

EAU

MAR 10, 2020

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 154

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C OF CHIPPEWA FALLS, PARK AVENUE

MAIN ST - 0.75 MILES WEST

LOC STR
CHIPPEWA

STATE PROJECT NUMBER
8996-01-01

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8996-01-01	WISC 2020096	1

PROJECT ID: 8996-01-01

COUNTY: CHIPPEWA

PROJECT LOCATION



39

DESIGN DESIGNATION

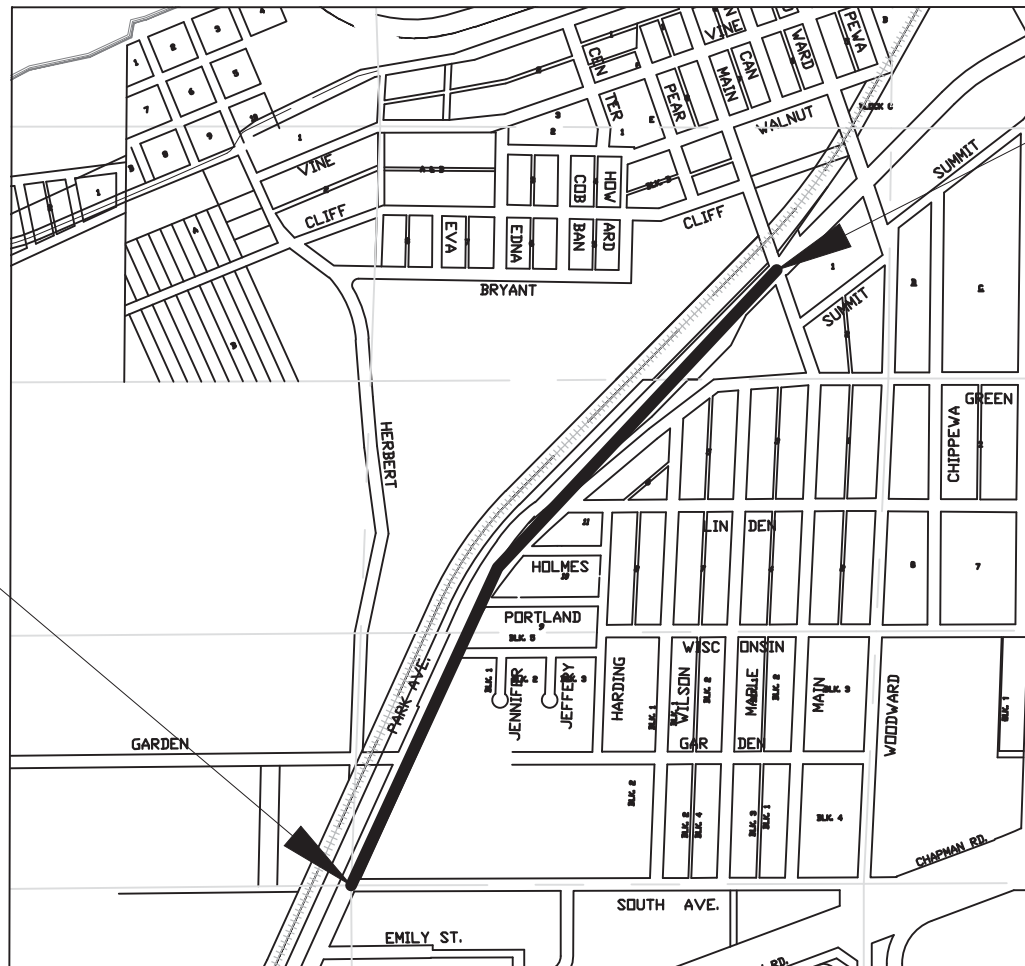
A.A.D.T.	2019	=	4600
A.A.D.T.	2039	=	5500
D.H.V.		=	616
D.D.		=	59/41
T.		=	9.9%
DESIGN SPEED		=	40 MPH
ESALS		=	750,000

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

BEGIN PROJECT
STA 100+00
Y=121875.622
X=169855.573



END PROJECT
STA 139+70



TOTAL NET LENGTH OF CENTERLINE = 0.75 MI

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CHIPPEWA COUNTY.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2012).

ACCEPTED FOR
CITY OF CHIPPEWA FALLS

Date: 10/31/2019 *Richard J. Rebecy*
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY
CITY OF CHIPPEWA FALLS ENGINEERING OFFICE

WISCONSIN
WILLIAM McELROY
E-45044-6
Chippewa Falls, WI
PROFESSIONAL ENGINEER

DATE: 10/31/2019

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY: CHIPPEWA FALLS ENGINEERING OFFICE
 Designer: CHIPPEWA FALLS ENGINEERING OFFICE
 Project Manager: MATT THORNSEN
 Regional Examiner: TOU YANG
 Regional Supervisor: ANDREW STENSLAND

APPROVED FOR THE DEPARTMENT
DATE: 10/31/19 *[Signature]*
(Signature)

E

CONTROL POINTS

POINT NUMBER	NORTHING	EASTING	DESCRIPTION
1	121857.52	169829.99	PK NAIL
2	121931.30	169900.04	PK NAIL
3	122348.05	170097.95	PK NAIL
4	122509.88	170109.23	PK NAIL
5	123107.67	170397.49	PK NAIL
6	123657.10	170689.02	PK NAIL
7	124189.12	171187.75	PK NAIL
8	124756.17	171748.85	PK NAIL
9	125093.99	172050.48	PK NAIL

SUPERELEVATION TABLE			
STATION	LT LANE SLOPE	RT LANE SLOPE	COMMENT
114+68	-3.00%	-3.00%	END NORMAL CROWN
115+31	0.00%	-3.00%	LEVEL CROWN
115+85	2.60%	-3.00%	BEGIN FULL SUPERELEVATION
122+38	2.60%	-3.00%	END FULL SUPERELEVATION
122+92	0.00%	-3.00%	LEVEL CROWN
123+55	-3.00%	-3.00%	BEGIN NORMAL CROWN

NOTE: RT LANE DOES NOT CHANGE FROM NORMAL CROWN SLOPE

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
SIDE SLOPE-TURF			.25			.27			.28			.30
PAVEMENT:			.32			.34			.36			.38
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 6.4 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 6.4 ACRES

UTILILTIES

AT&T
 RICK PODOLAK
 304 SOUTH DEWEY STREET
 EAU CLAIRE, WI 54703
 715-839-5565;
 CELL 715-410-0656
 RP4514@ATT.COM

CHARTER SPECTRUM
 SHANE YODER
 1201 MCCANN DRIVE
 ALTOONA, WI 54720
 715-831-8940 EXT 619
 SHANE.YODER@CHARTERCOM.COM

CINC
 DAREN BAUER
 UNIVERSITY OF WISCONSIN - EAU CLAIRE
 105 GARFIELD AVENUE
 EAU CLAIRE, WI 54701
 715-836-5286
 BAUERDP@UWEC.EDU

CITY OF CHIPPEWA FALLS, WATER & SEWER
 RICK RUBENZER, P.E.
 30 WEST CENTRAL STREET
 CHIPPEWA FALLS, WI 54729
 715-726-2736
 RRUBENZER@CHIPPEWAFALLS-WI.GOV

WISCONSIN INDEPENDENT NETWORK
 JOHN LOUIS
 4955 BULLIS FARM ROAD
 EAU CLAIRE, WI 54701
 715-838-4012
 JOHN.LOUIS@WINTechnology.COM

XCEL ENERGY - GAS
 BRADY GARDOW
 1400 WESTERN AVENUE
 EAU CLAIRE, WI 54703
 715-737-1450
 BRADY.P.GARDOW@XCELENERGY.COM

XCEL ENERGY - ELECTRICAL
 DAVID MELSNESS
 1400 WESTERN AVENUE
 EAU CLAIRE, WI 54703
 715-737-1495
 DAVID.J.MELSNESS@XCELENERGY.COM

XCEL ENERGY - TRANSMISSION
 MITCH DIENGER
 414 NICOLLETT MALL, 5TH FLOOR
 MINNEAPOLIS, MN 55401
 612-321-3109
 608-386-2233
 MITCHELL.A.DIENGER@XCELENERGY.COM



GENERAL NOTES

THE LOCATIONS OF EXISTING & PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. SANITARY SERVICE LOCATIONS ARE ILLUSTRATED FOR REFERENCE ONLY. EXACT LOCATIONS MAY VARY IN THE FIELD AND SHALL BE LOCATED DURING SANITARY SEWER INSTALLATION.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE SEEDED, FERTILIZED, AND MULCHED AS DIRECTED BY THE ENGINEER. ALL OTHER DISTURBED AREAS ARE TO BE SEEDED, FERTILIZED AND MULCHED AT THE CONTRACTORS EXPENSE.

THE EXACT LOCATION OF DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

THE EXACT LOCATION OF EROSION CONTROL LIMITS WILL BE LOCATED IN THE FIELD BY THE ENGINEER.

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE COUNTY SURVEYOR CONCERNING MONUMENT AND PROPERTY CORNER PRESERVATION.

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

PIPE LENGTHS ILLUSTRATED ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE COUNTY SURVEYOR CONCERNING MONUMENT AND PROPERTY CORNER PRESERVATION.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

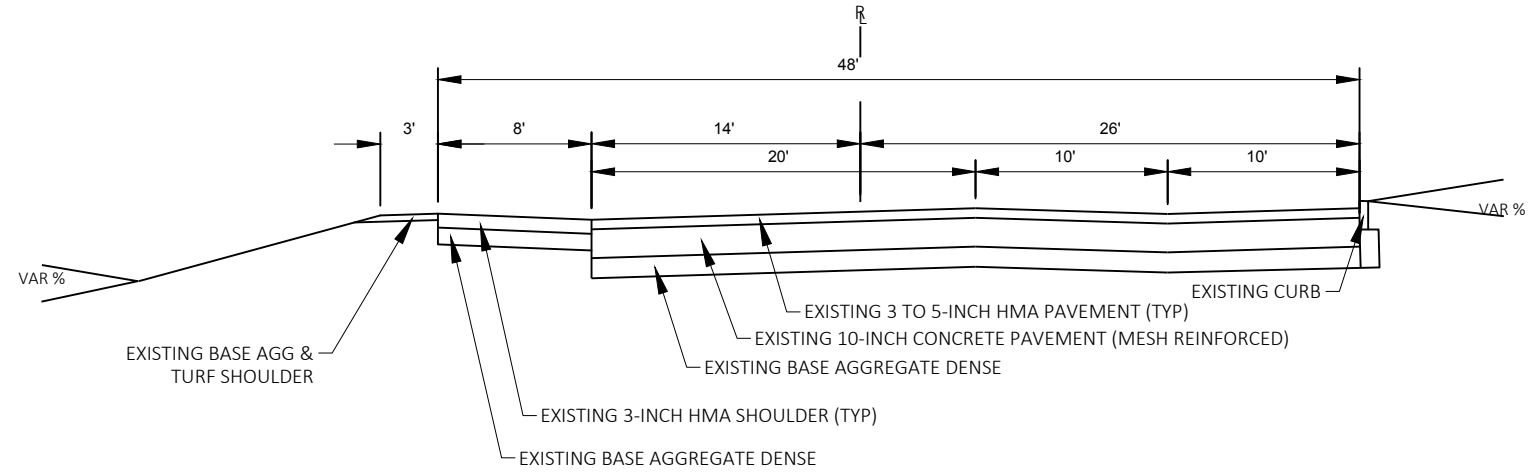
TYPICAL DRIVEWAYS ARE MATCHED INTO EXISTING ASPHALT DRIVEWAY WITH 2 FEET OF ASPHALTIC SURFACE DRIVEWAY AT THE EXISTING DRIVEWAY THICKNESS. LARGER PAVED AREAS ARE SHOWN IN PLAN AND PROFILE SHEETS.

DESIGN CONTACTS

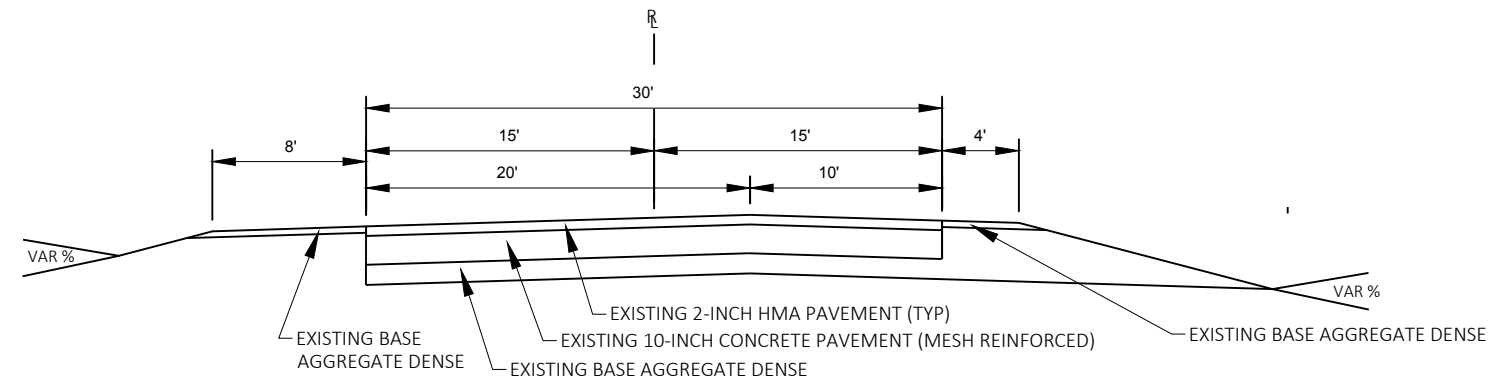
CITY OF CHIPPEWA FALLS
 ENGINEERING DEPARTMENT
 BILL MCELROY
 30 W. CENTRAL ST
 CHIPPEWA FALLS, WI 54729
 715-726-2736
 BMCELROY@CHIPPEWAFALLS-WI.GOV

WIDNR
 LEAH NICOL
 1300 W CLAIREMONT AVE
 EAU CLAIRE, WI 54701
 715-934-9014
 LEAH.NICOL@WISCONSIN.GOV

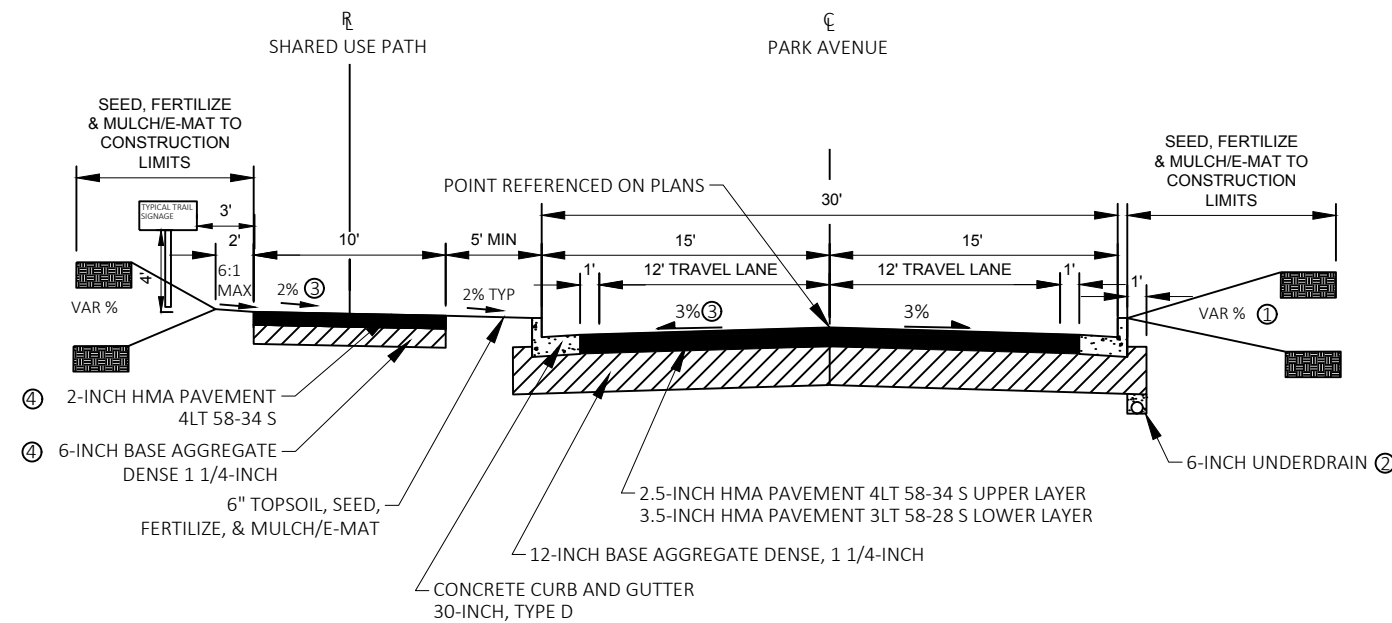
WISDOT NW & NC REGION RAIL COORDINATOR
 ANNA DAVEY
 1701 N 4TH STREET
 SUPERIOR, WI 54880
 715-392-7960
 ANNA.DAVEY@DOT.WI.GOV



TYPICAL EXISTING SECTION
116+00 - 129+00

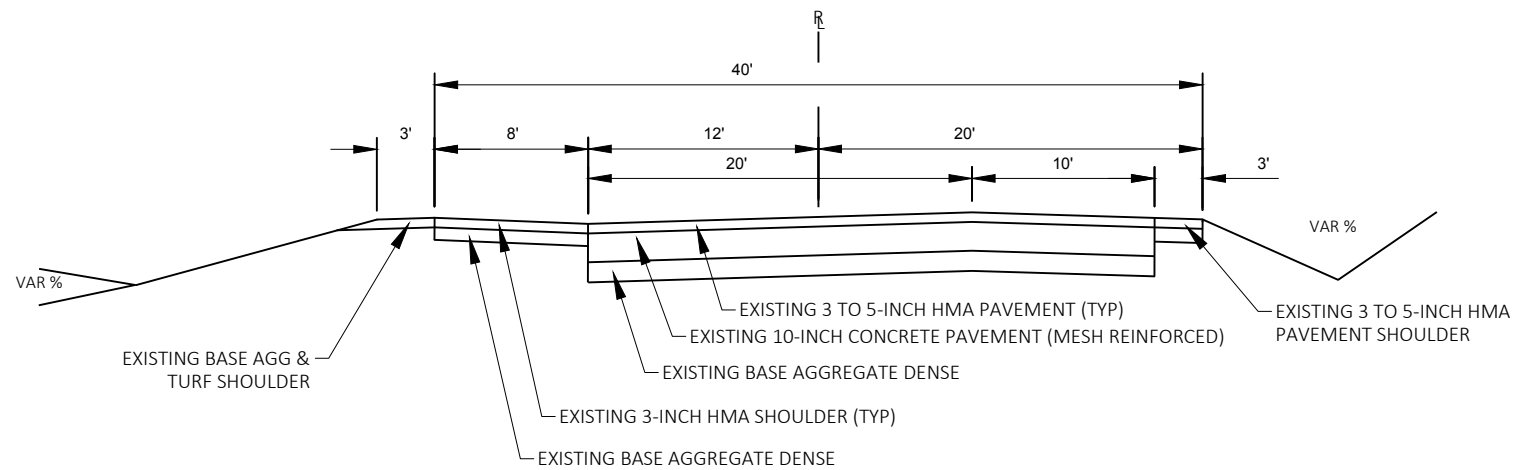


TYPICAL EXISTING SECTION
100+00 - 116+00

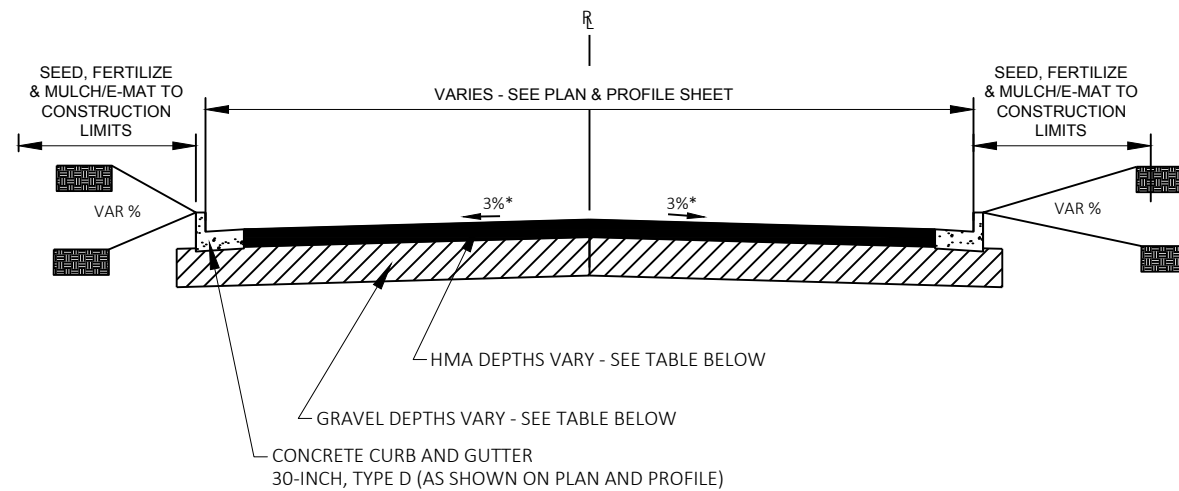


TYPICAL PROPOSED SECTION
100+00 - 139+59

- ① SEE CROSS SECTIONS FOR DITCH DETAIL FROM STA 129+00 TO STA 139+59
- ② 6" UNDERDRAIN TO BE INSTALLED FROM STA 127+25 TO 139+00. SEE CONSTRUCTION DETAIL
- ③ SEE PLAN AND PROFILE SHEETS FOR SUPERELEVATION DETAILS. SHARED USE PATH REMAINS UNCHANGED (2% TOWARD STREET) DURING ROADWAY SUPERELEVATION.
- ④ PEDESTRIAN RAMPS ON SHARED USE PATH SHALL BE CONSTRUCTED WITH 4-INCH CONCRETE SIDEWALK OVER 4-INCH BASE AGGREGATE DENSE 1 1/4-INCH



TYPICAL EXISTING SECTION
129+00 - 139+59



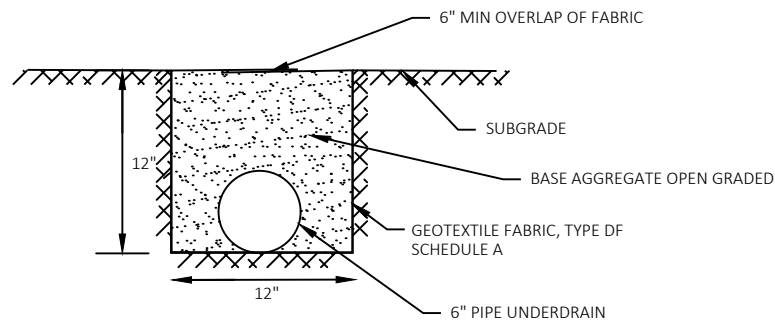
TYPICAL PROPOSED SECTION - SIDE ROADS

- SOUTH AVENUE
- GARDEN STREET
- WISCONSIN ST EAST
- WISCONSIN ST WEST
- PORTLAND AVENUE
- MAIN STREET

*VARIES - SEE GRADES ON INTERSECTION DETAILS

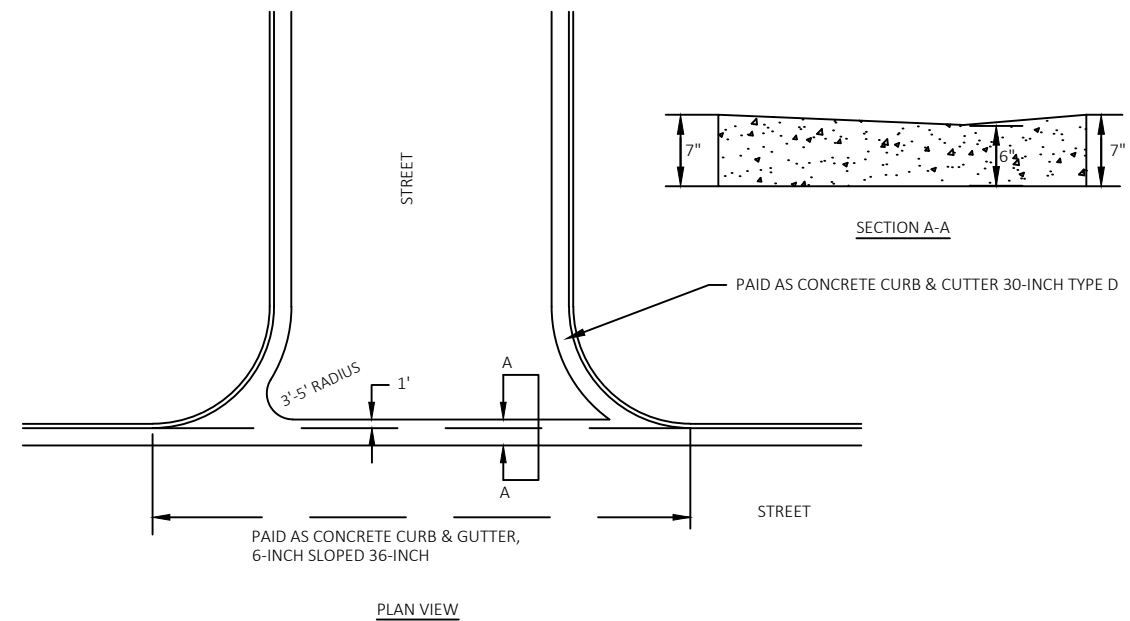
SIDE ROAD NAME	HMA UPPER LIFT	HMA LOWER LIFT	GRAVEL DEPTH (INCH)	CURB AND GUTTER PRESENT
SOUTH AVE	1.75" 4LT 58-34S	1.75" 4LT 58-34S	9	NO
GARDEN STREET	1.75" 4LT 58-34S	1.75" 4LT 58-34S	9	NO
WISCONSIN STREET (EAST OF PARK)	1.75" 4LT 58-34S	1.75" 4LT 58-34S	9	YES
WISCONSIN STREET (WEST OF PARK)	1.75" 4LT 58-34S	1.75" 4LT 58-34S	9	NO
PORTLAND AVENUE	1.75" 4LT 58-34S	1.75" 4LT 58-34S	9	YES
MAIN STREET	2.5" 4LT 58-34S	3.5" 3LT 58-28S	12	YES

PIPE UNDERDRAIN DETAIL

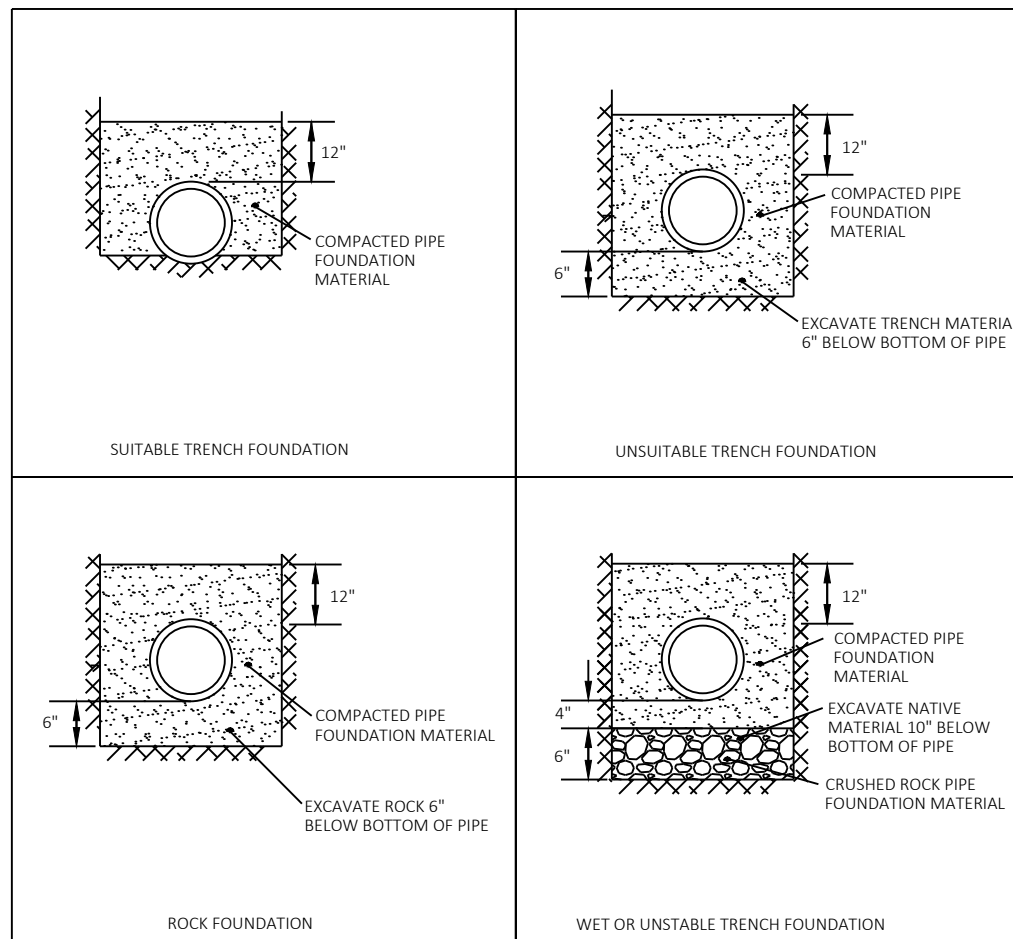


NOTES:
 FABRIC SHALL OVERLAP AT THE TOP OF SUBGRADE, 6-INCH MINIMUM OVERLAP
 PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY
 IF THERE IS A CONFLICT WITH THE STORM SEWER THE PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE STORM SEWER TOWARDS THE CENTER OF THE ROAD.
 PLACE UNDERDRAIN AFTER EXCAVATION TO SUBGRADE AND PRIOR TO PLACEMENT OF BASE AGGREGATE.
 TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED, OR IN LIEU OF USE WELL GRADED COURSE AGGREGATE SIZE NO 1 OR 2 AS PER STANDARD SPECIFICATION 501.2.5.4.5

CONCRETE FLUME DETAIL

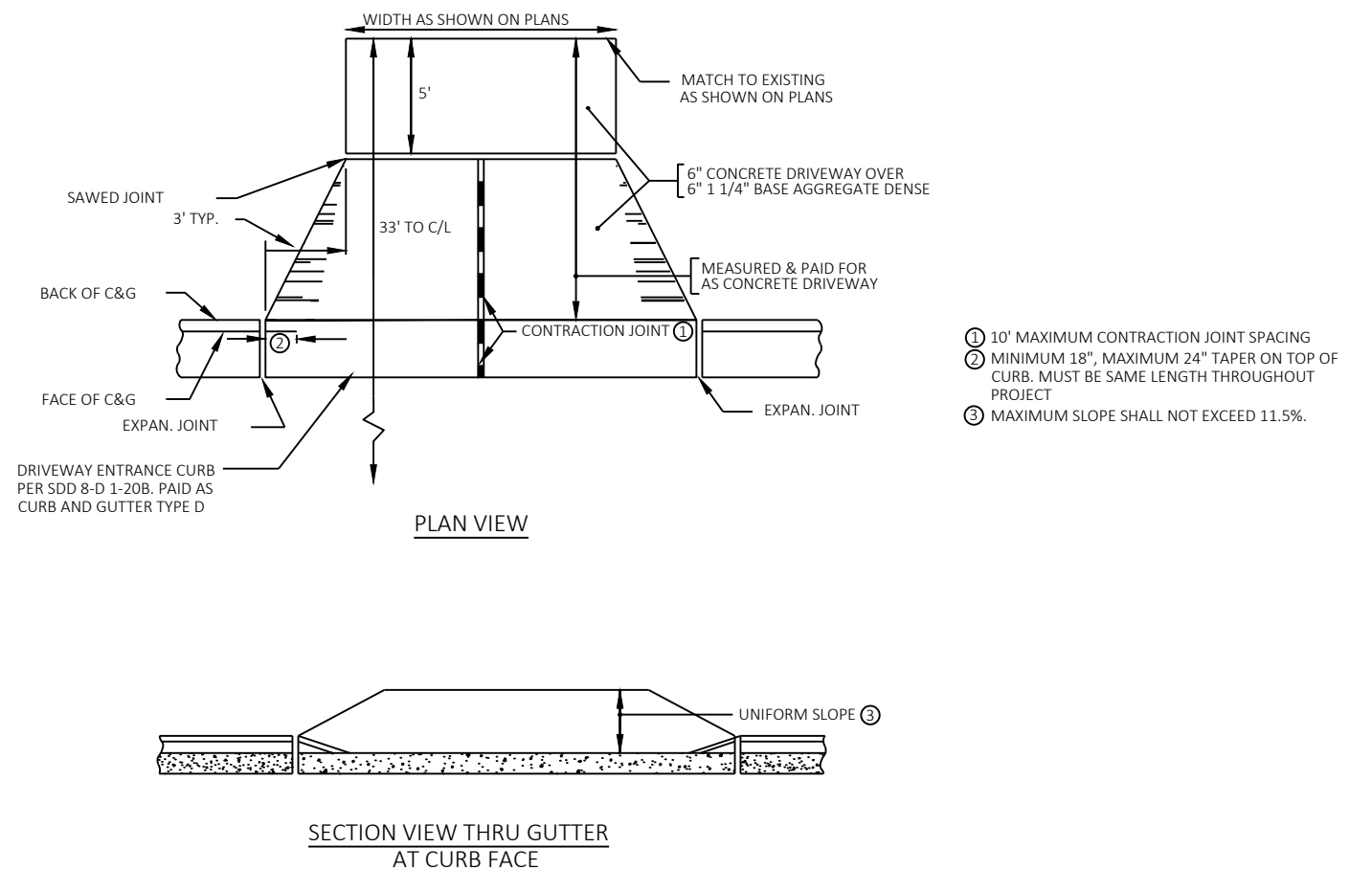


LAYING CONDITIONS FOR SANITARY SEWER PIPE AND WATER MAIN

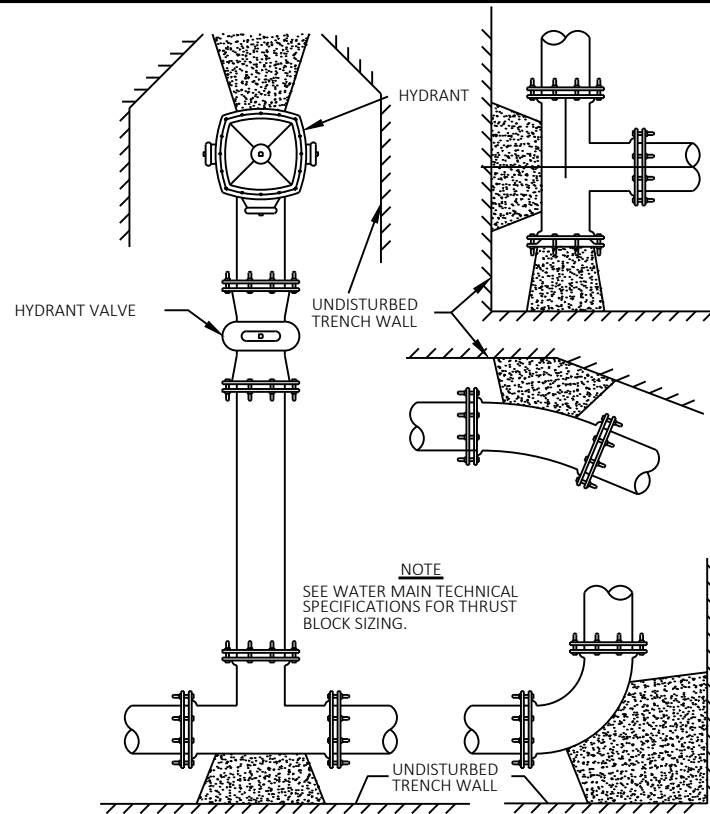


NOTE:
 TRENCH WIDTH AT PIPE ZONE:
 MIN = OUTSIDE PIPE DIAMETER + 12"
 MAX = OUTSIDE PIPE DIAMETER + 24"
 (EXCEPT ROCK EXCAVATION)
 ENGINEER SHALL DETERMINE THE SUITABILITY FOR NATIVE MATERIAL TO BE USED AS BACKFILL AND/OR PIPE FOUNDATION MATERIAL

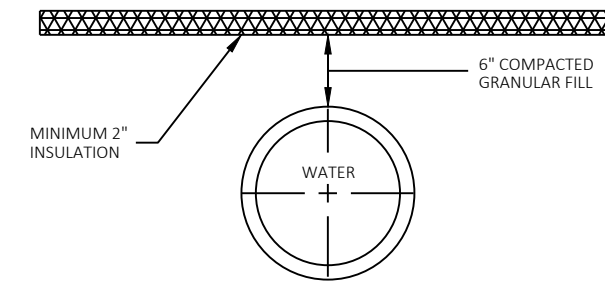
CONCRETE DRIVEWAY DETAIL



- ① 10' MAXIMUM CONTRACTION JOINT SPACING
- ② MINIMUM 18", MAXIMUM 24" TAPER ON TOP OF CURB. MUST BE SAME LENGTH THROUGHOUT PROJECT
- ③ MAXIMUM SLOPE SHALL NOT EXCEED 11.5%.

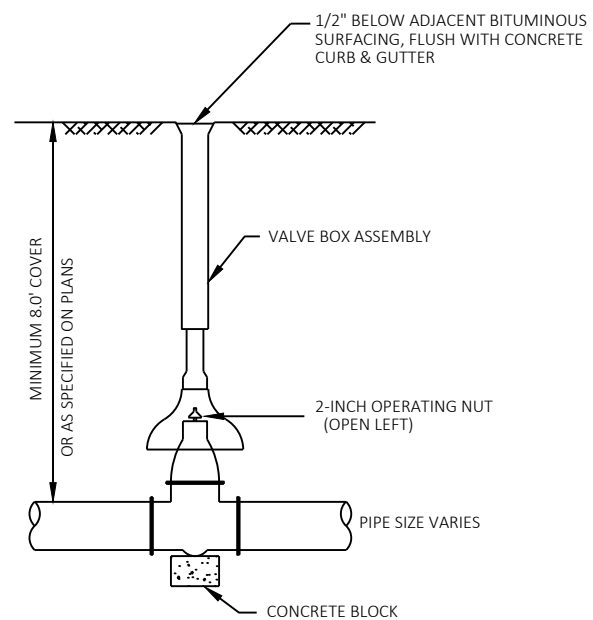


TYPICAL THRUST
BLOCKING DETAIL

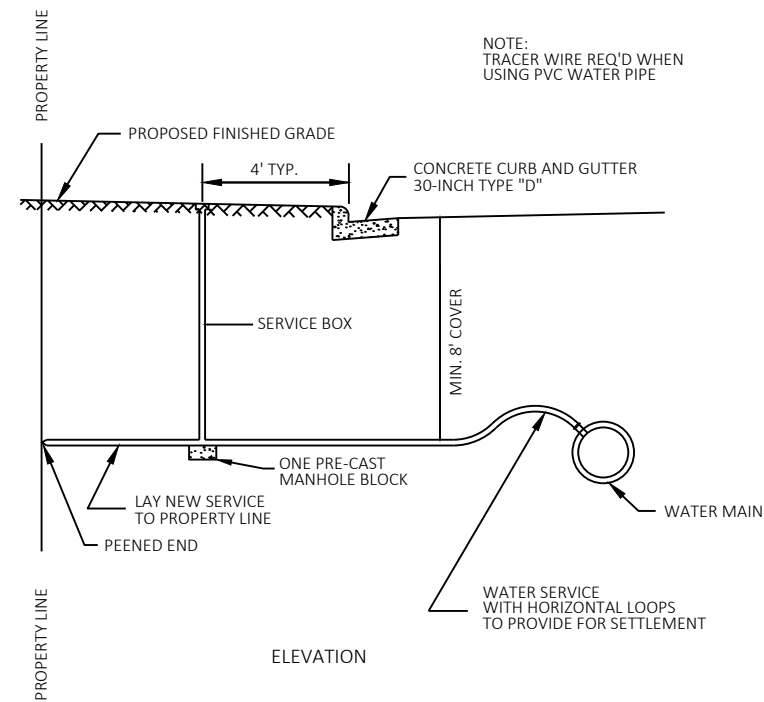


NOTE:
ALL INSULATION SHALL BE CENTERED
OVER WATER MAIN

WATER MAIN
INSULATION

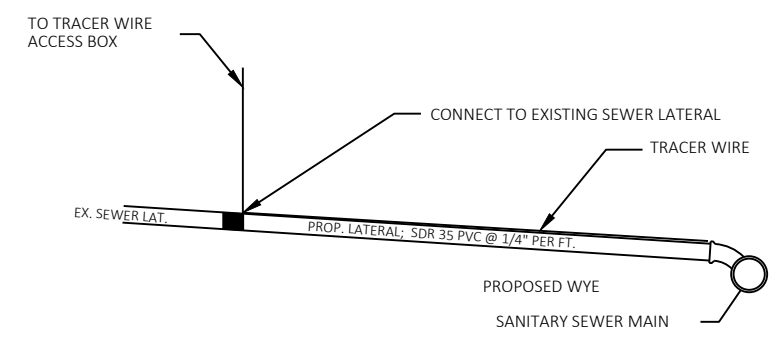
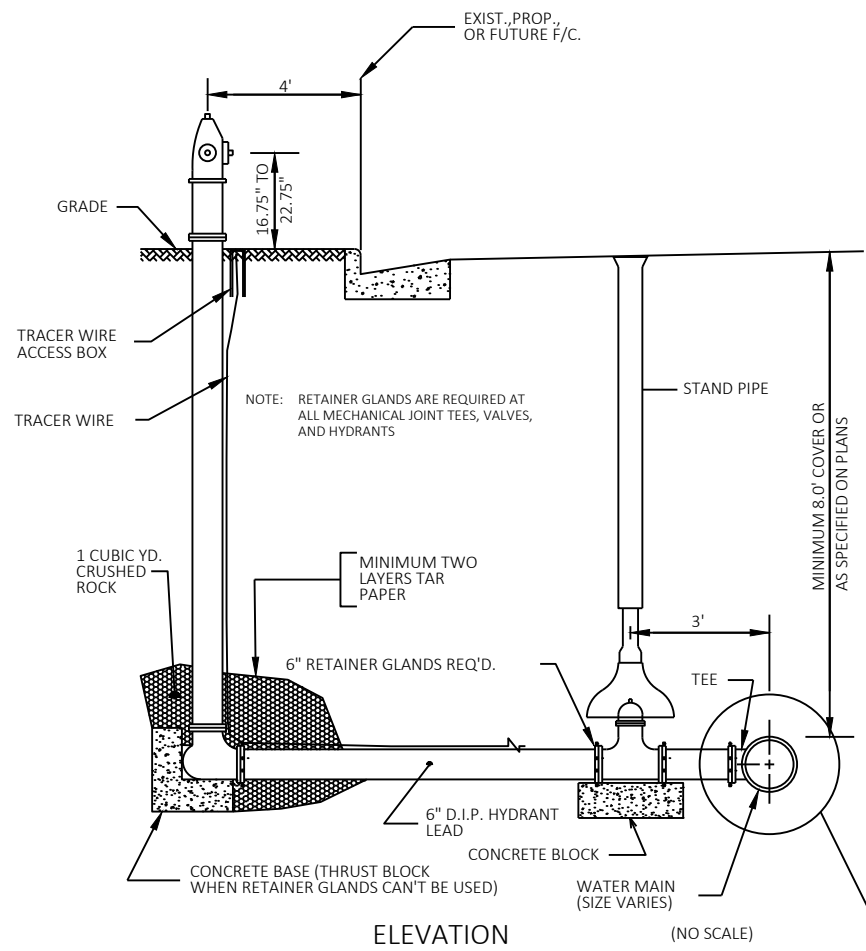


TYPICAL GATE VALVE
& BOX INSTALLATION

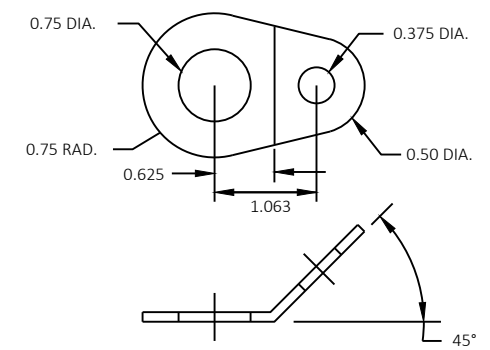
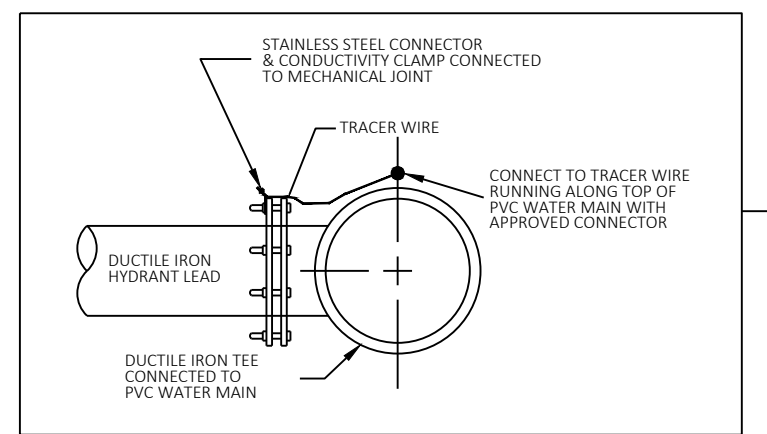


NOTE:
TRACER WIRE REQ'D WHEN
USING PVC WATER PIPE

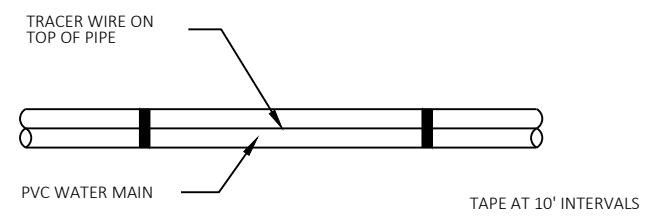
WATER SERVICE CONNECTION



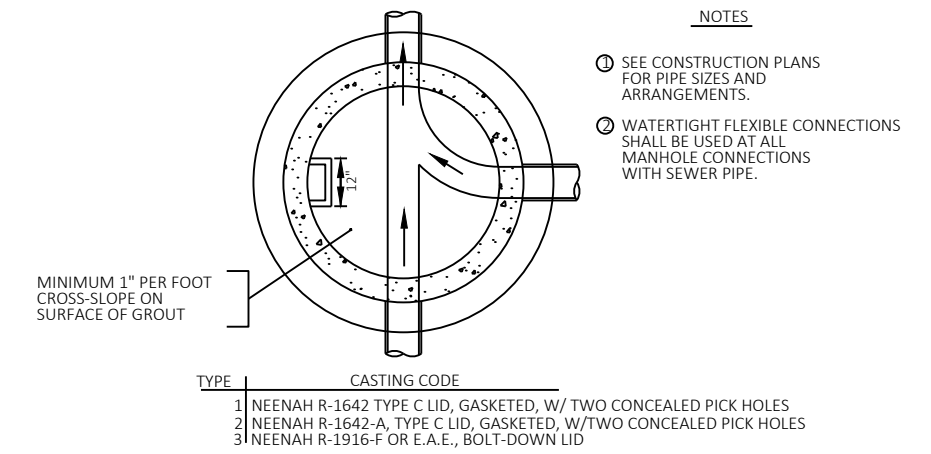
SANITARY SEWER LATERAL CONNECTIONS



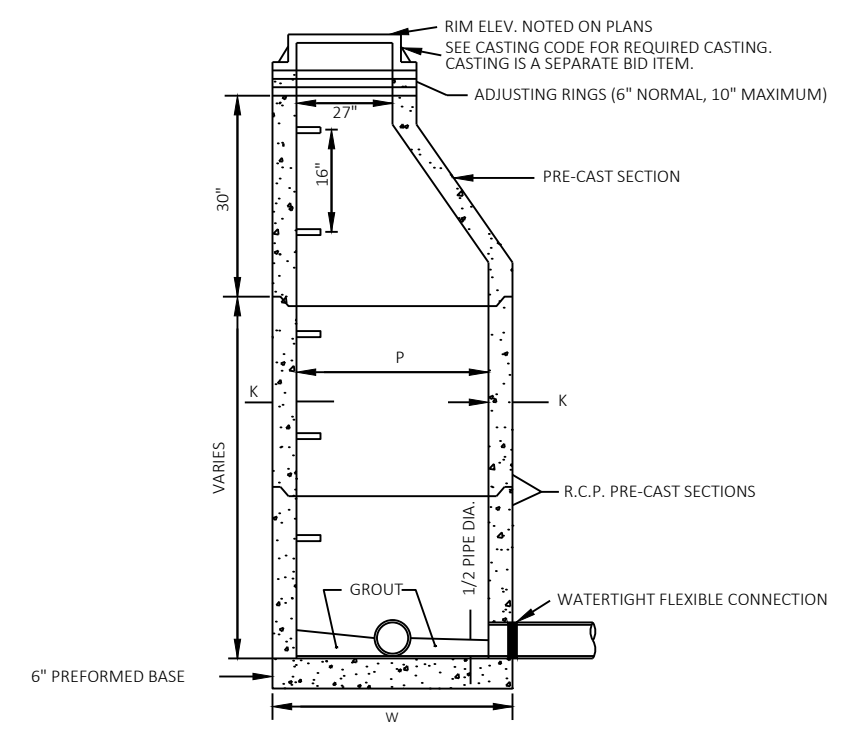
STAINLESS STEEL CONNECTOR



FIRE HYDRANT



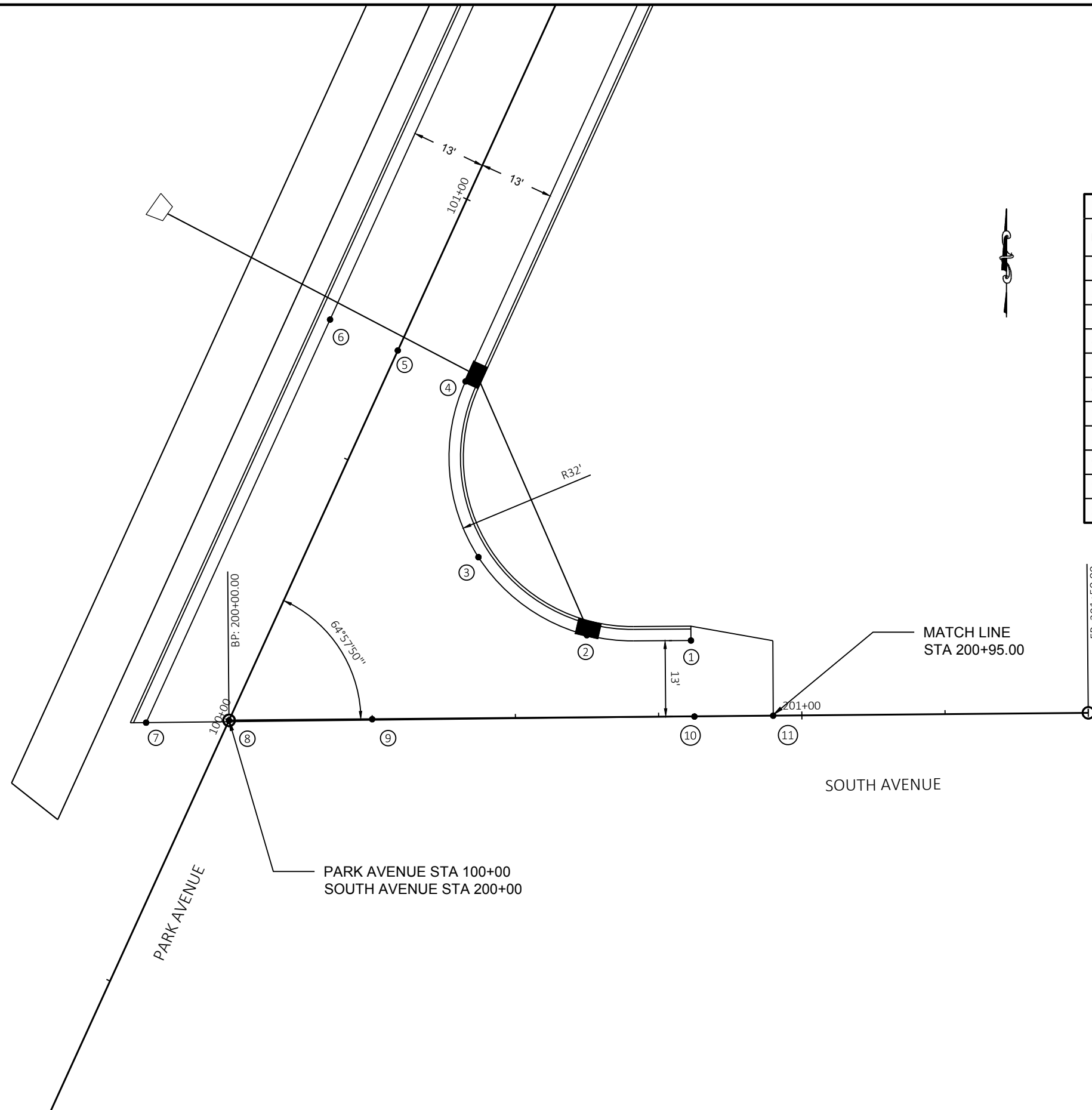
TYPICAL PLAN



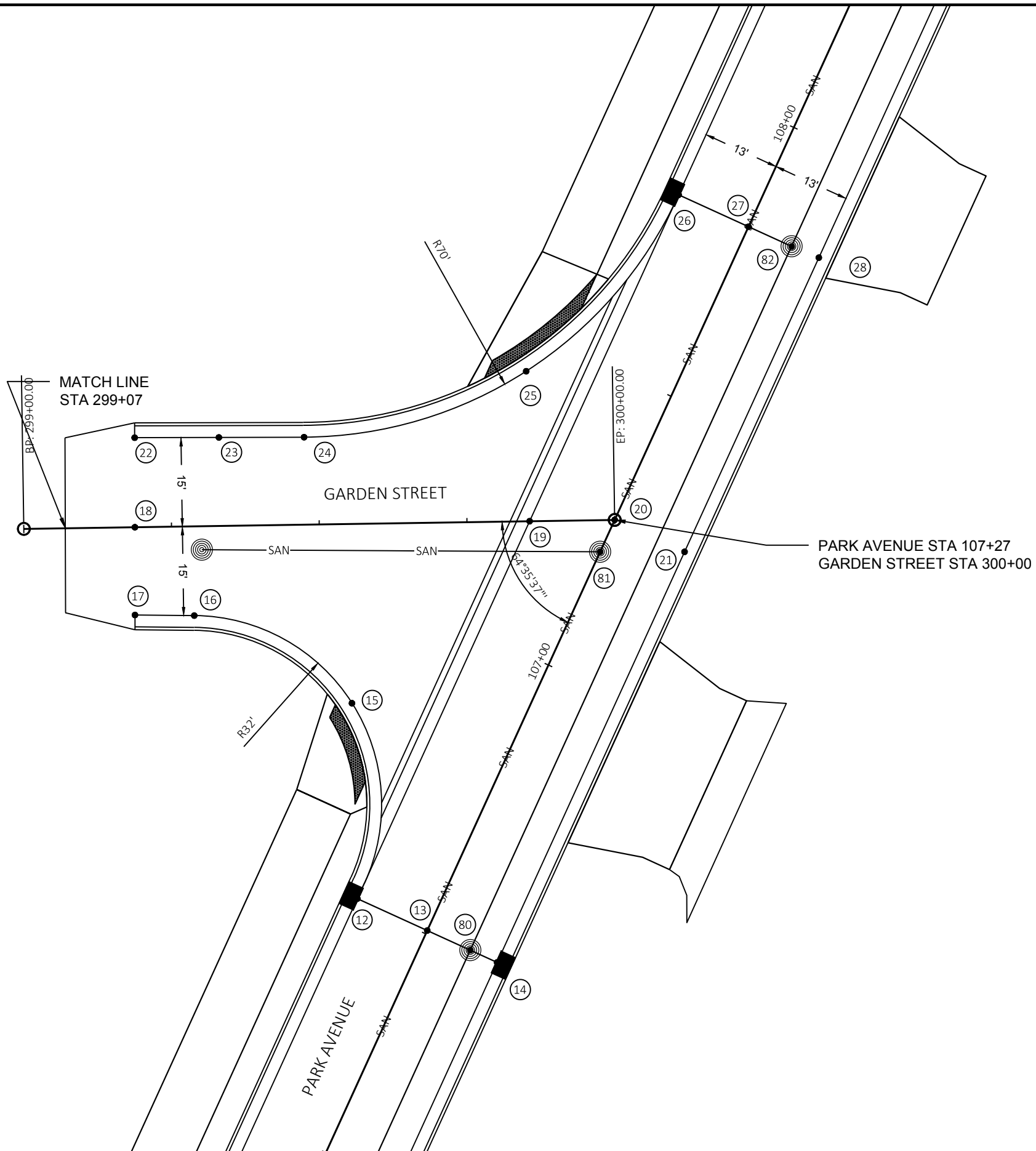
TYPICAL SECTION

SANITARY SEWER MANHOLE

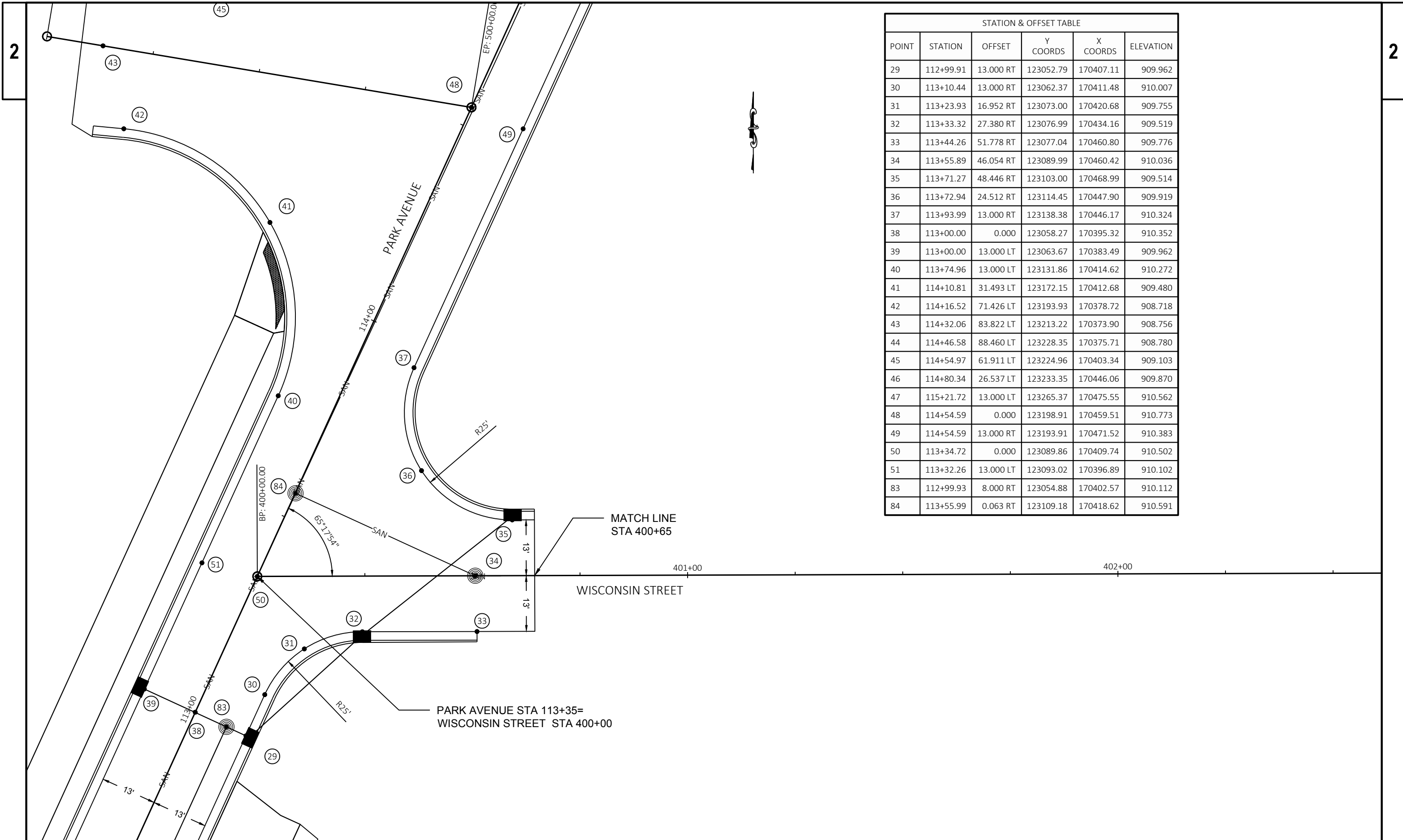
DIMENSIONS	SANITARY MANHOLE TYPE										
	4-FT	4.5-FT	5-FT	5.5-FT	6-FT	7-FT	8-FT	9-FT	10-FT	12-FT	
P (DIA.)	48"	54"	60"	66"	72"	84"	96"	108"	120"	144"	
K	5"	5.5"	6"	6.5"	7"	8"	9"	10"	11"	12"	
W (DIA.)	58"	65"	72"	79"	86"	100"	114"	128"	142"	168"	
H (DIA.)	27"	27"	27"	27"	27"	27"	27"	27"	27"	27"	



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
1	100+46.17	67.569 RT	121889.57	169936.20	909.361
2	100+39.47	50.595 RT	121890.51	169918.02	909.153
3	100+44.00	27.780 RT	121904.12	169899.10	908.802
4	100+72.81	13.000 RT	121934.79	169896.86	908.345
5	100+73.51	0.000	121940.19	169885.03	908.735
6	100+70.98	13.000 LT	121945.59	169873.20	908.345
7	99+91.90	16.719 LT	121875.24	169841.09	909.360
8	99+99.75	0.000	121875.62	169855.56	909.723
9	100+10.58	22.651 RT	121875.84	169880.56	909.315
10	100+34.36	73.633 RT	121876.30	169936.81	909.800
11	100+40.20	86.074 RT	121876.46	169950.56	909.948

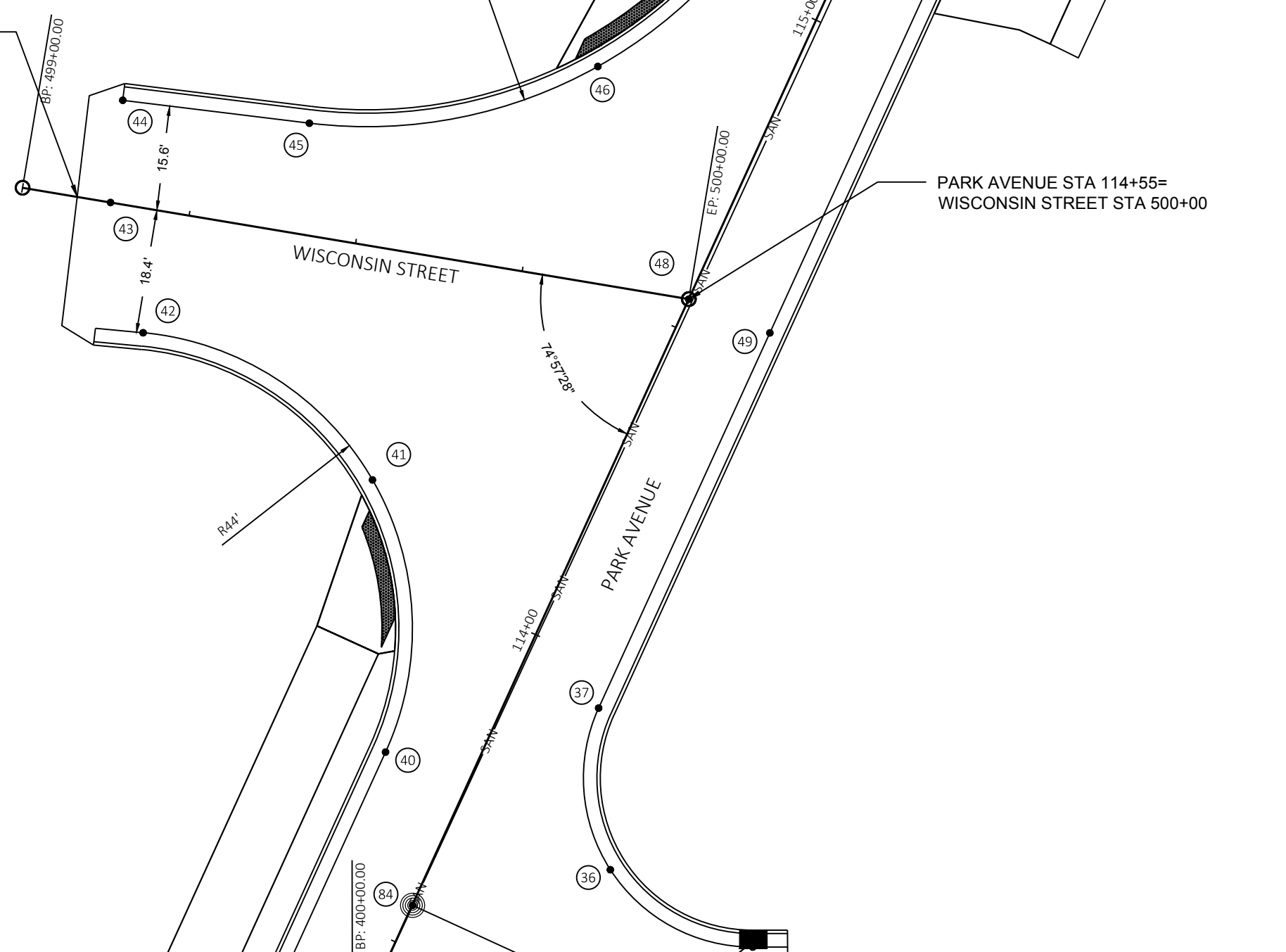


STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
12	106+50.61	13.000 LT	122472.90	170113.87	907.158
13	106+50.61	0.000	122467.51	170125.70	907.548
14	106+50.61	13.000 RT	122462.11	170137.52	907.158
15	106+80.32	27.564 LT	122505.98	170112.95	907.790
16	106+82.73	58.000 LT	122520.81	170086.27	909.108
17	106+78.66	67.163 LT	122520.90	170076.24	909.681
18	106+92.07	73.533 LT	122535.75	170076.22	910.024
19	107+20.82	13.002 LT	122536.77	170143.02	907.461
20	107+26.99	0.000	122536.99	170157.41	907.878
21	107+26.99	13.000 RT	122531.59	170169.23	907.488
22	107+05.93	79.671 LT	122550.91	170076.18	910.015
23	107+11.89	66.718 LT	122550.95	170090.44	909.033
24	107+17.75	53.665 LT	122550.99	170104.85	908.502
25	107+43.67	24.065 LT	122562.16	170142.44	908.118
26	107+81.54	12.775 LT	122592.01	170168.23	907.724
27	107+81.54	0.000	122586.61	170180.06	908.113
28	107+81.54	13.000 RT	122581.37	170191.95	907.724
80	106+50.61	8.002 RT	122464.18	170132.98	907.308
81	107+21.06	0.000	122531.59	170154.94	907.852
82	107+81.54	8.027 RT	122583.28	170187.36	907.872



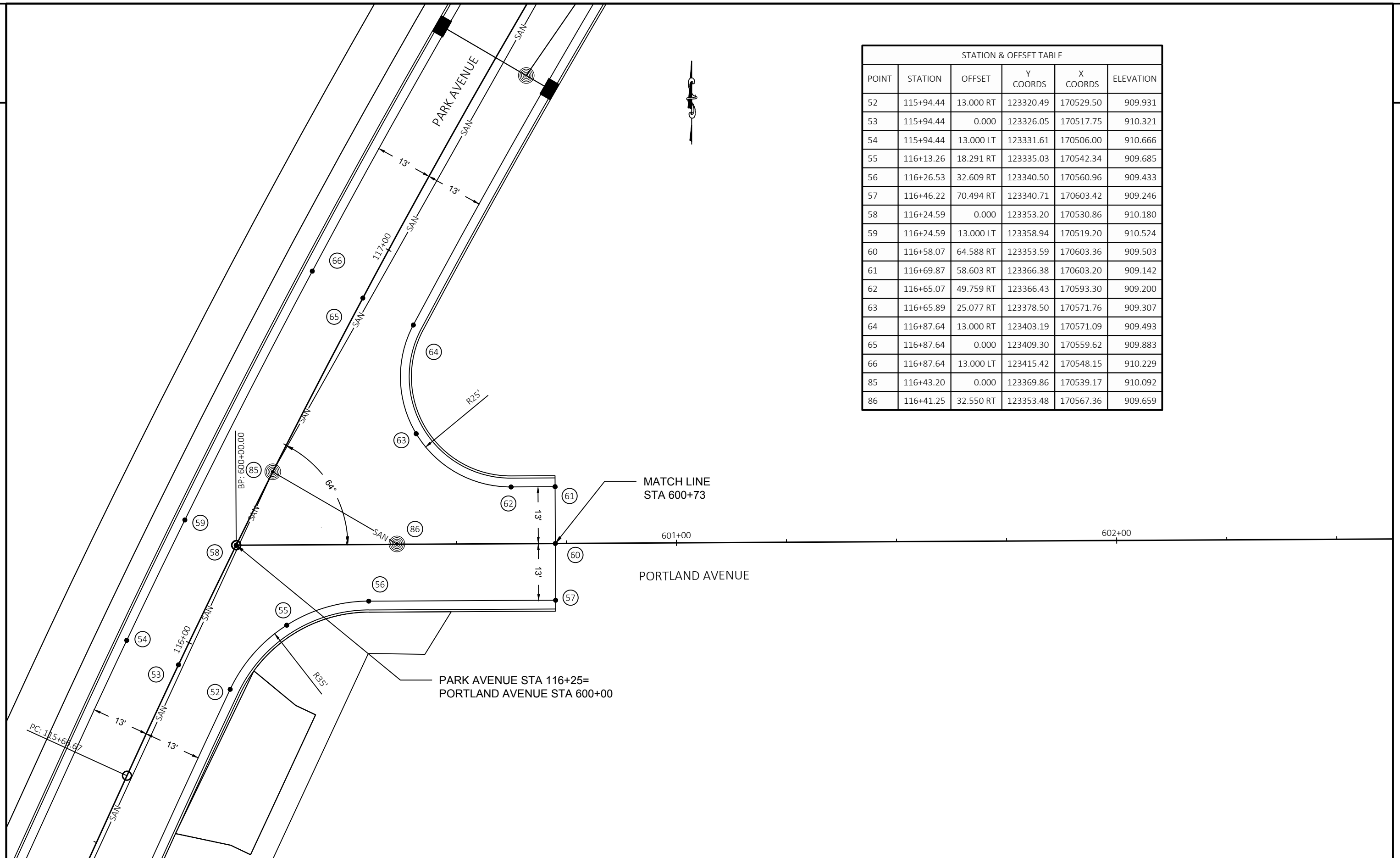
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
29	112+99.91	13.000 RT	123052.79	170407.11	909.962
30	113+10.44	13.000 RT	123062.37	170411.48	910.007
31	113+23.93	16.952 RT	123073.00	170420.68	909.755
32	113+33.32	27.380 RT	123076.99	170434.16	909.519
33	113+44.26	51.778 RT	123077.04	170460.80	909.776
34	113+55.89	46.054 RT	123089.99	170460.42	910.036
35	113+71.27	48.446 RT	123103.00	170468.99	909.514
36	113+72.94	24.512 RT	123114.45	170447.90	909.919
37	113+93.99	13.000 RT	123138.38	170446.17	910.324
38	113+00.00	0.000	123058.27	170395.32	910.352
39	113+00.00	13.000 LT	123063.67	170383.49	909.962
40	113+74.96	13.000 LT	123131.86	170414.62	910.272
41	114+10.81	31.493 LT	123172.15	170412.68	909.480
42	114+16.52	71.426 LT	123193.93	170378.72	908.718
43	114+32.06	83.822 LT	123213.22	170373.90	908.756
44	114+46.58	88.460 LT	123228.35	170375.71	908.780
45	114+54.97	61.911 LT	123224.96	170403.34	909.103
46	114+80.34	26.537 LT	123233.35	170446.06	909.870
47	115+21.72	13.000 LT	123265.37	170475.55	910.562
48	114+54.59	0.000	123198.91	170459.51	910.773
49	114+54.59	13.000 RT	123193.91	170471.52	910.383
50	113+34.72	0.000	123089.86	170409.74	910.502
51	113+32.26	13.000 LT	123093.02	170396.89	910.102
83	112+99.93	8.000 RT	123054.88	170402.57	910.112
84	113+55.99	0.063 RT	123109.18	170418.62	910.591

MATCH LINE
STA 499+08

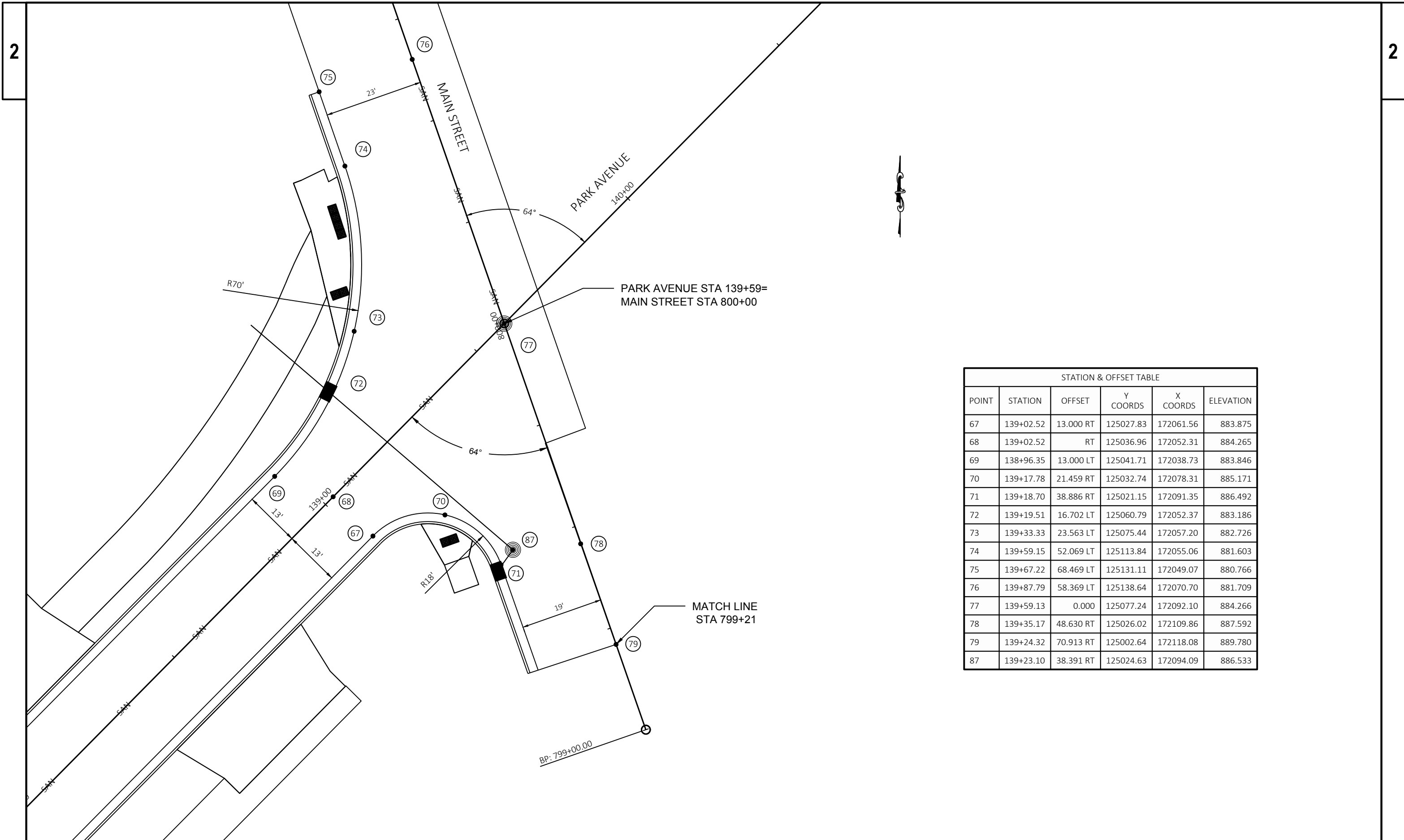


PARK AVENUE STA 114+55=
WISCONSIN STREET STA 500+00

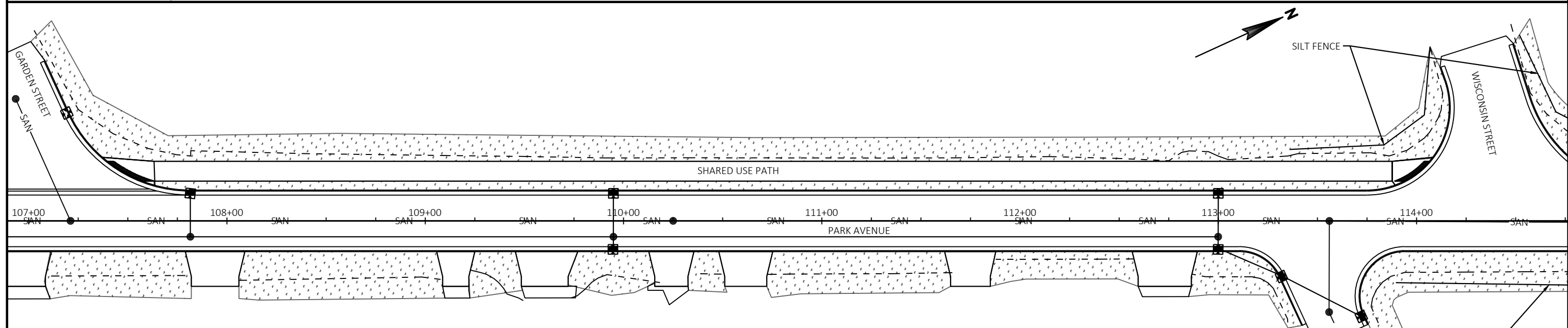
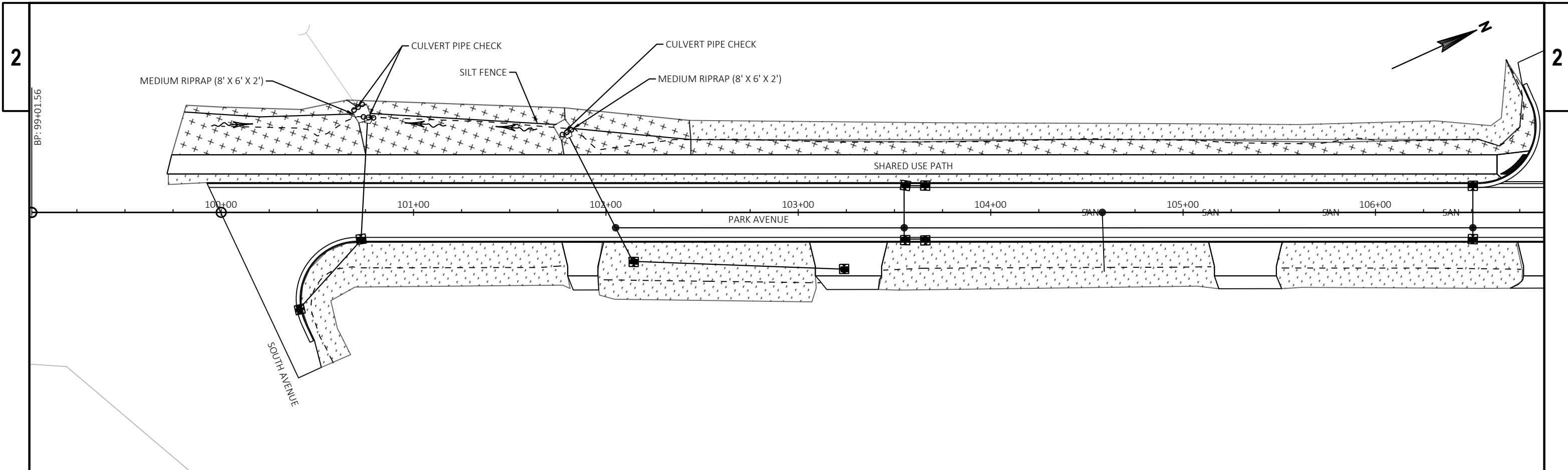
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
29	112+99.91	13.000 RT	123052.79	170407.11	909.962
30	113+10.44	13.000 RT	123062.37	170411.48	910.007
31	113+23.93	16.952 RT	123073.00	170420.68	909.755
32	113+33.32	27.380 RT	123076.99	170434.16	909.519
33	113+44.26	51.778 RT	123077.04	170460.80	909.776
34	113+55.89	46.054 RT	123089.99	170460.42	910.036
35	113+71.27	48.446 RT	123103.00	170468.99	909.514
36	113+72.94	24.512 RT	123114.45	170447.90	909.919
37	113+93.99	13.000 RT	123138.38	170446.17	910.324
38	113+00.00	0.000	123058.27	170395.32	910.352
39	113+00.00	13.000 LT	123063.67	170383.49	909.962
40	113+74.96	13.000 LT	123131.86	170414.62	910.272
41	114+10.81	31.493 LT	123172.15	170412.68	909.480
42	114+16.52	71.426 LT	123193.93	170378.72	908.718
43	114+32.06	83.822 LT	123213.22	170373.90	908.756
44	114+46.58	88.460 LT	123228.35	170375.71	908.780
45	114+54.97	61.911 LT	123224.96	170403.34	909.103
46	114+80.34	26.537 LT	123233.35	170446.06	909.870
47	115+21.72	13.000 LT	123265.37	170475.55	910.562
48	114+54.59	0.000	123198.91	170459.51	910.773
49	114+54.59	13.000 RT	123193.91	170471.52	910.383
50	113+34.72	0.000	123089.86	170409.74	910.502
51	113+32.26	13.000 LT	123093.02	170396.89	910.102
83	112+99.93	8.000 RT	123054.88	170402.57	910.112
84	113+55.99	0.063 RT	123109.18	170418.62	910.591



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
52	115+94.44	13.000 RT	123320.49	170529.50	909.931
53	115+94.44	0.000	123326.05	170517.75	910.321
54	115+94.44	13.000 LT	123331.61	170506.00	910.666
55	116+13.26	18.291 RT	123335.03	170542.34	909.685
56	116+26.53	32.609 RT	123340.50	170560.96	909.433
57	116+46.22	70.494 RT	123340.71	170603.42	909.246
58	116+24.59	0.000	123353.20	170530.86	910.180
59	116+24.59	13.000 LT	123358.94	170519.20	910.524
60	116+58.07	64.588 RT	123353.59	170603.36	909.503
61	116+69.87	58.603 RT	123366.38	170603.20	909.142
62	116+65.07	49.759 RT	123366.43	170593.30	909.200
63	116+65.89	25.077 RT	123378.50	170571.76	909.307
64	116+87.64	13.000 RT	123403.19	170571.09	909.493
65	116+87.64	0.000	123409.30	170559.62	909.883
66	116+87.64	13.000 LT	123415.42	170548.15	910.229
85	116+43.20	0.000	123369.86	170539.17	910.092
86	116+41.25	32.550 RT	123353.48	170567.36	909.659

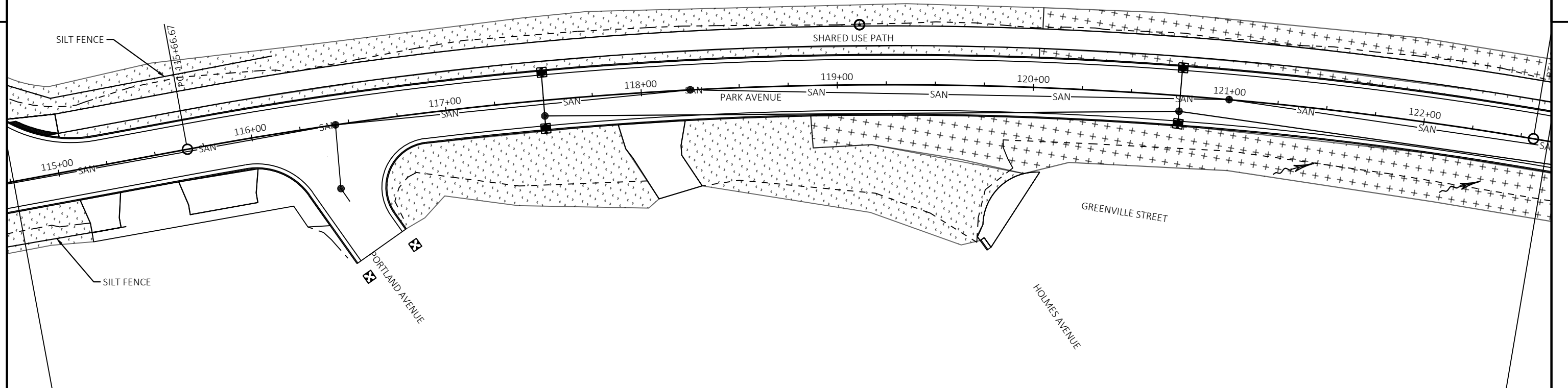


STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
67	139+02.52	13.000 RT	125027.83	172061.56	883.875
68	139+02.52	RT	125036.96	172052.31	884.265
69	138+96.35	13.000 LT	125041.71	172038.73	883.846
70	139+17.78	21.459 RT	125032.74	172078.31	885.171
71	139+18.70	38.886 RT	125021.15	172091.35	886.492
72	139+19.51	16.702 LT	125060.79	172052.37	883.186
73	139+33.33	23.563 LT	125075.44	172057.20	882.726
74	139+59.15	52.069 LT	125113.84	172055.06	881.603
75	139+67.22	68.469 LT	125131.11	172049.07	880.766
76	139+87.79	58.369 LT	125138.64	172070.70	881.709
77	139+59.13	0.000	125077.24	172092.10	884.266
78	139+35.17	48.630 RT	125026.02	172109.86	887.592
79	139+24.32	70.913 RT	125002.64	172118.08	889.780
87	139+23.10	38.391 RT	125024.63	172094.09	886.533

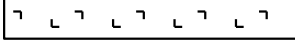
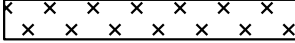
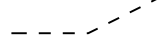

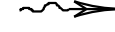


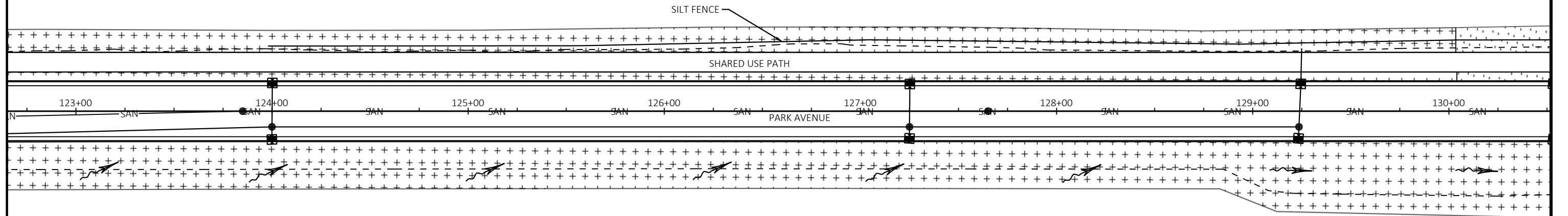
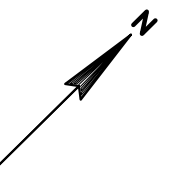
LEGEND	
	NO. 40 SEED, TYPE B FERTILIZER, MULCH
	NO. 40 SEED, TYPE B FERTILIZER, URBAN CLASS I TYPE A EROSION MAT
	SLOPE INTERCEPT
	INLET PROTECTION
	SURFACE WATER FLOW

PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	EROSION CONTROL	SHEET	E
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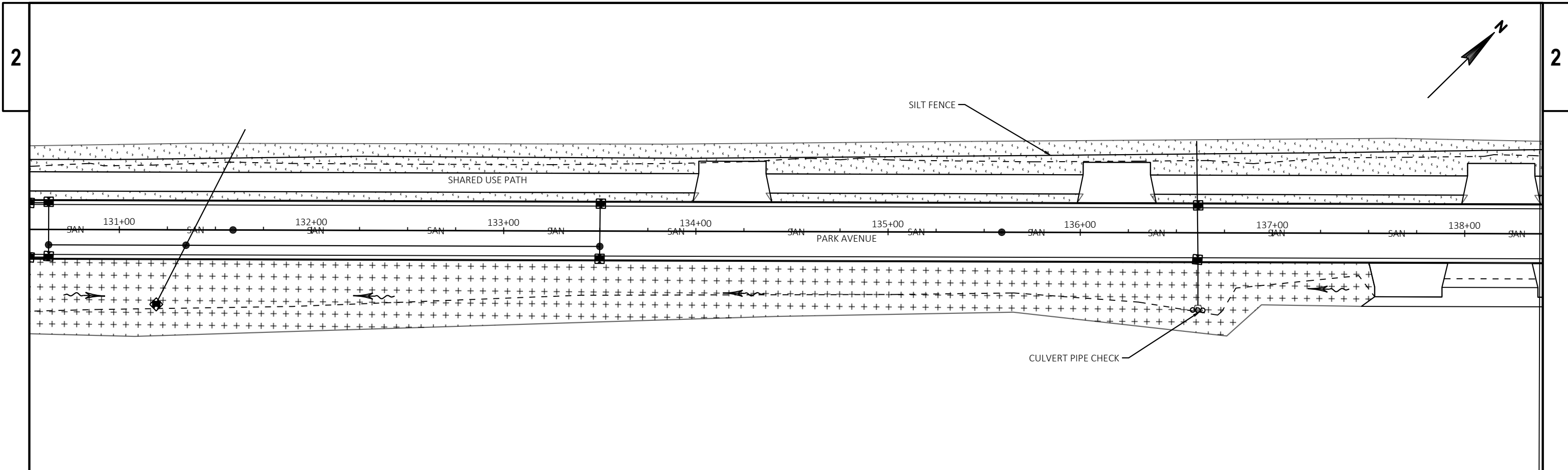


LEGEND

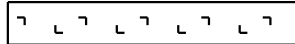
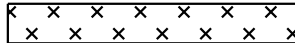
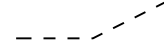

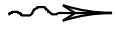
-  NO. 40 SEED, TYPE B FERTILIZER, MULCH
-  NO. 40 SEED, TYPE B FERTILIZER, URBAN CLASS I TYPE A EROSION MAT
-  SLOPE INTERCEPT
-  INLET PROTECTION
-  SURFACE WATER FLOW



PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	EROSION CONTROL	SHEET	E
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LEGEND

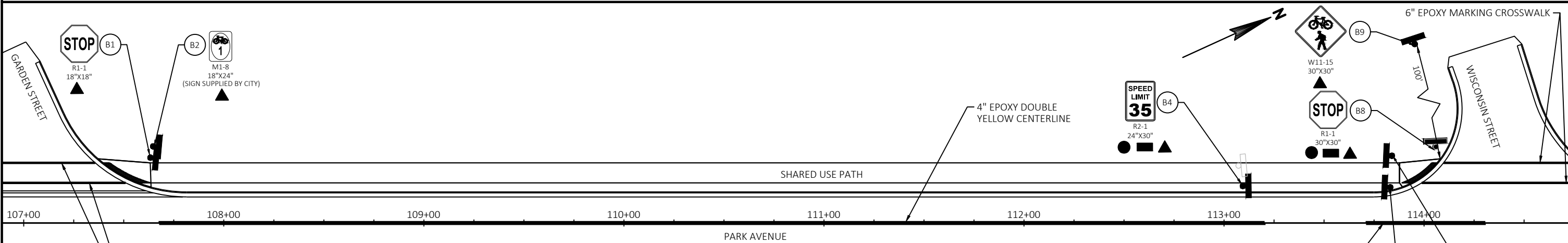
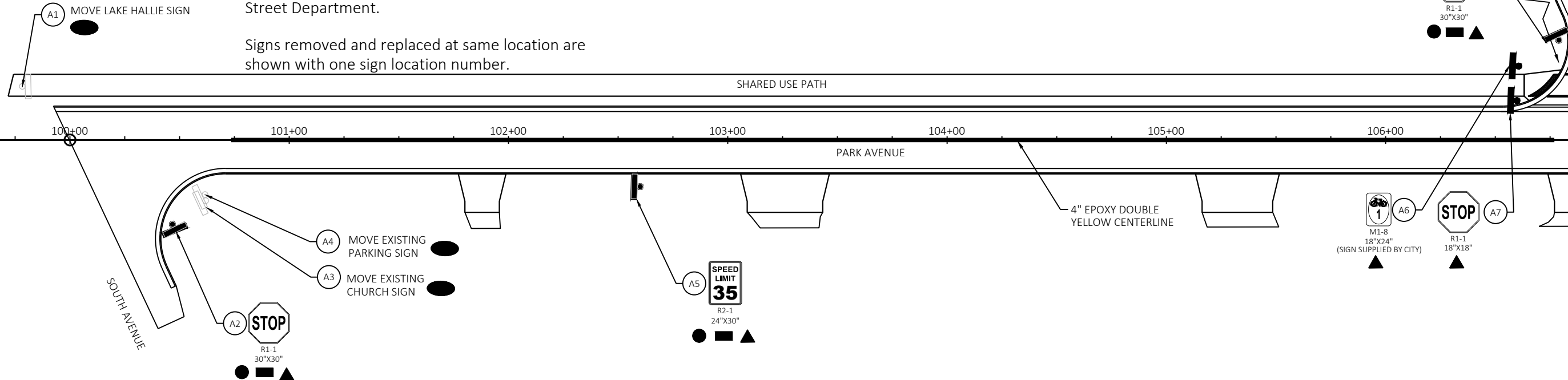
	NO. 40 SEED, TYPE B FERTILIZER, MULCH
	NO. 40 SEED, TYPE B FERTILIZER, URBAN CLASS I TYPE A EROSION MAT
	SLOPE INTERCEPT
	INLET PROTECTION
	SURFACE WATER FLOW

Note: Permanent Sign Locations are Approximate, Final Locations Shall Be Placed in Accordance to Details and the MUTCD.

Salvage all signs and posts to Chippewa Falls Street Department.

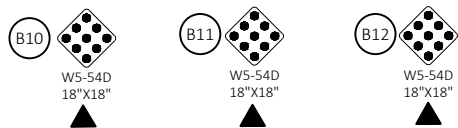
Signs removed and replaced at same location are shown with one sign location number.

BP: 99+01.56

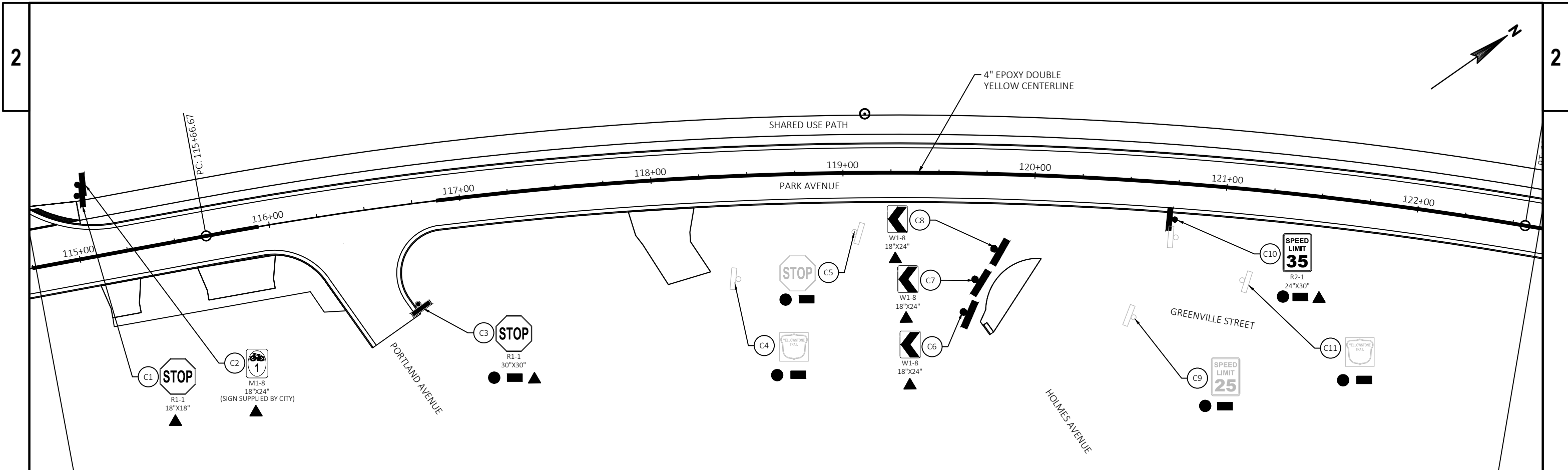


LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- REMOVING SIGNS TYPE II
- REMOVING SMALL SIGN SUPPORT
- SIGN TYPE II REFLECTIVE
- MOVING SIGNS TYPE II



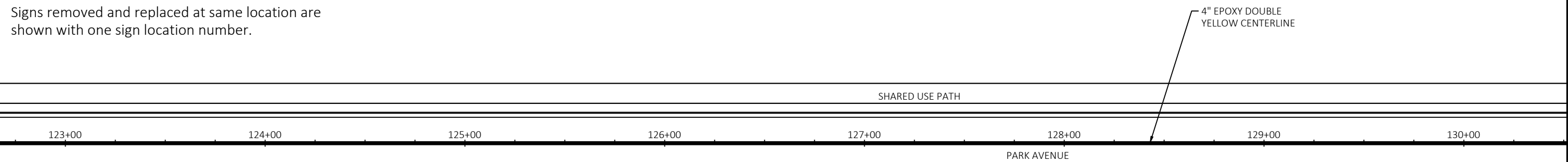
*PLACE AT DEAD END OF GARDEN STREET ONCE TEMPORARY DRIVEWAY IS REMOVED (SIGNS WILL REPLACE GUARDRAIL)



Note: Permanent Sign Locations are Approximate,
Final Locations Shall Be Placed in Accordance to
Details and the MUTCD.

Salvage all signs and posts to Chippewa Falls
Street Department.

Signs removed and replaced at same location are
shown with one sign location number.



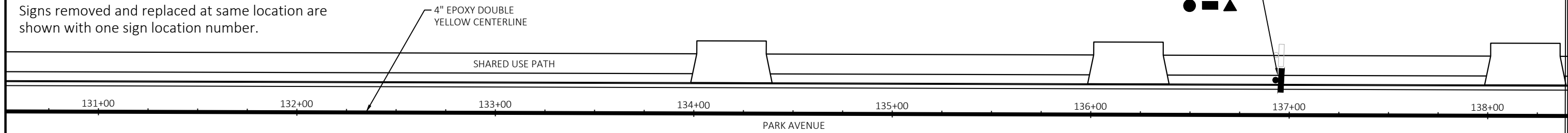
LEGEND

- | | |
|----------------------------------|-----------------------------|
| EXISTING SIGN MOUNTED ON POST(S) | REMOVING SIGNS TYPE II |
| PROPOSED SIGN MOUNTED ON POST(S) | REMOVING SMALL SIGN SUPPORT |
| DENOTES SIGN NUMBER | SIGN TYPE II REFLECTIVE |
| INDICATES SIGN SIZE | MOVING SIGNS TYPE II |

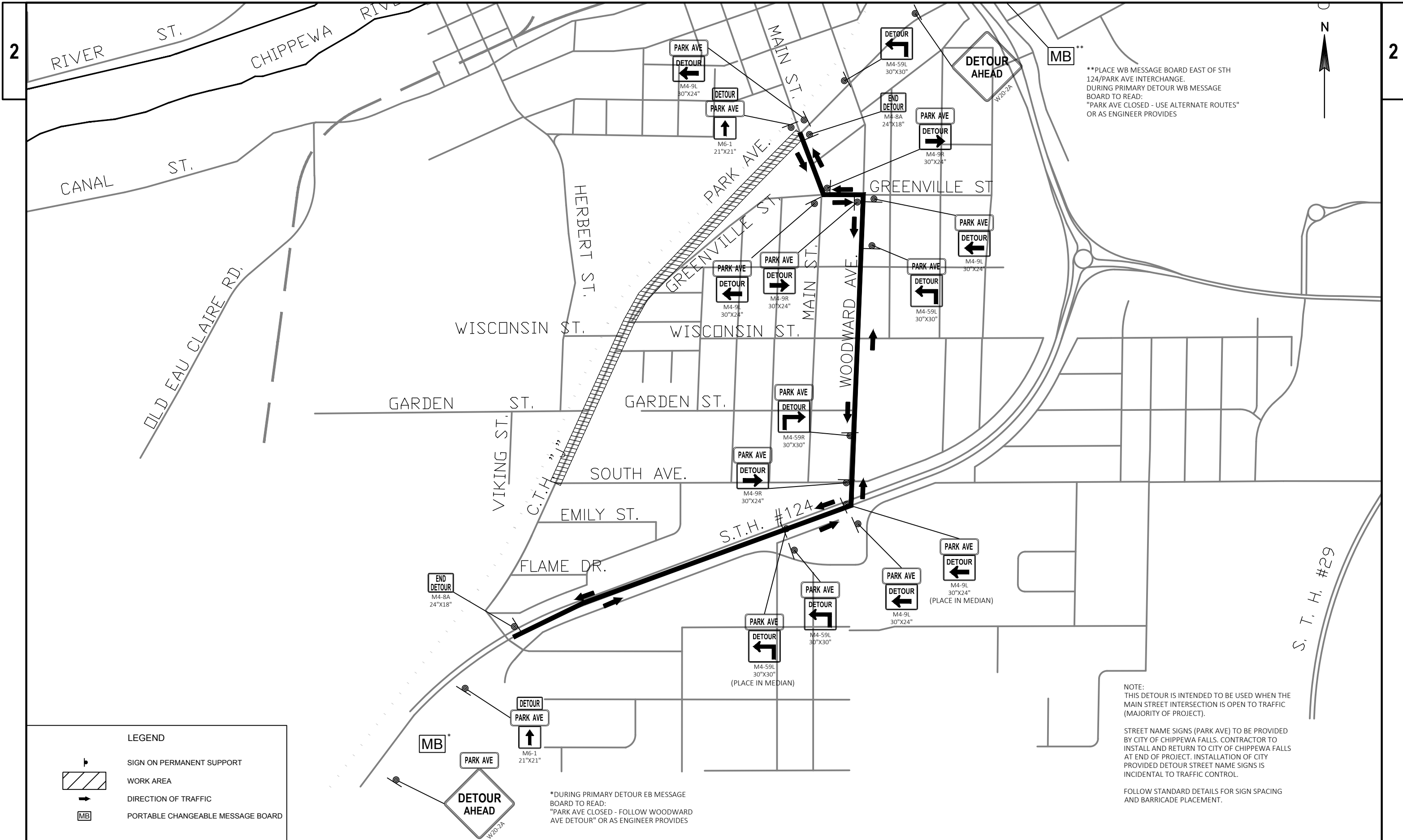
Note: Permanent Sign Locations are Approximate, Final Locations Shall Be Placed in Accordance to Details and the MUTCD.

Salvage all signs and posts to Chippewa Falls Street Department.

Signs removed and replaced at same location are shown with one sign location number.



LEGEND	
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
	DENOTES SIGN NUMBER
	INDICATES SIGN SIZE
	REMOVING SIGNS TYPE II
	REMOVING SMALL SIGN SUPPORT
	SIGN TYPE II REFLECTIVE
	MOVING SIGNS TYPE II



**PLACE WB MESSAGE BOARD EAST OF STH 124/PARK AVE INTERCHANGE. DURING PRIMARY DETOUR WB MESSAGE BOARD TO READ: "PARK AVE CLOSED - USE ALTERNATE ROUTES" OR AS ENGINEER PROVIDES

*DURING PRIMARY DETOUR EB MESSAGE BOARD TO READ: "PARK AVE CLOSED - FOLLOW WOODWARD AVE DETOUR" OR AS ENGINEER PROVIDES

NOTE: THIS DETOUR IS INTENDED TO BE USED WHEN THE MAIN STREET INTERSECTION IS OPEN TO TRAFFIC (MAJORITY OF PROJECT).

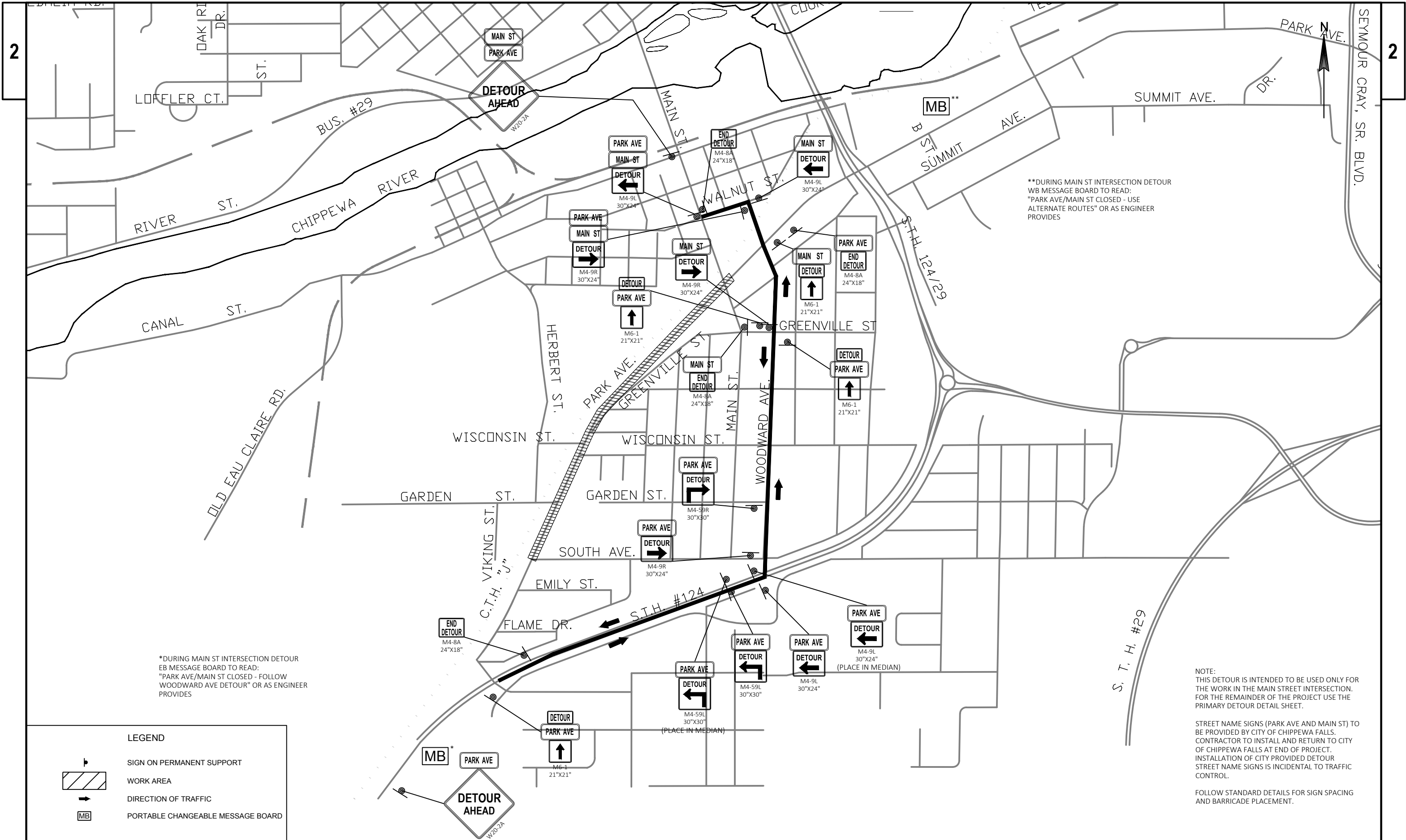
STREET NAME SIGNS (PARK AVE) TO BE PROVIDED BY CITY OF CHIPPEWA FALLS. CONTRACTOR TO INSTALL AND RETURN TO CITY OF CHIPPEWA FALLS AT END OF PROJECT. INSTALLATION OF CITY PROVIDED DETOUR STREET NAME SIGNS IS INCIDENTAL TO TRAFFIC CONTROL.

FOLLOW STANDARD DETAILS FOR SIGN SPACING AND BARRICADE PLACEMENT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PRIMARY DETOUR ROUTE	SHEET	E
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*DURING MAIN ST INTERSECTION DETOUR
 EB MESSAGE BOARD TO READ:
 "PARK AVE/MAIN ST CLOSED - FOLLOW
 WOODWARD AVE DETOUR" OR AS ENGINEER
 PROVIDES

**DURING MAIN ST INTERSECTION DETOUR
 WB MESSAGE BOARD TO READ:
 "PARK AVE/MAIN ST CLOSED - USE
 ALTERNATE ROUTES" OR AS ENGINEER
 PROVIDES

NOTE:
 THIS DETOUR IS INTENDED TO BE USED ONLY FOR
 THE WORK IN THE MAIN STREET INTERSECTION.
 FOR THE REMAINDER OF THE PROJECT USE THE
 PRIMARY DETOUR DETAIL SHEET.

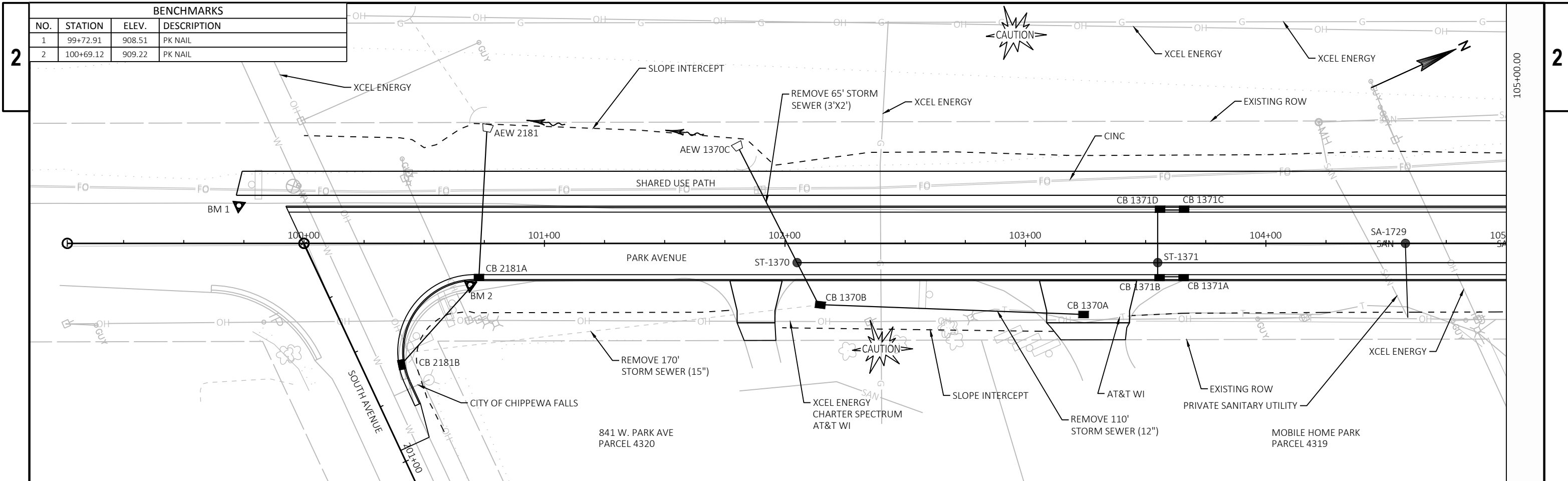
STREET NAME SIGNS (PARK AVE AND MAIN ST) TO
 BE PROVIDED BY CITY OF CHIPPEWA FALLS.
 CONTRACTOR TO INSTALL AND RETURN TO CITY
 OF CHIPPEWA FALLS AT END OF PROJECT.
 INSTALLATION OF CITY PROVIDED DETOUR
 STREET NAME SIGNS IS INCIDENTAL TO TRAFFIC
 CONTROL.

FOLLOW STANDARD DETAILS FOR SIGN SPACING
 AND BARRICADE PLACEMENT.

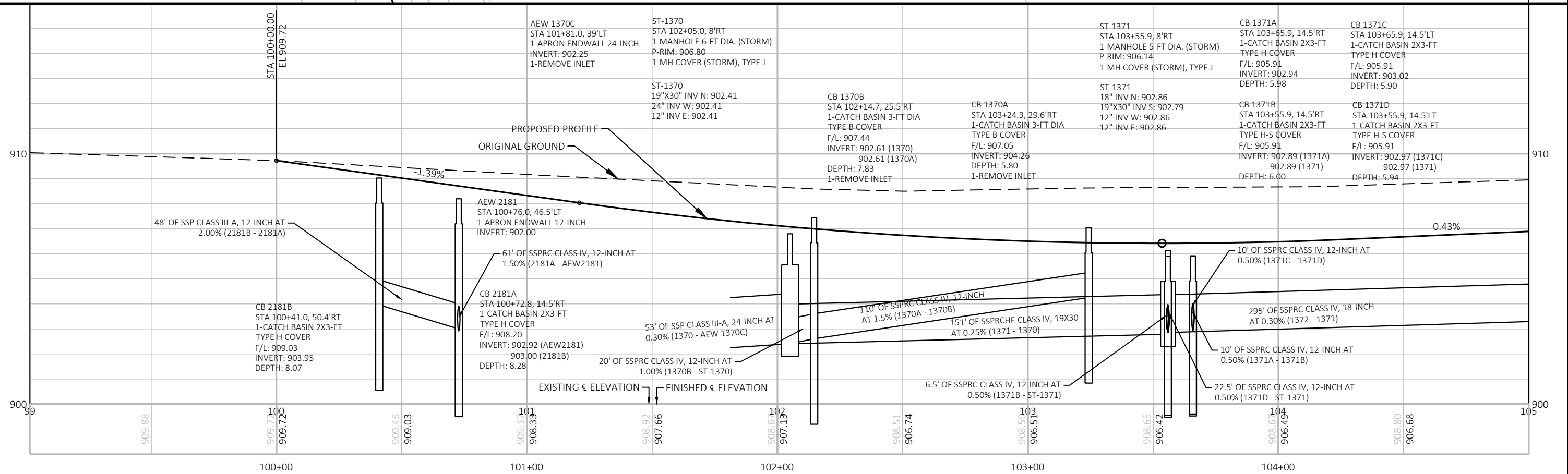
LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	MAIN ST INTERSECTION DETOUR ROUTE	SHEET	E
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BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1	99+72.91	908.51	PK NAIL
2	100+69.12	909.22	PK NAIL

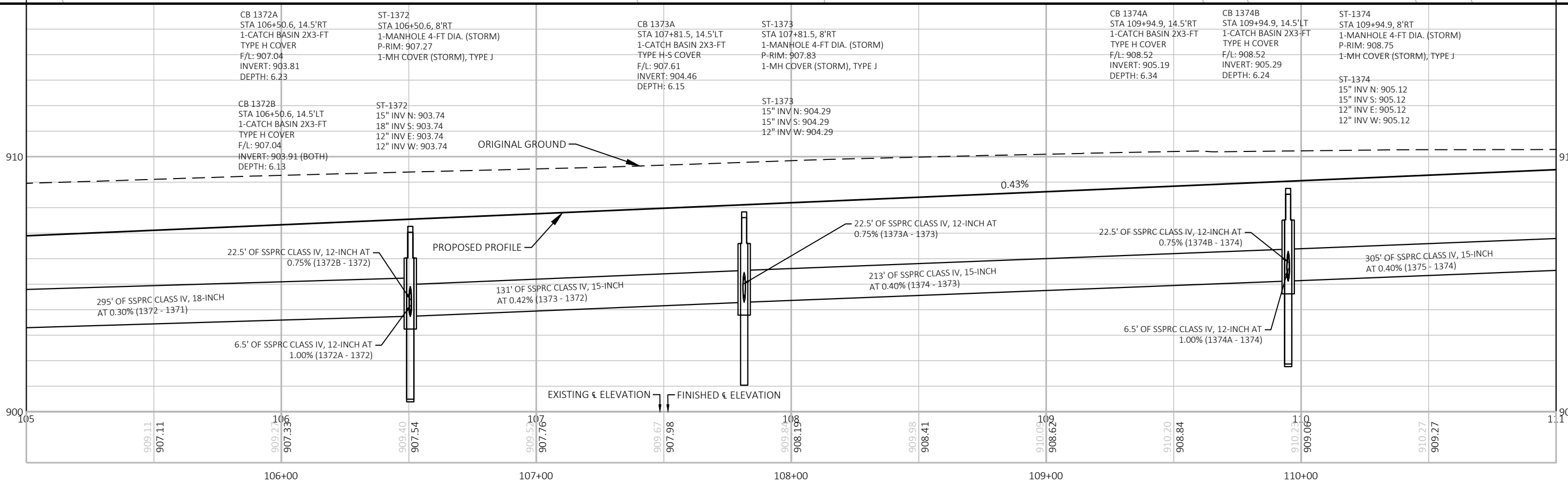
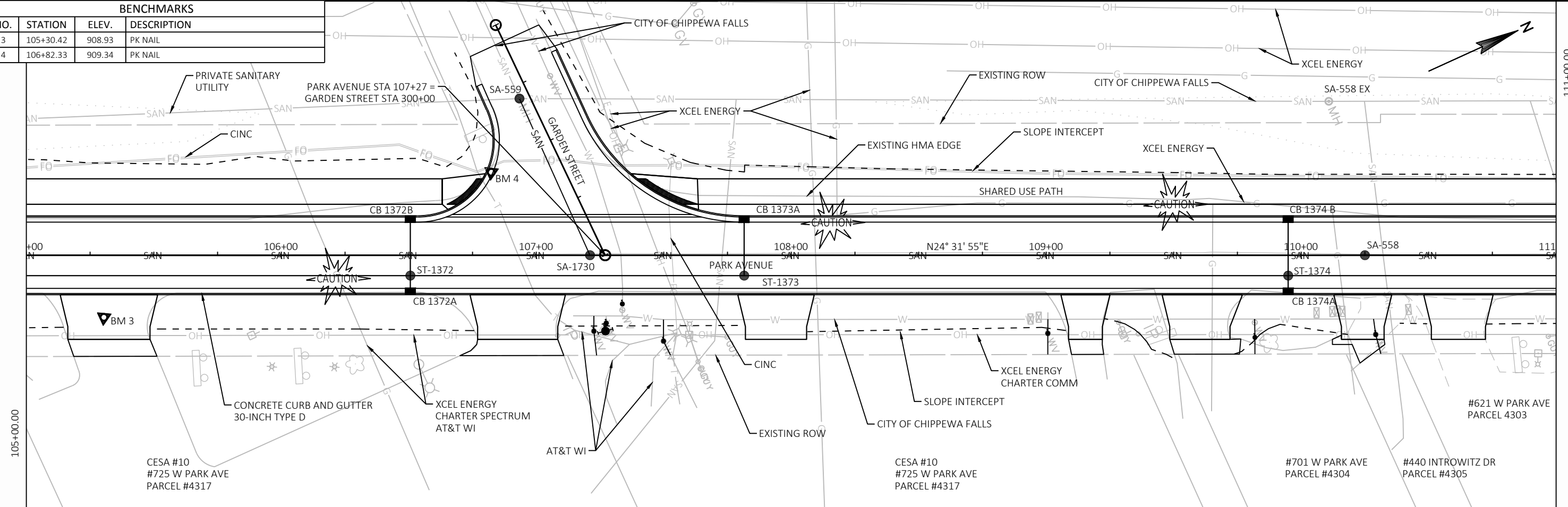


BENCHMARKS

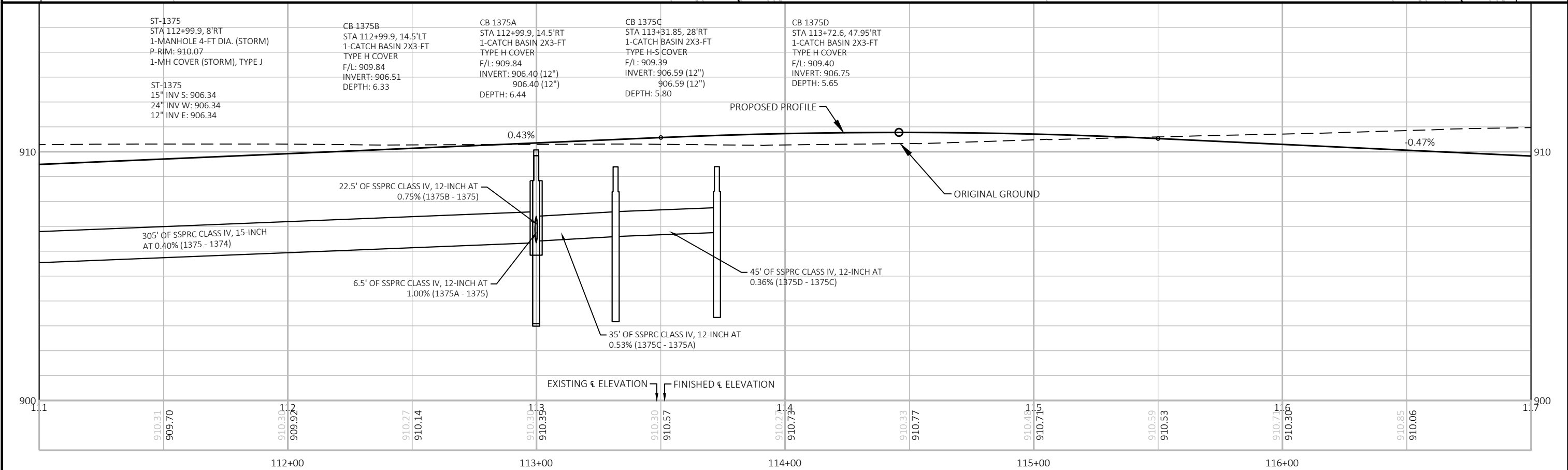
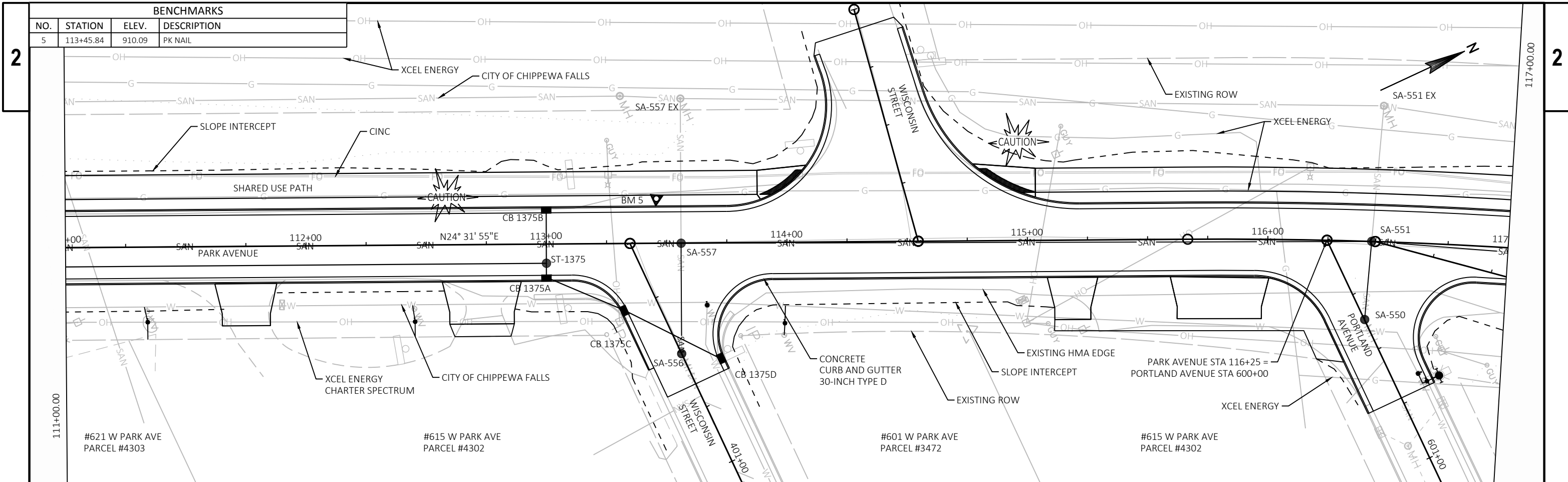
NO.	STATION	ELEV.	DESCRIPTION
3	105+30.42	908.93	PK NAIL
4	106+82.33	909.34	PK NAIL

2

2

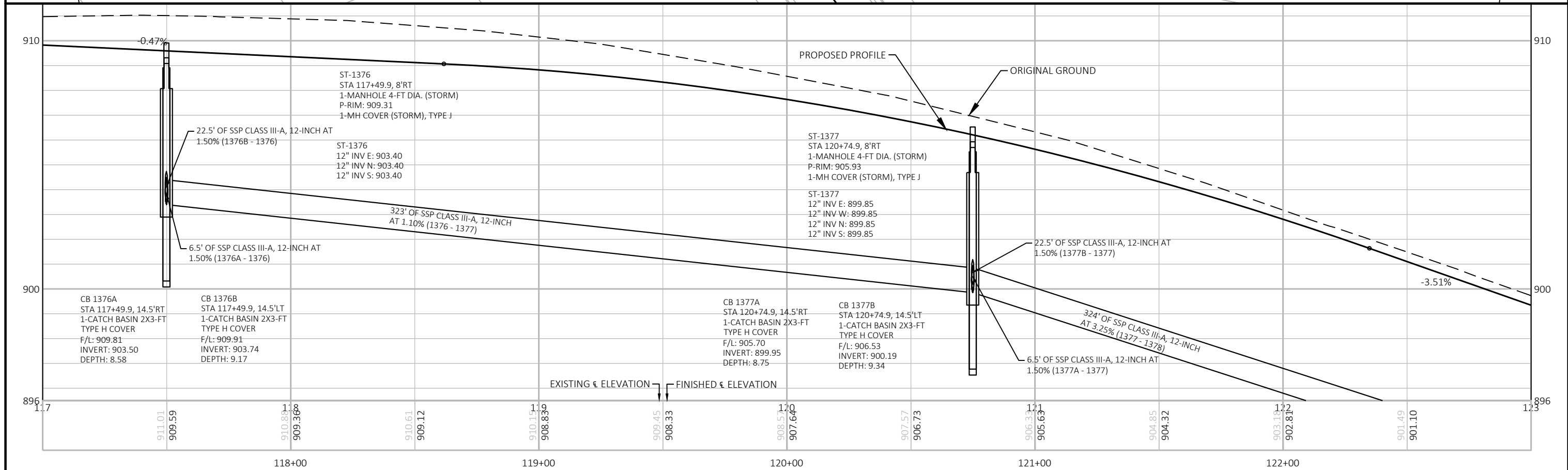
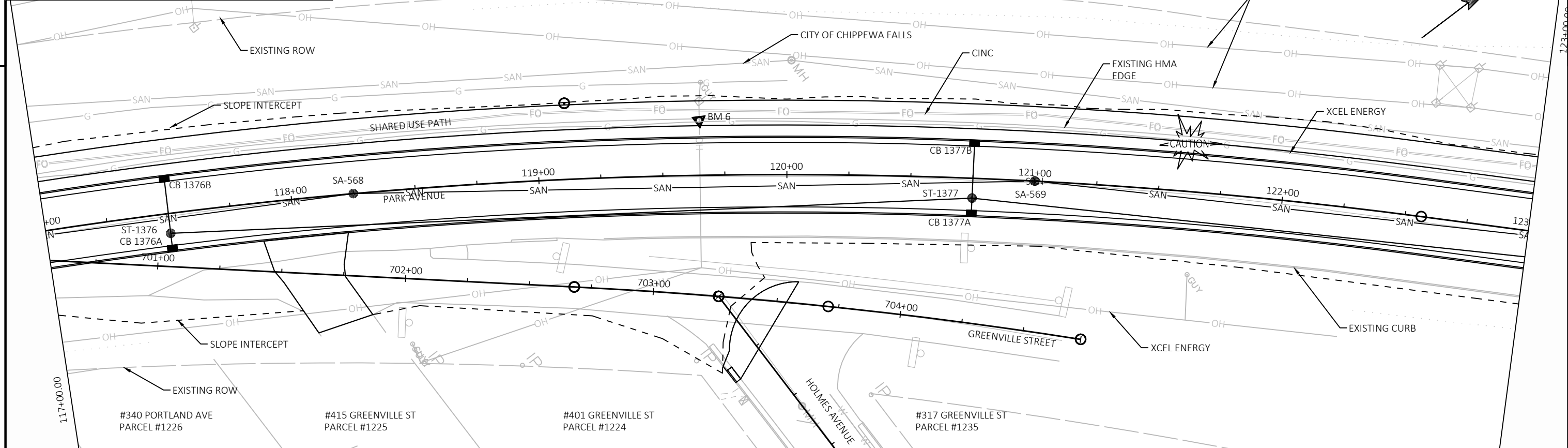


PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	STORM SEWER	SHEET	E
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PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	STORM SEWER	SHEET	E
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BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
6	119+64.98	909.59	PK NAIL

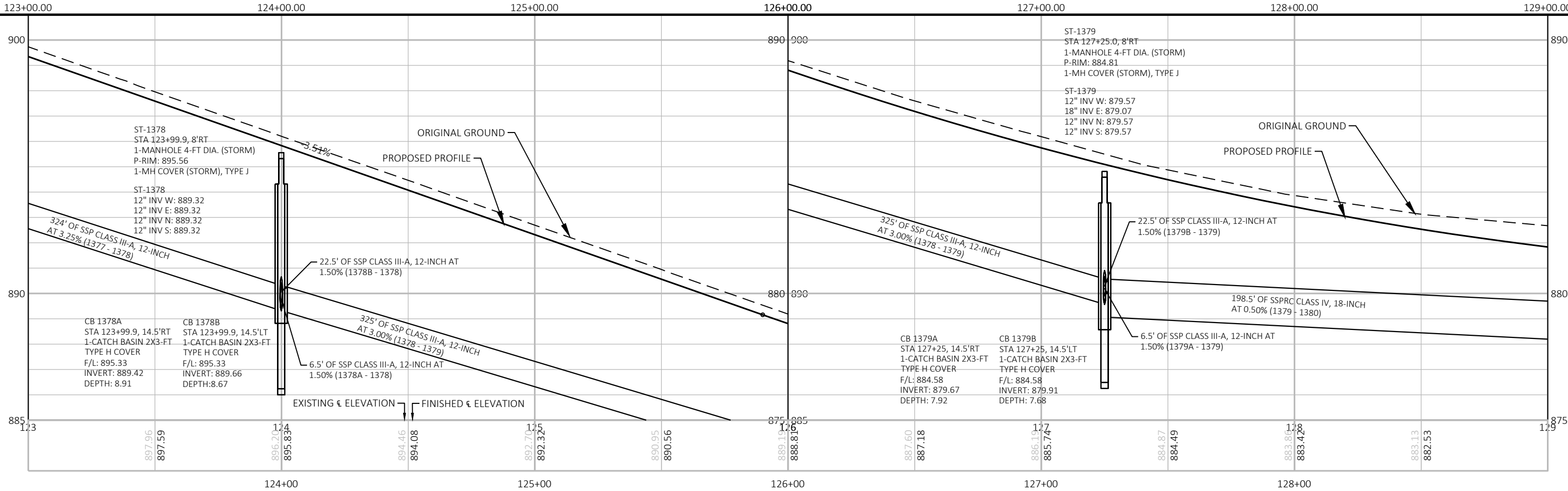
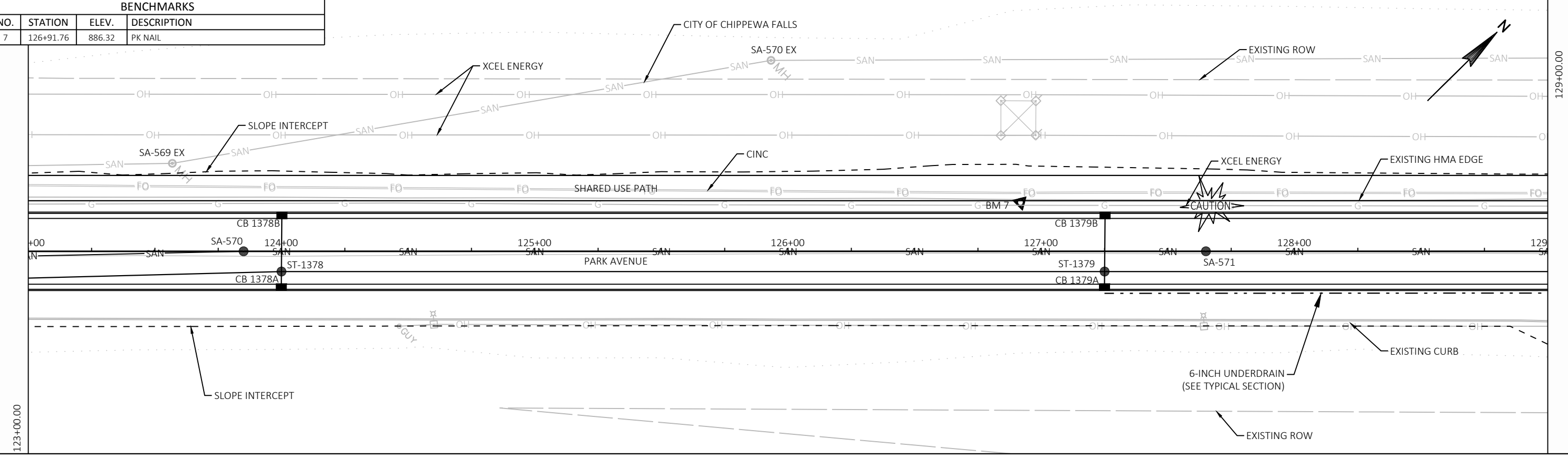


PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	STORM SEWER	SHEET	E
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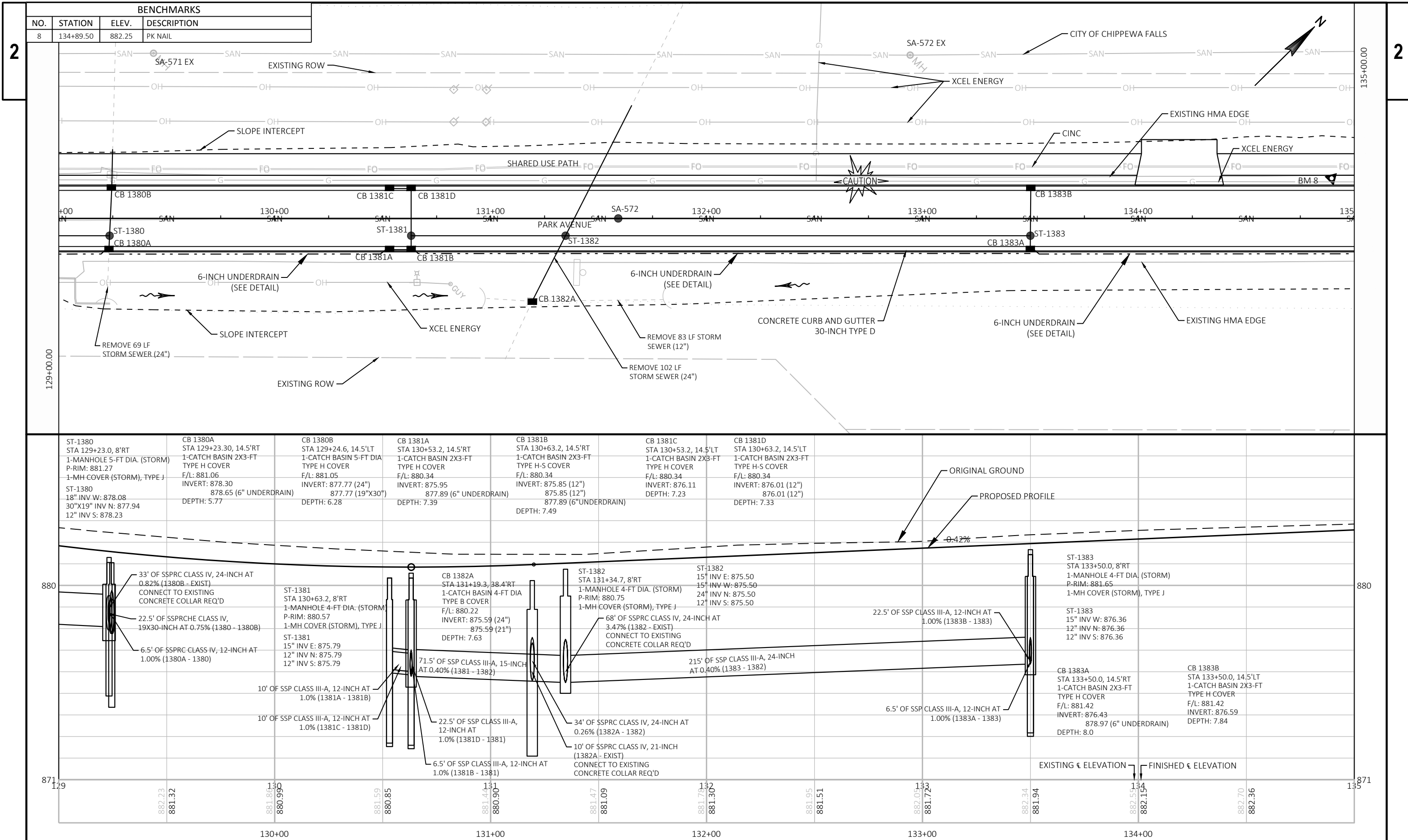
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
7	126+91.76	886.32	PK NAIL

2

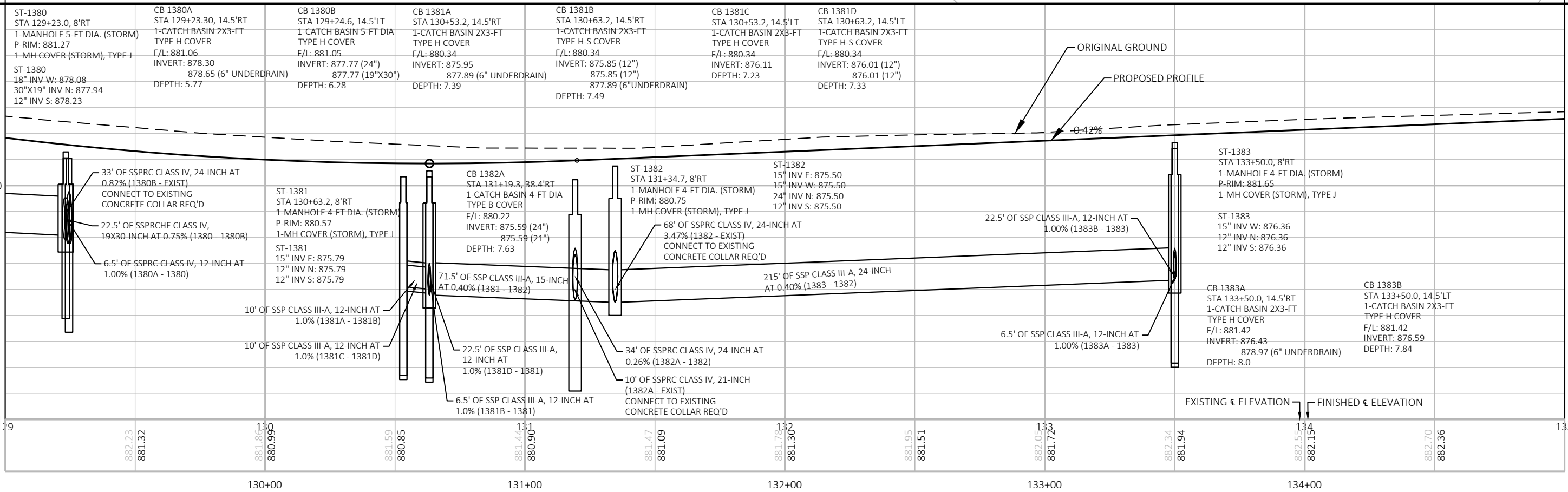
2



PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	STORM SEWER	SHEET	E
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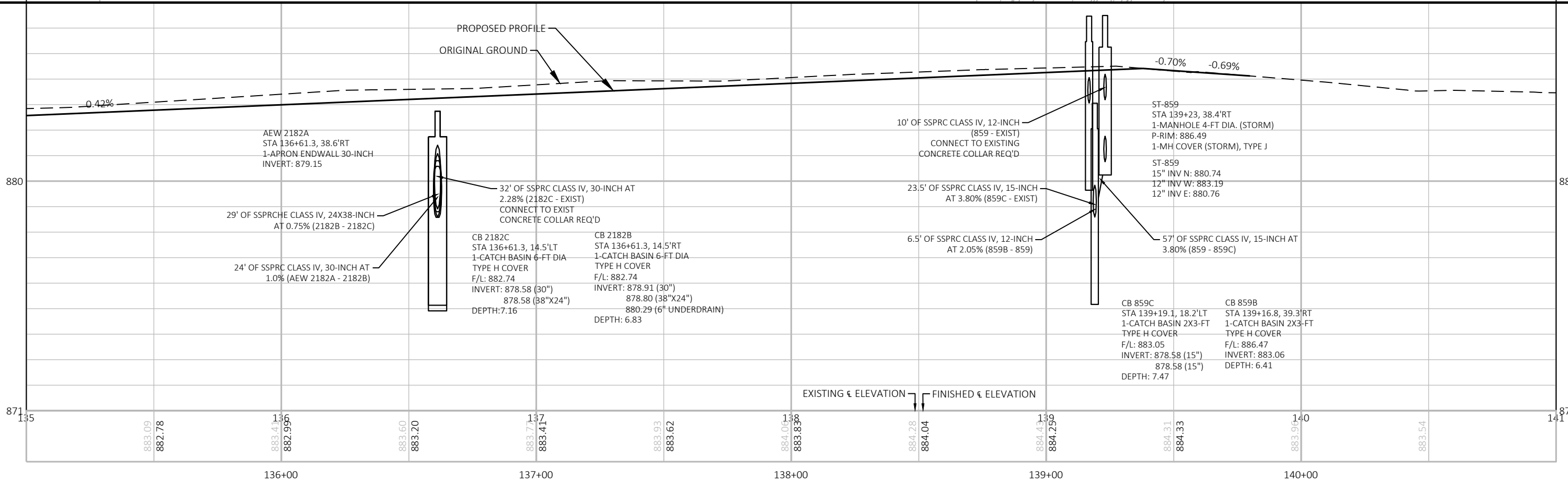
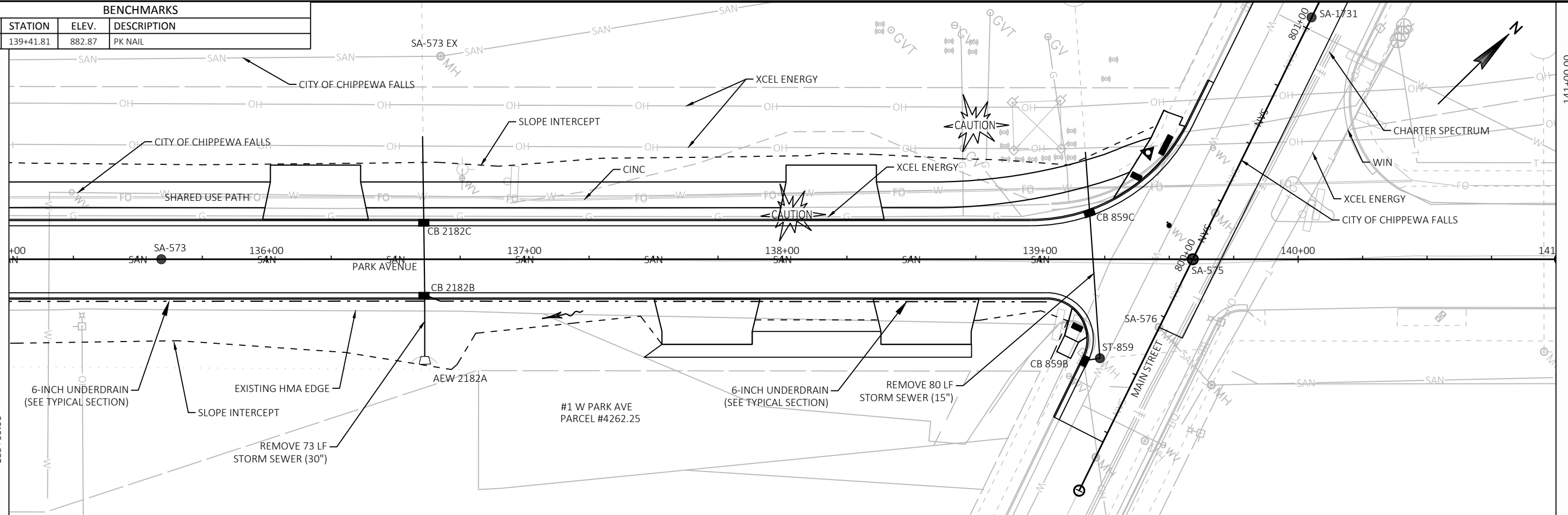


BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
8	134+89.50	882.25	PK NAIL

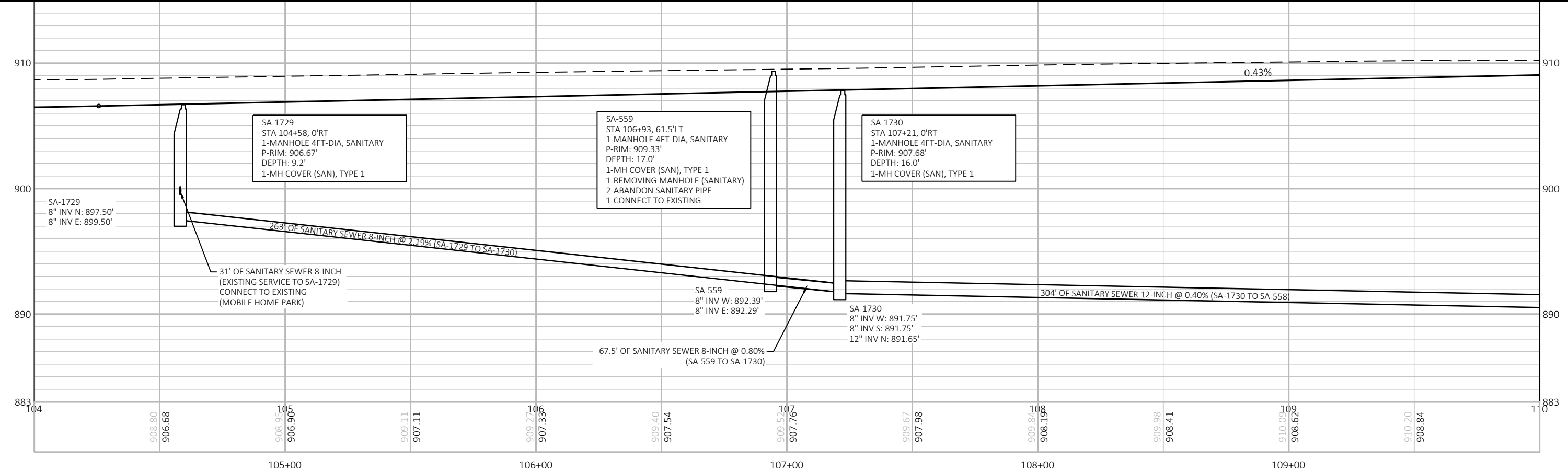
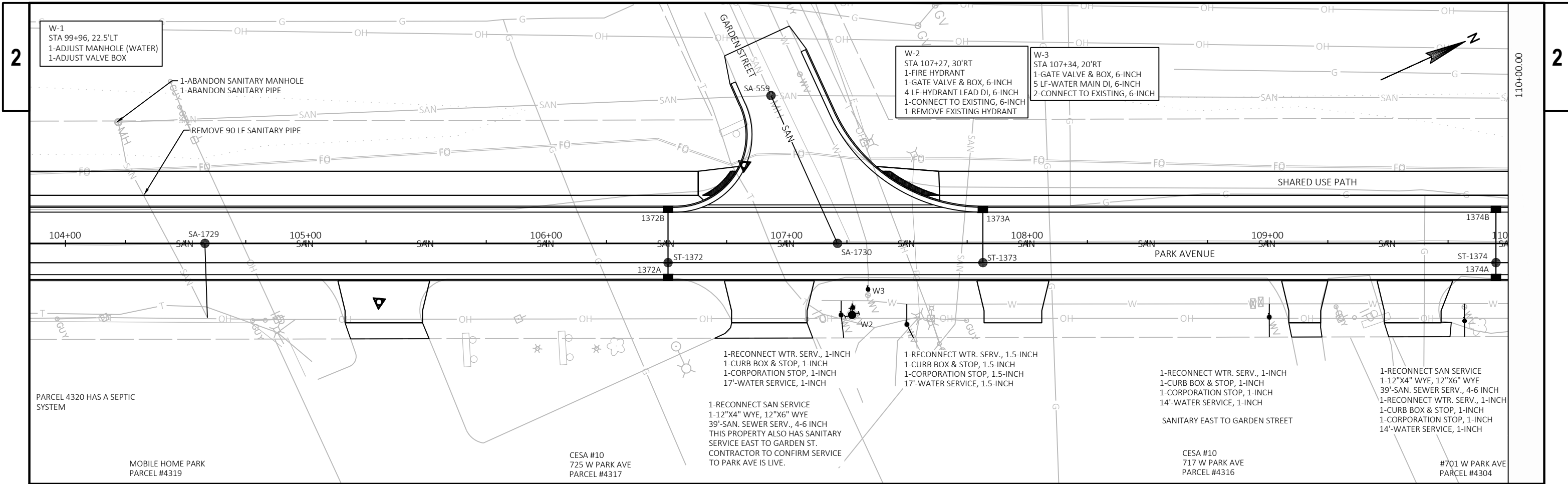


PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	STORM SEWER	SHEET	E
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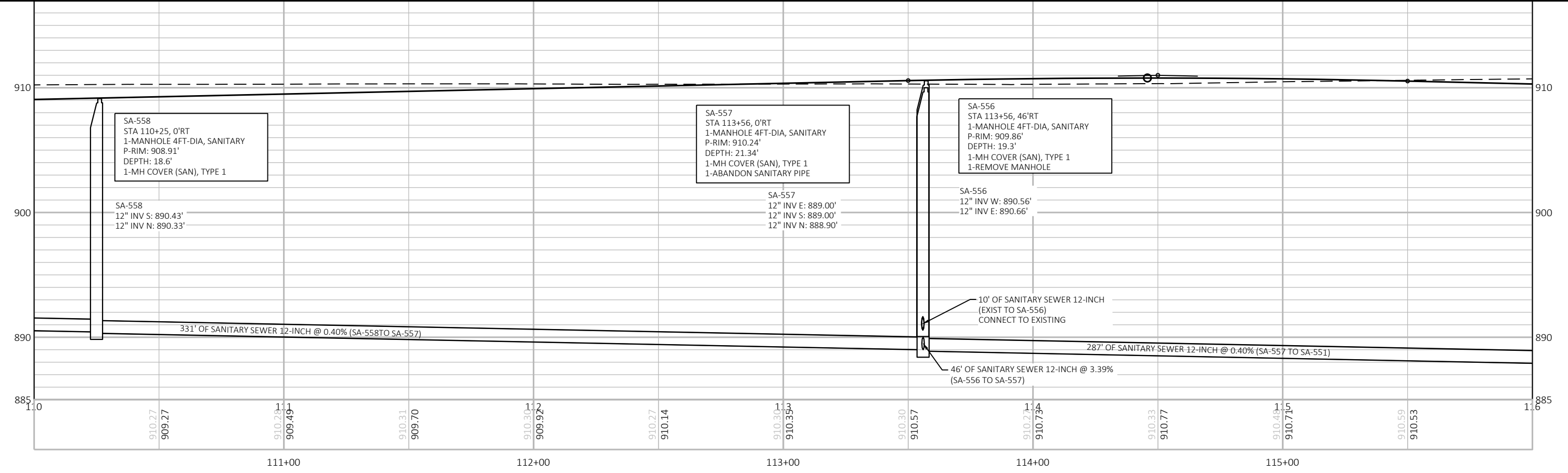
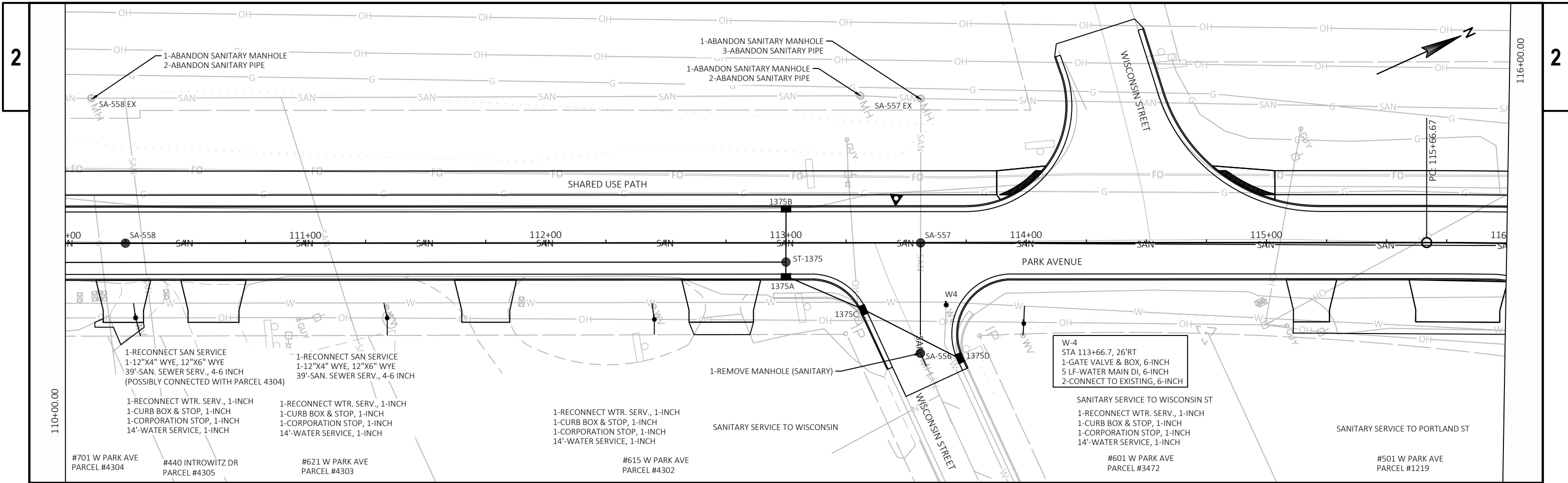
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
9	139+41.81	882.87	PK NAIL



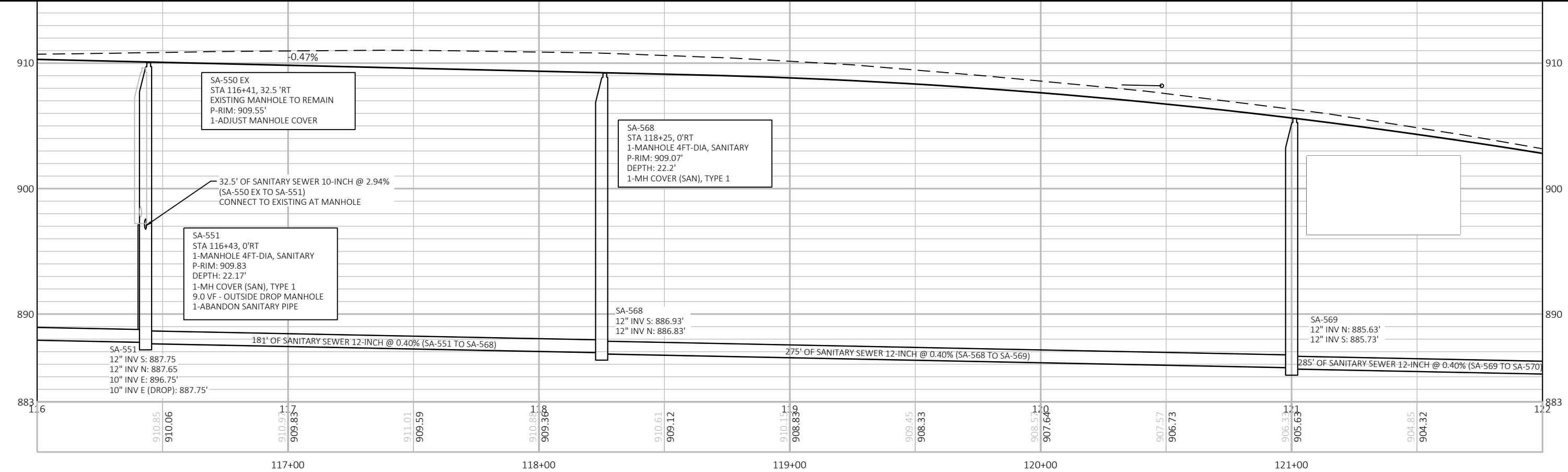
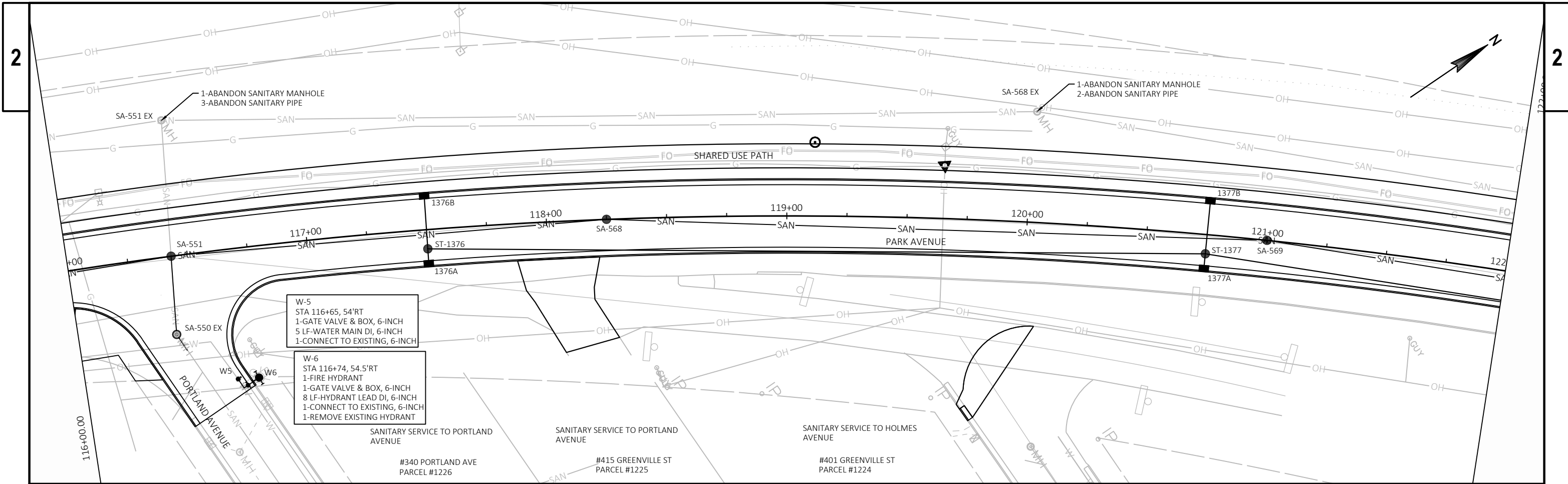
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	STORM SEWER	SHEET	E
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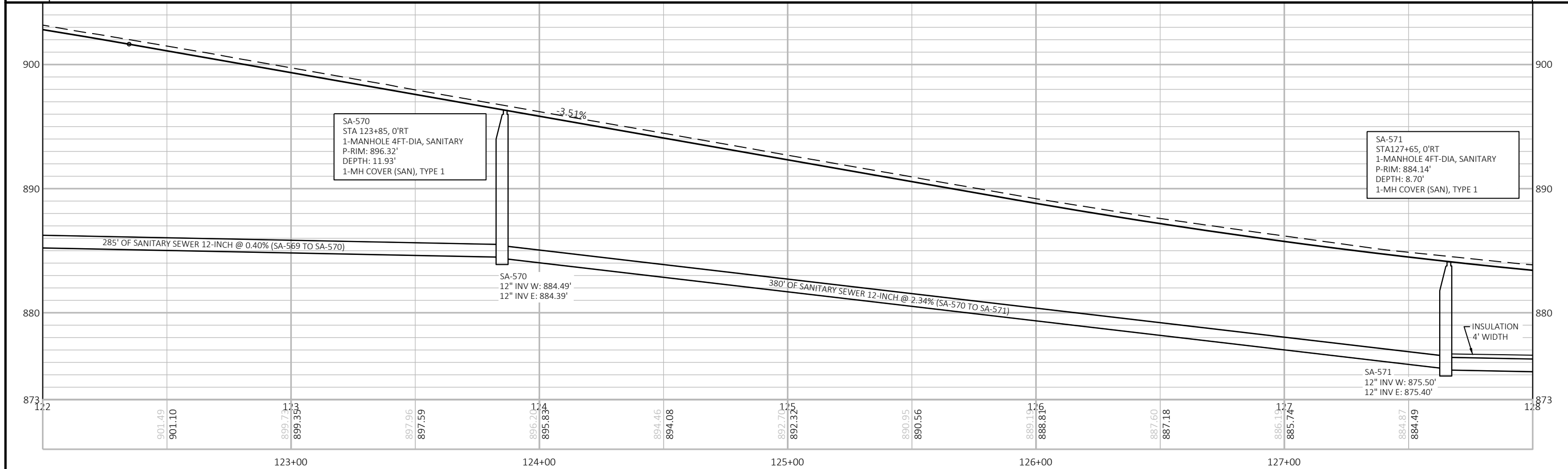
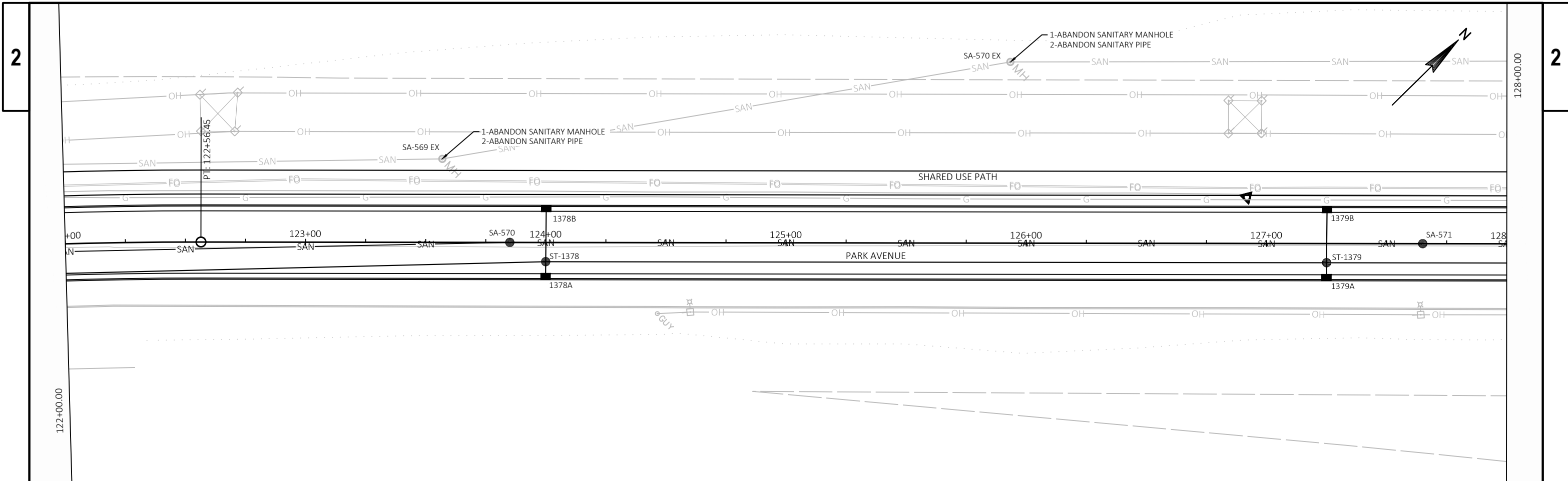
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	SANITARY & WATER	SHEET	E
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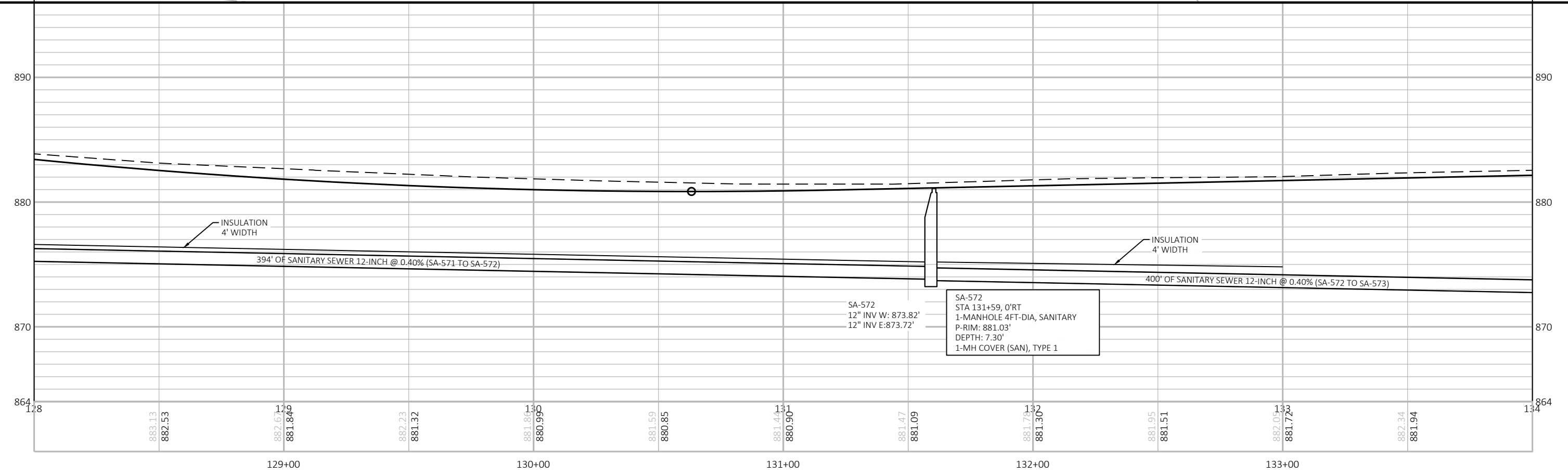
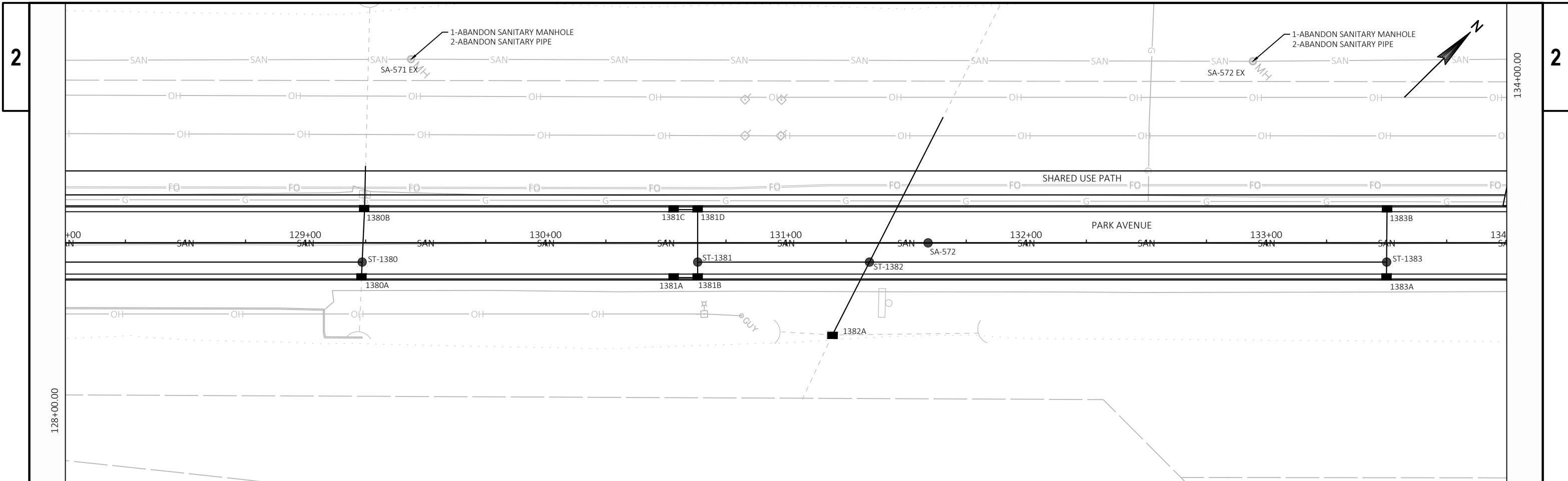
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	SANITARY & WATER	SHEET	E
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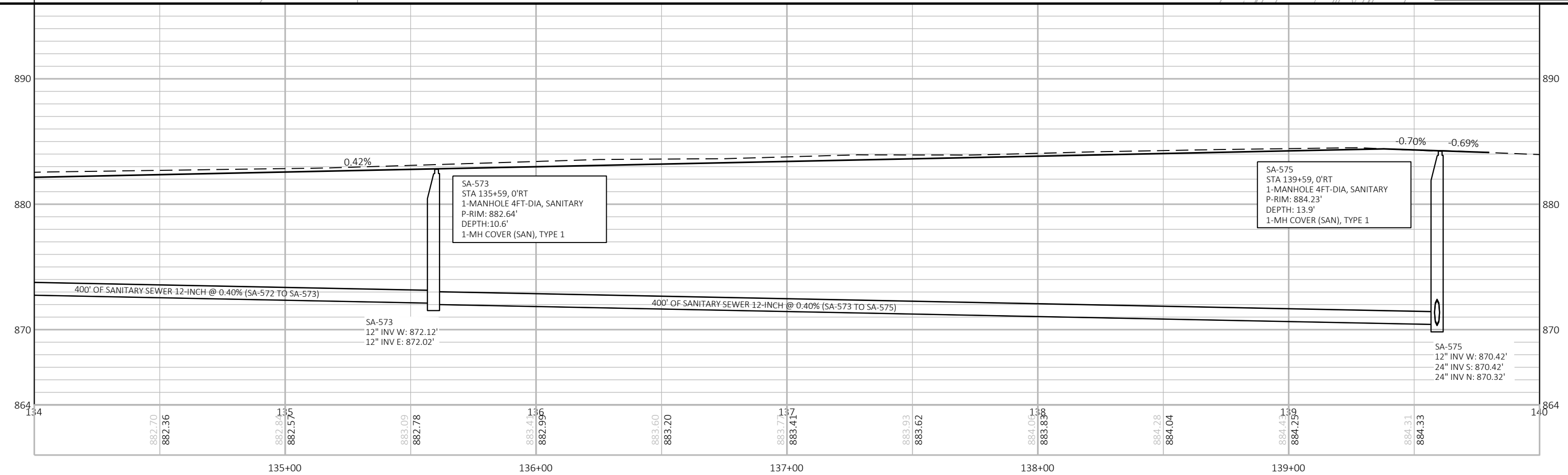
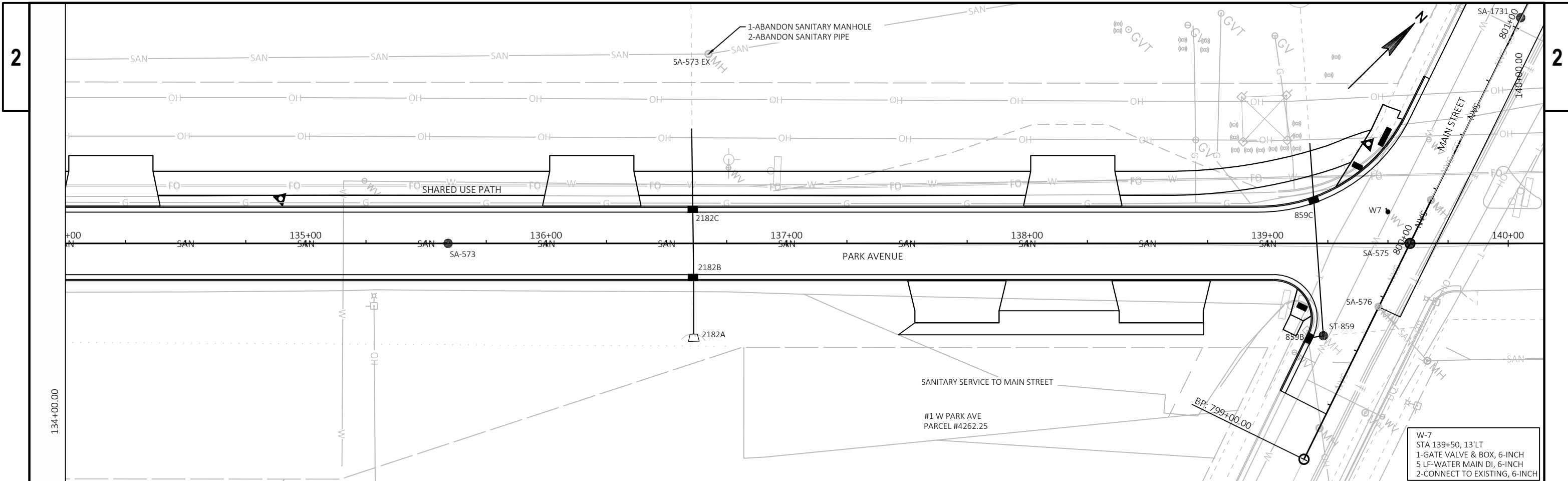
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	SANITARY & WATER	SHEET	E
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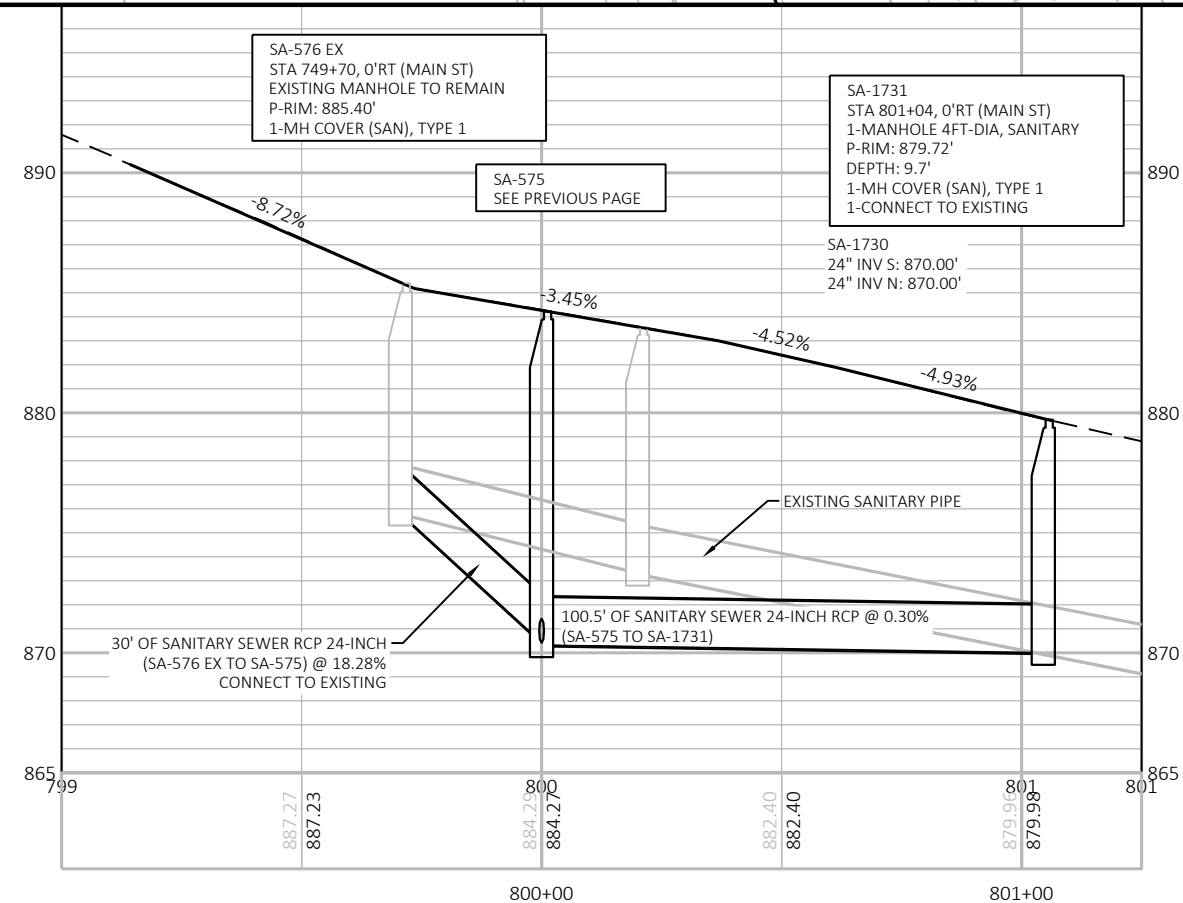
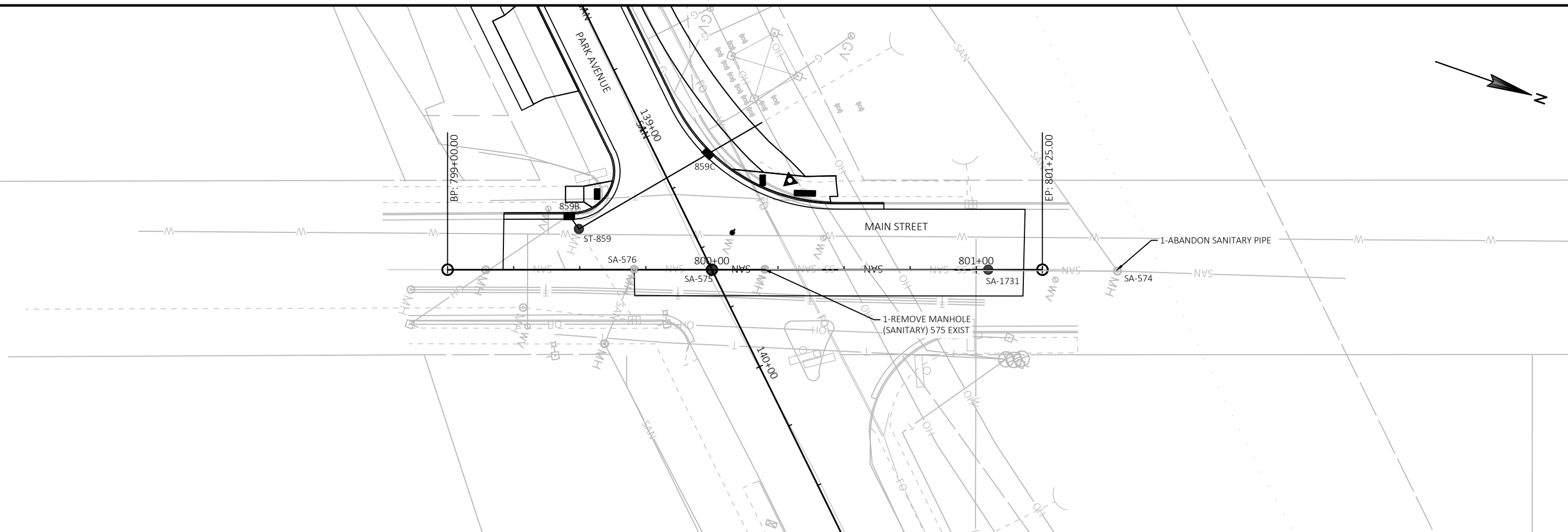


PROJECT NO: 8996-01-01 HWY: PARK AVENUE COUNTY: CHIPPEWA SANITARY & WATER SHEET E



PROJECT NO: 8996-01-01 HWY: PARK AVENUE COUNTY: CHIPPEWA SANITARY & WATER SHEET E





Estimate Of Quantities

8996-01-01

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	5.000	5.000
0004	201.0205	Grubbing	STA	5.000	5.000
0006	204.0100	Removing Pavement	SY	15,660.000	15,660.000
0008	204.0150	Removing Curb & Gutter	LF	1,318.000	1,318.000
0010	204.0155	Removing Concrete Sidewalk	SY	29.000	29.000
0012	204.0165	Removing Guardrail	LF	25.000	25.000
0014	204.0220	Removing Inlets	EACH	4.000	4.000
0016	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	209.500	209.500
0018	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	250.000	250.000
0020	204.0245	Removing Storm Sewer (size) 03. 24-Inch	LF	171.000	171.000
0022	204.0245	Removing Storm Sewer (size) 04. 30-Inch	LF	73.000	73.000
0024	204.0245	Removing Storm Sewer (size) 05. 3'x2' Box	LF	65.000	65.000
0026	205.0100	Excavation Common	CY	15,049.000	15,049.000
0028	213.0100	Finishing Roadway (project) 01. 8996-01-01	EACH	1.000	1.000
0030	214.0100	Obliterating Old Road	STA	3.000	3.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	15.000	15.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	13,525.000	13,525.000
0036	310.0110	Base Aggregate Open-Graded	TON	82.000	82.000
0038	416.0160	Concrete Driveway 6-Inch	SY	1,172.000	1,172.000
0040	455.0605	Tack Coat	GAL	890.000	890.000
0042	460.2000	Incentive Density HMA Pavement	DOL	3,100.000	3,100.000
0044	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	3,900.000	3,900.000
0046	460.5223	HMA Pavement 3 LT 58-28 S	TON	2,400.000	2,400.000
0048	460.5224	HMA Pavement 4 LT 58-28 S	TON	150.000	150.000
0050	460.5244	HMA Pavement 4 LT 58-34 S	TON	2,300.000	2,300.000
0052	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	70.000	70.000
0054	520.1012	Apron Endwalls for Culvert Pipe 12-Inch	EACH	1.000	1.000
0056	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	1.000	1.000
0058	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	1.000	1.000
0060	520.8000	Concrete Collars for Pipe	EACH	6.000	6.000
0062	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	7,526.000	7,526.000
0064	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	127.000	127.000
0066	602.0405	Concrete Sidewalk 4-Inch	SF	1,047.000	1,047.000
0068	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	32.000	32.000
0070	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	158.000	158.000
0072	606.0200	Riprap Medium	CY	8.000	8.000
0074	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	215.000	215.000
0076	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	452.500	452.500

Estimate Of Quantities

8996-01-01

Line	Item	Item Description	Unit	Total	Qty
0078	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	729.500	729.500
0080	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	493.500	493.500
0082	608.0421	Storm Sewer Pipe Reinforced Concrete Class IV 21-Inch	LF	10.000	10.000
0084	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	188.000	188.000
0086	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	56.000	56.000
0088	608.2419	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	173.500	173.500
0090	608.2424	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	LF	29.000	29.000
0092	608.3012	Storm Sewer Pipe Class III-A 12-Inch	LF	1,214.000	1,214.000
0094	608.3015	Storm Sewer Pipe Class III-A 15-Inch	LF	71.500	71.500
0096	611.0530	Manhole Covers Type J	EACH	15.000	15.000
0098	611.0606	Inlet Covers Type B	EACH	3.000	3.000
0100	611.0624	Inlet Covers Type H	EACH	30.000	30.000
0102	611.0639	Inlet Covers Type H-S	EACH	6.000	6.000
0104	611.1004	Catch Basins 4-FT Diameter	EACH	1.000	1.000
0106	611.1005	Catch Basins 5-FT Diameter	EACH	1.000	1.000
0108	611.1006	Catch Basins 6-FT Diameter	EACH	2.000	2.000
0110	611.1230	Catch Basins 2x3-FT	EACH	32.000	32.000
0112	611.2003	Manholes 3-FT Diameter	EACH	2.000	2.000
0114	611.2004	Manholes 4-FT Diameter	EACH	12.000	12.000
0116	611.2005	Manholes 5-FT Diameter	EACH	2.000	2.000
0118	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0120	612.0106	Pipe Underdrain 6-Inch	LF	1,169.000	1,169.000
0122	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	240.000	240.000
0124	619.1000	Mobilization	EACH	1.000	1.000
0126	624.0100	Water	MGAL	195.000	195.000
0128	625.0100	Topsoil	SY	19,000.000	19,000.000
0130	627.0200	Mulching	SY	10,000.000	10,000.000
0132	628.1504	Silt Fence	LF	2,500.000	2,500.000
0134	628.1520	Silt Fence Maintenance	LF	2,500.000	2,500.000
0136	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0138	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0140	628.2006	Erosion Mat Urban Class I Type A	SY	9,000.000	9,000.000
0142	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0144	628.7010	Inlet Protection Type B	EACH	2.000	2.000

Estimate Of Quantities

8996-01-01

Line	Item	Item Description	Unit	Total	Qty
0146	628.7015	Inlet Protection Type C	EACH	48.000	48.000
0148	628.7555	Culvert Pipe Checks	EACH	12.000	12.000
0150	629.0210	Fertilizer Type B	CWT	12.000	12.000
0152	630.0140	Seeding Mixture No. 40	LB	340.000	340.000
0154	630.0200	Seeding Temporary	LB	500.000	500.000
0156	630.0500	Seed Water	MGAL	428.000	428.000
0158	634.0410	Posts Wood 4x4-Inch X 10-FT	EACH	10.000	10.000
0160	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	17.000	17.000
0162	637.2230	Signs Type II Reflective F	SF	105.630	105.630
0164	638.2102	Moving Signs Type II	EACH	6.000	6.000
0166	638.2602	Removing Signs Type II	EACH	15.000	15.000
0168	638.3000	Removing Small Sign Supports	EACH	15.000	15.000
0170	642.5001	Field Office Type B	EACH	1.000	1.000
0172	643.0420	Traffic Control Barricades Type III	DAY	8,964.000	8,964.000
0174	643.0705	Traffic Control Warning Lights Type A	DAY	11,840.000	11,840.000
0176	643.0900	Traffic Control Signs	DAY	10,492.000	10,492.000
0178	643.1050	Traffic Control Signs PCMS	DAY	324.000	324.000
0180	643.5000	Traffic Control	EACH	1.000	1.000
0182	645.0111	Geotextile Type DF Schedule A	SY	586.000	586.000
0184	645.0120	Geotextile Type HR	SY	26.000	26.000
0186	646.1020	Marking Line Epoxy 4-Inch	LF	7,007.000	7,007.000
0188	646.6020	Marking Stop Line Epoxy 12-Inch	LF	38.000	38.000
0190	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	384.000	384.000
0192	646.7520	Marking Crosswalk Epoxy Ladder Pattern 24-Inch	LF	160.000	160.000
0194	650.4000	Construction Staking Storm Sewer	EACH	56.000	56.000
0196	650.4500	Construction Staking Subgrade	LF	8,549.000	8,549.000
0198	650.5000	Construction Staking Base	LF	8,549.000	8,549.000
0200	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	7,653.000	7,653.000
0202	650.9910	Construction Staking Supplemental Control (project) 01. 8996-01-01	LS	1.000	1.000
0204	650.9920	Construction Staking Slope Stakes	LF	4,584.000	4,584.000
0206	690.0150	Sawing Asphalt	LF	710.000	710.000
0208	690.0250	Sawing Concrete	LF	481.000	481.000
0210	999.1500.S	Crack and Damage Survey	LS	1.000	1.000
0212	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0214	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0216	SPV.0060	Special 01. Remove Sanitary Manhole	EACH	3.000	3.000
0218	SPV.0060	Special 02. Abandon Sanitary Manhole	EACH	10.000	10.000
0220	SPV.0060	Special 03. Abandon Sanitary Pipe	EACH	25.000	25.000
0222	SPV.0060	Special 04. Sanitary Manhole 4 FT-Dia	EACH	15.000	15.000

Estimate Of Quantities

8996-01-01

Line	Item	Item Description	Unit	Total	Qty
0224	SPV.0060	Special 05. Sanitary Manhole Cover, Type 1	EACH	16.000	16.000
0226	SPV.0060	Special 06. Connect To Existing Sanitary Sewer	EACH	6.000	6.000
0228	SPV.0060	Special 07. Sanitary Wye - 12"x4", 12"x6"	EACH	4.000	4.000
0230	SPV.0060	Special 08. Reconnect Existing Sanitary Service	EACH	4.000	4.000
0232	SPV.0060	Special 09. Fire Hydrant	EACH	2.000	2.000
0234	SPV.0060	Special 10. Gate Valve & Box 6-Inch	EACH	6.000	6.000
0236	SPV.0060	Special 11. Connect To Existing Water Main	EACH	9.000	9.000
0238	SPV.0060	Special 12. Removing Fire Hydrant	EACH	2.000	2.000
0240	SPV.0060	Special 13. Adjust Gate Valve Box	EACH	1.000	1.000
0242	SPV.0060	Special 14. Corporation Stop, 1-Inch	EACH	7.000	7.000
0244	SPV.0060	Special 15. Corporation Stop, 1.5-Inch	EACH	1.000	1.000
0246	SPV.0060	Special 16. Curb Stop & Box, 1-Inch	EACH	7.000	7.000
0248	SPV.0060	Special 17. Curb Stop & Box, 1.5-Inch	EACH	1.000	1.000
0250	SPV.0060	Special 18. Reconnect Existing Water Service	EACH	8.000	8.000
0252	SPV.0060	Special 19. Install City Provided Sign	EACH	5.000	5.000
0254	SPV.0090	Special 01. Removing Sanitary Pipe 8-Inch	LF	90.000	90.000
0256	SPV.0090	Special 02. Sanitary Sewer 8-Inch	LF	361.500	361.500
0258	SPV.0090	Special 03. Sanitary Sewer 10-Inch	LF	32.500	32.500
0260	SPV.0090	Special 04. Sanitary Sewer 12-Inch	LF	3,293.000	3,293.000
0262	SPV.0090	Special 05. Sanitary Sewer Reinforced Concrete Pipe 24-Inch	LF	130.500	130.500
0264	SPV.0090	Special 06. Crushed Rock For Pipe Stabilization, Sanitary	LF	1,324.500	1,324.500
0266	SPV.0090	Special 07. Sanitary Service Pipe & Riser 4-6 Inch	LF	156.000	156.000
0268	SPV.0090	Special 08. Hydrant Lead DI 6-Inch	LF	12.000	12.000
0270	SPV.0090	Special 09. Water Main Lead DI 6-Inch	LF	20.000	20.000
0272	SPV.0090	Special 10. Water Service Pipe, 1-Inch	LF	101.000	101.000
0274	SPV.0090	Special 11. Water Service Pipe, 1.5-Inch	LF	17.000	17.000
0276	SPV.0105	Special 01. Maintain Sanitary Sewer Flow	LS	1.000	1.000
0278	SPV.0195	Special 01. Walking Trail Base Aggregate	TON	5.000	5.000
0280	SPV.0200	Special 01. Outside Drop Manhole Section	VF	9.000	9.000

<u>CLEARING AND GRUBBING</u>			
		201.0105	201.0205
		CLEARING	GRUBBING
STATION	LOCATION	STA	STA
<u>CAT 0010</u>			
100+00 - 105+00	LT	5	5
CAT 0010 TOTALS		5	5

<u>REMOVING PAVEMENT</u>			
			204.0100
			REMOVING
			PAVEMENT
STATION - STATION	LENGTH	WIDTH	SY
<u>CAT 0010</u>			
100+00 - 116+00	1600	30	5333
116+00 - 129+00	1300	40	5778
129+00 - 139+35	1035	30	3450
GREENVILLE ST	-	-	417
MAIN ST	-	-	633
DRIVEWAY AT 110+61	-	-	49
CAT 0010 TOTALS			15660

<u>STORMSEWER REMOVALS</u>									
				204.0245.01	204.0245.02	204.0245.03	204.0245.04	204.0245.05	204.0220
				REMOVING PIPE,	REMOVING PIPE,	REMOVING PIPE,	REMOVING PIPE,	REMOVING PIPE,	REMOVING
				12-INCH (STORM)	15-INCH (STORM)	24-INCH (STORM)	30-INCH (STORM)	3'X2' BOX	INLETS
								(STORM)	
STATION	LOCATION	STRUCTURE	DOWNSTREAM STRUCTURE	LF	LF	LF	LF	LF	EACH
<u>CAT 0010</u>									
100+50 - 102+20	RT	1370B	2181B	-	170	-	-	-	-
103+24.3	29.6' RT	1370A	1370B	110	-	-	-	-	1
102+14.7	25.5' RT	1370B	1370C	-	-	-	-	65	2
129+23	LT/RT	1380A	EXIST	-	-	69	-	-	-
131+35	LT/RT	1382A	EXIST	-	-	102	-	-	-
131+75 - 130+92	RT			83	-	-	-	-	-
136+61.3	38.6' RT	AEW 2182A	2182B	-	-	-	24	-	-
136+61.3	14.5' RT	2182B	2182C	-	-	-	29	-	-
136+61.3	14.5' LT	2182C	EXISTING LT	-	-	-	20	-	-
139+33	37.5' RT	EXISTING	ST-859	10	-	-	-	-	-
139+16.8	39.3' RT	859B	ST-859	6.5	-	-	-	-	1
139+23	38.4' RT	ST-859	859C	-	57	-	-	-	-
139+19.1	18.2' LT	859C	EXISTING	-	23	-	-	-	-
CAT 0010 TOTALS				209.5	250	171	73	65	4

<u>REMOVALS SIDEWALK</u>	
	204.0155
	REMOVING
	CONCRETE
	SIDEWALK
STATION	SY
<u>CAT 0010</u>	
139+12 RT	9
139+45 LT	20
CAT 0010 TOTALS	29

<u>CURB AND GUTTER REMOVAL</u>				
			204.0150	
			REMOVING	
			CURB AND	
			GUTTER	
STATION - STATION	LOCATION	LF	REMARKS	
<u>CAT 0010</u>				
100+42.5 - 100+69.5	RT	53	SOUTH AVENUE	
112+95 - 113+42.5	RT	64	WISCONSIN STREET	
113+75 - 113+78	RT	24	WISCONSIN STREET	
116+44.4	RT	3	PORTLAND AVENUE	
116+72	RT	17	PORTLAND AVENUE	
119+79	RT	18	HOLMES AVENUE	
119+25 - 129+24	RT	1006	PARK AVENUE	
139+07 - 139+06	RT	50	MAIN STREET	
139+03 - 139+66	LT	83	MAIN STREET	
CAT 0010 TOTALS			1318	

<u>OBLITERATING OLD ROAD</u>		
		214.0100
		OBLITERATING OLD ROAD
		STA
STATION	LOCATION	STA
<u>CAT 0010</u>		
700+73 - 703+36	GREENVILLE ST	3
CAT 0010 TOTAL		3

3

3

		<u>EXCAVATION</u> 205.0100			
		COMMON	UNUSABLE	AIR	EXPAND.
STATION - STATION	LOCATION	EXCAVATION CY	MATERIAL CY	FILL CY	FILL CY
100+00 - 139+70	LT & RT	15049	5859	661	859
CAT 0010 TOTALS		15049			

- NOTES:
 1) SEE EARTHWORK TABLE FOR ADDITIONAL DETAILS
 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON EXCAVATION.
 3) UNUSABLE MATERIAL IS THE ESTIMATED VOLUME OF CONCRETE AND ASPHALTIC PAVEMENT
 4) FILL WILL BE BACKFILLED WITH EXCAVATION COMMON
 5) EXPANSION FACTOR = 1.3

		<u>REHEATING JOINTS</u>	
		460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS	
STATION - STATION	JOINTS	LF	
100+00 - 139+00	CENTERLINE	3900	
CAT 0010 TOTALS		3900	

		<u>HMA AND BASE COURSE</u>							
		305.0120	305.0110	460.5223	460.5224	460.5244	455.0605		
		BASE AGGREGATE	BASE AGGREGATE	HMA PAVEMENT	HMA PAVEMENT	HMA PAVEMENT	TACK COAT		
		DENSE 1 1/4-INCH*	DENSE 3/4-INCH	3 LT 58-28 S	4 LT 58-28 S	4 LT 58-34 S			
STATION - STATION	LOCATION	TON	TON	TON	TON	TON	GAL	REMARKS	
CAT 0010									
100+00 - 107+27	LT/RT	1867	-	412	-	294	105	MAINLINE	
107+27 - 116+25	LT/RT	2304	-	508	-	363	130	MAINLINE	
116+25 - 138+96	LT/RT	5829	-	1286	-	918	328	MAINLINE	
200+14 - 200+95	LT/RT	97	1	-	18	18	9	SOUTH AVENUE	
299+07 - 299+83	LT/RT	203	3	-	33	33	17	GARDEN STREET	
400+14 - 400+65	LT/RT	105	-	-	18	18	9	WISCONSIN STREET EAST	
499+08 - 499+87	LT/RT	245	1	-	43	43	22	WISCONSIN STREET WEST	
600+15 - 600+72	LT/RT	126	-	-	21	21	11	PORTLAND AVENUE	
703+40 - 703+54	LT/RT	28	-	-	5	5	3	GREENVILLE STREET	
799+21 - 801+18	LT/RT	609	-	158	-	113	40	MAIN STREET	
99+73 - 106+63	LT	273	-	-	-	86	38	SHARED USE PATH	
107+63 - 113+88	LT	254	-	-	-	78	35	SHARED USE PATH	
115+03 - 134+01	LT	748	-	-	-	237	106	SHARED USE PATH	
134+36 - 136+01	LT	64	-	-	-	21	9	SHARED USE PATH	
136+36 - 138+01	LT	64	-	-	-	21	9	SHARED USE PATH	
138+36 - 139+38	LT	50	-	-	-	13	6	SHARED USE PATH	
UNDISTRIBUTED		134	10	36	12	18	13		
CAT 0010 TOTALS		13000	15	2400	150	2300	890		

*QUANTITY ALSO SHOWN ELSEWHERE
 SEE TYPICAL SECTION FOR HMA AND GRAVEL DEPTHS
 BASE AGGREGATE 3/4-INCH USED FOR SHOULDERS ON SIDE ROADS

3

CONCRETE CURB & GUTTER ITEMS

STATION	LOCATION	601.0411	601.0557	650.5500	REMARKS
		CONCRETE CURB & GUTTER, 30-INCH TYPED	CONCRETE CURB & GUTTER, 6-INCH SLOPED 36-INCH TYPED	CONSTRUCTION STAKING, CURB, GUTTER, CURB & GUTTER	
LF	LF				
CAT 0010					
99+92.7 - 106+76.8	LT	731		731	
106+52.7 - 107+79.5	LT		127	127	CROSSING GARDEN ST.
107+07.7 - 114+12.3	LT	187		187	
100+48 - 113+42.5	RT	1363		1363	
113+75.2 - 116+44.4	RT	331		331	
114+48.5 - 139+65.4	LT	2588		2588	
116+71.7 - 139+05.5	RT	2326		2326	
CAT 0010 TOTALS		7526	127	7653	

DETECTABLE WARNING FIELDS

STATION	LOCATION	602.0505	602.0605	REMARKS
		CURB RAMP DETECTABLE WARNING FIELD YELLOW	CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW	
SF	SF			
CAT 0010				
106+70	LT		30	SHARED USE PATH
107+56	LT		43	SHARED USE PATH
113+94	LT		42	SHARED USE PATH
114+99	LT		43	SHARED USE PATH
139+14	RT	8		SIDEWALK
139+45	LT	24		SHARED USE PATH/SIDEWALK
CAT 0010 TOTAL		32	158	

3

CONCRETE SIDEWALK AND DRIVEWAY

STATION	LOCATION	416.0160	465.0120	305.0120	602.0405	REMARKS
		CONCRETE DRIVEWAY 6-INCH	ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES	BASE AGGREGATE DENSE 1 1/4-INCH*	CONCRETE SIDEWALK 4-INCH	
SY	TON	TON	SF			
CAT 0010						
101+88	RT	35	2	15	-	841 W. PARK AVENUE
103+26.1	RT	71	4	32	-	MOBILE HOME PARK
105+32.4	RT	67	4	30	-	(SOUTH) 725 W. PARK AVE
106+70	LT	-	-	-	139	SHARED USE PATH
106+92.7	RT	65	4	30	-	(NORTH) 725 W. PARK AVENUE
107+56	LT	-	-	-	188	SHARED USE PATH
107+94	RT	51	-	17	-	NORTH OF 725 W. PARK AVENUE
109+15.4	RT	30	1	13	-	717 W. PARK AVENUE
109+60.3	RT	51	6	23	-	INTROWITZ DRIVE
110+24.2	RT	37	2	16	-	701 W. PARK AVENUE
110+61.7	RT	45	-	15	-	621 W. PARK AVENUE
111+75	RT	43	-	14	-	(SOUTH) 615 W. PARK AVENUE
112+73	RT	56	2	24	-	(NORTH) 615 W. PARK AVENUE
113+94	LT	-	-	-	157	SHARED USE PATH
114+99	LT	-	-	-	188	SHARED USE PATH
115+18.7	RT	33	29	69	-	(SOUTH) 501 W. PARK AVENUE
115+79.8	RT	72	-	-	-	(NORTH) 501 W. PARK AVENUE
118+17.2	RT	111	-	37	-	415 GREENVILLE STREET
134+18.9	LT	87	-	29	-	
136+18.9	LT	87	-	29	-	
137+71.8	RT	72	16	56	-	(SOUTH) 1 W. PARK AVENUE
138+18.9	LT	87	-	29	-	
138+55.8	RT	72	-	-	-	(NORTH) 1 W. PARK AVE
139+14	RT	-	-	-	109	SIDEWALK
139+45	LT	-	-	-	266	SHARED USE PATH/SIDEWALK
GARDEN ST TEMP ACCESS				47	-	725 W PARK AVENUE
CAT 0010 TOTAL		1172	70	525	1047	

*QUANTITY SHOWN ELSEWHERE

PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	MISCELLANEOUS QUANTITIES	SHEET	E
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STORMSEWER PIPE

STATION	LOCATION	STRUCTURE	DOWNSTREAM STRUCTURE	608.3012	608.0412	608.3015	608.0415	608.0418	608.0421	608.0324	608.0424	608.0430	608.2419	608.2424
				STORMSEWER PIPE CLASS III-A, 12-INCH	STORMSEWER PIPE RC CLASS IV, 12-INCH	STORMSEWER PIPE CLASS III-A, 15-INCH	STORMSEWER PIPE RC CLASS IV, 15-INCH	STORMSEWER PIPE RC CLASS IV, 18-INCH	STORMSEWER PIPE RC CLASS IV, 21-INCH	STORMSEWER PIPE CLASS III-A, 24-INCH	STORMSEWER PIPE RC CLASS IV, 24-INCH	STORMSEWER PIPE RC CLASS IV, 30-INCH	STORMSEWER PIPE RC HE CLASS HE-IV, 19X30-INCH	STORMSEWER PIPE RC HE CLASS HE-IV, 24X38-INCH
				LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
CAT 0010														
100+41	50.4' RT	2181B	2181A	48	-	-	-	-	-	-	-	-	-	-
100+72.8	14.5' RT	2181A	AEW 2181	-	61	-	-	-	-	-	-	-	-	-
103+24.3	29.6' RT	1370A	1370B	-	110	-	-	-	-	-	-	-	-	-
102+14.7	25.5' RT	1370B	ST-1370	-	20	-	-	-	-	-	-	-	-	-
102+05	8' RT	ST-1370	AEW 1370C	-	-	-	-	-	-	-	53	-	-	-
103+55.9	8' RT	ST-1371	ST-1370	-	-	-	-	-	-	-	-	-	151	-
103+65.9	14.5' RT	1371A	1371B	-	10	-	-	-	-	-	-	-	-	-
103+55.9	14.5' RT	1371B	ST-1371	-	6.5	-	-	-	-	-	-	-	-	-
103+65.9	14.5' LT	1371C	1371D	-	10	-	-	-	-	-	-	-	-	-
103+55.9	14.5' LT	1371D	ST-1371	-	22.5	-	-	-	-	-	-	-	-	-
106+50.6	8' RT	ST-1372	ST-1371	-	-	-	-	295	-	-	-	-	-	-
106+50.6	14.5' LT	1372B	ST-1372	-	22.5	-	-	-	-	-	-	-	-	-
106+50.6	14.5' RT	1372A	ST-1372	-	6.5	-	-	-	-	-	-	-	-	-
107+81.5	8' RT	ST-1373	ST-1372	-	-	-	131	-	-	-	-	-	-	-
107+81.5	14.5' LT	1373A	ST-1373	-	22.5	-	-	-	-	-	-	-	-	-
109+94.9	8' RT	ST-1374	ST-1373	-	-	-	213	-	-	-	-	-	-	-
109+94.9	14.5' RT	1374A	ST-1374	-	6.5	-	-	-	-	-	-	-	-	-
109+94.9	14.5' LT	1374B	ST-1374	-	22.5	-	-	-	-	-	-	-	-	-
112+99.9	8' RT	ST-1375	ST-1374	-	-	-	305	-	-	-	-	-	-	-
113+72.6	47.9' RT	1375D	1375C	-	45	-	-	-	-	-	-	-	-	-
113+31.8	28' RT	1375C	1375A	-	35	-	-	-	-	-	-	-	-	-
112+99.9	14.5' RT	1375A	ST-1375	-	6.5	-	-	-	-	-	-	-	-	-
112+99.9	14.5' LT	1375B	ST-1375	-	22.5	-	-	-	-	-	-	-	-	-
117+49.9	14.5' RT	1376A	ST-1376	6.5	-	-	-	-	-	-	-	-	-	-
117+49.9	14.5' LT	1376B	ST-1376	22.5	-	-	-	-	-	-	-	-	-	-
117+49.9	8' RT	ST-1376	ST-1377	323	-	-	-	-	-	-	-	-	-	-
120+74.9	14.5' RT	1377A	ST-1377	6.5	-	-	-	-	-	-	-	-	-	-
120+74.9	14.5' LT	1377B	ST-1377	22.5	-	-	-	-	-	-	-	-	-	-
120+74.9	8' RT	ST-1377	ST-1378	324	-	-	-	-	-	-	-	-	-	-
123+99.9	14.5' RT	1378A	ST-1378	6.5	-	-	-	-	-	-	-	-	-	-
123+99.9	14.5' LT	1378B	ST-1378	22.5	-	-	-	-	-	-	-	-	-	-
123+99.9	8' RT	ST-1378	ST-1379	325	-	-	-	-	-	-	-	-	-	-
127+25	14.5' RT	1379A	ST-1379	6.5	-	-	-	-	-	-	-	-	-	-
127+25	14.5' LT	1379B	ST-1379	22.5	-	-	-	-	-	-	-	-	-	-
127+25	8' RT	ST-1379	ST-1380	-	-	-	198.5	-	-	-	-	-	-	-
129+23.3	14.5' RT	1380A	ST-1380	-	6.5	-	-	-	-	-	-	-	-	-
129+23	8' RT	ST-1380	1380B	-	-	-	-	-	-	-	-	22.5	-	-
129+24.6	14.5' LT	1380B	EXISTINGLT	-	-	-	-	-	-	33	-	-	-	-
130+53.2	14.5' RT	1381A	1381B	10	-	-	-	-	-	-	-	-	-	-
130+63.2	14.5' RT	1381B	ST-1381	6.5	-	-	-	-	-	-	-	-	-	-
130+53.2	14.5' LT	1381C	1381D	10	-	-	-	-	-	-	-	-	-	-
130+63.2	14.5' LT	1381D	ST-1381	22.5	-	-	-	-	-	-	-	-	-	-
130+63.2	8' RT	ST-1381	ST-1382	-	-	71.5	-	-	-	-	-	-	-	-
131+19.3	38.4' RT	EXISTINGRT 1382A	1382A	-	-	-	-	-	10	-	-	-	-	-
133+50	14.5' RT	1383A	ST-1382	-	-	-	-	-	-	-	34	-	-	-
133+50	14.5' LT	1383B	ST-1383	6.5	-	-	-	-	-	-	-	-	-	-
133+50	8' RT	ST-1383	ST-1382	22.5	-	-	-	-	-	215	-	-	-	-
131+34.7	8' RT	ST-1382	EXISTINGLT	-	-	-	-	-	-	-	68	-	-	-
136+61.3	38.6' RT	AEW 2182A	2182B	-	-	-	-	-	-	-	-	24	-	-
136+61.3	14.5' RT	2182B	2182C	-	-	-	-	-	-	-	-	-	-	29
136+61.3	14.5' LT	2182C	EXISTINGLT	-	-	-	-	-	-	-	32	-	-	-
139+33	37.5' RT	EXISTING	ST-859	-	10	-	-	-	-	-	-	-	-	-
139+16.8	39.3' RT	859B	ST-859	-	6.5	-	-	-	-	-	-	-	-	-
139+23	38.4' RT	ST-859	859C	-	-	-	57	-	-	-	-	-	-	-
139+19.1	18.2' LT	859C	EXISTING	-	-	-	23.5	-	-	-	-	-	-	-
CAT 0010 TOTALS				1214	452.5	71.5	729.5	493.5	10	215	188	56	173.5	29

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STORM SEWER COVERS & STRUCTURES

STATION	LOCATION	STRUCTURE	DOWNSIDE STRUCTURE	611.0624	611.0639	611.0606	611.0530	611.1230	611.1004	611.1005	611.1006	611.2003	611.2004	611.2005	611.2006	520.8000	520.1012	520.1024	520.1030	650.4000
				INLET COVER, TYPE H	INLET COVER, TYPE H-S	INLET COVER, TYPE B	MANHOLE COVER TYPE J	CATCH BASINS 2X3-FT EACH	CATCH BASINS 4-FT DIA EACH	CATCH BASINS 5-FT DIA EACH	CATCH BASINS 6-FT DIA EACH	MANHOLE 3-FT DIA. EACH	MANHOLE 4-FT DIA. EACH	MANHOLE 5-FT DIA. EACH	MANHOLE 6-FT DIA. EACH	CONCRETE COLLARS FOR PIPE EACH	APRON ENDWALL FOR CULVERT PIPE 12-INCH EACH	APRON ENDWALL FOR CULVERT PIPE 24-INCH EACH	APRON ENDWALL FOR CULVERT PIPE 30-INCH EACH	CONSTRUCTION STAKING STORM SEWER SYSTEM EACH
CAT 0010																				
100+41	50.4' RT	2181B	2181A	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
100+72.8	14.5' RT	2181 A	AEW 2181	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
100+76	46.5' LT	AEW 2181		1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
103+24.3	29.6' RT	1370A	1370B	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	1
102+14.7	25.5' RT	1370B	ST-1370	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	1
102+05	8' RT	ST-1370	AEW 1370C	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	1
101+81	39' LT	AEW 1370C		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
103+55.9	8' RT	ST-1371	ST-1370	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	1
103+65.9	14.5' RT	1371A	1371B	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
103+55.9	14.5' RT	1371B	ST-1371	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
103+65.9	14.5' LT	1371C	1371D	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
103+55.9	14.5' LT	1371D	ST-1371	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
106+50.6	8' RT	ST-1372	ST-1371	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
106+50.6	14.5' LT	1372B	ST-1372	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
106+50.6	14.5' RT	1372A	ST-1372	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
107+81.5	8' RT	ST-1373	ST-1372	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
107+81.5	14.5' LT	1373A	ST-1373	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
109+94.9	8' RT	ST-1374	ST-1373	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
109+94.9	14.5' RT	1374A	ST-1374	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
109+94.9	14.5' LT	1374B	ST-1374	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
112+99.9	8' RT	ST-1375	ST-1374	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
113+72.6	47.9' RT	1375D	1375C	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
113+31.85	28' RT	1375C	1375A	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
112+99.9	14.5' RT	1375A	ST-1375	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
112+99.9	14.5' LT	1375B	ST-1375	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
117+49.9	14.5' RT	1376A	ST-1376	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
117+49.9	14.5' LT	1376B	ST-1376	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
117+49.9	8' RT	ST-1376	ST-1377	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
120+74.9	14.5' RT	1377A	ST-1377	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
120+74.9	14.5' LT	1377B	ST-1377	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
120+74.9	8' RT	ST-1377	ST-1378	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
123+99.9	14.5' RT	1378A	ST-1378	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
123+99.9	14.5' LT	1378B	ST-1378	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
123+99.9	8' RT	ST-1378	ST-1379	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
127+25	14.5' RT	1379A	ST-1379	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
127+25	14.5' LT	1379B	ST-1379	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
127+25	8' RT	ST-1379	ST-1380	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
129+23.3	14.5' RT	1380A	ST-1380	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
129+23	8' RT	ST-1380	1380B	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
129+24.6	14.5' LT	1380B	EXISTINGLT	1	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1
130+53.2	14.5' RT	1381A	1381B	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
130+63.2	14.5' RT	1381B	ST-1381	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
130+53.2	14.5' LT	1381C	1381D	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
130+63.2	14.5' LT	1381D	ST-1381	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
130+63.2	8' RT	ST-1381	ST-1382	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
131+19.3	38.4' RT	EXISTINGRT	1382A	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
133+50	14.5' RT	1382A	ST-1382	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	1
133+50	14.5' LT	1383A	ST-1383	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
133+50	14.5' LT	1383B	ST-1383	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
133+50	8' RT	ST-1383	ST-1382	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
131+34.7	8' RT	ST-1382	EXISTINGLT	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
136+61.3	38.6' RT	AEW 2182A	2182B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
136+61.3	14.5' RT	2182B	2182C	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
136+61.3	14.5' LT	2182C	EXISTINGLT	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	1
139+33	37.5' RT	EXISTING	ST-859	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
139+16.8	39.3' RT	859B	ST-859	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
139+23	38.4' RT	ST-859	859C	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1
139+19.1	18.2' LT	859C	EXISTING	1	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	1
CAT 0010 TOTALS				30	6	3	15	32	1	1	2	2	12	2	1	6	1	1	1	56

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<u>PIPE UNDERDRAIN</u>				
		612.0106	645.0111	310.0110
		PIPE UNDERDRAIN	GEOTEXTILE TYPE	BASE AGGREGATE
		6-INCH	DF SCHEDULE A	OPEN-GRADED
STATION - STATION	LOCATION	LF	SY	TON
<u>CAT 0010</u>				
127+25 - 129+23	RT	199	100	14
129+23 - 130+53	RT	130	65	9
130+63 - 133+50	RT	287	144	20
133+50 - 136+61	RT	311	156	22
136+61 - 139+03	RT	242	121	17
CAT 0010 TOTAL		1169	586	82

<u>WATER</u>			
		624.0100	630.0500
		WATER	SEED WATER
		MGAL	MGAL
<u>CAT 0010</u>			
PROJECT		195	-
PROJECT		-	428
CAT 0010 TOTALS		195	428

<u>RIPRAP ITEMS</u>			
		606.0200	645.0120
		RIPRAP MEDIUM	GEOTEXTILE TYPE HR
STATION	LOCATION	CY	SY
<u>CAT 0010</u>			
100+76	LT	4	13
101+81	LT	4	13
CAT 0010 TOTAL		8	26

<u>CULVERT PIPE CHECKS</u>		
		628.7555
		CULVERT PIPE
		CHECKS
STATION	LOCATION	EACH
<u>CAT 0010</u>		
100+76	46.5' LT	3
101+81	39' LT	3
136+61	38.6' RT	3
UNDISTRIBUTED		3
CAT 0010 TOTALS		12

<u>EROSION CONTROL</u>						
		628.1504	628.1520	628.7005	628.7010	628.7015
		SILT FENCE	SILT FENCE	INLET	INLET	INLET
		MAINTENANCE	MAINTENANCE	PROTECTION	PROTECTION	PROTECTION
		LF	LF	TYPE A	TYPE B	TYPE C
STATION	LOCATION	LF	LF	EACH	EACH	EACH
<u>CAT 0010</u>						
99+81 - 102+44	LT	263	263	-	-	-
113+36 - 114+07	LT	108	108	-	-	-
113+89 - 115+29	RT	140	140	-	-	-
114+51 - 116+17	LT	195	195	-	-	-
123+98 - 139+49	LT	1555	1555	-	-	-
100+41	RT	-	-	-	-	1
100+73	RT	-	-	-	-	1
102+14.5	RT	-	-	1	-	-
103+24	RT	-	-	-	1	-
103+55.5	RT/LT	-	-	-	-	2
103+66	RT/LT	-	-	-	-	2
106+50.5	RT/LT	-	-	-	-	2
107+19	LT	-	-	-	-	1
107+81.5	LT	-	-	-	-	1
109+94.5	RT/LT	-	-	-	-	2
113+00	RT/LT	-	-	-	-	2
113+32	RT	-	-	-	-	1
113+72	RT	-	-	-	-	1
116+49	RT	-	-	-	-	1
116+76	RT	-	-	-	-	1
117+50	RT/LT	-	-	-	-	2
120+75	RT/LT	-	-	-	-	2
124+00	RT/LT	-	-	-	-	2
127+25	RT/LT	-	-	-	-	2
129+23	RT/LT	-	-	-	-	2
130+53	RT/LT	-	-	-	-	2
130+63	RT/LT	-	-	-	-	2
131+19	RT	-	-	1	-	-
133+50	RT/LT	-	-	-	-	2
136+61	RT/LT	-	-	-	-	2
139+19	LT	-	-	-	-	1
139+17	RT	-	-	-	-	1
100+76	46.5' LT	-	-	-	-	-
101+81	39' LT	-	-	-	-	-
136+61	38.6' RT	-	-	-	-	-
UNDISTRIBUTED		239	239	1	1	10
CAT 0010 TOTALS		2500	2500	3	2	48

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PROJECT NO: 8996-01-01

HWY: PARK AVENUE

COUNTY: CHIPPEWA

MISCELLANEOUS QUANTITIES

SHEET

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<u>RESTORATION</u>							
		625.0100	627.0200	628.2006	630.0140	630.0200	629.0210
		<u>EROSION MAT</u>			<u>SEEDING</u>	<u>SEEDING</u>	<u>FERTILIZER</u>
		<u>URBAN CLASS I</u>			<u>NO. 40</u>	<u>TEMPORARY</u>	<u>TYPE B</u>
<u>STATION</u>	<u>LOCATION</u>	<u>TOPSOIL</u>	<u>MULCHING</u>	<u>TYPE A</u>	<u>NO. 40</u>	<u>TEMPORARY</u>	<u>TYPE B</u>
		<u>SY</u>	<u>SY</u>	<u>SY</u>	<u>LB</u>	<u>LB</u>	<u>CWT</u>
CAT 0010							
99+74 - 106+83	LT	1115	-	1115	20	30	0.70
99+72 - 106+75	LT	789	789	-	14.2	21.3	0.50
100+41 - 113+43	RT	2644	2644	-	47.6	71.4	1.67
107+01 - 114+15	LT	1453	1453	-	26.2	39.2	0.92
113+70 - 115+11	RT	361	361	-	6.5	9.7	0.23
114+48 - 120+04	LT	1088	1088	-	19.6	29.4	0.69
116+66 - 119+97	RT	1156	1156	-	20.8	31.2	0.73
118+86 - 137+54	RT	5640	-	5726	103.1	154.6	3.61
120+03 - 130+04	LT	1807	-	1807	32.5	48.8	1.14
130+03 - 139+48	LT	2048	2048	-	36.9	55.3	1.29
138+96 - 139+17	RT	24	-	24	0.4	0.6	0.02
GARDEN ST TEMP ACCESS		144	144		2.6	3.9	0.09
UNDISTRIBUTED		731	317	328	9.6	4.6	0.4
CAT 0010 TOTAL		19000	10000	9000	340	500	12.0

<u>SAWING ASPHALT AND CONCRETE</u>			
		690.0150	690.0250
		<u>SAWING</u>	<u>SAWING</u>
		<u>ASPHALT</u>	<u>CONCRETE</u>
<u>STATION</u>	<u>LOCATION</u>	<u>LF</u>	<u>LF</u>
CAT 0010			
100+00 LT/RT	MAINLINE	-	50
100+00 RT	SOUTH AVENUE	77	-
99+73 LT	SHARED USE PATH	10.5	-
101+88.5 RT	DRIVEWAY	15	-
103+26.5 RT	DRIVEWAY	31.5	-
105+33 RT	DRIVEWAY	32.5	-
106+92.9 RT	DRIVEWAY	32.5	-
106+87.6 LT	GARDEN STREET	30	-
109+15.5 RT	DRIVEWAY	24.5	-
109+61.4 RT	INTROWITZ DRIVE	24.5	-
110+22.5 RT	DRIVEWAY	20.5	-
110+61.6 RT	DRIVEWAY	-	21
112+73.5 RT	DRIVEWAY	23.5	-
113+62.5 RT	C&G WISCONSIN ST.	-	5
113+62.8 RT	WISCONSIN STREET	26	-
114+30.4 LT	WISCONSIN STREET	34	-
115+63 RT	P-LOT 501 W. PARK AVE	128	-
116+58 RT	C&G PORTLAND STREET	-	5
116+58 RT	PORTLAND STREET	25.5	-
118+17 RT	DRIVEWAY	-	23
119+93 RT	HOLMES AVE/GREENVILLE ST	-	48
138+10 RT	P-LOT 1 W. PARK AVE	174.5	-
139+09 RT	SIDEWALK	-	6
139+52.4 LT	SIDEWALK	-	6
139+70 LT/RT	MAINLINE/MAIN ST	-	317
CAT 0010 TOTALS		710	481

<u>PAVEMENT MARKING</u>						
		646.1020	646.6020	646.7420	646.7520	
		<u>MARKING</u>	<u>MARKING STOP LINE</u>	<u>MARKING</u>	<u>MARKING CROSSWALK</u>	
		<u>EPOXY 4-INCH</u>	<u>EPOXY 12-INCH</u>	<u>CROSSWALK EPOXY</u>	<u>EPOXY LADDER</u>	
<u>STATION</u>	<u>LOCATION</u>	<u>LF</u>	<u>LF</u>	<u>6-INCH</u>	<u>PATTERN 24-INCH</u>	<u>REMARKS</u>
CAT 0010						
100+73.5 - 106+77	0' RT/LT	1207	-	-	-	DOUBLE YELLOW CENTERLINE GARDEN ST.
106+77.5 - 107+43	LT	-	-	131.5	-	
107+67.5 - 113+20.5	0' RT/LT	1106	-	-	-	DOUBLE YELLOW CENTERLINE
113+71 - 114+30.5	0' RT/LT	119	-	-	-	DOUBLE YELLOW CENTERLINE
114+04 - 114+83.5	LT	-	-	159	-	WISCONSIN ST.
114+74.5 - 115+94.5	0' RT/LT	120	-	-	-	DOUBLE YELLOW CENTERLINE
116+87.5 - 139+15	0' RT/LT	4455	-	-	-	DOUBLE YELLOW CENTERLINE
139+11.6	0' LT - 14' RT	-	14	-	-	PARK AVE. AT MAIN ST.
139+23.8	RT/LT	-	-	93.5	-	PARK AVE.
139+57 - 140+19	LT	-	-	-	160	MAIN ST.
140+15	LT	-	24	-	-	PARK AVE. TURN LANE
ITEM TOTALS		7007	38	384	160	

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PERMANENT SIGNING													
SIGN GROUP CODE	STATION	SIGN CODE	SIGN MESSAGE	TYPE II SIZE	637.2230 REFLECTIVE F SF	634.0410		638.2102 MOVING SIGN TYPE II EACH	634.0616		638.2602 SIGN TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
						637.2230 SIGNS	637.2230 TYPE II		634.0616 POSTS	634.0616 POSTS			
							4X4-INCH 10-FT EACH		4X6-INCH 16-FT EACH	SPV.0060.19 INSTALL CITY PROVIDED SIGN EACH			
CAT 0010													
A1	99+77 LT		LAKE HALLIE	-	-	-	-	1	-	-	-	-	
A2	100+45 RT	R1-1	STOP	30"X30"	6.25	-	1	-	-	1	1	1	
A3	100+60 RT		CHURCH SIGN	-	-	-	-	1	-	-	-	-	
A4	100+60 RT		CITY PARKING	-	-	-	-	1	-	-	-	-	
A5	102+60 RT	R2-1	SPEED LIMIT 35	24"X30"	5.00	-	1	-	-	1	1	1	
A6	106+60 LT	M1-8	BIKE ROUTE	18"X24"	-	1	-	-	1	-	-	-	TRAIL SIGN
A7	106+60 LT	R1-1	STOP	18"X18"	1.86	1	-	-	-	-	-	-	TRAIL SIGN
A8	GARDEN ST.	W11-5	PED/BIKE XING	30"X30"	6.25	-	1	-	-	-	-	-	
A9	106+80 LT	R1-1	STOP	30"X30"	6.25	-	1	-	-	1	1	1	
B1	107+63 LT	R1-1	STOP	18"X18"	1.86	1	-	-	-	-	-	-	TRAIL SIGN
B2	107+63 LT	M1-8	BIKE ROUTE	18"X24"	-	1	-	-	1	-	-	-	TRAIL SIGN
B3	113+06 RT	-	YELLOW STONE	-	-	-	-	1	-	-	-	-	
B4	113+06 LT	R2-1	SPEED LIMIT 35	24"X30"	5.00	-	1	-	-	1	1	1	
B5	113+75 RT	R1-1	STOP	30"X30"	6.25	-	1	-	-	1	1	1	
B6	113+83 LT	R1-1	STOP	18"X18"	1.86	1	-	-	-	-	-	-	TRAIL SIGN
B7	113+83 LT	M1-8	BIKE ROUTE	18"X24"	-	1	-	-	1	-	-	-	TRAIL SIGN
B8	114+05 LT	R1-1	STOP	30"X30"	6.25	-	1	-	-	1	1	1	
B9	WISCONSIN ST.	W11-5	PED/BIKE XING	30"X30"	6.25	-	1	-	-	-	-	-	
B10	GARDEN ST.	W5-54D	OBJECT MAKER	18"X18"	1.86	-	1	-	-	-	-	-	
B11	GARDEN ST.	W5-54D	OBJECT MAKER	18"X18"	1.86	-	1	-	-	-	-	-	
B12	GARDEN ST.	W5-54D	OBJECT MAKER	18"X18"	1.86	-	1	-	-	-	-	-	
C1	115+05 LT	R1-1	STOP	18"X18"	1.86	1	-	-	-	-	-	-	TRAIL SIGN
C2	115+05 LT	M1-8	BIKE ROUTE	18"X24"	-	1	-	-	1	-	-	-	TRAIL SIGN
C3	PORTLAND AVE.	R1-1	STOP	30"X30"	6.25	-	1	-	-	1	1	1	
C4	118+45 RT	-	YELLOW STONE	-	-	-	-	-	-	1	1	1	
C5	119+05 RT	-	STOP	-	-	-	-	-	-	1	1	1	
C6	INTERSECTION	W 1-8	OBJECT MAKER	18"X24"	3.00	-	1	-	-	-	-	-	GREENVILLE ST./HOLMES AVE.
C7	INTERSECTION	W 1-8	OBJECT MAKER	18"X24"	3.00	-	1	-	-	-	-	-	GREENVILLE ST./HOLMES AVE.
C8	INTERSECTION	W 1-8	OBJECT MAKER	18"X24"	3.00	-	1	-	-	-	-	-	GREENVILLE ST./HOLMES AVE.
C9	GREENVILLE ST.	-	SPEED LIMIT 25	-	-	-	-	-	-	1	1	1	
C10	120+75 RT	R2-1	SPEED LIMIT 35	24"X30"	5.00	-	1	-	-	1	1	1	
C11	GREENVILLE ST.	-	YELLOW STONE	-	-	-	-	-	-	1	1	1	
D1	131+35 RT	W3-1	STOP AHEAD	36"X36"	9.00	-	-	1	-	1	1	1	
D2	136+90 LT	R2-1	SPEED LIMIT 35	24"X30"	5.00	-	-	1	-	1	1	1	
E1	139+02 RT	R1-1	STOP	36"X36"	9.00	-	1	-	-	1	1	1	
E2	139+30 LT	R1-1	STOP	18"X18"	1.86	1	-	-	-	-	-	-	TRAIL SIGN
E3	139+30 LT	M1-8	BIKE ROUTE	18"X24"	-	1	-	-	1	-	-	-	TRAIL SIGN
CAT 0010 TOTALS					105.63	10	17	6	5	15	15		

TRAFFIC CONTROL SIGNS

LOCATION	NO. OF SIGNS	NO. OF BARRICADES	NO. OF TYPE A		643.0900	643.0420	643.0705
			WARNING LIGHTS	DAYS OF SERVICE	TRAFFIC CONTROL SIGNS DAY	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY
<u>CAT 0010</u>							
<u>MAINLINE CLOSURE</u>							
PROJECT BEGIN	5	6	8	148	740	888	1184
SOUTH AVENUE	5	6	8	148	740	888	1184
GARDEN STREET	5	6	8	148	740	888	1184
WISCONSIN STREET SOUTH	5	6	8	148	740	888	1184
WISCONSIN STREET NORTH	5	6	8	148	740	888	1184
PORTLAND STREET	5	6	8	148	740	888	1184
GREENVILLE STREET	5	6	8	148	740	888	1184
MAIN STREET SOUTH	5	6	8	148	740	888	1184
MAIN STREET NORTH	5	6	8	148	740	888	1184
END PROJECT	5	6	8	148	740	888	1184
<u>PRIMARY PARK AVE DETOUR</u>							
EASTBOUND	10	-	-	148	1480	-	-
WESTBOUND	9	-	-	148	1332	-	-
<u>MAIN STREET DETOUR</u>							
EASTBOUND	11	-	-	14	154	-	-
WESTBOUND	9	6	8	14	126	84	-
CAT 0010 TOTAL					10492	8964	11840

*SEE SDD 15C02 FOR LAYOUT
 CHIPPEWA FALLS TO PROVIDE "PARK AVENUE" AND "MAIN ST" SIGNS FOR DETOUR. CONTRACTOR TO PROVIDE ALL OTHERS.

TRAFFIC CONTROL MESSAGE SIGNS

LOCATION	NO. OF PCMS EACH	DAYS OF SERVICE	643.1050
			TRAFFIC CONTROL SIGNS PCMS DAYS
<u>CAT 0010</u>			
STH 124 (EB TRAFFIC)	1	162	162
PARK AVE (WB TRAFFIC)	1	162	162
CAT 0010 TOTAL			324

CONSTRUCTION STAKING ROADWAY

STATION - STATION	LOCATION	650.4500	650.5000	650.9920
		CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING SLOPE STAKES LF
CAT 0010				
100+00 - 139+70	MAINLINE PARK AVENUE	3970	3970	3970
200+00 - 200+95	SOUTH AVENUE	95	95	95
299+07 - 300+00	GARDEN STREET	93	93	93
400+00 - 400+65	WISCONSIN STREET (EAST)	65	65	65
499+08 - 500+00	WISCONSIN STREET (WEST)	92	92	92
600+00 - 600+72	PORTLAND AVENUE	72	72	72
799+21 - 801+18	MAIN STREET	197	197	197
99+73 - 139+38	SHARED USE PATH	3965	3965	
	CAT 0010 TOTAL	8549	8549	4584

TEMPORARY ACCESS AT 725 PARK AVENUE

LOCATION	204.0165	SPV.0195.01
	REMOVING GUARDRAIL LF	WALKING TRAIL BASE AGGREGATE TON
CAT 0010		
725 PARK AVE (ENTRANCE FROM GARDEN ST)	25	5
CAT 0010 TOTAL	25	5

BASE AGGREGATE AND RESTORATION FOR THIS AREA LOCATED UNDER THOSE RESPECTIVE ITEMS

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				SANITARY SEWER													
				SPV.0090.01	SPV.0090.02	SPV.0090.03	SPV.0090.04	SPV.0090.05	SPV.0060.01	SPV.0060.02	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0200.01	SPV.0060.06.	612.0902.S	SPV.0090.06
				REMOVING	SANITARY	SANITARY	SANITARY	SANITARY SEWER	REMOVE	ABANDON	ABANDON	SANITARY	SANITARY	OUTSIDE	CONNECT	INSULATION	CRUSHED ROCK
				SANITARY	SEWER 8-	SEWER 10-	SEWER 12-	REINFORCED	SANITARY	SANITARY	SANITARY	MANHOLE	MANHOLE	DROP	TO EXISTING	BOARD	FOR PIPE
				PIPE, 8-INCH	INCH	INCH	INCH	CONCRETE PIPE	MANHOLE	MANHOLE	PIPE	4FT-DIA.	COVER TYPE 1	MANHOLE	SANITARY	POLYSTYRENE	STABILIZATION,
				LF	LF	LF	LF	24-INCH	EACH	EACH	EACH	EACH	EACH	VF	EACH	2-INCH	SANITARY
STATION	LOCATION	STRUCTURE	DOWNSTREAM STRUCTURE	LF	LF	LF	LF	LF	EACH	EACH	EACH	EACH	EACH	VF	EACH	SY	LF
CAT 0020																	
104+58	RT	EXISTING	SA-1729	90	31	-	-	-	-	-	-	-	-	-	1	-	-
104+50	LT	EXISTING		-	-	-	-	-	1	1	-	-	-	-	-	-	-
104+58	0' RT	SA-1729	SA-559	-	263	-	-	-	-	-	1	1	-	-	-	-	-
107+00	LT	SA-559	SA-1730	-	67.5	-	-	-	1	-	2	1	1	-	1	-	-
107+21	0' RT	SA-1730	SA-558	-	-	-	304	-	-	-	-	1	1	-	-	-	-
110+11	LT	SA-558 EX		-	-	-	-	-	-	1	2	-	-	-	-	-	-
110+25	0' RT	SA-558	SA-557	-	-	-	331	-	-	-	-	1	1	-	-	-	-
113+58	56' RT	EXISTING	SA-556	-	-	-	10	-	-	-	-	-	-	-	1	-	-
113+56	46' RT	SA-556	SA-557	-	-	-	46	-	1	-	2	1	1	-	-	-	-
113+31	60' LT	SA-557 EX		-	-	-	-	-	-	1	2	-	-	-	-	-	-
113+56	60' LT	SA-557 EX		-	-	-	-	-	-	1	3	-	-	-	-	-	-
113+56	0' RT	SA-557	SA-551	-	-	-	287	-	-	-	1	1	1	-	-	-	-
116+41	32.5' RT	SA-550 EX	SA-551	-	-	32.5	-	-	-	-	-	-	-	-	1	-	-
116+46	56' LT	SA-551 EX		-	-	-	-	-	-	1	3	-	-	-	-	-	-
116+43	0' RT	SA-551	SA-568	-	-	-	181	-	-	-	1	1	1	9	-	-	-
118+25	0' RT	SA-568	SA-569	-	-	-	275	-	-	-	-	1	1	-	-	-	-
120+02	46' LT	SA-568 EX		-	-	-	-	-	1	2	-	-	-	-	-	-	-
121+00	0' RT	SA-569	SA-570	-	-	-	285	-	-	-	-	1	1	-	-	-	-
123+57	35' LT	SA-569 EX		-	-	-	-	-	-	1	2	-	-	-	-	-	-
123+85	0' RT	SA-570	SA-571	-	-	-	380	-	-	-	-	1	1	-	-	-	-
125+93	75' LT	SA-570 EX		-	-	-	-	-	-	1	2	-	-	-	-	-	-
127+65	0' RT	SA-571	SA-572	-	-	-	394	-	-	-	-	1	1	-	-	175	394
129+44	76' LT	SA-571 EX		-	-	-	-	-	1	2	-	-	-	-	-	-	-
131+59	0' RT	SA-572	SA-573	-	-	-	400	-	-	-	-	1	1	-	-	65	400
132+94	76' LT	SA-572 EX		-	-	-	-	-	1	2	-	-	-	-	-	-	-
135+59	0' RT	SA-573	SA-575	-	-	-	400	-	-	-	-	1	1	-	-	-	400
139+59	0' RT	SA-575	SA-1730	-	-	-	-	100.5	1	-	-	1	1	-	-	-	100.5
MAIN STREET																	
749+70	0' RT	SA-576 EX	SA-575	-	-	-	-	30	-	-	-	-	1	-	1	-	30
801+04	0' RT	SA-1731	EXISTING	-	-	-	-	-	-	-	-	1	1	-	1	-	-
CAT 0020 TOTALS				90	361.5	32.5	3293	130.5	3	10	25	15	16	9	6	240	1324.5

<u>MAINTAIN SANITARY SEWER FLOW</u>	
SPV.0105.01	
LOCATION	MAINTAIN SANITARY SEWER FLOW LS
CAT 0020	
PROJECT	1
CAT 0020 TOTAL	1

<u>SANITARY SERVICES</u>					
		SPV.0060.07	SPV.0090.07	SPV.0060.08	ADDRESS
		SANITARY WYE	SANITARY	RECONNECT EX.	
		12"x4", 12"x6"	SERVICE PIPE &	SAN SERV.	
			RISER 4-6 INCH		
PARCEL #	LOCATION	EACH	LF	EACH	
CAT 0020					
4317	RT	1	39	1	725 W PARK AVE
4304	RT	1	39	1	701 W PARK AVE
4305	RT	1	39	1	440 INTROWITZ DR
4303	RT	1	39	1	621 W PARK AVE
CAT 0020 TOTALS		4	156	4	

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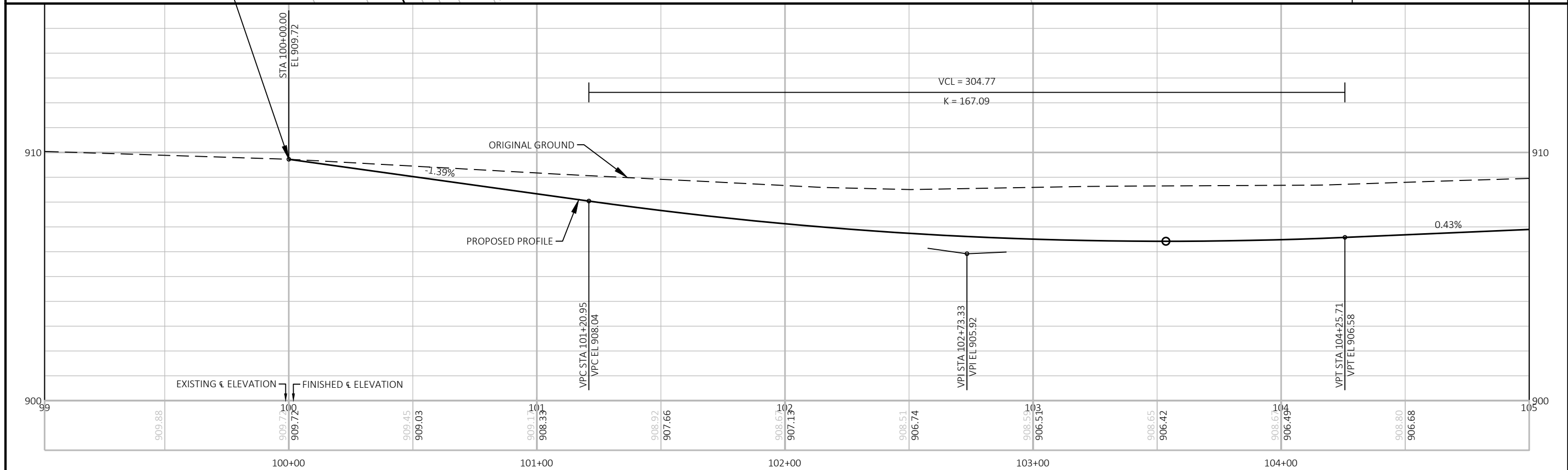
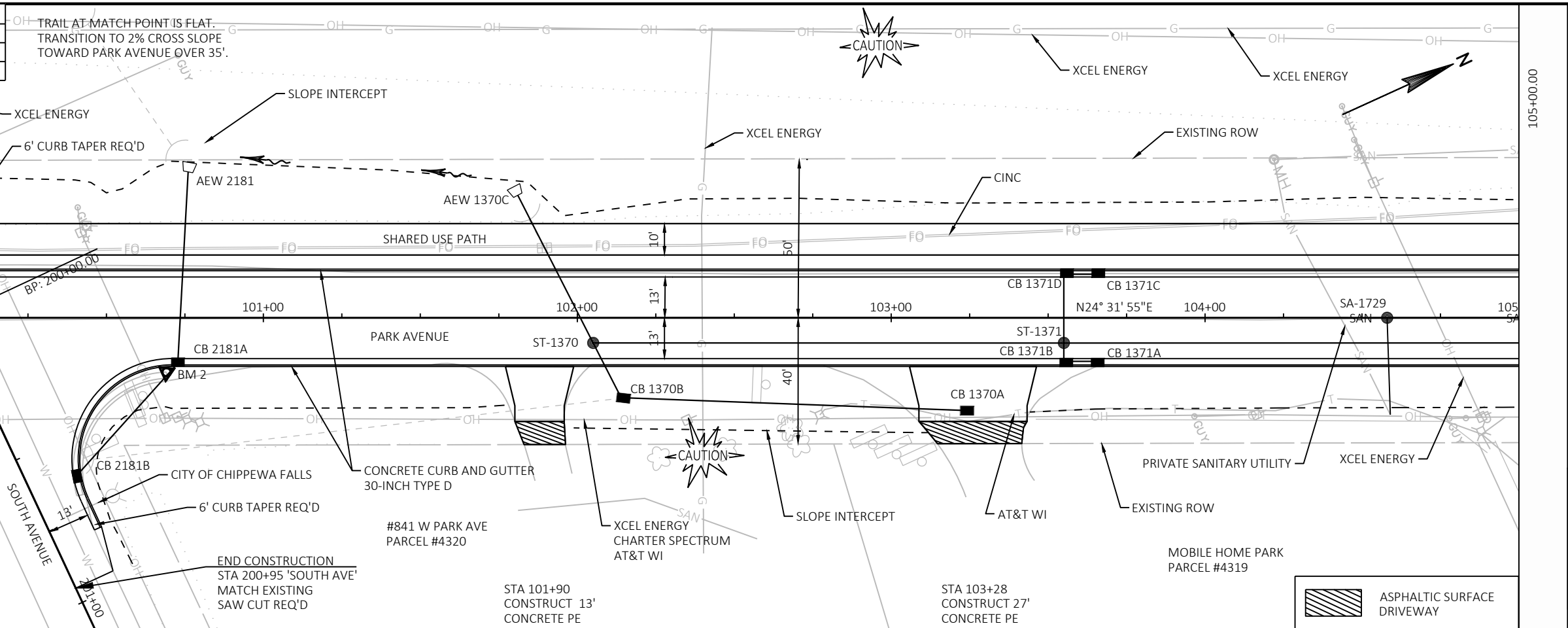
WATERMAIN

		SPV.0060.09	SPV.0060.10	SPV.0090.08	SPV.0090.09	SPV.0060.11	SPV.0060.12	SPV.0060.13	
		FIRE HYDRANT	GATE VALVE & BOX 6-INCH	HYDRANT LEAD DI 6-INCH	WATER MAIN DUCTILE IRON 6-INCH	CONNECT TO EXISTING WATER MAIN	REMOVING FIRE HYDRANT	ADJUST GATE VALVE BOX	
STATION	LOCATION	EACH	EACH	LF	LF	EACH	EACH	EACH	
CAT 0020									
107+27	30' RT	1	1	4	-	1	1	-	
107+34	34' RT	-	1	-	5	2	-	-	
113+66.7	26' RT	-	1	-	5	2	-	-	
116+65	54' RT	-	1	-	5	1	-	-	
116+74	54.5' RT	1	1	8	-	1	1	-	
139+50	13' LT	-	1	-	5	2	-	-	
99+96 'MAIN ST'	22.5' LT	-	-	-	-	-	-	1	
CAT 0020 TOTALS		2	6	12	20	9	2	1	

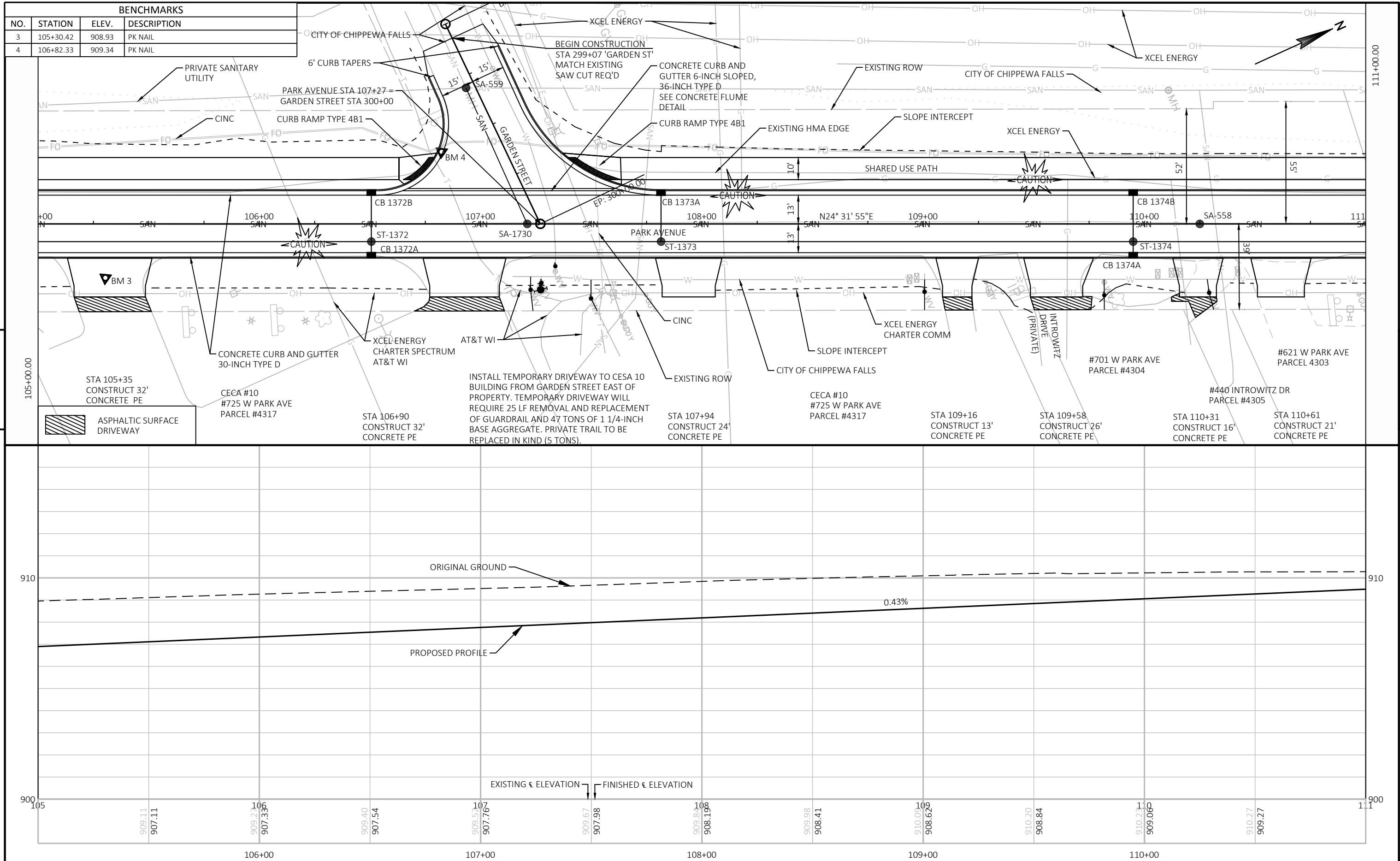
WATER SERVICES

		SPV.0090.10	SPV.0090.11	SPV.0060.14	SPV.0060.15	SPV.0060.16	SPV.0060.17	SPV.0060.18	
		WATER SERVICE PIPE, 1-INCH	WATER SERVICE PIPE, 1.5-INCH	CORPORATION STOP, 1-INCH	CORPORATION STOP, 1.5-INCH	CURB STOP & BOX, 1-INCH	CURB STOP & BOX, 1.5-INCH	RECONNECT EX. WATER SERVICE	ADDRESS
PARCEL #	LOCATION	LF	LF	EACH	EACH	EACH	EACH	EACH	
CAT 0020									
4317	RT	17	-	1	-	1	-	1	725 W PARK AVE
4317	RT	-	17	-	1	-	1	1	725 W PARK AVE
4316	RT	14	-	1	-	1	-	1	717 W PARK AVE
4304	RT	14	-	1	-	1	-	1	701 W PARK AVE
4305	RT	14	-	1	-	1	-	1	440 INTROWITZ DR
4303	RT	14	-	1	-	1	-	1	621 W PARK AVE
4302	RT	14	-	1	-	1	-	1	615 W PARK AVE
3472	RT	14	-	1	-	1	-	1	601 W PARK AVE
CAT 0020 TOTALS		101	17	7	1	7	1	8	

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1	99+72.91	908.51	PK NAIL
2	100+69.12	909.22	PK NAIL



PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE:	SHEET	E
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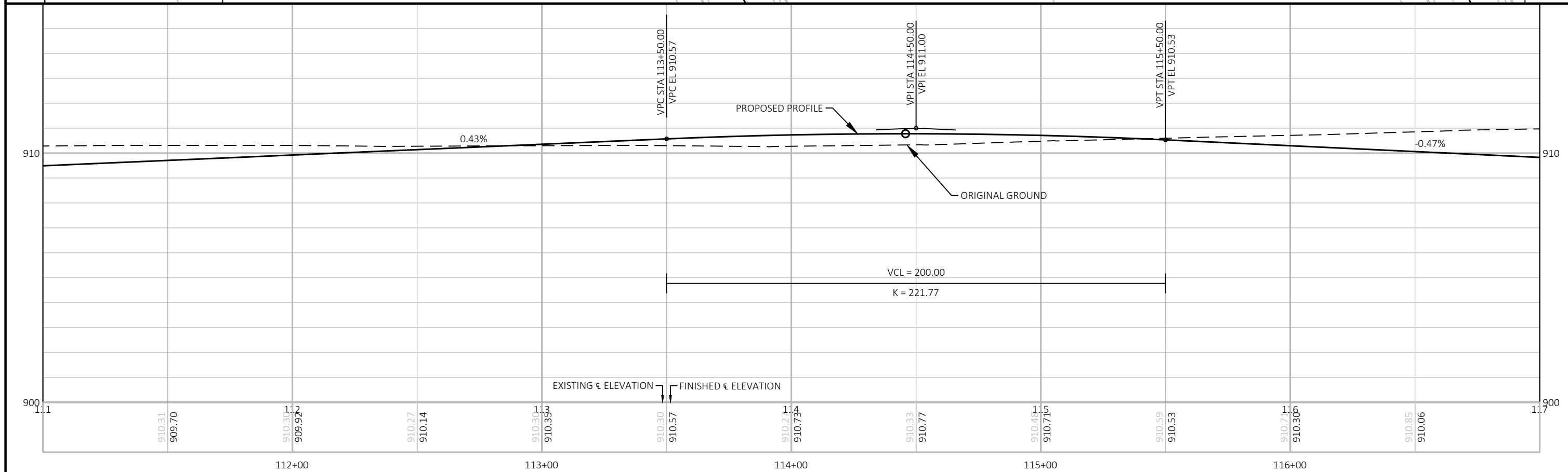
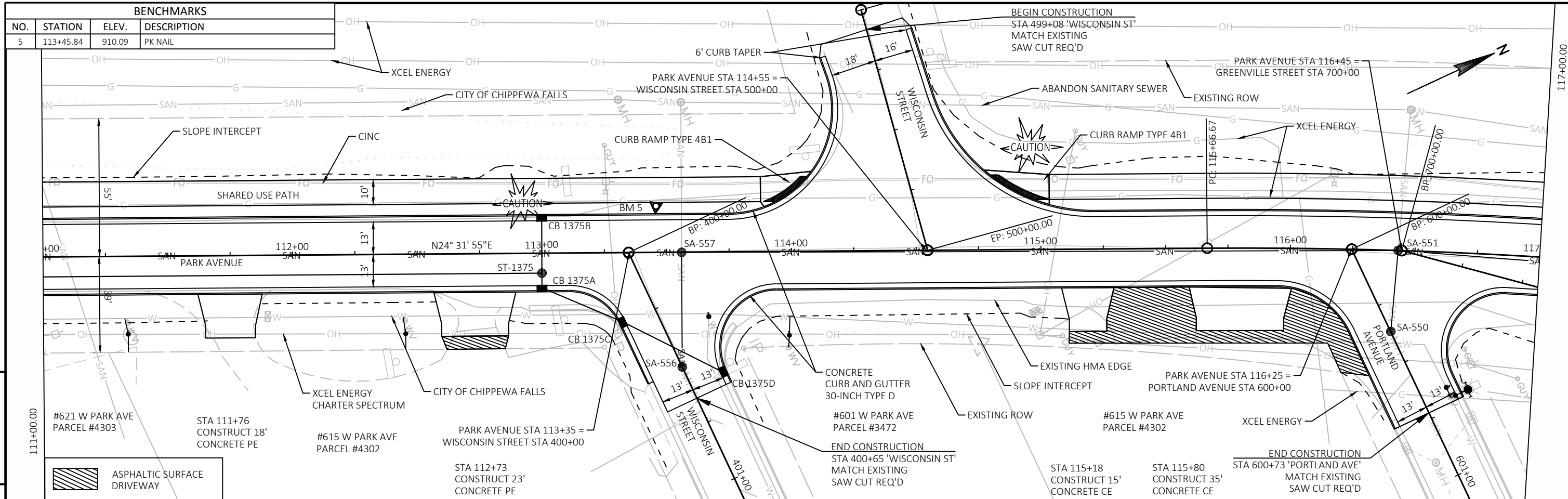


BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
3	105+30.42	908.93	PK NAIL
4	106+82.33	909.34	PK NAIL

5

5

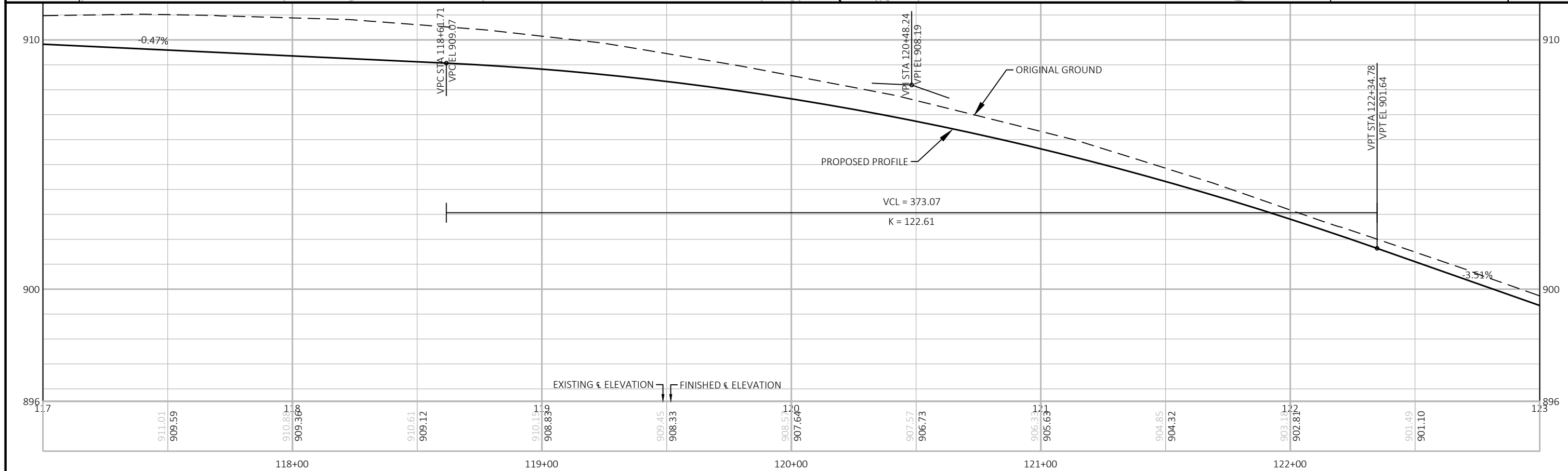
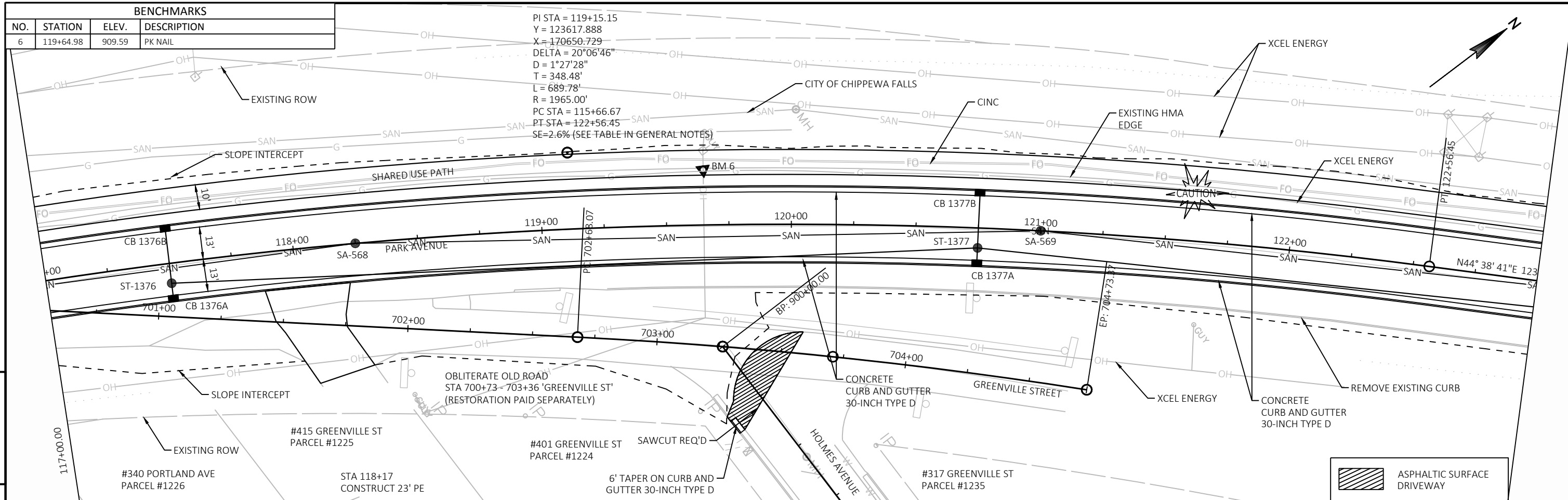
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE:	SHEET	E
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PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE:	SHEET	E
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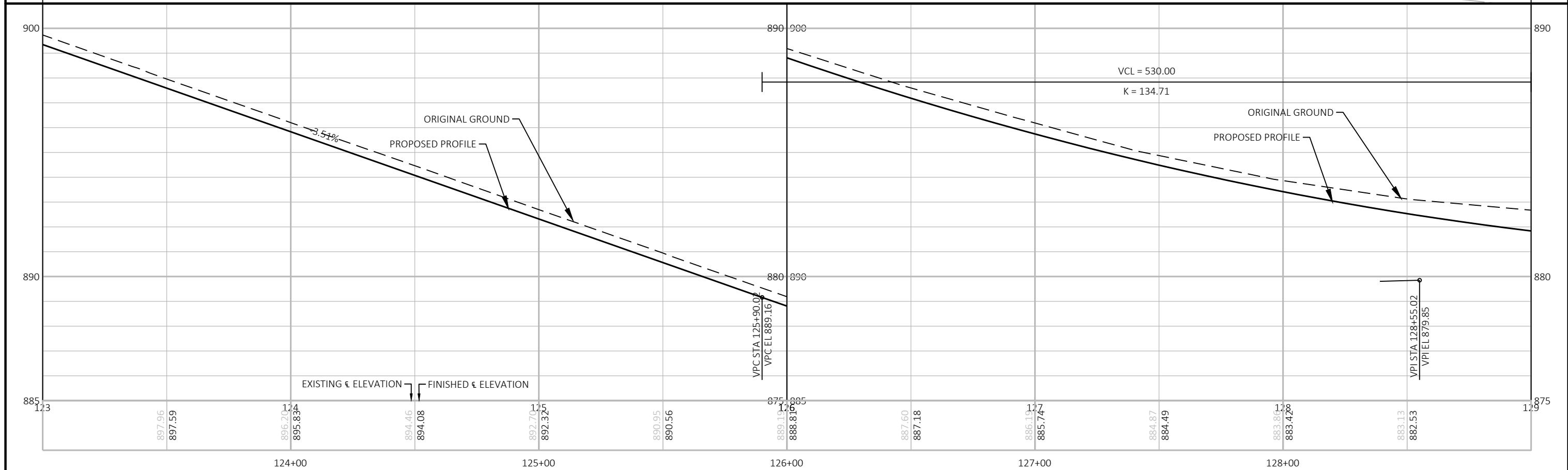
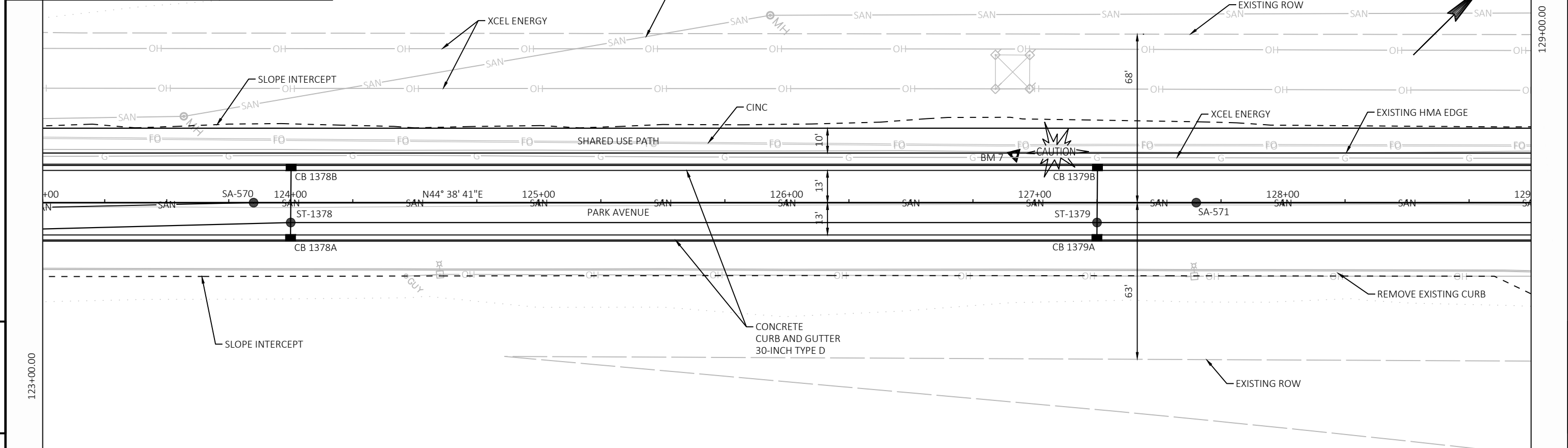
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
6	119+64.98	909.59	PK NAIL

PI STA = 119+15.15
 Y = 123617.888
 X = 170650.729
 DELTA = 20°06'46"
 D = 1°27'28"
 T = 348.48'
 L = 689.78'
 R = 1965.00'
 PC STA = 115+66.67
 PT STA = 122+56.45
 SE = 2.6% (SEE TABLE IN GENERAL NOTES)



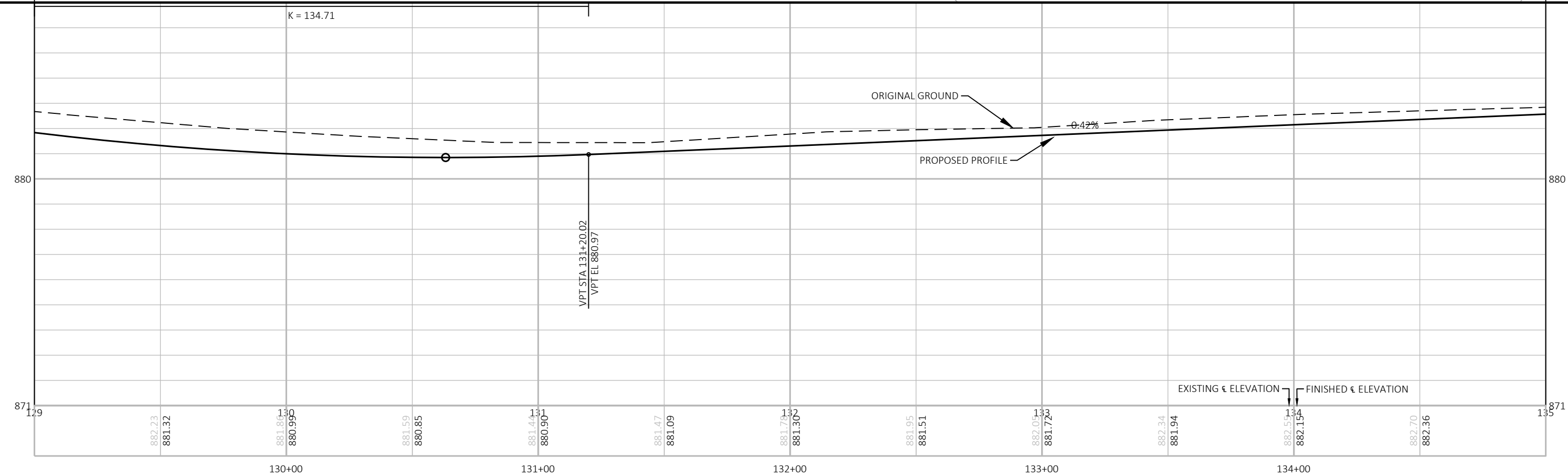
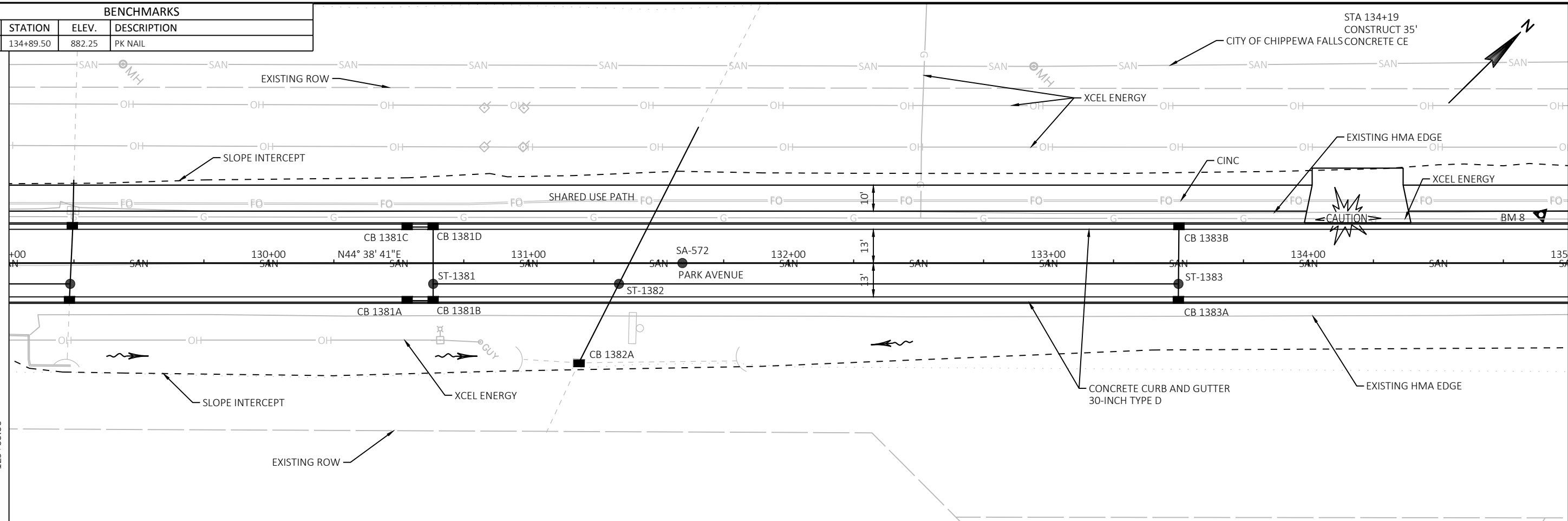
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE:	SHEET	E
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BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
7	126+91.76	886.32	PK NAIL



PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE:	SHEET	E
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BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
8	134+89.50	882.25	PK NAIL



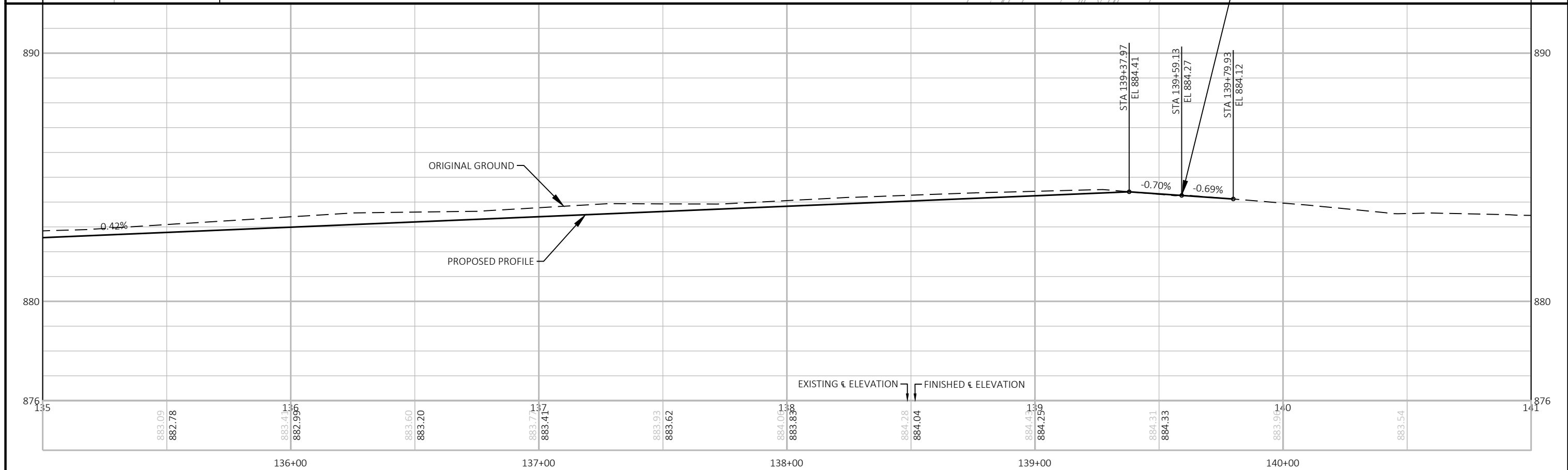
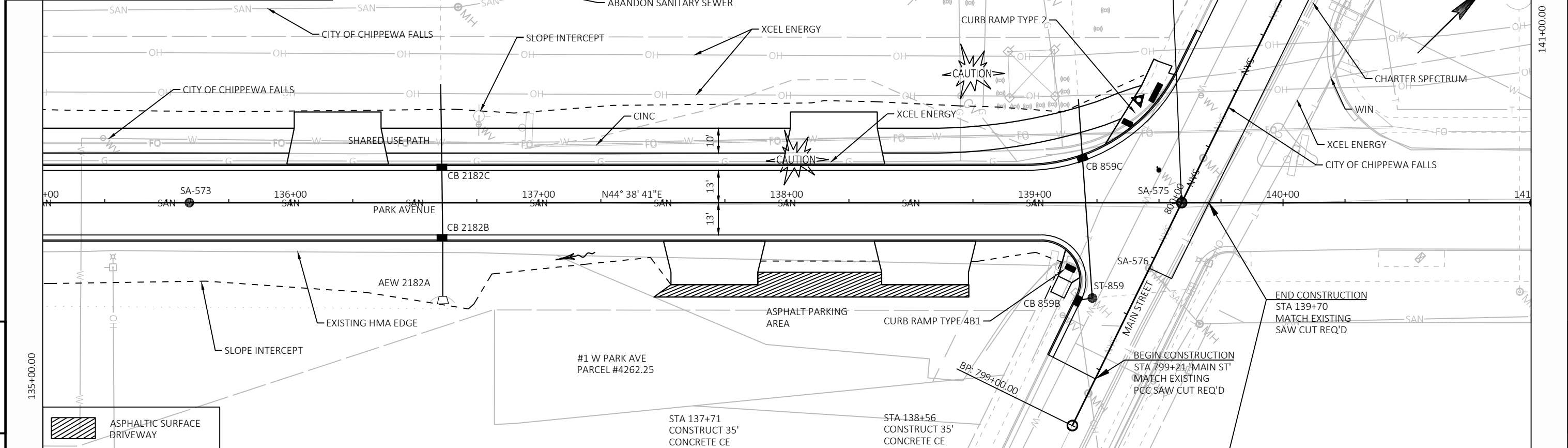
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE:	SHEET	E
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BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
9	139+41.81	882.87	PK NAIL

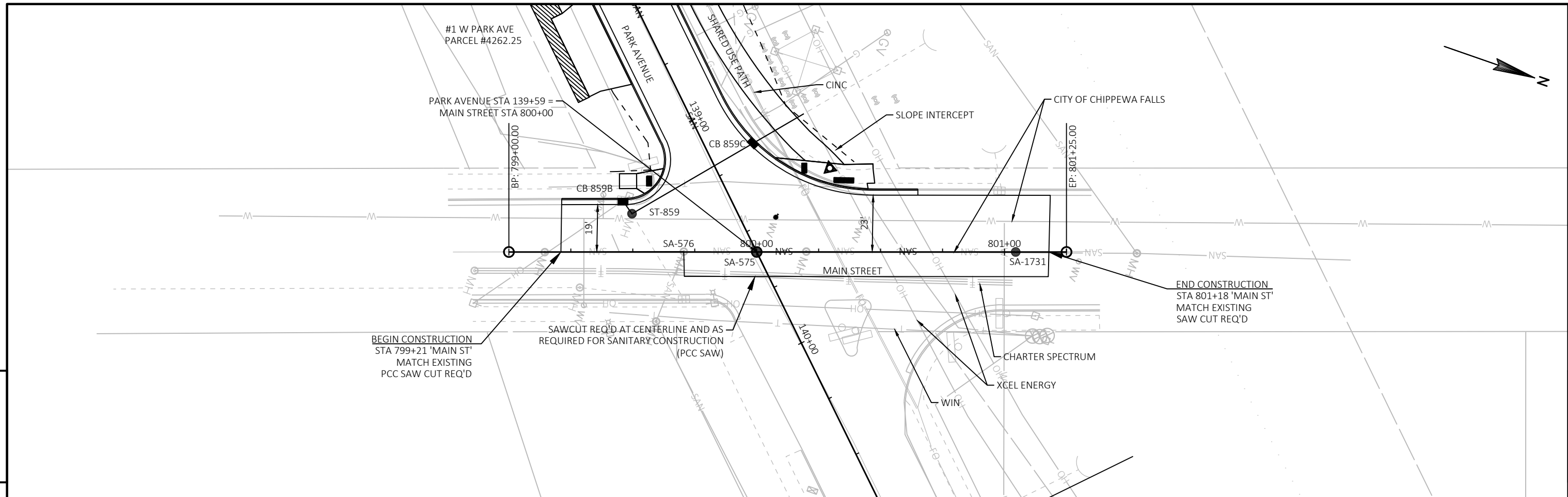
STA 136+19
CONSTRUCT 35'
CONCRETE CE

STA 138+19
CONSTRUCT 35'
CONCRETE CE

PARK AVENUE STA 139+59 =
MAIN STREET STA 800+00

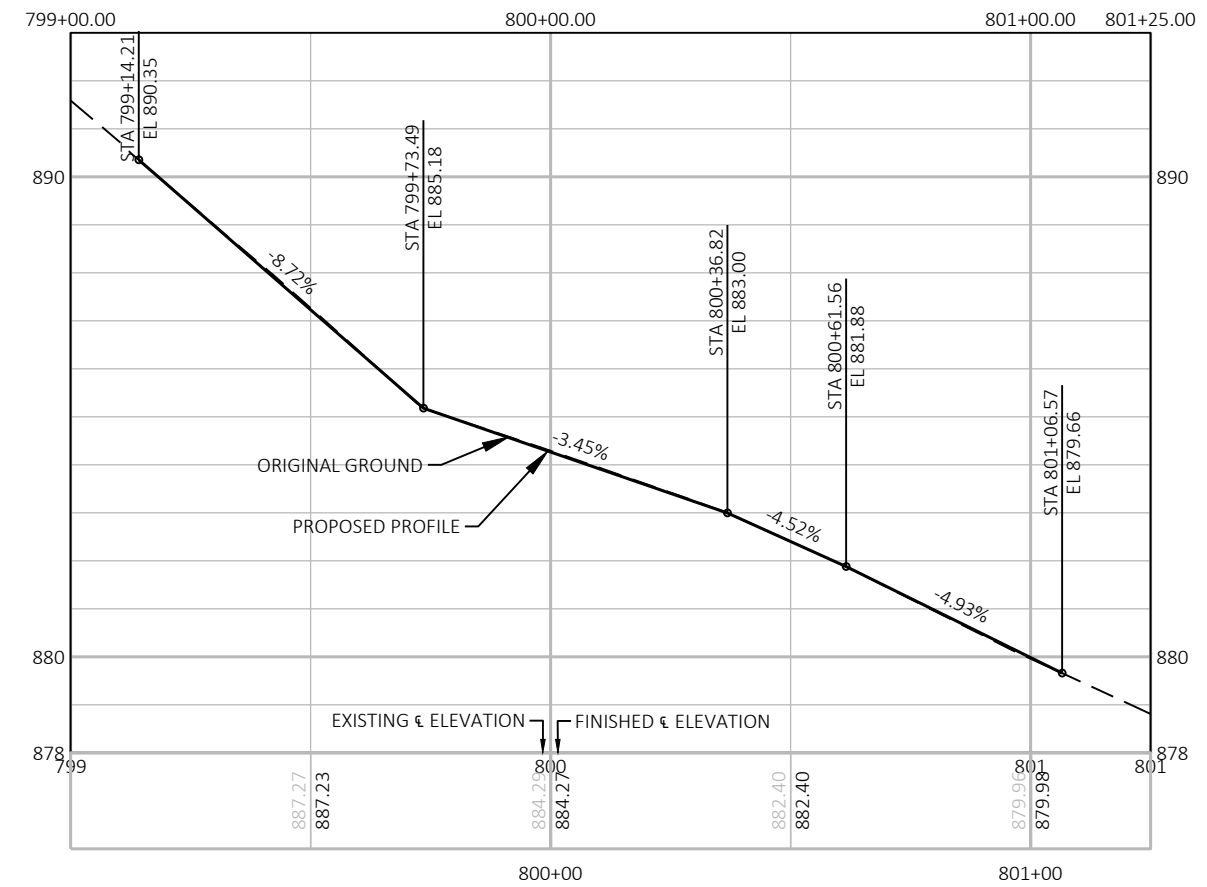


PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE:	SHEET	E
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5

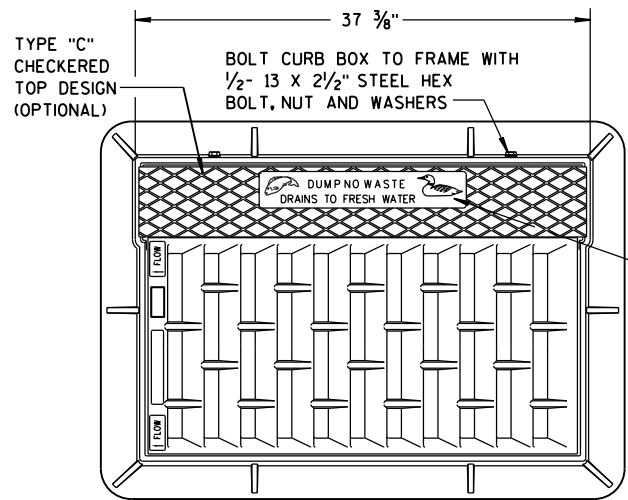
5



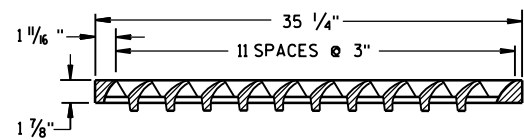
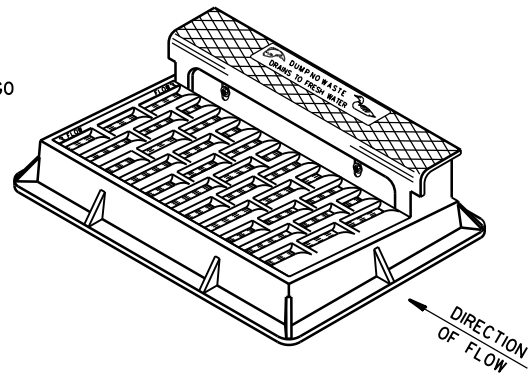
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	PLAN AND PROFILE: PLAN AND PROFILE	SHEET	E
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Standard Detail Drawing List

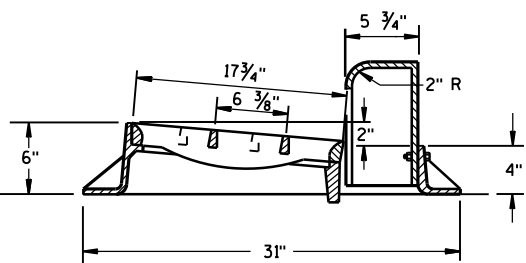
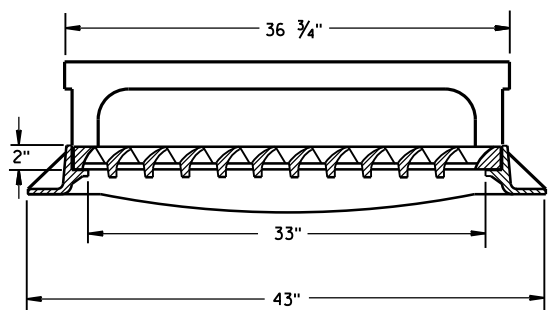
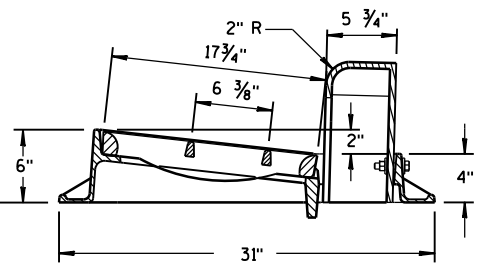
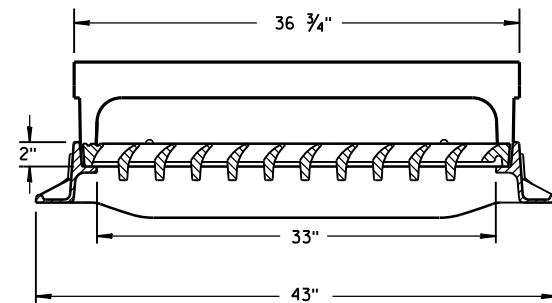
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



**NOTE:
GRATE IS REVERSIBLE.**

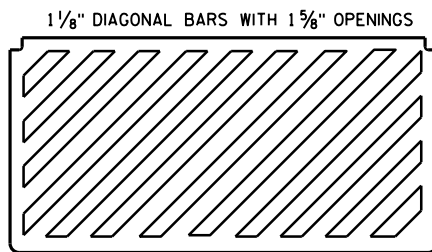


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



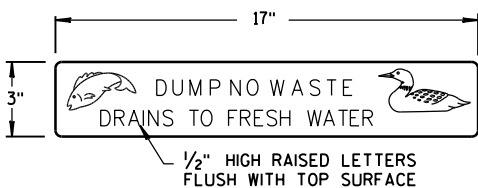
TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE

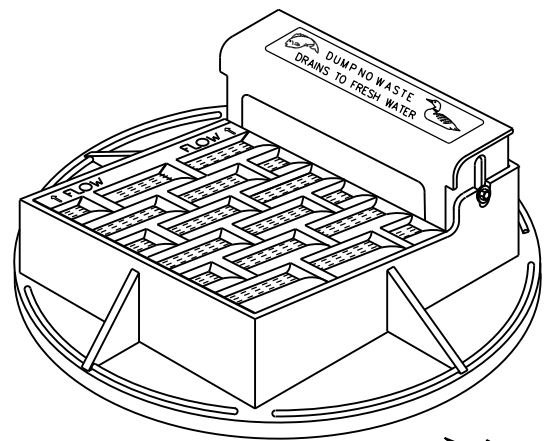


**SPECIAL GRATE FOR
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

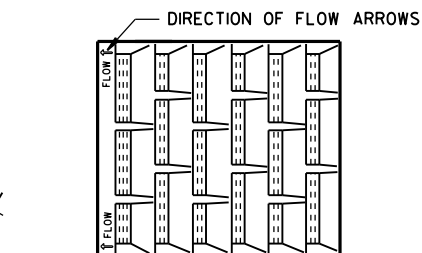
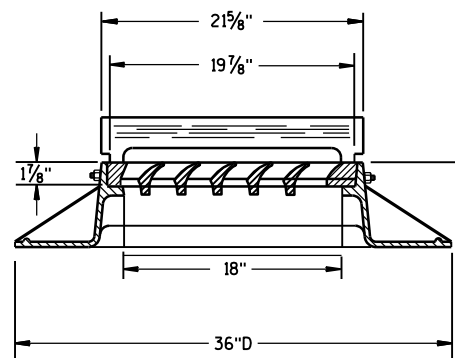


LOGO DETAIL

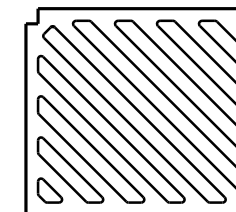


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

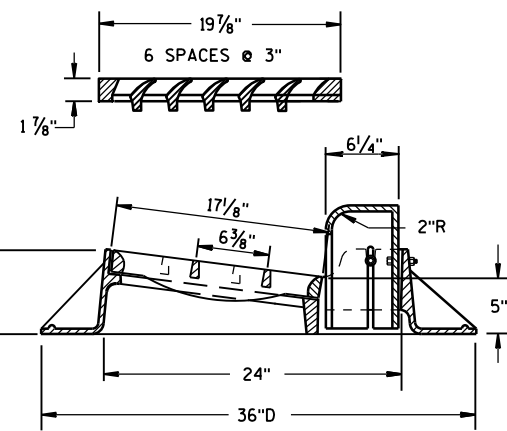
**NOTE:
GRATE IS REVERSIBLE.**



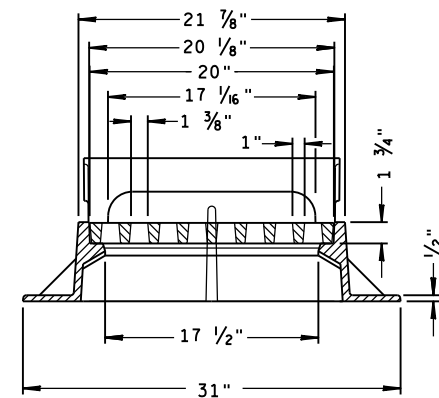
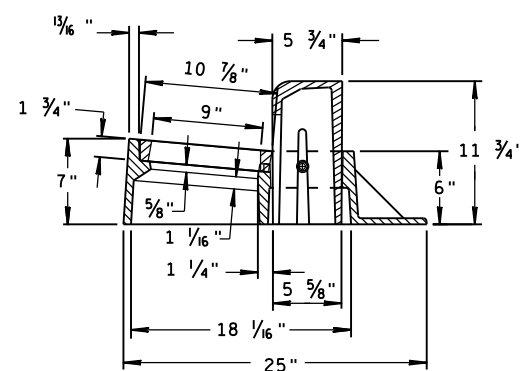
**1" DIAGONAL BARS
WITH 1 1/2" OPENINGS**



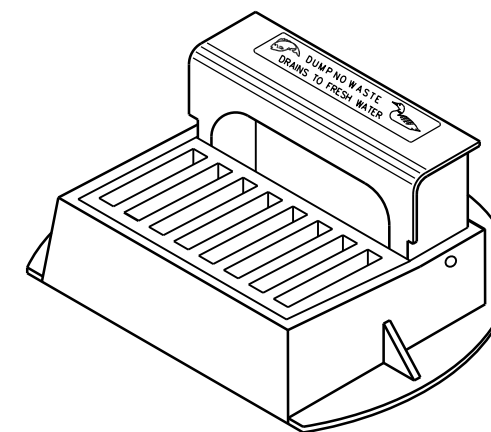
**SPECIAL GRATE FOR
TYPE "A" COVER**
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



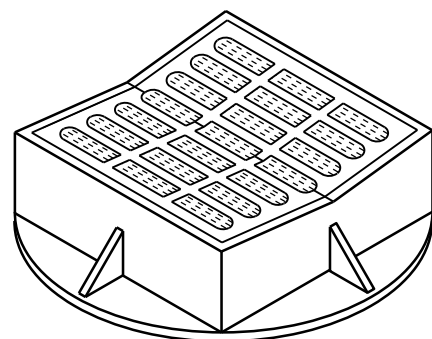
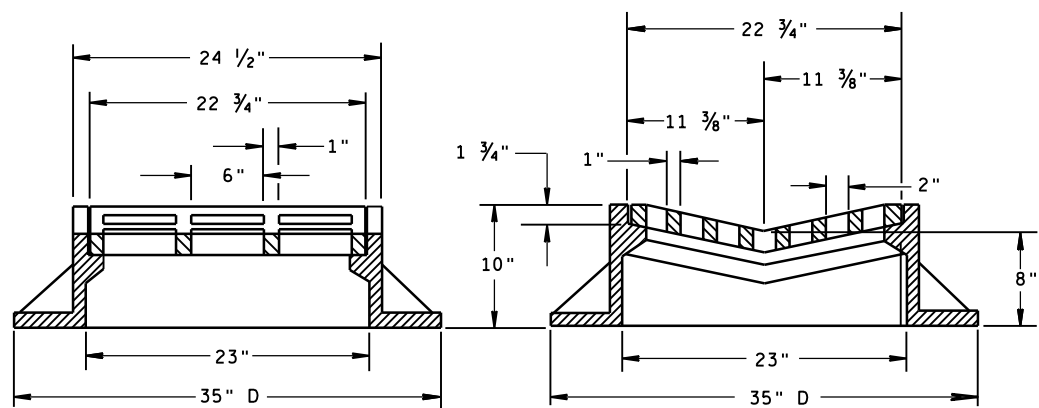
TYPE "Z"



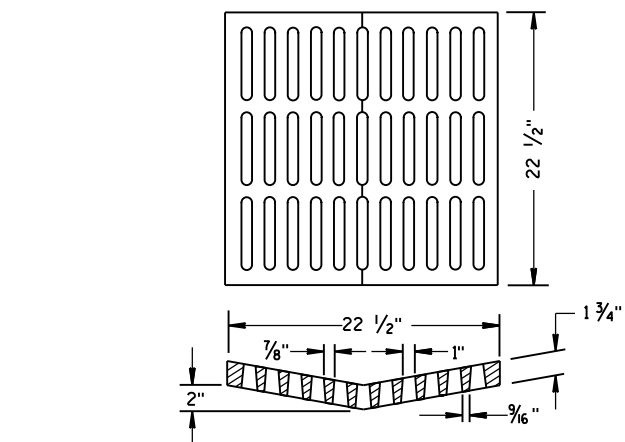
**INLET COVERS
TYPE A, H, A-S, H-S & Z**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

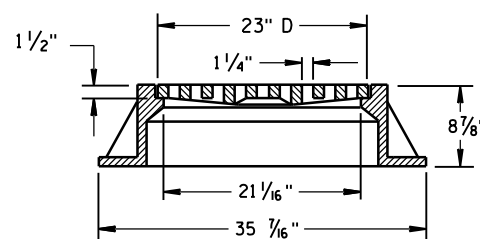
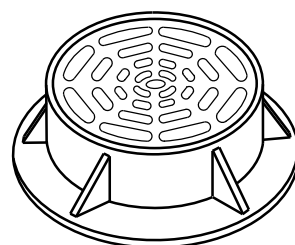
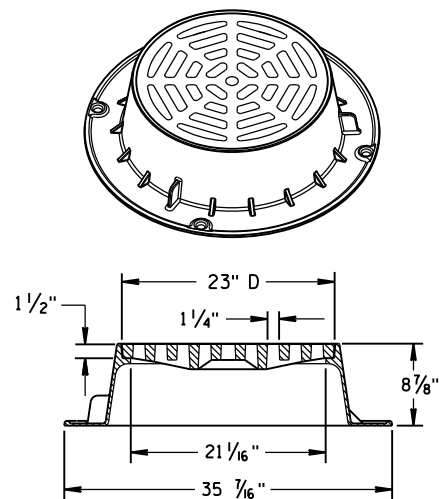


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

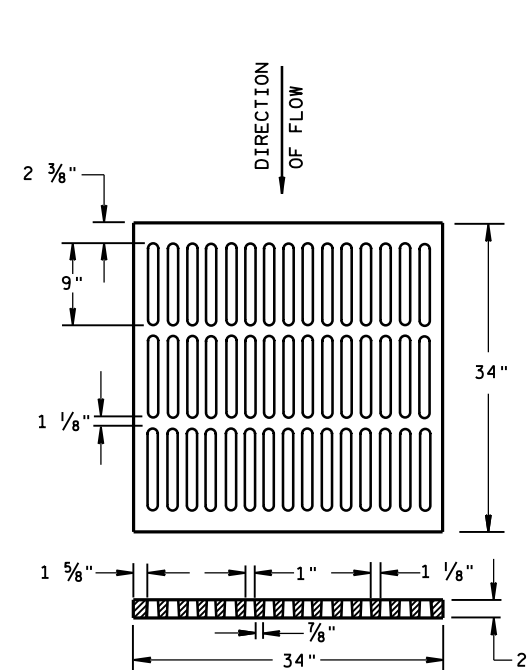
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

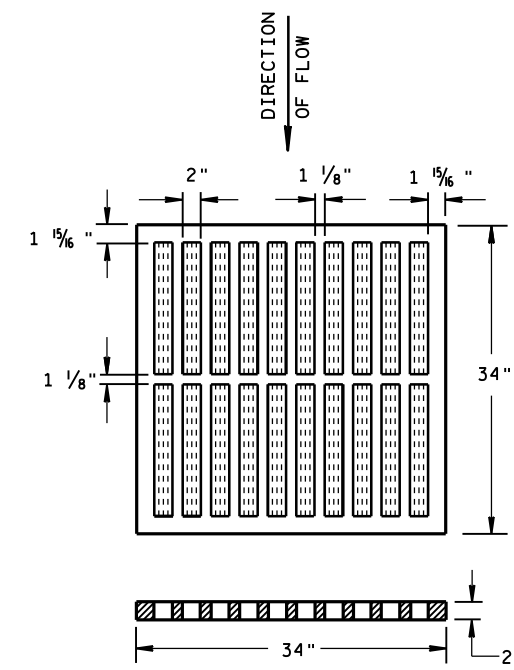
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



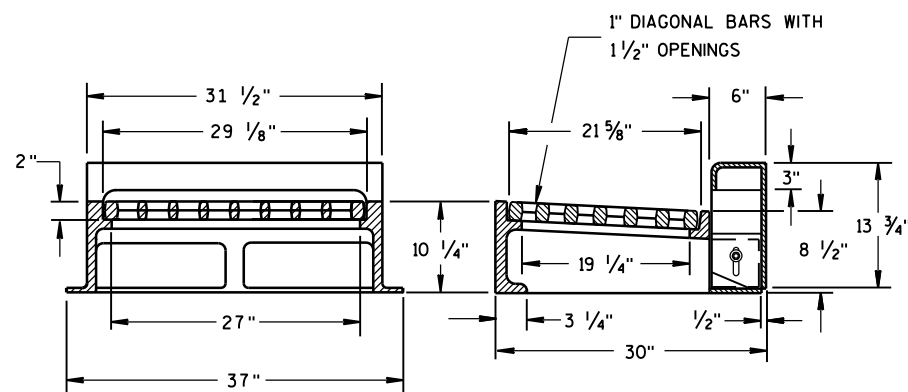
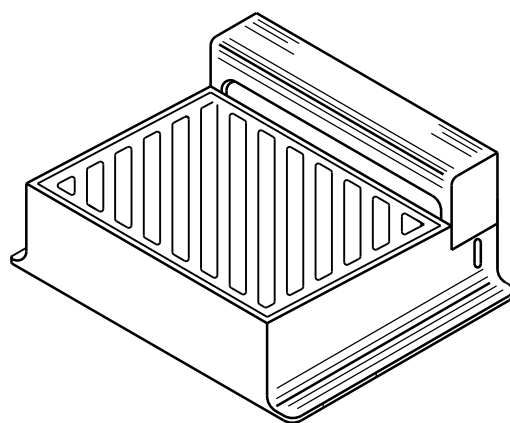
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

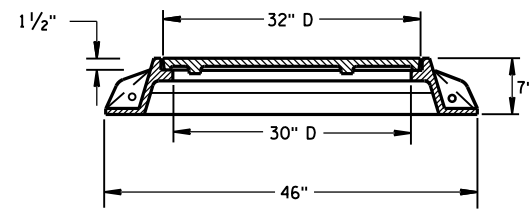
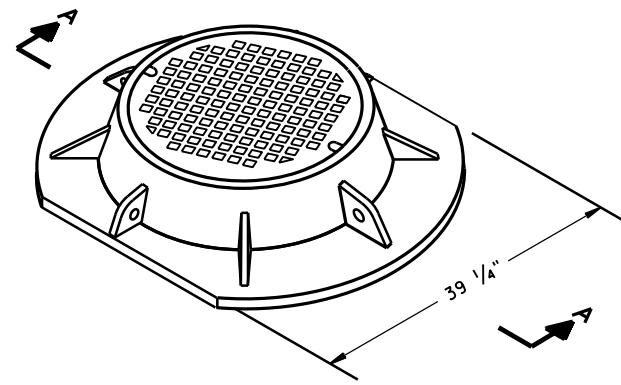
DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

DIRECTION OF FLOW

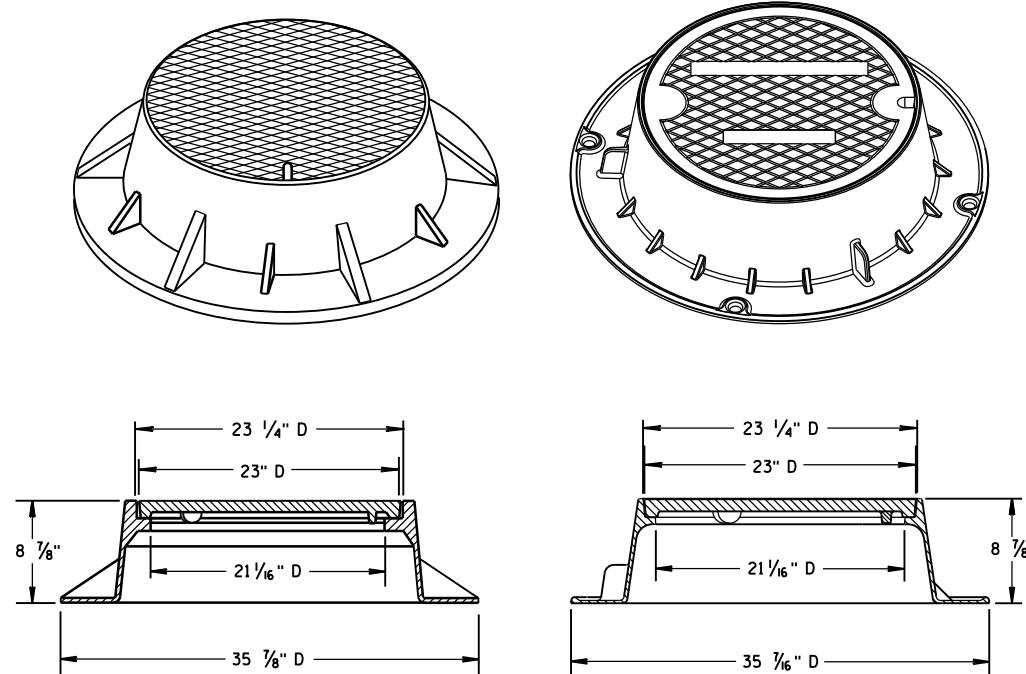
**INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 11/27/2013 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

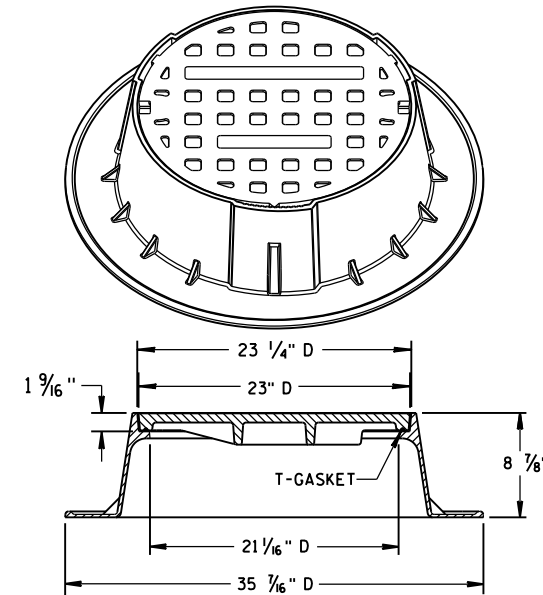


SECTION A-A
TYPE "K"



TYPE "J"

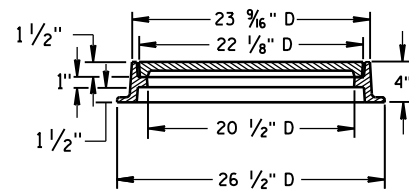
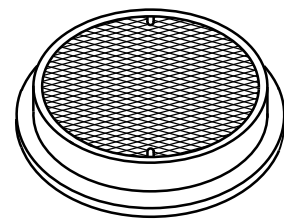
NOTE: EITHER CASTING IS ACCEPTABLE



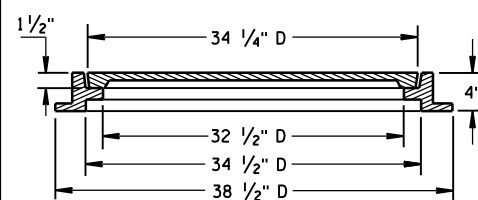
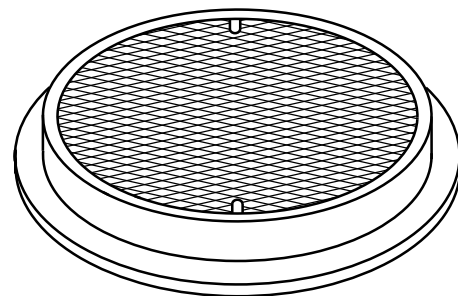
TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

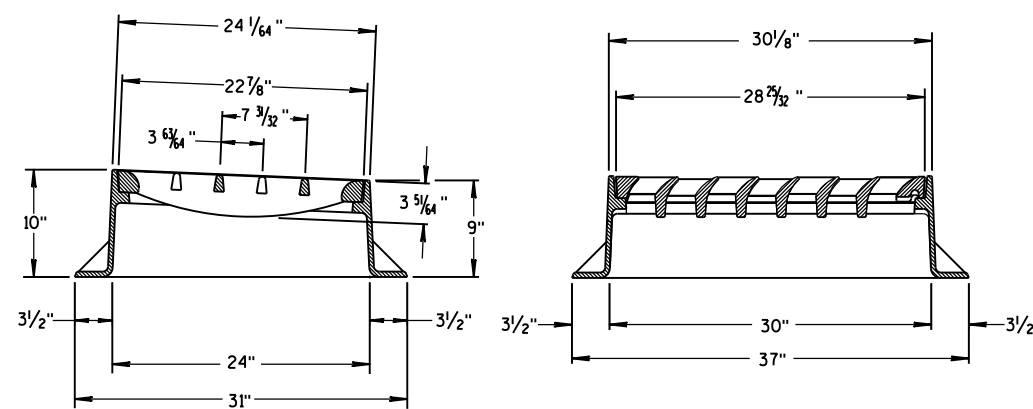
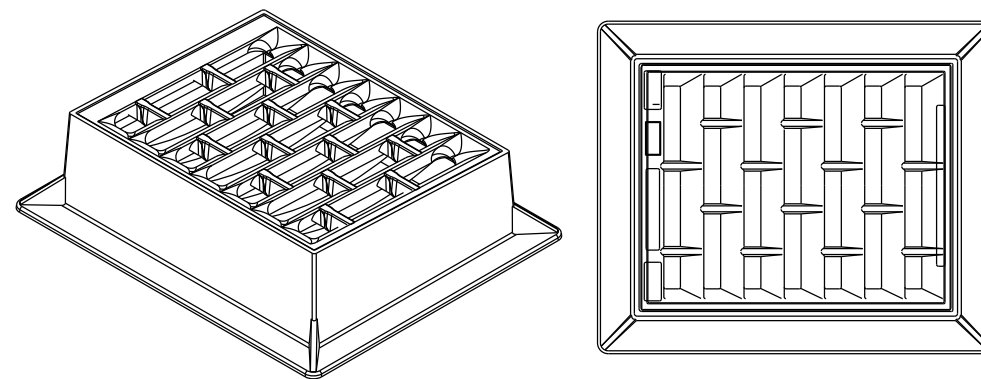
NOTE: EITHER CASTING IS ACCEPTABLE



TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

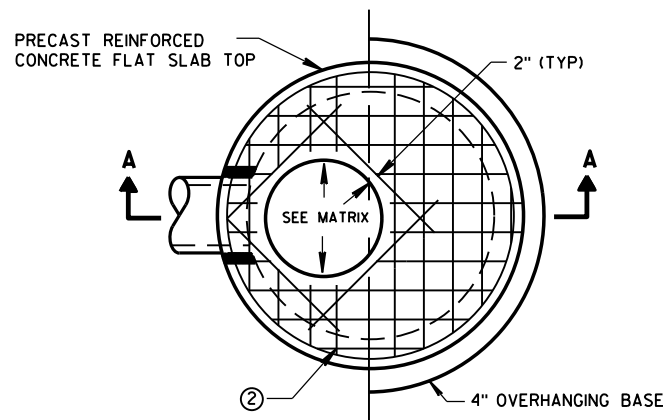
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

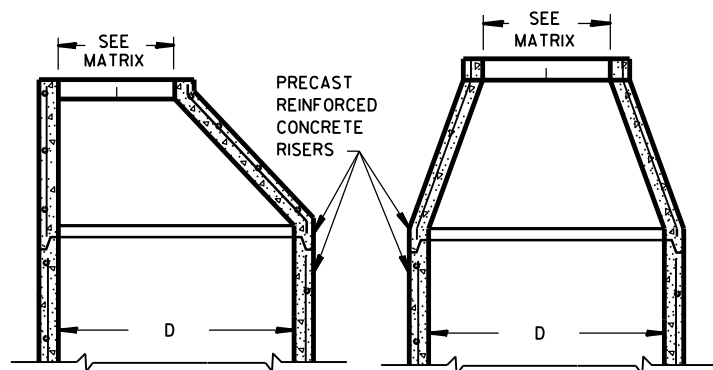
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K,
J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

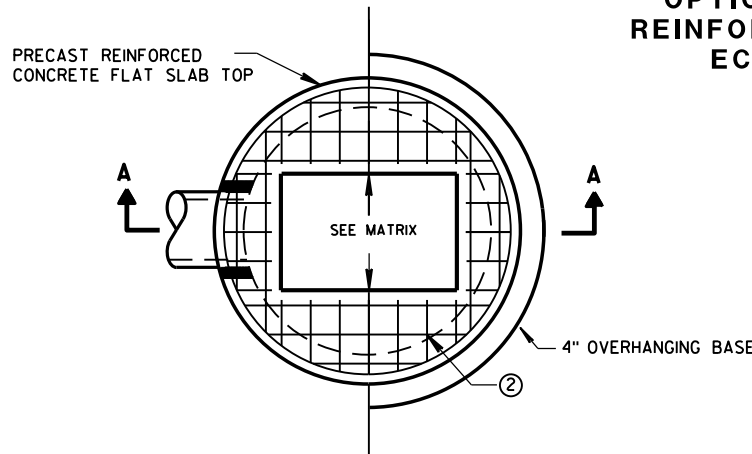


PLAN VIEW CIRCULAR OPENING

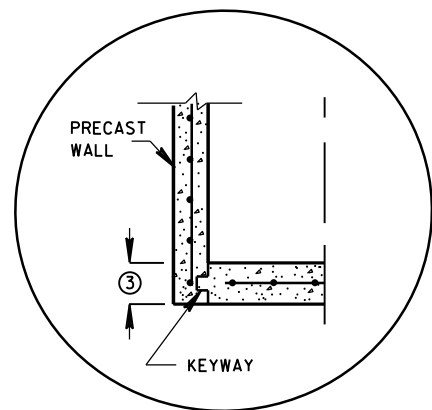


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

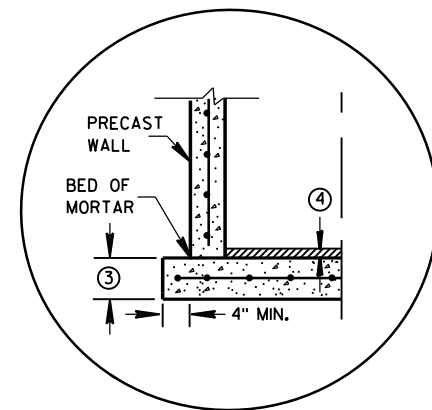
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PLAN VIEW RECTANGULAR OPENING

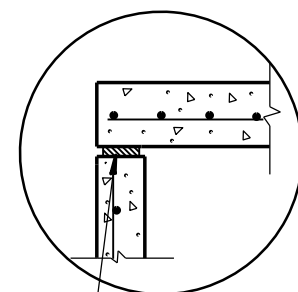


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

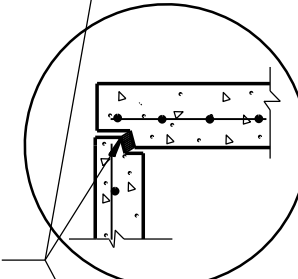


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

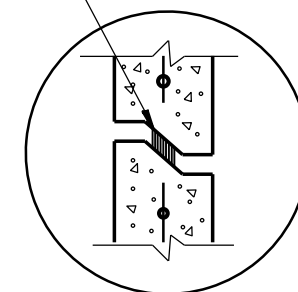
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



TOP WITH PLAIN END JOINT

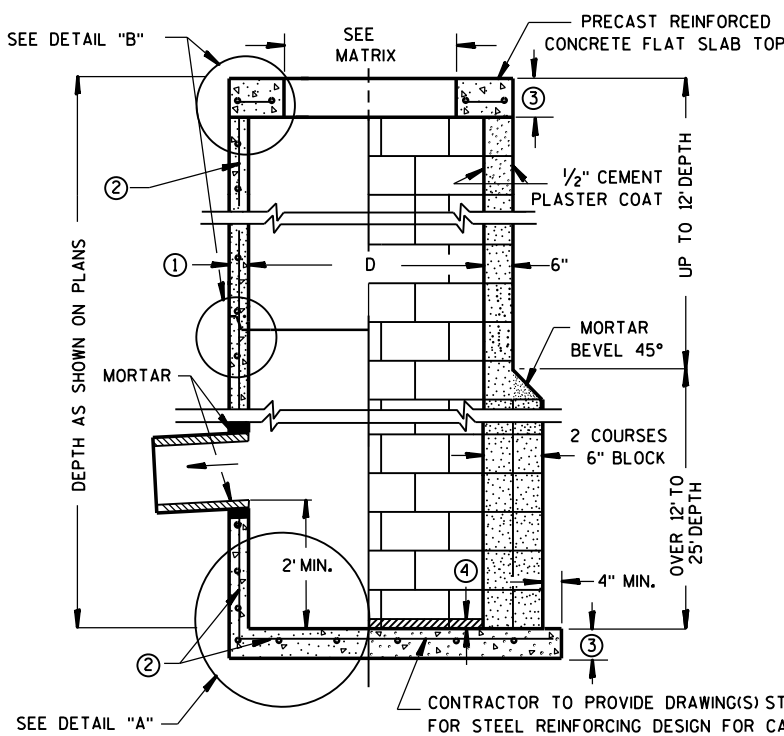


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

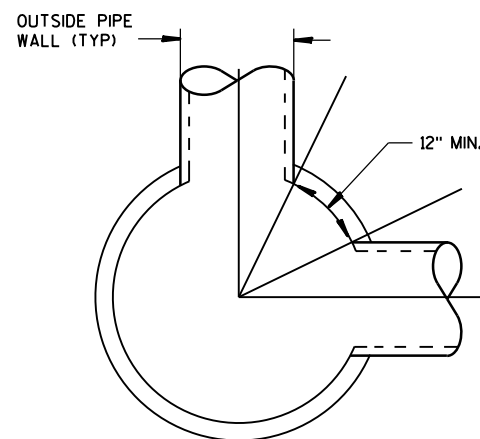
DETAIL "B"



SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②



DETAIL "C"

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".
- ④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE OPENING SIZE (FT)	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
3-FT	2X2	X	X					X		X		
	2 DIA.				X					X		X
4-FT- 6-FT	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

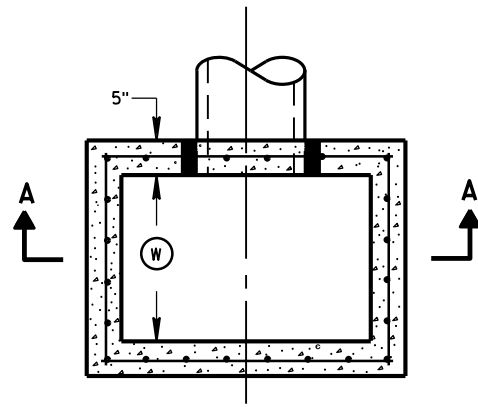
APPROVED
Sep 1, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

6

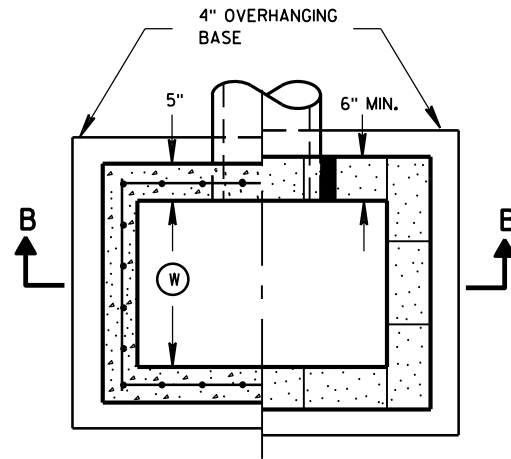
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S.D.D. 8 A 8-2

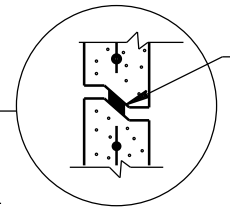
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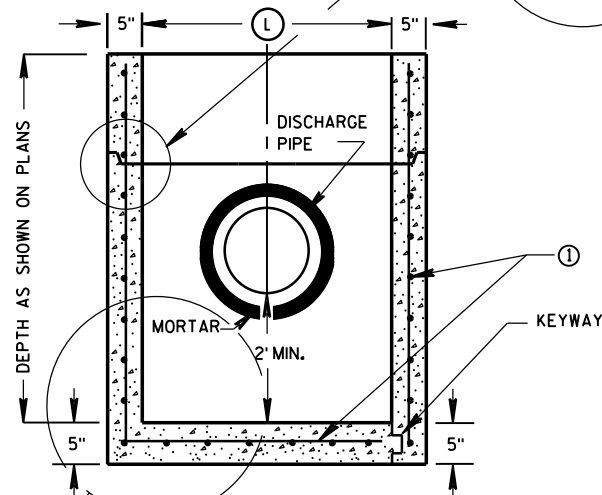
PLAN VIEW



PLAN VIEW

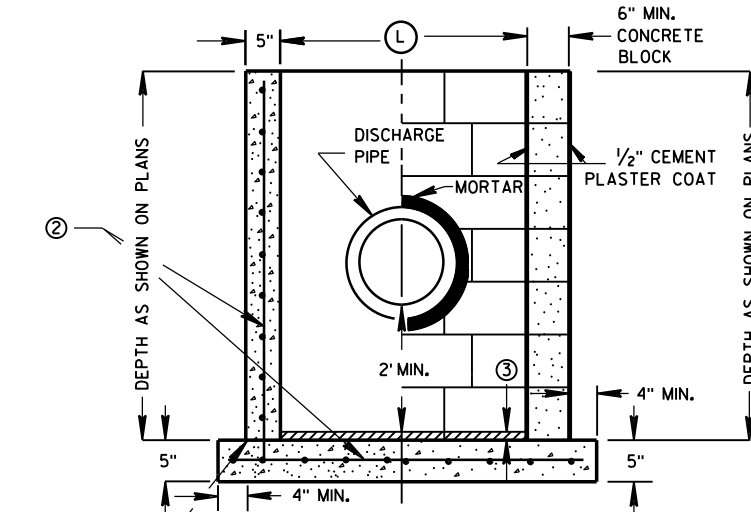


RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



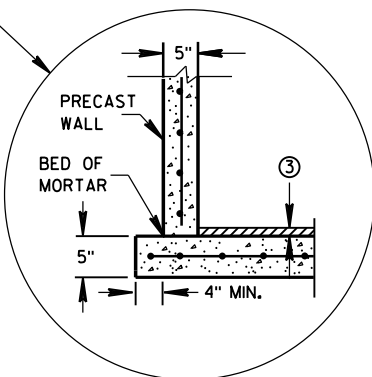
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

SECTION A-A



CAST-IN-PLACE REINFORCED CONCRETE CONCRETE BLOCK ON CAST-IN-PLACE WITH PRECAST REINFORCED CONCRETE BASE ①

SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.

OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

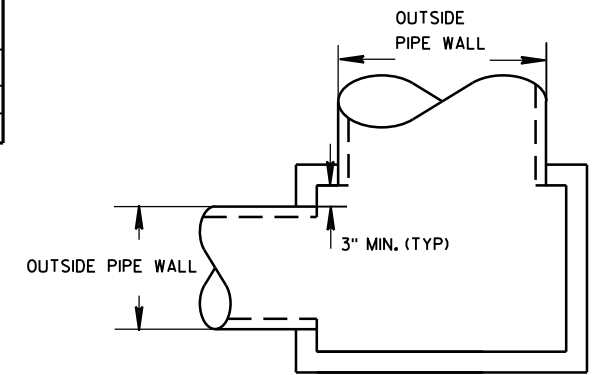
- ① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- ③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	INLET COVER TYPE		F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



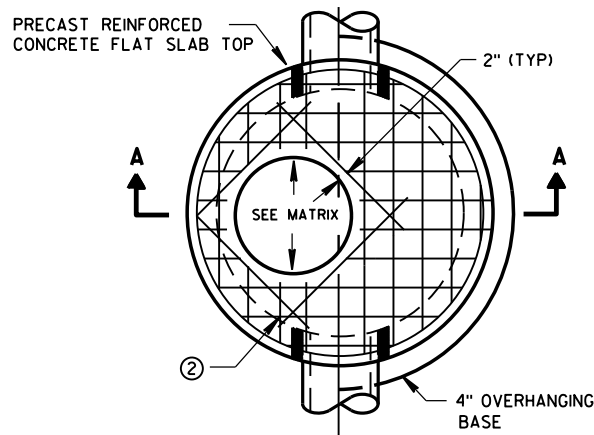
DETAIL "A"

CATCH BASINS 2X3-FT AND 2.5X3-FT

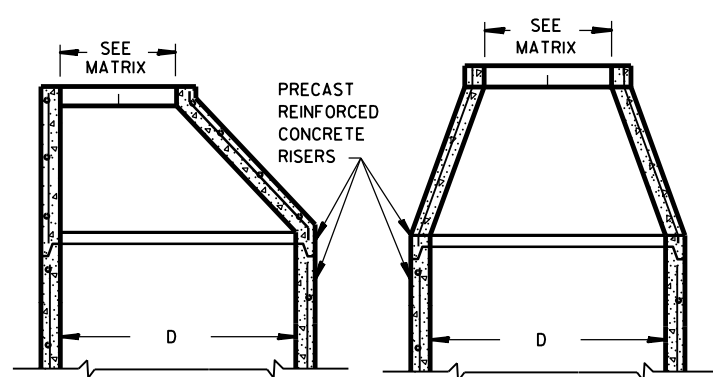
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED
 Sep 2016 /S/ Rodney Taylor
 DATE ROADWAY STANDARDS DEVELOPMENT
 FHWA UNIT SUPERVISOR

CATCH BASINS 2X3-FT AND 2.5X3-FT

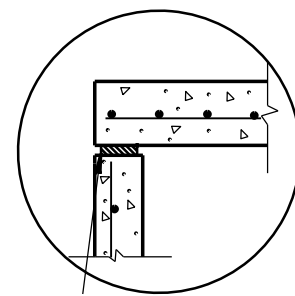


PLAN VIEW CIRCULAR OPENING

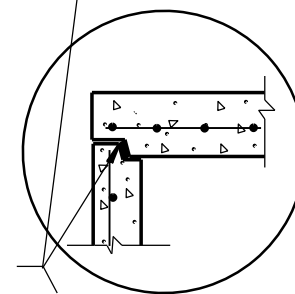


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

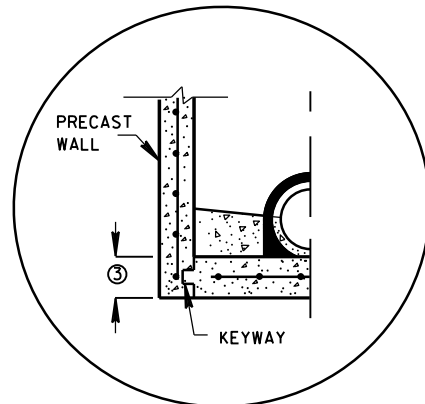
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT

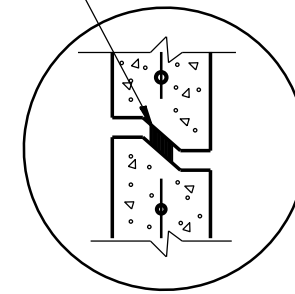


TOP WITH TONGUE AND GROOVE JOINT



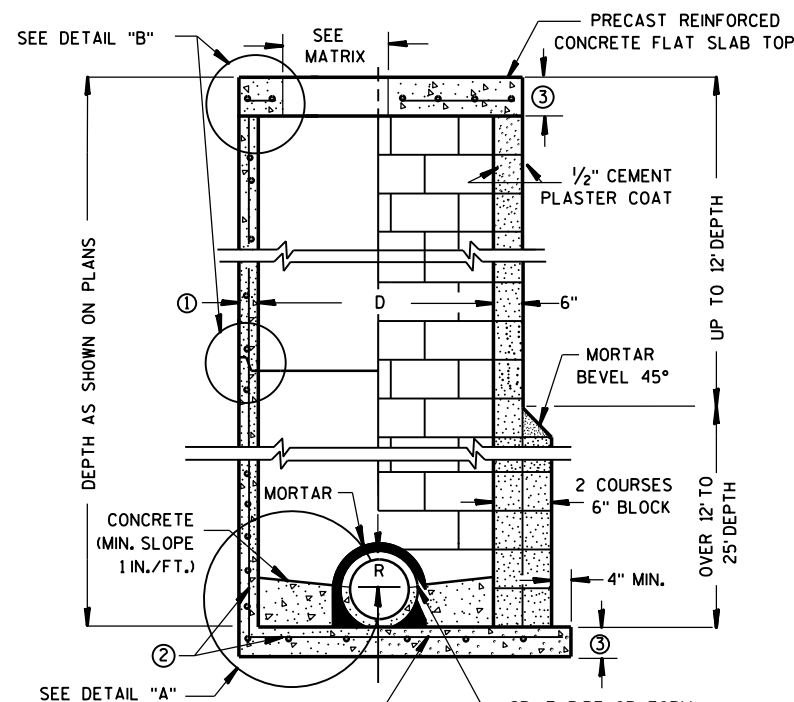
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



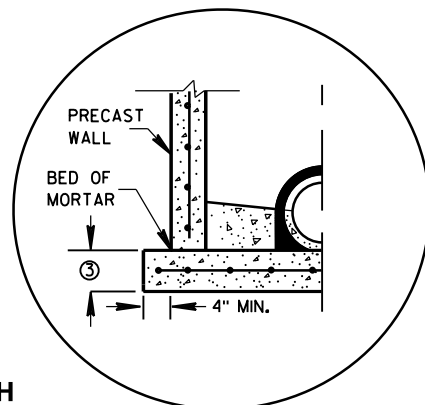
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



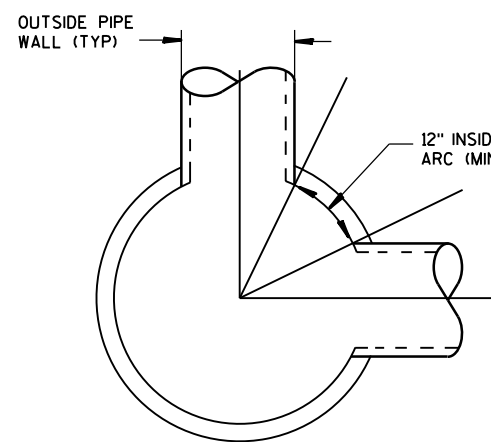
CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED. CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

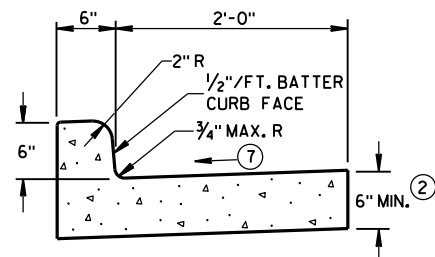
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

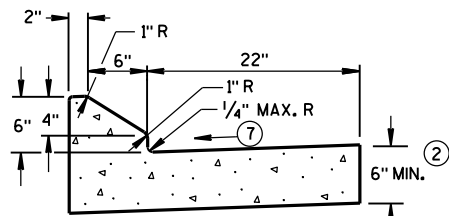
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept., 2016 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

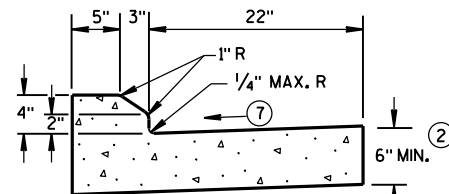
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER



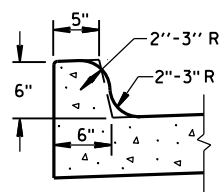
TYPES A^① & D



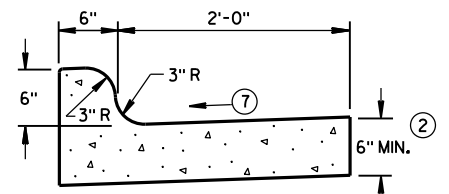
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

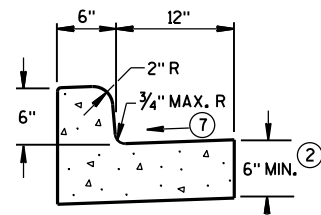


TYPES K^① & L
(OPTIONAL CURB SHAPE)



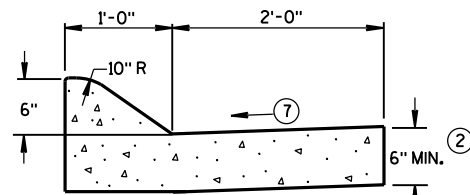
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

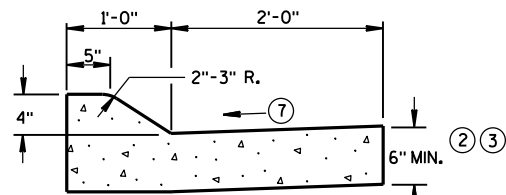


TYPES A^① & D

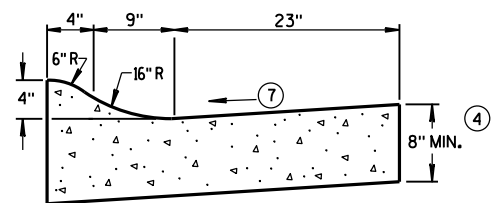
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

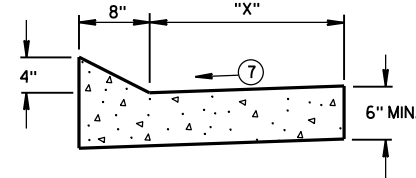


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

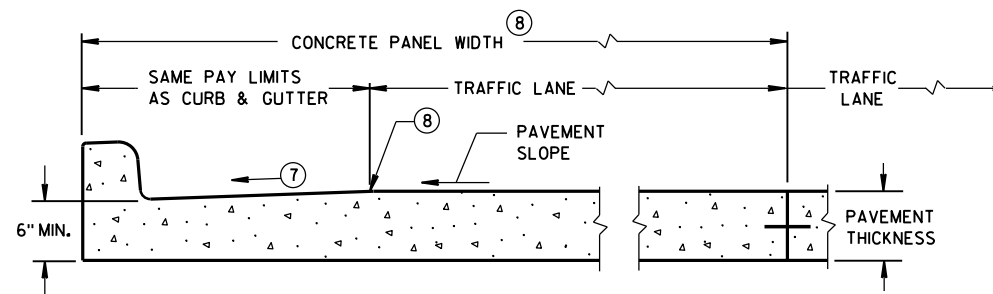
CONCRETE CURB & GUTTER 36"



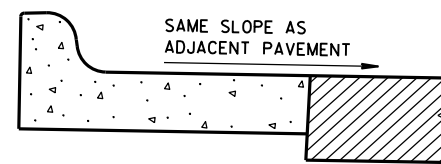
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

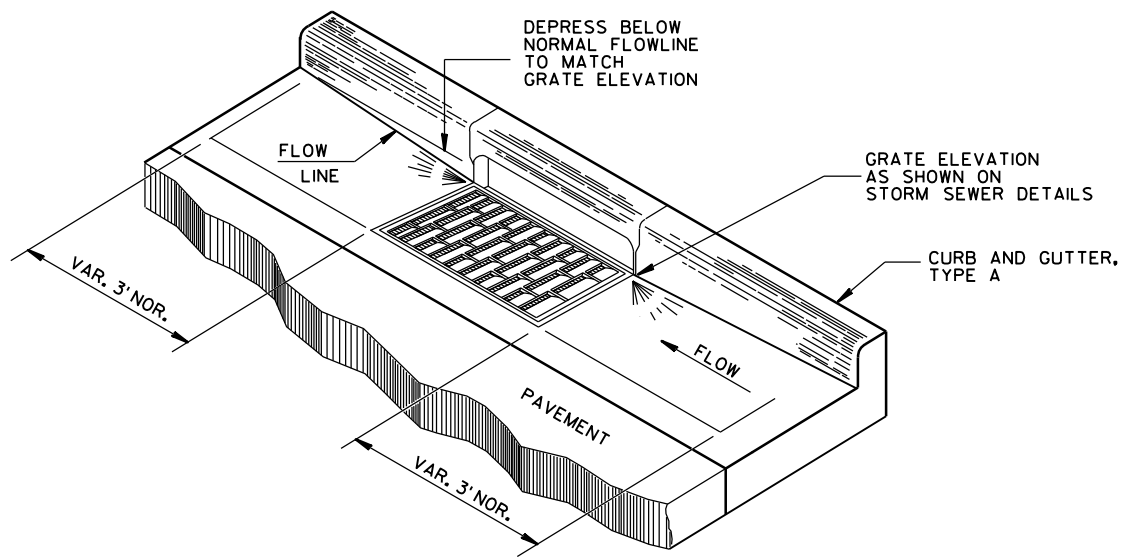
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

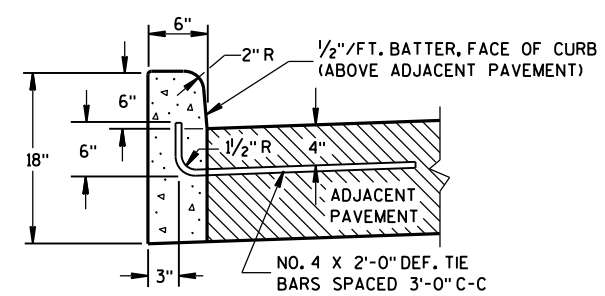
* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

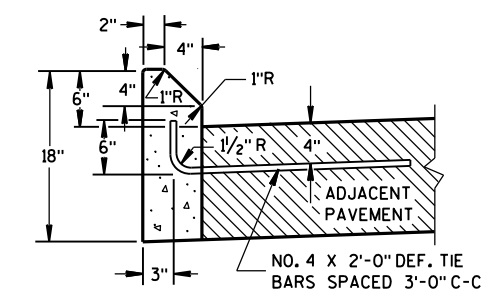
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL OF CURB AND GUTTER AT INLETS
(TYPE H INLET COVER SHOWN)



TYPES A^① & D

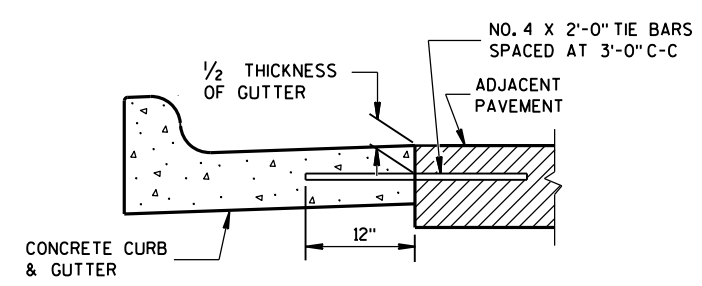


TYPES G^① & J

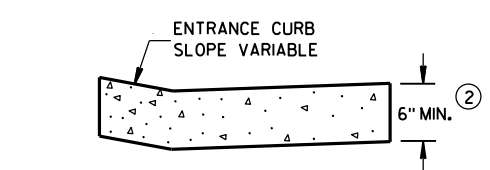
GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.
- UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
 - ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
 - ③ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

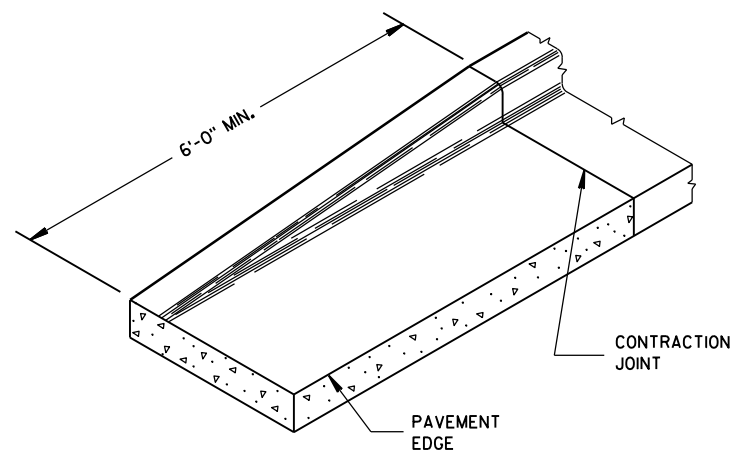
CONCRETE CURB



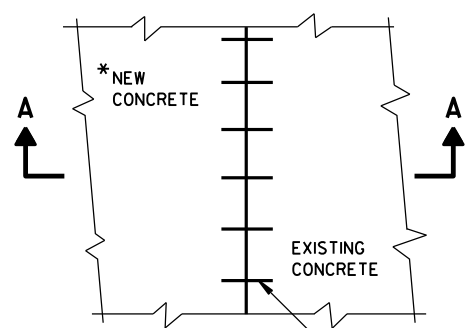
TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

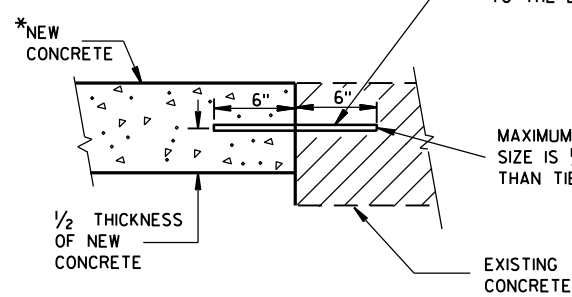


END SECTION CURB & GUTTER



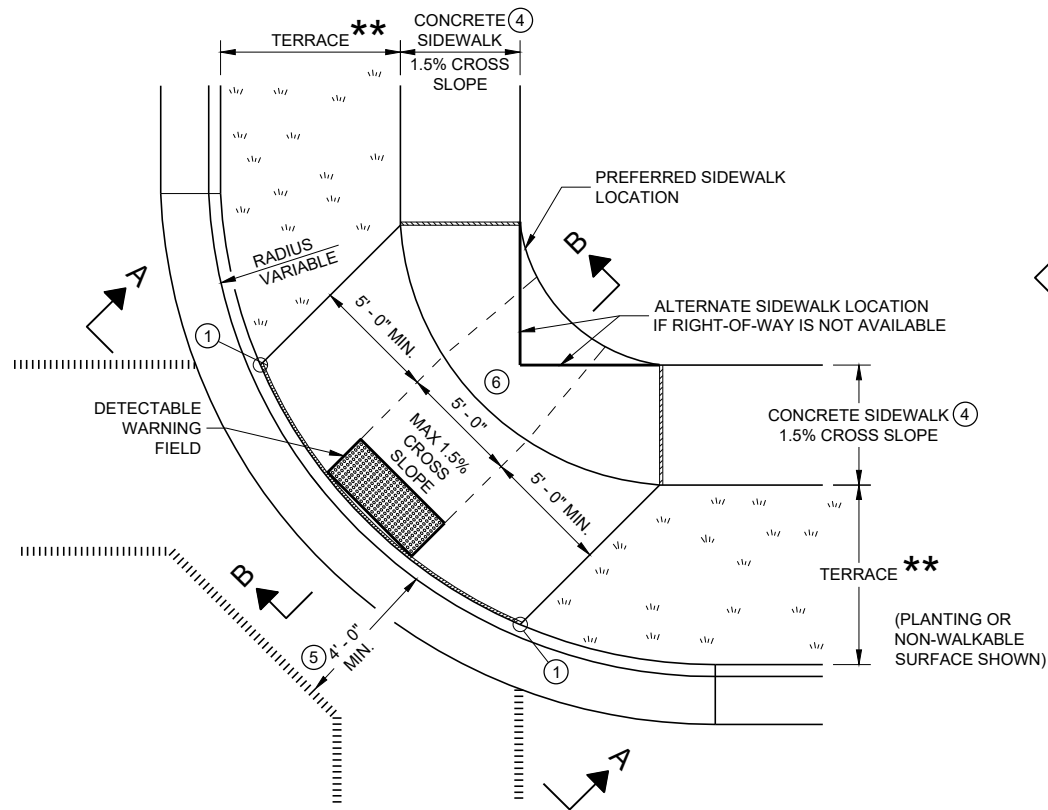
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

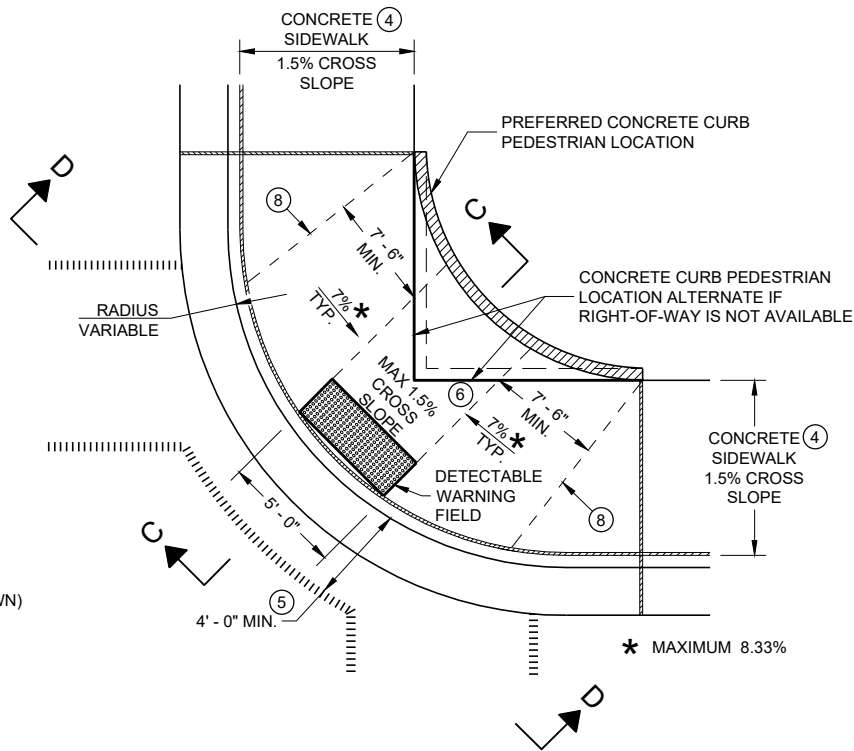


SECTION A-A
TIE BARS DRILLED INTO EXISTING PAVEMENT

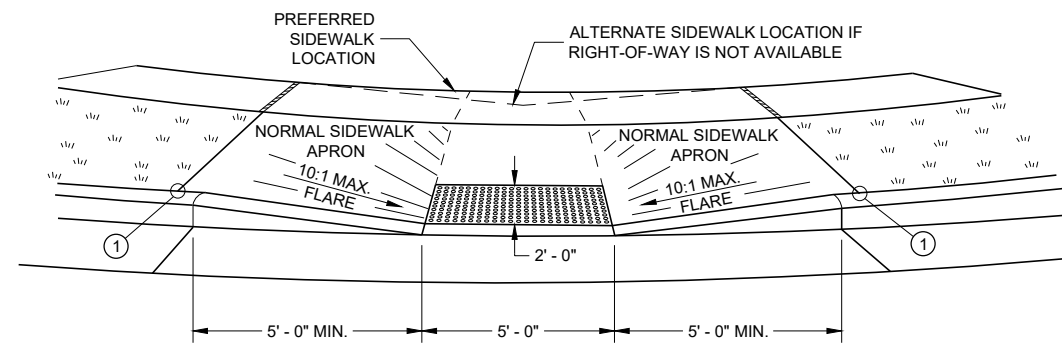
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2017 DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

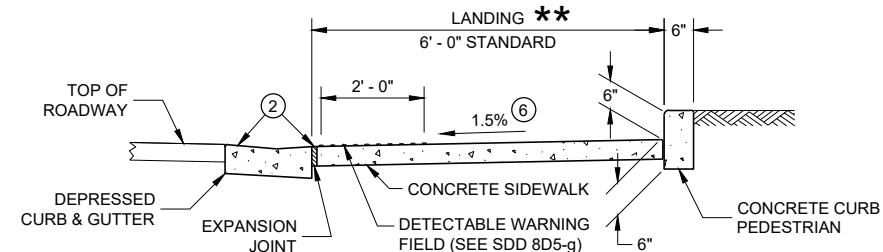


PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)

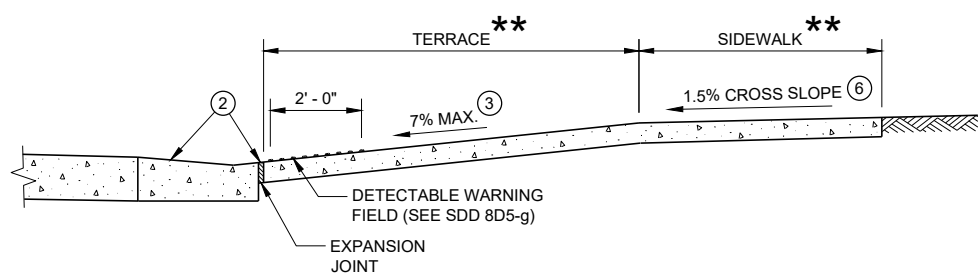


VIEW A - A FOR TYPE 1

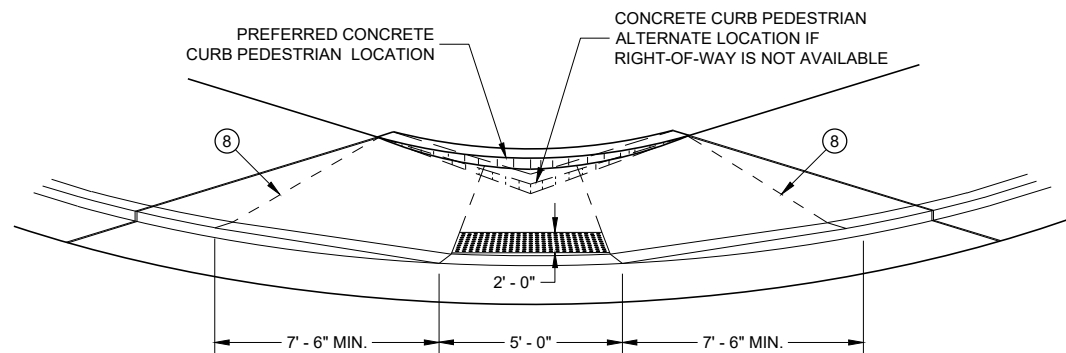
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

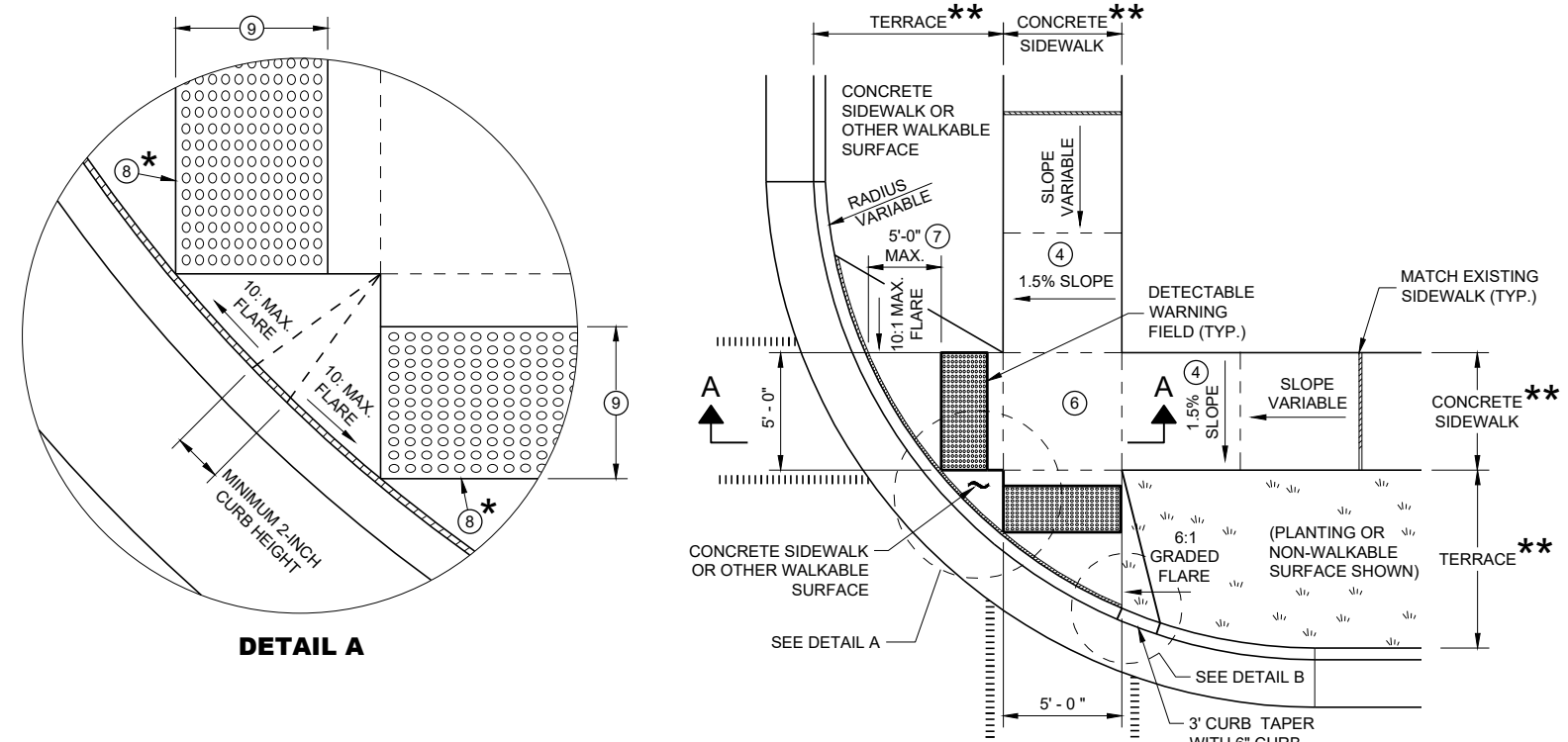
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

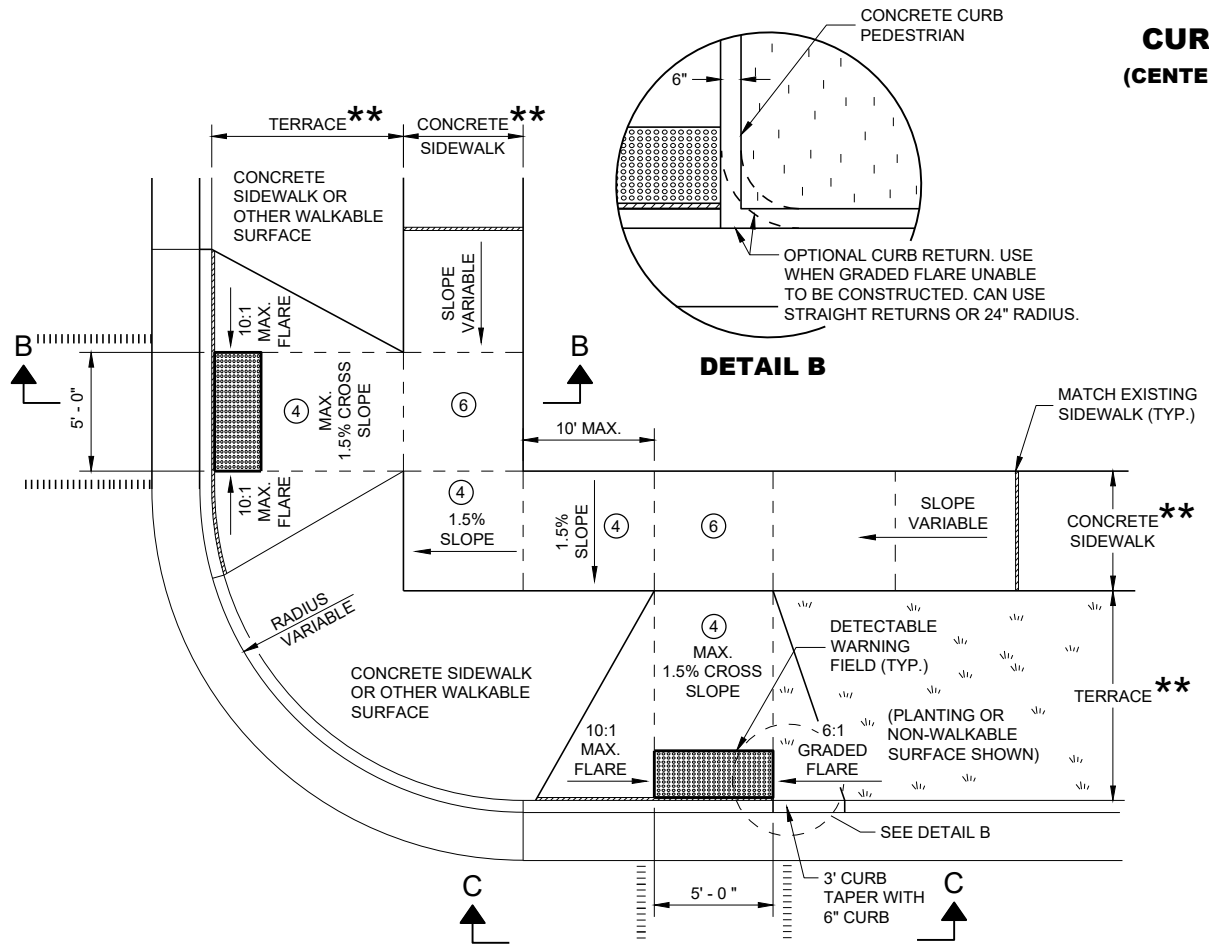
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

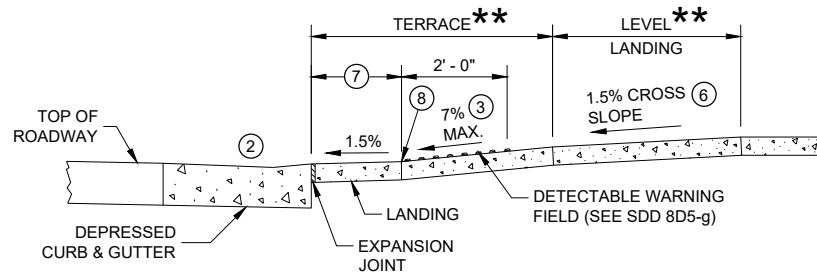
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



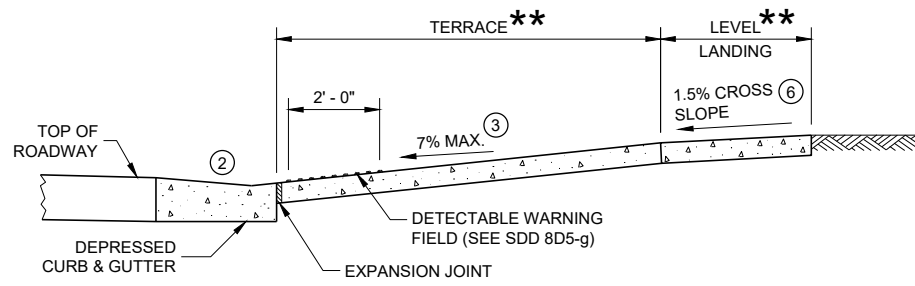
PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)



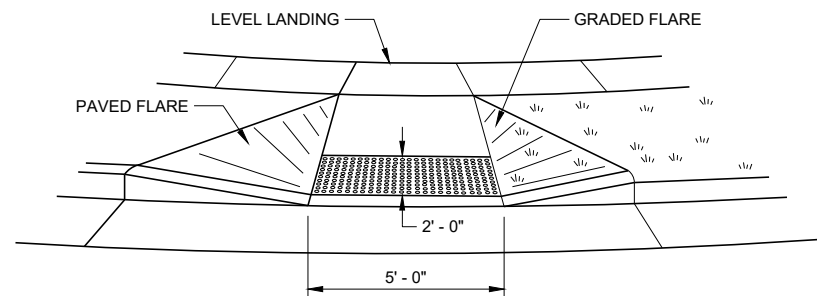
PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)



SECTION A - A FOR TYPE 2



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

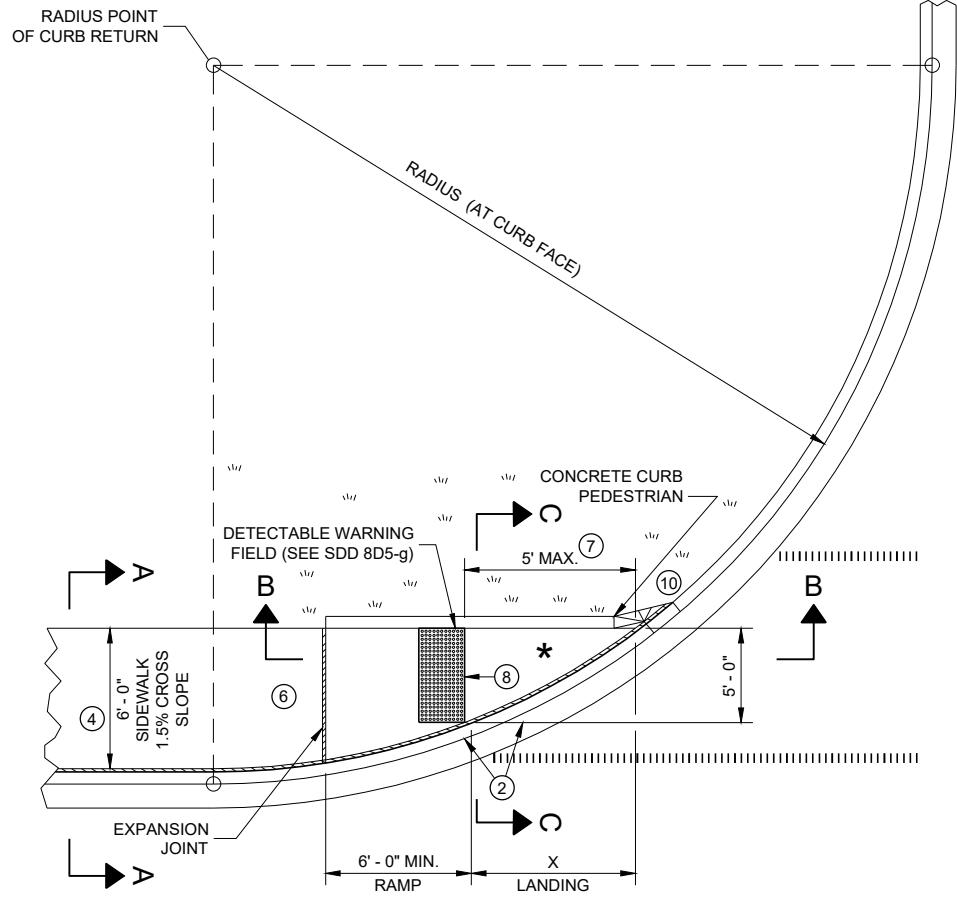
** WIDTH SHOWN ELSEWHERE IN THE PLANS

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

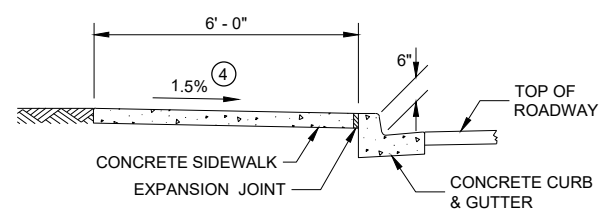
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



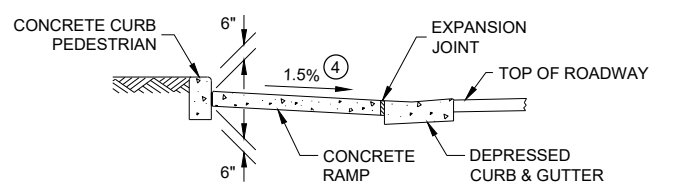
SECTION A - A FOR TYPE 4A

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

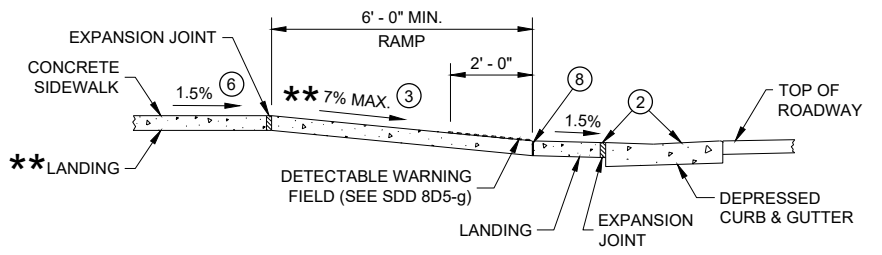
LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)



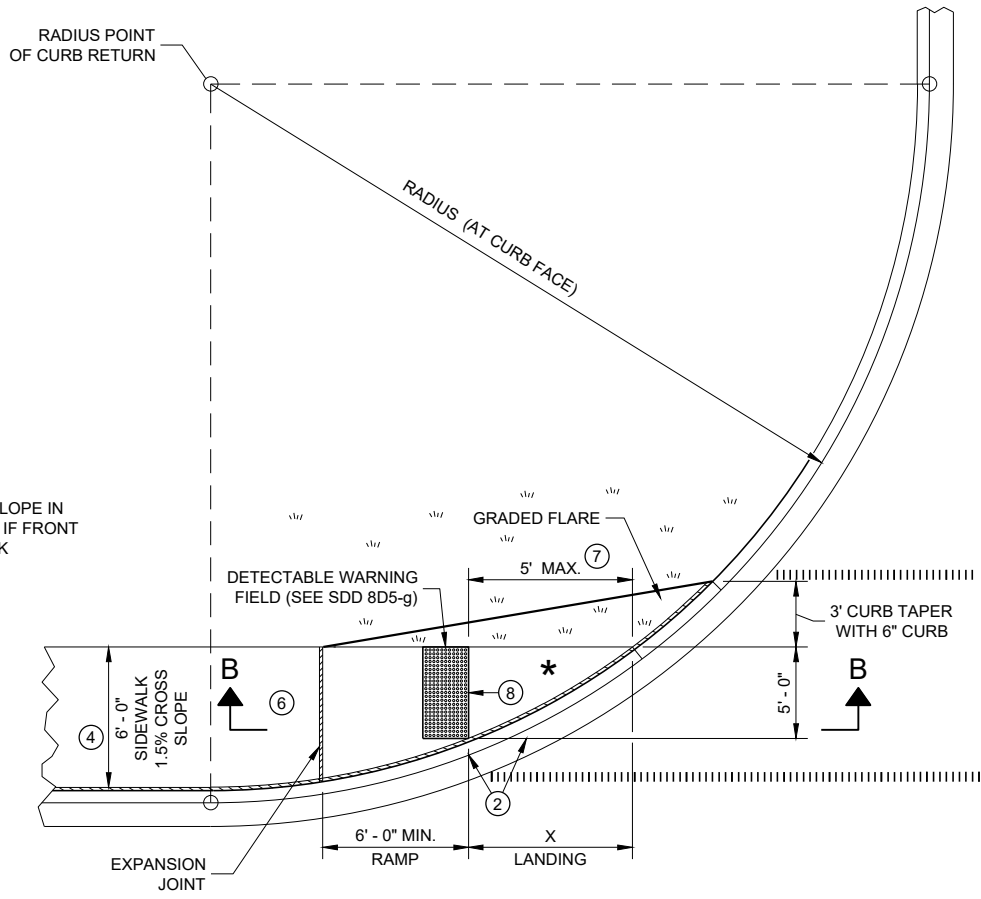
SECTION C - C FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

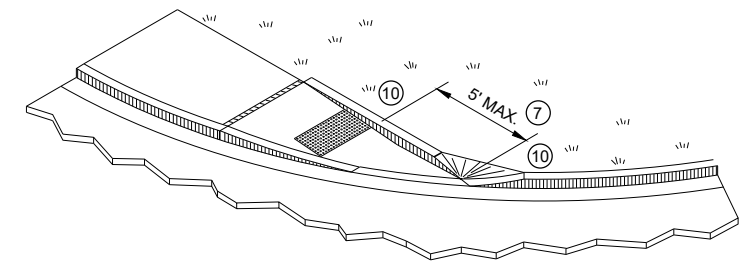


**SECTION B - B FOR
TYPE 4A AND TYPE 4A1**

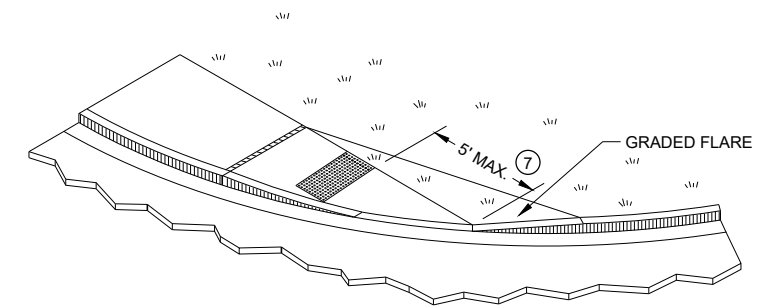
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**PLAN VIEW
CURB RAMP TYPE 4A1**



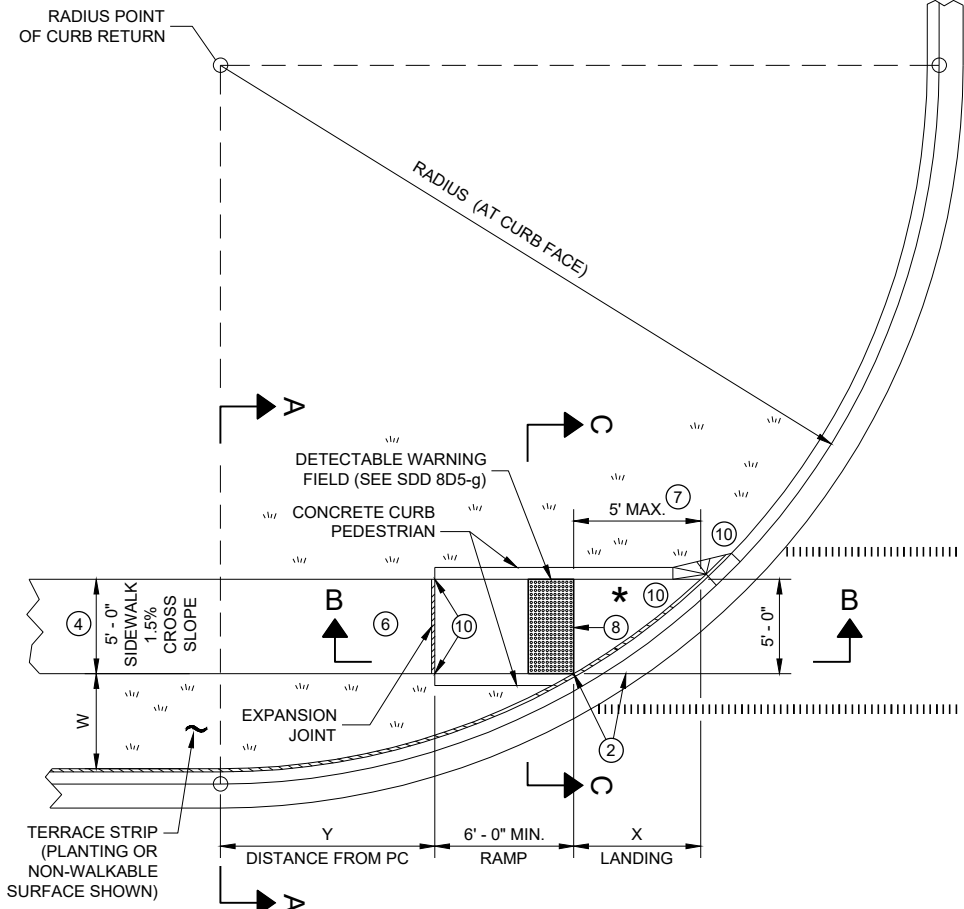
ISOMETRIC VIEW FOR TYPE 4A



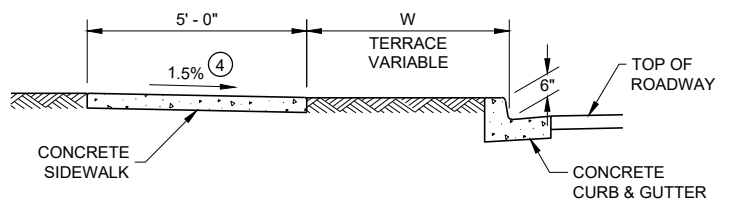
ISOMETRIC VIEW FOR TYPE 4A1

**CURB RAMPS
TYPE 4A AND 4A1**

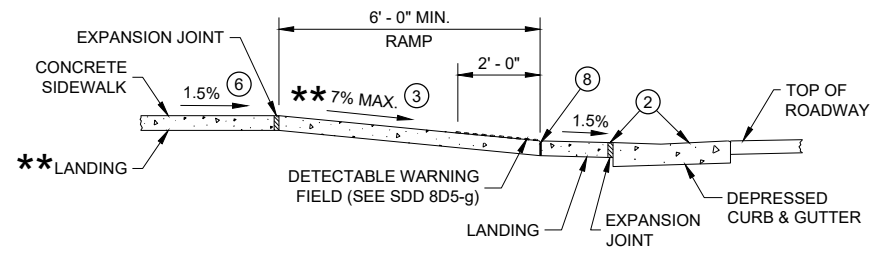
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**PLAN VIEW
CURB RAMP TYPE 4B**



SECTION A - A FOR TYPE 4B

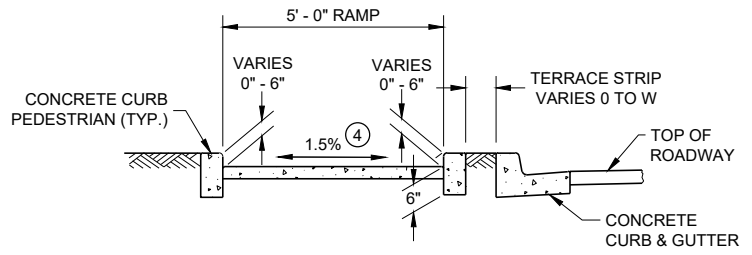


**SECTION B - B FOR
TYPE 4B AND TYPE 4B1**

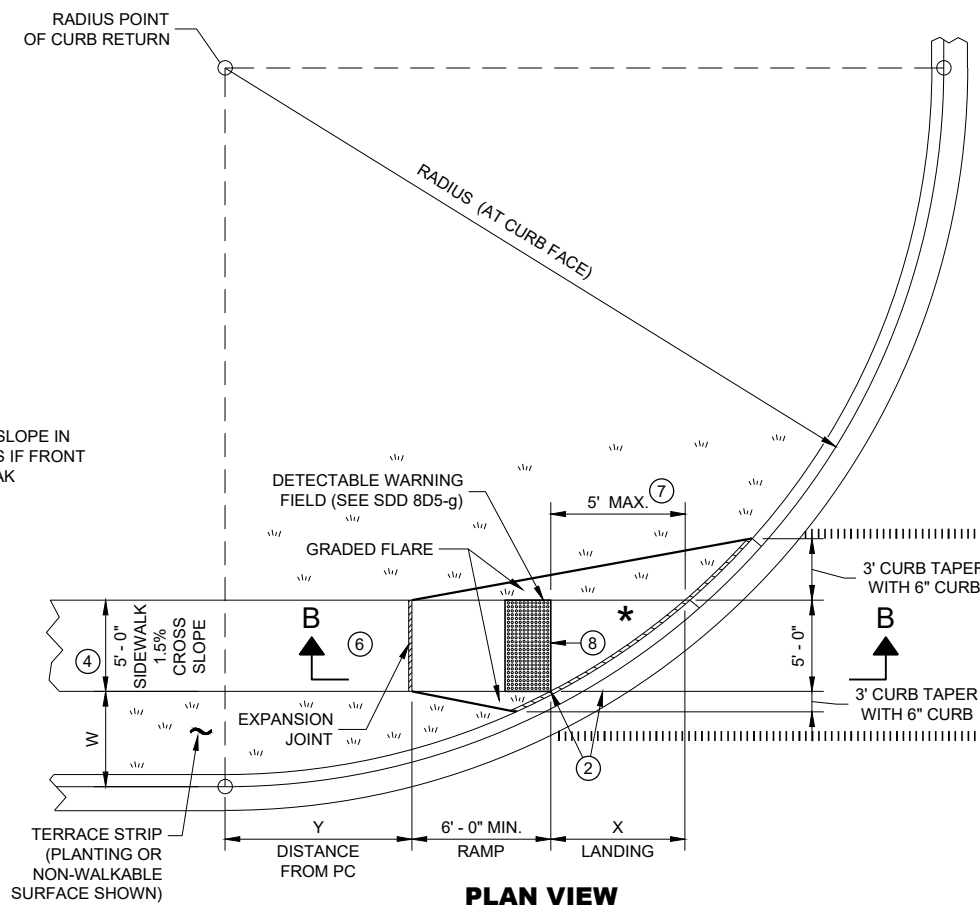
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/4"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B



**PLAN VIEW
CURB RAMP TYPE 4B1**

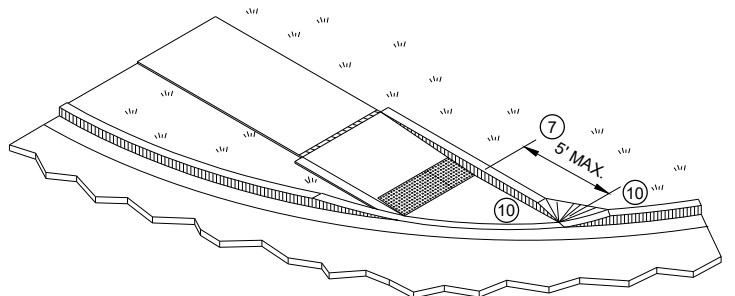
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

LEGEND

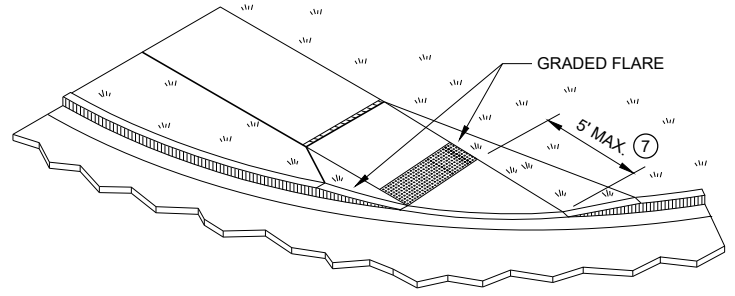
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/2 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- 7 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 10 INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



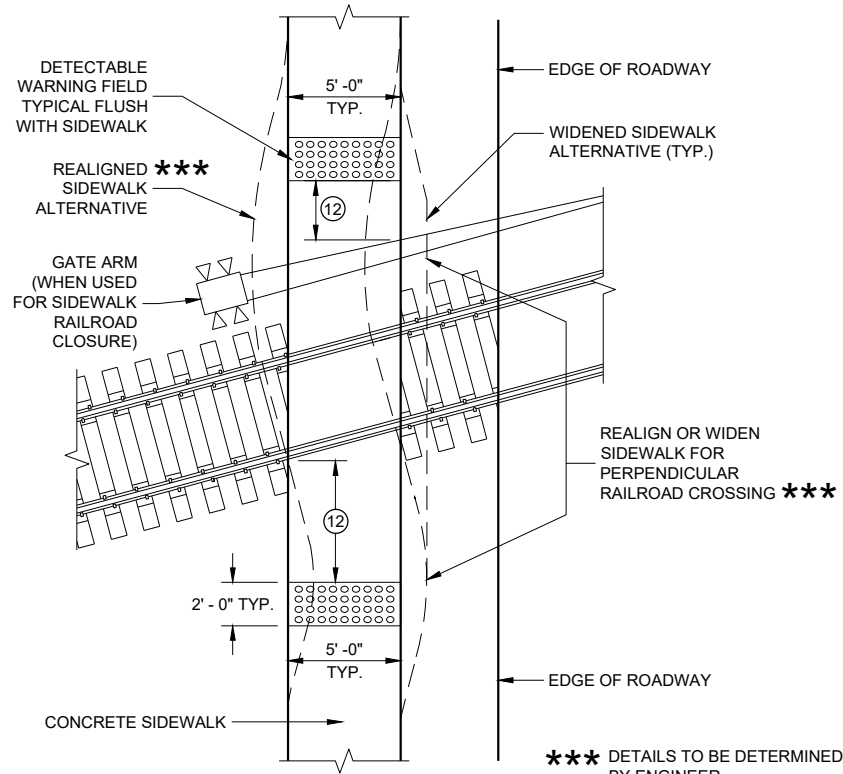
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

**CURB RAMPS
TYPE 4B AND 4B1**

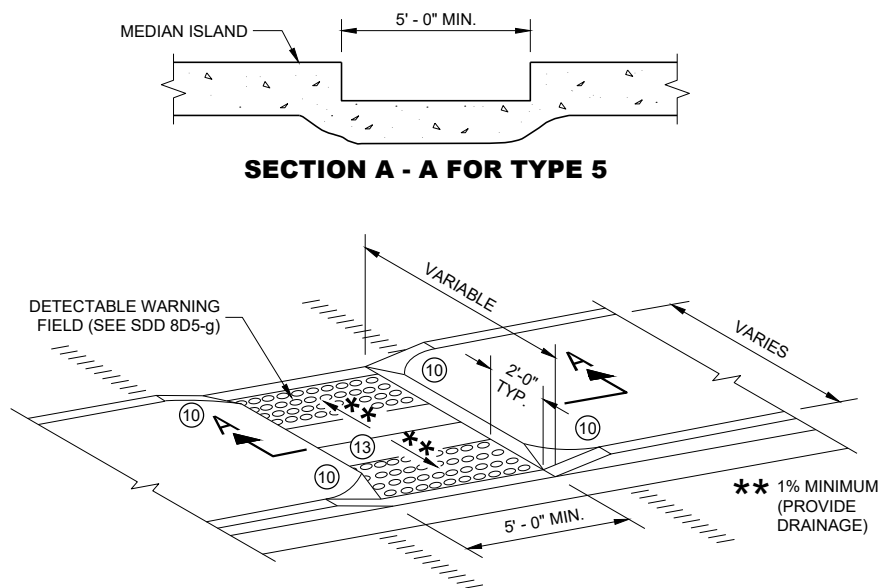
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DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY ENGINEER



CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

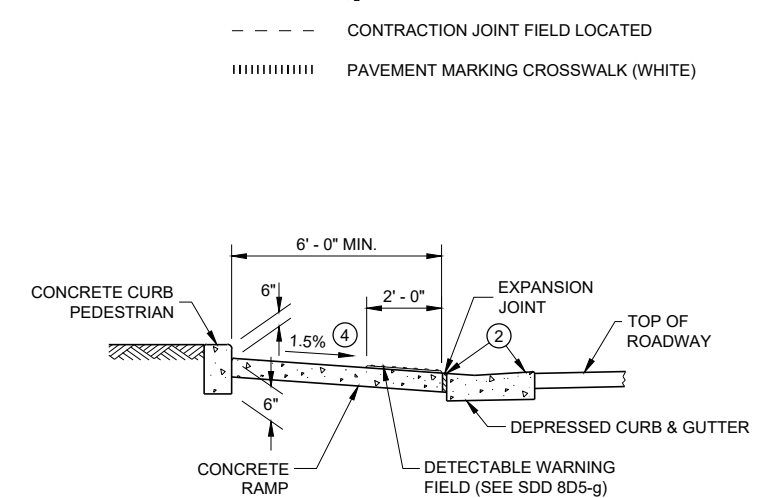
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

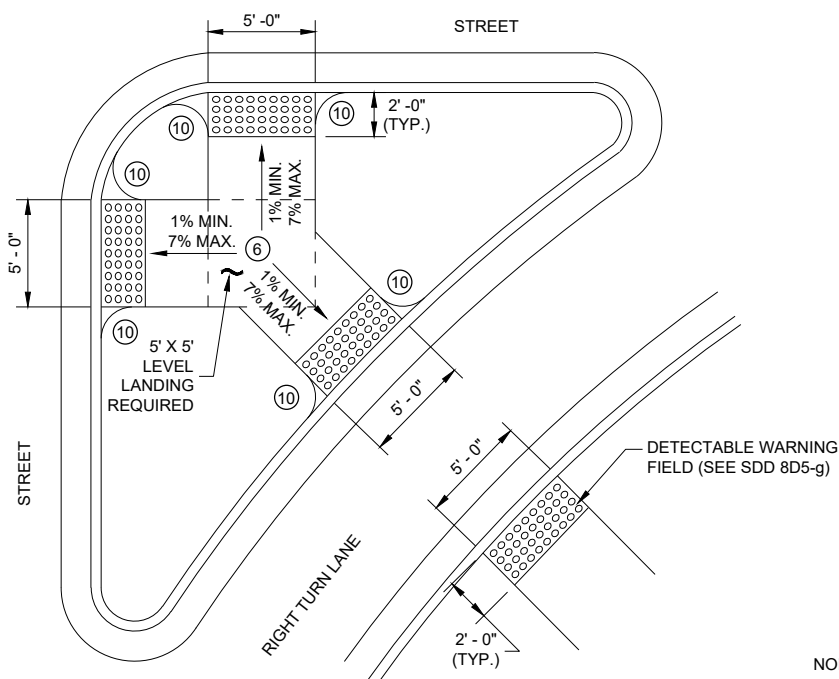
LEGEND

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)



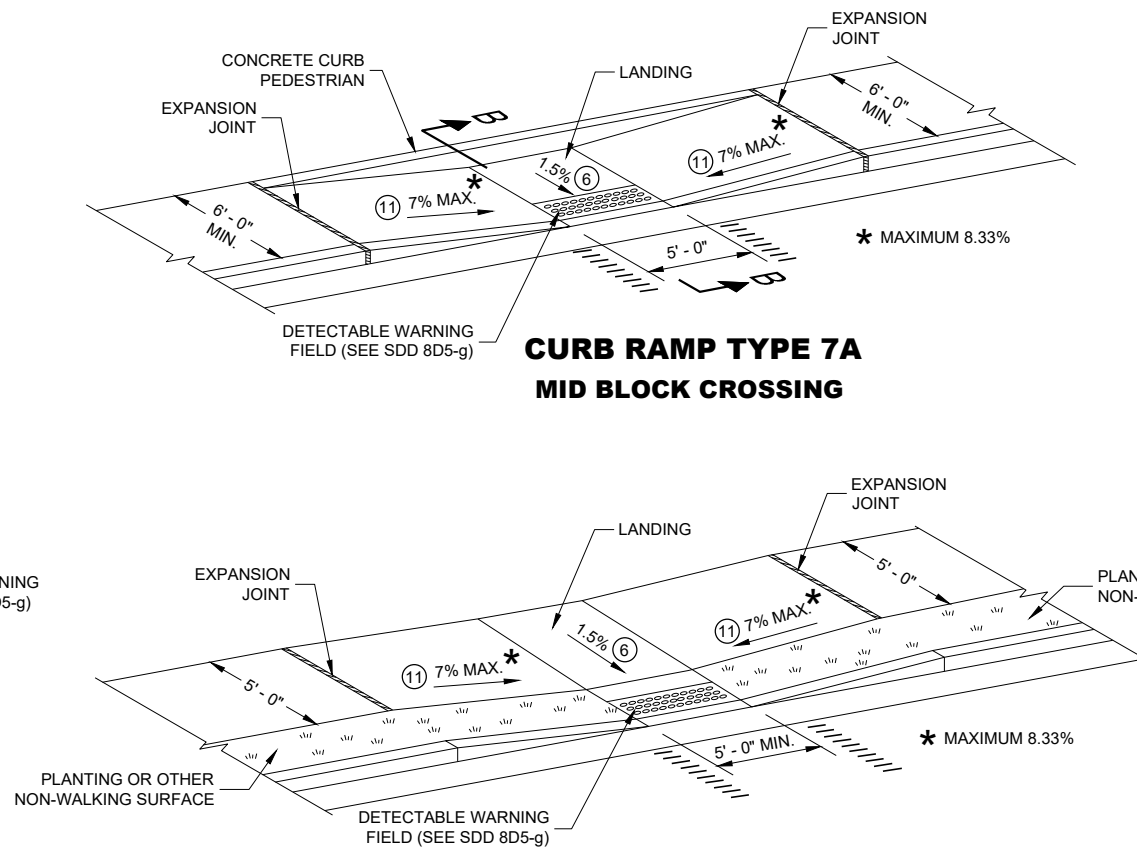
CURB RAMP TYPE 7A
MID BLOCK CROSSING

SECTION B - B FOR TYPE 7A



CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES ② AND ③ FOR ALL ISLAND CURB RAMPS



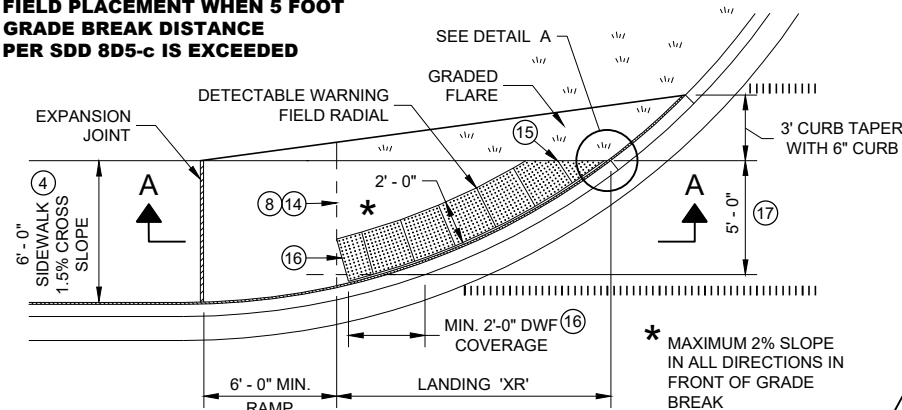
CURB RAMP TYPE 7B
MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

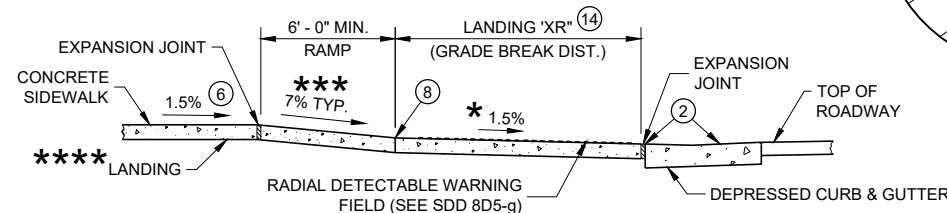
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW CURB RAMP TYPE 4A1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)

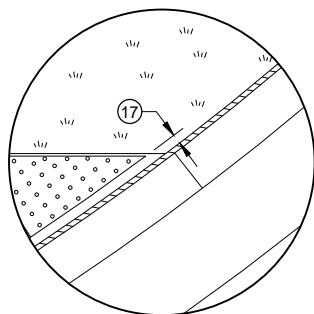


SECTION A - A FOR TYPE 4A1

**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - - - - - CONTRACTION JOINT SIDEWALK
 - ||||| PAVEMENT MARKING CROSSWALK (WHITE)

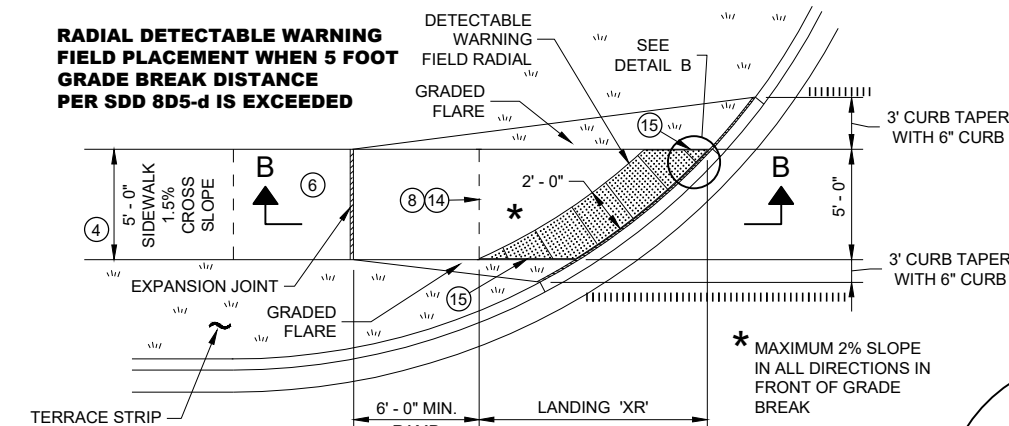


DETAIL A

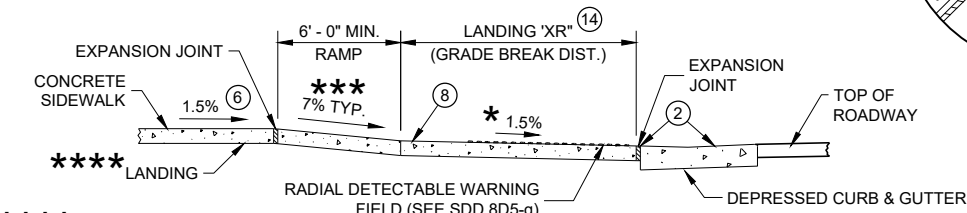
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- 2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- 8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



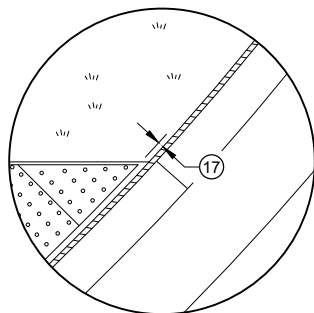
PLAN VIEW CURB RAMP TYPE 4B1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

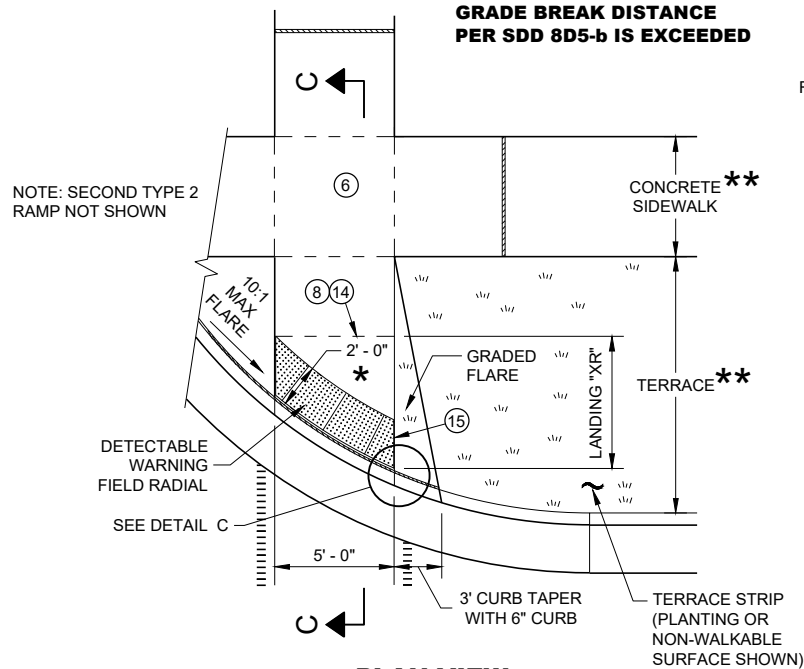
**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%



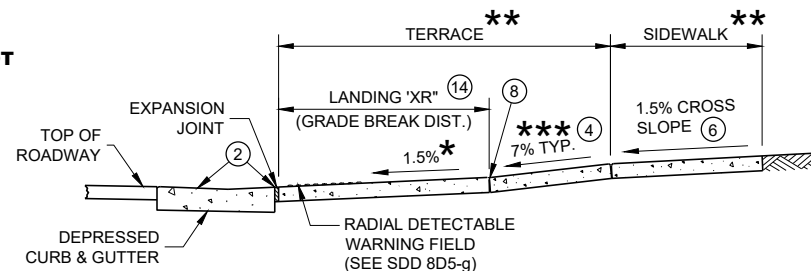
DETAIL B

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED



PLAN VIEW CURB RAMP TYPE 2 (GRADE BREAK DISTANCE GREATER THAN 5 FEET) (ON LINE WITH SIDEWALK)

NOTE: SECOND TYPE 2 RAMP NOT SHOWN

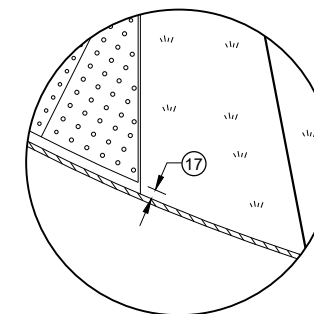


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



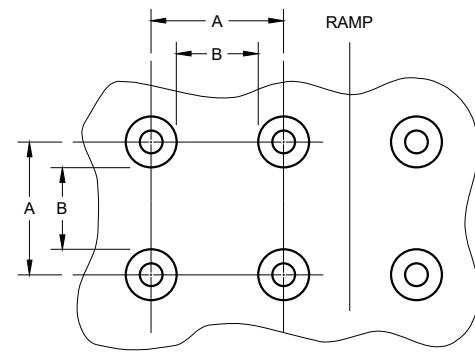
DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

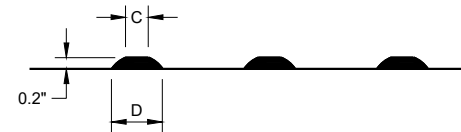
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

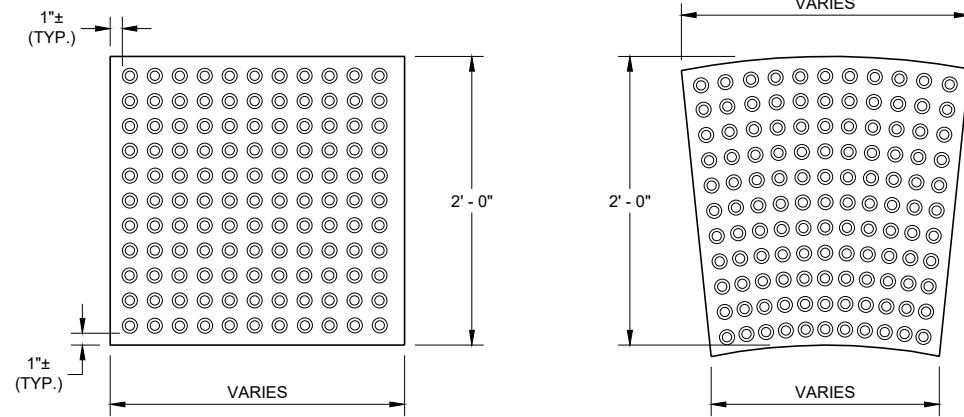


PLAN VIEW



ELEVATION VIEW

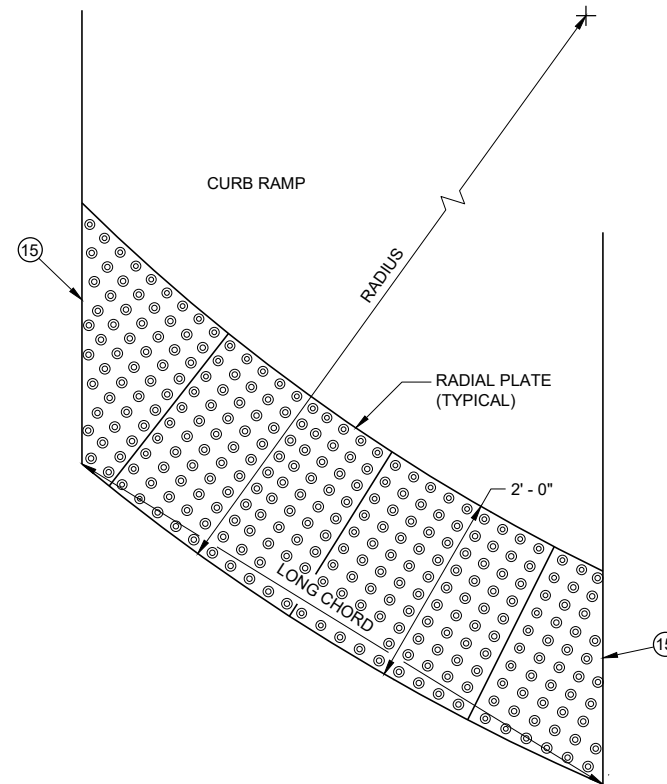
**TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL**



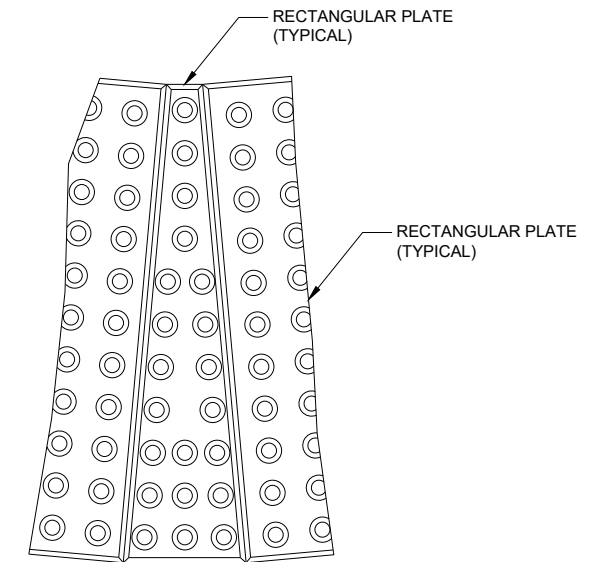
RECTANGULAR
PLATES

RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

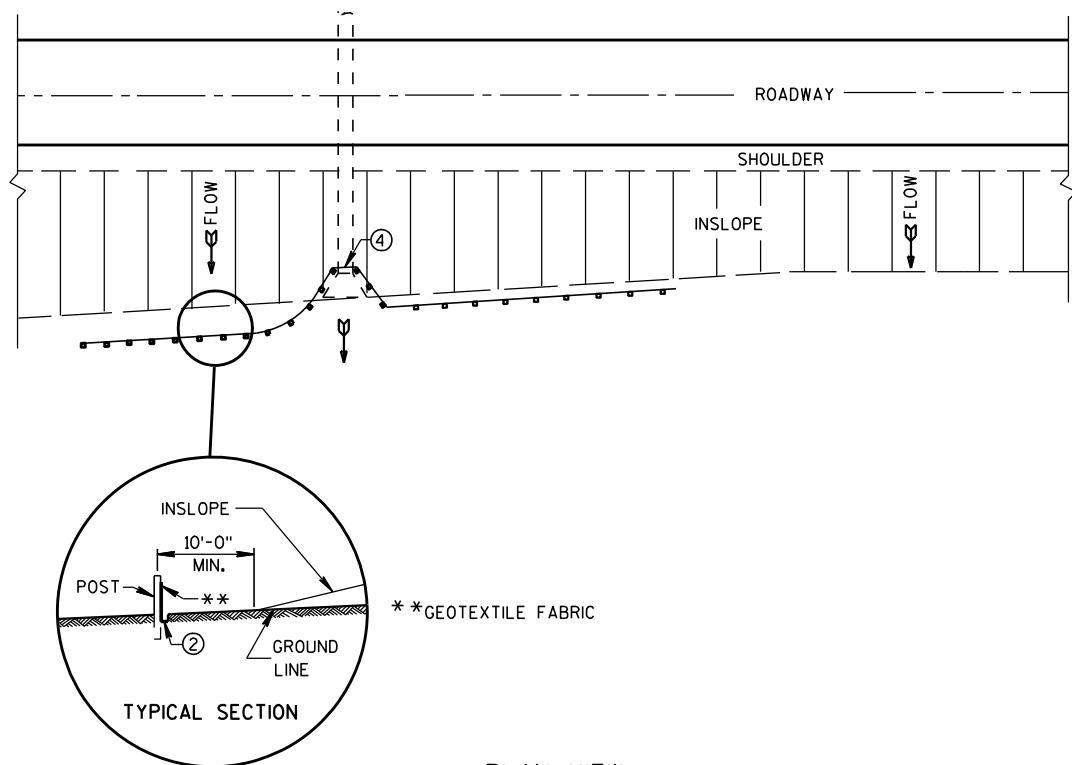
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

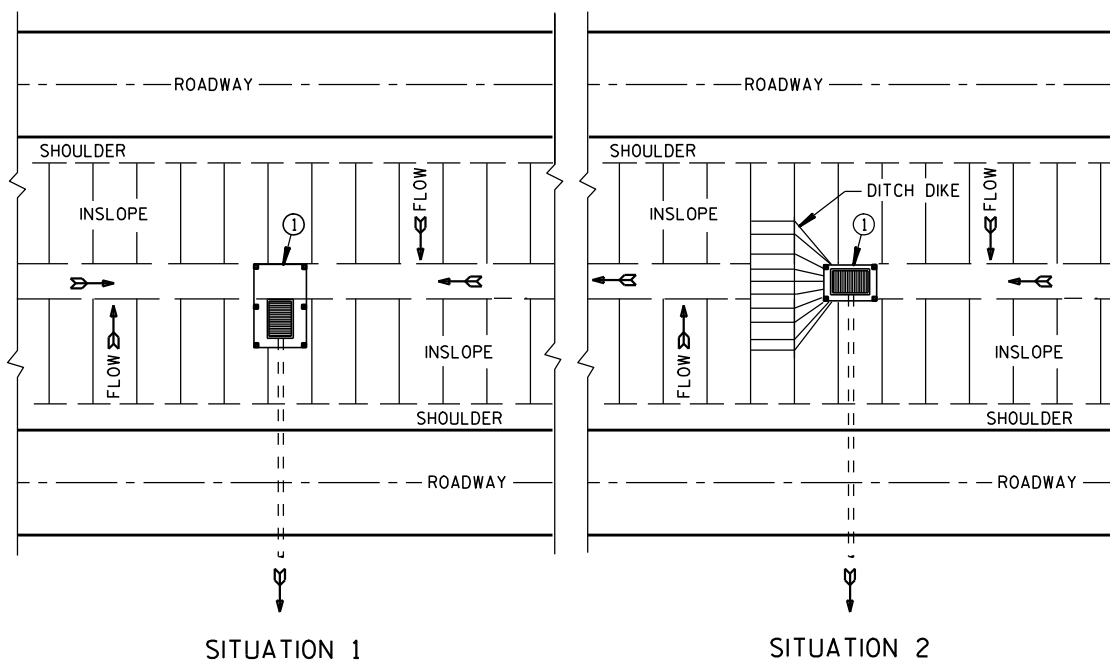
DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

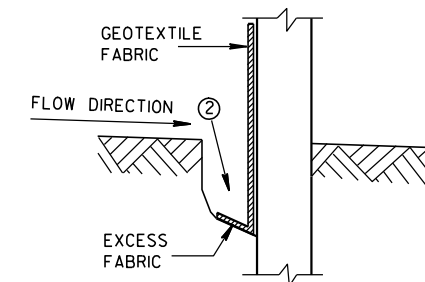


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

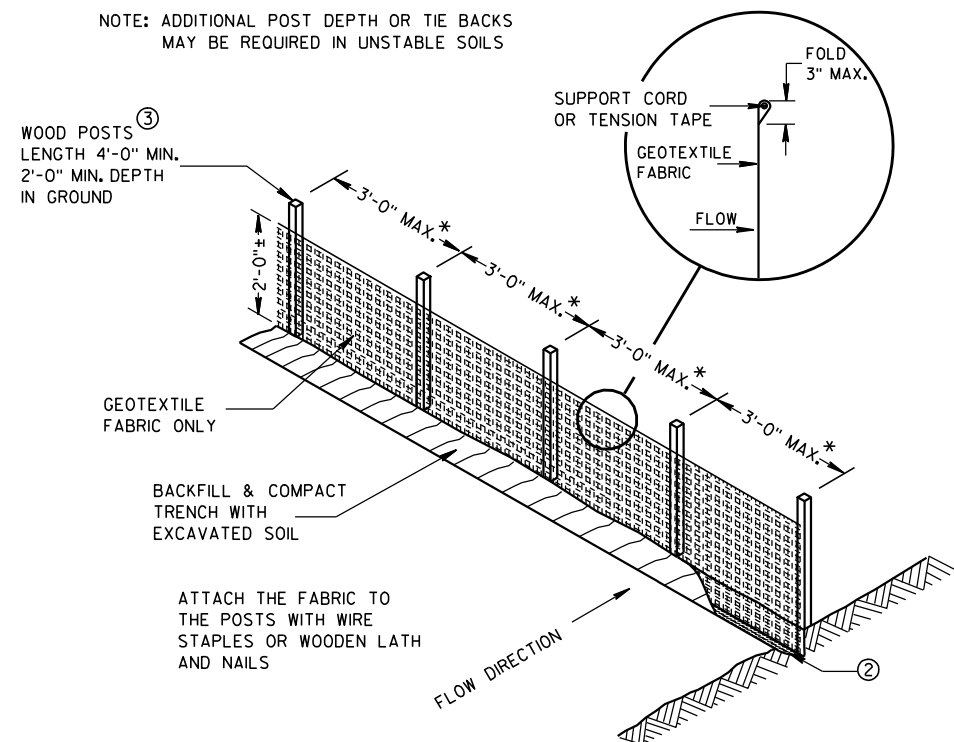
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

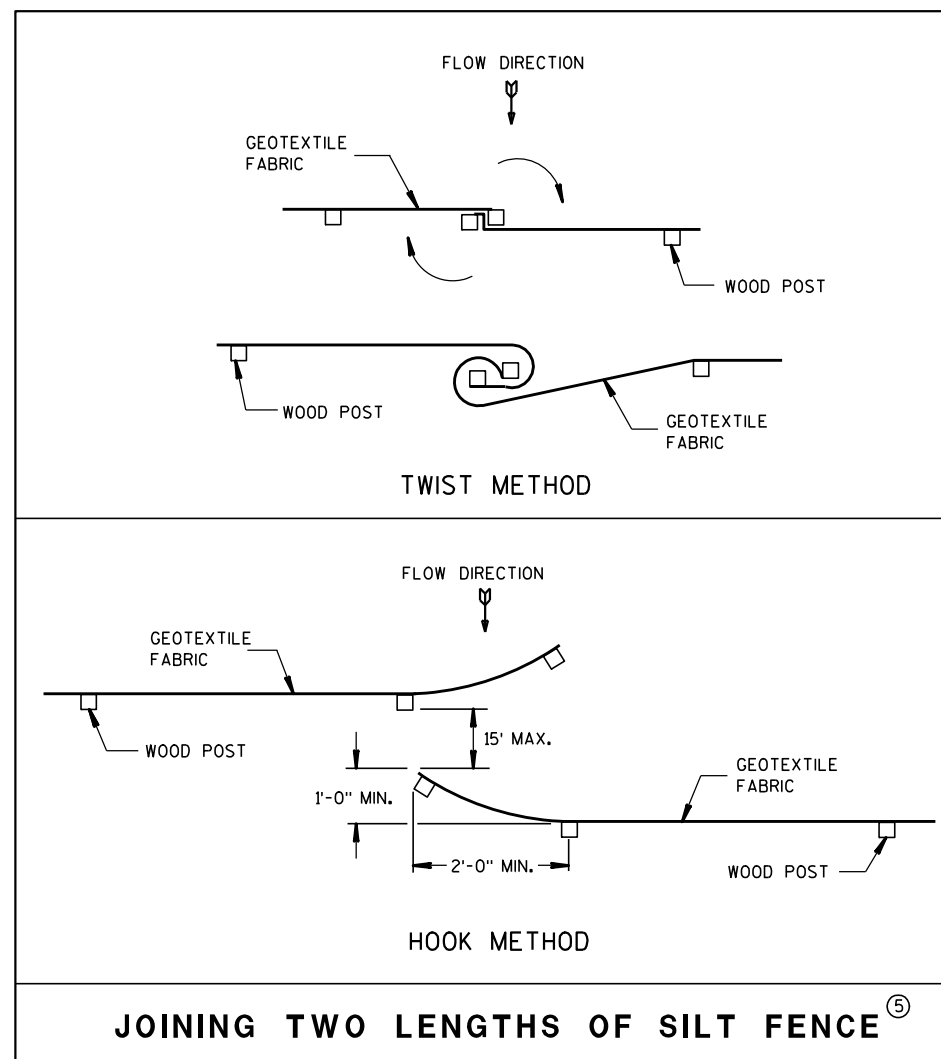


TRENCH DETAIL

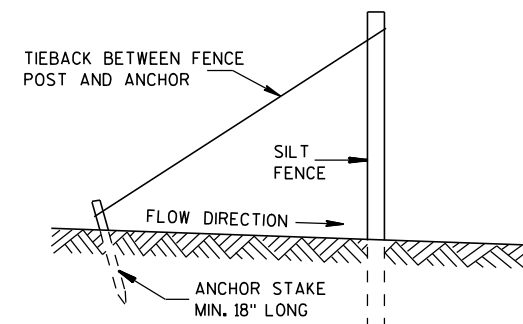


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

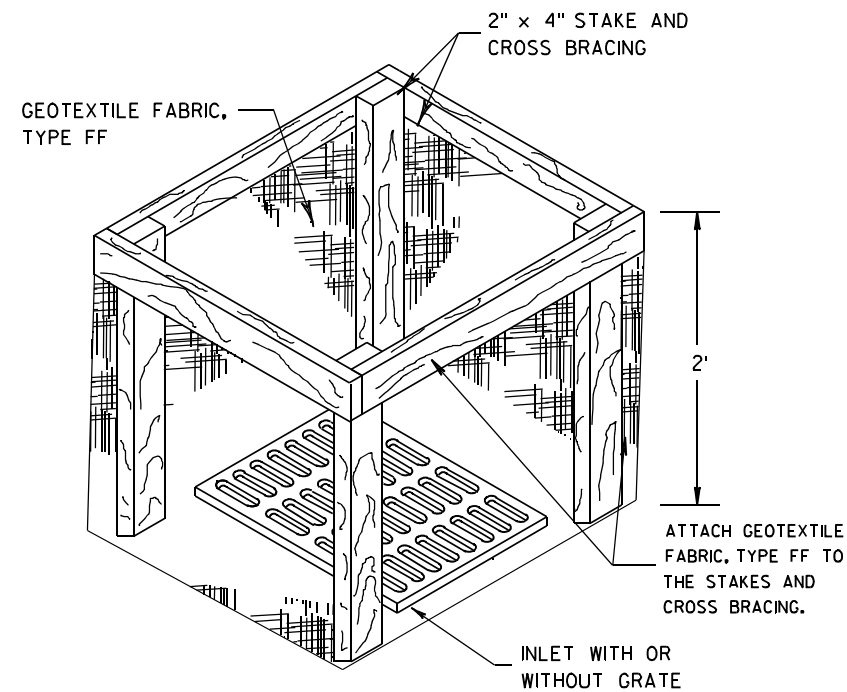
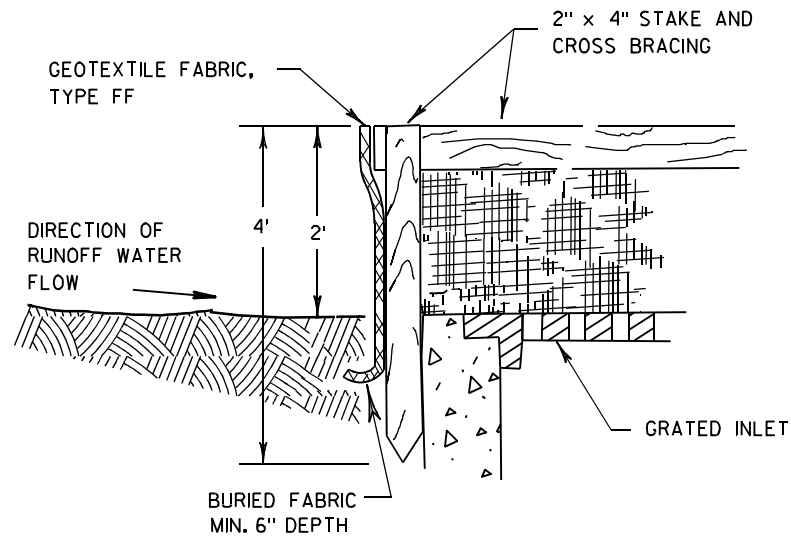
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

FHWA

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

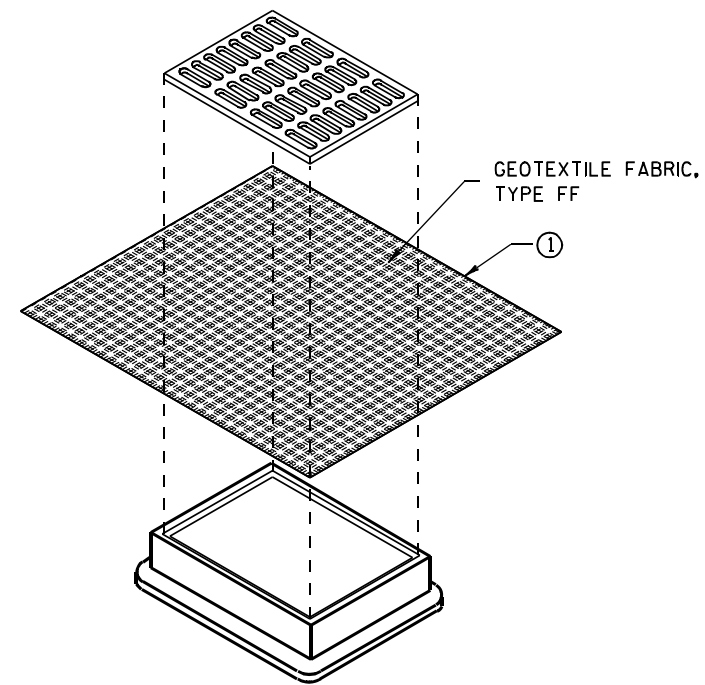
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

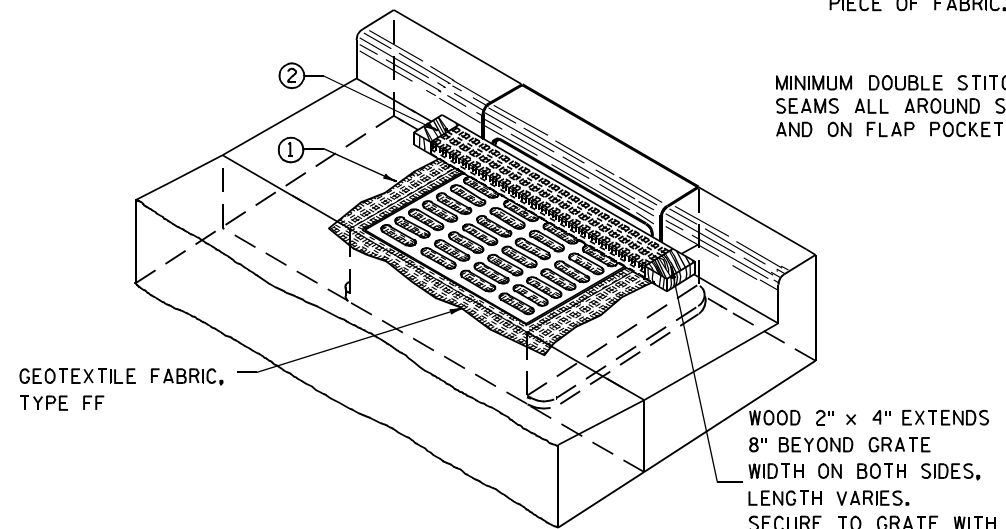
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

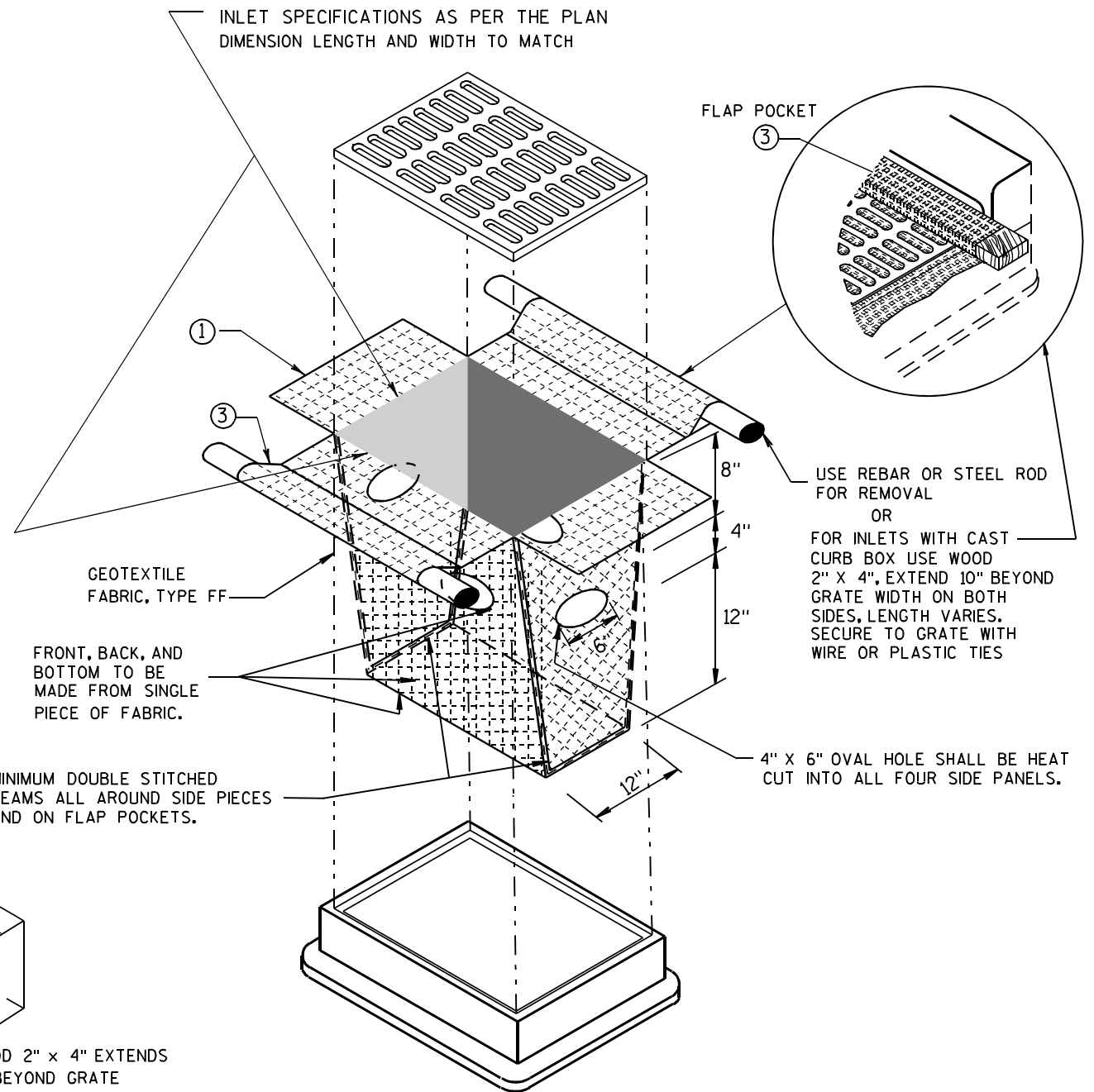
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

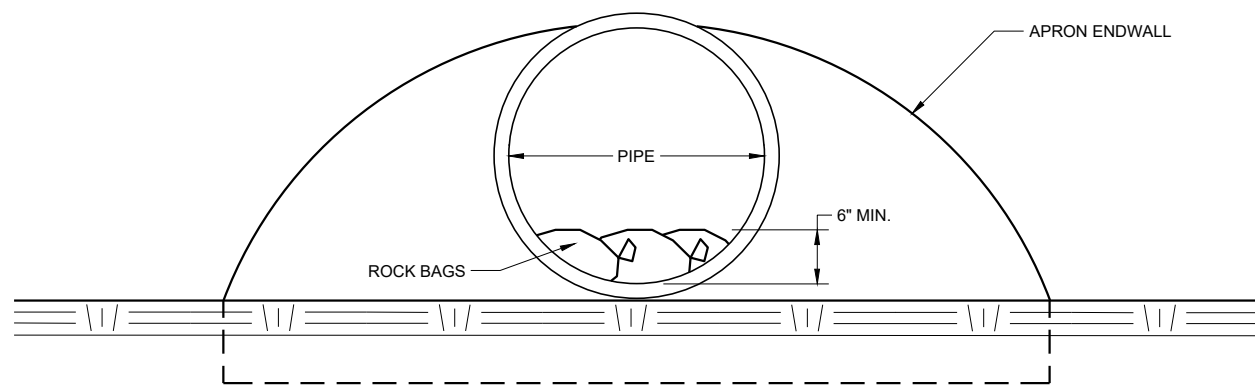
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



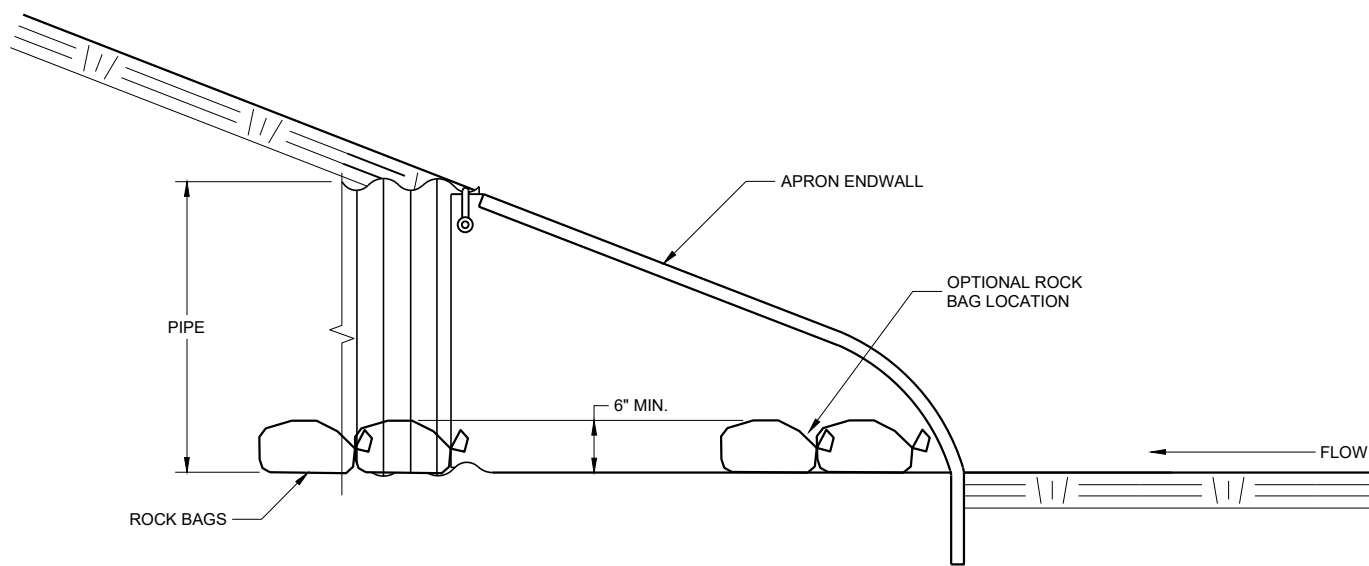
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Conestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
 (INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2019 /S/ Daniel Schave
 DATE EROSION CONTROL ENGINEER

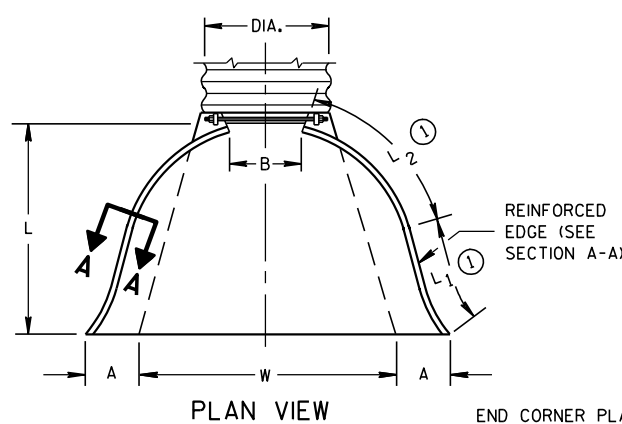
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

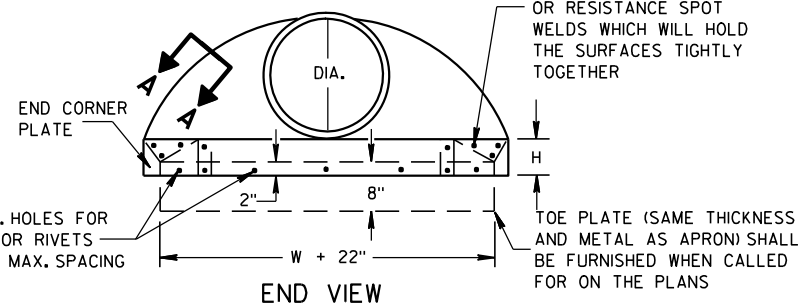
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1	
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1	
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1	
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1	
48	5	24	72	26	98	84	5	3 to 1	
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	30-35	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	30-35	78	21	99	108	6	2 to 1	
78	7 1/2	30-35	78	21	99	114	6 1/2	2 to 1	
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1	
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1	

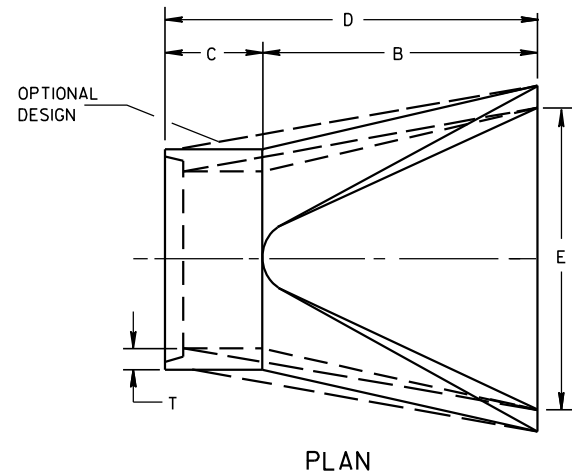
* MINIMUM
** MAXIMUM



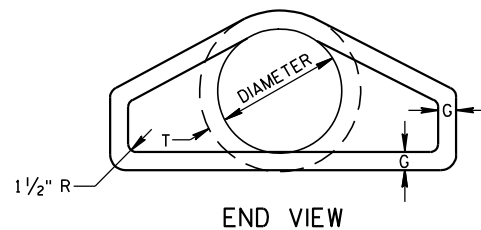
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



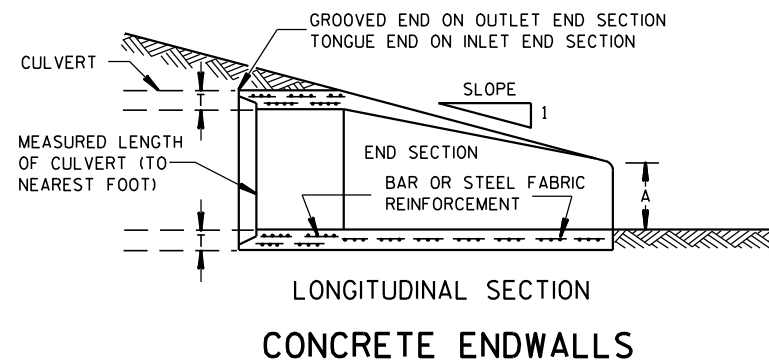
SIDE ELEVATION
METAL ENDWALLS



PLAN

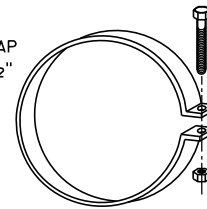


END VIEW

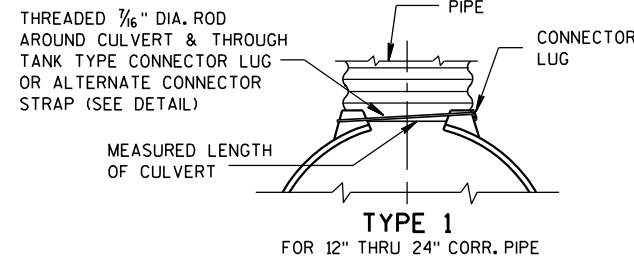


LONGITUDINAL SECTION
CONCRETE ENDWALLS

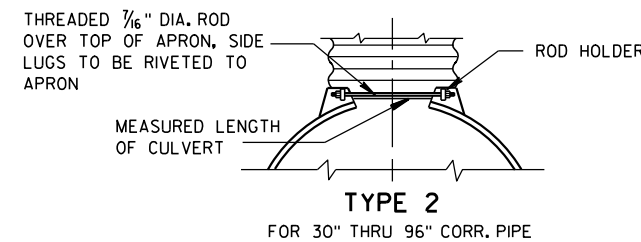
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



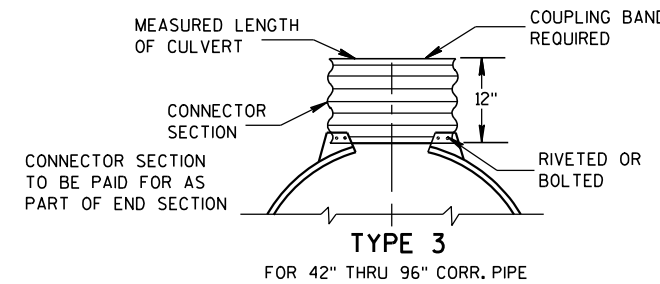
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



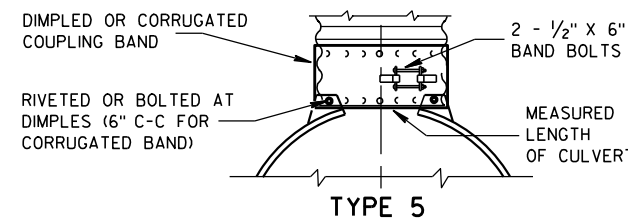
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

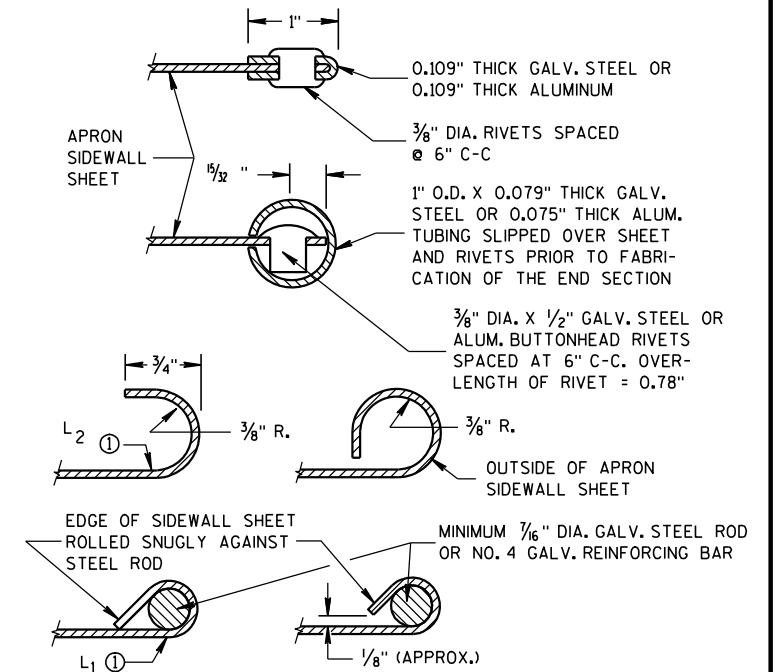
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

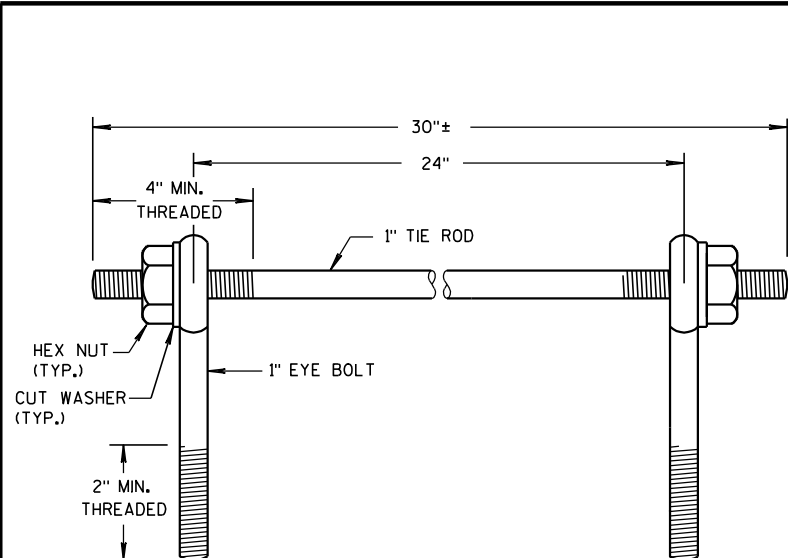
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

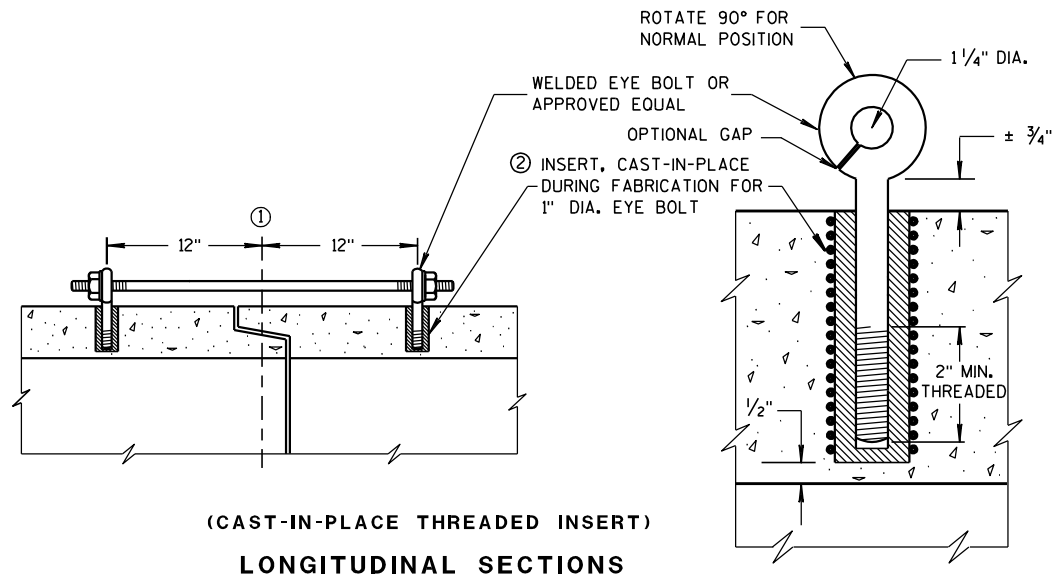
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

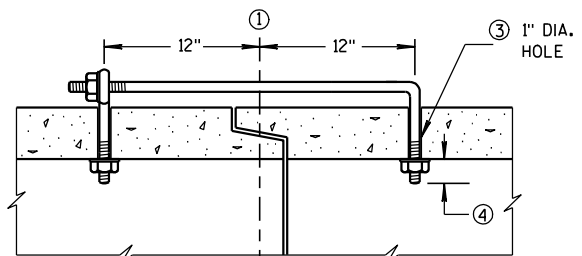
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

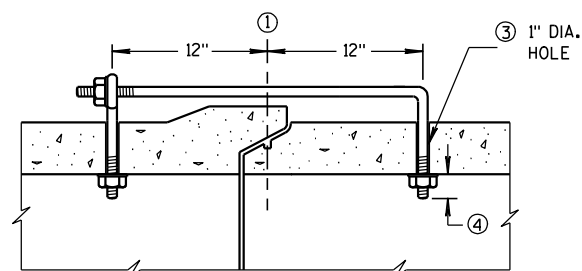
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① ϕ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

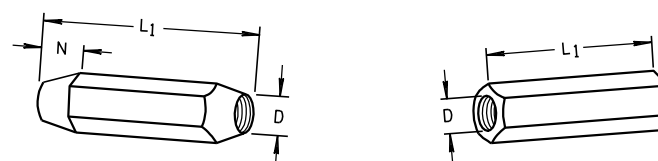
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

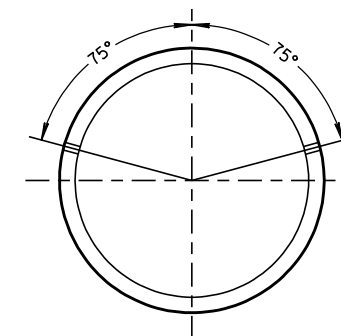
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/6

DIMENSIONS SHOWN ARE IN INCHES

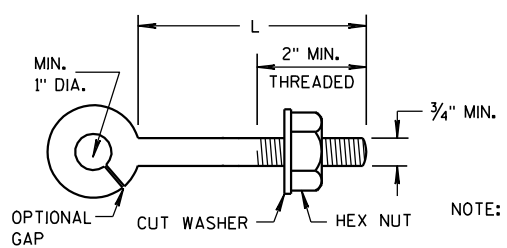


TAPERED PLAIN
RIGHT AND LEFT THREADS
SLEEVE NUTS



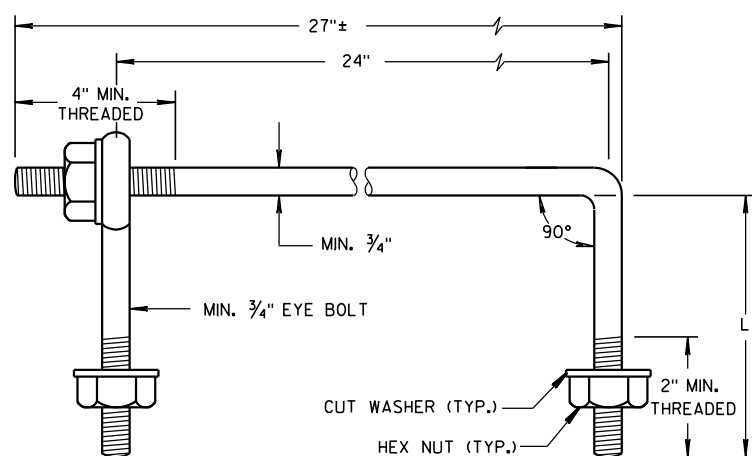
PLACEMENT OF (2) CAST-IN-PLACE
INSERTS OR HOLES DURING FABRICATION
FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



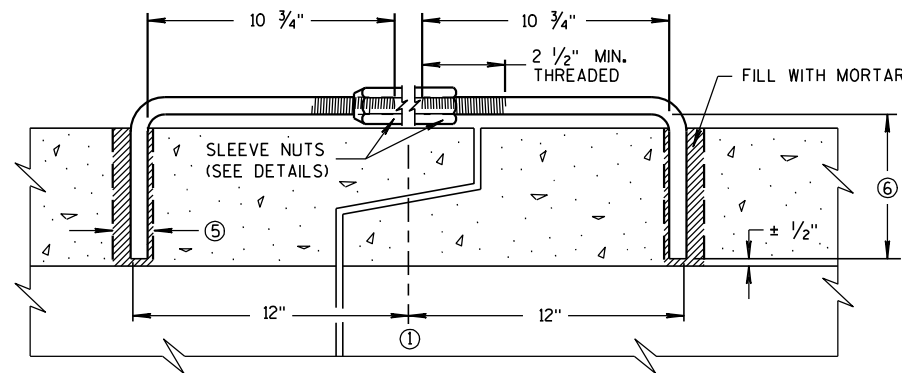
EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

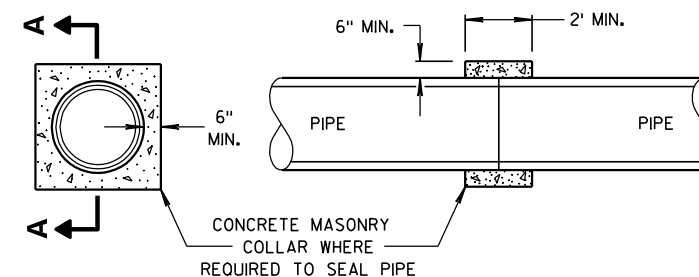


EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)
EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



LONGITUDINAL SECTION
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)
ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

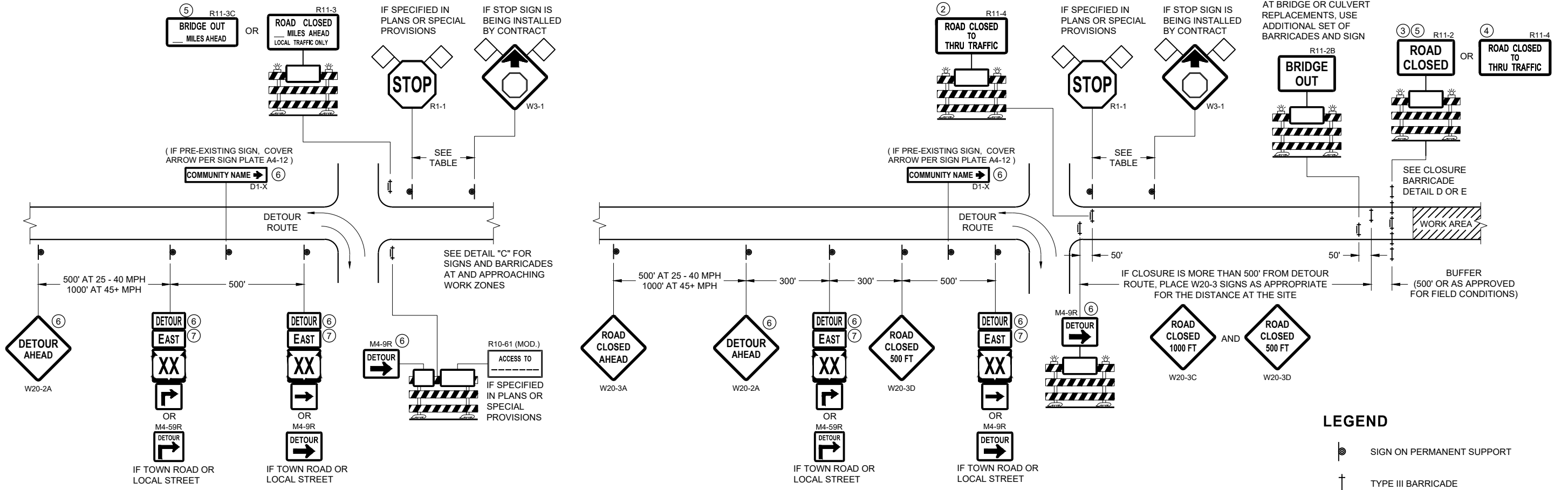


SECTION A-A
CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE
PIPE AND CONCRETE
COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

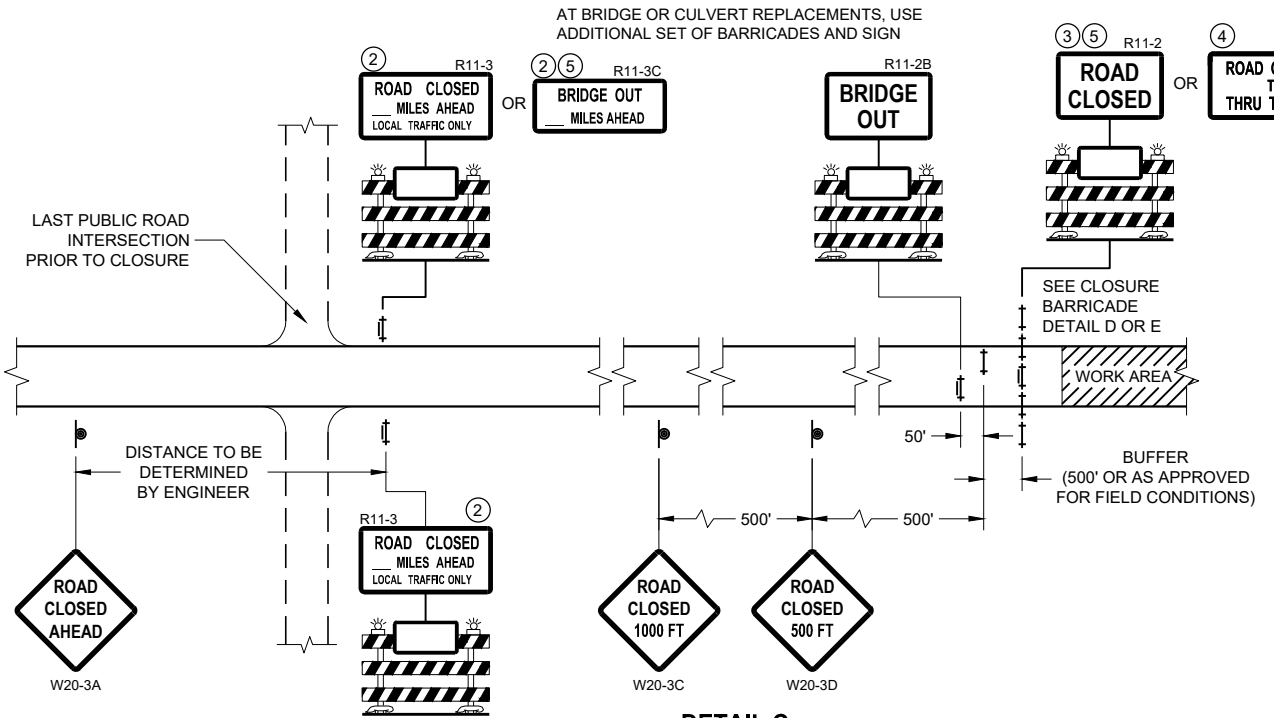
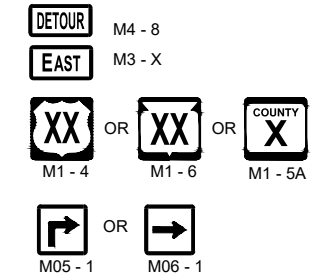


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
 DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE LESS THAN 1/2 MILE FROM
 DETOUR ROUTE (1000 FEET IF URBAN)

- LEGEND**
- SIGN ON PERMANENT SUPPORT
 - TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TYPE "A" WARNING LIGHT (FLASHING)
 - WORK AREA
 - FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

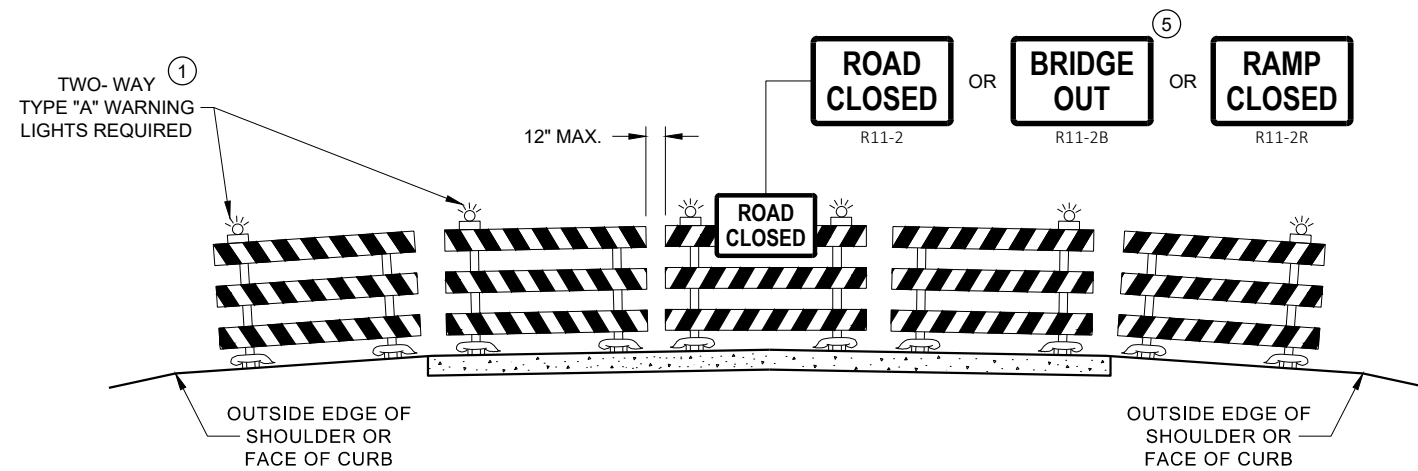
SEE SDD 15C2-SHEET "b"
 FOR GENERAL NOTES
 AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
 FOR MAINLINE CLOSURES**

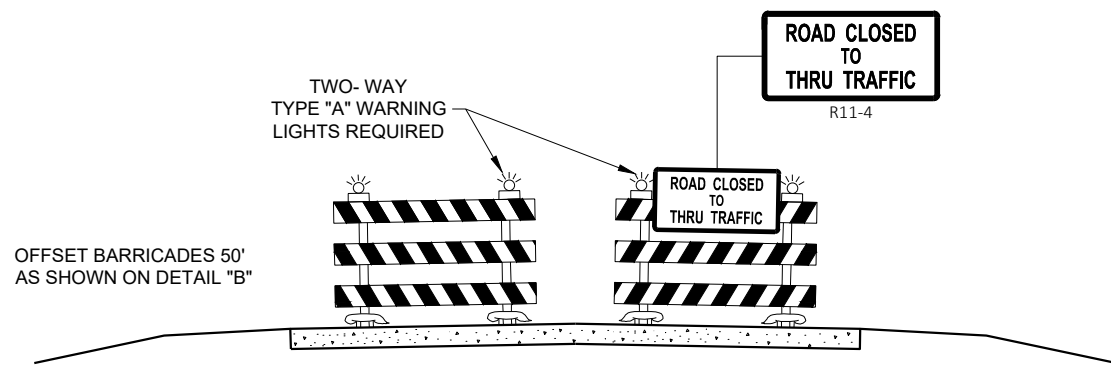
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2018 /S/ Andrew Heidtke
 DATE DATE WORK ZONE ENGINEER

FHWA



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

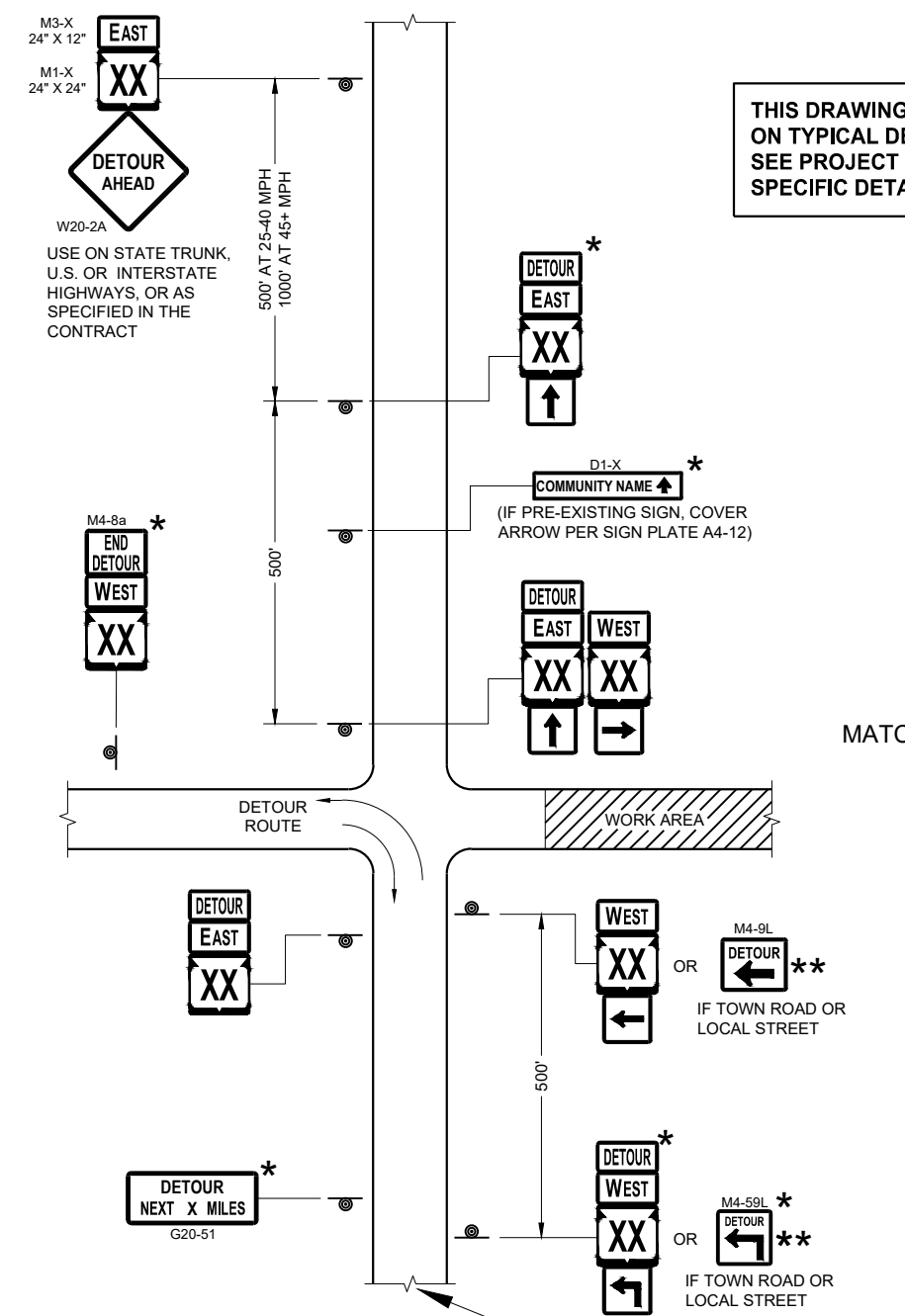
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

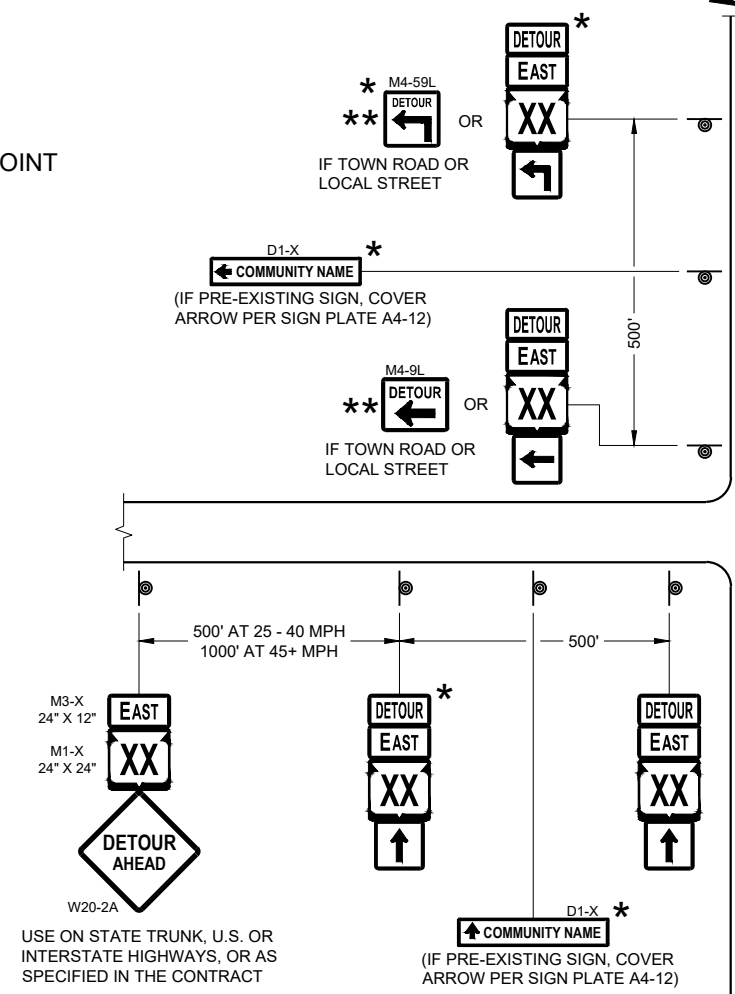
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

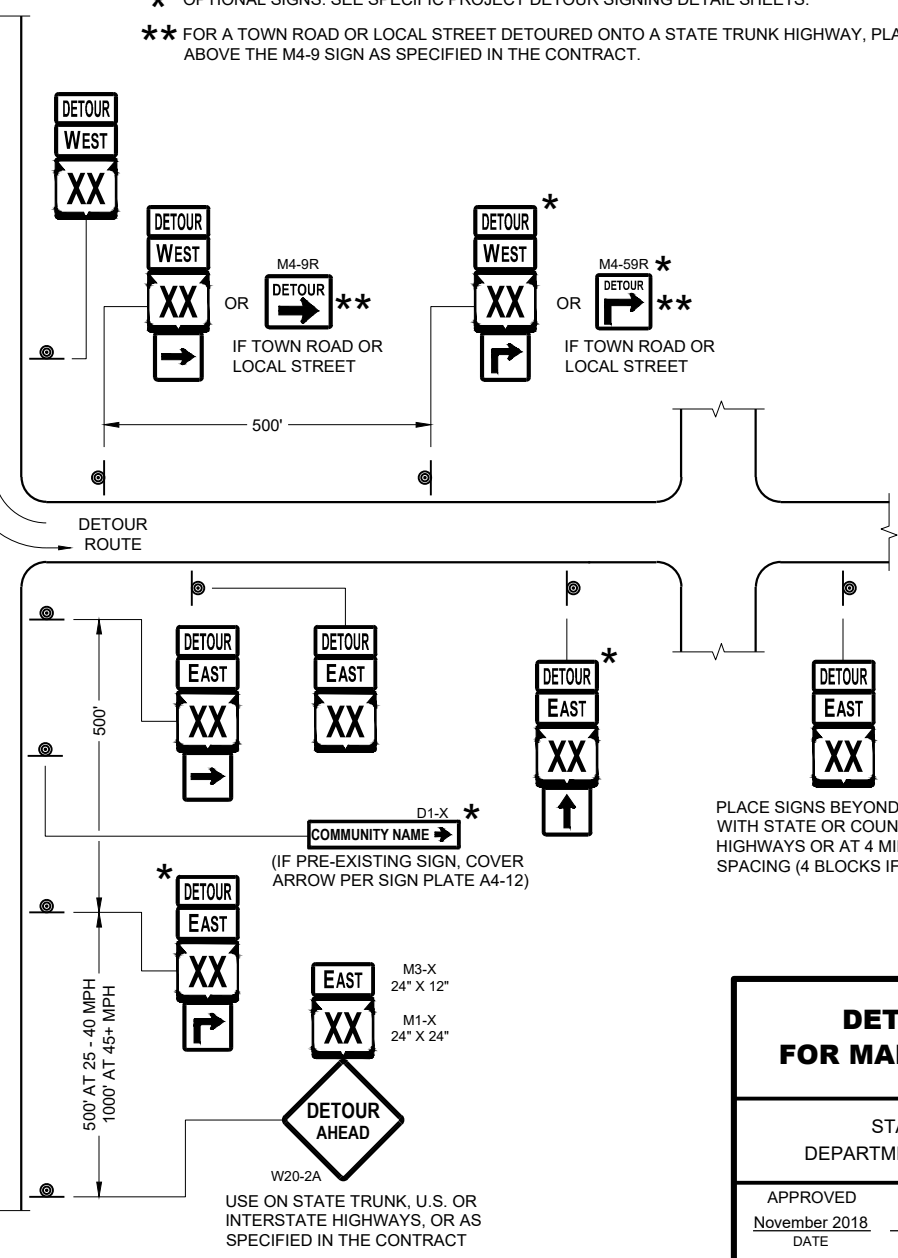
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT



DETAIL F
DETOUR SIGNING



**DETOUR SIGNING
FOR MAINLINE CLOSURES**

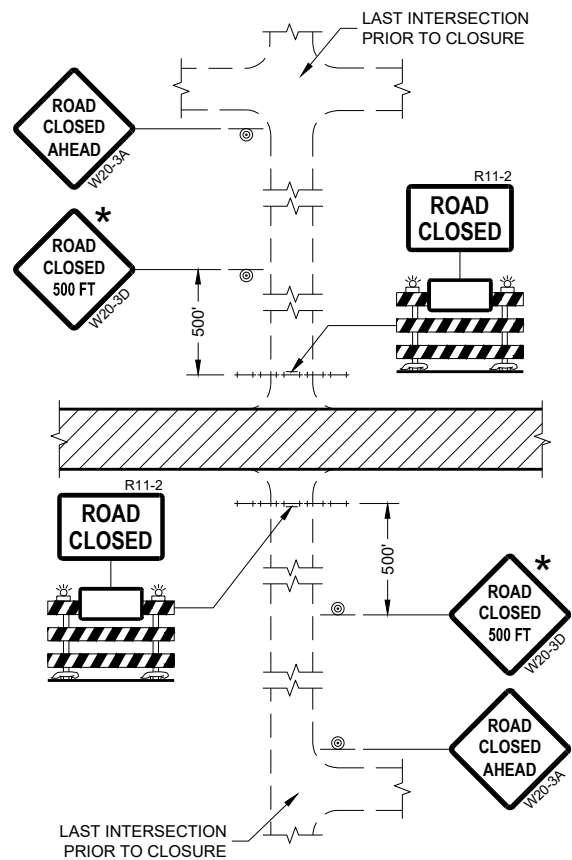
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

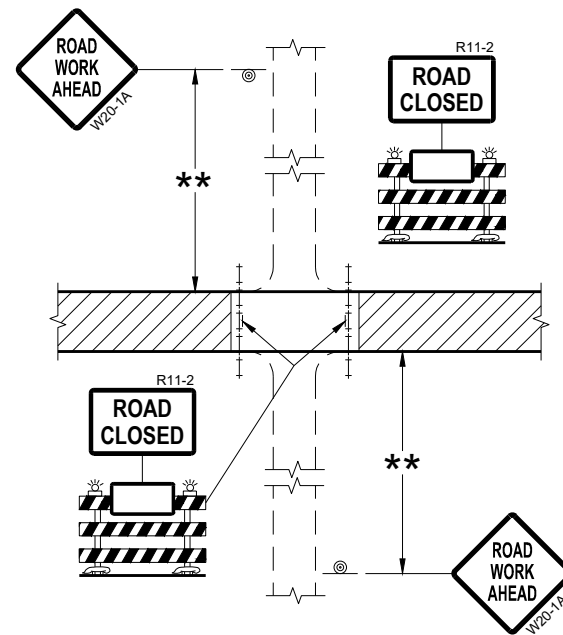
FHWA

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

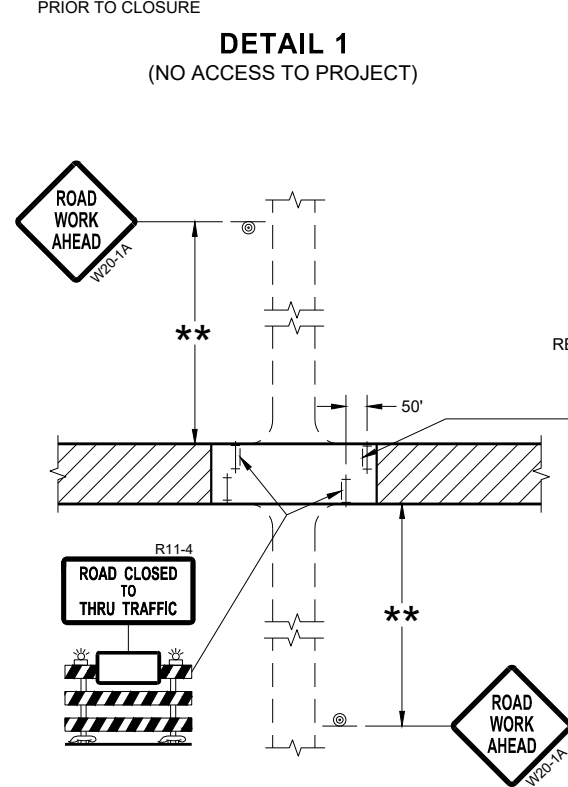
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)



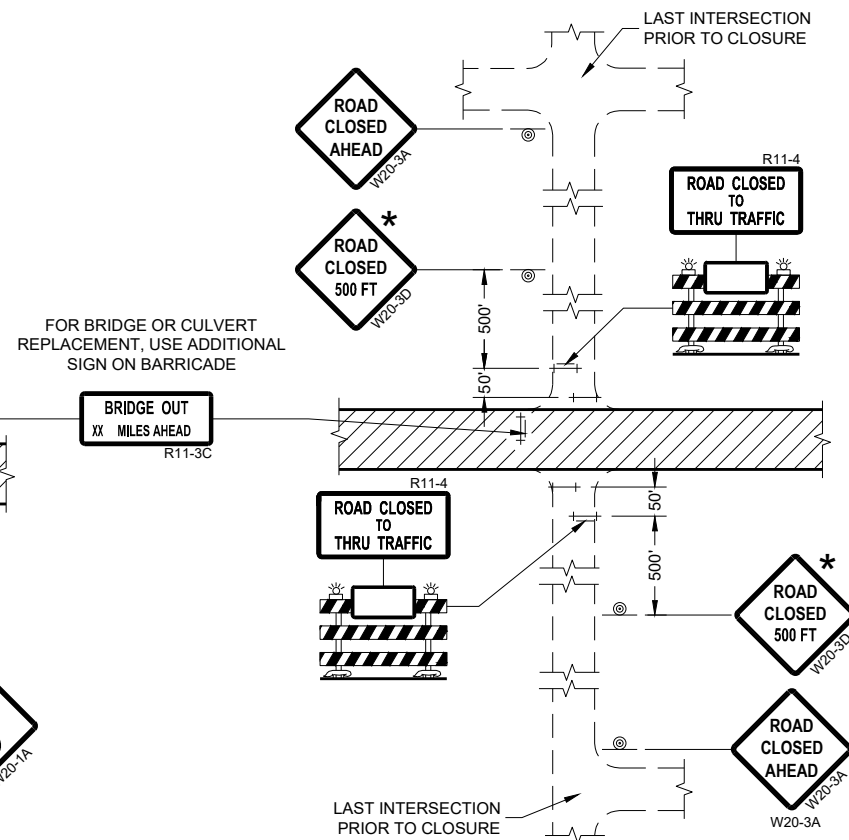
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

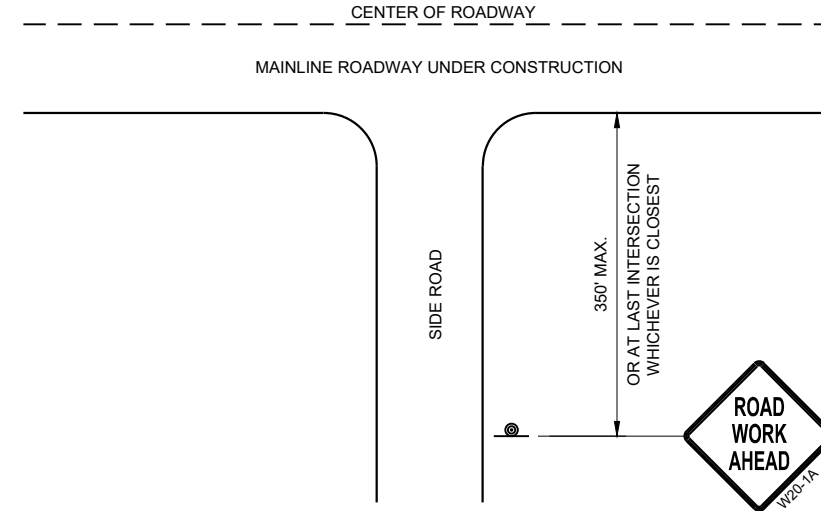
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

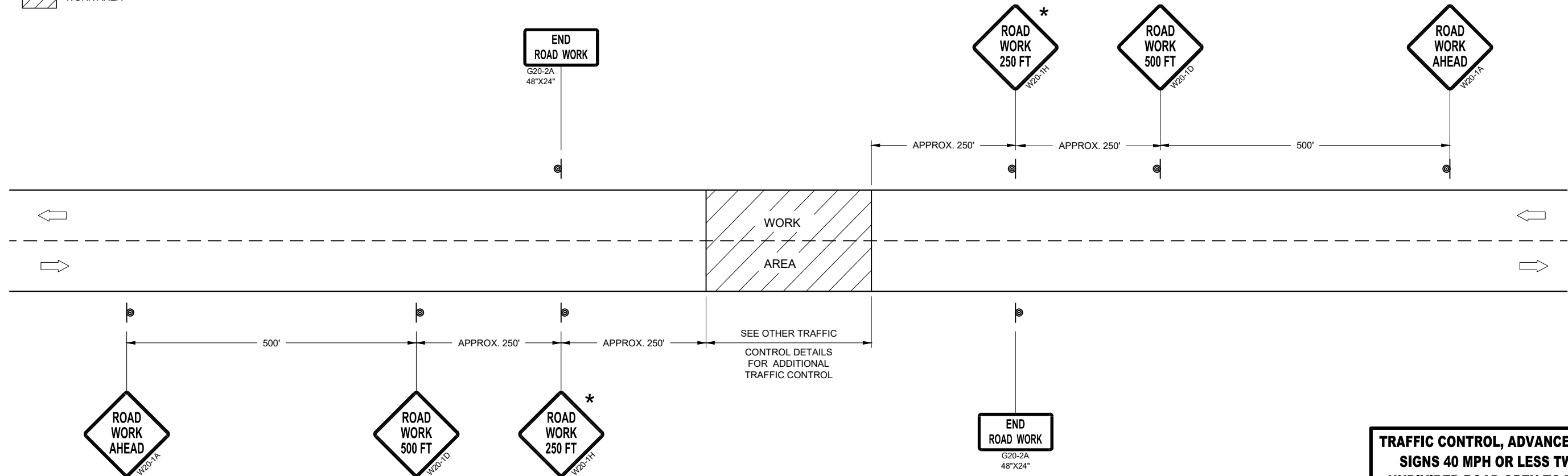
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL



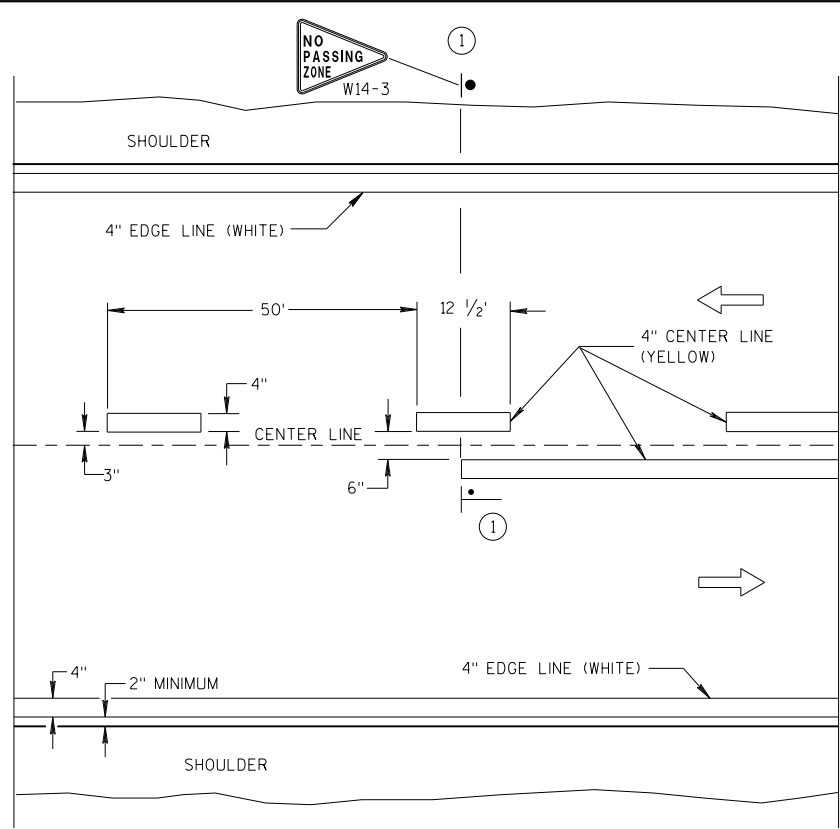
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

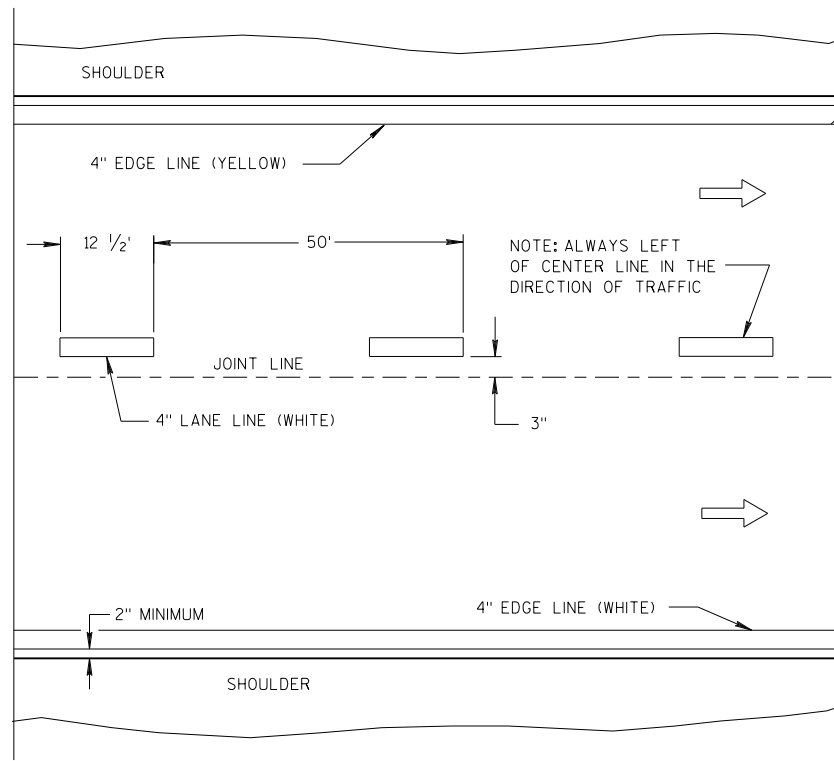
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

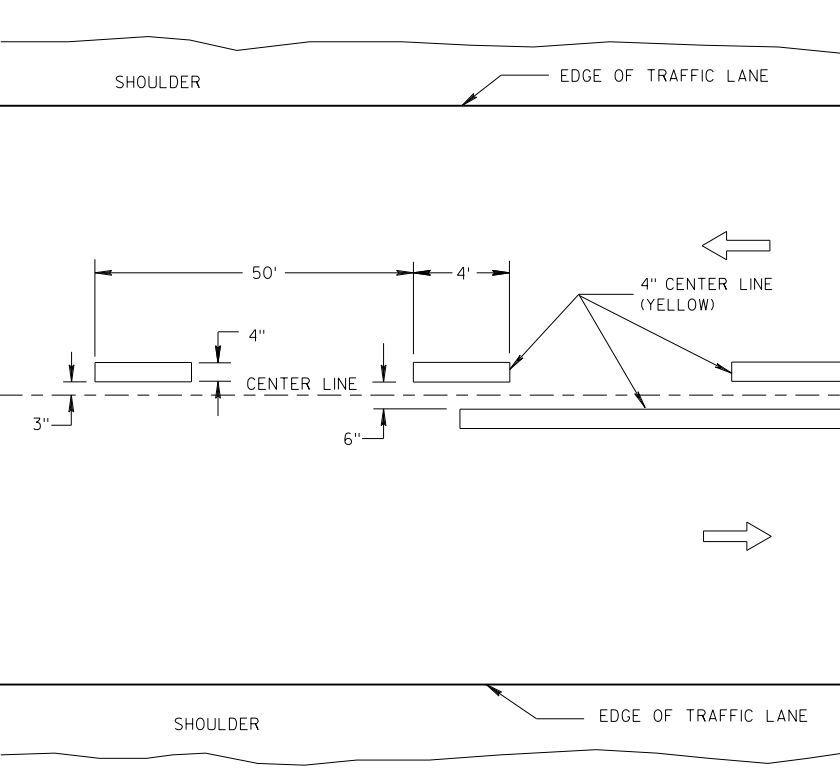


TWO WAY TRAFFIC

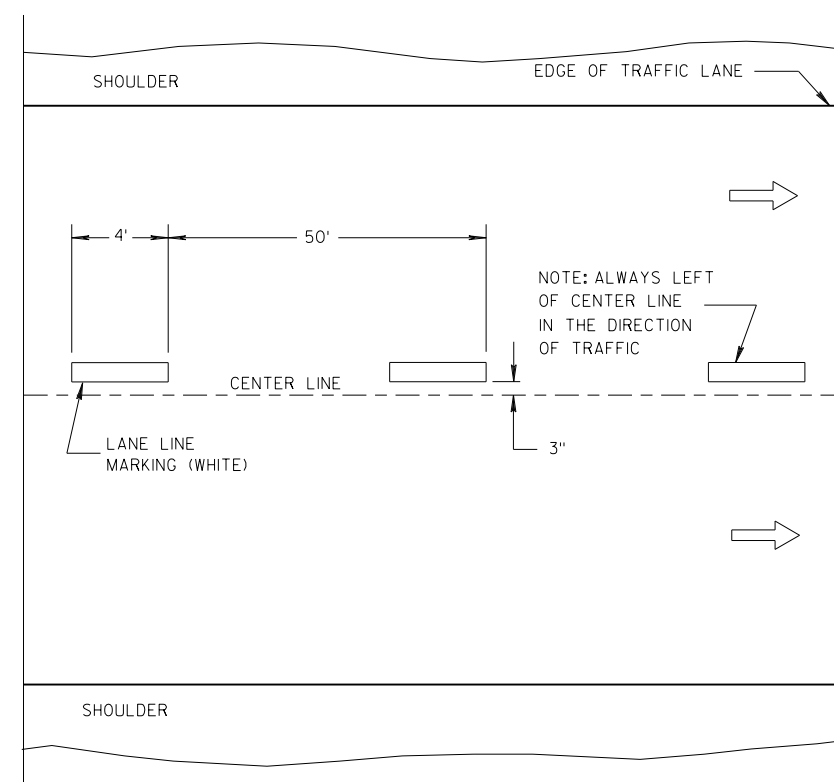


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

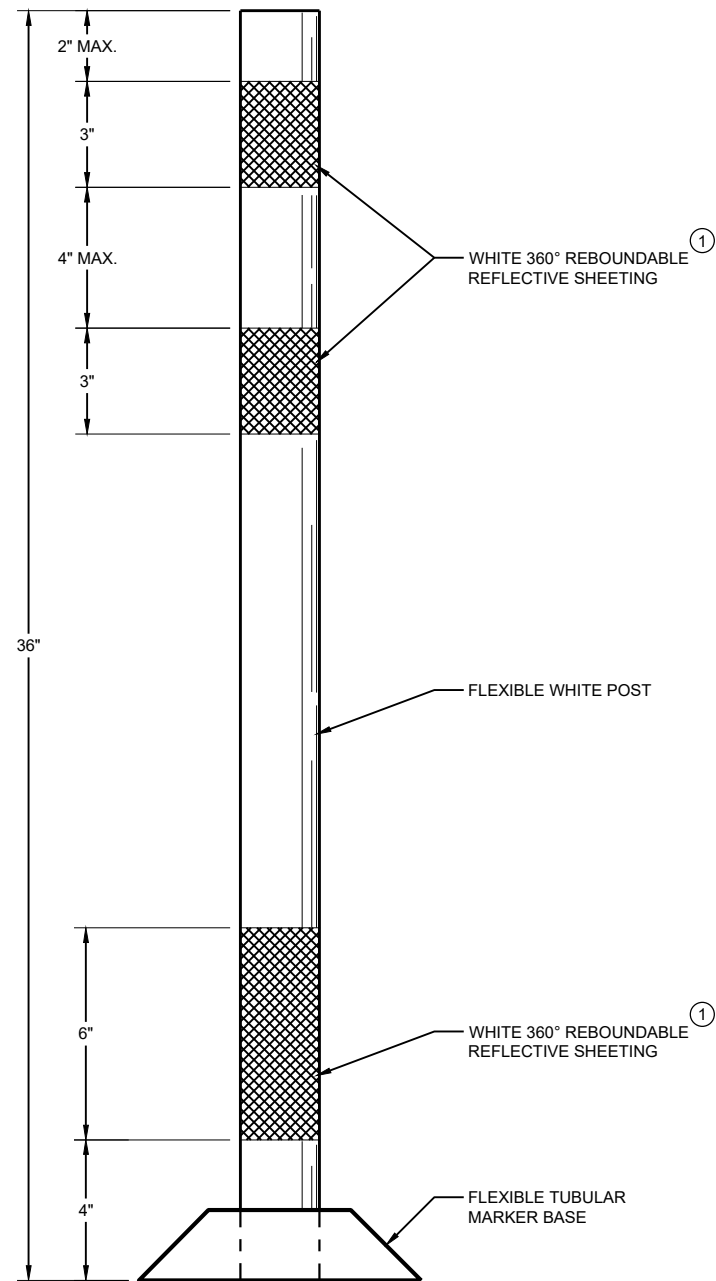
NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

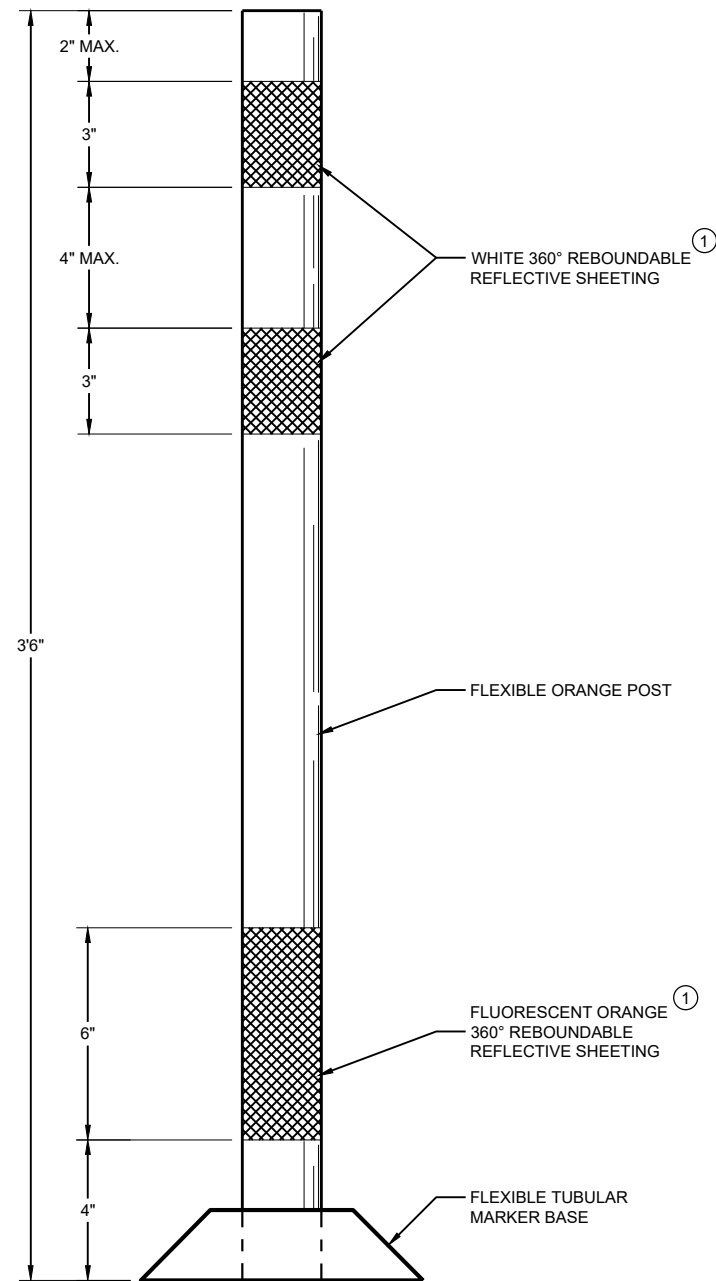
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018	/S/ Matthew R. Rauch DATE STATE SIGNING AND MARKING ENGINEER
FHWA	



**FLEXIBLE TUBULAR
MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE TUBULAR
MARKER POST
WORK ZONE**

GENERAL NOTES

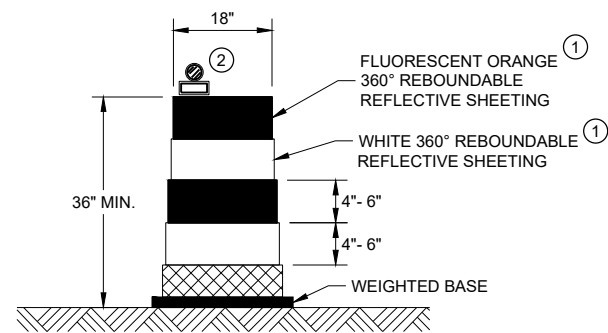
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

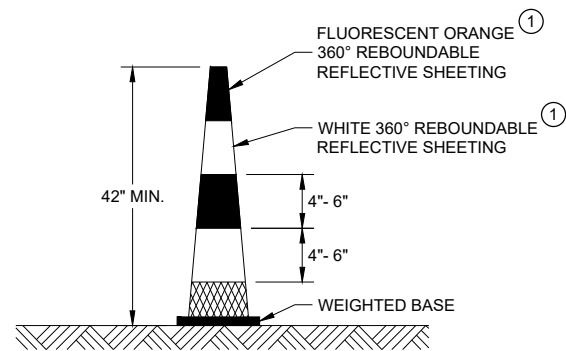
THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

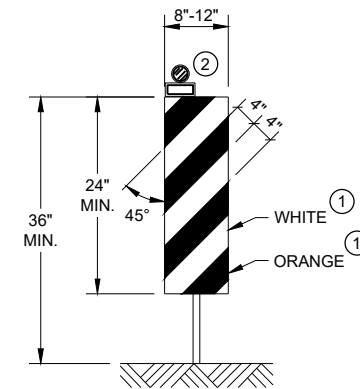


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

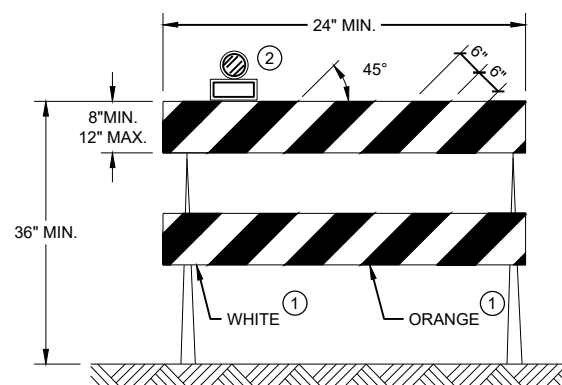


VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

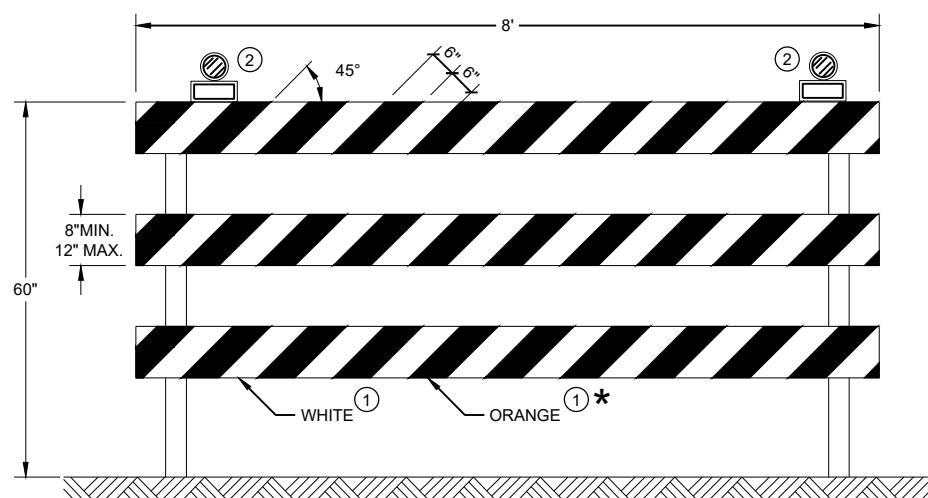
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

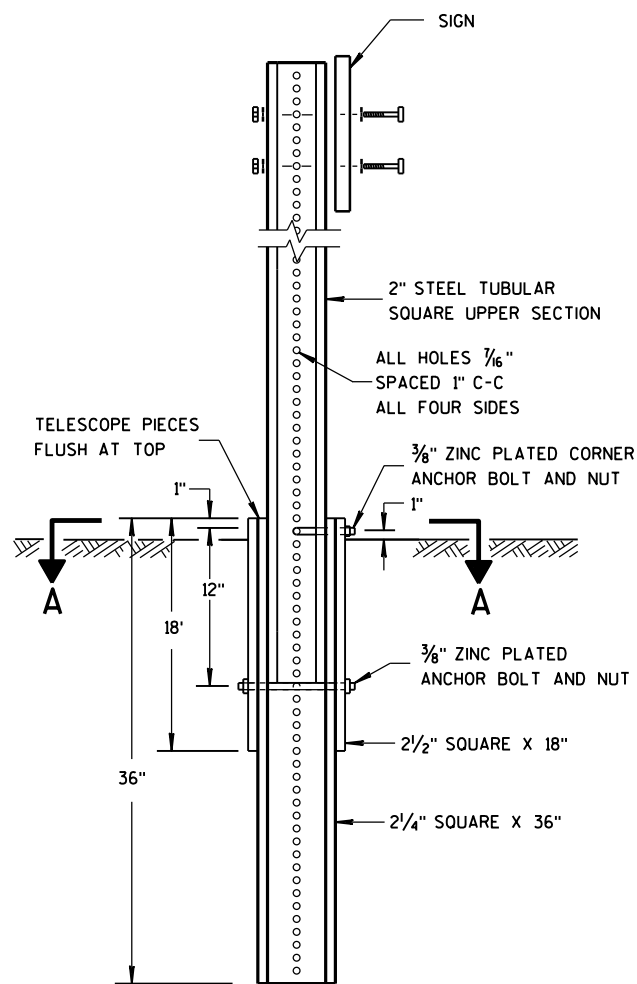


TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



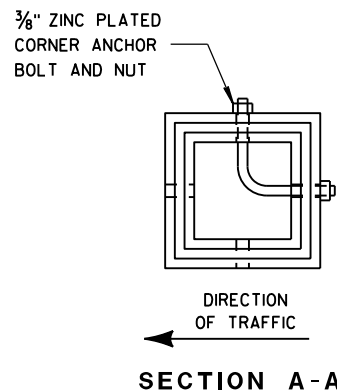
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

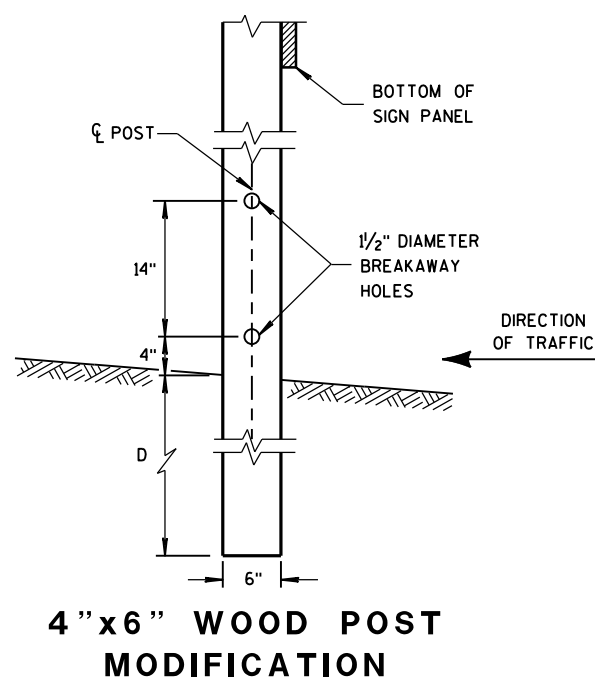
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

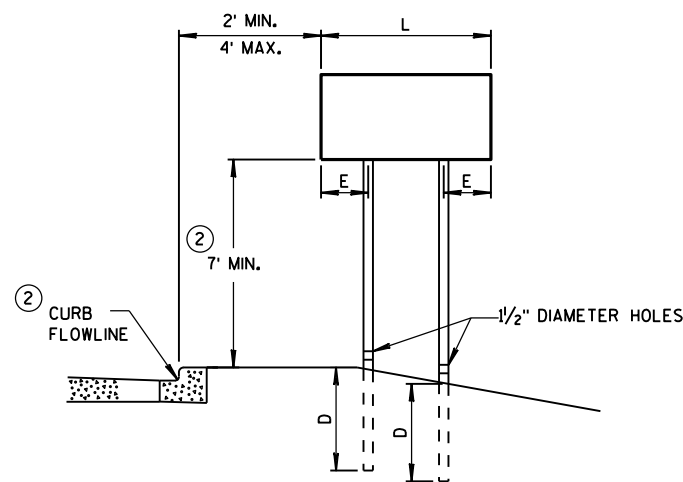
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



SECTION A-A



4" X 6" WOOD POST MODIFICATION

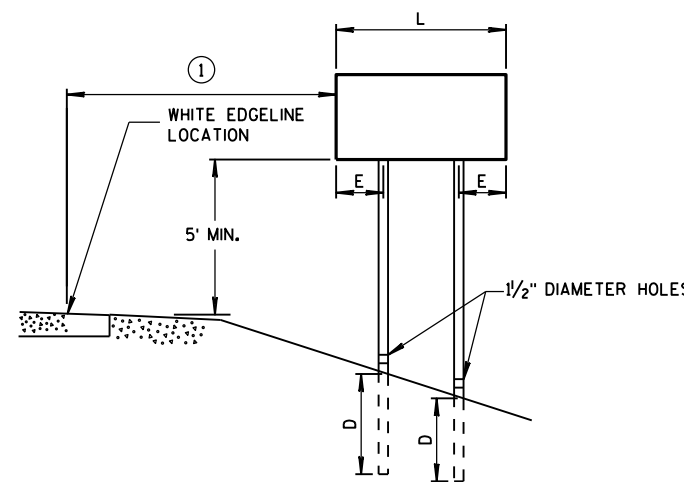


URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



RURAL AREA

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

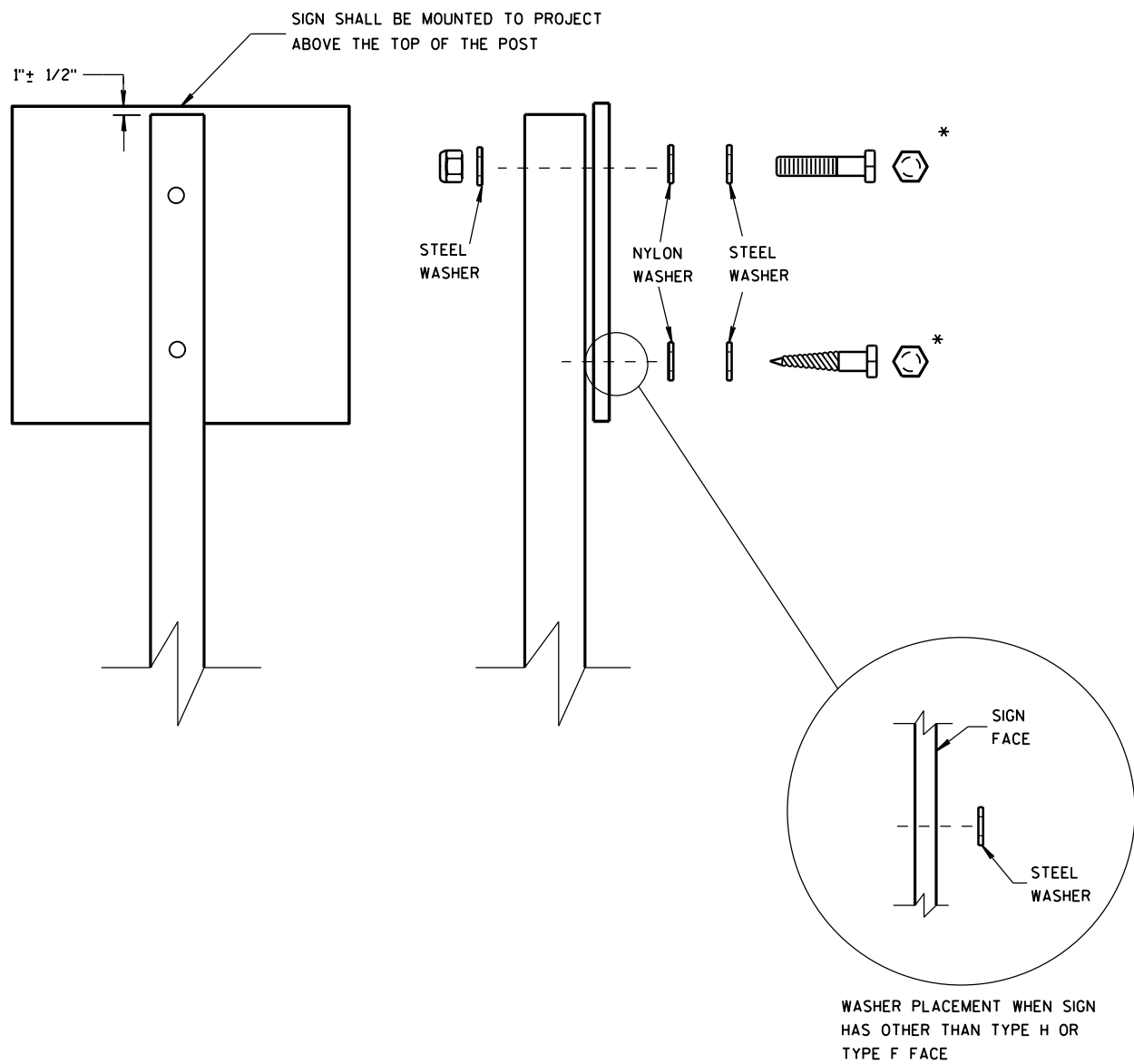
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 3/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

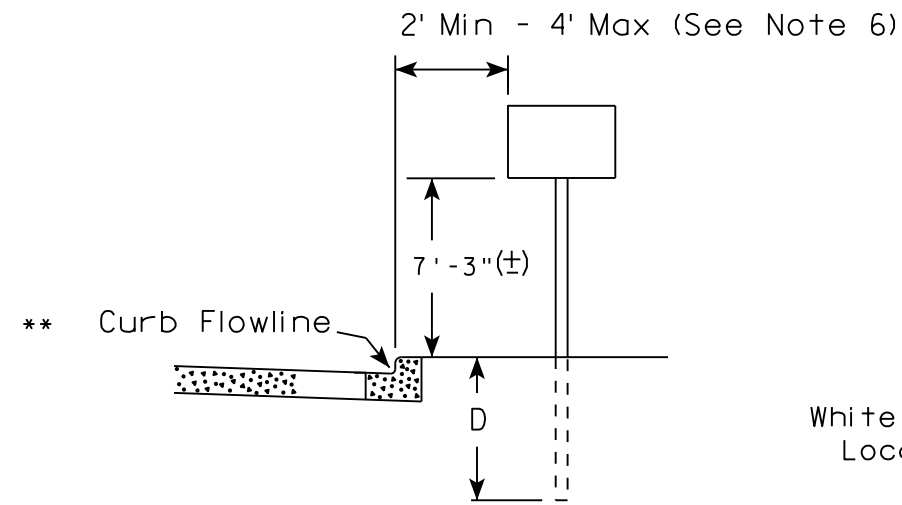
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

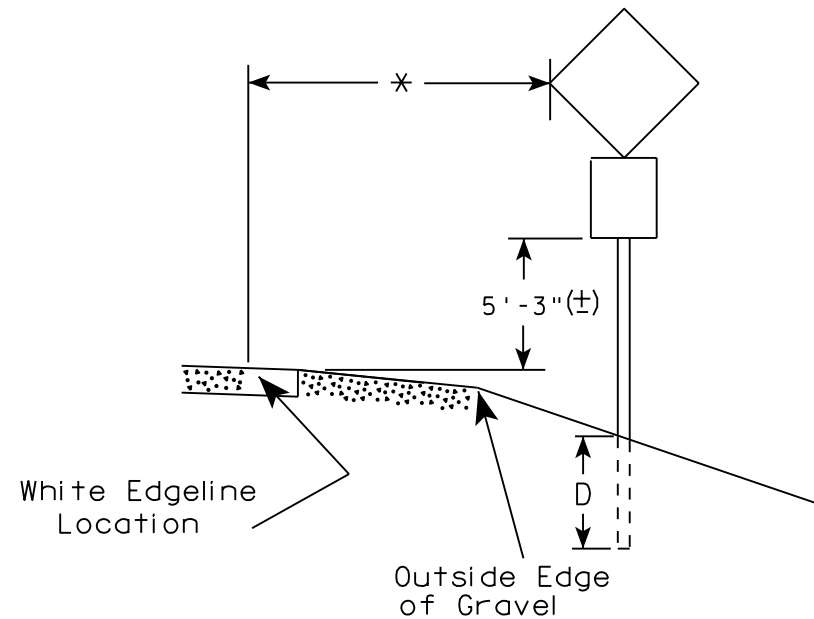
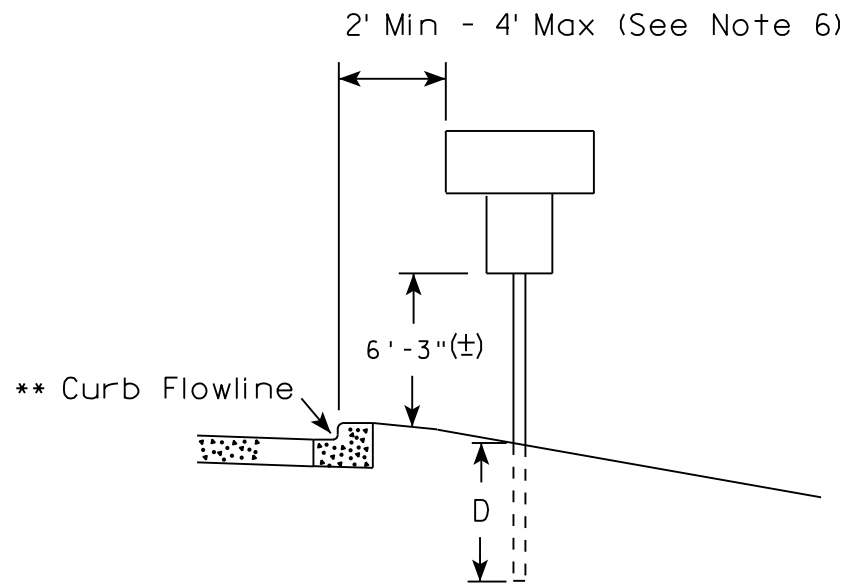
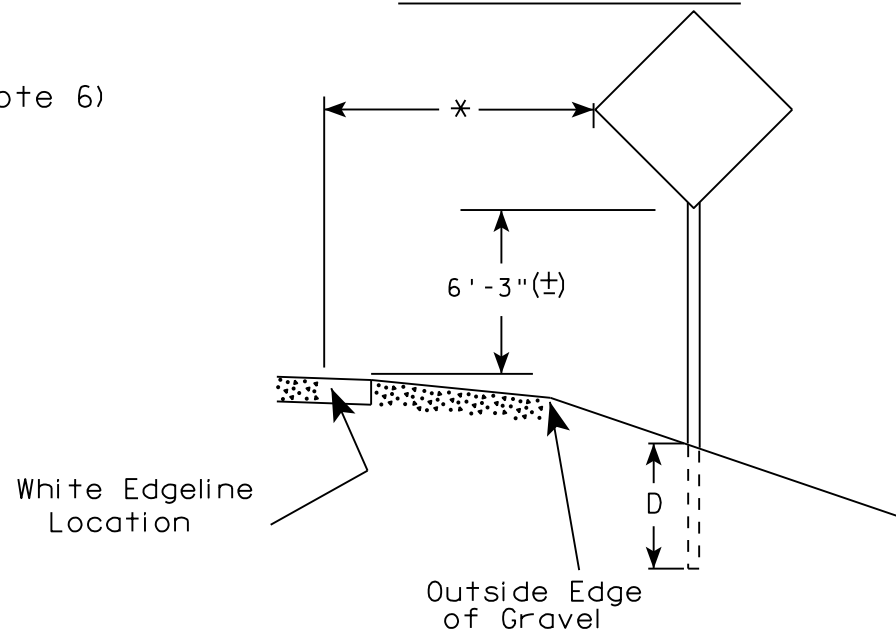
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/s/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

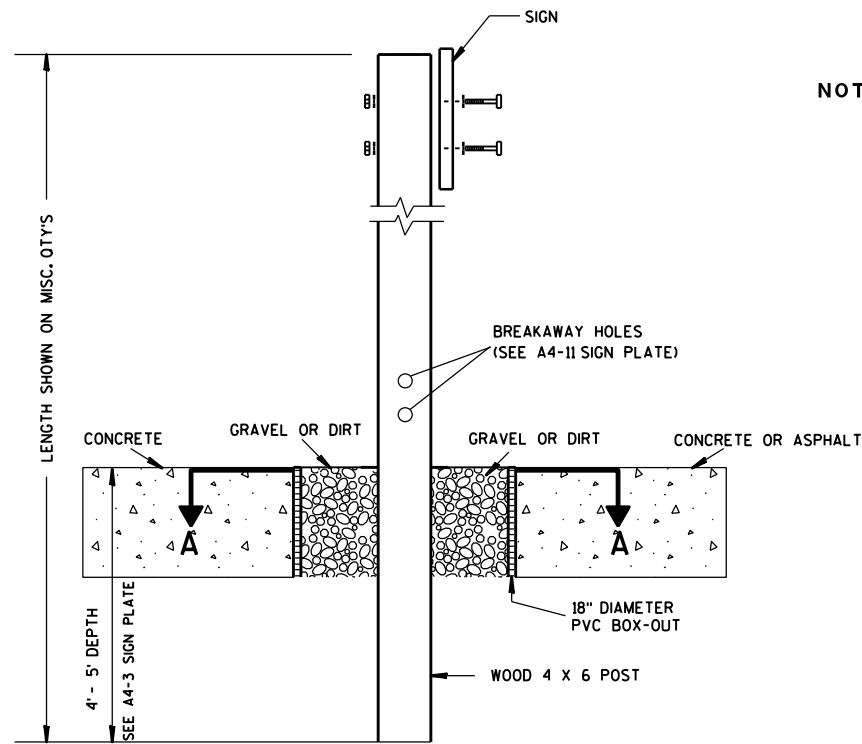
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

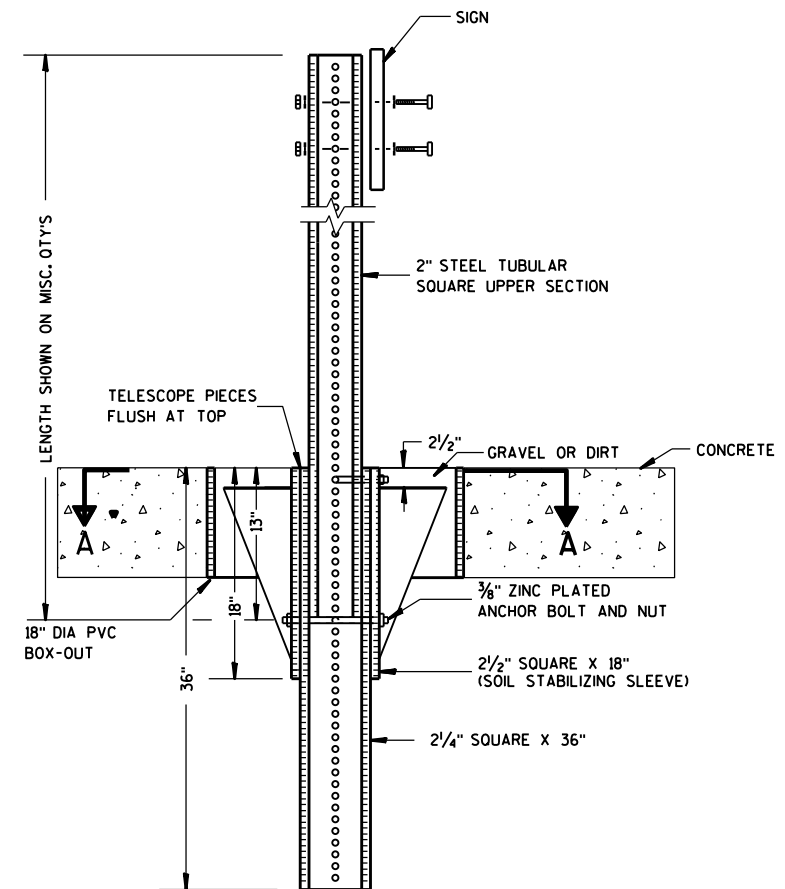
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

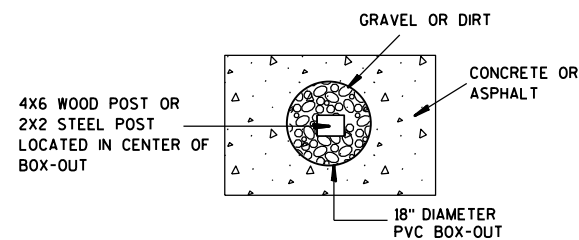
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

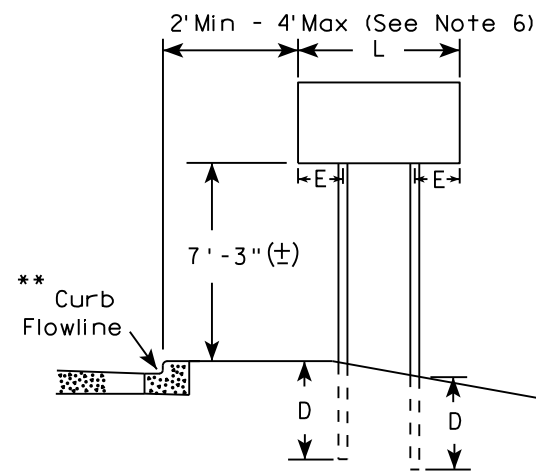
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

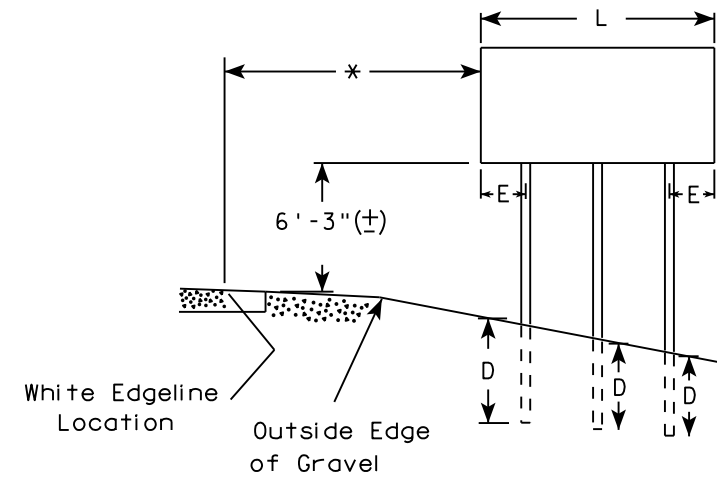
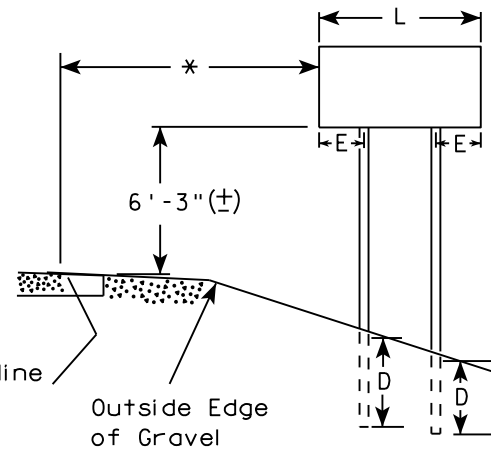
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

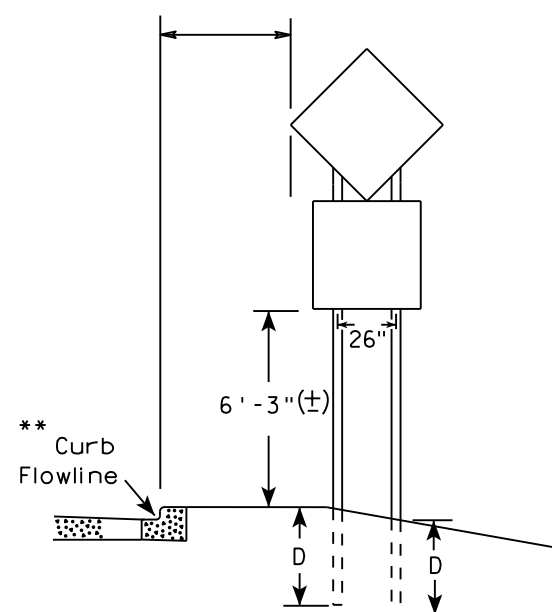
URBAN AREA



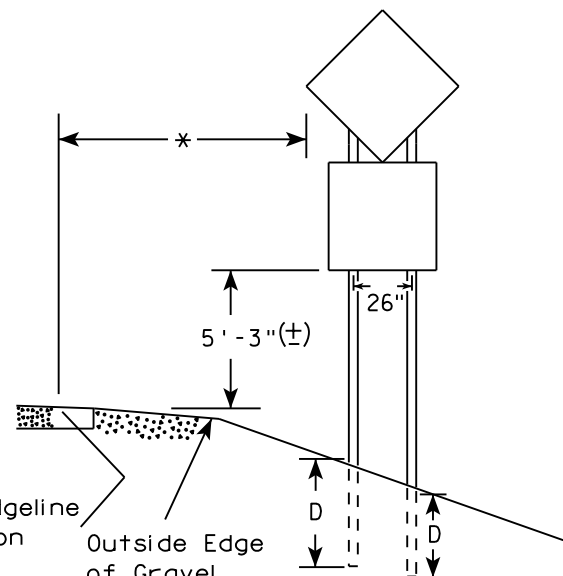
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

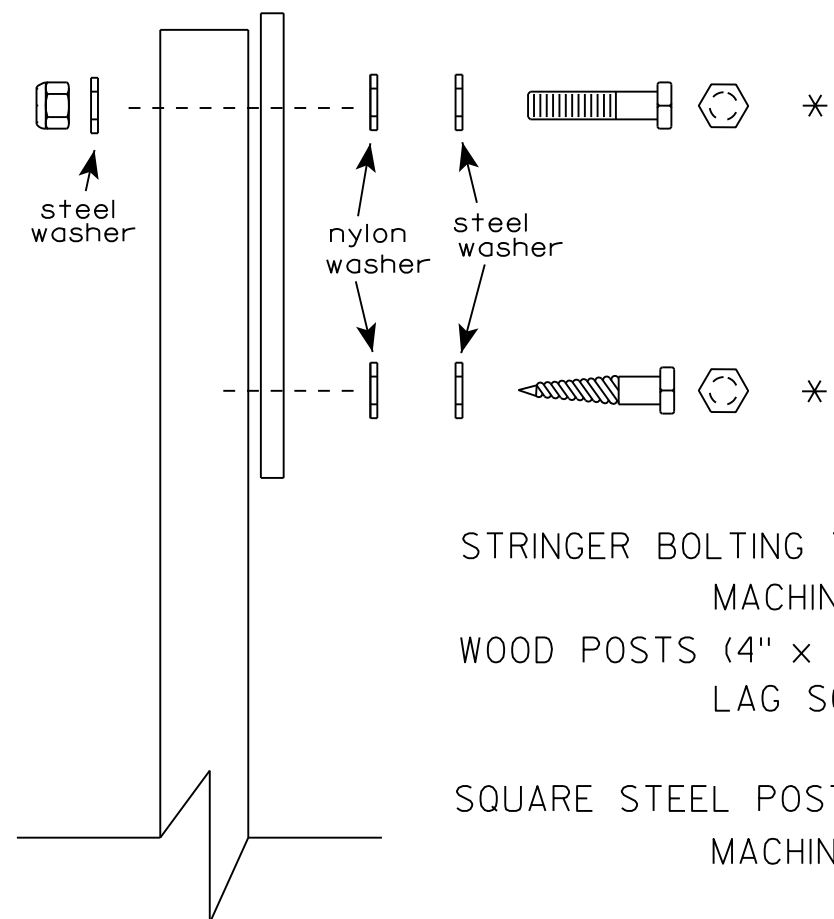
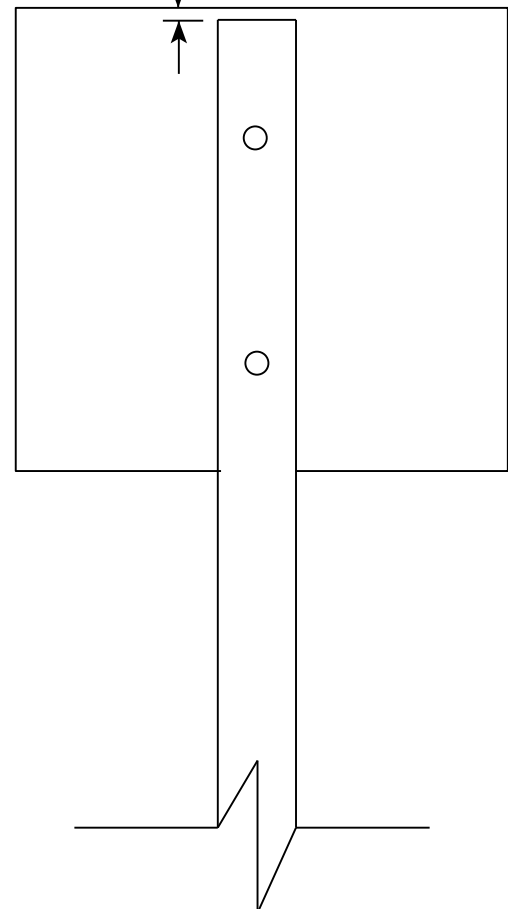
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15

1"± 1/2"

SIGN SHALL BE MOUNTED TO PROJECT ABOVE THE TOP OF THE POST



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

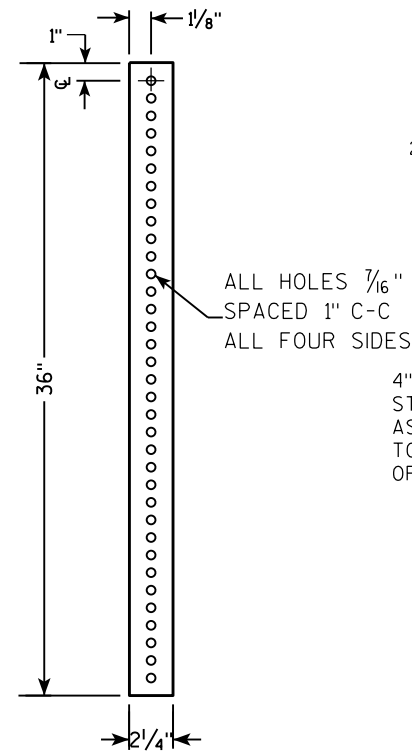
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

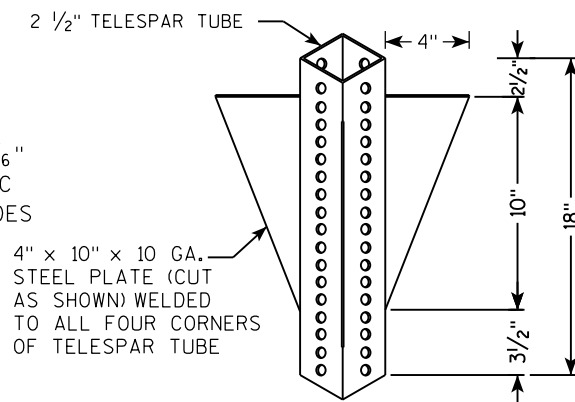
7

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

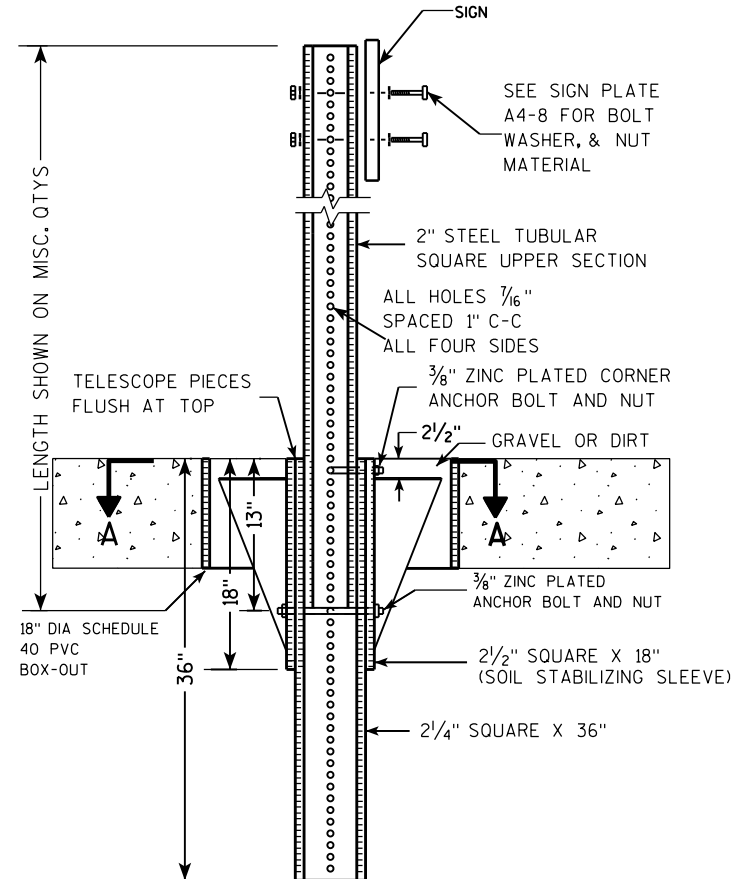
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



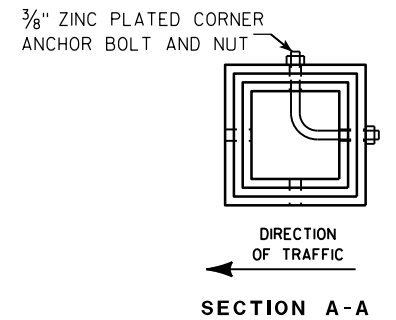
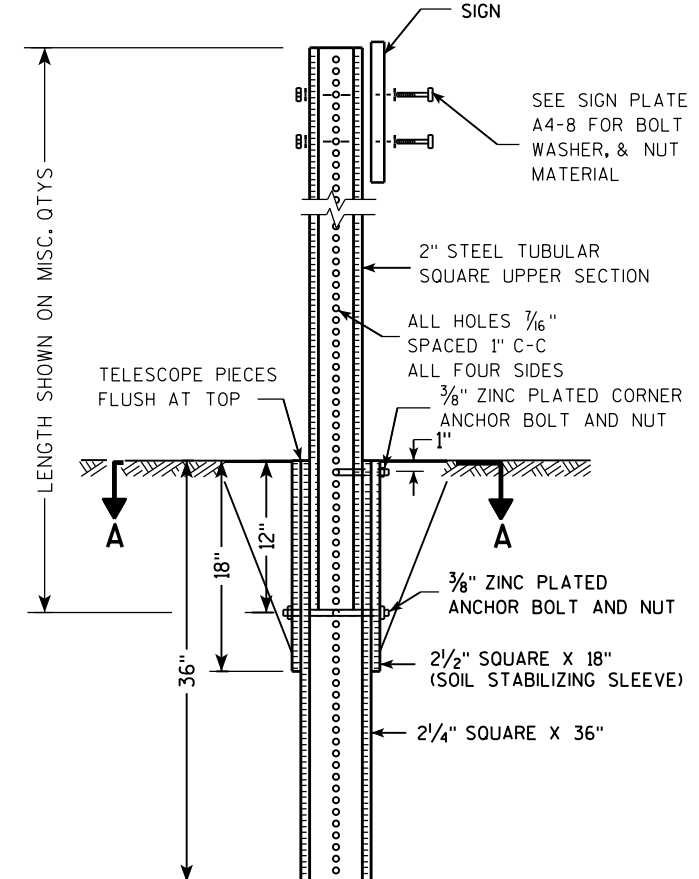
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

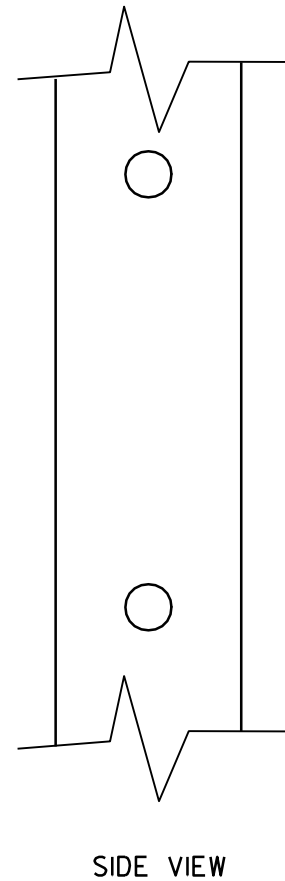
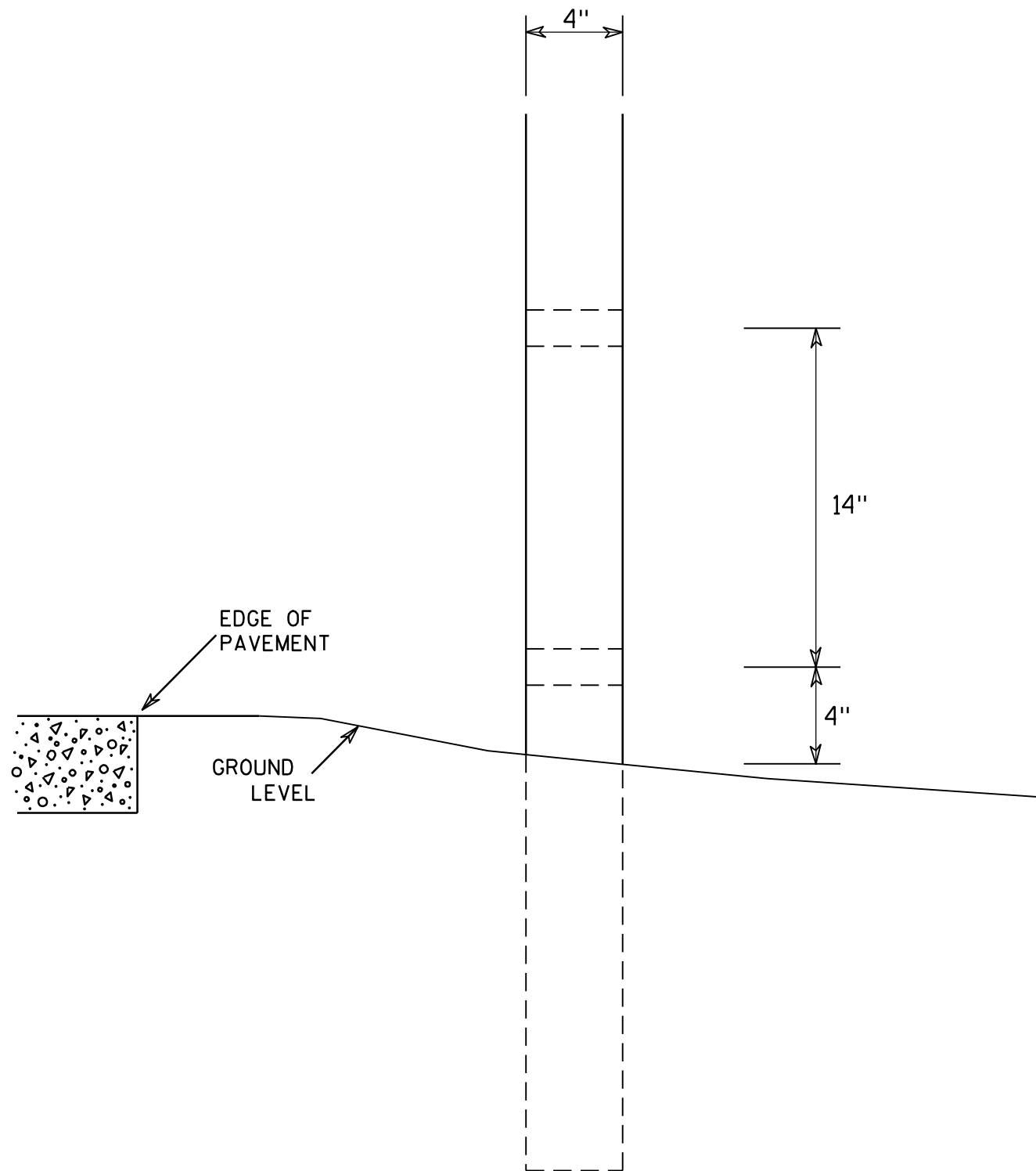
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9




GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

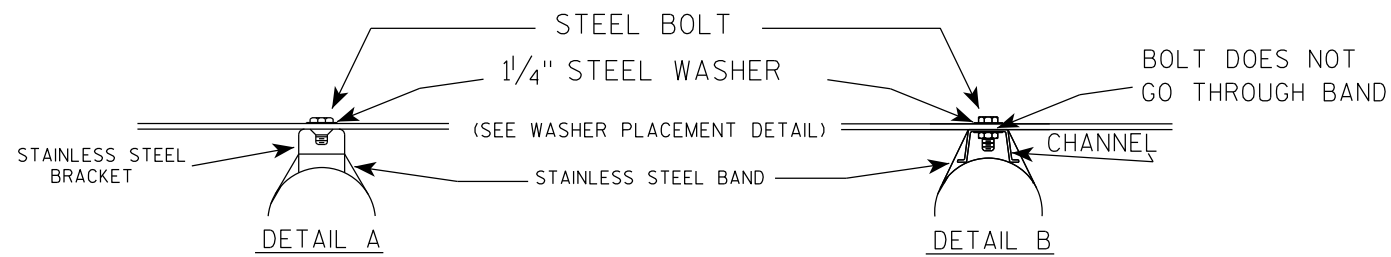
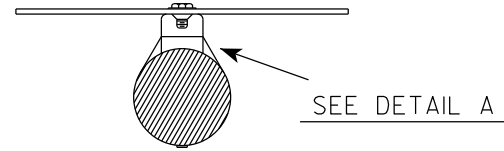
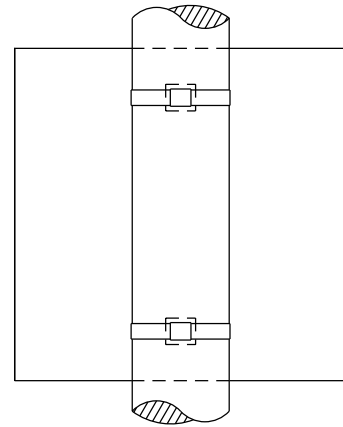
7

7

4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	 <small>for State Traffic Engineer</small>
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

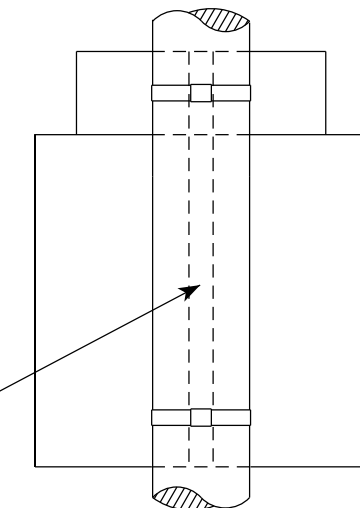
SINGLE SIGN



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

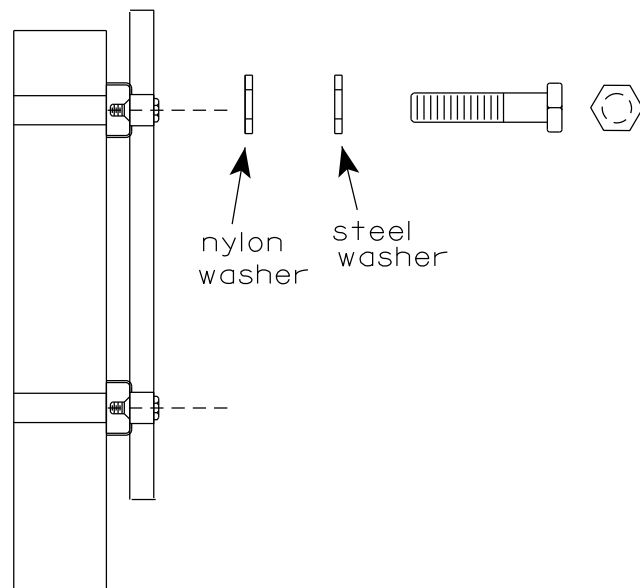
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



WASHER PLACEMENT



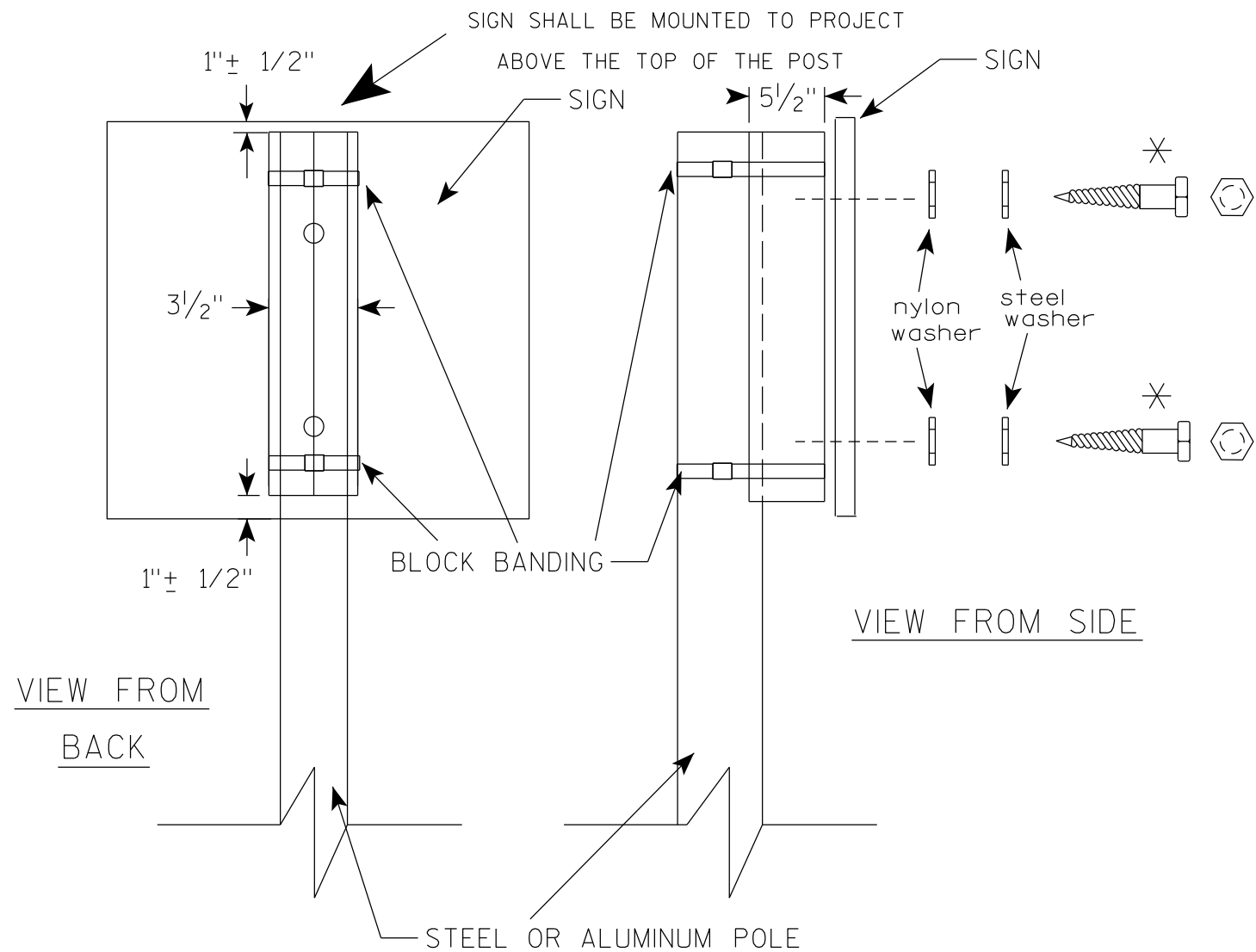
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

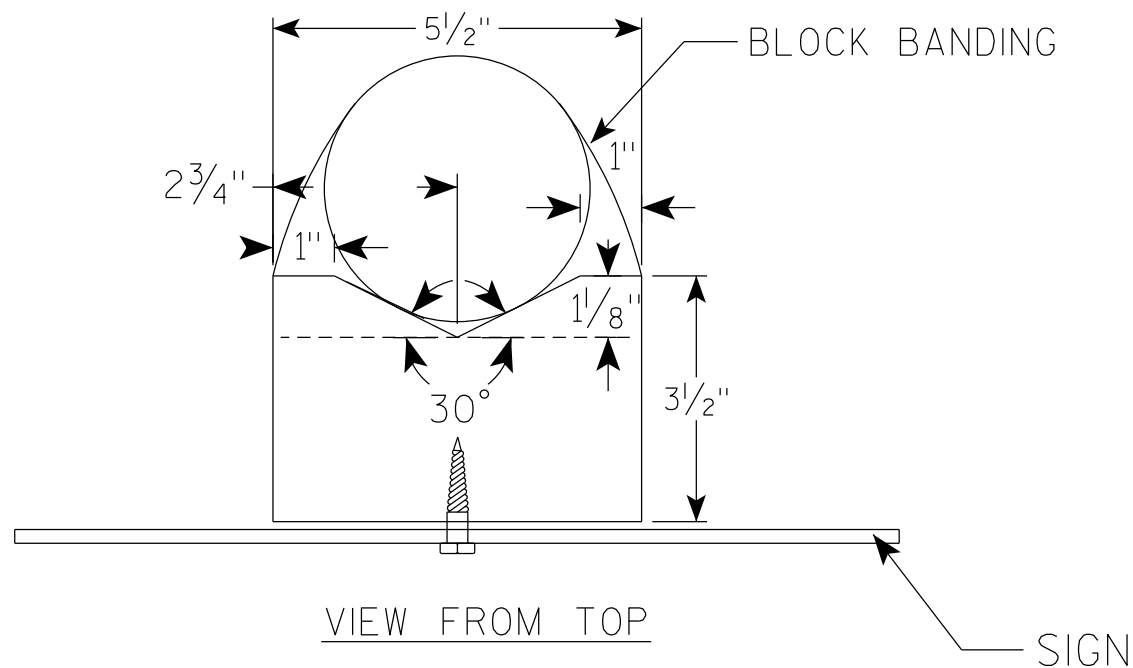
DATE 6/10/19 PLATE NO. A5-9.4



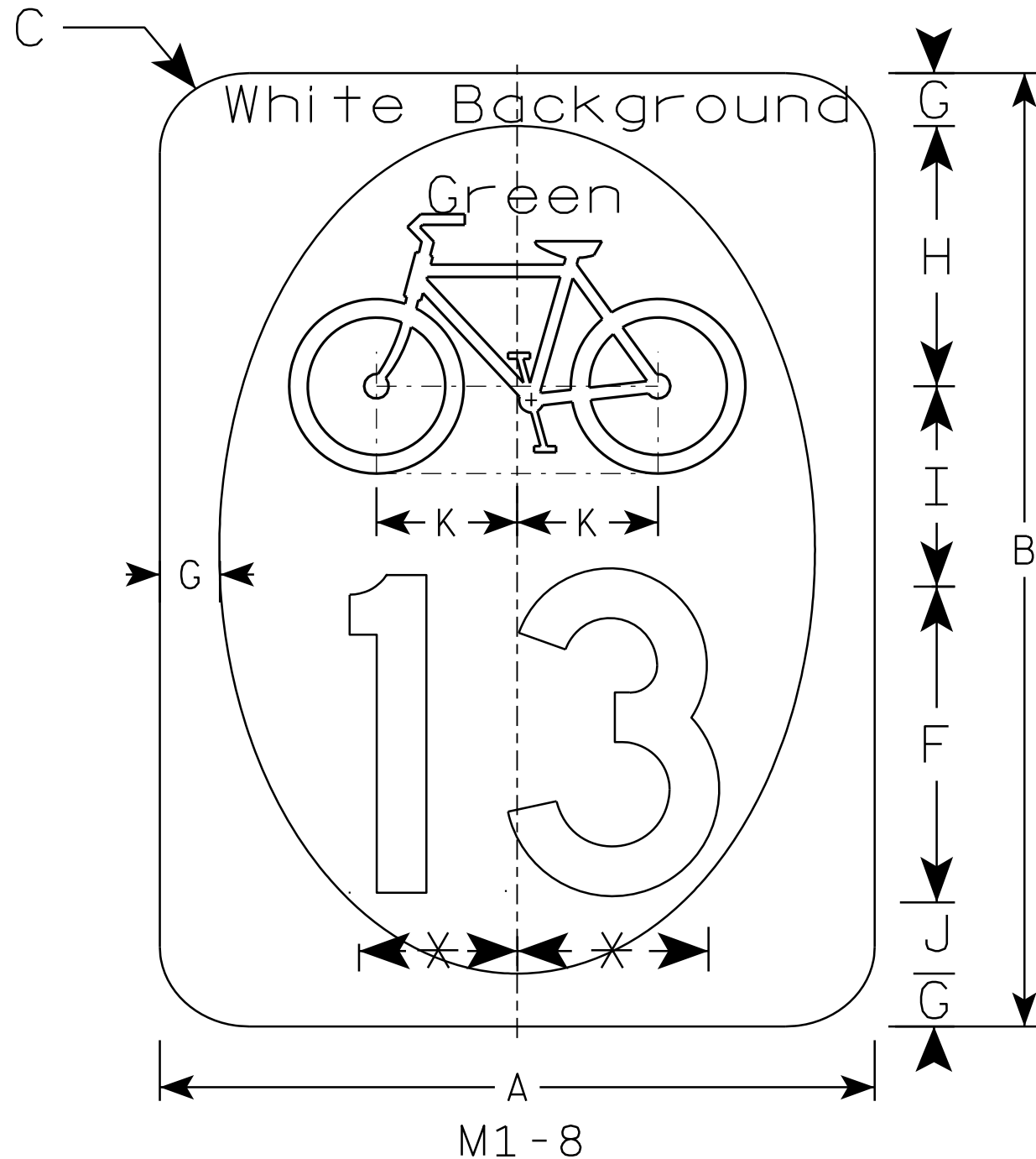
GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - As noted
Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

*- Optically center numbers to fit

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	18	24	2 1/4			8	1 3/8	6 1/2	5	1 3/4	3 1/2																3.0
3																											
4																											
5																											

STANDARD SIGN
M1-8

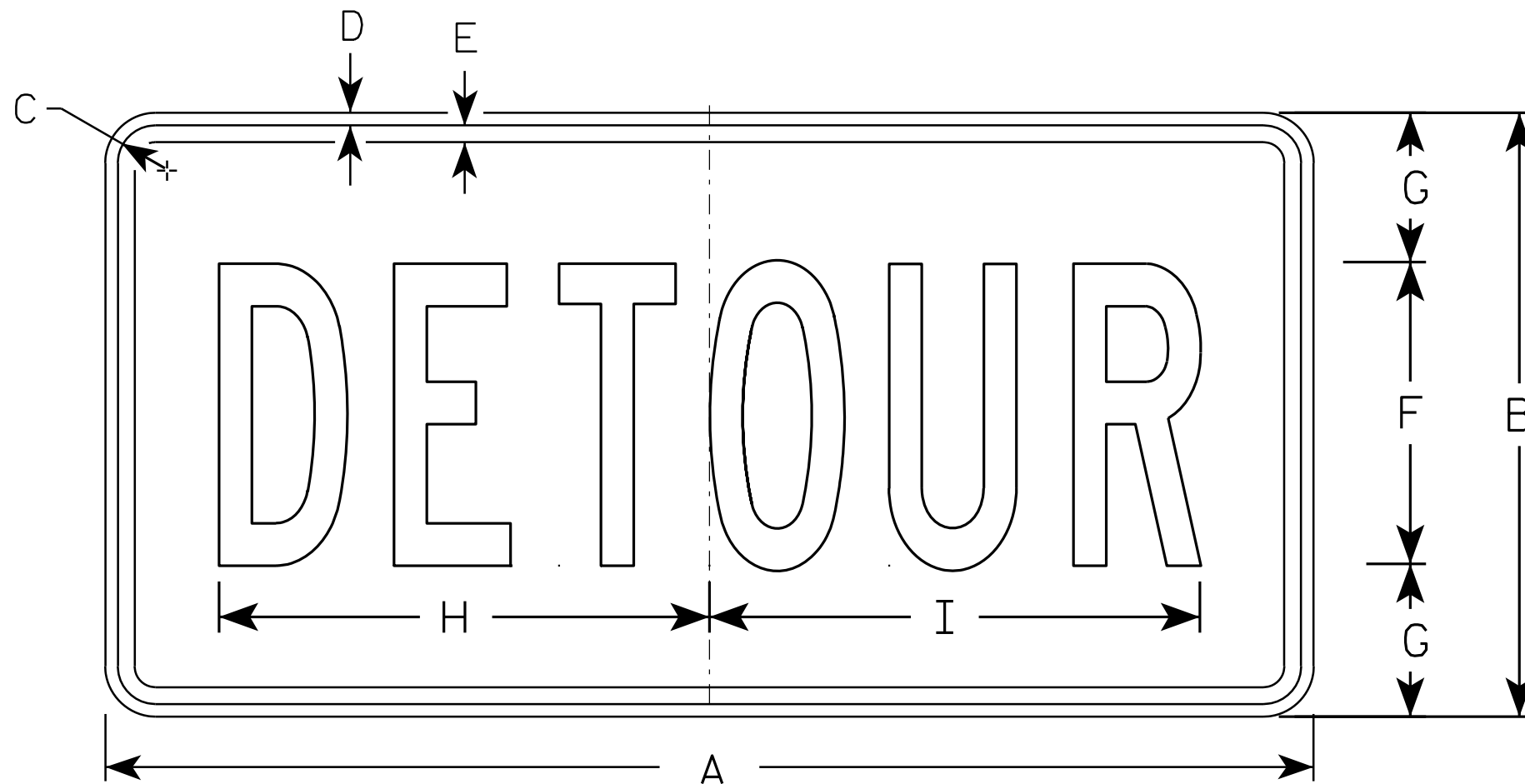
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/1/10 PLATE NO. M1-8.1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4-8

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

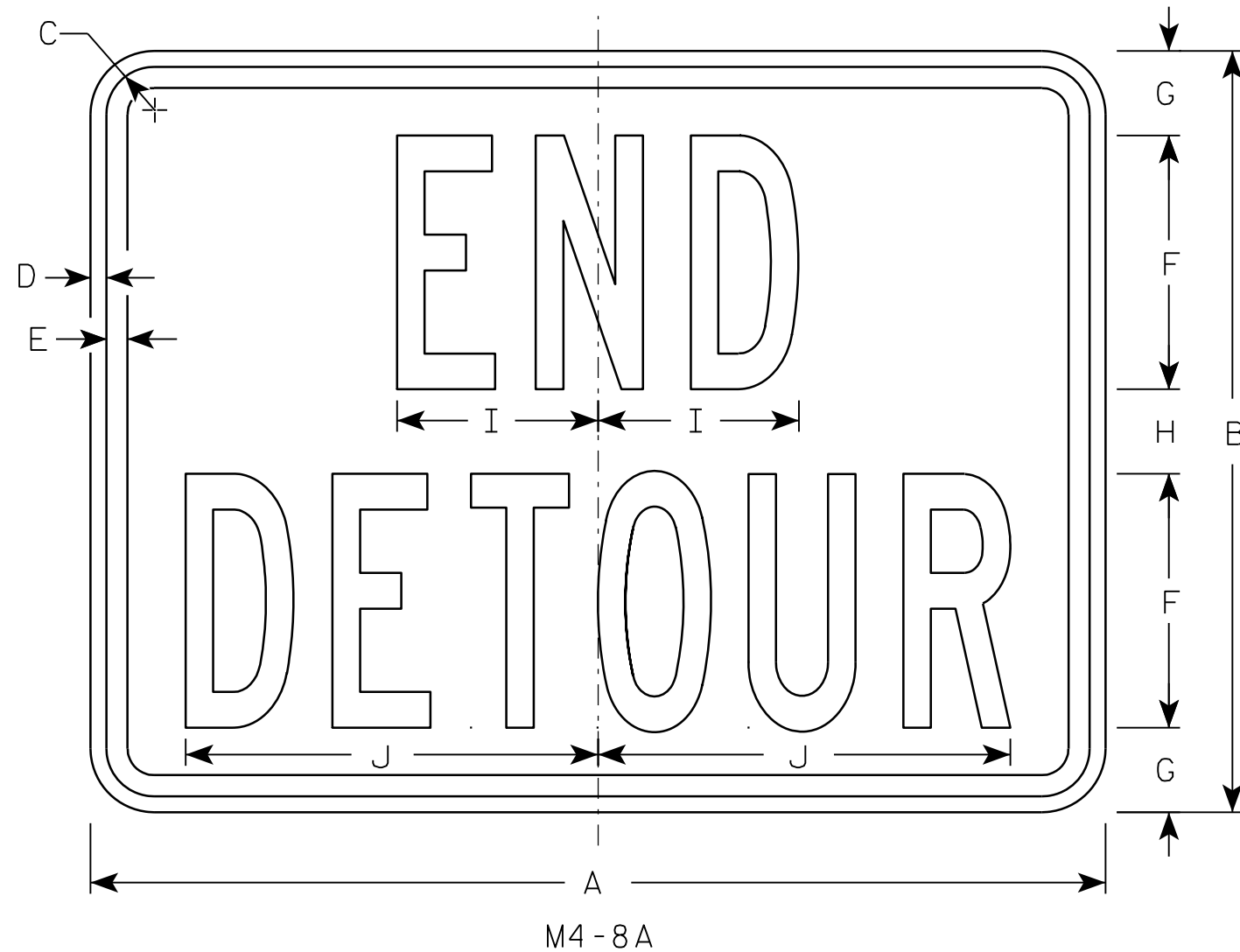
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

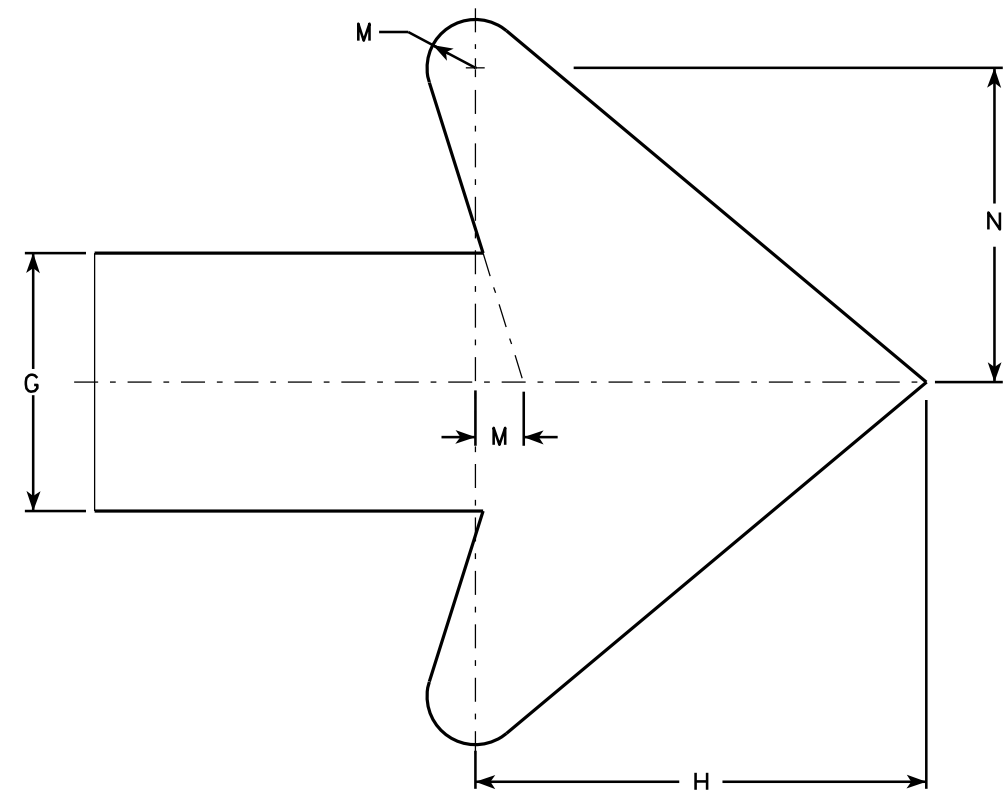
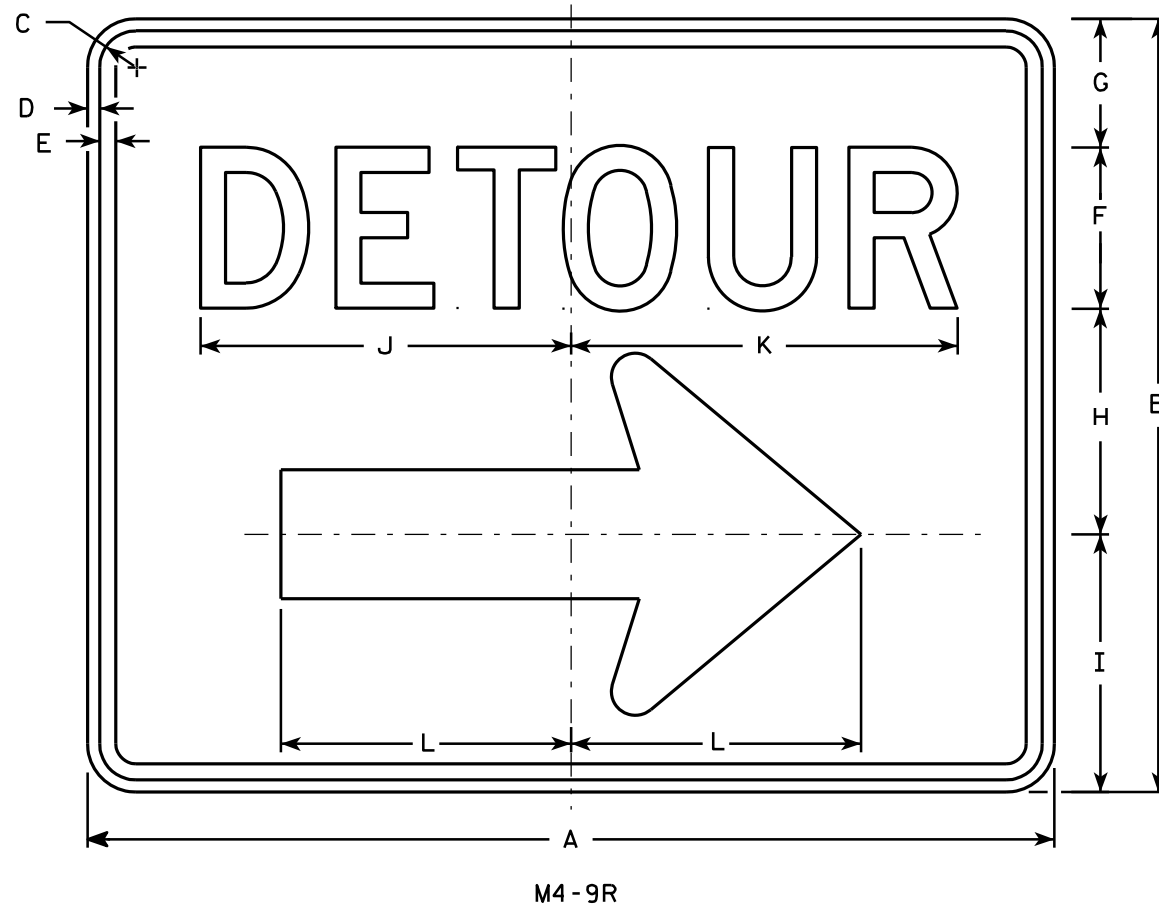
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

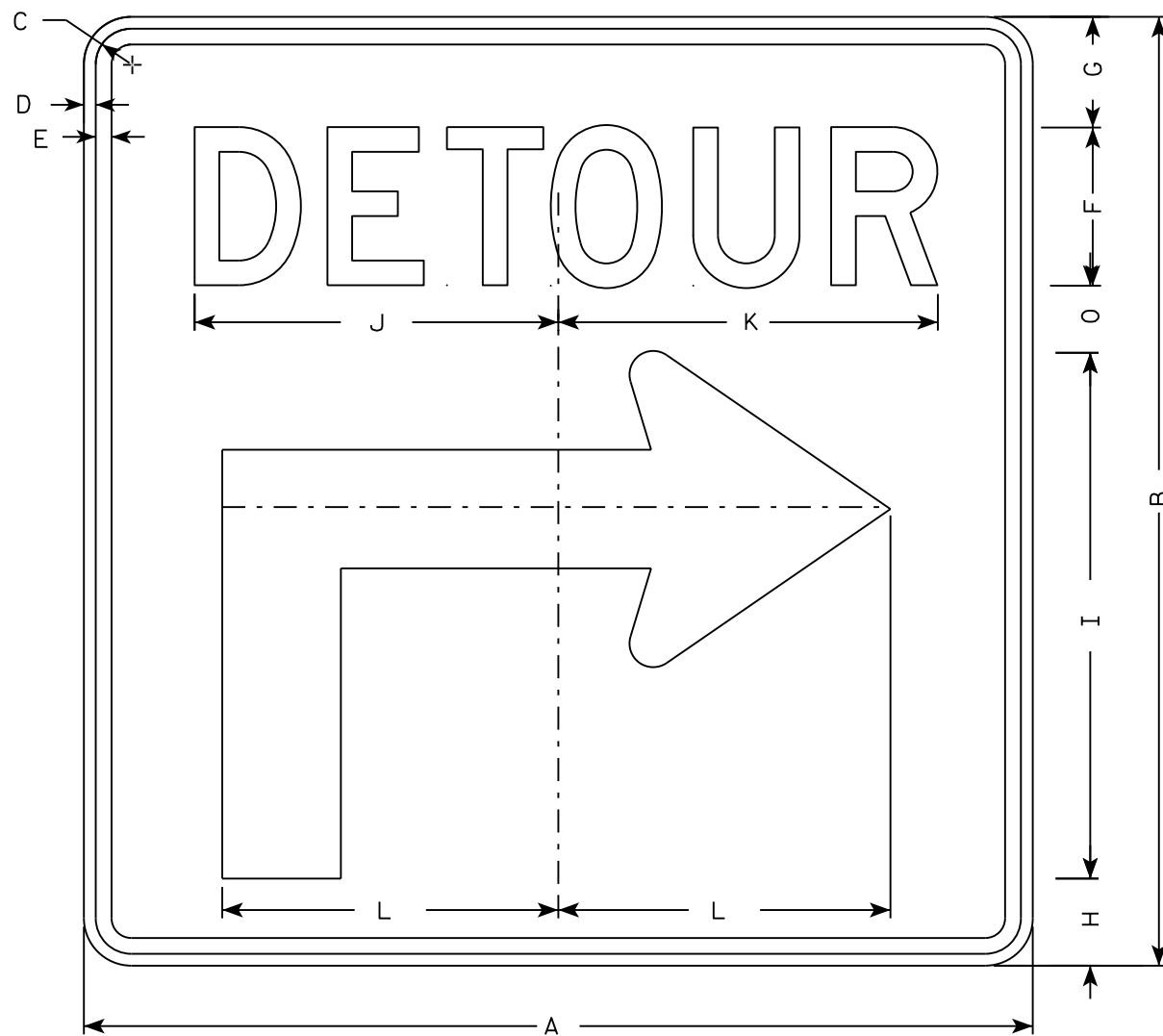
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

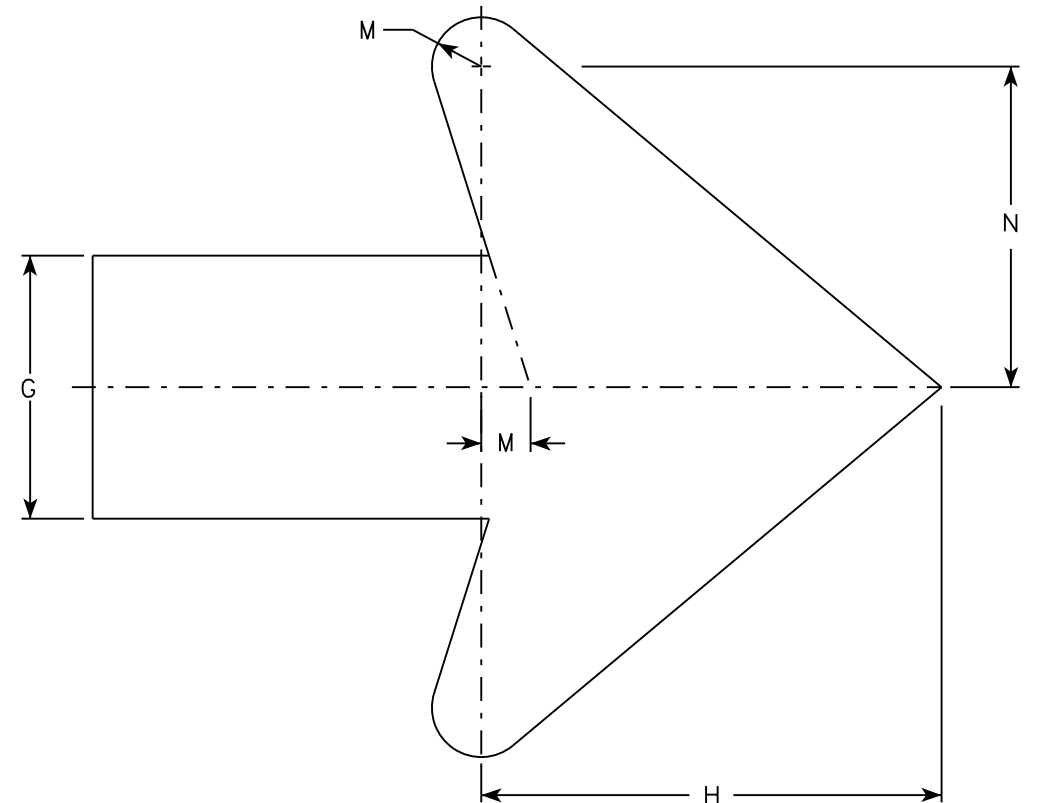
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



M4-59R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown when base material is metal.
5. M4-59L is the same as M4-59R except the arrow is reversed.



Arrow Detail

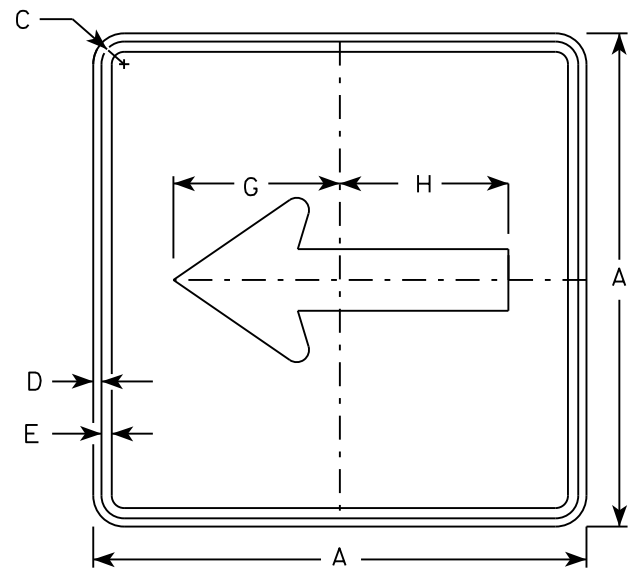
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
3	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
4	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0
5	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0

STANDARD SIGN
M4-59 L&R

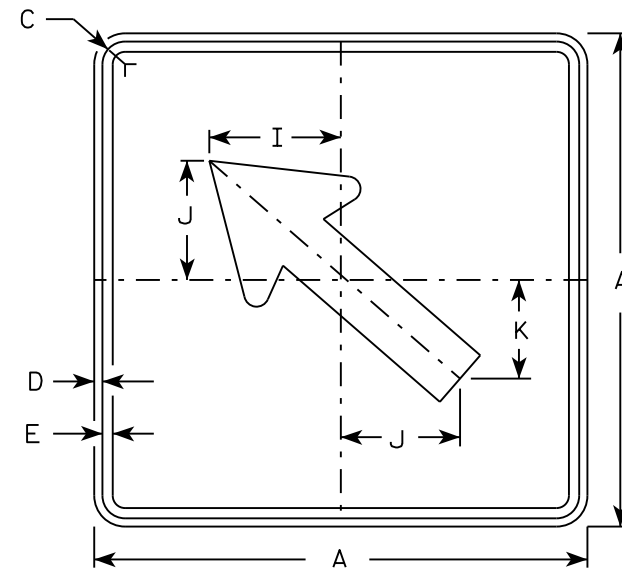
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

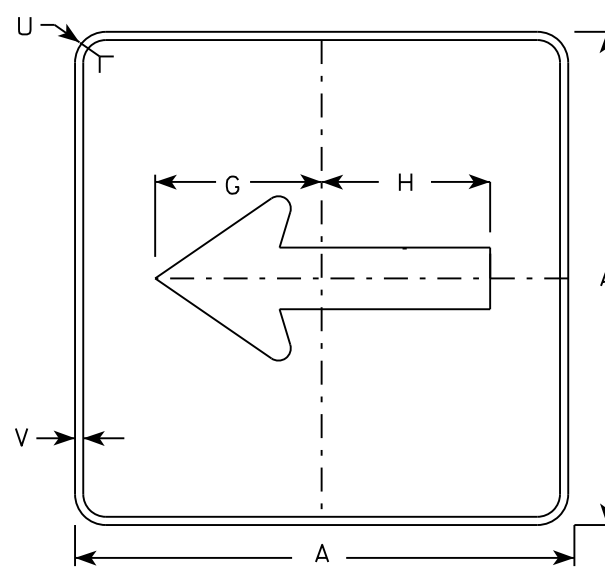
DATE 11/10/15 PLATE NO. M4-59.1



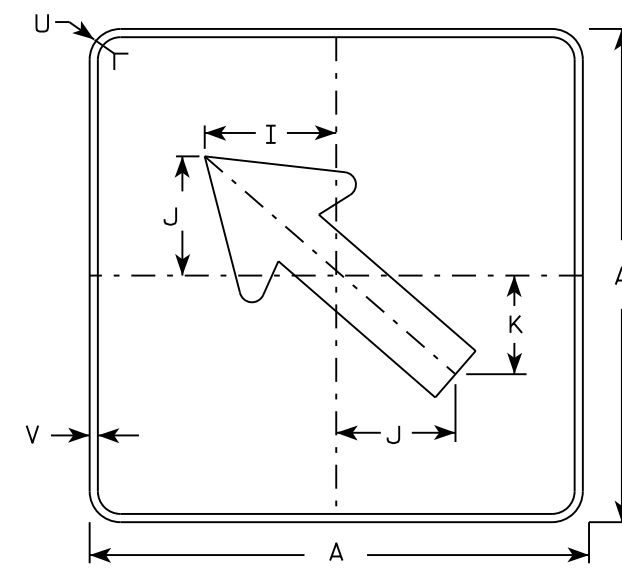
M6-1
MM6-1
M06-1
MP6-1



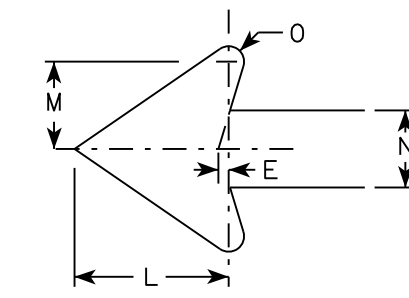
M6-2
MM6-2
M06-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

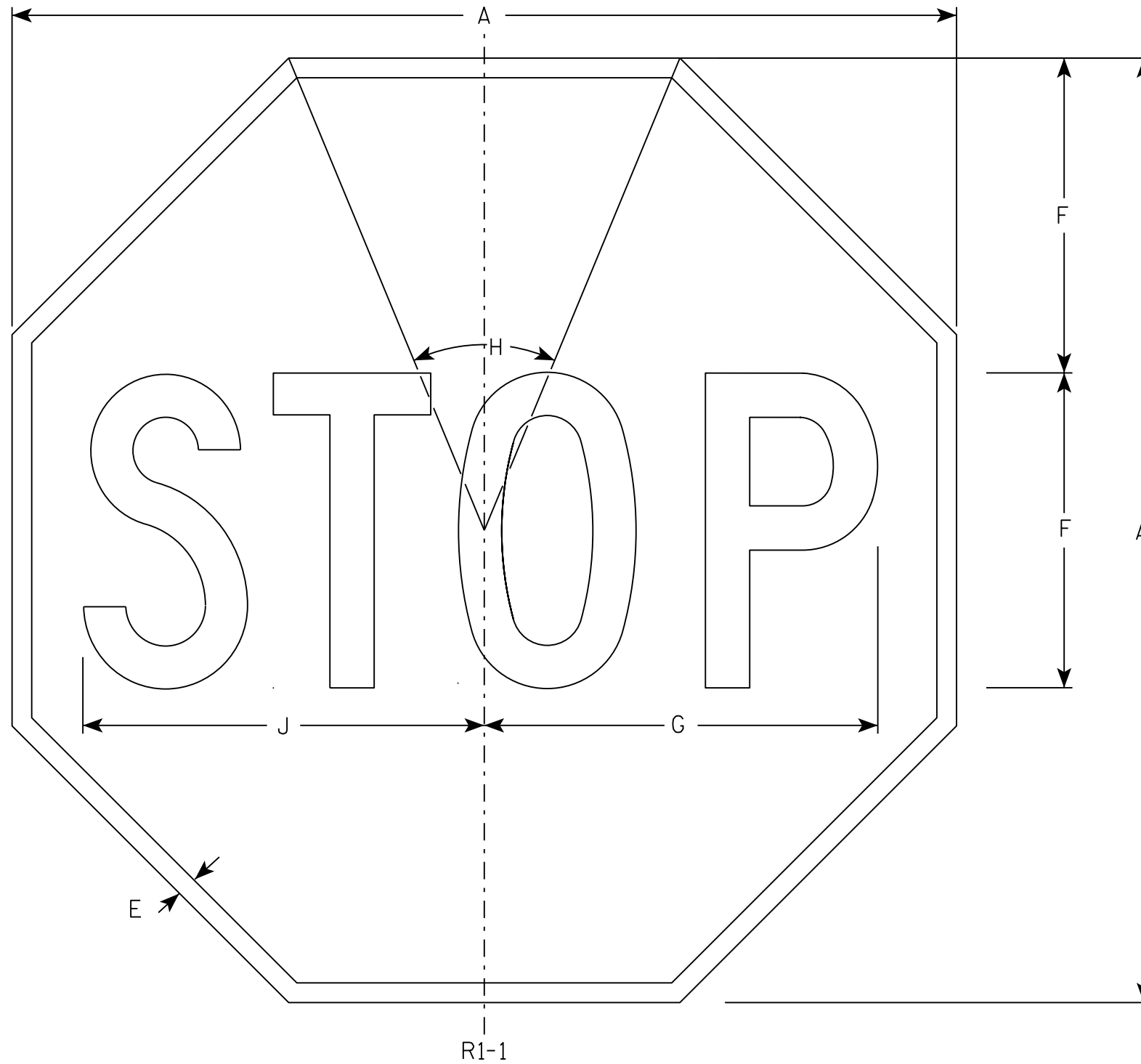
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - C



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

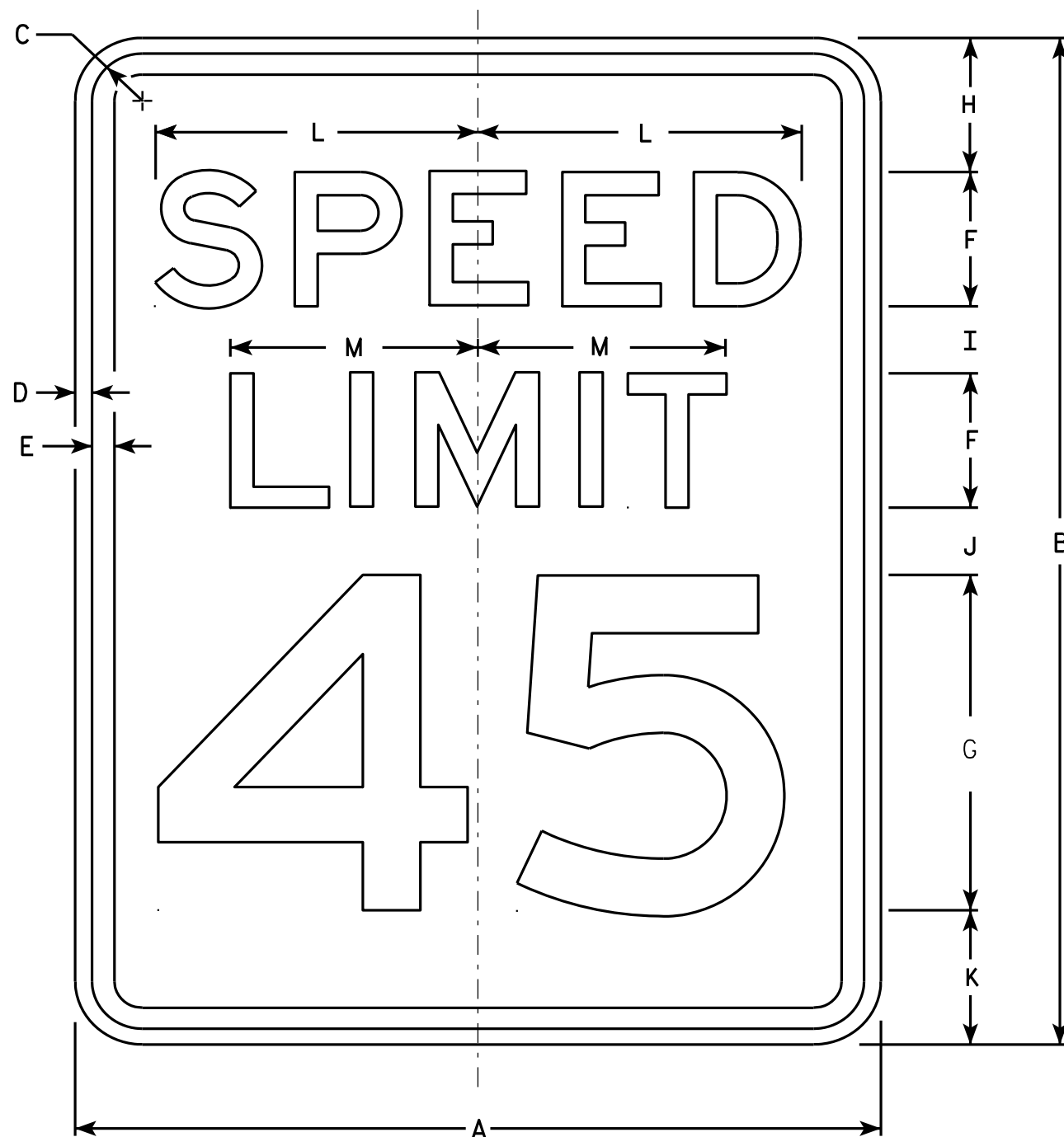
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

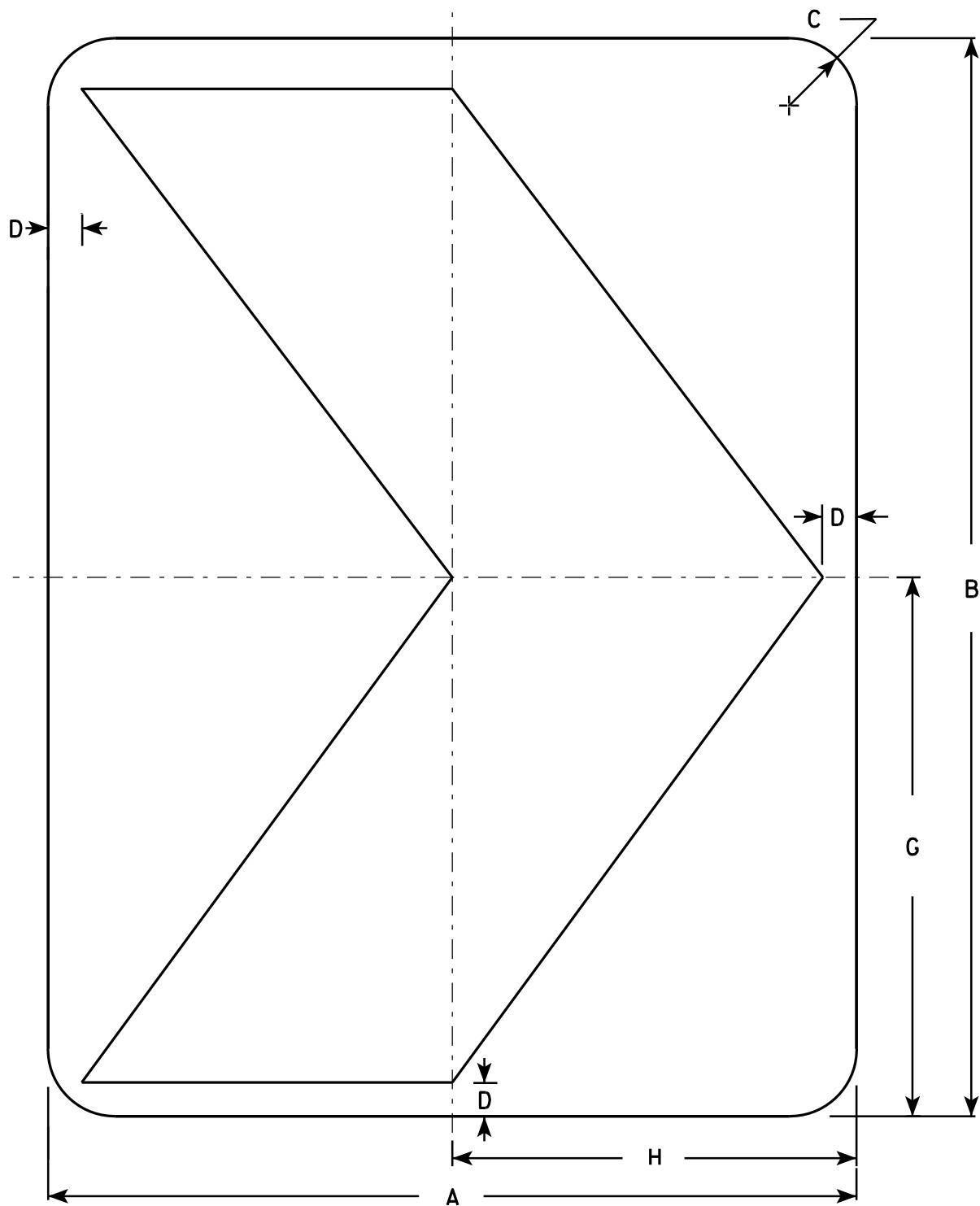
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

W1-8

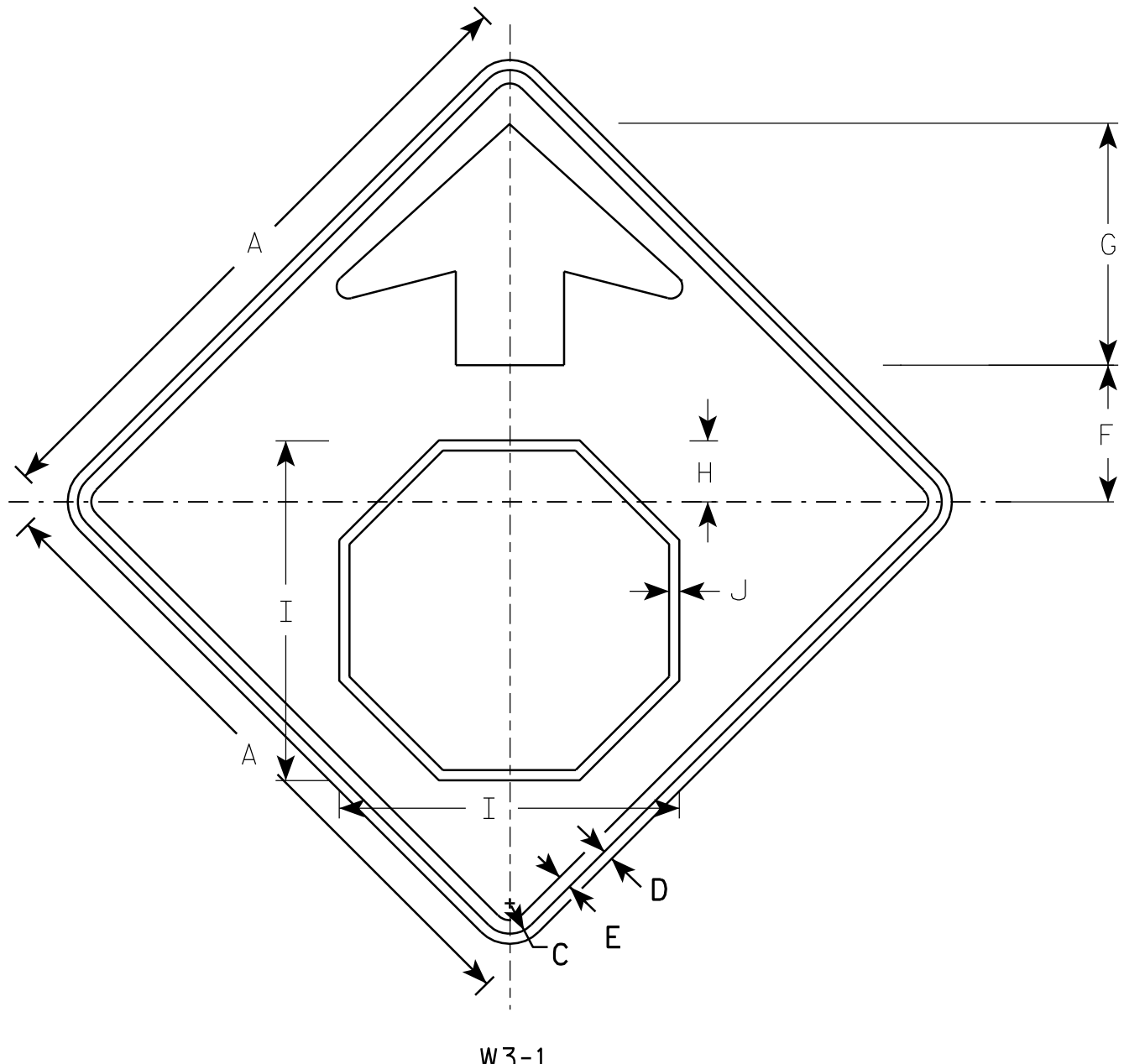
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/2	1/2			9	6																			1.5
2S	18	24	1 1/2	3/4			12	9																			3.0
2M	18	24	1 1/2	3/4			12	9																			3.0
3	24	30	1 1/2	1			15	12																			5.0
4	30	36	1 7/8	1 1/4			18	15																			7.5
5	36	48	2 1/4	1 1/2			24	18																			12.0

STANDARD SIGN
W1-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

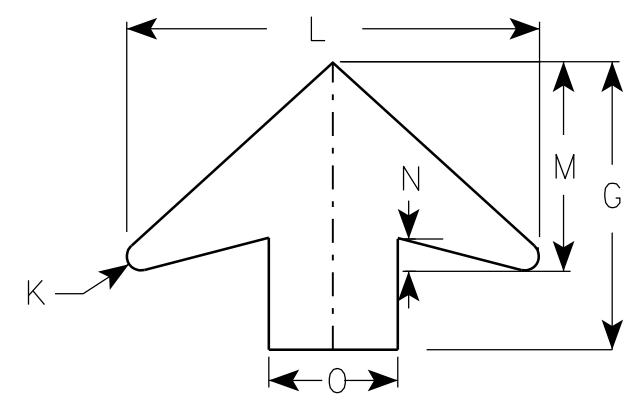
DATE 6/7/10 PLATE NO. W1-8.6



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 Background - YELLOW
 Arrow & Border - BLACK
 Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

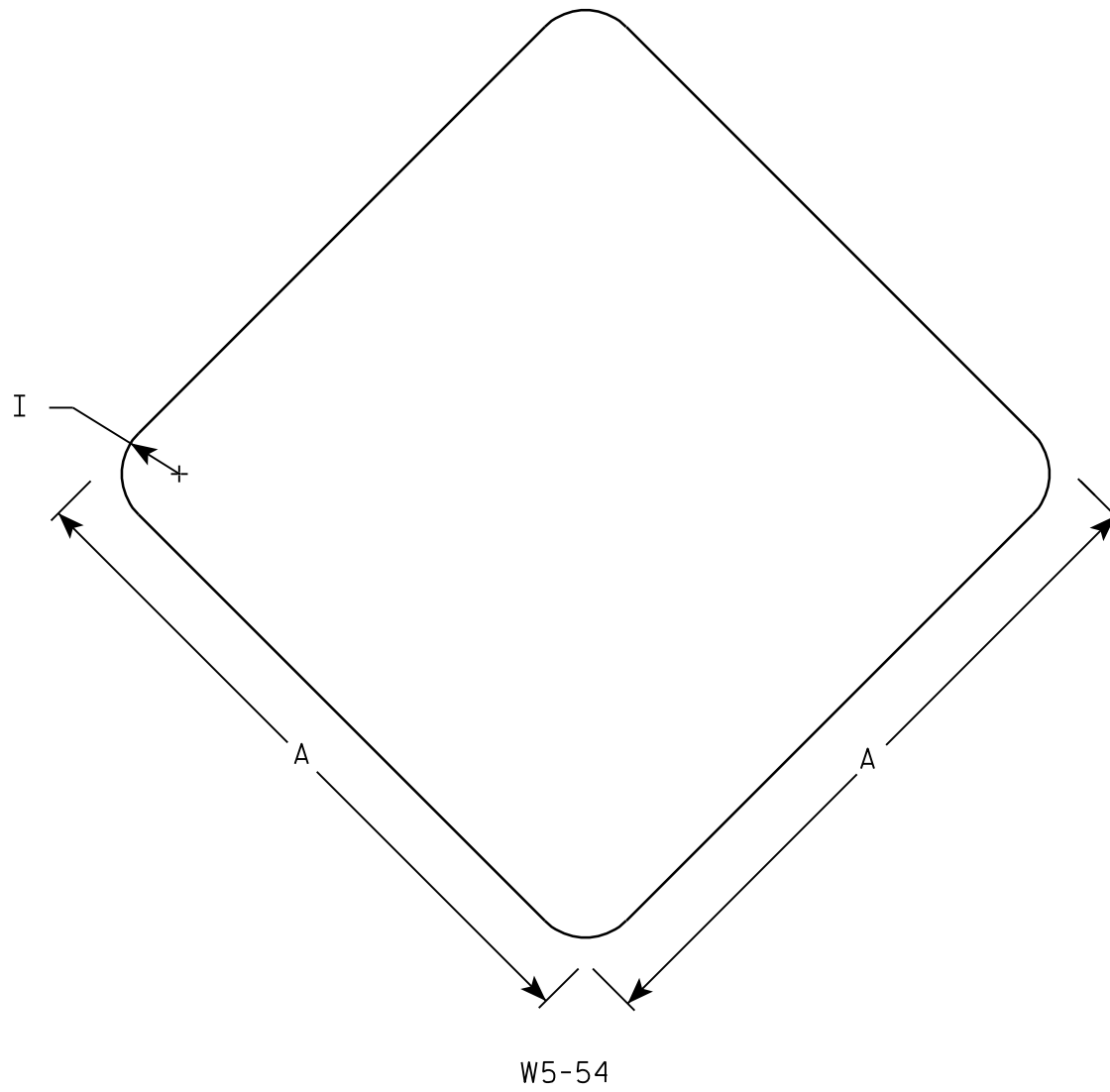
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO: _____ SHEET NO: _____ E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.



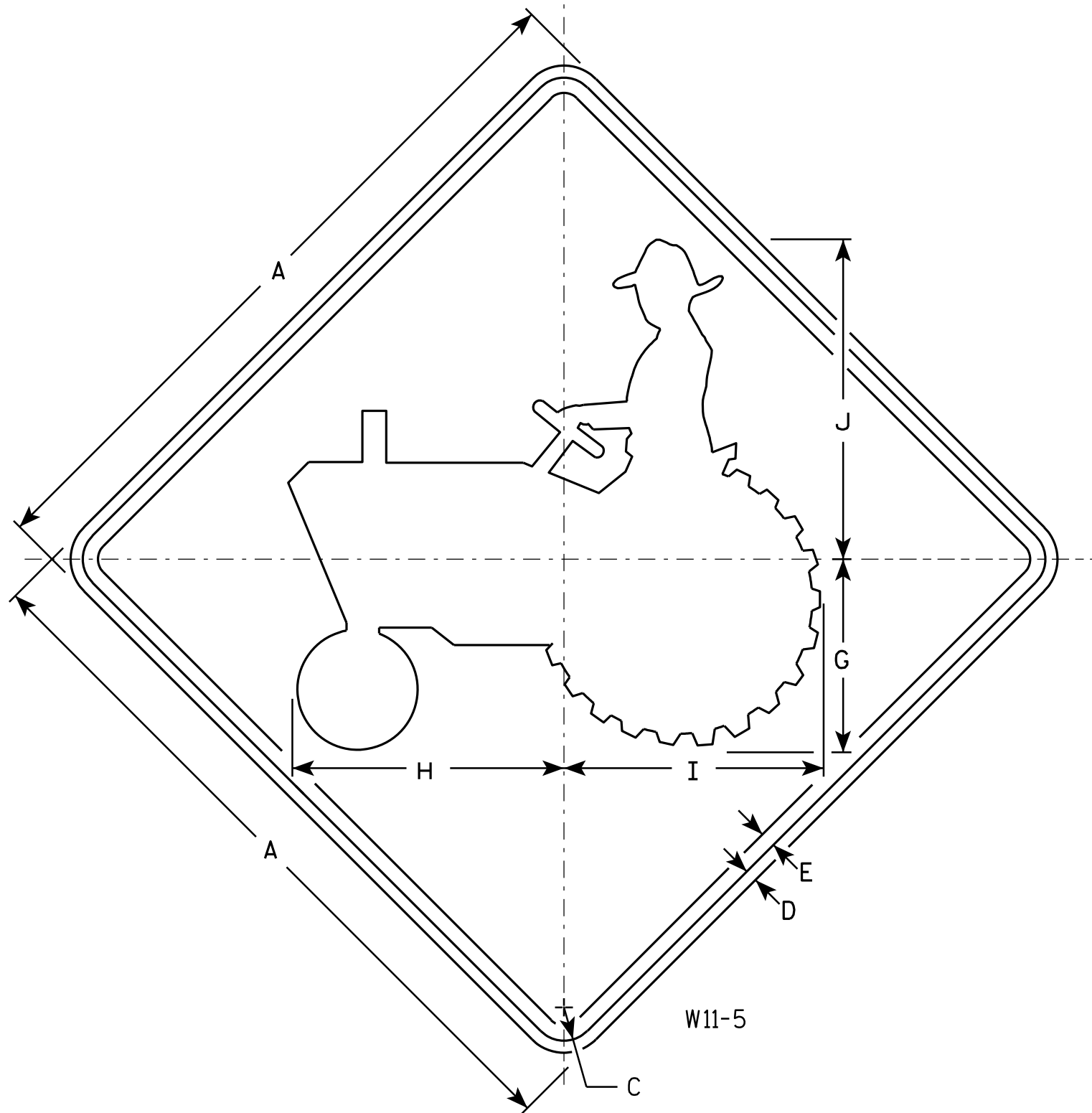
7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 1/2																		2.25
2M	18								1 1/2																		2.25
3																											
4																											
5																											

STANDARD SIGN W5-54	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE <u>11/3/10</u>	PLATE NO. <u>W5-54.8</u>

PROJECT NO:	HWY:	COUNTY:	SHEET NO: E
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NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		6 3/8	9	8 5/8	10 5/8																	4.0
2S	30		1 3/8	1/2	5/8		8	11 1/4	10 3/4	13 1/4																	6.25
2M	30		1 3/8	1/2	5/8		8	11 1/4	10 3/4	13 1/4																	6.25
3																											
4	36		1 5/8	5/8	3/4		9 5/8	13 1/2	12 7/8	16																	9.0
5	48		2 1/4	3/4	1		12 3/4	18	17 1/4	21 1/8																	16.0

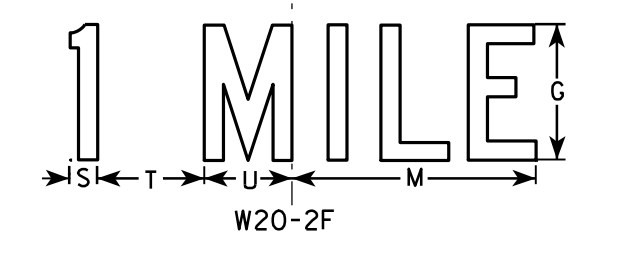
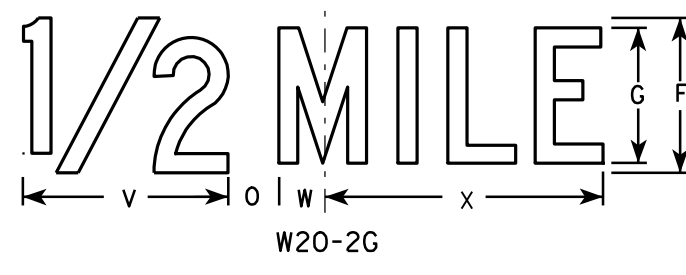
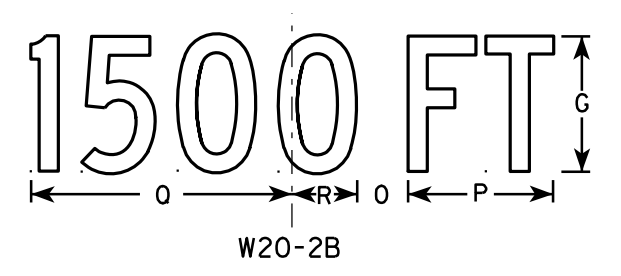
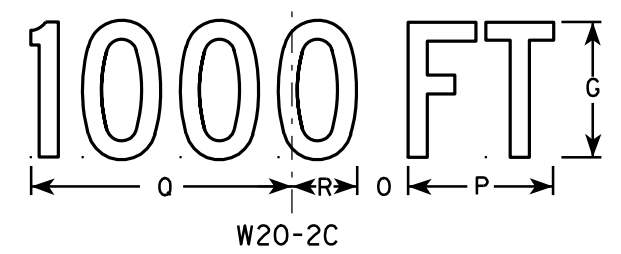
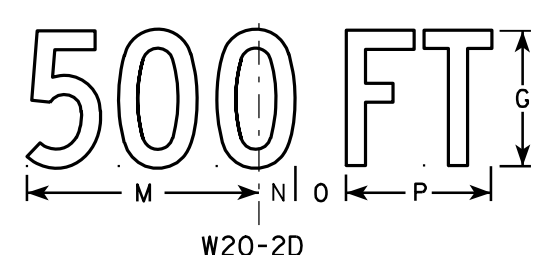
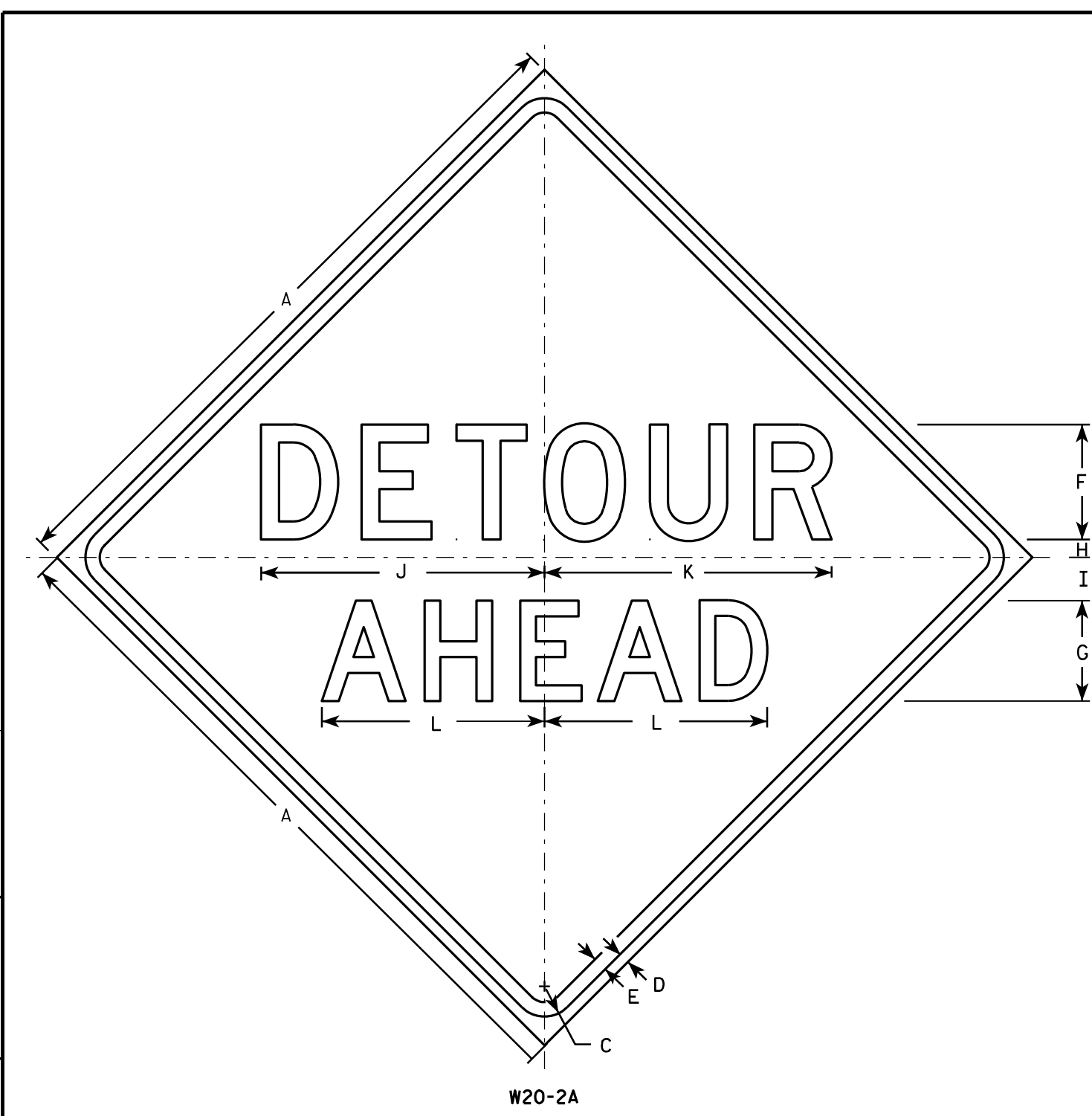
STANDARD SIGN
W11-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-5.6

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

PARK AVENUE

Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY) (Adjusted)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.30	
		Note 2	Note 2		Note 1	Note 2	Note 3	Note 2	Note 4	
100+00	0	79.67	30	24.71	0	0	0	0	0	0
101+00	100	86.14	30	37.53	307	111	115	307	150	46
101+50	50	100.87	30	36.82	173	56	69	480	239	74
101+90	40	131.14	30	10.62	170	44	35	650	285	155
102+00	10	130.47	30	0	50	12	2	701	287	191
102+50	50	159.32	30	0	268	56	0	969	287	404
103+00	50	170.05	30	0	305	56	0	1274	287	653
103+28	28	176.76	30	0	180	31	0	1454	287	802
103+50	22	173.49	30	0	143	24	0	1597	287	920
104+00	50	175.24	30	0	323	56	0	1919	287	1188
104+50	50	176.89	30	0	326	56	0	2246	287	1458
105+00	50	168.71	30	0	320	56	0	2566	287	1723
105+35	35	180.56	30	0	226	39	0	2792	287	1910
105+50	15	178.31	30	0	100	17	0	2892	287	1993
106+00	50	165.75	30	0	319	56	0	3210	287	2256
106+50	50	159.57	30	0	301	56	0	3511	287	2502
106+90	40	283.08	30	0	331	45	0	3843	287	2788
107+27	37	233.2	30	0	350	41	0	4192	287	3098
107+94	67	159.65	30	0	487	74	0	4680	287	3511
108+00	6	158.13	30	0	35	7	0	4715	287	3539
108+50	50	135.79	30	0	272	56	0	4987	287	3756
109+00	50	128.65	30	0	245	56	0	5232	287	3945
109+16	16	138.52	30	0	79	18	0	5311	287	4006
109+58	42	133.67	30	0	212	47	0	5523	287	4172
110+00	42	113.03	30	0	192	47	0	5715	287	4317
110+29	29	109.86	30	0	120	32	0	5835	287	4404
110+50	21	110.08	30	0	86	23	0	5920	287	4466
110+61	11	108.37	30	0	44	12	0	5965	287	4499
111+00	39	95.33	30	0	147	43	0	6112	287	4602
111+50	50	85.02	30	0	167	56	0	6279	287	4714
111+76	26	83.72	30	0	81	29	0	6360	287	4766
112+00	24	73.74	30	0.17	70	27	0	6430	287	4809
112+50	50	63.5	30	1.15	127	56	1	6557	289	4879
112+73	23	59.44	30	1.46	52	26	1	6609	290	4905
113+00	27	52.02	30	7.47	56	30	4	6665	296	4925
113+35	35	78.14	30	7.28	84	39	10	6750	308	4958
114+00	65	51.55	30	4.05	156	72	14	6906	326	5024
114+55	55	119.15	30	3.17	174	61	7	7079	336	5127
115+00	45	52.9	30	4.02	143	50	6	7223	344	5213
115+50	50	54.55	30	9.6	99	56	13	7322	360	5240
115+56	6	56.09	30	9.9	12	7	2	7335	363	5243
116+00	44	78.02	30	1.63	109	49	9	7444	375	5291
116+25	25	127.01	52	0.26	95	38	1	7539	376	5347
117+00	75	122.04	52	0	346	144	0	7885	377	5548
117+50	50	130.26	52	0	234	96	0	8118	377	5685
118+00	50	139.73	52	0	250	96	0	8368	377	5839
118+17	17	136.82	52	0	87	33	0	8455	377	5893
118+50	33	130.58	52	0	163	64	0	8619	377	5993
119+00	50	108.26	52	2.08	221	96	2	8840	379	6116
119+50	50	98.27	52	0.39	191	96	2	9031	382	6208

NOTES:

- 1) Common Excavation is the sum of the Cut and columns. Item number 205.0100
- 2) Salvaged/Unusable Pavement Material is included in Cut.
- 3) Available Material = Cut - Salvaged/Unusable Pavement Material
- 4) Will be backfilled with Excavation Common
- 5) Plus quantity indicates an excess of material. Minus indicates a shortage of material.

SEE NEXT PAGE FOR STATIONS
120+00 - 139+59 & TOTALS

9

9

PROJECT NO: 8996-01-01

HWY: PARK AVENUE

COUNTY: CHIPPEWA

CROSS SECTIONS: COMPUTER EARTHWORK DATA

SHEET

E

PARK AVENUE										
Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY) (Adjusted)		Mass Ordinate
		Cut Note 2	Salvaged/Unusable Pavement Material Note 2	Fill	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cut 1.00 Note 2	Expanded Fill 1.30 Note 4	
120+00	50	88.53	52	1.57	173	96	2	9204	384	6282
120+50	50	82.08	52	2.6	158	96	4	9362	389	6338
121+00	50	76.94	52	1.46	147	96	4	9509	394	6385
121+50	50	70.52	52	3.6	137	96	5	9646	400	6419
122+00	50	62.81	52	8.38	123	96	11	9769	415	6431
122+50	50	63.48	52	9.13	117	96	16	9886	436	6431
123+00	50	72.87	52	6.25	126	96	14	10013	454	6442
123+50	50	75.09	52	5.08	137	96	10	10150	468	6469
124+00	50	74.81	52	6.45	139	96	11	10288	482	6498
124+50	50	76.07	52	5.88	140	96	11	10428	497	6527
125+00	50	77.48	52	6.89	142	96	12	10570	512	6557
125+50	50	71.25	52	7.59	138	96	13	10708	530	6581
126+00	50	72.27	52	4.47	133	96	11	10841	544	6603
126+50	50	74.67	52	4.25	136	96	8	10977	555	6633
127+00	50	76.16	52	2.35	140	96	6	11117	563	6668
127+50	50	74.3	52	2.15	139	96	4	11256	568	6706
128+00	50	77.72	52	2.57	141	96	4	11397	574	6744
128+50	50	87.01	52	1.06	153	96	3	11549	578	6796
129+00	50	99.72	52	0	173	96	1	11722	579	6871
129+50	50	108.66	40	5.38	193	85	5	11915	586	6973
130+00	50	119.78	40	4.84	212	74	9	12127	598	7097
130+50	50	128.75	40	0.02	230	74	5	12357	604	7247
131+00	50	108.45	40	0.04	220	74	0	12576	604	7392
131+50	50	96.62	40	0.73	190	74	1	12766	605	7507
132+00	50	94.29	40	0.62	177	74	1	12943	607	7608
132+50	50	87.86	40	0.92	169	74	1	13112	608	7700
133+00	50	80.76	40	1.11	156	74	2	13268	611	7779
133+50	50	82.18	40	1.27	151	74	2	13419	614	7853
134+00	50	80.18	40	2.28	150	74	3	13569	618	7924
134+50	50	73.76	40	5.97	143	74	8	13711	628	7982
135+00	50	74.13	40	6.13	137	74	11	13848	642	8030
135+50	50	78.37	40	4.89	141	74	10	13990	656	8084
136+00	50	85.13	40	5.36	151	74	9	14141	668	8148
136+50	50	96.17	40	6.97	168	74	11	14309	683	8227
137+00	50	65.59	40	5.03	150	74	11	14459	697	8288
137+50	50	63.4	40	12.92	119	74	17	14578	719	8311
138+00	50	61.47	40	16.36	116	74	27	14694	754	8317
138+50	50	61.45	40	17.06	114	74	31	14807	794	8316
139+59	109	58.41	40	7.68	242	162	50	15049	859	8331
TOTALS				15049	5859	661				

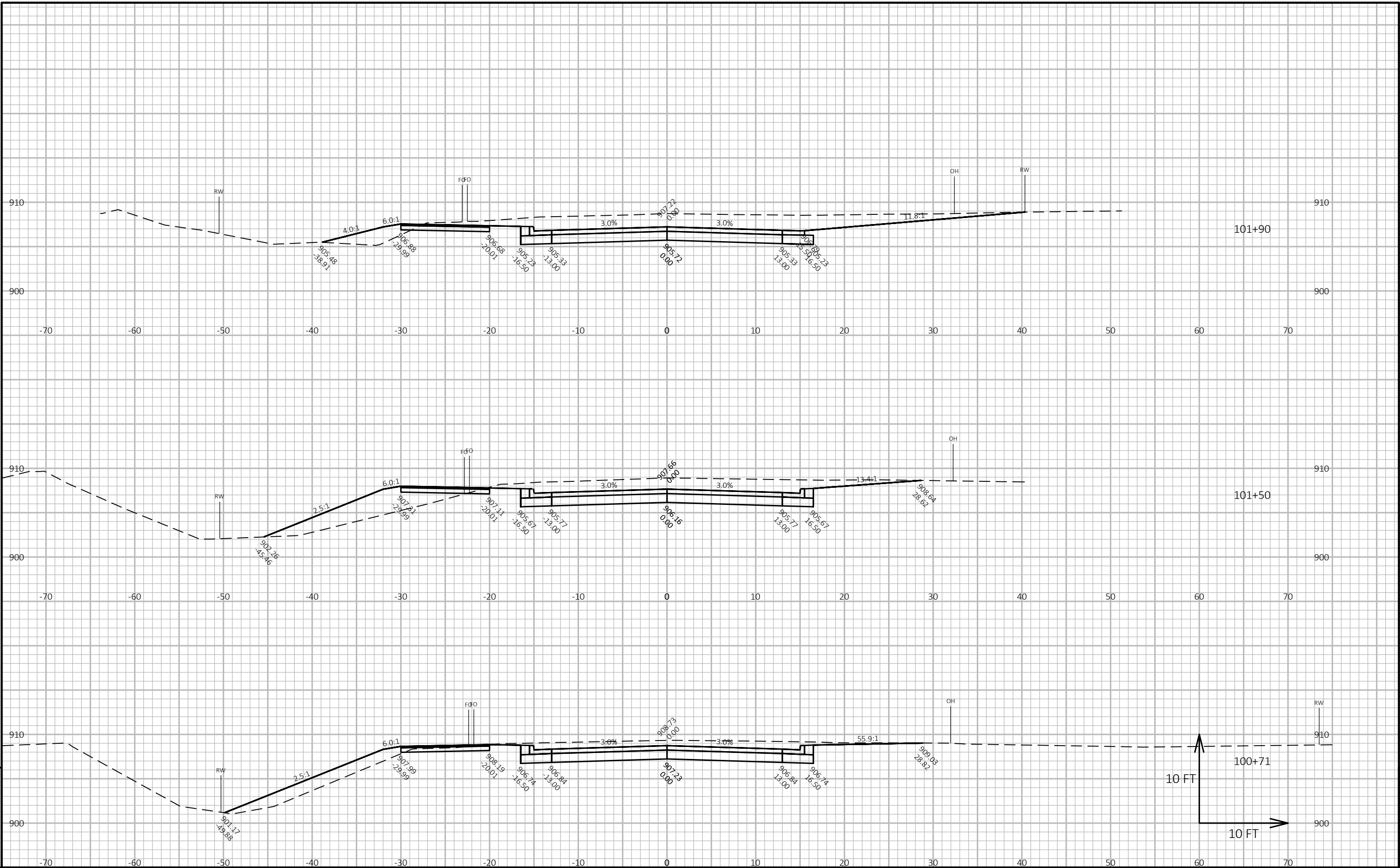
NOTES:

1) Common Excavation is the sum of the Cut and columns. Item number 205.0100
2) Salvaged/Unusable Pavement Material is included in Cut.
3) Available Material = Cut - Salvaged/Unusable Pavement Material
4) Will be backfilled with Excavation Common
5) Plus quantity indicates an excess of material. Minus indicates a shortage of material.

SEE PREVIOUS PAGE FOR STATIONS
100+00 - 119+50

9

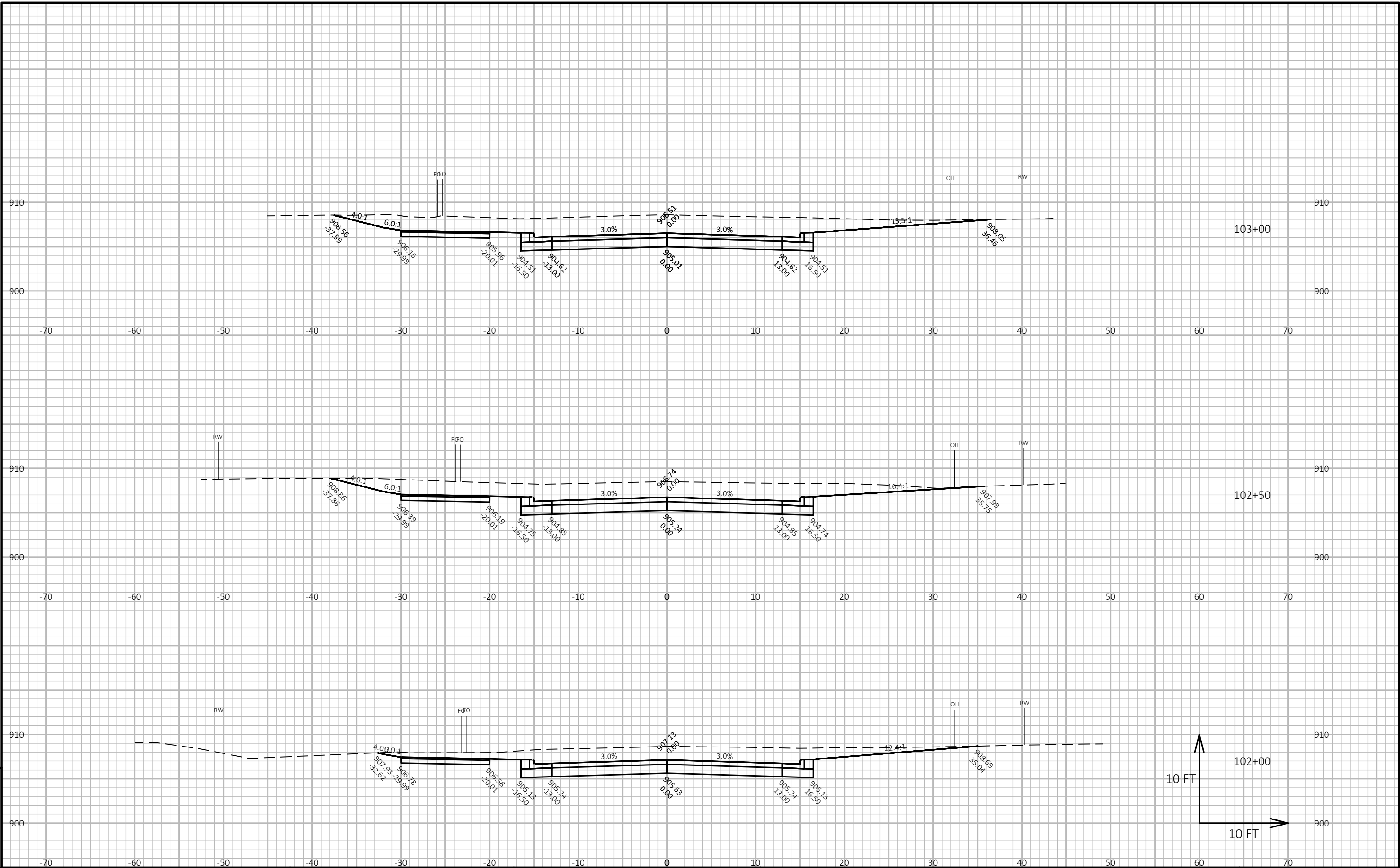
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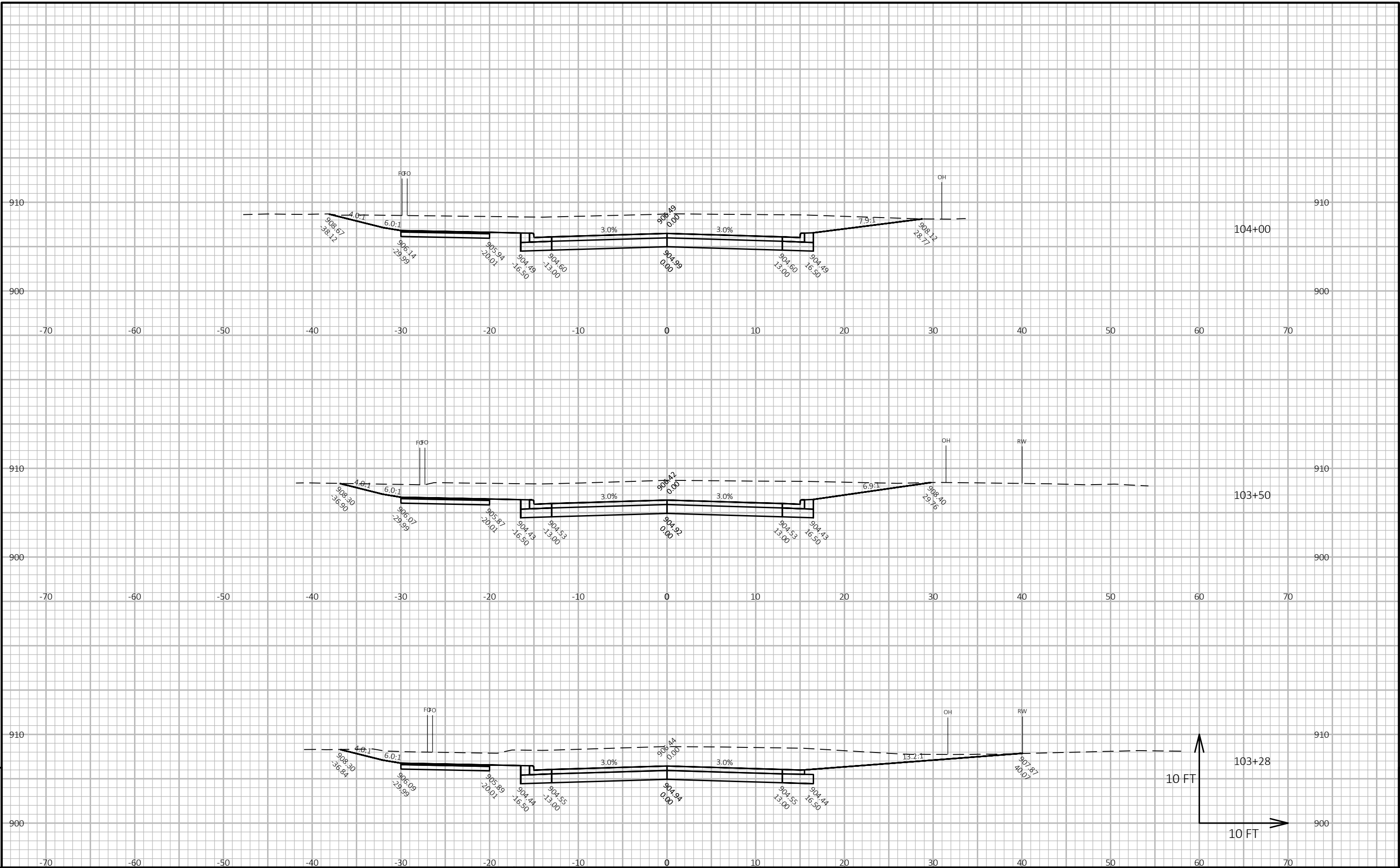
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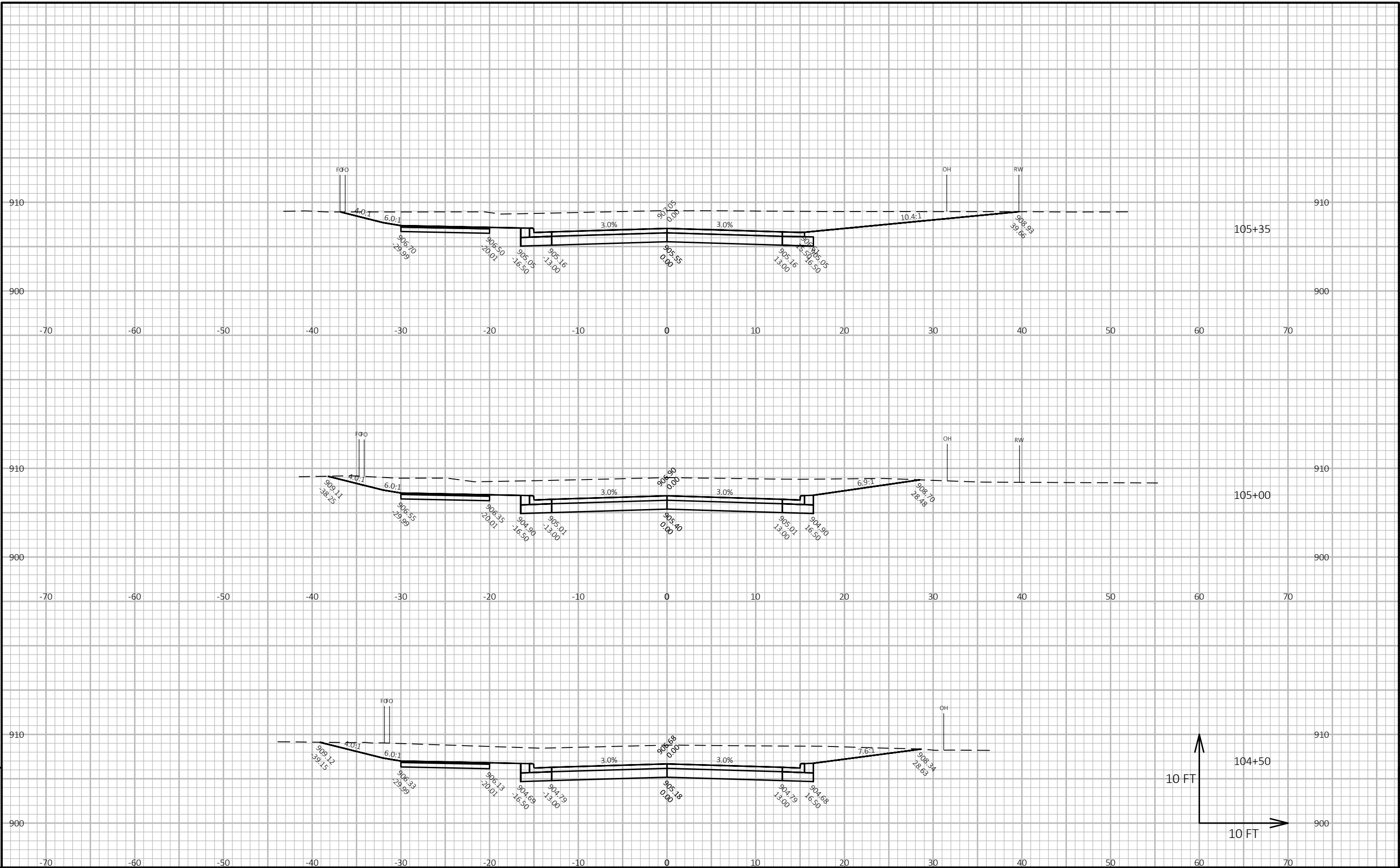
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PROJECT NO: 8996-01-01 HWY: PARK AVENUE COUNTY: CHIPPEWA CROSS SECTIONS: CROSS SECTIONS SHEET E



PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET
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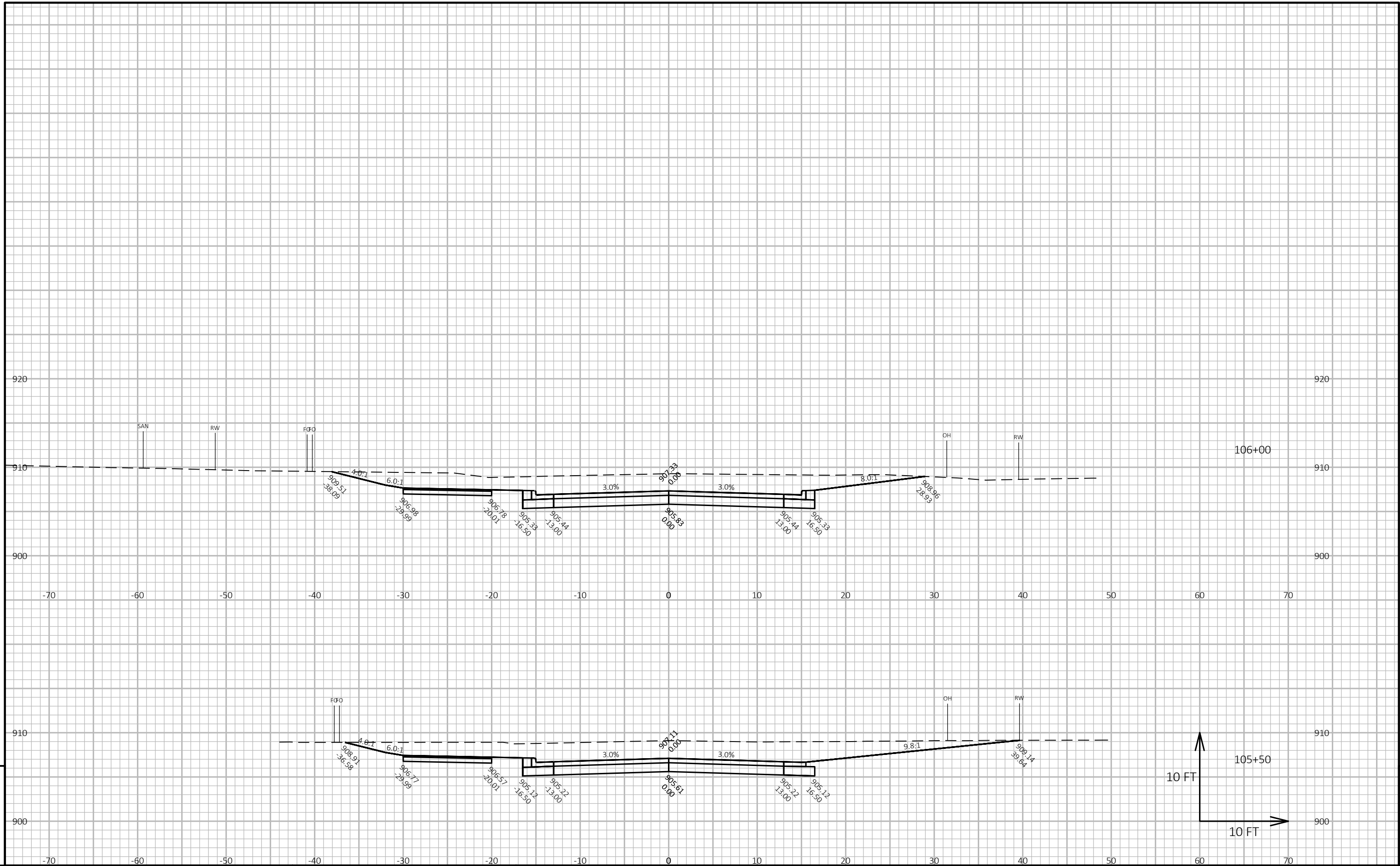


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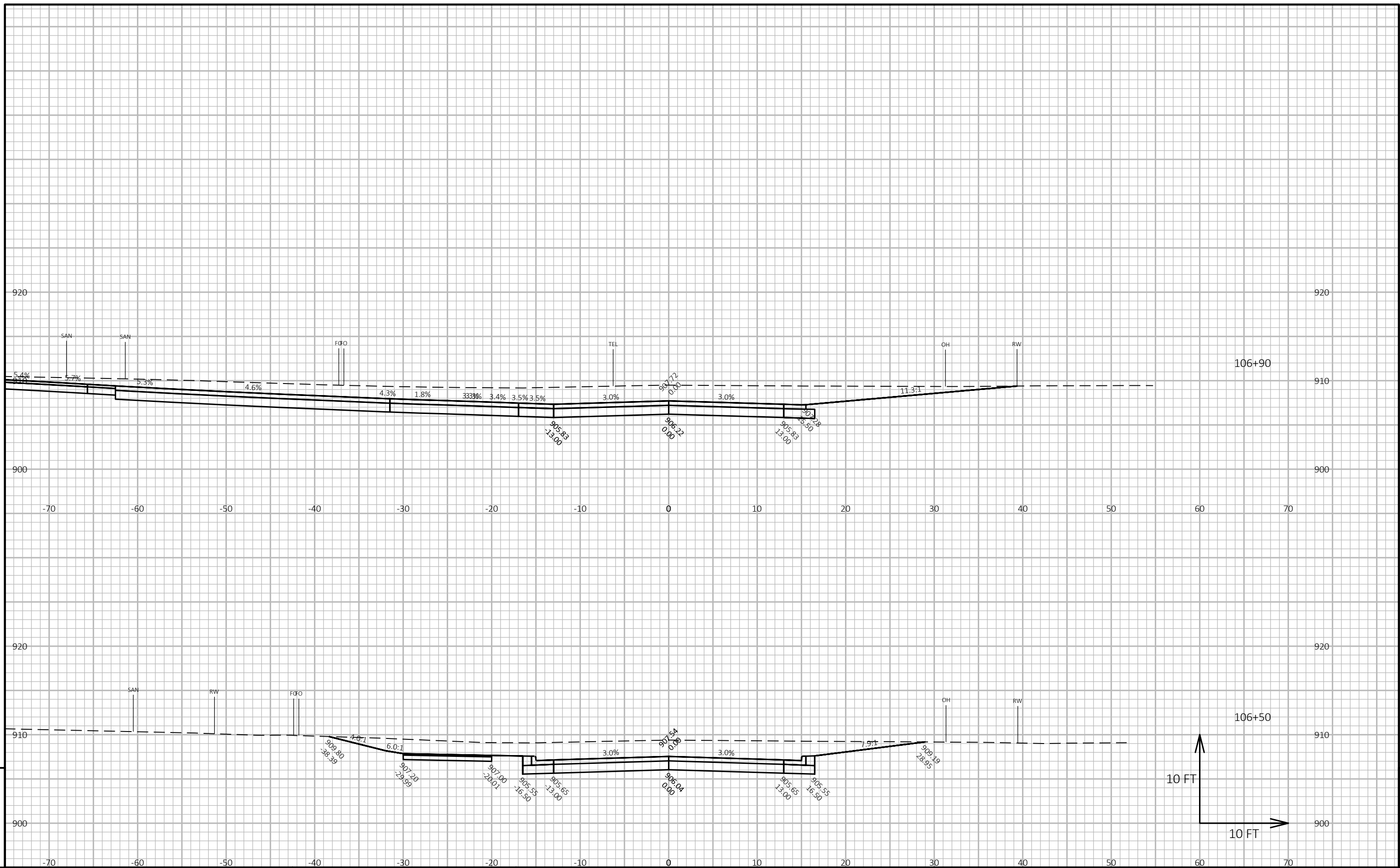
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PROJECT NO: 8996-01-01 HWY: PARK AVENUE COUNTY: CHIPPEWA CROSS SECTIONS: CROSS SECTIONS SHEET E

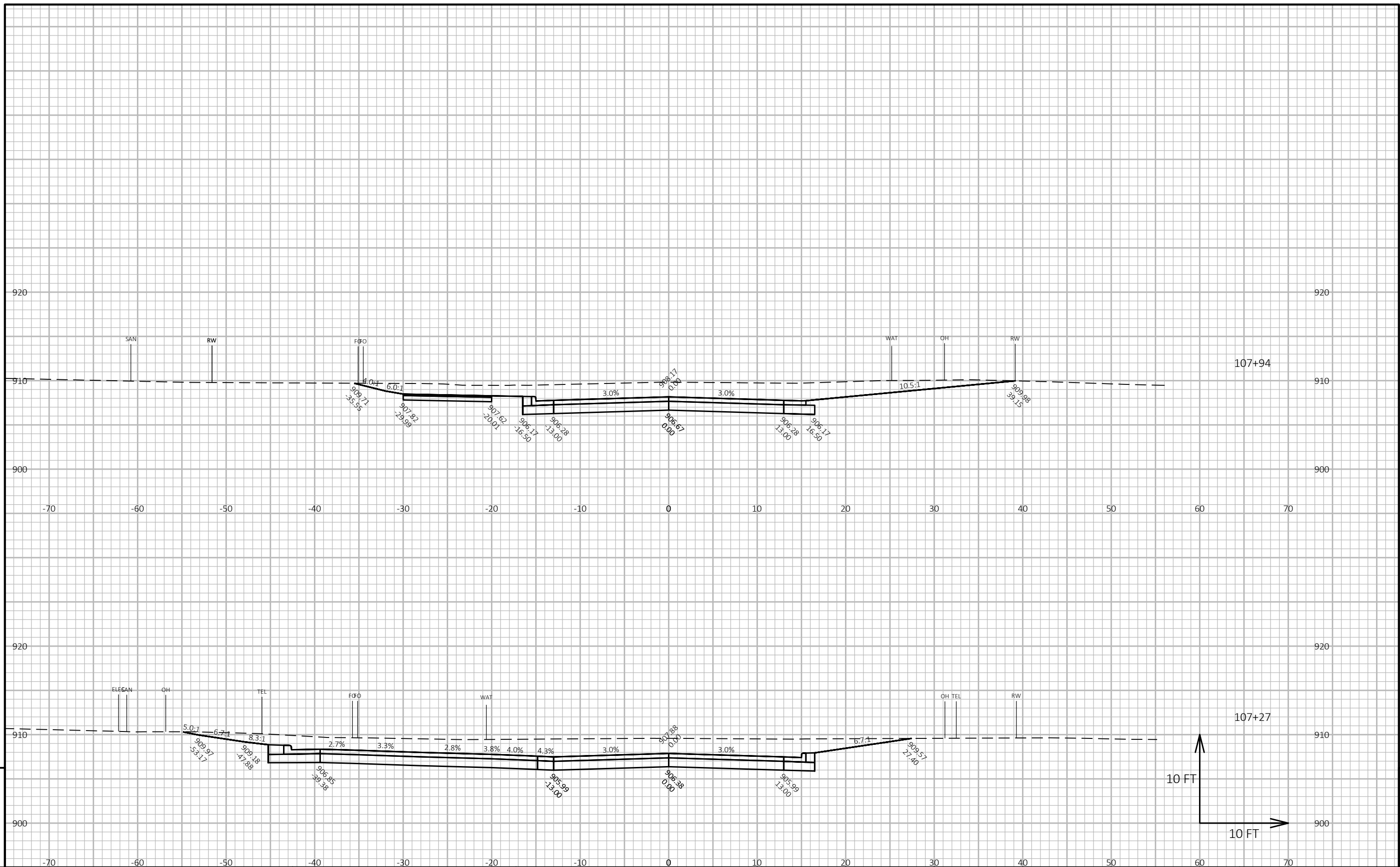
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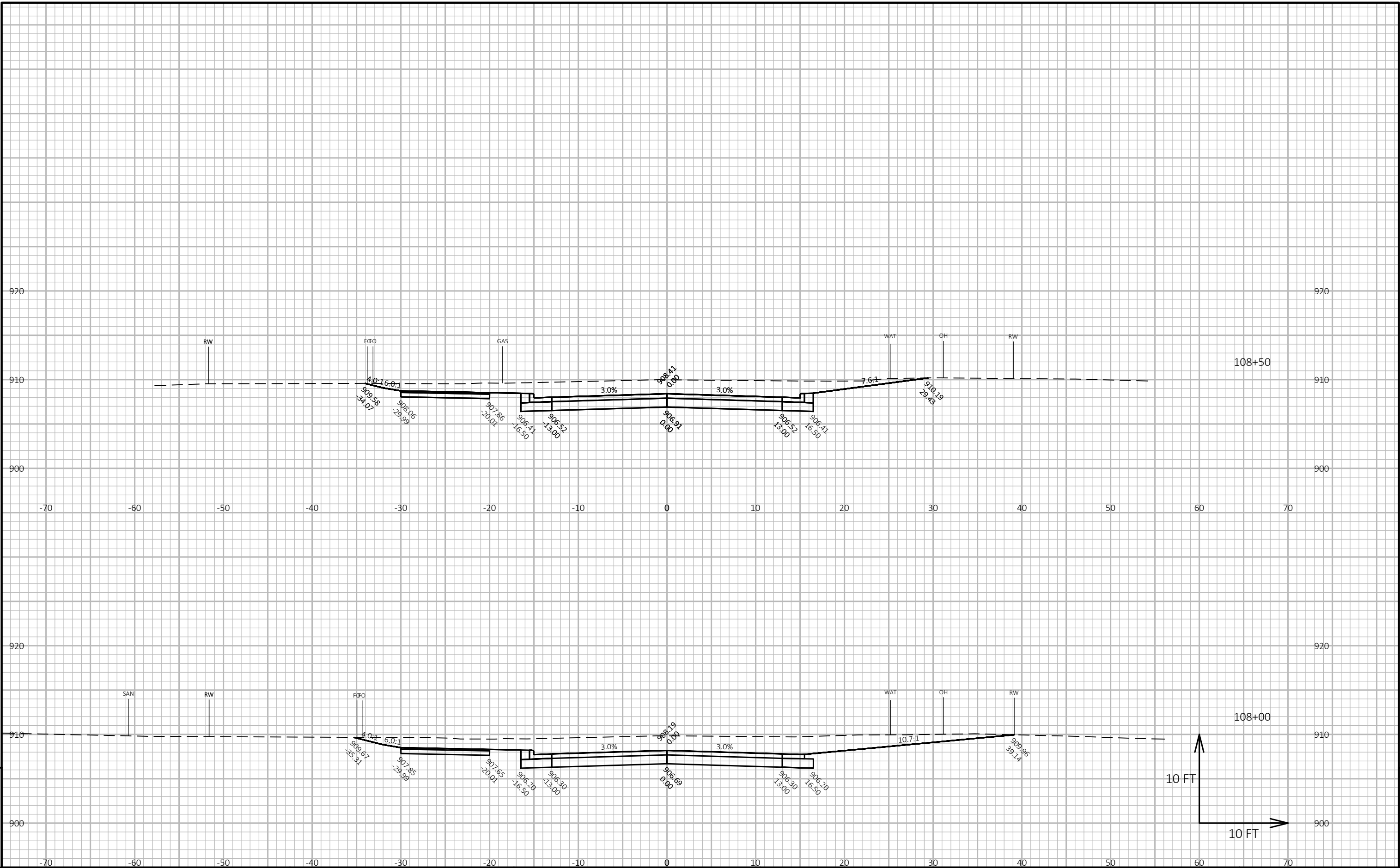
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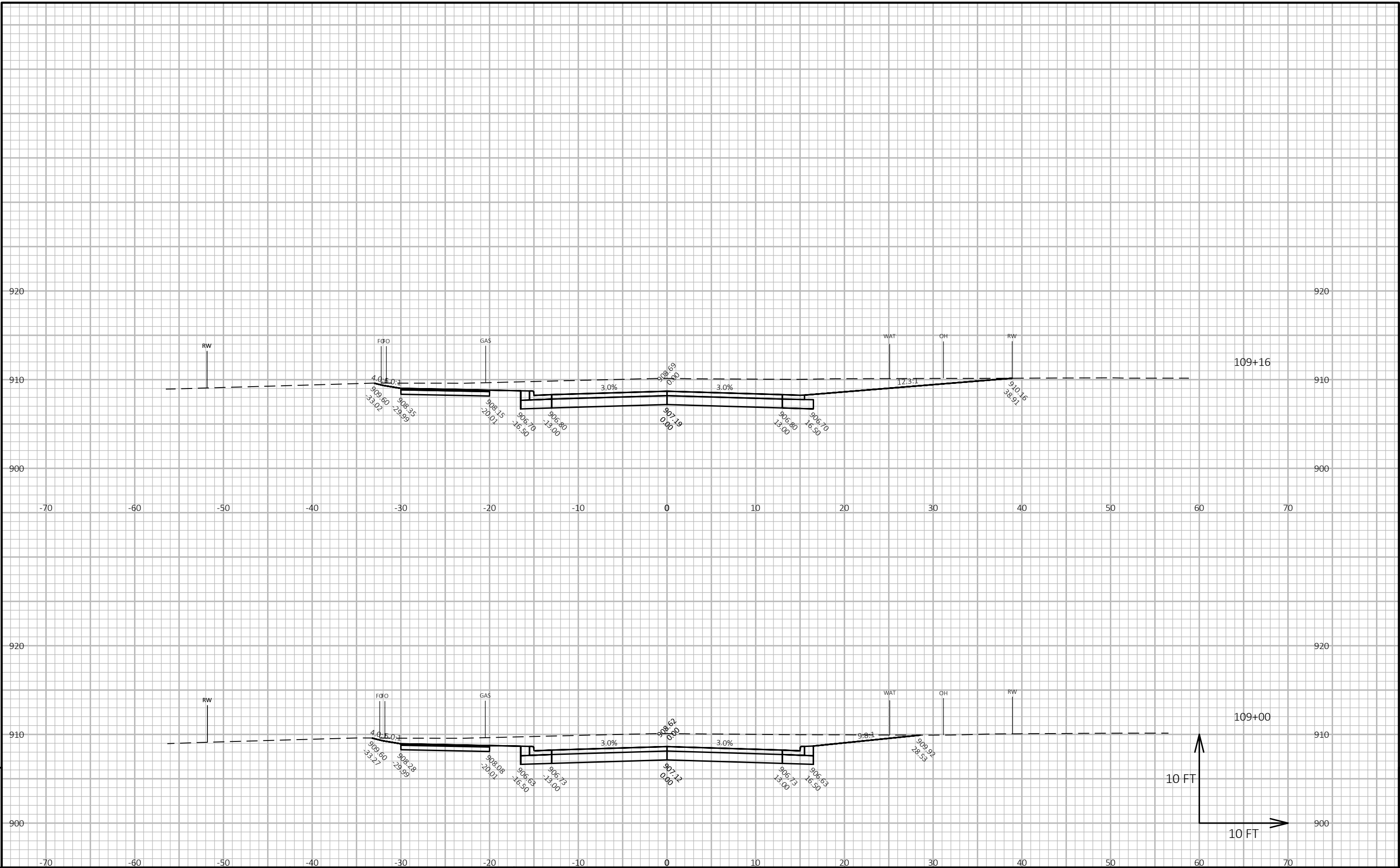
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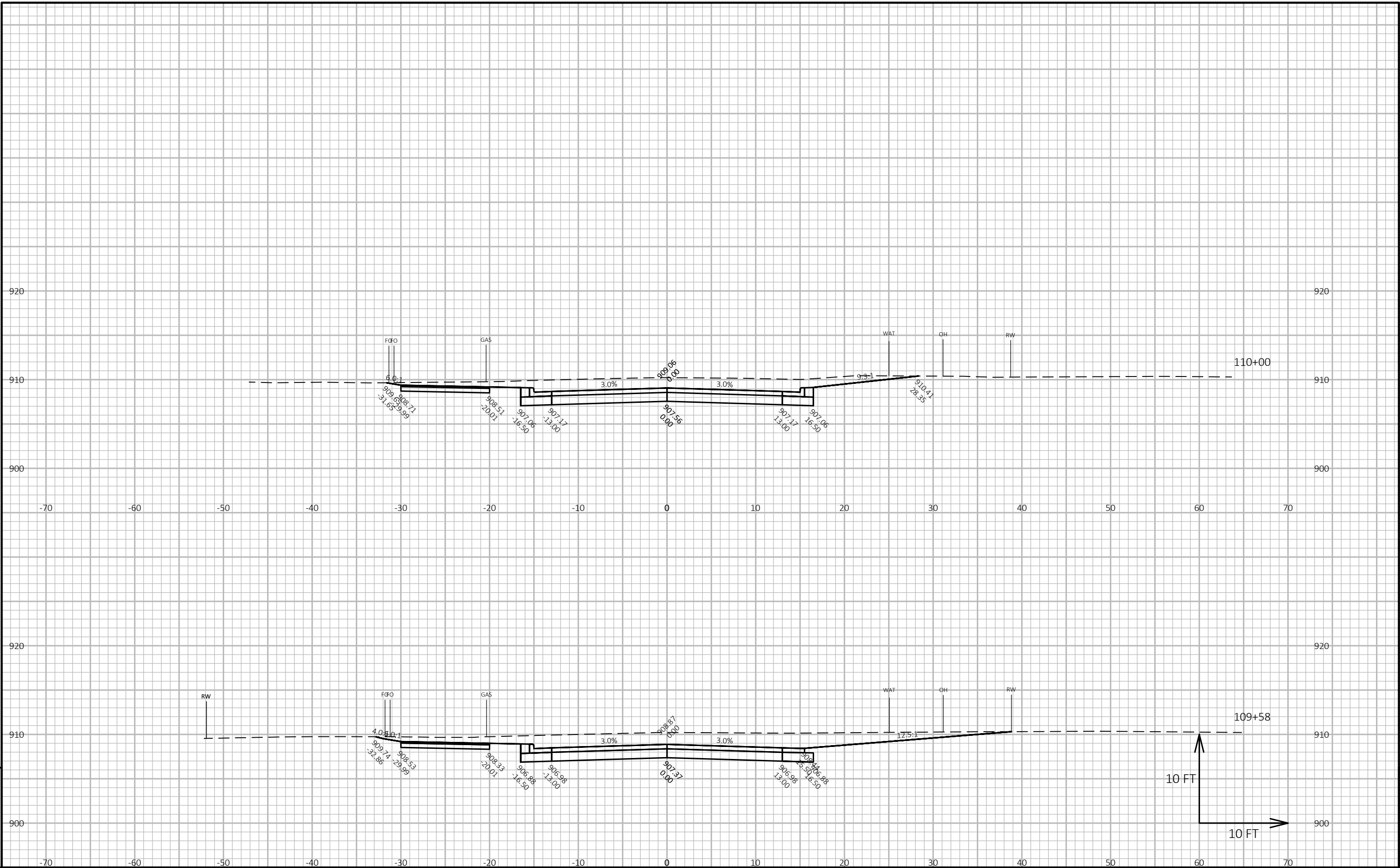
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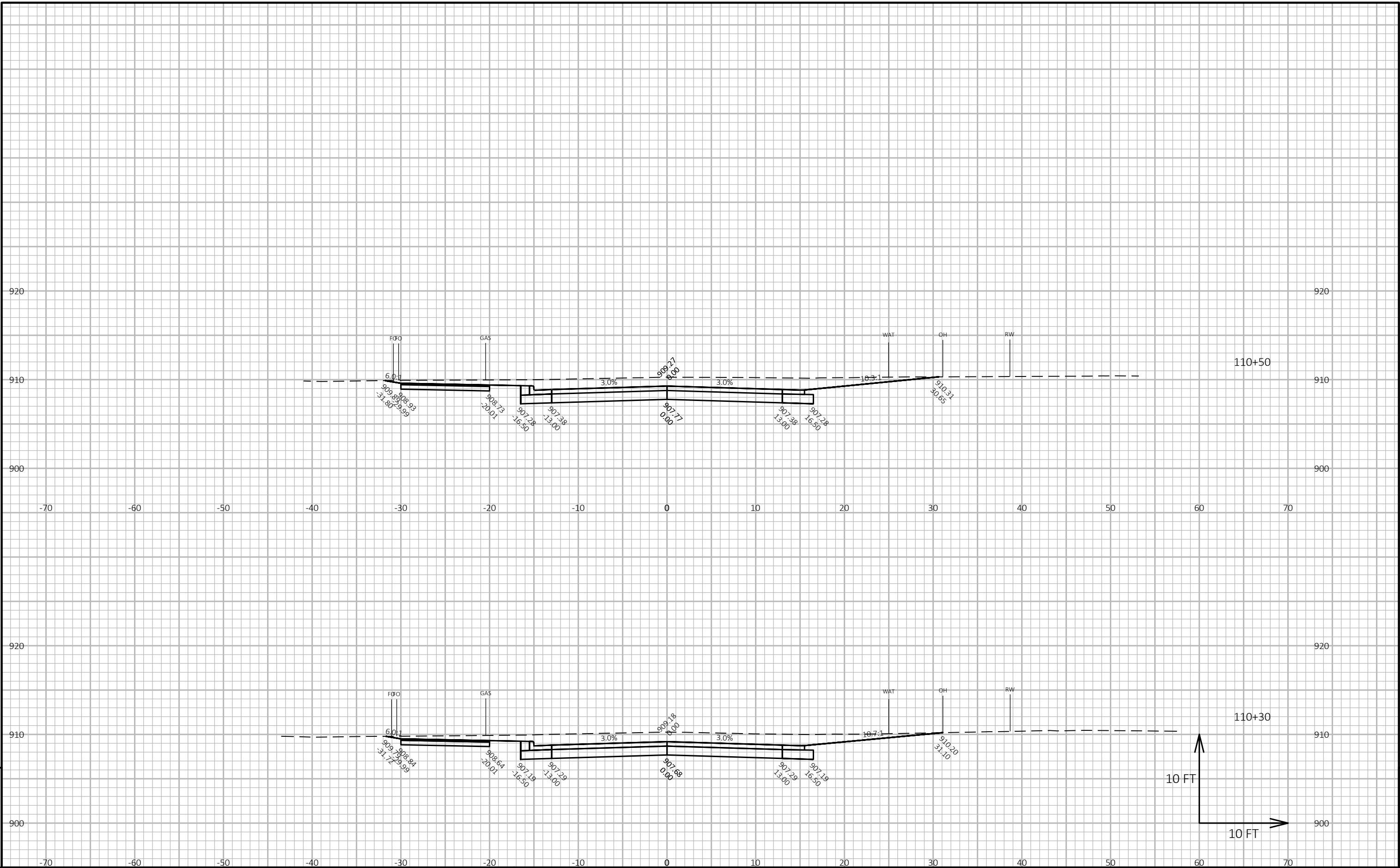
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PROJECT NO: 8996-01-01 HWY: PARK AVENUE COUNTY: CHIPPEWA CROSS SECTIONS: CROSS SECTIONS SHEET E



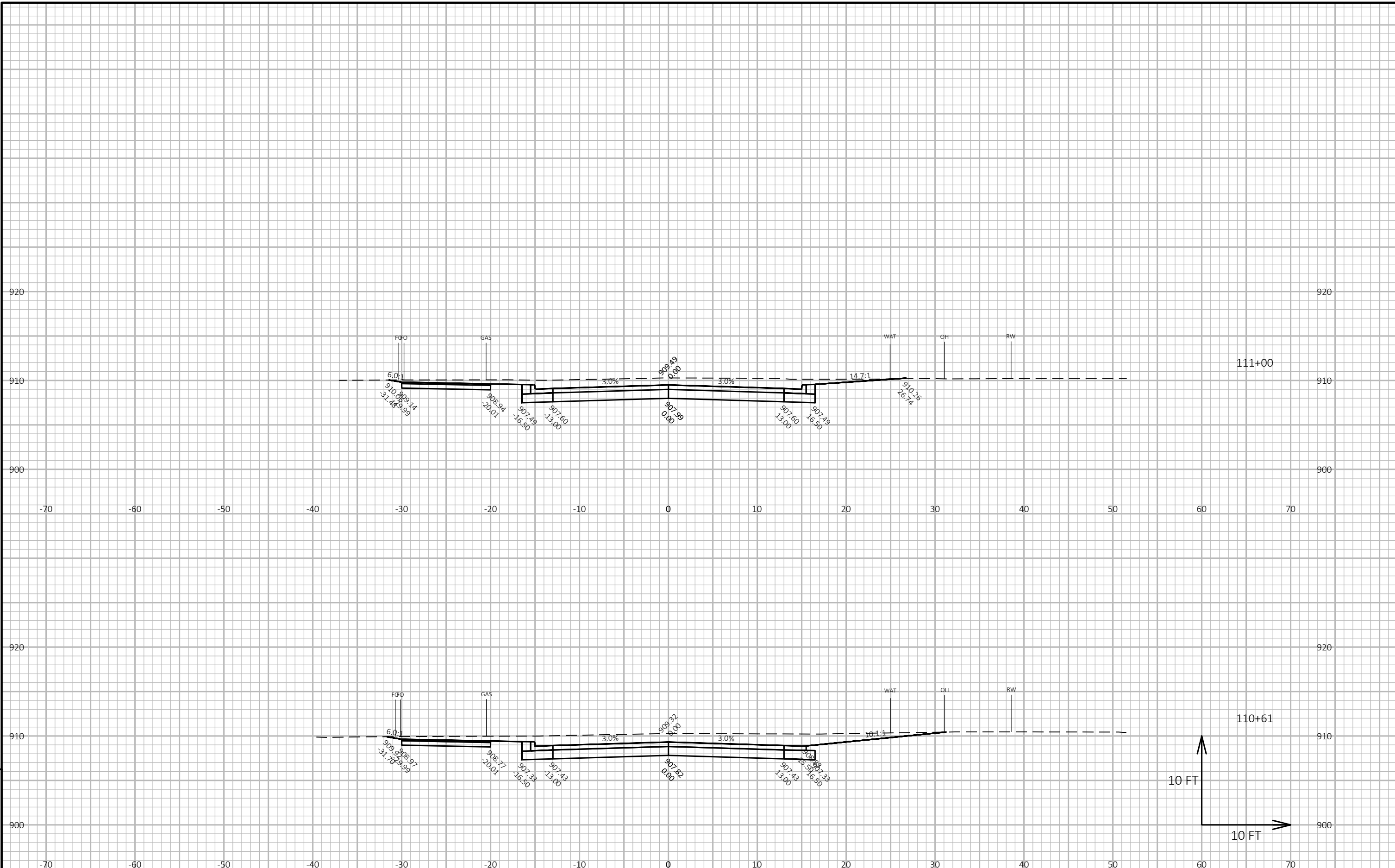
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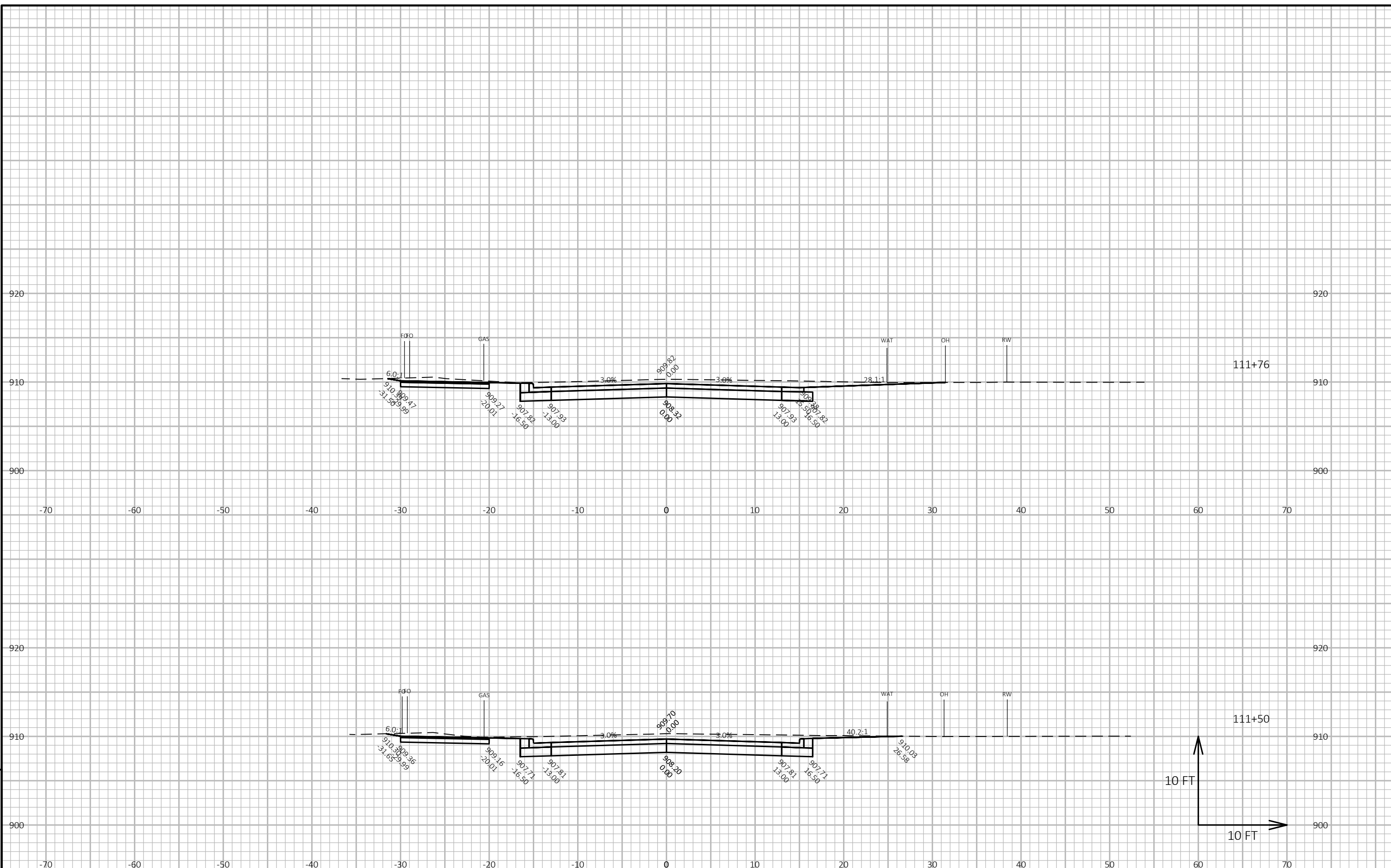
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PROJECT NO: 8996-01-01 HWY: PARK AVENUE COUNTY: CHIPPEWA CROSS SECTIONS: CROSS SECTIONS SHEET E



PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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PROJECT NO: 8996-01-01

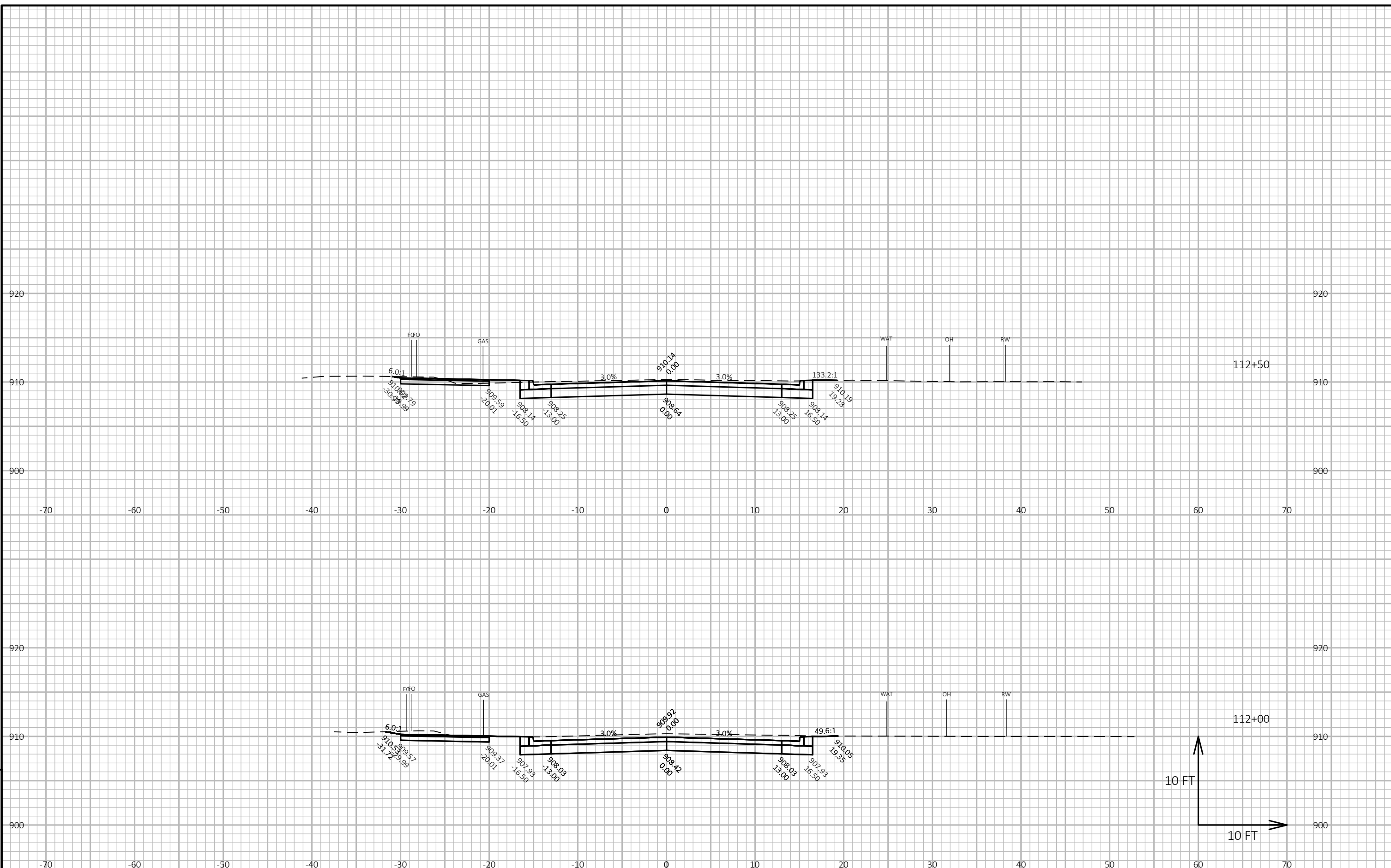
HWY: PARK AVENUE

COUNTY: CHIPPEWA

CROSS SECTIONS: CROSS SECTIONS

SHEET

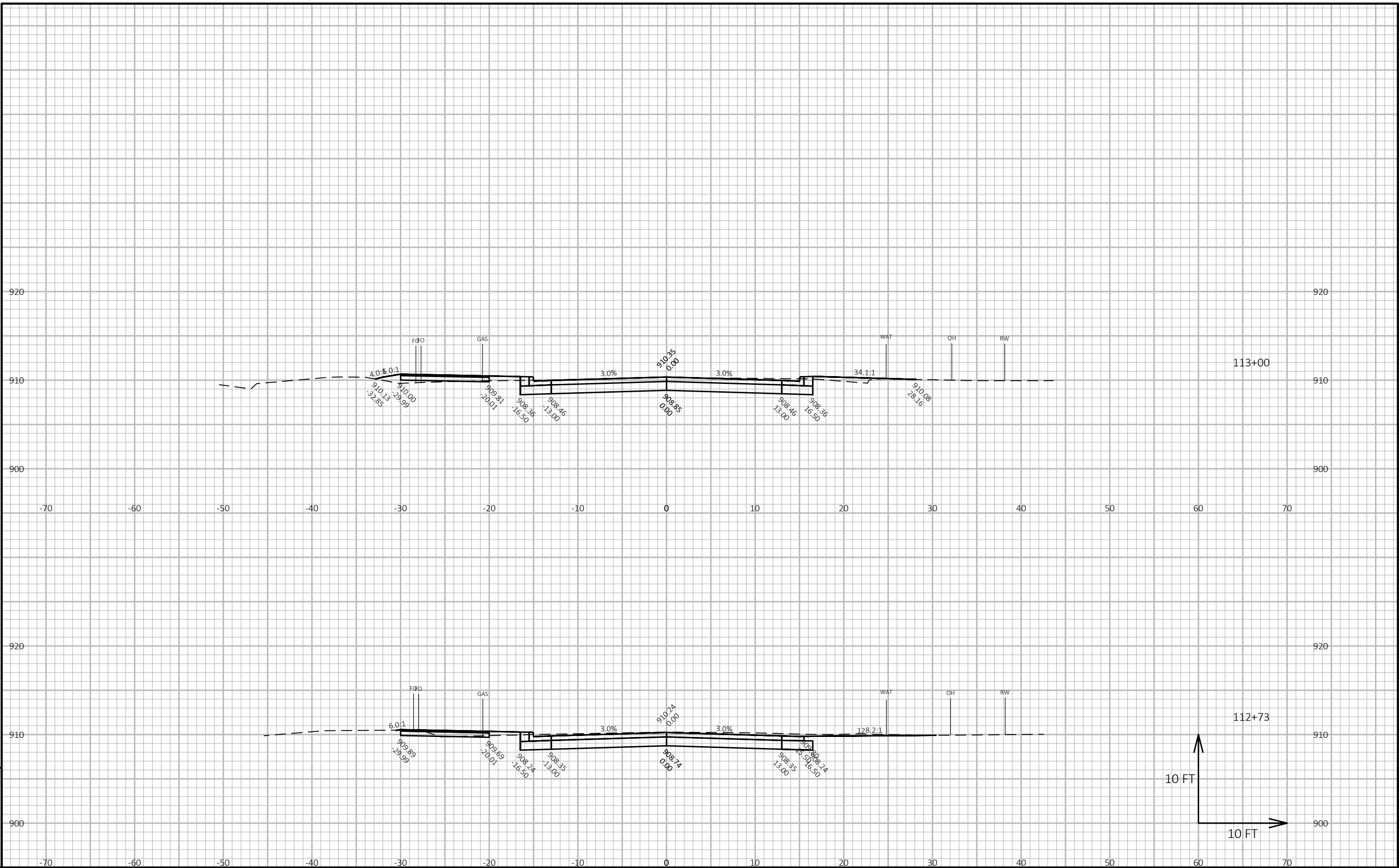
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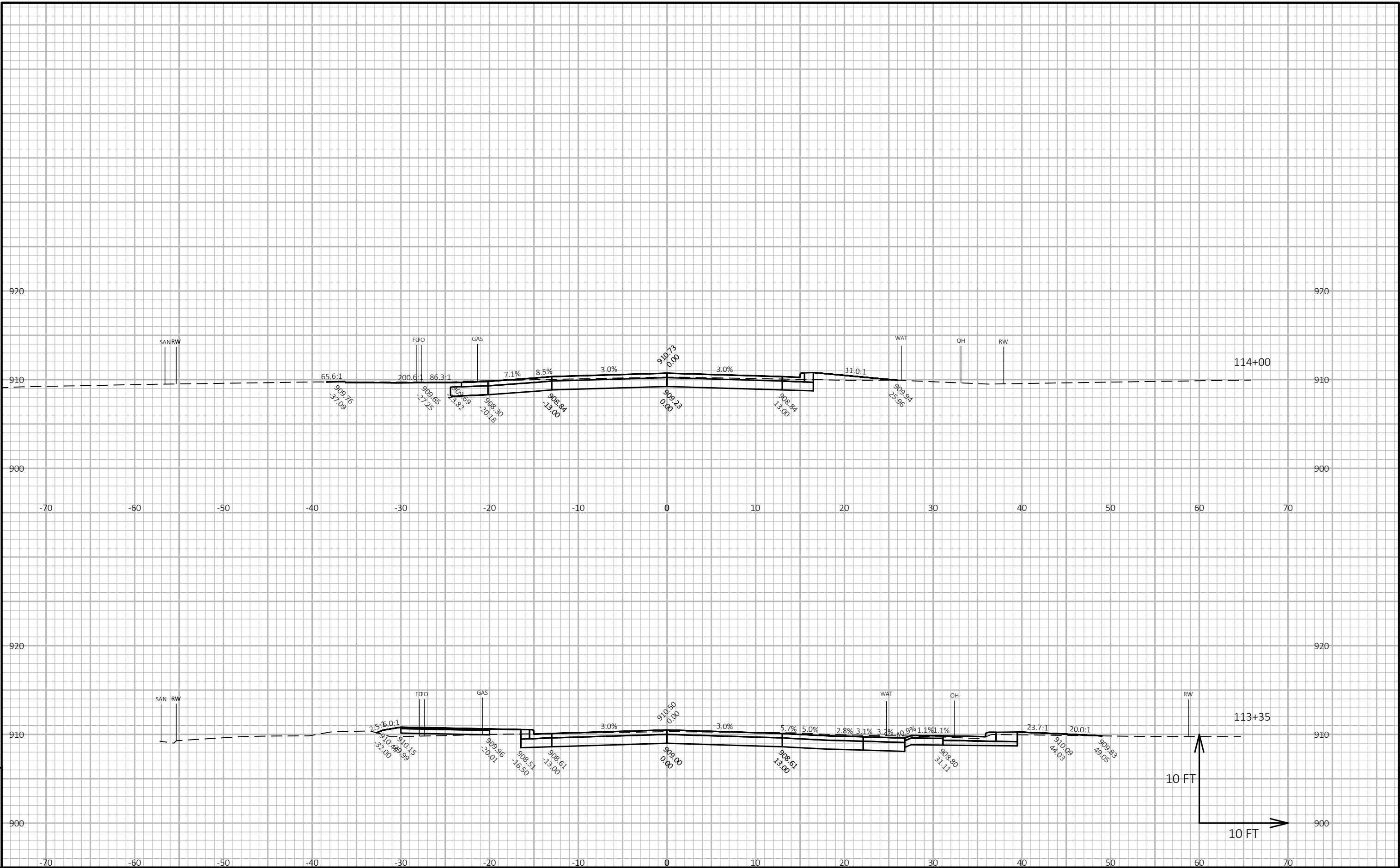
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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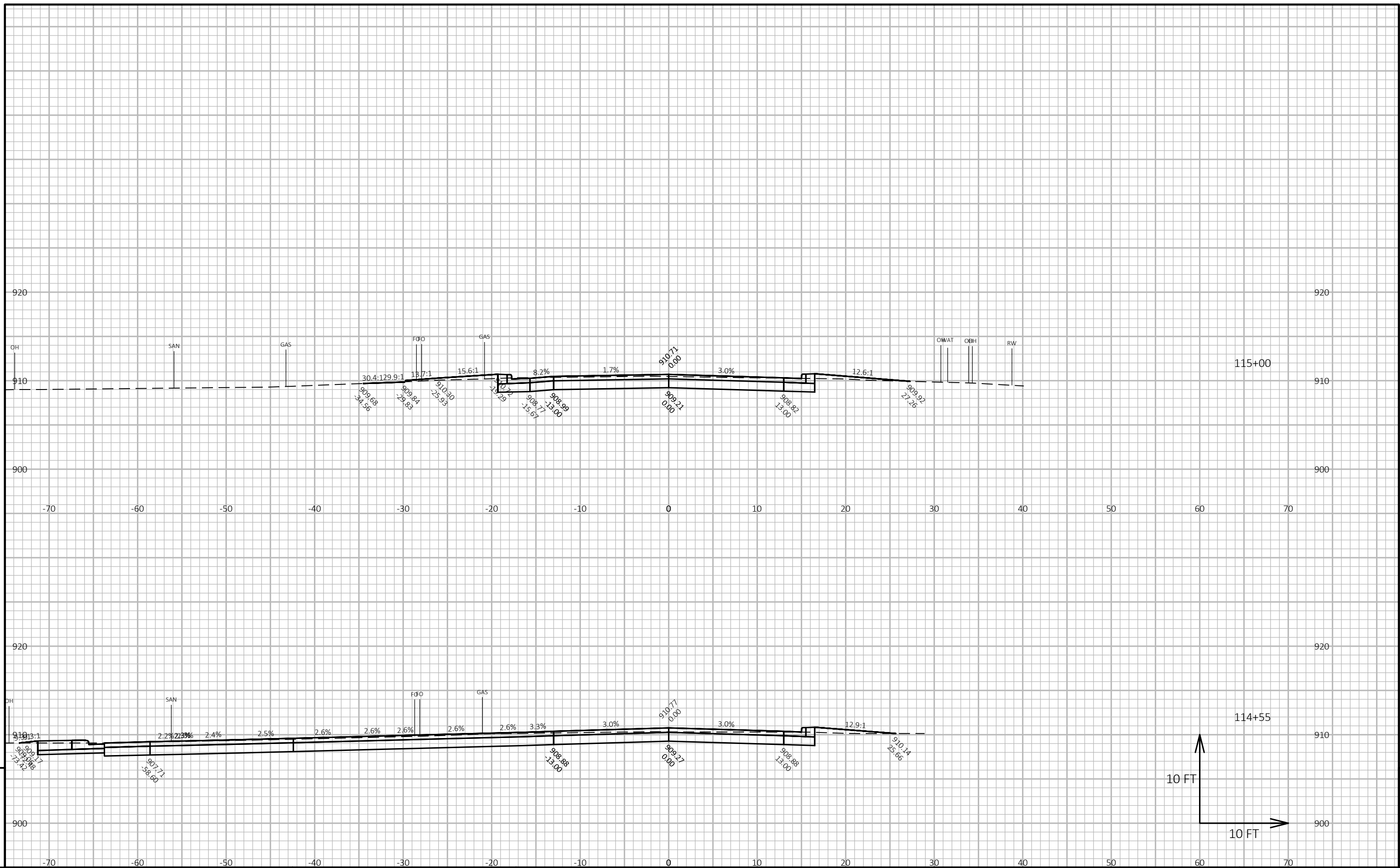
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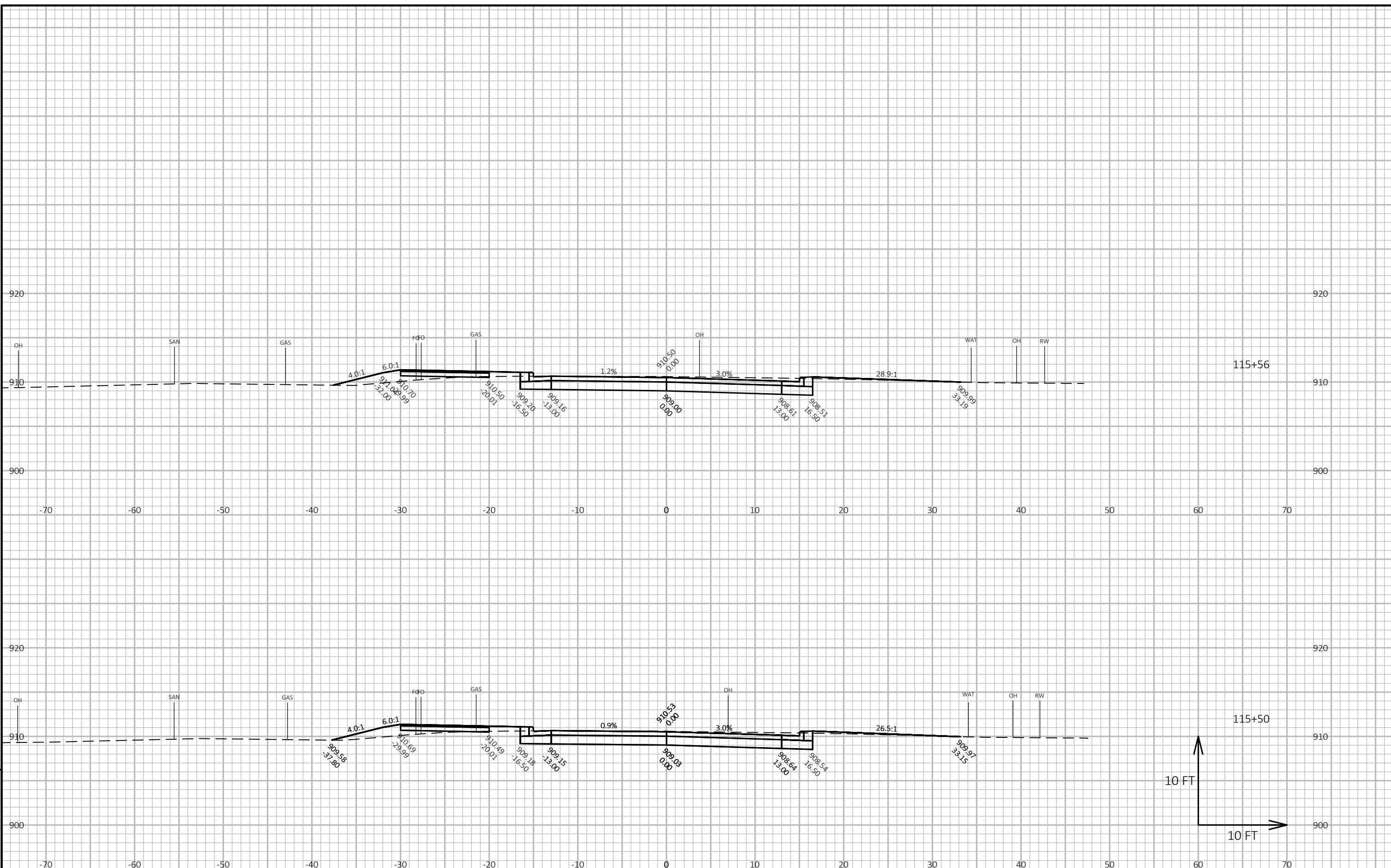
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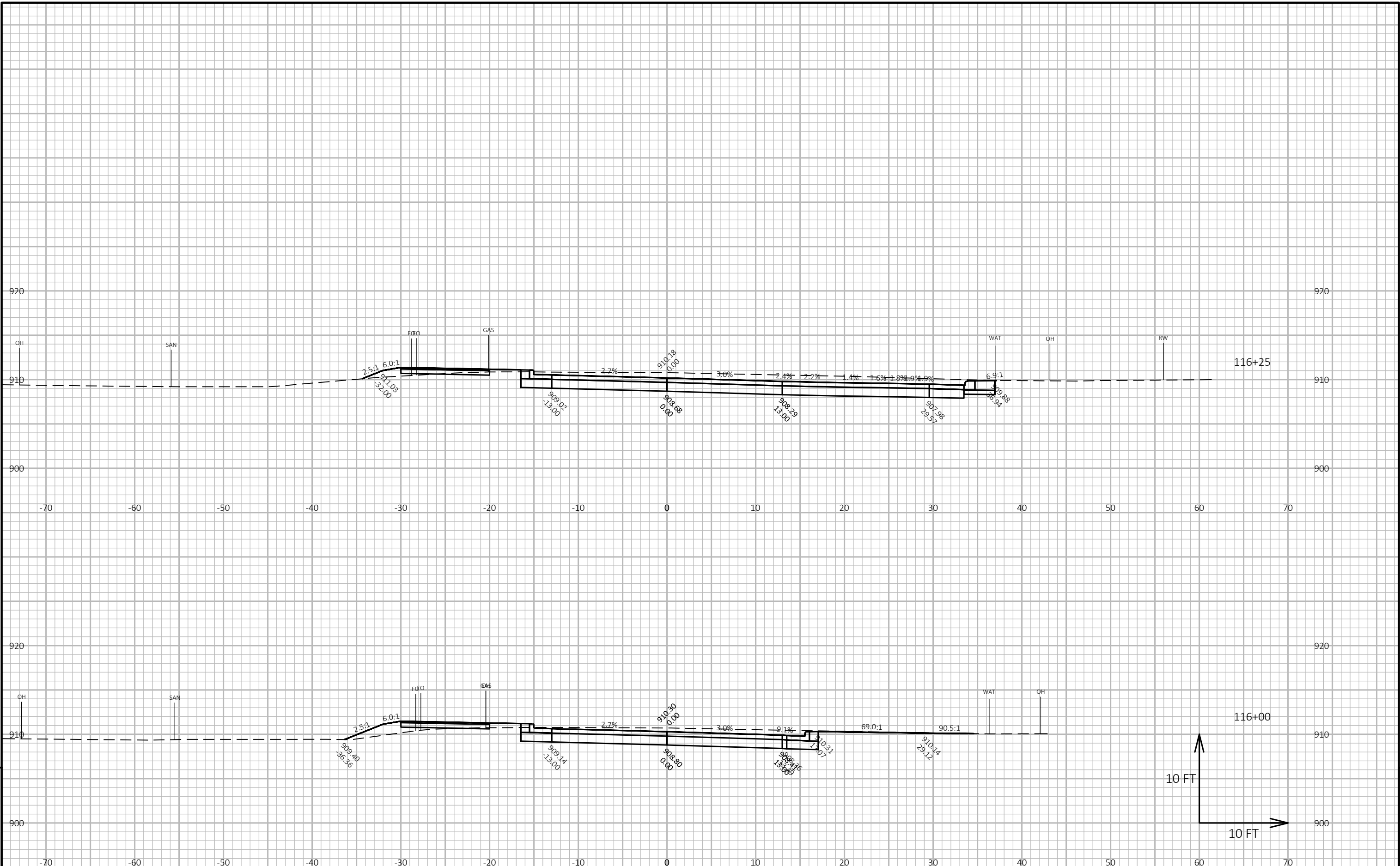
PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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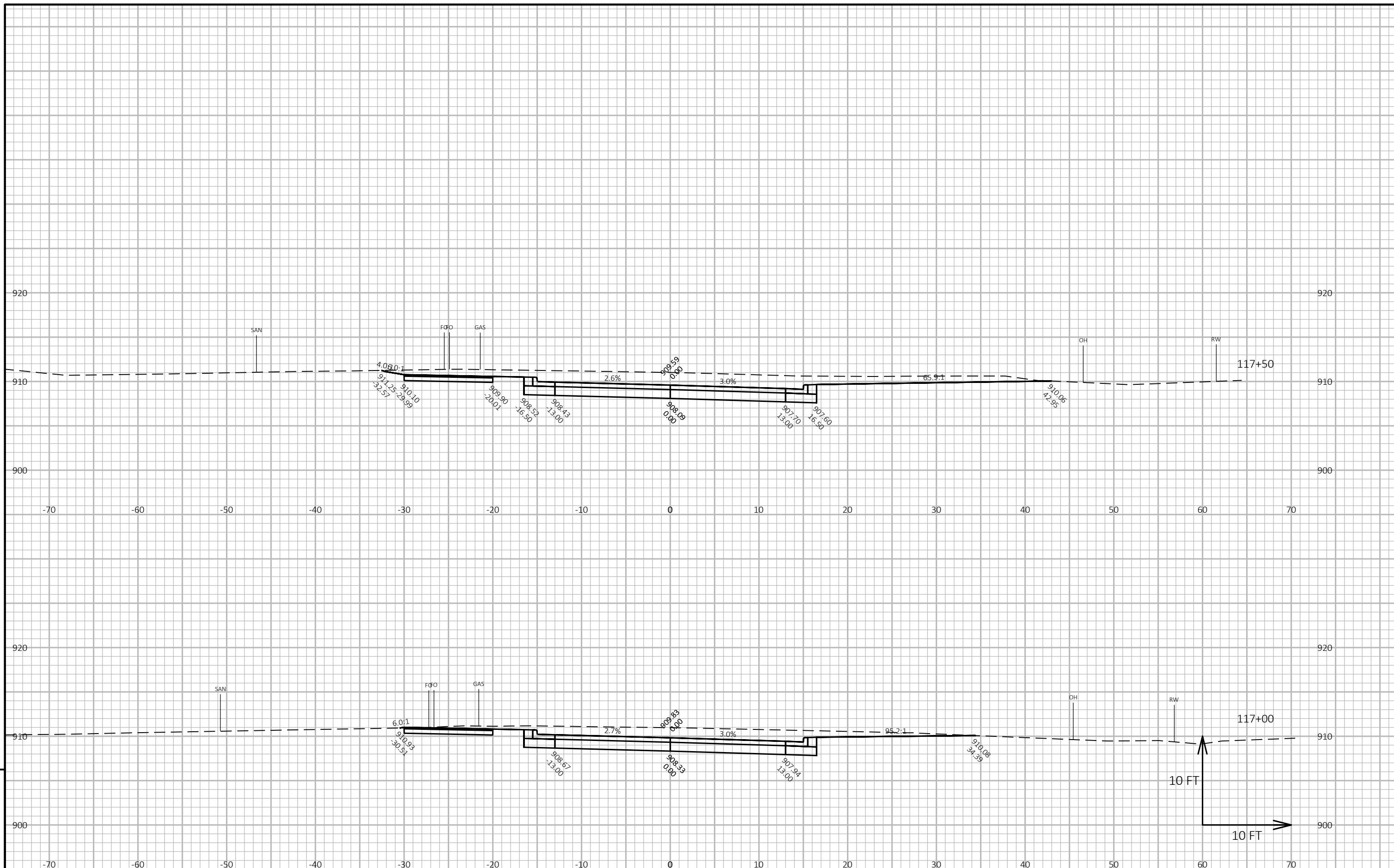
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HWY: PARK AVENUE

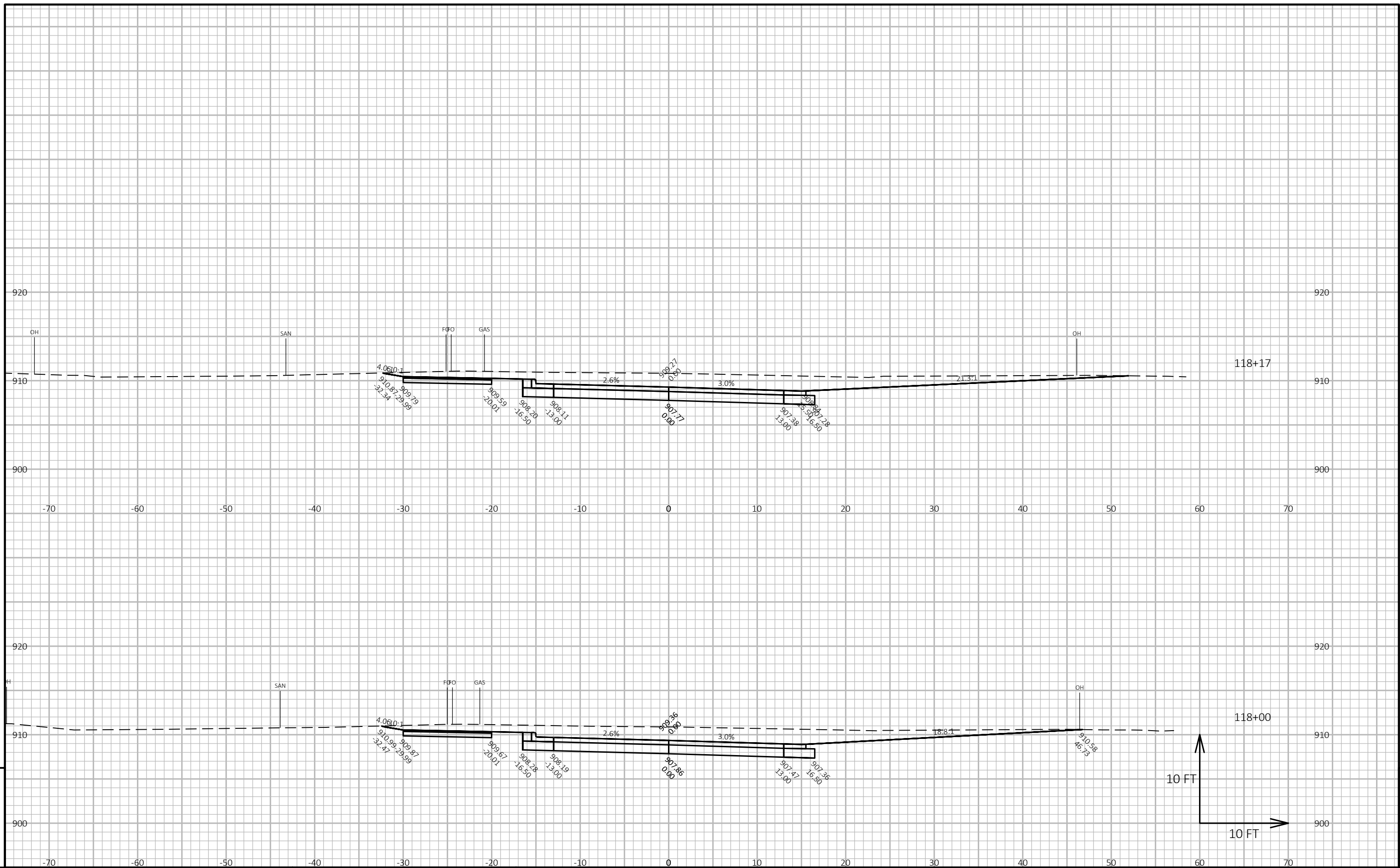
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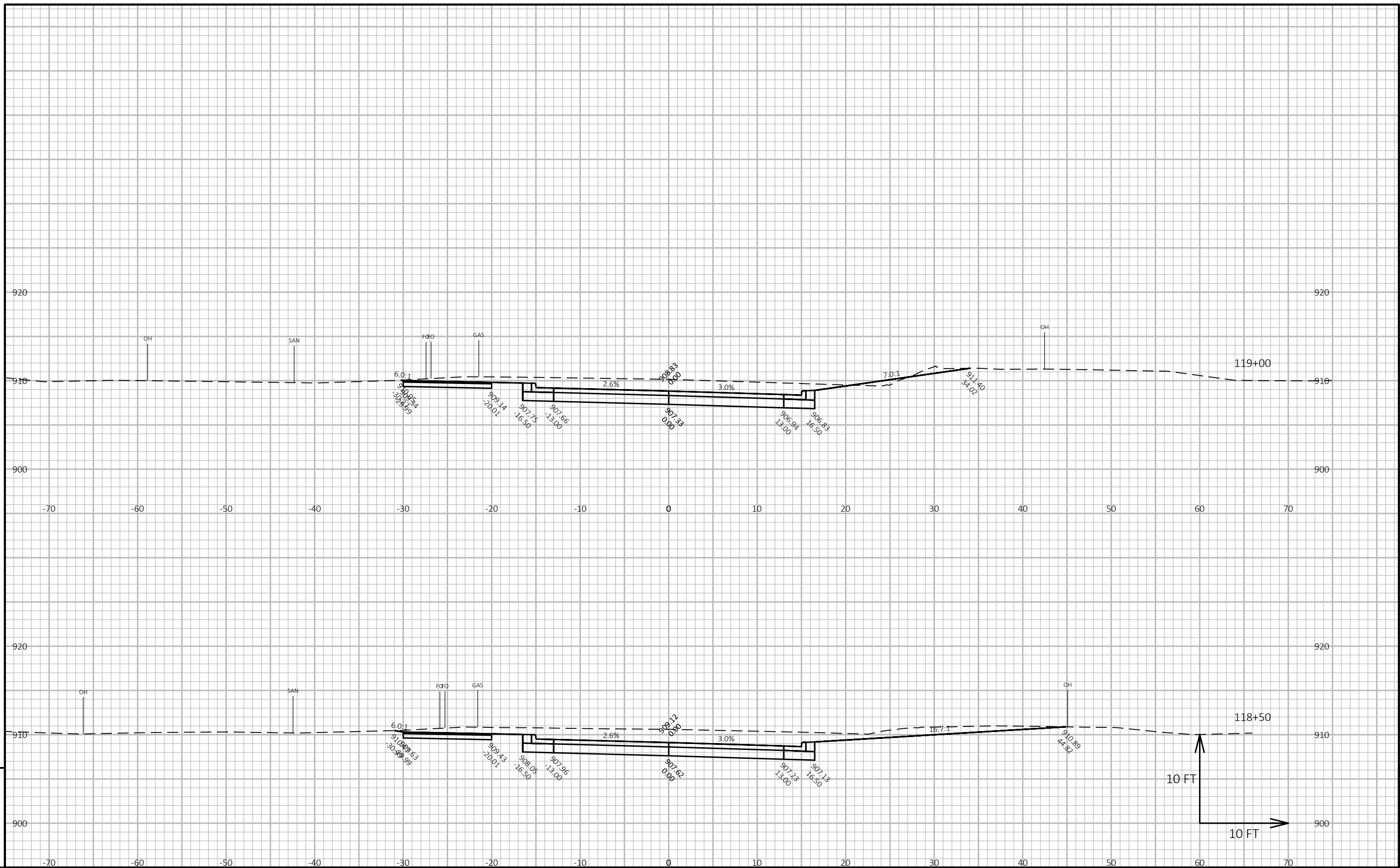
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PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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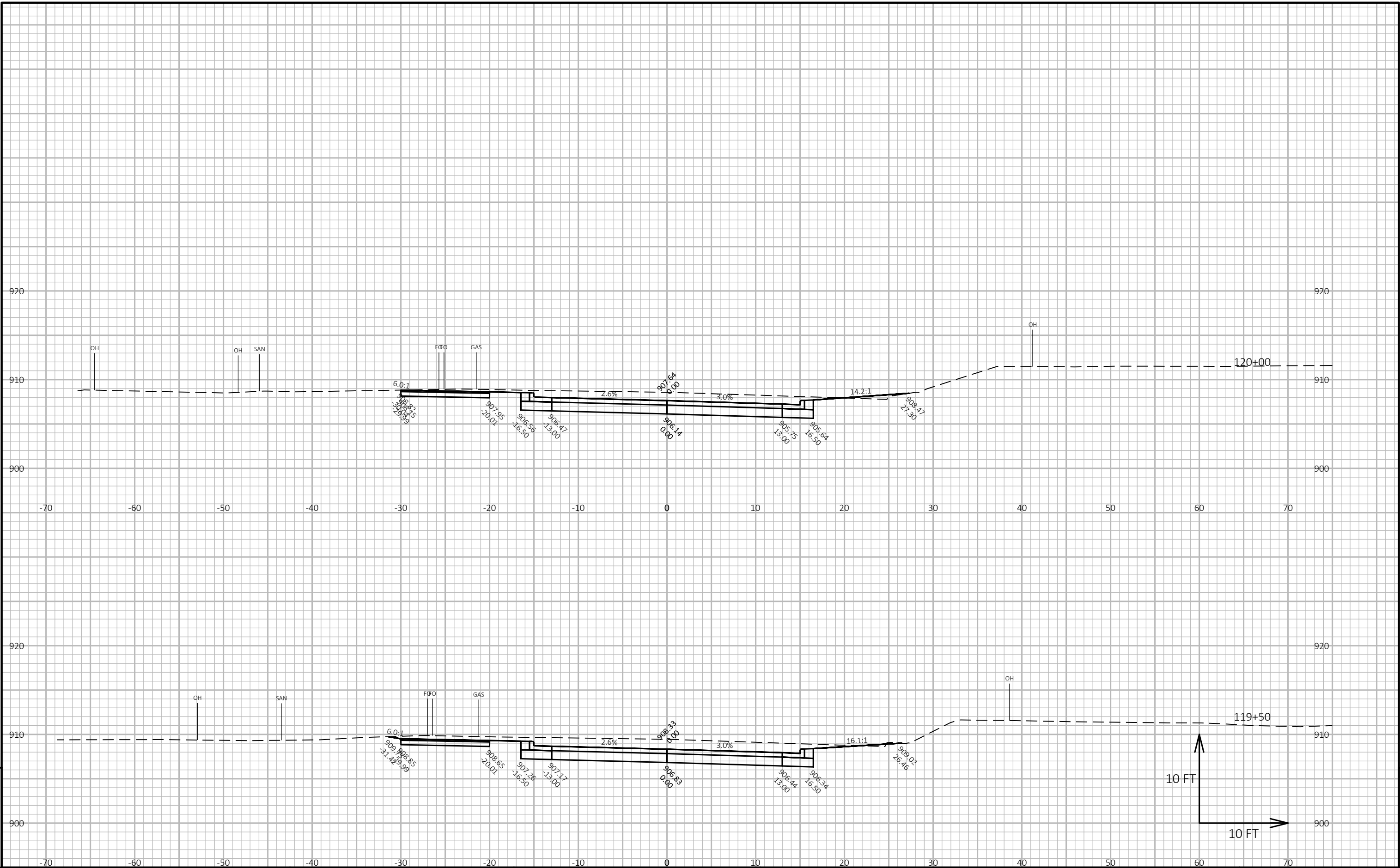
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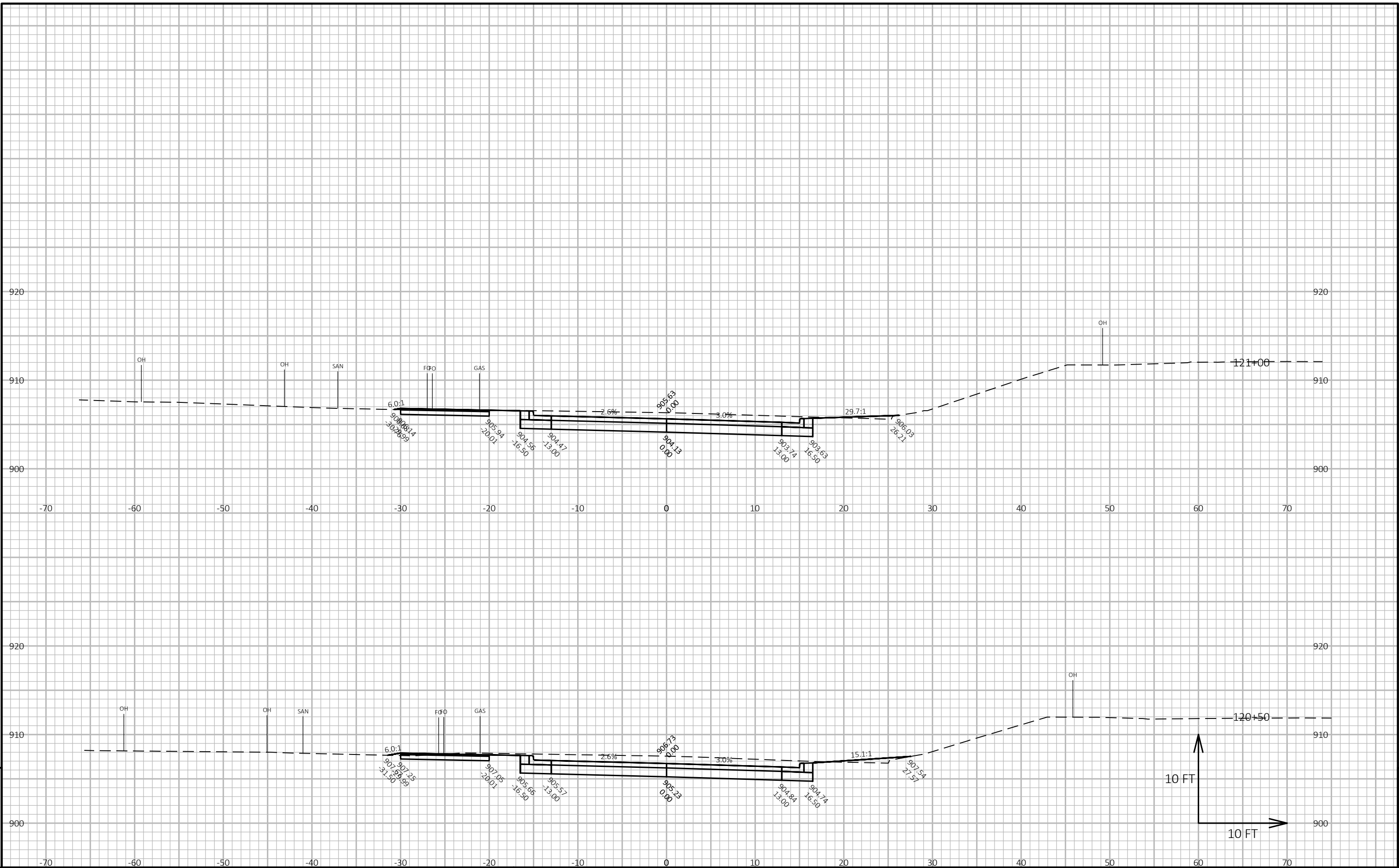
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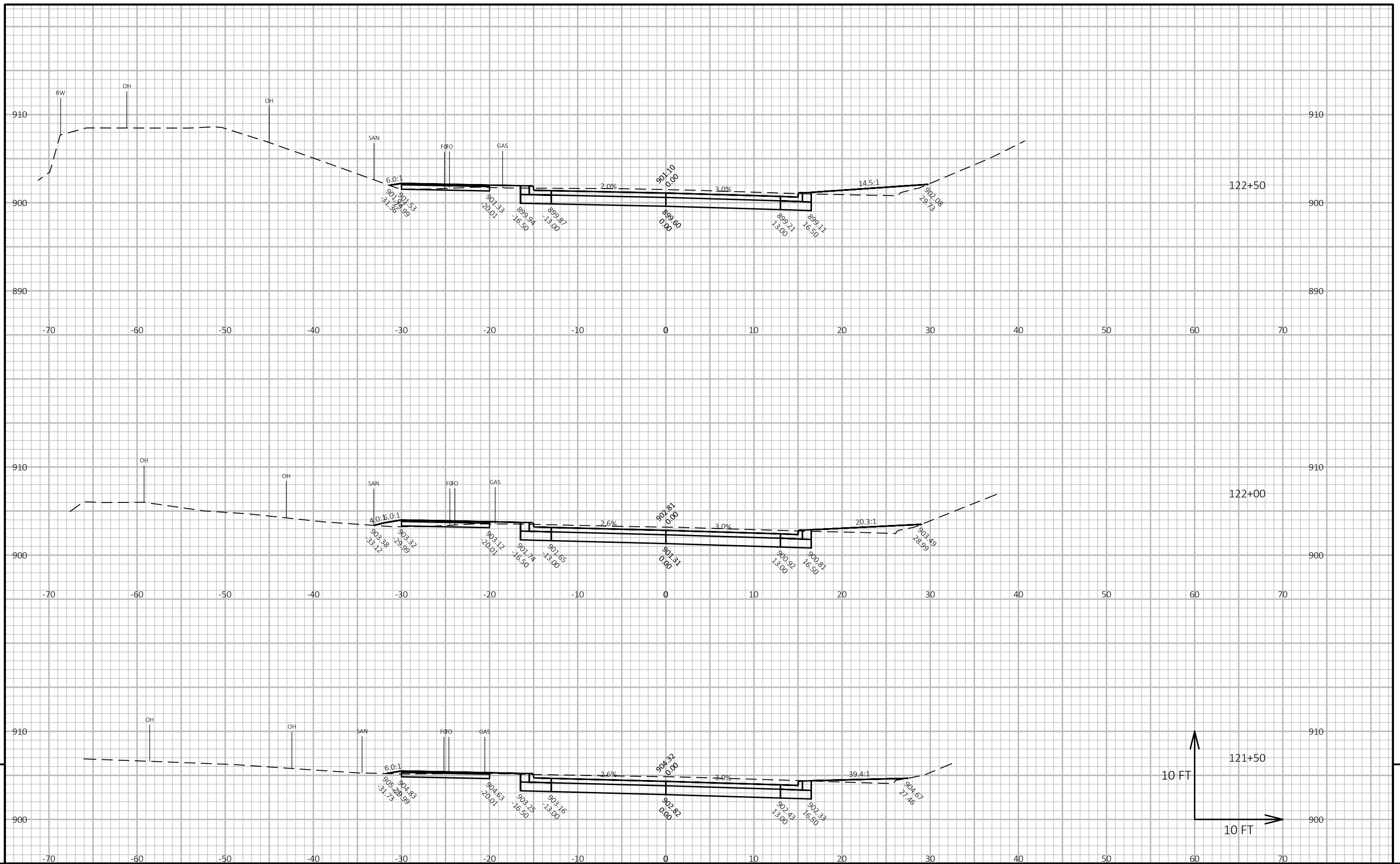
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PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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PROJECT NO: 8996-01-01

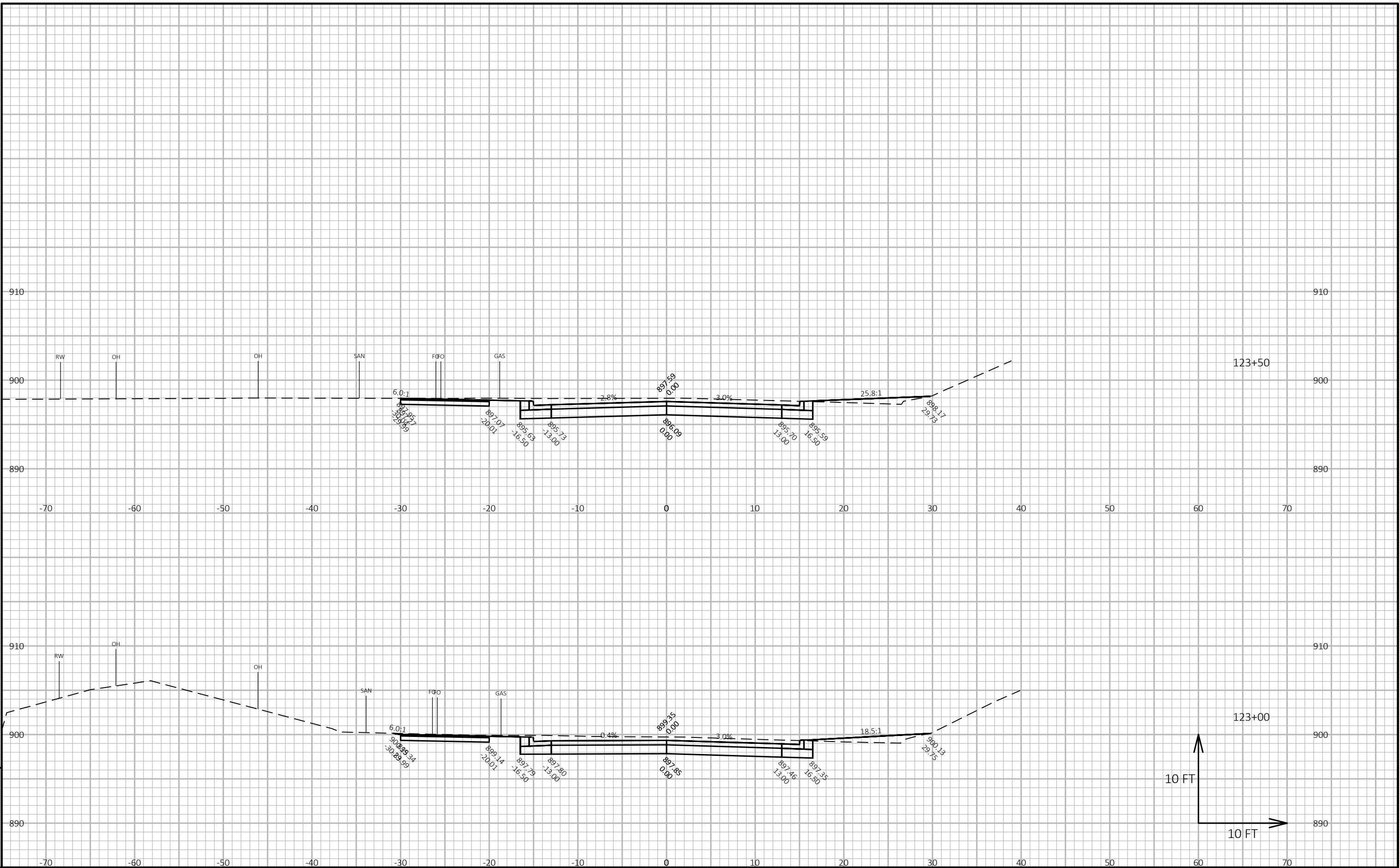
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COUNTY: CHIPPEWA

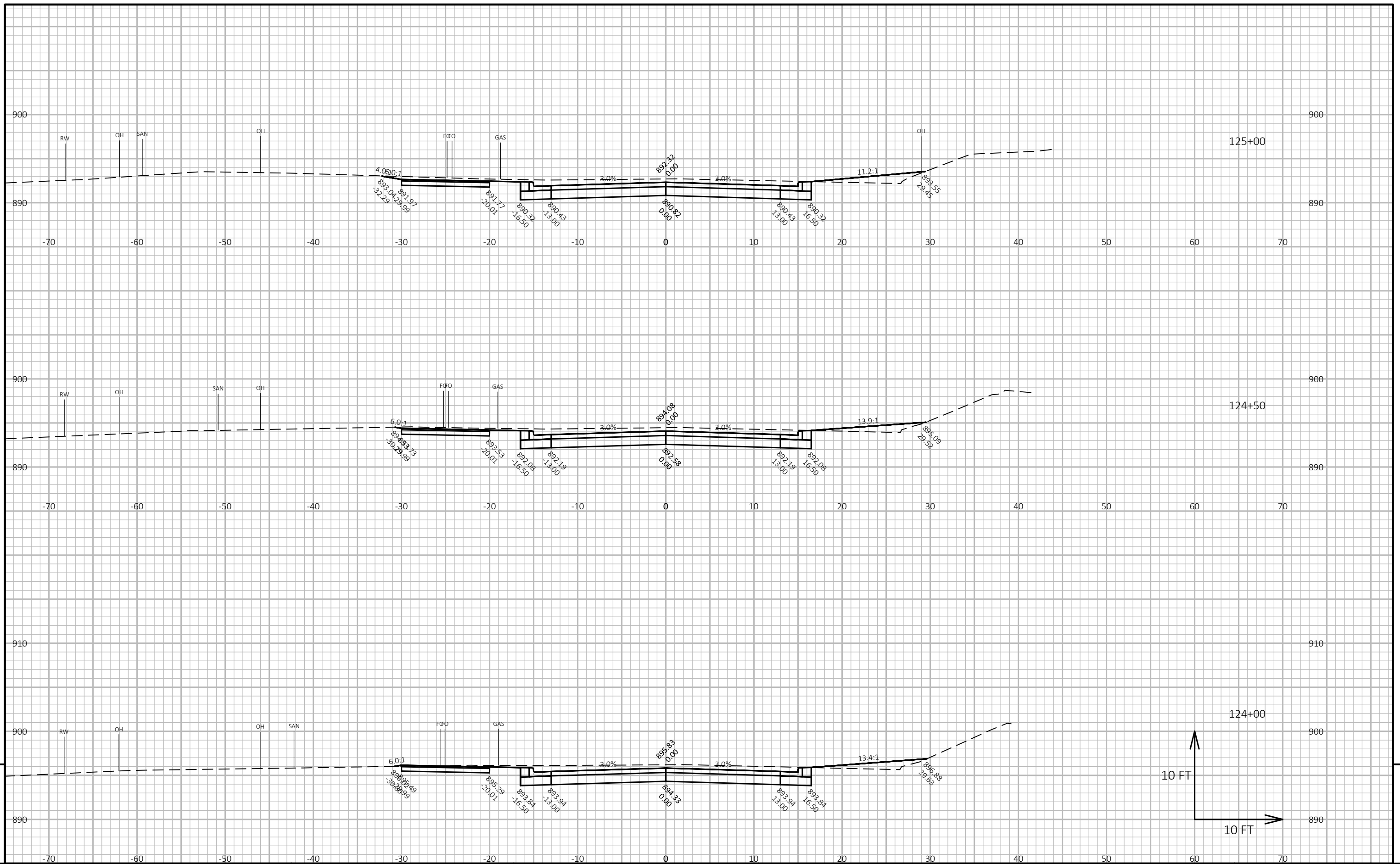
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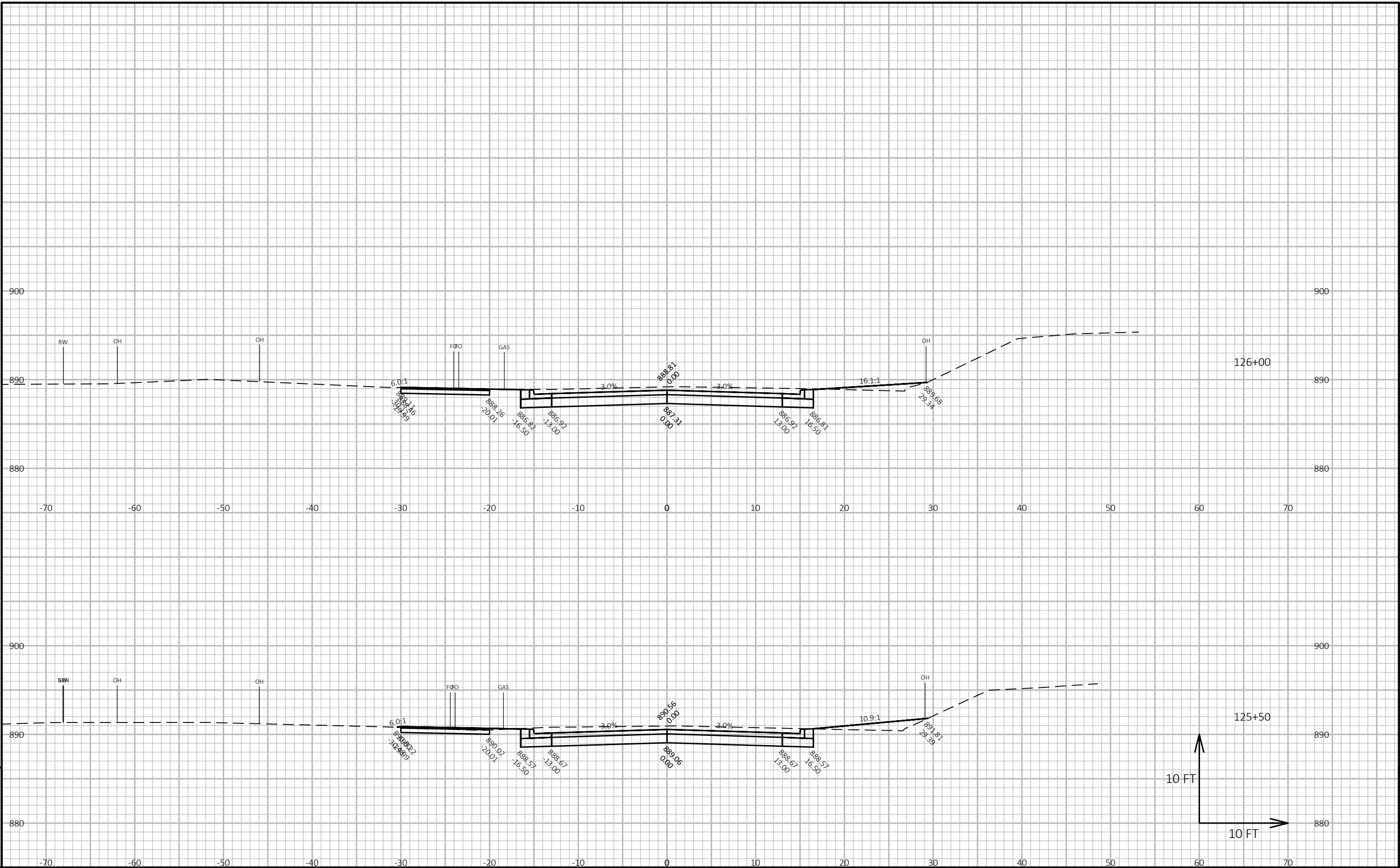
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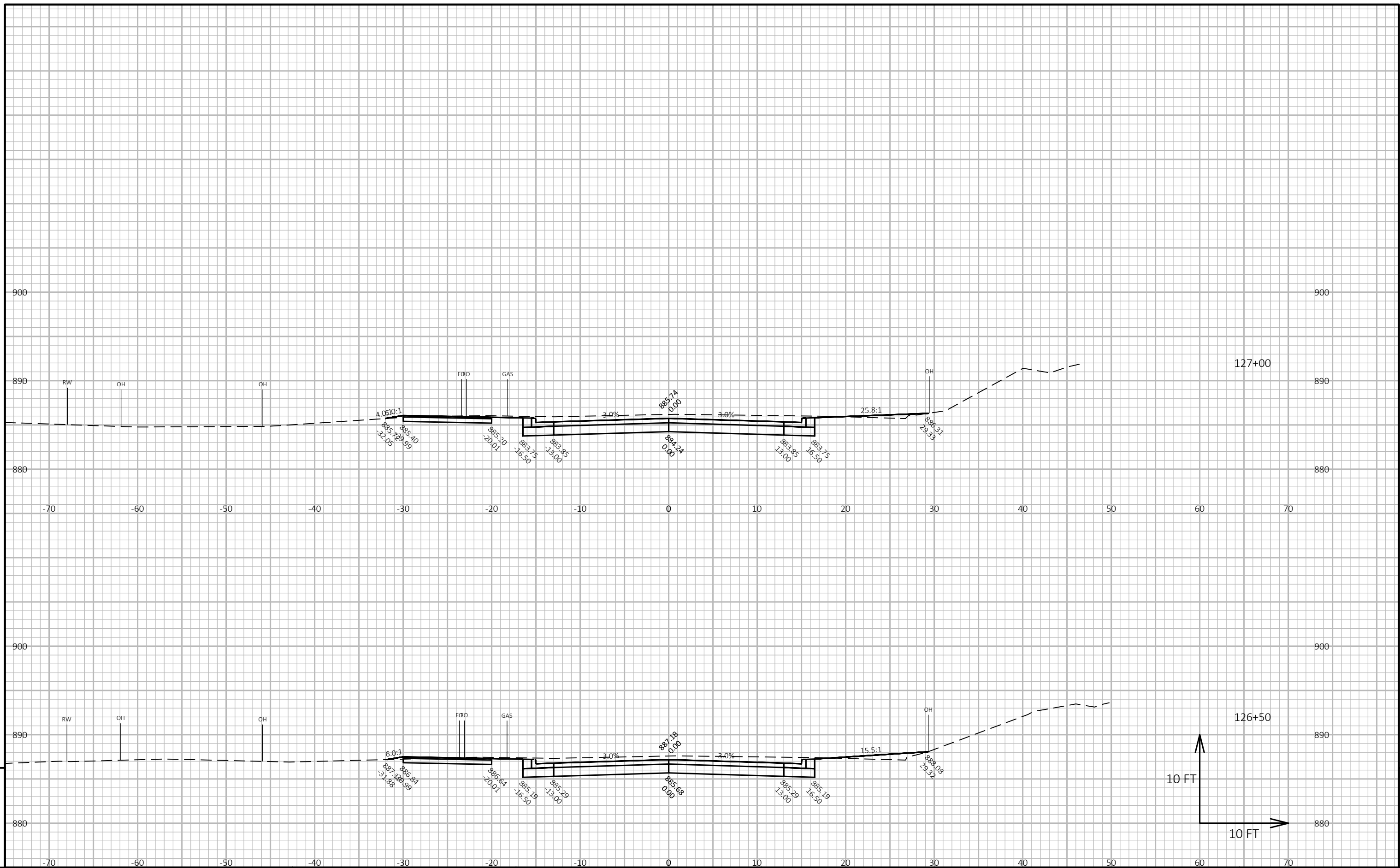
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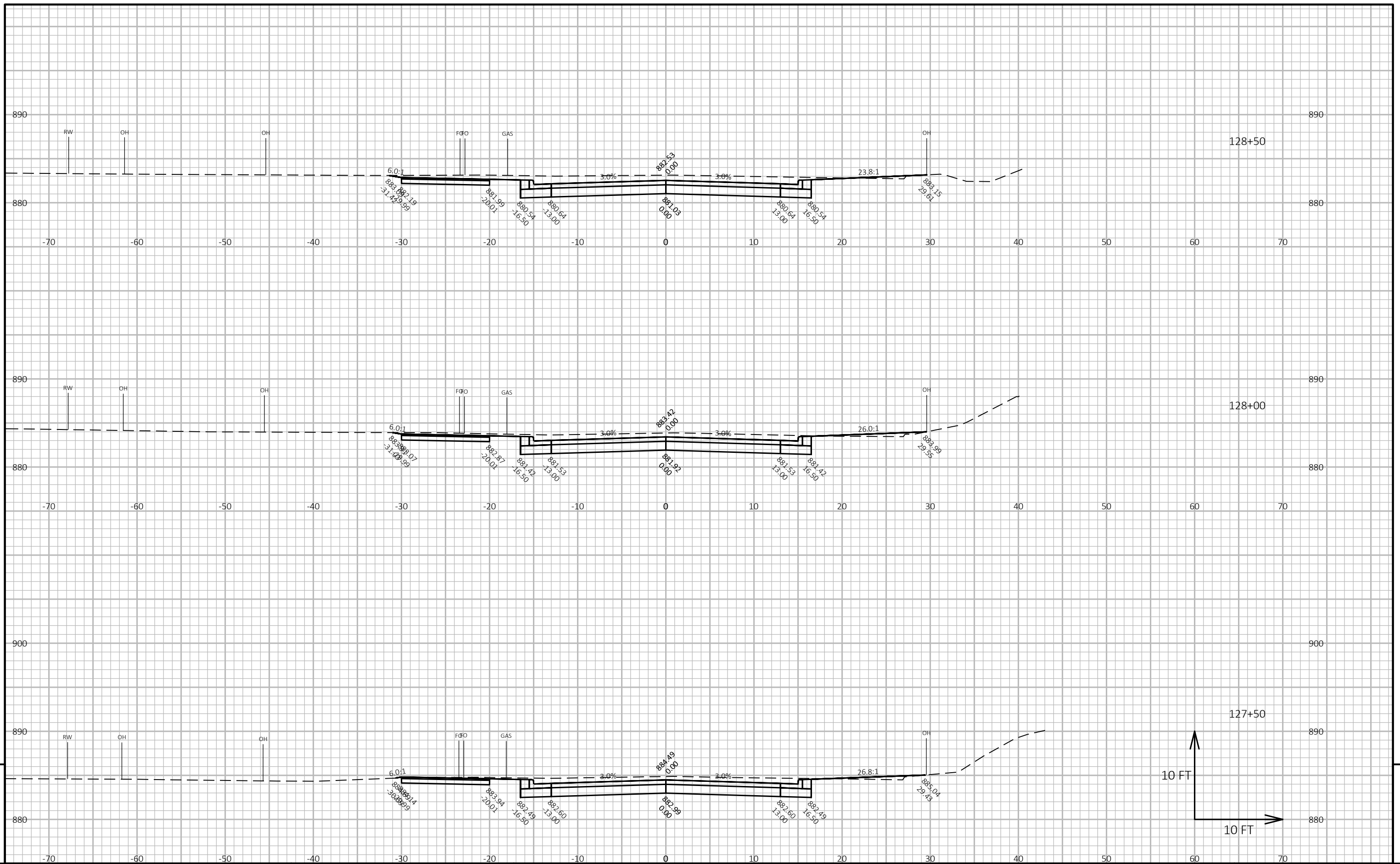
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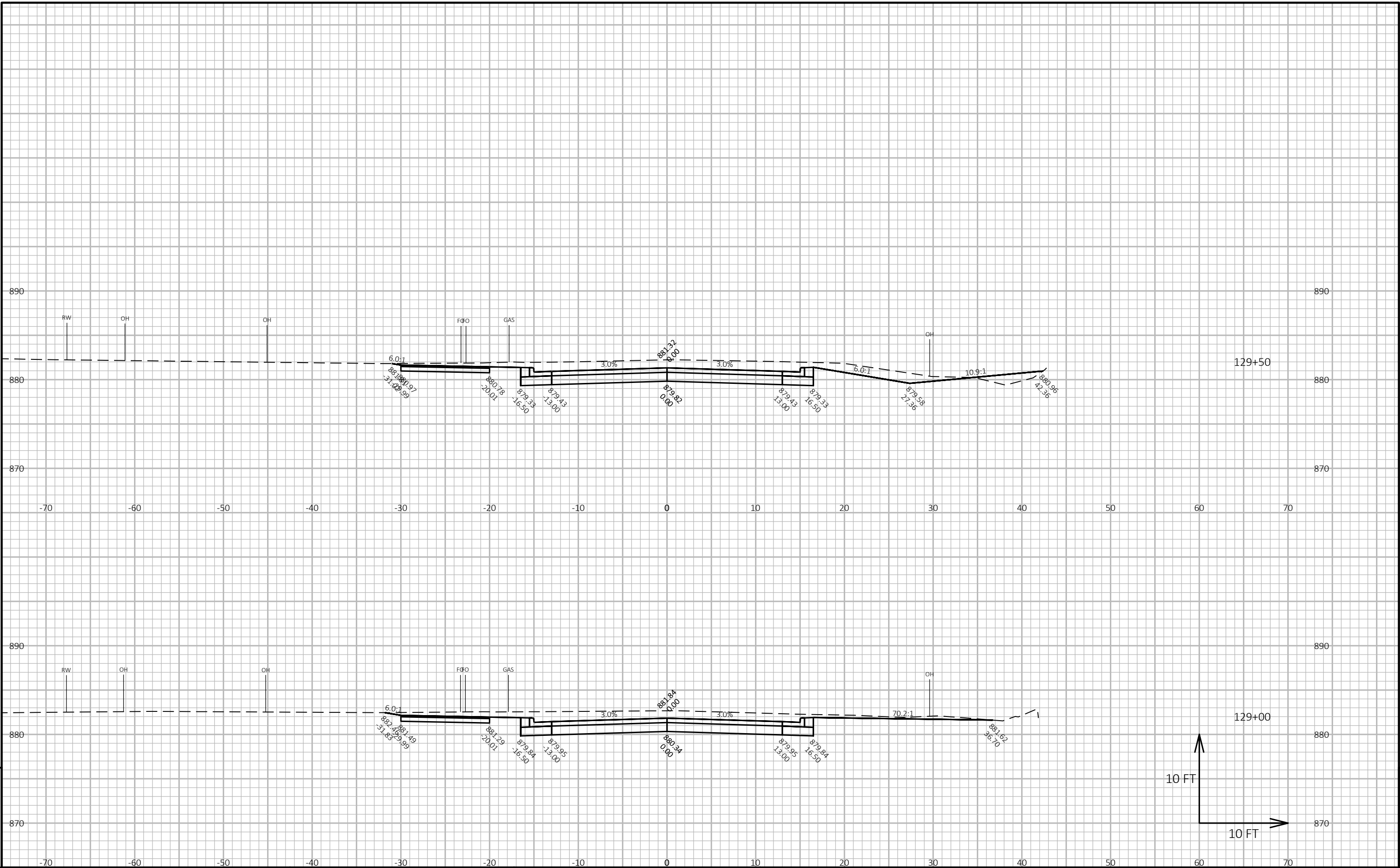
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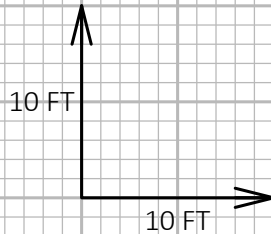
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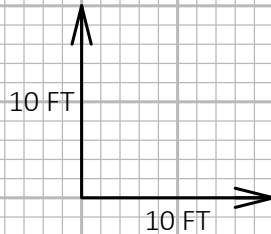
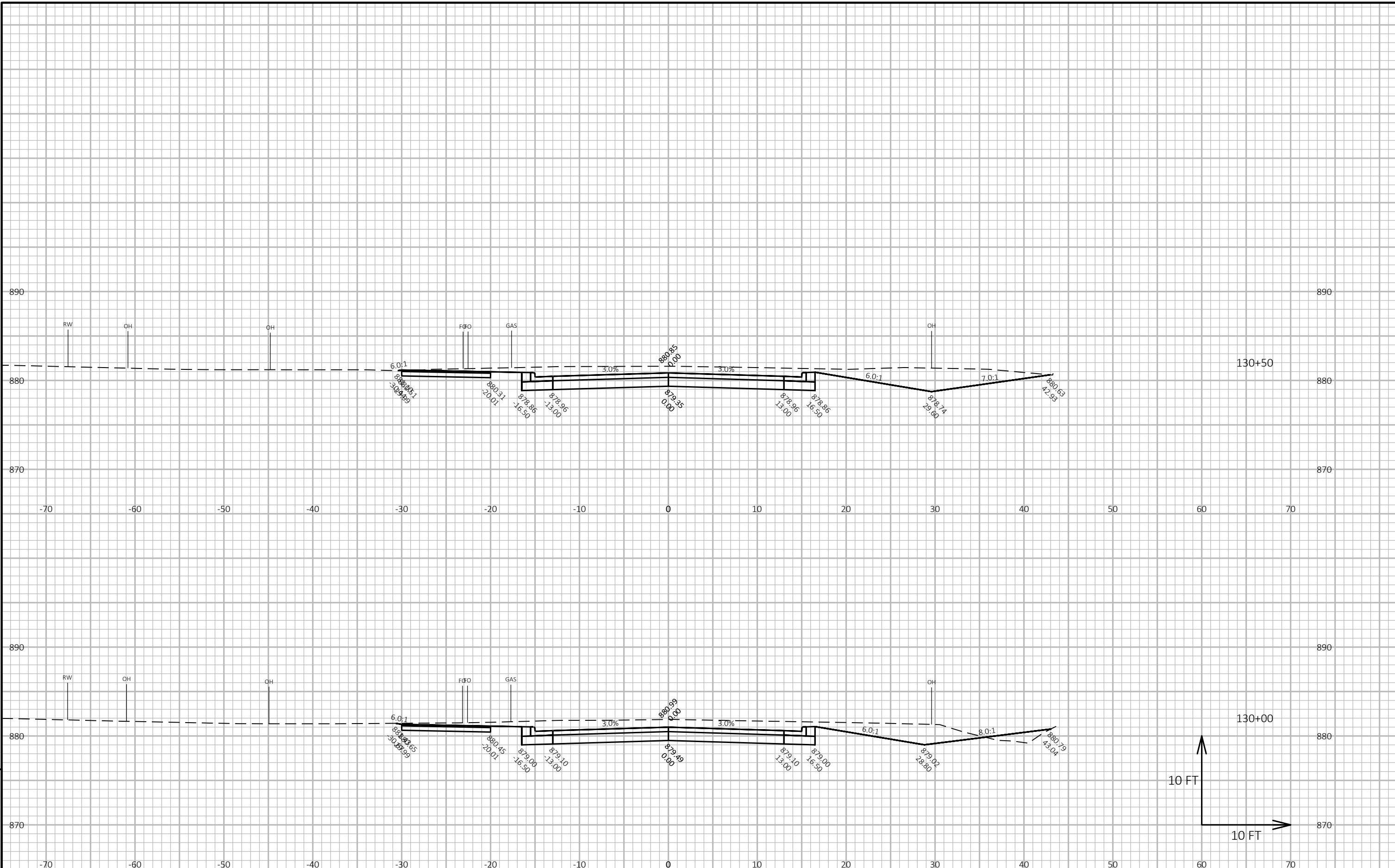
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PROJECT NO: 8996-01-01 HWY: PARK AVENUE COUNTY: CHIPPEWA CROSS SECTIONS: CROSS SECTIONS SHEET E

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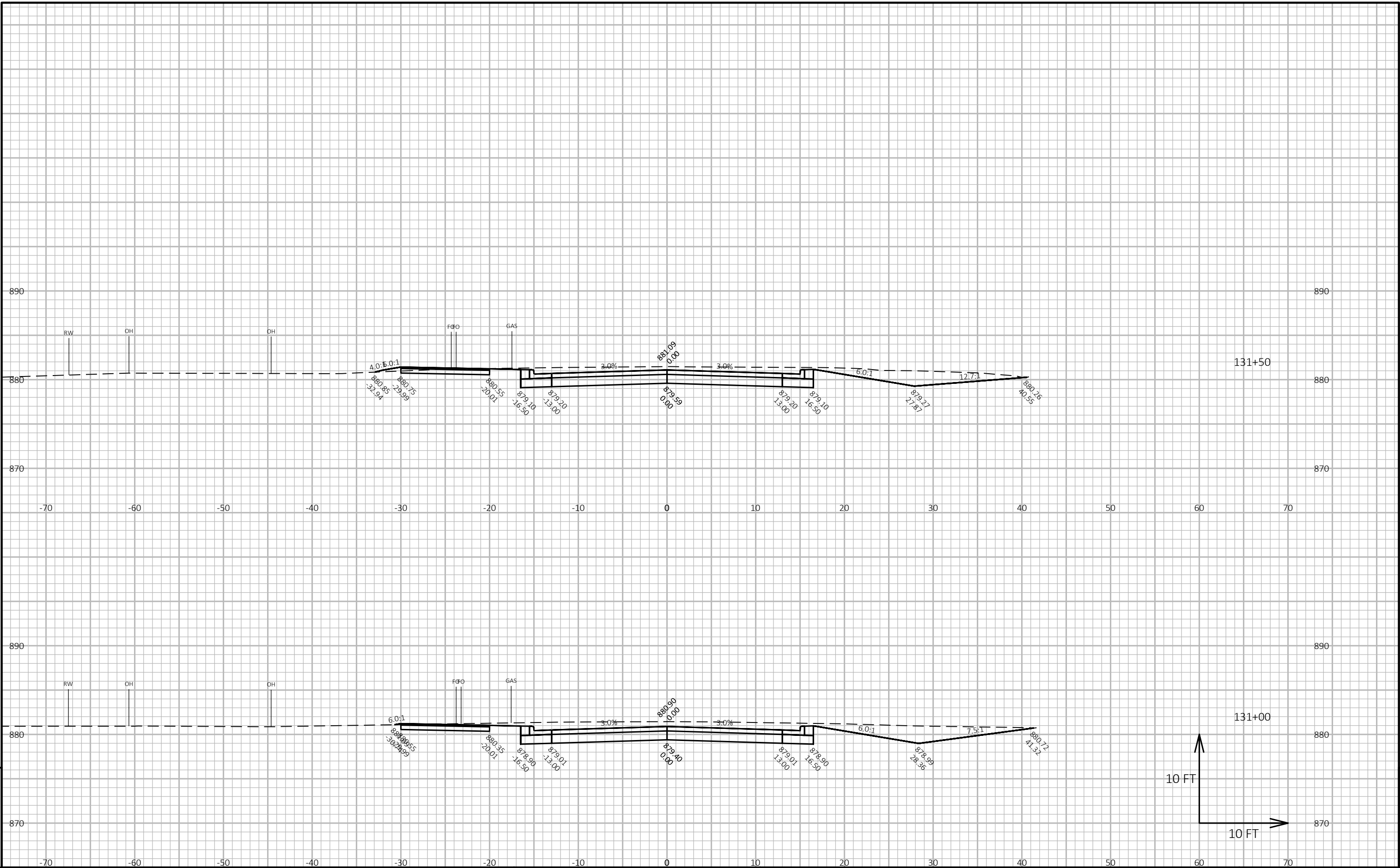


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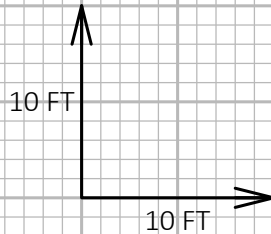
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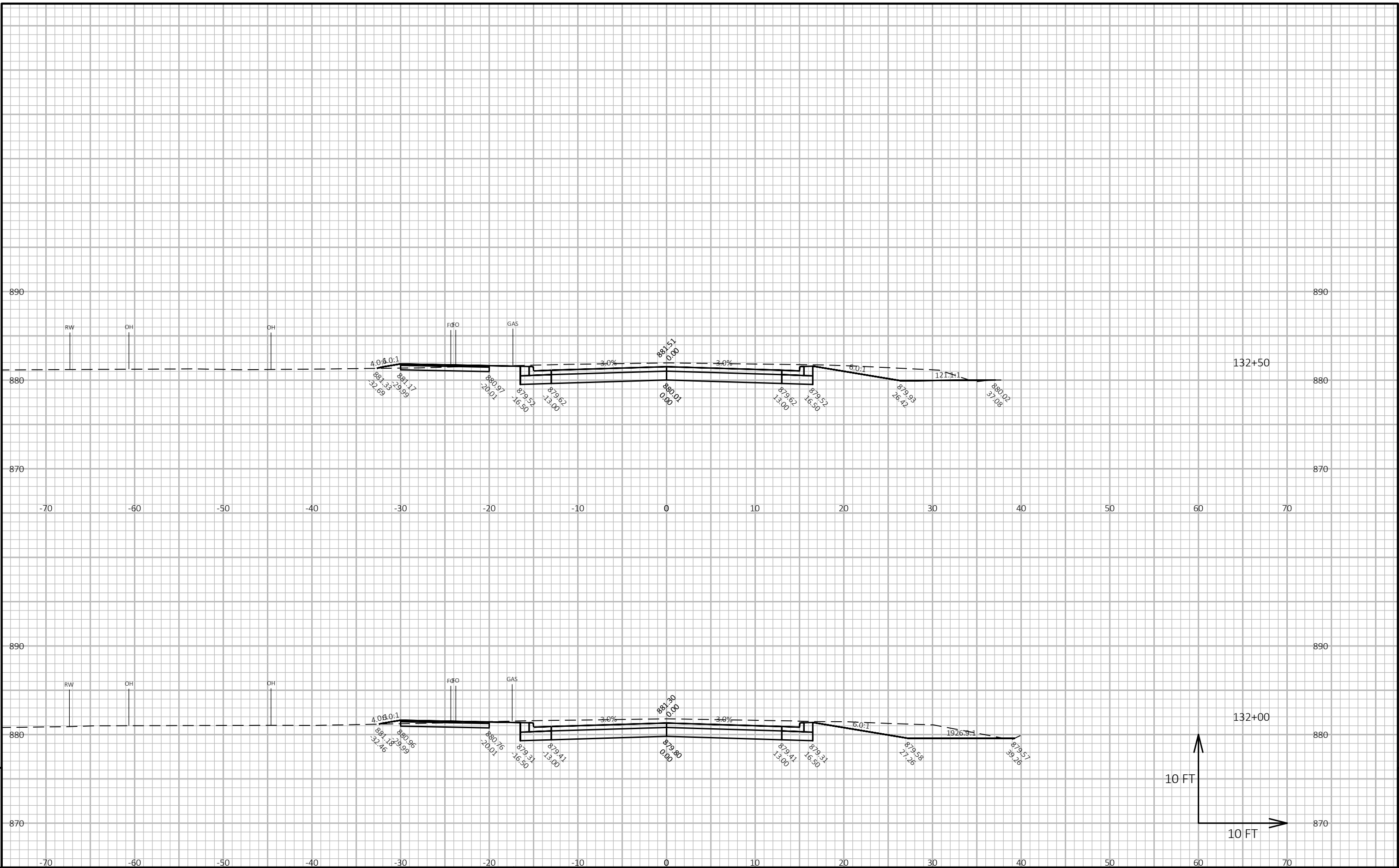


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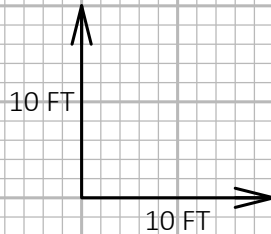


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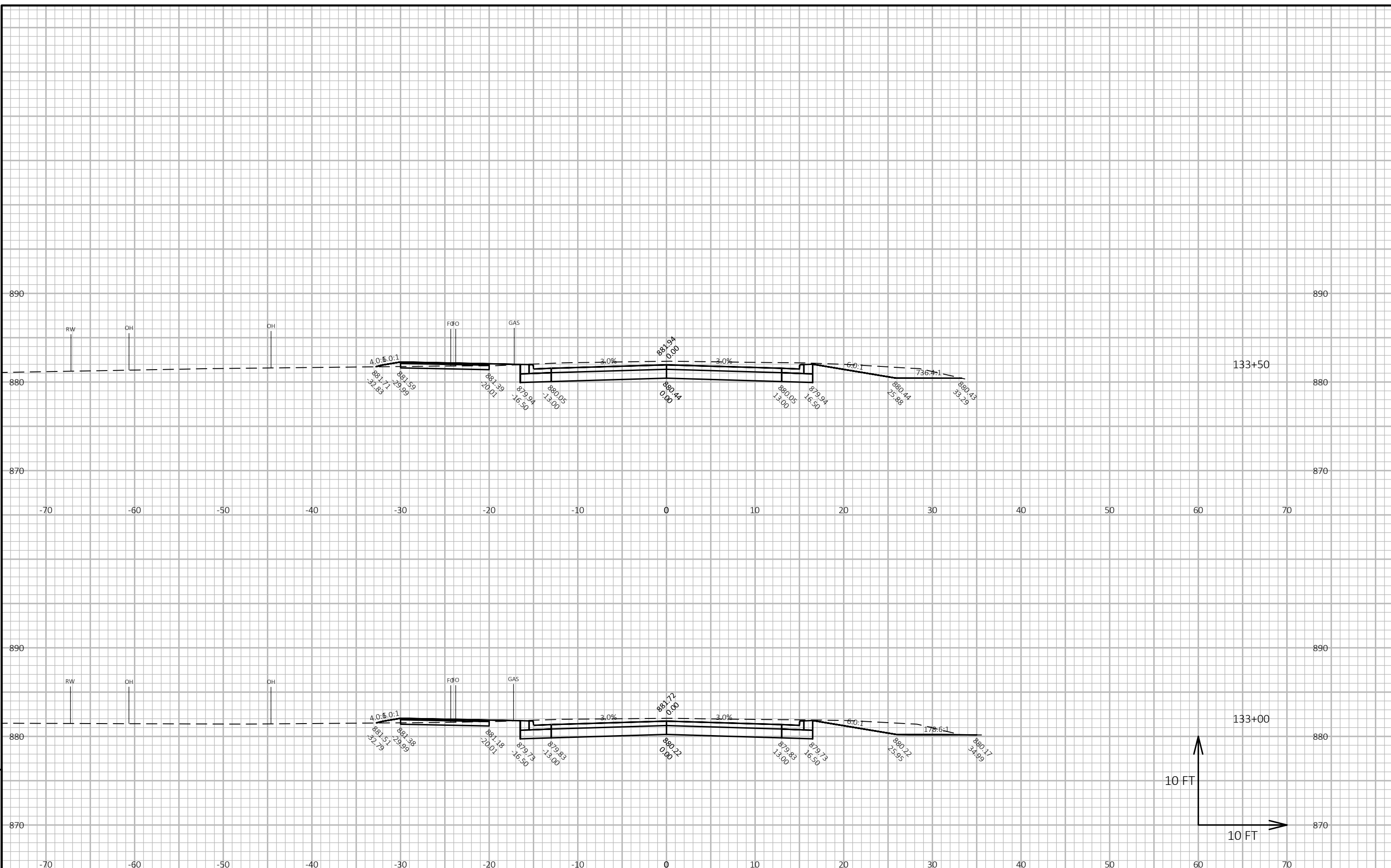


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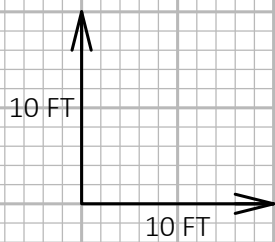


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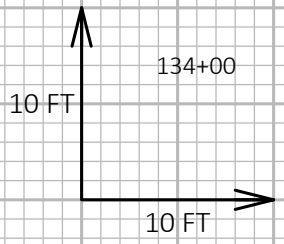
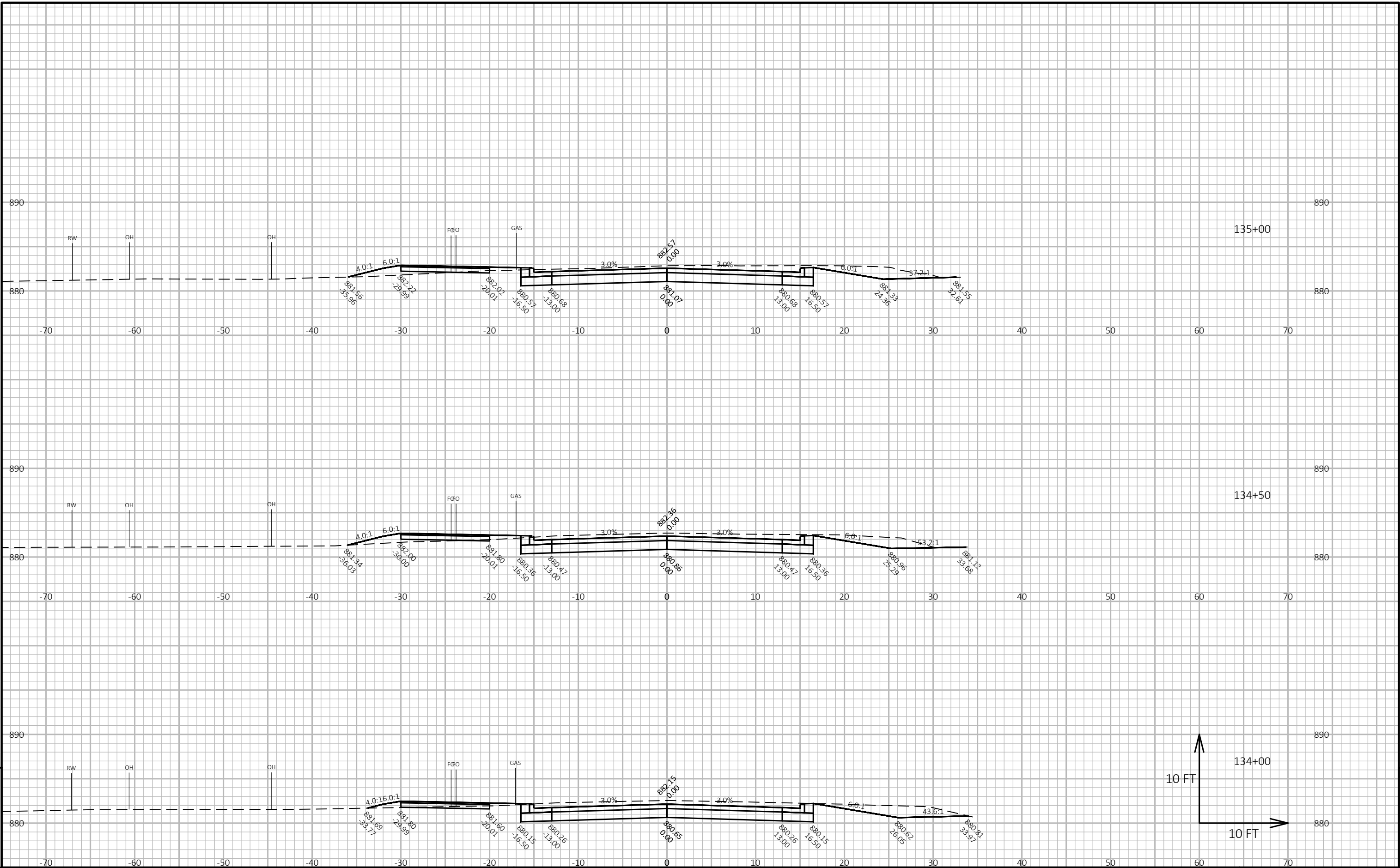


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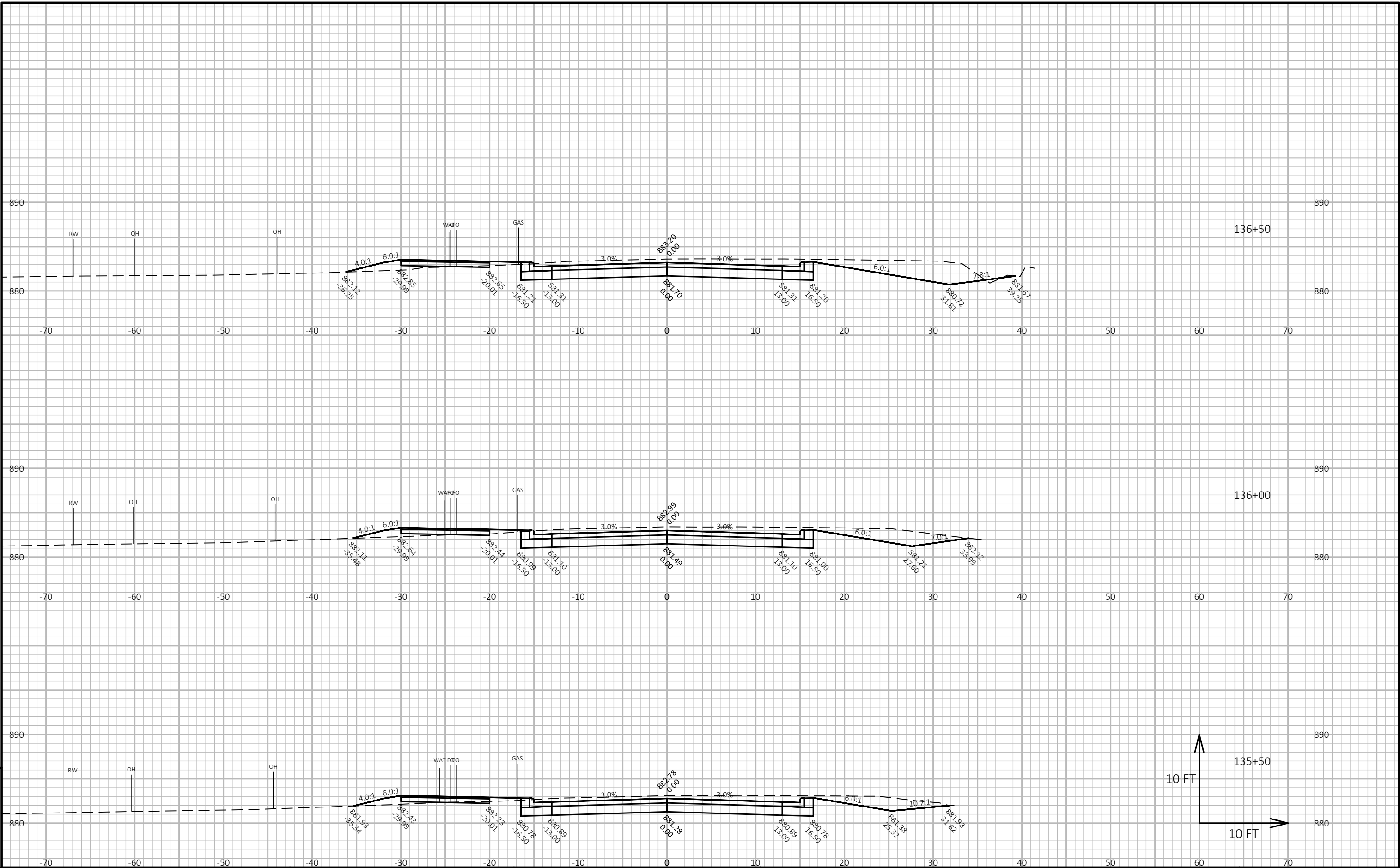
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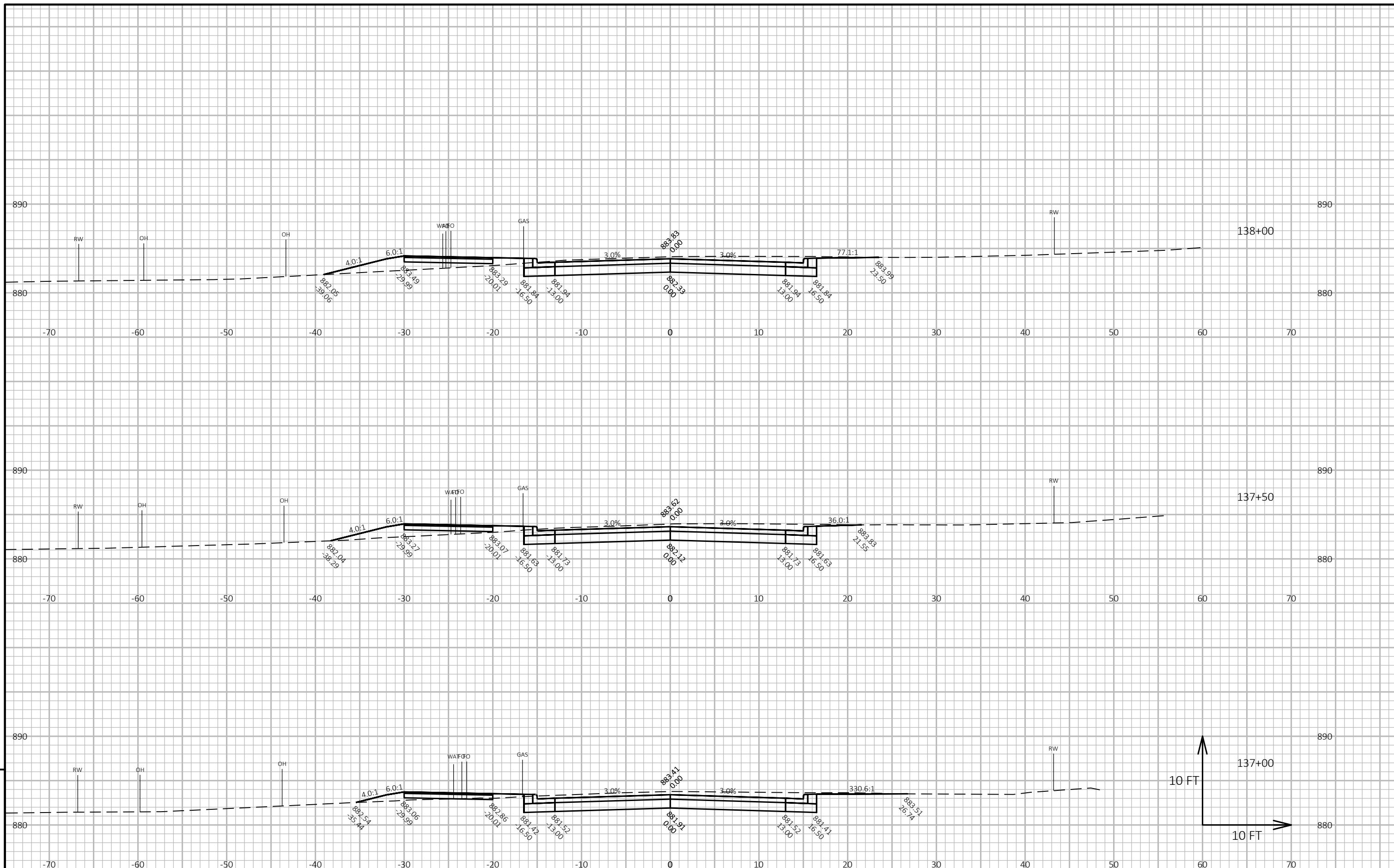
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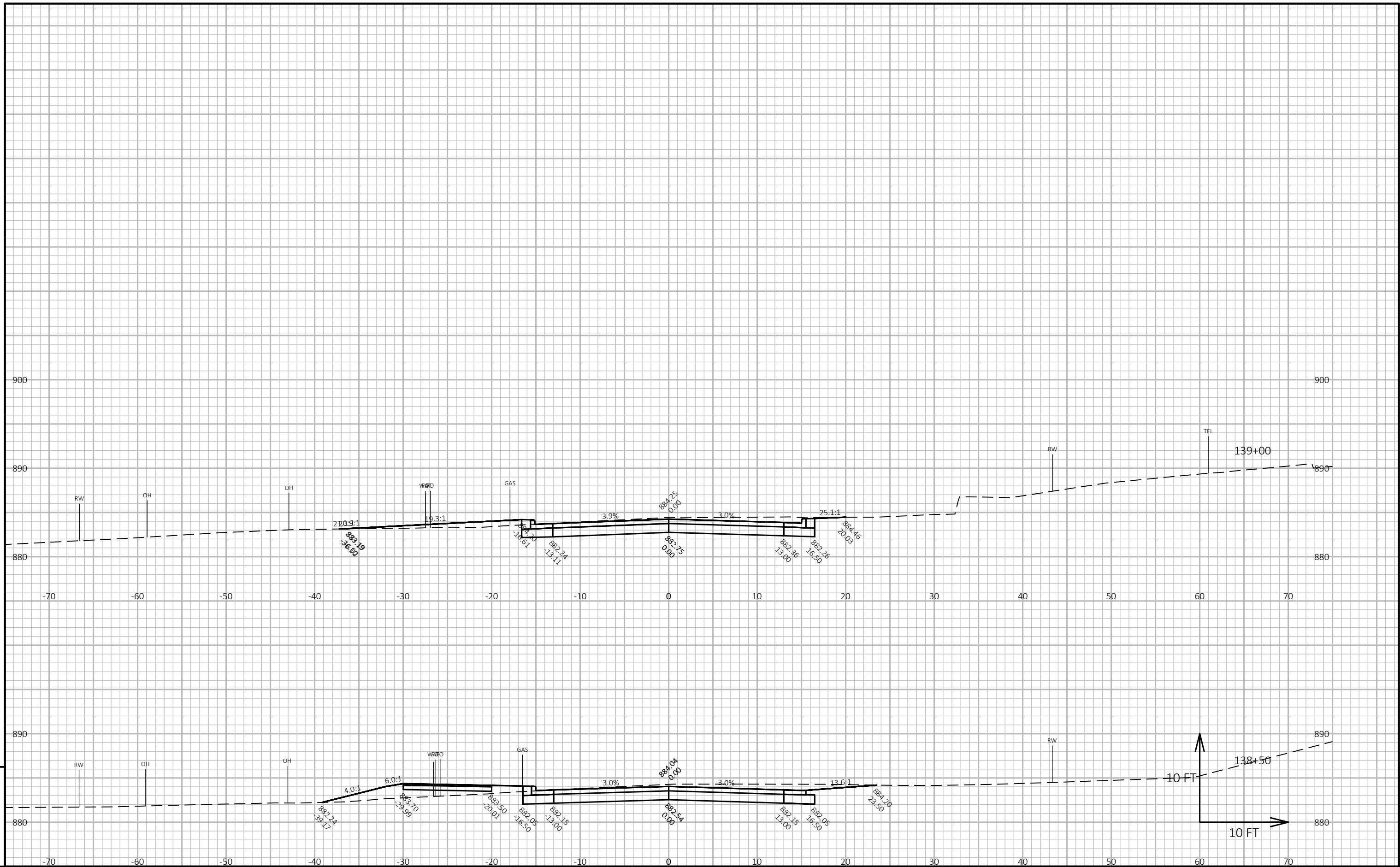
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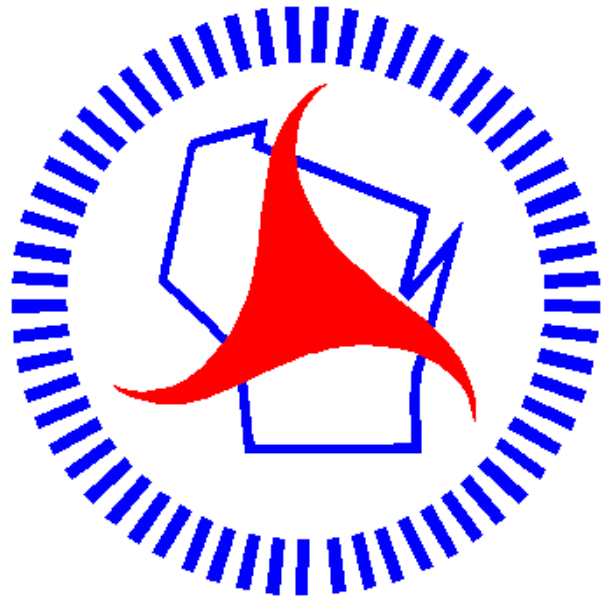
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PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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PROJECT NO: 8996-01-01	HWY: PARK AVENUE	COUNTY: CHIPPEWA	CROSS SECTIONS: CROSS SECTIONS	SHEET	E
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