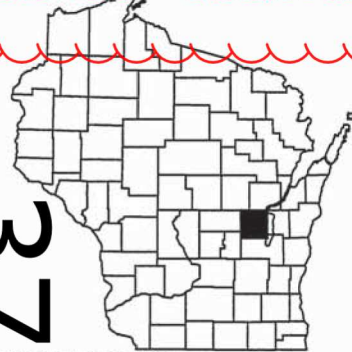


Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	2	Erosion Control Plans
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
<del>Section No.</del>	<del>6</del>	<del>Standard Detail Drawings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

TOTAL SHEETS = 274  
 Section No. 6 Standard Detail Drawings - Sheets 115, 116 & 117 are replaced with Sheets REV115, REV116 & REV117.



DESIGN DESIGNATION

A.A.D.T.	2019	=	7,400
A.A.D.T.	2039	=	9,900
D.H.V.		=	1,188
D.D.		=	59,41
T.		=	4.0%
DESIGN SPEED		=	50 MPH
ESALS		=	1,230,483

CONVENTIONAL SYMBOLS

- COUNTY LINE
- CORPORATE LIMITS
- PROPERTY LINE
- LIMITED EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- FENCE
- GUARD RAIL
- SLOPE INTERCEPT
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such)
- MARSH AREA
- WOODED OR SHRUB AREA
- STREAM OR WATER EDGE
- BUSH
- PINE TREE
- TREE
- TRAFFIC SIGNAL CONTROL CABINET
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL MAST-ARM
- TRAFFIC SIGNAL WITH LIGHT
- EXISTING PULL BOX
- BOLLARD

- COMBUSTIBLE FLUIDS
- UNDERGROUND UTILITIES
  - GAS
  - SANITARY SEWER
  - STORM SEWER
  - WATER
  - ELECTRIC
  - TELEPHONE
  - FIBER OPTIC
  - CABLE TELEVISION
  - FORCE MAIN
- MANHOLE
- UTILITY PEDESTAL
- FIBER OPTIC HAND HOLE
- POWER POLE
- TELEPHONE POLE
- RAILROAD
- HYDRANT
- LIGHT POLE
- RAILROAD SIGNAL SIGN
- TRANSMISSION TOWER
- VALVE
- CURB STOP
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)

- CAUTION
- (SIZE) G
- (SIZE) SAN
- (SIZE) SS
- (SIZE) W
- E
- T
- FO
- TV
- FM
- MH
- HH
- PH
- (TYPE)
- CS
- (SIZE, TYPE)

BEGIN PROJECT 4682-01-73

STA 103+50'NB'  
 X = 801,673.641  
 Y = 533,728.554  
 STA 103+50'SB'  
 X = 801,660.037  
 Y = 533,728.268



TOTAL NET LENGTH OF CENTERLINE = 0.280 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WINNEBAGO COUNTY, NAD 1983 (2011 ADJUSTMENT).  
 ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 2012).

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

## T NEENAH, CTH CB CTH CB & OAKRIDGE RD INTERSECTION CTH CB WINNEBAGO COUNTY

STATE PROJECT NUMBER  
**4682-01-73**

### AS-BUILT PLAN

SUPERVISOR: Jim Thompson  
 PROJECT MANAGER: Brian Edwards  
 PROJECT ENGINEER: Evan Tursky-Graef  
 PRIME CONTRACTOR: Sommers Const. Co., Inc.  
 CONSTRUCTION STARTED: 5/31/2019  
 SUBSTANTIALLY COMPLETE: 9/21/2019  
 WORK COMPLETED: 10/3/2019

**SUBCONTRACTOR LIST**  
 Bodart Electric Service, Inc.  
 Brickline Inc.  
 Double D Landscape, LLC  
 Heider & Bott Company  
 Kuzisaso Construction  
 Northeast Asphalt, Inc.  
 Pavement Maintenance Inc.  
 Storm Companies Inc.  
 VanStraten Construction Company, Inc.  
 Wisconsin Land Surveying, Inc.

ACCEPTED FOR  
 COUNTY of WINNEBAGO  
 10/16/18  
 Highway Commissioner  
 (Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY  
**raSmith**  
 CREATIVITY BEYOND ENGINEERING  
 WISCONSIN  
 DOUGLAS M. SENSO  
 E-32746  
 KAUKAUNA WI  
 PROFESSIONAL ENGINEER  
 10-16-18  
 (Date) (Signature)

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PREPARED BY  
 Surveyor raSmith  
 Designer raSmith  
 Management Consultant JT ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT  
 DATE 10/18/18  
 Management Consultant Signature

PROJECT ID: 4682-01-73

37

COUNTY: WINNEBAGO

GENERAL NOTES

- 1 THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- 2 NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.
- 3 CURB AND GUTTER GRADES ARE SHOWN AT THE FLANGE LINE UNLESS OTHERWISE NOTED. CURB AND GUTTER STATIONS, OFFSETS, AND RADII ARE MEASURED AT THE FACE OF CURB UNLESS OTHERWISE NOTED.
- 4 ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH TOPSOIL, SEEDED, FERTILIZED, AND SECURED WITH EROSION MAT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 5 EROSION CONTROL DEVICES ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S "ECIP" AND BY THE ENGINEER. EROSION CONTROL DEVICE'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE DEVICE IS NO LONGER REQUIRED.
- 6 STATIONS AND OFFSETS FOR STORM SEWER STRUCTURES ARE BASED ON THE RESPECTIVE REFERENCE LINE. RIM ELEVATIONS ARE SHOWN AT THE FLANGE.
- 7 KEEP ALL EQUIPMENT AND MATERIALS OUT OF ADJACENT WETLANDS AND WATERWAYS.
- 8 THE EXACT LOCATION OF PRIVATE ENTRANCES AND DRIVEWAYS IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 9 PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS AND PROVIDE DOCUMENTATION TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

ORDER OF SECTION 2 SHEETS

- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PAVEMENT DETAILS
- EROSION CONTROL PLAN
- STORM SEWER PLAN
- SIGN REMOVALS
- PERMANENT SIGNING
- PAVEMENT MARKING PLAN
- LIGHTING
- CONSTRUCTION STAGING PLAN
- DETOUR OVERVIEW
- ALIGNMENT PLAN

UTILITY CONTACTS

Charter Communications Operating LLC  
 Vince Albin  
 3520 E. Destination Dr  
 Appleton, WI 54915  
 920-831-9249 Cell: 920-378-0444  
 vince.albin@charter.com

We Energies - Gas Operations  
 Ben Vincent  
 800 S Lynndale Dr  
 Appleton, WI 54914  
 920-380-3467  
 Ben.Vincent@we-energies.com

Wisconsin Independent Network, LLC  
 John Louis  
 4955 Bullis Farm Rd  
 Eau Claire, WI 54701  
 715-838-4012 Cell: 715-864-2918  
 jlouis@wins.net

AT&T  
 Joseph Kassab  
 205 S Jefferson St  
 Green Bay, WI 54301  
 920-433-4200 Cell: 920-202-4002  
 jk572k@att.com

Teleport Communications America  
 Bobby Akhter  
 4513 Western Ave  
 Lisle, IL 60532  
 630-719-1483 Cell: 630-390-0089

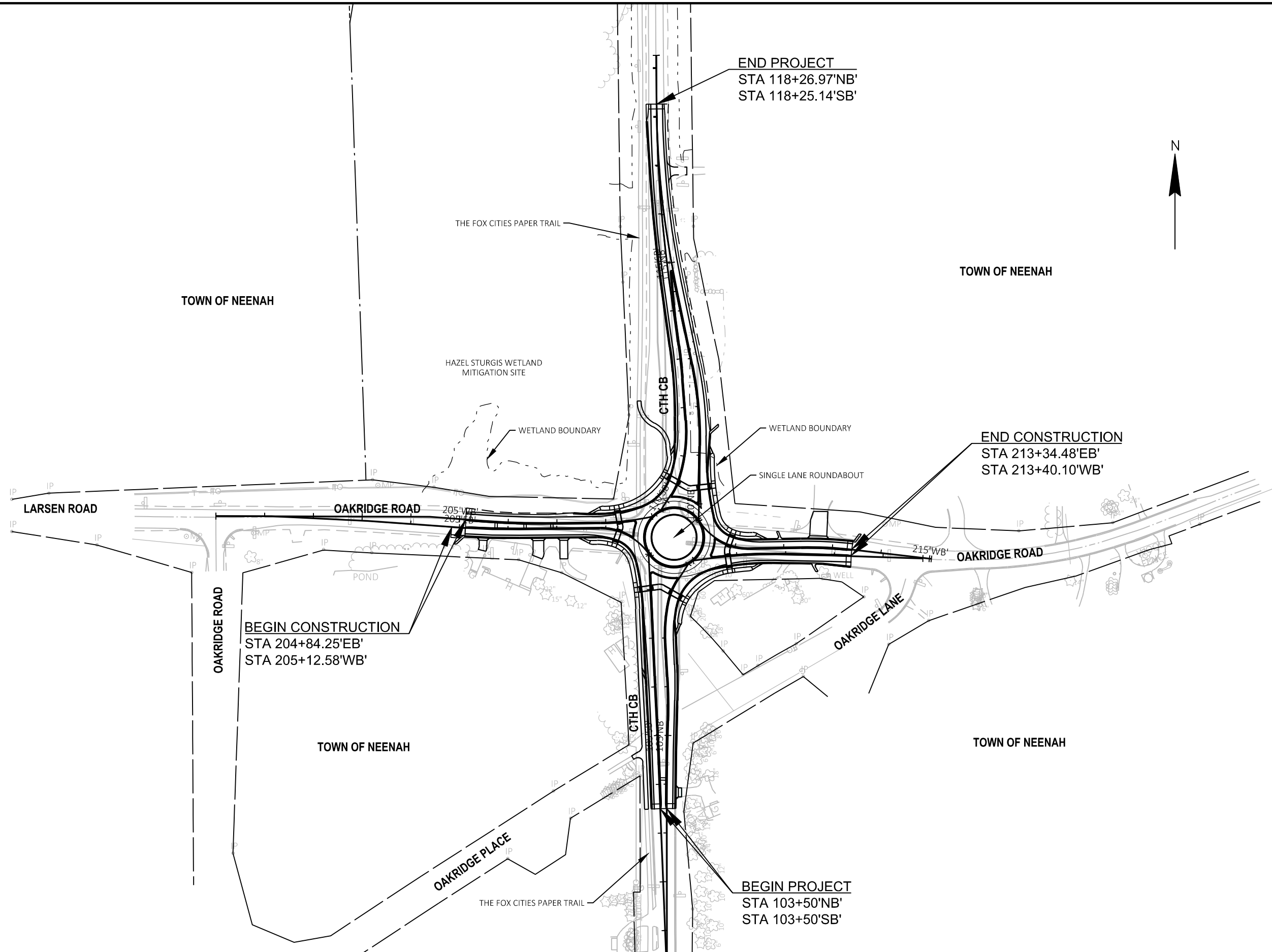
DNR LIAISON

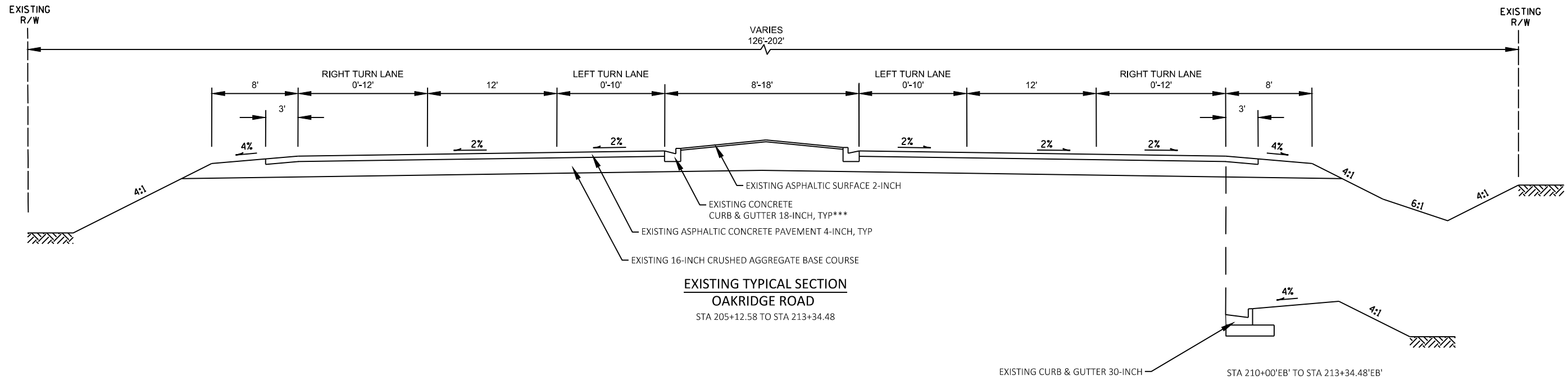
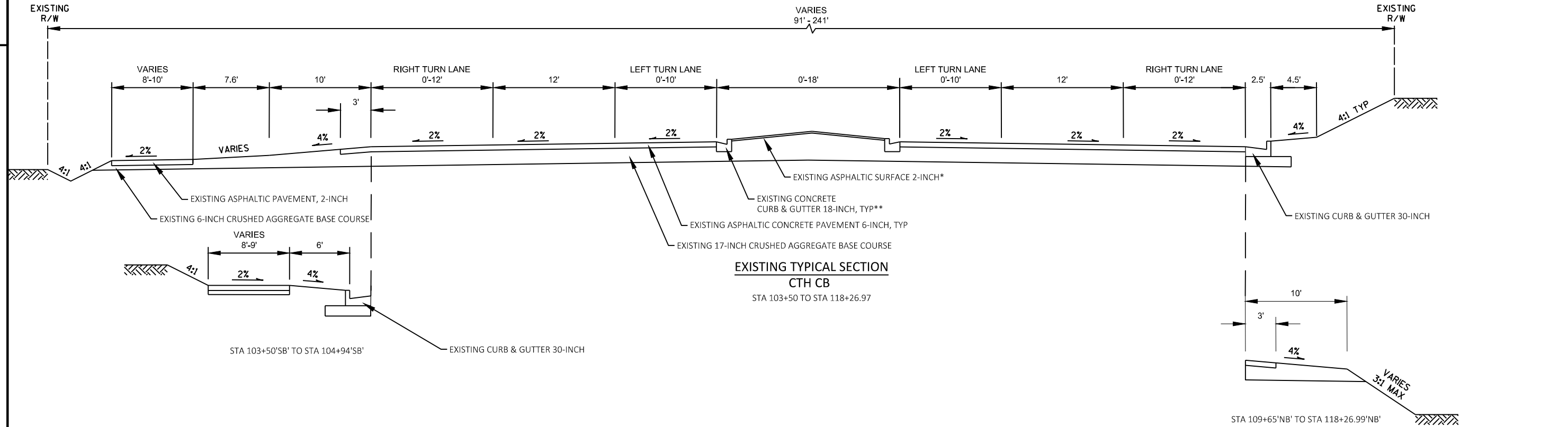
Wisconsin Dept of Natural Resources  
 DNR Northeast Regional Headquarters  
 2984 Shawano Ave  
 Green Bay, WI 54313  
 Jay Schiefelbein  
 (920) 360-3784  
 jeremiah.schiefelbein@wisconsin.gov

We Energies - Electric  
 Alex Herzog  
 800 S Lynndale Dr  
 Appleton, WI 54912  
 920-380-3576  
 alexander.herzog@we-energies.com

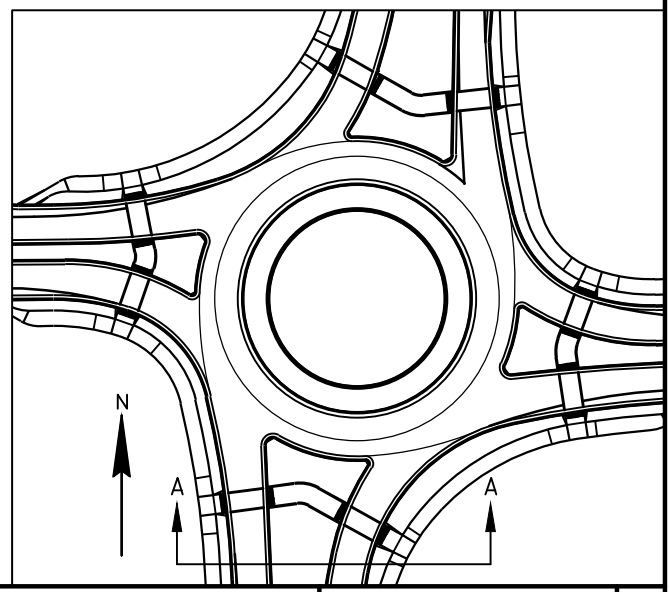
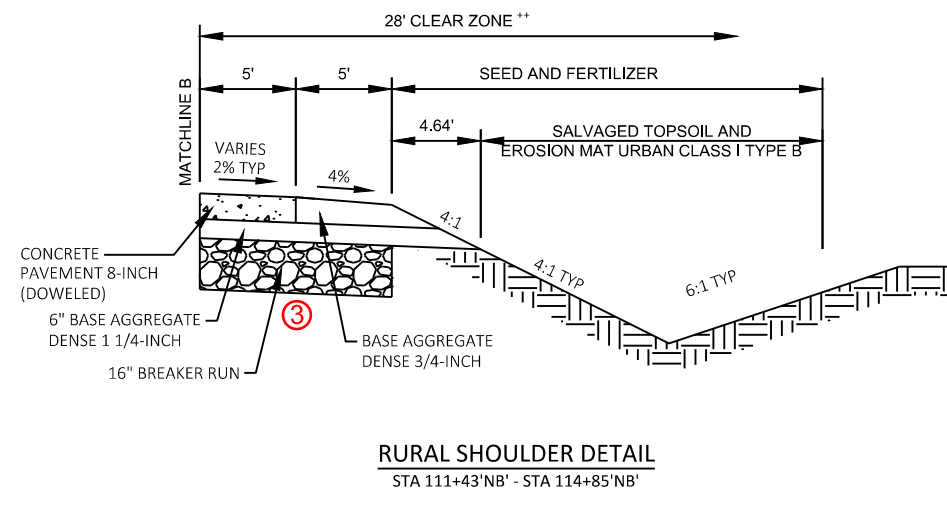
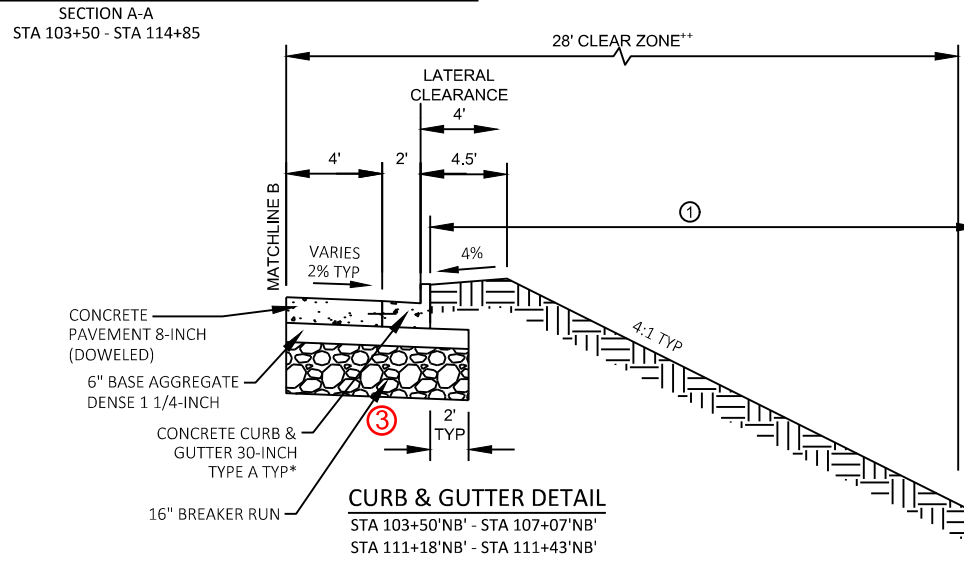
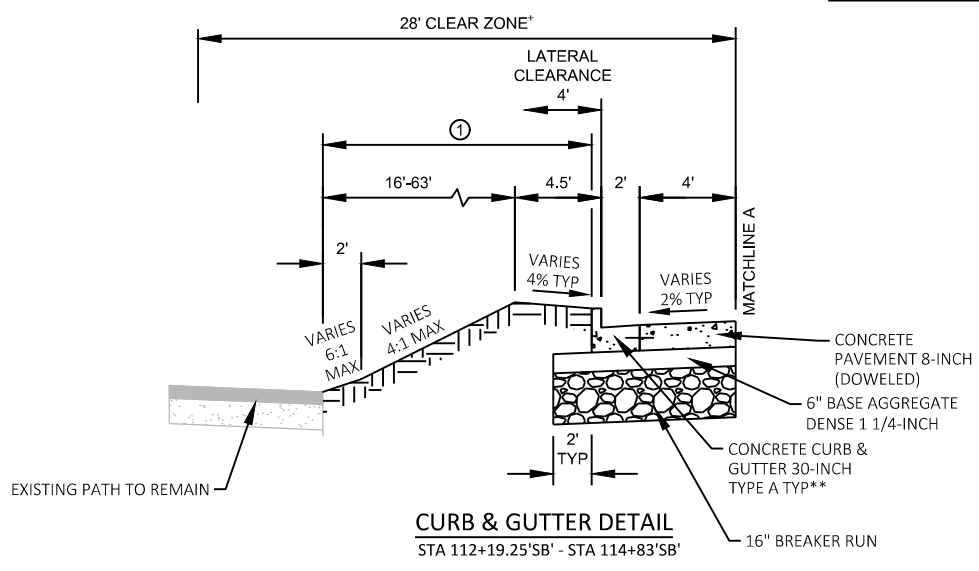
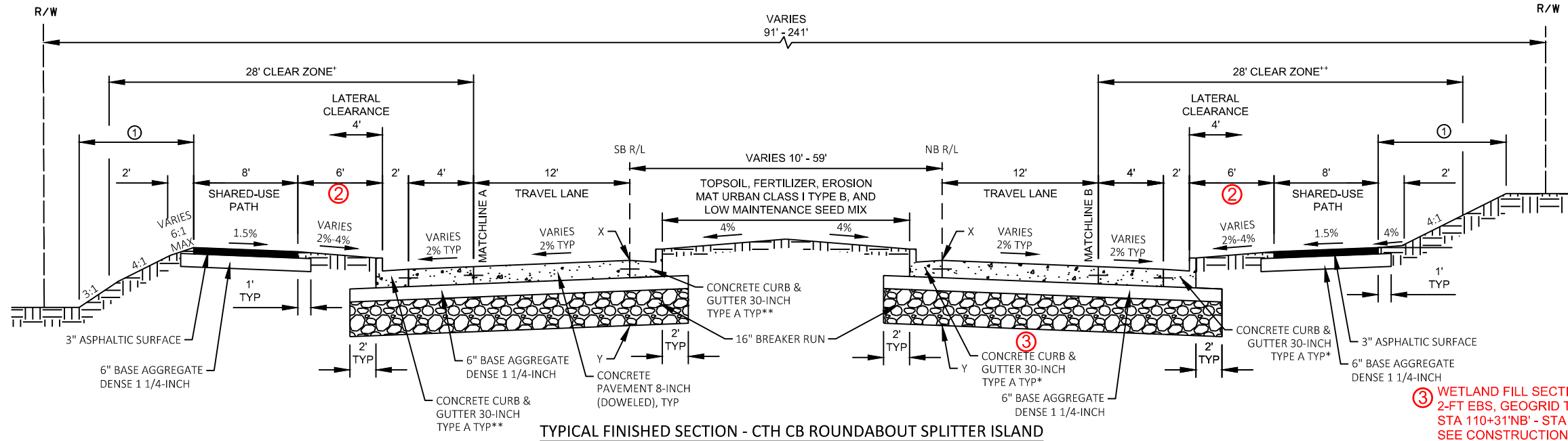
ANR Pipeline Company  
 Mark Birschbach  
 W3925 Pipeline Lane  
 Eden, WI 53019  
 920-477-2242 Cell: 920-375-0467  
 mark\_birschbach@transcanada.com







\* GRASS MEDIAN FROM STA 104+44 TO STA 107+07 AND FROM STA 111+87 TO STA 115+46  
 \*\* DEPRESSED MEDIAN WITH MOUNTABLE CURB & GUTTER FROM STA 103+50 TO STA 104+38  
 \*\*\* DEPRESSED MEDIAN WITH MOUNTABLE CURB & GUTTER FROM STA 205+12.58 TO STA 207+55 AND FROM STA 211+46 TO STA 212+94



③ WETLAND FILL SECTION FOUNDATION IMPROVEMENT  
2-FT EBS, GEOGRID TYPE R, 3-FT BREAKER RUN  
STA 110+31'NB' - STA 114+68'NB'  
SEE CONSTRUCTION DETAIL

② LOW MAINTENANCE SEED, FERTILIZER, EROSION MAT  
URBAN CLASS I TYPE B AND TOPSOIL

① SEED, FERTILIZER, EROSION MAT URBAN CLASS I TYPE B,  
AND SALVAGED TOPSOIL

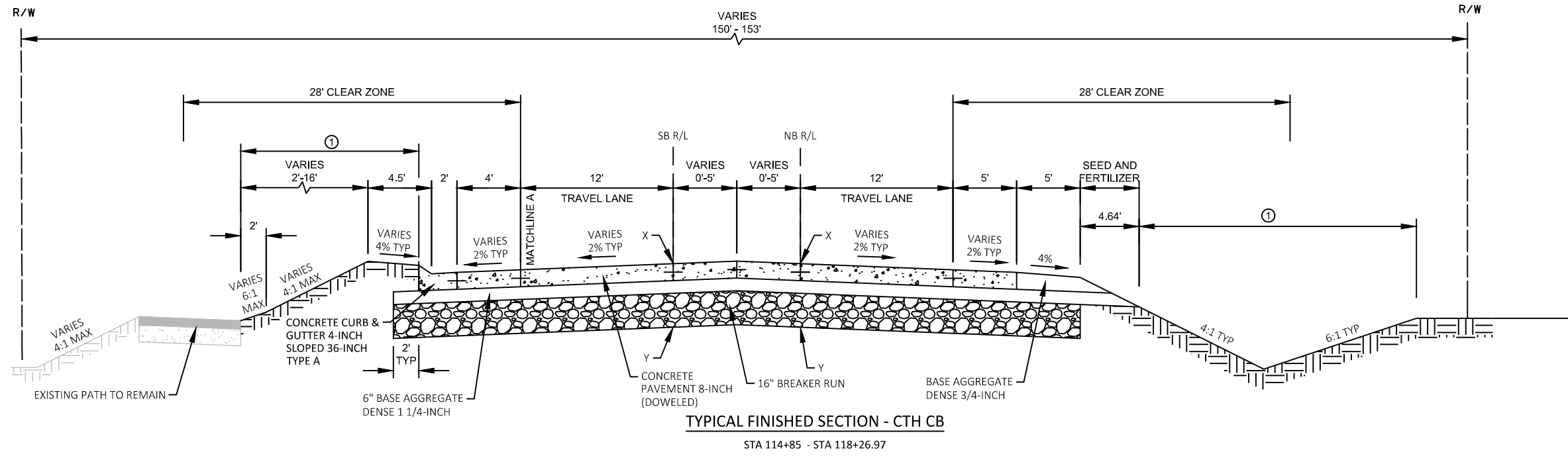
\*CONCRETE CURB & GUTTER 4-INCH SLOPED  
36-INCH TYPE A FROM  
STA 103+50'NB' - STA 105+58'NB' (MEDIAN AND  
OUTER CURB & GUTTER) AND FROM  
STA 113+55'NB' - STA 114+78'NB' (MEDIAN ONLY)

\*\*CONCRETE CURB & GUTTER 4-INCH SLOPED  
36-INCH TYPE A FROM  
STA 103+50'SB' - STA 104+81'SB' AND FROM  
STA 112+81'SB' - STA 114+83'SB' (MEDIAN AND  
OUTER CURB & GUTTER)

\* 18' CLEAR ZONE FROM  
STA 104+81'SB' TO STA 112+81'SB'

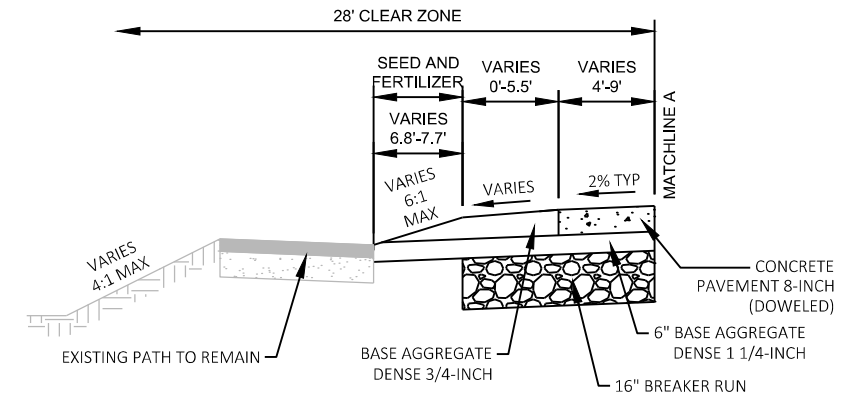
\*\*18' CLEAR ZONE FROM  
STA 105+58'NB' TO STA 113+55'NB'

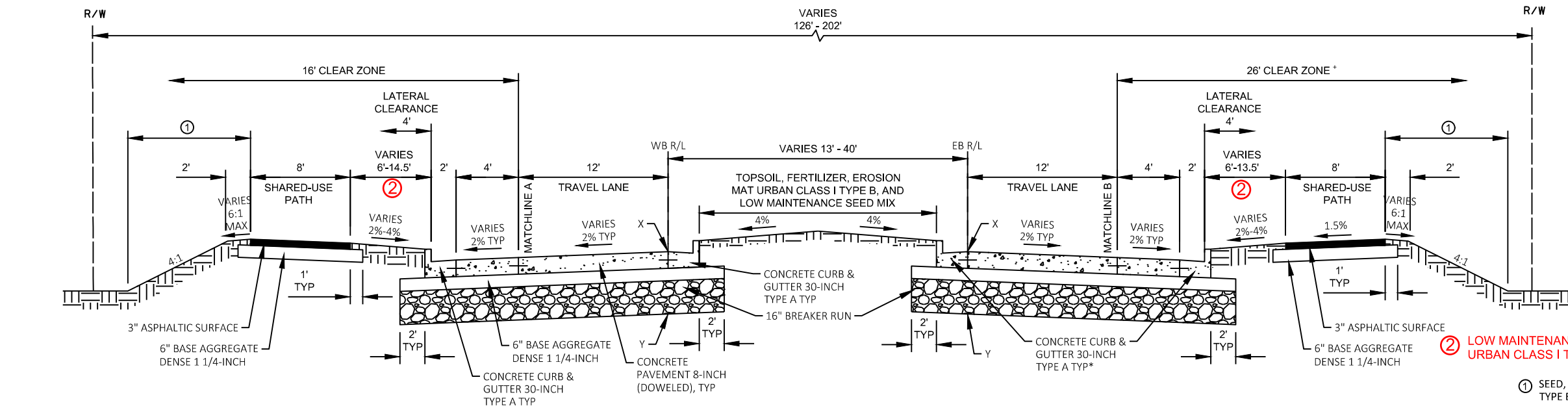
"X" = POINTS REFERRED TO ON PROFILE  
"Y" = POINTS REFERRED TO ON CROSS SECTIONS



① SEED, FERTILIZER, EROSION MAT URBAN CLASS I TYPE B, AND SALVAGED TOPSOIL

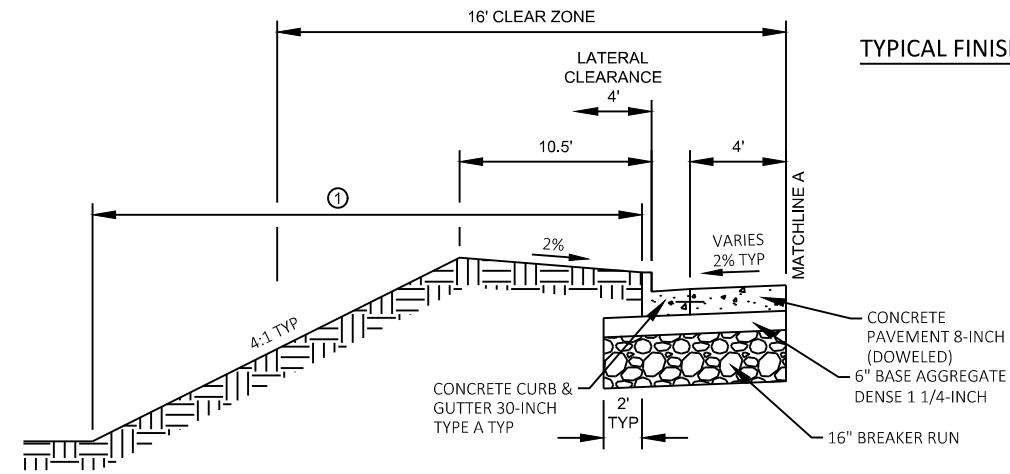
"X" = POINTS REFERRED TO ON PROFILE  
"Y" = POINTS REFERRED TO ON CROSS SECTIONS





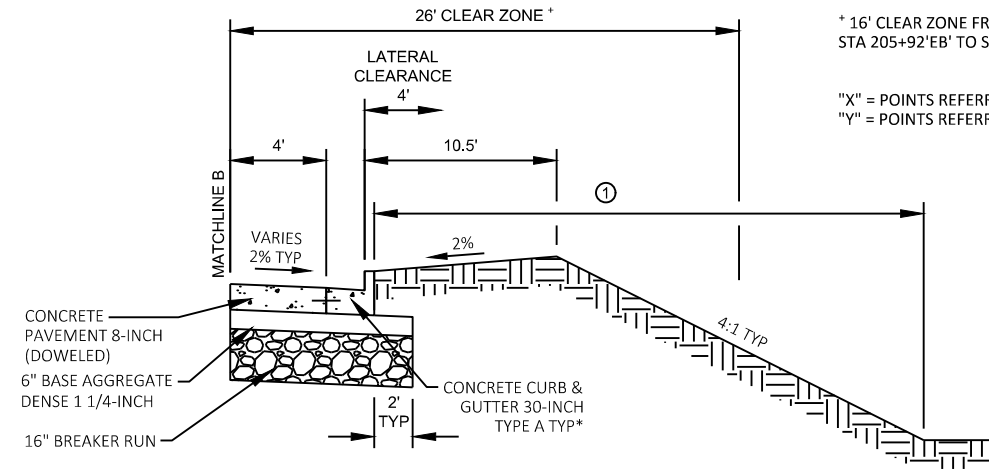
**TYPICAL FINISHED SECTION - OAKRIDGE RD ROUNDABOUT SPLITTER ISLAND**

SECTION B-B  
STA 205+12.58 - STA 213+40.10



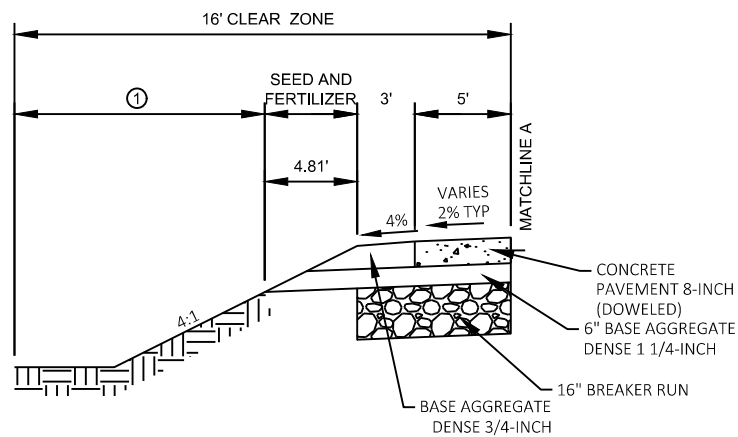
**CURB & GUTTER DETAIL**

STA 207+33.77'WB' - STA 207+64.77'WB'  
STA 211+65.15'WB' - STA 213+40.10'WB'



**CURB & GUTTER DETAIL**

STA 205+12.79'EB' - STA 207+45.39'EB'  
STA 211+51.66'EB' - STA 213+34.48'EB'



**RURAL SHOULDER DETAIL**

STA 205+12.58'WB' - STA 207+33.77'WB'

② LOW MAINTENANCE SEED, FERTILIZER, EROSION MAT URBAN CLASS I TYPE B AND TOPSOIL

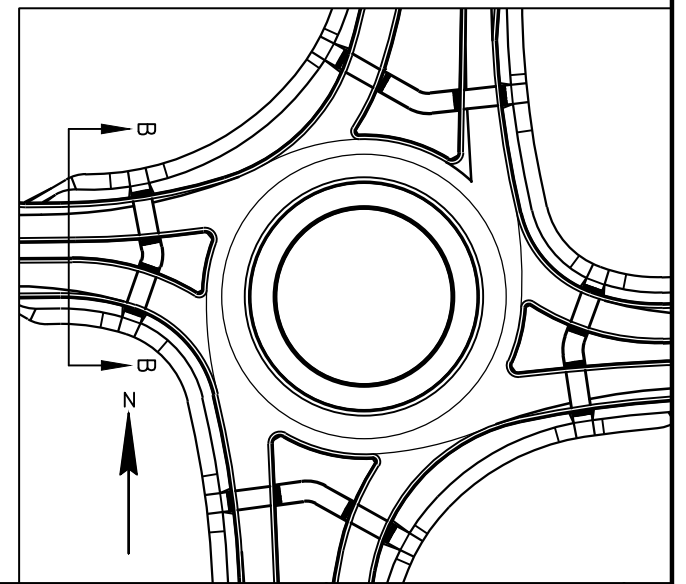
① SEED, FERTILIZER, EROSION MAT URBAN CLASS I TYPE B, AND SALVAGED TOPSOIL

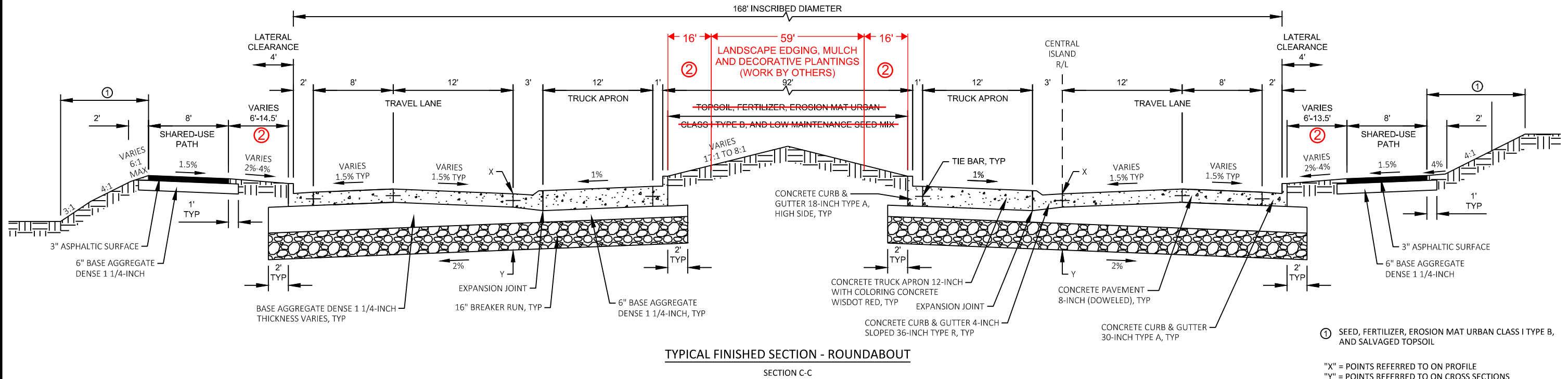
\*CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A FROM

STA 205+24'EB' - STA 206+37'EB' (MED AND OUTER)  
STA 205+24'WB' - STA 206+37'WB' (MED)

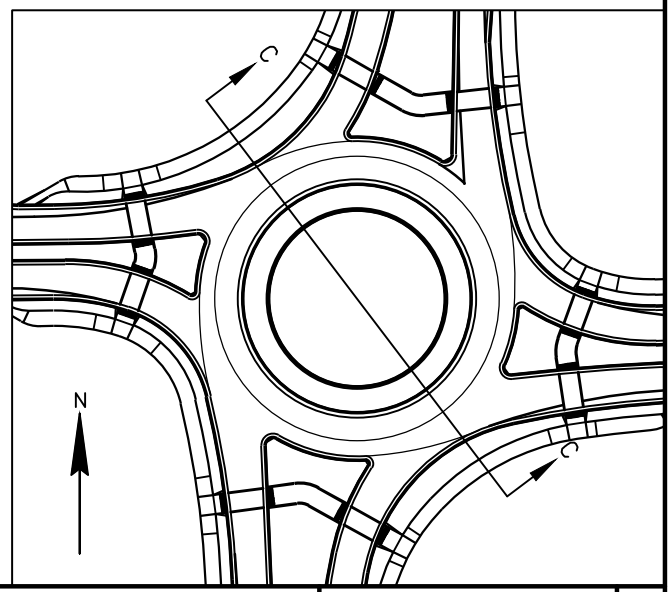
\* 16' CLEAR ZONE FROM STA 205+92'EB' TO STA '213+34.48'EB'

"X" = POINTS REFERRED TO ON PROFILE  
"Y" = POINTS REFERRED TO ON CROSS SECTIONS

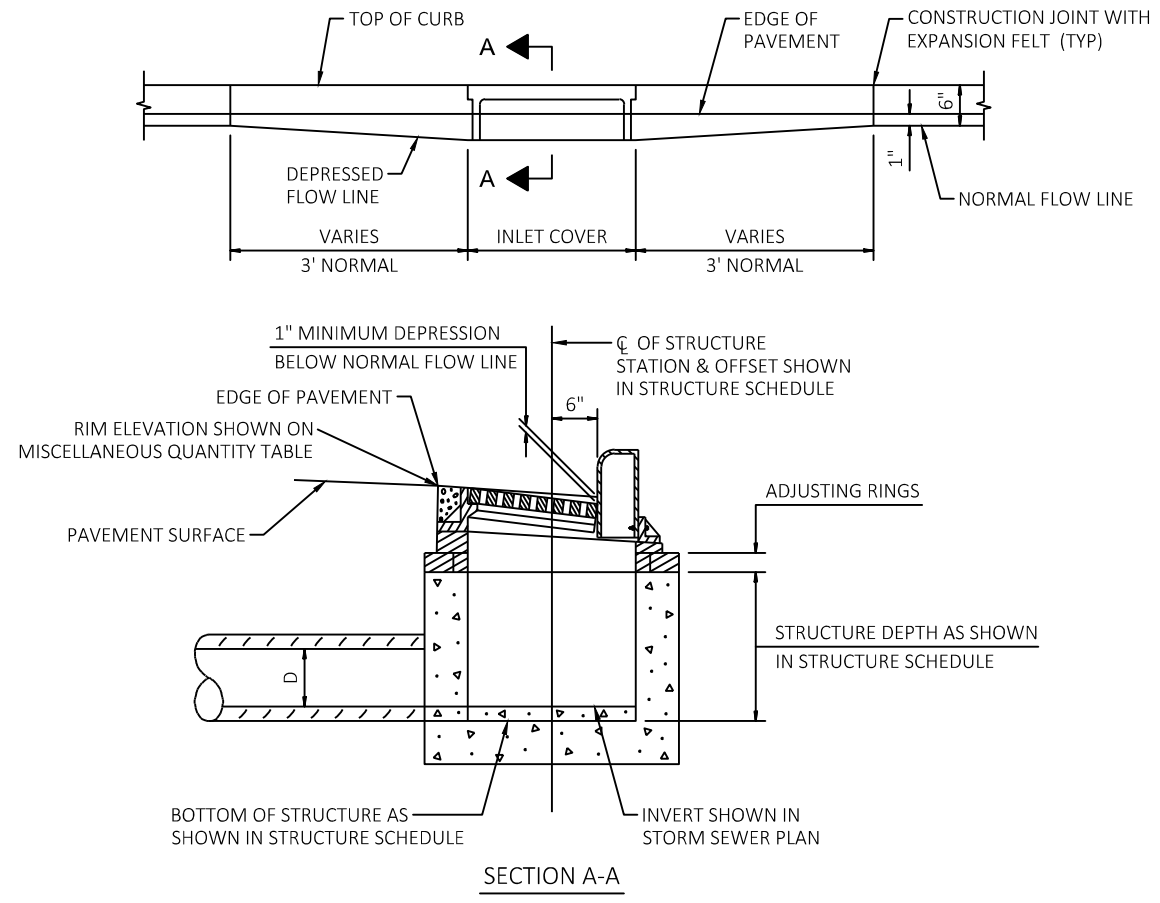




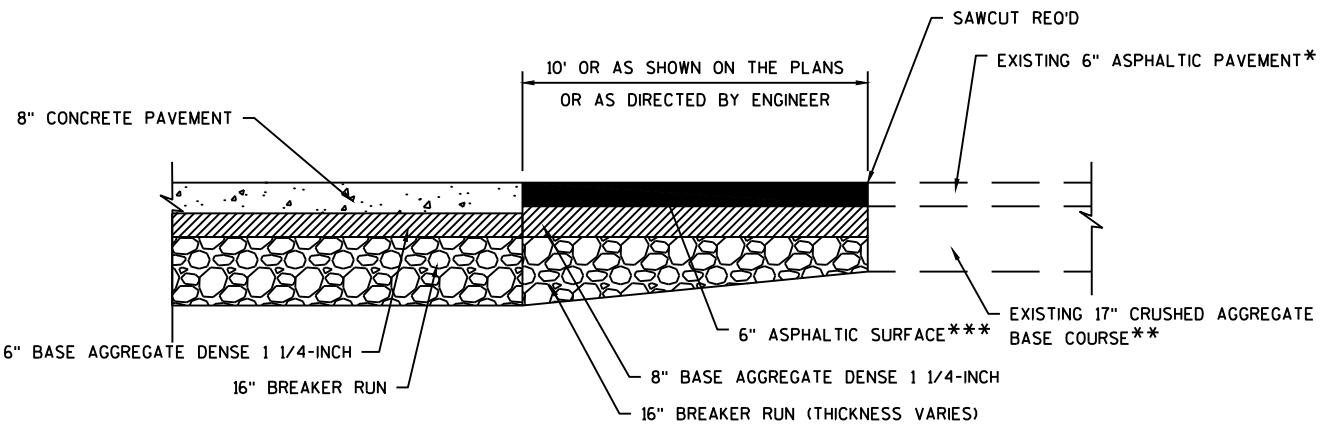
**TYPICAL FINISHED SECTION - ROUNDABOUT**  
SECTION C-C





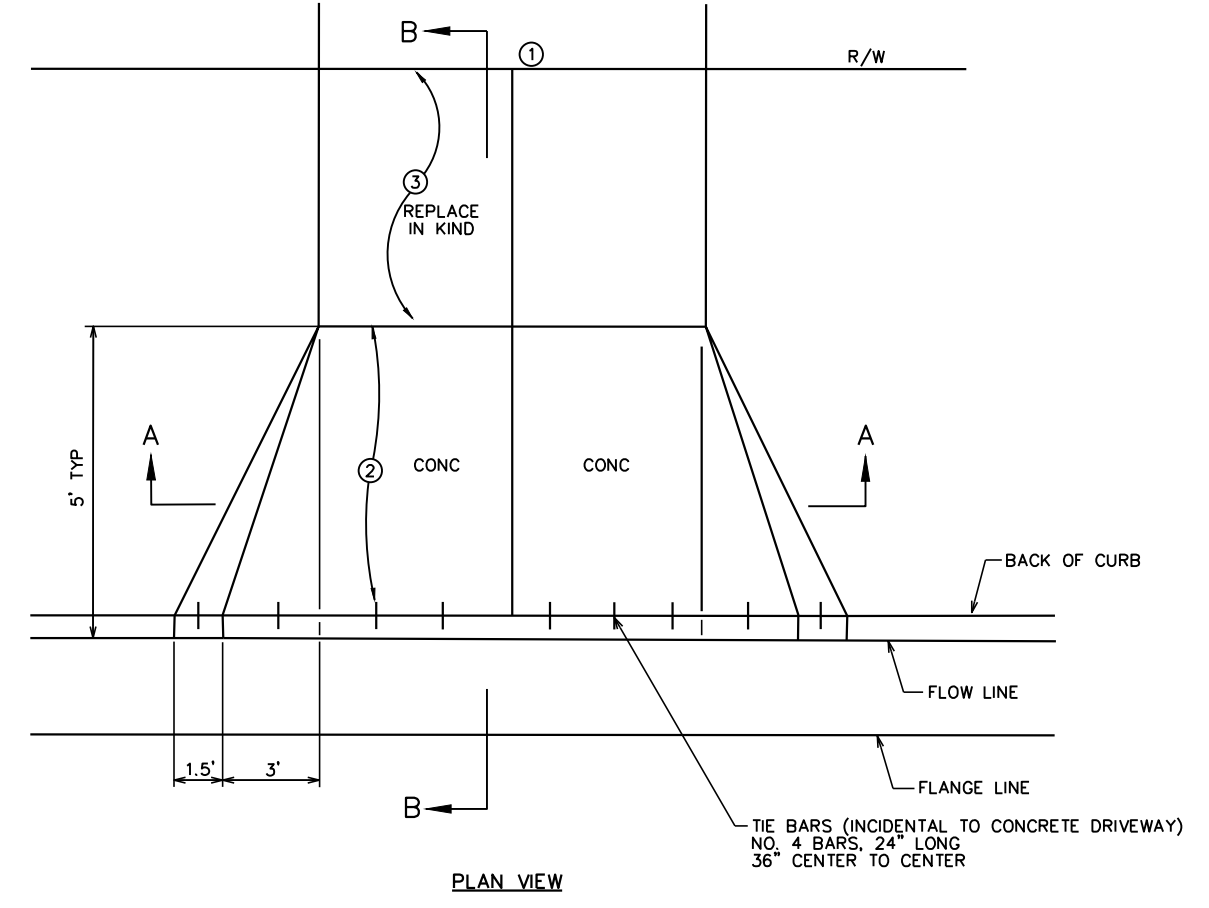


SECTION A-A  
DETAIL OF CURB AND GUTTER AT INLETS

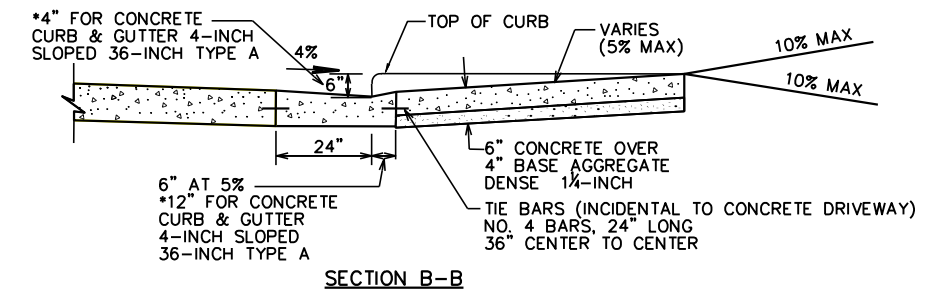


\* EXISTING 4" ASPHALTIC PAVEMENT ON OAKRIDGE RD  
 \*\* EXISTING 16" CRUSHED AGGREGATE BASE COURSE ON OAKRIDGE RD  
 \*\*\* PLACE ASPHALTIC SURFACE IN TWO LIFTS OF EVEN DEPTH. CTH CB SHALL BE TWO 3-INCH LIFTS, OAKRIDGE ROAD SHALL BE TWO 2-INCH LIFTS.

PAVEMENT TRANSITION AT EXISTING ASPHALTIC PAVEMENT MATCH POINTS



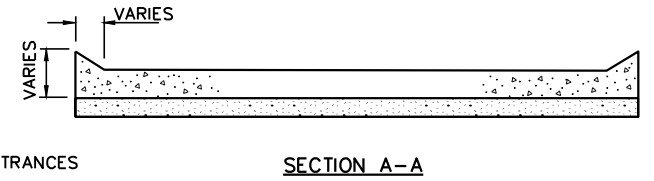
PLAN VIEW



SECTION B-B

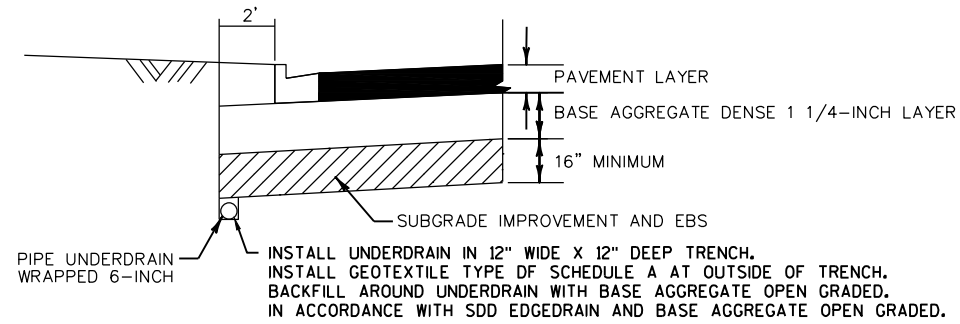
NOTES:

- ① DRIVEWAY WIDTHS  
 COMMERCIAL 35' MAX 12' MIN  
 NON-COMMERCIAL 24' MAX 12' MIN
- ② ALL DRIVEWAY APPROACHES SHALL BE 6" CONCRETE ON 4" BASE AGGREGATE DENSE 1 1/4-INCH.
- ③ DRIVEWAY SURFACE SHALL BE REPLACED IN-KIND WITH MINIMUM SECTION OF:  
 ASPHALT - 3" ASPHALTIC SURFACE FOR DRIVEWAYS AND FIELD ENTRANCES ON 4" BASE AGGREGATE DENSE 1 1/4-INCH  
 CONCRETE - 6" CONCRETE ON 4" BASE AGGREGATE DENSE 1 1/4-INCH  
 BASE AGGREGATE DENSE - 6" BASE AGGREGATE DENSE 1/4-INCH



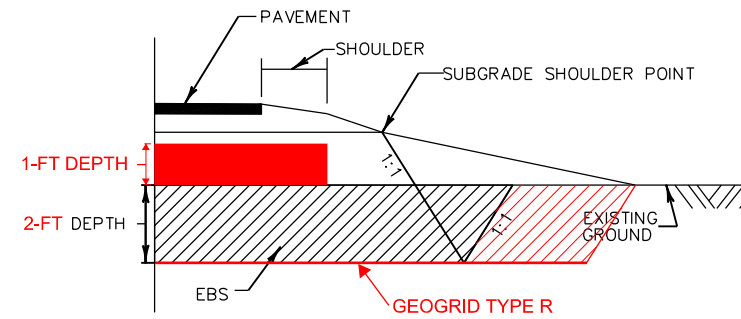
SECTION A-A

URBAN DRIVEWAY DETAIL



- INSTALL UNDERDRAIN IN 12" WIDE X 12" DEEP TRENCH. INSTALL GEOTEXTILE TYPE DF SCHEDULE A AT OUTSIDE OF TRENCH. BACKFILL AROUND UNDERDRAIN WITH BASE AGGREGATE OPEN GRADED. IN ACCORDANCE WITH SDD EDGEDRAIN AND BASE AGGREGATE OPEN GRADED.
- NOTES: 1. EXCAVATION REQUIRED FOR EBS OR SUBGRADE IMPROVEMENT SHALL BE PAID FOR AS COMMON EXCAVATION.  
 2. FILL EBS AND SUBGRADE IMPROVEMENT VOID WITH BREAKER RUN.  
 3. UNDERDRAIN TO EXTEND 50 FEET OUT FROM AVAILABLE INLETS AT LOW POINTS.  
 4. EBS LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

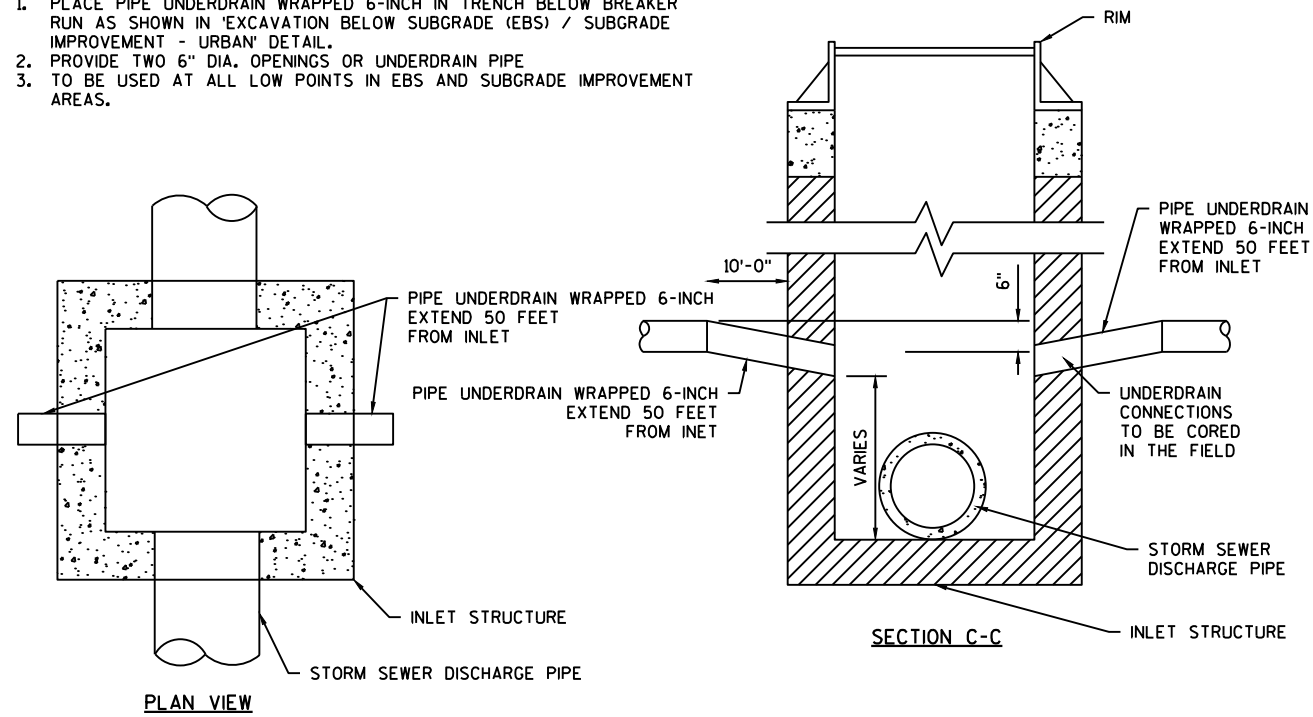
EXCAVATION BELOW SUBGRADE (EBS) / SUBGRADE IMPROVEMENT – URBAN



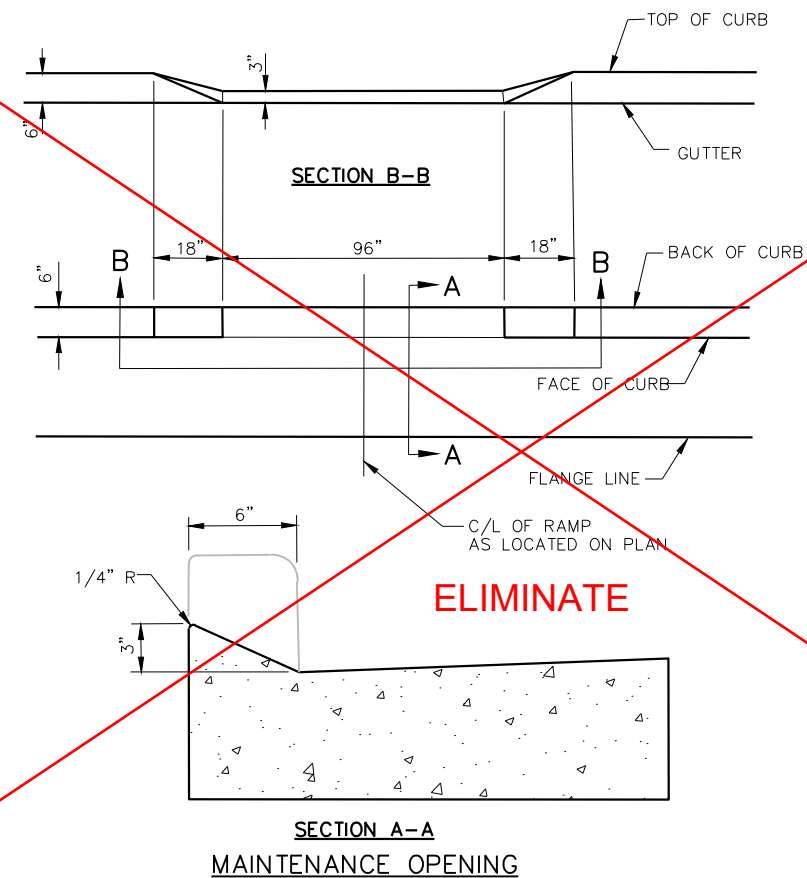
- NOTES: 1. EBS SHALL BE PAID FOR AS EXCAVATION COMMON.  
 2. AS DIRECTED BY THE ENGINEER.  
 3. FILL VOID WITH BREAKER RUN. TO 1-FT ABOVE EXISTING GROUND.  
 4. DEPTH AS DIRECTED BY ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS) – RURAL

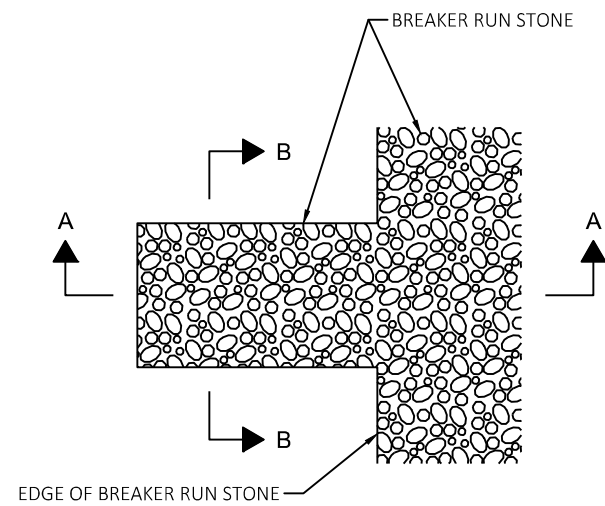
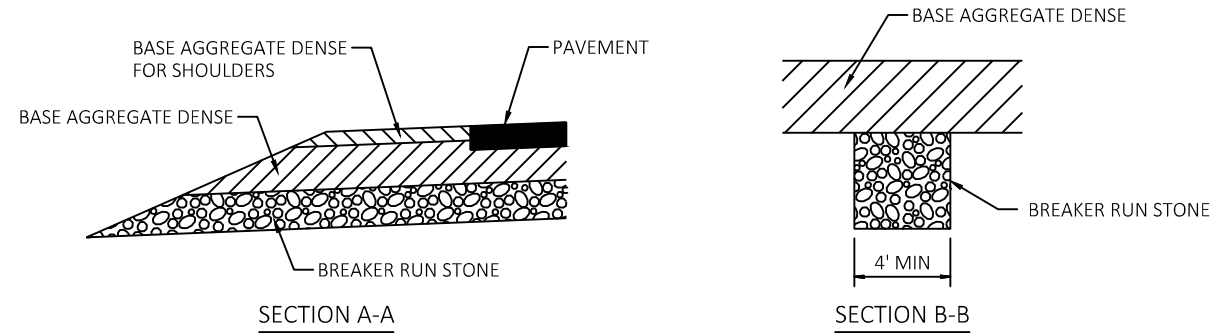
- NOTES: 1. PLACE PIPE UNDERDRAIN WRAPPED 6-INCH IN TRENCH BELOW BREAKER RUN AS SHOWN IN 'EXCAVATION BELOW SUBGRADE (EBS) / SUBGRADE IMPROVEMENT - URBAN' DETAIL.  
 2. PROVIDE TWO 6" DIA. OPENINGS OR UNDERDRAIN PIPE  
 3. TO BE USED AT ALL LOW POINTS IN EBS AND SUBGRADE IMPROVEMENT AREAS.



DRAINTILE OUTFALL AT INLET



SECTION A-A  
MAINTENANCE OPENING

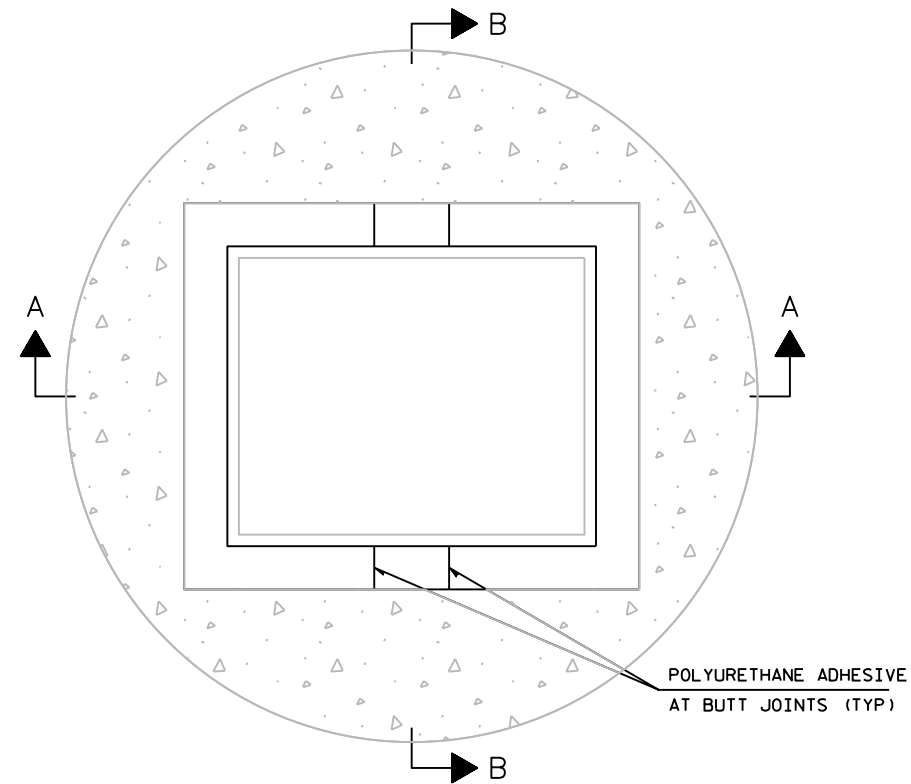


**DETAIL FOR FRENCH DRAINS**

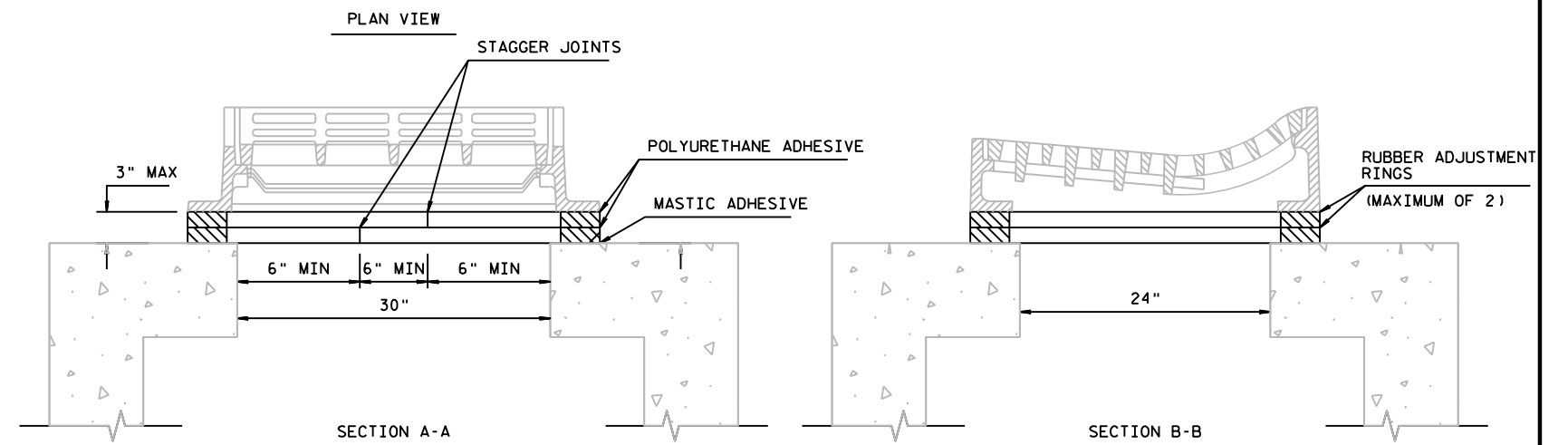
DRAINS ARE TO BE CONSTRUCTED AT LEAST EVERY 250' AND AT EACH SAG VERTICAL CURVE IN THE PROFILE.

LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM BREAKER RUN STONE.

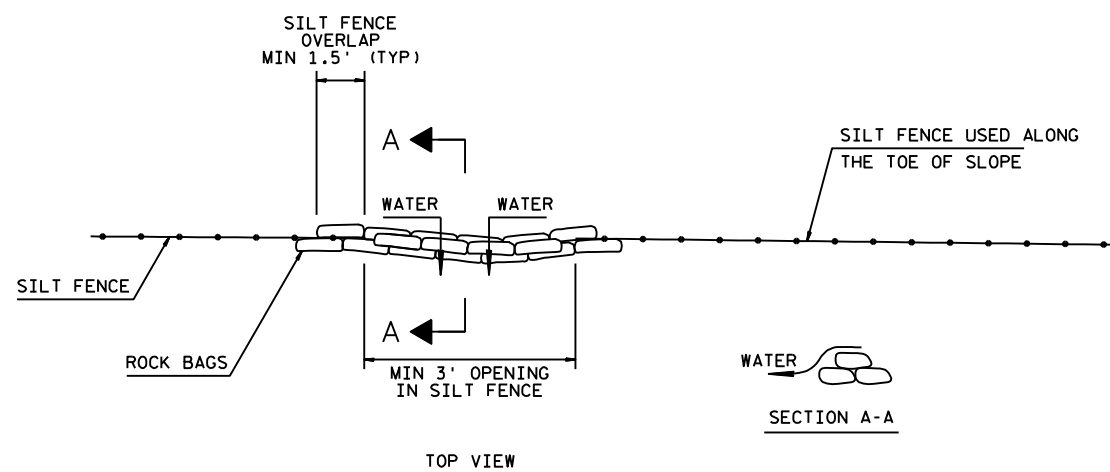


NOTE: ALL CUTS MADE TO RUBBER ADJUSTMENT RINGS WILL BE PERPENDICULAR AND PROVIDE A TIGHT JOINT.



**RUBBER RING CUTTING DETAIL FOR CATCH BASINS 4-FT DIAMETER SPECIAL**

SEE STORM SEWER TABLE FOR LOCATIONS



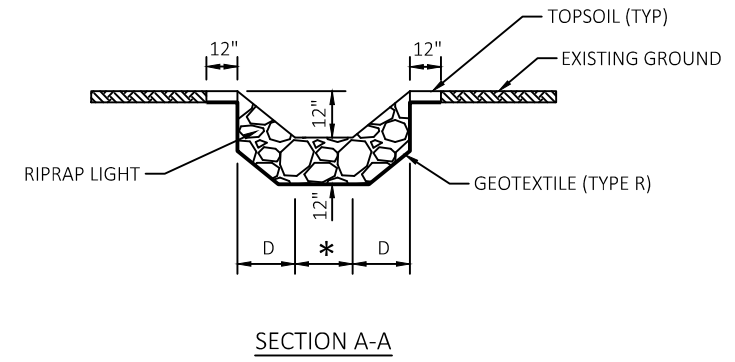
**ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL**

PAID AS ROCK BAGS

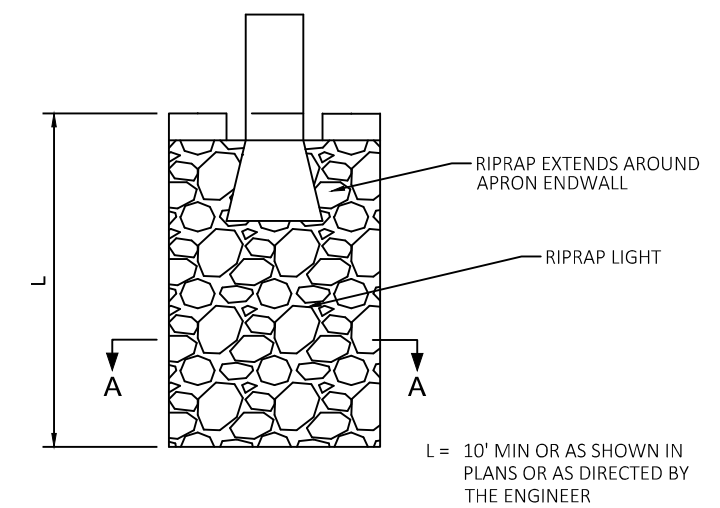
## RUNOFF COEFFICIENT TABLE

	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
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 7.9 ACRES  
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.8 ACRES

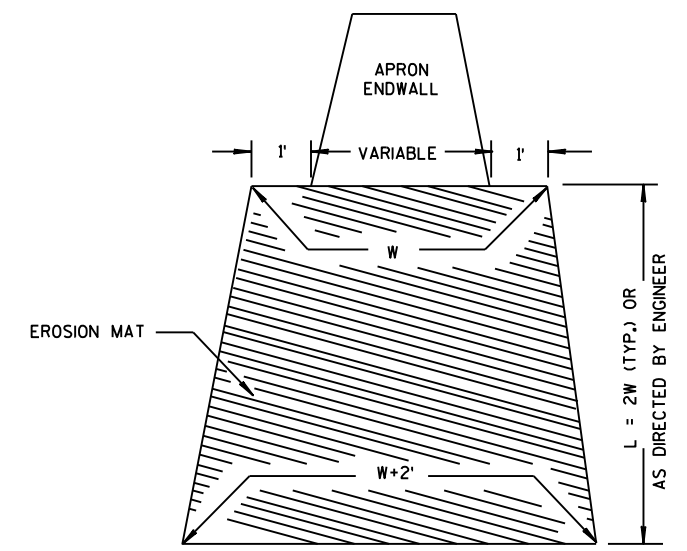


\* APRON ENDWALL WIDTH  
 D = PIPE DIAMETER

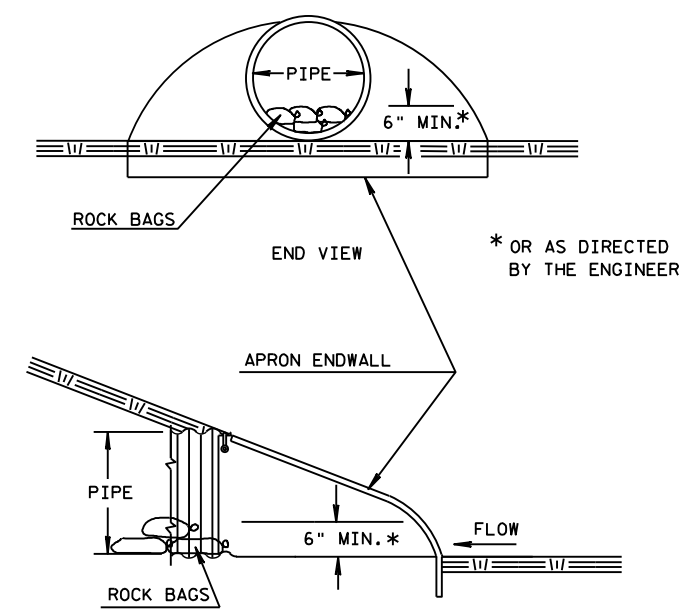


L = 10' MIN OR AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER

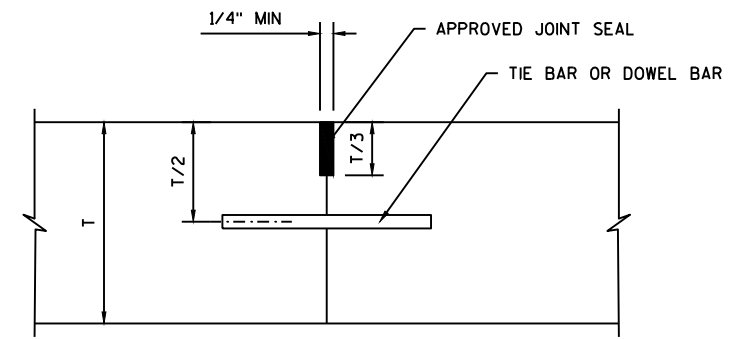
PLAN VIEW  
**RIPRAP TREATMENT AT STORM SEWER OUTFALLS**



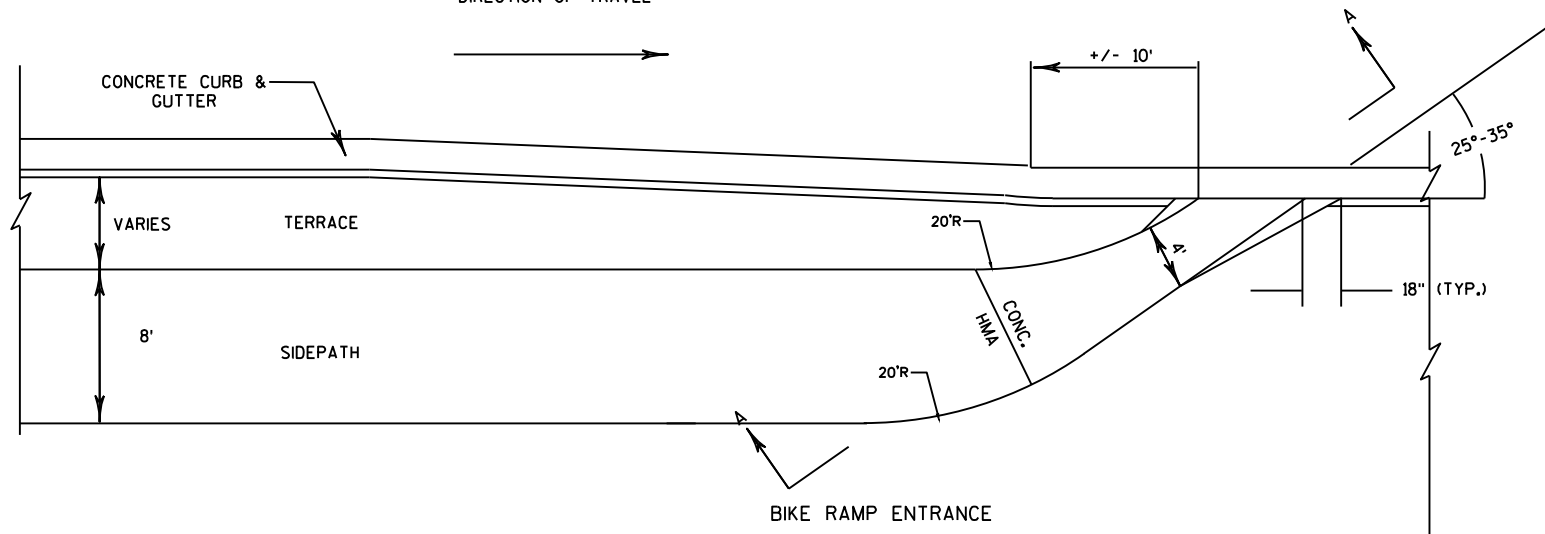
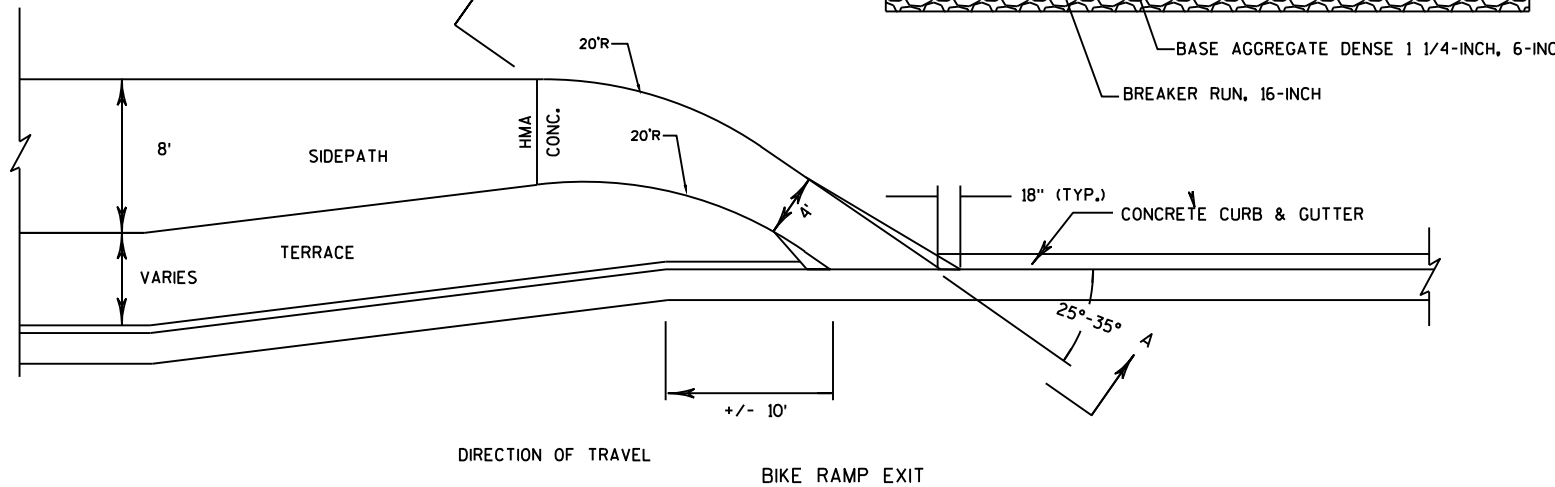
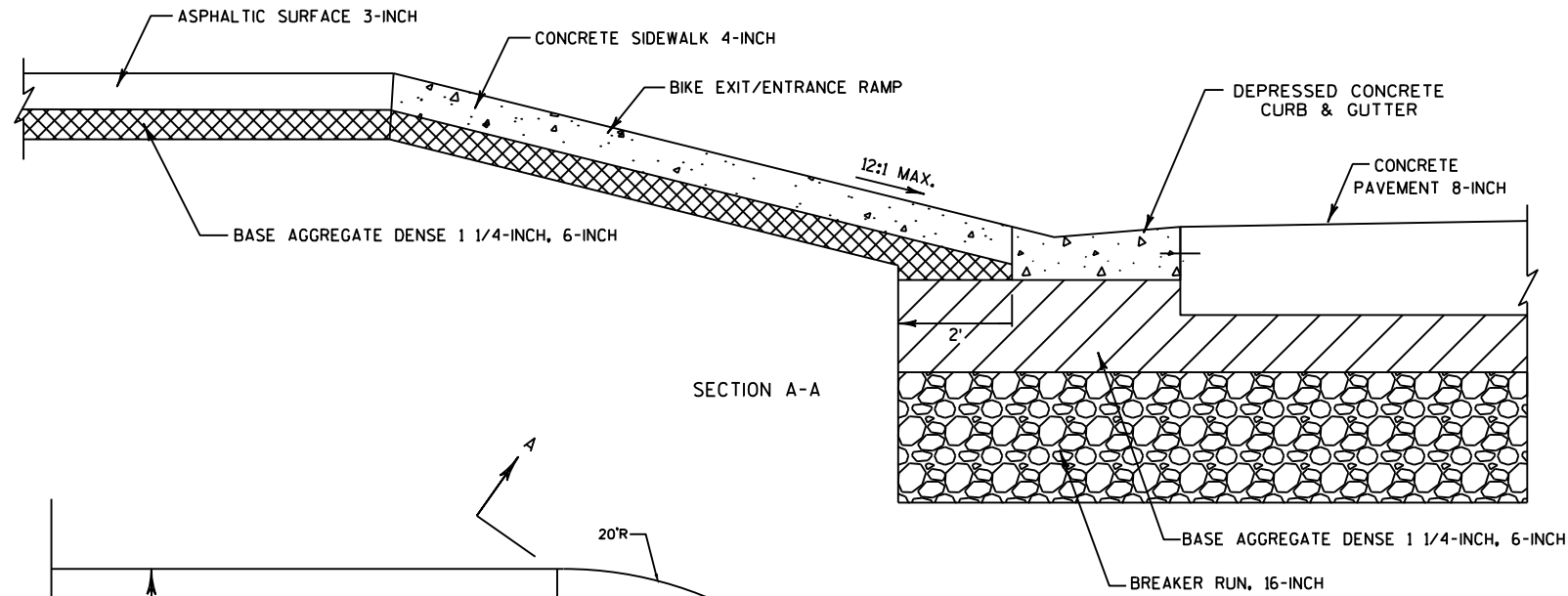
**EROSION MAT DETAIL AT APRON ENDWALLS**  
 SEE EROSION CONTROL PLANS FOR TYPES AND LOCATIONS



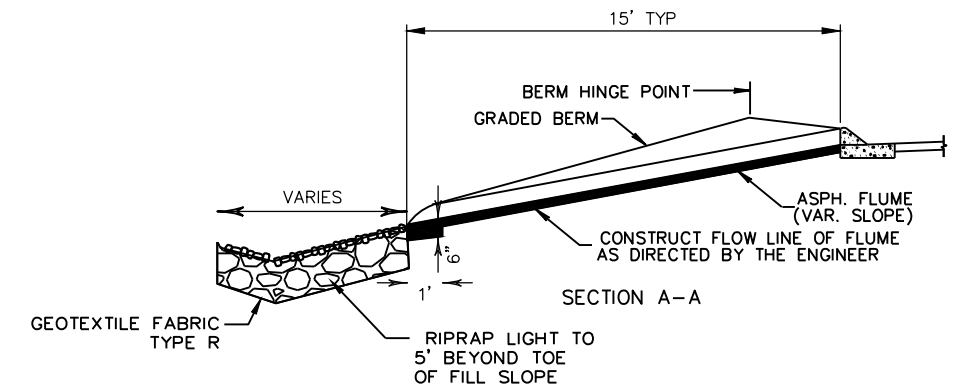
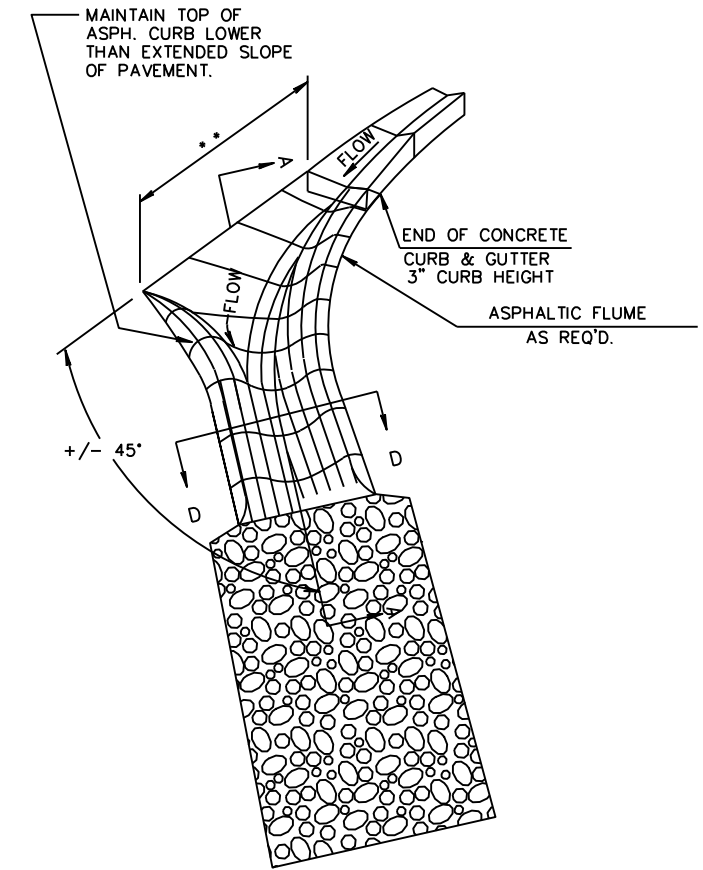
SIDE VIEW  
**CULVERT PIPE CHECK**



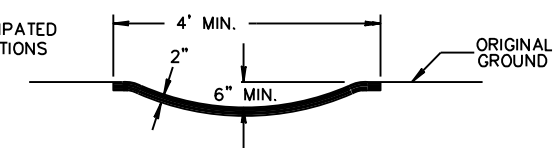
**CONCRETE JOINT FILLING**



**TYPICAL BIKE RAMP ENTRANCE & EXIT DETAIL**  
SEE PLAN DETAILS FOR LOCATIONS



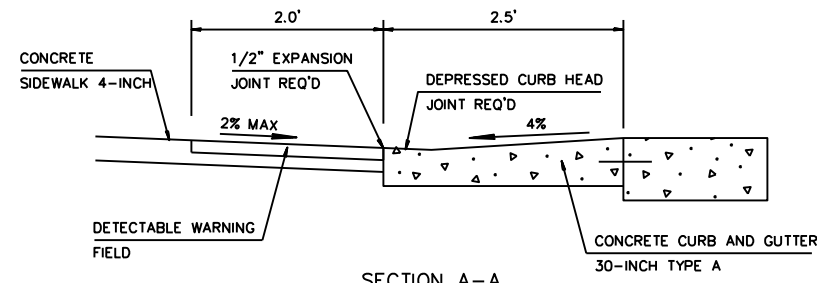
\*\* VARIES DEPENDING UPON ANTICIPATED FLOW VELOCITY & FIELD CONDITIONS (10' MIN.)



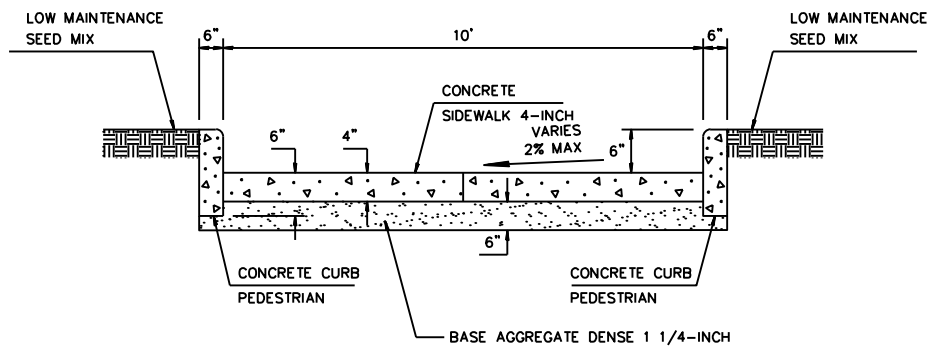
**ASPHALTIC FLUME DETAIL**

SEE EROSION CONTROL AND PLAN & PROFILE SHEETS FOR LOCATIONS

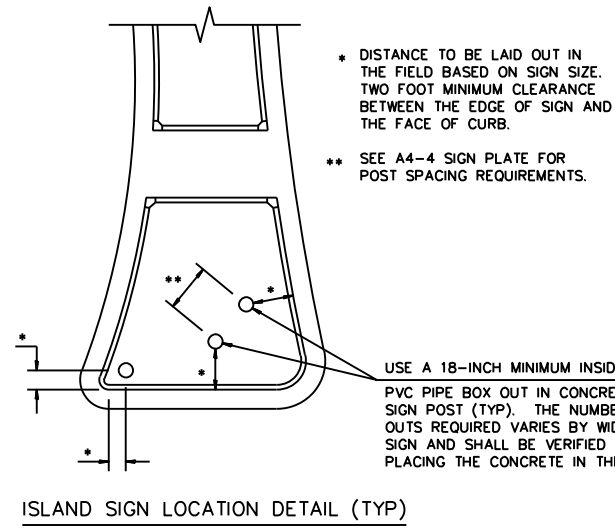
SEE SDD "CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES" FOR DETAILS NOT SHOWN.



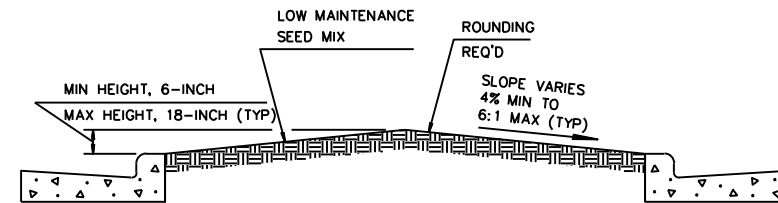
SECTION A-A



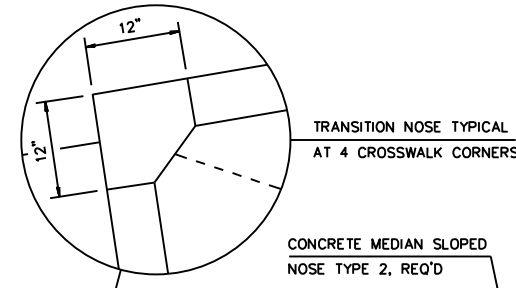
SECTION B-B



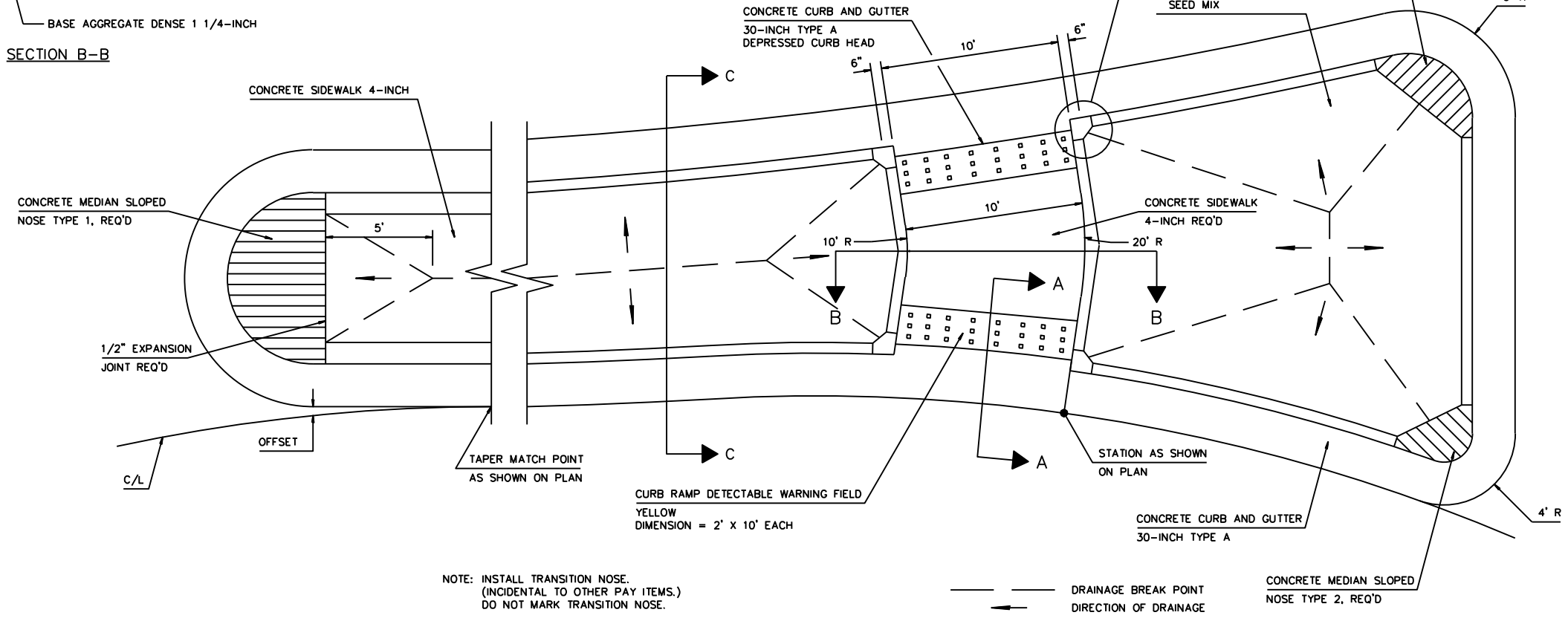
ISLAND SIGN LOCATION DETAIL (TYP)



SECTION C-C



TRANSITION NOSE TYPICAL AT 4 CROSSWALK CORNERS



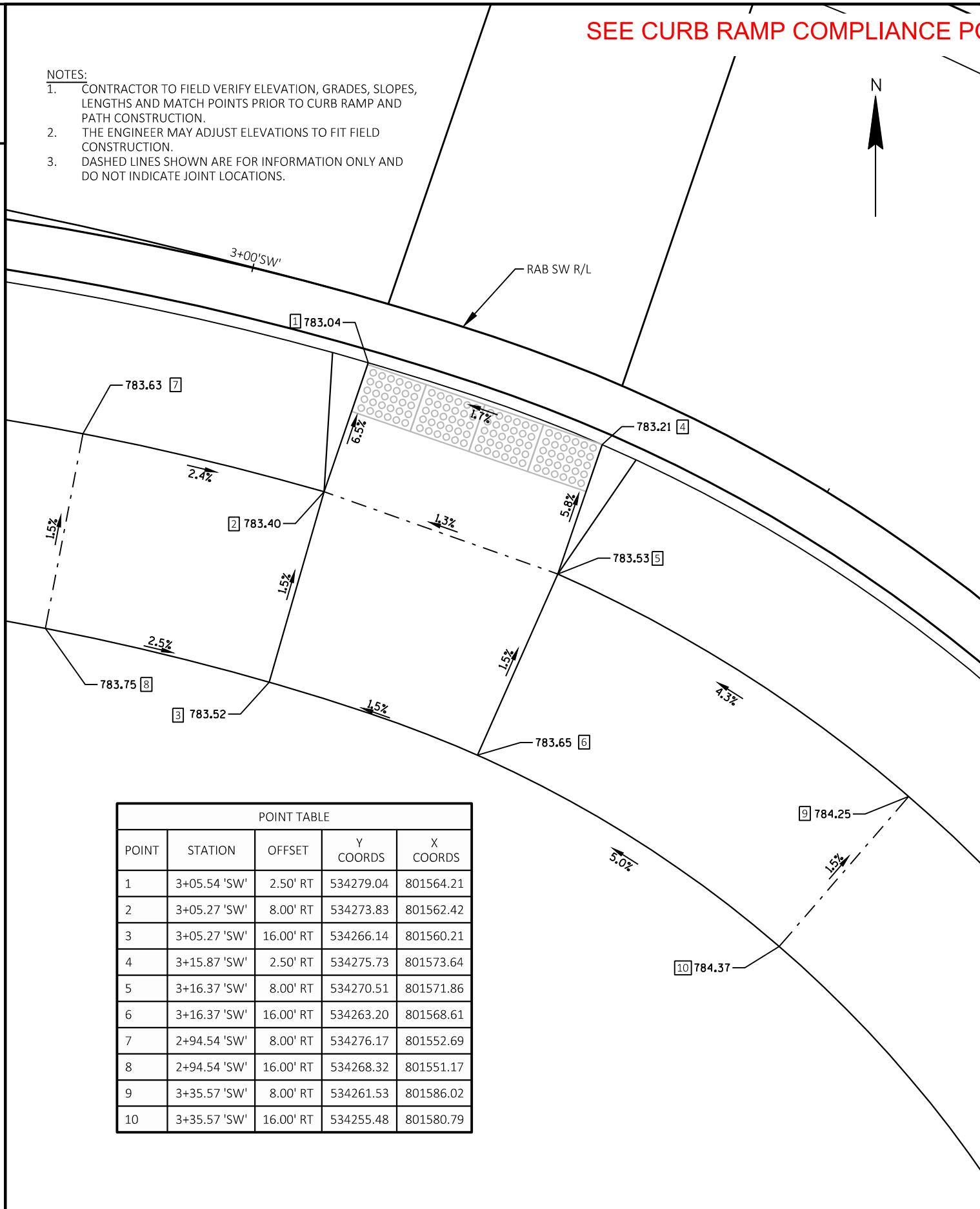
SPLITTER ISLAND DETAIL

NOTE: INSTALL TRANSITION NOSE.  
(INCIDENTAL TO OTHER PAY ITEMS.)  
DO NOT MARK TRANSITION NOSE.

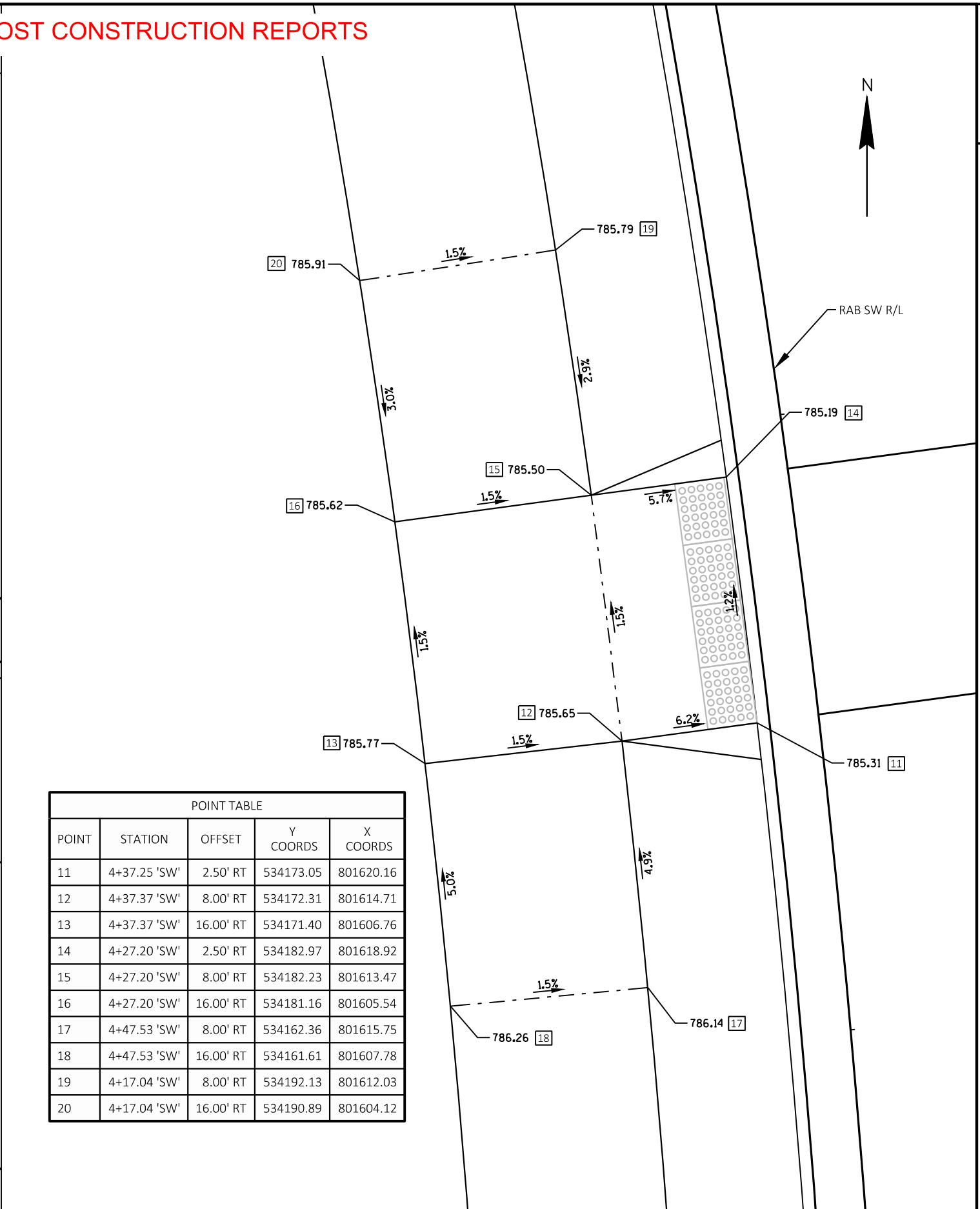
SEE CURB RAMP COMPLIANCE POST CONSTRUCTION REPORTS

NOTES:

1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND PATH CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. DASHED LINES SHOWN ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.



POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1	3+05.54 'SW'	2.50' RT	534279.04	801564.21
2	3+05.27 'SW'	8.00' RT	534273.83	801562.42
3	3+05.27 'SW'	16.00' RT	534266.14	801560.21
4	3+15.87 'SW'	2.50' RT	534275.73	801573.64
5	3+16.37 'SW'	8.00' RT	534270.51	801571.86
6	3+16.37 'SW'	16.00' RT	534263.20	801568.61
7	2+94.54 'SW'	8.00' RT	534276.17	801552.69
8	2+94.54 'SW'	16.00' RT	534268.32	801551.17
9	3+35.57 'SW'	8.00' RT	534261.53	801586.02
10	3+35.57 'SW'	16.00' RT	534255.48	801580.79



POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
11	4+37.25 'SW'	2.50' RT	534173.05	801620.16
12	4+37.37 'SW'	8.00' RT	534172.31	801614.71
13	4+37.37 'SW'	16.00' RT	534171.40	801606.76
14	4+27.20 'SW'	2.50' RT	534182.97	801618.92
15	4+27.20 'SW'	8.00' RT	534182.23	801613.47
16	4+27.20 'SW'	16.00' RT	534181.16	801605.54
17	4+47.53 'SW'	8.00' RT	534162.36	801615.75
18	4+47.53 'SW'	16.00' RT	534161.61	801607.78
19	4+17.04 'SW'	8.00' RT	534192.13	801612.03
20	4+17.04 'SW'	16.00' RT	534190.89	801604.12

SEE CURB RAMP COMPLIANCE POST CONSTRUCTION REPORTS

POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
32	5+59.02 'SE'	2.50' RT	534224.09	801796.68
33	5+58.94 'SE'	8.05' RT	534218.60	801797.49
34	5+59.15 'SE'	16.05' RT	534210.74	801798.97
35	5+69.07 'SE'	2.51' RT	534225.60	801806.56
36	5+69.09 'SE'	8.00' RT	534220.17	801807.37
37	5+69.09 'SE'	16.00' RT	534212.25	801808.51
38	5+48.80 'SE'	8.58' RT	534216.38	801787.74
39	5+49.47 'SE'	16.56' RT	534208.66	801789.81
40	5+74.17 'SE'	8.00' RT	534220.86	801812.32
41	5+74.17 'SE'	16.00' RT	534212.93	801813.39

POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
21	4+30.66 'SE'	2.51' RT	534157.22	801698.66
22	4+28.97 'SE'	12.07' RT	534152.53	801707.14
23	4+27.71 'SE'	20.00' RT	534148.98	801714.31
24	4+40.98 'SE'	2.50' RT	534166.47	801702.60
25	4+40.92 'SE'	3.54' RT	534165.97	801703.50
26	4+40.35 'SE'	13.21' RT	534161.28	801711.98
27	4+39.31 'SE'	21.17' RT	534157.10	801718.80
28	4+23.35 'SE'	11.41' RT	534148.00	801705.02
29	4+21.99 'SE'	19.33' RT	534144.77	801712.34
30	4+46.10 'SE'	13.69' RT	534165.49	801714.69
31	4+45.19 'SE'	21.65' RT	534161.00	801721.32

NOTES:

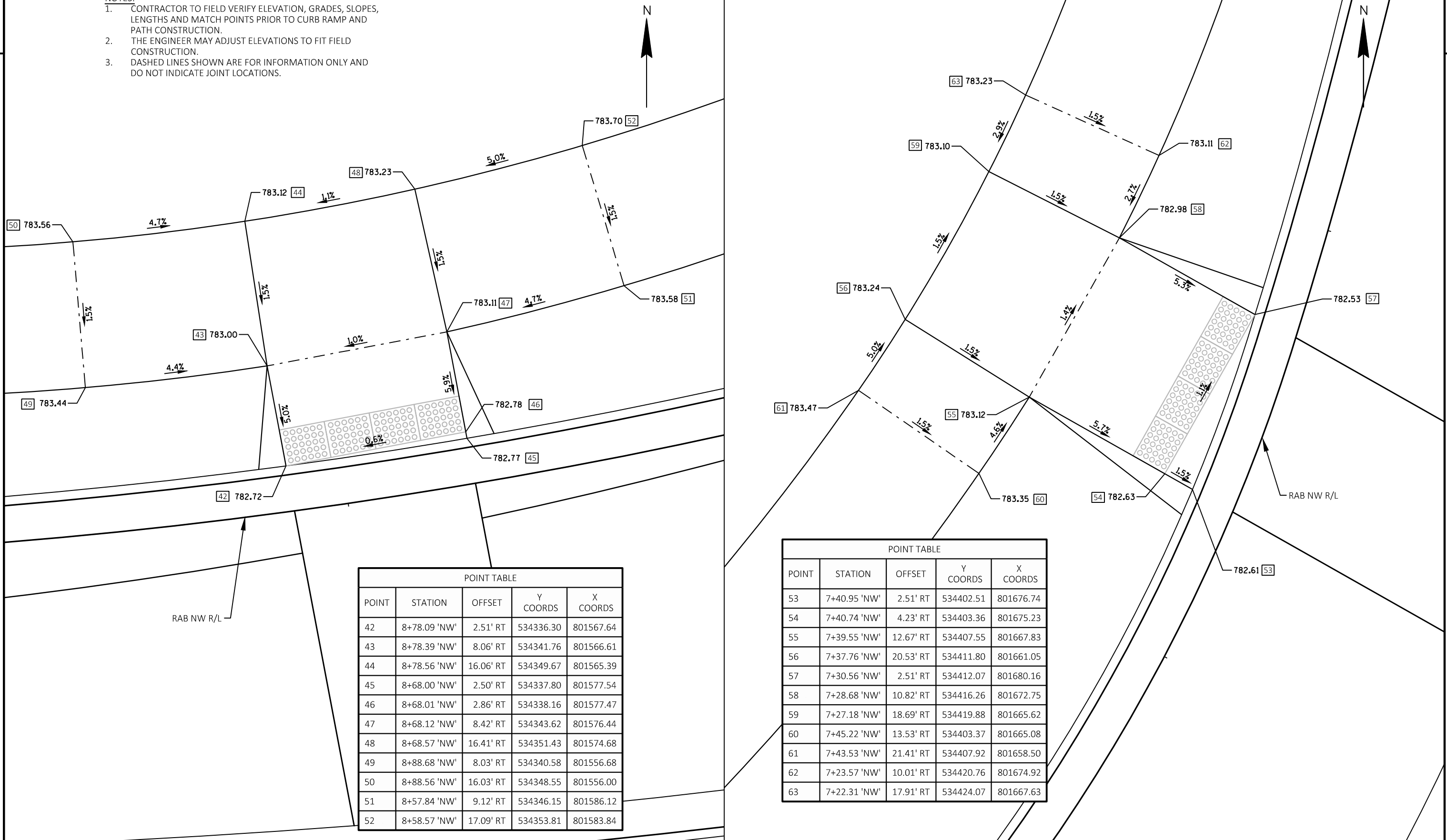
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SEE CURB RAMP COMPLIANCE POST CONSTRUCTION REPORTS

NOTES:

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POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
42	8+78.09 'NW'	2.51' RT	534336.30	801567.64
43	8+78.39 'NW'	8.06' RT	534341.76	801566.61
44	8+78.56 'NW'	16.06' RT	534349.67	801565.39
45	8+68.00 'NW'	2.50' RT	534337.80	801577.54
46	8+68.01 'NW'	2.86' RT	534338.16	801577.47
47	8+68.12 'NW'	8.42' RT	534343.62	801576.44
48	8+68.57 'NW'	16.41' RT	534351.43	801574.68
49	8+88.68 'NW'	8.03' RT	534340.58	801556.68
50	8+88.56 'NW'	16.03' RT	534348.55	801556.00
51	8+57.84 'NW'	9.12' RT	534346.15	801586.12
52	8+58.57 'NW'	17.09' RT	534353.81	801583.84

POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
53	7+40.95 'NW'	2.51' RT	534402.51	801676.74
54	7+40.74 'NW'	4.23' RT	534403.36	801675.23
55	7+39.55 'NW'	12.67' RT	534407.55	801667.83
56	7+37.76 'NW'	20.53' RT	534411.80	801661.05
57	7+30.56 'NW'	2.51' RT	534412.07	801680.16
58	7+28.68 'NW'	10.82' RT	534416.26	801672.75
59	7+27.18 'NW'	18.69' RT	534419.88	801665.62
60	7+45.22 'NW'	13.53' RT	534403.37	801665.08
61	7+43.53 'NW'	21.41' RT	534407.92	801658.50
62	7+23.57 'NW'	10.01' RT	534420.76	801674.92
63	7+22.31 'NW'	17.91' RT	534424.07	801667.63

SEE CURB RAMP COMPLIANCE POST CONSTRUCTION REPORTS

- NOTES:
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POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
64	3+67.04 'NE'	2.49' RT	534384.18	801760.44
65	3+66.99 'NE'	8.00' RT	534384.76	801765.92
66	3+66.99 'NE'	16.00' RT	534385.70	801773.87
67	3+77.09 'NE'	2.49' RT	534394.12	801759.37
68	3+77.15 'NE'	8.00' RT	534394.71	801764.85
69	3+77.15 'NE'	16.00' RT	534395.48	801772.81
70	3+51.74 'NE'	8.00' RT	534369.89	801767.91
71	3+51.74 'NE'	16.00' RT	534371.07	801775.82
72	3+82.23 'NE'	8.00' RT	534399.69	801764.39
73	3+82.23 'NE'	16.00' RT	534400.38	801772.36

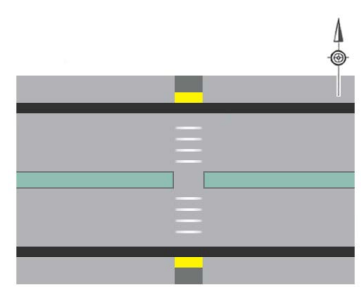
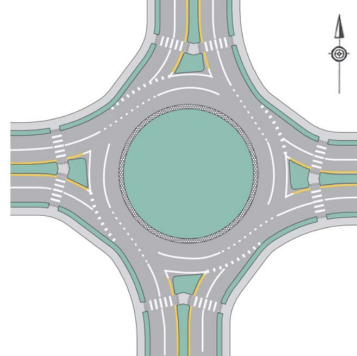
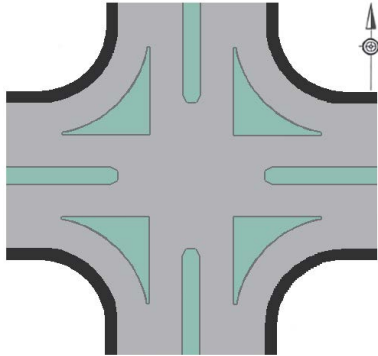
POINT TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
74	2+55.20 'NE'	2.51' RT	534288.96	801802.29
75	2+55.74 'NE'	8.00' RT	534294.14	801804.16
76	2+55.74 'NE'	16.00' RT	534301.37	801807.58
77	2+44.86 'NE'	2.51' RT	534285.48	801811.66
78	2+44.57 'NE'	8.00' RT	534290.64	801813.53
79	2+44.57 'NE'	16.00' RT	534298.30	801815.86
80	2+67.35 'NE'	8.00' RT	534299.28	801795.53
81	2+67.35 'NE'	16.00' RT	534305.73	801800.27
82	2+33.72 'NE'	8.00' RT	534288.23	801823.25
83	2+33.72 'NE'	16.00' RT	534296.09	801824.77



# Curb Ramp Compliance Post Construction Report

Email completed copy of this report to WisDOT Region Bike/Ped. Coordinator for project. Also include copy of this report in final project records.

Project ID		Project Name			Region	
Highway/Road			Intersecting Highway/Road		Curb Ramp SDD Date	
Date	Inspected By		Email			Phone



Curb Ramp Location(s)	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Curb Ramp ID (Latitude/Longitude)				
Location Type				
Curb Ramp Type				

Curb Ramp Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Ramp Opening Width (48" minimum)	"	"	"	"
Ramp Running Slope (8.33% maximum)	%	%	%	%
Ramp Cross Slope (2% maximum)	%	%	%	%
LT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
RT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
Rollover (11% maximum)	%	%	%	%
4'x4' Clear Space at Ramp Bottom?	Yes No NA	Yes No NA	Yes No NA	Yes No NA

Level Landing Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Width (48" minimum)	"	"	"	"
Depth (48" minimum)	"	"	"	"
Cross Slope (2% maximum - both directions)	%	%	%	%

Detectable Warning Field Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Detectable Warning Field Spans Ramp Width?	Yes No	Yes No	Yes No	Yes No
Radial Panels?	Yes No NA	Yes No NA	Yes No NA	Yes No NA
Warning Field Color (Yellow, White, Patina)				

Transition Details	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Lip less than ¼ inch? (if present)	Yes No	Yes No	Yes No	Yes No
Gutter Flowline Slope at Ramp (2% maximum*)	%	%	%	%
Gutter Counter Slope (4% maximum)	%	%	%	%

\*Slope at street crossings without yield or stop control and at mid-block street crossings shall be permitted to equal the road grade.

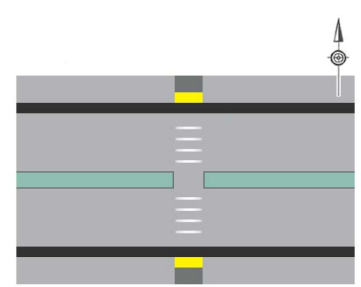
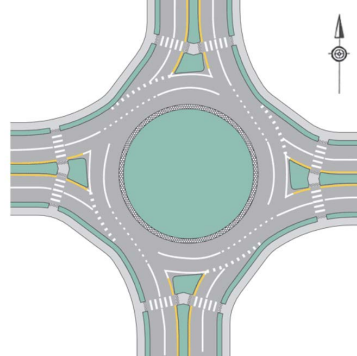
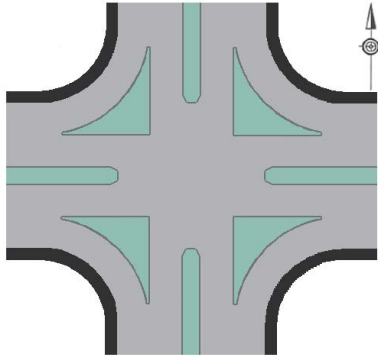
**If curb ramp not built to plan specs, explain below.**



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Project ID		Project Name			Region	
Highway/Road			Intersecting Highway/Road		Curb Ramp SDD Date	
Date	Inspected By		Email			Phone



Curb Ramp Location(s)	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Curb Ramp ID (Latitude/Longitude)				
Location Type				
Curb Ramp Type				

Curb Ramp Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Ramp Opening Width (48" minimum)	"	"	"	"
Ramp Running Slope (8.33% maximum)	%	%	%	%
Ramp Cross Slope (2% maximum)	%	%	%	%
LT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
RT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
Rollover (11% maximum)	%	%	%	%
4'x4' Clear Space at Ramp Bottom?	Yes No NA	Yes No NA	Yes No NA	Yes No NA

Level Landing Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Width (48" minimum)	"	"	"	"
Depth (48" minimum)	"	"	"	"
Cross Slope (2% maximum - both directions)	%	%	%	%

Detectable Warning Field Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Detectable Warning Field Spans Ramp Width?	Yes No	Yes No	Yes No	Yes No
Radial Panels?	Yes No NA	Yes No NA	Yes No NA	Yes No NA
Warning Field Color (Yellow, White, Patina)				

Transition Details	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Lip less than ¼ inch? (if present)	Yes No	Yes No	Yes No	Yes No
Gutter Flowline Slope at Ramp (2% maximum*)	%	%	%	%
Gutter Counter Slope (4% maximum)	%	%	%	%

\*Slope at street crossings without yield or stop control and at mid-block street crossings shall be permitted to equal the road grade.

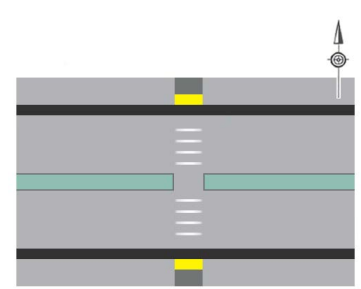
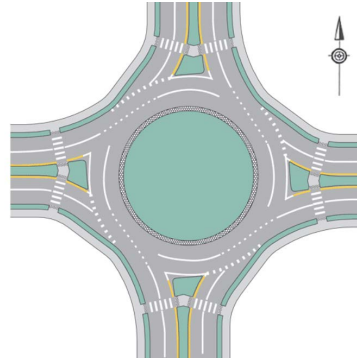
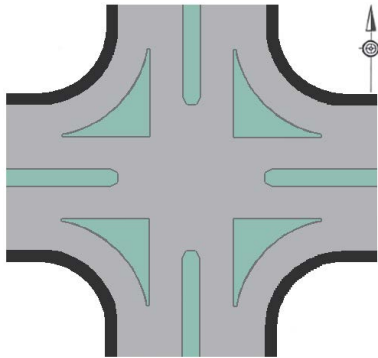
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Highway/Road			Intersecting Highway/Road		Curb Ramp SDD Date	
Date	Inspected By		Email			Phone



Curb Ramp Location(s)	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Curb Ramp ID (Latitude/Longitude)				
Location Type				
Curb Ramp Type				

Curb Ramp Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Ramp Opening Width (48" minimum)	"	"	"	"
Ramp Running Slope (8.33% maximum)	%	%	%	%
Ramp Cross Slope (2% maximum)	%	%	%	%
LT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
RT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
Rollover (11% maximum)	%	%	%	%
4'x4' Clear Space at Ramp Bottom?	Yes No NA	Yes No NA	Yes No NA	Yes No NA

Level Landing Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Width (48" minimum)	"	"	"	"
Depth (48" minimum)	"	"	"	"
Cross Slope (2% maximum - both directions)	%	%	%	%

Detectable Warning Field Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Detectable Warning Field Spans Ramp Width?	Yes No	Yes No	Yes No	Yes No
Radial Panels?	Yes No NA	Yes No NA	Yes No NA	Yes No NA
Warning Field Color (Yellow, White, Patina)				

Transition Details	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Lip less than 1/4 inch? (if present)	Yes No	Yes No	Yes No	Yes No
Gutter Flowline Slope at Ramp (2% maximum*)	%	%	%	%
Gutter Counter Slope (4% maximum)	%	%	%	%

\*Slope at street crossings without yield or stop control and at mid-block street crossings shall be permitted to equal the road grade.

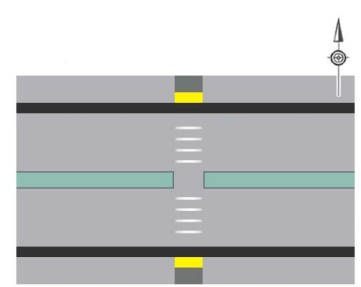
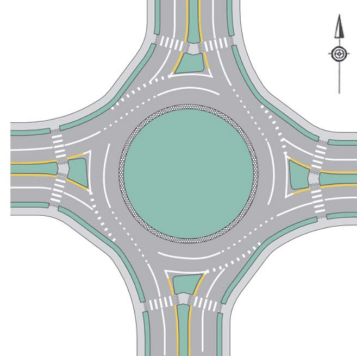
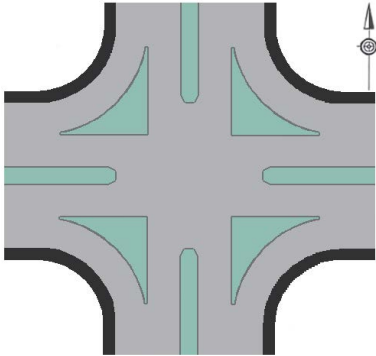
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Highway/Road			Intersecting Highway/Road		Curb Ramp SDD Date	
Date	Inspected By		Email			Phone



Curb Ramp Location(s)	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Curb Ramp ID (Latitude/Longitude)				
Location Type				
Curb Ramp Type				

Curb Ramp Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Ramp Opening Width (48" minimum)	"	"	"	"
Ramp Running Slope (8.33% maximum)	%	%	%	%
Ramp Cross Slope (2% maximum)	%	%	%	%
LT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
RT. Flare Slope (10% max., 6:1 max. for graded)	%	%	%	%
Rollover (11% maximum)	%	%	%	%
4'x4' Clear Space at Ramp Bottom?	Yes No NA	Yes No NA	Yes No NA	Yes No NA

Level Landing Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Width (48" minimum)	"	"	"	"
Depth (48" minimum)	"	"	"	"
Cross Slope (2% maximum - both directions)	%	%	%	%

Detectable Warning Field Attributes	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Detectable Warning Field Spans Ramp Width?	Yes No	Yes No	Yes No	Yes No
Radial Panels?	Yes No NA	Yes No NA	Yes No NA	Yes No NA
Warning Field Color (Yellow, White, Patina)				

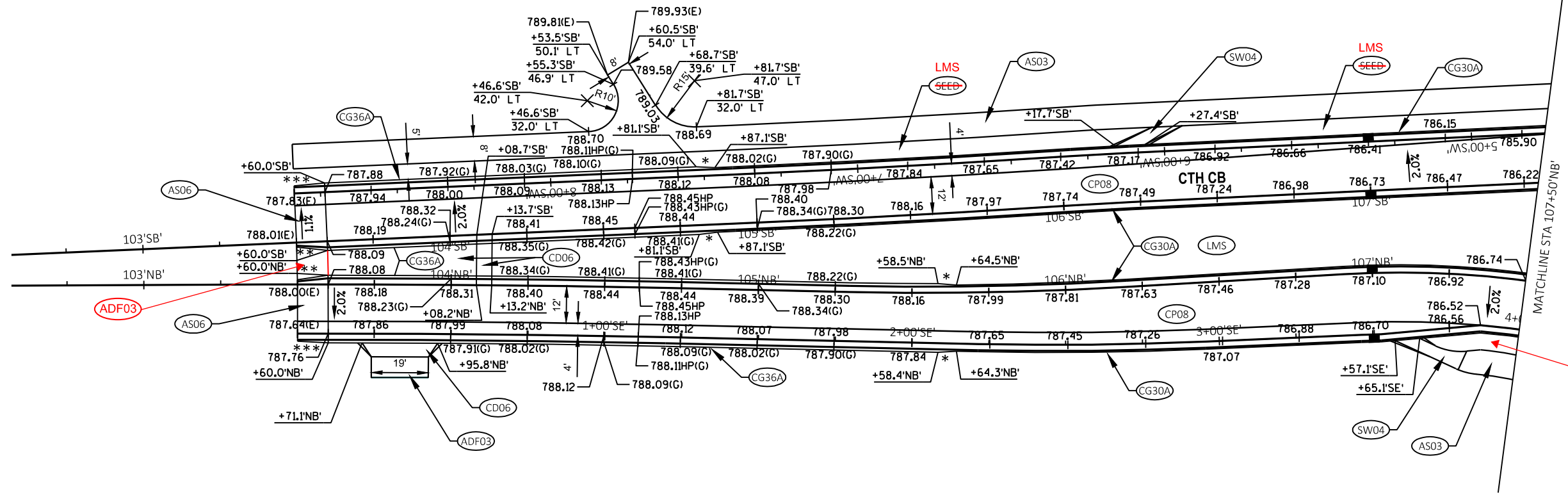
Transition Details	Ramp Location	Ramp Location	Ramp Location	Ramp Location
Lip less than ¼ inch? (if present)	Yes No	Yes No	Yes No	Yes No
Gutter Flowline Slope at Ramp (2% maximum*)	%	%	%	%
Gutter Counter Slope (4% maximum)	%	%	%	%

\*Slope at street crossings without yield or stop control and at mid-block street crossings shall be permitted to equal the road grade.

**If curb ramp not built to plan specs, explain below.**

LEGEND

- |  |   |
|--|---|
| (AF01) ASPHALTIC FLUME (SEE CONSTRUCTION DETAIL)   | (CG36A) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A               |
| (AG01) BASE AGGREGATE DENSE 3/4-INCH               | (CG36R) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R               |
| (AS03) 3" ASPHALTIC SURFACE                        | <del>(MO)</del> MAINTENANCE OPENING (SEE CONSTRUCTION DETAIL) — ELIMINATE |
| (AS04) 4" ASPHALTIC SURFACE                        | (SEED) SEED   |
| (AS06) 6" ASPHALTIC SURFACE                        | (LMS) LOW MAINTENANCE SEED MIX  |
| (ADF03) 3" ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES | (SN01) CONCRETE MEDIAN SLOPED NOSE TYPE 1                                 |
| (CD06) CONCRETE DRIVEWAY 6-INCH                    | (SW04) CONCRETE SIDEWALK 4-INCH   |
| (CP08) CONCRETE PAVEMENT 8-INCH (DOWELED)          | (CD01) CONCRETE SURFACE DRAIN   |
| (CP12) CONCRETE TRUCK APRON 12-INCH                | LP LOW POINT  |
| (CCR) COLORING CONCRETE WISDOT RED                 | HP HIGH POINT   |
| (CCP) CONCRETE CURB PEDESTRIAN                     | (E) EXISTING ELEVATION  |
| (CG18A) CONCRETE CURB & GUTTER 18-INCH TYPE A      | (G) GUTTER ELEVATION  |
| (CG30A) CONCRETE CURB & GUTTER 30-INCH TYPE A      | ■ DETECTABLE WARNING FIELD  |

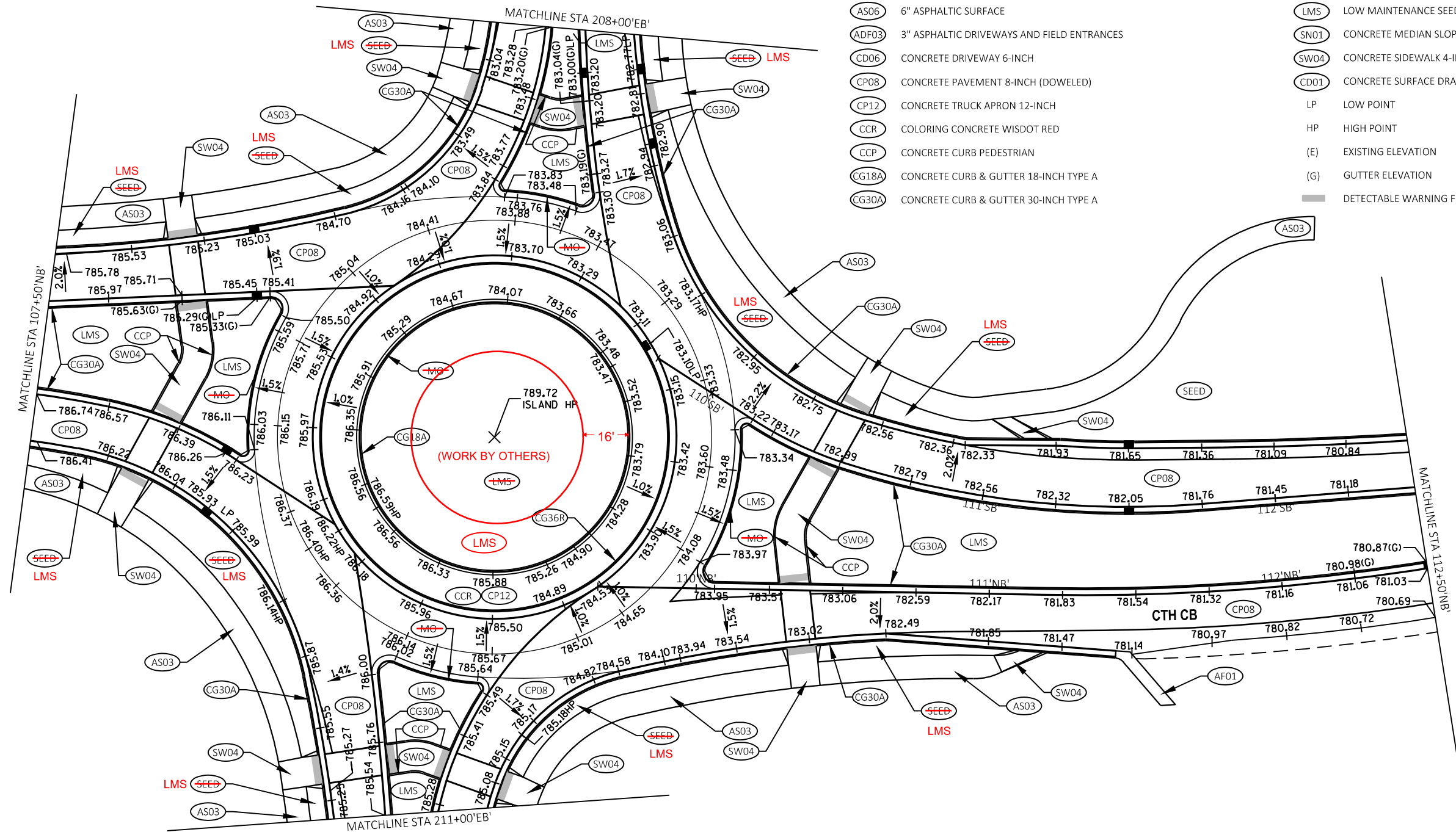


- \* TRANSITION CURB AND GUTTER FROM CONC C&G 30-INCH TYPE A TO CONC C&G 4-INCH SLOPED 36-INCH TYPE A OVER 6 FEET (PAID FOR AS CONC C&G 4-INCH SLOPED 36-INCH TYPE A)
- \*\* TRANSITION CURB AND GETTER FROM CONC C&G 4-INCH SLOPED 36-INCH TYPE D TO CONC C&G 18-INCH TYPE D OVER 10 FEET (PAID FOR AS CONC C&G 4-INCH SLOPED 36-INCH TYPE D)
- \*\*\* TRANSITION CURB AND GUTTER FROM CONC C&G 30-INCH TYPE D TO CONC C&G 4-INCH SLOPED 36-INCH TYPE D OVER 6 FEET (PAID FOR AS CONC C&G 4-INCH SLOPED 36-INCH TYPE D)

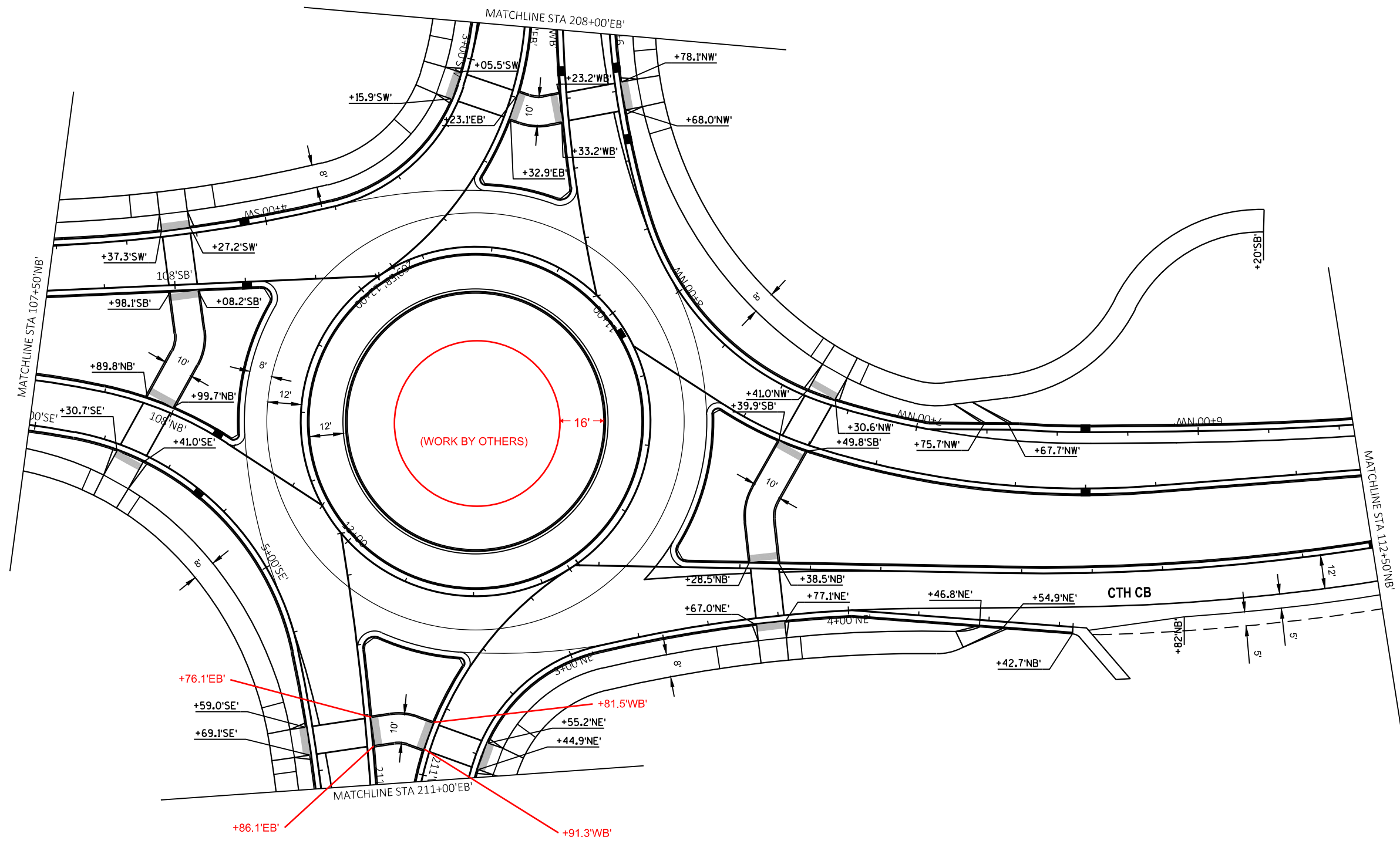
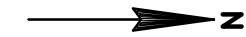


LEGEND

- (AF01) ASPHALTIC FLUME (SEE CONSTRUCTION DETAIL)
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AS03) 3" ASPHALTIC SURFACE
- (AS04) 4" ASPHALTIC SURFACE
- (AS06) 6" ASPHALTIC SURFACE
- (ADF03) 3" ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES
- (CD06) CONCRETE DRIVEWAY 6-INCH
- (CP08) CONCRETE PAVEMENT 8-INCH (DOWELED)
- (CP12) CONCRETE TRUCK APRON 12-INCH
- (CCR) COLORING CONCRETE WISDOT RED
- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18A) CONCRETE CURB & GUTTER 18-INCH TYPE A
- (CG30A) CONCRETE CURB & GUTTER 30-INCH TYPE A
- (CG36A) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
- (CG36R) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
- ~~ELIMINATE~~ (MO) MAINTENANCE OPENING (SEE CONSTRUCTION DETAIL)
- (SEED) SEED
- (LMS) LOW MAINTENANCE SEED MIX
- (SN01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (SW04) CONCRETE SIDEWALK 4-INCH
- (CD01) CONCRETE SURFACE DRAIN
- LP LOW POINT
- HP HIGH POINT
- (E) EXISTING ELEVATION
- (G) GUTTER ELEVATION
- DETECTABLE WARNING FIELD

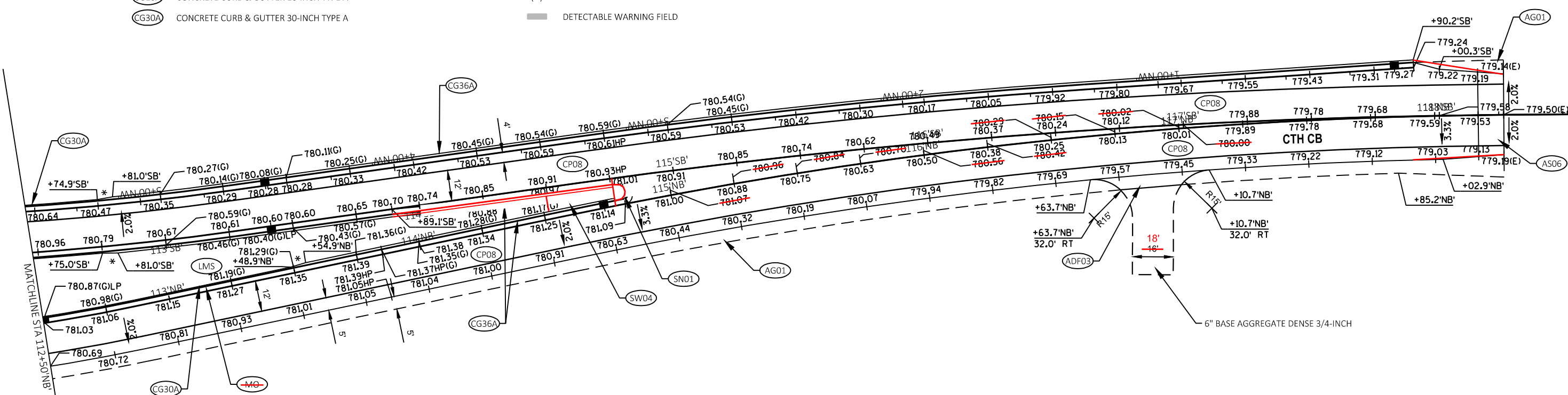






LEGEND

- (AF01) ASPHALTIC FLUME (SEE CONSTRUCTION DETAIL)
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AS03) 3" ASPHALTIC SURFACE
- (AS04) 4" ASPHALTIC SURFACE
- (AS06) 6" ASPHALTIC SURFACE
- (ADF03) 3" ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES
- (CD06) CONCRETE DRIVEWAY 6-INCH
- (CP08) CONCRETE PAVEMENT 8-INCH (DOWELED)
- (CP12) CONCRETE TRUCK APRON 12-INCH
- (CCR) COLORING CONCRETE WISDOT RED
- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18A) CONCRETE CURB & GUTTER 18-INCH TYPE A
- (CG30A) CONCRETE CURB & GUTTER 30-INCH TYPE A
- (CG36A) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- (CG36R) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
- ~~(MO)~~ MAINTENANCE OPENING (SEE CONSTRUCTION DETAIL) ~~ELIMINATE~~
- (SEED) SEED
- (LMS) LOW MAINTENANCE SEED MIX
- (SN01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (SW04) CONCRETE SIDEWALK 4-INCH
- (CD01) CONCRETE SURFACE DRAIN
- LP LOW POINT
- HP HIGH POINT
- (E) EXISTING ELEVATION
- (G) GUTTER ELEVATION
- █ DETECTABLE WARNING FIELD



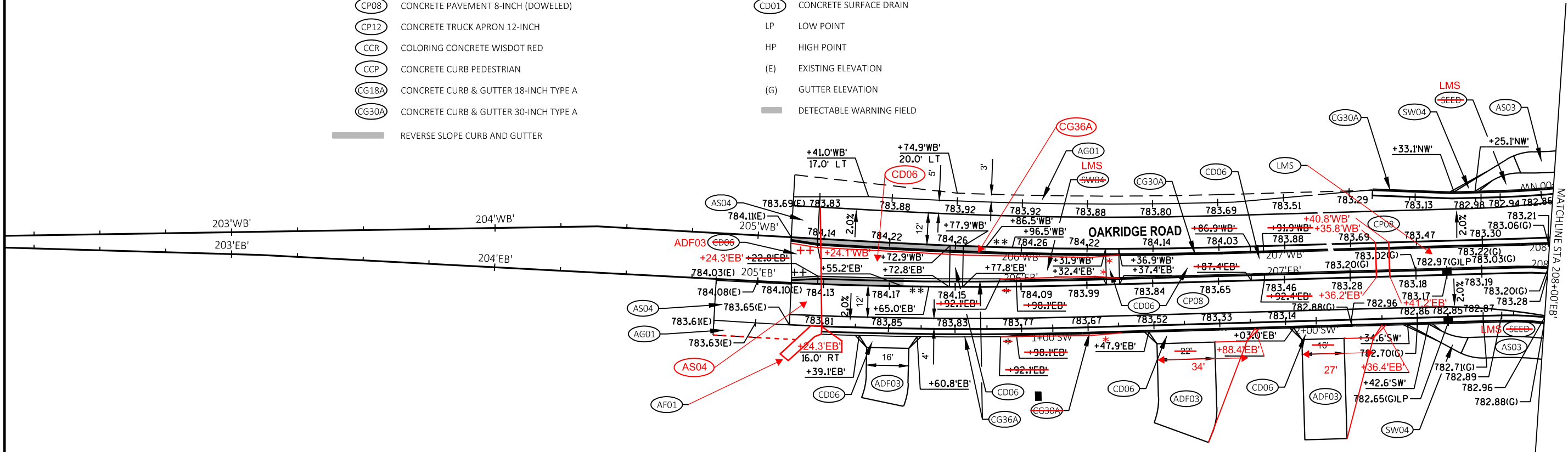
\* TRANSITION CURB AND GUTTER FROM CONC C&G 30-INCH TYPE A TO CONC C&G 4-INCH SLOPED 36-INCH TYPE A OVER 6 FEET (PAID FOR AS CONC C&G 4-INCH SLOPED 36-INCH TYPE A)

SUPERELEVATION DATA - CTH CB-NB EXIT

DESCRIPTION	STATION	ROADWAY CROSS SLOPE RIGHT OF CROWNLINE
End Normal Crown	114+53'NB'	-2.00%
Begin Full Super	114+84'NB'	-3.30%
End Full Super	118+00'NB'	-3.30%
Begin Normal Crown	118+26.97'NB'	-2.00%

LEGEND

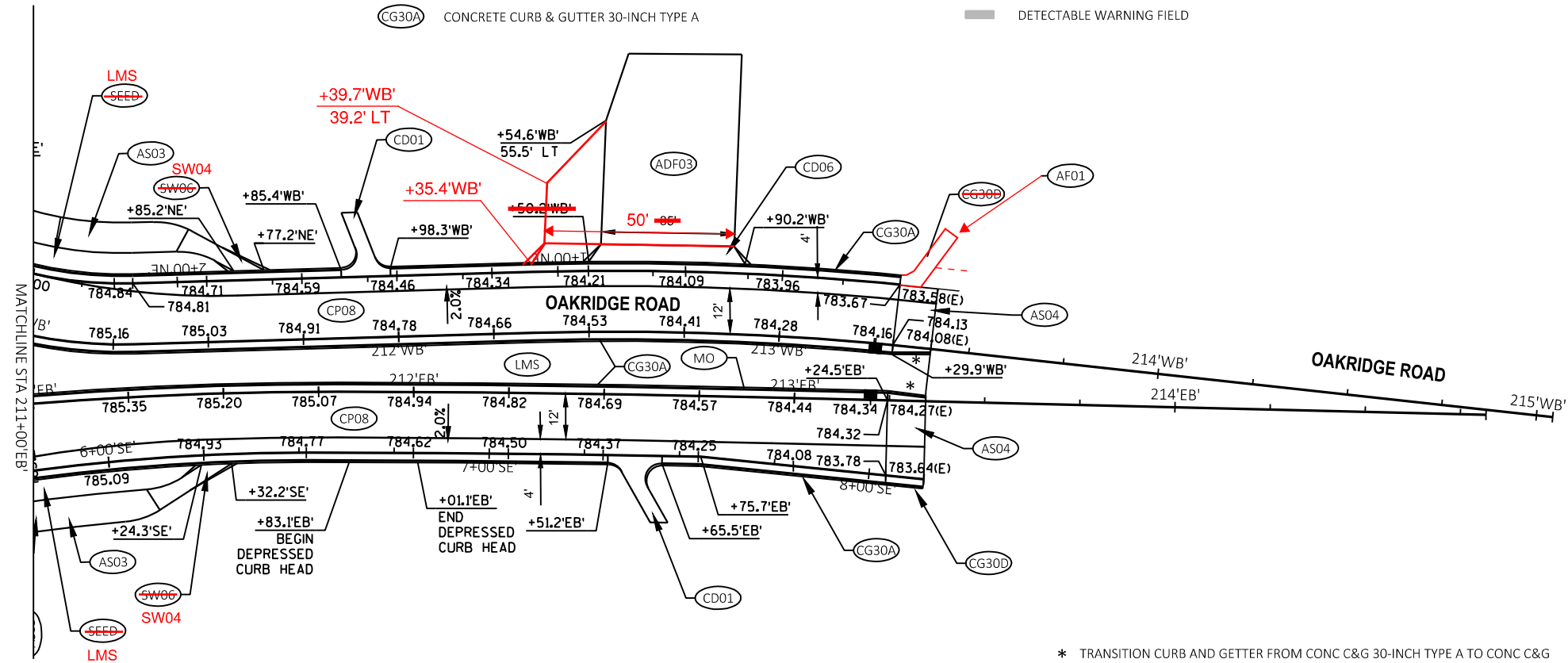
- (AF01) ASPHALTIC FLUME (SEE CONSTRUCTION DETAIL)
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AS03) 3" ASPHALTIC SURFACE
- (AS04) 4" ASPHALTIC SURFACE
- (AS06) 6" ASPHALTIC SURFACE
- (ADF03) 3" ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES
- (CD06) CONCRETE DRIVEWAY 6-INCH
- (CP08) CONCRETE PAVEMENT 8-INCH (DOWELED)
- (CP12) CONCRETE TRUCK APRON 12-INCH
- (CCR) COLORING CONCRETE WISDOT RED
- (CCP) CONCRETE CURB PEDESTRIAN
- (CG18A) CONCRETE CURB & GUTTER 18-INCH TYPE A
- (CG30A) CONCRETE CURB & GUTTER 30-INCH TYPE A
- REVERSE SLOPE CURB AND GUTTER
- (CG36A) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- (CG36R) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
- (MC) MAINTENANCE OPENING (SEE CONSTRUCTION DETAIL) ELIMINATE
- (SEED) SEED
- (LMS) LOW MAINTENANCE SEED MIX
- (SN01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (SW04) CONCRETE SIDEWALK 4-INCH
- (CD01) CONCRETE SURFACE DRAIN
- LP LOW POINT
- HP HIGH POINT
- (E) EXISTING ELEVATION
- (G) GUTTER ELEVATION
- DETECTABLE WARNING FIELD



- \* TRANSITION CURB AND GUTTER FROM CONC C&G 30-INCH TYPE A TO CONC C&G 4-INCH SLOPED 36-INCH TYPE A OVER 6 FEET (PAID FOR AS CONC C&G 4-INCH SLOPED 36-INCH TYPE A)
- \*\* TRANSITION GUTTER TO REVERSE SLOPE OVER 10 FEET
- + TRANSITION CURB AND GUTTER FROM CONC C&G 30-INCH TYPE D REVERSE SLOPE TO CONC C&G 18-INCH TYPE D REVERSE SLOPE OVER 10 FEET (PAID FOR AS CONC C&G 30-INCH TYPE D)
- ++ TRANSITION CURB AND GUTTER FROM CONC C&G 4-INCH SLOPED 36-INCH TYPE A REVERSE SLOPE TO CONC C&G 18-INCH TYPE A REVERSE SLOPE OVER 10 FEET (PAID FOR AS CONC C&G 4-INCH SLOPED 36-INCH TYPE D)

LEGEND

- (AF01) ASPHALTIC FLUME (SEE CONSTRUCTION DETAIL)
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
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- (AS04) 4" ASPHALTIC SURFACE
- (AS06) 6" ASPHALTIC SURFACE
- (ADF03) 3" ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES
- (CD06) CONCRETE DRIVEWAY 6-INCH
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- (CG36A) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- (CG36R) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
- ~~(MO)~~ MAINTENANCE OPENING (SEE CONSTRUCTION DETAIL) ~~ELIMINATE~~
- (SEED) SEED
- (LMS) LOW MAINTENANCE SEED MIX
- (SN01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (SW04) CONCRETE SIDEWALK 4-INCH
- (CD01) CONCRETE SURFACE DRAIN
- LP LOW POINT
- HP HIGH POINT
- (E) EXISTING ELEVATION
- (G) GUTTER ELEVATION
- DETECTABLE WARNING FIELD



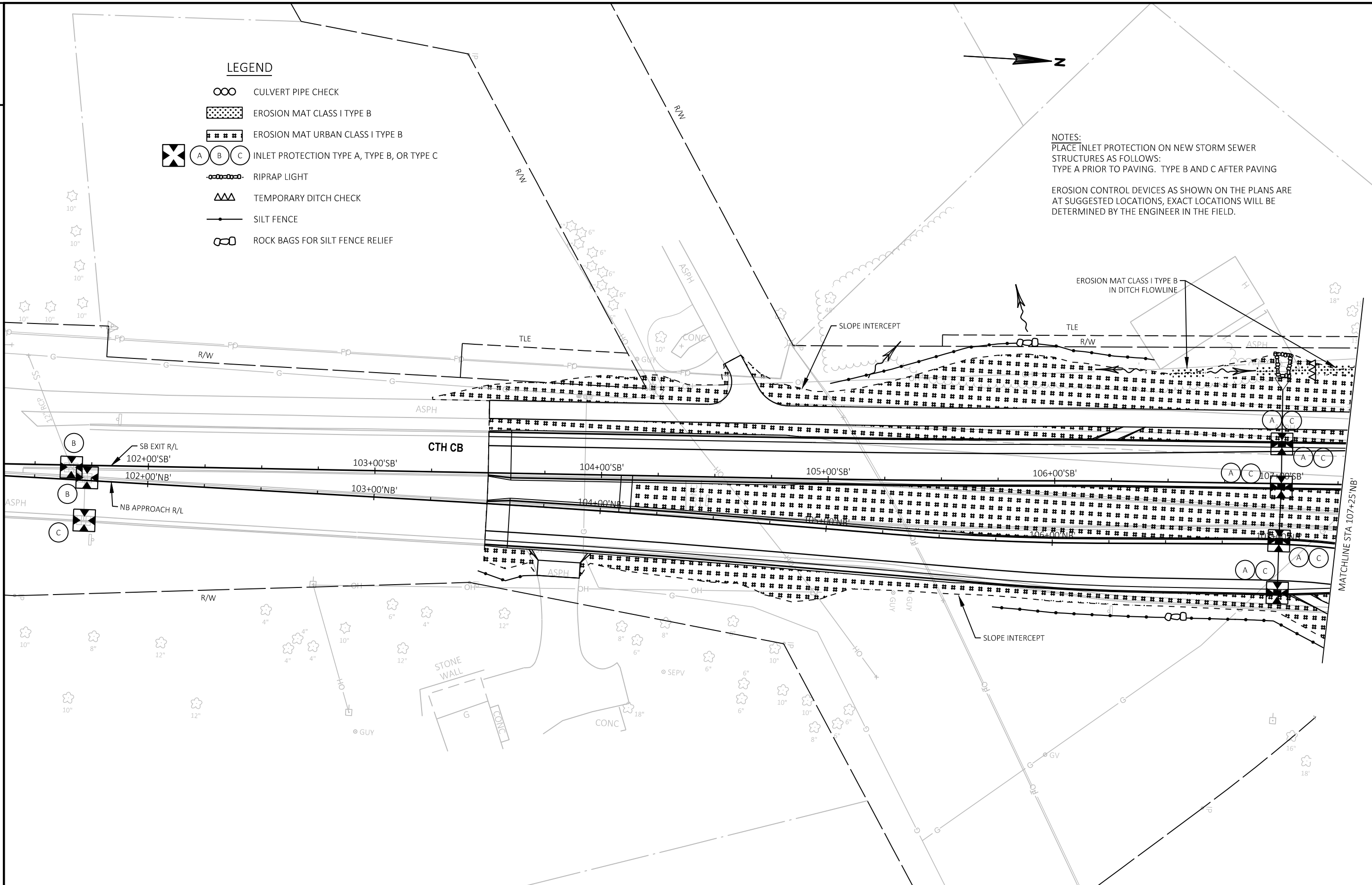
\* TRANSITION CURB AND GETTER FROM CONC C&G 30-INCH TYPE A TO CONC C&G 18-INCH TYPE D REVERSE SLOPE OVER 10 FEET (PAID FOR AS CONC C&G 30-INCH TYPE D)

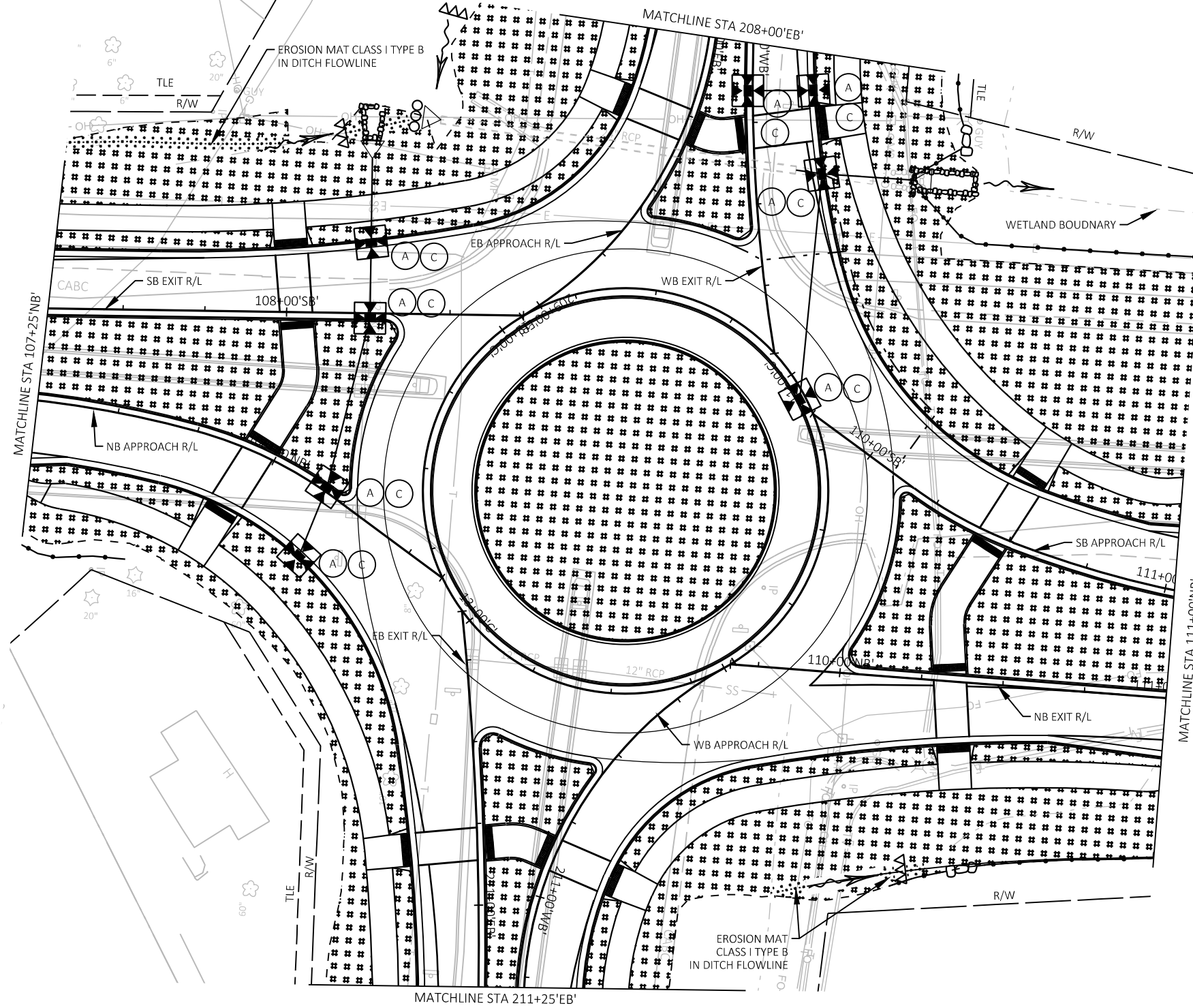
LEGEND

- ∞ CULVERT PIPE CHECK
- ▨ EROSION MAT CLASS I TYPE B
- ▩ EROSION MAT URBAN CLASS I TYPE B
- ⊗ (A) ⊗ (B) ⊗ (C) INLET PROTECTION TYPE A, TYPE B, OR TYPE C
- ⋯ RIPRAP LIGHT
- △△△ TEMPORARY DITCH CHECK
- SILT FENCE
- ⊗ ROCK BAGS FOR SILT FENCE RELIEF

NOTES:  
 PLACE INLET PROTECTION ON NEW STORM SEWER  
 STRUCTURES AS FOLLOWS:  
 TYPE A PRIOR TO PAVING. TYPE B AND C AFTER PAVING

EROSION CONTROL DEVICES AS SHOWN ON THE PLANS ARE  
 AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE  
 DETERMINED BY THE ENGINEER IN THE FIELD.





**LEGEND**

- CULVERT PIPE CHECK
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- INLET PROTECTION TYPE A, TYPE B, OR TYPE C
- RIPRAP LIGHT
- TEMPORARY DITCH CHECK
- SILT FENCE
- ROCK BAGS FOR SILT FENCE RELIEF









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HAZEL STURGIS WETLAND  
MITIGATION SITE

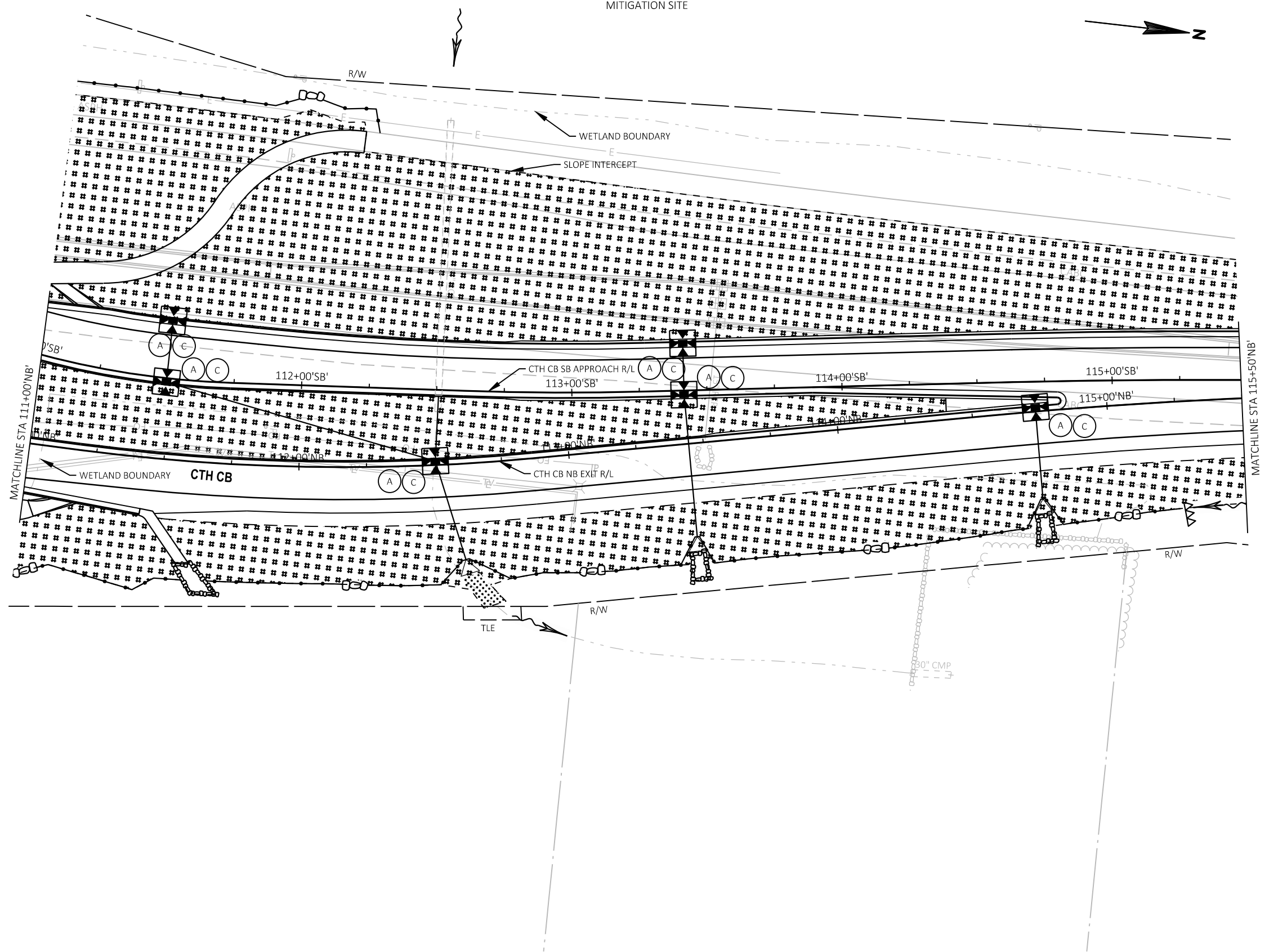


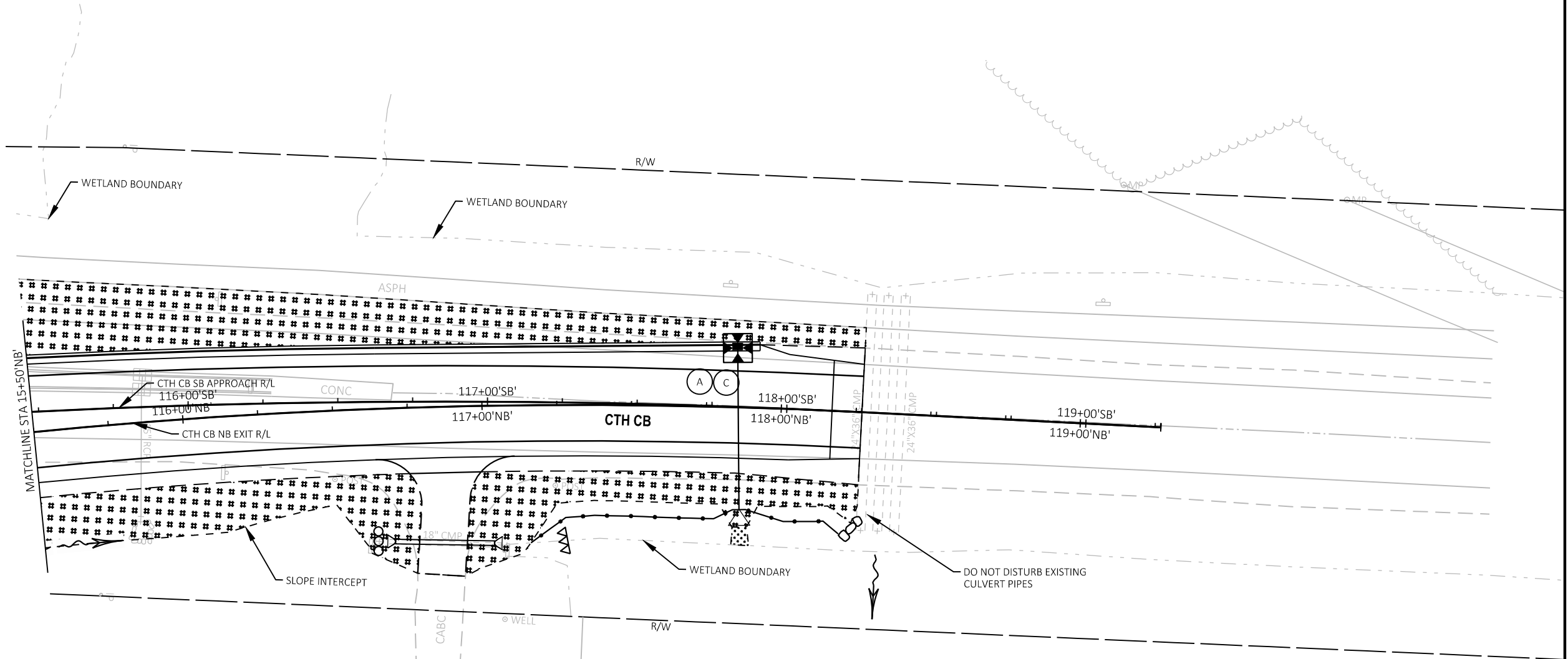
LEGEND

-  CULVERT PIPE CHECK
-  EROSION MAT CLASS I TYPE B
-  EROSION MAT URBAN CLASS I TYPE B
-  INLET PROTECTION TYPE A, TYPE B, OR TYPE C
-  RIPRAP LIGHT
-  TEMPORARY DITCH CHECK
-  SILT FENCE
-  ROCK BAGS FOR SILT FENCE RELIEF

NOTES:  
 PLACE INLET PROTECTION AS FOLLOWS:  
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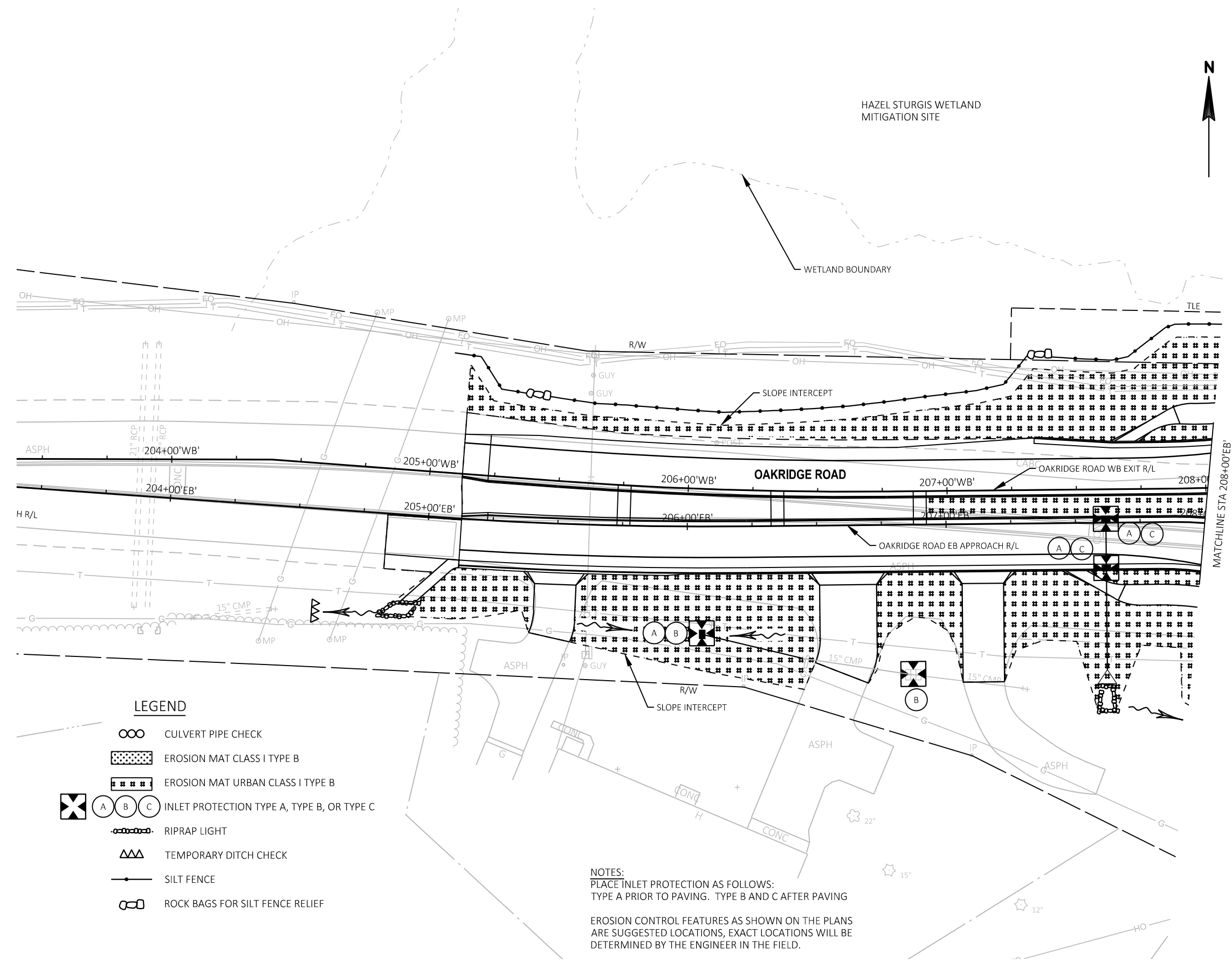
**LEGEND**

- CULVERT PIPE CHECK
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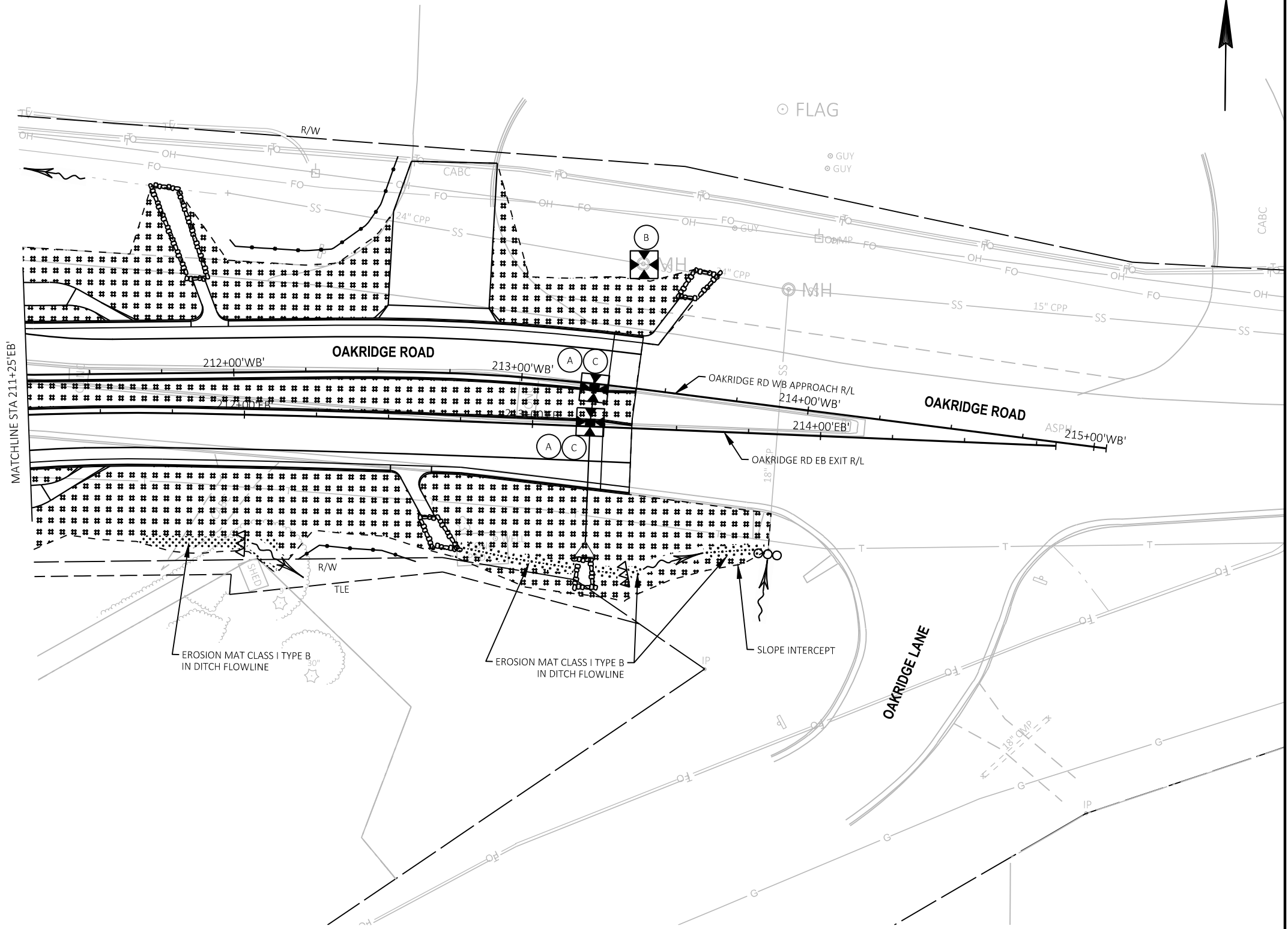


**LEGEND**

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LEGEND

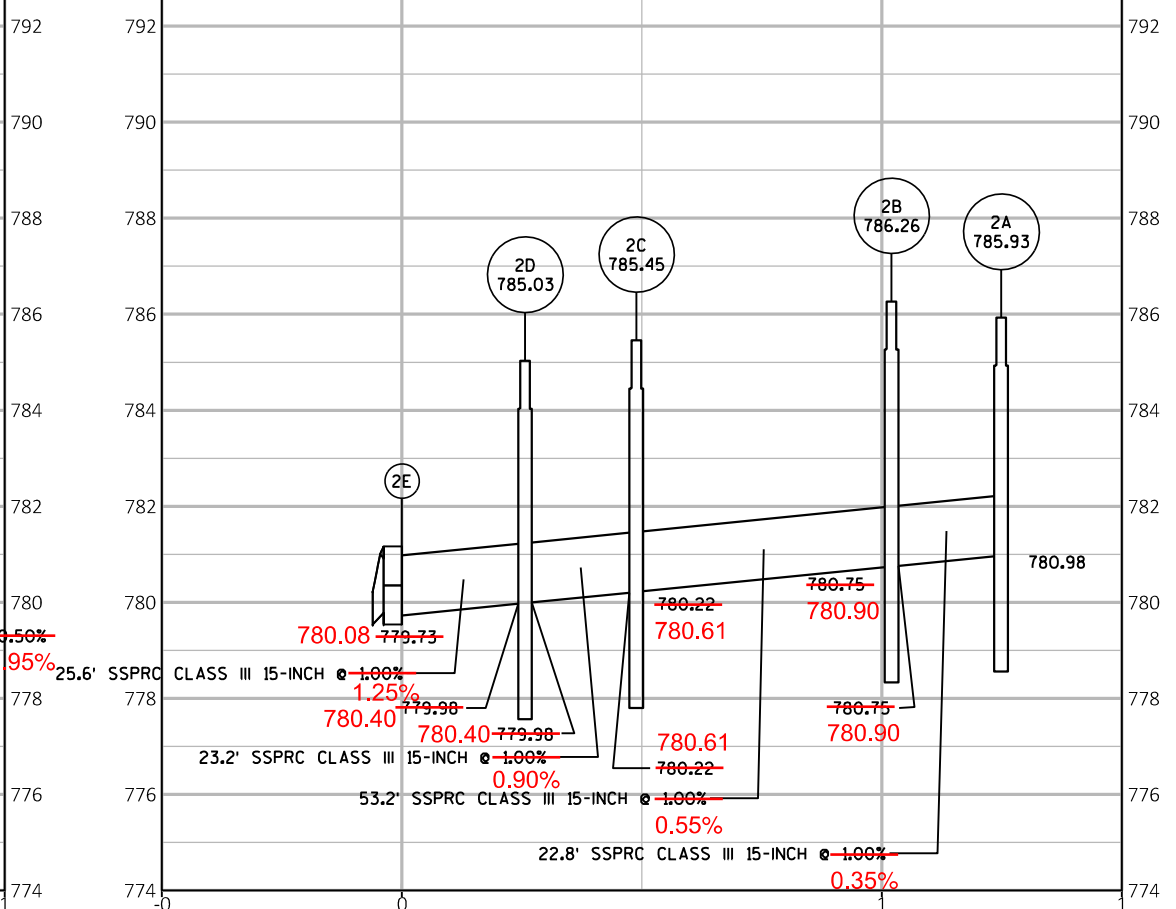
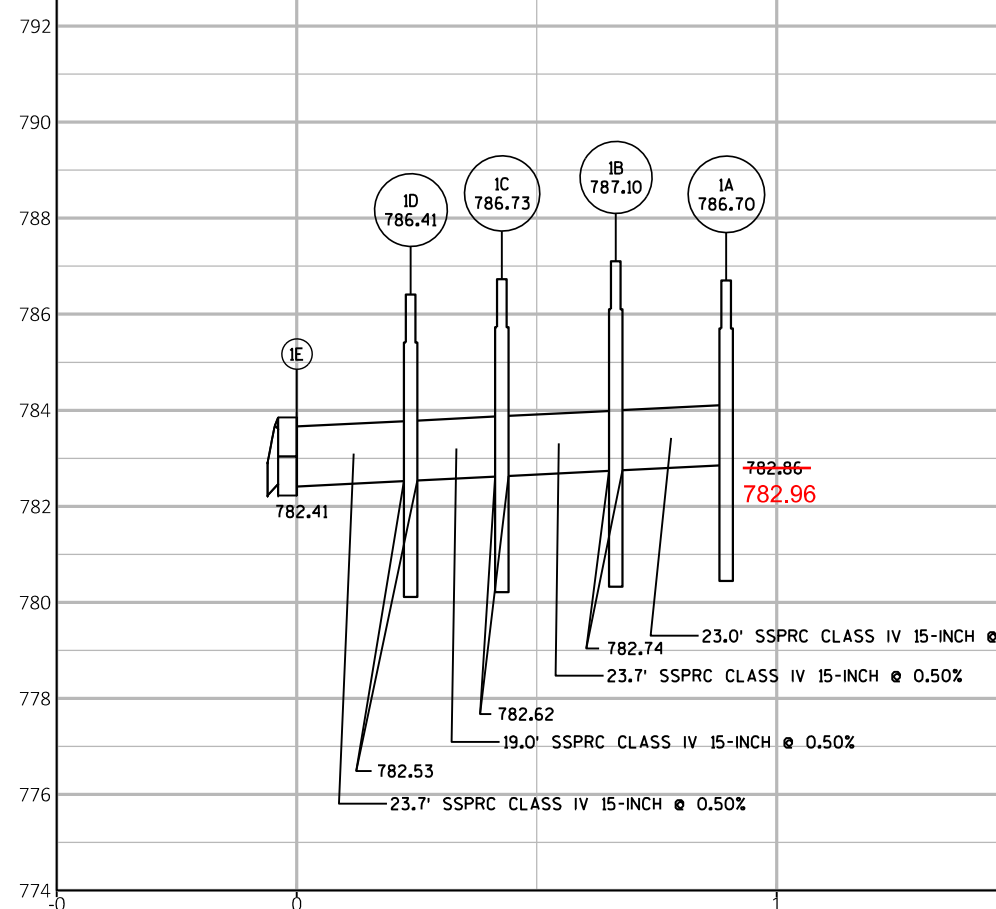
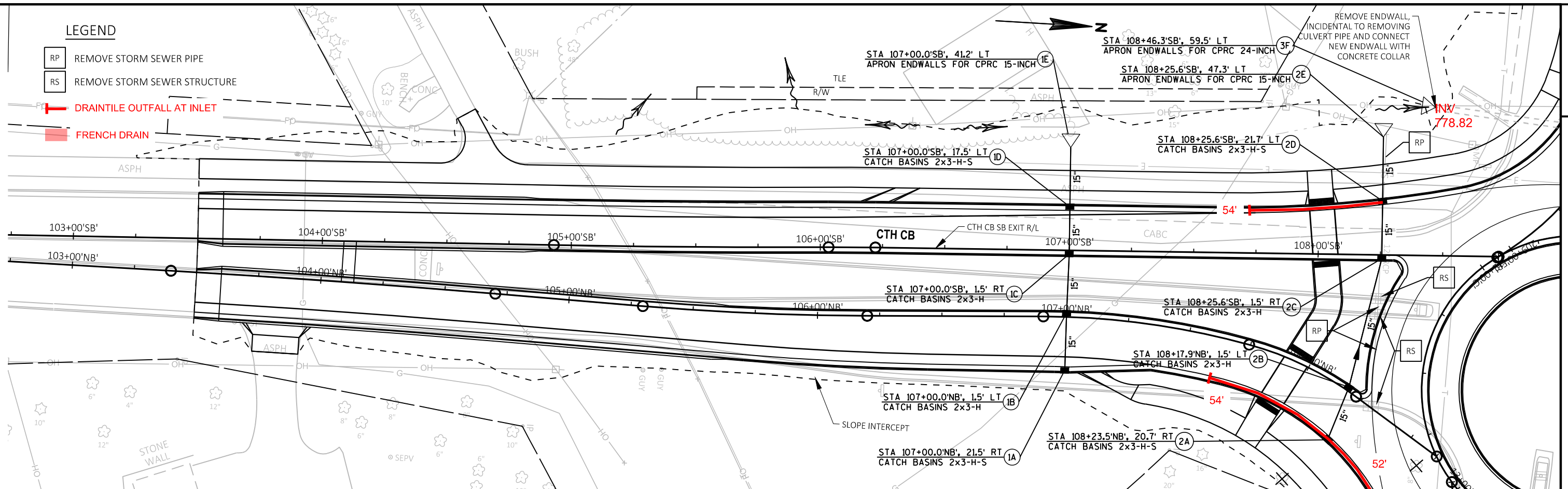
- CULVERT PIPE CHECK
- EROSION MAT CLASS I TYPE B
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- RIPRAP LIGHT
- TEMPORARY DITCH CHECK
- SILT FENCE
- ROCK BAGS FOR SILT FENCE RELIEF

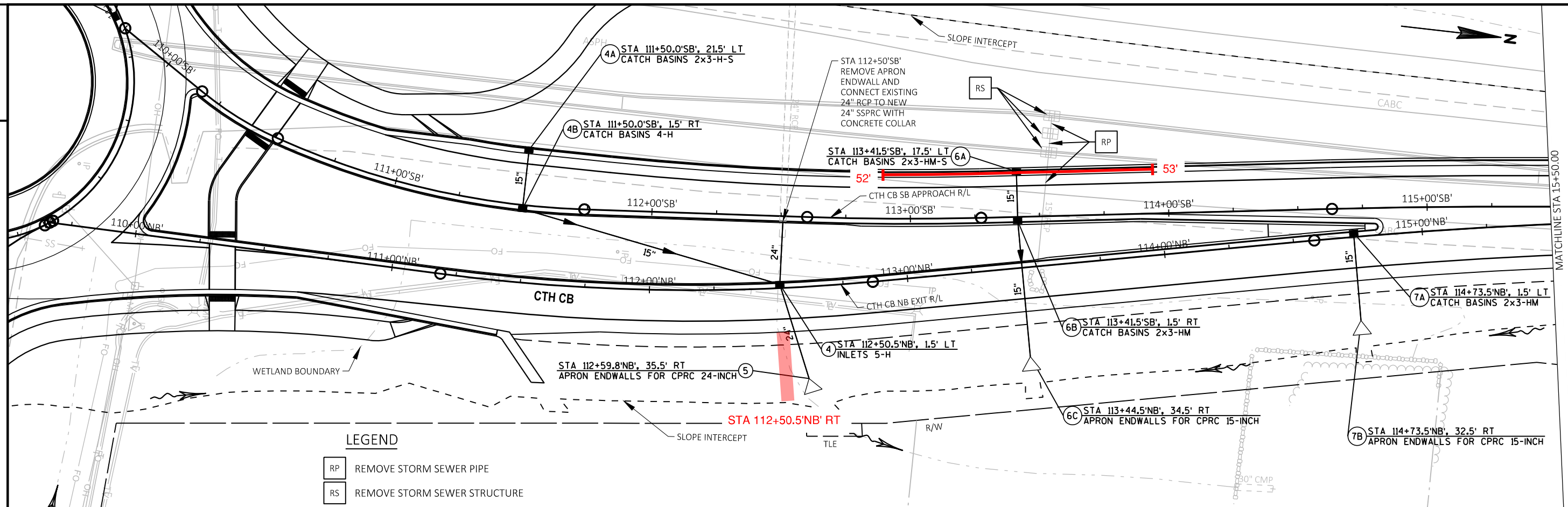
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LEGEND

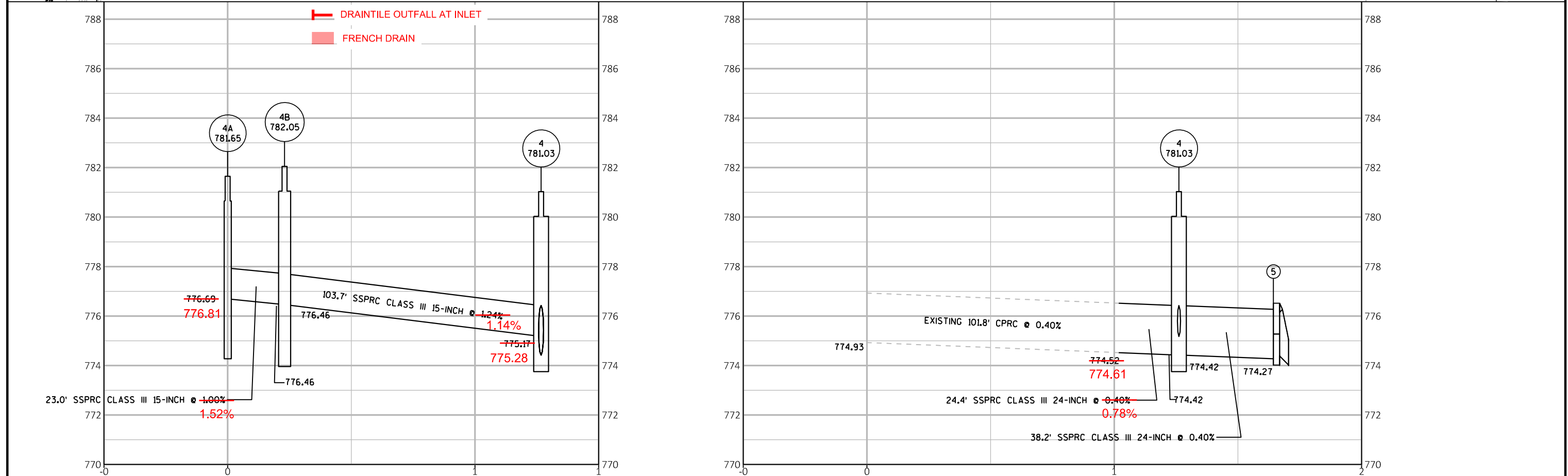
- RP REMOVE STORM SEWER PIPE
- RS REMOVE STORM SEWER STRUCTURE
- DRAINTILE OUTFALL AT INLET
- FRENCH DRAIN

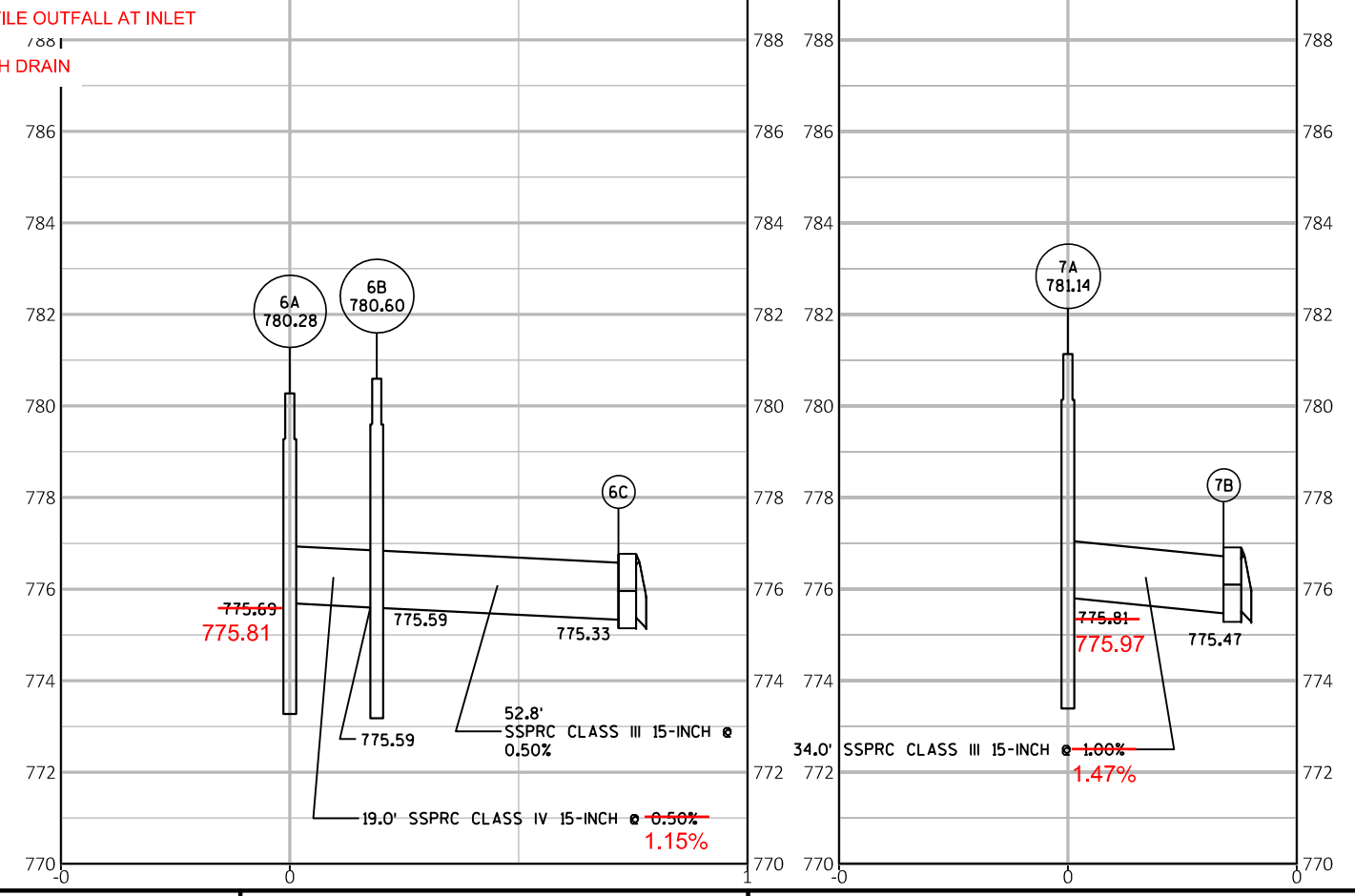
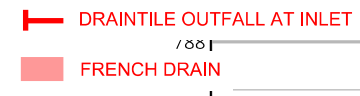
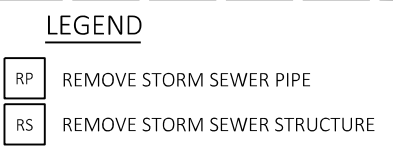
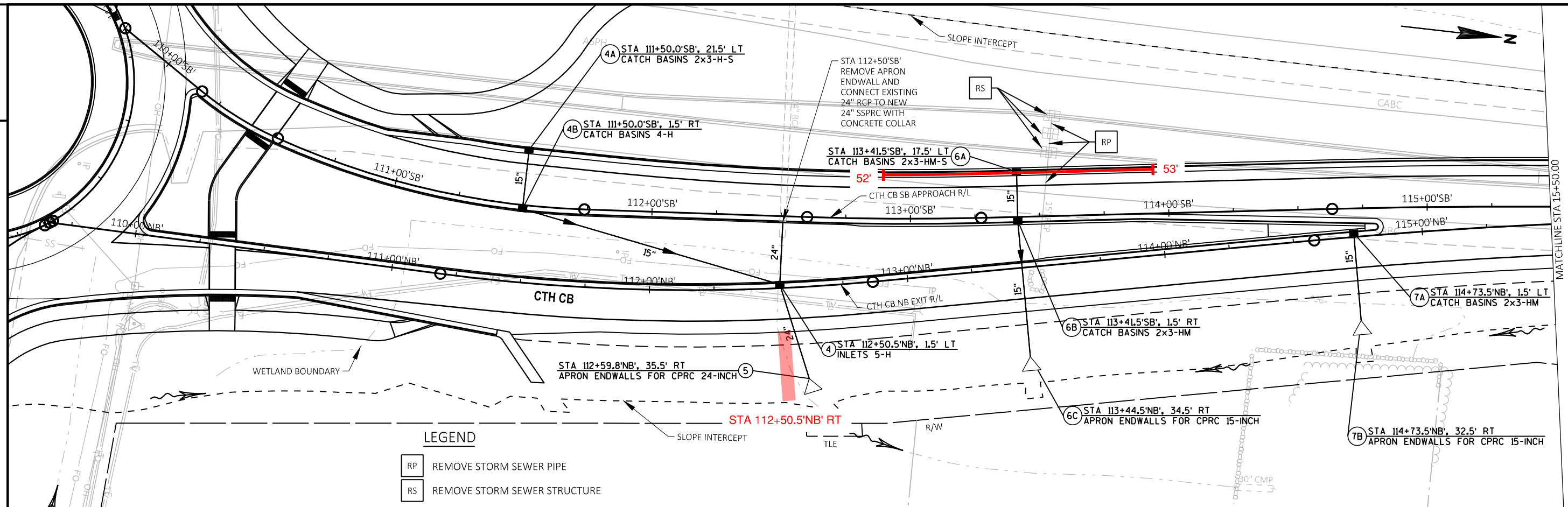




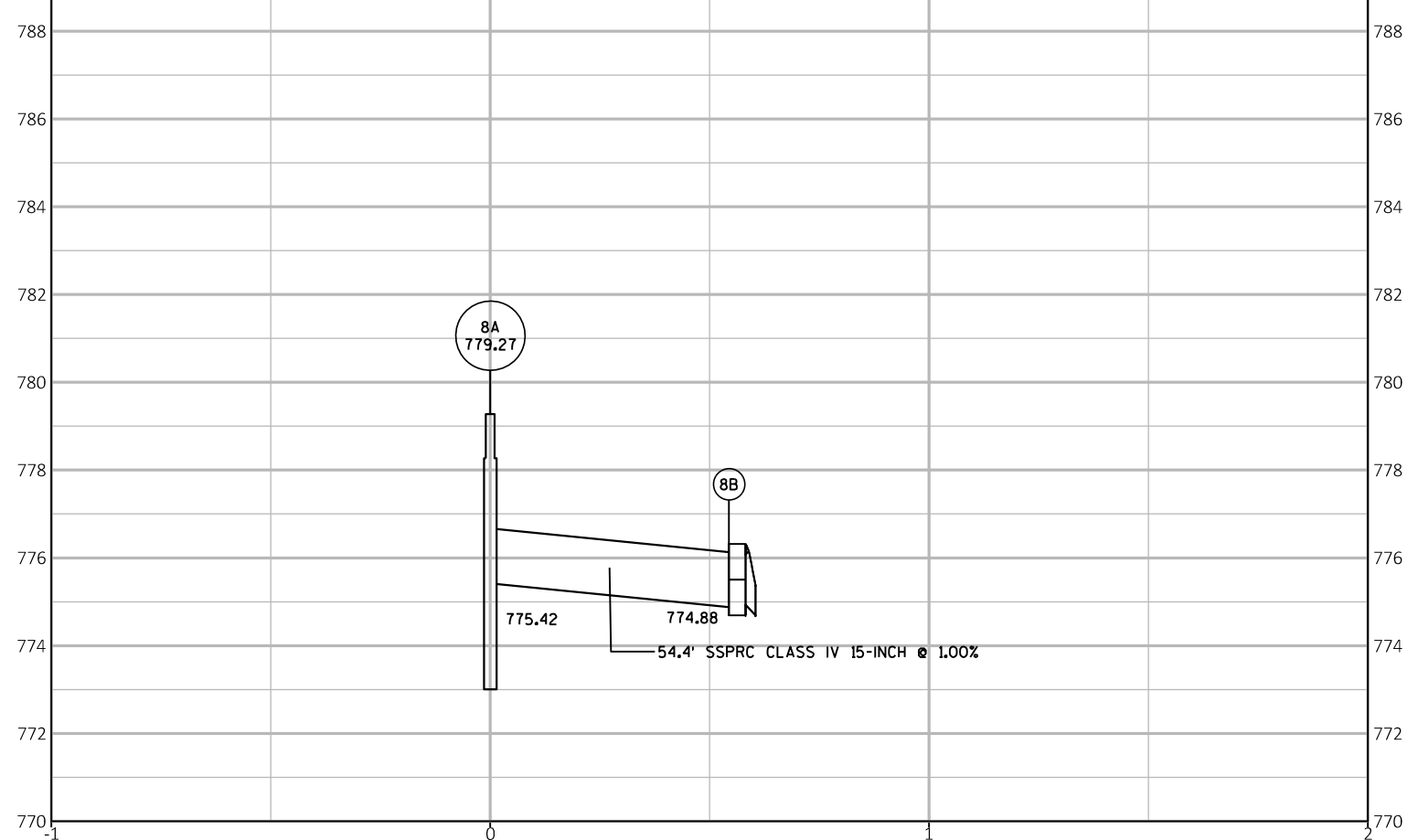
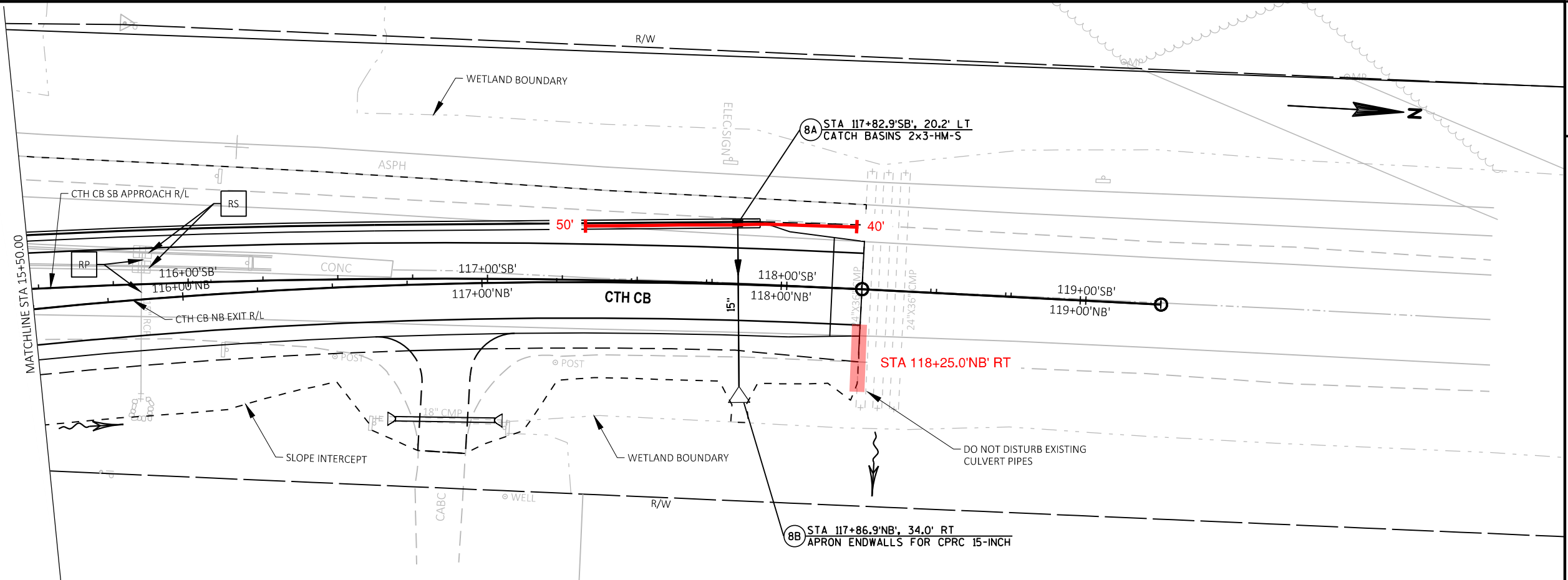
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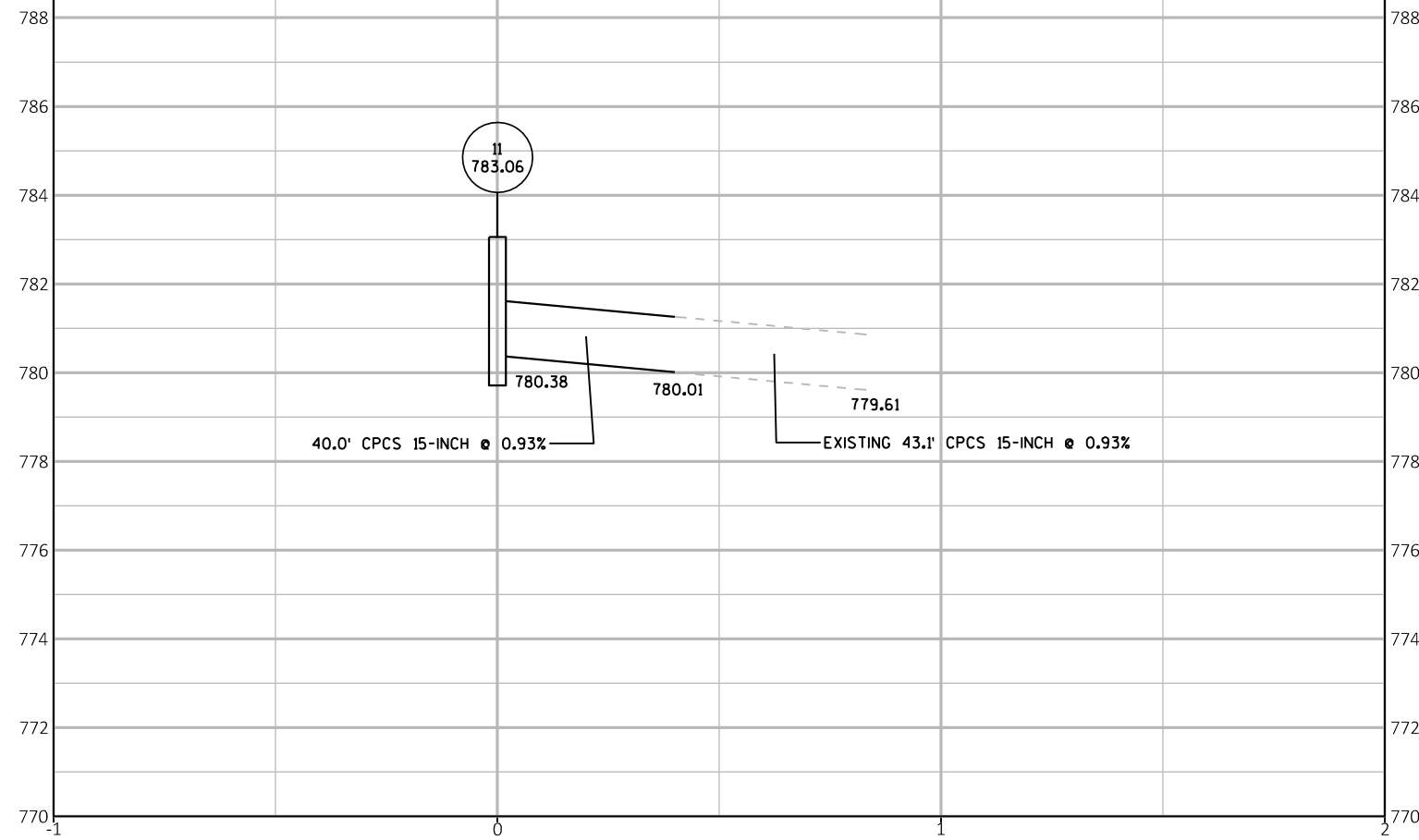
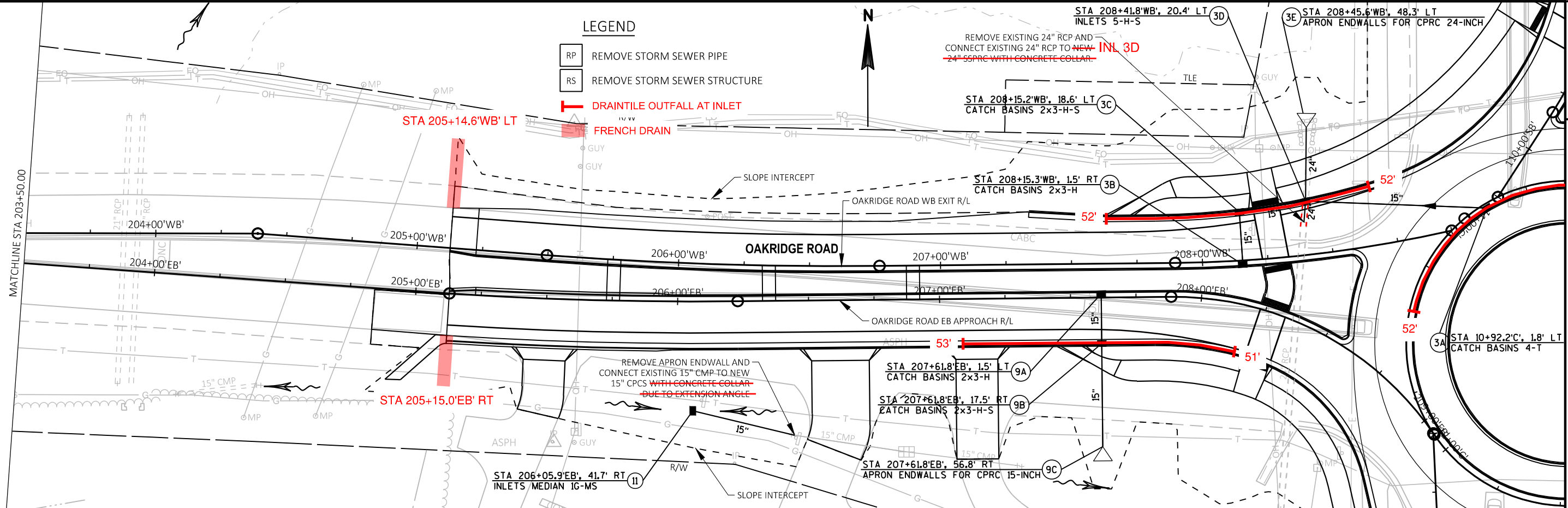
- RP REMOVE STORM SEWER PIPE
- RS REMOVE STORM SEWER STRUCTURE

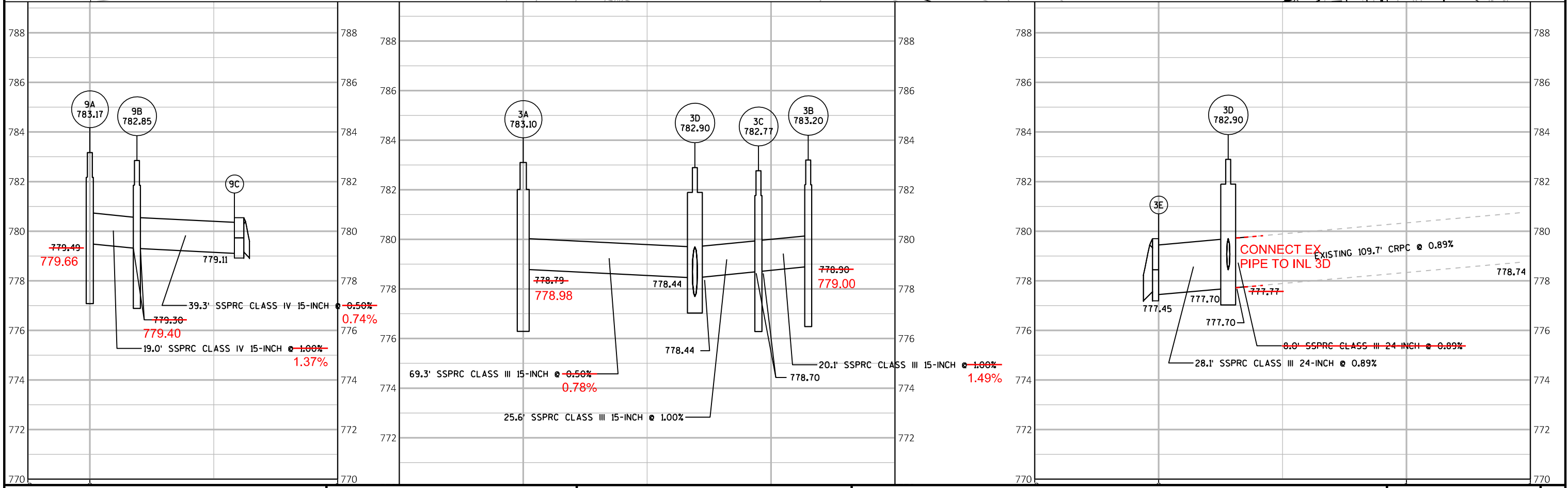
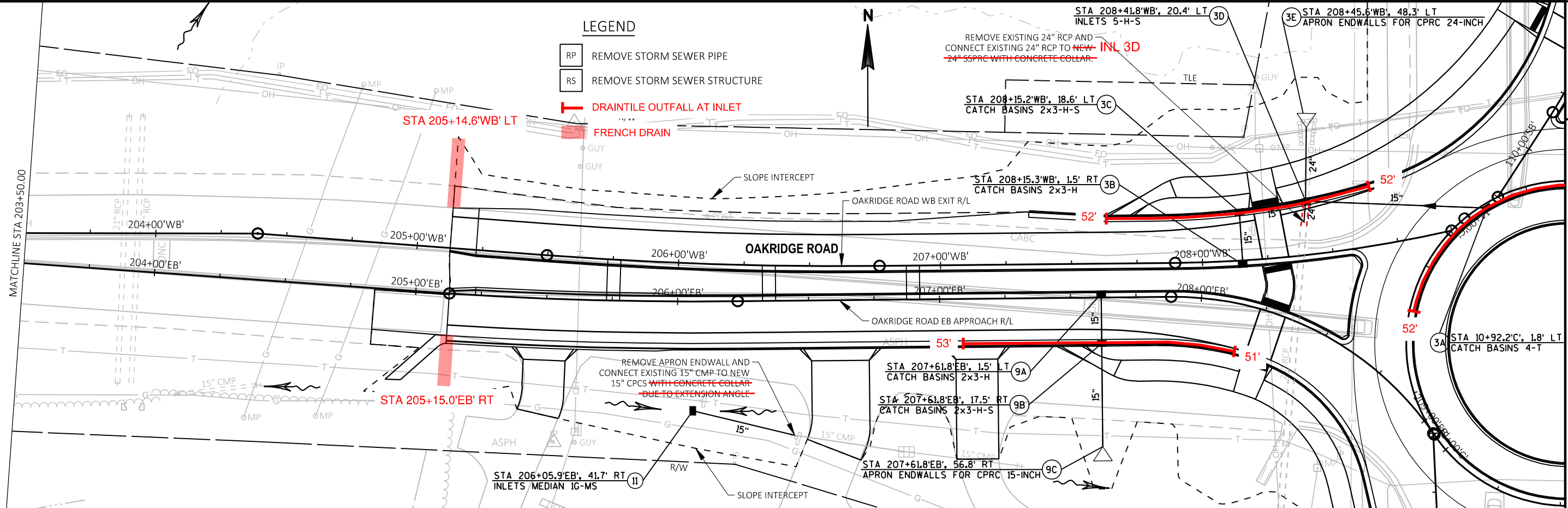




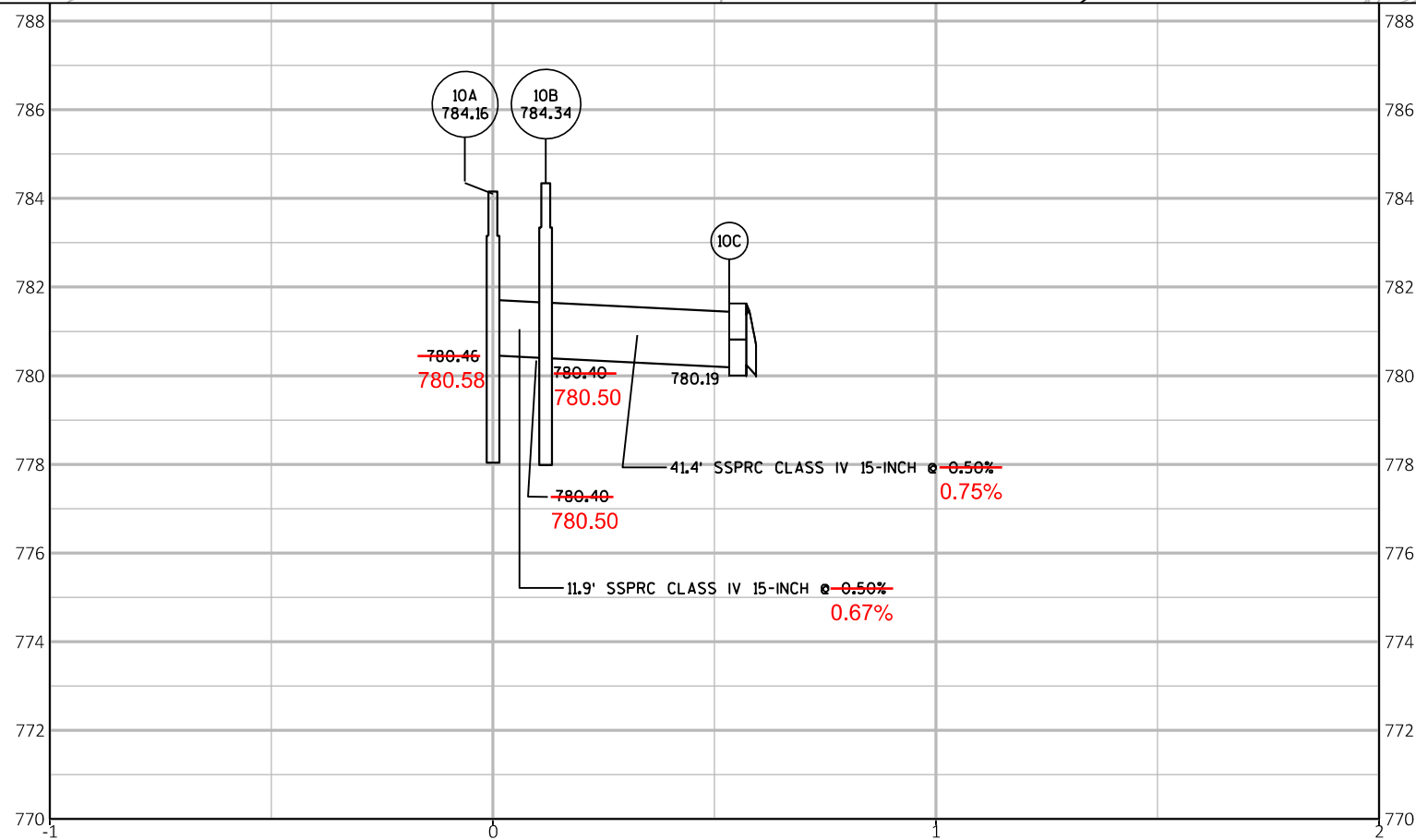
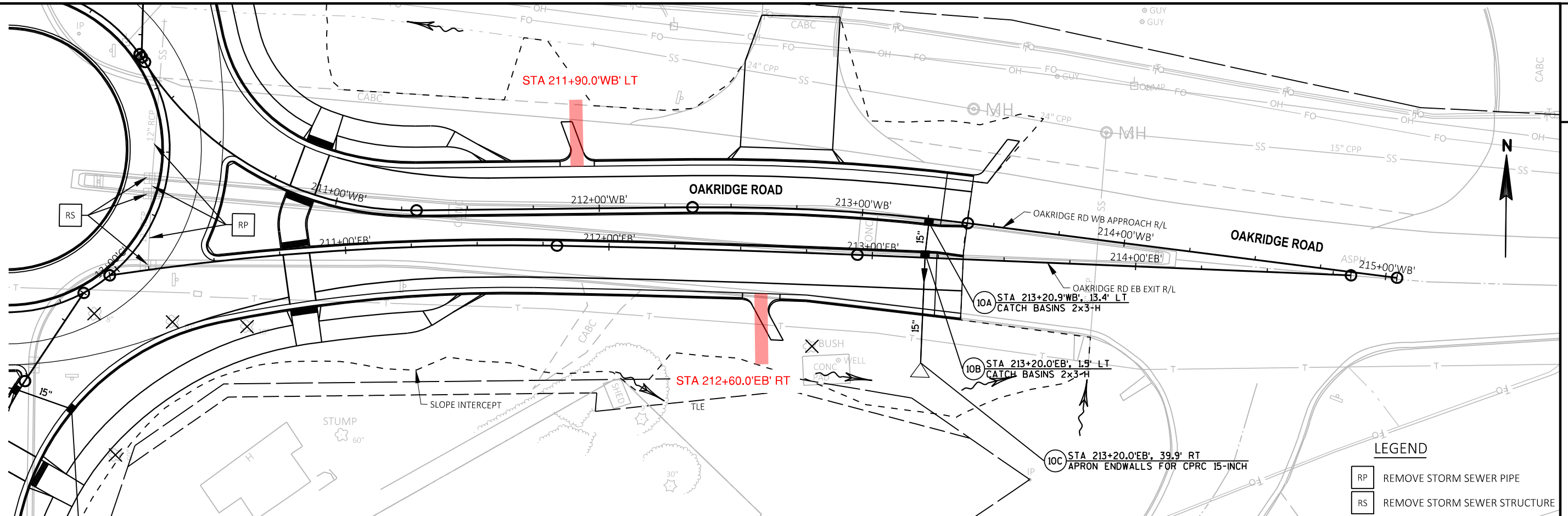
- LEGEND**
- RP REMOVE STORM SEWER PIPE
  - RS REMOVE STORM SEWER STRUCTURE
  - DRAINTILE OUTFALL AT INLET
  - FRENCH DRAIN












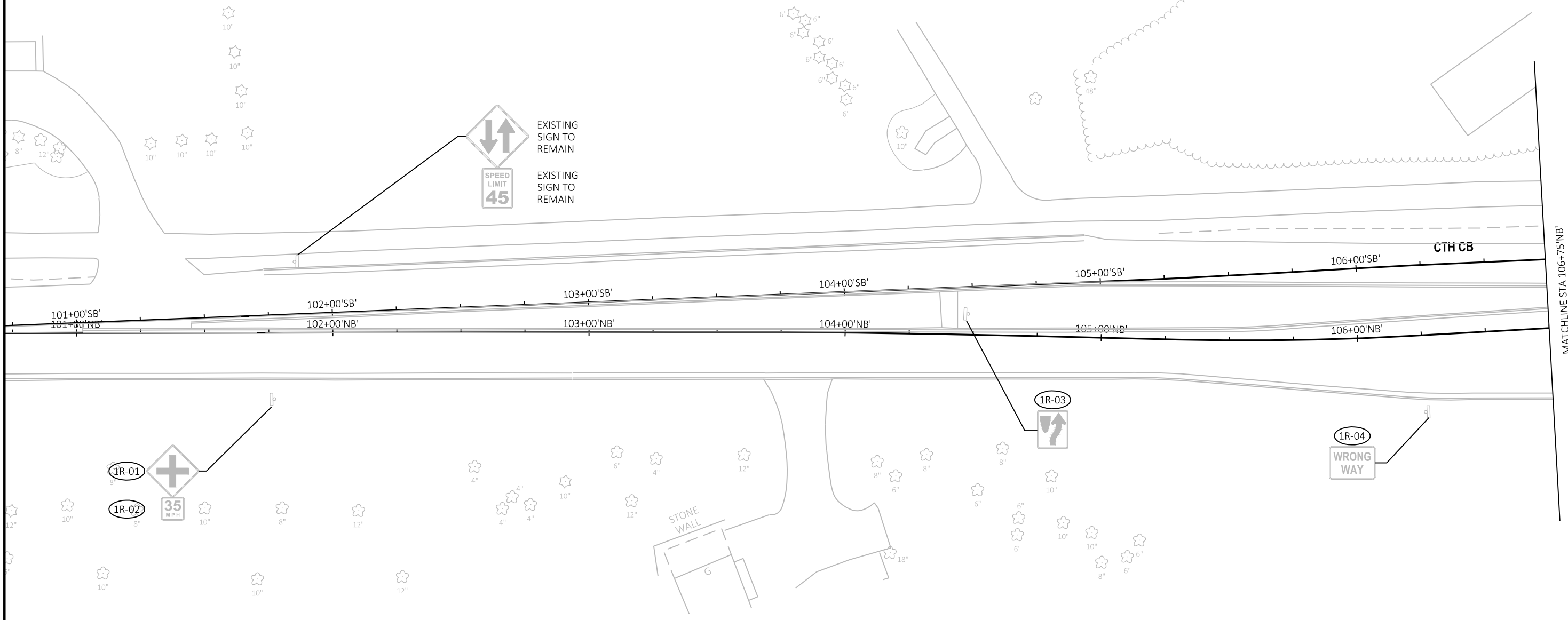
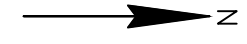


**LEGEND**

- RP REMOVE STORM SEWER PIPE
- RS REMOVE STORM SEWER STRUCTURE
- FRENCH DRAIN

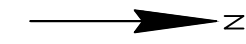
**SIGN REMOVAL LEGEND**

-  EXISTING SIGN(S) MOUNTED ON WOOD POST(S)
-  SIGN REMOVAL SIGN NUMBER
-  MOVING SIGN NUMBER



MATCHLINE STA 106+75'NB'

MATCHLINE STA 207+50'EB'



**SIGN REMOVAL LEGEND**

EXISTING SIGN(S) MOUNTED ON WOOD POST(S)

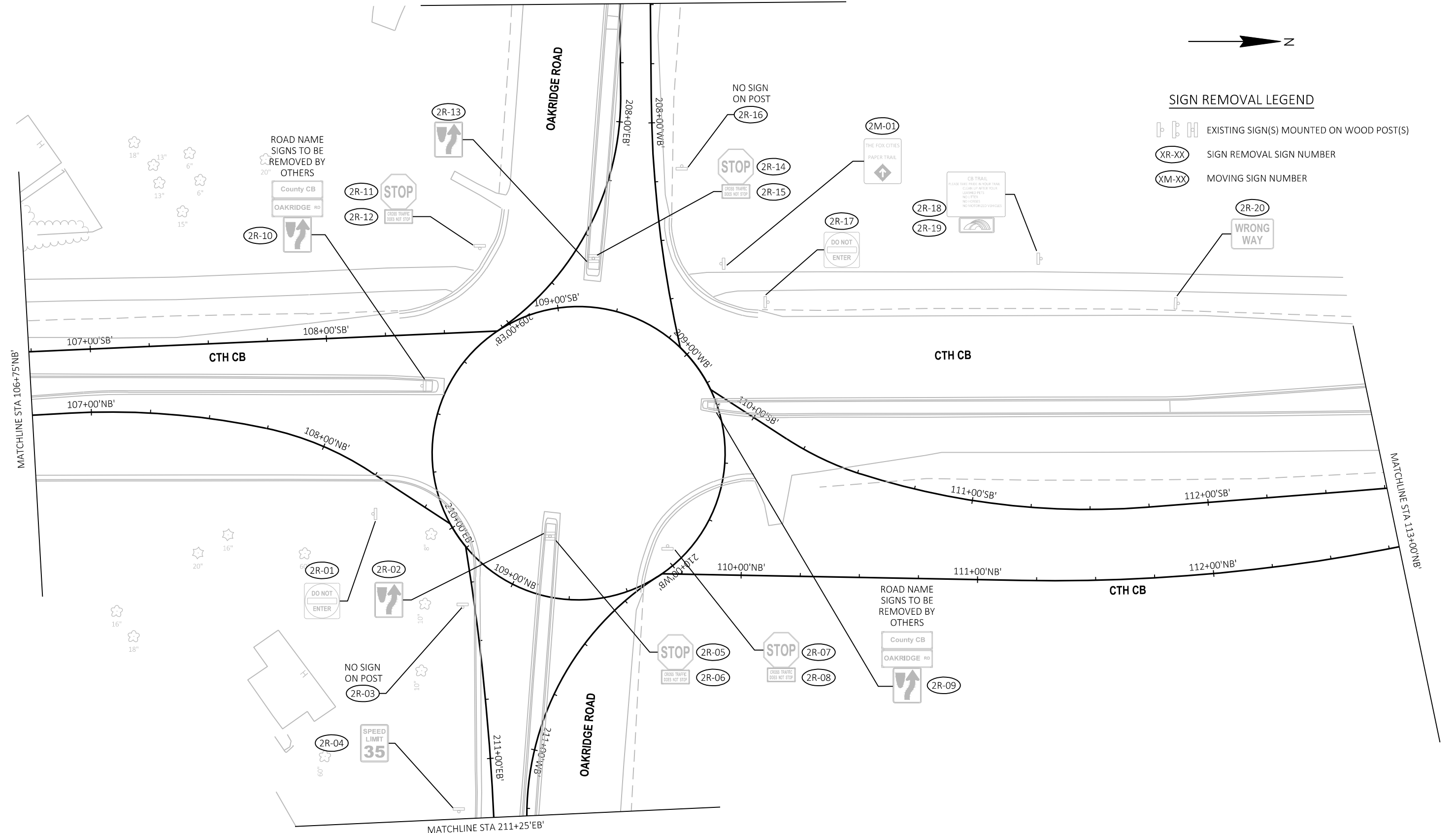
SIGN REMOVAL SIGN NUMBER

MOVING SIGN NUMBER




MATCHLINE STA 106+75'NB'

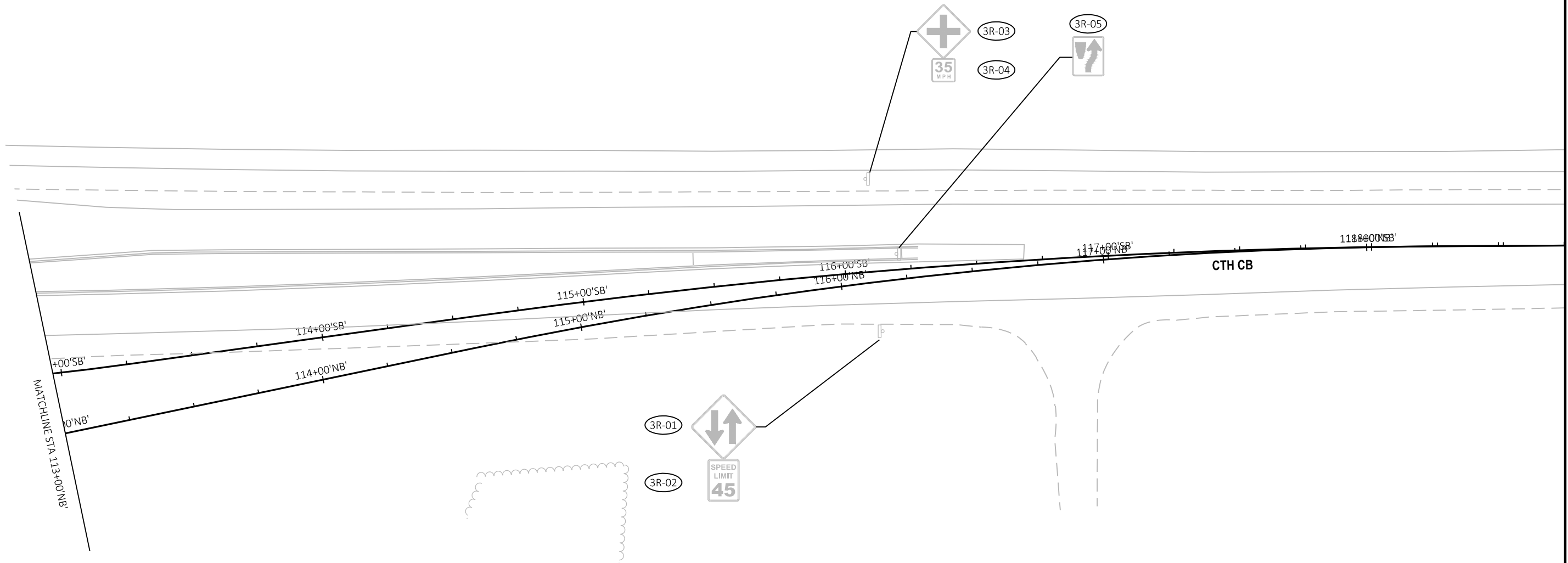
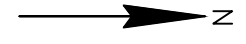
MATCHLINE STA 113+00'NB'

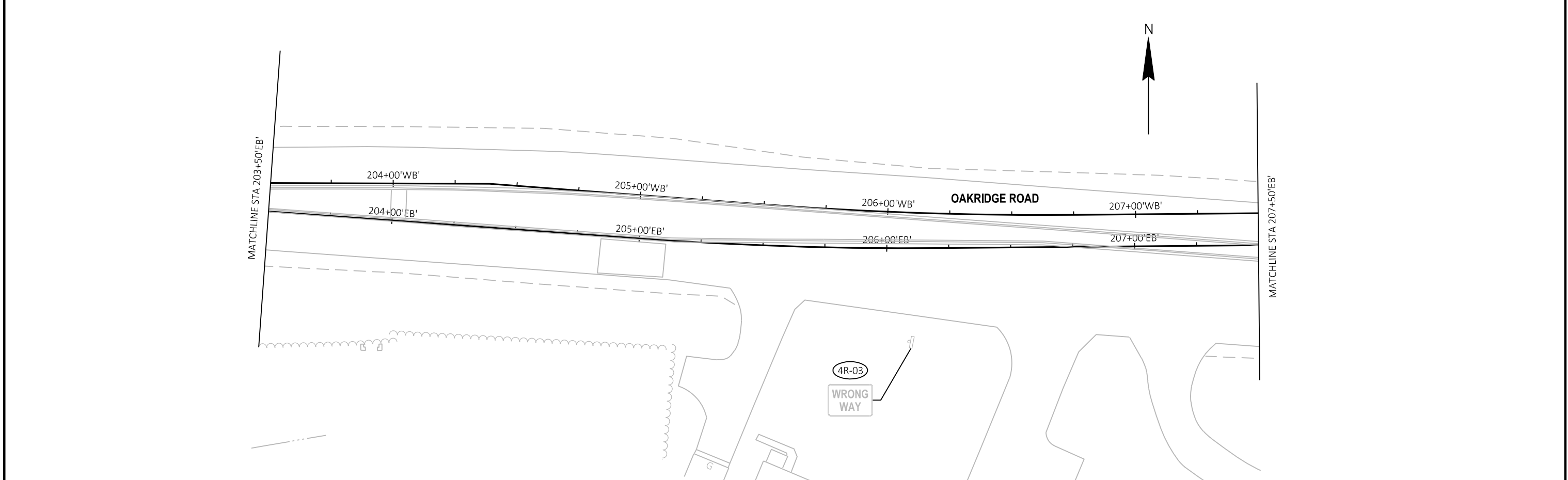
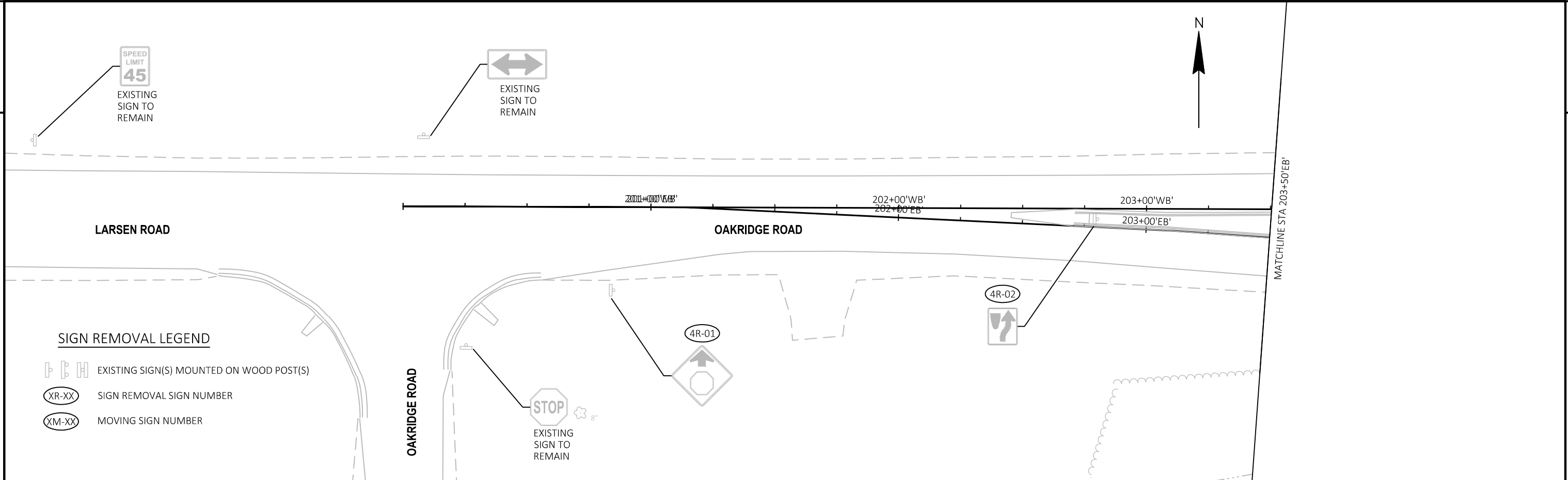
MATCHLINE STA 211+25'EB'



SIGN REMOVAL LEGEND




-  EXISTING SIGN(S) MOUNTED ON WOOD POST(S)
-  SIGN REMOVAL SIGN NUMBER
-  MOVING SIGN NUMBER

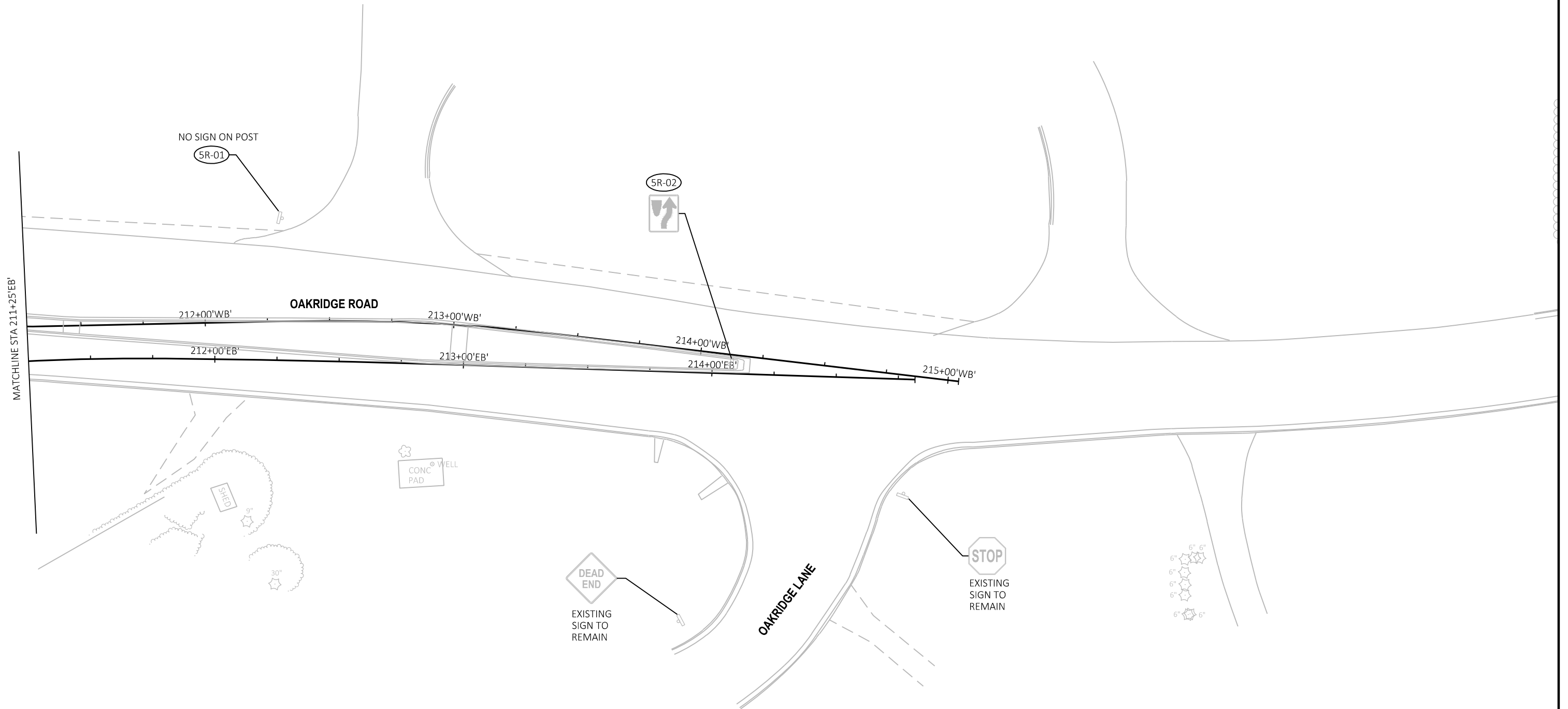










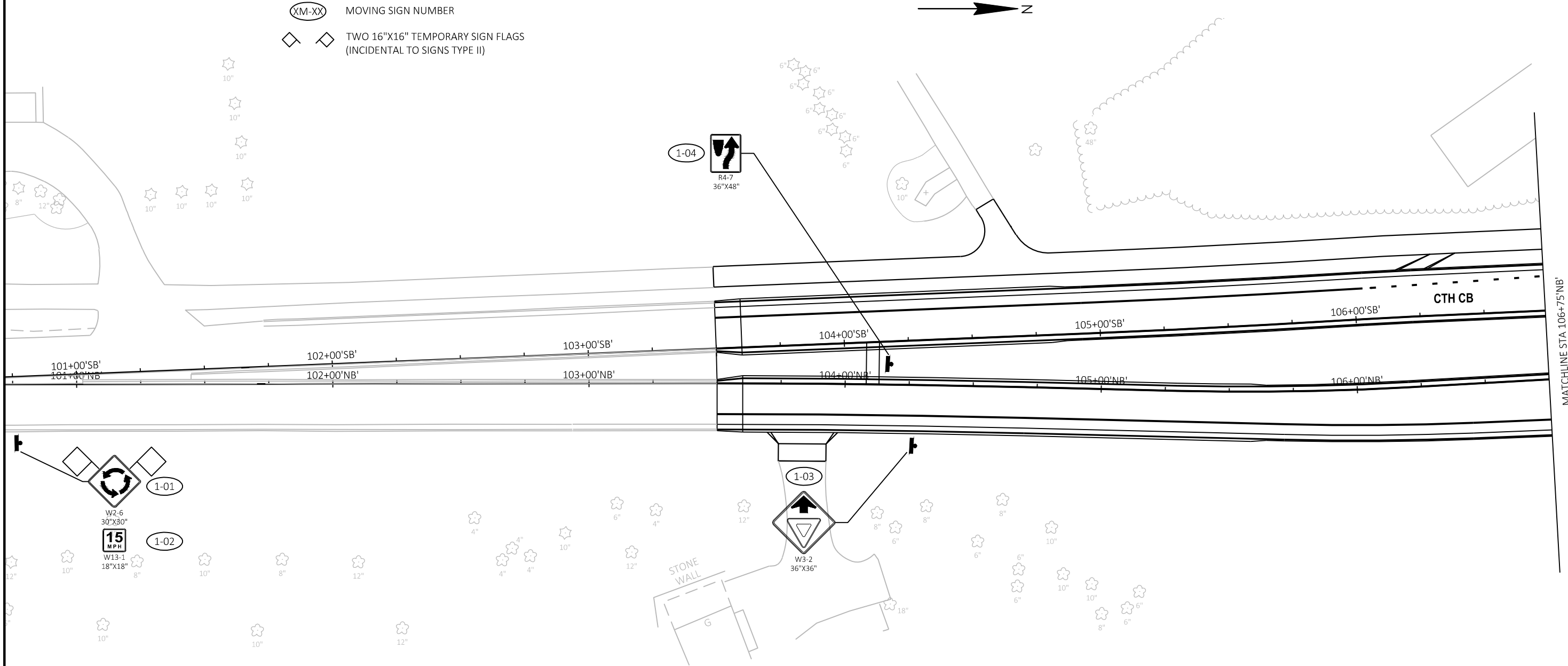
SIGN REMOVAL LEGEND

-  EXISTING SIGN(S) MOUNTED ON WOOD POST(S)
-  SIGN REMOVAL SIGN NUMBER
-  MOVING SIGN NUMBER



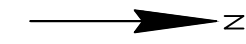
PERMANENT SIGNING LEGEND

-  PROPOSED SIGN MOUNTED ON WOOD POST(S)
-  NEW SIGN NUMBER
-  MOVING SIGN NUMBER
-  TWO 16"X16" TEMPORARY SIGN FLAGS (INCIDENTAL TO SIGNS TYPE II)



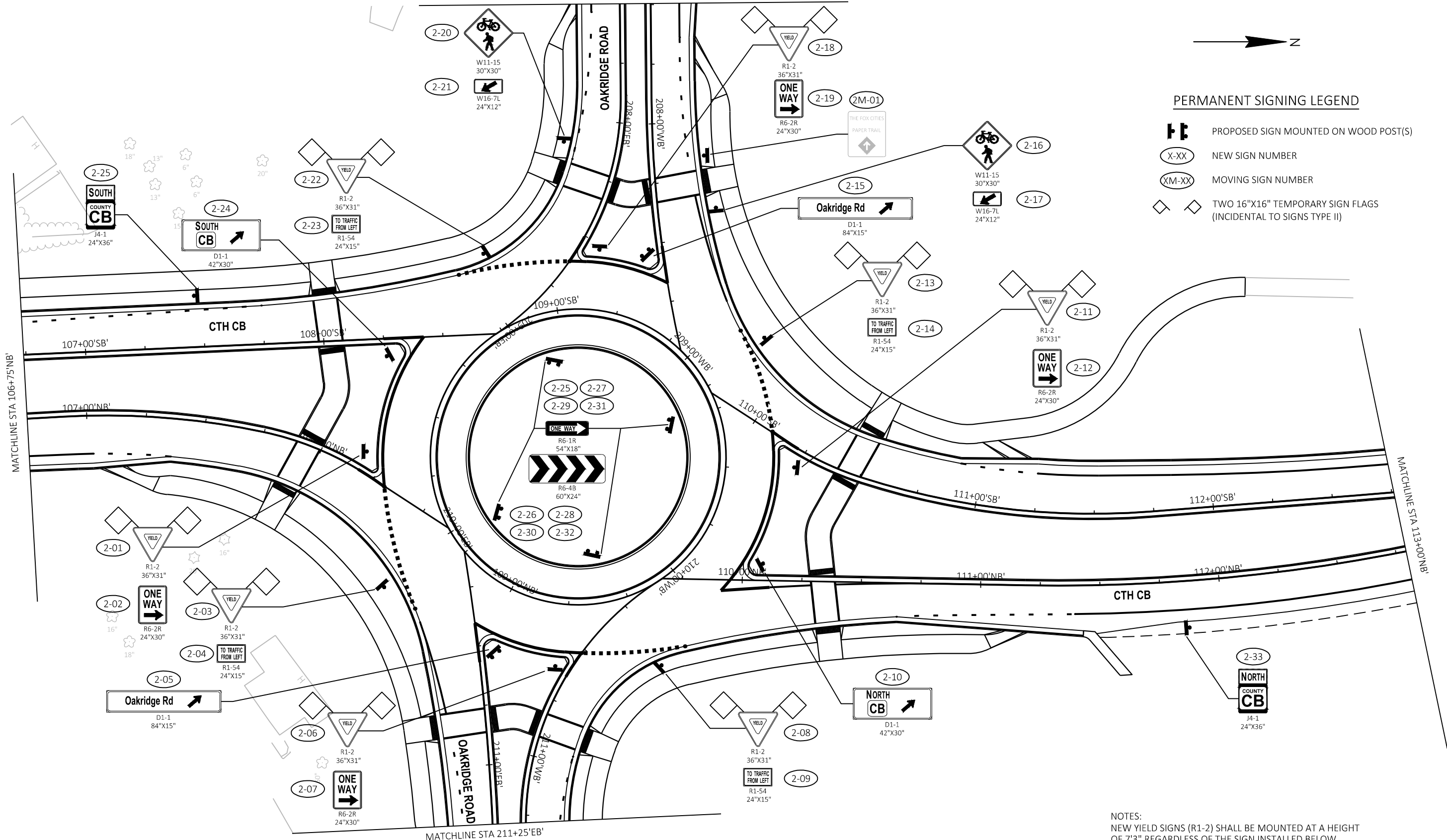
MATCHLINE STA. 106+75' NB'

MATCHLINE STA 207+50'EB'



PERMANENT SIGNING LEGEND





- PROPOSED SIGN MOUNTED ON WOOD POST(S)
- NEW SIGN NUMBER
- MOVING SIGN NUMBER
- TWO 16"X16" TEMPORARY SIGN FLAGS (INCIDENTAL TO SIGNS TYPE II)

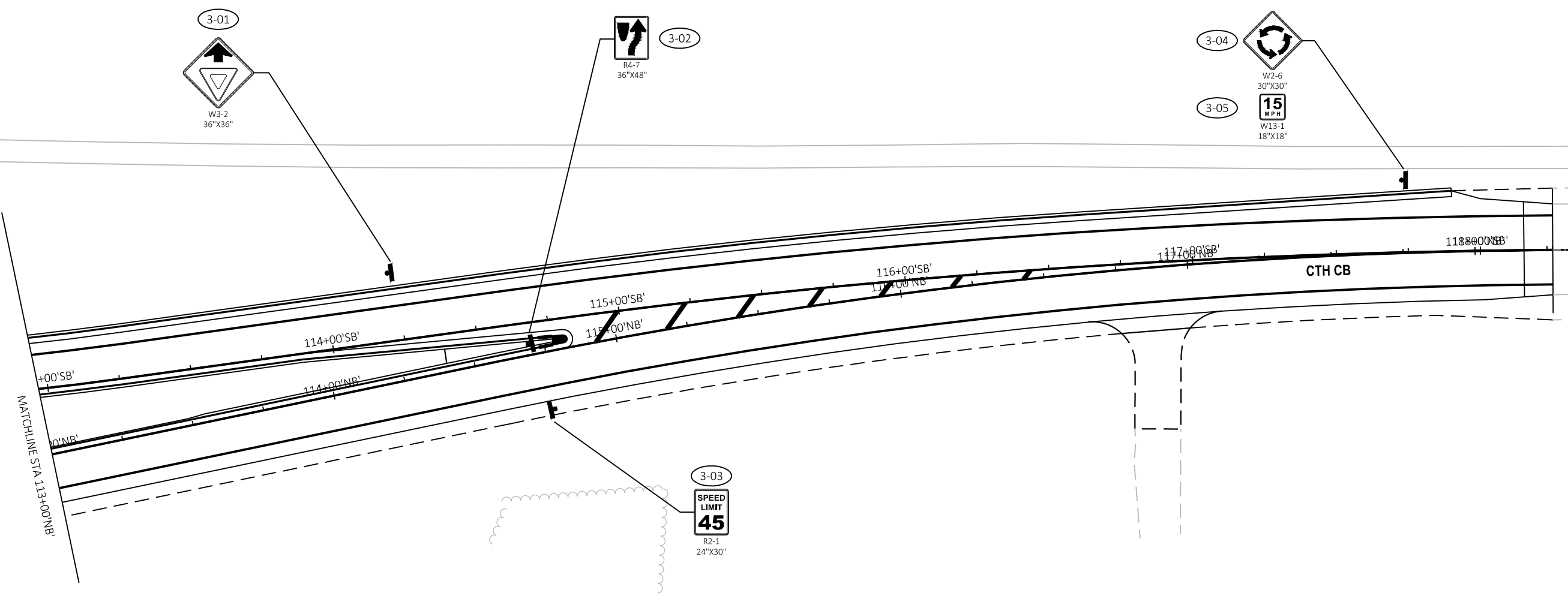
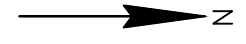


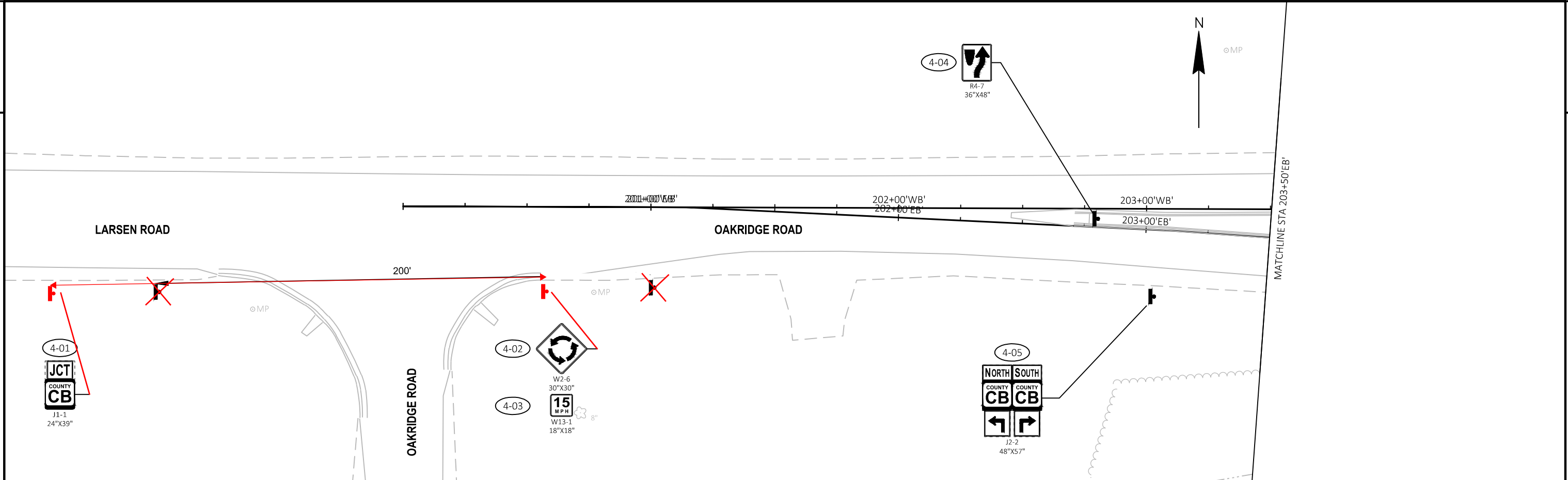
NOTES:  
 NEW YIELD SIGNS (R1-2) SHALL BE MOUNTED AT A HEIGHT OF 7'3" REGARDLESS OF THE SIGN INSTALLED BELOW.



PERMANENT SIGNING LEGEND

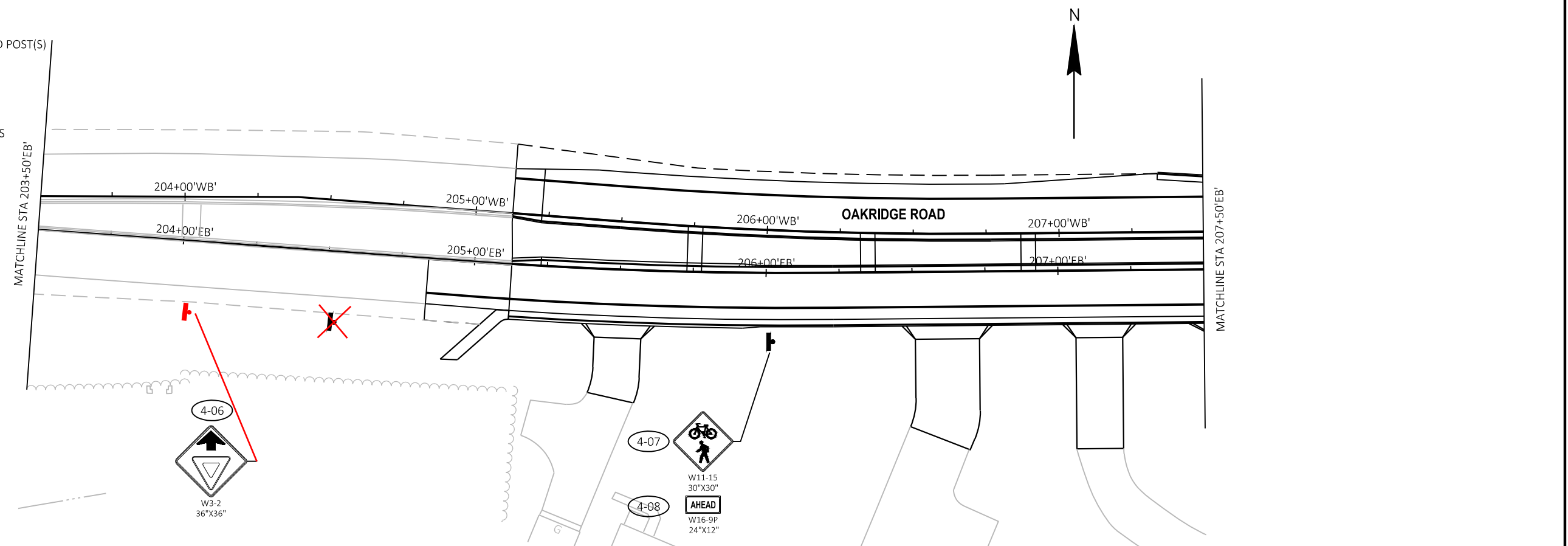
-  PROPOSED SIGN MOUNTED ON WOOD POST(S)
-  NEW SIGN NUMBER
-  MOVING SIGN NUMBER
-  TWO 16"x16" TEMPORARY SIGN FLAGS (INCIDENTAL TO SIGNS TYPE II)





PERMANENT SIGNING LEGEND

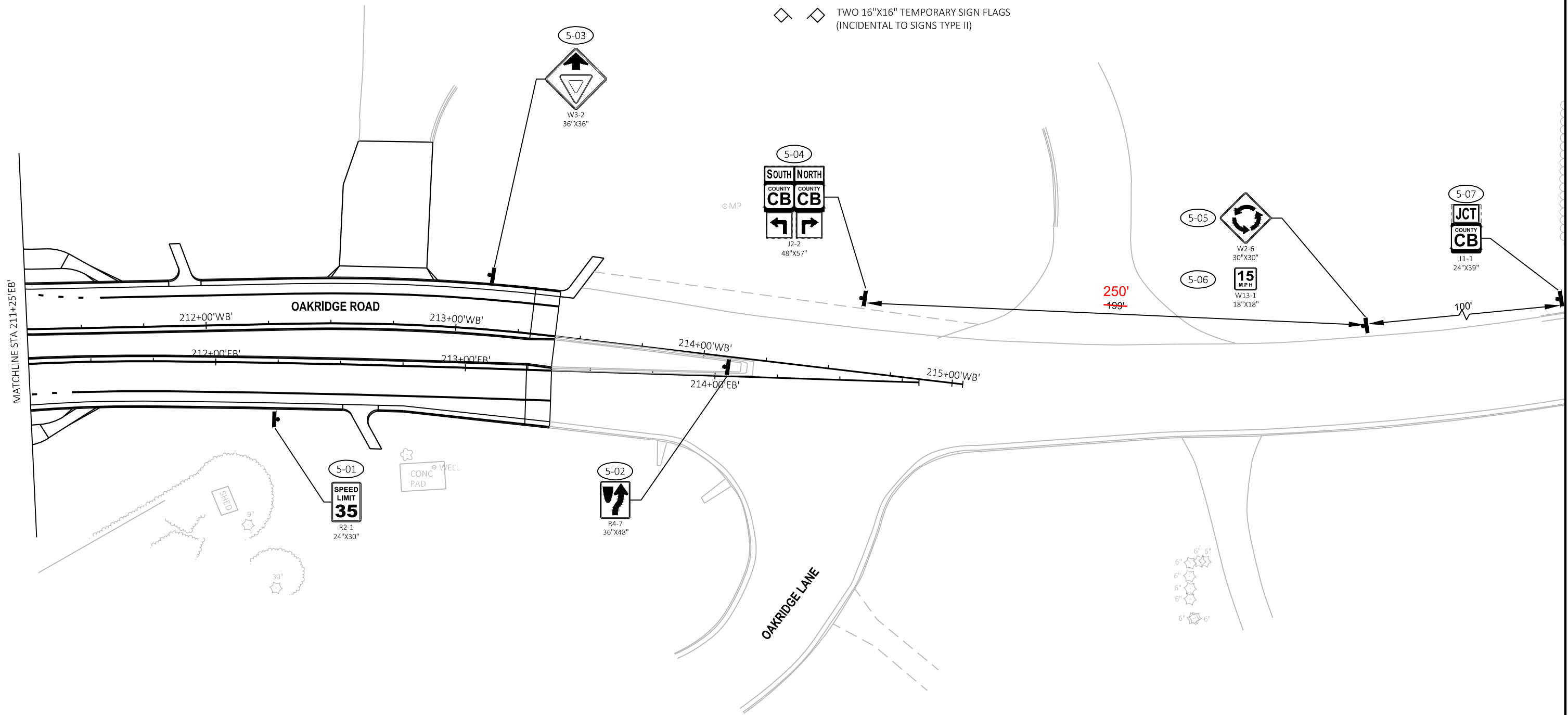
- PROPOSED SIGN MOUNTED ON WOOD POST(S)
- NEW SIGN NUMBER
- MOVING SIGN NUMBER
- TWO 16"x16" TEMPORARY SIGN FLAGS (INCIDENTAL TO SIGNS TYPE II)





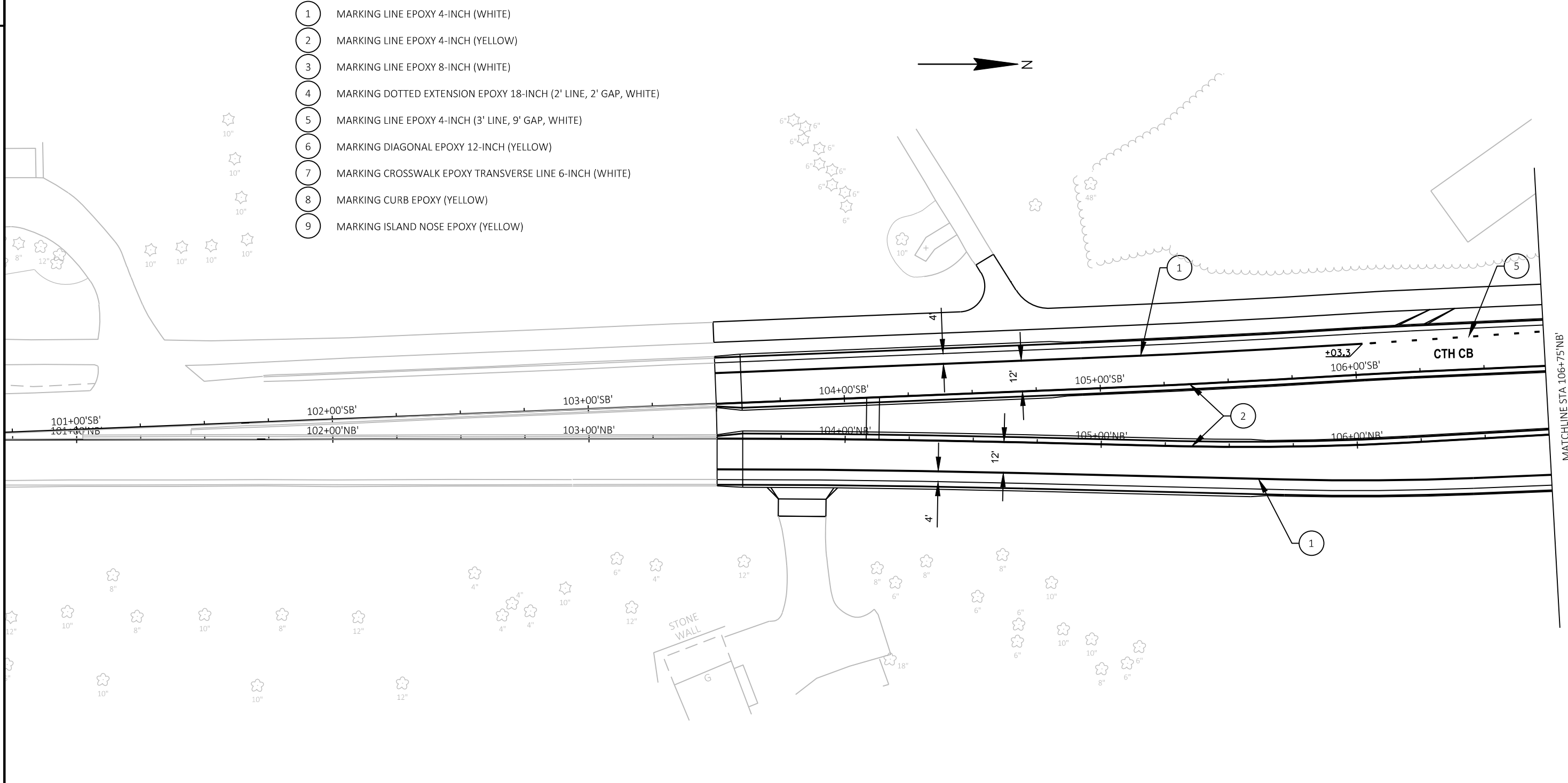
PERMANENT SIGNING LEGEND

- PROPOSED SIGN MOUNTED ON WOOD POST(S)
- NEW SIGN NUMBER
- MOVING SIGN NUMBER
- TWO 16"X16" TEMPORARY SIGN FLAGS (INCIDENTAL TO SIGNS TYPE II)



PAVEMENT MARKING LEGEND

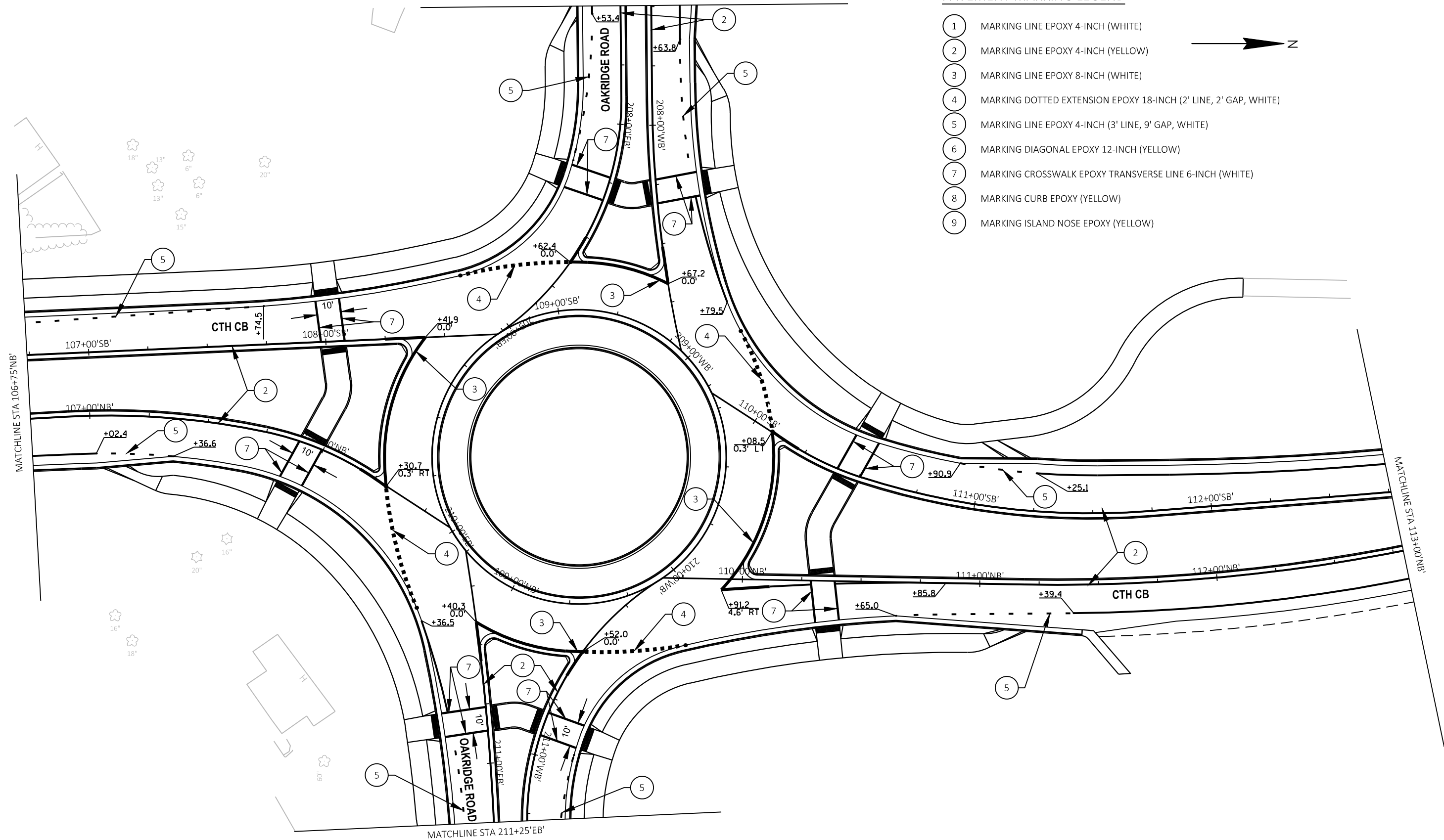
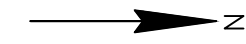
- 1 MARKING LINE EPOXY 4-INCH (WHITE)
- 2 MARKING LINE EPOXY 4-INCH (YELLOW)
- 3 MARKING LINE EPOXY 8-INCH (WHITE)
- 4 MARKING DOTTED EXTENSION EPOXY 18-INCH (2' LINE, 2' GAP, WHITE)
- 5 MARKING LINE EPOXY 4-INCH (3' LINE, 9' GAP, WHITE)
- 6 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- 8 MARKING CURB EPOXY (YELLOW)
- 9 MARKING ISLAND NOSE EPOXY (YELLOW)



MATCHLINE STA 207+50'EB'

PAVEMENT MARKING LEGEND

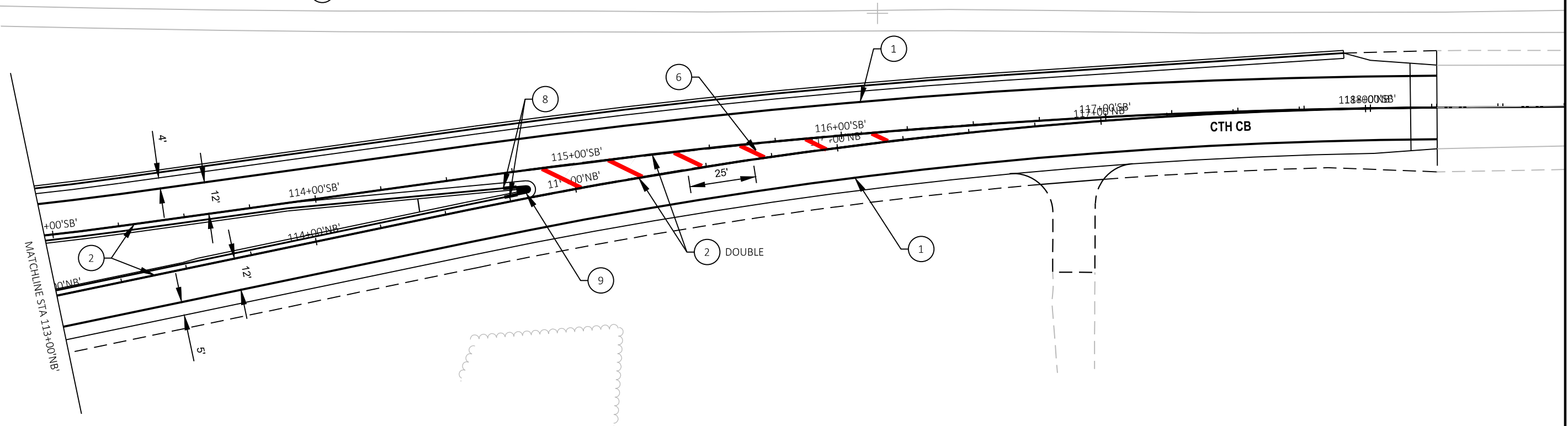
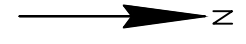
- 1 MARKING LINE EPOXY 4-INCH (WHITE)
- 2 MARKING LINE EPOXY 4-INCH (YELLOW)
- 3 MARKING LINE EPOXY 8-INCH (WHITE)
- 4 MARKING DOTTED EXTENSION EPOXY 18-INCH (2' LINE, 2' GAP, WHITE)
- 5 MARKING LINE EPOXY 4-INCH (3' LINE, 9' GAP, WHITE)
- 6 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- 8 MARKING CURB EPOXY (YELLOW)
- 9 MARKING ISLAND NOSE EPOXY (YELLOW)



MATCHLINE STA 211+25'EB'

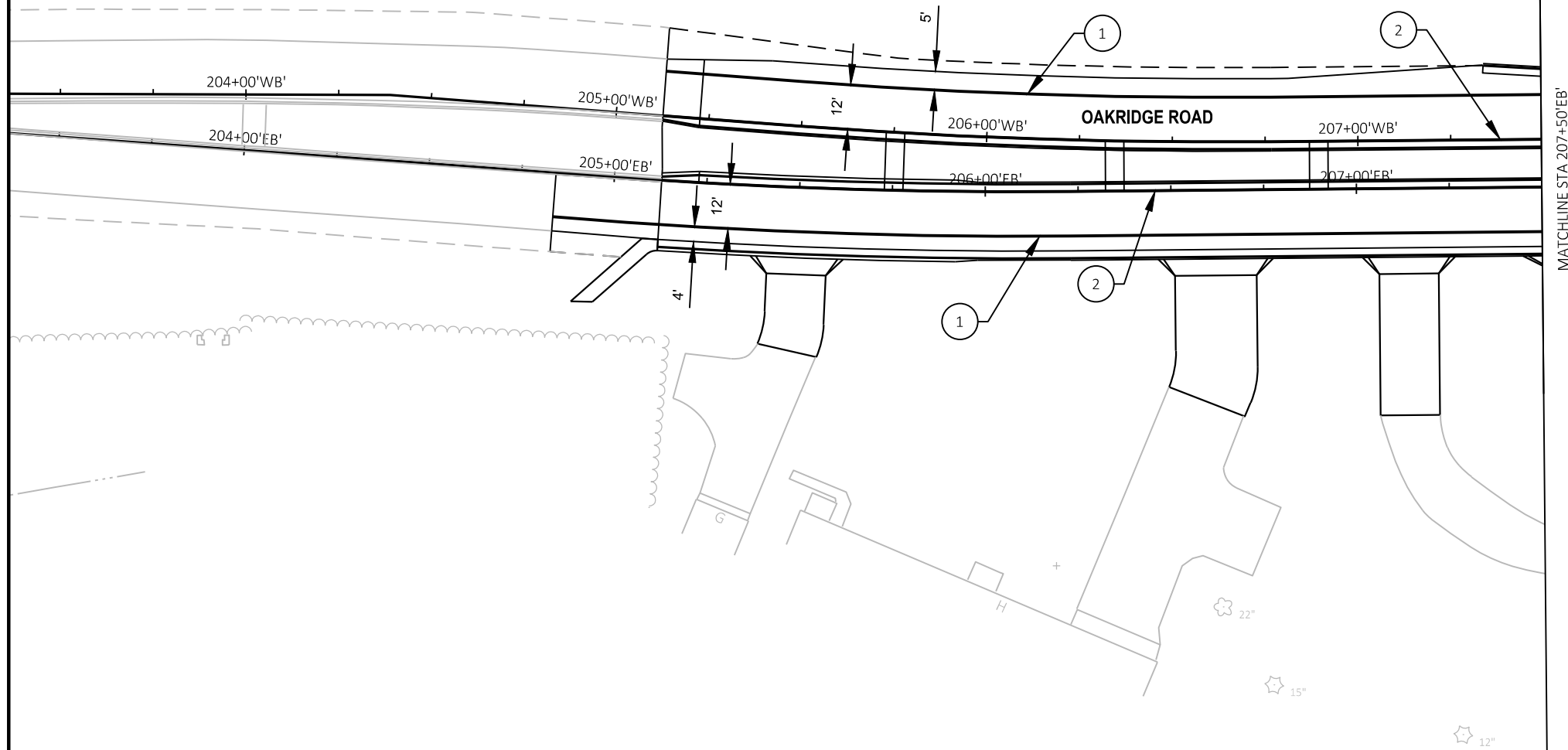
PAVEMENT MARKING LEGEND

- 1 MARKING LINE EPOXY 4-INCH (WHITE)
- 2 MARKING LINE EPOXY 4-INCH (YELLOW)
- 3 MARKING LINE EPOXY 8-INCH (WHITE)
- 4 MARKING DOTTED EXTENSION EPOXY 18-INCH (2' LINE, 2' GAP, WHITE)
- 5 MARKING LINE EPOXY 4-INCH (3' LINE, 9' GAP, WHITE)
- 6 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- 8 MARKING CURB EPOXY (YELLOW)
- 9 MARKING ISLAND NOSE EPOXY (YELLOW)

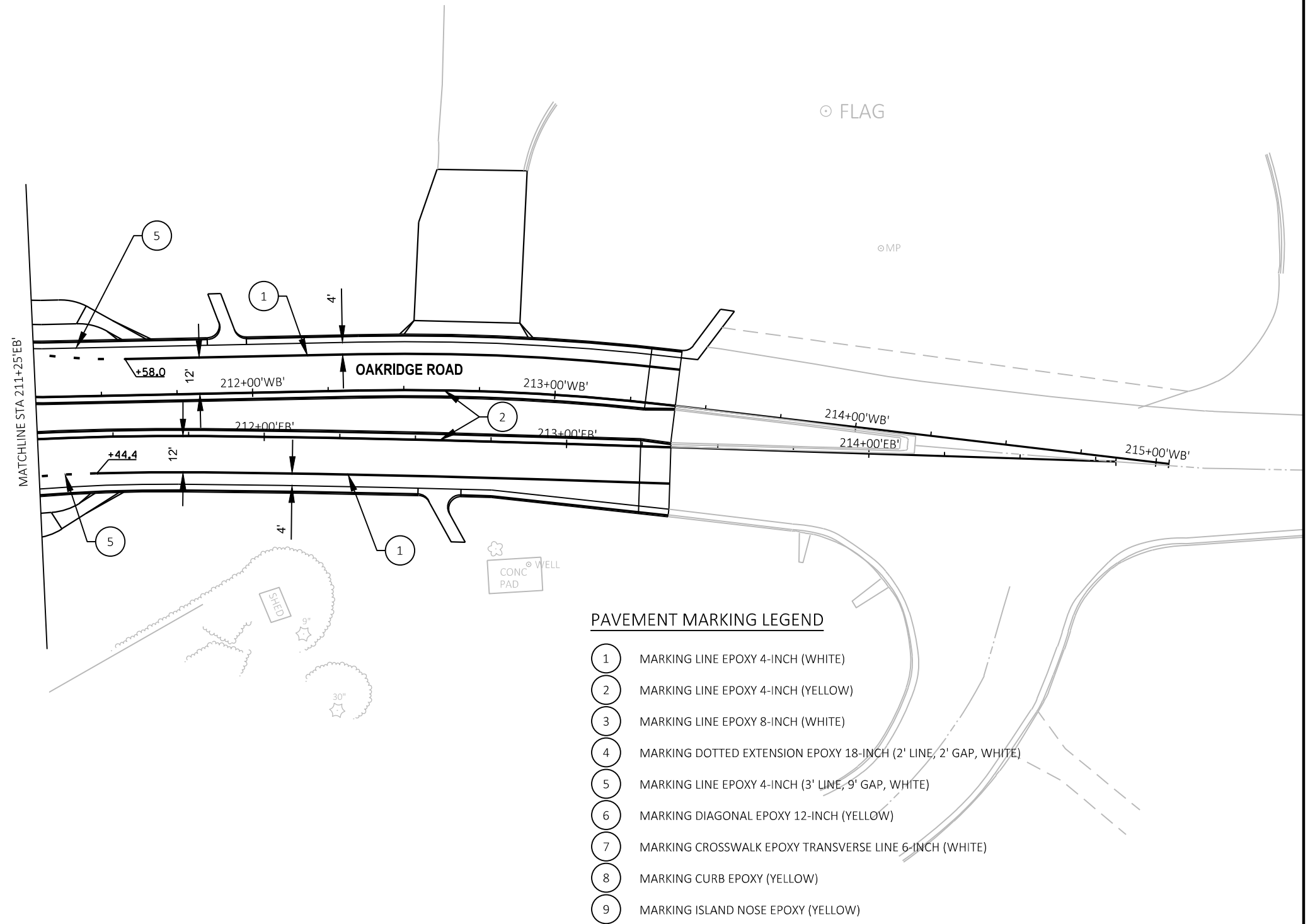


PAVEMENT MARKING LEGEND

- 1 MARKING LINE EPOXY 4-INCH (WHITE)
- 2 MARKING LINE EPOXY 4-INCH (YELLOW)
- 3 MARKING LINE EPOXY 8-INCH (WHITE)
- 4 MARKING DOTTED EXTENSION EPOXY 18-INCH (2' LINE, 2' GAP, WHITE)
- 5 MARKING LINE EPOXY 4-INCH (3' LINE, 9' GAP, WHITE)
- 6 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- 8 MARKING CURB EPOXY (YELLOW)
- 9 MARKING ISLAND NOSE EPOXY (YELLOW)



MATCHLINE STA 207+50'EB'









**PAVEMENT MARKING LEGEND**

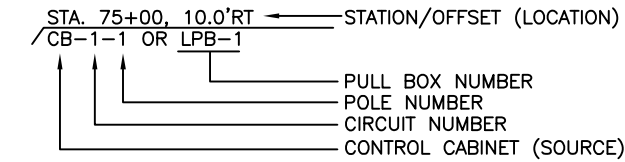
- 1 MARKING LINE EPOXY 4-INCH (WHITE)
- 2 MARKING LINE EPOXY 4-INCH (YELLOW)
- 3 MARKING LINE EPOXY 8-INCH (WHITE)
- 4 MARKING DOTTED EXTENSION EPOXY 18-INCH (2' LINE, 2' GAP, WHITE)
- 5 MARKING LINE EPOXY 4-INCH (3' LINE, 9' GAP, WHITE)
- 6 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- 8 MARKING CURB EPOXY (YELLOW)
- 9 MARKING ISLAND NOSE EPOXY (YELLOW)





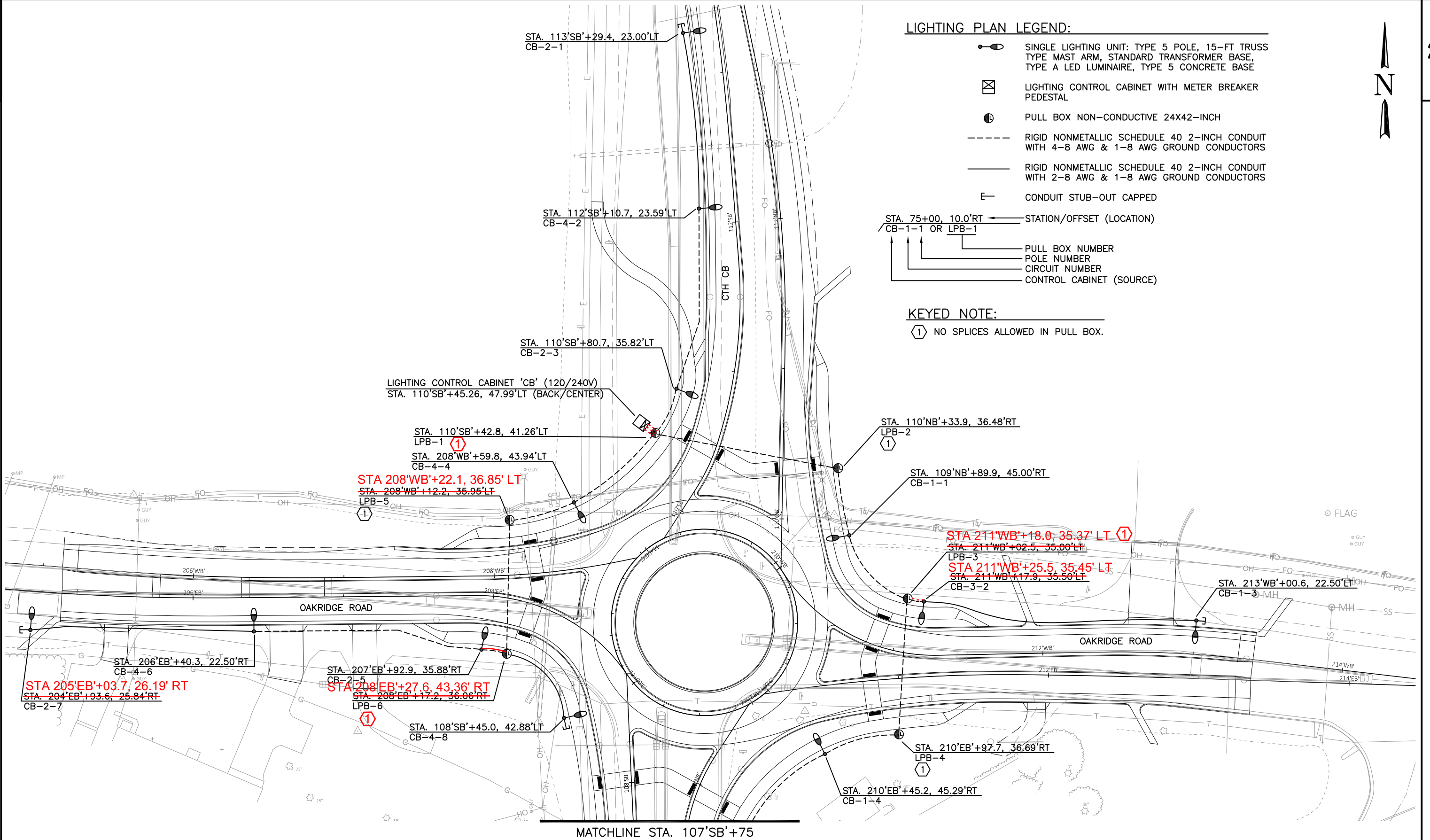
LIGHTING PLAN LEGEND:

-  SINGLE LIGHTING UNIT: TYPE 5 POLE, 15-FT TRUSS TYPE MAST ARM, STANDARD TRANSFORMER BASE, TYPE A LED LUMINAIRE, TYPE 5 CONCRETE BASE
-  LIGHTING CONTROL CABINET WITH METER BREAKER PEDESTAL
-  PULL BOX NON-CONDUCTIVE 24X42-INCH
-  RIGID NONMETALLIC SCHEDULE 40 2-INCH CONDUIT WITH 4-8 AWG & 1-8 AWG GROUND CONDUCTORS
-  RIGID NONMETALLIC SCHEDULE 40 2-INCH CONDUIT WITH 2-8 AWG & 1-8 AWG GROUND CONDUCTORS
-  CONDUIT STUB-OUT CAPPED



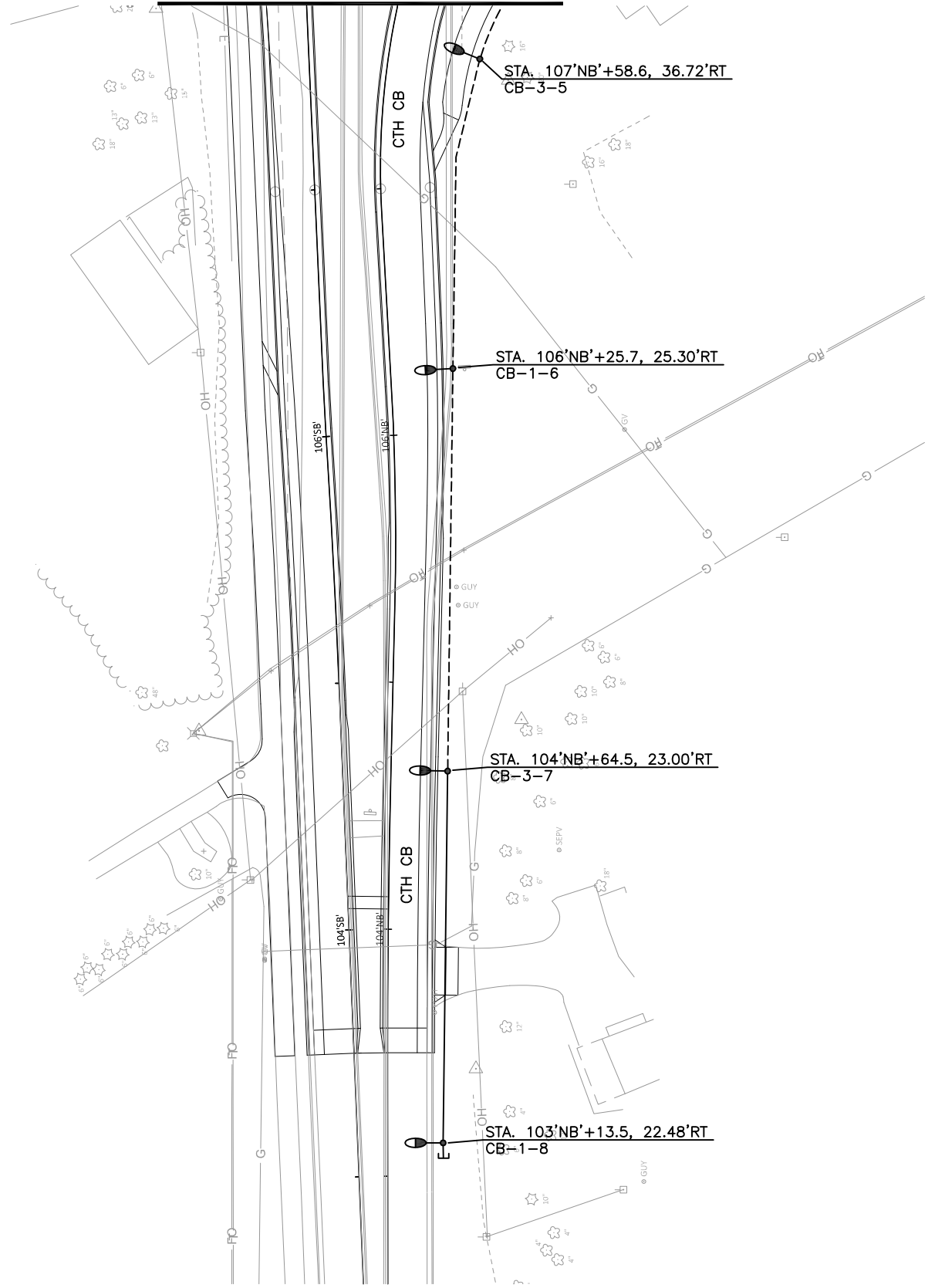
KEYED NOTE:

-  NO SPLICES ALLOWED IN PULL BOX.




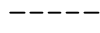
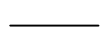

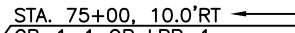

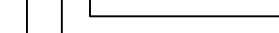
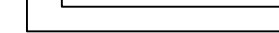





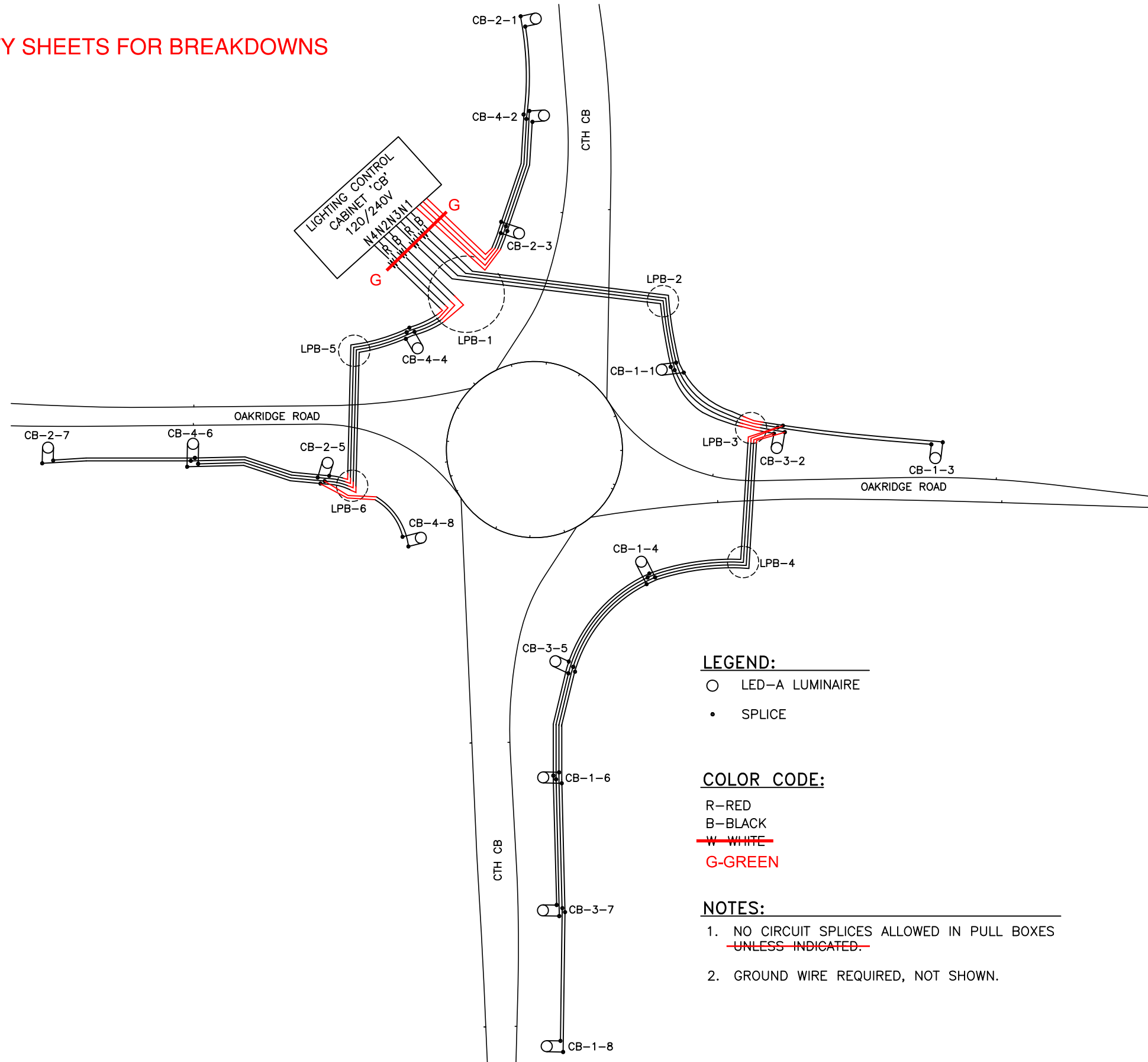
MATCHLINE STA. 107'SB'+75



LIGHTING PLAN LEGEND:

-  SINGLE LIGHTING UNIT: TYPE 5 POLE, 15-FT TRUSS TYPE MAST ARM, STANDARD TRANSFORMER BASE, TYPE A LED LUMINAIRE, TYPE 5 CONCRETE BASE
-  LIGHTING CONTROL CABINET WITH METER BREAKER PEDESTAL
-  PULL BOX NON-CONDUCTIVE 24X42-INCH
-  RIGID NONMETALLIC SCHEDULE 40 2-INCH CONDUIT WITH 4-8 AWG & 1-8 AWG GROUND CONDUCTORS
-  RIGID NONMETALLIC SCHEDULE 40 2-INCH CONDUIT WITH 2-8 AWG & 1-8 AWG GROUND CONDUCTORS
-  CONDUIT STUB-OUT CAPPED
-  STA. 75+00, 10.0'RT ← STATION/OFFSET (LOCATION)  
/CB-1-1 OR LPB-1
-  PULL BOX NUMBER
-  POLE NUMBER
-  CIRCUIT NUMBER
-  CONTROL CABINET (SOURCE)

SEE ELECTRICAL WIRING QUANTITY SHEETS FOR BREAKDOWNS



**LEGEND:**

- LED-A LUMINAIRE
- SPLICE

**COLOR CODE:**

- R-RED
- B-BLACK
- ~~W-WHITE~~
- G-GREEN

**NOTES:**

1. NO CIRCUIT SPLICES ALLOWED IN PULL BOXES ~~UNLESS INDICATED.~~
2. GROUND WIRE REQUIRED, NOT SHOWN.

ITEM DESC:	655.0620	PROJECT I.D:	4682-01-73
ITEM #:	Electrical Wire Lighting 8 AWG	ROADWAY:	CTH CB
CATEGORY:	0010	DESCRIPTION:	CTH CB & Oakridge Rd Intersection
ENTERED BY:	BPL	COUNTY:	Winnebago
CHECKED BY:	EMT 9/18/19		

QUANTITY TO DATE **10,236.0** L.F. POSTED BY EMT 9/18/19

See Example for help.





No. of Wires	From	To	Path Measurement (L.F.)																L.F.	Subtotal	Remarks			
15	CB	LPB-1	CB	to	LPB1	to		to		to		to		to		to		to		to		---	---	DIRECT FIELD MEASUREMENT BY BPL
			12.0	7.0	6.0																	375.0	375.0	
5	LPB-1	CB4-2	LPB-1	to	CB-2-3	to	CB-4-2	to		to		to		to		to		to		to		---	---	
			6.0	32.0	12.0	122.0	6.0															890.0	1,265.0	
3	CB-4-2	CB-2-1	CB4-2	to	CB2-1	to		to		to		to		to		to		to		to		---	---	
			6.0	118.0	6.0																	390.0	1,655.0	
5	LPB-1	CB4-6	LPB-1	to	CB4-4	to	LPB-5	to	LPB-6	to	CB2-5	to	CB4-6	to		to		to		to		---	---	
			6.0	73.0	6.0	36.0	12.0	98.0	12.0	27.0	12.0	151.0	6.0									2,195.0	3,850.0	
3	CB4-6	CB2-7	CB4-6	to	CB2-7	to		to		to		to		to		to		to		to		---	---	
			6.0	141.0	6.0																	459.0	4,309.0	
3	CB2-5	CB4-8	CB2-5	to	LPB-6	to	CB4-8	to		to		to		to		to		to		to		---	---	
			6.0	27.0	12.0	49.0	6.0															300.0	4,609.0	
5	LPB-1	CB3-2	LPB-1	to	LPB-2	to	CB1-1	to	LPB-3	to	CB3-2	to		to		to		to		to		---	---	
			6.0	123.0	12.0	49.0	12.0	75.0	12.0	6.0	6.0											1,505.0	6,114.0	
5	CB3-2	CB3-7	CB3-2	to	LPB-3	to	LPB-4	to	CB1-4	to	CB3-5	to	CB1-6	to	CB3-7	to		to		to		---	---	
			6.0	6.0	12.0	91.0	12.0	53.0	12.0	91.0	12.0	128.0	12.0	165.0	12.0							3,060.0	9,174.0	
3	CB3-7	CB1-8	CB3-7	to	CB1-8	to		to		to		to		to		to		to		to		---	---	
			6.0	152.0	6.0																	492.0	9,666.0	
3	CB3-2	CB1-3	CB3-2	to	CB1-3	to		to		to		to		to		to		to		to		---	---	
			6.0	178.0	6.0																	570.0	10,236.0	
				to		to		to		to		to		to		to		to		to		---	---	
				to		to		to		to		to		to		to		to		to		---	---	
				to		to		to		to		to		to		to		to		to		---	---	
				to		to		to		to		to		to		to		to		to		---	---	
				to		to		to		to		to		to		to		to		to		---	---	
				to		to		to		to		to		to		to		to		to		---	---	
				to		to		to		to		to		to		to		to		to		---	---	



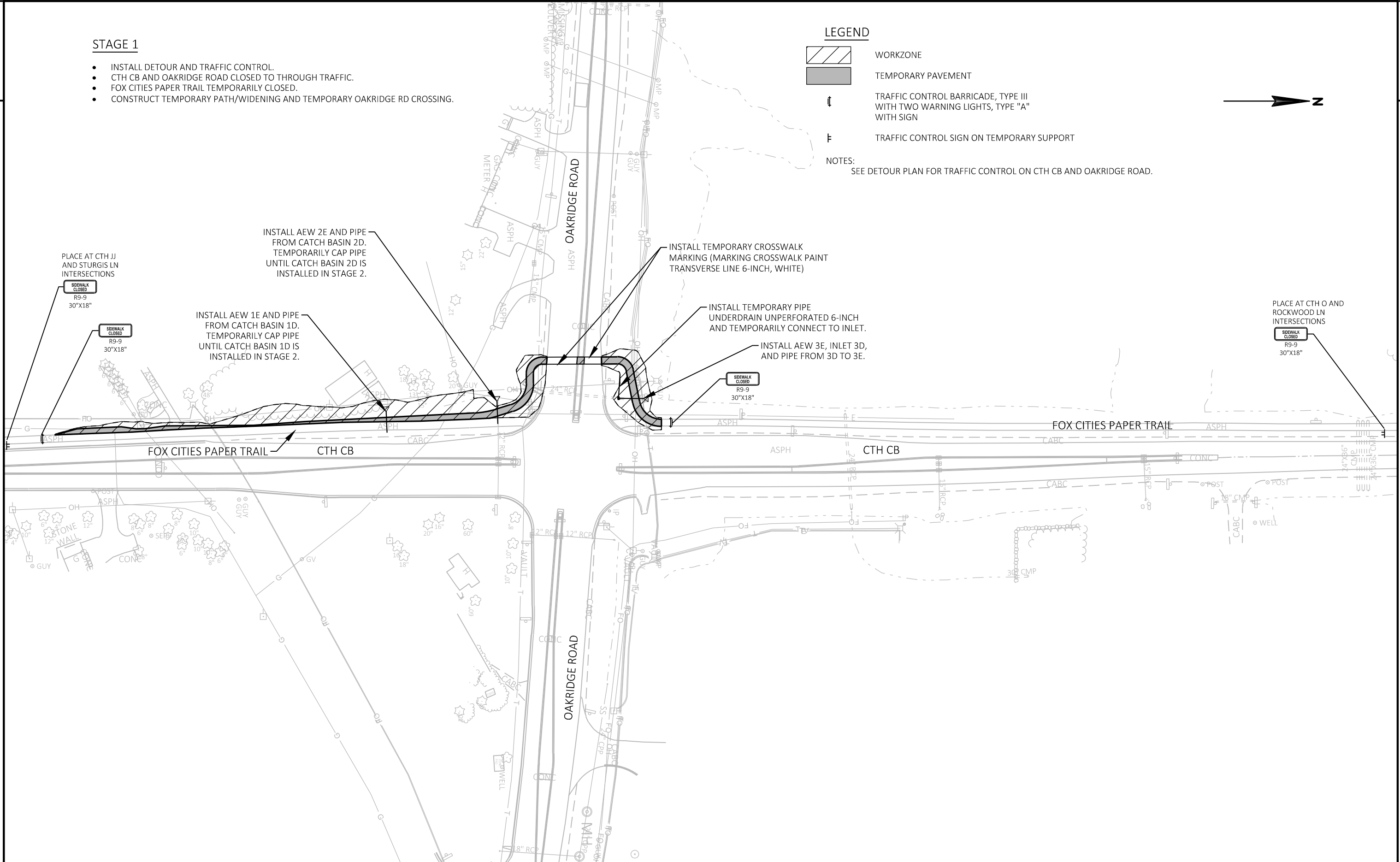
STAGE 1

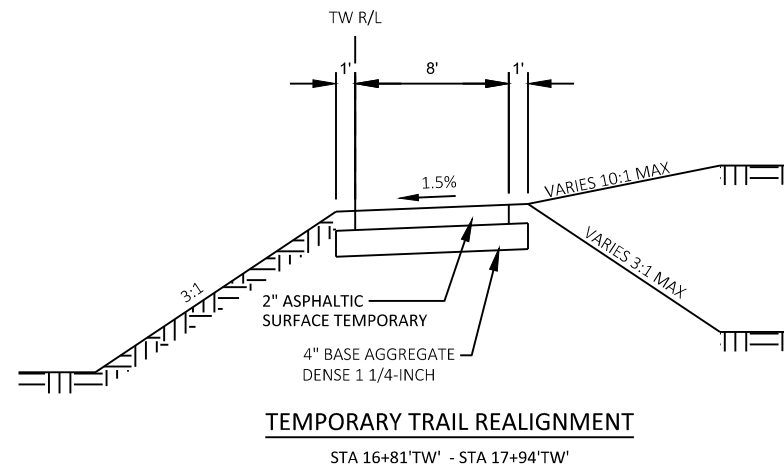
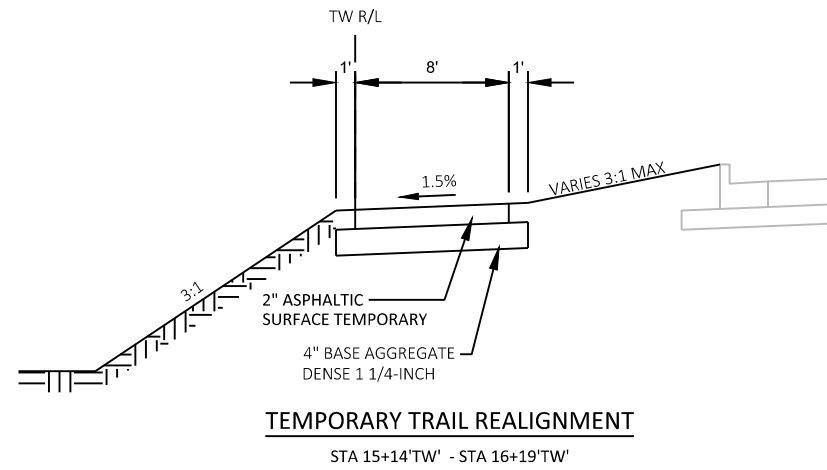
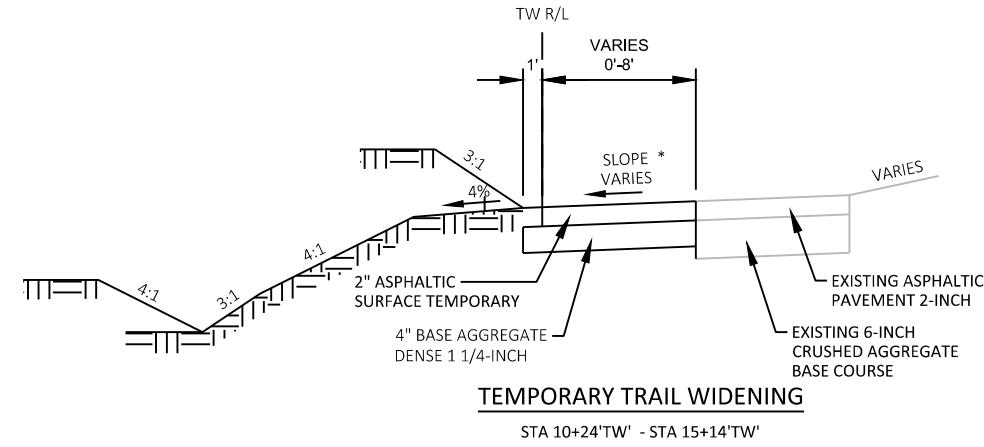
- INSTALL DETOUR AND TRAFFIC CONTROL.
- CTH CB AND OAKRIDGE ROAD CLOSED TO THROUGH TRAFFIC.
- FOX CITIES PAPER TRAIL TEMPORARILY CLOSED.
- CONSTRUCT TEMPORARY PATH/WIDENING AND TEMPORARY OAKRIDGE RD CROSSING.

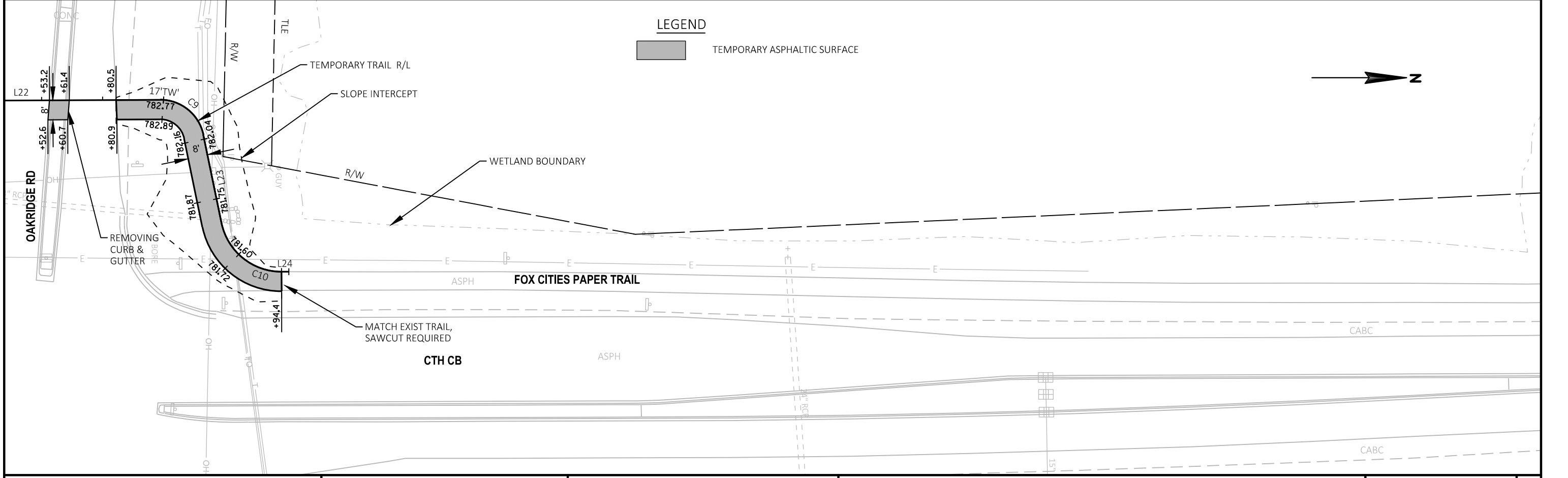
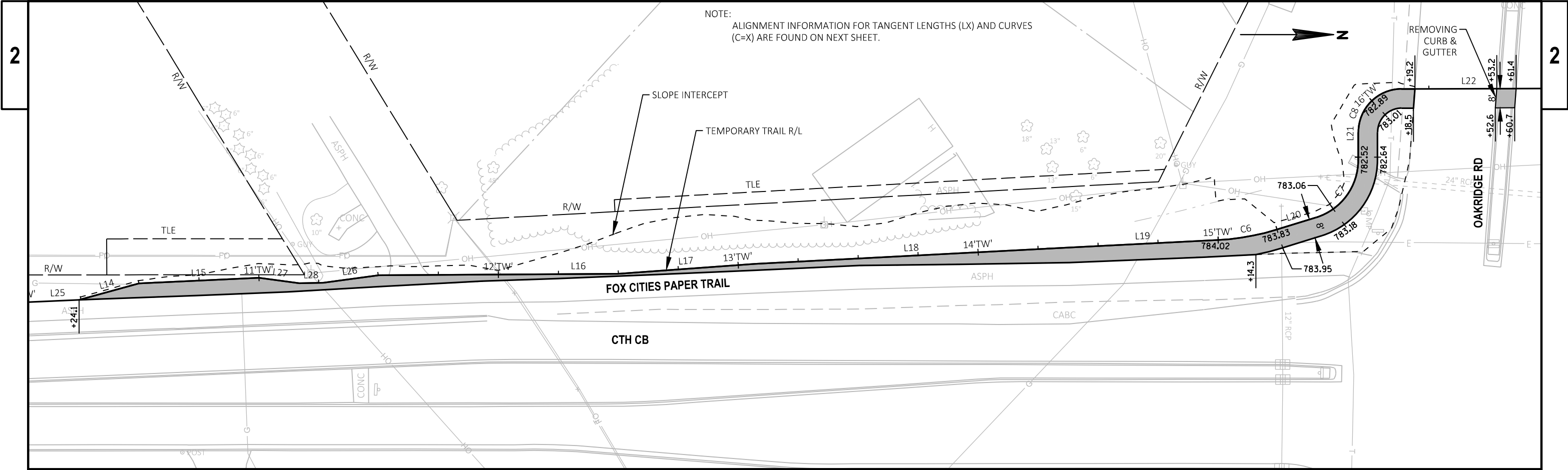
LEGEND

-  WORKZONE
-  TEMPORARY PAVEMENT
-  TRAFFIC CONTROL BARRICADE, TYPE III WITH TWO WARNING LIGHTS, TYPE "A" WITH SIGN
-  TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT

NOTES:  
SEE DETOUR PLAN FOR TRAFFIC CONTROL ON CTH CB AND OAKRIDGE ROAD.







PROJECT NO: 4682-01-73	HWY: CTH CB	COUNTY: WINNEBAGO	STAGE CONSTRUCTION - STAGE 1 DETAIL	SHEET 58	E
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FILE NAME: K:\1172703\CIVIL3D\46820100\SHEETSP\AN\026001\_S1.DWG  
 LAYOUT NAME - 2  
 PLOT DATE: 10/19/2018 3:39 PM  
 PLOT BY: GUILLAMA, TINA  
 PLOT NAME:  
 PLOT SCALE: 1 IN=40 FT  
 WINSDOT/CADD SHEET 42



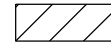


TEMPORARY TRAIL HORIZONTAL ALIGNMENT INFORMATION

NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L25	9+92.01	10+24.13	533669.85 801630.64	533701.94 801629.24						32.12'						N2°29'49.6"W
L14	10+24.13	10+50.00	533701.94 801629.24	533726.88 801622.38						25.87'						N15°22'14.7"W
L15	10+50.00	11+00.00	533726.88 801622.38	533776.83 801620.05						50.00'						N2°40'22.4"W
L27	11+00.00	11+16.91	533776.83 801620.05	533793.58 801622.32						16.91'						N7°42'14.8"E
L28	11+16.91	11+26.91	533793.58 801622.32	533803.58 801622.10						10.00'						N1°13'22.4"W
L26	11+26.91	11+50.20	533803.58 801622.10	533826.66 801618.97						23.29'						N7°43'17.0"W
L16	11+50.20	12+49.88	533826.66 801618.97	533926.34 801618.37						99.68'						N0°20'49.0"W
L17	12+49.88	13+06.98	533926.34 801618.37	533983.29 801614.23						57.10'						N4°09'37.9"W
L18	13+06.98	14+37.67	533983.29 801614.23	534113.80 801607.43						130.68'						N2°58'53.1"W
L19	14+37.67	14+99.71	534113.80 801607.43	534175.77 801604.32						62.05'						N2°52'13.0"W
C6					15+12.28	534188.32 801603.69	14°19'26"	57°17'45"	12.57'	25.00'	0.79'	100.00'	14+99.71	15+24.71	N2°52'13.0"W	N17°11'39.2"W
L20	15+24.71	15+41.99	534200.32 801599.98	534216.83 801594.87						17.28'						N17°11'39.2"W
C7					15+60.43	534234.44 801589.42	72°48'21"	229°10'59"	18.43'	31.77'	6.06'	25.00'	15+41.99	15+73.76	N17°11'39.2"W	N90°00'00.0"W
L21	15+73.76	15+85.34	534234.44 801570.99	534234.44 801559.41						11.58'						N90°00'00.0"W
C8					16+03.27	534234.44 801541.48	89°45'14"	318°18'36"	17.92'	28.20'	7.40'	18.00'	15+85.34	16+13.54	N90°00'00.0"W	N0°14'45.5"W
L22	16+13.54	16+98.55	534252.36 801541.41	534337.37 801541.04						85.01'						N0°14'45.5"W
C9					17+13.27	534352.09 801540.98	78°31'52"	318°18'36"	14.71'	24.67'	5.25'	18.00'	16+98.55	17+23.22	N0°14'45.5"W	N78°17'06.5"E
L23	17+23.22	17+60.13	534355.07 801555.39	534362.57 801591.52						36.90'						N78°17'06.5"E
C10					17+80.58	534366.72 801611.54	78°33'30"	229°10'59"	20.45'	34.28'	7.30'	25.00'	17+60.13	17+94.41	N78°17'06.5"E	N0°16'23.2"W
L24	17+94.41	17+97.39	534387.17 801611.45	534390.15 801611.43						2.98'						N0°16'23.2"W

STAGE 2

- CTH CB AND OAKRIDGE ROAD CLOSED TO THROUGH TRAFFIC.
- FOX CITIES PAPER TRAIL OPEN ON TEMPORARY TRAIL/WIDENING.
- CONSTRUCT CTH CB AND OAKRIDGE ROAD. GAP OAKRIDGE ROAD CONSTRUCTION AT TEMPORARY TRAIL CROSSING LOCATION.

LEGEND

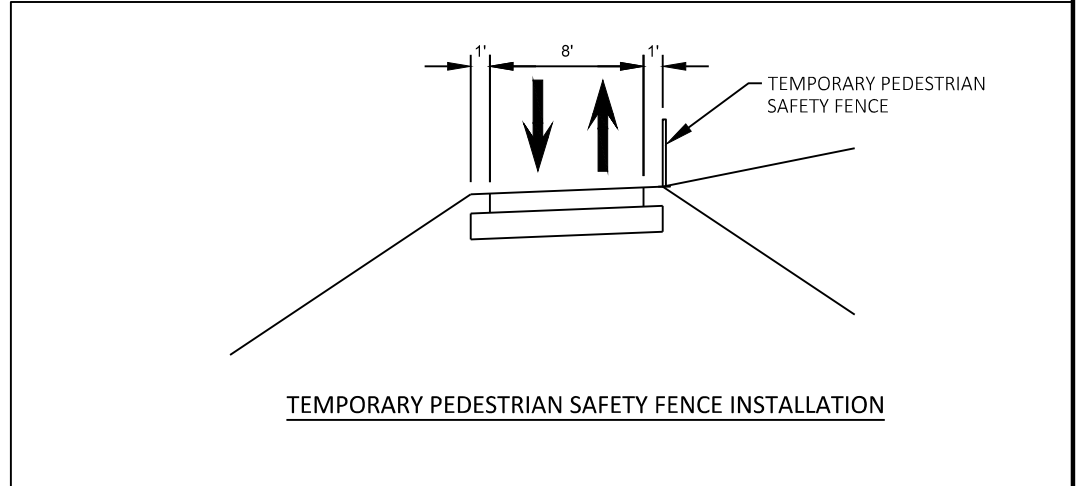
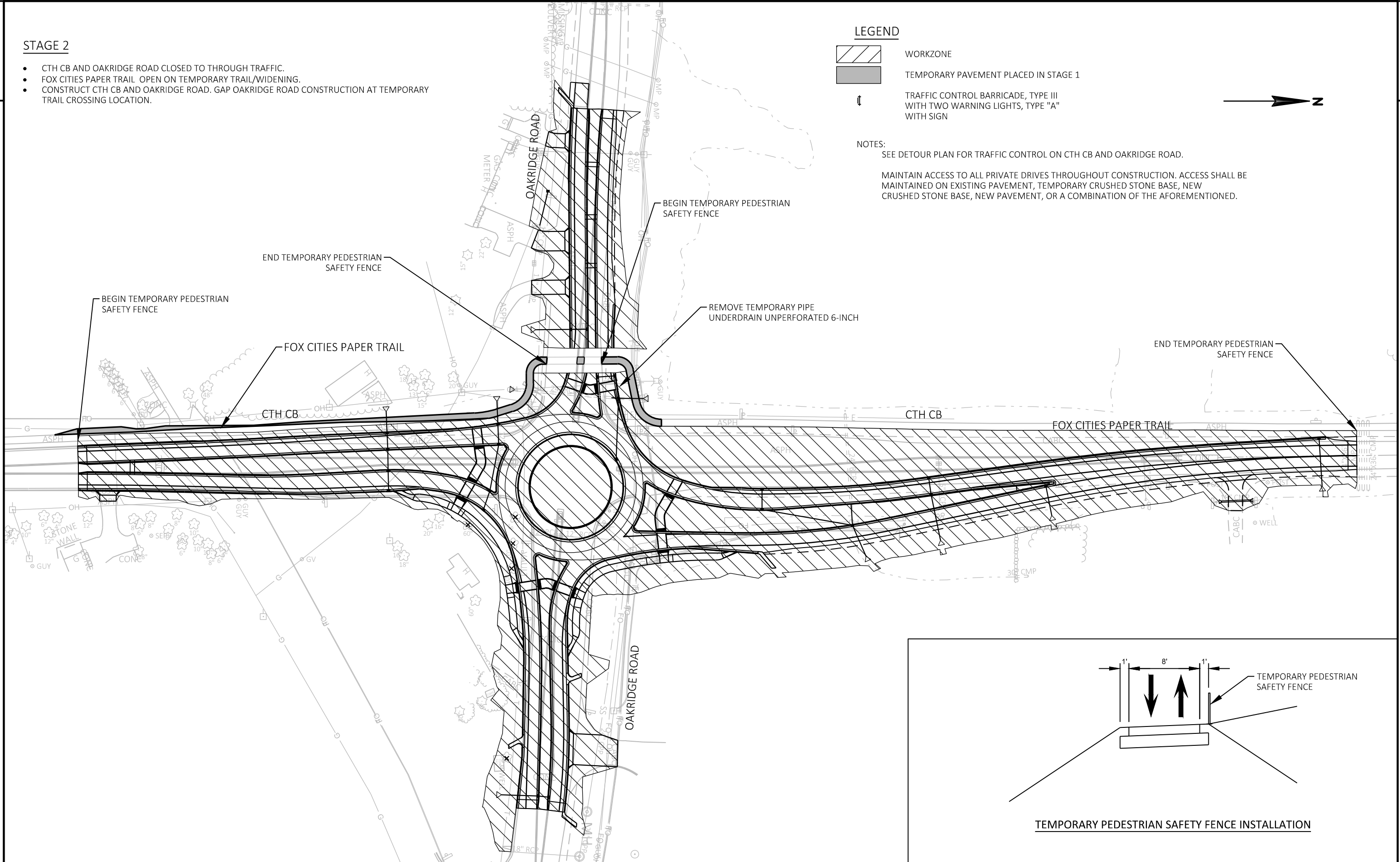
-  WORKZONE
-  TEMPORARY PAVEMENT PLACED IN STAGE 1
-  TRAFFIC CONTROL BARRICADE, TYPE III WITH TWO WARNING LIGHTS, TYPE "A" WITH SIGN



NOTES:

SEE DETOUR PLAN FOR TRAFFIC CONTROL ON CTH CB AND OAKRIDGE ROAD.





MAINTAIN ACCESS TO ALL PRIVATE DRIVES THROUGHOUT CONSTRUCTION. ACCESS SHALL BE MAINTAINED ON EXISTING PAVEMENT, TEMPORARY CRUSHED STONE BASE, NEW CRUSHED STONE BASE, NEW PAVEMENT, OR A COMBINATION OF THE AFOREMENTIONED.



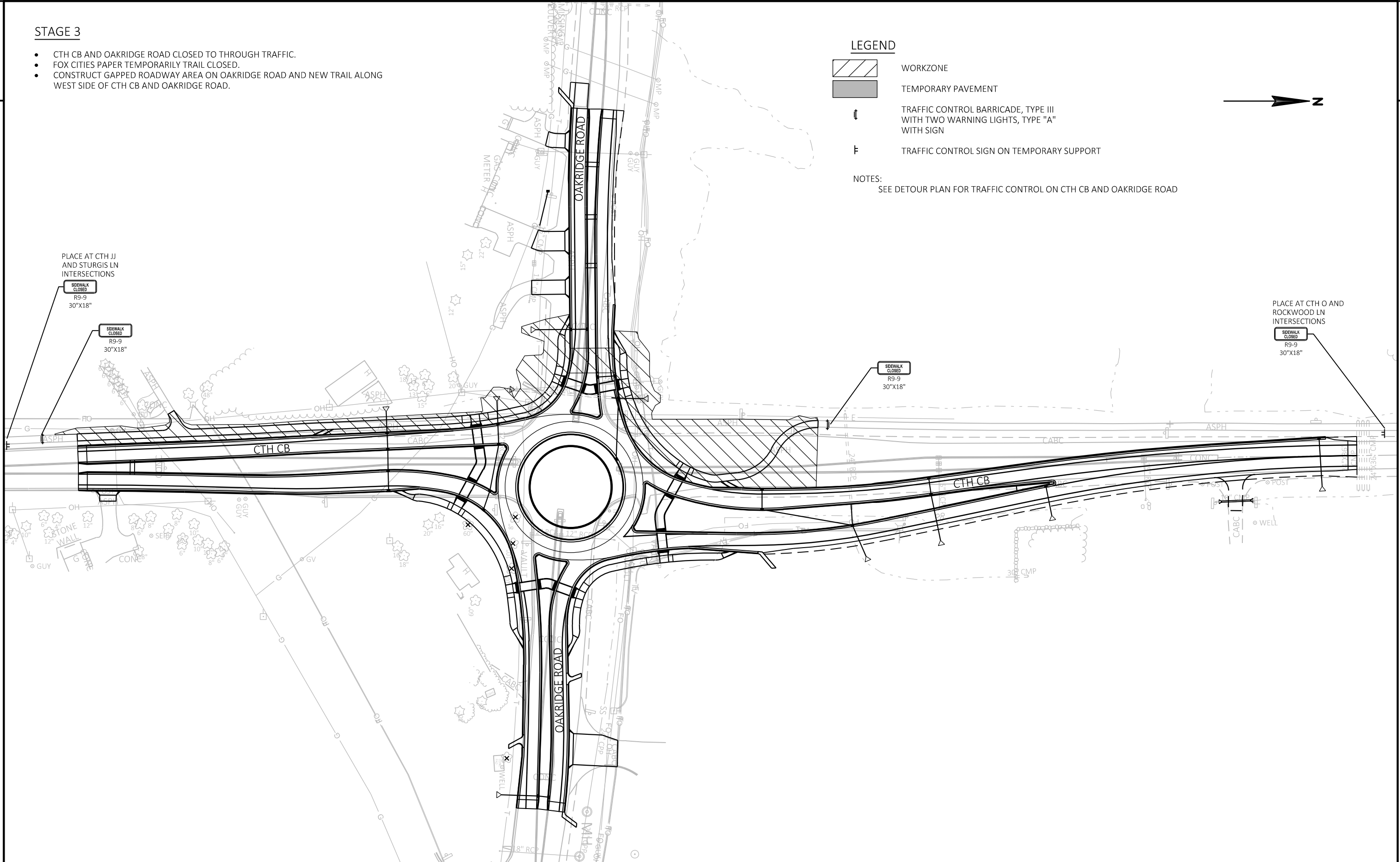
STAGE 3

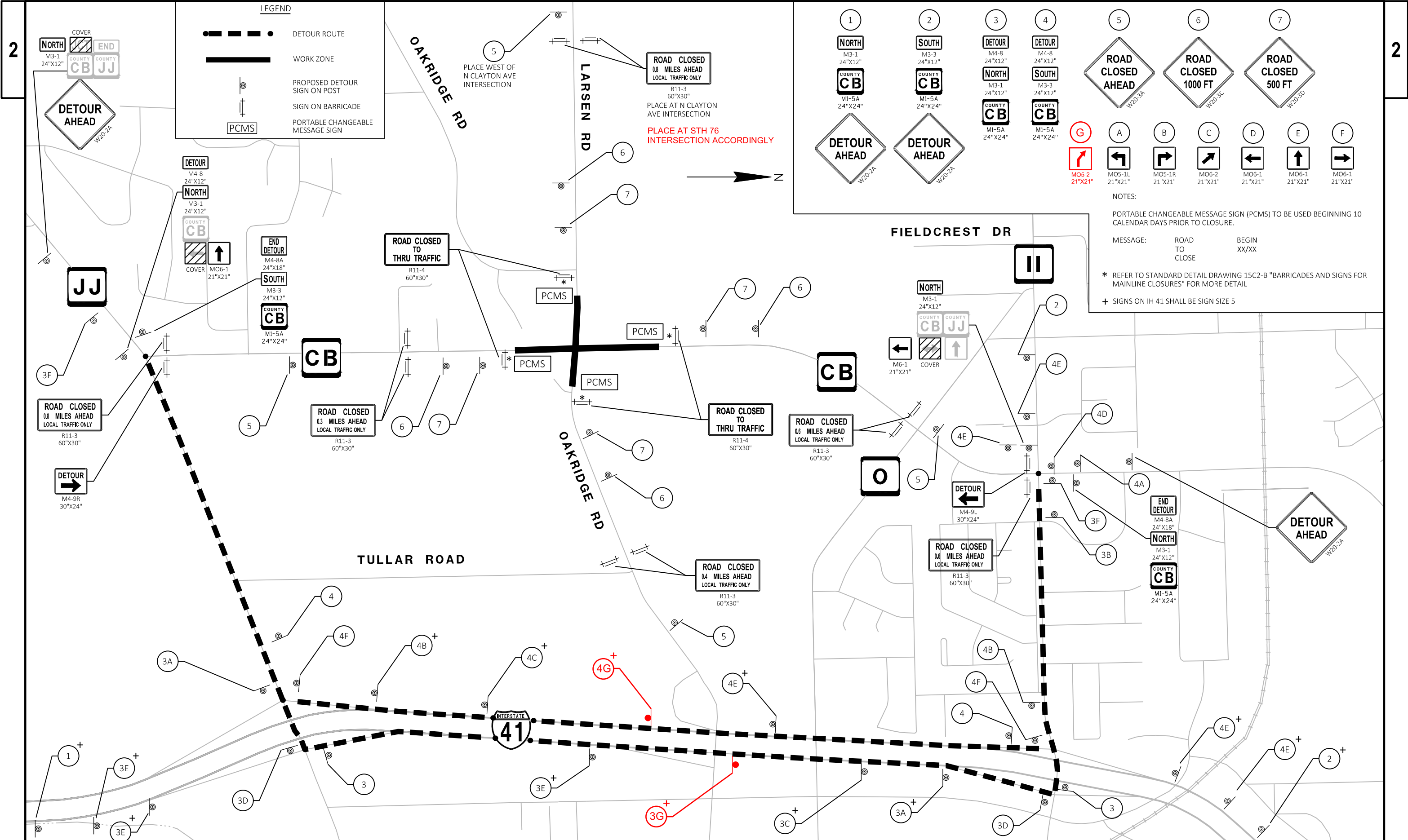
- CTH CB AND OAKRIDGE ROAD CLOSED TO THROUGH TRAFFIC.
- FOX CITIES PAPER TEMPORARILY TRAIL CLOSED.
- CONSTRUCT GAPPED ROADWAY AREA ON OAKRIDGE ROAD AND NEW TRAIL ALONG WEST SIDE OF CTH CB AND OAKRIDGE ROAD.

LEGEND

-  WORKZONE
-  TEMPORARY PAVEMENT
-  TRAFFIC CONTROL BARRICADE, TYPE III WITH TWO WARNING LIGHTS, TYPE "A" WITH SIGN
-  TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT

NOTES:  
SEE DETOUR PLAN FOR TRAFFIC CONTROL ON CTH CB AND OAKRIDGE ROAD



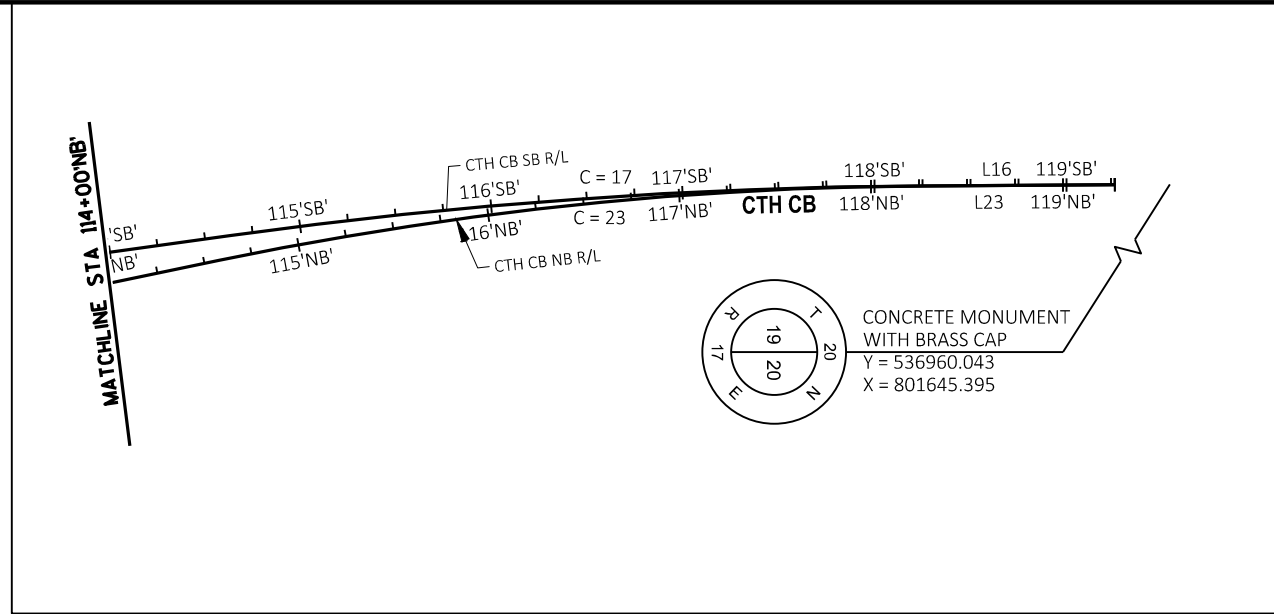


**LEGEND**

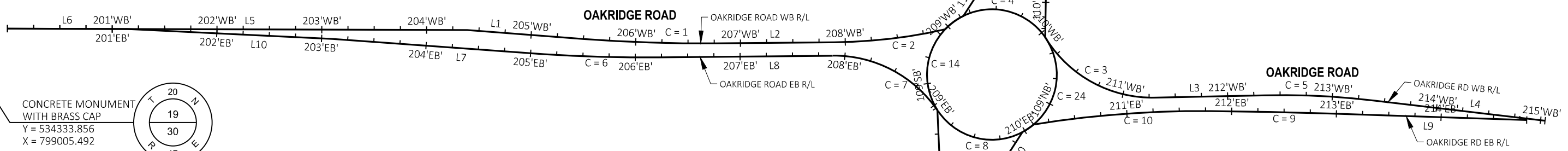
- DETOUR ROUTE
- WORK ZONE
- PROPOSED DETOUR SIGN ON POST
- SIGN ON BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN

1 NORTH M3-1 24"x12" COUNTY CB M1-5A 24"x24"	2 SOUTH M3-3 24"x12" COUNTY CB M1-5A 24"x24"	3 DETOUR NORTH M4-8 24"x12" COUNTY CB M1-5A 24"x24"	4 DETOUR SOUTH M4-8 24"x12" COUNTY CB M1-5A 24"x24"	5 ROAD CLOSED AHEAD W20-3A	6 ROAD CLOSED 1000 FT W20-3C	7 ROAD CLOSED 500 FT W20-3D

NOTES:  
 PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) TO BE USED BEGINNING 10 CALENDAR DAYS PRIOR TO CLOSURE.  
 MESSAGE: ROAD TO CLOSE BEGIN XX/XX  
 \* REFER TO STANDARD DETAIL DRAWING 15C2-B "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR MORE DETAIL  
 + SIGNS ON IH 41 SHALL BE SIGN SIZE 5



MATCHLINE STA 114+00'NB'



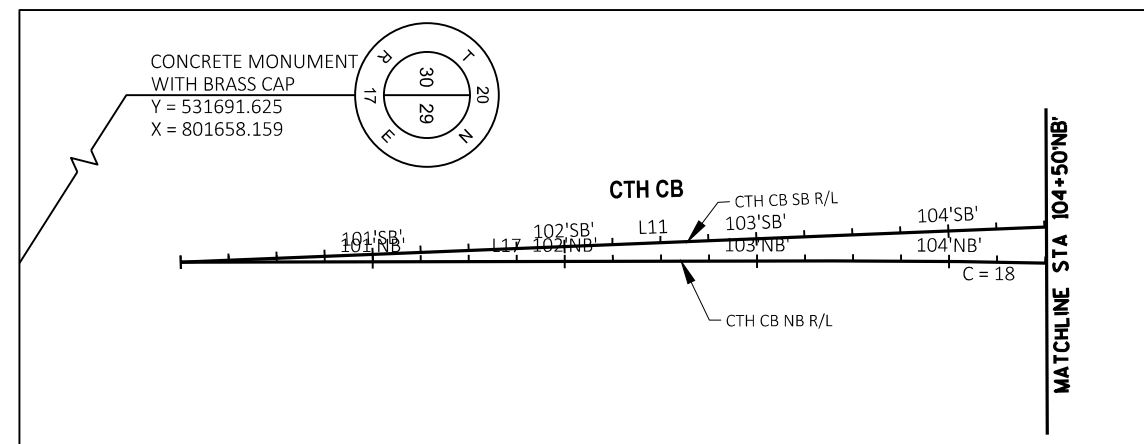
OAKRIDGE ROAD

OAKRIDGE ROAD

CONCRETE MONUMENT WITH BRASS CAP  
 Y = 534333.856  
 X = 799005.492

CONCRETE MONUMENT WITH BRASS CAP  
 Y = 534333.920  
 X = 804268.434

CONCRETE MONUMENT WITH BRASS CAP  
 Y = 531691.625  
 X = 801658.159



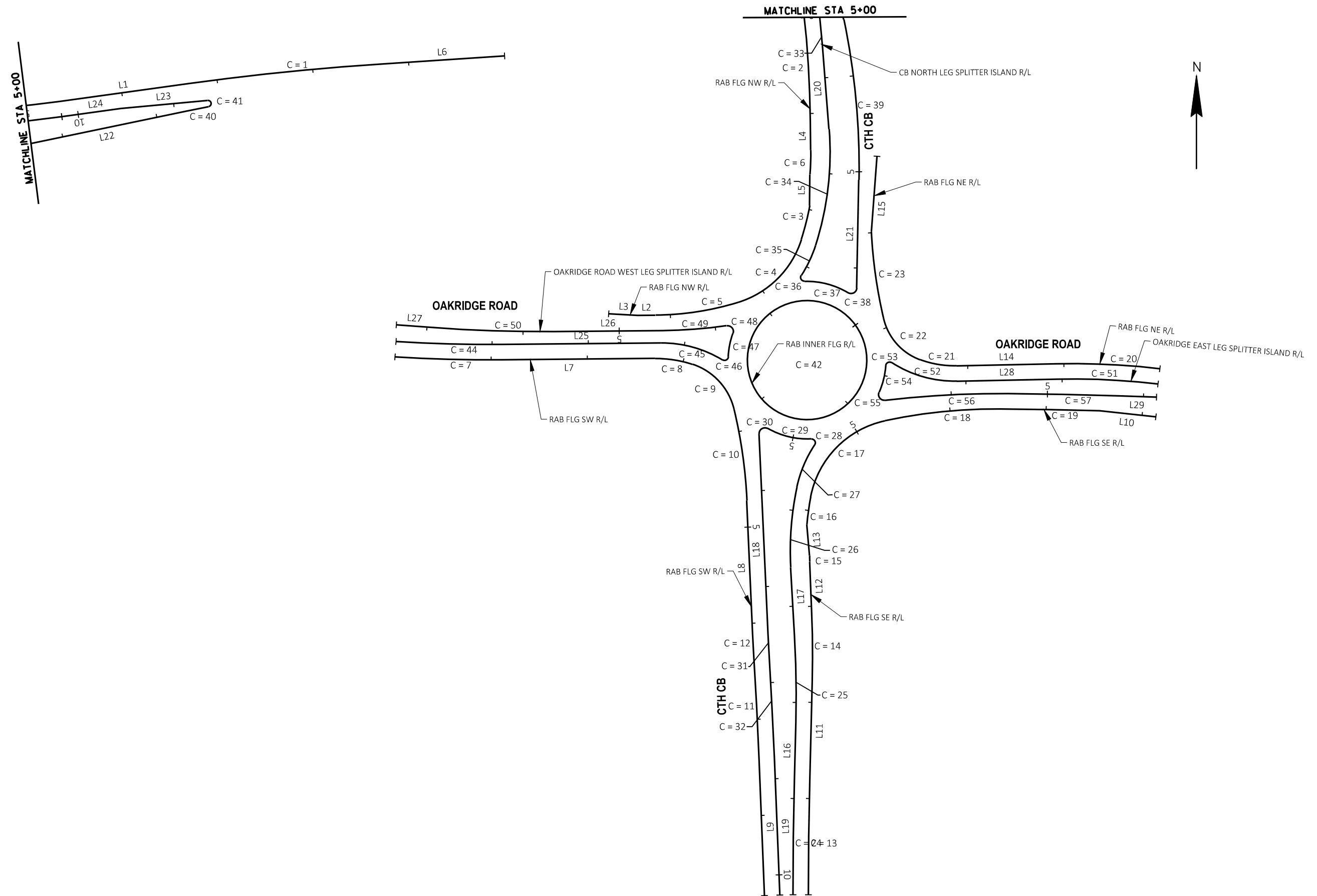
MATCHLINE STA 104+50'NB'

CB-SB																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L11	100+00.00	104+92.94	533378.55 801674.19	533871.09 801654.26						492.94'						N2°19'03.6"W
C = 11					105+48.11	533926.21 801652.03	1°15'40"	0°34'18"	55.16'	110.32'	0.30'	5012.00'	104+92.94	106+03.27	N2°19'03.6"W	N3°34'43.9"W
C = 12					106+12.68	533990.67 801647.99	1°02'15"	2°45'17"	9.42'	18.83'	0.04'	1040.00'	106+03.27	106+22.10	N3°34'43.9"W	N2°32'29.1"W
L13	106+22.10	108+72.44	534000.08 801647.58	534250.17 801636.48						250.34'						N2°32'29.1"W
C = 14					109+43.44	534309.37 801597.27	97°44'41"	46°12'23"	71.00'	105.77'	32.26'	62.00'	108+72.44	109+78.21	N33°31'11.8"W	N64°13'29.0"E
L12	109+78.21	110+16.72	534340.24 801661.20	534372.55 801682.16						38.51'						N32°58'33.7"E
C = 13					110+34.10	534387.12 801691.62	15°13'31"	22°02'13"	17.37'	34.55'	1.16'	130.00'	110+16.72	110+51.27	N32°58'33.7"E	N17°45'02.7"E
C = 15					111+13.29	534462.74 801715.83	22°12'32"	9°03'57"	62.02'	122.49'	6.03'	316.00'	110+51.27	111+73.75	N17°45'02.7"E	N4°27'29.3"W
L14	111+73.75	112+59.99	534524.57 801711.01	534610.55 801704.30						86.24'						N4°27'29.3"W
C = 16					112+93.68	534644.13 801701.69	3°25'04"	2°32'15"	33.68'	67.35'	0.50'	1129.00'	112+59.99	113+27.34	N4°27'29.3"W	N7°52'33.5"W
L15	113+27.34	114+63.17	534677.50 801697.07	534812.05 801678.46						135.83'						N7°52'33.5"W
C = 17					116+44.42	534991.59 801653.62	7°32'30"	1°02'30"	181.25'	361.97'	5.97'	2750.00'	114+63.17	118+25.14	N7°52'33.5"W	N0°20'03.4"W
L16	118+25.14	119+25.14	535172.83 801652.56	535272.83 801651.98						100.00'						N0°20'03.4"W

CB-NB																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L17	100+00.00	103+39.63	533378.55 801674.19	533718.18 801673.64						339.63'						N0°05'36.2"W
C = 18					104+04.92	533783.47 801673.53	1°29'46"	0°34'23"	65.29'	130.57'	0.43'	5000.00'	103+39.63	104+70.20	N0°05'36.2"W	N1°24'10.1"E
L18	104+70.20	105+29.65	533848.74 801675.13	533908.18 801676.58						59.46'						N1°24'10.1"E
C = 19					105+74.80	533953.31 801677.69	4°35'47"	2°32'47"	45.15'	90.25'	0.91'	1125.00'	105+29.65	106+19.90	N1°24'10.1"E	N3°11'37.4"W
L19	106+19.90	106+90.63	533998.39 801675.17	534069.01 801671.23						70.73'						N3°11'37.4"W
C = 20					107+32.74	534111.05 801668.89	15°10'48"	9°03'57"	42.11'	83.72'	2.79'	316.00'	106+90.63	107+74.36	N3°11'37.4"W	N11°59'10.4"E
C = 21					107+98.64	534176.00 801682.68	21°09'55"	22°02'13"	24.29'	48.02'	2.25'	130.00'	107+74.36	108+22.38	N11°59'10.4"E	N33°09'05.3"E
L20	108+22.38	108+62.64	534196.34 801695.96	534230.05 801717.98						40.26'						N33°09'05.3"E
C = 24					109+31.42	534263.12 801778.29	95°56'12"	46°12'23"	68.78'	103.81'	30.60'	62.00'	108+62.64	109+66.46	N61°15'33.1"E	N34°40'38.5"W
L21	109+66.46	111+18.76	534319.68 801739.15	534471.96 801741.95						152.30'						N1°03'10.4"E
C = 22					112+02.97	534556.16 801743.50	12°48'49"	3°49'11"	84.22'	167.73'	4.71'	750.00'	111+18.76	112+86.48	N1°03'10.4"E	N11°45'38.4"W
L22	112+86.48	114+58.03	534638.61 801726.33	534806.55 801691.37						171.54'						N11°45'38.4"W
C = 23					116+43.11	534987.75 801653.64	11°25'35"	1°32'55"	185.08'	368.94'	9.24'	1850.00'	114+58.03	118+26.97	N11°45'38.4"W	N0°20'03.4"W
L23	118+26.97	119+26.97	535172.83 801652.56	535272.83 801651.98						100.00'						N0°20'03.4"W

Oakridge-WB																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L5	200+00.00	204+38.88	534328.16 800748.88	534326.72 801187.76						438.88'						S89°48'45.8"E
L1	204+38.88	205+49.63	534326.72 801187.76	534318.37 801298.19						110.74'						S85°40'25.0"E
C = 1					206+13.18	534313.57 801361.56	4°51'09"	1°54'35"	63.56'	127.03'	1.35'	1500.00'	205+49.63	206+76.66	S85°40'25.0"E	N89°28'26.5"E
L2	206+76.66	207+89.52	534314.16 801425.11	534315.19 801537.97						112.86'						N89°28'26.5"E
C = 2					208+42.97	534315.68 801591.42	12°12'10"	5°43'46"	53.45'	106.49'	2.85'	500.00'	207+89.52	208+96.01	N89°28'26.5"E	N77°16'16.4"E
C = 4					209+74.54	534383.97 801698.08	103°24'55"	46°12'23"	78.53'	111.91'	38.05'	62.00'	208+96.01	210+07.92	N43°58'36.8"E	S32°36'27.9"E
C = 3					210+75.22	534261.13 801776.66	58°34'18"	23°52'24"	67.30'	122.67'	17.58'	120.00'	210+07.92	211+30.59	S32°36'27.9"E	N88°49'13.6"E
L3	211+30.59	212+35.35	534262.51 801843.95	534264.67 801948.68						104.76'						N88°49'13.6"E
C = 5					212+87.81	534265.75 802001.13	7°53'48"	3°46'10"	52.46'	104.75'	1.81'	760.00'	212+35.35	213+40.10	N88°49'13.6"E	S83°16'57.9"E
L4	213+40.10	215+04.29	534259.61 802053.23	534240.41 802216.29						164.20'						S83°16'57.9"E

Oakridge-EB																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L6	200+00.00	201+14.21	534328.16 800748.88	534327.78 800863.08						114.21'						S89°48'45.8"E
L10	201+14.21	203+11.08	534327.78 800863.08	534318.31 801059.73						196.88'						S87°14'32.5"E
L7	203+11.08	205+12.79	534318.31 801059.73	534303.78 801260.91						201.70'						S85°52'03.5"E
C = 6					205+67.87	534300.24 801315.88	4°12'22"	1°54'35"	55.08'	110.11'	1.01'	1500.00'	205+12.79	206+22.90	S86°19'11.7"E	N89°28'26.5"E
L8	206+22.90	207+88.38	534300.75 801370.96	534302.27 801536.43						165.47'						N89°28'26.5"E
C = 7					208+52.70	534302.86 801600.75	56°23'14"	23°52'24"	64.33'	118.10'	16.15'	120.00'	207+88.38	209+06.47	N89°28'26.5"E	S34°08'19.6"E
C = 8					209+74.91	534192.97 801675.25	95°38'50"	46°12'23"	68.43'	103.50'	30.34'	62.00'	209+06.47	210+09.97	S34°08'19.6"E	N50°12'50.1"E
C = 10					210+95.27	534250.41 801812.04	9°45'04"	2°51'53"	85.30'	170.19'	3.63'	1000.00'	210+09.97	211+80.16	N80°47'39.2"E	S89°27'16.6"E
C = 9					212+37.22	534249.06 801954.39	1°18'27"	0°34'23"	57.05'	114.10'	0.33'	5000.00'	211+80.16	212+94.26	S89°27'16.6"E	S88°08'49.6"E
L9	212+94.26	214+81.74	534247.21 802011.41	534241.15 802198.80						187.48'						S88°08'49.6"E





RAB-Fig-NW																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L6	0+00.00	1+28.86	535137.72 801633.99	535009.14 801642.36						128.86'						S3°43'33.0"E
C = 1					2+29.08	534909.13 801648.88	4°09'00"	1°02'09"	100.22'	200.35'	1.82'	2766.00'	1+28.86	3+29.21	S3°43'33.0"E	S7°52'33.5"E
L1	3+29.21	4+65.04	534809.85 801662.61	534675.31 801681.22						135.83'						S7°52'33.5"E
C = 2					5+36.53	534604.49 801691.02	7°21'00"	2°34'26"	71.49'	142.78'	2.29'	1113.00'	4+65.04	6+07.82	S7°52'33.5"E	S0°31'33.5"E
L4	6+07.82	6+38.10	534533.01 801691.67	534502.73 801691.95						30.28'						S0°31'33.5"E
C = 6					6+50.76	534490.07 801692.07	4°53'51"	9°40'42"	12.66'	25.30'	0.27'	296.00'	6+38.10	6+63.40	S0°31'33.5"E	S4°22'17.6"W
L5	6+63.40	6+95.85	534477.45 801691.10	534445.00 801690.88						32.45'						S0°23'52.0"W
C = 3					7+13.92	534427.24 801687.56	6°53'41"	9°32'57"	18.07'	36.10'	0.54'	300.00'	6+95.85	7+31.95	S10°33'56.5"W	S17°27'37.5"W
C = 4					7+84.45	534359.92 801666.39	55°23'39"	28°38'52"	52.49'	96.68'	12.94'	100.00'	7+31.95	8+28.63	S17°27'37.5"W	S72°51'17.0"W
C = 5					8+72.45	534331.53 801574.36	16°37'10"	9°32'57"	43.82'	87.02'	3.18'	300.00'	8+28.63	9+15.65	S72°51'17.0"W	S89°28'26.5"W
L2	9+15.65	9+34.06	534331.13 801530.54	534330.96 801512.14						18.41'						S89°28'26.5"W
L3	9+34.06	9+64.19	534330.96 801512.14	534332.69 801482.05						30.13'						N86°42'42.8"W

RAB-Fig-SW																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 7					0+55.67	534284.24 801315.44	4°12'22"	1°53'23"	55.67'	111.29'	1.02'	1516.00'	-0+00.00	1+11.29	S86°19'11.7"E	N89°28'26.5"E
L7	1+11.29	2+70.49	534284.75 801371.11	534286.21 801530.30						159.20'						N89°28'26.5"E
C = 8					2+90.47	534286.39 801550.28	18°54'50"	23°52'24"	19.99'	39.61'	1.65'	120.00'	2+70.49	3+10.10	N89°28'26.5"E	S71°36'43.7"E
C = 9					3+46.15	534268.71 801603.46	58°01'51"	44°04'25"	36.05'	65.83'	9.33'	65.00'	3+10.10	3+75.93	S71°36'43.7"E	S13°34'52.2"E
C = 10					4+24.25	534186.70 801623.28	11°02'23"	5°43'46"	48.32'	96.34'	2.33'	500.00'	3+75.93	4+72.27	S13°34'52.2"E	S2°32'29.1"E
L8	4+72.27	6+11.47	534138.43 801625.42	533999.37 801631.59						139.20'						S2°32'29.1"E
C = 12					6+21.03	533989.81 801632.02	1°02'15"	2°42'46"	9.56'	19.12'	0.04'	1056.00'	6+11.47	6+30.59	S2°32'29.1"E	S3°34'43.9"E
C = 11					6+85.58	533925.39 801636.05	1°15'40"	0°34'24"	54.99'	109.97'	0.30'	4996.00'	6+30.59	7+40.57	S3°34'43.9"E	S2°19'03.6"E
L9	7+40.57	8+83.51	533870.45 801638.27	533727.62 801644.05						142.94'						S2°19'03.6"E

RAB-Fig-SE																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 13					0+59.91	533788.46 801689.66	1°22'38"	0°34'29"	59.91'	119.81'	0.36'	4984.00'	0+00.00	1+19.81	N0°01'31.6"E	N1°24'10.1"E
L11	1+19.81	2+21.54	533848.35 801691.12	533950.04 801693.61						101.73'						N1°24'10.1"E
C = 14					2+58.52	533987.01 801694.52	3°42'45"	2°30'39"	36.98'	73.93'	0.60'	1141.00'	2+21.54	2+95.47	N1°24'10.1"E	N2°18'34.6"W
L12	2+95.47	3+46.24	534023.96 801693.03	534074.69 801690.98						50.77'						N2°18'34.6"W
C = 15					3+49.48	534077.93 801690.85	1°15'17"	9°40'42"	3.24'	6.48'	0.02'	296.00'	3+46.24	3+52.72	N2°18'34.6"W	N1°03'18.1"W
L13	3+52.72	3+85.17	534081.17 801690.79	534113.49 801687.95						32.45'						N5°01'43.7"W
C = 16					3+99.70	534127.96 801689.25	5°32'39"	9°32'57"	14.53'	29.03'	0.35'	300.00'	3+85.17	4+14.20	N5°08'20.8"E	N10°40'59.7"E
C = 17					4+80.66	534207.54 801704.26	67°13'02"	28°38'52"	66.46'	117.32'	20.07'	100.00'	4+14.20	5+31.52	N10°40'59.7"E	N77°54'01.5"E
C = 18					5+91.99	534234.15 801828.38	12°32'57"	5°12'31"	60.47'	120.46'	3.31'	550.00'	5+31.52	6+51.98	N77°54'01.5"E	S89°33'01.7"E
C = 19					7+03.78	534233.27 801940.65	1°11'28"	0°34'29"	51.80'	103.60'	0.27'	4984.00'	6+51.98	7+55.58	S89°33'01.7"E	S88°21'34.0"E
L10	7+55.58	8+14.44	534231.78 801992.43	534225.40 802050.95						58.86'						S83°46'33.4"E

RAB-Fig-NE																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 20					0+53.56	534281.77 802001.90	7°53'48"	3°41'30"	53.56'	106.95'	1.85'	776.00'	0+00.00	1+06.95	N83°16'57.9"W	S88°49'13.6"W
L14	1+06.95	2+11.71	534280.67 801948.35	534278.51 801843.62						104.76'						S88°49'13.6"W
C = 21					2+31.27	534278.11 801824.07	21°17'58"	27°32'46"	19.56'	38.66'	1.82'	104.00'	2+11.71	2+50.37	S88°49'13.6"W	N69°52'48.5"W
C = 22					2+82.66	534295.94 801775.39	56°34'20"	47°44'47"	32.29'	59.24'	8.14'	60.00'	2+50.37	3+09.61	N69°52'48.5"W	N13°18'28.1"W
C = 23					3+55.53	534372.05 801757.38	10°29'40"	5°43'46"	45.92'	91.58'	2.10'	500.00'	3+09.61	4+01.19	N13°18'28.1"W	N2°48'48.4"W
L15	4+01.19	4+79.89	534417.91 801755.13	534496.38 801761.05						78.69'						N4°18'41.7"E

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2

CB-South Leg Splitter Island																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 24					0+60.10	533788.65 801673.66	1°22'38"	0°34'23"	60.10'	120.20'	0.36'	5000.00'	0+00.00	1+20.20	N0°01'31.6"E	N1°24'10.1"E
L16	1+20.20	1+79.65	533848.74 801675.13	533908.18 801676.58						59.46'						N1°24'10.1"E
C = 25					2+24.80	533953.31 801677.69	4°35'47"	2°32'47"	45.15'	90.25'	0.91'	1125.00'	1+79.65	2+69.90	N1°24'10.1"E	N3°11'37.4"W
L17	2+69.90	3+40.63	533998.39 801675.17	534069.01 801671.23						70.73'						N3°11'37.4"W
C = 26					3+82.74	534111.05 801668.89	15°10'48"	9°03'57"	42.11'	83.72'	2.79'	316.00'	3+40.63	4+24.35	N3°11'37.4"W	N11°59'10.1"E
C = 27					4+48.64	534176.00 801682.68	21°09'56"	22°02'13"	24.29'	48.02'	2.25'	130.00'	4+24.35	4+72.38	N11°59'09.8"E	N33°09'05.3"E
C = 28					4+80.25	534202.93 801700.26	126°06'51"	716°11'50"	7.87'	8.80'	4.83'	4.00'	4+72.38	4+81.18	N33°09'05.3"E	S87°02'14.7"W
C = 29					5+05.33	534201.27 801668.28	32°49'26"	34°56'11"	24.15'	46.98'	3.48'	82.00'	4+81.18	5+28.16	S87°02'14.7"W	N60°08'19.2"W
C = 30					5+39.07	534218.73 801637.87	122°24'10"	477°27'53"	10.91'	12.82'	6.46'	6.00'	5+28.16	5+40.98	N60°08'19.2"W	S2°32'29.1"E
L18	5+40.98	7+48.93	534207.83 801638.36	534000.08 801647.58						207.96'						S2°32'29.1"E
C = 31					7+58.35	533990.67 801647.99	1°02'15"	2°45'17"	9.42'	18.83'	0.04'	1040.00'	7+48.93	7+67.76	S2°32'29.1"E	S3°34'43.9"E
C = 32					8+22.93	533926.21 801652.03	1°15'40"	0°34'18"	55.16'	110.32'	0.30'	5012.00'	7+67.76	8+78.09	S3°34'43.9"E	S2°19'03.6"E
L19	8+78.09	10+21.03	533871.09 801654.26	533728.27 801660.04						142.94'						S2°19'03.6"E

CB-North Leg Splitter Island																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 33					0+33.68	534644.13 801701.69	3°25'04"	2°32'15"	33.68'	67.35'	0.50'	1129.00'	-0+00.00	0+67.35	S7°52'33.5"E	S4°27'29.3"E
L20	0+67.35	1+53.59	534610.55 801704.30	534524.57 801711.01						86.24'						S4°27'29.3"E
C = 34					2+15.61	534462.74 801715.83	22°12'32"	9°03'57"	62.02'	122.49'	6.03'	316.00'	1+53.59	2+76.07	S4°27'29.3"E	S17°45'02.7"W
C = 35					2+93.45	534387.12 801691.62	15°13'31"	22°02'13"	17.37'	34.55'	1.16'	130.00'	2+76.07	3+10.62	S17°45'02.7"W	S32°58'33.7"W
C = 36					3+18.26	534366.14 801678.01	124°44'18"	716°11'50"	7.64'	8.71'	4.62'	4.00'	3+10.62	3+19.33	S32°58'33.7"W	N88°14'15.9"E
C = 37					3+43.67	534367.12 801709.97	33°03'49"	34°56'11"	24.34'	47.32'	3.54'	82.00'	3+19.33	3+66.65	N88°14'15.9"E	S58°41'55.1"E
C = 38					3+77.09	534349.05 801739.69	120°14'54"	477°27'53"	10.44'	12.59'	6.05'	6.00'	3+66.65	3+79.24	S58°41'55.1"E	N1°03'10.4"E
L21	3+79.24	4+91.73	534359.49 801739.88	534471.96 801741.95						112.49'						N1°03'10.4"E
C = 39					5+75.94	534556.16 801743.50	12°48'49"	3°49'11"	84.22'	167.73'	4.71'	750.00'	4+91.73	6+59.46	N1°03'10.4"E	N11°45'38.4"W
L22	6+59.46	8+31.00	534638.61 801726.33	534806.55 801691.37						171.54'						N11°45'38.4"W
C = 40					8+42.90	534818.20 801688.94	0°44'13"	1°32'55"	11.90'	23.79'	0.04'	1850.00'	8+31.00	8+54.79	N11°45'38.4"W	N11°01'25.6"W
C = 41					9+19.72	534893.61 801674.25	174°16'09"	881°28'25"	64.93'	9.89'	61.76'	3.25'	8+54.79	8+64.68	N11°01'25.6"W	S5°17'34.7"E
L23	8+64.68	9+55.32	534828.95 801680.24	534738.70 801688.60						90.64'						S5°17'34.7"E
L24	9+55.32	10+17.10	534738.70 801688.60	534677.50 801697.07						61.79'						S7°52'33.5"E

CB-RAB Inner Fig																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 42					9+99.94	534320.75 801738.40	359°53'21"	46°12'23"	0.06'	389.44'	124.00'	62.00'	10+00.00	13+89.44	N35°56'04.6"W	N35°49'25.7"W

PROJECT NO: 4682-01-73

HWY: CTH CB

COUNTY: WINNEBAGO

CURB ALIGNMENTS

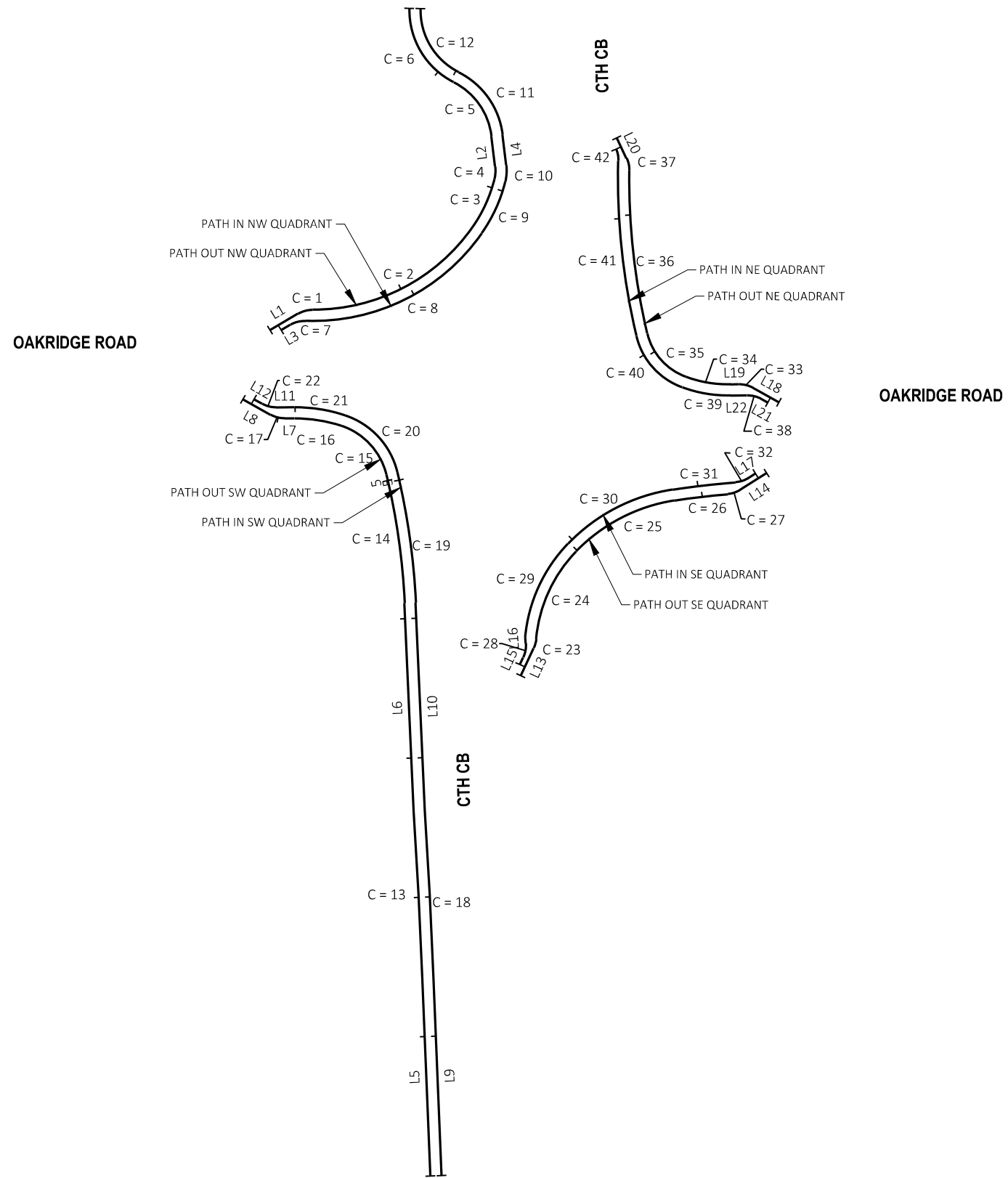
SHEET

68

E

Oakridge-West Leg Splitter Island																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 44					0+55.08	534300.24 801315.88	4°12'22"	1°54'35"	55.08'	110.11'	1.01'	1500.00'	0+00.00	1+10.11	S86°19'11.7"E	N89°28'26.5"E
L25	1+10.11	2+75.59	534300.75 801370.96	534302.27 801536.43						165.47'						N89°28'26.5"E
C = 45					3+09.98	534302.58 801570.82	31°59'07"	23°52'24"	34.39'	66.99'	4.83'	120.00'	2+75.59	3+42.58	N89°28'26.5"E	S58°32'26.4"E
C = 46					3+49.37	534281.09 801605.95	119°02'12"	716°11'50"	6.80'	8.31'	3.89'	4.00'	3+42.58	3+50.89	S58°32'26.4"E	N2°25'21.1"E
C = 47					3+63.47	534300.45 801606.77	17°27'04"	34°56'11"	12.59'	24.98'	0.96'	82.00'	3+50.89	3+75.86	N2°25'21.1"E	N19°52'24.8"E
C = 48					3+85.86	534321.69 801614.45	118°03'25"	477°27'53"	10.00'	12.36'	5.66'	6.00'	3+75.86	3+88.23	N19°52'24.8"E	S81°48'59.7"W
C = 49					4+21.69	534315.50 801571.43	7°39'27"	5°43'46"	33.46'	66.82'	1.12'	500.00'	3+88.23	4+55.05	S81°48'59.7"W	S89°28'26.5"W
L26	4+55.05	5+67.91	534315.19 801537.97	534314.16 801425.11						112.86'						S89°28'26.5"W
C = 50					6+31.47	534313.57 801361.56	4°51'09"	1°54'35"	63.56'	127.03'	1.35'	1500.00'	5+67.91	6+94.95	S89°28'26.5"W	N85°40'25.0"W
L27	6+94.95	7+31.99	534318.37 801298.19	534321.16 801261.25						37.04'						N85°40'25.0"W

Oakridge-East Leg Splitter Island																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
C = 51					0+52.46	534265.75 802001.13	7°53'48"	3°46'10"	52.46'	104.75'	1.81'	760.00'	-0+00.00	1+04.75	N83°16'57.9"W	S88°49'13.6"W
L28	1+04.75	2+09.50	534264.67 801948.68	534262.51 801843.95						104.76'						S88°49'13.6"W
C = 52					2+46.39	534261.75 801807.07	34°10'12"	23°52'24"	36.88'	71.57'	5.54'	120.00'	2+09.50	2+81.07	S88°49'13.6"W	N57°00'34.8"W
C = 53					2+87.86	534285.54 801770.44	119°02'14"	716°11'50"	6.80'	8.31'	3.89'	4.00'	2+81.07	2+89.38	N57°00'33.3"W	S3°57'12.7"W
C = 54					3+03.91	534264.26 801768.97	20°05'44"	34°56'11"	14.53'	28.76'	1.28'	82.00'	2+89.38	3+18.14	S3°57'12.7"W	S24°02'56.4"W
C = 55					3+28.71	534241.34 801758.74	120°51'34"	477°27'53"	10.57'	12.66'	6.16'	6.00'	3+18.14	3+30.80	S24°02'56.4"W	N83°11'22.8"E
C = 56					3+95.08	534250.21 801833.06	7°21'21"	2°51'53"	64.28'	128.38'	2.06'	1000.00'	3+30.80	4+59.18	N83°11'22.8"E	S89°27'16.6"E
C = 57					5+16.23	534249.06 801954.39	1°18'27"	0°34'23"	57.05'	114.10'	0.33'	5000.00'	4+59.18	5+73.28	S89°27'16.6"E	S88°08'49.6"E
L29	5+73.28	6+13.50	534247.21 802011.41	534245.91 802051.61						40.22'						S88°08'49.6"E



Path Out-NW Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L1	0+00.00	0+23.26	534333.47 801513.05	534345.28 801533.08						23.26'						N59°28'26.5"E
C = 1					0+28.78	534348.08 801537.84	30°52'45"	143°14'22"	5.52'	10.78'	0.75'	20.00'	0+23.26	0+34.04	N59°28'26.5"E	S89°38'48.3"E
C = 2					1+07.04	534347.60 801616.37	55°25'12"	20°36'36"	73.01'	134.45'	18.01'	139.00'	0+34.04	1+68.48	S89°38'48.3"E	N34°55'59.4"E
C = 3					1+87.67	534423.18 801669.16	20°54'28"	27°32'46"	19.19'	37.95'	1.76'	104.00'	1+68.48	2+06.44	N34°55'59.4"E	N14°01'31.8"E
C = 4					2+11.04	534446.27 801674.93	20°53'12"	114°35'30"	4.61'	9.11'	0.42'	25.00'	2+06.44	2+15.55	N14°01'31.8"E	N6°51'40.5"W
L2	2+15.55	2+37.51	534450.85 801674.38	534472.65 801671.75						21.96'						N6°51'40.5"W
C = 5					2+64.25	534499.20 801668.56	56°16'21"	57°17'45"	26.74'	49.11'	6.70'	50.00'	2+37.51	2+86.62	N6°51'40.5"W	N63°08'01.3"W
C = 6					3+23.05	534527.75 801612.21	64°16'06"	49°23'34"	36.43'	65.06'	10.49'	58.00'	2+86.62	3+51.68	N63°08'01.3"W	N1°08'05.0"E

Path In-NW Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L3	0+00.00	0+07.60	534333.54 801521.05	534337.40 801527.59						7.60'						N59°28'26.5"E
C = 7					0+13.48	534340.38 801532.66	32°44'41"	143°14'22"	5.88'	11.43'	0.85'	20.00'	0+07.60	0+19.03	N59°28'26.5"E	S87°46'52.7"E
C = 8					0+99.32	534337.05 801618.76	57°17'08"	19°29'18"	80.29'	146.97'	20.50'	147.00'	0+19.03	1+66.01	S87°46'52.7"E	N34°55'59.4"E
C = 9					1+86.67	534419.81 801676.56	20°54'28"	25°34'42"	20.66'	40.87'	1.89'	112.00'	1+66.01	2+06.88	N34°55'59.4"E	N14°01'31.8"E
C = 10					2+12.96	534445.76 801683.05	20°53'12"	86°48'42"	6.08'	12.03'	0.56'	33.00'	2+06.88	2+18.91	N14°01'31.8"E	N6°51'40.5"W
L4	2+18.91	2+40.87	534451.80 801682.32	534473.61 801679.70						21.96'						N6°51'40.5"W
C = 11					2+71.89	534504.40 801675.99	56°16'21"	49°23'34"	31.02'	56.96'	7.77'	58.00'	2+40.87	2+97.83	N6°51'40.5"W	N63°08'01.3"W
C = 12					3+29.24	534532.61 801620.31	64°16'06"	57°17'45"	31.41'	56.08'	9.05'	50.00'	2+97.83	3+53.92	N63°08'01.3"W	N1°08'05.0"E

Path Out-SW Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L5	0+00.00	1+42.94	533726.97 801628.06	533869.80 801622.28						142.94'						N2°19'03.6"W
C = 13					2+02.37	533929.18 801619.88	1°22'03"	0°34'31"	59.43'	118.85'	0.35'	4980.00'	1+42.94	2+61.80	N2°19'03.6"W	N3°41'06.3"W
L6	2+61.80	4+11.18	533988.49 801616.06	534137.72 801609.44						149.38'						N2°32'29.1"W
C = 14					4+57.95	534184.45 801607.36	11°02'23"	5°55'08"	46.77'	93.26'	2.25'	484.00'	4+11.18	5+04.43	N2°32'29.1"W	N13°34'52.2"W
C = 15					5+31.61	534256.33 801590.00	58°01'52"	58°27'54"	27.18'	49.63'	7.03'	49.00'	5+04.43	5+54.06	N13°34'52.2"W	N71°36'44.2"W
C = 16					5+71.38	534270.37 801547.77	18°54'50"	27°32'46"	17.32'	34.33'	1.43'	104.00'	5+54.06	5+88.39	N71°36'43.9"W	S89°28'26.5"W
L7	5+88.39	5+95.49	534270.21 801530.44	534270.14 801523.35						7.10'						S89°28'26.5"W
C = 17					6+00.85	534270.10 801517.99	30°00'00"	143°14'22"	5.36'	10.47'	0.71'	20.00'	5+95.49	6+05.96	S89°28'26.5"W	N60°31'33.5"W
L8	6+05.96	6+28.60	534272.73 801513.32	534283.87 801493.61						22.64'						N60°31'33.5"W

Path In-SW Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L9	0+00.00	1+42.94	533727.30 801636.06	533870.12 801630.28						142.94'						N2°19'03.6"W
C = 18					2+02.43	533929.56 801627.87	1°21'59"	0°34'28"	59.48'	118.96'	0.35'	4988.00'	1+42.94	2+61.91	N2°19'03.6"W	N3°41'03.0"W
L10	2+61.91	4+11.21	533988.92 801624.05	534138.07 801617.43						149.30'						N2°32'29.1"W
C = 19					4+58.75	534185.57 801615.32	11°02'23"	5°49'22"	47.55'	94.80'	2.29'	492.00'	4+11.21	5+06.00	N2°32'29.1"W	N13°34'52.2"W
C = 20					5+37.62	534262.52 801596.73	58°01'52"	50°15'34"	31.62'	57.73'	8.18'	57.00'	5+06.00	5+63.74	N13°34'52.2"W	N71°36'44.2"W
C = 21					5+82.39	534278.38 801549.03	18°54'50"	25°34'42"	18.66'	36.97'	1.54'	112.00'	5+63.74	6+00.71	N71°36'43.9"W	S89°28'26.5"W
L11	6+00.71	6+13.66	534278.21 801530.37	534278.09 801517.42						12.95'						S89°28'26.5"W
C = 22					6+19.02	534278.04 801512.06	30°00'00"	143°14'22"	5.36'	10.47'	0.71'	20.00'	6+13.66	6+24.13	S89°28'26.5"W	N60°31'33.5"W
L12	6+24.13	6+30.78	534280.68 801507.39	534283.95 801501.61						6.64'						N60°31'33.5"W

Path Out-SE Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L13	0+00.00	0+21.78	534085.70 801692.90	534105.45 801702.10						21.78'						N24°58'16.3"E
C = 23					0+25.27	534108.61 801703.57	19°48'49"	143°14'22"	3.49'	6.92'	0.30'	20.00'	0+21.78	0+28.70	N24°58'16.3"E	N5°09'27.5"E
C = 24					0+65.26	534148.50 801707.17	38°44'09"	27°32'46"	36.56'	70.31'	6.24'	104.00'	0+28.70	0+99.01	N5°09'27.5"E	N43°53'36.5"E
C = 25					1+40.88	534205.02 801761.55	37°18'58"	23°06'11"	41.87'	80.76'	6.88'	124.00'	0+99.01	1+79.77	N43°53'36.6"E	N81°12'34.9"E
C = 26					1+99.02	534214.36 801821.96	4°07'46"	5°21'53"	19.25'	38.49'	0.35'	534.00'	1+79.77	2+18.25	N81°12'34.9"E	N85°20'20.7"E
C = 27					2+23.18	534216.33 801846.05	27°41'01"	143°14'22"	4.93'	9.66'	0.60'	20.00'	2+18.25	2+27.92	N85°20'20.7"E	N57°39'19.8"E
L14	2+27.92	2+50.37	534218.96 801850.22	534230.98 801869.19						22.46'						N57°39'19.8"E

Path In-SE Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L15	0+00.00	0+05.64	534093.67 801692.20	534098.78 801694.58						5.64'						N24°58'16.3"E
C = 28					0+11.00	534103.64 801696.85	30°00'00"	143°14'22"	5.36'	10.47'	0.71'	20.00'	0+05.64	0+16.11	N24°58'16.3"E	N5°01'43.7"W
L16	0+16.11	0+20.62	534108.98 801696.38	534113.47 801695.98						4.51'						N5°01'43.7"W
C = 29					0+59.62	534152.29 801699.72	38°23'47"	25°34'43"	39.00'	75.06'	6.60'	112.00'	0+20.62	0+95.68	N5°29'49.2"E	N43°53'36.5"E
C = 30					1+40.25	534212.51 801757.66	37°18'58"	21°42'11"	44.57'	85.97'	7.32'	132.00'	0+95.68	1+81.65	N43°53'36.6"E	N81°12'34.9"E
C = 31					2+04.36	534222.80 801824.15	4°47'55"	5°17'08"	22.71'	45.39'	0.48'	542.00'	1+81.65	2+27.04	N81°12'34.9"E	N86°00'30.4"E
C = 32					2+32.09	534224.73 801851.85	28°21'11"	143°14'22"	5.05'	9.90'	0.63'	20.00'	2+27.04	2+36.94	N86°00'30.4"E	N57°39'19.8"E
L17	2+36.94	2+43.04	534227.43 801856.11	534230.70 801861.27						6.10'						N57°39'19.8"E

Path Out-NE Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L18	0+00.00	0+21.64	534281.72 801878.12	534292.15 801859.16						21.64'						N61°10'46.4"W
C = 33					0+27.00	534294.74 801854.46	30°00'00"	143°14'22"	5.36'	10.47'	0.71'	20.00'	0+21.64	0+32.11	N61°10'46.4"W	S88°49'13.6"W
L19	0+32.11	0+37.93	534294.62 801849.10	534294.51 801843.29						5.81'						S88°49'13.6"W
C = 34					0+54.48	534294.16 801826.75	21°17'58"	32°33'16"	16.55'	32.71'	1.54'	88.00'	0+37.93	0+70.64	S88°49'13.6"W	N69°52'48.5"W
C = 35					0+94.32	534308.00 801788.97	56°34'20"	65°06'32"	23.68'	43.44'	5.97'	44.00'	0+70.64	1+14.09	N69°52'48.5"W	N13°18'28.1"W
C = 36					1+73.30	534388.67 801769.89	13°56'59"	5°55'08"	59.21'	117.84'	3.61'	484.00'	1+14.09	2+31.92	N13°18'28.1"W	N0°38'30.6"E
C = 37					2+36.57	534452.52 801770.61	26°10'04"	143°14'22"	4.65'	9.13'	0.53'	20.00'	2+31.92	2+41.06	N0°38'30.6"E	N25°31'33.5"W
L20	2+41.06	2+57.18	534456.72 801768.61	534471.26 801761.66						16.12'						N25°31'33.5"W

Path In-NE Quadrant																
NUMBER	BEGIN LINE (STA)	END LINE (STA)	BEGIN LINE (Y,X)	END LINE (Y,X)	PI (STA)	PI (Y,X)	DELTA	DEGREE	TANGENT	LENGTH	EXTERNAL	RADIUS	PC (STA)	PT (STA)	BEARING BACK	BEARING AHEAD
L21	0+00.00	0+05.64	534281.55 801870.12	534284.27 801865.18						5.64'						N61°10'46.4"W
C = 38					0+11.00	534286.86 801860.48	30°00'00"	143°14'22"	5.36'	10.47'	0.71'	20.00'	0+05.64	0+16.11	N61°10'46.4"W	S88°49'13.6"W
L22	0+16.11	0+27.78	534286.75 801855.12	534286.51 801843.45						11.67'						S88°49'13.6"W
C = 39					0+45.84	534286.14 801825.41	21°17'58"	29°50'30"	18.05'	35.69'	1.68'	96.00'	0+27.78	0+63.47	S88°49'13.6"W	N69°52'48.5"W
C = 40					0+91.45	534301.97 801782.18	56°34'20"	55°05'32"	27.98'	51.34'	7.05'	52.00'	0+63.47	1+14.82	N69°52'48.5"W	N13°18'28.1"W
C = 41					1+78.48	534391.15 801761.09	14°44'43"	5°49'22"	63.66'	126.62'	4.10'	492.00'	1+14.82	2+41.43	N13°18'28.1"W	N1°26'15.2"E
C = 42					2+45.83	534459.19 801762.79	24°46'09"	143°14'22"	4.39'	8.65'	0.48'	20.00'	2+41.43	2+50.08	N1°26'15.2"E	N23°19'54.2"W

## Estimate Of Quantities

4682-01-73

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	6.000	6.000
0004	201.0120	Clearing	ID	10.000	10.000
0006	201.0205	Grubbing	STA	6.000	6.000
0008	201.0220	Grubbing	ID	10.000	10.000
0010	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0012	204.0100	Removing Pavement	SY	30.000	30.000
0014	204.0150	Removing Curb & Gutter	LF	4,900.000	4,900.000
0016	204.0155	Removing Concrete Sidewalk	SY	31.000	31.000
0018	204.0185	Removing Masonry	CY	4.000	4.000
0020	204.0220	Removing Inlets	EACH	11.000	11.000
0022	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	226.000	226.000
0024	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	86.000	86.000
0026	204.0265	Abandoning Wells	EACH	1.000	1.000
0028	204.9060.S	Removing (item description) 01. Concrete Apron Endwalls 15-Inch	EACH	1.000	1.000
0030	204.9060.S	Removing (item description) 02. Concrete Apron Endwalls 24-Inch	EACH	1.000	1.000
0032	205.0100	Excavation Common	CY	11,303.000	11,303.000
0034	208.0100	Borrow	CY	2,405.000	2,405.000
0036	213.0100	Finishing Roadway (project) 01. 4682-01-73	EACH	1.000	1.000
0038	305.0110	Base Aggregate Dense 3/4-Inch	TON	305.000	305.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,955.000	5,955.000
0042	310.0110	Base Aggregate Open-Graded	TON	35.000	35.000
0044	311.0110	Breaker Run	TON	13,645.000	13,645.000
0046	405.0100	Coloring Concrete WisDOT Red	CY	150.000	150.000
0048	415.0080	Concrete Pavement 8-Inch	SY	8,630.000	8,630.000
0050	415.0210	Concrete Pavement Gaps	EACH	2.000	2.000
0052	415.4100	Concrete Pavement Joint Filling	SY	10,700.000	10,700.000
0054	415.5110.S	Concrete Pavement Joint Layout	LS	1.000	1.000
0056	416.0160	Concrete Driveway 6-Inch	SY	270.000	270.000
0058	416.0512	Concrete Truck Apron 12-Inch	SY	445.000	445.000
0060	416.0610	Drilled Tie Bars	EACH	34.000	34.000
0062	416.0620	Drilled Dowel Bars	EACH	67.000	67.000
0064	416.1010	Concrete Surface Drains	CY	4.000	4.000
0066	455.0605	Tack Coat	GAL	13.000	13.000
0068	465.0105	Asphaltic Surface	TON	280.000	280.000
0070	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	80.000	80.000
0072	465.0125	Asphaltic Surface Temporary	TON	50.000	50.000
0074	465.0315	Asphaltic Flumes	SY	33.000	33.000
0076	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000

## Estimate Of Quantities

4682-01-73

Line	Item	Item Description	Unit	Total	Qty
0078	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0080	521.3115	Culvert Pipe Corrugated Steel 15-Inch	LF	40.000	40.000
0082	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	34.000	34.000
0084	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	7.000	7.000
0086	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	3.000	3.000
0088	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	290.000	290.000
0090	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	4,705.000	4,705.000
0092	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	50.000	50.000
0094	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	1,705.000	1,705.000
0096	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	40.000	40.000
0098	601.0580	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	LF	375.000	375.000
0100	601.0600	Concrete Curb Pedestrian	LF	250.000	250.000
0102	602.0405	Concrete Sidewalk 4-Inch	SF	3,250.000	3,250.000
0104	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	320.000	320.000
0106	606.0100	Riprap Light	CY	42.000	42.000
0108	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	453.300	453.300
0110	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	98.700	98.700
0112	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	274.400	274.400
0114	611.0624	Inlet Covers Type H	EACH	10.000	10.000
0116	611.0627	Inlet Covers Type HM	EACH	2.000	2.000
0118	611.0636	Inlet Covers Type HM-S	EACH	2.000	2.000
0120	611.0639	Inlet Covers Type H-S	EACH	8.000	8.000
0122	611.0642	Inlet Covers Type MS	EACH	1.000	1.000
0124	611.0652	Inlet Covers Type T	EACH	1.000	1.000
0126	611.1004	Catch Basins 4-FT Diameter	EACH	1.000	1.000
0128	611.1230	Catch Basins 2x3-FT	EACH	19.000	19.000
0130	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0132	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	30.000	30.000
0134	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	700.000	700.000
0136	619.1000	Mobilization	EACH	1.000	1.000
0138	620.0300	Concrete Median Sloped Nose	SF	185.000	185.000
0140	624.0100	Water	MGAL	130.000	130.000
0142	625.0100	Topsoil	SY	4,730.000	4,730.000
0144	625.0500	Salvaged Topsoil	SY	10,480.000	10,480.000
0146	627.0200	Mulching	SY	2,265.000	2,265.000
0148	628.1104	Erosion Bales	EACH	100.000	100.000



## Estimate Of Quantities

4682-01-73

Line	Item	Item Description	Unit	Total	Qty
0150	628.1504	Silt Fence	LF	2,310.000	2,310.000
0152	628.1520	Silt Fence Maintenance	LF	6,920.000	6,920.000
0154	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0156	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0158	628.2004	Erosion Mat Class I Type B	SY	425.000	425.000
0160	628.2008	Erosion Mat Urban Class I Type B	SY	16,900.000	16,900.000
0162	628.7005	Inlet Protection Type A	EACH	30.000	30.000
0164	628.7010	Inlet Protection Type B	EACH	7.000	7.000
0166	628.7015	Inlet Protection Type C	EACH	30.000	30.000
0168	628.7504	Temporary Ditch Checks	LF	154.000	154.000
0170	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0172	628.7560	Tracking Pads	EACH	6.000	6.000
0174	628.7570	Rock Bags	EACH	245.000	245.000
0176	629.0210	Fertilizer Type B	CWT	11.300	11.300
0178	630.0130	Seeding Mixture No. 30	LB	260.000	260.000
0180	630.0200	Seeding Temporary	LB	290.000	290.000
0182	630.0300	Seeding Borrow Pit	LB	35.000	35.000
0184	633.5200	Markers Culvert End	EACH	10.000	10.000
0186	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	34.000	34.000
0188	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	20.000	20.000
0190	637.2210	Signs Type II Reflective H	SF	249.040	249.040
0192	637.2230	Signs Type II Reflective F	SF	94.750	94.750
0194	638.2102	Moving Signs Type II	EACH	1.000	1.000
0196	638.2602	Removing Signs Type II	EACH	25.000	25.000
0198	638.3000	Removing Small Sign Supports	EACH	26.000	26.000
0200	638.4000	Moving Small Sign Supports	EACH	1.000	1.000
0202	642.5201	Field Office Type C	EACH	1.000	1.000
0204	643.0300	Traffic Control Drums	DAY	6,000.000	6,000.000
0206	643.0420	Traffic Control Barricades Type III	DAY	4,680.000	4,680.000
0208	643.0705	Traffic Control Warning Lights Type A	DAY	9,090.000	9,090.000
0210	643.0900	Traffic Control Signs	DAY	16,350.000	16,350.000
0212	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0214	643.1050	Traffic Control Signs PCMS	DAY	50.000	50.000
0216	643.5000	Traffic Control	EACH	1.000	1.000
0218	644.1616.S	Temporary Pedestrian Safety Fence	LF	1,470.000	1,470.000
0220	645.0111	Geotextile Type DF Schedule A	SY	266.000	266.000
0222	645.0130	Geotextile Type R	SY	111.000	111.000
0224	646.1020	Marking Line Epoxy 4-Inch	LF	7,565.000	7,565.000
0226	646.3020	Marking Line Epoxy 8-Inch	LF	365.000	365.000
0228	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	105.000	105.000

## Estimate Of Quantities

4682-01-73

Line	Item	Item Description	Unit	Total	Qty
0230	646.7120	Marking Diagonal Epoxy 12-Inch	LF	60.000	60.000
0232	646.7405	Marking Crosswalk Paint Transverse Line 6-Inch	LF	110.000	110.000
0234	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	280.000	280.000
0236	646.8120	Marking Curb Epoxy	LF	10.000	10.000
0238	646.8220	Marking Island Nose Epoxy	EACH	1.000	1.000
0240	650.4000	Construction Staking Storm Sewer	EACH	33.000	33.000
0242	650.4500	Construction Staking Subgrade	LF	4,296.000	4,296.000
0244	650.5000	Construction Staking Base	LF	709.000	709.000
0246	650.7000	Construction Staking Concrete Pavement	LF	4,296.000	4,296.000
0248	650.8500	Construction Staking Electrical Installations (project) 01. 4682-01-73	LS	1.000	1.000
0250	650.9000	Construction Staking Curb Ramps	EACH	8.000	8.000
0252	650.9910	Construction Staking Supplemental Control (project) 01. 4682-01-73	LS	1.000	1.000
0254	650.9920	Construction Staking Slope Stakes	LF	5,005.000	5,005.000
0256	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,972.000	1,972.000
0258	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	6.000	6.000
0260	654.0105	Concrete Bases Type 5	EACH	16.000	16.000
0262	654.0224	Concrete Control Cabinet Bases Type L24	EACH	1.000	1.000
0264	655.0610	Electrical Wire Lighting 12 AWG	LF	2,304.000	2,304.000
0266	655.0620	Electrical Wire Lighting 8 AWG	LF	8,812.000	8,812.000
0268	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. CB	LS	1.000	1.000
0270	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	16.000	16.000
0272	657.0322	Poles Type 5-Aluminum	EACH	16.000	16.000
0274	657.0715	Luminaire Arms Truss Type 4 1/2-Inch Clamp 15-FT	EACH	16.000	16.000
0276	659.1115	Luminaires Utility LED A	EACH	16.000	16.000
0278	659.2124	Lighting Control Cabinets 120/240 24-Inch	EACH	1.000	1.000
0280	690.0150	Sawing Asphalt	LF	330.000	330.000
0282	690.0250	Sawing Concrete	LF	35.000	35.000
0284	715.0415	Incentive Strength Concrete Pavement	DOL	2,589.000	2,589.000
0286	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
0288	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0290	SPV.0060	Special 01. Catch Basins 4-FT Diameter Special	EACH	1.000	1.000
0292	SPV.0060	Special 02. Inlets 5-FT Diameter	EACH	2.000	2.000
0294	SPV.0060	Special 03. Salvaging Solar Powered Flashing Blinker Signs	EACH	6.000	6.000
0296	SPV.0085	Special 01. Low Maintenance Seed Mix	LB	200.000	200.000
0298	SPV.0120	Special 01. Water for Seeded Areas	MGAL	415.000	415.000

CLEARING & GRUBBING

ROADWAY	STATION	-	STATION	SIDE	201.0105		201.0120		201.0205		201.0220	
					CLEARING		GRUBBING		STA	ID	STA	ID
CTH CB	105+00 'NB'	-	109+00 'NB'	LT/RT	4	---	4	---				
CTH CB SUBTOTAL					4	0	4	0				
OAKRIDGE RD			210+60	26' RT	---	10	---	10				
	212+00 'EB'	-	214+00 'EB'	RT	2	---	2	---				
OAKRIDGE RD SUBTOTAL					2	10	2	10				
<b>PROJECT TOTAL</b>					<b>6</b>	<b>10</b>	<b>6</b>	<b>10</b>				

REMOVING SMALL PIPE CULVERTS

ROADWAY	STATION	SIDE	DESCRIPTION	LENGTH (LF)	203.0100
					EACH
CTH CB	116+85 'NB'	RT	18" CMP	43	1
CTH CB SUBTOTAL					1
OAKRIDGE RD	208+25 'EB'	LT	24" RCP	17	1
	211+90 'EB'	RT	12" CMP	15	1
OAKRIDGE RD SUBTOTAL					2
<b>PROJECT TOTAL</b>					<b>3</b>

\* NON-BID ITEM: FOR INFORMATION ONLY

REMOVING PAVEMENT

ROADWAY	STATION	-	STATION	SIDE	204.0100
					SY
CTH CB	116+24 'NB'	-	116+71 'NB'	LT	30
CTH CB SUBTOTAL					30
<b>PROJECT TOTAL</b>					<b>30</b>

NOTES: REMOVAL OF CORRUGATED CONCRETE MEDIAN

REMOVING CURB & GUTTER

ROADWAY	STATION	-	STATION	SIDE	204.0150
					LF
CTH CB	103+50 'NB'	-	104+93 'NB'	LT/RT	145
	103+50 'NB'	-	108+27 'NB'	LT	1,000
	103+50 'NB'	-	108+80 'NB'	LT/RT	530
	108+05 'NB'	-	108+15 'NB'	LT	70
	109+55 'NB'	-	110+05 'NB'	LT	80
	109+85 'NB'	-	116+30 'NB'	LT	1,280
CTH CB SUBTOTAL					3,105
OAKRIDGE RD	205+13 'EB'	-	208+63 'EB'	LT/RT	715
	208+31 'EB'	-	208+47 'EB'	LT	65
	210+10 'EB'	-	213+36 'EB'	LT	680
	210+15 'EB'	-	231+35 'EB'	LT/RT	320
	212+82 'EB'	-	212+84 'EB'	LT	15
OAKRIDGE RD SUBTOTAL					1,795
<b>PROJECT TOTAL</b>					<b>4,900</b>

REMOVING CONCRETE SIDEWALK

ROADWAY	STATION	-	STATION	SIDE	204.0155
					SY
CTH CB	104+38 'NB'	-	104+44 'NB'	LT	11
	116+24 'NB'	-	116+30 'NB'	LT	3
	CTH CB SUBTOTAL				
OAKRIDGE RD	207+55 'EB'	-	207+61 'EB'	LT/RT	3
	211+39 'EB'	-	211+46 'EB'	LT	4
	212+94 'EB'	-	213+00 'EB'	LT	10
OAKRIDGE RD SUBTOTAL					17
<b>PROJECT TOTAL</b>					<b>31</b>

ALL ITEMS CATEGORY 0010 UNLESS NOTED

REMOVING INLETS

ROADWAY	STATION	SIDE	204.0220 EACH
CTH CB	108+10 'NB'	LT	1
	108+12 'NB'	LT	1
	108+29 'NB'	LT	1
	113+59 'NB'	LT	1
	113+60 'NB'	LT	1
	113+62 'NB'	LT	1
	115+87 'NB'	LT	1
	115+88 'NB'	LT	1
CTH CB SUBTOTAL			8
OAKRIDGE RD	210+26 'EB'	LT	1
	210+30 'EB'	LT	1
	210+31 'EB'	LT	1
OAKRIDGE RD SUBTOTAL			3
<b>PROJECT TOTAL</b>			<b>11</b>

ABANDONING WELLS

ROADWAY	STATION	SIDE	204.0265 EACH
OAKRIDGE RD	212+89 'EB'	RT	1
<b>PROJECT TOTAL</b>			<b>1</b>

REMOVING APRON ENDWALLS

ROADWAY	STATION	SIDE	204.9060.S.02 15-INCH EACH	204.9060.S.02 24-INCH EACH
CTH CB	112+52 'NB'	LT	---	1
	CTH CB SUBTOTAL			0
OAKRIDGE RD	206+44 'EB'	RT	1	---
				1
<b>PROJECT TOTAL</b>			<b>1</b>	<b>1</b>

REMOVING MASONRY

ROADWAY	STATION	SIDE	204.0185 CY	NOTES
OAKRIDGE RD	212+89 'EB'	RT	4	REMOVAL OF CONCRETE PAD
<b>PROJECT TOTAL</b>			<b>4</b>	

REMOVING STORM SEWER

ROADWAY	STATION - STATION	SIDE	204.0245.01 12-INCH LF	204.0245.02 15-INCH LF
CTH CB	107+92 'NB' - 108+10 'NB'	LT	66	---
	108+10 'NB' - 108+12 'NB'	LT	7	---
	108+12 'NB' - 108+29 'NB'	LT	37	---
	113+51 'NB' - 113+59 'NB'	LT	---	43
	113+59 'NB' - 113+60 'NB'	LT	8	---
	113+60 'NB' - 113+62 'NB'	LT	8	---
	115+83 'NB' - 115+87 'NB'	LT/RT	---	43
	115+87 'NB' - 115+88 'NB'	LT	6	---
CTH CB SUBTOTAL			132	86
OAKRIDGE RD	210+26 'EB' - 210+30 'EB'	LT	27	---
	210+30 'EB' - 210+31 'EB'	LT	6	---
	210+31 'EB' - 210+42 'EB'	LT	61	---
OAKRIDGE RD SUBTOTAL			94	0
<b>PROJECT TOTAL</b>			<b>226</b>	<b>86</b>

FINISHING ROADWAY

ROADWAY	PROJECT	213.0100 EACH
CTH CB	4682-01-73	1
<b>PROJECT TOTAL</b>		<b>1</b>

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

3

Earthwork Summary			A	B	C	D	E	F	G	H	I	J
			Item #205.0100		*	*	Item #305.0130	*	*	*	*	Item #208.0100
Stage	Location	From/To Station	Common Excavation (1) (CY)		Salvaged/Unusable Pavement Material (6) (CY)	Available Material (7) (CY)	EBS Backfill = Breaker Run (3) (TON)	Unexpanded Fill (CY)	Expanded Fill (8) (CY)	Mass Ordinate +/- (9) (CY)	Waste (CY)	Borrow (CY)
			Cut (2) (CY)	EBS Excavation(3)(4)(5) (CY)			Conversion Factor 1.80		Factor 1.11			
1	Temporary Trail	10+24 - 17+94	106	0	0	106	0	411	456	-350		
	Stage 1 Subtotals		106	0	0	106	0	411	456	-350	0	350
2	CTH CB NB Approach	103+50 - 108+00	1,116	0	240	876	0	117	130	746	746	
	CTH CB NB Exit	110+20 - 118+27	768	0	330	438	0	4,279	4,750	-4,312		
	CTH CB SB Exit	103+50 - 108+25	1,033	0	240	793	0	50	56	738	738	
	CTH CB SB Approach	110+20 - 118+25	2,279	0	330	1,949	0	111	123	1,826	1,826	
	Oakridge Rd EB Approach	204+84 - 208+45	910	0	120	790	0	109	121	669	669	
	Oakridge Rd EB Exit	210+65 - 213+84	482	0	110	372	0	391	434	-62		
	Oakridge Rd WB Exit	205+13 - 208+50	640	0	100	540	0	98	109	431	431	
	Oakridge Rd WB Approach	210+65 - 213+50	489	0	140	349	0	200	222	127	127	
	Circulating Roadway	10+00 - 13+89	1,307	0	300	1,007	0	2,879	3,196	-2,189		
	Stage 2 Subtotals		9,024	0	1,910	7,114	0	8,234	9,140	-2,026	4,537	2,026
3	CTH CB SB Exit	103+50 - 108+25	56	0	40	16	0	230	255	-239		
	CTH CB SB Approach	110+20 - 112+00	24	0	20	4	0	1	1	3	3	
	Oakridge Rd EB Approach	204+84 - 208+45	256	0	20	236	0	4	4	232	232	
	Oakridge Rd WB Exit	205+13 - 208+50	136	0	20	116	0	77	85	31	31	
		Circulating Roadway	10+00 - 13+89	1	0	0	1	0	50	56	-55	
	Stage 3 Subtotals		473	0	100	373	0	362	402	-29	265	29
UNDISTRIBUTED (EBS)			0	1,700	0	0	3,060	0	0	0	0	
Grand Total			9,603	1,700	2,010	7,593	3,060	9,007	9,998	-2,405	4,802	2,405
Total Common Excavation			11,303									

\*Not a bid item. Column shown for information only.

1) Common Excavation is the sum of the Cut (A) and Excavation Below Subgrade (B) columns. Item number 205.0100.

2) Salvaged/Unusable Pavement Material (C) is included in the Cut (A) to the proposed subgrade line.

3) EBS Excavation (B) to be backfilled with Breaker Run (E). Breaker Run unit weight estimated at 1.8 Tons per CY. Additional quantities shown elsewhere, see 'Base Aggregate Items' table.

4) EBS Areas were approximated as specified in the Geotechnical Report and are not shown on cross sections. Actual EBS locations to be determined by engineer.

5) EBS Excavation Material shall be removed from the site and shall not be used as fill material. EBS Excavation material is not included in the Mass Ordinate.

6) Salvaged/Unusable Pavement Material (C) is included in the Common Excavation quantity to the bottom of the existing pavement. This assumes the existing pavement structure is salvaged or wasted by the contractor. The existing pavement structure is not shown on the cross sections.

7) Available Material (D) = Cut (A) - Salvaged/Unusable Pavement Material (C).

8) Expanded Fill (G) = Unexpanded Fill (F) \* Expanded Fill Factor (1.11).

9) The Mass Ordinate (H) + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

**BASE AGGREGATE ITEMS**

STAGE	ROADWAY	STATION - STATION	305.0110	305.0120	311.0110
			BASE AGGREGATE	BASE AGGREGATE	BREAKER RUN
			DENSE 3/4-INCH TON	DENSE 1 1/4-INCH TON	TON
1	TEMPORARY PATH WIDENING	10+24 'TW' - 17+94 'TW'	---	120	---
<b>STAGE 1 SUBTOTAL</b>			<b>0</b>	<b>120</b>	<b>0</b>
2	CTH CB	103+50 'NB' - 108+30 'NB'	---	1,025	2,230
		108+30 'NB' - 109+95 'NB'	---	1,165	1,755
		109+95 'NB' - 115+00 'NB'	115	1,085	2,330
		115+00 'NB' - 118+27 'NB'	130	625	1,355
<b>CTH CB SUBTOTAL</b>			<b>245</b>	<b>3,900</b>	<b>7,670</b>
	OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	60	750	1,405
		210+40 'EB' - 213+34 'EB'	---	710	1,310
<b>OAKRIDGE RD SUBTOTAL</b>			<b>60</b>	<b>1,460</b>	<b>2,715</b>
<b>STAGE 2 SUBTOTAL</b>			<b>305</b>	<b>5,360</b>	<b>10,385</b>
3	CTH CB	103+50 'NB' - 108+30 'NB'	---	205	---
		108+30 'NB' - 109+95 'NB'	---	95	---
<b>CTH CB SUBTOTAL</b>			<b>0</b>	<b>300</b>	<b>0</b>
	OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	175	200
<b>OAKRIDGE RD SUBTOTAL</b>			<b>0</b>	<b>175</b>	<b>200</b>
<b>STAGE 3 SUBTOTAL</b>			<b>0</b>	<b>475</b>	<b>200</b>
<b>PROJECT TOTAL</b>			<b>305</b>	<b>5,955</b>	<b>10,585</b>

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE, SEE 'EARTHWORK SUMMARY TABLE

**CONCRETE PAVEMENT ITEMS**

STAGE	ROADWAY	STATION - STATION	405.0100	415.0080	415.0210	415.4100	416.0160	416.0512
			CONCRETE WISDOT RED CY	CONCRETE PAVEMENT 8-INCH SY	CONCRETE PAVEMENT GAPS EACH	CONCRETE PAVEMENT JOINT FILLING SY	CONCRETE DRIVEWAY 6-INCH SY	CONCRETE TRUCK APRON 12-INCH SY
2	CTH CB	103+50 'NB' - 108+30 'NB'	---	1,820	---	2,430	80	---
		108+30 'NB' - 109+95 'NB'	150	1,120	---	1,290	---	445
		109+95 'NB' - 115+00 'NB'	---	1,960	---	2,460	---	---
		115+00 'NB' - 118+27 'NB'	---	1,300	---	1,400	---	---
<b>CTH CB SUBTOTAL</b>			<b>150</b>	<b>6,200</b>	<b>0</b>	<b>7,580</b>	<b>80</b>	<b>445</b>
	OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	1,190	2	1,500	165	---
		210+40 'EB' - 213+34 'EB'	---	1,070	---	1,410	25	---
<b>OAKRIDGE RD SUBTOTAL</b>			<b>0</b>	<b>2,260</b>	<b>2</b>	<b>2,910</b>	<b>190</b>	<b>0</b>
<b>STAGE 2 SUBTOTAL</b>			<b>150</b>	<b>8,460</b>	<b>2</b>	<b>10,490</b>	<b>270</b>	<b>445</b>
3	OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	170	---	210	---	---
<b>OAKRIDGE RD SUBTOTAL</b>			<b>0</b>	<b>170</b>	<b>0</b>	<b>210</b>	<b>0</b>	<b>0</b>
<b>STAGE 3 SUBTOTAL</b>			<b>0</b>	<b>170</b>	<b>0</b>	<b>210</b>	<b>0</b>	<b>0</b>
<b>PROJECT TOTAL</b>			<b>150</b>	<b>8,630</b>	<b>2</b>	<b>10,700</b>	<b>270</b>	<b>445</b>

**CONCRETE PAVEMENT JOINT LAYOUT**

ROADWAY	PROJECT	415.5110.S LS
CTH CB	4682-01-73	1
<b>PROJECT TOTAL</b>		<b>1</b>

**CONCRETE SURFACE DRAINS**

ROADWAY	STATION	SIDE	416.1010 CY
OAKRIDGE RD	211+87 'EB'	LT	2
	212+58 'EB'	RT	2
<b>OAKRIDGE RD SUBTOTAL</b>			<b>4</b>
<b>PROJECT TOTAL</b>			<b>4</b>

**DRILLED BARS**

ROADWAY	STATION - STATION	416.0610 TIE BARS EACH	416.0620 DOWEL BARS EACH
CTH CB	103+50 'NB' - 108+30 'NB'	8	---
<b>CTH CB SUBTOTAL</b>		<b>8</b>	<b>0</b>
OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	20	67
	210+40 'EB' - 213+34 'EB'	6	---
<b>OAKRIDGE RD SUBTOTAL</b>		<b>26</b>	<b>67</b>
<b>PROJECT TOTAL</b>		<b>34</b>	<b>67</b>

\* USE 2 TIE BARS FOR CONNECTIONS TO EXISTING CURB & GUTTER

ALL ITEMS CATEGORY 0010 UNLESS NOTED

ASPHALTIC SURFACE ITEMS

STAGE	ROADWAY	STATION - STATION	455.0605	465.0105	465.0120	465.0125
			TACK COAT GAL	ASPHALTIC SURFACE TON	ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES SY	ASPHALTIC SURFACE TEMPORARY TON
1	TEMPORARY PATH WIDENING	10+24 'TW' - 17+94 'TW'	---	---	---	50
<b>STAGE 1 SUBTOTAL</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>50</b>
2	CTH CB	103+50 'NB' - 108+30 'NB'	3	30	5	---
		109+95 'NB' - 115+00 'NB'	0	20	---	---
		115+00 'NB' - 118+27 'NB'	3	15	5	---
<b>CTH CB SUBTOTAL</b>			<b>6</b>	<b>65</b>	<b>10</b>	<b>0</b>
	OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	4	25	35	---
		210+40 'EB' - 213+34 'EB'	3	40	35	---
		<b>OAKRIDGE RD SUBTOTAL</b>	<b>7</b>	<b>65</b>	<b>70</b>	<b>0</b>
<b>STAGE 2 SUBTOTAL</b>			<b>13</b>	<b>130</b>	<b>80</b>	<b>0</b>
3	CTH CB	103+50 'NB' - 108+30 'NB'	0	85	---	---
		109+95 'NB' - 115+00 'NB'	0	35	---	---
		<b>CTH CB SUBTOTAL</b>	<b>0</b>	<b>120</b>	<b>0</b>	<b>0</b>
	OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	0	30	---	---
		<b>OAKRIDGE RD SUBTOTAL</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>
<b>STAGE 3 SUBTOTAL</b>			<b>0</b>	<b>150</b>	<b>0</b>	<b>0</b>
<b>PROJECT TOTAL</b>			<b>13</b>	<b>280</b>	<b>80</b>	<b>50</b>

ASPHALTIC FLUMES

ROADWAY	STATION	SIDE	465.0315 SY
CTH CB	111+43 'NB'	RT	11
<b>CTH CB SUBTOTAL</b>			<b>11</b>
OAKRIDGE RD	205+13 'EB'	RT	12
	213+37 'EB'	LT	10
<b>OAKRIDGE RD SUBTOTAL</b>			<b>22</b>
<b>PROJECT TOTAL</b>			<b>33</b>

CULVERT PIPES & ENDWALLS

ROADWAY	INLET				OUTLET				SLOPE (%)	521.3118	521.1018
	STATION	OFFSET	SIDE	ELEV.	STATION	OFFSET	SIDE	ELEV.		CULVERT PIPE CORRUGATED STEEL 18-INCH LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH
CTH CB	116+70 'NB'	44.6'	RT	774.69	117+03	45.9'	RT	774.46	0.68	34	2
<b>CTH CB SUBTOTAL</b>										<b>34</b>	<b>2</b>
<b>PROJECT TOTAL</b>										<b>34</b>	<b>2</b>

ALL ITEMS CATEGORY 0010 UNLESS NOTED

STORM SEWER PIPES

FROM - TO	LOCATION	521.3115 Culvert Pipe Corrugated Steel 15-Inch LF	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch LF	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch LF	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch LF	* JOINT TIES EACH	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT
1A - 1B	CB-NB APPROACH	---	---	---	23.0	---	782.86	782.74	0.0052
1B - 1C	CB-NB APPROACH	---	---	---	23.7	---	782.74	782.62	0.0051
1C - 1D	CB-SB EXIT	---	---	---	19.0	---	782.62	782.53	0.0047
1D - 1E	CB-SB EXIT	---	---	---	23.7	6	782.53	782.41	0.0051
2A - 2B	CB-NB APPROACH	---	22.8	---	---	---	780.98	780.75	0.0101
2B - 2C	CB-NB APPROACH	---	53.2	---	---	---	780.75	780.22	0.0100
2C - 2D	CB-SB EXIT	---	23.2	---	---	---	780.22	779.98	0.0103
2D - 2E	CB-SB EXIT	---	25.6	---	---	6	779.98	779.73	0.0098
3A - 3D	CB-RAB INNER FLG	---	69.3	---	---	---	778.79	778.44	0.0051
3B - 3C	OAKRIDGE-WB EXIT	---	20.1	---	---	---	778.90	778.70	0.0100
3C - 3D	OAKRIDGE-WB EXIT	---	25.6	---	---	---	778.70	778.44	0.0102
EXIST - 3D	OAKRIDGE-WB EXIT	---	---	8.0	---	---	777.77	777.70	0.0087
3D - 3E	CB-NB EXIT	---	---	28.1	---	6	777.70	777.45	0.0089
4A - 4B	CB-SB APPROACH	---	23.0	---	---	---	776.69	776.46	0.0100
4B - 4	CB-NB EXIT	---	103.7	---	---	---	776.46	775.17	0.0124
EXIST - 4	CB-NB EXIT	---	---	24.4	---	---	774.52	774.42	0.0041
4 - 5	CB-NB EXIT	---	---	38.2	---	6	774.42	774.27	0.0039
6A - 6B	CB-SB APPROACH	---	---	---	19.0	---	775.69	775.59	0.0053
6B - 6C	CB-NB EXIT	---	52.8	---	---	6	775.59	775.33	0.0049
7A - 7B	CB-NB EXIT	---	34.0	---	---	6	775.81	775.47	0.0100
8A - 8B	CB-SB APPROACH	---	---	---	54.4	6	775.42	774.88	0.0099
9A - 9B	OAKRIDGE-EB APPROACH	---	---	---	19.0	---	779.49	779.30	0.0100
9B - 9C	OAKRIDGE-EB APPROACH	---	---	---	39.3	6	779.30	779.11	0.0048
10A - 10B	OAKRIDGE-WB APPROACH	---	---	---	11.9	---	780.46	780.40	0.0050
10B - 10C	OAKRIDGE-EB EXIT	---	---	---	41.4	6	780.40	780.19	0.0051
11 - EXIST	OAKRIDGE-EB APPROACH	40.0	---	---	---	---	780.38	780.01	0.0093
<b>PROJECT TOTAL</b>		<b>40.0</b>	<b>453.3</b>	<b>98.7</b>	<b>274.4</b>	<b>54</b>			

NOTES:

\* NON-BID ITEM: FOR INFORMATION ONLY

1. PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES

2. JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL REINFORCED CONCRETE APRON ENDWALL LOCATIONS. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT PIPE ENDS.

ALL ITEMS CATEGORY 0010 UNLESS NOTED



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STORM SEWER STRUCTURES

522.1015 522.1024 611.0624 611.0627 611.0636 611.0639 611.0642 611.0652 611.1004 611.1230 611.3901 SPV.0060.01 SPV.0060.02 520.8000 633.5200

Apron Endwalls for Culvert Pipe Reinforced Concrete 15-  
Apron Endwalls for Culvert Pipe Reinforced Concrete 24-

STRUCTURE	STATION	OFFSET*	LOCATION	RIM ELEVATION	INVERT ELEVATION	DEPTH FT	Inch EACH	Inch EACH	Inlet Covers Type H EACH	Inlet Covers Type HM EACH	Inlet Covers Type HM-S EACH	Inlet Covers Type H-S EACH	Inlet Covers Type MS EACH	Inlet Covers Type T EACH	Catch Basins 4-FT Diameter EACH	Catch Basins 2x3- FT EACH	Inlets Median 1 Grate EACH	Catch Basins 4-FT Diameter Special EACH	Inlets 5-FT Diameter EACH	Concrete Collars for Pipe EACH	Markers Culvert End EACH	* Joint Ties EACH	NOTES		
																								7	3
1A	107+00.0	'NB' 21.5' RT	CB-NB APPROACH	786.70	780.86	4.84	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---		
1B	107+00.0	'NB' 1.5' LT	CB-NB APPROACH	787.10	780.74	5.36	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
1C	107+00.0	'SB' 1.5' RT	CB-SB EXIT	786.73	780.62	5.11	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
1D	107+00.0	'SB' 17.5' LT	CB-SB EXIT	786.41	780.53	4.88	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---		
1E	107+00.0	'SB' 41.2' LT	CB-SB EXIT	---	782.41	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
2A	108+23.5	'NB' 20.7' RT	CB-NB APPROACH	785.93	778.98	5.95	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---		
2B	108+17.9	'NB' 1.5' LT	CB-NB APPROACH	786.26	778.75	6.51	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
2C	108+25.6	'SB' 1.5' RT	CB-SB EXIT	785.45	778.22	6.23	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
2D	108+25.6	'SB' 21.7' LT	CB-SB EXIT	785.03	777.98	6.05	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---		
2E	108+25.6	'SB' 47.3' LT	CB-SB EXIT	---	779.73	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
3A	10+92.2	'C' 1.8' LT	CB-RAB INNER FLG	783.10	776.79	5.48	---	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---		
3B	208+15.3	'WB' 1.5' RT	OAKRIDGE-WB EXIT	783.20	776.90	5.30	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
3C	208+15.2	'WB' 18.6' LT	OAKRIDGE-WB EXIT	782.77	776.70	5.07	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---		
3D	208+41.8	'WB' 20.4' LT	OAKRIDGE-WB EXIT	782.90	777.70	4.20	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---		
3E	208+45.7	'WB' 48.3' LT	OAKRIDGE-WB EXIT	---	777.45	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
3F	108+46.3	'SB' 59.5' LT	CB-SB EXIT	---	778.74	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	1	MATCH EXISTING INVERT ELEVATION		
4A	111+50.0	'SB' 21.5' LT	CB-SB APPROACH	781.65	774.69	5.96	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---		
4B	111+50.0	'SB' 1.5' RT	CB-SB APPROACH	782.05	774.46	6.59	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---		
4	12+50.5	'NB' 1.5' LT	CB-NB EXIT	781.03	774.42	5.61	---	---	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---		
5	112+59.8	'NB' 35.5' RT	CB-NB EXIT	---	774.27	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
6A	113+41.5	'SB' 17.5' LT	CB-SB APPROACH	780.28	773.69	5.59	---	---	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---		
6B	113+41.5	'SB' 1.5' RT	CB-SB APPROACH	780.60	773.59	6.01	---	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---		
6C	113+44.5	'NB' 34.5' RT	CB-NB EXIT	---	775.33	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
7A	114+73.5	'NB' 1.5' LT	CB-NB EXIT	781.14	773.81	6.33	---	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---		
7B	114+73.5	'NB' 32.5' RT	CB-NB EXIT	---	775.47	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
8A	117+82.9	'SB' 20.2' LT	CB-SB APPROACH	779.27	773.42	4.85	---	---	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---		
8B	117+86.9	'NB' 34' RT	CB-NB EXIT	---	774.88	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
9A	207+61.8	'EB' 1.5' LT	OAKRIDGE-EB APPROACH	783.17	777.49	4.68	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
9B	207+61.8	'EB' 17.5' RT	OAKRIDGE-EB APPROACH	782.85	777.30	4.55	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---		
9C	207+61.8	'EB' 56.8' RT	OAKRIDGE-EB APPROACH	---	779.11	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
10A	213+20.9	'WB' 1.5' RT	OAKRIDGE-WB APPROACH	784.16	778.46	4.70	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
10B	213+20.0	'EB' 1.5' LT	OAKRIDGE-EB EXIT	784.34	778.40	4.94	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---		
10C	213+20.0	'EB' 39.9' RT	OAKRIDGE-WB APPROACH	---	780.19	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
11	206+05.9	'EB' 41.7' RT	OAKRIDGE-EB APPROACH	783.06	780.38	2.68	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	NO SLOPE GRATE		
EXIST 24" SSPRC CONNECTION	215+50.7	'SB' 2.0' RT	CB-SB APPROACH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---		
EXIST 15" CPCS CONNECTION		'EB'	OAKRIDGE-EB APPROACH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
EXIST 24" SSPRC CONNECTION		'WB'	OAKRIDGE-WB EXIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---		
<b>PROJECT TOTAL</b>							<b>7</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>10</b>	<b>2</b>			

NOTES:

- \* NON-BID ITEM: FOR INFORMATION ONLY
- 1. STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
- 2. RIM ELEVATIONS ARE AT THE FLANGE LINE FOR INLET/CATCH BASIN GRATES
- 3. FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE
- 4. DEPTH = RIM ELEV - INVERT ELEVATION - CASTING HEIGHT - ADJUSTMENT RING HEIGHT  
CASTING HEIGHT = 6" FOR TYPE H COVERS, 6" FOR TYPE HM COVERS, 6" FOR TYPE H-S COVERS, 6" FOR TYPE HM-S COVERS, 7" FOR TYPE T COVERS  
ADJUSTMENT RING HEIGHT = 6" TYPICAL, 3" FOR CATCH BASINS 4-FT DIAMETER SPECIAL (NO ADJUSTMENT FOR INLETS MEDIAN 1 GRATE)

ALL ITEMS CATEGORY 0010 UNLESS NOTED

CONCRETE CURB AND GUTTER

STAGE	ROADWAY	STATION - STATION	601.0405		601.0409	601.0411	601.0551 601.0553 601.0580	
			18-INCH		30-INCH		4-INCH	
			TYPE A	LF	TYPE A	TYPE D	TYPE A	TYPE D
2	CTH CB	103+50 'NB' - 108+30 'NB'	---	1,330	---	665	40	---
		108+30 'NB' - 109+95 'NB'	290	---	---	---	---	375
		109+95 'NB' - 115+00 'NB'	---	1,120	---	565	---	---
		115+00 'NB' - 118+27 'NB'	---	---	---	300	---	---
		<b>CTH CB SUBTOTAL</b>	<b>290</b>	<b>2,450</b>	<b>0</b>	<b>1,530</b>	<b>40</b>	<b>375</b>
OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	900	10	175	---	---	
	210+40 'EB' - 213+34 'EB'	---	1,180	40	---	---	---	
	<b>OAKRIDGE RD SUBTOTAL</b>	<b>0</b>	<b>2,080</b>	<b>50</b>	<b>175</b>	<b>0</b>	<b>0</b>	
<b>STAGE 2 SUBTOTAL</b>	<b>290</b>	<b>4,530</b>	<b>50</b>	<b>1,705</b>	<b>40</b>	<b>375</b>		
3	OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	175	---	---	---	---
		<b>OAKRIDGE RD SUBTOTAL</b>	<b>0</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>STAGE 3 SUBTOTAL</b>	<b>0</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>PROJECT TOTAL</b>		<b>290</b>	<b>4,705</b>	<b>50</b>	<b>1,705</b>	<b>40</b>	<b>375</b>	

RIP RAP

ROADWAY	STATION	SIDE	606.0100	645.0130
			RIPRAP LIGHT CY	GEOTEXTILE TYPE R SY
CTH CB	107+00 'NB'	LT	3	7
	107+90 'NB'	LT	3	7
	111+60 'NB'	RT	4	11
	113+45 'NB'	RT	3	7
	114+74 'NB'	RT	3	7
<b>CTH CB SUBTOTAL</b>			<b>16</b>	<b>39</b>
OAKRIDGE RD	204+90 'EB'	RT	2	6
	207+62 'EB'	RT	3	7
	208+19 'EB'	LT	5	14
	211+81 'EB'	LT	9	26
	212+65 'EB'	RT	4	10
	213+54 'EB'	LT	3	9
<b>OAKRIDGE RD SUBTOTAL</b>			<b>26</b>	<b>72</b>
<b>PROJECT TOTAL</b>			<b>42</b>	<b>111</b>

CONCRETE SIDEWALK ITEMS

STAGE	ROADWAY	STATION - STATION	601.0600	602.0405	602.0505	
			CONCRETE CURB PEDESTRIAN LF	CONCRETE SIDEWALK 4-INCH SF	CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	
			2	CTH CB	103+50 'NB' - 108+30 'NB'	85
109+95 'NB' - 115+00 'NB'	90	755			60	
<b>CTH CB SUBTOTAL</b>	<b>175</b>	<b>1,465</b>			<b>120</b>	
OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	35			170	40
	210+40 'EB' - 213+34 'EB'	40			665	80
<b>OAKRIDGE RD SUBTOTAL</b>	<b>75</b>	<b>835</b>	<b>120</b>			
<b>STAGE 2 SUBTOTAL</b>	<b>250</b>	<b>2,300</b>	<b>240</b>			
3	CTH CB	103+50 'NB' - 108+30 'NB'	---	205	20	
		109+95 'NB' - 115+00 'NB'	---	255	20	
		<b>CTH CB SUBTOTAL</b>	<b>0</b>	<b>460</b>	<b>40</b>	
OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	490	40		
	<b>OAKRIDGE RD SUBTOTAL</b>	<b>0</b>	<b>490</b>	<b>40</b>		
<b>STAGE 3 SUBTOTAL</b>	<b>0</b>	<b>950</b>	<b>80</b>			
<b>PROJECT TOTAL</b>		<b>250</b>	<b>3,250</b>	<b>320</b>		

PIPE UNDERDRAIN ITEMS

ROADWAY	STATION - STATION	310.0110	* 612.0206	** 612.0406	645.0111
		BASE AGGREGATE OPEN GRADED TON	UNPERFORATED 6-INCH LF	WRAPPED 6-INCH LF	GEOTEXTILE TYPE DF SCHEDULE A SY
CTH CB	108+24 'NB'	5	---	100	38
	108+26 'SB'	5	---	100	38
	112+51 'NB'	5	---	100	38
	113+42 'SB'	5	---	100	38
<b>CTH CB SUBTOTAL</b>		<b>20</b>	<b>0</b>	<b>400</b>	<b>152</b>
OAKRIDGE RD	207+62 'EB'	5	---	100	38
	208+15 'WB'	5	---	100	38
	208+06 'WB' - 208+27 'WB'	---	30	---	---
<b>OAKRIDGE RD SUBTOTAL</b>		<b>10</b>	<b>30</b>	<b>200</b>	<b>76</b>
CIRCULATORY ROADWAY	10+92 'C'	5	---	100	38
<b>CIRCULATORY ROADWAY SUBTOTAL</b>		<b>5</b>	<b>0</b>	<b>100</b>	<b>38</b>
<b>PROJECT TOTAL</b>		<b>35</b>	<b>30</b>	<b>700</b>	<b>266</b>

\*FOR TEMPORARY DRAINAGE, SEE STAGING PLANS  
 \*\*FOR USE AT LOW POINT STRUCTURES

ALL ITEMS CATEGORY 0010 UNLESS NOTED

MOBILIZATION

ROADWAY	PROJECT	619.1000 EACH
CTH CB	4682-01-73	1
<b>PROJECT TOTAL</b>		<b>1</b>

WATER

LOCATION	624.0100 MGAL
BASE AGGREGATE PLACEMENT	100
DUST CONTROL	30
<b>PROJECT TOTAL</b>	<b>130</b>

CONCRETE MEDIAN SLOPED NOSE

ROADWAY	STATION - STATION	620.0300	
		TYPE 1 SF	TYPE 2 SF
CTH CB	103+50 'NB' - 108+30 'NB'	---	35
	109+95 'NB' - 115+00 'NB'	45	35
	<b>CTH CB SUBTOTAL</b>	<b>45</b>	<b>70</b>
OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	35
	210+40 'EB' - 213+34 'EB'	---	35
	<b>OAKRIDGE RD SUBTOTAL</b>	<b>0</b>	<b>70</b>
<b>PROJECT TOTAL</b>		<b>185</b>	

RESTORATION ITEMS

ROADWAY	STATION - STATION	625.0100	625.0500	627.0200	629.0210	630.0130	630.0200	630.0300	SPV.0085.01	SPV.0120.01
		TOPSOIL	SALVAGED TOPSOIL	MULCHING	FERTILIZER TYPE B	SEEDING MIXTURE NO. 30	SEEDING TEMPORARY	SEEDING BORROW	LOW MAINTENANCE SEED MIX	WATER FOR SEEDED AREAS
		SY	SY	SY	CWT	LB	LB	PIT LB	LB	MGAL
CTH CB	103+50 'NB' - 108+30 'NB'	1,000	1,710	---	1.8	35	40	---	45	65
	108+30 'NB' - 109+95 'NB'	730	---	---	0.5	---	10	---	35	20
	109+95 'NB' - 115+00 'NB'	1,050	4,320	---	3.4	80	75	---	50	125
	115+00 'NB' - 118+27 'NB'	---	1,170	---	0.8	25	20	---	---	30
	<b>CTH CB SUBTOTAL</b>	<b>2,780</b>	<b>7,200</b>	<b>0</b>	<b>6.5</b>	<b>140</b>	<b>145</b>	<b>0</b>	<b>130</b>	<b>240</b>
OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	190	1,710	---	1.2	35	30	---	10	45
	210+40 'EB' - 213+34 'EB'	370	1,570	---	1.3	30	30	---	20	45
	<b>OAKRIDGE RD SUBTOTAL</b>	<b>560</b>	<b>3,280</b>	<b>0</b>	<b>2.5</b>	<b>65</b>	<b>60</b>	<b>0</b>	<b>30</b>	<b>90</b>
BORROW SITE		---	---	1,810	1.2	---	25	25	---	---
UNDISTRIBUTED		1,390	---	455	1.1	55	60	10	40	85
<b>PROJECT TOTAL</b>		<b>4,730</b>	<b>10,480</b>	<b>2,265</b>	<b>11.3</b>	<b>260</b>	<b>290</b>	<b>35</b>	<b>200</b>	<b>415</b>

ALL ITEMS CATEGORY 0010 UNLESS NOTED

EROSION CONTROL ITEMS

	628.1104 EROSION BALES	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.1905 MOBILIZATIONS EROSION CONTROL	628.1910 EMERGENCY EROSION CONTROL	628.2004 EROSION MAT CLASS I TYPE B	628.2008 URBAN CLASS I TYPE B	628.7005 TYPE A	628.7010 INLET PROTECTION TYPE B	628.7015 TYPE C	628.7504 TEMPORARY DITCH CHECKS	628.7555 CULVERT PIPE CHECKS	628.7560 TRACKING PADS	628.7570 ROCK BAGS
ROADWAY	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION	STATION - STATION
	EACH	LF	LF	EACH	EACH	SY	SY	EACH	EACH	EACH	LF	EACH	EACH	EACH
CTH CB	103+50 'NB' - 108+30 'NB'	---	355	1,065	---	---	155	2,615	8	2	9	22	1	---
	108+30 'NB' - 109+95 'NB'	---	---	---	---	---	725	1	---	1	11	---	---	---
	109+95 'NB' - 115+00 'NB'	---	690	2,070	---	---	55	5,320	6	---	6	---	---	90
	115+00 'NB' - 118+27 'NB'	---	130	390	---	---	5	1,160	1	---	34	1	---	30
	CTH CB SUBTOTAL	0	1,175	3,525	0	0	215	9,820	16	2	17	67	2	0
OAKRIDGE RD	204+84 'EB' - 208+62 'EB'	---	410	1,230	---	---	---	1,865	6	2	5	31	---	---
	210+40 'EB' - 213+34 'EB'	---	130	390	---	---	125	1,835	2	1	2	25	1	---
	OAKRIDGE RD SUBTOTAL	0	540	1,620	0	0	125	3,700	8	3	7	56	1	0
	BORROW/WASTE SITE	---	130	390	---	---	---	---	---	---	---	---	---	---
	UNDISTRIBUTED	100	465	1,385	5	3	85	3,380	6	2	6	31	1	6
	<b>PROJECT TOTAL</b>	<b>100</b>	<b>2,310</b>	<b>6,920</b>	<b>5</b>	<b>3</b>	<b>425</b>	<b>16,900</b>	<b>30</b>	<b>7</b>	<b>30</b>	<b>154</b>	<b>4</b>	<b>6</b>

FIELD OFFICE TYPE C

ROADWAY	642.5201 EACH
CTH CB	1
<b>PROJECT TOTAL</b>	<b>1</b>

TRAFFIC CONTROL

ROADWAY	643.5000 EACH
CTH CB	1
<b>PROJECT TOTAL</b>	<b>1</b>

DETOUR ITEMS

		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	
LOCATION	DURATION DAYS	SIGNS	DAYS	EACH	NUMBER OF CYCLES
CTH CB DETOUR	95	128	12,160	4	1
SUBTOTAL	---	---	12,160	4	---
UNDISTRIBUTED	---	---	1,030	1	1
<b>PROJECT TOTAL</b>	<b>---</b>	<b>---</b>	<b>13,190</b>	<b>5</b>	<b>---</b>

\*FOR INFORMATION ONLY  
\*\*QUANTITIES SHOWN ELSEWHERE, SEE 'TRAFFIC CONTROL ITEMS' TABLE

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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TRAFFIC CONTROL ITEMS

STAGE	***												
	643.0300			643.0420		643.0705		643.0900		643.1050			
	TRAFFIC CONTROL			TRAFFIC CONTROL		TRAFFIC CONTROL		TRAFFIC CONTROL		TRAFFIC CONTROL			
	DRUMS			BARRICADES TYPE III		WARNING LIGHTS TYPE A		SIGNS		SIGNS PCMS			
DURATION	*	*	*	*	*	*	*	*	*	*	**	**	
DAYS	DRUMS	DAYS	BARRICADES	DAYS	LIGHTS	DAYS	SIGNS	DAYS	SIGNS	DAYS	SIGNS	DAYS	
STAGE 1	14	---	---	46	644	92	1,288	34	476	4	40		
STAGE 2	60	---	---	44	2,640	84	5,040	28	1,680	---	---		
STAGE 3	21	---	---	46	966	92	1,932	34	714	---	---		
<b>SUBTOTAL</b>	---	---	---	---	4,250	---	8,260	---	2,870	---	40		
<b>UNDISTRIBUTED</b>	---	---	6,000	---	430	---	830	---	290	1	10		
<b>PROJECT TOTAL</b>	---	---	6,000	---	4,680	---	9,090	---	3,160	---	50		

\*FOR INFORMATION ONLY  
 \*\*QUANTITIES INCLUDE SIGNS PLACED PRIOR TO CONSTRUCTIONS  
 \*\*\*QUANTITIES SHOWN ELSEWHERE, SEE 'DETOUR ITEMS' TABLE

TEMPORARY PEDESTRIAN SAFETY FENCE

					644.1616.S
ROADWAY	STATION	-	STATION	SIDE	LF
CTH CB	10+48 'TW'	-	16+18 'TW'	RT	570
	16+80 'TW'	-	N PROJECT LIMITS	RT	900
<b>CTH CB SUBTOTAL</b>					<b>1,470</b>
<b>PROJECT TOTAL</b>					<b>1,470</b>

PAVEMENT MARKING ITEMS

														646.1020	646.3020	646.6320	646.7120	646.7405	646.7420	646.8120	646.8220		
														MARKING LINE			MARKING LINE	MARKING DOTTED	MARKING	MARKING CROSSWALK	MARKING CROSSWALK	MARKING	MARKING
														EPOXY 4-INCH			EPOXY	EXTENSION EPOXY	DIAGONAL EPOXY	PAINT TRANSVERSE LINE	EPOXY TRANSVERSE LINE	CURB	ISLAND NOSE
														SOLID	SOLID	DASHED	8-INCH	18-INCH	12-INCH	6-INCH	6-INCH	EPOXY	EPOXY
														WHITE	YELLOW	WHITE	WHITE	WHITE	YELLOW	WHITE	WHITE	YELLOW	YELLOW
ROADWAY	STATION	-	STATION	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EACH						
CTH CB	103+50 'NB'	-	108+30 'NB'	600	925	55	100	30	---	---	---	70	---	---									
	109+95 'NB'	-	115+00 'NB'	735	1,075	30	110	25	15	---	---	70	---	---	1								
	115+00 'NB'	-	118+27 'NB'	655	1,310	---	---	---	45	---	---	---	10	---	---								
<b>CTH CB SUBTOTAL</b>				<b>1,990</b>	<b>3,310</b>	<b>85</b>	<b>210</b>	<b>55</b>	<b>60</b>	<b>0</b>	<b>140</b>	<b>10</b>	<b>1</b>										
OAKRIDGE RD	204+84 'EB'	-	208+62 'EB'	525	685	30	75	25	---	---	110	70	---	---									
	210+40 'EB'	-	213+34 'EB'	375	535	30	80	25	---	---	---	70	---	---									
	<b>OAKRIDGE RD SUBTOTAL</b>				<b>900</b>	<b>1,220</b>	<b>60</b>	<b>155</b>	<b>50</b>	<b>0</b>	<b>110</b>	<b>140</b>	<b>0</b>	<b>0</b>									
<b>PROJECT TOTAL</b>					<b>7,565</b>	<b>365</b>	<b>105</b>	<b>60</b>	<b>110</b>	<b>280</b>	<b>10</b>	<b>1</b>											

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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CONSTRUCTION STAKING\*

ROADWAY	STATION	-	STATION	650.4000	650.4500	650.5000	650.7000	650.9000	650.9920
				SEWER EACH	SUBGRADE LF	BASE LF	CONCRETE PAVEMENT LF	CURB RAMPS EACH	SLOPE STAKES LF
TEMPORAR TRAIL WIDENING	10+24 'TW'	-	16+19 'TW'	---	---	595	---	---	595
	16+80 'TW'	-	17+94 'TW'	---	---	114	---	---	114
CTH CB SUBTOTAL				0	0	709	0	0	709
CTH CB	103+50 'NB'	-	108+31 'NB'	4	481	---	481	1	481
	103+50 'SB'	-	108+42 'SB'	6	492	---	492	1	492
	109+95 'NB'	-	118+27 'NB'	6	832	---	832	1	832
	110+09 'SB'	-	118+25 'SB'	5	816	---	816	1	816
CTH CB SUBTOTAL				21	2,621	0	2,621	4	2,621
OAKRIDGE RD	205+13 'EB'	-	208+63 'EB'	4	350	---	350	1	350
	205+13 'WB'	-	208+67 'WB'	4	354	---	354	1	354
	210+40 'EB'	-	213+34 'EB'	2	294	---	294	1	294
	210+52 'WB'	-	213+40 'WB'	1	288	---	288	1	288
OAKRIDGE RD SUBTOTAL				11	1,286	0	1,286	4	1,286
CIRCULATORY ROADWAY	10+00 'C'	-	13+89 'C'	1	389	---	389	---	389
<b>PROJECT TOTAL</b>				<b>33</b>	<b>4,296</b>	<b>709</b>	<b>4,296</b>	<b>8</b>	<b>5,005</b>

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONSTRUCTION STAKING\*

LOCATION	650.8500	650.9910
	ELECTRICAL INSTALLATIONS LS	SUPPLEMENTAL CONTROL LS
ID 4682-01-73	1	1
<b>PROJECT TOTAL</b>	<b>1</b>	<b>1</b>

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SAWING

ROADWAY	STATION	-	STATION	690.0150	690.0200
				ASPHALT LF	CONCRETE LF
CTH CB	103+50 'NB'	-	108+30 'NB'	105	20
	115+00 'NB'	-	118+27 'NB'	35	---
CTH CB SUBTOTAL				140	20
OAKRIDGE RD	204+84 'EB'	-	208+62 'EB'	110	5
	210+40 'EB'	-	213+34 'EB'	80	10
OAKRIDGE RD SUBTOTAL				190	15
<b>PROJECT TOTAL</b>				<b>330</b>	<b>35</b>

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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## REMOVING SIGNS

SIGN #	SIGN CODE	SIGN MOUNTED ON SAME POST AS #	638.2102	638.2602	638.3000	638.4000	SPV.0060.02	DESCRIPTION
			MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	MOVING SMALL SIGN SUPPORTS EACH	SALVAGING SOLAR POWERED FLASHING BLINKER SIGNS EACH	
1R-01	W2-1	1R-02	---	---	1	---	1	CROSS ROAD BLINKER SIGN
1R-02	W13-1	1R-01	---	1	---	---	---	ADVISORY SPEED PLATE (YELLOW BACK)
1R-03	R4-7	---	---	1	1	---	---	KEEP RIGHT
1R-04	R5-1A	---	---	1	1	---	---	WRONG WAY
2R-01	R5-1	---	---	1	1	---	---	DO NOT ENTER
2R-02	R4-7	---	---	1	1	---	---	KEEP RIGHT
2R-03	---	---	---	---	1	---	---	NO SIGN ON POST
2R-04	R2-1	---	---	1	1	---	---	SPEED LIMIT 35 MPH
2R-05	R1-1	2R-06	---	---	1	---	1	STOP BLINKER SIGN
2R-06	W4-4P	2R-05	---	1	---	---	---	CROSS TRAFFIC DOES NOT STOP
2R-07	R1-1	2R-08	---	---	1	---	1	STOP BLINKER SIGN
2R-08	W4-4P	2R-07	---	1	---	---	---	CROSS TRAFFIC DOES NOT STOP
2R-09	R4-7	---	---	1	1	---	---	KEEP RIGHT
2R-10	R4-7	---	---	1	1	---	---	KEEP RIGHT
2R-11	R1-1	2R-12	---	---	1	---	1	STOP BLINKER SIGN
2R-12	W4-4P	2R-11	---	1	---	---	---	CROSS TRAFFIC DOES NOT STOP
2R-13	R4-7	---	---	1	1	---	---	KEEP RIGHT
2R-14	R1-1	2R-15	---	---	1	---	1	STOP BLINKER SIGN
2R-15	W4-4P	2R-14	---	1	---	---	---	CROSS TRAFFIC DOES NOT STOP
2R-16	---	---	---	---	1	---	---	NO SIGN ON POST
2R-17	R5-1	---	---	1	1	---	---	DO NOT ENTER
2R-18	---	2R-19	---	1	1	---	---	CB TRAIL
2R-19	---	2R-18	---	1	---	---	---	ADOPT-A-PATH SIGN
2R-20	R5-1A	---	---	1	1	---	---	WRONG WAY
2M-01	---	---	1	---	---	1	---	THE FOX CITIES PAPER TRAIL
3R-01	W6-3	3R-02	---	1	1	---	---	TWO-WAY TRAFFIC SYMBOL
3R-02	R2-1	3R-01	---	1	---	---	---	SPEED LIMIT 45 MPH
3R-03	W2-1	3R-04	---	---	1	---	1	CROSS ROAD BLINKER SIGN
3R-04	W13-1	3R-03	---	1	---	---	---	ADVISORY SPEED PLATE (YELLOW BACK)
3R-05	R4-7	---	---	1	1	---	---	KEEP RIGHT
4R-01	W3-1	---	---	1	1	---	---	STOP AHEAD
4R-02	R4-7	---	---	1	1	---	---	KEEP RIGHT
4R-03	R5-1A	---	---	1	1	---	---	WRONG WAY
5R-01	---	---	---	---	1	---	---	NO SIGN ON POST
5R-02	R4-7	---	---	1	1	---	---	KEEP RIGHT
<b>PROJECT TOTAL</b>			<b>1</b>	<b>25</b>	<b>26</b>	<b>1</b>	<b>6</b>	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PROJECT NO: 4682-01-73

HWY: CTH CB

COUNTY: WINNEBAGO

MISCELLANEOUS QUANTITIES

SHEET NO: 89

E

PERMANENT SIGNING

SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE		637.2210	637.2230	634.0614	634.0616	SIGN MOUNTED ON SAME POST AS #	DESCRIPTION	
			W	X	SIGNS REFLECTIVE	SIGNS REFLECTIVE	POSTS WOOD	POSTS WOOD			
			IN.	IN.	H SF	F SF	4X6-INCH X 14-FT EACH	4X6-INCH X 16-FT EACH			
1-01	W2-6	2S	30	X	30	---	6.25	---	1	---	CIRCULAR INTERSECTION SIGN, 16X16 TEMP FLAGS INCIDENTAL T
1-02	W13-1	2S	18	X	18	---	2.25	---	1	---	15 MPH ADVISORY SPEED PLATE (YELLOW BACK)
1-03	W3-2	2S	36	X	36	---	9	---	1	---	YIELD AHEAD
1-04	R4-7	3	36	X	48	12	---	---	1	---	KEEP RIGHT
2-01	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-02	R6-2R	2S	24	X	30	5	---	---	---	2-01	ONE WAY RIGHT ARROW
2-03	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-04	R1-54	2S	24	X	15	2.5	---	---	---	2-03	TO TRAFFIC FROM LEFT
2-05	D1-1	2S	84	X	15	---	---	---	2	---	ONE DESTINATION (ARROW)
2-06	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-07	R6-2R	2S	24	X	30	5	---	---	---	2-06	ONE WAY RIGHT ARROW
2-08	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-09	R1-54	2S	24	X	15	2.5	---	---	---	2-08	TO TRAFFIC FROM LEFT
2-10	D1-1	2S	42	X	30	---	---	---	1	---	ONE DESTINATION (ARROW)
2-11	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-12	R6-2R	2S	24	X	30	5	---	---	---	2-11	ONE WAY RIGHT ARROW
2-13	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-14	R1-54	2S	24	X	15	2.5	---	---	---	2-13	TO TRAFFIC FROM LEFT
2-15	D1-1	2S	84	X	15	---	---	---	2	---	ONE DESTINATION (ARROW)
2-16	W11-15	2S	30	X	30	---	6.25	---	1	---	TRAIL CROSSING (BIKE AND PED SYMBOL)
2-17	W16-7L	2S	24	X	12	---	2	---	---	2-16	LEFT DIAGONAL DOWNWARD POINTING ARROW (YELLOW)
2-18	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-19	R6-2R	2S	24	X	30	5	---	---	---	2-18	ONE WAY RIGHT ARROW
2-20	W11-15	2S	30	X	30	---	6.25	---	1	---	TRAIL CROSSING (BIKE AND PED SYMBOL)
2-21	W16-7L	2S	24	X	12	---	2	---	---	2-20	LEFT DIAGONAL DOWNWARD POINTING ARROW (YELLOW)
2-22	R1-2	2S	36	X	31	3.88	---	---	1	---	YIELD, MOUNT AT 7'3", 16X16 TEMP FLAGS INCIDENTAL TO SIGN
2-23	R1-54	2S	24	X	15	2.5	---	---	---	2-22	TO TRAFFIC FROM LEFT
2-24	D1-1	2S	42	X	30	---	---	---	1	---	ONE DESTINATION (ARROW)
2-25	J4-1	2S	24	X	36	6	---	---	1	---	REASSURANCE ASSEMBLY (1 HEADED ROUTE PANEL)
	M3-3					---	---	---	---	---	SOUTH CARDINAL ROUTE MARKER
	M1-5A					---	---	---	---	---	COUNTY MARKER
2-25	R6-1R	3	54	X	18	6.75	---	---	2	---	ONE WAY RIGHT ARROW
2-26	R6-4B	2S	60	X	24	10	---	---	---	2-25	ROUNDAABOUT CHEVRON BANK
2-27	R6-1R	3	54	X	18	6.75	---	---	2	---	ONE WAY RIGHT ARROW
2-28	R6-4B	2S	60	X	24	10	---	---	---	2-27	ROUNDAABOUT CHEVRON BANK
2-29	R6-1R	3	54	X	18	6.75	---	---	2	---	ONE WAY RIGHT ARROW
2-30	R6-4B	2S	60	X	24	10	---	---	---	2-29	ROUNDAABOUT CHEVRON BANK
2-31	R6-1R	3	54	X	18	6.75	---	---	2	---	ONE WAY RIGHT ARROW
2-32	R6-4B	2S	60	X	24	10	---	---	---	2-31	ROUNDAABOUT CHEVRON BANK
2-33	J4-1	2S	24	X	36	6	---	---	1	---	REASSURANCE ASSEMBLY (1 HEADED ROUTE PANEL)
	M3-1					---	---	---	---	---	NORTH CARDINAL ROUTE MARKER
	M1-5A					---	---	---	---	---	COUNTY MARKER
3-01	W3-2	2S	36	X	36	---	9	---	1	---	YIELD AHEAD
3-02	R4-7	3	36	X	48	12	---	---	1	---	KEEP RIGHT
3-03	R2-1	2S	24	X	30	5	---	---	1	---	SPEED LIMIT 45 MPH
3-04	W2-6	2S	30	X	30	---	6.25	---	1	---	CIRCULAR INTERSECTION SIGN
3-05	W13-1	2S	18	X	18	---	2.25	---	---	3-04	15 MPH ADVISORY SPEED PLATE (YELLOW BACK)
4-01	J1-1	2S	24	X	39	6.5	---	---	1	---	JUNCTION OR END ASSEMBLY
	M2-1					---	---	---	4	---	JCT
	M1-5A					---	---	---	4	---	COUNTY MARKER
<b>SUBTOTAL</b>						<b>175.54</b>	<b>51.5</b>	<b>33</b>	<b>10</b>		

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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PERMANENT SIGNING (CONT.)

SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE			637.2210	637.2230	634.0614	634.0616	SIGN MOUNTED ON SAME POST AS #	DESCRIPTION
			W IN.	X IN.	H IN.	SIGNS REFLECTIVE TYPE II H SF	SIGNS REFLECTIVE TYPE II F SF	POSTS WOOD 4X6-INCH X 14-FT EACH	POSTS WOOD 4X6-INCH X 16-FT EACH		
4-02	W2-6	2S	30	X	30	---	6.25	---	1	---	CIRCULAR INTERSECTION SIGN
4-03	W13-1	2S	18	X	18	---	2.25	---	---	4-02	15 MPH ADVISORY SPEED PLATE (YELLOW BACK)
4-04	R4-7	3	36	X	48	12	---	---	1	---	KEEP RIGHT
4-05	J2-2	2S	48	X	57	19	---	---	1	---	ROUTE TURN ASSEMBLY (2 HEADED ROUTE PANEL)
	M3-1					---	---	---	---	---	NORTH CARDINAL ROUTE MARKER
	M3-3					---	---	---	---	---	SOUTH CARDINAL ROUTE MARKER
	M1-5A					---	---	---	---	---	COUNTY MARKER
	M1-5A					---	---	---	---	---	COUNTY MARKER
	M5-1L					---	---	---	---	---	ADVANCE ARROW LEFT TURN
	M5-1R					---	---	---	---	---	ADVANCE ARROW RIGHT TURN
4-06	W3-2	2S	36	X	36	---	9	---	1	---	YIELD AHEAD
4-07	W11-15	2S	30	X	30	---	6.25	---	1	---	TRAIL CROSSING (BIKE AND PED SYMBOL)
4-08	W16-9P	2S	24	X	12	---	2	---	---	4-07	AHEAD PLAQUE (YELLOW)
5-01	R2-1	2S	24		30	5	---	1	---	---	SPEED LIMIT 35 MPH
5-02	R4-7	3	36		48	12	---	---	1	---	KEEP RIGHT
5-03	W3-2	2S	36		36	---	9	---	1	---	YIELD AHEAD
5-04	J2-2	2S	48		57	19	---	---	1	---	ROUTE TURN ASSEMBLY (2 HEADED ROUTE PANEL)
	M3-1					---	---	---	---	---	NORTH CARDINAL ROUTE MARKER
	M3-3					---	---	---	---	---	SOUTH CARDINAL ROUTE MARKER
	M1-5A					---	---	---	---	---	COUNTY MARKER
	M1-5A					---	---	---	---	---	COUNTY MARKER
	M5-1L					---	---	---	---	---	ADVANCE ARROW LEFT TURN
	M5-1R					---	---	---	---	---	ADVANCE ARROW RIGHT TURN
5-05	W2-6	2S	30		30	---	6.25	---	1	---	CIRCULAR INTERSECTION SIGN
5-06	W13-1	2S	18		18	---	2.25	---	---	5-05	15 MPH ADVISORY SPEED PLATE (YELLOW BACK)
5-07	J1-1	2S	24		39	6.5	---	---	1	---	JUNCTION OR END ASSEMBLY
	M2-1					---	---	---	---	---	JCT
	M1-5A					---	---	---	---	---	COUNTY MARKER
<b>SUBTOTAL</b>						<b>73.5</b>	<b>43.25</b>	<b>1</b>	<b>10</b>		
<b>PROJECT TOTAL</b>						<b>249.04</b>	<b>94.75</b>	<b>34</b>	<b>20</b>		

ALL ITEMS CATEGORY 0010 UNLESS NOTED

LIGHTING BRANCH CIRCUIT WIRE AND CONDUIT QUANTITIES

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF
CAB. 'CB'	LPB-1	10	150
LPB-1	CB-2-3	32	195
CB-2-3	CB-4-2	121	645
CB-4-2	CB-2-1	117	375
LPB-1	CB-4-4	65	365
CB-4-4	LPB-5	44	255
LPB-5	LPB-6	89	475
LPB-6	CB-2-5	17	120
CB-2-5	CB-4-6	155	815
CB-4-6	CB-2-7	154	486
LPB-6	CB-4-8	65	216
LPB-1	LPB-2	124	650
LPB-2	CB-1-1	46	265
CB-1-1	LPB-3	61	340
LPB-3	CB-3-2	10	85
CB-3-2	CB-1-3	183	573
LPB-3	LPB-4	91	485
LPB-4	CB-1-4	52	295
CB-1-4	CB-3-5	94	510
CB-3-5	CB-1-6	128	680
CB-1-6	CB-3-7	163	355
CB-3-7	CB-1-8	151	477
TOTALS		1972	8812

PULL BOX QUANTITIES

NO.	653.0164 PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
LPB-1	1
LPB-2	1
LPB-3	1
LPB-4	1
LPB-5	1
LPB-6	1
TOTAL	6

LIGHTING CONTROL QUANTITIES

NO.	654.0224 CONTROL CABINET BASES TYPE L24 EACH	656.0200.1 ELECTRICAL SERVICE METER BREAKER PEDESTAL CABINET CB LS	659.2124 LIGHTING CONTROL CABINETS 120/240 24-INCH EACH
CABINET CB	1	1	1
TOTALS	1	1	1

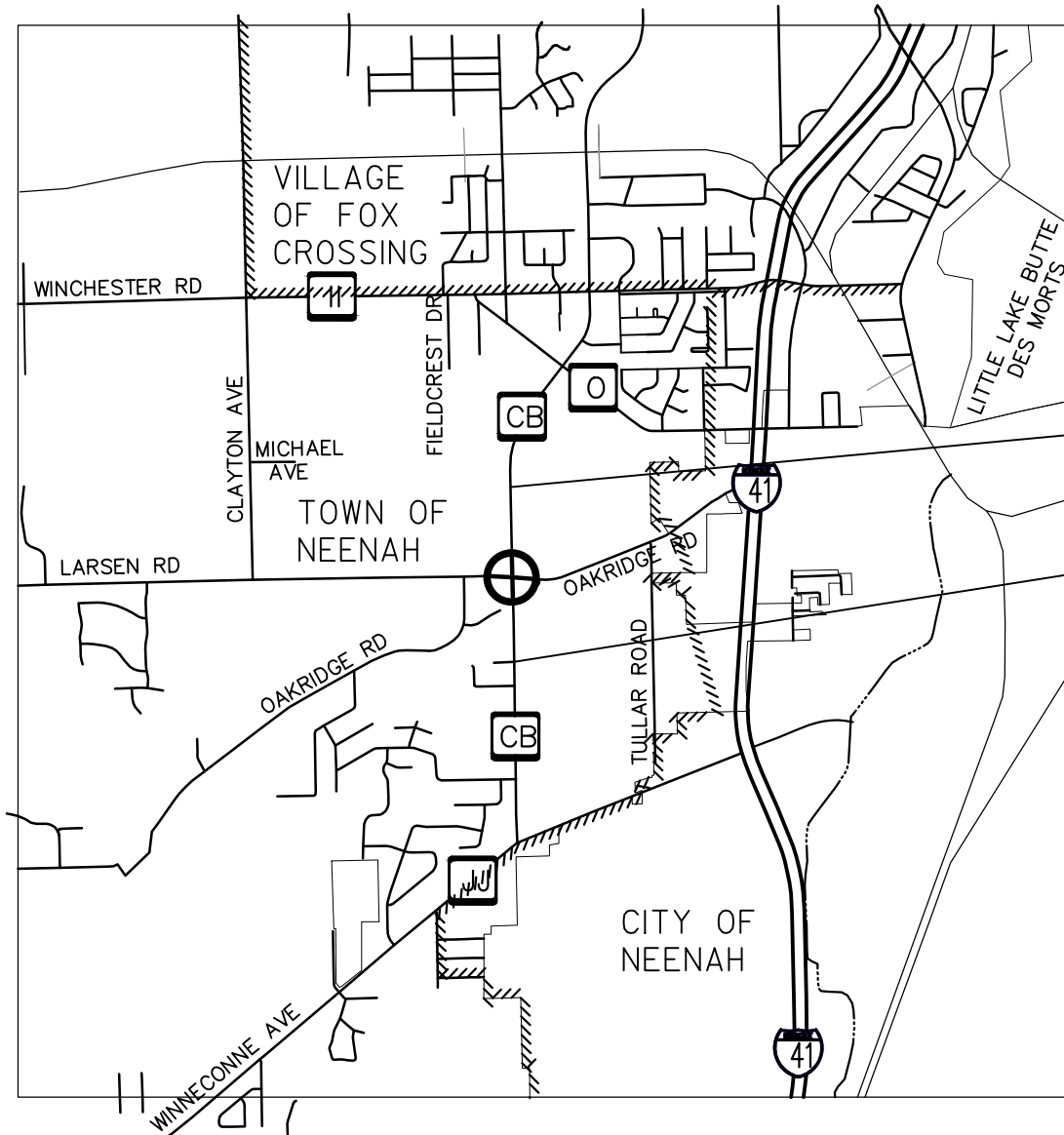
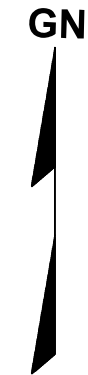
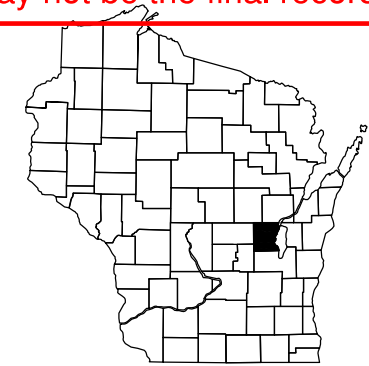
LIGHTING UNIT QUANTITIES

NO.	654.0105 CONCRETE BASES TYPE 5 EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 - ALUMINUM EACH	657.0715 LUMINAIRE ARMS TRUSS TYPE 4-1/2-INCH CLAMP 15-FT EACH	659.1115 LUMINAIRES UTILITY LED A EACH
CB-1-1	1	144	1	1	1	1
CB-3-2	1	144	1	1	1	1
CB-3-3	1	144	1	1	1	1
CB-1-4	1	144	1	1	1	1
CB-3-5	1	144	1	1	1	1
CB-1-6	1	144	1	1	1	1
CB-3-7	1	144	1	1	1	1
CB-2-1	1	144	1	1	1	1
CB-4-2	1	144	1	1	1	1
CB-2-3	1	144	1	1	1	1
CB-4-4	1	144	1	1	1	1
CB-2-5	1	144	1	1	1	1
CB-4-6	1	144	1	1	1	1
CB-2-7	1	144	1	1	1	1
CB-4-8	1	144	1	1	1	1
CB-2-9	1	144	1	1	1	1
TOTALS	16	2304	16	16	16	16

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

The most current Right of Way information should be viewed in DOTView using the Real Estate Project ID. The Plat information contained in this AsBuilt may not be the final records.

## TRANSPORTATION PROJECT PLAT TITLE SHEET PROJECT NO. 4682-01-00 CTH CB CTH CB & OAKRIDGE RD INTERSECTION WINNEBAGO COUNTY



**END PROJECT**  
STA 259+50.00  
X = 801652.7854  
Y = 535071.8834

**BEGIN PROJECT**  
STA 245+22.21  
Y = 533644.472  
X = 801673.862

**NOTES:**  
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, WINNEBAGO COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.  
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.  
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF WINNEBAGO COUNTY.  
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".  
PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.  
EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH CB AND OAKRIDGE ROAD ESTABLISHED FROM PREVIOUS PROJECT 4619-02-21 AND EXISTING CERTIFIED SURVEY MAPS.  
A **TEMPORARY LIMITED EASEMENT (TLE)** IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S ARE TO EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN. EXCLUDED FROM THIS EASEMENT IS ANY LAND CURRENTLY OCCUPIED BY BUILDINGS.  
DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

### CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT	RDE
CENTERLINE	C/L	EASEMENT	
CERTIFIED SURVEY MAP	CSM	RIGHT	RT
CONCRETE	CONC	RIGHT OF WAY	R/W
COUNTY	CO	SECTION	SEC
COUNTY TRUNK HIGHWAY	CTH	SEPTIC VENT	SEPV
DISTANCE	DIST	SQUARE FEET	SF
CORNER	COR	STATE TRUNK HIGHWAY	STH
DOCUMENT NUMBER	DOC	STATION	STA
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED	TLE
GAS VALVE	GV	EASEMENT	
GRID NORTH	GN	TRANSPORTATION PROJECT	TPP
HIGHWAY EASEMENT	HE	PLAT	
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED	PLE		
EASEMENT			
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

### CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

### CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	●
QUARTER LINE	---	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	---	FOUND R/W POST		FOUND IRON PIN (1-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	---	GEODETIC SURVEY MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE	---	SIXTEENTH CORNER MONUMENT			
EXISTING R/W OR HE LINE	---	SIGN			
PROPERTY LINE	---				
LOT, TIE & OTHER MINOR LINES	---				
SLOPE INTERCEPT	---				
CORPORATE LIMITS	---				
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	---				
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---				
TEMPORARY LIMITED EASEMENT AREA	---				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---				
TRANSMISSION STRUCTURES	---				
BUILDING TO BE REMOVED					
BRIDGE					
PARCEL NUMBER					
UTILITY NUMBER					
PARALLEL OFFSETS	---				

### CONVENTIONAL UTILITY SYMBOLS

NON COMPENSABLE	---	WATER	—W—
COMPENSABLE	---	GAS	—G—
POWER POLE		TELEPHONE	—T—
TELEPHONE POLE		OVERHEAD TRANSMISSION LINES	—OH—
TELEPHONE PEDESTAL		ELECTRIC	—E—
GUY ANCHOR		CABLE TELEVISION	—TV—
ELECTRIC TOWER		FIBER OPTIC	—FO—
GAS VALVE		SANITARY SEWER	—SAN—
		STORM SEWER	—SS—

LAYOUT  
NOT TO SCALE

TOTAL NET LENGTH OF CENTER LINE = 0.28 MILES

TRANSPORTATION PROJECT PLAT NO: 4682-01-00 - 4.01

THAT PART OF LOT 1, CSM 5520, BEING LOCATED IN THE NE1/4 - NE1/4, ALSO THAT PART OF THE NE1/4 - NE1/4, ALL BEING LOCATED IN SECTION 30, ALSO THAT PART OF THE NW1/4 - NW1/4, SECTION 29, ALL BEING LOCATED IN TOWNSHIP 20 NORTH, RANGE 17 EAST, TOWN OF NEENAH, WINNEBAGO COUNTY, WISCONSIN.

RELOCATION ORDER CTH CB & OAKRIDGE ROAD INTERSECTION.

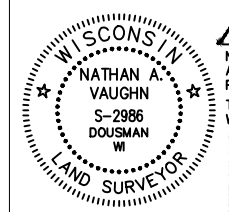
TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, WINNEBAGO COUNTY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, THE COUNTY HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF WINNEBAGO COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

The most current Right of Way information should be viewed in DOTView using the Real Estate Project ID. The Plat information contained in this AsBuilt may not be the final records.

raSmith  
CREATIVITY BEYOND  
ENGINEERING

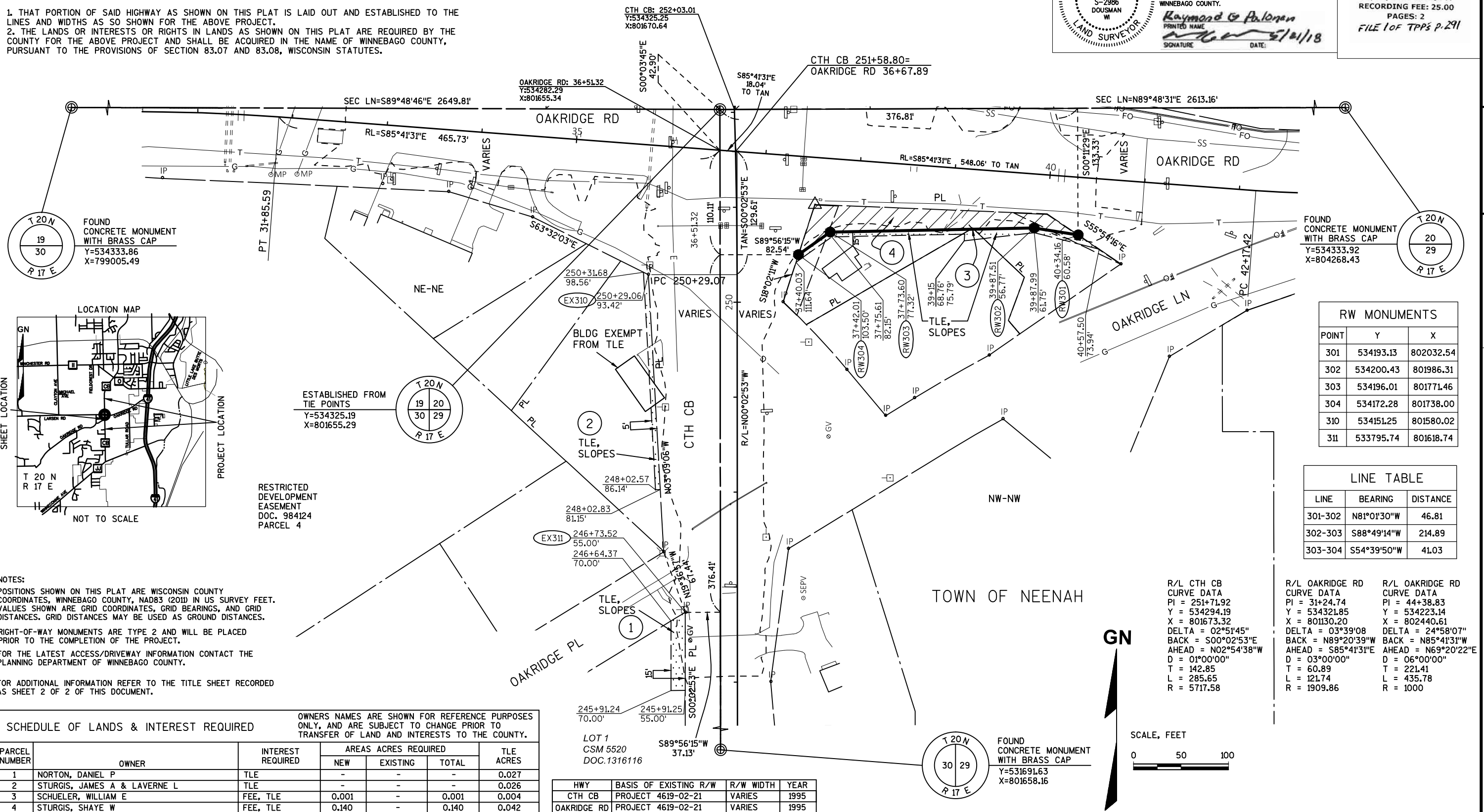
I, NATHAN A. VAUGHN, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 4682-01-00 - 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



NATHAN A. VAUGHN  
AGENT FOR raSmith  
P.L.S. NUMBER 2986  
DATE: 05/08/18  
THIS PLAT AND RELOCATION ORDER IS APPROVED FOR WINNEBAGO COUNTY.  
Raymond G. Palonen  
PRINTED NAME  
DATE: 5/8/18  
SIGNATURE

RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 4682-01-00 - 4.01  
AMENDMENT NO: \_\_\_\_\_  
SHEET 1 OF 2

DOC# 1767445  
NATALIE STROHMEYER  
REGISTER OF DEEDS  
WINNEBAGO COUNTY, WI  
RECORDED ON:  
06/01/2018 02:28 PM  
RECORDING FEE: 25.00  
PAGES: 2  
FILE 10F TPP P.291



RW MONUMENTS		
POINT	Y	X
301	534193.13	802032.54
302	534200.43	801986.31
303	534196.01	801771.46
304	534172.28	801738.00
310	534151.25	801580.02
311	533795.74	801618.74

LINE TABLE		
LINE	BEARING	DISTANCE
301-302	N81°01'30"W	46.81
302-303	S88°49'14"W	214.89
303-304	S54°39'50"W	41.03

R/L CTH CB	R/L OAKRIDGE RD	R/L OAKRIDGE RD
CURVE DATA	CURVE DATA	CURVE DATA
PI = 251+71.92	PI = 31+24.74	PI = 44+38.83
Y = 534294.19	Y = 534321.85	Y = 534223.14
X = 801673.32	X = 801130.20	X = 802440.61
DELTA = 02°51'45"	DELTA = 03°39'08"	DELTA = 24°58'07"
BACK = S00°02'53"E	BACK = N89°20'39"W	BACK = N85°41'31"W
AHEAD = N02°54'38"W	AHEAD = S85°41'31"E	AHEAD = N69°20'22"E
D = 01°00'00"	D = 03°00'00"	D = 06°00'00"
T = 142.85	T = 60.89	T = 221.41
L = 285.65	L = 121.74	L = 435.78
R = 5717.58	R = 1909.86	R = 1000

NOTES:  
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, WINNEBAGO COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.  
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.  
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF WINNEBAGO COUNTY.  
FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET RECORDED AS SHEET 2 OF 2 OF THIS DOCUMENT.

SCHEDULE OF LANDS & INTEREST REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO THE COUNTY.				
PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED			TLE ACRES
			NEW	EXISTING	TOTAL	
1	NORTON, DANIEL P	TLE	-	-	-	0.027
2	STURGIS, JAMES A & LAVERNE L	TLE	-	-	-	0.026
3	SCHUELER, WILLIAM E	FEE, TLE	0.001	-	0.001	0.004
4	STURGIS, SHAYE W	FEE, TLE	0.140	-	0.140	0.042

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
CTH CB	PROJECT 4619-02-21	VARIES	1995
OAKRIDGE RD	PROJECT 4619-02-21	VARIES	1995

TRANSPORTATION PROJECT PLAT NO: 4682-01-00 - 4.02

THAT PART OF LOT 2 AND 3, CSM 5822 AND LOT 3, CSM 5188, BEING LOCATED IN THE SW1/4 - SW1/4, ALL BEING LOCATED IN SECTION 20, ALSO THAT PART OF THE SE1/4 - SE1/4 OF SECTION 19, ALL BEING LOCATED IN TOWNSHIP 20 NORTH, RANGE 17 EAST, TOWN OF NEENAH, WINNEBAGO COUNTY, WISCONSIN.

RELOCATION ORDER CTH CB & OAKRIDGE RD INTERSECTION.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, WINNEBAGO COUNTY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, THE COUNTY HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY WINNEBAGO COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF WINNEBAGO COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, WINNEBAGO COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

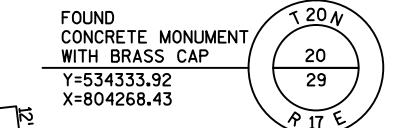
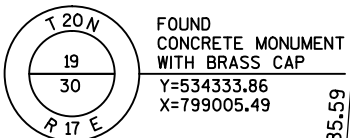
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF WINNEBAGO COUNTY.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET RECORDED AS SHEET 2 OF 2 OF DOCUMENT 1767445, OF TRANSPORTATION PROJECT PLATS IN THE WINNEBAGO COUNTY REGISTER OF DEEDS.

R/L CTH CB CURVE DATA	R/L CTH CB CURVE DATA	R/L OAKRIDGE RD CURVE DATA
PI = 251+71.92	PI = 255+49.74	PI = 31+24.74
Y = 534294.19	Y = 534671.57	Y = 534321.85
X = 801673.32	X = 801654.13	X = 801130.20
DELTA = 02°51'45"	DELTA = 02°43'06"	DELTA = 03°39'08"
BACK = S00°02'53"E	BACK = S02°54'38"E	BACK = N89°20'39"W
AHEAD = N02°54'38"W	AHEAD = N00°11'32"W	AHEAD = S85°41'31"E
D = 01°00'00"	D = 01°00'00"	D = 03°00'00"
T = 142.85	T = 136.23	T = 60.89
L = 285.65	L = 272.40	L = 121.74
R = 5717.58	R = 5741.58	R = 1909.86

R/L OAKRIDGE RD CURVE DATA
PI = 44+38.83
Y = 534223.14
X = 802440.61
DELTA = 24°58'07"
BACK = N85°41'31"W
AHEAD = N69°20'22"E
D = 06°00'00"
T = 221.41
L = 435.78
R = 1000



UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
100	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS
101	AT&T WISCONSIN	RELEASE OF RIGHTS
102	TIME WARNER CABLE	RELEASE OF RIGHTS
103	ANR PIPELINE	RELEASE OF RIGHTS

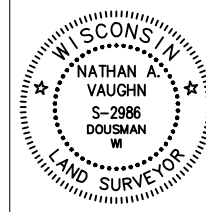
SCHEDULE OF LANDS & INTEREST REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED			TLE ACRES
			NEW	EXISTING	TOTAL	
5	WINNEBAGO COUNTY HIGHWAY COMMISSION	TLE	-	-	-	0.043
6	OGDEN, JEFFREY D	FEE, TLE	0.397	-	0.397	0.002
7	BARNES, JOSEPH & JOCHMAN, TRACIE	FEE	0.193	-	0.193	-

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO WINNEBAGO COUNTY.

raSmith  
CREATIVITY BEYOND  
ENGINEERING

I, NATHAN A. VAUGHN, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 4682-01-00 - 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

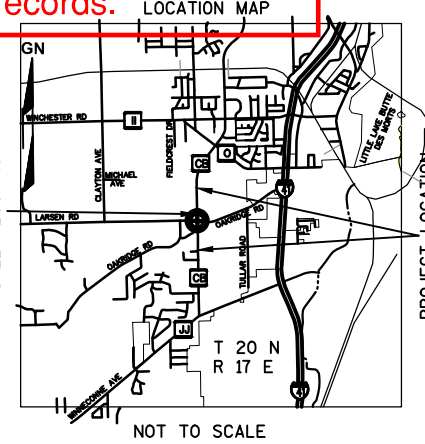


NATHAN A. VAUGHN  
AGENT FOR raSmith  
P.L.S. NUMBER 2986  
DATE: 05/08/18  
THIS PLAT AND RELOCATION ORDER IS APPROVED FOR WINNEBAGO COUNTY.  
Raymond G. Polman  
DATE: 5/10/18

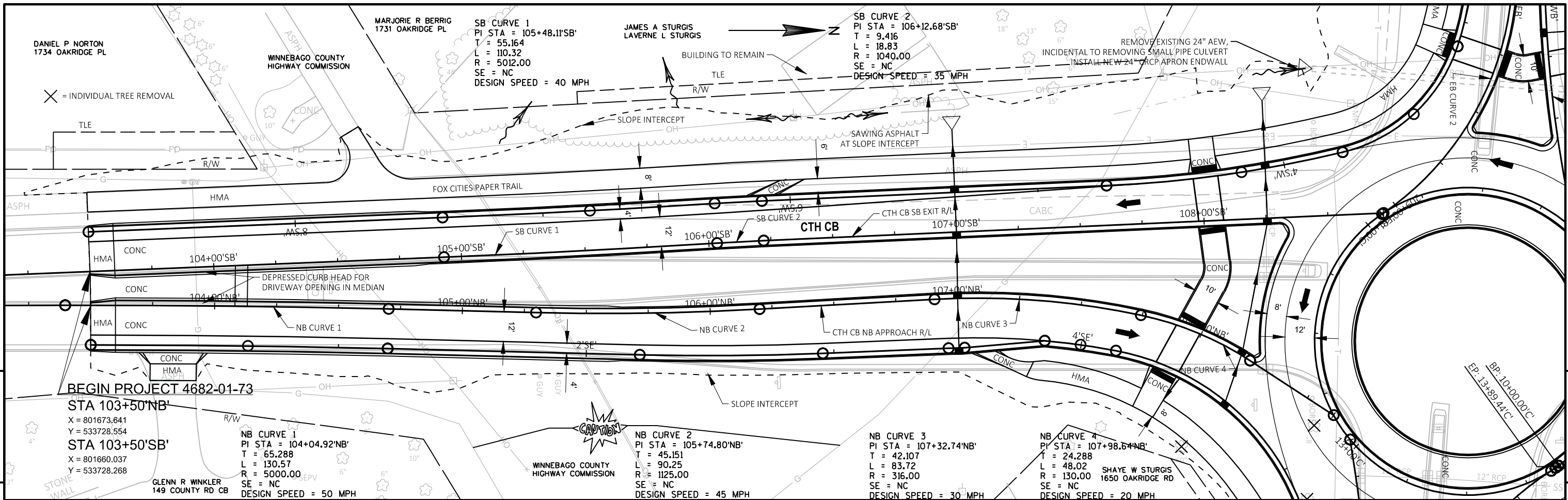
RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 4682-01-00 - 4.02  
AMENDMENT NO.:

DOC# 1767446  
NATALIE STROHMEYER  
REGISTER OF DEEDS  
WINNEBAGO COUNTY, WI  
RECORDED ON:  
06/01/2018 02:28 PM  
RECORDING FEE: 25.00  
PAGES: 1  
FILE 1 of TPPs p.292

The most current Right of Way information should be viewed in DOTView using the Real Estate Project ID. The Plat information contained in this AsBuilt may not be the final records.

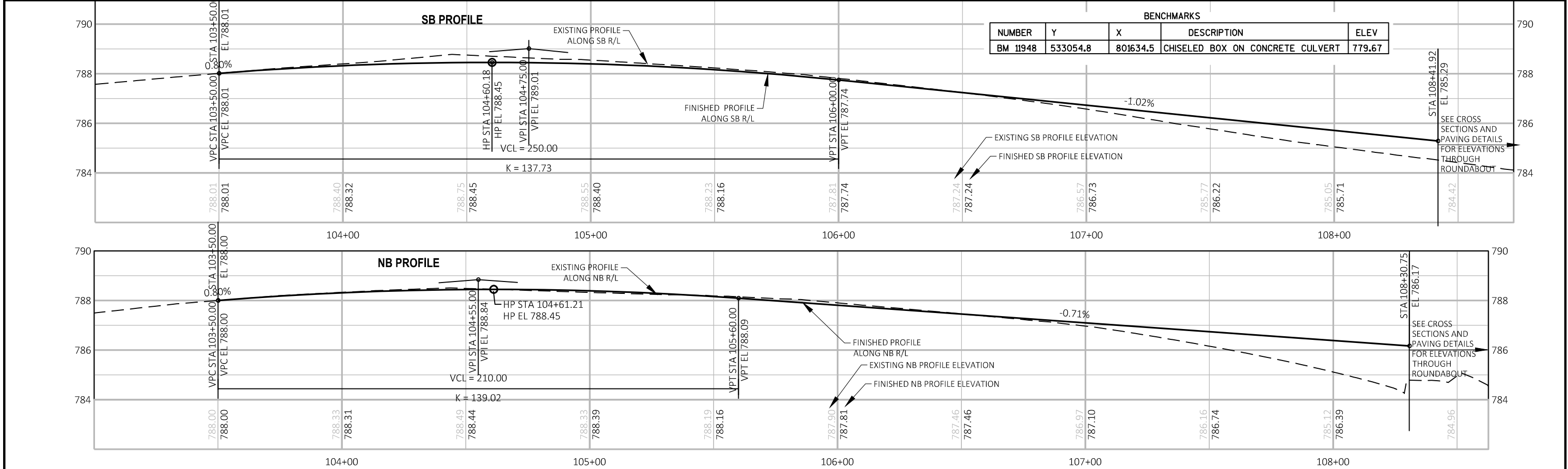


RW MONUMENTS		
POINT	Y	X
305	534353.91	801813.44
306	534649.82	801780.18
307	534897.45	801728.62
308	534922.63	801728.29
309	534363.15	801564.25

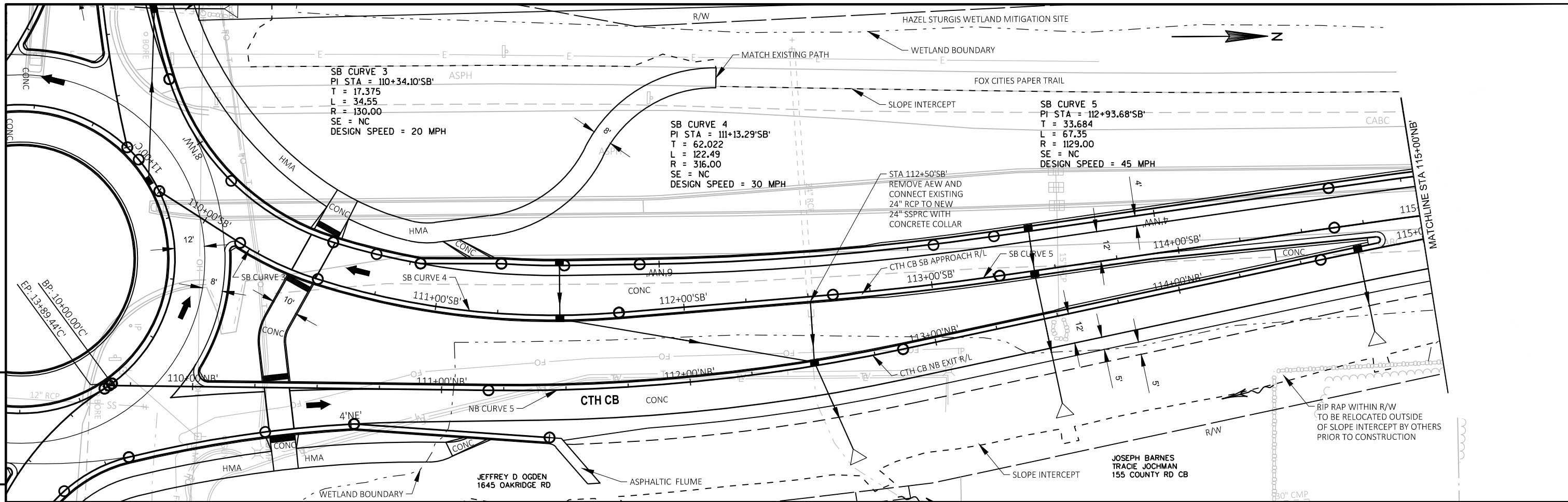


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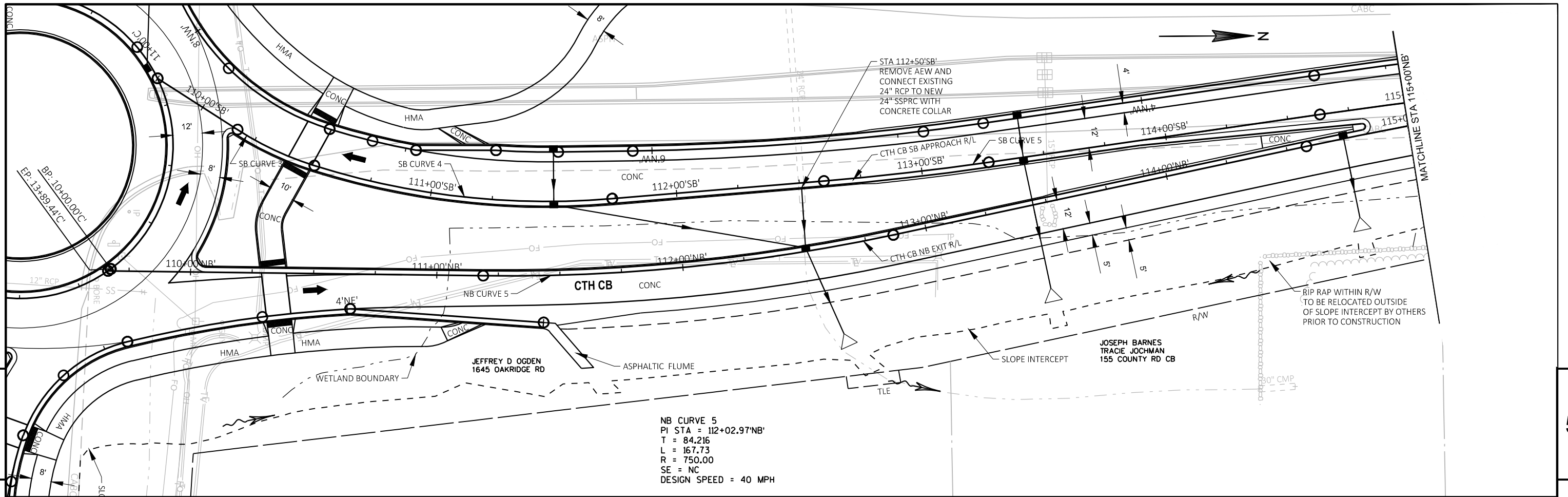
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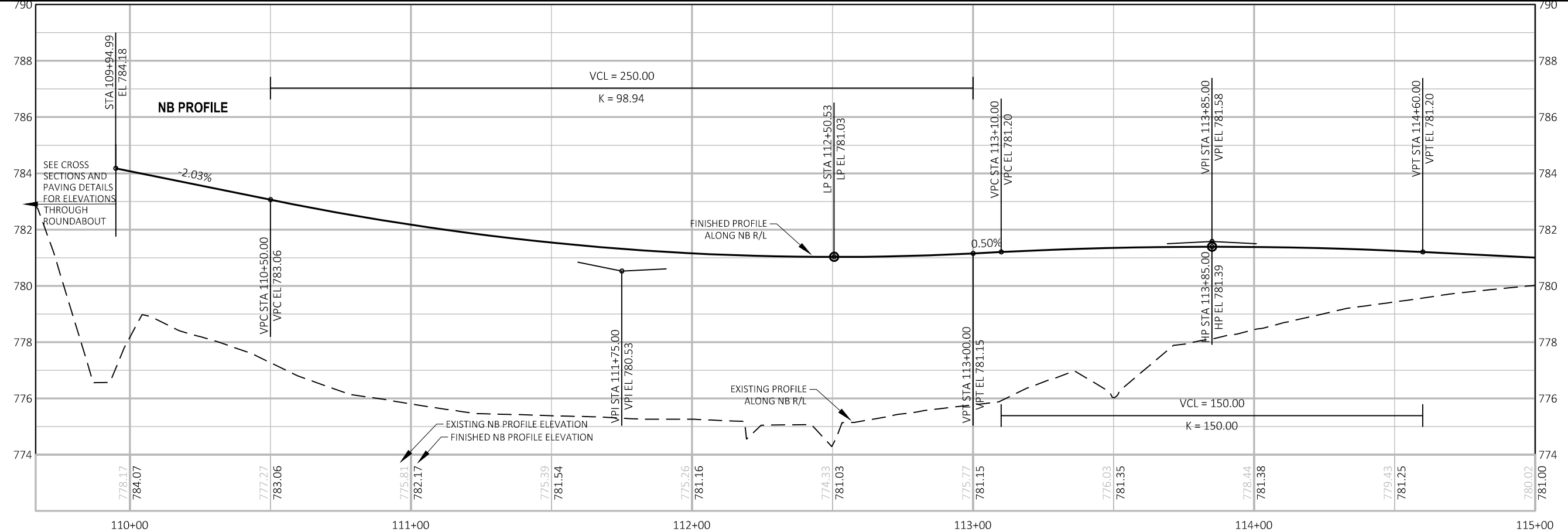
PROJECT NO: 4682-01-73    HWY: CTH CB    COUNTY: WINNEBAGO    PLAN AND PROFILE: CTH CB    SHEET 96



PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      PLAN AND PROFILE: CTH CB - SOUTHBOUND      SHEET 97

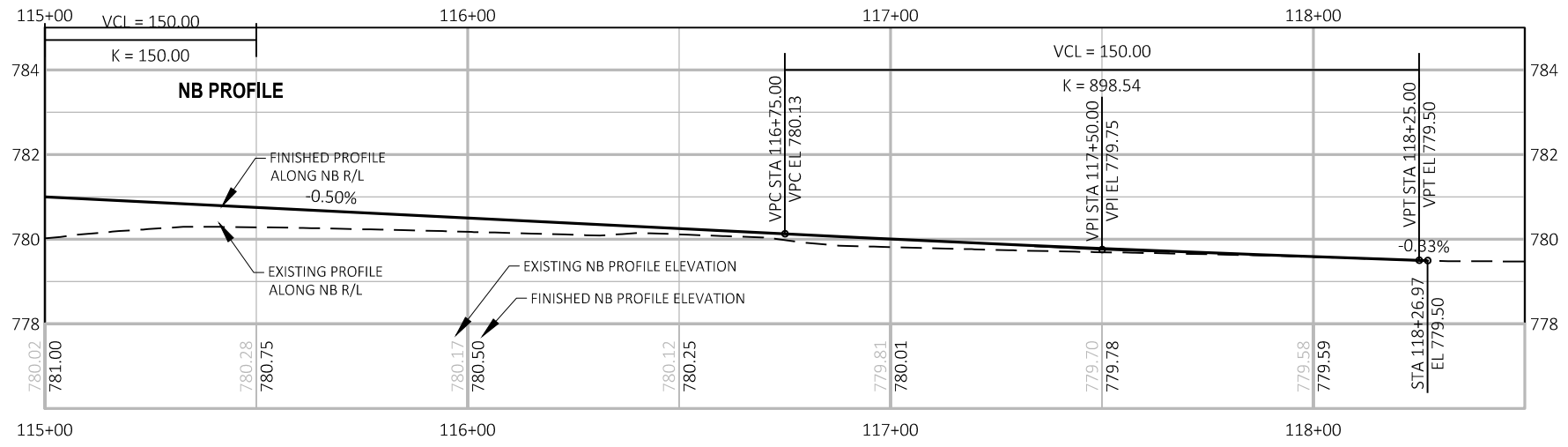
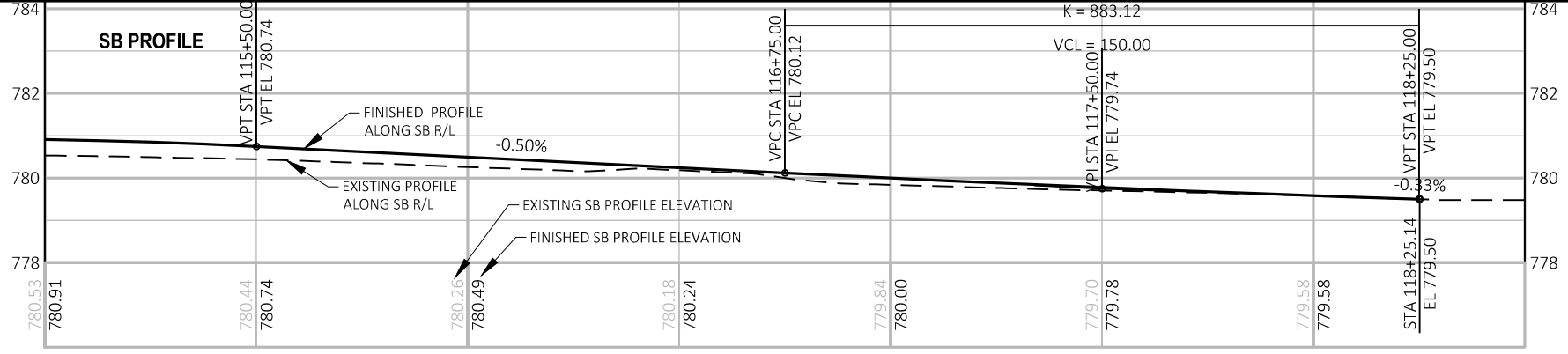
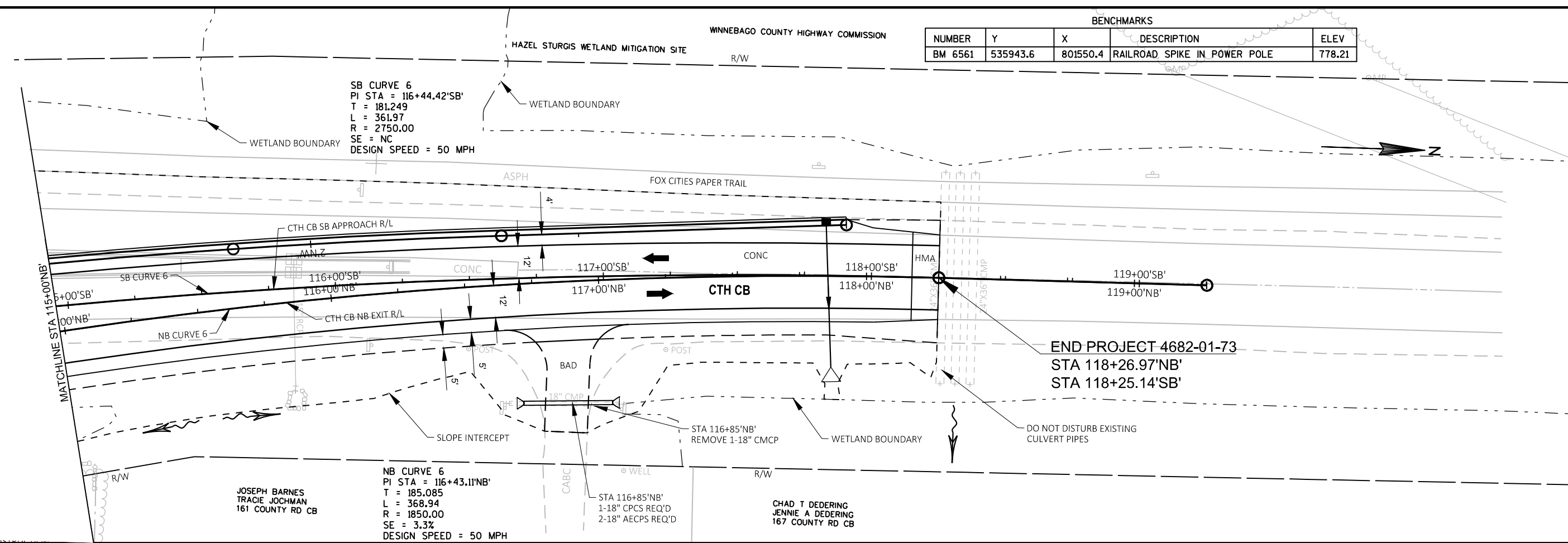


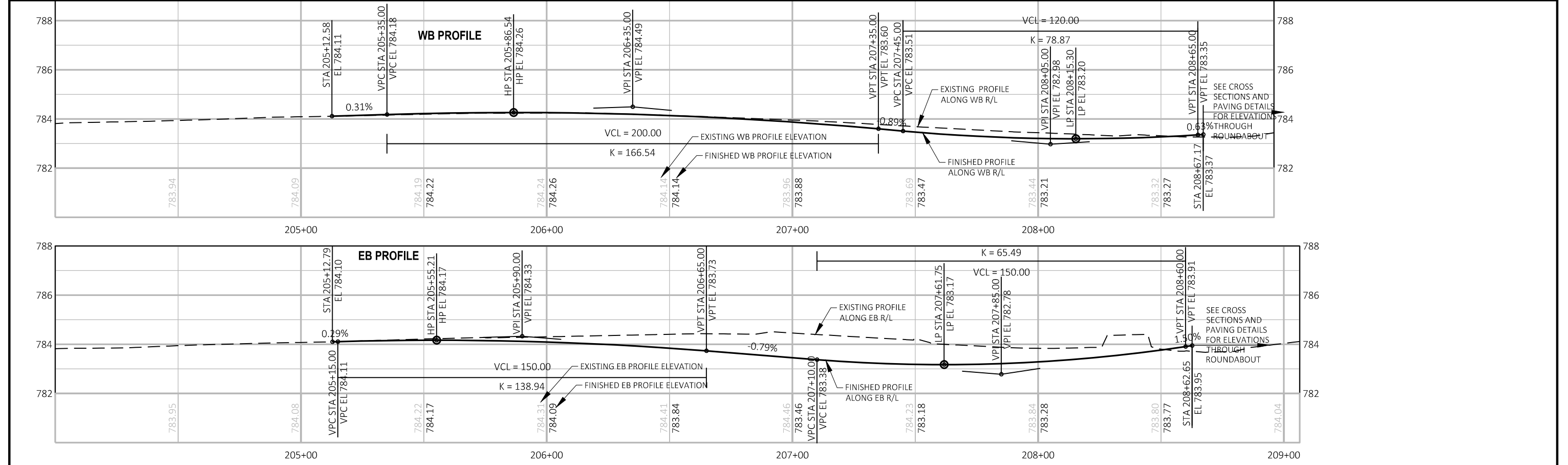
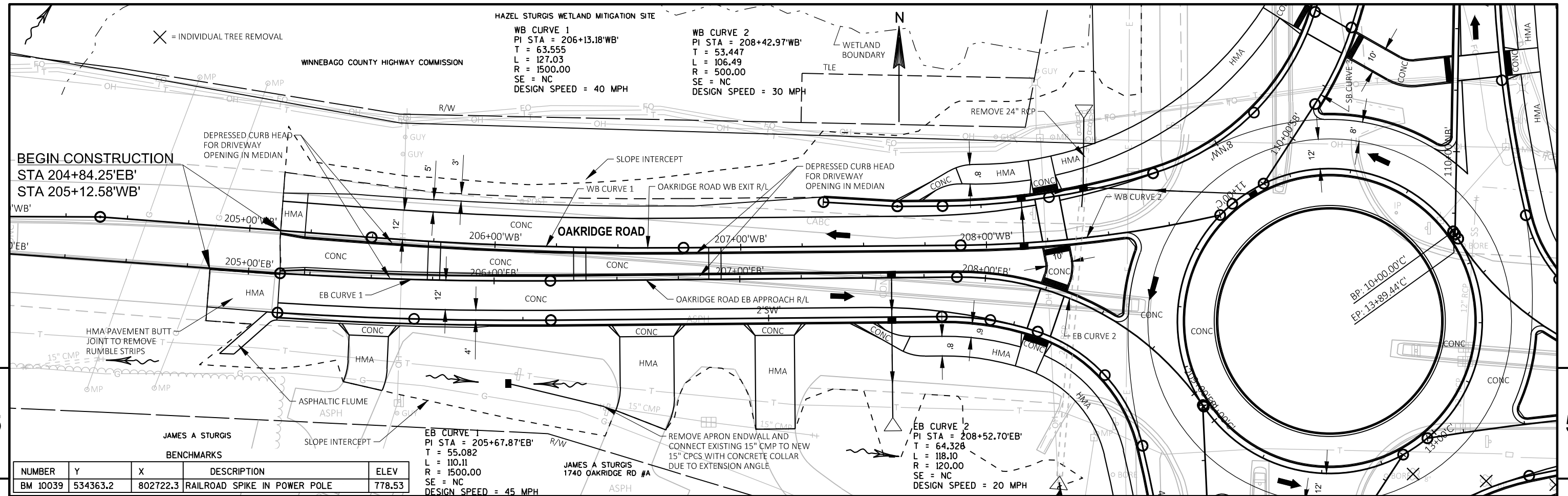
**NB CURVE 5**  
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 T = 84.216  
 L = 167.73  
 R = 750.00  
 SE = NC  
 DESIGN SPEED = 40 MPH

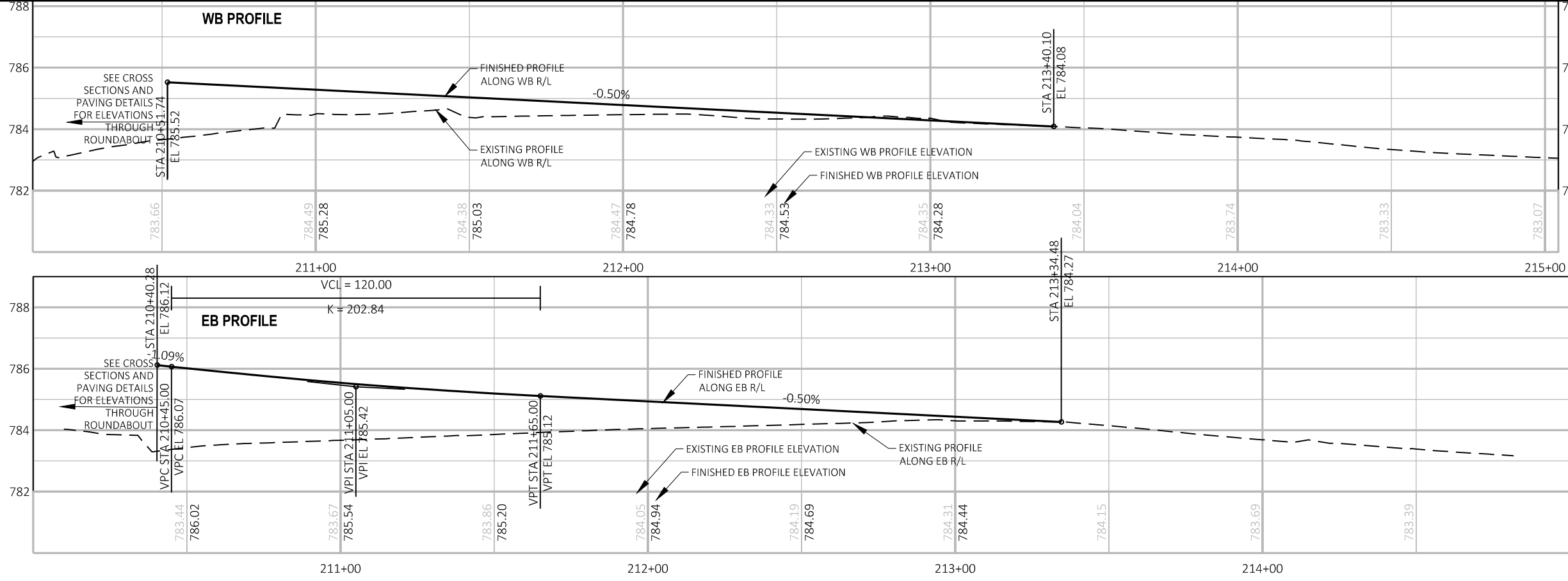
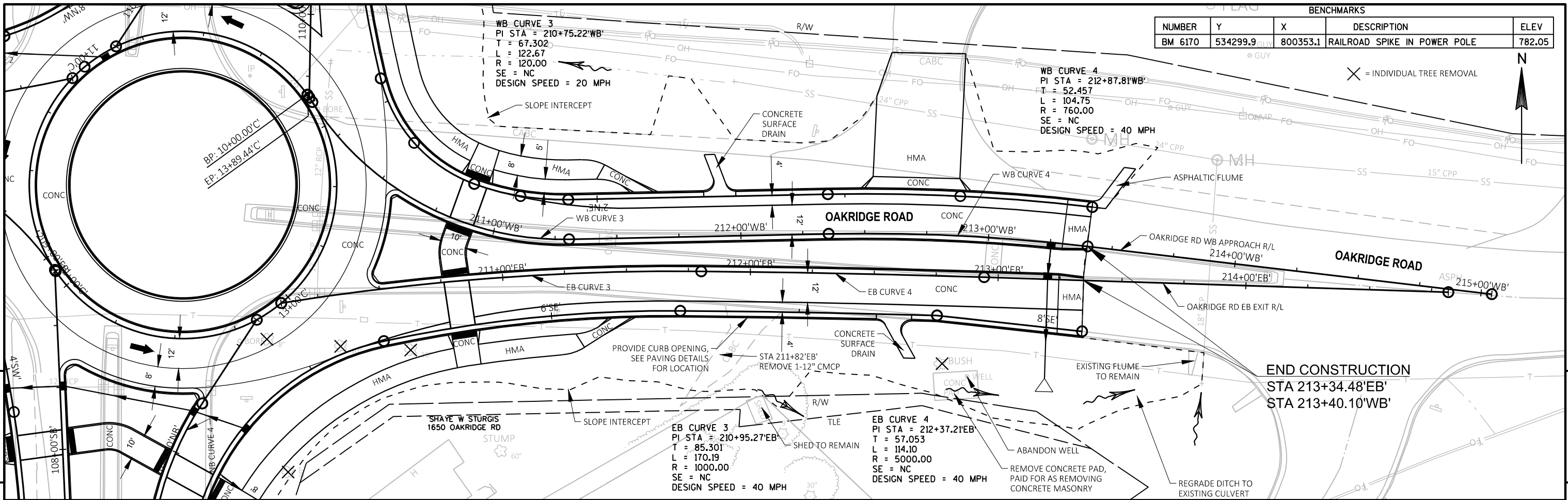


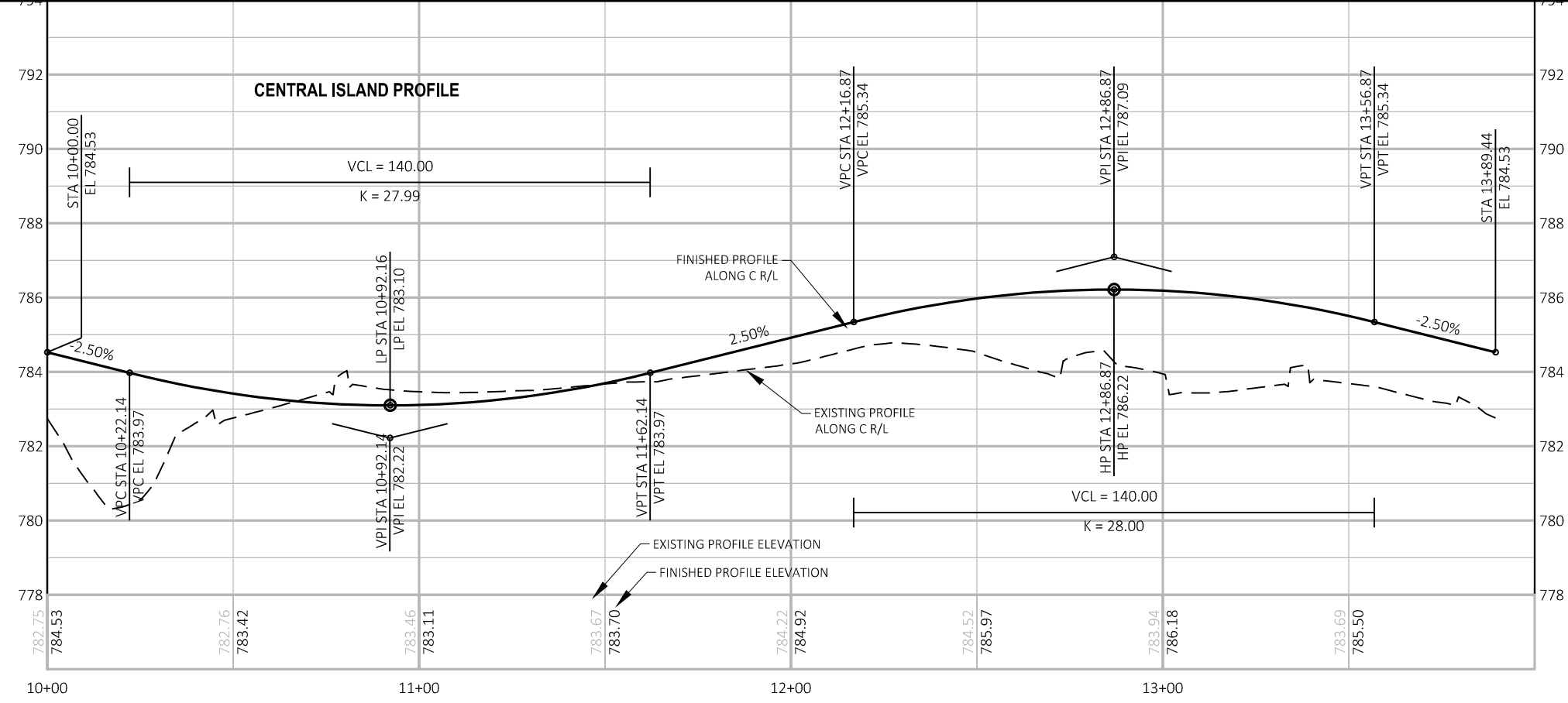
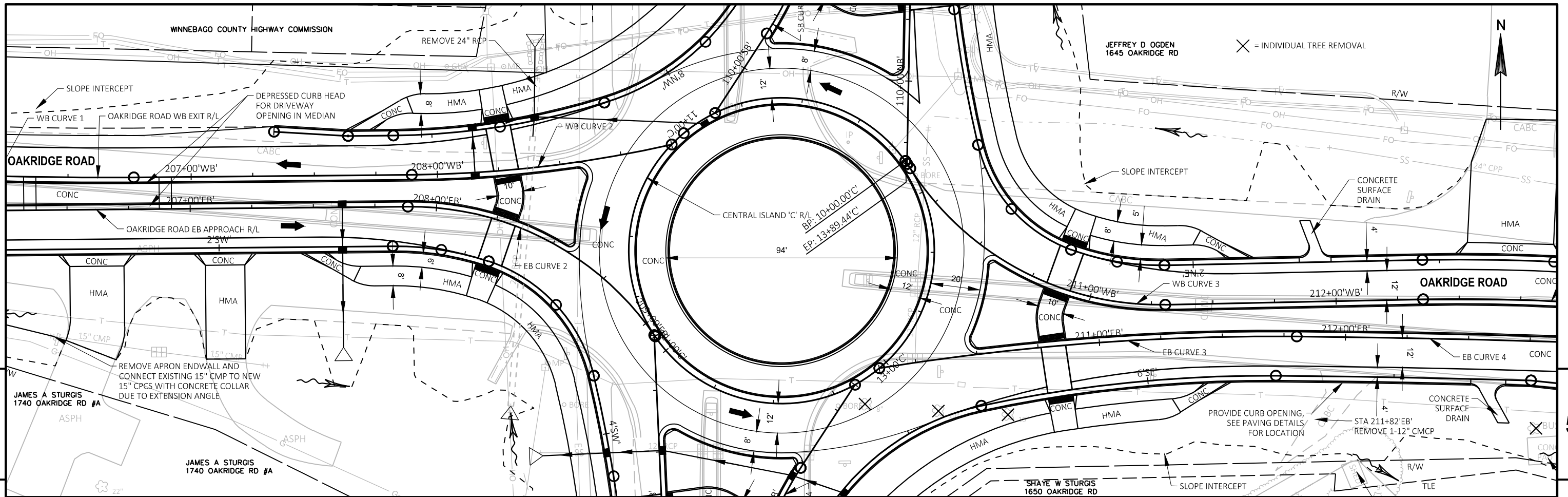


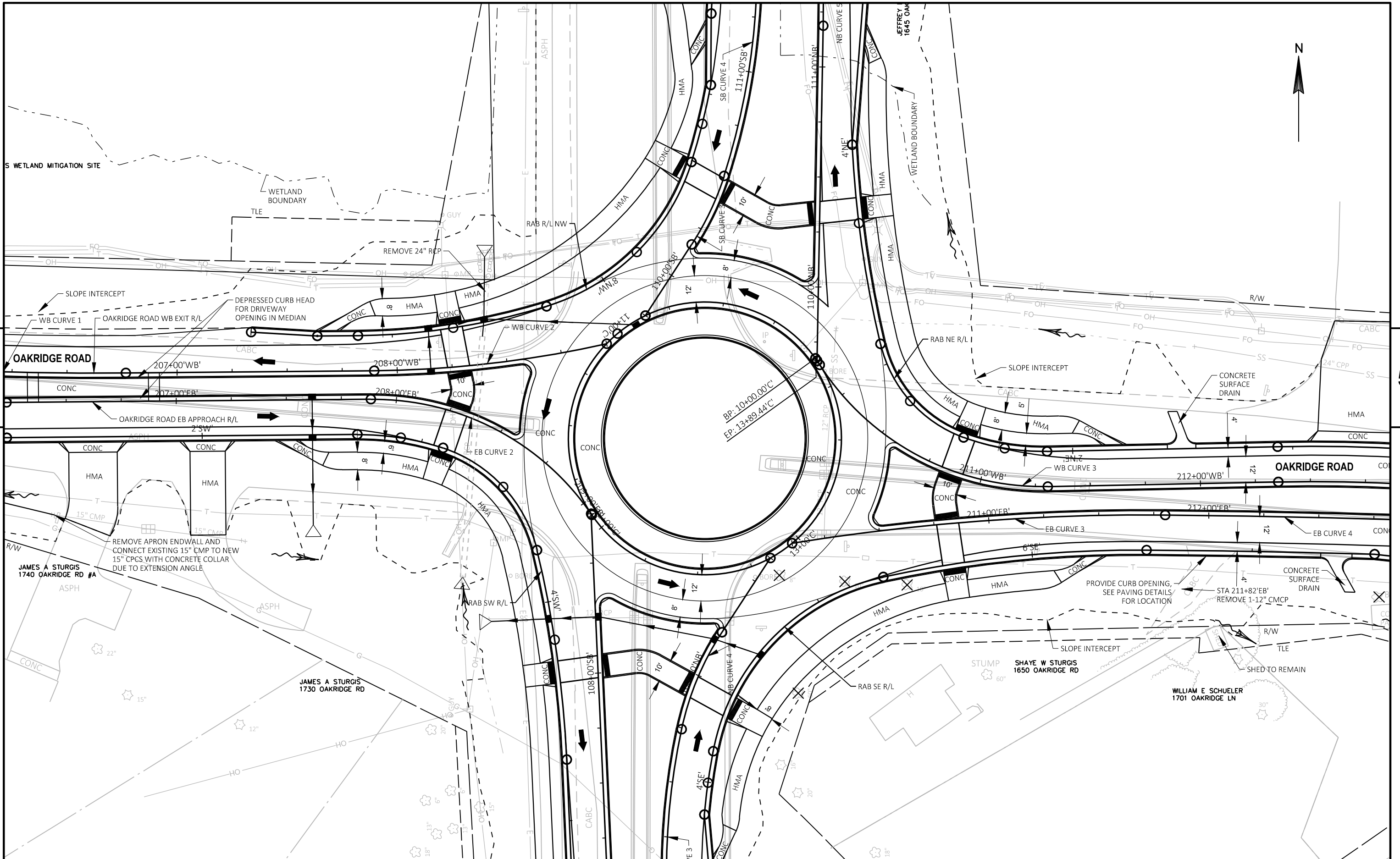
BENCHMARKS				
NUMBER	Y	X	DESCRIPTION	ELEV
BM 6561	535943.6	801550.4	RAILROAD SPIKE IN POWER POLE	778.21



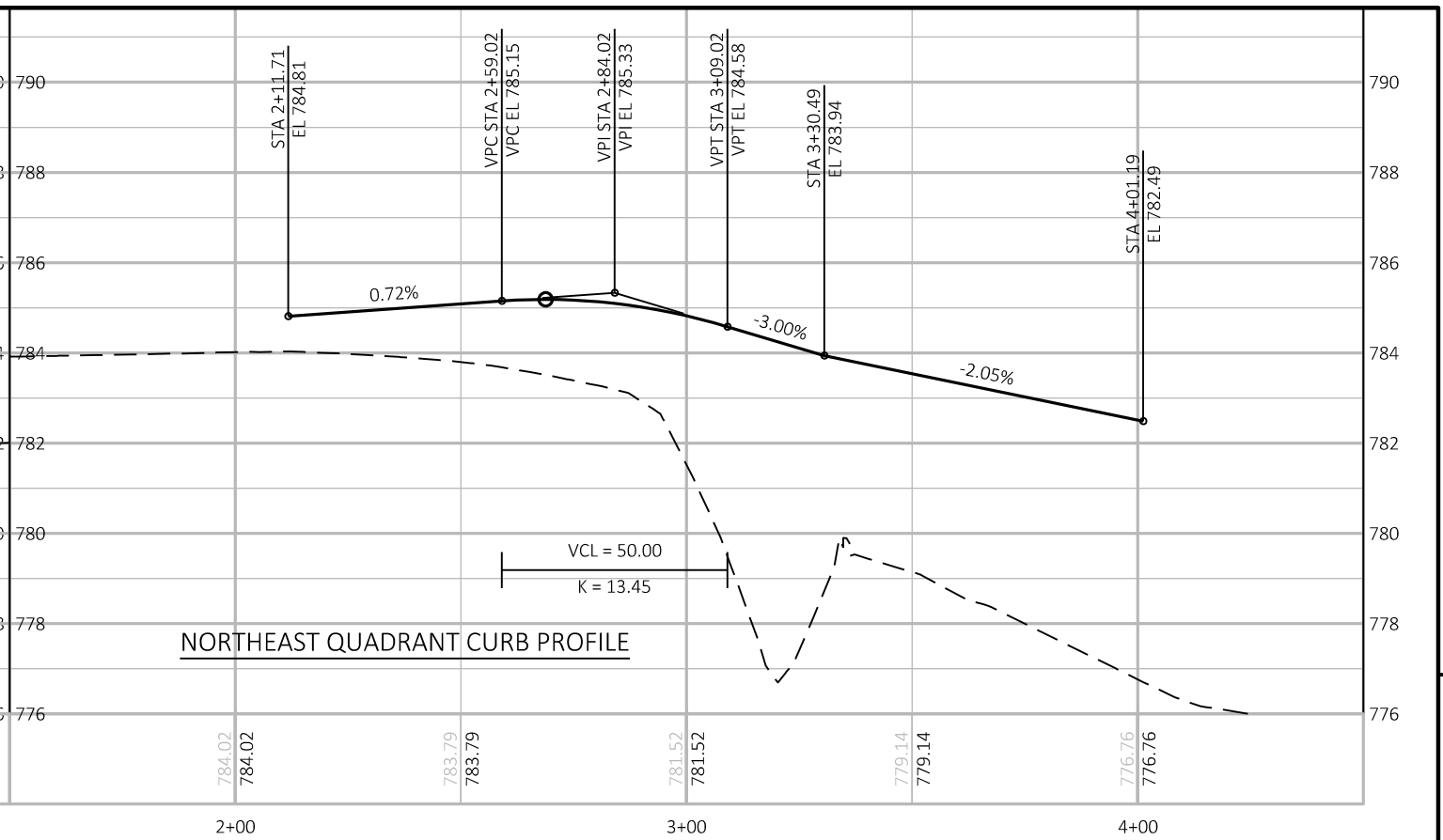
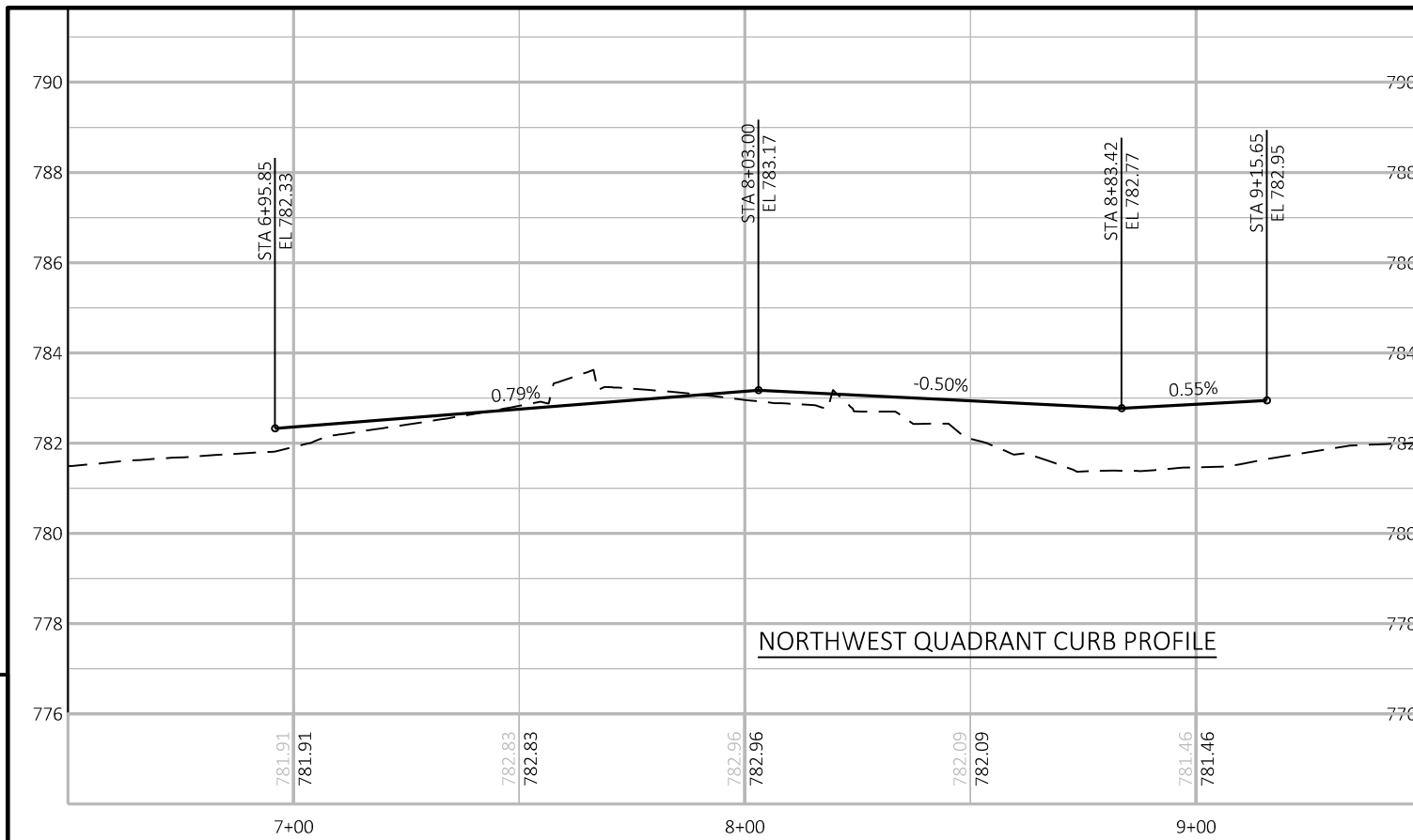




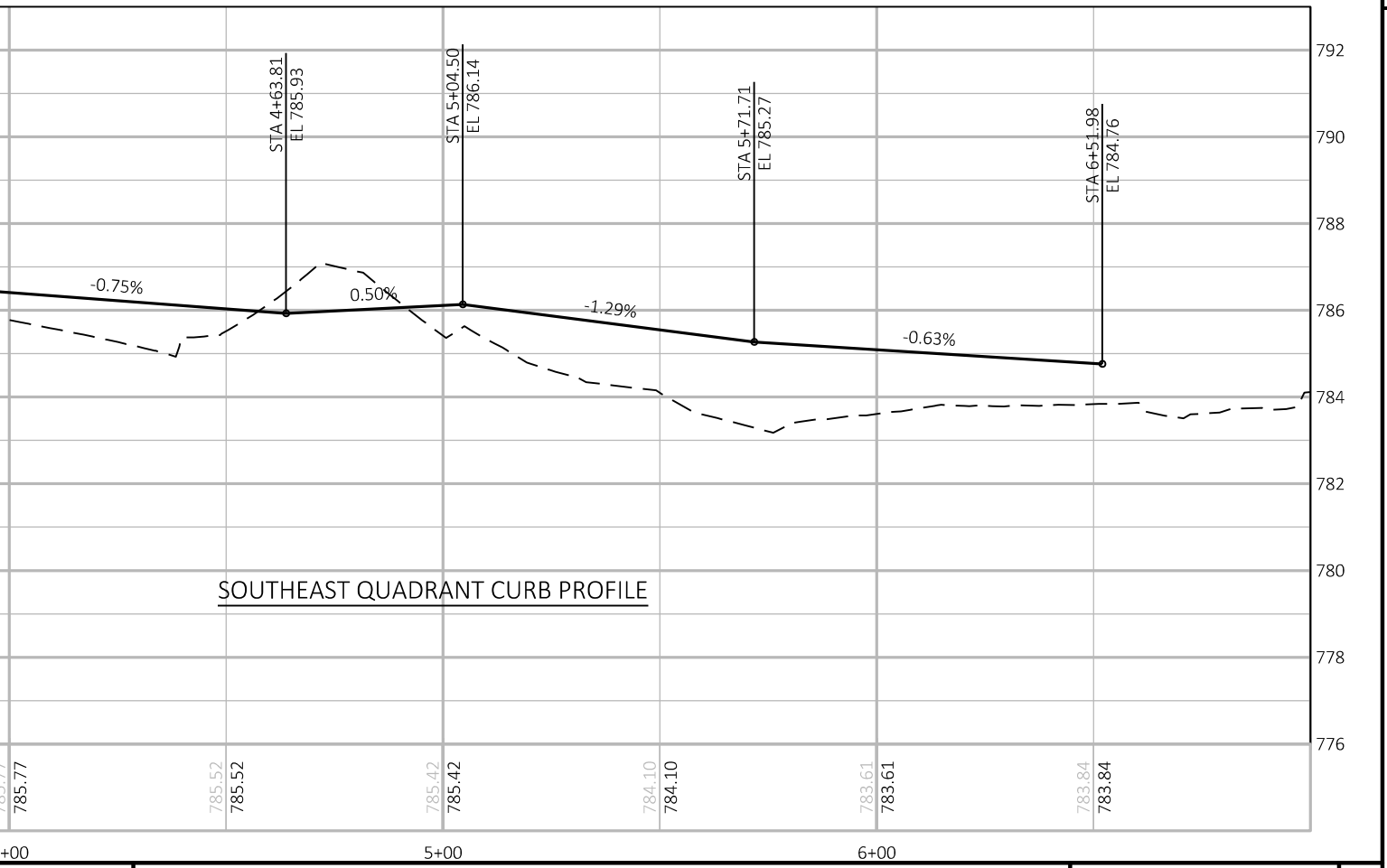
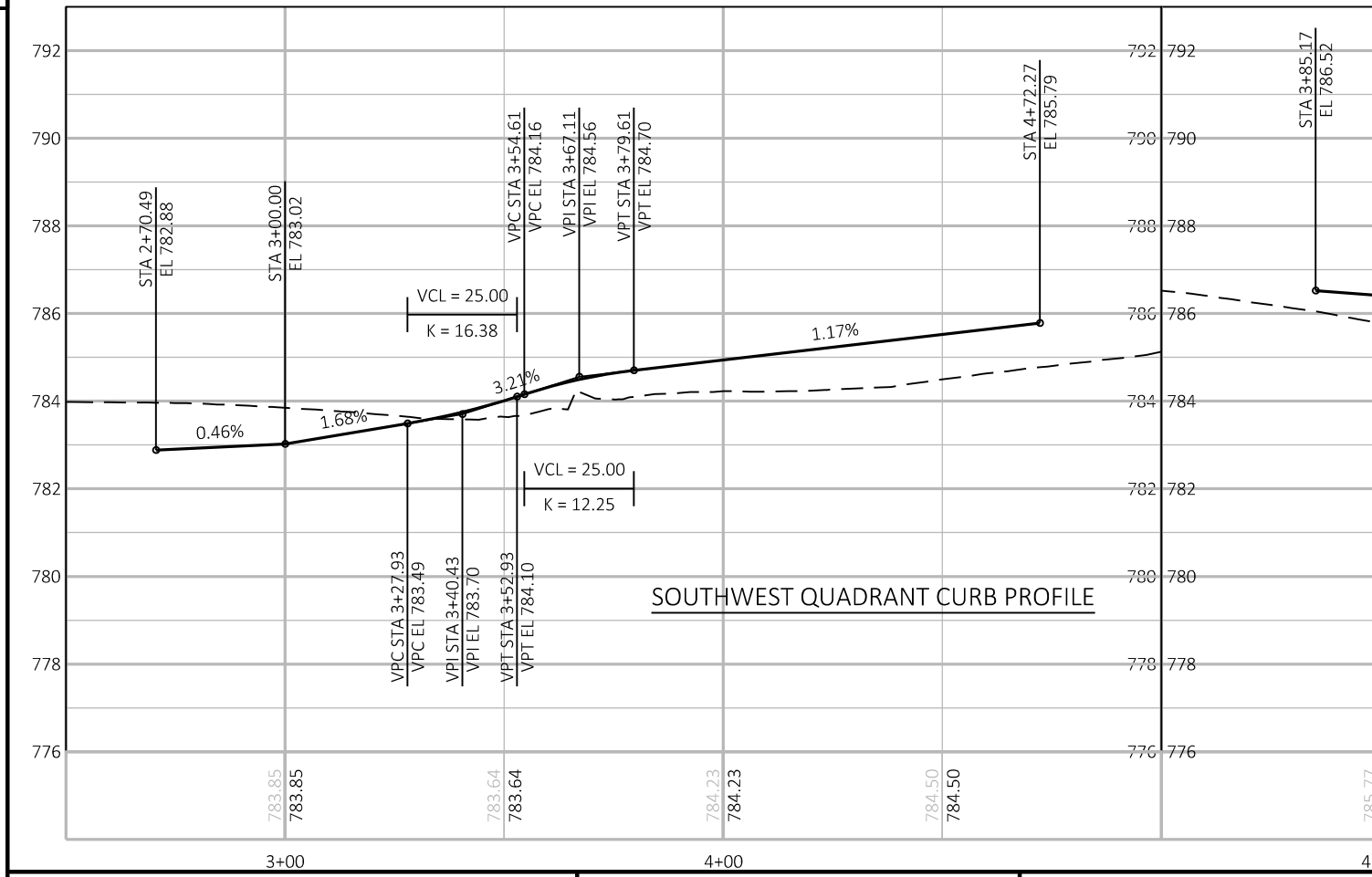




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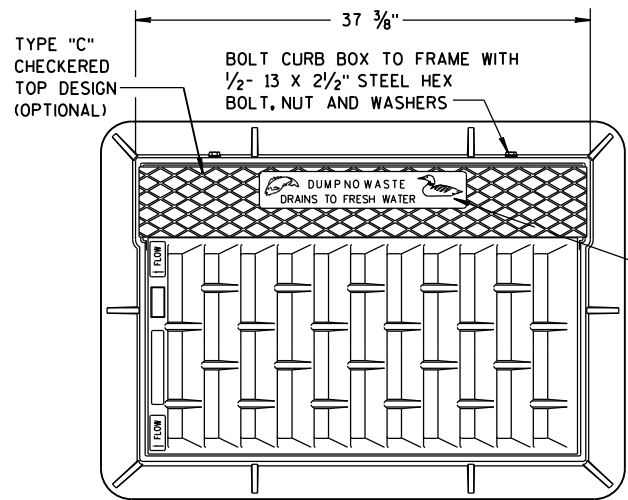


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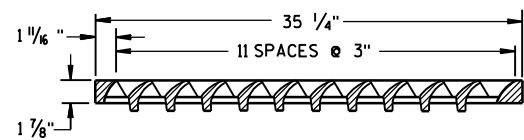
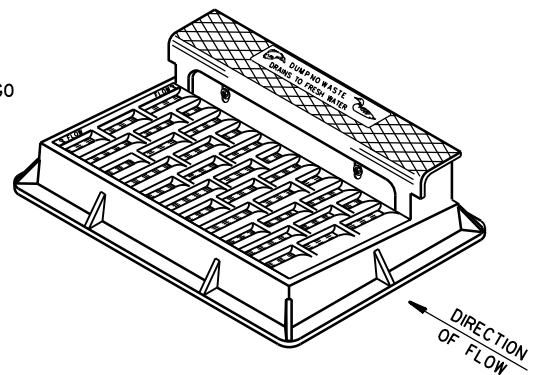


## Standard Detail Drawing List

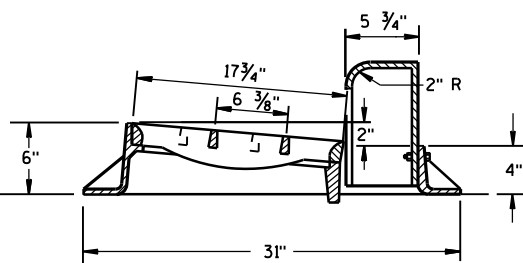
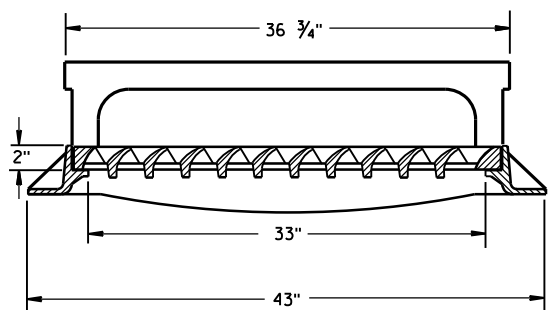
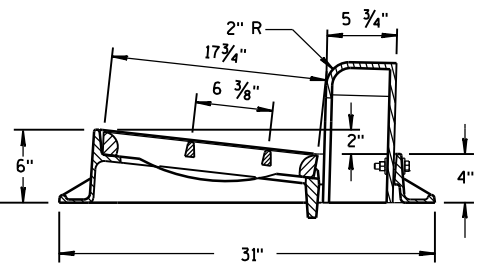
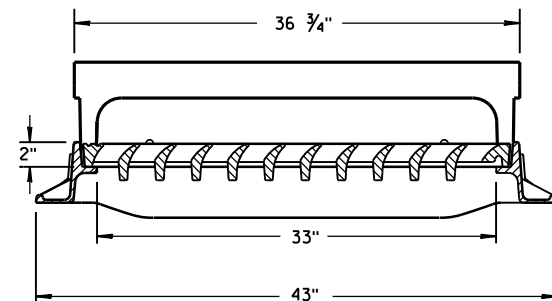
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B16-01	PULL BOX NON-CONDUCTIVE
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C05-10	CONCRETE CONTROL CABINET BASES
09C14-02	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D04-02	LIGHTING CONTROL CABINET 120/240 VOLT
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
11B02-02	CONCRETE MEDIAN NOSE
13A03-06	CONCRETE PAVEMENT SHOULDERS
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
13C13-09	URBAN DOWELED CONCRETE PAVEMENT
13C18-06A	CONCRETE PAVEMENT JOINTING
13C18-06B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-06C	CONCRETE PAVEMENT JOINT TYPES
13C18-06D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
13C18-06E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-06F	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C18-04	MEDIAN ISLAND MARKING
15C27-03B	PAVEMENT MARKING (ISLANDS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



**NOTE:  
GRATE IS REVERSIBLE.**

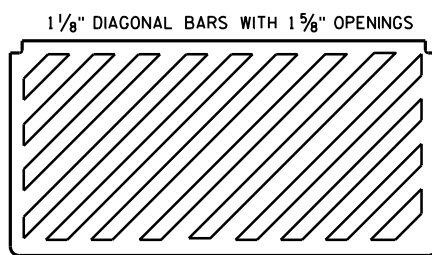


**NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"**

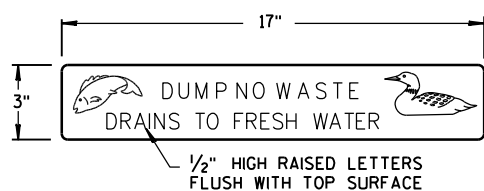


**TYPE "H"**

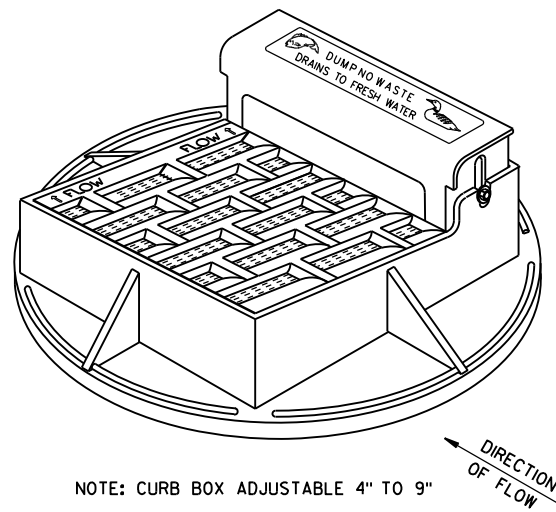
**NOTE: EITHER CASTING IS ACCEPTABLE**



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

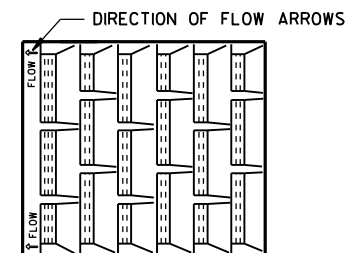


**LOGO DETAIL**

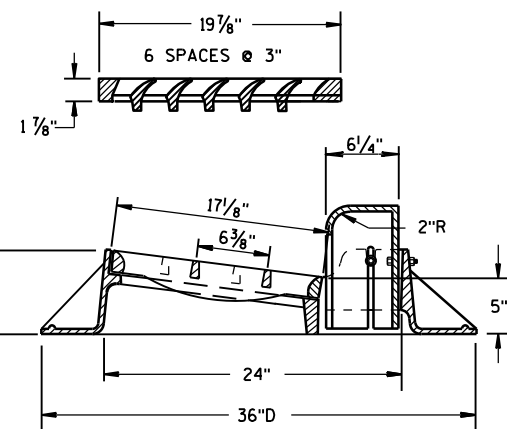
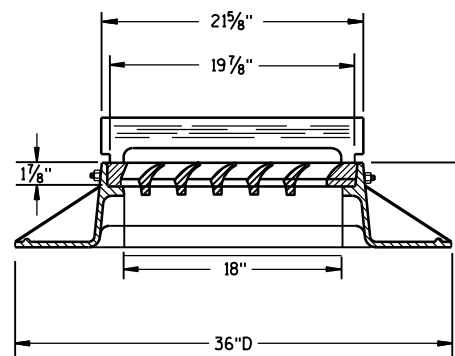


**NOTE: CURB BOX ADJUSTABLE 4" TO 9"**

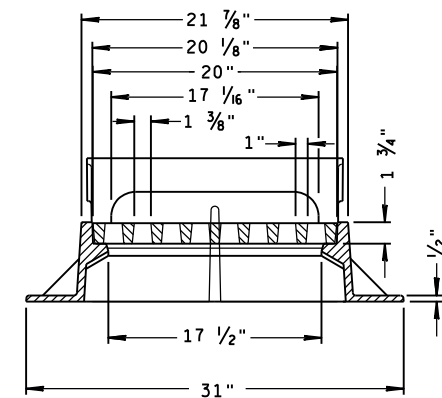
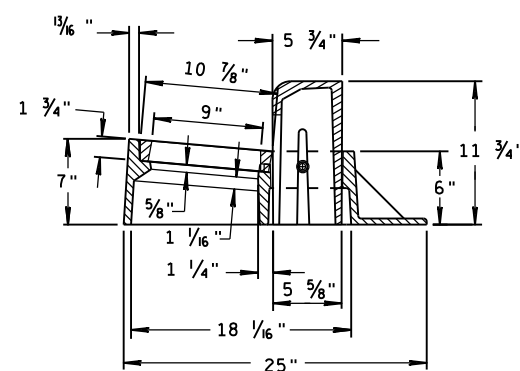
**NOTE:  
GRATE IS REVERSIBLE.**



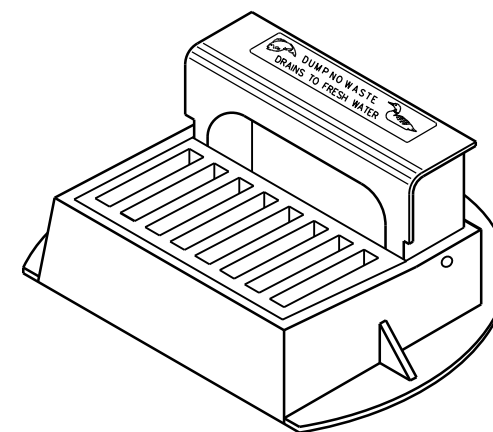
**SPECIAL GRATE FOR  
TYPE "A" COVER**  
(MEASURES 19 3/4" X 17" X 1 1/8")  
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



**TYPE "A"**



**TYPE "Z"**

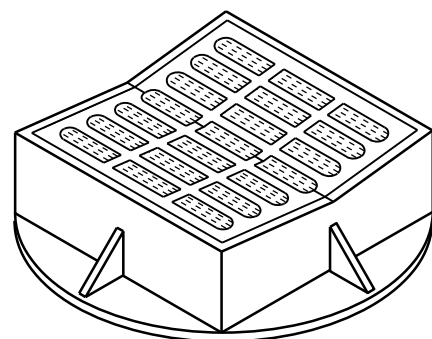
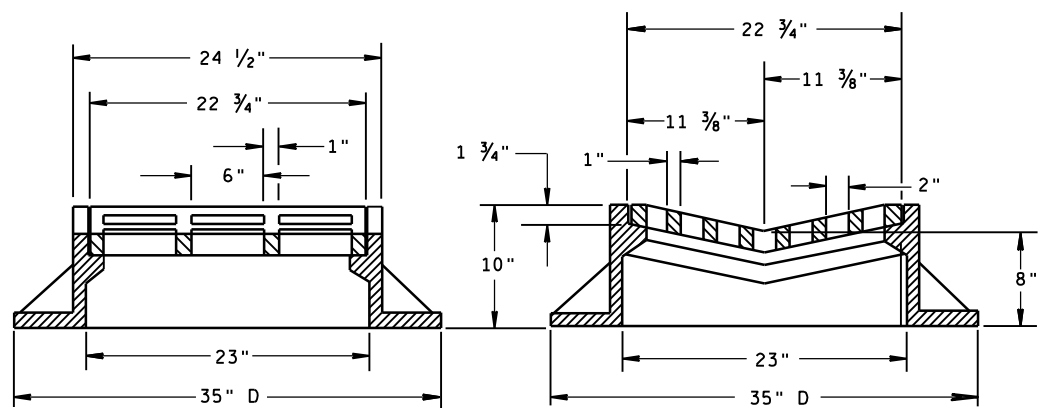


**INLET COVERS  
TYPE A, H, A-S, H-S & Z**

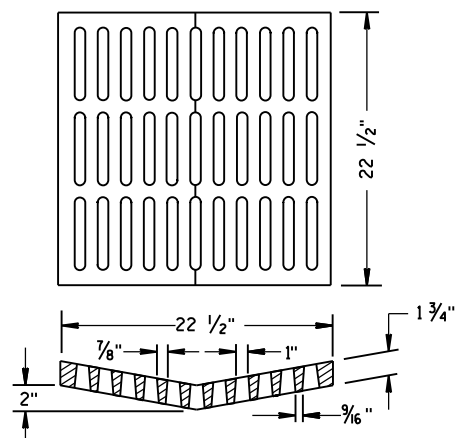
**STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION**

**APPROVED**  
DATE: 11-27-13  
DATE: 1/5/ Jerry H. Zogg  
DATE: ROADWAY STANDARDS 106  
DATE: ENGINEER ENT  
FHWA



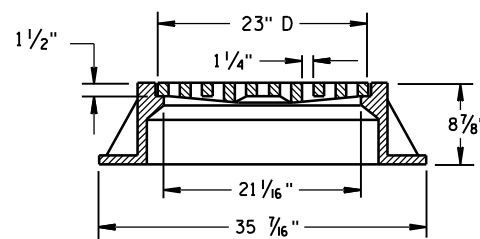
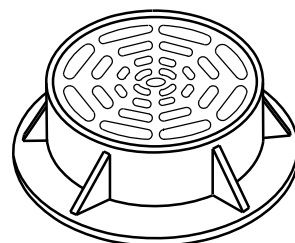
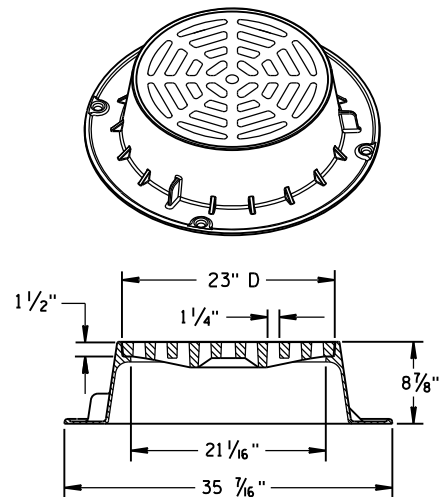


**TYPE "B"**



**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"**

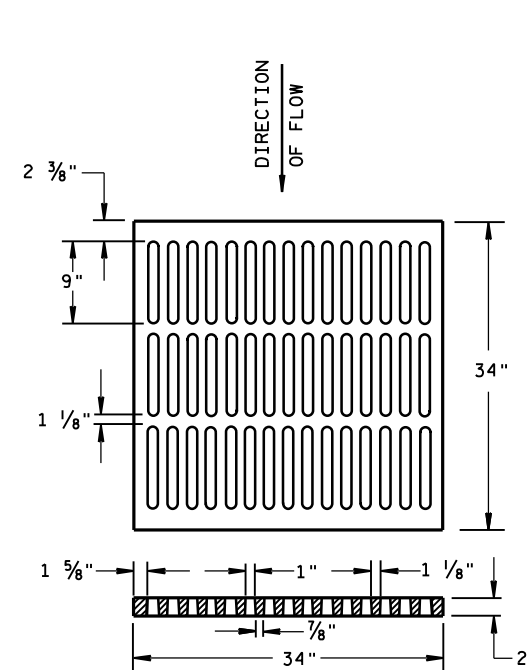
NOTE: EITHER CASTING IS ACCEPTABLE

**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.

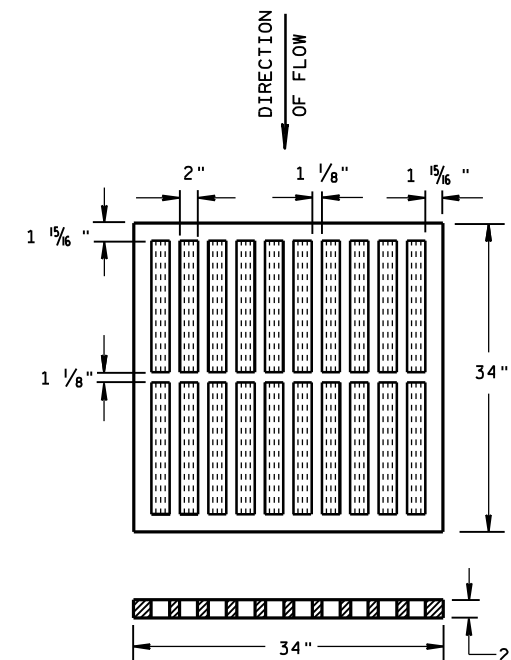
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



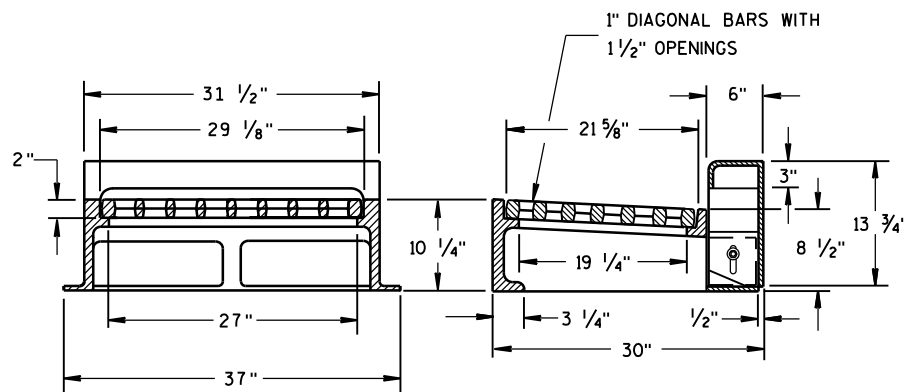
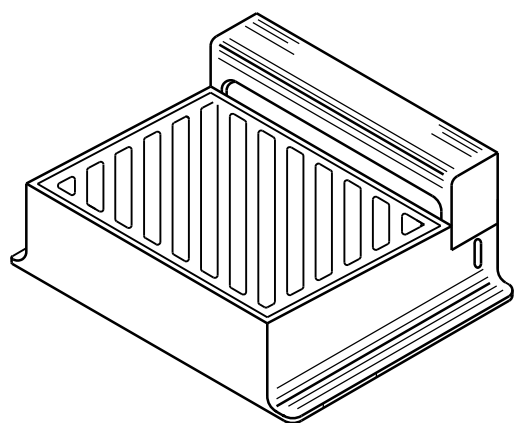
**ALTERNATIVE TYPE "MS"**

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"**

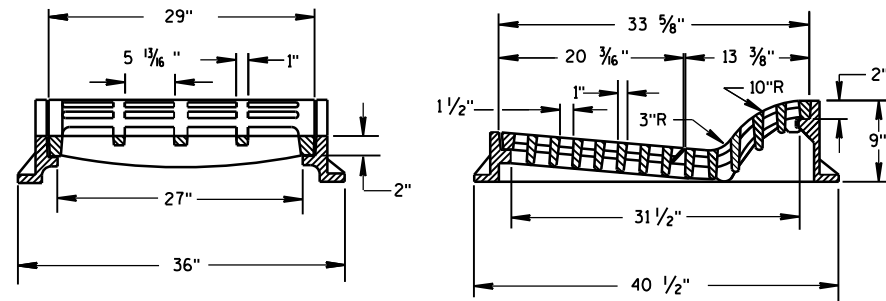
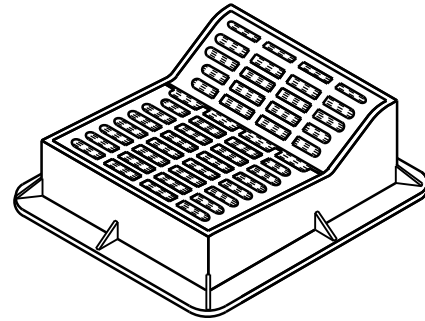
DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

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 ENGINEER  
FHWA



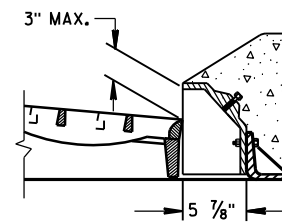
**TYPE "F"**

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

**GENERAL NOTES**

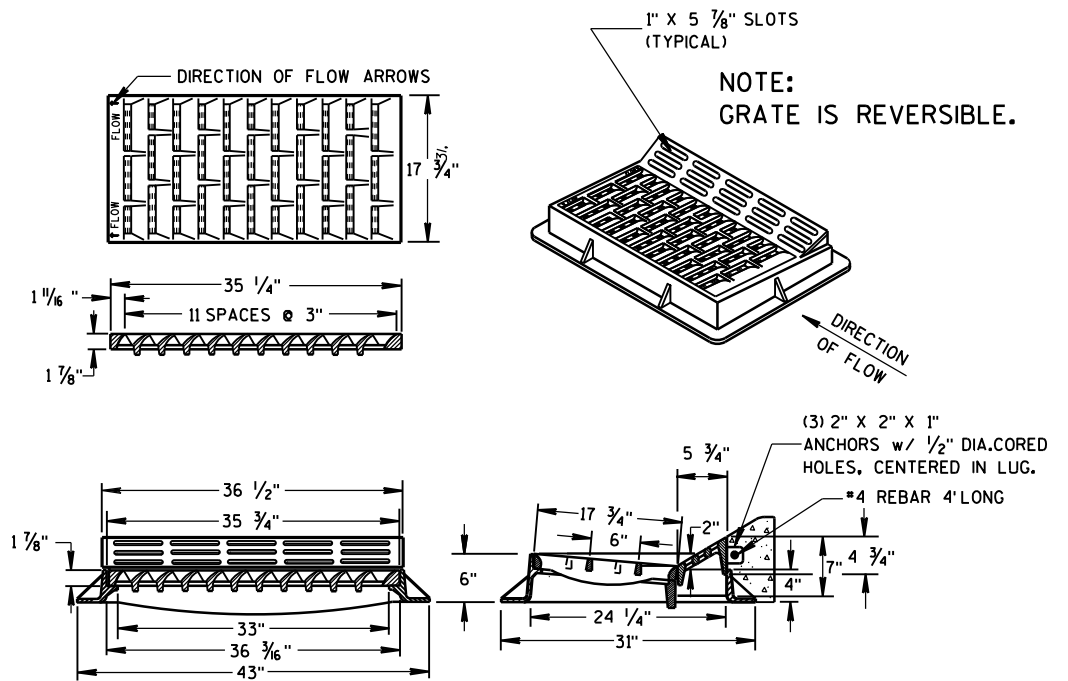
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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



**ALTERNATIVE CURB BOX FOR TYPE "HM" COVER**

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH NOTED AS TYPE HM-GJ ON DRAINAGE TABLE



**TYPE "HM"**

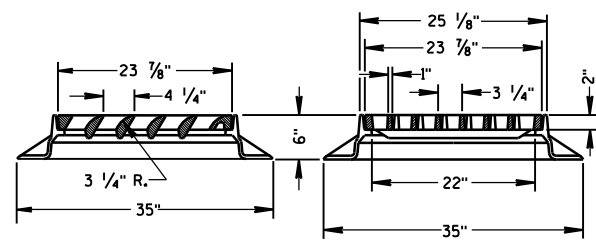
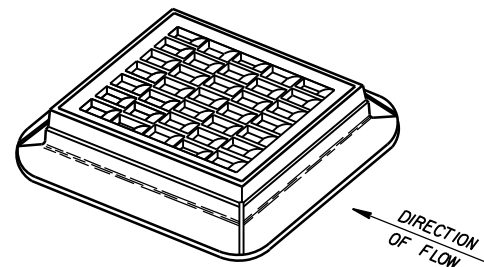
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM" COVER NOTED AS TYPE HM-S ON DRAINAGE TABLE

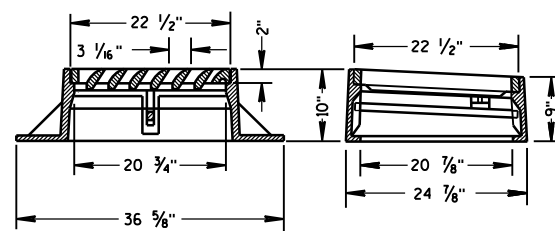
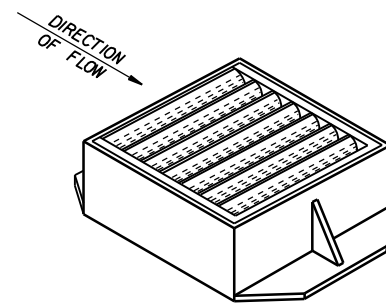
NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

6

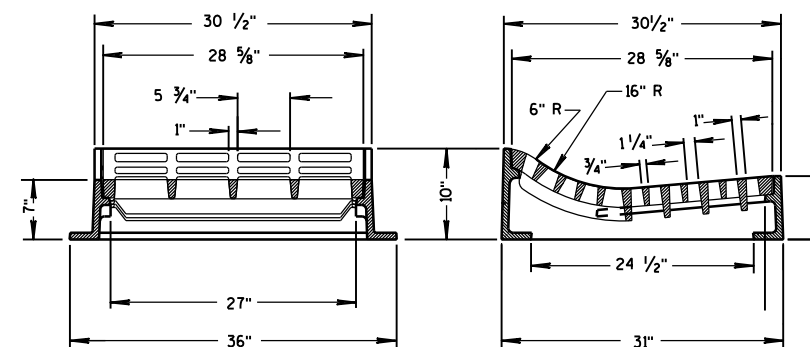
6



**TYPE "S"**

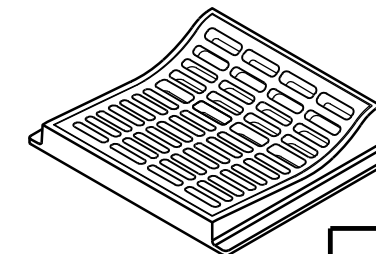


**TYPE "V"**



**TYPE "T"**

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



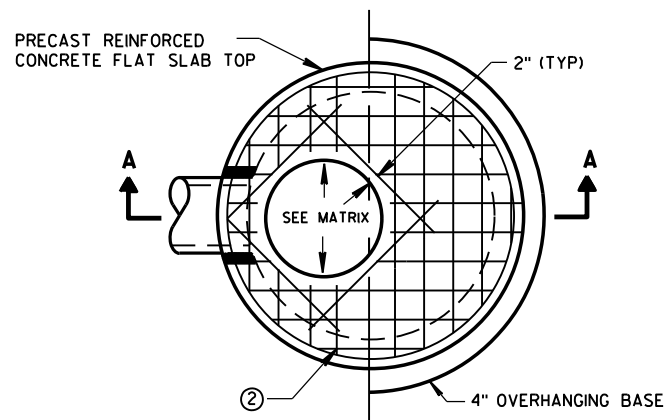
**INLET COVERS**  
TYPE F, HM, HM-S, S, T, V,  
HM-GJ, & HM-GJ-S

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

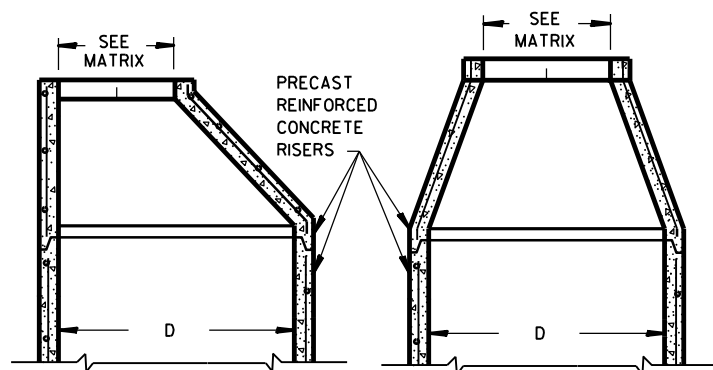
APPROVED  
11/27/2013 DATE /s/ Jerry H. Zogg  
ROADWAY STANDARDS ENGINEER  
FHWA

S.D.D. 8 A 5-19C

S.D.D. 8 A 5-19C

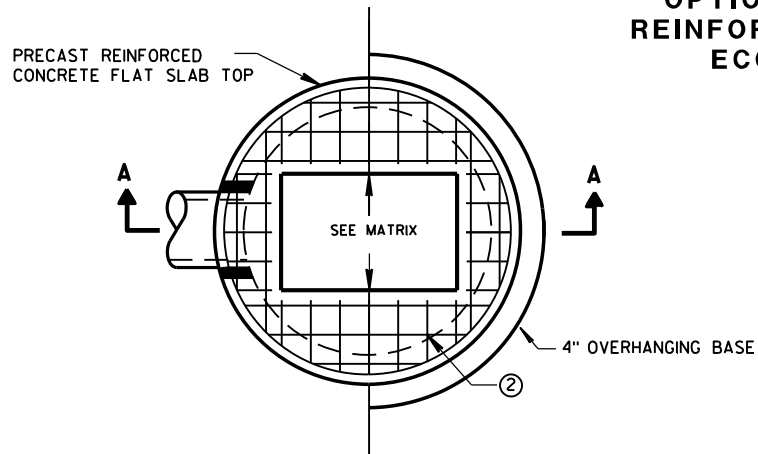


PLAN VIEW CIRCULAR OPENING

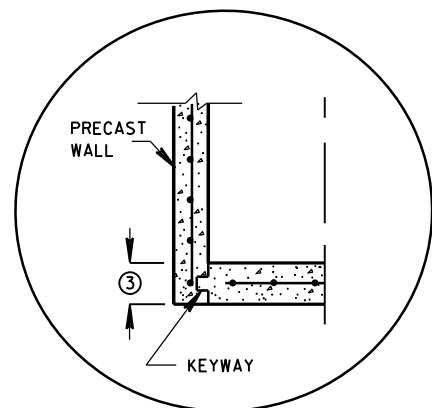


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

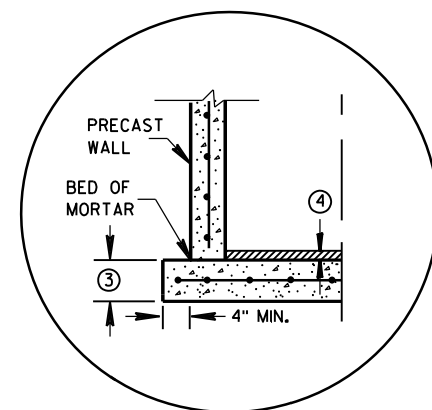
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PLAN VIEW RECTANGULAR OPENING



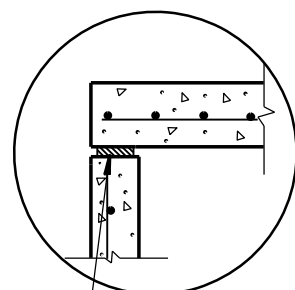
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



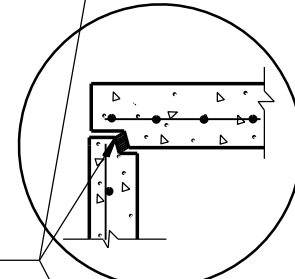
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

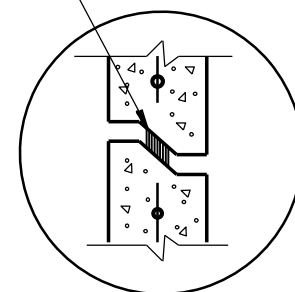
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



TOP WITH PLAIN END JOINT

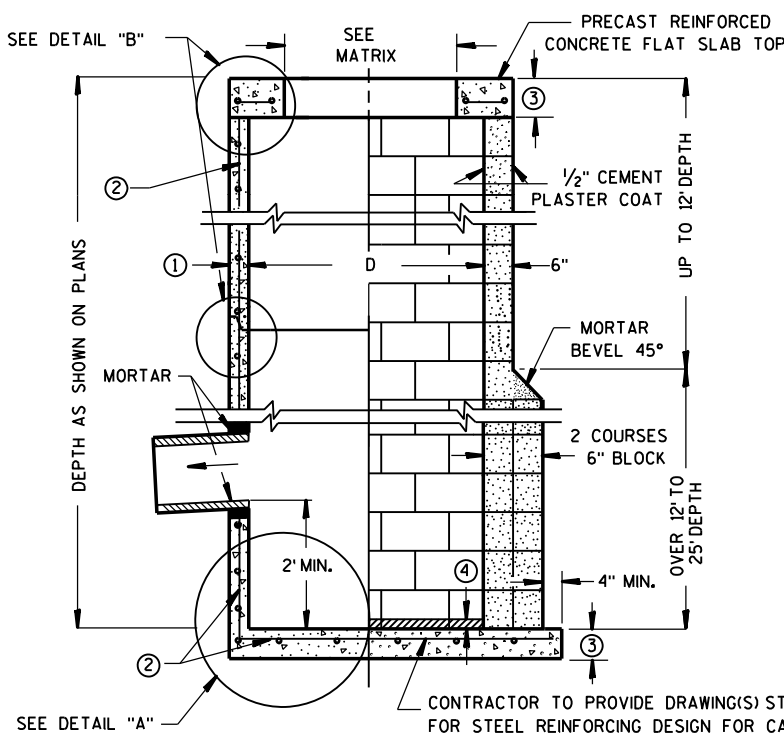


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

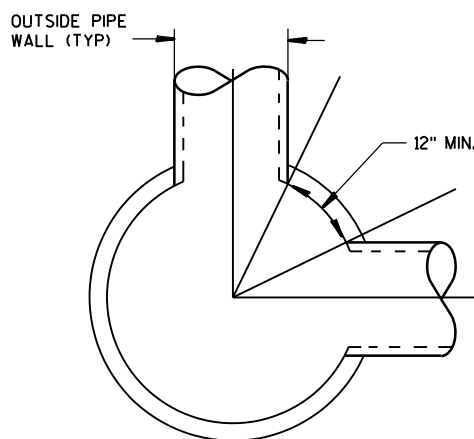
DETAIL "B"



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
4-FT- 6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3											

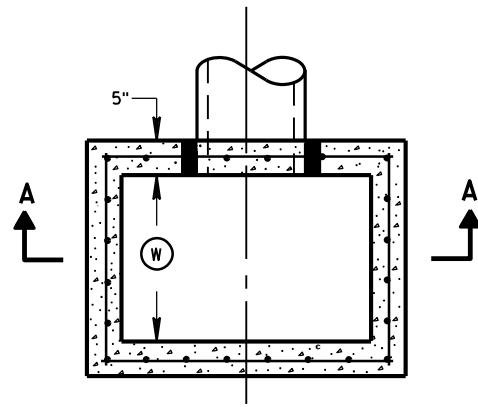
PIPE MATRIX

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

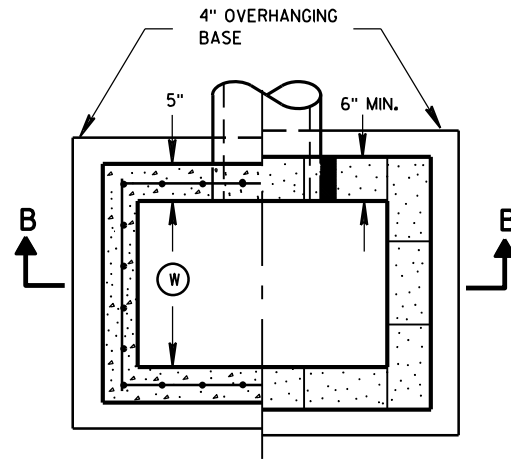
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

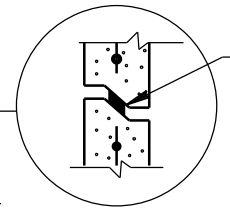
APPROVED  
 Sep 1, 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS UNIT SUPERVISOR  
 FHWA 109 ENT



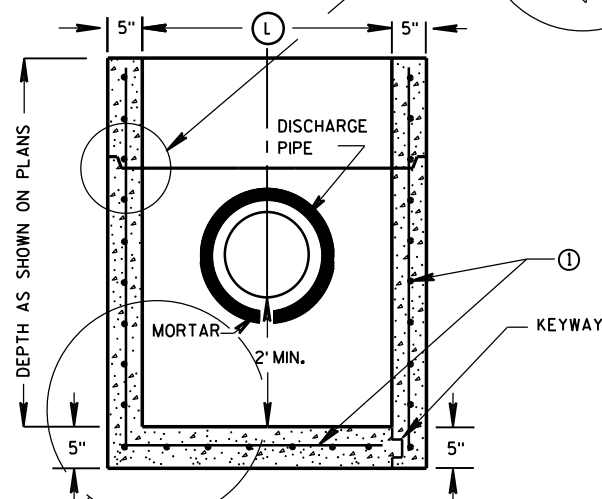
PLAN VIEW



PLAN VIEW

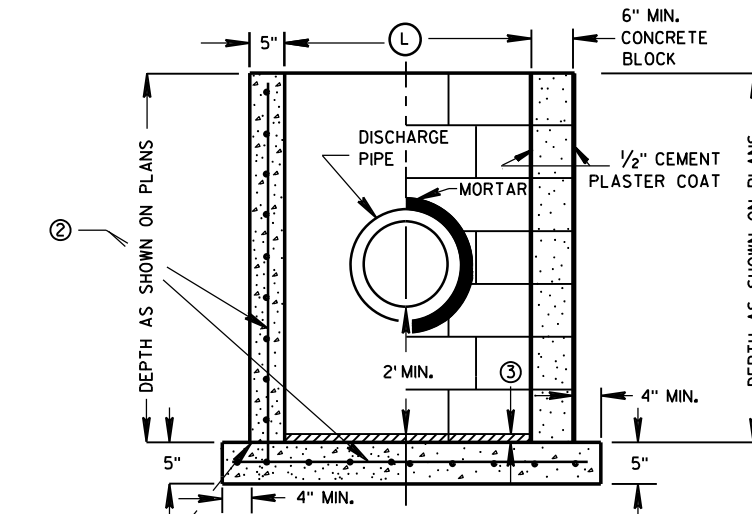


RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

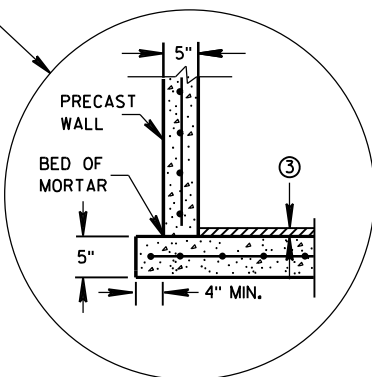
SECTION A-A



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.

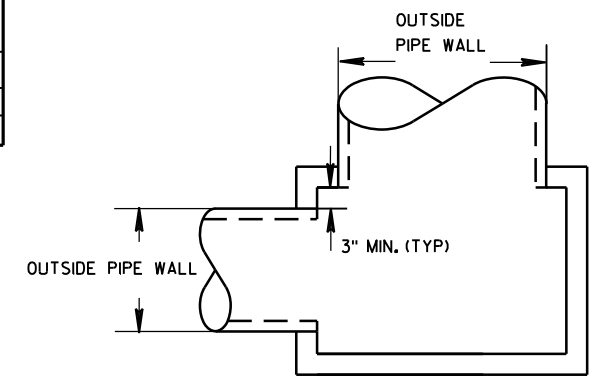
- ① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- ③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

**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

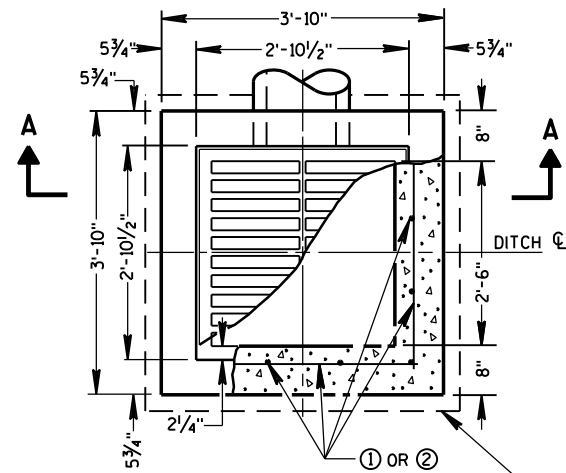


DETAIL "A"

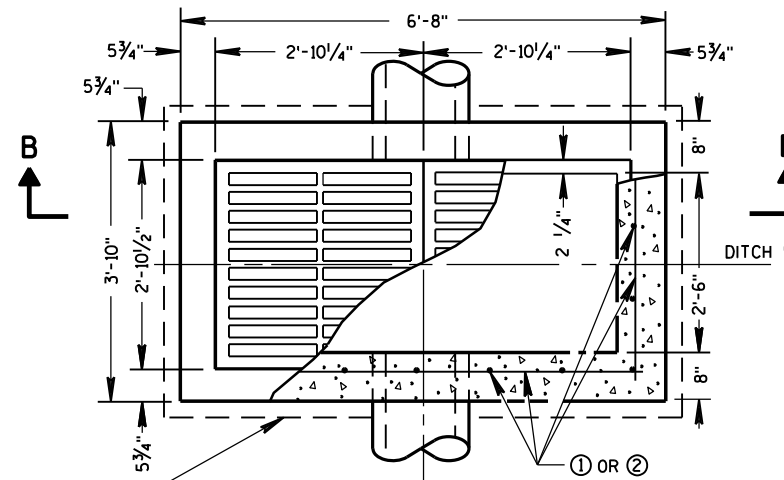
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

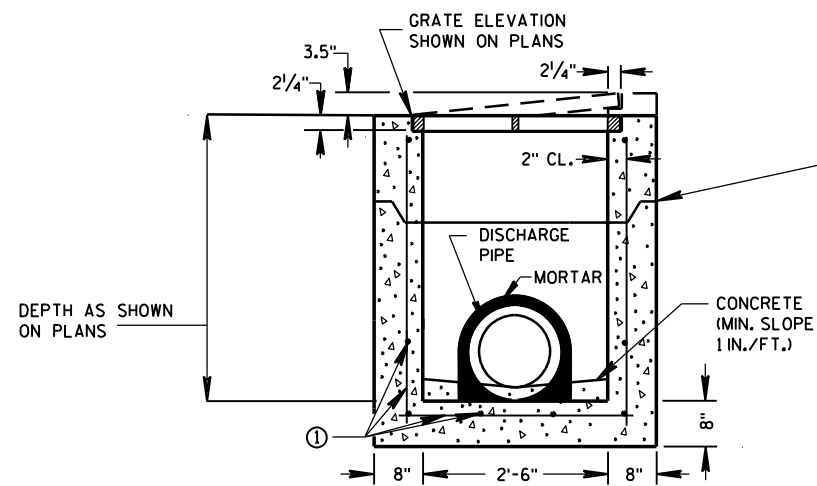
APPROVED  
Sep., 2016 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS UNIT SUPERVISOR  
FHWA 110 INT



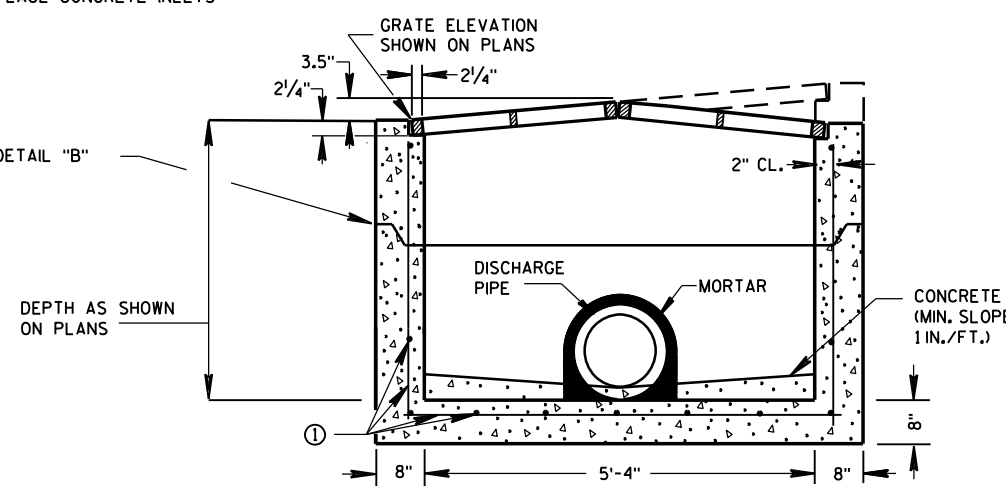
PLAN VIEW



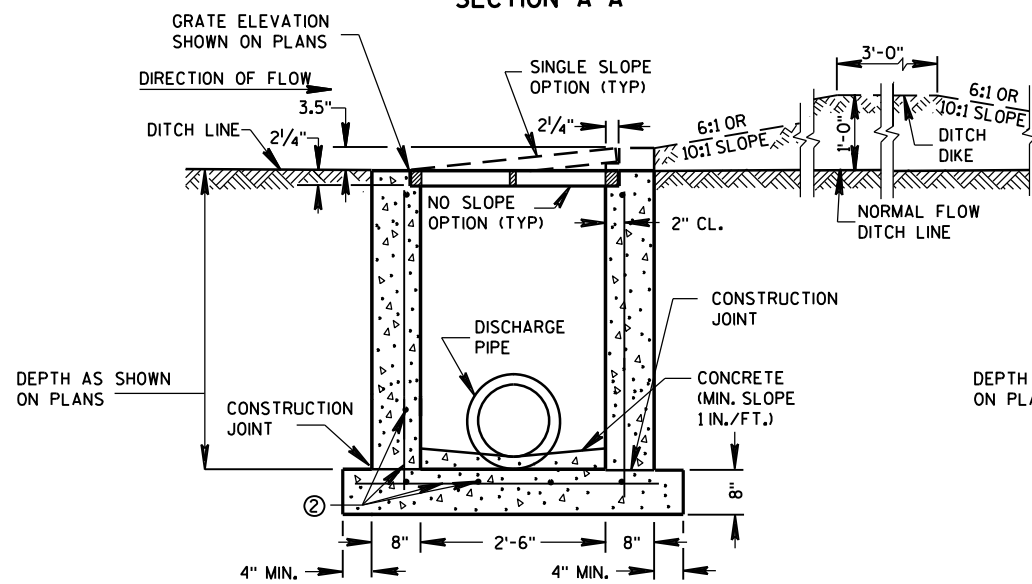
PLAN VIEW



PRECAST REINFORCED CONCRETE SECTION A-A

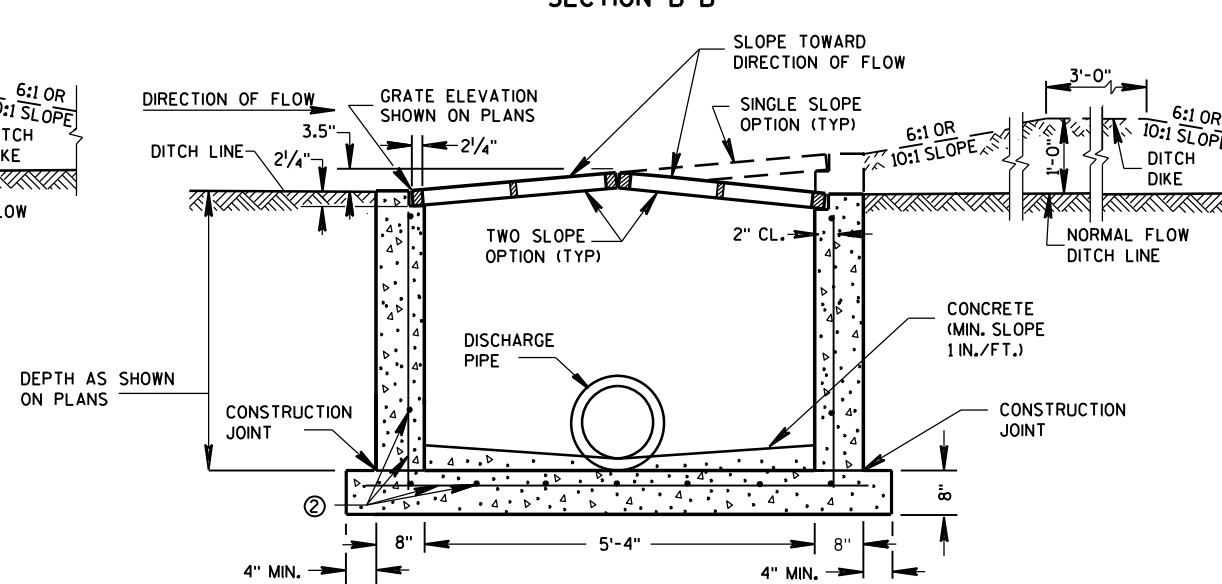


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

**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 INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE 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.

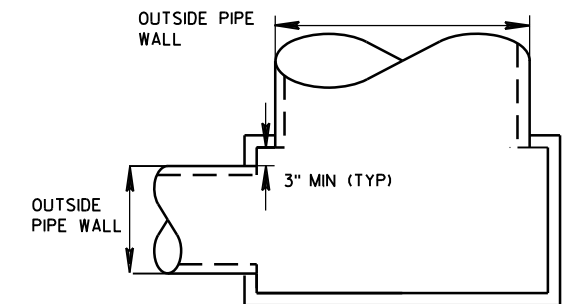
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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 INLETS 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.

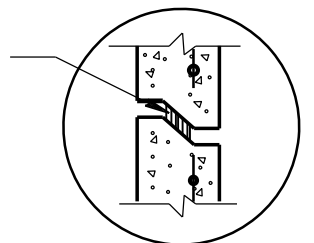
**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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

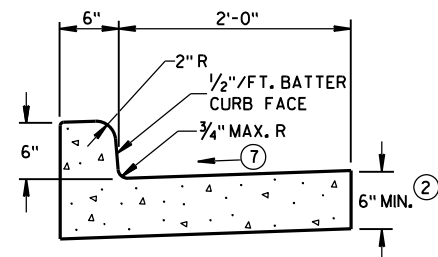


DETAIL "B"

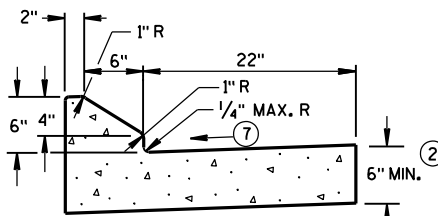
**INLETS MEDIAN 1 AND 2 GRATE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

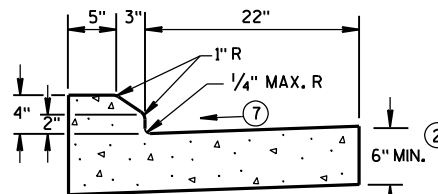
APPROVED  
Sept., 2016 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS UNIT SUPERV 111 ENT  
FHWA



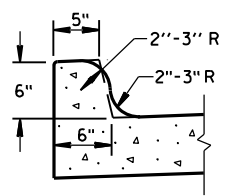
TYPES A<sup>①</sup> & D



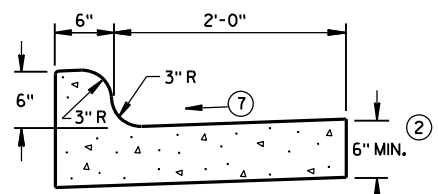
6" SLOPED CURB TYPES G<sup>①</sup> & J



4" SLOPED CURB TYPES G<sup>①</sup> & J

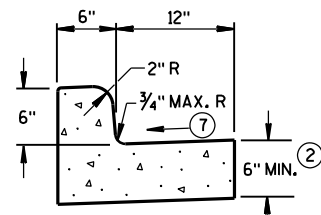


TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



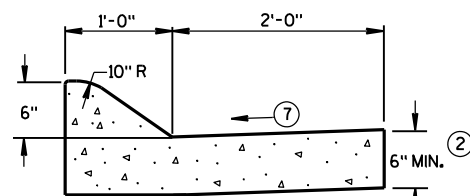
TYPES K<sup>①</sup> & L

CONCRETE CURB & GUTTER 30"

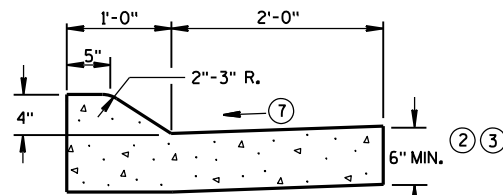


TYPES A<sup>①</sup> & D

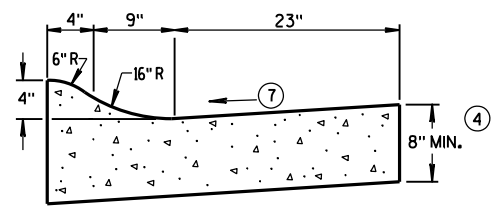
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A<sup>①</sup> & D

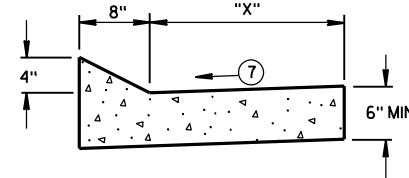


4" SLOPED CURB TYPES A<sup>①</sup> & D



4" SLOPED CURB TYPES R<sup>①</sup> & T<sup>⑤</sup>

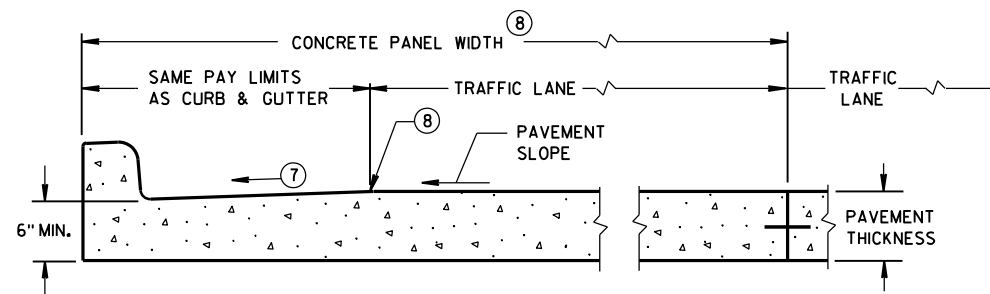
CONCRETE CURB & GUTTER 36"



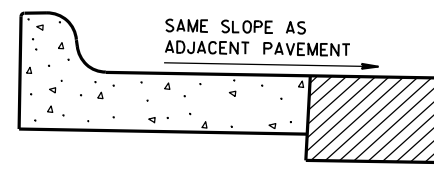
TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER<sup>⑥</sup>  
(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.

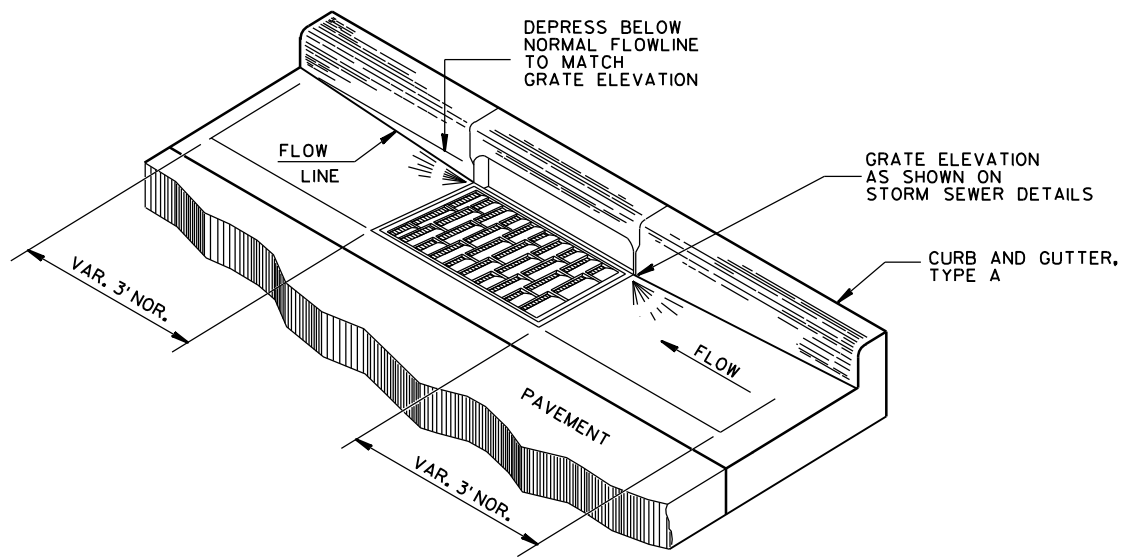
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

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

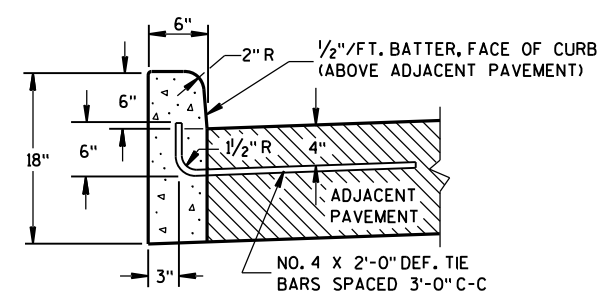
\* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

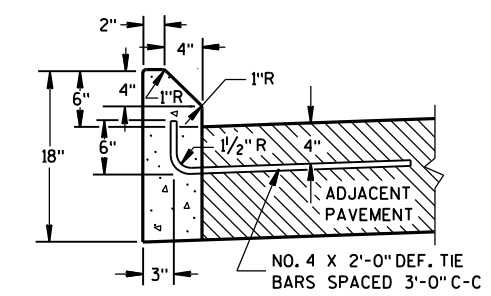
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



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



TYPES A<sup>①</sup> & D

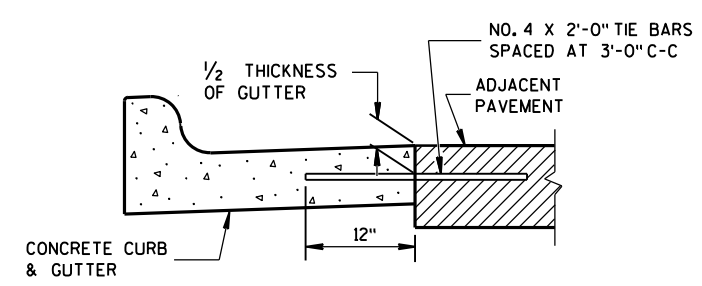


TYPES G<sup>①</sup> & J

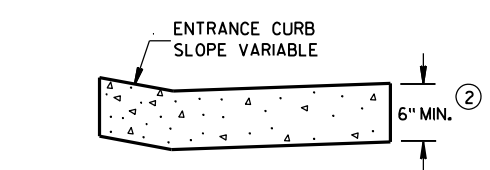
**GENERAL NOTES**

- 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.

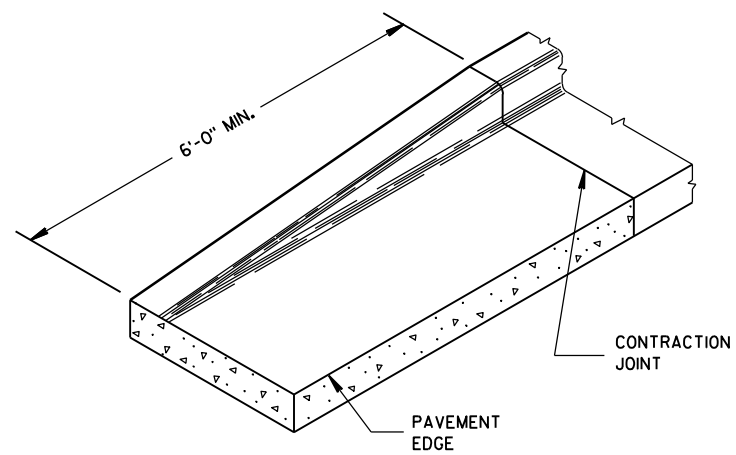
**CONCRETE CURB**



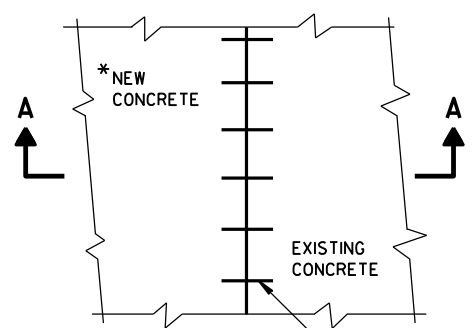
TYPICAL TIE BAR LOCATION<sup>①</sup>



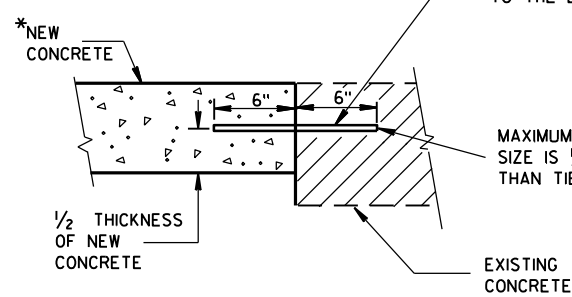
DRIVEWAY ENTRANCE CURB<sup>⑨</sup>  
(WHEN DIRECTED BY THE ENGINEER)



END SECTION CURB & GUTTER



PLAN VIEW



SECTION A-A  
TIE BARS DRILLED INTO EXISTING PAVEMENT

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

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.

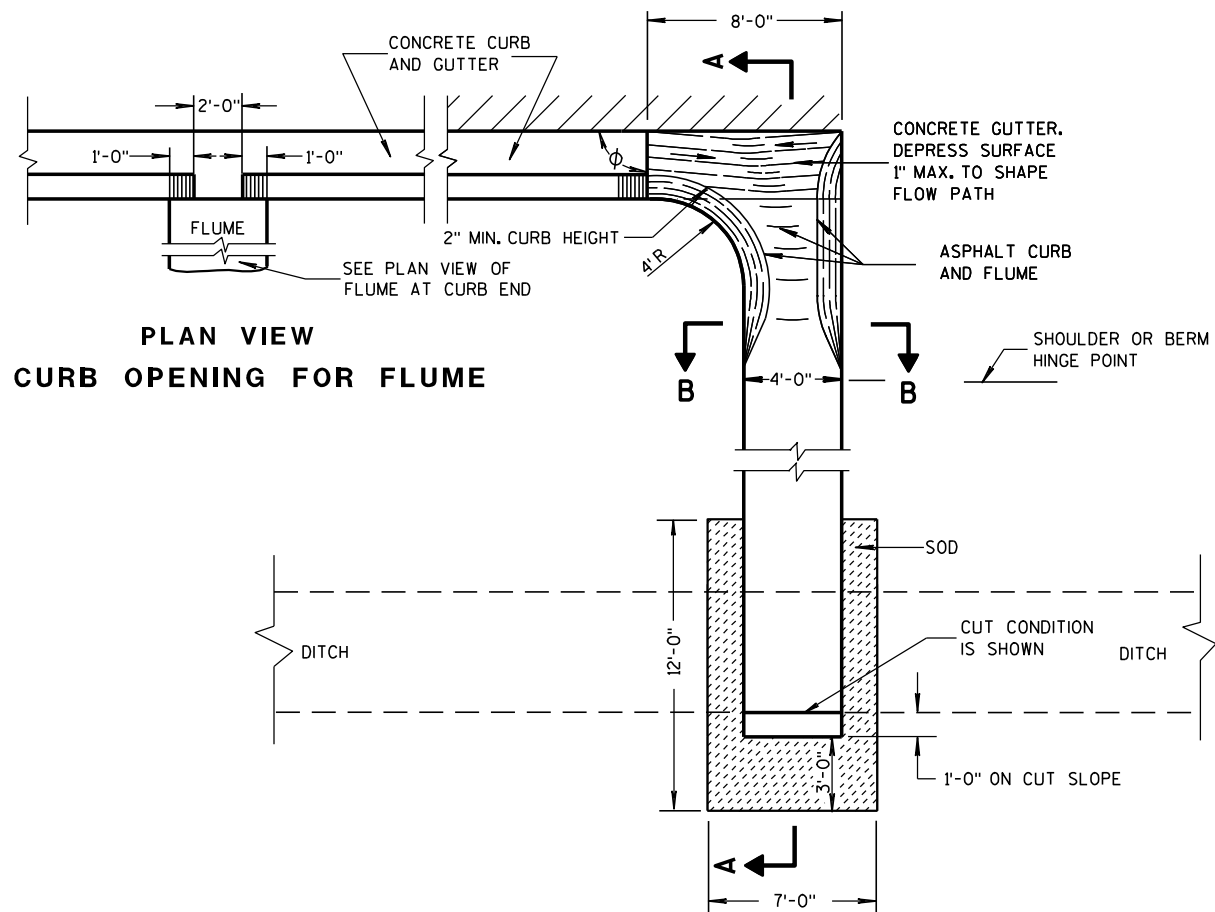
MAXIMUM DRILL HOLE SIZE IS 1/8" GREATER THAN TIE BAR DIAMETER

<b>CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS</b>		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED June, 2017 DATE	/s/ Rodney Taylor ROADWAY STANDARDS 113 UNIT SUPERVISOR	ENT
FHWA		

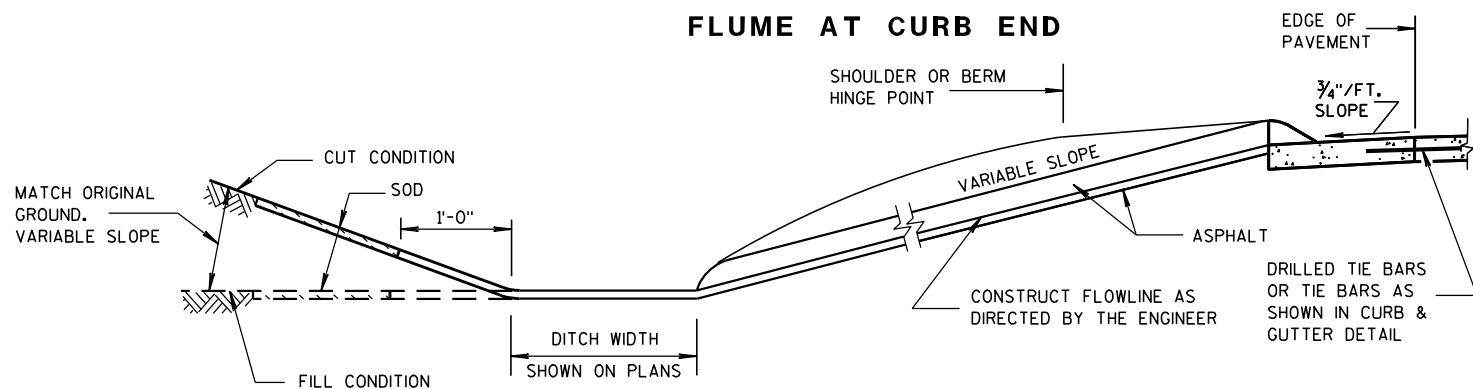
**ASPHALTIC FLUME**

NOTE: TAPER CURB ENDS TO GUTTER IN 1'-0"

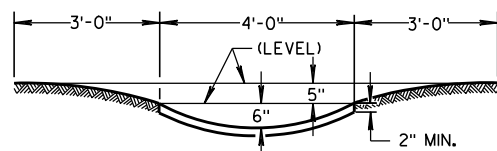
INCREASE  $\phi$  FROM RIGHT ANGLE TO BEST FIT FIELD CONDITIONS



**SECTION A-A**



**SECTION B-B**



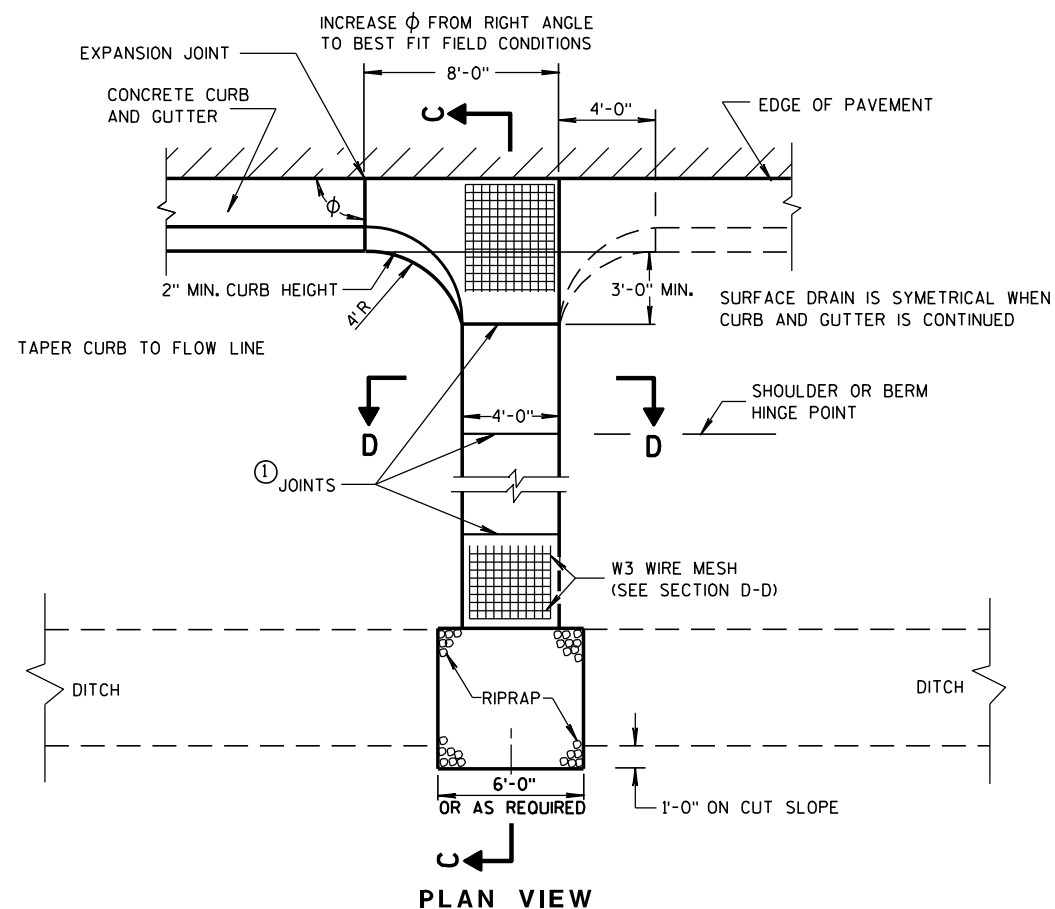
**GENERAL NOTES**

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

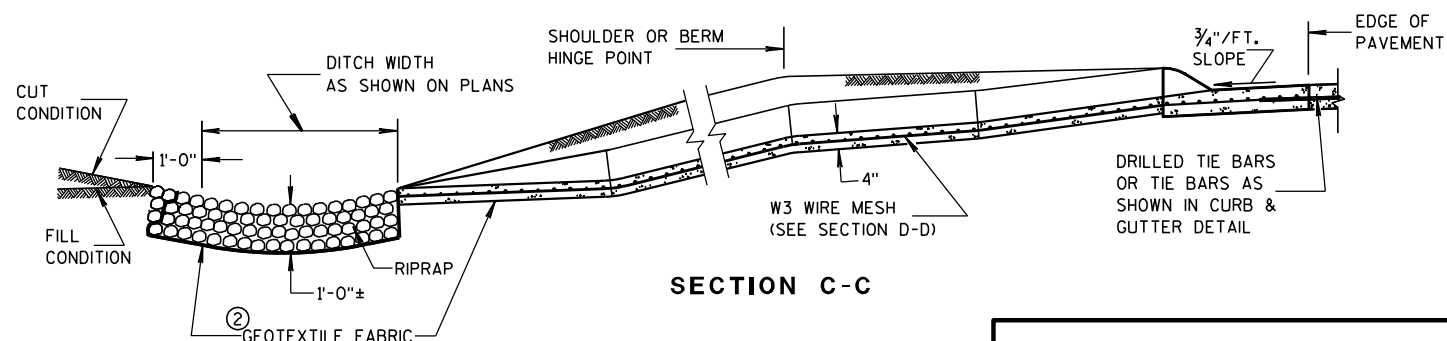
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8 TO 1/4 INCH WIDE BY 1/2 INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

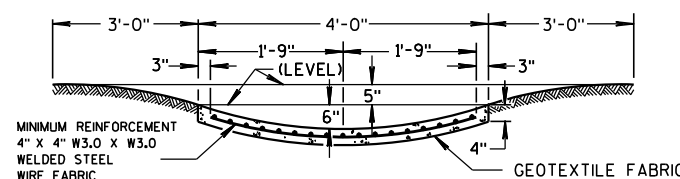
**③ CONCRETE SURFACE DRAIN**



**SECTION C-C**



**SECTION D-D**



**CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES**

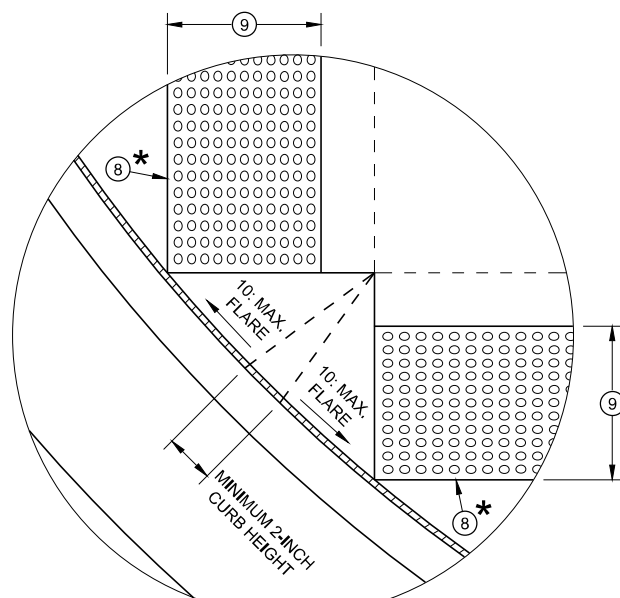
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
9-4-08 DATE /S/ Jerry H. 7000  
ROADWAY STANDARDS 114 MENT  
ENGINEER

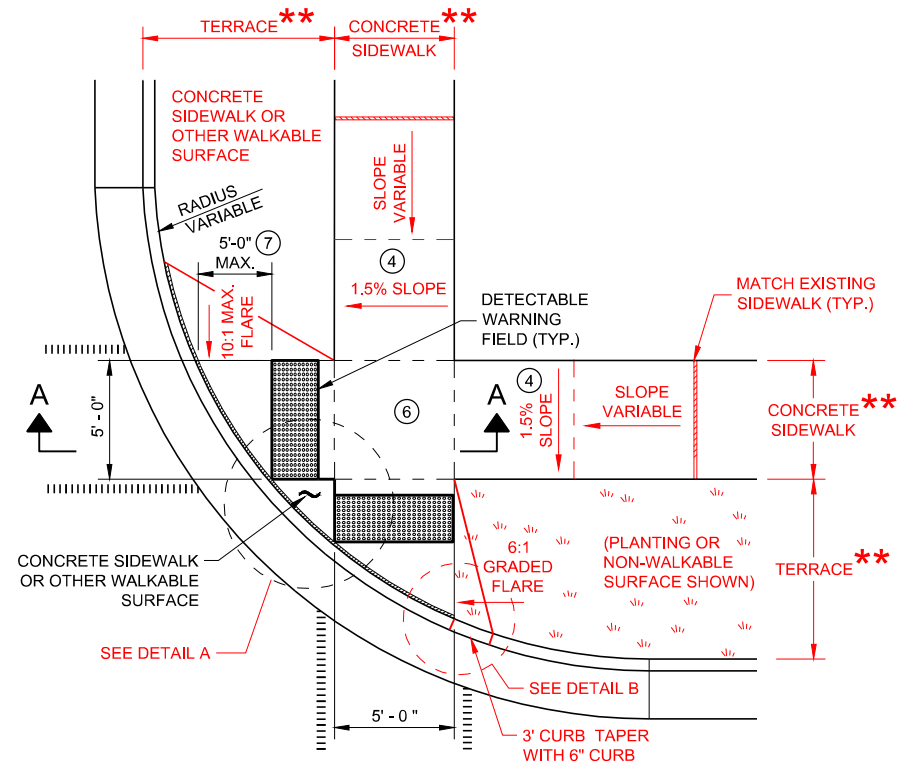




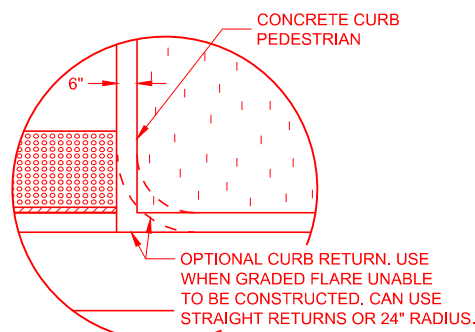
# SDD 08D05-b Curb Ramps Types 2 and 3



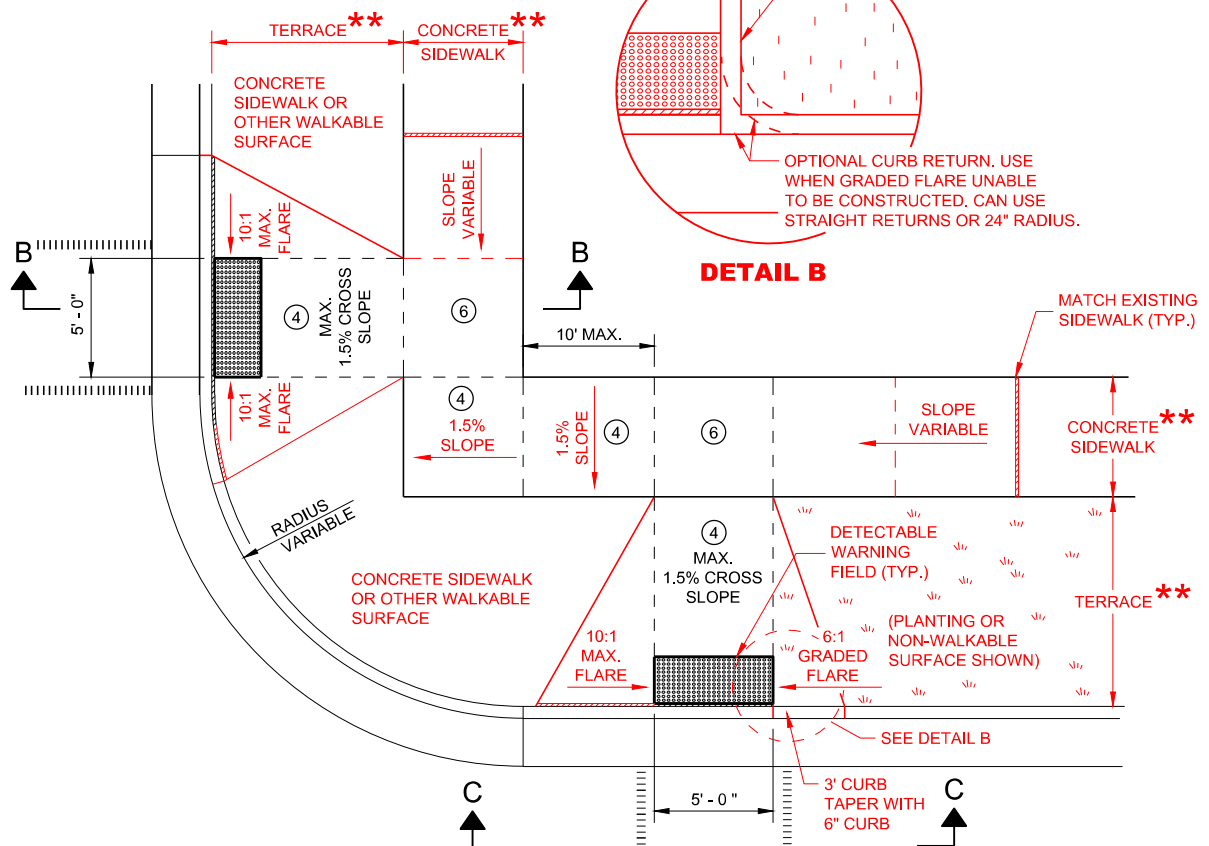
**DETAIL A**



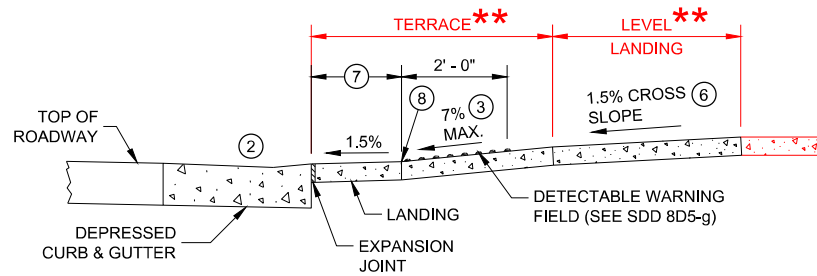
**PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)**



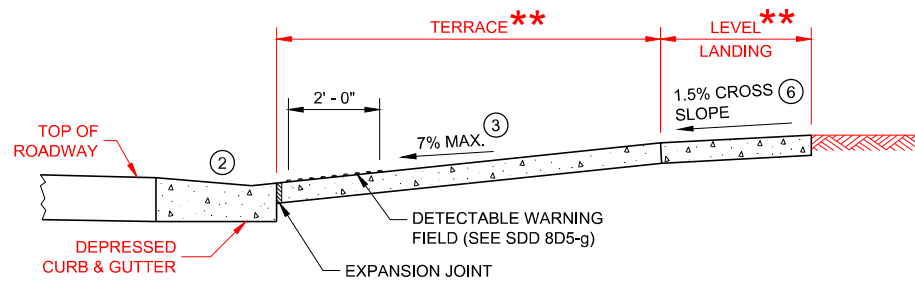
**DETAIL B**



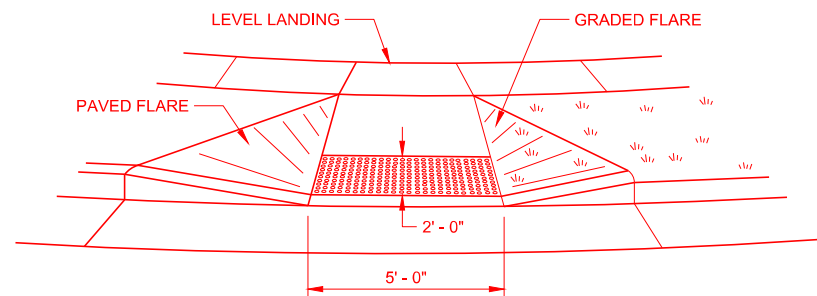
**PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)**



**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)

CONTRACT: 20190312037  
 CONT. MOD.: 1  
 REVISED SHEET 115

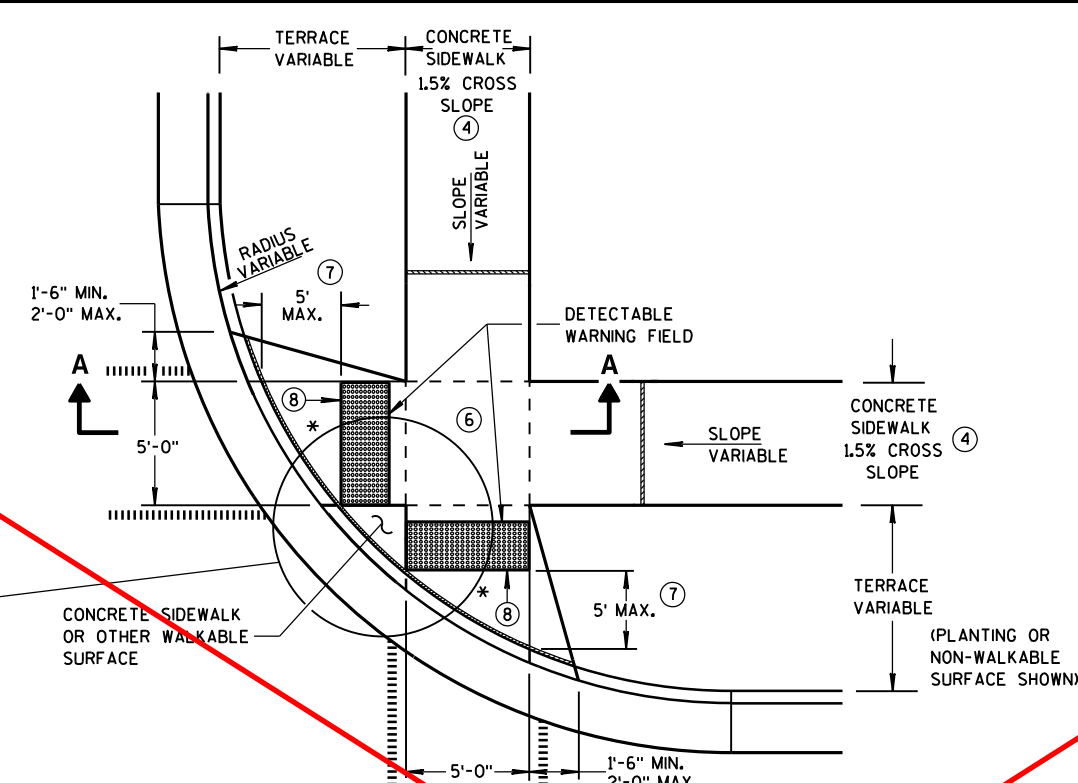
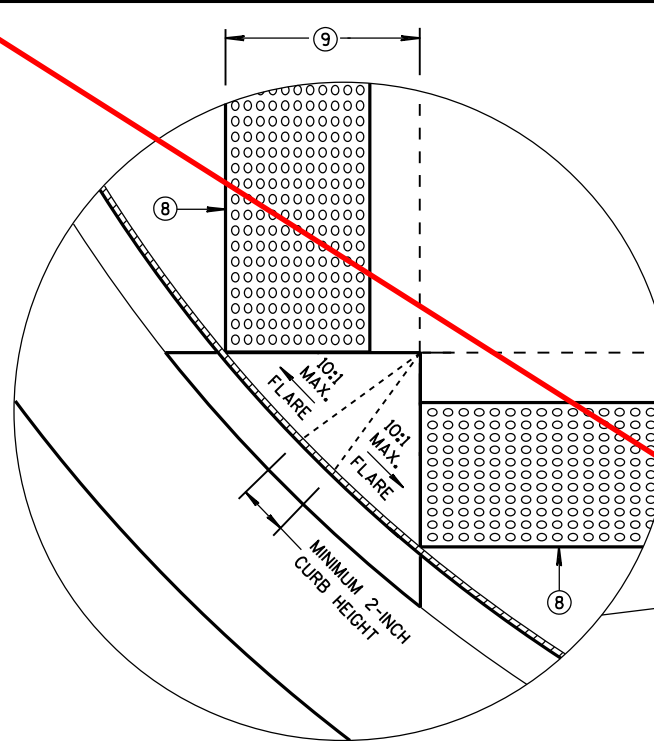
**CURB RAMPS TYPE 2 AND 3**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

REV115

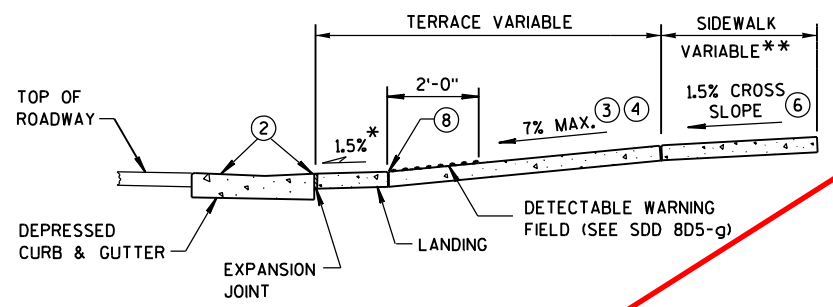
SDD 08D05 - 20b

SDD 08D05 - 20b



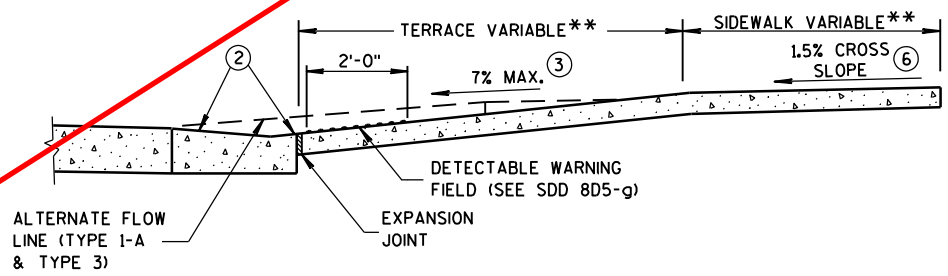
**PLAN VIEW  
TYPE 2 RAMP**  
(ON LINE WITH SIDEWALK)

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



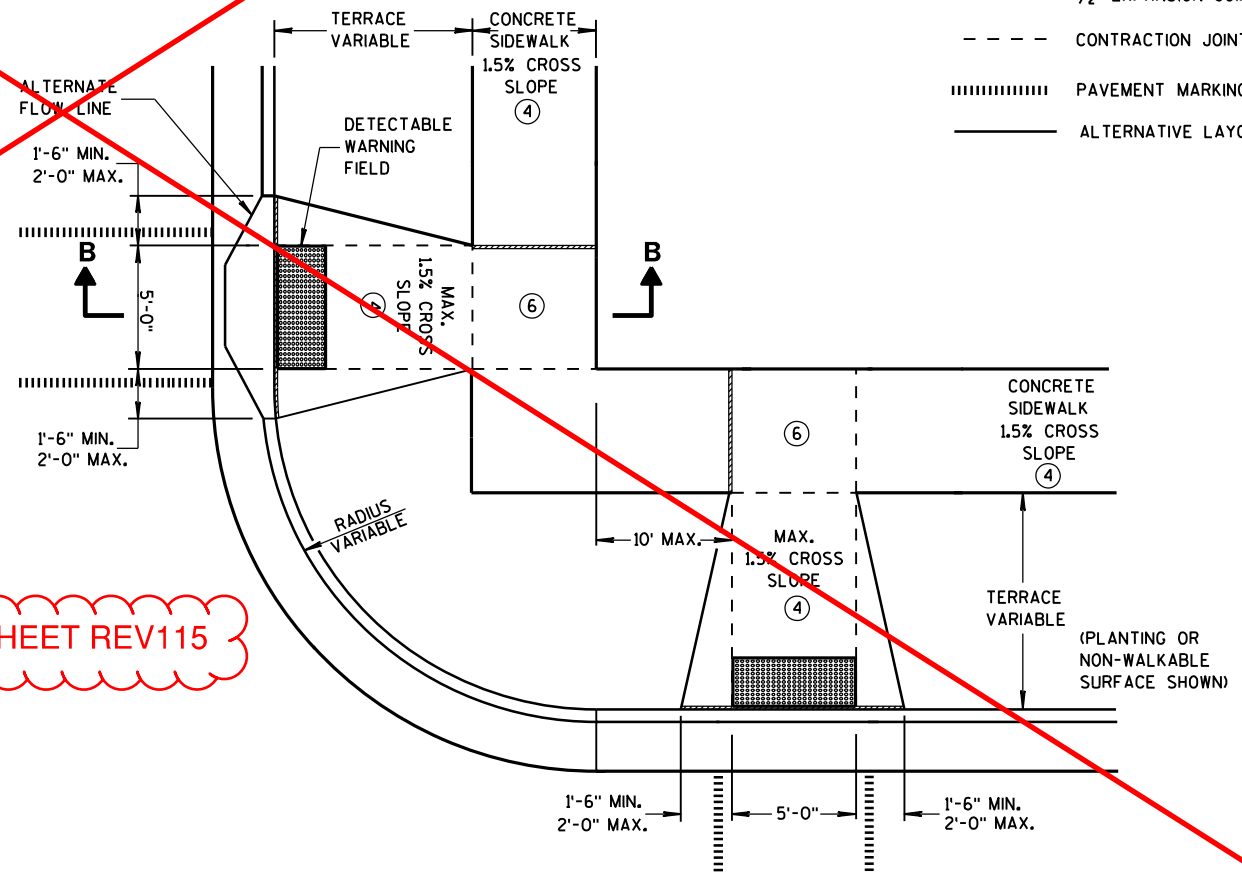
**SECTION A-A**

\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



**SECTION B-B**

SEE SHEET REV115



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

**LEGEND**

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

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- 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 ABSOLUTE MAXIMUM 12H:1V (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 X 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-g.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS 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.

6

6

S.D.D. 8 D 5-19b

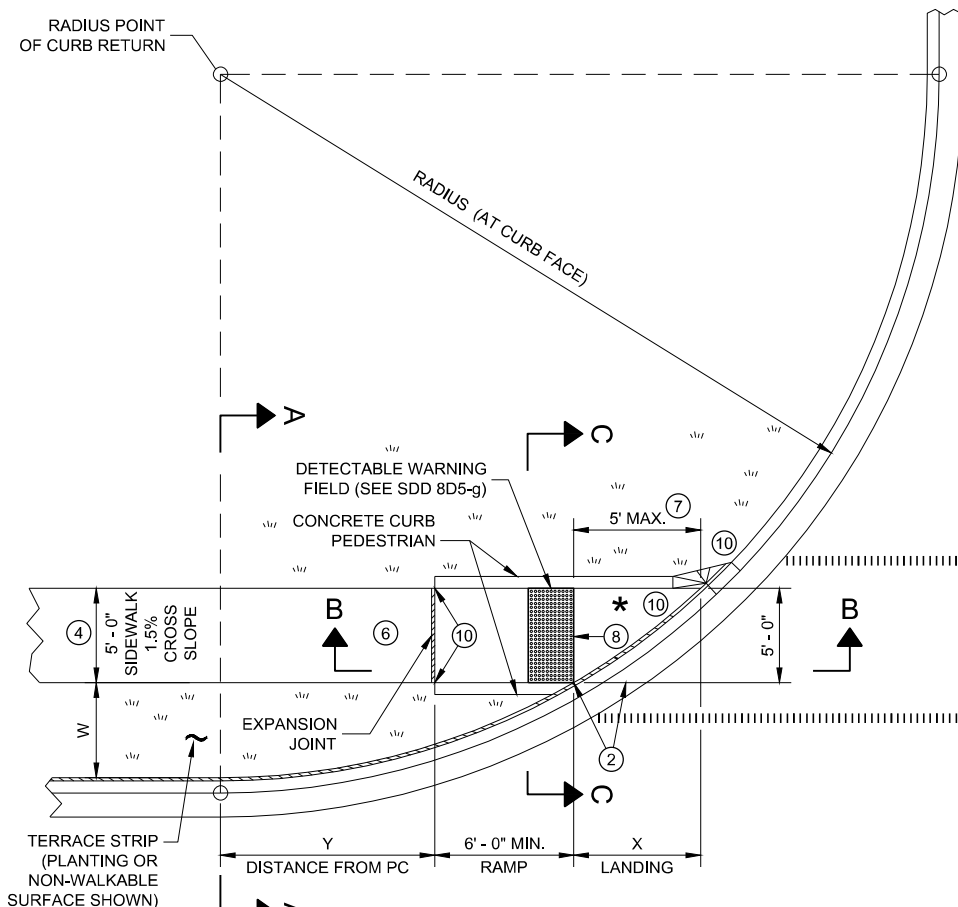
S.D.D. 8 D 5-19b

**CURB RAMPS  
TYPES 2 AND 3**

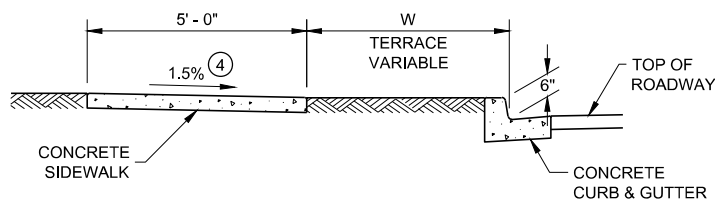
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 115



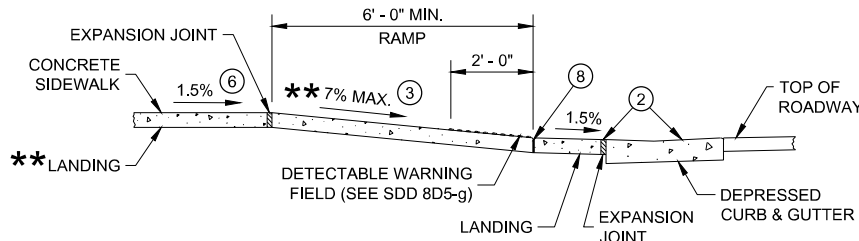
# SDD 08D05-d: Curb Ramps Types 4B and 4B1



**PLAN VIEW CURB RAMP TYPE 4B**



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



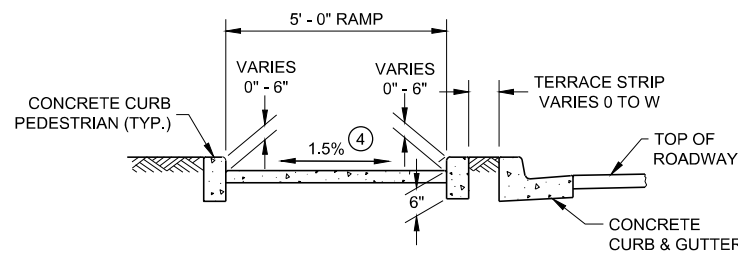
**SECTION B - B FOR TYPE 4B AND TYPE 4B1**

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

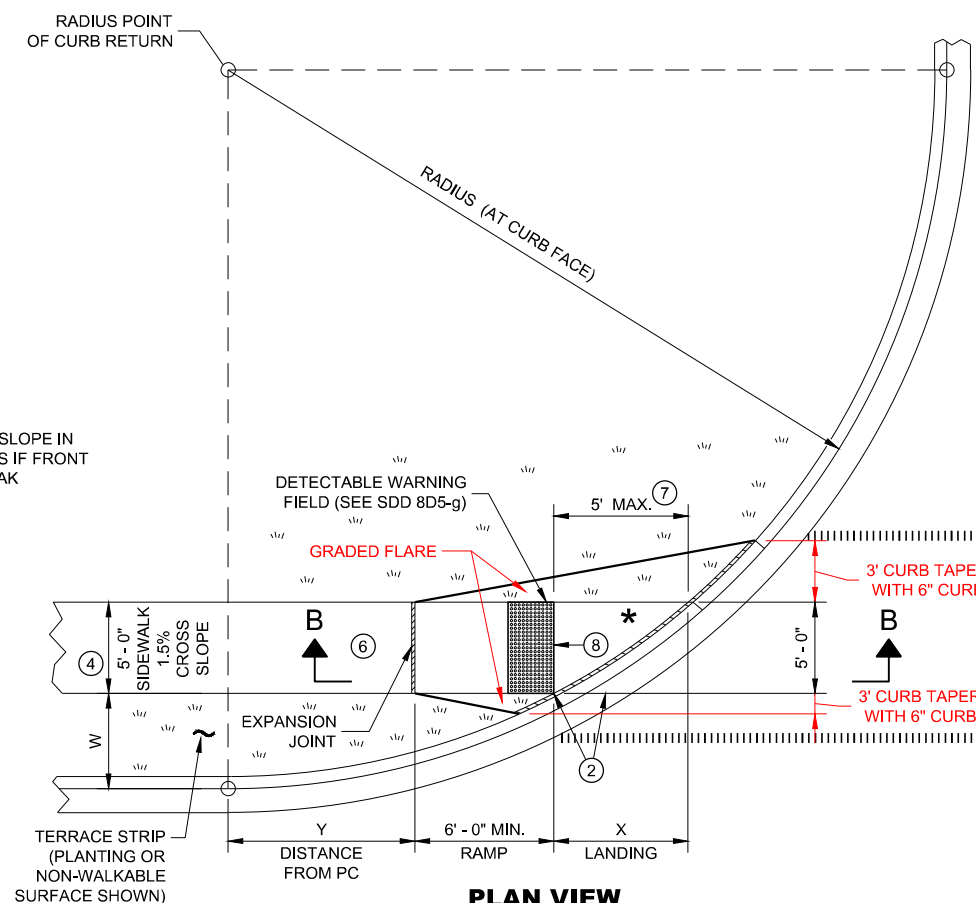
\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

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 1/4"	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 1/2"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 1/4"	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"

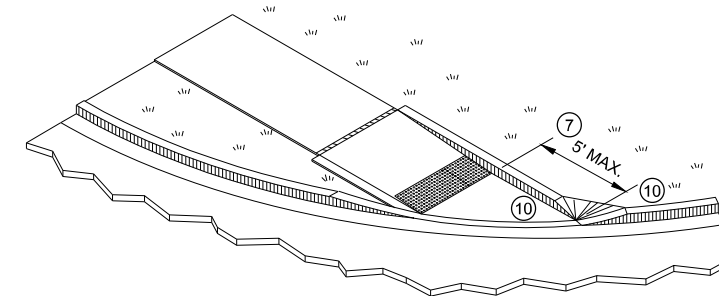
INTERMEDIATE RADII CAN BE INTERPOLATED  
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



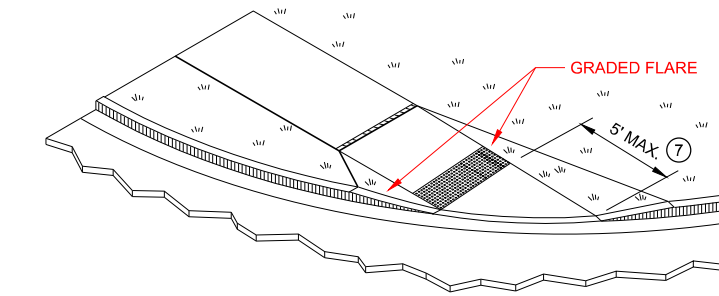
**SECTION C - C FOR TYPE 4B**



**PLAN VIEW CURB RAMP TYPE 4B1**



**ISOMETRIC VIEW FOR TYPE 4B**



**ISOMETRIC VIEW FOR TYPE 4B1**

CONTRACT: 20190312037  
CONT. MOD.: 1  
REVISED SHEET 116

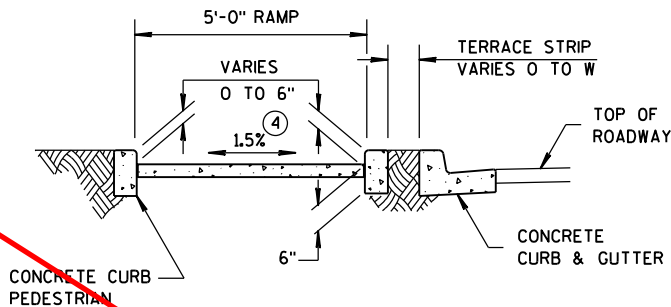
**CURB RAMPS  
TYPE 4B AND 4B1**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

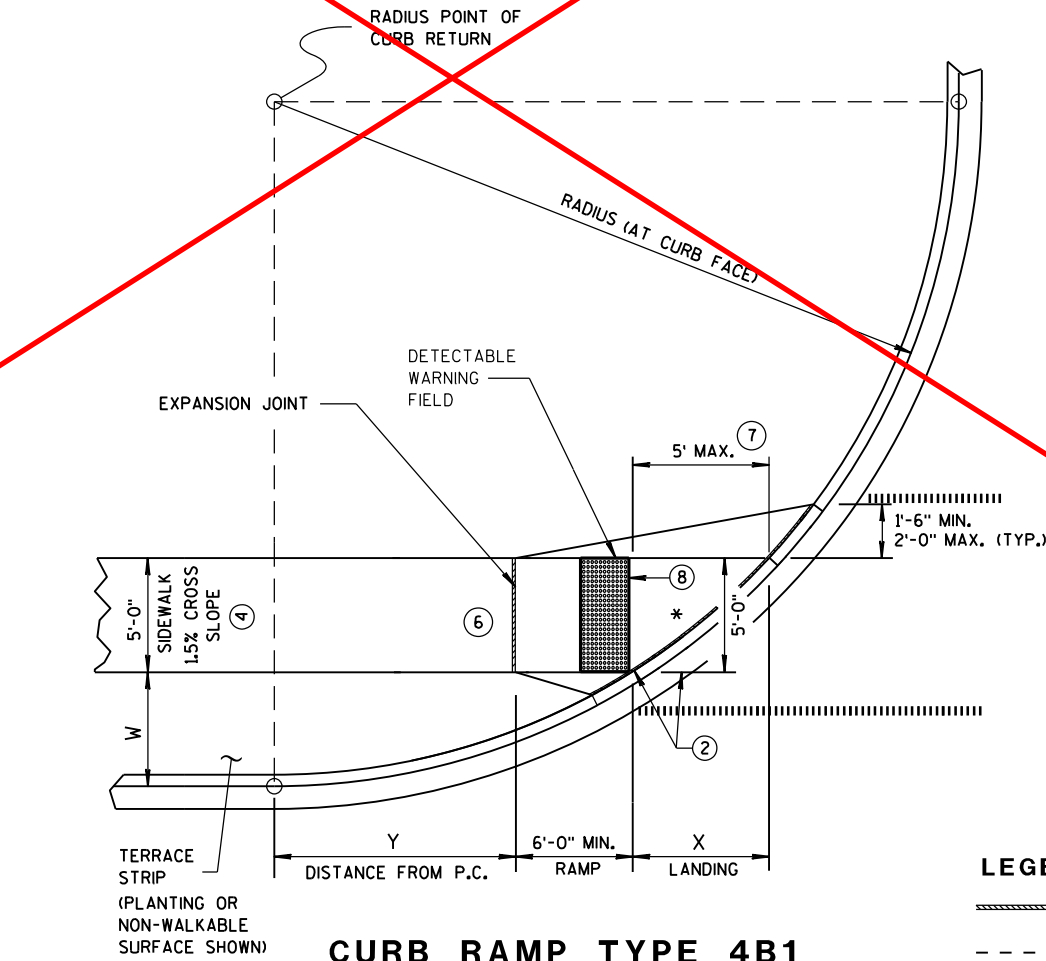
REV116

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 <sup>1</sup> / <sub>4</sub> "	0'-5"	2'-1"	1'-4 <sup>1</sup> / <sub>2</sub> "	1'-5"	2'-1"	0'-10"	2'-7 <sup>1</sup> / <sub>2</sub> "	0'-3 <sup>1</sup> / <sub>4</sub> "	3'-0 <sup>1</sup> / <sub>4</sub> "						
15 FEET	4'-6 <sup>3</sup> / <sub>4</sub> "	2'-1 <sup>3</sup> / <sub>4</sub> "	3'-9"	3'-5 <sup>1</sup> / <sub>4</sub> "	3'-1 <sup>1</sup> / <sub>4</sub> "	4'-6"	2'-6 <sup>3</sup> / <sub>4</sub> "	5'-4 <sup>1</sup> / <sub>2</sub> "	2'-1"	6'-1"	1'-8"	6'-8 <sup>1</sup> / <sub>2</sub> "	1'-3 <sup>1</sup> / <sub>4</sub> "	7'-2 <sup>1</sup> / <sub>2</sub> "	0'-10 <sup>3</sup> / <sub>4</sub> "	7'-7 <sup>1</sup> / <sub>4</sub> "
20 FEET	5'-9 <sup>3</sup> / <sub>4</sub> "	3'-6 <sup>1</sup> / <sub>2</sub> "	4'-11 <sup>1</sup> / <sub>2</sub> "	5'-1 <sup>3</sup> / <sub>4</sub> "	4'-3 <sup>1</sup> / <sub>4</sub> "	6'-5 <sup>1</sup> / <sub>2</sub> "	3'-8 <sup>3</sup> / <sub>4</sub> "	7'-7"	3'-3"	8'-6 <sup>1</sup> / <sub>2</sub> "	2'-10"	9'-4 <sup>1</sup> / <sub>2</sub> "	2'-5 <sup>1</sup> / <sub>2</sub> "	10'-1 <sup>1</sup> / <sub>4</sub> "	2'-1 <sup>1</sup> / <sub>4</sub> "	10'-9"
30 FEET			6'-9 <sup>1</sup> / <sub>4</sub> "	7'-11 <sup>1</sup> / <sub>4</sub> "	6'-0 <sup>1</sup> / <sub>4</sub> "	9'-8"	5'-5"	11'-1 <sup>3</sup> / <sub>4</sub> "	4'-10 <sup>3</sup> / <sub>4</sub> "	12'-5 <sup>3</sup> / <sub>4</sub> "	4'-5 <sup>1</sup> / <sub>2</sub> "	13'-7 <sup>3</sup> / <sub>4</sub> "	4'-0 <sup>3</sup> / <sub>4</sub> "	14'-8 <sup>1</sup> / <sub>2</sub> "	3'-8 <sup>1</sup> / <sub>2</sub> "	15'-8 <sup>1</sup> / <sub>4</sub> "
40 FEET									6'-1 <sup>3</sup> / <sub>4</sub> "	15'-8 <sup>1</sup> / <sub>2</sub> "	5'-8"	17'-2"	5'-3"	18'-5 <sup>3</sup> / <sub>4</sub> "	4'-10 <sup>3</sup> / <sub>4</sub> "	19'-8 <sup>1</sup> / <sub>4</sub> "
50 FEET															5'-10 <sup>1</sup> / <sub>4</sub> "	23'-2"

SEE SHEET REV116



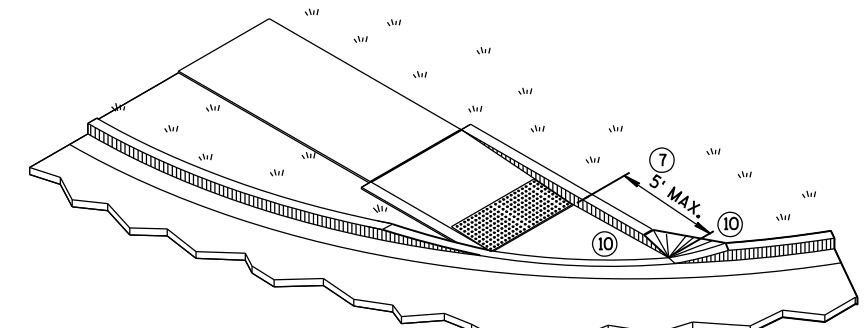
SECTION C-C FOR TYPE 4B



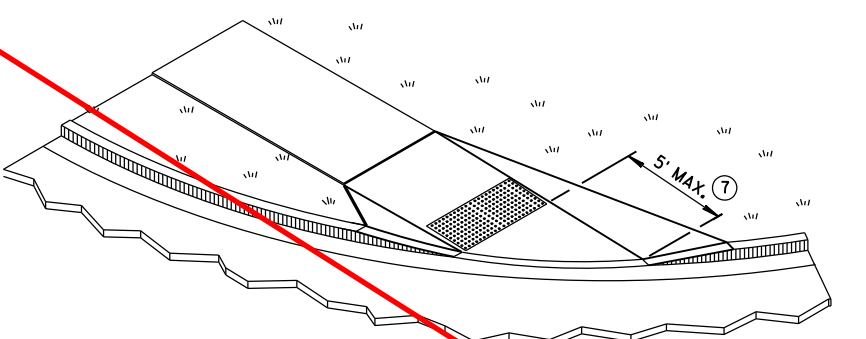
CURB RAMP TYPE 4B1  
PLAN VIEW

GENERAL NOTES

- 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
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
  - 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.
  - ABSOLUTE MAXIMUM 1:12 (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
  - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
  - WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
  - PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
  - INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



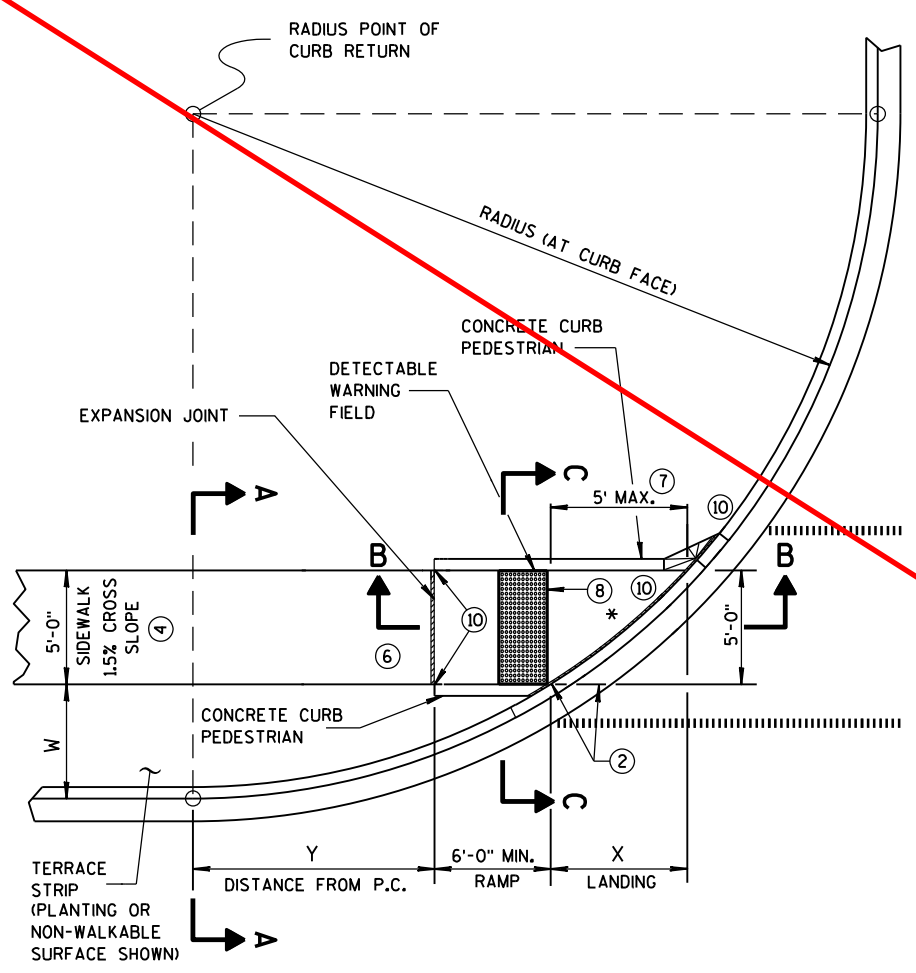
ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

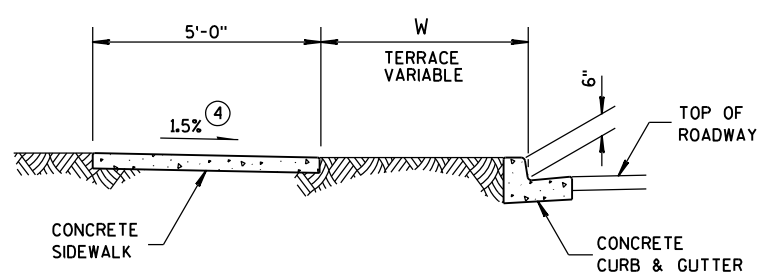
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS  
TYPE 4B AND 4B1

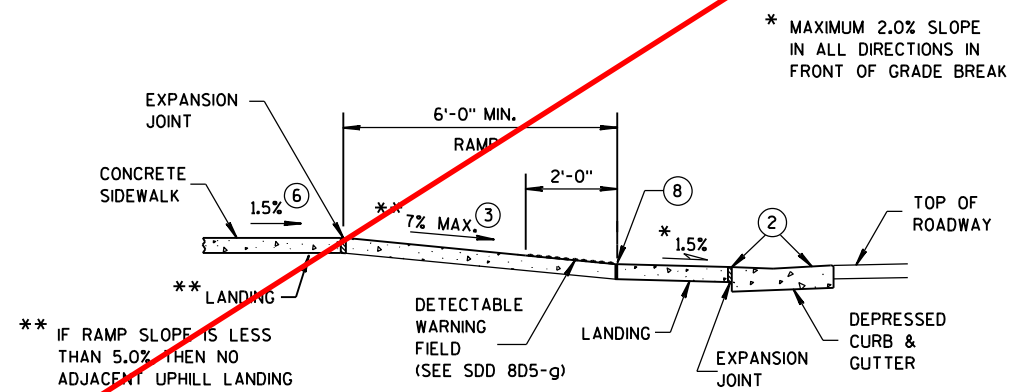
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 116



CURB RAMP TYPE 4B  
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B

6

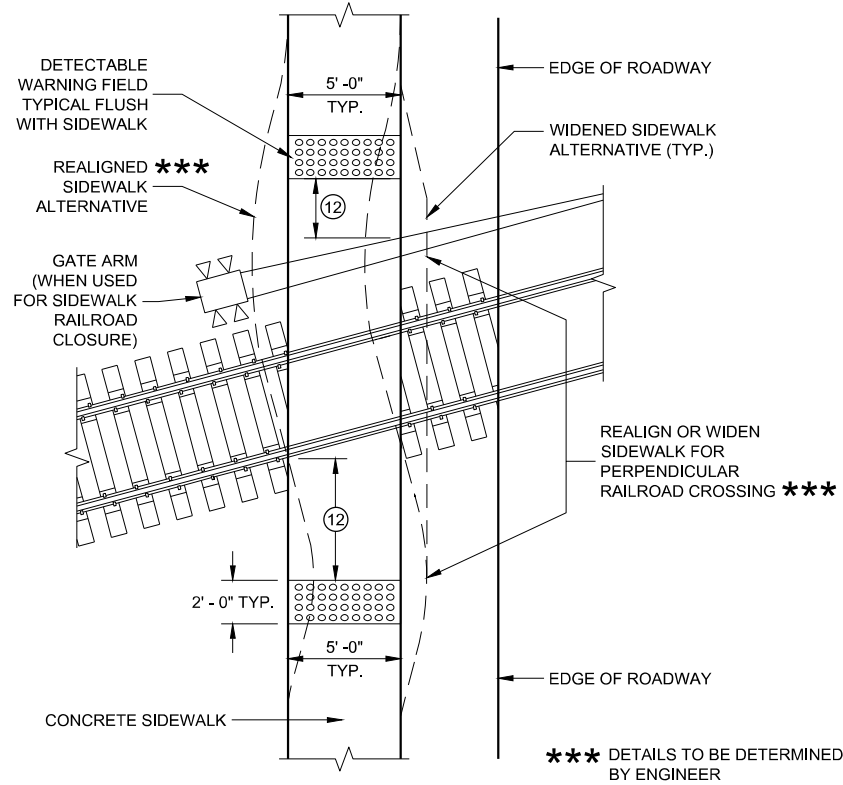
6

S.D.D. 8 D 5-19D

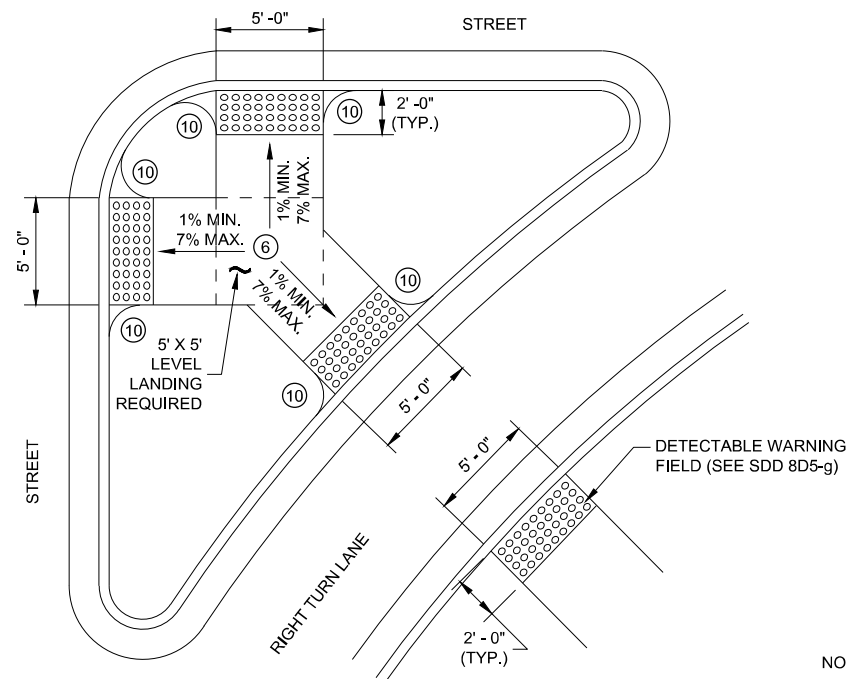
S.D.D. 8 D 5-19D



# SDD 08D05-e: Curb Ramps Types 5, 6, 7A, 7B and 8

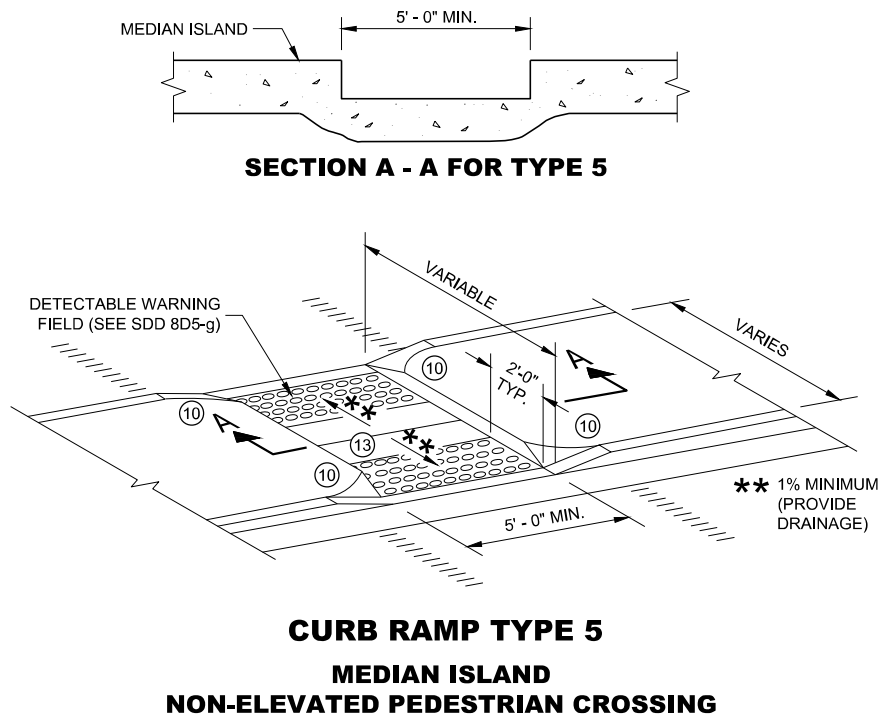


### CURB RAMP TYPE 8 DETECTABLE WARNINGS AT RAILROAD CROSSING

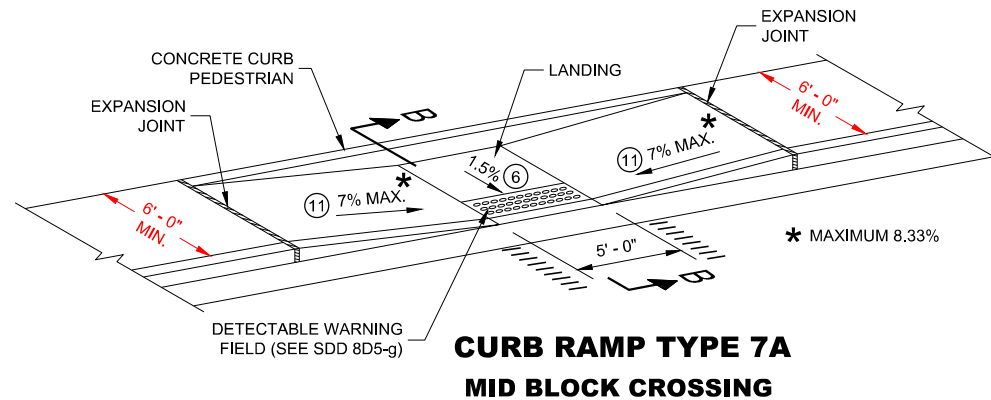


### CURB RAMP TYPE 6 DETECTABLE WARNING AT ISLANDS

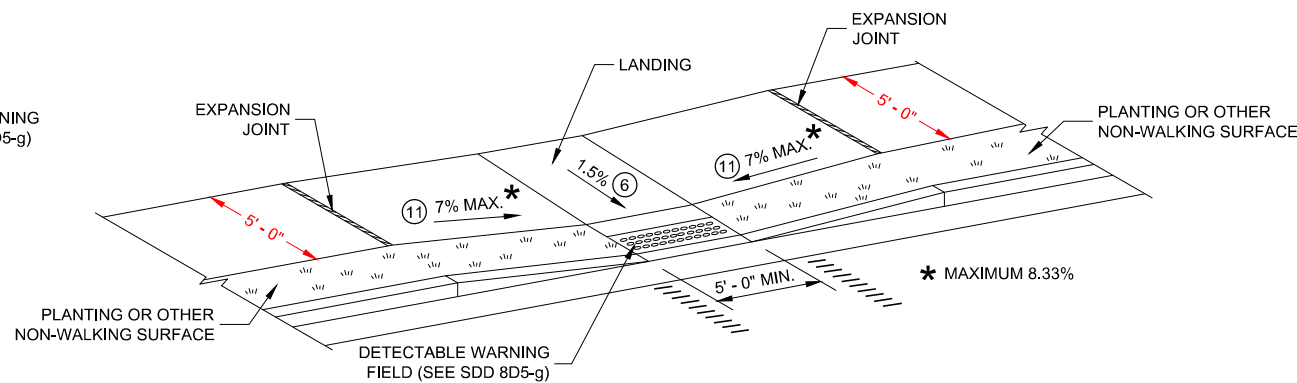
REFER TO GENERAL NOTES (2) AND (3)  
FOR ALL ISLAND CURB RAMPS



### CURB RAMP TYPE 5 MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING



### CURB RAMP TYPE 7A MID BLOCK CROSSING



### CURB RAMP TYPE 7B MID BLOCK CROSSING

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

## 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.

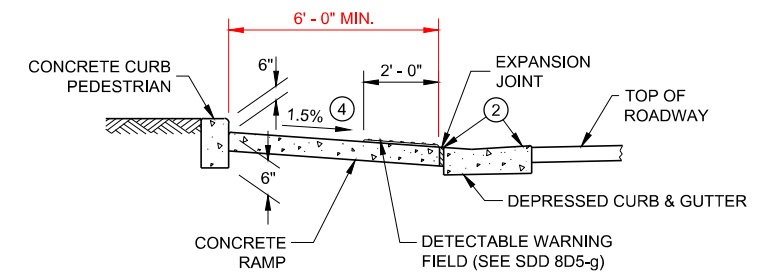
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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)



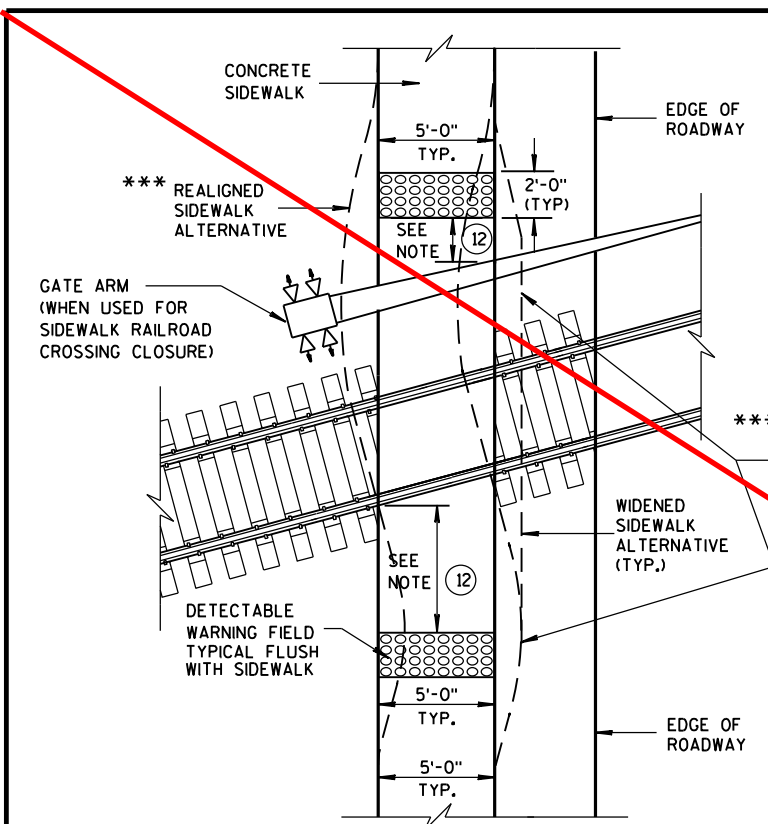
### SECTION B - B FOR TYPE 7A

CONTRACT: 20190312037  
CONT. MOD.: 1  
REVISED SHEET 117

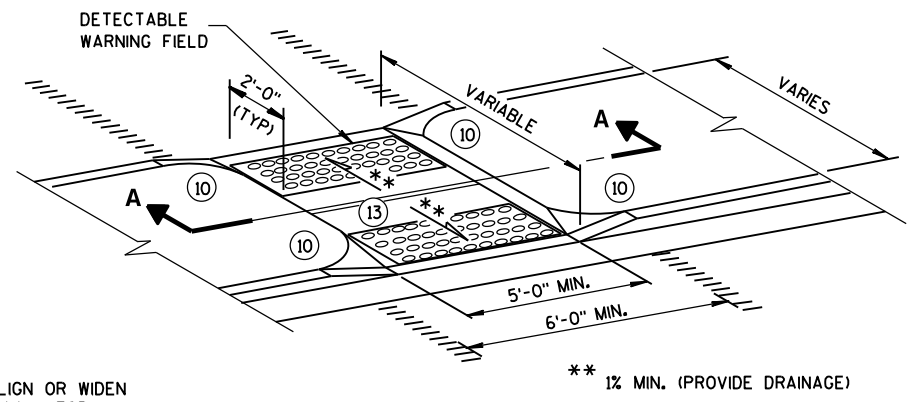
### CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

REV117



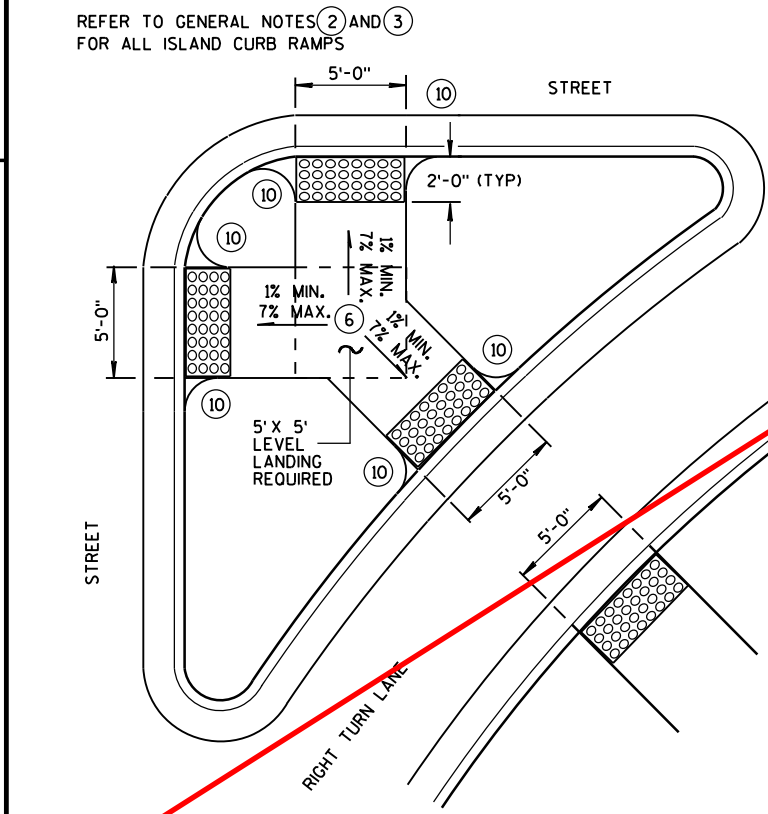
**TYPE 8  
DETECTABLE WARNINGS  
AT RAILROAD CROSSING**



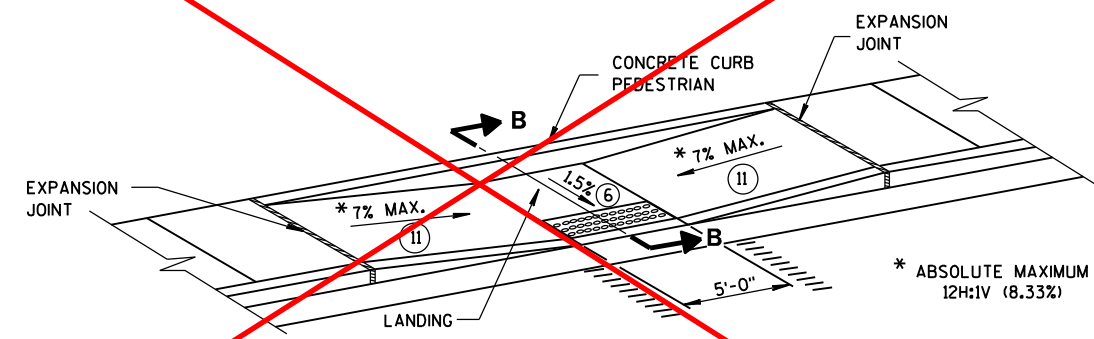
**MEDIAN ISLAND  
NON-ELEVATED PEDESTRIAN CROSSING  
TYPE 5**

**GENERAL NOTES**

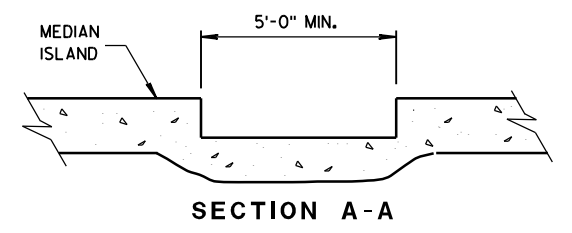
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE 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 ABSOLUTE MAXIMUM 12H:1V (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 X 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 15 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.



**TYPE 6  
DETECTABLE WARNING AT ISLANDS**

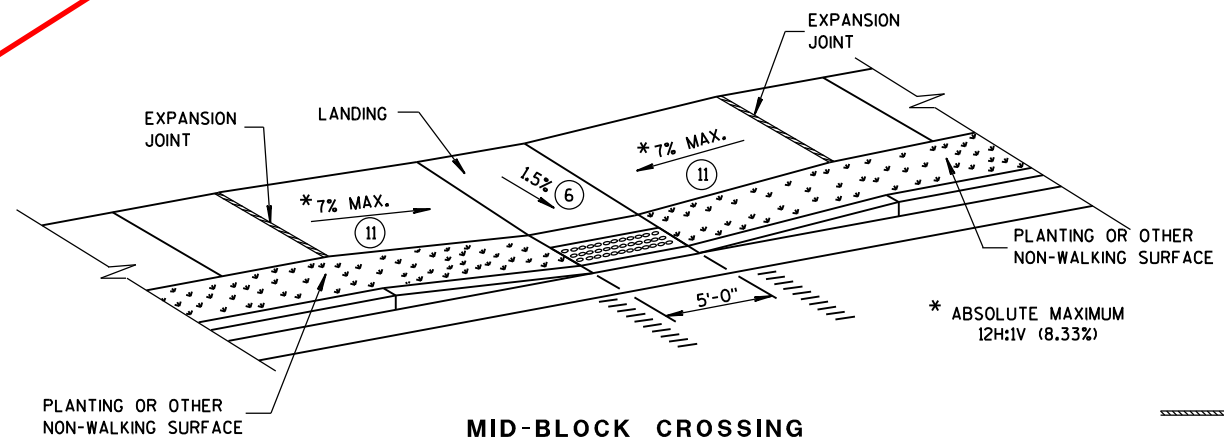


**MID-BLOCK CROSSING  
TYPE 7A**

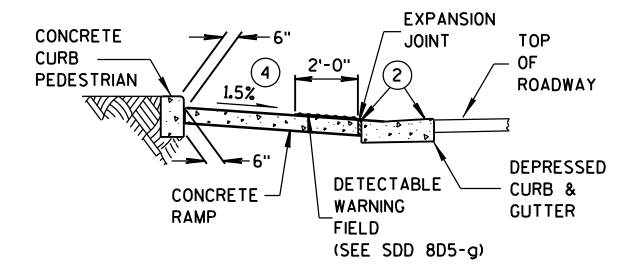


**SECTION A-A**

SEE SHEET REV117



**MID-BLOCK CROSSING  
TYPE 7B**



**SECTION B-B**

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

**LEGEND**

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

**CURB RAMPS  
TYPES 5, 6, 7A, 7B & 8**

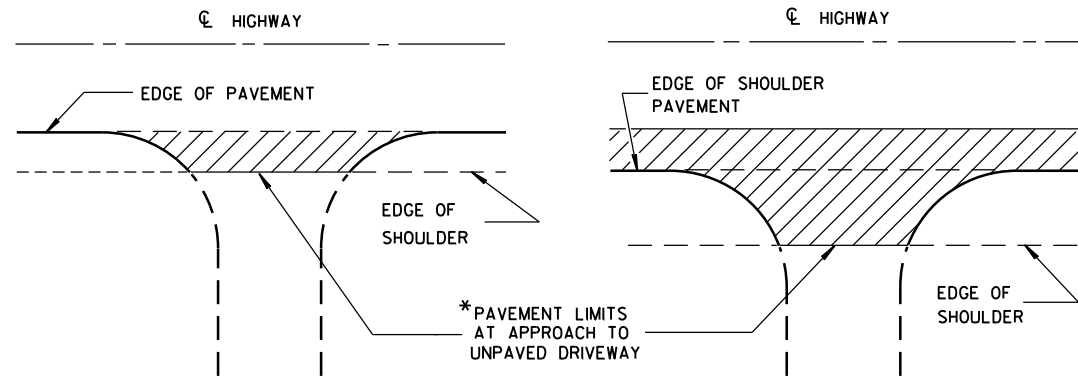
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 117

6

6

S.D.D. 8 D 5-19e

S.D.D. 8 D 5-19e

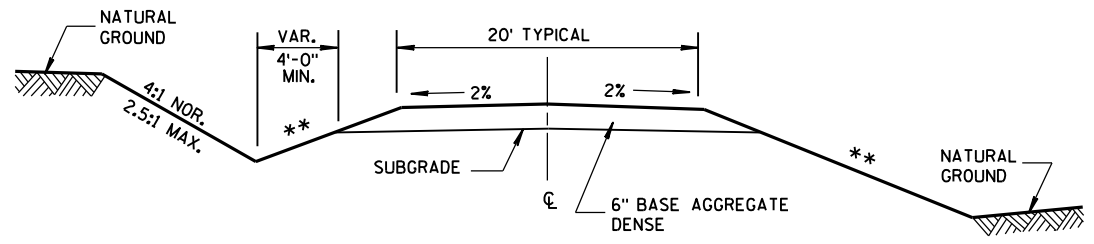


\*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

**PLAN VIEW**  
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**  
(PAVED SHOULDER ON HIGHWAY)

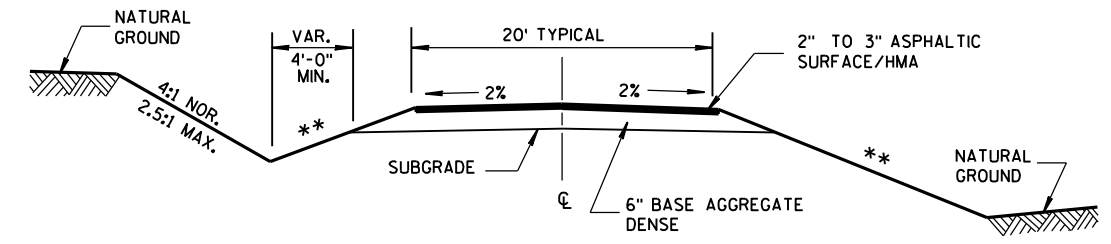
**RURAL DRIVEWAY INTERSECTION DETAIL**  
(NO CURB & GUTTER OR SIDEWALK)



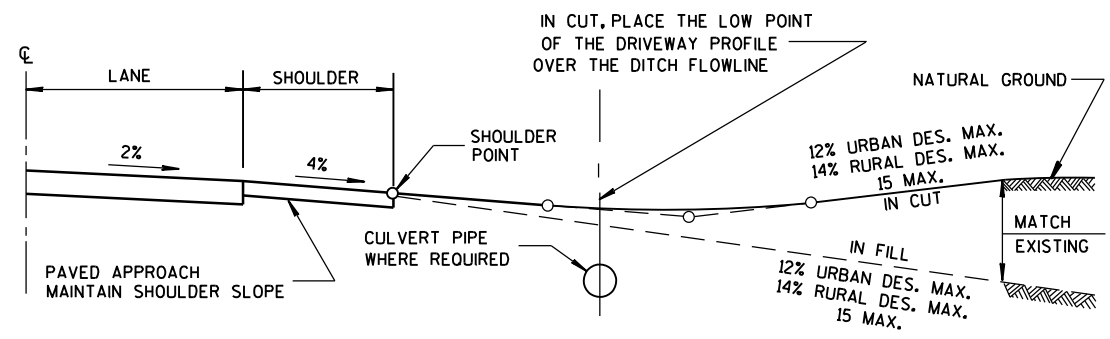
**IN CUT** **IN FILL**  
**TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE**

\*\* SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥35 TO <60	6:1
≥60	10:1

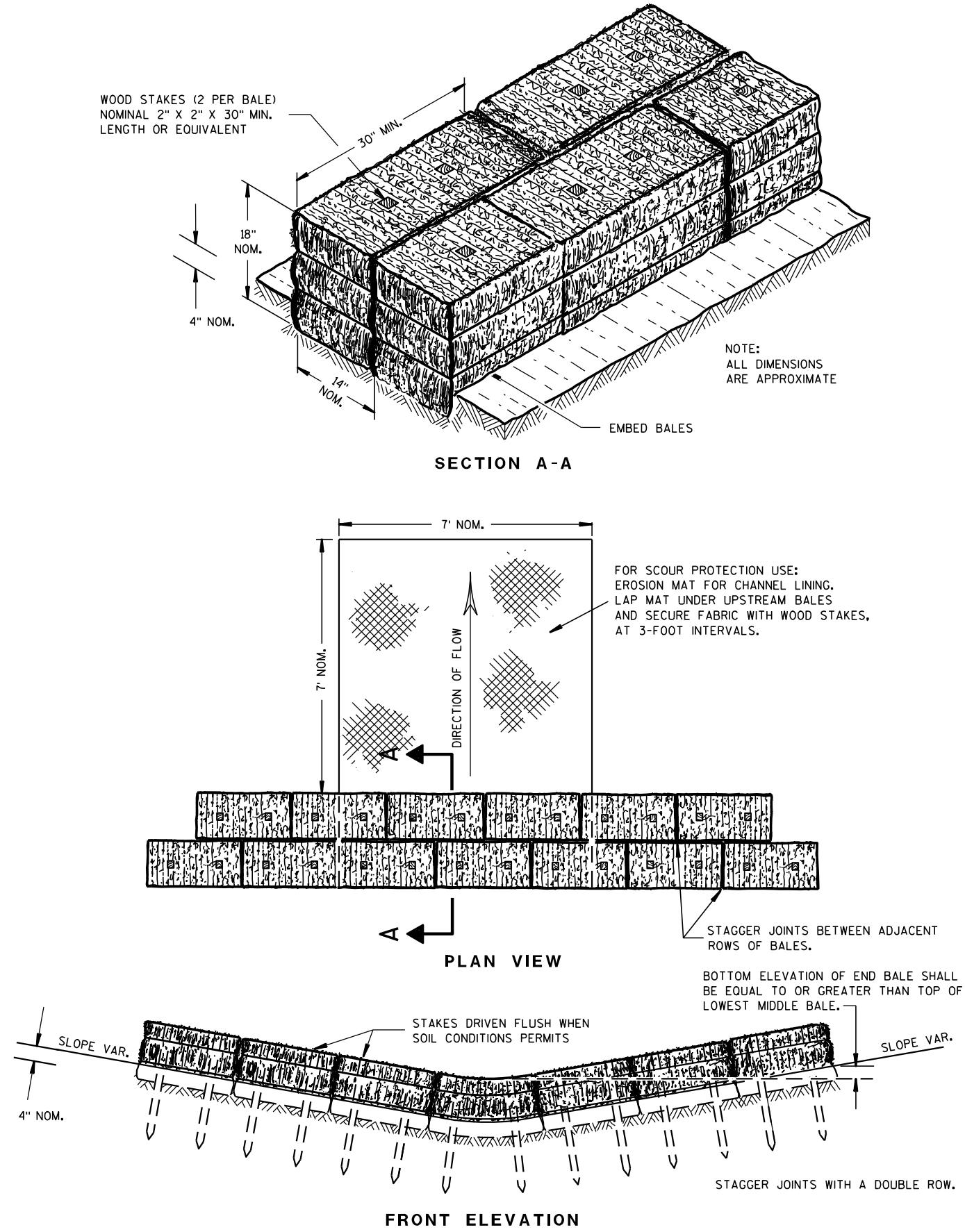


**IN CUT** **IN FILL**  
**TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE**



**TYPICAL DRIVEWAY PROFILES**

<b>DRIVEWAYS WITHOUT CURB &amp; GUTTER</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December, 2016	/S/ Rodney Taylor
DATE	ROADWAY STANDARDS UNIT SUPERV
FHWA	118 ENT

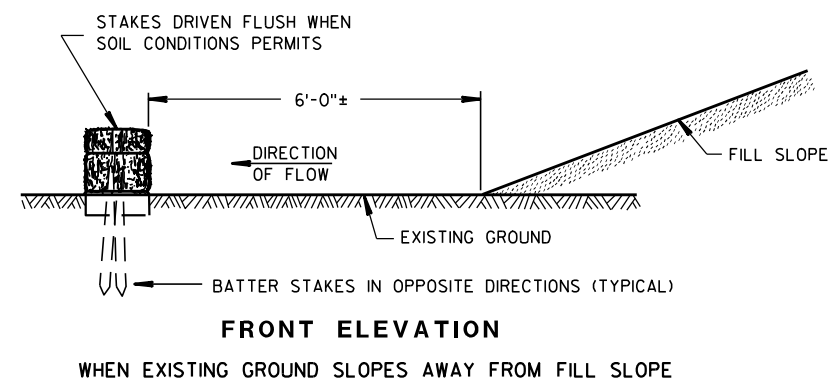
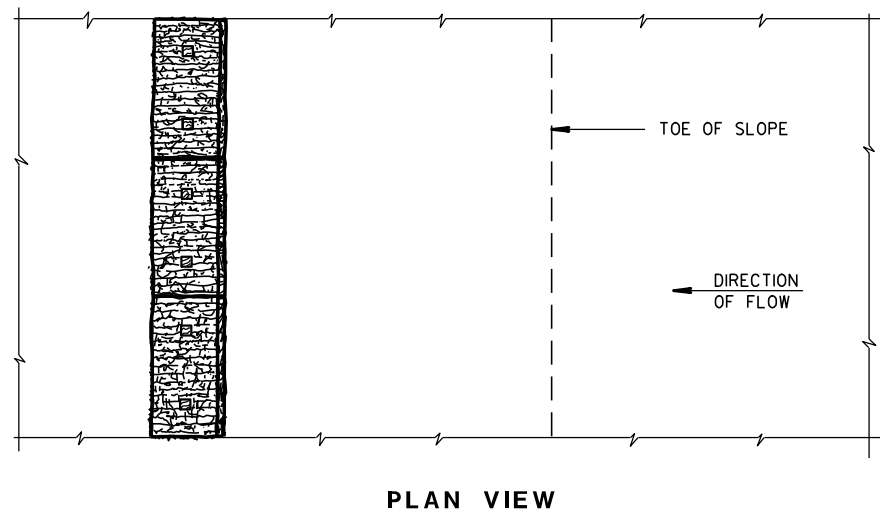
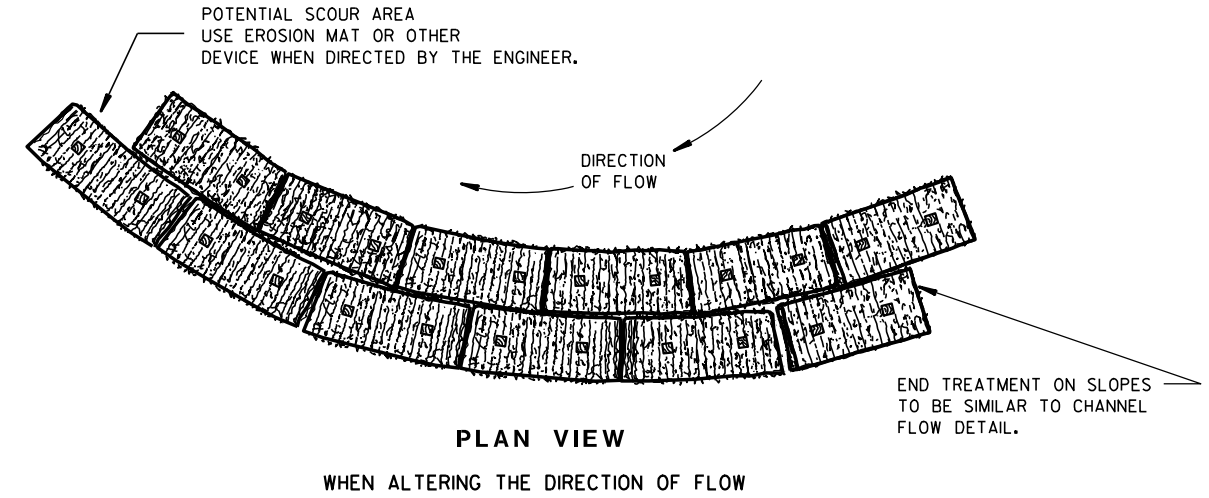


TEMPORARY DITCH CHECK USING EROSION BALES ①

**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.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.



EROSION BALES FOR SHEET FLOW

**TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS**

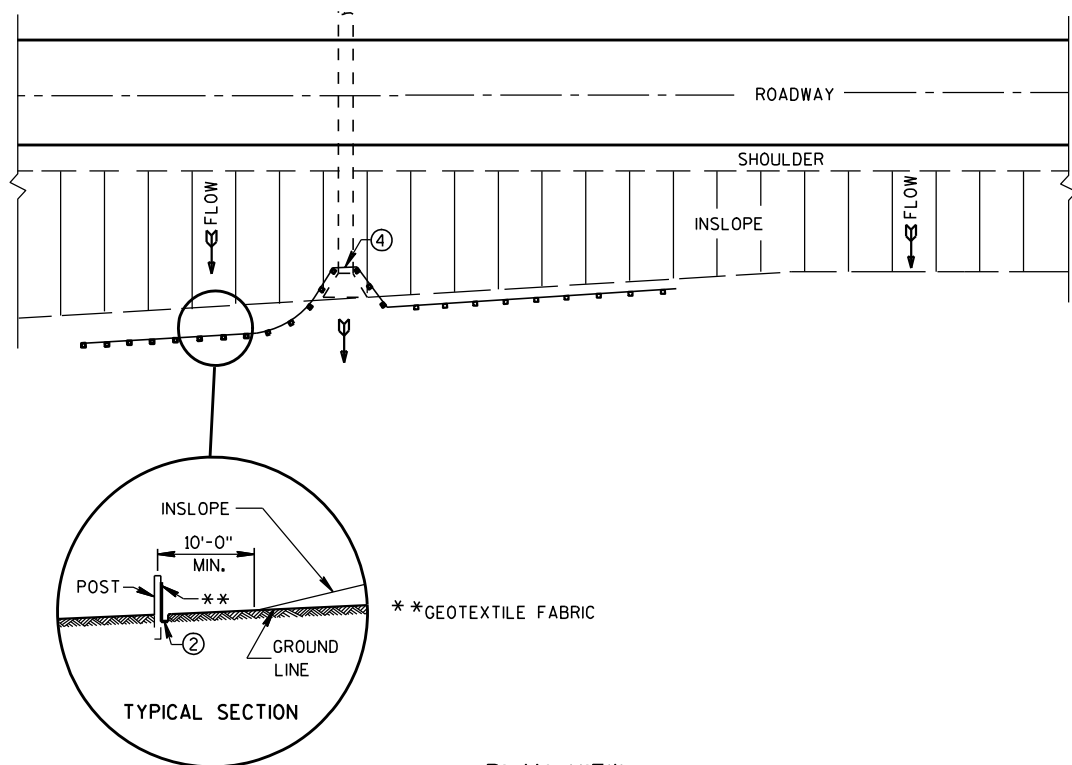
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

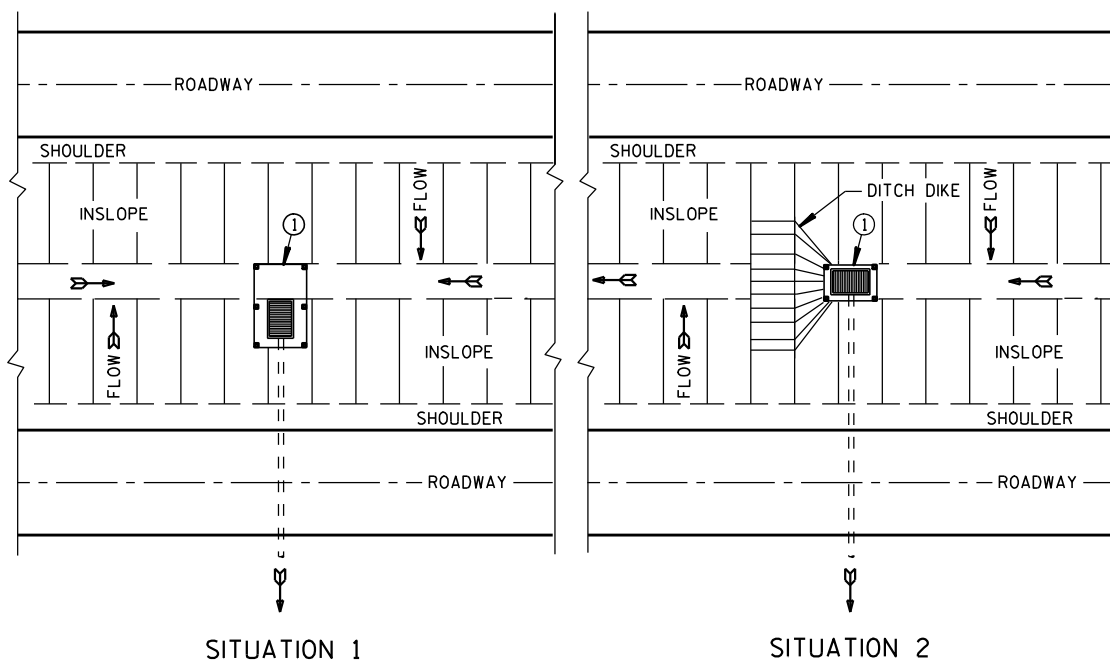
6/04/02 /S/ Beth Cann  
DATE CHIEF ROADWAY DEVELOP 119 ENGINEER

FHWA





PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

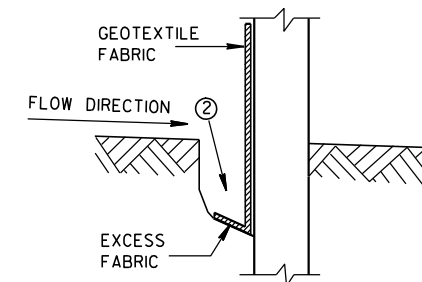


SITUATION 1      SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

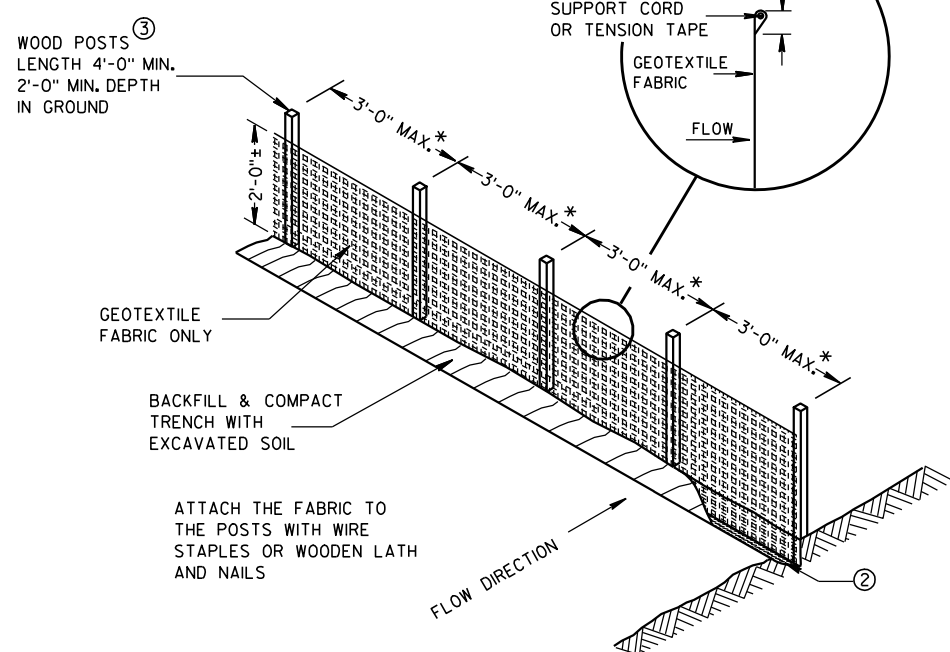
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



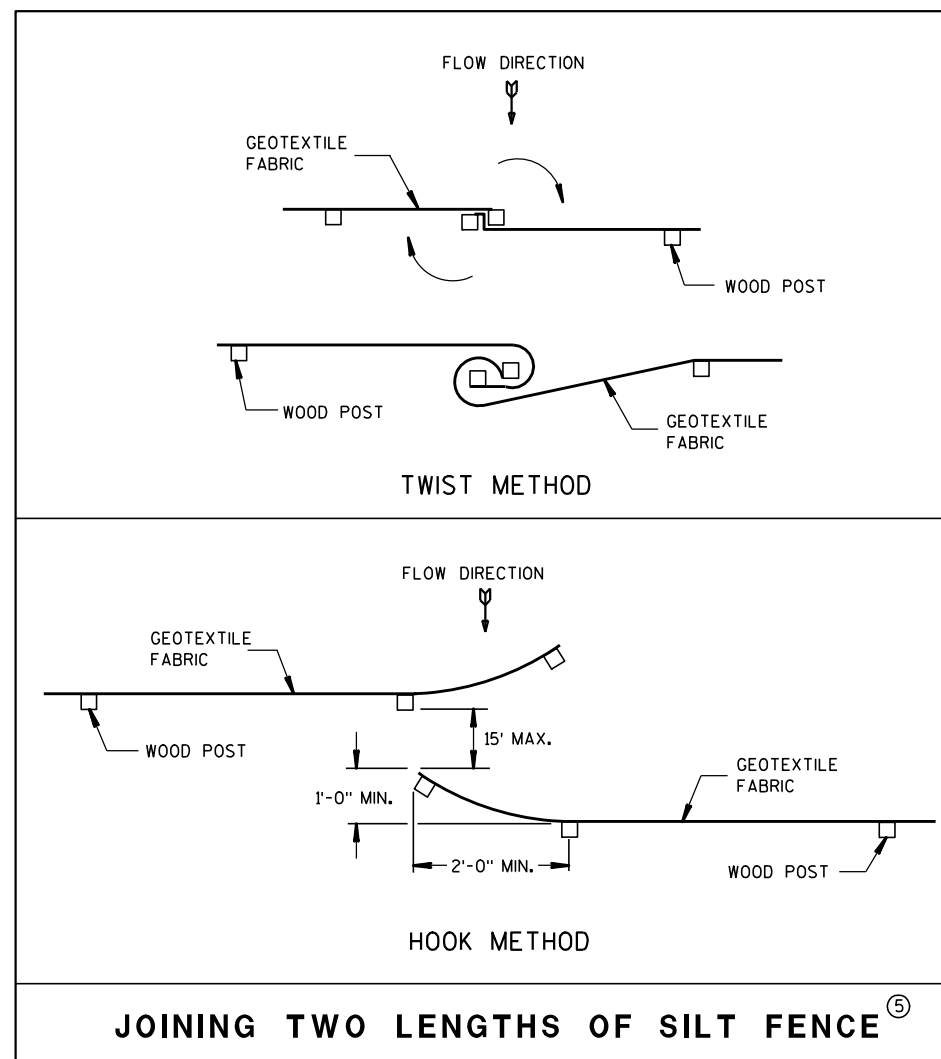
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

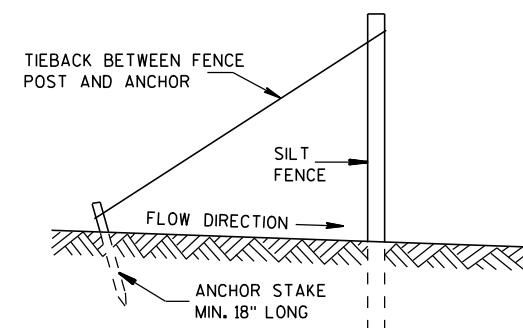


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤



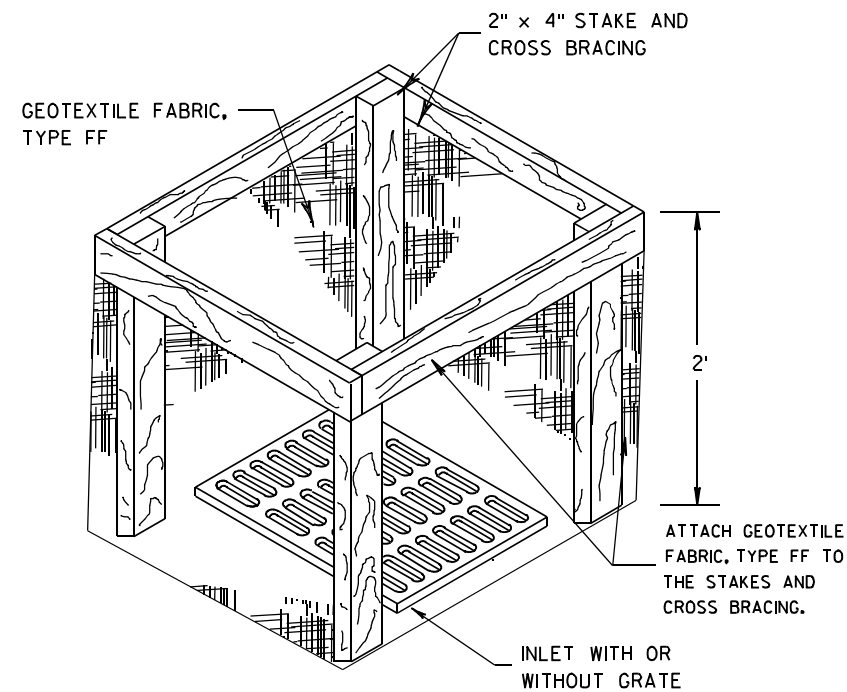
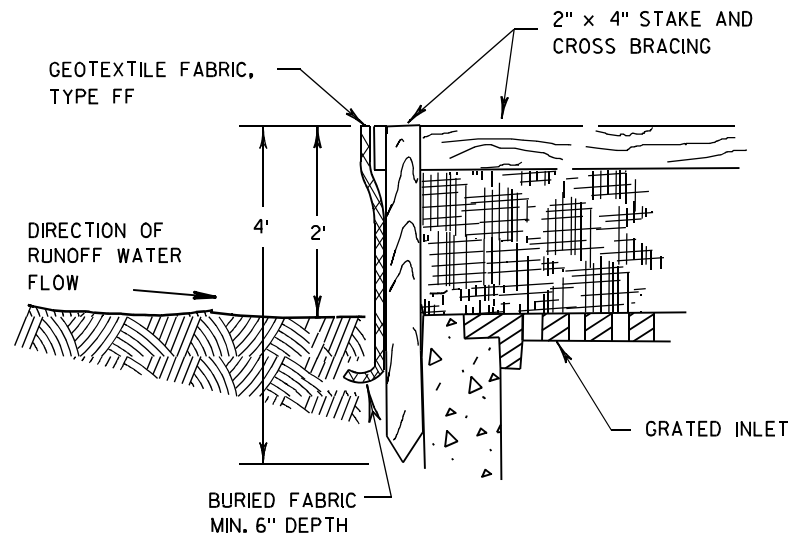
SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05 /S/ Beth Cann  
DATE CHIEF ROADWAY DEVELOP 120 INEER  
FHWA



**INLET PROTECTION, TYPE A**

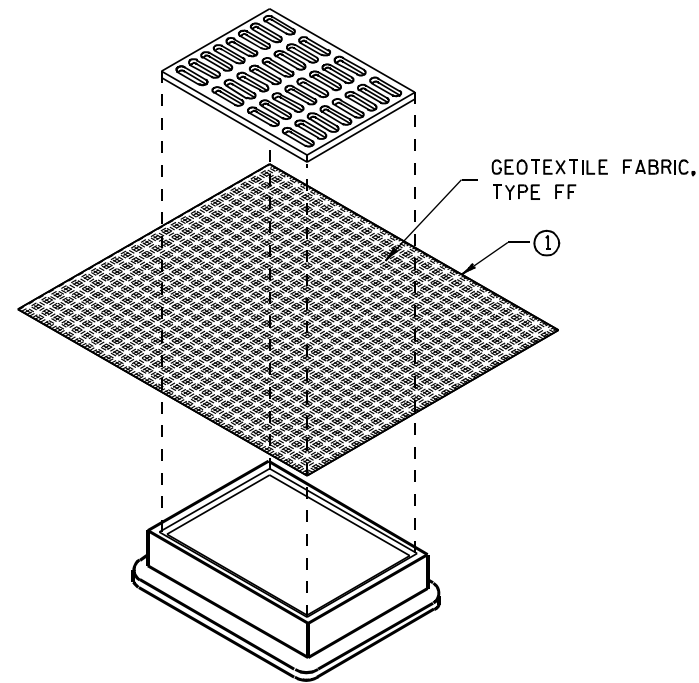
**GENERAL NOTES**

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.

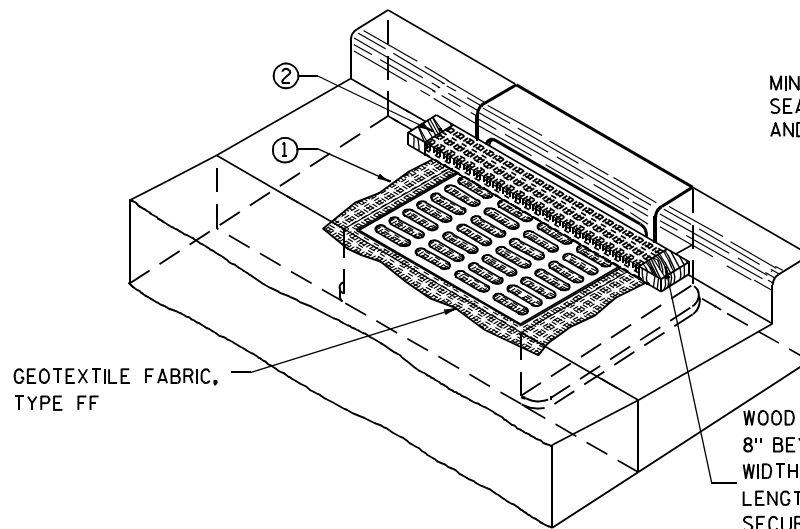
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

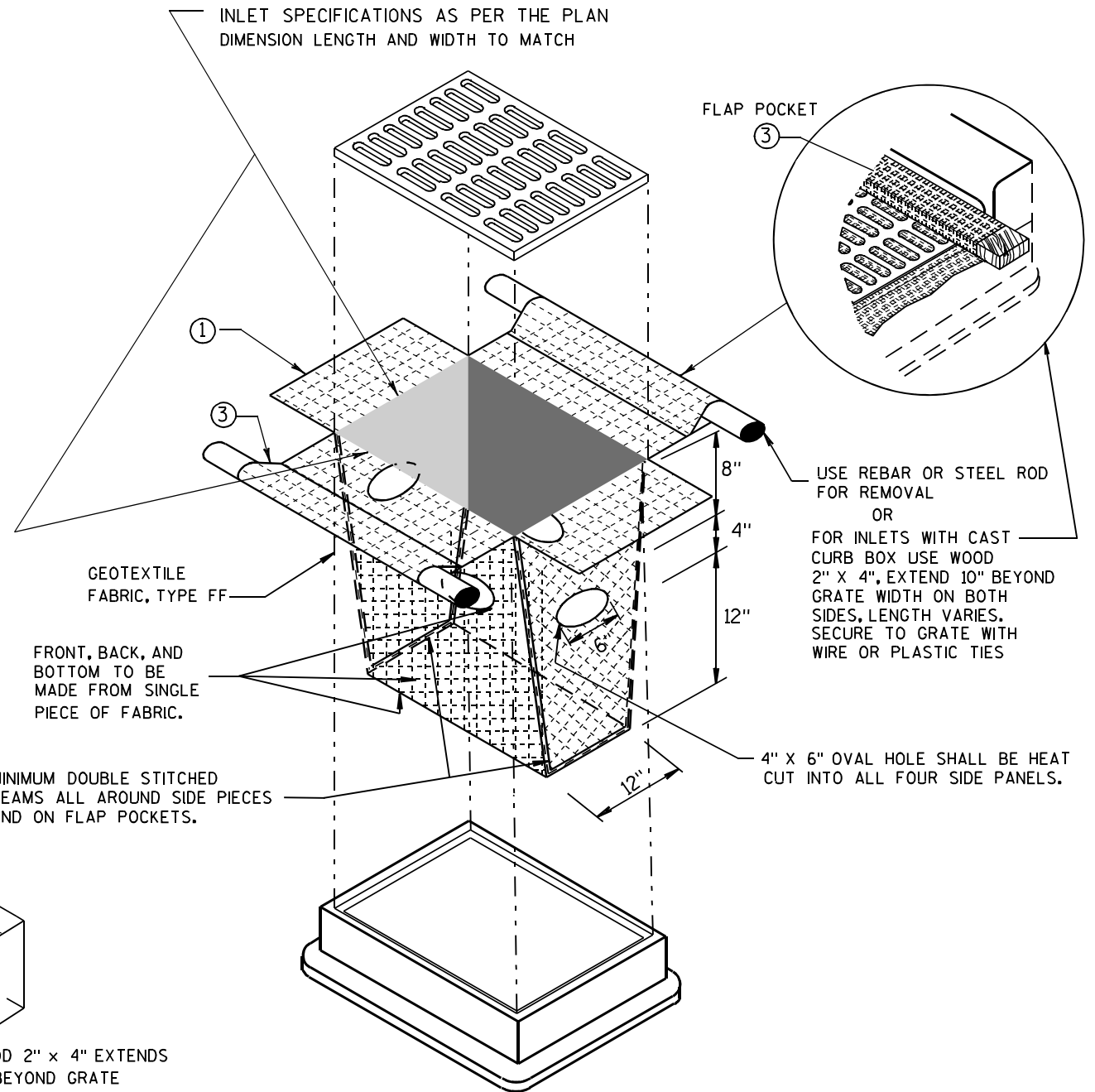
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**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 /S/ Beth Connor  
DATE 121  
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

**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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

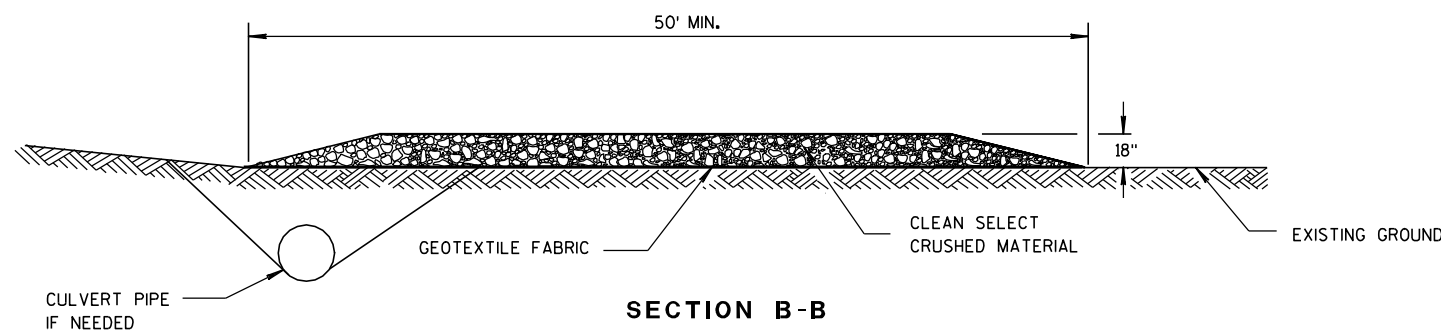
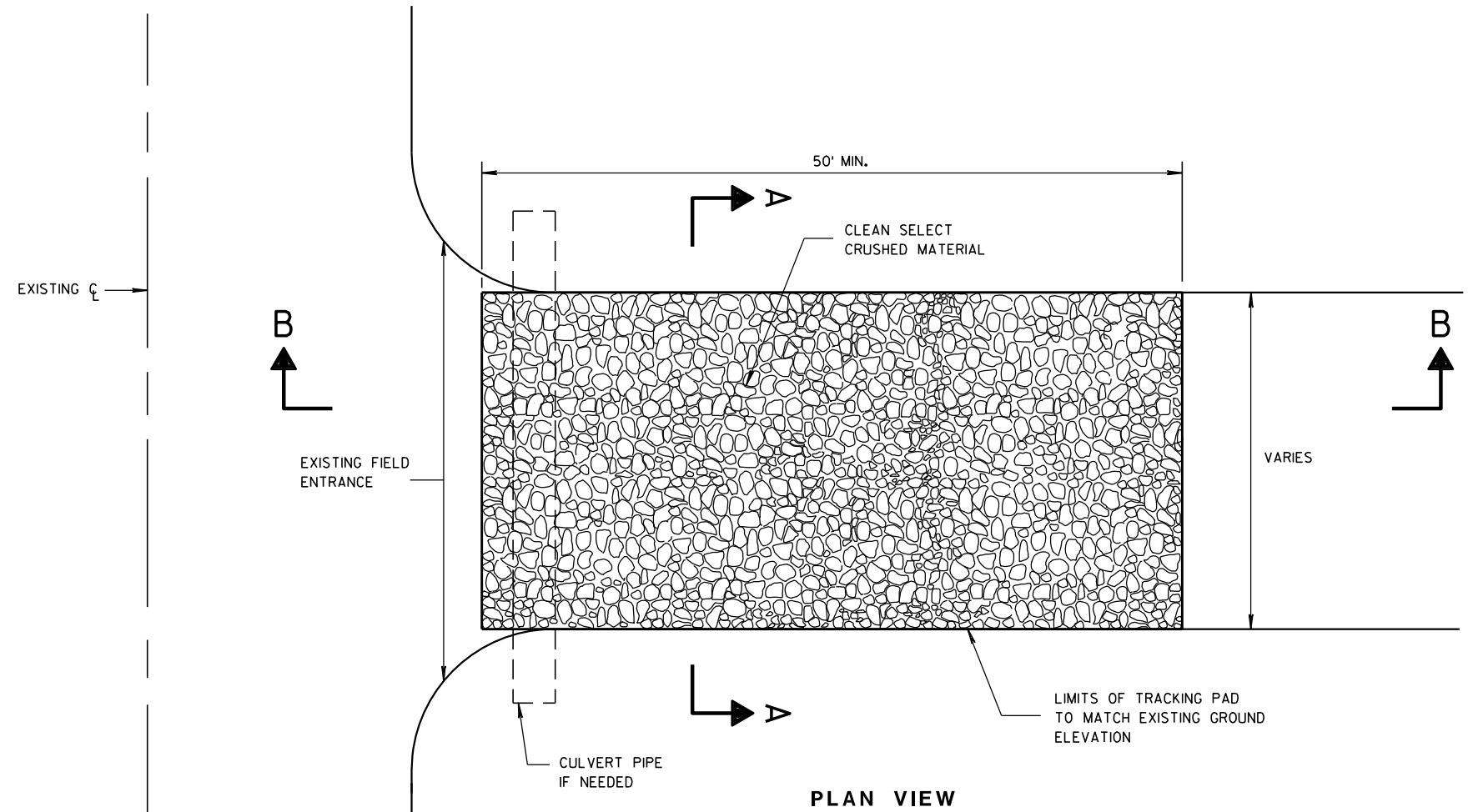
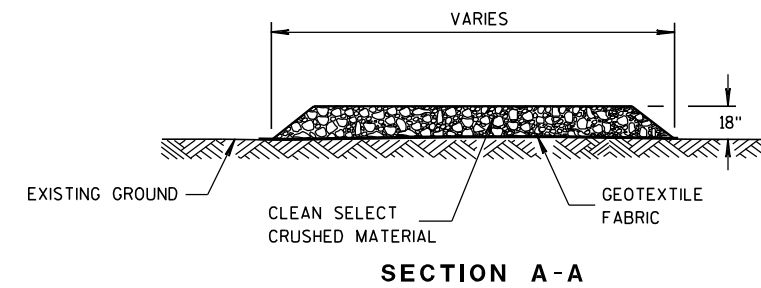
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



**TRACKING PAD**

**TRACKING PAD**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3/24/2011 DATE /S/ Jerry H. Zonn ROADWAY STANDARDS 122 ENT ENGINEER  
FHWA

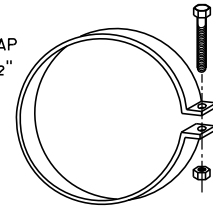
METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1/2")	L1 (Ⓛ)	L2 (Ⓛ)	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	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	24-30	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	24-36	78	21	99	108	6	2 to 1	
78	7 1/2	24-36	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	

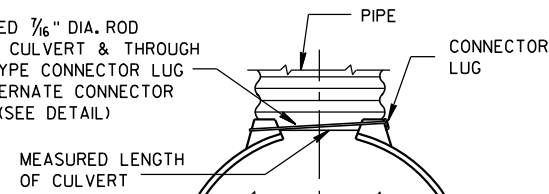
\* MINIMUM  
\*\* MAXIMUM

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



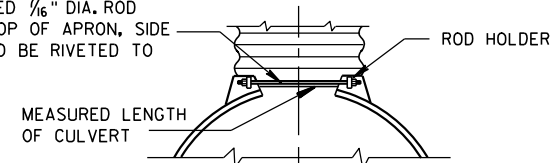
ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP

THREADED 3/16" DIA. ROD AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL)



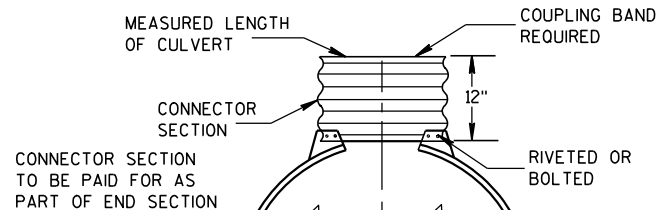
TYPE 1  
FOR 12" THRU 24" CORR. PIPE

THREADED 3/16" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



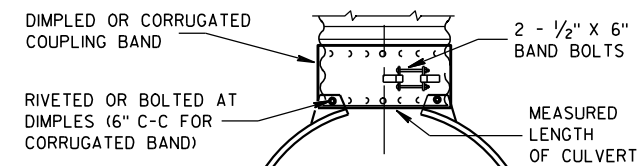
TYPE 2  
FOR 30" THRU 96" CORR. PIPE

CONNECTOR SECTION TO BE PAID FOR AS PART OF END SECTION



TYPE 3  
FOR 42" THRU 96" CORR. PIPE

CONNECTOR SECTION TO BE PAID FOR AS PART OF END SECTION



TYPE 5  
ALTERNATE FOR:  
ALL SIZES CORRUGATED CIRCULAR PIPE

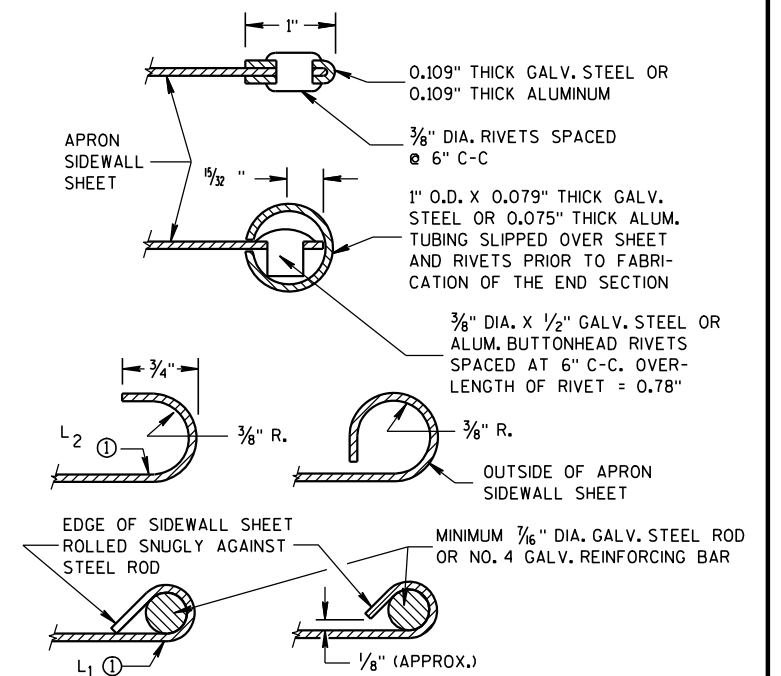
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

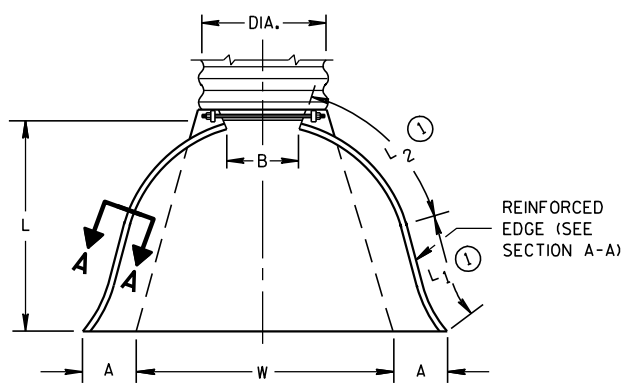
FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

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

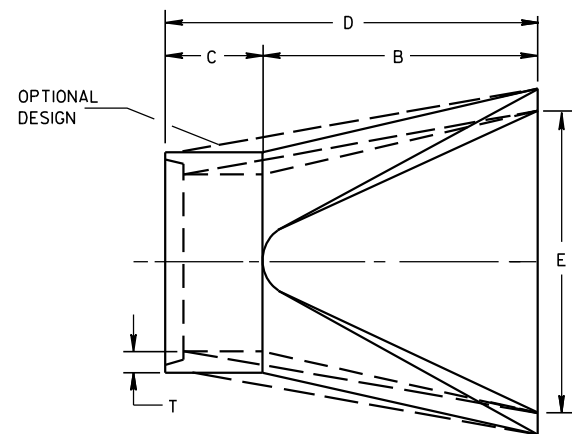
CONNECTION DETAILS



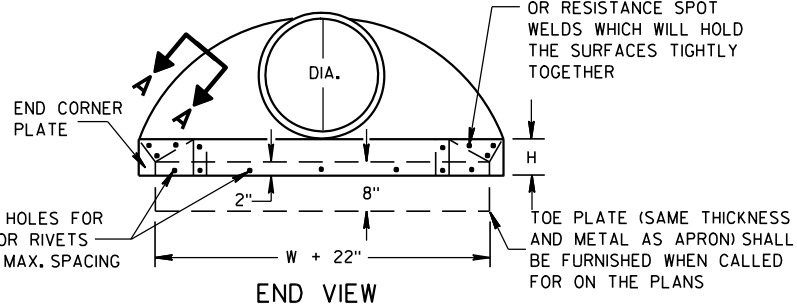
SECTION A-A



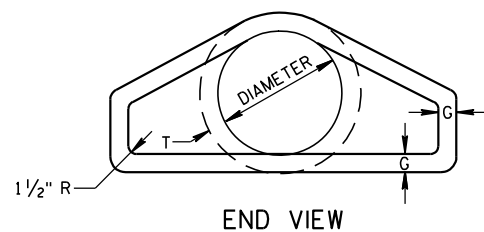
PLAN VIEW



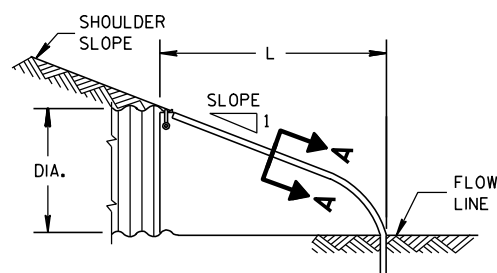
PLAN



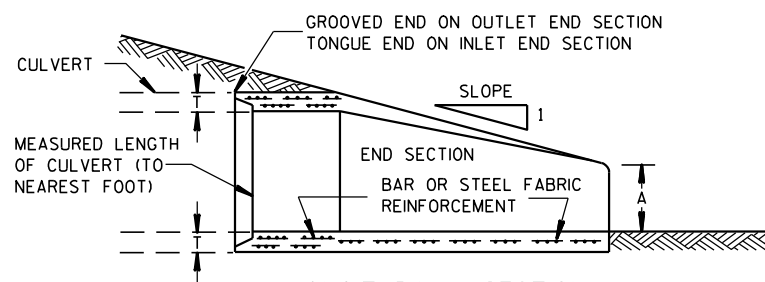
END VIEW



END VIEW



SIDE ELEVATION  
METAL ENDWALLS



LONGITUDINAL SECTION  
CONCRETE ENDWALLS

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.

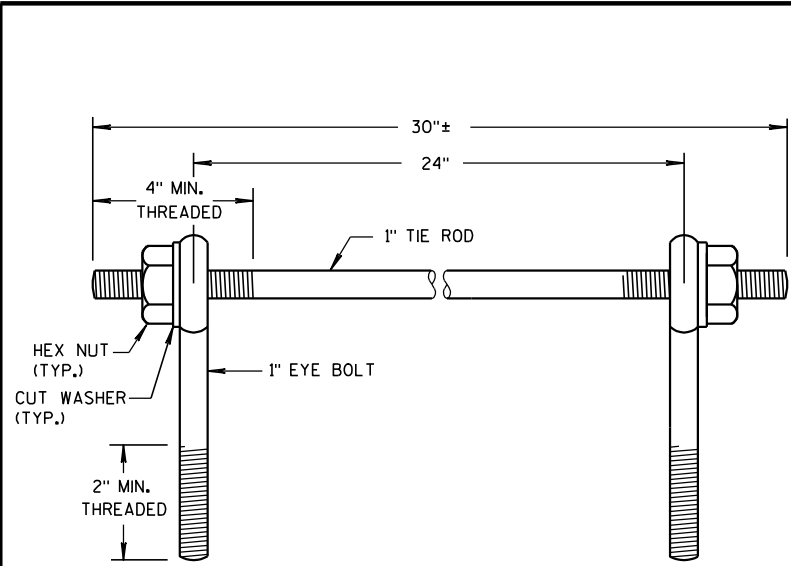
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

Ⓛ 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

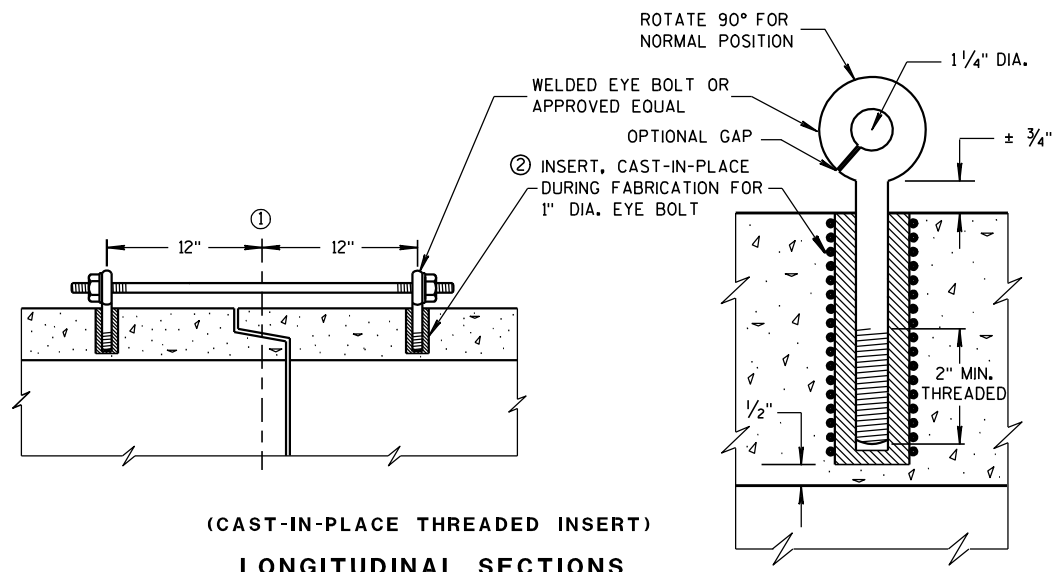
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/30/94 DATE /S/ Rory L. Rhin...  
NEER  
FHWA



EYE BOLTS AND TIE ROD

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



(CAST-IN-PLACE THREADED INSERT)  
LONGITUDINAL SECTIONS

GENERAL NOTES

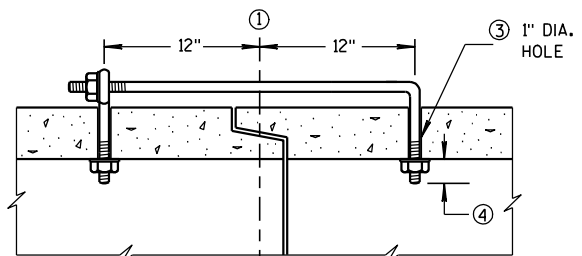
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

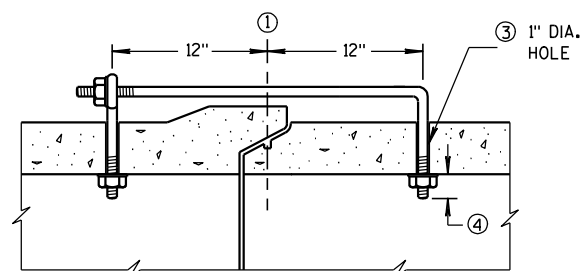
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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

- ①  $\phi$  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  $\phi$  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  $\frac{1}{2}$  INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)  
LONGITUDINAL SECTION

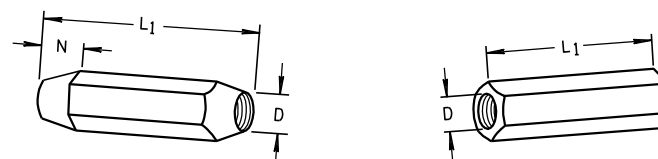
EYE BOLT DIMENSION TABLE

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"	

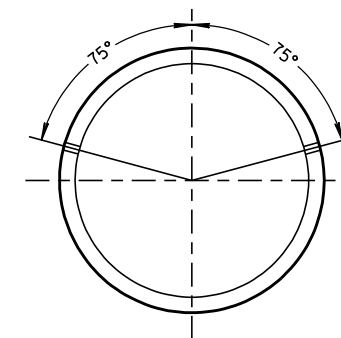
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L <sub>1</sub>	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

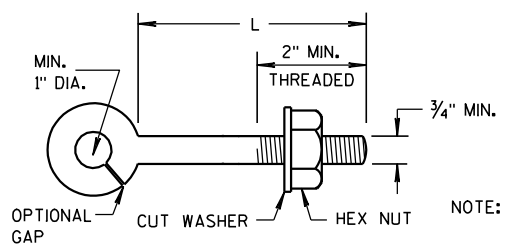


TAPERED PLAIN  
RIGHT AND LEFT THREADS  
SLEEVE NUTS



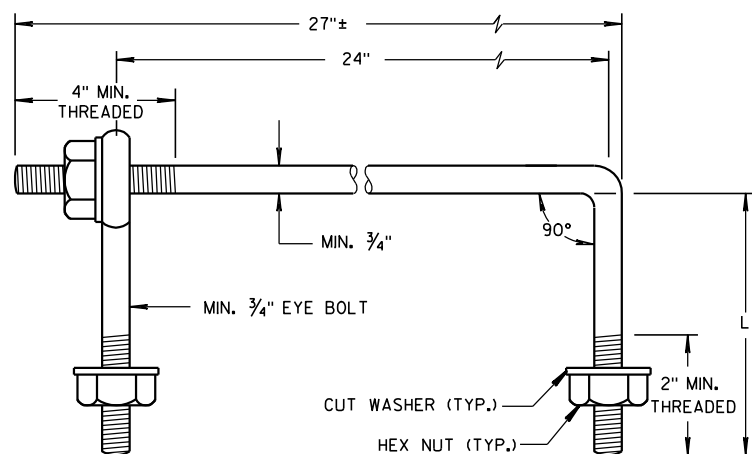
PLACEMENT OF (2) CAST-IN-PLACE  
INSERTS OR HOLES DURING FABRICATION  
FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



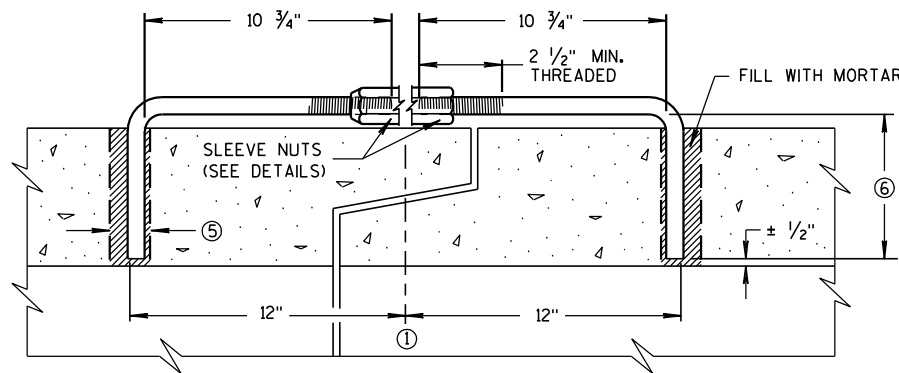
EYE BOLT

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



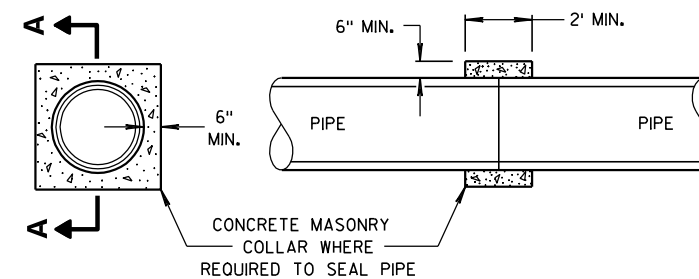
EYE BOLT AND TIE ROD

(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)



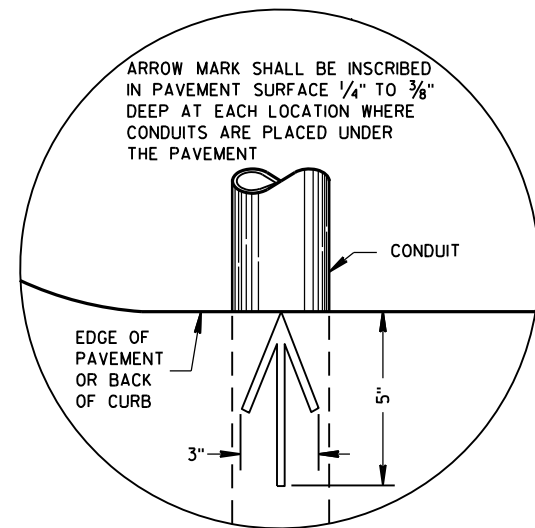
SECTION A-A

CONCRETE COLLAR DETAIL

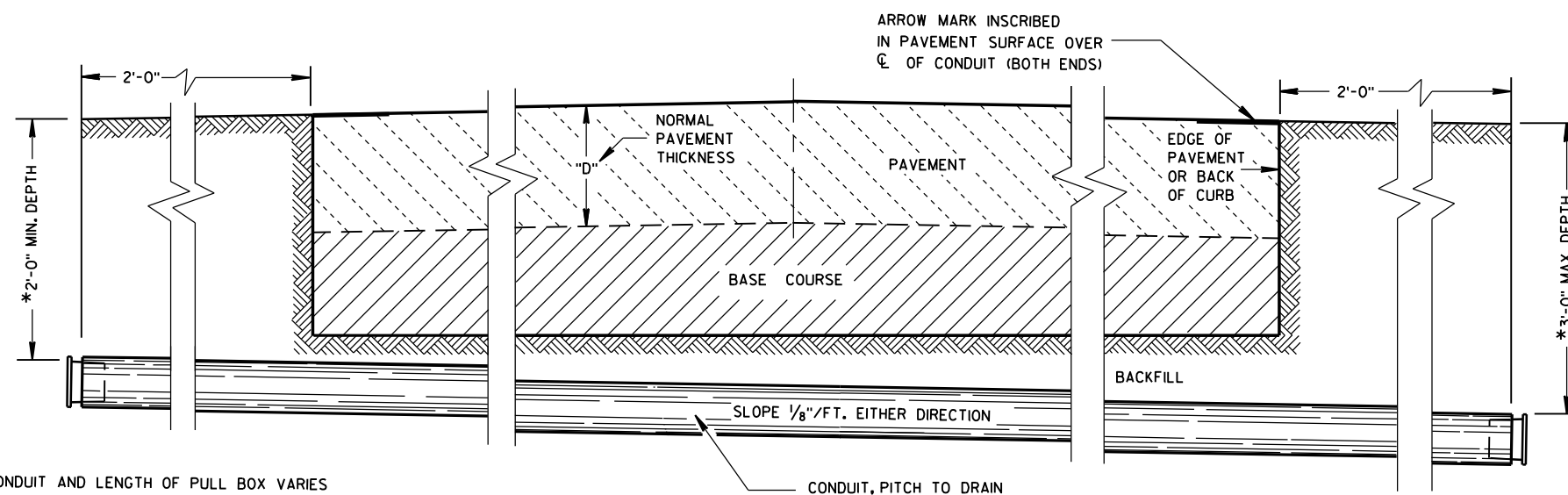
JOINT TIES FOR CONCRETE  
PIPE AND CONCRETE  
COLLAR DETAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
6/5/2012 /S/ Jerry H. Zogg  
DATE ROADWAY STANDARDS 124 'MENT  
FHWA ENGINEER



PLAN VIEW  
ARROW MARK



SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

\*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

### GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

6

6

S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

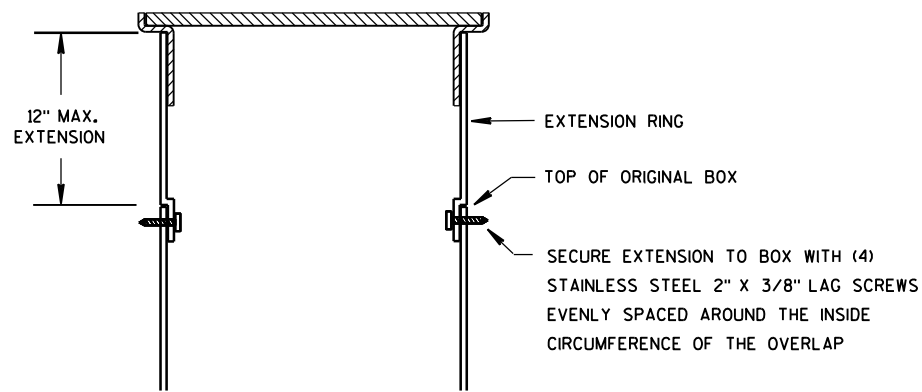
<b>CONDUIT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL 125
FHWA	

**TABLE OF NOMINAL DIMENSIONS AND WEIGHTS**

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
<b>WEIGHT IN POUNDS *</b>			
COVER		50	50
BOX ONLY		75	85

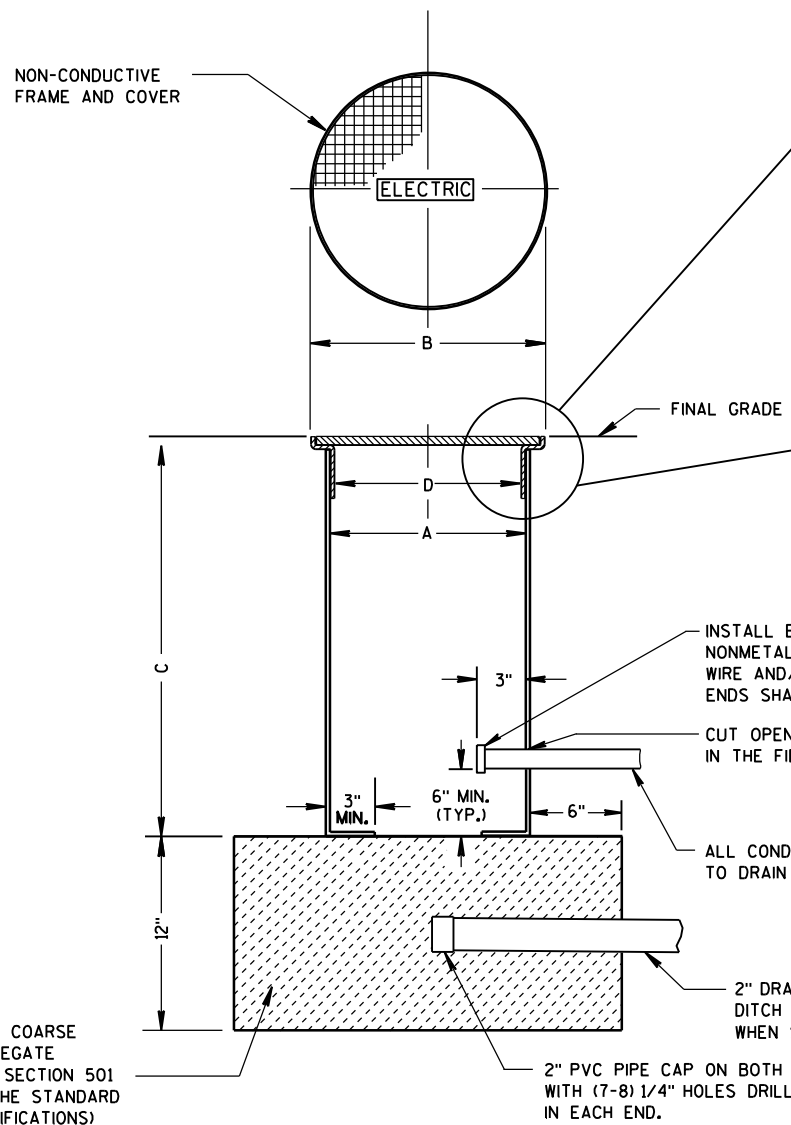
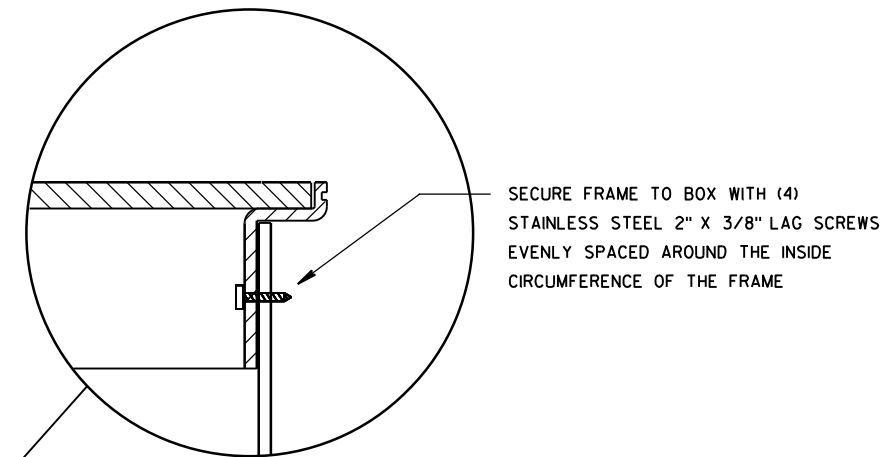
\* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

\*\* DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE



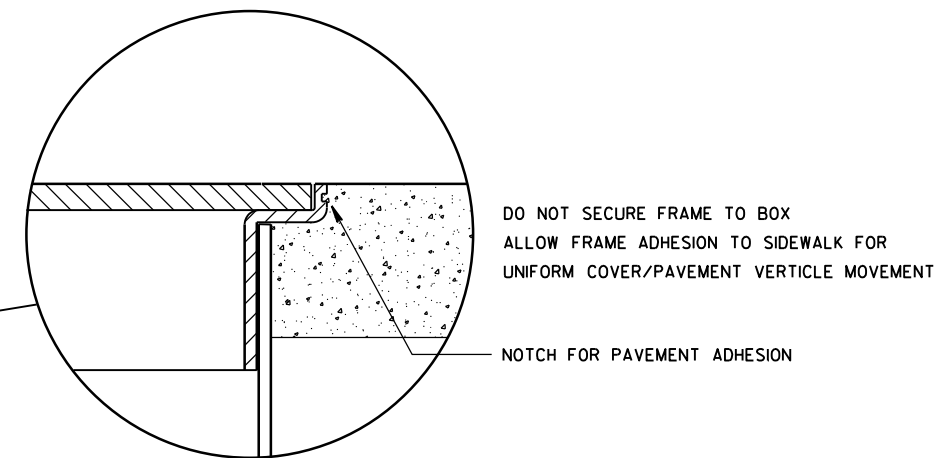
**BOX EXTENSION**

**INSTALLED IN SOD OR CRUSHED AGGREGATE**



**NON-CONDUCTIVE PULL BOX**

**INSTALLED IN SIDEWALK**



**GENERAL NOTES**

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

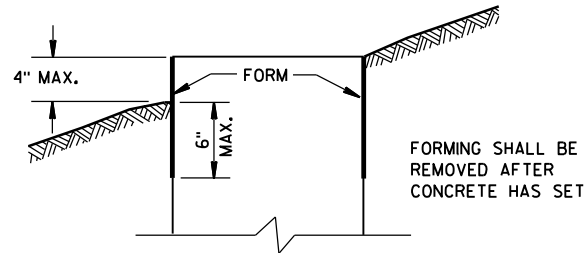
ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.

<b>PULL BOX NON-CONDUCTIVE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Ahmet Demireblek STATE ELECTRICAL 126

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



**FORMING DETAIL**

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

**GENERAL NOTES**

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

**GENERAL NOTES (CONTINUED)**

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD, ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

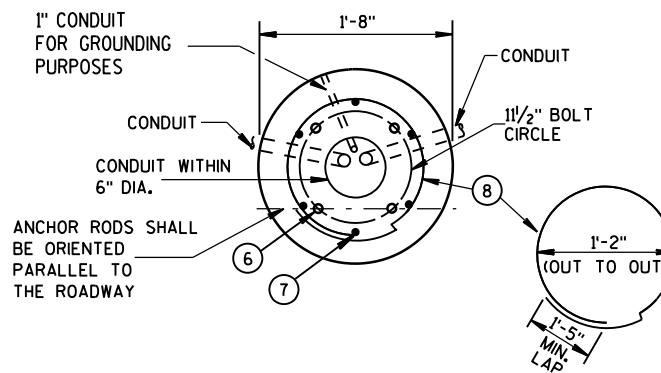
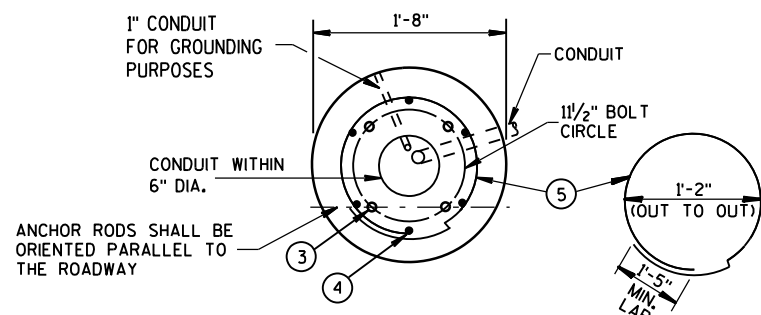
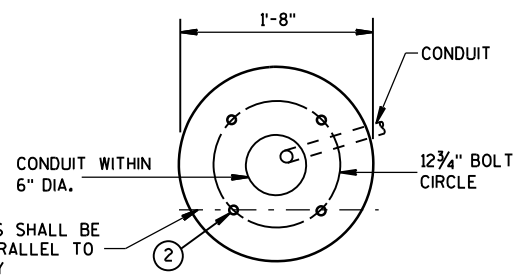
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH, THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

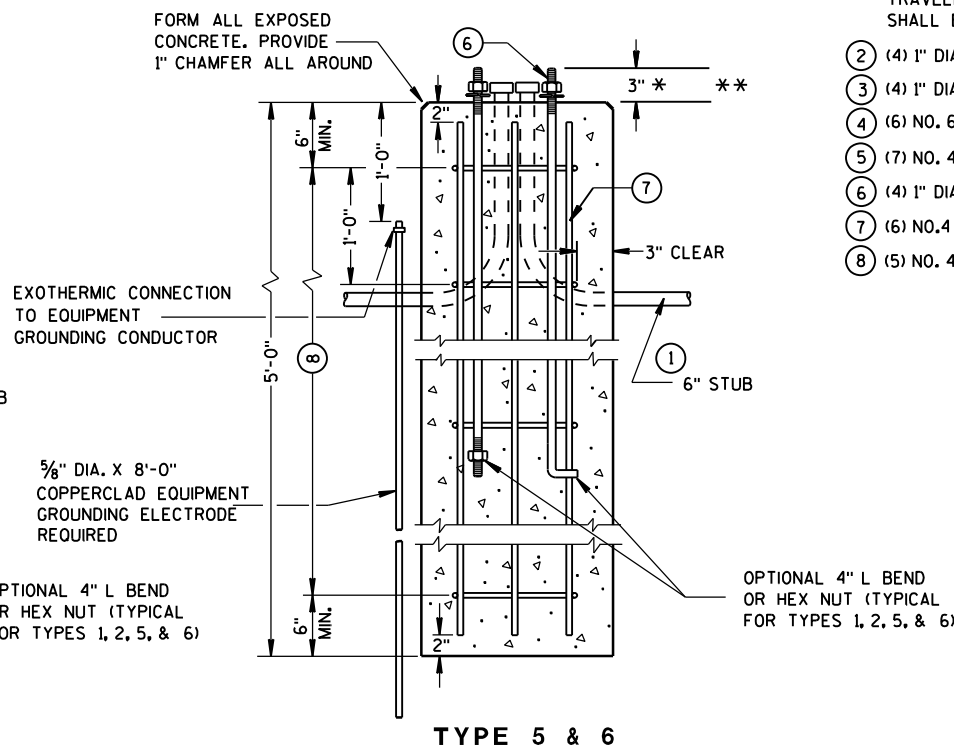
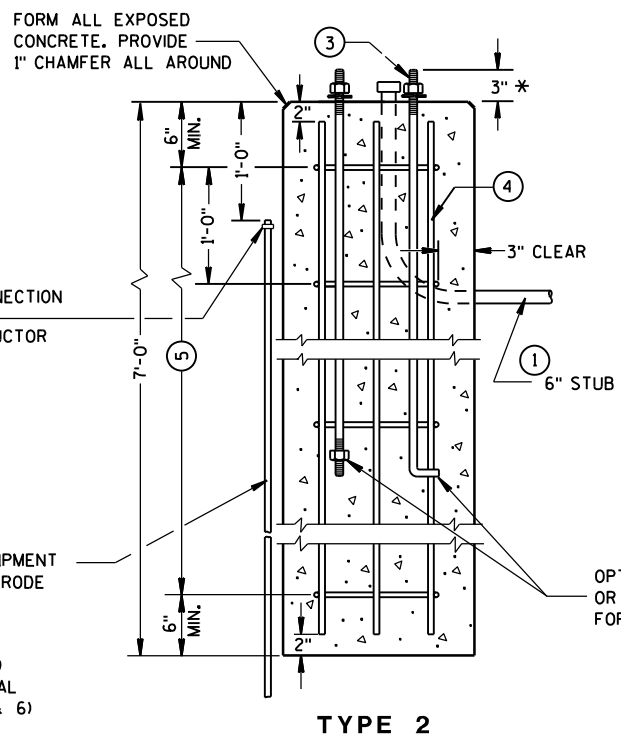
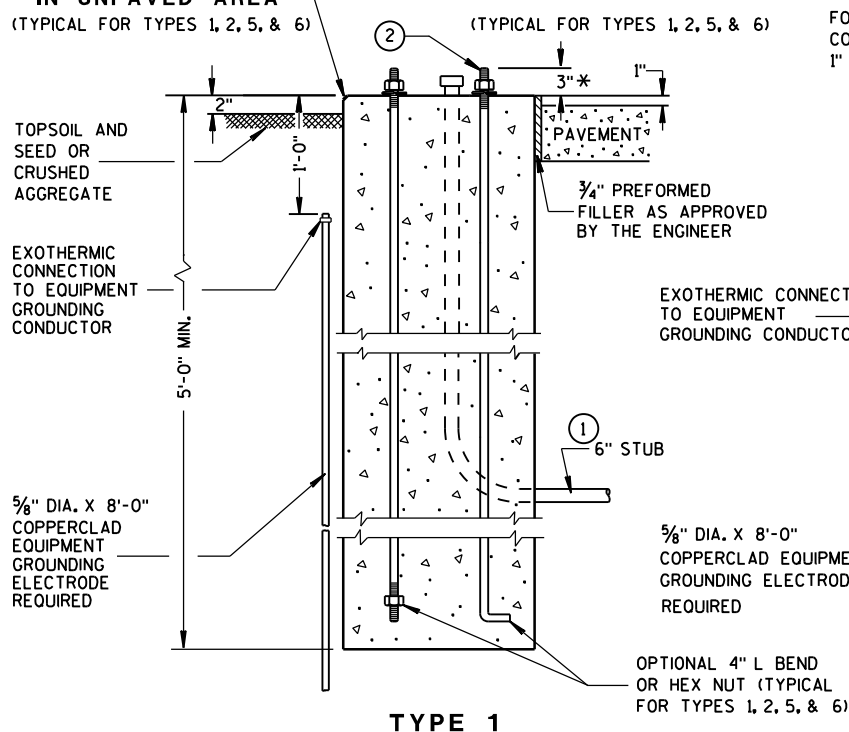
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

**HALF SECTION IN UNPAVED AREA**  
(TYPICAL FOR TYPES 1, 2, 5, & 6)

**HALF SECTION IN PAVEMENT**  
(TYPICAL FOR TYPES 1, 2, 5, & 6)



**CONCRETE BASES**

\* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

\*\* FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.
- ② (4) 1" DIA. X 3'-6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5'-0" ANCHOR RODS.
- ④ (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.
- ⑥ (4) 1" DIA. X 3'-6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4'-8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

**CONCRETE BASES,  
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sep. 2014 /S/ Ahmet Demirel  
DATE STATE ELECTRICAL 127  
FHWA



**GENERAL NOTES**

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

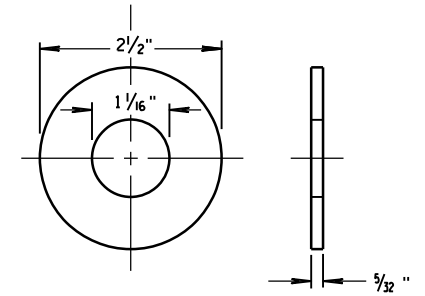
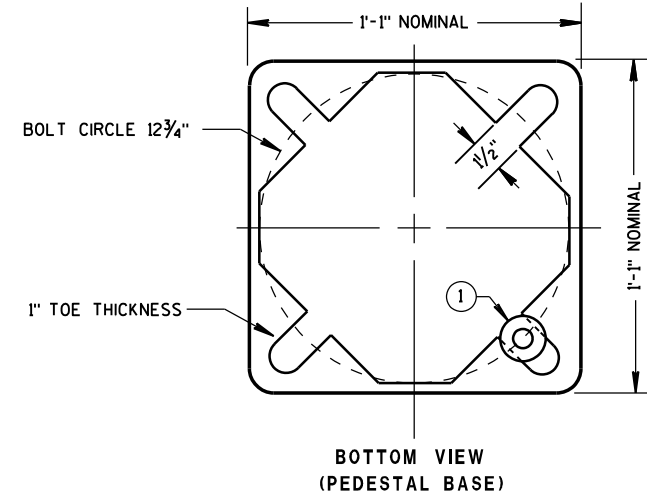
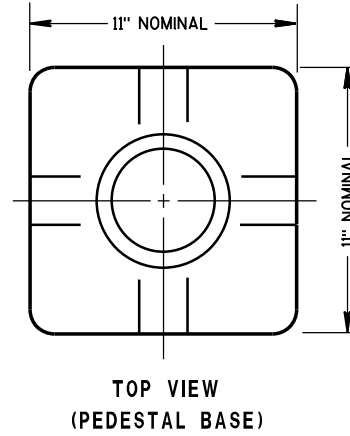
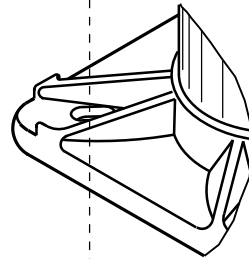
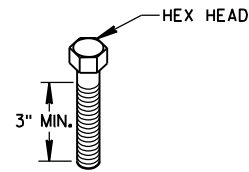
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

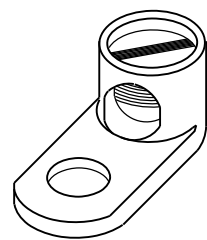
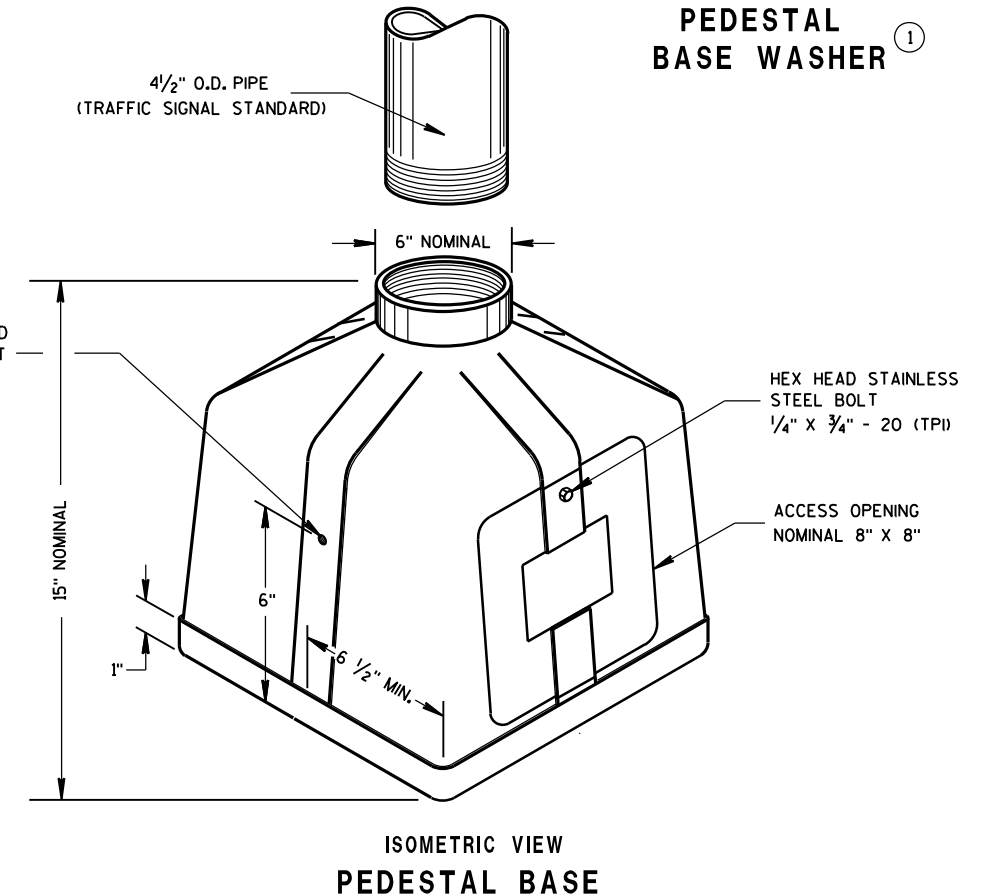
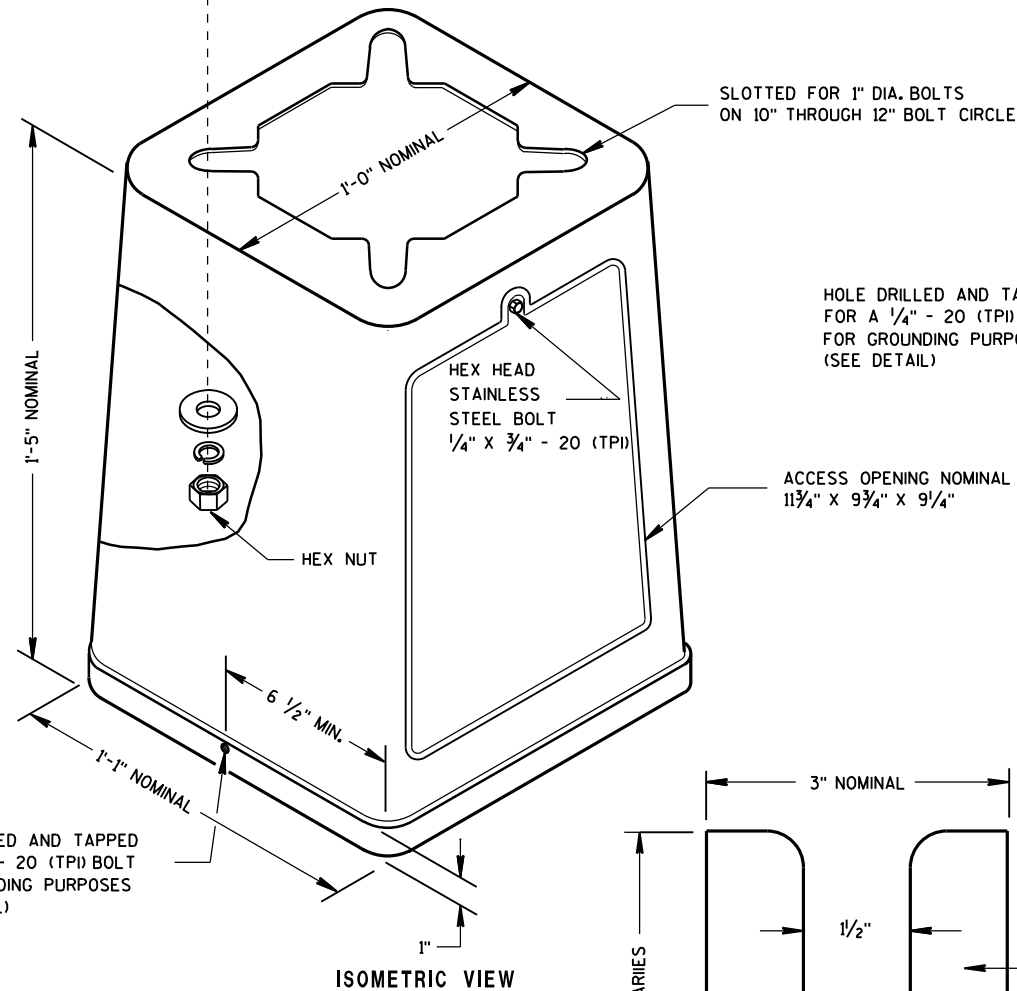
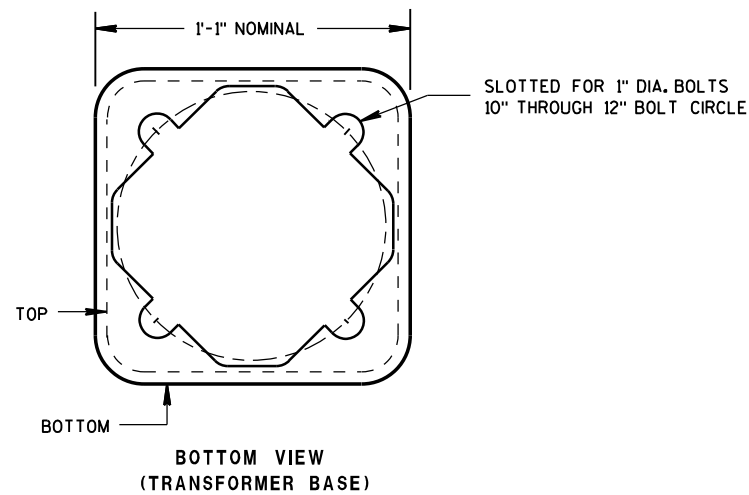
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

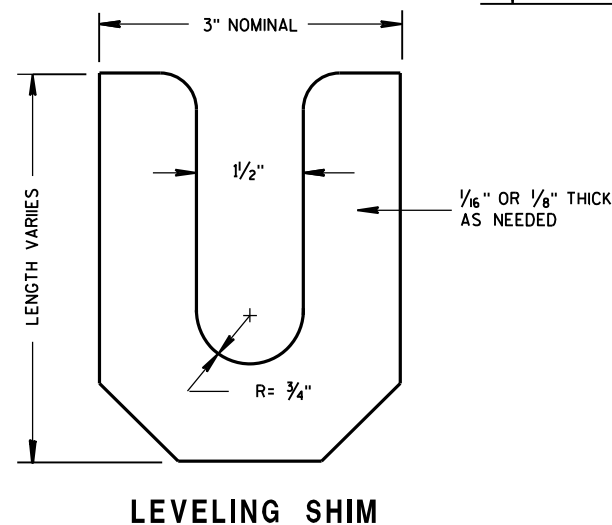


ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR  
**PEDESTAL BASE WASHER** ①



**TYPICAL MECHANICAL CONNECTOR LUG**  
TO BE FURNISHED WITH EACH BASE

**TRANSFORMER BASE**  
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



**LEVELING SHIM**

<b>TRANSFORMER/PEDESTAL BASES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL 128
FHWA	

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S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

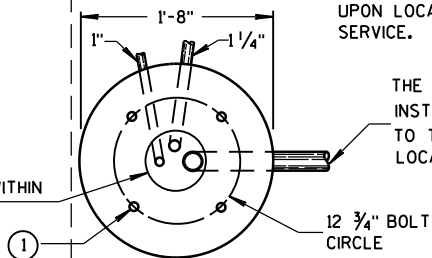
\* INCLUDES MAINTENANCE PLATFORM.

TYPICAL 3'-0" X 3'-0" X 4" THICK MAINTENANCE PLATFORM. LOCATION TO BE DETERMINED IN THE FIELD. COST TO BE INCLUDED UNDER CONCRETE CONTROL CABINET TYPE 10.

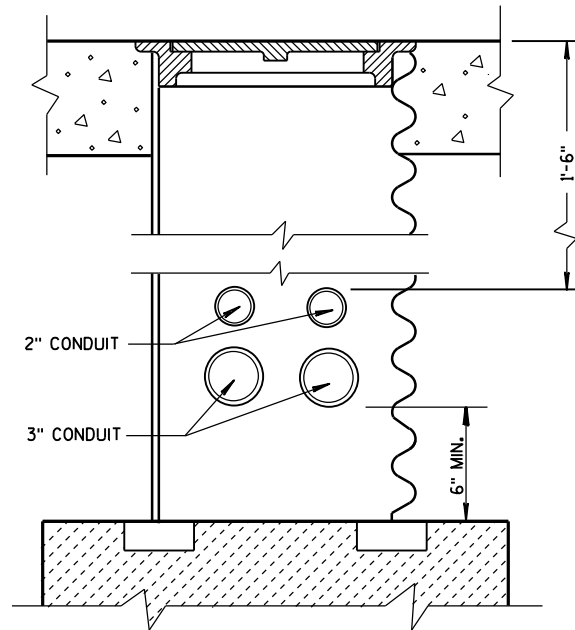
EXIT LOCATION OF 1/4" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE.

THE 3" CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLAN

ALL CONDUITS WITHIN 6" DIA. CIRCLE



### CONDUIT LOCATIONS IN 24" X 36" PULL BOX (LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

ALL CONDUIT SHALL BE INSTALLED WITHIN 7" X 14" RECTANGLE

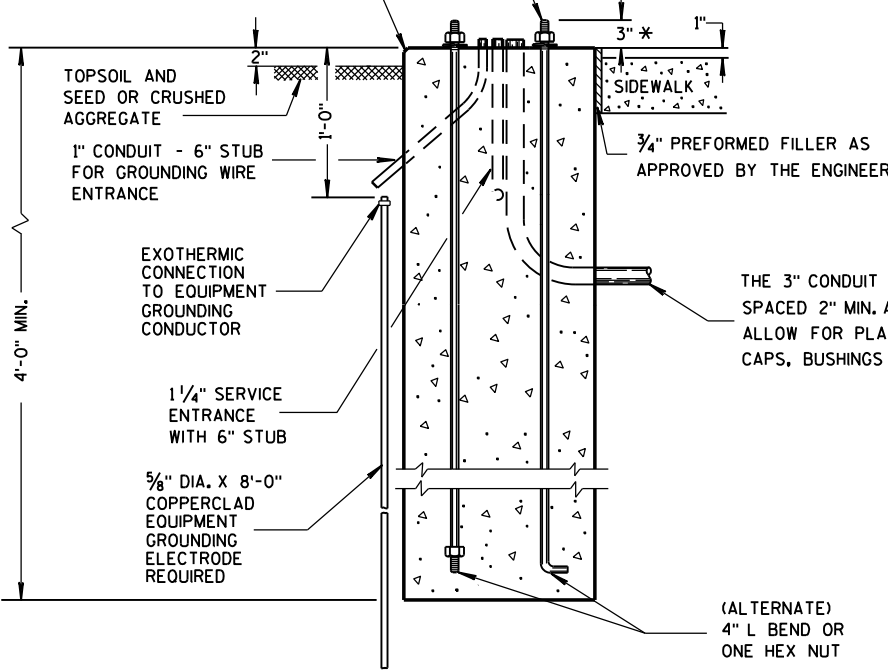
LOCATE CONCRETE MAINTENANCE PLATFORM ON DOOR SIDE OF CABINET (SEE NOTES)

GROUND LINE

4 - 6" STUBS SPACED 2" MIN. APART TO ALLOW FOR PLACEMENT OF CAPS, BUSHING OR COUPLINGS

#### HALF SECTION IN UNPAVED AREA

#### HALF SECTION IN PAVED AREA



THE 3" CONDUIT SHALL BE SPACED 2" MIN. APART TO ALLOW FOR PLACEMENT OF CAPS, BUSHINGS OR COUPLINGS

2" CONDUIT COMMUNICATION CABLE

EXIT LOCATION OF 1/4" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE.

① FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

### GENERAL NOTES

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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S.D.D. 9 C 5-10

S.D.D. 9 C 5-10

#### TYPE 10

#### TYPE 6, 7, 8 AND 9 (ISOMETRIC VIEW)

\* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

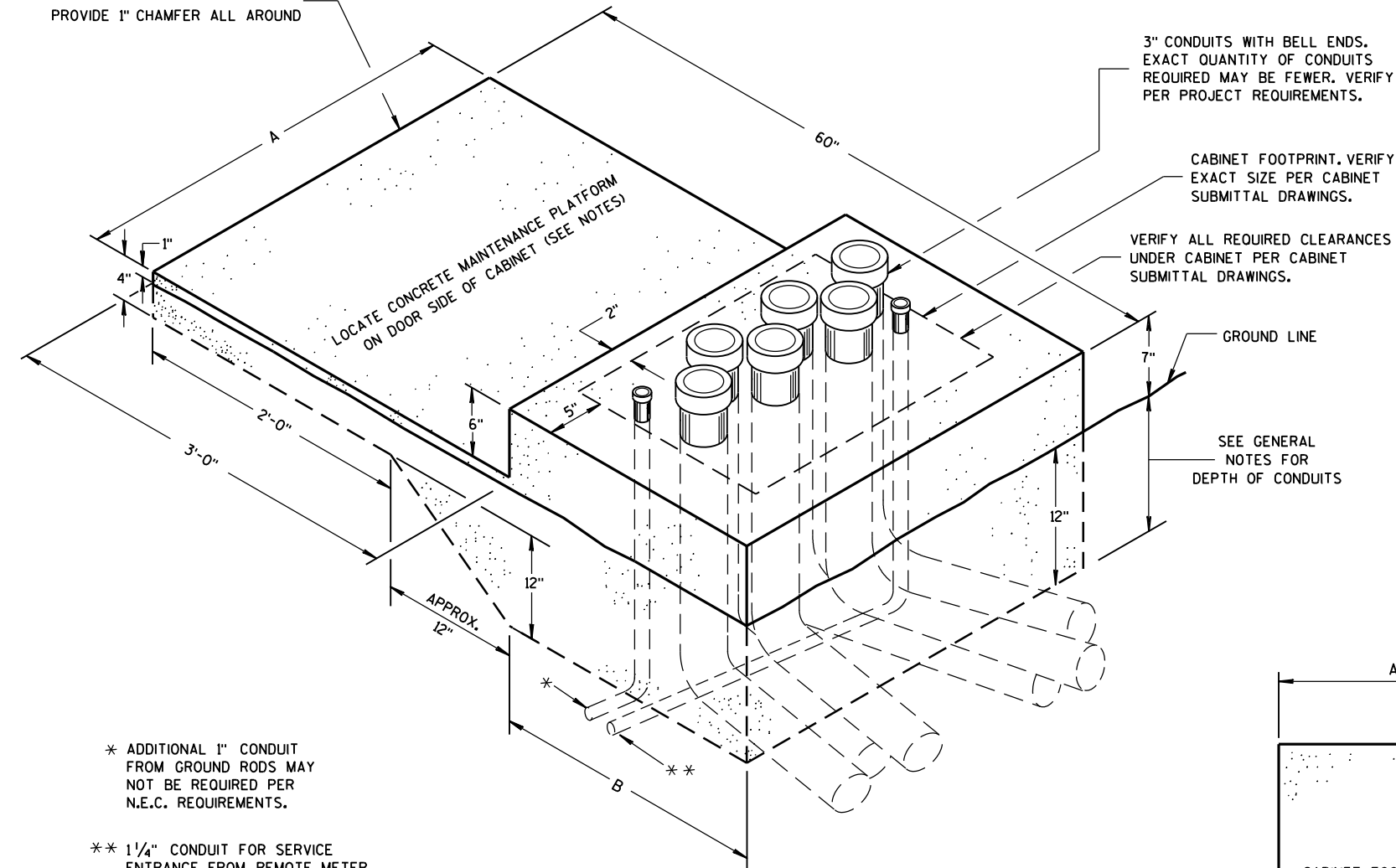
### CONCRETE CONTROL CABINET BASES

#### CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept. 2016 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL 129  
FHWA

FORM ALL EXPOSED CONCRETE  
PROVIDE 1" CHAMFER ALL AROUND



**ISOMETRIC VIEW  
CONCRETE CONTROL  
CABINET BASE, TYPE L**

(C.Y. CONCRETE = APPROX. 0.4 )

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6

3" CONDUITS WITH BELL ENDS.  
EXACT QUANTITY OF CONDUITS  
REQUIRED MAY BE FEWER. VERIFY  
PER PROJECT REQUIREMENTS.

CABINET FOOTPRINT. VERIFY  
EXACT SIZE PER CABINET  
SUBMITTAL DRAWINGS.

VERIFY ALL REQUIRED CLEARANCES  
UNDER CABINET PER CABINET  
SUBMITTAL DRAWINGS.

GROUND LINE

SEE GENERAL  
NOTES FOR  
DEPTH OF CONDUITS

\* ADDITIONAL 1" CONDUIT  
FROM GROUND RODS MAY  
NOT BE REQUIRED PER  
N.E.C. REQUIREMENTS.

\*\* 1/4" CONDUIT FOR SERVICE  
ENTRANCE FROM REMOTE METER  
BREAKER PEDESTAL PER PROJECT  
REQUIREMENTS. VERIFY LOCATION OF  
CONDUIT DEPENDENT UPON LOCATION  
OF INCOMING FEEDER AND FOR EASE  
OF CONNECTION TO LOAD CENTER.

**GENERAL NOTES**

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

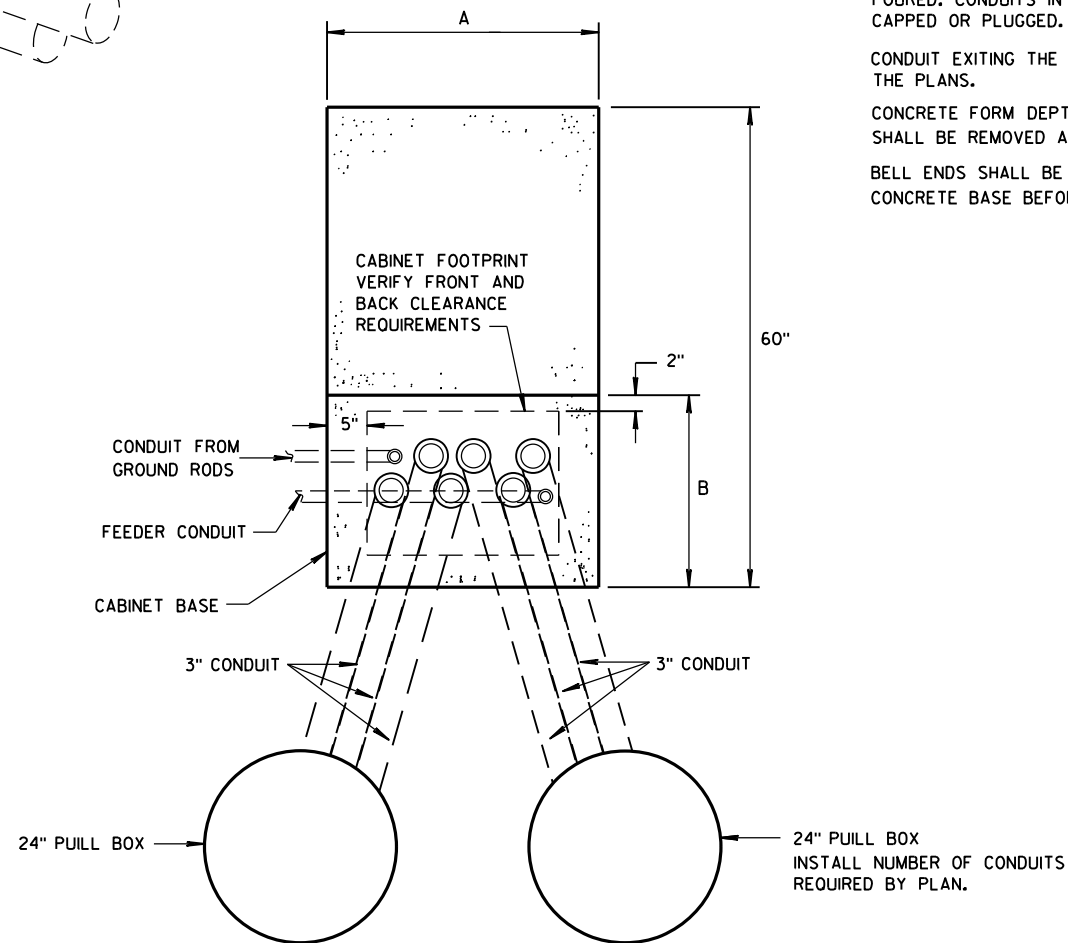
PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.



**PLAN VIEW  
CONCRETE CONTROL CABINET BASE, TYPE L**

**CONCRETE CONTROL  
CABINET BASE, TYPE L**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

Nov. 2014

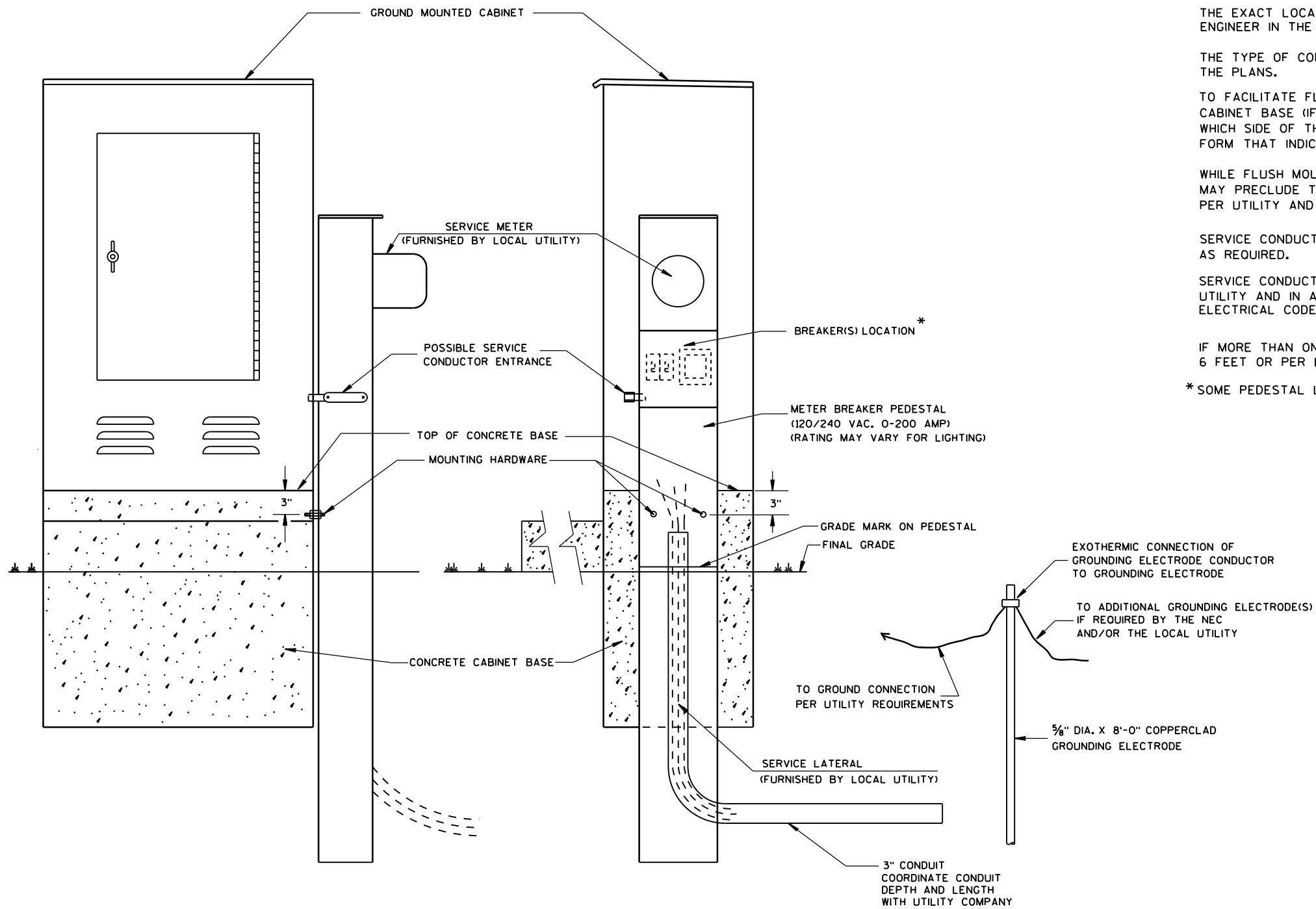
DATE

FHWA

/s/ Thomas Goering

STATE LIGHTING ENGINE 130

WYS



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

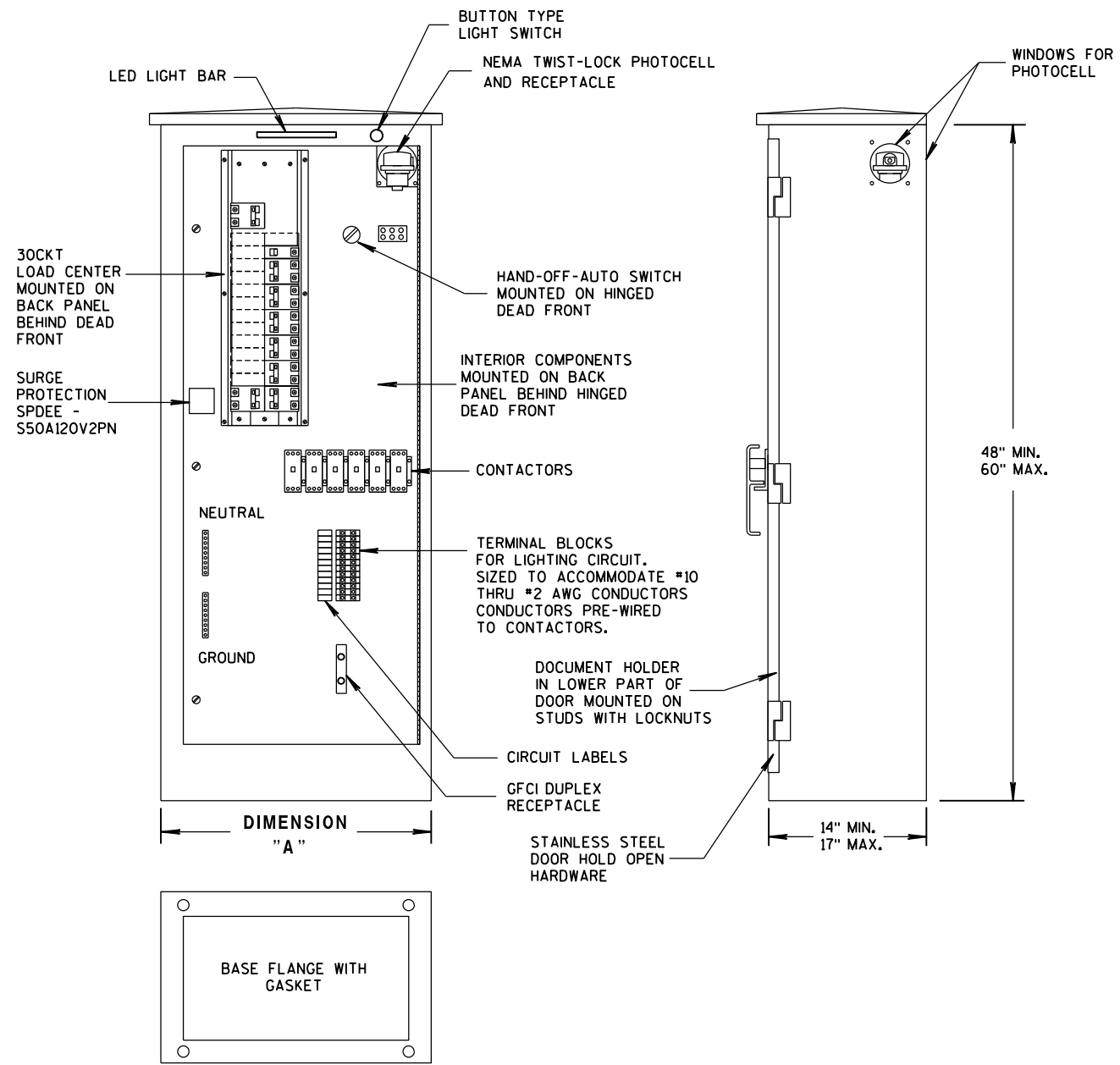
IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

\* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL 131
FHWA	

**FRONT INTERIOR ELEVATION**

**SIDE VIEW**



**TABLE OF DIMENSIONS (INCHES)**

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

**LIGHTING CONTROL CABINET**

**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.

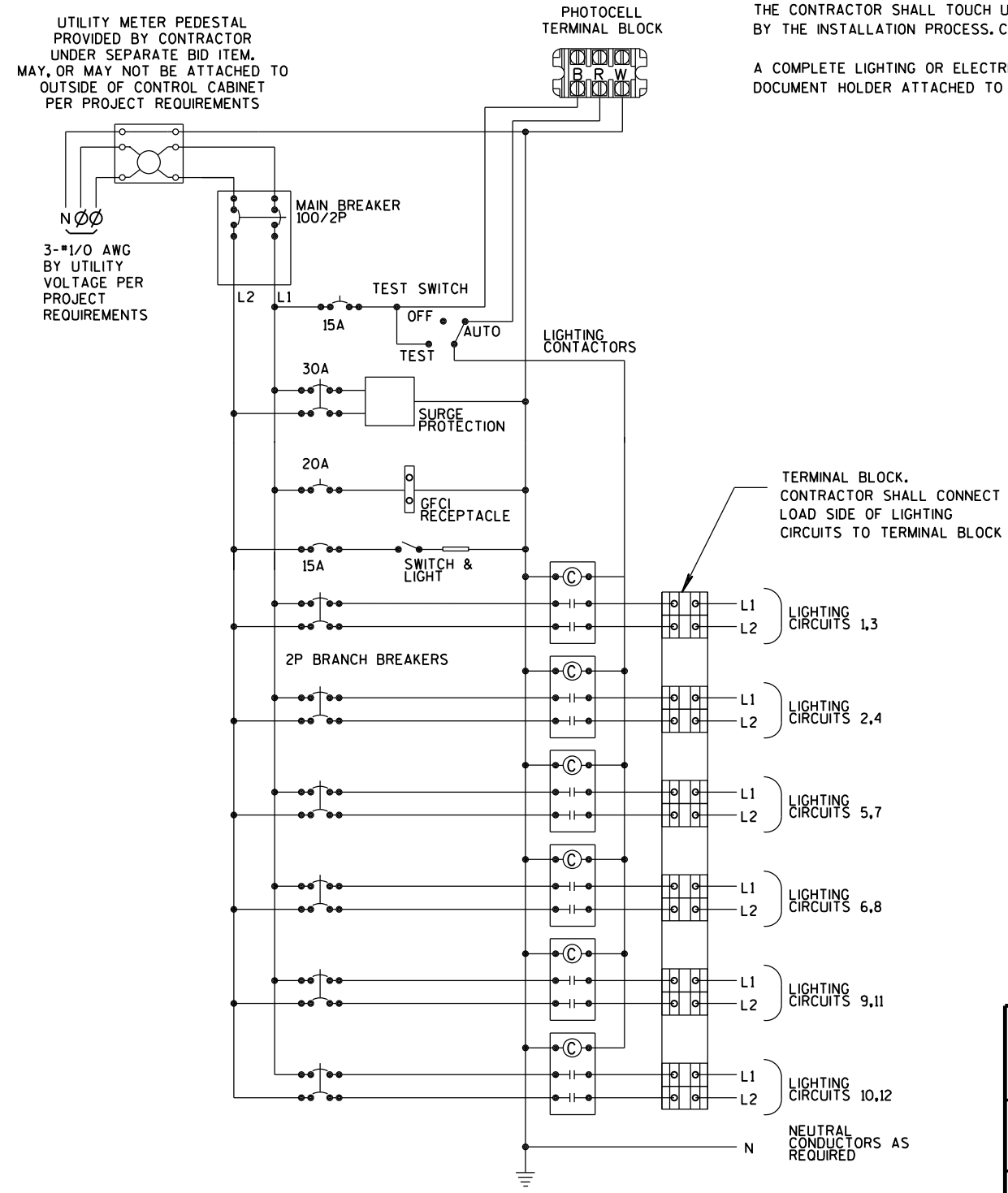
ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.



**CONTROL CABINET SCHEMATIC**

<b>LIGHTING CONTROL CABINET 120/240 VOLT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE <u>Sept. 2014</u>	/S/ Thomas Gorring STATE LIGHTING ENGINE 132 NYS.
FHWA	

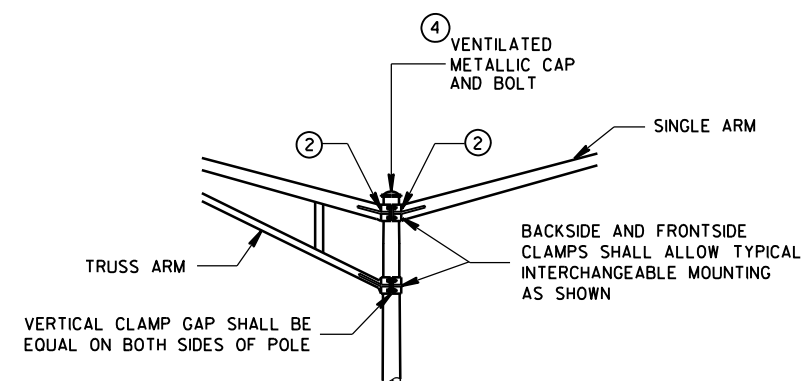
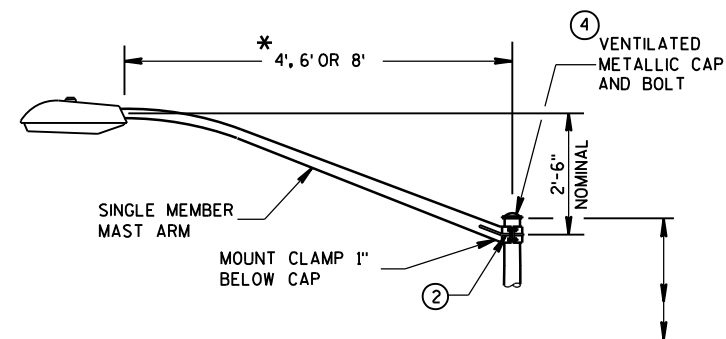
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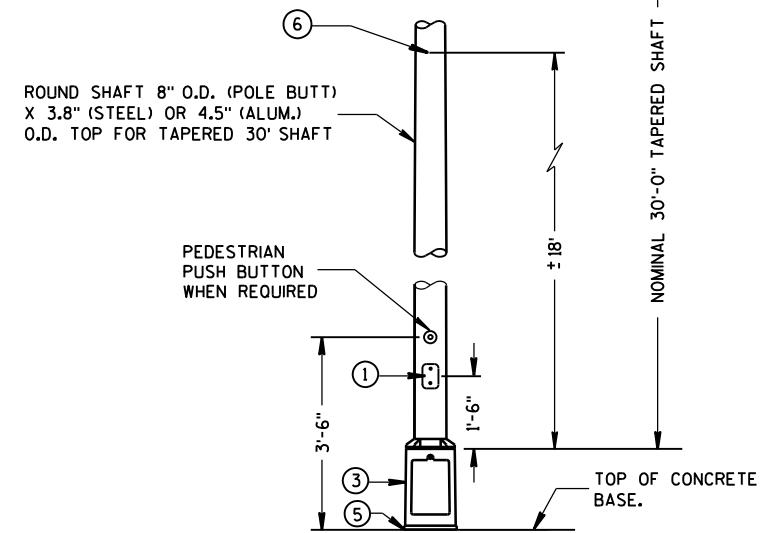
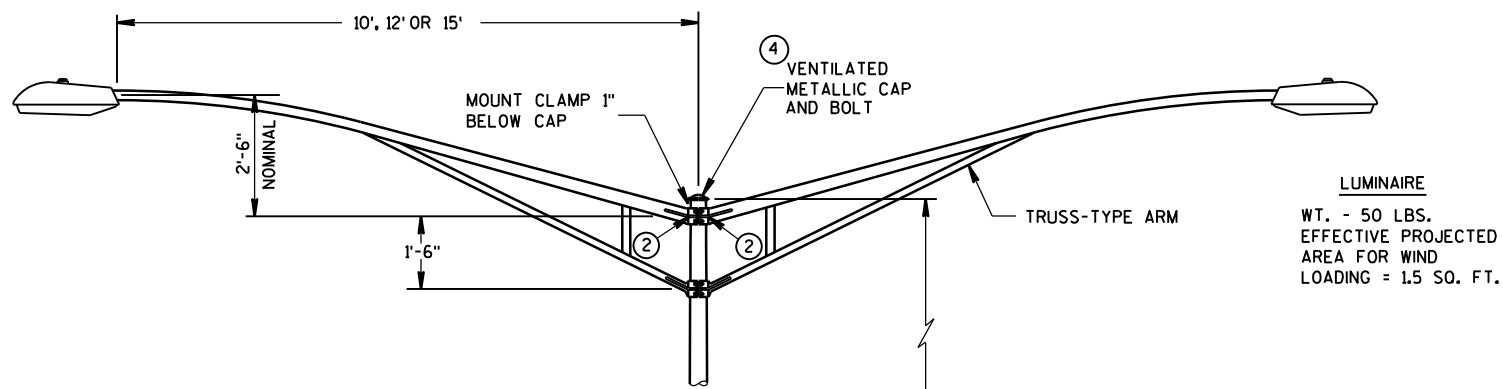
S.D.D. 9 D 4-2

S.D.D. 9 D 4-2

\* RISE FOR 4' ARM SHALL BE 2'-0".



INTERCHANGEABLE MOUNTING DETAIL



TYPE 5 POLE MOUNTING CONFIGURATION  
(MAXIMUM LOAD)  
LIGHTING ONLY

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.  
ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

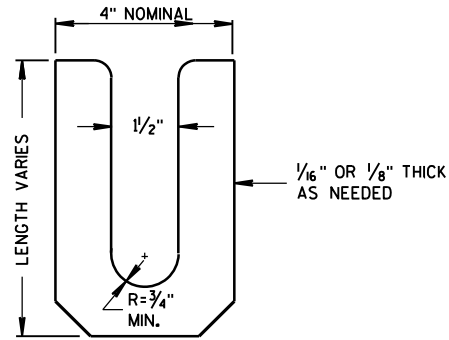
TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

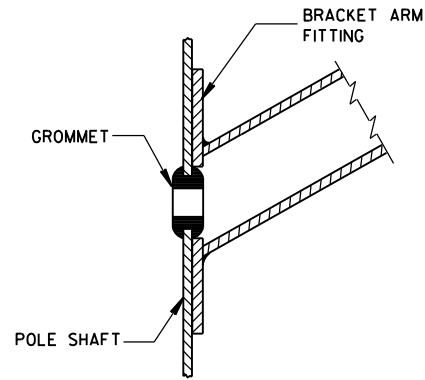
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- ① 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" x 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" x 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑥ INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

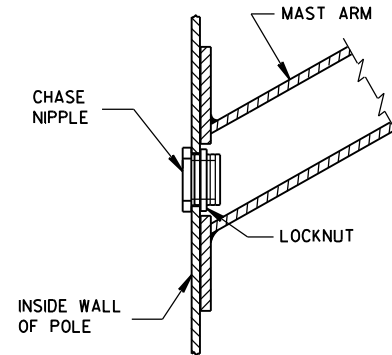
<p>POLE MONTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 133</p>



**LEVELING SHIM**  
SHALL BE ALUMINUM



**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**

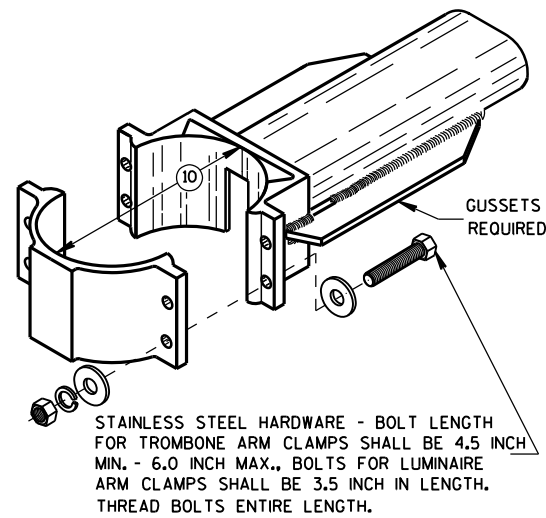


**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

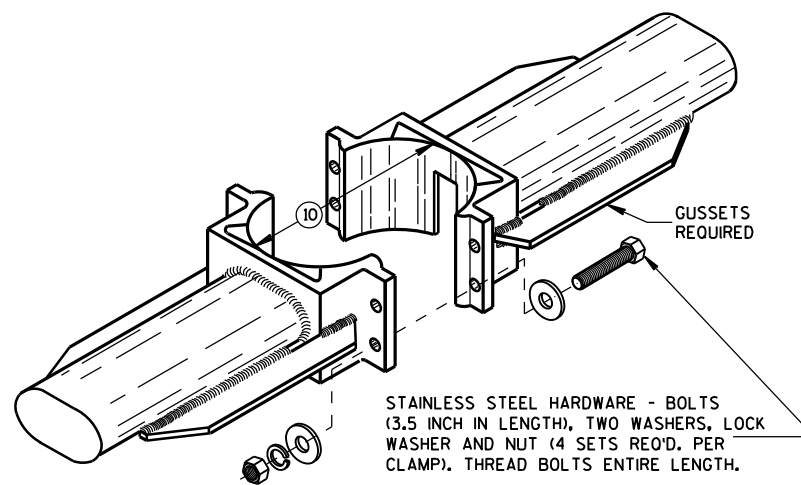
**GENERAL NOTES**

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

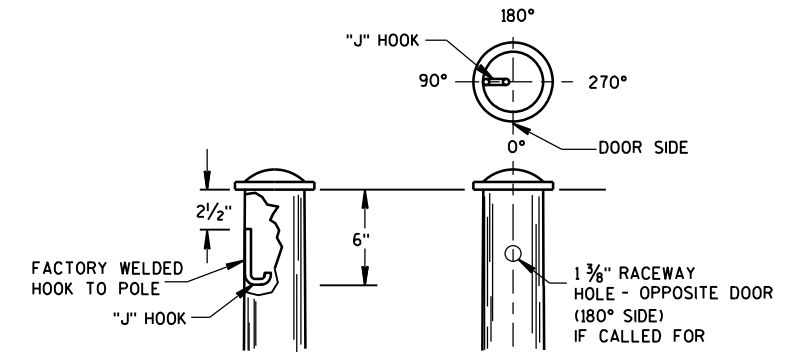
- ⑩ 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
  - ⑪ INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
  - ⑫ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
  - ⑬ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
- SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



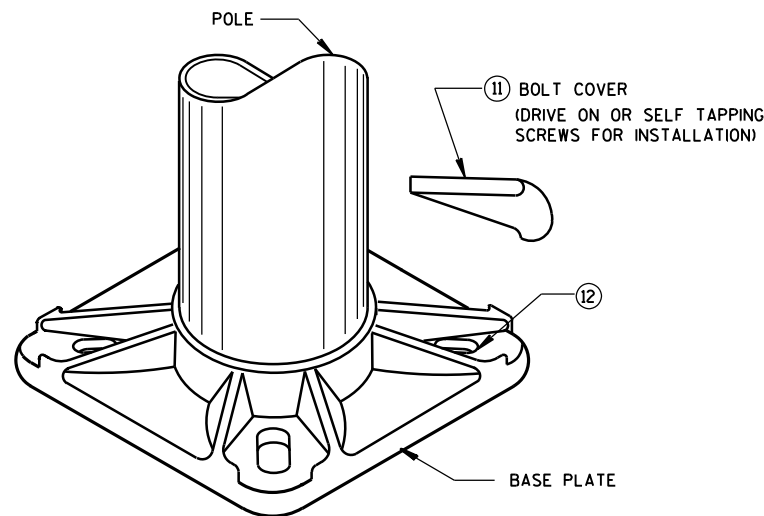
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



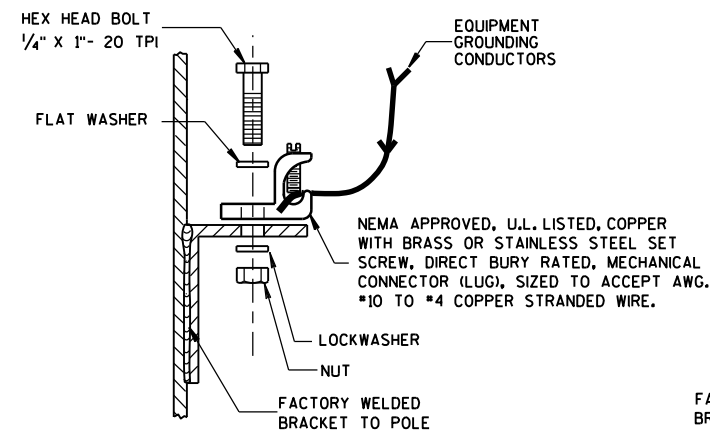
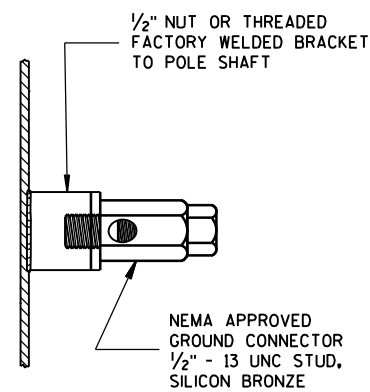
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



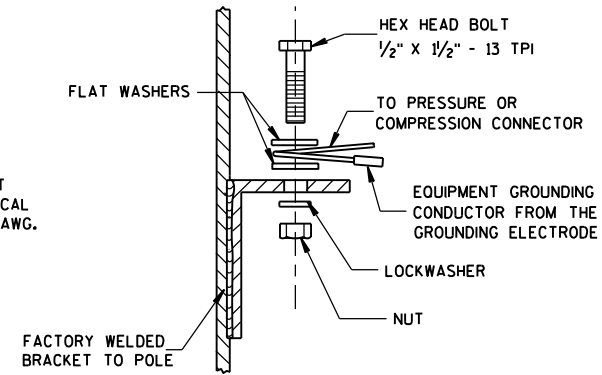
**TYPICAL "J" HOOK LOCATION**



**BASE PLATE**



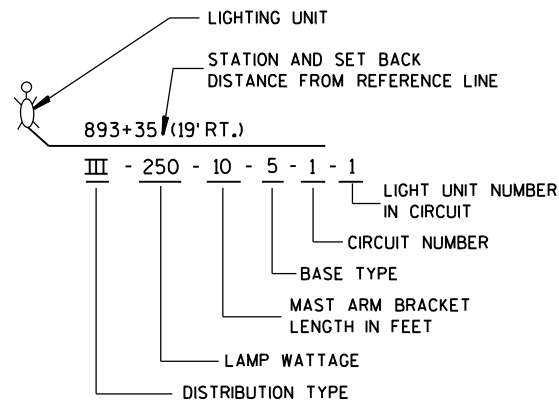
**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



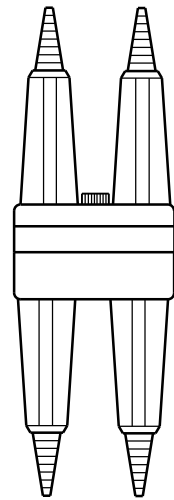
**HARDWARE DETAILS FOR POLE MOUNTINGS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

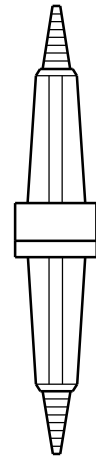
APPROVED  
Feb. 2015 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL 134  
FHWA



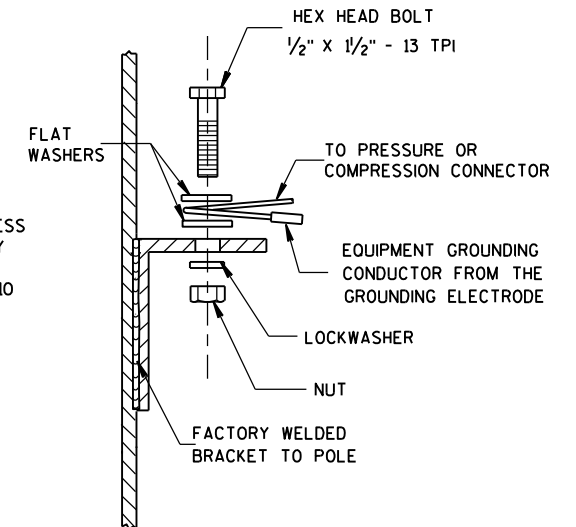
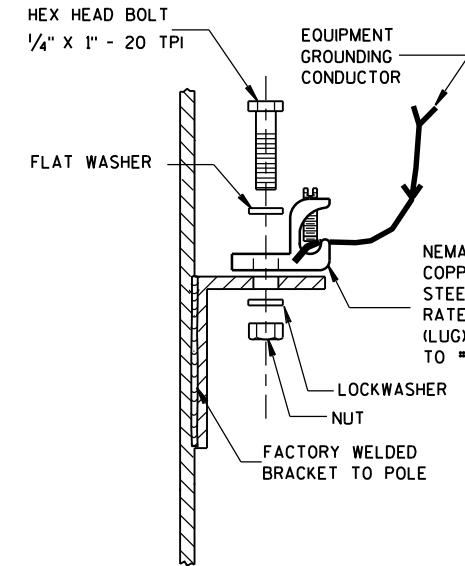
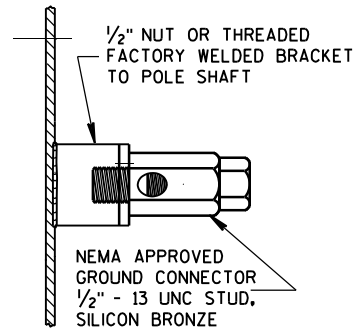
**LIGHTING UNIT CODE**  
(TYPICAL)



**DETAIL "A"**  
BREAKAWAY  
DOUBLE POLE WITH  
WATERPROOF  
INSULATING BOOT



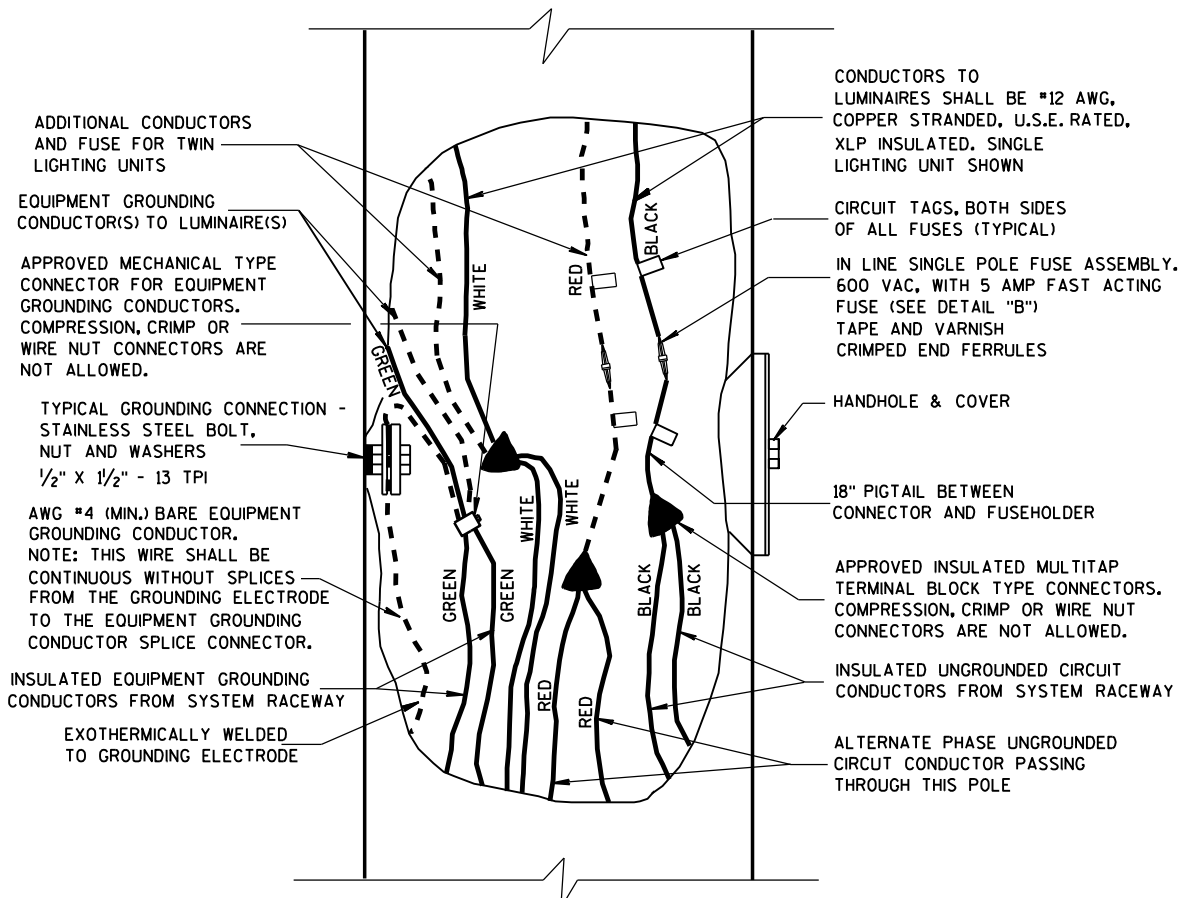
**DETAIL "B"**  
BREAKAWAY  
SINGLE POLE WITH  
WATERPROOF  
INSULATING BOOT



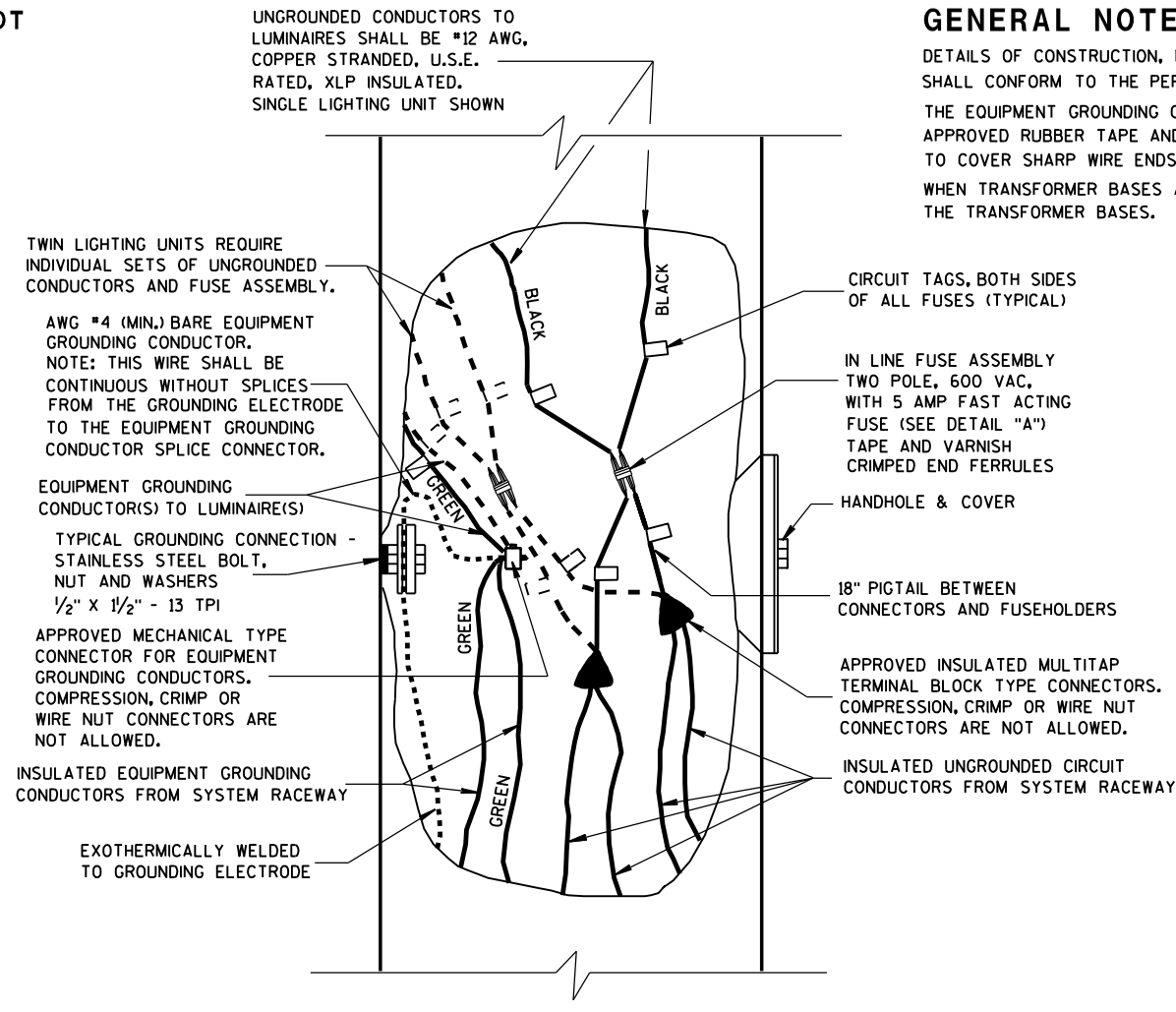
**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.  
THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.  
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



**3 WIRE - 120, 240 OR 480 VAC (UNGROUNDING CONDUCTOR)  
WITH GROUNDED CONDUCTOR AND  
WITH EQUIPMENT GROUNDING CONDUCTOR**



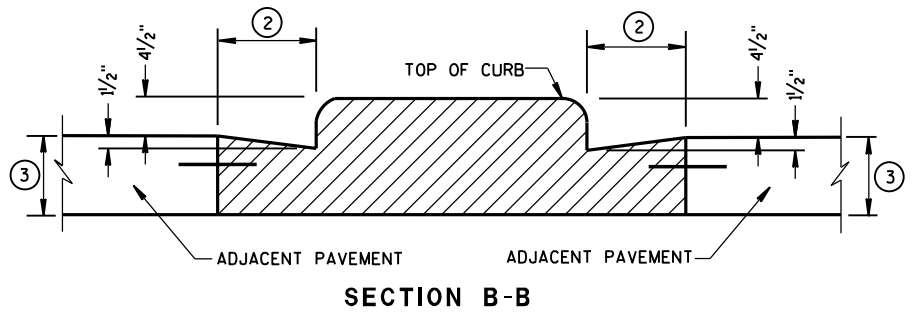
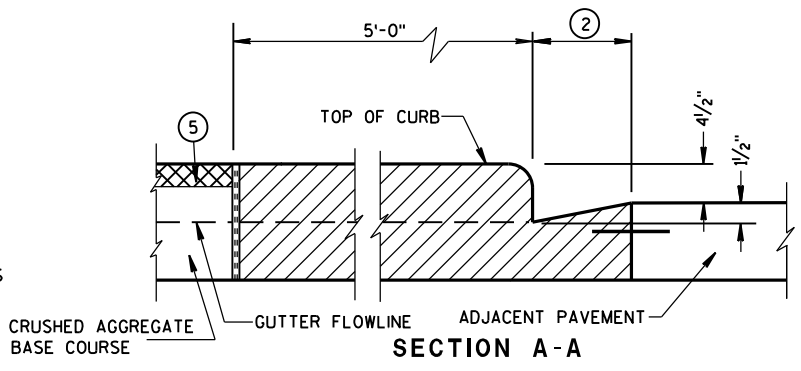
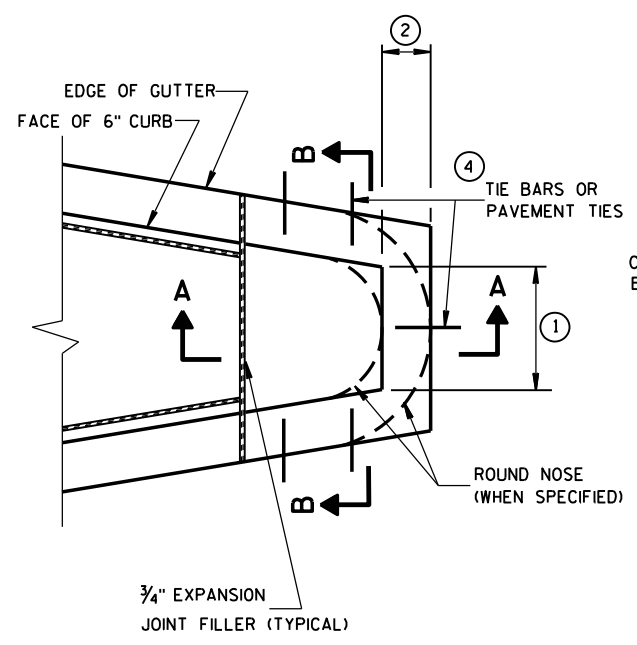
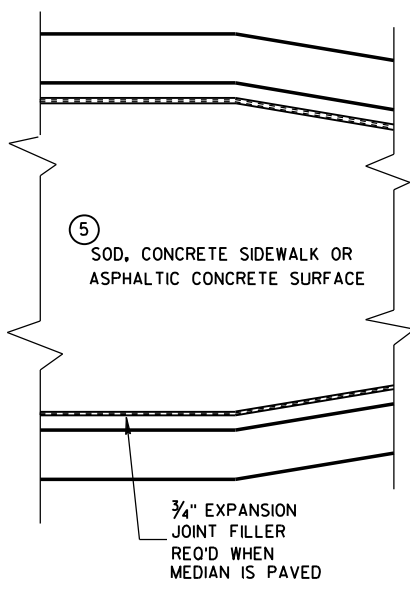
**2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS)  
WITH EQUIPMENT GROUNDING CONDUCTOR**

**NON-FREWAY LIGHTING UNIT  
POLE WIRING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: Sept. 2014 /S/ Ahmet Demirbilek  
STATE ELECTRICAL 135  
FHWA



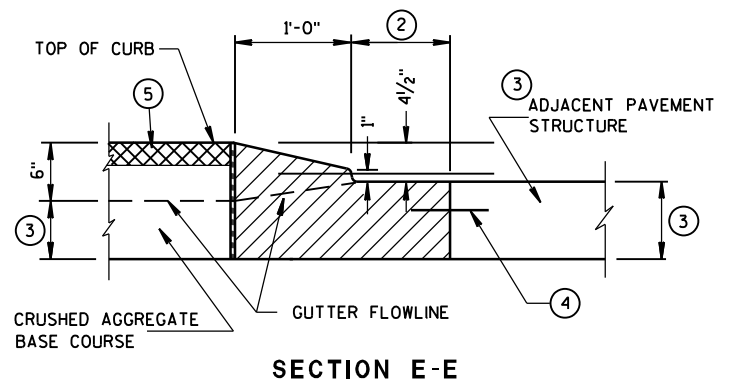
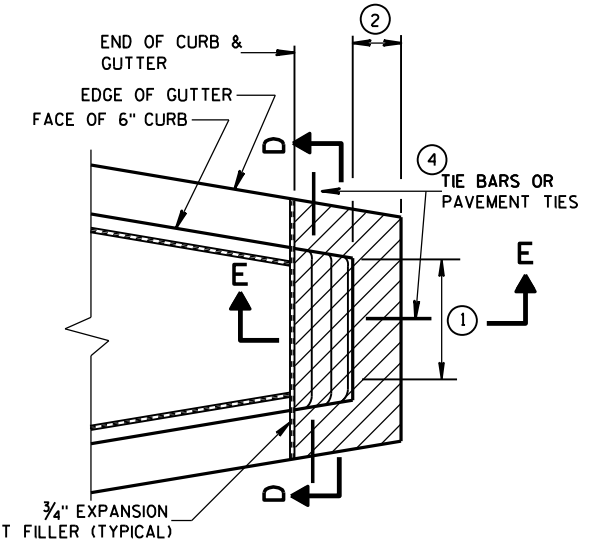


CONCRETE MEDIAN BLUNT NOSE DETAIL

**GENERAL NOTES**

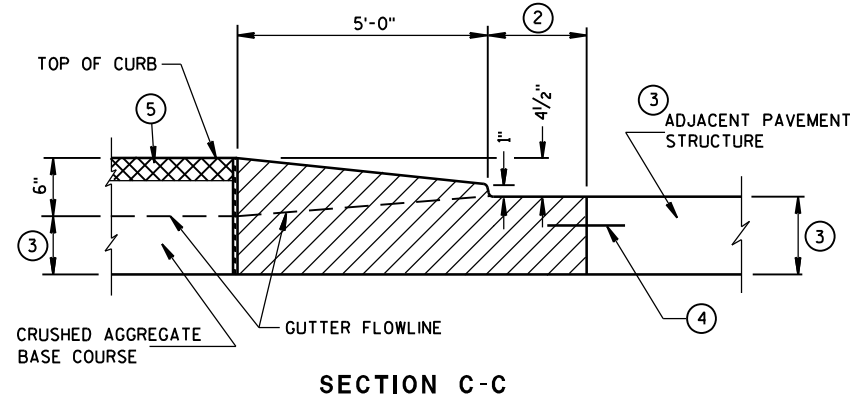
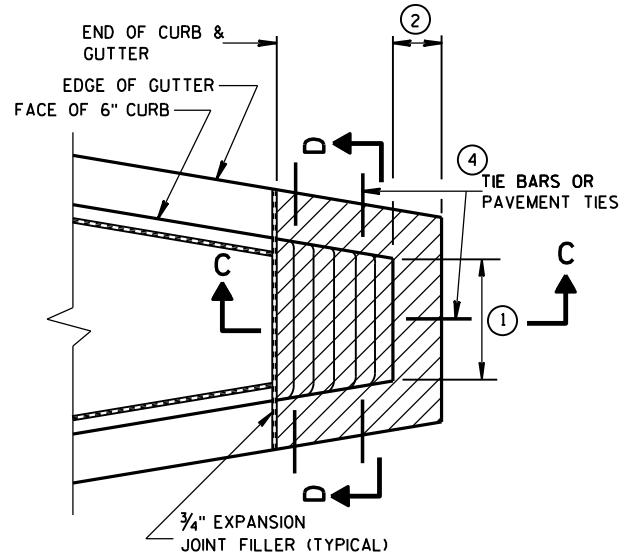
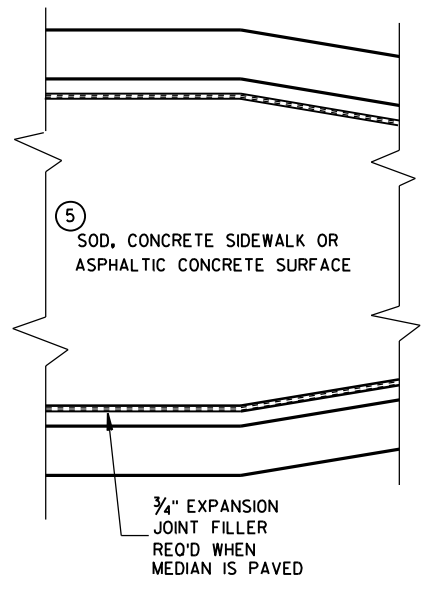
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

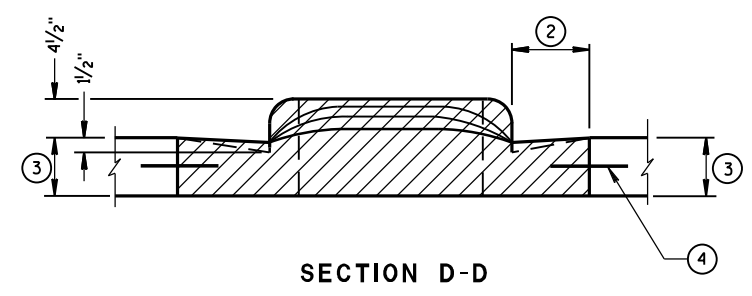


CONCRETE MEDIAN SLOPED NOSE TYPE 2

6



CONCRETE MEDIAN SLOPED NOSE TYPE 1



<b>CONCRETE MEDIAN NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/s/ Jerry H. Zoog ROADWAY STANDARDS & DESIGN ENGINEER
FHWA	VT

S.D.D. 11 B 2-2

S.D.D. 11 B 2-2

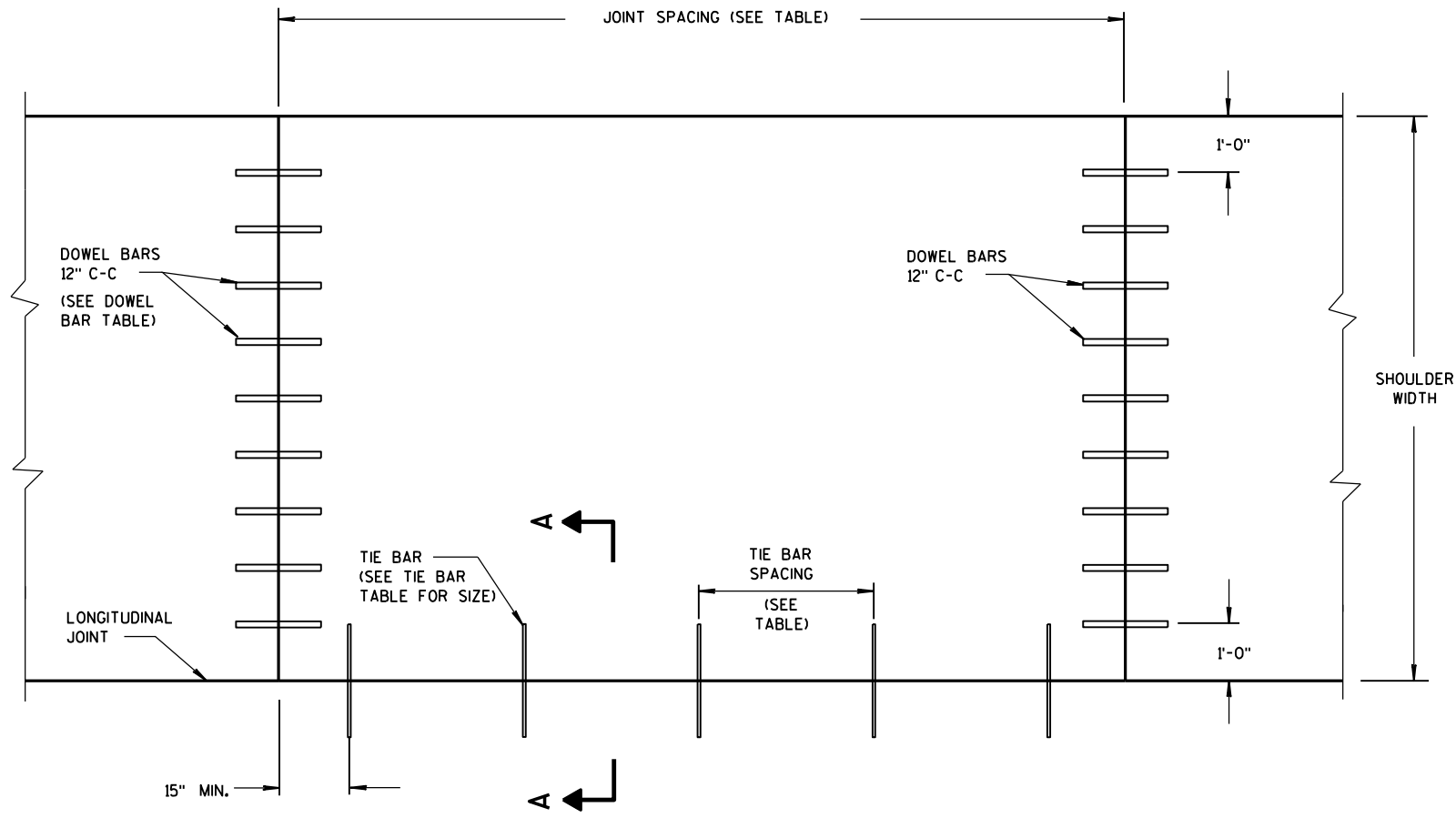
**GENERAL NOTES**

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.

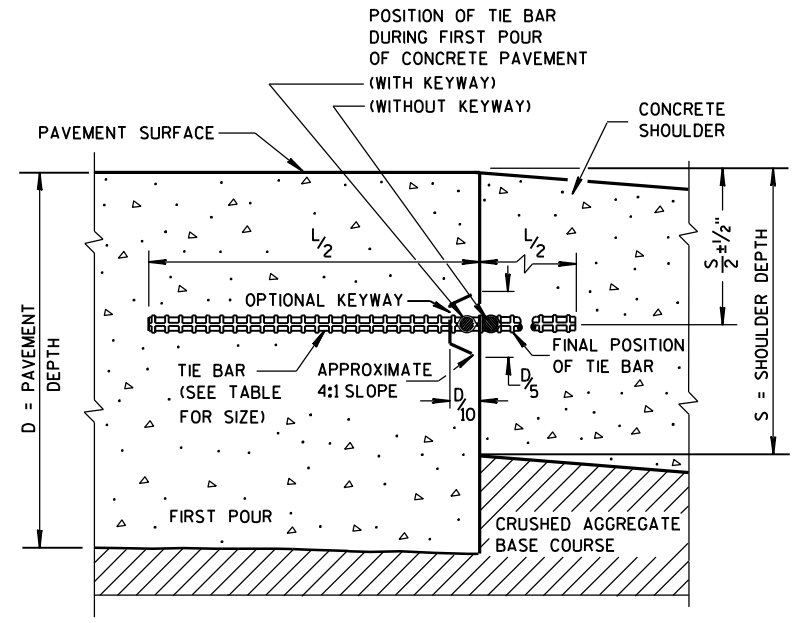
TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



**PLAN VIEW  
CONCRETE PAVEMENT SHOULDER**



**SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT**

**TIE BAR TABLE**

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

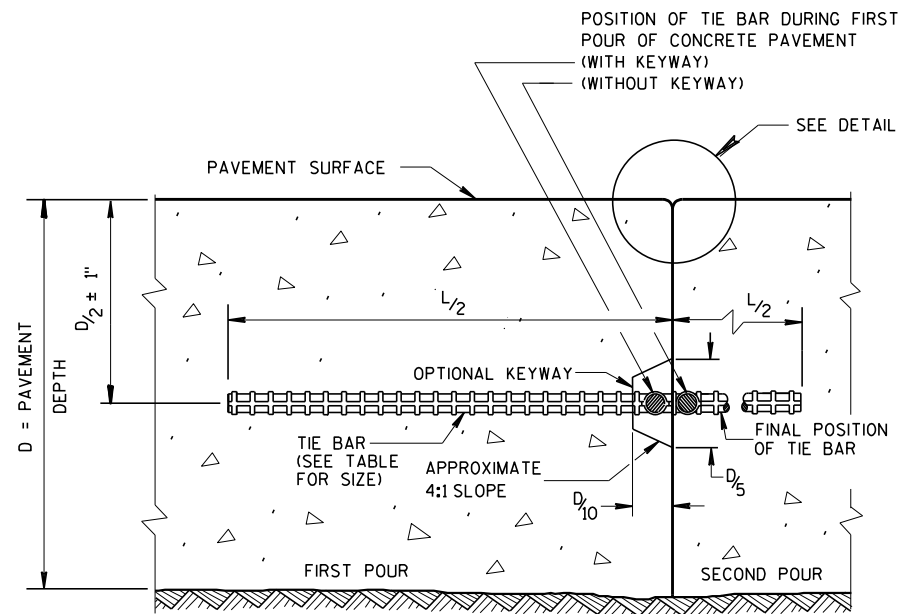
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

\*\*\* FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

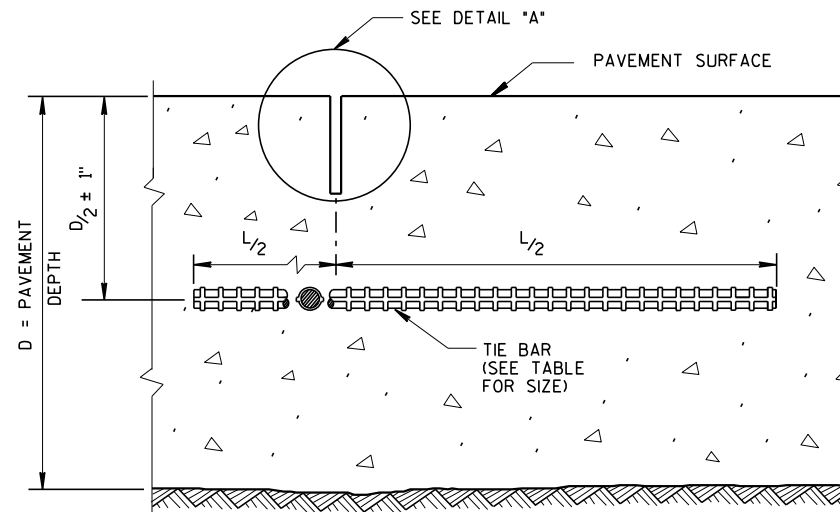
**CONCRETE PAVEMENT SHOULDERS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June, 2015 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPEF 137  
FHWA



**CONSTRUCTION JOINT**



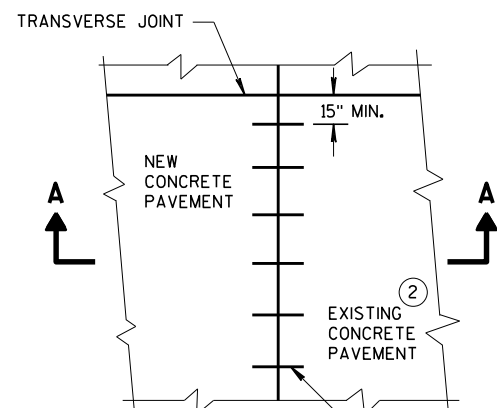
**SAWED JOINT**

**GENERAL NOTES**

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

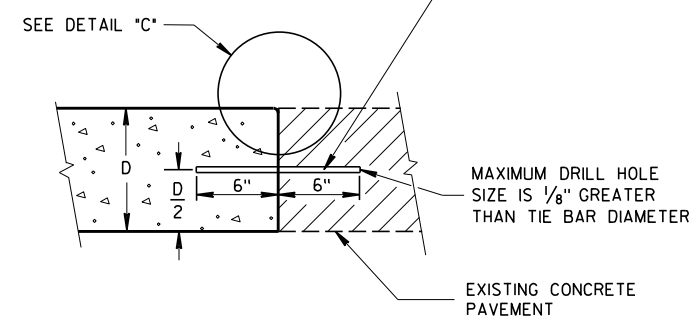
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

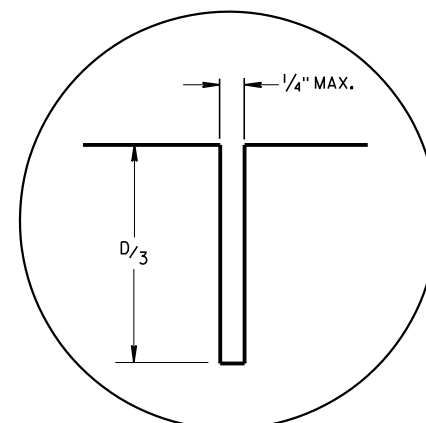


**PLAN VIEW**

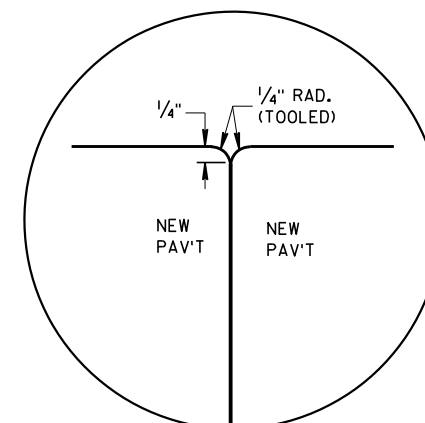
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



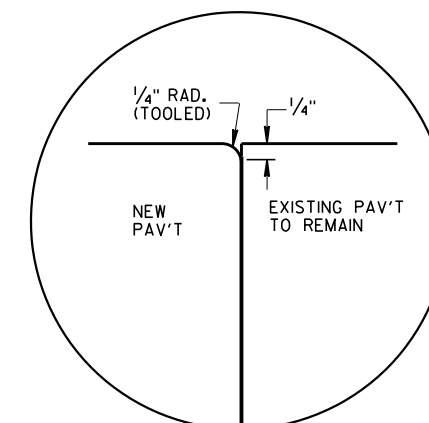
**SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT**



**DETAIL "A"**



**DETAIL "B"**



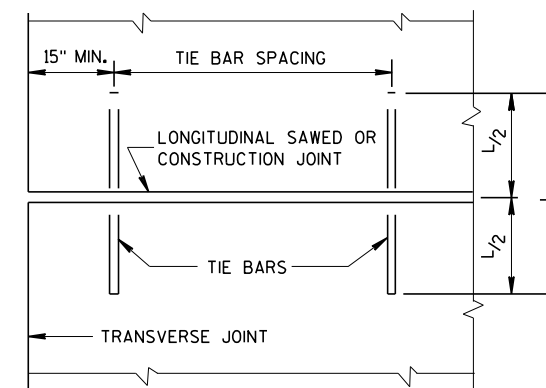
**DETAIL "C"**

**TIE BAR TABLE**

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

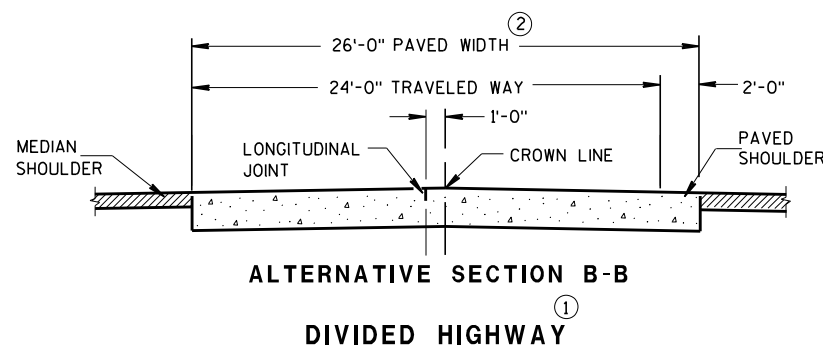
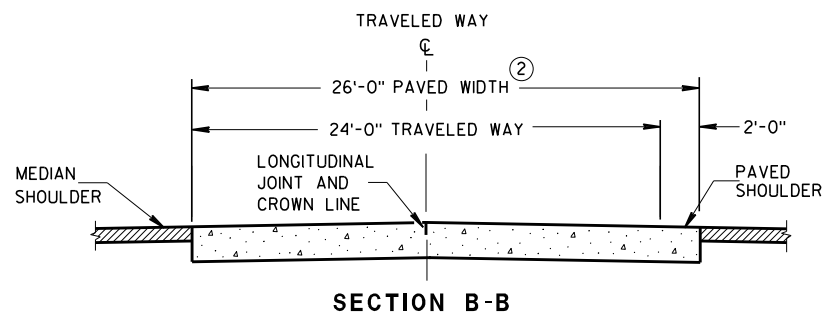
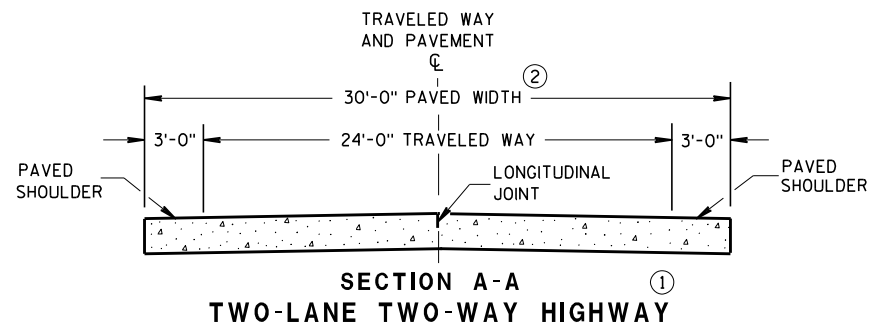


**PLAN VIEW  
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT  
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Peter Kern - 25  
DATE PAVEMENT SUPE 138  
FHWA



**GENERAL NOTES**

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

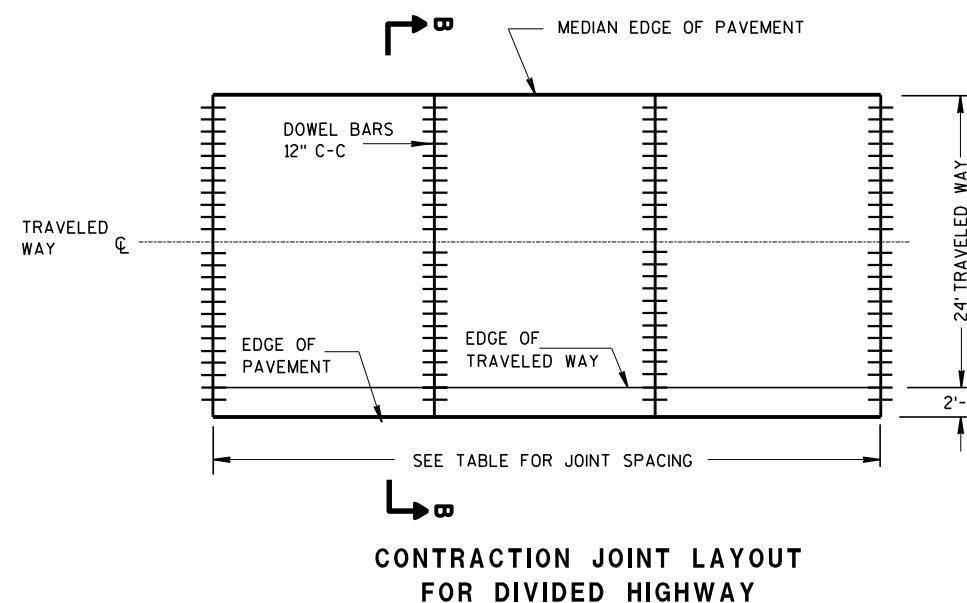
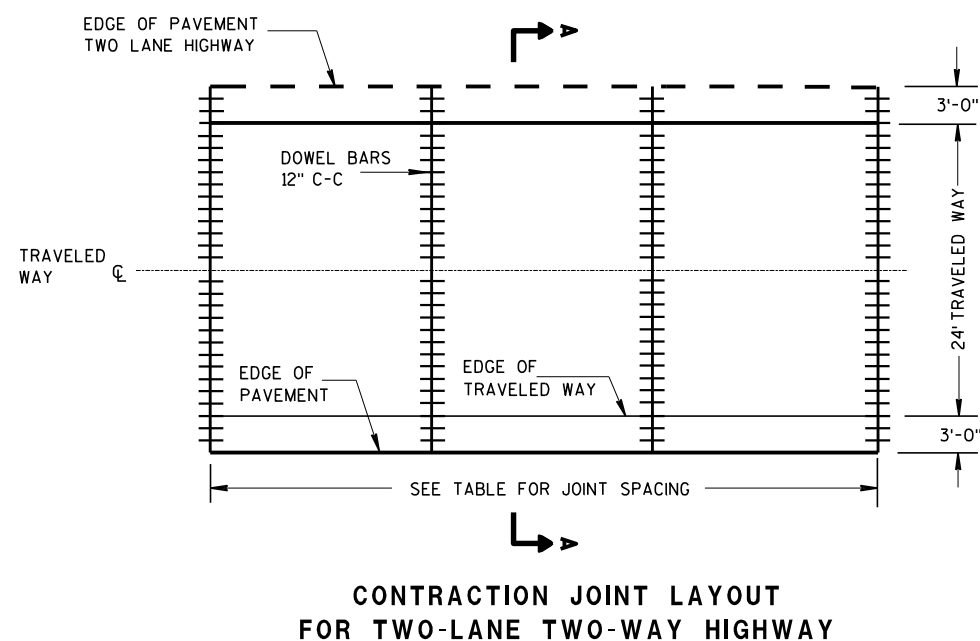
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

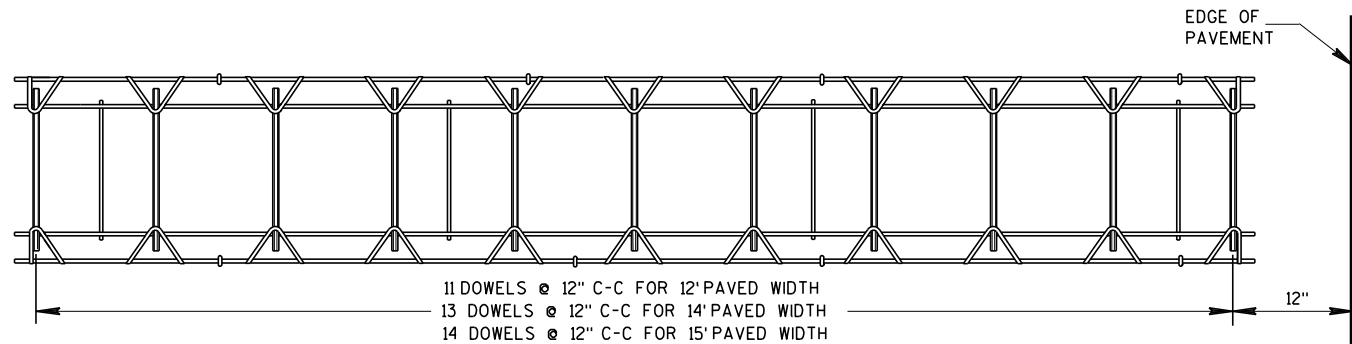
**PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

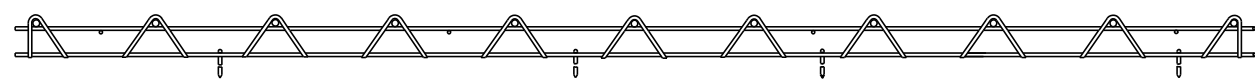


**RURAL DOWELED CONCRETE PAVEMENT**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION



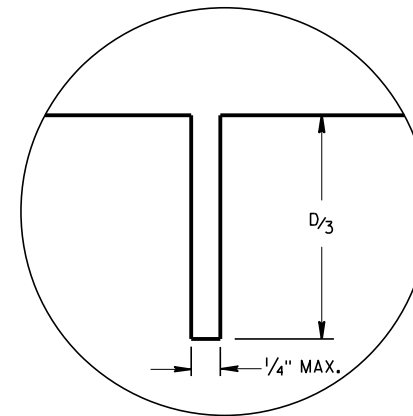
PLAN VIEW



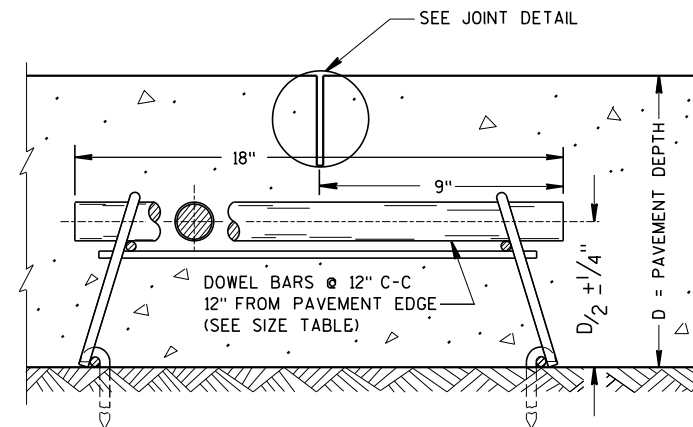
SIDE VIEW

(NORMAL TO CENTERLINE)

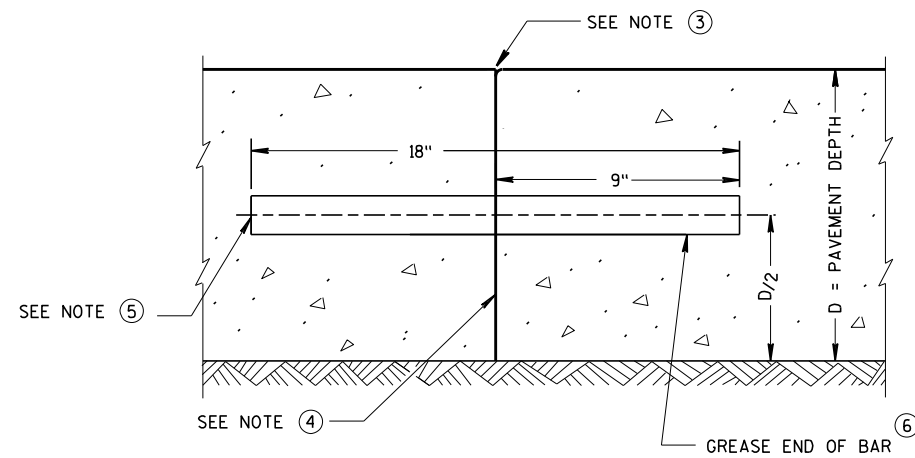
CONTRACTION JOINT DOWEL ASSEMBLY ①



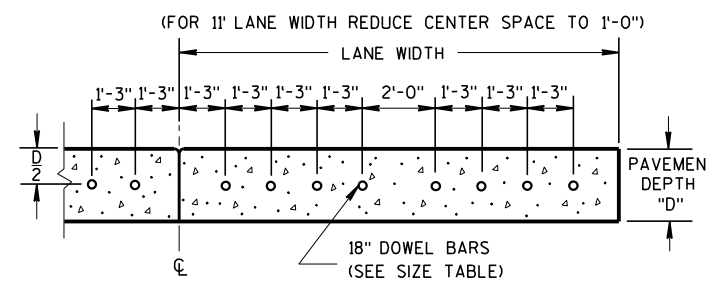
JOINT DETAIL



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT

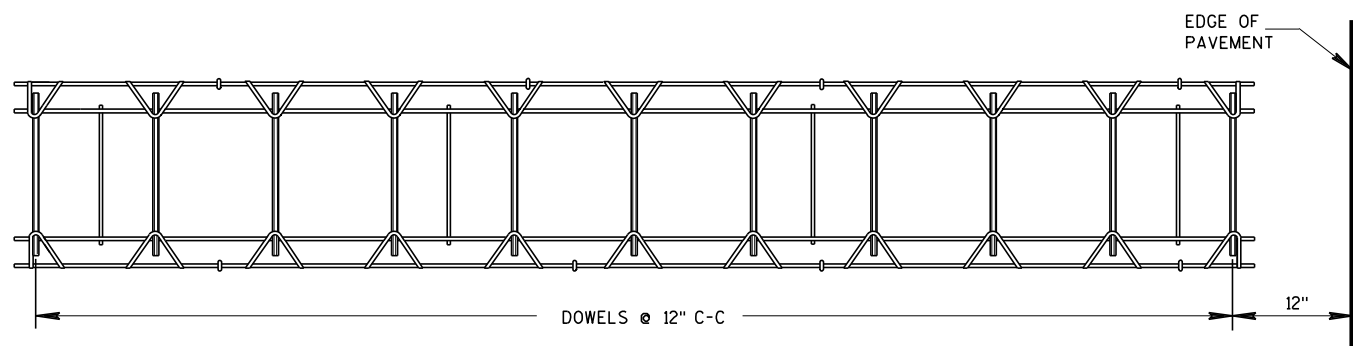
GENERAL NOTES

- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.

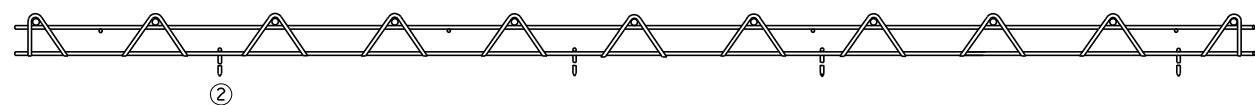
RURAL DOWELED  
 CONCRETE PAVEMENT

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 March 2018 /S/ Peter Kern P.E.  
 DATE PAVEMENT SUP 140  
 FHWA



PLAN VIEW



SIDE VIEW  
CONTRACTION JOINT DOWEL ASSEMBLY

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

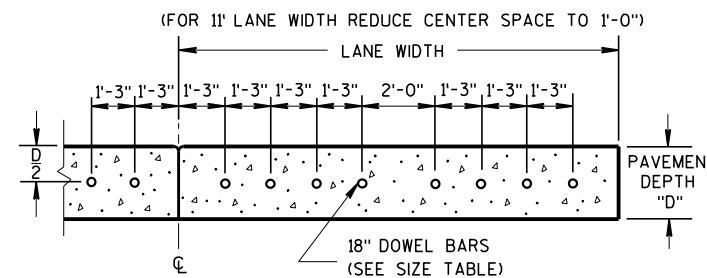
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

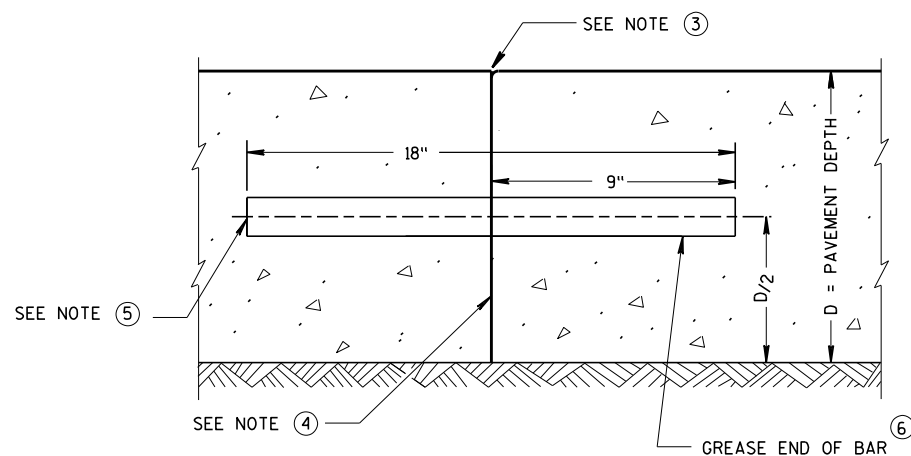
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

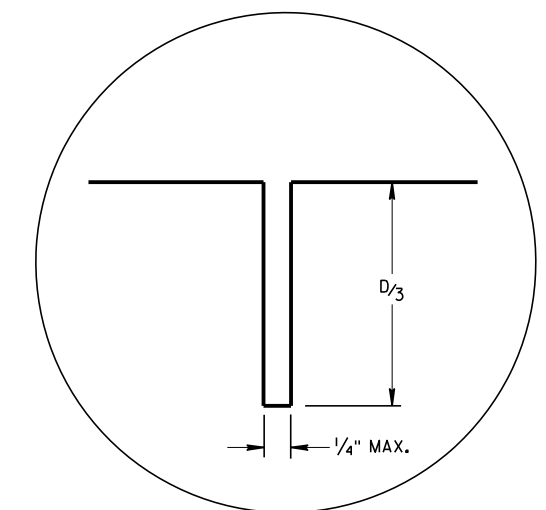
- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO DRILLED DOWEL BAR CONSTRUCTION JOINT DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



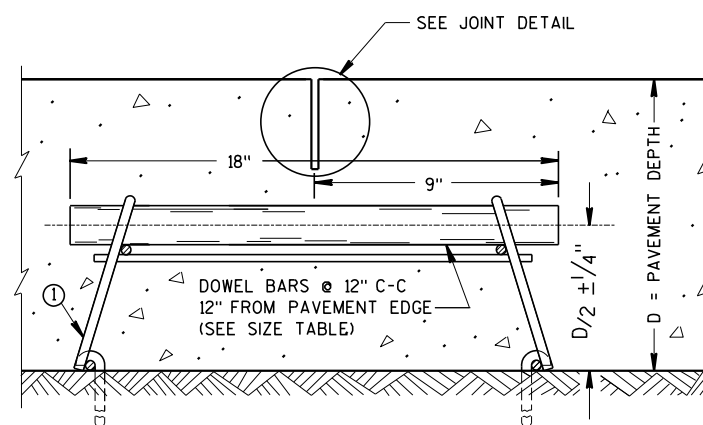
DRILLED DOWEL BAR CONSTRUCTION JOINT



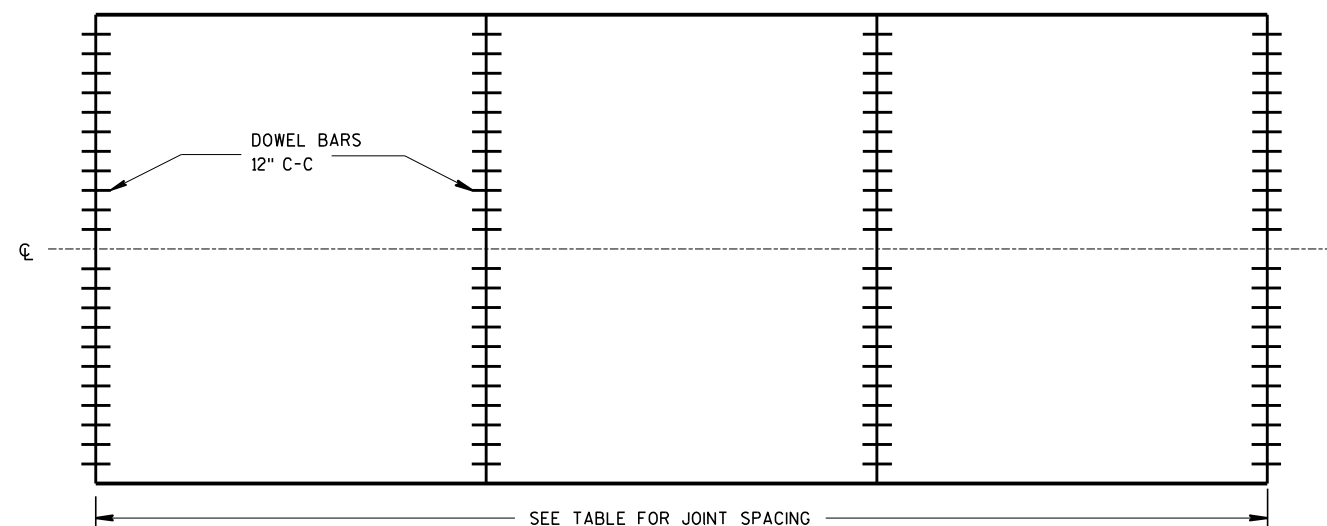
TRANSVERSE CONSTRUCTION JOINT



JOINT DETAIL



DOWELED CONTRACTION JOINT

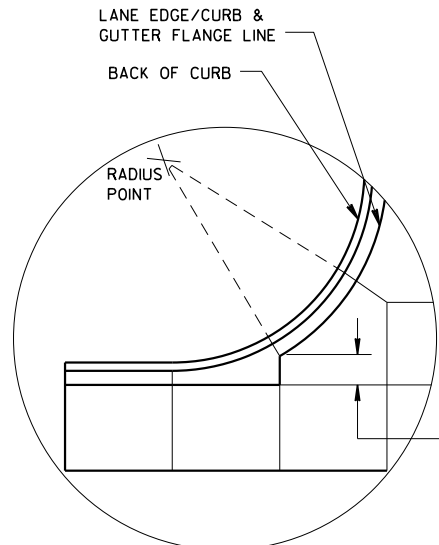


CONTRACTION JOINT LOCATIONS

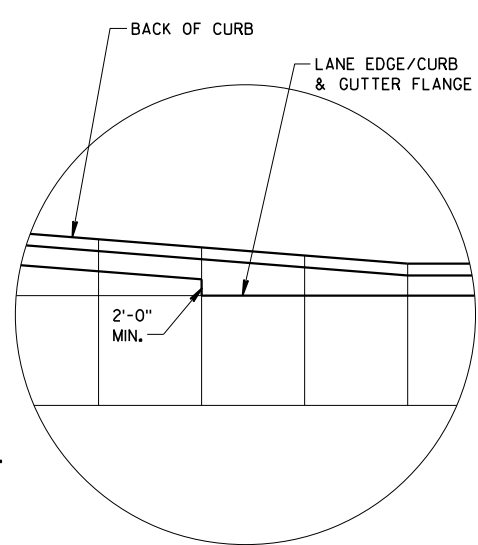
URBAN DOWELED  
CONCRETE PAVEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

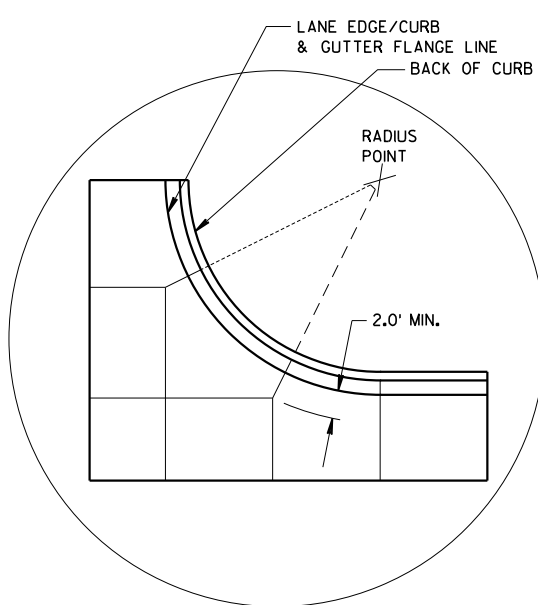
APPROVED  
March 2018 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUP 141  
FHWA



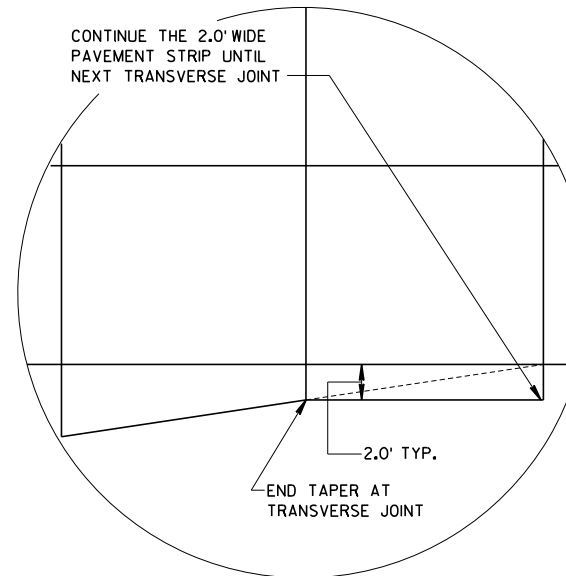
DETAIL "A"



DETAIL "B"



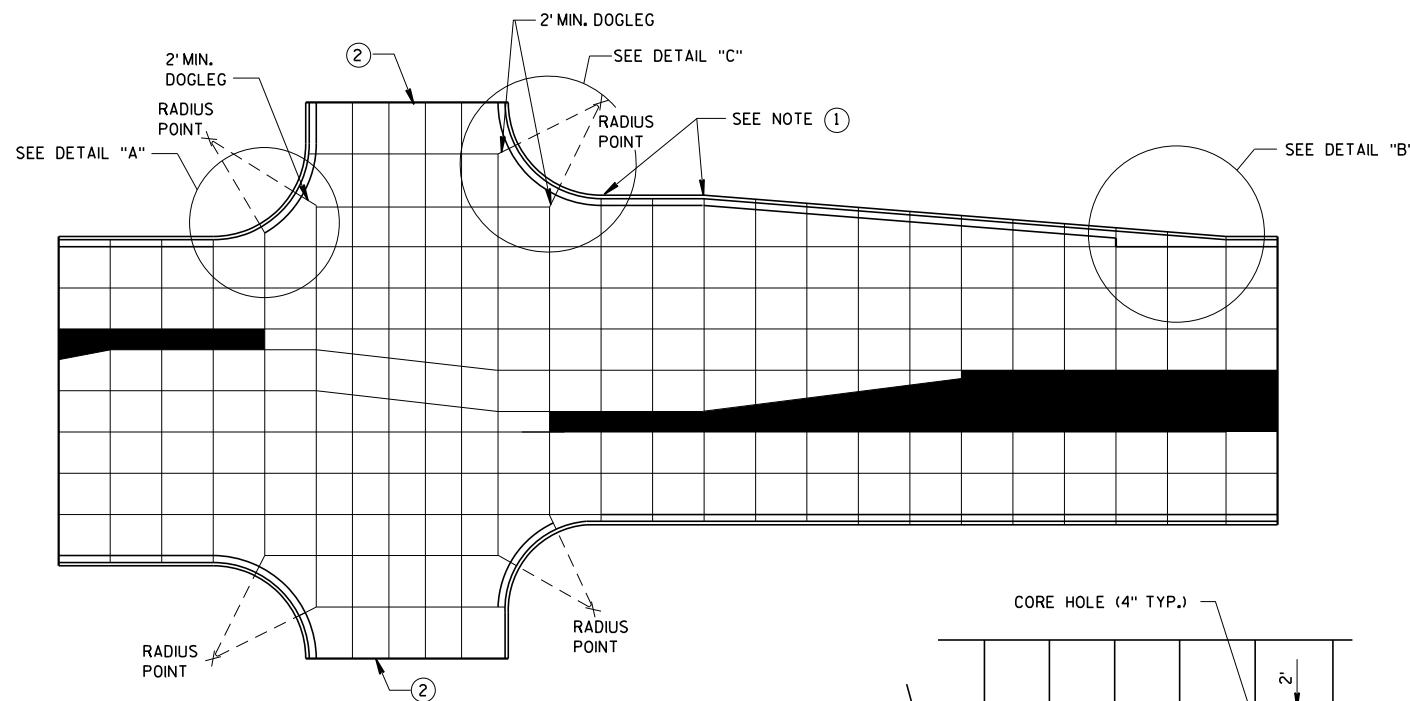
DETAIL "C"



DETAIL "D"

**GENERAL NOTES**

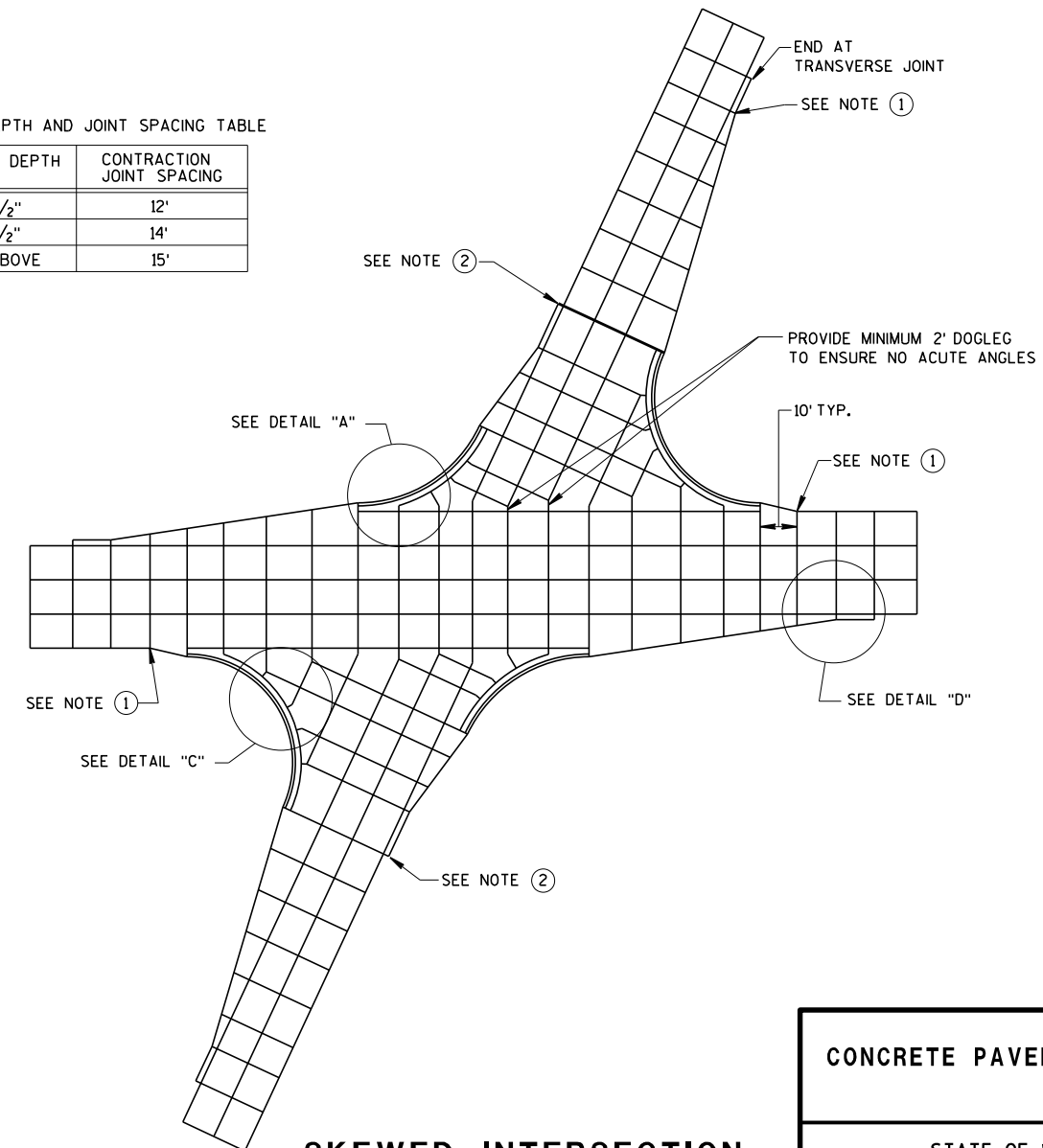
- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
  - ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
  - CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
  - ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
  - AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
  - SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
  - AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
  - CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
  2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
  3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



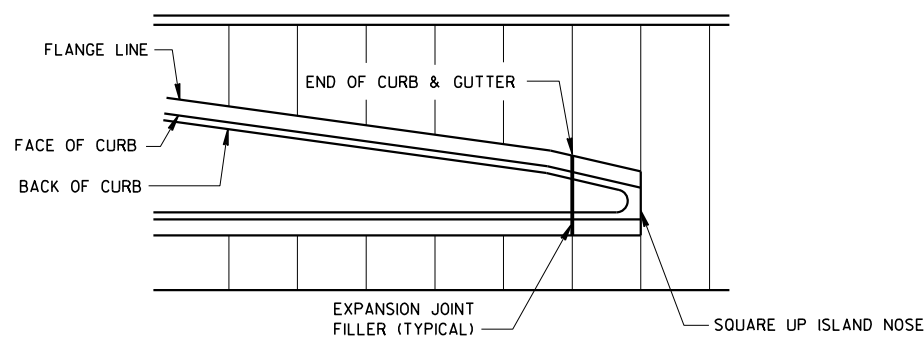
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

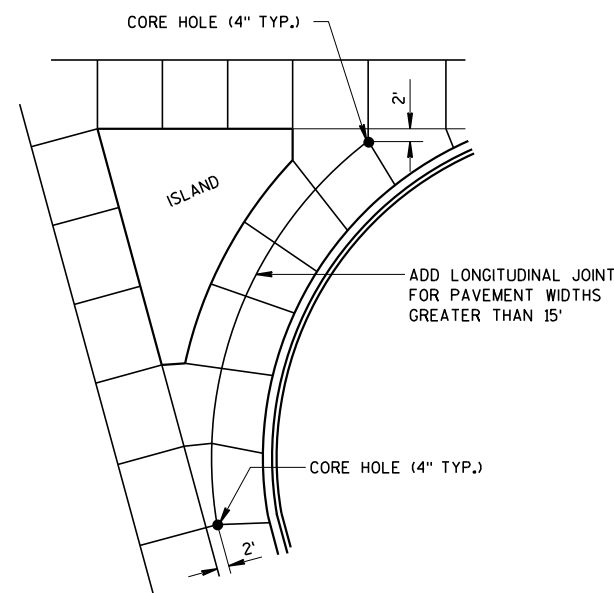
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN


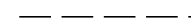



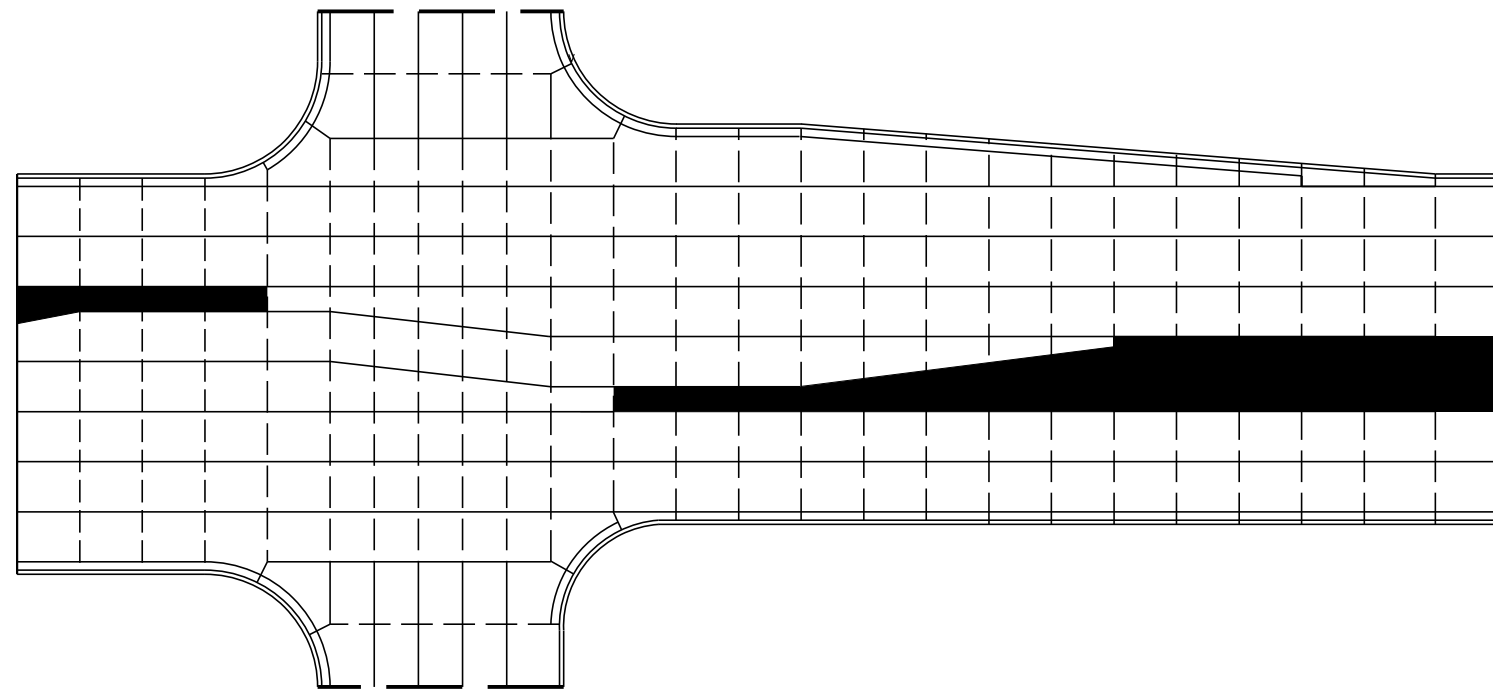
LARGE RIGHT TURN

**CONCRETE PAVEMENT JOINTING**

STATE OF WISCONSIN<sup>142</sup>  
DEPARTMENT OF TRANSPORTATION

**LEGEND**

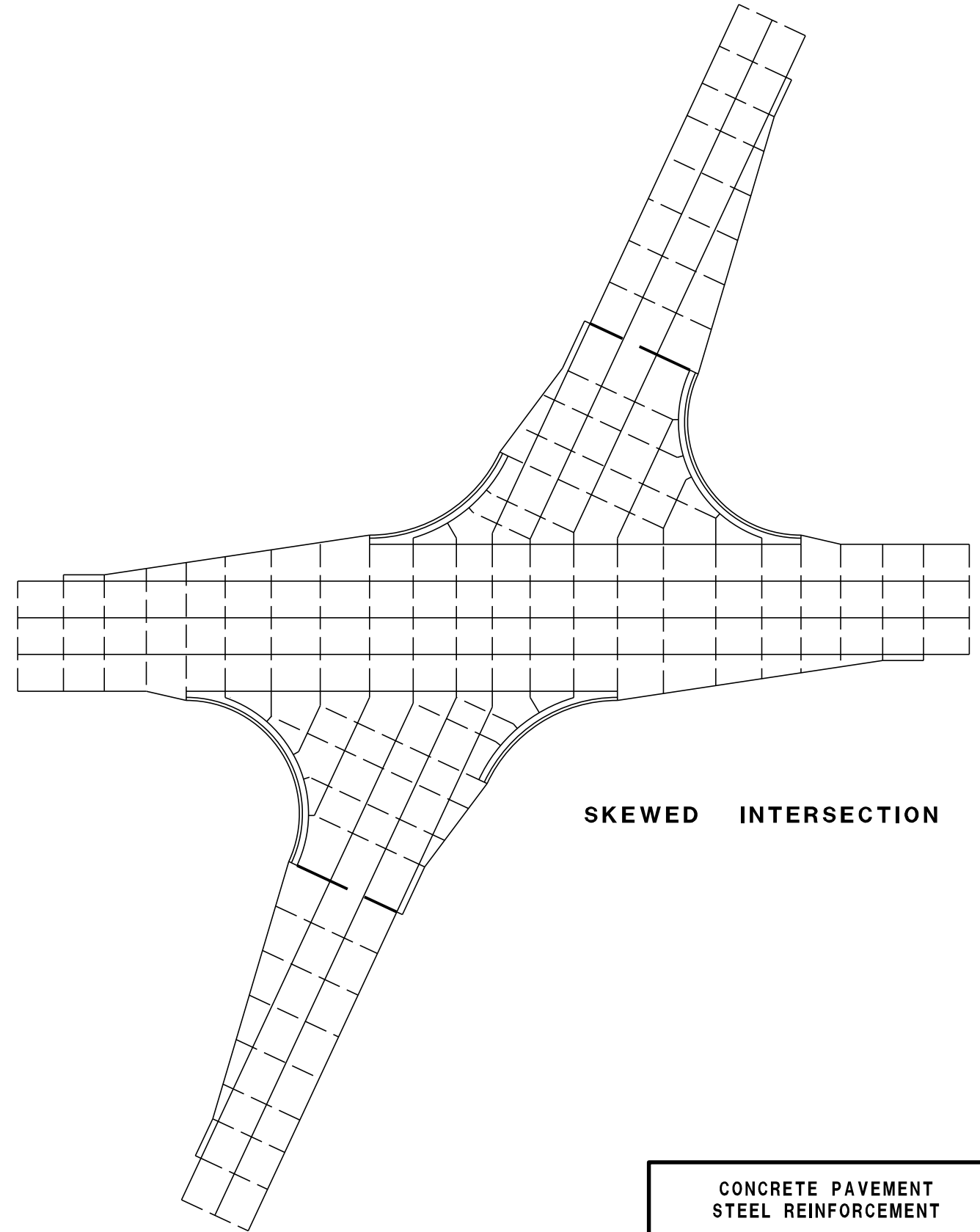
-  POTENTIAL DOWELED EXPANSION JOINT
-  DOWELED JOINT
-  TIED JOINT



**STANDARD INTERSECTION**

**GENERAL NOTES**

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

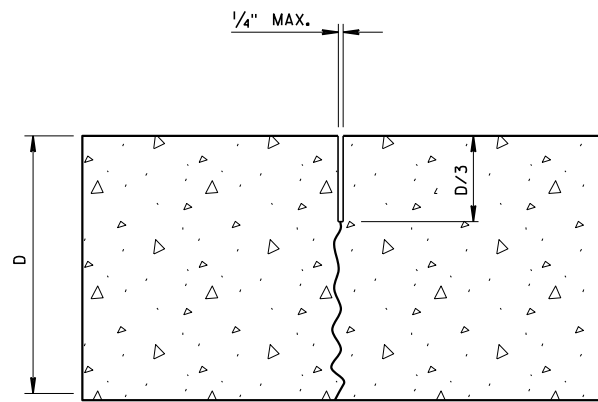


**SKEWED INTERSECTION**

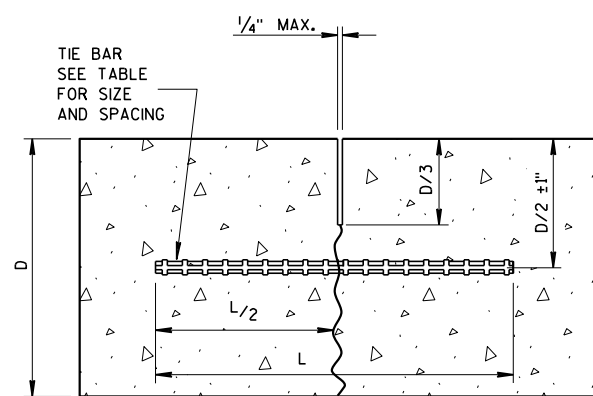
**CONCRETE PAVEMENT  
STEEL REINFORCEMENT**

STATE OF WISCONSIN<sup>143</sup>  
DEPARTMENT OF TRANSPORTATION





**UNDOWELED-TRANSVERSE**



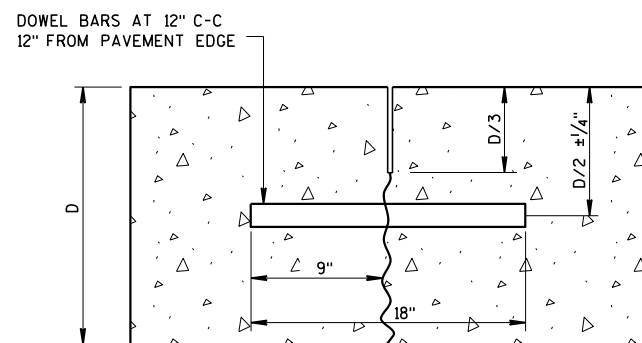
**TIED LONGITUDINAL**

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

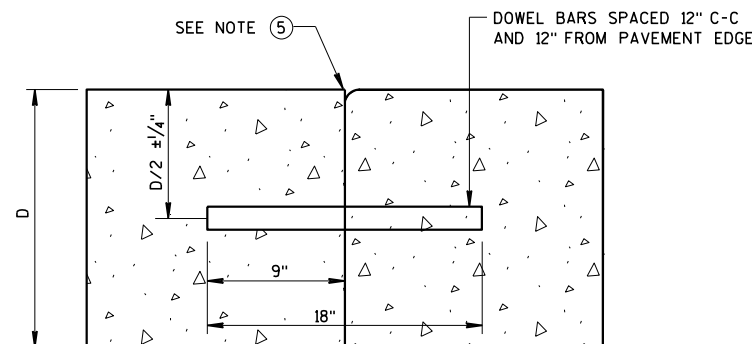
\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)  
 \*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**GENERAL NOTES**

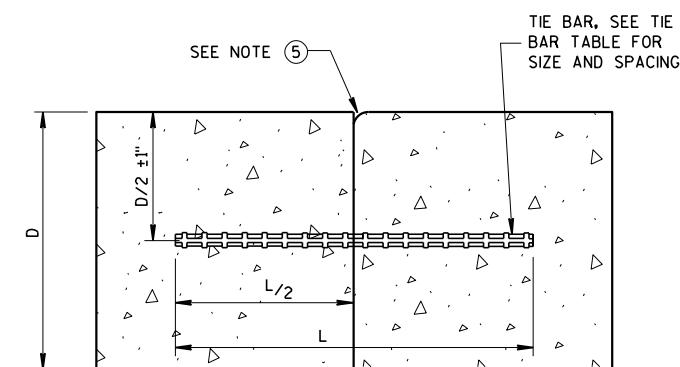
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



**DOWELED-TRANSVERSE**



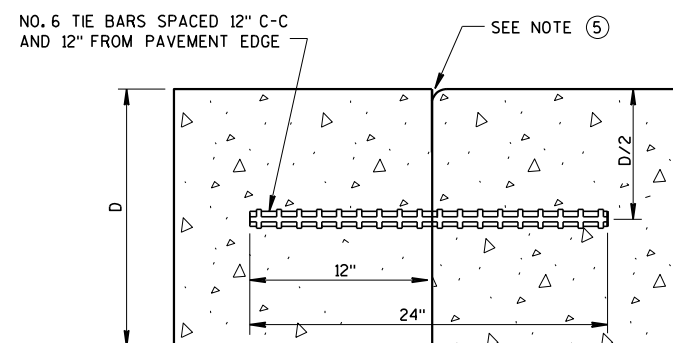
**DOWELED TRANSVERSE ③**



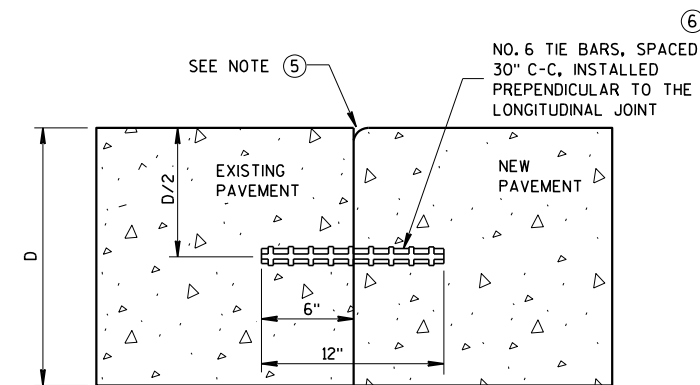
**TIED LONGITUDINAL**

**CONTRACTION JOINTS**

SEE NOTE ②



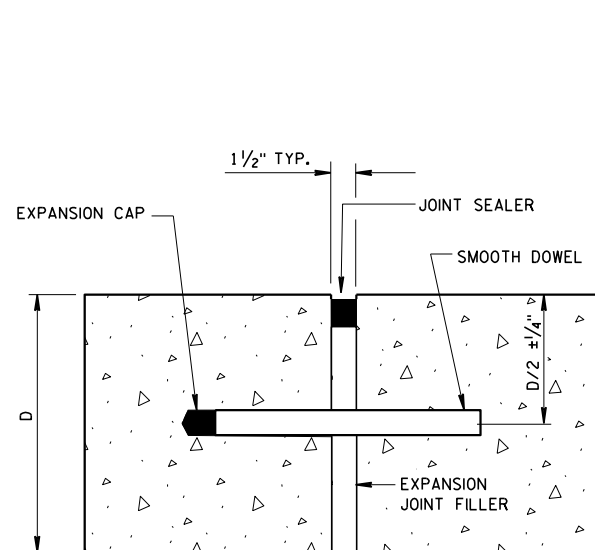
**TIED TRANSVERSE ③**  
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



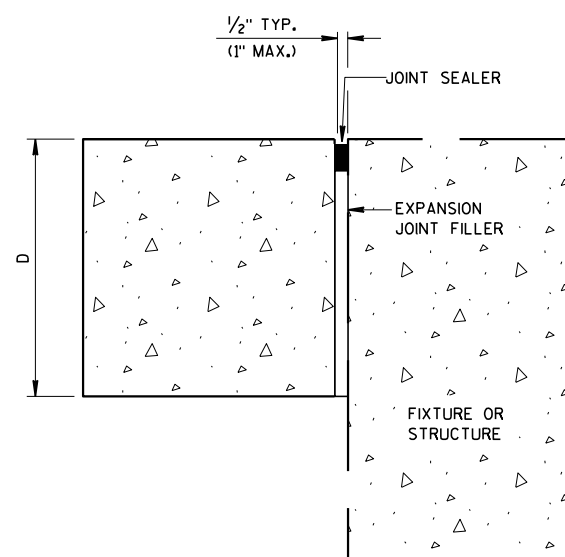
**TIED LONGITUDINAL TO EXISTING**

**CONSTRUCTION JOINTS**

SEE NOTE ④



**DOWELED-TRANSVERSE**  
SEE NOTE ①

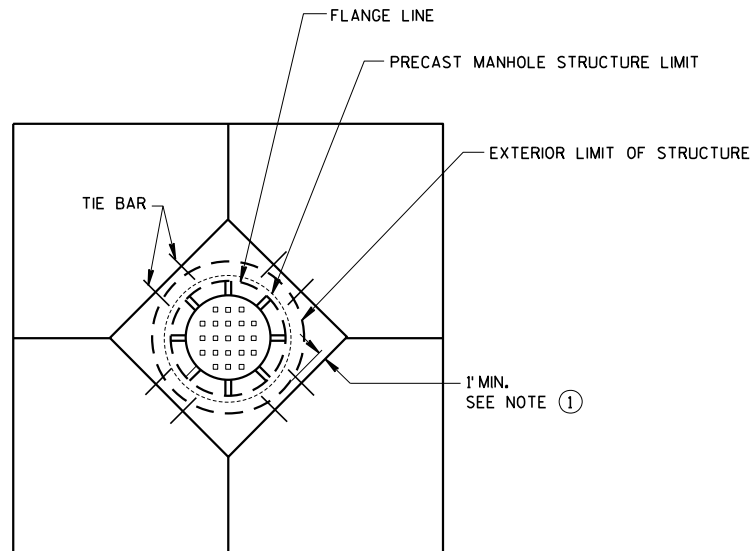


**UNTIED-LONGITUDINAL**

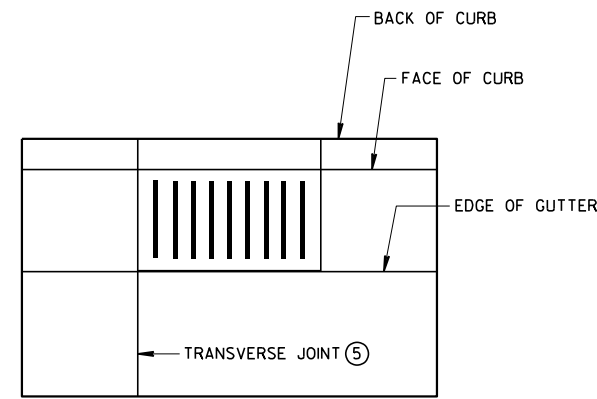
**EXPANSION JOINTS**

**CONCRETE PAVEMENT  
JOINT TYPES**

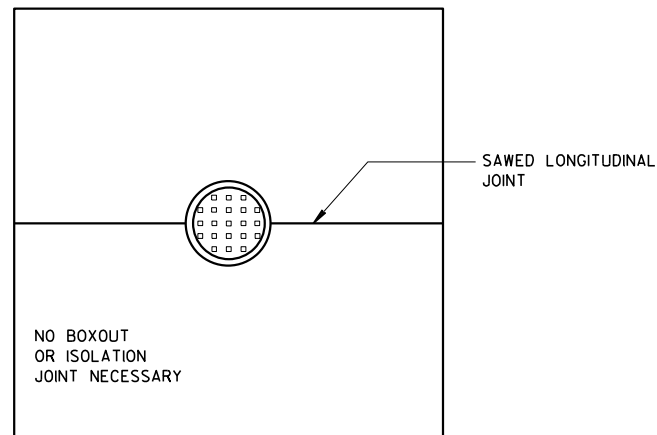
STATE OF WISCONSIN 144  
DEPARTMENT OF TRANSPORTATION



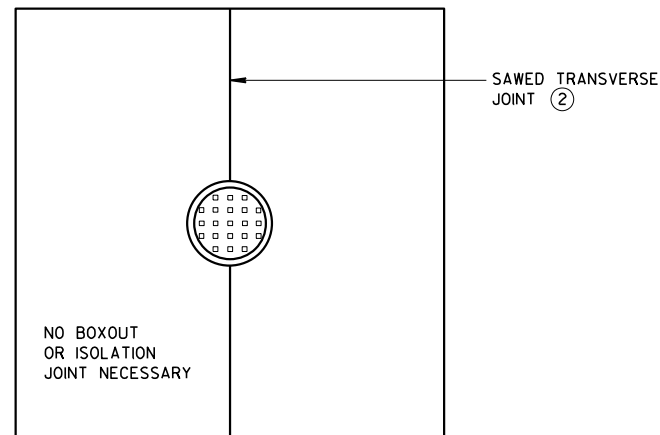
**DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS**



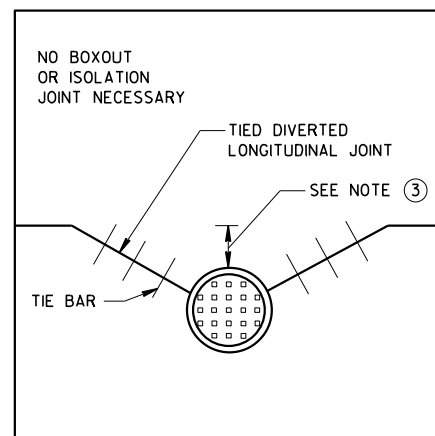
**INLET WITH TRANSVERSE JOINT**



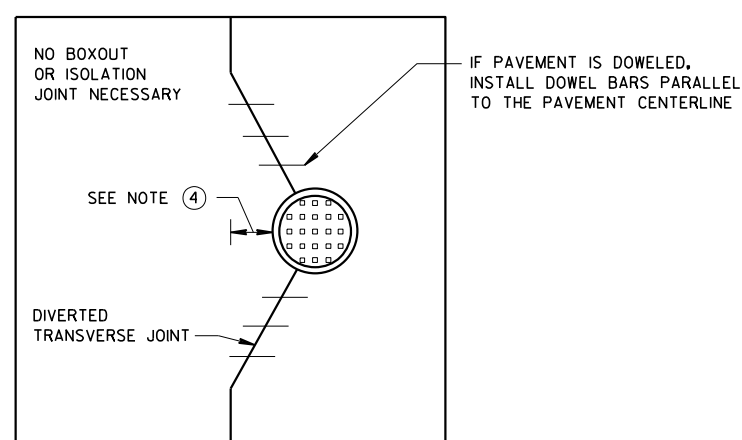
**MANHOLE WITH LONGITUDINAL JOINT**



**MANHOLE WITH TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT**

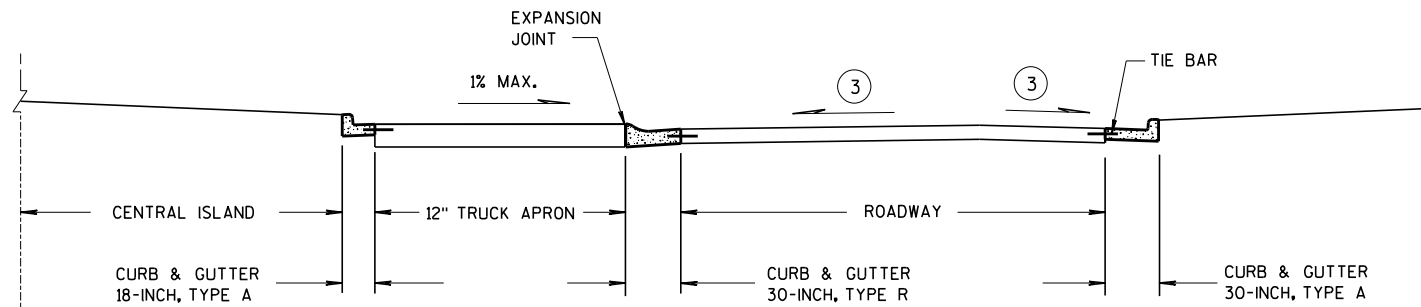


**MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT**

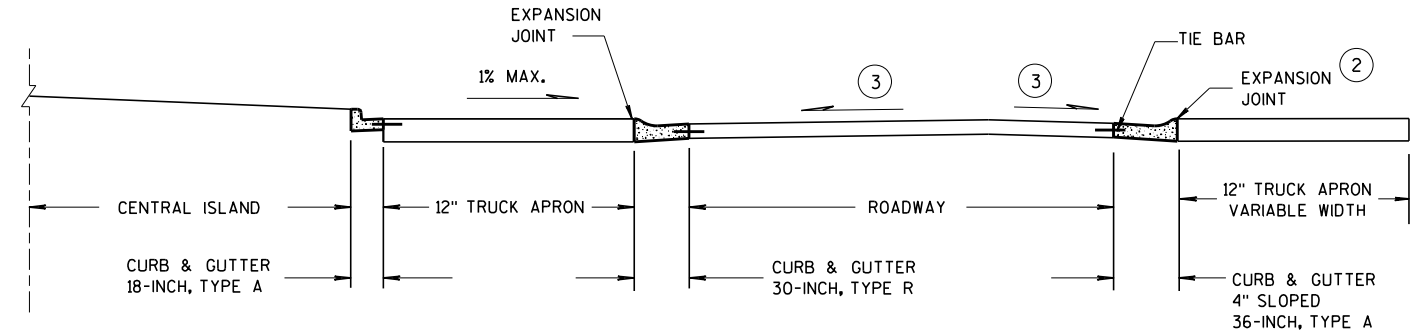
**GENERAL NOTES**

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

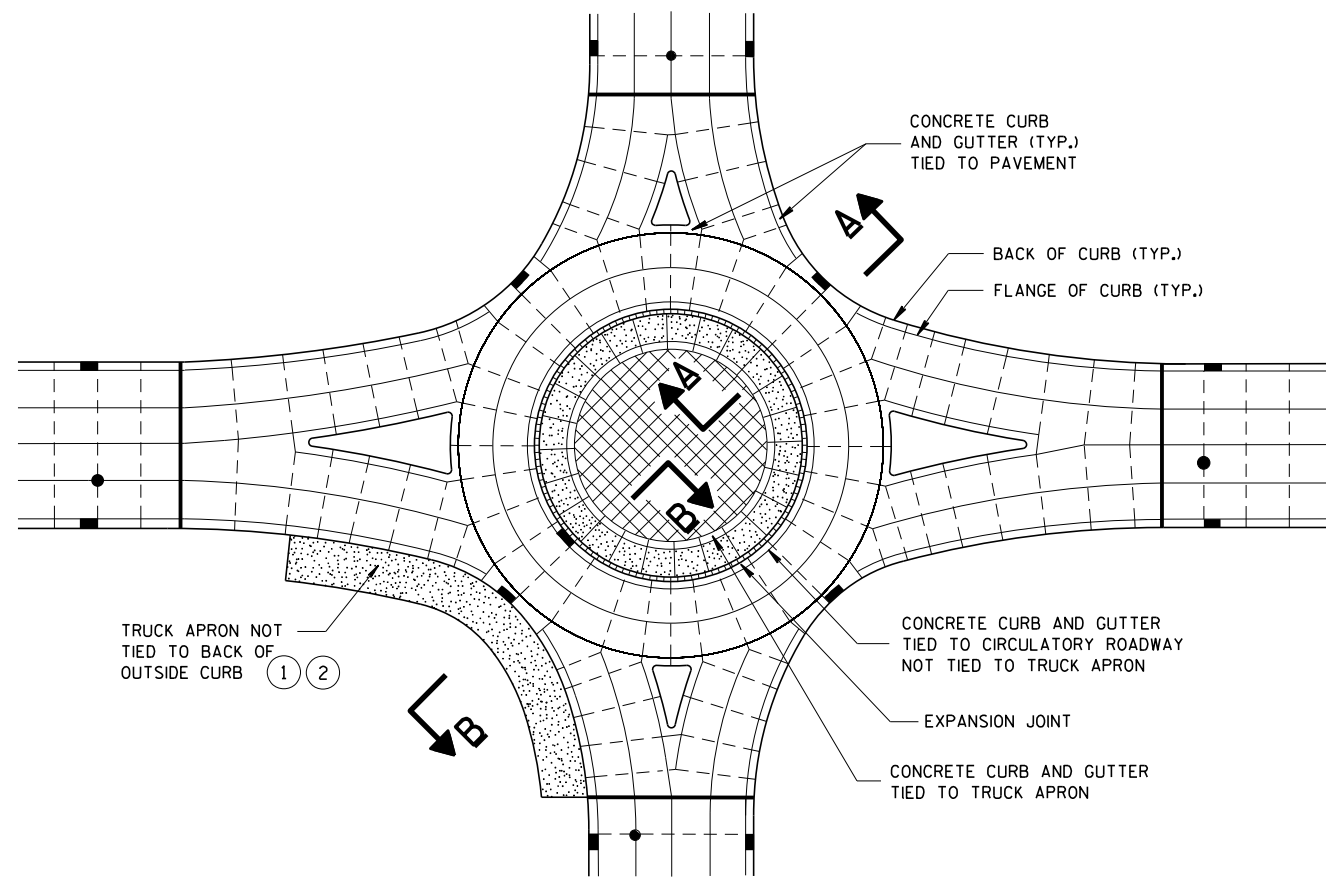
<b>CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/s/ Peter K... PAVEMENT SUP... 145
FHWA	



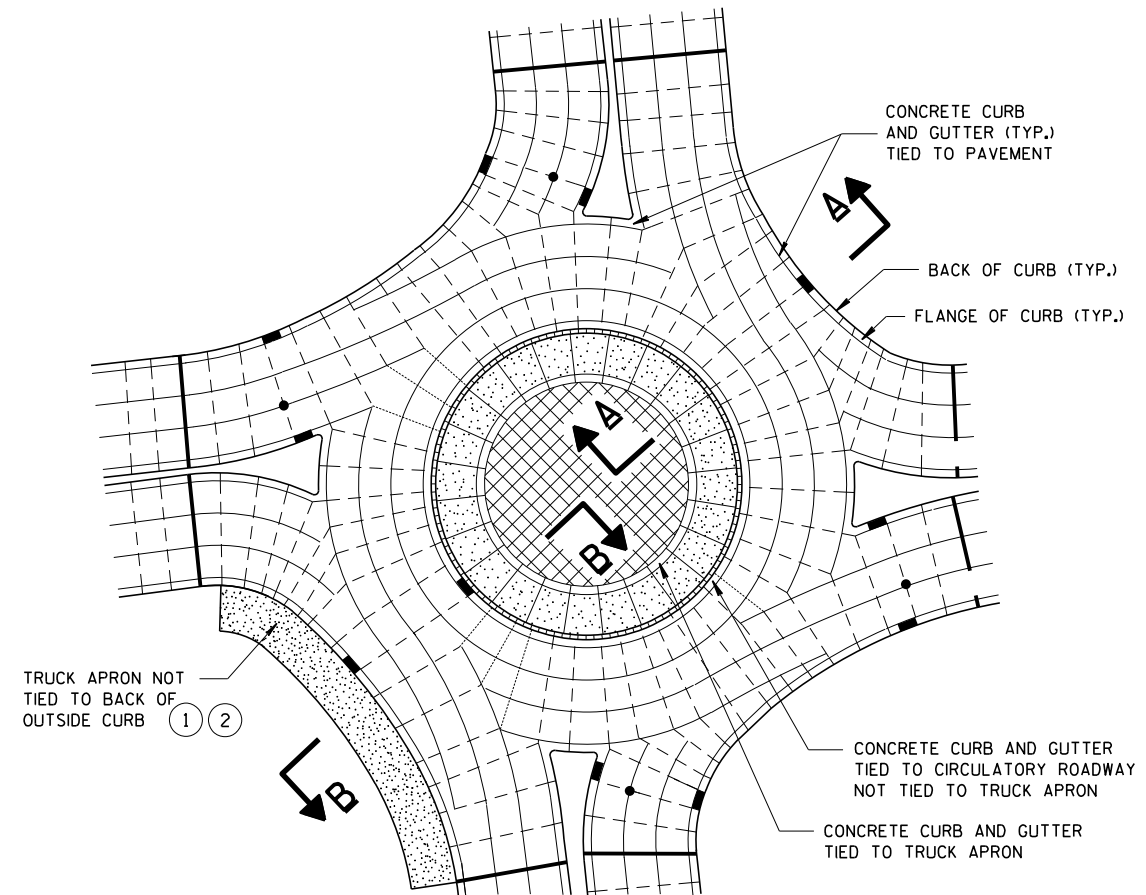
SECTION A-A



SECTION B-B



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

**GENERAL NOTES**

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 SHEET "a".

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

- ① DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE/OVERWEIGHT VEHICLES.
- ② TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON WIDTH IS LESS THAN 3 FEET.
- ③ CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

**LEGEND**

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- [Stippled Box] TRUCK APRON
- [Cross-hatched Box] CENTRAL ISLAND
- [Square with Dot] UTILITY STRUCTURES

**CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

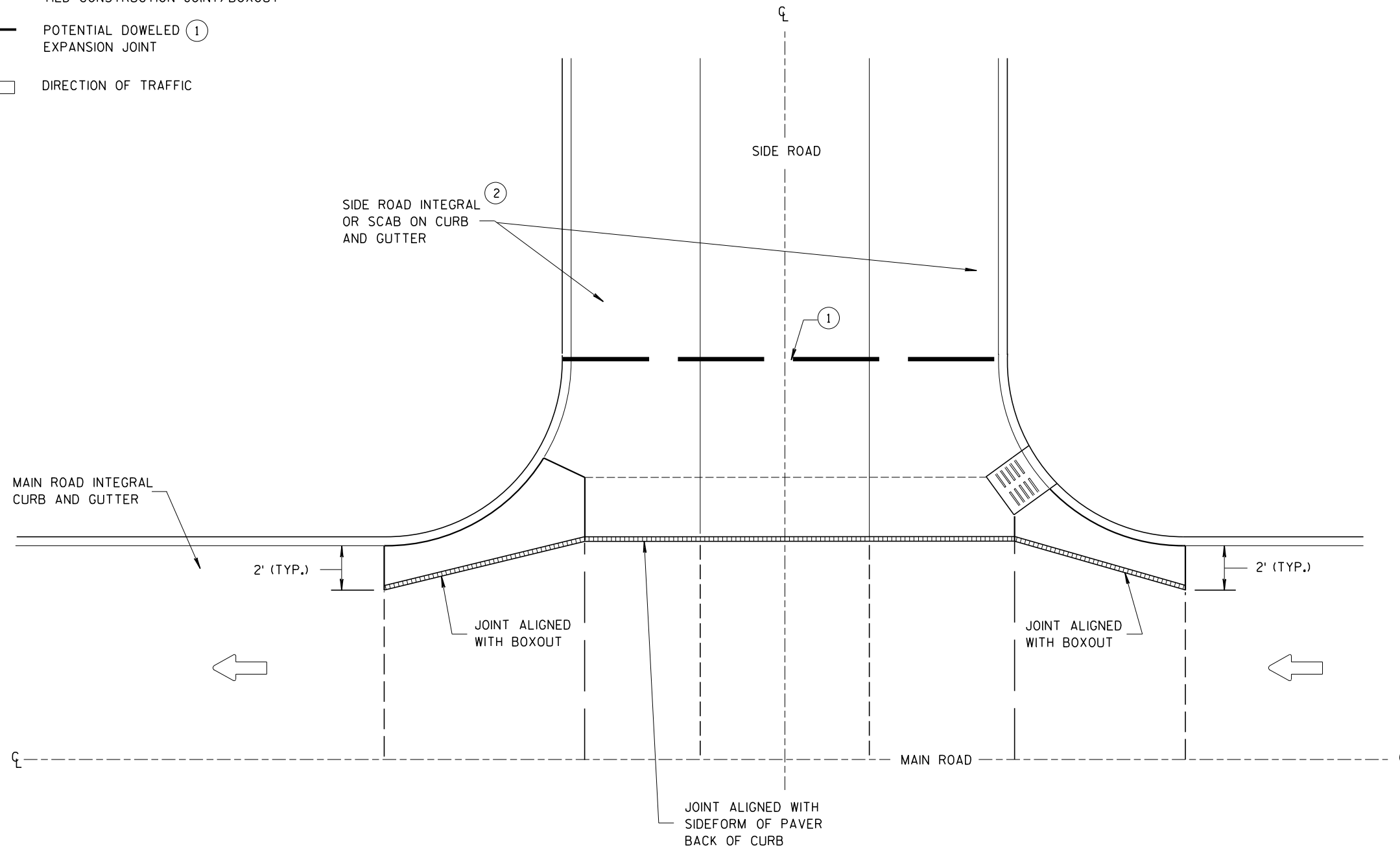
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March 2018 /S/ Peter Ke...  
DATE PAVEMENT SUP 146  
FHWA

**LEGEND**

- — — — DOWELED JOINT
- — — — TIED JOINT
- ▤ TIED CONSTRUCTION JOINT/BOXOUT
- — — — POTENTIAL DOWELED (1)  
EXPANSION JOINT
- ← DIRECTION OF TRAFFIC

**GENERAL NOTES**

- (1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH, ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- (2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USED.

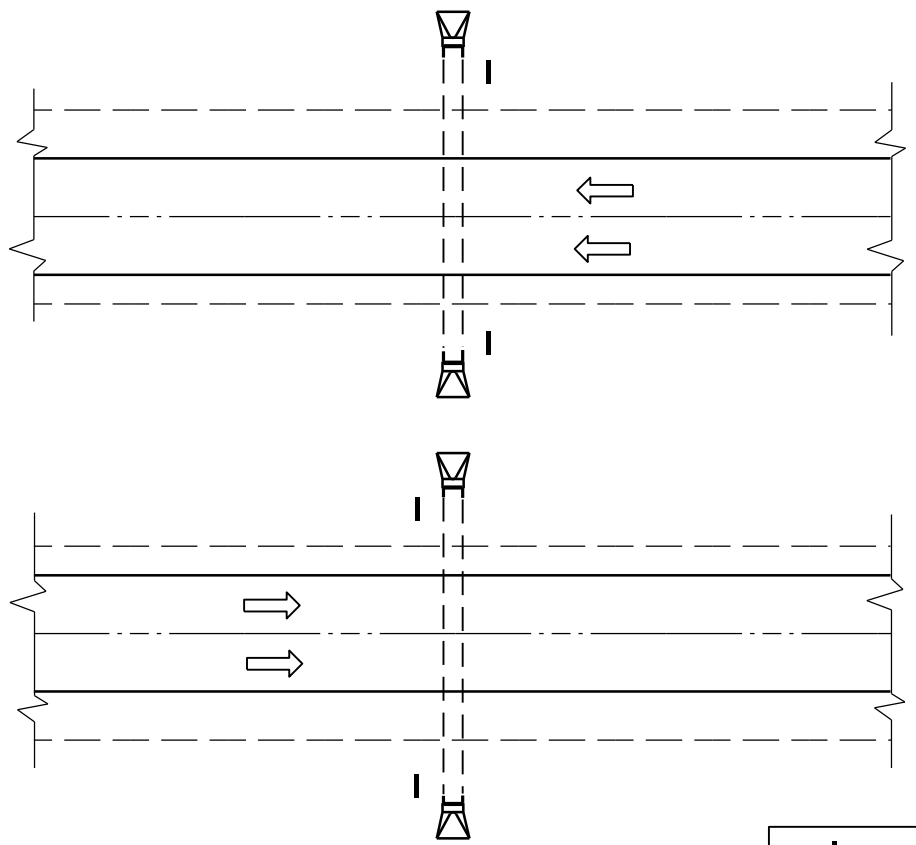


**INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

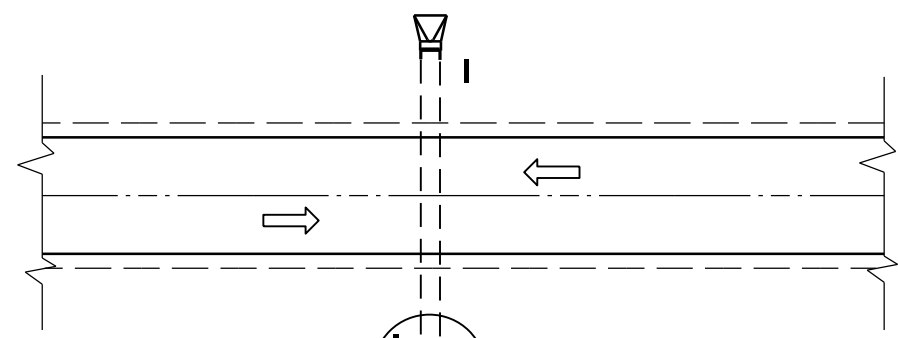
**CONCRETE PAVEMENT  
INTERSECTION BOXOUT FOR  
INTEGRAL CURB AND GUTTER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

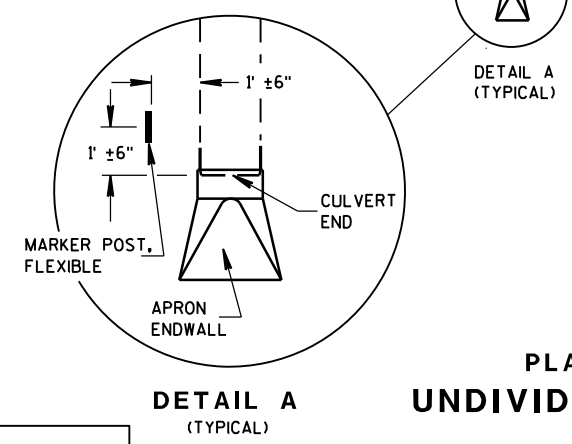
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DATE PAVEMENT SUR 147  
FHWA



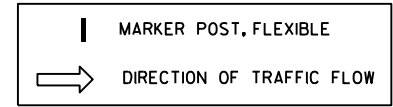
PLAN VIEW  
DIVIDED HIGHWAY



PLAN VIEW  
UNDIVIDED HIGHWAY

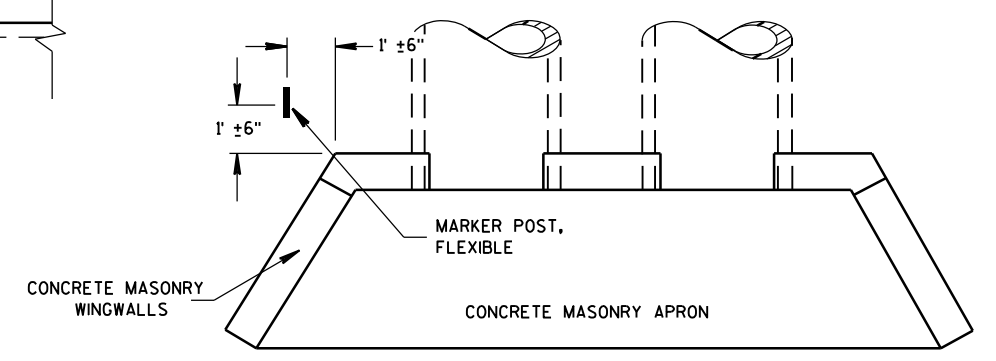


DETAIL A  
(TYPICAL)



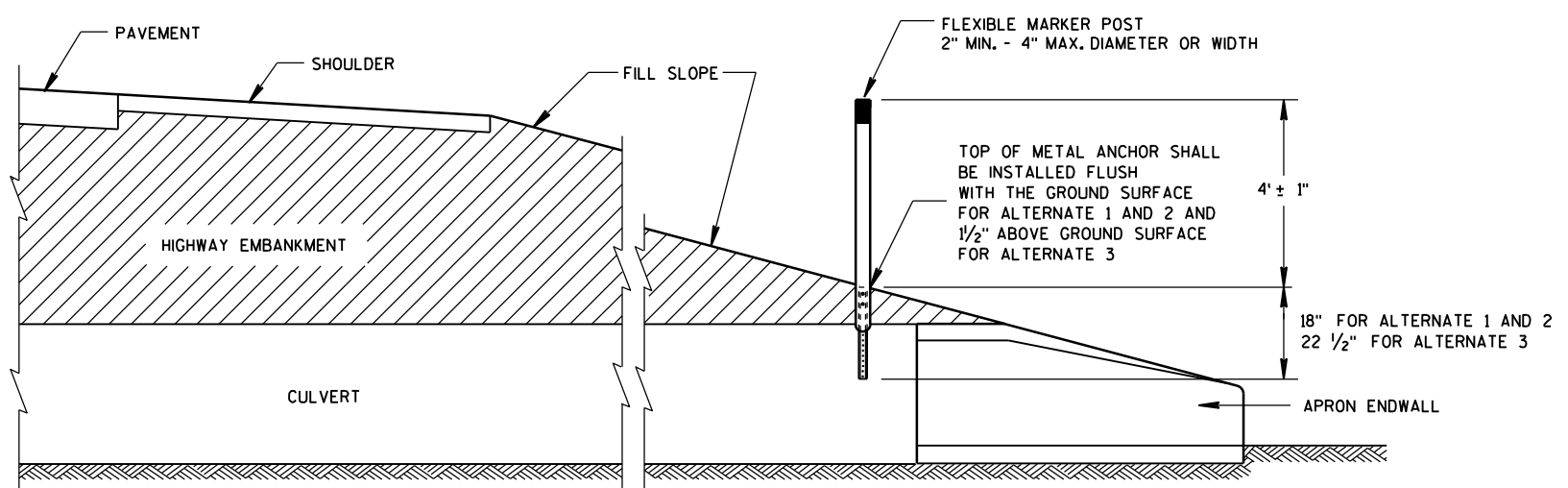
**GENERAL NOTES**

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.



PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH

**FLEXIBLE MARKER POST LOCATION**



CROSS SECTION  
FLEXIBLE MARKER POST

**FLEXIBLE MARKER POST  
FOR CULVERT END**

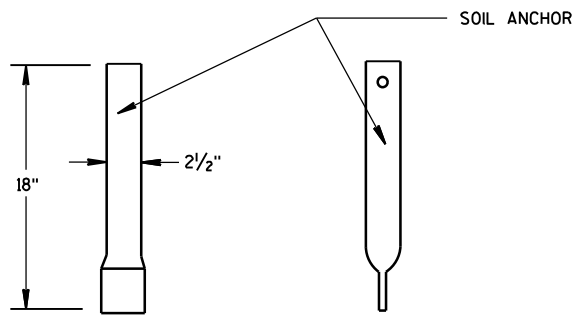
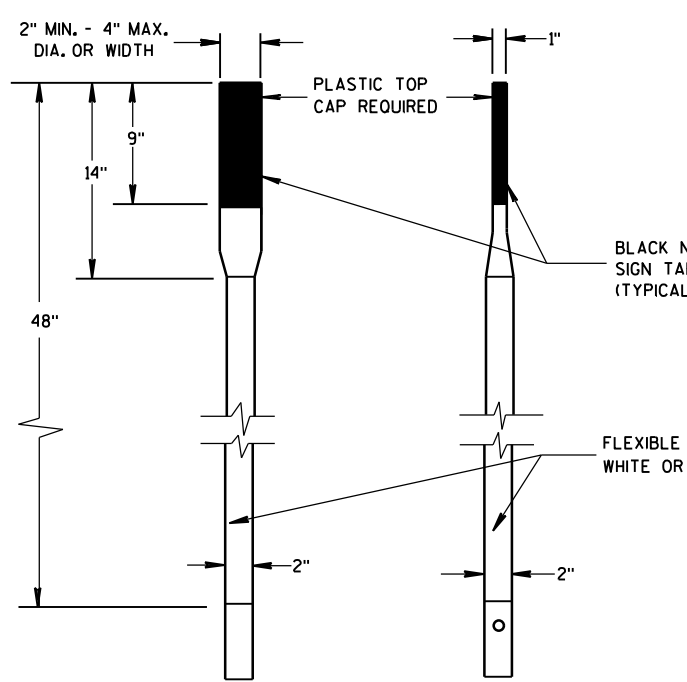
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 148

6

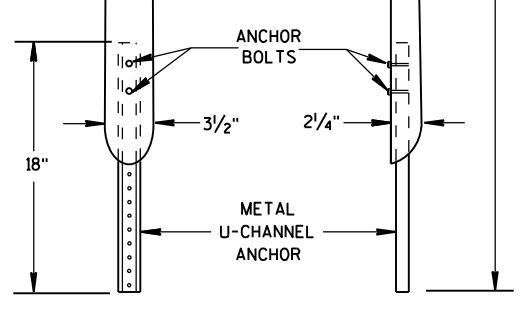
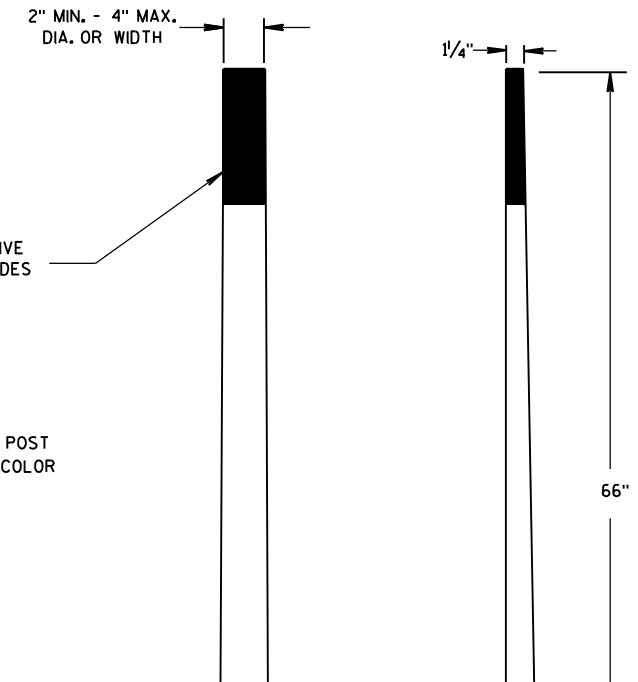
6

S.D.D. 15 A 3-2a

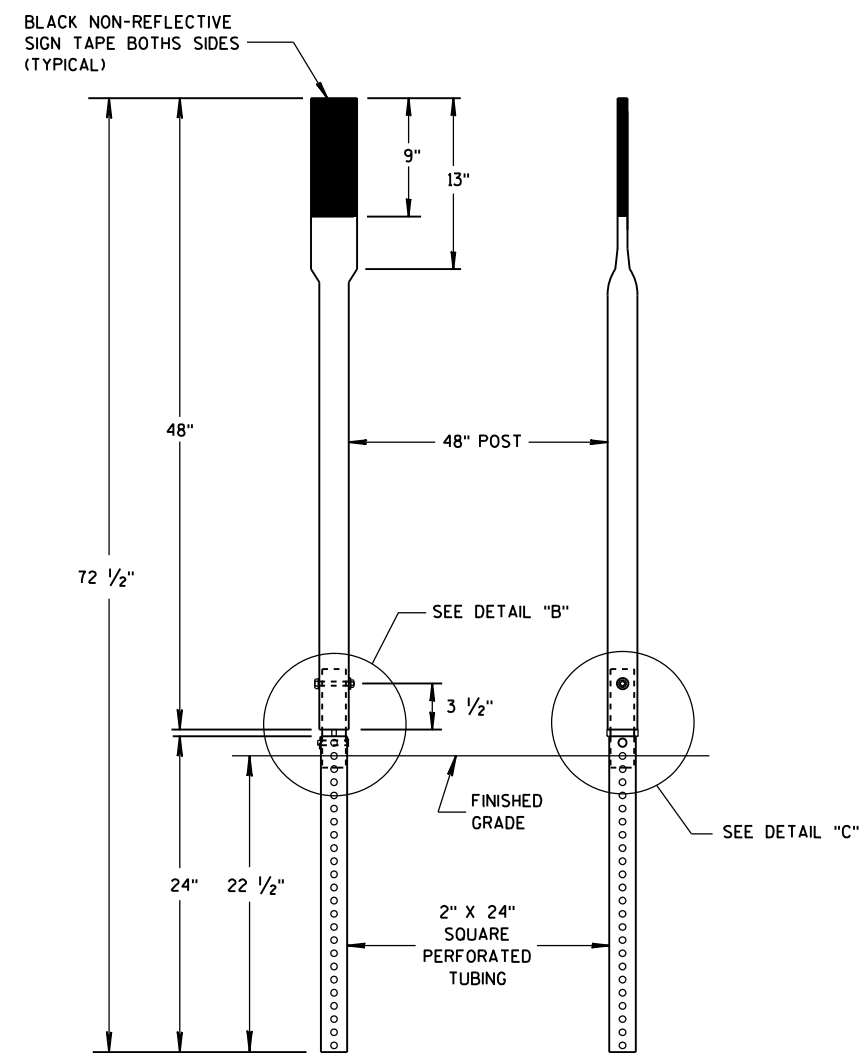
S.D.D. 15 A 3-2a



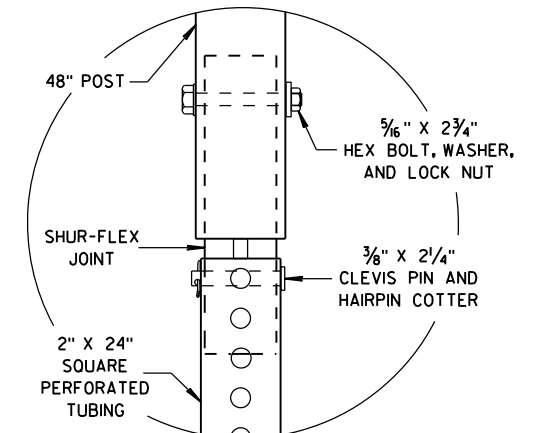
FRONT VIEW SIDE VIEW  
ALTERNATE 1



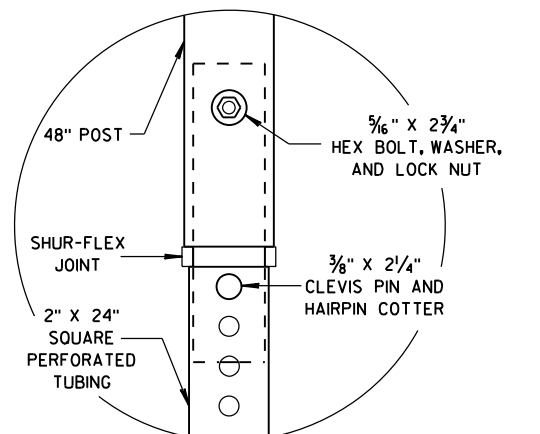
FRONT VIEW SIDE VIEW  
ALTERNATE 2



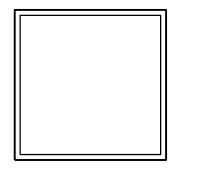
FRONT VIEW SIDE VIEW  
ALTERNATE 3



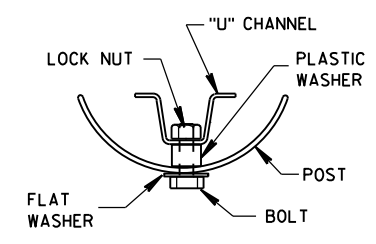
DETAIL B



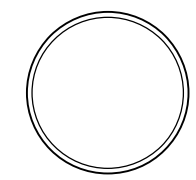
DETAIL C



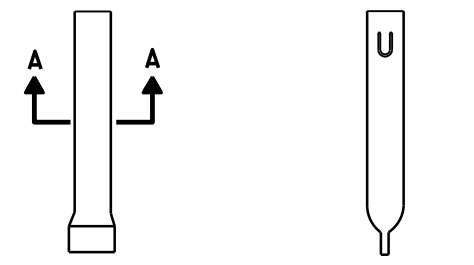
SECTION C-C



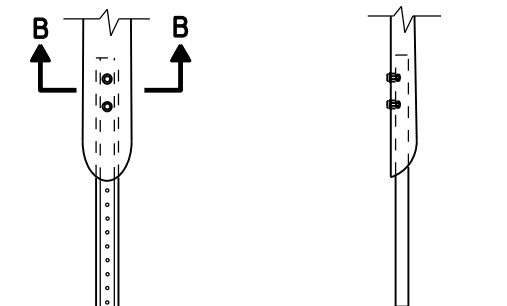
SECTION B-B



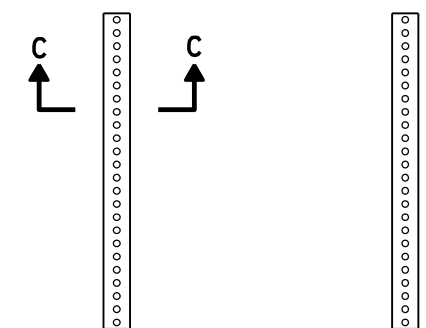
SECTION A-A



FRONT VIEW SIDE VIEW  
ALTERNATE 1



FRONT VIEW SIDE VIEW  
ALTERNATE 2



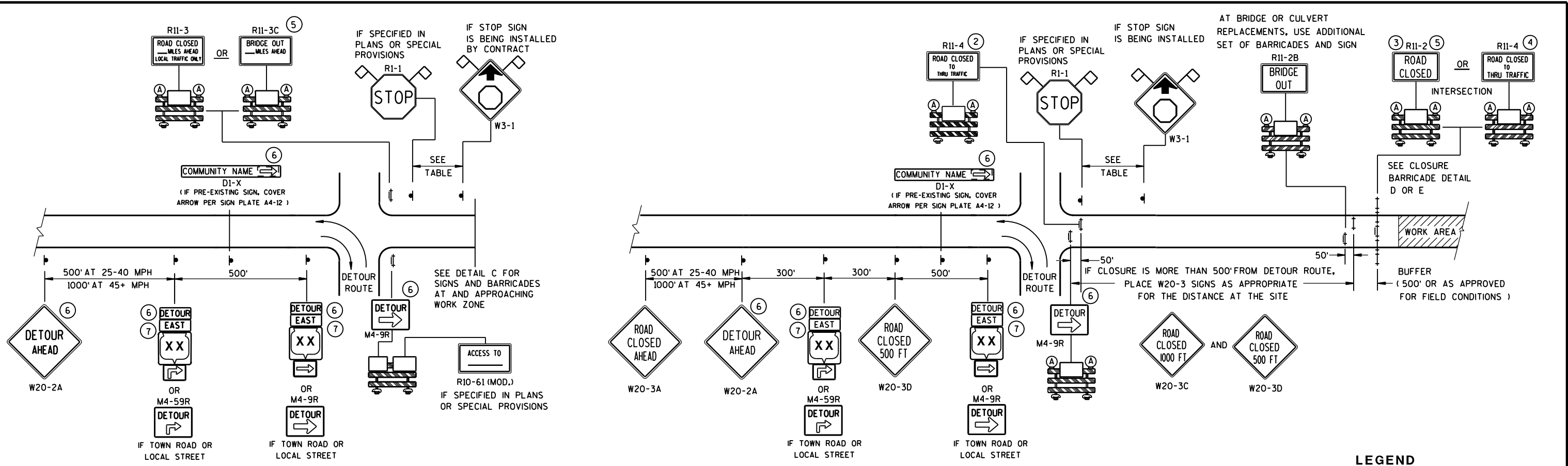
FRONT VIEW SIDE VIEW  
ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/1/2012 /S/ Travis Feltes  
DATE STATE TRAFFIC ENGINEER 149 IGN  
FHWA

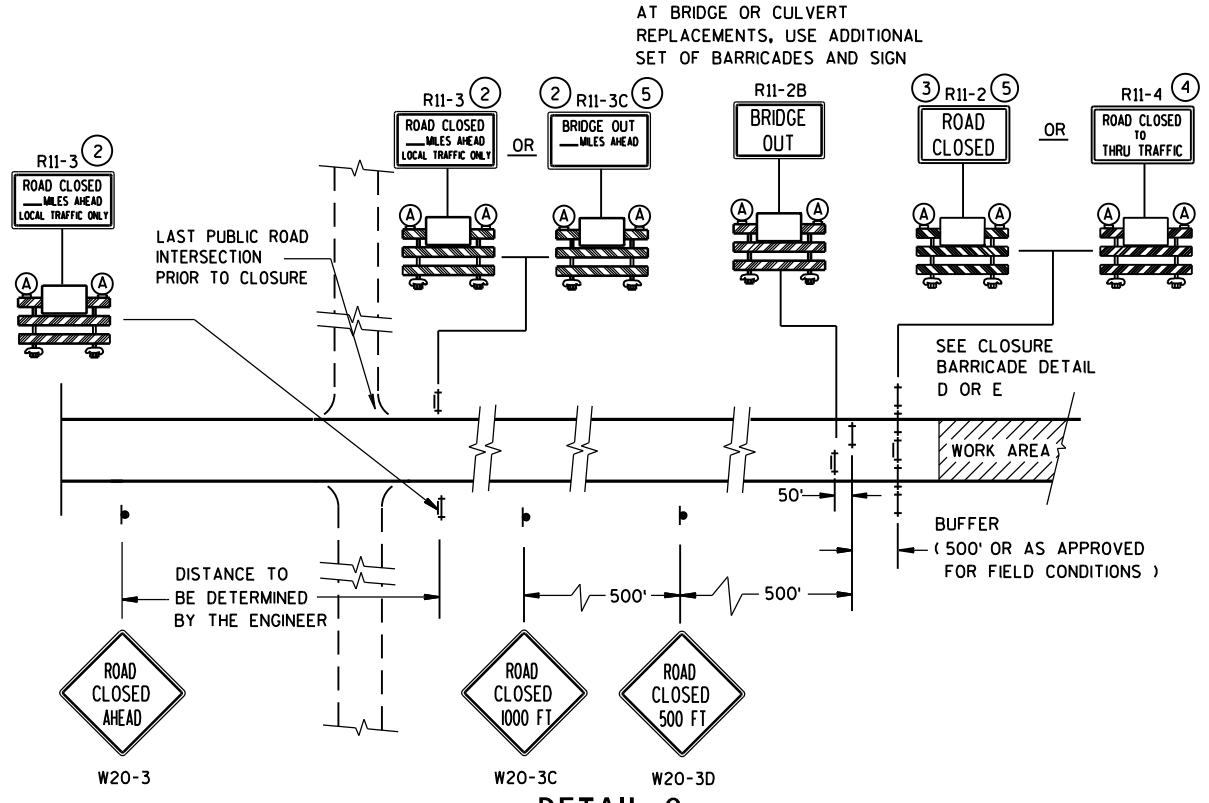


**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
 WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

**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
  - DETOUR EAST M4-8 OR M3-X
  - XX OR COUNTY XX OR XX M1-4 OR M1-5A OR M1-6
  - OR M05-1 OR M06-1
  - ◇ 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



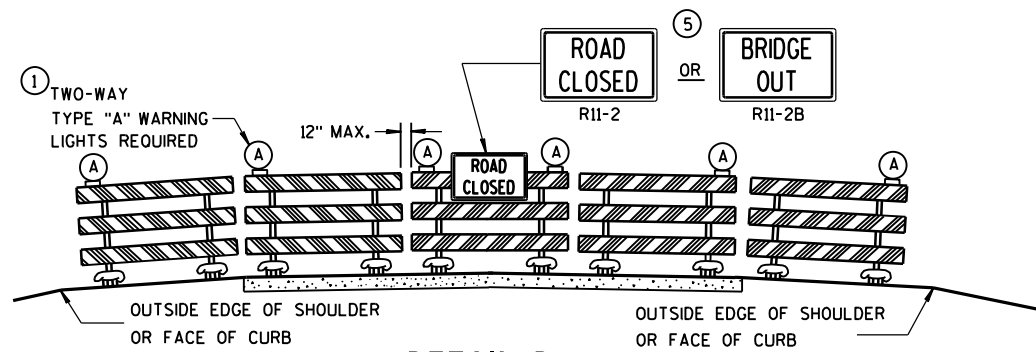
**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

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

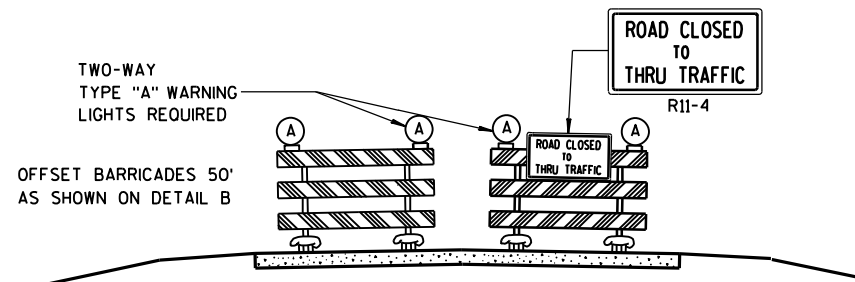
**BARRICADES AND SIGNS FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amakobe Atepe  
 DATE STATEWIDE WORK ZONE SAFETY ENGINEER



**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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- M05-1 AND M06-1 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 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 LANE 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.

<b>BARRICADES AND SIGNS FOR MAINLINE CLOSURES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
Sept. 2015 DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER 151 FIC
FHWA	



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

**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.

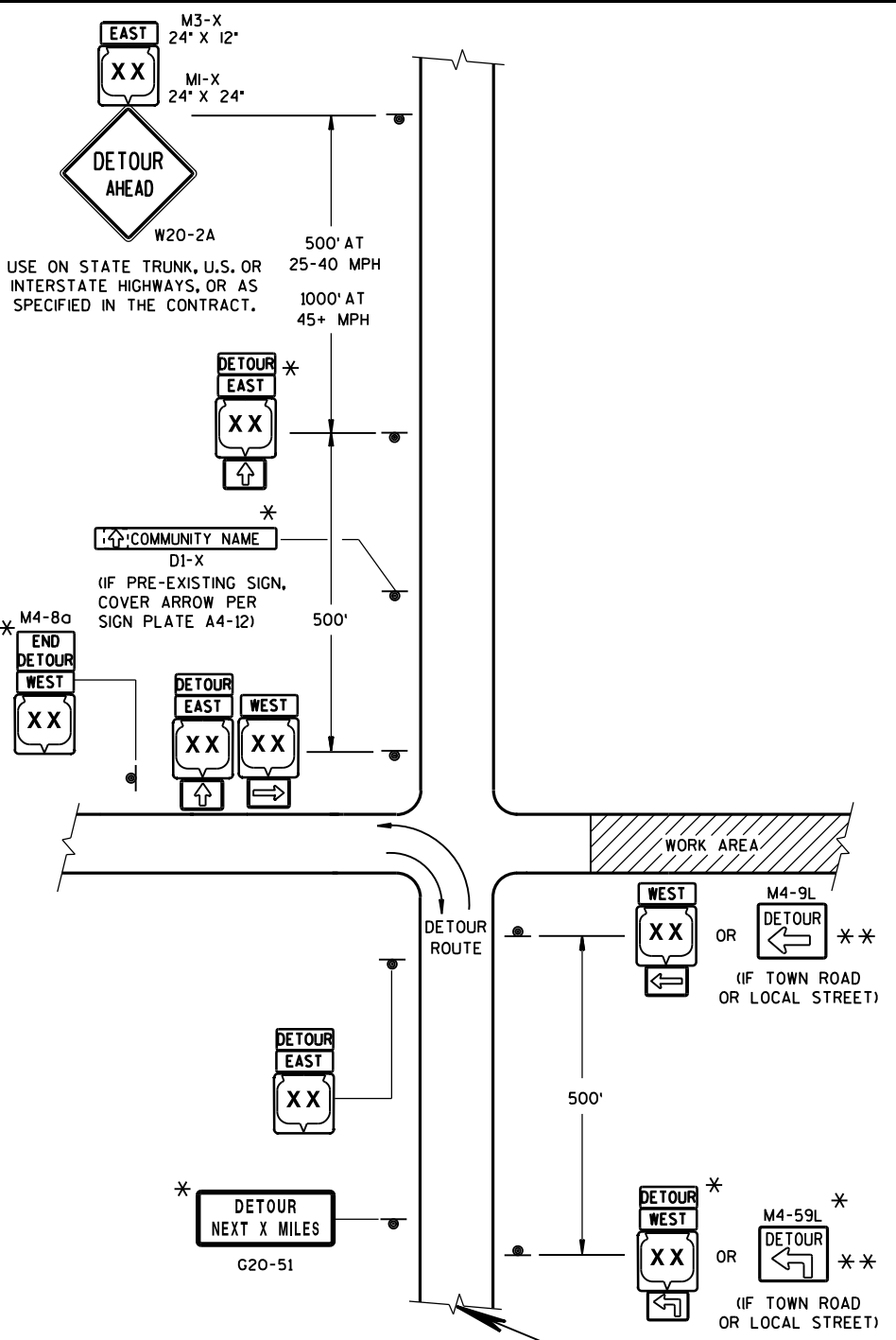
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

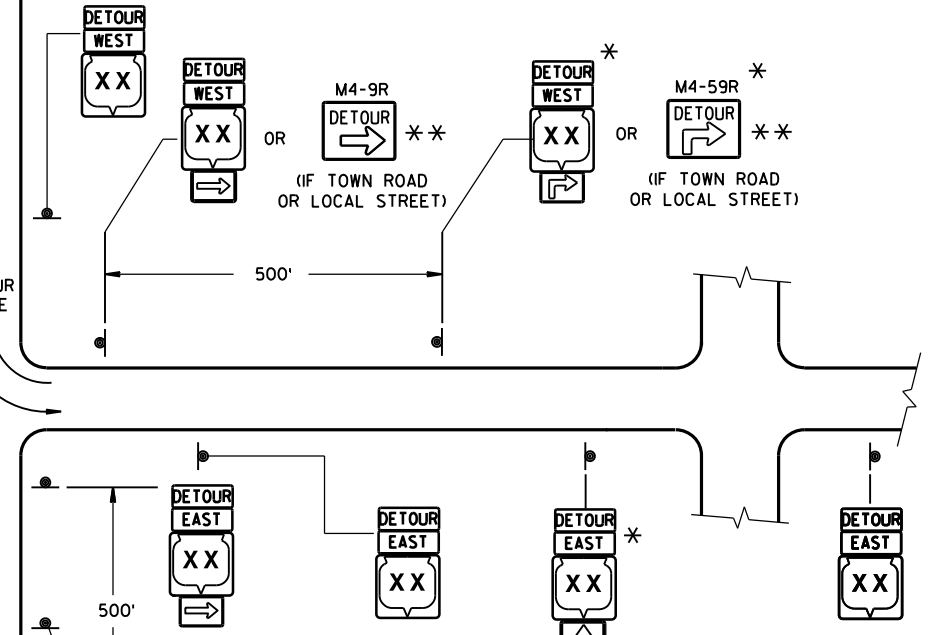
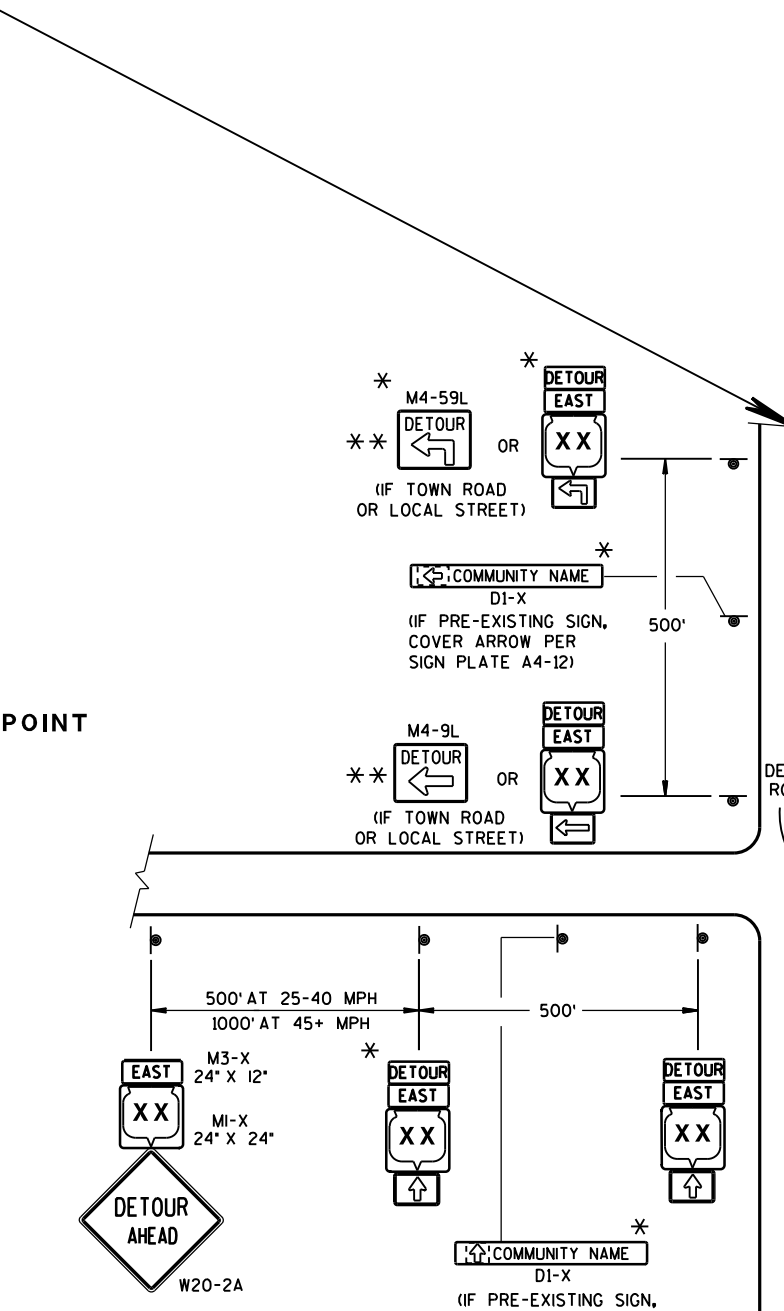
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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". (30" X 15" 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.)  
 M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)  
 M4-9 SHALL BE 30" X 24".  
 M4-8a SHALL BE 24" X 18".  
 G20-51 SHALL BE 60" X 24".  
 W20-2 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 DETOUR ED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



**MATCH POINT**



**LEGEND**

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

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

**DETAIL F  
DETOUR SIGNING**

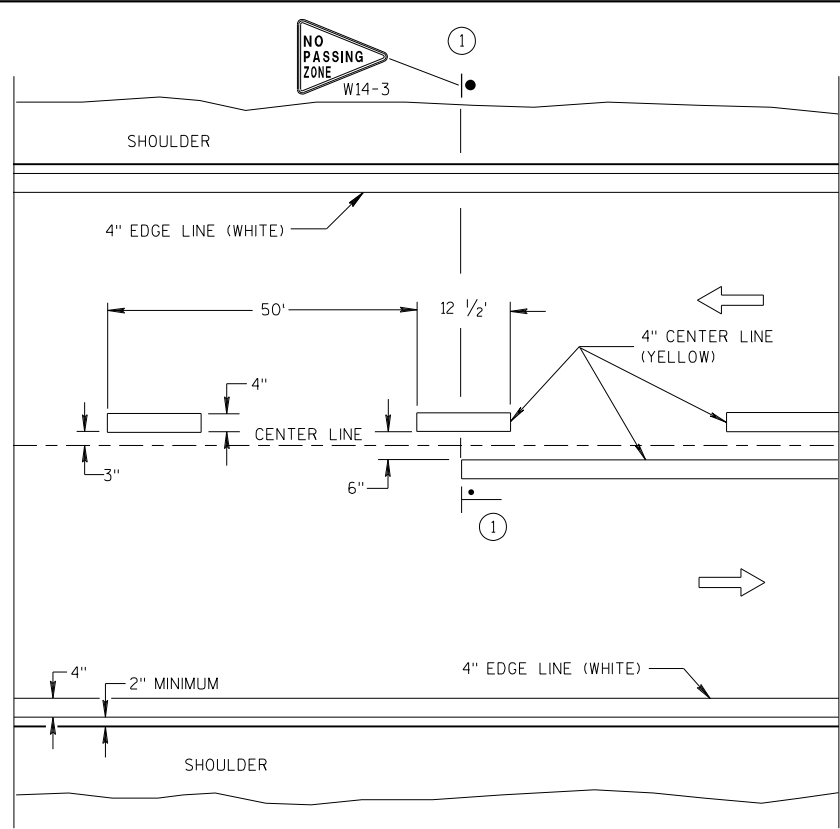
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT.

USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT.

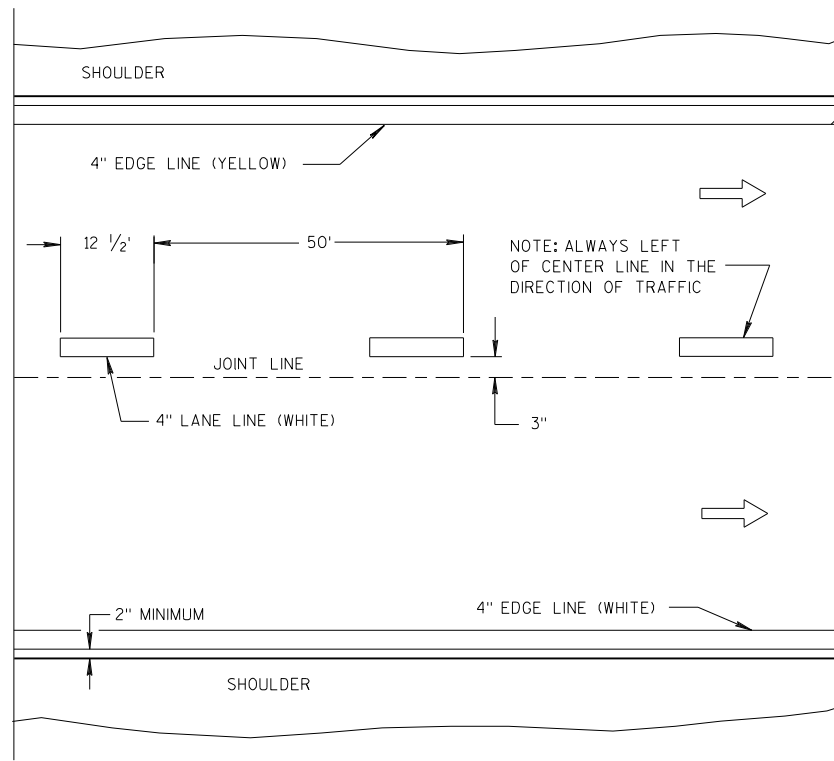
**DETOUR SIGNING FOR  
MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 DATE: Sept. 2015 /S/ Peter Amakobe Atepe  
 STATEWIDE WORK ZONE SAFETY ENGINEER

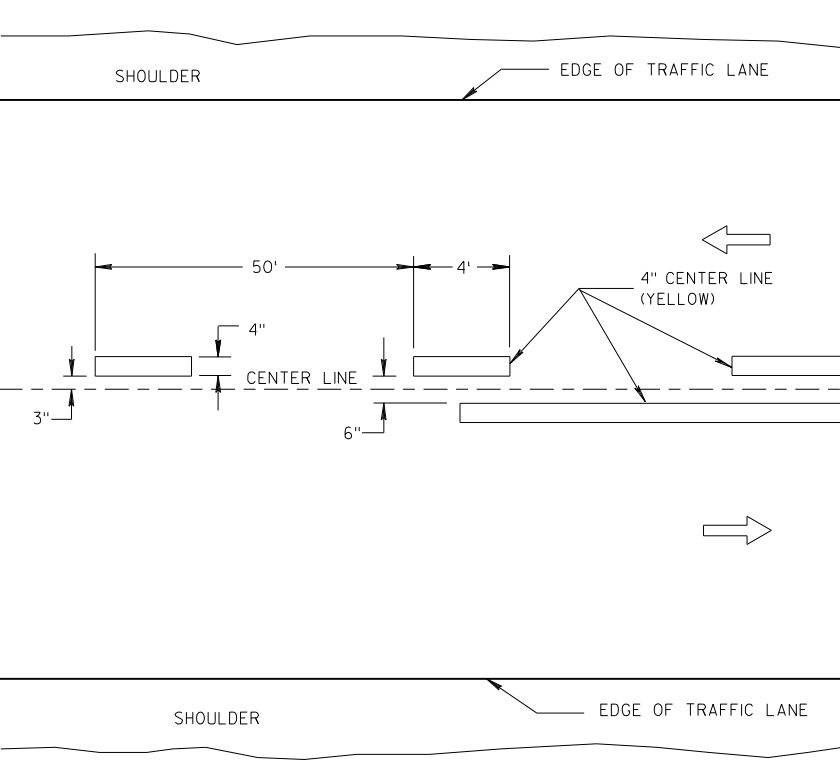


TWO WAY TRAFFIC

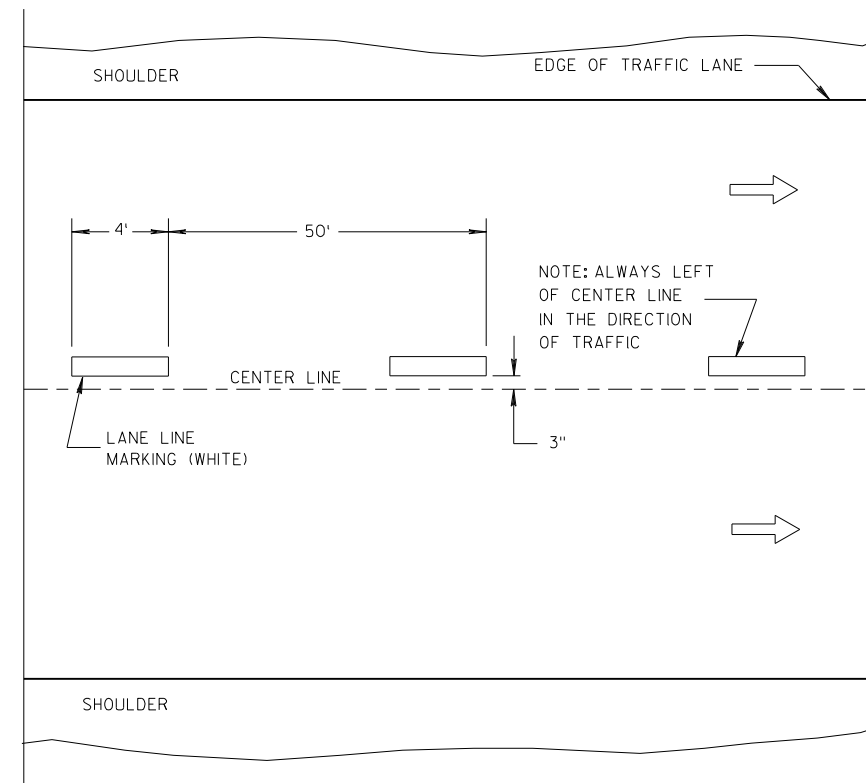


ONE WAY TRAFFIC

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

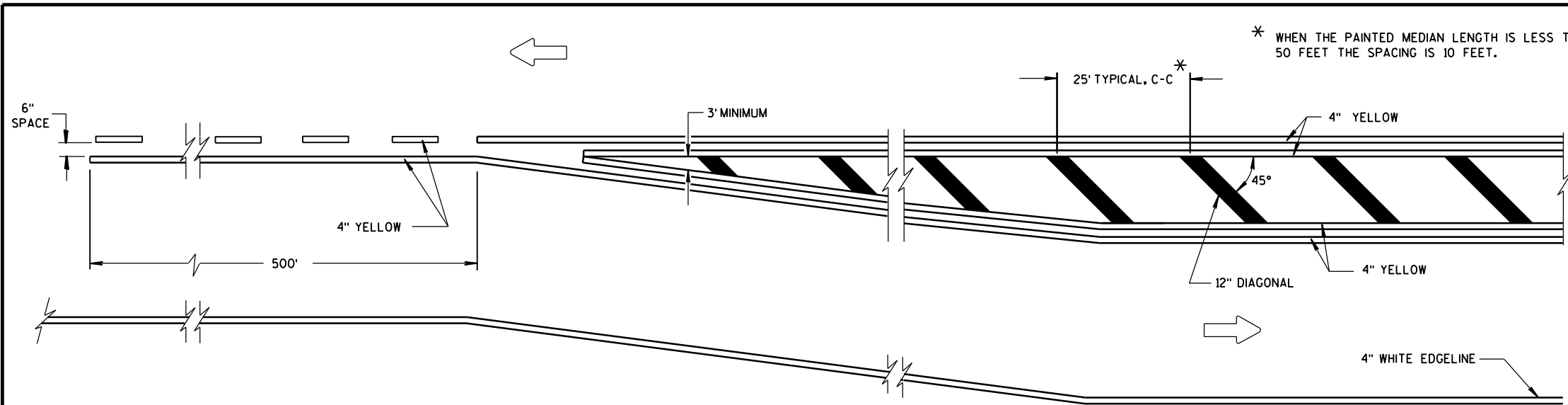
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 7/2018 /S/ Matthew R. Rauch  
STATE SIGNING AND MAR 153 INEER  
FHWA

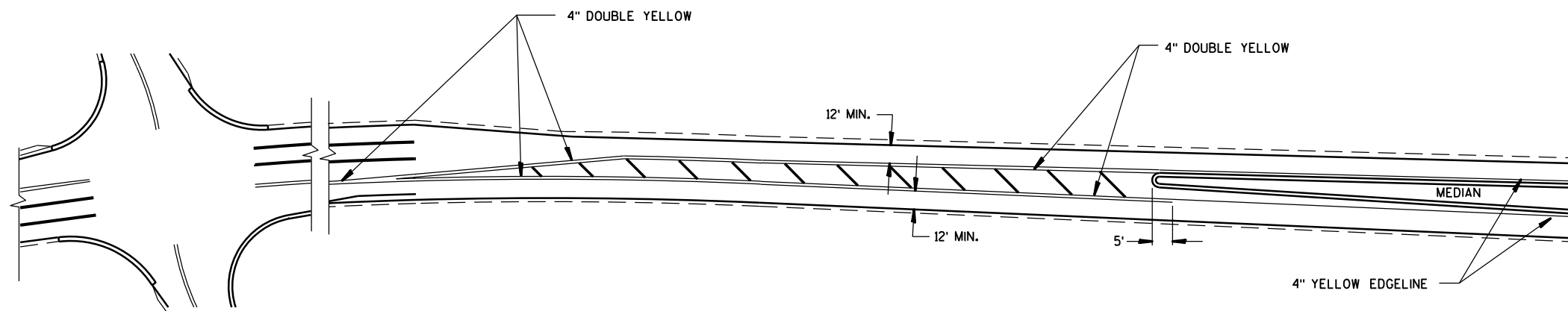


**MEDIAN ISLAND DETAIL**

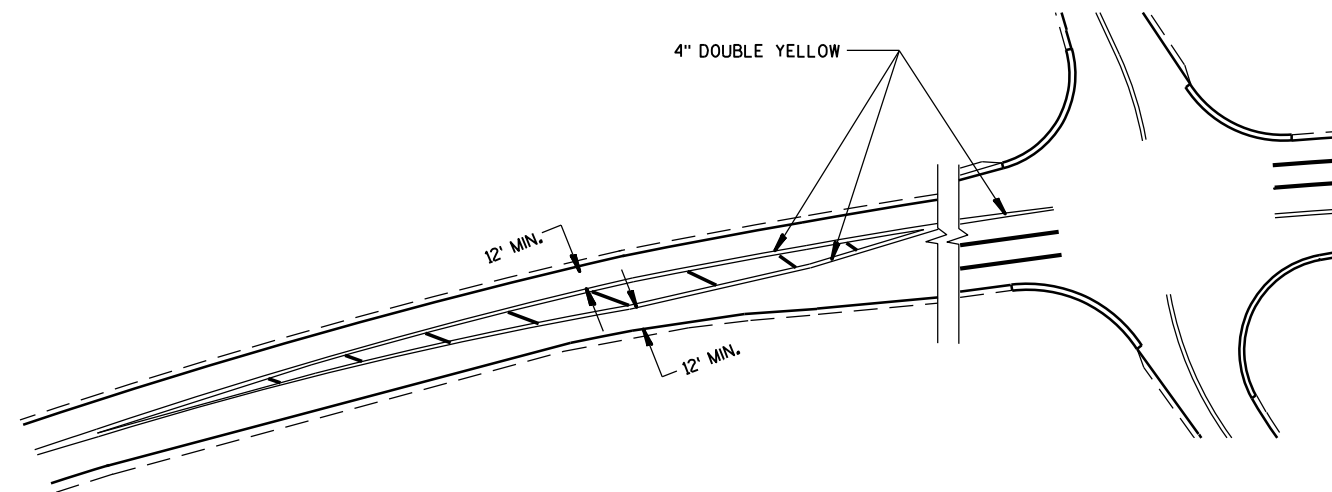
**GENERAL NOTE**

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➔ DIRECTION OF TRAVEL



**APPROACH MARKINGS FOR OTHER MEDIAN TYPES**



**NON APPROACH MARKINGS**

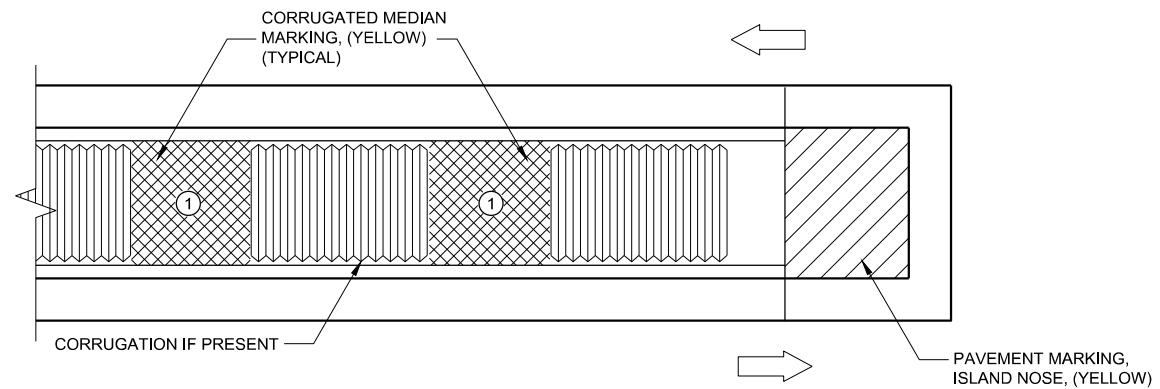
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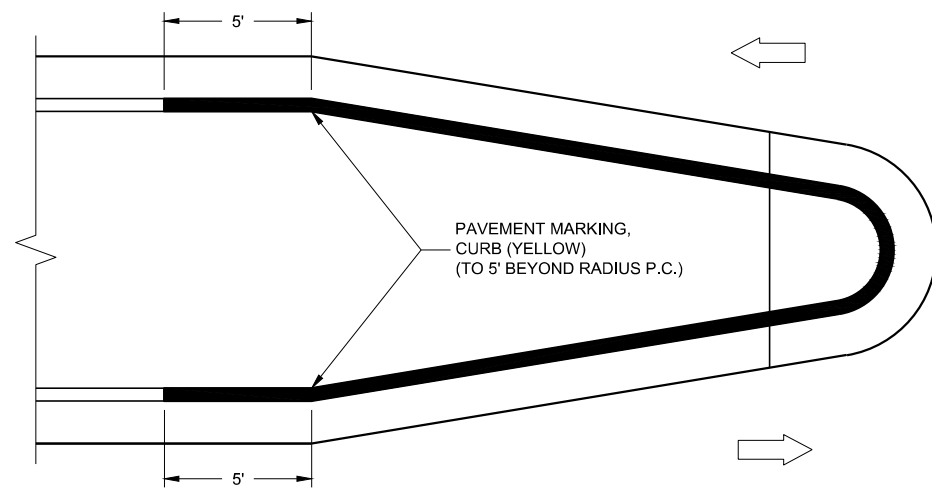
S.D.D. 15 C 18-4

S.D.D. 15 C 18-4

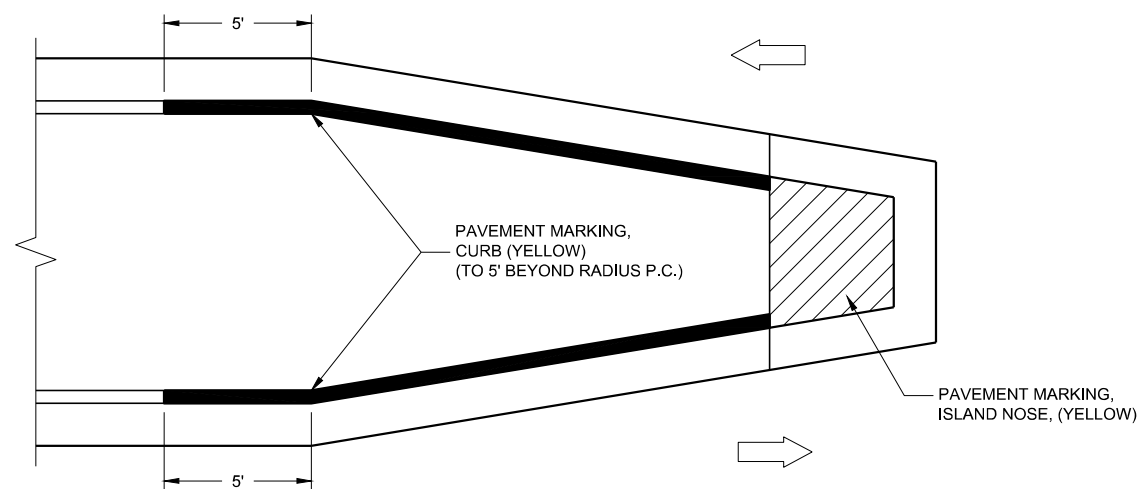
<b>MEDIAN ISLAND MARKING</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew Rauch STATE SIGNING AND MARK 154 FHW



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE







MEDIAN ISLAND WITH SLOPED NOSE

**TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS**

**GENERAL NOTES**

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL

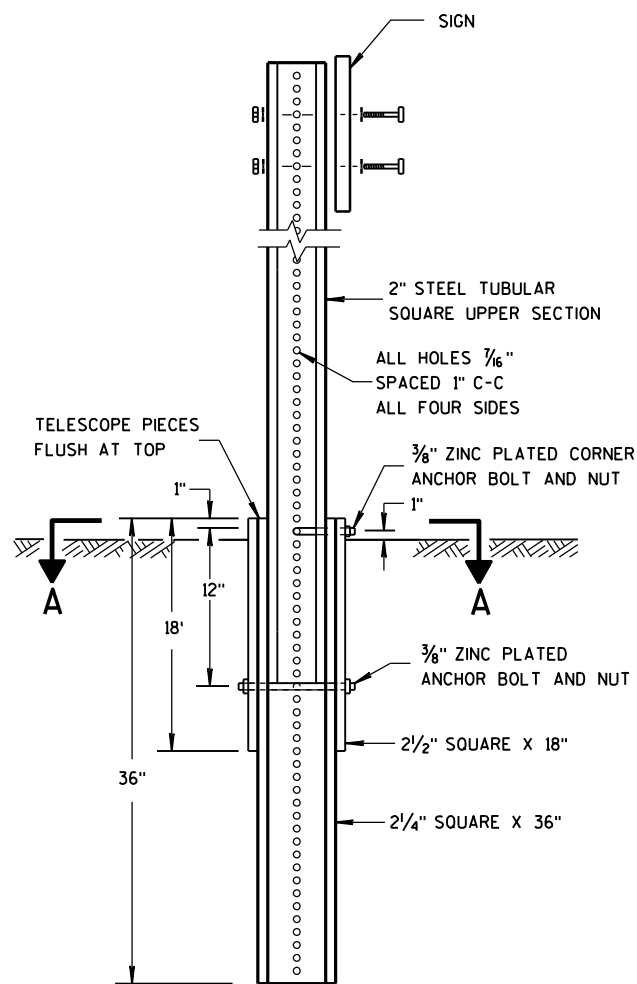
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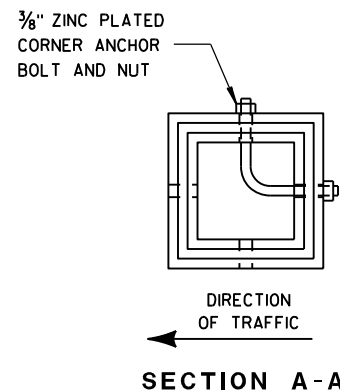
SDD 15C27 - 03b

SDD 15C27 - 03b

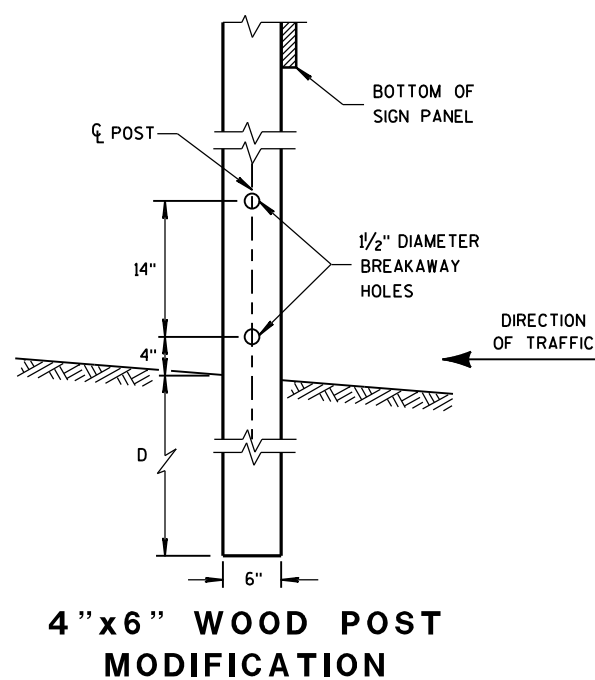
<b>PAVEMENT MARKINGS (ISLANDS)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 7/2018	/S/ Matthew R. Rauch STATE SIGNING AND MAP ENGINEER 155
FHWA	



**DETAIL OF TUBULAR STEEL SIGN POST**



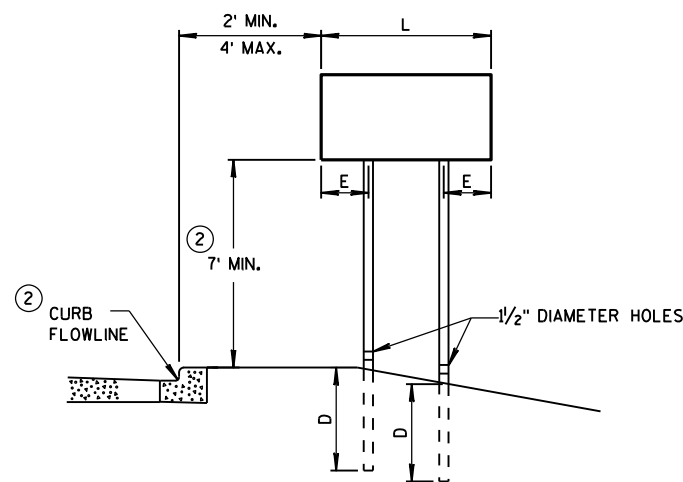
**SECTION A-A**



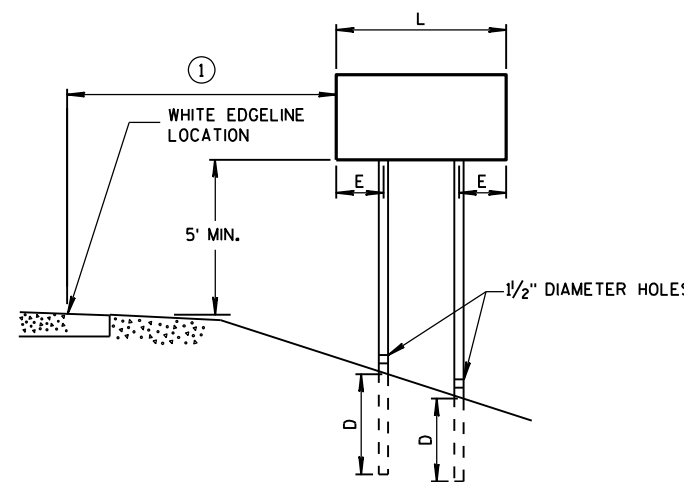
**4" X 6" WOOD POST MODIFICATION**

**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.



**URBAN AREA**



**RURAL AREA**

**POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS**

**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.

**WOOD POST EMBEDMENT DEPTH**

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

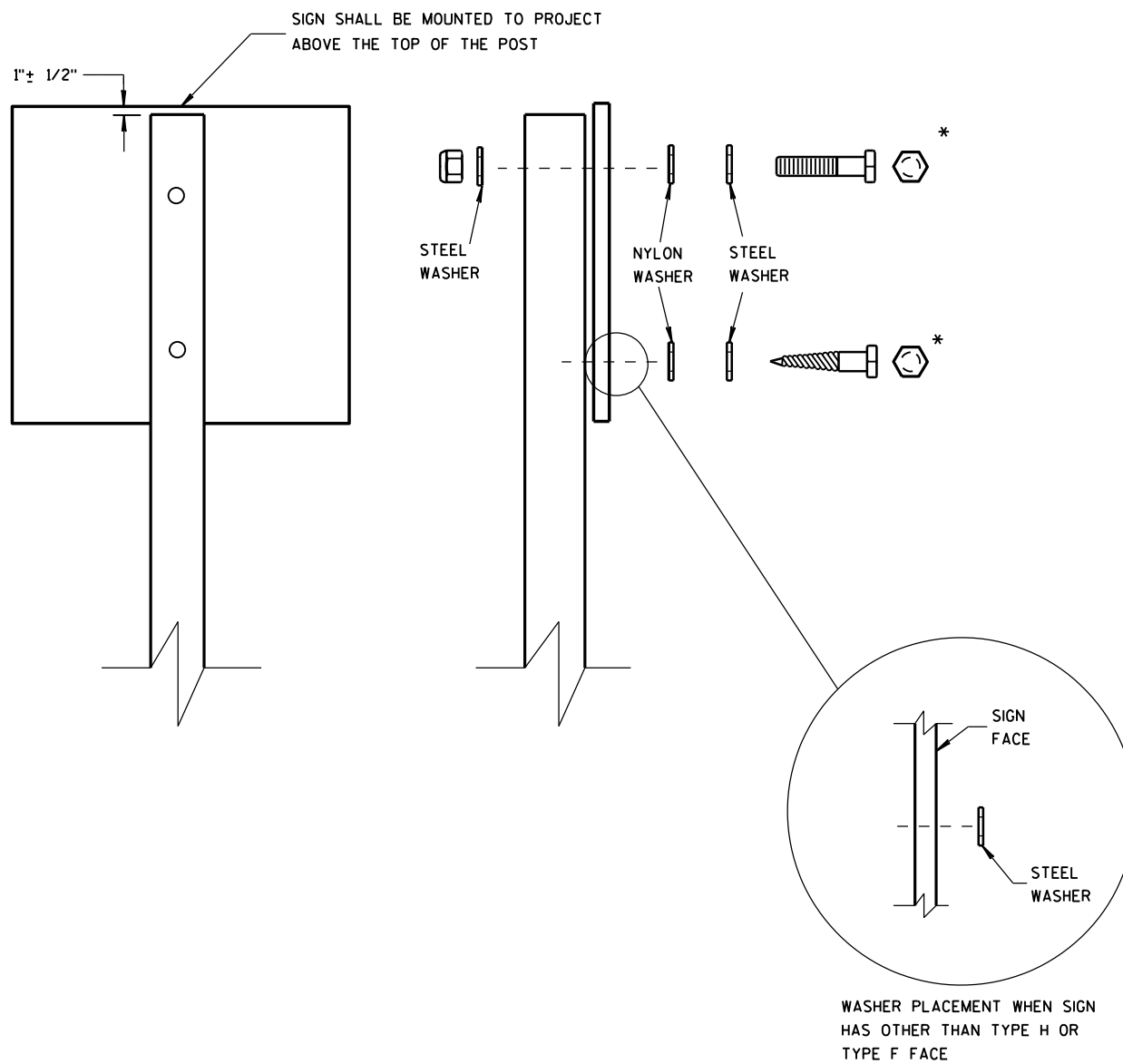
**4" X 6" WOOD POST**

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

**TEMPORARY TRAFFIC CONTROL SIGN MOUNTING**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 156



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

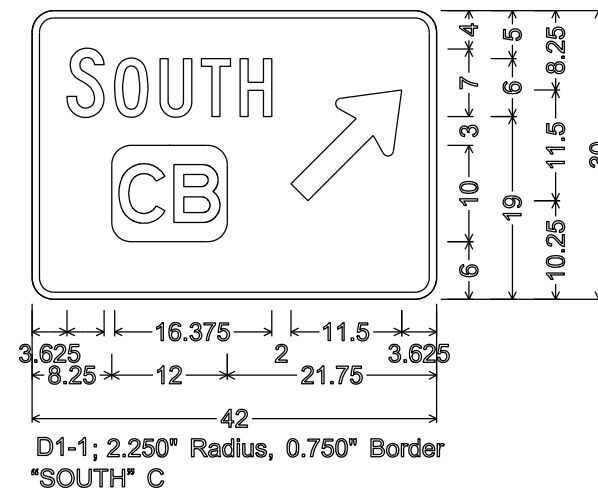
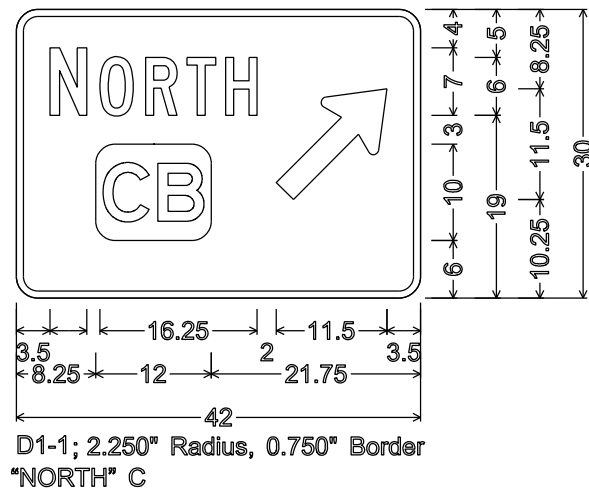
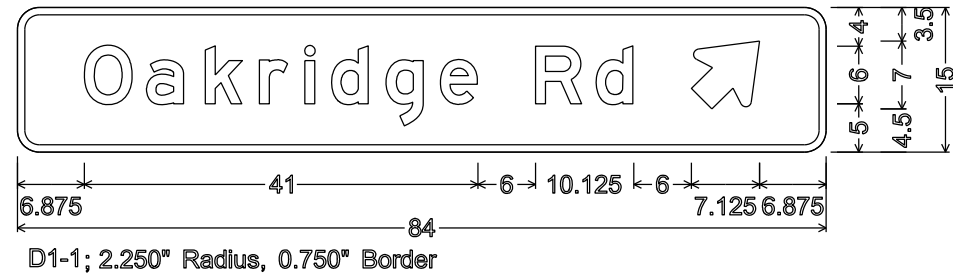
FHWA

/s/ Andrew Heidtke

WORK ZONE ENR 157

NOTES

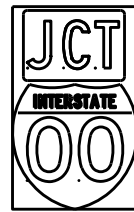
1. All Signs Type II - Type H Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E except as noted



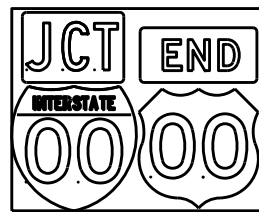
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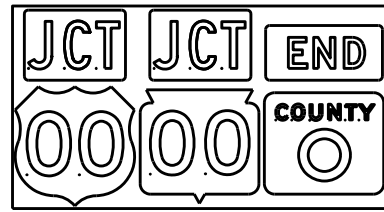
**TYPICAL ASSEMBLIES**



J1-1



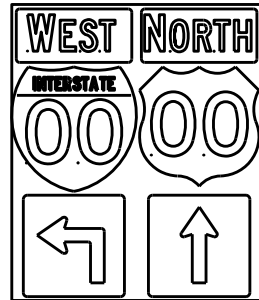
J1-2



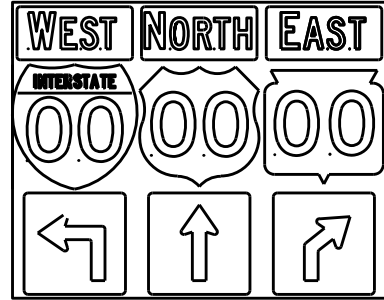
J1-3



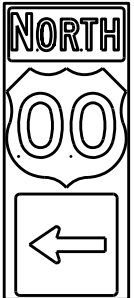
J2-1



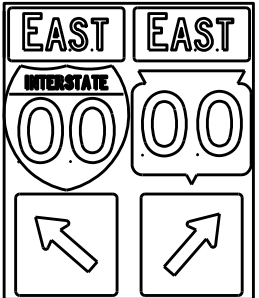
J2-2



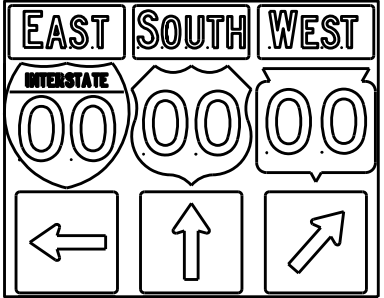
J2-3



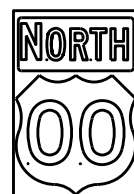
J3-1



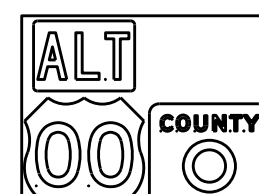
J3-2



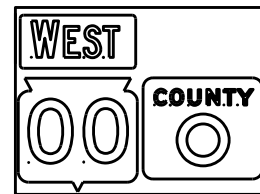
J3-3



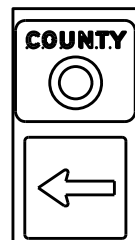
J4-1



J4-2



J4-2



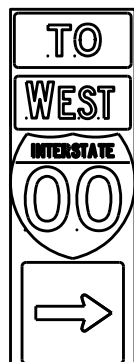
J13-1



J12-1



J32-1



J33-1



J23-1

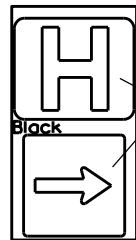


J22-1



JV

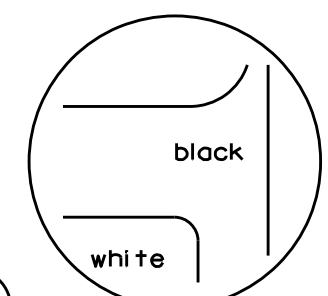
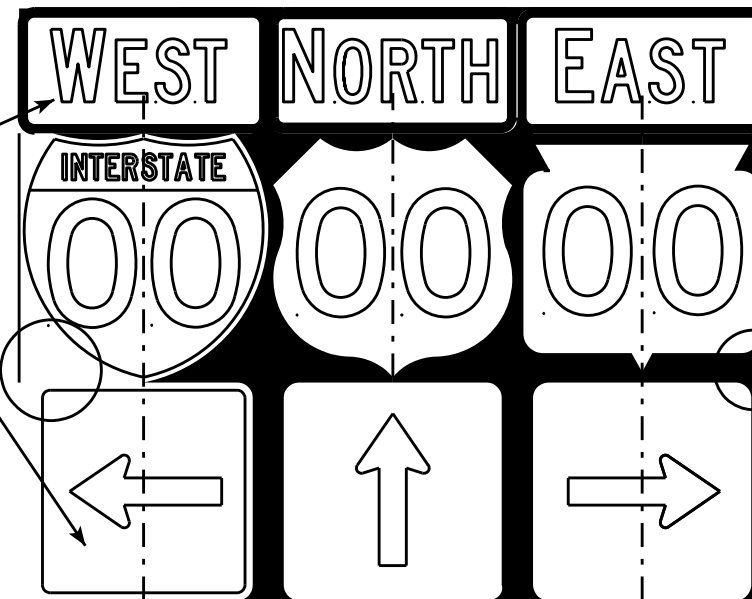
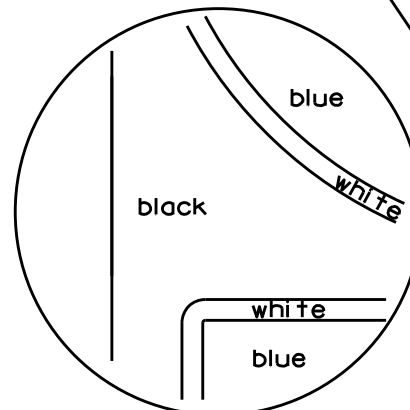
(Typical Vertical J-Assembly  
See Note 10 and 11)



JH-1

Blue Background

[blue background with interstate]



[black background]

**NOTES**

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - Black Non-reflective  
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an MI-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

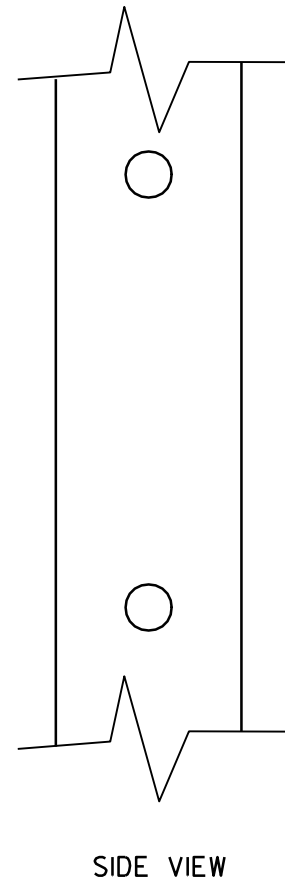
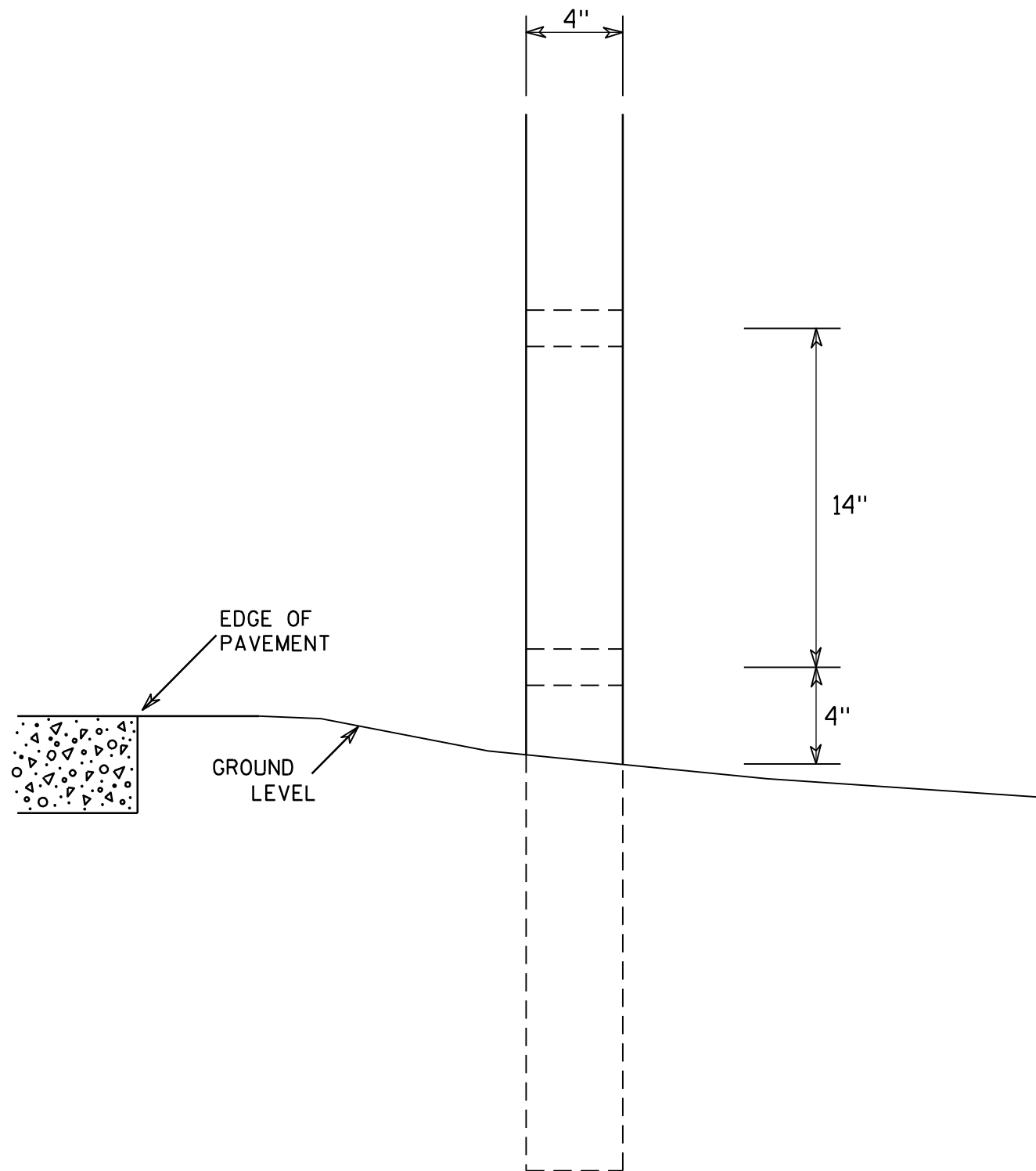
**ROUTE MARKERS & COMPONENTS  
IN TYPICAL ASSEMBLIES**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 2/06/14 PL 159 A2-1S.8





GENERAL NOTES

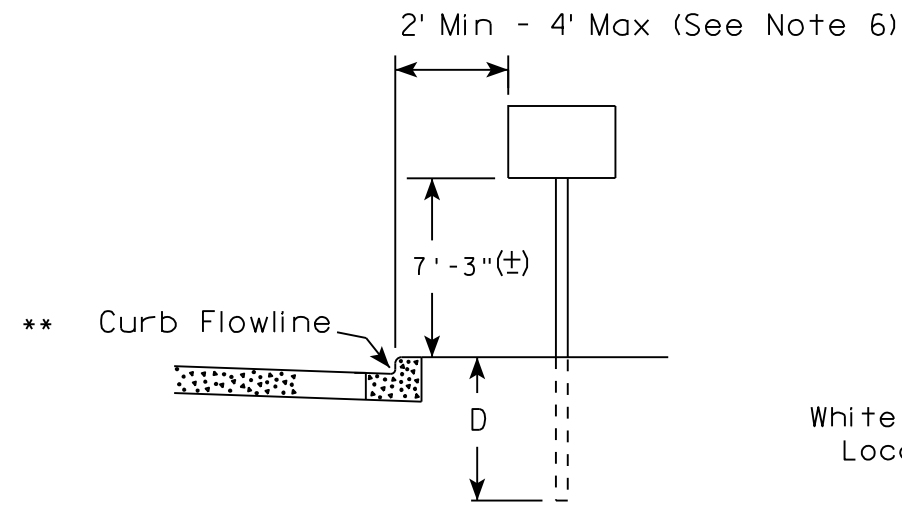
1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

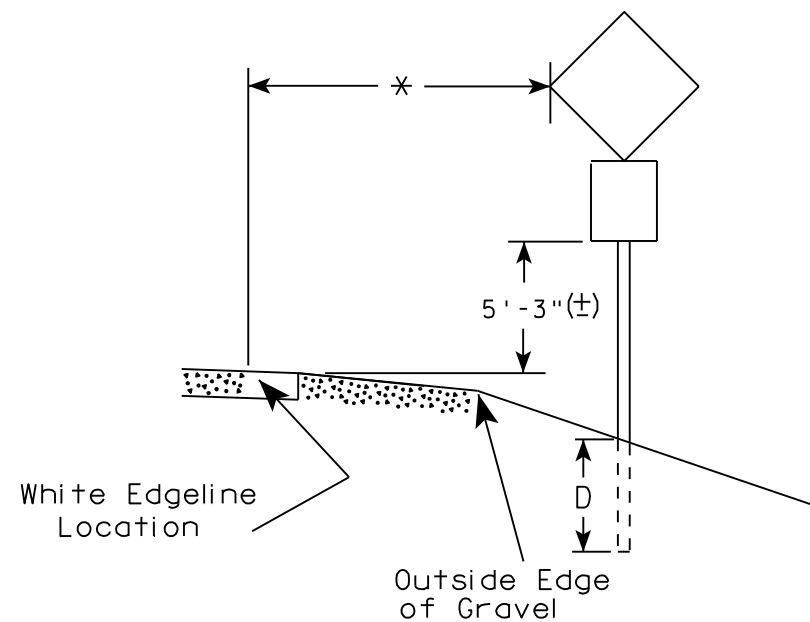
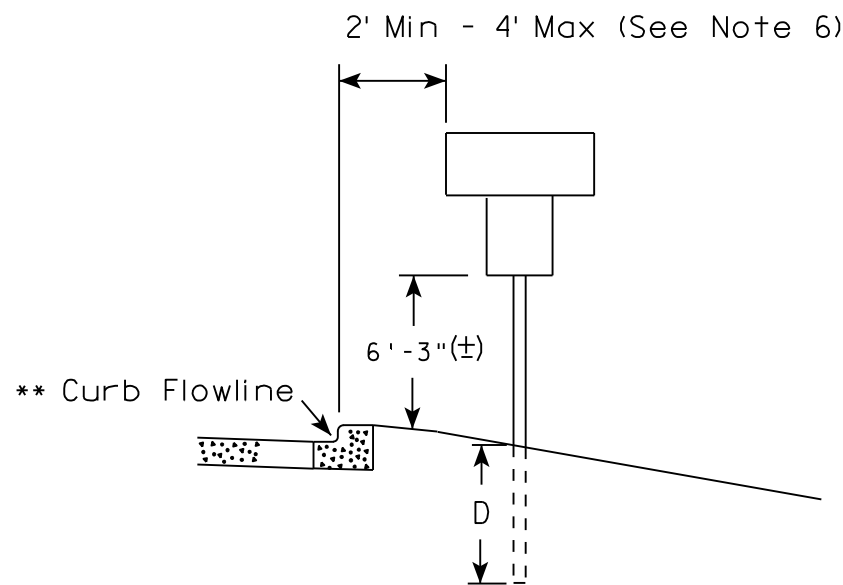
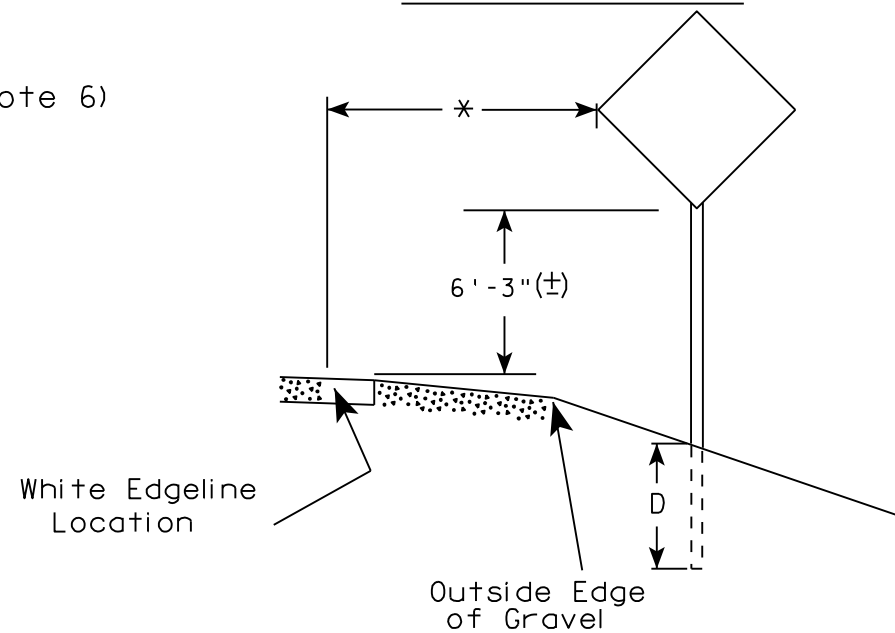
7

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

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.

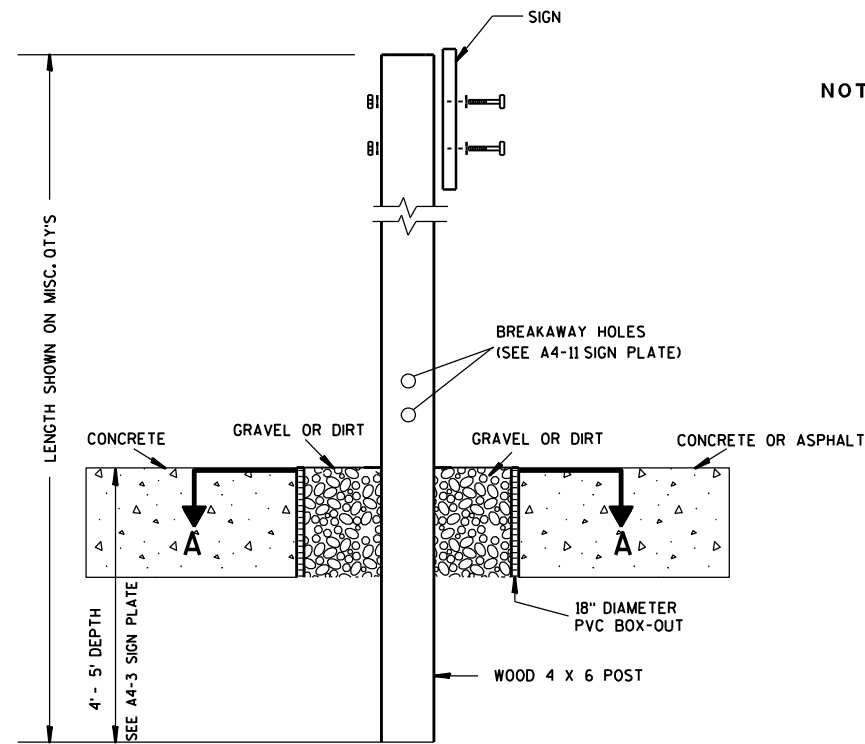
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

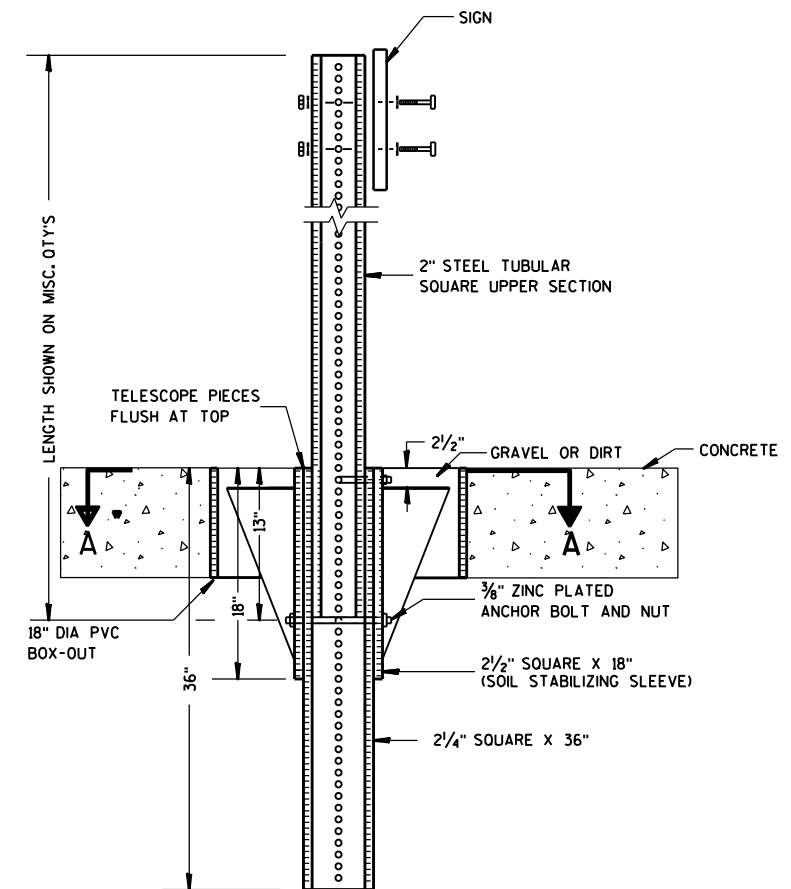
DATE 8/21/17 PLATE NO. A4-3.21



**ELEVATION VIEW**

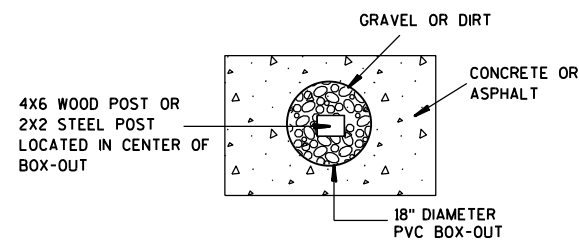
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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**

<b>SIGN POST BOX-OUTS A4-3B</b>	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED <i>Matthew R. Rauch</i> for State Traffic Engineer	
DATE 1/27/14	PLAT 162 A4-3B.1

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. Offset distance shall be consistent with existing signs or consistent throughout length of project.



POST EMBEDMENT DEPTH

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

7

7

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON MULTI USE PATHS

WISCONSIN DEPT OF TRANSPORTATION

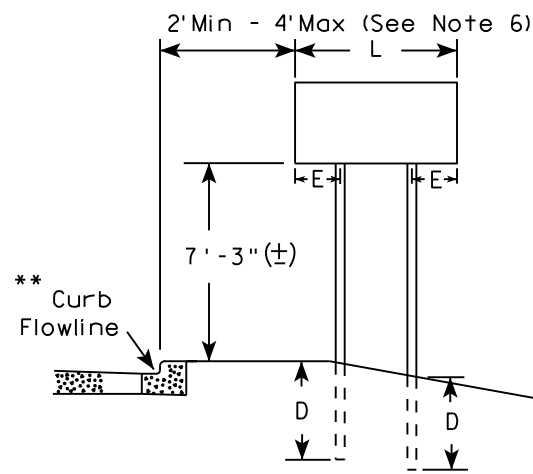
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/5/2012 PLATE NO. A4-3S.1

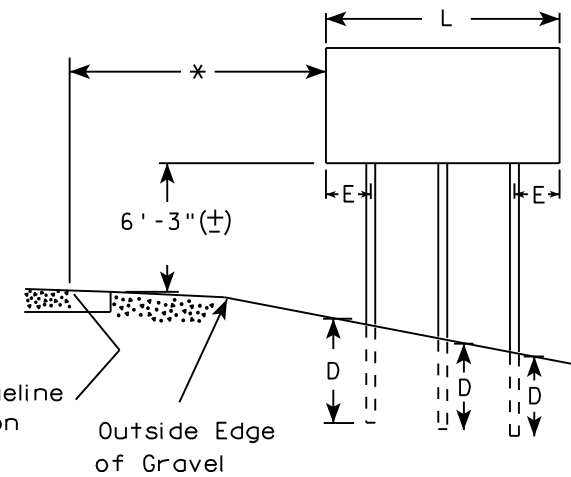
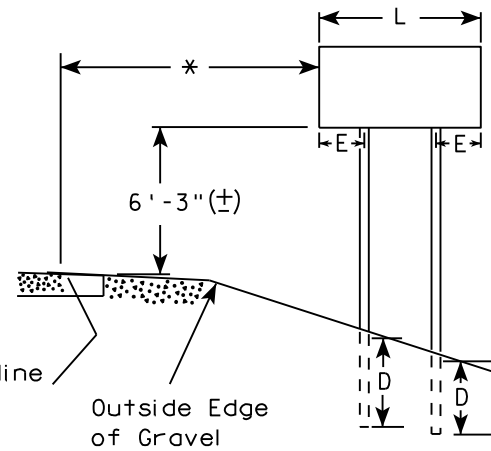
GENERAL NOTES

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" (±).

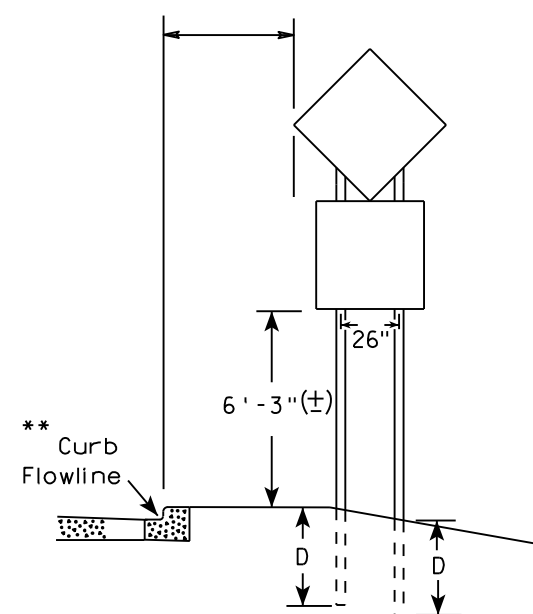
URBAN AREA



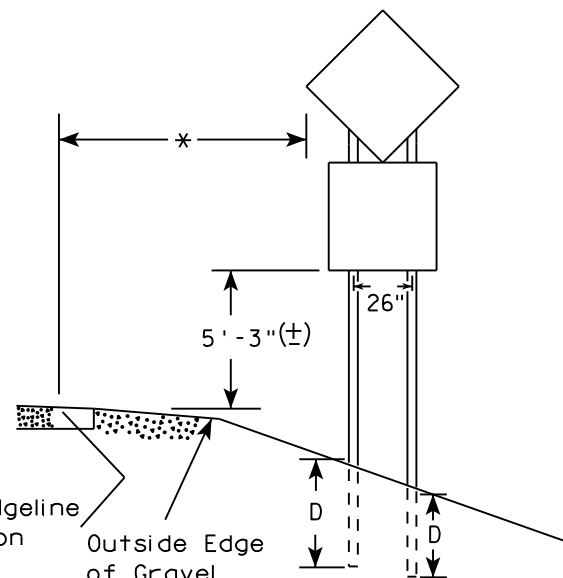
RURAL AREA (See Note 3)



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

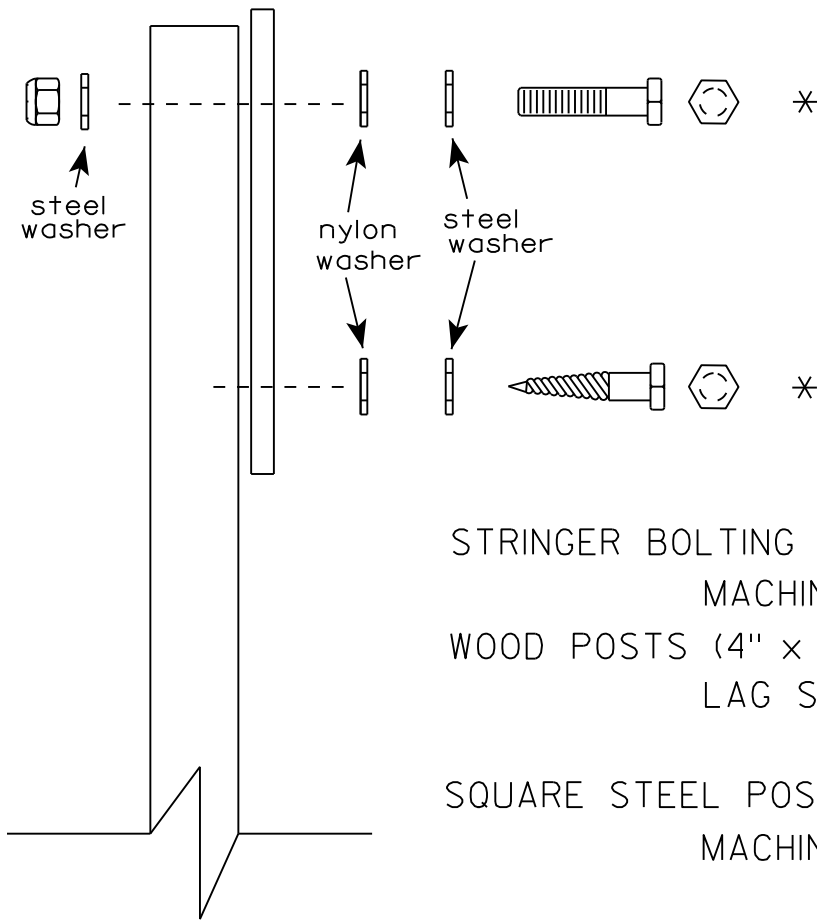
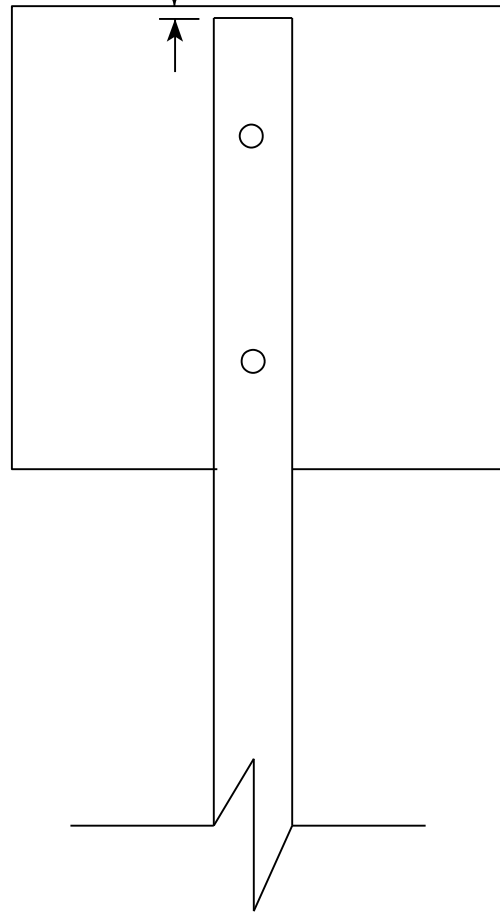
Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

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.

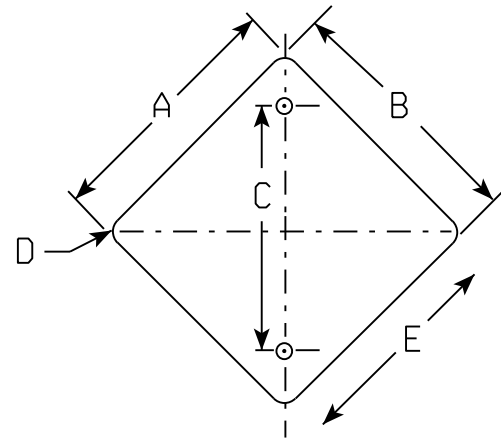
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

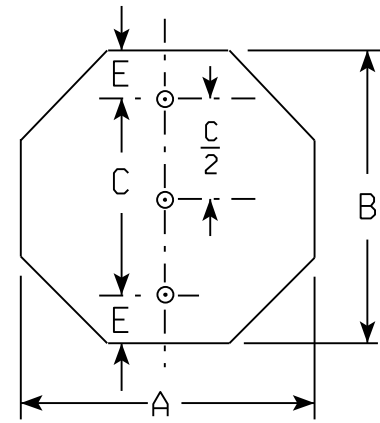
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8  
165

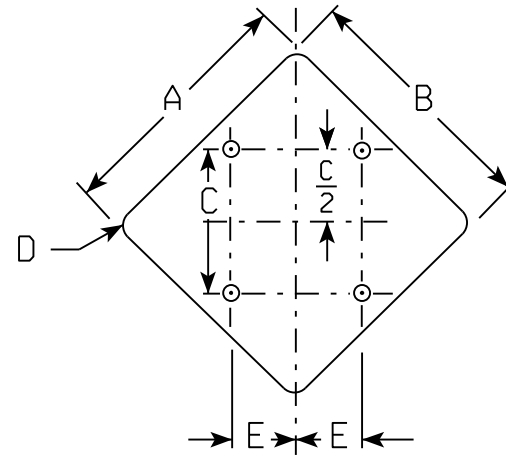
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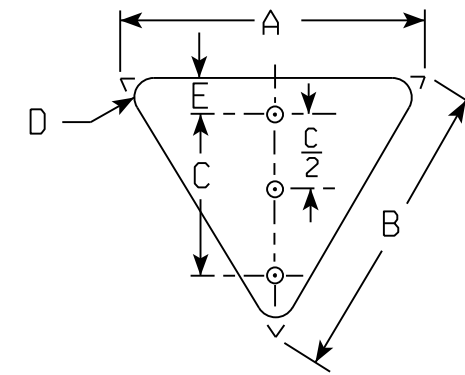
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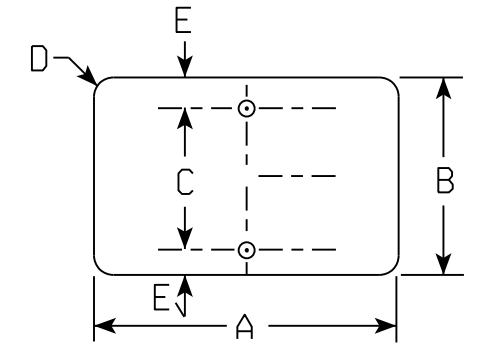
2



3



4



5

TYPE 1						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
18	18	18	1 1/2	14	2.25	2
24	24	24	1 1/2	20	4.0	2
30	30	30	1 7/8	22	6.25	2
36	36	36	2 1/4	26	9.0	2

TYPE 2						
A	B	C	E	Area Sq. Ft.	Mounting Holes	
24	24	20	2	3.31	2	
30	30	24	3	5.18	2	
36	36	28	4	7.46	2	
48	48	36	6	13.25	3	

TYPE 3						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
48	48	26	3	13	16.0	4

TYPE 4							
A	B	C	D	E	Area Sq. Ft.	Mounting Holes	
18	18	14	1	2	1.95	2	
36	36	24	2	2	3.9	2	
48	48	32	3	3	7.0	2	

TYPE 5							
A	B	C	D	E	Area Sq. Ft.	Mounting Holes	
8	8	6	1 1/2	1	0.44	2	
12	12	9	1 1/2	1 1/2	1.00	2	
18	18	14	1 1/2	2	2.25	2	
21	15	11	1 1/2	2	2.19	2	
21	21	17	1 1/2	2	3.06	2	
24	12	8	1 1/2	2	2.0	2	
24	18	14	1 1/2	2	3.0	2	
24	24	20	1 1/2	2	4.0	2	
30	12	8	1 1/2	2	2.5	2	
30	15	11	1 1/2	2	3.13	2	
30	18	14	1 1/2	2	3.75	2	
30	21	17	1 1/2	2	4.37	2	
30	24	20	1 1/2	2	5.0	2	

TYPE 5 CONT'D.							
A	B	C	D	E	Area Sq. Ft.	Mounting Holes	
30	30	22	1 7/8	4	6.25	2	
36	12	8	1 1/2	2	3.0	2	
36	18	14	1 1/2	2	4.5	2	
36	24	20	1 1/2	2	6.0	2	
36	36	26	2 1/4	5	9.0	2	
40	18	14	1 1/2	2	5.00	2	
42	21	17	1 7/8	2	6.125	2	
42	30	22	1 7/8	4	8.75	2	
48	24	20	1 7/8	2	8.0	2	

NOTES

1. All sign blanks shall have 7/16" Diameter mounting hole.

ALUMINUM THICKNESS

SIGN WIDTH	NOMINAL THICKNESS
30 inches and under	0.080 inch
Greater than 30-36 inches	0.100 inch
Over 36 inches	0.125 inch

STOP SIGN THICKNESS

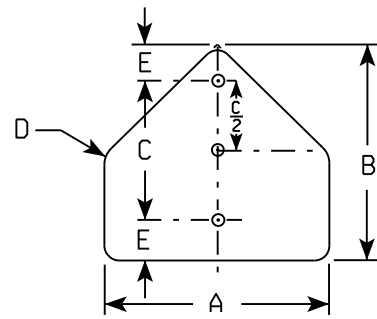
SIGN WIDTH	NOMINAL THICKNESS
30 inches	0.100 inch
36-48 inches	0.125 inch

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS SHEET 1 OF 3

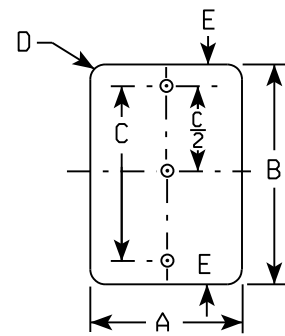
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

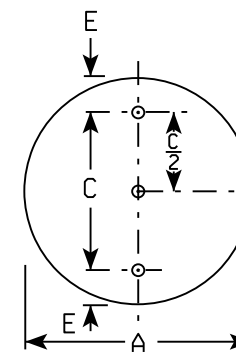
DATE 3/19/18 PLATE NO. A5-3.24



6



7



8

NOTES

1. All sign blanks shall have 7/16" Diameter mounting holes.

TYPE 6							
A	B	C	D	E	Area Sq. Ft.	Mounting Holes	
30	30	24	1 3/8	3	4.68	2	
36	36	26	1 5/8	5	6.75	2	
48	48	32	1 7/8	8	12.0	3	

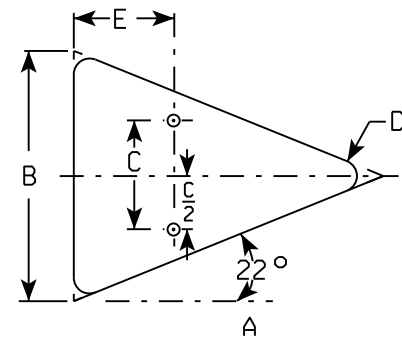
TYPE 7 *							
A	B	C	D	E	Area Sq. Ft.	Mounting Holes	
12	18	15	1 1/2	1 1/2	1.5	2	
12	24	20	1 1/2	2	2.0	2	
12	36	24	1 1/2	6	3.0	2	
12	48	32	1 1/2	8	4.0	3	
15	21	18	1 1/2	1 1/2	2.19	2	
18	24	20	1 1/2	2	3.0	2	
18	36	24	1 1/2	6	4.5	2	
18	54	36	2 1/2	9	6.75	3	
21	60	40	1 1/2	10	8.75	3	
21	72	52	1 1/2	10	10.5	3	
24	30	22	1 1/2	4	5.0	2	
24	36	24	1 1/2	6	6.0	2	
24	39	27	1 1/2	6	6.5	3	
24	45	32	1 7/8	6	7.5	3	
24	48	32	1 7/8	8	8.0	3	
24	57	37	1 7/8	10	9.5	3	
36	48	32	1 7/8	8	12.0	3	
30	36	24	1 7/8	6	7.5	2	
36	54	36	2 1/4	9	12.75	3	
36	57	37	1 7/8	10	14.25	3	
48	39	27	1 7/8	10	13.0	3	
48	45	32	1 7/8	10	14.0	3	
48	57	37	3	10	19.0	3	

TYPE 8							
A	B	C	E	Area Sq. Ft.	Mounting Holes		
30	—	24	3	4.91	2		
36	—	26	5	7.07	2		
48	—	32	8	12.5	3		

\* FOR SIGNS OVER 57" IN HEIGHT, PROVIDE 3 MOUNTING HOLES AT 10" FROM THE TOP AND BOTTOM OF SIGN AND IN THE CENTER OF SIGN.

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS  
SHEET 2 OF 3  
WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R Rauch*  
For State Traffic Engineer  
DATE 3/19/18 PLATE NO. A5-3.24

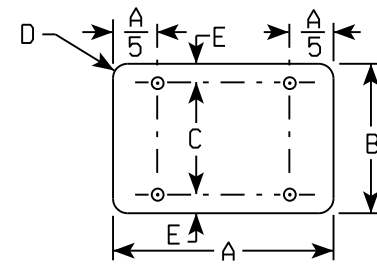




10

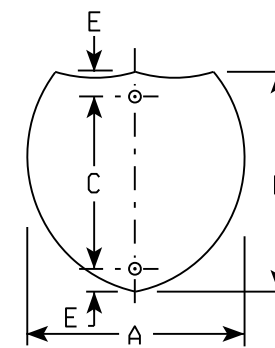
TYPE 10 (NOTE 1)						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
48	36	14	2 1/4	16	6.0	2

TYPE 11						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
66	12	8	3	2	5.5	4
66	18	14	3	2	8.25	4
66	24	20	3	2	11.0	4
66	30	22	3	4	13.75	4
66	36	28	3	4	16.5	4
66	42	34	3	4	19.25	4
66	48	40	3	4	22.0	4
72	12	8	3	2	6.0	4
72	18	14	3	2	9.0	4
72	24	20	3	2	12.0	4
72	30	22	3	4	15.0	4
72	36	28	3	4	18.0	4
72	42	34	3	4	21.0	4
72	48	40	3	4	24.0	4



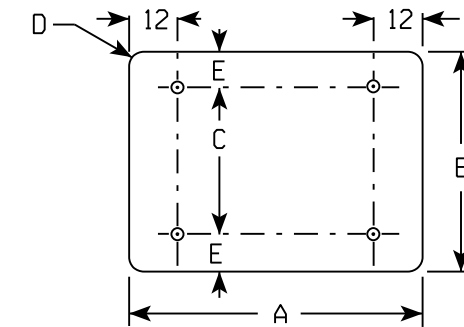
11

TYPE 12 (NOTE 2)					
A	B	C	E	Area Sq. Ft.	Mounting Holes
24	24	18	3	3.13	2
30	24	18	3	3.91	2
36	36	28	4	7.03	2
45	36	28	4	8.79	2



12

TYPE 13						
A	B	C	D	E	Area Sq. Ft.	Mounting Holes
48	60	40	3	10	20.0	4
54	12	8	1 1/2	2	4.5	4
54	15	11	1 1/2	2	5.63	4
54	18	14	1 1/2	2	6.75	4
54	21	17	1 1/2	2	7.88	4
54	24	20	1 7/8	2	9.0	4
54	36	28	1 7/8	4	13.5	4
54	48	40	1 7/8	4	18.0	4
60	12	8	1 1/2	2	5.0	4
60	18	14	1 1/2	2	7.5	4
60	24	20	1 7/8	2	10.0	4
60	30	22	1 7/8	4	12.5	4
60	36	28	1 7/8	4	15.0	4
60	42	34	1 7/8	4	17.5	4
60	48	40	3	4	20.0	4



13

NOTES

1. Dimension A on type #10 is measured to the theoretical intersections of the edges.
2. Shape of type #12 shall conform to FHWA standard for Interstate route markers.
3. All signs over 60" in width shall have 3" radius on the outside corners of the aluminum blank.
4. For signs over 60" in width see sign plate A4-18 for hole placement.

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS SHEET 3 OF 3

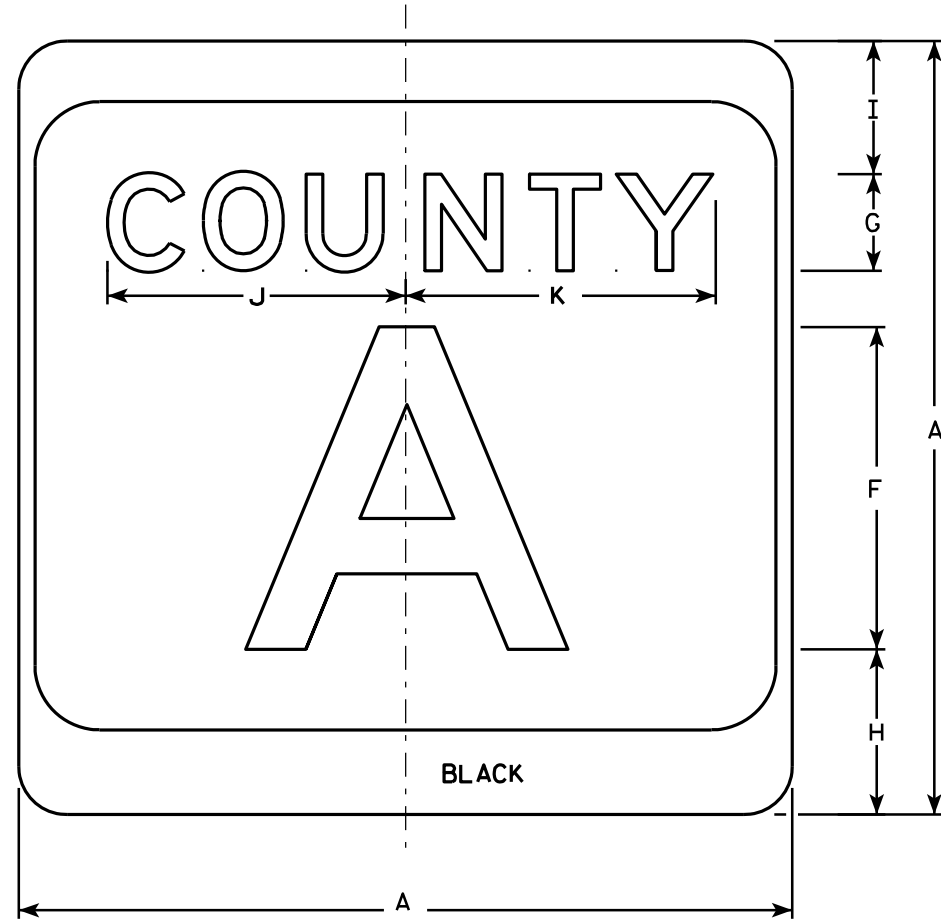
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

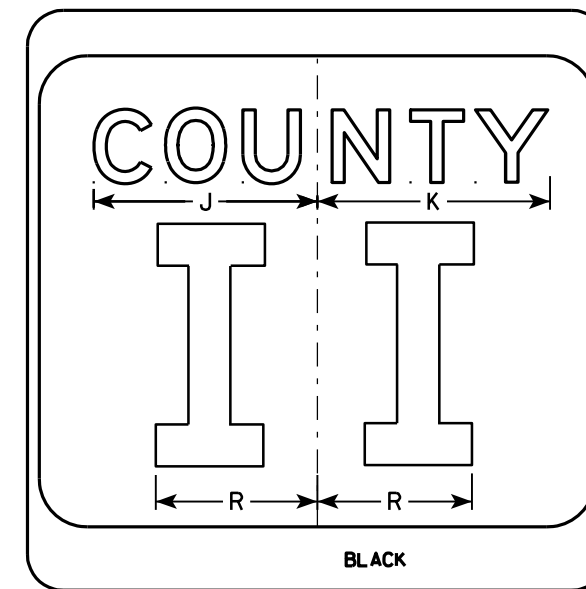
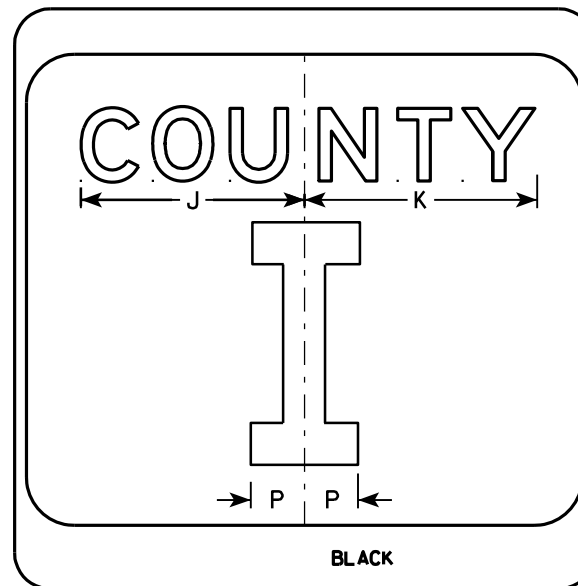
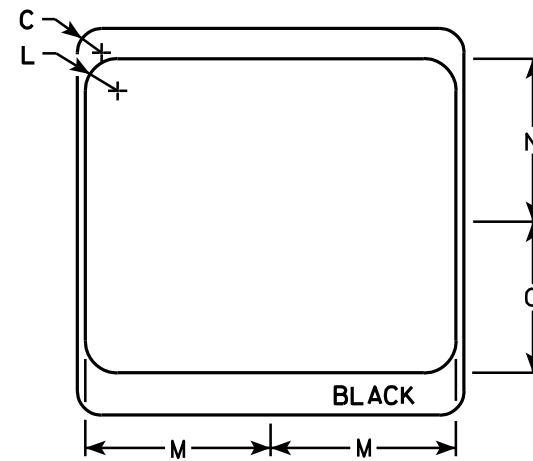
DATE 3/19/18 PLATE NO. A5.3.24

**NOTES**

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White & Black - See Note 7  
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. Message Series E for 1 letter.  
Message Series D for 2 letters unless message is too big then Series C.  
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs  
Background - Type H Reflective  
Detour or temporary Signs  
Background - Reflective



M1-5A



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		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

**CTH MARKER**  
**M1-5A FOR ASSEMBLIES**

WISCONSIN DEPT OF TRANSPORTATION

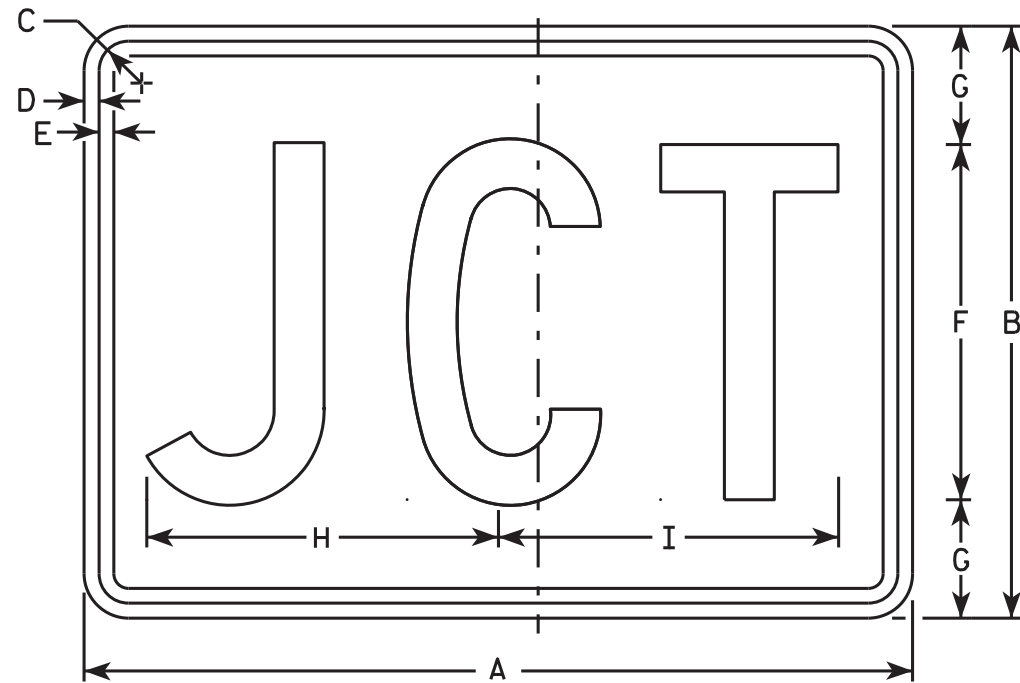
APPROVED *Matthew R. Raub*  
For State Traffic Engineer

DATE 9/27/11 PLATE NO. MI-5A.8

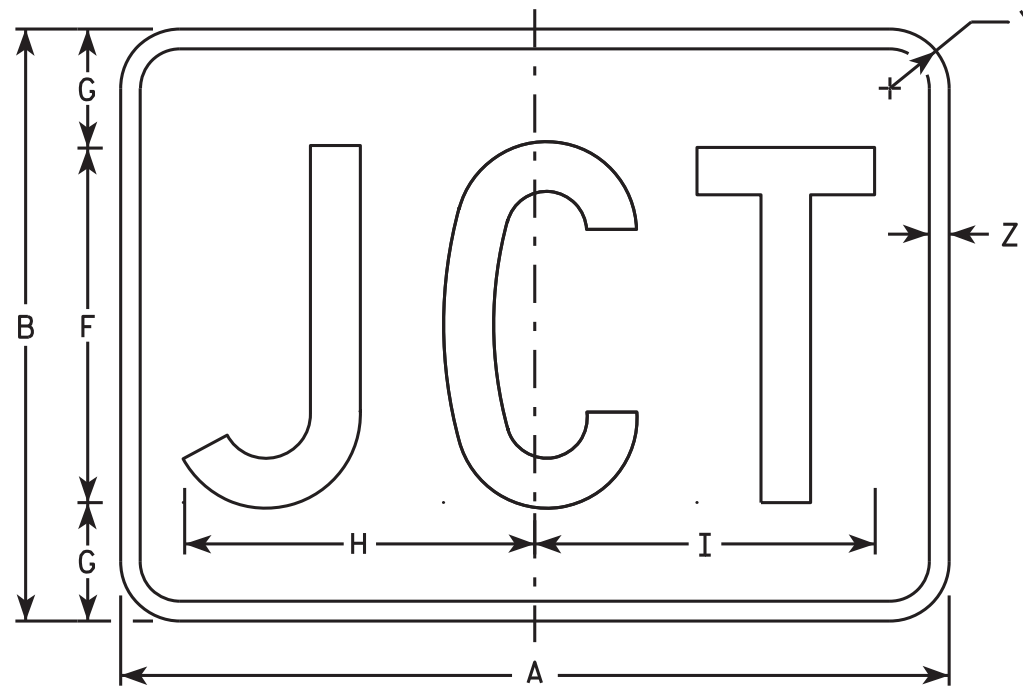
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 169 **E**

**NOTES**

1. Sign is Type II - Type H
2. Color:
  - Background - See note 5
  - Message - See note 5
3. Message Series - C
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. M2-1 Background - White  
 Message - Black  
 MB2-1 Background - Blue  
 Message - White  
 MK2-1 Background - Green  
 Message - White  
 MM2-1 Background - White  
 Message - Green  
 MN2-1 Background - Brown  
 Message - White  
 MP2-1 Background - White  
 Message - Blue  
 MR2-1 Background - Brown  
 Message - Yellow



M2-1  
MM2-1  
MP2-1



MB2-1  
MK2-1  
MN2-1  
MR2-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

**STANDARD SIGN**  
M2-1

WISCONSIN DEPT OF TRANSPORTATION

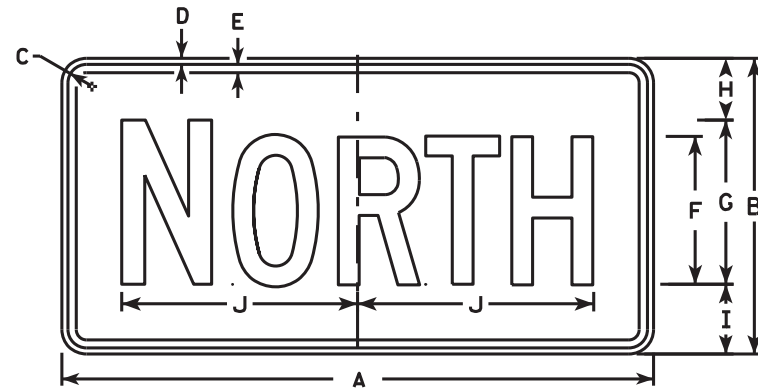
APPROVED *Matthew R. Raush*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M2-1.12

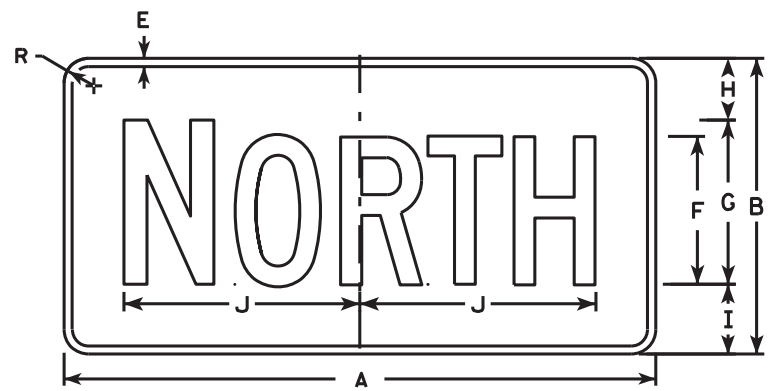
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO. <sup>170</sup> \_\_\_\_\_ E

NOTES

- All Signs Type II - Type H
- Color:
  - Background - See note 5
  - Message - See note 5
- Message Series - C
- CornerRadius 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.
- M3-1 thru M3-4 Background - White  
 Message - Black  
 MB3-1 thru MB3-4 Background - Blue  
 Message - White  
 MK3-1 thru MK3-4 Background - Green  
 Message - White  
 MM3-1 thru MM3-4 Background - White  
 Message - Green  
 MN3-1 thru MN3-4 Background - Brown  
 Message - White  
 MP3-1 thru MP3-4 Background - White  
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



M3-1  
MM3-1  
MP3-1



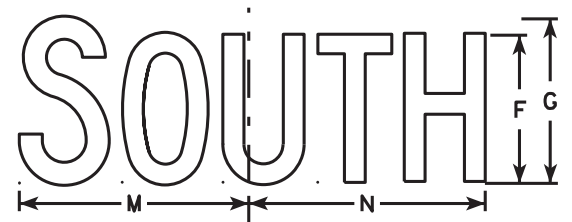
MB3-1  
MK3-1  
MN3-1



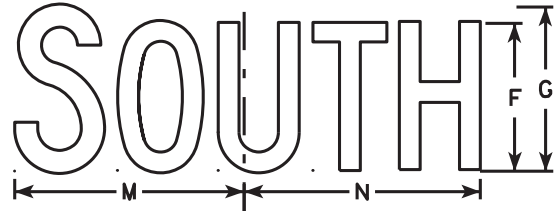
M3-2  
MM3-2  
MP3-2



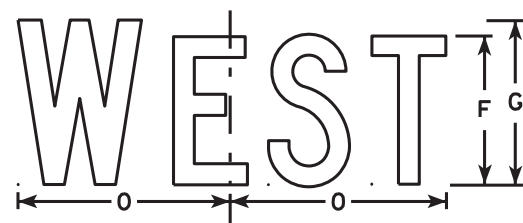
MB3-2  
MK3-2  
MN3-2



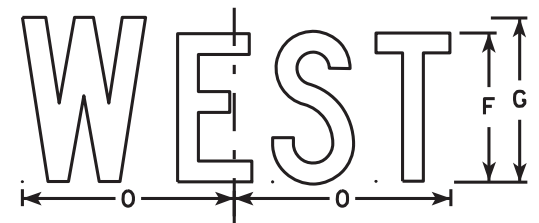
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

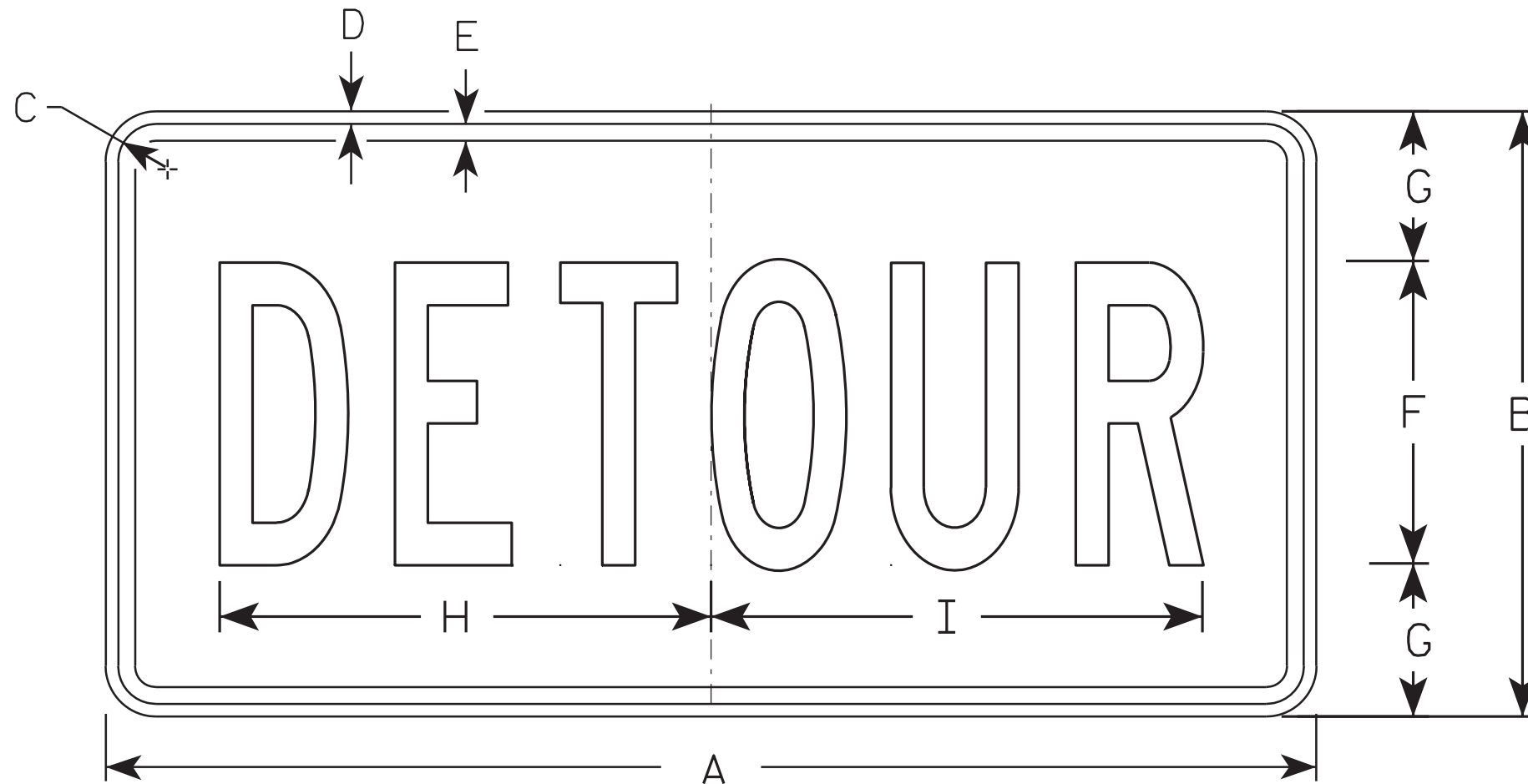
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

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

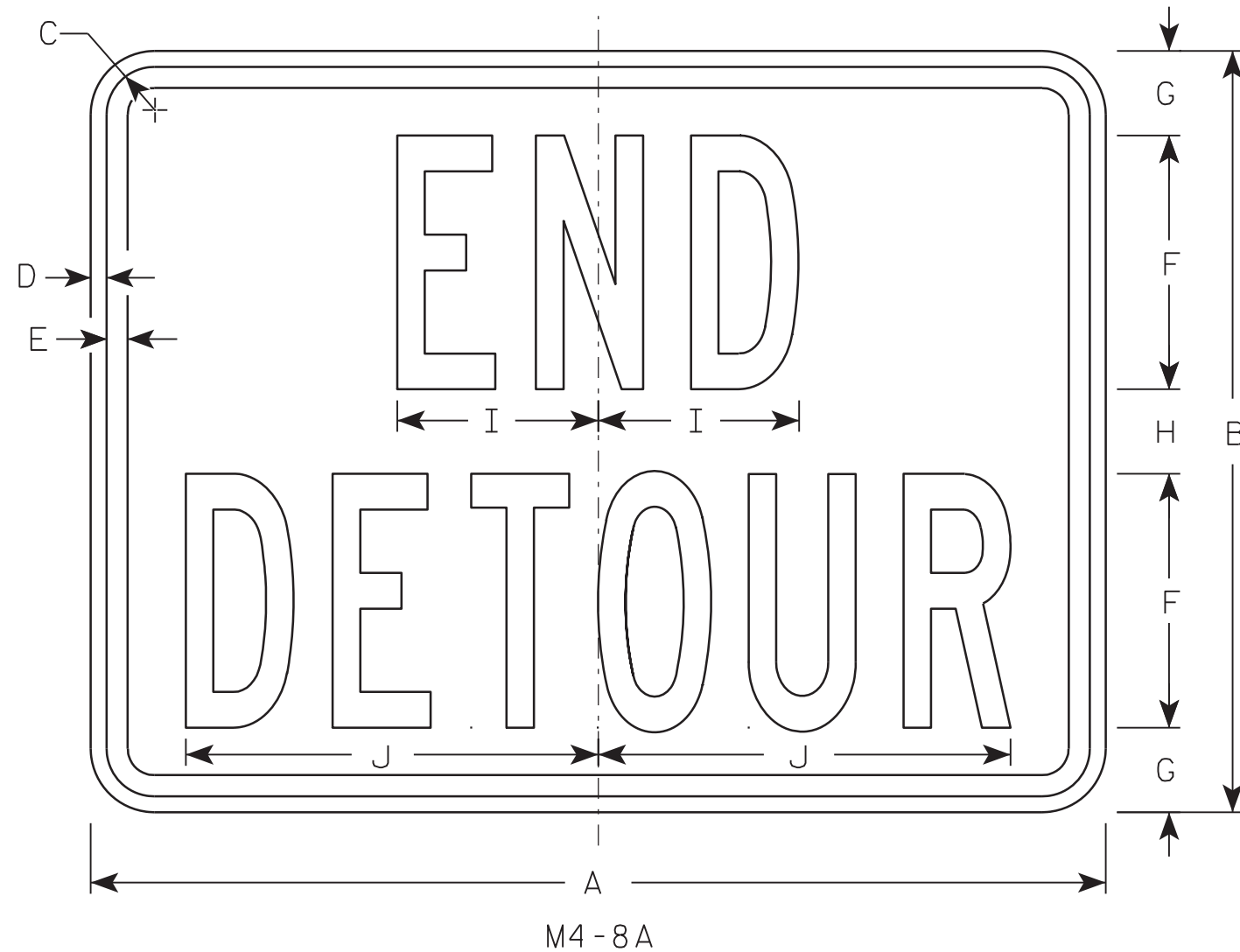
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 172 **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

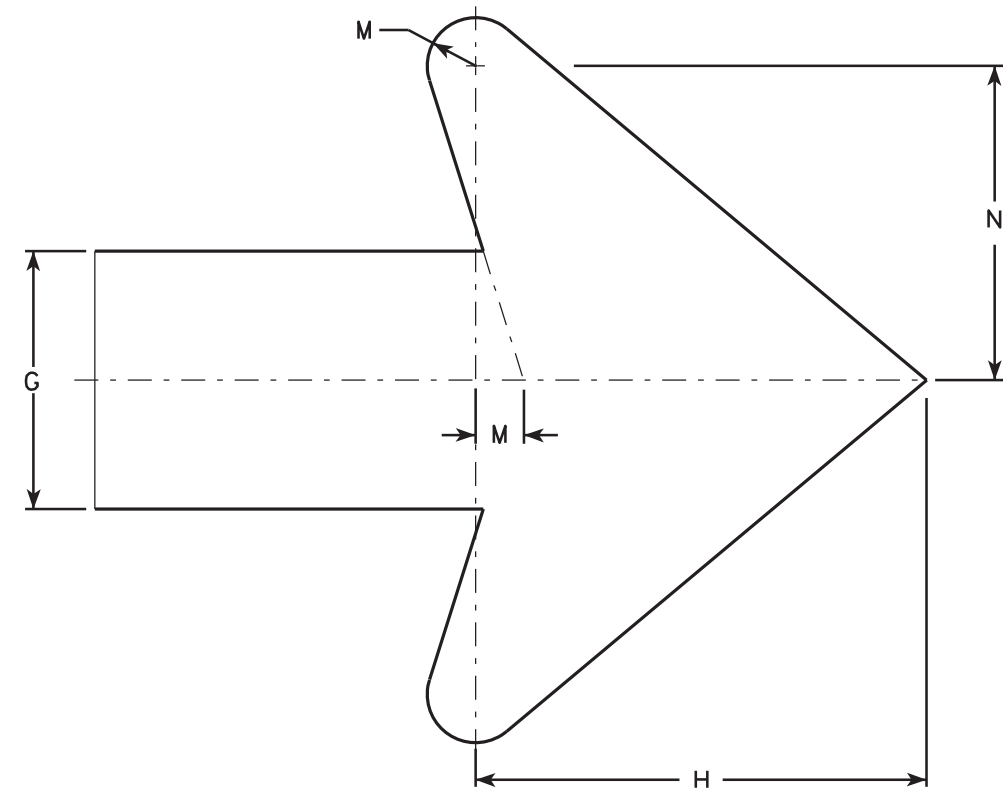
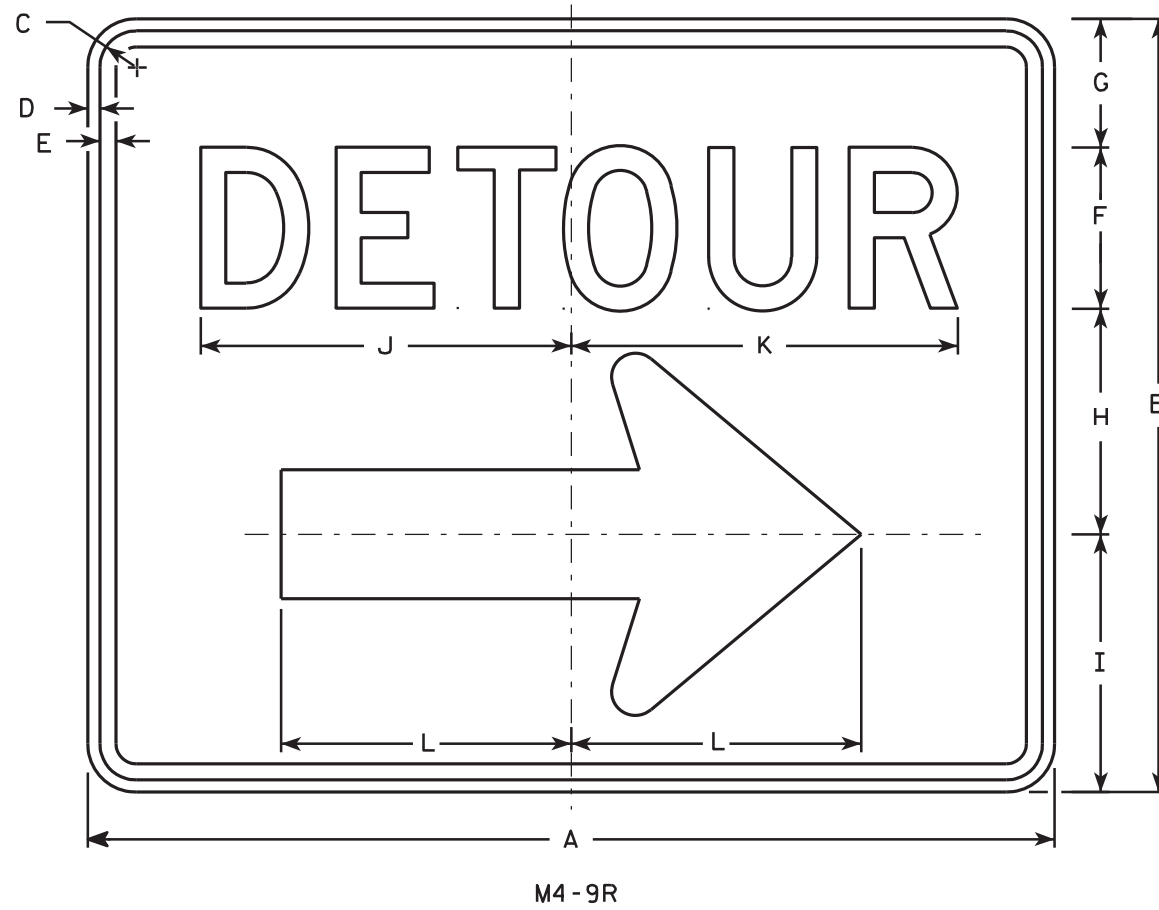
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 173 **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.



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																											
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

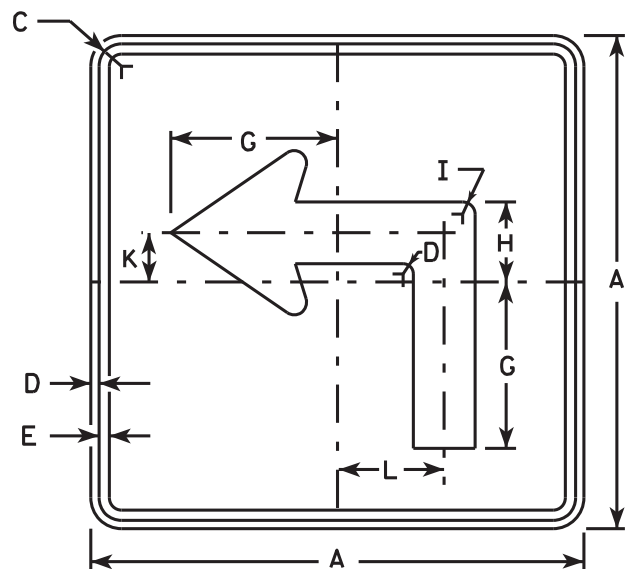
**STANDARD SIGN**  
**M4-9 R & L**

*WISCONSIN DEPT OF TRANSPORTATION*

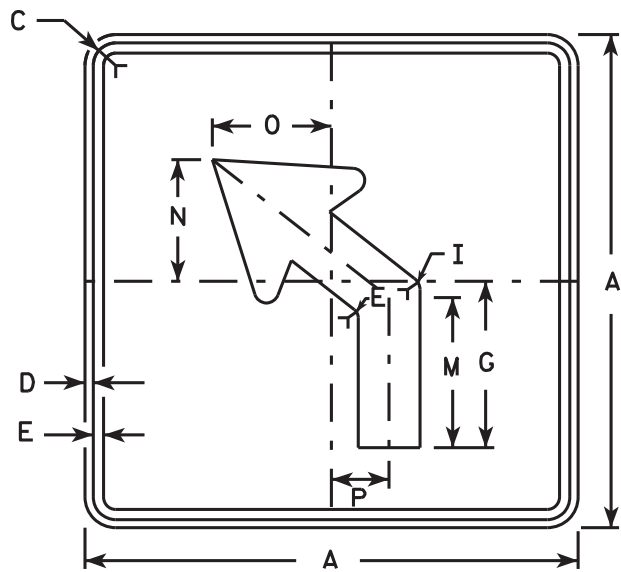
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

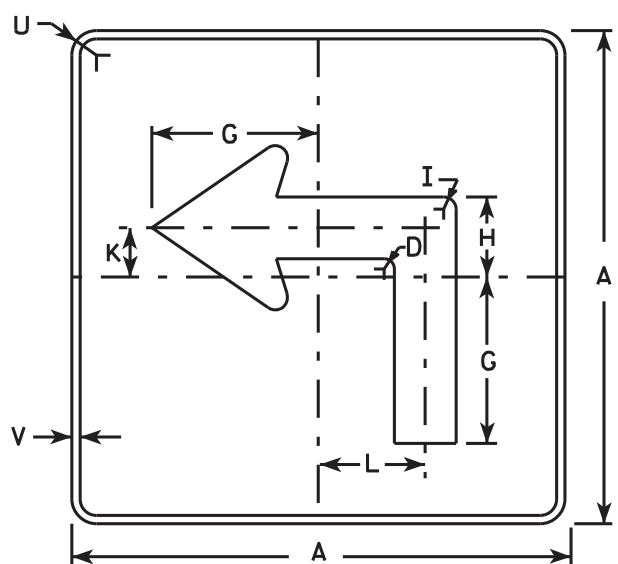
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 174 **E**



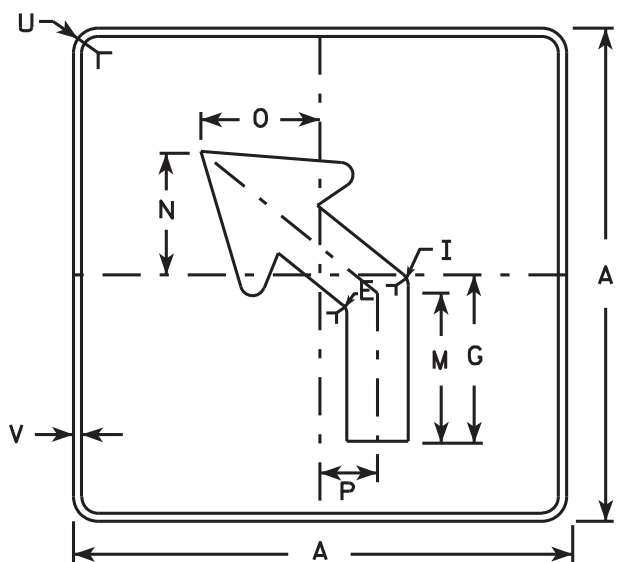
M5-1L  
MM5-1L  
M05-1L  
MP5-1L



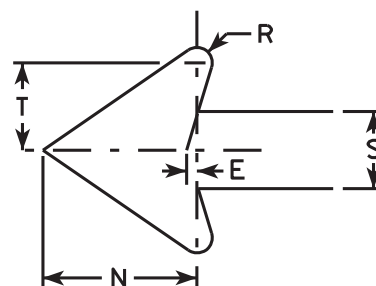
M5-2L  
MM5-2L  
M05-2L  
MP5-2L



MB5-1L  
MK5-1L  
MN5-1L  
MR5-1L



MB5-2L  
MK5-2L  
MN5-2L  
MR5-2L



NOTES

- Signs are Type II - Type H reflective 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.
- |                 |   |
|-----------------|---|
| M5-1 and M5-2   | Background - White                      |
|                 | Message - Black                         |
| MB5-1 and MB5-2 | Background - Blue                       |
|                 | Message - White                         |
| MK5-1 and MK5-2 | Background - Green                      |
|                 | Message - White                         |
| MM5-1 and MM5-2 | Background - White                      |
|                 | Message - Green                         |
| MN5-1 and MN5-2 | Background - Brown                      |
|                 | Message - White                         |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
|                 | Message - Black                         |
| MP5-1 and MP5-2 | Background - White - Type H Reflective  |
|                 | Message - Blue                          |
| MR5-1 and MR5-2 | Background - Brown                      |
|                 | Message - Yellow                        |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

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	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

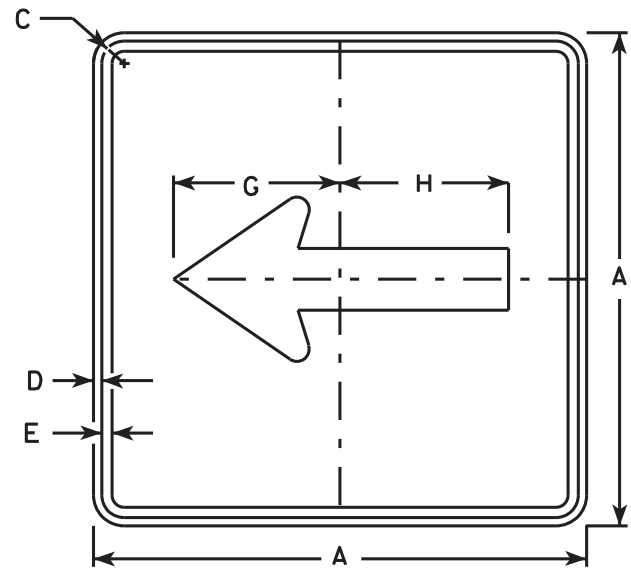
STANDARD SIGN  
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

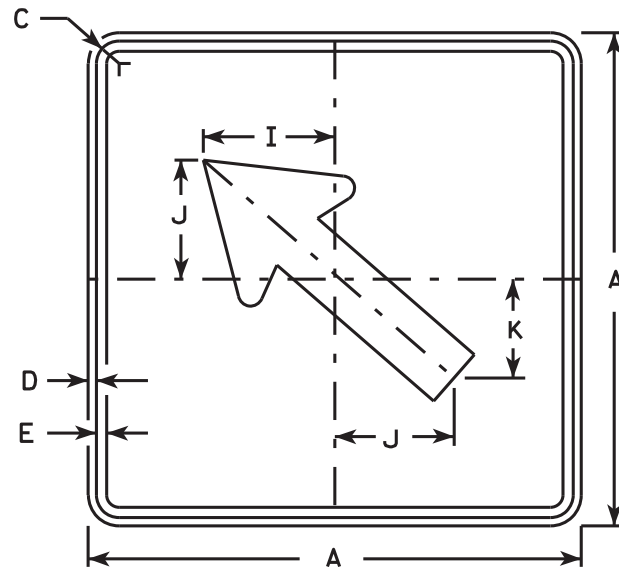
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

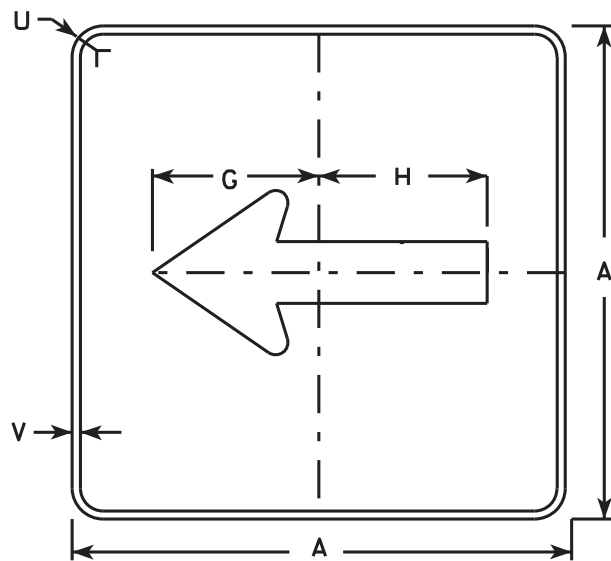




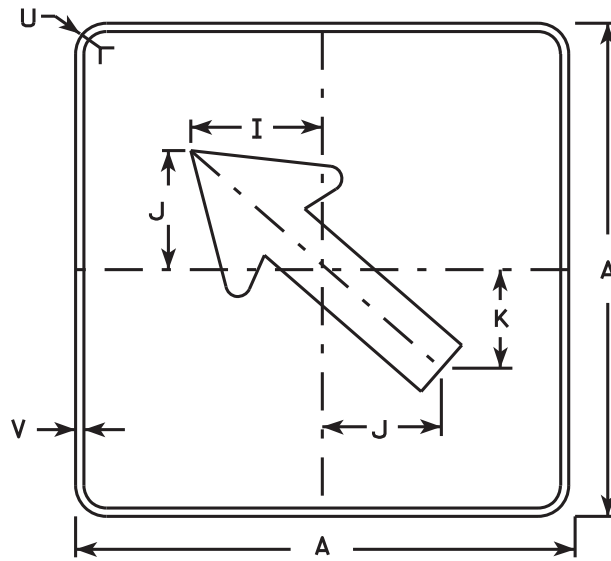
M6-1  
MM6-1  
M06-1  
MP6-1



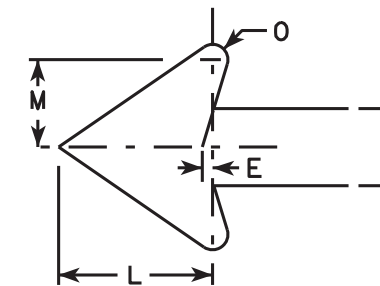
M6-2  
MM6-2  
M06-2  
MP6-2



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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO. 176

E

STANDARD SIGN  
M6-1 & M6-2  
SERIES

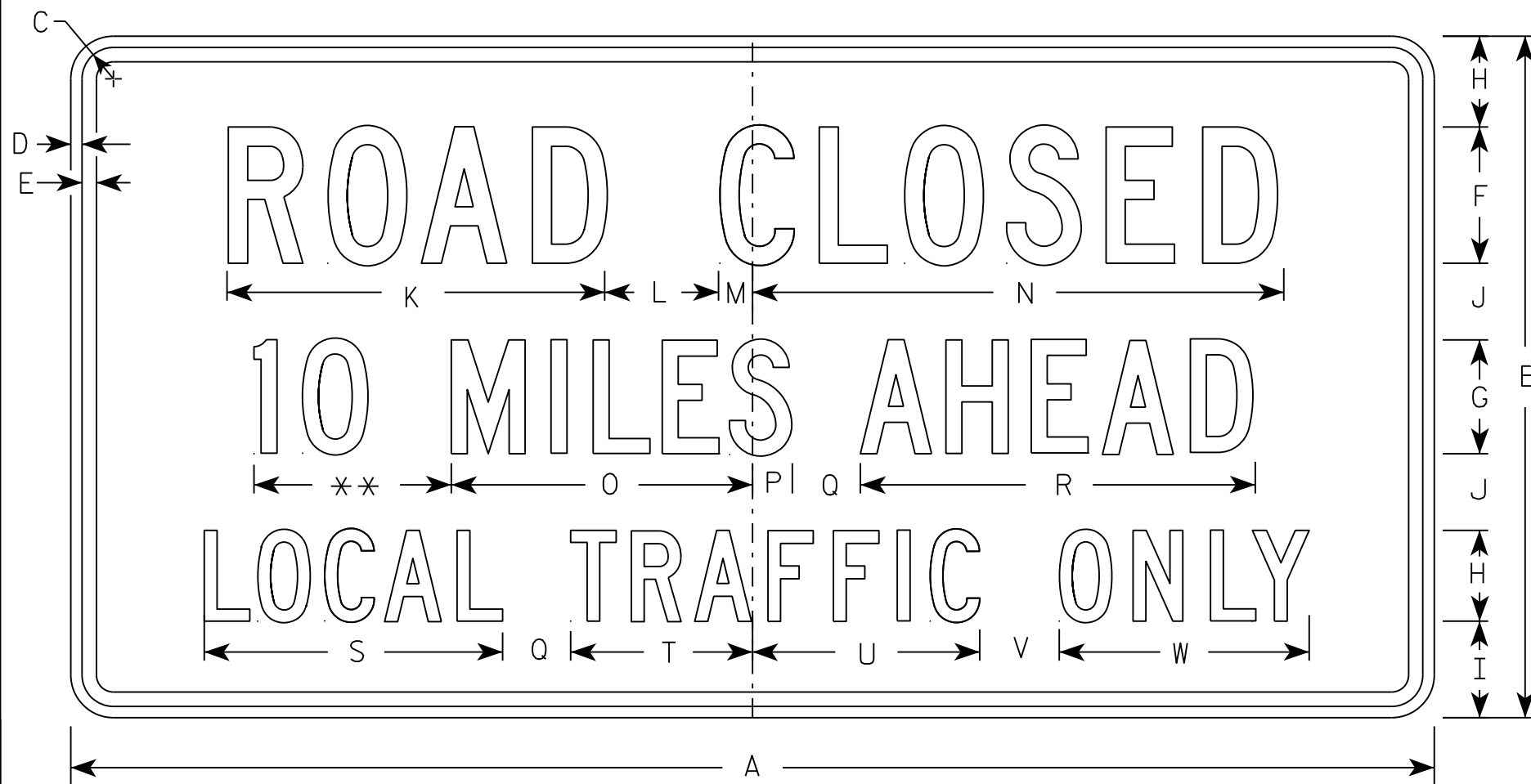
WISCONSIN DEPT OF TRANSPORTATION

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
2. Color:
  - Background - White
  - Message - Black
3. Message Series - C
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 to nearest quarter mile and optically adjust spacing to achieve proper balance.

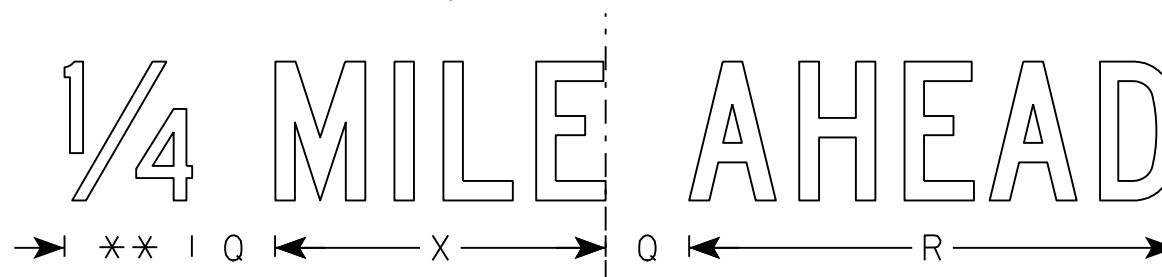


7

7

R11-3

\*\* See Note 5



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	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8		4.5	
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8		12.5	
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8		12.5	
3																											
4																											
5																											

STANDARD SIGN  
R11-3

WISCONSIN DEPT OF TRANSPORTATION

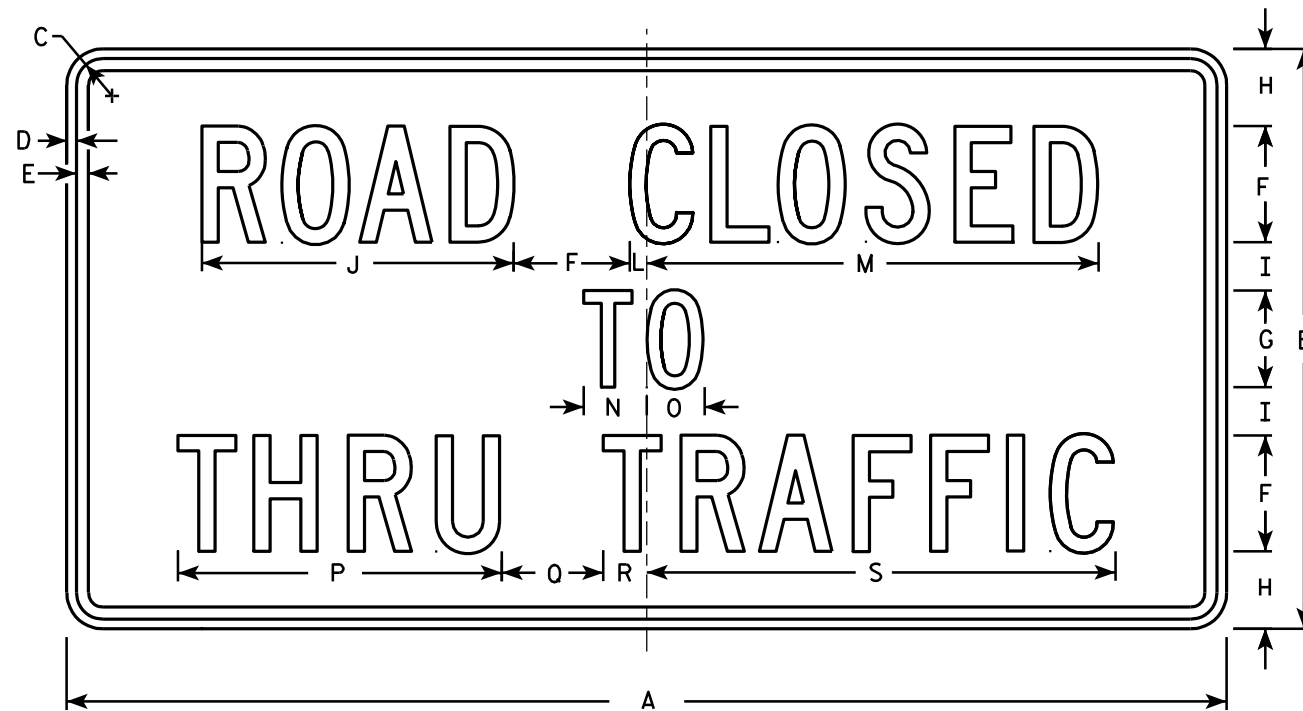
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 177 **E**

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 - C
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.



R11-4

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																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

**STANDARD SIGN**  
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

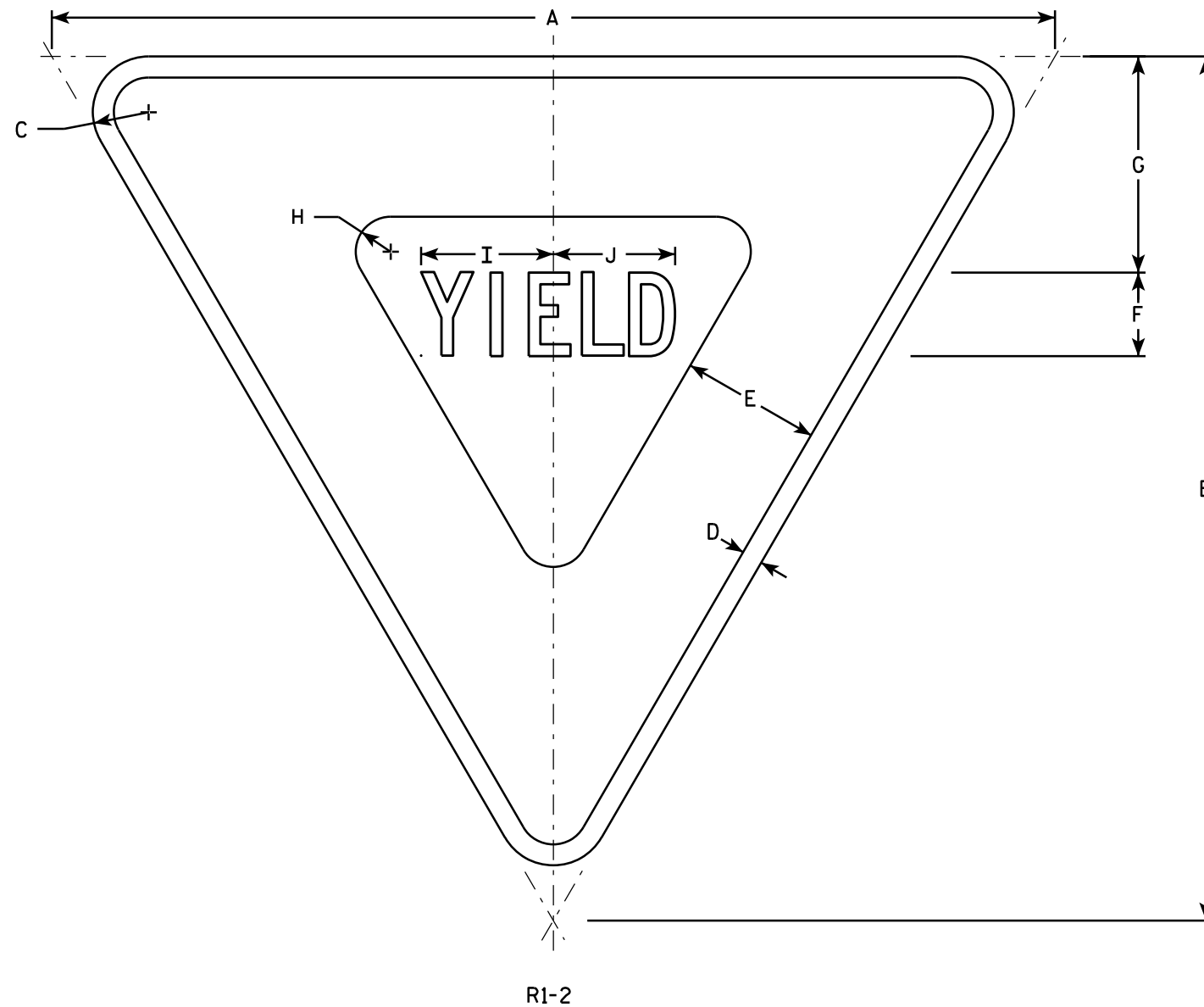
APPROVED *Matthew R. Raush*  
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 178 **E**

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 - See note 5
3. Message Series - C
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. The border strip and word message are reflectorized red.



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	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

**STANDARD SIGN**  
R1-2

WISCONSIN DEPT OF TRANSPORTATION

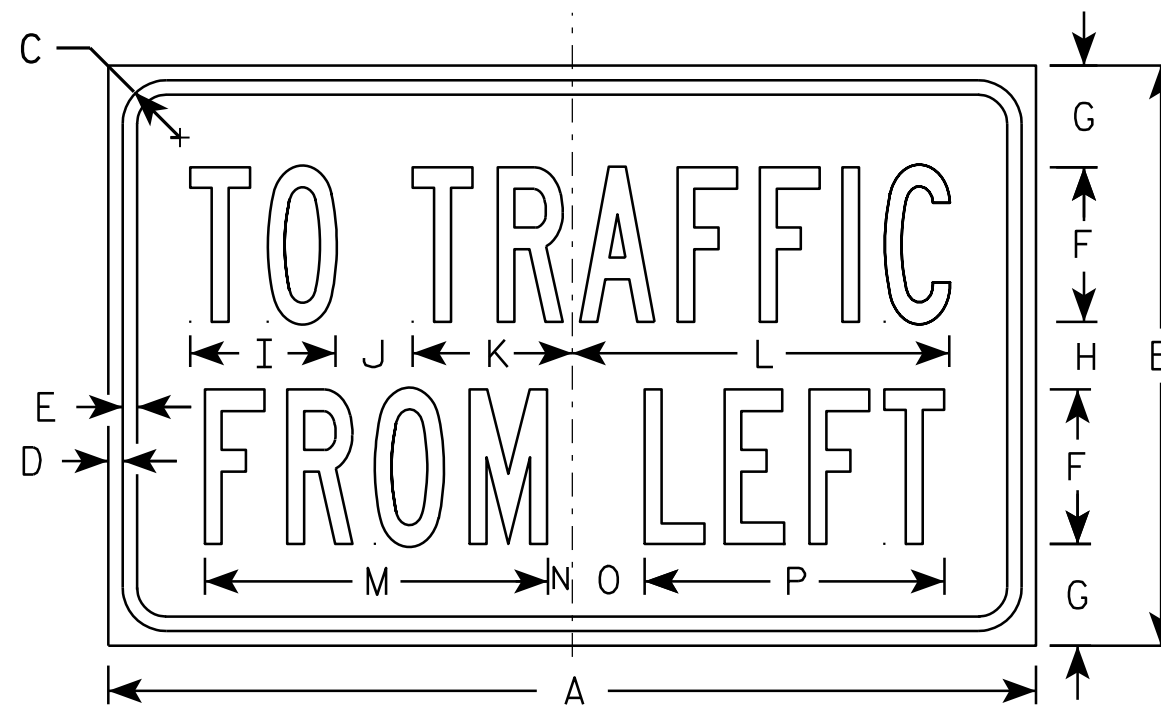
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/13/14 PLATE 179 P1-2.12

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

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 - B



R1-54

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																											
2S	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

STANDARD SIGN  
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*  
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-54.2

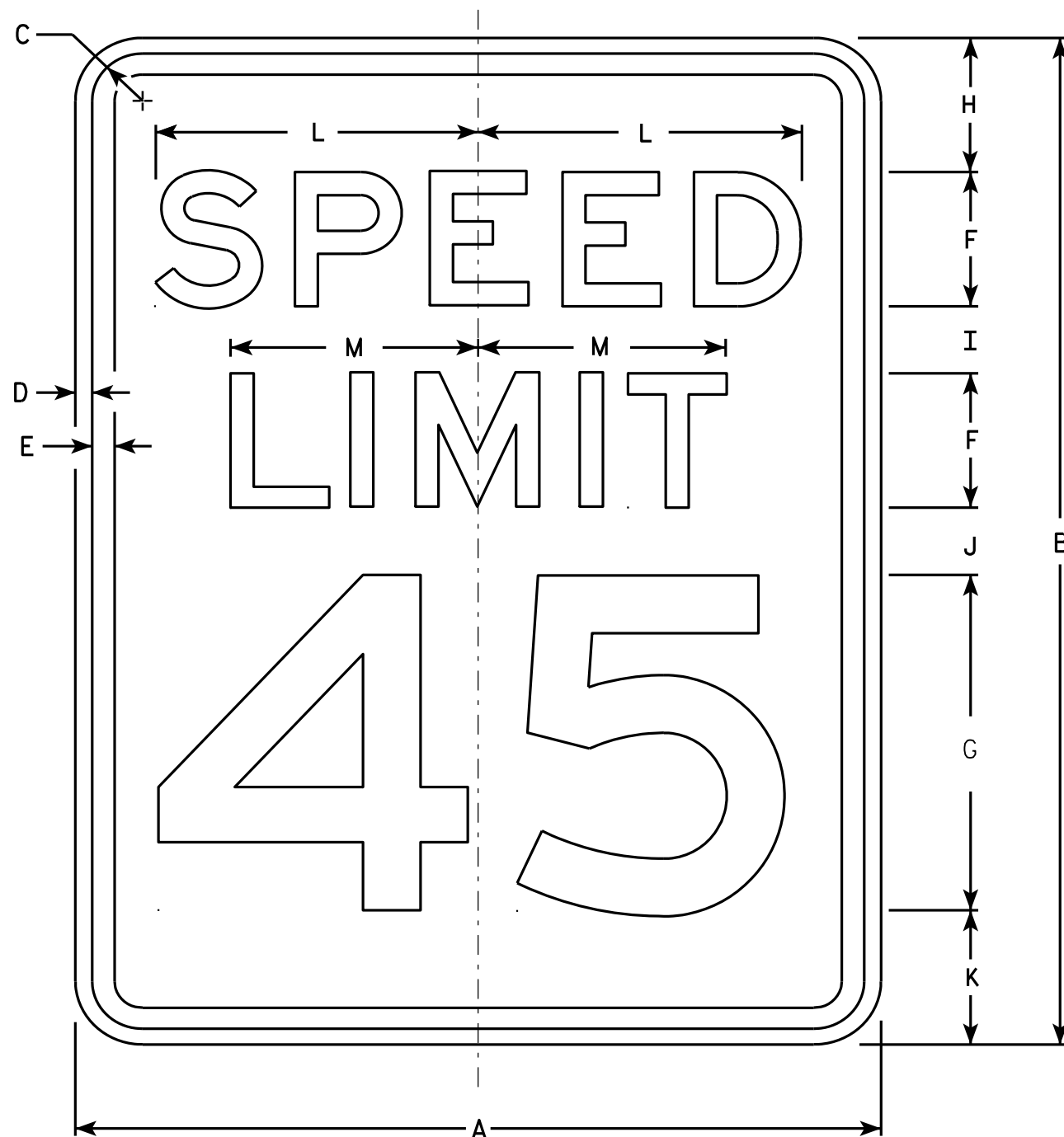
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 180

E



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

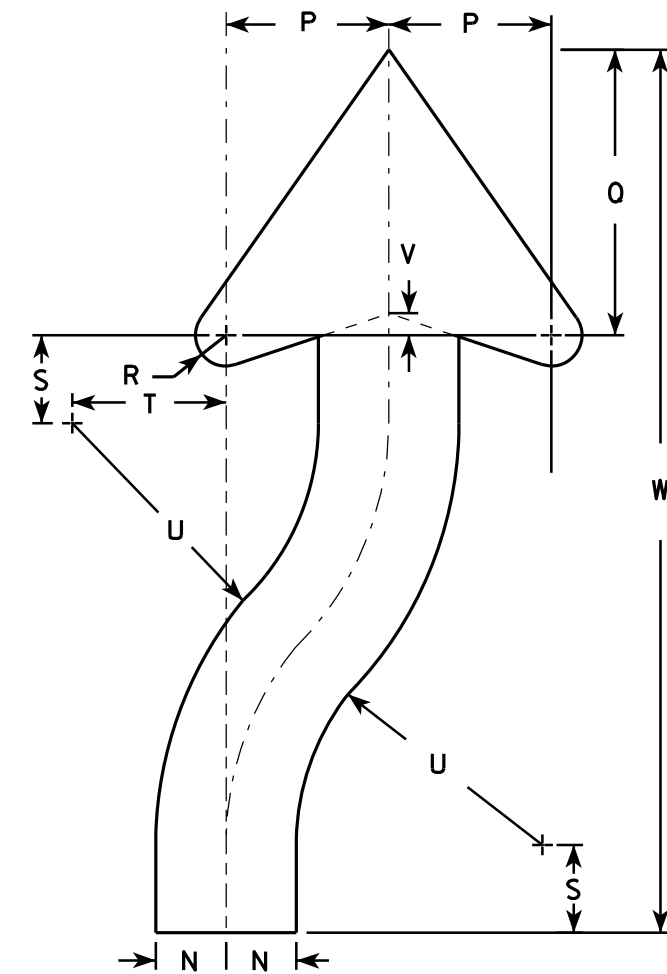
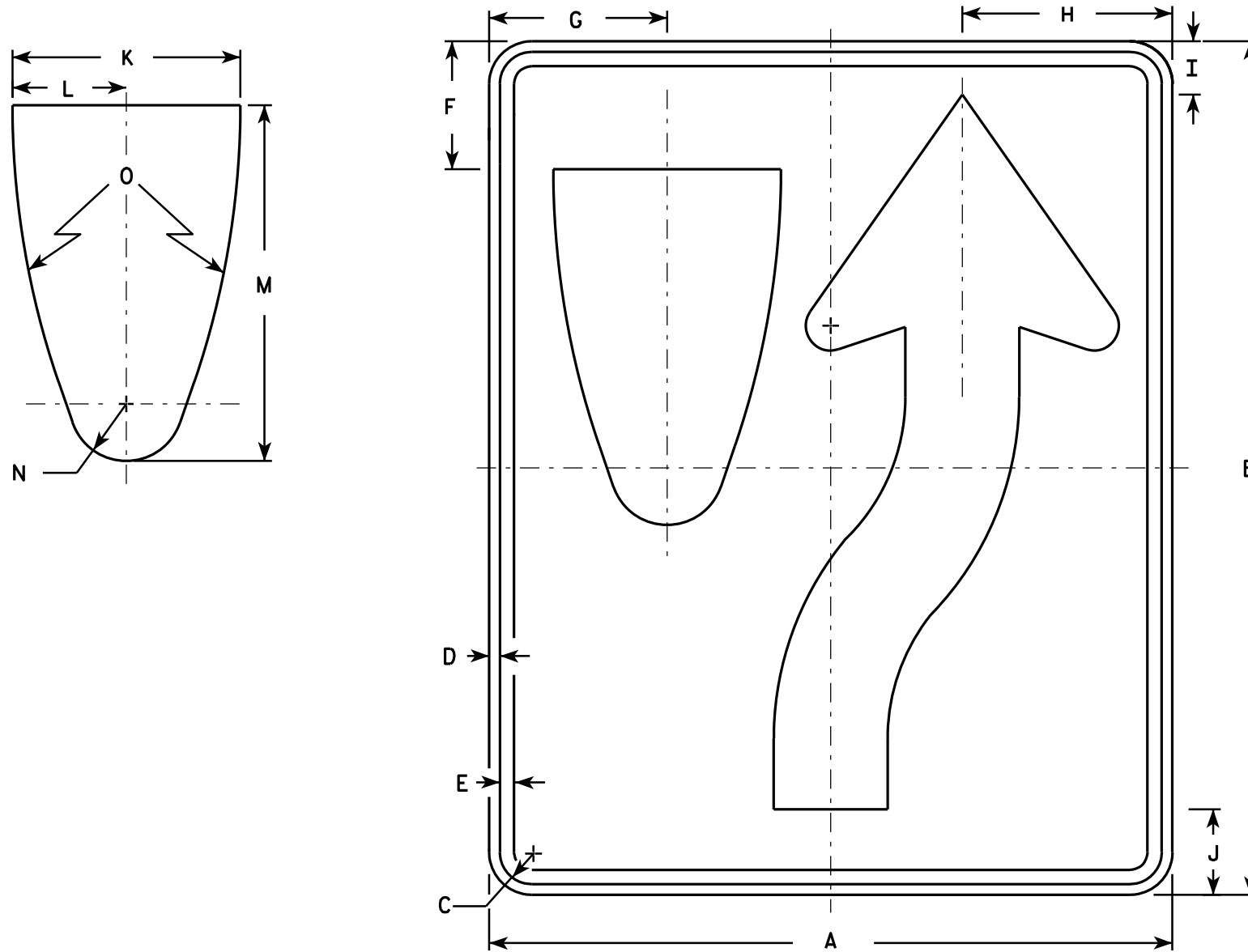
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 181 **E**

**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:  
Background - White  
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



**ARROW DETAIL**

**R4-7**

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 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

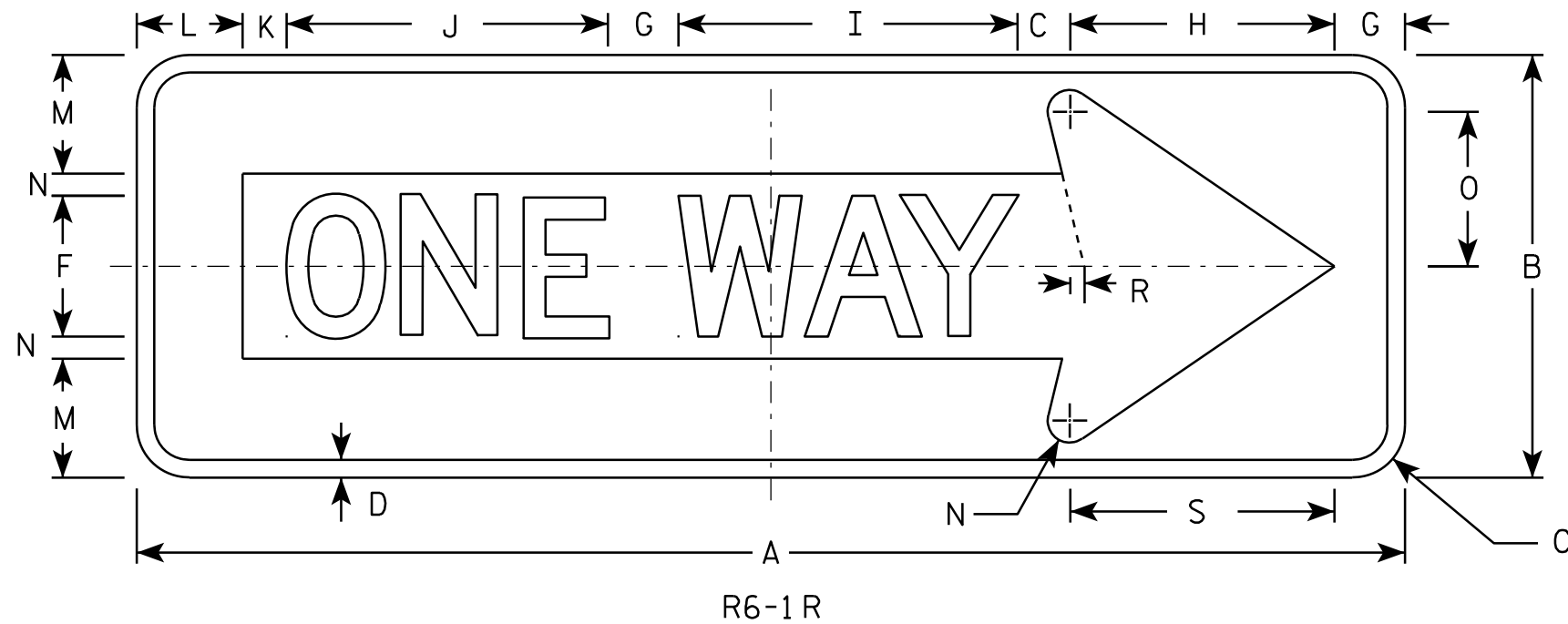
**STANDARD SIGN**  
**R4-7 & R4-8**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

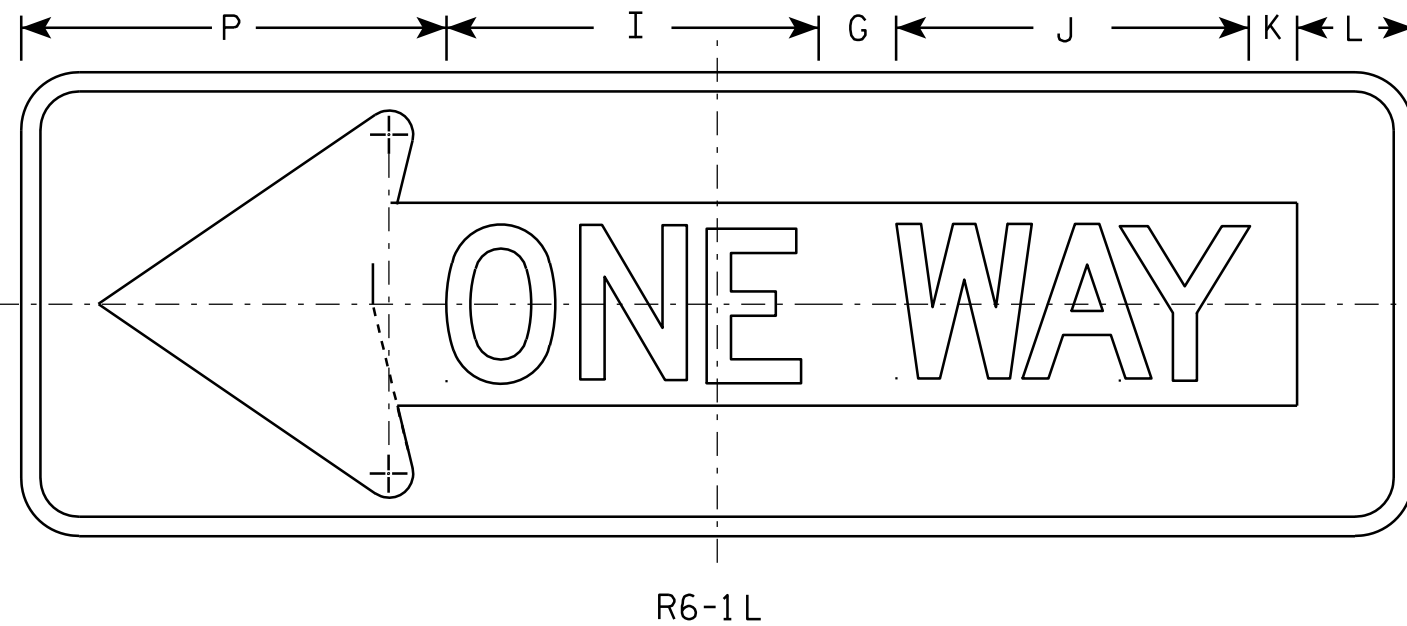
DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 182 **E**



**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - BLACK  
Message - BLACK LEGEND & WHITE ARROW & BORDER
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.



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																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

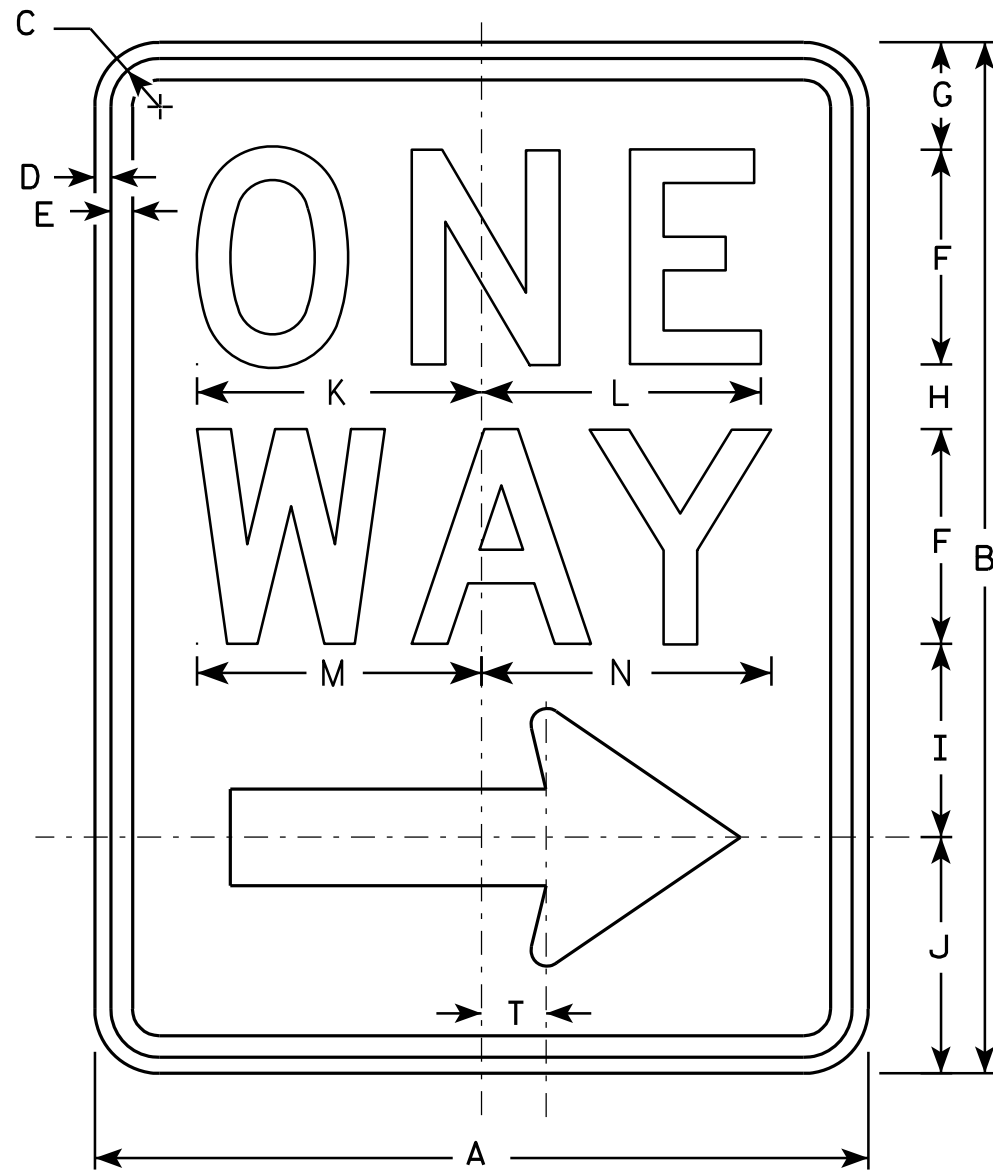
**STANDARD SIGN**  
**R6-1 L & R**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

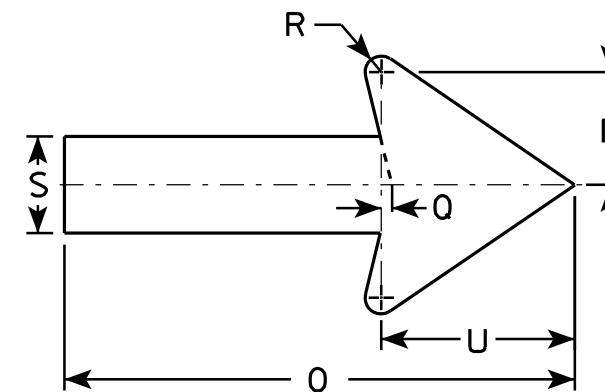




R6-2R

**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 - 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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

**STANDARD SIGN**  
**R6-2 R&L**

*WISCONSIN DEPT OF TRANSPORTATION*

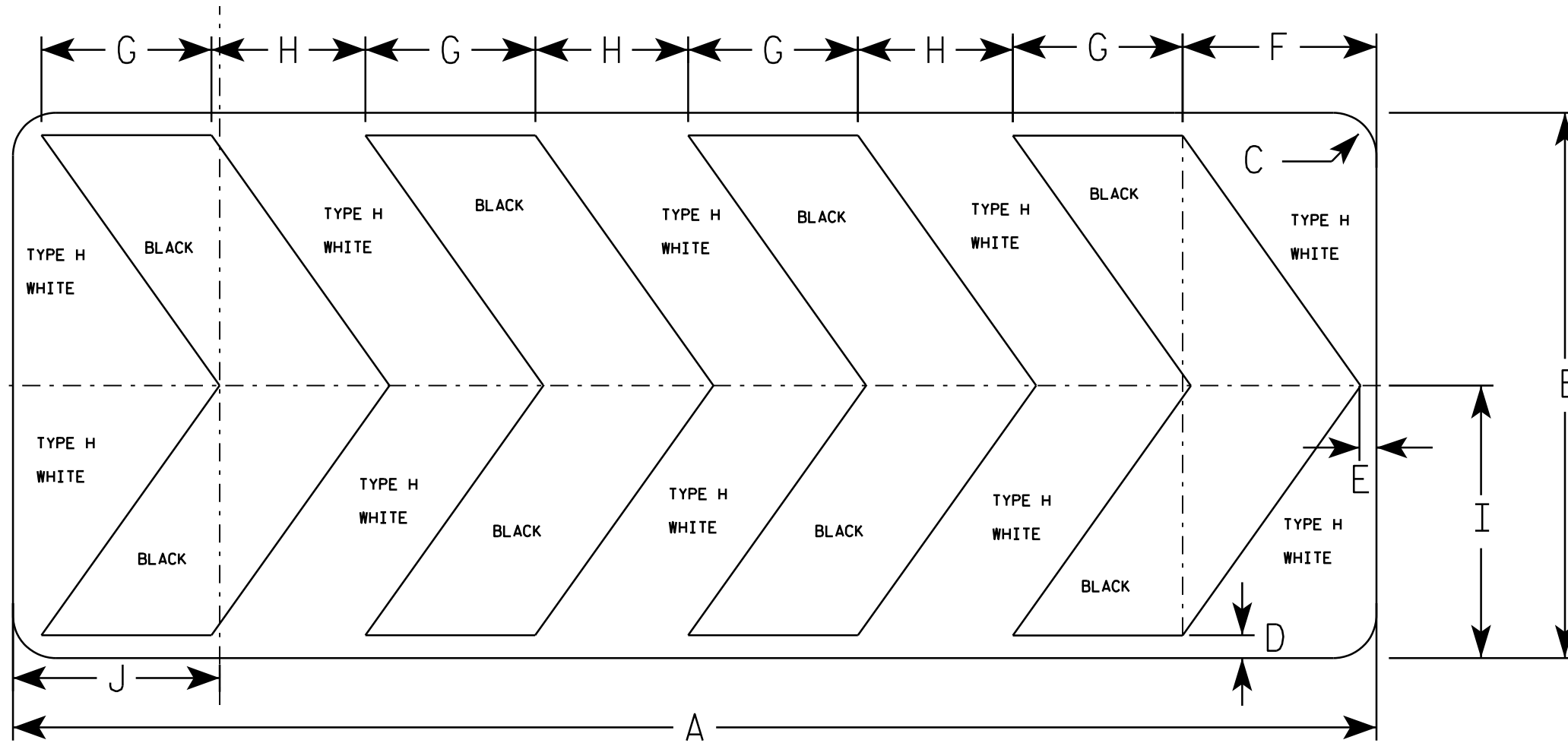
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 184 **E**

**NOTES**

1. Sign is Type II - Type H Reflective
2. Color:  
Background - WHITE  
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.



R6-4B

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																											
2S	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

**STANDARD SIGN**  
**R6-4B**

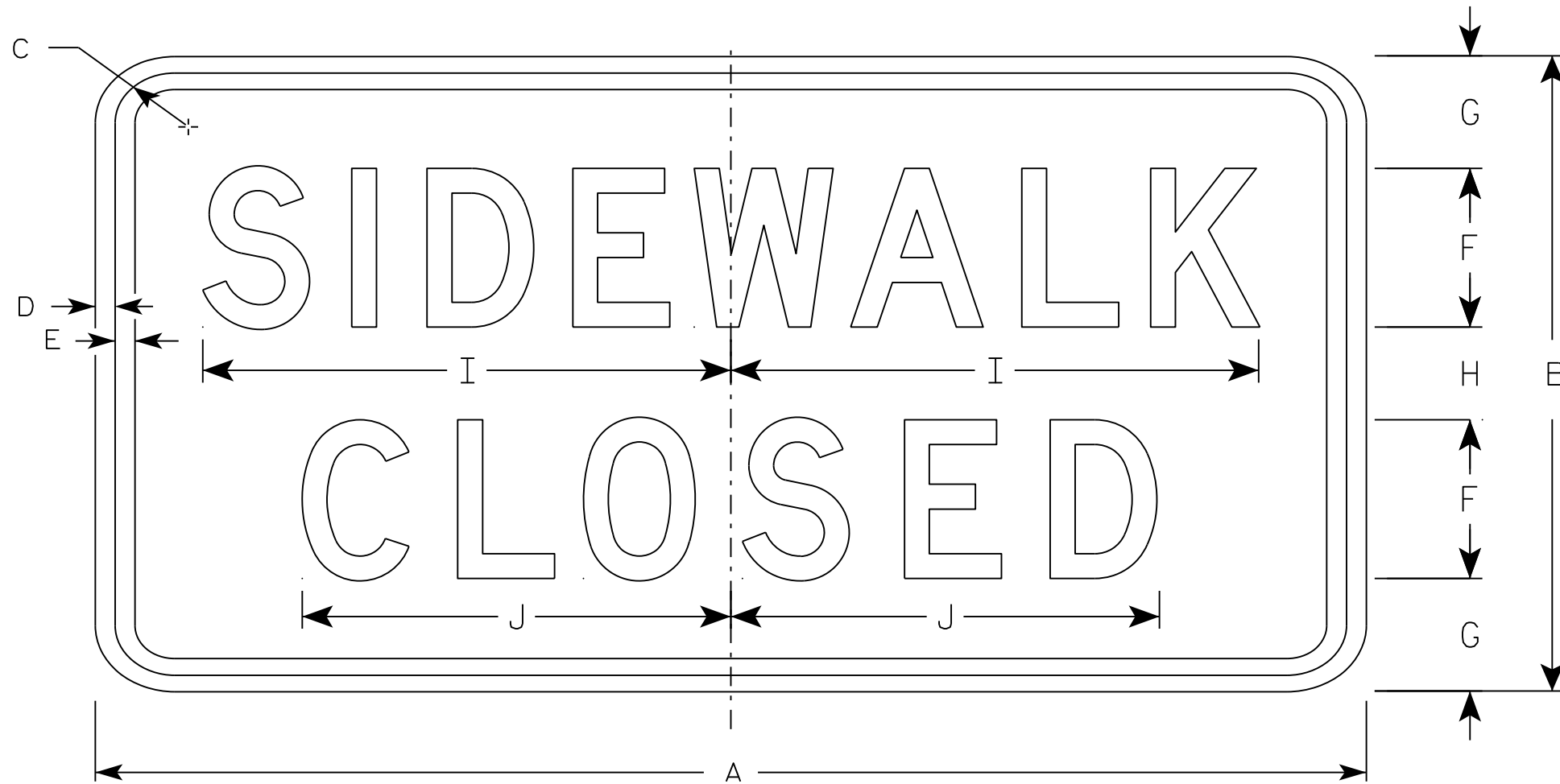
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/21/14 PLATE NO. 185 P6-4.3

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 - C
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. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.



R9-9

7

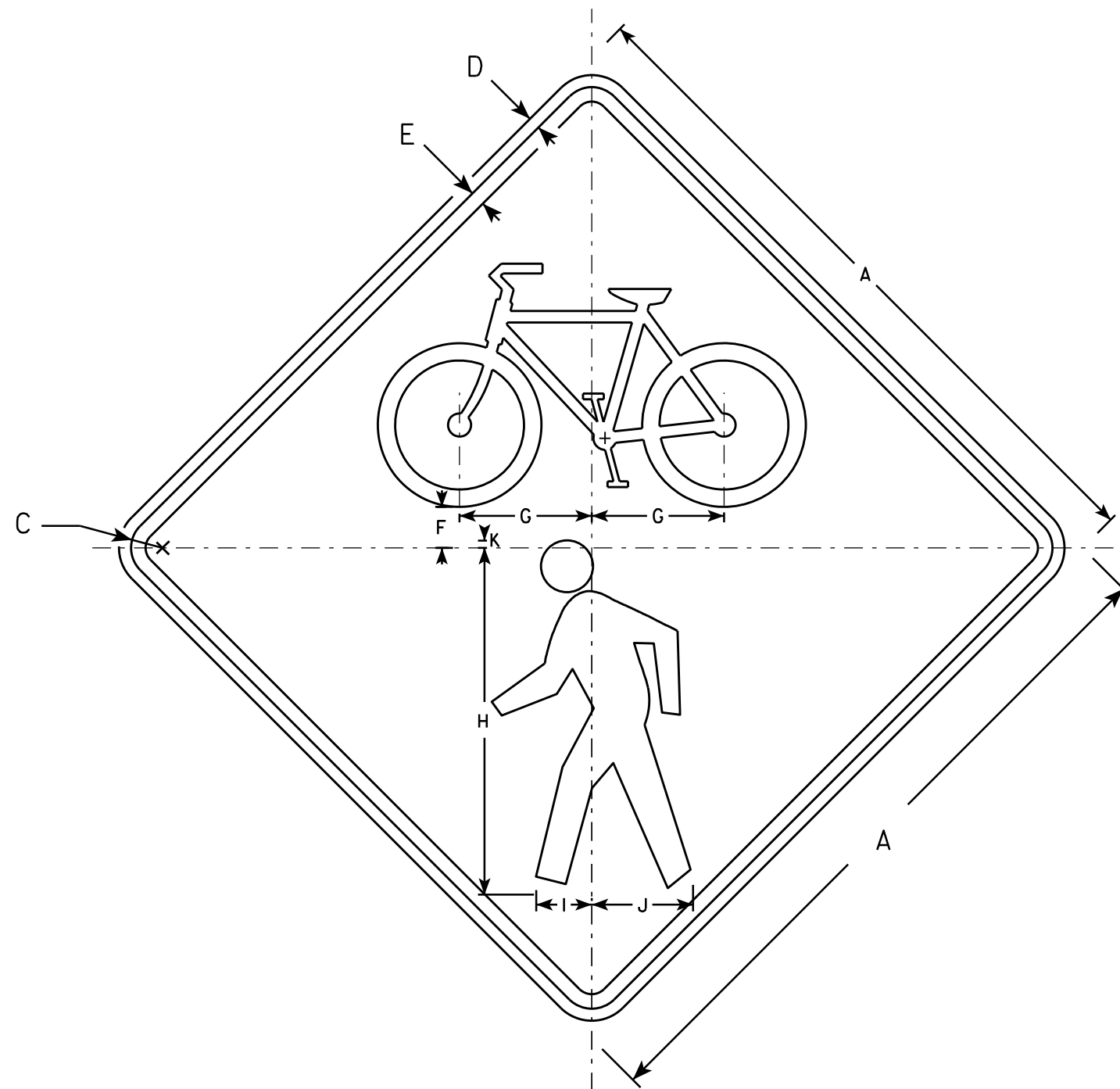
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN  
R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/11/16 PLATE 186 R9-9.6



W11-15

NOTES

1. Sign is Type II - Type F Reflective
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	1 3/8	4 5/8	12	1 7/8	3 1/2	1/4																4.0
2S	30		1 3/8	1/2	5/8	1 3/4	5 3/4	15	2 3/8	4 3/8	3/8																6.25
2M	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																9.0
3	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																16.0
4	48		2 1/4	3/4	1	2 7/8	9 1/8	24	3 7/8	7	1/2																16.0
5																											

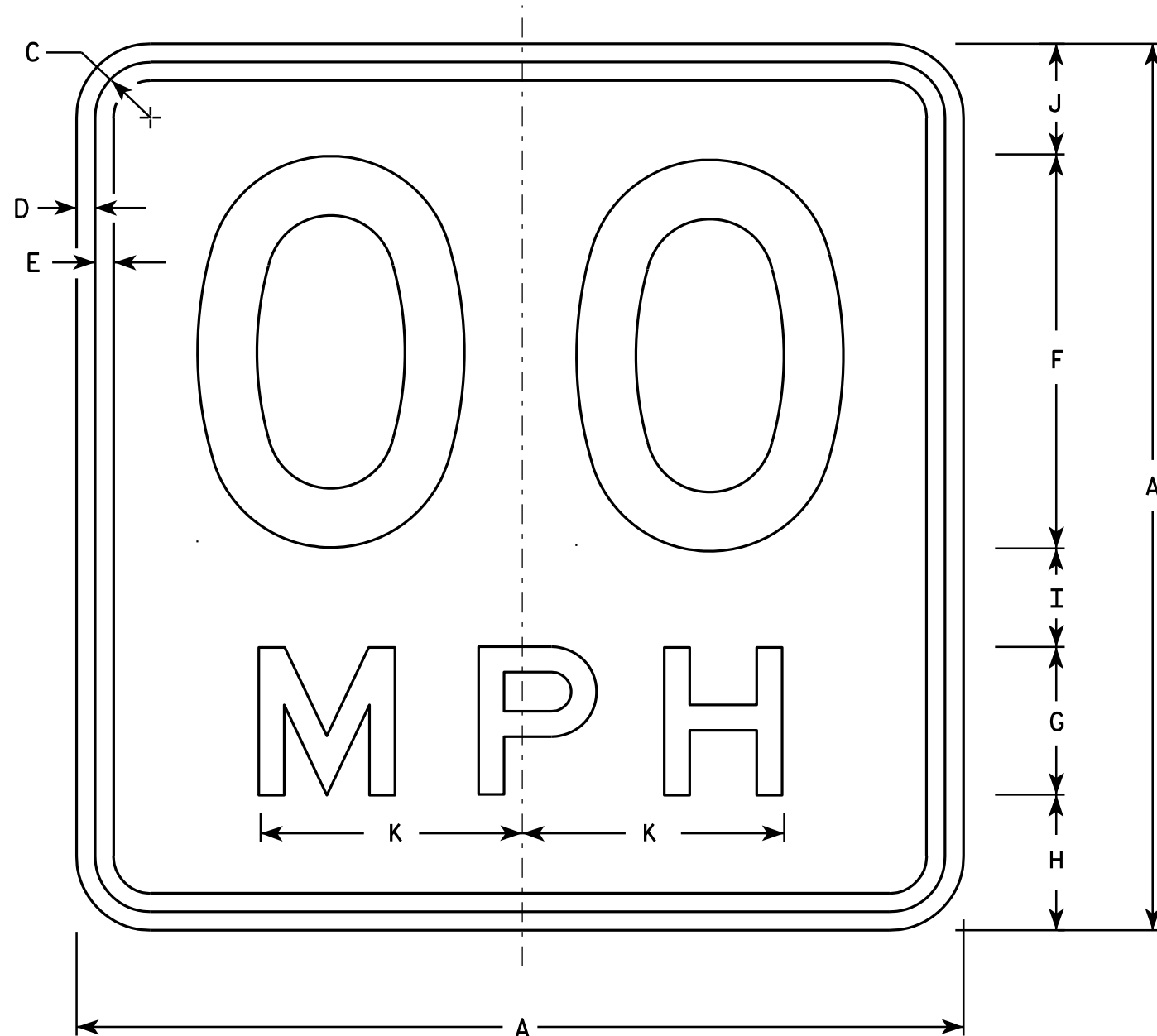
**STANDARD SIGN**  
W11-15

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 2/13/14 PLATE NO. W11-15.4  
187

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. Message Series - See Note 6
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 space about centerline to achieve proper balance.
6. Line 1 is Series D  
Line 2 is Series E

W13-1

\* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.  
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN

W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO:

HWY:

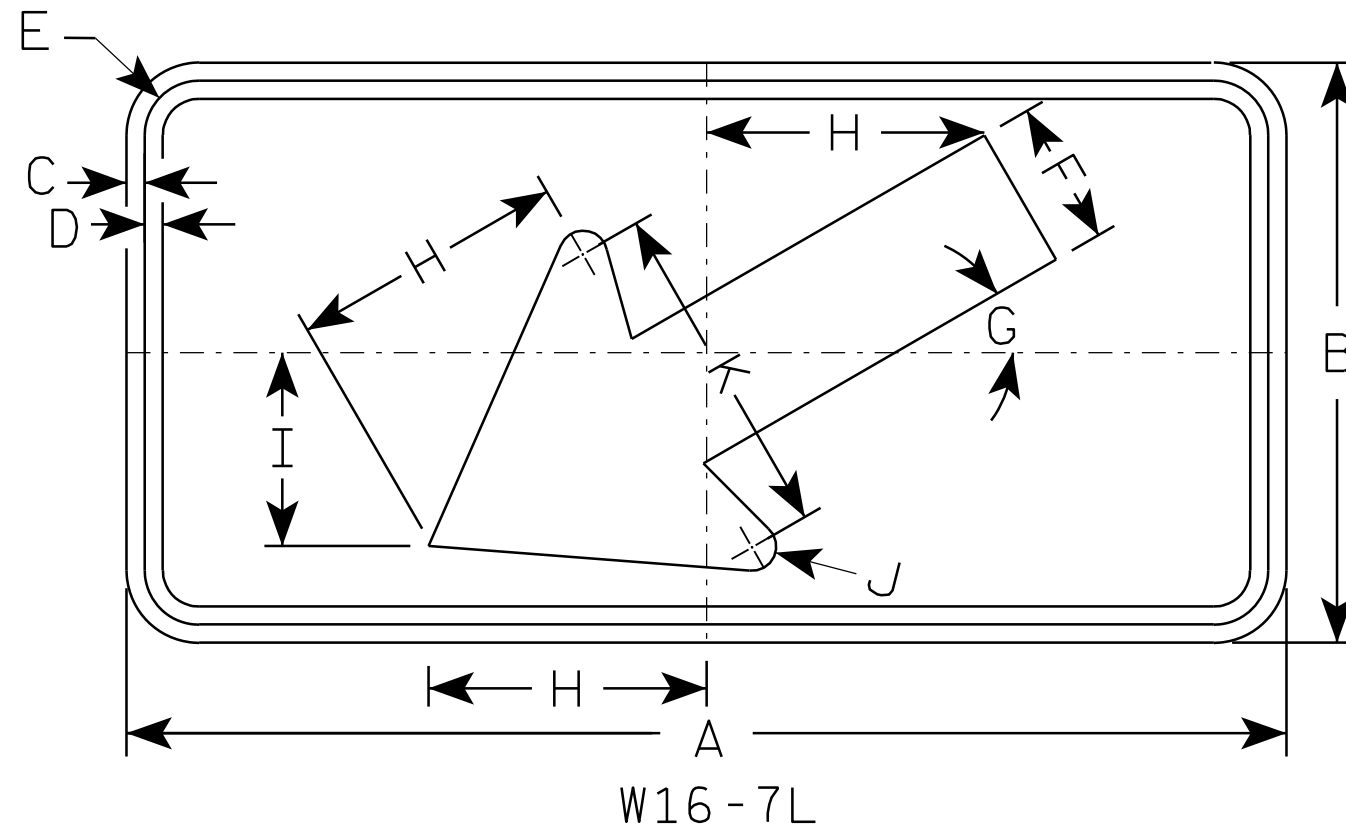
COUNTY:

SHEET NO: 188

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.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.



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																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

**STANDARD SIGN**  
**W16-7**

WISCONSIN DEPT OF TRANSPORTATION

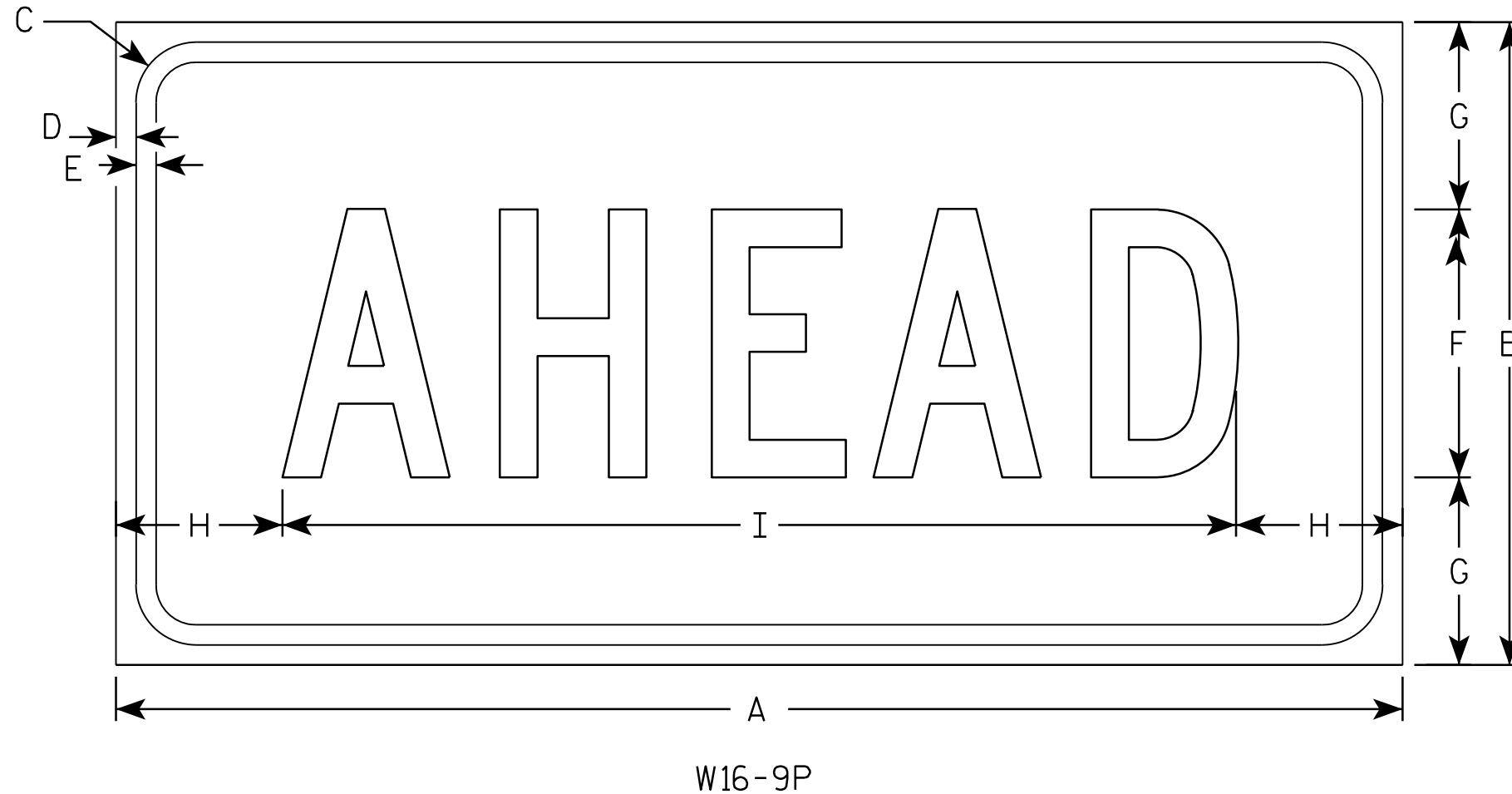
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 189 **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. Message Series - C
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																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

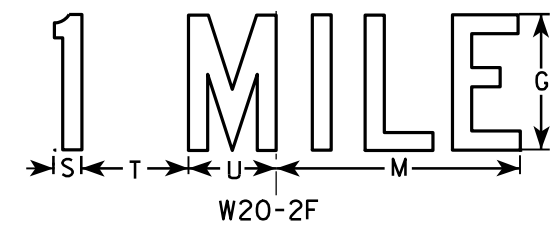
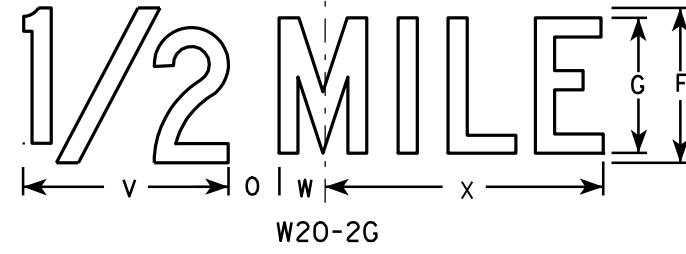
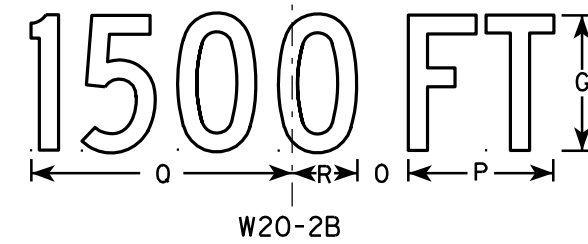
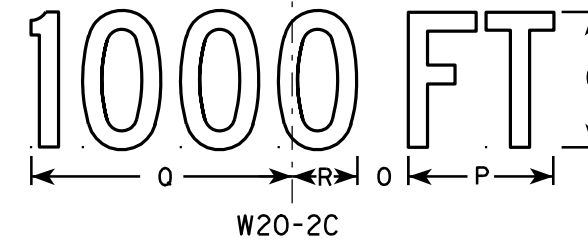
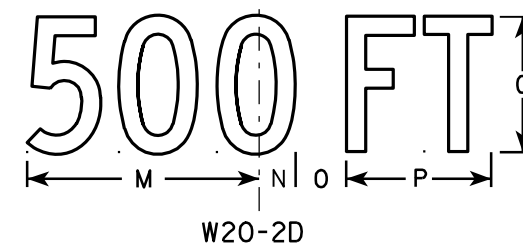
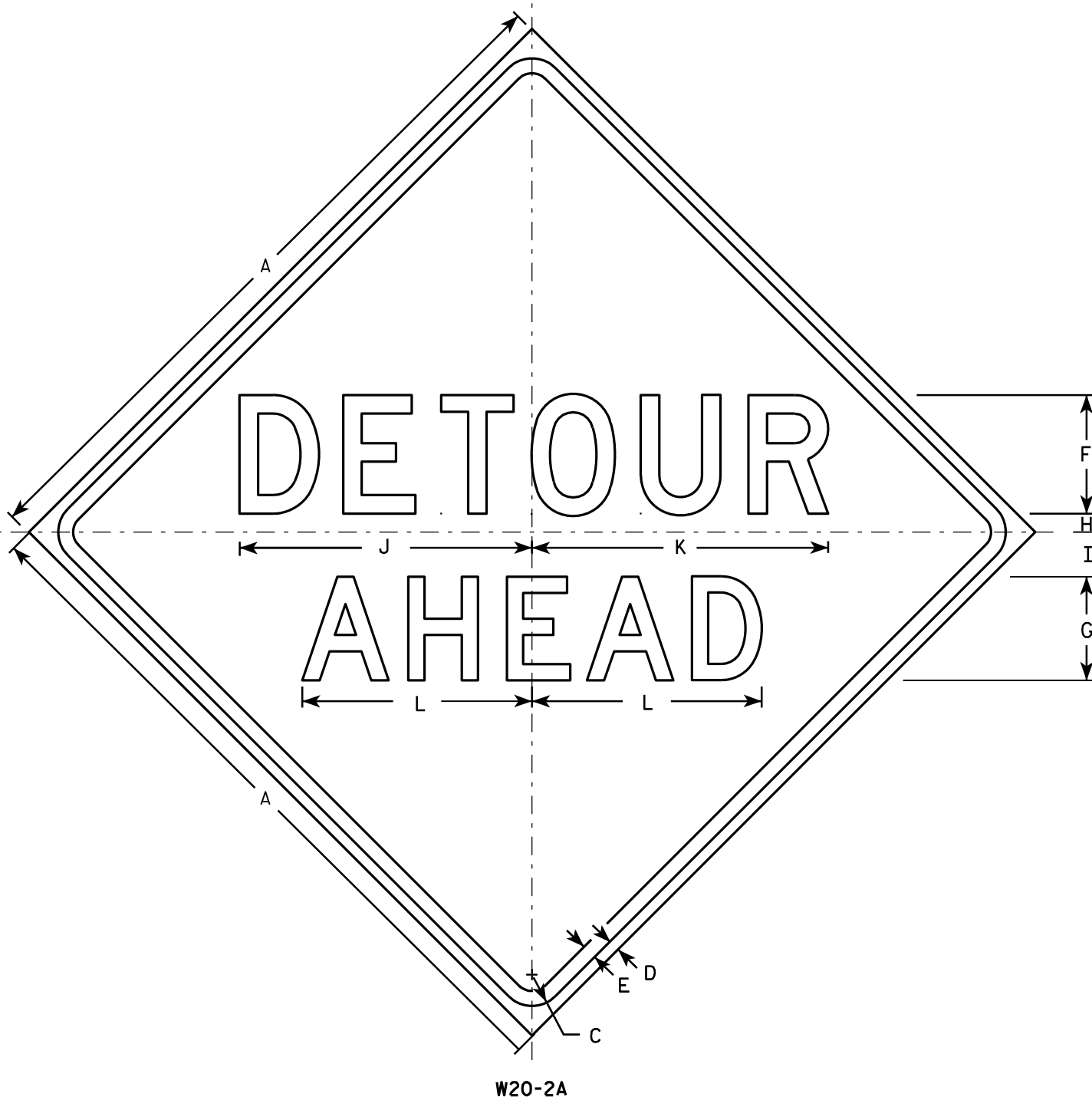
**STANDARD SIGN**  
**W16-9P**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 190 **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

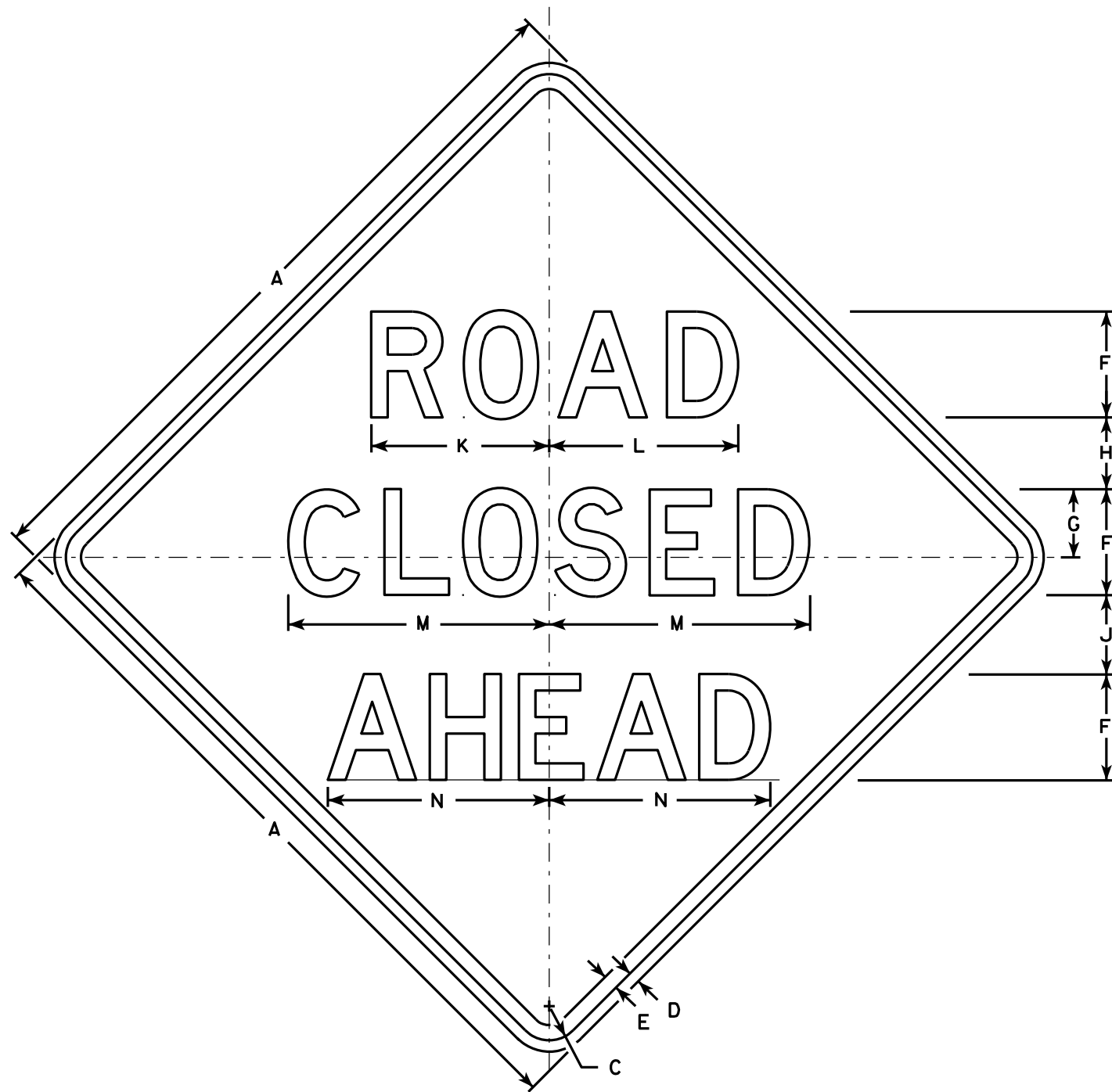
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*  
for State Traffic Engineer

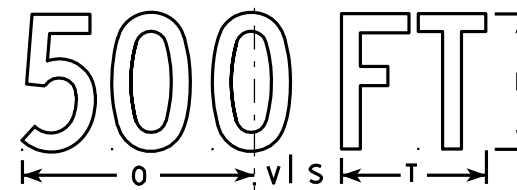
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 191 **E**

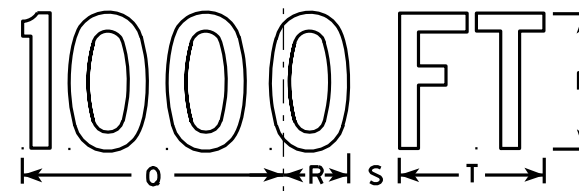




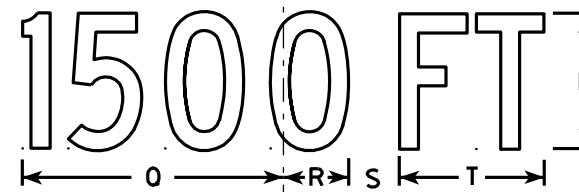
W20-3A



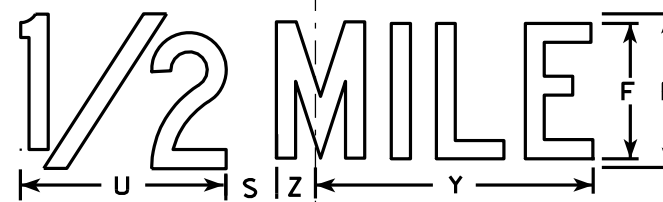
W20-3D



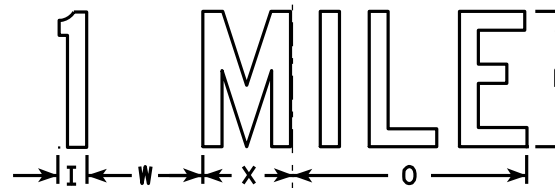
W20-3C



W20-3B



W20-3G



W20-3F

**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. Lines 1 and 2 are Series D.  
Line 3 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	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN  
W20-3A, B, C, D, F & G

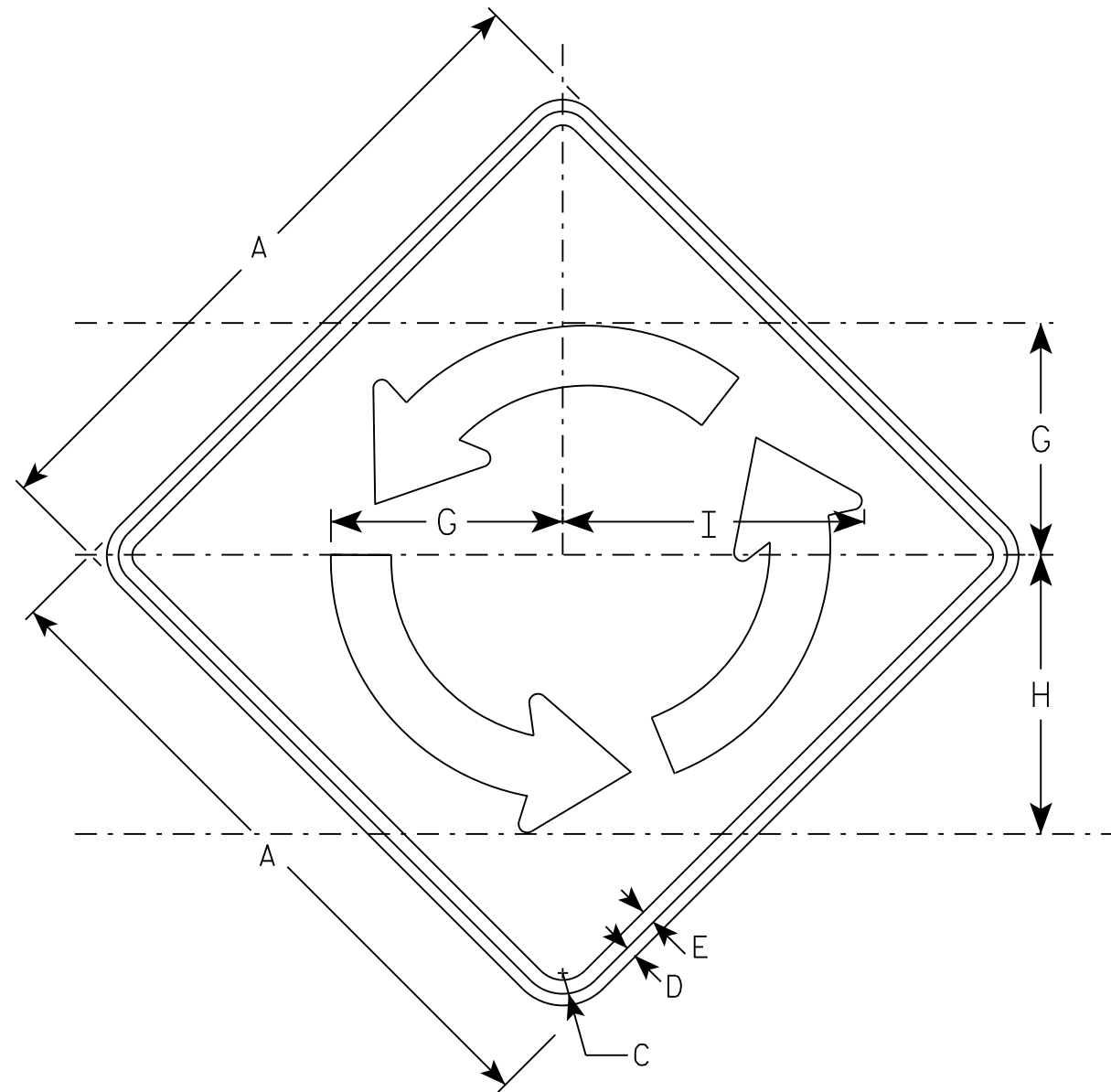
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
     Background - YELLOW  
     Message - BLACK



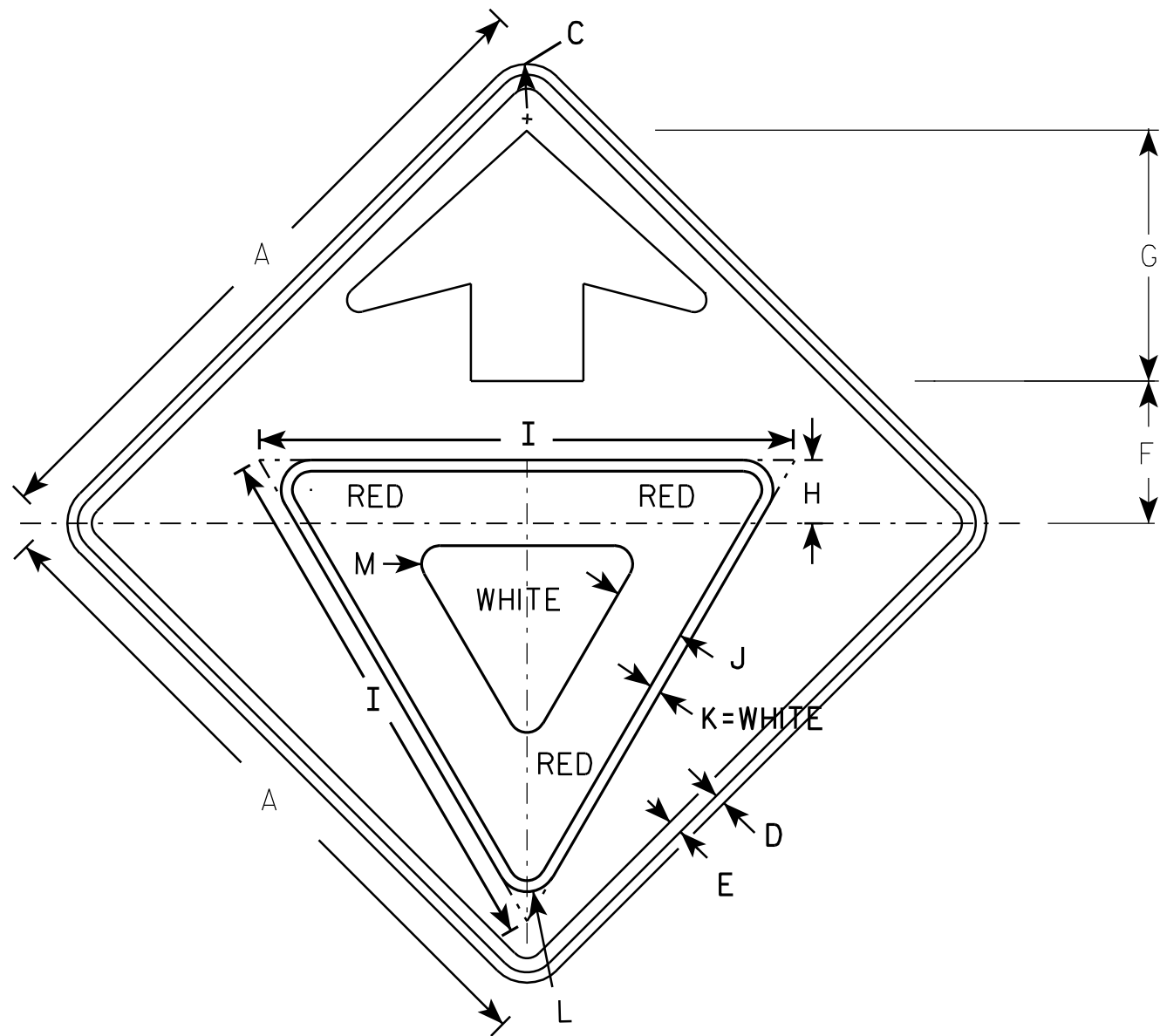
W2-6

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	Area sq. ft.
1																									
2S	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2																6.25
2M	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2																6.25
3	36		1 5/8	5/8	3/4		12 1/2	15	16 1/4																9.00
4	48		2 1/4	3/4	1		16 5/8	20	16 1/4																16.0
5																									

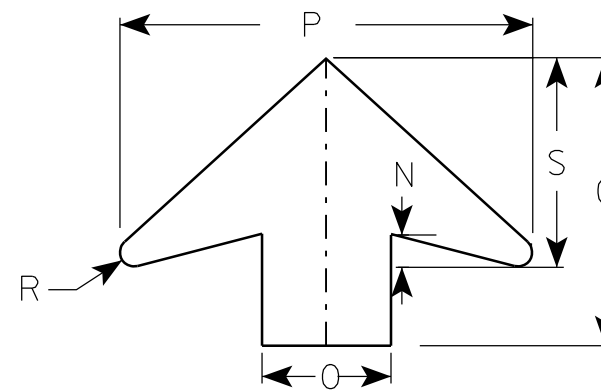
<b>STANDARD SIGN</b>	
W2-6	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 3/15/18	PLATE NO. W2-6.6



W3-2

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  
 Yield 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	3	25	3 3/8	1/2	1 3/8	7/8	1 1/4	5	16		1/2	8								6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

**STANDARD SIGN**  
W3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-2..9

TEMPORARY PATH / STAGE 1								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
10+24.13	0.00	0.35	0.00	0	0	0	0	0
10+50	25.87	4.93	0.00	3	0	3	0	3
11+00	50.00	13.64	0.00	17	0	20	0	20
11+50	50.00	5.43	0.00	18	0	37	0	37
12+00	50.00	2.68	0.00	8	0	45	0	45
12+50	50.00	1.11	8.92	4	8	48	9	39
13+00	50.00	1.06	26.03	2	32	50	45	5
13+50	50.00	1.02	18.50	2	41	52	91	-39
14+00	50.00	6.48	19.42	7	35	59	130	-71
14+50	50.00	5.23	21.24	11	38	70	172	-102
15+00	50.00	3.93	11.53	8	30	79	205	-127
15+50	50.00	7.09	0.27	10	11	89	217	-129
16+00	50.00	0.00	22.02	7	21	95	240	-145
16+18.81 BK	18.81	5.86	0.00	2	8	97	249	-151
16+80.18 AH	0.00	5.95	0.04	0	0	97	249	-151
17+00	19.82	0.00	39.84	2	15	100	265	-166
17+50	50.00	0.00	77.23	0	108	100	385	-286
17+94.05	44.05	7.81	0.02	6	63	106	455	-349
COLUMN TOTALS:				106	411			

CTH CB NB APPROACH / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
103+50	0.00	53.86	0.00	0	0	0	0	0
104+00	50.00	72.26	0.00	117	0	117	0	117
104+50	50.00	74.07	0.00	135	0	252	0	252
105+00	50.00	73.74	0.00	137	0	389	0	389
105+50	50.00	69.62	0.12	133	0	522	0	522
106+00	50.00	68.42	3.22	128	3	650	4	646
106+50	50.00	70.33	7.13	128	10	778	14	764
107+00	50.00	68.07	11.52	128	17	906	33	873
107+50	50.00	47.58	29.38	107	38	1,013	75	938
108+00	50.00	63.12	22.58	103	48	1,116	129	987
COLUMN TOTALS:				1,116	117			

CTH CB NB Exit / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
110+20	0.00	4.09	407.44	0	0	0	0	0
110+50	30.00	0.06	416.00	2	457	2	508	-505
111+00	50.00	0.03	371.59	0	729	2	1,317	-1,315
111+50	50.00	0.00	297.62	0	620	2	2,005	-2,003
112+00	50.00	0.00	275.77	0	531	2	2,594	-2,592
112+50	50.00	0.00	299.06	0	532	2	3,185	-3,183
113+00	50.00	0.00	178.67	0	442	2	3,676	-3,674
113+50	50.00	0.00	165.35	0	319	2	4,030	-4,027
114+00	50.00	0.33	116.85	0	261	3	4,320	-4,317
114+50	50.00	6.70	79.08	7	181	9	4,521	-4,512
115+00	50.00	31.90	45.55	36	115	45	4,649	-4,604
115+50	50.00	48.52	17.99	74	59	119	4,715	-4,595
116+00	50.00	56.06	7.18	97	23	216	4,740	-4,524
116+50	50.00	58.00	0.71	106	7	322	4,749	-4,427
117+00	50.00	85.80	0.00	133	1	455	4,749	-4,294
117+50	50.00	62.20	0.00	137	0	592	4,749	-4,157
118+00	50.00	64.83	0.00	118	0	710	4,749	-4,040
118+26.97	26.97	51.36	0.00	58	0	768	4,749	-3,982
COLUMN TOTALS:				768	4,279			

CTH CB SB Exit / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
103+50	0.00	51.92	0.00	0	0	0	0	0
104+00	50.00	70.20	0.00	113	0	113	0	113
104+50	50.00	72.46	0.00	132	0	245	0	245
105+00	50.00	63.55	2.18	126	2	371	2	369
105+50	50.00	61.08	3.29	115	5	486	8	479
106+00	50.00	60.27	4.06	112	7	599	15	583
106+50	50.00	58.17	4.14	110	8	709	24	685
107+00	50.00	54.08	4.01	104	8	812	32	780
107+50	50.00	45.29	4.70	92	8	904	41	863
108+00	50.00	44.86	4.28	83	8	988	50	938
108+25	25.00	50.75	3.67	44	4	1,032	54	978
COLUMN TOTALS:				1,033	50			

9

9

CTH CB SB APPROACH / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
110+20	0.00	65.51	11.23	0	0	0	0	0
110+50	30.00	64.38	3.79	72	8	72	9	63
111+00	50.00	61.59	9.60	117	12	189	23	166
111+50	50.00	57.76	17.77	111	25	299	51	248
112+00	50.00	108.80	5.50	154	22	454	75	378
112+50	50.00	113.17	5.68	206	10	659	87	573
113+00	50.00	127.10	0.00	222	5	882	92	789
113+50	50.00	122.79	0.00	231	0	1,113	92	1,021
114+00	50.00	102.00	0.01	208	0	1,321	92	1,229
114+50	50.00	84.47	0.00	173	0	1,494	92	1,401
115+00	50.00	60.13	1.70	134	2	1,628	94	1,533
115+50	50.00	55.70	2.74	107	4	1,735	99	1,636
116+00	50.00	54.24	3.02	102	5	1,837	105	1,732
116+50	50.00	53.10	4.11	99	7	1,936	112	1,824
117+00	50.00	50.89	1.74	96	5	2,032	118	1,914
117+50	50.00	52.76	1.67	96	3	2,128	121	2,007
118+00	50.00	56.31	0.00	101	2	2,229	123	2,106
118+25.14	25.14	50.31	0.00	50	0	2,279	123	2,156

COLUMN TOTALS: 2,279 111

OAKRIDGE RD EB APPROACH / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
204+84.25	0.00	40.71	0.00	0	0	0	0	0
205+00	15.75	47.49	0.00	26	0	26	0	26
205+12.79	12.79	71.39	18.82	28	4	54	5	49
205+50	37.21	71.67	7.82	99	18	152	25	127
206+00	50.00	70.63	30.79	132	36	284	65	219
206+50	50.00	82.79	4.76	142	33	426	102	325
207+00	50.00	87.68	0.10	158	5	584	107	478
207+50	50.00	98.42	0.00	172	0	756	107	650
208+00	50.00	0.00	0.00	91	0	848	107	741
208+45	45.00	74.90	15.49	62	13	910	121	789

COLUMN TOTALS: 910 109

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OAKRIDGE RD EB EXIT / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
210+65	0.00	20.40	73.14	0	0	0	0	0
211+00	35.00	19.85	53.02	26	82	26	91	-65
211+50	50.00	31.55	56.98	48	102	74	204	-130
212+00	50.00	42.22	32.47	68	83	142	296	-154
212+50	50.00	51.53	28.86	87	57	229	359	-130
213+00	50.00	81.14	16.71	123	42	352	406	-54
213+34.48	34.48	73.16	11.27	99	18	450	425	25
213+50	15.52	10.94	3.84	24	4	474	430	44
213+83.5	33.50	0.32	0.03	7	2	481	433	48
COLUMN TOTALS:				482	391			

OAKRIDGE RD WB EXIT / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
205+12.58	0.00	56.22	0.04	0	0	0	0	0
205+50	37.42	65.00	0.00	84	0	84	0	84
206+00	50.00	61.98	0.00	118	0	202	0	202
206+50	50.00	59.81	0.38	113	0	314	0	314
207+00	50.00	56.84	4.01	108	4	422	5	417
207+50	50.00	55.65	44.78	104	45	527	55	471
208+00	50.00	0.00	0.00	52	41	578	101	477
208+50	50.00	66.63	6.80	62	6	640	108	532
COLUMN TOTALS:				640	98			

OAKRIDGE RD WB APPROACH / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
210+65	0.00	22.38	51.08	0	0	0	0	0
211+00	35.00	35.90	25.13	38	49	38	55	-17
211+50	50.00	44.76	16.25	75	38	112	97	15
212+00	50.00	50.62	15.78	88	30	201	130	70
212+50	50.00	57.22	11.75	100	25	301	159	142
212+71.33	21.33	59.39	25.00	46	15	347	175	172
213+00	28.67	60.74	12.68	64	20	410	197	214
213+39.96	39.96	45.31	16.81	78	22	489	221	268
COLUMN TOTALS:				489	200			

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CIRCULATORY RDWY / STAGE 2								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
10+00	0.00	28.01	413.63	0	0	0	0	0
10+25	25.00	20.27	313.43	22	337	22	374	-351
10+50	25.00	83.86	158.80	48	219	71	616	-546
10+75	25.00	176.97	143.86	121	140	191	772	-581
11+00	25.00	140.43	144.29	147	133	338	920	-582
11+25	25.00	167.09	134.37	142	129	481	1,063	-582
11+50	25.00	124.87	139.79	135	127	616	1,204	-588
11+75	25.00	123.59	150.82	115	135	731	1,353	-623
12+00	25.00	129.85	158.30	117	143	848	1,512	-664
12+25	25.00	82.78	187.95	98	160	947	1,690	-744
12+50	25.00	59.25	213.57	66	186	1,012	1,896	-884
12+75	25.00	139.32	192.24	92	188	1,104	2,105	-1,001
13+00	25.00	54.15	202.41	90	183	1,194	2,308	-1,114
13+25	25.00	15.65	207.88	32	190	1,226	2,519	-1,292
13+50	25.00	43.17	186.79	27	183	1,253	2,721	-1,468
13+75	25.00	34.81	314.77	36	232	1,289	2,979	-1,690
13+89.44	14.44	28.22	413.43	17	195	1,306	3,195	-1,889
COLUMN TOTALS:				1,307	2,879			

CTH CB SB Exit / STAGE 3								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
103+50	0.00	11.74	0.08	0	0	0	0	0
104+00	50.00	14.36	3.21	24	3	24	3	21
104+50	50.00	9.63	0.02	22	3	46	7	40
105+00	50.00	0.03	4.94	9	5	55	12	44
105+50	50.00	0.00	13.93	0	17	55	31	24
106+00	50.00	0.00	19.76	0	31	55	66	-10
106+50	50.00	0.00	19.43	0	36	55	106	-51
107+00	50.00	0.00	22.15	0	39	55	149	-93
107+50	50.00	0.00	23.22	0	42	55	195	-140
108+00	50.00	0.00	16.41	0	37	55	236	-181
108+25	25.00	0.00	20.16	0	17	55	255	-200
COLUMN TOTALS:				56	230			

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CTH CB SB APPROACH / STAGE 3								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
110+20	0.00	0.00	0.60	0	0	0	0	0
110+50	30.00	0.00	0.09	0	0	0	0	0
111+00	50.00	0.48	0.00	0	0	0	1	0
111+50	50.00	0.06	0.00	0	0	1	1	0
112+00	50.00	14.88	0.00	14	0	15	1	14
112+50	50.00	0.00	0.00	9	0	10	1	10
COLUMN TOTALS:				24	1			

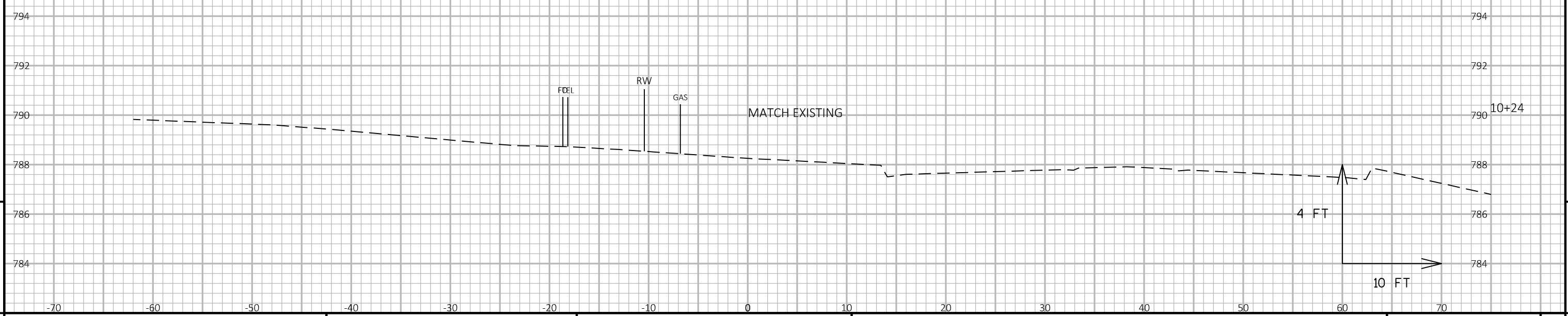
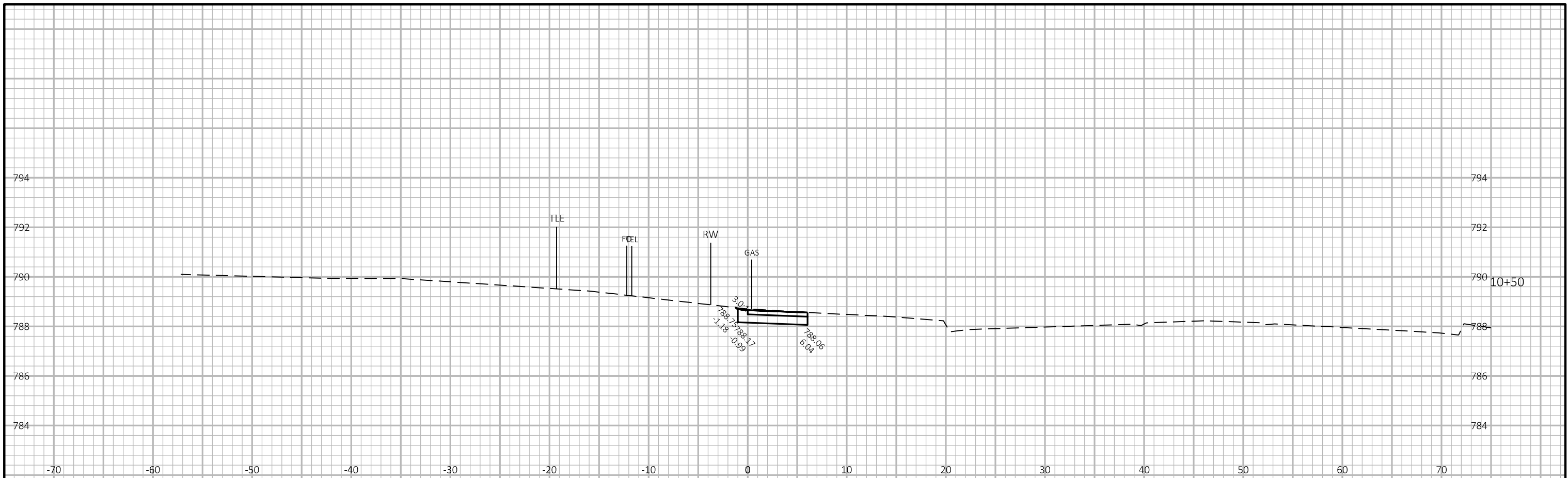
OAKRIDGE RD WB EXIT / STAGE 3								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
207+50	0.00	0.00	0.00	0	0	0	0	0
208+00	50.00	73.29	24.31	68	23	68	25	43
208+50	50.00	0.00	34.48	68	54	136	85	50
COLUMN TOTALS:				136	77			

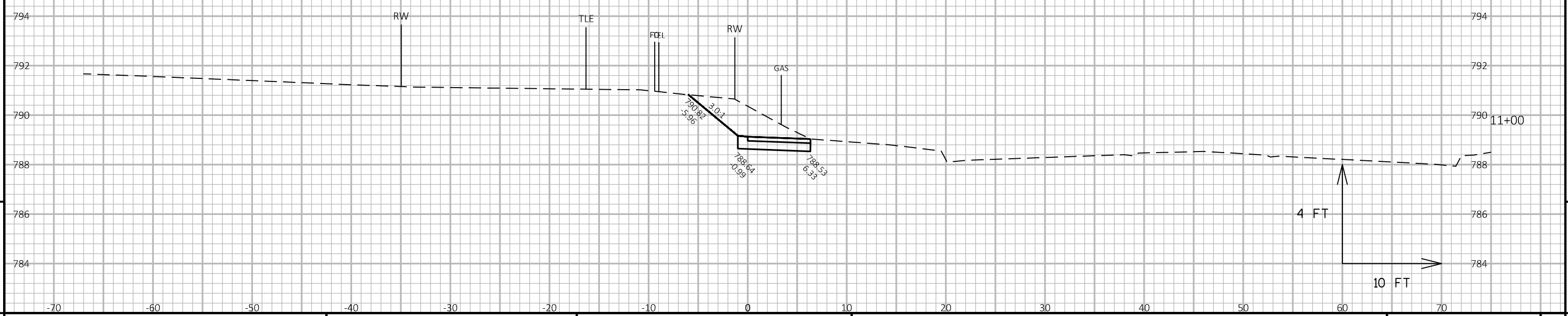
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STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
207+50	0.00	0.00	0.00	0	0	0	0	0
208+00	50.00	130.55	0.67	121	1	121	1	120
208+45	45.00	30.77	3.13	134	3	255	4	251
COLUMN TOTALS:				256	4			

CIRCULATORY RDWY / STAGE 3								
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.11	
10+75	0.00	0.00	0.00	0	0	0	0	0
11+00	25.00	0.00	20.39	0	9	0	10	-10
11+25 BK	25.00	0.00	0.00	0	9	0	21	-21
11+50 AH	0.00	0.00	0.00	0	0	0	21	0
11+75	25.00	0.90	5.85	0	3	0	24	-3
12+00	25.00	0.00	26.72	0	15	1	41	-19
12+25	25.00	0.00	0.00	0	12	1	54	-33
COLUMN TOTALS:				1	50			

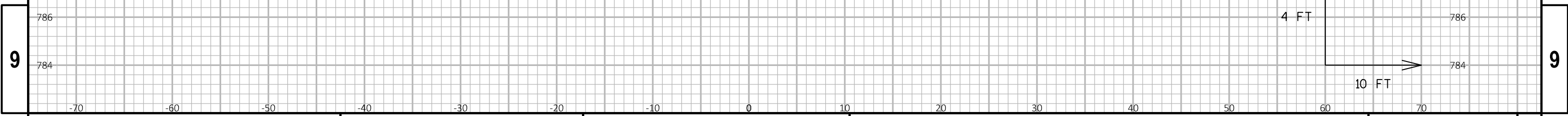
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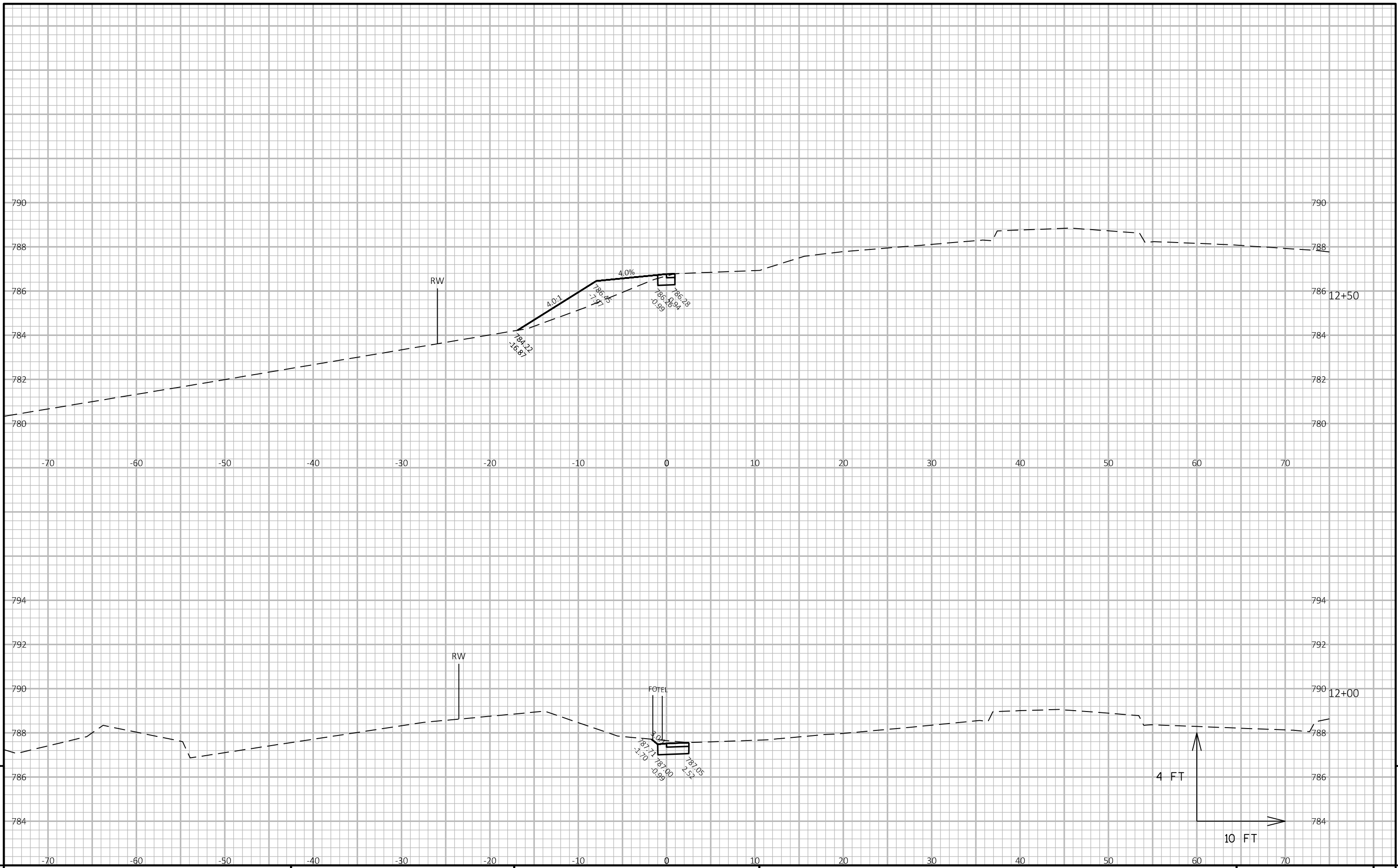
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PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 1 - TEMPORARY TRAIL WIDENING      SHEET 202





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PROJECT NO: 4682-01-73

HWY: CTH CB

COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 1 - TEMPORARY TRAIL WIDENING

SHEET 203

E

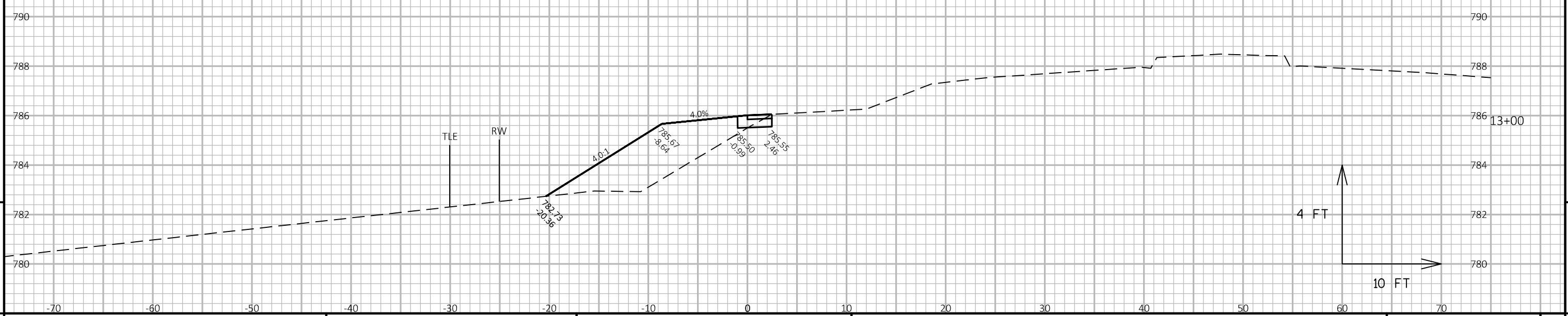
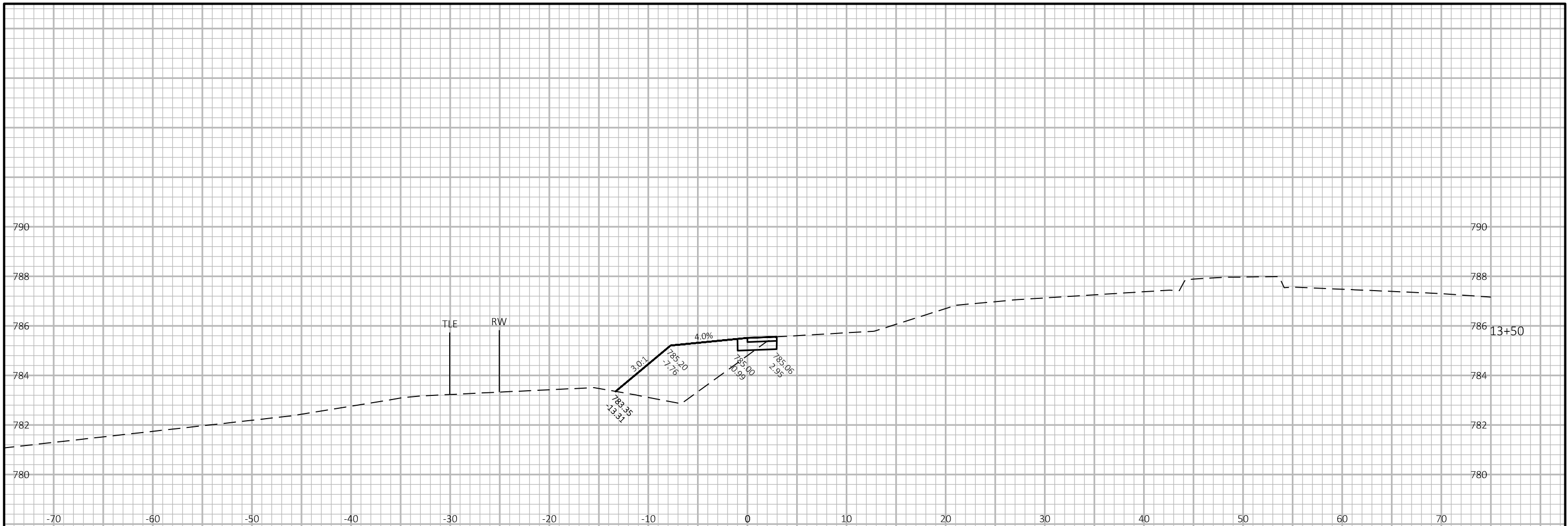
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PLOT DATE : 10/22/2018 4:09 PM

PLOT BY : NIKOLAI, ADAM

PLOT NAME :

WISDOT/CADD SHEET 49



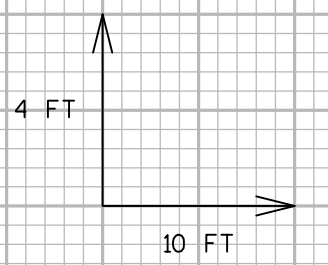
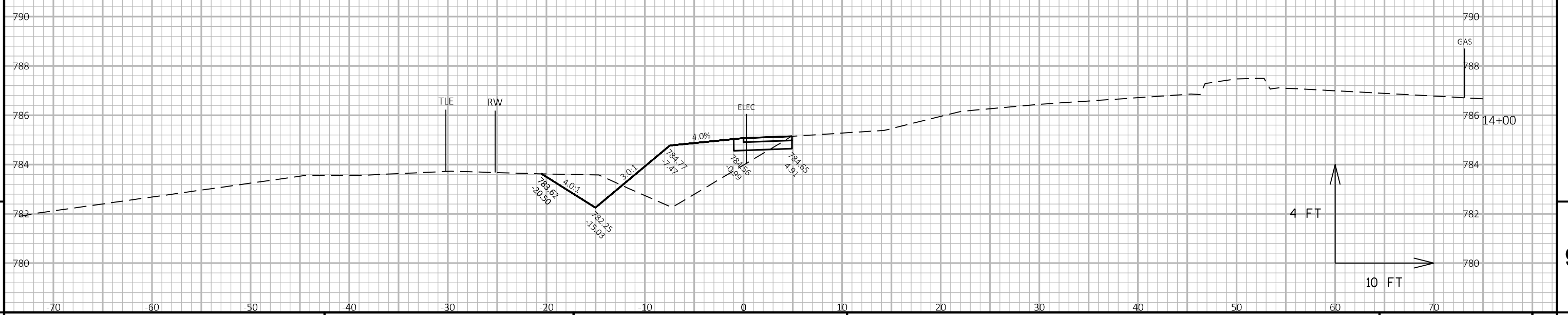
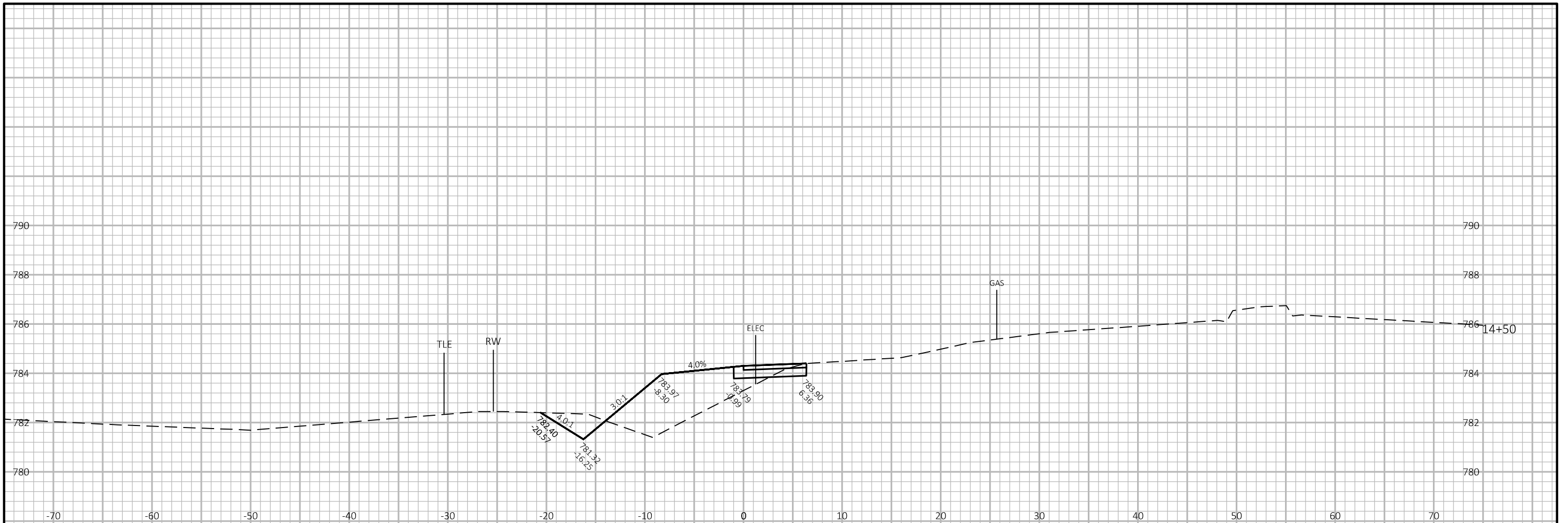
PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 1 - TEMPORARY TRAIL WIDENING      SHEET 204

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E



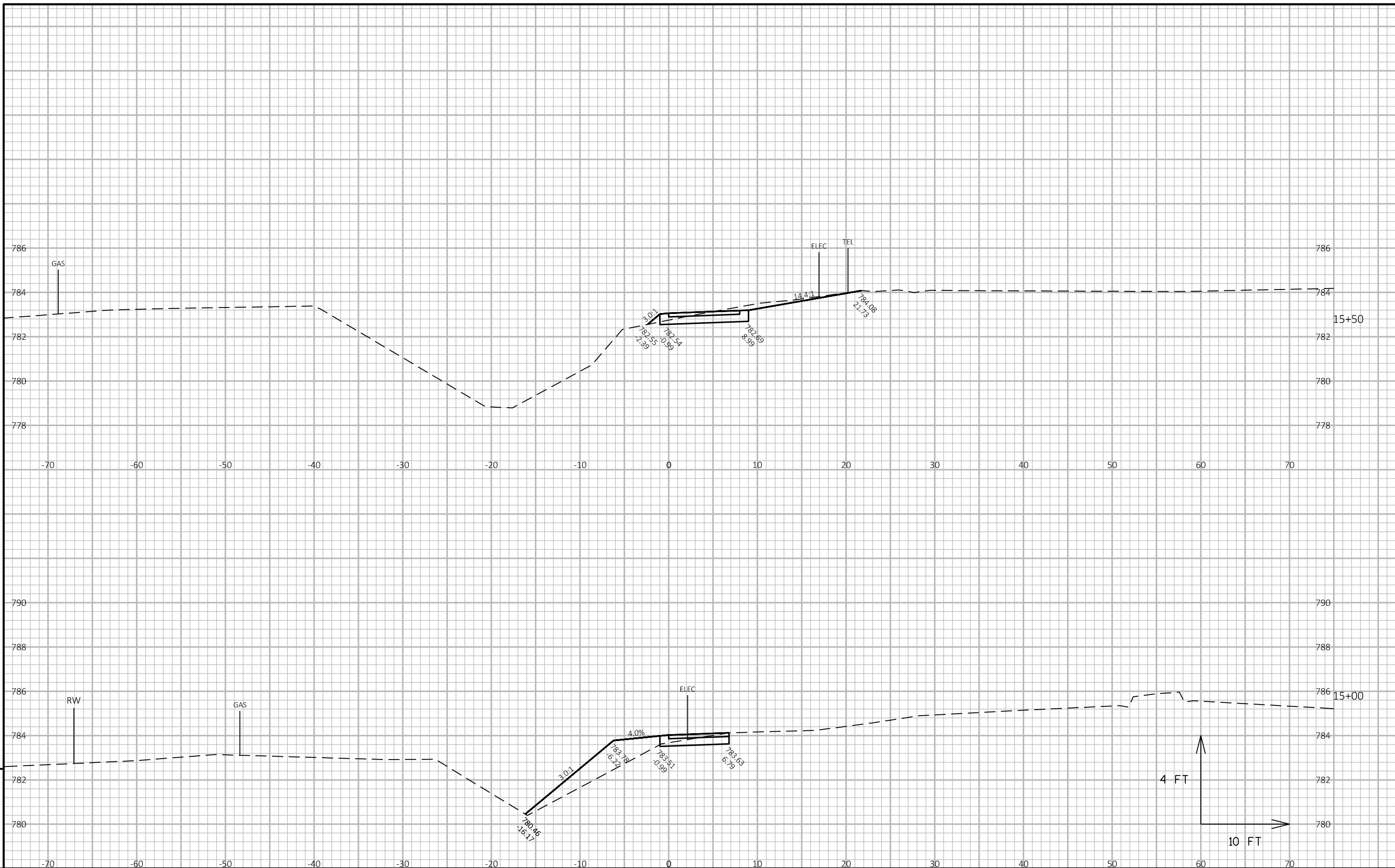
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E



PROJECT NO: 4682-01-73

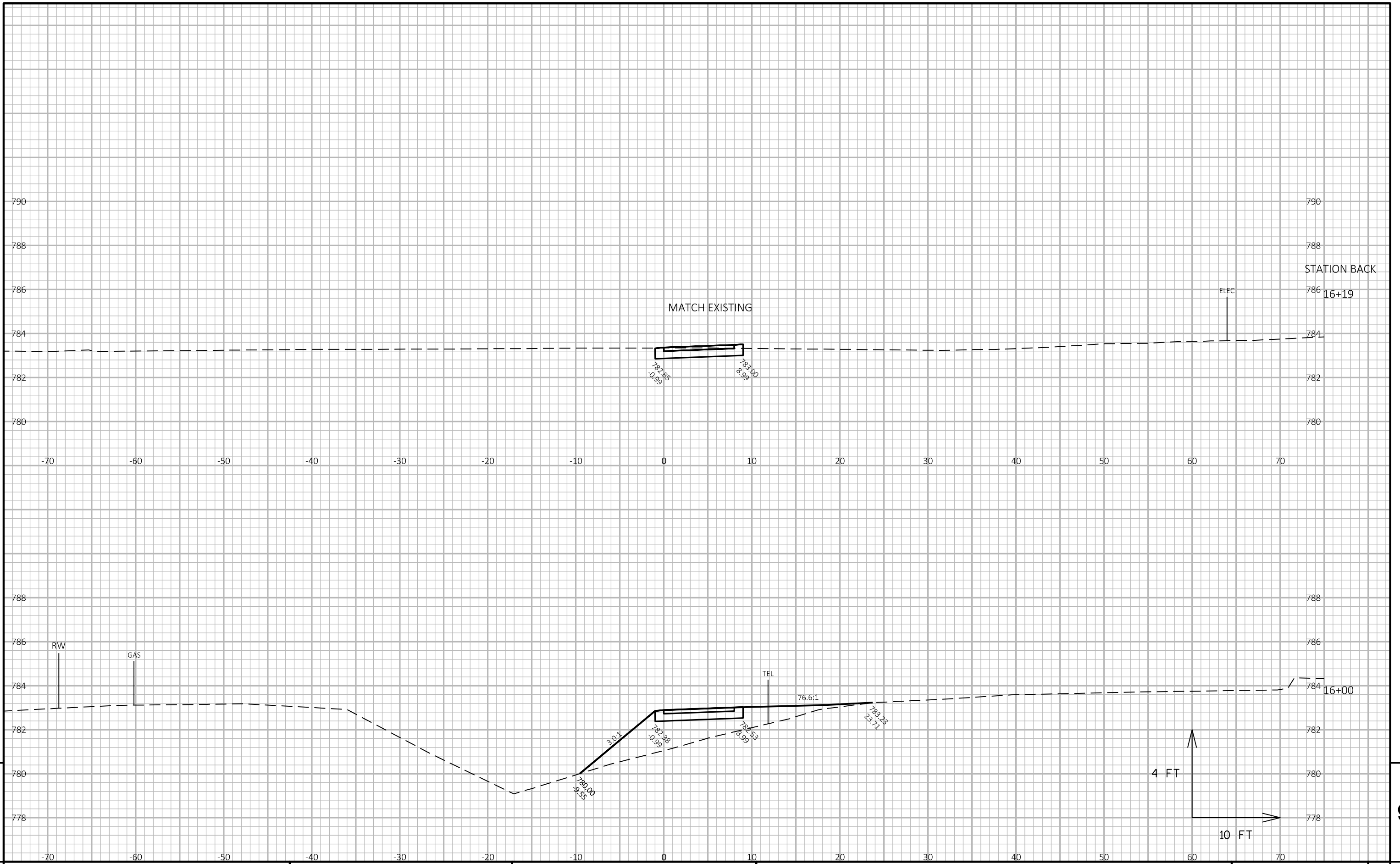
HWY: CTH CB

COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 1 - TEMPORARY TRAIL WIDENING

SHEET 206

E



PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 1 - TEMPORARY TRAIL WIDENING      SHEET 207

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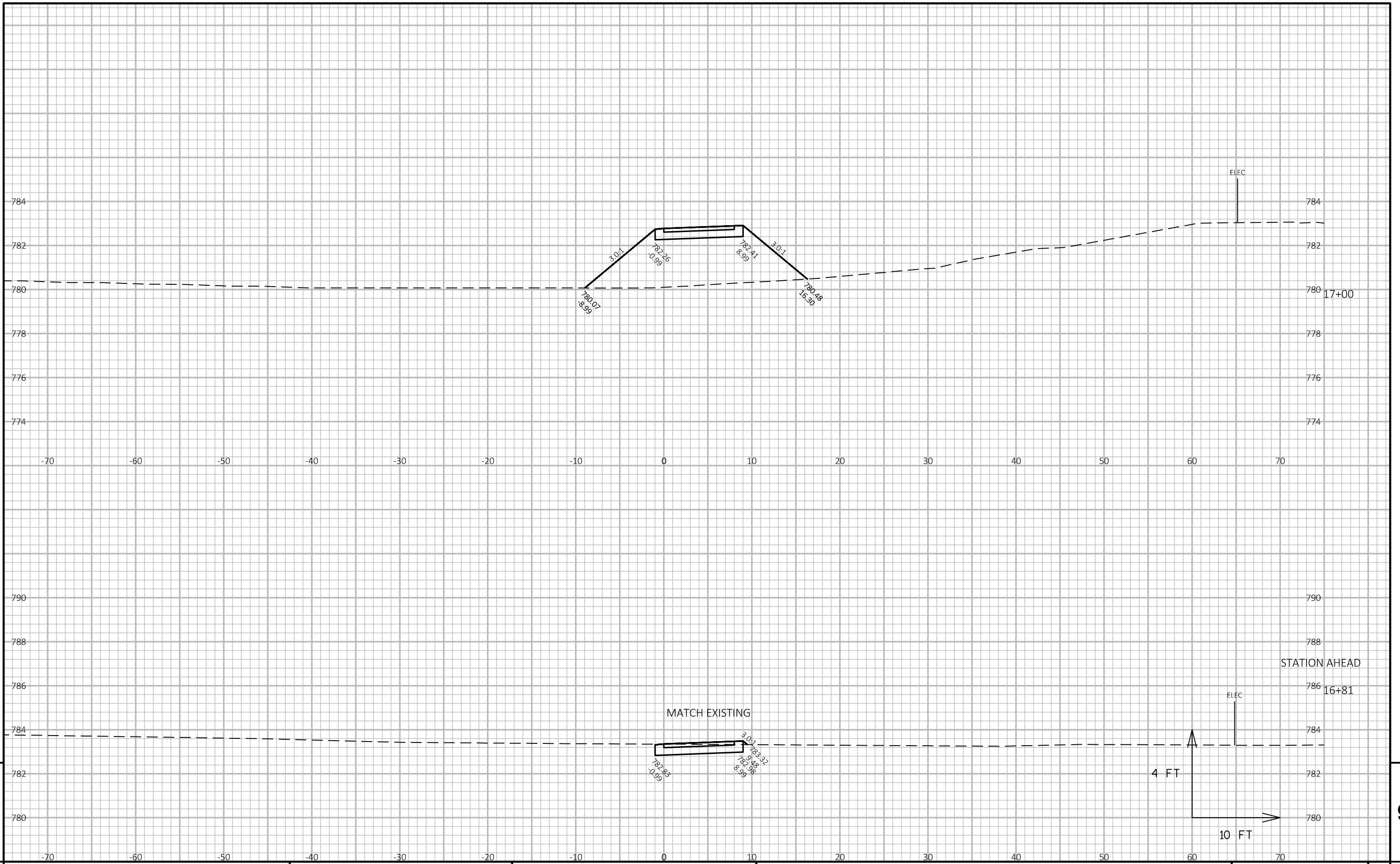
STATION BACK

786 16+19

784 16+00

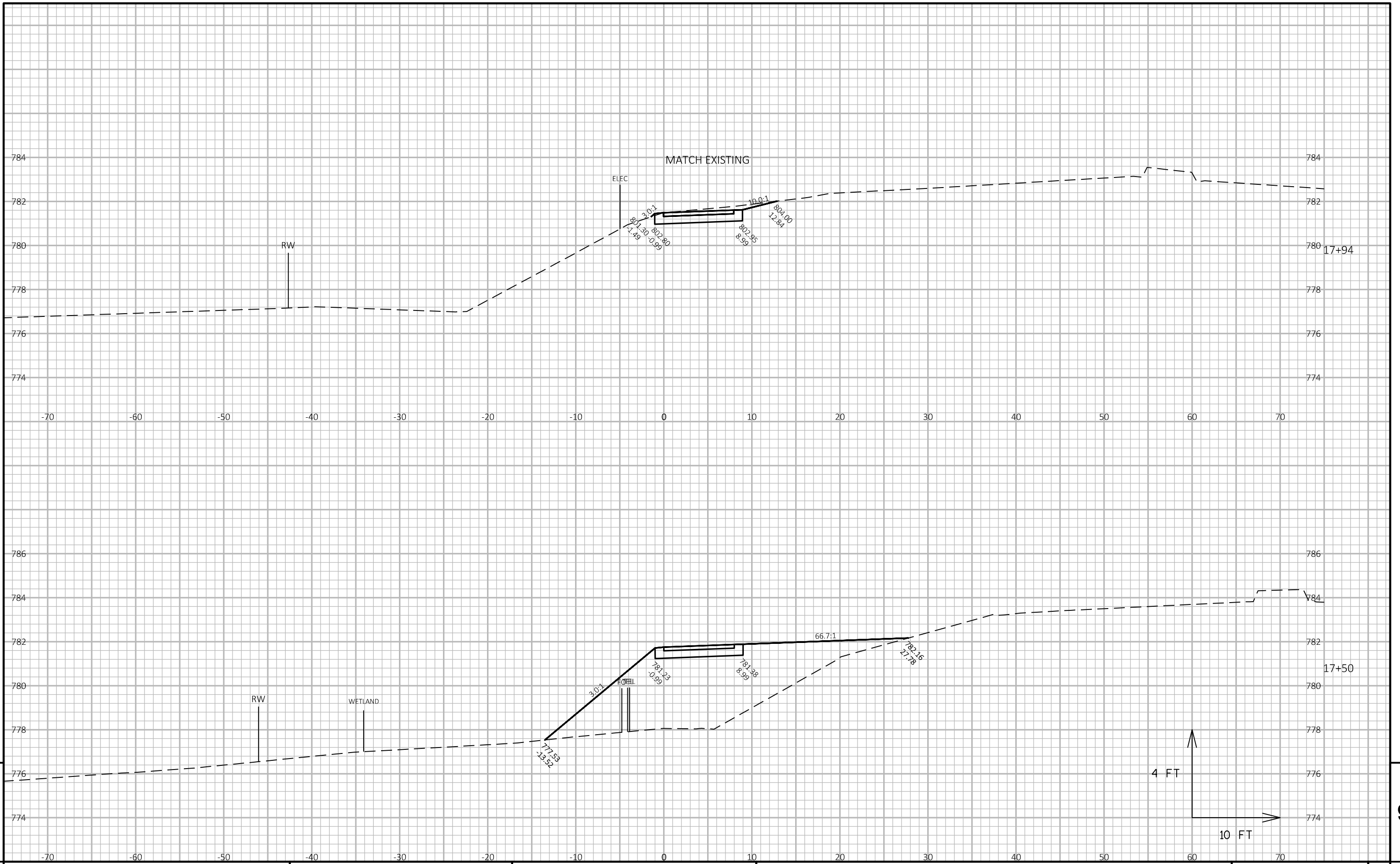
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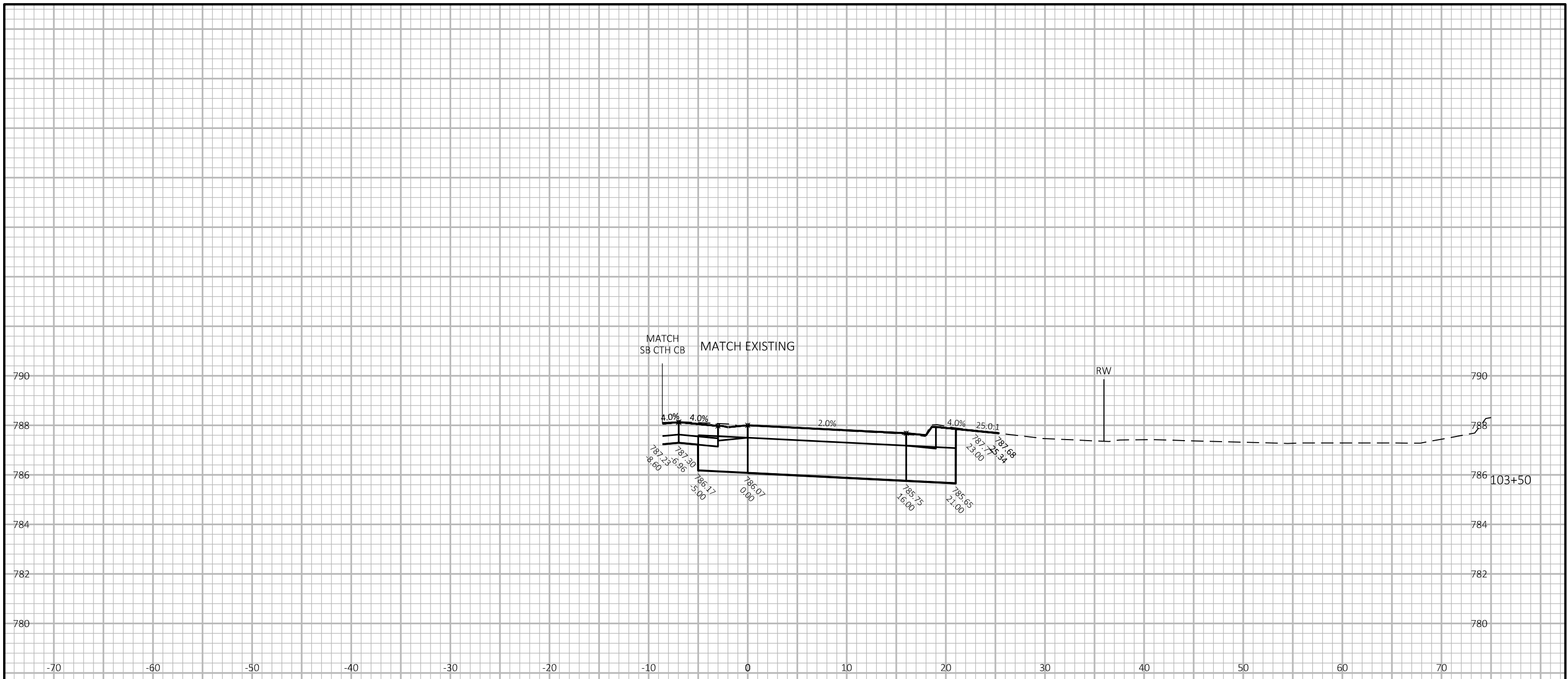




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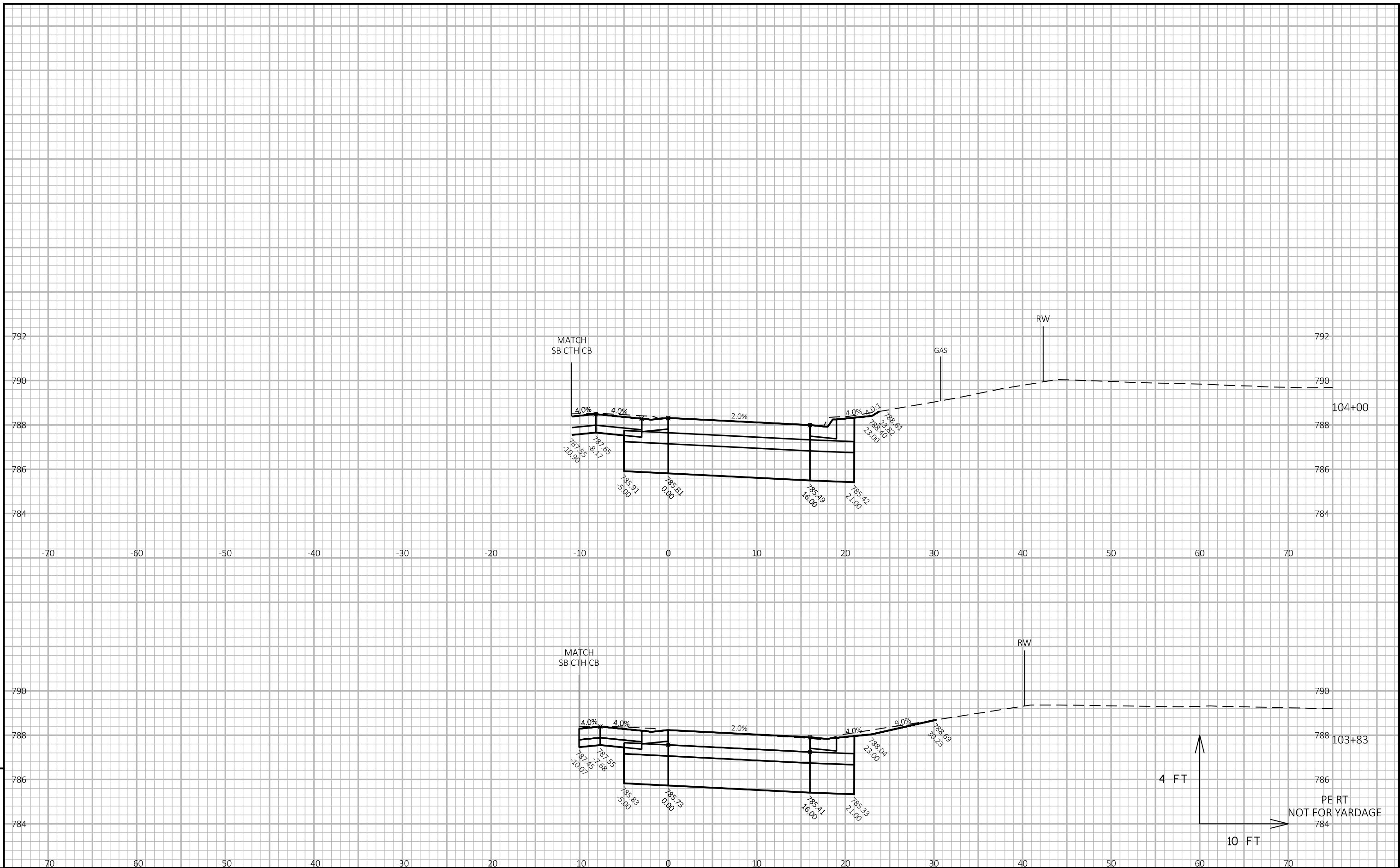
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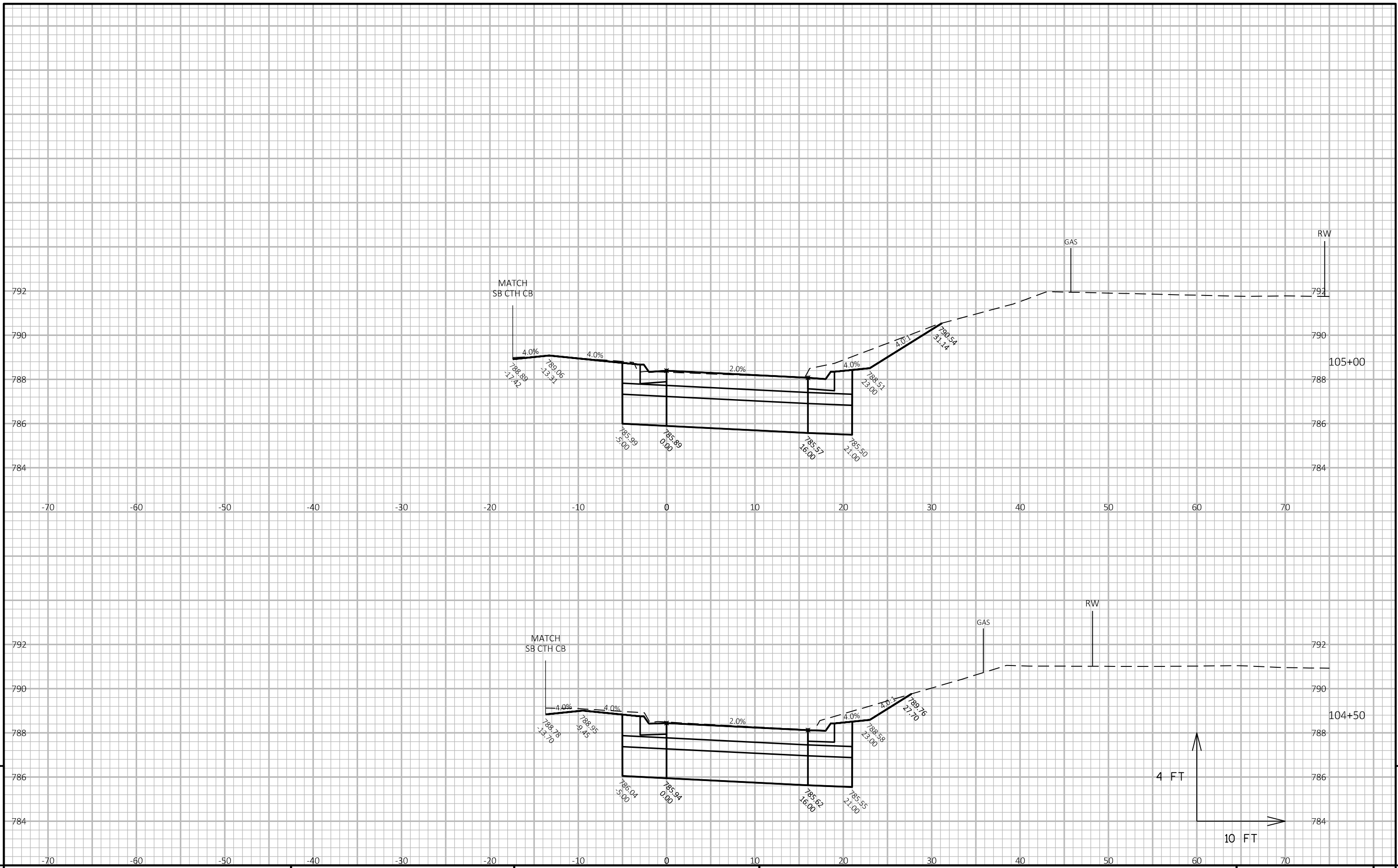
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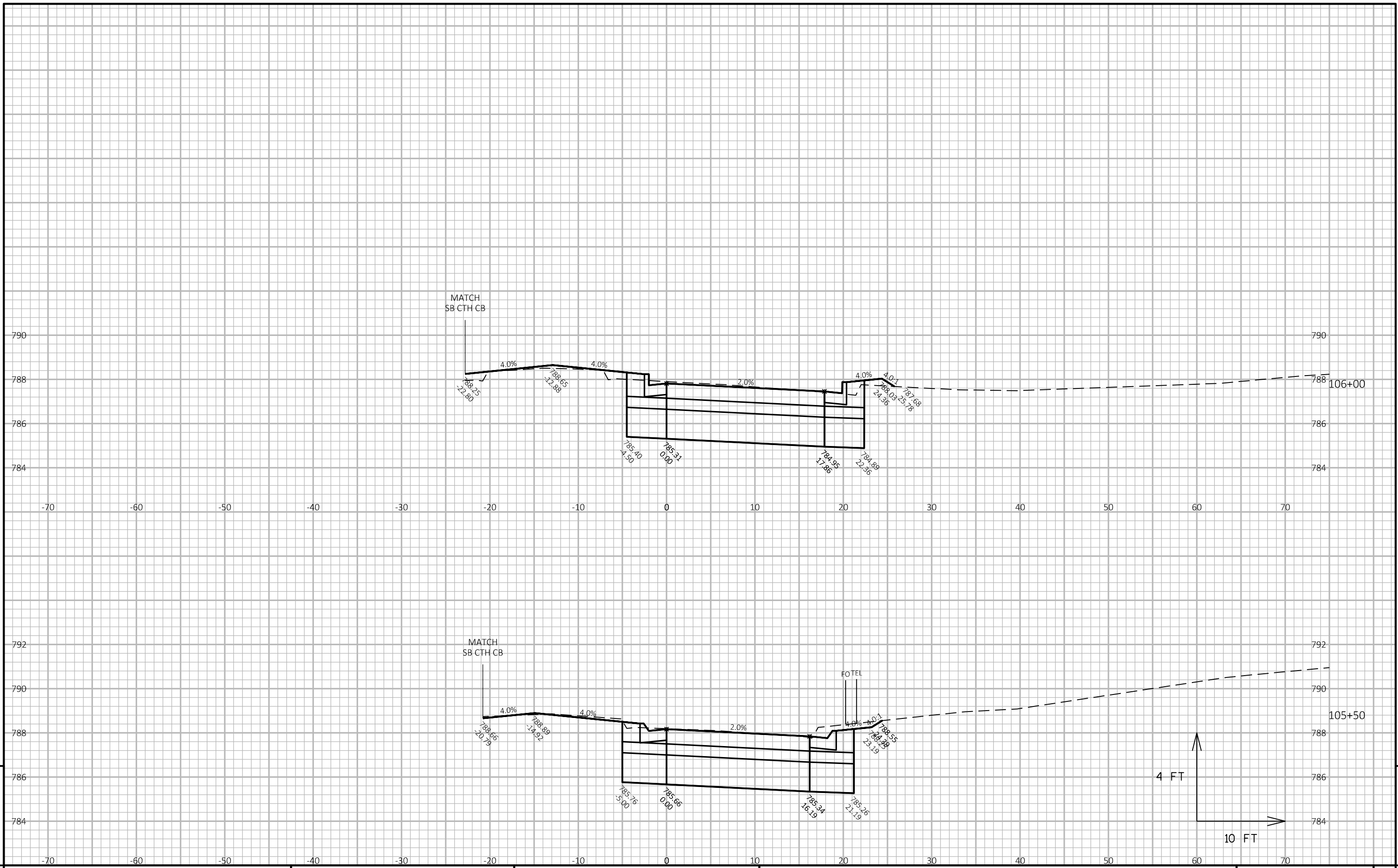
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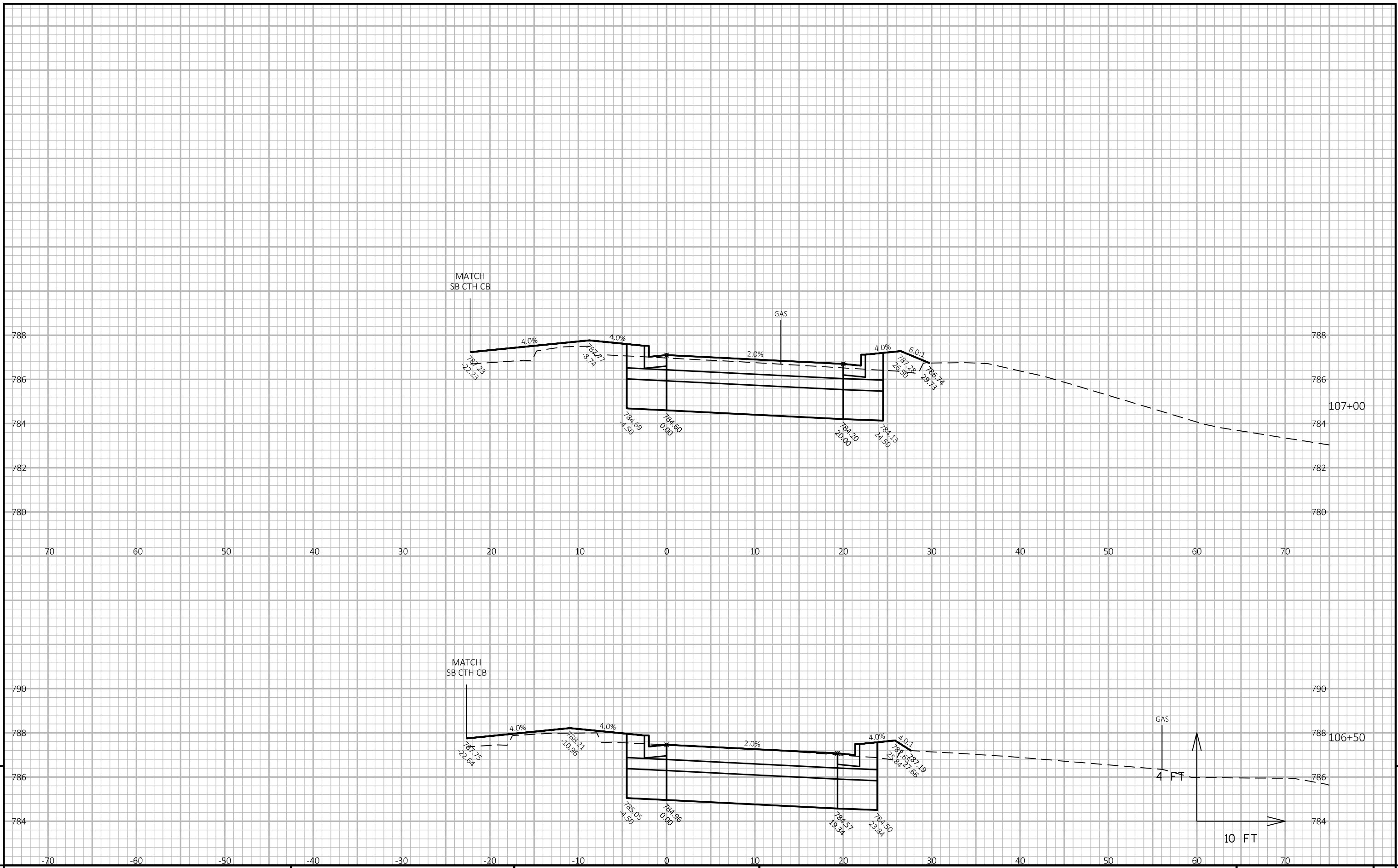
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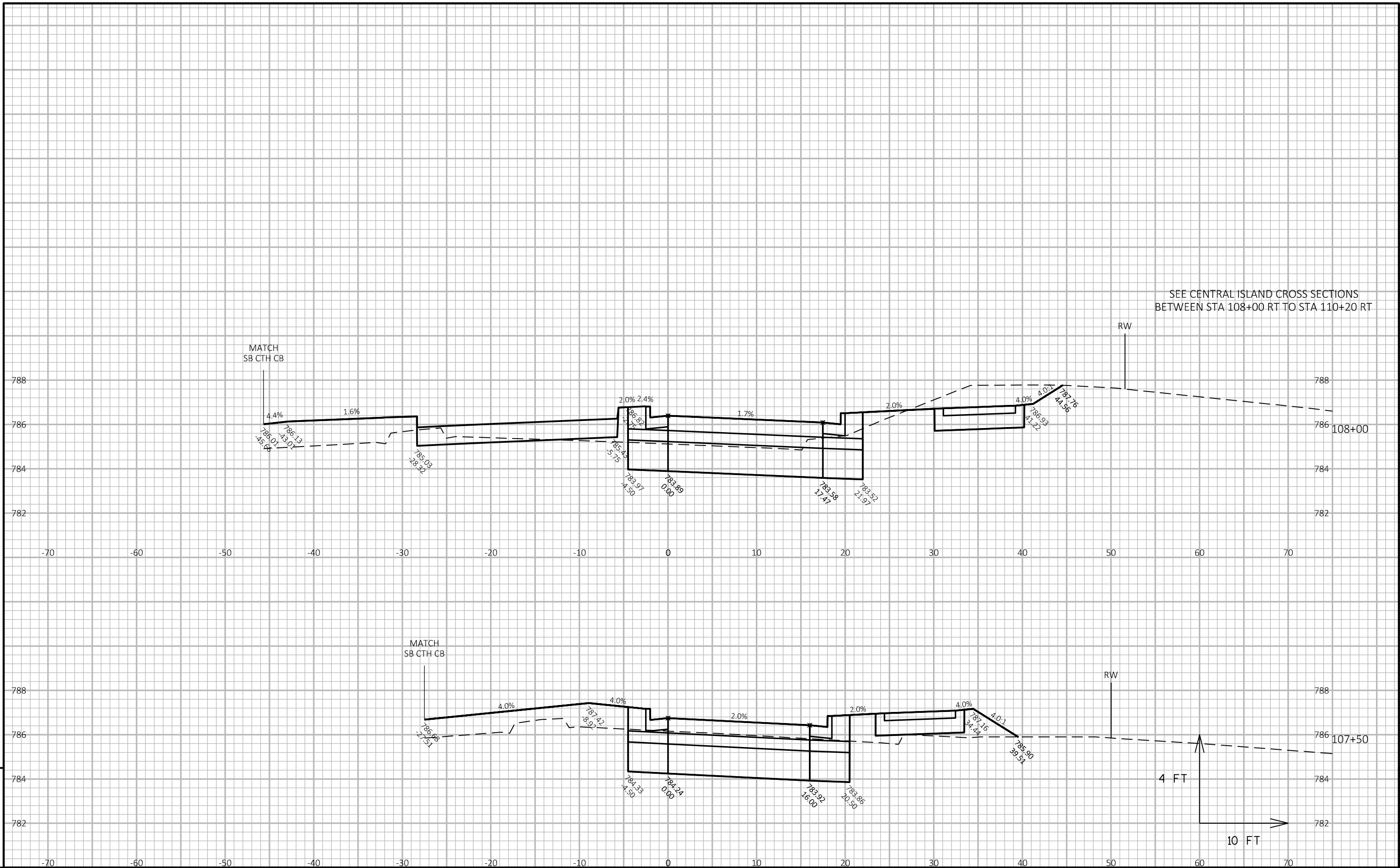
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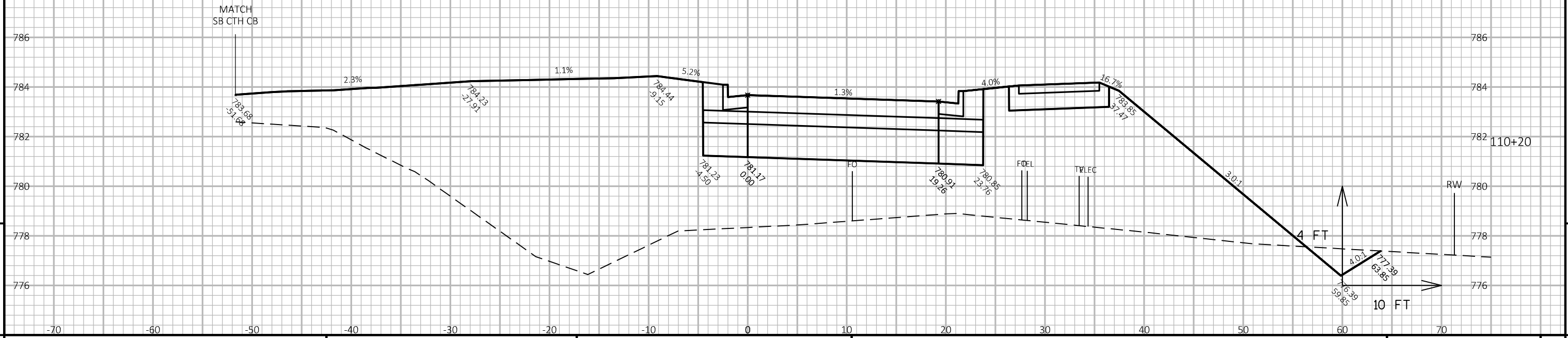
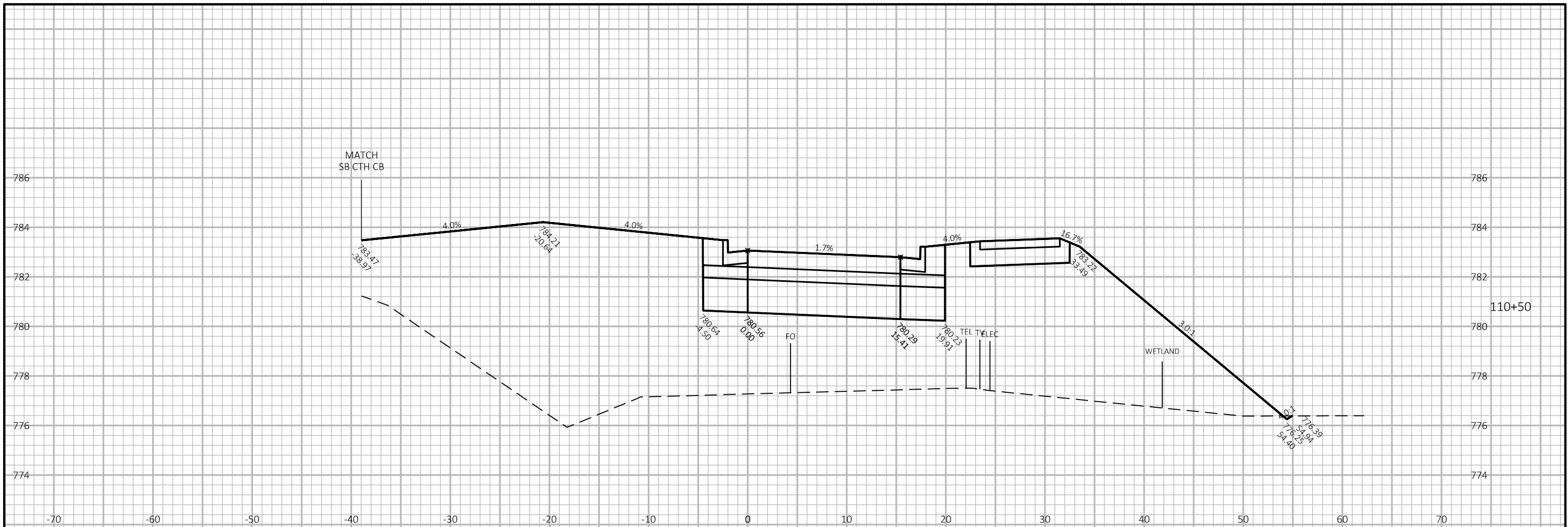


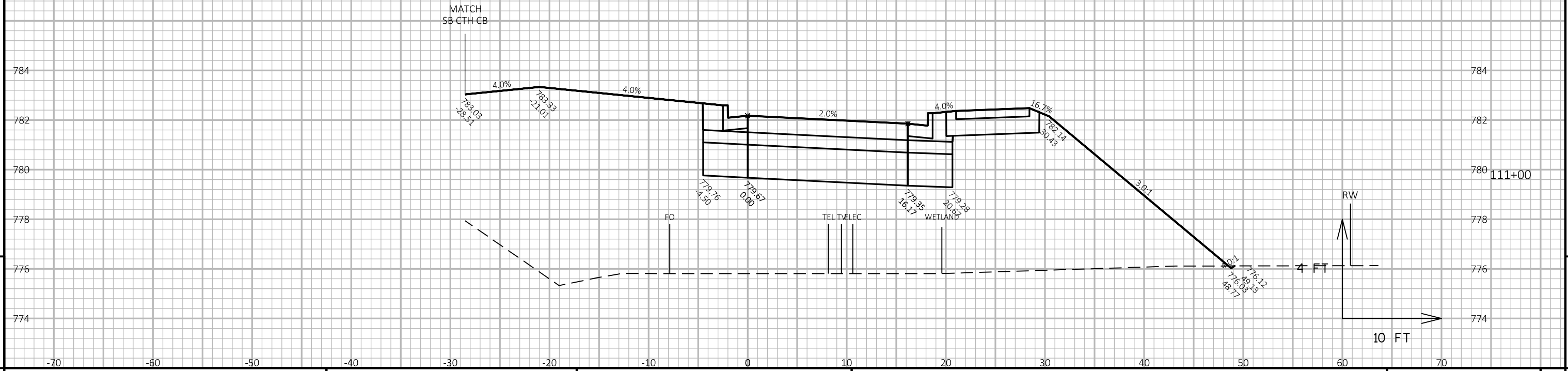
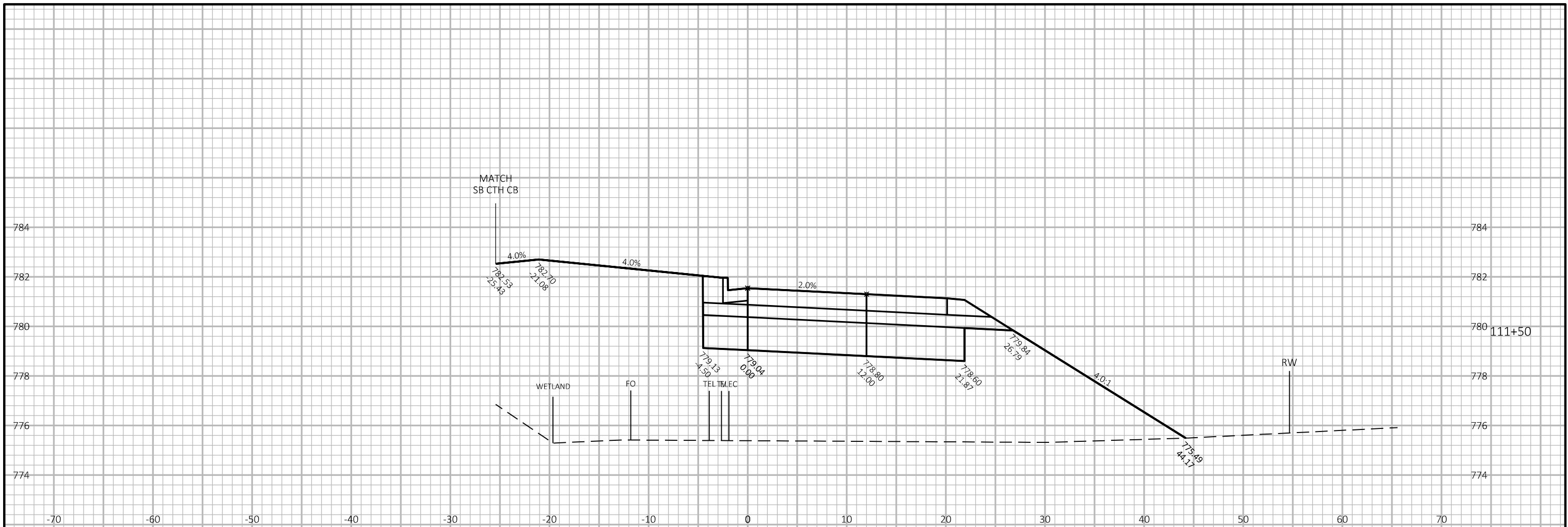




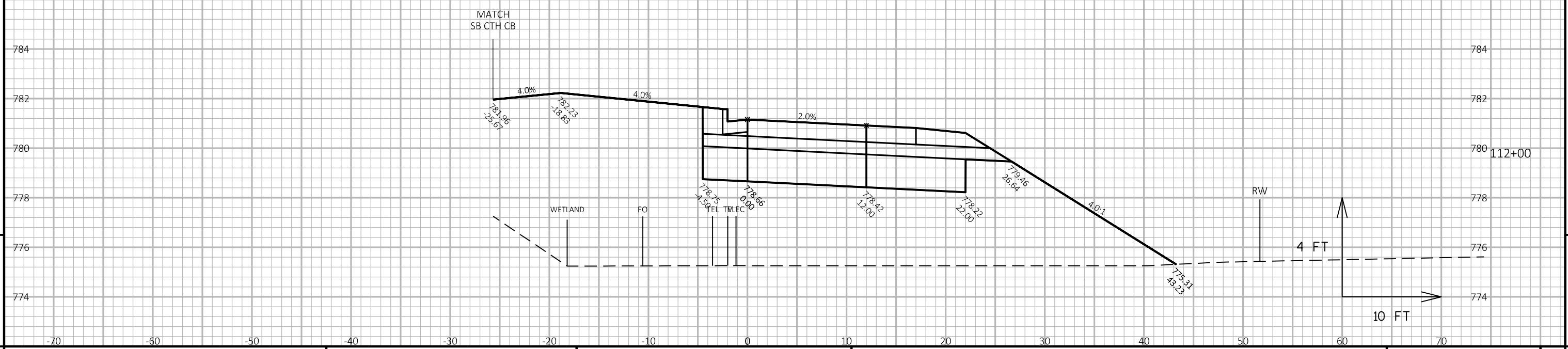
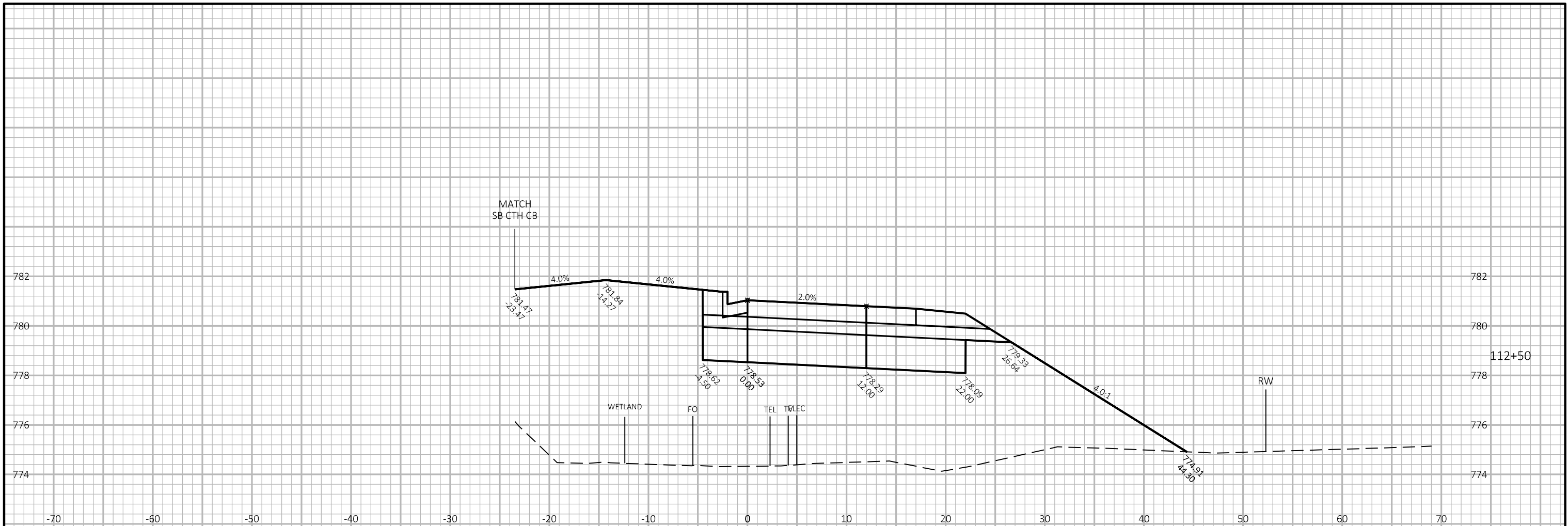








PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2 - CTH CB NB      SHEET 217

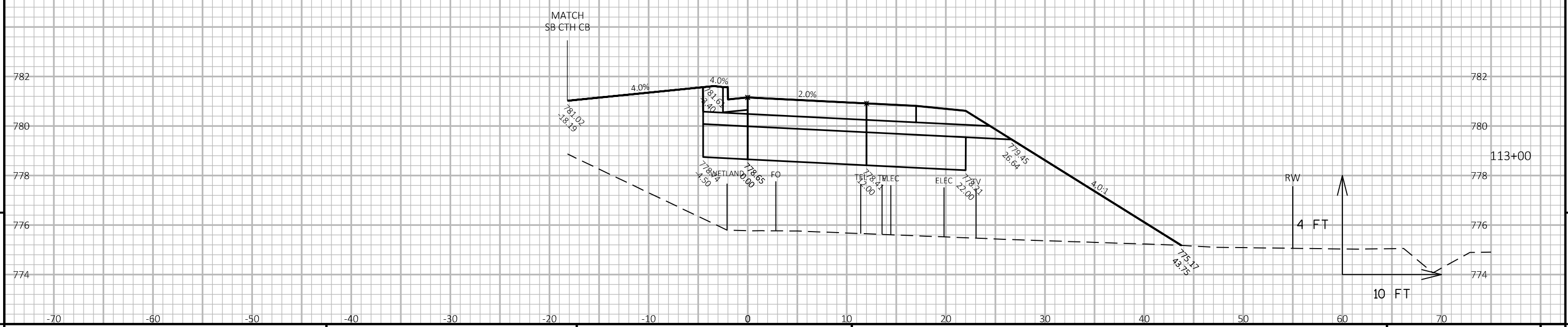
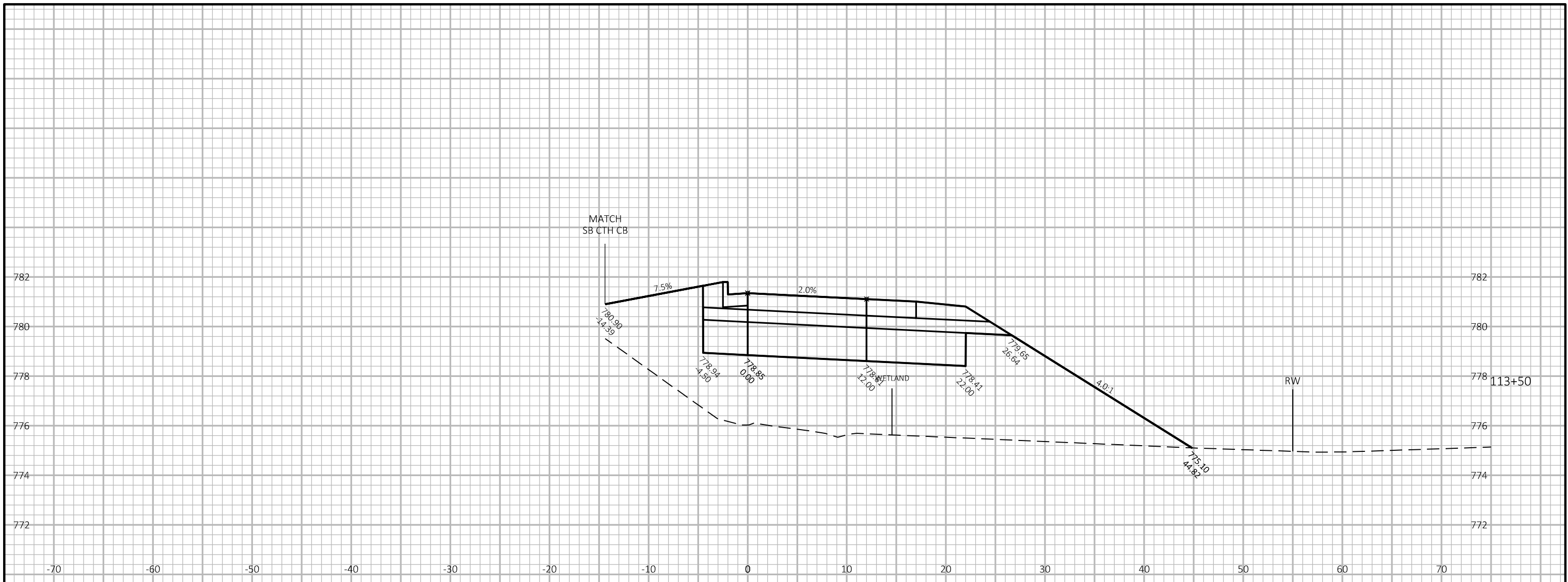


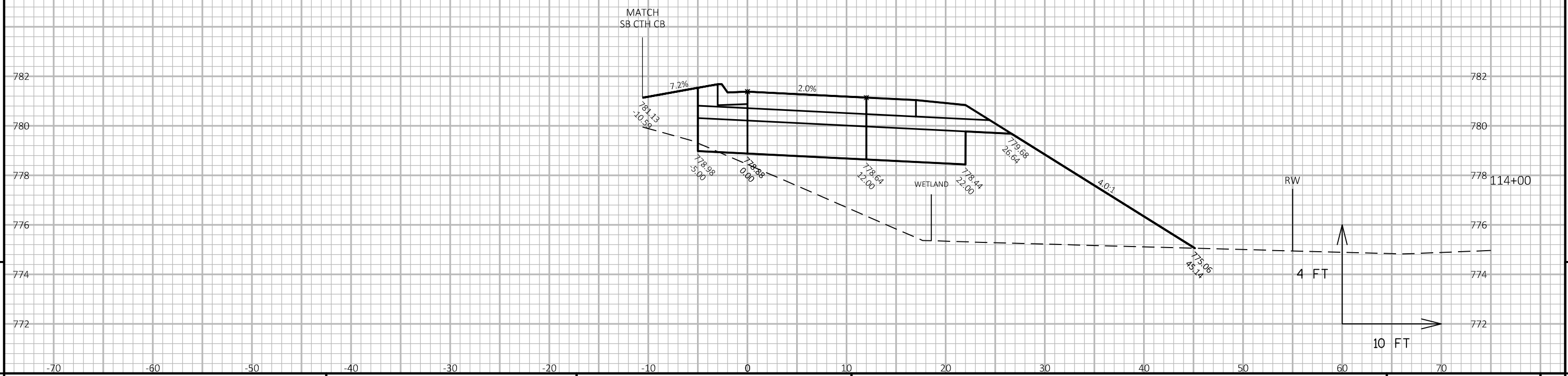
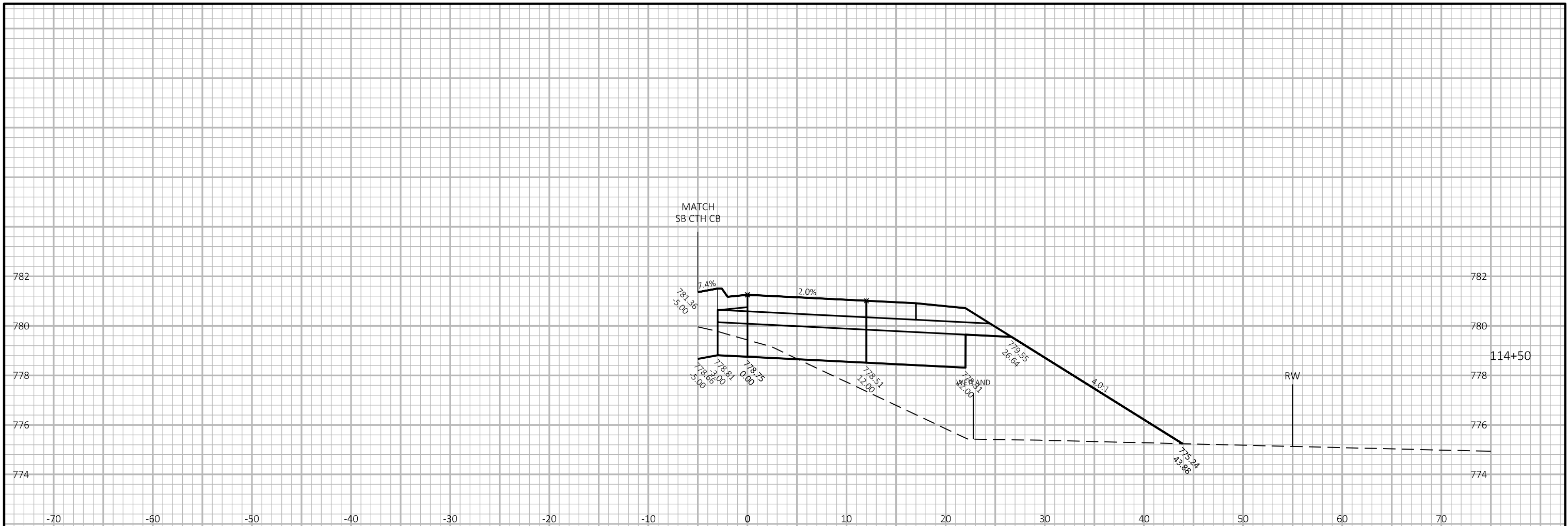
PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2 - CTH CB NB      SHEET 218

9

9

E

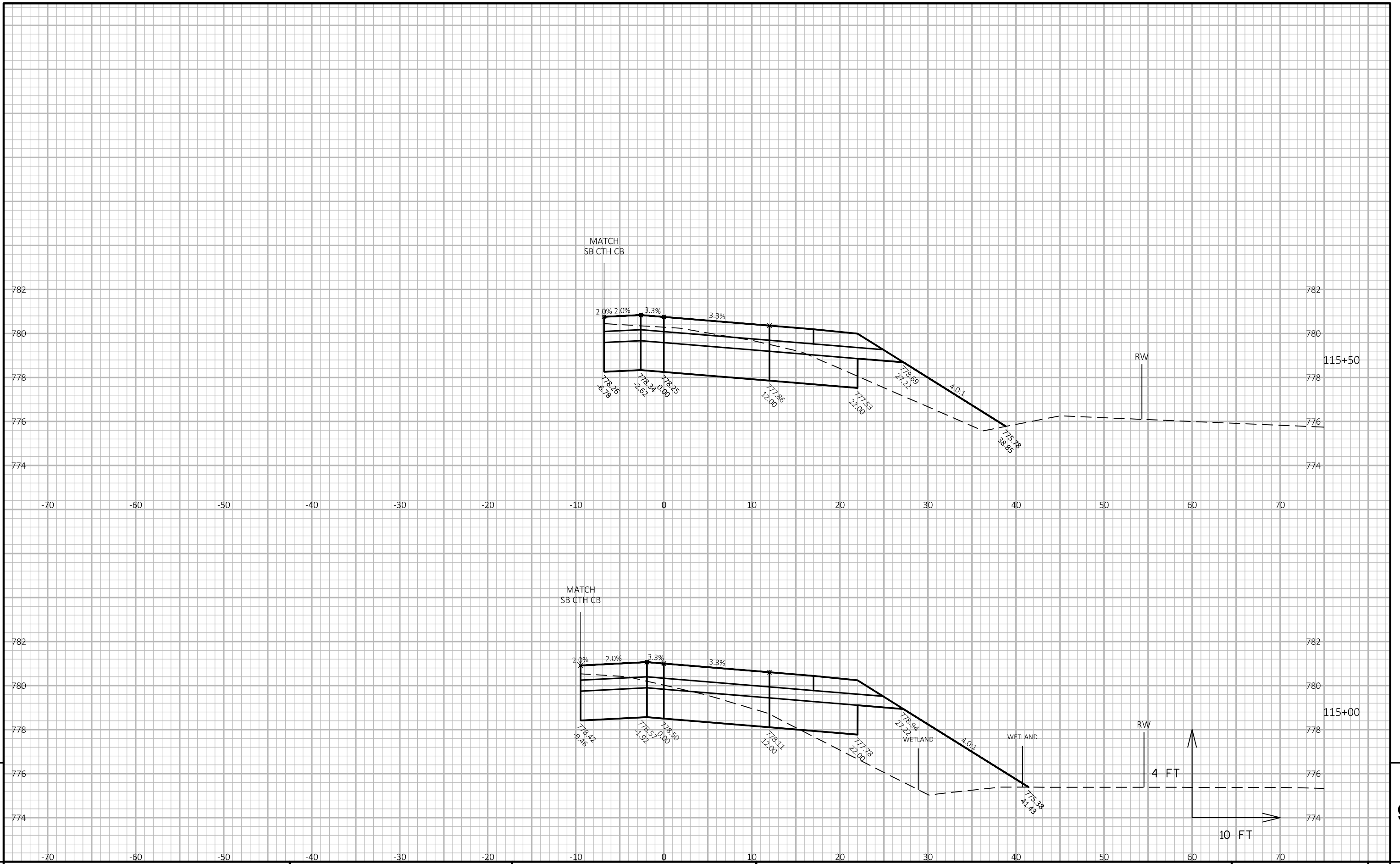




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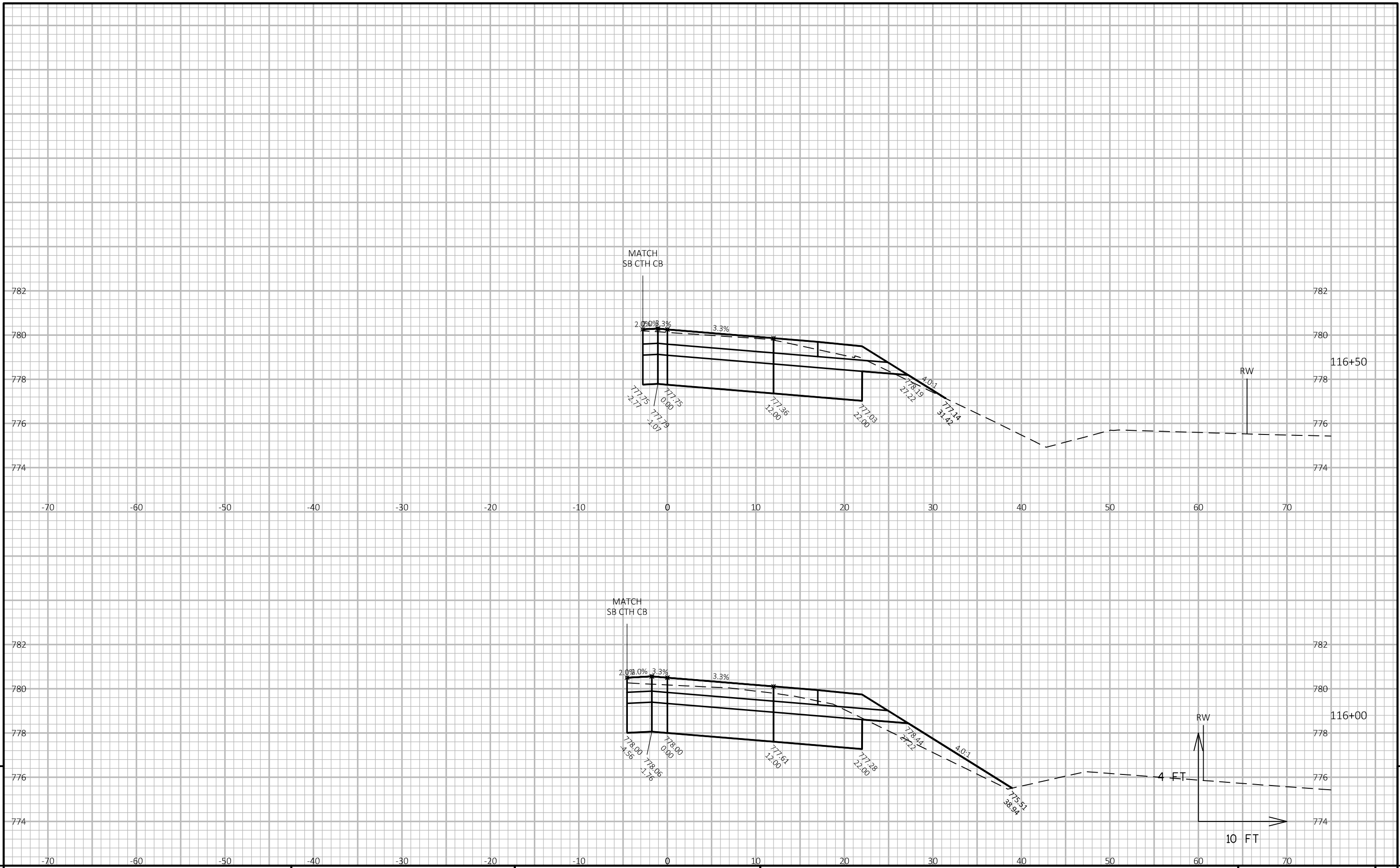
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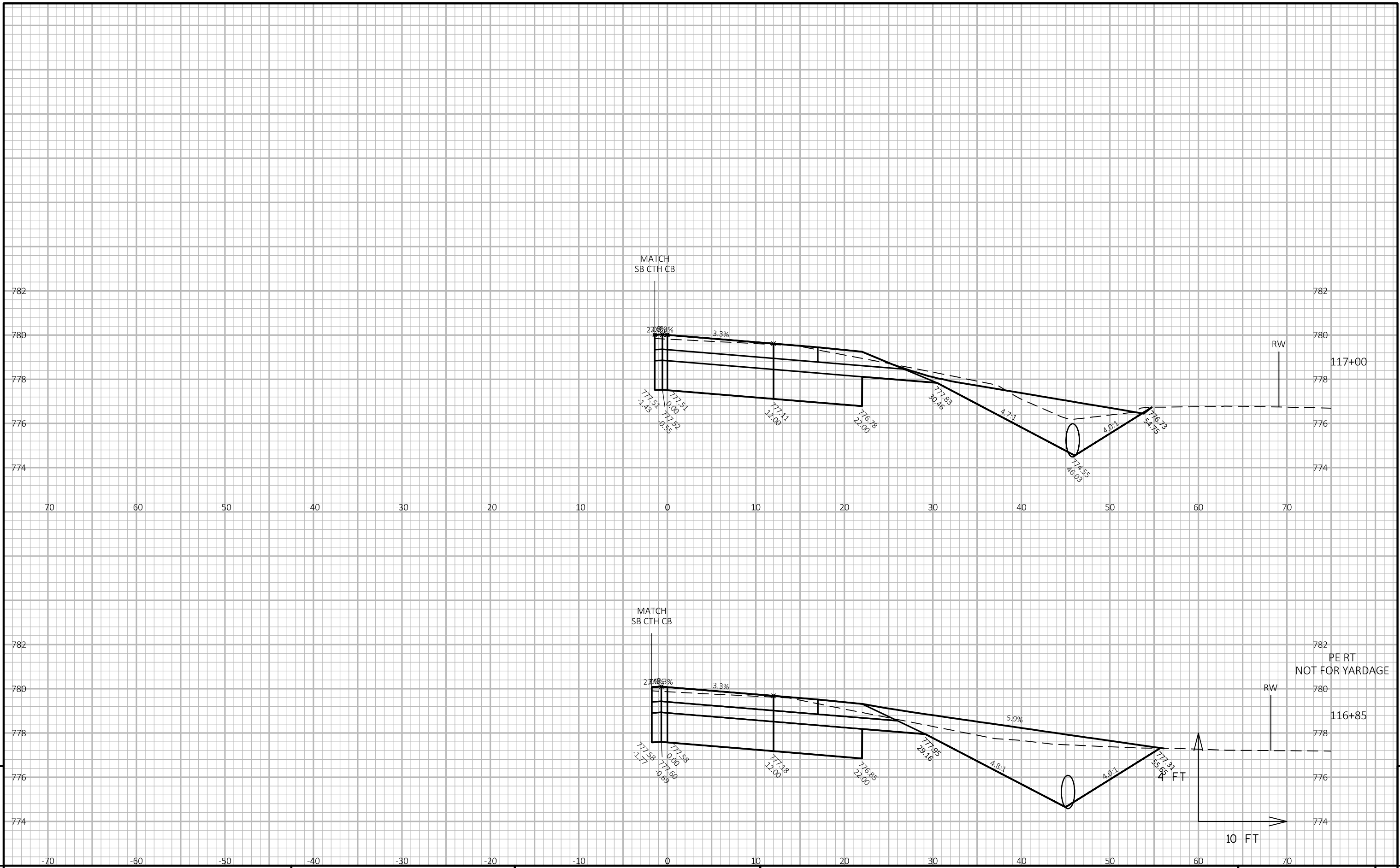
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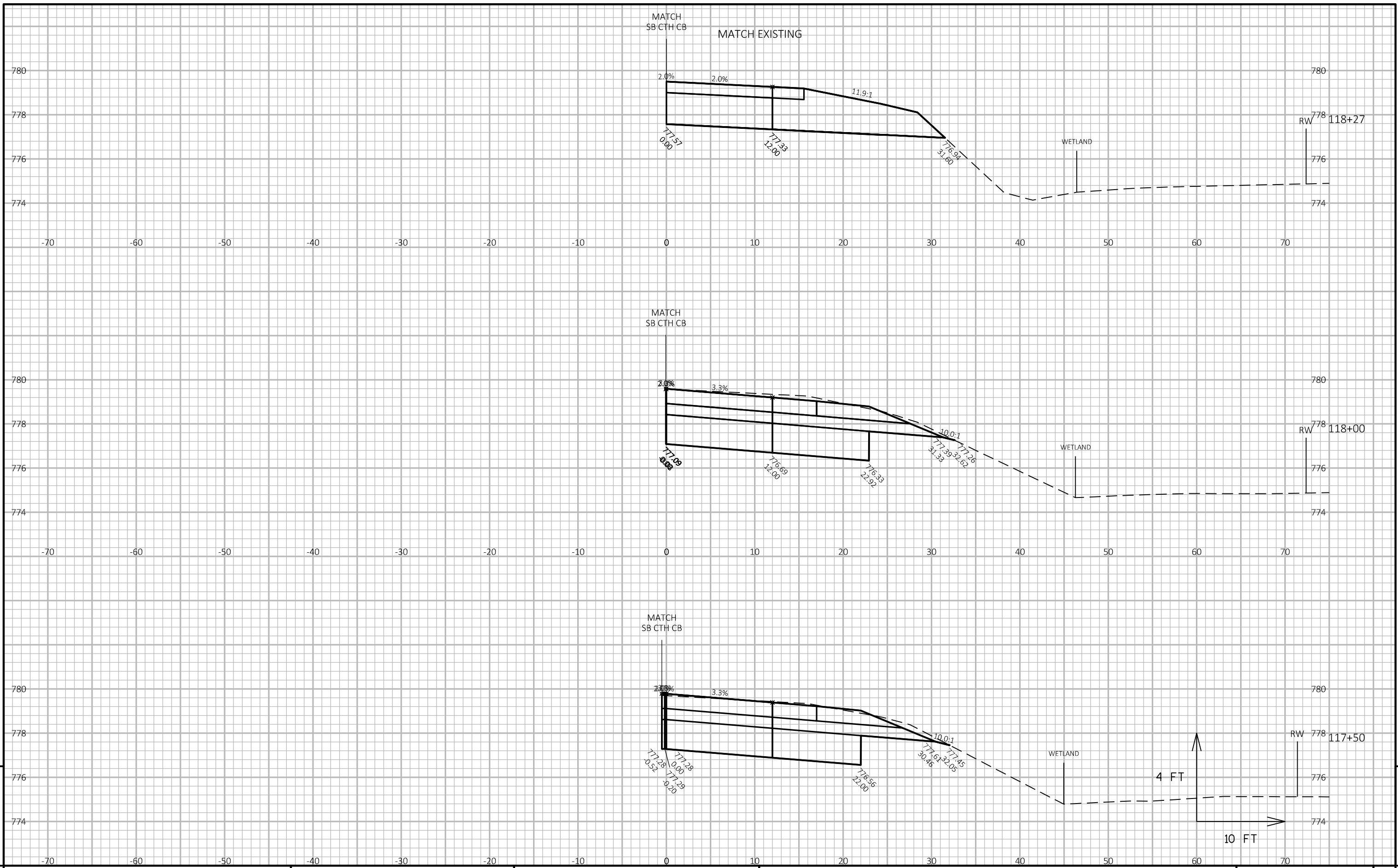
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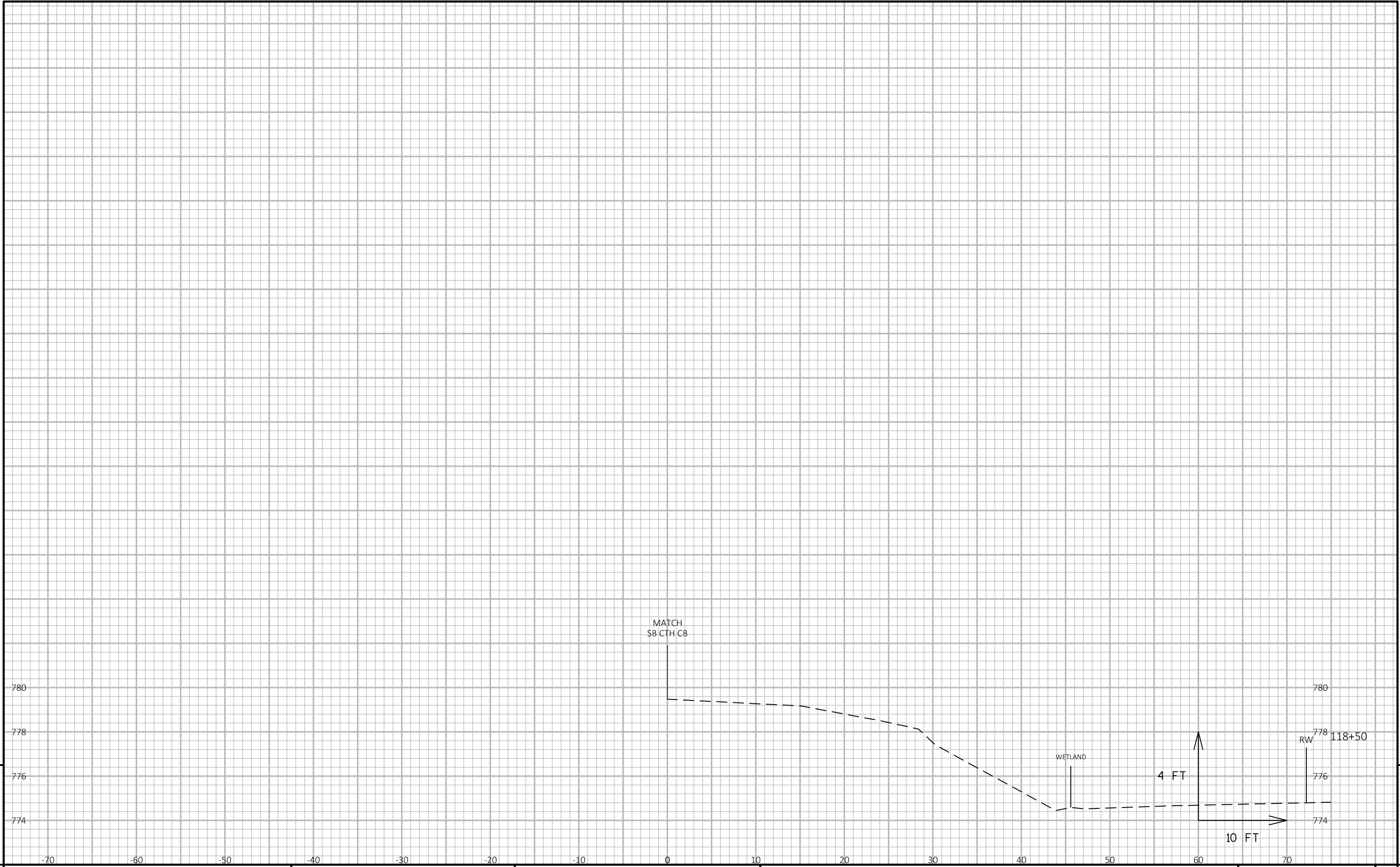






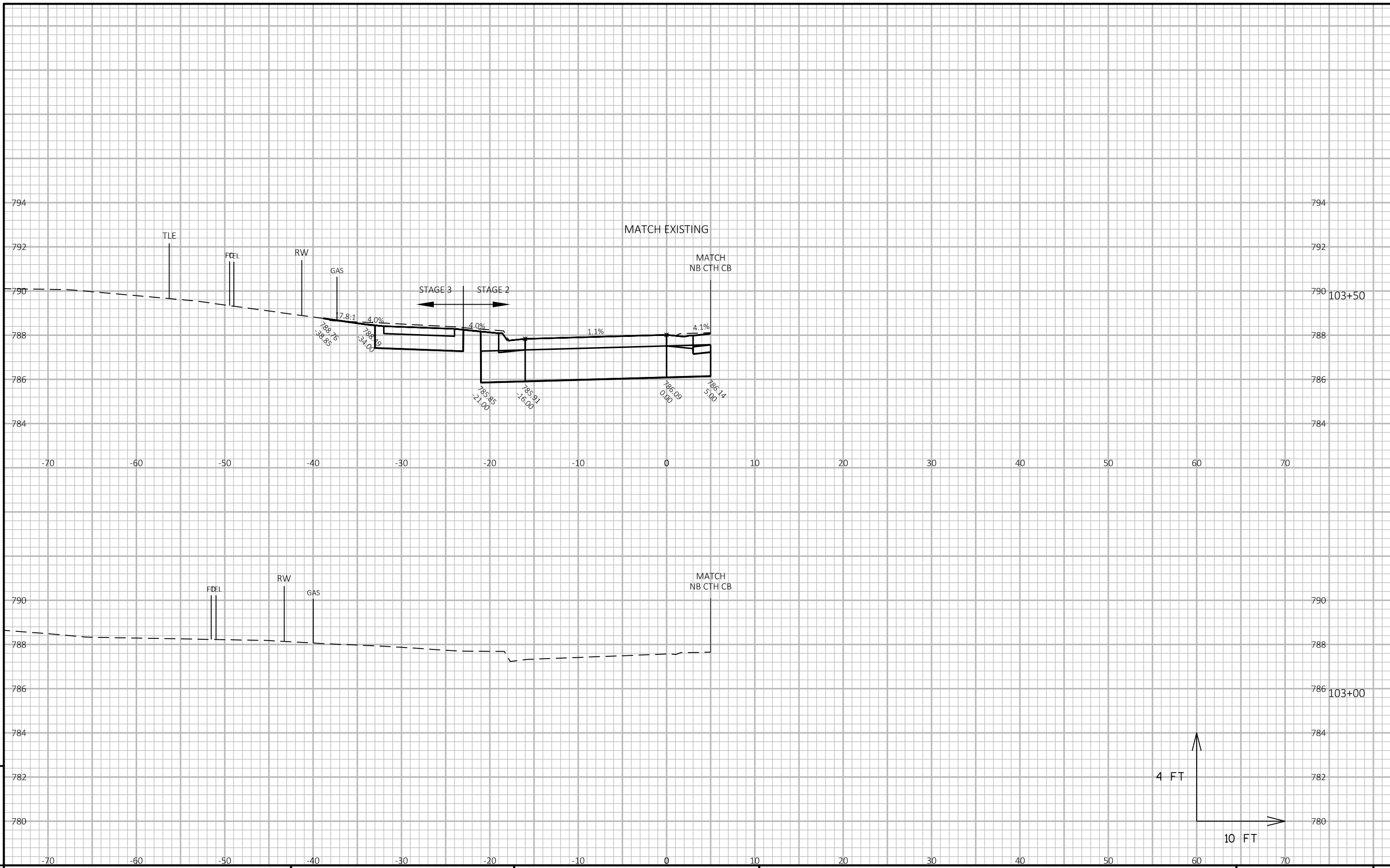
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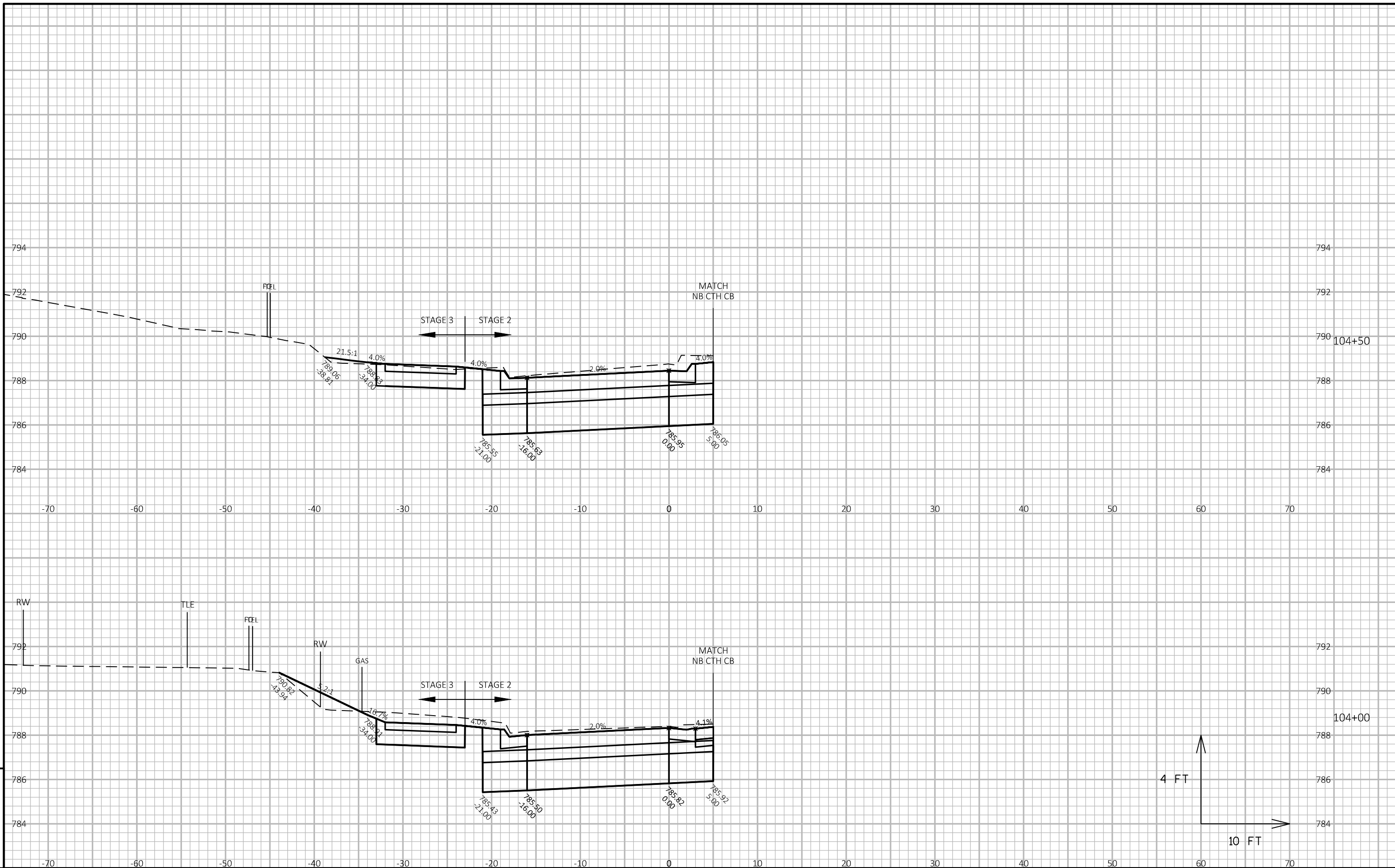
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PROJECT NO: 4682-01-73	HWY: CTH CB	COUNTY: WINNEBAGO	CROSS SECTIONS: STAGE 2 - CTH CB NB	SHEET 225	E
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FILE NAME : K:\1172703\CIVIL3D\46820100\SHEETSP\090202-XS.DWG      PLOT DATE : 10/26/2018 4:29 PM      PLOT BY : NIKOLAI, ADAM      PLOT NAME :





PROJECT NO: 4682-01-73

HWY: CTH CB

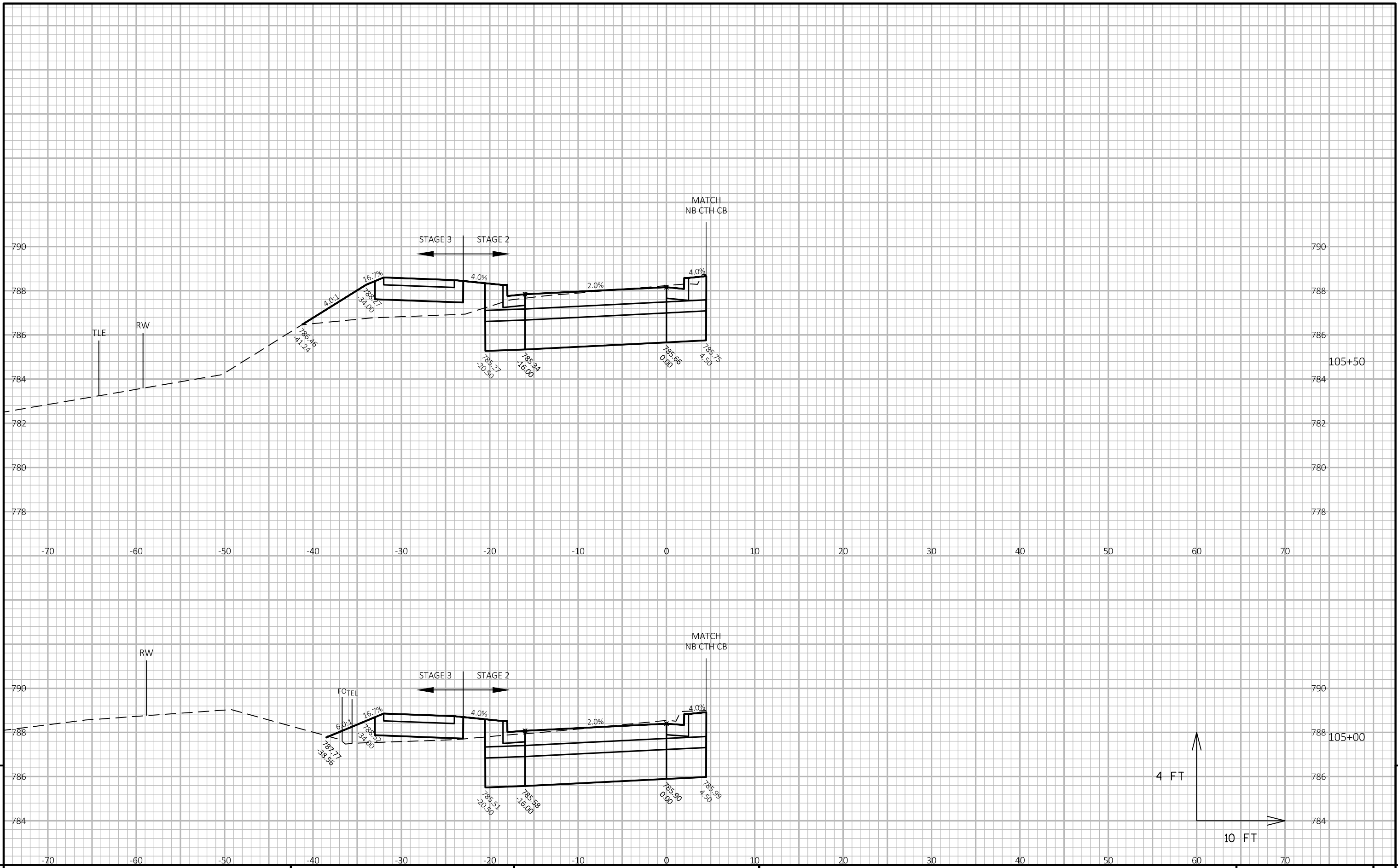
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CTH CB SB

SHEET

227

E



PROJECT NO: 4682-01-73

HWY: CTH CB

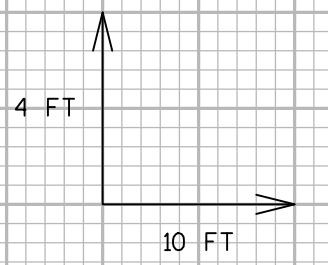
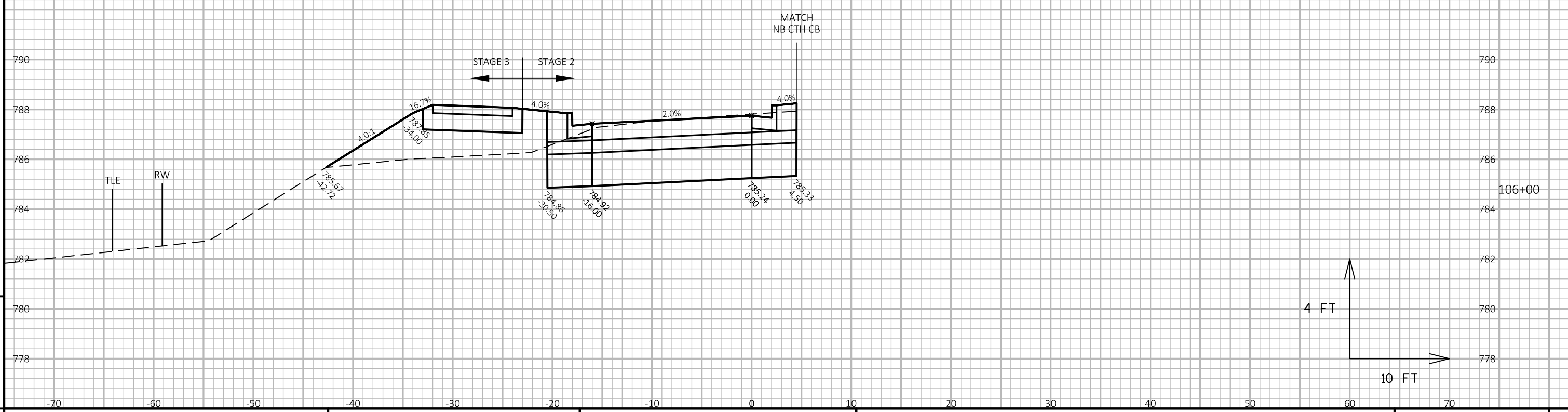
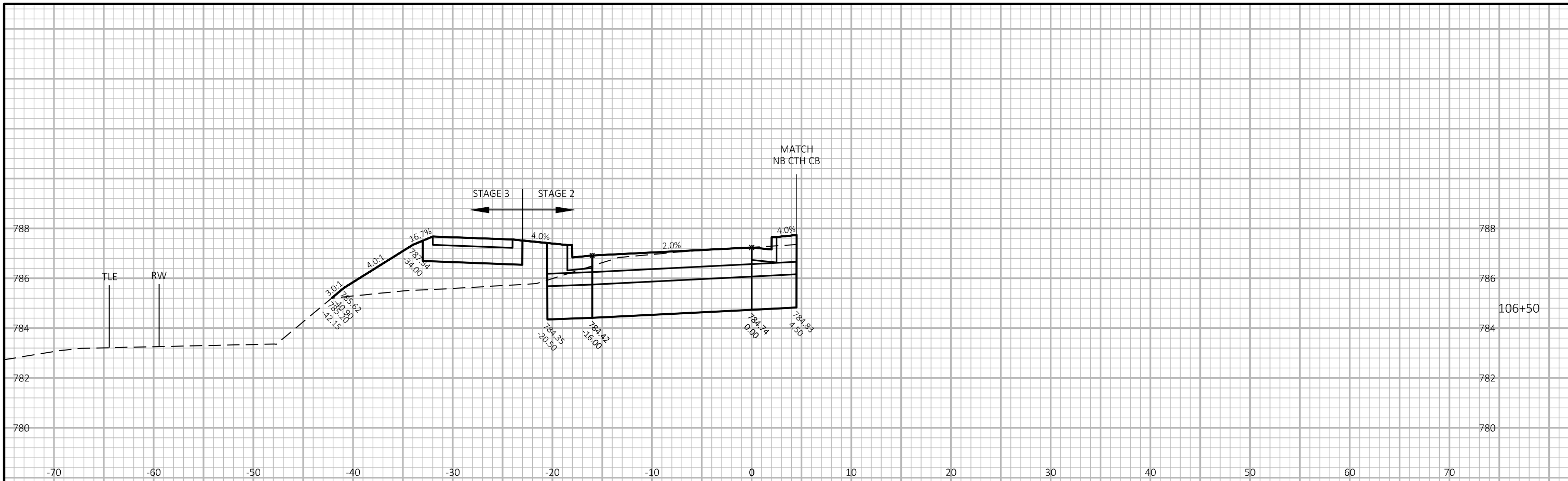
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CTH CB SB

SHEET

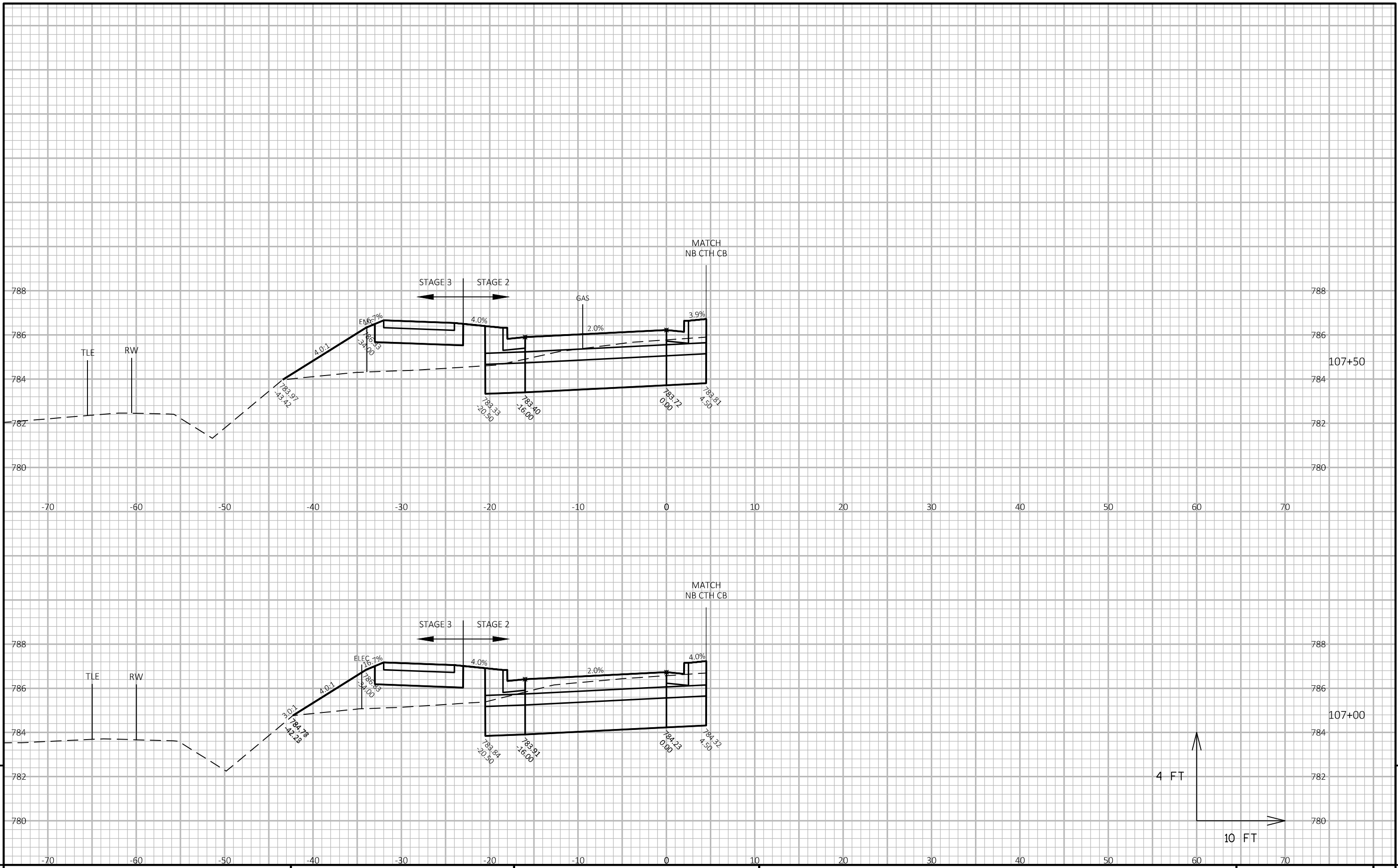
228

E



9

PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2/3 - CTH CB SB      SHEET 229      E



PROJECT NO: 4682-01-73

HWY: CTH CB

COUNTY: WINNEBAGO

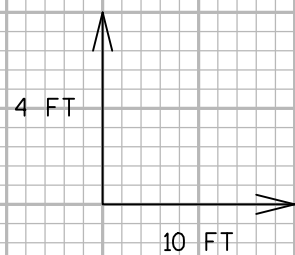
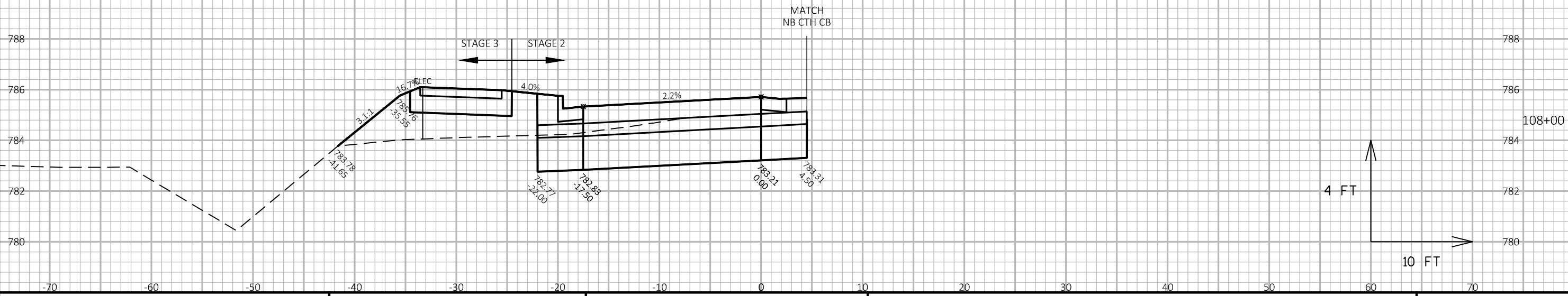
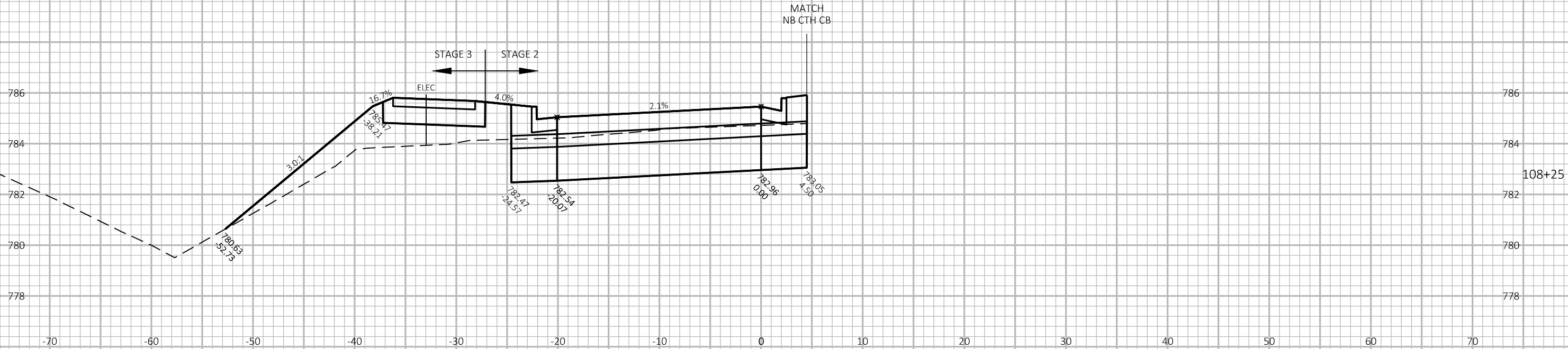
CROSS SECTIONS: STAGE 2/3 - CTH CB SB

SHEET

230

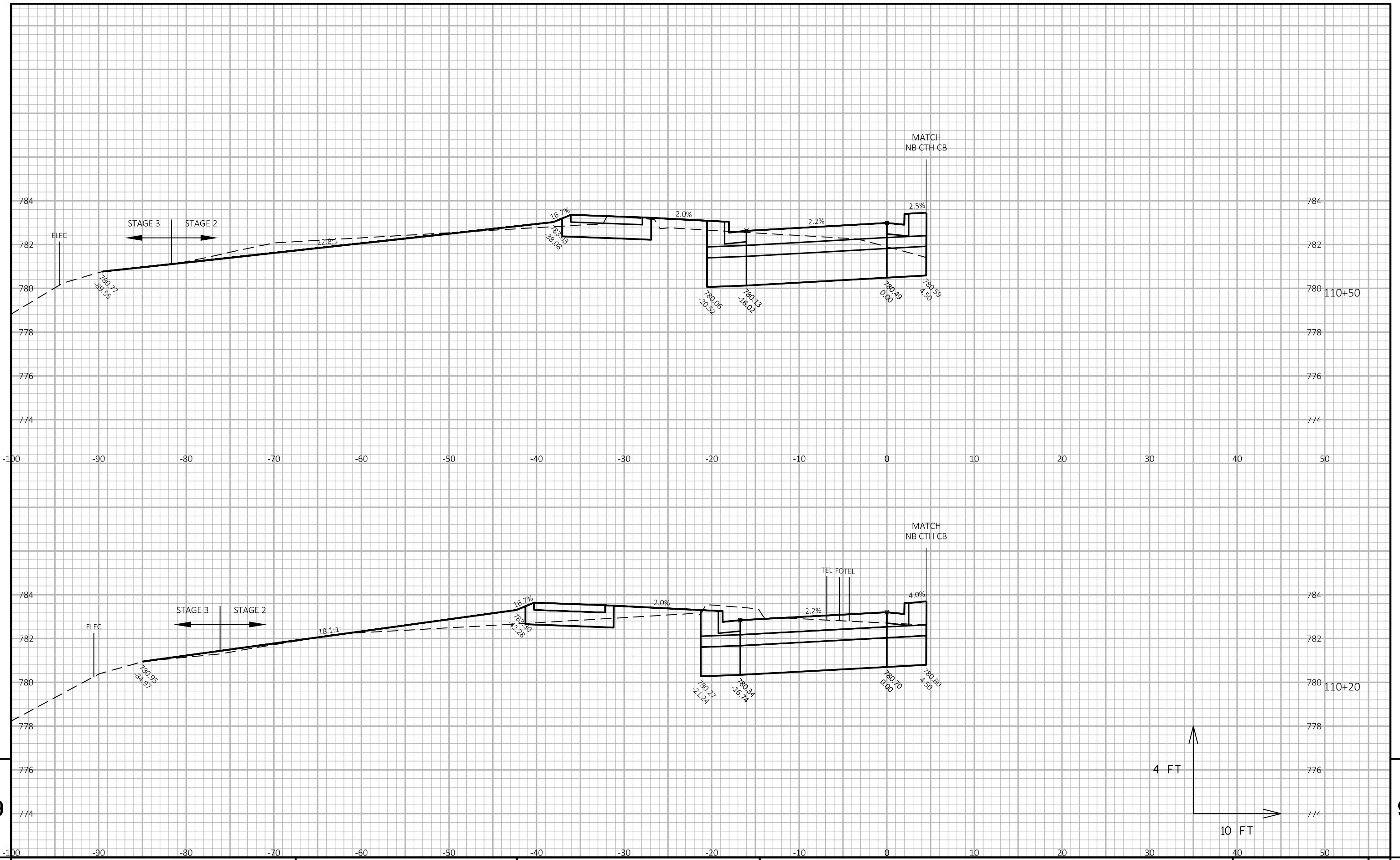
E

SEE CENTRAL ISLAND CROSS SECTIONS  
BETWEEN STA 108+25 LT TO STA 110+20 LT



9





9

9

PROJECT NO: 4682-01-73

HWY: CTH CB

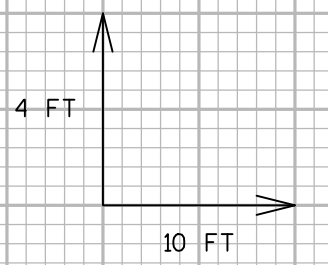
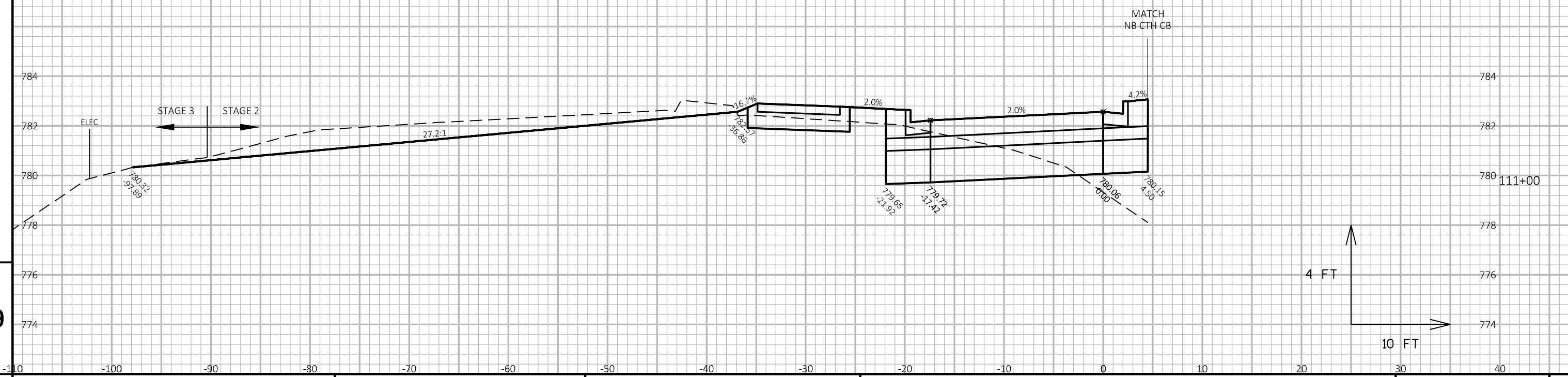
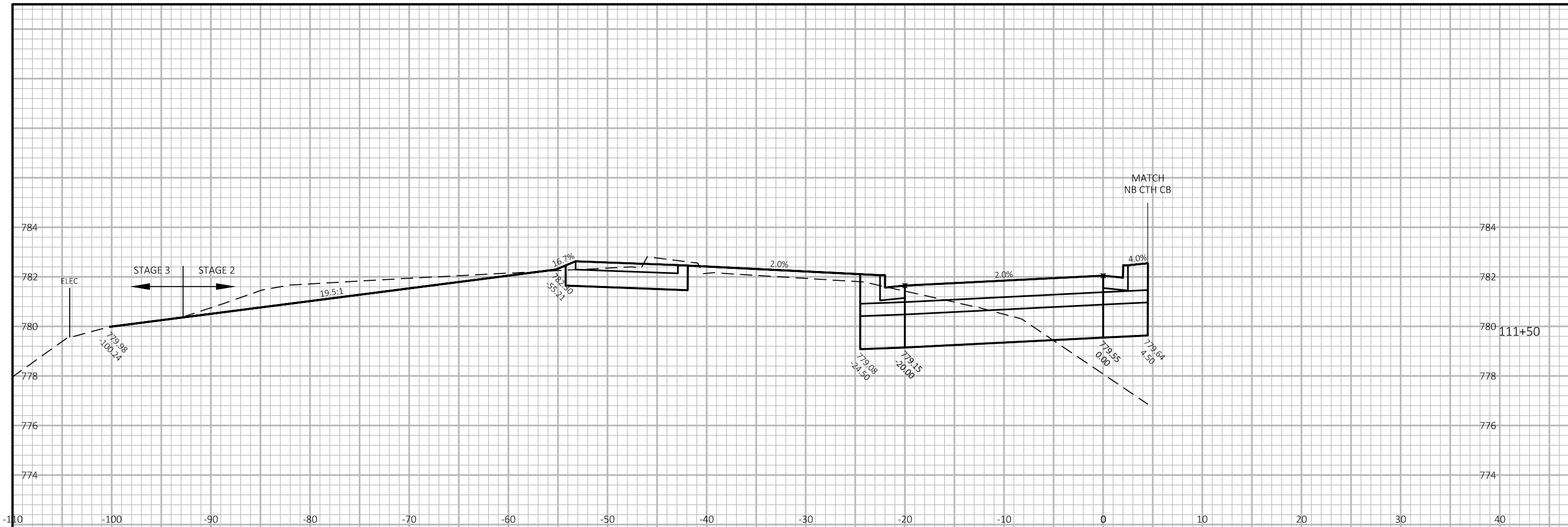
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CTH CB SB

SHEET

232

E



9



PROJECT NO: 4682-01-73

HWY: CTH CB

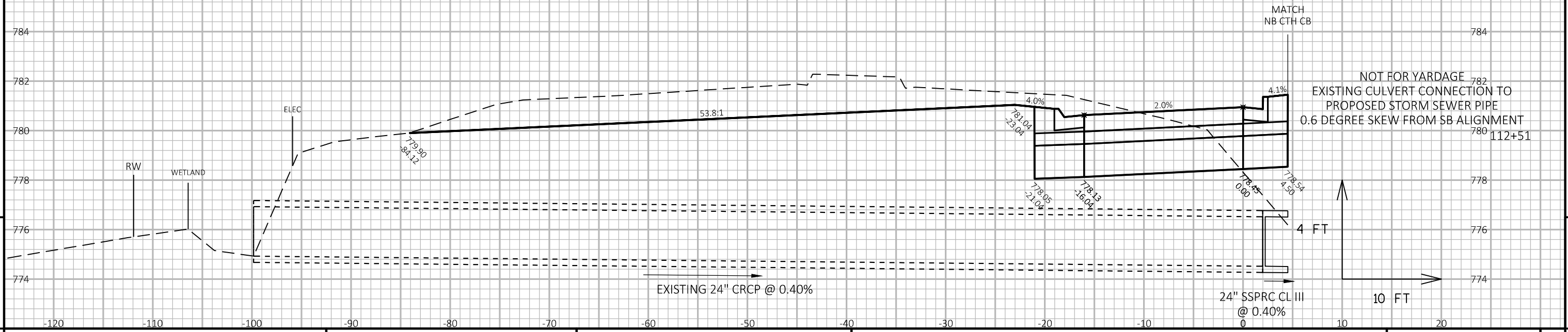
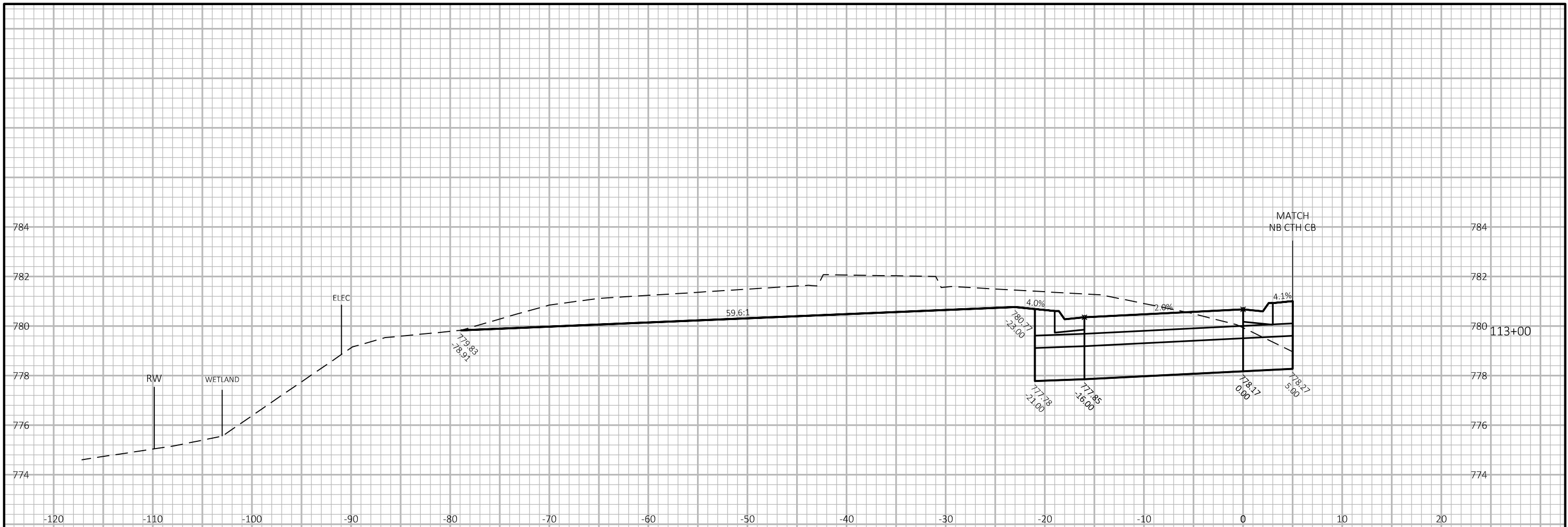
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CTH CB SB

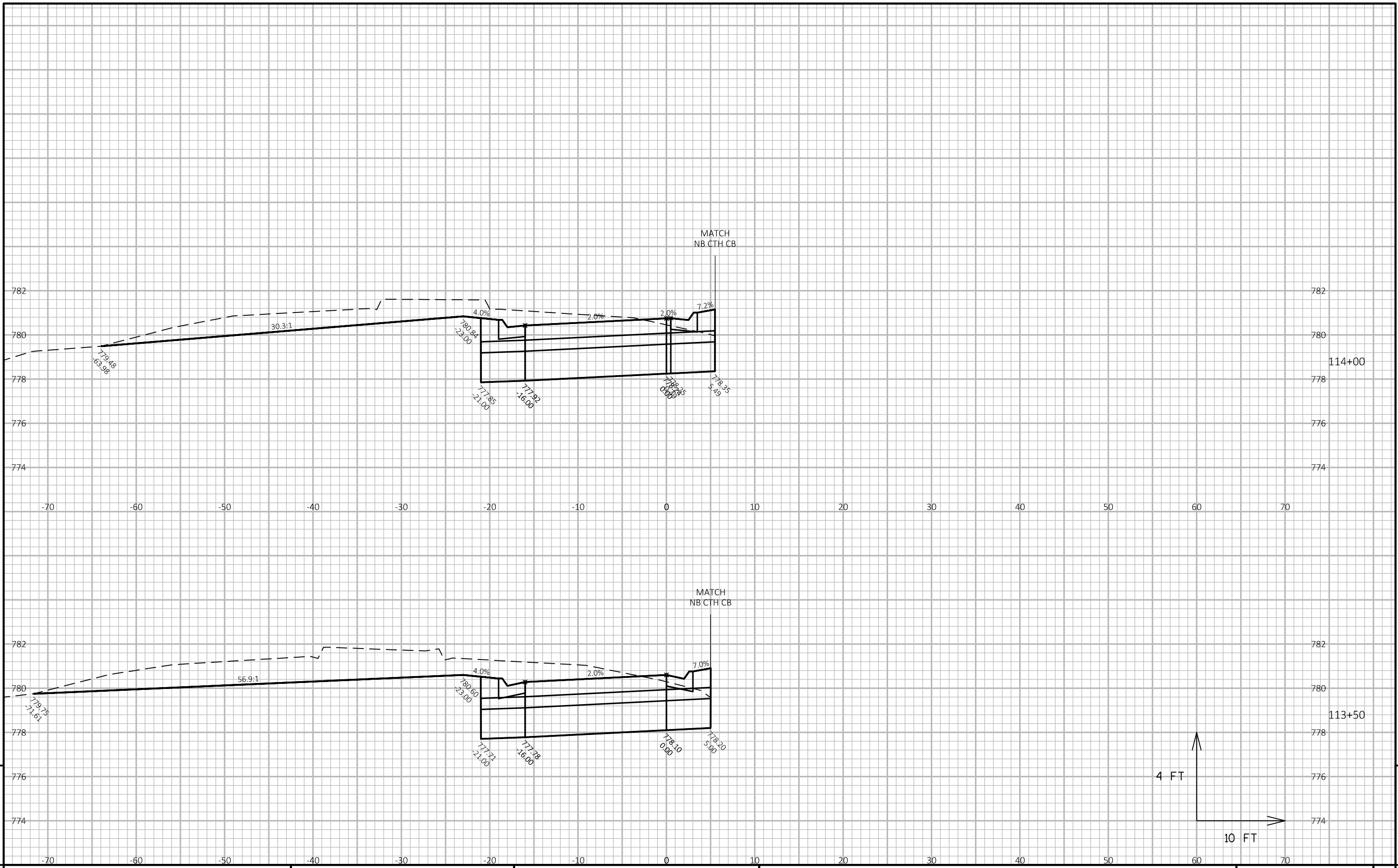
SHEET

234

E



PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2/3 - CTH CB SB      SHEET 235



PROJECT NO: 4682-01-73

HWY: CTH CB

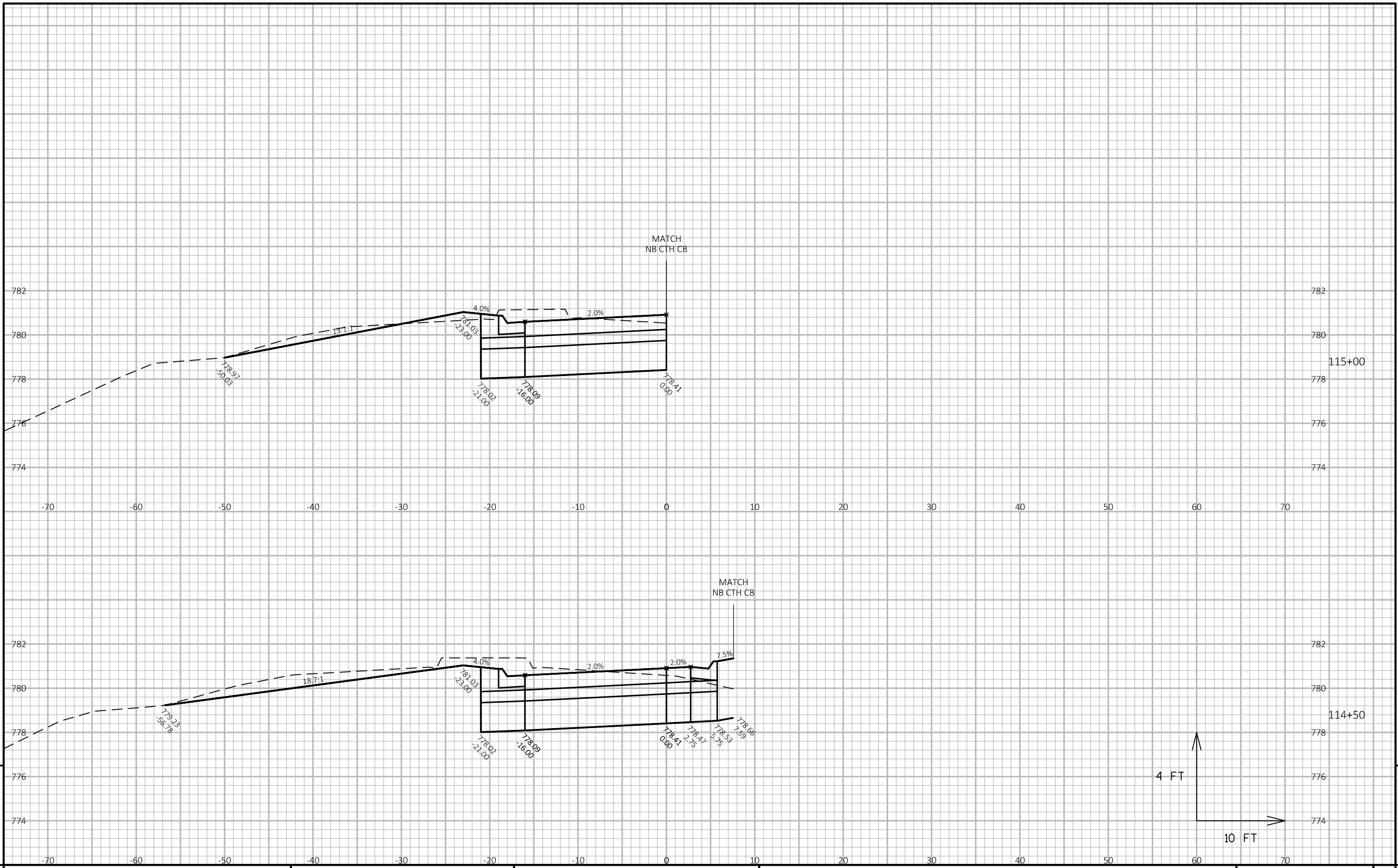
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CTH CB SB

SHEET

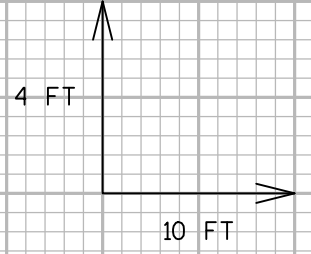
236

E



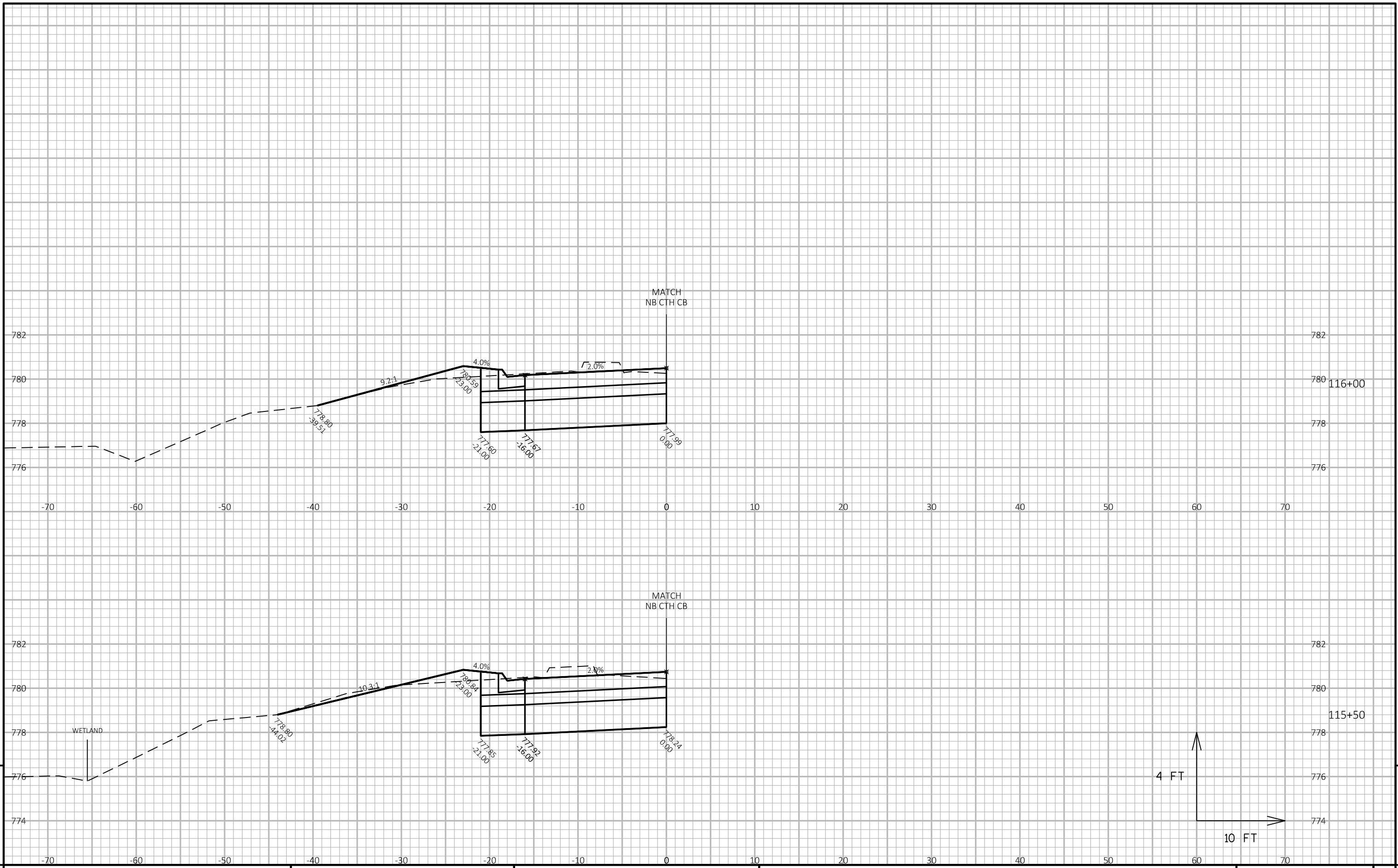
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PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2/3 - CTH CB SB      SHEET 237      E

FILE NAME : K:\1172703\CIVIL3D\46820100\SHEETS\PLAN\090202-XS.DWG      PLOT DATE : 10/26/2018 4:33 PM      PLOT BY : NIKOLAI, ADAM      PLOT NAME :



PROJECT NO: 4682-01-73

HWY: CTH CB

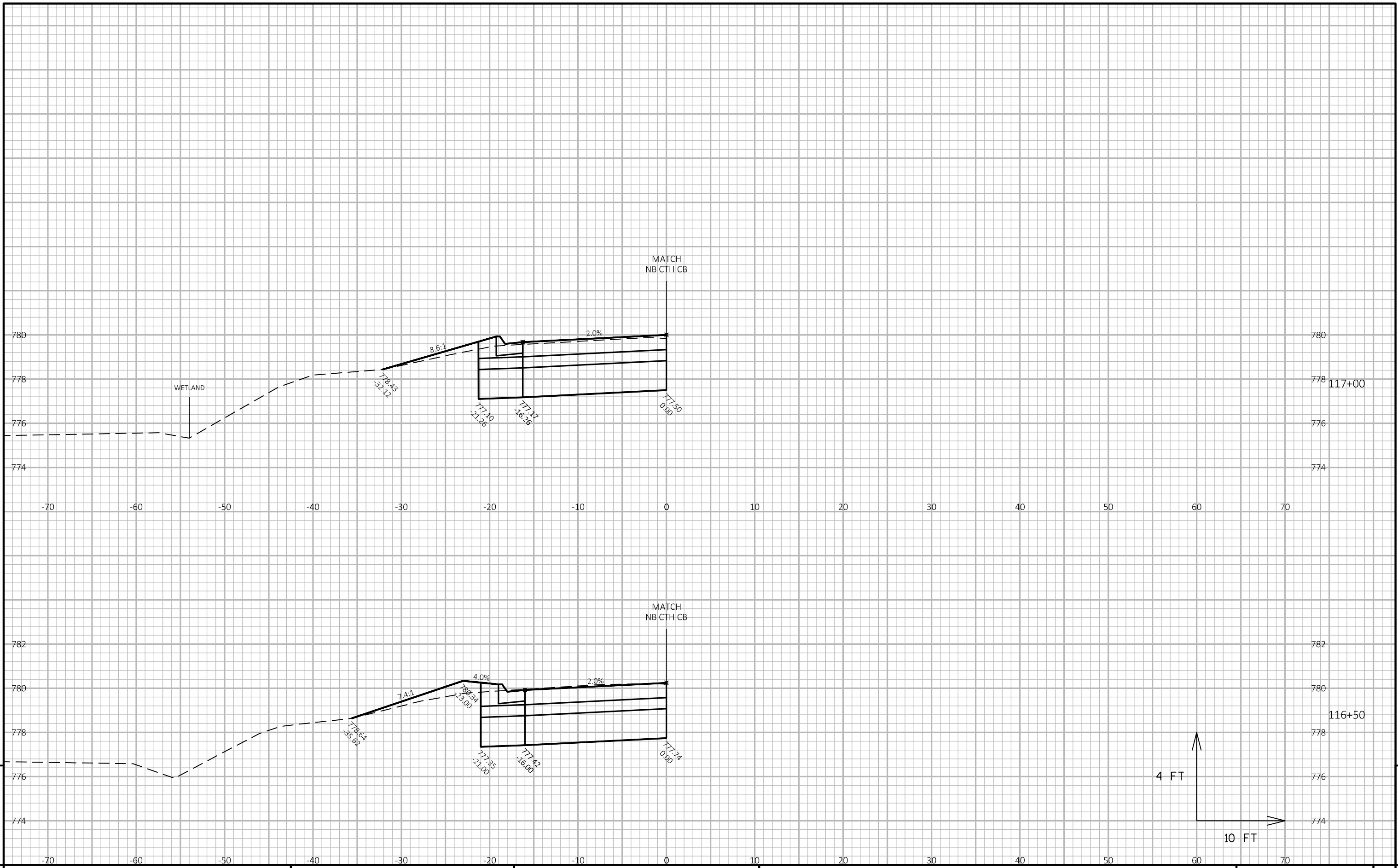
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CTH CB SB

SHEET

238

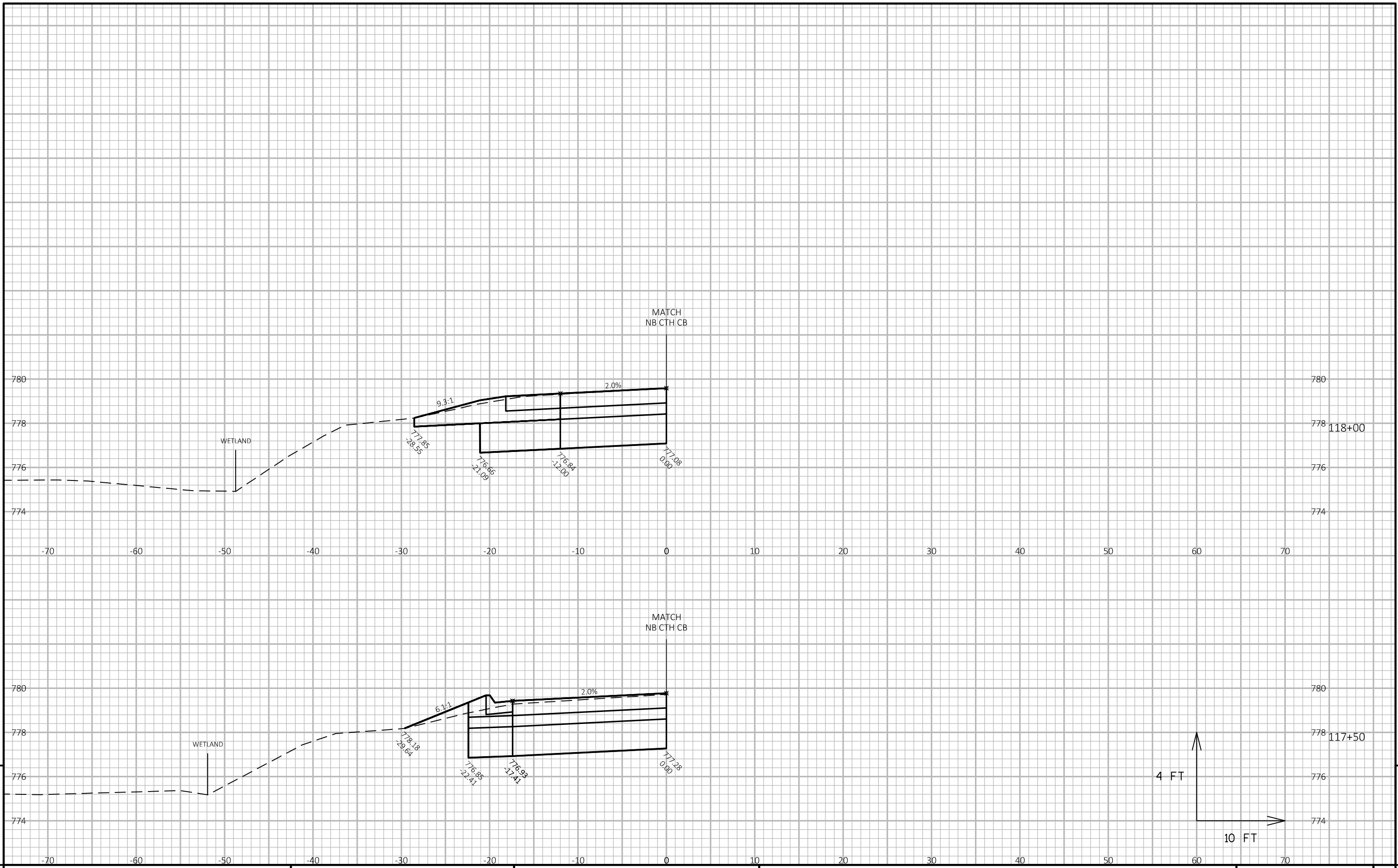
E

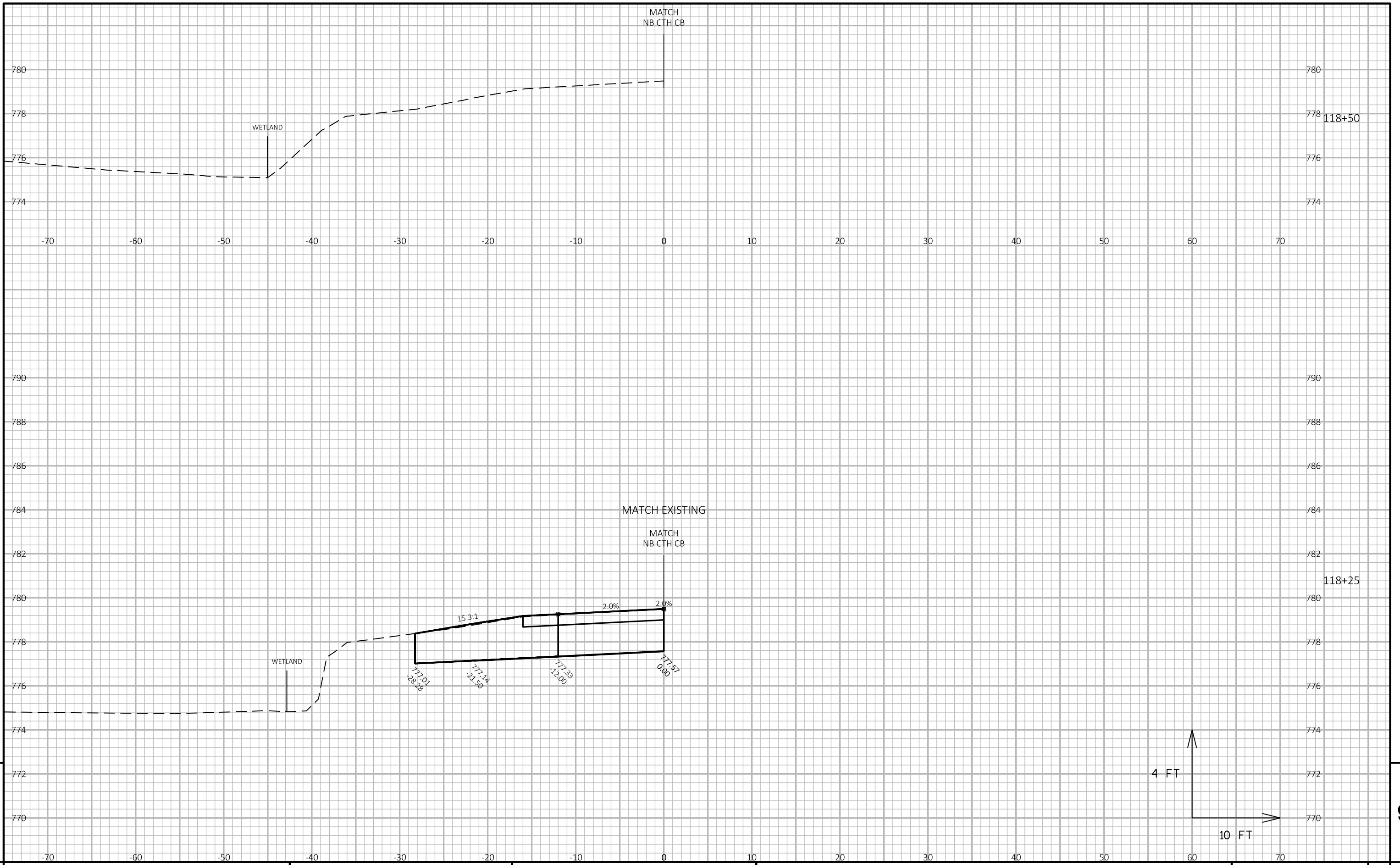


9

9







9

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PROJECT NO: 4682-01-73

HWY: CTH CB

COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CTH CB SB

SHEET 241

E

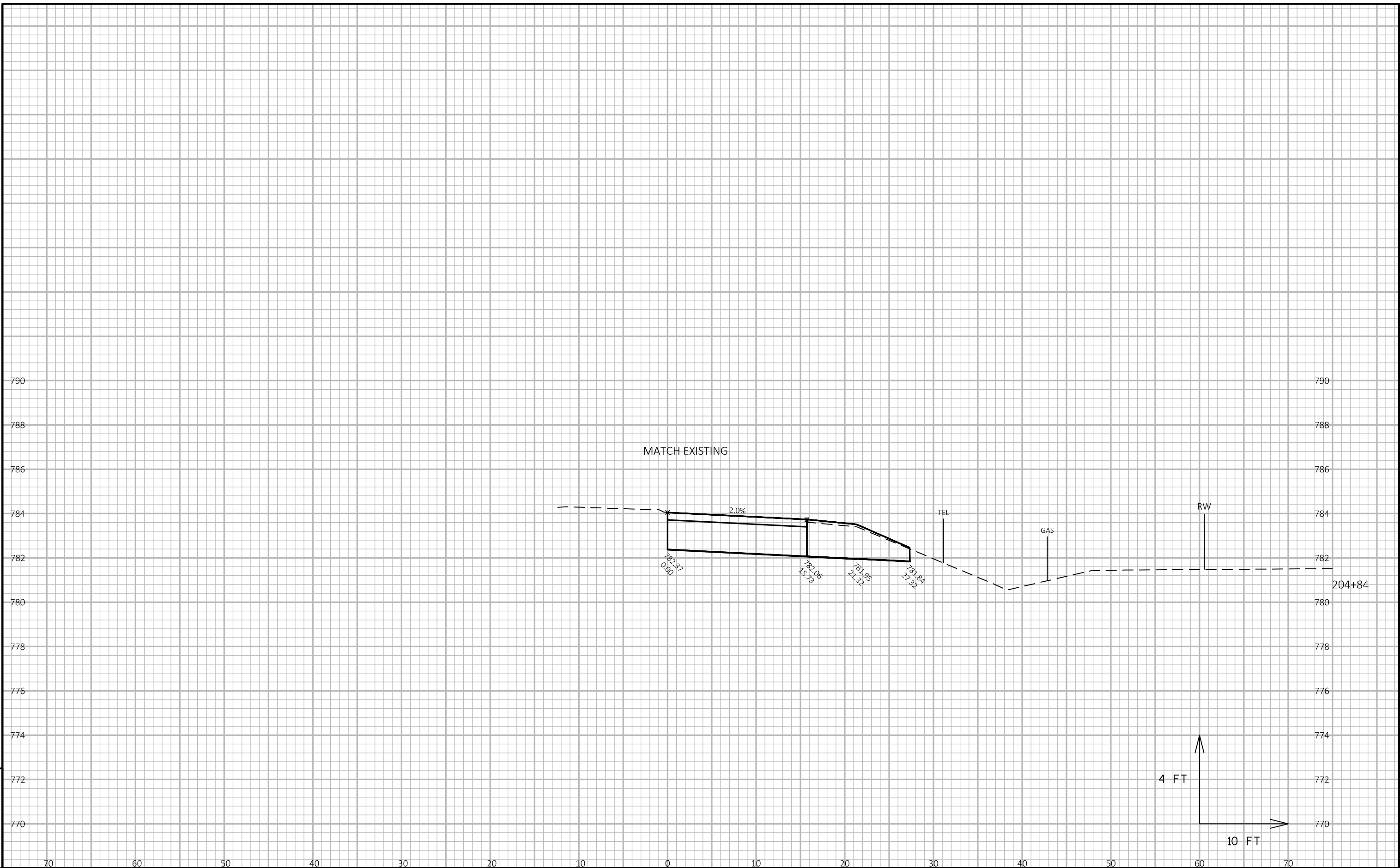
FILE NAME : K:\1172703\CIVIL3D\46820100\SHEETS\PLAN\090202-XS.DWG

PLOT DATE : 10/26/2018 4:33 PM

PLOT BY : NIKOLAI, ADAM

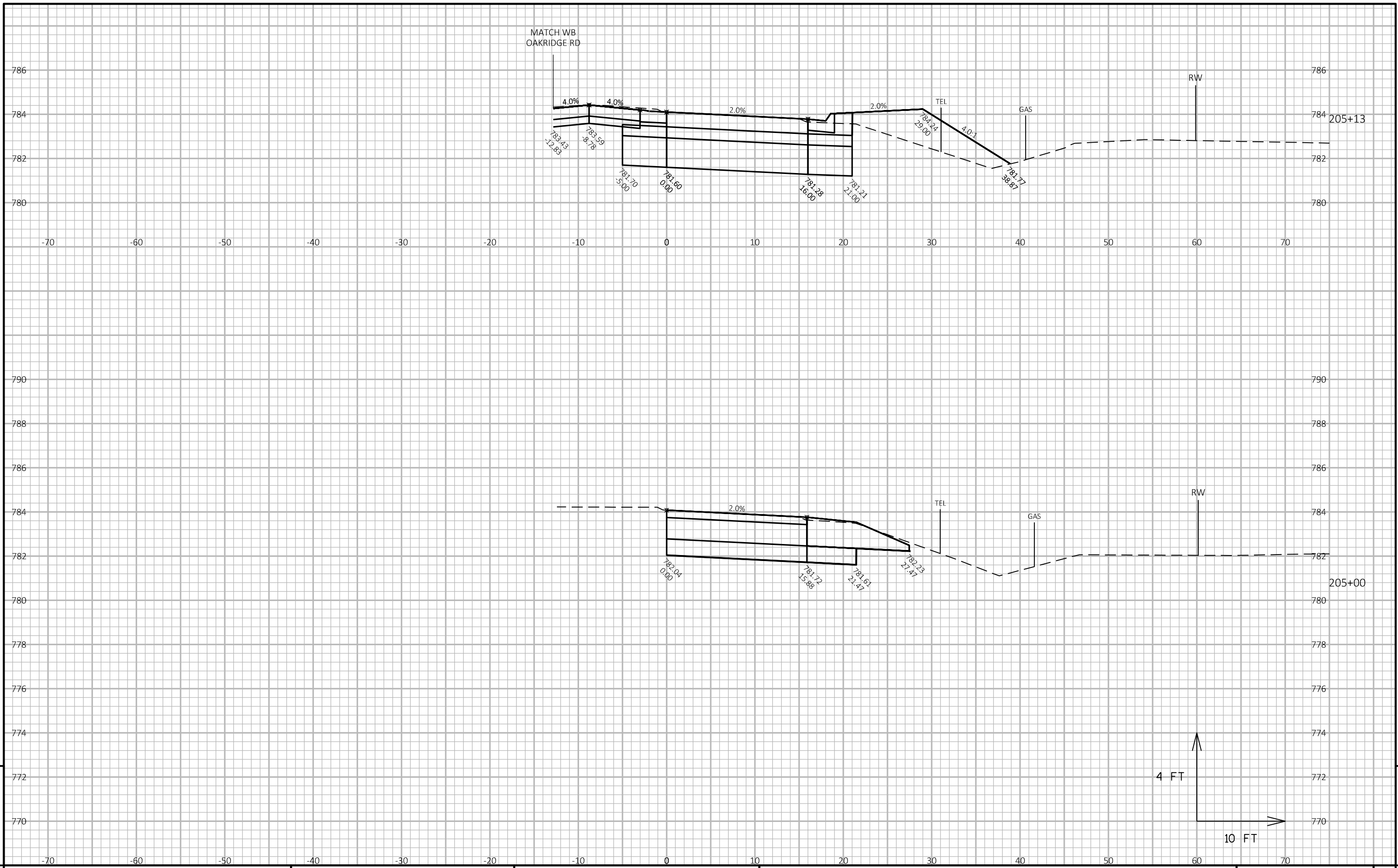
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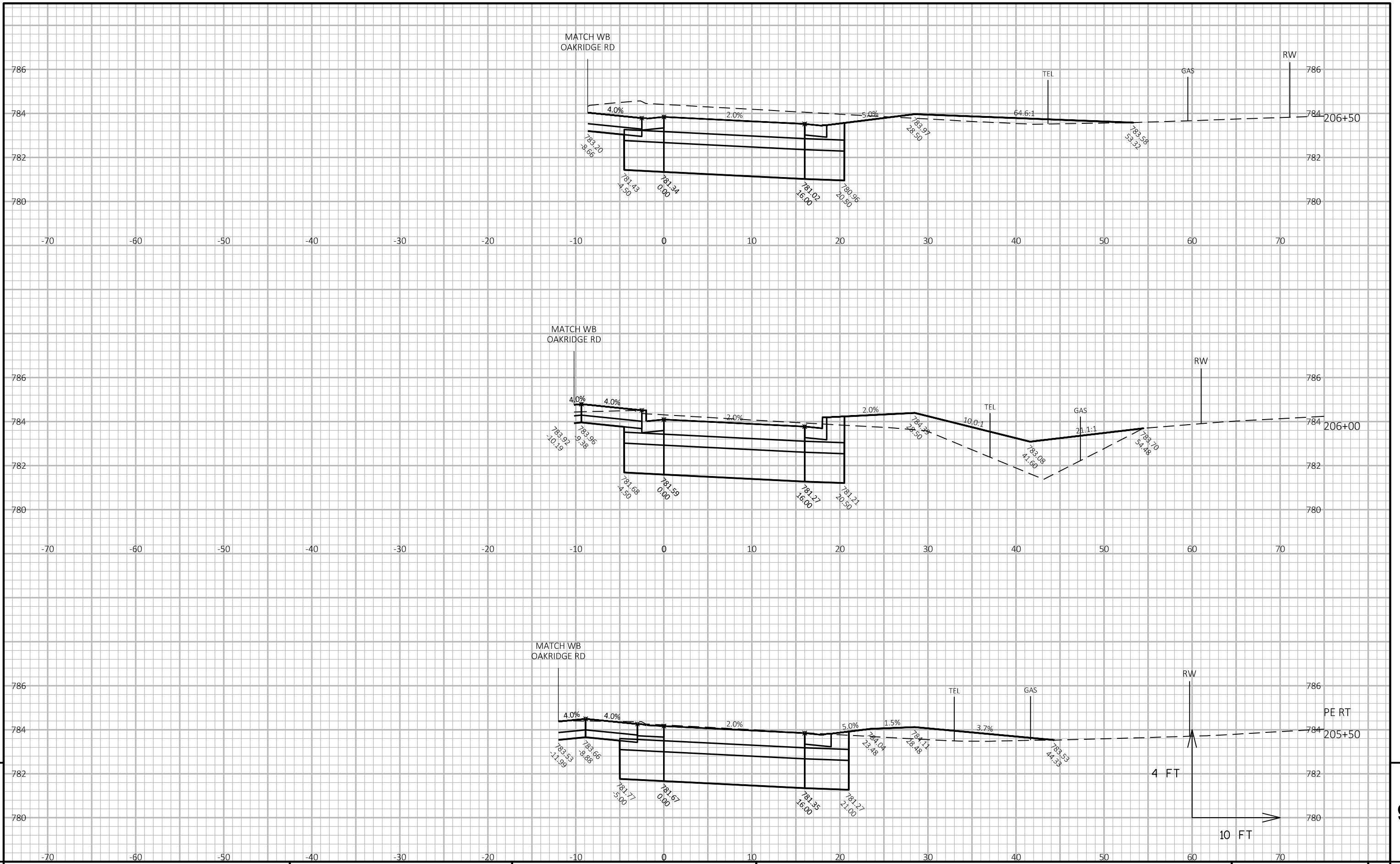
WISDOT/CADD SHEET 49



9

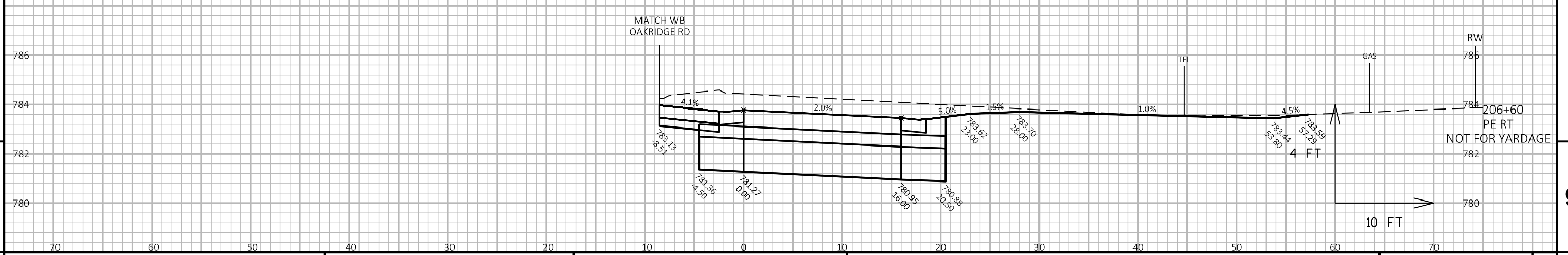
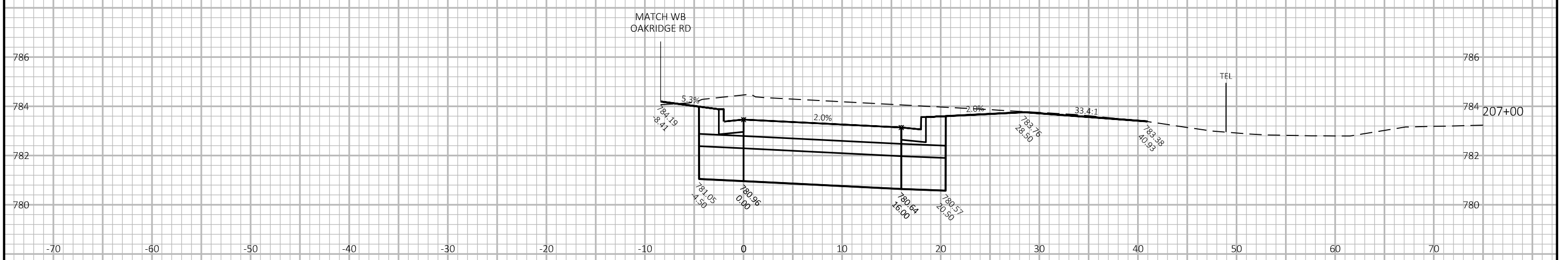
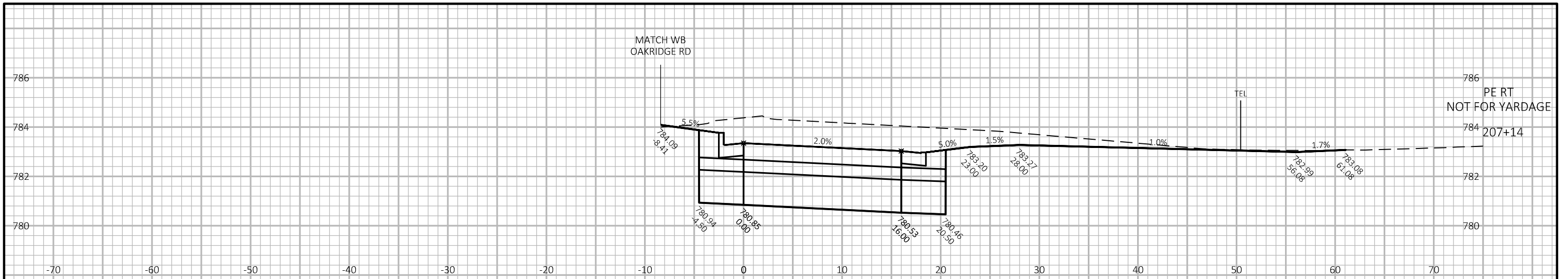
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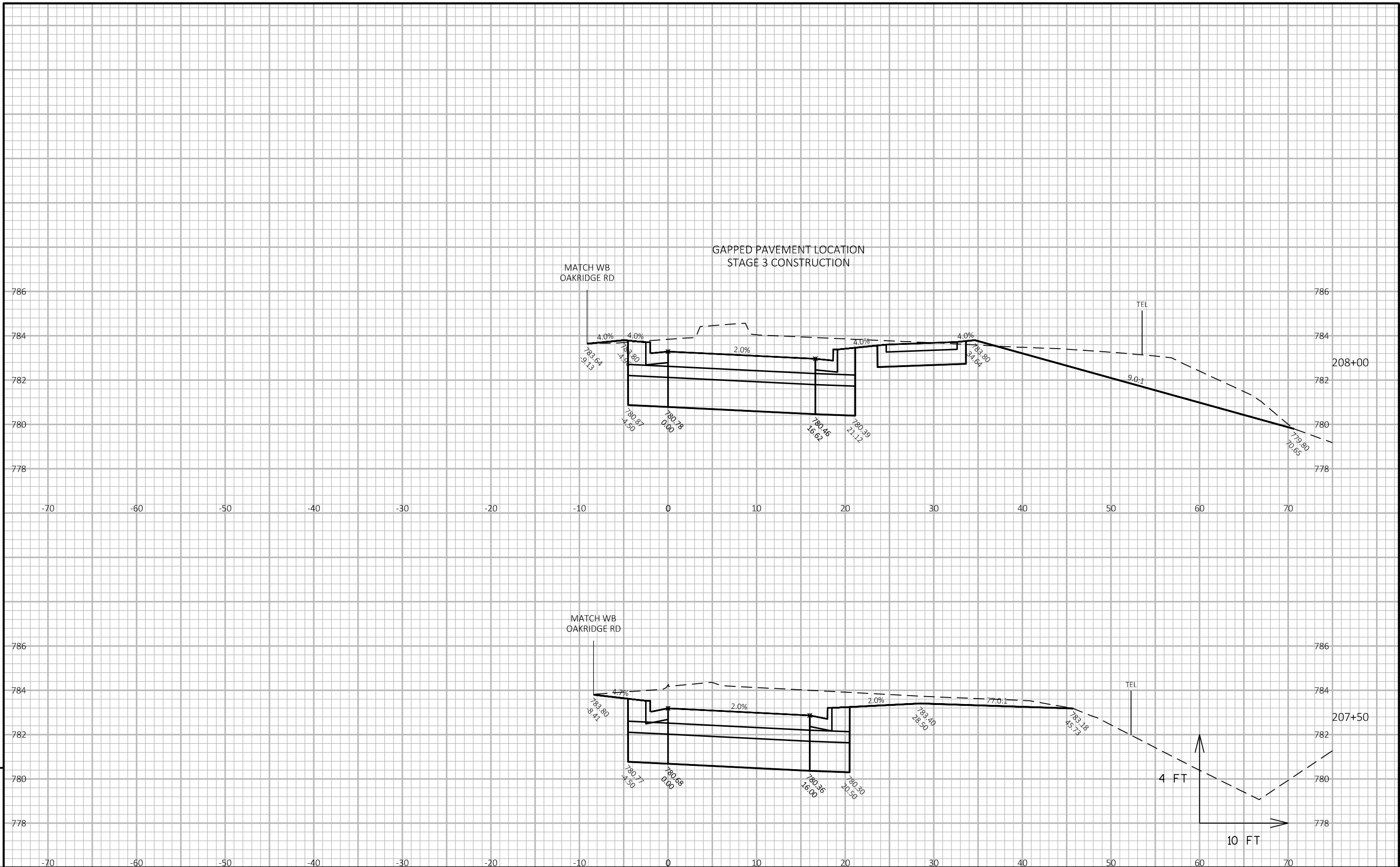
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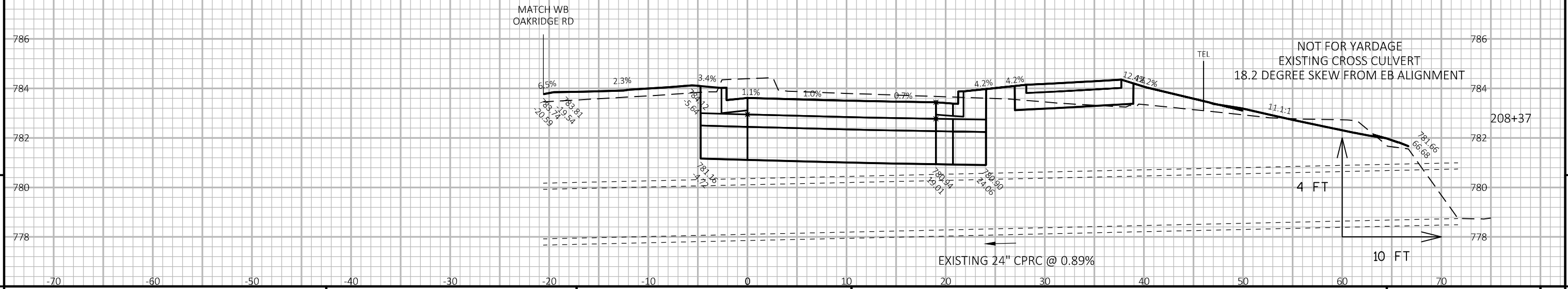
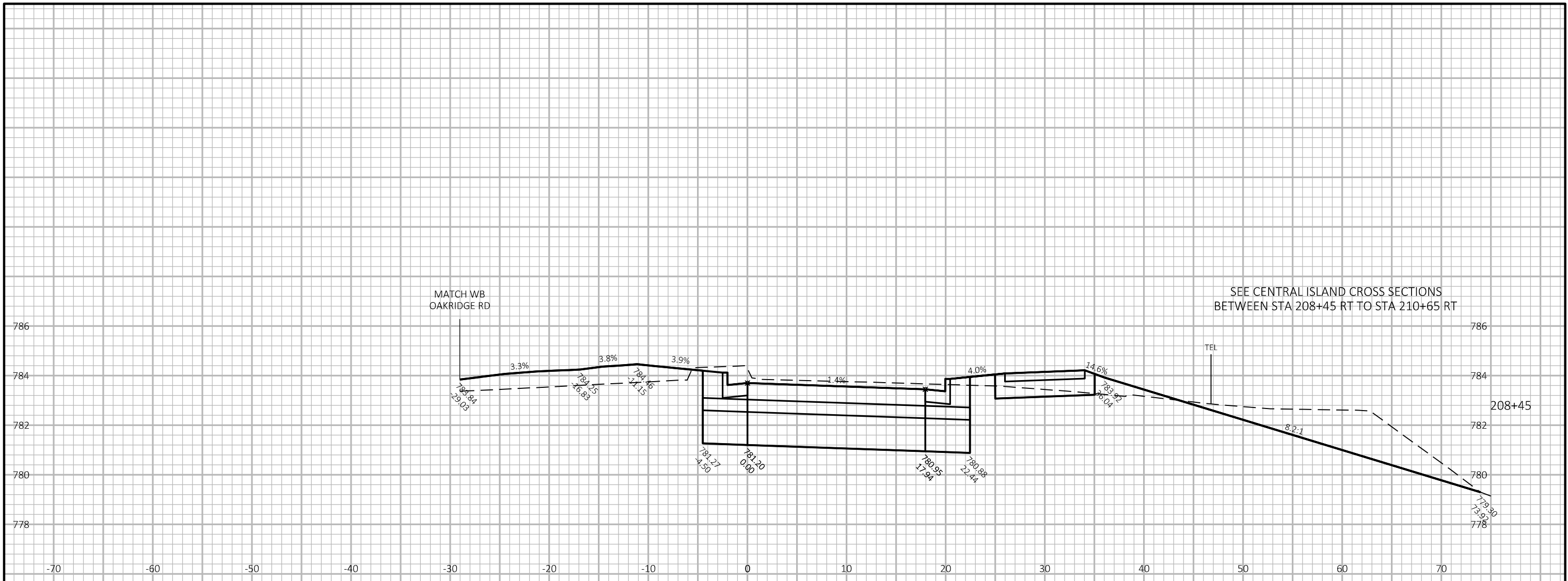
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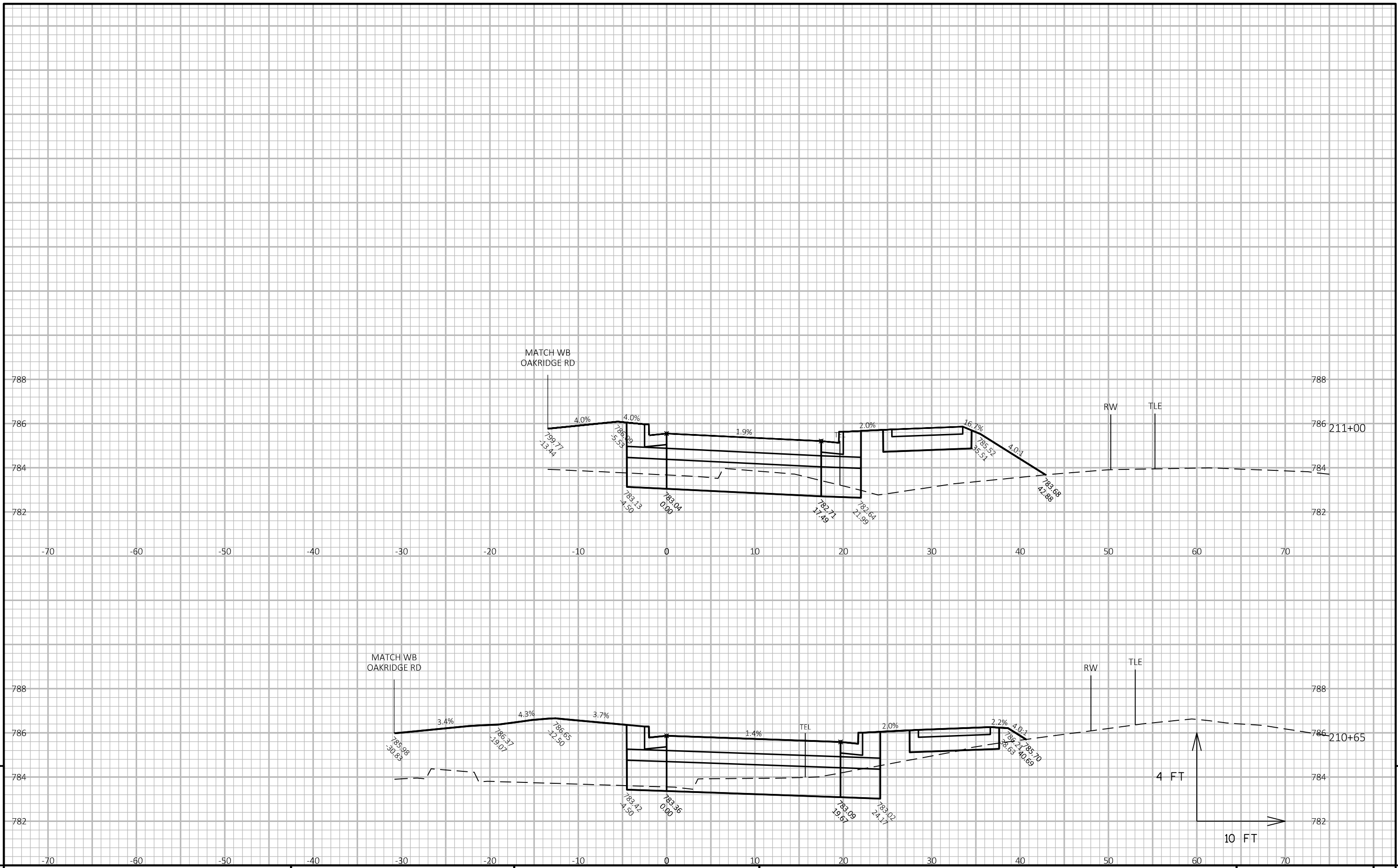


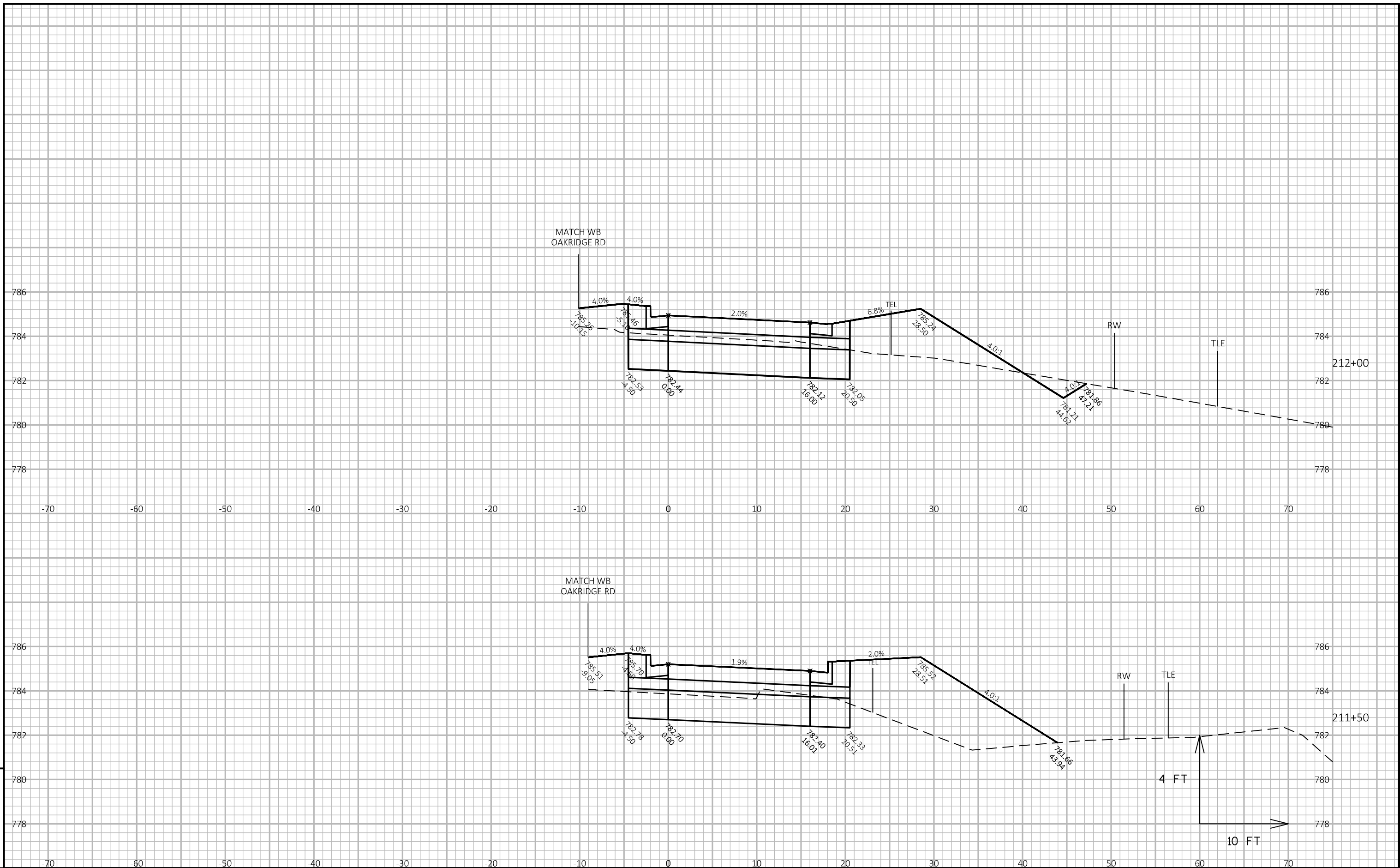
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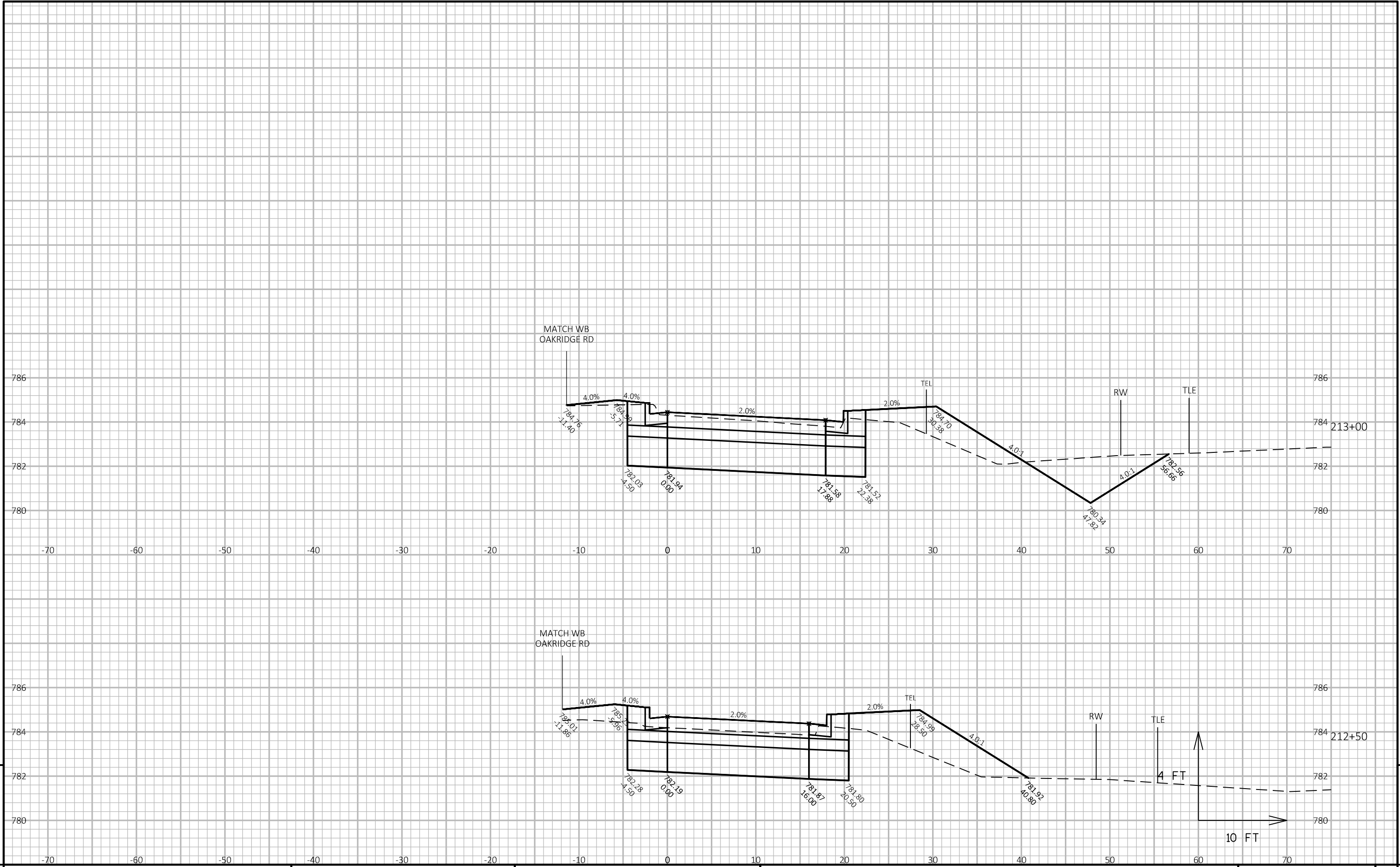
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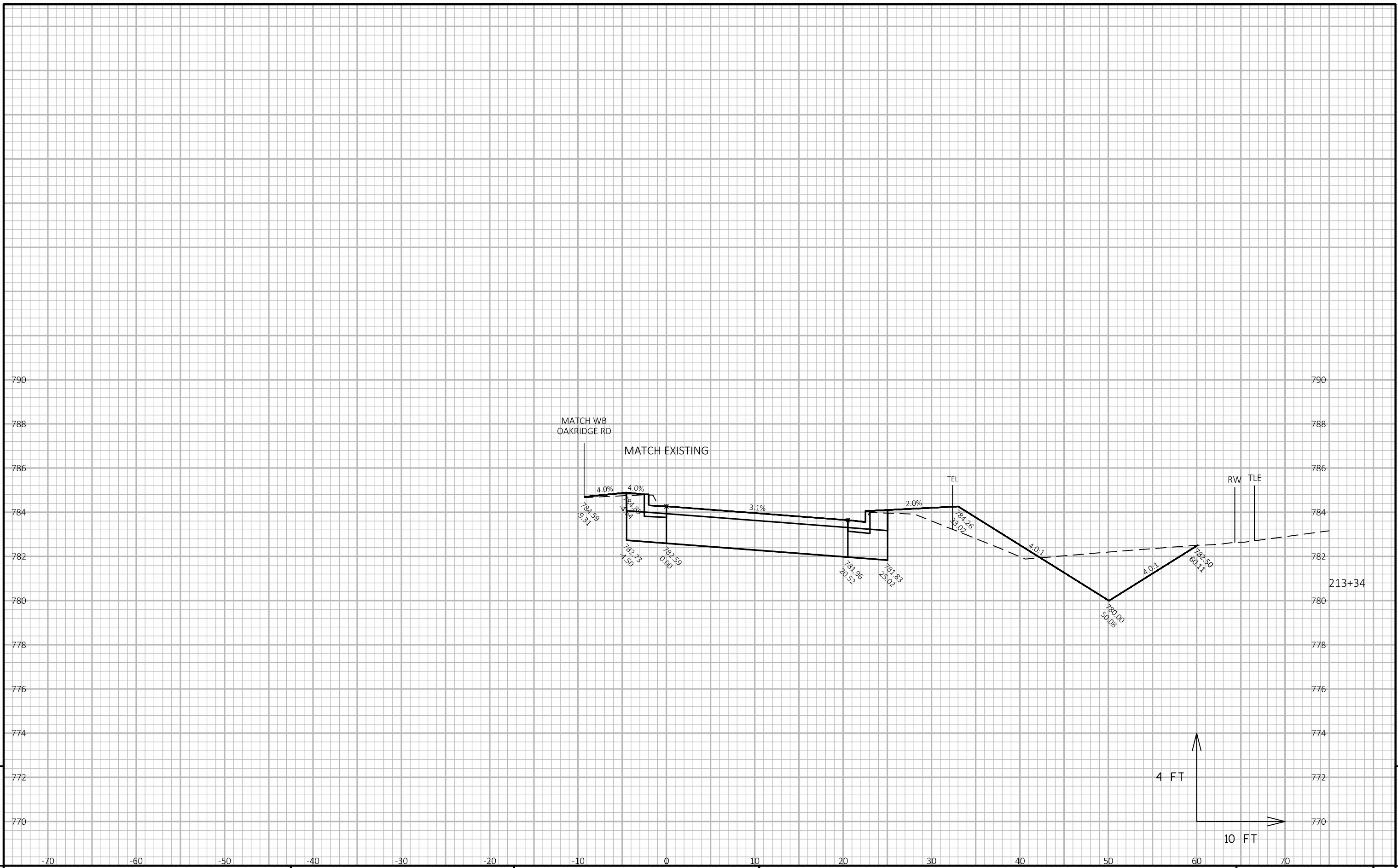






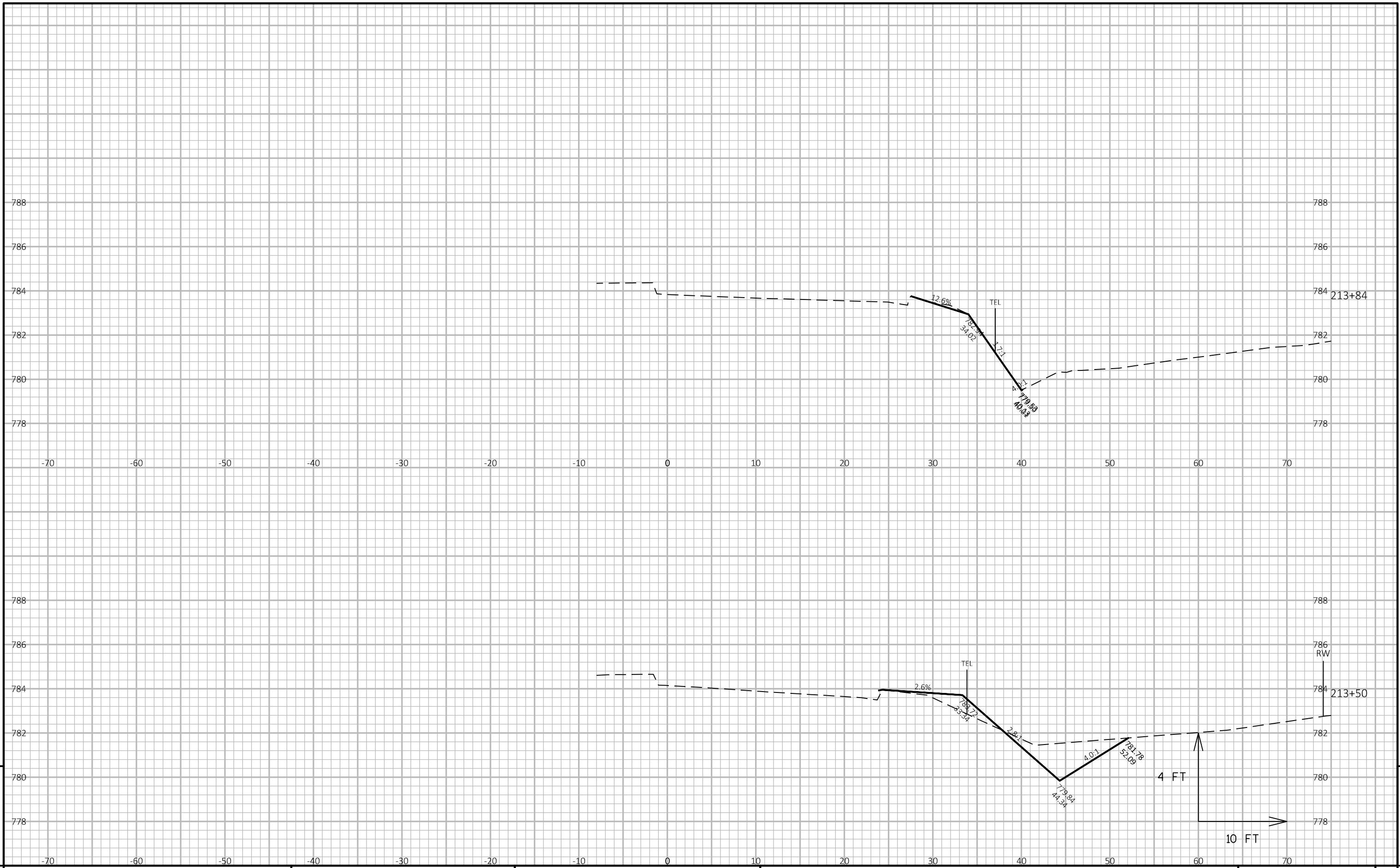
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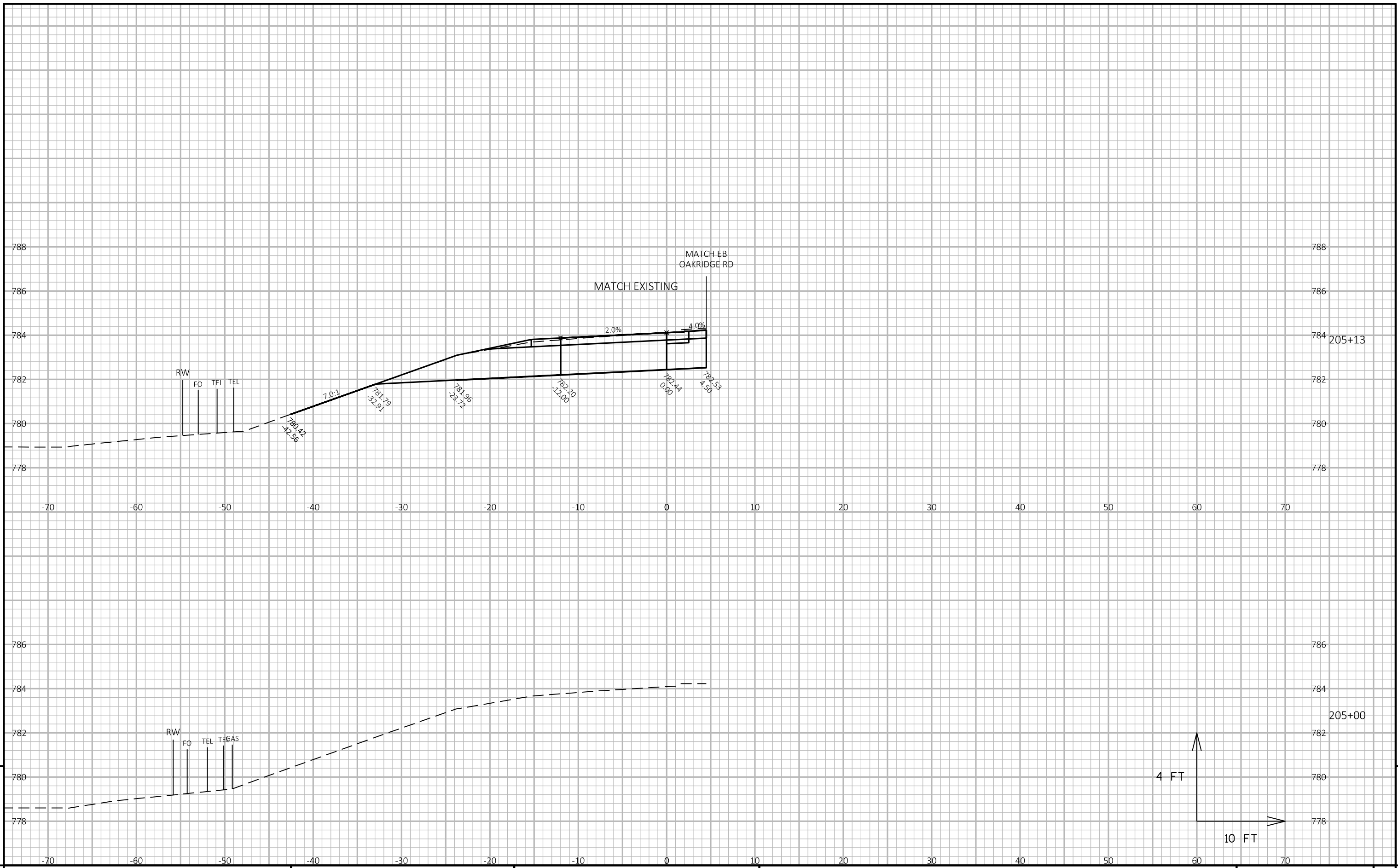
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9



9

9



PROJECT NO: 4682-01-73

HWY: CTH CB

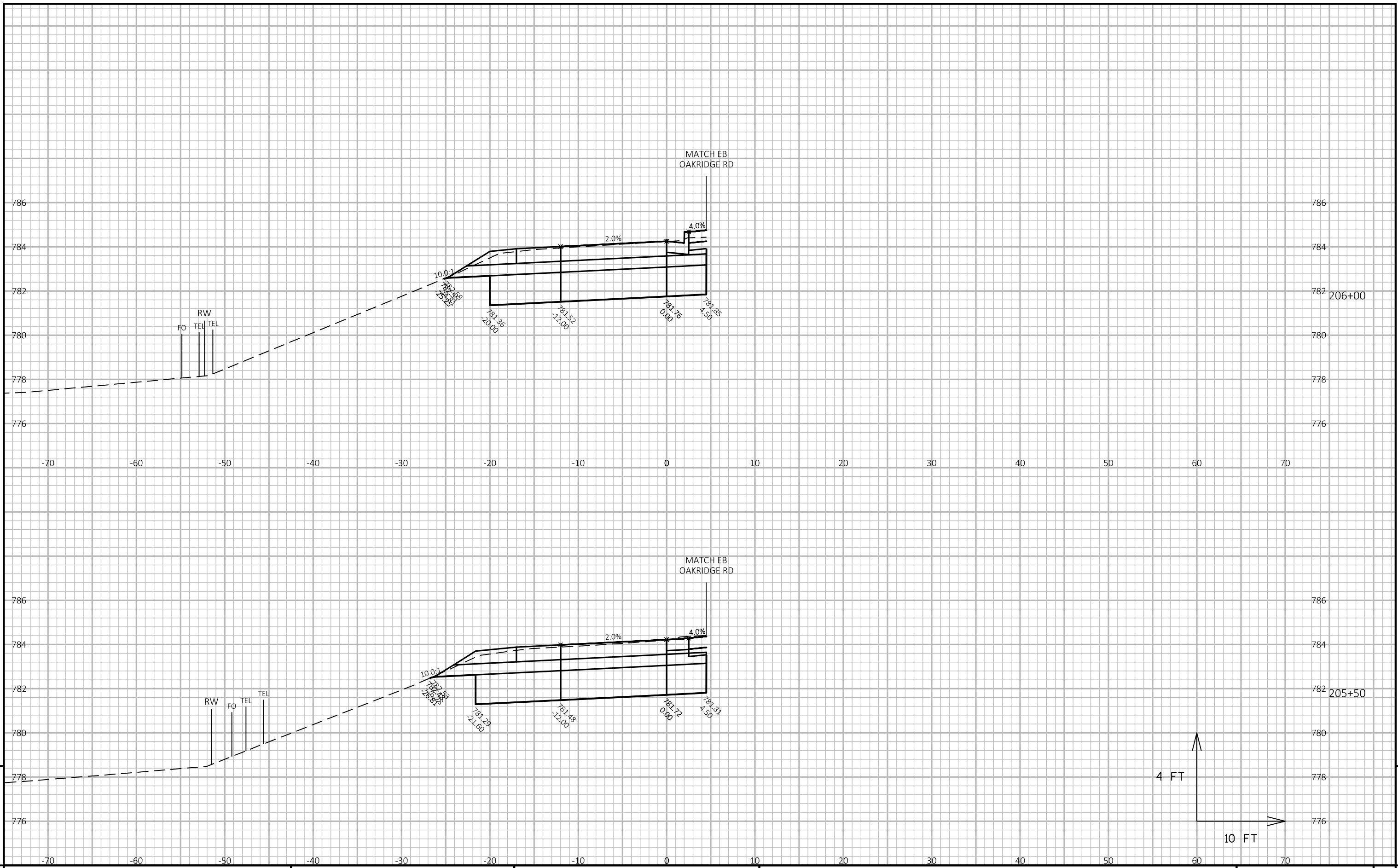
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - OAKRIDGE RD WB

SHEET

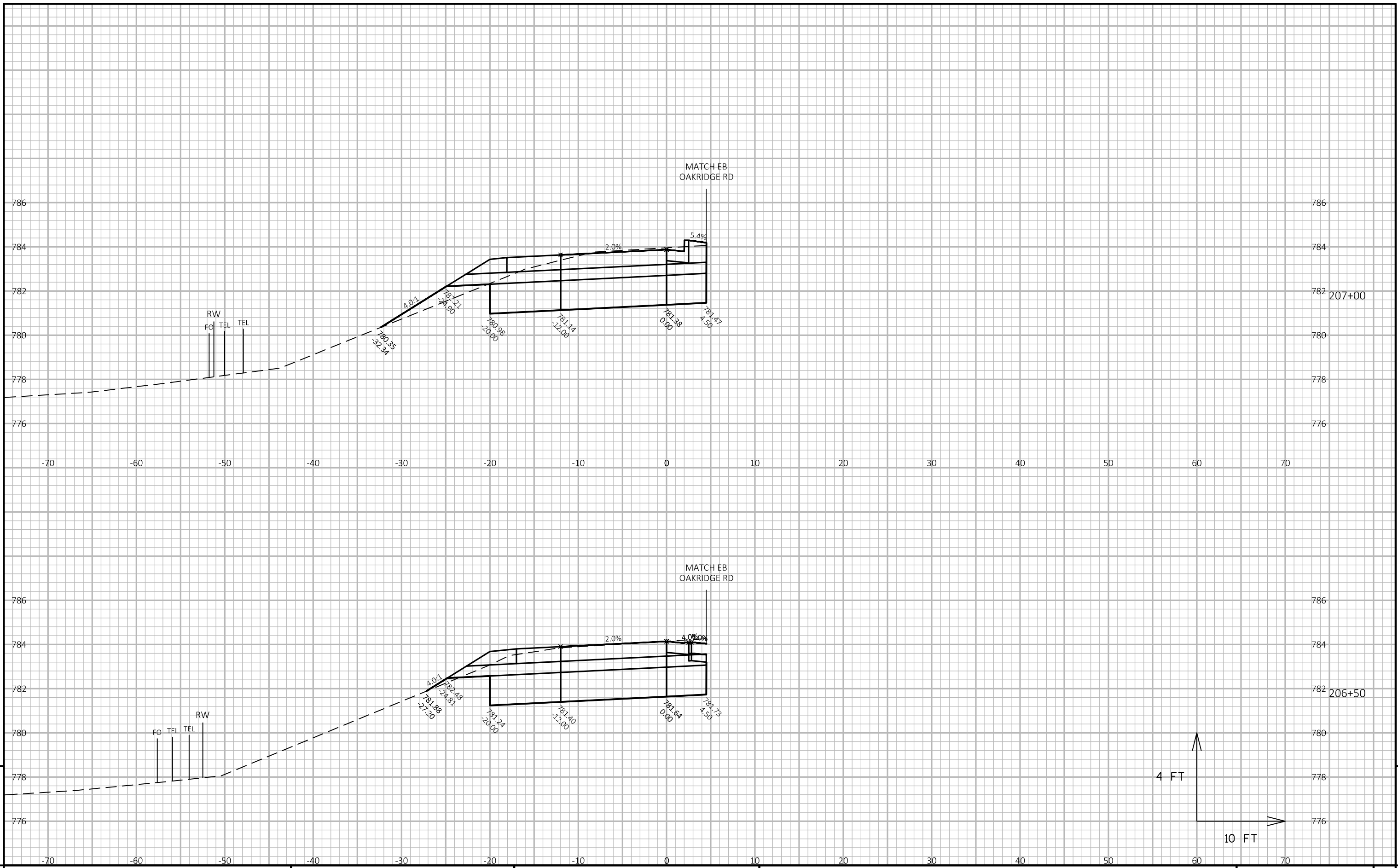
253

E



9

9



PROJECT NO: 4682-01-73

HWY: CTH CB

COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - OAKRIDGE RD WB

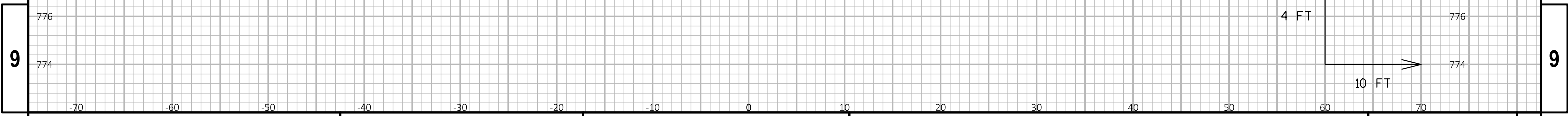
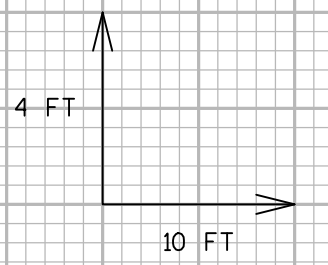
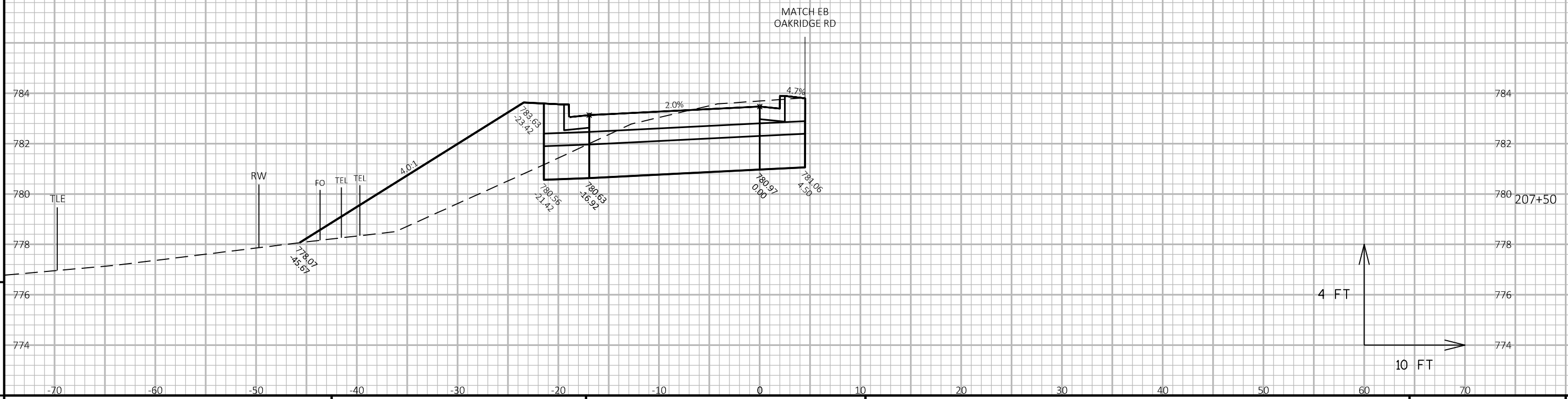
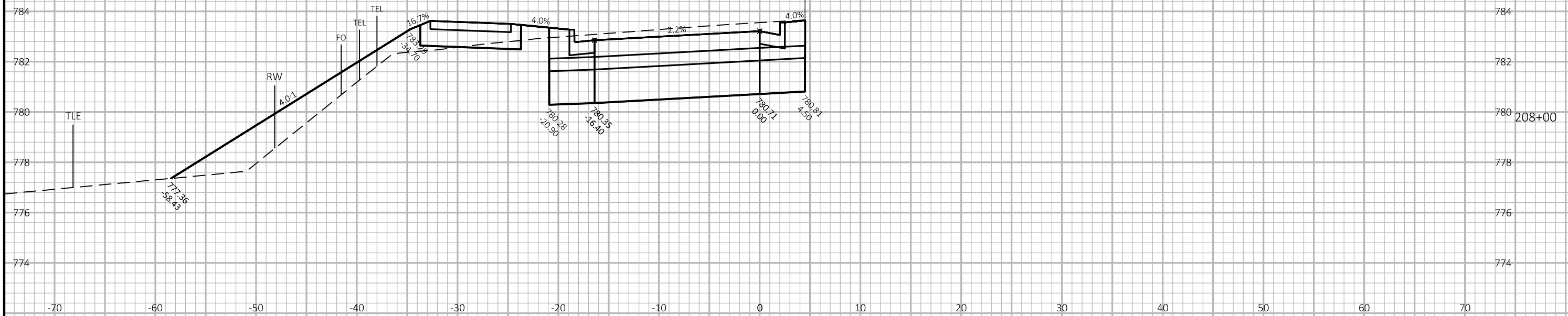
SHEET

255

E



GAPPED PAVEMENT LOCATION  
STAGE 3 CONSTRUCTION

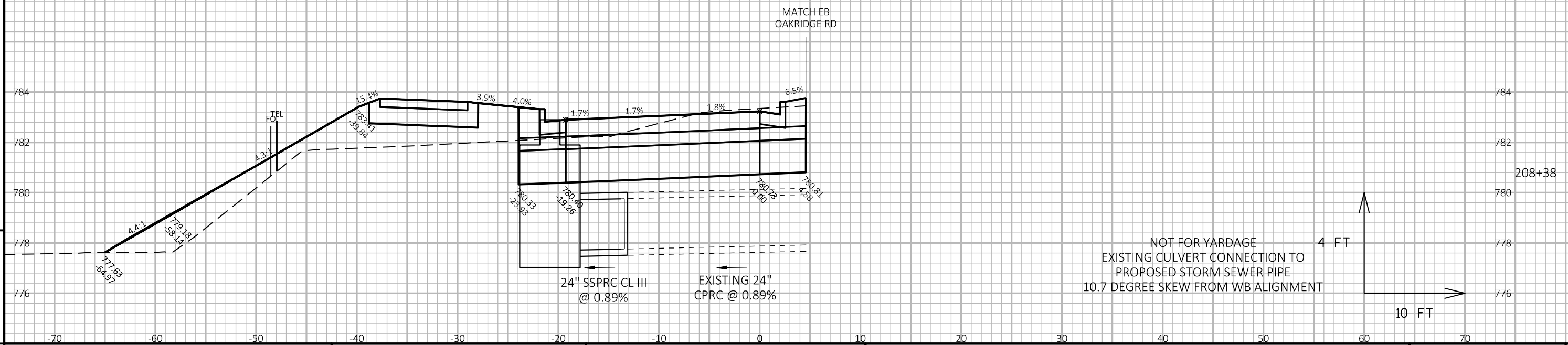
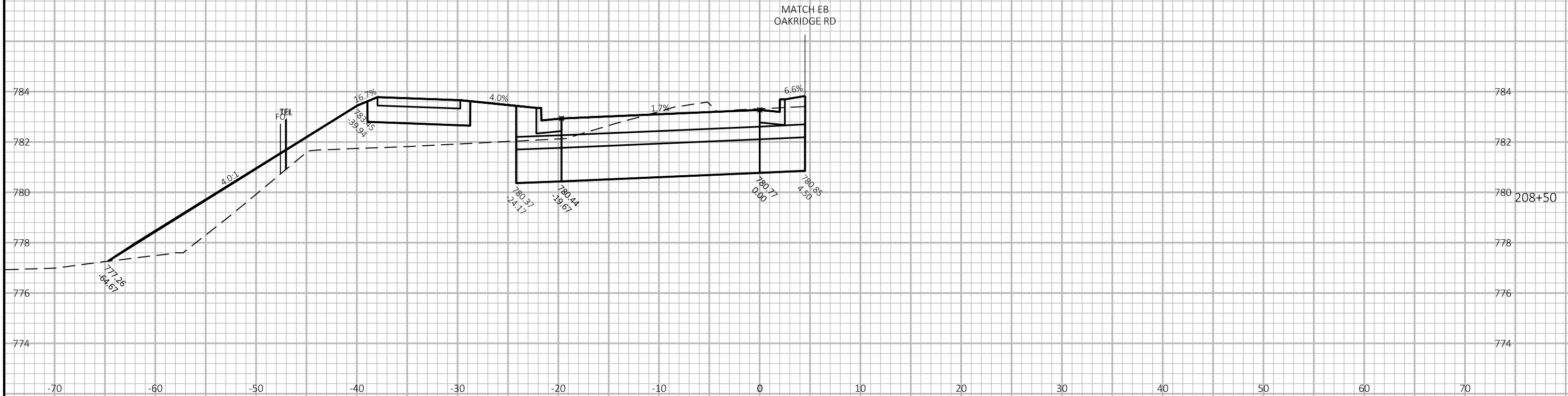


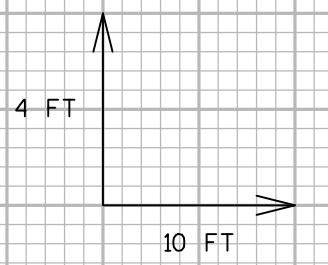
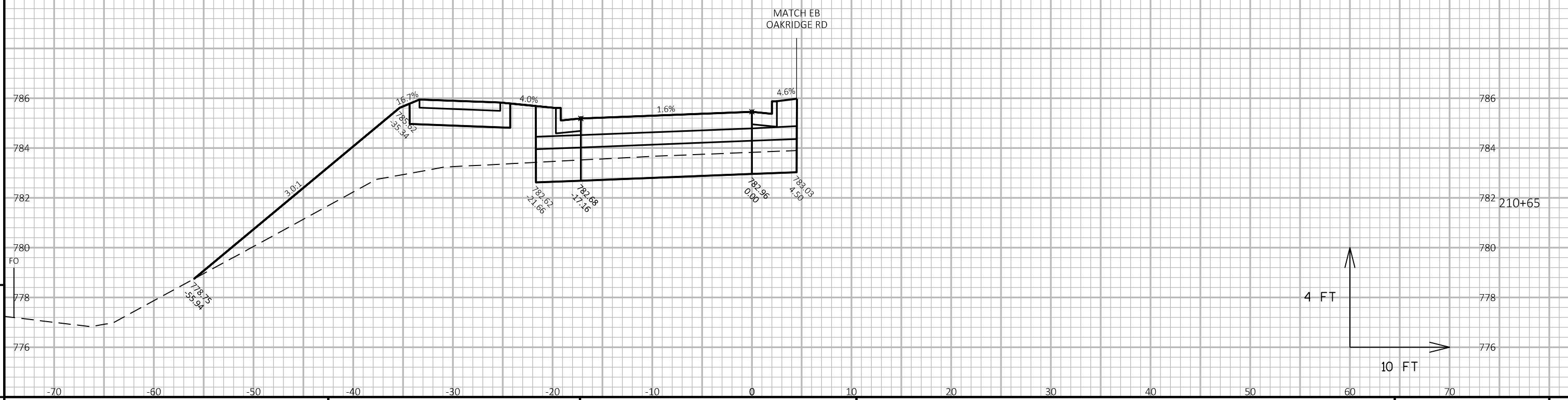
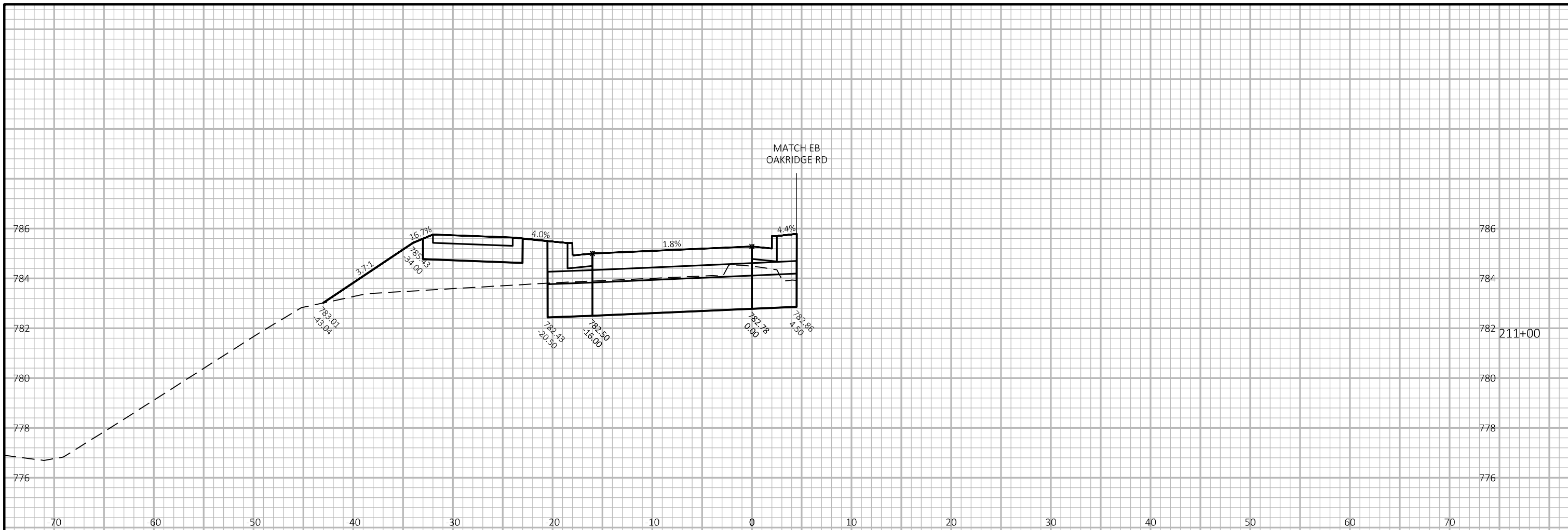
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9

E

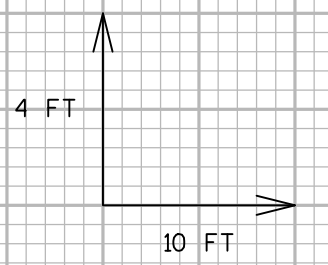
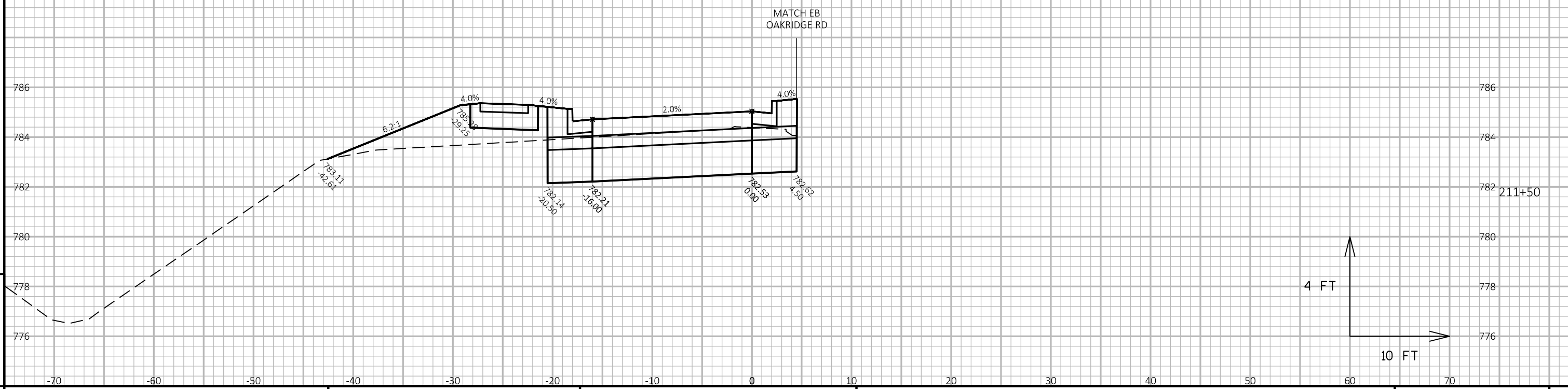
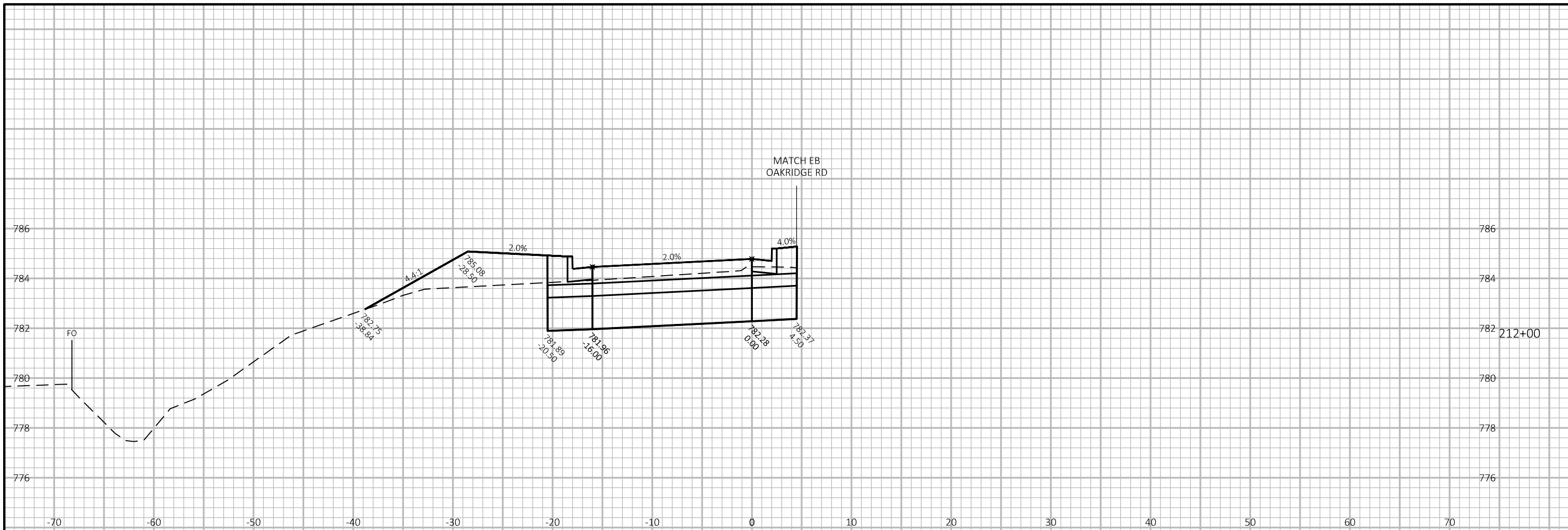
SEE CENTRAL ISLAND CROSS SECTIONS  
BETWEEN STA 208+50 LT TO STA 210+65 LT



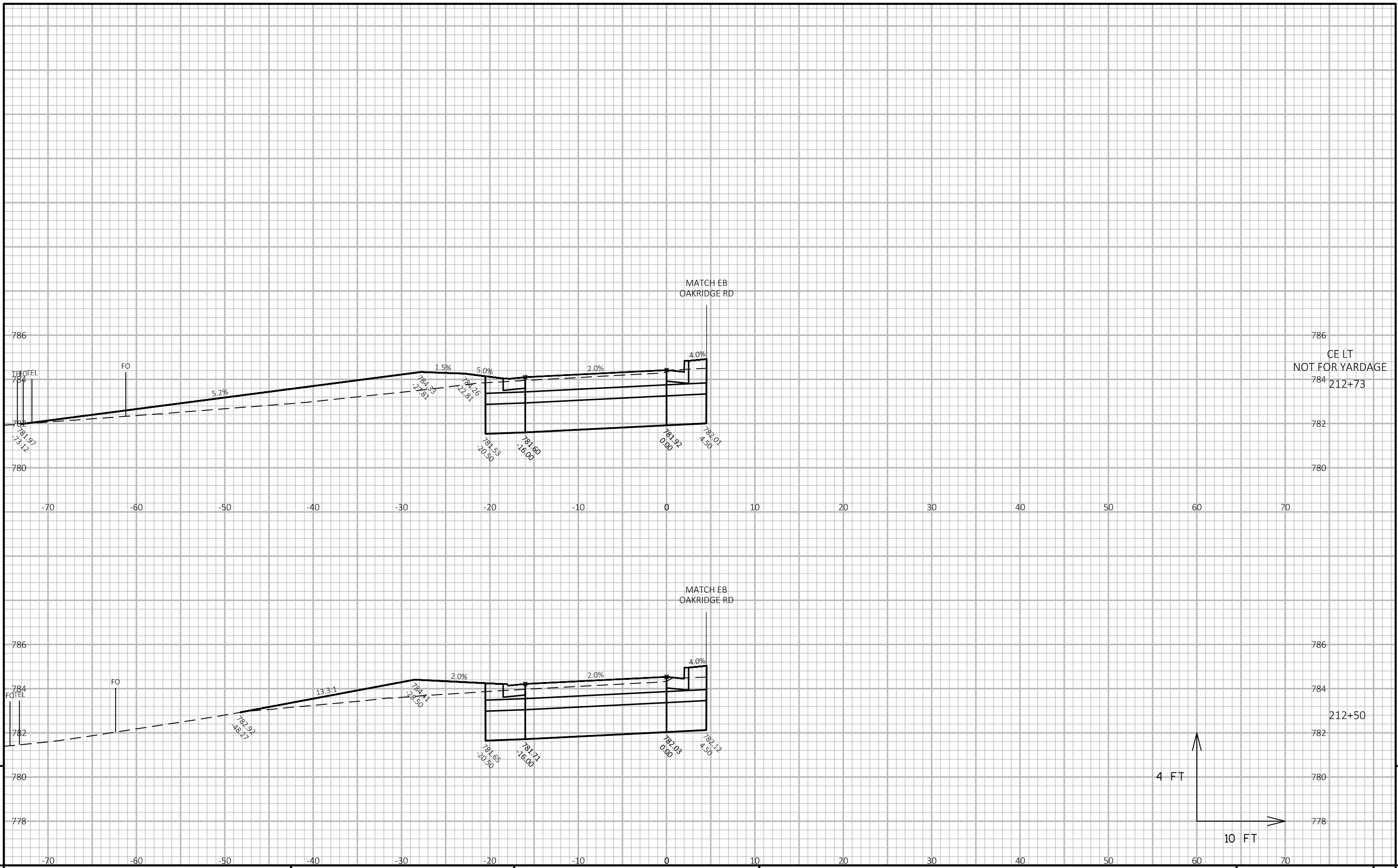


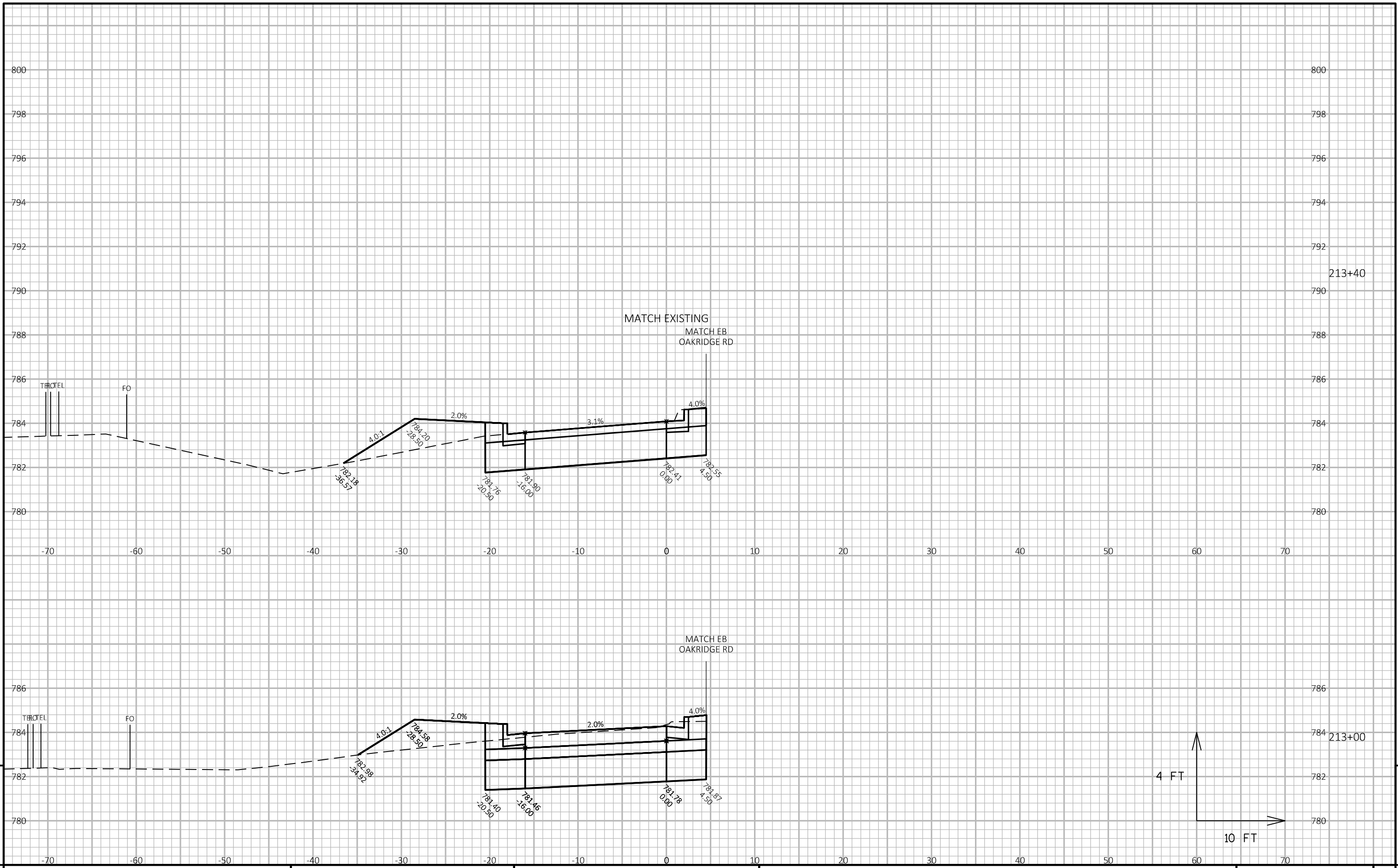
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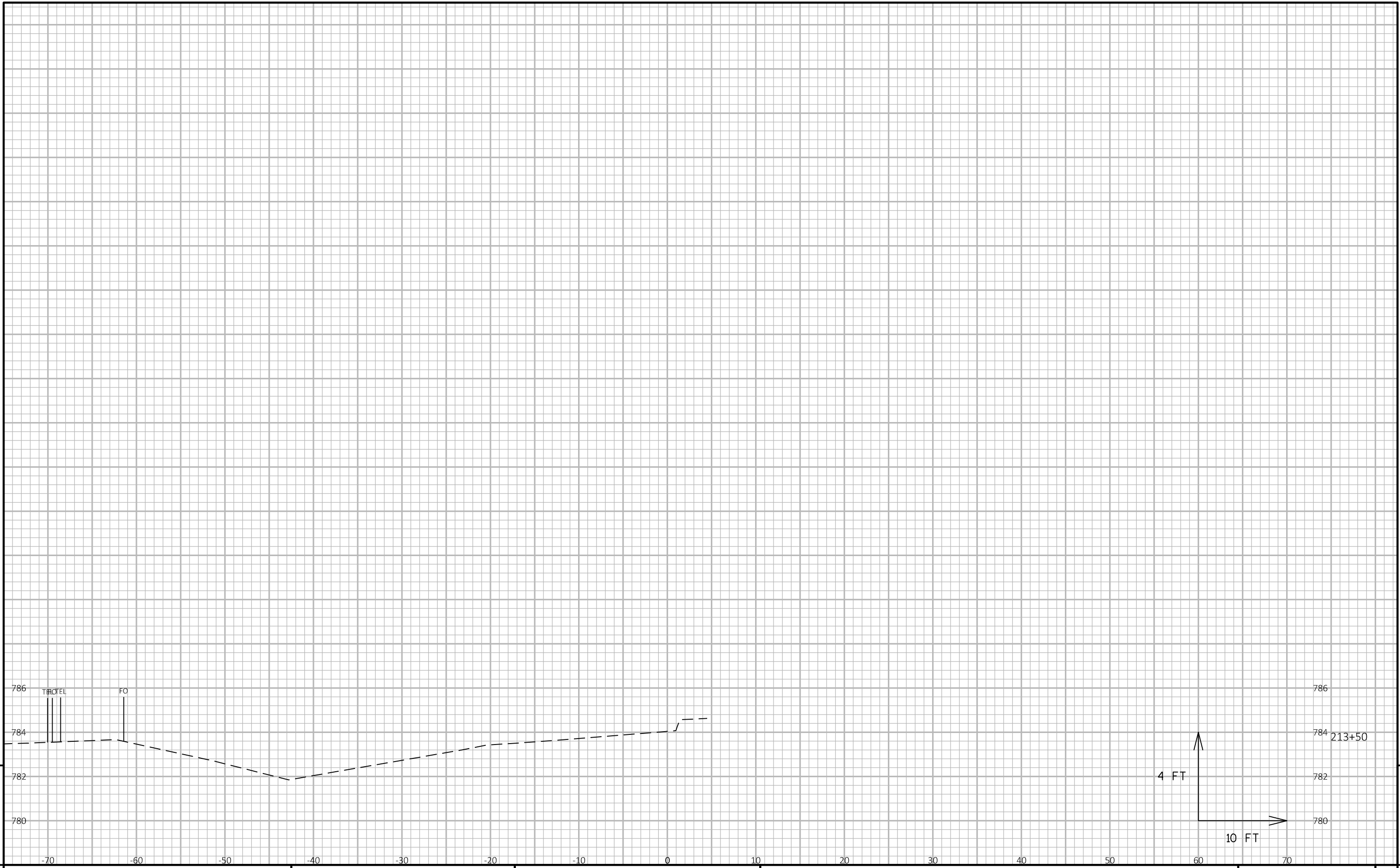
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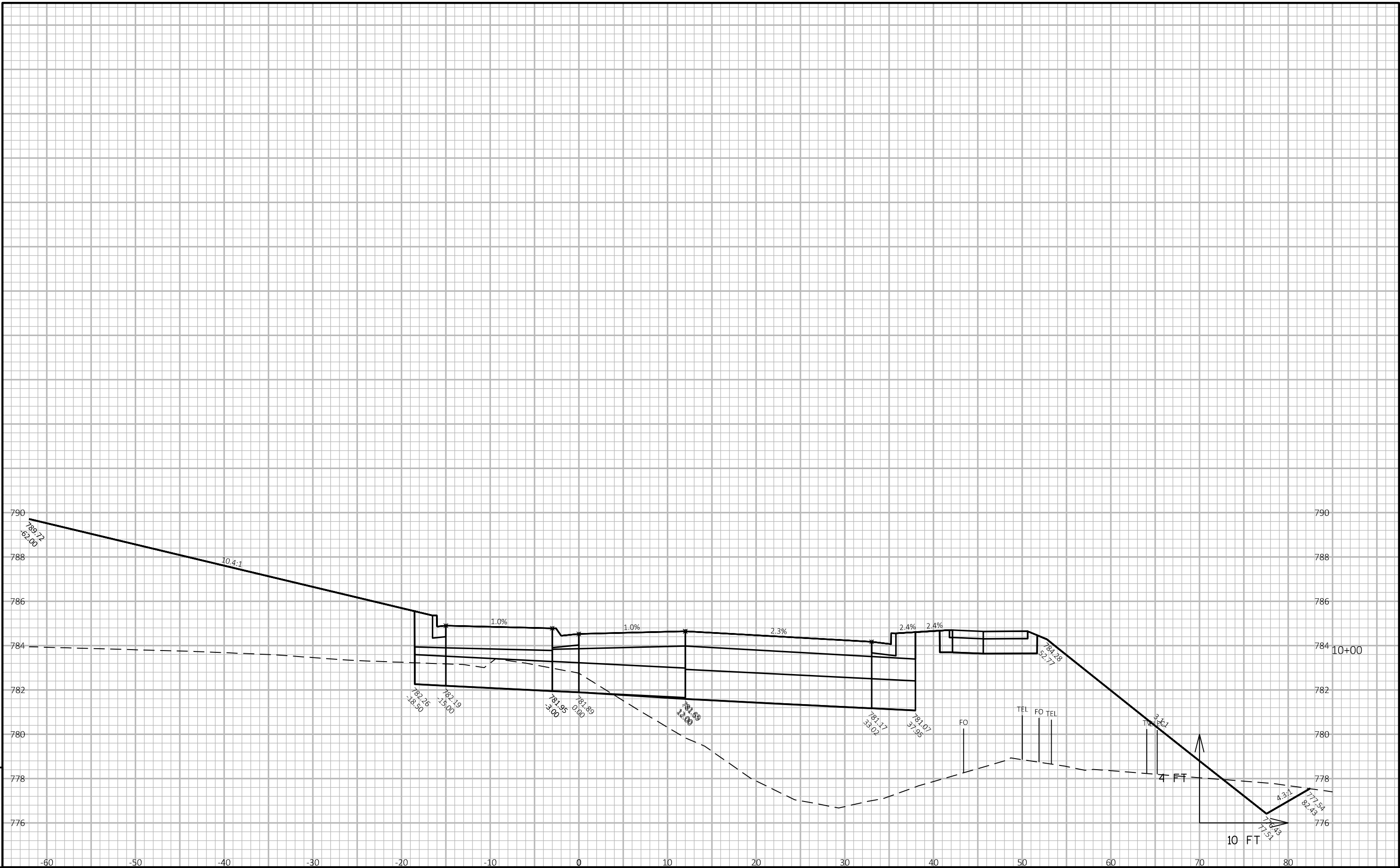


PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS:STAGE 2/3 - OAKRIDGE RD WB      SHEET 261

FILE NAME : K:\1172703\CIVIL3D\46820100\SHEETS\PLAN\090203-XS.DWG      PLOT DATE : 10/26/2018 5:19 PM      PLOT BY : NIKOLAI, ADAM      PLOT NAME :



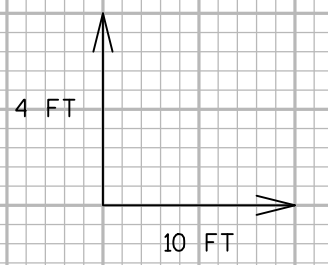
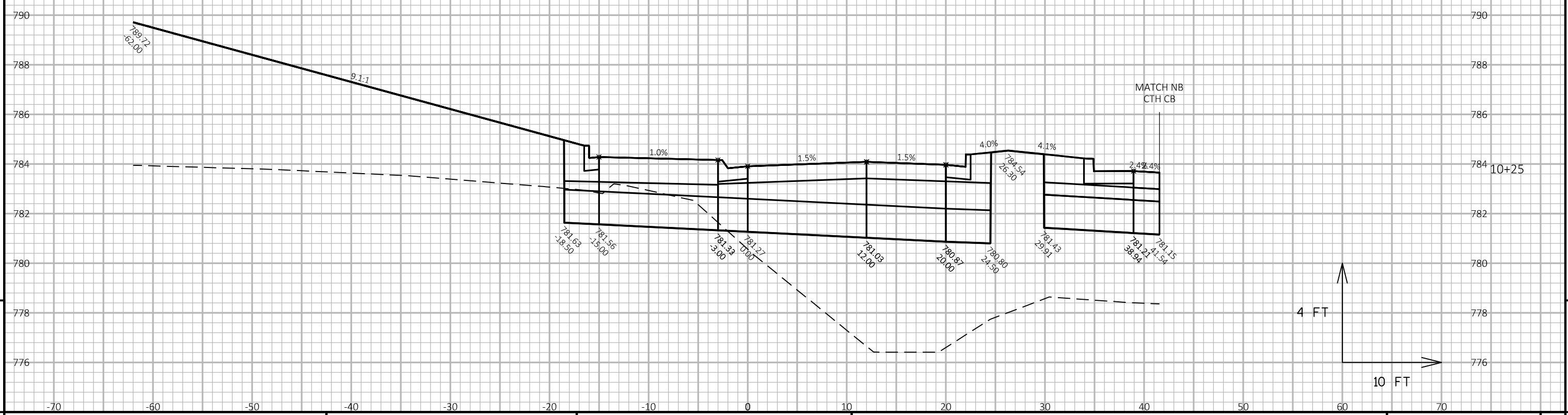
PROJECT NO: 4682-01-73	HWY: CTH CB	COUNTY: WINNEBAGO	CROSS SECTIONS: STAGE 2/3 - OAKRIDGE RD WB	SHEET 262	E
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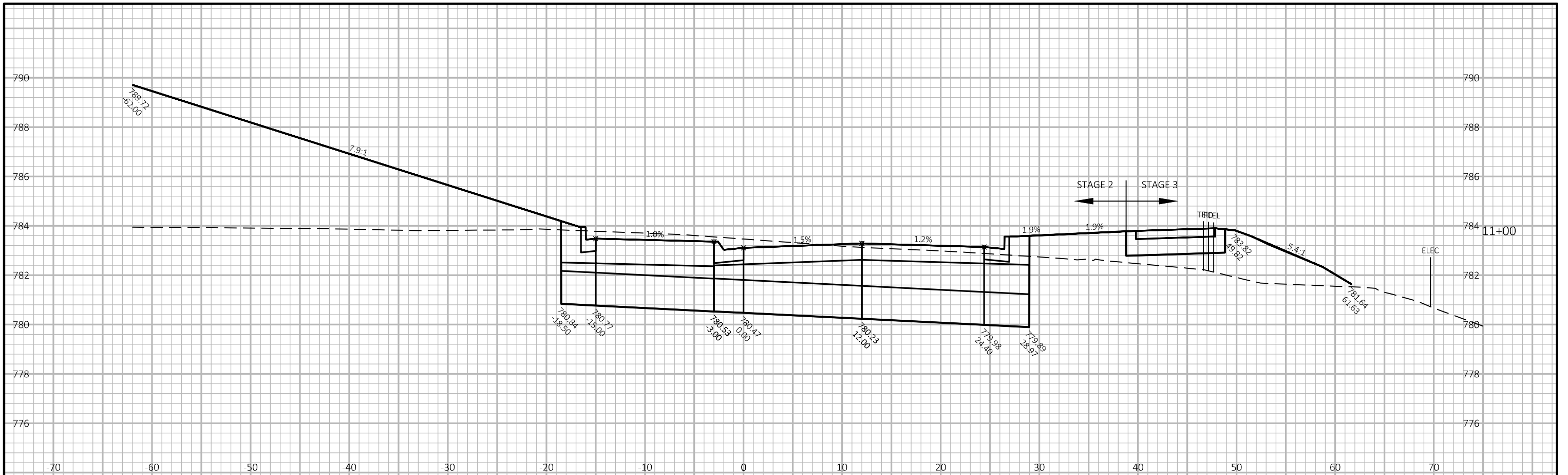


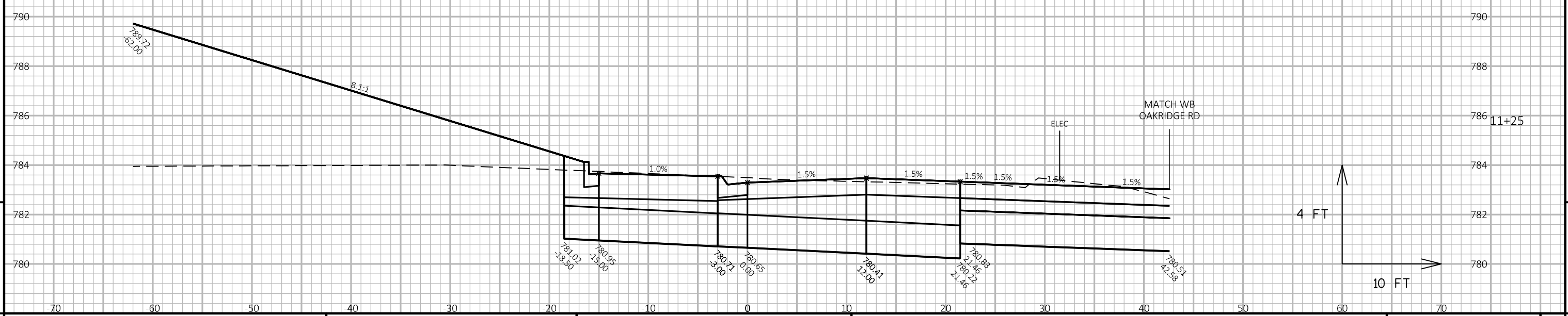
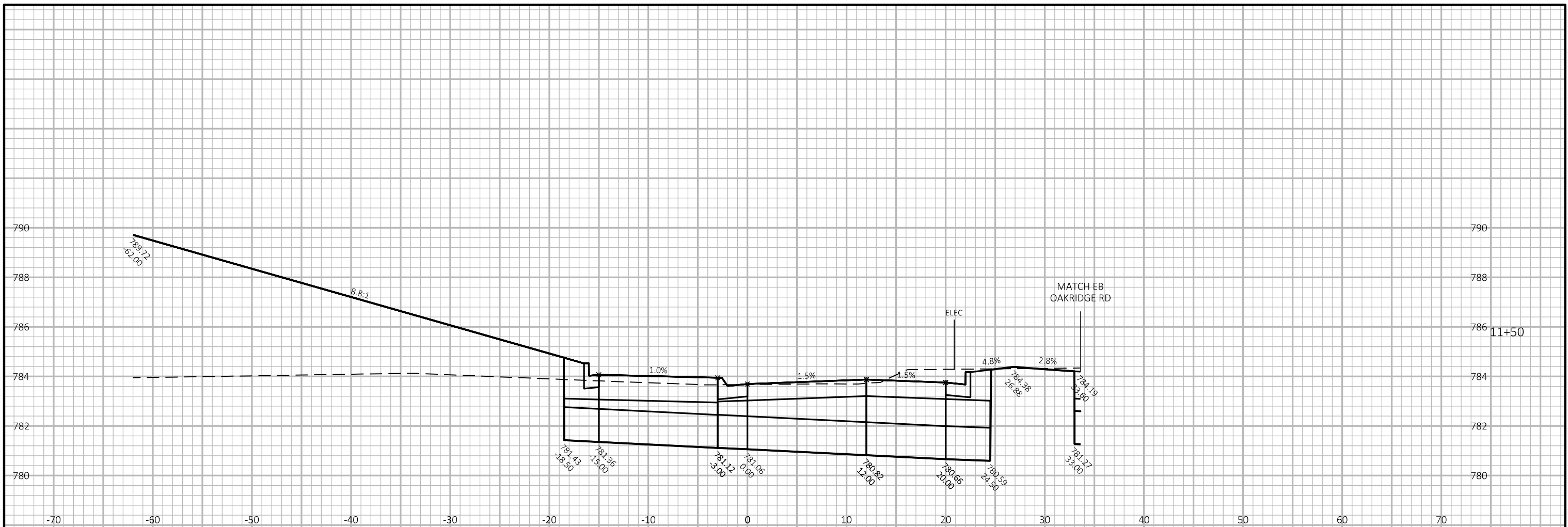
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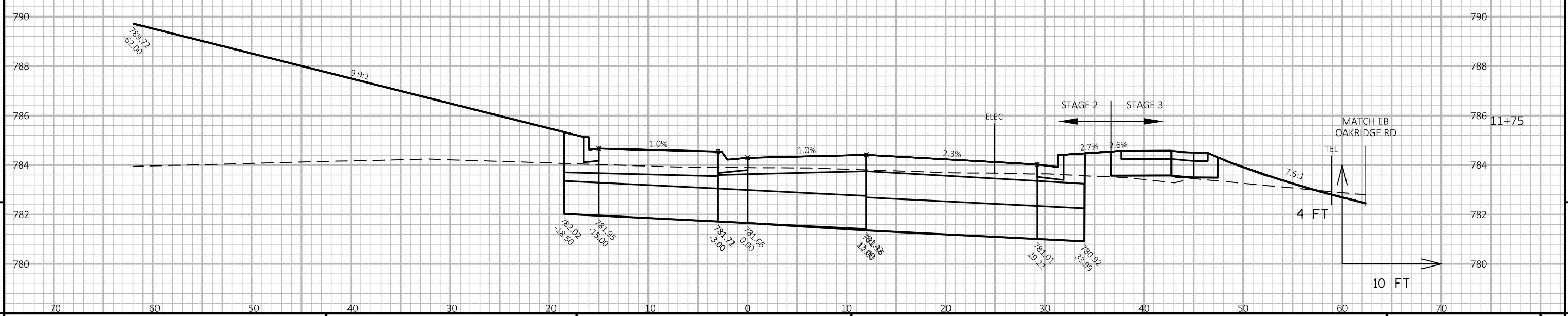
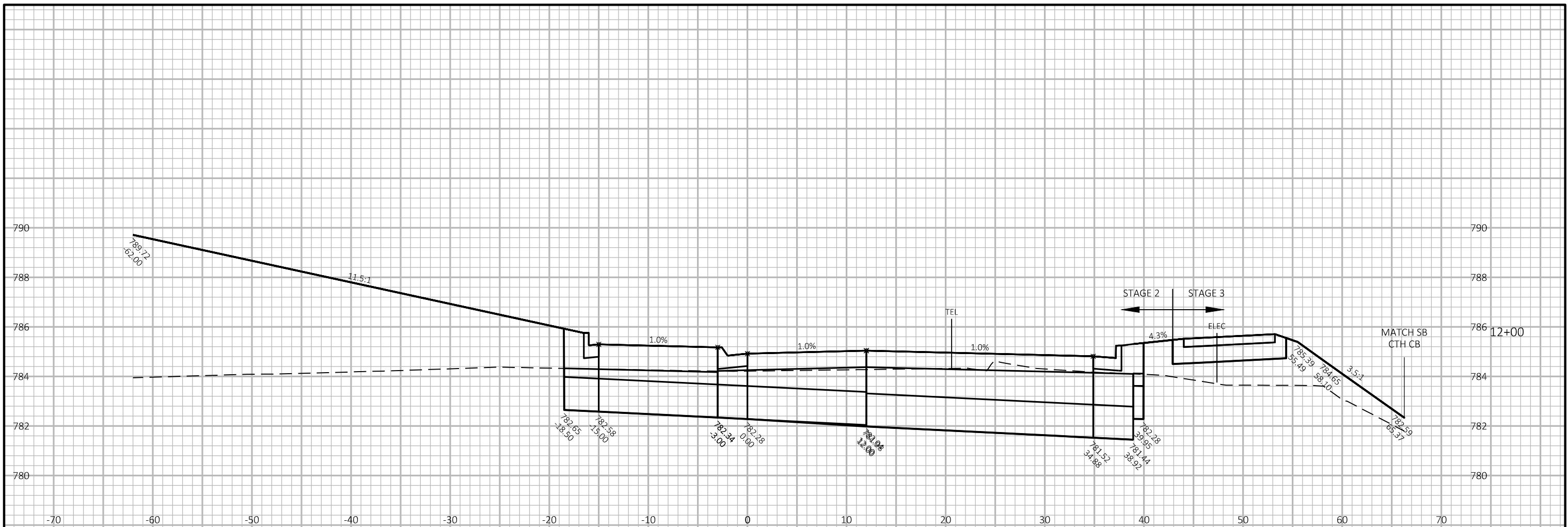
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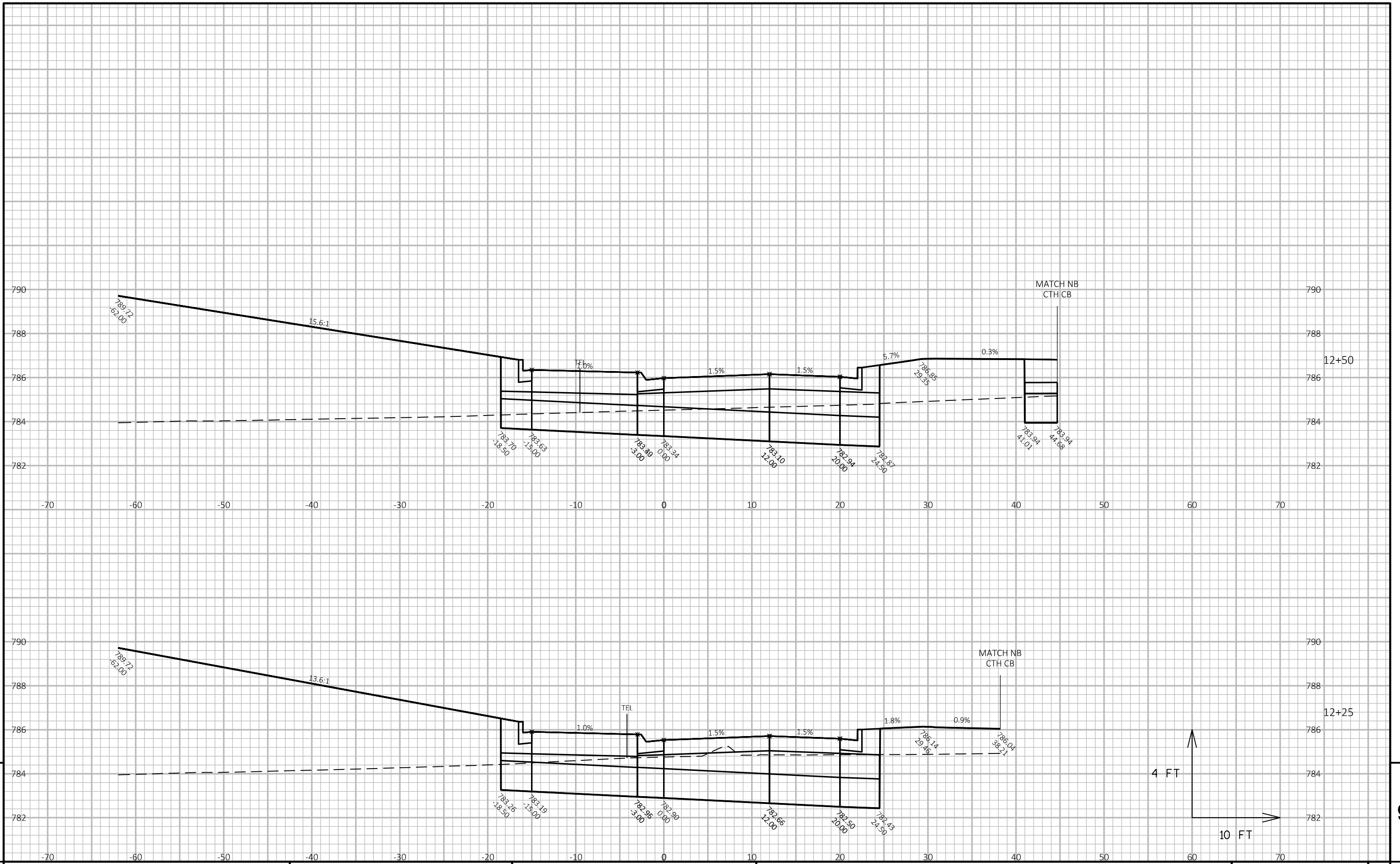






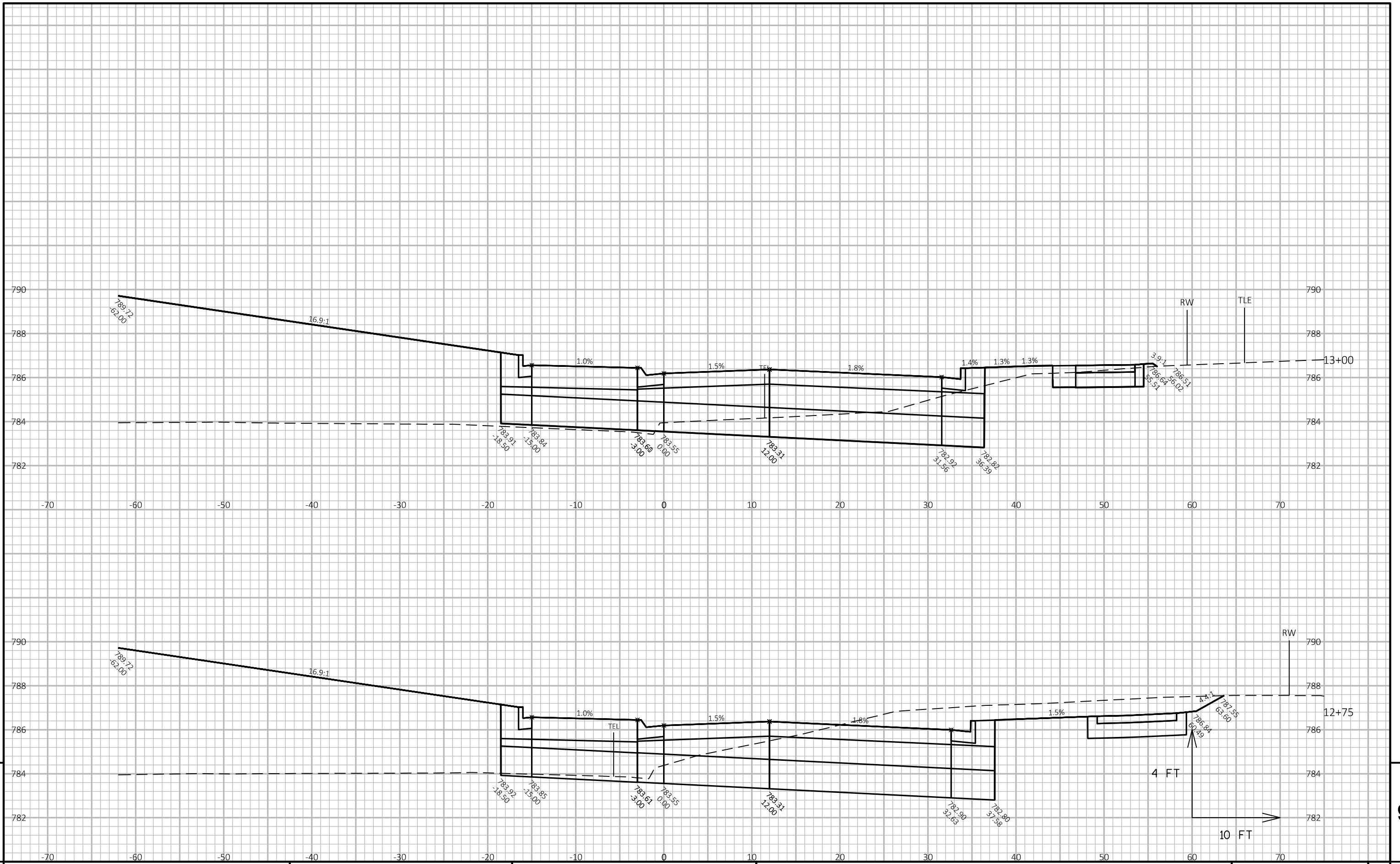


PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2/3 - CENTRAL ISLAND      SHEET 267      E



PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2/3 - CENTRAL ISLAND      SHEET 268

FILE NAME: K:\1172703\CIVIL3D\46820100\SHEETSP\090204-XS.DWG      PLOT DATE: 10/26/2018 4:00 PM      PLOT BY: NIKOLAI, ADAM      PLOT NAME:      WISDOT/CADD SHEET 49



PROJECT NO: 4682-01-73

HWY: CTH CB

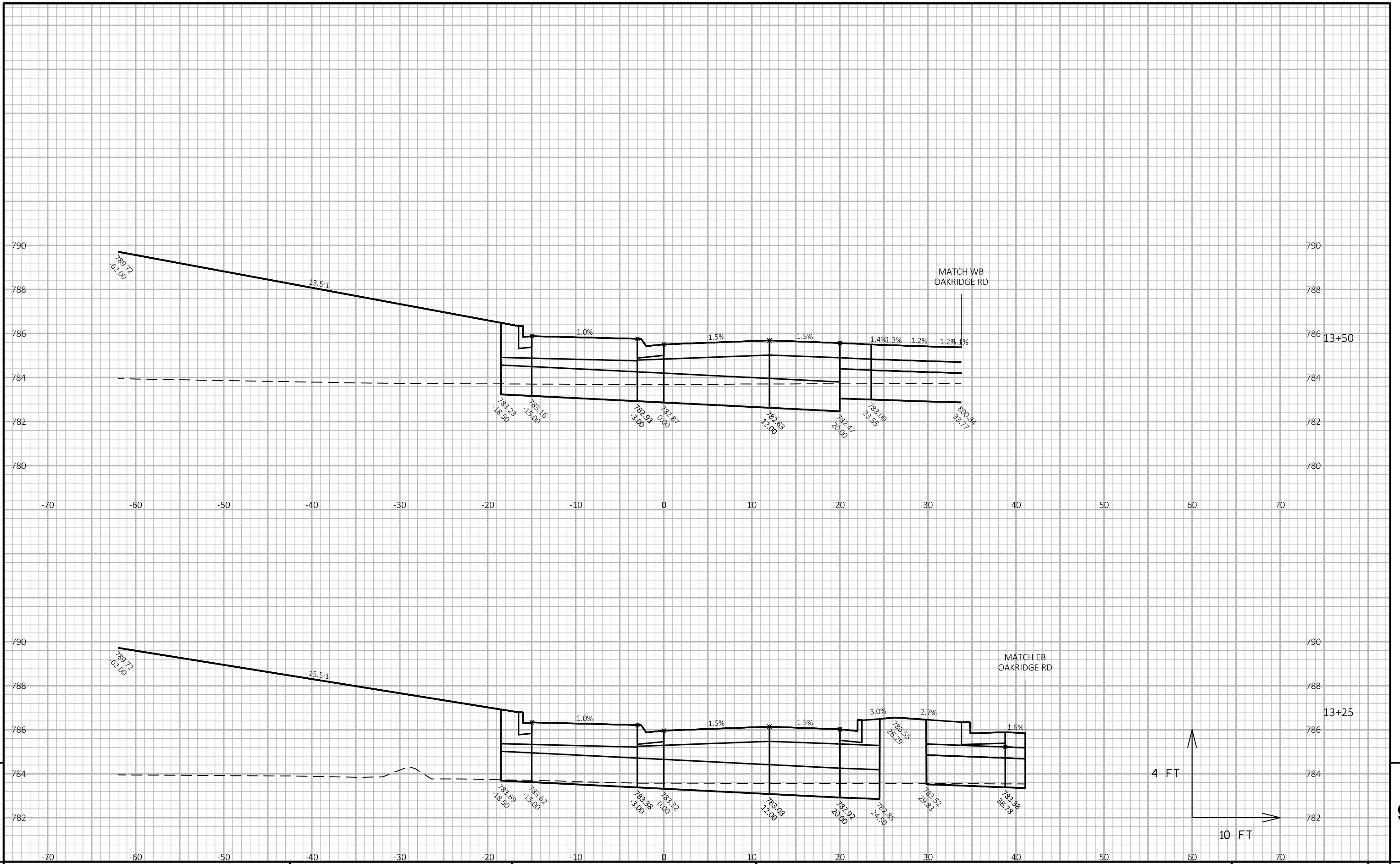
COUNTY: WINNEBAGO

CROSS SECTIONS: STAGE 2/3 - CENTRAL ISLAND

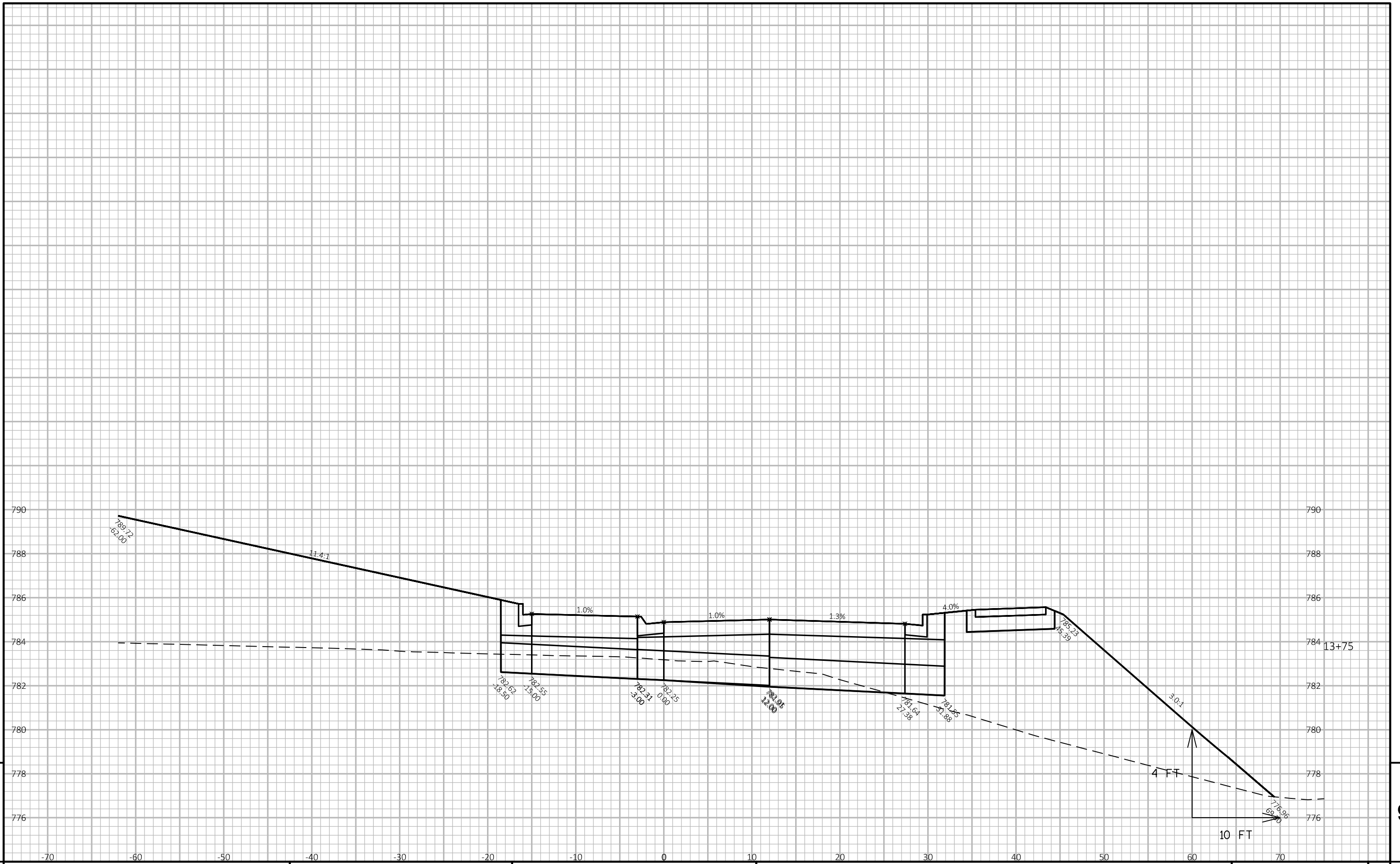
SHEET

269

E



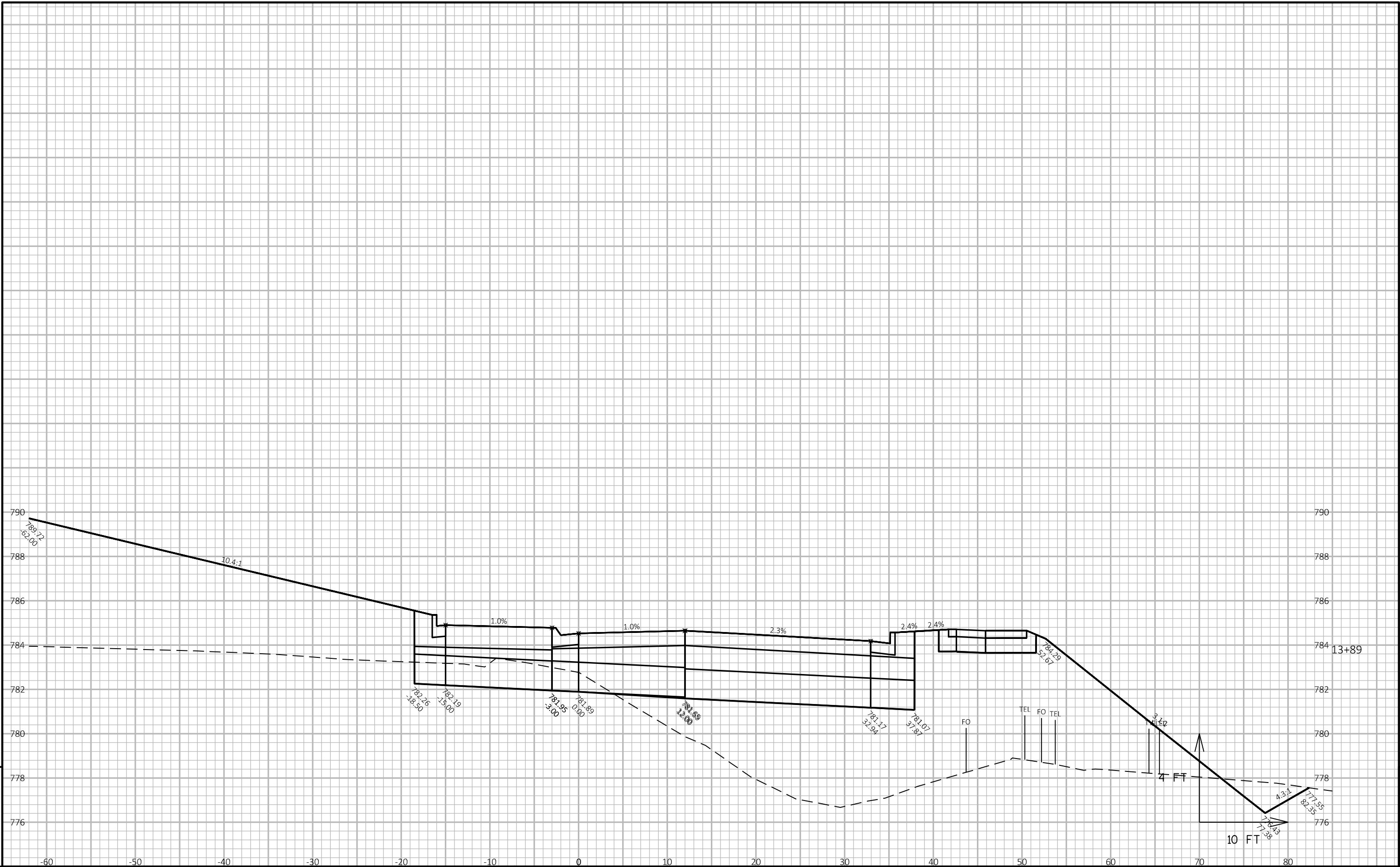
PROJECT NO: 4682-01-73      HWY: CTH CB      COUNTY: WINNEBAGO      CROSS SECTIONS: STAGE 2/3 - CENTRAL ISLAND      SHEET 270



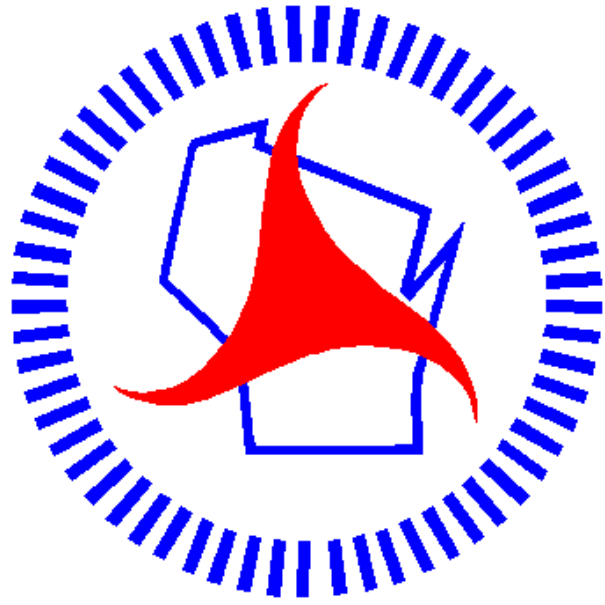
9

9





# Notes



## ***Wisconsin Department of Transportation***

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<http://www.dot.wisconsin.gov>