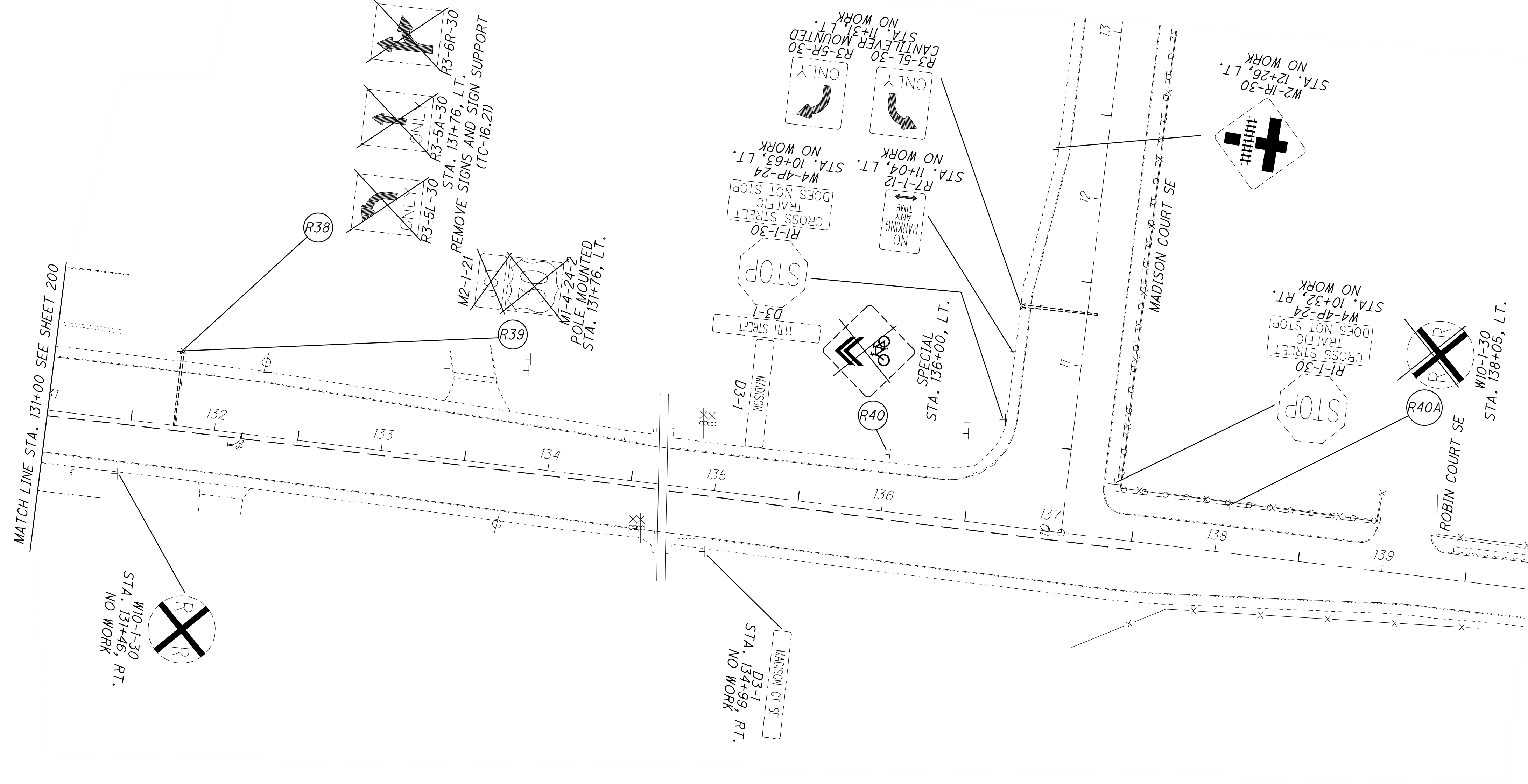
EXISTING, TO BE REMOVED



EXISTING SIGN, SINGLE POST



EXISTING SIGN, DOUBLE POST



CALCULATED TKI
CHECKED JMB

HORIZONTAL SCALE IN FEET

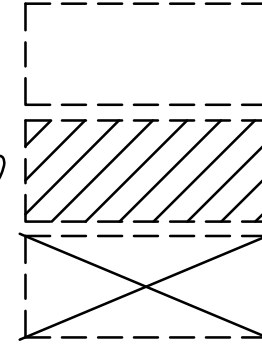
EXISTING SIGNING PLAN - 11TH STREET SE
STA. 131+00 TO ENDING

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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SIGN LEGEND

EXISTING, TO REMAIN



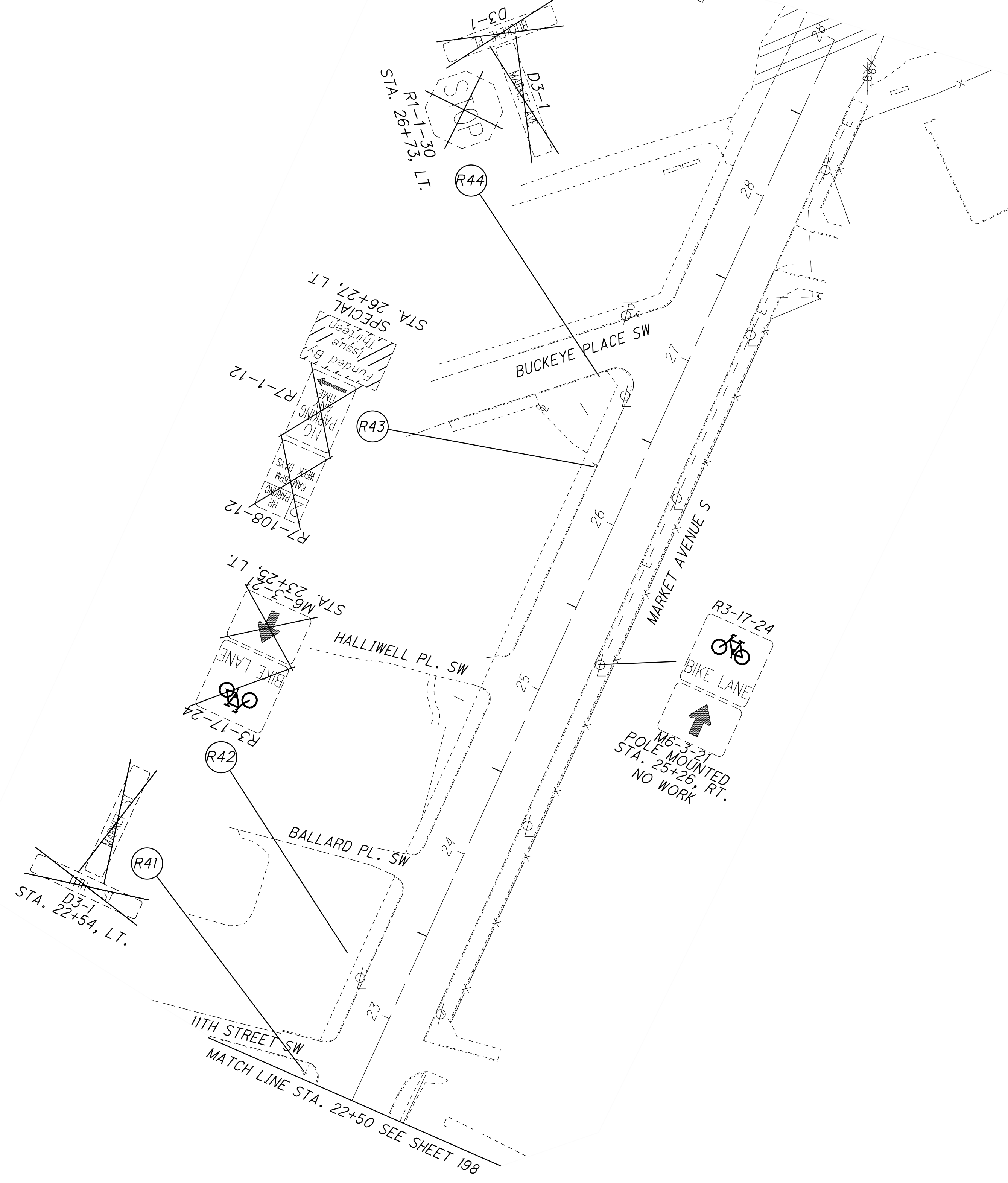
EXISTING, TO BE REERECTED

EXISTING, TO BE REMOVED

EXISTING SIGN, SINGLE POST



EXISTING SIGN, DOUBLE POST



CALCULATED	TKI
	CHECKED
JMB	

0 20 40 60
HORIZONTAL SCALE IN FEET

**EXISTING SIGNING PLAN - MARKET AVENUE S
STA. 22+50 TO ENDING**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

REF NO.	SHEET NO.	ROADWAY	STATION		630	630	630	630	630	630	630	630
					SIGN SUPPORT ASSEMBLY, POLE MOUNTED	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-16.21
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
R1	198	11TH ST SE	104+10	LT		1		1				
R2	198	11TH ST SE	105+33	RT		1		1				
R3	198	11TH ST SE	106+76	LT		1		1				
R4	198	11TH ST SE	106+87	LT		2		1				
R5	198	11TH ST SE	107+00	RT		2		1				
R6	198	11TH ST SE	107+50	LT		2		1				
R7	198	11TH ST SE	107+83	RT						1		
R8	198	11TH ST SE	108+39	LT	1		1	1				
R9	198	MARKET AVE S	15+63	RT						2		
R10	198	MARKET AVE S	16+25	RT		1		1				
R11	198	MARKET AVE S	17+45	RT		4		1				
R11A	198	MARKET AVE S	19+50	LT		1		3				
R12	198	MARKET AVE S	19+72	LT		2		1				
R13	198	MARKET AVE S	20+16	LT						4		
R14	198	MARKET AVE S	20+24	RT						2		
R15	198	MARKET AVE S	20+45	LT		1		1				
R16	198	MARKET AVE S	20+46	LT		3		1				
R17	198	MARKET AVE S	21+57	LT		1		1				
R18	198	MARKET AVE S	22+08	LT		1		1				
R19	199	11TH ST SE	109+67	RT		1		1				
R20	199	11TH ST SE	110+10	RT		3		1				
R21	199	11TH ST SE	111+54	LT						2		
R22	199	11TH ST SE	112+04	LT	1						1	
R23	199	11TH ST SE	113+11	LT						1		
R24	199	11TH ST SE	119+29	LT		1		1				
R25	200	11TH ST SE	120+78	RT		1		1				
R26	200	11TH ST SE	120+95	RT						2		
R27	200	11TH ST SE	121+58	LT		3		1				
R28	200	11TH ST SE	121+90	LT						1		
R29	200	11TH ST SE	122+29	RT		6		2				
R30	200	11TH ST SE	123+33	RT		2		1				
R31	200	11TH ST SE	123+71	RT		1	1	1				
R32	200	11TH ST SE	124+68	LT						1		
R33	200	11TH ST SE	126+73	LT	2						2	
R34	200	11TH ST SE	127+00	LT		1		1				
R35	200	11TH ST SE	127+63	LT						3		
R36	200	11TH ST SE	128+53	LT						1		
R37	200	CHERRY AVE SE	62+77	RT	1						1	
R38	201	11TH ST SE	131+76	LT					3			1
R39	201	11TH ST SE	131+76	LT						2		
R40	201	11TH ST SE	136+00	LT		1		1				
R40A	201	11TH ST SE	136+00	LT		1		1				
R41	202	MARKET AVE S	22+54	LT		2		1				
R42	202	MARKET AVE S	23+25	LT		2		1				
R43	202	MARKET AVE S	26+27	LT	1	2	1	1				
R44	202	MARKET AVE S	26+73	LT		3		1				
TOTALS CARRIED TO GENERAL SUMMARY					6	53	3	33	3	22	4	1

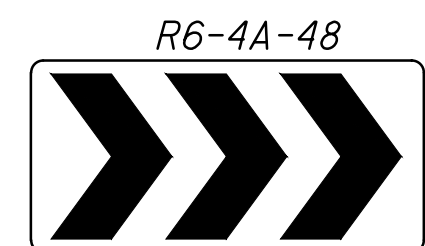
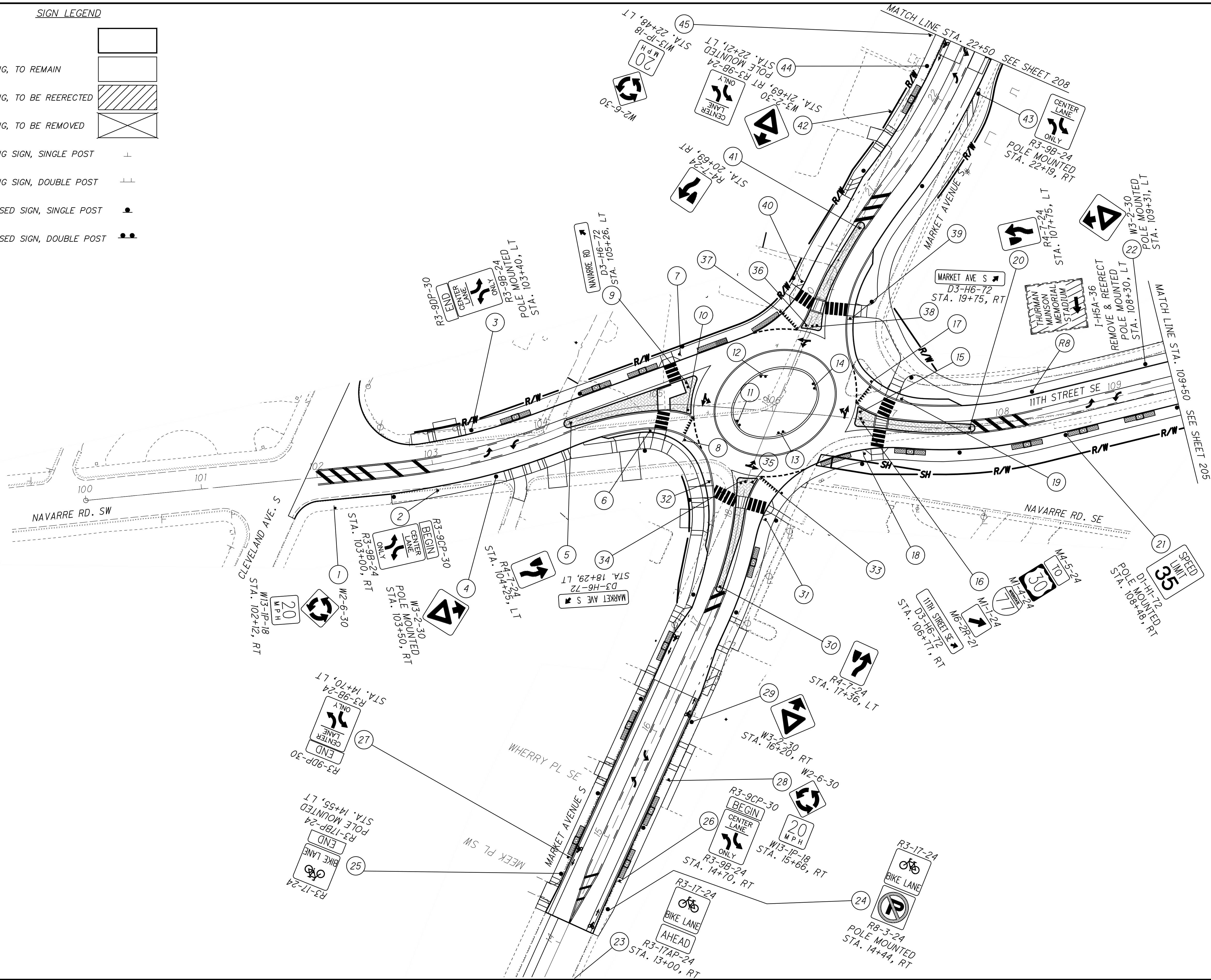
EXISTING SIGNING SUBSUMMARY

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

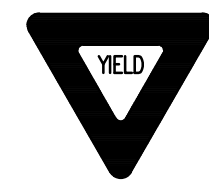
c:\pwworking\aecom_ds20_na_2019\brittney.crandall@aecom.com\dms21919\17790_IP002.dwg_04-Nov-22 2:26 PM

SIGN LEGEND

NEW	
EXISTING, TO REMAIN	
EXISTING, TO BE REERECTED	
EXISTING, TO BE REMOVED	
EXISTING SIGN, SINGLE POST	
EXISTING SIGN, DOUBLE POST	
PROPOSED SIGN, SINGLE POST	
PROPOSED SIGN, DOUBLE POST	



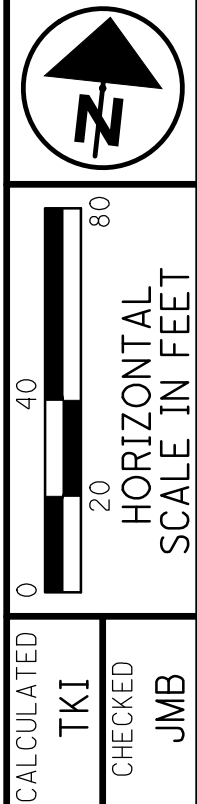
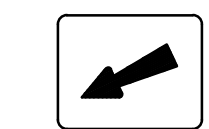
- 11 STA. 105+71, RT
- 12 STA. 105+90, LT
- 13 STA. 106+09, RT
- 14 STA. 106+35, LT



- 8 STA. 105+25, RT
- 10 STA. 105+26, RT
- 15 STA. 106+76, LT
- 17 STA. 106+80, LT
- 33 STA. 18+28, RT
- 35 STA. 18+30, RT
- 36 STA. 19+74, LT
- 37 STA. 19+75, LT



- 6 STA. 104+93, RT
- 7 STA. 105+20, LT
- 18 STA. 106+84, RT
- 19 STA. 107+08, LT
- 31 STA. 18+00, RT
- 32 STA. 18+21, LT
- 39 STA. 19+93, RT
- 40 STA. 20+06, LT

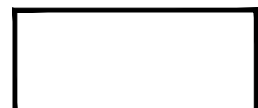
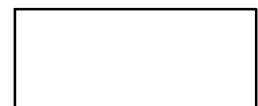
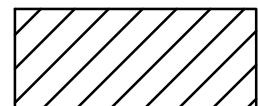
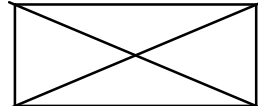






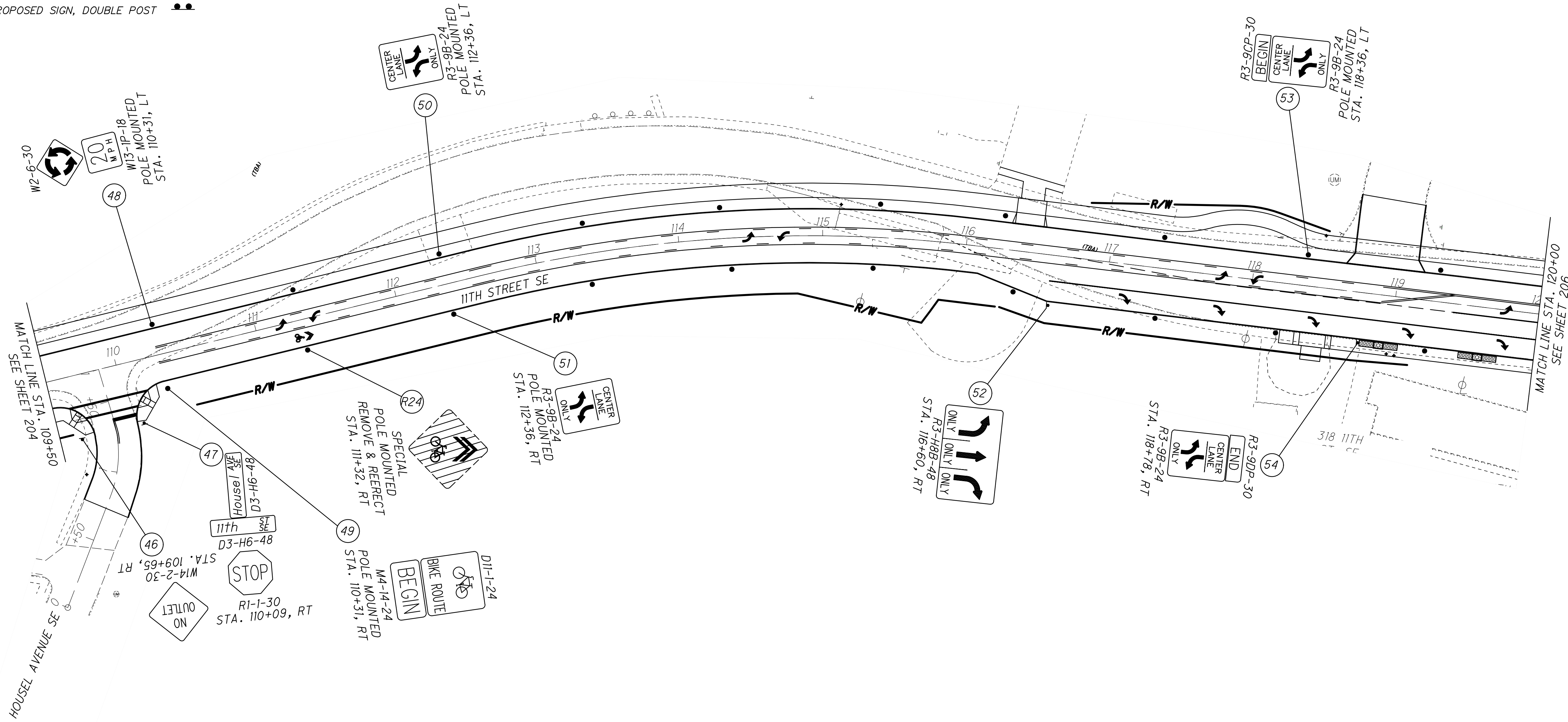
PROPOSED SIGNING PLAN - 11TH STREET SE BEGINNING TO STA. 109+50

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

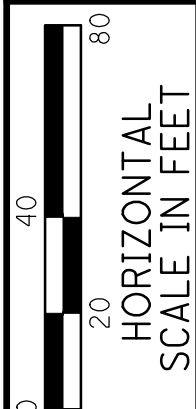
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SIGN LEGEND

- NEW 
- EXISTING, TO REMAIN 
- EXISTING, TO BE REERECTED 
- EXISTING, TO BE REMOVED 
- EXISTING SIGN, SINGLE POST 
- EXISTING SIGN, DOUBLE POST 
- PROPOSED SIGN, SINGLE POST 
- PROPOSED SIGN, DOUBLE POST 



CALCULATED TKI
CHECKED JMB

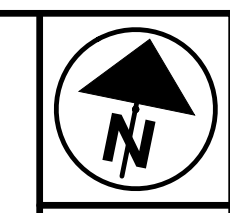
HORIZONTAL SCALE IN FEET

PROPOSED SIGNING PLAN - 11TH STREET SE
STA. 109+50 TO STA. 120+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

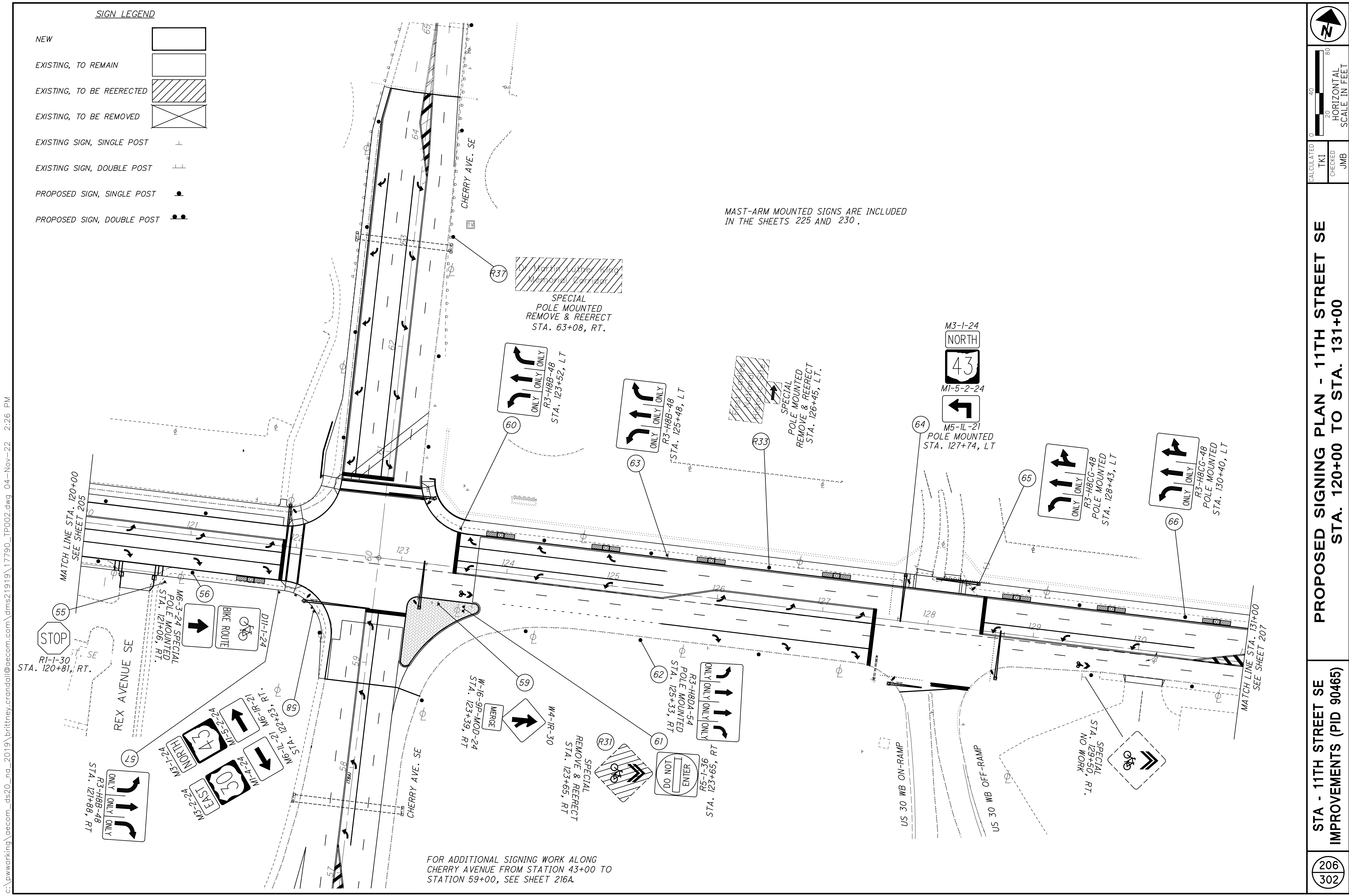
SIGN LEGEND

- NEW
- EXISTING, TO REMAIN
- EXISTING, TO BE REERECTED
- EXISTING, TO BE REMOVED
- EXISTING SIGN, SINGLE POST
- EXISTING SIGN, DOUBLE POST
- PROPOSED SIGN, SINGLE POST
- PROPOSED SIGN, DOUBLE POST



CALCULATED	TKI	CHECKED	JMB

HORIZONTAL SCALE IN FEET
0 20 40 60 80



MAST-ARM MOUNTED SIGNS ARE INCLUDED
IN THE SHEETS 225 AND 230.

Dr. Martin Luther King
Memorial Corridor
SPECIAL
POLE MOUNTED
REMOVE & REERECT
STA. 63+08, RT.

SPECIAL
POLE MOUNTED
REMOVE & REERECT
STA. 126+45, LT.

SPECIAL
REMOVE & REERECT
STA. 123+65, RT

SPECIAL
NO WORK
STA. 129+50, RT.

FOR ADDITIONAL SIGNING WORK ALONG
CHERRY AVENUE FROM STATION 43+00 TO
STATION 59+00, SEE SHEET 216A.

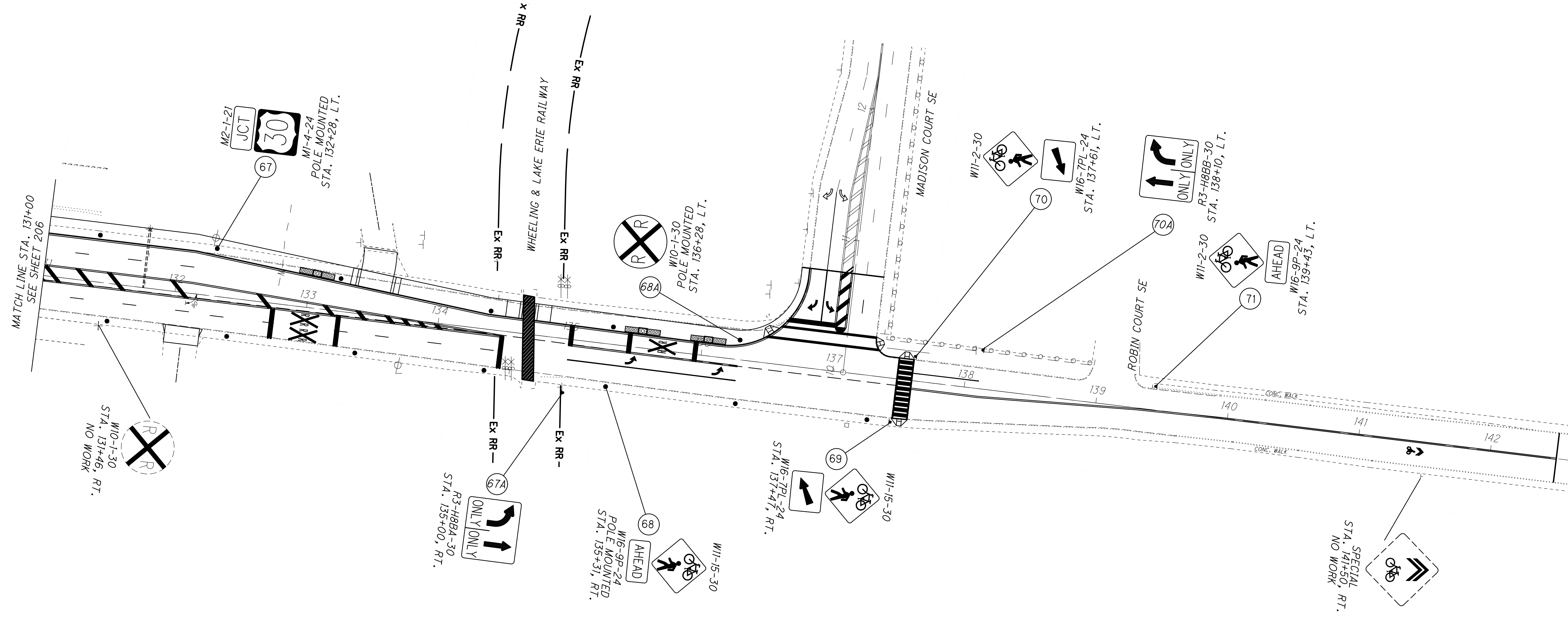
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**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

**PROPOSED SIGNING PLAN - 11TH STREET SE
STA. 120+00 TO STA. 131+00**

SIGN LEGEND

NEW	
EXISTING, TO REMAIN	
EXISTING, TO BE REERECTED	
EXISTING, TO BE REMOVED	
EXISTING SIGN, SINGLE POST	
EXISTING SIGN, DOUBLE POST	
PROPOSED SIGN, SINGLE POST	
PROPOSED SIGN, DOUBLE POST	



CALCULATED TKI
CHECKED JMB




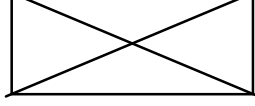




HORIZONTAL SCALE IN FEET

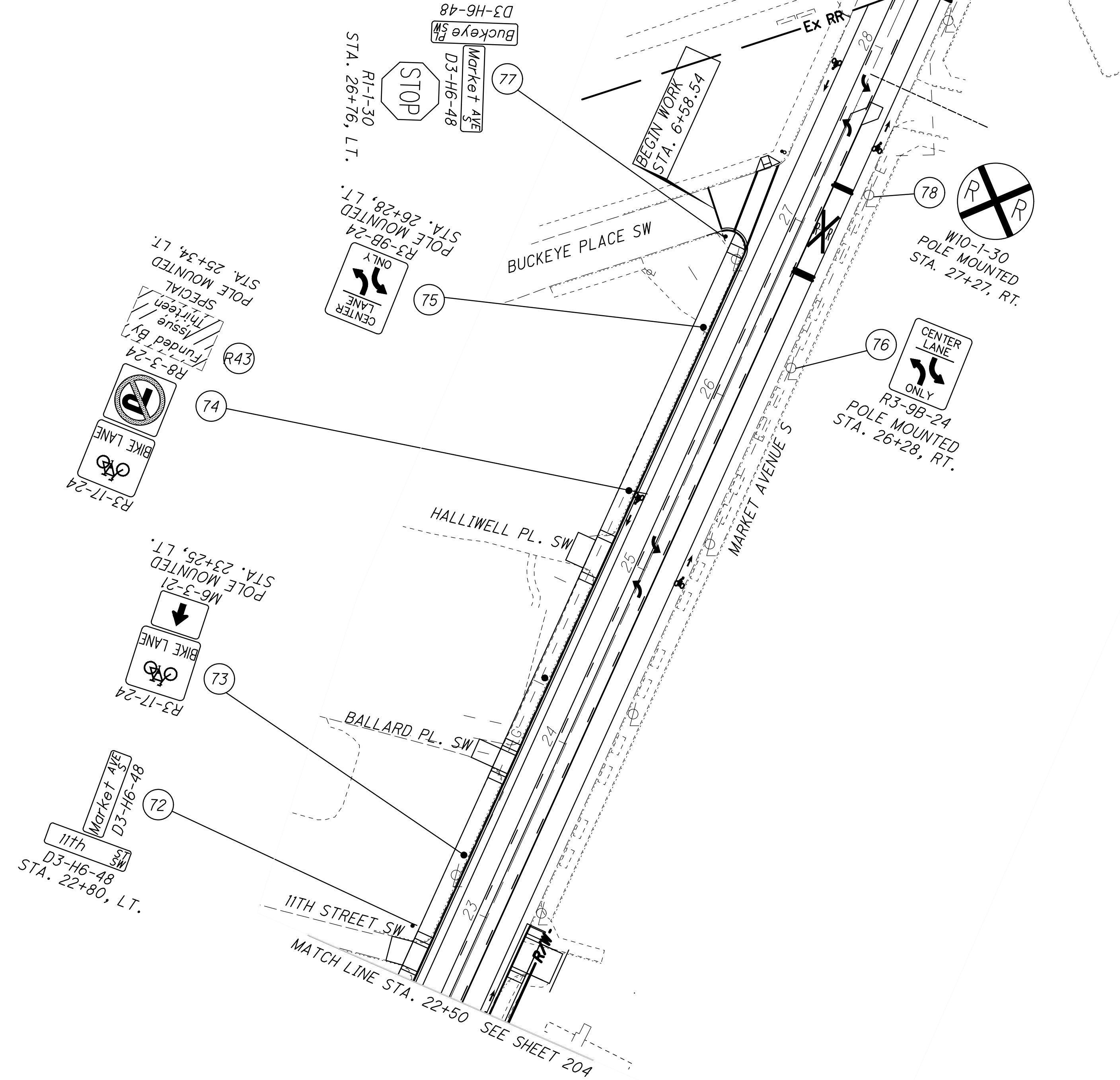
PROPOSED SIGNING PLAN - 11TH STREET SE
STA. 131+00 TO ENDING

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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SIGN LEGEND

NEW	
EXISTING, TO REMAIN	
EXISTING, TO BE REERECTED	
EXISTING, TO BE REMOVED	
EXISTING SIGN, SINGLE POST	
EXISTING SIGN, DOUBLE POST	
PROPOSED SIGN, SINGLE POST	
PROPOSED SIGN, DOUBLE POST	



CALCULATED
TKI
CHECKED
JMB

0 20 40 80
HORIZONTAL
SCALE IN FEET

PROPOSED SIGNING PLAN - MARKET AVENUE S
STA. 22+50 TO ENDING

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

REF NO.	SHEET NO.	ROADWAY	STATION		SIGN CODE	SIGN SIZE (INCHES)	630	630	630	630	630	630	630
							GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 3 POST	SIGN POST REFLECTOR	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	SIGN, DOUBLE FACED, STREET NAME
							FT	FT	FT	EACH	EACH	SF	EACH
1	204	11TH ST SE	102+12	RT	W2-6-30	30X30		15.5				6.3	
					W13-1P-18	18X18						2.3	
2	204	11TH ST SE	103+00	RT	R3-9CP-30	30X12		14.5				2.5	
					R3-9B-24	24X36						6	
3	204	11TH ST SE	103+40	LT	R3-9DP-30	30X12					1	2.5	
					R3-9B-24	24X36					1	6	
4	204	11TH ST SE	103+50	RT	W2-6-30	30X30					1	6.3	
5	204	11TH ST SE	104+25	LT	R4-7-24	24X30	13					6	
6	204	11TH ST SE	104+93	RT	W11-15-30	30X30		15				6.3	
					W16-7PL-24	24X12						2	
7	204	11TH ST SE	105+20	LT	W11-15-30	30X30		15				6.3	
					W16-7PL-24	24X12						2	
8	204	11TH ST SE	105+25	RT	R1-2-36	36X36X36		13.5		1		9	
9	204	11TH ST SE	105+26	LT	D3-H6-72	72X12	23					6	
10	204	11TH ST SE	105+26	RT	R1-2-36	36X36X36		13.5		1		9	
11	204	11TH ST SE	105+71	RT	R6-4A-48	48X24	25					8	
12	204	11TH ST SE	105+90	LT	R6-4A-48	48X24	25					8	
13	204	11TH ST SE	106+09	RT	R6-4A-48	48X24	25					8	
14	204	11TH ST SE	106+35	LT	R6-4A-48	48X24	25					8	
15	204	11TH ST SE	106+76	LT	R1-2-36	36X36X36		13.5		1		9	
16	204	11TH ST SE	106+77	RT	D3-H6-72	72X12		28.3				6	
					M4-5-24	24X12						2	
					M1-4-24	24X24						4	
					M1-1-24	24X12						4	
					M6-2R-21	21X15						2.2	
17	204	11TH ST SE	106+80	LT	R1-2-36	36X36X36		13.5		1		9	
18	204	11TH ST SE	106+84	RT	W11-15-30	30X30		15				6.3	
					W16-7PL-24	24X12						2	
19	204	11TH ST SE	107+08	LT	W11-15-30	30X30		15				6.3	
					W16-7PL-24	24X12						2	
20	204	11TH ST SE	107+75	LT	R4-7-24	24X30	13					6	
21	204	11TH ST SE	108+48	RT	R2-1-24	24X30					1	6	
22	204	11TH ST SE	109+31	LT	W2-6-30	30X30					1	6.3	
23	204	MARKET AVE S	13+00	RT	R3-17-24	24X18	12.7					3	
					R3-17AP-24	24X8						1.3	
24	204	MARKET AVE S	14+44	RT	R3-17-24	24X18					1	3	
					R8-3-24	24X24					1	4	
25	204	MARKET AVE S	14+55	LT	R3-17-24	24X18					1	3	
					R3-17BP-24	24X8					1	1.3	
26	204	MARKET AVE S	14+70	RT	R3-9CP-30	30X12		14.5				2.5	
					R3-9B-24	24X36						6	
27	204	MARKET AVE S	14+70	LT	R3-9DP-30	30X12		14.5				2.5	
					R3-9B-24	24X36						6	
28	204	MARKET AVE S	15+66	RT	W2-6-30	30X30		15.5				6.3	
					W13-1P-18	18X18						2.3	
29	204	MARKET AVE S	16+20	RT	W2-6-30	30X30		14				6.3	
30	204	MARKET AVE S	17+36	LT	R4-7-24	24X30	13					6	
31	204	MARKET AVE S	18+00	RT	W11-15-30	30X30		15				6.3	
					W16-7PL-24	24X12						2	
32	204	MARKET AVE S	18+21	LT	W11-15-30	30X30		15				6.3	
					W16-7PL-24	24X12						2	
33	204	MARKET AVE S	18+28	RT	R1-2-36	36X36X36		13.5		1		9	
34	204	MARKET AVE S	18+29	LT	D3-H6-72	72X12	23					6	
35	204	MARKET AVE S	18+30	RT	R1-2-36	36X36X36		13.5		1		9	
36	204	MARKET AVE S	19+74	LT	R1-2-36	36X36X36		13.5		1		9	
37	204	MARKET AVE S	19+75	LT	R1-2-36	36X36X36		13.5		1		9	
38	204	MARKET AVE S	19+75	RT	D3-H6-72	72X12	23					6	
39	204	MARKET AVE S	19+93	RT	W11-15-30	30X30		15				6.3	
					W16-7PL-24	24X12						2	
TOTALS CARRIED TO GENERAL SUMMARY							220.7	329.8	0.0	8	9	308.0	0

CALCULATED
CX
CHECKED
VMN

PROPOSED SIGNING SUBSUMMARY

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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REF NO.	SHEET NO.	ROADWAY	STATION		SIGN CODE	SIGN SIZE (INCHES)	630	630	630	630	630	630	630
							GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 3 POST	SIGN POST REFLECTOR	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	SIGN, DOUBLE FACED, STREET NAME
							FT	FT	FT	EACH	EACH	SF	EACH
40	204	MARKET AVE S	20+06	LT	W11-15-30	30X30		15					6.3
					W16-7PL-24	24X12							2
41	204	MARKET AVE S	20+69	RT	R4-7-24	24X30	13						6
42	204	MARKET AVE S	21+69	RT	W2-6-30	30X30		14					6.3
43	204	MARKET AVE S	22+19	RT	R3-9B-24	24X36					1		6
44	204	MARKET AVE S	22+21	LT	R3-9B-24	24X36					1		6
45	204	MARKET AVE S	22+48	LT	W2-6-30	30X30		15.5					6.3
					W13-1P-18	18X18							2.3
46	204	11TH ST SE	109+65	RT	W14-2-30	30X30		14					6.3
47	205	11TH ST SE	110+09	RT	R1-1-30	30X30			14.3	1			6.3
					D3-H6-48	48X8							1
					D3-H6-48	48X8							1
48	205	11TH ST SE	110+31	LT	W2-6-30	30X30					1		6.3
					W13-1P-18	18X18					1		2.3
49	205	11TH ST SE	110+31	RT	D11-1-24	24X18					1		3
					M4-14-24	24X12					1		2
50	205	11TH ST SE	112+36	LT	R3-9B-24	24X36					1		6
51	205	11TH ST SE	112+36	RT	R3-9B-24	24X36					1		6
52	205	11TH ST SE	116+60	RT	R3-H8B-48	48X30	26						10
53	205	11TH ST SE	118+36	LT	R3-9CP-30	30X12					1		2.5
					R3-9B-24	24X36					1		6
54	205	11TH ST SE	118+78	RT	R3-9DP-30	30X12		14.5					2.5
					R3-9B-24	24X36							6
55	206	11TH ST SE	120+81	RT	R1-1-30	30X30		13		1			6.3
56	206	11TH ST SE	121+06	RT	D11-1-24	24X18					1		3
					M6-3-21	21X15					1		2.2
57	206	11TH ST SE	121+88	RT	R3-H8B-48	48X30	26						10
58	206	11TH ST SE	122+23	RT	M3-2-24	24X12		14.8					2
					M1-4-24	24X24							4
					M6-1L-21	21X15							2.2
					M3-1-24	24X12		14.8					2
					M1-5-2-24	24X24							4
					M6-1R-21	21X15							2.2
59	206	11TH ST SE	123+39	RT	W4-1R-30	30X30		14					6.3
					W16-9P-24	24X12							2
60	206	11TH ST SE	123+52	LT	R3-H8B-48	48X30	26						10
61	206	11TH ST SE	123+65	RT	R5-1-36	36X36		13.5		1			9
62	206	11TH ST SE	125+33	RT	R3-H8DA-54	54X30					1		11.3
63	206	11TH ST SE	125+48	LT	R3-H8B-48	48X30	26						10
64	206	11TH ST SE	127+74	LT	M3-1-24	24X12					1		2
					M1-5-2-24	24X24					1		4
					M5-1L-21	21X15					1		2.2
65	206	11TH ST SE	128+43	LT	R3-H8B-48	48X30					1		10
66	206	11TH ST SE	130+40	LT	R3-H8B-48	48X30					1		10
67	207	11TH ST SE	132+28	LT	M2-1-21	21X15					1		2.2
					M1-4-24	24X24					1		4
67A	207	11TH ST SE	135+00	RT	R3-H8BA-30	30X30		13					6.3
68	207	11TH ST SE	135+31	RT	W11-15-30	30X30					1		6.3
					W16-9P-24	24X12					1		2
68A	207	11TH ST SE	136+28	LT	W10-1-30	30X30					1		6.3
69	207	11TH ST SE	137+47	RT	W11-15-30	30X30					1		6.3
					W16-7PL-24	24X12					1		2
70	207	11TH ST SE	137+61	LT	W11-15-30	30X30		15					6.3
					W16-7PL-24	24X12							2
70A	207	11TH ST SE	138+10	LT	R3-H8BB-30	30X30		13					6.3
71	207	11TH ST SE	139+43	LT	W11-15-30	30X30		15					6.3
					W16-9P-24	24X12							2
TOTALS CARRIED TO GENERAL SUMMARY							117.0	184.1	14.3	3	25	271.1	2

CALCULATED
CX
CHECKED
VMN

PROPOSED SIGNING SUBSUMMARY

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

210
302

REF NO.	SHEET NO.	ROADWAY	STATION TO STATION				630	630	630	630	630	630	630
							GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 3 POST	SIGN POST REFLECTOR	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	SIGN, DOUBLE FACED, STREET NAME
						FT	FT	FT	EACH	EACH	SF	EACH	
72	208	MARKET AVE S	22+80	LT	D3-H6-48	48X8			11.8			1	
					D3-H6-48	48X8						1	
73	208	MARKET AVE S	23+25	LT	R3-17-24	24X18				1	3		
					M6-3-21	21X15				1	2.2		
74	208	MARKET AVE S	25+34	LT	R3-17-24	24X18				1	3		
					R8-3-24	24X24				1	4		
75	208	MARKET AVE S	26+28	LT	R3-9B-24	24X36				1	6		
76	208	MARKET AVE S	26+28	RT	R3-9B-24	24X36				1	6		
77	208	MARKET AVE S	26+76	LT	R1-1-30	30X30		14.3	1		6.3		
					D3-H6-48	48X8						1	
					D3-H6-48	48X8						1	
78	208	MARKET AVE S	27+27	RT	W10-1-30	30X30				1	6.3		
79	216A	CHERRY AVE SE	52+75	LT	W4-2-36	36X36		15			9		
TOTALS CARRIED TO GENERAL SUMMARY							0.0	15.0	26.1	1	7	45.8	4

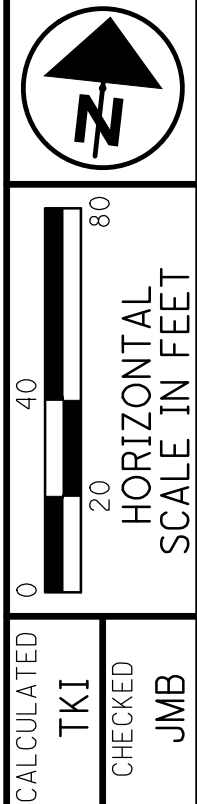
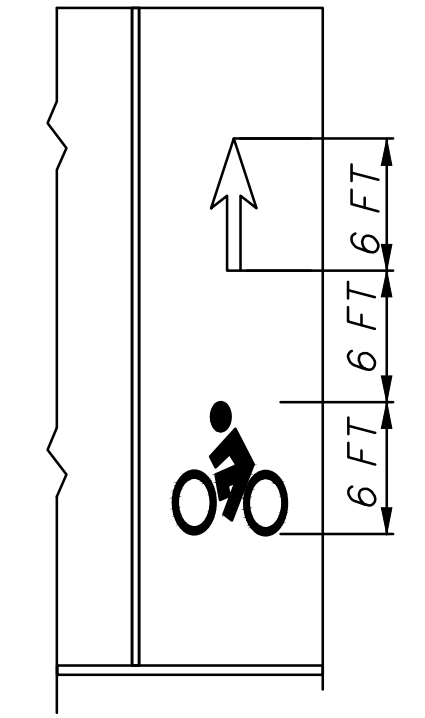
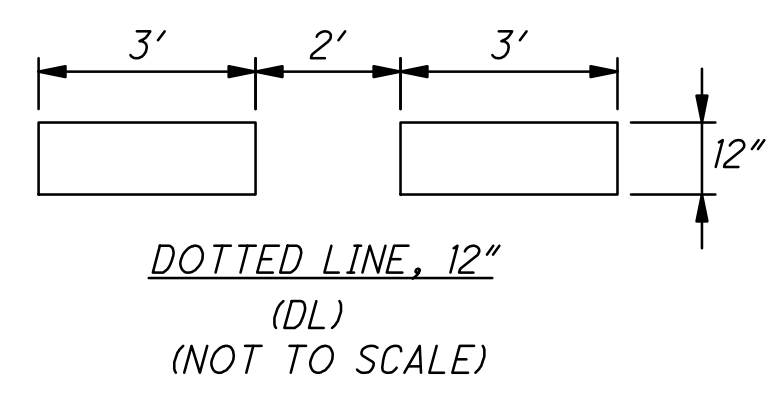
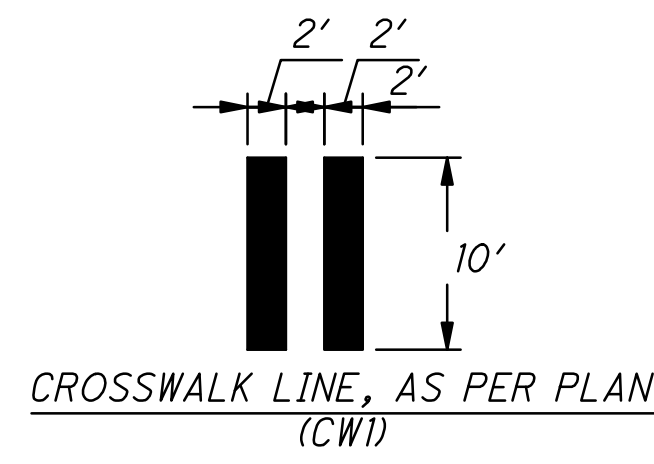
CALCULATED
CX
CHECKED
VMN

PROPOSED SIGNING SUBSUMMARY

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

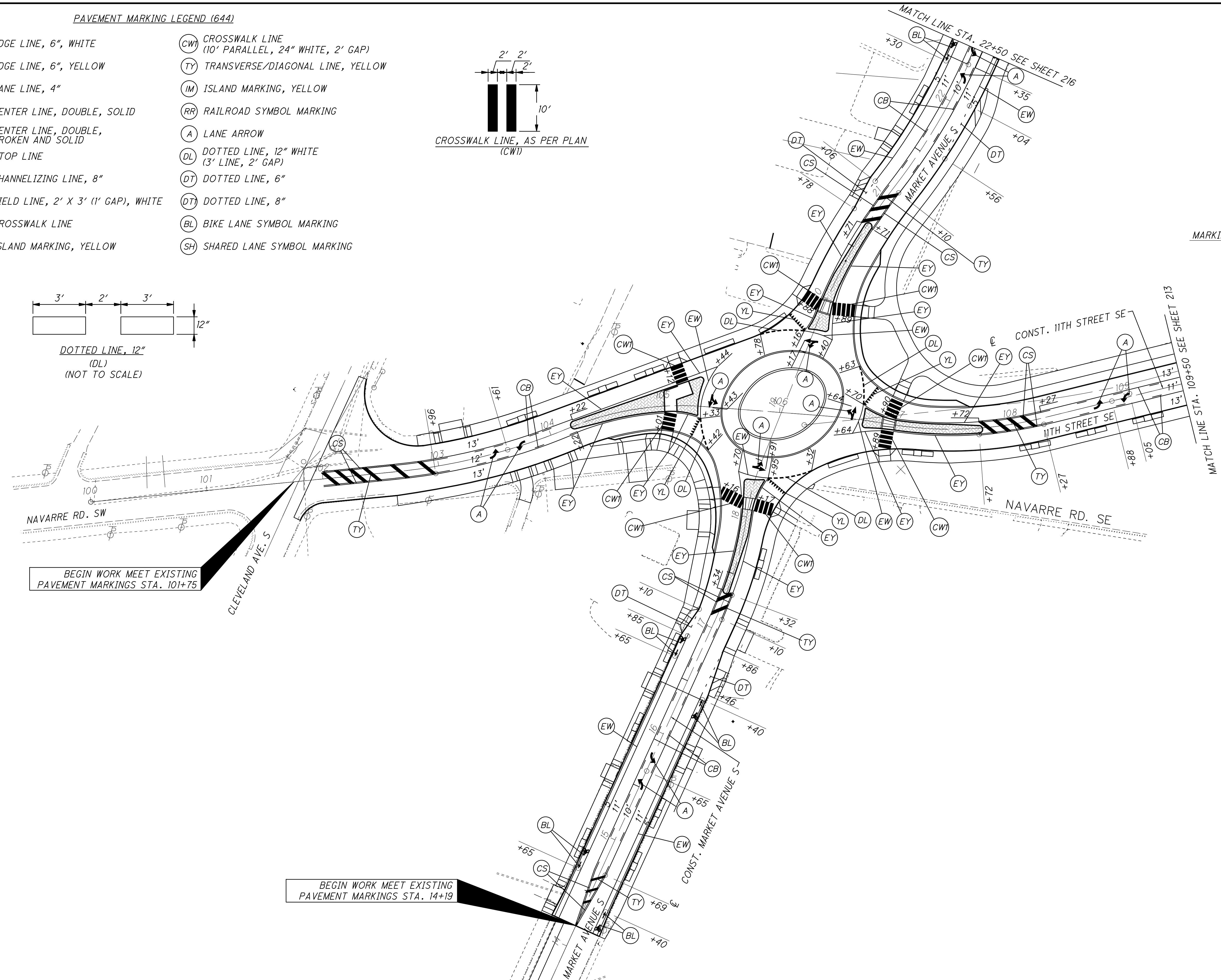
PAVEMENT MARKING LEGEND (644)

- | | |
|---|--|
| (EW) EDGE LINE, 6", WHITE | (CW) CROSSWALK LINE
(10' PARALLEL, 24" WHITE, 2' GAP) |
| (EY) EDGE LINE, 6", YELLOW | (TY) TRANSVERSE/DIAGONAL LINE, YELLOW |
| (LL) LANE LINE, 4" | (IM) ISLAND MARKING, YELLOW |
| (CS) CENTER LINE, DOUBLE, SOLID | (RR) RAILROAD SYMBOL MARKING |
| (CB) CENTER LINE, DOUBLE,
BROKEN AND SOLID | (A) LANE ARROW |
| (S) STOP LINE | (DL) DOTTED LINE, 12" WHITE
(3' LINE, 2' GAP) |
| (CH) CHANNELIZING LINE, 8" | (DT) DOTTED LINE, 6" |
| (YL) YIELD LINE, 2' X 3' (1' GAP), WHITE | (DT) DOTTED LINE, 8" |
| (CW) CROSSWALK LINE | (BL) BIKE LANE SYMBOL MARKING |
| (IM) ISLAND MARKING, YELLOW | (SH) SHARED LANE SYMBOL MARKING |



PAVEMENT MARKING PLAN - 11TH STREET SE
BEGINNING TO STA. 109+50

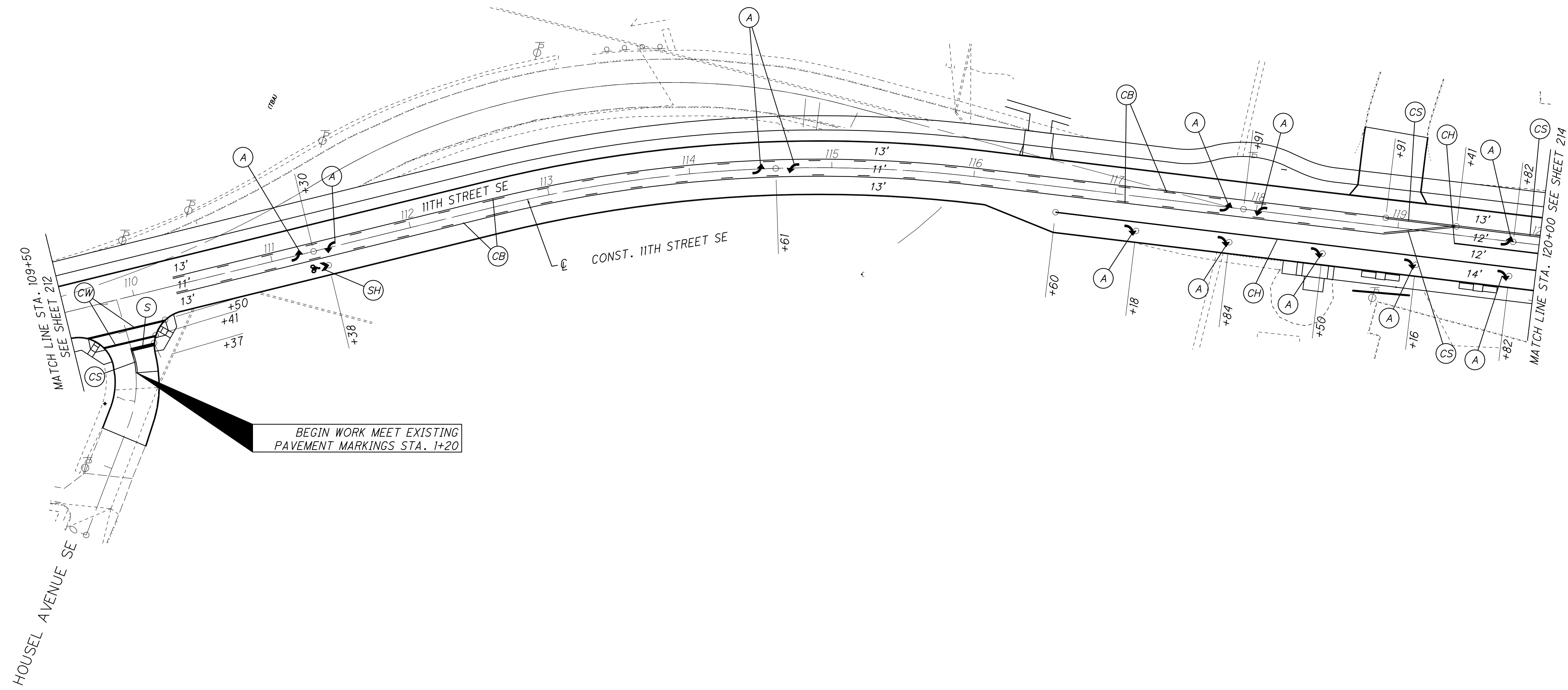
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



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FOR PAVEMENT MARKING LEGEND, SEE SHEET 212.

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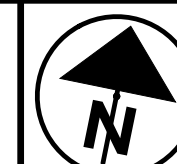


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0 20 40 80
HORIZONTAL
SCALE IN FEET

**PAVEMENT MARKING PLAN - 11TH STREET SE
STA. 109+50 TO STA. 120+00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**



0 20 40 60
HORIZONTAL
SCALE IN FEET

CALCULATED
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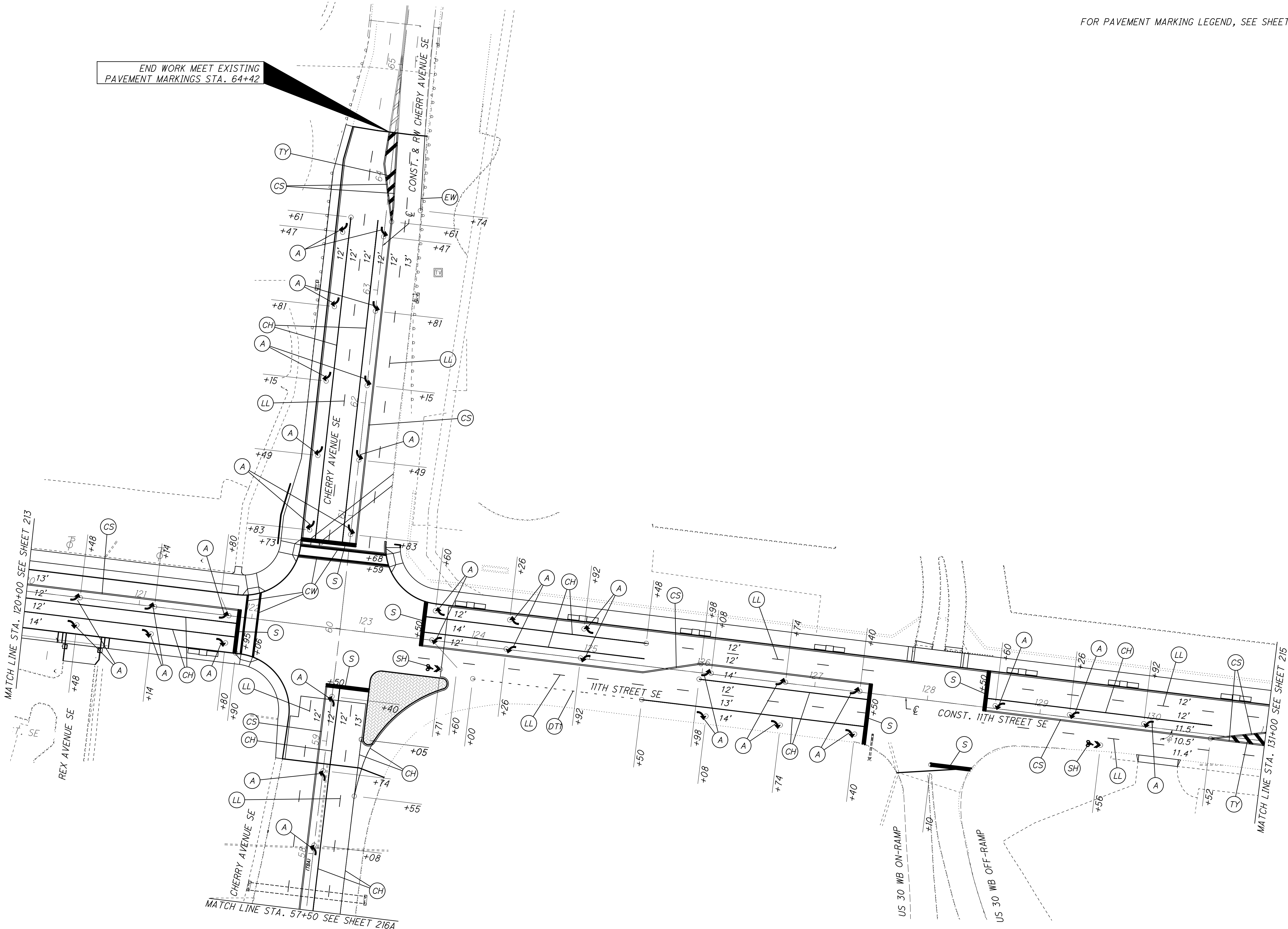
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

PAVEMENT MARKING PLAN - 11TH STREET SE
STA. 120+00 TO STA. 131+00

214
302

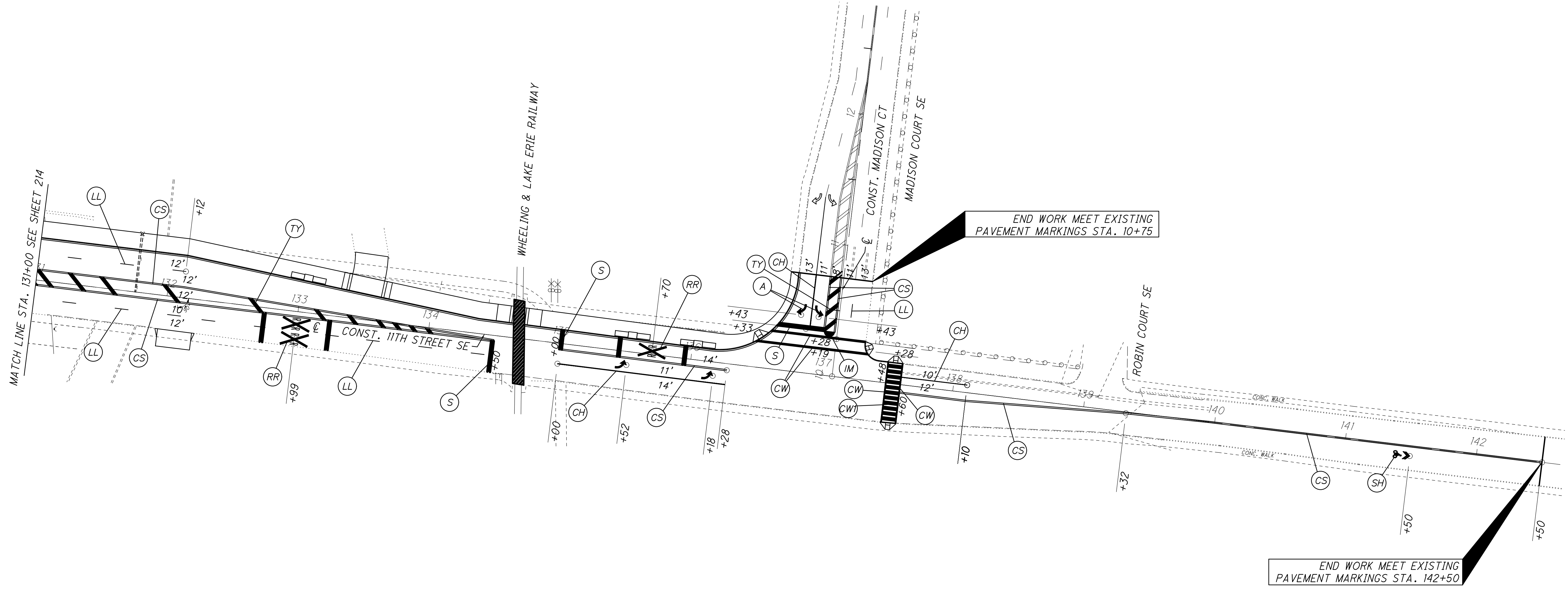
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END WORK MEET EXISTING
PAVEMENT MARKINGS STA. 64+42



FOR PAVEMENT MARKING LEGEND, SEE SHEET 212.

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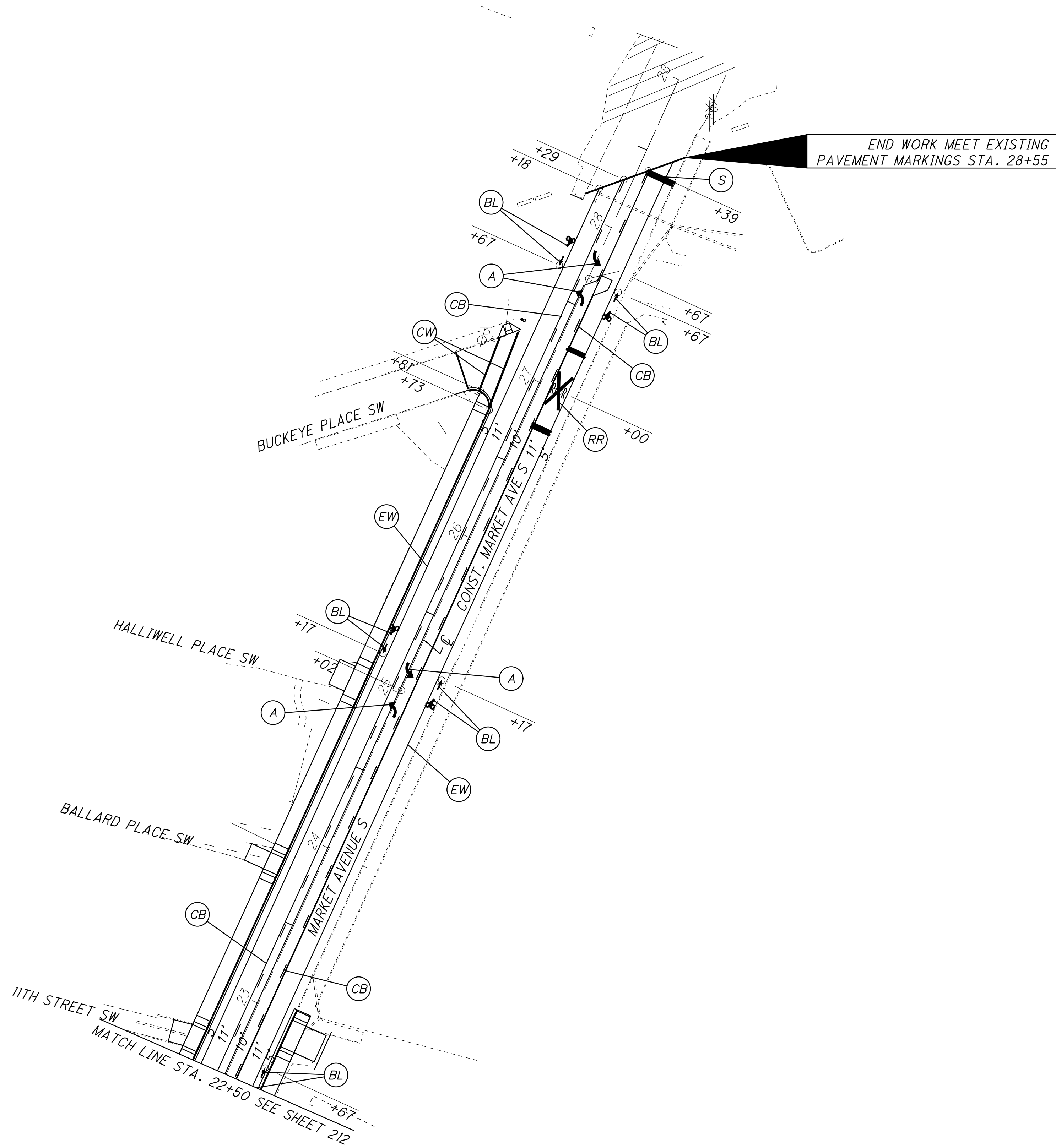
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0 20 40 60
HORIZONTAL
SCALE IN FEET

PAVEMENT MARKING PLAN - 11TH STREET SE
STA. 131+00 TO ENDING

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

FOR PAVEMENT MARKING LEGEND, SEE SHEET 212.



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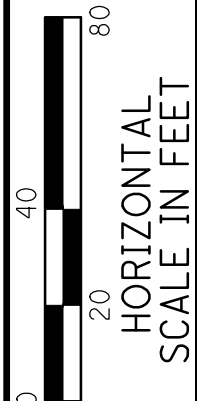
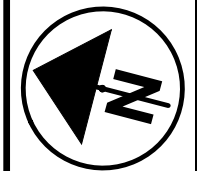
0 20 40 80
HORIZONTAL
SCALE IN FEET

**PAVEMENT MARKING PLAN - MARKET AVENUE S
STA. 22+50 TO ENDING**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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FOR PAVEMENT MARKING LEGEND, SEE SHEET 212.



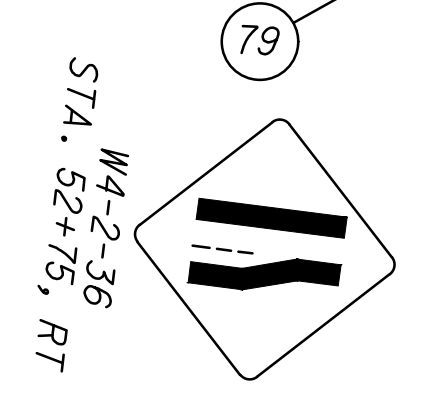
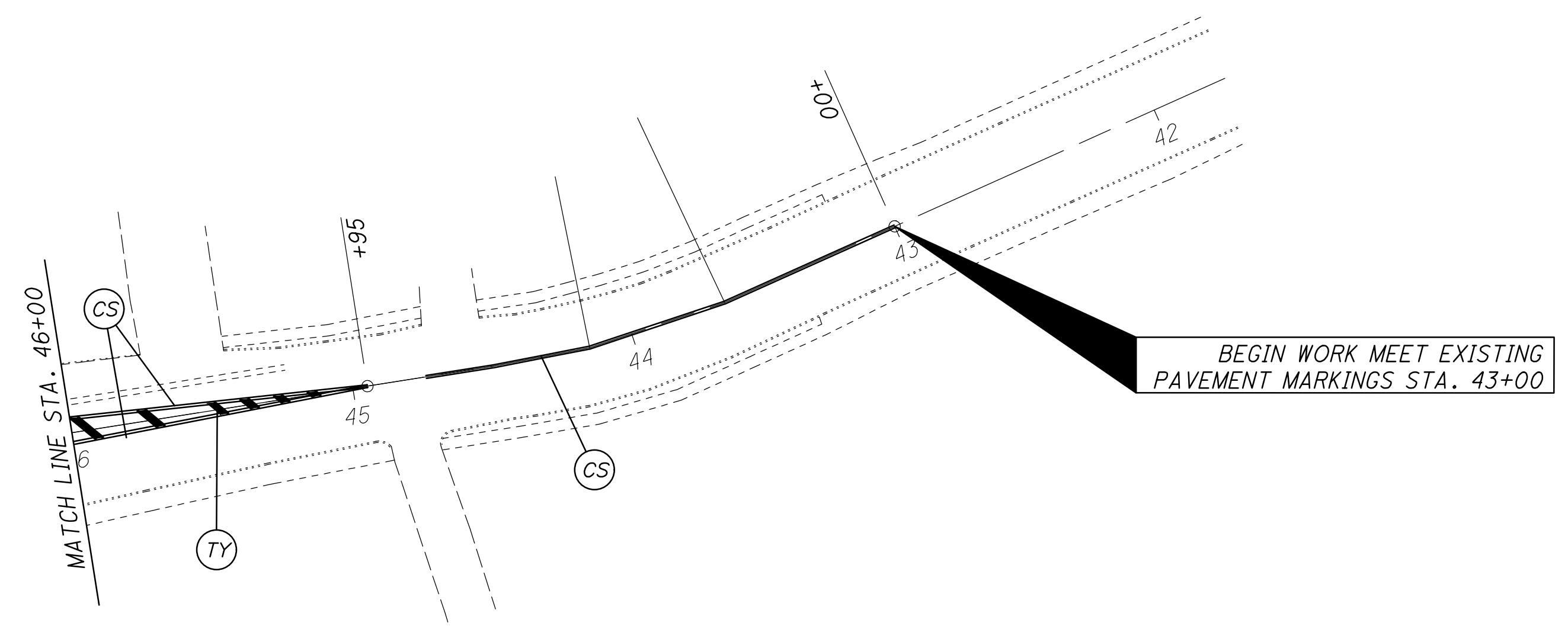
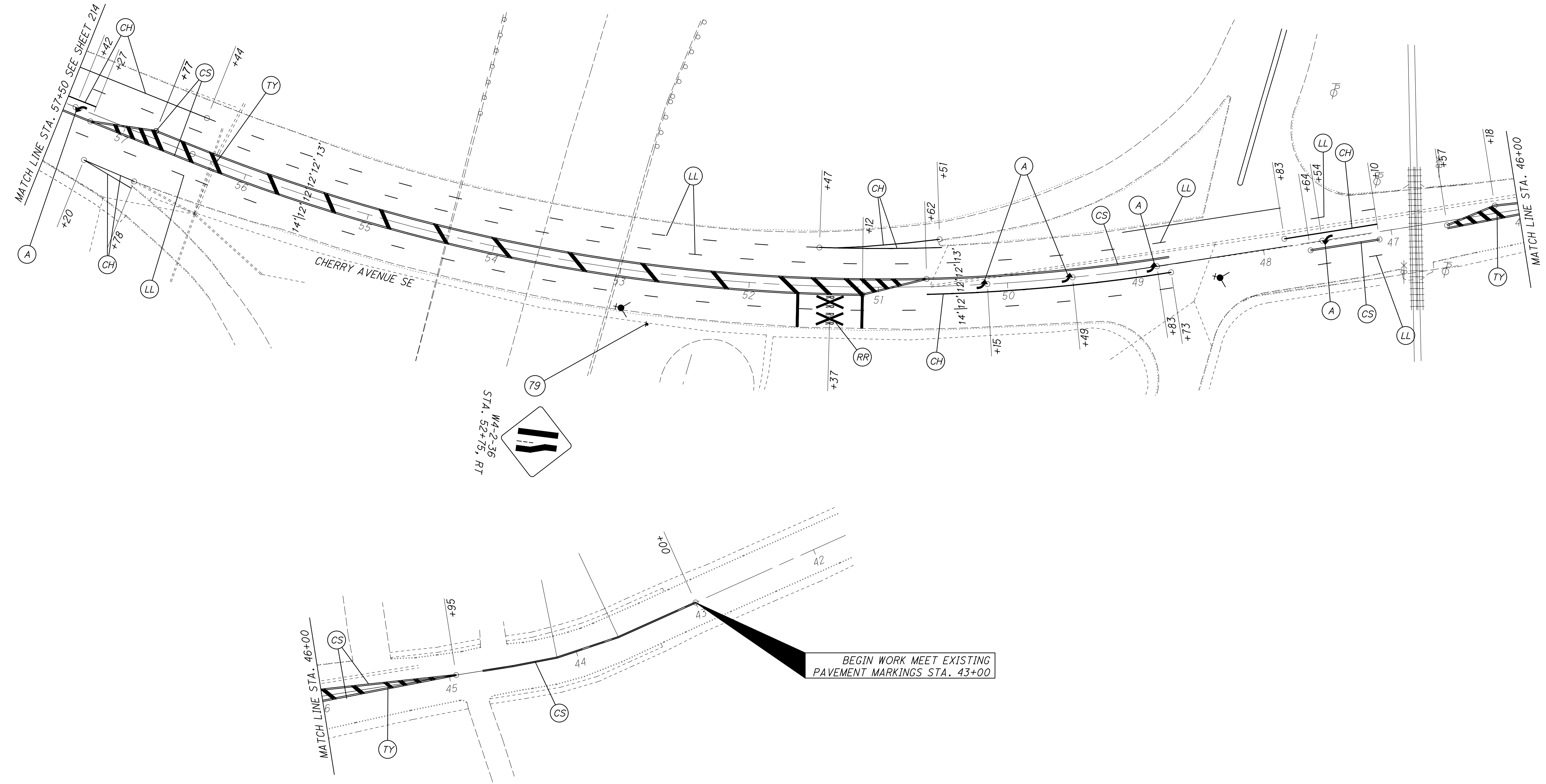
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**PAVEMENT MARKING PLAN - CHERRY AVENUE SE
STA. 57+50 TO ENDING**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

216A
302

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REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			644	644	644	644	644	644	644	644	644	644	644	644	644	644	644			
						EDGE LINE, 6"	LANE LINE, 4"	CENTER LINE	CHANNELIZING LINE, 8"	STOP LINE	CROSSWALK LINE, 12"	CROSSWALK LINE, 12", AS PER PLAN	TRANSVERSE/DIAGONAL LINE	ISLAND MARKING	RAILROAD SYMBOL MARKING	LANE ARROW	DOTTED LINE, 6"	DOTTED LINE, 8"	DOTTED LINE, 12"	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING	YIELD LINE	
						MILE	MILE	MILE	FT	FT	FT	FT	FT	SF	EACH	EACH	FT	FT	FT	EACH	EACH	FT	
EW	212	MARKET AVE S	14+19	RT	16+46	0.04																	
EW	212	MARKET AVE S	14+19	LT	16+85	0.05																	
EW	212	11TH ST SE	105+33	RT	105+44	0.01																	
EW	212	11TH ST SE	105+70	RT	105+95	0.01																	
EW	212	11TH ST SE	106+64	RT	106+70	0.01																	
EW	212	11TH ST SE	106+16	LT	106+40	0.01																	
EW	212	MARKET AVE S	22+04	RT	22+50	0.01																	
EW	212	MARKET AVE S	21+06	LT	22+50	0.03																	
EY	212	MARKET AVE S	17+32	RT	105+95	0.02																	
EY	212	MARKET AVE S	17+34	LT	105+70	0.02																	
EY	212	11TH ST SE	106+40	LT	20+71	0.02																	
EY	212	11TH ST SE	106+16	LT	20+71	0.02																	
EY	212	11TH ST SE	104+22	LT	105+44	0.03																	
EY	212	11TH ST SE	104+22	RT	105+33	0.02																	
EY	212	11TH ST SE	106+70	LT	107+72	0.02																	
EY	212	11TH ST SE	106+64	RT	107+72	0.02																	
CS	212	MARKET AVE S	14+19	LT	14+69			0.01															
CS	212	MARKET AVE S	14+19	RT	14+69			0.01															
CB	212	MARKET AVE S	14+69	LT	17+10			0.05															
CB	212	MARKET AVE S	14+69	RT	17+10			0.05															
CS	212	MARKET AVE S	17+10	LT	17+34			0.01															
CS	212	MARKET AVE S	17+10	RT	17+32			0.01															
CS	212	MARKET AVE S	20+71	LT	21+10			0.01															
CS	212	MARKET AVE S	20+71	RT	21+10			0.01															
CB	212	MARKET AVE S	21+10	LT	22+50			0.03															
CB	212	MARKET AVE S	21+10	RT	22+50			0.03															
CS	212	11TH ST SE	102+00	LT	102+96			0.02															
CS	212	11TH ST SE	102+00	RT	102+96			0.02															
CB	212	11TH ST SE	102+96	LT	104+22			0.02															
CB	212	11TH ST SE	102+96	RT	104+22			0.02															
CS	212	11TH ST SE	107+72	LT	108+27			0.01															
CS	212	11TH ST SE	107+72	RT	108+27			0.01															
CB	212	11TH ST SE	108+27	LT	109+50			0.02															
CB	212	11TH ST SE	108+27	RT	109+50			0.02															
CW1	212	MARKET AVE S	18+16	LT							20												
CW1	212	MARKET AVE S	18+17	RT							14												
CW1	212	MARKET AVE S	18+88	LT							14												
CW1	212	MARKET AVE S	18+88	RT							18												
CW1	212	11TH ST SE	105+01	RT							15												
CW1	212	11TH ST SE	105+12	LT							14												
CW1	212	11TH ST SE	106+89	RT							14												
CW1	212	11TH ST SE	106+90	LT							15												
TY	212	MARKET AVE S	14+19	LT	14+69						26												
TY	212	MARKET AVE S	17+10	LT	17+34						30												
TY	212	MARKET AVE S	20+71	LT	21+10						48												
TY	212	11TH ST SE	102+00	LT	102+96						102												
TY	212	11TH ST SE	107+72	LT	108+27						64												
A	212	MARKET AVE S	15+65	CL											2								
A	212	MARKET AVE S	22+35	CL											2								
A	212	11TH ST SE	103+61	CL											2								
A	212	11TH ST SE	108+88	CL											2								
A	212	11TH ST SE	105+43	LT											1								
A	212	11TH ST SE	105+91	RT											1								
A	212	11TH ST SE	106+64	LT											1								
A	212	11TH ST SE	106+17	LT											1								
DT	212	MARKET AVE S	16+46	RT	16+86																	40	
DT	212	MARKET AVE S	16+85	LT	17+10																	25	
DT	212	MARKET AVE S	20+78	LT	21+06																	28	
DT	212	MARKET AVE S	21+56	RT	22+04																	48	
TOTALS CARRIED TO GENERAL SUMMARY						0.34	0.00	0.36	0	0	0	124	270	0	0	12	141	0	0	0	0	0	0

CALCULATED
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PAVEMENT MARKING SUBSUMMARY

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			644	644	644	644	644	644	644	644	644	644	644	644	644	644	644	644		
						EDGE LINE, 6"	LANE LINE, 4"	CENTER LINE	CHANNELIZING LINE, 8"	STOP LINE	CROSSWALK LINE, 12"	CROSSWALK LINE, 12", AS PER PLAN	TRANSVERSE/DIAGONAL LINE	ISLAND MARKING	RAILROAD SYMBOL MARKING	LANE ARROW	DOTTED LINE, 6"	DOTTED LINE, 8"	DOTTED LINE, 12"	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING	YIELD LINE	
						MILE	MILE	MILE	FT	FT	FT	FT	FT	SF	EACH	EACH	FT	FT	FT	EACH	EACH	FT	
DL	212	11TH ST SE	105+33	RT	105+42																28		
DL	212	11TH ST SE	105+95	RT	106+32																38		
DL	212	11TH ST SE	106+70	LT	106+63																32		
DL	212	11TH ST SE	106+16	RT	105+78																39		
BL	212	MARKET AVE S	14+40	RT																	1		
BL	212	MARKET AVE S	14+65	LT																	1		
BL	212	MARKET AVE S	16+40	RT																	1		
BL	212	MARKET AVE S	16+65	LT																	1		
BL	212	MARKET AVE S	22+30	LT																	1		
YL	212	11TH ST SE	105+33	RT																			16
YL	212	11TH ST SE	105+95	RT																			18
YL	212	11TH ST SE	106+70	LT																			19
YL	212	11TH ST SE	106+16	RT																			19
CB	213	11TH ST SE	109+50	LT	118+91																		
CB	213	11TH ST SE	109+50	RT	118+91						0.18												
CS	213	11TH ST SE	118+91	LT	119+41						0.01												
CS	213	11TH ST SE	118+91	RT	119+41						0.01												
CS	213	11TH ST SE	119+41	RT	120+00						0.01												
CS	213	HOUSEL AVE SE	1+20	CL	1+37						0.01												
CH	213	11TH ST SE	116+60	RT	120+00				340														
CH	213	11TH ST SE	119+41	RT	120+00				59														
S	213	HOUSEL AVE SE	1+37	RT							17												
CW	213	HOUSEL AVE SE	1+41	LT	RT							38											
CW	213	HOUSEL AVE SE	1+50	LT	RT							57											
A	213	11TH ST SE	111+30	CL															2				
A	213	11TH ST SE	114+61	CL															2				
A	213	11TH ST SE	117+91	CL															2				
A	213	11TH ST SE	117+18	RT															1				
A	213	11TH ST SE	117+84	RT															1				
A	213	11TH ST SE	118+50	RT															1				
A	213	11TH ST SE	119+16	RT															1				
A	213	11TH ST SE	119+82	RT															1				
A	213	11TH ST SE	119+82	CL															1				
SH	213	11TH ST SE	111+38	RT																			1
EW	214	CHERRY AVE SE	63+74	RT	64+42	0.01																	
LL	214	11TH ST SE	123+50	RT	131+00						0.14												
LL	214	11TH ST SE	125+48	LT	131+00						0.11												
LL	214	CHERRY AVE SE	57+50	LT	64+42						0.13												
LL	214	CHERRY AVE SE	57+50	RT	64+42						0.13												
CS	214	11TH ST SE	120+00	LT	130+52						0.2												
CS	214	11TH ST SE	130+52	LT	131+00						0.01												
CS	214	11TH ST SE	130+52	RT	131+00						0.01												
CS	214	CHERRY AVE SE	57+50	LT	63+61						0.12												
CS	214	CHERRY AVE SE	63+61	LT	64+42						0.02												
CS	214	CHERRY AVE SE	63+61	RT	64+42						0.02												
CH	214	11TH ST SE	120+00	RT	121+90																		
CH	214	11TH ST SE	120+00	RT	121+90																		
CH	214	11TH ST SE	123+50	LT	125+48																		198
CH	214	11TH ST SE	123+50	LT	125+48																		198
CH	214	11TH ST SE	125+50	RT	127+50																		200
CH	214	11TH ST SE	125+98	RT	127+50																		152
CH	214	11TH ST SE	128+50	LT	130+52																		202
CH	214	CHERRY AVE SE	57+50	RT	59+05																		155
CH	214	CHERRY AVE SE	58+55	RT	59+05																		50
CH	214	CHERRY AVE SE	57+50	RT	59+50																		200
CH	214	CHERRY AVE SE	60+73	LT	63+61																		288
CH	214	CHERRY AVE SE	60+73	LT	63+61																		288
S	214	11TH ST SE	121+90	RT																			38
S	214	11TH ST SE	123+50	LT																			39
S	214	11TH ST SE	127+50	RT																			53
TOTALS CARRIED TO GENERAL SUMMARY						0.01	0.51	0.78	2710	147	95	0	0	0	0	0	12	0	0	137	5	1	72

PAVEMENT MARKING SUBSUMMARY

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

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REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			644	644	644	644	644	644	644	644	644	644	644	644	644	644	644			
						EDGE LINE, 6"	LANE LINE, 4"	CENTER LINE	CHANNELIZING LINE, 8"	STOP LINE	CROSSWALK LINE, 12"	CROSSWALK LINE, 12", AS PER PLAN	TRANSVERSE/DIAGONAL LINE	ISLAND MARKING	RAILROAD SYMBOL MARKING	LANE ARROW	DOTTED LINE, 6"	DOTTED LINE, 8"	DOTTED LINE, 12"	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING	YIELD LINE	
						MILE	MILE	MILE	FT	FT	FT	FT	FT	SF	EACH	EACH	FT	FT	FT	EACH	EACH	FT	
S	214	11TH ST SE	128+50	LT					35														
S	214	CHERRY AVE SE	59+50	RT					38														
S	214	CHERRY AVE SE	60+73	LT					48														
S	214	11TH ST SE	128+10	RT					36														
CW	214	11TH ST SE	121+95	LT	RT					52													
CW	214	11TH ST SE	122+06	LT	RT					57													
CW	214	CHERRY AVE SE	60+59	LT	RT					80													
CW	214	CHERRY AVE SE	60+68	LT	RT					76													
TY	214	11TH ST SE	130+52	RT		131+00					30												
TY	214	CHERRY AVE SE	63+61	RT		64+42					54												
A	214	11TH ST SE	120+48	RT											2								
A	214	11TH ST SE	121+14	RT											2								
A	214	11TH ST SE	121+80	RT											2								
A	214	11TH ST SE	123+60	LT											2								
A	214	11TH ST SE	124+26	LT											2								
A	214	11TH ST SE	124+92	LT											2								
A	214	11TH ST SE	126+08	RT											2								
A	214	11TH ST SE	126+74	RT											2								
A	214	11TH ST SE	127+40	RT											2								
A	214	11TH ST SE	128+60	LT											1								
A	214	11TH ST SE	129+26	LT											1								
A	214	11TH ST SE	129+92	LT											1								
A	214	CHERRY AVE SE	58+08	CL											1								
A	214	CHERRY AVE SE	58+74	CL											1								
A	214	CHERRY AVE SE	59+40	CL											1								
A	214	CHERRY AVE SE	60+83	LT											2								
A	214	CHERRY AVE SE	61+49	LT											2								
A	214	CHERRY AVE SE	62+15	LT											2								
A	214	CHERRY AVE SE	62+81	LT											2								
A	214	CHERRY AVE SE	63+47	LT											2								
DT1	214	11TH ST SE	124+00	RT		125+50												150					
SH	214	11TH ST SE	123+71	RT																	1		
SH	214	11TH ST SE	129+56	RT																	1		
LL	215	11TH ST SE	131+00	LT		132+12				0.02													
LL	215	11TH ST SE	131+00	RT		134+50				0.07													
LL	215	MADISON COURT SE	10+33	RT		10+75				0.01													
CS	215	11TH ST SE	131+00	LT		142+50					0.22												
CS	215	11TH ST SE	131+00	RT		134+50					0.07												
CS	215	MADISON COURT SE	10+33	LT		10+75					0.01												
CS	215	MADISON COURT SE	10+33	LT		10+75					0.01												
CH	215	11TH ST SE	135+00	RT		136+28			128														
CH	215	11TH ST SE	137+60	LT		138+10			50														
CH	215	MADISON COURT SE	10+33	LT		10+75			42														
S	215	11TH ST SE	134+50	RT						24													
S	215	11TH ST SE	135+00	LT						15													
S	215	MADISON COURT SE	10+33	LT						36													
CW	215	11TH ST SE	137+48	LT	LR						46												
CW	215	11TH ST SE	137+60	LT	LR						46												
CW1	215	11TH ST SE	137+48	LT	LR							46											
CW	215	MADISON COURT SE	10+19	LT	RT						86												
CW	215	MADISON COURT SE	10+28	LT	RT						72												
TY	215	11TH ST SE	131+00	RT		134+50						119											
TY	215	MADISON COURT SE	10+33	LT		10+75						42											
IM	215	MADISON COURT SE	10+33	LT									25.1										
RR	215	11TH ST SE	132+99	RT											2								
RR	215	11TH ST SE	135+70	LT											1								
A	215	11TH ST SE	135+52	RT											1								
A	215	11TH ST SE	136+18	RT											1								
A	215	MADISON COURT SE	10+43	LT											2								
SH	215	11TH ST SE	141+50	RT																	1		
TOTALS CARRIED TO GENERAL SUMMARY																							
						0.00	0.10	0.31	220	232	515	46	245	25	5	36	0	150	0	0	3	0	

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PAVEMENT MARKING SUBSUMMARY

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			644	644	644	644	644	644	644	644	644	644	644	644	644	644	644		
						EDGE LINE, 6"	LANE LINE, 4"	CENTER LINE	CHANNELIZING LINE, 8"	STOP LINE	CROSSWALK LINE, 12"	CROSSWALK LINE, 12", AS PER PLAN	TRANSVERSE/DIAGONAL LINE	ISLAND MARKING	RAILROAD SYMBOL MARKING	LANE ARROW	DOTTED LINE, 6"	DOTTED LINE, 8"	DOTTED LINE, 12"	BIKE LANE SYMBOL MARKING	SHARED LANE MARKING	YIELD LINE
						MILE	MILE	MILE	FT	FT	FT	FT	FT	SF	EACH	EACH	FT	FT	FT	EACH	EACH	FT
EW	216	MARKET AVE S	22+50	LT	28+18	0.11																
EW	216	MARKET AVE S	22+50	RT	28+55	0.11																
CB	216	MARKET AVE S	22+50	LT	28+29			0.11														
CB	216	MARKET AVE S	22+50	RT	28+39			0.11														
S	216	MARKET AVE S	28+39	RT					17													
CW	216	MARKET AVE S	26+73	LT						50												
CW	216	MARKET AVE S	26+81	LT						34												
RR	216	MARKET AVE S	27+00	RT											1							
A	216	MARKET AVE S	25+02	CL											2							
A	216	MARKET AVE S	27+67	CL											2							
BL	216	MARKET AVE S	22+67	RT																1		
BL	216	MARKET AVE S	25+17	LT																1		
BL	216	MARKET AVE S	25+17	RT																1		
BL	216	MARKET AVE S	27+67	LT																1		
BL	216	MARKET AVE S	27+67	RT																1		
LL	216A	CHERRY AVE SE	47+10	LT	57+50		0.2															
LL	216A	CHERRY AVE SE	47+10	RT	57+50		0.2															
LL	216A	CHERRY AVE SE	51+47	RT	56+44		0.09															
CS	216A	CHERRY AVE SE	43+00	LR	57+50			0.28														
CS	216A	CHERRY AVE SE	44+95	RT	46+57			0.03														
CS	216A	CHERRY AVE SE	50+62	LT	57+27			0.13														
CH	216A	CHERRY AVE SE	47+10	RT	47+83				73													
CH	216A	CHERRY AVE SE	48+73	LT	50+62				189													
CH	216A	CHERRY AVE SE	50+51	RT	51+47				96													
CH	216A	CHERRY AVE SE	50+51	RT	51+47				96													
CH	216A	CHERRY AVE SE	56+44	RT	57+50				106													
CH	216A	CHERRY AVE SE	57+27	LT	57+50				23													
CH	216A	CHERRY AVE SE	56+78	LT	57+20				42													
CH	216A	CHERRY AVE SE	56+78	LT	57+20				42													
TY	216A	CHERRY AVE SE	44+95	LR	46+57					75												
TY	216A	CHERRY AVE SE	50+62	LR	57+27				312													
RR	216A	CHERRY AVE SE	51+37	LT											2							
A	216A	CHERRY AVE SE	47+54	CL											1							
A	216A	CHERRY AVE SE	48+83	CL											1							
A	216A	CHERRY AVE SE	49+49	CL											1							
A	216A	CHERRY AVE SE	50+15	CL											1							
A	216A	CHERRY AVE SE	57+42	CL											1							
TOTALS CARRIED TO GENERAL SUMMARY						0.00	0.49	0.44	667	0	34	0	387	0	3	9	0	0	0	5	0	0

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PAVEMENT MARKING SUBSUMMARY

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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302

GENERAL

SCOPE

THESE NOTES AND SPECIFICATIONS SUPPLEMENT THE STATE OF OHIO CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE SUPPLEMENTAL SPECIFICATIONS NOTES ON THE TITLE SHEET. THE WORK TO BE PERFORMED BY THE CONTRACTOR IN CONNECTION WITH FURNISHING LABOR, SUPPLIES, EQUIPMENT, MATERIALS, AND PERFORMING ALL OPERATIONS NECESSARY FOR THE ACCEPTABLE INSTALLATION OF THE TRAFFIC CONTROL DEVICES, SHALL BE IN STRICT ACCORDANCE WITH THESE PLANS, NOTES AND SPECIFICATIONS. THESE NOTES, SCHEDULES AND DRAWINGS ARE INTENDED TO PROVIDE ALL MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL A COMPLETE TRAFFIC CONTROL SYSTEM.

GUARANTEE:

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 180 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY.

EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR. THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, CABINET, UNINTERRUPTIBLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION/INTERCONNECT EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE CITY OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT. THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM AMERICAN ELECTRIC POWER AT THE LOCATIONS INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

AMERICAN ELECTRIC POWER
301 CLEVELAND AVENUE SW
P.O BOX 24400
CANTON, OH 44701-4400
PHONE: 330-438-7739
ATTN: MICHAEL ALLMAN
330-438-7999

VEHICULAR SIGNAL HEAD VERTICAL CLEARANCES

PRIOR TO ACCEPTANCE BY THE CITY, PROVIDE DOCUMENTATION TO THE PROJECT ENGINEER SHOWING THE ACTUAL MEASURED VERTICAL CLEARANCES OF ALL VEHICULAR SIGNAL HEADS.

SHOULD THE VERTICAL CLEARANCE OF ANY VEHICULAR SIGNAL HEAD BE LESS THAN THE ALLOWED MINIMUM, ADJUST EACH NON-CONFORMING SIGNAL HEAD UNTIL THE MINIMUM CLEARANCE CRITERION IS MET, AND RE-DOCUMENT THE MEASUREMENT.

THE COSTS ASSOCIATED WITH MEASURING THE VERTICAL CLEARANCES ARE INCIDENTAL TO THE PROJECT, AND ANY COSTS FOR ADJUSTMENTS WILL BE BORNE BY THE CONTRACTOR.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND CITY TRAFFIC ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION

BEFORE ANY WORK IS STARTED REPRESENTATIVES OF THE CITY, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING SIGNAL/FLASHER INSTALLATIONS TO BE MAINTAINED. DURING THIS INSPECTION A WRITTEN RECORD OF THE CONDITION OF THE EXISTING SIGNAL/FLASHER SHALL BE MADE BY THE CITY'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL ITEMS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE CITY, THE MAINTAINING AGENCY, AND THE CONTRACTOR.

AFTER THE REPORT HAS BEEN SIGNED BY ALL PARTIES, THE SIGNAL INSTALLATION SHALL BE TURNED OVER TO THE CONTRACTOR, WHO SHALL THEN BE REQUIRED TO MAINTAIN THE TRAFFIC SIGNAL INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

- A. EXISTING SIGNAL INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS INCLUDING DAMAGE DUE TO UTILITY RELOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION AT AN INTERSECTION FROM THE TIME THE INSTALLATION IS FIRST DISTURBED, WHETHER FROM UTILITY WORK OR FROM THE CONTRACTOR.
B. NEW OR REUSED SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. AT THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL PROVIDE THE MAINTAINING AGENCY AND THE PROJECT ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE (1) OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, SEVEN (7) DAYS A WEEK.

THE CONTRACTOR SHALL HAVE THE MALFUNCTION CORRECTED AND/OR REPAIRED TO THE SATISFACTION OF THE ENGINEER WITHIN EIGHT HOURS OF THE NOTIFICATION ON OR LIQUIDATED DAMAGES OF \$500 PER HOUR SHALL BE ASSESSED THE CONTRACTOR.

ALL LAMP OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE PROJECT ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN EIGHT (8) HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGES.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE PROJECT ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN EIGHT (8) HOURS AFTER THE CONTRACTOR IS NOTIFIED OF THE OUTAGE.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED EIGHT (8) HOUR PERIOD. AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE (1) LOCATION. WHERE MORE THAN ONE (1) OUTAGE OCCURS AT ANY ONE (1) LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION (continued)

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY DAMAGES FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGES AS PER 107.15.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE. THE PROJECT ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE CITY OF CANTON FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONEYS DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15. IN ADDITION TO THESE BILLINGS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES OF 3500/HOUR FOR EACH HOUR BEYOND THE ALLOWED EIGHT-HOUR PERIOD THAT THE SIGNAL IS INOPERATIVE.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICES ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A MUTUALLY ACCEPTABLE AGREEMENT WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE PROJECT ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DUE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED FOUR (4) HOURS FOR INSTALLATIONS UTILIZING NEW FOUNDATIONS AND EIGHT (8) HOURS FOR INSTALLATIONS UTILIZING EXISTING FOUNDATIONS AND NO OUTAGE TIME PERIOD SHALL INCLUDE THE HOURS OF 6:00 AM TO 8:00 AM AND 4:00 PM TO 6:00 PM. ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED, AS DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING. 1). TIME OF NOTIFICATION OF MALFUNCTION, 2). TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION; 3). ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED; 4). A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE; AND 5). TIME OF COMPLETION OF REPAIR AND SYSTEM RESTORED TO FULL SERVICE. A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 625 ARC FLASH CALCULATIONS AND LABEL

THIS ITEM OF WORK SHALL CONSIST OF PERFORMING ARC FLASH CALCULATIONS AND APPLYING AN EXTERNAL LABEL AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 825. THIS WORK SHALL BE PERFORMED FOR DISCONNECT SWITCH, SIGNAL CABINET, AND UPS ENCLOSURE. THE LABEL USED SHALL BE ODOT VERSION A (PREFERRED).

METHOD OF MEASUREMENT SHALL BE PER 825.06.

ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 630.06, SIGNS SHALL BE RIGID MOUNTED ON MAST ARMS AS DETAILED ON TC-16.22. THE CENTER OF THE SIGN SHALL BE EQUAL TO THE CENTER OF THE MAST ARM.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION AS PER PLAN

THE REMOVAL AT THE FOLLOWING THREE INTERSECTIONS SHALL CONSIST OF VEHICULAR SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, CONTROLLER WITH CABINET, TRAFFIC POLES AND PEDESTALS, FOUNDATIONS, PULL BOXES, MESSENGER WIRE, SIGNAL CABLE, CONDUIT RISER, MISCELLANEOUS ATTACHMENTS, POLE AND MAST ARM MOUNTED SIGNS, AND ALL OTHER PORTIONS OF A TRAFFIC SIGNAL INSTALLATION PER SECTION 632.26 UNLESS OTHERWISE STATED ON THE INTERSECTION PLAN SHEET.

INTERSECTION TRAFFIC SIGNAL REMOVAL INCLUDES: 11TH STREET SE AND MARKET AVENUE S 11TH STREET SE AND CHERRY AVENUE SE 11TH STREET SE AND US 30 ON/OFF RAMPS

UNLESS OTHERWISE DESIGNATED, ALL TRAFFIC POLES AND ARMS REMOVED SHALL BE DELIVERED TO THE CITY OF CANTON TRAFFIC SIGN AND PAINT DEPARTMENT AT 2506 CLEVELAND AVENUE S.W., CANTON, OHIO.

IN ADDITION, UNLESS OTHERWISE DESIGNATED, ALL OTHER ITEMS REMOVED, VEHICULAR SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTON, EXCEPT MESSENGER WIRE AND SIGNAL CABLES SHALL BE DELIVERED TO THE CITY OF CANTON TRAFFIC SIGNAL DEPARTMENT AT 2436-30TH STREET N.E., CANTON, OHIO.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MESSENGER WIRE, SIGNAL CABLES, AND ANY OTHER TRAFFIC SIGNAL ITEMS DESIGNATED BY THE ENGINEER.

ITEM 632 - POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER ODOT SPECIFICATION 652 AND ODOT STANDARD CONSTRUCTION DRAWING TC-83.20.

ELECTRIC POWER SHALL BE SUPPLIED BY AMERICAN ELECTRIC POWER (AEP). POWER SERVICE IS TO BE UNMETERED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS, EXCEPT WHERE DECORATIVE SIGNAL SUPPORTS WITH ORNAMENTAL LUMINAIRE WHICH REQUIRES 240V OR 208V. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE CITY OF CANTON.

ITEM 632 - POWER CABLE 1 CONDUCTOR NO 6 AWG, AS PER PLAN

POWER CABLE SHALL BE 1 CONDUCTOR, NO. 6 AWG STRANDED, COPPER, TYPE UF, 600 VOLT.

ITEM 632 - COVERING OF VEHICULAR SIGNAL HEAD

COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD OF COVERING TO COVER ATTACHMENT AND MATERIALS, INCLUDING BACKPLATES, AS APPROVED BY THE ENGINEER. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED BY THE ENGINEER.

CALCULATED CX CHECKED VMN

TRAFFIC SIGNAL GENERAL NOTES 11TH STREET SE

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

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GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

- 1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
 - a. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
 - b. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
 - c. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
 - d. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINT, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
 - e. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
 - f. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS

- a. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
- b. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
- c. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
- d. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING

- a. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
 - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
 - II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.a.I ABOVE.
 - III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.a.I ABOVE.
 - IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
- b. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH A MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE A MINIMUM SIZE 4 AWG.

4. GROUND ROD

- a. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
- b. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

GROUNDING AND BONDING (continued)

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.

- a. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
- b. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
 - I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
 - II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT.

ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), COUNTDOWN, TYPE D2 AS PER PLAN

IN ADDITION TO THE REQUIREMENT OF CMS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

- A. LED, LIGHT EMITTING DIODE, SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 872. ALL LAMP UNITS SHALL BE THE 16 INCH SIZE AND A SINGLE UNIT.
- B. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
- C. ALL LAMP UNITS SHALL BE PROVIDED WITH QUICK COUPLERS FOR SIDE OF POLE MOUNTING OR WITH TOP OF PEDESTAL MOUNTING HARDWARE, AS SPECIFIED IN THE PLANS.
- D. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL (BLACK) RATHER THAN PAINTING.

THE CONTRACTOR SHALL PROVIDE THE CITY, IN WRITING, THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP AND DATE OF MANUFACTURER FOR ALL LED UNITS TO BE USED IN THE TRAFFIC PEDESTRIAN HEADS PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES. THE INFORMATION SHALL BE SENT TO THE FOLLOWING LOCATION:

TRAFFIC ENGINEERING DEPARTMENT
2436 - 30TH STREET N.E.
CANTON, OHIO 44705

CITY WILL MEASURE "PEDESTRIAN SIGNAL HEAD WITH LED LAMPS, COUNTDOWN, TYPE D2, AS PER PLAN" BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, CLOSURE CAPS, AND LAMPS AS ALL PROPOSED CONNECTIONS SHALL BE FIELD DRILLED. BANDING OR STRAPPING ON THE NOSTALGIA PEDESTAL SHALL NOT BE PERMITTED.

ITEM 632 - VEHICULAR SIGNAL HEAD (LED), BY TYPE, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

- A. VEHICULAR SIGNAL HEADS SHALL BE FREE SWINGING.
- B. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.
- C. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
- D. VEHICULAR SIGNAL HEADS SHALL BE PROVIDED WITH A PIVOT AND LOCK BALANCE ADJUSTER. ALL BALANCE ADJUSTERS SHALL HAVE A MINIMUM THREE-QUARTER INCH (19 MILLIMETER) EYE BOLT AND THREE-QUARTER INCH (19 MILLIMETER) WIDE SLOT. EYE BOLTS ARE CAST FROM Z16 STAINLESS STEEL AND PROVIDED WITH A SATIN FINISH. THREE-QUARTER INCH (19 MILLIMETER) BODY HALVES ARE CAST FROM A MINIMUM 65-45-12 DUCTILE IRON AND PROVIDED WITH A BRIGHT ZINC FINISH (ZNI).
- E. ALL LAMP UNITS SHALL BE THE 12-INCH (300 MILLIMETER) SIZE AND BE EQUIPPED WITH 12"x11" CUTAWAY VISORS. UNLESS OTHERWISE NOTED IN THE PLANS.
- F. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
- G. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF ALUMINUM.
- H. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING. ALL EXTERIOR COLOR SHALL BE FEDERAL HIGHWAY BLACK AT INTERSECTIONS THAT CONTAIN NOSTALGIA SIGNAL SUPPORTS AND PEDESTALS.

THE CONTRACTOR SHALL PROVIDE THE CITY, IN WRITING, THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURER FOR ALL LED UNITS TO BE USED IN THE TRAFFIC VEHICULAR SIGNAL HEADS PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES. THE INFORMATION SHALL BE SENT TO THE FOLLOWING LOCATION:

TRAFFIC ENGINEERING DEPARTMENT
2436 - 30TH STREET N.E.
CANTON, OHIO 44705

CITY WILL MEASURE "VEHICULAR SIGNAL HEAD (LED), BY TYPE, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN" BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, CLOSURE CAPS, AND LAMPS AS ALL PROPOSED CONNECTIONS SHALL BE FIELD DRILLED. BANDING OR STRAPPING ON THE NOSTALGIA SIGNAL POLES SHALL NOT BE PERMITTED.

ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN

PEDESTRIAN PUSHBUTTON SHALL BE AMERICAS WITH DISABILITIES ACT (ADA) COMPLIANT AND FREEZE PROOF. IN ORDER TO CONFORM TO ADA. THE REQUIREMENTS OF 632.09 AND 732.06 ARE MODIFIED AS FOLLOWS:

- A. THE MAXIMUM FORCE REQUIRED TO OPERATE THE PUSHBUTTON SHALL BE FIVE (5) POUNDS PER FOOT.
- B. THE PUSHBUTTON SHALL BE RAISED OR FLUSH AND SHALL BE A MINIMUM OF TWO (2) INCHES AT THE SMALLEST DIMENSION.

633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&M 633 AND 733, POLE ATTACHMENT HARDWARE WILL BE INCLUDED FOR POLE-MOUNTED CABINETS, AND A CABINET RISER (8 INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE CITY TRAFFIC ENGINEER AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY-DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSES OVER THE POWER CORD.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/ SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED MODULE SHOULD BE PLACED AND CENTERED ON THE TOP SURFACE OF THE UPS CABINET AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY," WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

ITEM 625 - PULL BOX, MISC.: 725.06. (BY SIZE)

PULL BOXES SHALL BE MANUFACTURED BY CARSON BROOKS (MODEL #1324 AND #1730). QUAZITE (MODEL #PG1324BA1 B/PG1324HA44 AND #P01730BA18/PC17SOHA44), OR SYNERTECH (MODEL RSJ 324 HBBOA1B AND #S1730 HBBOA1B), OR APPROVED EQUAL. ALL PULL BOXES SHALL INCLUDE A POLYMER CONCRETE RING AND COVER TYPE, OR EQUAL, AND SHALL BE MARKED "TRAFFIC". THE PULL BOX SHALL BE FIBERGLASS REINFORCED POLYESTER, OR EQUAL, WITH INSERTS AND SHALL BE 18" IN DEPTH. EACH PULL BOX SHALL INCLUDE TWO (2) STAINLESS STEEL HEX BOLTS. EACH PULL BOX AND COVER SHALL HAVE A MINIMUM LOAD RATING OF 20,000 POUNDS CAPACITY IN ACCORDANCE WITH THE WESTERN UNDERGROUND COMMITTEE GUIDE 3.6. UNDERDRAINS SHALL NOT BE INSTALLED IN PULL BOXES.

ITEM 625 - CONDUIT, (BY SIZE) 725.05, AS PER PLAN

ALL CONDUITS AND FITTINGS SHALL BE TYPE EB, SCHEDULE 40 PVC ENCASED IN CONCRETE. ALL CONDUITS SHALL HAVE PULL WIRE. ALL CONDUITS ENTERING A PULL BOX, POLE, ETC. SHALL NOT EXTEND MORE THAN 1" BEYOND ENTERING THE PULL BOX, POLE, ETC.

ITEM 632 - COMBINATION SIGNAL SUPPORT MISC.: NOSTALGIA SIGNAL SUPPORT (BY TYPE)

NOSTALGIA SIGNAL SUPPORTS (MAST ARM POLES AND ARMS) SHALL BE PACIFIC FAMILY 50312GF SERIES (SEE DETAILS ON SHEETS 235 AND 236.) AND MANUFACTURED BY:
UNION METAL CORPORATION
1432 MAPLE AVENUE N.E.
P.O. BOX 9920 CANTON, OH. 44711
PHONE: 330-456-7653

THE CONTRACTOR SHALL FURNISH AND INSTALL NOSTALGIA SIGNAL SUPPORTS AS PER PLANS. ALL HARDWARE INCLUDING LUMINARIE BRACKET ARM AND RELATED EQUIPMENT SHALL BE INCLUDED WITH THIS ITEM.

THE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION TO THE CITY THAT THE ACCEPTED POLE, ARM, LUMINAIRE, AND DECORATIVE SHROUD, IS OR WILL BECOME A STOCK ITEM. READILY AVAILABLE WITH REPLACEMENT PARTS FOR MINIMUM TEN (10) YEAR PERIOD. ALL MATERIAL SUPPLIES SHALL BE WARRANTED BY THE MANUFACTURER FOR 5 YEARS AFTER DELIVERY AGAINST FAULTY MATERIALS AND WORKMANSHIP. THE POLE TOP SHALL BE MECHANICALLY ATTACHED TO THE TOP OF THE POLE SHAFT TO PROVIDE ACCESS FOR WIRING SIGNALS SECURED BY A J - HOOK WIRE SUPPORT. AN OPTIONAL OUTLET FRAME SHALL BE INTEGRALLY WELDED INTO THE POLE SHAFT TO ACCOMMODATE A 20A - 125V GFCI DUPLEX RECEPTACLE WHICH IS ALSO INCLUDED. THE RECEPTACLE COVER SHALL BE WEATHER WHILE IN USE AND PAINTED TO MATCH POLE. THE MAST ARM SHALL BE DRILLED IN THE FIELD 1' FROM REQUIRED SIGNAL LOCATIONS. TWO (2) RUBBER GROMMETS SHALL BE FURNISHED WITH EACH MAST ARM SIGNAL HANGER CLAMPS SHALL BE SUPPLIED BY THE SIGNAL SUPPLIER OR MANUFACTURER, AS REQUIRED. A PERMANENT LEGIBLE MARKING INDICATION SHALL BE INCLUDED ON EACH SIGNAL SUPPORT AND ARM. THE FOLLOWING INDICATIONS SHALL BE REQUIRED AS A MINIMUM:

- A. POLE INDICATIONS MONTH/DATE OF FABRICATION; POLE GAUGE; BOTTOM DIAMETER; POLE HEIGHT; BOLT CIRCLE; ANCHOR BOLT DIAMETER; FLANGE BOLT DIAMETER. AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.
- B. ARM INDICATIONS MONTH/DATE OF FABRICATION; ARM GAUGE; ARM DIAMETER, ARM LENGTH; CONNECTING FLANGE BOLT DIAMETER; AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.

THE ORNAMENTAL BASE SHALL BE UNION METAL BASE LANCASTER. THE FOUNDATION SURFACE SHALL BE LEVEL IN ORDER TO ACCEPT THE BASE ASSEMBLY. ALL PROPOSED EXTERIOR CONNECTIONS (PEDESTRIAN SIGNAL HEADS, SCHOOL SPEED LIMIT SIGNS, ETC.) TO NOSTALGIA SIGNAL POLES SHALL BE FIELD DRILLED. BANDING OR STRAPPING ON THE NOSTALGIA SIGNAL POLES SHALL NOT BE PERMITTED.

ITEM 632 - PEDESTAL MISC.: NOSTALGIA PEDESTAL 8'

NOSTALGIA PEDESTALS SHALL BE PACIFIC FAMILY P2000G SERIES (SEE DETAILS ON SHEET 237.) AND MANUFACTURED BY:

UNION METAL CORPORATION
1432 MAPLE AVENUE N.E.
P.O. BOX 9920 CANTON, OH 44711
PHONE: 330-456-7653

THE CONTRACTOR SHALL FURNISH AND INSTALL NOSTALGIA PEDESTALS AS PER PLANS. PEDESTAL SHALL INCLUDE HANDHOLE, CHAIN, AND COVER. ALL HARDWARE SHALL BE INCLUDED WITH THIS ITEM. THE ENTIRE ASSEMBLY SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF AASHTO. A STEEL FABRICATION TENON SHALL BE WELDED TO THE TOP OF THE SHAFT AND SIZED TO ACCEPT PEDESTRIANS SIGNALS AS REQUIRED. THE ORNAMENTAL BASE SHALL BE UNION METAL CORPORATION BASE NO. 74 AND SHALL BE LEVEL IN ORDER TO ACCEPT THE BASE ASSEMBLY AND SHALL BE AT LEAST AS LARGE AS THE BOTTOM DIMENSION OF THE ORNAMENTAL BASE CASTING. ALL PROPOSED EXTERIOR CONNECTIONS (PEDESTRIAN PUSHBUTTONS, ETC.) TO NOSTALGIA PEDESTALS SHALL BE FIELD DRILLED. BANDING OR STRAPPING ON THE NOSTALGIA PEDESTALS SHALL NOT BE PERMITTED.

ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN

THIS PROJECT REQUIRES CONSTRUCTION OF SIGNAL SUPPORT FOUNDATIONS IN LOCATIONS WHICH CONTAIN NUMEROUS EXISTING UNDERGROUND UTILITIES. ORDERS FOR SIGNAL POLES AND MAST ARMS SHALL BE PLACED SYSTEMATICALLY AFTER THEIR RESPECTIVE FOUNDATIONS HAVE BEEN CONSTRUCTED. FOUNDATIONS THAT HAVE BEEN CONSTRUCTED SHALL BE PROTECTED AS PER SECTION 107.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. WITHIN TWO (2) WEEKS OF RECEIVING A SIGNED CONTRACT, THE CONTRACTOR SHALL LAYOUT THE PERIMETER OF EACH FOUNDATION THEN CONTACT OUPS AND ODOT (330-297-0801, EXT 298). A MEETING BETWEEN THE CONTRACTOR, ENGINEER AND A REPRESENTATIVE FROM THE CITY OF CANTON WILL BE HELD ON SITE NO LATER THAN TWO (2) WEEKS AFTER THE OUPS NOTIFICATION. BASED UPON THE PRIORITIES DETERMINED AT THIS MEETING, THE CONTRACTOR WILL CONSTRUCT FOUNDATIONS BEGINNING WITH THE HIGHEST PRIORITY FIRST.

IF A UTILITY OR OTHER CONFLICT EXISTS WHICH REQUIRES THAT A SIGNAL SUPPORT BE CONSTRUCTED AT A LOCATION OTHER THAN WHAT IS INDICATED IN THE PLAN, THE ENGINEER SHALL DETERMINE WHETHER THE SPECIFIED MAST ARM LENGTH IS APPROPRIATE. IF A LONGER ARM IS REQUIRED. WITHIN TEN (10) WORKING DAYS, THE CONTRACTOR WILL BE PROVIDED WITH REVISED POLE AND ARM DATA. THE CONTRACTOR SHALL NOT ORDER THE POLES PRIOR TO RECEIVING THIS DATA. SUPPORT FOUNDATION LOCATIONS SHALL BE ADJUSTED ONLY WHEN APPROVED BY THE ENGINEER. THE CONTRACTOR IS ADVISED TO LOCATE AND CONSTRUCT THE SIGNAL SUPPORT FOUNDATIONS AS SOON AS POSSIBLE IN ORDER TO PROVIDE AMPLE LEAD TIME TO ORDER THE SIGNAL SUPPORTS AND THEIR ASSOCIATED MAST ARMS. ALL FOUNDATIONS SHALL BE HAND EXCAVATED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. NO TIME EXTENSIONS SHALL BE GRANTED FOR DELAYS WHICH ARE CAUSED BY THE CONTRACTOR'S FAILURE TO PLAN FOUNDATION WORK AS SOON AS POSSIBLE IN THE CONTRACTORS' PROGRESS SCHEDULE.

PAYMENT FOR ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN SHALL BE MADE AT THE UNIT CONTRACT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY TO EXCAVATE AND BUILD THE FOUNDATION SYSTEM, COMPLETE IN PLACE AND ACCEPTED.

BECAUSE OF THE RECOGNIZED TIME DELAY BETWEEN THE CONSTRUCTION OF THE FOUNDATIONS AND THE DELIVERY OF THE SIGNAL SUPPORTS AND/OR PEDESTALS FROM THE MANUFACTURER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE NEW CONSTRUCTED FOUNDATIONS BY A DEVICE SUCH AS A WOODEN BOX IN ACCORDANCE WITH ODOT SECTION 107.07. THE TYPE OF PROTECTIVE DEVICE SHALL BE APPROVED BY CITY PRIOR TO ITS APPLICATION IN THE FIELD. TRAFFIC CONES SHALL NOT BE ACCEPTABLE. PROTECTIVE DEVICES CAN BE REUSED IF THEY ARE NO LONGER NEEDED AT A PREVIOUS INTERSECTION AND THEY MEET ODOT SECTION 107.07.

FOUNDATIONS FOR NOSTALGIA SIGNAL SUPPORTS SHALL BE CONSTRUCTED AS PER DETAILS ON SHEET 238.

ITEM 632 - PEDESTAL FOUNDATION, AS PER PLAN

FOUNDATIONS FOR NOSTALGIA PEDESTALS SHALL BE CONSTRUCTED AS PER DETAILS ON SHEET 238.

NOSTALGIA SIGNAL SUPPORT AND PEDESTAL AND DECORATIVE LIGHT POLE PAINTING

NOSTALGIA SIGNAL SUPPORT, ARMS, AND LUMINAIRE BRACKETS SHALL BE POWDER COATED. THE FOLLOWING SHALL APPLY:

- A. **BLASTING:**
ALL THREADS SHALL BE PROTECTED FROM DAMAGE DURING BLASTING PROCESS.
PREPARATION-STEEL, BLAST TO SSPC-SP6.
PREPARATION-ALUMINUM AND GALVANIZED, BLAST TO SSPC-SP7.
- B. **POWDER COATING:**
POWDER FINISH 3-5 MIL BOTH INSIDE AND OUTSIDE OF POLES AND ALL SURFACES OF PARTS WITH TIGER DRYLAC SUPER DURABLE SERIES 38.
- C. **POWDER BAKING:**
BAKE PART PER POWDER MANUFACTURER'S RECOMMENDATIONS. GALVANIZED PARTS SHALL BE PRE-BAKED TO ENSURE ALL GASSES ARE RELEASED FROM THE GALVANIZED SURFACE BEFORE POWDER COATING AFTER WHICH THE TOP COAT SHALL BE APPLIED.
- D. **COLOR:**
THE COLOR OF THE POLES SHALL BE CBD GREEN (COLOR AND FORMULA IS ON FILE AT THE MIDWEST TANK SERVICES CO., INC., CANTON, OH).
- E. **FINAL INSPECTION:**
ALL PRODUCTS SHALL RECEIVE A FINAL INSPECTION BEFORE PACKAGING. A MIL THICKNESS OF 3-5 SHALL BE VERIFIED AND DOCUMENTED.
- F. **WARRANTY:**
MANUFACTURER SHALL PROVIDE A FIVE (5) YEAR MATERIALS PERFORMANCE GUARANTEE FROM PEELING AND/OR 8 DELTA E MAXIMUM COLOR CHANGE WHEN MEASURED IN ACCORDANCE WITH ASTM E 1349, CHALKING <8, AND GLOSS RETENTION >30%.

THE COST FOR NOSTALGIA SIGNAL SUPPORT AND PEDESTAL AND DECORATIVE LIGHT POLE PAINTING SHALL BE INCLUDED IN AND INCIDENTAL TO THE NOSTALGIA SIGNAL SUPPORT AND PEDESTAL BID ITEMS (BID ITEMS 632).

ITEM 816 - VIDEO DETECTION SYSTEM, AS PER PLAN

THIS ITEM OF WORK SHALL MEET STATE OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) SUPPLEMENTAL SPECIFICATION 816, VIDEO DETECTION SYSTEM. IN ADDITION TO THE REQUIREMENTS OF ODOT'S SUPPLEMENTAL SPECIFICATION 907 THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

THE NECESSARY VIDEO DETECTION CAMERAS MUST PROVIDE A COMMUNICATIONS INTERFACE THAT FULLY SUPPORTS AN ETHERNET IEEE 802.3 COMPLIANT 10/100 BASE T AUTO SENSING PORT FOR ADVANCED SYSTEMS COMMUNICATIONS. THE ETHERNET PORT SHALL PROVIDE AN UPSTREAM CONNECTION TO OTHER ETHERNET DEVICES IN THE CABINET. AN INDUSTRY STANDARD RJ-45 TYPE CONNECTOR SHALL BE INCLUDED THAT SUPPORTS A SIMPLE CASTE PATCH CABLE INTERFACE.

ITEM 809 - EMERGENCY VEHICLE PREEMPTION

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION EQUIPMENT IN THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN IN THE PLANS. THE PREEMPTION SHALL CONFORM TO ODOT SUPPLEMENTAL SPECIFICATION 809 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PRIORITY VEHICLE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED PREEMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.

THE COMMUNICATIONS MEDIUM SHALL EMPLOY SOUND DETECTION TECHNIQUES TO DETERMINE AND LOG THE PRESENCE OF THE EMERGENCY VEHICLE. THE SYSTEM SHALL DETECT THE PRESENCE OF THE VEHICLE THROUGH AN EMITTING DEVICE LOCATED ON THE EMERGENCY VEHICLE. THE SYSTEM SHALL ACTIVATE THE PREEMPTION SEQUENCE BY APPLYING A SIGNAL TO ONE OF THE CONTROLLER'S PREEMPT DISCRETE INPUTS. THE SYSTEM SHALL BE COMPLETELY COMPATIBLE WITH THE CONTROLLER.

THE EQUIPMENT SHALL BE SHELF OR RACK MOUNTED AND EASILY REMOVABLE AND REPLACEABLE WITHIN THE CABINET. SUPPLY EQUIPMENT COMPLETELY WIRED IN THE CONTROLLER CABINET AND TESTED. THE SYSTEM SHALL BE CAPABLE OF PREEMPTING AND RECEIVING PRIORITY FOR EACH APPROACH TO THE INTERSECTION. IT SHALL BE POSSIBLE TO DETECT THE EMERGENCY VEHICLE AT LEAST 2000 FEET FROM THE INTERSECTION IN AN 80DB-A NOISE ENVIRONMENT.

ALL PREEMPTION PLANS SHOULD BE PROGRAMMED TO PREVENT THE YELLOW TRAP, UNLESS AS DIRECTED BY THE DISTRICT TRAFFIC ENGINEER. YELLOW TRAP PREVENT WILL FORCE THE TRANSITION THROUGH YELLOW CHANGE AND RED CLEARANCE FOR RESOLUTION OF YELLOW TRAP IF ANY PHASE OPPOSING THE PREEMPTION CLEARANCE PHASE(S) IS ACTIVE AND DISPLAYING A GREEN OR FLASHING YELLOW ARROW INDICATION WHEN THE PREEMPTION PLAN IS ACTIVATED AND THE PREEMPTION CLEARANCE PHASE(S) ARE GREEN.

SUPPLY EACH INTERSECTION SHOWN IN THE PLANS WITH THE FOLLOWING COMPONENTS, EACH BID SEPARATELY:

- 1. PREEMPT RECEIVING UNIT.
- 2. PREEMPT DETECTOR CABLE.
- 3. PREEMPT PHASE SELECTOR ASSEMBLY AND INTERFACE WIRING PANEL.
- 4. CONFIRMATION LIGHT.

THE CONTRACTOR SHALL INVENTORY THE ABOVE EMERGENCY VEHICLES TO DETERMINE COMPATIBILITY OF THE SIRENS WITH THE SYSTEM. EACH VEHICLE THAT IS DETERMINED TO BE NOT COMPATIBLE SHALL BE SUPPLIED WITH NEW SIRENS AT COST INCIDENTAL TO THE SYSTEM.

THE CITY SHALL BE SUPPLIED WITH SOFTWARE REQUIRED TO CALIBRATE, LOG, AND OPERATE THE SYSTEM. TWO OPERATING AND INSTRUCTION MANUALS SHALL BE SUPPLIED WITH THE SOFTWARE.

THE CONTRACTOR SHALL THOROUGHLY TEST THE INSTALLED SYSTEM. AS A MINIMUM, THE CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINETS. THE CONTRACTOR SHALL CHECK THAT THE RANGE SETTING IS PROPER FOR EACH INTERSECTION. THE CONTRACTOR SHALL DETERMINE THAT ALL PHASE SELECTORS ARE SELECTING THE PROPER PHASE AND TIMING ACCURATELY. THE CONTRACTOR SHALL VERIFY THAT ALL VEHICLE EMITTERS ARE BEING PROPERLY DETECTED.

IF THE PROPOSED PREEMPT SYSTEM IS NOT COMPATIBLE WITH THE EXISTING SYSTEM, THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FIFTEEN (15) PERSONS IN THE OPERATION OF THE SYSTEM. IT SHALL BE PROVIDED WITHIN 48 HOURS OF THE INSTALLATION OF THE SYSTEM. IT SHALL CONSIST OF HANDS-ON INSTRUCTION FOR A MINIMUM OF SIXTEEN (16) HOURS. THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FOUR (4) PERSONS IN THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL CONSIST OF A MINIMUM OF EIGHT (8) HOURS OF INSTRUCTION. TRAINING SHALL BE SUPPLIED WITHIN SEVEN (7) DAYS OF THE INSTALLATION OF THE ALL TRAINING SHALL BE HELD IN A CITY SUPPLIED LOCATION. TRAINING SHALL BE CONDUCTED BY SOMEONE WHO HAS PERFORMED THIS WITHIN THE LAST YEAR AND DOES IT ON A REGULAR BASIS. THE COST OF TRAINING, INCLUDING COURSE MATERIAL, TRAVEL SUBSISTENCE AND RELATED COSTS, SHALL BE ENTIRELY BORNE BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE PREEMPTION EQUIPMENT.

PAYMENT FOR ITEM 809 PREEMPTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PREEMPTION IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS, EXCEPT FOR THOSE ITEMS BID SEPARATELY.

ITEM 809 PREEMPTION RECEIVING UNIT

RECEIVING UNITS SHALL CONSIST OF A LIGHTWEIGHT, WEATHERPROOF AND DIRECTIONAL ASSEMBLY. EACH RECEIVING UNIT SHALL BE 360 DEGREE ADJUSTABLE. THE RECEIVING UNIT SHALL BE CAPABLE OF SENDING THE PROPER ELECTRICAL SIGNAL TO THE TRAFFIC SIGNAL CONTROLLER VIA THE PREEMPTION DETECTOR CABLE. RECEIVING UNITS SHALL BE SUPPLIED WITH MAST ARM MOUNTING HARDWARE AS SHOWN IN THE PLANS.

FURNISH PREEMPTION RECEIVING UNITS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

PAYMENT FOR ITEM 809 PREEMPTION RECEIVING UNIT SHALL BE AT THE CONTRACT UNIT FOR EACH RECEIVING UNIT IN PLACE, COMPLETELY INSTALLED AT THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 809 PREEMPTION DETECTOR CABLE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION DETECTOR HOME RUN CABLE IN THE LOCATIONS SHOWN IN THE PLANS. IT SHALL CONNECT THE PREEMPT RECEIVING UNITS TO THE PHASE SELECTORS IN THE LOCAL CONTROLLER CABINET.

PREEMPTION DETECTOR CABLE SHALL CONFORM TO ODOT SPECIFICATION 632. ONLY ONE EXTERNAL SPLICE SHALL BE PERMITTED BETWEEN PREEMPTION RECEIVER UNIT AND CONTROLLER CABINET. THIS SPLICE SHALL MEET THE REQUIREMENTS OF C&MS 632.23 USING A WATERPROOF SPLICE KIT. THE CABLE SHALL BE APPROVED FOR BOTH OVERHEAD AND UNDERGROUND USE. THE JACKET SHALL WITHSTAND EXPOSURE TO SUNLIGHT AND ATMOSPHERIC TEMPERATURES AND STRESSES REASONABLY EXPECTED IN NORMAL INSTALLATIONS.

PAYMENT FOR ITEM 809 PREEMPTION DETECTOR CABLE SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT FOR THE CABLE FURNISHED, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

ITEM 809 PREEMPT PHASE SELECTOR

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPT PHASE SELECTORS INCLUDING WIRING INTERFACE PANELS IN THE LOCAL CONTROLLER CABINET AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT PHASE SELECTORS COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS.

THIS ITEM SHALL INCLUDE THE EXTRA CABINET SPACE NECESSARY TO BE LOCATED IN THE LOCAL CONTROLLER CABINETS WHERE INDICATED IN THE PLANS. THE PHASE SELECTORS SHALL CONSIST OF A MODULE OR MODULES THAT WILL PROVIDE THE NECESSARY INPUTS TO THE CONTROLLER. PHASE SELECTORS SHALL BE SUPPLIED WITH SUFFICIENT QUANTITIES OF CHANNELS TO PROVIDE PREEMPTION FOR ALL APPROACHES TO THE INTERSECTION SEPARATELY. POWER SHALL BE OBTAINED FROM THE PHASE SELECTOR OR PHASE SELECTOR POWER SUPPLY AND NOT FROM THE LOCAL CONTROLLER TIMER.

THE PHASE SELECTORS SHALL HAVE FRONT PANEL INDICATORS FOR ACTIVE PREEMPT CHANNEL STATUS. IT SHALL HAVE TEST SWITCHES TO ACTIVATE ALL PREEMPT CHANNELS.

FURNISH PREEMPT PHASE SELECTORS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

PAYMENT FOR ITEM 809 PREEMPT PHASE SELECTOR SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PHASE SELECTOR IN PLACE, COMPLETELY INSTALLED IN THE LOCAL CONTROLLER SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 633 - CONTROLLER ITEM, MISC.: CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1

THE CONTROLLER UNIT PROVIDED IN THIS PROJECT SHALL BE THE MOST CURRENT MODEL OF AN ECONOLITE COBALT MANUFACTURED BY:

ECONOLITE CONTROL PRODUCTS
1250 N. TUSTIN AVENUE
ANAHEIM, CA 92807
PHONE: 800-225-6480

MANUFACTURER GUARANTEES OR WARRANTIES ON ALL INSTALLED TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL BE TRANSFERRED TO THE CITY OF CANTON TRAFFIC SIGNAL DEPARTMENT FOR ACCEPTANCE OF THE EQUIPMENT.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TESTING, CERTIFICATIONS, AND OTHER INCIDENTALS NECESSARY TO FURNISH THE CONTROLLER COMPLETE, INCLUDING ALL CONNECTIONS MADE AND WIRING COMPLETE, TESTED, AND ACCEPTED.

THE CONTROLLER ASSEMBLY AND CABINET SHALL INCLUDE A NEMA TS2 TYPE 2 CONTROLLER AND A NEMA TS2 TYPE 16 MALFUNCTION MANAGEMENT UNIT (MMU) COMPLETE IN A NEMA TS1 CABINET ASSEMBLY. IN ADDITION, THE CONTROLLER ASSEMBLY AND CABINET SHALL CONFORM TO ODOT SPECIFICATION 633. THE CONTROLLER SHALL BE CAPABLE OF AN ADDITIONAL 12 STANDARD OVERLAPS BY ASSIGNING EACH PHASE OUTPUT TO AN OVERLAP. ALL EQUIPMENT SHALL BE IP ADDRESSABLE IF AVAILABLE.

THE CONTROLLER SHALL INCLUDE TIME-OF-DAY AND COORDINATION CAPABILITIES. IN ADDITION, THE CONTROLLER SHALL INCLUDE PREEMPTION CAPABILITIES INCLUDING SIX (6) RAILROAD, FIRE, AND EMERGENCY VEHICLE HIGH-PRIORITY PREEMPTORS AND FOUR (4) LOW-PRIORITY BUS-PREEMPTORS. CONTROLLER SHALL BE PROGRAMMABLE TO ALLOW FOR FLASHING "DON'T WALK" THROUGH THE YELLOW SIGNAL PHASE. THE CABINET SHALL BE WIRED FOR MONITORING EACH APPROACH SEPARATELY. ALL VEHICLE SIGNAL CIRCUITS SHALL BE ISOLATED (SPLITTING THE HEADS FOR PREEMPTION PURPOSES).

THE MMU SHALL PASS ALL TESTS AS PERFORMED BY AN AUTOMATIC MONITOR TESTER. TEST RESULTS SHALL BE PRINTED AND SUPPLIED WITH EACH CABINET. THE POLICE PANEL SHALL HAVE SWITCH ACCESS FOR SIGNAL ON/OFF, FLASH CONTROL, AUTOMATIC/MANUAL TRANSFER, AND MANUAL PUSHBUTTON WITH TEN (10) FEET COILED HAND CORD.

TECHNICIAN SWITCH PANEL SHALL BE MOUNTED ON THE INSIDE OF THE MAIN CABINET DOOR AND SHALL HAVE SWITCH ACCESS FOR STOP TIME ON/OFF, FLASH CONTROL, TIMER POWER ON/OFF, DETECTOR TEST, MOMENTARY PUSHBUTTON.

THE CABINET SHALL BE ALUMINUM, WITH A NATURAL SATIN FINISH OUTSIDE WITH A PAINTED SEMI-GLOSS WHITE ENAMEL FINISH INSIDE. THE CABINETS SHALL COMPLY WITH THE REQUIREMENTS OF 733.03 (SECTION A).

WIRE CONNECTIONS TO THE BACKPANEL SHALL BE MADE WITH CRIMP TERMINALS AND THREADED FASTENERS. SOLDER CONNECTIONS MAY BE USED ON THE BACKSIDE OF A PANEL THAT UTILIZES FEED-THRU STYLE TERMINAL BLOCKS. PRINTED CIRCUIT BOARDS SHALL NOT BE USED ON ANY PART OF THE TERMINALS AND FACILITIES PROVIDED WITHIN THE CABINET. ALL WIRES FASTENED TO THE LOAD SWITCH, FLASHER AND FLASH TRANSFER RELAY SOCKETS SHALL BE SOLDERED IN PLACE. A GOOD MECHANICAL CONNECTION MUST BE MADE PRIOR TO SOLDERING. ALL WIRING OF HARNESSSES AND INTERPANEL WIRING, INCLUDING WIRING TO THE POLICE PANEL SHALL BE PROTECTED WITH A NYLON MESH OR "SNAKE SKIN". ANY EXPOSED WIRES, OR THE USE OF CABLE TIES TO HOLD THE WIRE BUNDLES TOGETHER SHALL NOT BE ALLOWED. FOR EASE OF MAINTENANCE, ALL HARNESSSES SHALL BE OF SUFFICIENT LENGTH TO PLACE THE EQUIPMENT ON TOP OF THE CABINET AND BE OPERATIONAL.

A COLOR-CODED WIRING SYSTEM SHALL BE USED THROUGHOUT THE WIRING OF THE CABINET. ALL SYSTEMS FUNCTIONS OF THE CONTROLLER SHALL BE TERMINATED ON A SINGLE PANEL. WIRING COLOR-CODE SHALL BE AS FOLLOWS:

- A. BLUE CONTROLLER UNIT
- B. VIOLET MMU
- C. RED RED LOAD SWITCH OUTPUT
- D. YELLOW YELLOW LOAD SWITCH OUTPUT
- E. BROWN GREEN LOAD SWITCH OUTPUT
- F. BLACK AC LINE POWER
- G. WHITE AC NEUTRAL
- H. GREEN EARTH GROUND
- I. GRAY LOGIC GROUND
- J. ORANGE FLASH PROGRAMMING

ITEM 633 - CONTROLLER ITEM, MISC.: CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1 (continued)

TWO (2) SETS OF CABINET WIRING DIAGRAMS, SERVICE MANUALS, PROGRAMMING AND MAINTENANCE INSTRUCTIONS SHALL BE FURNISHED FOR EACH CABINET AND EQUIPMENT ITEM.

THE CABINET WIRING DIAGRAMS SHALL BE SUPPLIED IN A CLEAR PLASTIC POUCH FASTENED TO THE INSIDE OF THE CONTROLLER CABINET.

ALTERNATE BID ITEM

ITEM 816 - VIDEO DETECTION SYSTEM, AS PER PLAN

THE VIDEO DETECTION SYSTEM PROVIDED IN THIS PROJECT SHALL BE GRIDSMART BELL CAMERA MANUFACTURED BY:

GRIDSMART TECHNOLOGIES, INC.
10545 HARDIN VALLEY ROAD,
KNOXVILLE, TN 37932
PHONE: 866-652-5347

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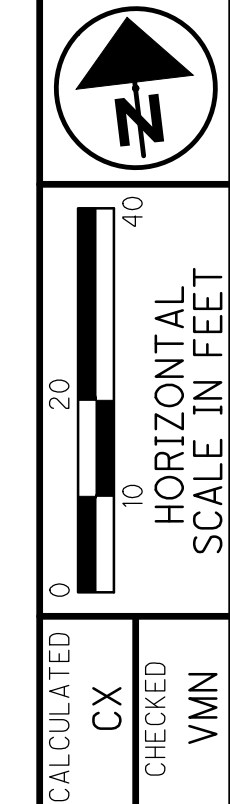
TRAFFIC SIGNAL GENERAL NOTES
11TH STREET SE

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

224
302

PULL BOX CHART

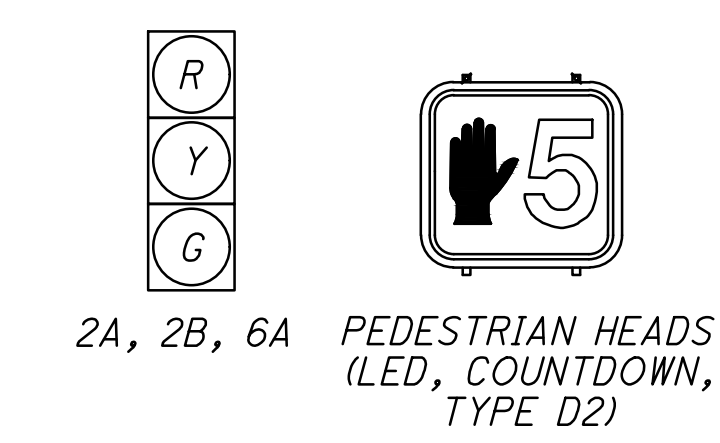
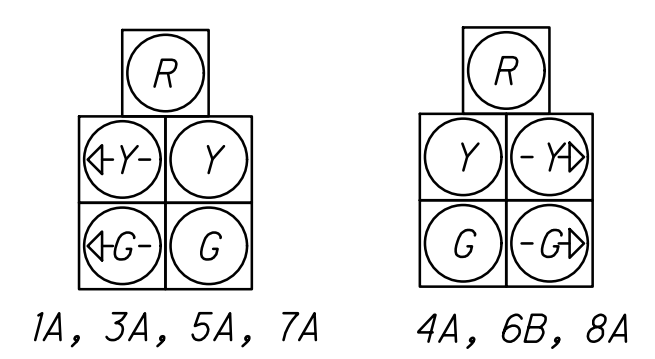
PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	122+01	LT	45'	17X30
PB-2	123+30	LT	58'	17X30
PB-3	122+08	RT	46'	17X30
PB-4	122+25	RT	55'	36X36
PB-5	123+25	RT	37'	17X30
PB-6	121+99	LT	48'	17X30
PB-7	122+09	RT	50'	17X30



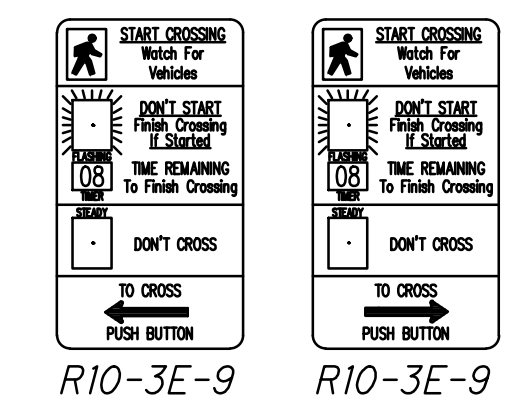
SIGNAL PLAN 11TH STREET SE AND CHERRY AVENUE SE

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

225/302

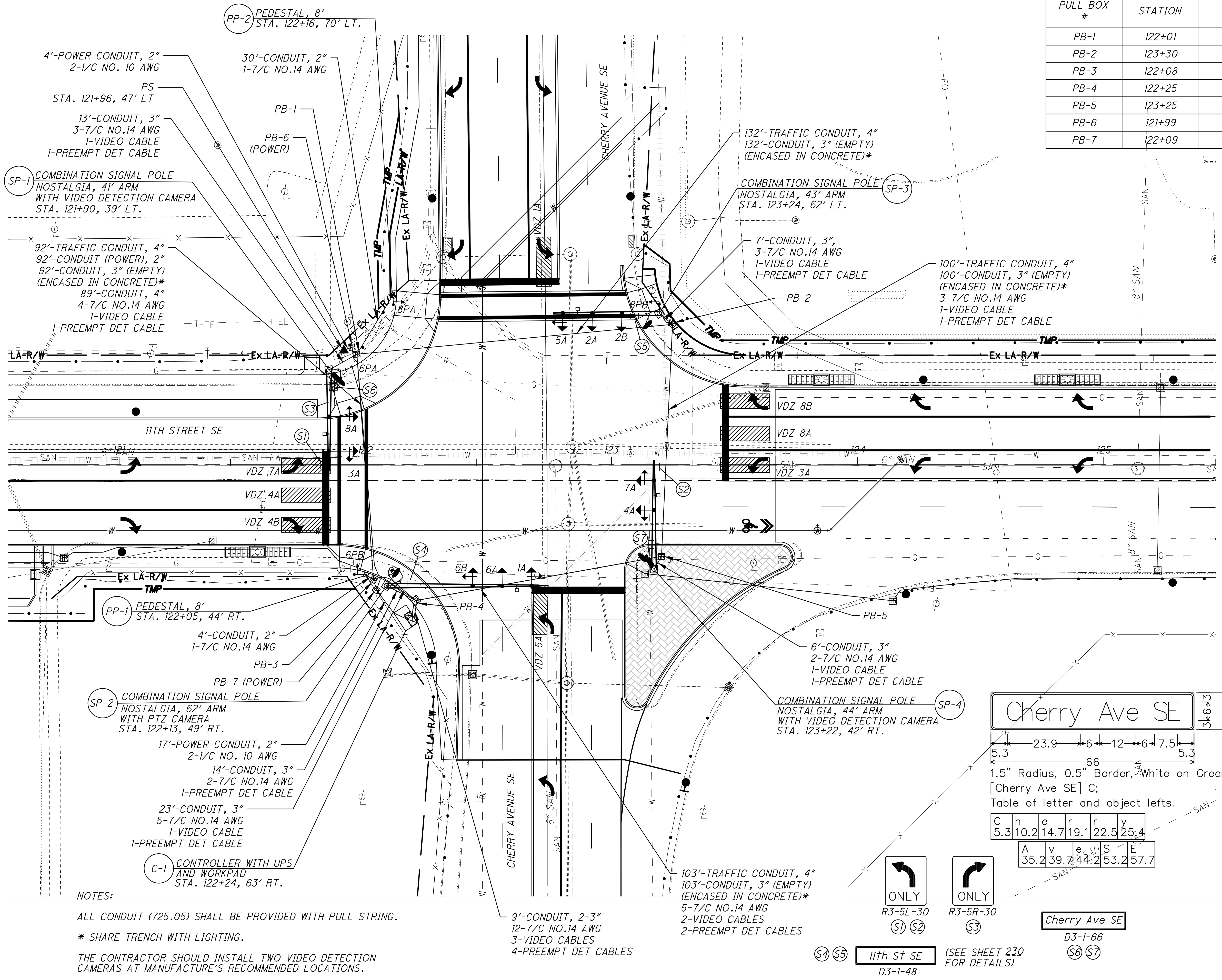


2A, 2B, 6A PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)



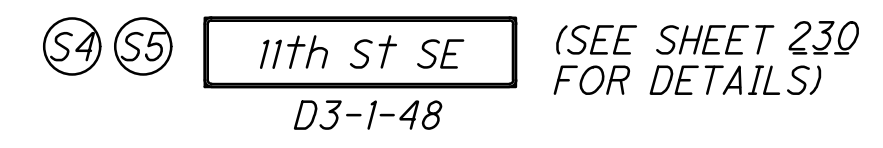
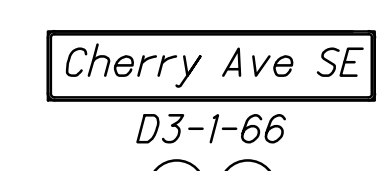
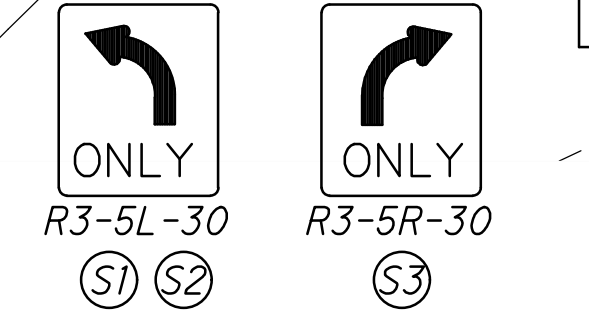
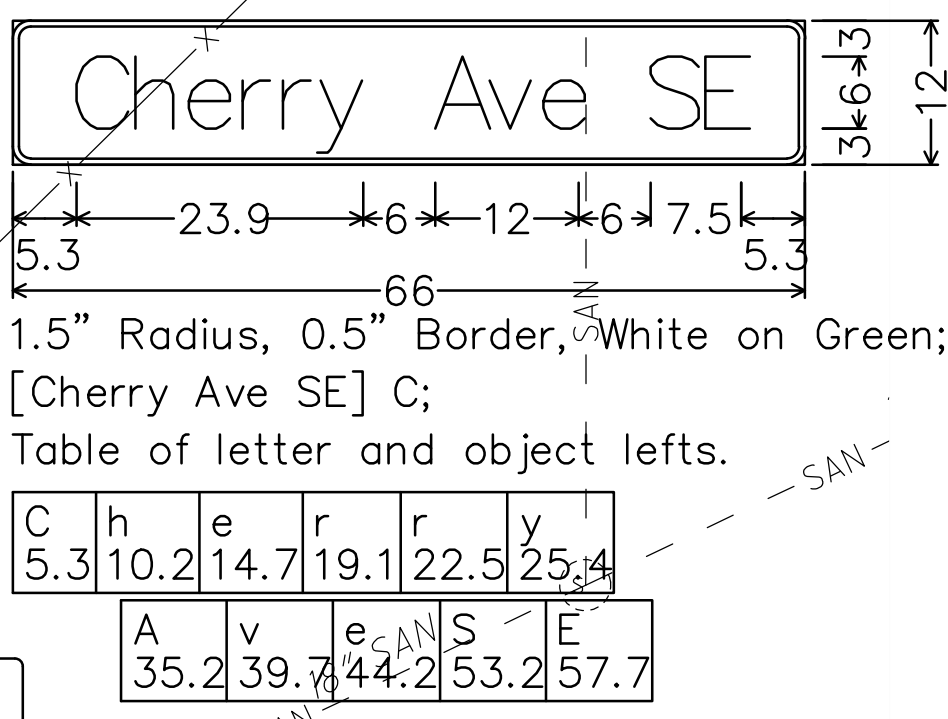
LEGEND

- PROP
- TRAFFIC SIGNAL, 3 UNIT HEAD, 12"
- TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"
- SIGNAL SUPPORT POLE
- PEDESTRIAN SIGNAL
- PEDESTRIAN PUSH BUTTON
- PEDESTAL SUPPORT
- CONTROLLER CABINET AND WORK PAD
- TRAFFIC PULL BOX, 725.06
- VIDEO DETECTION ZONE
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- PREEMPTION RECEIVING UNIT
- LUMINAIRE BRACKET ARM
- POWER SERVICE/ CONTROL CENTER



NOTES:

- ALL CONDUIT (725.05) SHALL BE PROVIDED WITH PULL STRING.
- * SHARE TRENCH WITH LIGHTING.
- THE CONTRACTOR SHOULD INSTALL TWO VIDEO DETECTION CAMERAS AT MANUFACTURE'S RECOMMENDED LOCATIONS.



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SIGNAL TIMING CHART

INTERSECTION: 11TH STREET SE AND CHERRY AVENUE SE											
MAINTAINING AGENCY: CITY OF CANTON											
START UP		DUAL ENTRY: YES		PHASES: 2 & 6 AND 4 & 8							
START IN: 2+6		REST IN RED: RING 1 - RING 2 -		OVERLAP		A		B		C	D
TIME FOR FLASH, ALL RED: 9, 6		PHASES		5		7		3		-	
FIRST PHASE(S): 2+6		INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
COLOR DISPLAYED: GREEN		INTERSECTION MOVEMENT (PHASE)		1		2		3		4	
		DIRECTION		SBLT		NB		WBLT		EB	
		MINIMUM GREEN (INITIAL) (SEC.)		7		20		7		10	
		ADDED INITIAL *(SEC./ACTUATION)		-		-		-		-	
		MAXIMUM INITIAL (SEC.)		-		-		-		-	
		PASSAGE TIME (PRESET GAP) (SEC.)		3		3		3		3	
		TIME BEFORE REDUCTION *(SEC.)		-		-		-		-	
		MINIMUM GAP *(SEC.)		-		-		-		-	
		TIME TO REDUCE *(SEC.)		-		-		-		-	
		MAXIMUM GREEN I (SEC.)		15		30		15		45	
		MAXIMUM GREEN II (SEC.)		-		-		-		-	
		YELLOW CHANGE (SEC.)		3.4		4.4		3.2		4.1	
		ALL RED CLEARANCE (SEC.)		2.3		1.0		2.0		1.1	
		DELAYED GREEN (LPI)* (SEC.)		-		-		-		-	
		WALK (SEC.)		-		13		-		14	
		PEDESTRIAN CLEARANCE (SEC.)		-		13		-		19	
RECALL		MAXIMUM (ON/OFF)		OFF		OFF		OFF		OFF	
		MINIMUM (ON/OFF)		OFF		ON		OFF		OFF	
		PEDESTRIAN (ON/OFF)		OFF		OFF		OFF		OFF	
MEMORY		(ON/OFF)		OFF		OFF		OFF		OFF	

*VOLUME DENSITY CONTROLS

NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- FOR PROTECTED/PERMISSIVE PHASES, IMPLEMENT CALL OMITTS TO AVOID YELLOW BALL TRAP.
- ENABLE $\phi 1, 3$ & $\phi 5, 7$ DETECTOR SWITCHING TO ALLOW $\phi 1$ & $\phi 5$ TO EXTEND $\phi 2$ & $\phi 6$ OR $\phi 3$ & $\phi 7$ TO EXTEND $\phi 4$ & $\phi 8$, RESPECTIVELY, WHEN ALLOCATED GREEN TIME FOR LEFT TURN PHASES ARE EXHAUSTED.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS AND EXTENSIONS SHALL BE PLACED IN THE CONTROLLER.

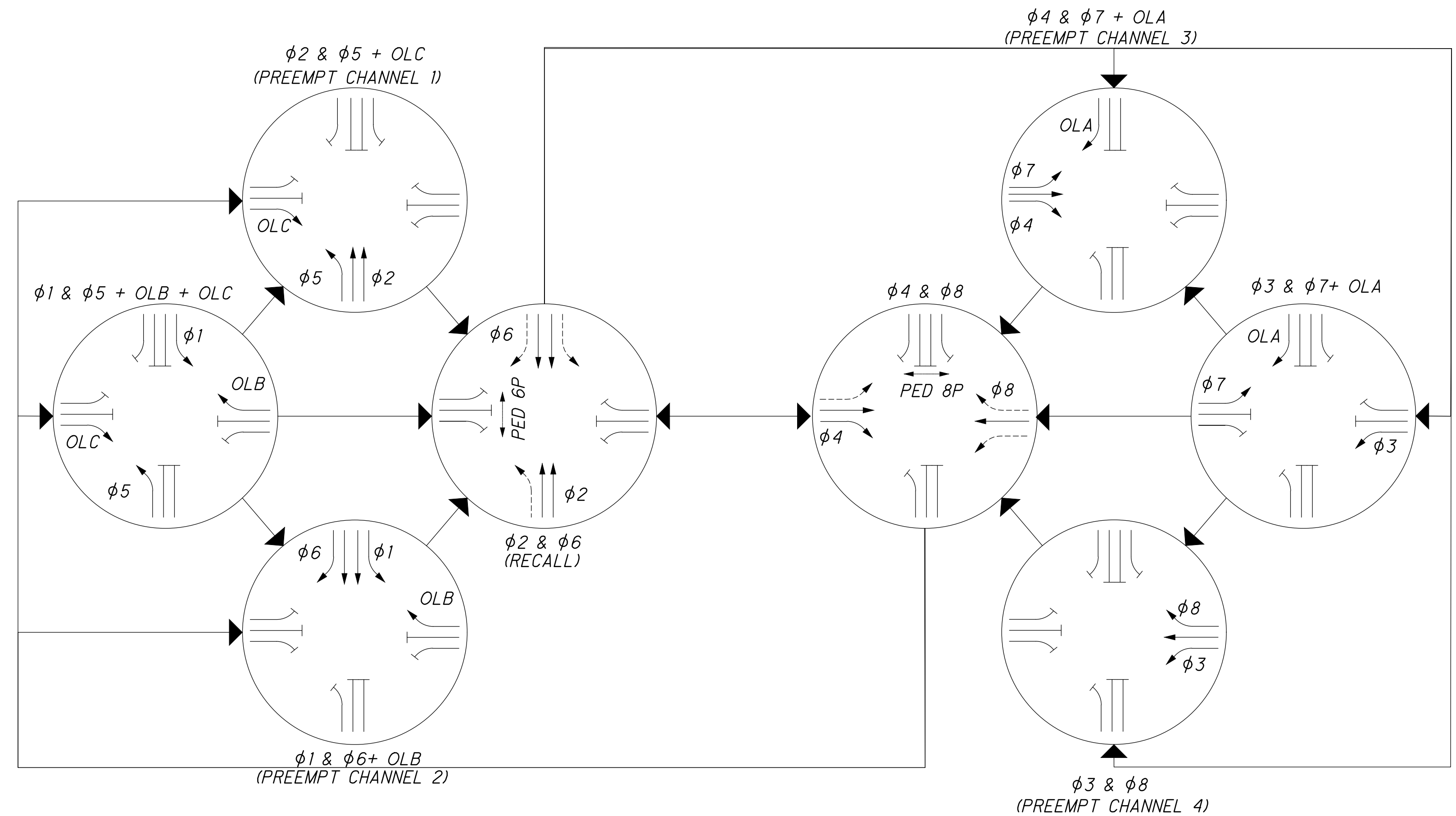
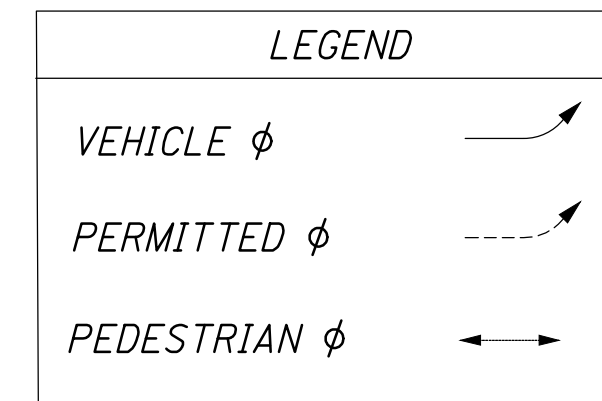
PREEMPT CHANNELS

CHANNEL 1 = $\phi 2$ (NORTHBOUND ONLY) CHANNEL 3 = $\phi 4$ (EASTBOUND ONLY)
 CHANNEL 2 = $\phi 6$ (SOUTHBOUND ONLY) CHANNEL 4 = $\phi 8$ (WESTBOUND ONLY)

PREEMPT NOTES:

1. IF PHASE ACTIVE CONFLICTS WITH PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME ITS YELLOW AND ALL RED CLEARANCES.
2. IF ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND RETURN PHASE SHALL BE $\phi 2+6$.
4. IF PREEMPT PHASES = RETURN PHASES $\phi 2+6$ THEN YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

PHASING DIAGRAM



TRAFFIC SIGNAL DETECTION CHART

DETECTION ZONE	MOVEMENT	WIDTH (FT)	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
VDZ 7A	EBLT	6	0	3	-	STOP-LINE	20
VDZ 4A	EB	6	0	3	-	STOP-LINE	20
VDZ 4B	EB	6	0	3	-	STOP-LINE	20
VDZ 3A	WBLT	6	0	3	-	STOP-LINE	20
VDZ 8A	WB	6	0	3	-	STOP-LINE	20
VDZ 8B	WB	6	0	3	-	STOP-LINE	20
VDZ 5A	NBLT	6	0	3	-	STOP-LINE	20
VDZ 1A	SBLT	6	0	3	-	STOP-LINE	20

NOTE: ALL DETECTORS ZONES SHALL BE SET TO PRESENCE. ALL DELAYS ARE SET IN CONTROLLER.



HORIZONTAL SCALE IN FEET

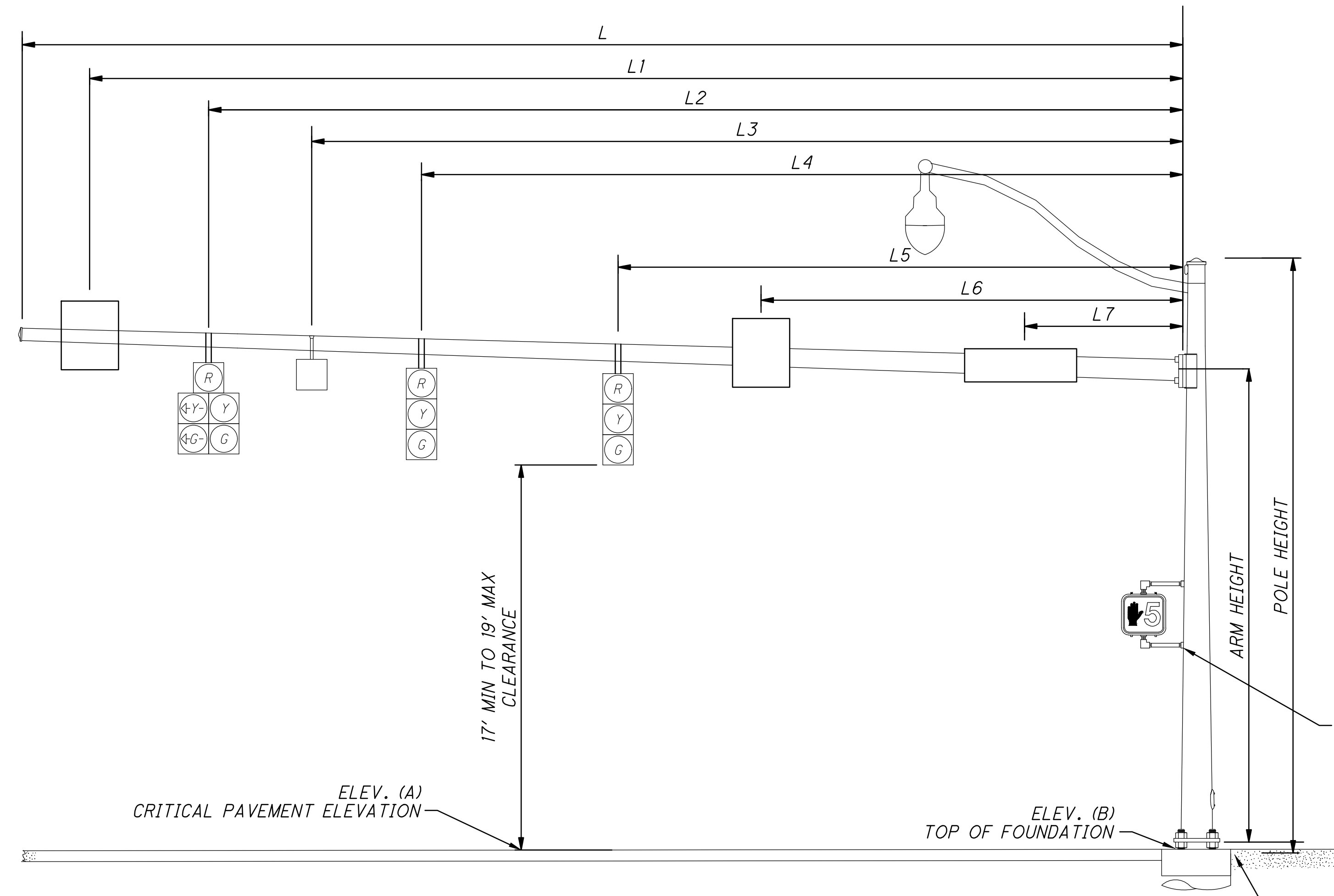
CALCULATED CX CHECKED VMN

SIGNAL PLAN 11TH STREET SE AND CHERRY AVENUE SE

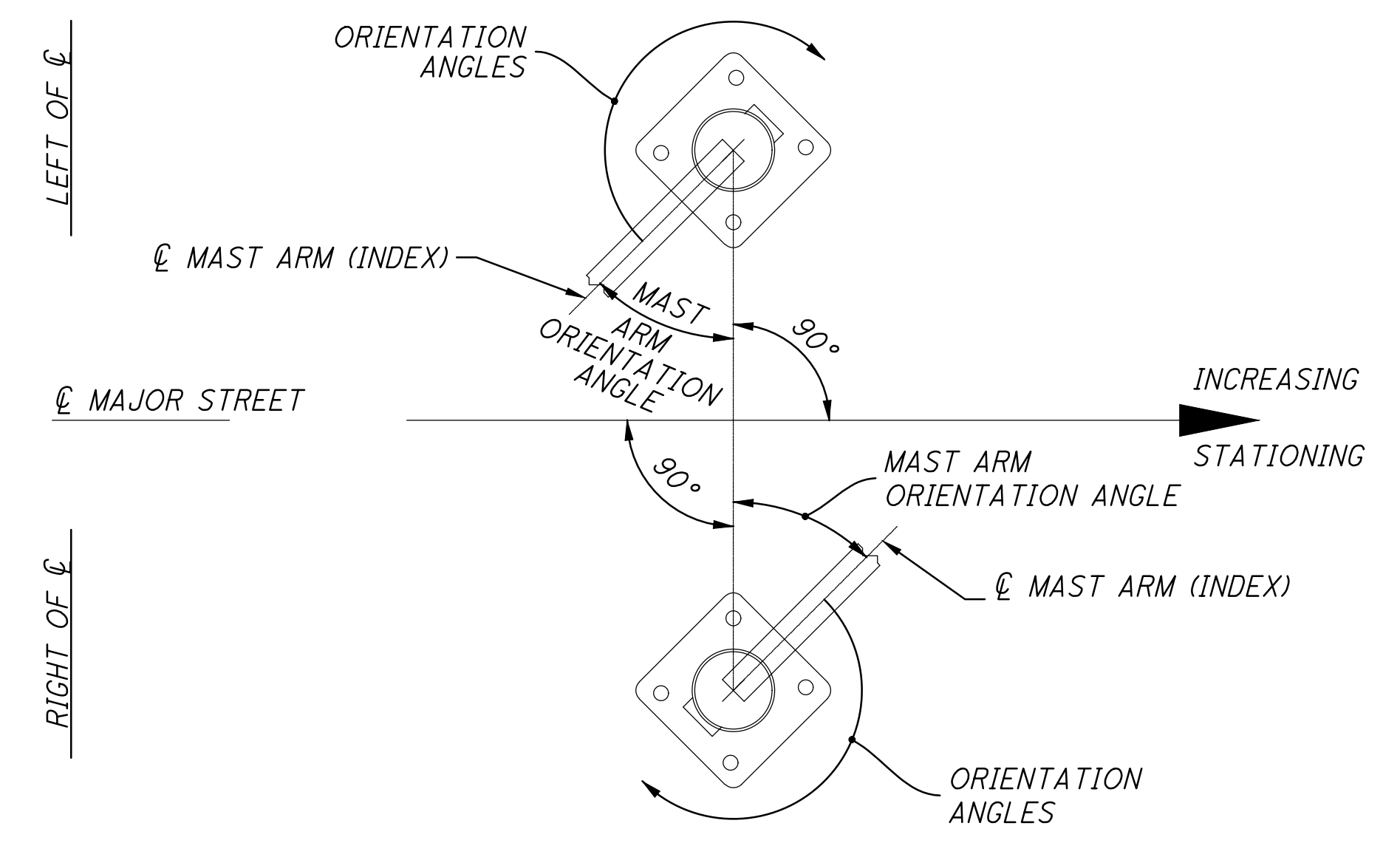
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

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SIGNAL SUPPORT ELEVATION
(TYPICAL)



POLE ORIENTATION

MAST ARM TABLE
(NOSTALGIA SIGNAL SUPPORT)

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS												ORIENTATION ANGLES FROM MAST ARM									
			A (PAVEMENT ELEVATION)	B (TOP OF FOUNDATION)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	L4	L5	L6	L7	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	POWER SERVICE	SIGNAL CABINET	LUMINAIRE BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP	
																										FT
SP-1	121+90	39' LT	1028.52	1028.85	TC-81.22	12	26	21.75	41	38.5	33	27	19	-	13	7	0	-	270	0	-	-	45	180	-	
SP-2	122+13	49' RT	1029.30	1029.28	TC-81.22	14	30	21.75	62	-	59	53	47	35	-	10	90	-	90	90	-	-	45	180	-	
SP-3	123+24	62' LT	1029.09	1029.47	TC-81.22	12	26	21.75	43	-	40	34	28	16	-	10	90	-	-	-	-	-	45	180	-	
SP-4	123+22	42' RT	1029.29	1029.50	TC-81.22	12	26	21.75	44	41.5	36	30	24	-	-	10	0	-	-	-	-	-	45	180	-	

SEE SHEET 235 FOR POLE HEIGHT AND ARM HEIGHT DETAILS)

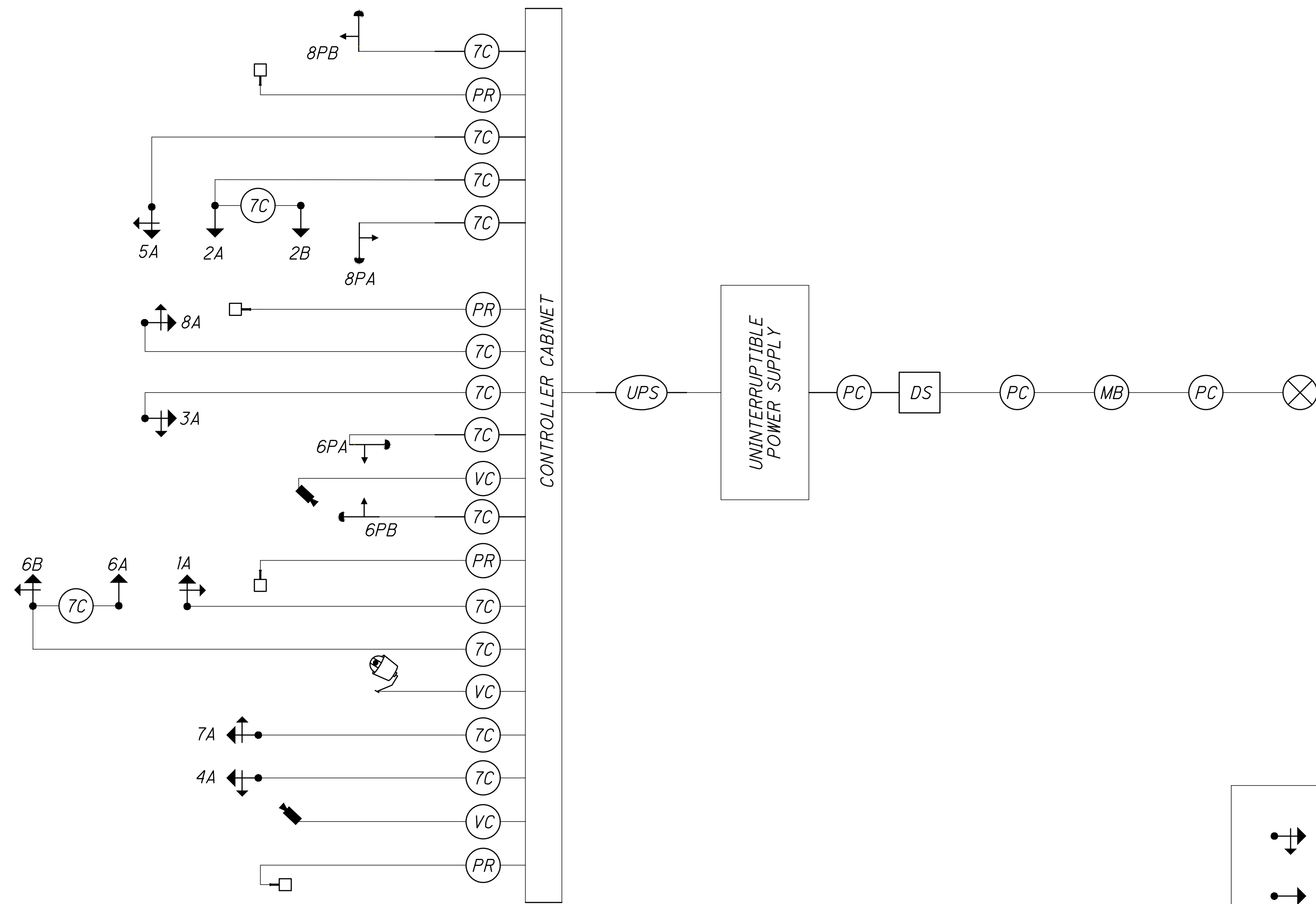
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SIGNAL PLAN
11TH STREET SE AND CHERRY AVENUE SE

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
4A (EB TH/RT)	R	φ 4R	R	6A (SB TH)	R	φ 6R	Y
	Y	φ 4Y					
	G	φ 4G					
	→Y←	φ OLC Y	OUT				
	→G←	φ OLC G					
7A (EB LT/TH)	R	φ 4R	R	6B (SB TH/RT)	R	φ 6R	Y
	Y	φ 4Y					
	G	φ 4G					
	→Y←	φ 7Y	OUT		→Y←	φ OLA Y	OUT
	→G←	φ 7G			→G←	φ OLA G	
8A (WB TH/RT)	R	φ 8R	R	1A (SB LT/TH)	R	φ 6R	Y
	Y	φ 8Y					
	G	φ 8G					
	→Y←	φ OLB Y	OUT		→Y←	φ 1Y	OUT
	→G←	φ OLB G			→G←	φ 1G	
3A (WB LT/TH)	R	φ 8R	R	OVERLAPS			
	Y	φ 8Y		OLA A	→Y←	φ 7Y	OUT
	G	φ 8G		OLA B	→G←	φ 7G	OUT
	→Y←	φ 3Y		OUT	→Y←	φ 1Y	OUT
	→G←	φ 3G			→G←	φ 1G	OUT
2A,2B (NB TH)	R	φ 2R	Y	OLA C	→Y←	φ 5Y	OUT
	Y	φ 2Y		→G←	φ 5G	OUT	
	G	φ 2G		PEDESTRIAN MOVEMENTS			
5A (NB LT/TH)	R	φ 2R	Y	PED 8P (NORTH)	W	φ 8W	OUT
	Y	φ 2Y			FDW	φ 8FDW	
	G	φ 2G			DW	φ 8DW	
	→Y←	φ 5Y	OUT	PED 6P (WEST)	W	φ 6W	
	→G←	φ 5G			FDW	φ 6FDW	
					DW	φ 6DW	

LEGEND

	TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
	TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD 12"		POWER SOURCE
	PEDESTRIAN SIGNAL		POWER CABLE, 2 CONDUCTOR, NO. 10 AWG
	PEDESTRIAN PUSH BUTTON		METER BASE
	VIDEO DETECTION CAMERA		DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
	PTZ OR GRIDSMART CAMERA		UNINTERRUPTIBLE POWER SUPPLY CABLE
	PREEMPTION RECEIVING UNIT		PREEMPTION CABLE

CALCULATED
CX
CHECKED
VMN

SIGNAL PLAN
11TH STREET SE AND CHERRY AVENUE SE

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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SHEET NO.	REFERENCE NO.	STATION		SIDE	625	625	625	625	625	625	625	625	625	630	630	632	632	632	632	632	632	632	632	632	632	632	633	633	633	633	809	809	809	809	809	816	
		FROM	TO		FT	FT	FT	FT	FT	EACH	EACH	EACH	FT	EACH	EACH	SF	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH
225	C1	122+24		RT																																	
	PB-4	122+24	122+25	RT			18		9		1		9																								
	SP-2	122+25	122+13	RT			14		14			1	14										1														
	PB-3	122+25	122+08	RT			23		23	1		23													1												
	PP-1	122+08	122+05	RT	4				4			1	4											1													
	PB-1	122+08	122+01	LT				92	92		1		92																								
	SP-1	122+01	121+90	LT			13		13			1	13											1													
	PP-2	122+01	122+16	LT	30				30			1	30																								
	PB-2	122+01	123+30	LT				132	132		1		132																								
	SP-3	123+30	123+24	LT			7		7			1	7																								
	PB-5	123+30	123+25	LT				100	100		1		100																								
	SP-4	123+25	123+22	LT			6		6			1	6																								
	PB-4	123+25	122+25	LT				103	103				103																								
	PB-7 (PWR)	122+24	122+09	RT	17				17		1		17																								
	PB-6 (PWR)	122+09	121+99	LT		92					1																										
	PS (PWR)	121+99	121+96	LT	4				4				4																								
	C1	VEH SIG 1A														1																					
	C1	VEH SIG 6A & 6B															1																				
	C1	VEH SIG 3A																																			
	C1	VEH SIG 8A																																			
	C1	VEH SIG 5A																																			
	C1	VEH SIG 2A & 2B															2																				
	C1	VEH SIG 7A																																			
	C1	VEH SIG 4A																																			
	C1	PED SIG SP1																																			
	C1	PED SIG PP1																																			
	C1	PED SIG SP3																																			
	C1	PED SIG PP2																																			
	C1	PREEMPT SP2																																			
	C1	PREEMPT SP1																																		1	117
	C1	PREEMPT SP3																																	1	215	
	C1	PREEMPT SP4																																1	304		
	C1	PREEMPT SP4																																1	194		
	S1 (R3-5L-30)														1																						
	S2 (R3-5L-30)														1																						
	S3 (R3-5R-30)														1																						
	S4 (D3-1-48)														1																						
	S5 (D3-1-48)														1																						
	S6 (D3-1-66)														1																						
	S7 (D3-1-66)														1																						
TOTALS CARRIED TO GENERAL SUMMARY					55	92	81	427	427	554	6	1	6	554	1	7	41.5	3	7	4	10	4	4	2387	4	2	296	1	3	1	2	1	1	1	1	1	1

CALCULATED
CX
CHECKED
VMN

TRAFFIC SIGNAL SUBSUMMARY 11TH STREET SE AND CHERRY AVENUE SE

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

229
302

NOTES:

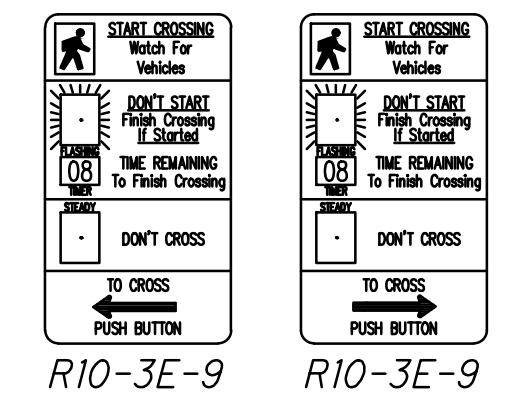
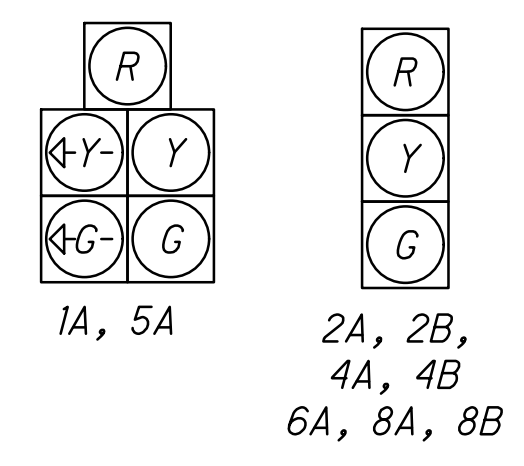
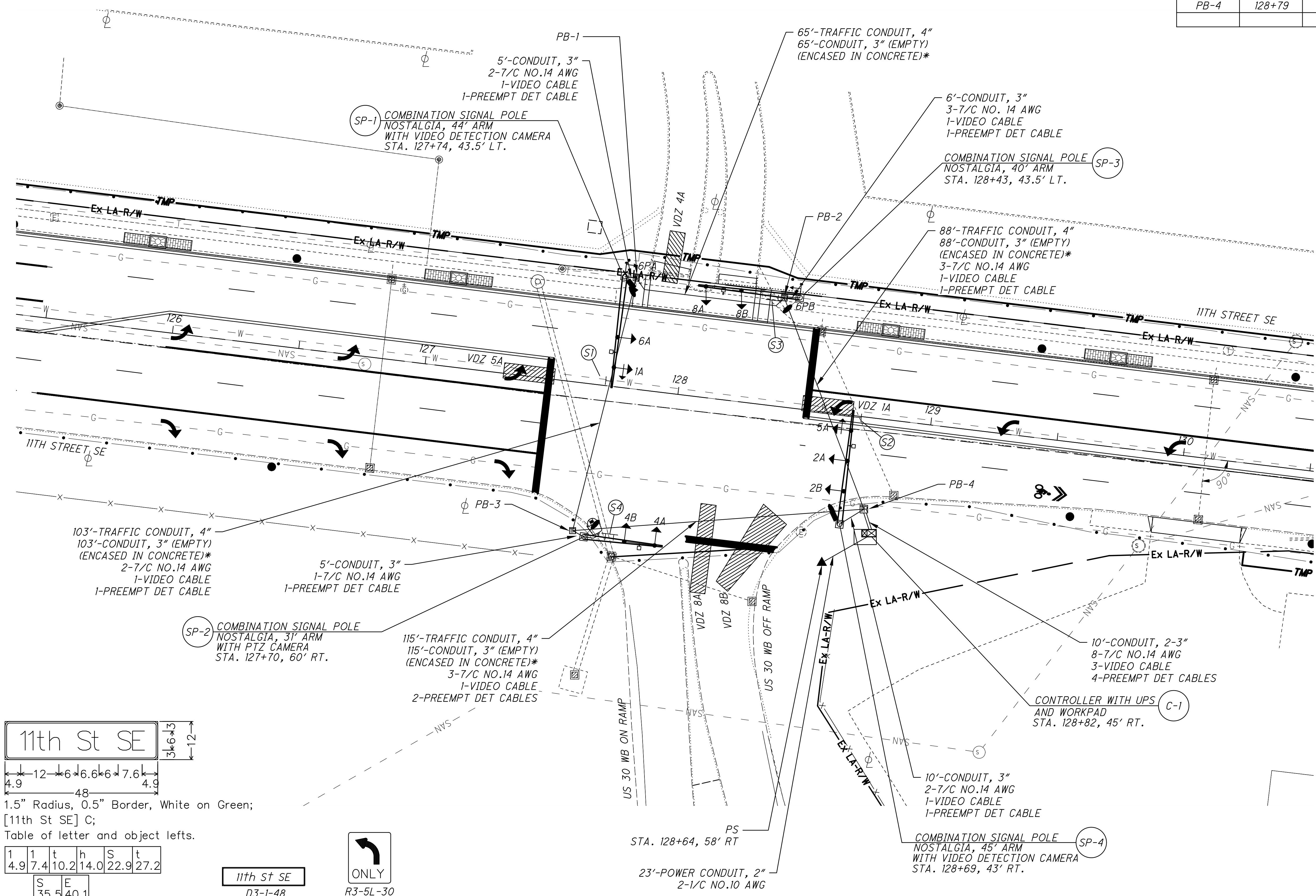
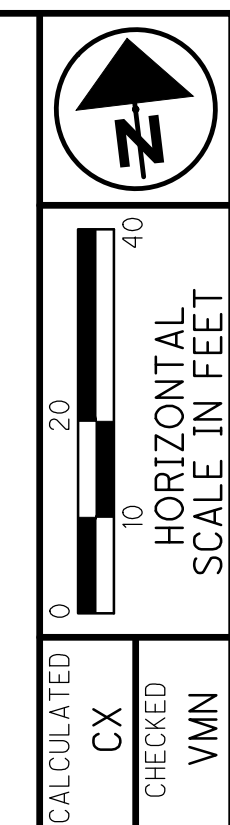
ALL CONDUIT (725.05) SHALL BE PROVIDED WITH PULL STRING.

* SHARE TRENCH WITH LIGHTING.

THE CONTRACTOR SHOULD INSTALL TWO VIDEO DETECTION CAMERAS AT MANUFACTURE'S RECOMMENDED LOCATIONS.

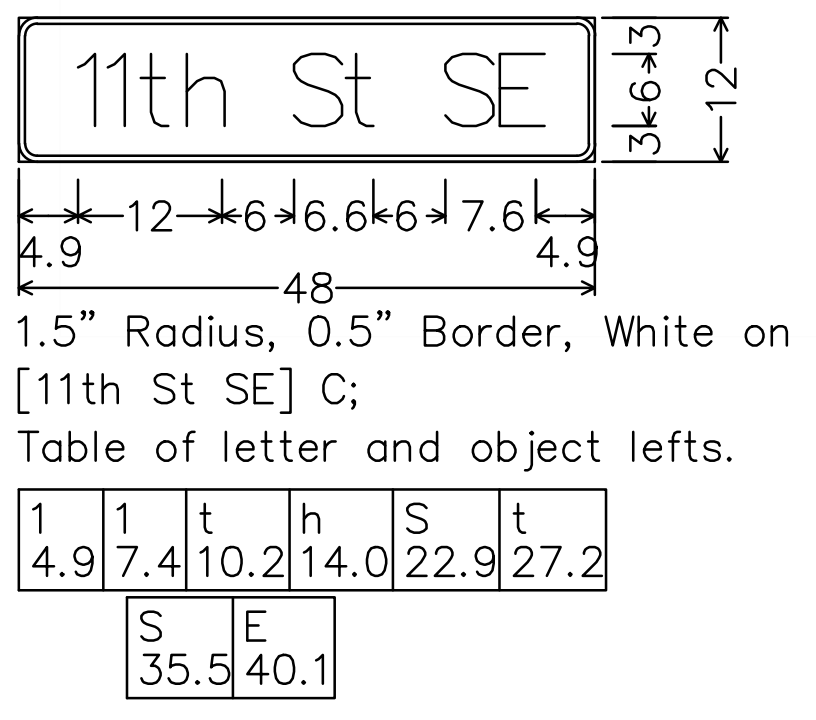
PULL BOX CHART

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	127+78	LT	43	17X30
PB-2	128+37	LT	43	17X30
PB-3	127+65	RT	58	17X30
PB-4	128+79	RT	42	36X36



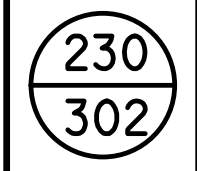
LEGEND

- PROP
- TRAFFIC SIGNAL, 3 UNIT HEAD, 12"
- TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"
- SIGNAL SUPPORT POLE
- PEDESTRIAN SIGNAL
- PEDESTRIAN PUSH BUTTON
- PEDESTAL SUPPORT
- CONTROLLER CABINET AND WORK PAD
- TRAFFIC PULL BOX, 725.06
- VIDEO DETECTION ZONE
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- PREEMPTION RECEIVING UNIT
- LUMINAIRE BRACKET ARM
- POWER SERVICE/ CONTROL CENTER



SIGNAL PLAN
11TH STREET SE AND US 30 ON/OFF RAMP

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)



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SIGNAL TIMING CHART

INTERSECTION: 11TH STREET SE AND US 30 ON/OFF RAMP MAINTAINING AGENCY: CITY OF CANTON								
START UP		DUAL ENTRY: YES		PHASES: 2 & 6 AND 4 & 8				
START IN:	2+6	REST IN RED:		RING 1		RING 2		
TIME FOR FLASH, ALL RED:	9, 6	OVERLAP		A	B	C	D	
FIRST PHASE(S):	2+6	PHASES		1	3	-	-	
COLOR DISPLAYED:	GREEN							
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	WBLT	EB	-	SB	EBLT	WB	-	NB
MINIMUM GREEN (INITIAL) (SEC.)	7	20	-	10	7	20	-	10
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	3	-	-	3	3	-	-	3
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	15	45	-	30	15	45	-	30
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	3.2	4.1	-	4.9	3.2	4.1	-	3.6
ALL RED CLEARANCE (SEC.)	1.9	1.0	-	1.7	1.9	1.0	-	1.9
DELAYED GREEN (LPI)* (SEC.)	-	-	-	-	-	-	-	-
WALK (SEC.)	-	-	-	-	-	7	-	13
PEDESTRIAN CLEARANCE (SEC.)	-	-	-	-	-	15	-	13
RECALL	MAXIMUM (ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	OFF
	MINIMUM (ON/OFF)	OFF	ON	-	OFF	OFF	ON	OFF
	PEDESTRIAN (ON/OFF)	OFF	ON	-	OFF	OFF	ON	OFF
MEMORY (ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF

*VOLUME DENSITY CONTROLS

NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- FOR PROTECTED/PERMISSIVE PHASES, IMPLEMENT CALL OMITTS TO AVOID YELLOW BALL TRAP.
- ENABLE $\phi 1, 3$ & $\phi 5, 7$ DETECTOR SWITCHING TO ALLOW $\phi 1$ & $\phi 5$ TO EXTEND $\phi 2$ & $\phi 6$ OR $\phi 3$ & $\phi 7$ TO EXTEND $\phi 4$ & $\phi 8$, RESPECTIVELY, WHEN ALLOCATED GREEN TIME FOR LEFT TURN PHASES ARE EXHAUSTED.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS AND EXTENSIONS SHALL BE PLACED IN THE CONTROLLER.

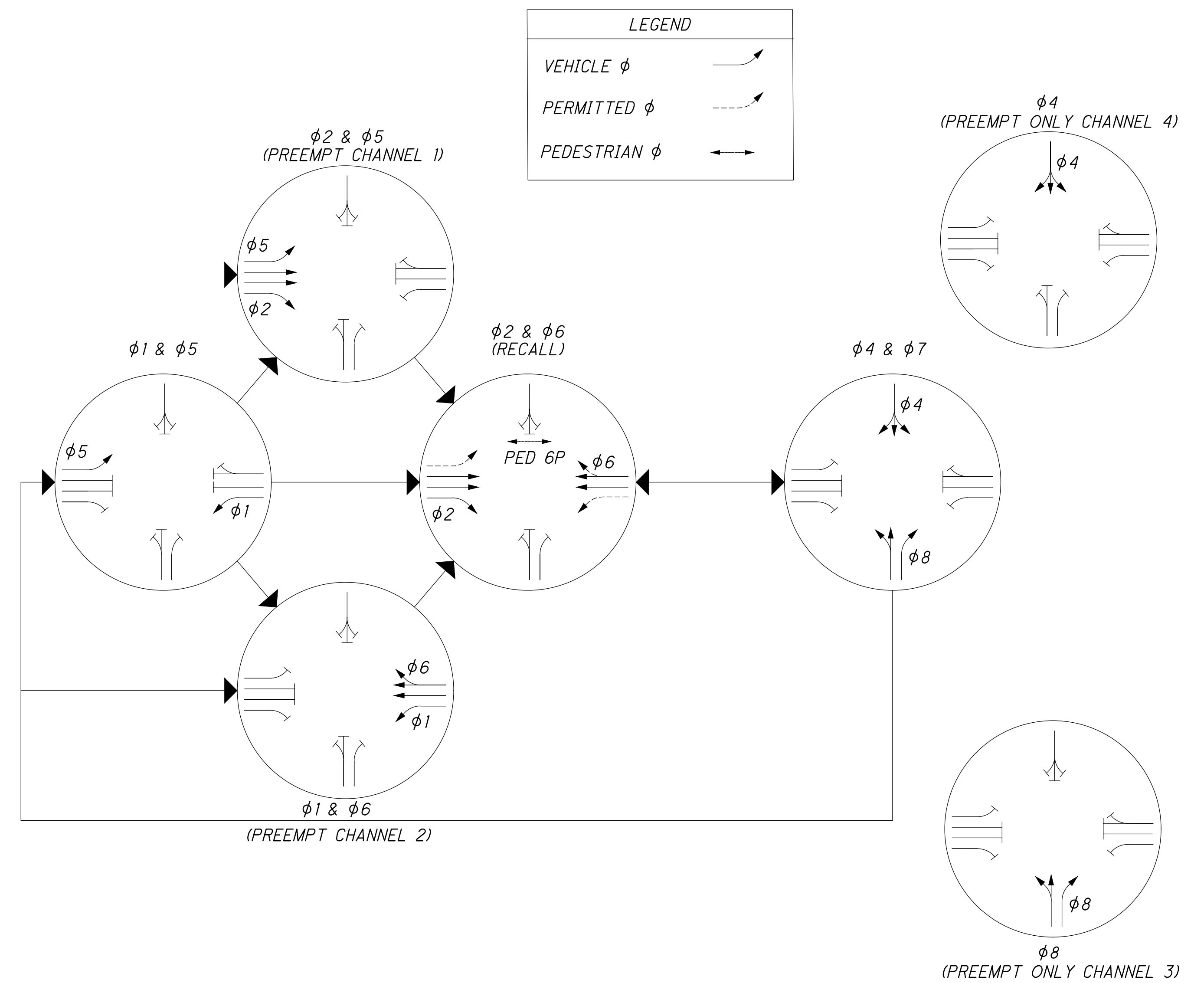
PREEMPT CHANNELS

CHANNEL 1 = $\phi 2$ (EASTBOUND ONLY) CHANNEL 3 = $\phi 8$ (NORTHBOUND ONLY)
CHANNEL 2 = $\phi 6$ (WESTBOUND ONLY) CHANNEL 4 = $\phi 4$ (SOUTHBOUND ONLY)

PREEMPT NOTES:

1. IF PHASE ACTIVE CONFLICTS WITH PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME ITS YELLOW AND ALL RED CLEARANCES.
2. IF ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND RETURN PHASE SHALL BE $\phi 2+6$.
4. IF PREEMPT PHASES = RETURN PHASES $\phi 2+6$ THEN YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

PHASING DIAGRAM



TRAFFIC SIGNAL DETECTION CHART

DETECTION ZONE	MOVEMENT	WIDTH (FT)	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
VDZ 5A	EBLT	6	0	3	-	STOP-LINE	20
VDZ 4A	SB	6	0	3	-	STOP-LINE	20
VDZ 1A	WBLT	6	0	3	-	STOP-LINE	20
VDZ 8A	NB/NBLT	6	0	3	-	STOP-LINE	35
VDZ 8B	NBRT	6 TO 12	10	3	8	STOP-LINE	35

NOTE: ALL DETECTORS ZONES SHALL BE SET TO PRESENCE.
ALL DELAYS ARE SET IN CONTROLLER.

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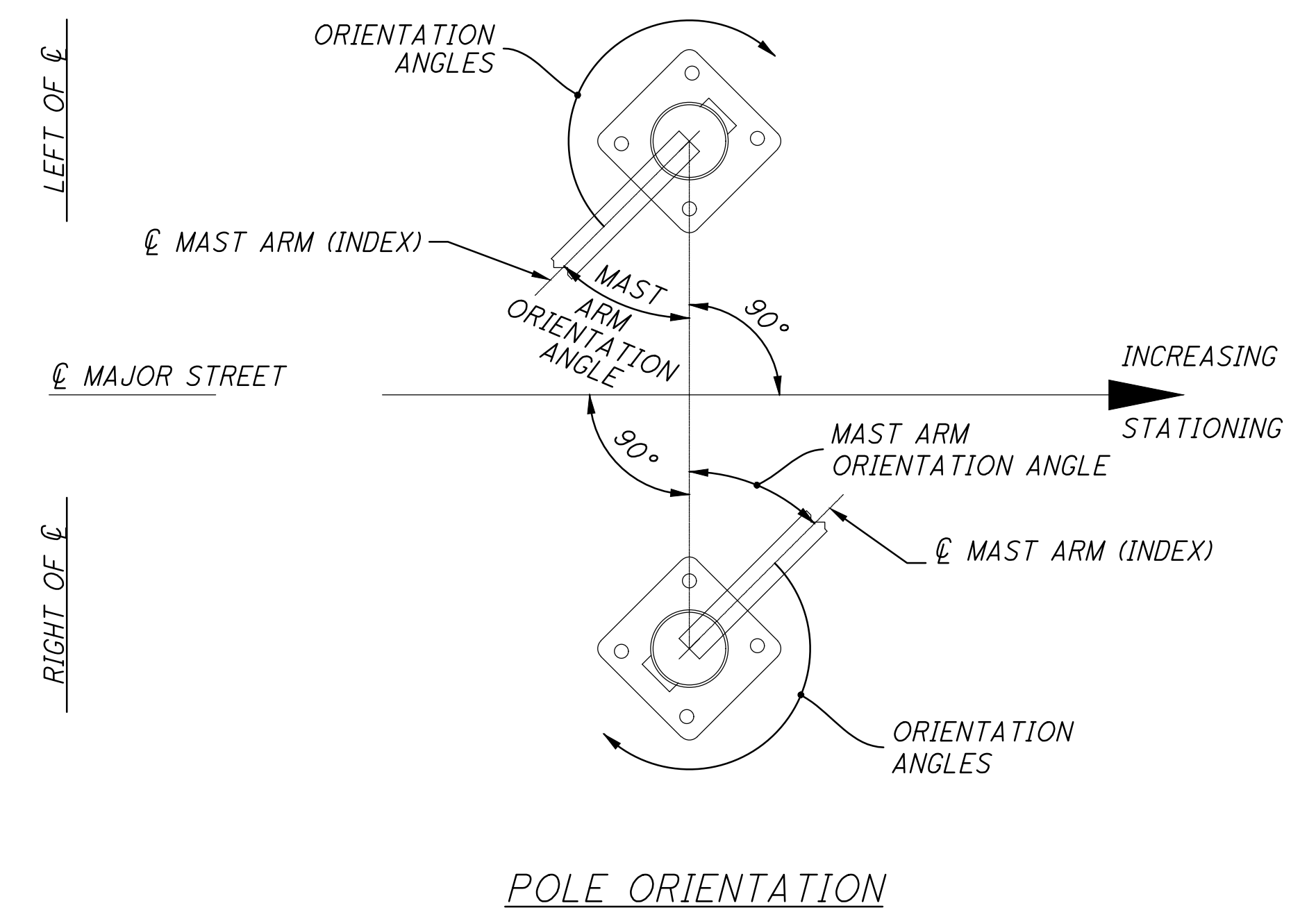
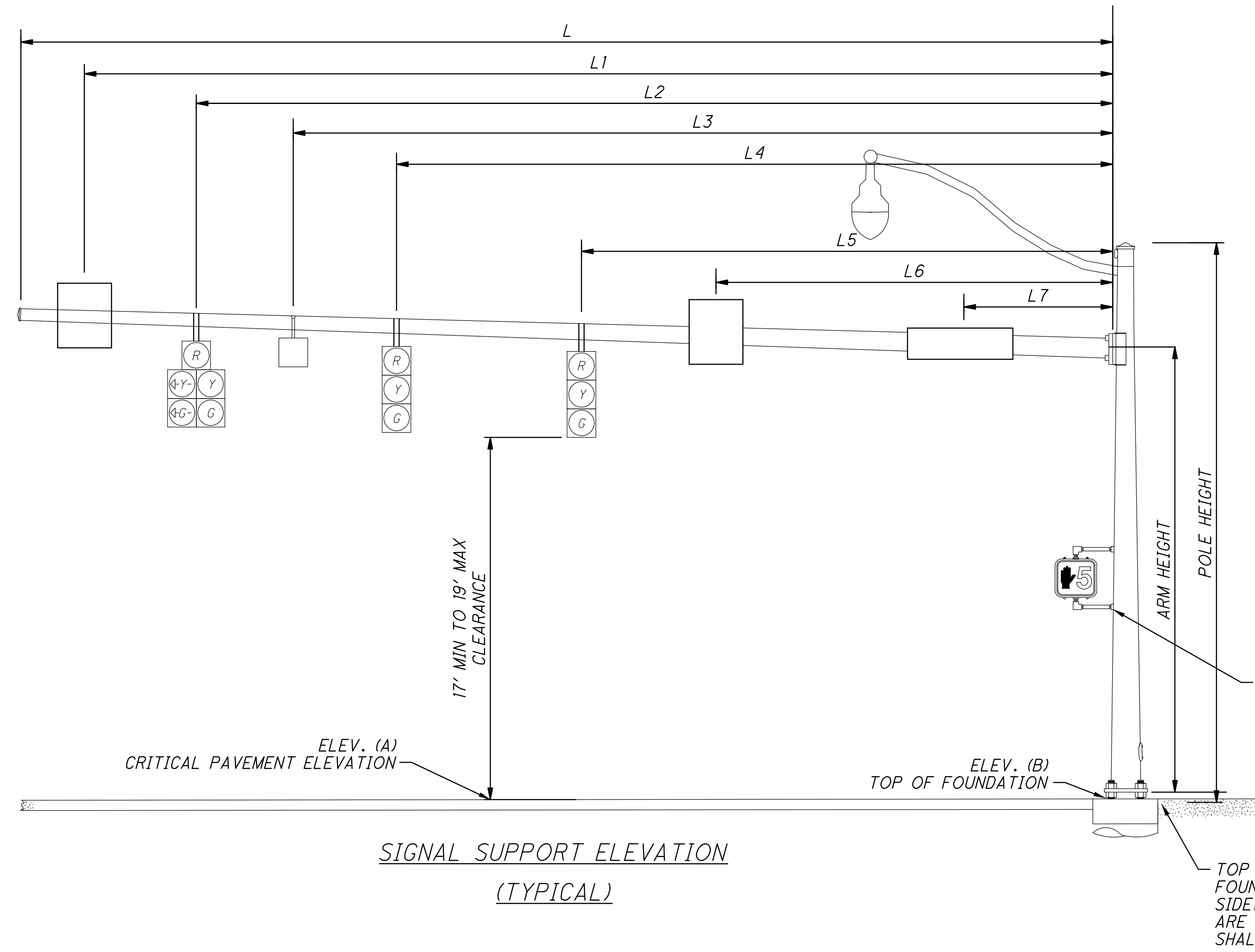
HORIZONTAL SCALE IN FEET

CALCULATED
CX
CHECKED
VMN

SIGNAL PLAN
11TH STREET SE AND US 30 ON/OFF RAMP

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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MAST ARM TABLE
(NOSTALGIA SIGNAL SUPPORT)

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS												ORIENTATION ANGLES FROM MAST ARM									
			A (PAVEMENT ELEVATION)	B (TOP OF FOUNDATION)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	L4	L5	L6	L7	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	POWER SERVICE	SIGNAL CABINET	LUMINAIRE BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP	
																										FT
SP-1	127+74	43.5' LT	1030.17	1030.35	TC-81.22	12	26	21.75	44	41.5	36	30	24	-	-	-	0	-	180	180	-	-	45	180	-	
SP-2	127+70	60' RT	1029.76	1029.80	TC-81.22	2	30	21.75	31	-	28	22	16	-	-	10	90	-	-	-	-	-	45	180	-	
SP-3	128+43	43.5' LT	1030.52	1030.59	TC-81.22	12	26	21.75	40	-	37	31	23	-	-	10	90	-	90	90	-	-	45	180	-	
SP-4	128+69	43' RT	1030.75	1030.60	TC-81.22	12	26	21.75	45	42.5	37	31	25	13	-	-	0	-	-	-	-	-	45	180	-	

SEE SHEET 235 FOR POLE HEIGHT AND ARM HEIGHT DETAILS)

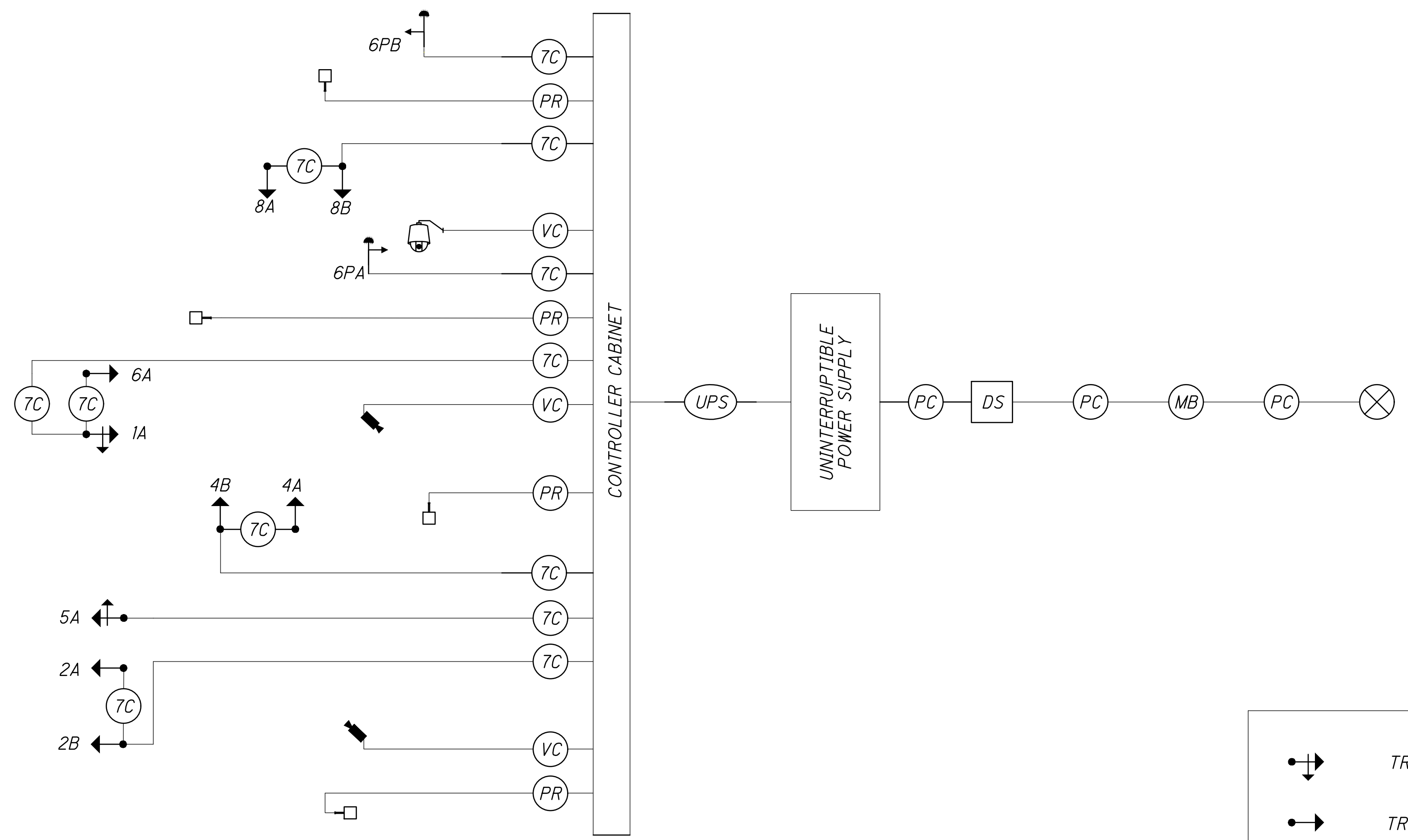
CALCULATED
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CHECKED
VMN

SIGNAL PLAN
11TH STREET SE AND US 30 ON/OFF RAMP

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
2A, 2B (EB TH)	R	φ 2R	Y	8A, 8B (NB)	R	φ 8R	R
	Y	φ 2Y			Y	φ 8Y	
	G	φ 2G			G	φ 8G	
5A (EB LT/TH)	R	φ 2R	Y	4A, 4B (SB)	R	φ 4R	R
	Y	φ 2Y			Y	φ 4Y	
	G	φ 2G			G	φ 4G	
	←Y	φ 5Y	OUT				
	←G	φ 5G					
6A (WB TH)	R	φ 6R	Y				
	Y	φ 6Y					
	G	φ 6G					
1A (WB LT/TH)	R	φ 6R	Y	PEDESTRIAN MOVEMENTS			
	Y	φ 6Y		PED 6P (NORTH)	W	φ 6W	OUT
	G	φ 6G			FDW	φ 6FDW	
	←Y	φ 1Y	OUT	DW	φ 6DW		
	←G	φ 1G					

LEGEND

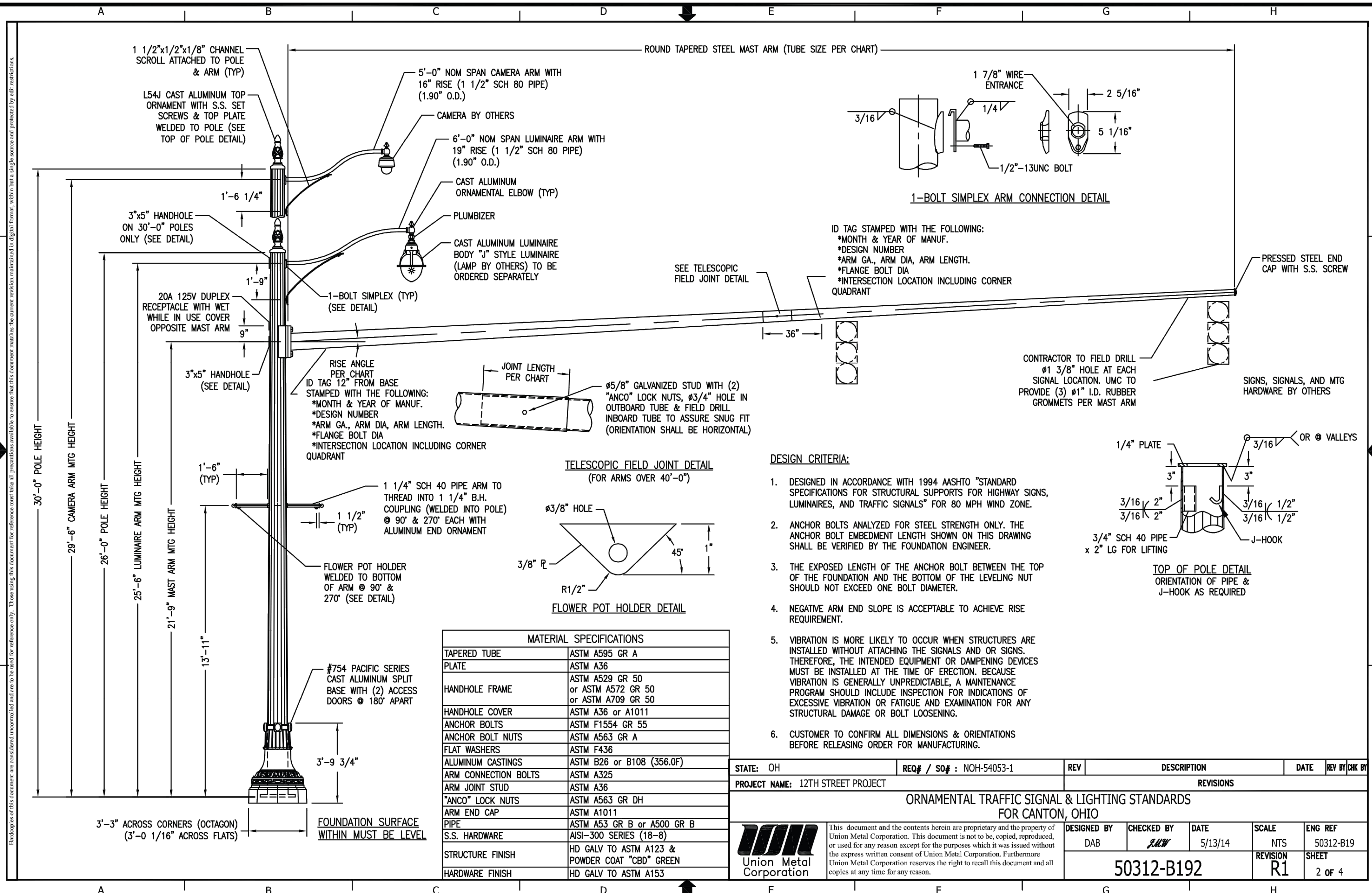
	TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
	TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD 12"		POWER SOURCE
	PEDESTRIAN SIGNAL		POWER CABLE, 2 CONDUCTOR, NO. 10 AWG
	PEDESTRIAN PUSH BUTTON		METER BASE
	VIDEO DETECTION CAMERA		DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
	PTZ OR GRIDSMART CAMERA		UNINTERRUPTIBLE POWER SUPPLY CABLE
	PREEMPTION RECEIVING UNIT		PREEMPTION CABLE

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

SIGNAL PLAN 11TH STREET SE AND US 30 ON/OFF RAMPS

CALCULATED
TKI
CHECKED
JMB

HORIZONTAL SCALE IN FEET



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CALCULATED CHECKED LIGHTING DETAILS STA - 11TH STREET SE IMPROVEMENTS (PID 90465) 235 302

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE 44705 : 330-489-3381 : www.cantonohio.gov/engineering

APPROVED DATE: APRIL 2012
 APPROVED BY: EEM
 DRAWING FILE NAME:
ce_61-65_LIGHTPOLES.dwg

REVISIONS		
DESCRIPTION	DATE	BY
INSERTED UM DRAWING 50312-B192	4/17/15	EGM

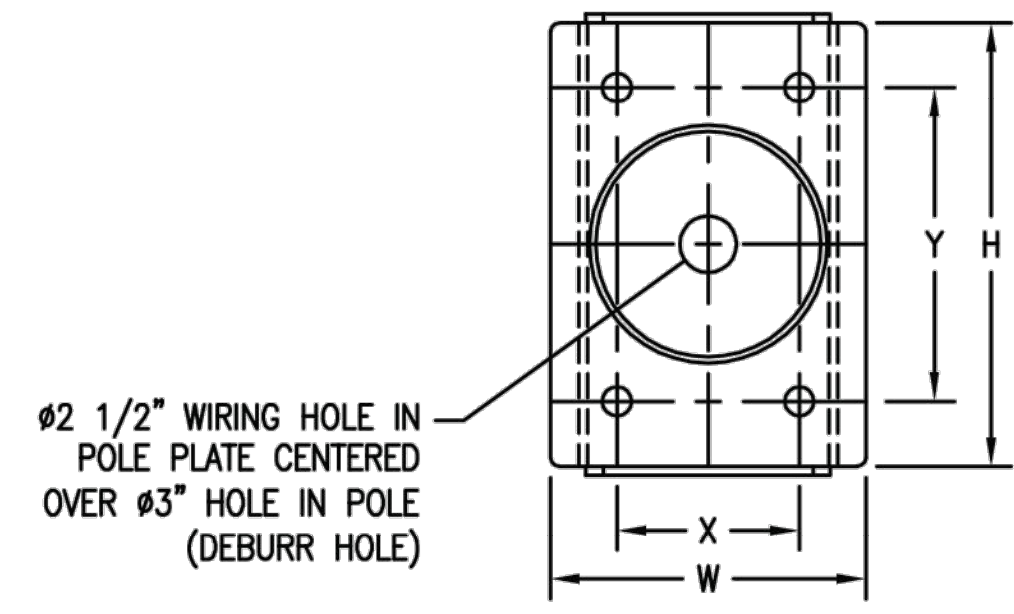
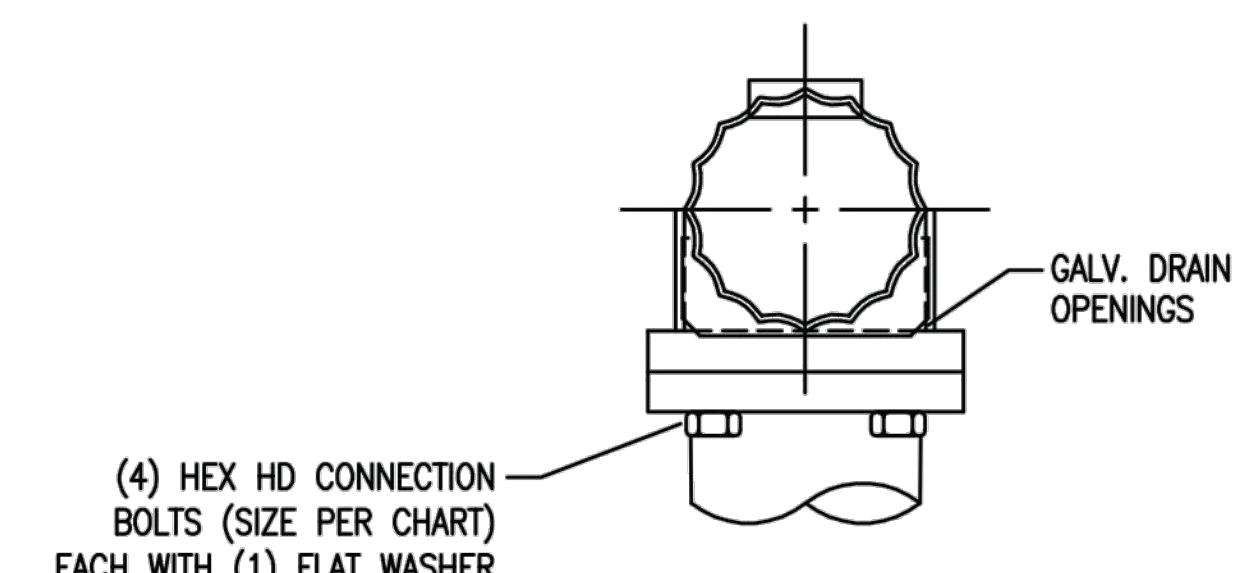
STANDARD DRAWING NO. 61
NOSTALGIC POLE FOUNDATION & WIRING DIAGRAM
 SHEET 1 OF 5

MATERIAL SPECIFICATIONS	
TAPERED TUBE	ASTM A595 GR A
PLATE	ASTM A36
HANDHOLE FRAME	ASTM A529 GR 50 or ASTM A572 GR 50 or ASTM A709 GR 50
HANDHOLE COVER	ASTM A36 or A1011
ANCHOR BOLTS	ASTM F1554 GR 55
ANCHOR BOLT NUTS	ASTM A563 GR A
FLAT WASHERS	ASTM F436
ALUMINUM CASTINGS	ASTM B26 or B108 (356.0F)
ARM CONNECTION BOLTS	ASTM A325
ARM JOINT STUD	ASTM A36
"ANCO" LOCK NUTS	ASTM A563 GR DH
ARM END CAP	ASTM A1011
PIPE	ASTM A53 GR B or A500 GR B
S.S. HARDWARE	AISI-300 SERIES (18-8)
STRUCTURE FINISH	HD GALV TO ASTM A123 & POWDER COAT "CBD" GREEN
HARDWARE FINISH	HD GALV TO ASTM A153

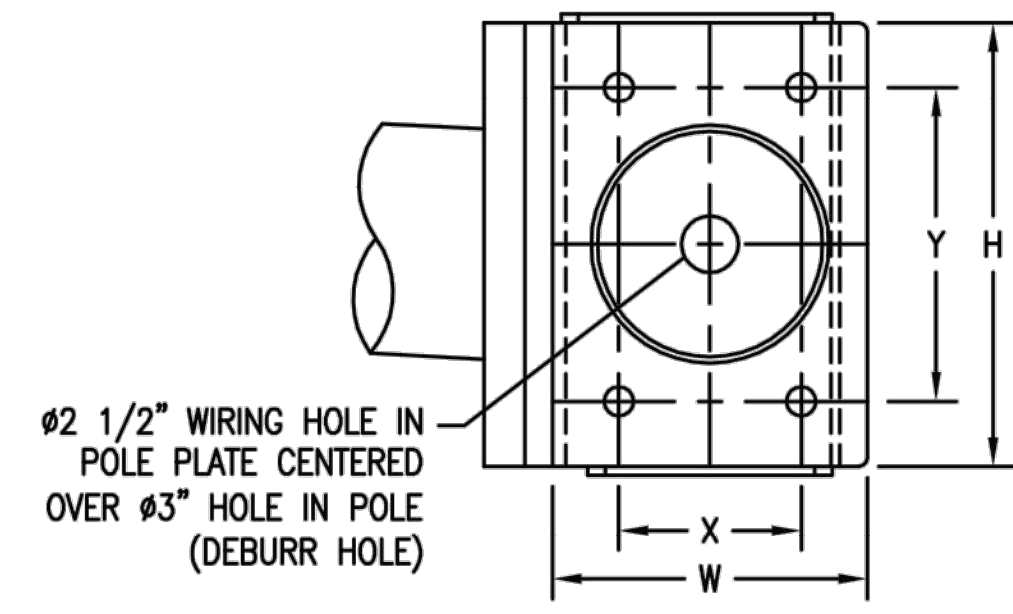
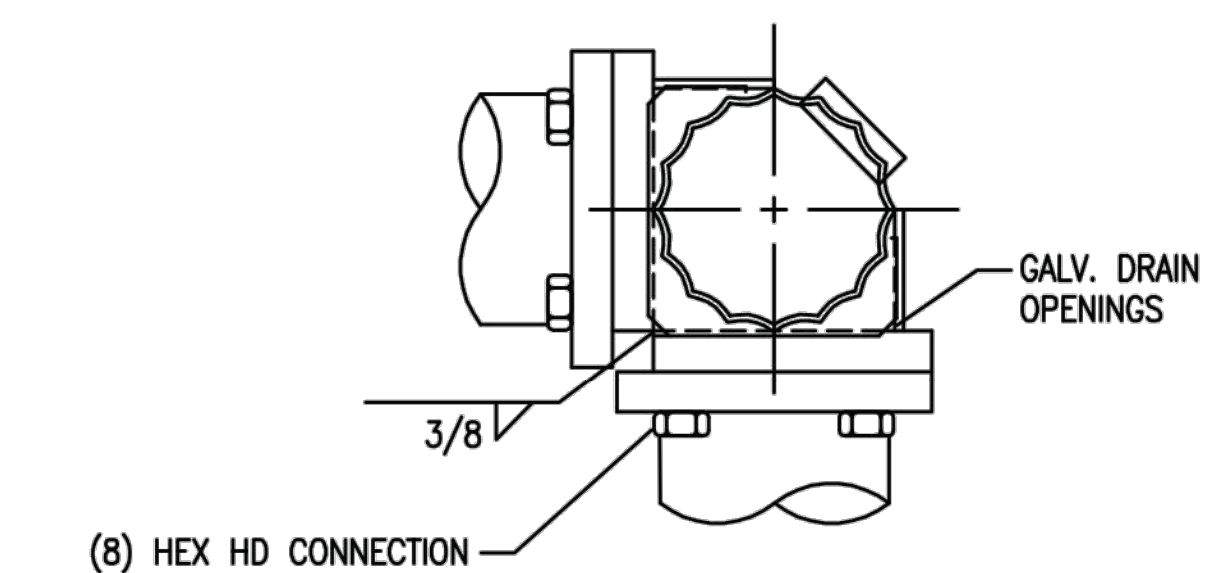
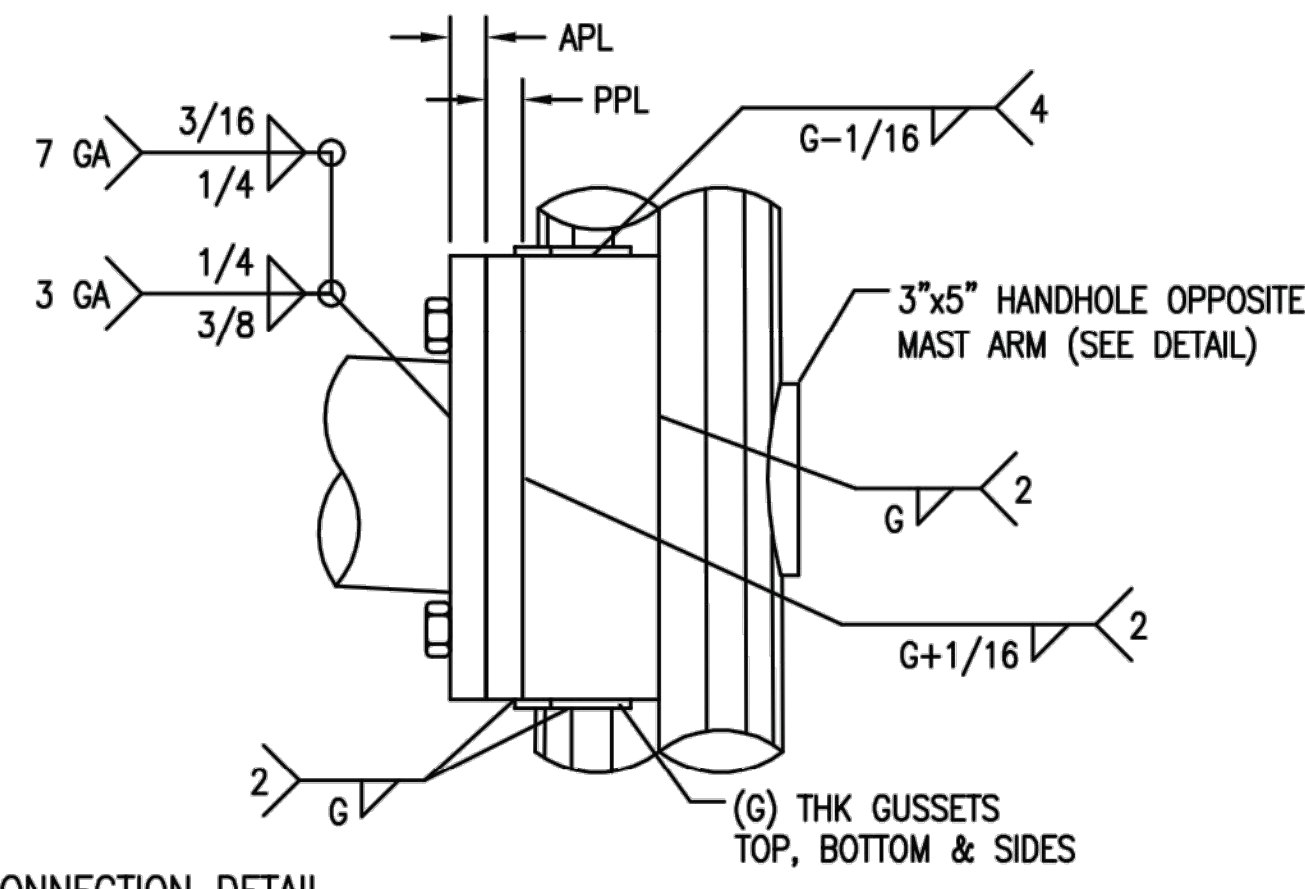
STATE: OH	REQ# / SO# : NOH-54053-1	REV	DESCRIPTION	DATE	REV BY/CHK BY
PROJECT NAME: 12TH STREET PROJECT					
REVISIONS					
ORNAMENTAL TRAFFIC SIGNAL & LIGHTING STANDARDS FOR CANTON, OHIO					
DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF	
DAB	SMW	5/13/14	NTS	50312-B19	
50312-B192			REVISION	SHEET	
			R1	2 OF 4	

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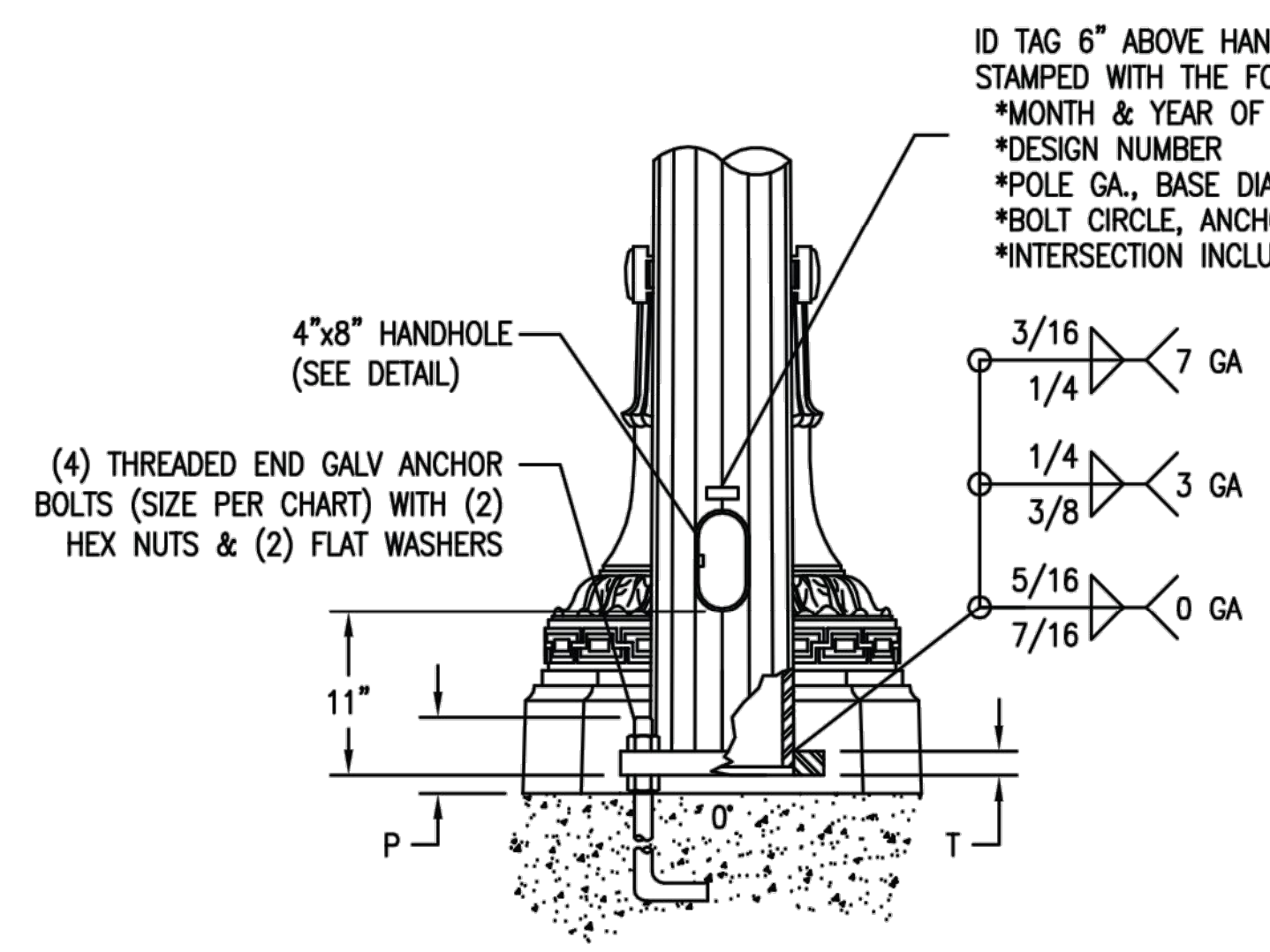
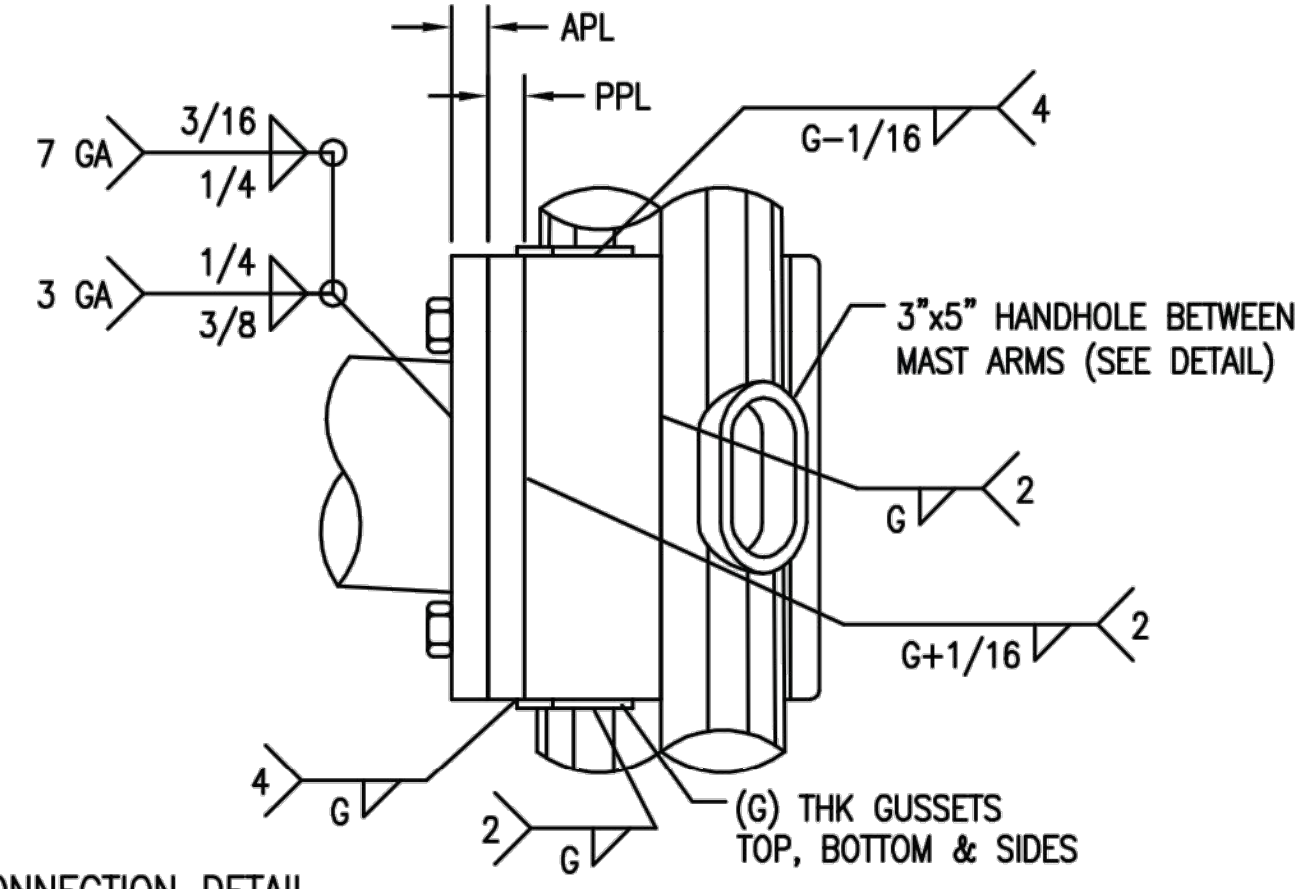
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SINGLE MAST ARM CONNECTION DETAIL

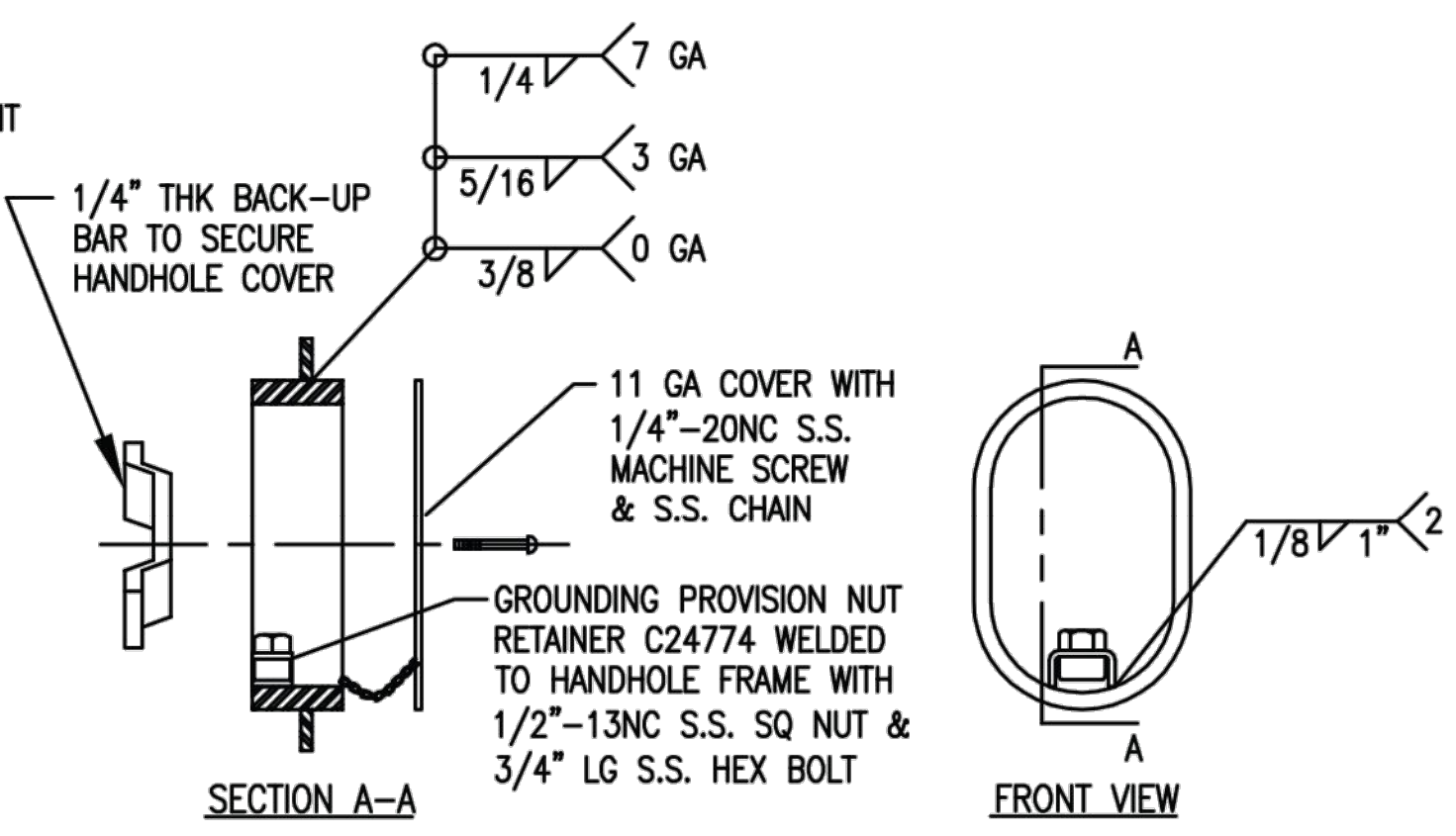


DUAL MAST ARM CONNECTION DETAIL

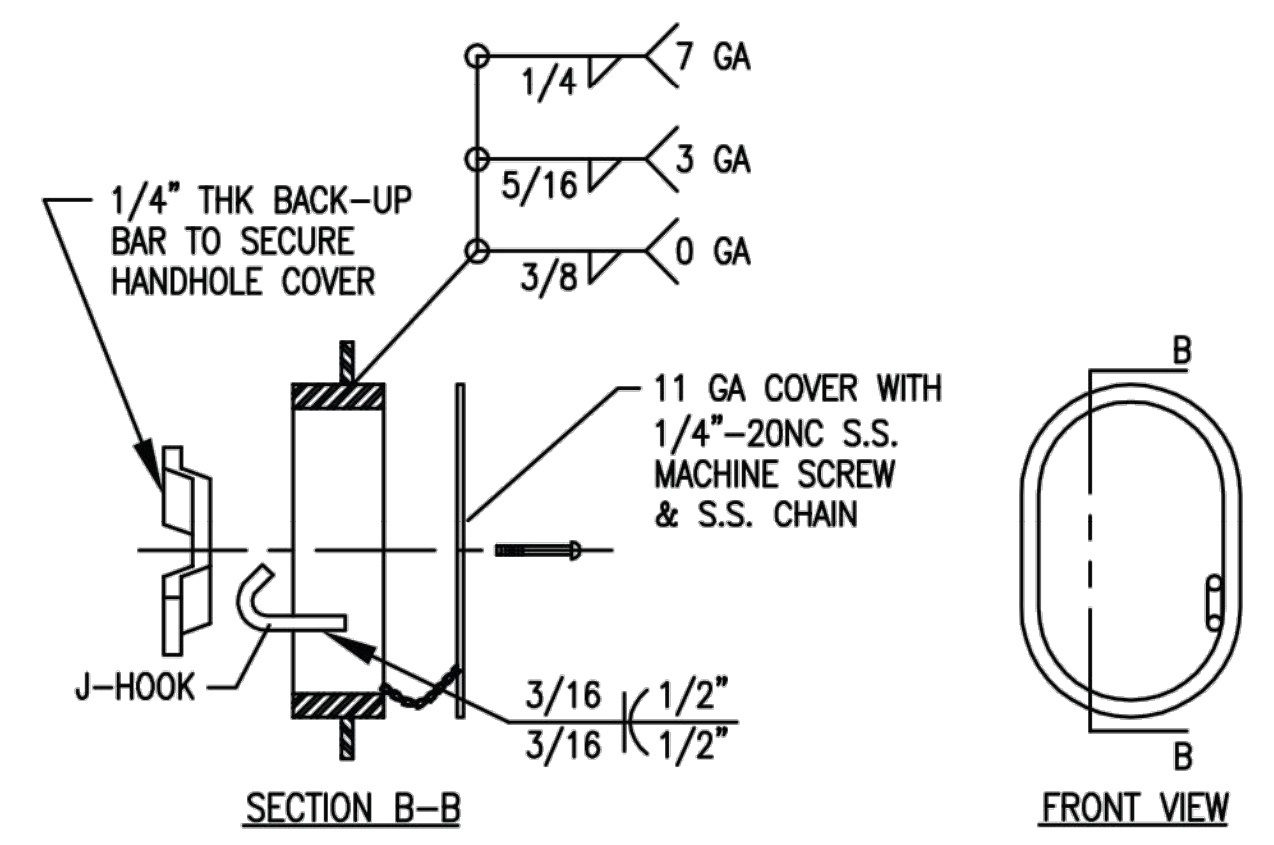


BASE CONNECTION DETAIL

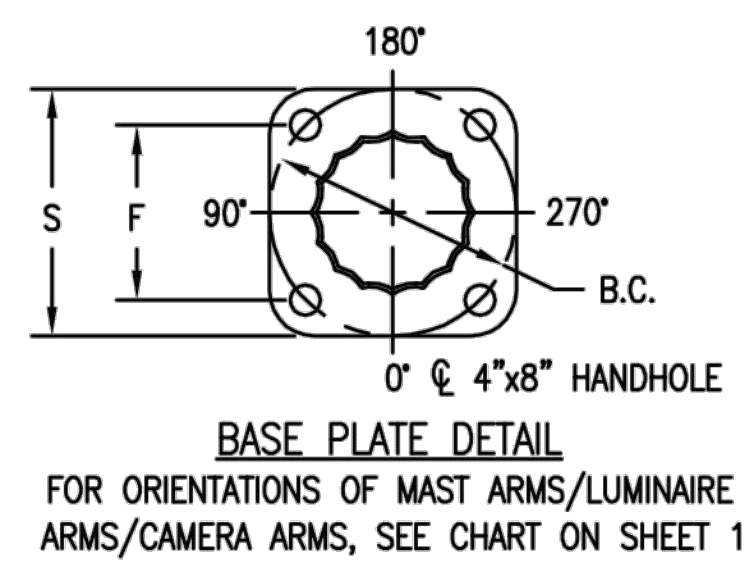
ID TAG 6" ABOVE HANDHOLE STAMPED WITH THE FOLLOWING:
 *MONTH & YEAR OF MFG
 *DESIGN NUMBER
 *POLE GA., BASE DIA, POLE HGT
 *BOLT CIRCLE, ANCHOR BOLT DIA
 *INTERSECTION INCLUDING CORNER QUADRANT



4"x8" HANDHOLE FRAME DETAIL



3"x5" HANDHOLE FRAME DETAIL



BASE PLATE DETAIL

STATE: OH	REQ# / SO# : NOH-54053-1	REV	DESCRIPTION	DATE	REV BY/CHK BY
PROJECT NAME: 12TH STREET PROJECT		REVISIONS			
ORNAMENTAL TRAFFIC SIGNAL & LIGHTING STANDARDS FOR CANTON, OHIO					
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	50312-B192			SCALE NTS	ENG REF 50312-B19
			REVISION R1	SHEET 3 OF 4	



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APPROVED DATE: APRIL 2012
 APPROVED BY: EEM
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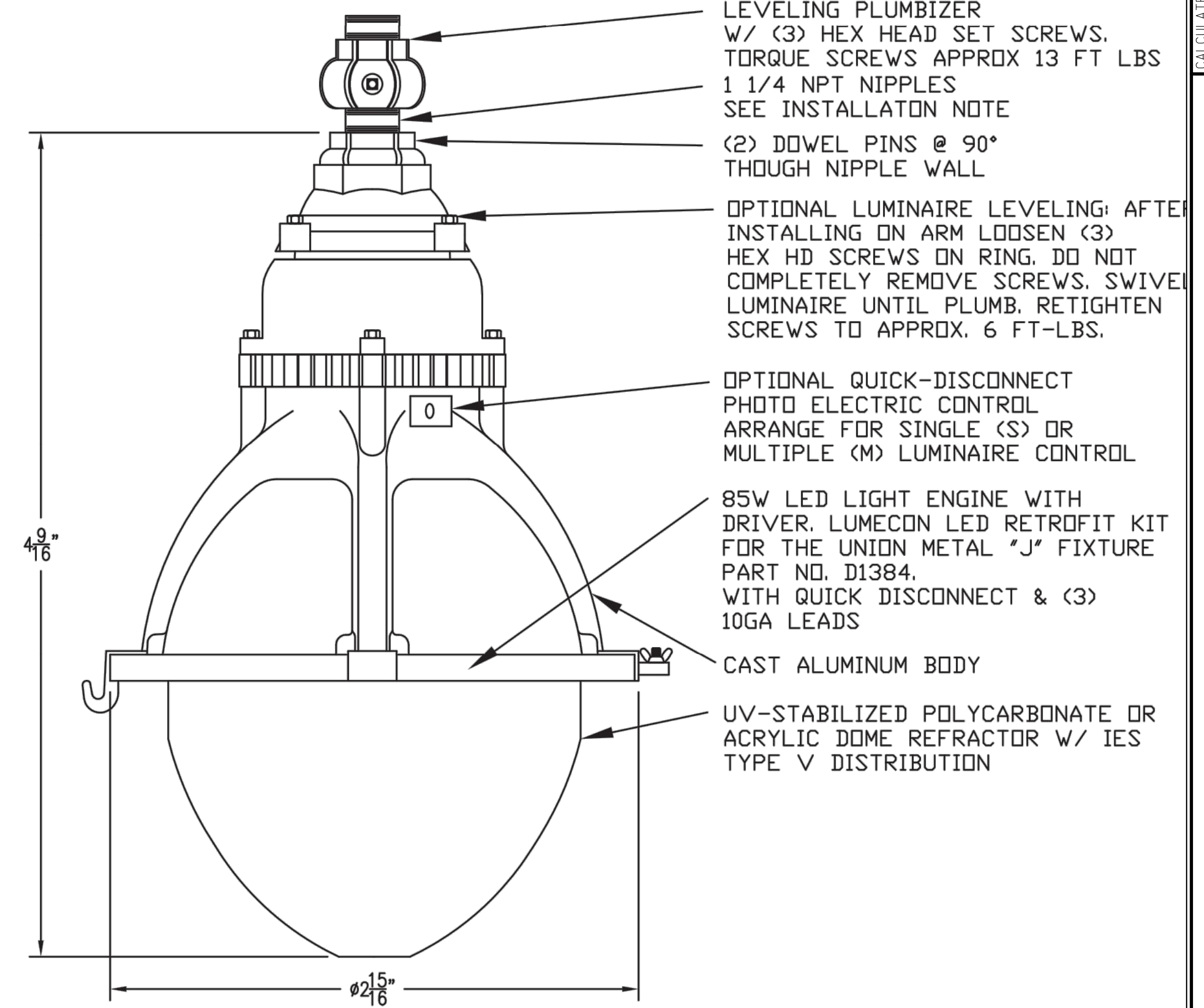
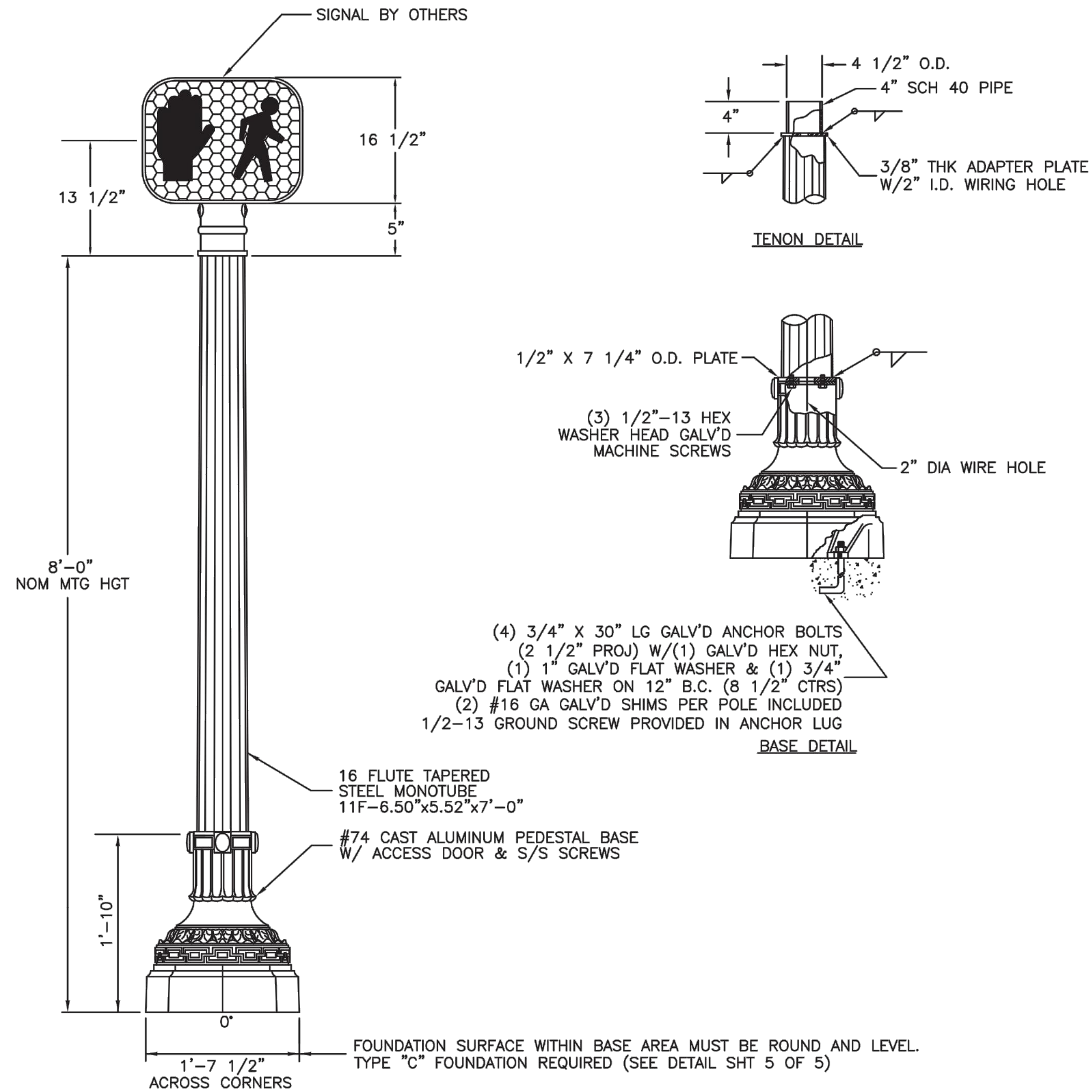
STANDARD DRAWING NO. 62
NOSTALGIC POLE FOUNDATION & WIRING DIAGRAM
 SHEET 2 OF 5

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)
 236
 302

CALCULATED
 CHECKED

LIGHTING DETAILS

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INSTALLATION NOTE:
 USE PIPE SEALANT ON ALL PIPE THREADS BEFORE ASS'Y. THE THREADS SHOULD ENGAGE 3-4 TURNS BY HAND AND AN ADDITIONAL 2-4 TURNS WITH A WRENCH TO ENSURE A SECURE CONNECTION. TORQUE SHOULD INCREASE GRADUALLY WHILE TIGHTENING WITH A WRENCH. DO NOT OVER TIGHTEN, A MINIMUM OF 2 THREADS SHOULD BE VISIBLE AFTER TIGHTENING. IF TORQUE INCREASES SUDDENLY OR BOTTOMS OUT WHILE TIGHTENING, DO NOT INSTALL LUMINAIRE. CONSULT FACTORY BEFORE PROCEEDING.

DESIGN NUMBER	PEC OPTION
NLJ1-110-A14-Y1	MULTIPLE
NLJ1-110-A14-Y2	NONE
NLJ1-110-A14-Y3	SINGLE

WEIGHT 40 LBS. MAX. EPA 1.2 SQ. FT.

STATE	REQ# / SO#	REV	DESCRIPTION	DATE	REV BY/CHK
OHIO	NOH54508				

PROJECT NAME: CITY OF CANTON STANDARD LED

REVISIONS					
NO.	DATE	BY	DESCRIPTION	SCALE	ENG REF
1	7/15/14	MB	"J" STYLE LUMINAIRE WITH 110 TYPE GLOBE AND LUMECOM LED PENDANT	1:5	NLJ1-110-A2
2		MRB		REVISION R0	SHEET 1 OF 1

ORNAMENTAL PEDESTRIAN POLE
 DESIGNED FOR CANTON, OHIO
 U.M.C. DESIGN NO. P2000-74-B9-Y1

LOF _____ ENG. REF. # _____
 REQ. # 0329-40-98 S.O. # _____ CAD# 0329C98

Union Metal CORPORATION

DRAWN WJC DRAWING NO. N2000-74-B9
 DATE 4/24/98
 CHECKED GMP

EST. 1805
 OFFICE OF THE CITY ENGINEER
 CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE 44705 : 330-489-3381 : www.cantonohio.gov/engineering

APPROVED DATE: APRIL 2012

APPROVED BY: EEM

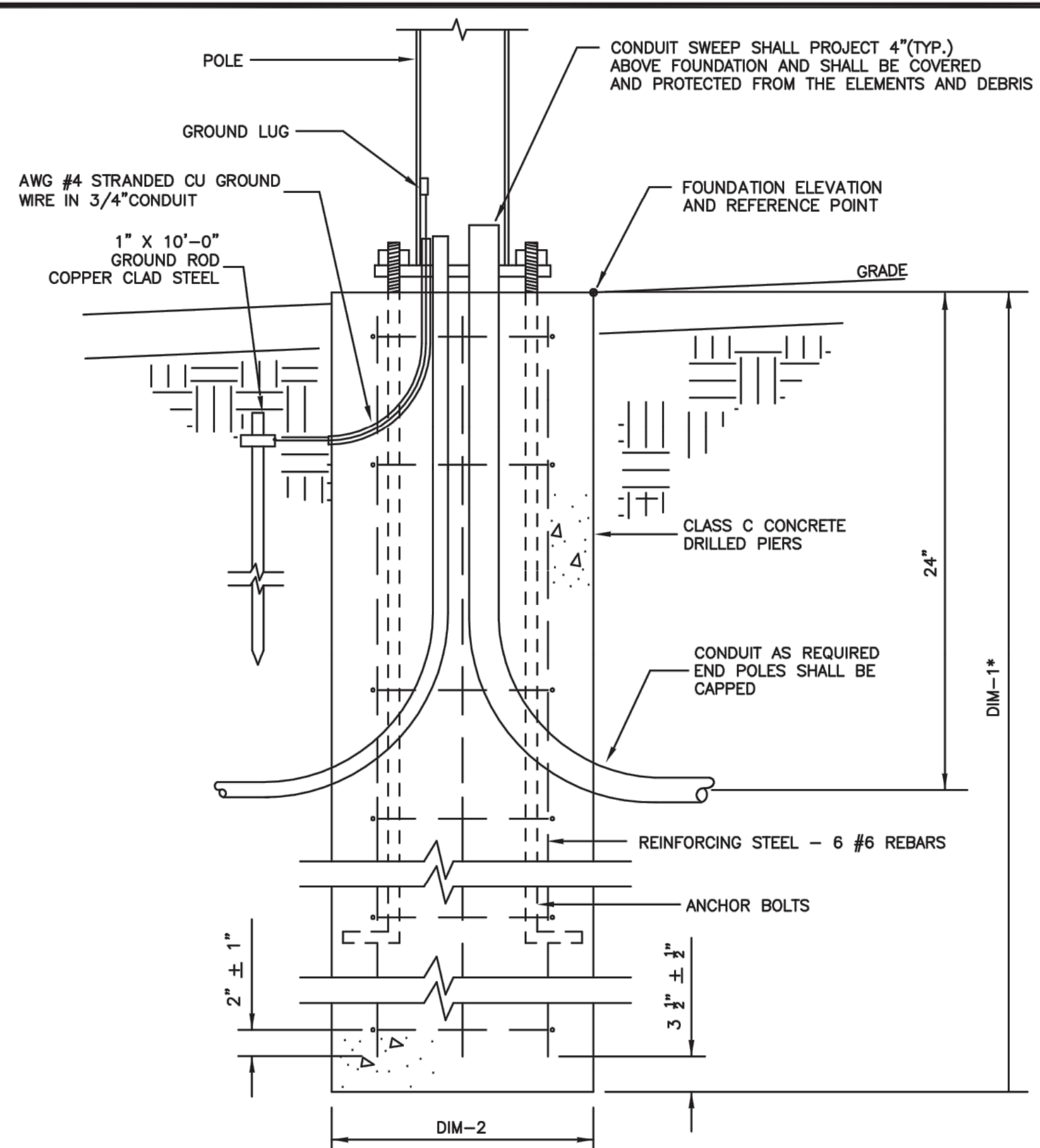
DRAWING FILE NAME:
 ce_61-65_LIGHTPOLES.dwg

REVISIONS		
DESCRIPTION	DATE	BY
INSERTED UM DRAWING NLJ1-110-A14	4/17/15	EEM
NEW LED RETROFIT KIT SPEC.	8/26/16	EEM

STANDARD DRAWING NO. 64
 NOSTALGIC POLE FOUNDATION & WIRING DIAGRAM
 SHEET 4 OF 5

CALCULATED
 CHECKED
 LIGHTING DETAILS
 STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)
 237
 302

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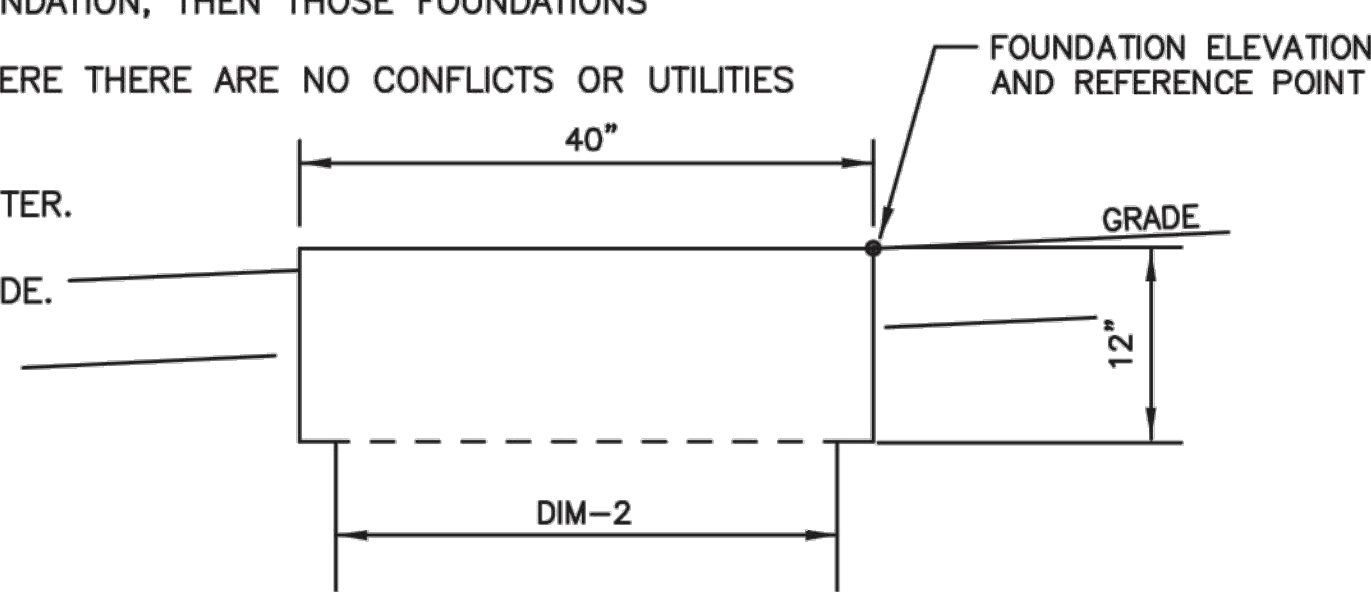
NOSTALGIC FOUNDATION DETAIL
NO SCALE

NOTES:

1. ALL FOUNDATIONS SHALL BE DRILLED PIERS TO AVOID DISTURBING SURROUNDING SOIL. A TEMPORARY STEEL CASING MAY BE REQUIRED. IF UTILITIES OR ANOTHER CONFLICT IS IN CLOSE PROXIMITY TO THE FOUNDATION, THEN THOSE FOUNDATIONS MAY HAVE TO BE EXCAVATED BY HAND.
2. PRE-CAST LIGHT POLE FOUNDATIONS, 30" X 72", WILL BE PERMITTED AT LOCATIONS WHERE THERE ARE NO CONFLICTS OR UTILITIES PROHIBITING PLACEMENT.
3. ANCHOR BOLT PATTERN SHALL BE PROVIDED BY POLE MANUFACTURER (U.M.C.).
4. REINFORCING STEEL SHALL BE ASSEMBLED IN CAGES USING #4 TIES AT 24" (MAX.) CENTER.
5. FOUNDATION TOP SHALL BE ROUND AND LEVEL TO ACCOMMODATE DECORATIVE BASE.
6. TOP OF FOUNDATION SHALL BE AT LEAST 1" ABOVE PROJECTED FINISHED SIDEWALK GRADE.

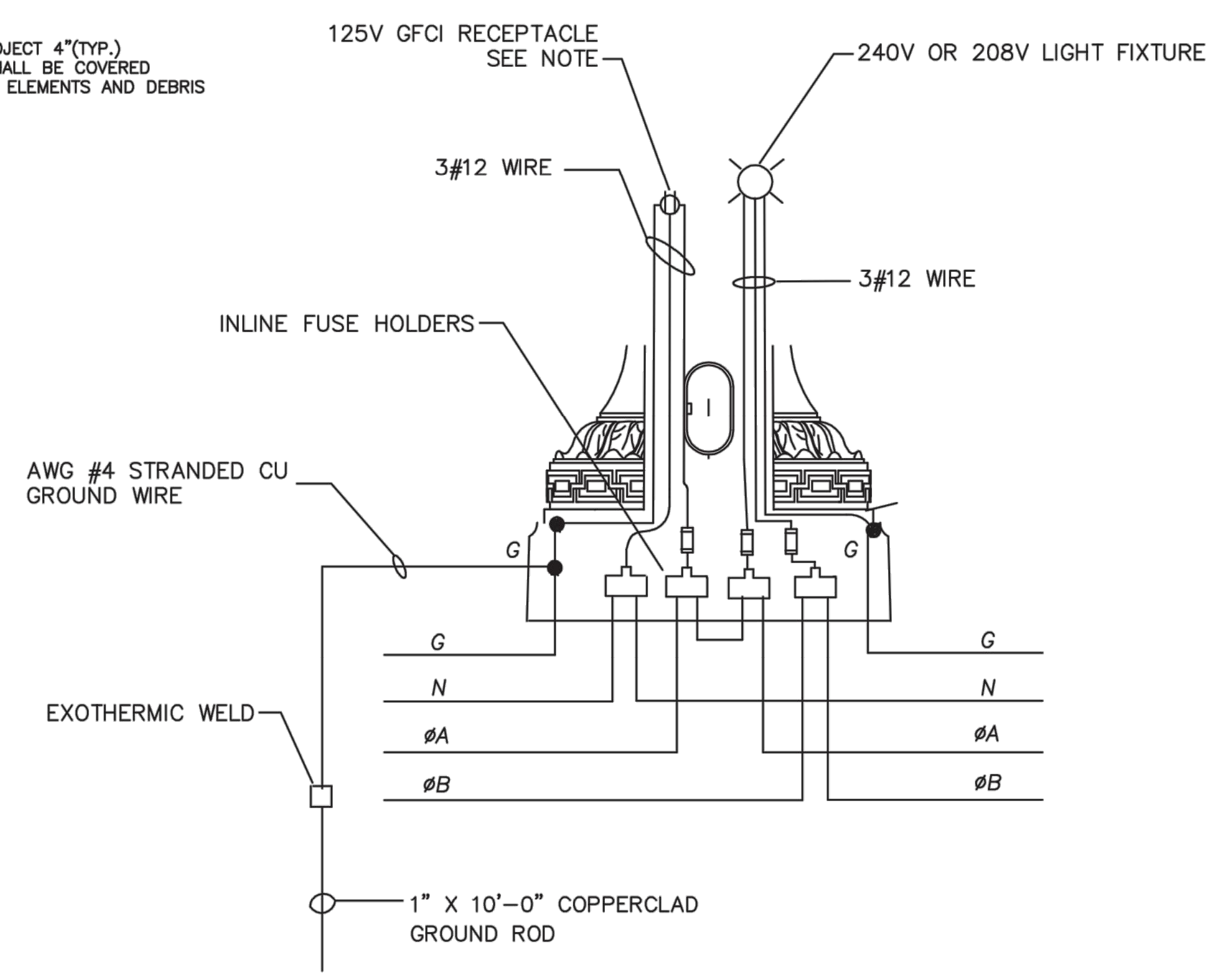
FOUNDATION	DIM-1*	DIM-2
SIGNAL (16" BOLT CIRCLE)	9'-0"	36"
SIGNAL (>16" BOLT CIRCLE)	11'-0"	36"
LUMINARIES	6'-0"	30"
PEDESTRIAN	4'-0"	24"

* MINIMUM DEPTH MAY VARY BASED ON SOIL CONDITION.



FOUNDATION CAP DETAIL

CAP FOR SIGNAL POLE WITH >16" BOLT CIRCLE. CAP IS NECESSARY TO ACCOMMODATE DECORATIVE BASE.



POLE WIRING DIAGRAM
NO SCALE

NOTE:

1. THE COST FOR WIRING TO ALL NOSTALGIA LUMINARIES AND RECEPTACLES SHALL BE INCIDENTAL TO THE NOSTALGIA BID ITEMS. ALL WIRING IN POLES AND CONDUITS TO LIGHTS AND RECEPTACLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL WIRING INTO EACH NOSTALGIA POLE BASE SHALL BE NO. 6 AWG WIRE AND CONNECTED TO IN-LINE FUSE HOLDERS. THE COST FOR THIS WIRE SHALL BE INCIDENTAL TO THE NOSTALGIA BID ITEMS.
3. IN-LINE FUSE HOLDERS SHALL BE BUSSMAN (HEB-AW-RYC). INSTALL FUSES IN PHASE LINES AND SOLID LINK IN NEUTRAL (HET-AW-RYC) FOR GROUND USE SPLIT BOLT CONNECTOR. COPPER GROUND CABLE SHALL BE EXOTHERMICALLY WELDED TO THE GROUND ROD. RUN CABLE FREE END THROUGH 3/4" EMT AND CONNECTED AS SHOWN IN THE POLE WIRING DIAGRAM. THE COST FOR THE IN-LINE FUSE HOLDERS AND ALL RELATED ITEMS SHALL BE INCIDENTAL TO THE NOSTALGIA BID ITEMS.
4. THE POLE RECEPTACLE SHALL BE ALTERNATELY WIRED TO PHASE A AND PHASE B AS SHOWN IN THE POLE WIRING DIAGRAM.
5. FOR LIGHTS, USE 5 AMP FUSES. FOR RECEPTACLES, USE 10 AMP FUSES. AMP RATINGS SHALL BE BASED UPON 75 DEGREE C RATINGS.
6. UNLESS OTHERWISE NOTED IN THESE PLANS, ALL WIRING SHALL BE MINIMUM NO. 12 AWG, COPPER, 600 VOLT RATED WITH THE EXCEPTION OF NO. 14 AWG, COPPER SHALL BE PERMISSIBLE FOR CONTROL CIRCUITRY. THE FOLLOWING SHALL APPLY TO ALL WIRING:
 - A. ALL WIRING SHALL BE STRANDED "XHNN/XHWN".
 - B. UNDERGROUND BRANCH CIRCUIT WIRING SHALL BE "XHHW".
7. CONDUCTORS SHALL BE PULLED FROM LIGHT POLE TO LIGHT POLE AND FROM LIGHTING CONTROL PANEL TO LIGHT POLE WITHOUT SPLICES.



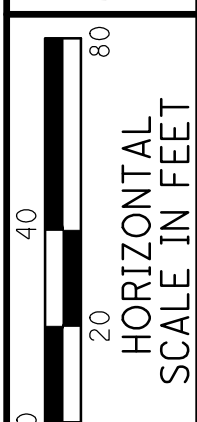
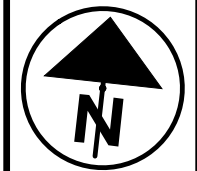
OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 : 330-489-3381 : www.cantonohio.gov/engineering

APPROVED DATE: MARCH 2014
APPROVED BY: EEM
DRAWING FILE NAME:
ce_61-65_LIGHTPOLES.dwg

REVISIONS		
DESCRIPTION	DATE	BY
MODIFIED DIMS AND OTHER CHANGES	4/29/14	NJL
MODIFIED FOUNDATION NOTES	2/21/17	EGM

STANDARD DRAWING NO. 65
NOSTALGIC POLE FOUNDATION & WIRING DIAGRAM
SHEET 5 OF 5

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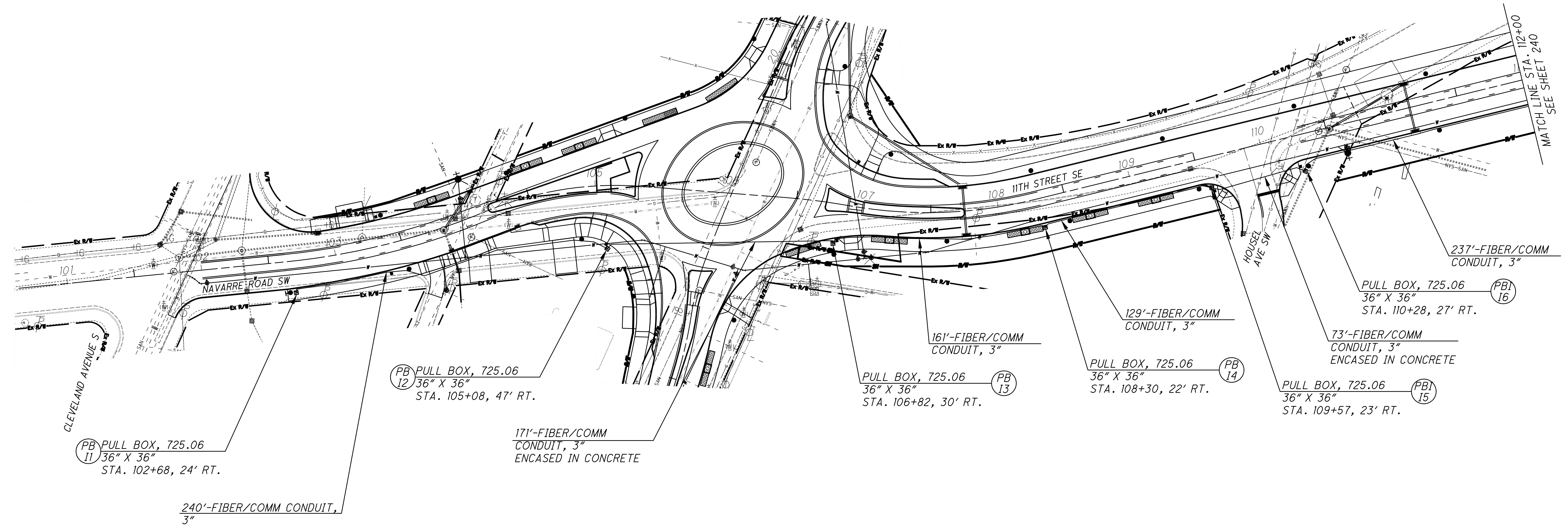
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INTERCONNECT PLAN
11TH STREET SE - BEGINNING TO STA. 112+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

LEGEND


-  TRAFFIC INTERCONNECT PULL BOX, 36"X36", 725.06
-  CONDUIT (ALL CONDUIT LABELED IN INTERCONNECT PLANS (EXCEPT AS NOTED) CONTAIN FIBER OPTIC CABLE, ARMORED, 48 FIBER. INTERCONNECT CONDUIT SHALL SHARE SAME TRENCH AS LIGHTING CONDUIT.)
-  CONTROLLER CABINET AND WORK PAD

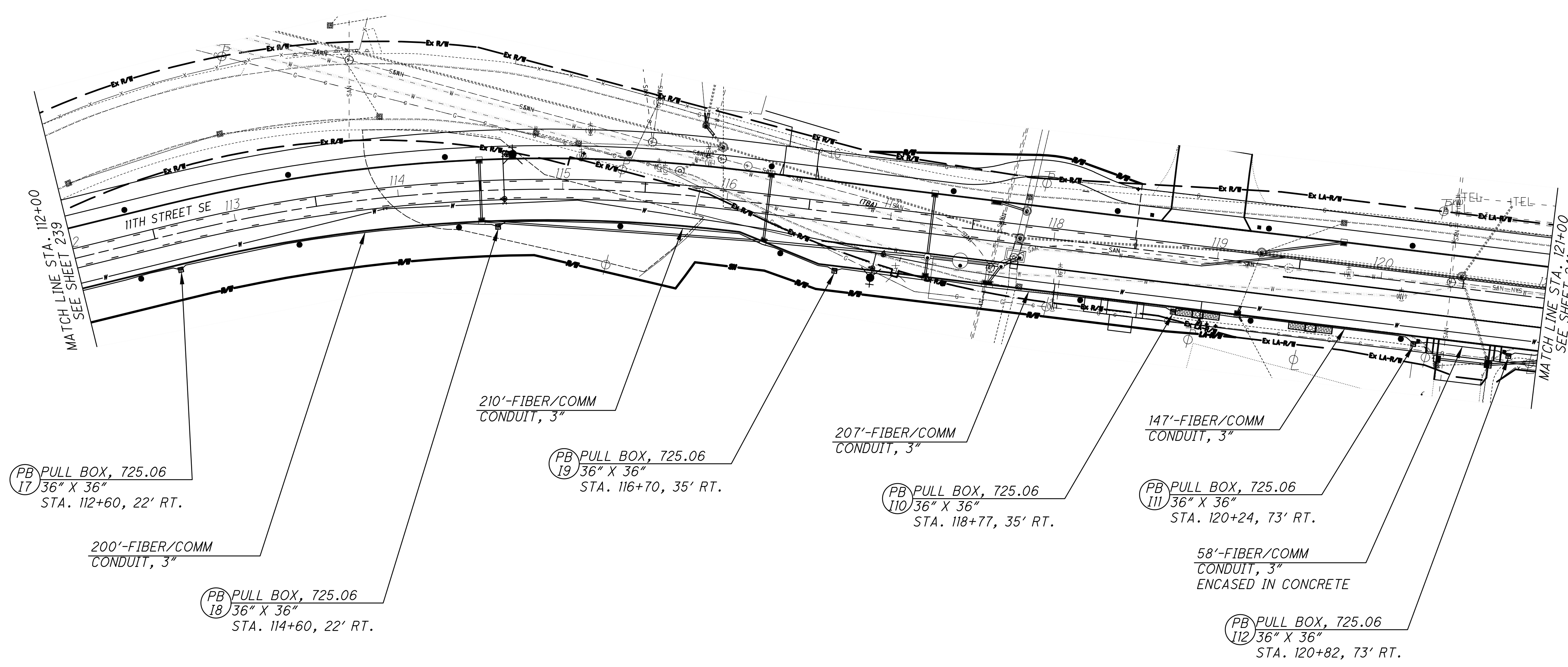


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LEGEND

- ▣ TRAFFIC INTERCONNECT PULL BOX, 36"X36", 725.06
- CONDUIT (ALL CONDUIT LABELED IN INTERCONNECT PLANS (EXCEPT AS NOTED) CONTAIN FIBER OPTIC CABLE, ARMORED, 48 FIBER. INTERCONNECT CONDUIT SHALL SHARE SAME TRENCH AS LIGHTING CONDUIT.)
- ☒ CONTROLLER CABINET AND WORK PAD

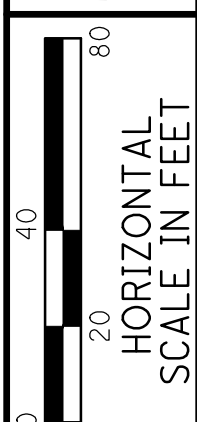
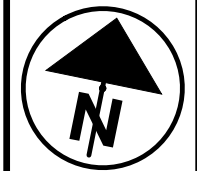

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 HORIZONTAL SCALE IN FEET
 CALCULATED CX
 CHECKED VMN



**INTERCONNECT PLAN
11TH STREET SE - STA. 112+00 TO STA. 121+00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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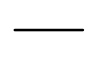



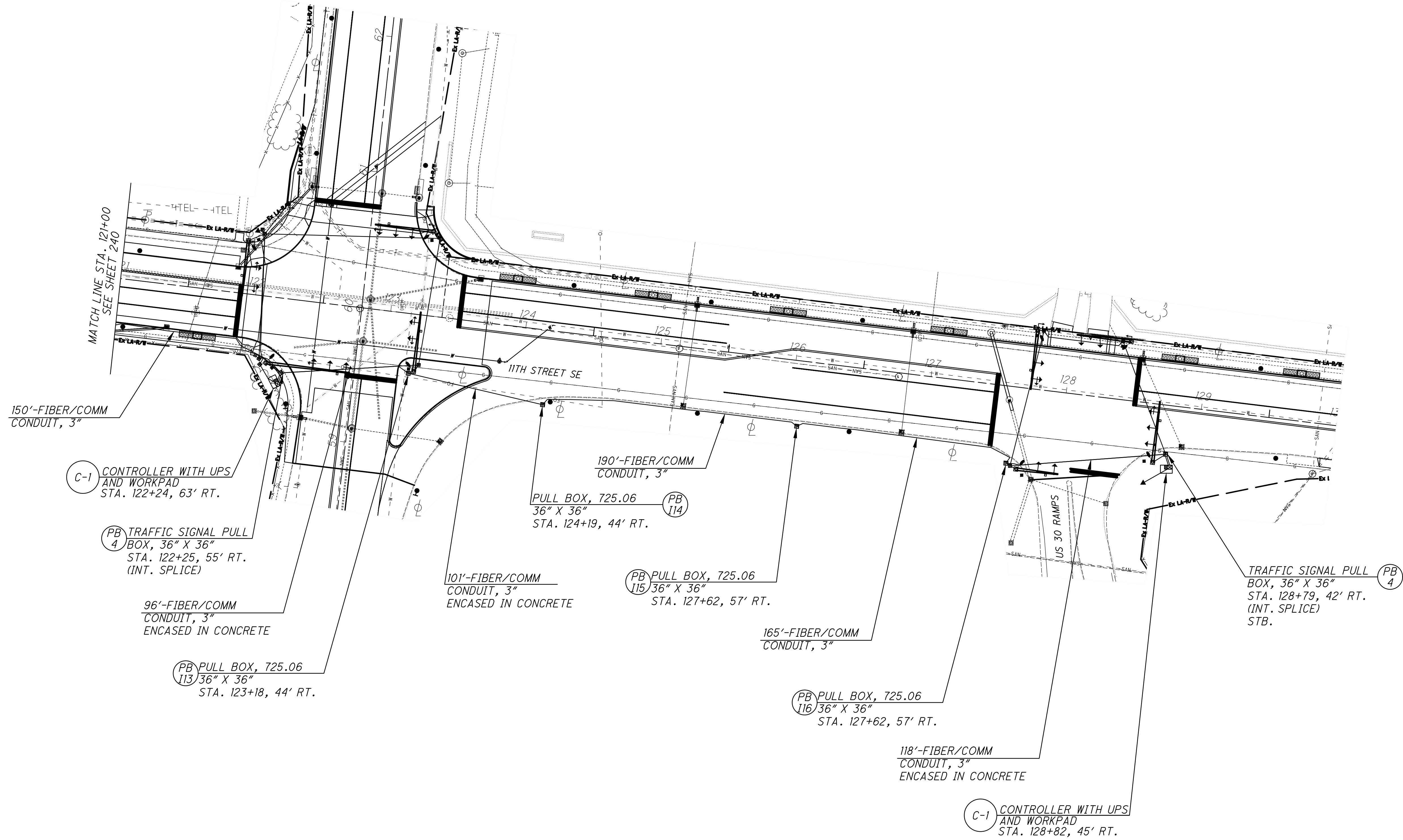
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INTERCONNECT PLAN
11TH STREET SE - STA. 121+00 TO STA. 130+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

LEGEND

-  TRAFFIC INTERCONNECT PULL BOX, 36"X36", 725.06
-  CONDUIT (ALL CONDUIT LABELED IN INTERCONNECT PLANS (EXCEPT AS NOTED) CONTAIN FIBER OPTIC CABLE, ARMORED, 48 FIBER. INTERCONNECT CONDUIT SHALL SHARE SAME TRENCH AS LIGHTING CONDUIT.)
-  CONTROLLER CABINET AND WORK PAD



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SHEET NO.	REFERENCE NO.	STATION		SIDE	ITEM DESCRIPTION															
		FROM	TO		625	625	625	625	625	804	804	804	804	804	804	804	804	804	804	
					FT	FT	FT	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LUMP	EACH	
239	PB-I1	102+68	105+08	RT	240			1		245										
	PB-I2	105+08	106+82	RT		171		1		176										
	PB-I3	106+82	108+30	RT	161			1		166										
	PB-I4	108+30	109+57	RT	129			1		134										
	PB-I5	109+57	110+28	RT		73		1		78										
	PB-I6	110+28	112+60	RT	237			1		242										
240	PB-I7	112+60	114+60	RT	200			1		205										
	PB-I8	114+60	116+70	RT	210			1		215										
	PB-I9	116+70	118+77	RT	207			1		212										
	PB-I10	118+77	120+24	RT	147			1		152										
	PB-I11	120+24	120+82	RT		58		1		63										
	PB-I12	120+82	122+25	RT	150			1		155										
241	PB-4 TO CONTROLLER	122+25	122+24	RT						178	2	1	2	1	12	1	2		1	
	PB-4	122+25	123+18	RT		96				101										
	PB-I13	123+18	124+19	RT		101	101	1	101	106										
	PB-I14	124+19	126+06	RT	190			1		195										
	PB-I15	126+06	127+62	RT	165			1		170										
	PB-I16	127+62	128+79	RT		118		1		123										
	PB-4 TO CONTROLLER	128+79	128+82	RT						165	2	1	2	1	12	1	2	LS	1	
TOTALS CARRIED TO GENERAL SUMMARY					2036	617	101	16	101	3081	4	2	4	2	24	2	4	LS	2	

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CX
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INTERCONNECT SUBSUMMARY

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

LIGHTING GENERAL

SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 725 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. REFERENCE SHALL BE MADE TO STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET OF THESE PLANS.

ITEM 625 - POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER ODOT SPECIFICATION 632 AND CITY OF CANTON STANDARDS. ELECTRIC POWER SHALL BE SUPPLIED BY AMERICAN ELECTRIC POWER.

AMERICAN ELECTRIC POWER (AEP)
301 CLEVELAND AVE. SW, BOX 24400
CANTON, OHIO 44701-4400
330-438-7739
ATTN: KEITH SCHALMO (330-438-7999)

POWER SERVICE IS TO BE METERED. THE SERVICE PEDESTAL SHALL BE MILBANK MODEL #CP3B5115AAOSP10. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS.

THE PROJECT WILL RECEIVE 120 VOLT/240 VOLT THREE-WIRE SECONDARY SERVICE FROM AMERICAN ELECTRIC POWER.

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN

THE LUMINAIRES SHALL BE UNION METAL DESIGN (#NL318R-3) AND SHALL BE FURNISHED PREWIRED AND MANUFACTURED AS DETAILED ON THE CITY OF CANTON STANDARDS CONSTRUCTION DRAWING NO. 63. THE CONTRACTOR SHALL VERIFY WITH CITY FOR THE CURRENT CITY STANDARD FOR THIS ITEM. THIS ITEM SHALL INCLUDE THE LED LAMP AS DETAILED ON THE STANDARD DRAWING NO. 63.

BASIS OF PAYMENT WILL BE AT THE CONTRACT BID PRICE PER EACH ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN, WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS (TWO LUMINAIRES), EQUIPMENT, INSTALLATION AND INCIDENTALS.

ITEM 625 - LUMINAIRE, CONVENTIONAL, AS PER PLAN

LUMINAIRES ON THE TRAFFIC SIGNAL BRACKET ARMS SHALL BE UNION METAL CAST ALUMINUM BODY "J" STYLE AND SHALL BE FURNISHED PREWIRED AND MANUFACTURED AS DETAILED ON THE CITY OF CANTON STANDARDS CONSTRUCTION DRAWING NO. 61. THE CONTRACTOR SHALL VERIFY WITH CITY FOR THE CURRENT CITY STANDARD FOR THIS ITEM. THIS ITEM SHALL INCLUDE THE LED LAMP AS DETAILED ON THE STANDARD DRAWING NO. 64.

BASIS OF PAYMENT WILL BE AT THE CONTRACT BID PRICE PER EACH ITEM 625 - LUMINAIRE, CONVENTIONAL, AS PER PLAN, WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, INSTALLATION AND INCIDENTALS.

ITEM 625 - LIGHT POLE FOUNDATION, MISC.: 30" X 6' DEEP

FOUNDATIONS SHALL BE 30 IN. X 6 FT. AS DETAILED ON THE CITY OF CANTON STANDARDS CONSTRUCTION DRAWING NO. 65. EXCAVATION AND EMBANKMENT SHALL BE AN INCIDENTAL COST TO THE PAY ITEM.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR EACH ITEM 625, LIGHT POLE FOUNDATION, MISC.: 30" X 5' DEEP, WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT TO COMPLETE THIS WORK.

ITEM 625 - PULL BOX, MISC.: 725.06 (17" X 30")

PULL BOXES SHALL BE MANUFACTURED BY CARSON BROOKS, QUAZITE OR SYNERTECH OR APPROVED EQUAL. ALL PULL BOXES SHALL INCLUDE A POLYMER CONCRETE RING AND COVER TYPE, OR EQUAL, AND SHALL BE MARKED "ELECTRIC". THE PULL BOX SHALL BE FIBERGLASS REINFORCED POLYESTER, OR EQUAL, WITH INSERTS AND SHALL BE 18" IN DEPTH. EACH PULL BOX SHALL INCLUDE TWO (2) STAINLESS STEEL HEX BOLTS. EACH PULL BOX AND COVER SHALL HAVE A MINIMUM LOAD RATING OF 20,000 POUNDS CAPACITY IN ACCORDANCE WITH THE WESTERN UNDERGROUND COMMITTEE GUIDE 3.6. UNDERDRAINS SHALL NOT BE INSTALLED IN PULL BOXES.

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF CITY, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY CITY'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF CITY, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

ITEM 625 - ARC FLASH CALCULATIONS AND LABEL (CC)

THE CONTRACTOR SHALL SATISFY THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 825 FOR EACH OF THE NEW LIGHTING CONTROL CENTER INDICATED IN THE PLANS. THE CONTRACTOR MAY BE ABLE TO OBTAIN LABELS FOR ODOT MAINTAINED INSTALLATIONS FROM THE ODOT SIGN SHOP, 1606 WEST BROAD STREET, COLUMBUS, OH 43223. FOR NON-ODOT MAINTAINED INSTALLATIONS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE LABEL MADE FROM "ENGINEER GRADE" SIGN SHEETING OR AN EQUIVALENT COMMERCIAL LABEL MATERIAL.

THE ODOT OFFICE OF ROADWAY ENGINEERING HAS AN EXCEL SPREADSHEET, AVAILABLE UPON REQUEST, TO ASSIST WITH MAKING AND DOCUMENTING THE REQUIRED CALCULATIONS. METHOD OF MEASUREMENT SHALL BE PER 825.06. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUMMARY.

ITEM 625 ARC FLASH CALCULATION AND LABEL (CC) - EACH

ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN

NOSTALGIA LIGHT POLES SHALL BE UNION METAL PACIFIC FAMILY SERIES (VERIFY WITH CITY FOR CURRENT STANDARD DESIGN).

UNION METAL CORPORATION
1432 MAPLE AVENUE N.E.
P.O. BOX 9920
CANTON, OH 44711
PHONE: 330-456-7653

THE CONTRACTOR SHALL FURNISH AND INSTALL DECORATIVE LIGHT POLES, AS PER PLAN. POLES SHALL INCLUDE HANDHOLE, CHAIN, AND COVER. ALL HARDWARE INCLUDING BRACKET ARMS AND RELATED EQUIPMENT SHALL BE INCLUDED WITH THIS ITEM. THE ENTIRE ASSEMBLY SHALL BE INCLUDED WITH THIS ITEM. THE ENTIRE ASSEMBLY SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF AASHTO. THE ORNAMENTAL BASE SHALL BE UNION METAL CORPORATION BASE NO. 74 AND SHALL BE LEVEL IN ORDER TO ACCEPT THE BASE ASSEMBLY AND SHALL BE AT LEAST AS LARGE AS THE BOTTOM DIMENSION OF THE ORNAMENTAL BASE CASTING. ALL PROPOSED EXTERIOR CONNECTIONS (PEDESTRIAN SIGNAL HEADS, SIGNS, ETC.) TO DECORATIVE LIGHT POLES SHALL BE FIELD DRILLED. BANDING OR STRAPPING ON THE DECORATIVE LIGHT POLES SHALL NOT BE PERMITTED. A PERMANENT LEGIBLE MARKING INDICATION SHALL BE INCLUDED ON EACH DECORATIVE LUMINAIRE SUPPORT. THE FOLLOWING INDICATION SHALL BE REQUIRED AS A MINIMUM:

- A. POLE INDICATIONS, MONTH/DATE OF FABRICATION, POLE GAUGE, BOTTOM DIAMETER, POLE HEIGHT, BOLT CIRCLE, ANCHOR BOLT DIAMETER, FLANGE BOLT DIAMETER, AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.

EACH POLE SHALL INCLUDE AN OUTLET FRAME INTEGRALLY WELDED INTO THE TOP OF THE SHAFT TO ACCOMMODATE A DUPLEX 20A-125V, GFI RECEPTACLE PROVIDED WITH THE POLE. A WEATHERPROOF COVER PAINTED TO MATCH THE POLE SHALL ALSO BE PROVIDED.

EACH POLE SHALL INCLUDE PROVISIONS FOR AN ALUMINUM FLAG HOLDER BRACKET, FLOWER HOLDER AND BANNER ARMS.

BASIS OF PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN, WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, INSTALLATION, ANCHOR BOLTS, COVER BASE, PAINTING, AND INCIDENTALS.

NOSTALGIA SIGNAL SUPPORT AND PEDESTAL AND DECORATIVE LIGHT POLE PAINTING

LUMINAIRE POLE AND BRACKETS SHALL BE PAINTED (SURFACE PREPARATION, PRIMER APPLICATION, AND FINISH COATING OF GALVANIZED SUBSTRATES). THE FOLLOWING SHALL APPLY:

- A. SURFACE PREPARATION:
PRE CLEAN SUBSTRATES SSPC-SP-1 SOLVENT CLEANING SPECIFICATION, PREPARE GALVANIZED SUBSTRATES BY ABRASIVE BLASTING TO SSPC-SP-7. BRUSH-OFF BLAST CLEANING SPECIFICATION.
- B. COLOR:
THE COLOR OF THE POLES SHALL BE CBD GREEN (COLOR AND FORMULA IS ON FILE AT THE MIDWEST TANK SERVICES CO. INC., CANTON, OH).
- C. MATERIALS:
PRIMER-APPLY ONE (1) COAT OF POLYAMIDE UNIVERSAL EPOXY PRIMER-LIGHT GRAY AT A DRY FILM THICKNESS OF 2.0-4.0 MILS.
1ST INTERMEDIATE-APPLY ONE (1) COAT OF HIGH BUILD EPOXY-BUFF COLOR AT A DRY FILM THICKNESS OF 4.0-8.0 MILS
2ND INTERMEDIATE- APPLY ONE (1) COAT OF ALIPHATIC ACRYLIC URETHANE-CBD GREEN AT A DRY FILM THICKNESS OF 2.0-3.0 MILS.
FINISH-APPLY ONE (1) COAT OF ALIPHATIC URETHANE-CLEAR AT A DRY FILM THICKNESS OF 2.0-3.0 MILS
- D. APPLICATION:
APPLICATION(S) OF COATING(S) SHALL BE BY SPRAY METHOD ONLY BY INDUSTRY STANDARDS OF GOOD WORKMANSHIP AND PRACTICES.
- E. INSPECTIONS:
INSPECTION OF APPLIED COATINGS SHALL BE IN ACCORDANCE WITH THE SOCIETY FOR PROTECTIVE COATINGS (SSPC) PAINT APPLICATION STANDARD NO. 2. MEASUREMENT OF DRY COATING THICKNESS WITH MAGNETIC GAGES (SSPC-PA2).
- F. WARRANTY:
COATING MANUFACTURER SHALL PROVIDE A TEN YEAR (10 YEAR) MATERIALS PERFORMANCE GUARANTEE.

THE COST FOR NOSTALGIA DECORATIVE LIGHT POLE PAINTING SHOULD BE INCLUDED IN AND INCIDENTAL TO ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN.

ITEM 625 - CONDUIT, 2", 725.05, AS PER PLAN

ALL CONDUITS AND FITTINGS SHALL BE TYPE EB, SCHEDULE 40 PVC ENCASED IN CONCRETE. ALL CONDUITS SHALL HAVE PULL WIRE. ALL CONDUITS ENTERING A PULL BOX, POLE, ETC. SHALL NOT EXTEND MORE THAN 1" BEYOND ENTERING THE PULL BOX, POLE, ETC.

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LIGHTING GENERAL NOTES

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

243
302

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REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			625	625	625	625	625	625	625	625	625	625	625	625	625	SPECIAL	625	625	625	625	625	625	
						CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PULL APART	LIGHT POLE, DECORATIVE, AS PER PLAN	LIGHT POLE FOUNDATION, MISC.: 30" X 6' DEEP	NO. 6 AWG 600 VOLT DISTRIBUTION CABLE	NO. 12 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.05	CONDUIT, 2", 725.05, AS PER PLAN	CONDUIT, JACKED OR DRILLED, 725.04, 2"	LUMINAIRE, CONVENTIONAL, AS PER PLAN	LUMINAIRE, DECORATIVE, AS PER PLAN	TRENCH	PULL BOX, MISC.: 725.06 (17" X 30")	GROUND ROD	POWER SERVICE, AS PER PLAN	UNDERGROUND WARNING/MARKING TAPE	MAINTAIN EXISTING LIGHTING	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED
						EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	FT		EACH	EACH	EACH	EACH	EACH	EACH		
PB-A10	250	11TH ST SE	106+84	RT	106+90					284			61			61										
			106+84	RT	105+07								170			170										
			106+84	RT	107+61							83				83										
PB-A11	250	11TH ST SE	106+90	RT											1											
			106+90	RT	107+16					136		24				24										
			106+90	RT	108+30							136				136										
AD-7	250	11TH ST SE	107+16	LT						120						2			1							
			107+16	LT	20+16					336		74				74										
AD-8	250	MARKET AVE	20+16	RT						120						2			1							
			20+16	RT	21+30					484		111				111										
AD-9	250	MARKET AVE	21+30	RT						120						2			1							
			21+30	RT	22+19					412		93				93										
AD-10	250	MARKET AVE	22+19	RT						120						2			1							
			22+19	RT	22+30					88		12				12										
PB-A1	250	MARKET AVE	22+30	RT												1										
			22+30	RT	22+33					228		4				4										
PB-A17	254	MARKET AVE	26+64	LT												1										
			26+64	LT	26+28							36				36										
AB-4	254	MARKET AVE	26+28	LT						120						2			1							
			26+28	LT	25+34					416		94				94										
AB-3	254	MARKET AVE	25+34	LT						120						2			1							
			25+34	LT	25+13					124		21				21										
PB-A16	254	MARKET AVE	25+13	LT												1										
			25+13	LT	24+79					176		34				34										
PB-A15	254	MARKET AVE	24+79	LT												1										
			24+79	LT	24+27					248		52				52										
AB-2	254	MARKET AVE	24+27	LT						120						2			1							
			24+27	LT	24+00					148		27				27										
PB-A14	254	MARKET AVE	24+00	LT												1										
			24+00	LT	23+65					180		35				35										
PB-A13	254	MARKET AVE	23+65	LT												1										
			23+65	LT	23+25					200		40				40										
AB-1	254	MARKET AVE	23+25	LT						120						2			1							
			23+25	LT	22+80					220		45				45										
PB-A12	254	MARKET AVE	22+80	LT												1										
			22+80	LT	22+30					240		50				50										
BA-1	250	11TH ST SE	108+30	LT						120						2			1							
			108+30	LT	109+31					440		100				100										
BA-2	250	11TH ST SE	109+31	LT						120						2			1							
			109+31	LT	110+31					440		100				100										
BA-3	251	11TH ST SE	110+31	LT						120						2			1							
			110+31	LT	111+32					444		101				101										
BA-4	251	11TH ST SE	111+32	LT						120						2			1							
			111+32	LT	112+36					456		104				104										
BA-5	251	11TH ST SE	112+36	LT						120						2			1							
			112+36	LT	113+36					448		102				102										
BA-6	251	11TH ST SE	113+36	LT						120						2			1							
			113+36	LT	114+30					424		96				96										
BA-7	251	11TH ST SE	114+30	LT						120						2			1							
			114+30	LT	115+39					488		112				112										
BA-8	251	11TH ST SE	115+39	LT						120						2			1							
			115+39	LT	116+25					388		87				87										
BA-9	251	11TH ST SE	116+25	LT						120						2			1							
			116+25	LT	117+36					488		112				112										
BA-10	251	11TH ST SE	117+36	LT						120						2			1							
			117+36	LT	118+36					440		100				100										
TOTALS CARRIED TO 249						54	18	18	18	8376	2160	1866	350	0	0	36	2216	9	18	0	2216	0	0	0	0	0

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REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			625	625	625	625	625	625	625	625	625	625	625	625	SPECIAL	625	625	625	625	625	625		
						CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PULL APART	LIGHT POLE, DECORATIVE, AS PER PLAN	LIGHT POLE FOUNDATION, MISC.: 30" X 6' DEEP	NO. 6 AWG 600 VOLT DISTRIBUTION CABLE	NO. 12 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.05	CONDUIT, 2", 725.05, AS PER PLAN	CONDUIT, JACKED OR DRILLED, 725.04, 2"	LUMINAIRE, CONVENTIONAL, AS PER PLAN	LUMINAIRE, DECORATIVE, AS PER PLAN	TRENCH	PULL BOX, MISC.: 725.06 (17" X 30")	GROUND ROD	POWER SERVICE, AS PER PLAN	UNDERGROUND WARNING/MARKING TAPE	MAINTAIN EXISTING LIGHTING	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED
					EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
BA-11	251	11TH ST SE	118+36	LT					124	21																
PB-B3	251	11TH ST SE	118+36	LT	118+57																					
			118+57	LT	119+23				300		65															
PB-B2	251	11TH ST SE	119+23	LT																						
BA-12	251	11TH ST SE	119+23	LT	119+29				64	6																
			119+29	LT	120+17																					
BA-13	252	11TH ST SE	120+17	LT					120																	
			120+17	LT	121+12				420																	
BA-14	252	11TH ST SE	121+12	LT					120																	
			121+12	LT	121+90				408	92																
BA-15	252	11TH ST SE	121+90	LT					165																	
			121+90	LT	121+97				72	8																
PB-B1	252	11TH ST SE	121+97	LT																						
			121+97	LT	121+96				368	8																
PS-B	252	11TH ST SE	121+96	LT																				1		
BB-1	250	11TH ST SE	107+61	RT					120																	
			107+61	RT	108+48				412	93																
BB-2	250	11TH ST SE	108+48	RT					120																	
			108+48	RT	109+49				436	99																
BB-3	251	11TH ST SE	109+49	RT					120																	
			109+49	RT	109+59				88	12																
PB-B8	251	11TH ST SE	109+59	RT																						
			109+59	RT	110+25				304		66															
PB-B7	251	11TH ST SE	110+25	RT																						
			110+25	RT	110+31				64	6																
BB-4	251	11TH ST SE	110+31	RT					120																	
			110+31	RT	111+32				444	101																
BB-5	251	11TH ST SE	111+32	RT					120																	
			111+32	RT	112+36				456	104																
BB-6	251	11TH ST SE	112+36	RT					120																	
			112+36	RT	113+36				432	98																
BB-7	251	11TH ST SE	113+36	RT					120																	
			113+36	RT	114+36				432	98																
BB-8	251	11TH ST SE	114+36	RT					120																	
			114+36	RT	115+36				432	98																
BB-9	251	11TH ST SE	115+36	RT					120																	
			115+36	RT	116+36				440	100																
BB-10	251	11TH ST SE	116+36	RT					120																	
			116+36	RT	117+36				444	101																
BB-11	251	11TH ST SE	117+36	RT					120																	
			117+36	RT	118+20				380	85																
BB-12	251	11TH ST SE	118+20	RT					120																	
			118+20	RT	119+24				456	104																
BB-13	251	11TH ST SE	119+24	RT					120																	
			119+24	RT	120+16				408	92																
BB-14	252	11TH ST SE	120+16	RT					120																	
			120+16	RT	120+27				84	11																
PB-B6	252	11TH ST SE	120+27	RT																						
			120+27	RT	120+80				252		53															
PB-B5	252	11TH ST SE	120+80	RT																						
			120+80	RT	121+06				144	26																
BB-15	252	11TH ST SE	121+06	RT					120																	
			121+06	RT	122+13				520	120																
BB-16	252	11TH ST SE	122+13	RT					165																	
			122+13	RT	122+18				64	6																
TOTALS CARRIED TO 249																										
					63	21	19	19	8840	2610	1672	184	0	2	38	1856	7	19	1	1856	0	0	0	0	0	1

246	CALCULATED
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302	CHECKED
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LIGHTING SUBSUMMARY

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			625	625	625	625	625	625	625	625	625	625	625	625	SPECIAL	625	625	625	625	625	625	
						CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PULL APART	LIGHT POLE, DECORATIVE, AS PER PLAN	LIGHT POLE FOUNDATION, MISC.: 30" X 6' DEEP	NO. 6 AWG 600 VOLT DISTRIBUTION CABLE	NO. 12 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.05	CONDUIT, 2", 725.05, AS PER PLAN	CONDUIT, JACKED OR DRILLED, 725.04, 2"	LUMINAIRE, CONVENTIONAL, AS PER PLAN	LUMINAIRE, DECORATIVE, AS PER PLAN	TRENCH	PULL BOX, MISC.: 725.06 (17" X 30")	GROUND ROD	POWER SERVICE, AS PER PLAN	UNDERGROUND WARNING/MARKING TAPE	MAINTAIN EXISTING LIGHTING	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED
					EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
BB-17	252	CHERRY AVE	59+23	LT		3	1	1	1	120					2			1							
			59+23	LT	122+18					180		35						35							
BB-18	252	11TH ST SE	123+22	RT	123+18	3	1			56		4			1			4							
PB-B12	252	11TH ST SE	123+18	RT													1								
			123+18	RT	122+18					440		100													
PB-B4	252	11TH ST SE	122+18	RT													1								
			122+18	RT	121+97					420		95													
PB-B9	252	CHERRY AVE	65+14	LT													1								
			65+14	LT	EX LIGHT					520															
			65+14	LT	65+08					64		6						6							
BC-5	252	CHERRY AVE	65+08	LT		3	1	1	1	120				2			1								
			65+08	LT	64+08					452		103						103							
BC-4	252	CHERRY AVE	64+08	LT		3	1	1	1	120				2			1								
			64+08	LT	63+08					440		100						100							
BC-3	252	CHERRY AVE	63+08	LT		3	1	1	1	120				2			1								
			63+08	LT	62+09					440		100						100							
BC-2	252	CHERRY AVE	62+09	LT		3	1	1	1	120				2			1								
			62+09	LT	61+09					440		100						100							
BC-1	252	CHERRY AVE	61+09	LT		3	1	1	1	120				2			1								
			61+09	LT	121+97					364		81						81							
PB-B10	252	CHERRY AVE	65+14	RT													1								
			65+14	RT	EX LIGHT					520															
			65+14	RT	65+08					64		6						6							
BD-6	252	CHERRY AVE	65+08	RT		3	1	1	1	120				2			1								
			65+08	RT	64+08					440		100						100							
BD-5	252	CHERRY AVE	64+08	RT		3	1	1	1	120				2			1								
			64+08	RT	63+08					440		100						100							
BD-4	252	CHERRY AVE	63+08	RT		3	1	1	1	120				2			1								
			63+08	RT	61+95					500		115						115							
BD-3	252	CHERRY AVE	61+95	RT		3	1	1	1	120				2			1								
			61+95	RT	61+09					388		87						87							
BD-2	252	CHERRY AVE	61+09	RT		3	1	1	1	120				2			1								
			61+09	RT	123+24					244		51						51							
BD-1	252	11TH ST SE	123+24	LT		3	1			165				1											
			123+24	LT	124+24					68		7						7							
PB-B11	252	11TH ST SE	123+24	LT													1								
			123+24	LT	121+97					548			127												
			123+24	LT	124+31							116						116							
			123+24	LT	123+18							96													
CA-1	252	11TH ST SE	124+31	LT		3	1	1	1	120				2			1								
			124+31	LT	125+33					448		102						102							
CA-2	252	11TH ST SE	125+33	LT		3	1	1	1	120				2			1								
			125+33	LT	126+45					488		112						112							
CA-3	252	11TH ST SE	126+45	LT		3	1	1	1	120				2			1								
			126+45	LT	127+74					580		135						135							
CA-4	252	11TH ST SE	127+74	LT		3	1			165				1											
			127+74	LT	127+73					56		4						4							
PB-C3	252	11TH ST SE	127+73	LT																					
			127+73	LT	128+37					296		64													
PB-C2	252	11TH ST SE	128+37	LT																					
			128+37	LT	128+63					768		86													
CB-1	252	CHERRY AVE	58+71	RT		3	1	1	1	120				2			1								
			58+71	RT	124+24					552		128						128							
TOTALS CARRIED TO 249						54	18	15	15	10216	2295	1592	568	0	3	30	1592	7	15	0	1592	0	0	0	0

REF NO.	SHEET NO.	ROADWAY	STATION TO STATION			625	625	625	625	625	625	625	625	625	625	625	625	SPECIAL	625	625	625	625	625	625					
						CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PULL APART	LIGHT POLE, DECORATIVE, AS PER PLAN	LIGHT POLE FOUNDATION, MISC.: 30" X 6' DEEP	NO. 6 AWG 600 VOLT DISTRIBUTION CABLE	NO. 12 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.05	CONDUIT, 2", 725.05, AS PER PLAN	CONDUIT, JACKED OR DRILLED, 725.04 2"	LUMINAIRE, CONVENTIONAL, AS PER PLAN	LUMINAIRE, DECORATIVE, AS PER PLAN	TRENCH	PULL BOX, MISC.: 725.06 (17" X 30")	GROUND ROD	POWER SERVICE, AS PER PLAN	UNDERGROUND WARNING/MARKING TAPE	MAINTAIN EXISTING LIGHTING	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED	DISCONNECT CIRCUIT	ARC FLASH CALCULATIONS AND LABEL (CC)	
					EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH					
CB-2	252	11TH ST SE	124+24 RT			3	1	1	1	120					2		1												
			124+24 RT		125+33					476		109				109													
CB-3	252	11TH ST SE	125+33 RT			3	1	1	1	120				2		1													
			125+33 RT		126+45					488		112				112													
CB-4	252	11TH ST SE	126+45 RT			3	1	1	1	120				2		1													
			126+45 RT		127+70					556		129				129													
CB-5	252	11TH ST SE	127+70 RT			3	1			165				1															
			127+70 RT		127+75					64		6				6													
PB-C4	252	11TH ST SE	127+75 RT														1												
			127+75 RT		128+63					404			91																
			127+75 RT		127+73								103																
PB-C1	252	11TH ST SE	128+63 RT														1												
			128+63 RT		128+64					464		14				14													
PS-C	252	11TH ST SE	128+64 RT														1							1					
PB-C9	253	11TH ST SE	136+33 LT														1												
			136+33 LT		136+28							6				6													
CC-9	253	11TH ST SE	136+28 LT			3	1	1	1	120				2		1													
			136+28 LT		135+32					424		96				96													
CC-8	253	11TH ST SE	135+32 LT			3	1	1	1	120				2		1													
			135+32 LT		134+87					220		45				45													
PB-C8	253	11TH ST SE	134+87 LT														1												
			134+87 LT		134+46					204			41																
PB-C7	253	11TH ST SE	134+46 LT														1												
			134+46 LT		134+39					68		7				7													
CC-7	253	11TH ST SE	134+39 LT			3	1	1	1	120				2		1													
			134+39 LT		133+23					504		116				116													
CC-6	253	11TH ST SE	133+23 LT			3	1	1	1	120				2		1													
			133+23 LT		132+28					424		96				96													
CC-5	253	11TH ST SE	132+28 LT			3	1	1	1	120				2		1													
			132+28 LT		131+39					396		89				89													
CC-4	253	11TH ST SE	131+39 LT			3	1	1	1	120				2		1													
			131+39 LT		130+40					436		99				99													
CC-3	253	11TH ST SE	130+40 LT			3	1	1	1	120				2		1													
			130+40 LT		129+40					440		100				100													
CC-2	252	11TH ST SE	129+40 LT			3	1	1	1	120				2		1													
			129+40 LT		128+43					452		103				103													
CC-1	252	11TH ST SE	128+43 LT			3	1			165				1															
			128+43 LT		128+37					68		7				7													
CD-10	253	11TH ST SE	137+30 RT			3	1	1	1	120				2		1													
			137+30 RT		136+50					440		100				100													
CD-9	253	11TH ST SE	136+30 RT			3	1	1	1	120				2		1													
			136+30 RT		135+31					436		99				99													
CD-8	253	11TH ST SE	135+31 RT			3	1	1	1	120				2		1													
			135+31 RT		134+93					192		38				38													
PB-C6	253	11TH ST SE	134+93 RT														1												
			134+93 RT		134+45					232			48																
PB-C5	253	11TH ST SE	134+45 RT														1												
			134+45 RT		134+39					68		7				7													
CD-7	253	11TH ST SE	134+39 RT			3	1	1	1	120				2		1													
			134+39 RT		133+40					436		99				99													
CD-6	253	11TH ST SE	133+40 RT			3	1	1	1	120				2		1													
			133+40 RT		132+43					432		98				98													
CD-5	253	11TH ST SE	132+43 RT			3	1	1	1	120				2		1													
			132+43 RT		131+52					404		91				91													
CD-4	253	11TH ST SE	131+52 RT			3	1	1	1	120				2		1													
			131+52 RT		130+54					432		98				98													
TOTALS CARRIED TO 249							60	20	18	18	9160	2490	1764	194	89	2	36	1764	7	18	1	1764	0	0	0	0	0	0	1

LIGHTING SUBSUMMARY

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

CALCULATED
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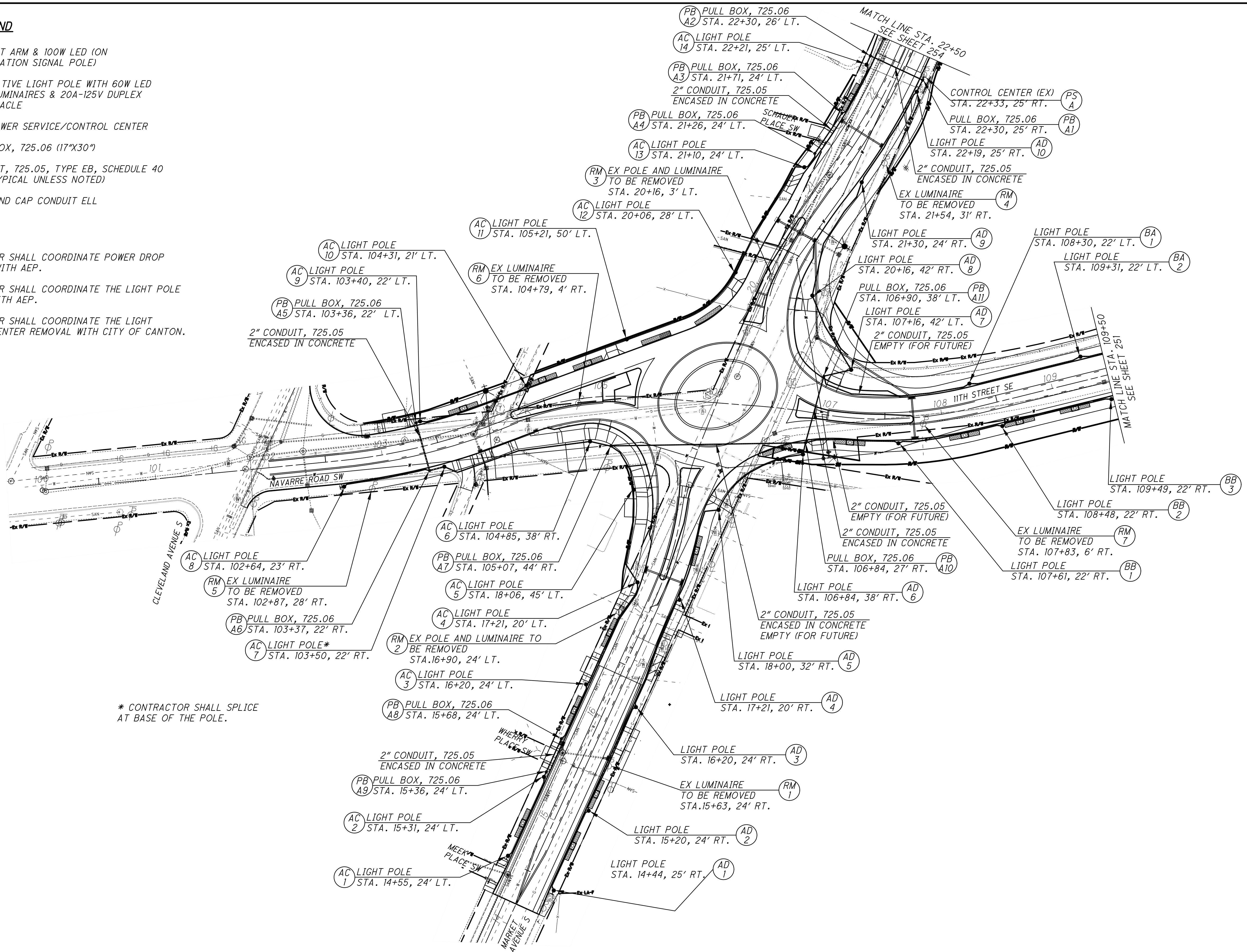
REF NO.	SHEET NO.	ROADWAY	STATION TO STATION				625	625	625	625	625	625	625	625	625	625	625	625	625	SPECIAL	625	625	625	625	625	625		
							CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PULL APART	LIGHT POLE, DECORATIVE, AS PER PLAN	LIGHT POLE FOUNDATION, MISC.: 30" X 6' DEEP	NO. 6 AWG 600 VOLT DISTRIBUTION CABLE	NO. 12 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.05	CONDUIT, 2", 725.05, AS PER PLAN	CONDUIT, JACKED OR DRILLED, 725.04, 2"	LUMINAIRE, CONVENTIONAL, AS PER PLAN	LUMINAIRE, DECORATIVE, AS PER PLAN	TRENCH	PULL BOX, MISC.: 725.06 (17" X 30")	GROUND ROD	POWER SERVICE, AS PER PLAN	UNDERGROUND WARNING/MARKING TAPE	MAINTAIN EXISTING LIGHTING	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED	POWER SERVICE REMOVED	DISCONNECT CIRCUIT
						EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	FT	LS	EACH	EACH	EACH	EACH	EACH		
CD-3	253	11TH ST SE	130+54	RT		3	1	1	1		120				2													
			130+54	RT	129+59					424		96					96											
CD-2	252	11TH ST SE	129+59	RT		3	1	1	1		120				2													
			129+59	RT	128+69					420		95					95											
CD-1	252	11TH ST SE	128+69	RT		3	1				165			1														
			128+69	RT	128+63					64		6					6											
RM-1	250	MARKET AVE	15+63	RT																			1		1			
RM-2	250	MARKET AVE	16+90	LT																		1	1	1	1			
RM-3	250	MARKET AVE	20+16	LT																		1	1	1	1			
RM-4	250	MARKET AVE	21+54	RT																			1		1			
RM-5	250	11TH ST SE	102+87	RT																			1		1			
RM-6	250	11TH ST SE	104+79	RT																			1		1			
RM-7	250	11TH ST SE	107+83	RT																			1		1			
RM-8	250	11TH ST SE	110+01	LT																			1		1			
RM-9	250	11TH ST SE	112+04	LT																			1		1			
RM-10	250	11TH ST SE	113+11	LT																			1		1			
RM-11	250	11TH ST SE	115+35	LT																			1		1			
RM-12	251	11TH ST SE	118+00	RT																		1	1	1	1			
RM-13	252	11TH ST SE	120+95	RT																		1	1	1	1			
RM-14	252	11TH ST SE	121+90	LT																		1	1	1	1			
RM-15	252	11TH ST SE	123+17	LT																		1	1	1	1			
RM-16	252	11TH ST SE	123+58	RT																		1	1	1	1			
RM-17	252	11TH ST SE	124+32	RT																		1	1	1	1			
RM-18	252	11TH ST SE	124+68	LT																		1	1	1	1			
RM-19	252	11TH ST SE	125+73	RT																		1	1	1	1			
RM-20	252	11TH ST SE	126+73	LT																		1	1	1	1			
RM-21	252	11TH ST SE	127+22	RT																		1	1	1	1			
RM-22	252	11TH ST SE	129+08	LT																		1	1	1	1			
RM-23	252	CHERRY AVE	58+58	RT																		1	1	1	1			
RM-24	252	CHERRY AVE	59+20	LT																		1	1	1	1			
RM-25	252	CHERRY AVE	61+75	LT																		1	1	1	1			
RM-26	252	CHERRY AVE	62+77	RT																		1	1	1	1			
RM-27	252	CHERRY AVE	63+82	LT																		1	1	1	1			
RM-28	252	CHERRY AVE	64+85	RT																		1	1	1	1			
RM-29	253	11TH ST SE	130+80	RT																		1	1	1	1			
RM-30	253	11TH ST SE	132+26	LT																		1	1	1	1			
RM-31	253	11TH ST SE	133+74	RT																		1	1	1	1			
RM-32	253	11TH ST SE	135+61	RT																			1		1			
RM-LCC	251	11TH ST SE	121+93	RT																				1				
TOTALS CARRIED TO 249						9	3	2	2	908	405	197	0	0	1	4	197	0	2	0	197	0	22	22	32	1	32	0
TOTALS CARRIED FROM 244						60	20	20	20	8500	2400	1590	170	0	0	40	1760	8	20	0	1760	1	0	0	0	0	0	0
TOTALS CARRIED FROM 245						54	18	18	18	8376	2160	1866	350	0	0	36	2216	9	18	0	2216	0	0	0	0	0	0	0
TOTALS CARRIED FROM 246						63	21	19	19	8840	2610	1672	184	0	2	38	1856	7	19	1	1856	0	0	0	0	0	0	1
TOTALS CARRIED FROM 247						54	18	15	15	10216	2295	1592	568	0	3	30	1592	7	15	0	1592	0	0	0	0	0	0	0
TOTALS CARRIED FROM 248						60	20	18	18	9160	2490	1764	194	89	2	36	1764	7	18	1	1764	0	0	0	0	0	0	1
TOTALS CARRIED FROM THIS SHEET						9	3	2	2	908	405	197	0	0	1	4	197	0	2	0	197	0	22	22	32	1	32	0
TOTALS CARRIED TO GENERAL SUMMARY						300	100	92	92	46000	12360	8681	1466	89	8	184	9385	38	92	2	9385	1	22	22	32	1	32	2

LEGEND

- BRACKET ARM & 100W LED (ON COMBINATION SIGNAL POLE)
- DECORATIVE LIGHT POLE WITH 60W LED TWIN LUMINAIRES & 20A-125V DUPLEX RECEPTACLE
- ▲ NEW POWER SERVICE/CONTROL CENTER
- PULL BOX, 725.06 (17"X30")
- CONDUIT, 725.05, TYPE EB, SCHEDULE 40 PVC (TYPICAL UNLESS NOTED)
- ┌ STUB AND CAP CONDUIT ELL

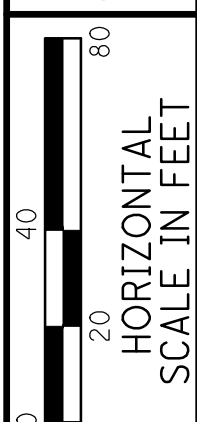
NOTE:

- CONTRACTOR SHALL COORDINATE POWER DROP LOCATION WITH AEP.
- CONTRACTOR SHALL COORDINATE THE LIGHT POLE REMOVAL WITH AEP.
- CONTRACTOR SHALL COORDINATE THE LIGHT CONTROL CENTER REMOVAL WITH CITY OF CANTON.



* CONTRACTOR SHALL SPLICE AT BASE OF THE POLE.

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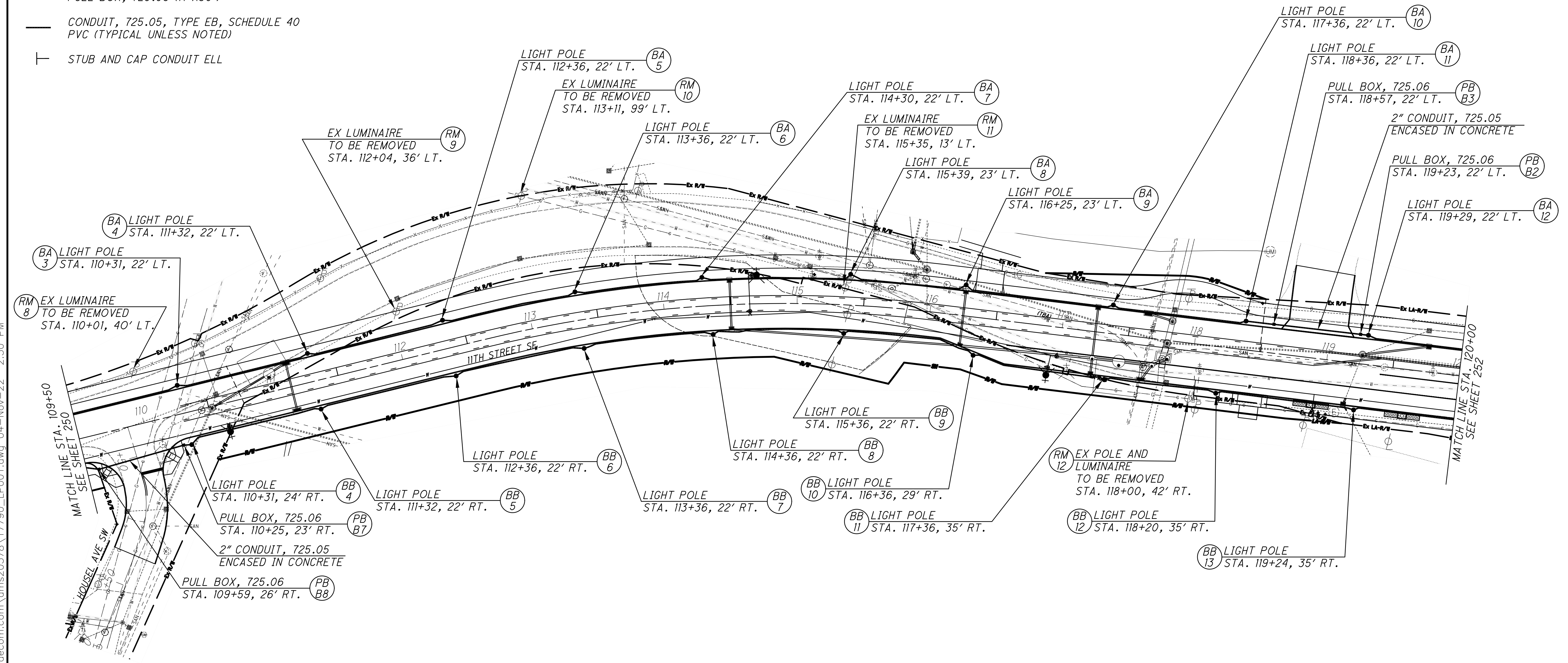
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CX
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11TH STREET SE - STA. 109+50 TO STA. 120+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

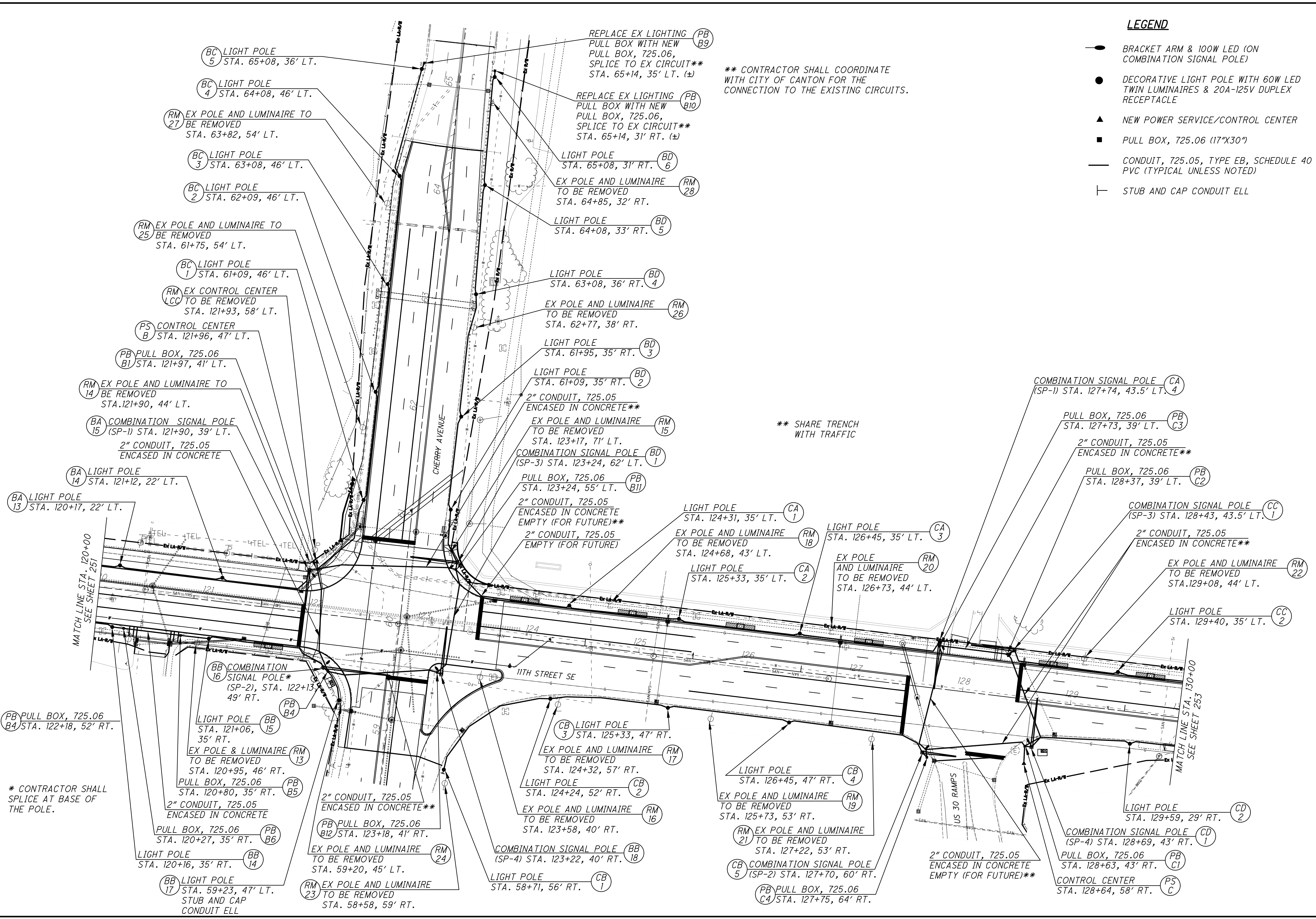
LEGEND

- BRACKET ARM & 100W LED (ON COMBINATION SIGNAL POLE)
- DECORATIVE LIGHT POLE WITH 60W LED TWIN LUMINAIRES & 20A-125V DUPLEX RECEPTACLE
- ▲ NEW POWER SERVICE/CONTROL CENTER
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- ┌ STUB AND CAP CONDUIT ELL



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LEGEND

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- DECORATIVE LIGHT POLE WITH 60W LED TWIN LUMINAIRES & 20A-125V DUPLEX RECEPTACLE
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- CONDUIT, 725.05, TYPE EB, SCHEDULE 40 PVC (TYPICAL UNLESS NOTED)
- └ STUB AND CAP CONDUIT ELL

** CONTRACTOR SHALL COORDINATE WITH CITY OF CANTON FOR THE CONNECTION TO THE EXISTING CIRCUITS.

** SHARE TRENCH WITH TRAFFIC



**LIGHTING PLAN
11TH STREET SE - STA. 120+00 TO STA. 130+00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

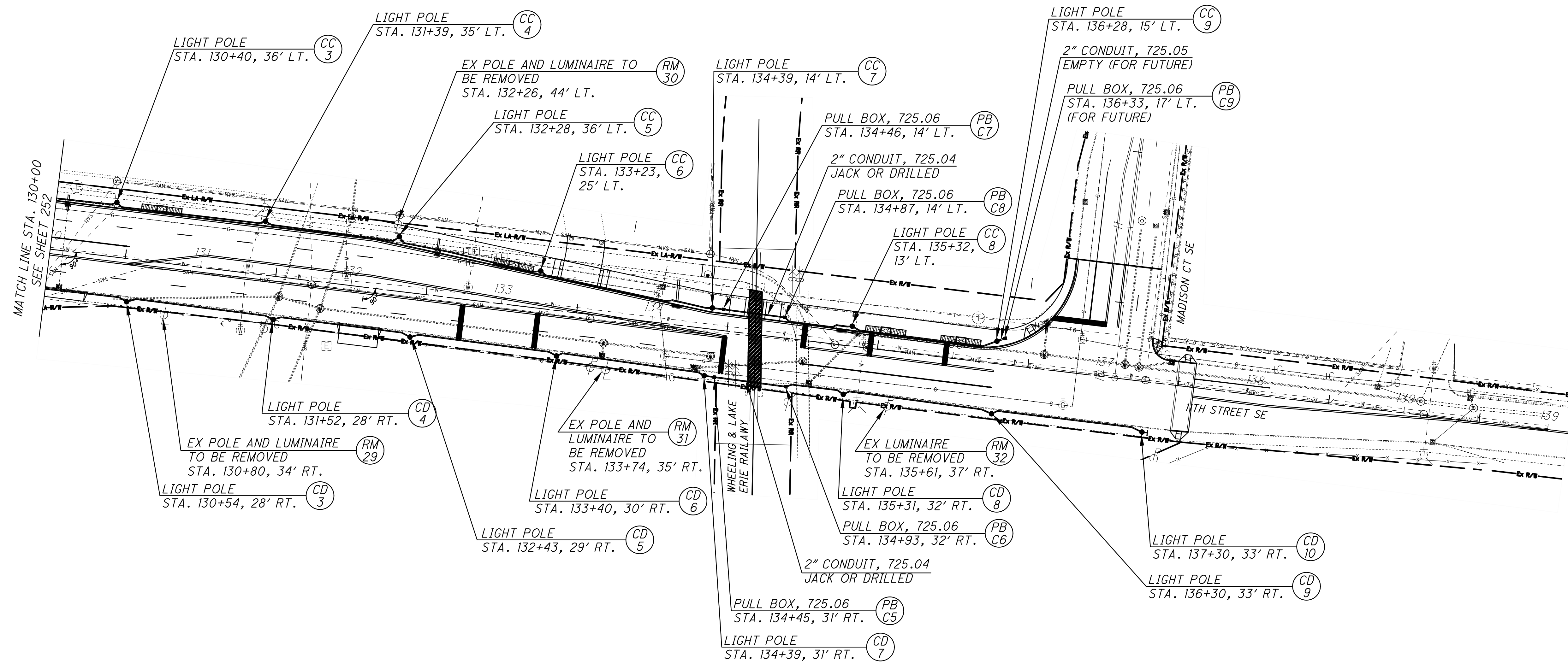
LEGEND

- BRACKET ARM & 100W LED (ON COMBINATION SIGNAL POLE)
- DECORATIVE LIGHT POLE WITH 60W LED TWIN LUMINAIRES & 20A-125V DUPLEX RECEPTACLE
- ▲ NEW POWER SERVICE/CONTROL CENTER
- PULL BOX, 725.06 (17"X30")
- CONDUIT, 725.05, TYPE EB, SCHEDULE 40 PVC (TYPICAL UNLESS NOTED)
- ┤ STUB AND CAP CONDUIT ELL

N

0 20 40 60 80
HORIZONTAL SCALE IN FEET

CALCULATED CX
CHECKED JAN



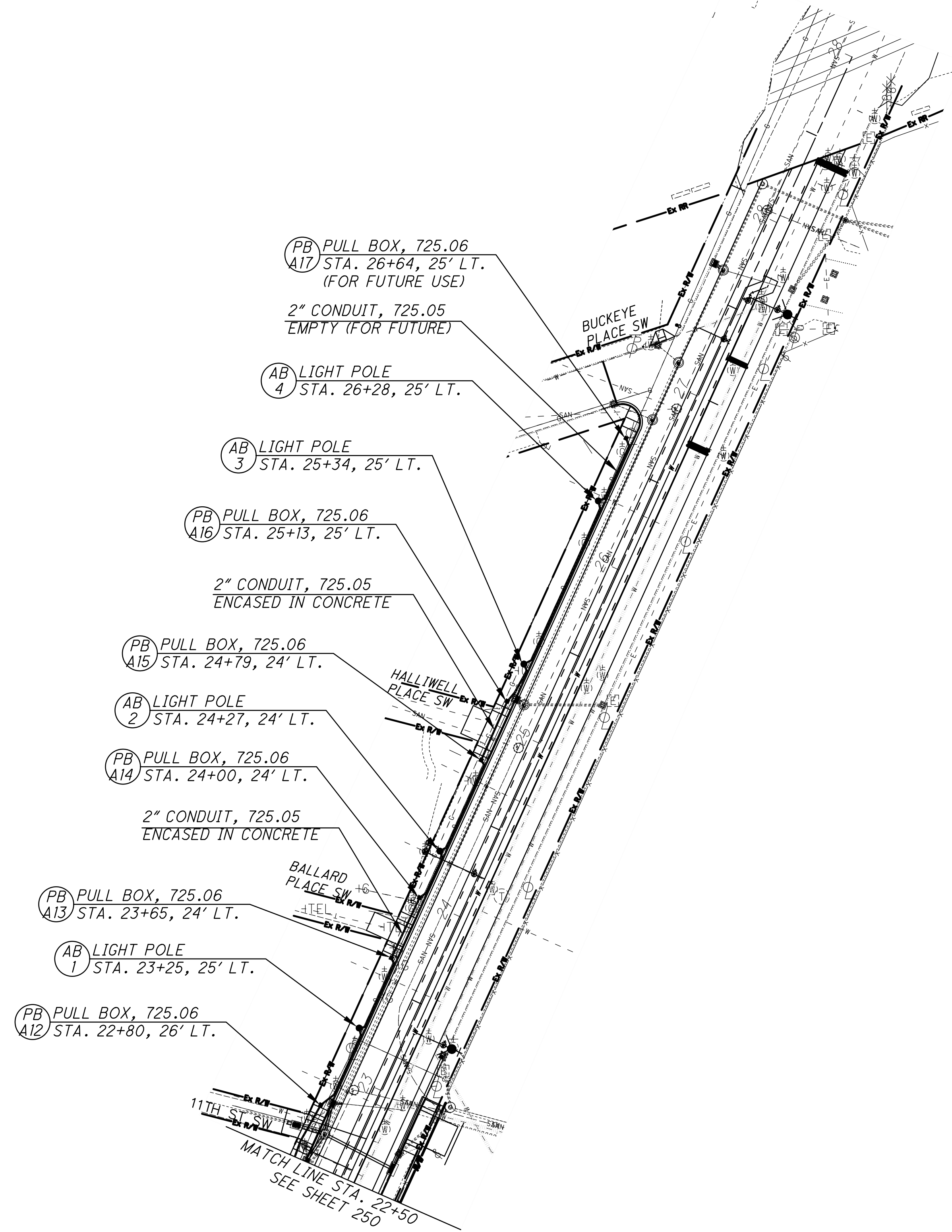
LIGHTING PLAN
11TH STREET SE - STA. 130+00 TO ENDING

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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LEGEND

- BRACKET ARM & 100W LED (ON COMBINATION SIGNAL POLE)
- DECORATIVE LIGHT POLE WITH 60W LED TWIN LUMINAIRES & 20A-125V DUPLEX RECEPTACLE
- ▲ NEW POWER SERVICE/CONTROL CENTER
- PULL BOX, 725.06 (17"X30")
- CONDUIT, 725.05, TYPE EB, SCHEDULE 40 PVC (TYPICAL UNLESS NOTED)
- └ STUB AND CAP CONDUIT ELL

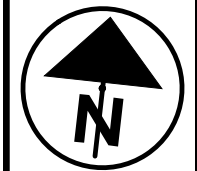


CALCULATED CX
 CHECKED JAN

**LIGHTING PLAN
 MARKET AVENUE S - STA. 22+50 TO ENDING**

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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HORIZONTAL SCALE IN FEET

CALCULATED BY CX CHECKED BY JAN

LIGHTING CIRCUIT DIAGRAM

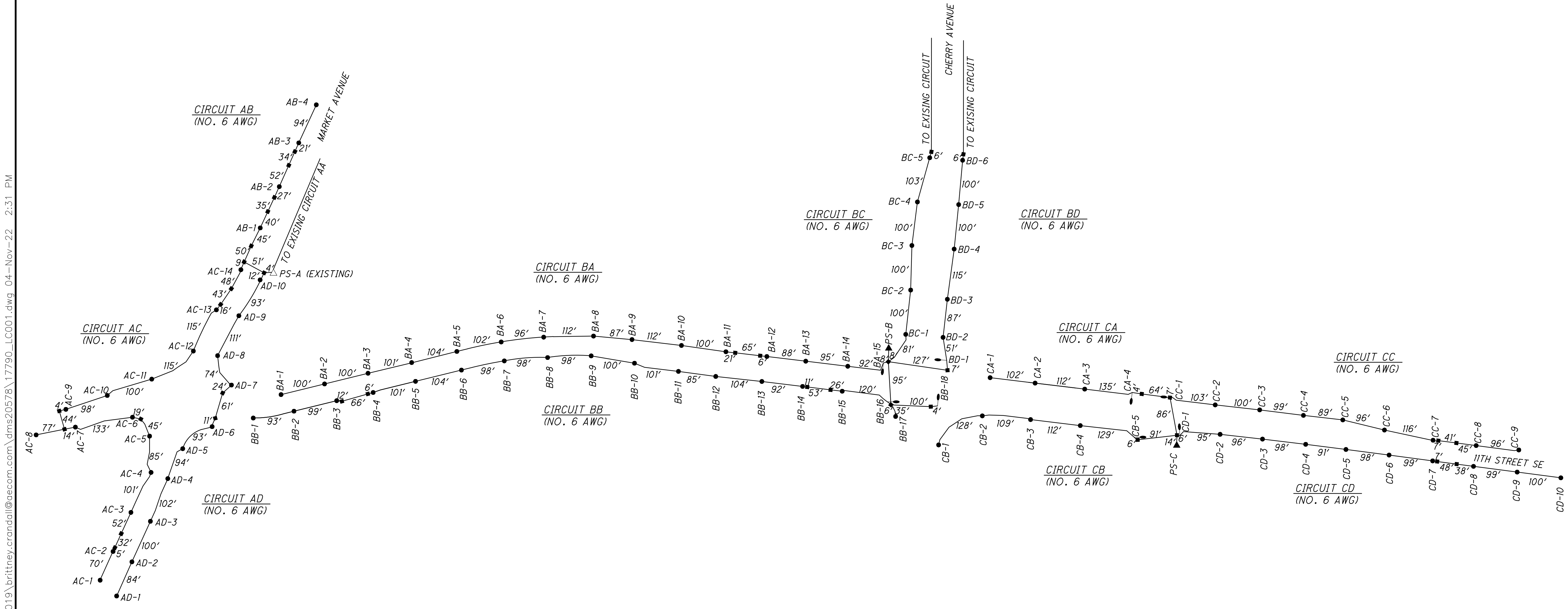
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

255/302

LEGEND

- BRACKET ARM & 100W LED (ON SIGNAL POLE)
- DECORATIVE LIGHT POLE WITH 60W LED TWIN LUMINAIRES & 20A-125V DUPLEX RECEPTACLE
- ▲ NEW POWER SERVICE/CONTROL CENTER
- PULL BOX, 725.06 (17"x30")

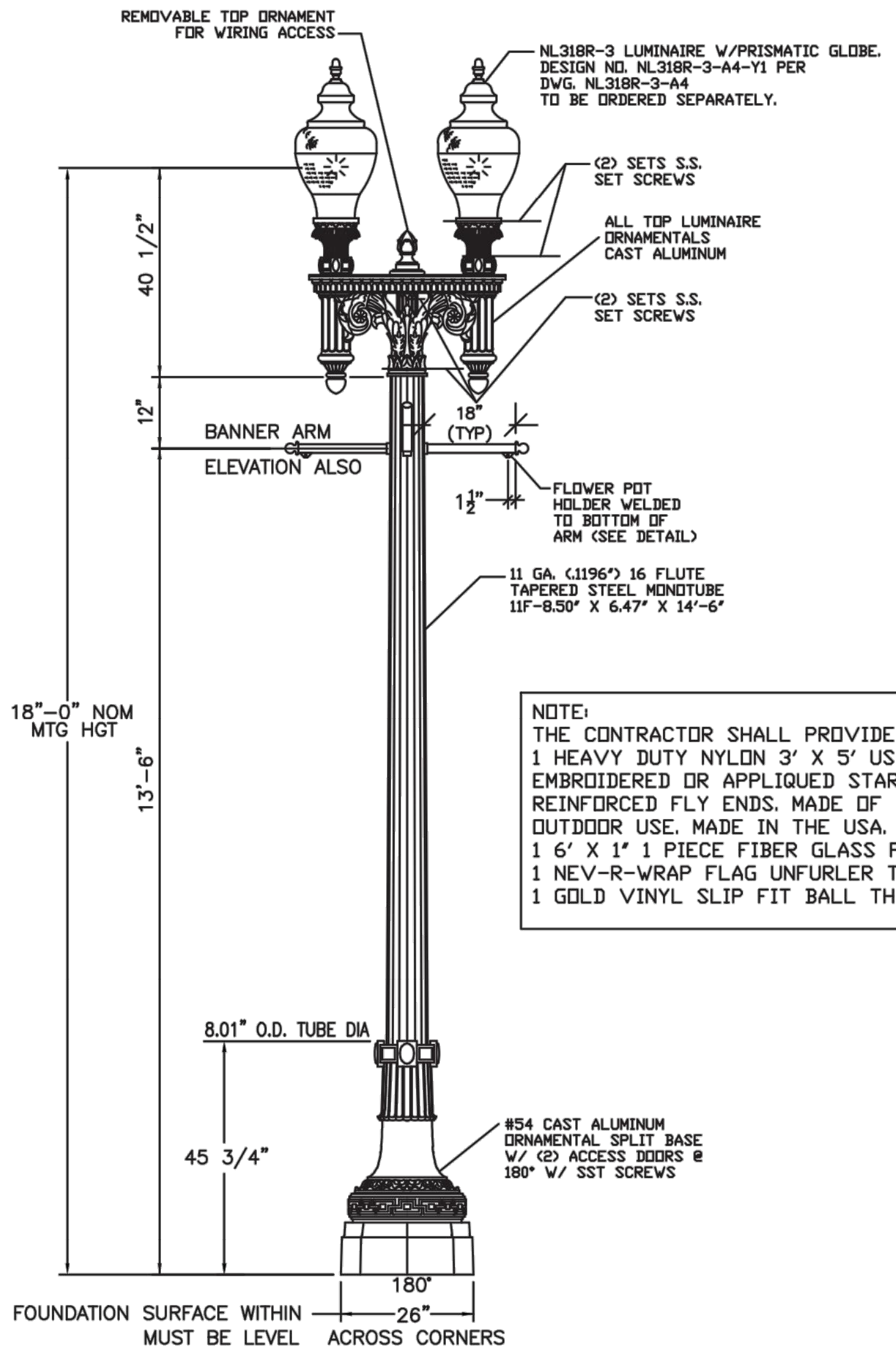
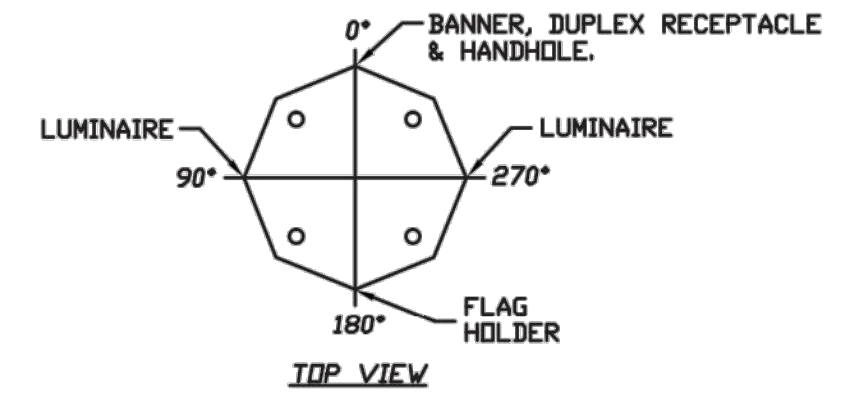
POWER SERVICE DATA									
POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
PS-A (EX.)	240	5.30	#2	120	A (EX)	3.9	40	6	CITY OF CANTON
					B	2.6	40	6	
					C	9.1	40	6	
					D	6.5	40	6	
PS-B	240	10.60	#2	120	A	9.64	40	6	
					B	11.48	40	6	
					C	11.26	40	6 & 4 (EX)	
					D	11.8	40	6 & 4 (EX)	
PS-C	240	4.26	#2	120	A	2.49	40	6	
					B	3.14	40	6	
					C	5.74	40	6	
					D	6.39	40	6	



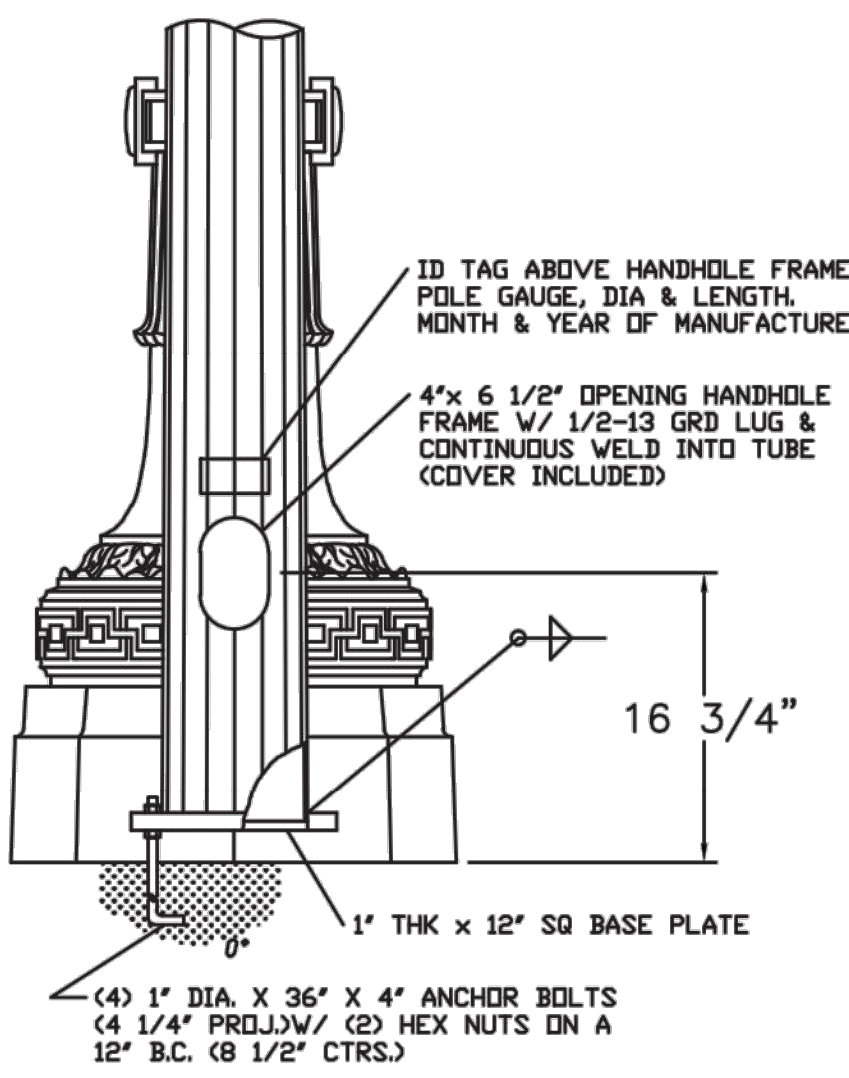
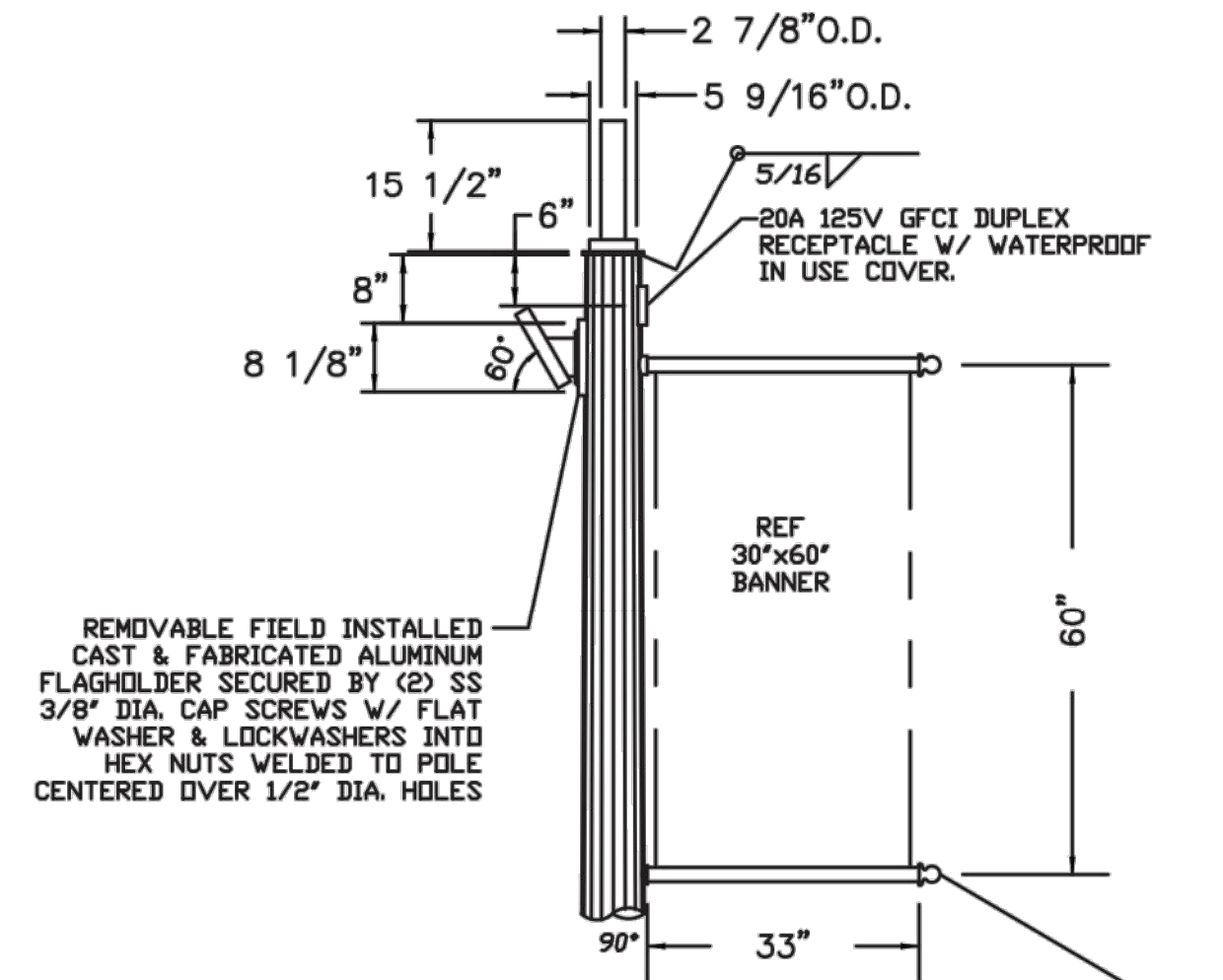
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MATERIAL SPECIFICATIONS	
MONOTUBE PLATES	EQUAL TO ASTM-A595 GR A
TUBING	ASTM-A36
PIPE	ASTM-A53 GRB, A501
ALUM. CASTINGS	ASTM B26 356.0
HANDHOLE FRAME	ASTM-A529 GR50/A709 GR50
HANDHOLE COVER	C1010 STEEL
ALUM. PLATE, PIPE	ASTM B209, 210, 221, 241 6061, 6063
ANCHOR BOLTS	ASTM-F1554 GR55
ANCHOR BOLT NUTS	ASTM-A563 GRA
FLAT WASHERS	ASTM-A436
SST HARDWARE	AISI-300 SERIES (18-8)
HARDWARE FINISH	GALVANIZED ASTM-A153
STRUCTURE FINISH	GALVANIZED ASTM-A153
FINISH	POWDER OVER GALV. CANTON CBD GREEN

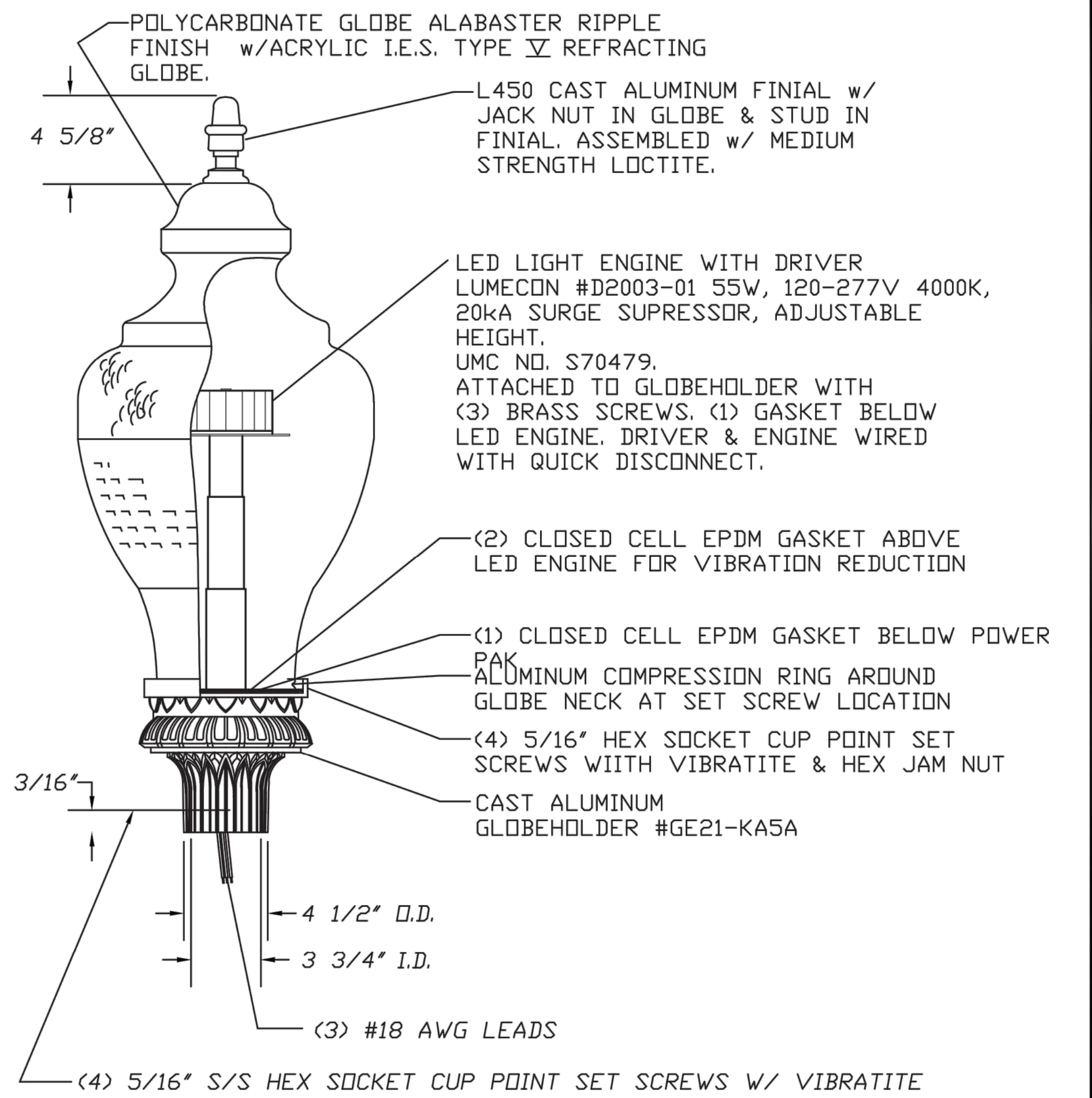
STRUCTURE DESIGNED IN ACCORDANCE WITH 1994 ASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY TRAFFIC SIGNS, LUMINAIRES & TRAFFIC SIGNALS FOR 90 MPH WIND ZONE.



NOTE:
THE CONTRACTOR SHALL PROVIDE PER LIGHT POLE:
1 HEAVY DUTY NYLON 3' X 5' US FLAG CONSTRUCTED WITH EMBROIDERED OR APPLIED STARS, SEWN STRIPS AND REINFORCED FLY ENDS. MADE OF NYLON, MANUFACTURED FOR OUTDOOR USE. MADE IN THE USA.
1 6' X 1' 1 PIECE FIBER GLASS POLE.
1 NEV-R-WRAP FLAG UNFURLER THAT FITS 1' POLE DIAMETER.
1 GOLD VINYL SLIP FIT BALL THAT FITS 1' POLE DIAMETER.



NOTES:
1. HD GALV & POWDER COATED FINISH, CITY OF CANTON CBD GREEN.



NOTES:
1. GLOBEHOLDER & FINIAL POWDER COATED CITY OF CANTON CBD GREEN.
2. GLOBE STREET SIDE POSITIONED BETWEEN TWO LED BARS. STREET SIDE OF LUMINAIRE MARKED ON OUTSIDE OF GLOBEHOLDER.

STATE:	REQ# / SO# :	REV	DESCRIPTION	DATE	REV BY	CHK BY
OHIO	NOH54053					
PROJECT NAME: NOSTALGIA_LUMINAIRE_NL318R_WITH_LED_&_GE21_KA5A_GLOBEHOLDER						
DESIGN_NUMBER B2473-54-B37-Y1						
DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF		
DGMR	8/22/14		NONE	N2473-54-B35		
N2473-54-B37			REVISION	SHEET		
			REV	SHT OF SHTS		

STATE:	REQ# / SO# :	REV	DESCRIPTION	DATE	REV BY	CHK BY
OHIO	NOH54508	R1	5/16" SET SCREWS WAS 1/4". VIBRATITE WAS NYLOCK	3/10/15	MB	MB
PROJECT NAME: NOSTALGIA_LUMINAIRE_NL318R_WITH_LED_&_GE21_KA5A_GLOBEHOLDER						
DESIGN_NUMBER_NL318R-3-A4-Y1						
DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF		
			NONE	NL318R-3-A3		
NL318R-3-A4			REVISION	SHEET		
				- OF -		



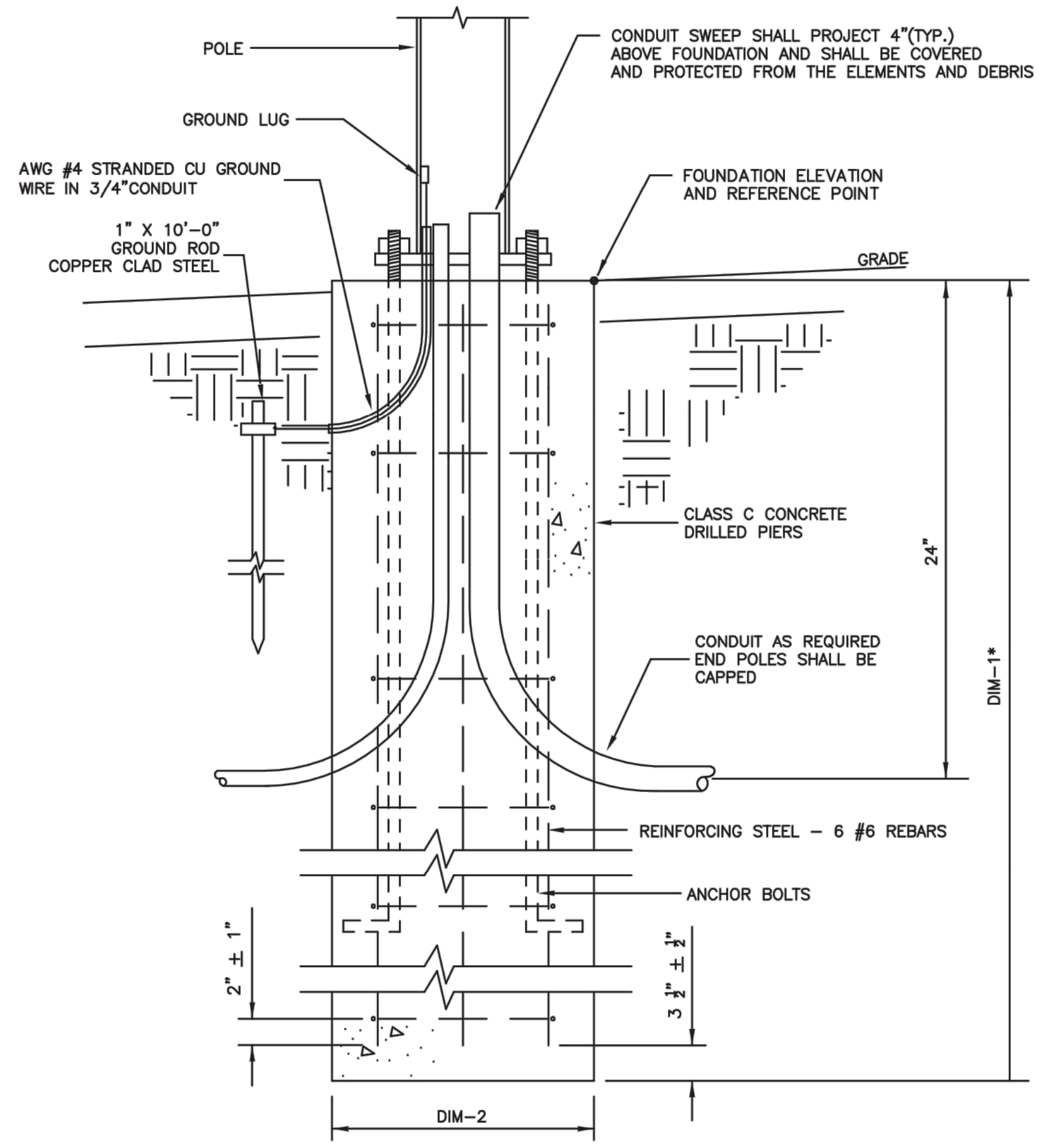
OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 : 330-489-3381 : www.cantonohio.gov/engineering

APPROVED DATE: MARCH 2014
APPROVED BY: EEM
DRAWING FILE NAME: ce_61-65_LIGHTPOLES.dwg

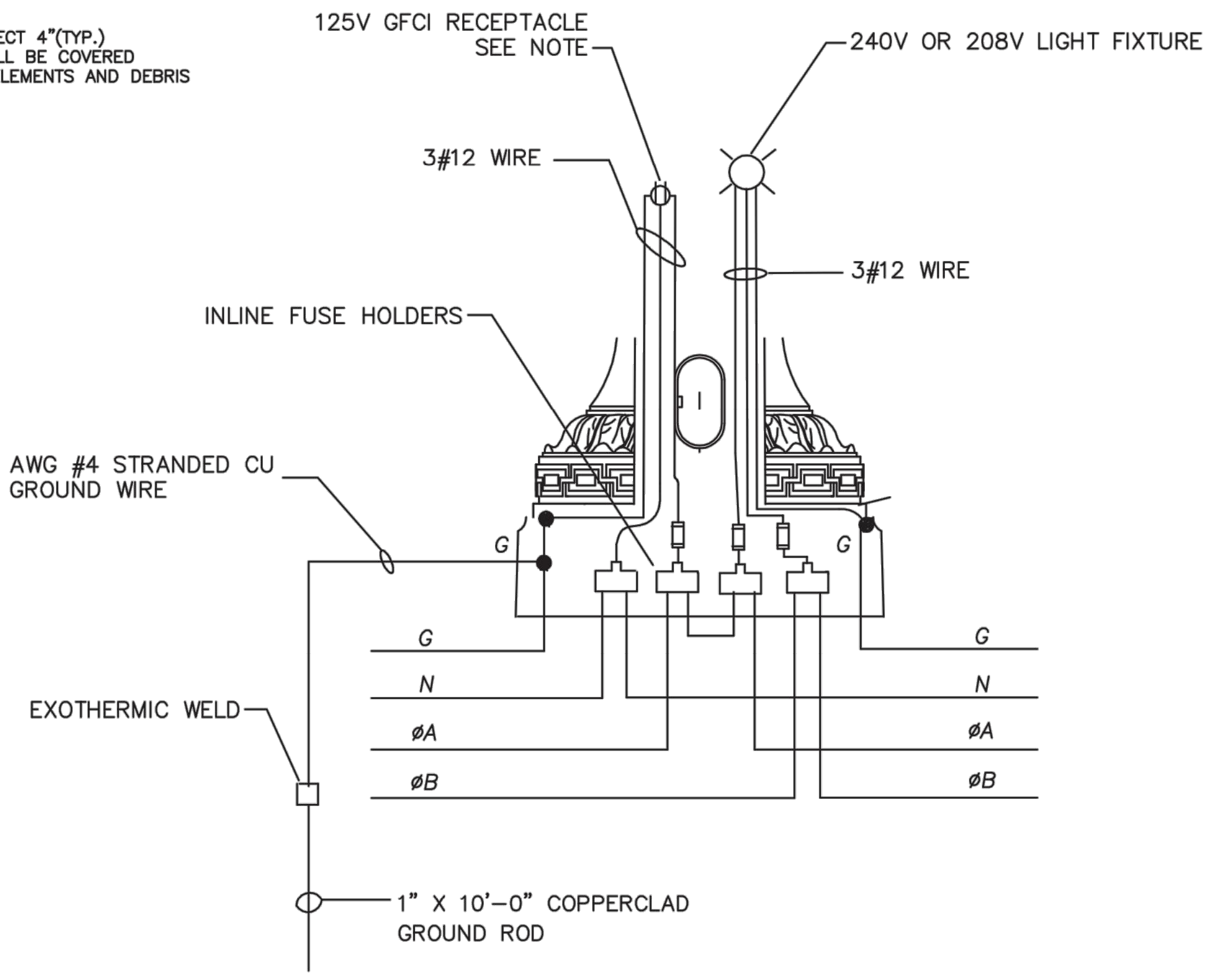
REVISIONS		
DESCRIPTION	DATE	BY
INSERTED UM DRAWINGS N2473-54-B37 & NL318R-3-A4	4/17/15	EGM
FLOWER POT HOLDERS ADDED	8/23/16	EGM
LED ENGINE UPDATE	7/6/2018	RMB

STANDARD DRAWING NO. 63
NOSTALGIA LIGHT POLE & LUMINAIRE
SHEET 3 OF 5

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NOSTALGIC FOUNDATION DETAIL
NO SCALE



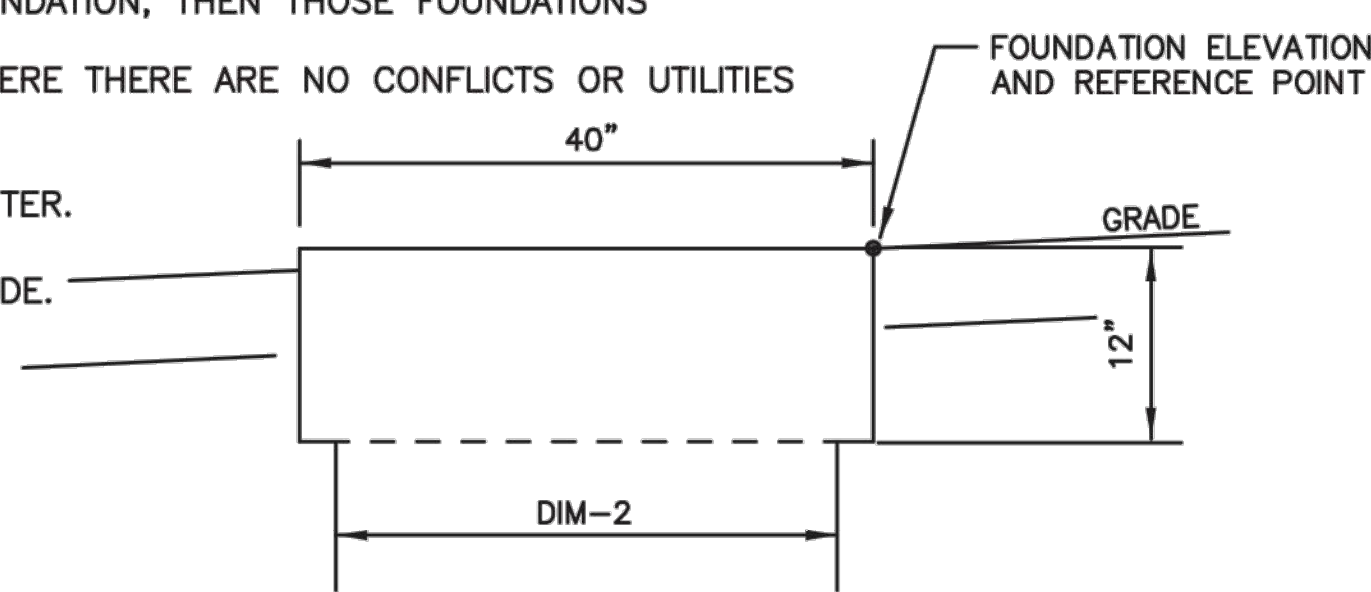
POLE WIRING DIAGRAM
NO SCALE

NOTE:

1. THE COST FOR WIRING TO ALL NOSTALGIA LUMINARIES AND RECEPTACLES SHALL BE INCIDENTAL TO THE NOSTALGIA BID ITEMS. ALL WIRING IN POLES AND CONDUITS TO LIGHTS AND RECEPTACLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL WIRING INTO EACH NOSTALGIA POLE BASE SHALL BE NO. 6 AWG WIRE AND CONNECTED TO IN-LINE FUSE HOLDERS. THE COST FOR THIS WIRE SHALL BE INCIDENTAL TO THE NOSTALGIA BID ITEMS.
3. IN-LINE FUSE HOLDERS SHALL BE BUSSMAN (HEB-AW-RYC). INSTALL FUSES IN PHASE LINES AND SOLID LINK IN NEUTRAL (HET-AW-RYC) FOR GROUND USE SPLIT BOLT CONNECTOR. COPPER GROUND CABLE SHALL BE EXOTHERMICALLY WELDED TO THE GROUND ROD. RUN CABLE FREE END THROUGH 3/4" EMT AND CONNECTED AS SHOWN IN THE POLE WIRING DIAGRAM. THE COST FOR THE IN-LINE FUSE HOLDERS AND ALL RELATED ITEMS SHALL BE INCIDENTAL TO THE NOSTALGIA BID ITEMS.
4. THE POLE RECEPTACLE SHALL BE ALTERNATELY WIRED TO PHASE A AND PHASE B AS SHOWN IN THE POLE WIRING DIAGRAM.
5. FOR LIGHTS, USE 5 AMP FUSES. FOR RECEPTACLES, USE 10 AMP FUSES. AMP RATINGS SHALL BE BASED UPON 75 DEGREE C RATINGS.
6. UNLESS OTHERWISE NOTED IN THESE PLANS, ALL WIRING SHALL BE MINIMUM NO. 12 AWG, COPPER, 600 VOLT RATED WITH THE EXCEPTION OF NO. 14 AWG, COPPER SHALL BE PERMISSIBLE FOR CONTROL CIRCUITRY. THE FOLLOWING SHALL APPLY TO ALL WIRING:
 - A. ALL WIRING SHALL BE STRANDED "XHNN/XHWN".
 - B. UNDERGROUND BRANCH CIRCUIT WIRING SHALL BE "XHHW".
7. CONDUCTORS SHALL BE PULLED FROM LIGHT POLE TO LIGHT POLE AND FROM LIGHTING CONTROL PANEL TO LIGHT POLE WITHOUT SPLICES.

NOTES:

1. ALL FOUNDATIONS SHALL BE DRILLED PIERS TO AVOID DISTURBING SURROUNDING SOIL. A TEMPORARY STEEL CASING MAY BE REQUIRED. IF UTILITIES OR ANOTHER CONFLICT IS IN CLOSE PROXIMITY TO THE FOUNDATION, THEN THOSE FOUNDATIONS MAY HAVE TO BE EXCAVATED BY HAND.
2. PRE-CAST LIGHT POLE FOUNDATIONS, 30" X 72", WILL BE PERMITTED AT LOCATIONS WHERE THERE ARE NO CONFLICTS OR UTILITIES PROHIBITING PLACEMENT.
3. ANCHOR BOLT PATTERN SHALL BE PROVIDED BY POLE MANUFACTURER (U.M.C.).
4. REINFORCING STEEL SHALL BE ASSEMBLED IN CAGES USING #4 TIES AT 24" (MAX.) CENTER.
5. FOUNDATION TOP SHALL BE ROUND AND LEVEL TO ACCOMMODATE DECORATIVE BASE.
6. TOP OF FOUNDATION SHALL BE AT LEAST 1" ABOVE PROJECTED FINISHED SIDEWALK GRADE.



FOUNDATION CAP DETAIL

CAP FOR SIGNAL POLE WITH >16" BOLT CIRCLE. CAP IS NECESSARY TO ACCOMMODATE DECORATIVE BASE.

FOUNDATION	DIM-1*	DIM-2
SIGNAL (16" BOLT CIRCLE)	9'-0"	36"
SIGNAL (>16" BOLT CIRCLE)	11'-0"	36"
LUMINARIES	6'-0"	30"
PEDESTRIAN	4'-0"	24"

* MINIMUM DEPTH MAY VARY BASED ON SOIL CONDITION.



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APPROVED DATE: MARCH 2014

APPROVED BY: EEM

DRAWING FILE NAME:
ce_61-65_LIGHTPOLES.dwg

REVISIONS

DESCRIPTION	DATE	BY
MODIFIED DIMS AND OTHER CHANGES	4/29/14	NJL
MODIFIED FOUNDATION NOTES	2/21/17	EGM

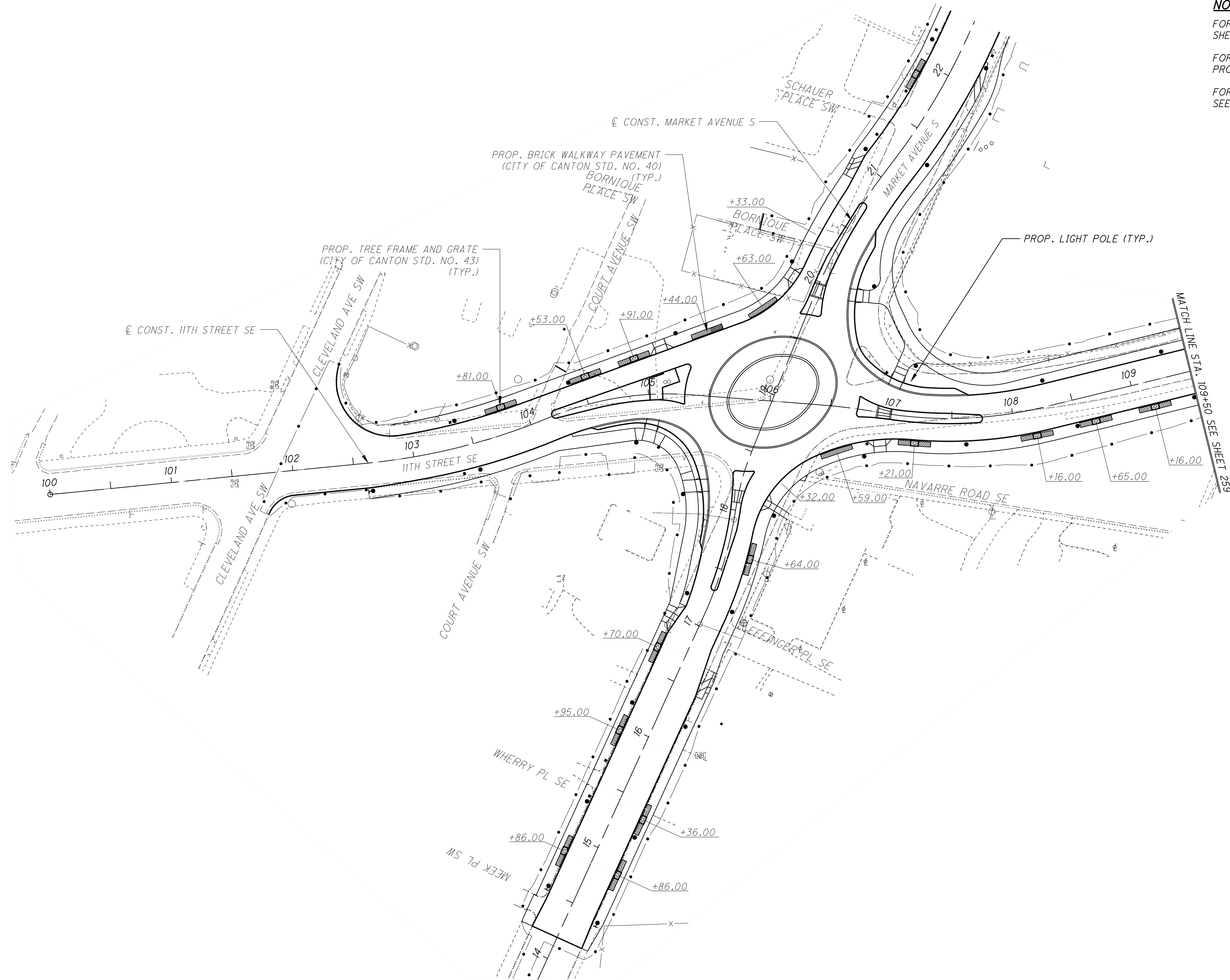
STANDARD DRAWING NO. 65

NOSTALGIC POLE FOUNDATION & WIRING DIAGRAM

SHEET 5 OF 5

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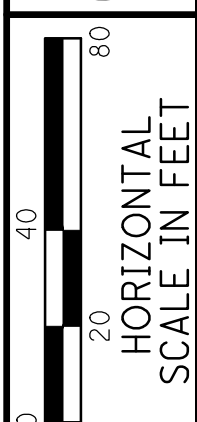
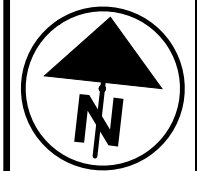


NOTES:

FOR PLAN VIEW LEGEND, SEE SHEET 24.

FOR 11TH STREET SE PLAN AND PROFILE, SEE SHEETS 47-64.

FOR 11TH STREET SE LIGHTING, SEE SHEETS 243-257.

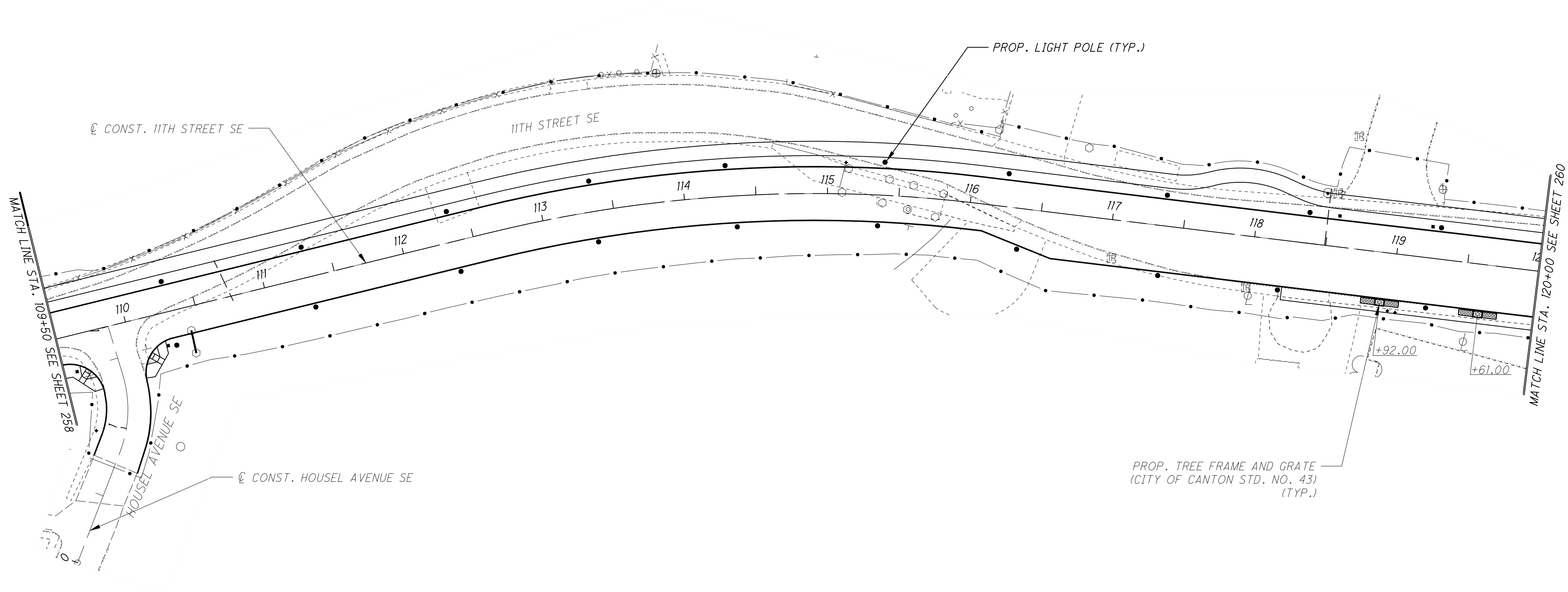


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LANDSCAPING PLAN
11TH STREET SE - BEGINNING TO STA. 109+50

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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NOTES:
 FOR PLAN VIEW LEGEND, SEE SHEET 24.
 FOR 11TH STREET SE PLAN AND PROFILE, SEE SHEETS 47-64.
 FOR 11TH STREET SE LIGHTING, SEE SHEETS 243-257.

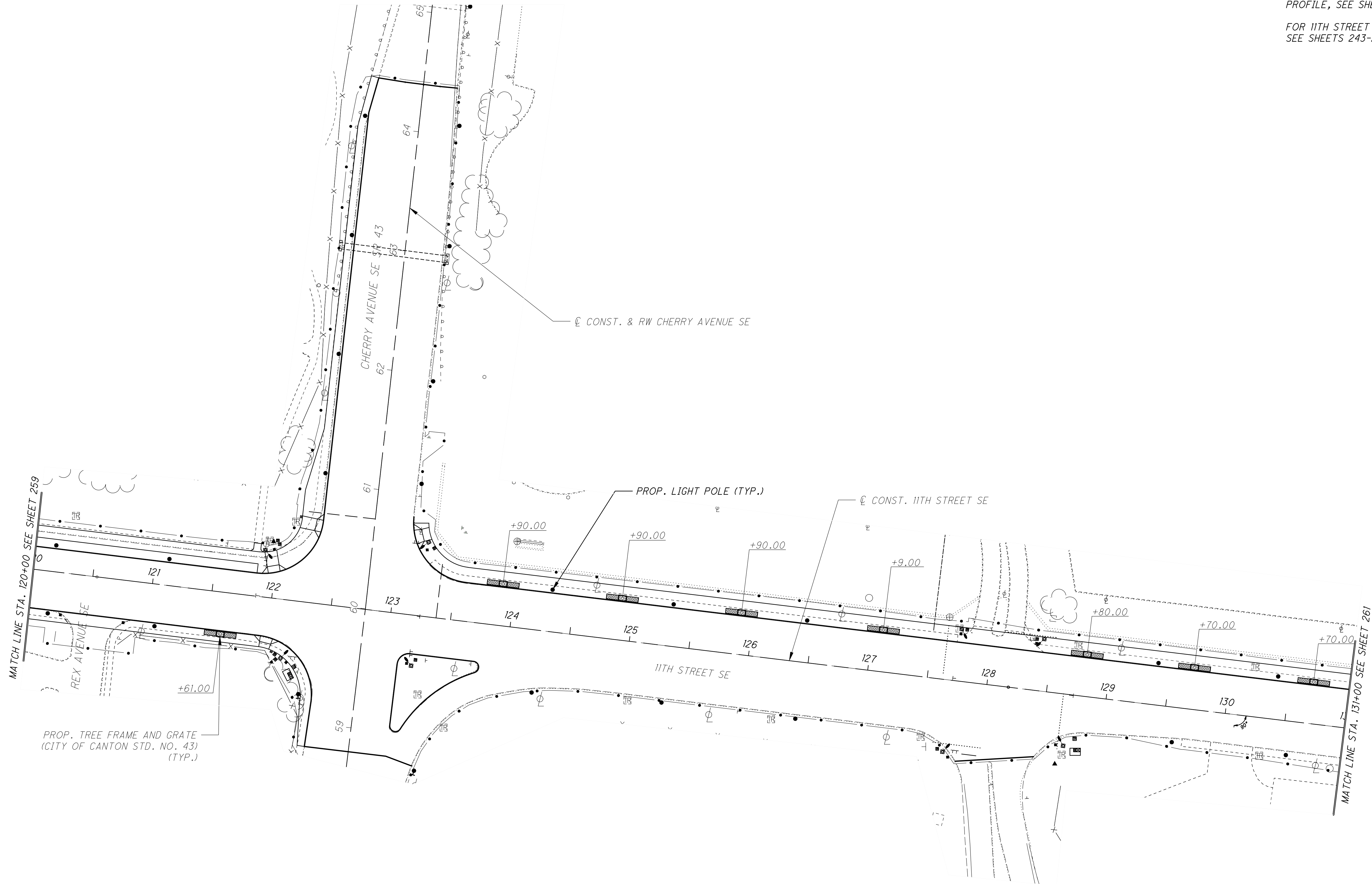
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LANDSCAPING PLAN
11TH STREET SE - STA. 109+50 TO STA. 120+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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NOTES:

FOR PLAN VIEW LEGEND, SEE SHEET 24.

FOR 11TH STREET SE PLAN AND PROFILE, SEE SHEETS 47-64.

FOR 11TH STREET SE LIGHTING, SEE SHEETS 243-257.

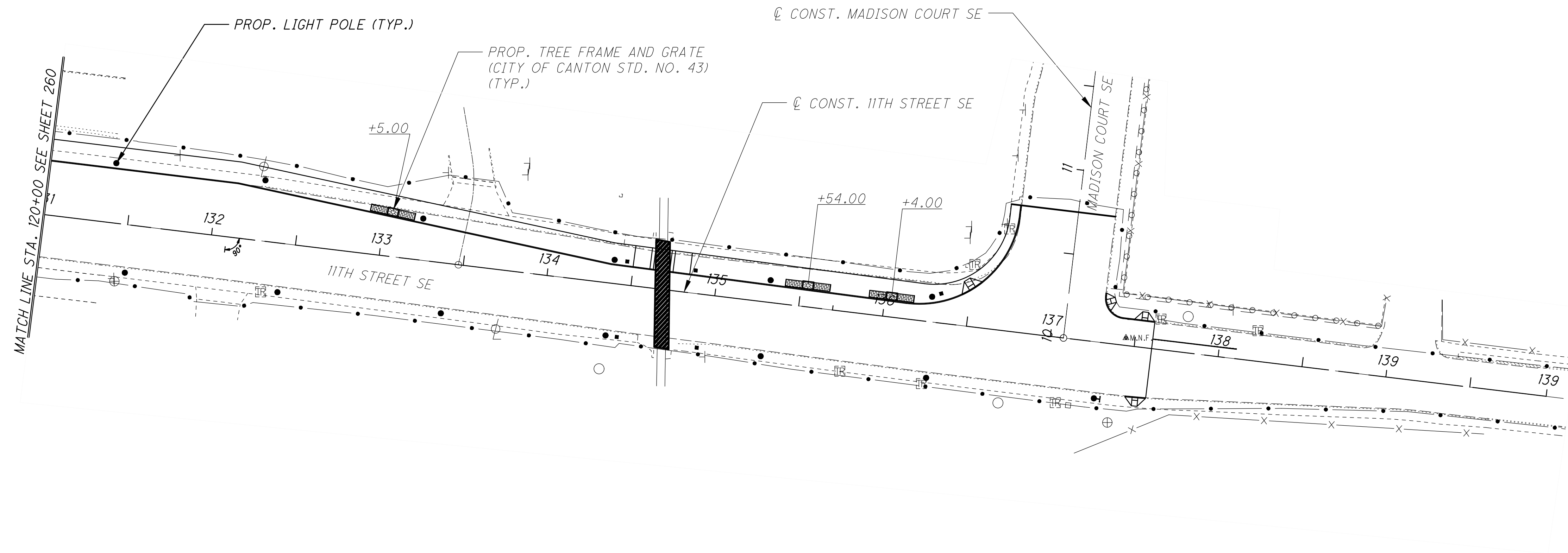
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**LANDSCAPING PLAN
11TH STREET SE - STA. 120+00 TO STA. 131+00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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NOTES:
 FOR PLAN VIEW LEGEND, SEE SHEET 24.
 FOR 11TH STREET SE PLAN AND PROFILE, SEE SHEETS 47-64.
 FOR 11TH STREET SE LIGHTING, SEE SHEETS 243-257.

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**LANDSCAPING PLAN
 11TH STREET SE - STA. 131+00 TO ENDING**


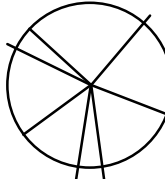
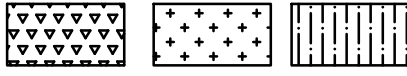

**STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)**

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TREE SCHEDULE						
KEY	QTY	DESCRIPTION	COMMON NAME	SIZE	CONTAINER	NOTES
QR	4	ITEM 661 - DECIDUOUS TREE (QUERCUS ROBUR 'FASTIGIATA'), 4" CALIPER, AS PER PLAN	UPRIGHT ENGLISH OAK	3" CAL.	B&B	SINGLE STEM, STRAIGHT TRUNK, FULL CROWN, WELL MATCHED SPECIMENS

SHRUB/PERENNIAL SCHEDULE					
KEY	QTY	DESCRIPTION	COMMON NAME	SIZE	NOTES
PA	130	ITEM 661 - PERENNIALS; (PENNISETUM ALOPECUROIDES 'LITTLE BUNNY')	LITTLE BUNNY DWARF FOUNTAIN GRASS	#2 CONT. 10-12" HT.	24" SPACING
SH	180	ITEM 661 - PERENNIALS (SPOROBOLUS HETEROLEPIS)	PRAIRIE DROPSEED	#2 CONT. 24" HT.	24" SPACING
PV	140	ITEM 661 - PERENNIALS; (PANICUM VIRGATUM 'SHENANDOAH')	SHENANDOAH SWITCH GRASS	#2 CONT. 48" HT.	24" SPACING

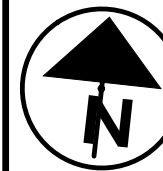

LANDSCAPE PLANS LEGEND

-  EXISTING TREES
-  ITEM 661 - DECIDUOUS TREE, 4" CALIPER, AS PER PLAN
-  ITEM 661 - PERENNIAL ORNAMENTAL GRASSES
-  ITEM 203 - ROADWAY MISC.; FLAGPOLE 30' & 35' HEIGHT
- | |
|----|
| 2 |
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 PLANT QUANTITY
PLANT SYMBOL

LANDSCAPE PLANTING NOTES

1. LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK. KEEP DISTURBANCE OF ALL AREAS TO A MINIMUM.
2. DO NOT PARK, STORE, OR OPERATE EQUIPMENT OR MATERIALS WITHIN THE DRIP-LINE OF ANY EXISTING TREES OR OPEN/LANDSCAPED AREAS ON SITE.
3. FOR ALL DISTURBED AREAS NOT DESIGNATED FOR LANDSCAPE PLANT MATERIALS, PROVIDE TOPSOIL AND TURF SEED. PLACE 4" TOPSOIL IN ALL AREAS WHERE NO TOPOIL EXISTS TO MEET FINISH GRADE (PROVIDE 6" TOPSOIL WITHIN ROUNDABOUT).
4. AVOID OVER-SEEDING OR SPRAYING ONTO ADJACENT SURFACES. CLEAN AND REMOVE ALL OVER-SEEDING ONTO THESE AREAS.
5. DO NOT INSTALL PLANT MATERIAL BEFORE COMPLETION AND APPROVAL OF ROUGH GRADING. PLANT MATERIALS INSTALLED WITHOUT APPROVAL ARE AT THE CONTRACTOR'S RISK.
6. SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING PLANS AS SHOWN.
7. PROVIDE BALLED AND BURLAPPED OR CONTAINER GROWN PLANTS AS SPECIFIED. CONTAINER GROWN STOCK WILL NOT BE ACCEPTED IF IT IS ROOT BOUND. REMOVE ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETIC OR PLASTICS AT TIME OF PLANTING. INSTALL ALL PLANTS TO THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING.
8. REMOVE THE CONTAINER AND CUT THE BALL VERTICALLY THROUGH THE SURFACE IN TWO LOCATIONS FOR CONTAINER GROWN STOCK.
9. SPRAY ALL PLANTS WITH AN ANTIDESSICANT WITHIN 24 HOURS OF PLANTING, AND AT THE BEGINNING OF THEIR FIRST WINTER.
10. INSTALL ALL PLANTS ACCORDING TO DETAILS AND CONTRACT SPECIFICATIONS.
11. MULCH ALL PLANTING BEDS PER PLANTING SPECIFICATIONS UNLESS SPECIFICALLY NOTED ON PLANS AS GRAVEL OR RIVER STONE MULCH.
12. TREE STAKING IS REQUIRED FOR MEDIAN TREES ONLY. STAKE REMAINING TREES ONLY IF WARRANTED BY SITE CONDITIONS AS NECESSARY TO ESTABLISH HEALTHY, STABLE TREES. REMOVE ALL TREE STAKING AT THE END OF THE WARRANTY PERIOD.

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LANDSCAPING NOTES

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

262
302

LANDSCAPE GENERAL NOTES

ITEM 203 – EMBANKMENT

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 203 – EMBANKMENT – 150 CY

ITEM 653 – TOPSOIL FURNISHED AND PLACED, AS PER PLAN

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS, AND ODOT 661, 653, AND 203. THIS ITEM INCLUDES THE PREPARATION AND INSTALLATION OF TOPSOIL FOR LANDSCAPED AREAS. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS REQUIRED FOR EXCAVATION, SITE PREPARATION, EMBANKMENT, AND ANY OTHER INCIDENTAL WORK RELATING TO THE INSTALLATION OF TOPSOIL, AS PER PLAN. THIS WORK SHALL BE COORDINATED WITH THE HARDSCAPE AND LANDSCAPE INSTALLATION.

TOPSOIL SHALL BE FURNISHED AND PLACED TO A DEPTH OF 4 INCHES. PLANTING BACKFILL MATERIAL (TOPSOIL) SHALL CONSIST OF NATURAL LOAM TOPSOIL WITH THE ADDITION OF HUMUS ONLY, AND NO OTHER SOIL TYPE, SUCH AS A SAND OR CLAY SOIL TYPE, SHALL BE ACCEPTED. TOPSOIL MUST BE FREE FROM SUBSOIL, OBTAINED FROM AN AREA WHICH HAS NEVER BEEN STRIPPED. IT SHALL BE REMOVED TO A DEPTH OF ONE (1) FOOT, OR LESS IF SUBSOIL IS ENCOUNTERED. TOPSOIL SHALL BE OF UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, HARDPAN, SODS, PARTIALLY DISINTEGRATED STONE, LIME, CEMENT, ASHES, SLAG, CONCRETE, TAR RESIDUES, TARRIED PAPER, BOARDS, CHIPS, STICKS OR ANY OTHER UNDESIRABLE MATERIAL. IF A TRUCKLOAD OF TOPSOIL IS CONSIDERED BY THE AGENCY TO CONTAIN TOO MUCH UNDESIRABLE MATERIAL TO BE CORRECTED ON THE SITE, THE ENTIRE TRUCK LOAD SHALL BE REJECTED. NO TOPSOIL SHALL BE DELIVERED IN A FROZEN OR MUDDY CONDITION. TOPSOIL SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. ORGANIC MATTER. MUST BE BETWEEN SEVEN PERCENT (7%) AND TWELVE PERCENT (12%) (NOT TO EXCEED 14%) BY WEIGHT, AS DETERMINED BY THE DRY COMBUSTION METHOD FOR TOTAL CARBON AND ORGANIC CARBON (USING A MULTIPLYING FACTOR OF 2 AS DESCRIBED IN METHODS OF SOIL ANALYSIS, #9, PART 2, 2ND ED. PUBLISHED BY THE AMERICAN SOCIETY OF AGRONOMY. THE ORGANIC CONTENT SHALL NOT EXCEED FOURTEEN PERCENT (14%).
2. PH RANGE. SHALL BE 6.0 TO 7.0 INCLUSIVE.
3. SIEVE ANALYSIS (BY WASH TEST, ASTM DESIGNATION C-117). PASSING 2" SIEVE (100%); PASSING 1" SIEVE (95% TO 100%); PASSING #4 SIEVE (90% TO 100%); PASSING #100 SIEVE (30% TO 60%).
4. THE TEST METHOD TO MEASURE THE CLAY CONTENT OF THE SOIL SHALL BE ASTM D 422.

THIS ITEM WILL BE PAID FOR ON A PER CUBIC YARD BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 653 – TOPSOIL FURNISHED AND PLACED, AS PER PLAN – 55 CY

ITEM 661 – PLANTING, MISC.: PEA GRAVEL MULCH

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS, AND ODOT 661 AND 653. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS FOR CLEAN AND WASHED PEA GRAVEL MULCH.

CONTRACTOR IS REQUIRED TO PROVIDE A 1 GALLON SAMPLE OF GRAVEL MULCH FOR APPROVAL BY DEPUTY DIRECTOR PRIOR TO PROCEEDING WITH INSTALLATION.

THE GRAVEL MULCH SHALL BE BETWEEN 1/4" TO 1/2" IN DIAMETER WITH SMOOTH EDGES ON ALL SIDES. THE MULCH SHOULD BE WASHED CLEAN AND FREE OF VEGETATION, SILT, OR MISCELLANEOUS DEBRIS. THE MULCH SHALL BE UNIFORMLY APPLIED AT A THREE (3) INCH DEPTH IN THE AREAS SHOWN ON PLANS. THE COLOR SHALL BE A BROWN/TAN BLEND.

THIS ITEM BE PAID ON A SQUARE YARD BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 661 – PLANTING, MISC.: PEA GRAVEL MULCH – 18 CY

ITEM 661 – PLANTING, MISC.: WEED BARRIER MAT

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS, AND ODOT 661. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS FOR WEED BARRIER MAT.

WEED BARRIER MAT SHALL BE UV STABILIZED, PERMEABLE TO AIR AND WATER AND A MINIMUM WEIGHT OF 2 OZ/SQ. YD. WEED BARRIER MAT SHALL PROVIDE WEED CONTROL AND BE GUARANTEED BY MANUFACTURER TO LAST FOR 15 YEARS IN EXPOSED CONDITIONS. WEED BARRIER MAT SHALL BE STAPLED TO SOIL AS PER MANUFACTURER'S DIRECTIONS WITH MULCH PLACED ON TOP OF WEED BARRIER MAT. CONTRACTOR TO SUBMIT SAMPLE AND MANUFACTURER'S LITERATURE TO PROJECT DEPUTY DIRECTOR FOR APPROVAL PRIOR TO INSTALLATION.

THIS ITEM BE PAID ON A SQUARE YARD BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 661 – PLANTING, MISC.: WEED BARRIER MAT – 350 SY

ITEM 661 – PLANTING, MISC.: SUBGRADE TILLING

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS, AND ODOT 659.01 FOR SITE PREPARATION AND 661. THIS ITEM INCLUDES THE SUBGRADE PREPARATION OF LANDSCAPE BED AREAS. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS REQUIRED SITE PREPARATION AND ANY OTHER INCIDENTAL WORK RELATING TO THE INSTALLATION OF SUBGRADE TILLING.

PRIOR TO INSTALLATION OF TOPSOIL, WEED BARRIER MAT, AND MULCH, CONTRACTOR TO THOROUGHLY TILL SUBGRADE TO A DEPTH OF 12 INCHES USING A PLOW, DISC, OR ROTOTILLER.

THE PAYMENT FOR THE ITEM SHALL BE ON SQUARE YARD BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 661 – PLANTING, MISC.: SUBGRADE TILLING – 350 SY

ITEM 661 – MULCH, AS PER PLAN

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS, AND ODOT 661.11. THIS ITEM INCLUDES ALL MULCH FOR LANDSCAPE BED AREAS. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR, AND MATERIALS MULCH INSTALLATION.

HARDWOOD MULCH SHALL BE FINE, TRIPLE SHREDDED ORGANIC HARDWOOD, FREE OF WEED SEEDS, ROOTS, OR ANY OTHER SUBSTANCE NOT CONSISTING OF EITHER HOLE OR BRANCH WOOD AND BARK. THE MULCH SHALL BE UNIFORMLY APPLIED AT FOUR (4) INCH DEPTH IN PLANTING AREAS SHOWN ON THE PLANS. DO NOT FERTILIZE. CONTRACTOR TO SUBMIT SAMPLE TO PROJECT DEPUTY DIRECTOR FOR APPROVAL PRIOR TO INSTALLATION.

THE PAYMENT FOR THE ITEM SHALL BE ON CUBIC YARD BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 661 – MULCH, AS PER PLAN – 20 CY

ITEM 203 – ROADWAY, MISC.: FLAGPOLE, 30' HEIGHT

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND NOTES. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR, AND MATERIAL FOR SHOP DRAWINGS, SUBMITTALS, SITE PREPARATION, EXCAVATION, FOUNDATION CONSTRUCTION, ATTACHMENT, AND ANY OTHER INCIDENTAL WORK RELATING TO THE INSTALLATION OF THE FLAGPOLES. CONTRACTOR TO SUBMIT SHOP DRAWING TO PROJECT DEPUTY DIRECTOR FOR APPROVAL PRIOR TO INSTALLATION.

THE PAYMENT FOR THE ITEM SHALL BE ON A PER EACH BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 203 – ROADWAY, MISC.: FLAGPOLE, 30' HEIGHT – 2 EA

ITEM 203 – ROADWAY, MISC.: FLAGPOLE, 35' HEIGHT

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND NOTES. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR, AND MATERIAL FOR SHOP DRAWINGS, SUBMITTALS, SITE PREPARATION, EXCAVATION, FOUNDATION CONSTRUCTION, ATTACHMENT, AND ANY OTHER INCIDENTAL WORK RELATING TO THE INSTALLATION OF THE FLAGPOLES. CONTRACTOR TO SUBMIT SHOP DRAWING TO PROJECT DEPUTY DIRECTOR FOR APPROVAL PRIOR TO INSTALLATION.

THE PAYMENT FOR THE ITEM SHALL BE ON A PER EACH BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 203 – ROADWAY, MISC.: FLAGPOLE, 35' HEIGHT – 1 EA

ITEM 203 – ROADWAY, MISC.: LANDSCAPE BOULDER

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND NOTES. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR, AND MATERIAL FOR SHOP DRAWINGS, SUBMITTALS, SITE PREPARATION, EXCAVATION, FOUNDATION CONSTRUCTION, ATTACHMENT, AND ANY OTHER INCIDENTAL WORK RELATING TO THE INSTALLATION OF THE LANDSCAPE BOULDER. CONTRACTOR TO SUBMIT SHOP DRAWING TO PROJECT DEPUTY DIRECTOR FOR APPROVAL PRIOR TO INSTALLATION.

THE PAYMENT FOR THE ITEM SHALL BE ON A PER EACH BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 203 – ROADWAY, MISC.: LANDSCAPE BOULDER – 16 EA

ITEM 203 – ROADWAY, MISC.: METAL EDGER

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND NOTES. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR, AND MATERIAL FOR SHOP DRAWINGS, SUBMITTALS, SITE PREPARATION, EXCAVATION, FOUNDATION CONSTRUCTION, ATTACHMENT, AND ANY OTHER INCIDENTAL WORK RELATING TO THE INSTALLATION OF THE METAL EDGER. CONTRACTOR TO SUBMIT SHOP DRAWING TO PROJECT DEPUTY DIRECTOR FOR APPROVAL PRIOR TO INSTALLATION.

THE PAYMENT FOR THE ITEM SHALL BE ON A PER EACH BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE FOLLOWING WORK:
ITEM 203 – ROADWAY, MISC.: METAL EDGER – 130 LF

ITEM 661 – DECIDUOUS TREE, 4" CALIPER, AS PER PLAN

CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS FOR INSTALLATION OF THE 4" CALIPER TREE PER THE PLANS AND AS PER ITEM 661. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS INCLUDING EXCAVATION, SOIL PREPARATION, PLANTING BACKFILL, LEAF COMPOST, FERTILIZER, WEED BARRIER MAT, TREE STAKING, 12 MONTH WARRANTY, AND OTHER INCIDENTAL WORK RELATING TO THE COMPLETE INSTALLATION, THIS ITEM WILL BE PAID ON A PER EACH BASIS.

ITEM 661 – PERENNIALS, NO. 2 CONT., AS PER PLAN

CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS FOR INSTALLATION OF THE PERENNIALS PER THE PLANS AND AS PER ITEM 661. PAYMENT FOR THIS ITEM INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS INCLUDING EXCAVATION, SOIL PREPARATION, PLANTING BACKFILL, LEAF COMPOST, FERTILIZER, WEED BARRIER MAT, STABILIZATION, 12 MONTH WARRANTY, AND OTHER INCIDENTAL WORK RELATING TO THE COMPLETE INSTALLATION, THIS ITEM WILL BE PAID ON A PER EACH BASIS.

ITEM 661 – PLANTING, MISC.: TREE FRAME AND GRATE

THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE CITY OF CANTON STANDARD CONSTRUCTION DRAWING CE 43. THIS ITEM INCLUDES THE CONCRETE COLLAR SUPPORTING THE FRAME/GRATE.

THE PAYMENT FOR THE ITEM SHALL BE ON EACH BASIS. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY:

ITEM 661 – PLANTING, MISC.: TREE FRAME AND GRATE



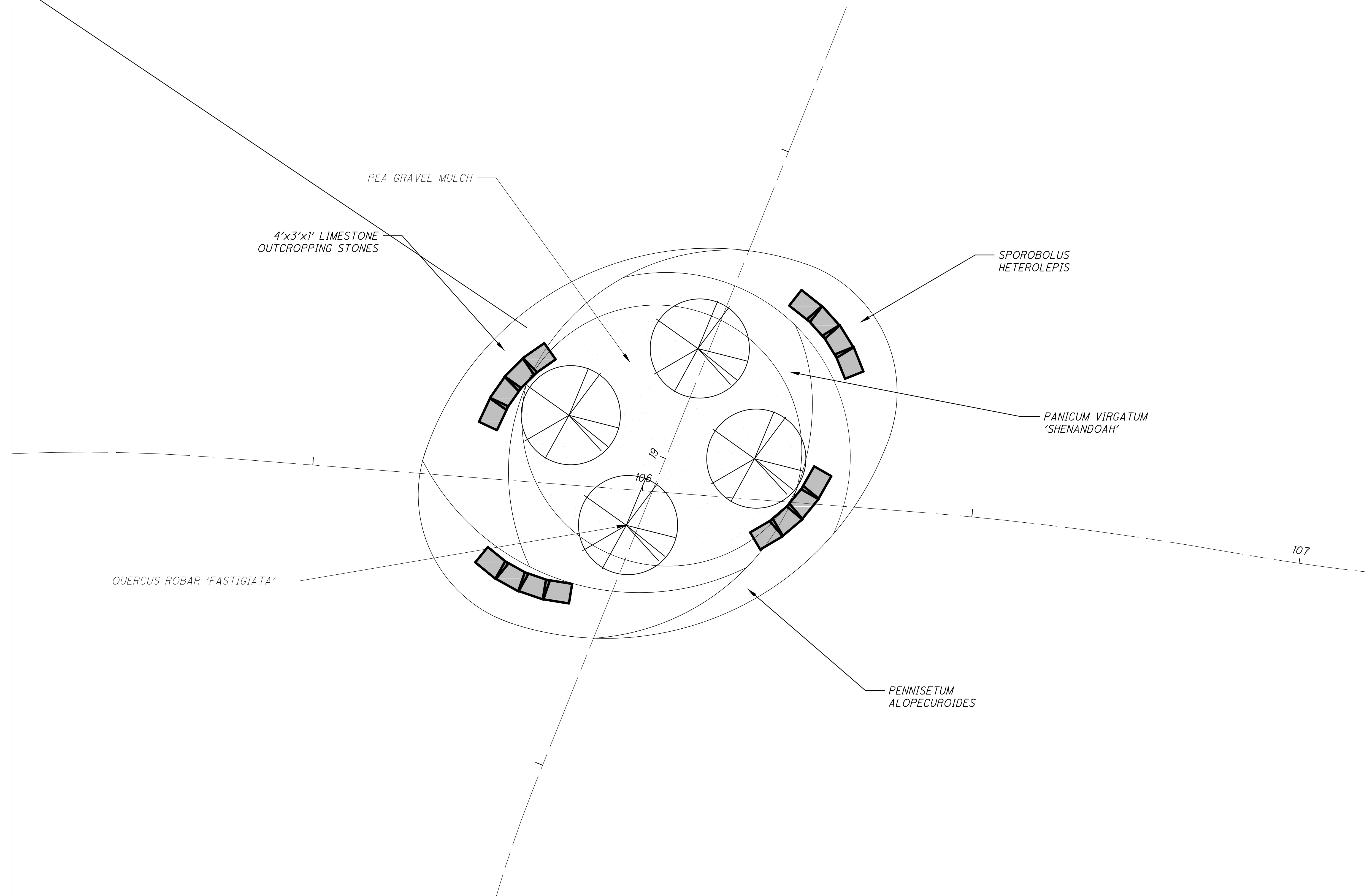
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LANDSCAPING NOTES

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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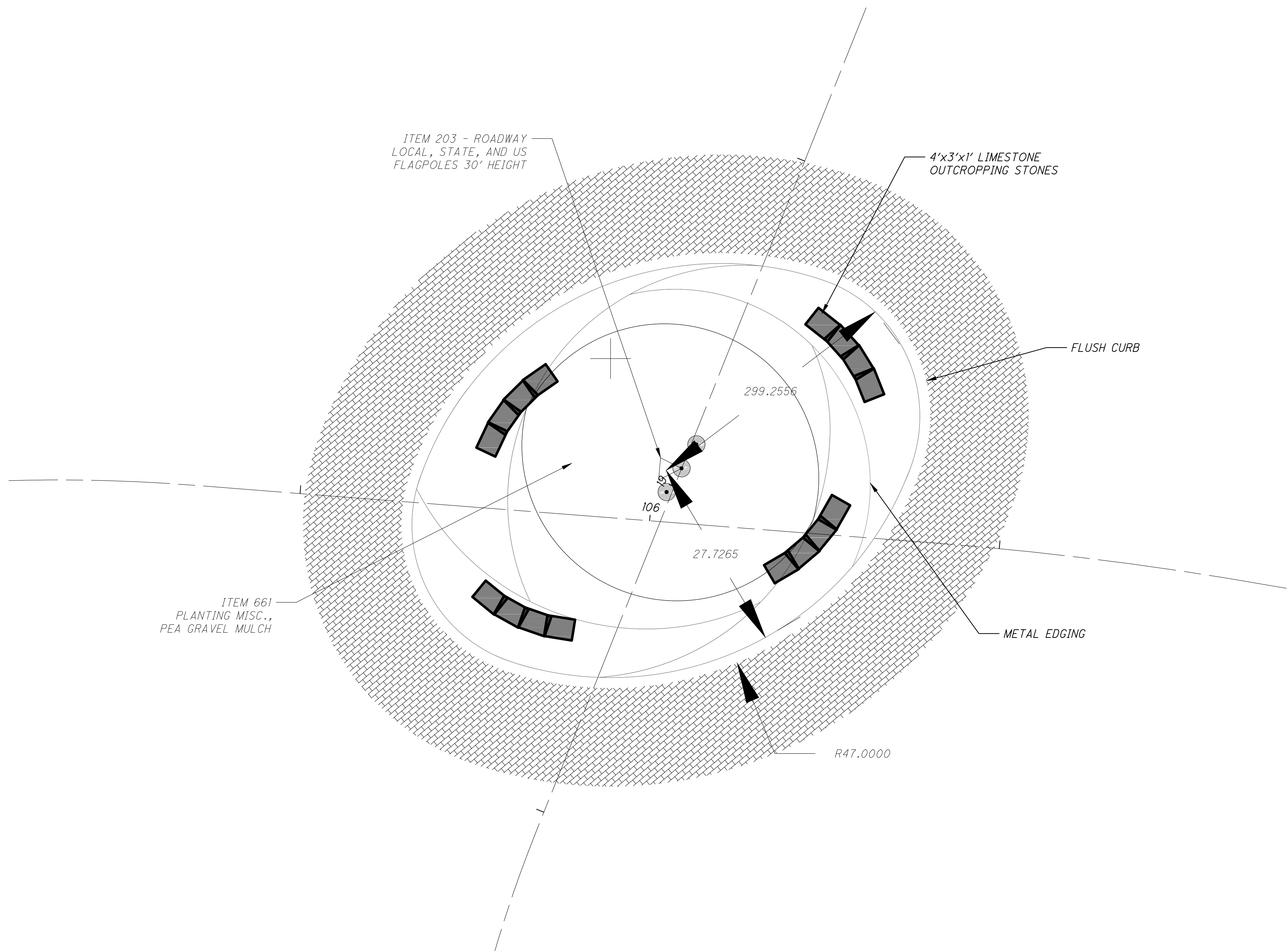
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PLANTING PLAN

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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- NOTES:
1. EACH GROUP OF BOULDERS SHOULD BE EVENLY SPACED AROUND THE ROUNDABOUT.
 2. FINAL LOCATION OF BOULDER GROUPINGS SHOULD BE STAKED AND APPROVED BY OWNER PRIOR TO INSTALLATION.

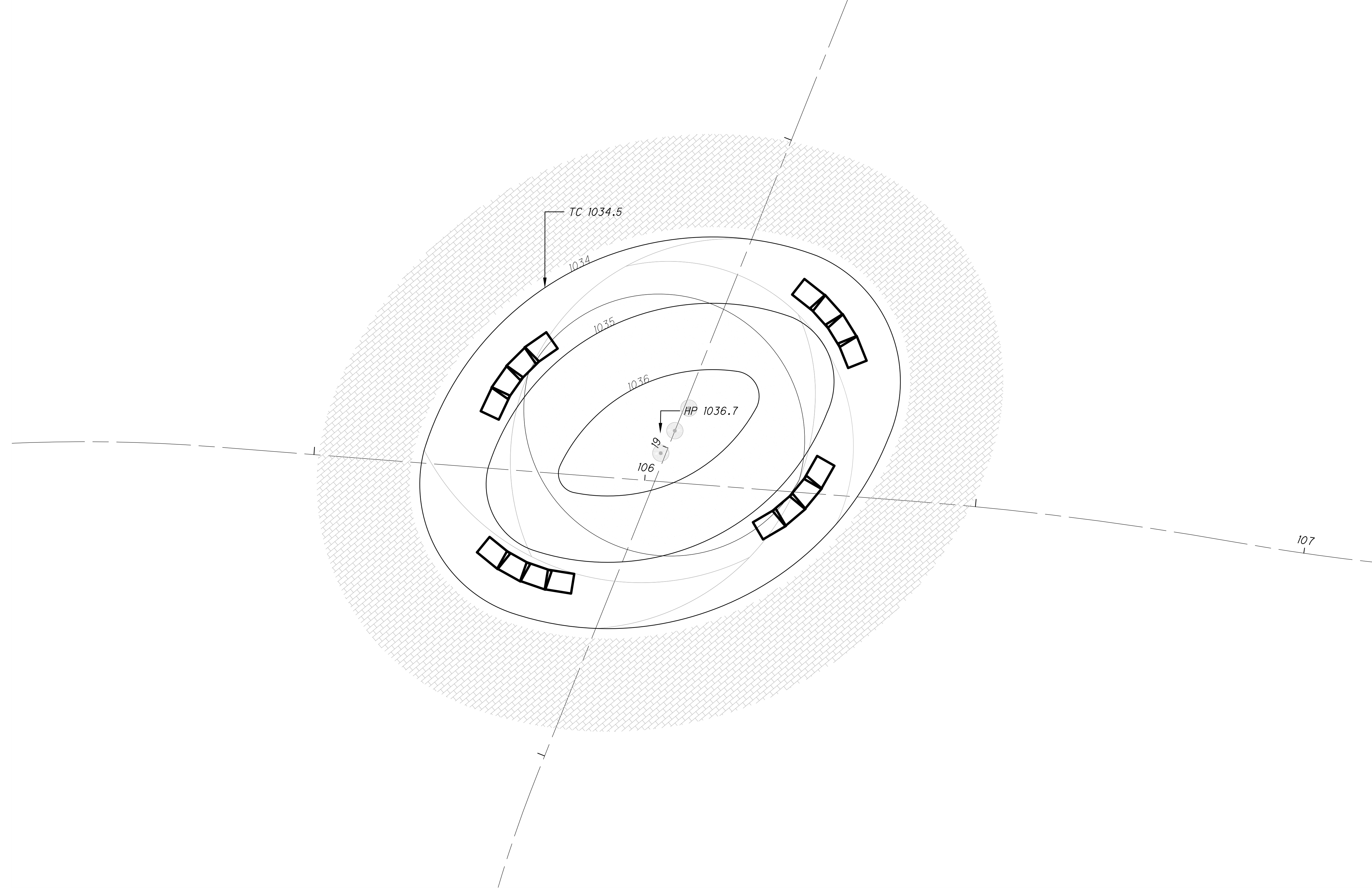
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MATERIALS AND LAYOUT PLAN

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

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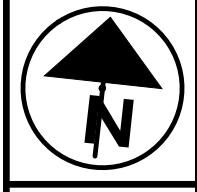
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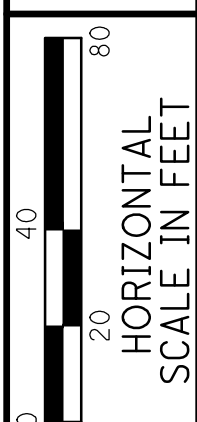
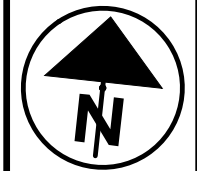
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IMPROVEMENTS (PID 90465)

GRADING PLAN

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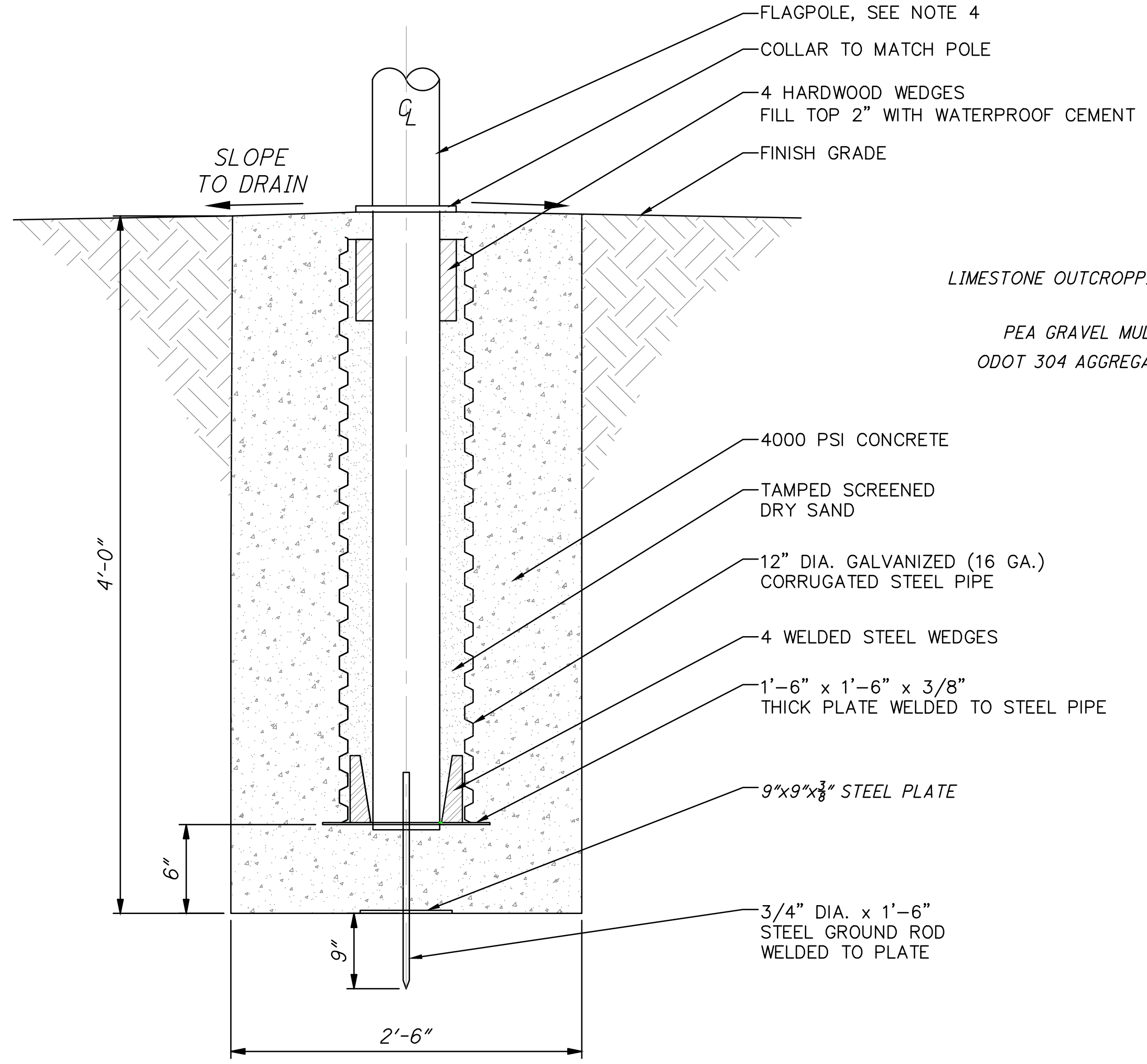
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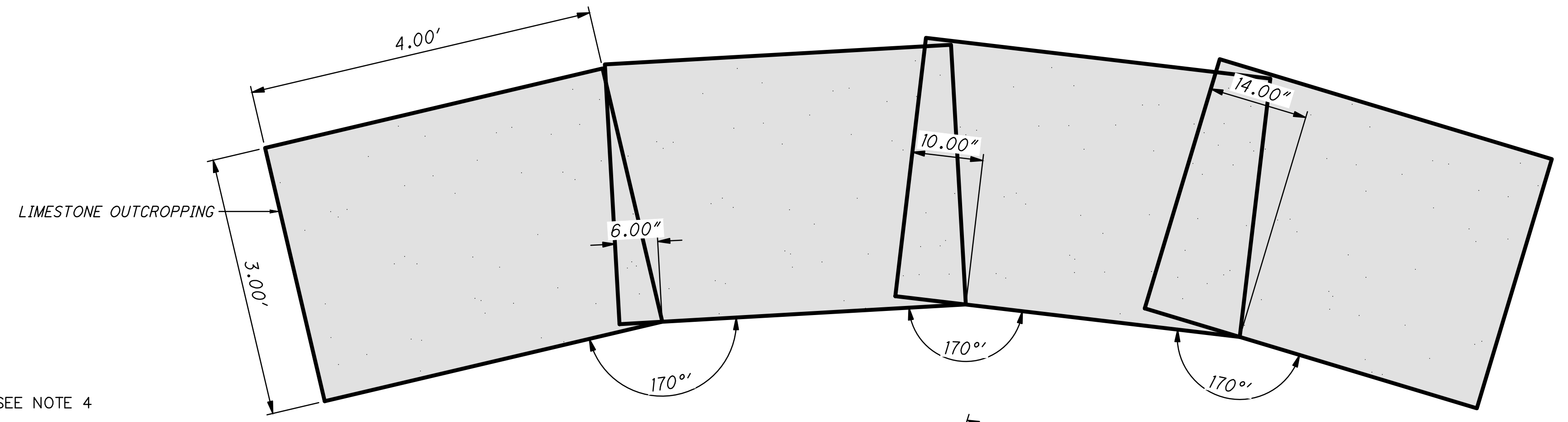
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IMPROVEMENTS (PID 90465)

FLAGPOLE NOTES:

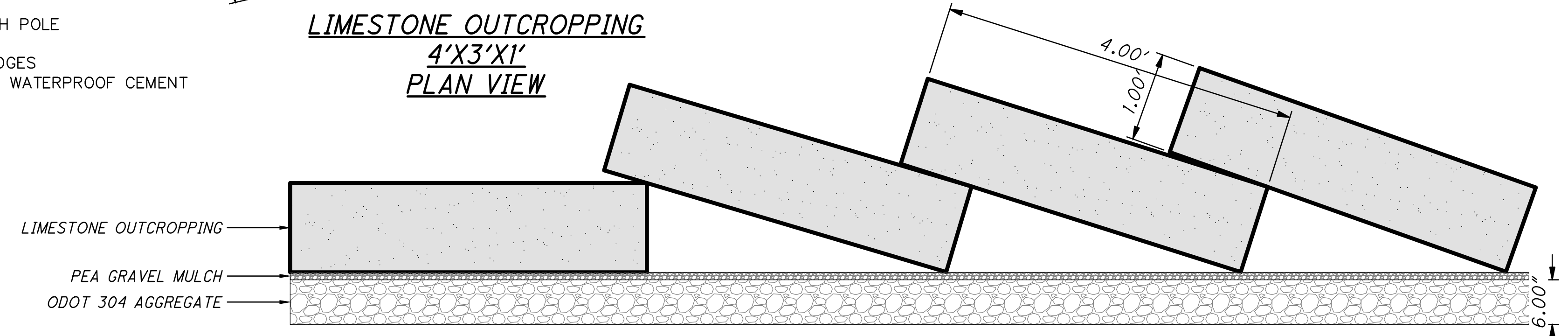
1. SET FLAGPOLE IN COMPLETELY DRY CONDITIONS AND IN ONE CONTINUOUS OPERATION TO AVOID THE INTRODUCTION OF MOISTURE.
2. COORDINATE FINAL DIMENSIONS WITH FLAG POLE MANUFACTURER.
3. CONTRACTOR TO PROVIDE OWNER WITH ONE FLAG FOR EACH POLE. FLAG TYPE TO BE SELECTED BY OWNER.
4. FLAGPOLE SHALL MEET THE FOLLOWING CRITERIA:
 POLE HEIGHT: (2) 30' HT. AND (1) 35' HT.
 POLE BASE DIAMETER: 6"
 POLE WALL THICKNESS: .156"
 POLE MATERIAL/FINISH: ALUMINUM/DARK BRONZE ANODIZED
 TOP: GOLD ANODIZED BALL
 MECHANISM: INTERNAL PULLY SYSTEM WITH LOCKING OPTION
 TRUCK: CAST ALUMINUM, REVOLVING, NON-FOULING INTERNAL HALYARD



**ITEM 203 - ROADWAY MISC.:
FLAGPOLE, 30' & 35' HEIGHT**



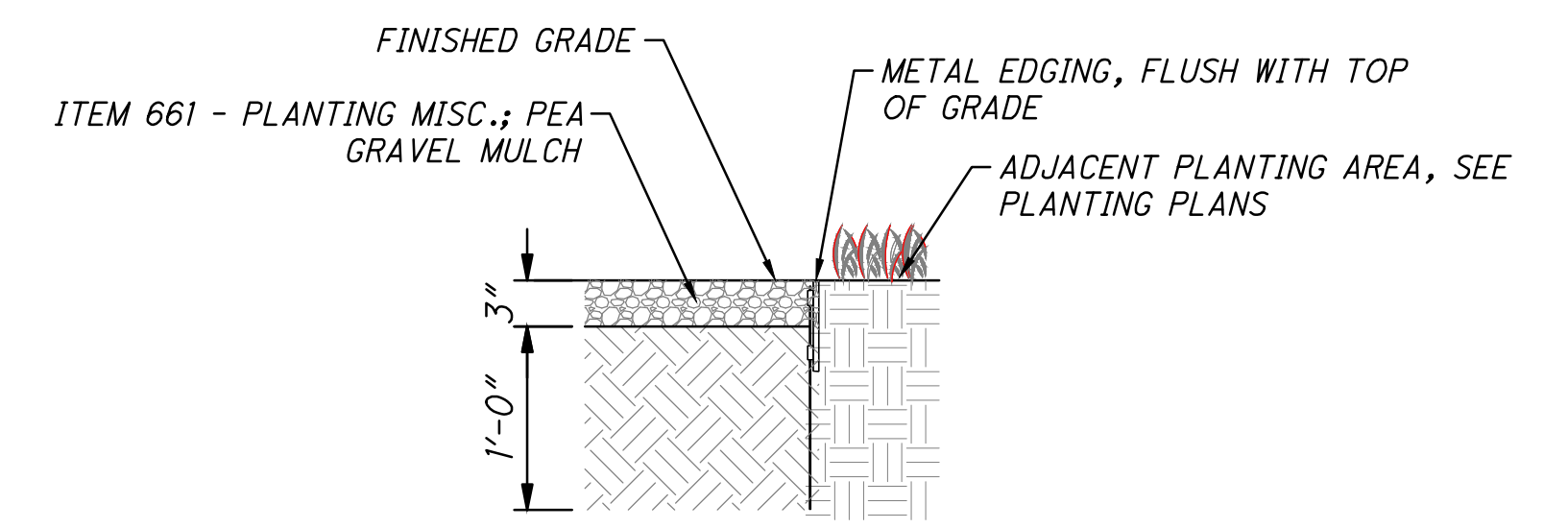
**LIMESTONE OUTCROPPING
4'X3'X1'
PLAN VIEW**



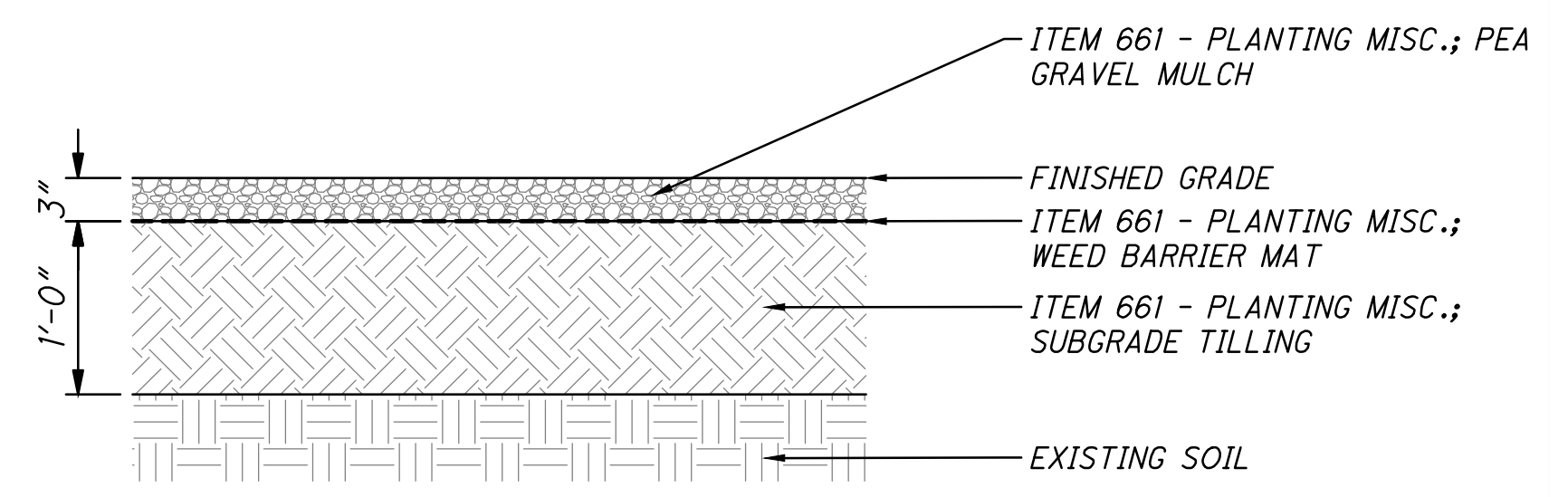
**LIMESTONE OUTCROPPING
4'X3'X1'
SECTION CUT**

CONCRETE EDGER NOTES:

1. PROVIDE EXPANSION JOINTS WITH JOINT SEALANT MATERIAL AND BACKER ROD AT 30' MAX SPACING ALONG LENGTH OF CONCRETE EDGER.
2. PROVIDE SAWN CONTRACTION JOINTS AT 10' MAX SPACING ALONG LENGTH OF CONCRETE EDGER.



**ITEM 661 - PLANTING MISC.,
METAL EDGING**



**ITEM 661 - PLANTING MISC.,
PEA GRAVEL MULCH**

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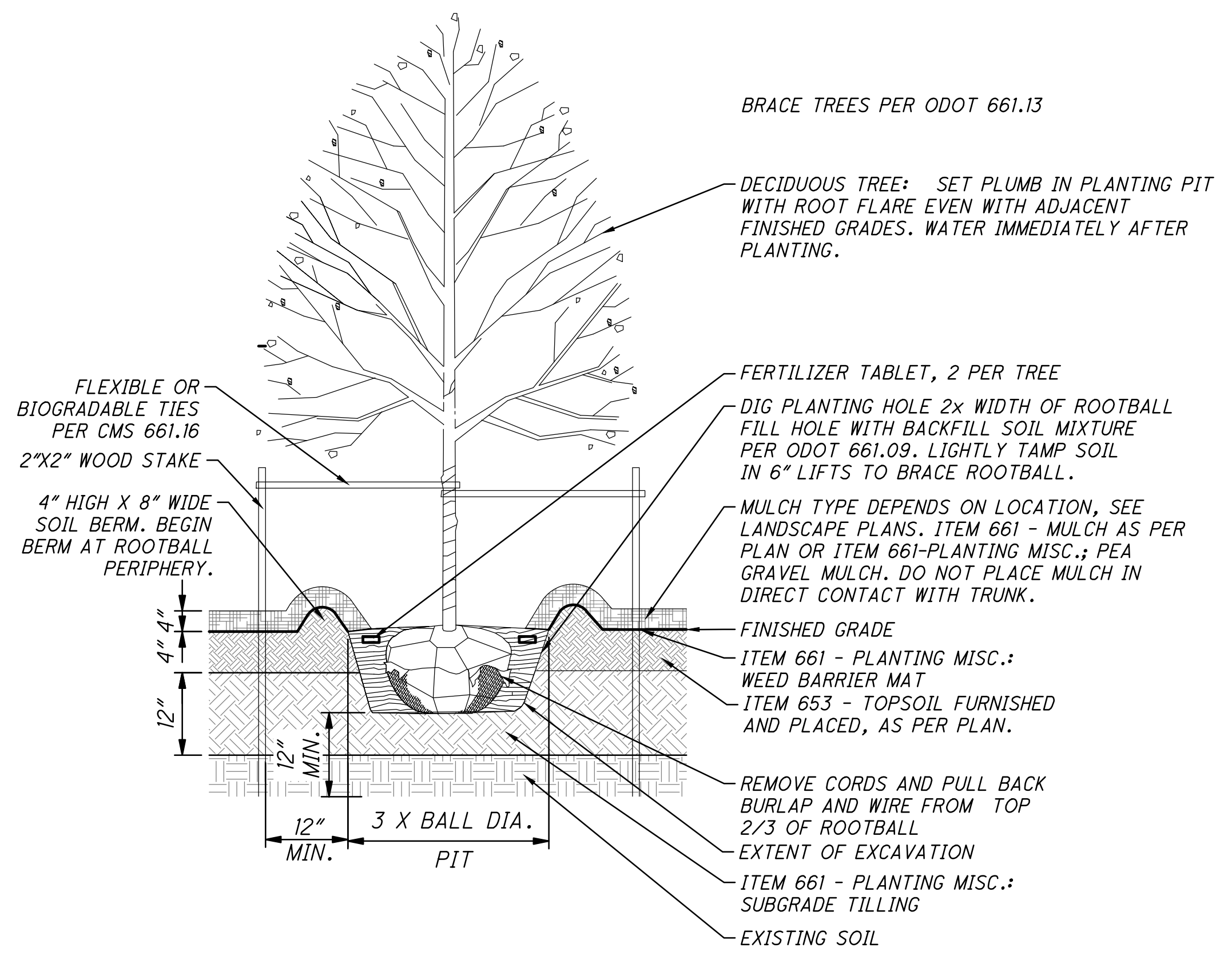
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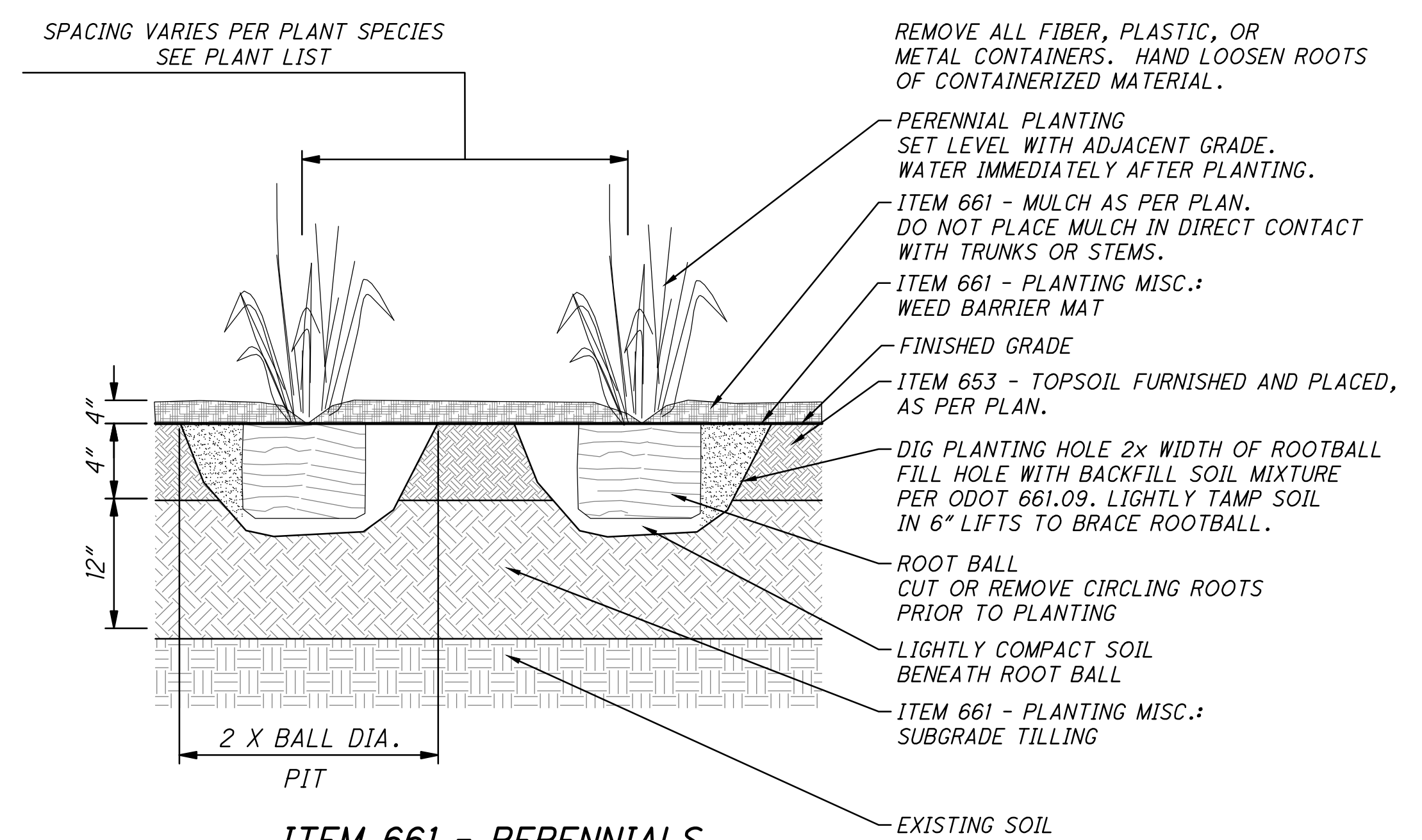
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HORIZONTAL
SCALE IN FEET

LANDSCAPING DETAILS

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

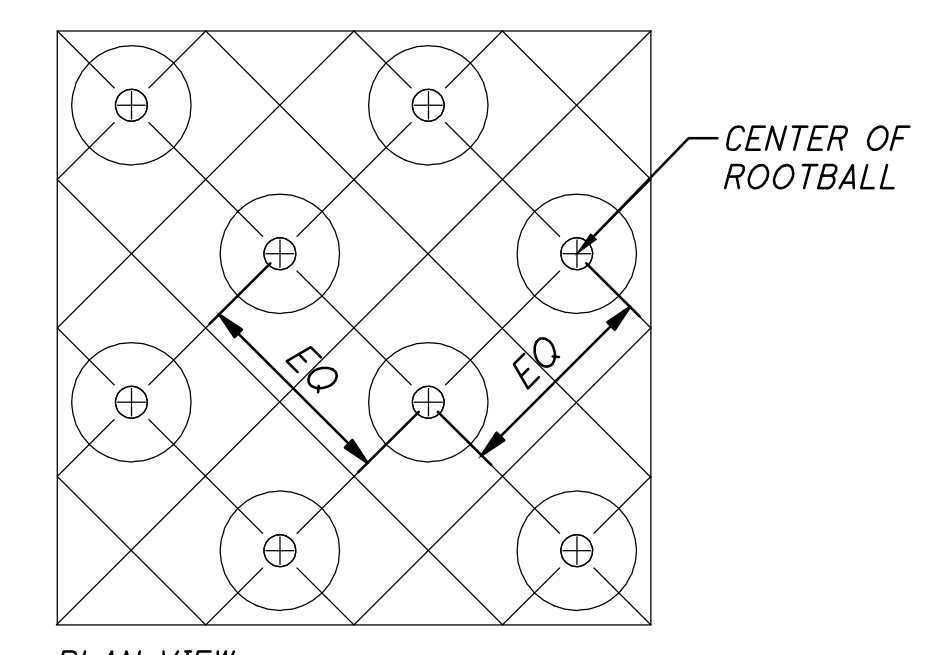


**ITEM 661 - DECIDUOUS TREE,
4" CALIPER, AS PER PLAN**

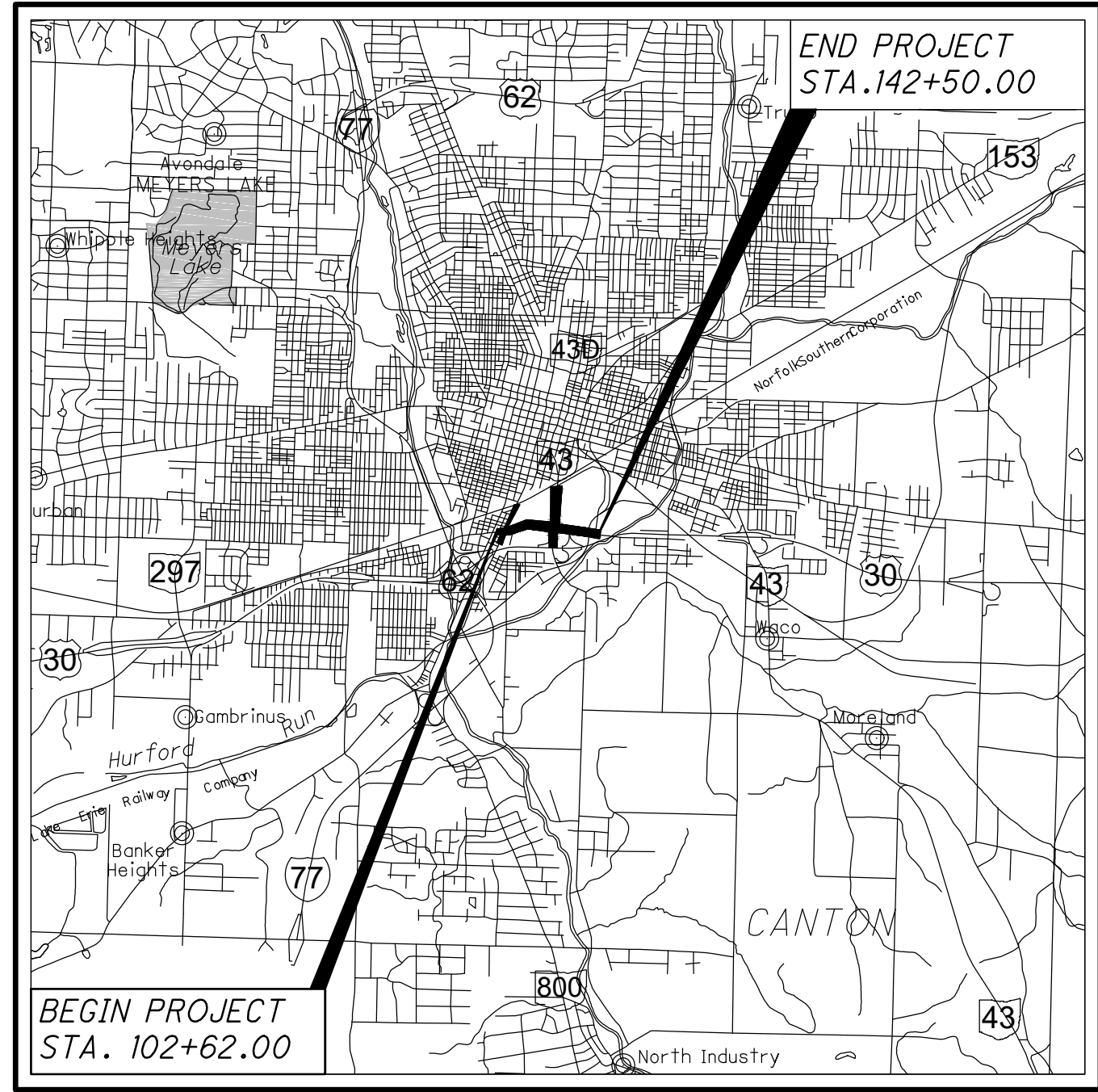


**ITEM 661 - PERENNIALS,
NO 2 CONT., AS PER PLAN**

PLANT SHRUBS AND PERENNIALS
IN STAGGERED SPACING AS SHOWN.
SPACING VARIES PER SPECIES.
SEE PLANT LIST.

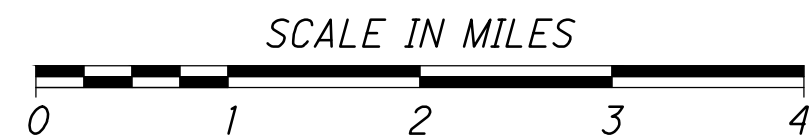


PLAN VIEW
**SHRUB/PERENNIAL
LAYOUT DETAIL**



LOCATION MAP

LATITUDE: N40°47'22" LONGITUDE: W81°22'36"



NATURAL GAS DIST./TRANS.
 DOMINION EAST OHIO GAS
 320 SPRINGSIDE DR.
 AKRON, OHIO 44333
 330-664-2638
 ATTN: MICAH RISACHER
 RELOCATION@DOM.COM
 EMERGENCY NO.
 1-800-521-4400

TELEPHONE
 AT&T
 50 W. BOWERY STREET
 FLOOR 6
 AKRON, OHIO 44308
 ATTN: STEVE HYLTON
 330-384-3055
 EMERGENCY NO. - 24 HRS
 1-800-572-4545 OPTION #4

TRAFFIC INTERCONNECT
 CITY ENGINEER'S OFFICE
 2436-30TH ST. N.E.
 CANTON, OHIO 44705
 ATTN: NICK LOUKAS
 330-489-3381

SANITARY AND STORM SEWER
 CITY ENGINEER'S OFFICE
 2436-30TH ST. N.E.
 CANTON, OHIO 44705
 ATTN: DAN MOEGLIN
 330-489-3381

WATER
 CANTON WATER DEPT.
 2664 HARRISBURG RD. N.E.
 CANTON, OHIO 44708
 ATTN: BRENT BURRIER OR
 LEWI MILLER
 330-489-3310

CABLE TV
 SPECTRUM
 ATTN: RON ICKES
 530 S. MAIN STREET,
 SUITE 1751
 AKRON, OHIO 44311
 (216) 392-7964

ELECTRIC
 AMERICAN ELECTRIC POWER
 301 CLEVELAND AVE. SW
 P.O. BOX 24400
 CANTON, OHIO 44701-4400
 330-438-7739
 ATTN: KEITH SCHALMO
 330-438-7720

THE CITY ENGINEER'S OFFICE IS TO BE CONTACTED DIRECTLY FOR SANITARY AND STORM SEWER AND TRAFFIC INTERCONNECT FACILITIES LOCATION: 330-489-3381

CONVENTIONAL SYMBOLS

County Line	-----	Ditch / Creek (Ex)	-----
Township Line	-----	Ditch / Creek (Pr)	-----
Section Line	-----	Ownership Hook Symbol	∟, Example
Corporation Line	-----	Property Line Symbol	ℙ, Example
Fence Line (Ex)	----- (Pr)	Break Line Symbol	∟, Example
Center Line	-----	Tree (Pr)	☼, Tree (Ex) ☼, Shrub (Ex) ☼
Right of Way (Ex)	-----	Tree (Remove)	☼, Shrub (Remove) ☼
Right of Way (Pr)	----- R/W	Evergreen (Ex)	☼, Stump
Standard Highway Ease. (Ex)	-----	Evergreen (Remove)	☼, Stump (Remove)
Standard Highway Ease. (Pr)	-----	Wetland (Pr)	∩, Grass (Pr) ∩, Aerial Target
Temporary Right of Way	-----	Post (Ex)	○, Mailbox (Ex) □, Mailbox (Pr) □
Sewer Ease. (Pr)	-----	Light (Ex)	⊕, Telephone Marker (Ex) ⊕TEL
Slope Ease. (Ex)	-----	Fire Hydrant (Ex)	⊕, Water Meter (Ex) ⊕
Guardrail (Ex)	----- (Pr)	Water Valve (Ex)	⊕, Utility Valve Unknown (Ex.) ⊕
Construction Limits	-----	Telephone Pole (Ex)	⊕, Power Pole (Ex) ⊕
Edge of Pavement (Ex)	-----	Light Pole (Ex)	⊕
Edge of Pavement (Pr)	-----		
Edge of Shoulder (Ex)	-----		
Edge of Shoulder (Pr)	-----		

RIGHT OF WAY LEGEND SHEET STA - 11TH STREET SE IMPROVEMENTS

CITY OF CANTON
 STARK COUNTY, OHIO

INDEX OF SHEETS:

RW LEGEND SHEET	1
CENTERLINE PLAT	2-3
PROPERTY MAP	4-5
SUMMARY OF ADDITIONAL R/W	6-8
RIGHT OF WAY TOPO SHEETS	9-33
RIGHT OF WAY BOUNDARY SHEETS	10-34

SHEET SCALES
PROPERTY MAP SHEETS 4 & 5: 1" = 100'
RW BOUNDARY & TOPO SHEETS 9-34: 1"=20'

PROJECT DESCRIPTION

IMPROVEMENTS CONSIST OF A ROUNDABOUT AT THE INTERSECTION OF 11TH STREET/MARKET AVENUE, STREETSCAPING WITH TREES, UPGRADED PEDESTRIAN LIGHTING, UPGRADED SIGNALS, ADA IMPROVEMENTS AT CROSSWALKS, BRICK INTERSECTION, A SHARED-USE PATH AND BIKE LANES THAT ALIGN WITH THE CITY'S MASTER BIKE ROUTES. 11TH STREET WILL ALSO BE REALIGNED TO ELIMINATE THE SUBSTANDARD DEFLECTION IN THE EXISTING ALIGNMENT.

PLANS PREPARED BY:

FIRM NAME: AECOM
 PLANS PREPARED BY: JOHN P. KALENTERIDES
 FIELD REVIEW BY: DAN STANKAVICH
 DATE COMPLETED: 04/28/21
 OWNERSHIP VERIFIED BY: DAN STANKAVICH
 DATE COMPLETED: 04/28/21
 DATE COMPLETED: 04/28/21

TYPES OF TITLE LEGEND:
 WD = WARRANTY DEED
 T = TEMPORARY EASEMENT
 WL = WARRANTY LIMITED ACCESS
 SH = STANDARD HIGHWAY EASEMENT

PROJECT CONTROL

STATE PLANE GRID NORTH ZONE NAD83 (2011)
 PROJECT ADJUSTMENT FACTOR : 0.99989102

STRUCTURE KEY

	RESIDENTIAL
	COMMERCIAL
	OUT-BUILDING

I, Dan Stankavich, P. S. have conducted a survey of the existing centerline and property lines for this project for the City of Canton in November of 2009 thru July of 2012. The results of that survey are contained herein.

As a part of this work I have set the monuments at the proposed Property corners, Section Corners and other points as shown herein, prior to construction. However, Item 604 Monument Assemblies, Item 604 Reference Monuments and Centerline Monuments shall be that may called for, will be installed by the construction contractor as specified in the plans. All Centerline Monuments, and Right of Way Monuments set and/or reset by the contractor's surveyor will include a cap as per Standard Construction Drawing RM-1.1 and bear the surveyor's Ohio registration number and/or name or company name. This work will be done in accordance with OAC 4733-37 as cited below.

All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted.

The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Dan Stankavich
 Dan Stankavich, Professional Land Surveyor 7122

Date: APRIL 29, 2021

SURVEYOR'S SEAL

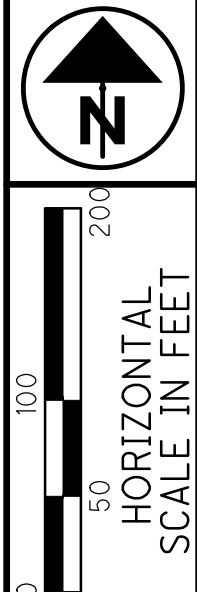
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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS

EXISTING RIGHT OF WAY WIDTHS FOR THIS PROJECT WERE DETERMINED FROM THE FOLLOWING:
PLAT BOOK 37, PAGE 109 AND PLAT BOOK 58, PAGE 60 - STARK COUNTY RECORDER RECORDS
REFERENCE IMPROVEMENT PLANS:
STA-11TH STREET SE (CITY OF CANTON)
ODOT DISTRICT 4 RIGHT OF WAY PLANS DENOTED:
STA-30-15.04 / STA-77-77-9.22
STA-43-13.38
STA-30-15.83
STA-30-15.66

MONUMENT LEGEND

 EXISTING MONUMENT FOUND
 EXISTING IRON PIN FOUND
 MONUMENT TO BE SET
BASIS OF BEARING
 BEARINGS BASE OFF OF THE OHIO STATE PLANE COORDINATE GROUND SYSTEM, NORTH ZONE, NAD 83 (CORS2011)

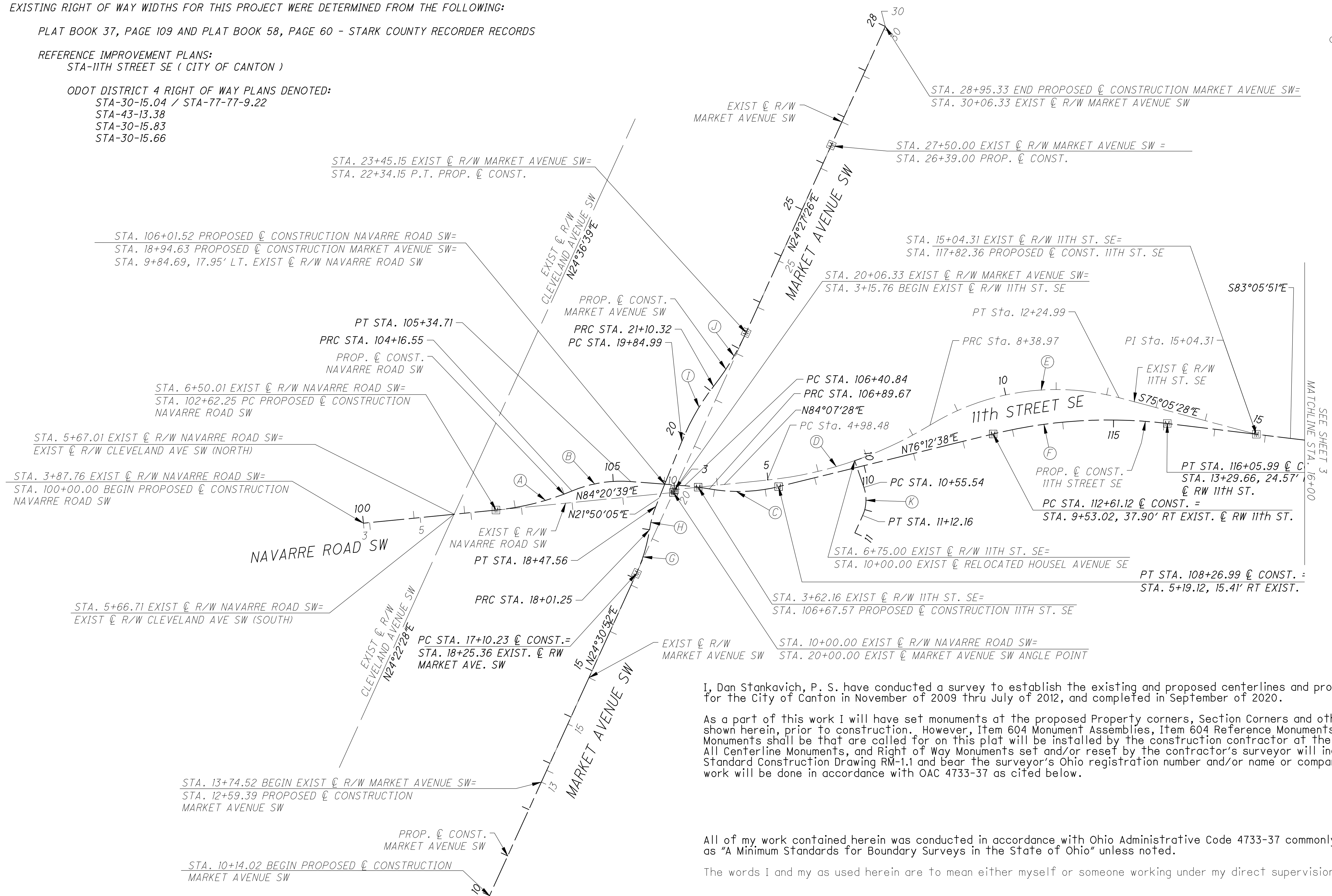


PID NO. **90465**
 R/W DESIGNER JPK
 R/W REVIEWER DS

**CENTERLINE PLAT
SHEET 1 OF 2**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

2/34
 270
 302



I, Dan Stankavich, P. S. have conducted a survey to establish the existing and proposed centerlines and property lines for this project for the City of Canton in November of 2009 thru July of 2012, and completed in September of 2020.

As a part of this work I will have set monuments at the proposed Property corners, Section Corners and other points as shown herein, prior to construction. However, Item 604 Monument Assemblies, Item 604 Reference Monuments and Centerline Monuments shall be that are called for on this plat will be installed by the construction contractor at the locations specified on this plat. All Centerline Monuments, and Right of Way Monuments set and/or reset by the contractor's surveyor will include a cap as per Standard Construction Drawing RM-1.1 and bear the surveyor's Ohio registration number and/or name or company name. This work will be done in accordance with OAC 4733-37 as cited below.

All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted.

The words I and my as used herein are to mean either myself or someone working under my direct supervision.

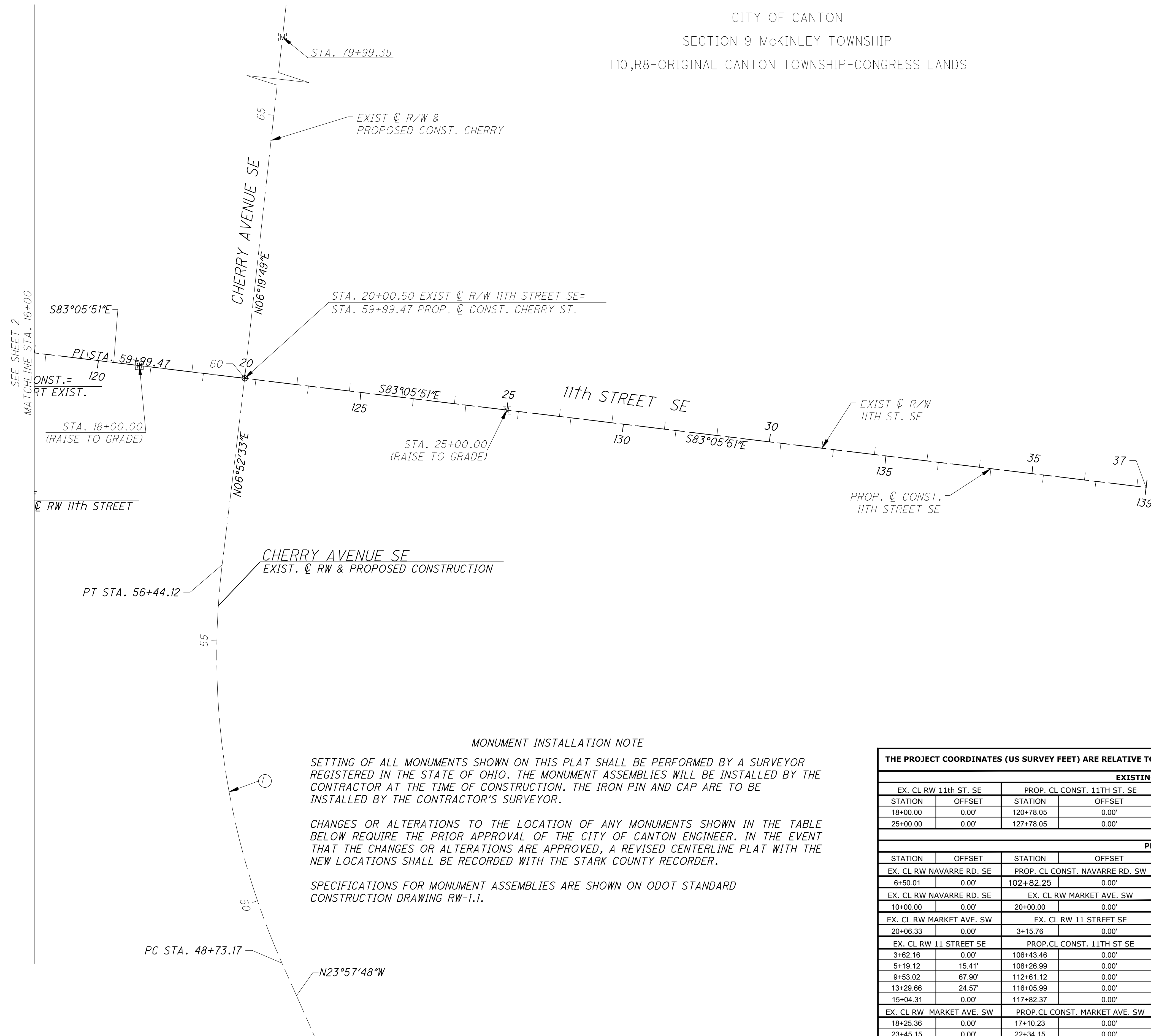
Dan Stankavich, Professional Land Surveyor 7122

Date: APRIL 29, 2021

SURVEYOR'S SEAL

c:\pwworking\aecom_ds20_na_2019\brittney.crandall@aecom.com\dms20701\17790_RC001.dwg_04-Nov-22 2:33 PM

STARK COUNTY
CITY OF CANTON
SECTION 9-MCKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



MONUMENT INSTALLATION NOTE
SETTING OF ALL MONUMENTS SHOWN ON THIS PLAT SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THE TABLE BELOW REQUIRE THE PRIOR APPROVAL OF THE CITY OF CANTON ENGINEER. IN THE EVENT THAT THE CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED WITH THE STARK COUNTY RECORDER.

SPECIFICATIONS FOR MONUMENT ASSEMBLIES ARE SHOWN ON ODOT STANDARD CONSTRUCTION DRAWING RW-1.1.

- Ⓐ PROP. C OF CONST. NAVARRE ROAD SW
CURVE DATA
P.I. STA. 103+39.97
Δ = 16° 58' 07"
Dc = 10' 59' 50"
R = 521.00'
T = 77.72'
L = 154.30'
E = 5.76'
C = 153.74'
CB = N75°51'35"E
- Ⓑ PROP. C OF CONST. NAVARRE ROAD SW
CURVE DATA
P.I. STA. 104+76.76
Δ = 27° 04' 55"
Dc = 22' 55' 06"
R = 250.00'
T = 60.21'
L = 118.17'
E = 7.15'
C = 117.07'
CB = N80°54'59"E
- Ⓒ PROP. C OF CONST. 11TH STREET SE
CURVE DATA
P.I. STA. 107+59.34
Δ = 23° 50' 33"
Dc = 17' 21' 44"
R = 330.00'
T = 69.67'
L = 137.32'
E = 7.27'
C = 136.33'
CB = N88°07'54"E
- Ⓓ EX. R/W 11TH STREET SE
CURVE DATA
P.I. STA. 6+71.60
Δ = 25° 32' 15"
Dc = 7' 30' 00"
R = 763.94'
T = 173.12'
L = 340.50'
E = 19.37'
C = 337.69'
CB = N71°21'21"E
- Ⓔ EX. R/W 11TH STREET SE
CURVE DATA
P.I. STA. 10+43.23
Δ = 46° 19' 19"
Dc = 12' 00' 00"
R = 477.46'
T = 204.25'
L = 386.01'
E = 41.85'
C = 375.59'
CB = N81°44'53"E
- Ⓕ PROP. C OF CONST. 11TH STREET SE
CURVE DATA
P.I. STA. 114+35.45
Δ = 20° 41' 32"
Dc = 6' 00' 00"
R = 954.93'
T = 174.33'
L = 344.87'
E = 15.78'
C = 343.00'
CB = N86°33'23"E
- Ⓖ PROP. C OF CONST. MARKET STREET
CURVE DATA
P.I. STA. 17+56.03
Δ = 15° 56' 53"
Dc = 17' 31' 18"
R = 327.00'
T = 45.81'
L = 91.02'
E = 3.19'
C = 90.72'
CB = N16°32'25"E
- Ⓗ PROP. C OF CONST. MARKET STREET
CURVE DATA
P.I. STA. 18+24.51
Δ = 13° 16' 06"
Dc = 28' 38' 52"
R = 200.00'
T = 23.26'
L = 46.32'
E = 1.35'
C = 46.21'
CB = N15°12'02"E
- Ⓙ PROP. C OF CONST. MARKET STREET
CURVE DATA
P.I. STA. 20+48.07
Δ = 16° 08' 12"
Dc = 12' 52' 32"
R = 445.00'
T = 63.08'
L = 125.33'
E = 4.45'
C = 124.92'
CB = N29°54'11"E
- Ⓚ PROP. C OF CONST. MARKET STREET
CURVE DATA
P.I. STA. 21+72.52
Δ = 13° 30' 51"
Dc = 10' 54' 49"
R = 525.00'
T = 62.20'
L = 123.83'
E = 3.67'
C = 123.54'
CB = N31°12'52"E
- Ⓛ EX. R/W HOUSEL AVENUE SE
CURVE DATA
P.I. STA. 10+85.28
Δ = 43° 15' 15"
Dc = 76' 23' 40"
R = 75.00'
T = 29.74'
L = 56.62'
E = 5.68'
C = 55.28'
CB = S02°30'44"W
- Ⓜ EX. R/W CHERRY AVENUE
CURVE DATA
P.I. STA. 52+68.23
Δ = 30° 50' 21"
Dc = 4' 00' 00"
R = 1,432.35'
T = 395.06'
L = 770.96'
E = 53.48'
C = 761.68'
CB = N08°32'37"W

THE PROJECT COORDINATES (US SURVEY FEET) ARE RELATIVE TO STATE PLANE GROUND COORDINATES (US SURVEY FEET) BY A COMBINED SCALE FACTOR OF 0.99990679

EXISTING MONUMENTS TO BE RECONSTRUCTED TO GRADE								
EX. CL RW 11th ST. SE	PROP. CL CONST. 11TH ST. SE	LOCATION						
STATION	OFFSET	STATION	OFFSET		NORTHING	EASTING	NO.	
18+00.00	0.00'	120+78.05	0.00'	POT	EX. R/W 11TH ST. SE / PROP CL CONST.	411001.47	2280502.43	1
25+00.00	0.00'	127+78.05	0.00'	POT	EX. R/W 11TH ST. SE / PROP CL CONST.	410917.34	2281197.36	1
TOTAL CARRIED TO GENERAL SUMMARY							2	
PROPOSED MONUMENT ASSEMBLIES, TYPE C								
STATION	OFFSET	STATION	OFFSET	LOCATION		NORTHING	EASTING	NO.
EX. CL RW NAVARRE RD. SE		PROP. CL CONST. NAVARRE RD. SW						
6+50.01	0.00'	102+82.25	0.00'	POT - EX. CL RW NAVARRRE RD. SW & PC - PROP. CL CONST.		410888.05	2278714.63	1
EX. CL RW NAVARRE RD. SE		EX. CL RW MARKET AVE. SW						
10+00.00	0.00'	20+00.00	0.00'	EX. CL R/W NAVARRE ROAD SW & PI EX. CL RW MARKET AVE. SW		410922.54	2279062.93	1
EX. CL RW MARKET AVE. SW		EX. CL RW 11 STREET SE						
20+06.33	0.00'	3+15.76	0.00'	EX. CL RW MARKET AVE SW - BEGIN EX. CL RW 11 STREET SE		410928.30	2279065.55	1
EX. CL RW 11 STREET SE		PROP. CL CONST. 11TH ST SE						
3+62.16	0.00'	106+43.46	0.00'	INTERSECT EX. R/W & PROP. CL CONSTRUCTION		410933.05	2279111.70	1
5+19.12	15.41'	108+26.99	0.00'	PT PROP. CL CONSTRUCTION		410934.12	2279269.80	1
9+53.02	67.90'	112+61.12	0.00'	PC. PROP. CL CONSTRUCTION		411037.60	2279691.41	1
13+29.66	24.57'	116+05.99	0.00'	PT PROP. CL CONSTRUCTION		411058.20	2280033.79	1
15+04.31	0.00'	117+82.37	0.00'	INTERSECT EX. R/W & PROP. CL CONSTRUCTION		411037.01	2280208.88	1
EX. CL RW MARKET AVE. SW		PROP. CL CONST. MARKET AVE. SW						
18+25.36	0.00'	17+10.23	0.00'	EX. CL R/W MARKET AVE. SW / PC PROP. CL CONSTRUCTION		410763.65	2278990.46	1
23+45.15	0.00'	22+34.15	0.00'	EX. CL R/W MARKET AVE. SW / PT PROP. CL CONSTRUCTION		411236.72	2279205.82	1
27+50.00	0.00'	26+39.00	0.00'	POT - EX. CL RW MARKET AVE. SW / PROP. CL CONST.		411605.25	2279373.44	1
TOTAL CARRIED TO GENERAL SUMMARY							11	

N
2

0 50 100 200
HORIZONTAL SCALE IN FEET

PID NO. **90465**

R/W DESIGNER JPK
R/W REVIEWER DS

CENTERLINE PLAT
SHEET 2 OF 2

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

3 / 34

271
302

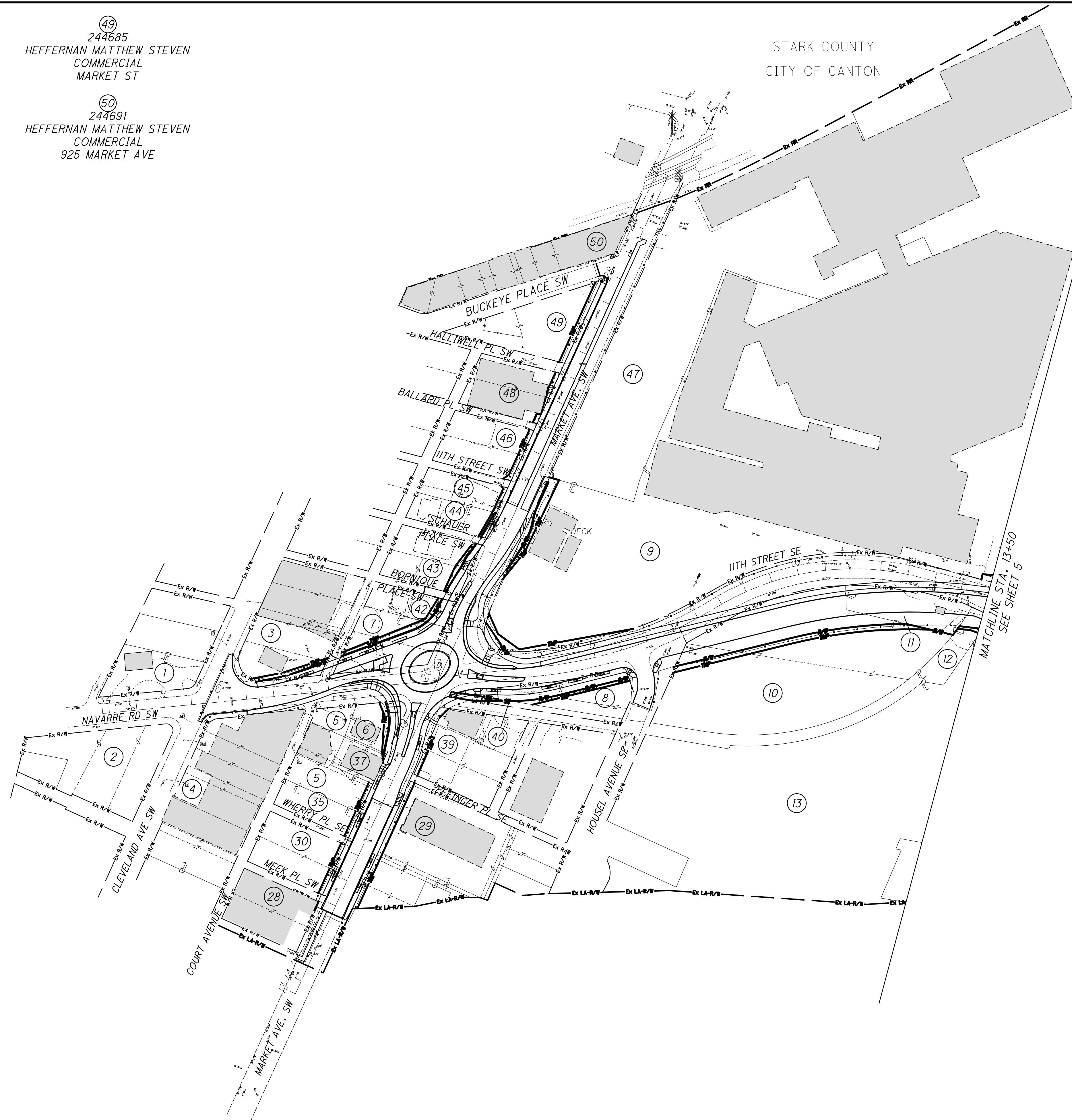
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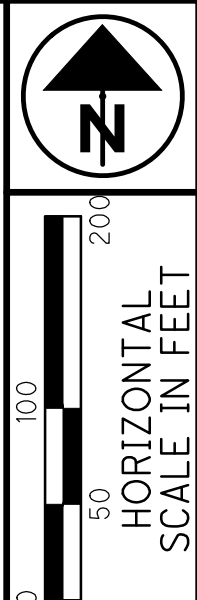
④⑨
244685
HEFFERNAN MATTHEW STEVEN
COMMERCIAL
MARKET ST

⑤⑩
244691
HEFFERNAN MATTHEW STEVEN
COMMERCIAL
925 MARKET AVE

STARK COUNTY
CITY OF CANTON



- | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--|---|--|---|---|---|--|---|--|--|---|---|--|---|--|---|--|--|---|---|--|---|--|
| ①
244195
ROBERT D. COEN
COMMERCIAL
301 NAVARRE RD SW | ②
246417
CLG ENTERPRISES, LLC.
COMMERCIAL
1210 CLEVELAND AVE. SW | ③
10007467
219 NAVARRE ROAD SW LLC
COMMERCIAL
219 NAVARRE RD SW | ④
245012
DIFIORE FAMILY
PROPERTIES LLC
COMMERCIAL
216 NAVARRE RD SW | ⑤
245598
NORTHEASTERN RICHARDS
HOLDINGS LLC
COMMERCIAL
112 NAVARRE RD SW | ⑥
244191
SIPASAK PROPERTIES LLC
COMMERCIAL
104 NAVARRE RD SW | ⑦
10007468
219 NAVARRE ROAD SW LLC
COMMERCIAL
219 NAVARRE RD SW | ⑧
244688
WHITE MOTORS DEVELOPMENT LLC
INDUSTRIAL
MARKET AVE | ⑨
10007303
BROADVIEW TWO LLC
COMMERCIAL
101 11TH ST | ⑩
244524
WHITE MOTORS DEVELOPMENT LLC
INDUSTRIAL
11TH ST | ⑪
244603
CANTON COMMUNITY IMPROVEMENT CORP
COMMERCIAL
220 11TH ST | ⑫
299097
WHEELING & LAKE ERIE RAILWAY
COMPANY
11TH ST SW | ⑬
244524
WHITE MOTORS DEVELOPMENT LLC
COMMERCIAL
11TH ST | ⑭
245579
OP PROPERTIES OF CANTON LLC
COMMERCIAL
1239 MARKET AVE | ⑮
246818
JAJC HOLDINGS LLC
COMMERCIAL
1220 MARKET AVE | ⑯
247479
OP PROPERTIES OF CANTON LLC
COMMERCIAL
WHERRY PL SW | ⑰
237848
VAN DE BOGART KATHY
ET AL (7 OWNERS)
COMMERCIAL
1213 MARKET AVE | ⑱
284095
HANNAHS HOUSE 119
COMMERCIAL
MARKET AVE | ⑲
299096
WHEELING & LAKE ERIE RAILWAY
COMPANY
INDUSTRIAL
1200 MARKET AVE | ⑳
204697
MILLER JOHN C
COMMERCIAL
MARKET AVE | ㉑
10010081
HENRY C. MCGHEE
JAMES R. MCGHEE
RESIDENTIAL
110 SCHAUERS PL SW | ㉒
10010078
MCGHEE HENRY C. JR
& JAMES R.
RESIDENTIAL
1107 MARKET AVE | ㉓
220642
MCGHEE JAMES G
RESIDENTIAL
1103 MARKET AVE | ㉔
10010080
MCGHEE HENRY C. JR.
JAMES R.
COMMERCIAL
MARKET AVE | ㉕
10007308
HERCULES COMPLEX
CONDOMINIUM (MASTER RECORD)
COMMERCIAL
101 11TH ST | ㉖
205329
CHIARELLI JOHN & TARR CLIFFORD
COMMERCIAL
1025 MARKET AVE |
|--|--|---|--|---|--|---|---|---|--|---|--|--|---|---|--|---|--|---|--|--|---|---|--|---|--|



PID NO. **90465**

R/W DESIGNER JPK
R/W REVIEWER DS

PROPERTY MAP

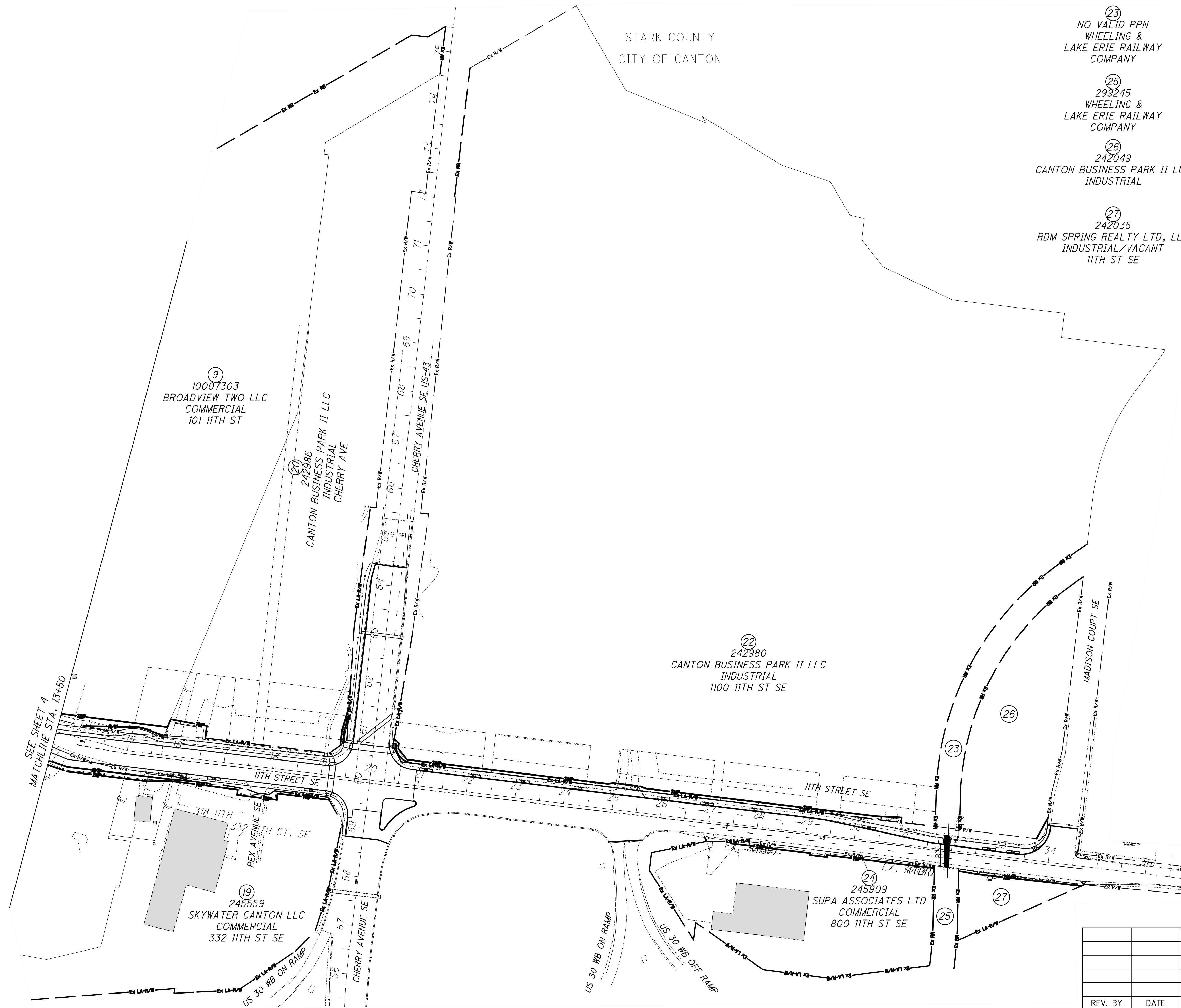
**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

4 / 34

②72
③02

REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON

(23)
NO VALID PPN
WHEELING &
LAKE ERIE RAILWAY
COMPANY

(25)
299245
WHEELING &
LAKE ERIE RAILWAY
COMPANY

(26)
242049
CANTON BUSINESS PARK II LLC
INDUSTRIAL

(27)
242035
RDM SPRING REALTY LTD, LLC
INDUSTRIAL/VACANT
11TH ST SE

(9)
10007303
BROADVIEW TWO LLC
COMMERCIAL
101 11TH ST

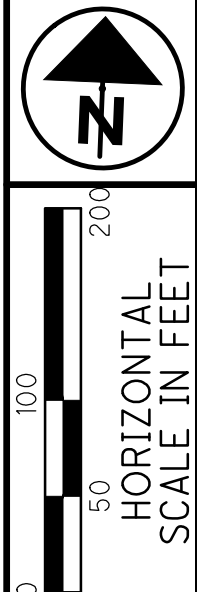
(20)
242986
CANTON BUSINESS PARK II LLC
INDUSTRIAL
CHERRY AVE

(22)
242980
CANTON BUSINESS PARK II LLC
INDUSTRIAL
1100 11TH ST SE

(19)
245559
SKYWATER CANTON LLC
COMMERCIAL
332 11TH ST SE

(24)
245909
SUPA ASSOCIATES LTD
COMMERCIAL
800 11TH ST SE

SEE SHEET 4
MATCHLINE STA. 13+50



PID NO. **90465**
R/W DESIGNER: JPK
R/W REVIEWER: DS

PROPERTY MAP

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

5 / 34
273
302

REV. BY	DATE	DESCRIPTION

TOTAL NUMBER OF :

31 OWNERSHIPS 1 TOTAL TAKES
 53 PARCELS 1 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = AUDITOR'S RECORD AREA - NET TAKE

GRANTEE:
 ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
 CITY OF CANTON UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NUMBER	OFFICIAL RECORD		AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED
			BOOK	PAGE								LEFT	RIGHT			INSTRUMENT NO.
1	Robert D. Coen	9,10	3782	736	244195	0.249	0.000									NO TAKE
2	CLG Enterprises, LLC an Ohio Limited Liability Company	9,10	201407090025436		246417	0.597	0.000									NO TAKE
3-WD	219 Navarre Rd, S.W., L.L.C. an Ohio Limited Liability Company	9,10	200305190046141		10007467	0.781	0.000	0.025	0.000	0.025		0.756				TAKE 21 L.F. 8' HIGH CHAIN LINK FENCE & 26' GATE & GATE POSTS
3-T		9,10						0.020	0.000	0.020						GRADE & RECONNECT DRIVE
4	DiFiore Family Properties LLC	9,10	201305140024004		245012	1.057	0.000									NO TAKE
5-T	Northeastern Richards Holdings, LLC an Ohio Limited Liability Company	29,30	200712310067633		245598	0.384	0.000	0.011	0.000	0.011						GRADE & RECONNECT DRIVE
6-WD	Sipasak Properties, LLC, an Ohio Corporation	11,12	201008190031741		244191	0.160	0.000	0.043	0.000	0.043						
6-T								0.016	0.000	0.016						DRIVE & PARKING LOT RECONSTRUCTION
7-WD	219 Navarre Rd, S.W., L.L.C. an Ohio Limited Liability Company	11,12	200301230006689		10007468	0.323	0.000	0.221	0.000	0.221		0.102				
7-T		11,12	201009210036675					0.029	0.000	0.029						GRADE & SEED
8-WD	White Motors Development LLC	11 - 14	200606080034818		244688	0.300	0.000	0.130	0.000	0.130						
8-T		11 - 14						0.028	0.000	0.028						GRADE & SEED
9-WD1	Broadview Two LLC	31,32	201612220051924		10007303	22.350	0.000	0.022	0.000	0.022						
9-WD2	an Ohio Limited Liability Company	11,12						0.019	0.000	0.019						
9-WD3		17,18						0.030	0.000	0.030						
	TOTAL 9-WD1, 2 & 3					22.350	0.000	0.071	0.000	0.071		22.279				
9-T1		31,32						0.047	0.000	0.047						GRADE & RECONNECT DRIVE-TAKE 170 L.F. FENCE/GATE
9-T2		11 - 14						0.056	0.000	0.056						GRADE & SEED
9-T3		17,18						0.074	0.000	0.074						GRADE & RECONNECT DRIVE
10-WD	White Motors Development LLC	13 - 16	200605080034818		244686	0.980	0.000	0.465	0.000	0.465						
	TOTAL 10-WD		200602100007893		244524	6.210	0.000	0.046	0.000	0.046						6.164
						7.190		0.511	0.000	0.511						6.679
10-T		13 - 16			244686			0.103	0.000	0.103						GRADE & SEED
	TOTAL 10-T				244524			0.000	0.000	0.000						
								0.103	0.000	0.103						
11-WD	Canton Community Improvement Corp (TOTAL TAKE)	15 - 18	1232	975	244603	0.285	0.000	0.285	0.000	0.285	Y					TOTAL TAKE - TAKE SCALE & SCALE OFFICE
12-SH	The Wheeling & Lake Erie Railway Company	17,18	OR 998	464	299097	0.430	0.000	0.031	0.000	0.031						0.399
12-T		17,18						0.006	0.000	0.006						GRADE & SEED
13-WD	White Motors Development LLC	17,18	200602100007893		244524	6.210	0.000	0.061	0.000	0.061						6.149
13-T		17,18						0.033	0.000	0.033						GRADE & SEED
14	NOT USED															
15-WD	Edward W. Klink	17,18	201212190058251		245563	0.300	0.000	0.019	0.000	0.019						0.281
15-T		17,18	OR 199600943					0.017	0.000	0.017						GRADE & RECONNECT DRIVE

80% FEDERAL, 20% LOCAL

NOTE: ALL TEMPORARY PARCELS TO BE OF 30 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

* DENOTES RIGHT OF WAY ENCROACHMENT

(c) = CALCULATED AREA

TYPES OF TITLE LEGEND:
 WD = WARRANTY DEED
 WL = WARRANTY DEED WITH LIMITATION OF ACCESS
 T = TEMPORARY EASEMENT

JLN	6/10/22	PARCEL 6-WD TAKE AREA AND NET RESIDUE REVISED
JLN	6/10/22	PARCEL 11-WD RECORD AND TAKE AREAS REVISED
REV. BY	DATE	DESCRIPTION
DATE COMPLETED	DATE	

FEDERAL PROJECT NO. E110 (520)
 PID NO. 90465
 STATE JOB NO. 440749
 R/W DESIGNER
 DPP
 R/W REVIEWER DS
SUMMARY OF ADDITIONAL RIGHT OF WAY IMPROVEMENTS (PID 90465)
 STA - 11TH STREET SE
 IMPROVEMENTS (PID 90465)
 6/34
 274
 302

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NET RESIDUE = AUDITOR'S RECORD AREA - NET TAKE

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NUMBER	OFFICIAL RECORD		AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT NO.
			BOOK	PAGE								LEFT	RIGHT			
16-18	NOT USED															
19-WL	Skywater Canton LLC	17,18	OR 2000012124		245559	4.330	0.000	0.004	0.000	0.004			4.326			
19-T		17 - 20						0.051	0.000	0.051					GRADE & RECONNECT DRIVE	
20-WL	Canton Business Park II LLC	19,20	201205080020281		242986	6.990	0.000	0.006	0.000	0.006			6.984			
20-T1		17,18						0.055	0.000	0.055					GRADE & RECONNECT DRIVE	
20-T2		19,20						0.008	0.000	0.008					GRADE & SEED	
21	NOT USED															
22-WL	Canton Business Park II LLC	19,20	201205080020281		242980	37.490	0.000	0.004	0.000	0.004			37.486			
22-T		19 - 26						0.155	0.000	0.155					GRADE & RECONNECT 2 DRIVES	
23	The Wheeling & Lake Erie Railway Company	25,26	3952	529	NONE ASSIGNED	0.503(D)	0.000								NO TAKE	
24-T	Supa Associates LTD	23-28	201101180002186		245908	0.050	0.000	0.002	0.000	0.002					GRADE, SEED, RECONNECT DRIVE & REMOVE	
					245909	2.810	0.000	0.072	0.000	0.072					STREET LIGHTING	
	TOTAL 24-T					2.860	0.000	0.074	0.000	0.074						
25	Wheeling & Lake Erie Railway Company	25-28	3952	529	299245	2.230	0.000								NO TAKE	
26-T	Canton Business Park II LLC	25-28	201205080020281		242049	0.970	0.000	0.008	0.000	0.008					GRADE & SEED	
27-T	RDM Spring Realty LTD LLC	25-28	OR 1997031451		242035	0.043	0.000	0.025	0.000	0.025					GRADE & SEED	
28-T	OP Properties of Canton, LLC	29-30	200512090082495		245579	0.344	0.000	0.001	0.000	0.001					RECONNECT SIDEWALK	
29-T	JAJC Holdings, LLC an Ohio Limited Liability Company	11,12 & 29-30	201310020048829 201310020048830		239708 244110 246818	0.057 0.110 0.870	0.000 0.000 0.000	0.009 0.010 0.027	0.000 0.000 0.000	0.009 0.010 0.027					GRADE, RECONNECT DRIVE & PARKING LOT	
	TOTAL 29-T							0.046	0.000	0.046						
30-T	OP Properties of Canton, LLC	29,30	200512090082495		247479	0.344	0.000	0.018	0.000	0.018					GRADE & SEED	
31-34	NOT USED															
35-T	OP Properties of Canton, LLC	29,30	201108220033283		234175	0.172	0.000	0.009	0.000	0.009					GRADE & SEED	
36	NOT USED															
37-WD	Van De Bogart Kathy (1/12), Richard Scott(1/12) Edward Scott(1/12), Eugene Scott (1/12) Robert(1/12), Rodney Scott(1/12) Andy H. Sullivan(1/2)	11,12	201801300003519		237848	0.177	0.000	0.001	0.000	0.001						
37-T		11,12	OR 1997020873					0.001	0.000	0.001					RECONNECT DRIVE	
38	NOT USED															
39-T1	Community Restoration Centers, Inc. of Stark County, an Ohio Corporation	11,12	201903150008779		284097 284095	0.172 0.172	0.000 0.000	0.008 0.003	0.000 0.000	0.008 0.003						
	TOTAL 39-T1							0.011	0.000	0.011					RECONNECT PARKING LOT	
39-T2		11,12			284094 284096 284098	0.083 0.039 0.060	0.000 0.000 0.000	0.002 0.000 0.000	0.000 0.000 0.000	0.002 0.000 0.000					GRADE	
40-SH	The Wheeling & Lake Erie Railway Company	11,12	OR 998	464	299096	0.070	0.003	0.015	0.000	0.015			0.055			
41	NOT USED															

80% FEDERAL, 20% LOCAL

NOTE: ALL TEMPORARY PARCELS TO BE OF 30 MONTH DURATION.

* DENOTES RIGHT OF WAY ENCROACHMENT

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(C) = CALCULATED AREA

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
WL = WARRANTY DEED WITH LIMITATION OF ACCESS
T = TEMPORARY EASEMENT

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	DATE	

FEDERAL PROJECT NO. E110 (520)
 PID NO. 90465
 STATE JOB NO. 440749
 R/W DESIGNER
 DPP
 R/W REVIEWER
 DS
SUMMARY OF ADDITIONAL RIGHT OF WAY IMPROVEMENTS (PID 90465)
 STA - 11TH STREET SE
 7/34
 275
 302

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NET RESIDUE = AUDITOR'S RECORD AREA - NET TAKE

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NUMBER	OFFICIAL RECORD		AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			INSTRUMENT NO.	
42-WD	John C. Miller AKA John C. Miller, Jr.	11,12	200809180041648		204697	0.085	0.000	0.031	0.000	0.031					TAKE 118 LF CH. LNK.FENCE & POSTS		
	TOTAL 42-WD		200301240007081		229761	0.039	0.000	0.000	0.000	0.000							
42-T		11,12						0.009	0.000	0.009					GRADE & RECONNECT PARKING LOT		
43-WD	Henry C. McGhee, Jr. James R. McGhee	31,32	201606390024988		10010081	0.278	0.000	0.042	0.000	0.042			0.236				
			201711090048062														
			201803010007607		10010217	0.044	0.000	0.000	0.000	0.000			0.044				
			201803150009653														
	TOTAL 43-WD					0.322	0.000	0.042	0.000	0.042			0.280				
43-T		31,32						0.015	0.000	0.015					GRADE & SEED		
44-WD	Henry C. McGhee, Jr. James R. McGhee	31,32	201606390024988		10010078	0.172	0.000	0.006	0.000	0.006			0.164				
			201711090048062														
44-T		31,32						0.005	0.000	0.005					GRADE & SEED		
45-T	McGhee James G.	31,32	NO RECORD FOUND		220642	0.172	0.000	0.008	0.000	0.008					GRADE & SEED		
46-T	Henry C. McGhee, Jr. James R. McGhee	31,32	201606390024988		10010080	0.344	0.000	0.019	0.000	0.019					GRADE & SEED		
	TOTAL 46-T		201711090048062														
47	Hercules Complex Condominium	31 - 34	201512170050621		10007308	3.660	0.000								NO TAKE		
48-T	John Chiarelli & Clifford Tarr	31 - 34	201210120046710		205329	0.344	0.000	0.014	0.000	0.014					GRADE & SEED		
49-T	Matthew Steven Heffernan	33 - 34	201610250043115		244685	0.297	0.000	0.037	0.000	0.037					GRADE & RECONNECT PARKING LOT		
	TOTAL 49-T				243376	0.031	0.000										
50	Matthew Steven Heffernan	33 - 34	201610250043115		242552	0.320	0.000								NO TAKE		
					244691	0.218	0.000										

80% FEDERAL, 20% LOCAL

NOTE: ALL TEMPORARY PARCELS TO BE OF 30 MONTH DURATION.

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* DENOTES RIGHT OF WAY ENCROACHMENT

(c) = CALCULATED AREA

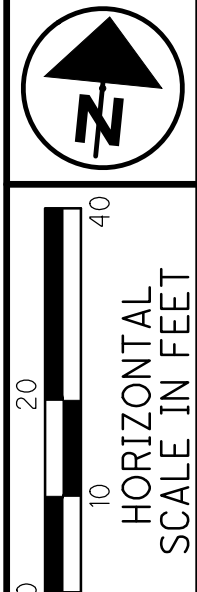
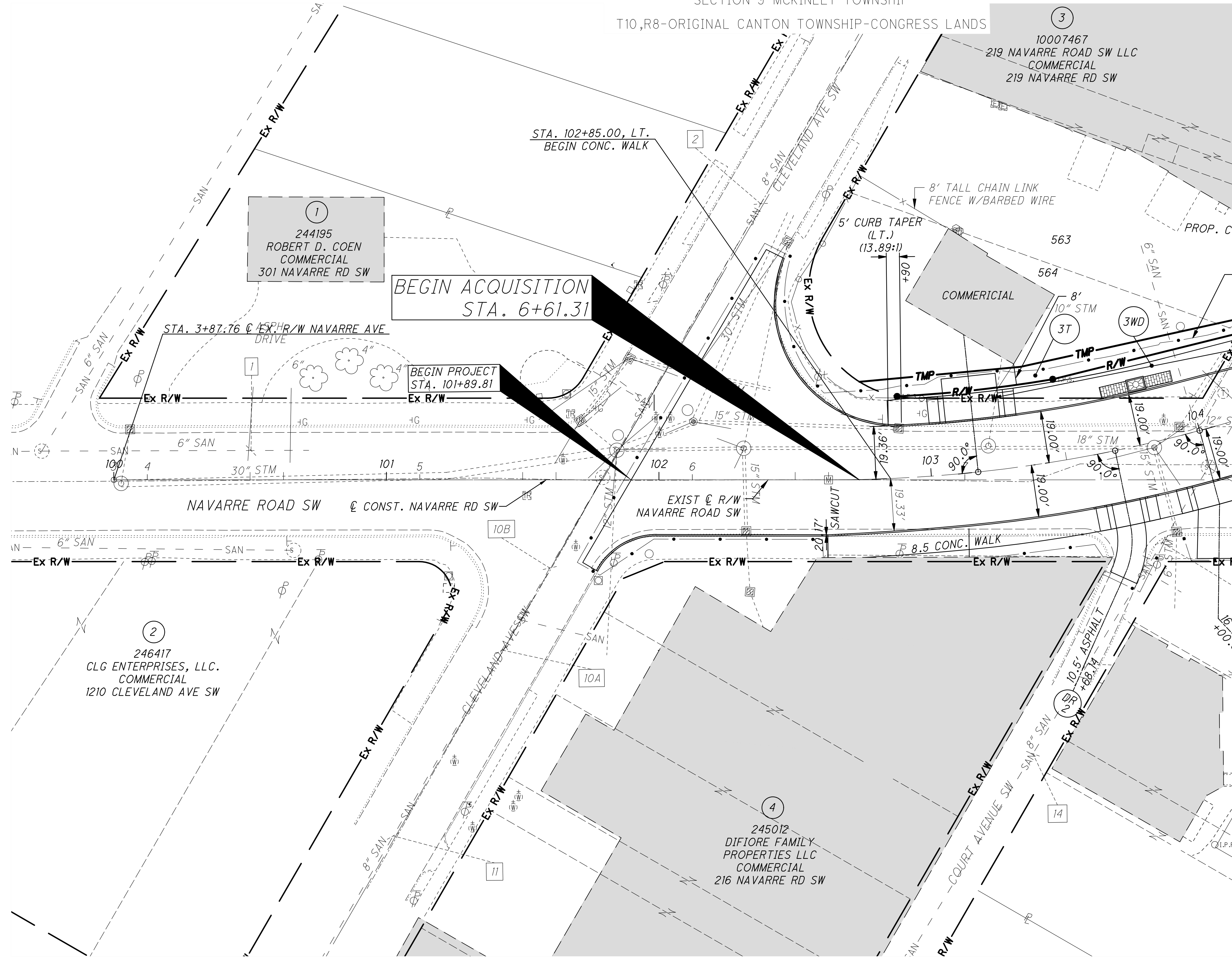
TYPES OF TITLE LEGEND:
 WD = WARRANTY DEED
 WL = WARRANTY DEED WITH LIMITATION OF ACCESS
 T = TEMPORARY EASEMENT

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	DATE	

FEDERAL PROJECT NO.	E110 (520)
PID NO.	90465
STATE JOB NO.	440749
R/W DESIGNER	DPP
R/W REVIEWER	DS
SUMMARY OF ADDITIONAL RIGHT OF WAY	
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)	8/34
	276
	302

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STARK COUNTY
 CITY OF CANTON
 SECTION 9-McKINLEY TOWNSHIP
 T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



PID NO. **90465**

R/W DESIGNER JPK
 R/W REVIEWER DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - BEGINNING TO STA. 8+00

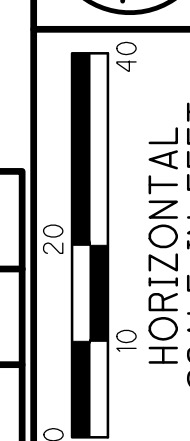
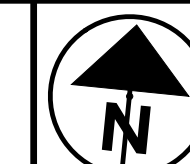
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

REV. BY	DATE	DESCRIPTION

9 / 34

277
 302

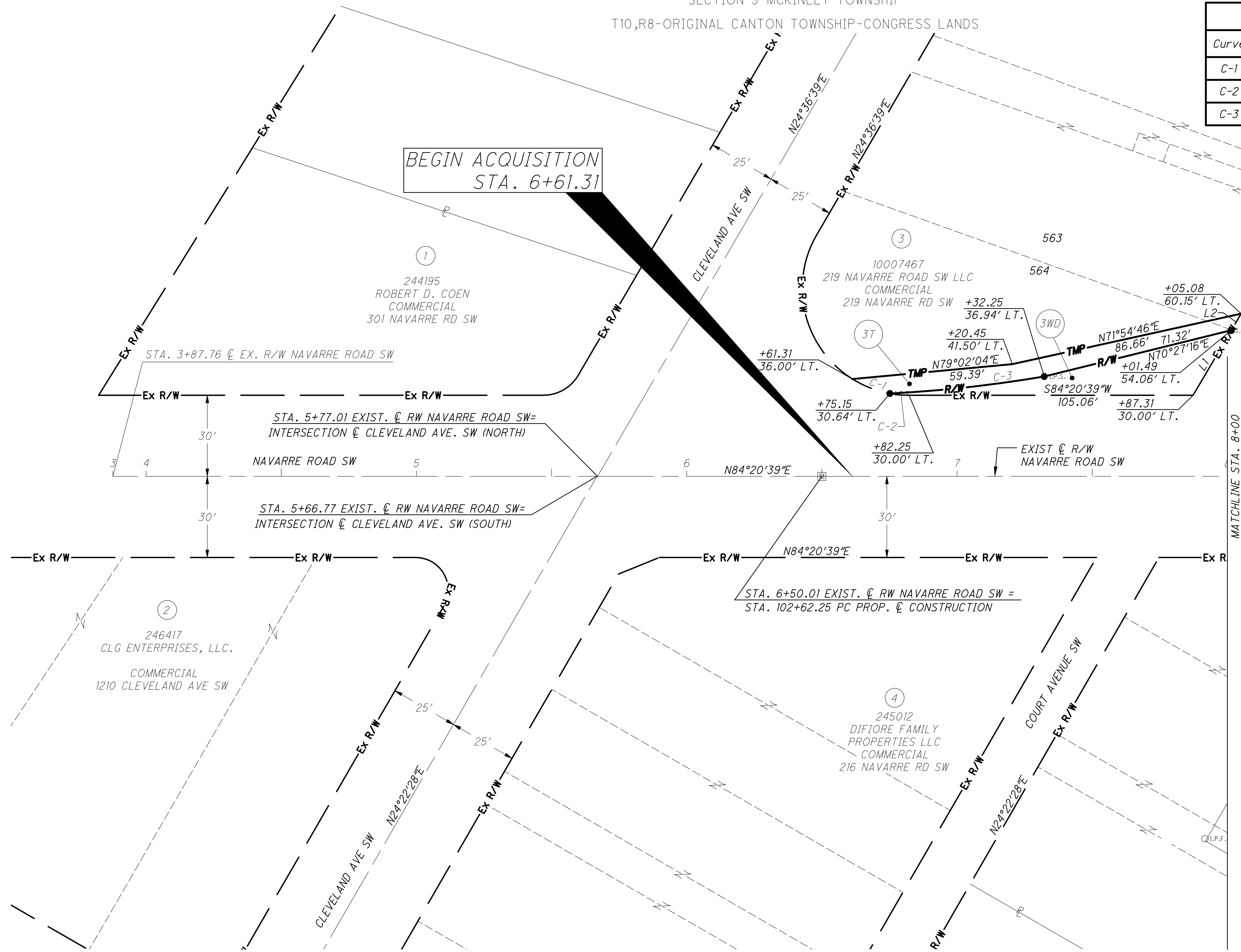
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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS

Right of Way Curve Table						
Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-1	39.50'	21°38'42"	14.92'	7.55'	14.83'	N74°28'24"W
C-2	39.50'	10°21'36"	7.14'	3.58'	7.13'	S89°31'27"W
C-3	491.00'	6°42'28"	57.48'	28.77'	57.45'	N78°03'19"E

Right of Way Line Table		
Line #	Bearing	Distance
L1	S24°51'05"W	27.92'
L2	S24°51'05"W	7.08'



PID NO. 90465

R/W DESIGNER JPK
R/W REVIEWER DS

RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - BEGINNING TO STA. 8+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

10/34

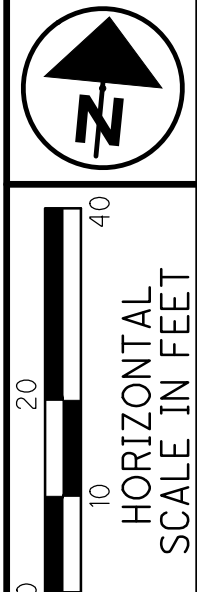
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302

REV. BY	DATE	DESCRIPTION

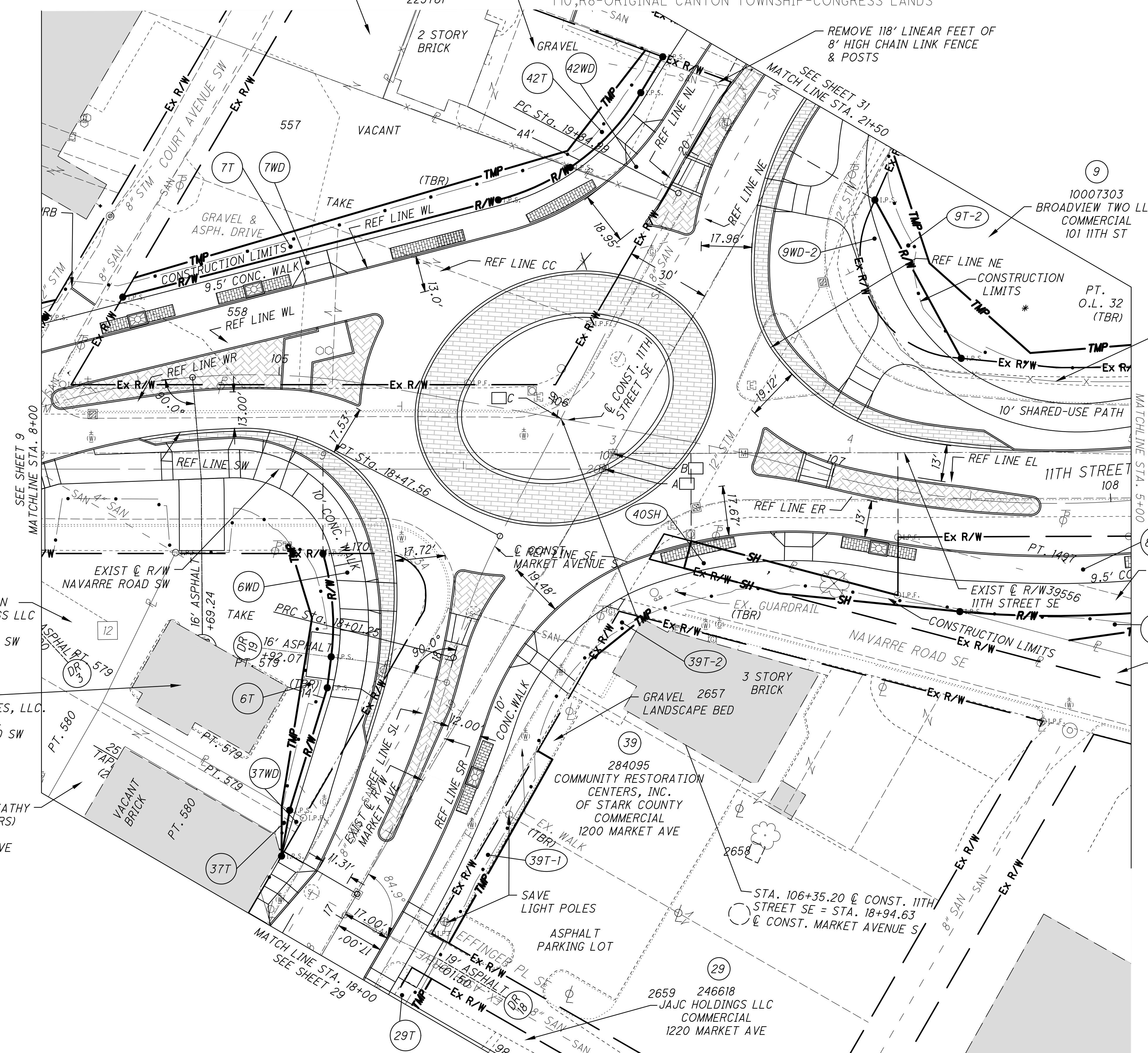
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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



- A = STA. 10+00.00 @ EX. R/W NAVARRE RD. SW = STA. 20+00.00 @ EX. R/W MARKET AVE
 - B = STA. 3+15.76 @ EX. R/W 11TH ST. SE = STA. 20+06.33 @ EX. R/W MARKET AVE
 - C = STA. 10+00.00 @ EX. R/W NAVARRE RD. SW = STA. 20+00.00 @ EX. R/W MARKET AVE
- * = EX. R/W ENCROACHMENTS TO BE REMOVED



- 5 245598 NORTHEASTERN RICHARDS HOLDINGS LLC COMMERCIAL 112 NAVARRE RD SW
- 6 244191 SIPASAK PROPERTIES, LLC. COMMERCIAL 104 NAVARRE RD SW
- 37 237848 VAN DE BOGART KATHY ET AL (7 OWNERS) COMMERCIAL 1213 MARKET AVE

- 9 10007303 BROADVIEW TWO LLC COMMERCIAL 101 11TH ST
- 8 244688 WHITE MOTORS DEVELOPMENT LLC INDUSTRIAL MARKET AVE
- 40 299096 WHEELING & LAKE ERIE RAILWAY INDUSTRIAL MARKET AVE

- 7 10007468 219 NAVARRE ROAD SW LLC COMMERCIAL 219 NAVARRE RD SW
- 42 204697 JOHN C. MILLER, JR. RESIDENTIAL 108 BORNIQUE PL SW 229761

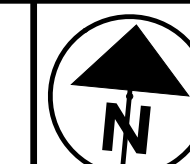
PID NO. 90465

R/W DESIGNER JPK
R/W REVIEWER DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 8+00 TO STA. 5+00

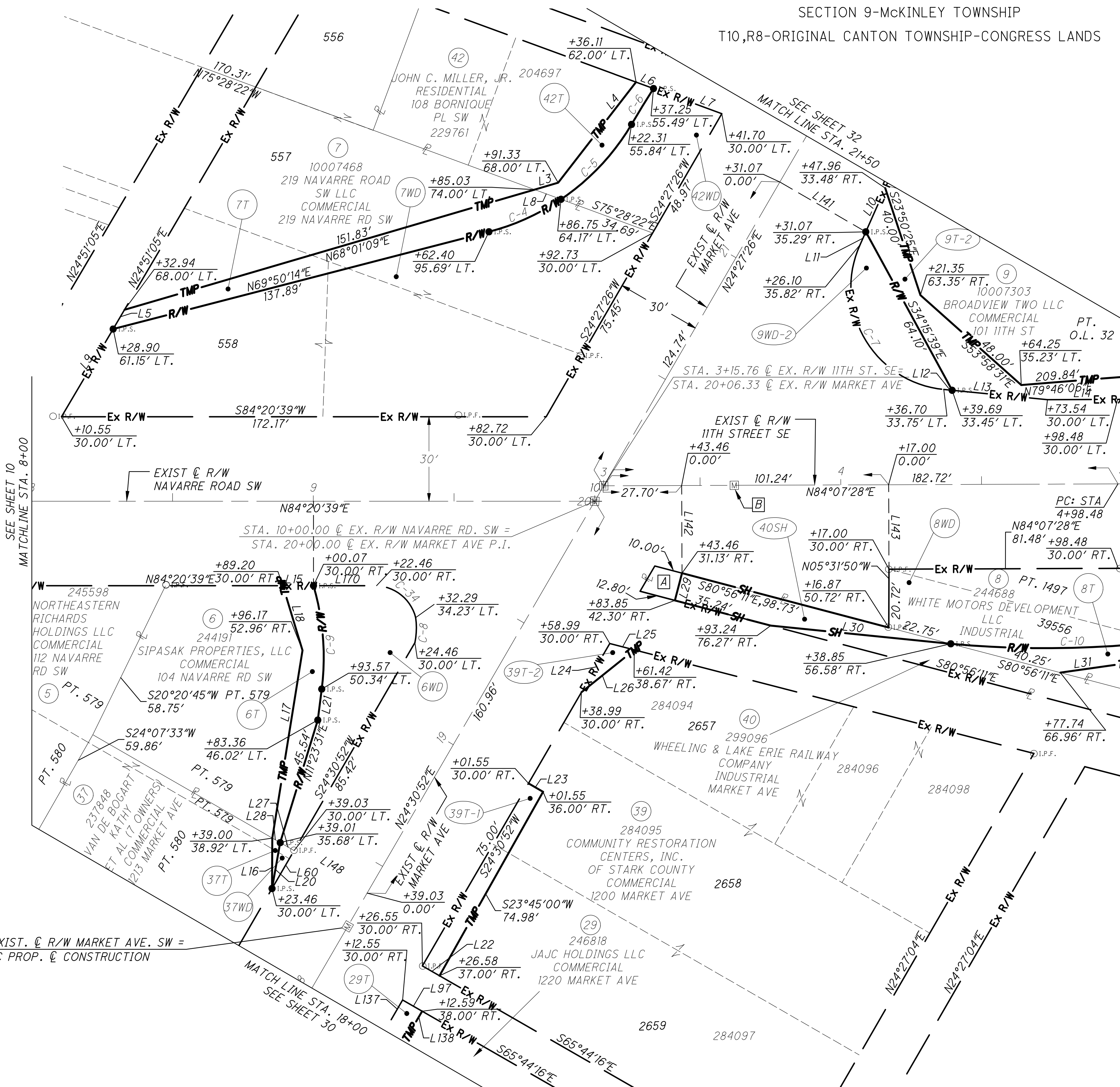
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

REV. BY	DATE	DESCRIPTION



STARK COUNTY
CITY OF CANTON

SECTION 9-MCKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



Right of Way Curve Table

Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-4	83.00'	19°29'30"	28.24'	14.26'	28.10'	N60°05'30"E
C-5	83.00'	25°25'26"	36.83'	18.72'	36.53'	N37°38'02"E
C-6	474.00'	1°48'23"	14.94'	7.47'	14.94'	N25°49'30"E
C-7	36.50'	108°54'14"	69.38'	51.08'	59.40'	N35°42'02"W
C-8	27.50'	18°37'07"	8.94'	4.51'	8.90'	S03°51'08"E
C-9	90.00'	23°36'45"	37.09'	18.81'	36.83'	N10°13'14"W
C-10	370.00'	13°22'51"	86.41'	43.40'	86.21'	S82°54'00"W
C-34	15.00'	73°30'52"	19.25'	11.20'	17.95'	S56°29'37"E

Right of Way Line Table

Line #	Bearing	Distance
L3	N68°01'09"E	8.71'
L4	N32°05'20"E	45.18'
L5	N24°51'05"E	7.95'
L6	S75°26'44"E	6.61'
L7	S75°26'44"E	25.87'
L8	N75°28'22"W	9.98'
L9	N24°51'05"E	36.16'
L10	N18°21'48"E	16.99'
L11	N18°21'48"E	5.00'
L12	S89°56'35"W	3.00'
L13	S89°56'35"W	34.02'
L14	N84°07'28"E	24.94'
L15	N84°20'39"E	10.87'
L16	N05°21'37"W	17.92'
L17	N03°29'38"E	67.52'
L18	N22°33'35"W	24.00'
L20	N04°27'11"E	16.55'
L21	N01°35'09"E	11.09'
L22	N65°44'16"W	7.00'
L23	S65°29'08"E	6.00'

Right of Way Line Table

Line #	Bearing	Distance
L24	N24°30'52"E	20.00'
L25	S81°07'44"E	9.00'
L26	S45°38'34"W	24.04'
L27	S65°43'25"E	5.68'
L28	N65°43'25"W	3.25'
L29	N09°03'49"E	10.00'
L30	N89°53'13"W	64.27'
L31	N76°17'45"E	181.74'
L60	N24°30'52"E	15.57'
L97	S65°44'16"E	8.00'
L137	N24°30'52"E	254.69'
L138	N24°30'52"E	250.72'
L141	S65°32'34"E	35.29'
L142	S05°52'32"E	31.13'
L143	S05°52'32"E	30.00'
L148	N65°29'08"W	30.00'
L170	N84°20'39"E	22.40'

[A] = EXISTING STANDARD HIGHWAY EASEMENT TO CITY OF CANTON REC. IMAGE 20111170046438
 [B] = STA. 3+62.16 EXIST. @ RW 11th STREET SE = STA. 106+67.57 INTERSECT. PROP. @ CONSTRUCTION 11TH ST. SE

JLN	6/10/22	PARCEL 6-WD BOUNDARY REVISED
REV. BY	DATE	DESCRIPTION
DATE COMPLETED	DATE	

PID NO. 90465

RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 8+00 TO STA. 5+00

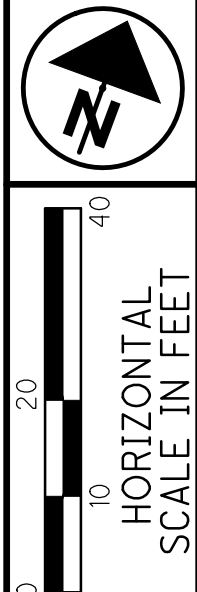
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

12 / 34

280
302

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STARK COUNTY
 CITY OF CANTON
 SECTION 9-McKINLEY TOWNSHIP
 T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



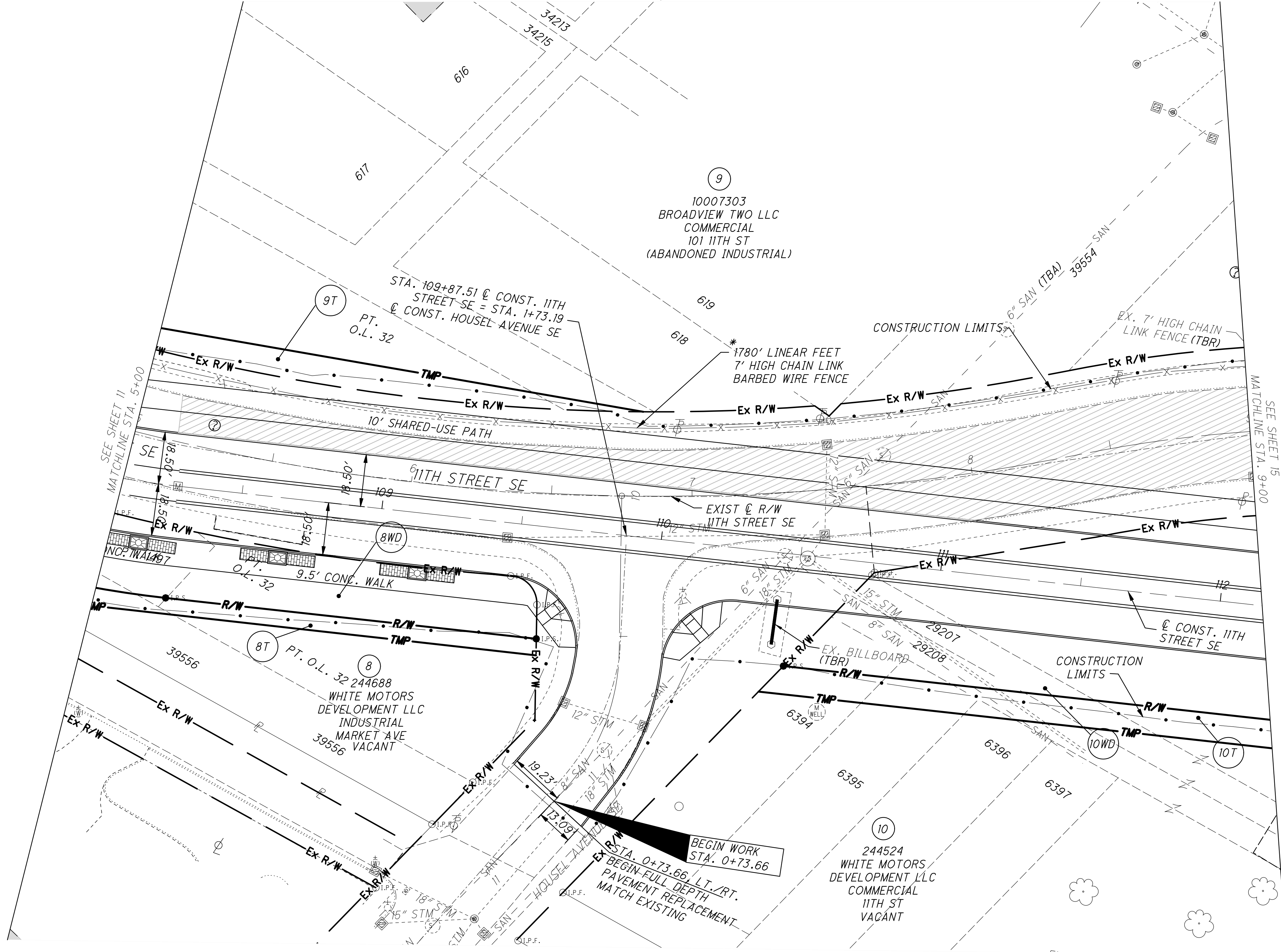
* = EX. R/W ENCROACHMENTS
 TO BE REMOVED

PID NO. **90465**
 R/W DESIGNER JPK
 R/W REVIEWER DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 5+00 TO STA. 9+00

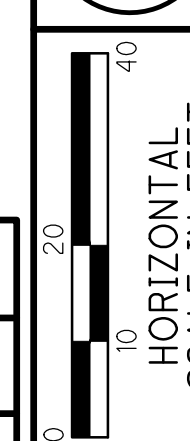
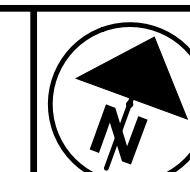
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

13 / 34
 281
 302



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REV. BY	DATE	DESCRIPTION



STARK COUNTY
CITY OF CANTON
SECTION 9-MCKINLEY TOWNSHIP

T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS

Existing Center Line R/W
11th Street Curve Table

Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-35	763.94'	19°45'41"	263.48'	133.06'	262.18'	N74°14'38"E
C-36	763.94'	25°32'15"	340.50'	173.12'	337.69'	N71°21'21"E
C-37	477.46'	46°19'19"	386.01'	204.25'	375.59'	S81°44'53"W

Right of Way Curve Table

Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-11	733.94'	13°47'42"	176.71'	88.78'	176.28'	S77°13'37"W
C-12	733.94'	4°45'58"	61.05'	30.54'	61.03'	N67°56'47"E
C-13	733.94'	6°14'34"	79.97'	40.02'	79.93'	N61°42'30"E
C-14	507.46'	38°16'20"	338.97'	176.08'	332.70'	S77°43'23"W
C-15	793.94'	10°25'11"	144.39'	72.39'	144.19'	N78°54'53"E
C-16	10.00'	87°10'46"	15.22'	9.52'	13.79'	S62°42'20"E
C-33	447.46'	29°33'52"	230.89'	118.08'	228.33'	S73°22'09"W

Right of Way Line Table

Line #	Bearing	Distance
L31	N76°17'45"E	181.74'
L32	N75°00'45"W	6.25'
L33	S24°07'15"W	6.09'
L34	S19°06'57"E	5.89'
L139	S24°08'22"W	12.68'
L144	N25°38'13"W	30.94'

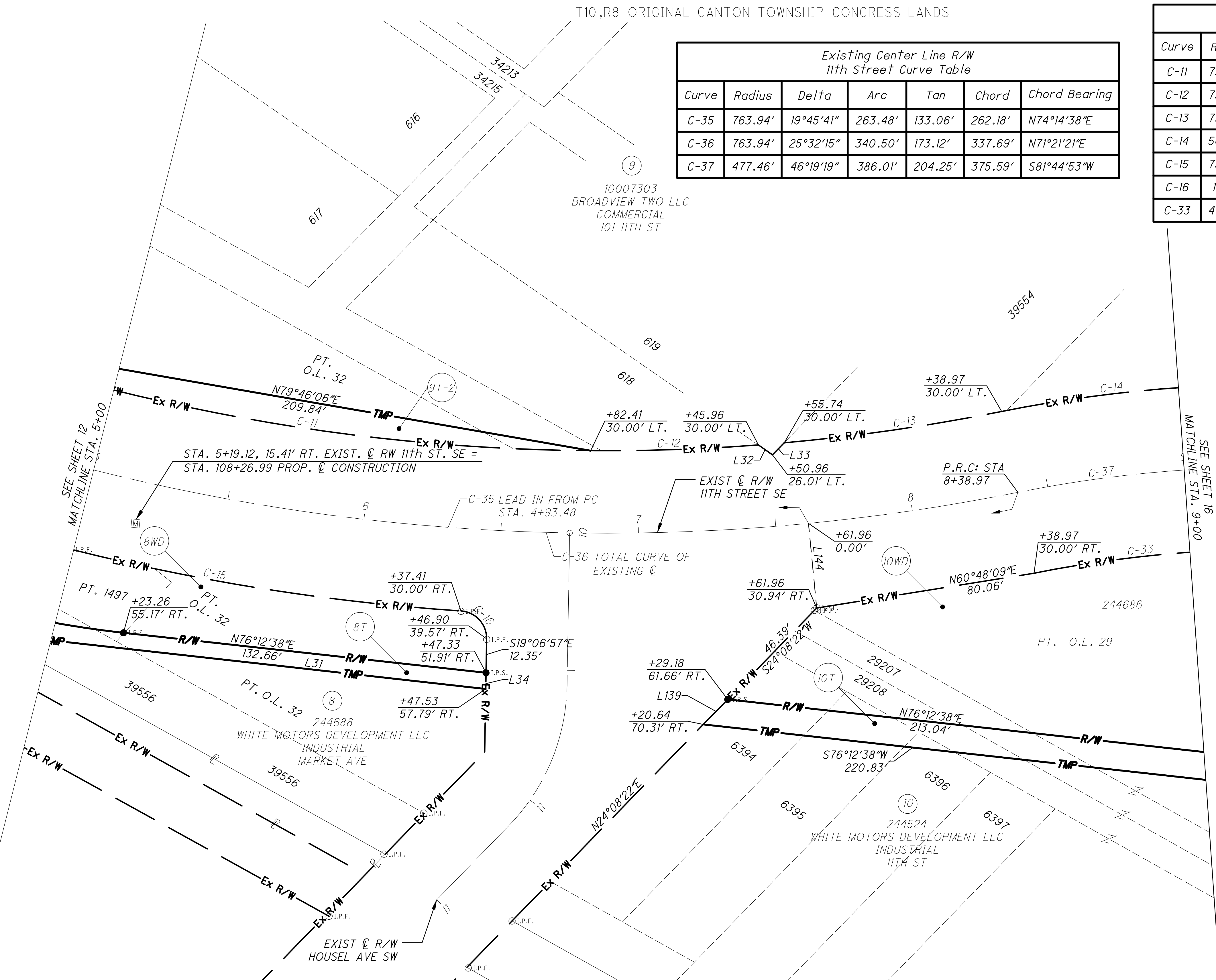
PID NO. 90465
R/W DESIGNER JPK
R/W REVIEWER DS

RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 5+00 TO STA. 9+00

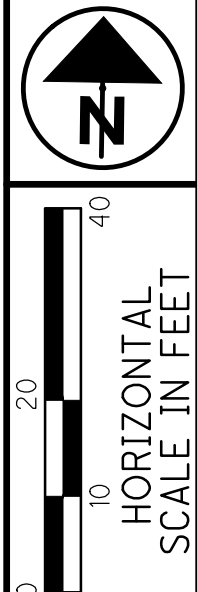
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

REV. BY	DATE	DESCRIPTION

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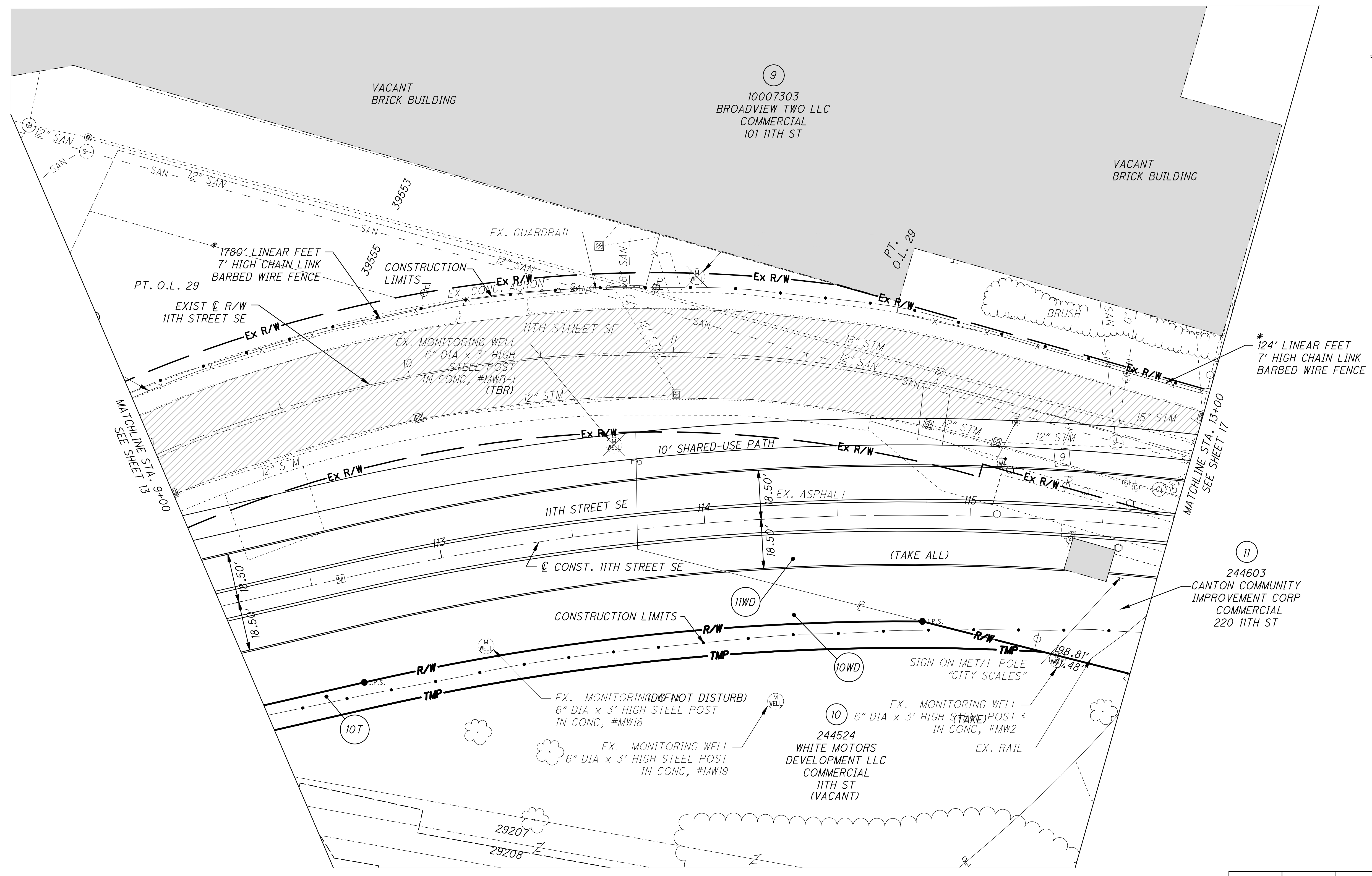


STARK COUNTY
 CITY OF CANTON
 SECTION 9-McKINLEY TOWNSHIP
 T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



PID NO. **90465**
 R/W DESIGNER JPK
 R/W REVIEWER DS

* = EX. R/W ENCROACHMENTS TO BE REMOVED



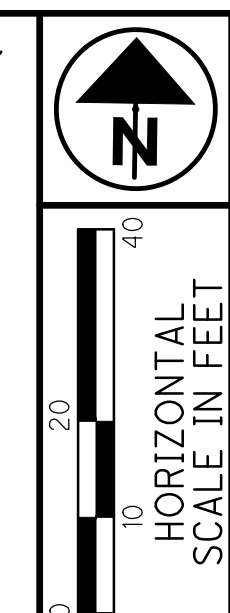
RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 9+00 TO STA. 13+00

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



PID NO. **90465**

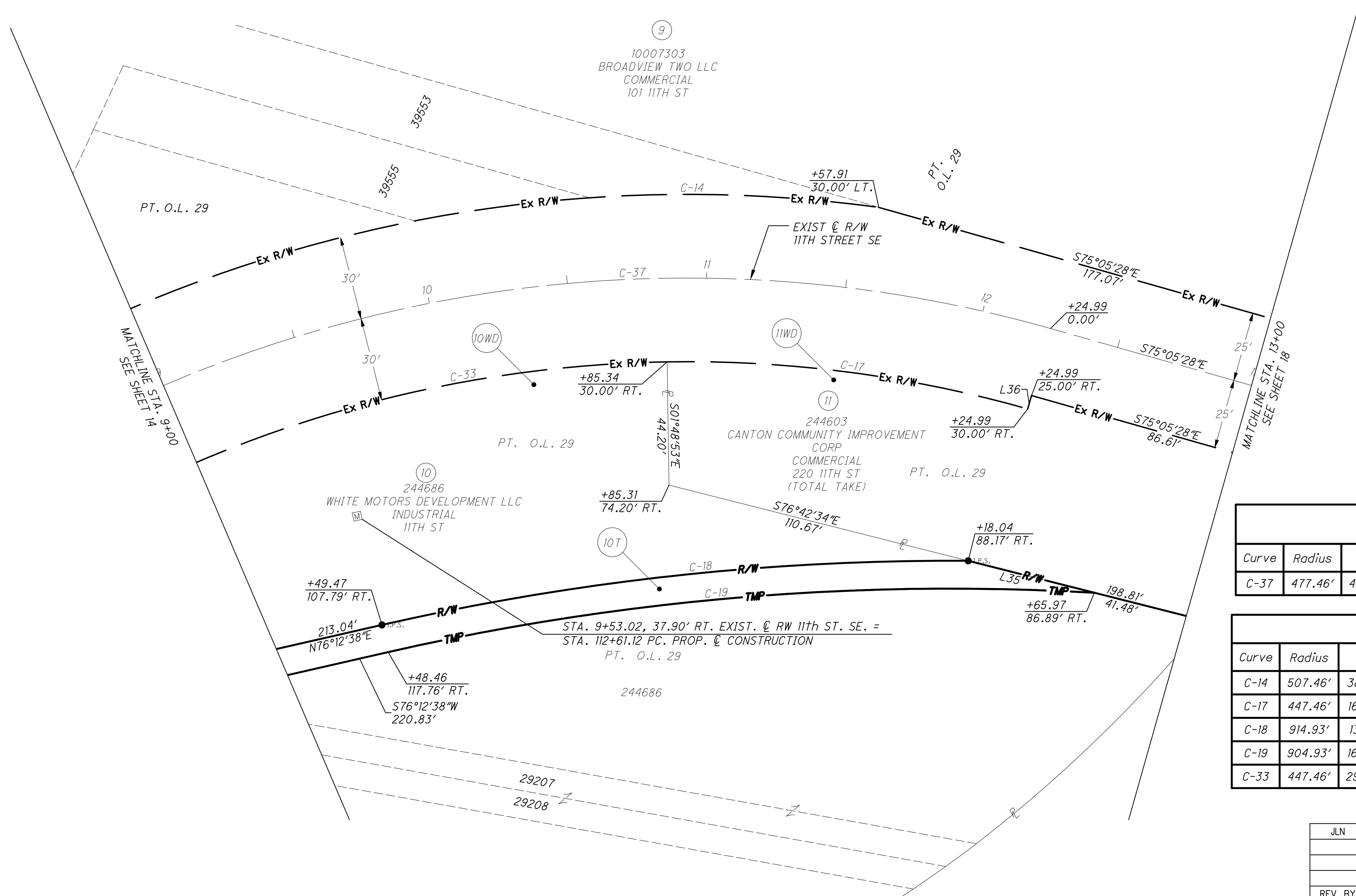
R/W DESIGNER: JPK
R/W REVIEWER: DS

RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 9+00 TO STA. 13+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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Line #	Bearing	Distance
L35	S76°42'34"E	46.66'
L36	N14°54'32"E	5.00'

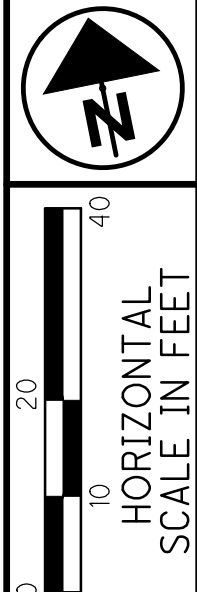
Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-37	477.46'	46°19'19"	386.01'	204.25'	375.59'	S81°44'53"W

Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-14	507.46'	38°16'20"	338.97'	176.08'	332.70'	S77°43'23"W
C-17	447.46'	16°45'27"	130.87'	65.91'	130.40'	S83°28'12"E
C-18	914.93'	13°16'26"	211.97'	106.46'	211.49'	S82°50'51"W
C-19	904.93'	16°08'39"	254.98'	128.34'	254.14'	S84°16'57"W
C-33	447.46'	29°33'52"	230.89'	118.08'	228.33'	S73°22'09"W

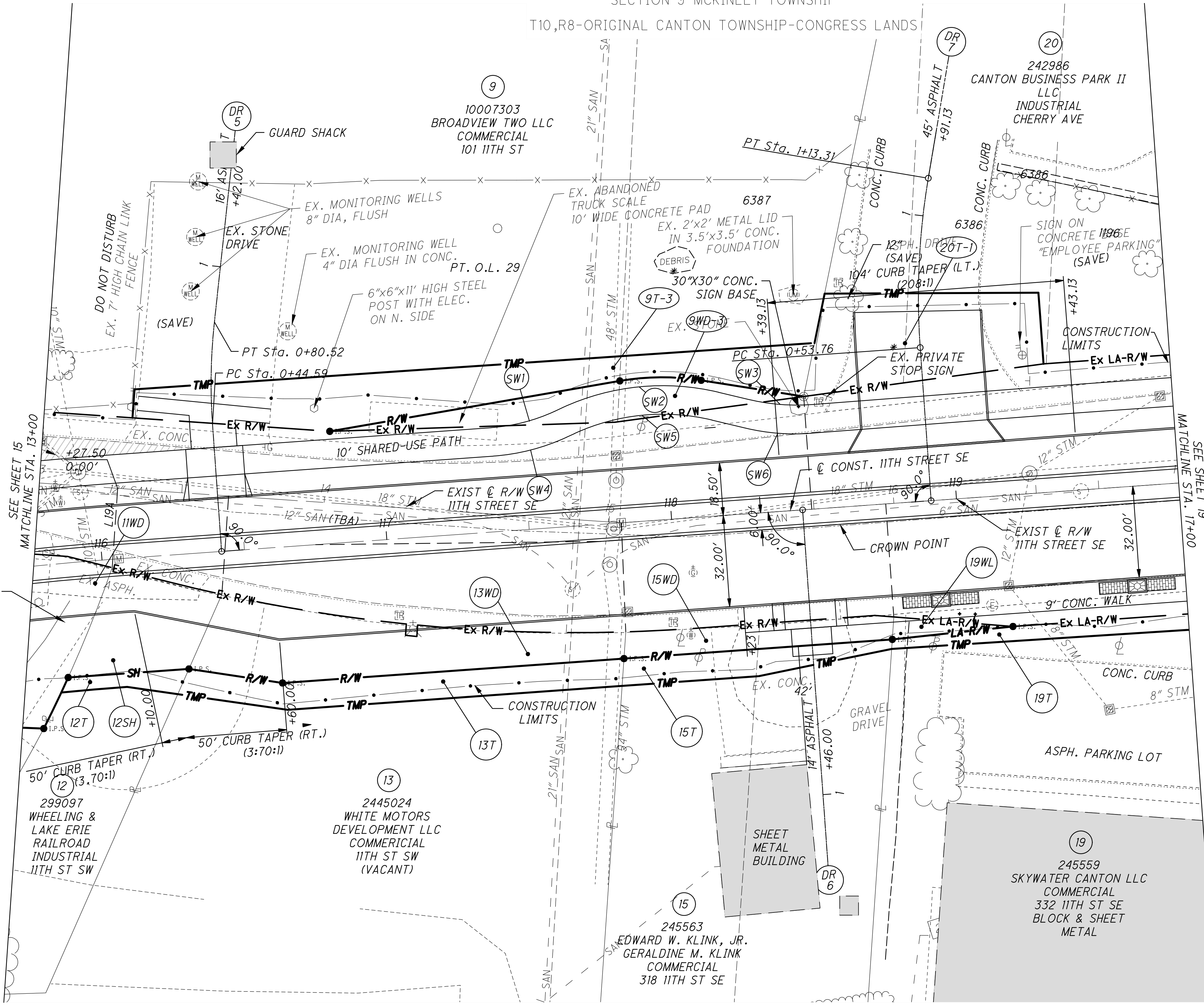
REV. BY	DATE	DESCRIPTION
JLN	6/10/22	REV. CH. BRG. C-17 & PARCEL 11 DIM.

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



* = EX. R/W ENCROACHMENTS TO BE REMOVED



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PID NO. **90465**

R/W DESIGNER JPK
R/W REVIEWER DS

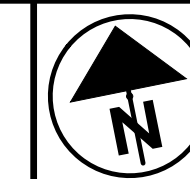
RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 13+00 TO STA. 17+00

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

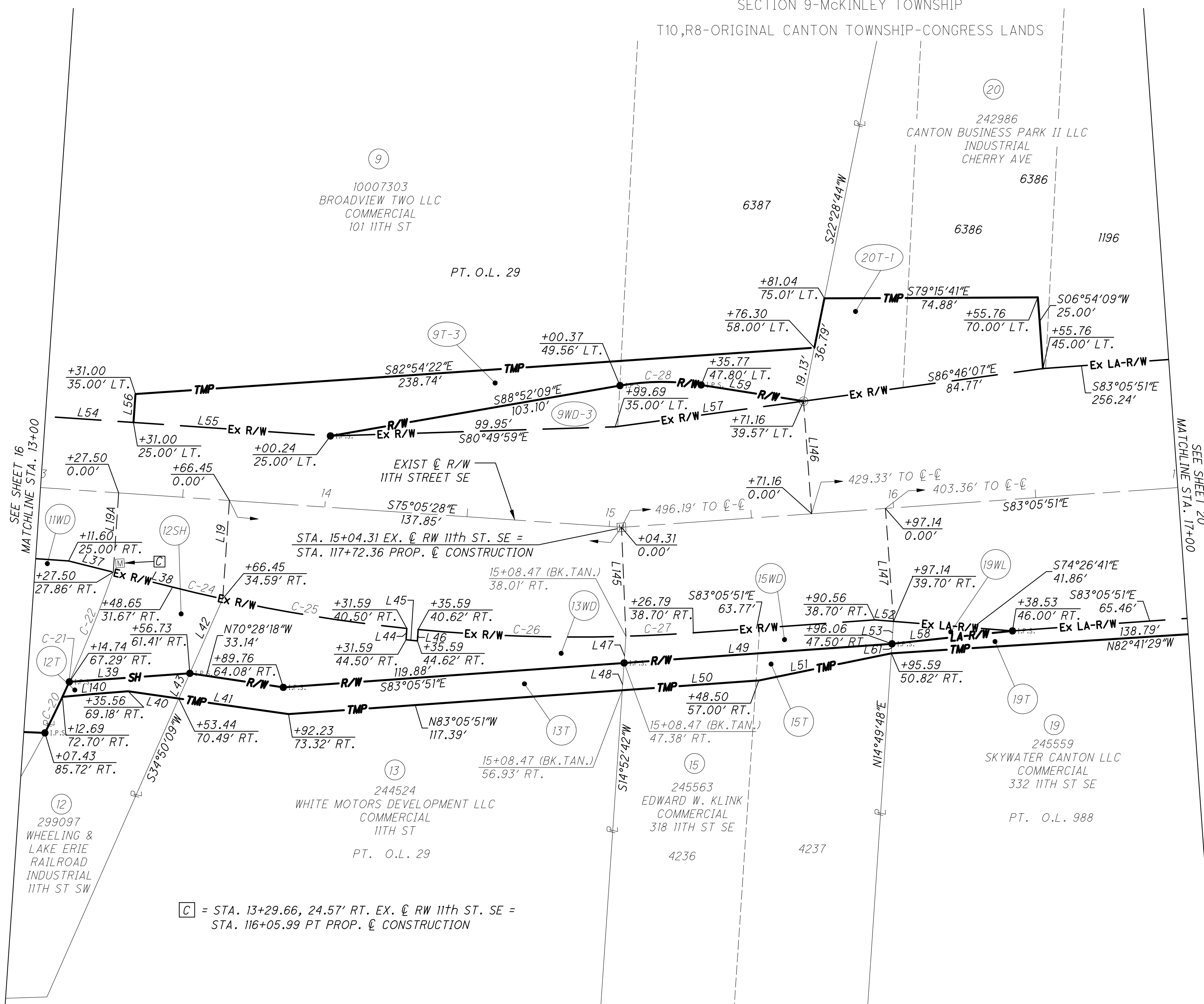
17 / 34

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302

REV. BY	DATE	DESCRIPTION



STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



□ = STA. 13+29.66, 24.57' RT. EX. C/RW 11th ST. SE = STA. 116+05.99 PT PROP. C CONSTRUCTION

Right of Way Curve Table						
Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-20	471.60'	7°26'45"	61.29'	30.69'	61.24'	S34°02'42"W
C-21	471.60'	0°42'10"	5.79'	2.89'	5.79'	N35°42'37"E
C-22	471.60'	5°02'12"	41.46'	20.74'	41.44'	N32°50'26"E
C-24	579.57'	1°47'02"	18.05'	9.02'	18.05'	S65°46'54"E
C-25	579.57'	6°28'08"	65.43'	32.75'	65.40'	S69°54'29"E
C-26	579.57'	7°12'50"	72.97'	36.53'	72.92'	S77°08'42"E
C-27	579.57'	2°20'22"	23.67'	11.83'	23.66'	S81°55'18"E
C-28	87.00'	18°51'33"	28.64'	14.45'	28.51'	S79°26'23"E

Right of Way Line Table		
Line #	Bearing	Distance
L19	N14°54'32"E	34.59'
L19A	S14°54'32"W	27.87'
L37	S64°53'08"E	16.16'
L38	S64°53'08"E	21.49'
L39	S83°04'03"E	42.40'
L40	N70°54'25"W	17.93'
L41	N70°54'25"W	38.89'
L42	N34°50'09"E	28.53'
L43	N34°50'09"E	9.65'
L44	S14°54'32"W	4.00'
L45	S73°22'40"E	4.00'
L46	N14°54'32"E	4.00'
L47	N14°52'42"E	9.38'
L48	N14°52'42"E	9.59'
L49	S83°05'51"E	94.23'
L50	N83°05'51"W	48.00'
L51	S89°25'39"W	47.50'
L52	S74°26'41"E	6.66'
L53	N14°49'48"E	7.87'
L54	S75°05'28"E	177.07'
L55	N75°05'28"W	69.24'

Right of Way Line Table		
Line #	Bearing	Distance
L56	N14°54'32"E	10.00'
L57	S86°46'07"E	66.69'
L58	S85°07'13"E	42.50'
L59	S70°00'37"E	36.34'
L61	N14°49'48"E	3.35'
L140	N83°50'58"W	23.14'
L145	S08°40'08"W	38.23'
L146	N06°54'09"E	39.57'
L147	S06°54'09"W	39.70'

PID NO. 90465

R/W DESIGNER JPK R/W REVIEWER DS

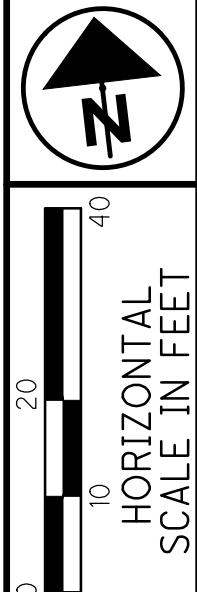
RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 13+00 TO STA. 17+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

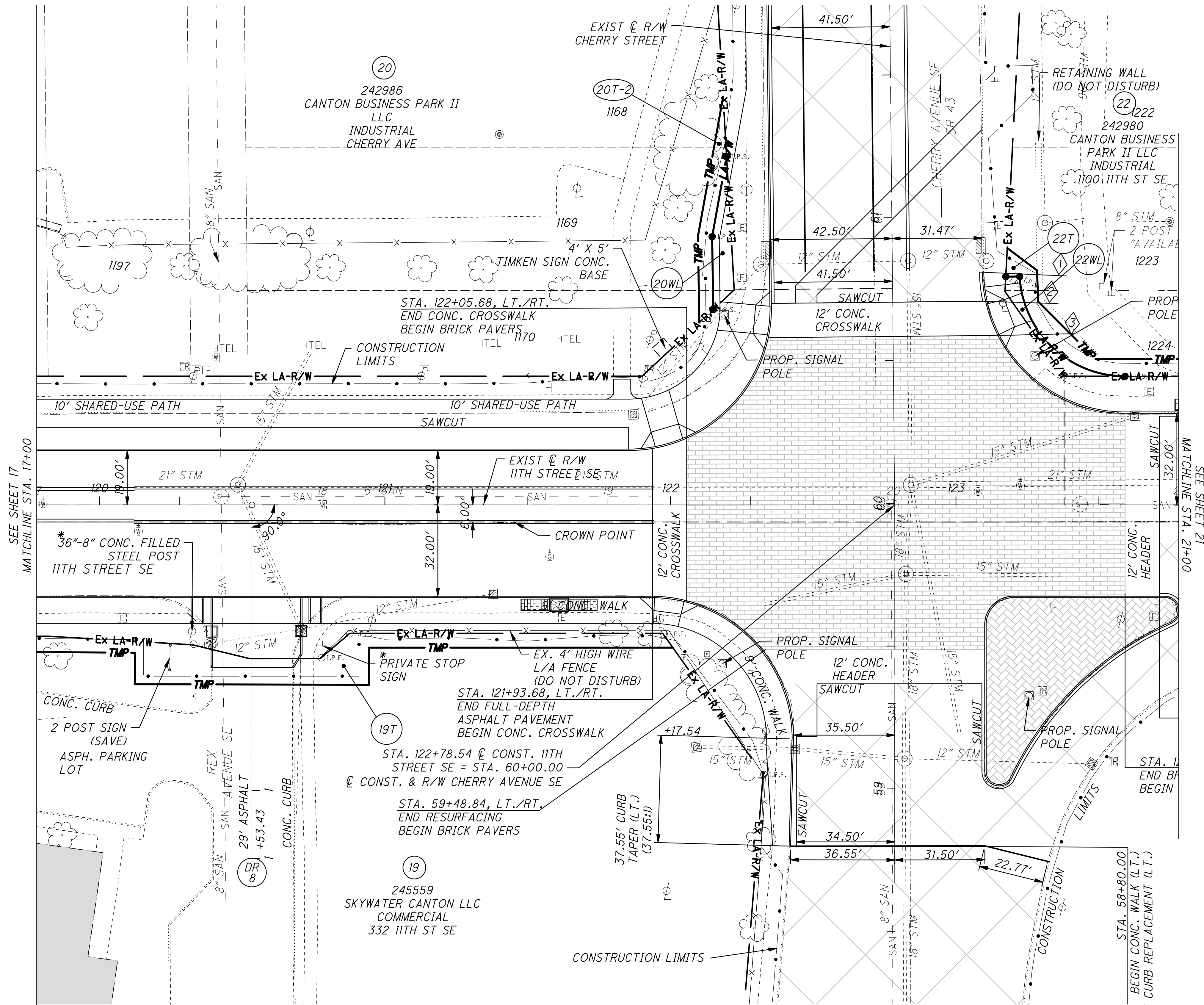
JLN	6/10/22	REVISE PARCEL 11 DIMENSIONS
REV. BY	DATE	DESCRIPTION
DATE COMPLETED	DATE	

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



* = EX. R/W ENCROACHMENTS TO BE REMOVED



SEE SHEET 17
MATCHLINE STA. 17+00

SEE SHEET 21
MATCHLINE STA. 21+00

PID NO.
90465

R/W DESIGNER
JPK
R/W REVIEWER
DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 17+00 TO STA. 21+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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302

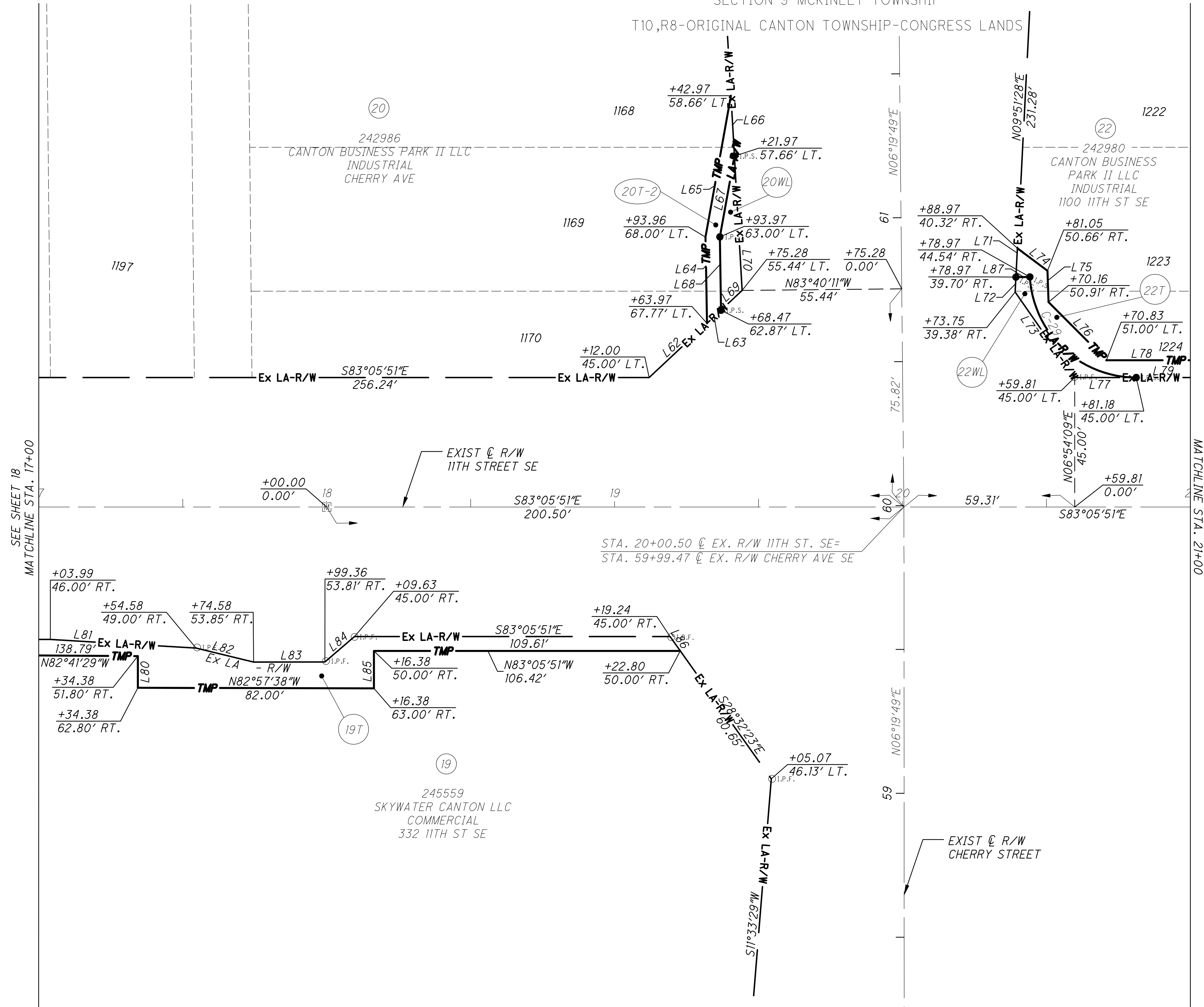
REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP

T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



Right of Way Curve Table						
Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-29	37.00'	86°48'36"	56.06'	35.00'	50.85'	S39°41'34"E

Right of Way Line Table		
Line #	Bearing	Distance
L62	N53°46'13"E	44.26'
L63	N53°46'13"E	6.65'
L64	N05°53'15"E	29.99'
L65	N17°06'57"E	49.89'
L66	S03°36'28"W	21.02'
L67	S17°06'59"W	28.51'
L68	N06°02'12"E	25.50'
L69	S53°46'13"W	10.08'
L70	S03°36'28"W	46.74'
L71	N09°51'28"E	10.02'
L72	N09°51'28"E	5.22'
L73	N27°57'59"W	36.17'
L74	S46°14'21"E	13.02'
L75	S04°59'00"W	10.90'
L76	S38°00'27"E	28.52'
L77	S83°05'51"E	21.37'
L78	S83°05'51"E	414.10'
L79	S83°05'51"E	1010.00'
L80	N06°54'09"E	11.00'
L81	S79°42'04"E	50.68'

Right of Way Line Table		
Line #	Bearing	Distance
L82	S69°29'13"E	20.58'
L83	S83°10'22"E	24.78'
L84	N56°16'01"E	13.53'
L85	S06°54'09"W	13.00'
L86	S28°32'23"E	6.14'
L87	N83°40'11"W	4.84'

PID NO. **90465**

R/W DESIGNER: JPK
R/W REVIEWER: DS

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

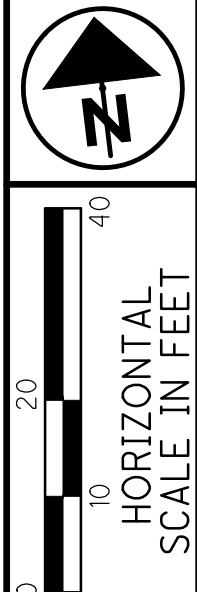
RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 17+00 TO STA. 21+00

20/34

288
302

REV. BY	DATE	DESCRIPTION

STARK COUNTY
 CITY OF CANTON
 SECTION 9-McKINLEY TOWNSHIP
 T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS

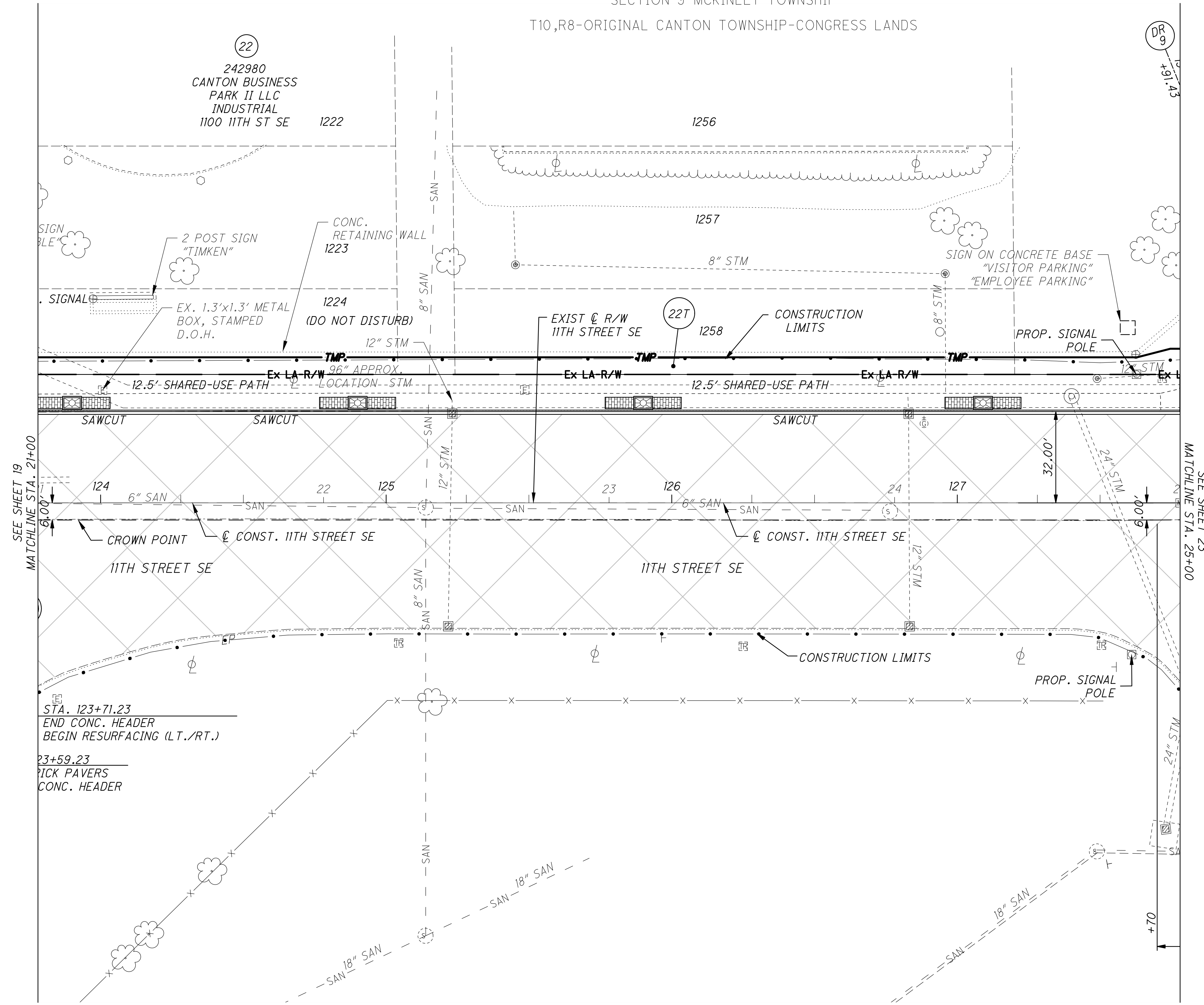


PID NO. **90465**
 R/W DESIGNER JPK
 R/W REVIEWER DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 21+00 TO STA. 25+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

21/34
 289
 302



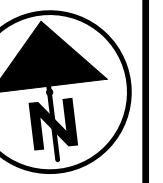
SEE SHEET 19
 MATCHLINE STA. 21+00

SEE SHEET 23
 MATCHLINE STA. 25+00

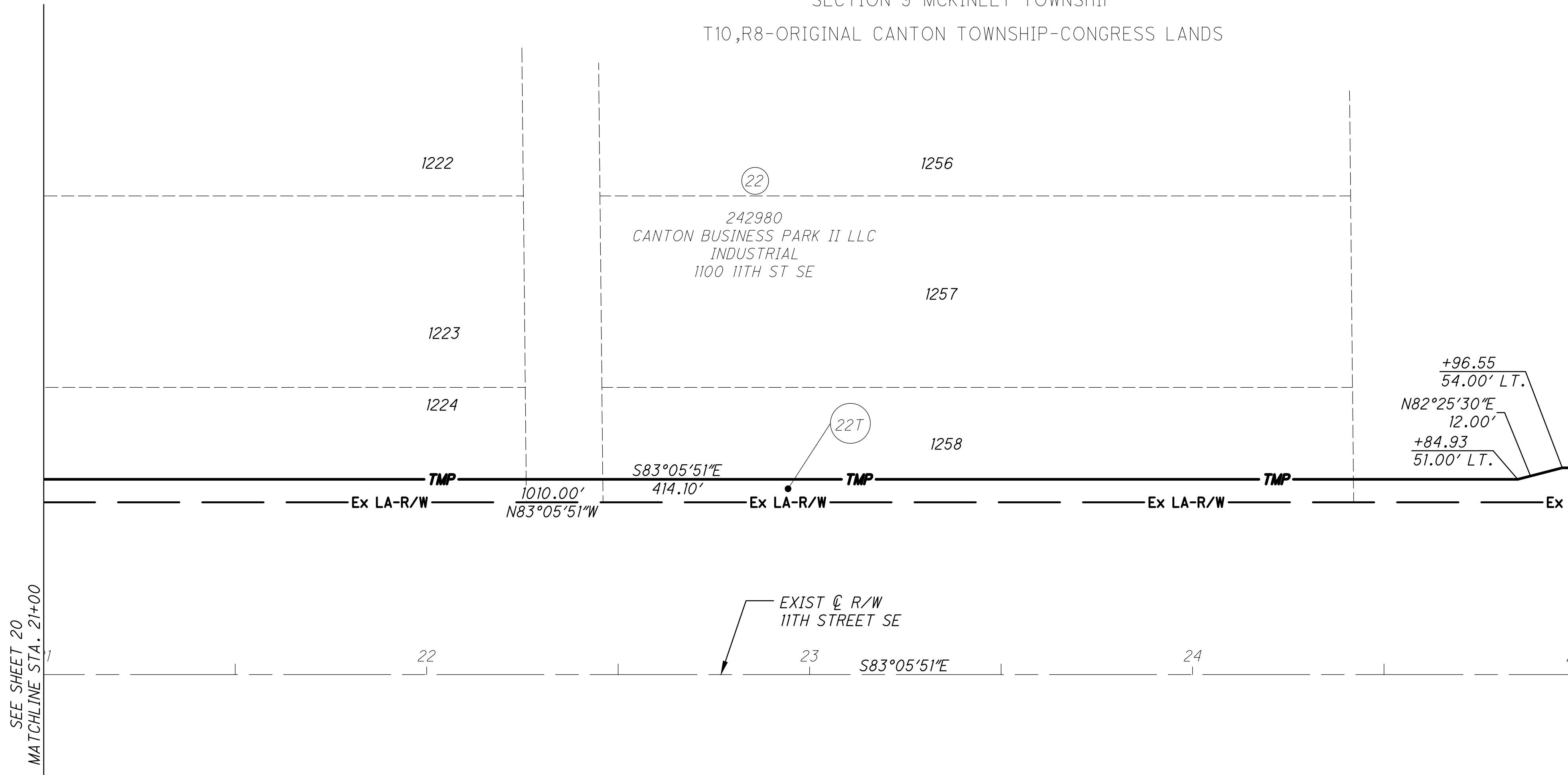
STA. 123+71.23
 END CONC. HEADER
 BEGIN RESURFACING (LT./RT.)
 23+59.23
 PICK PAVERS
 CONC. HEADER

REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



SEE SHEET 20
MATCHLINE STA. 21+00

SEE SHEET 24
MATCHLINE STA. 25+00

PID NO.
90465

R/W DESIGNER
JPK
R/W REVIEWER
DS

RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 21+00 TO STA. 25+00

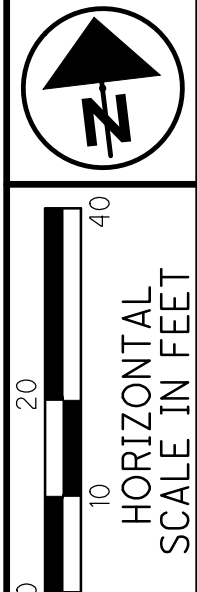
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

22/34

290
302

REV. BY	DATE	DESCRIPTION

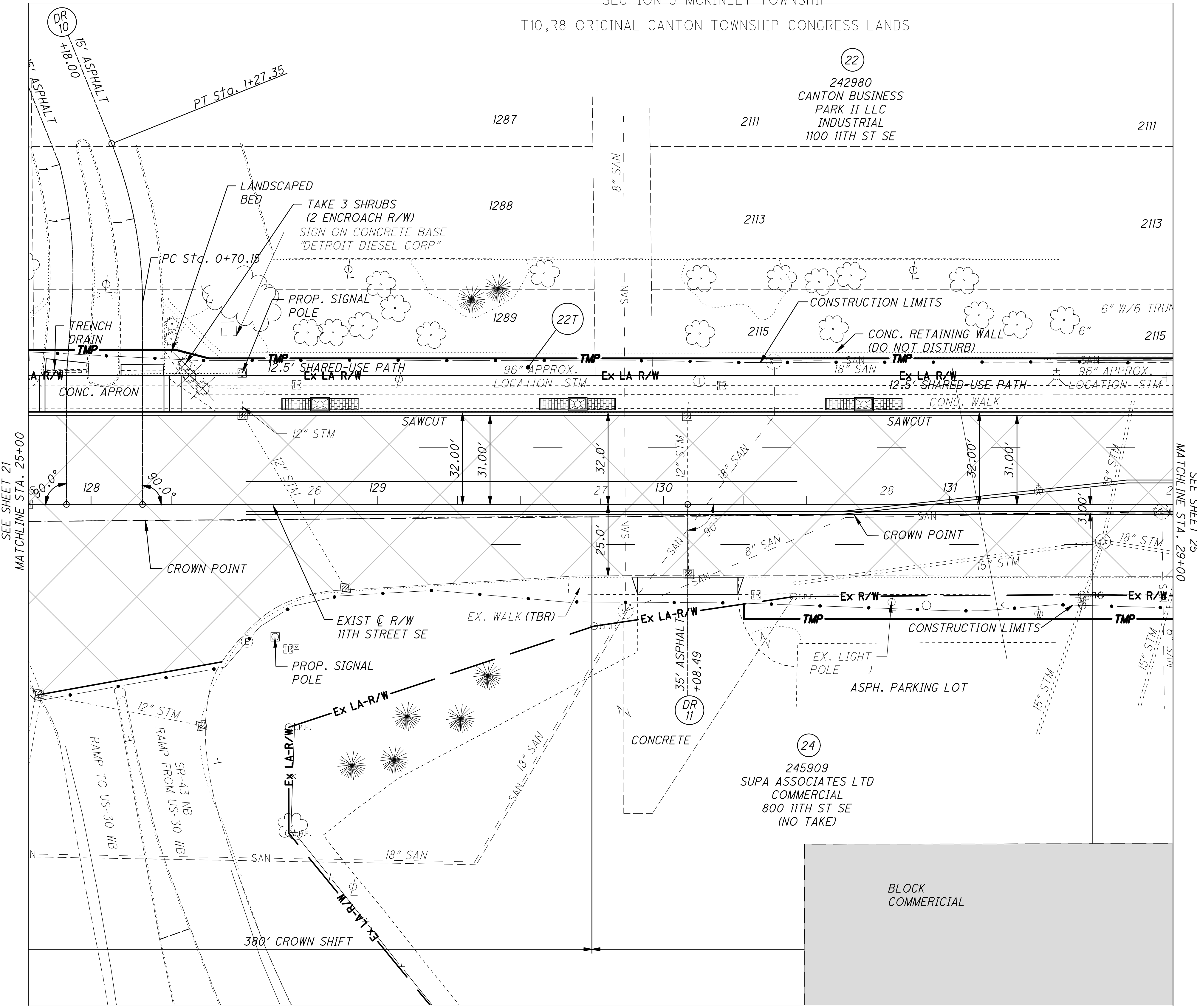
STARK COUNTY
 CITY OF CANTON
 SECTION 9-McKINLEY TOWNSHIP
 T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



PID NO. **90465**
 R/W DESIGNER: JPK
 R/W REVIEWER: DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 25+00 TO STA. 29+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

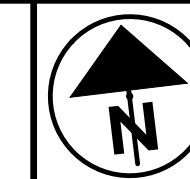


SEE SHEET 21
 MATCHLINE STA. 25+00

SEE SHEET 25
 MATCHLINE STA. 29+00

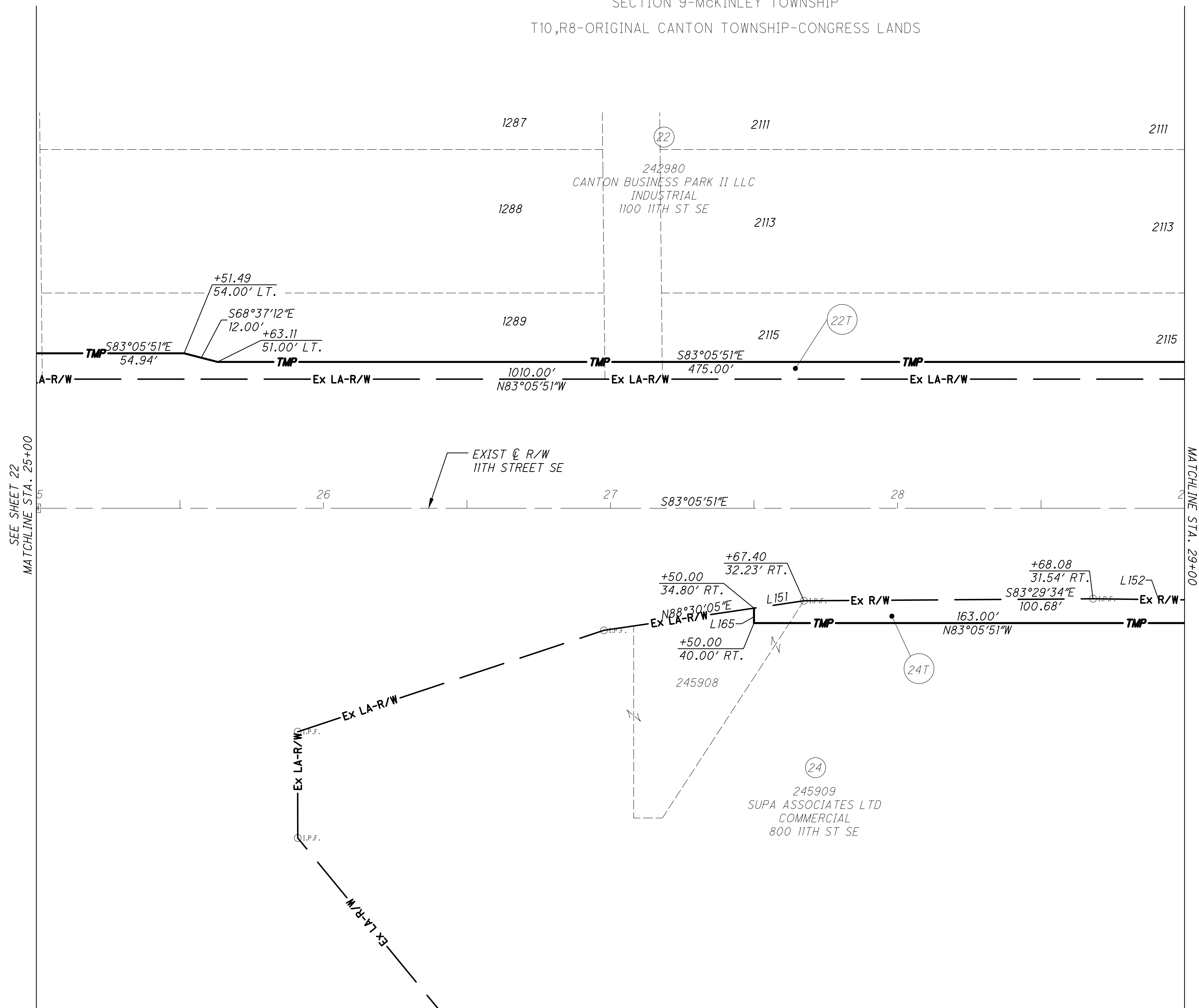
REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS

Right of Way Line Table		
Line #	Bearing	Distance
L151	N88°30'05"E	17.59'
L152	S82°26'59"E	50.02'
L165	S06°54'09"W	5.20'



SEE SHEET 22
MATCHLINE STA. 25+00

SEE SHEET 26
MATCHLINE STA. 29+00

PID NO.
90465

R/W DESIGNER
JPK
R/W REVIEWER
DS

RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 25+00 TO STA. 29+00

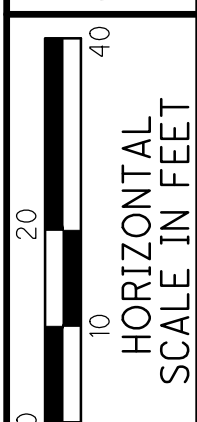
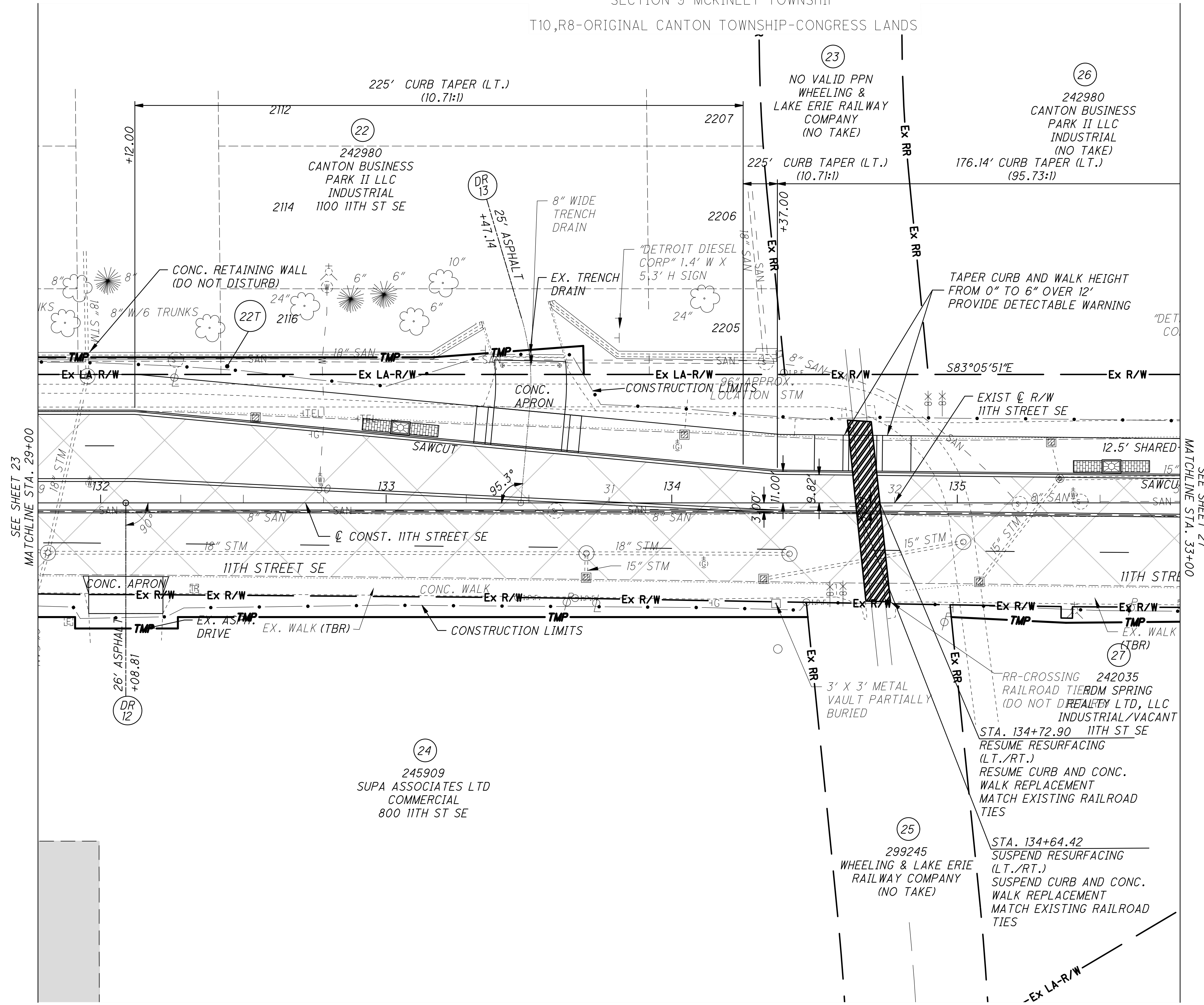
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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302

REV. BY	DATE	DESCRIPTION

STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



PID NO. **90465**

R/W DESIGNER: JPK
R/W REVIEWER: DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 29+00 TO STA. 33+00

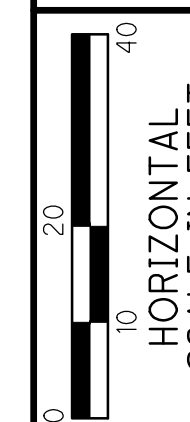
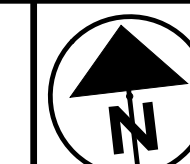
STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

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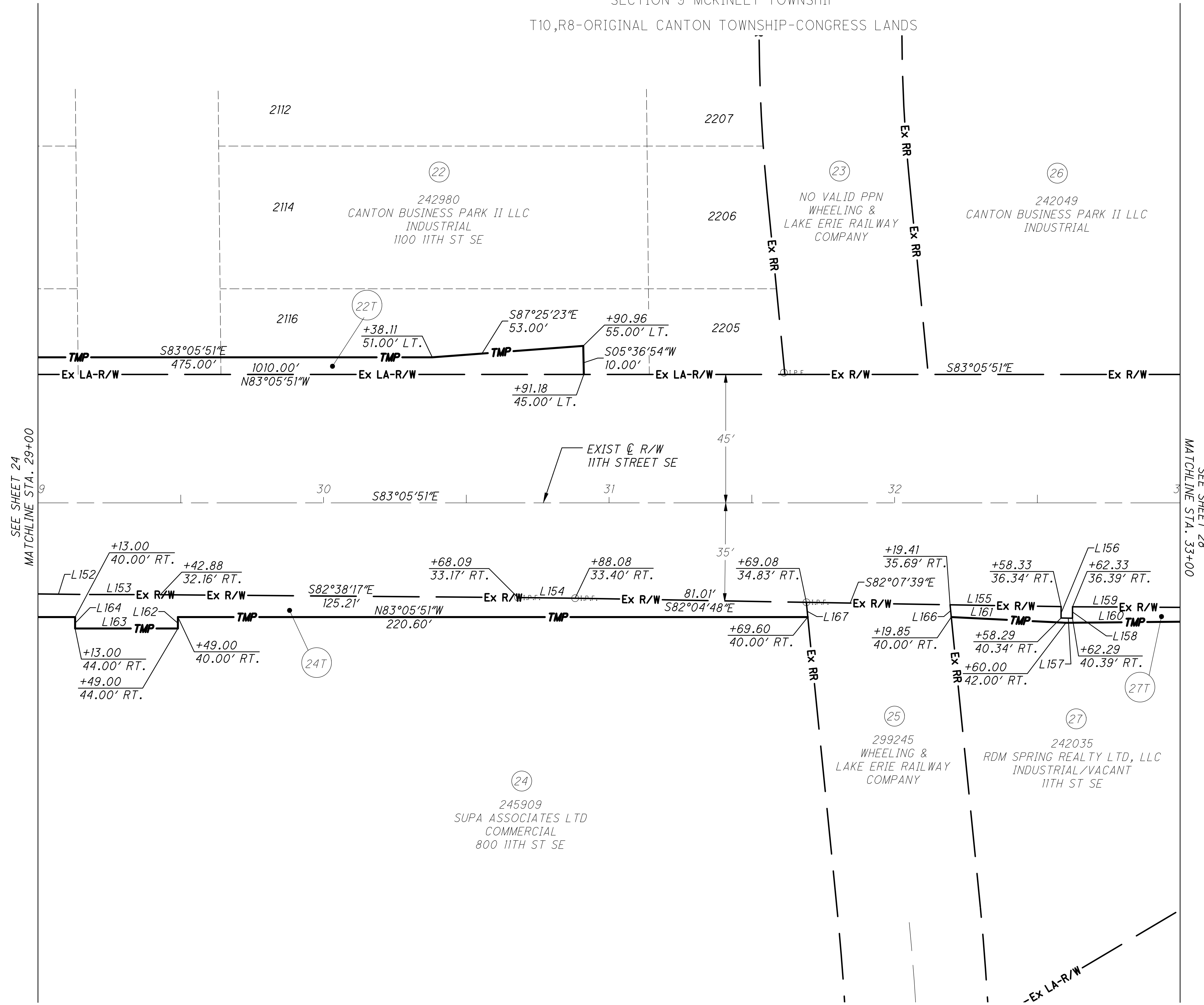
293
302

REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



Right of Way Line Table		
Line #	Bearing	Distance
L152	S82°26'59"E	50.02'
L153	S82°57'48"E	24.79'
L154	S82°26'20"E	19.99'
L155	S82°07'39"E	38.92'
L156	N07°29'48"E	4.00'
L157	N82°30'12"W	4.00'
L158	S07°29'48"W	4.00'
L159	S82°47'27"E	81.02'
L160	S83°38'06"E	213.22'
L161	S80°14'45"E	40.20'
L162	S06°54'09"W	4.00'
L163	S83°05'51"E	36.00'
L164	S06°54'09"W	4.00'
L166	N01°10'46"E	4.34'
L167	S01°10'46"W	5.19'

PID NO. 90465

R/W DESIGNER JPK
R/W REVIEWER DS

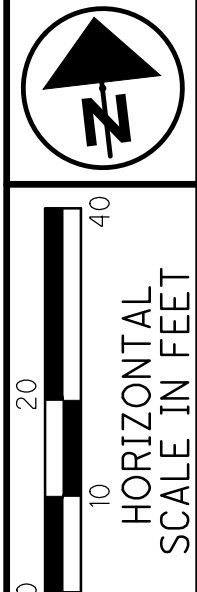
RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 29+00 TO STA. 33+00

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	DATE	

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STARK COUNTY
 CITY OF CANTON
 SECTION 9-McKINLEY TOWNSHIP
 T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS

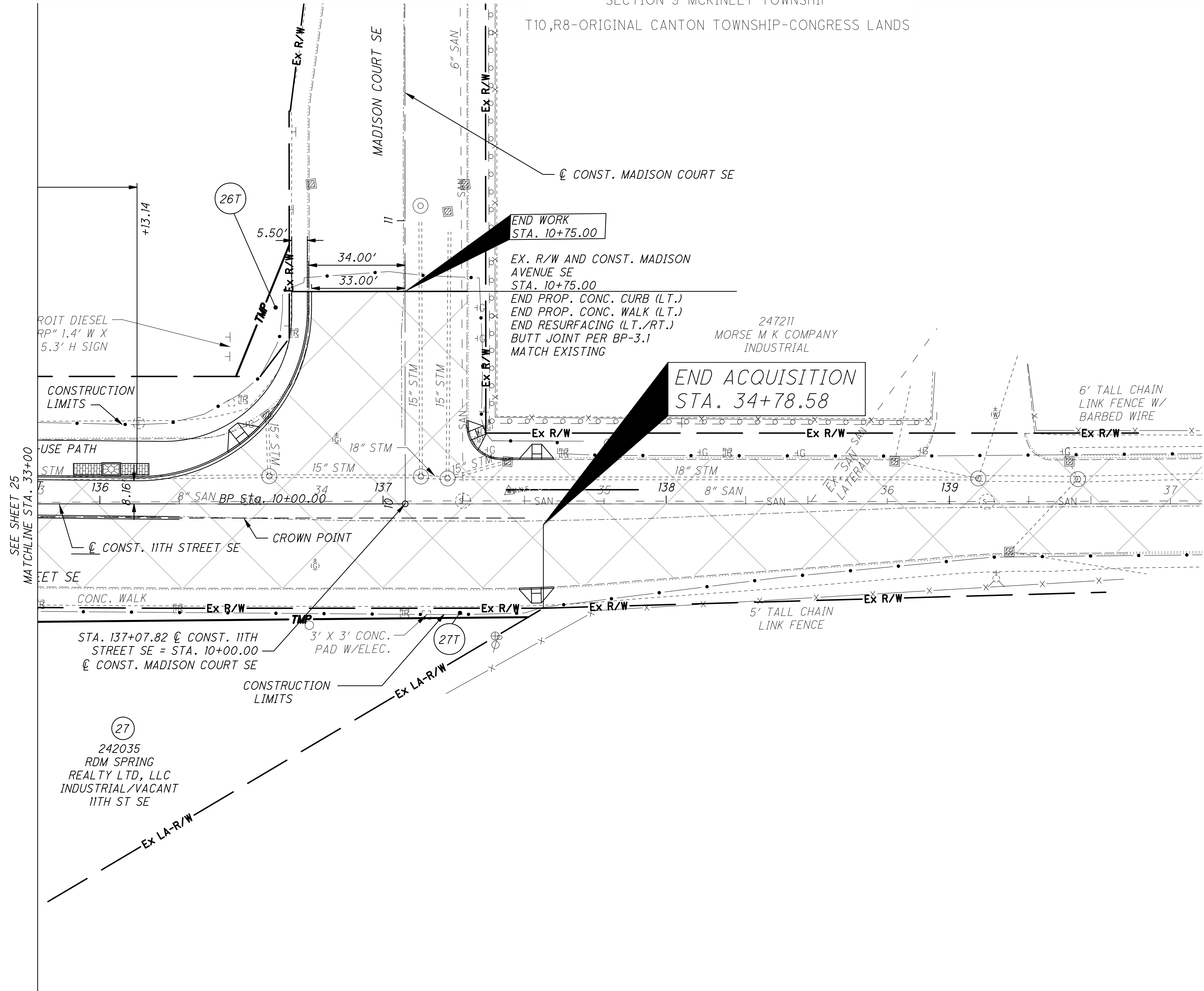


PID NO. **90465**
 R/W DESIGNER JPK
 R/W REVIEWER DS

RIGHT OF WAY TOPO SHEET
11TH STREET SE - STA. 33+00 TO END

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

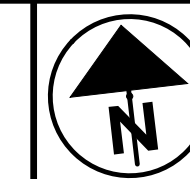
27/34
 295
 302



SEE SHEET 25
 MATCHLINE STA. 33+00

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REV. BY	DATE	DESCRIPTION



PID NO. **90465**

R/W DESIGNER: JPK
R/W REVIEWER: DS

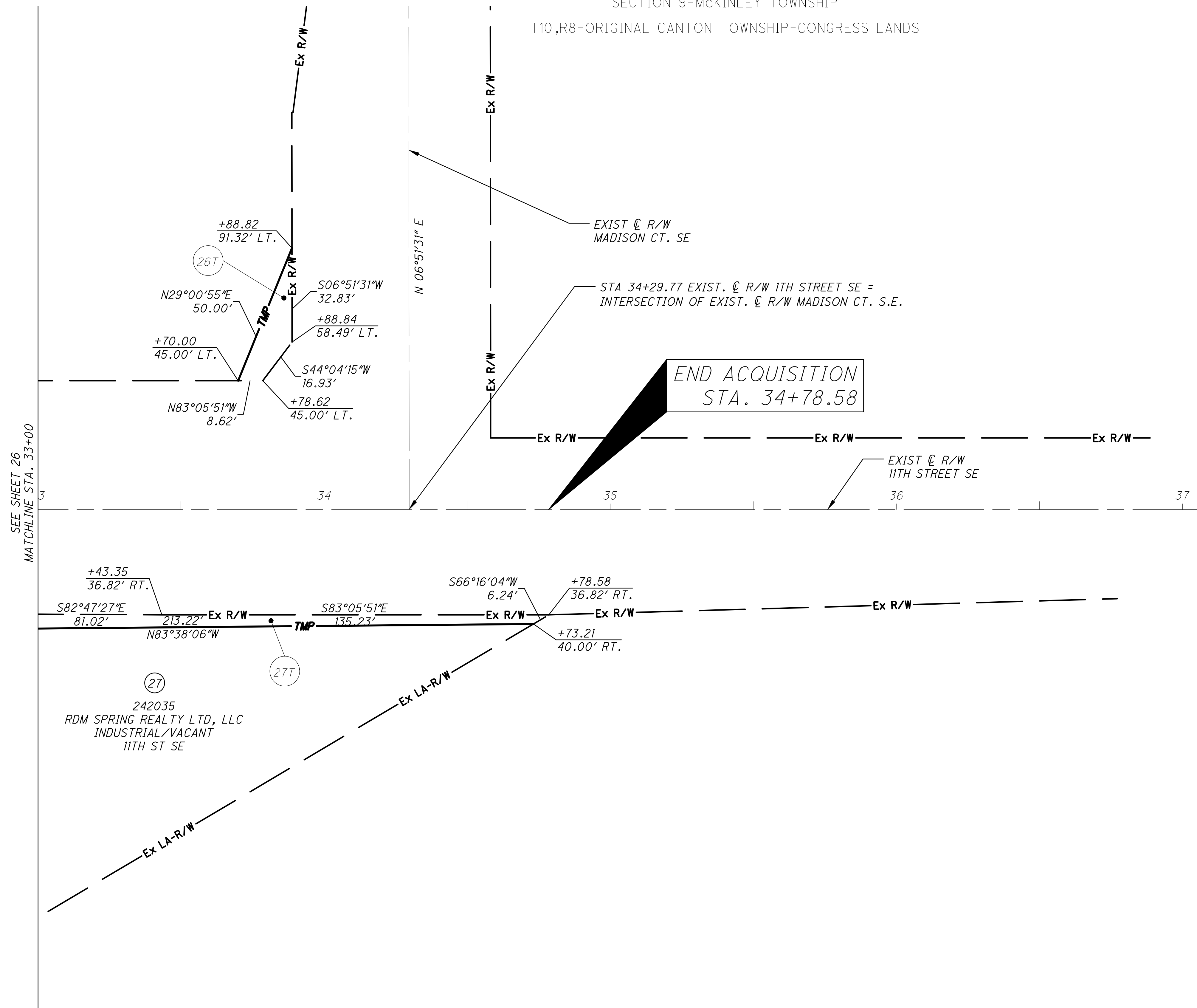
RIGHT OF WAY BOUNDARY SHEET
11TH STREET SE - STA. 33+00 TO END

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

28/34

296
302

STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



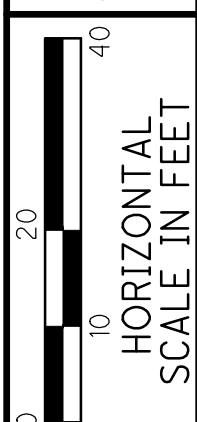
SEE SHEET 26
MATCHLINE STA. 33+00

END ACQUISITION
STA. 34+78.58

27
242035
RDM SPRING REALTY LTD, LLC
INDUSTRIAL/VACANT
11TH ST SE

REV. BY	DATE	DESCRIPTION

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PID NO. 90465

R/W DESIGNER JPK
R/W REVIEWER DS

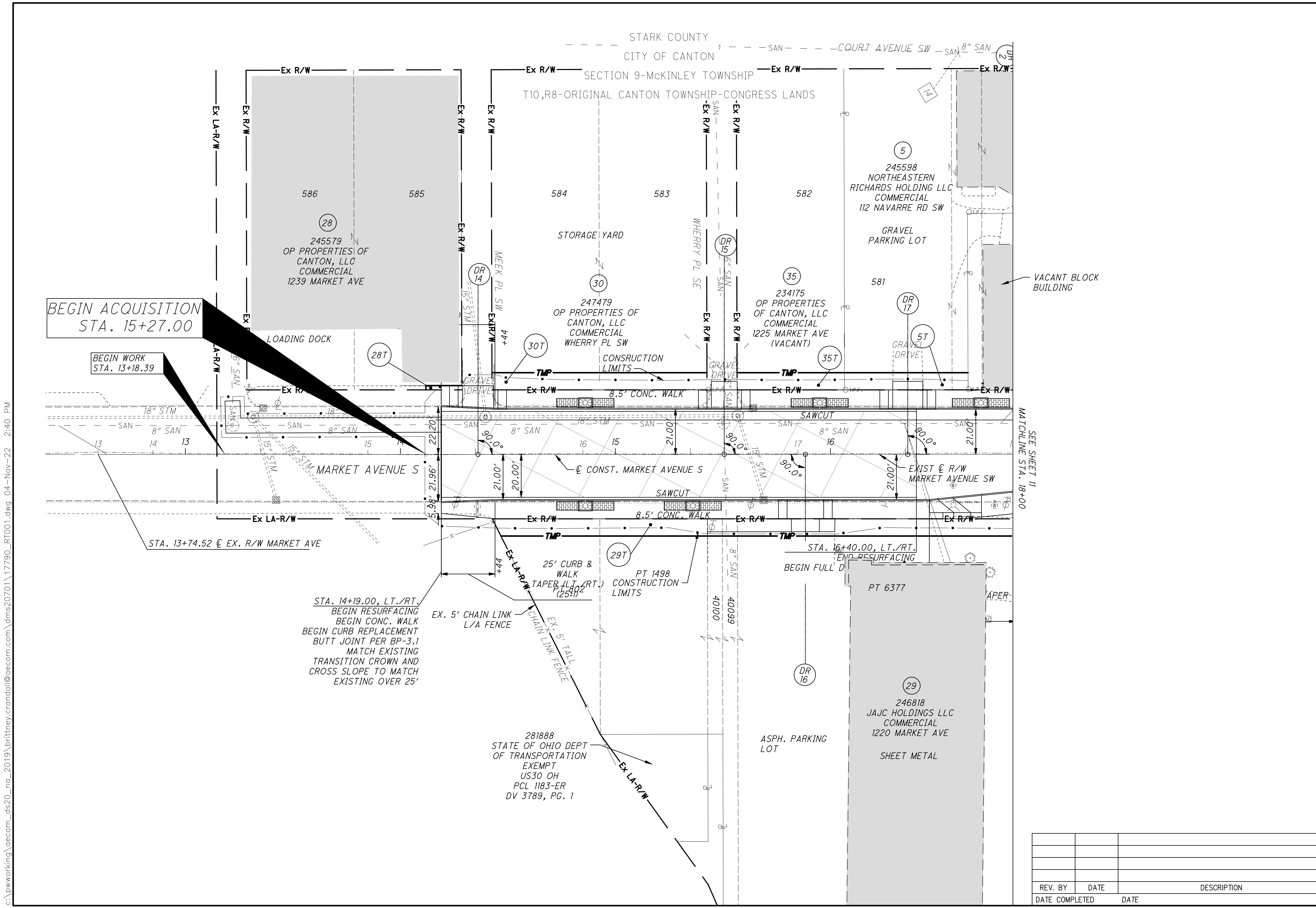
**RIGHT OF WAY TOPO SHEET
MARKET AVE SW - BEGINNING TO STA. 18+00**

**STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)**

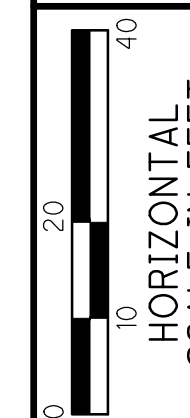
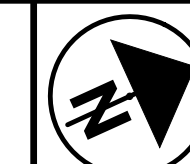
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REV. BY	DATE	DESCRIPTION



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PID NO. **90465**

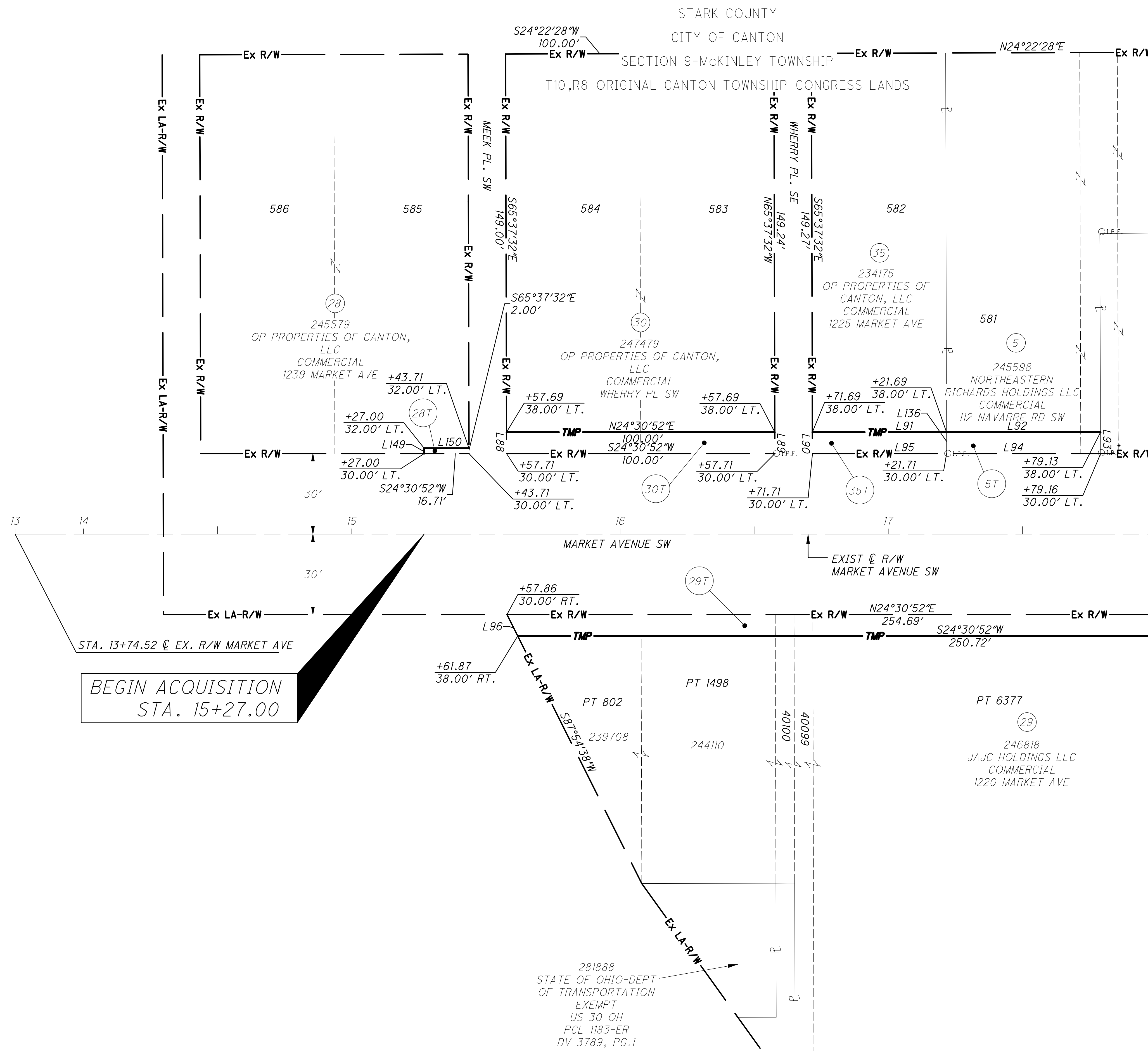
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R/W REVIEWER: DS

RIGHT OF WAY BOUNDARY SHEET
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)
MARKET AVENUE S - BEGINNING TO STA. 18+00

30 / 34

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Right of Way Line Table		
Line #	Bearing	Distance
L88	N65°37'32"W	8.00'
L89	S65°37'32"E	8.00'
L90	N65°37'32"W	8.00'
L91	N24°30'52"E	50.00'
L92	N24°30'52"E	57.44'
L93	S65°43'25"E	8.00'
L94	N24°30'52"E	57.45'
L95	N24°30'52"E	50.00'
L96	S87°54'38"W	8.95'
L136	S65°37'32"E	8.00'
L149	N65°29'08"W	2.00'
L150	N24°30'52"E	16.71'



BEGIN ACQUISITION
STA. 15+27.00

SEE SHEET 12
MATCHLINE STA. 18+00

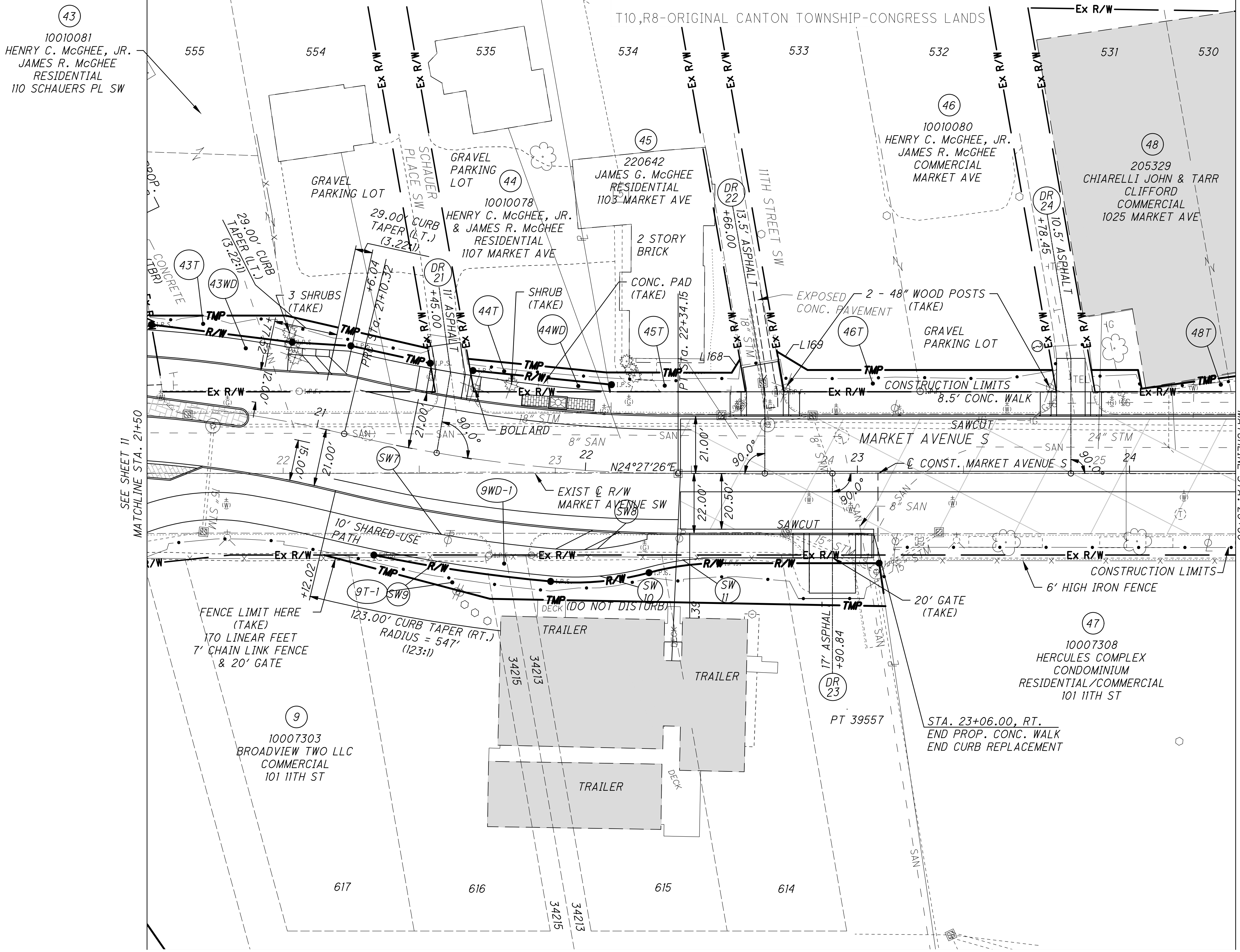
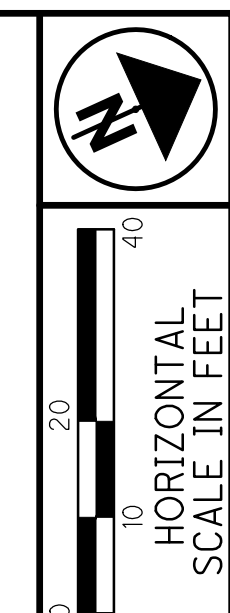
281888
STATE OF OHIO-DEPT
OF TRANSPORTATION
EXEMPT
US 30 OH
PCL 1183-ER
DV 3789, PG.1

REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



SEE SHEET 11
MATCHLINE STA. 21+50

SEE SHEET 33
MATCHLINE STA. 25+50

PID NO.
90465

R/W DESIGNER
JPK
R/W REVIEWER
DS

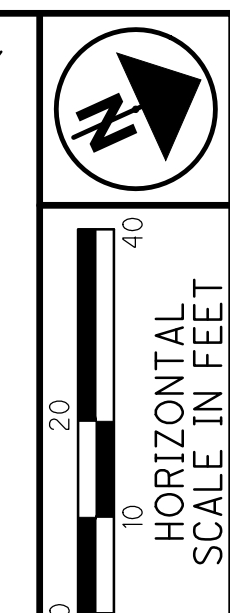
RIGHT OF WAY TOPO SHEET
MARKET AVE SW - STA. 21+50 TO STA. 25+50

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

REV. BY	DATE	DESCRIPTION

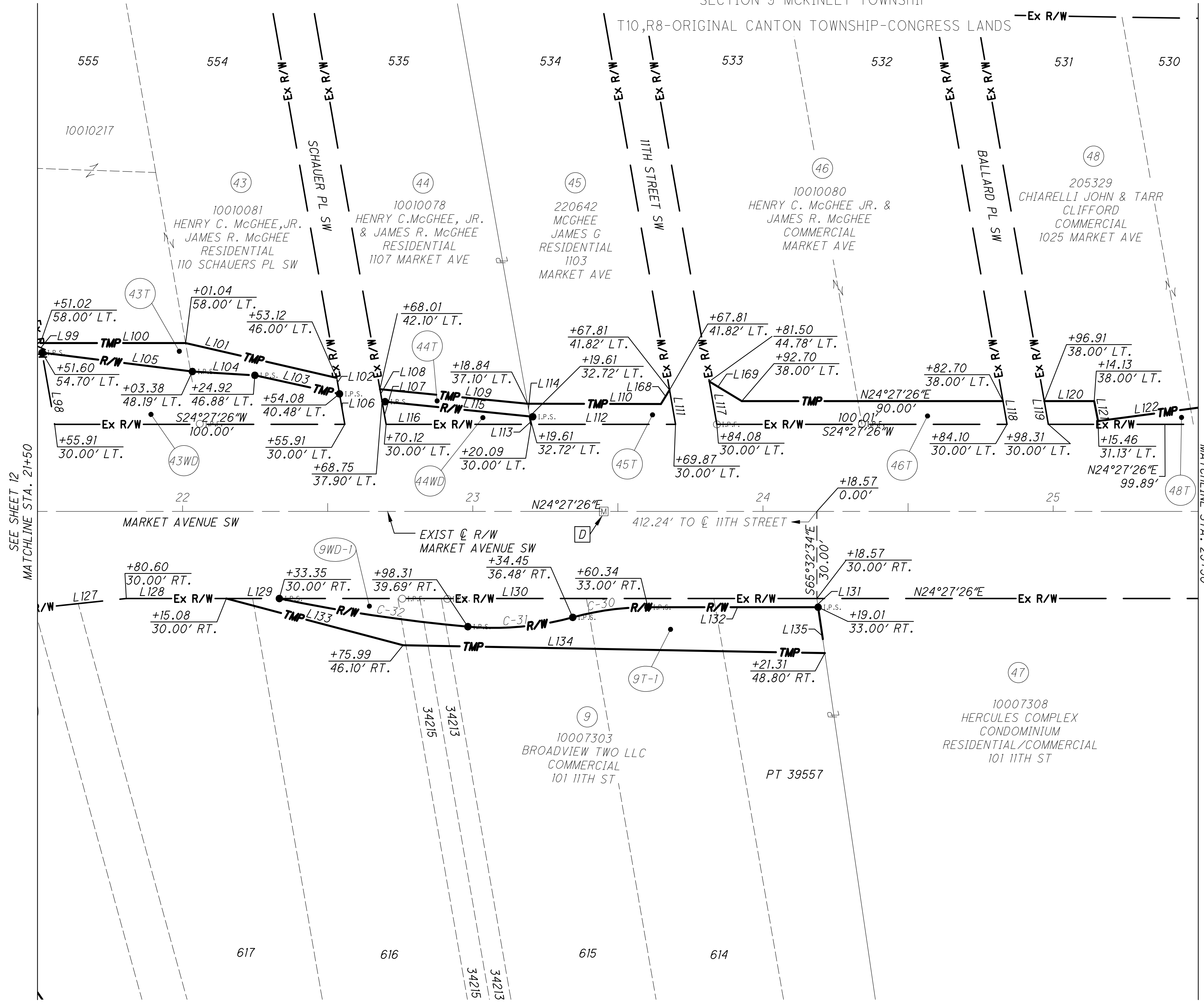
31 / 34

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302



STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP

T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



Right of Way Curve Table						
Curve	Radius	Delta	Arc	Tan	Chord	Chord Bearing
C-30	98.00'	15°19'21"	26.21'	13.18'	26.13'	S16°47'46"W
C-31	102.00'	20°29'28"	36.48'	18.44'	36.28'	S19°22'50"W
C-32	567.00'	6°38'24"	65.71'	32.89'	65.67'	S32°56'46"W

Right of Way Line Table		
Line #	Bearing	Distance
L98	N75°26'44"W	25.07'
L99	N75°26'44"W	3.35'
L100	N24°27'26"E	50.02'
L101	N37°25'59"E	53.44'
L102	S75°26'44"E	5.60'
L103	N36°50'13"E	29.86'
L104	N27°55'35"E	21.58'
L105	N31°37'15"E	52.18'
L106	S75°26'44"E	10.64'
L107	N75°26'44"W	8.02'
L108	N75°26'44"W	4.26'
L109	N30°04'18"E	51.08'
L110	N24°34'26"E	46.00'
L111	S75°26'44"E	12.00'
L112	N24°27'26"E	49.78'
L113	S75°28'22"E	2.76'
L114	S75°28'22"E	4.45'
L115	N30°16'38"E	51.13'
L116	S24°27'26"W	49.96'
L117	N75°26'44"W	15.00'

Right of Way Line Table		
Line #	Bearing	Distance
L118	N75°26'44"W	8.12'
L119	N75°26'44"W	8.12'
L120	N24°27'26"E	17.22'
L121	S76°26'28"E	7.00'
L122	N16°49'55"E	51.80'
L127	N18°21'48"E	32.82'
L128	N24°27'26"E	34.48'
L129	N24°27'26"E	18.27'
L130	N24°27'26"E	185.22'
L131	S73°50'46"E	3.03'
L132	N24°27'26"E	58.66'
L133	S39°15'46"W	63.00'
L134	S25°31'20"W	145.35'
L135	S73°50'46"E	15.97'
L168	N33°53'58"W	5.65'
L169	N55°38'19"E	13.09'

[D] = STA. 23+45.15 EXIST. C R/W MARKET AVE. SW = STA. 22+34.15 PT PROP. C CONSTRUCTION

PID NO. 90465

R/W DESIGNER JPK
R/W REVIEWER DS

RIGHT OF WAY BOUNDARY SHEET
MARKET AVENUE S - STA. 21+50 TO STA. 25+50

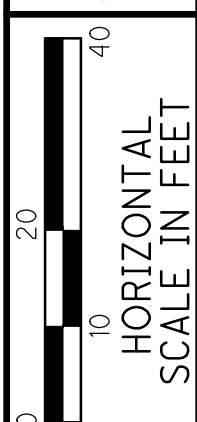
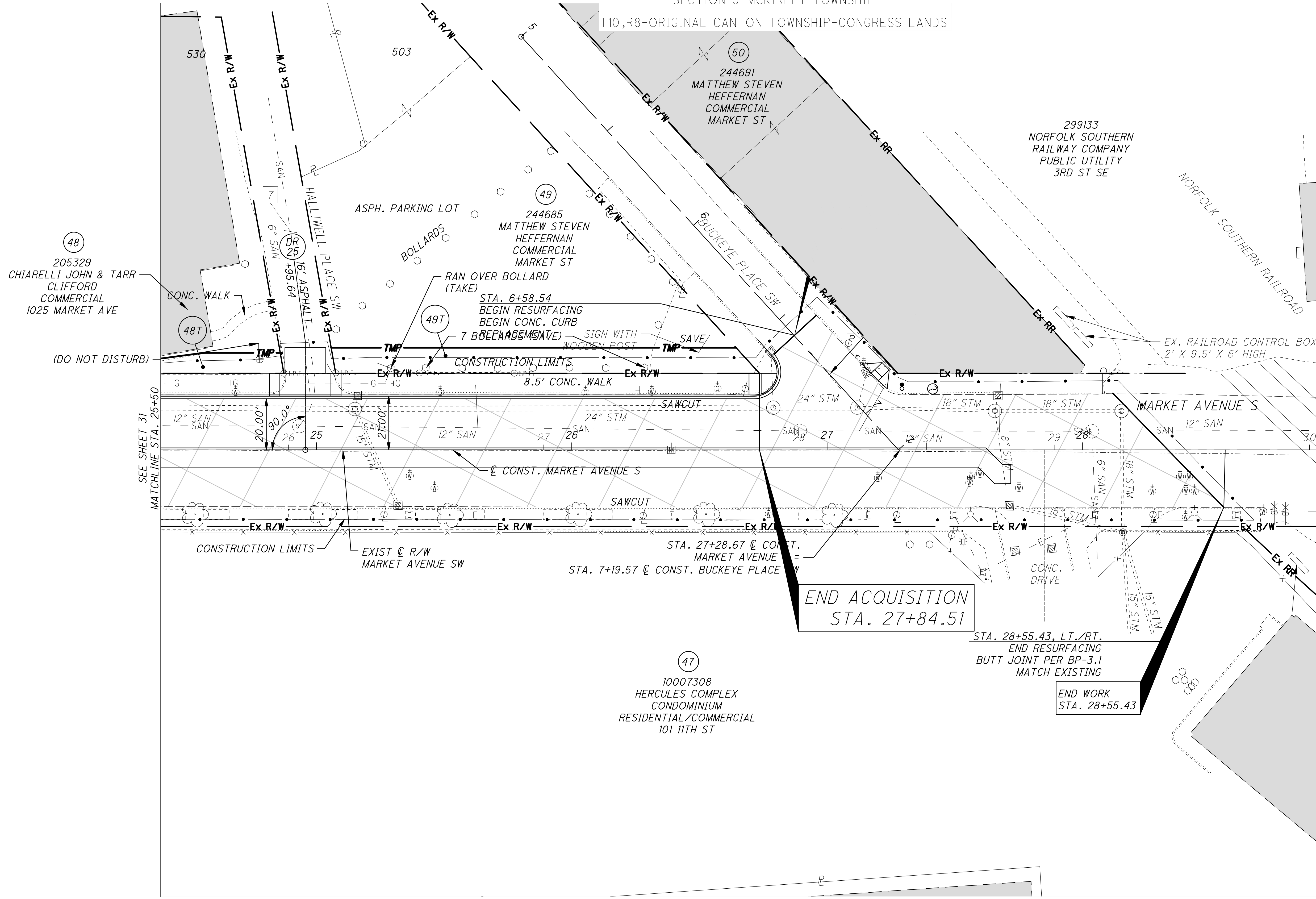
STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

REV. BY	DATE	DESCRIPTION

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STARK COUNTY
CITY OF CANTON
SECTION 9-McKINLEY TOWNSHIP
T10,R8-ORIGINAL CANTON TOWNSHIP-CONGRESS LANDS



PID NO. **90465**

R/W DESIGNER: JPK
R/W REVIEWER: DS

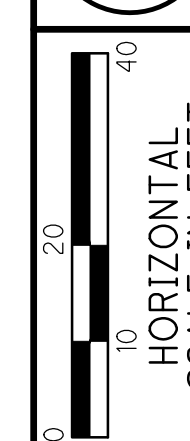
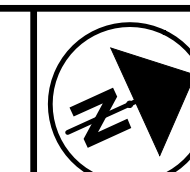
RIGHT OF WAY TOPO SHEET
MARKET AVE SW - STA. 25+50 TO END

STA - 11TH STREET SE IMPROVEMENTS (PID 90465)

33 / 34

301
302

REV. BY	DATE	DESCRIPTION



PID NO.
90465

R/W DESIGNER
JPK
R/W REVIEWER
DS

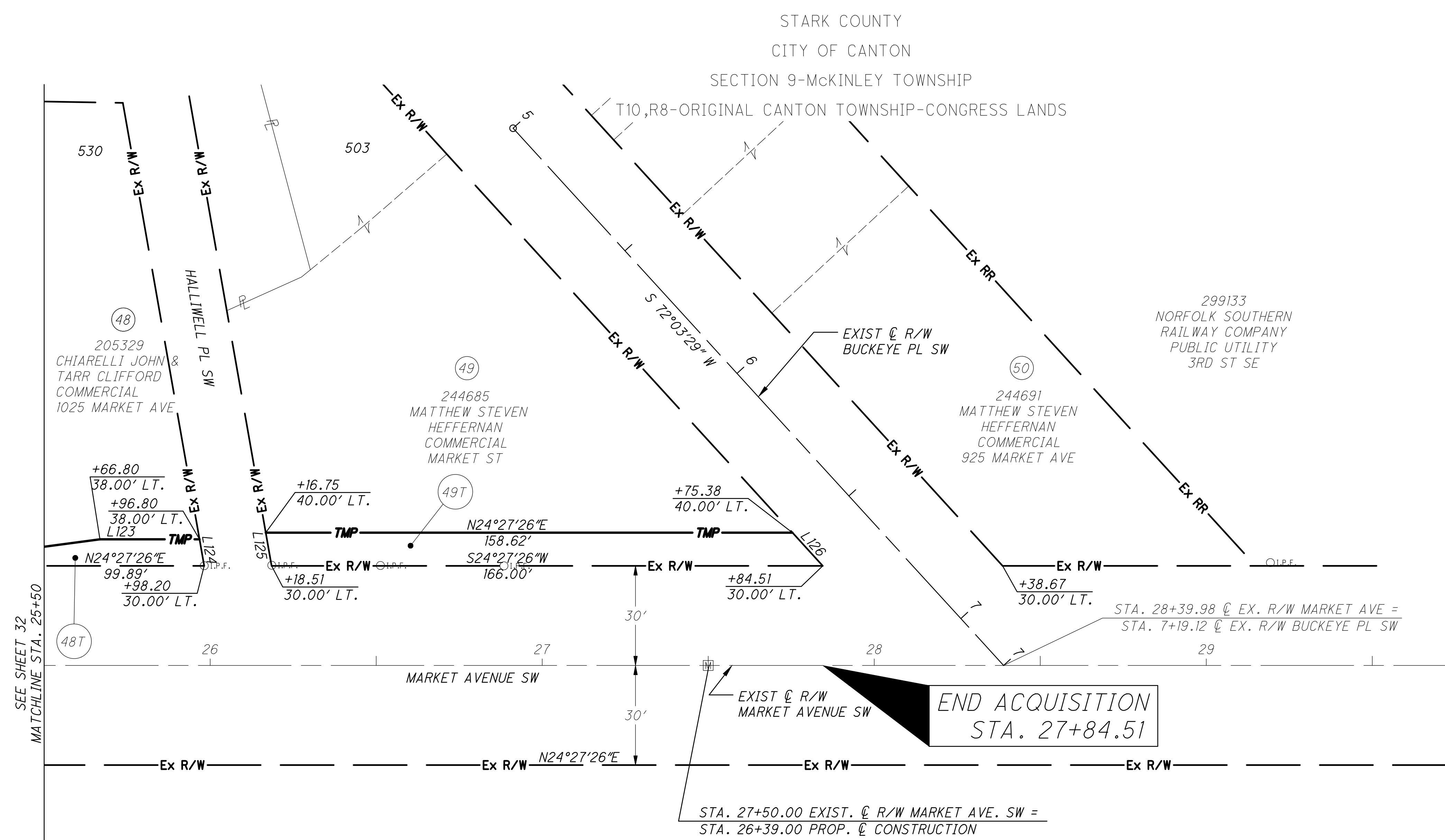
RIGHT OF WAY BOUNDARY SHEET
MARKET AVENUE S - STA. 25+50 TO END

STA - 11TH STREET SE
IMPROVEMENTS (PID 90465)

34 / 34

302
302

Right of Way Line Table		
Line #	Bearing	Distance
L123	N24°27'26"E	30.00'
L124	S75°30'00"E	8.12'
L125	N75°30'00"W	10.15'
L126	N72°03'29"E	13.54'



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