

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1430-08-81	WISC 2024124	1
6640-00-70	WISC 2024127	1

ORDER OF SHEETS

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

TOTAL SHEETS = 258

PRINCETON - RIPON

STH 73/PYE ALLEY ROAD INTERSECTION

STH 23

GREEN LAKE COUNTY

COLUMBUS - PRINCETON

N JCT STH 44 TO S JCT STH 23

STH 73

GREEN LAKE COUNTY

STATE PROJECT NUMBER
1430-08-81

STATE PROJECT NUMBER
6640-00-70

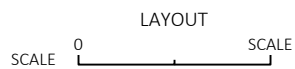
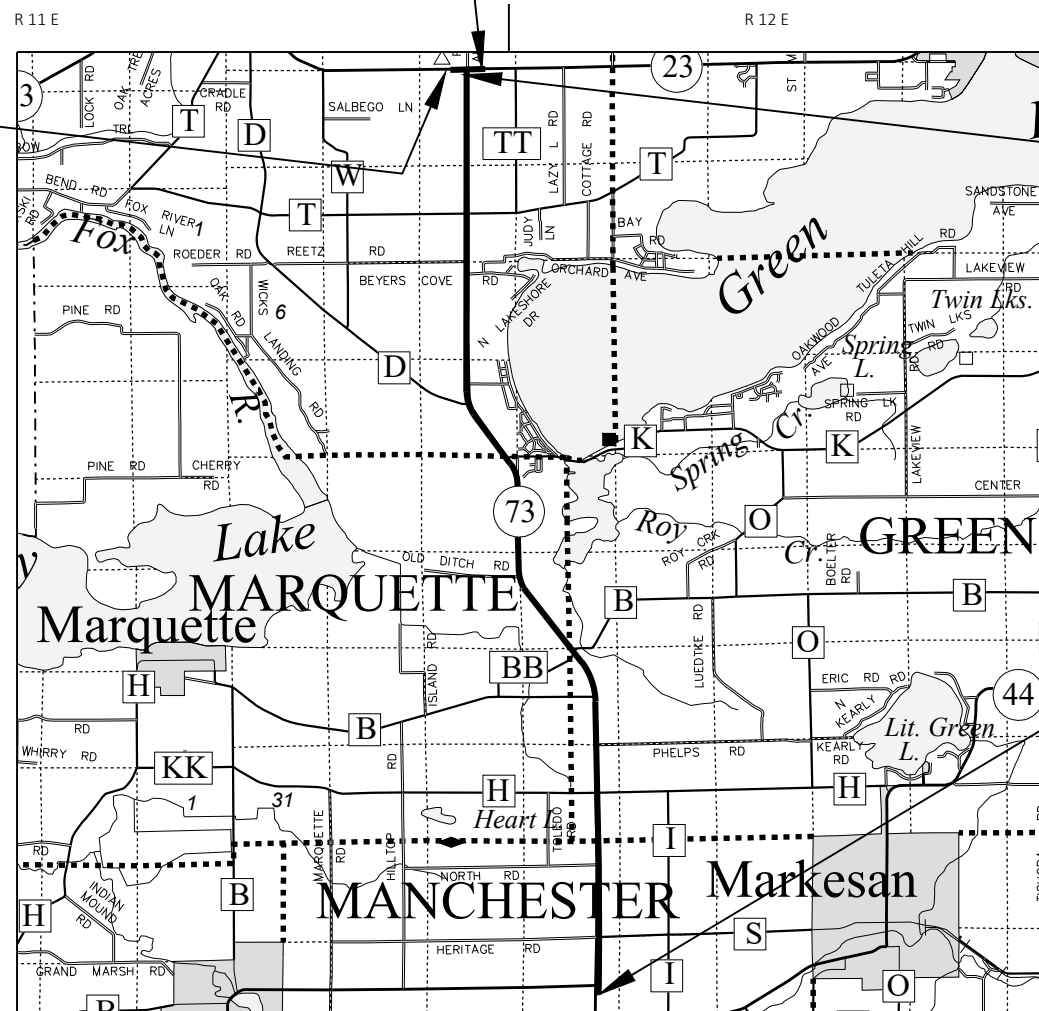
END PROJECT

1430-08-81
STA 420+05.81
Y= 270,412.809
X= 539,485.798

BEGIN PROJECT 1430-08-81
STA 396+89.54
Y= 270,382.561
X= 537,169.722

END PROJECT 6640-00-70
STA 1522+13.32
Y= 270,235.775
X= 538,332.307

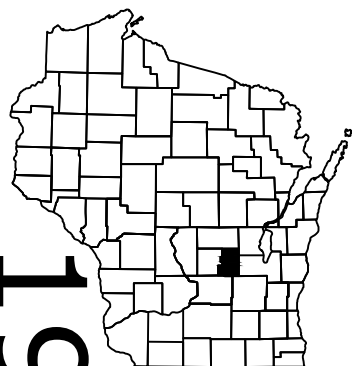
BEGIN PROJECT 6640-00-70
STA 994+85.00
Y= 219,557.445
X= 545,351.730



TOTAL NET LENGTH OF CENTERLINE (1430-08-81) = 0.06 MI
TOTAL NET LENGTH OF CENTERLINE (6640-00-70) = 9.92 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), GREEN LAKE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.



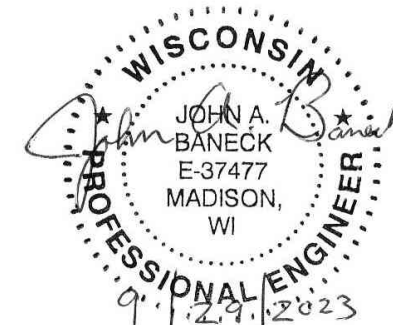
DESIGN DESIGNATION	1430-08-81	6640-00-70
A.A.D.T. 2024	= 6,370	2,330
A.A.D.T. 2044	= 6,370	2,470
D.H.V.	= 855	292
D.D.	= 61/39	61/39
T.	= 23.9%	22.4%
DESIGN SPEED	= 60 MPH	60 MPH
ESALS	= 5,100,000	900,000

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

ORIGINAL PLANS PREPARED BY

AYRES



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	NC REGION & AYRES ASSOCIATES
Designer	AYRES ASSOCIATES
Project Manager	WENDY ARNESON, P.E.
Regional Examiner	FRED SCHUNKE, P.E.
Regional Supervisor	ELIZABETH NEMEC, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 9/22/2023 (Signature)

E

PROJECT ID: 1430-08-81 & 6640-00-70 WITH: NA

COUNTY: GREEN LAKE

19

GENERAL NOTES

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

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR 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.

UTILITIES FACILITIES ARE NOT SHOWN ON PLAN SHEETS WHERE THEY ARE NOT IMPACTED BY PROPOSED CONSTRUCTION BECAUSE PROPOSED WORK IS LIMITED TO MILL AND OVERLAY OF ASPHALT PAVEMENT. UTILITIES HAVING FACILITIES IN THE HIGHWAY RIGHT-OF-WAY ARE LISTED ON THIS SHEET.

GRADING IS NOT ALLOWED IN WETLAND AREAS. DO NOT STORE EQUIPMENT OR MATERIAL IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- PAVING GRADE
- EROSION CONTROL
- PERMANENT SIGNING AND PAVEMENT MARKING
- TRAFFIC CONTROL AND CONSTRUCTION STAGING
- DETOUR ROUTE

UTILITY CONTACTS

ATC MANAGEMENT, INC. - ELECTRICITY-TRANSMISSION
CHRIS DAILEY
P.O. BOX 47
WAUKESHA, WI 53187
(262) 506-6884
CDAILEY@ATCLLC.COM

ALLIANT ENERGY - ELECTRICITY
CODY JACKSON
506 FENTON STREET
RIPON, WI 54971
(920) 748-4013
CODYJACKSON@ALLIANTENERGY.COM

BRIGHTSPEED OF CENTRAL WISCONSIN, LLC AND
BRIGHTSPEED OF NORTH CENTRAL WISCONSIN, LLC
(FORMERLY CENTURYLINK) - COMMUNICATION LINE
SCOTT HEINZELMAN
144 NORTH PEARL STREET
BERLIN, WI 54923
P: (608) 716-5964
C: (920) 757-4802
SCOTT.HEINZELMAN@BRIGHTSPEED.COM

BUG TUSSEL WIRELESS, LLC - COMMUNICATION LINE
GEREMIAH YOUNG
417 PINE STREET
GREEN BAY, WI 54301
(920) 328-3442
GEREMIAH.YOUNG@BTUSSEL.COM
DUSTIN TEAFF (CONSTRUCTION CONTACT)
KES EXCAVATING SERVICES, LLC
1262 CAMBER CT
DE PERE, WI 54115
(920) 254-3539
DUSTIN.TEAFF@KESEXCAVATING.COM

GREEN LAKE SANITARY DISTRICT - SEWER
DALLAS LEWALLEN
N 5295 CTH TT
PRINCETON, WI 54968
(608) 345-7484
DALLASDEANLEWALLEN@GMAIL.COM

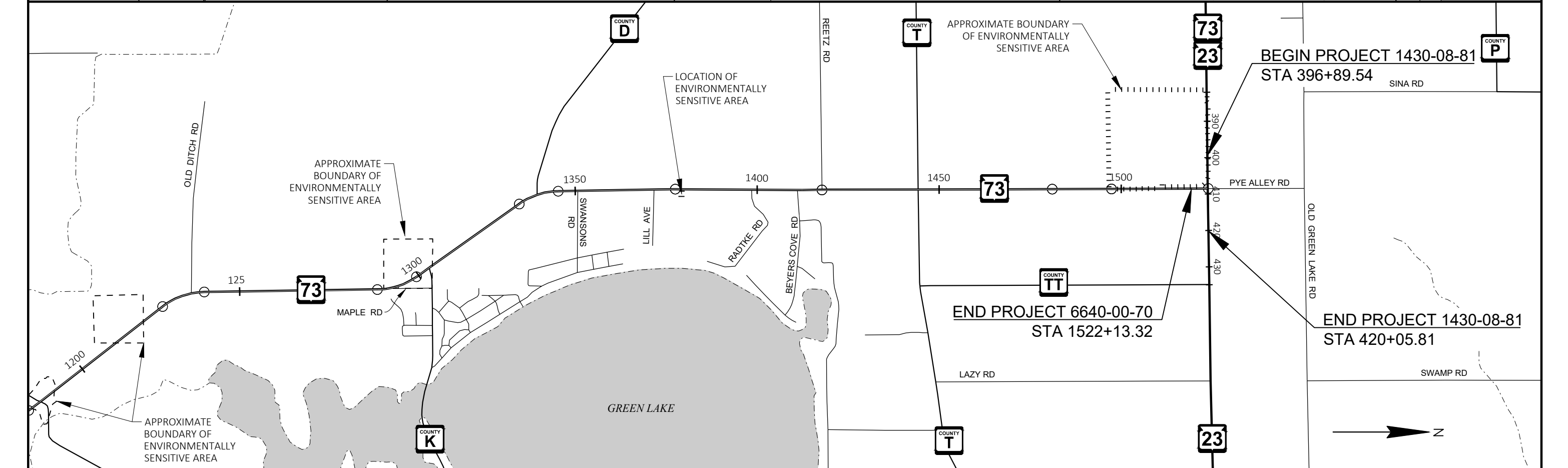
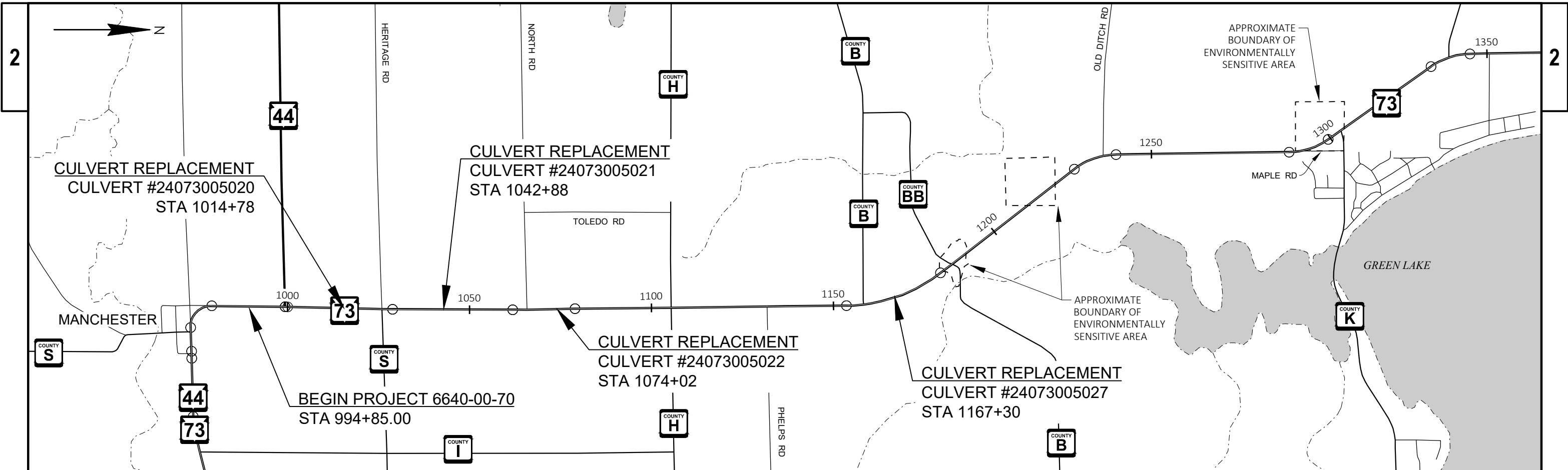
WE ENERGIES -GAS/PETROLEUM
LARRY KOCH
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
P: (715) 421-7249
C: (715) 421-9293
LARRY.KOCH@WE-ENERGIES.COM

OTHER CONTACTS

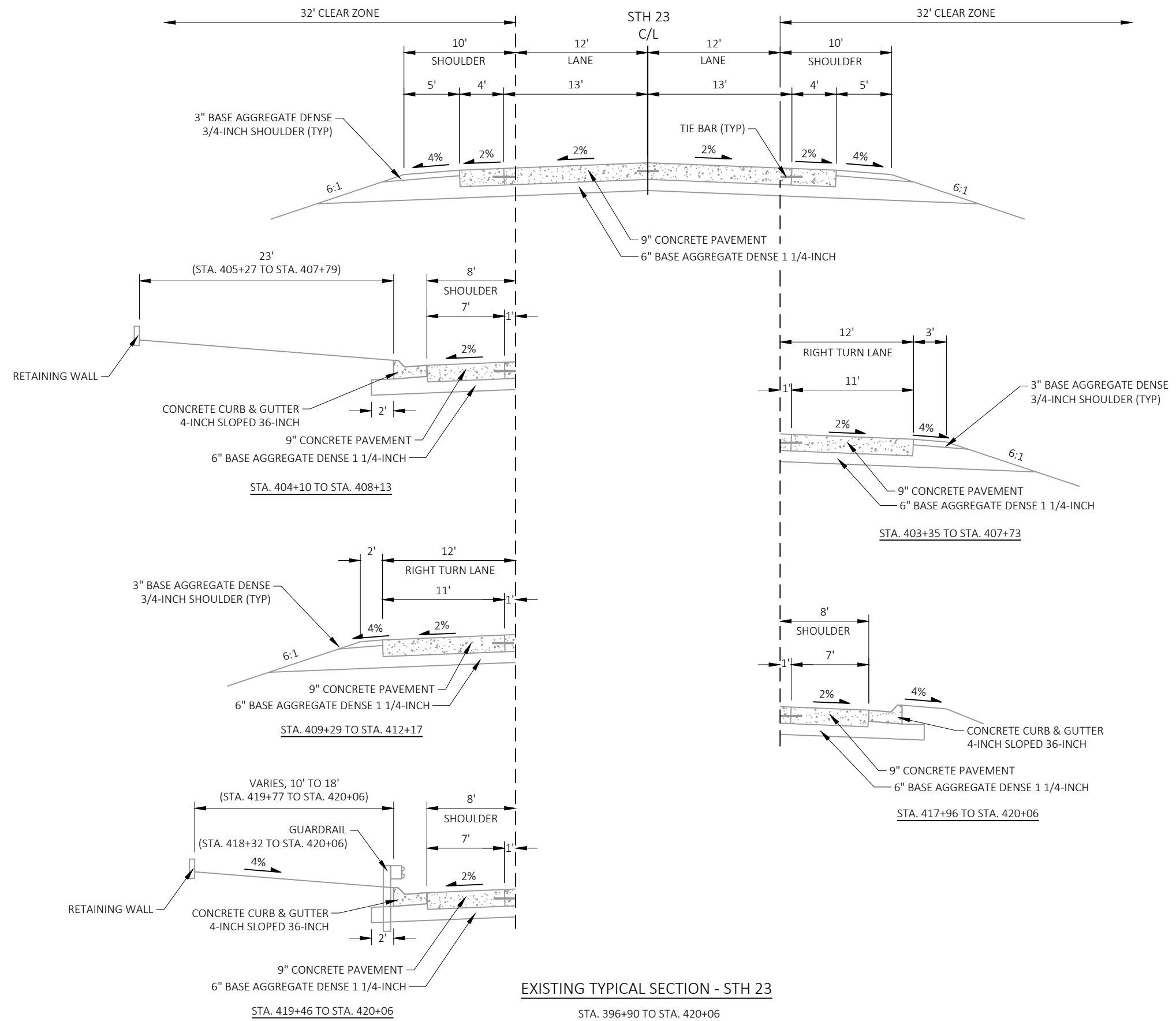
WISCONSIN DNR LIASON

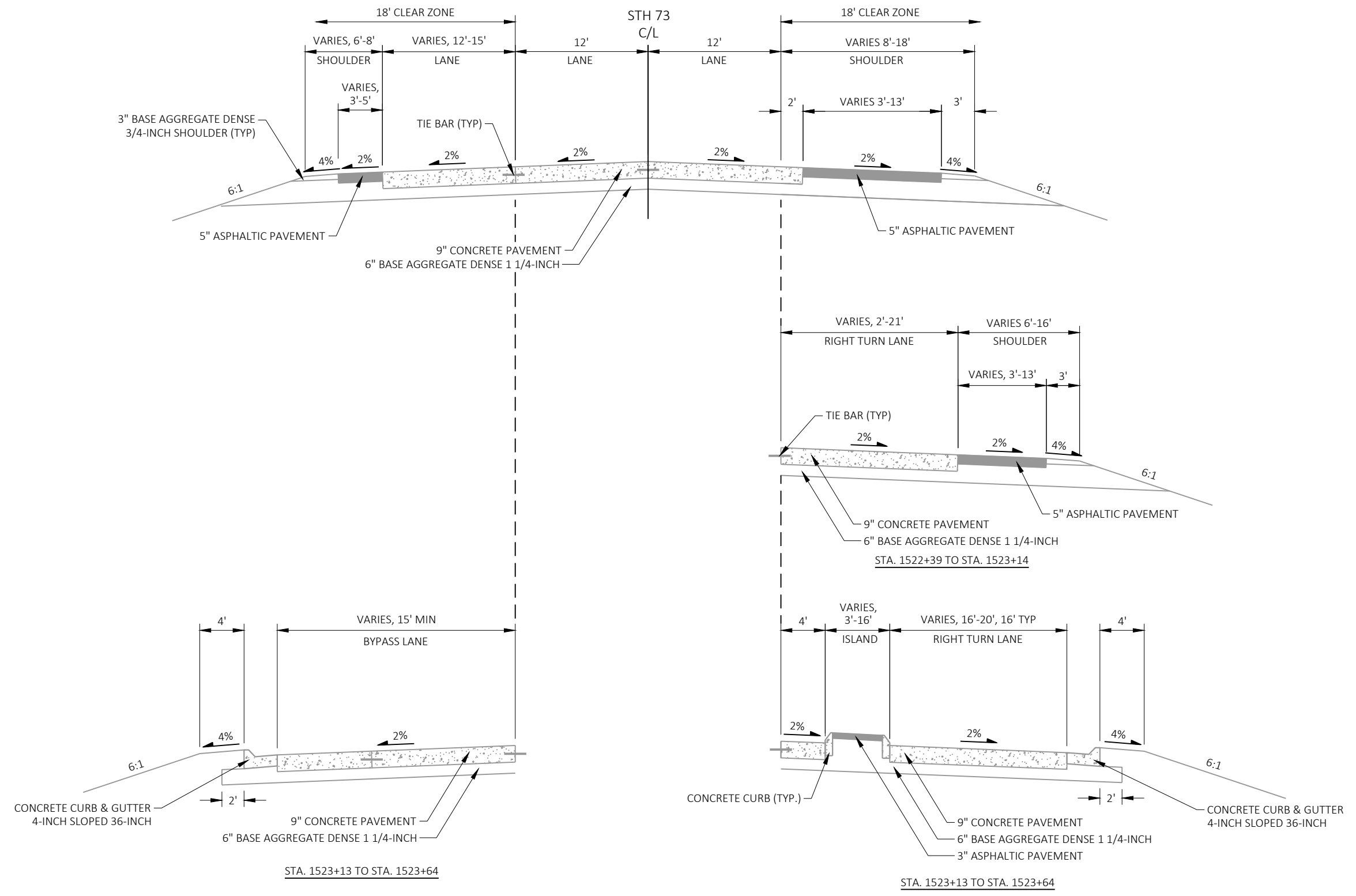
JAY SCHIEFELBEIN
DNR NORTHEAST REGION HEADQUARTERS
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
(920) 360-3784
JEREMIAH.SCHIEFELBEIN@WISCONSIN.GOV





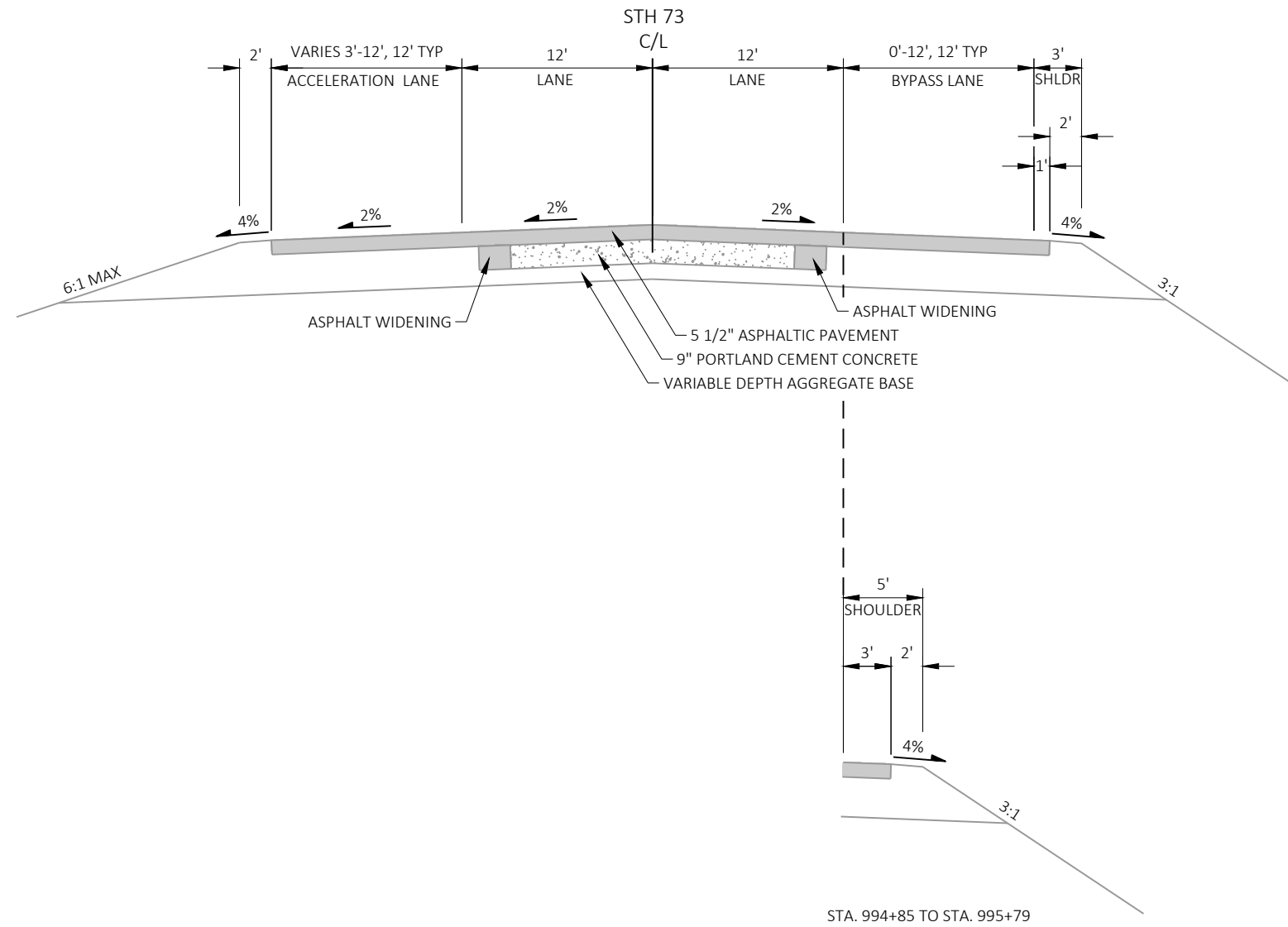
PROJECT NO: 1430-08-81 & 6640-00-70	HWY: STH 23 & STH 73	COUNTY: GREEN LAKE	PROJECT OVERVIEW
			SHEET E



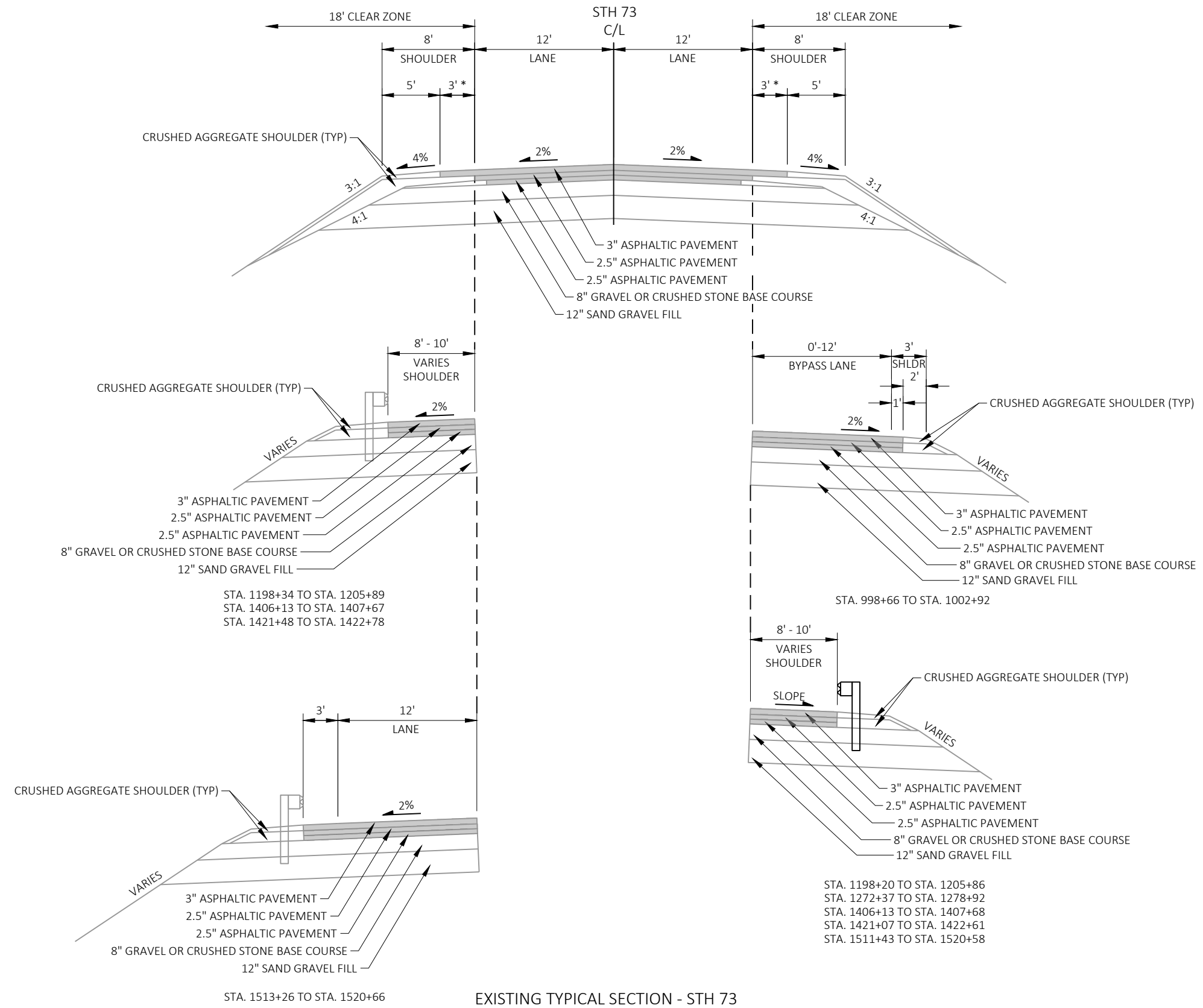


EXISTING TYPICAL SECTION - STH 73

STA. 1522+13 TO STA. 1523+64



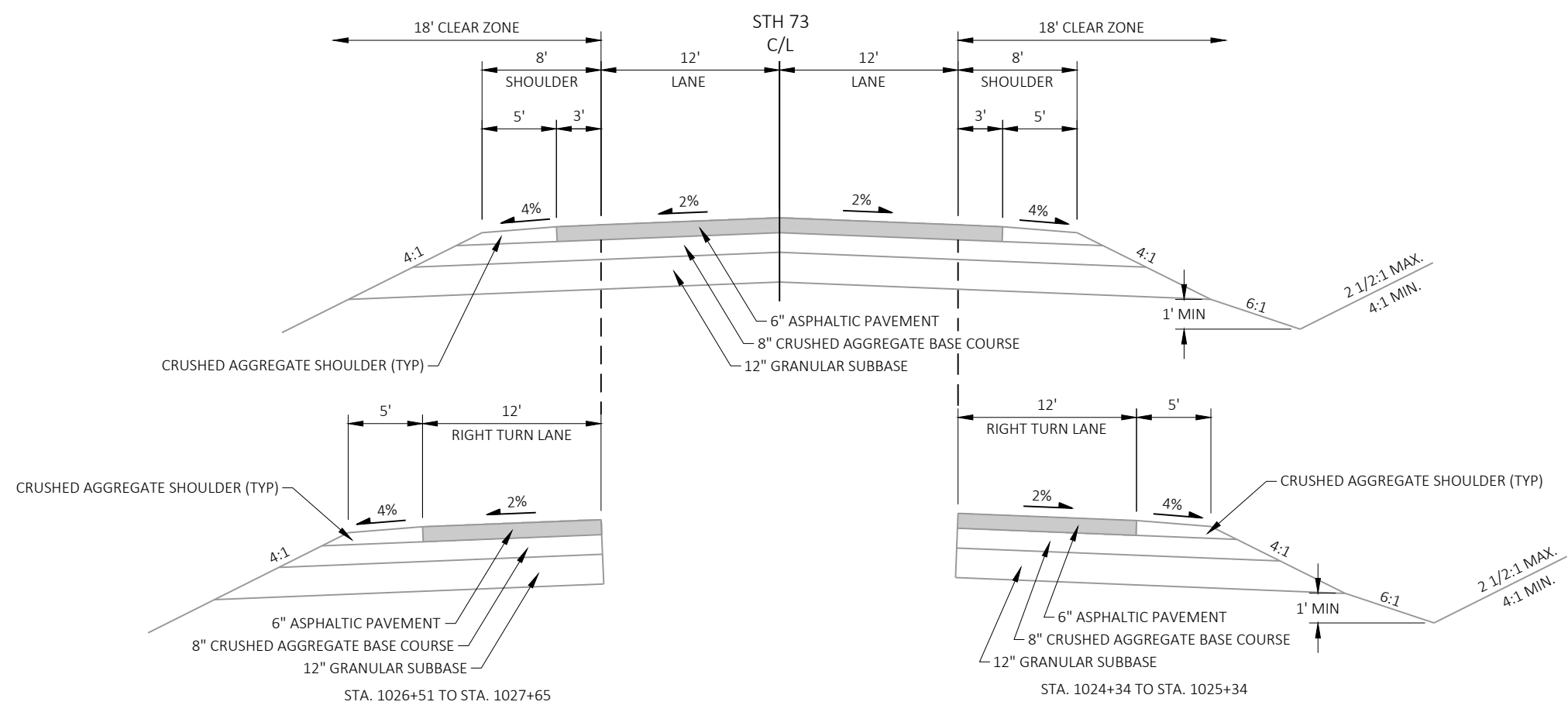
EXISTING TYPICAL SECTION - STH 73
 STA. 994+85 TO STA. 998+66



EXISTING TYPICAL SECTION - STH 73

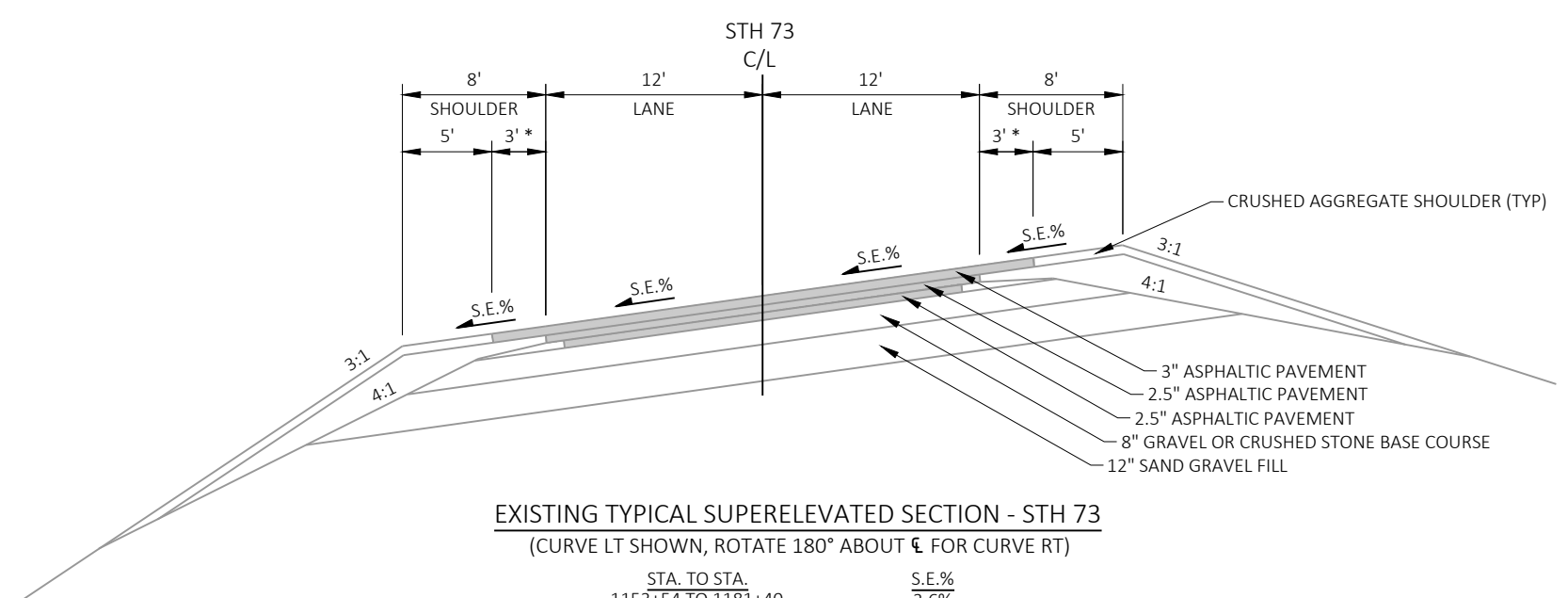
STA. 998+66 TO STA. 1022+45
STA. 1035+50 TO STA. 1522+45

*PAVED SHOULDER IS 5' WIDE FROM
STA. 1304+92.6 TO STA. 1444+56.6



EXISTING TYPICAL SECTION - STH 73

STA. 1022+45 TO STA. 1035+50

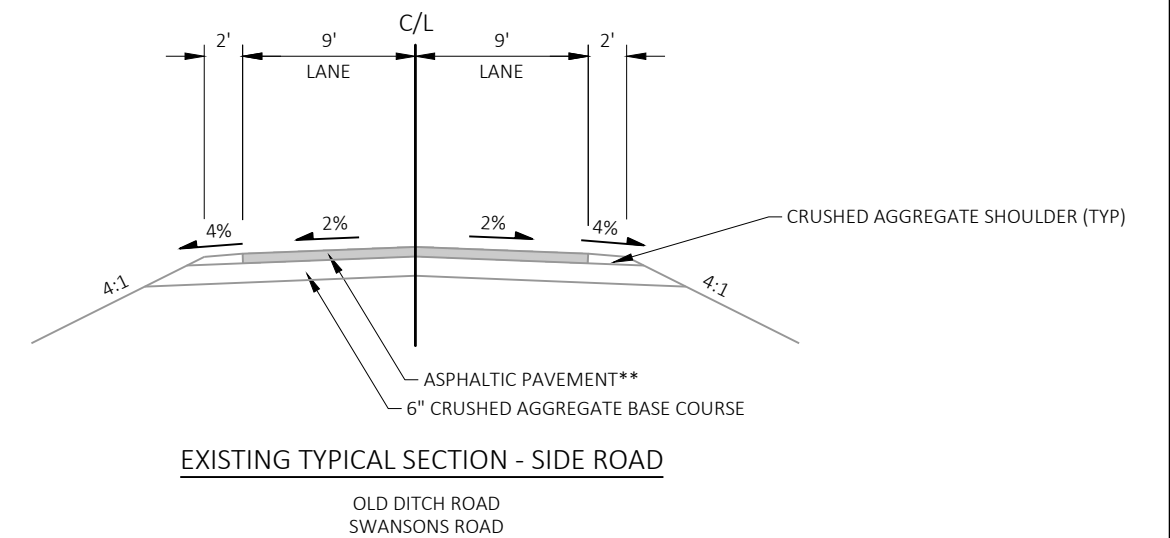
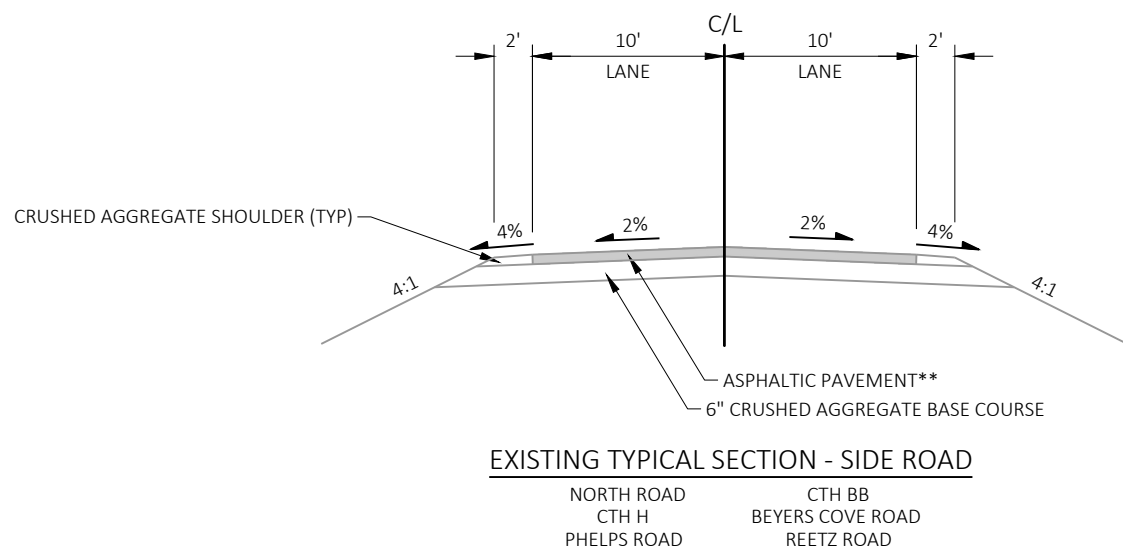
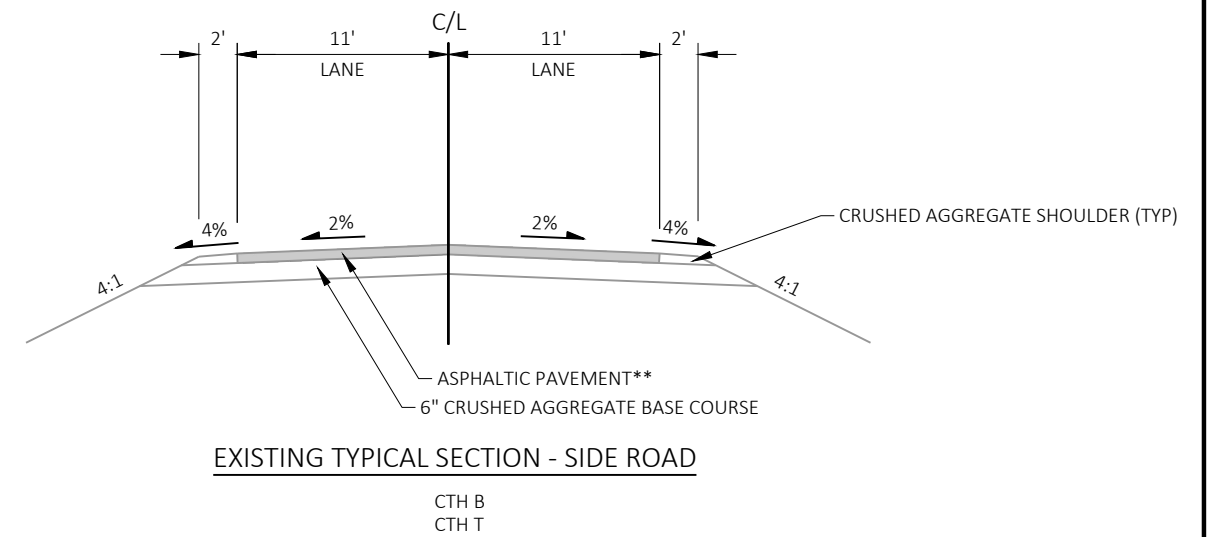
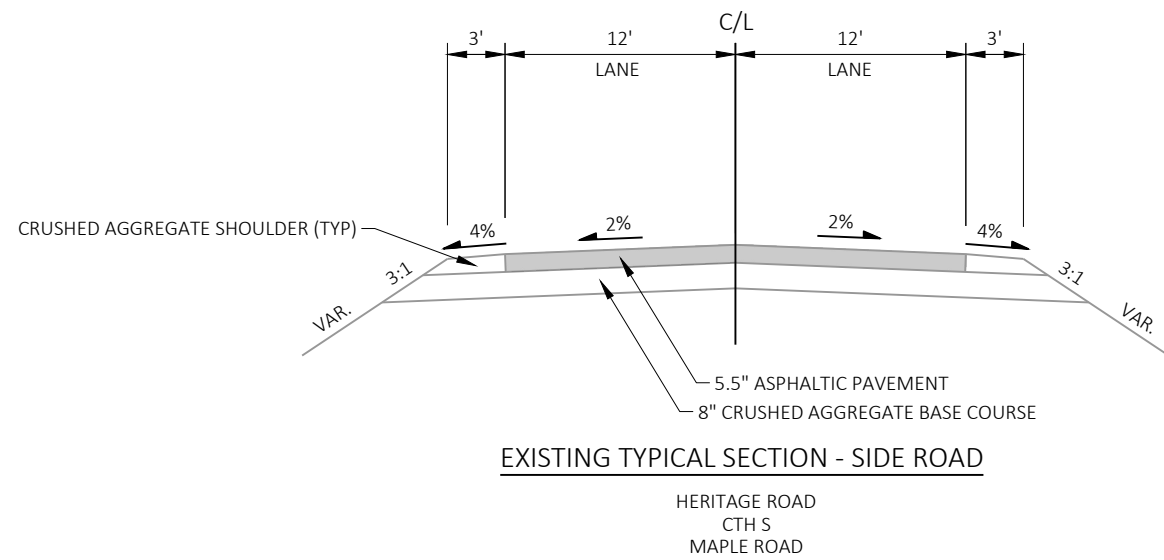
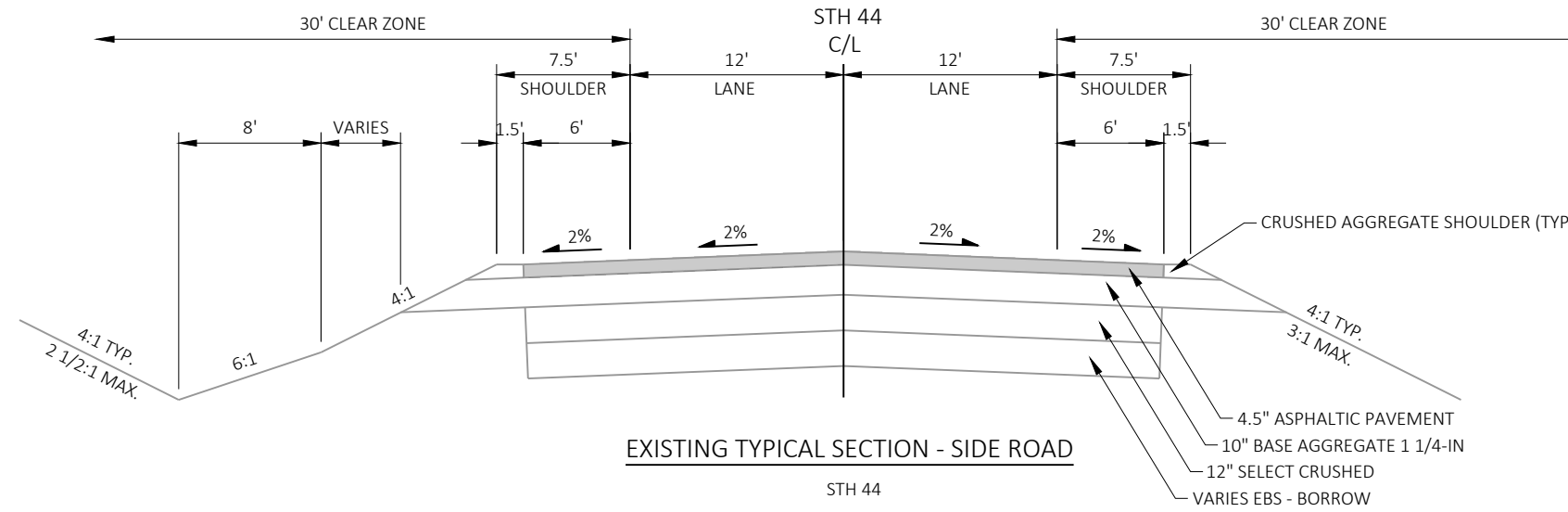


EXISTING TYPICAL SUPERELEVATED SECTION - STH 73

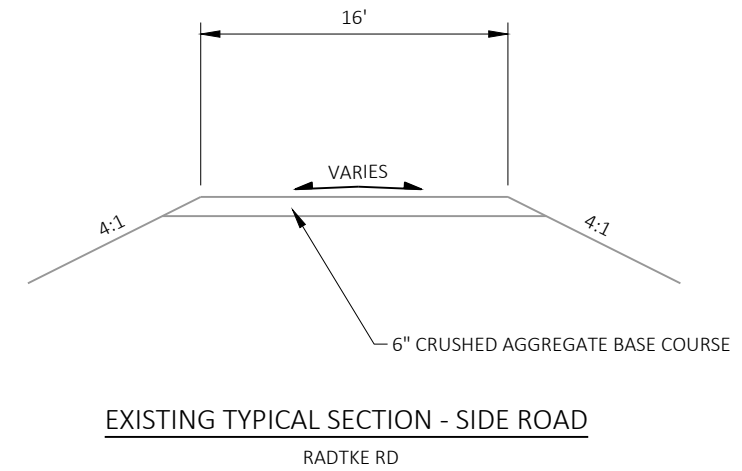
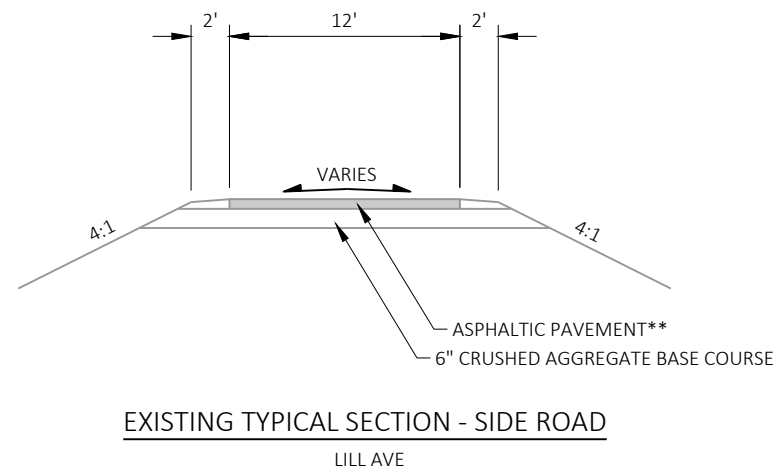
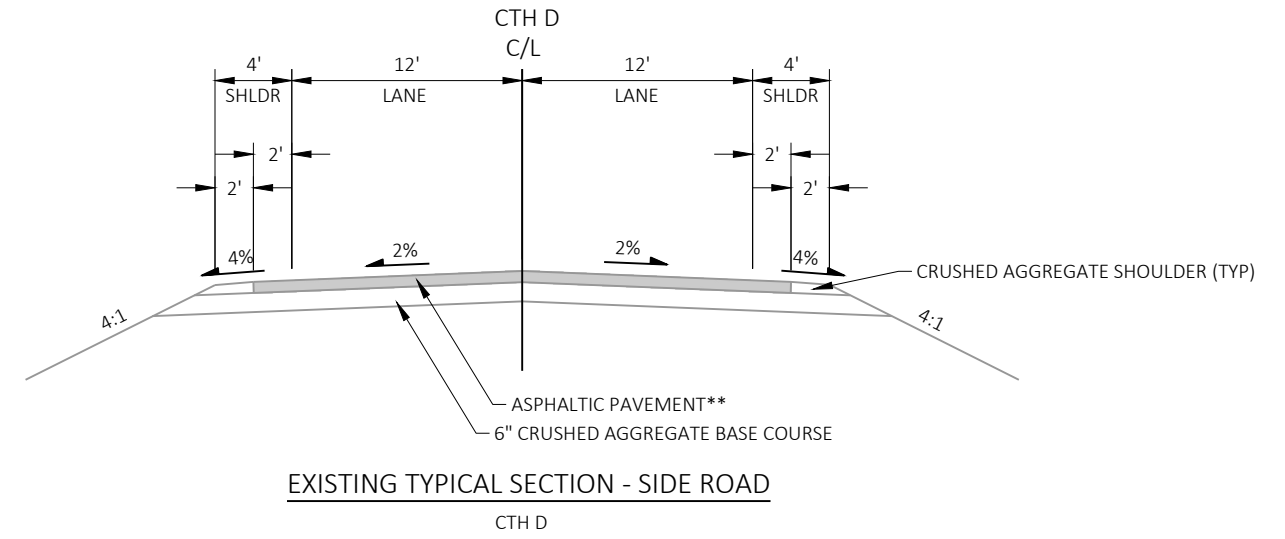
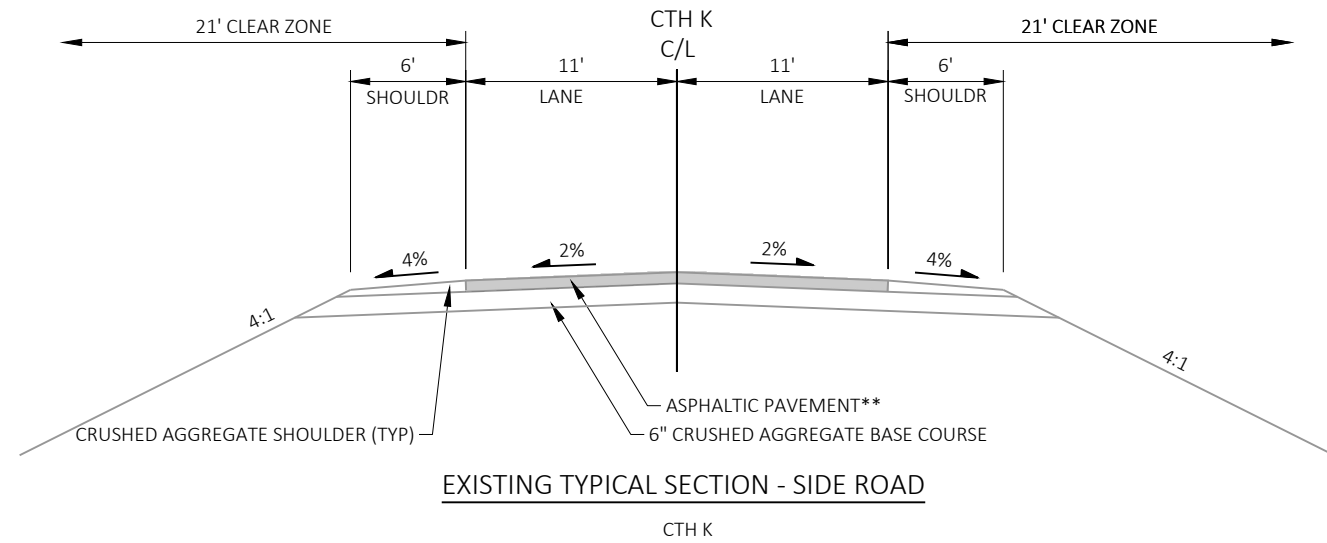
(CURVE LT SHOWN, ROTATE 180° ABOUT C/L FOR CURVE RT)

STA. TO STA.	S.E.%
1153+54 TO 1181+40	3.6%
1227+92 TO 1240+24	5.4%
1287+79 TO 1299+29	5.4%
1333+87 TO 1345+32	5.4%

*PAVED SHOULDER IS 5' WIDE FROM STA. 1304+92.6 TO STA. 1444+56.6

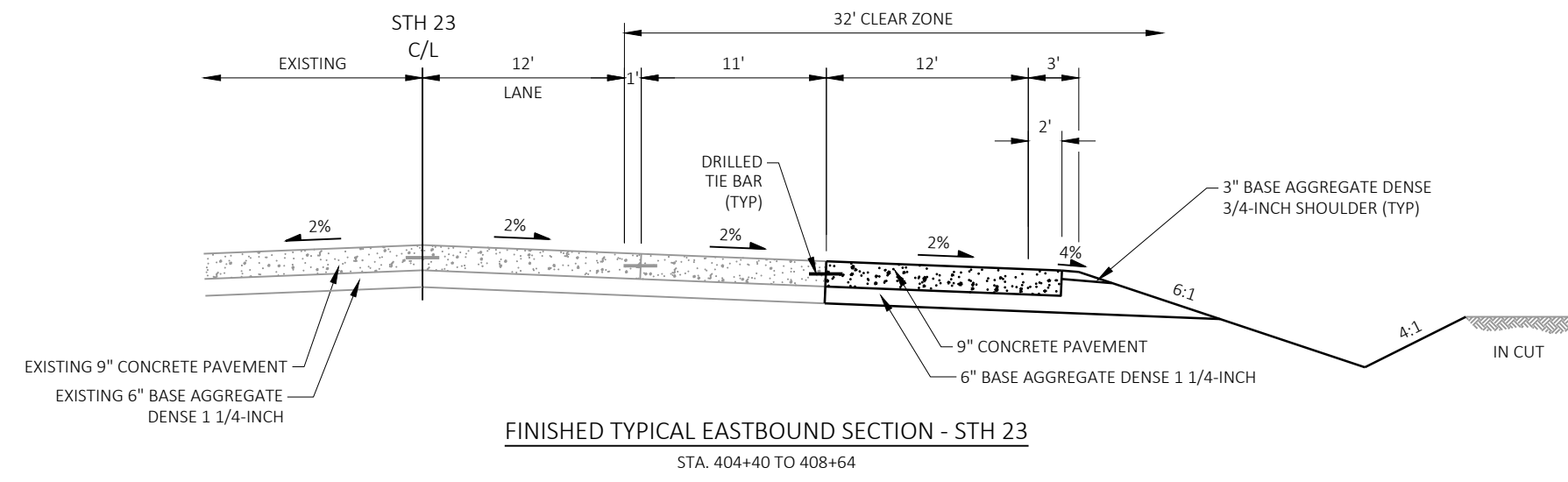
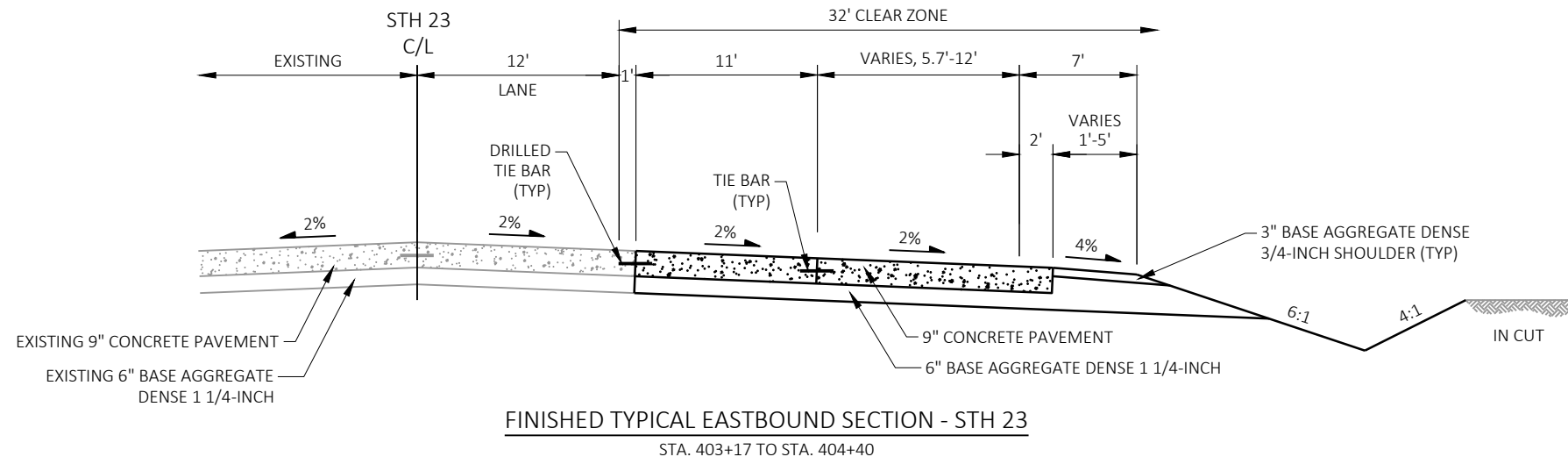
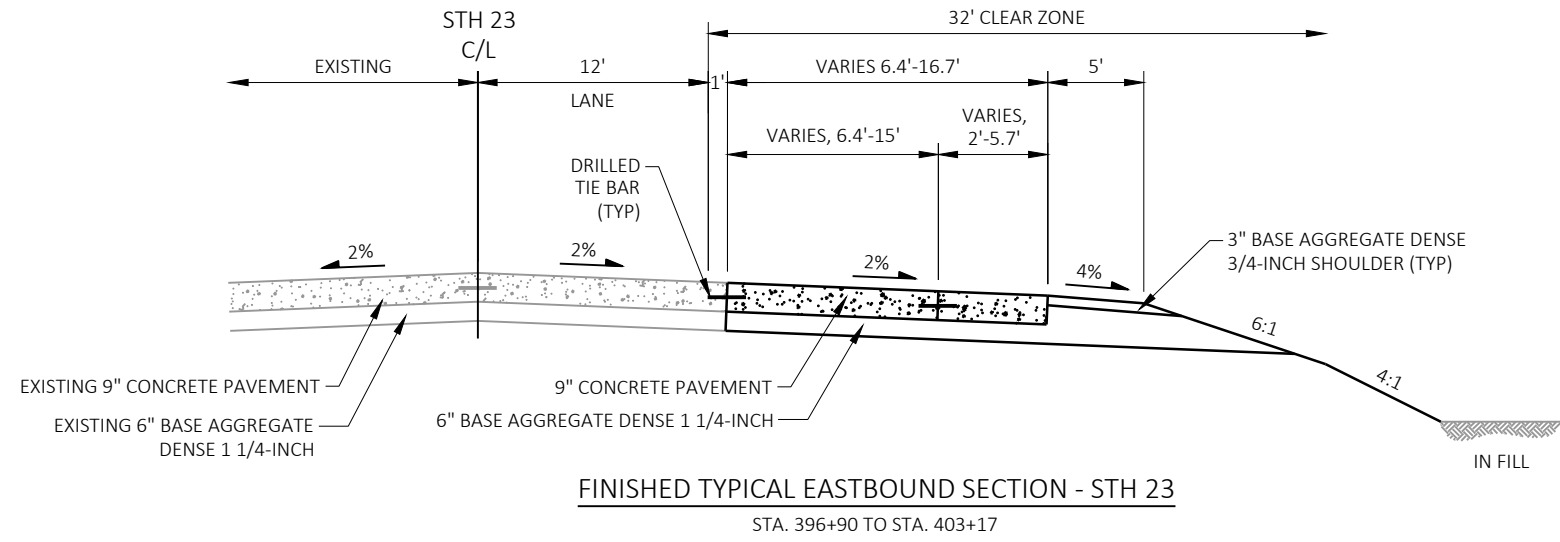


**EXISTING PAVEMENT THICKNESS UNKNOWN

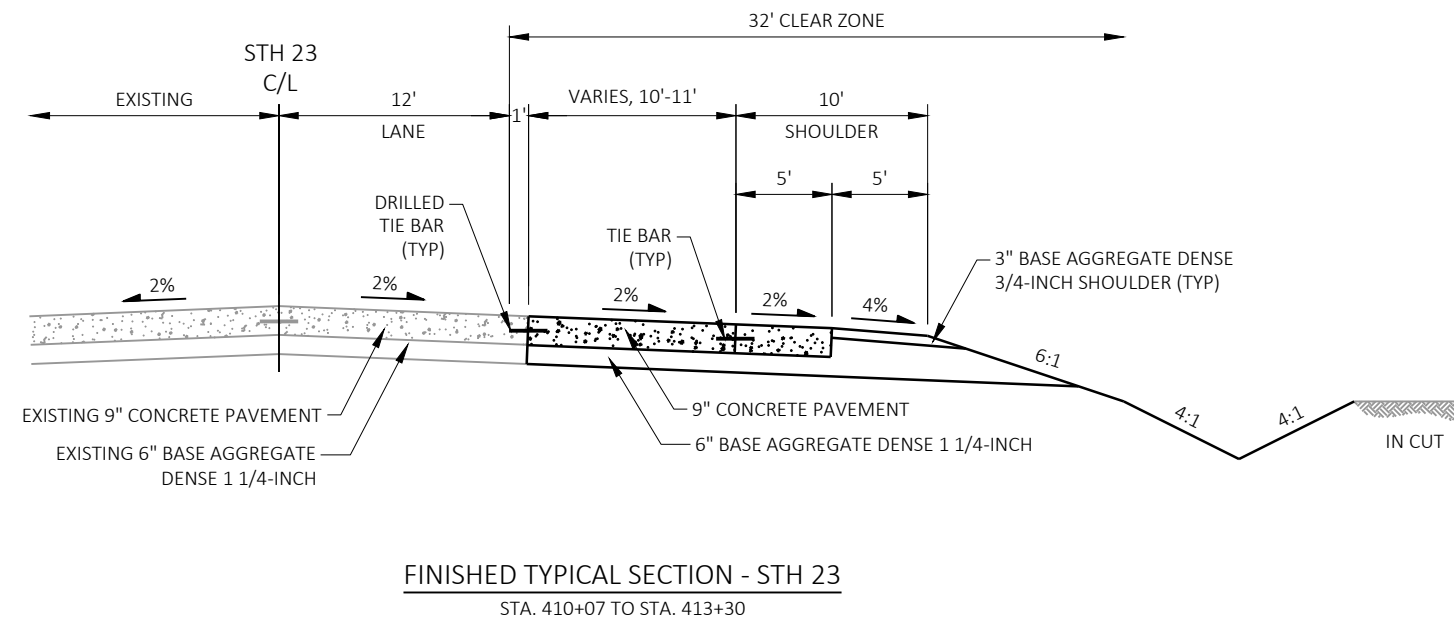
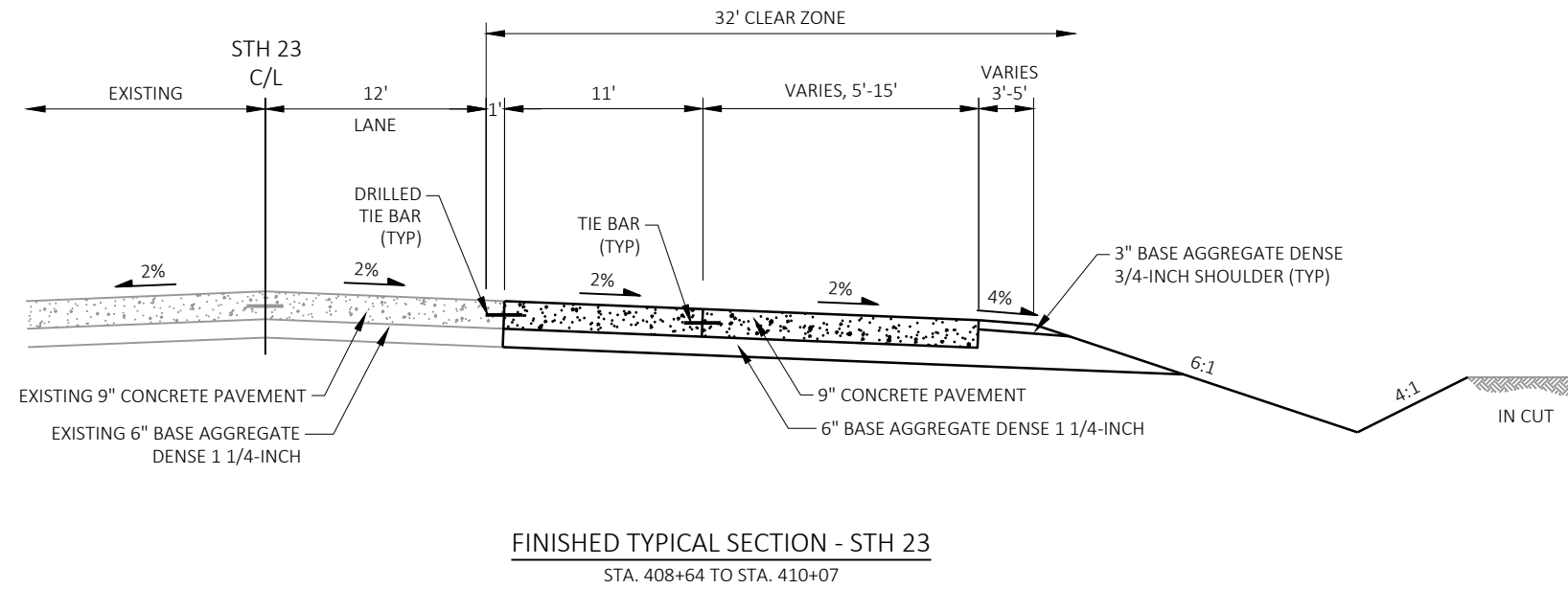


**EXISTING PAVEMENT THICKNESS UNKNOWN

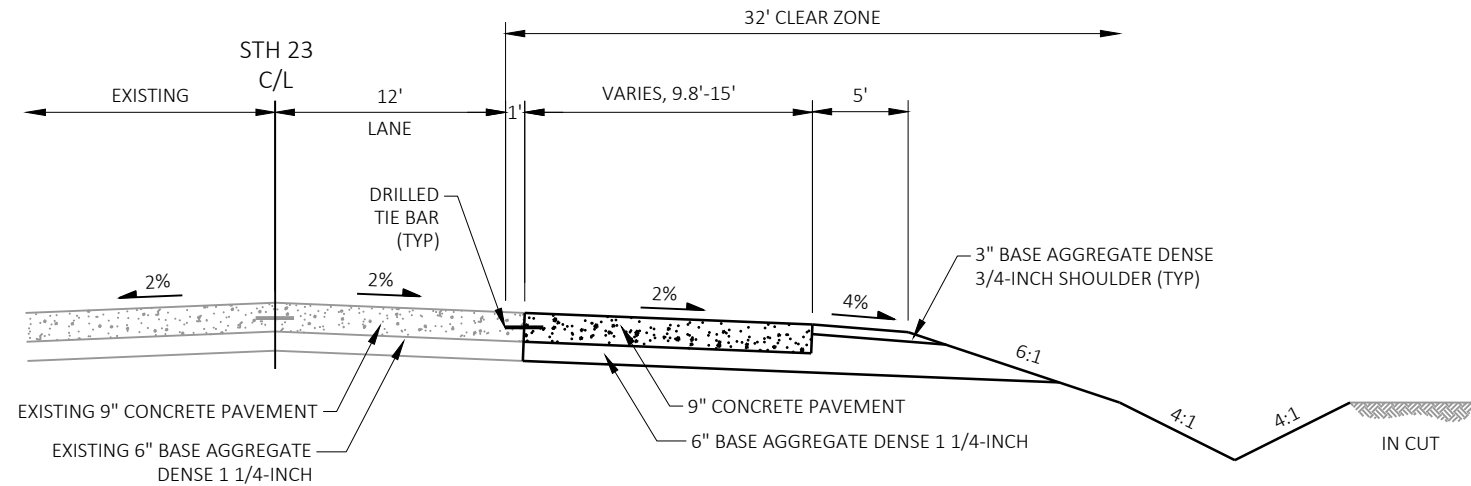
NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.



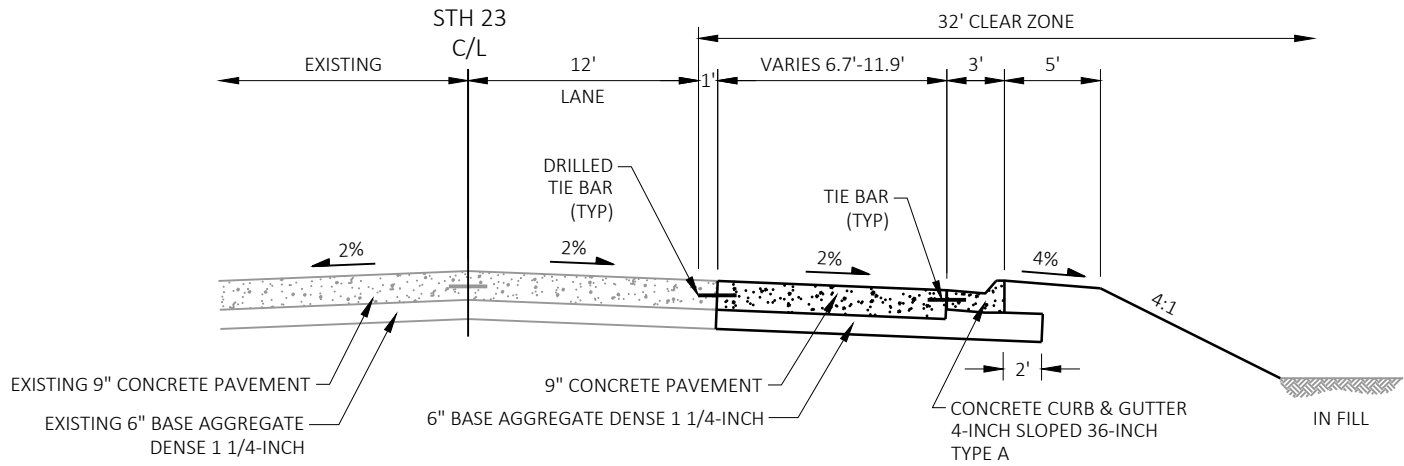
NOTES:
CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.



NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.

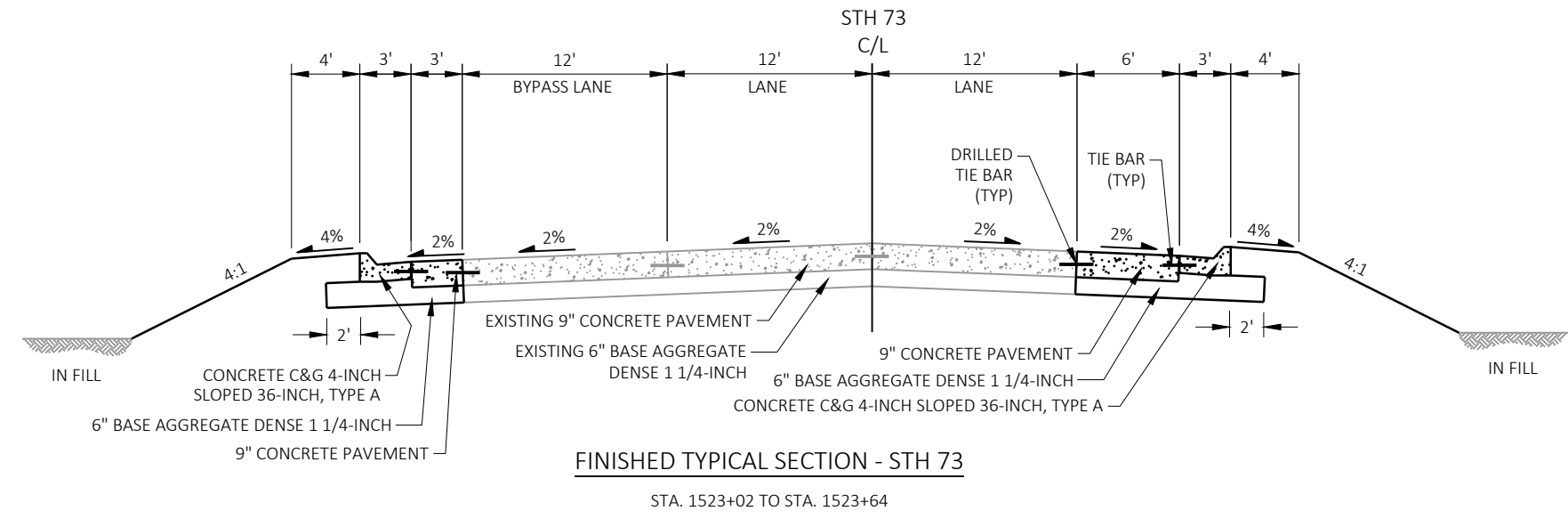
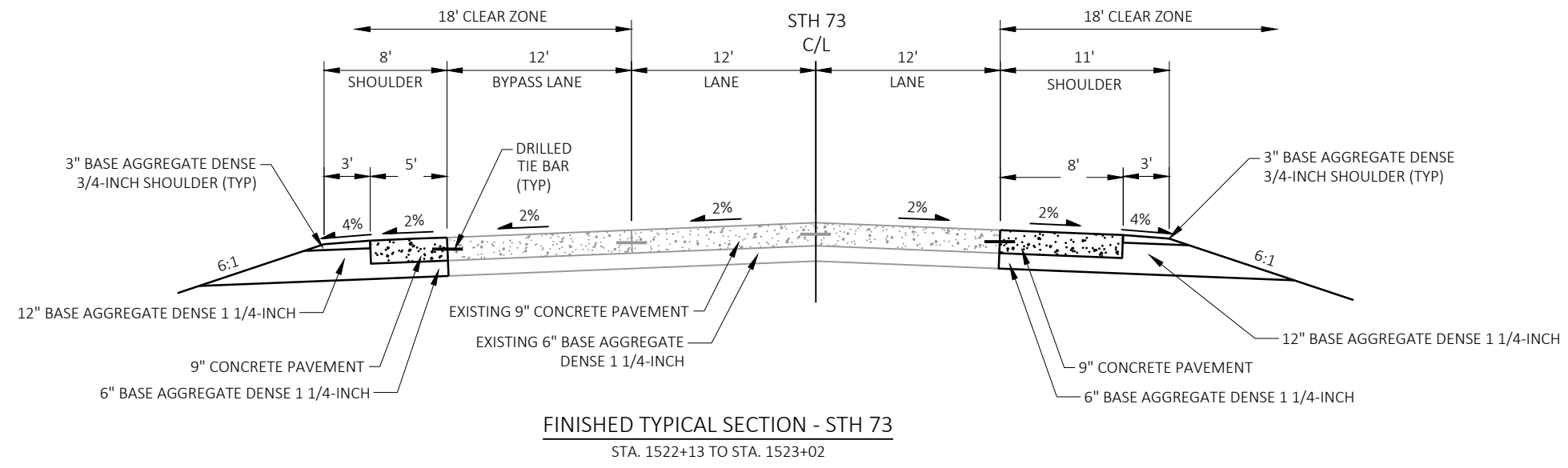


FINISHED TYPICAL SECTION - STH 23
 STA. 413+30 TO STA. 416+92

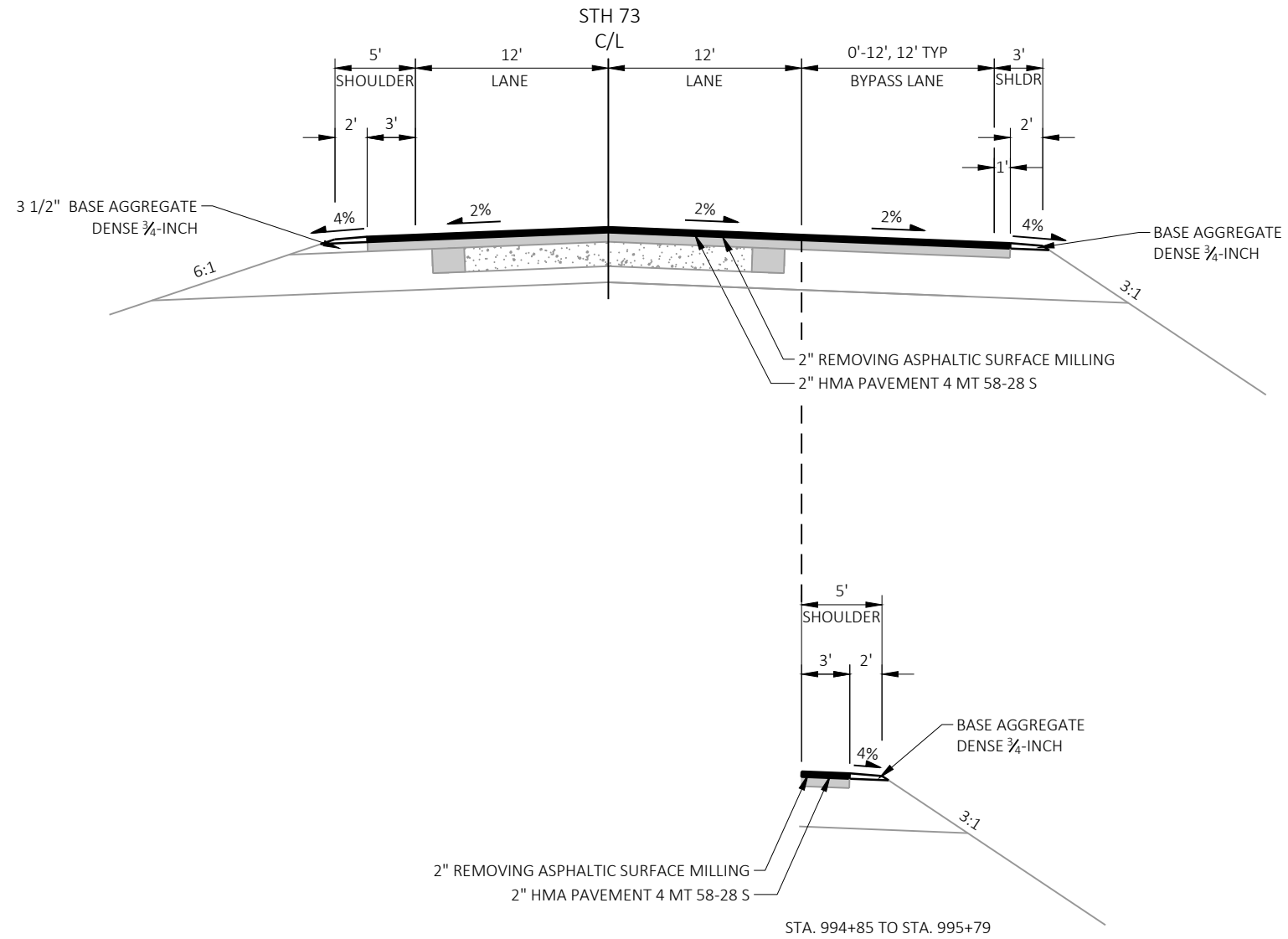


FINISHED TYPICAL SECTION - STH 23
 STA. 416+92 TO STA. 420+06

NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.



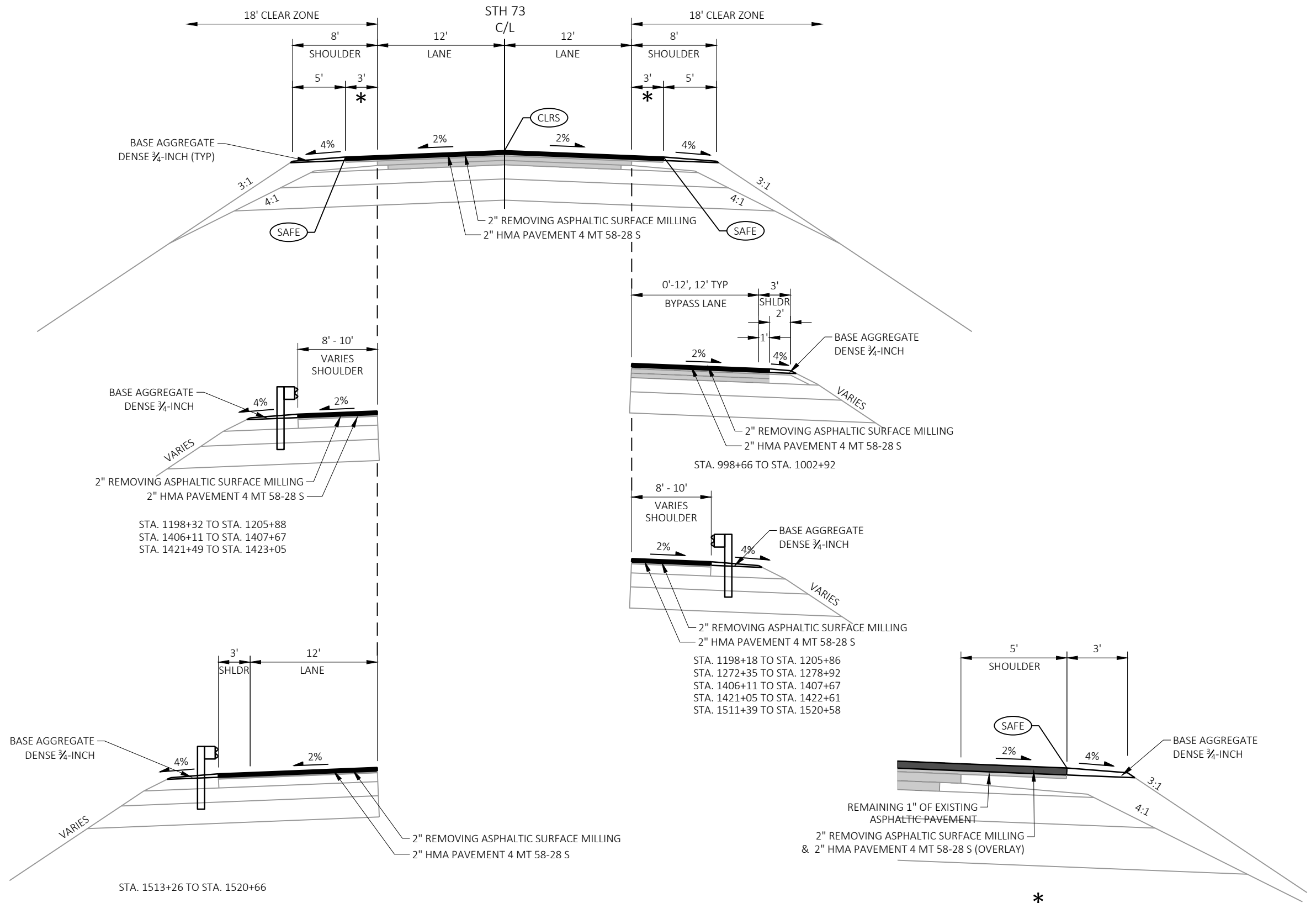
NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.



FINISHED TYPICAL SECTION - STH 73

STA. 994+85 TO STA. 998+66

NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.



FINISHED TYPICAL SECTION - STH 73

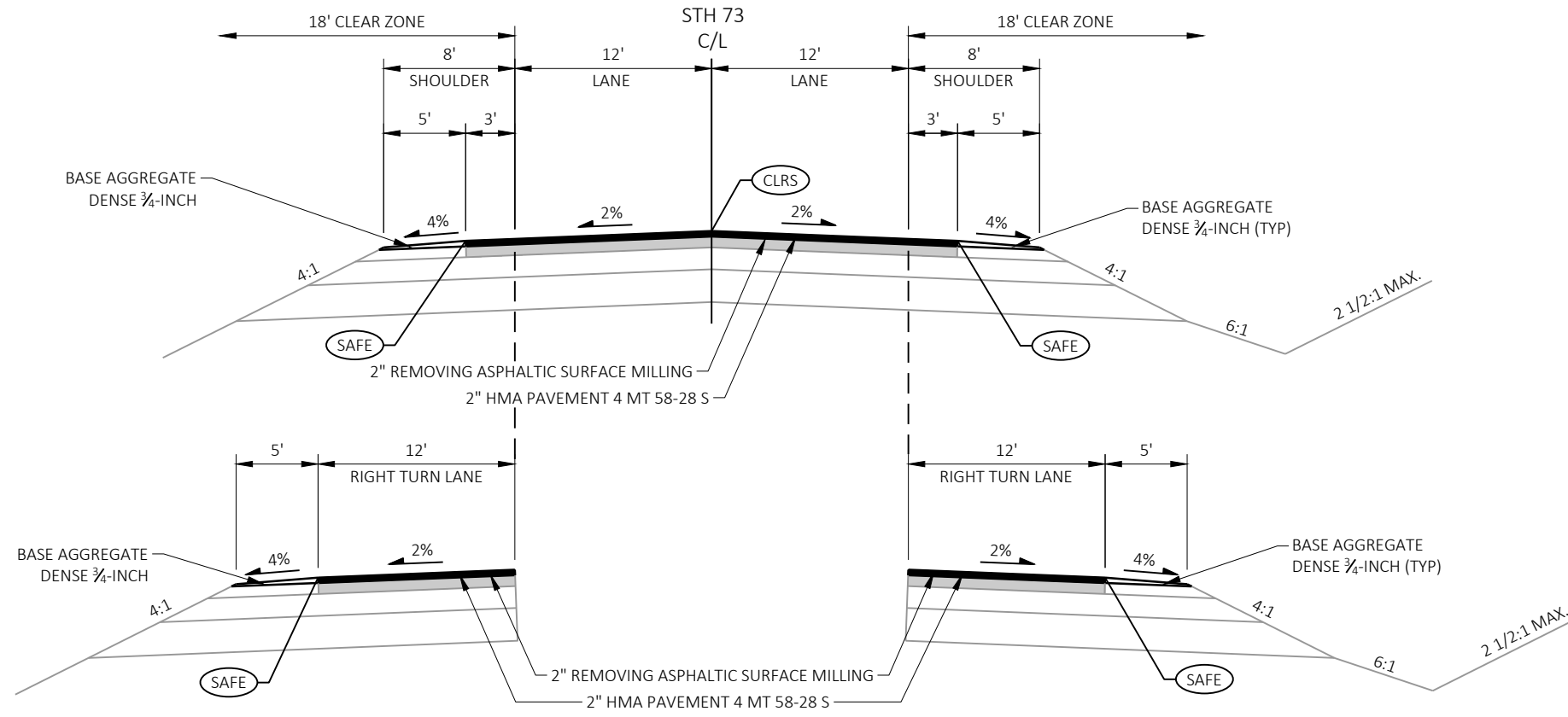
STA. 998+66 TO STA. 1022+45
 STA. 1035+50 TO STA. 1522+45

* PAVED SHOULDER IS 5' WIDE FROM STA. 1304+93 TO STA. 1444+57

*
 DETAIL FOR 5' PAVED SHOULDER SECTION LT & RT
 STA. 1304+93 TO STA. 1444+57

LEGEND:
 (SAFE) SAFETY EDGE
 (CLRS) ASPHALTIC CENTERLINE RUMBLE STRIP 2-LANE RURAL

NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.

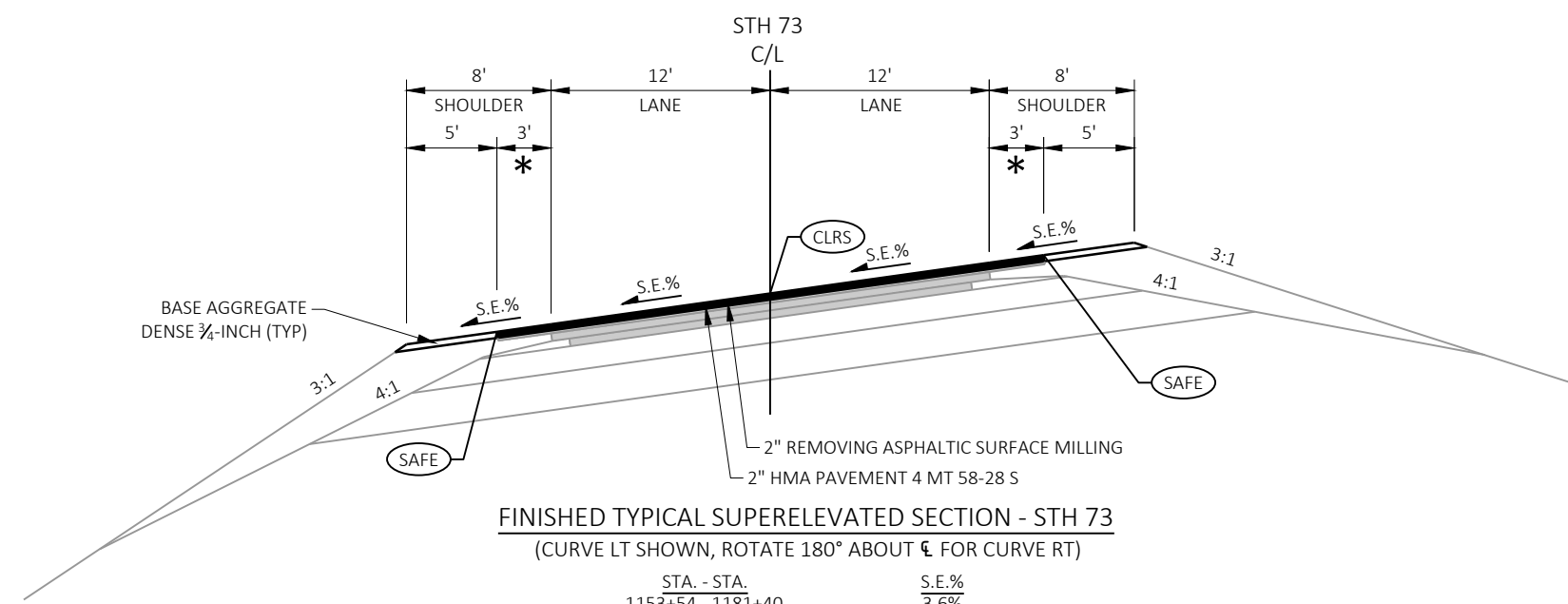


STA. 1026+51 TO STA. 1027+65

STA. 1024+34 TO STA. 1025+34

FINISHED TYPICAL SECTION - STH 73

STA. 1022+45 TO STA. 1035+50



FINISHED TYPICAL SUPERELEVATED SECTION - STH 73
(CURVE LT SHOWN, ROTATE 180° ABOUT C/L FOR CURVE RT)

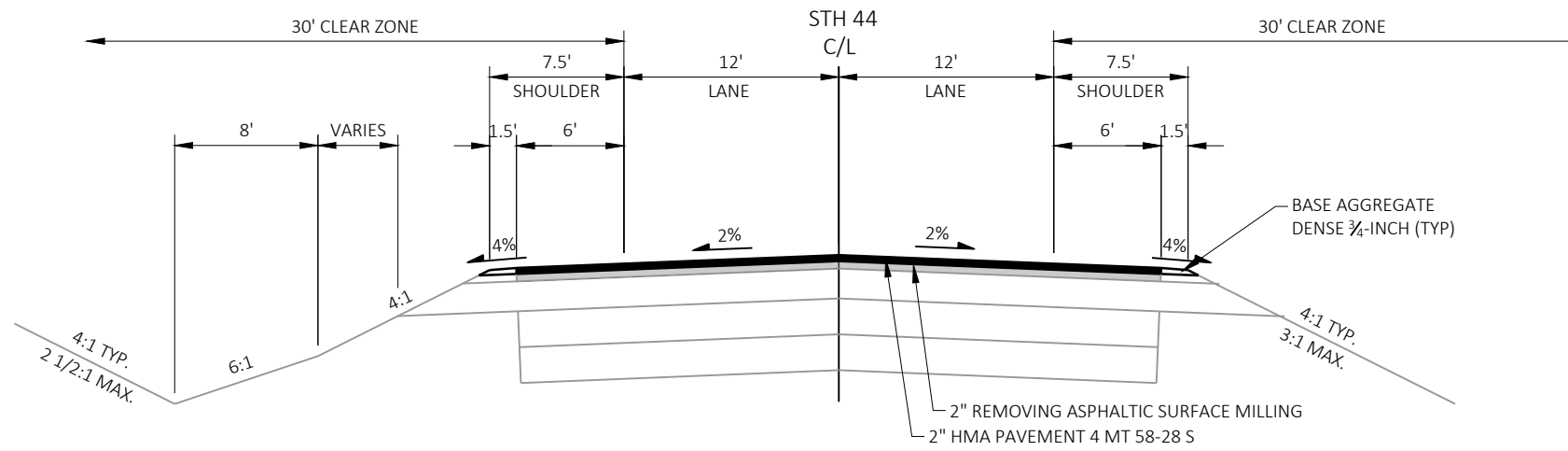
STA. - STA.	S.E. %
1153+54 - 1181+40	3.6%
1227+92 - 1240+24	5.4%
1287+79 - 1299+29	5.4%
1333+87 - 1345+32	5.4%

* PAVED SHOULDER IS 5' WIDE FROM STA. 1304+92.6 TO STA. 1444+56.6 (SEE DETAIL ON PREVIOUS PAGE)

LEGEND:

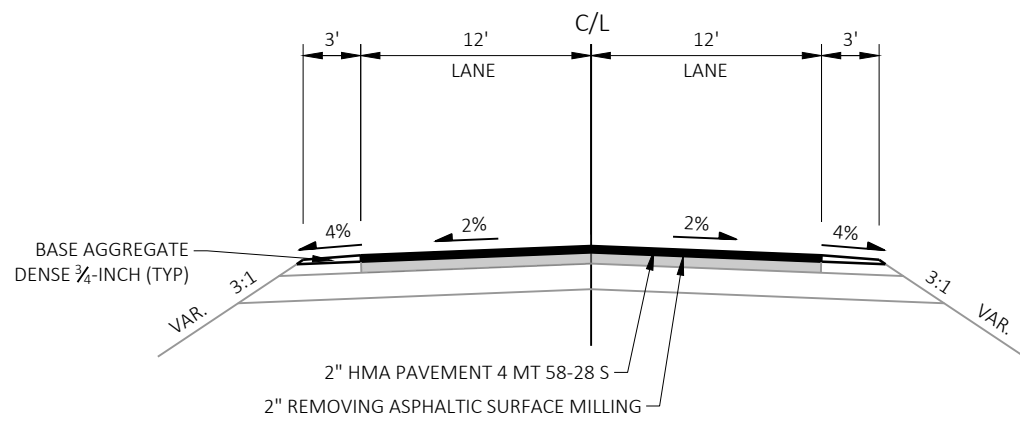
- SAFE SAFETY EDGE
- CLRS ASPHALTIC CENTERLINE RUMBLE STRIP 2-LANE RURAL

NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.



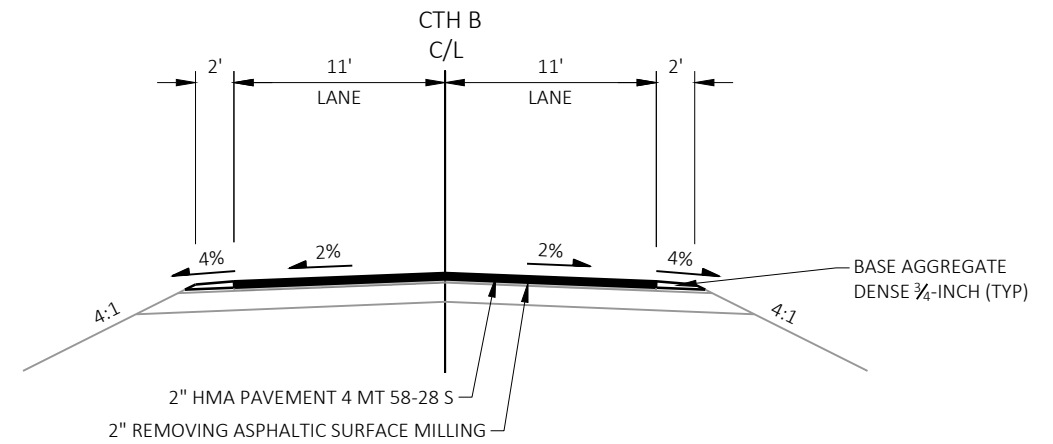
FINISHED TYPICAL SECTION - SIDEROAD

STH 44



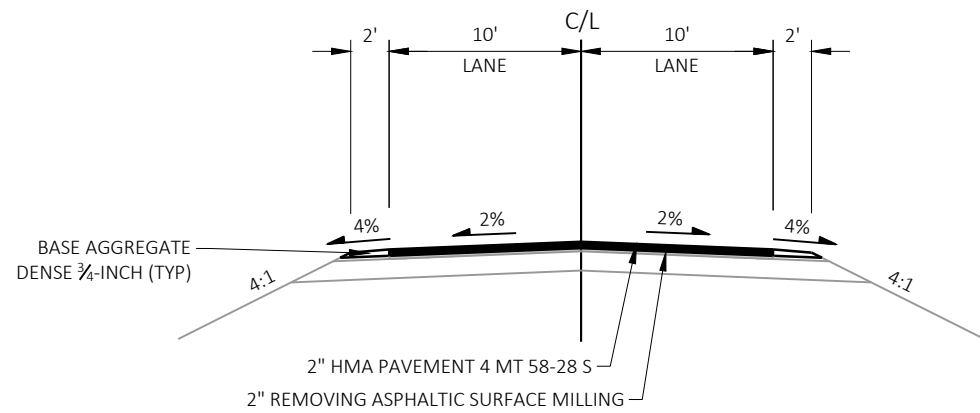
FINISHED TYPICAL SECTION - SIDEROAD

HERITAGE ROAD
CTH S
MAPLE ROAD



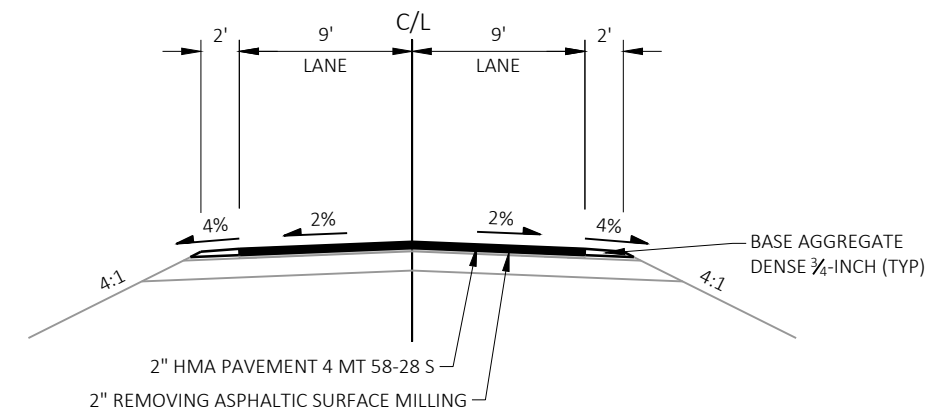
FINISHED TYPICAL SECTION - SIDEROAD

CTH B
CTH T



FINISHED TYPICAL SECTION - SIDEROAD

NORTH ROAD
CTH H
PHELPS ROAD
CTH BB
BEYERS COVE ROAD
REETZ ROAD



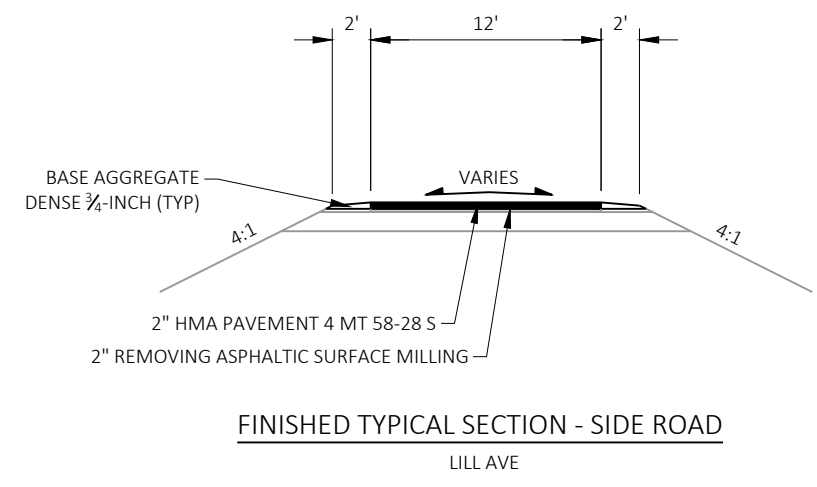
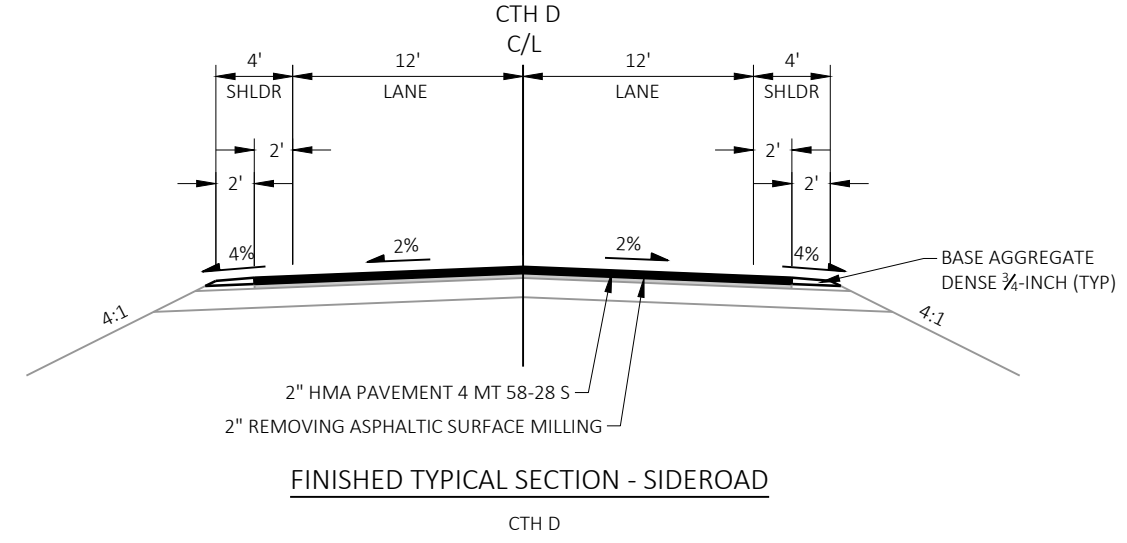
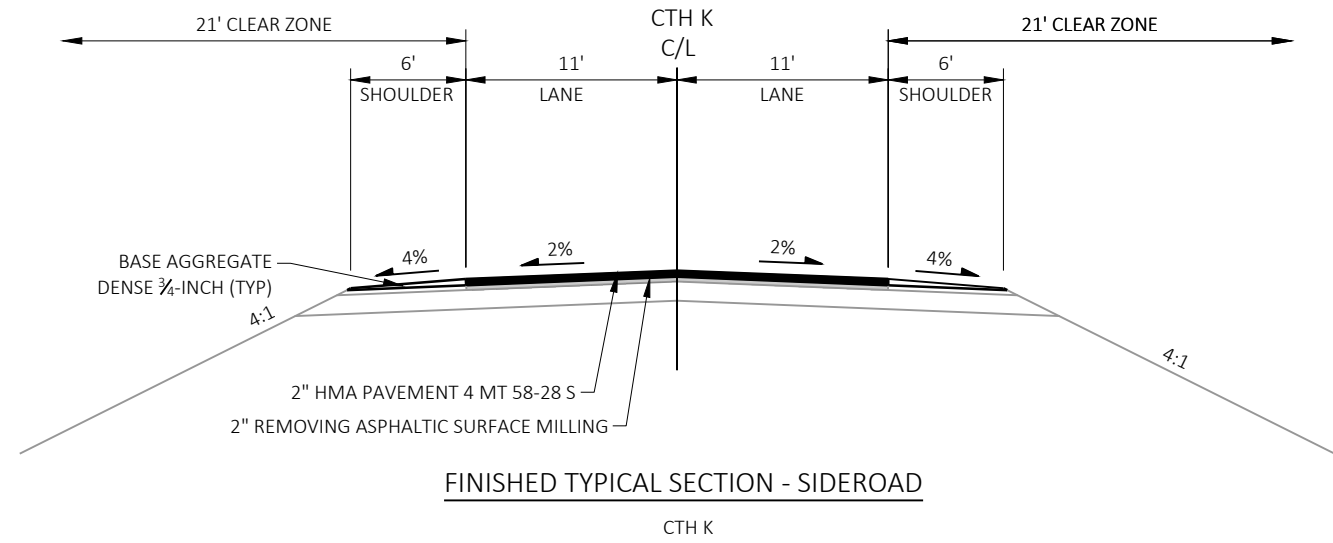
FINISHED TYPICAL SECTION - SIDEROAD

OLD DITCH ROAD
SWANSONS ROAD

LEGEND:

- SAFETY EDGE
- ASPHALTIC CENTERLINE RUMBLE STRIP 2-LANE RURAL

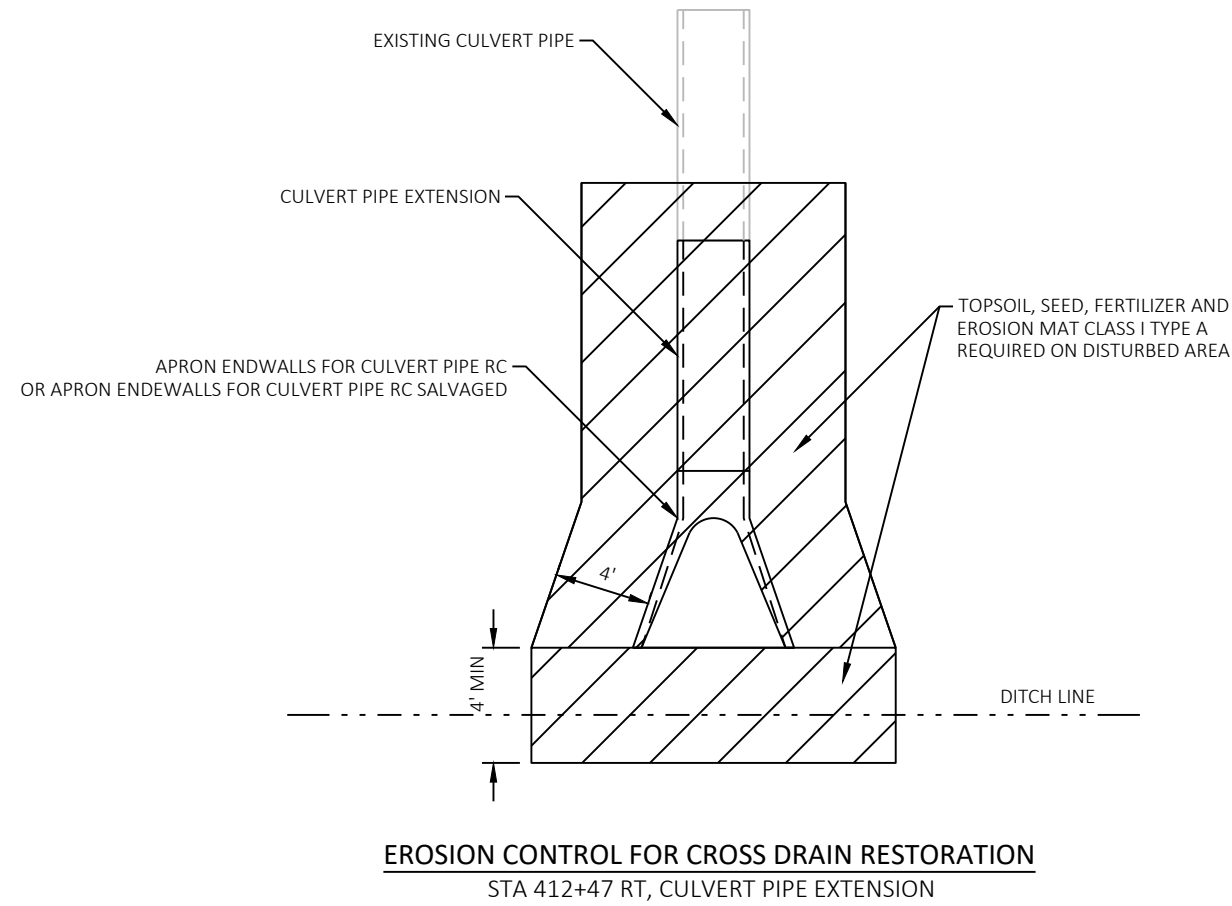
NOTES:
 CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE.



LEGEND:

(SAFE) SAFETY EDGE

(CLRS) ASPHALTIC CENTERLINE RUMBLE STRIP 2-LANE RURAL

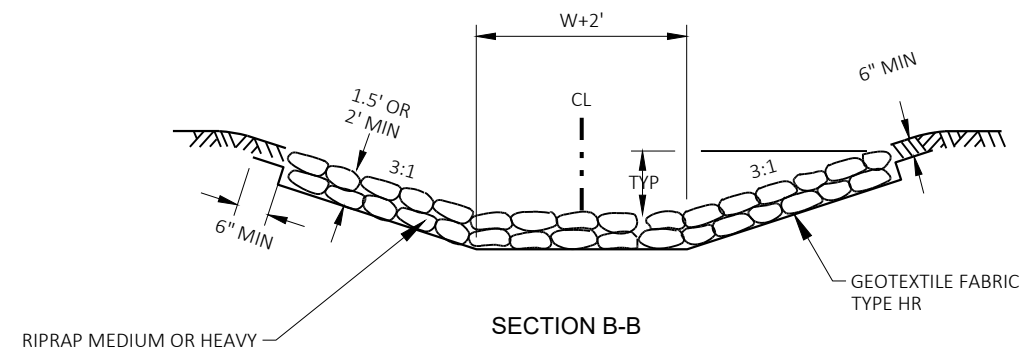
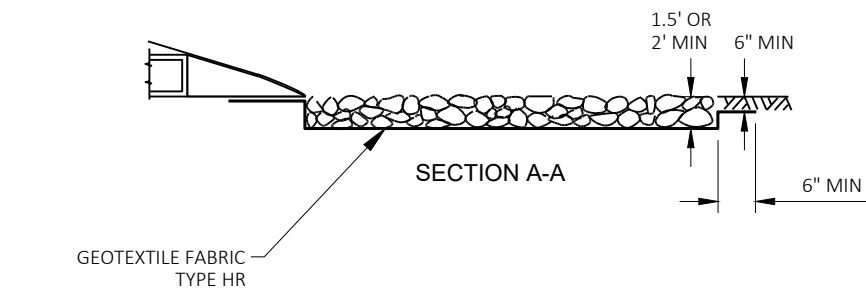
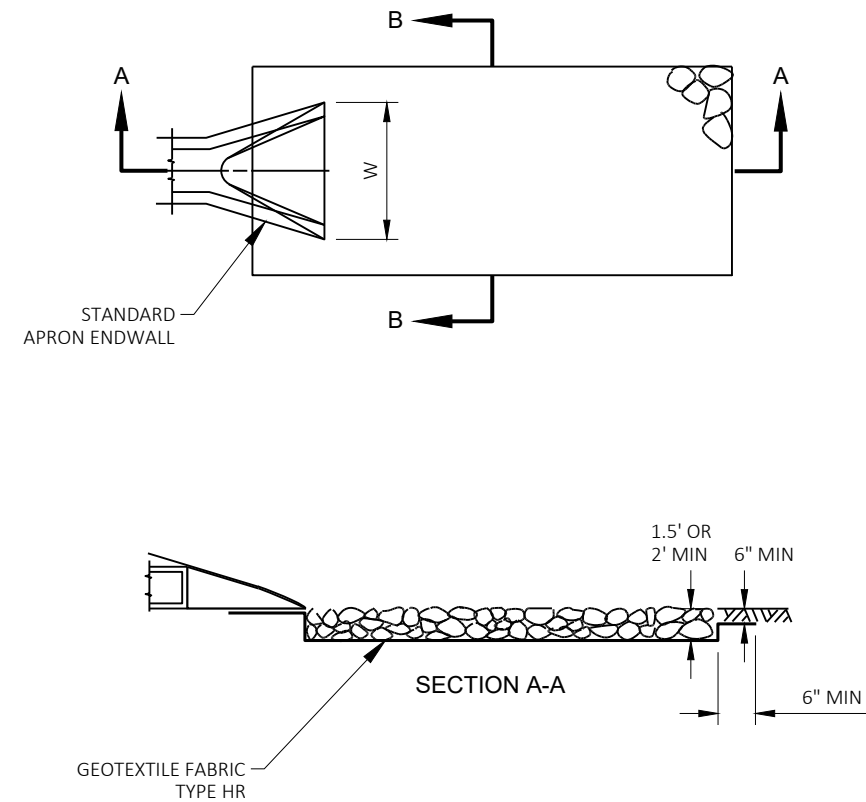


RUNOFF COEFFICIENT TABLE

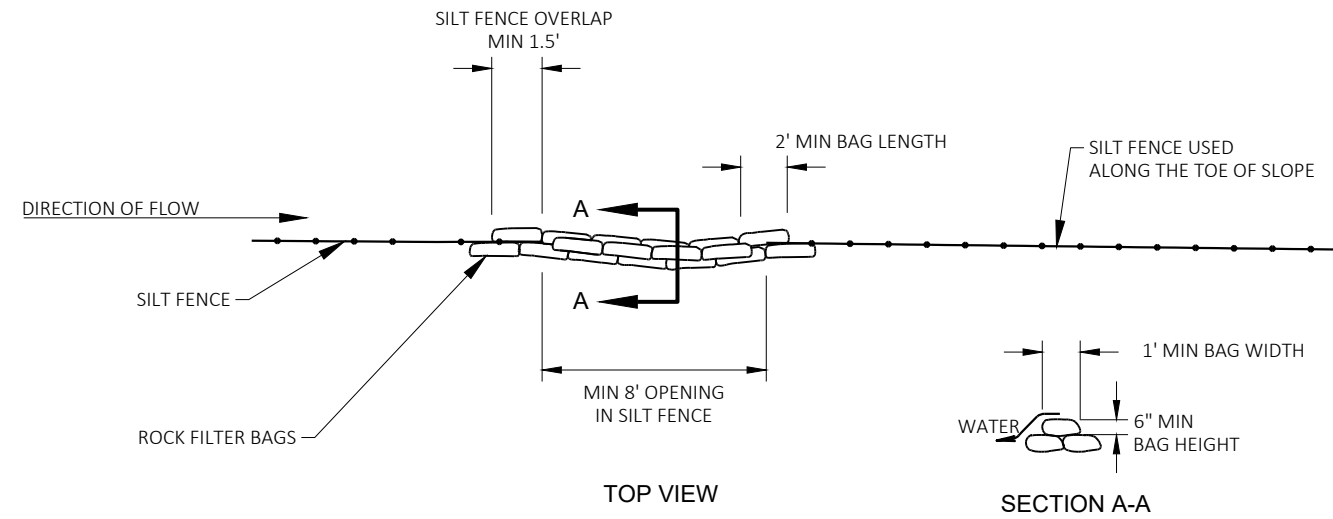
LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
MEDIAN STRIPTURF:	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
SIDE SLOPETURF:	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
PAVEMENT:			.25			.27			.28			.30
ASPHALT:			.32			.34			.36			.38
CONCRETE:						.70 - .95			.80 - .95			.70 - .80
BRICK:						.70 - .80			.75 - .85			.75 - .95
DRIVES, WALKS:						.75 - .85			.40 - .60			
ROOFS:						.75 - .95						
GRAVEL ROADS, SHOULDERS:						.40 - .60						

PROJECT ID: 1430-08-81
 TOTAL PROJECT AREA = 7.891 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.275 ACRES

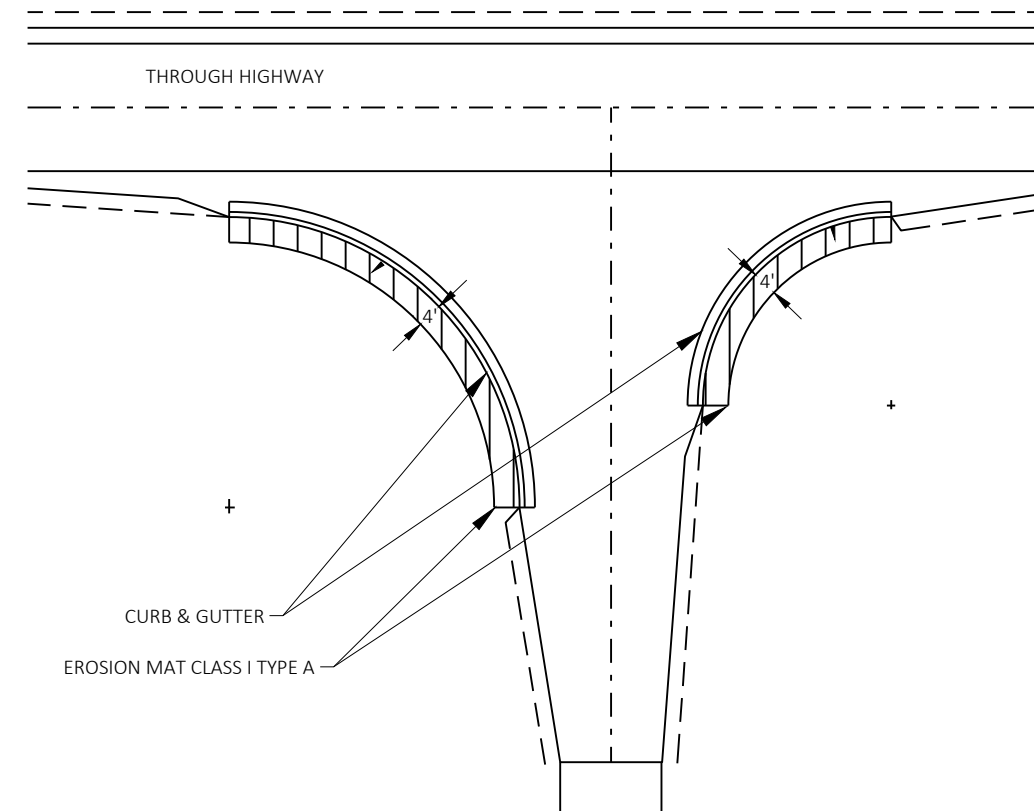
PROJECT ID: 6640-00-70
 TOTAL PROJECT AREA = 158.647 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.541 ACRES



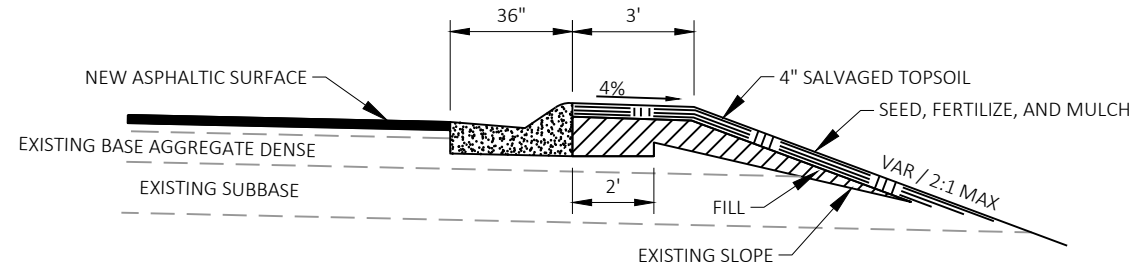
RIPRAP AND GEOTEXTILE



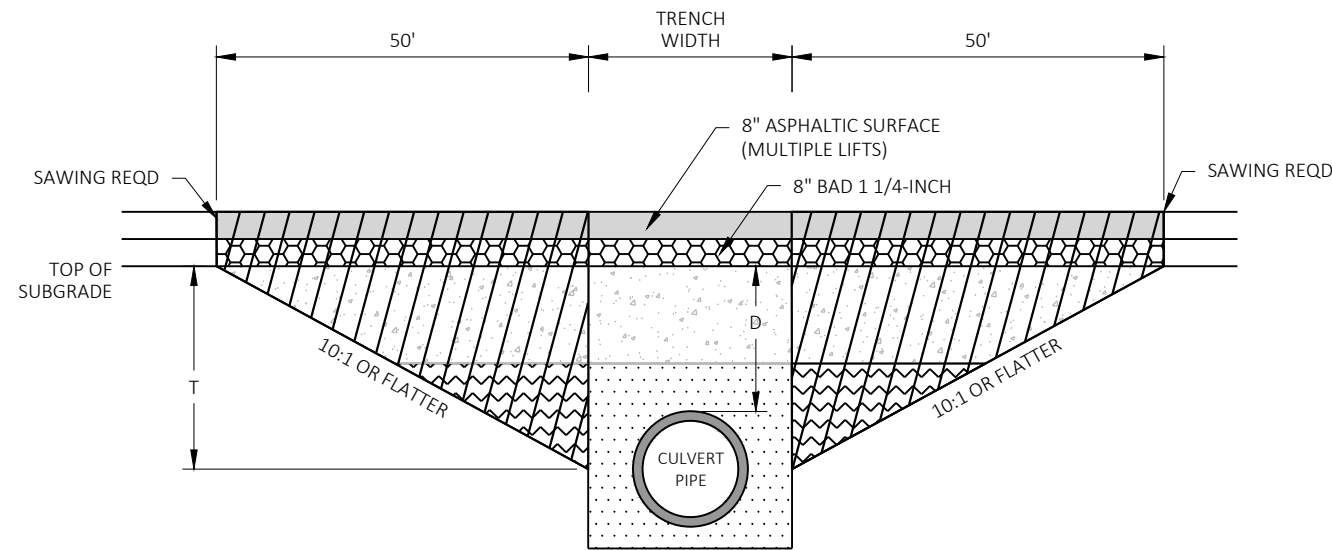
ROCK BAGS USED FOR SILT FENCE RELIEF



EROSION MAT DETAIL AT RURAL INTERSECTIONS

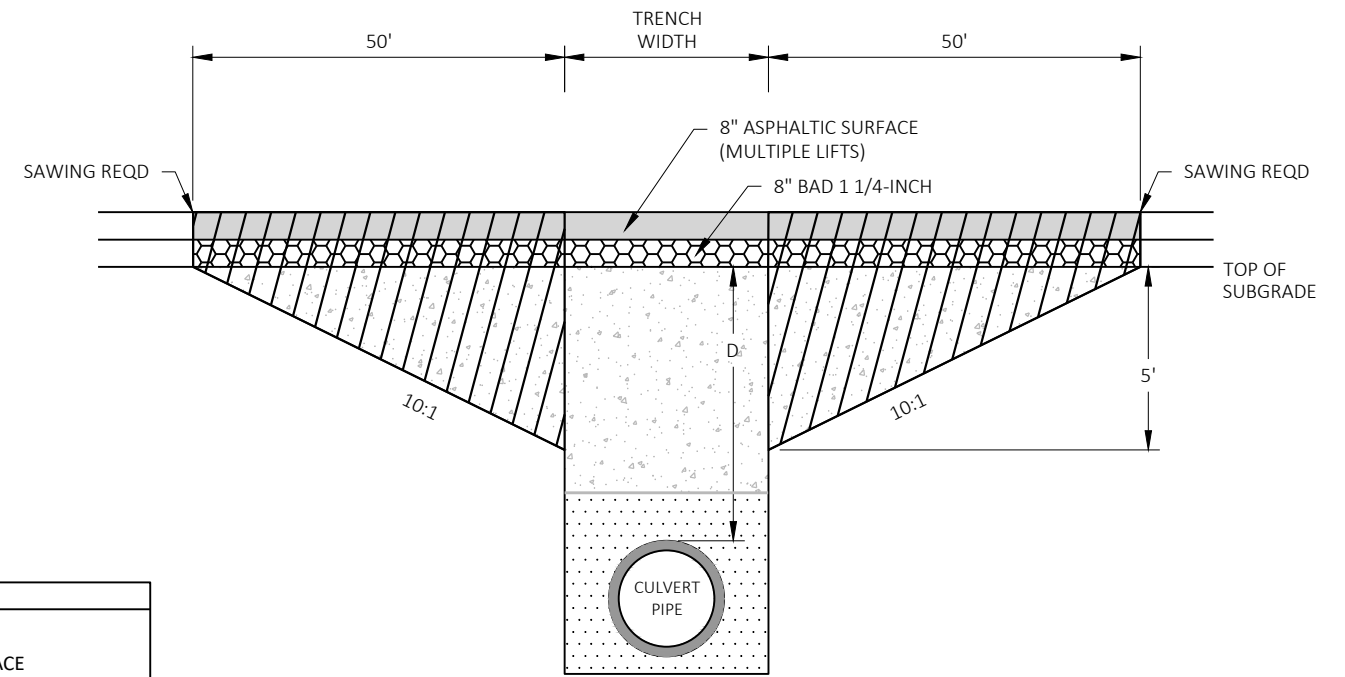


DETAIL OF CURB & GUTTER INSTALLATION AT INTERSECTIONS



DEPTH D < 6 FT

TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.



DEPTH D ≥ 6 FT

KEY	
	PROPOSED SURFACE
	PROPOSED BASE
	TRENCH BACKFILL
	TRENCH OR FOUNDATION BACKFILL
	FOUNDATION BACKFILL
	TRANSITION CUT

NOTES

- TRANSITION CUT IS PAID AS EXCAVATION COMMON.
- TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
- BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
- PERFORM CULVERT PIPE INSTALLATION BEFORE MILLING AND PAVING MAINLINE.
- PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION. THEN MILL AND OVERLAY 2-INCHES WITH HMA PAVEMENT 4 MT 58-28 S.

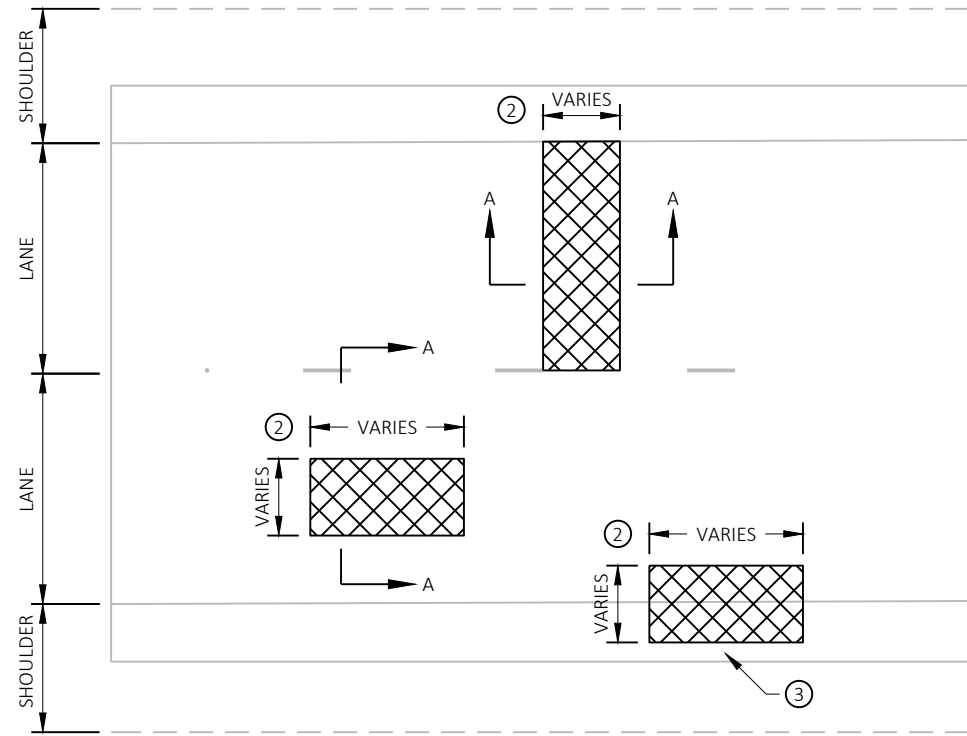
CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
STH 73	1014+79	1.5'	71" X 47"	POLYMER COATED CSPA
STH 73	1042+89	2.0'	49" X 33"	POLYMER COATED CSPA
STH 73	1074+02	6.5'	36"	POLYMER COATED CPCS
STH 73	1167+30	1.5'	42" X 29"	POLYMER COATED CSPA

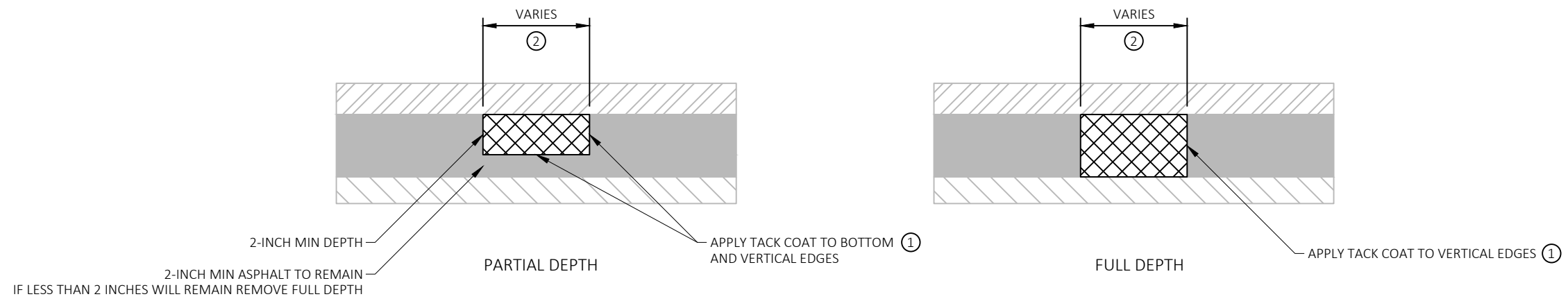
NOTES:

PERFORM REMOVING ASPHALTIC SURFACE MILLING PRIOR TO REMOVING DISTRESSED ASPHALTIC SURFACE MILLING

- ① MILLED VERTICAL EDGES ARE ACCEPTABLE, SAW CUTS ARE NOT REQUIRED.
- ② THE SMALLEST DIMENSION OF REMOVING DISTRESSED ASPHALTIC SURFACE MILLING IS 4 FEET IN ANY DIRECTION.
- ③ WHEN THE DISTANCE FROM THE EDGE OF PAVEMENT TO EDGE OF REMOVING DISTRESSED ASPHALTIC SURFACE MILLING IS LESS THAN 1-FOOT, EXTEND THE REMOVING DISTRESSED ASPHALTIC SURFACE MILLING TO THE EDGE OF PAVEMENT.



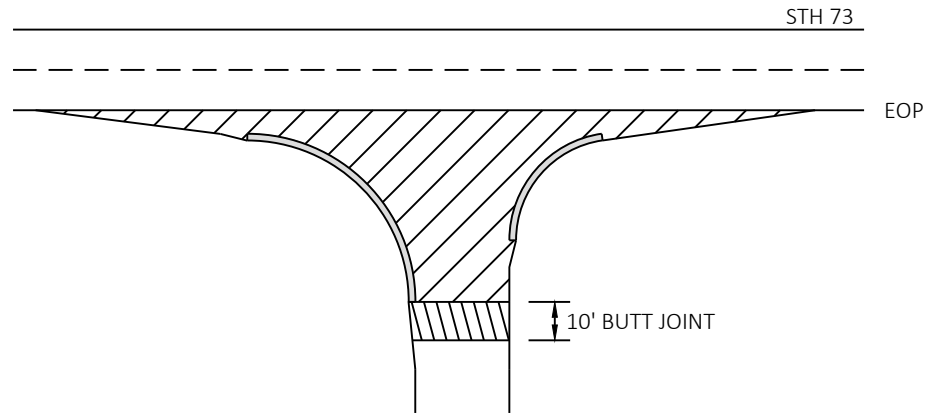
PLAN VIEW





SECTION A-A

- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING DISTRESSED ASPHALTIC SURFACE MILLING
ASPHALTIC SURFACE PATCHING
- EXISTING ASPHALT
- EXISTING BASE COURSE

REMOVING DISTRESSED ASPHALTIC SURFACE MILLING
 LOCATIONS AND LIMITS DETERMINED BY THE ENGINEER IN THE FIELD

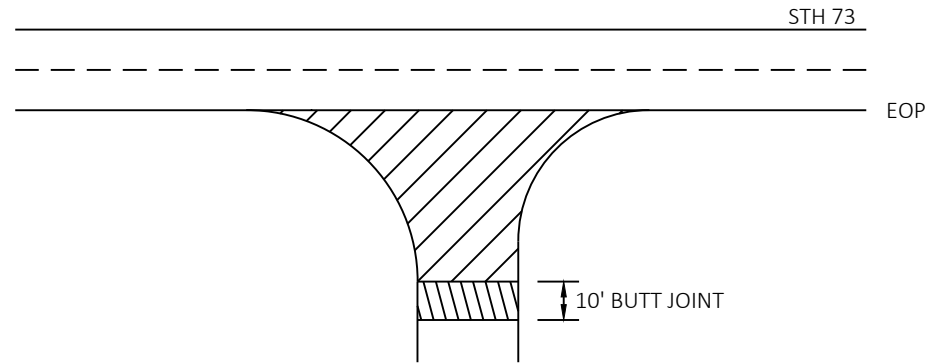




-  REMOVING ASPHALTIC SURFACE MILLING
-  REMOVING ASPHALTIC SURFACE BUTT JOINTS SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

**SIDE ROADS
WITH CURB AND GUTTER**

- STH 44
- HERITAGE RD
- CTH S
- CTH H
- CTH BB
- CTH B (EAST)
- CTH K
- CTH D
- CTH T

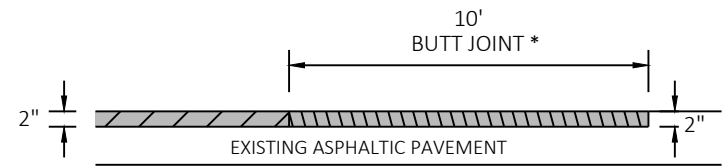





-  REMOVING ASPHALTIC SURFACE MILLING
-  REMOVING ASPHALTIC SURFACE BUTT JOINTS SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

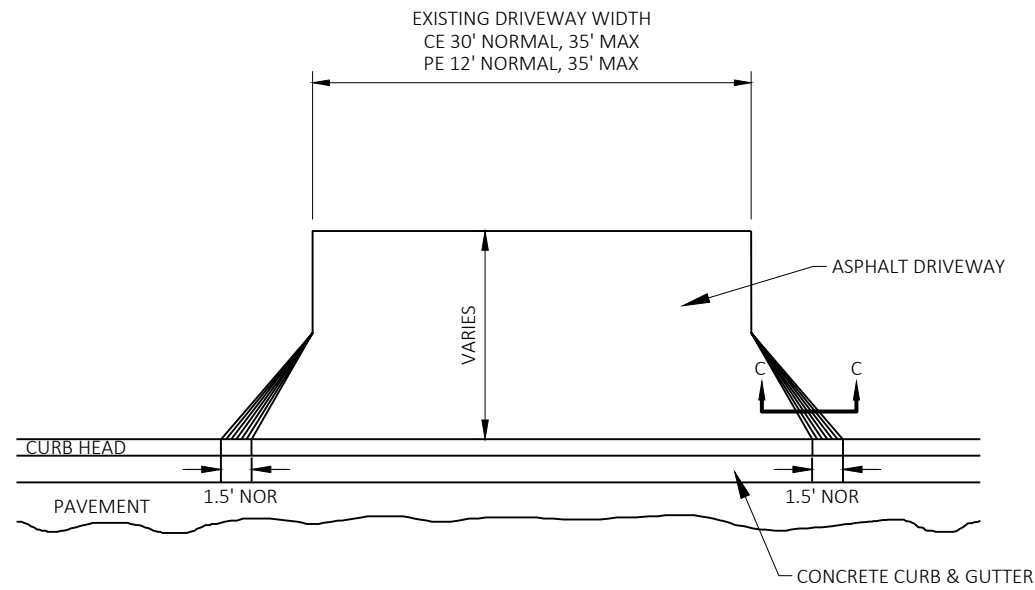
**SIDE ROADS
WITHOUT CURB AND GUTTER**

- NORTH RD
- PHELPS RD
- CTH B (WEST)
- OLD DITCH RD
- MAPLE RD
- SWANSONS RD
- LILL AVE
- BEYERS COVE RD
- REETZ RD

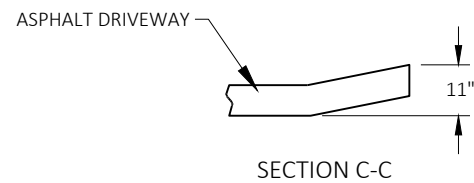


-  HMA PAVEMENT
-  REMOVING ASPHALTIC SURFACE MILLING
-  REMOVING ASPHALTIC SURFACE BUTT JOINTS
- * 3' BUTT JOINT FOR ASPHALTIC ENTRANCES

**BUTT JOINT
MAINLINE, SIDE ROADS AND ASPHALTIC ENTRANCES**

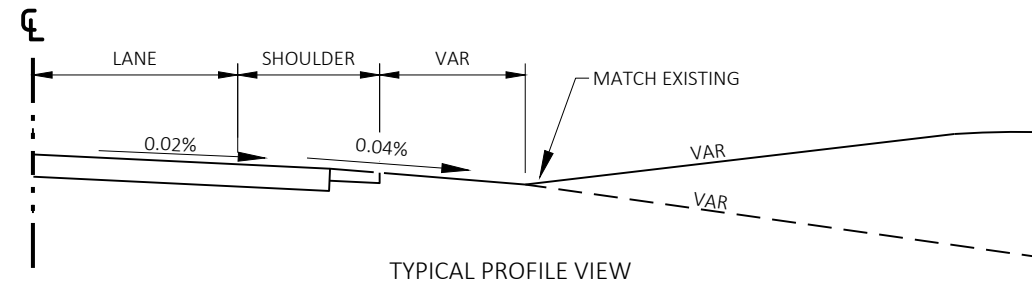


PLAN VIEW

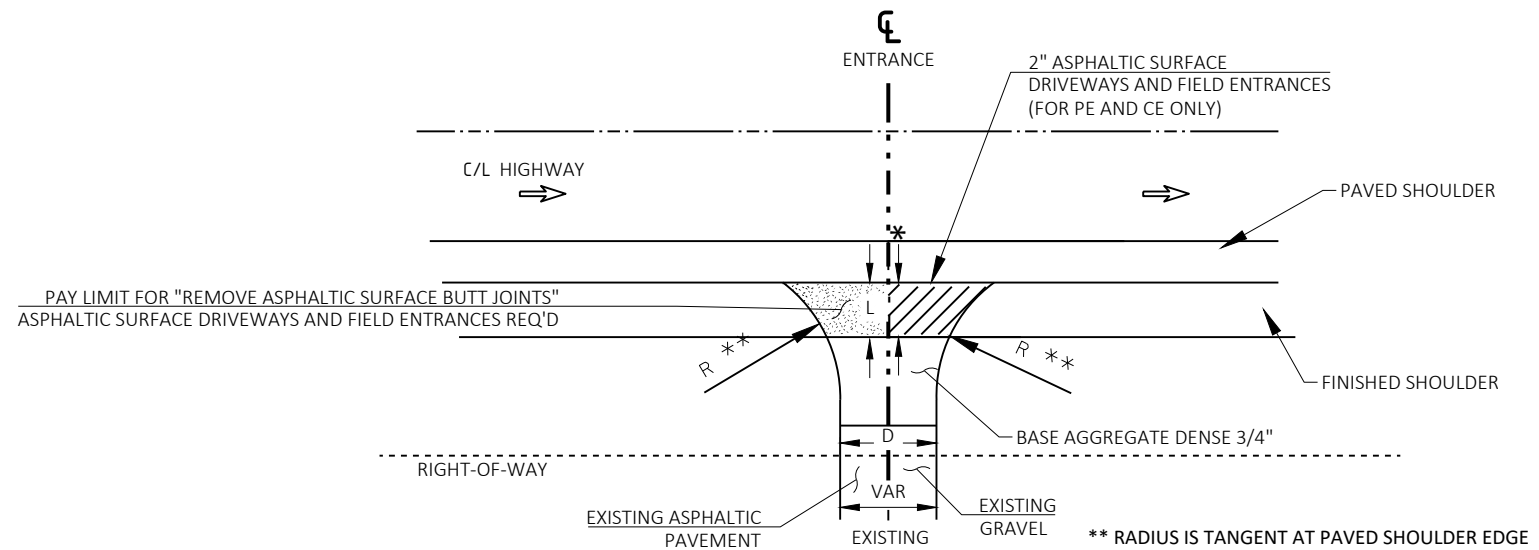


SECTION C-C

DRIVEWAY ENTRANCE WITH CURB & GUTTER



TYPICAL PROFILE VIEW



PAY LIMIT FOR "REMOVE ASPHALTIC SURFACE BUTT JOINTS"
ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES REQ'D

L= VARIABLE 3' TO 5', EXACT LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER

D=DRIVEWAY WIDTH
D=20'TYP(PE & FE) (16'MIN-24'MAX)
D=28'TYP(CE & FARM ENT) (24'MIN-35'MAX)

** RADIUS IS TANGENT AT PAVED SHOULDER EDGE
R=30' FOR 0' TO 3' PAVED SHOULDER
R=25' FOR GREATER THAN 3' PAVED SHOULDER

* 5' MIN OR TO FINISHED SHOULDER WHICH EVER IS GREATER FOR EXISTING ASPHALTIC BUMP OUTS

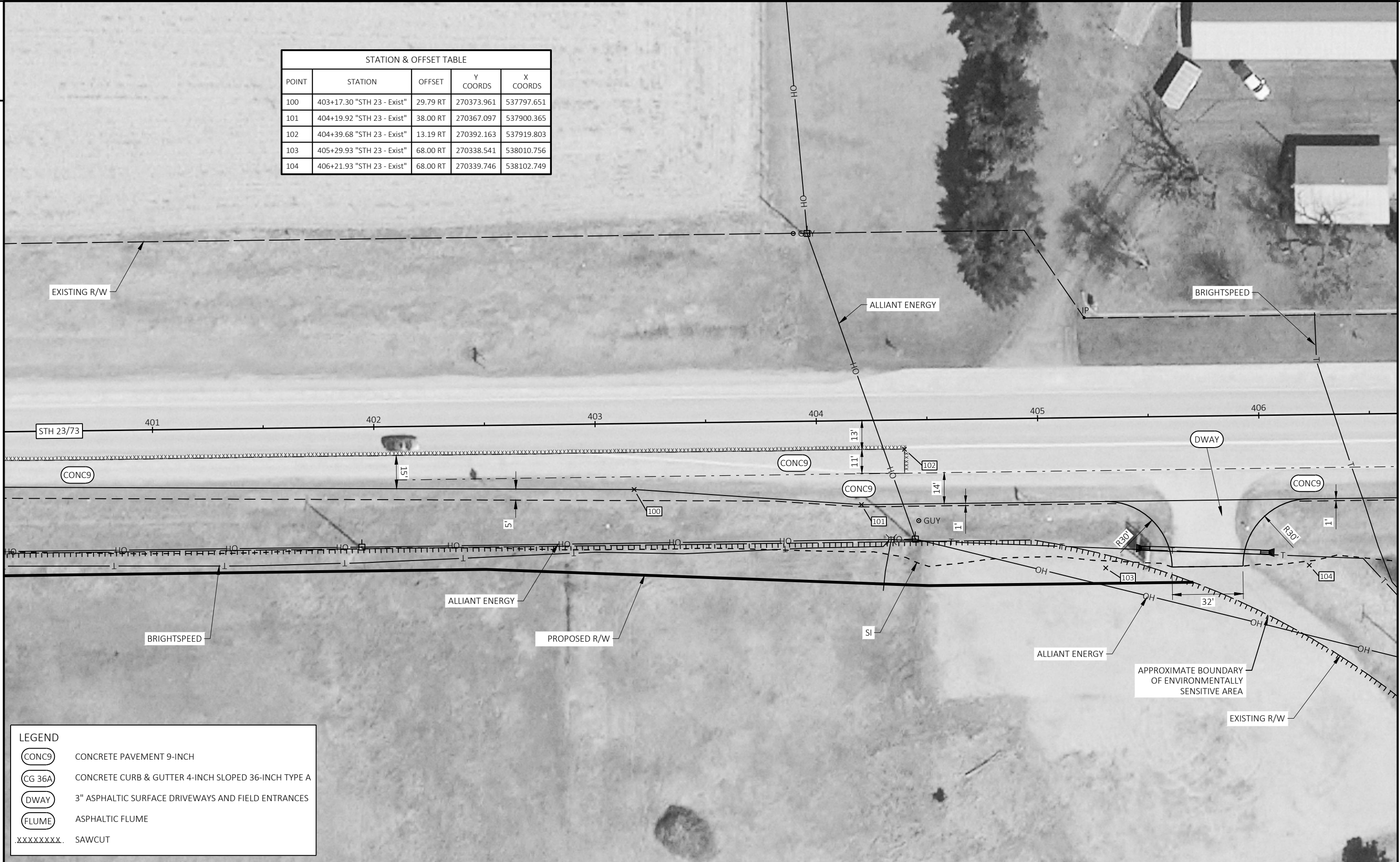
PLAN VIEW

RURAL DRIVEWAY INTERSECTION (PE, FE & CE)
(FOR RESURFACING PROJECTS)



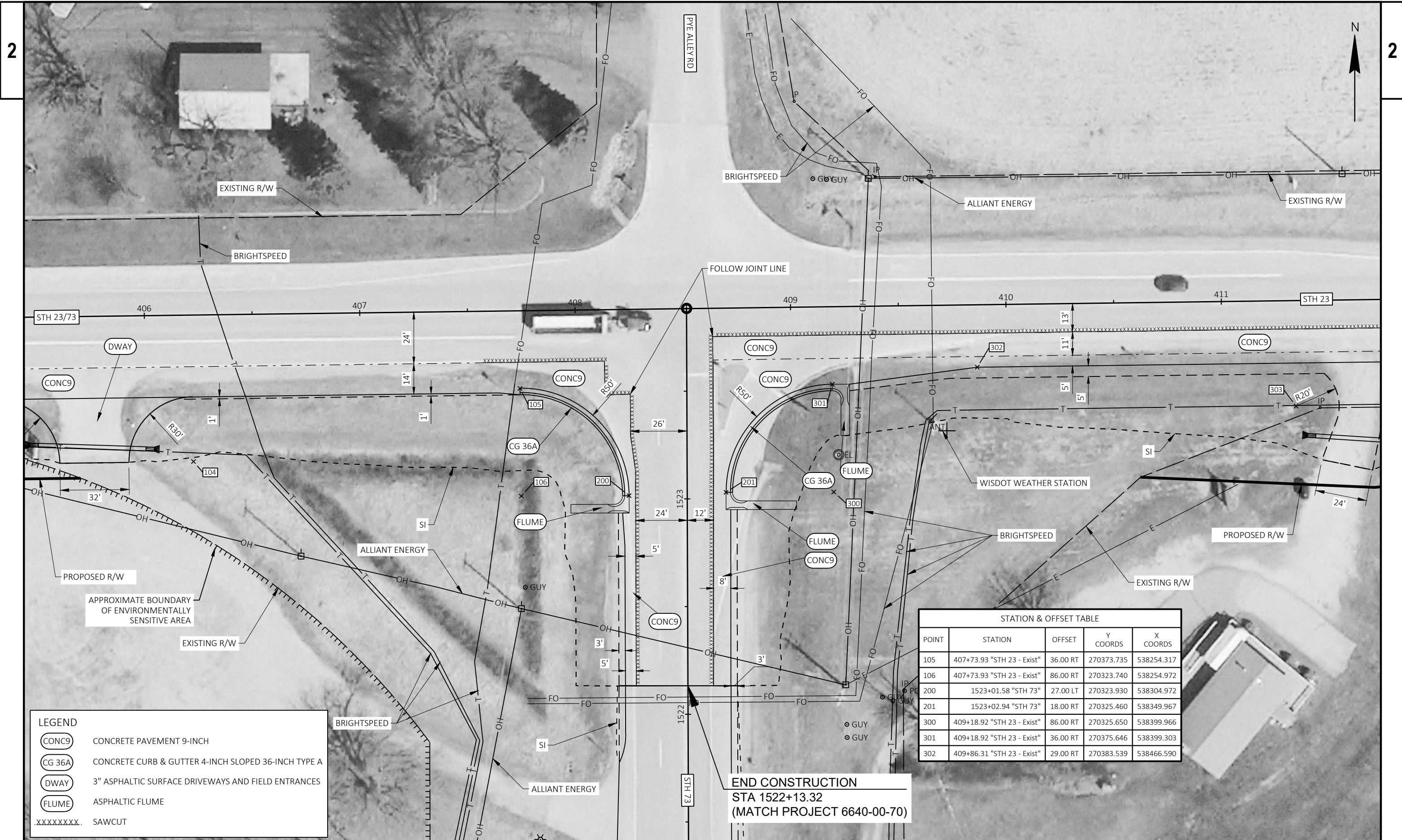
LEGEND	
(CONC9)	CONCRETE PAVEMENT 9-INCH
(CG 36A)	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
(DWAY)	3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
(FLUME)	ASPHALTIC FLUME
.XXXXXXXXX.	SAWCUT

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
100	403+17.30 "STH 23 - Exist"	29.79 RT	270373.961	537797.651
101	404+19.92 "STH 23 - Exist"	38.00 RT	270367.097	537900.365
102	404+39.68 "STH 23 - Exist"	13.19 RT	270392.163	537919.803
103	405+29.93 "STH 23 - Exist"	68.00 RT	270338.541	538010.756
104	406+21.93 "STH 23 - Exist"	68.00 RT	270339.746	538102.749



LEGEND

(CONC9)	CONCRETE PAVEMENT 9-INCH
(CG 36A)	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
(DWAY)	3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
(FLUME)	ASPHALTIC FLUME
.XXXXXXXX.	SAWCUT



LEGEND

CONC9	CONCRETE PAVEMENT 9-INCH
CG 36A	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
DWAY	3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
FLUME	ASPHALTIC FLUME
.XXXXXXXX.	SAWCUT

STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS
105	407+73.93 "STH 23 - Exist"	36.00 RT	270373.735	538254.317
106	407+73.93 "STH 23 - Exist"	86.00 RT	270323.740	538254.972
200	1523+01.58 "STH 73"	27.00 LT	270323.930	538304.972
201	1523+02.94 "STH 73"	18.00 RT	270325.460	538349.967
300	409+18.92 "STH 23 - Exist"	86.00 RT	270325.650	538399.966
301	409+18.92 "STH 23 - Exist"	36.00 RT	270375.646	538399.303
302	409+86.31 "STH 23 - Exist"	29.00 RT	270383.539	538466.590

END CONSTRUCTION
STA 1522+13.32
(MATCH PROJECT 6640-00-70)

LEGEND

- CONC9 CONCRETE PAVEMENT 9-INCH
- CG 36A CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- DWAY 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- FLUME ASPHALTIC FLUME
- .XXXXXXXX SAWCUT



STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
303	411+34.07 "STH 23 - Exist"	49.00 RT	270365.501	538614.607
304	412+00.20 "STH 23 - Exist"	54.00 RT	270361.378	538680.792
305	412+80.14 "STH 23 - Exist"	29.00 RT	270387.436	538760.399
306	416+42.00 "STH 23 - Exist"	22.97 RT	270398.266	539122.145
307	417+00.00 "STH 23 - Exist"	25.00 RT	270397.002	539180.167



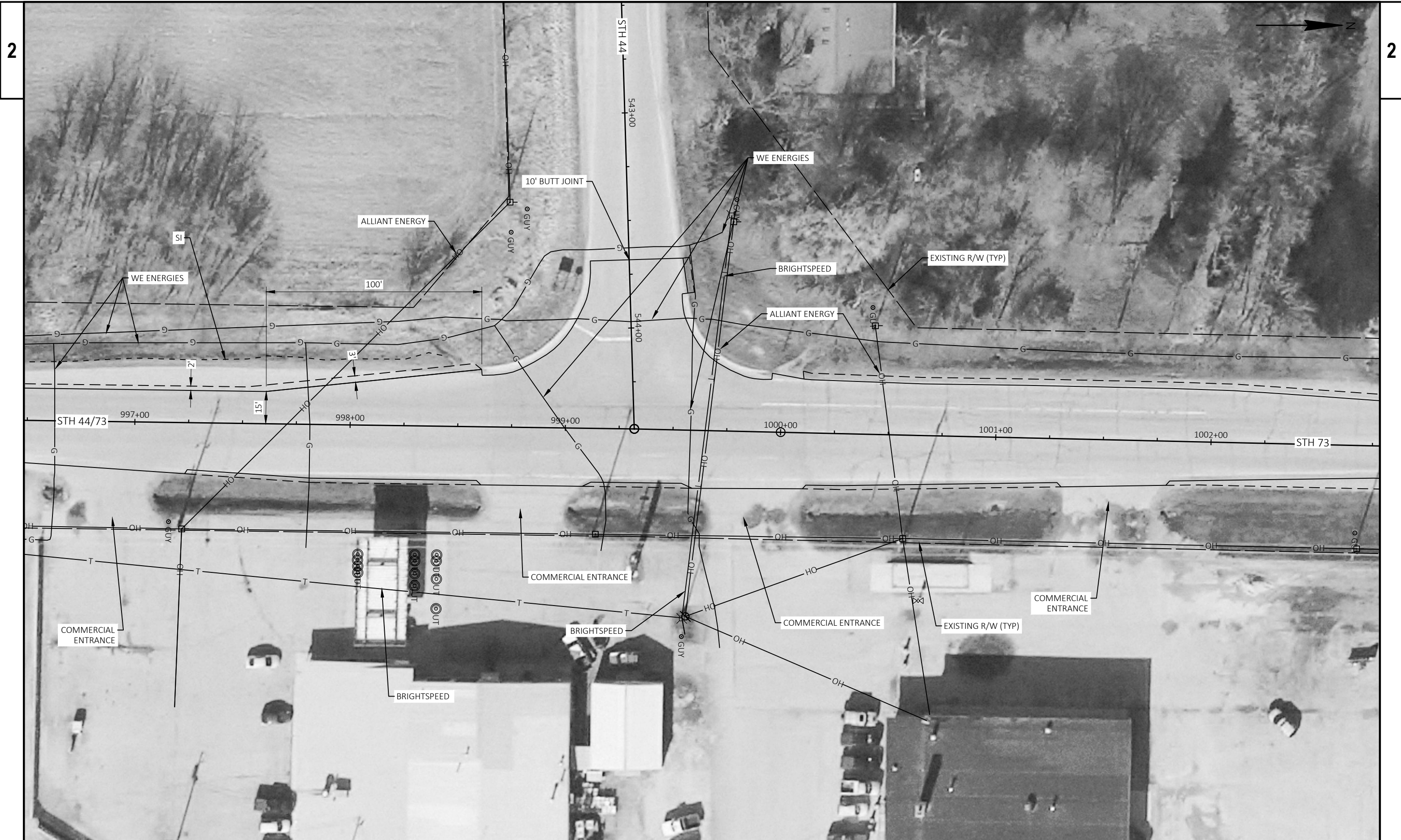
LEGEND

- CONC9 CONCRETE PAVEMENT 9-INCH
- CG 36A CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- DWAY 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- FLUME ASPHALTIC FLUME
- SAWCUT





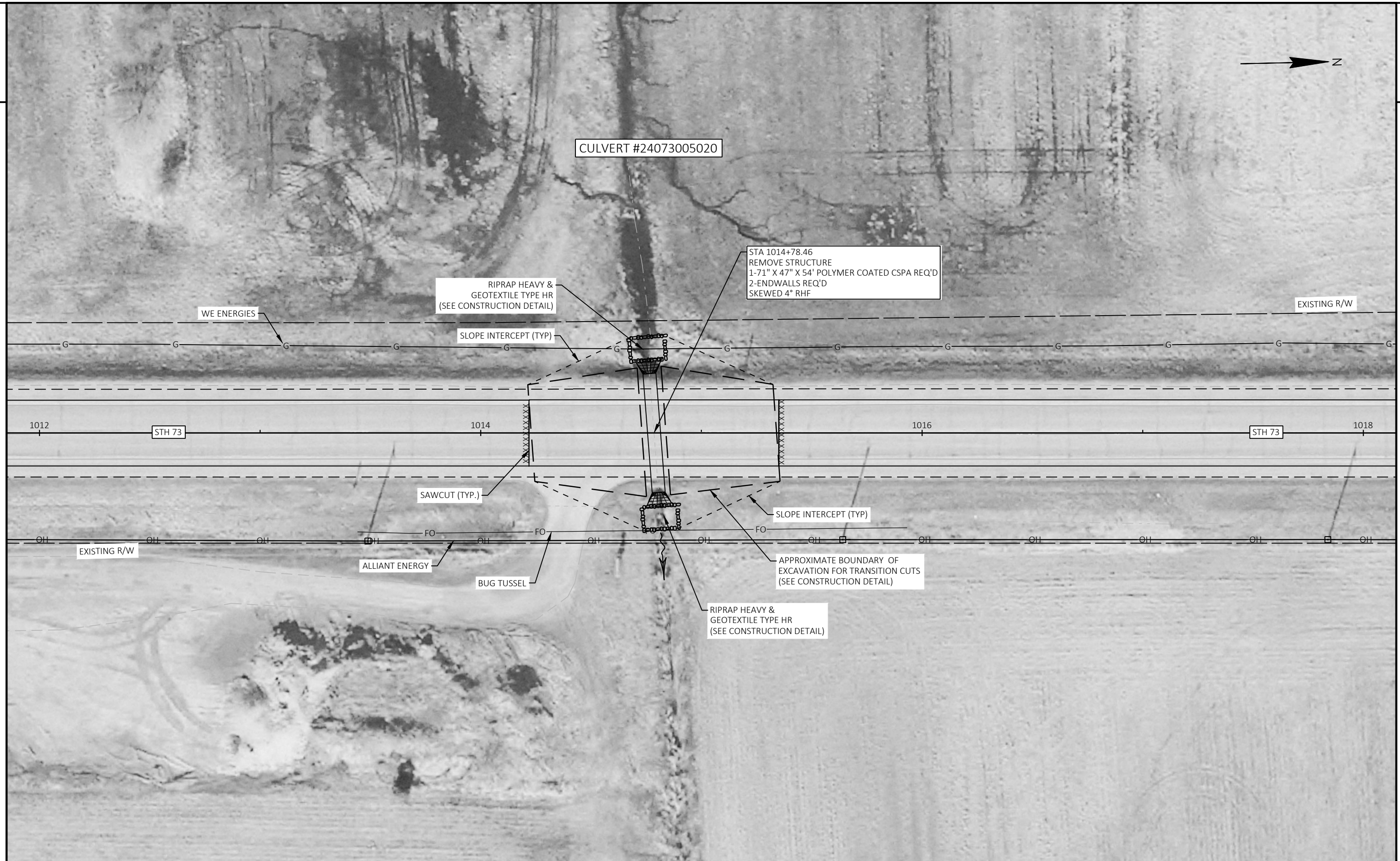
PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN DETAILS - STH 44 & STH 73 SOUTHWEST QUADRANT - REMOVE EXCESS PAVEMENT	SHEET E
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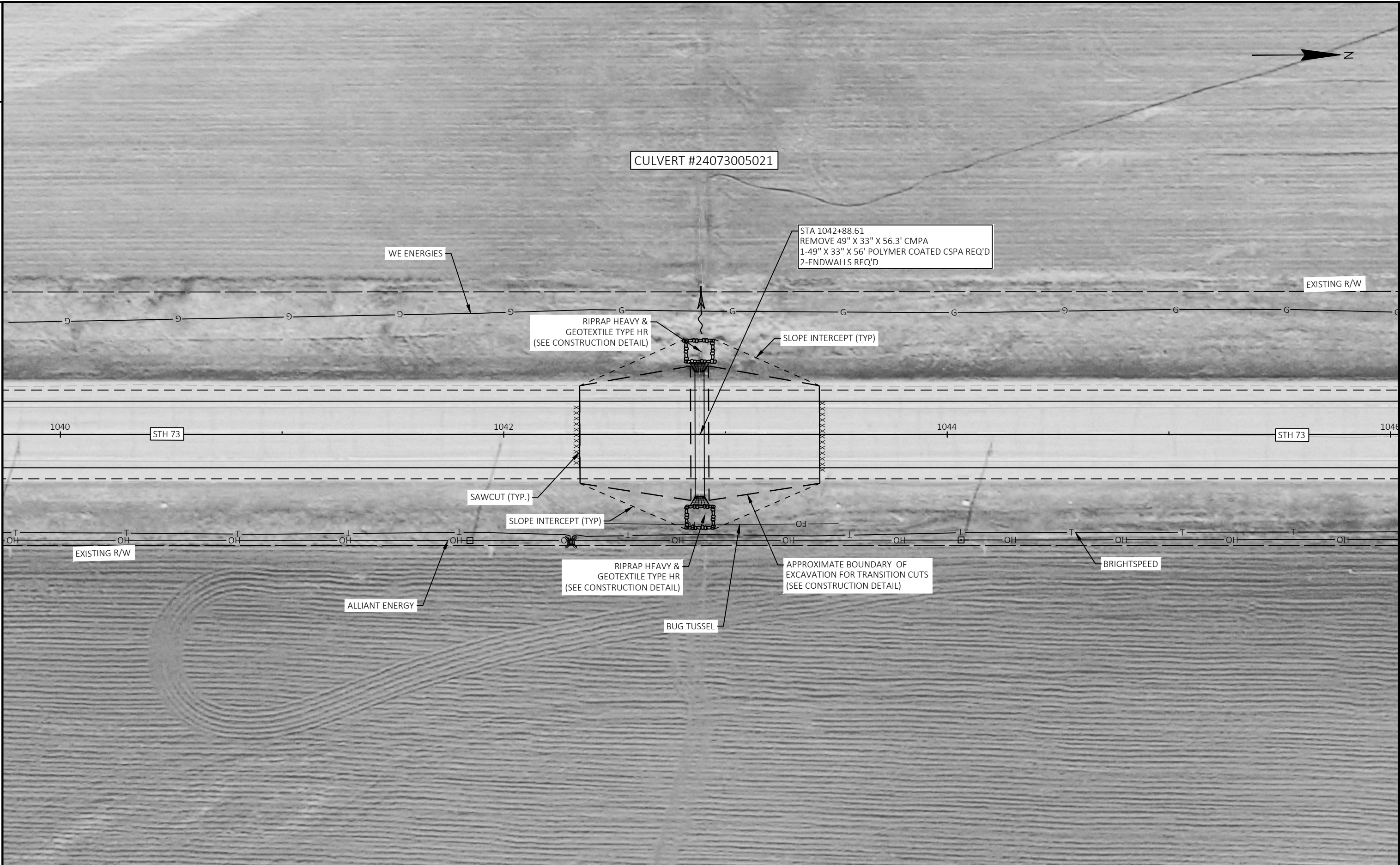
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2

PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN DETAILS - STH 44 & STH 73 SOUTHWEST QUADRANT - REMOVE EXCESS PAVEMENT	SHEET E
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN DETAILS - PIPE REPLACEMENT - STA 1014+78.46	SHEET	E
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN DETAILS - PIPE REPLACEMENT - STA 1042+88.61	SHEET	E
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CULVERT #24073005022

STA 1074+02.15
REMOVE 36" X 84.5' CMP
1-36" X 84' POLYMER COATED CPCS REQ'D
2-ENDWALLS REQ'D
SKEWED 2° RHF

RIPRAP HEAVY &
GEOTEXTILE TYPE HR
(SEE CONSTRUCTION DETAIL)

BRIGHTSPEED

WE ENERGIES

EXISTING R/W

SLOPE INTERCEPT (TYP)

STH 73

1072

1074

1076

STH 73

SAWCUT (TYP.)

SLOPE INTERCEPT (TYP)

EXISTING R/W

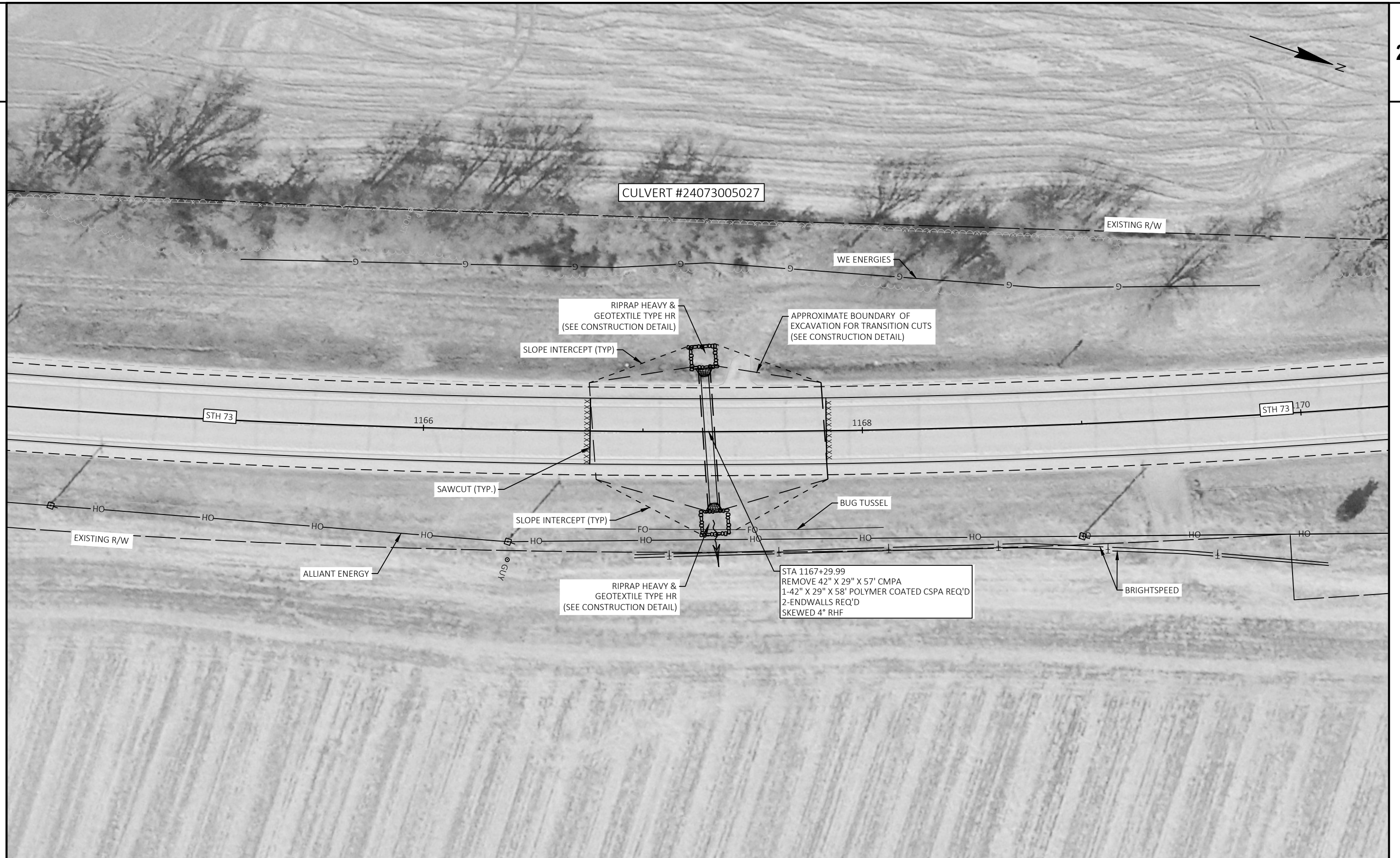
BRIGHTSPEED

ALLIANT ENERGY

RIPRAP HEAVY &
GEOTEXTILE TYPE HR
(SEE CONSTRUCTION DETAIL)

APPROXIMATE BOUNDARY OF
EXCAVATION FOR TRANSITION CUTS
(SEE CONSTRUCTION DETAIL)

BUG TUSSEL



PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN DETAILS - PIPE REPLACEMENT - STA 1167+29.99	SHEET	E
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN DETAILS - BEAM GUARD DETAILS	SHEET	E
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PROJECT NO: 6640-00-70

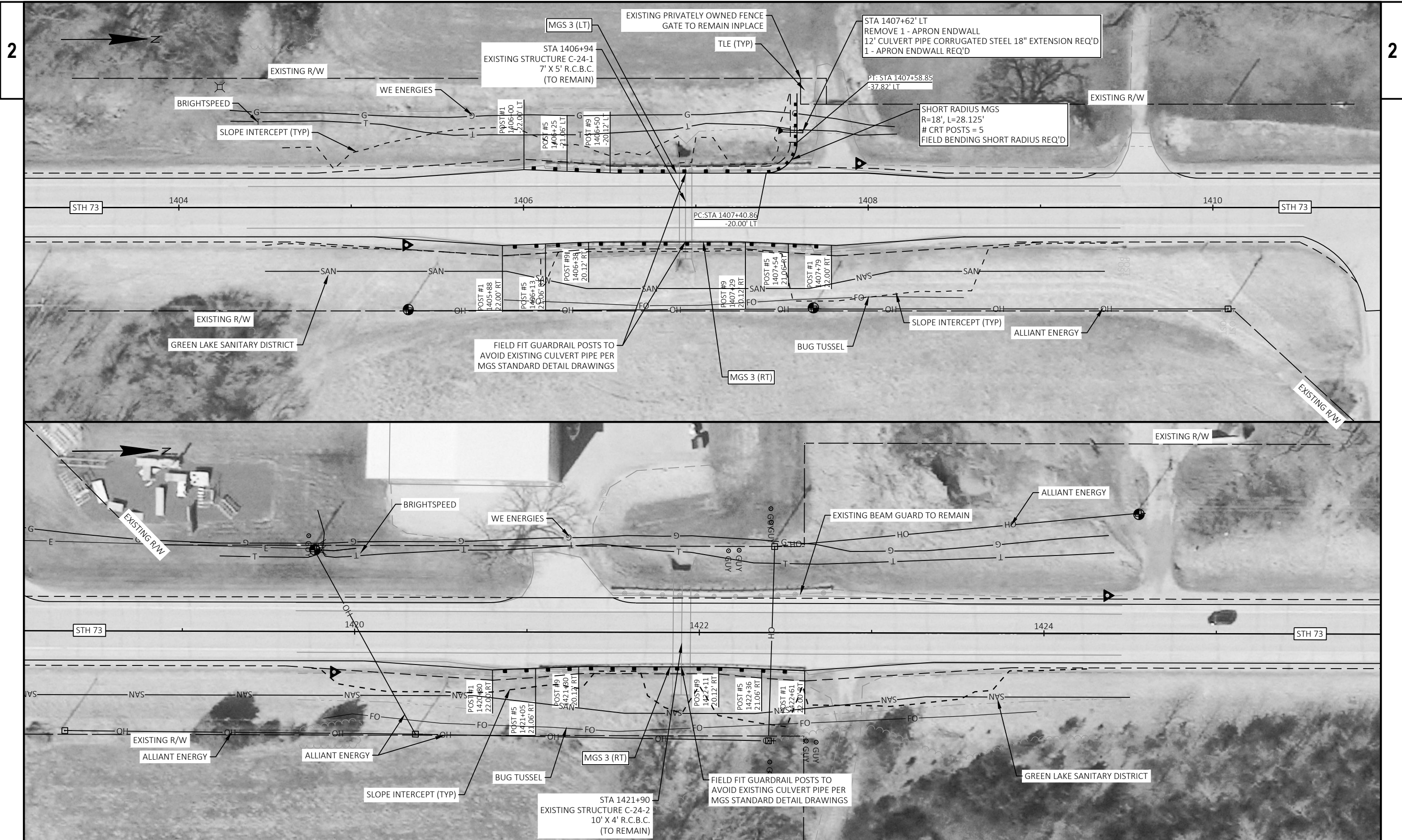
HWY: STH 73

COUNTY: GREEN LAKE

PLAN DETAILS - BEAM GUARD DETAILS

SHEET

E



PROJECT NO: 6640-00-70

HWY: STH 73

COUNTY: GREEN LAKE

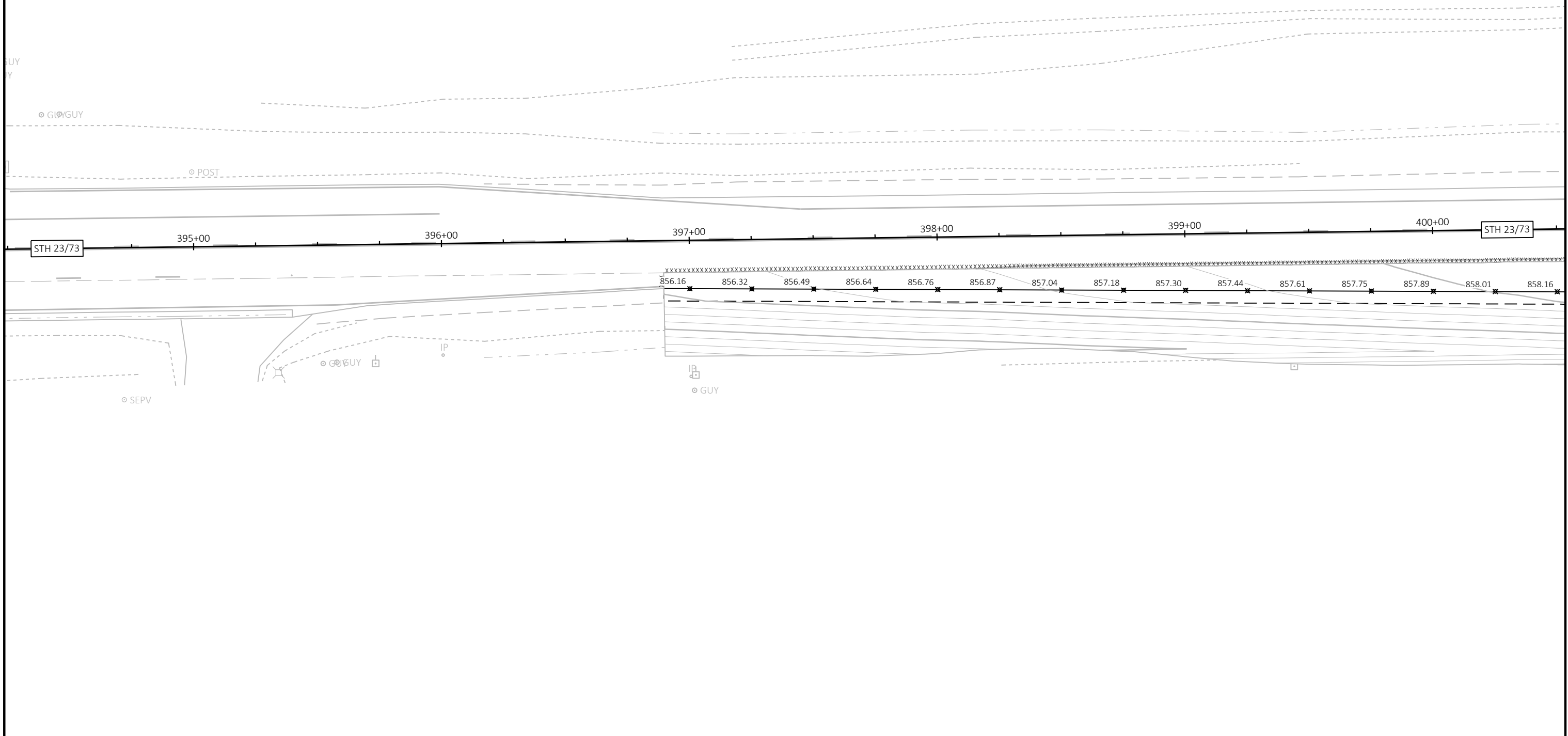
PLAN DETAILS - BEAM GUARD DETAILS

SHEET

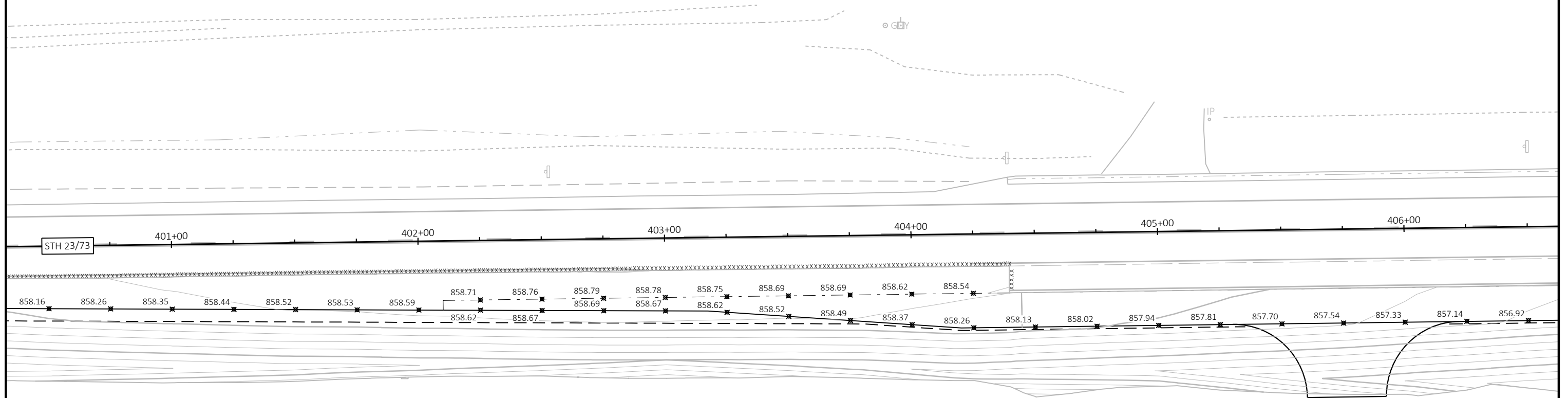
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN DETAILS - BEAM GUARD DETAILS	SHEET	E
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PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	PAVING GRADE	SHEET	E
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PROJECT NO: 1430-08-81

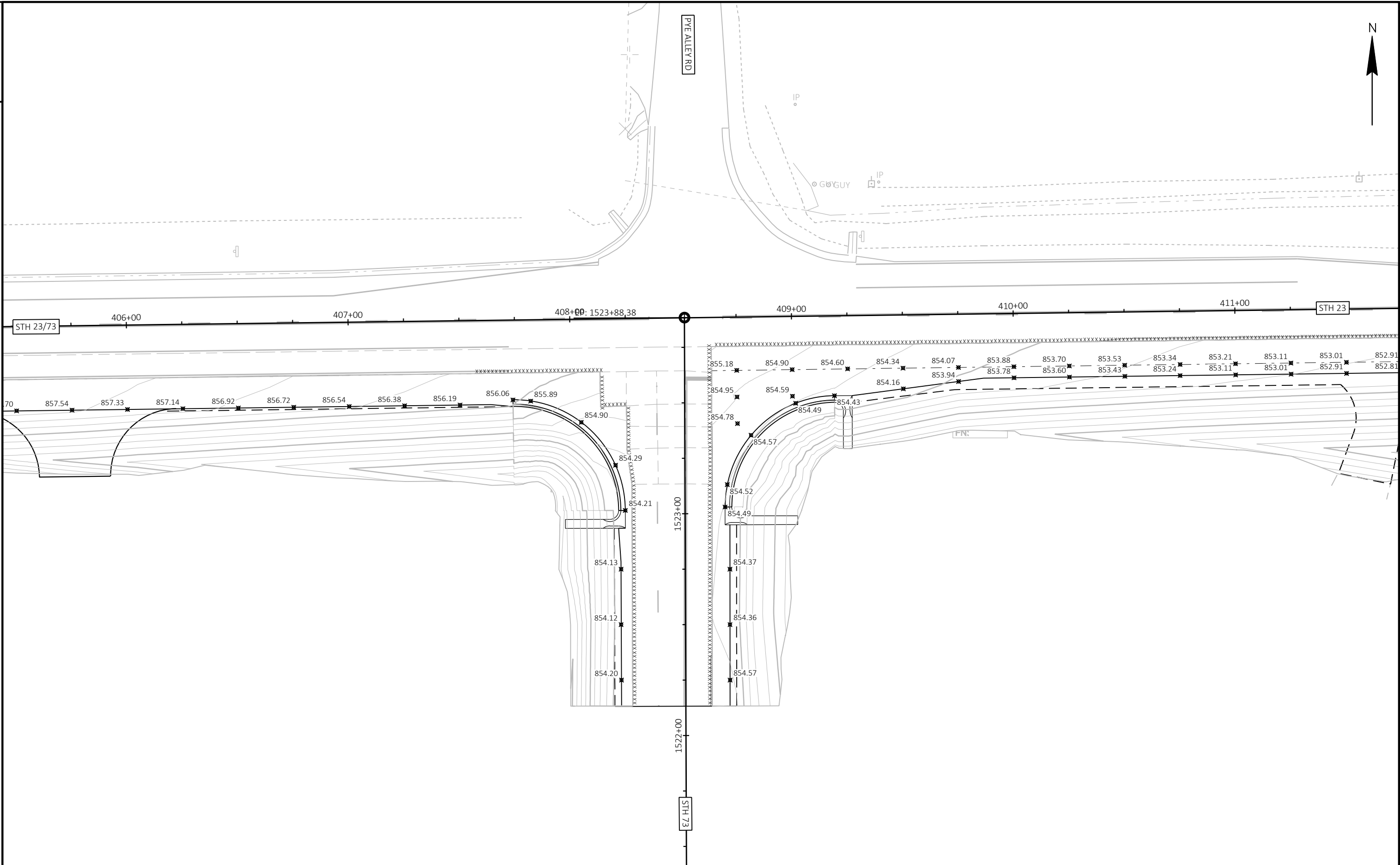
HWY: STH 23

COUNTY: GREEN LAKE

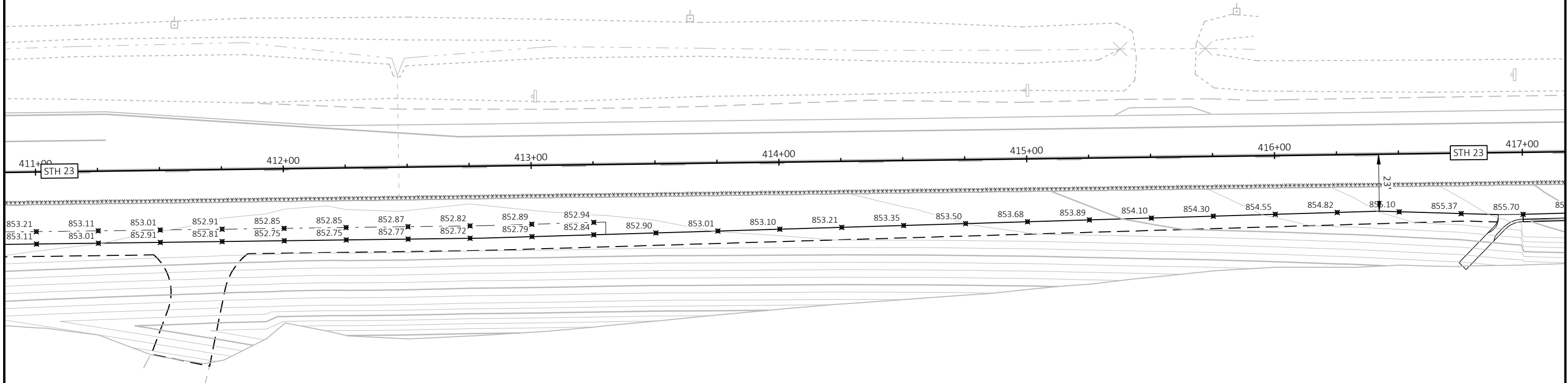
PAVING GRADE

SHEET

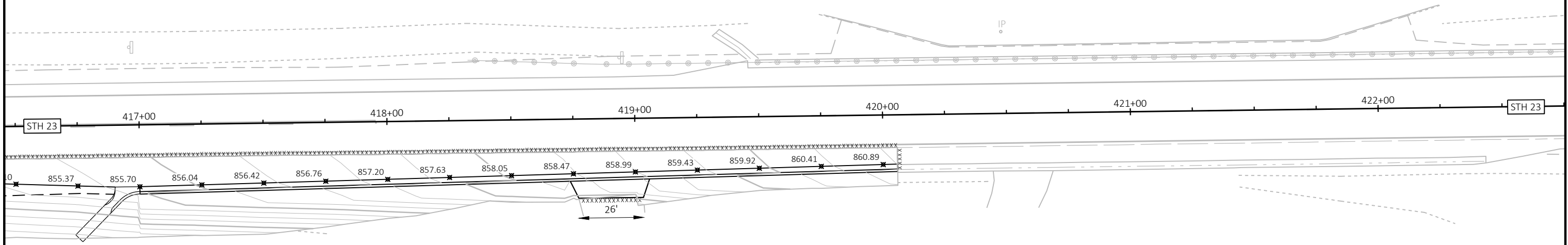
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PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	PAVING GRADE	SHEET	E
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PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	PAVING GRADE	SHEET	E
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PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	PAVING GRADE	SHEET	E
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LEGEND	
	SILT FENCE
	RIPRAP MEDIUM & GEOTEXTILE TYPE HR
	EROSION MAT CLASS 1, TYPE A
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	EROSION CONTROL	SHEET	E
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LEGEND

	SILT FENCE
	RIPRAP MEDIUM & GEOTEXTILE TYPE HR
	EROSION MAT CLASS 1, TYPE A
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

PROJECT NO: 1430-08-81

HWY: STH 23

COUNTY: GREEN LAKE

EROSION CONTROL

SHEET

E



LEGEND	
	SILT FENCE
	RIPRAP MEDIUM & GEOTEXTILE TYPE HR
	EROSION MAT CLASS 1, TYPE A
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

END CONSTRUCTION
 STA 1522+13.32
 (MATCH PROJECT 6640-00-70)

LEGEND	
	SILT FENCE
	RIPRAP MEDIUM & GEOTEXTILE TYPE HR
	EROSION MAT CLASS 1, TYPE A
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW






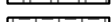
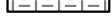




PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	EROSION CONTROL	SHEET	E
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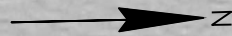
LEGEND	
	SILT FENCE
	RIPRAP MEDIUM & GEOTEXTILE TYPE HR
	EROSION MAT CLASS 1, TYPE A
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW



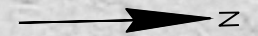
PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	EROSION CONTROL	SHEET	E
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LEGEND

-  SILT FENCE
-  RIPRAP HEAVY & GEOTEXTILE TYPE HR
-  EROSION MAT CLASS I, TYPE A
-  EROSION MAT CLASS II, TYPE B
-  SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
-  SLOPE INTERCEPT
-  TEMPORARY DITCH CHECK
-  CULVERT PIPE CHECK
-  SURFACE WATER FLOW



PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	EROSION CONTROL - STA 1014+78.46	SHEET	E
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CULVERT #24073005020

EXISTING R/W

1012

STH 73

1014

DEWATERING MAY BE REQUIRED

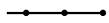



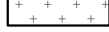
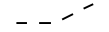



1016

STH 73

1018

EXISTING R/W

LEGEND

-  SILT FENCE
-  RIPRAP HEAVY & GEOTEXTILE TYPE HR
-  EROSION MAT CLASS I, TYPE A
-  EROSION MAT CLASS II, TYPE B
-  SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
-  SLOPE INTERCEPT
-  TEMPORARY DITCH CHECK
-  CULVERT PIPE CHECK
-  SURFACE WATER FLOW

PROJECT NO: 6640-00-70

HWY: STH 73

COUNTY: GREEN LAKE

EROSION CONTROL - STA 1014+78.46

SHEET

E



CULVERT #24073005022

EXISTING R/W

STH 73

1072

1074

1076

STH 73

EXISTING R/W

LEGEND	
	SILT FENCE
	RIPRAP HEAVY & GEOTEXTILE TYPE HR
	EROSION MAT CLASS I, TYPE A
	EROSION MAT CLASS II, TYPE B
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

PROJECT NO: 6640-00-70

HWY: STH 73

COUNTY: GREEN LAKE

EROSION CONTROL - STA 1074+02.15

SHEET

E



CULVERT #24073005021

EXISTING R/W

1040

STH 73

1042

1044

STH 73

1046

EXISTING R/W

LEGEND	
	SILT FENCE
	RIPRAP HEAVY & GEOTEXTILE TYPE HR
	EROSION MAT CLASS I, TYPE A
	EROSION MAT CLASS II, TYPE B
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW



CULVERT #24073005027

EXISTING R/W

STH 73

1166

1168

STH 73

1170

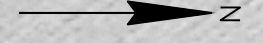
EXISTING R/W

LEGEND	
	SILT FENCE
	RIPRAP HEAVY & GEOTEXTILE TYPE HR
	EROSION MAT CLASS I, TYPE A
	EROSION MAT CLASS II, TYPE B
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW



LEGEND	
	SILT FENCE
	RIPRAP HEAVY & GEOTEXTILE TYPE HR
	EROSION MAT CLASS I, TYPE A
	EROSION MAT CLASS II, TYPE B
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	EROSION CONTROL	SHEET	E
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SILT FENCE RELIEF
(SEE CONS. DETAIL)

STA 1203+26
EXISTING 30" CMCP
(TO REMAIN)

LEGEND	
	SILT FENCE
	RIPRAP HEAVY & GEOTEXTILE TYPE HR
	EROSION MAT CLASS I, TYPE A
	EROSION MAT CLASS II, TYPE B
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	EROSION CONTROL	SHEET	E
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LEGEND

	SILT FENCE
	RIPRAP HEAVY & GEOTEXTILE TYPE HR
	EROSION MAT CLASS I, TYPE A
	EROSION MAT CLASS II, TYPE B
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	EROSION CONTROL	SHEET	E
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FILE NAME : I:\47\470381 STH 73 REHABILITATION\C3D\SHEETSPLAN\66400070_022001_EC.DWG PLOT DATE : 11/9/2023 10:03 AM PLOT BY : KUSCHEL, LEVI PLOT NAME : PLOT SCALE : 1 IN:50 FT WISDOT/CADD SHEET 44

LAYOUT NAME - 07





LEGEND

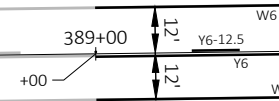
	SILT FENCE
	RIPRAP HEAVY & GEOTEXTILE TYPE HR
	EROSION MAT CLASS I, TYPE A
	EROSION MAT CLASS II, TYPE B
	SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO 30, MULCH
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE EROSION CONTROL SHEET **E**



(TO REMAIN)

STH 23/73 383+00 384+00 385+00 386+00 387+00 388+00 STH 23/73 389+00



LEGEND

	PROPOSED OR MOVED SIGN ON SINGLE/DOUBLE SUPPORT
	MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
LABEL	DESCRIPTION
W6	MARKING LINE 6-INCH, WHITE
W6-12.5	MARKING LINE 6-INCH, WHITE, 12.5' SEG., 37.5' GAP
Y6-12.5	MARKING LINE 6-INCH, YELLOW, 12.5' SEG., 37.5' GAP
Y6	MARKING LINE 6-INCH, YELLOW
DY6	MARKING LINE 6-INCH, DOUBLE YELLOW
SL18	MARKING STOPLINE 18-INCH WHITE
W10	MARKING LINE 10-INCH, WHITE
Y12	MARKING DIAGONAL, 12-INCH, YELLOW, 25-FOOT SPACING
W0	MARKING WORD
A-2	MARKING ARROW TYPE 2

NOTE: ALL EDGELINE MARKING IS EPOXY, LANE LINE/CHANNELIZING LINE MARKING IS GROOVED WET REF EPOXY.

WAYSIDE



(TO REMAIN)

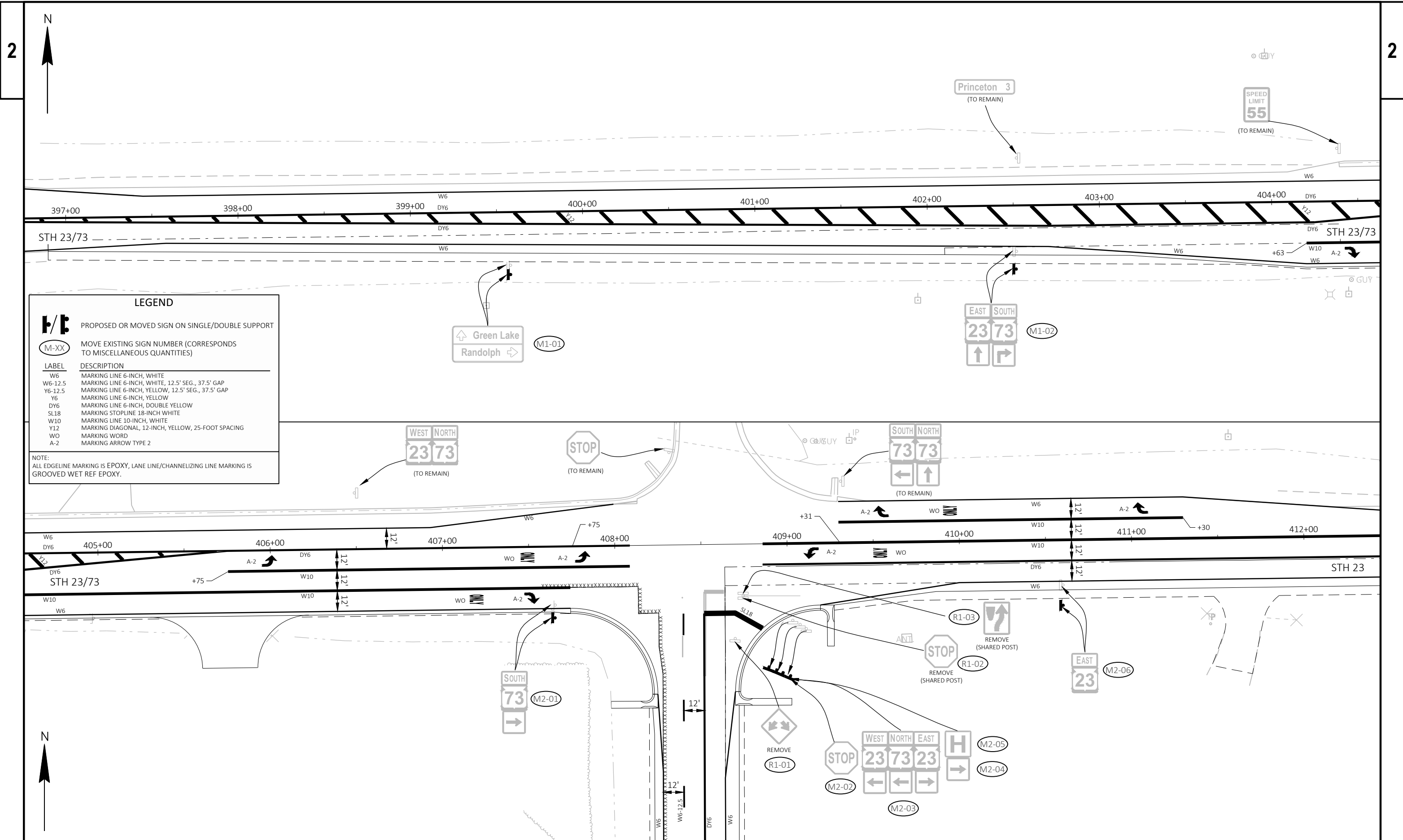


(TO REMAIN)

STH 23/73 390+00 391+00 392+00 393+00 394+00 395+00 396+00 397+00 STH 23/73



(TO REMAIN)



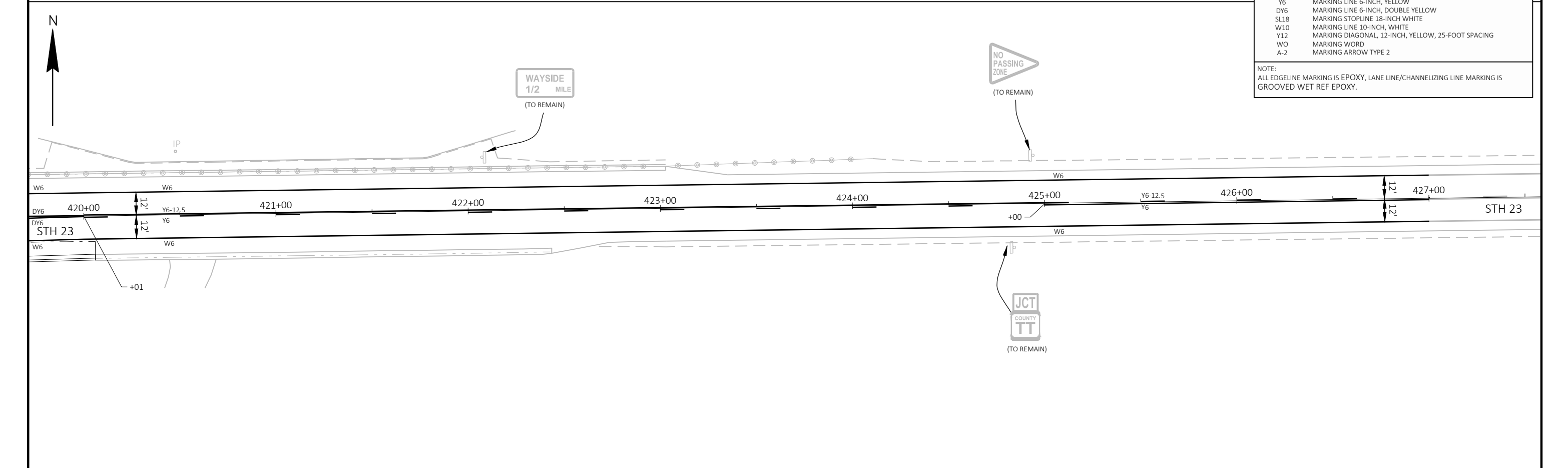
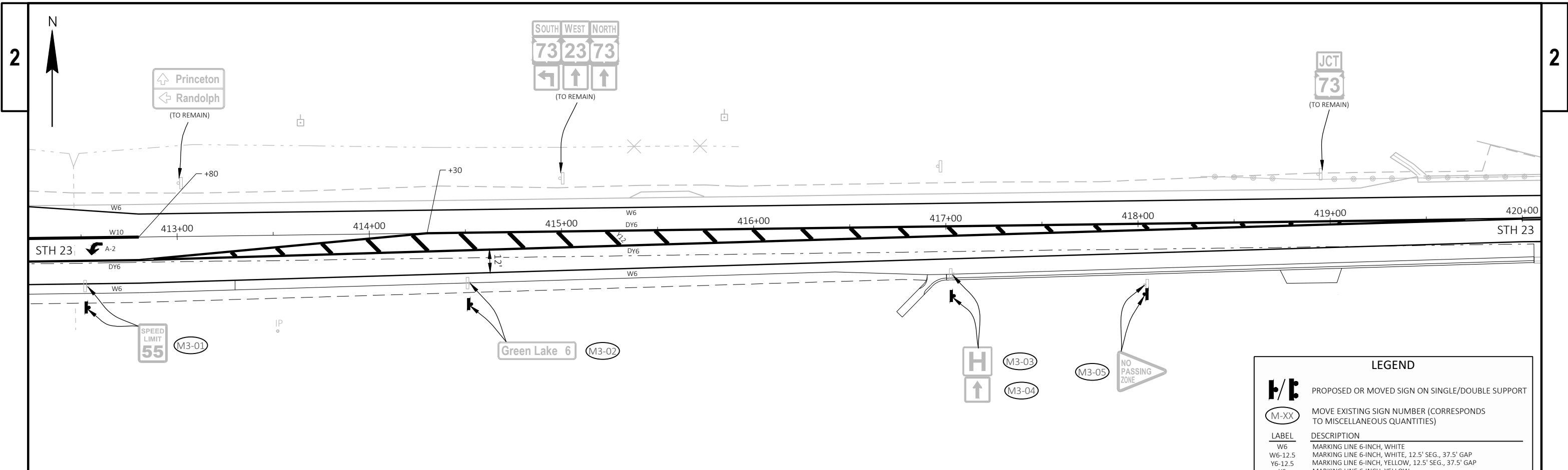
LEGEND

F/T PROPOSED OR MOVED SIGN ON SINGLE/DOUBLE SUPPORT

(M-XX) MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
W6	MARKING LINE 6-INCH, WHITE
W6-12.5	MARKING LINE 6-INCH, WHITE, 12.5' SEG., 37.5' GAP
Y6-12.5	MARKING LINE 6-INCH, YELLOW, 12.5' SEG., 37.5' GAP
Y6	MARKING LINE 6-INCH, YELLOW
DY6	MARKING LINE 6-INCH, DOUBLE YELLOW
SL18	MARKING STOPLINE 18-INCH WHITE
W10	MARKING LINE 10-INCH, WHITE
Y12	MARKING DIAGONAL, 12-INCH, YELLOW, 25-FOOT SPACING
WO	MARKING WORD
A-2	MARKING ARROW TYPE 2

NOTE:
ALL EDGELINE MARKING IS EPOXY, LANE LINE/CHANNELIZING LINE MARKING IS GROOVED WET REF EPOXY.



LEGEND

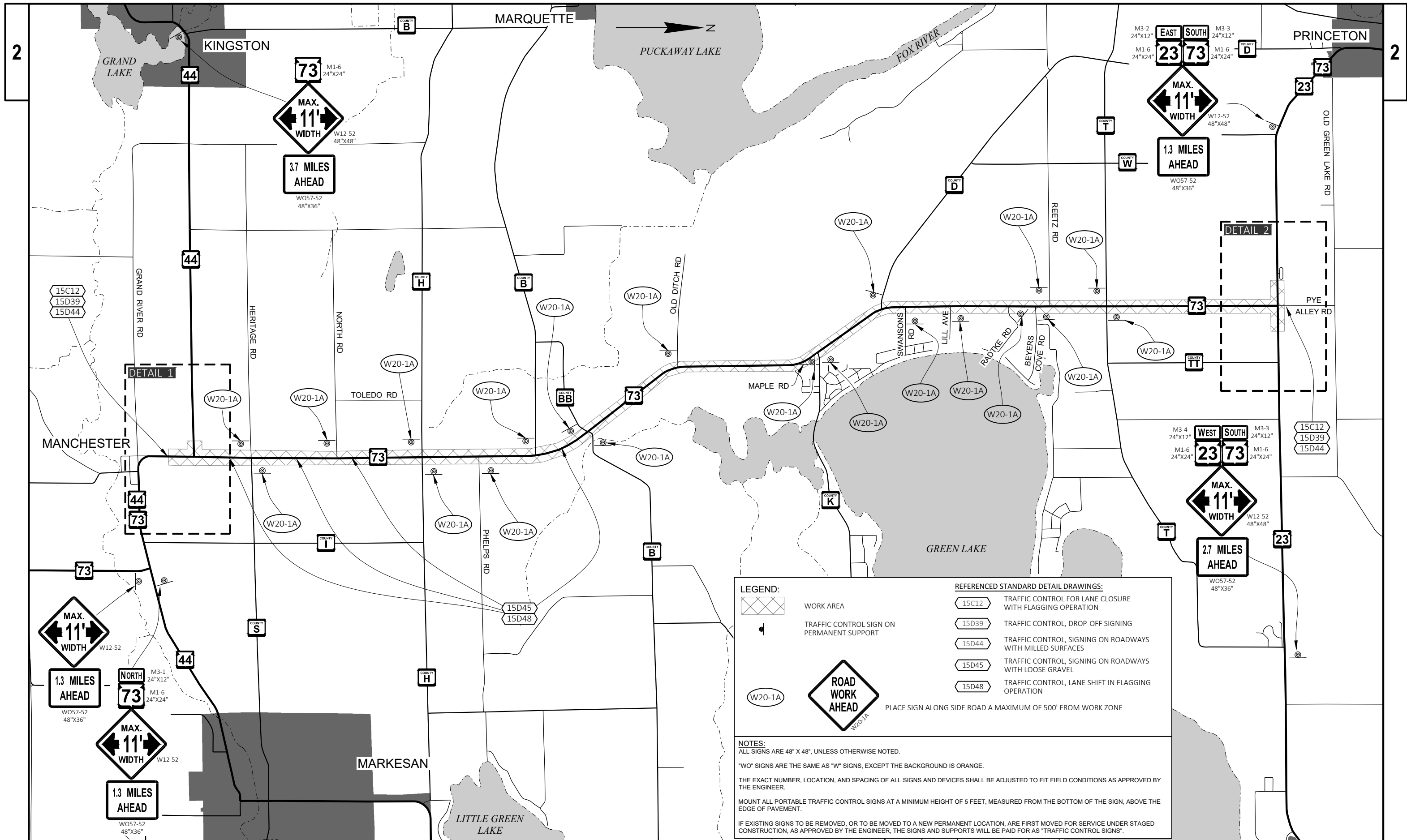
H/T PROPOSED OR MOVED SIGN ON SINGLE/DOUBLE SUPPORT

(M-XX) MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
W6	MARKING LINE 6-INCH, WHITE
W6-12.5	MARKING LINE 6-INCH, WHITE, 12.5' SEG., 37.5' GAP
Y6-12.5	MARKING LINE 6-INCH, YELLOW, 12.5' SEG., 37.5' GAP
Y6	MARKING LINE 6-INCH, YELLOW
DY6	MARKING LINE 6-INCH, DOUBLE YELLOW
SL18	MARKING STOPLINE 18-INCH WHITE
W10	MARKING LINE 10-INCH, WHITE
Y12	MARKING DIAGONAL, 12-INCH, YELLOW, 25-FOOT SPACING
W0	MARKING WORD
A-2	MARKING ARROW TYPE 2

NOTE:
ALL EDGELINE MARKING IS EPOXY, LANE LINE/CHANNELIZING LINE MARKING IS GROOVED WET REF EPOXY.

PROJECT NO: 1430-08-81 HWY: STH 23 COUNTY: GREEN LAKE PERMANENT SIGNING & MARKING SHEET E



LEGEND:

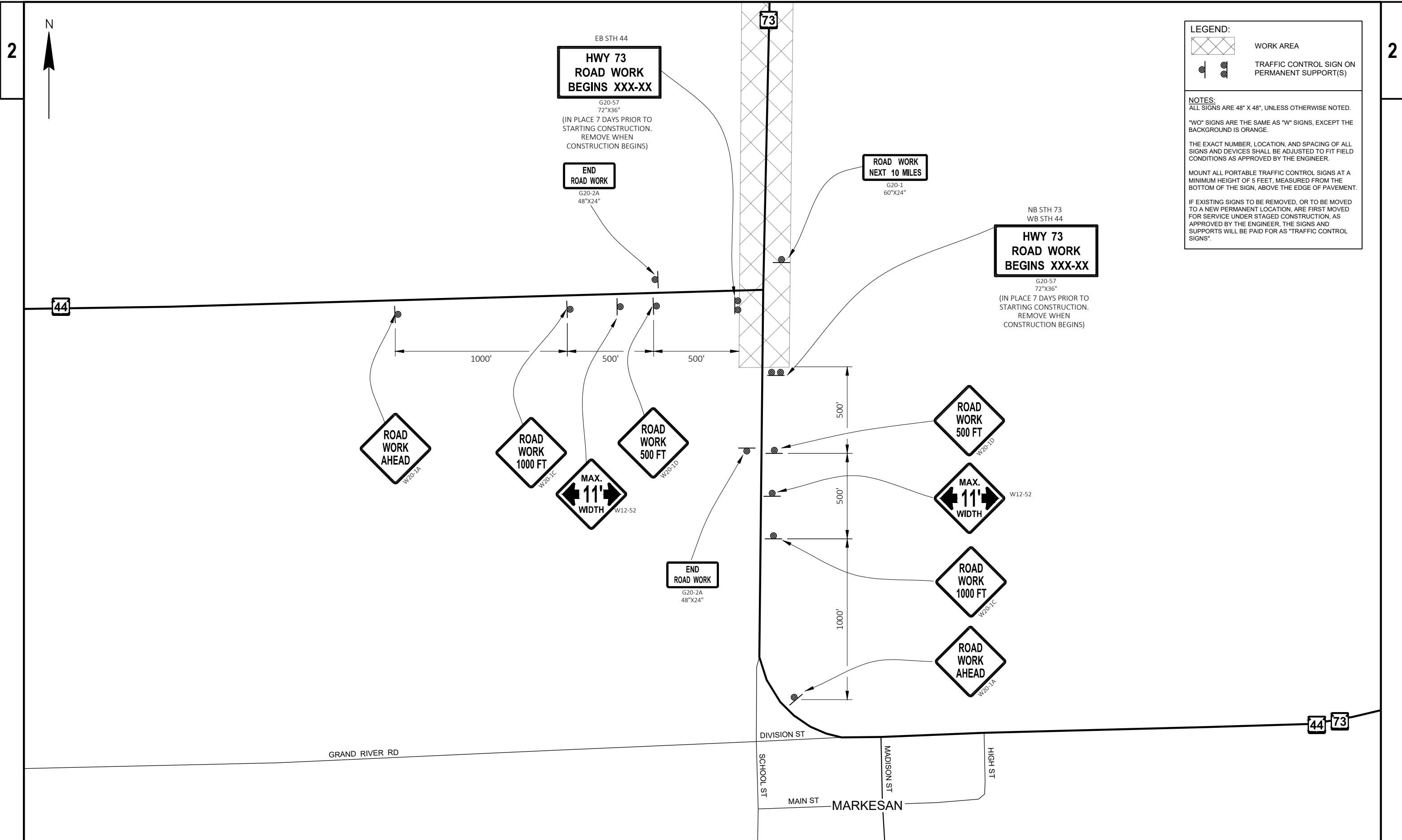
- WORK AREA
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- ROAD WORK AHEAD
PLACE SIGN ALONG SIDE ROAD A MAXIMUM OF 500' FROM WORK ZONE

REFERENCED STANDARD DETAIL DRAWINGS:

- 15C12 TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
- 15D39 TRAFFIC CONTROL, DROP-OFF SIGNING
- 15D44 TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
- 15D45 TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
- 15D48 TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION

NOTES:
 ALL SIGNS ARE 48" X 48", UNLESS OTHERWISE NOTED.
 "WO" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.
 THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 IF EXISTING SIGNS TO BE REMOVED, OR TO BE MOVED TO A NEW PERMANENT LOCATION, ARE FIRST MOVED FOR SERVICE UNDER STAGED CONSTRUCTION, AS APPROVED BY THE ENGINEER, THE SIGNS AND SUPPORTS WILL BE PAID FOR AS "TRAFFIC CONTROL SIGNS".

PROJECT NO: 1430-08-81 & 6640-00-70 HWY: STH 23 & STH 73 COUNTY: GREEN LAKE TRAFFIC CONTROL - OVERVIEW & ADVANCE WARNING SIGNS - SIDEROADS SHEET E





LEGEND:

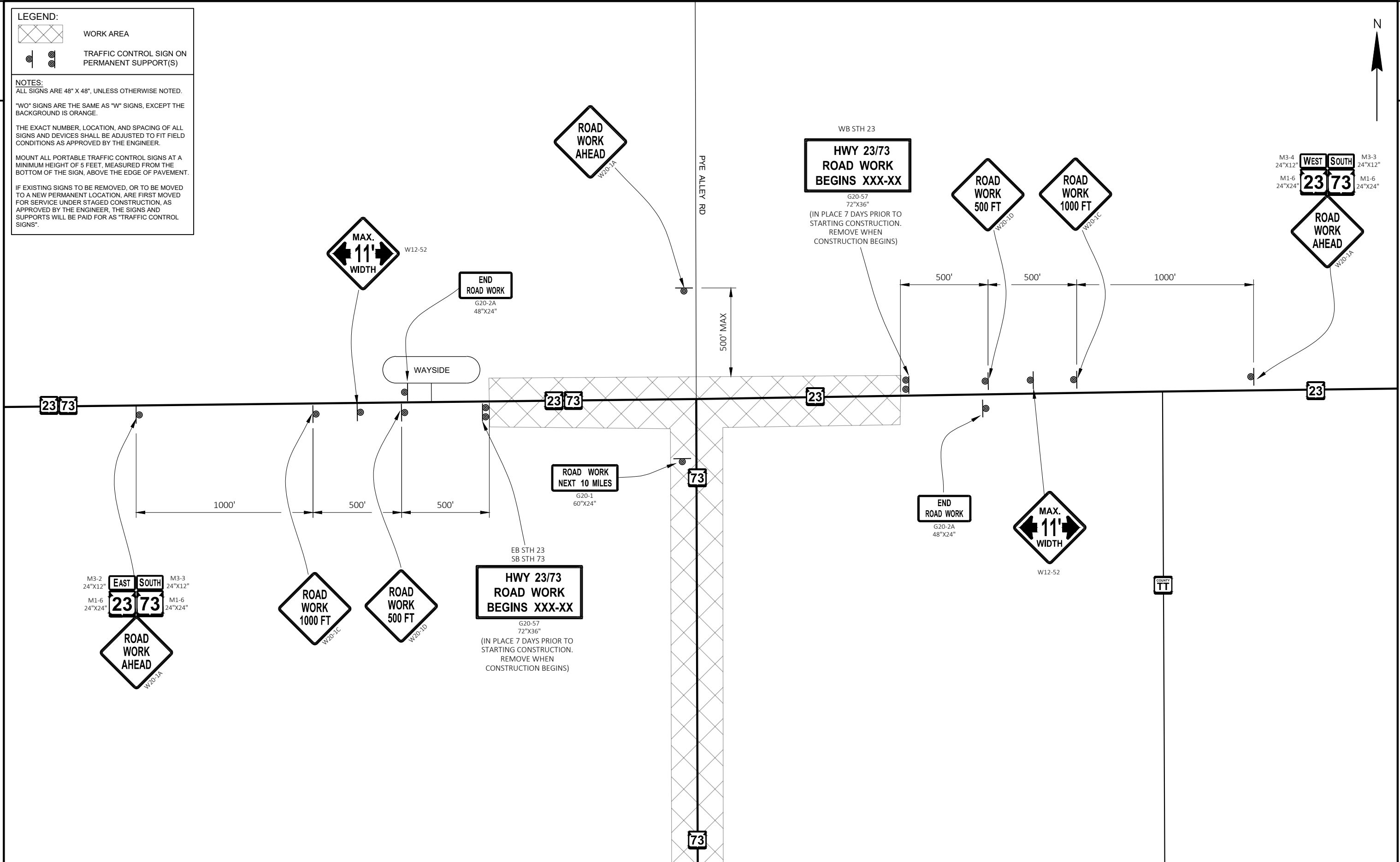
WORK AREA

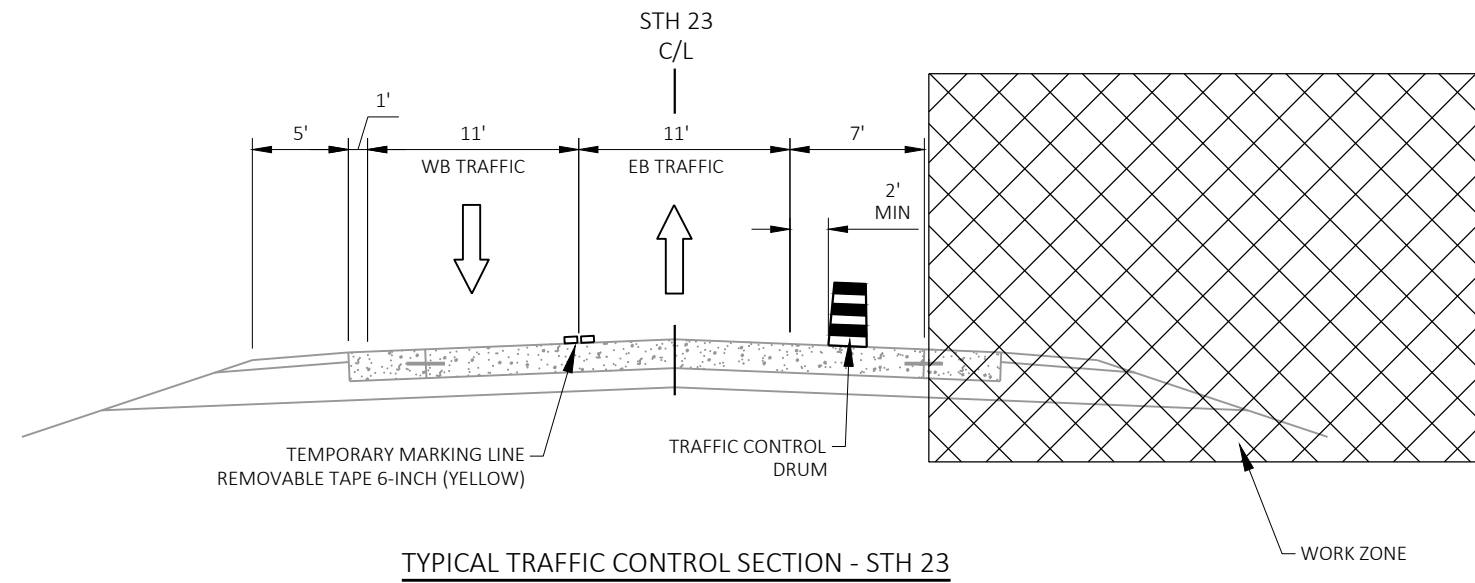
TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT(S)

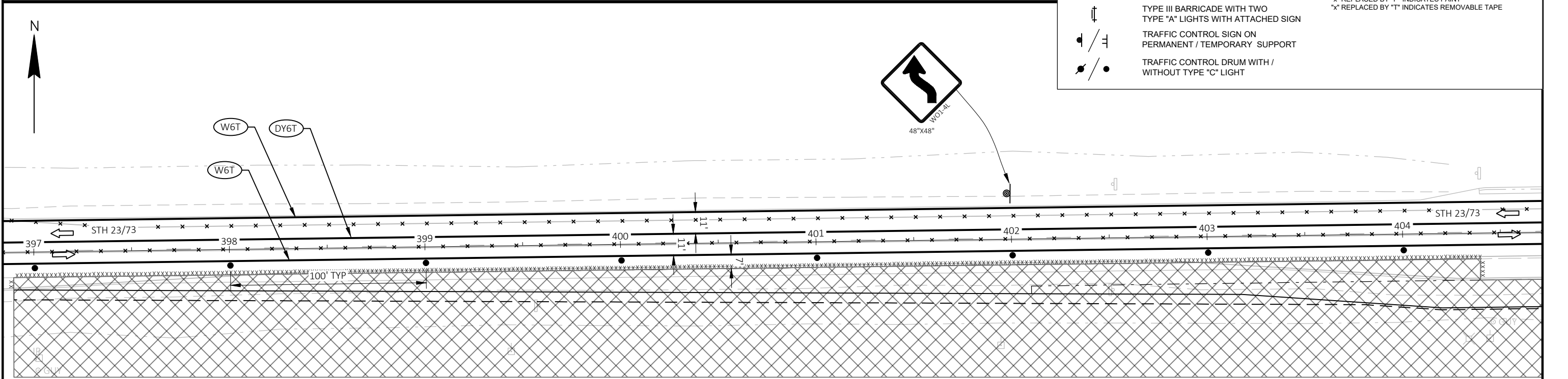
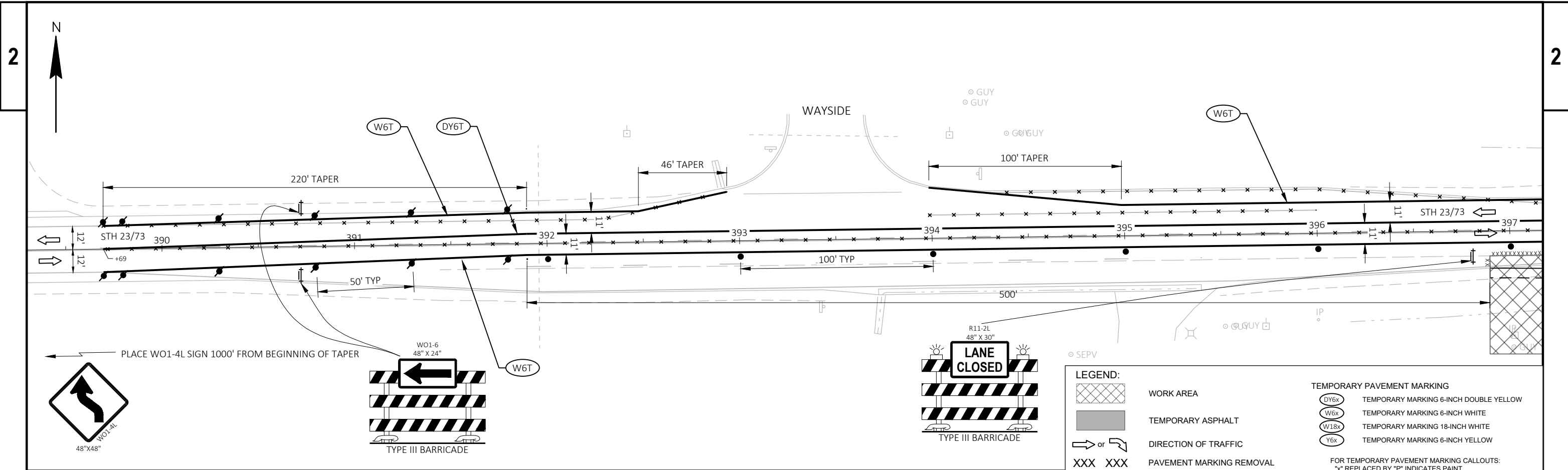
NOTES:
 ALL SIGNS ARE 48" X 48", UNLESS OTHERWISE NOTED.
 "WO" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.
 THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 IF EXISTING SIGNS TO BE REMOVED, OR TO BE MOVED TO A NEW PERMANENT LOCATION, ARE FIRST MOVED FOR SERVICE UNDER STAGED CONSTRUCTION, AS APPROVED BY THE ENGINEER, THE SIGNS AND SUPPORTS WILL BE PAID FOR AS "TRAFFIC CONTROL SIGNS".

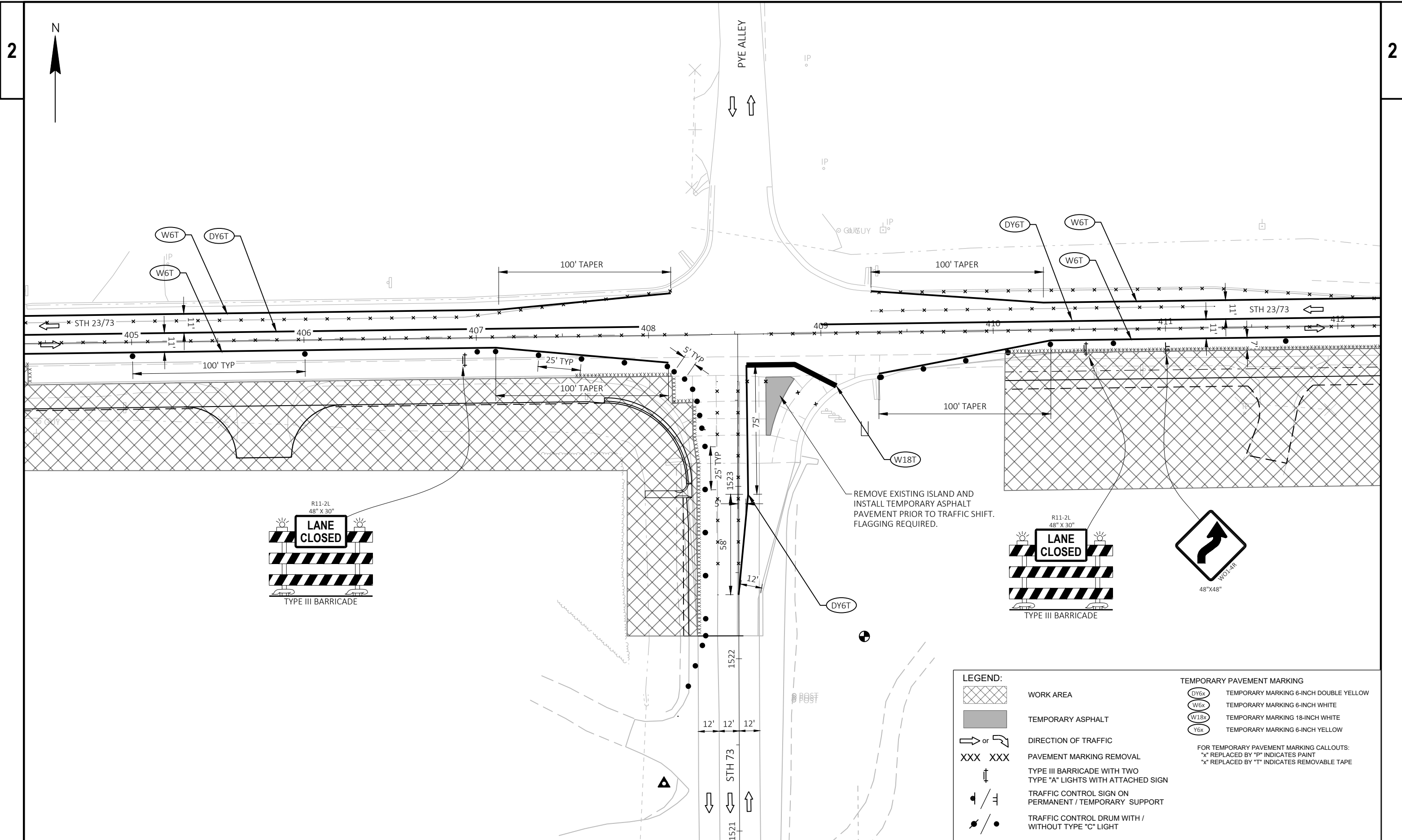
LEGEND:
 WORK AREA
 TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT(S)

NOTES:
 ALL SIGNS ARE 48" X 48", UNLESS OTHERWISE NOTED.
 WO SIGNS ARE THE SAME AS *W* SIGNS, EXCEPT THE BACKGROUND IS ORANGE.
 THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 IF EXISTING SIGNS TO BE REMOVED, OR TO BE MOVED TO A NEW PERMANENT LOCATION, ARE FIRST MOVED FOR SERVICE UNDER STAGED CONSTRUCTION, AS APPROVED BY THE ENGINEER, THE SIGNS AND SUPPORTS WILL BE PAID FOR AS "TRAFFIC CONTROL SIGNS".









PROJECT NO: 1430-08-81

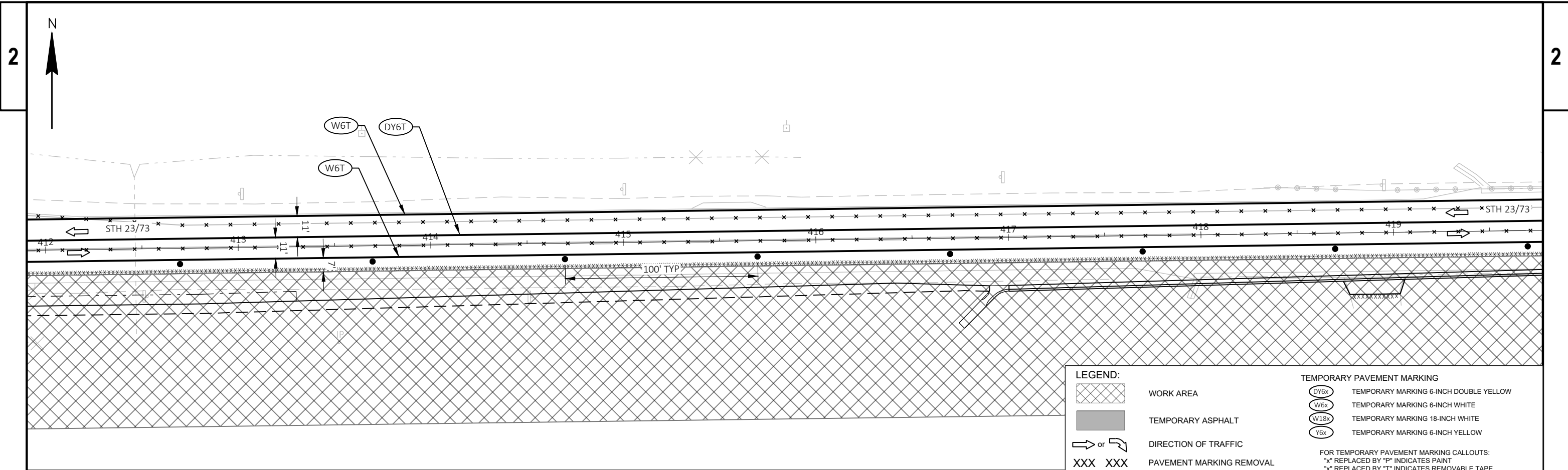
HWY: STH 23

COUNTY: GREEN LAKE

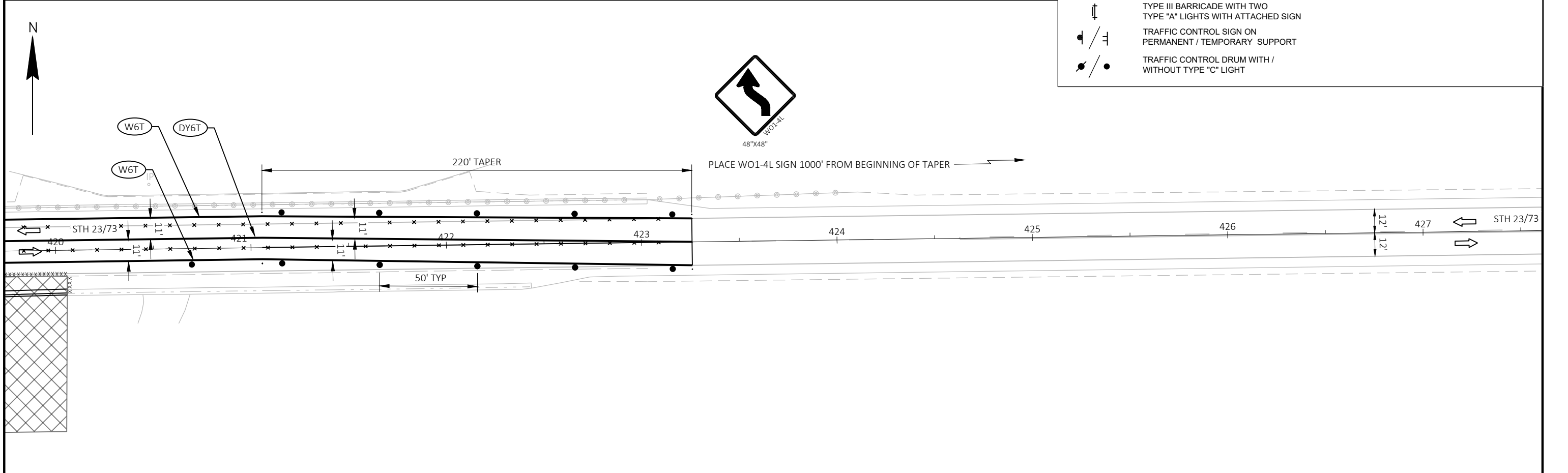
STAGE CONSTRUCTION - STAGE 1 - (STH 23/73)

SHEET

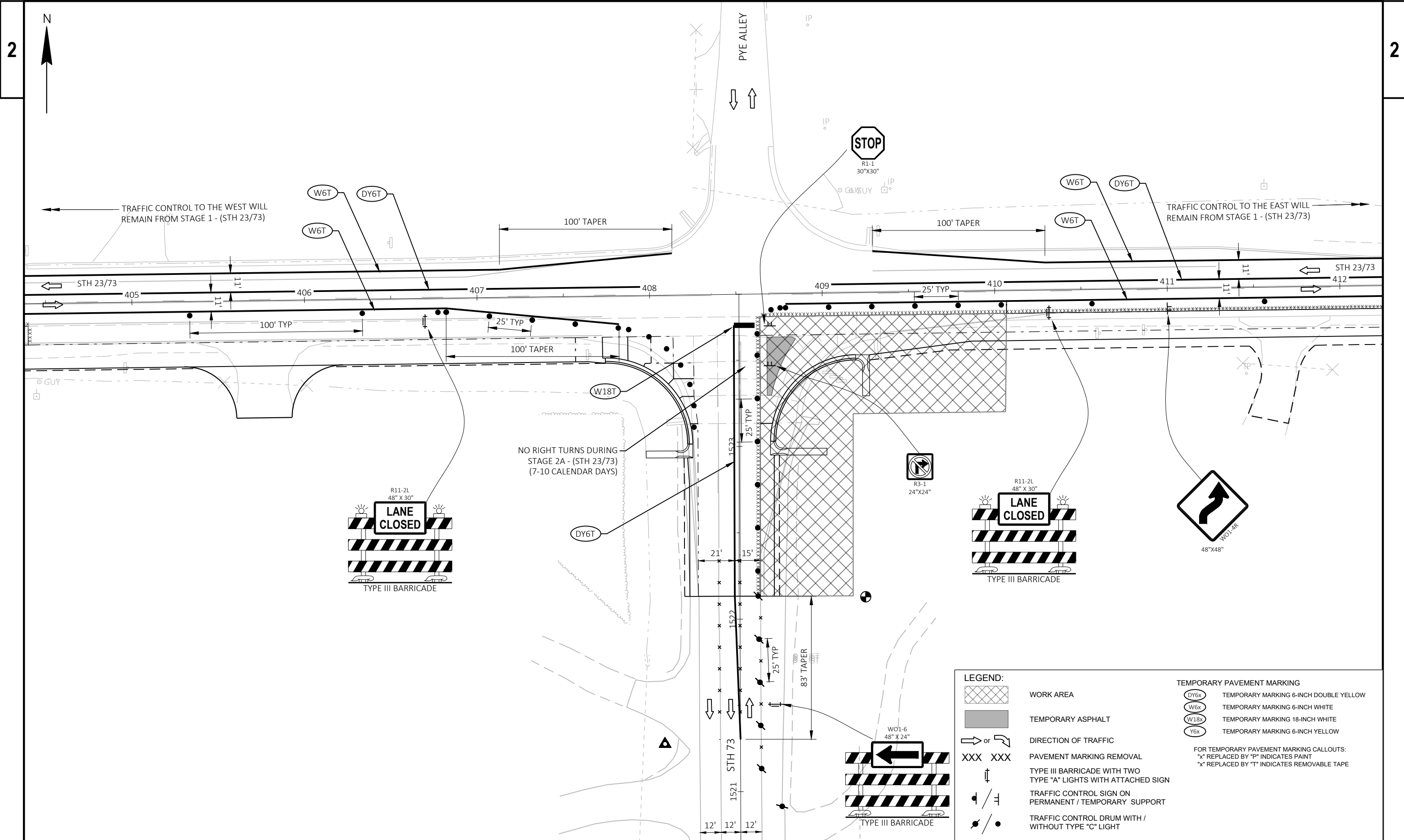
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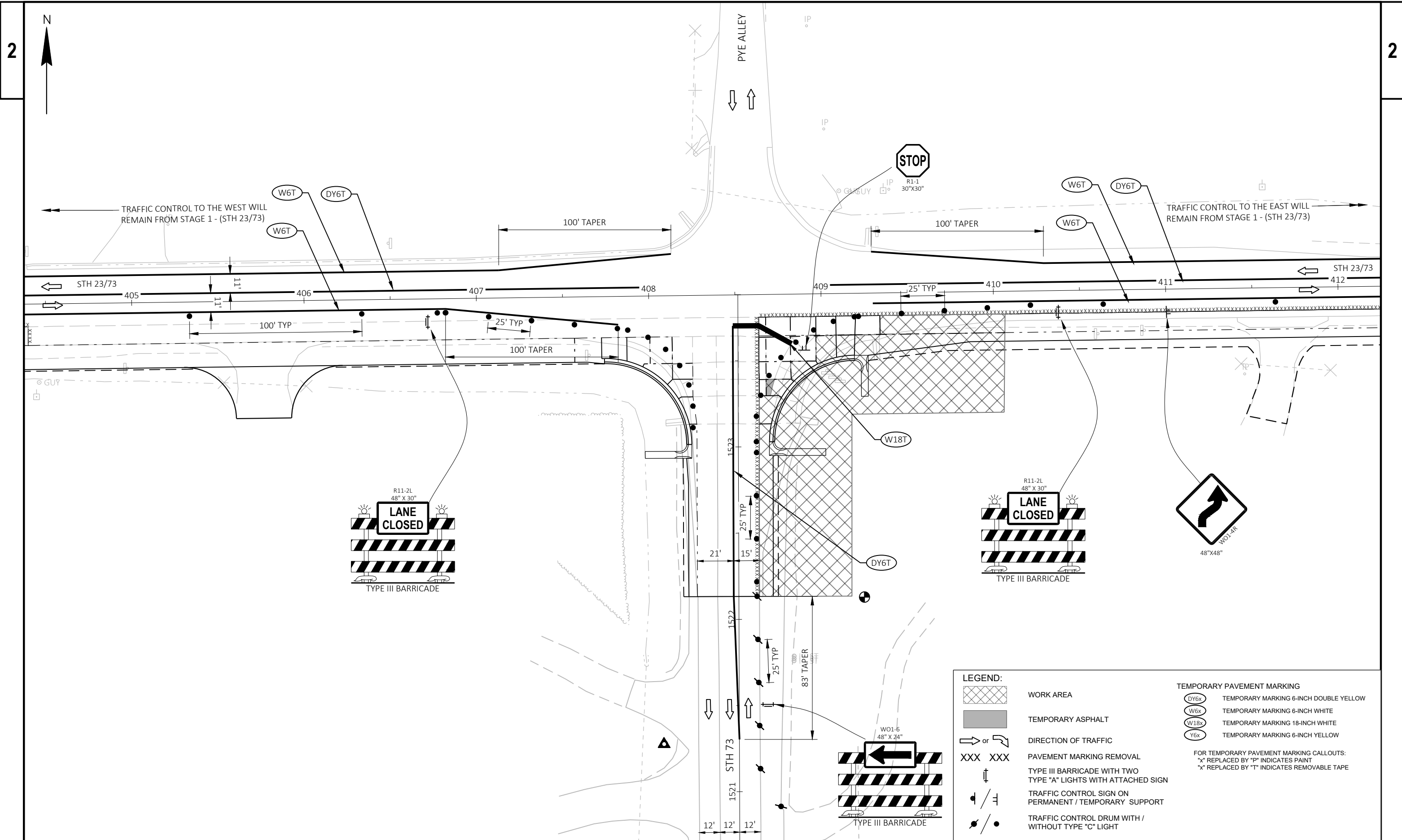


LEGEND:		TEMPORARY PAVEMENT MARKING	
	WORK AREA		TEMPORARY MARKING 6-INCH DOUBLE YELLOW
	TEMPORARY ASPHALT		TEMPORARY MARKING 6-INCH WHITE
	DIRECTION OF TRAFFIC		TEMPORARY MARKING 18-INCH WHITE
	PAVEMENT MARKING REMOVAL		TEMPORARY MARKING 6-INCH YELLOW
	TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS WITH ATTACHED SIGN	FOR TEMPORARY PAVEMENT MARKING CALLOUTS: "x" REPLACED BY "P" INDICATES PAINT "x" REPLACED BY "T" INDICATES REMOVABLE TAPE	
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT		
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT		



PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	STAGE CONSTRUCTION - STAGE 1 - (STH 23/73)	SHEET	E
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PROJECT NO: 1430-08-81

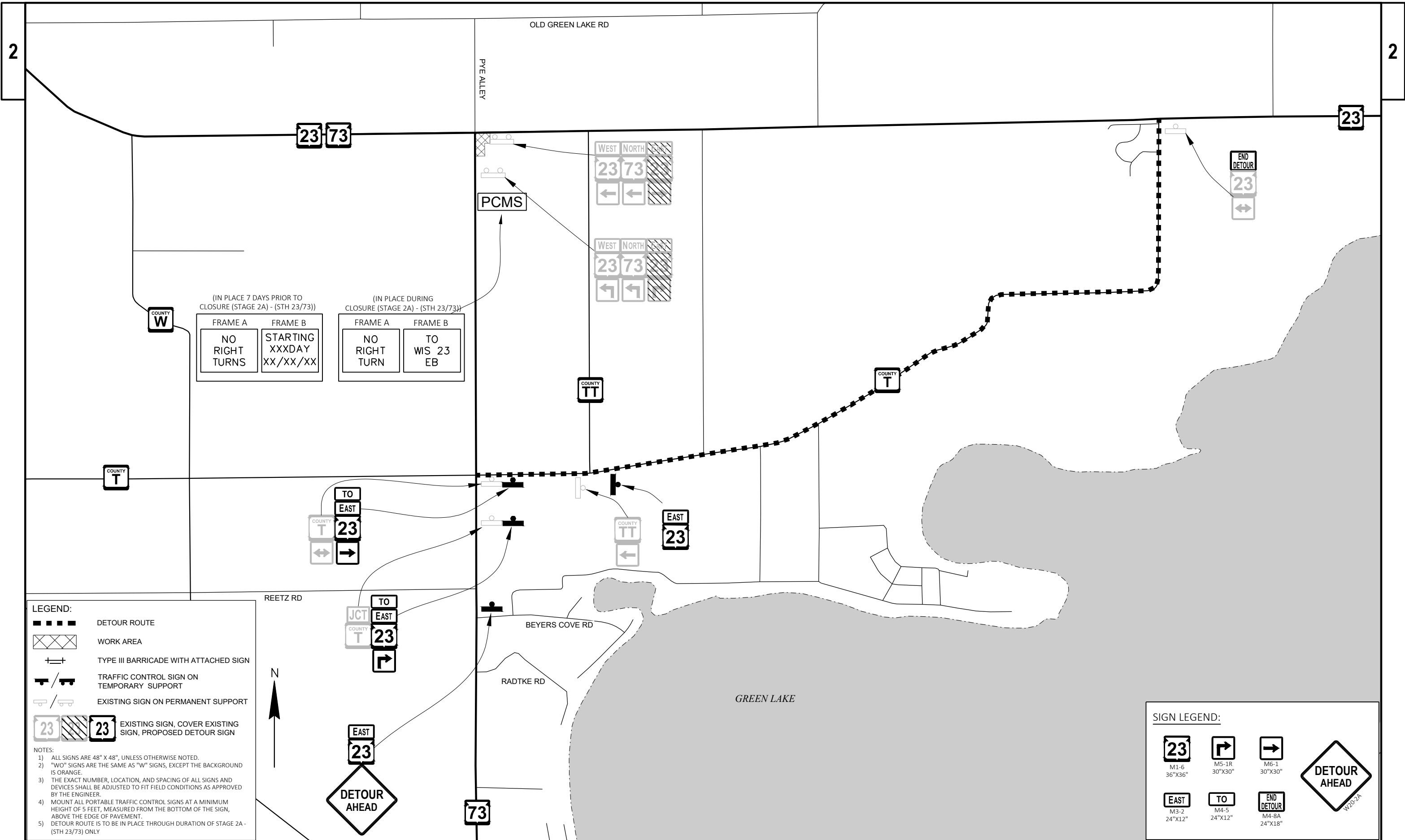
HWY: STH 23

COUNTY: GREEN LAKE

STAGE CONSTRUCTION - STAGE 2B - (STH 23/73)

SHEET

E



LEGEND:

- — — — — DETOUR ROUTE
- XXXXX WORK AREA
- ⇄ TYPE III BARRICADE WITH ATTACHED SIGN
- / — TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- / — EXISTING SIGN ON PERMANENT SUPPORT
- 23 23 EXISTING SIGN, COVER EXISTING SIGN, PROPOSED DETOUR SIGN

NOTES:

- 1) ALL SIGNS ARE 48" X 48", UNLESS OTHERWISE NOTED.
- 2) "WO" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.
- 3) THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- 4) MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
- 5) DETOUR ROUTE IS TO BE IN PLACE THROUGH DURATION OF STAGE 2A - (STH 23/73) ONLY

SIGN LEGEND:

Estimate Of Quantities

1430-08-81 6640-00-70

Line	Item	Item Description	Unit	Total	Qty	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	7.000	3.000	4.000
0004	203.0220	Removing Structure (structure) 01. Culvert #24073005020	EACH	1.000		1.000
0006	204.0100	Removing Concrete Pavement	SY	1,491.000	1,491.000	
0008	204.0110	Removing Asphaltic Surface	SY	274.000	27.000	247.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	845.000		845.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	196,200.000		196,200.000
0014	204.0130	Removing Curb	LF	89.000	89.000	
0016	204.0150	Removing Curb & Gutter	LF	701.000		701.000
0018	204.0165	Removing Guardrail	LF	4,430.000		4,430.000
0020	204.9060.S	Removing (item description) 01. Removing Private Sign	EACH	1.000	1.000	
0022	205.0100	Excavation Common	CY	3,502.000	1,708.000	1,794.000
0024	208.0100	Borrow	CY	646.000	646.000	
0026	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	4.000		4.000
0028	213.0100	Finishing Roadway (project) 01. 1430-08-81	EACH	1.000	1.000	
0030	213.0100	Finishing Roadway (project) 02. 6640-00-70	EACH	1.000		1.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	10,336.000	176.000	10,160.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,580.000	2,540.000	1,040.000
0036	415.0090	Concrete Pavement 9-Inch	SY	3,670.000	3,670.000	
0038	416.0610	Drilled Tie Bars	EACH	1,016.000	1,016.000	
0040	416.0620	Drilled Dowel Bars	EACH	41.000	41.000	
0042	455.0605	Tack Coat	GAL	14,109.000	14.000	14,095.000
0044	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000		1.000
0046	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000		1.000
0048	460.2005	Incentive Density PWL HMA Pavement	DOL	16,080.000		16,080.000
0050	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	10,990.000		10,990.000
0052	460.2010	Incentive Air Voids HMA Pavement	DOL	22,020.000		22,020.000
0054	460.6224	HMA Pavement 4 MT 58-28 S	TON	22,020.000		22,020.000
0056	465.0105	Asphaltic Surface	TON	870.000		870.000
0058	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	52.000	22.000	30.000
0060	465.0125	Asphaltic Surface Temporary	TON	9.000	9.000	
0062	465.0305	Asphaltic Surface Safety Islands	TON	4.000		4.000
0064	465.0315	Asphaltic Flumes	SY	57.000	57.000	
0066	465.0560	Asphaltic Rumble Strips, Centerline	LF	47,010.000		47,010.000
0068	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000	
0070	520.3318	Culvert Pipe Class III-A 18-Inch	LF	86.000	86.000	
0072	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000	
0074	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	1.000		1.000
0076	521.1036	Apron Endwalls for Culvert Pipe Steel 36-Inch	EACH	2.000		2.000
0078	521.1242	Apron Endwalls for Pipe Arch Steel 42x29-Inch	EACH	2.000		2.000
0080	521.1249	Apron Endwalls for Pipe Arch Steel 49x33-Inch	EACH	2.000		2.000
0082	521.1271	Apron Endwalls for Pipe Arch Steel 71x47-Inch	EACH	2.000		2.000
0084	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	12.000		12.000
0086	521.5136	Culvert Pipe Corrugated Steel Polymer Coated 36-Inch	LF	84.000		84.000
0088	521.5742	Pipe Arch Polymer Coated Corrugated Steel 42x29-Inch	LF	58.000		58.000
0090	521.5749	Pipe Arch Polymer Coated Corrugated Steel 49x33-Inch	LF	56.000		56.000
0092	521.5771	Pipe Arch Polymer Coated Corrugated Steel 71x47-Inch	LF	54.000		54.000
0094	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	16.000	16.000	
0096	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000	
0098	601.0120	Concrete Curb Type J	LF	200.000		200.000
0100	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	457.000	457.000	

Estimate Of Quantities

1430-08-81 6640-00-70

Line	Item	Item Description	Unit	Total	Qty	Qty
0102	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	561.000		561.000
0104	606.0200	Riprap Medium	CY	5.000	5.000	
0106	606.0300	Riprap Heavy	CY	37.000		37.000
0108	614.0010	Barrier System Grading Shaping Finishing	EACH	8.000		8.000
0110	614.2300	MGS Guardrail 3	LF	1,728.125		1,728.125
0112	614.2330	MGS Guardrail 3 K	LF	1,862.500		1,862.500
0114	614.2350	MGS Guardrail Short Radius	LF	28.125		28.125
0116	614.2610	MGS Guardrail Terminal EAT	EACH	15.000		15.000
0118	614.2630	MGS Guardrail Short Radius Terminal	EACH	1.000		1.000
0120	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1430-08-81	EACH	1.000	1.000	
0122	618.0100	Maintenance and Repair of Haul Roads (project) 02. 6640-00-70	EACH	1.000		1.000
0124	619.1000	Mobilization	EACH	1.000	0.300	0.700
0126	623.0200	Dust Control Surface Treatment	SY	4,810.000	4,810.000	
0128	624.0100	Water	MGAL	280.000	56.000	224.000
0130	625.0500	Salvaged Topsoil	SY	7,950.000	6,010.000	1,940.000
0132	627.0200	Mulching	SY	7,950.000	6,010.000	1,940.000
0134	628.1504	Silt Fence	LF	7,990.000	1,420.000	6,570.000
0136	628.1520	Silt Fence Maintenance	LF	7,990.000	1,420.000	6,570.000
0138	628.1905	Mobilizations Erosion Control	EACH	6.000	3.000	3.000
0140	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	1.000	2.000
0142	628.2002	Erosion Mat Class I Type A	SY	2,380.000	800.000	1,580.000
0144	628.2006	Erosion Mat Urban Class I Type A	SY	360.000		360.000
0146	628.6510	Soil Stabilizer Type B	ACRE	1.640	1.240	0.400
0148	628.7504	Temporary Ditch Checks	LF	50.000	50.000	
0150	628.7555	Culvert Pipe Checks	EACH	68.000	4.000	64.000
0152	628.7570	Rock Bags	EACH	85.000		85.000
0154	629.0210	Fertilizer Type B	CWT	4.000	4.000	
0156	630.0130	Seeding Mixture No. 30	LB	142.000	108.000	34.000
0158	630.0500	Seed Water	MGAL	178.500	135.000	43.500
0160	633.5200	Markers Culvert End	EACH	9.000	1.000	8.000
0162	638.2102	Moving Signs Type II	EACH	13.000	13.000	
0164	638.2602	Removing Signs Type II	EACH	3.000	3.000	
0166	638.3000	Removing Small Sign Supports	EACH	2.000	2.000	
0168	638.4000	Moving Small Sign Supports	EACH	14.000	14.000	
0170	642.5201	Field Office Type C	EACH	1.000	0.300	0.700
0172	643.0300	Traffic Control Drums	DAY	7,188.000	6,678.000	510.000
0174	643.0420	Traffic Control Barricades Type III	DAY	470.000	470.000	
0176	643.0705	Traffic Control Warning Lights Type A	DAY	498.000	498.000	
0178	643.0715	Traffic Control Warning Lights Type C	DAY	1,326.000	1,326.000	
0180	643.0900	Traffic Control Signs	DAY	8,650.000	3,487.000	5,163.000
0182	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000	
0184	643.1000	Traffic Control Signs Fixed Message	SF	72.000	36.000	36.000
0186	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000	
0188	643.3165	Temporary Marking Line Paint 6-Inch	LF	64,030.000		64,030.000
0190	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	12,830.000	12,830.000	
0192	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	92.000	92.000	
0194	643.5000	Traffic Control	EACH	1.000	0.300	0.700
0196	645.0120	Geotextile Type HR	SY	233.000	28.000	205.000
0198	646.2020	Marking Line Epoxy 6-Inch	LF	10,050.000	10,050.000	
0200	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	183,790.000	7,450.000	176,340.000

Estimate Of Quantities

1430-08-81 6640-00-70

Line	Item	Item Description	Unit	Total	Qty	Qty
0202	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	3,250.000	1,420.000	1,830.000
0204	646.5020	Marking Arrow Epoxy	EACH	8.000	8.000	
0206	646.5120	Marking Word Epoxy	EACH	4.000	4.000	
0208	646.6120	Marking Stop Line Epoxy 18-Inch	LF	256.000	36.000	220.000
0210	646.7120	Marking Diagonal Epoxy 12-Inch	LF	540.000	540.000	
0212	646.8120	Marking Curb Epoxy	LF	200.000		200.000
0214	646.9000	Marking Removal Line 4-Inch	LF	7,640.000	7,640.000	
0216	646.9002	Marking Removal Line 6-Inch	LF	400.000	400.000	
0218	646.9200	Marking Removal Line Wide	LF	35.000	35.000	
0220	650.4500	Construction Staking Subgrade	LF	2,420.000	2,420.000	
0222	650.6000	Construction Staking Pipe Culverts	EACH	8.000	3.000	5.000
0224	650.7000	Construction Staking Concrete Pavement	LF	2,420.000	2,420.000	
0226	650.8000	Construction Staking Resurfacing Reference	LF	0.150		0.150
0228	650.9911	Construction Staking Supplemental Control (project) 01. 1430-08-81	EACH	1.000	1.000	
0230	650.9911	Construction Staking Supplemental Control (project) 02. 6640-00-70	EACH	2,500.000		2,500.000
0232	650.9920	Construction Staking Slope Stakes	LF	2,790.000	2,420.000	370.000
0234	690.0150	Sawing Asphalt	LF	776.000		776.000
0236	690.0250	Sawing Concrete	LF	2,420.000	2,420.000	
0238	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	1,101.000	1,101.000	
0240	740.0440	Incentive IRI Ride	DOL	39,946.000		39,946.000
0242	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	720.000	1,680.000
0244	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,980.000	594.000	1,386.000
0246	SPV.0180	Special 01. Removing Distressed Pavement Milling	SY	1,962.000		1,962.000

REMOVING SMALL PIPE CULVERTS

203.0100 REMOVING SMALL PIPE CULVERTS				
CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	405+76	STH 23 EB RT	1	48'- 18" CMCP
	411+64	STH 23 EB RT	1	52'- 18" CMCP
	412+47	STH 23 EB RT	1	Remove Apron Endwall
TOTAL 0010			3	

MISCELLANEOUS REMOVALS

					204.0100	204.0110	204.0130	204.9060.S.01
					REMOVING CONCRETE PAVEMENT SY	REMOVING ASPHALTIC SURFACE SY	REMOVING CURB LF	REMOVING (ITEM DESCRIPTION) (01. Removing Private Sign) EACH
CATEGORY	STATION	TO	STATION	LOCATION				
0010	396+89	-	408+50	STH 23 EB RT	470	-	-	1
	408+50	-	420+06	STH 23 EB RT	1,021	27	89	-
TOTAL 0010					1,491	27	89	1

EARTHWORK SUMMARY (PROJECT ID 1430-08-81)

CATEGORY 0010

FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
		CUT (2)				FACTOR 1.25				
396+90 - 407+74	STH 23	714	94	620	622	778	-158	0	158	
407+74 - 408+27	STH 23/73	119	24	95	41	51	44	68	0	
408+63 - 409+19	STH 23/73	167	100	67	52	65	2	102	0	
409+19 - 420+06	STH 23	708	164	544	880	1,100	-556	0	556	

PROJECT ID 1430-08-81 TOTALS	1,708	382	1,326	1,595	1,994	-668	170	646	
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NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (13) EXPANDED FILL FACTOR = 1.25
- (14) THE MASS ORDINATE + 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 QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

BASE AGGREGATE DENSE

CATEGORY	STATION TO STATION	LOCATION	305.0110	305.0120	623.0200	624.0100
			BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	DUST CONTROL SURFACE TREATMENT SY	WATER MGAL
0010	396+89 - 408+50	STH 23 EB RT	91	1,260	2,270	28
	408+50 - 420+06	STH 23 EB RT	85	1,280	2,540	28
TOTAL 0010			176	2,540	4,810	56

HMA PAVEMENT

CATEGORY	STATION TO STATION	LOCATION	455.0605	465.0120	465.0125	465.0315	
			PAVEMENT THICKNESS IN	TACK COAT GAL	DRIVEWAYS AND FIELD ENTRANCES TON	ASPHALTIC SURFACE TEMPORARY TON	ASPHALTIC FLUMES SY
0010	1522+13 - 1523+03	STH 73 NB LT	2.25	-	-	14	
	1522+13 - 1523+03	STH 73 NB RT	3.50	-	-	16	
	405+29 - 406+22	STH 23 EB RT	2.25	10	19	-	
	416+73 - 419+06	STH 23 EB RT	2.25	2	3	27	
	1523+30 - 1523+65	STH 73	5.00	2	-	9	
TOTAL 0010				14	22	9	57

EROSION CONTROL ITEMS

CATEGORY	STATION TO STATION	LOCATION	628.1504	628.1520	628.7504	628.7555	628.7570
			SILT FENCE LF	SILT FENCE MAINTENANCE LF	TEMPORARY DITCH CHECKS LF	CULVERT PIPE CHECKS EACH	ROCK BAGS EACH
0010	396+89 - 408+50	STH 23 EB RT	250	250	50	2	-
	408+50 - 420+06	STH 23 EB RT	1,170	1,170	-	2	51
TOTAL 0010			1,420	1,420	50	4	51

CONCRETE PAVEMENT

CATEGORY	STATION TO STATION	LOCATION	415.0090	416.0610	416.0620	690.0250
			CONCRETE PAVEMENT 9-INCH SY	DRILLED TIE BARS EACH	DRILLED DOWEL BARS EACH	SAWING CONCRETE LF
0010	396+89 - 408+50	STH 23 EB RT	1,790	501	28	990
	408+50 - 420+06	STH 23 EB RT	1,880	515	13	1,430
TOTAL 0010			3,670	1,016	41	2,420

RIPRAP & GEOTEXTILE FABRIC

CATEGORY	STATION TO STATION	LOCATION	606.0200	645.0120
			RIPRAP MEDIUM CY	GEOTEXTILE TYPE HR SY
0010	396+89 - 408+50	STH 23 EB RT	1	7
	408+50 - 420+06	STH 23 EB RT	4	21
TOTAL 0010			5	28

CONCRETE CURB & GUTTER

CATEGORY	STATION TO STATION	LOCATION	601.0551
			CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A LF
0010	407+73 - 408+22	STH 23 EB RT	76
	408+70 - 409+19	STH 23 EB RT	75
	417+00 - 420+06	STH 23 EB RT	306
TOTAL 0010			457

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING SIGNS

650- CONSTRUCTION STAKING

CATEGORY	SIGN NO.	STATION	OFFSET	SIGN WORDING & PICTORIALS	CODE	638.2602	638.3000	REMARKS
						REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
0010	R1-01	408+70	RT	DOUBLE DIAGONAL ARROW	W12-1D	1	1	
0010	R1-02	408+75	RT	STOP	R1-1	1	1	
0010	R1-03	408+75	RT	KEEP RIGHT	R4-7	1	-	SHARED POST
TOTAL 0010						3	2	

CATEGORY	STATION	TO	STATION	LOCATION	650.4500	650.6000	650.7000	650.9911.01	650.9920
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING CONCRETE PAVEMENT LF	SUPPLEMENTAL CONTROL (PROJECT) (1430-08-81) EACH	CONSTRUCTION STAKING SLOPE STAKES LF
0010	389+50	-	408+50	STH 23	1,135	1	1,135	-	1,135
0010	408+50	-	423+25	STH 23	1,145	2	1,145	-	1,145
0010	1522+00	-	1523+88	STH 73	140	-	140	-	140
0010	STH 23/73 Project				-	-	-	1	-
TOTAL 0010					2,420	3	2,420	1	2,420

MOVING SIGNS

CATEGORY	SIGN NO.	STATION	OFFSET	SIGN WORDING & PICTORIALS	CODE	638.2102	638.4000	REMARKS
						MOVING SIGNS TYPE II EACH	MOVING SMALL SIGN SUPPORTS EACH	
0010	M1-01	399+50	RT	GREEN LAKE AHEAD, RANDOLPH RIGHT	D1-1	1	2	
0010	M1-02	402+50	RT	STH 23, EAST, UP ARROW; STH 73, SOUTH, RIGHT AHEAD ARROW	J2-2	1	1	
0010	M2-01	407+65	RT	STH 73, SOUTH, RIGHT ARROW	J2-1	1	1	
0010	M2-02	409+00	RT	STOP	R1-1	1	1	
0010	M2-03	409+00	RT	STH 23, WEST, LEFT ARROW; STH 73, NORTH, LEFT ARROW; STH 23, EAST, RIGHT ARROW	J2-3	1	2	
0010	M2-04	409+00	RT	RIGHT ARROW	M6-1	1	1	
0010	M2-05	409+00	RT	HOSPITAL SYMBOL	D9-2	1	-	SHARED POST
0010	M2-06	410+60	RT	STH 23, EAST	J1-1	1	1	
0010	M3-01	423+50	RT	SPEED LIMIT 55 M.P.H.	R2-1	1	1	
0010	M3-02	414+50	RT	GREEN LAKE 6	I2-2	1	2	
0010	M3-03	417+00	RT	HOSPITAL SYMBOL	D9-2	1	1	
0010	M3-04	417+00	RT	UP ARROW	M6-1	1	-	SHARED POST
0010	M3-05	418+00	RT	NO PASSING ZONE	W14-3	1	1	
TOTAL 0010						13	14	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

CULVERT ITEMS

CATEGORY	LOCATION	INLET			OUTLET			PIPE THICKNESS (IN)	520.1018		520.3318		520.8000		522.0124		522.1024		633.5200		REMARKS
		STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION		APRON ENDWALLS FOR CULVERT PIPE	18-INCH EACH	CULVERT PIPE CLASS III-A 18-INCH LF	CONCRETE COLLARS FOR PIPE EACH	CONCRETE REINFORCED III 24-INCH LF	CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE	CONCRETE REINFORCED CONCRETE 24-INCH EACH	MARKERS CULVERT END EACH				
0010	STH 23 EB RT	405+50	59.5' RT	854.24	406+00	61.8' RT	853.49	0.064	2	50	-	-	-	-	-	-	-	-	-	-	EXTENSION OF CULVERT UNDER STH23
	STH 23 EB RT	411+43	62.9' RT	847.94	411+79	65.7' RT	847.35	0.064	2	36	-	-	-	-	-	-	-	-	-	-	
	STH 23 EB RT	412+46	56.9' RT	846.08	412+46	41.9' RT	845.90	-	-	-	1	16	1	1	1	1	1	1	1	1	
TOTAL 0010									4	86	1	16	1	1	1	1	1	1	1	1	

FINISHING ITEMS

CATEGORY	STATION TO	STATION	LOCATION	625.0500	627.0200	628.2002	628.6510	629.0210	630.0130	630.0500
				SALVAGED TOPSOIL SY	MULCHING SY	EROSION MAT CLASS I TYPE A SY	SOIL STABILIZER TYPE B ACRE	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	SEED WATER MGAL
0010	396+89 -	408+50	STH 23 EB RT	3,160	3,160	680	0.65	2	57	71
	408+50 -	420+06	STH 23 EB RT	2,850	2,850	120	0.59	2	51	64
TOTAL 0010				6,010	6,010	800	1.24	4	108	135

PERMANENT PAVEMENT MARKINGS

CATEGORY	STATION TO	STATION	LOCATION	646.2020		646.2040		646.4040		646.5020	646.5120	646.6120	646.7120
				MARKING LINE EPOXY 6-INCH (SOLID YELLOW) LF	MARKING LINE EPOXY 6-INCH (SKIP YELLOW) LF	MARKING LINE GROOVED EPOXY 6-INCH (SOLID WHITE) LF	MARKING LINE GROOVED EPOXY 6-INCH (SKIP WHITE) LF	MARKING LINE GROOVED EPOXY 10-INCH (SOLID WHITE) LF	MARKING LINE GROOVED EPOXY 10-INCH (SKIP WHITE) LF	MARKING ARROW EPOXY (WHITE) EACH	MARKING WORD EPOXY (WHITE) EACH	MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF
0010	389+50 -	408+50	STH 23	5,150	160	3,630	90	790	-	4	2	-	370
	408+50 -	423+25	STH 23	4,290	180	3,550	-	590	-	4	2	-	170
	1522+00 -	1523+88	STH 73	270	-	180	-	-	40	-	-	36	-
SUBTOTAL				9,710	340	7,360	90	1,380	40	8	4	36	540
TOTAL 0010				10,050		7,450		1,420		8	4	36	540

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	LOCATION	APPROXIMATE SERVICE DAY	NO.	643.0300	643.0420	643.0705	643.0715	643.0900	643.0920	643.1000	643.1050
					TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	TRAFFIC CONTROL SIGNS PCMS DAY
0010	1	ADVANCED WARNING AND WIDTH RESTRICTION PROJECT AREA	28	-	-	-	-	-	31	868	-	-
			28	74	2,072	5	140	6	168	12	336	9
STAGE 1 SUBTOTALS					2,072	140	168	336	1,120	0	36	0
0010	2A	ADVANCED WARNING AND WIDTH RESTRICTION PROJECT AREA	7	-	-	-	-	-	31	217	-	-
			7	82	574	6	42	6	42	18	126	11
		DETOUR ROUTE	7	-	-	-	-	-	15	105	1	2
STAGE 2A SUBTOTALS					574	42	42	126	399	2	0	14
0010	2B	ADVANCED WARNING AND WIDTH RESTRICTION PROJECT AREA	48	-	-	-	-	-	31	1,488	-	-
			48	84	4,032	6	288	6	288	18	864	10
STAGE 2B SUBTOTALS					4,032	288	288	864	1,968	0	0	0
TOTAL 0010					6,678	470	498	1,326	3,487	2	36	14

MARKING REMOVAL

CATEGORY	STATION TO	STATION	LOCATION	646.9000	646.9002	646.9200
				MARKING REMOVAL LINE 4-INCH LF	MARKING REMOVAL LINE 6-INCH LF	MARKING REMOVAL LINE WIDE LF
0010	389+50 -	408+50	STH 23	4,280	200	-
	408+50 -	423+25	STH 23	2,830	200	-
	1522+00 -	1523+88	STH 73	530	-	35
TOTAL 0010				7,640	400	35

TEMPORARY MARKINGS

CATEGORY	STATION TO	STATION	LOCATION	643.3180		643.3850
				TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (SOLID YELLOW) LF	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (SOLID WHITE) LF	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE) LF
0010	389+50 -	408+50	STH 23	3,220	3,680	-
	408+50 -	423+25	STH 23	2,850	2,950	-
	1522+00 -	1523+88	STH 73	130	-	92
SUBTOTALS				6,200	6,630	92
TOTAL 0010					12,830	92

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

MISCELLANEOUS REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0165 REMOVING GUARDRAIL LF	SPV.0180.01 SPECIAL (01. REMOVING DISTRESSED PAVEMENT MILLING) SY	REMARKS
0010	994+85	-	1025+00	STH 73	220	50	11,500	-	-	-	
0010	1025+00	-	1106+00	STH 73	-	180	29,300	71	-	-	
0010	1106+00	-	1184+00	STH 73	-	55	26,700	-	-	-	
0010	1184+00	-	1302+00	STH 73	-	70	42,200	280	2,180	-	
0010	1302+00	-	1445+00	STH 73	-	280	57,500	350	590	-	
0010	1445+00	-	1522+13	STH 73	-	-	29,000	-	1,660	-	
0010	994+85	-	1522+13	STH 73	-	-	-	-	-	1,962	
0010	994+85	-	1522+14	STH 73	-	210	-	-	-	-	ASPHALTIC DRIVEWAYS AND FIELD ENTERANCES
TOTAL 0010					220	845	196,200	701	4,430	1,962	

EARTHWORK SUMMARY (PROJECT ID 6640-00-70)

CATEGORY 0010

FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	COMMENT
		CUT (2)				FACTOR 1.25			
994+85 - 998+61	STH 73, LT	12	0	12	0	0	12	12	STH 44 INTERSECTION
1014+78	STH 73	371	58	313	0	0	313	313	71" X 47" CSPA
1042+88	STH 73	367	55	312	0	0	312	312	49" X 33" CSPA
1074+02	STH 73	697	53	644	0	0	644	644	36" CPCS
1167+30	STH 73	347	55	292	0	0	292	292	42" X 29" CSPA

PROJECT ID 6640-00-70 TOTALS

1,794	221	1,573	0	0	1,573	1,573
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NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (13) EXPANDED FILL FACTOR = 1.25
- (14) THE MASS ORDINATE + 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 QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

STRUCTURE REMOVALS

CATEGORY	STATION	LOCATION	203.0100	203.0220.01	REMARKS
			REMOVING SMALL PIPE CULVERTS EACH	REMOVING STRUCTURE (STRUCTURE) (01. CULVERT #24073005020) EACH	
0010	1014+78	STH 73	-	1	71" X 47" X 56.3' CMP
	1042+88	STH 73	1	-	49" X 33" X 56.3' CMPA
	1074+02	STH 73	1	-	36" X 84.5' CMP
	1167+30	STH 73	1	-	42" X 29" X 57' CMPA
	1407+62	STH 73	1	-	Remove Apron Endwall
TOTAL 0010			4	1	

BASE AGGRGEGATE DENSE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	624.0100	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	WATER MGAL	
0010	994+85	-	1025+00	STH 73	590	270	17	
	1025+00	-	1106+00	STH 73	1,750	510	45	
	1106+00	-	1184+00	STH 73	1,700	260	39	
	1184+00	-	1302+00	STH 73	2,400	-	48	
	1302+00	-	1445+00	STH 73	2,090	-	42	
	1445+00	-	1522+13	STH 73	1,580	-	32	
	994+85	-	1522+14	STH 73 PROJECT	50	-	1	DRIVEWAYS AND FIELD ENTERANCES
TOTAL 0010					10,160	1,040	224	

3

HMA PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	455.0605	460.6224	465.0105	465.0120	465.0305	465.0560	REMARKS
					PAVEMENT THICKNESS IN	TACK COAT GAL	HMA PAVEMENT 4 MT 58-28 S TON	ASPHALTIC SURFACE TON	DRIVEWAYS AND FIELD ENTRANCES TON	ASPHALTIC SURFACE SAFETY ISLANDS TON	
0010	994+85	-	1025+00	STH 73	2.00	810	1,300	-	-	2,390	
	1025+00	-	1106+00	STH 73	2.00	2,060	3,300	-	-	7,150	
	1106+00	-	1184+00	STH 73	2.00	1,870	3,000	-	-	6,790	
	1184+00	-	1302+00	STH 73	2.00	2,960	4,730	-	-	11,020	
	1302+00	-	1445+00	STH 73	2.00	4,030	6,440	-	4	12,070	
	1445+00	-	1522+13	STH 73	2.00	2,030	3,250	-	-	7,590	
	1014+20	-	1015+35	STH 73/CULVERT	8.00	55	-	170	-	-	SEE CULVERT PIPE TRANSITION CONS. DETAIL
	1042+34	-	1043+43	STH 73/CULVERT	8.00	50	-	160	-	-	SEE CULVERT PIPE TRANSITION CONS. DETAIL
	1073+49	-	1074+55	STH 73/CULVERT	8.00	50	-	160	-	-	SEE CULVERT PIPE TRANSITION CONS. DETAIL
	1066+75	-	1067+84	STH 73/CULVERT	8.00	50	-	160	-	-	SEE CULVERT PIPE TRANSITION CONS. DETAIL
	994+85	-	1522+14	STH 73	3.00	-	-	-	30	-	ASPHALTIC DRIVEWAYS AND FIELD ENTERANCES
	994+85	-	1522+14	STH 73	2.00	130	-	220	-	-	DISTRESSED MILLING LOCATIONS
TOTAL 0010						14,095	22,020	870	30	4	47,010

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

PWL MIXTURE USE TABLE

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	994+85 TO 1522+14	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	15,750	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12 FOOT PASSING LANE	1500+00 TO 1522+14	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	330	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3 FOOT SHOULDER + INTERSECTIONS	994+85 TO 1522+14	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	5,940	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
VARIOUS	-	CULVERT PATCHES	BASE AGGREGATE	ASPHALTIC SURFACE	650	8"	QMP AS PER SS 465	ACCEPTANCE BY ORDINARY COMPACTION
VARIOUS	-	SPOT REPAIRS LOWER LAYER	MILLED EXISTING HMA SURFACE	ASPHALTIC SURFACE	210	2"	QMP AS PER SS 465	ACCEPTANCE BY ORDINARY COMPACTION

CULVERT ITEMS

CATEGORY	LOCATION	INLET			OUTLET			PIPE THICKNESS (IN)	CULVERT WORK EACH	TEMPORARY LANE SHIFT DURING	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH EACH	APRON ENDWALLS FOR PIPE ARCH STEEL 42X29-INCH EACH	APRON ENDWALLS FOR PIPE ARCH STEEL 49X33-INCH EACH	APRON ENDWALLS FOR PIPE ARCH STEEL 71X47-INCH EACH	CULVERT PIPE CORRUGATED STEEL 18-INCH LF	CULVERT PIPE CORRUGATED STEEL POLYMER COATED 36-INCH LF	PIPE ARCH POLYMER COATED STEEL 42X29-INCH LF	PIPE ARCH POLYMER COATED STEEL 49X33-INCH LF	PIPE ARCH POLYMER COATED STEEL 71X47-INCH LF	MARKERS CULVERT END EACH	REMARKS
		STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION															
0010	STH 73	1014+76	26.9' LT	873.05	1014+80	25.6' RT	872.69	0.138	1	-	-	-	-	2	-	-	-	-	54	2		
	STH 73	1042+88	27.8' RT	903.99	1042+88	28.2' LT	903.70	0.109	1	-	-	-	2	-	-	-	-	56	-	2		
	STH 73	1074+03	35.4' RT	895.14	1074+00	48.5' LT	892.21	0.079	1	-	2	-	-	-	-	84	-	-	-	2		
	STH 73	1167+28	24.7' LT	915.88	1167+32	32.1' RT	915.21	0.079	1	-	-	2	-	-	-	-	-	58	-	2		
	STH 73 LT	1407+62	43.9' LT	808.30	1407+50	44.5' LT	808.00	0.064	-	1	-	-	-	-	12	-	-	-	-	-	-	CULVERT EXTENSION
TOTAL 0010									4	1	2	2	2	2	12	84	58	56	54	8		

CONCRETE CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	601.0120	601.0553
					CONCRETE CURB TYPE J LF	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF
0010	994+85	-	1025+00	STH 73	-	-
	1025+00	-	1106+00	STH 73	-	71
	1106+00	-	1184+00	STH 73	-	-
	1184+00	-	1302+00	STH 73	-	280
	1302+00	-	1445+00	STH 73	200	210
	1445+00	-	1522+13	STH 73	-	-
TOTAL 0010					200	561

GEOTEXTILE AND RIPRAP

CATEGORY	STATION	LOCATION	606.0300	645.0120
			RIPRAP HEAVY CY	GEOTEXTILE TYPE HR SY
0010	1014+78	STH 73	11	60
	1042+88	STH 73	9	50
	1074+02	STH 73	8	45
	1167+30	STH 73	9	50
TOTAL 0010			37	205

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

BARRIER SYSTEMS

FOR INFORMATION PURPOSES ONLY

CATEGORY	STATION TO STATION	LOCATION	614.0010	BORROW	SALVAGED	MULCHING	EROSION MAT	EROSION MAT	FERTILIZER TYPE	SEEDING	SEED WATER	CONSTRUCTION
			BARRIER SYSTEM									
			FINISHING	CY	SY	SY	SY	SY	CWT	LB	MGAL	STAKES
			EACH									LF
0010	1197+00 - 1207+00	STH 73 RT	1	543	1610	1610	70	1540	1.0	29	36	1000
	1197+00 - 1207+00	STH 73 LT	1	290	1610	1610	70	1540	1.0	29	36	1000
	1271+50 - 1280+00	STH 73 RT	1	235	1150	1150	-	1150	1.0	21	26	850
	1405+00 - 1408+75	STH 73 RT	1	110	510	510	-	510	0.3	9	12	375
	1405+00 - 1407+75	STH 73 LT	1	200	510	510	-	510	0.3	9	12	275
	1420+00 - 1423+50	STH 73 RT	1	94	630	630	-	630	0.4	11	14	350
	1510+00 - 1521+50	STH 73 RT	1	120	570	570	-	570	0.5	10	13	1150
	1512+00 - 1521+50	STH 73 LT	1	73	570	570	-	570	0.5	10	13	950
TOTAL 0010			8	1,665	7,160	7,160	140	7,020	5	128	162	5,950

MGS GUARDRAIL

CATEGORY	STATION TO STATION	LOCATION	614.2300	614.2330	614.2350	614.2610	614.2630
			MGS GUARDRAIL	MGS GUARDRAIL	MGS GUARDRAIL	MGS GUARDRAIL	MGS GUARDRAIL
			3	3 K	SHORT RADIUS	TERMINAL EAT	SHORT RADIUS
			LF	LF	LF	EACH	TERMINAL
0010	1197+00 - 1206+00	STH 73	-	1,312.5	-	4	-
	1272+00 - 1279+00	STH 73	-	550	-	2	-
	1405+50 - 1408+00	STH 73	203.125	-	28.125	3	1
	1420+50 - 1423+00	STH 73	75	-	-	2	-
	1511+00 - 1521+00	STH 73	1,450	-	-	4	-
TOTAL 0010			1,728.125	1,862.5	28.125	15	1

FINISHING ITEMS

CATEGORY	STATION TO STATION	LOCATION	625.0500	627.0200	628.2002	628.2006	628.6510	630.0130	630.0500
			SALVAGED	MULCHING	EROSION MAT	EROSION MAT	SOIL STABILIZER	SEEDING	SEED WATER
			TOPSOIL	SY	CLASS I TYPE A	URBAN CLASS I	TYPE B	MIXTURE NO. 30	MGAL
			SY	SY	SY	TYPE A	ACRE	LB	
0010	994+85 - 999+00	STH 73	350	350	350	-	0.07	6	7.8
	1014+00 - 1015+50	STH 73	360	360	-	360	0.07	6	8.0
	1042+00 - 1043+50	STH 73	330	330	330	-	0.07	6	7.4
	1073+00 - 1075+00	STH 73	580	580	580	-	0.12	10	13
	1166+50 - 1168+00	STH 73	320	320	320	-	0.07	6	7.3
TOTAL 0010			1,940	1,940	1,580	360	0.40	34	43.5

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520	628.1905	628.1910	628.7555	628.7570
					SILT FENCE LF	SILT FENCE MAINTENANCE LF	MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EROSION CONTROL EACH	CULVERT PIPE CHECKS EACH	ROCK BAGS EACH
0010	994+85	-	999+00	STH 73	380	380	-	-	-	17
	1014+00	-	1015+50	STH 73	240	240	-	-	16	-
	1042+00	-	1043+50	STH 73	240	240	-	-	10	-
	1073+00	-	1075+00	STH 73	290	290	-	-	7	-
	1166+50	-	1168+00	STH 73	230	230	-	-	8	-
	1197+00	-	1206+00	STH 73	2070	2070	-	-	23	34
	1272+00	-	1279+00	STH 73	870	870	-	-	-	-
	1405+50	-	1408+00	STH 73	810	810	-	-	-	-
	1420+50	-	1423+00	STH 73	480	480	-	-	-	-
	1511+00	-	1521+00	STH 73	960	960	-	-	-	34
	994+85	-	1522+14	STH 73 PROJECT	-	-	3	2	-	-
	TOTAL 0010				6,570	6,570	3	2	64	85

TEMPORARY MARKINGS

CATEGORY	STATION	TO	STATION	LOCATION	643.3165	643.3165
					TEMPORARY MARKING LINE PAINT 6-INCH (SOLID YELLOW) LF	TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW 4' SKIPS, 46' GAP) LF
0010	994+85	-	1025+00	STH 73	2430	200
	1025+00	-	1106+00	STH 73	9270	480
	1106+00	-	1184+00	STH 73	12340	250
	1184+00	-	1302+00	STH 73	11190	700
	1302+00	-	1445+00	STH 73	12080	900
	1445+00	-	1522+13	STH 73	14070	120
	SUBTOTAL				61380	2650
	TOTAL 0010					64,030

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	APPROXIMATE SERVICE DAY	NO.	643.0300	643.0900	643.1000	
				TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL SIGNS DAY	TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	
0010	ADVANCED WARNING AND WIDTH RESTRICTION	83	-	-	41	3,403	36
	DROP-OFF AND MILLED SURFACE	32	-	-	51	1,632	-
	GUARDRAIL REPLACEMENT AREAS	10	15	150	8	80	-
	CULVERT REPLACEMENT AREAS	6	35	210	8	48	-
	UNDISTRIBUTED	10	15	150	-	-	-
	TOTAL 0010			510	5,163	36	

650- CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.6000	650.8000	650.9911.01	650.9920
					CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION SUPPLEMENTAL CONTROL (PROJECT) (6640-00-70) EACH	CONSTRUCTION STAKING SLOPE STAKES LF
0010	994+85	-	1522+15	STH 73 Project	5	52,730	1	370
	TOTAL 0010				5	52,730	1	370

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

PERMANENT PAVEMENT MARKINGS

CATEGORY	STATION	TO	STATION	LOCATION	646.2040				646.4040		646.6120	646.8120
					MARKING LINE GROOVED WET REF EPOXY 6-INCH				MARKING LINE GROOVED WET REF EPOXY 10-INCH		MARKING STOP LINE EPOXY 18-INCH	MARKING CURB EPOXY
					(SOLID WHITE)	(SOLID YELLOW)	(SKIP WHITE)	(SKIP YELLOW)	(SOLID WHITE)	(SKIP WHITE)	(WHITE)	(YELLOW)
	LF	LF	LF	LF	LF	LF	LF	LF				
0010	994+85	-	1025+00	STH 73	6,120	2,610	60	640	260	-	30	-
	1025+00	-	1106+00	STH 73	15,960	9,700	-	1,510	360	-	70	-
	1106+00	-	1184+00	STH 73	15,520	12,450	20	770	190	-	-	-
	1184+00	-	1302+00	STH 73	23,650	11,590	-	2,190	110	-	50	-
	1302+00	-	1445+00	STH 73	28,270	12,770	120	2,810	450	-	70	200
	1445+00	-	1522+13	STH 73	15,430	13,780	-	370	-	460	-	-
				SUBTOTAL	104,950	62,900	200	8,290	1,370	460	220	200
				TOTAL 0010	176,340				1,830		220	200

SAWING ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150	REMARKS
					SAWING ASPHALT LF	
0010	994+85	-		STH 73	24	Project Start
	543+68	-		STH 44	40	STH 44 Butt Joint
	1014+00	-	1015+50	STH 73	48	Culvert Removal
	1026+00	-		STH 73	58	CTH S/Heritage Rd Butt Joints
	1042+00	-	1042+50	STH 73	48	Culvert Removal
	1066+75	-		STH 73	20	N Rd Butt Joint
	1073+50	-	1074+75	STH 73	48	Culvert Removal
	1105+50	-		STH 73	68	CTH H Butt Joint
	1131+75	-		STH 73	22	Phelps Rd Butt Joint
	1158+25	-		STH 73	24	CTH B Butt Joint
	1166+50	-	1168+00	STH 73	48	Culvert Removal
	1185+25	-		STH 73	45	CTH BB/CTH B Butt Joint
	1236+75	-		STH 73	20	Old Ditch Road Butt Joint
	1303+50	-		STH 73	53	CTH K Butt Joint
	1339+50	-		STH 73	57	CTH D Butt Joint
	1350+75	-		STH 73	25	Swansons Rd Butt Joing
	1411+00	-		STH 73	22	Beyers Cove Butt Joint
	1417+70	-		STH 73	28	Reetz Rd Butt Joint
	1444+25	-		STH 73	78	CTH T Butt Joints
				TOTAL 0010	776	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION TRANSPORTATION PROJECT PLAT TITLE SHEET

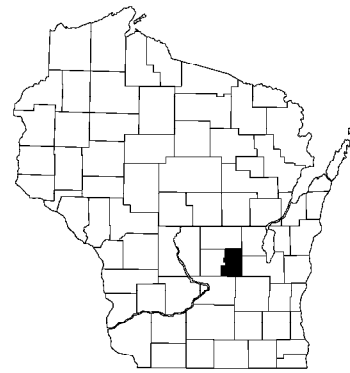
1430-08-21

PRINCETON - RIPON

STH 73/PYE ALLEY ROAD INTERSECTION

STH 23

GREEN LAKE COUNTY



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	---	GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	●
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE	---	SIGN		COMPENSABLE	
EXISTING R/W OR HE LINE	---	OFF-PREMISE SIGN		NON-COMPENSABLE	
PROPERTY LINE	---	PARCEL NUMBER		UTILITY NUMBER	
LOT, TIE & OTHER MINOR LINES	---	PARALLEL OFFSETS			
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					
BRIDGE					

CONVENTIONAL ABBREVIATIONS

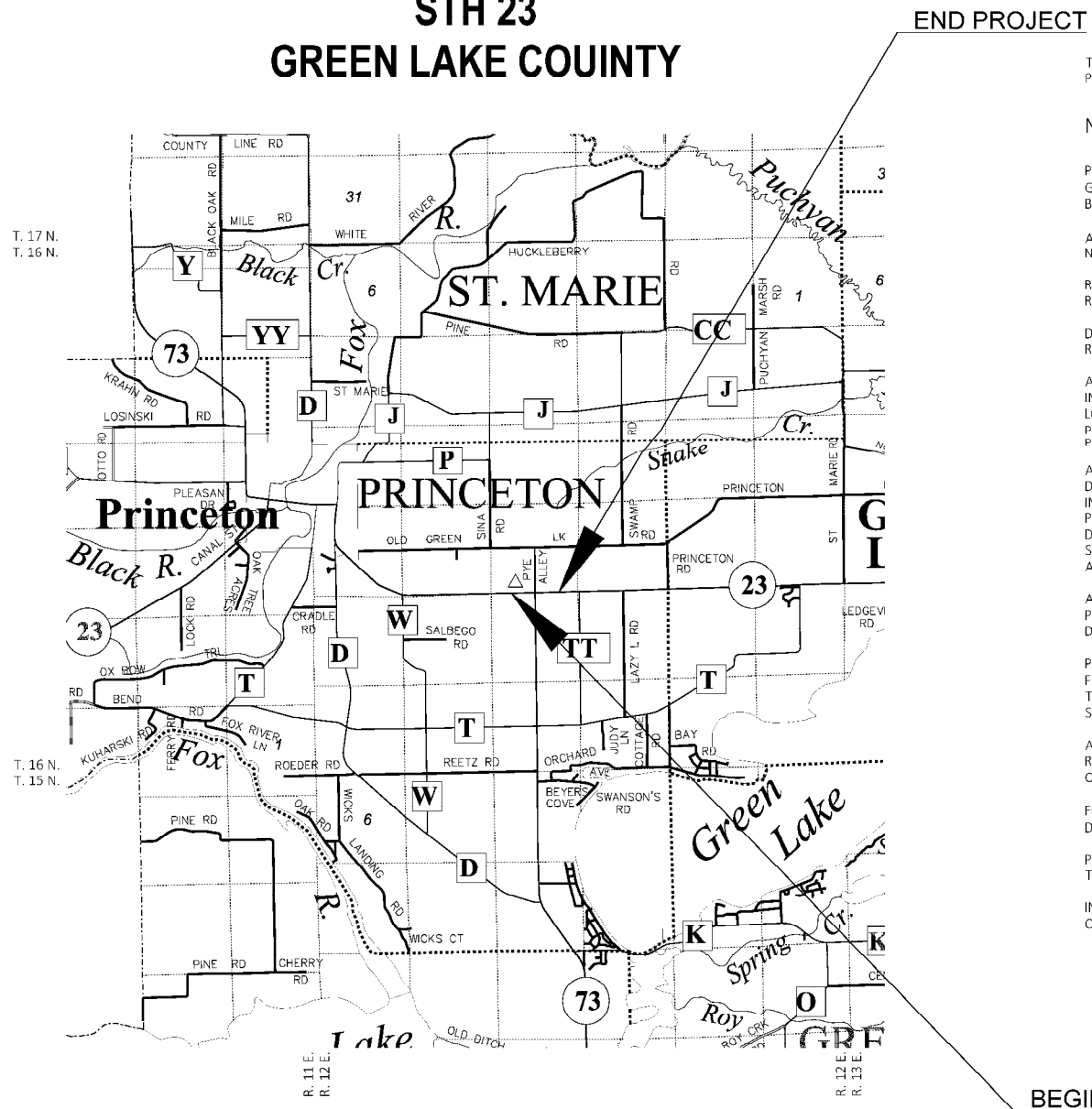
ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT	RDE
CENTERLINE	C/L	EASEMENT	
CERTIFIED SURVEY MAP	CSM	RIGHT	RT
CONCRETE	CONC	RIGHT 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 EASEMENT	PLE		
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 UTILITY SYMBOLS

---	WATER
---	GAS
---	TELEPHONE
---	OVERHEAD TRANSMISSION LINES
---	ELECTRIC
---	CABLE TELEVISION
---	FIBER OPTIC
---	SANITARY SEWER
---	STORM SEWER



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1430-08-21

NOTES:

- POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), GREEN LAKE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.
- ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
- 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.
- DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.
- A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, 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 DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.
- A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE 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 DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.
- AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.
- PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED 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, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.
- ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.
- FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WISCONSIN RAPIDS.
- PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.
- INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

PROJECT NUMBER 1430-08-21 -4.01
SHEET 2 OF 2
AMENDMENT NO:

TRANSPORTATION PROJECT PLAT NO: 1430-08-21 - 4.01

THAT PART OF LOT 1 AND LOT 2 OF CSM 3348 LOCATED IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THAT PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND PART OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4, ALL IN SECTION 28, TOWNSHIP 16 NORTH, RANGE 12 EAST, TOWN OF PRINCETON, GREEN LAKE COUNTY, WISCONSIN.

RELOCATION ORDER STH 23, PRINCETON - RIPON, STH73/PYE ALLEY ROAD INTERSECTION, GREEN LAKE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

- 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.
- THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

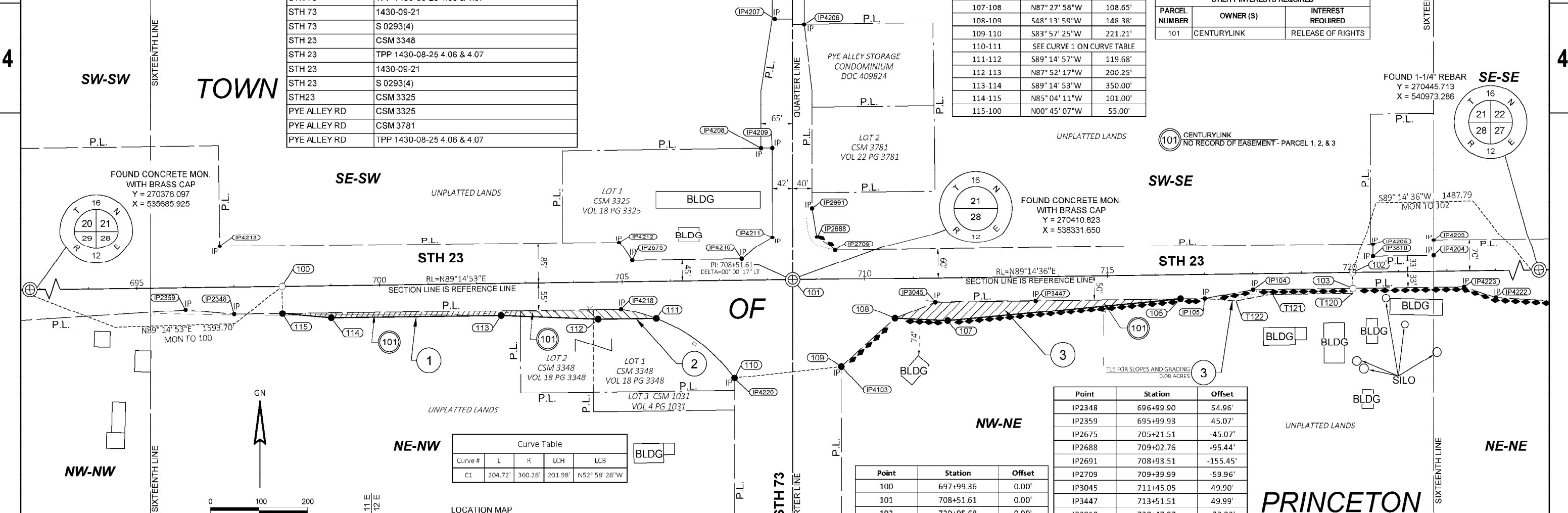
HWY	BASIS OF EXISTING R/W
STH 73	CSM 3348
STH 73	TPP 1430-08-25 4.06 & 4.07
STH 73	1430-09-21
STH 73	S 0293(4)
STH 23	CSM 3348
STH 23	TPP 1430-08-25 4.06 & 4.07
STH 23	1430-09-21
STH 23	S 0293(4)
STH23	CSM 3325
PYE ALLEY RD	CSM 3325
PYE ALLEY RD	CSM 3781
PYE ALLEY RD	TPP 1430-08-25 4.06 & 4.07

PARCEL NUMBER	OWNER (S)	INTEREST(S) REQUIRED	RW ACRES REQUIRED			PLE ACRES	TLE ACRES
			NEW	EXISTING	TOTAL		
1	MCI REAL ESTATE HOLDINGS LLC	FEE	0.10	---	0.10	---	---
2	GREEN LAKE LODGING AND SPORTS	FEE	0.10	---	0.10	---	---
3	JAMES G. WESNER AND KATHLEEN D. WESNER REVOCABLE TRUST	FEE/TLE	0.26	---	0.26	---	0.08

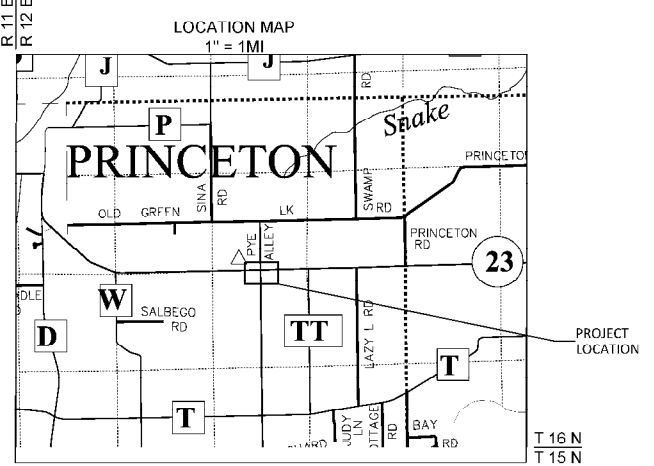
419230
 RECORDED ON:
 04/13/2023 08:49:45 AM
 REC FEE: 25.00
 VOL. OF TPPLT PG. PAGES: 2
 RENEE A. THIEM-NORTH
 REGISTER OF DEEDS
 GREEN LAKE, WI
 RESERVED FOR REGISTER OF DEEDS
 PROJECT NUMBER 1430-08-21-4.01
 SHEET 1 OF 2
 AMENDMENT NO.:

COURSE	BEARING	DISTANCE
100-101	N89° 14' 53"E	1052.25'
101-102	N89° 14' 36"E	1154.07'
102-103	S00° 45' 24"E	33.00'
103-IP104	S89° 14' 36"W	205.68'
IP104-IP105	S79° 35' 43"W	101.43'
	(S79° 35' 31"W)	(101.43')
IP105-106	S89° 14' 36"W	49.79'
106-107	S84° 48' 21"W	481.79'
107-108	N87° 27' 58"W	108.65'
108-109	S48° 13' 59"W	148.38'
109-110	S83° 57' 25"W	221.21'
110-111	SEE CURVE 1 ON CURVE TABLE	
111-112	S89° 14' 57"W	119.68'
112-113	N87° 52' 17"W	200.25'
113-114	S89° 14' 53"W	350.00'
114-115	N85° 04' 11"W	101.00'
115-100	N00° 45' 07"W	55.00'

UTILITY INTERESTS REQUIRED		
PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED
101	CENTURYLINK	RELEASE OF RIGHTS



Curve #	L	R	LCH	LCB
C1	204.72'	360.28'	201.98'	N52° 58' 28"W



Point	Station	Offset
100	697+99.36	0.00'
101	708+51.61	0.00'
102	720+05.68	0.00'
103	720+05.68	33.00'
IP104	718+00.00	33.00'
IP105	717+00.01	50.00'
106	716+50.21	50.00'
107	711+69.87	87.28'
108	710+61.40	81.04'
109	709+49.43	178.41'
110	707+29.18	198.80'
111	705+69.54	75.07'
112	704+49.87	75.06'
113	702+49.87	65.00'
114	698+99.86	65.00'
115	697+99.36	55.00'
T120	720+05.68	43.00'
T121	718+39.87	43.00'
T122	717+64.87	55.50'

Point	Station	Offset
IP2348	696+99.90	54.96'
IP2359	695+99.93	45.07'
IP2675	705+21.51	-45.07'
IP2688	709+02.76	-95.44'
IP2691	708+93.51	-155.45'
IP2709	709+39.99	-59.96'
IP3045	711+45.05	49.90'
IP3447	713+51.51	49.99'
IP3810	720+47.97	-33.02'
IP4103	709+50.10	178.80'
IP4203	721+73.52	-70.11'
IP4204	721+72.95	-33.01'
IP4205	720+48.31	-60.07'
IP4206	708+82.23	-531.85'
IP4207	708+21.95	-543.96'
IP4208	707+90.07	-280.39'
IP4209	708+13.25	-280.31'
IP4210	707+47.30	-44.92'
IP4211	708+11.08	-95.48'
IP4212	704+94.80	-84.83'
IP4213	696+71.85	-84.99'
IP4218	704+97.23	55.04'
IP4220	707+29.26	200.20'
IP4222	722+99.94	56.01'
IP4223	722+35.01	32.91'

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2

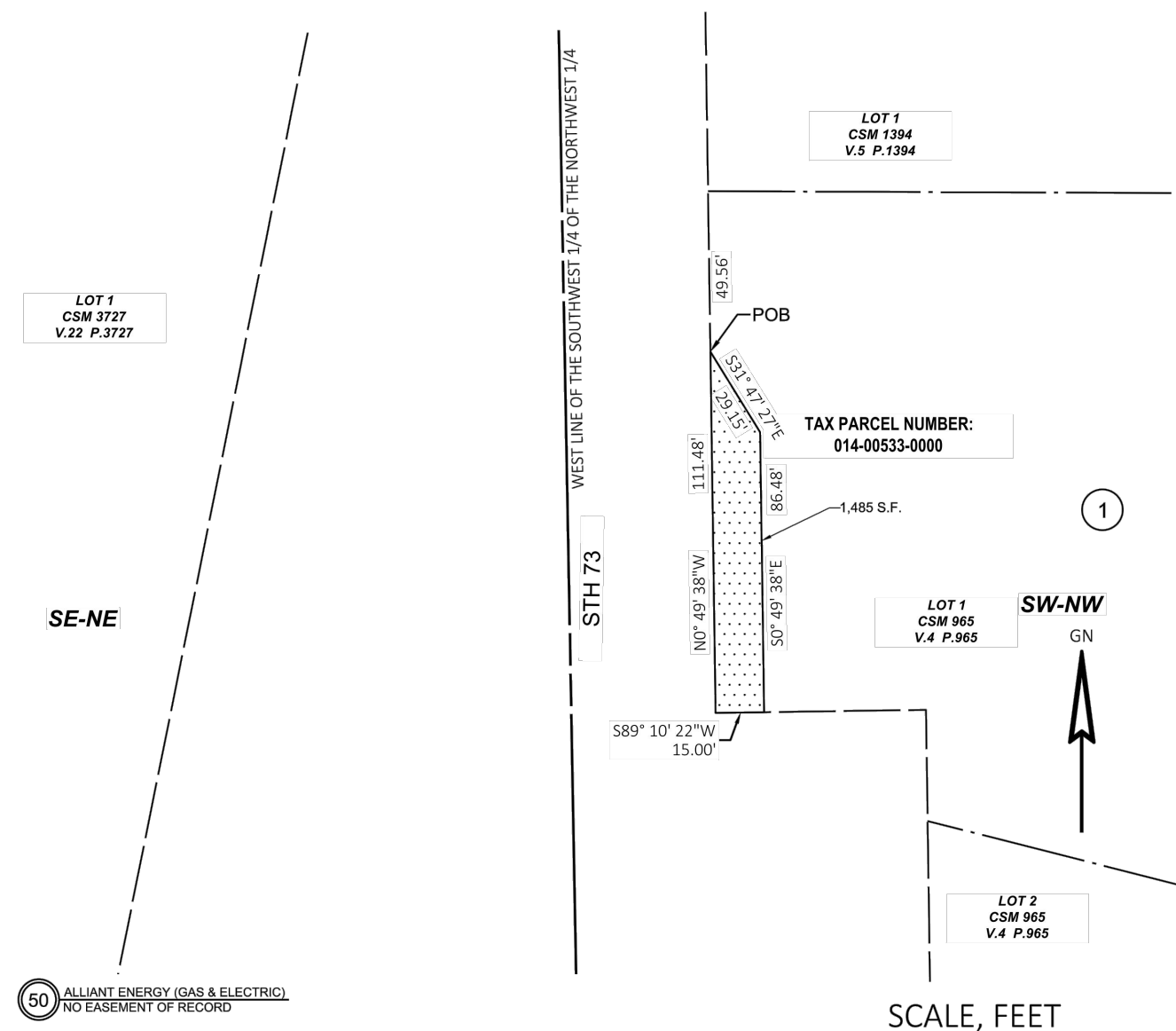
NOTES:
 POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), GREEN LAKE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.
 ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
 FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WISCONSIN RAPIDS.
 EXISTING ACCESS CONTROL ALONG STH 23 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT TPP 1430-08-25-4.07

BENJAMIN J LARSON, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.
 SIGNATURE: *Benjamin J Larson* DATE: 04/10/23
 PRINT NAME: BENJAMIN J LARSON
 REGISTRATION NUMBER: S-3006
 THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE DEPARTMENT
 SIGNATURE: *Brent L Stella* DATE: 04/10/23
 PRINT NAME: BRENT L STELLA

NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY.
REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.

THIS TLE IS FOR THE RIGHT TO CONSTRUCT, CUT, AND/OR FILL SLOPES, INCLUDING FOR SUCH PURPOSE THE RIGHT TO OPERATE THE 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 DEEM NECESSARY OR DESIRABLE.

R/W PROJECT NUMBER: 6640-00-20 EXHIBIT NUMBER: 1
TLE ACQUISITION EXHIBIT
COLUMBUS - PRINCETON
N JCT 44 TO S JCT STH 23
STH 73 GREEN LAKE COUNTY
PART OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 15, T15N, R12E, TOWN OF MARQUETTE, GREEN LAKE COUNTY, WISCONSIN.



UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
N/A	N/A	N/A

SCHEDULE OF LANDS & INTERESTS REQUIRED				
PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	PLE S.F.	TLE S.F.
1	DIANE Y. WHITE AND KELLY L. WHITE	TLE	0	1,485

FILE NAME : STH 73 TLE EXHIBITS.DWG PLOT DATE : 4/5/2023 8:47 AM R/W PROJECT: 6640-00-20

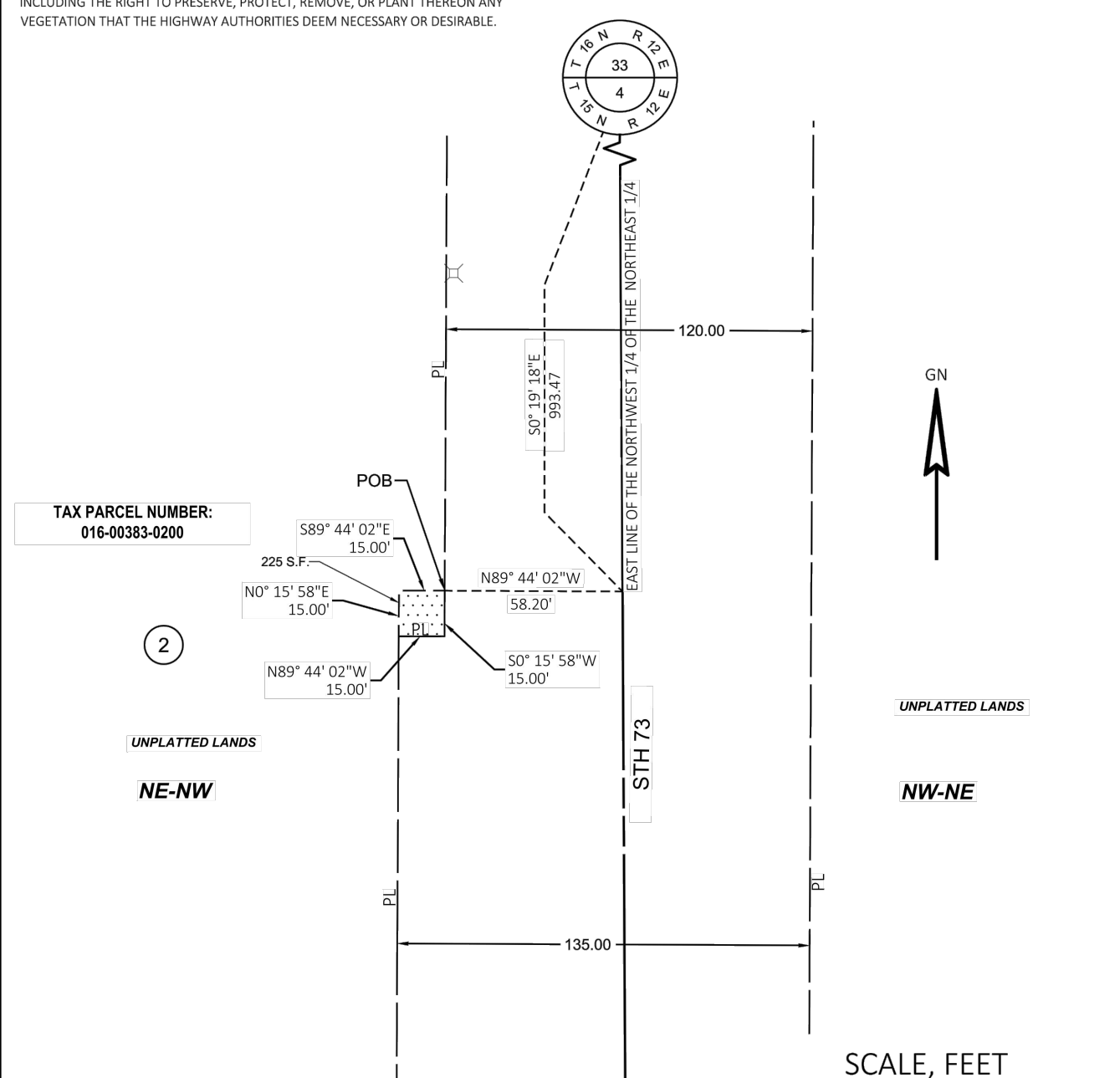
PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE TLE SHEET E

FILE NAME : I:\47470381 STH 73 REHABILITATION\C3D\SHEETSPLAN\66400070_040101_RP.DWG LAYOUT NAME - 01

NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY.
REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.

THIS TLE IS FOR THE RIGHT TO CONSTRUCT, CUT, AND/OR FILL SLOPES, INCLUDING FOR SUCH PURPOSE THE RIGHT TO OPERATE THE 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 DEEM NECESSARY OR DESIRABLE.

R/W PROJECT NUMBER: 6640-00-20 EXHIBIT NUMBER: 2
TLE ACQUISITION EXHIBIT
COLUMBUS - PRINCETON
N JCT 44 TO S JCT STH 23
STH 73 GREEN LAKE COUNTY
PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 4, T15N, R12E, TOWN OF PRINCETON, GREEN LAKE COUNTY, WISCONSIN.

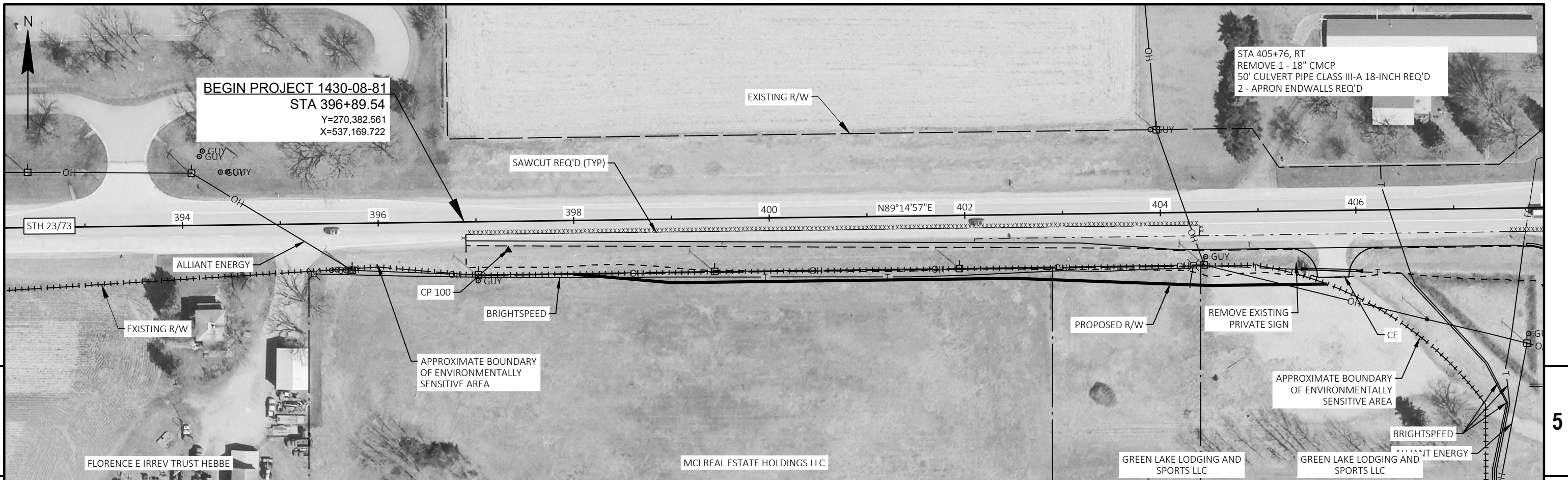


UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
N/A	N/A	N/A

SCHEDULE OF LANDS & INTERESTS REQUIRED				
PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	PLE S.F.	TLE S.F.
2	CAROL A. SIDDAL	TLE	0	225

FILE NAME : STH 73 TLE EXHIBITS.DWG PLOT DATE : 4/5/2023 8:44 AM R/W PROJECT: 6640-00-20

PLOT DATE : 6/26/2023 9:52 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:20 FT WISDOT/CADD SHEET 42



BEGIN PROJECT 1430-08-81
STA 396+89.54
 Y=270,382.561
 X=537,169.722

STA 405+76, RT
 REMOVE 1 - 18" CMCP
 50' CULVERT PIPE CLASS III-A 18-INCH REQ'D
 2 - APRON ENDWALLS REQ'D

STA 411+64, RT
 REMOVE 1 - 18" CMCP
 36' CULVERT PIPE CLASS III-A 18-INCH REQ'D
 2 - APRON ENDWALLS REQ'D

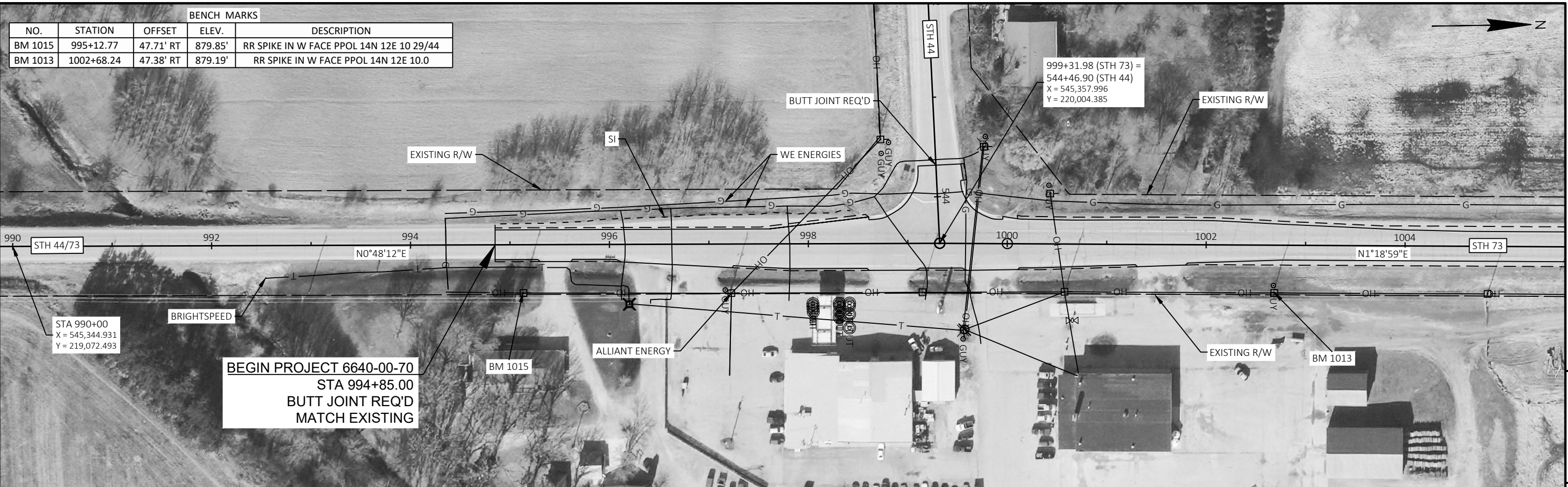
STA 412+47, 42' RT
 REMOVE 1 - APRON ENDWALL
 16' CPRC CLASS III 24-INCH EXTENSION REQ'D
 1 - APRON ENDWALL REQ'D
 1 - CONCRETE COLLAR FOR PIPE

END PROJECT 1430-08-81
STA STA 420+05.81
 Y=270,412.809
 X=539,485.798

END CONSTRUCTION PROJECT 6640-00-70
BEGIN CONSTRUCTION PROJECT 1430-08-81
STA 1522+13.32

Control & Benchmark Table					
Point #	Code	Northing	Easting	Elevation	Description
100	CP	270366.65	537213.08	854.94	REBAR/CAP
101	CP	270370.32	538280.48	855.64	3/4" REBAR
102	CP	270393.25	539284.42	857.04	REBAR/CAP
907	CP	270149.97	538288.89	854.81	REBAR/CAP
1006	BM	270235	538405	850.29	RR SPIKE IN PPO

PROJECT NO: 1430-08-81 HWY: STH 23 COUNTY: GREEN LAKE PLAN SHEET E



BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1015	995+12.77	47.71' RT	879.85'	RR SPIKE IN W FACE PPOL 14N 12E 10 29/44
BM 1013	1002+68.24	47.38' RT	879.19'	RR SPIKE IN W FACE PPOL 14N 12E 10.0

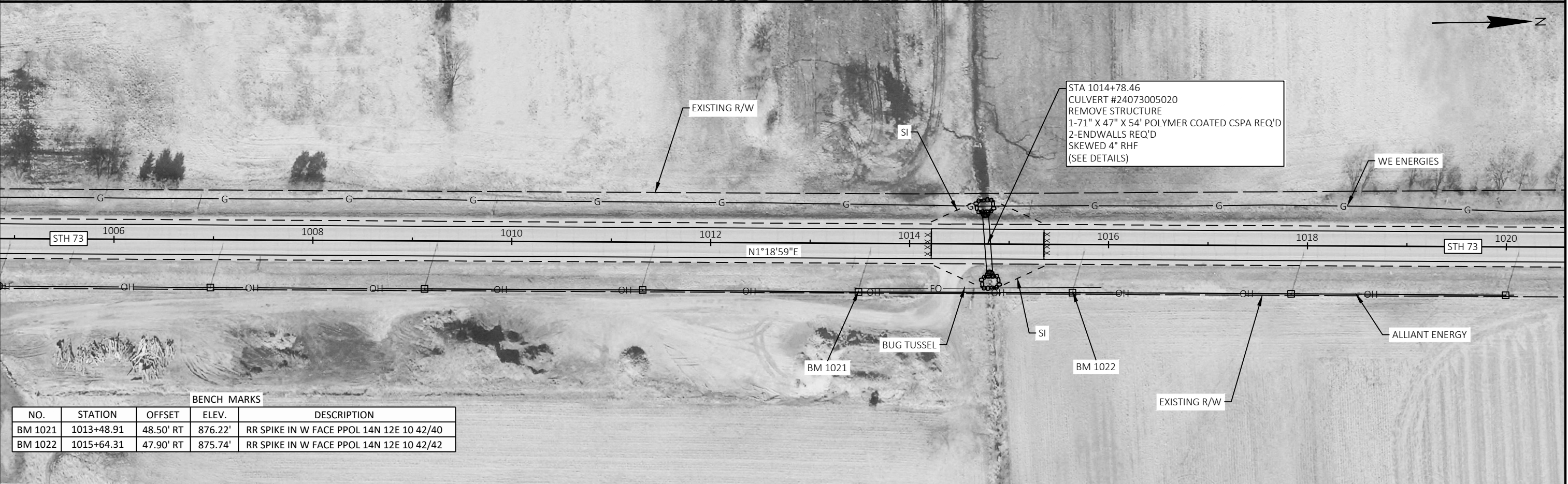
BEGIN PROJECT 6640-00-70
 STA 994+85.00
 BUTT JOINT REQ'D
 MATCH EXISTING

999+31.98 (STH 73) =
 544+46.90 (STH 44)
 X = 545,357.996
 Y = 220,004.385

STA 990+00
 X = 545,344.931
 Y = 219,072.493

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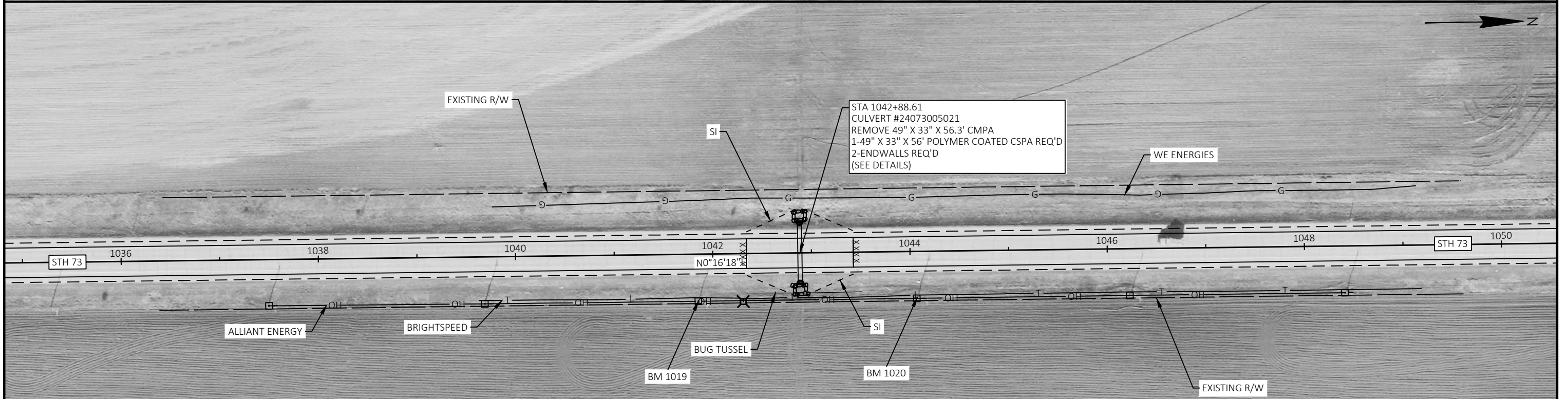
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STA 1014+78.46
 CULVERT #24073005020
 REMOVE STRUCTURE
 1-71" X 47" X 54' POLYMER COATED CSPA REQ'D
 2-ENDWALLS REQ'D
 SKEWED 4° RHF
 (SEE DETAILS)

BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1021	1013+48.91	48.50' RT	876.22'	RR SPIKE IN W FACE PPOL 14N 12E 10 42/40
BM 1022	1015+64.31	47.90' RT	875.74'	RR SPIKE IN W FACE PPOL 14N 12E 10 42/42

PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE PLAN SHEET E



BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1019	1041+84.90	47.39' RT	908.61'	RR SPIKE IN W FACE PPOL 14N 12E 03 40/16
BM 1020	1044+06.55	46.70' RT	908.22'	RR SPIKE IN W FACE PPOL 14N 12E 03 40/18

PROJECT NO: 6640-00-70

HWY: STH 73

COUNTY: GREEN LAKE

PLAN

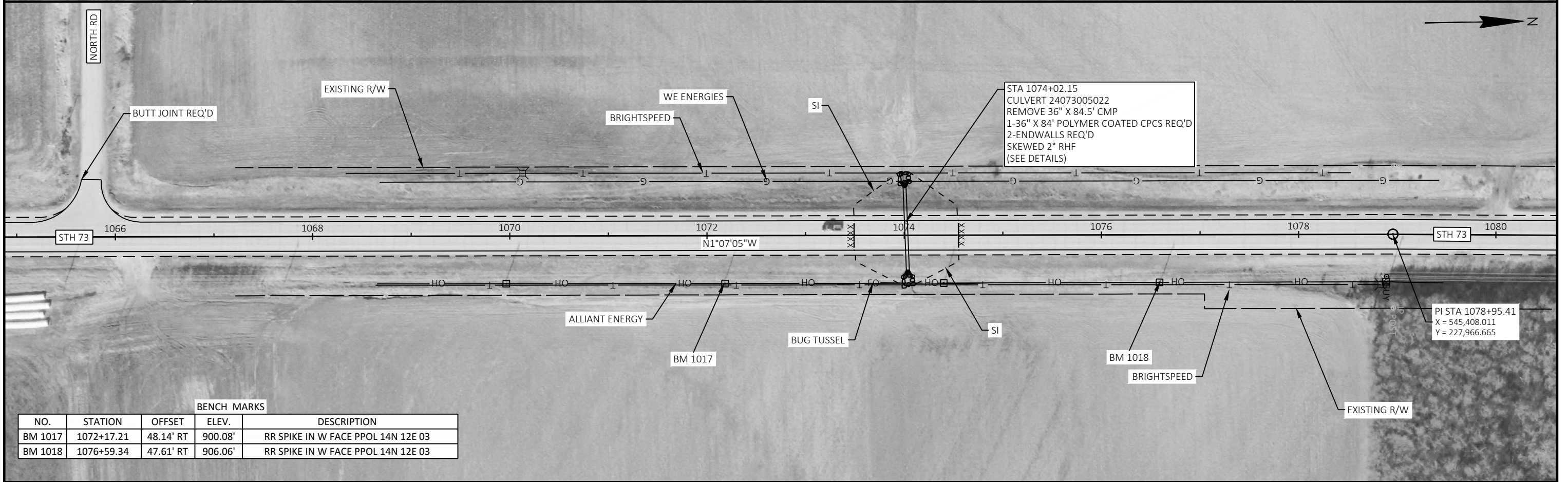
SHEET

E



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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1017	1072+17.21	48.14' RT	900.08'	RR SPIKE IN W FACE PPOL 14N 12E 03
BM 1018	1076+59.34	47.61' RT	906.06'	RR SPIKE IN W FACE PPOL 14N 12E 03

PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE PLAN SHEET E



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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN	SHEET	E
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN	SHEET	E
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PI STA = 1167+98.01
 Y = 236868.709
 X = 545308.618
 DELTA = 37°08'09"
 D = 1°20'00"
 T = 1443.63'
 L = 2785.46'
 R = 4297.60'
 PC STA = 1153+54.38
 Y = 235425.174
 X = 545324.735
 PT STA = 1181+39.84
 Y = 238009.774
 X = 544424.297
 BK = N00°38'22.9"W
 AH = N37°46'32.0"W
 SE = 3.6% (MATCH EXISTING)

STA 1167+29.99
 CULVERT #24073005027
 REMOVE 42" X 29" X 57' CMPA
 1-42" X 29" X 58' POLYMER COATED CPC'S REQ'D
 2-ENDWALLS REQ'D
 SKEWED 4° RHF
 (SEE DETAILS)

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1012	1166+39.16	50.19' RT	918.91'	RR SPIKE IN SW FACE PPOL 15N 12E 27
BM 1011	1168+98.45	50.40' RT	912.90'	RR SPIKE IN SW FACE PPOL 15N 12E 27



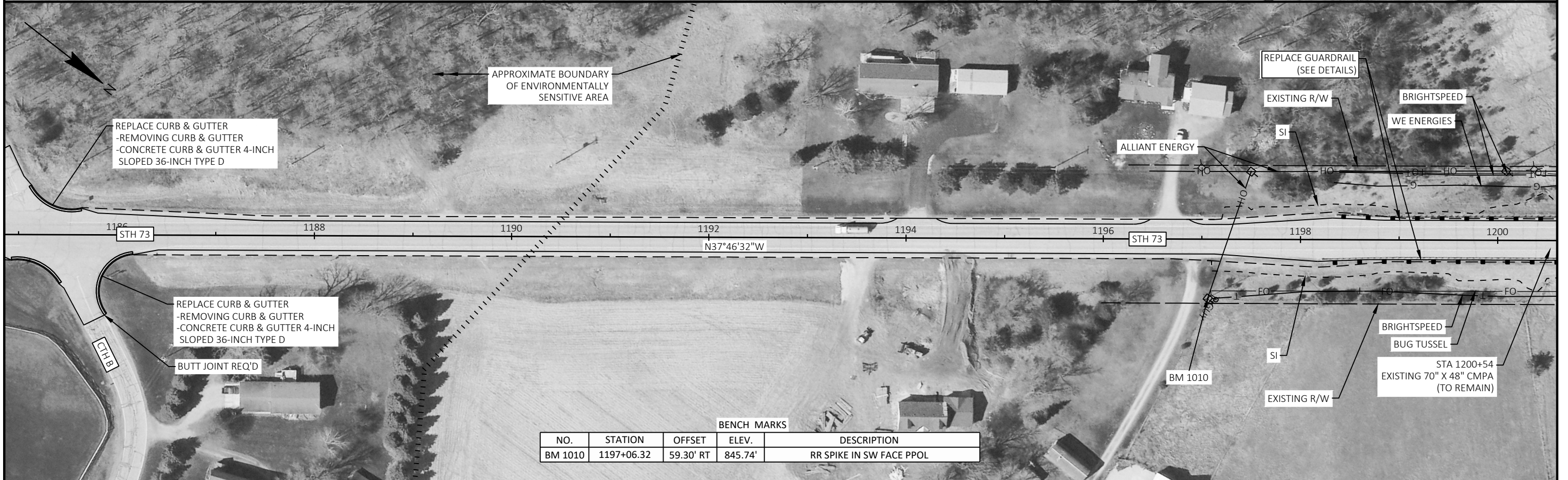
PI STA = 1167+98.01
 Y = 236868.709
 X = 545308.618
 DELTA = 37°08'09"
 D = 1°20'00"
 T = 1443.63'
 L = 2785.46'
 R = 4297.60'
 PC STA = 1153+54.38
 Y = 235425.174
 X = 545324.735
 PT STA = 1181+39.84
 Y = 238009.774
 X = 544424.297
 BK = N00°38'22.9"W
 AH = N37°46'32.0"W
 SE = 3.6% MATCH EXISTING

REPLACE CURB & GUTTER
 -REMOVING CURB & GUTTER
 -CONCRETE CURB & GUTTER 4-INCH
 SLOPED 36-INCH TYPE D

REPLACE CURB & GUTTER
 -REMOVING CURB & GUTTER
 -CONCRETE CURB & GUTTER 4-INCH
 SLOPED 36-INCH TYPE D

5

5



APPROXIMATE BOUNDARY OF ENVIRONMENTALLY SENSITIVE AREA

REPLACE CURB & GUTTER
 -REMOVING CURB & GUTTER
 -CONCRETE CURB & GUTTER 4-INCH
 SLOPED 36-INCH TYPE D

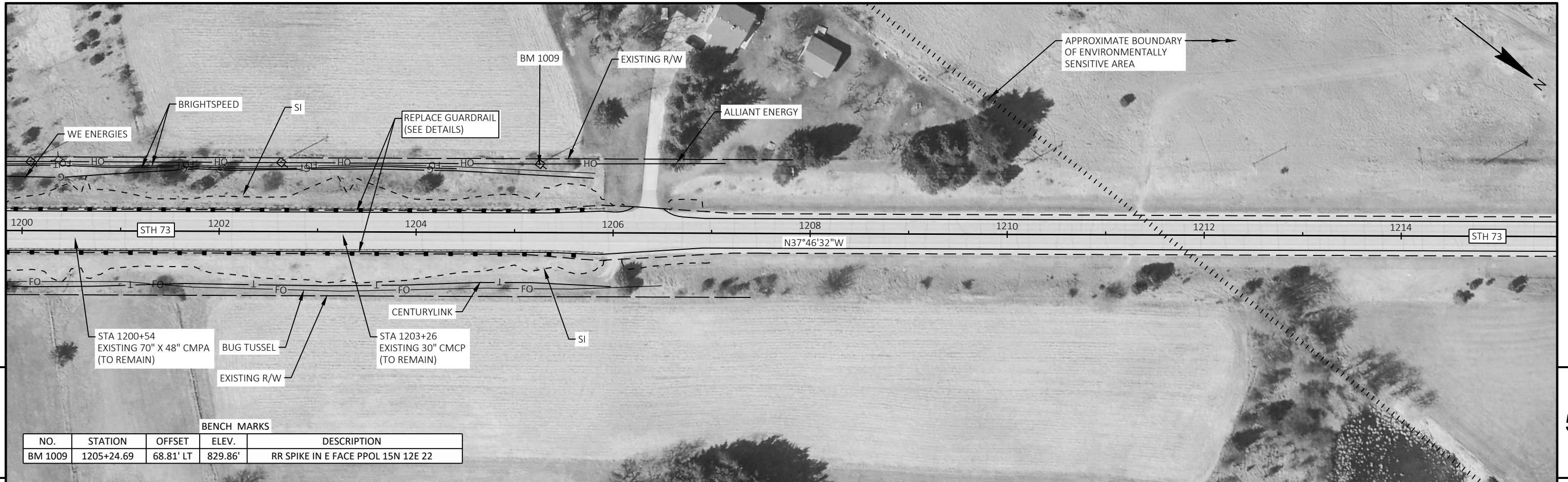
REPLACE GUARDRAIL (SEE DETAILS)

BRIGHTSPEED WE ENERGIES

REPLACE CURB & GUTTER
 -REMOVING CURB & GUTTER
 -CONCRETE CURB & GUTTER 4-INCH
 SLOPED 36-INCH TYPE D

BRIGHTSPEED
 BUG TUSSEL
 STA 1200+54
 EXISTING 70" X 48" CMPA
 (TO REMAIN)

BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1010	1197+06.32	59.30' RT	845.74'	RR SPIKE IN SW FACE PPOL



BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1009	1205+24.69	68.81' LT	829.86'	RR SPIKE IN E FACE PPOL 15N 12E 22



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE PLAN SHEET E



PI STA = 1234+30.43
 Y = 242191.545
 X = 541183.439
 DELTA = 36°56'54"
 D = 2°59'59"
 T = 638.12'
 L = 1231.70'
 R = 1910.00'
 PC STA = 1227+92.31
 Y = 241687.164
 X = 541574.333
 PT STA = 1240+24.02
 Y = 242829.599
 X = 541174.227
 BK = N37°46'32.0"W
 AH = N00°49'37.8"W
 SE = 5.4% (MATCH EXISTING)

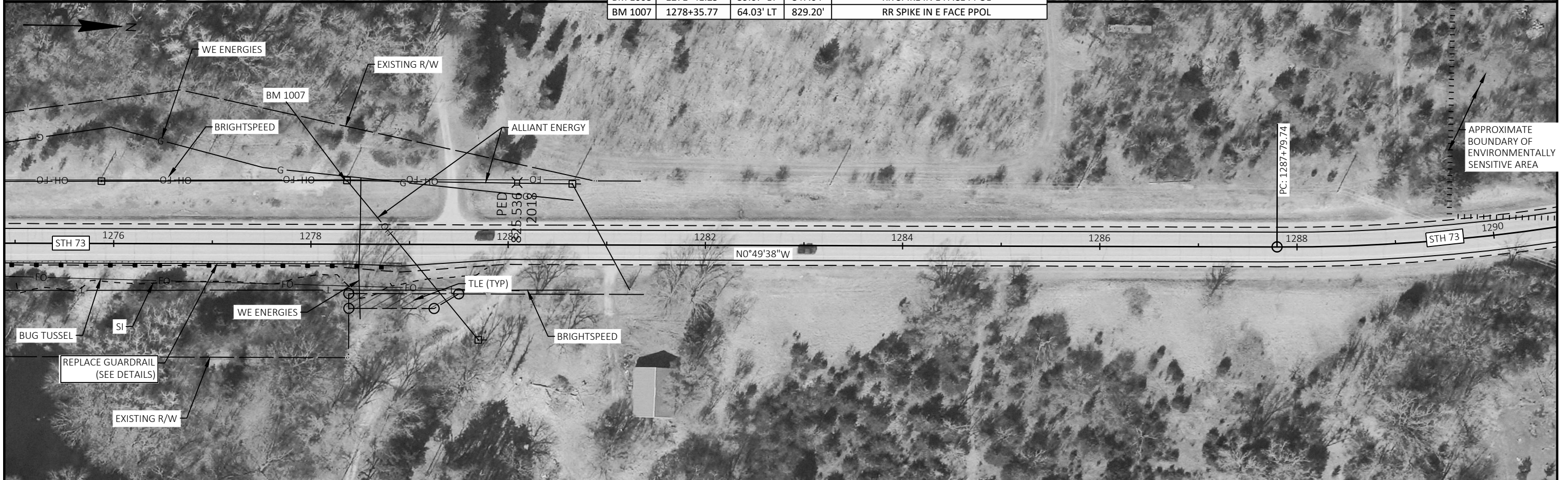


PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN	SHEET	E
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BENCH MARKS

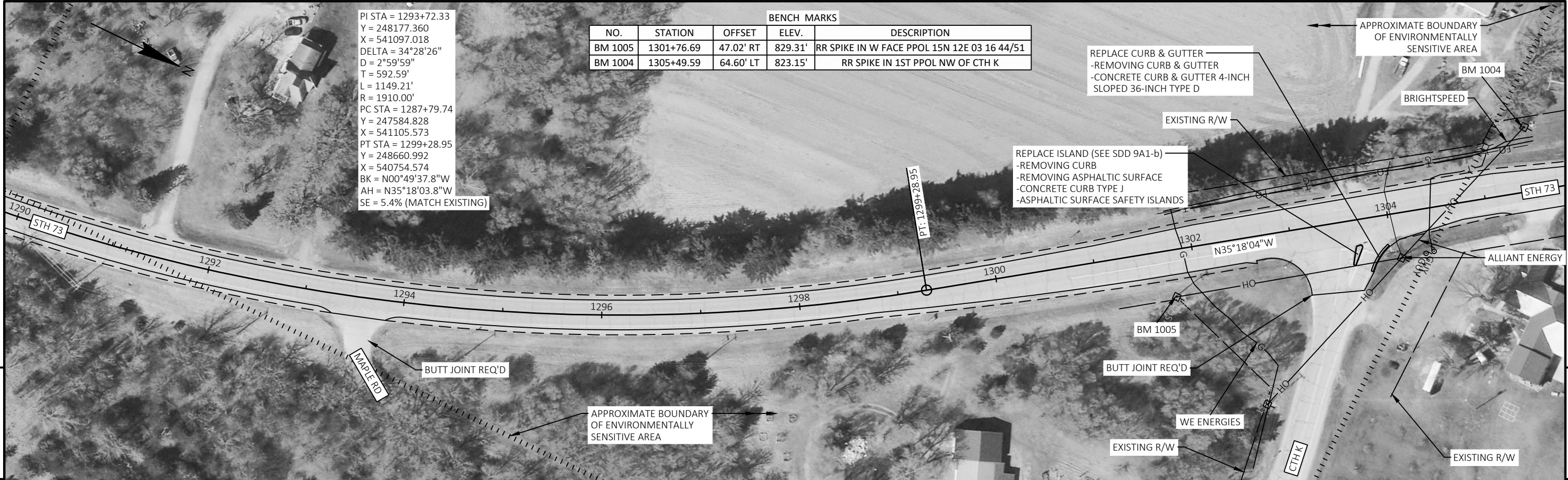
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1008	1271+41.25	59.67' LT	847.04'	RR SPIKE IN E FACE PPOL
BM 1007	1278+35.77	64.03' LT	829.20'	RR SPIKE IN E FACE PPOL



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE PLAN SHEET E

PI STA = 1293+72.33
 Y = 248177.360
 X = 541097.018
 DELTA = 34°28'26"
 D = 2°59'59"
 T = 592.59'
 L = 1149.21'
 R = 1910.00'
 PC STA = 1287+79.74
 Y = 247584.828
 X = 541105.573
 PT STA = 1299+28.95
 Y = 248660.992
 X = 540754.574
 BK = N00°49'37.8"W
 AH = N35°18'03.8"W
 SE = 5.4% (MATCH EXISTING)

BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1005	1301+76.69	47.02' RT	829.31'	RR SPIKE IN W FACE PPOL 15N 12E 03 16 44/51
BM 1004	1305+49.59	64.60' LT	823.15'	RR SPIKE IN 1ST PPOL NW OF CTH K



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE PLAN SHEET E



PI STA = 1339+77.48
 Y = 251965.105
 X = 538415.040
 DELTA = 34°19'24"
 D = 2°59'59"
 T = 589.84'
 L = 1144.20'
 R = 1910.00'
 PC STA = 1333+87.64
 Y = 251483.718
 X = 538755.894
 PT STA = 1345+31.83
 Y = 252554.863
 X = 538404.975
 BK = N35°18'03.8"W
 AH = N00°58'39.8"W
 SE = 5.4% (MATCH EXISTING)

PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN	SHEET	E
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350 STH 73 1352 1354 1356 1358 1360 1362 1364 STH 73
 N0°58'40"W



5

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STH 73 1366 1368 1370 1372 1374 1376 1378 1380 STH 73
 N0°58'40"W N0°15'58"E



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE PLAN SHEET E

FILE NAME : I:\47\470381 STH 73 REHABILITATION\C3D\SHEETSPLAN\66400070_050201_PN.DWG PLOT DATE : 9/27/2023 11:22 AM PLOT BY : KUSCHEL, LEVI PLOT NAME : PLOT SCALE : 1 IN:100 FT WISDOT/CADD SHEET 44

LAYOUT NAME - 13

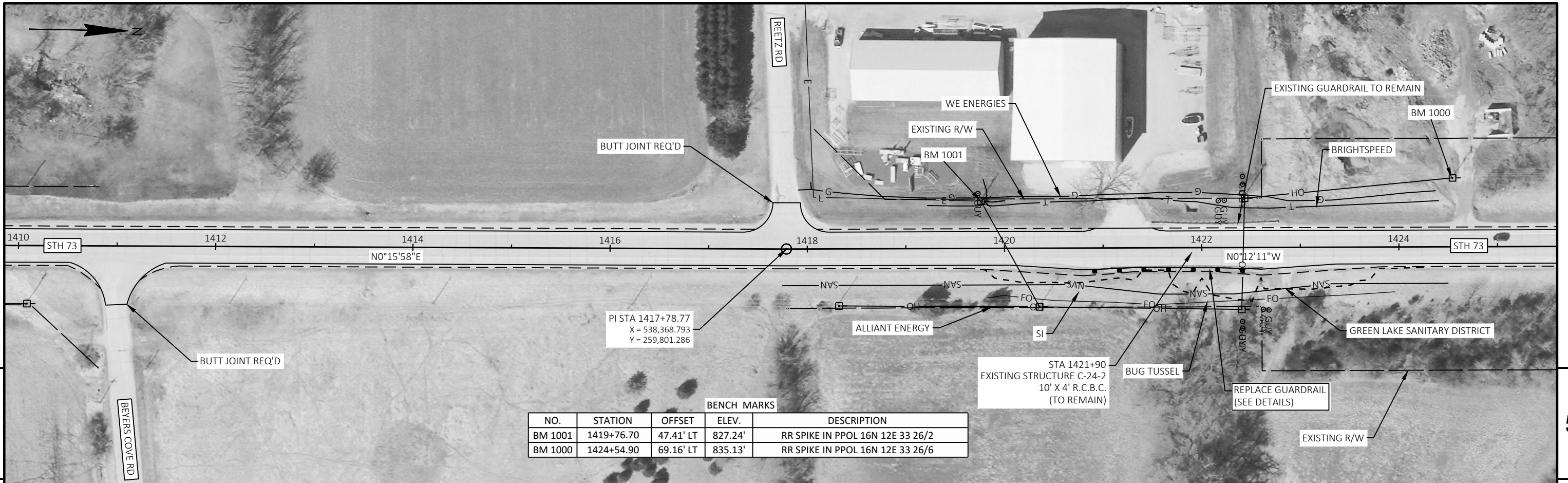


BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1003	1405+33.07	59.25' RT	809.59'	RR SPIKE IN FACE PPOL 15N 12E 26/41
BM 1002	1407+68.14	58.20' RT	807.69'	RR SPIKE 2ND POLE SOUTH OF BEYERS COVER

STA 1407+62' LT
 REMOVE 1 - APRON ENDWALL
 12' CULVERT PIPE CORRUGATED STEEL 18" EXTENSION REQ'D
 1 - APRON ENDWALL REQ'D
 1 - CONCRETE COLLAR FOR PIPE
 (SEE DETAILS)



PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN	SHEET	E
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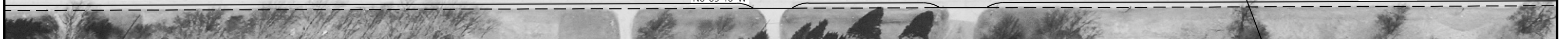
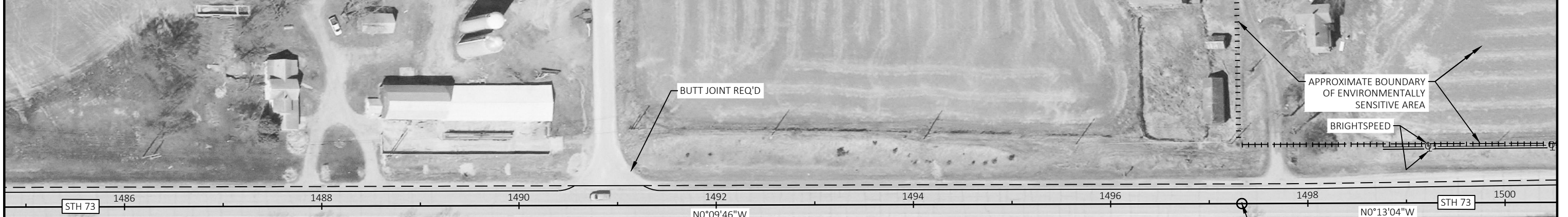
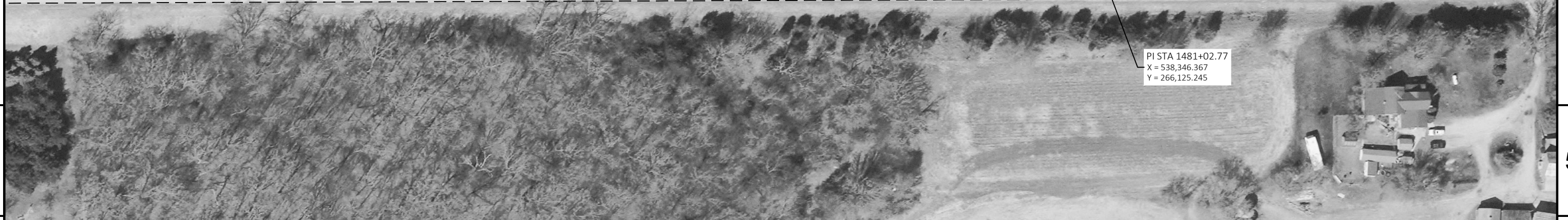
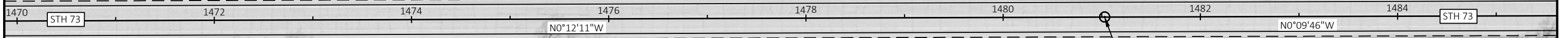
BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1001	1419+76.70	47.41' LT	827.24'	RR SPIKE IN PPOL 16N 12E 33 26/2
BM 1000	1424+54.90	69.16' LT	835.13'	RR SPIKE IN PPOL 16N 12E 33 26/6





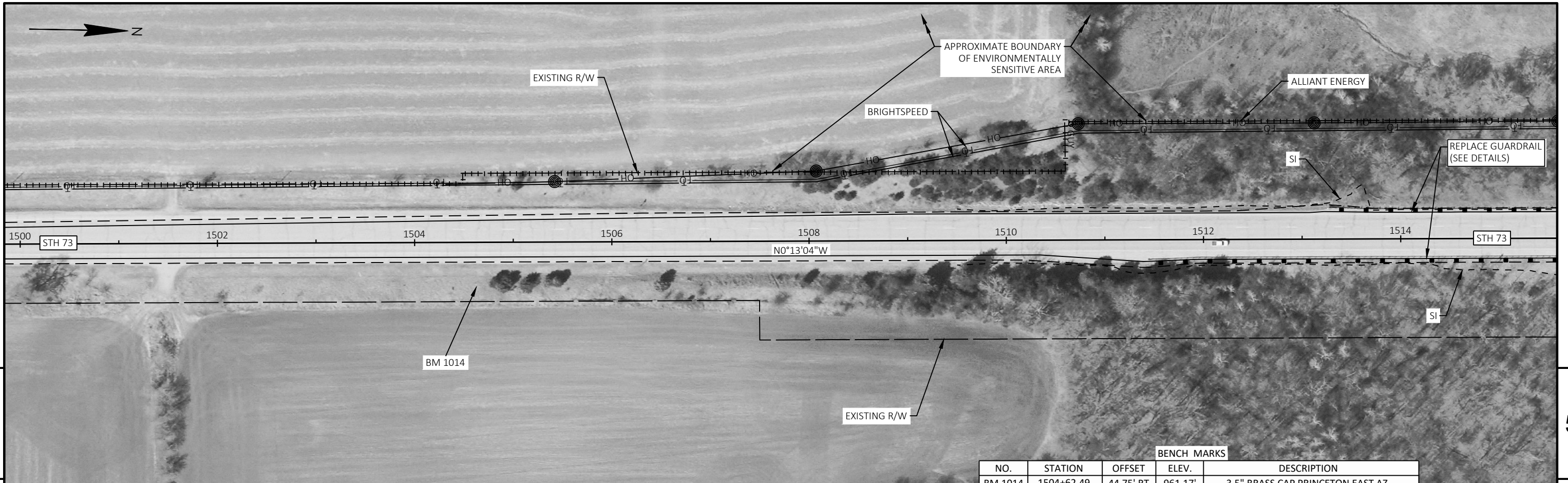
PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN	SHEET	E
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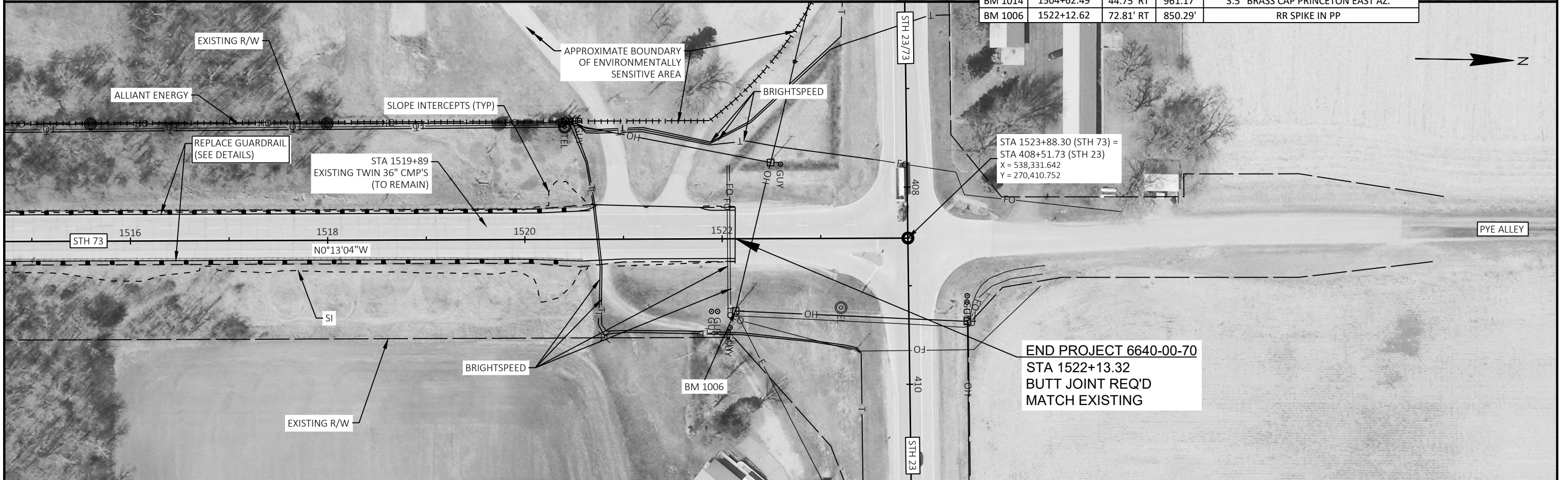
PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	PLAN	SHEET	E
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5

5



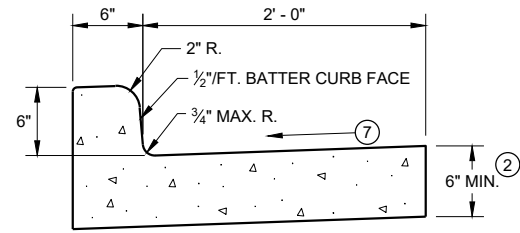
BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1014	1504+62.49	44.75' RT	961.17'	3.5" BRASS CAP PRINCETON EAST AZ.
BM 1006	1522+12.62	72.81' RT	850.29'	RR SPIKE IN PP



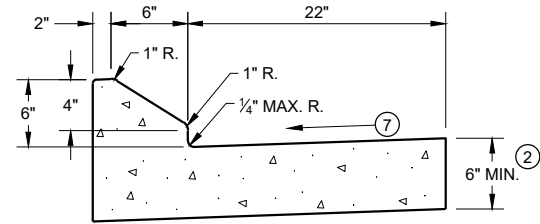
END PROJECT 6640-00-70
 STA 1522+13.32
 BUTT JOINT REQ'D
 MATCH EXISTING

Standard Detail Drawing List

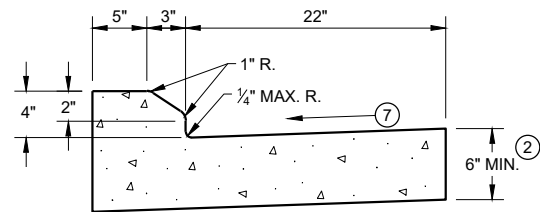
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-14B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-14A	RURAL DOWELED CONCRETE PAVEMENT
13C11-14B	RURAL DOWELED CONCRETE PAVEMENT
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B53-02A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09D	ON RAMP LANE CLOSURE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C35-06B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-06C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-05D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



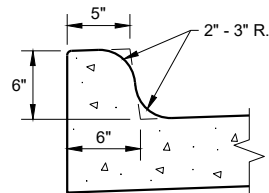
TYPES A^① & D



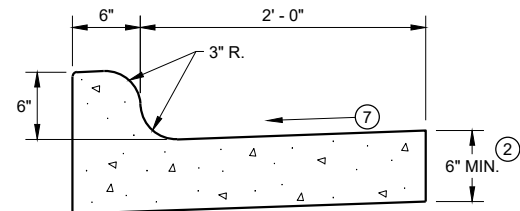
6" SLOPED CURB TYPES G^① & J



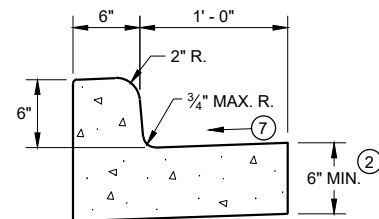
4" SLOPED CURB TYPES G^① & J



TYPES K^① & L
(OPTIONAL CURB SHAPE)

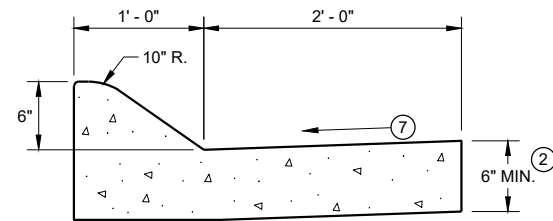


TYPES K^① & L
CONCRETE CURB AND GUTTER 30"

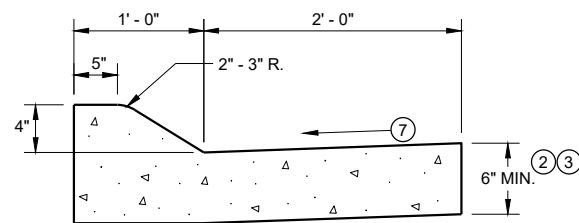


TYPES A^① & D

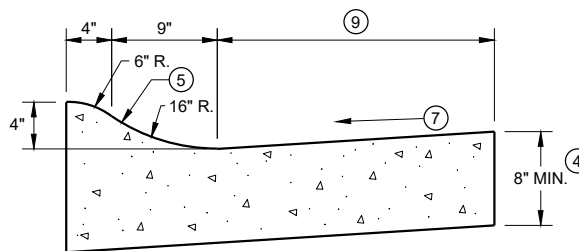
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

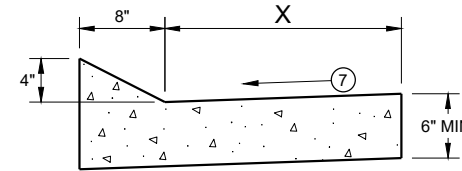


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

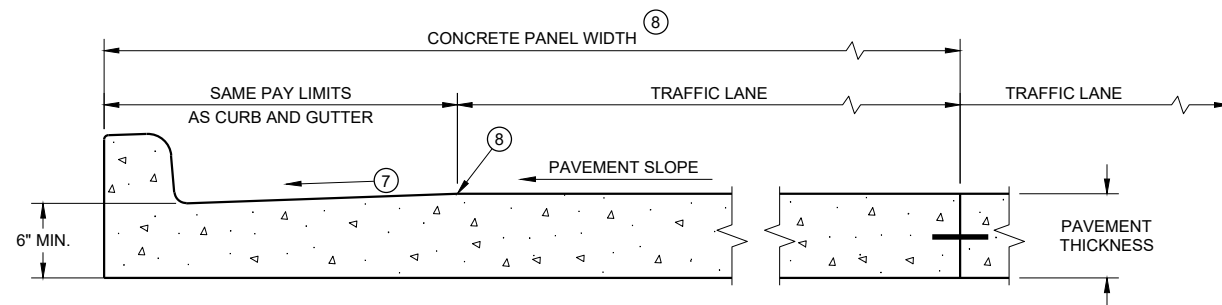


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

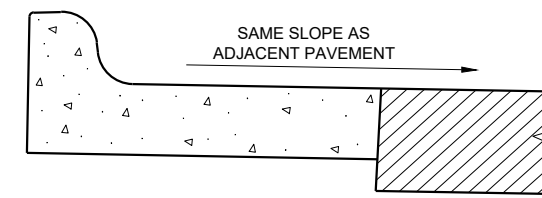
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT* WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

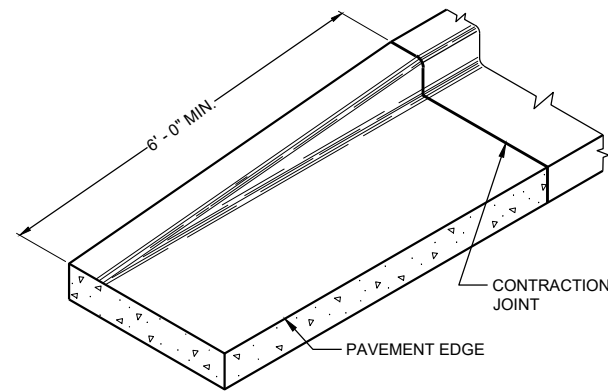
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

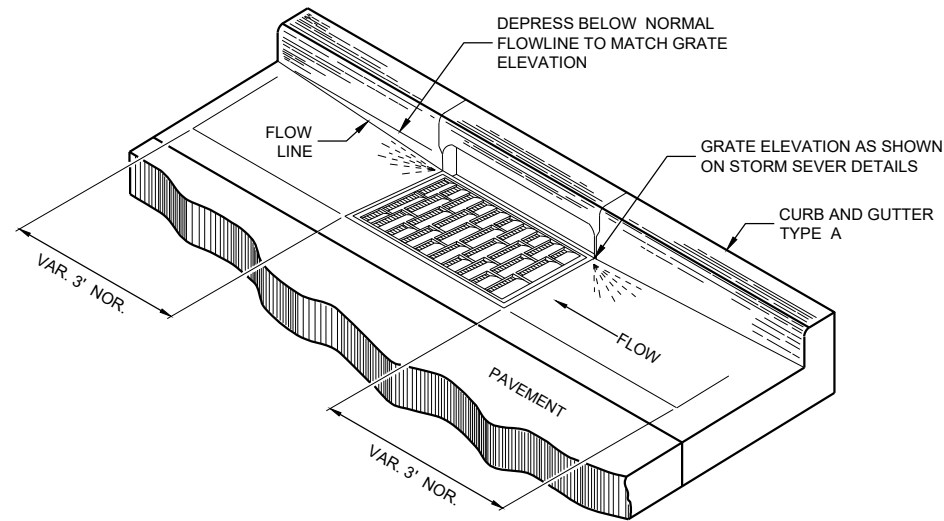
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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 GUTTERS 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 UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

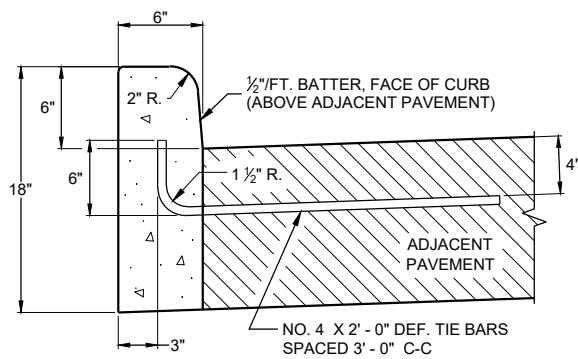
GENERAL NOTES

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

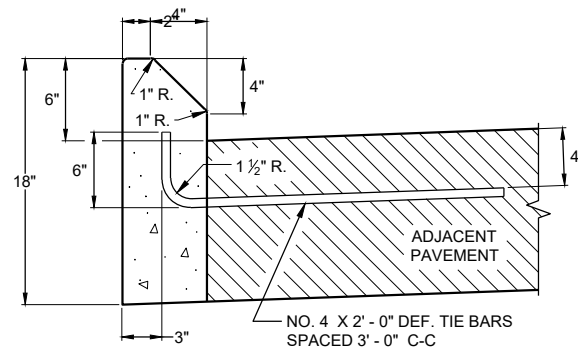
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

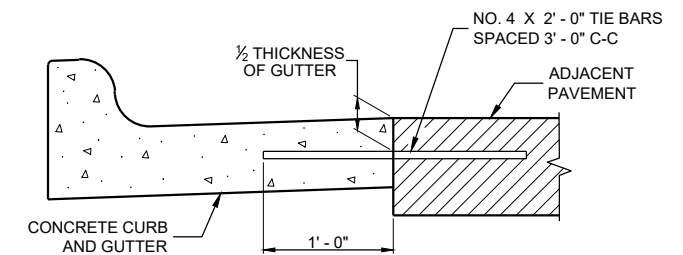
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



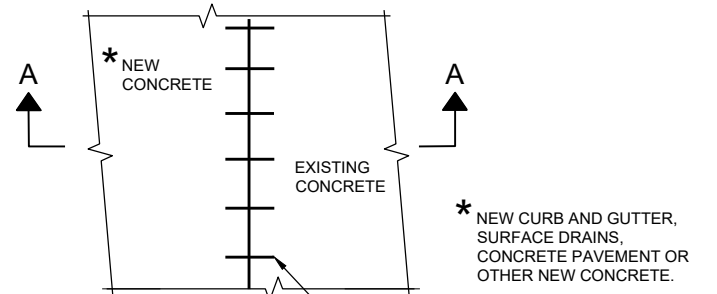
TYPES A^① & D



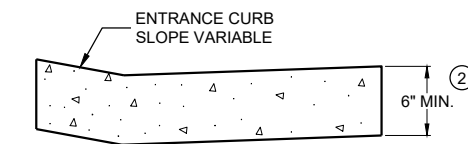
**TYPES G^① & J
CONCRETE CURB**



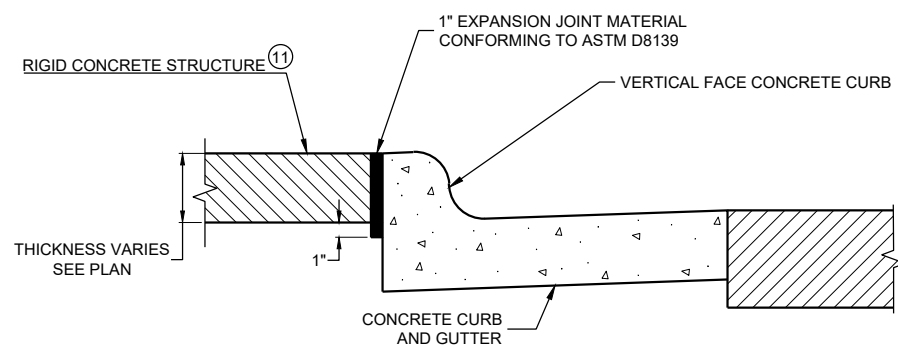
TYPICAL TIE BAR LOCATION^①



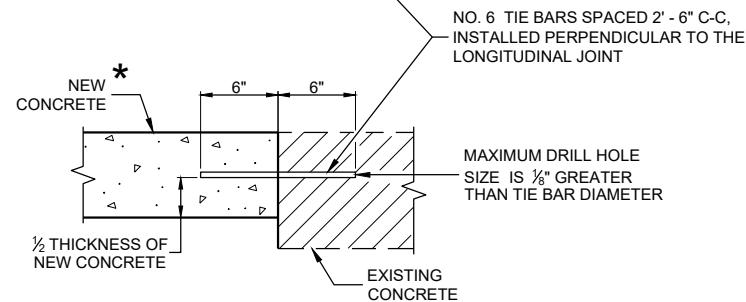
PLAN VIEW



**DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)**



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



**SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT**

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

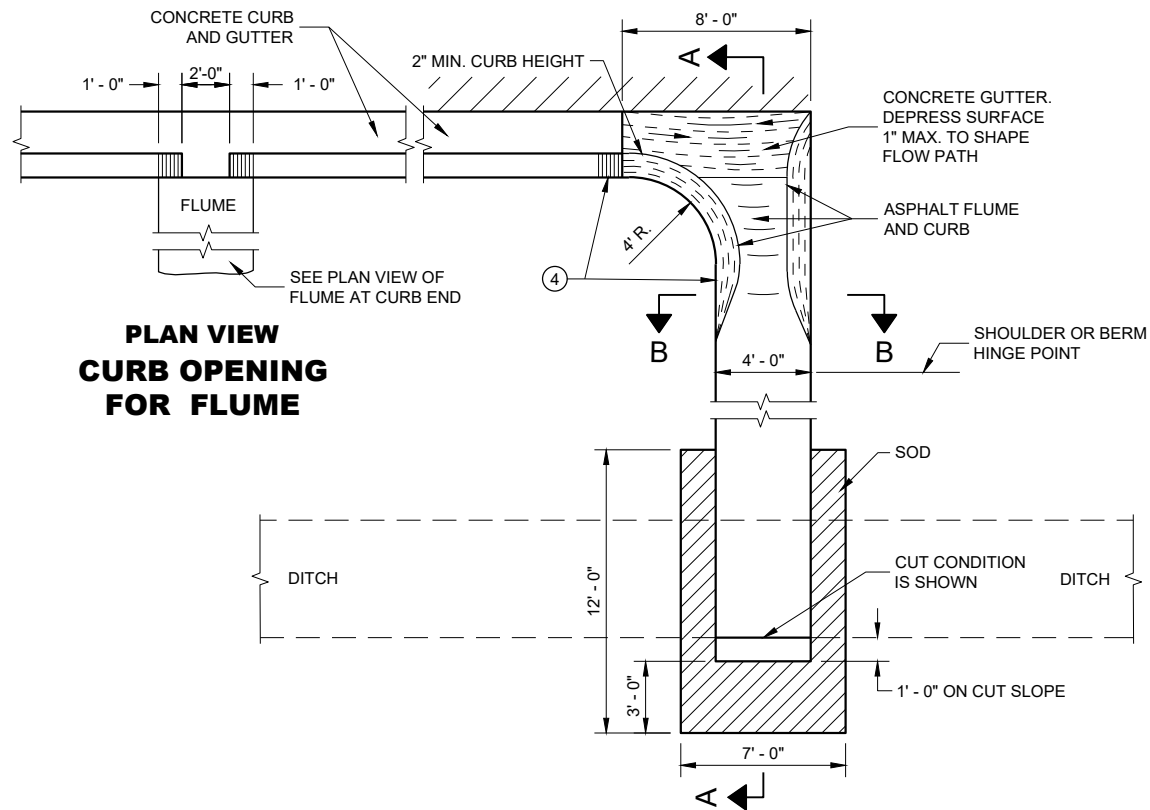
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

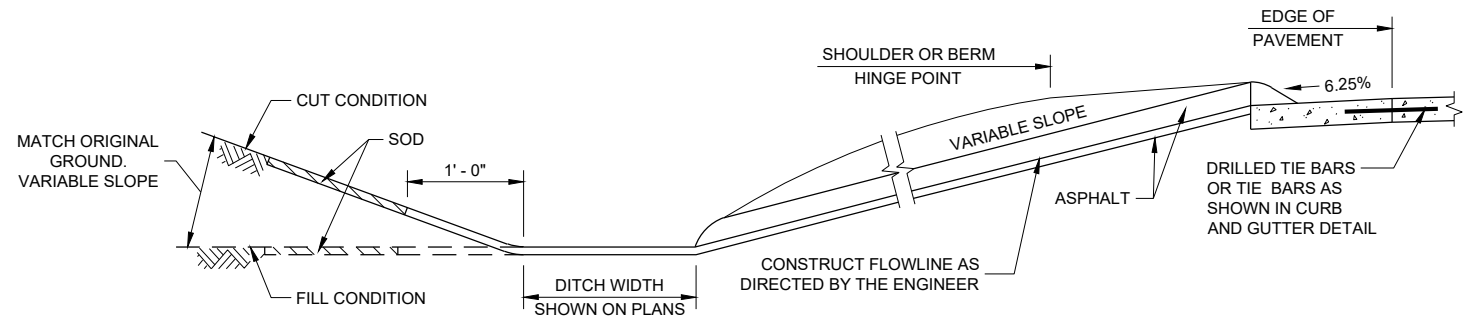
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

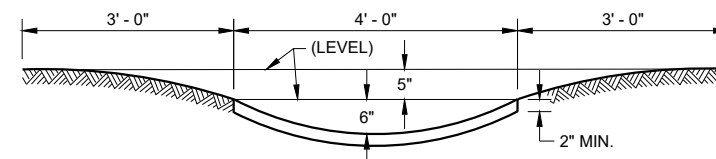
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

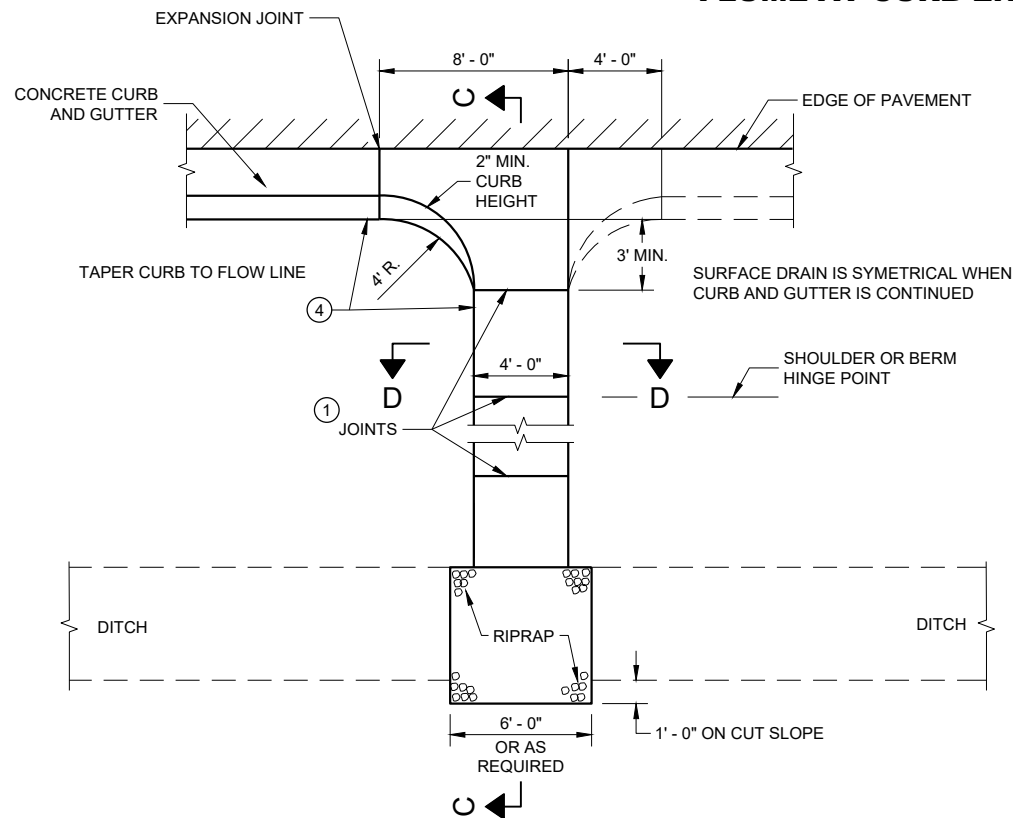
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



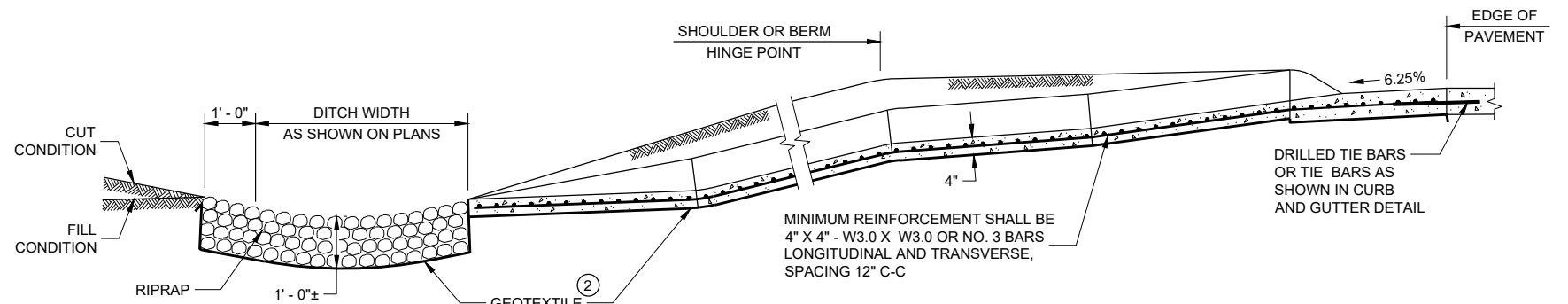
SECTION A - A



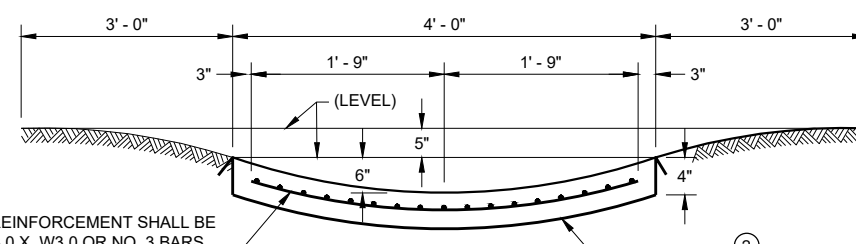
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

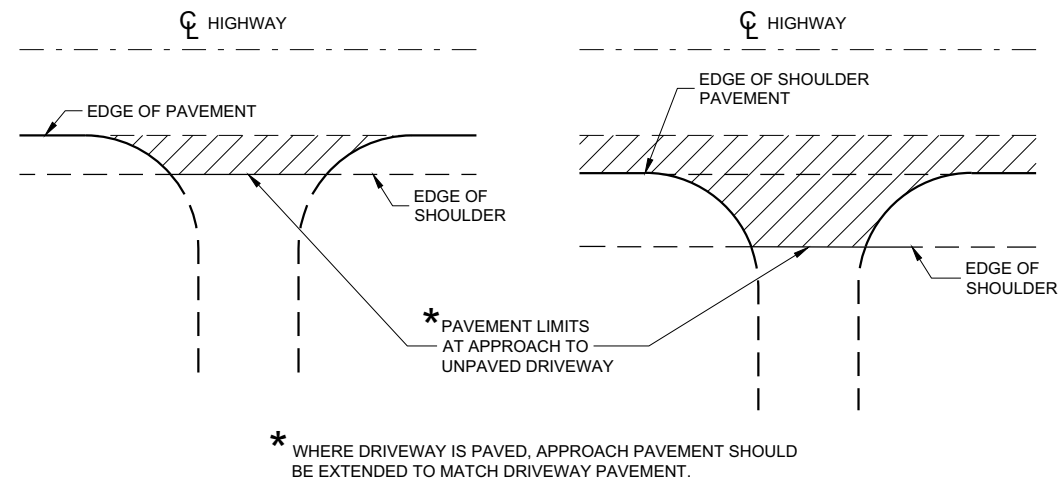
MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

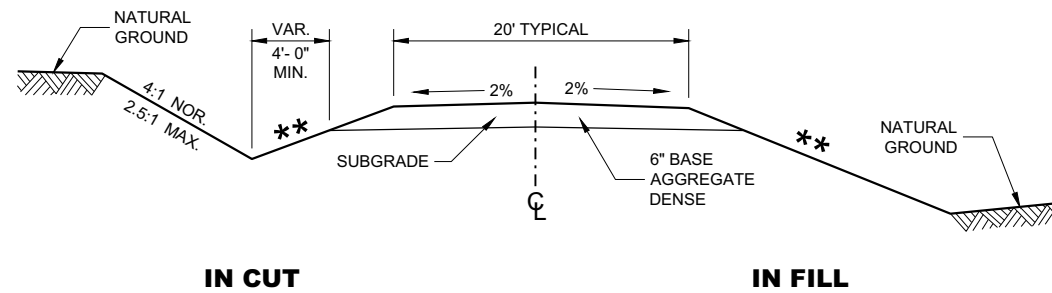
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

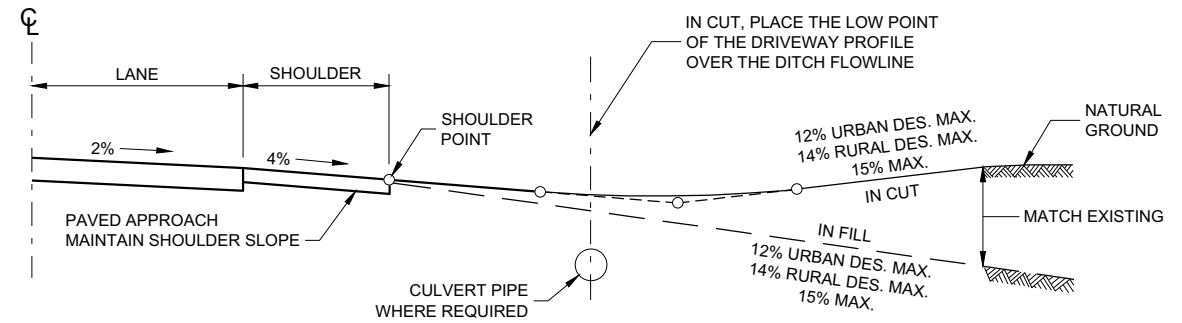
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



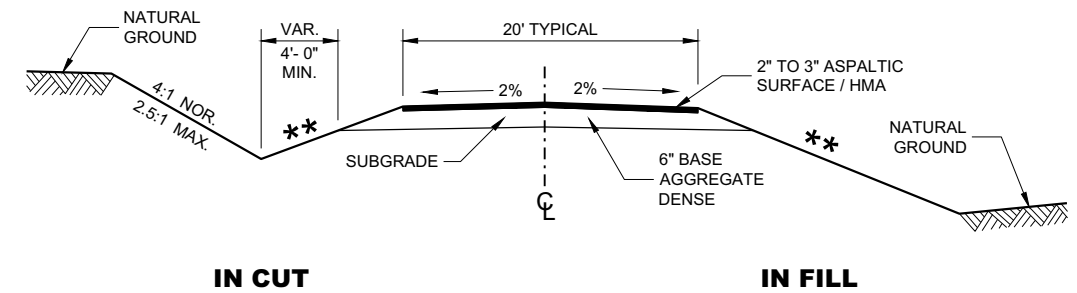
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

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



TYPICAL DRIVEWAY PROFILES

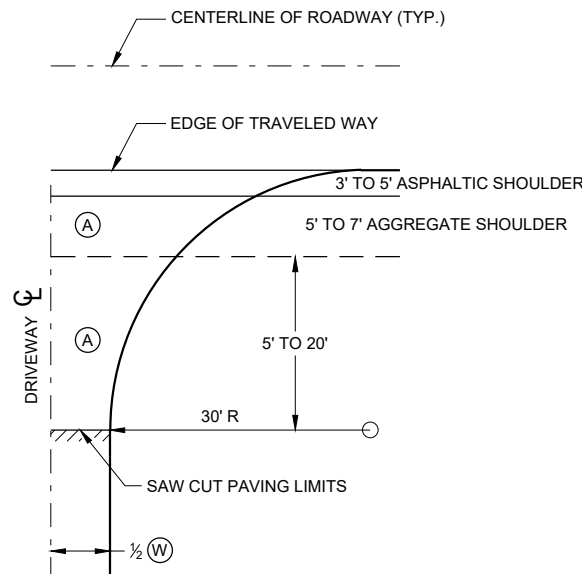


**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

DRIVEWAYS WITHOUT CURB AND GUTTER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2017 DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

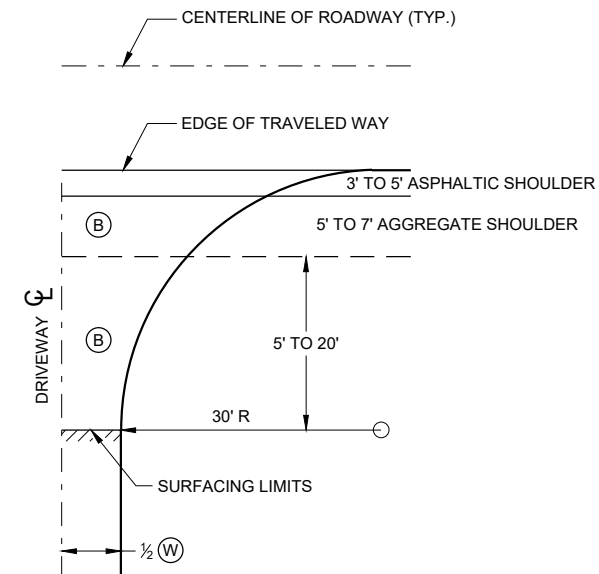
GENERAL NOTES

- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

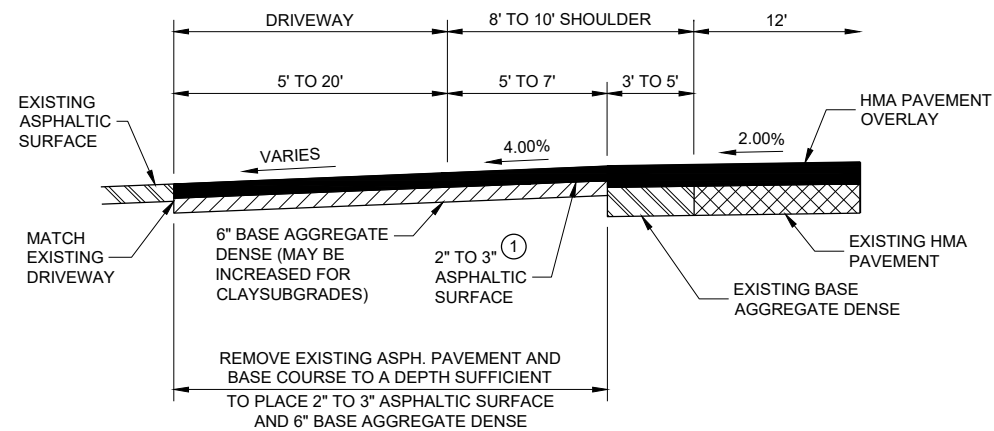


- Ⓐ : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- Ⓑ : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- ⒲ : DRIVEWAY WIDTH 16' MIN. - 24' MAX.

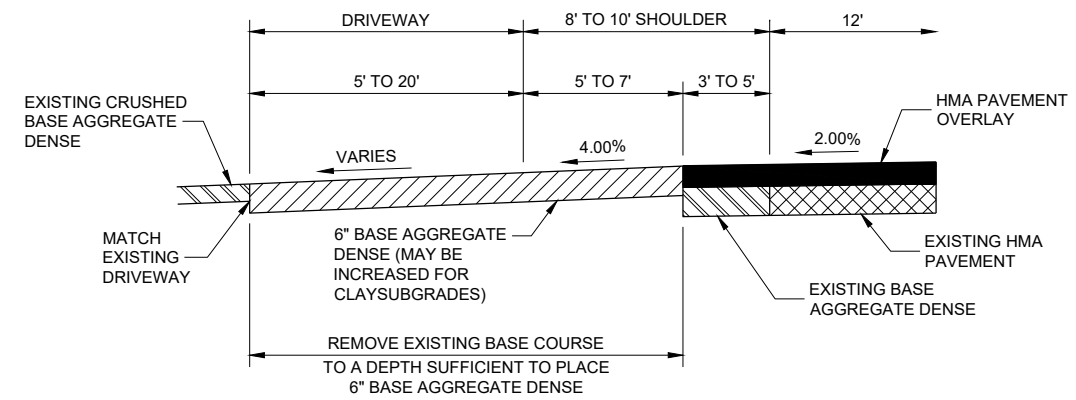
**PLAN VIEW
HALF SECTION**



**PLAN VIEW
HALF SECTION**



**PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS**



**PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS**

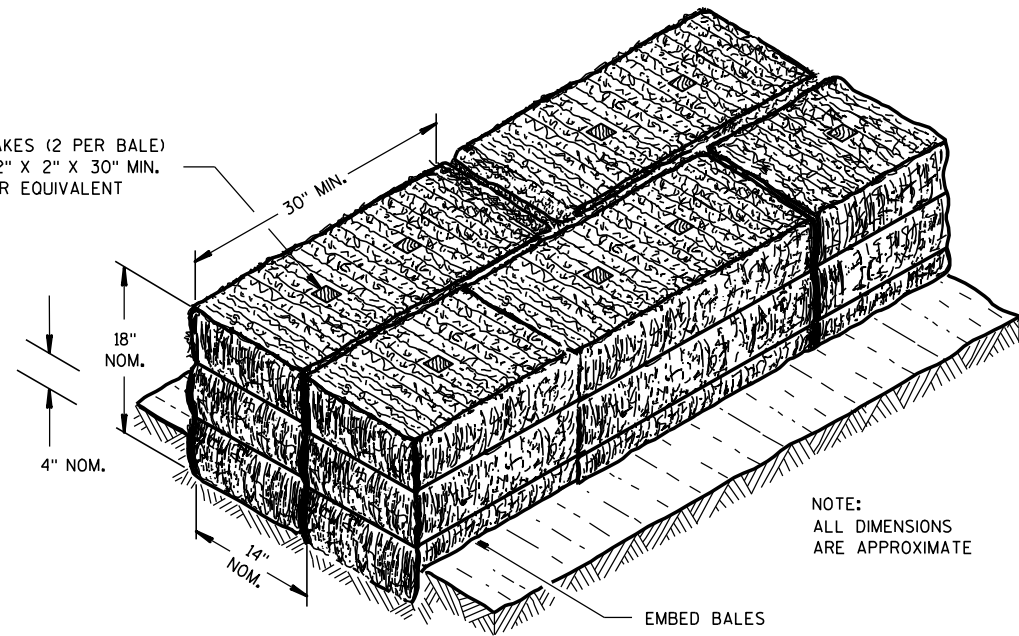
**DRIVEWAYS WITHOUT CURB
AND GUTTER RESURFACING
PROJECTS RURAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

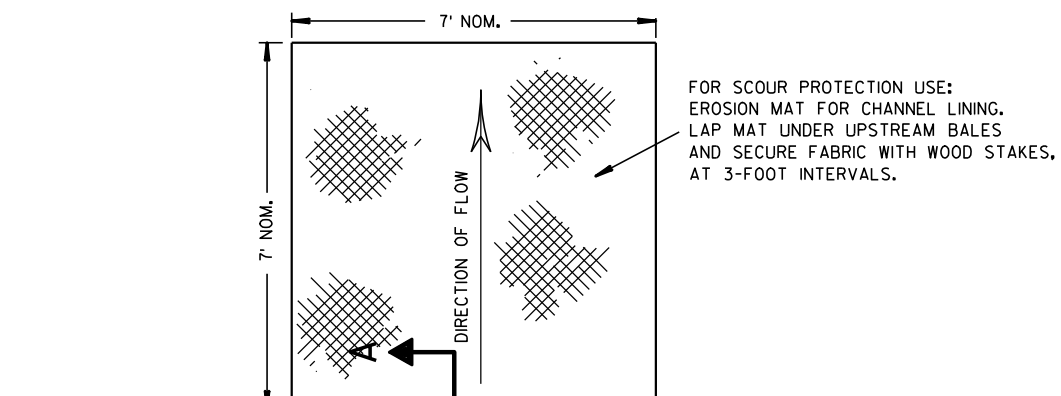
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



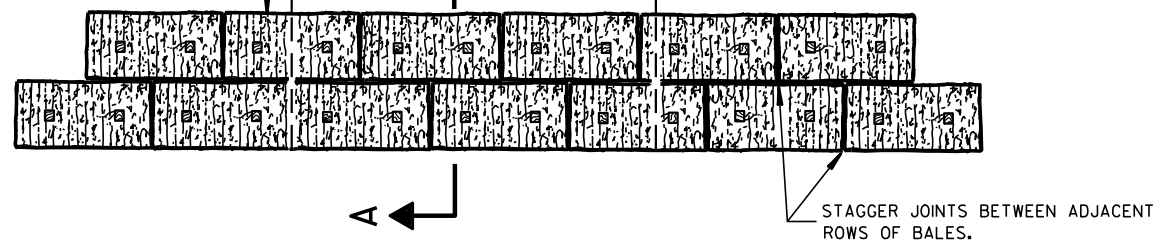
NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

SECTION A-A

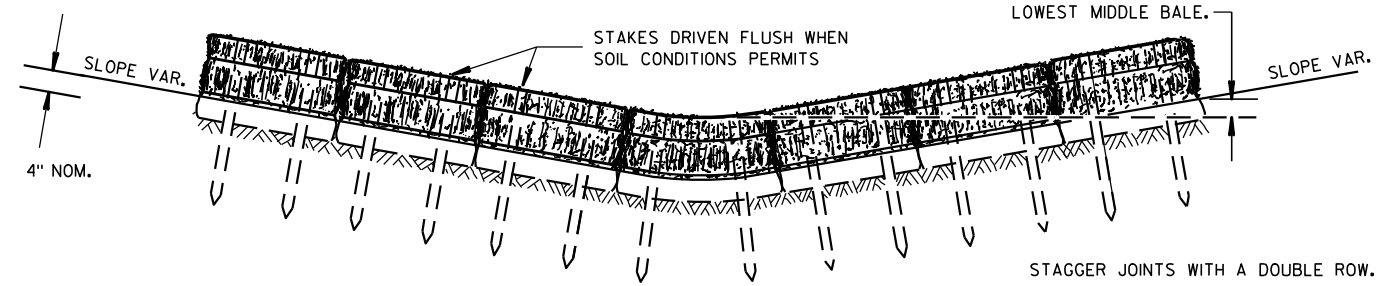


FOR SCOUR PROTECTION USE:
EROSION MAT FOR CHANNEL LINING.
LAP MAT UNDER UPSTREAM BALES
AND SECURE FABRIC WITH WOOD STAKES,
AT 3-FOOT INTERVALS.



PLAN VIEW

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



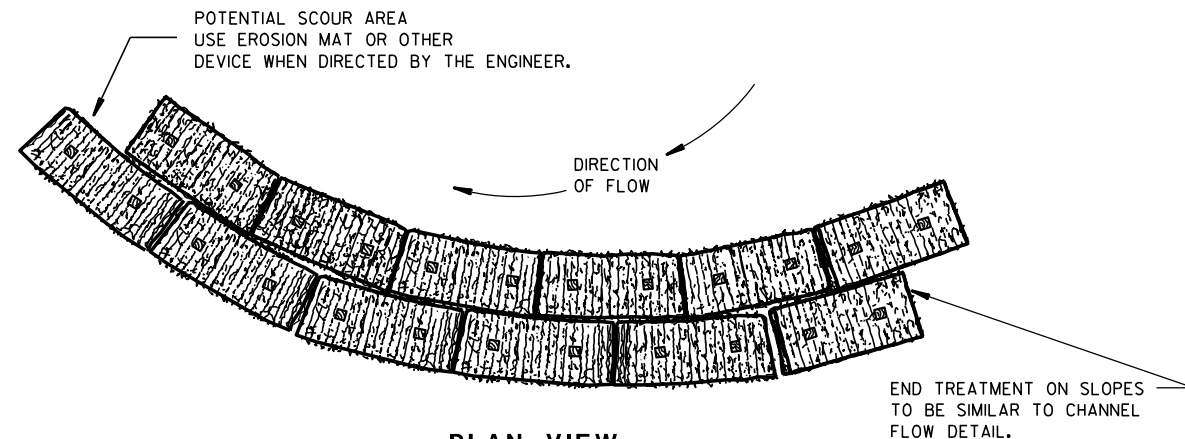
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

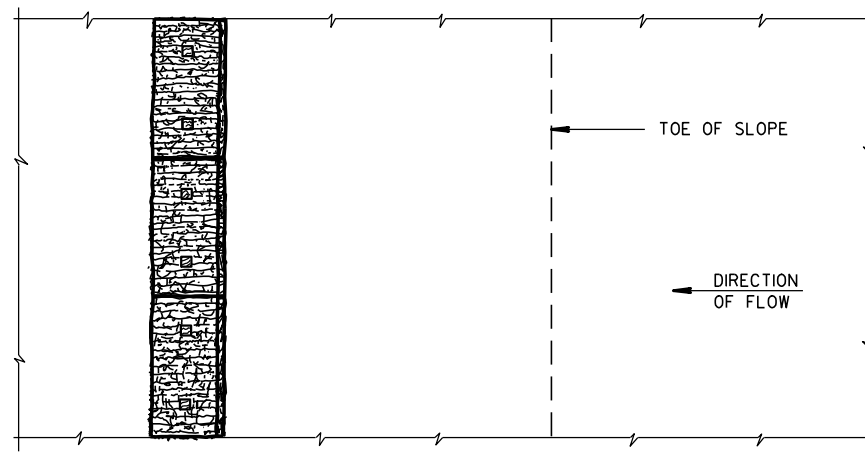
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

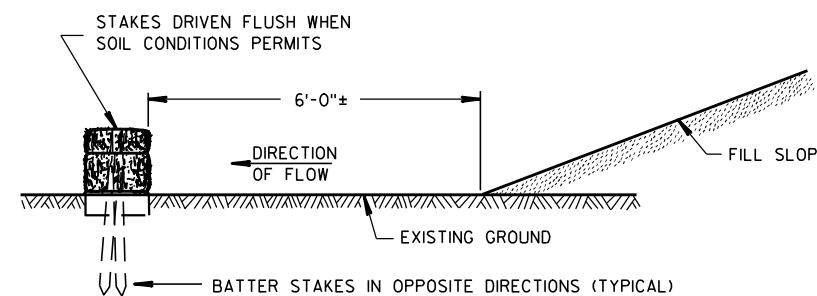


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

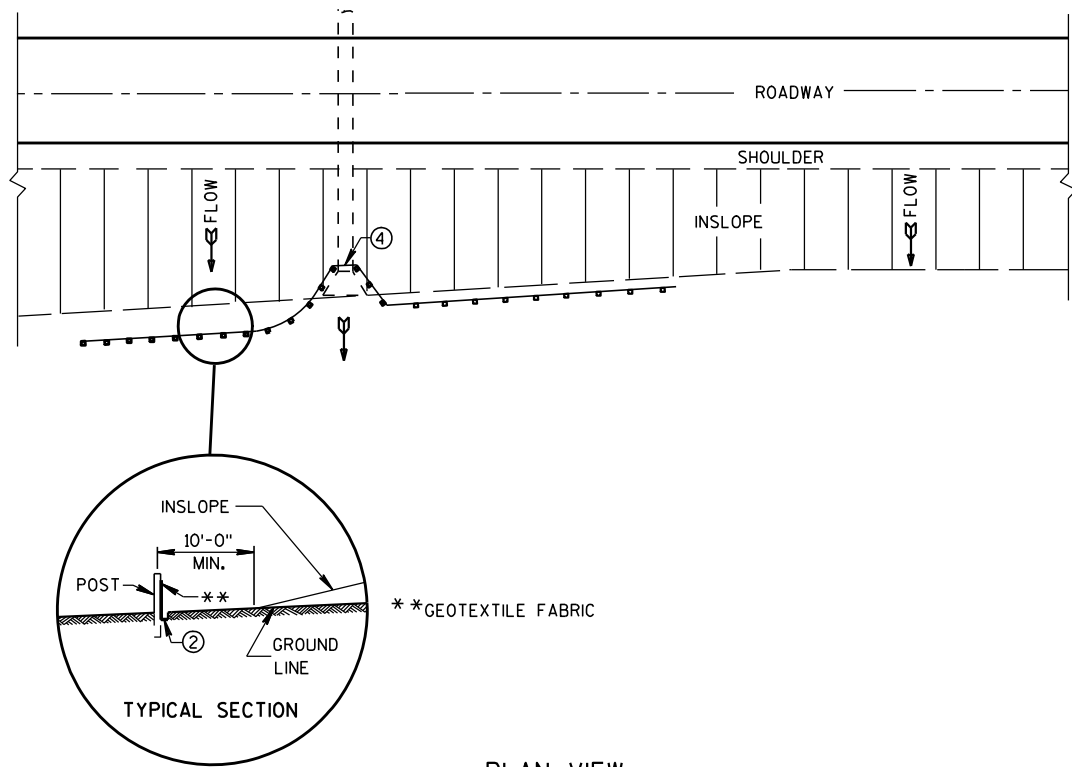
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

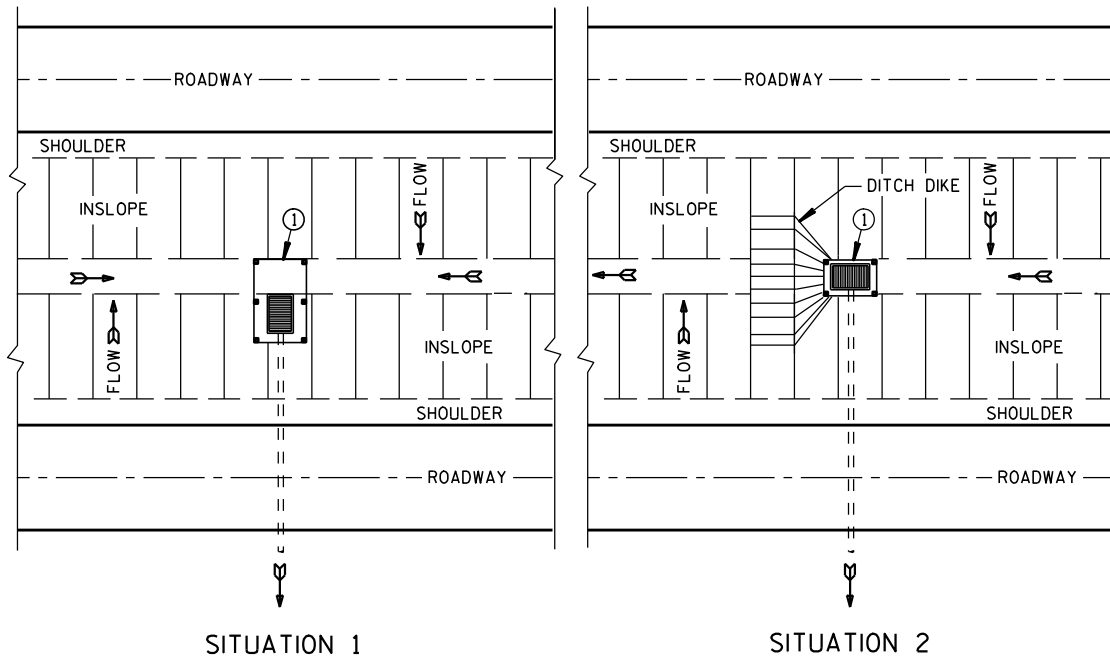
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 6/04/02 /S/ Beth Canestra
 DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
 FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

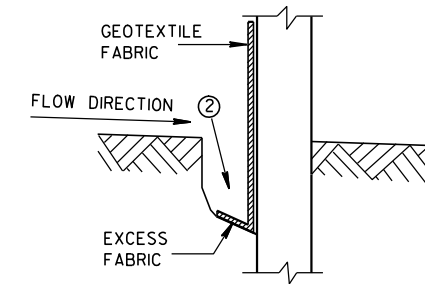


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

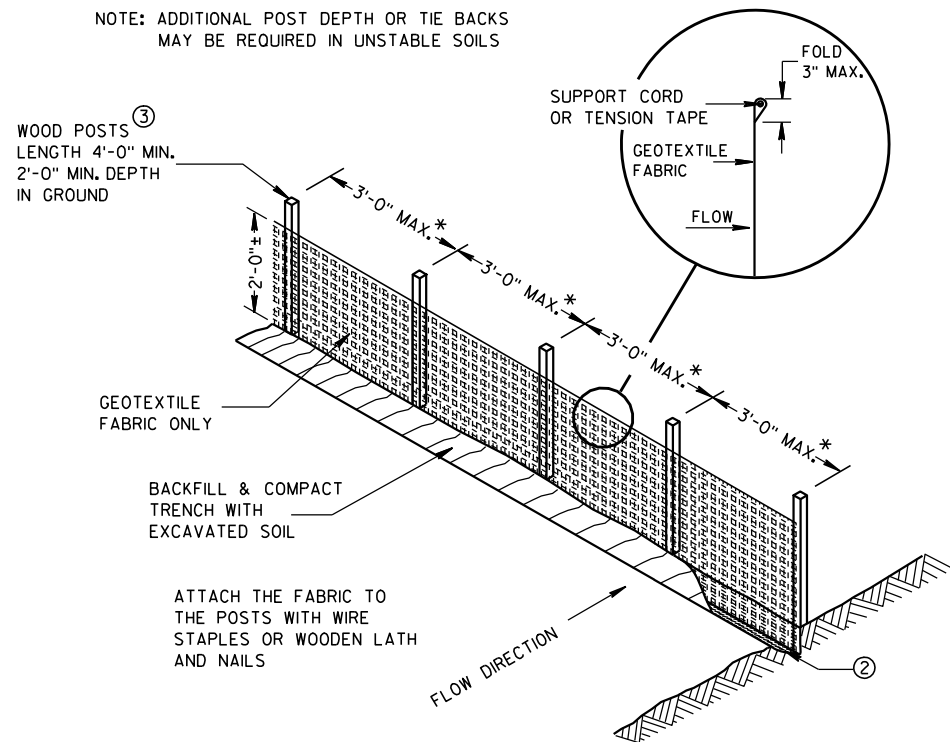
GENERAL NOTES

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

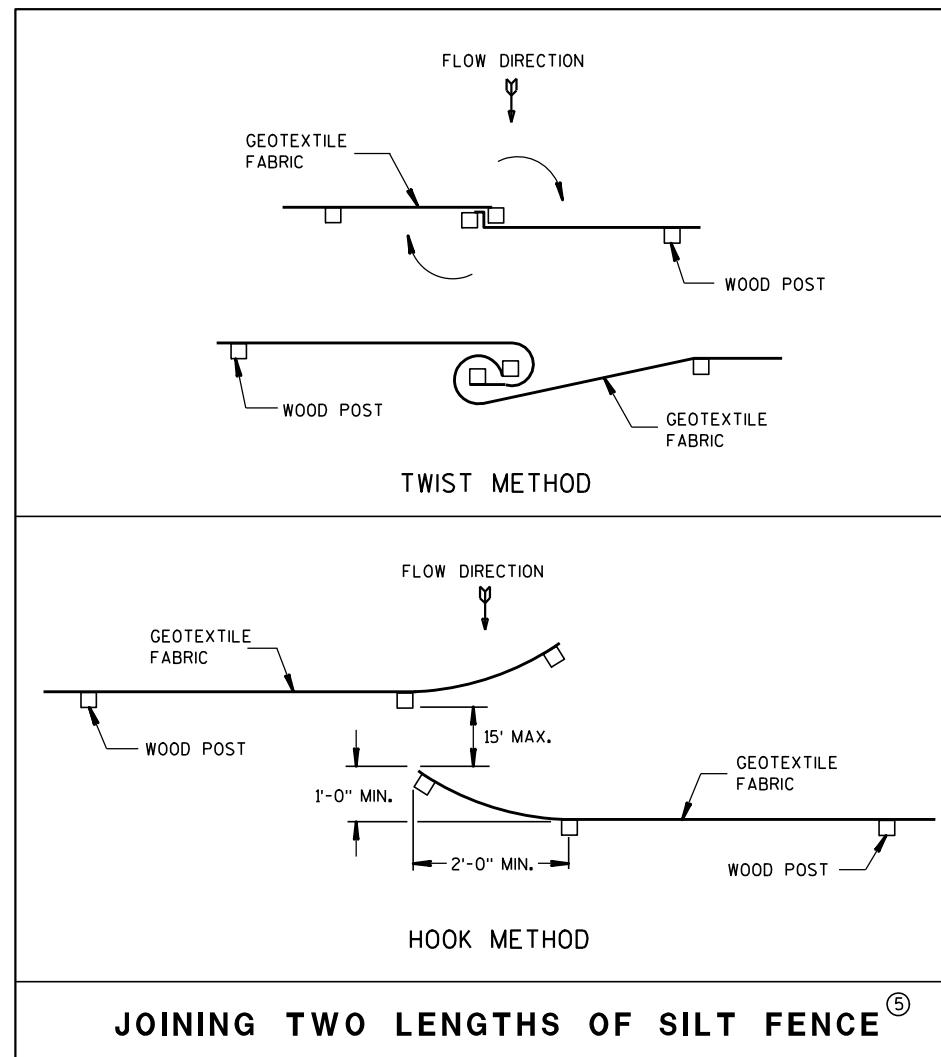
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS 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.



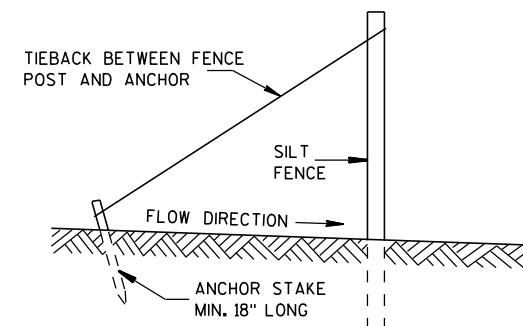
TRENCH DETAIL



SILT FENCE

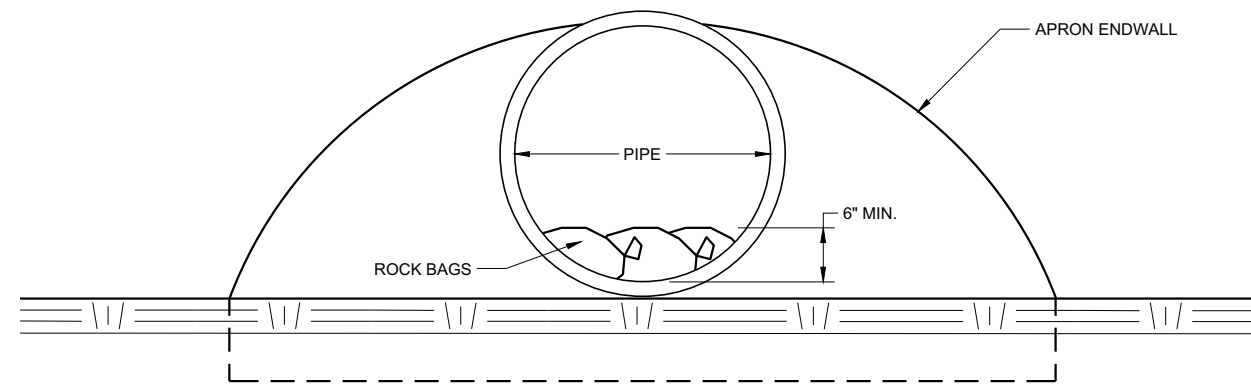


JOINING TWO LENGTHS OF SILT FENCE

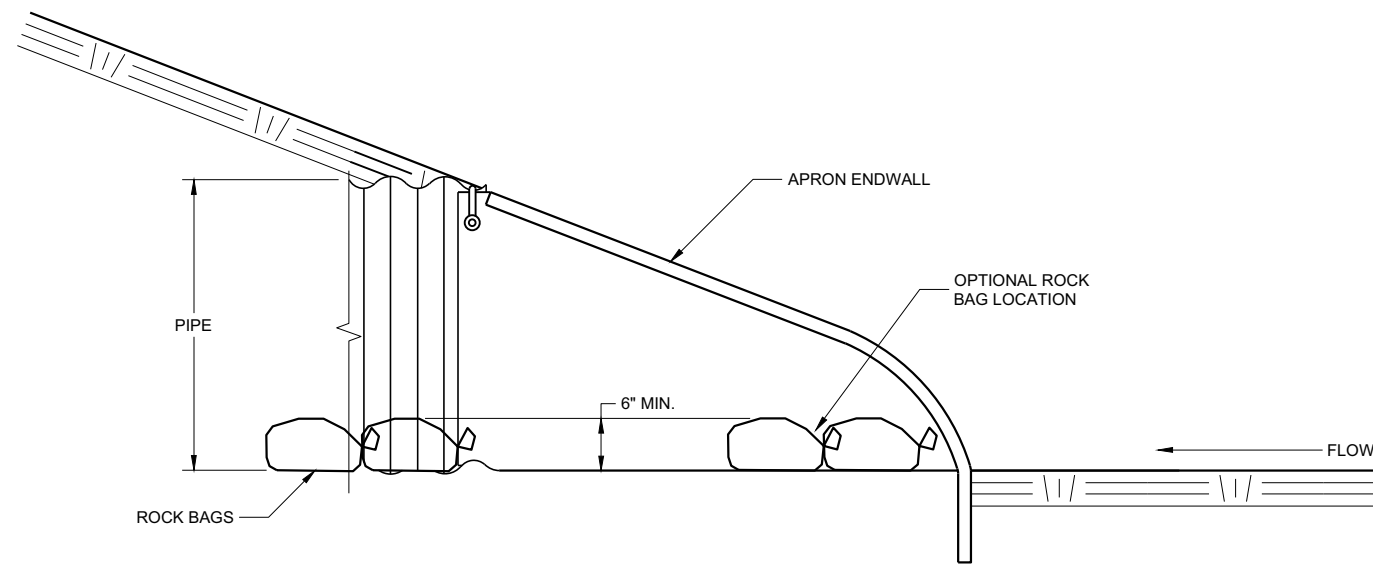


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

6

6

SDD 08E15 - 01

SDD 08E15 - 01

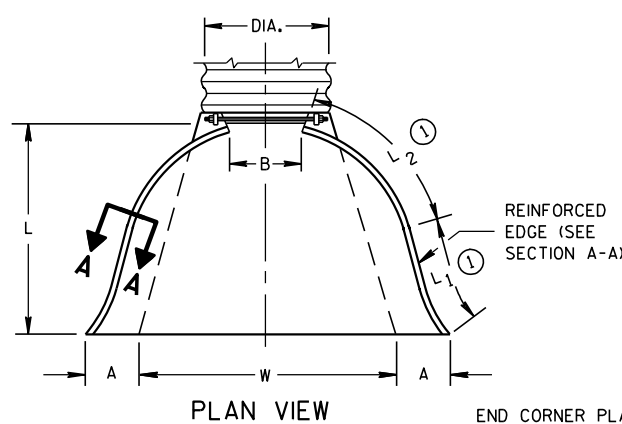
CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
<small>FHWA</small>	

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

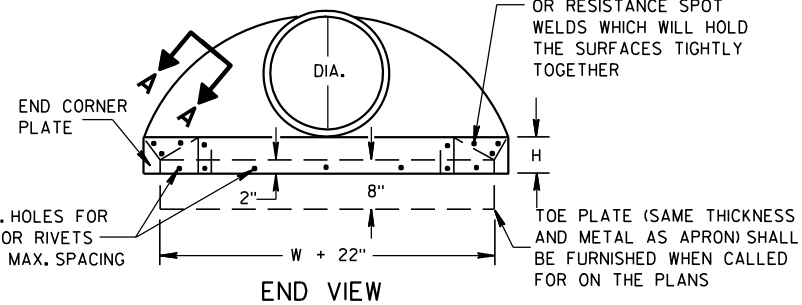
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

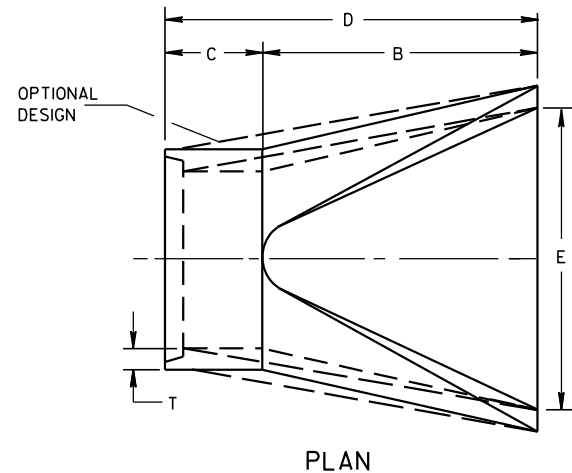
* MINIMUM
** MAXIMUM



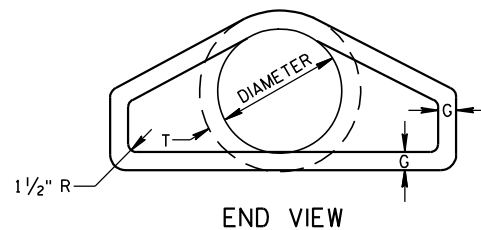
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



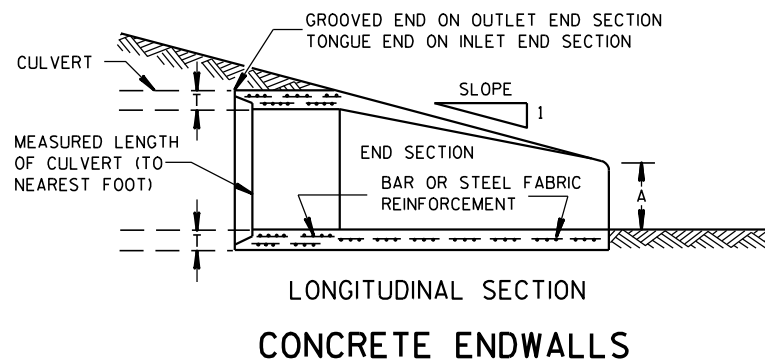
SIDE ELEVATION
METAL ENDWALLS



PLAN

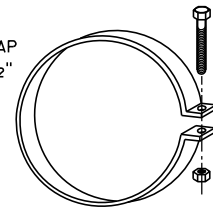


END VIEW

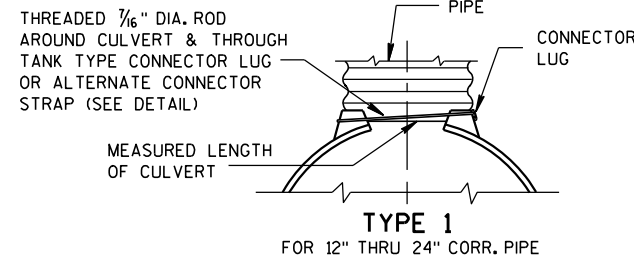


LONGITUDINAL SECTION
CONCRETE ENDWALLS

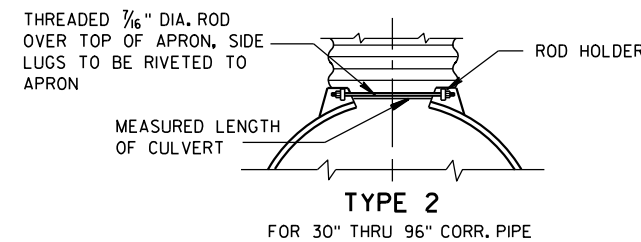
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



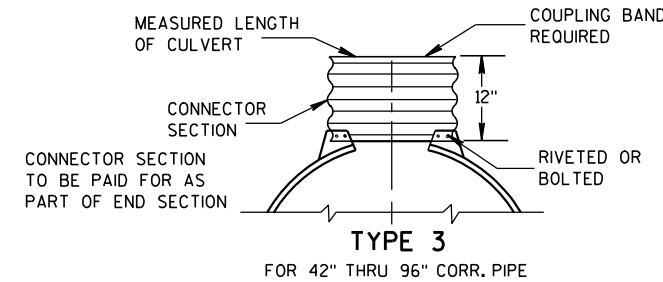
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



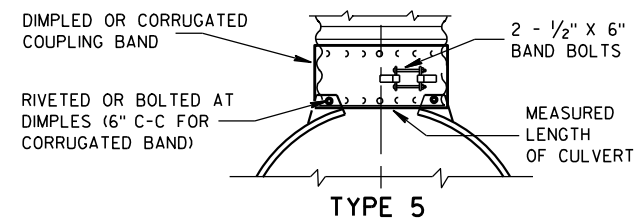
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

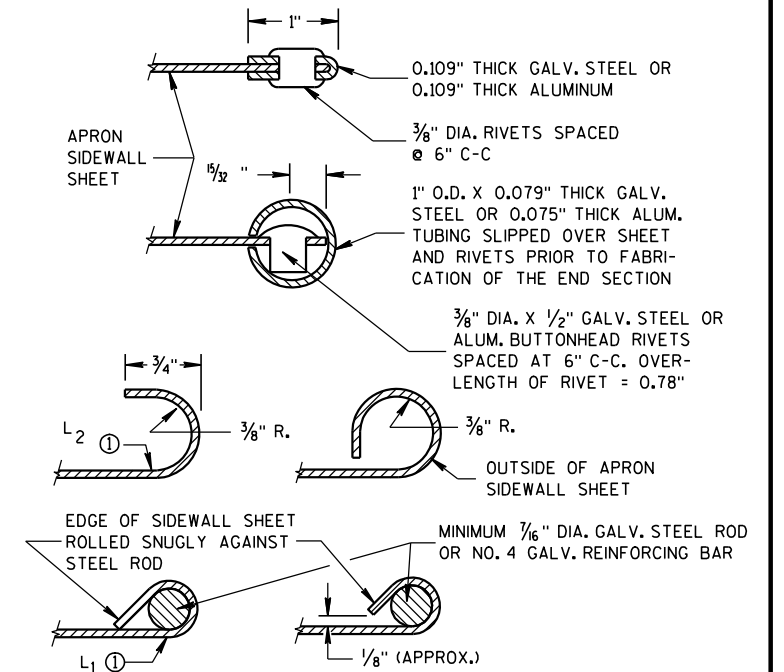
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

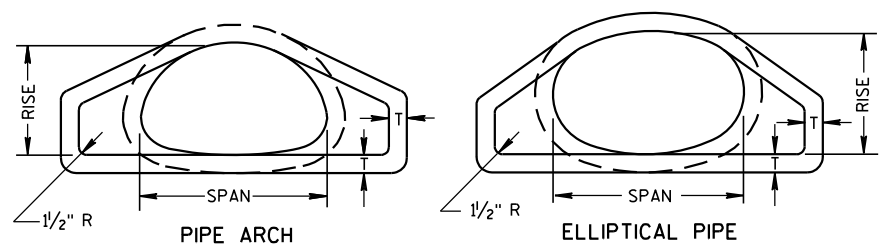
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

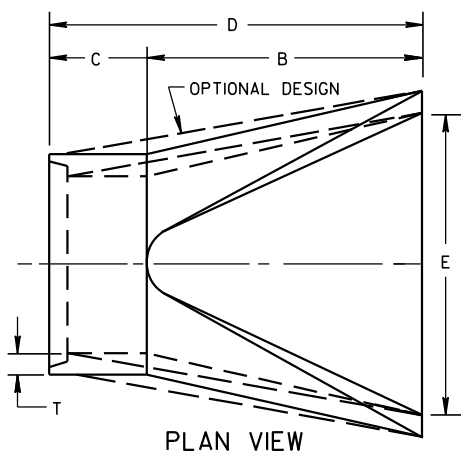
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

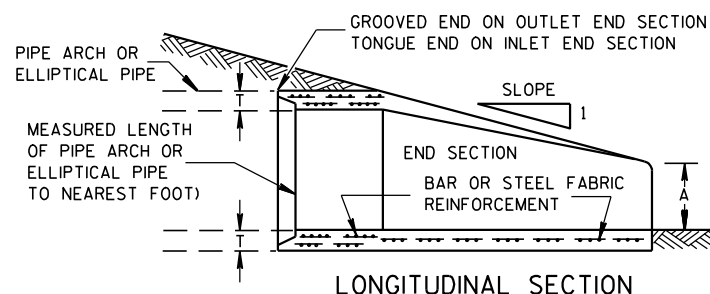
APPROVED
11/30/94 DATE /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



END VIEW



PLAN VIEW



LONGITUDINAL SECTION

CONCRETE ENDWALLS

2- 2 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⊙)	L2 (⊙)	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⊙)	L2 (⊙)	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED. * EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 1/8	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

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.

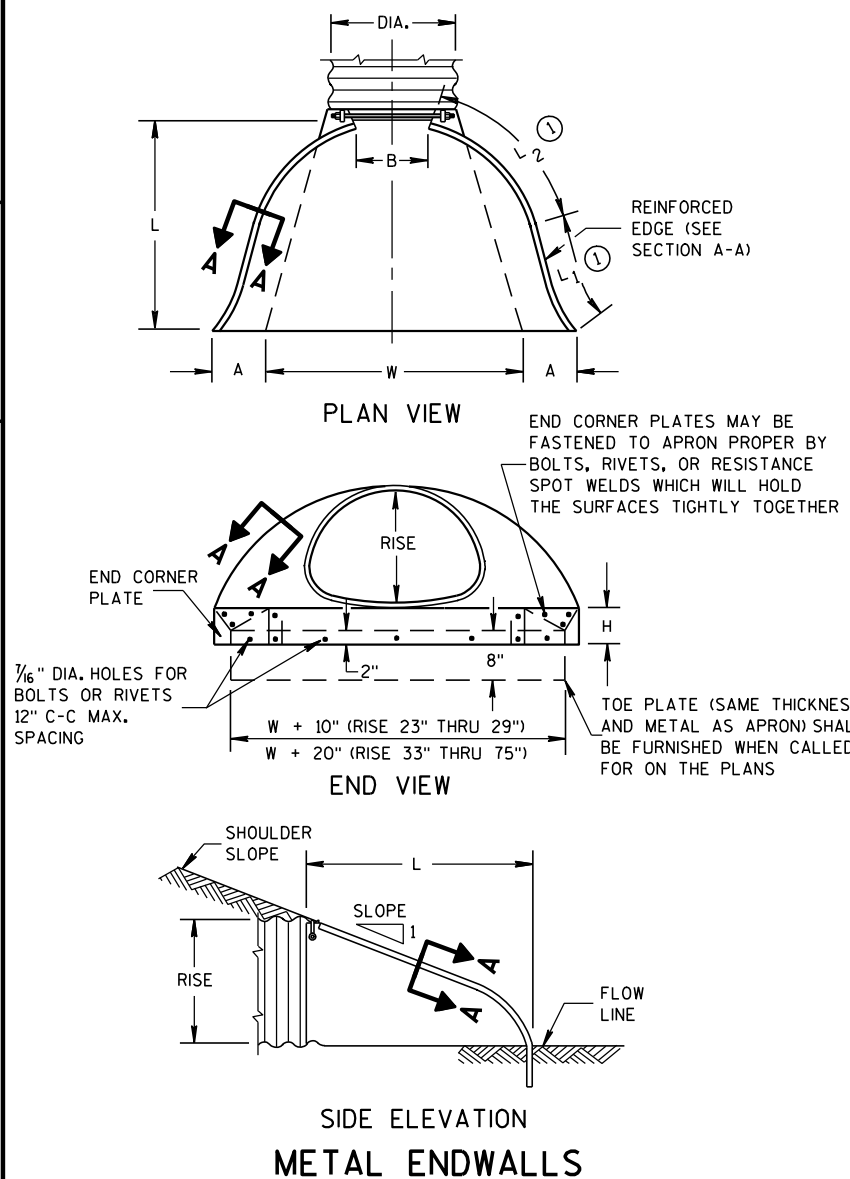
CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH PERIMETER.

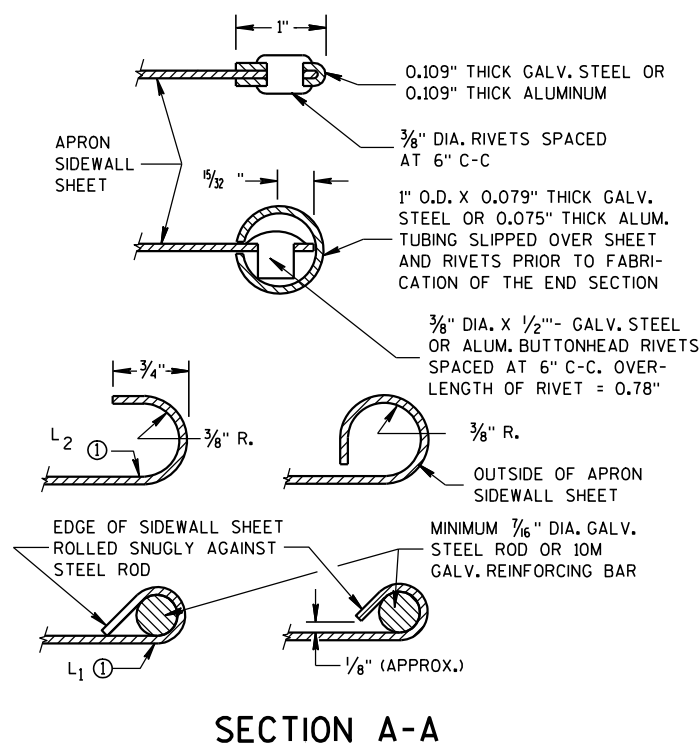
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



METAL ENDWALLS

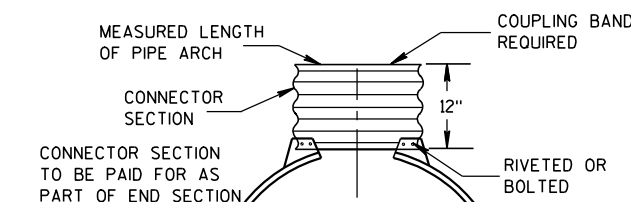


SECTION A-A



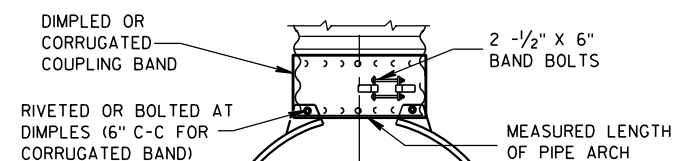
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR: ALL SIZES CORRUGATED PIPE ARCHES

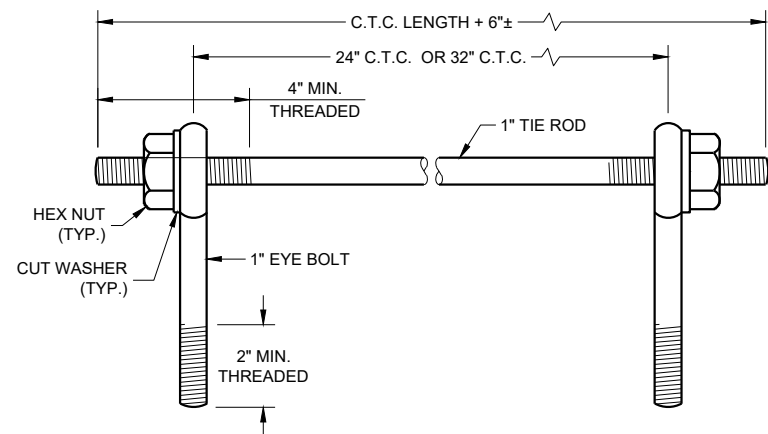
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

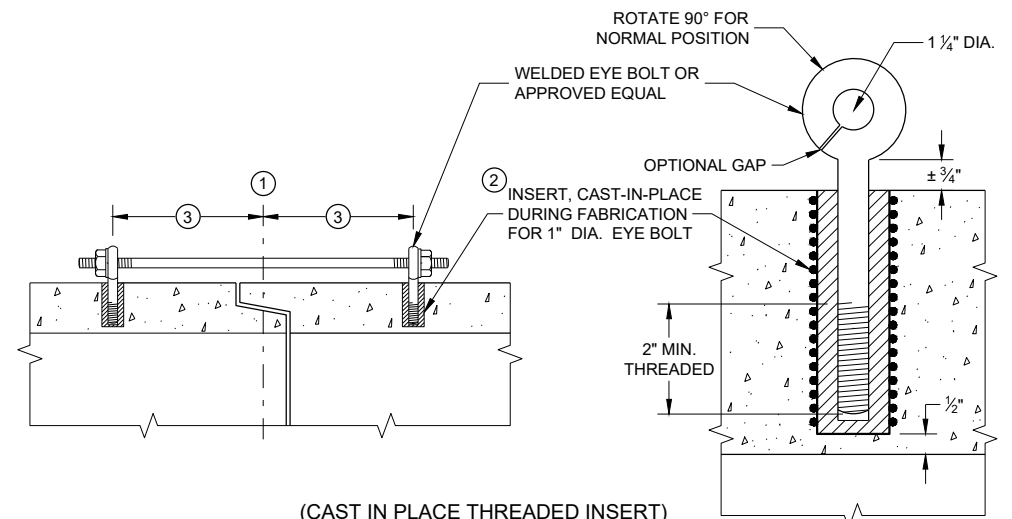
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

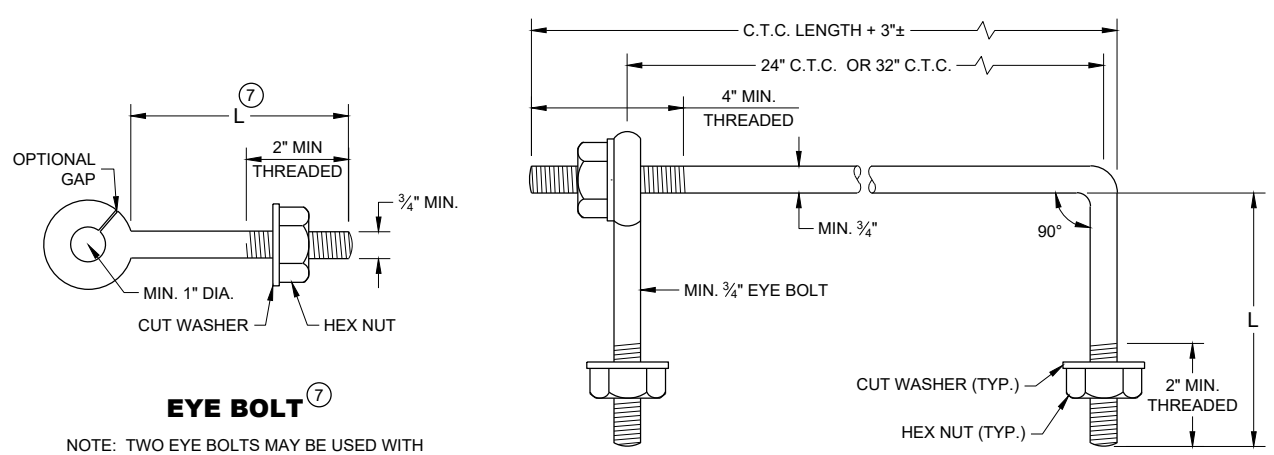
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

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

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

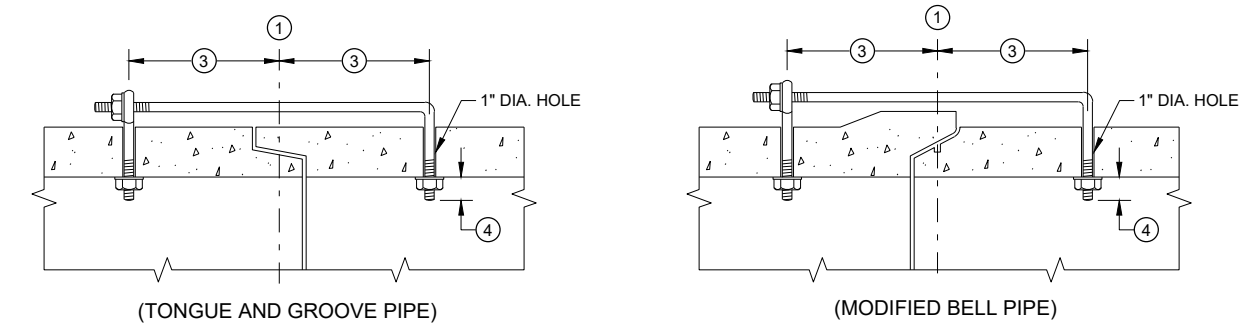
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT ⑦

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30\"/>

EYE BOLT AND TIE ROD



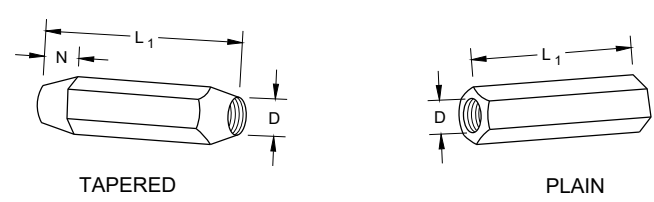
LONGITUDINAL SECTION
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

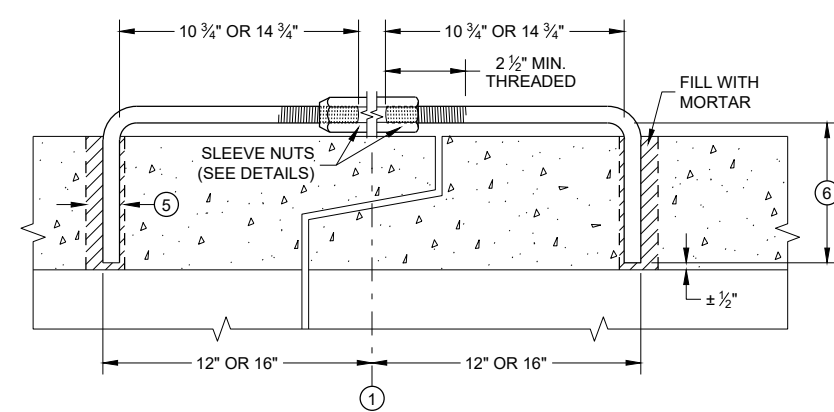
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 7/16

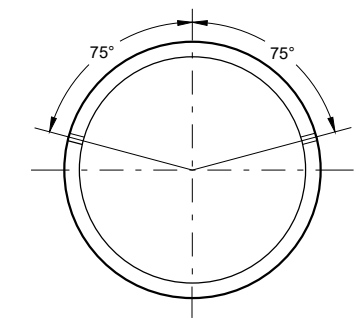
DIMENSIONS SHOWN ARE IN INCHES



RIGHT AND LEFT THREADS SLEEVE NUTS

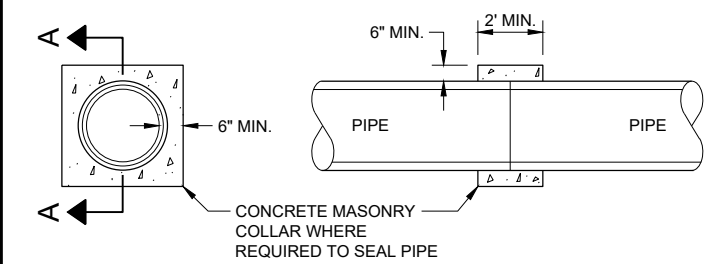


LONGITUDINAL SECTION
ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION

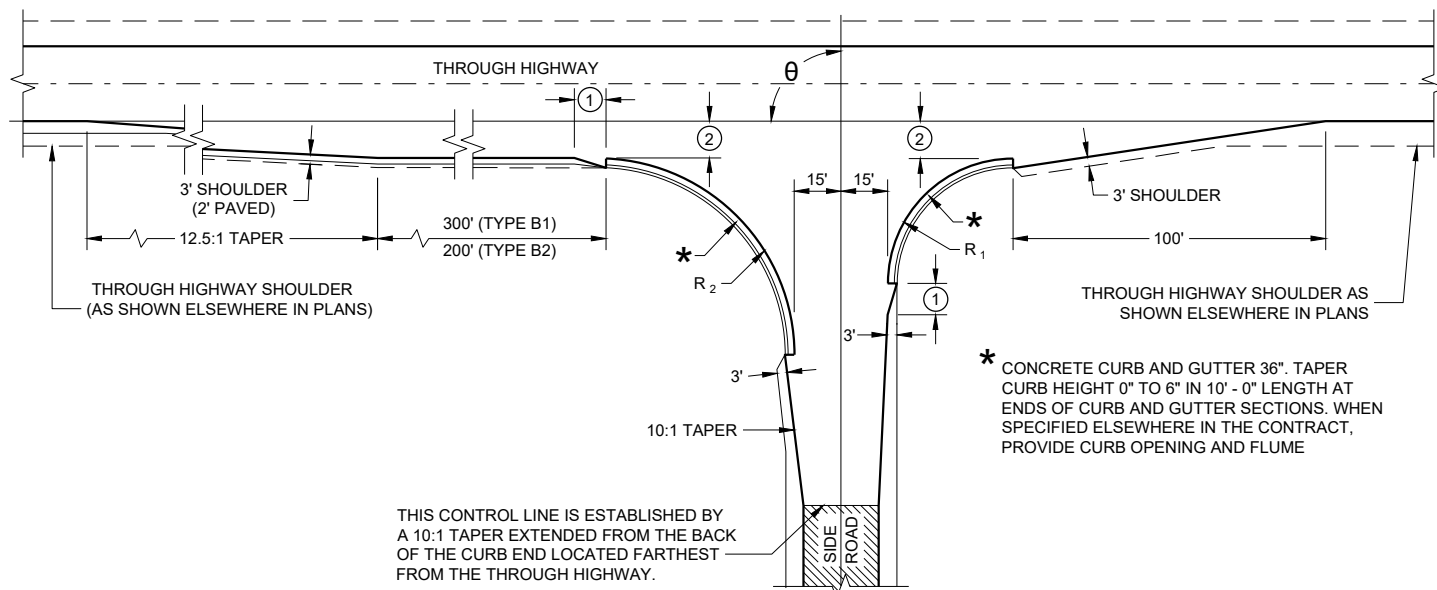


SECTION A - A
CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



TYPE "B1" AND "B2"

RADI DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65 - 70	35	70
71 - 80	40	70
81 - 90	40	60
91 - 100	50	55
101 - 110	60	45

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

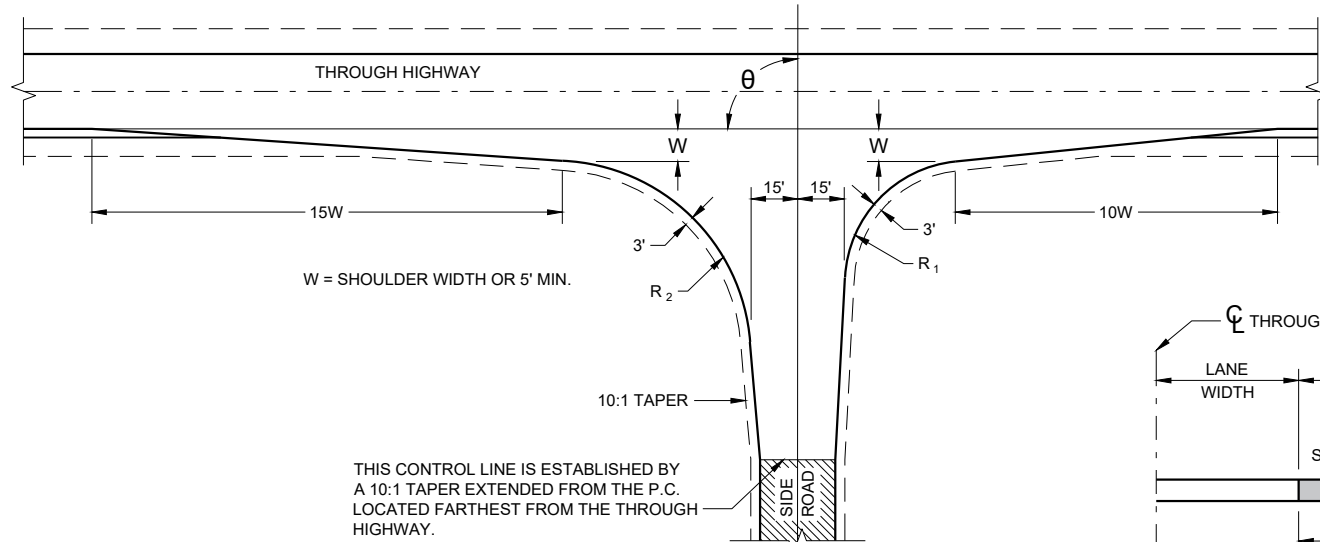
SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

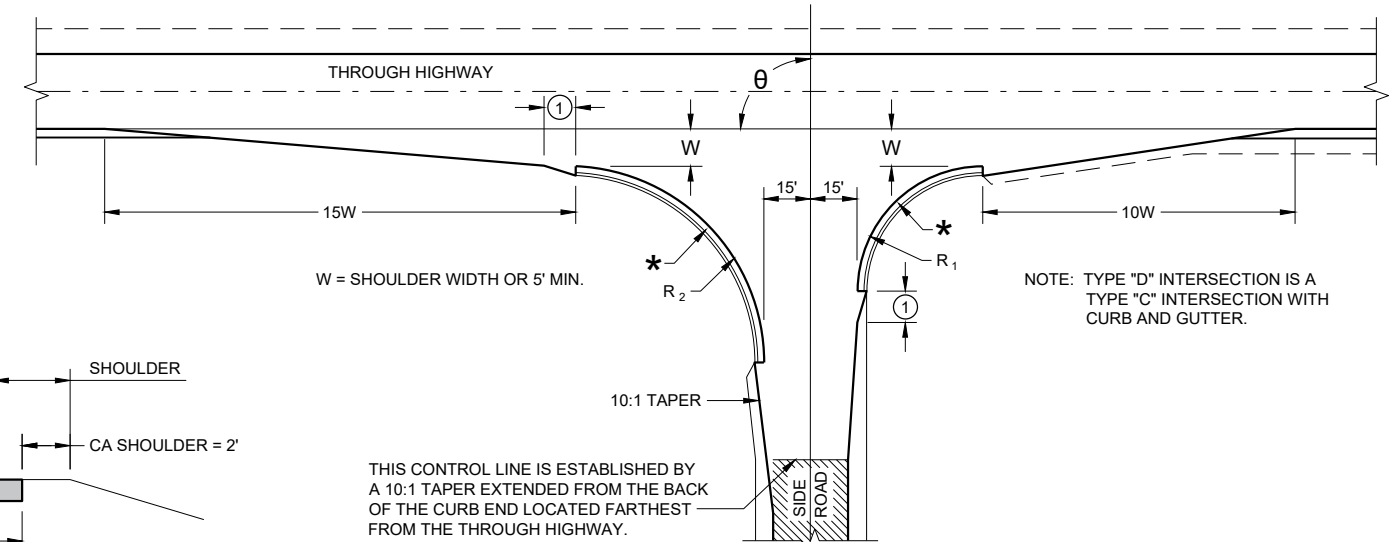
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

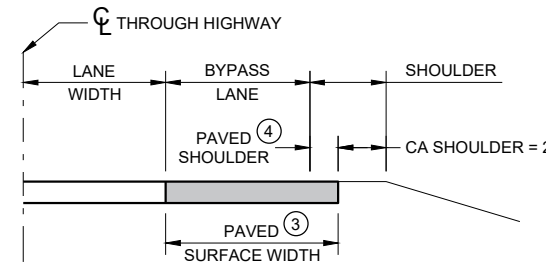
- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
- ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH
- PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



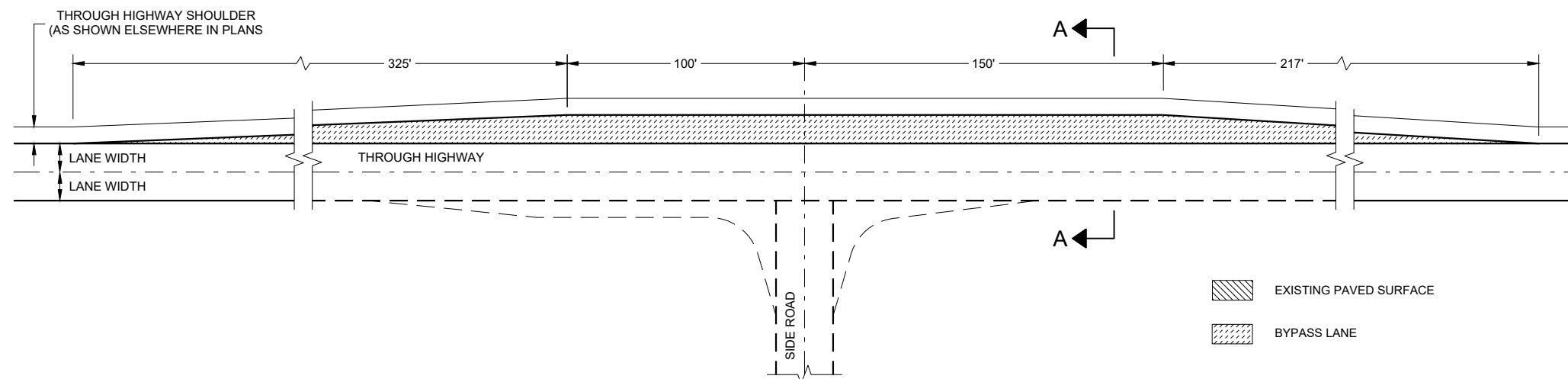
TYPE "C"



TYPE "D"



SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)

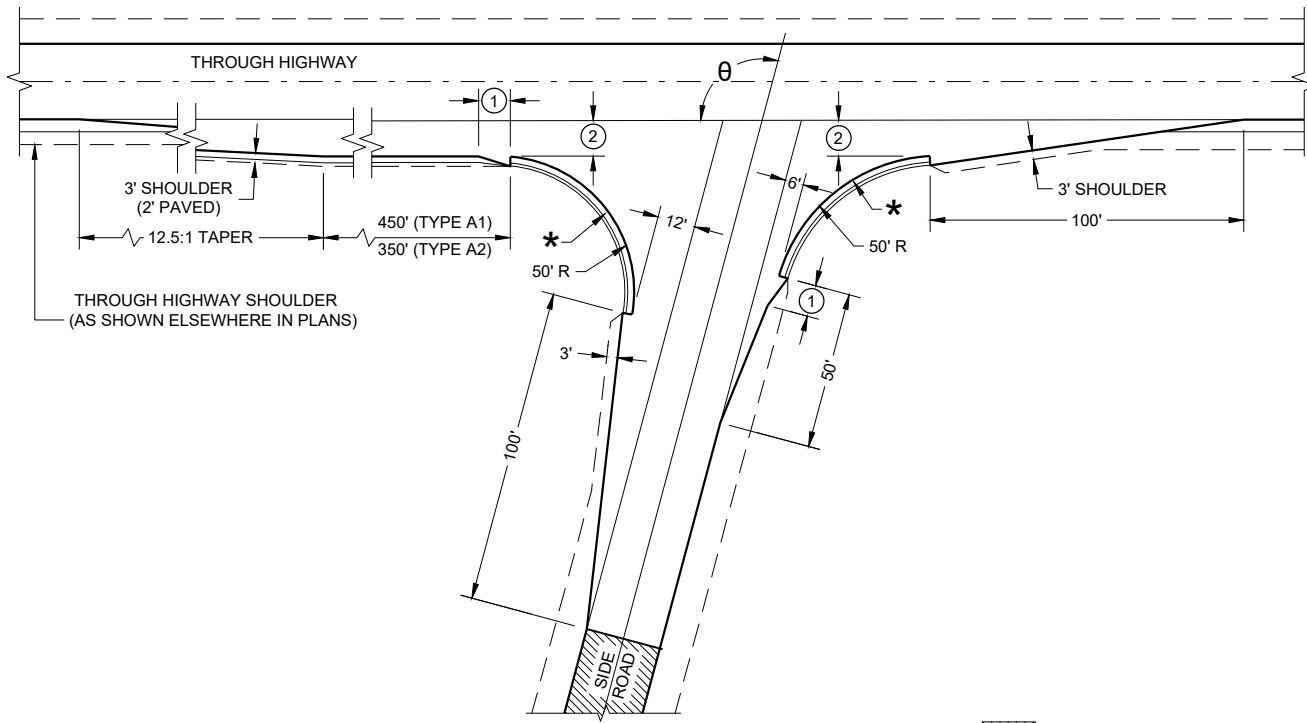


TEE INTERSECTION BYPASS LANE DETAIL

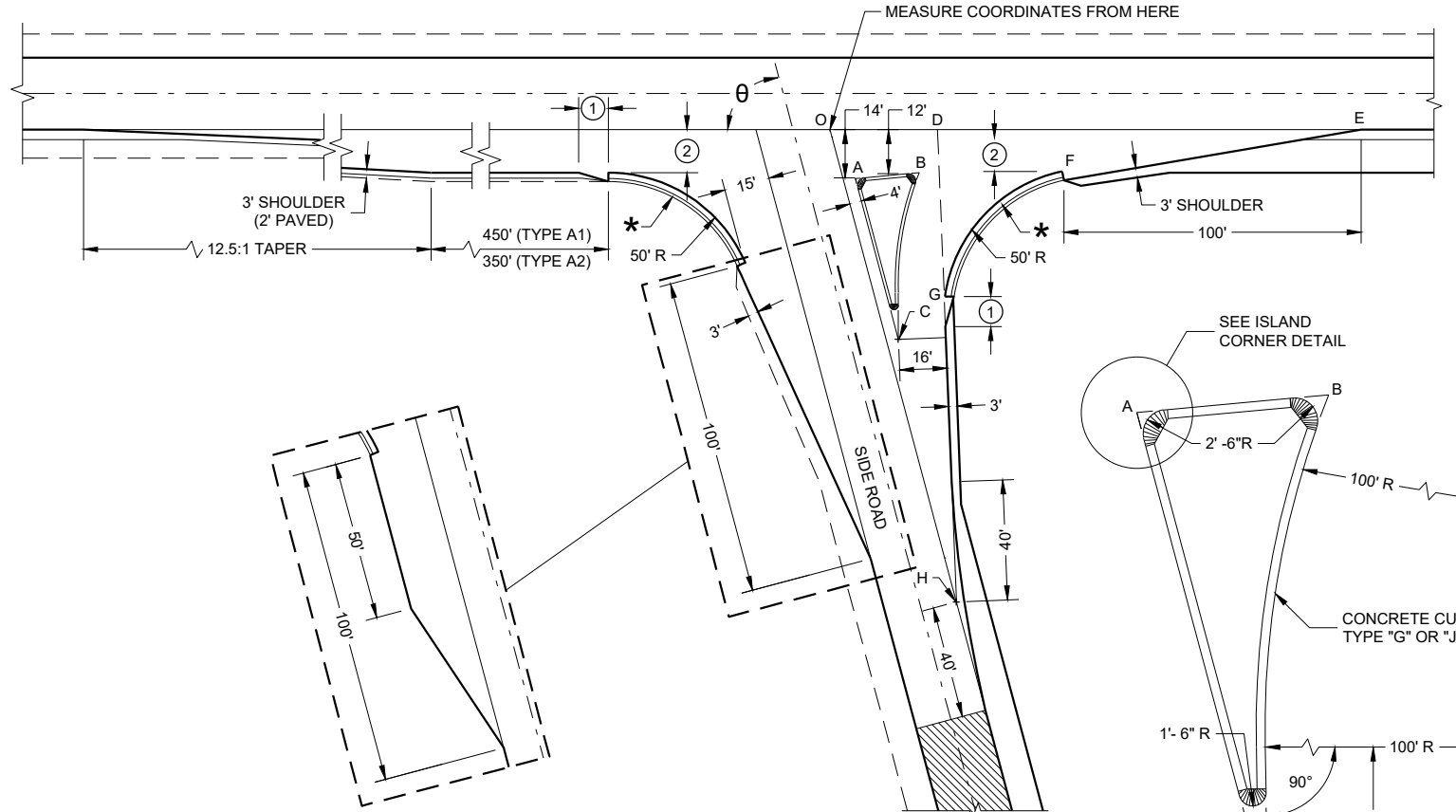
EXISTING PAVED SURFACE
BYPASS LANE

AT GRADE SIDE ROAD INTERSECTION TYPES "B1", "B2", "C", "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



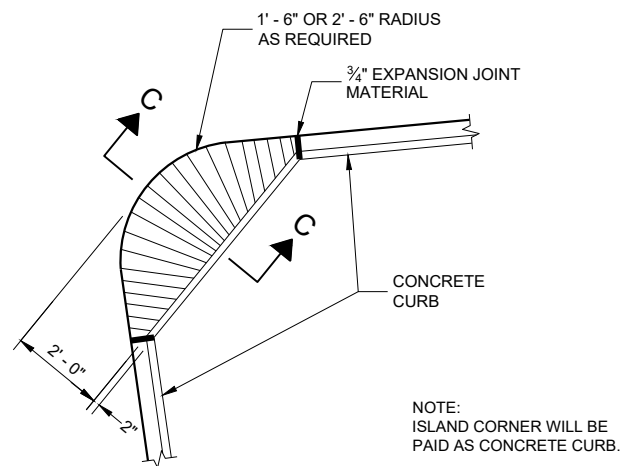
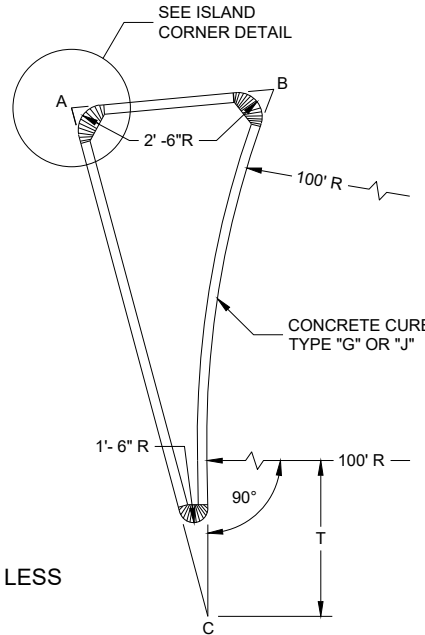
$\theta = \text{MORE THAN } 80^\circ$



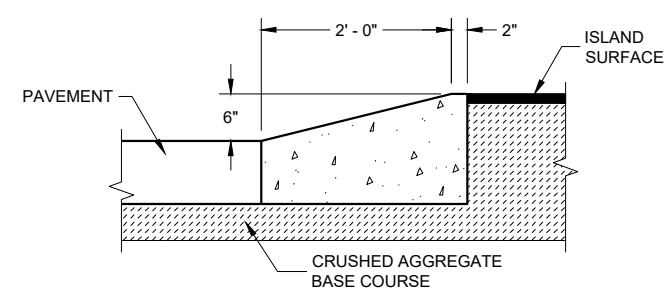
SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 $\theta = \text{ACUTE ANGLES } 70^\circ \text{ OR LESS}$

$\theta = \text{ACUTE ANGLES } 80^\circ \text{ OR LESS}$

EXISTING PAVED SURFACE



PLAN VIEW



SECTION C - C

ISLAND CORNER DETAIL
 (TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES
 (INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT 'O')								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 -14.0	44.9 -12.0	46.4 -72.4	41.9 0.0	205.0 0.0	104.6 -12.0	64.0 -75.5	85.0 -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 -14.0	39.0 -12.0	37.8 -71.6	39.4 0.0	196.1 0.0	95.7 -12.0	54.1 -71.5	70.5 -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 -14.0	33.9 -12.0	29.8 -70.1	37.4 0.0	188.3 0.0	87.8 -12.0	45.6 -67.5	56.1 -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 -14.0	29.3 -12.0	22.3 -67.9	35.7 0.0	181.2 0.0	80.7 -12.0	38.2 -63.4	41.8 -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 -14.0	25.4 -12.0	15.6 -65.2	34.4 0.0	174.8 0.0	74.4 -12.0	31.8 -59.3	27.6 -156.5	18.9	52.0	15.6	66.9	158.9

TYPE 'A1" AND "A2" SIDE ROAD INTERSECTION DETAILS

AT GRADE SIDE ROAD INTERSECTIONS
 TYPES "A1" AND "A2"

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2022 /S/ John Jenkins
 DATE ROADWAY STANDARDS DEVELOPMENT
 ENGINEER
 FHWA

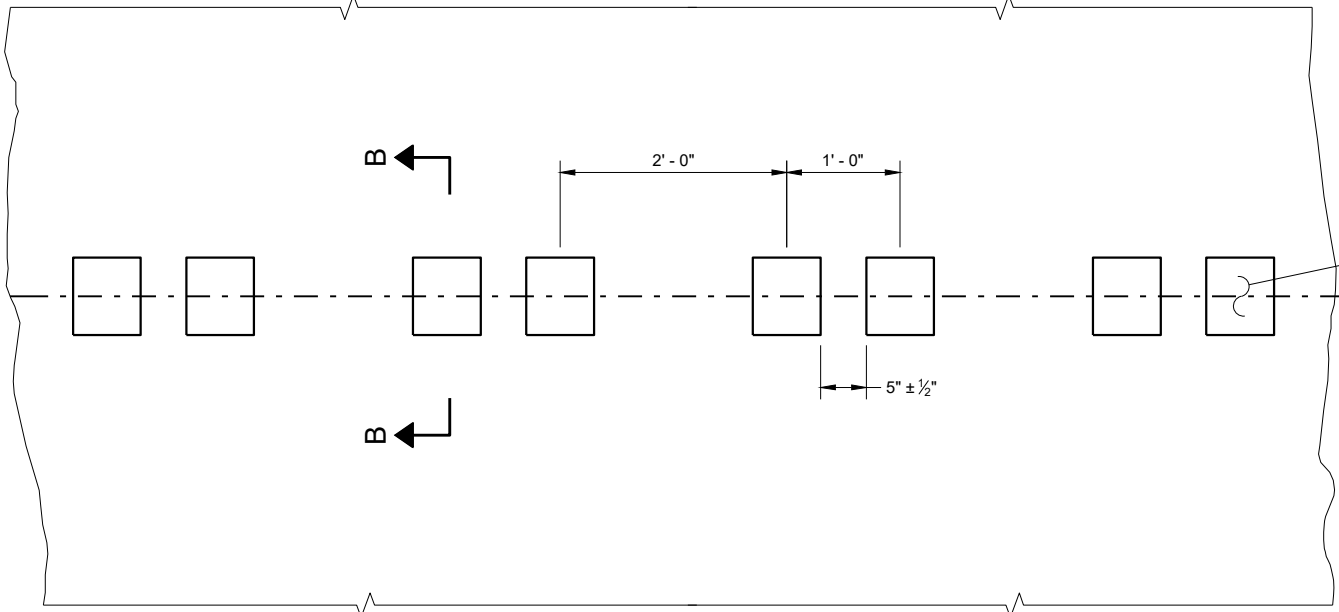
SDD09A01 - 14b

SDD09A01 - 14b

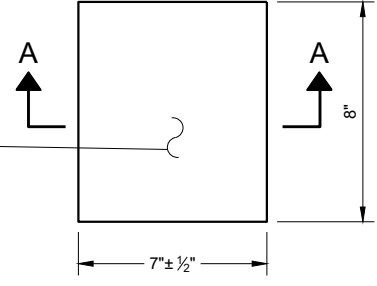
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

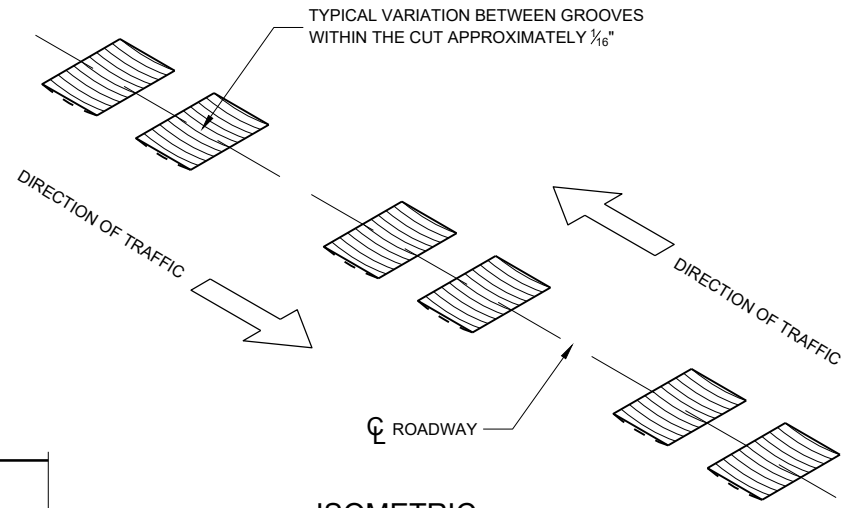
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



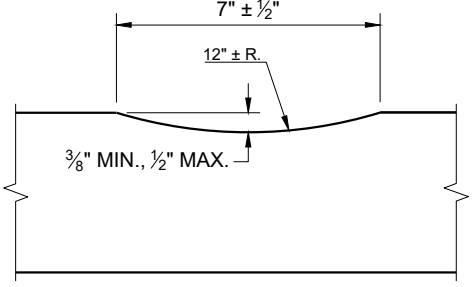
PLAN DETAIL VIEW



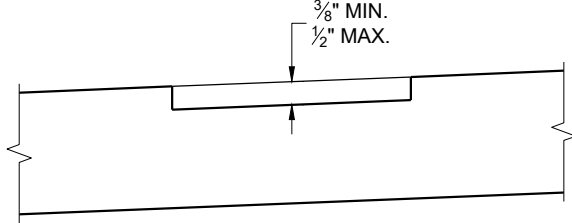
PLAN VIEW (SINGLE GROOVE)



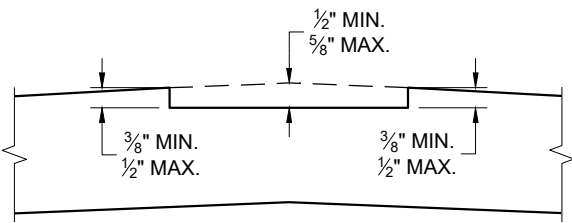
ISOMETRIC



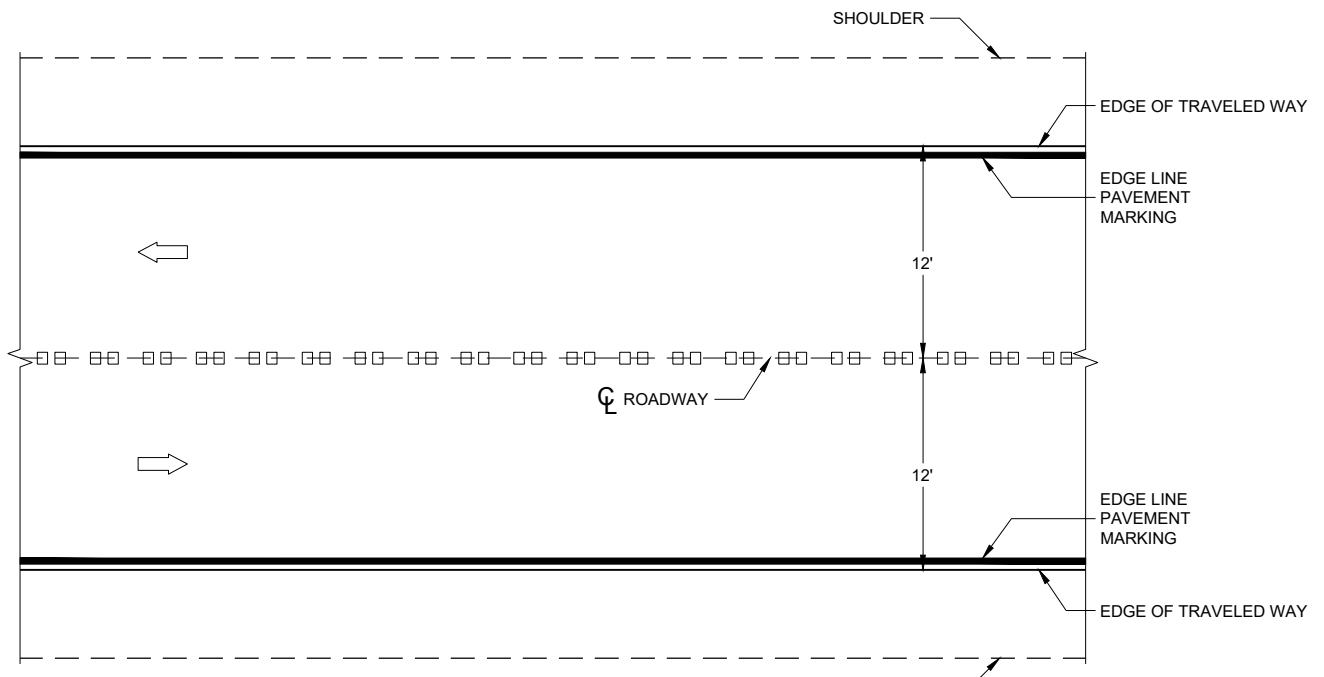
SECTION A - A



SECTION B - B SUPERELEVATED ROADWAY



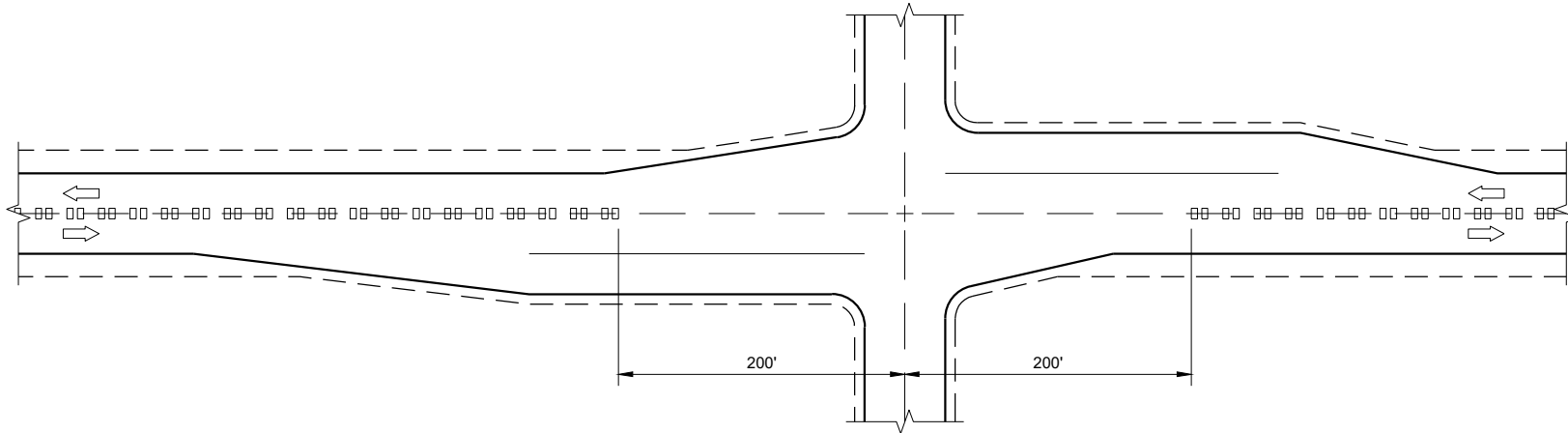
SECTION B - B CROWNED ROADWAY



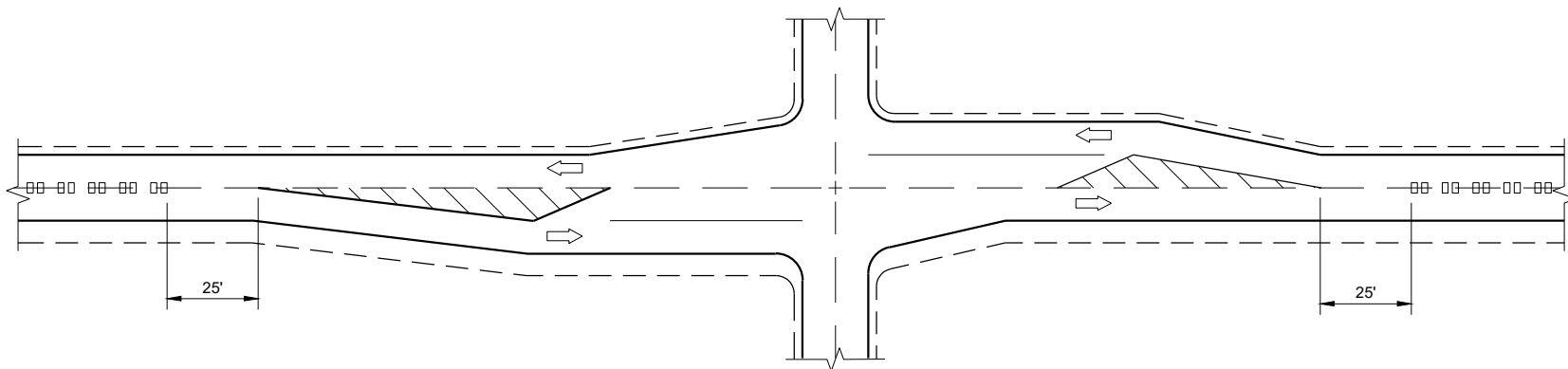
PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

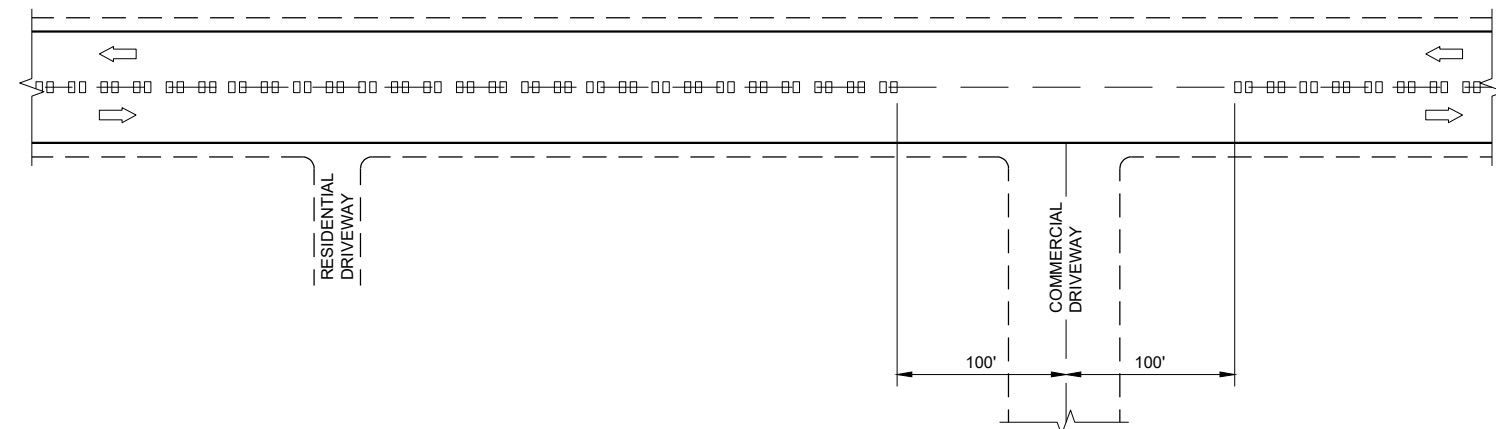
CENTERLINE RUMBLE STRIPS - ASPHALT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



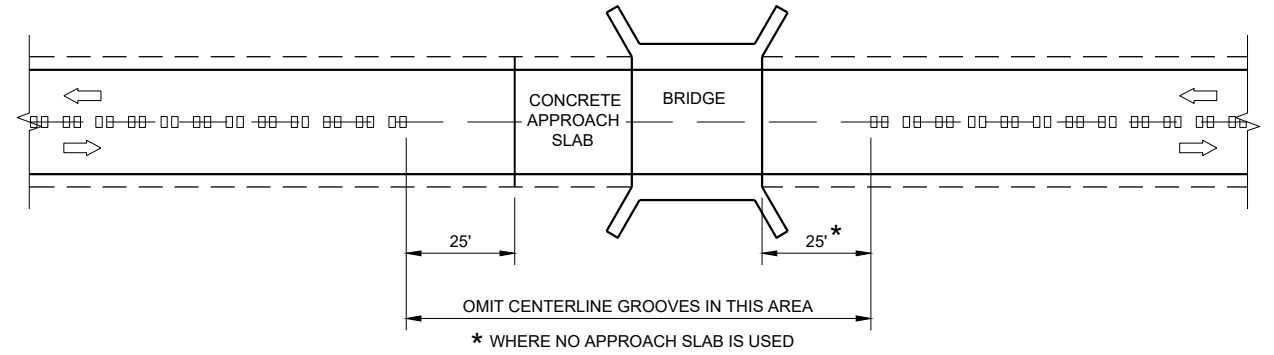
**CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)**



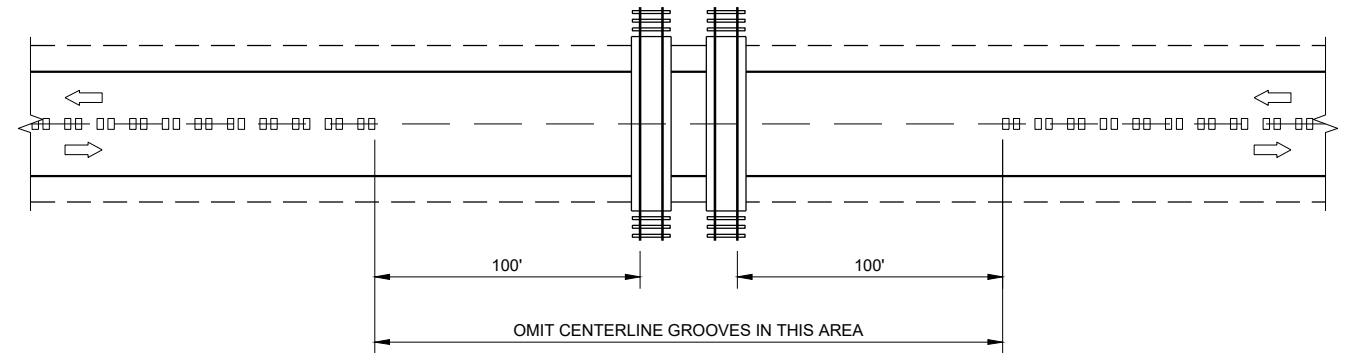
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

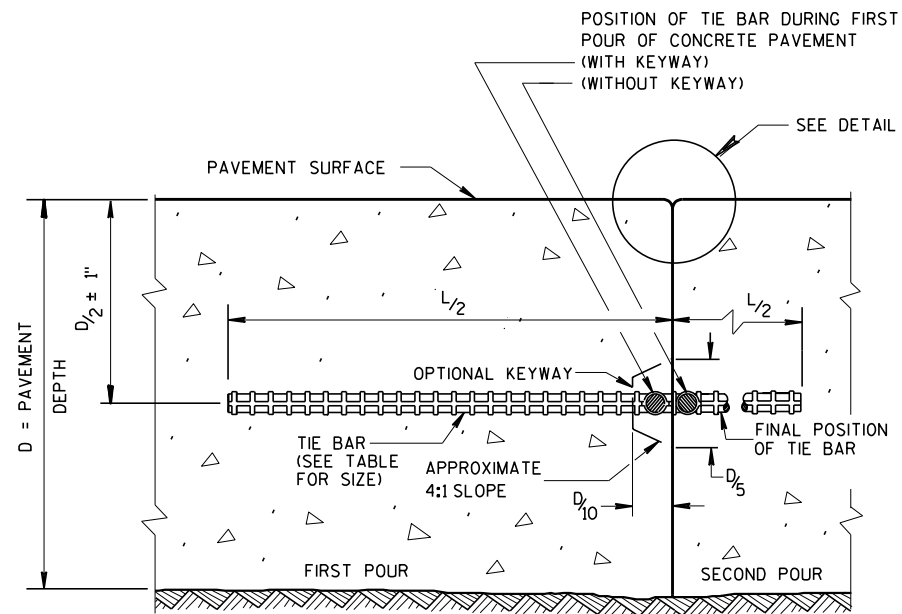
6

6

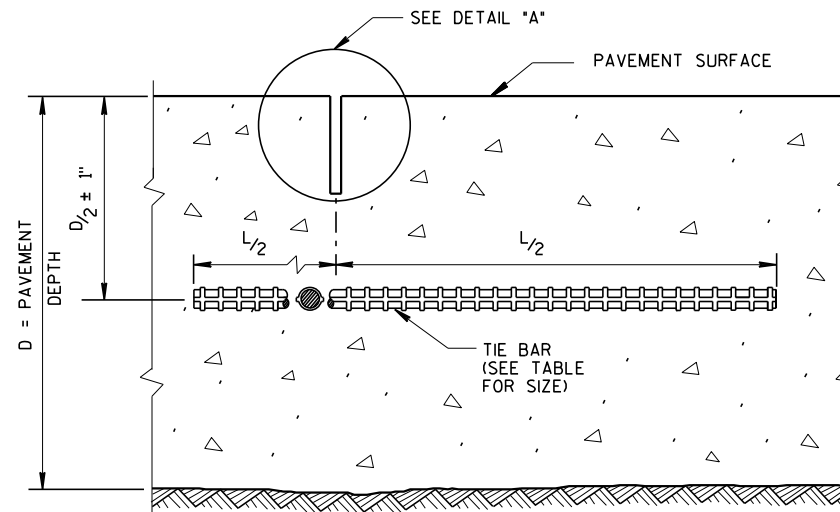
SDD 13A11 - 04d

SDD 13A11 - 04d

CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



CONSTRUCTION JOINT



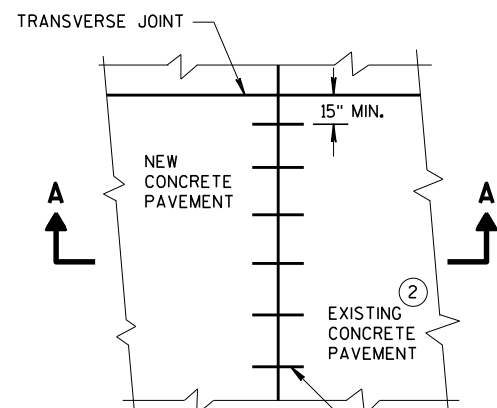
SAWED JOINT

GENERAL NOTES

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

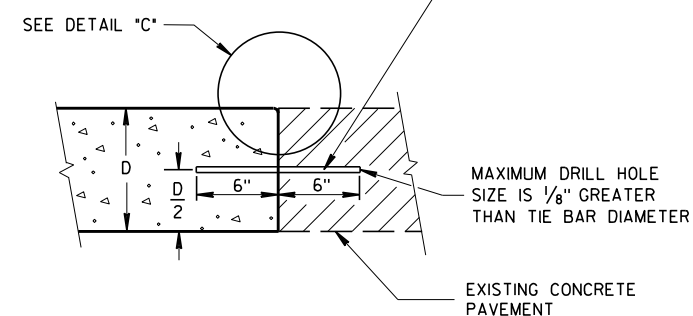
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

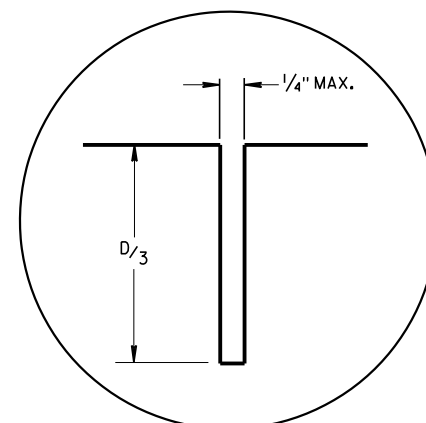


PLAN VIEW

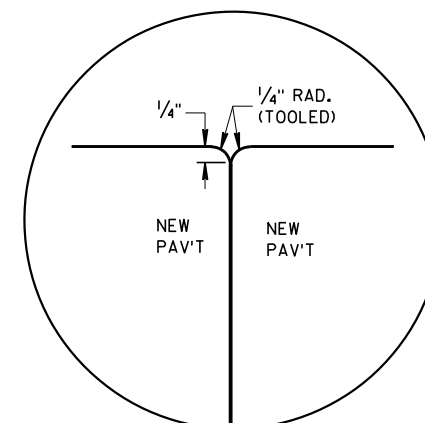
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



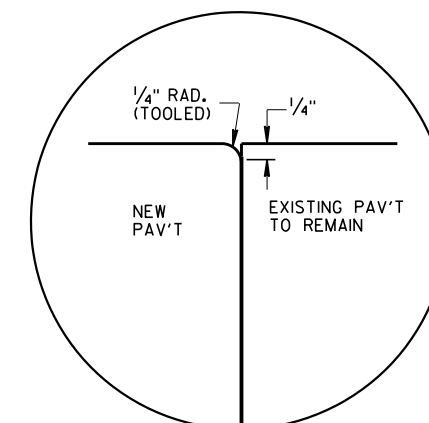
**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"



DETAIL "B"



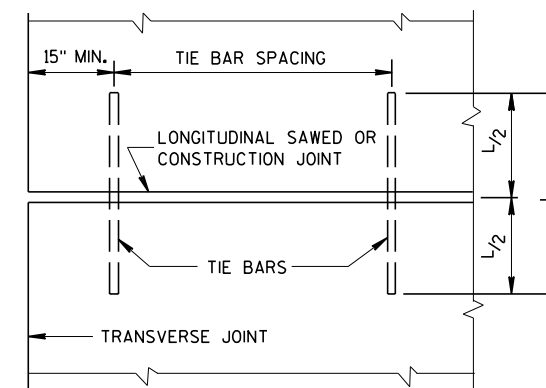
DETAIL "C"

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 Kemp, P.E.
DATE PAVEMENT SUPERVISOR
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 FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

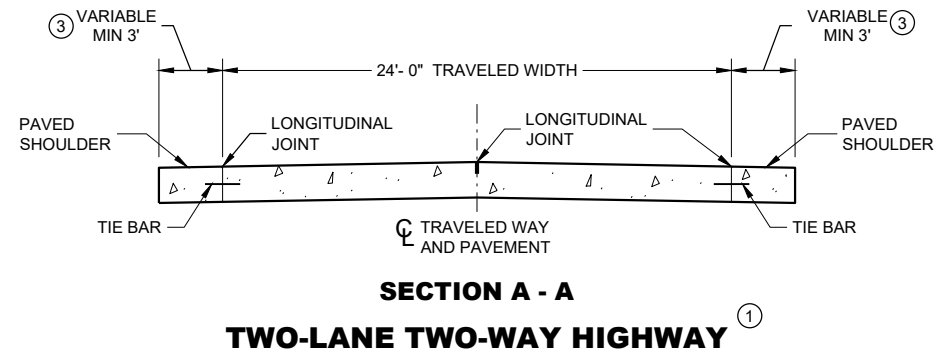
CONSTRUCTION JOINTS

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

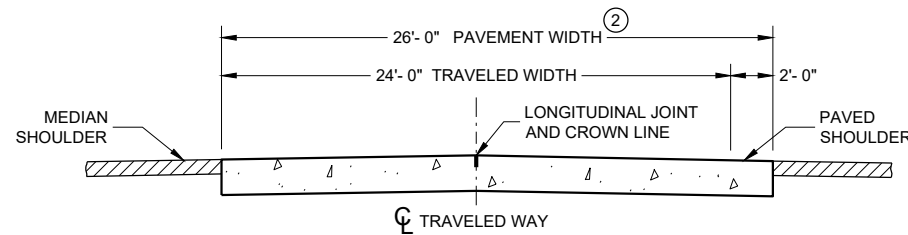
- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED "PAVED SHOULDER" AS CONCRETE PAVEMENT.
- ③ SHOULDER WIDTHS LESS THAN 3 FEET SHALL BE PAVED INTEGRAL TO THE MAINLINE CONCRETE PAVEMENT, SEE SECTION B-B.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

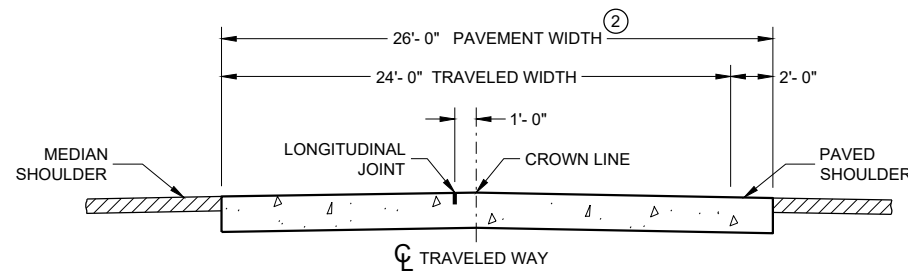
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8" & ABOVE	1 1/4"	15'



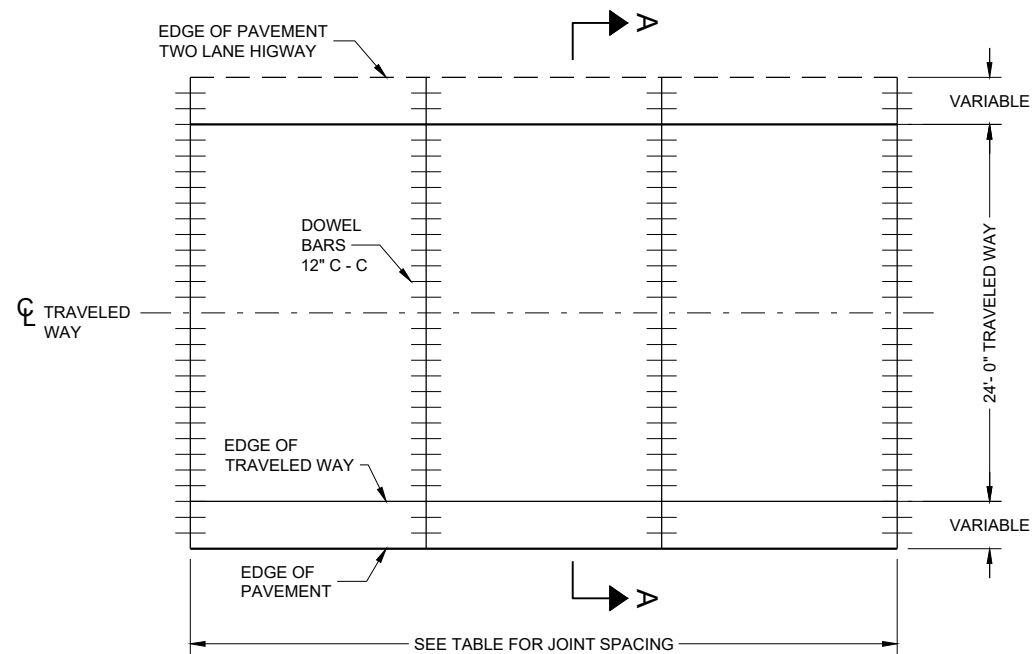
**SECTION A - A
TWO-LANE TWO-WAY HIGHWAY**



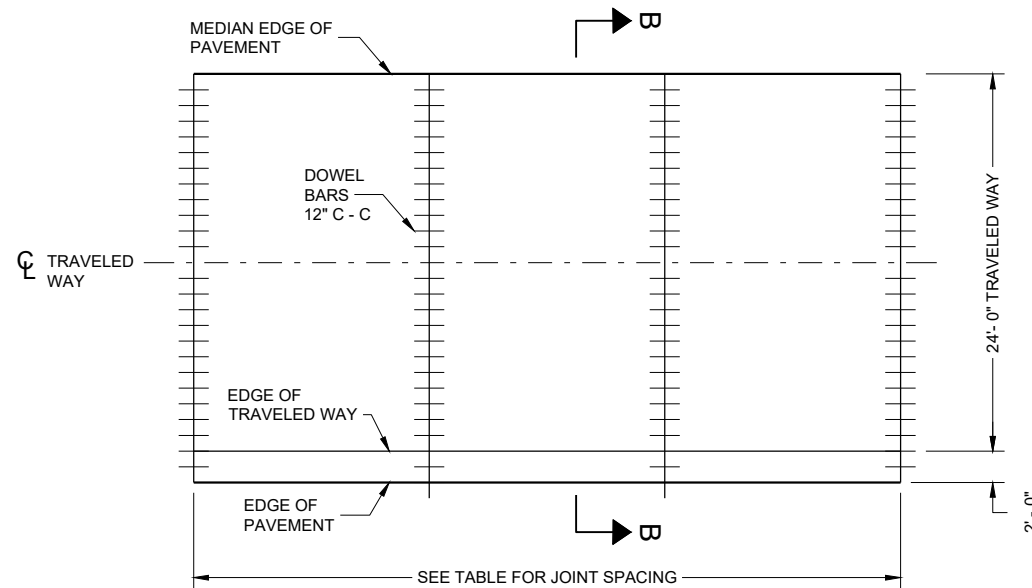
SECTION B - B



**ALTERNATIVE SECTION B - B
DIVIDED HIGHWAY**



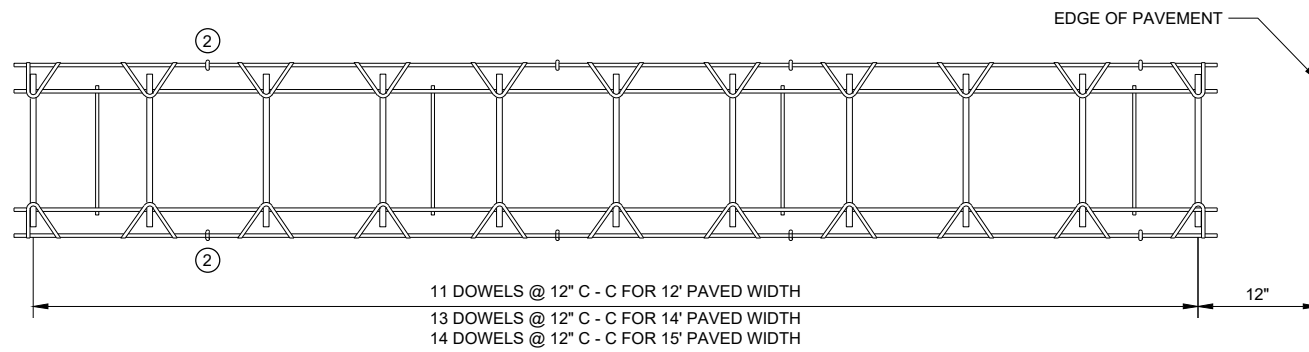
**CONTRACTION JOINT LAYOUT FOR
TWO-LANE TWO-WAY HIGHWAY**



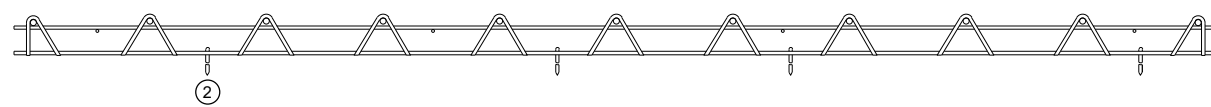
**CONTRACTION JOINT LAYOUT FOR
DIVIDED HIGHWAY**

**RURAL DOWELED
CONCRETE PAVEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



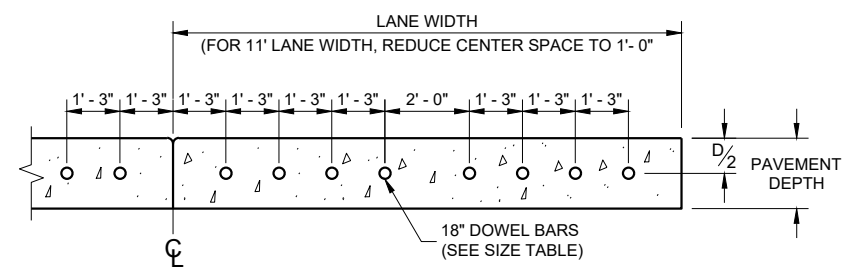
PLAN VIEW



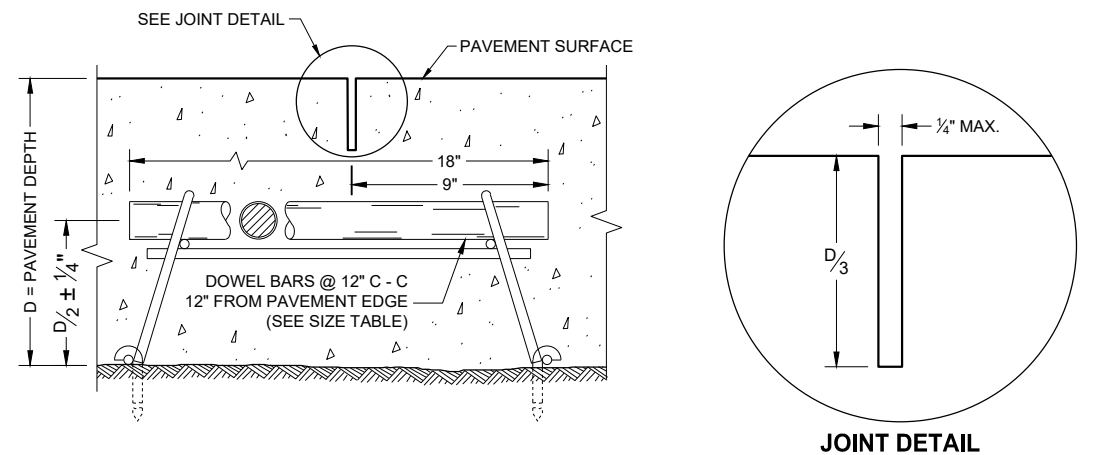
CONTRACTION JOINT DOWEL ASSEMBLY ①

GENERAL NOTES

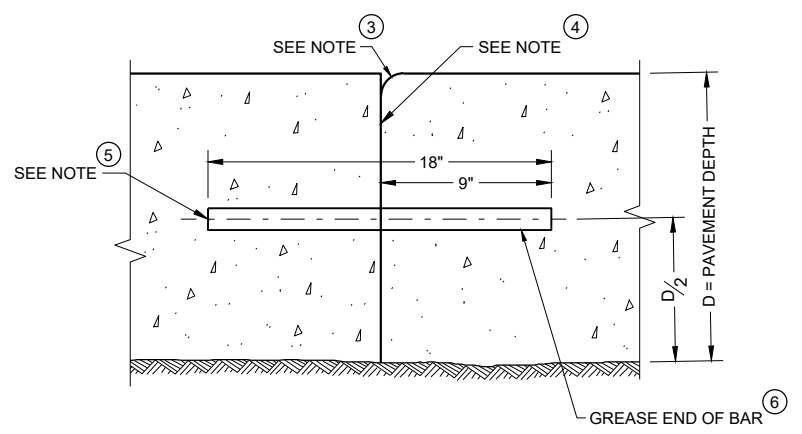
- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4" 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 THE "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 AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



DOWELED CONTRACTION JOINT

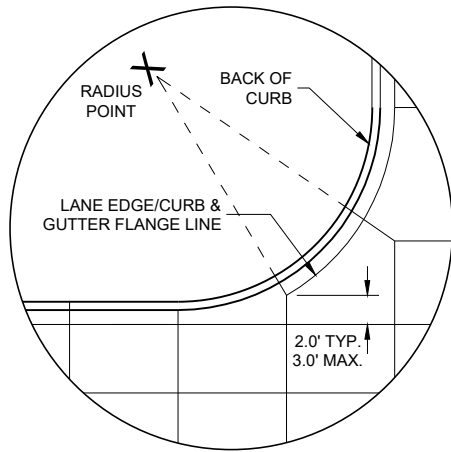


TRANSVERSE CONSTRUCTION JOINT

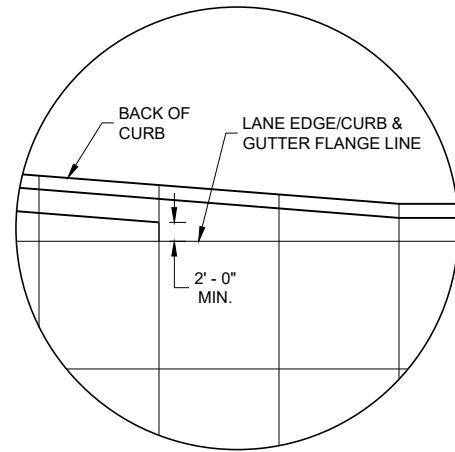
**RURAL DOWELED
 CONCRETE PAVEMENT**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

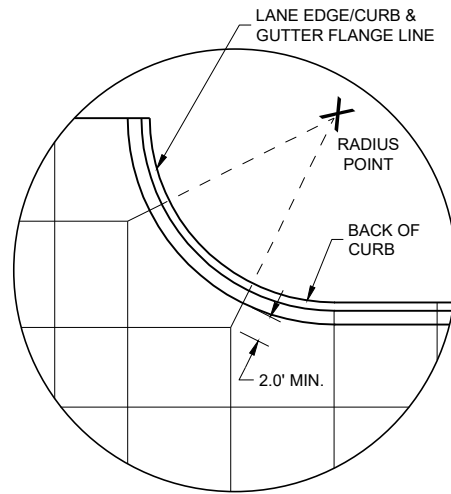
APPROVED
 November 2022 /S/ Peter Kemp P.E.
 DATE PAVEMENT SUPERVISOR



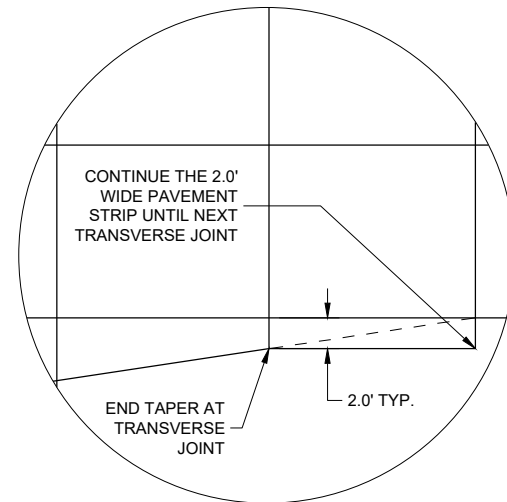
DETAIL "A"



DETAIL "B"



DETAIL "C"

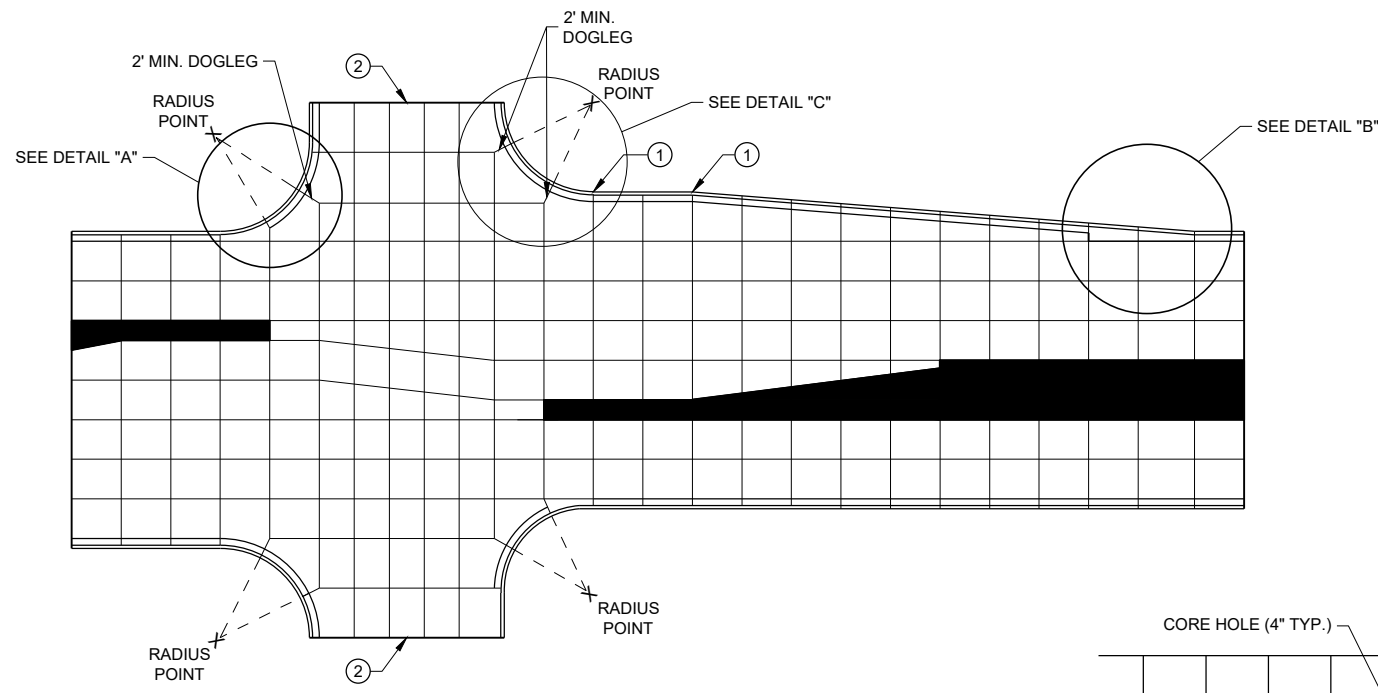


DETAIL "D"

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.

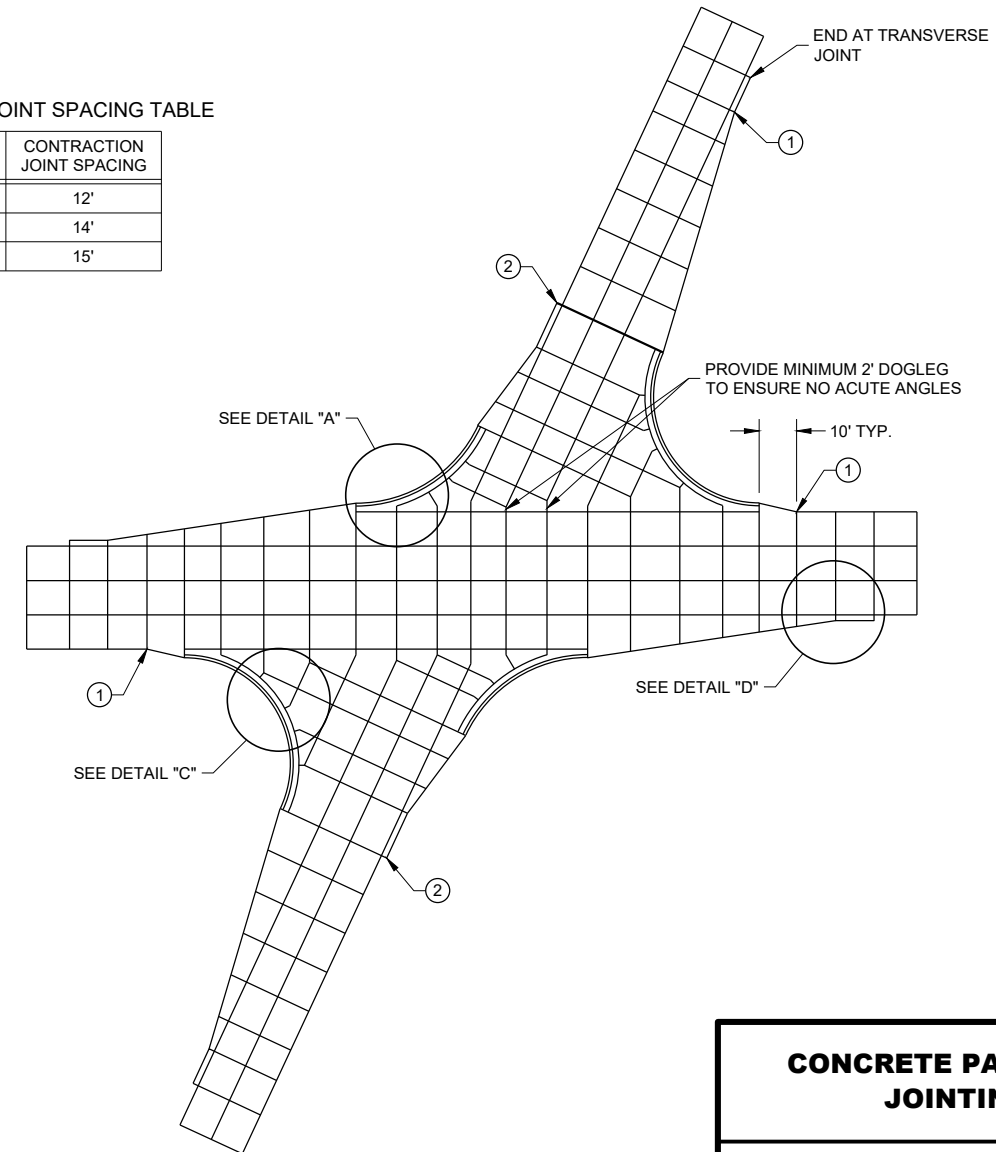
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



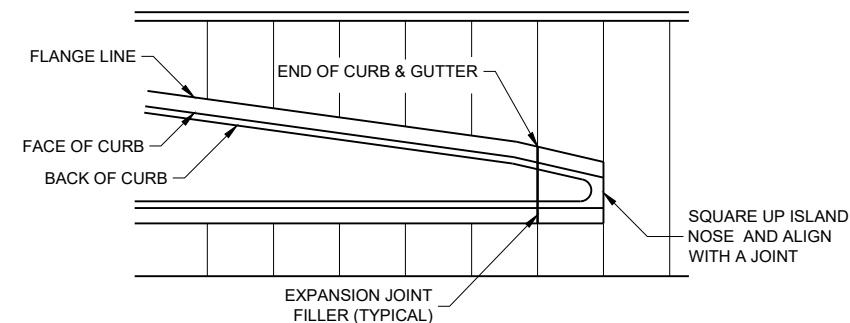
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

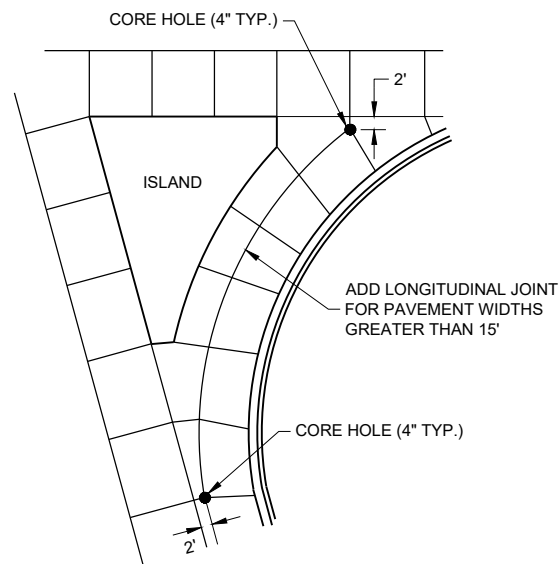
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

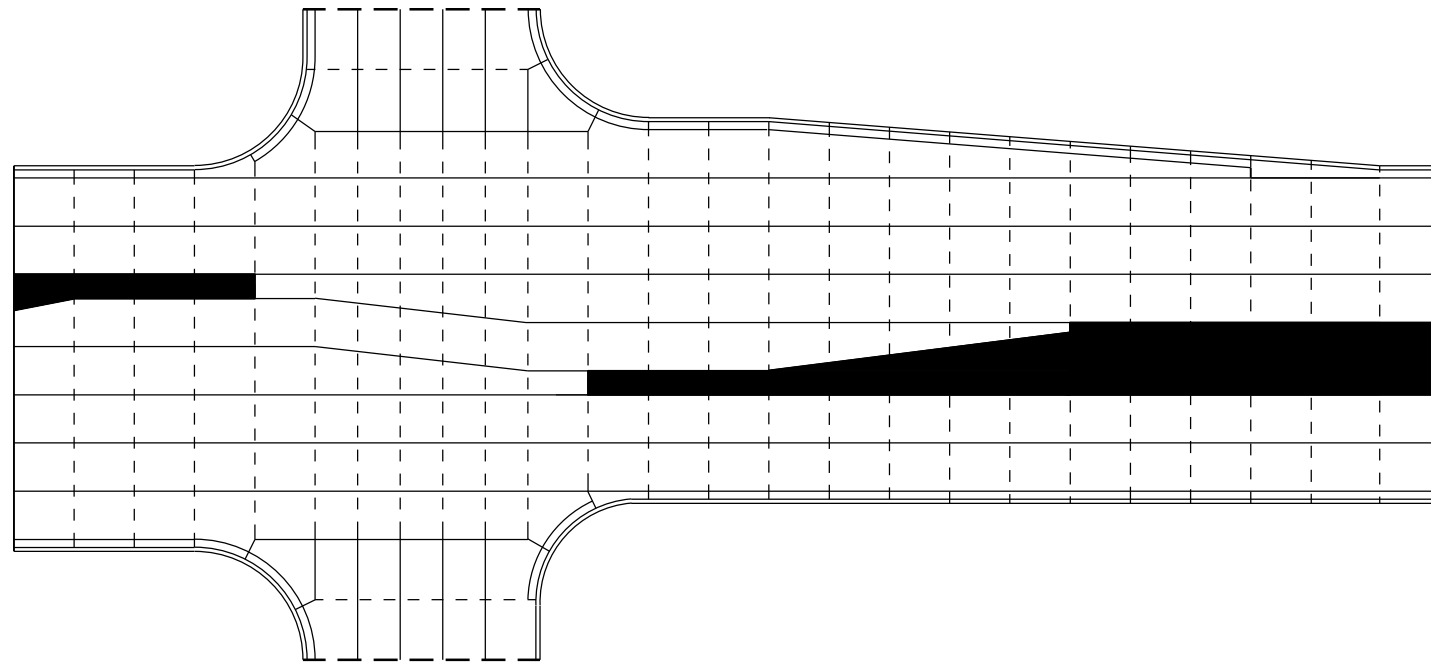
LEGEND

- - - - - POTENTIAL DOWELED EXPANSION JOINT
- - - - - DOWELED JOINT
- TIED JOINT

GENERAL NOTES

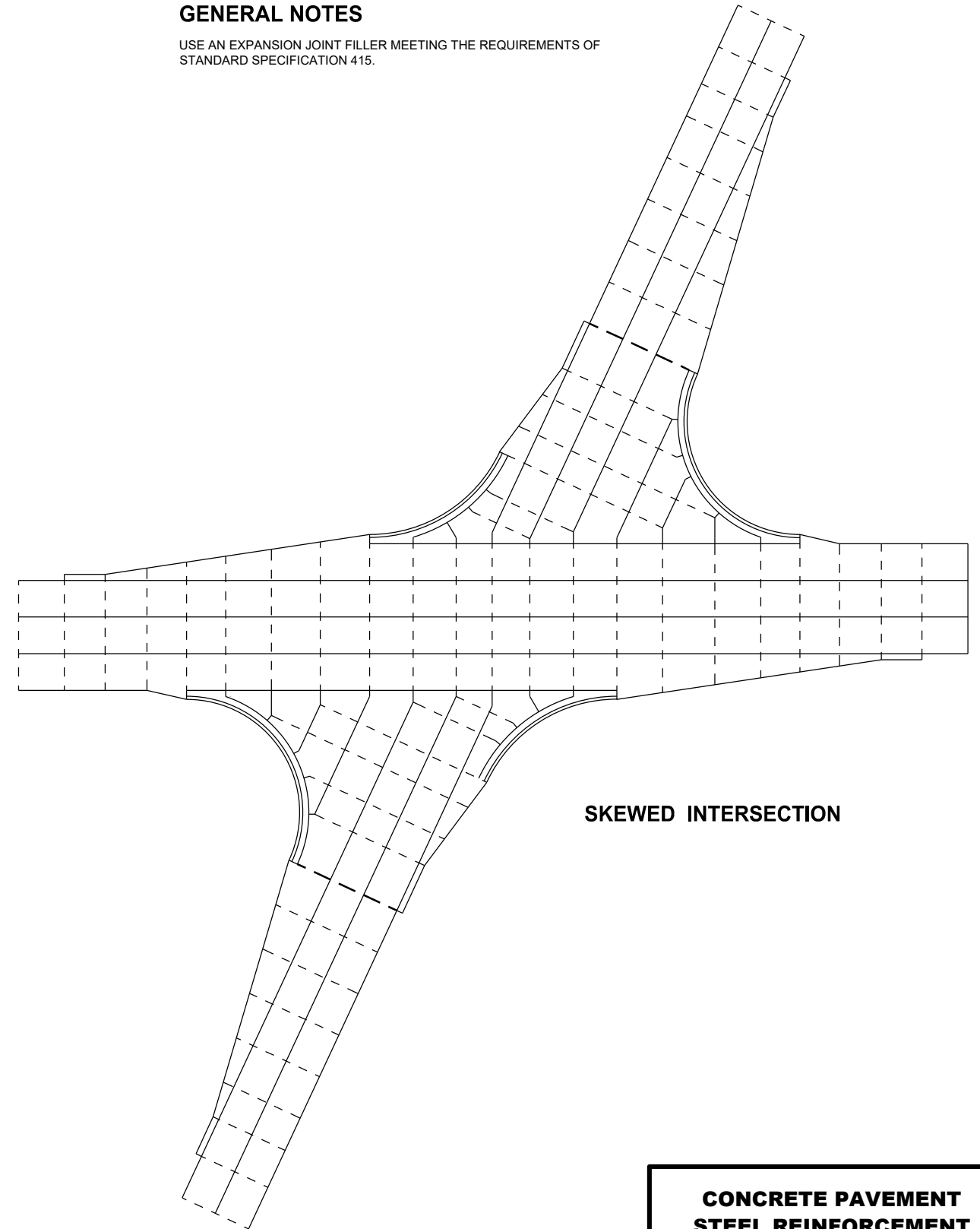
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

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STANDARD INTERSECTION

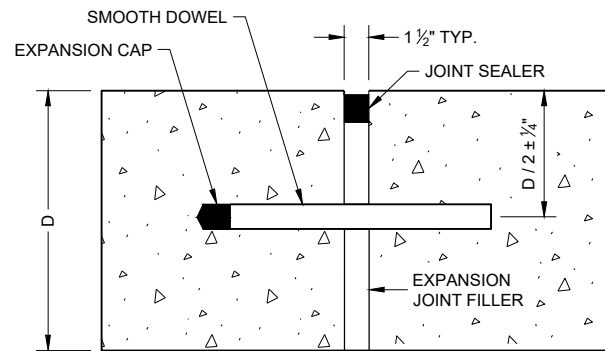
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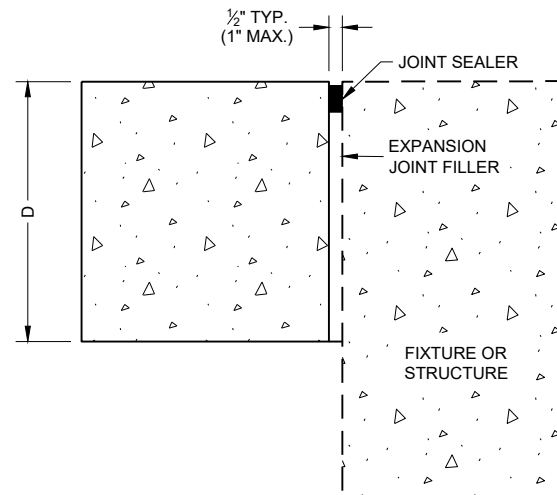
SKewed INTERSECTION

**CONCRETE PAVEMENT
STEEL REINFORCEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DOWELED TRANSVERSE ①



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

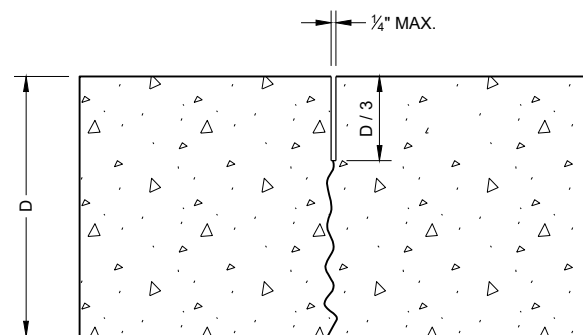
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

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

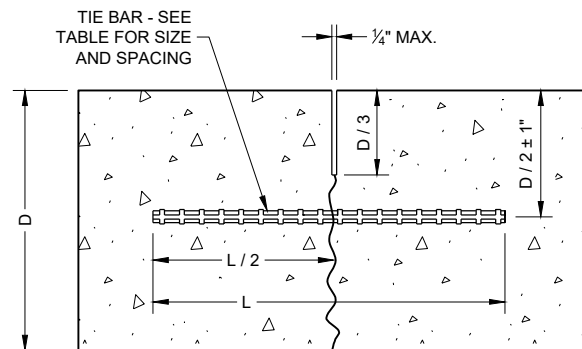
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

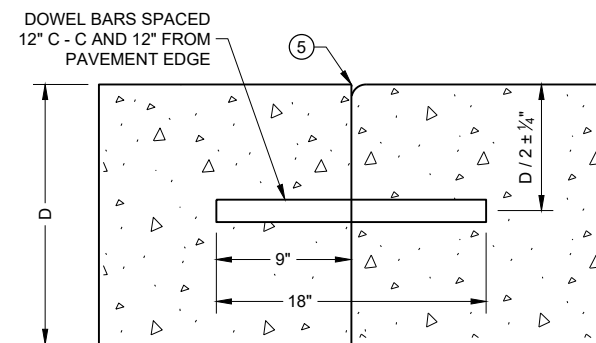
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM 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" RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



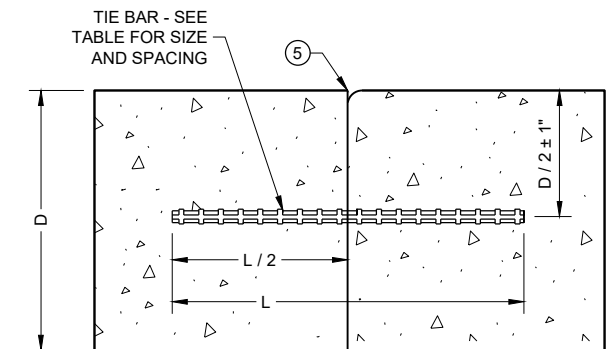
UNDOWELED TRANSVERSE



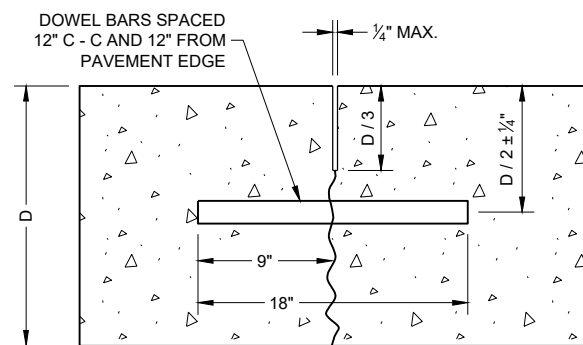
TIED LONGITUDINAL



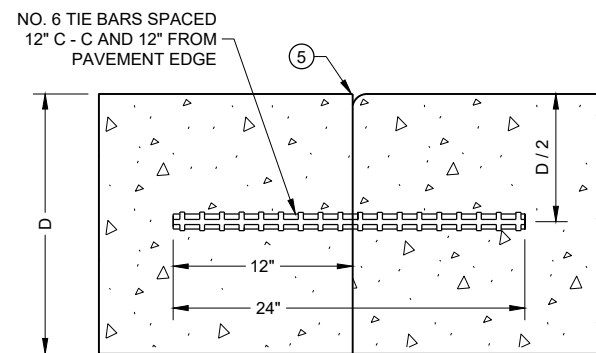
DOWELED TRANSVERSE ③



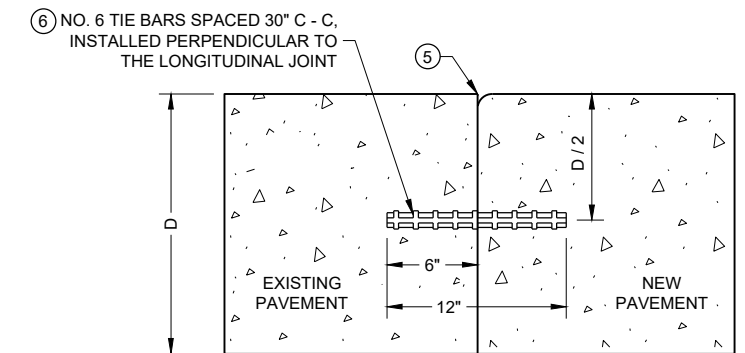
TIED LONGITUDINAL



DOWELED TRANSVERSE



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



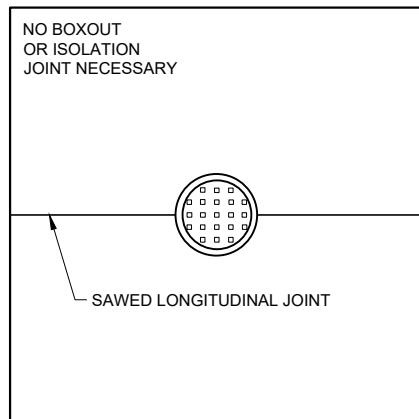
TIED LONGITUDINAL TO EXISTING

CONTRACTION JOINTS ②

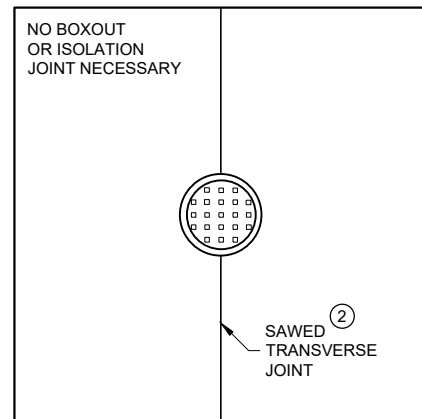
CONSTRUCTION JOINTS ④

**CONCRETE PAVEMENT
JOINT TYPES**

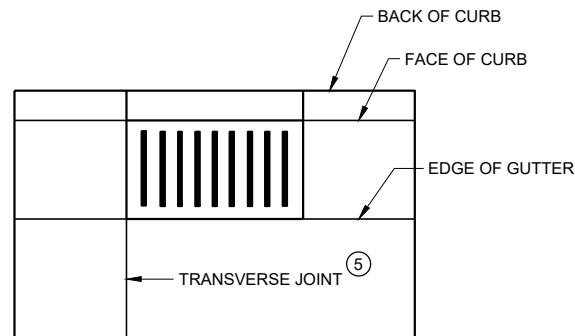
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MANHOLE WITH LONGITUDINAL JOINT



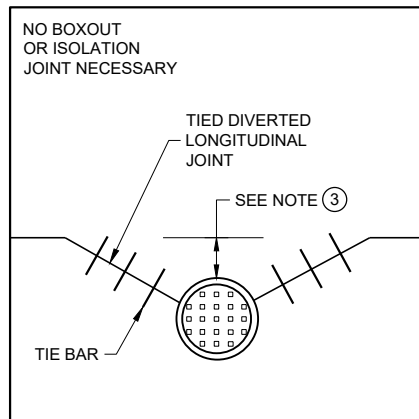
MANHOLE WITH TRANSVERSE JOINT



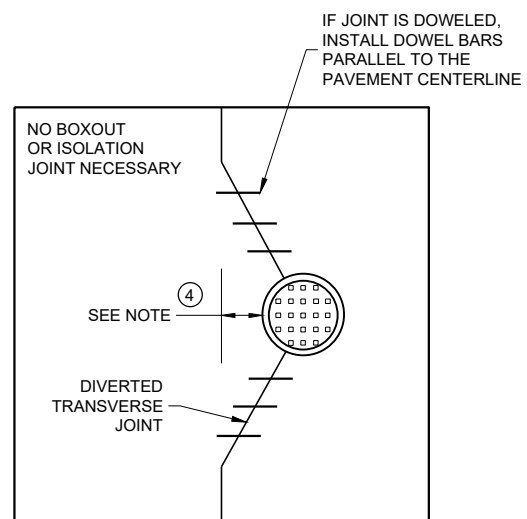
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

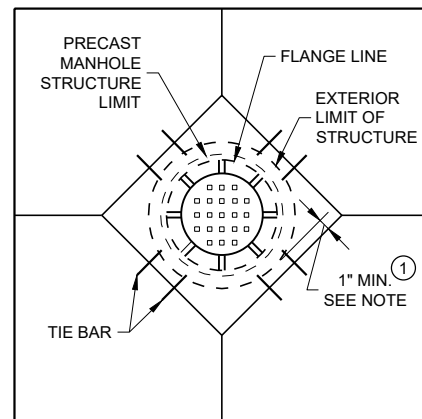
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE 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 REINFORCEMENT REBAR AROUND THE MANHOLE.
- ④ IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 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 REINFORCEMENT REBAR AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

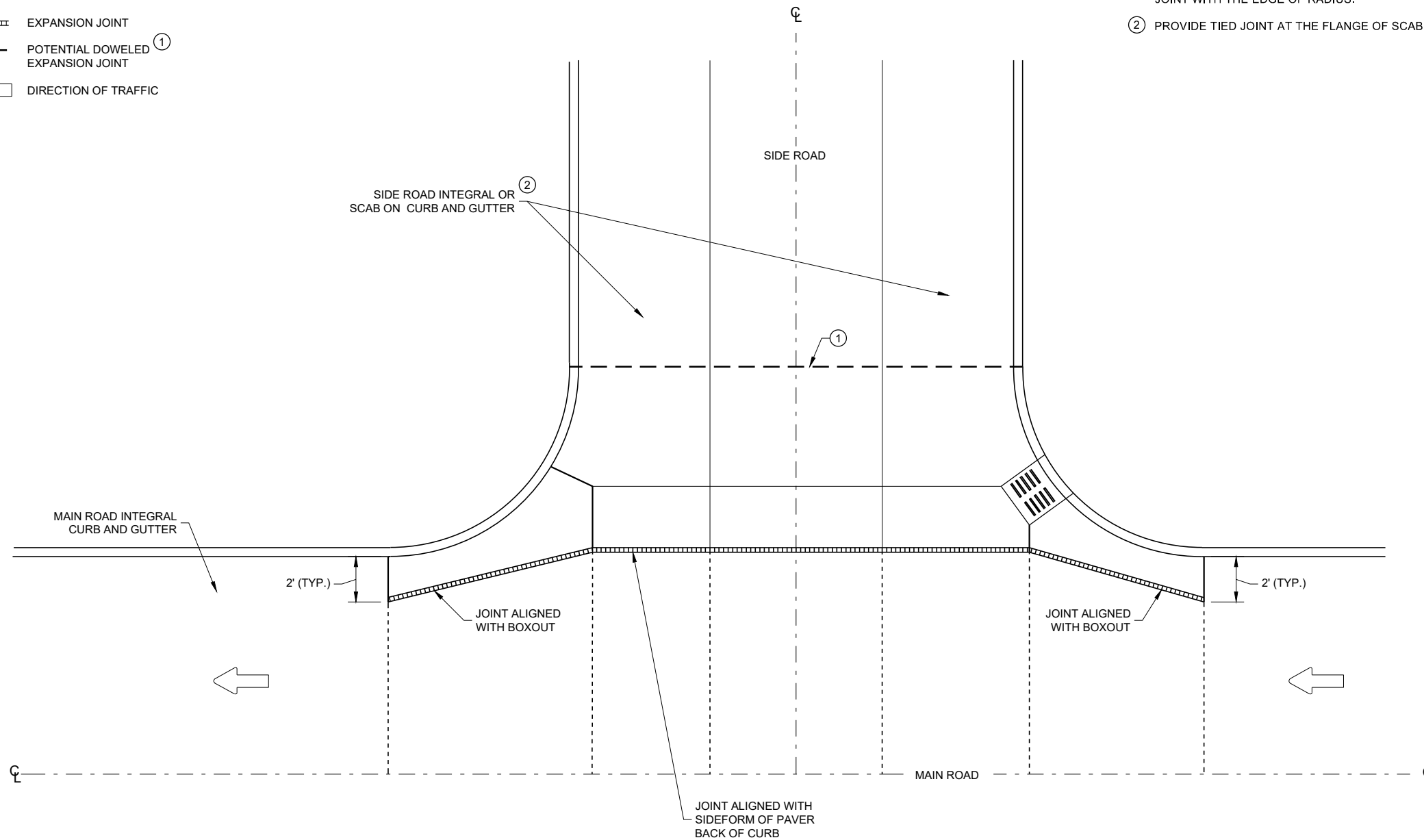
APPROVED May 2023 DATE /S/ Peter Kemp P.E. PAVEMENT SUPERVISOR

LEGEND

- DOWELED JOINT
- TIED JOINT
- ▨▨▨▨ EXPANSION JOINT
- — — — POTENTIAL DOWELED ^① EXPANSION JOINT
- ← DIRECTION OF TRAFFIC

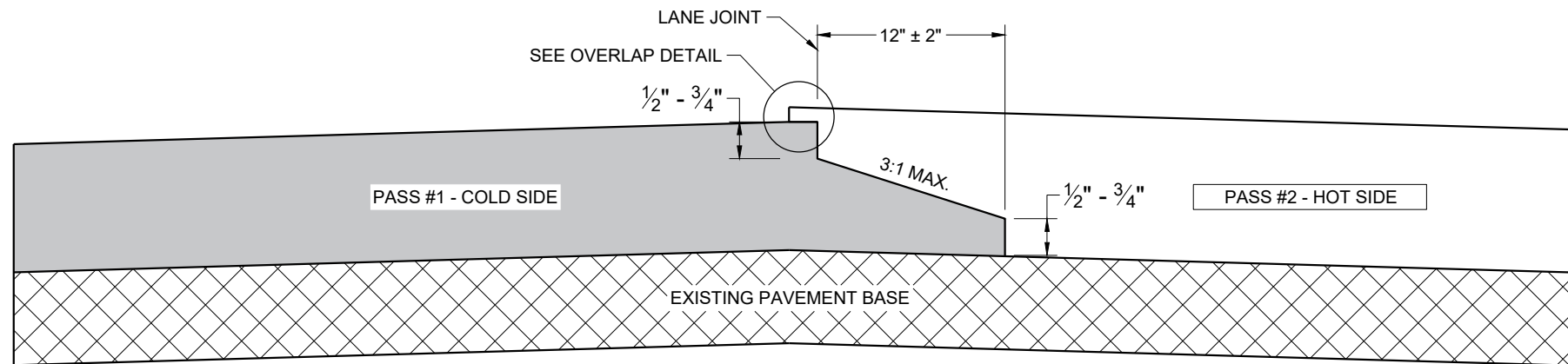
GENERAL NOTES

- 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 THE EDGE OF RADIUS.
- ② PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

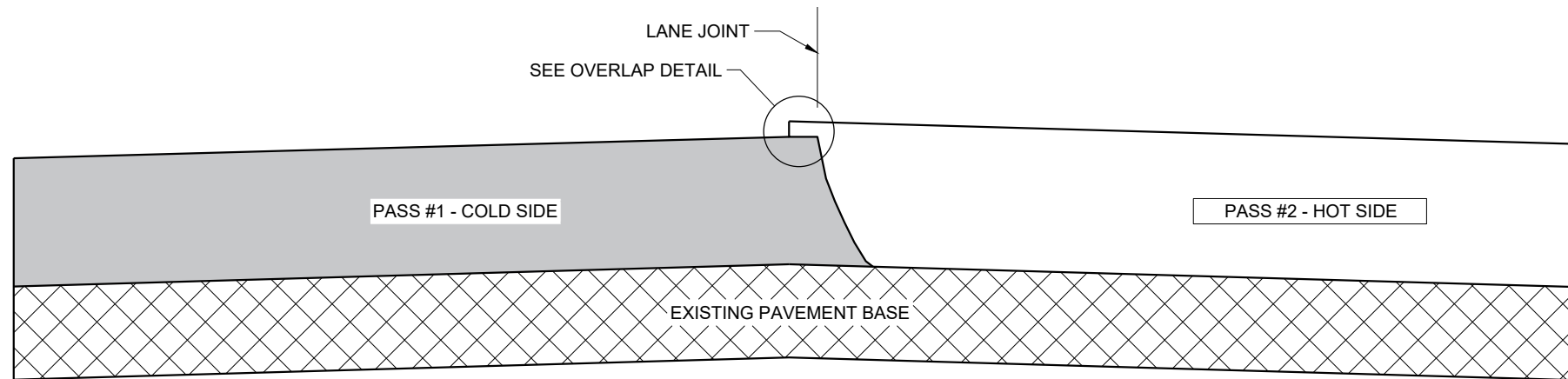


INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

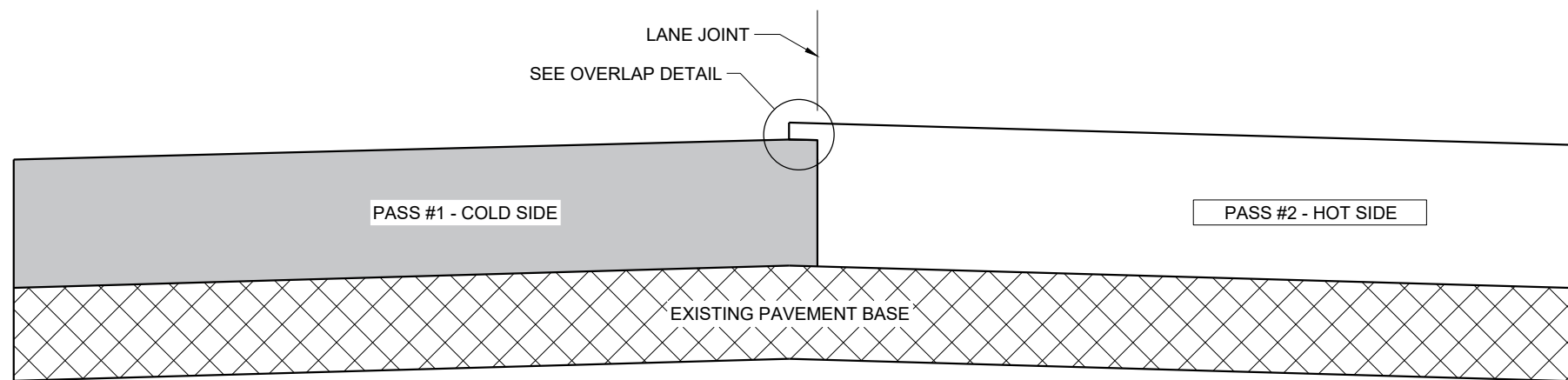
CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Peter Kemp P.E. PAVEMENT SUPERVISOR
FHWA	



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

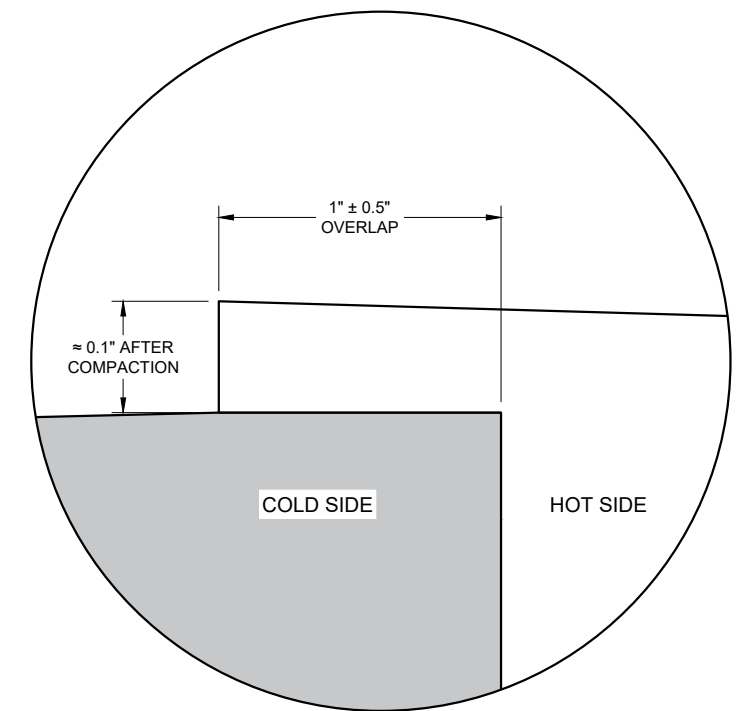
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO $2"$ FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

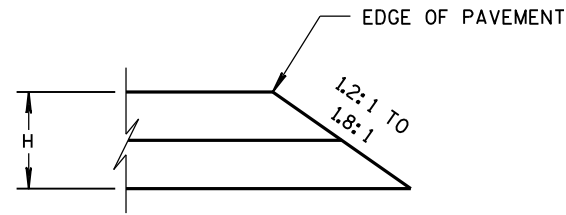
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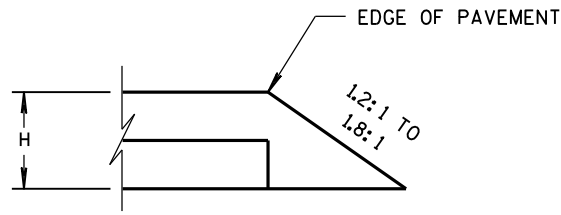
SDD 13C19 - 03

SDD 13C19 - 03

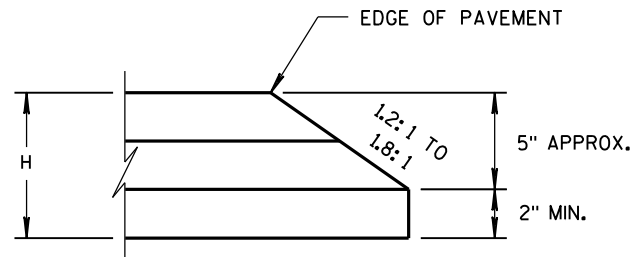
HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



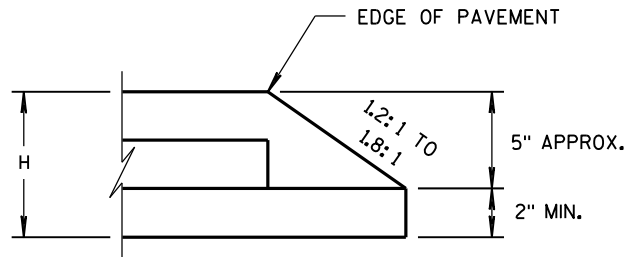
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

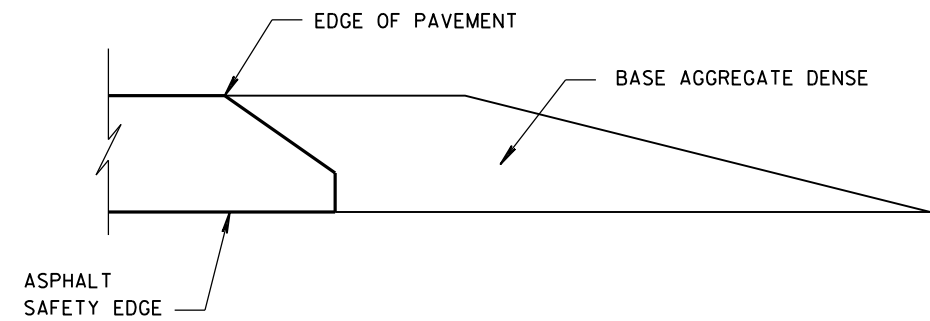


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

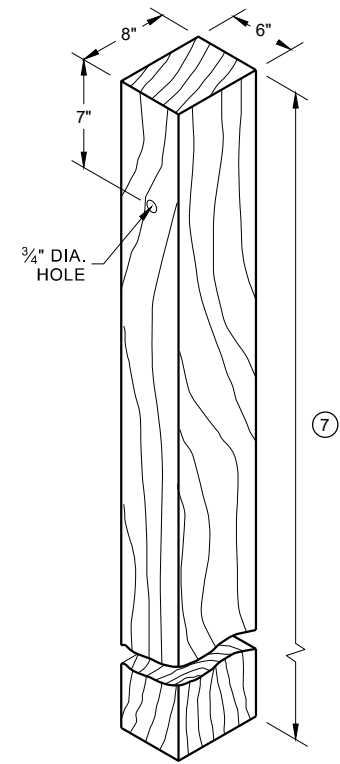
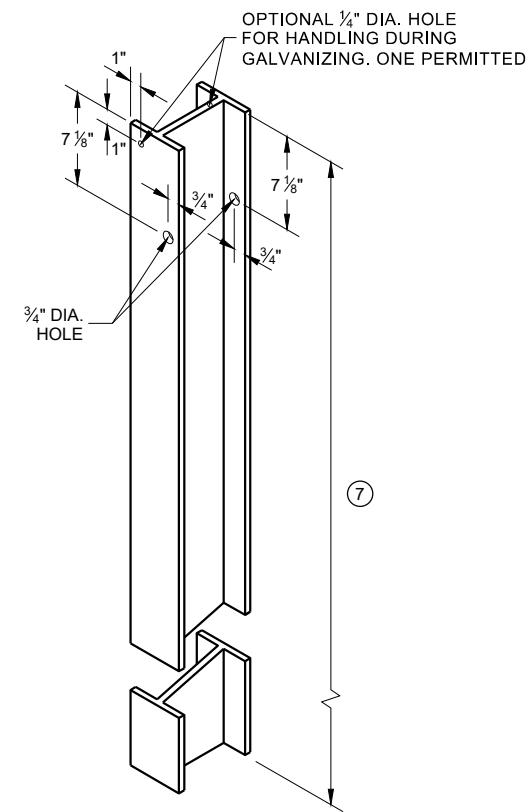
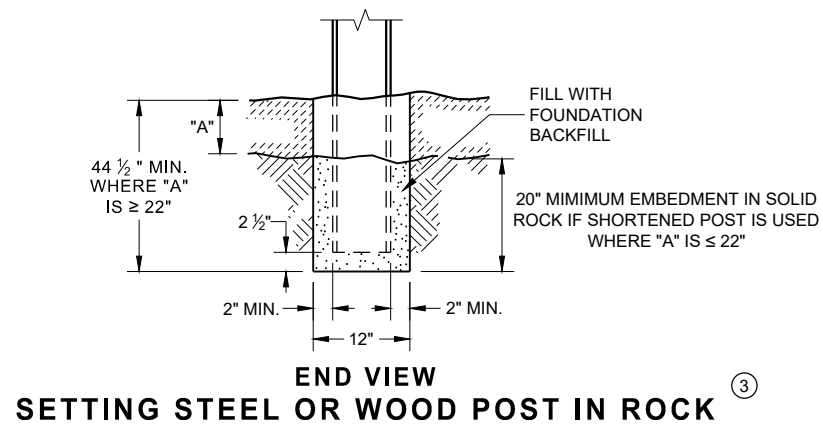
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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

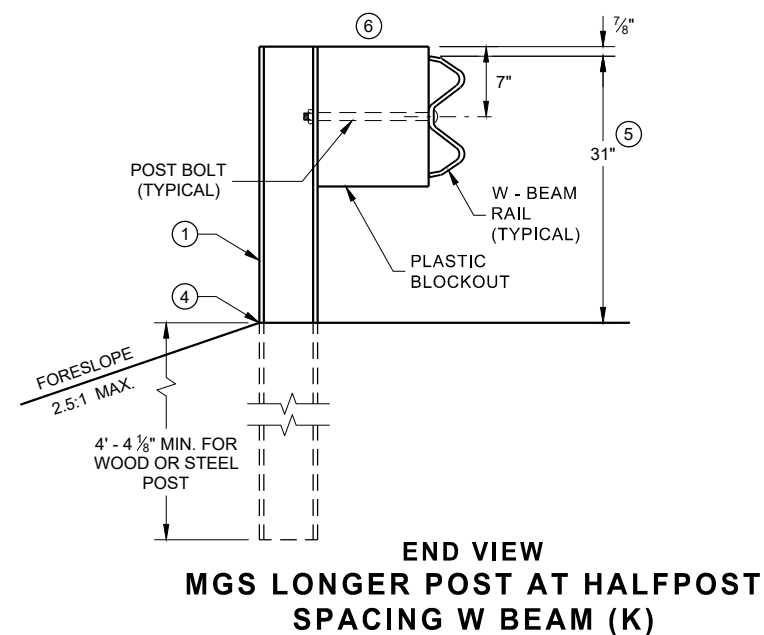
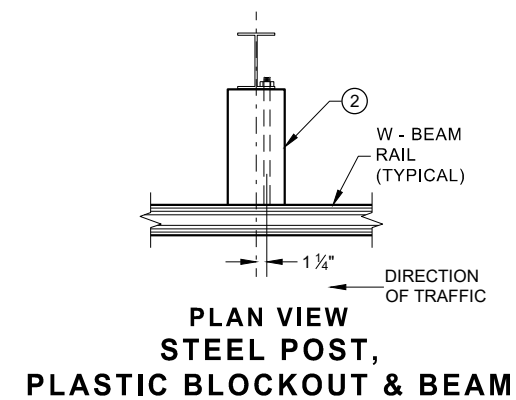
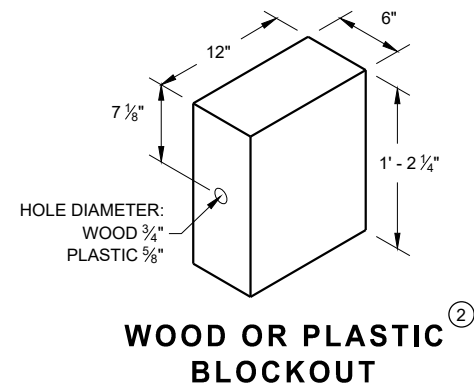
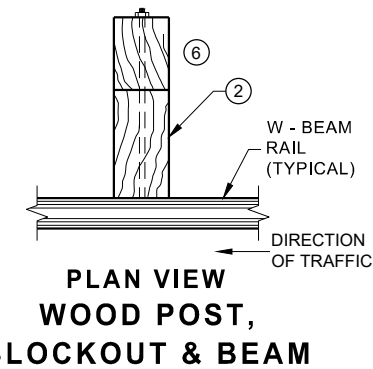
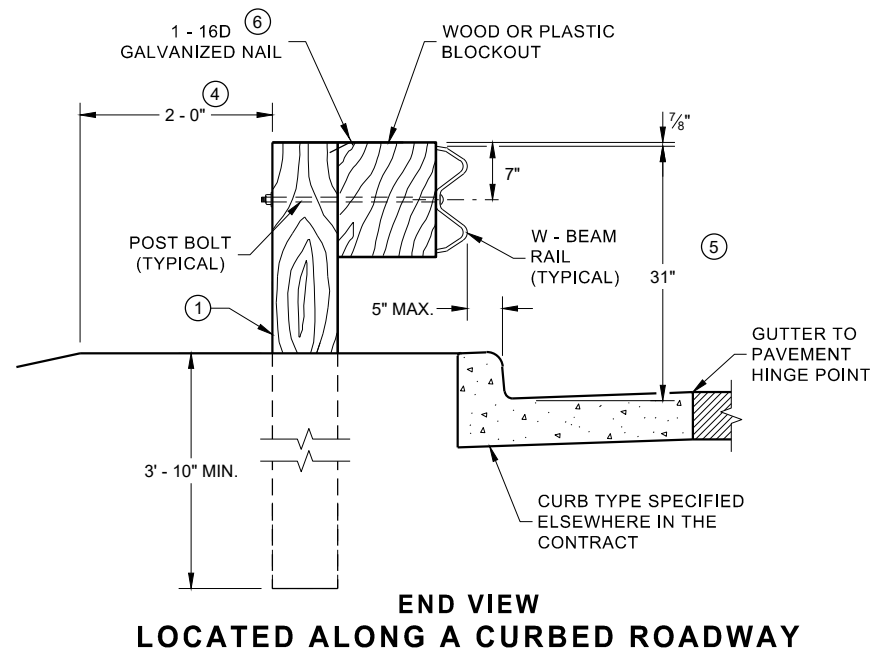
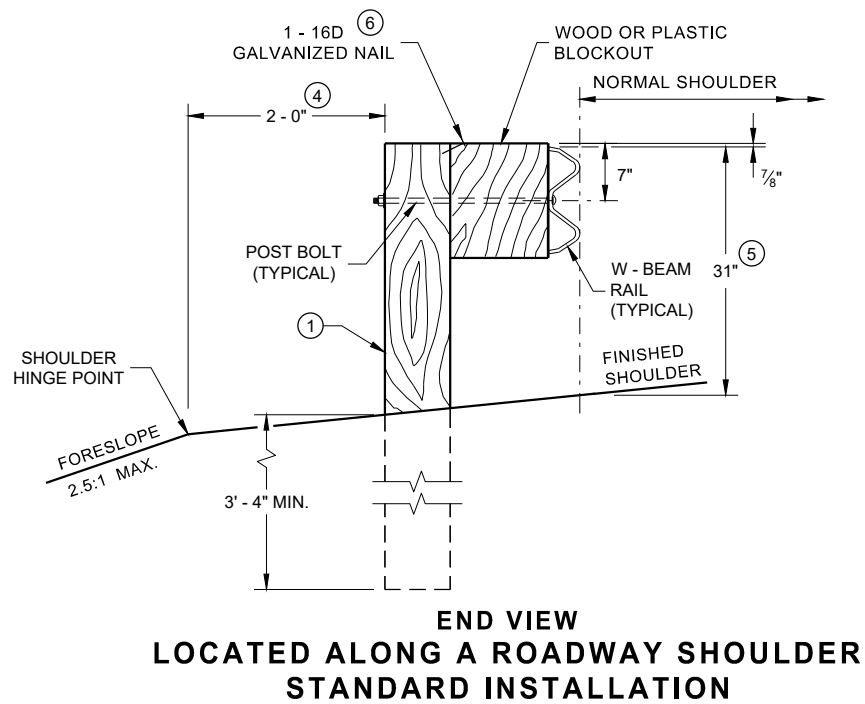
SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0". TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



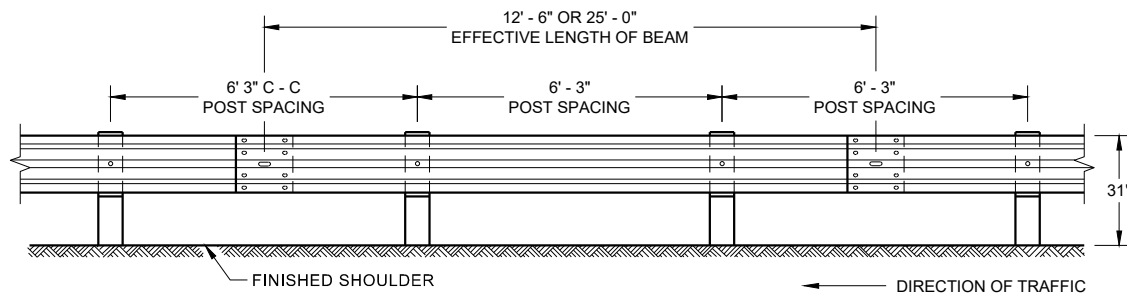
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9)

WOOD POST (6" X 8") NOMINAL

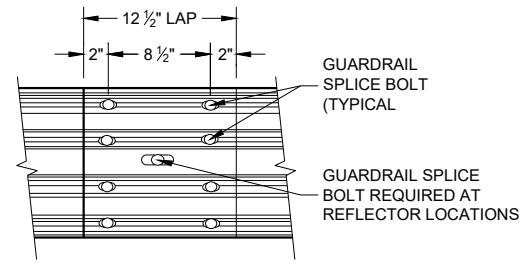


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



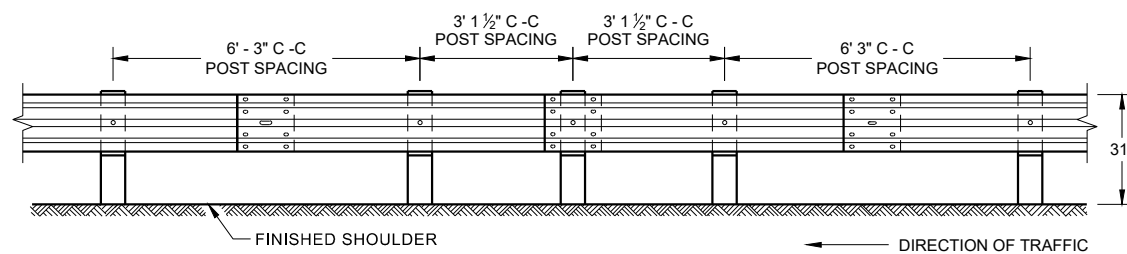
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



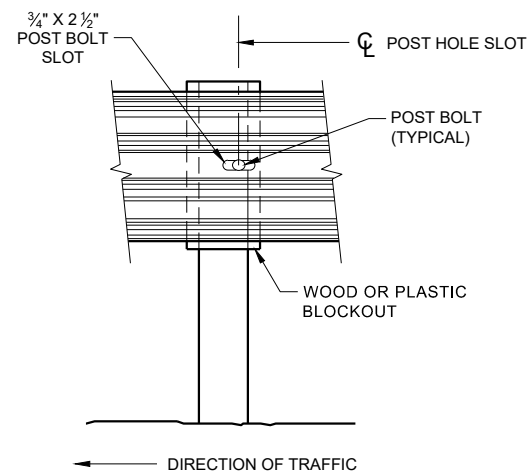
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

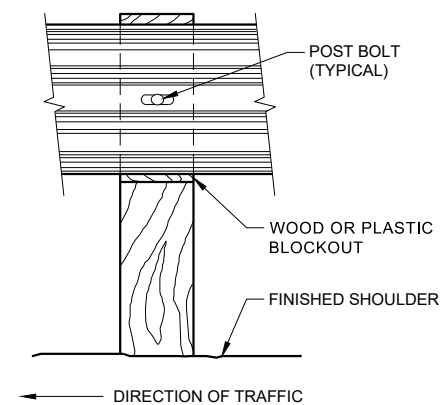
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



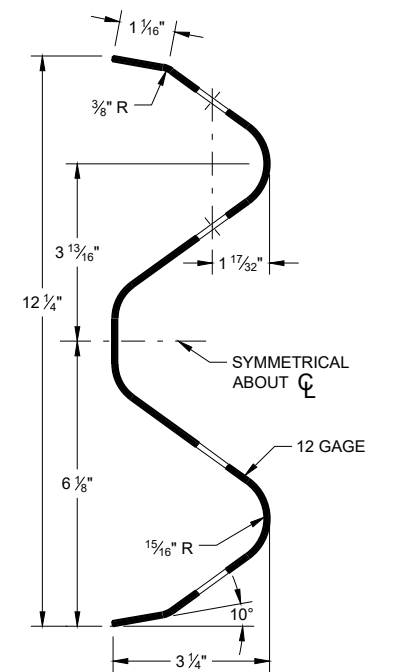
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



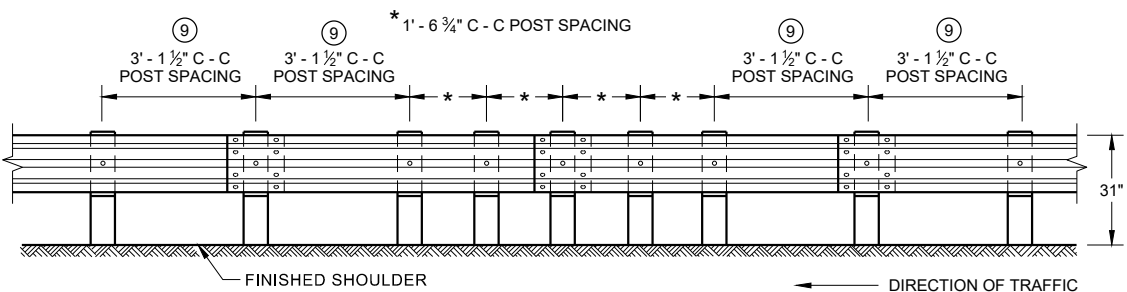
FRONT VIEW AT STEEL POST



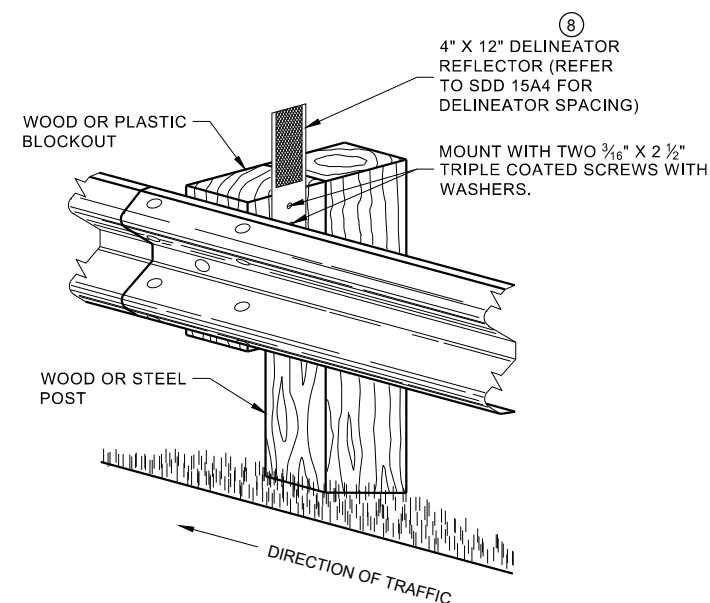
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



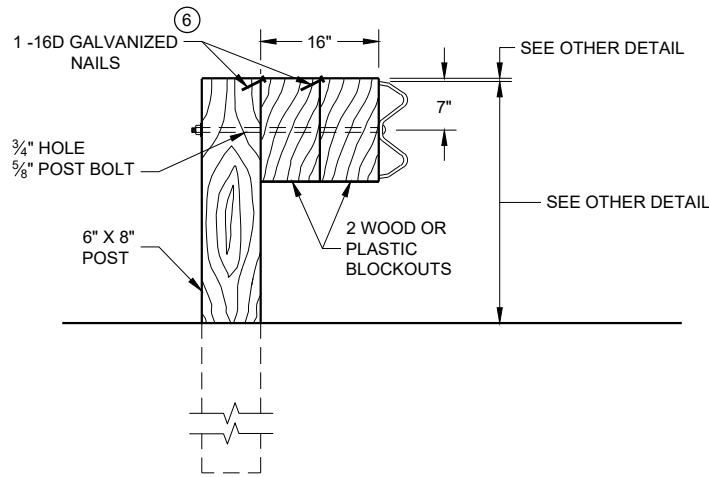
**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

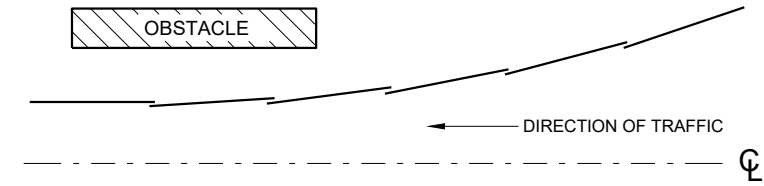
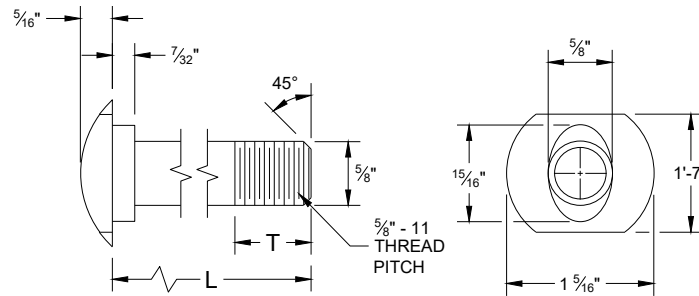
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



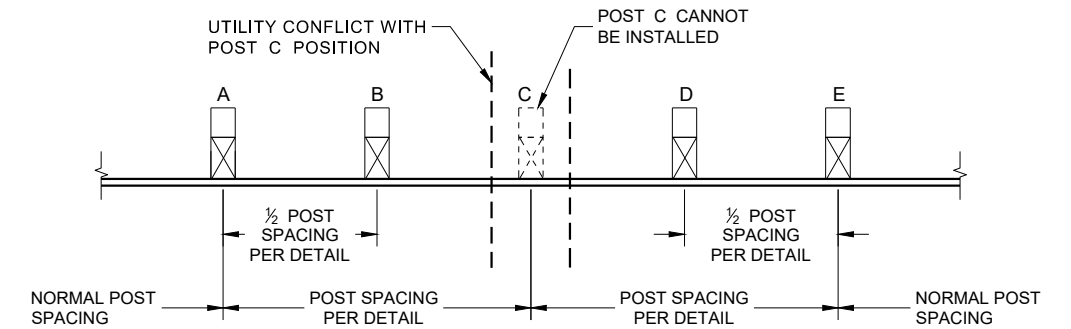
DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

- NOTE:
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
 2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.



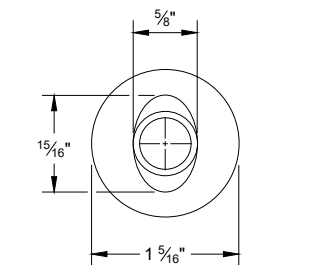
**PLAN VIEW
BEAM LAPPING DETAIL**



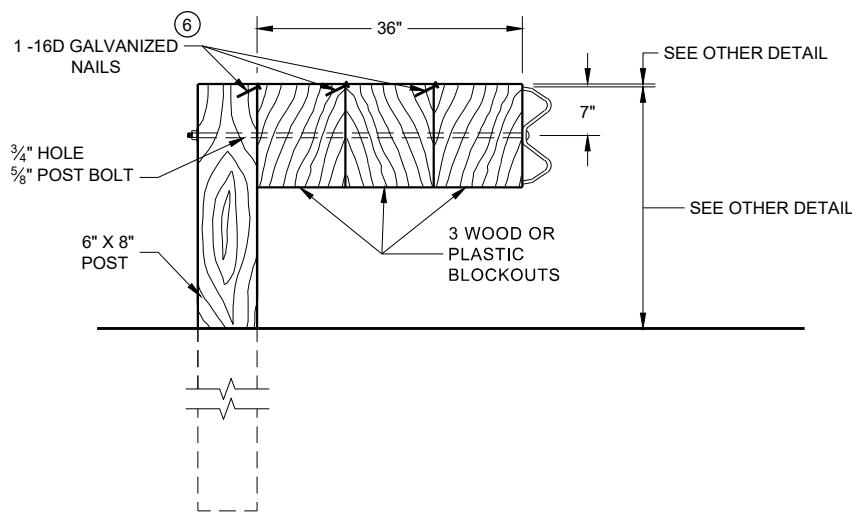
**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

POST BOLT TABLE

L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

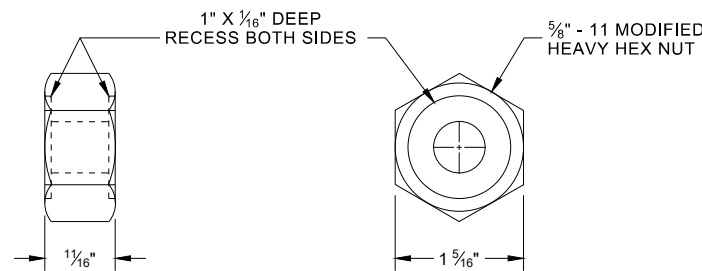


ALTERNATE BOLT HEAD

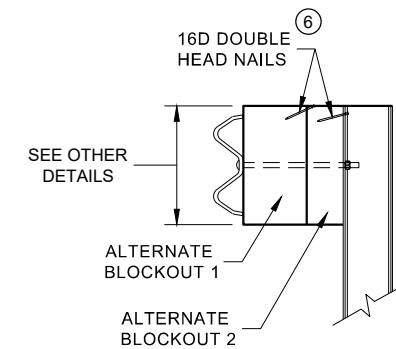


DETAIL FOR 36" BLOCKOUT DEPTH

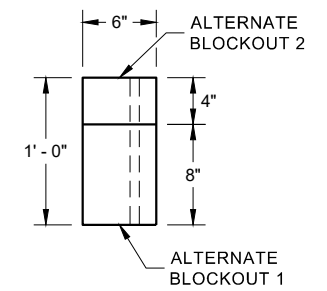
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**



SIDE VIEW



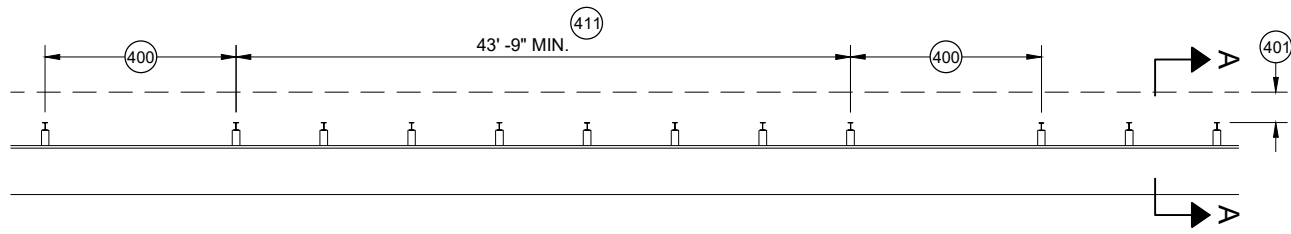
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

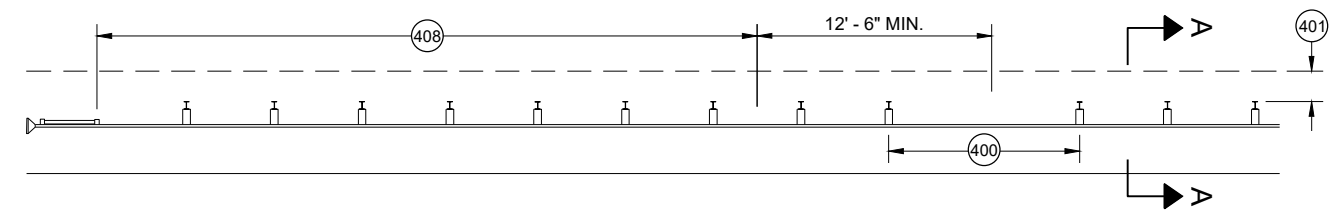
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

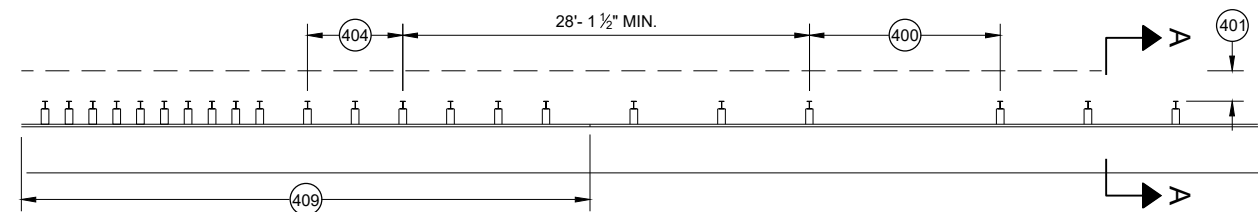
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



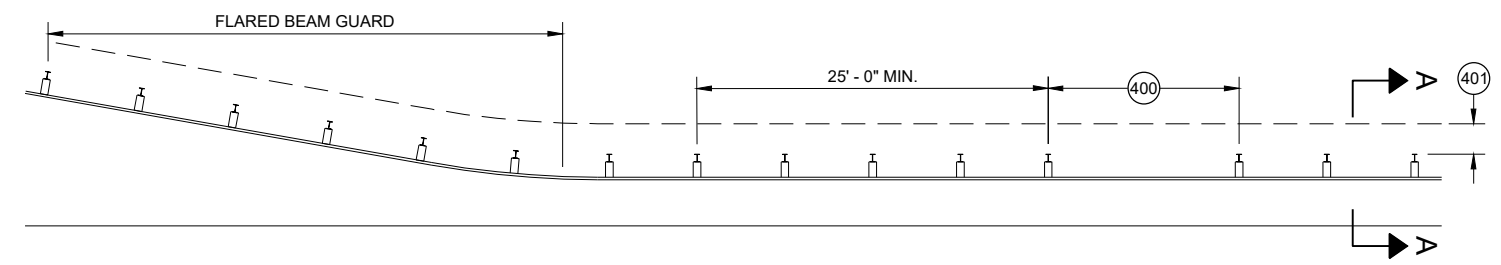
MISSING POST IN MGS GUARDRAIL



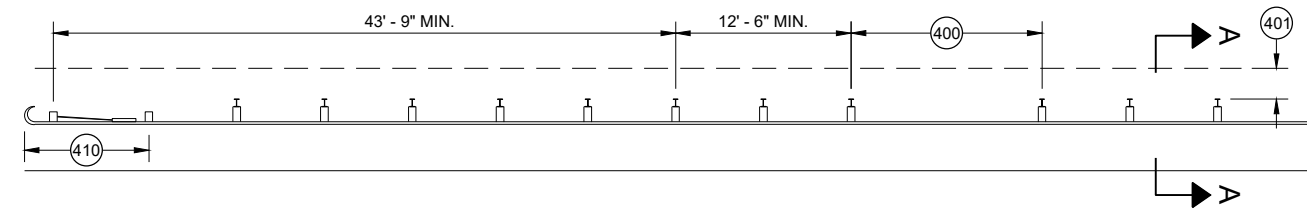
MISSING POST IN MGS GUARDRAIL NEAR EAT



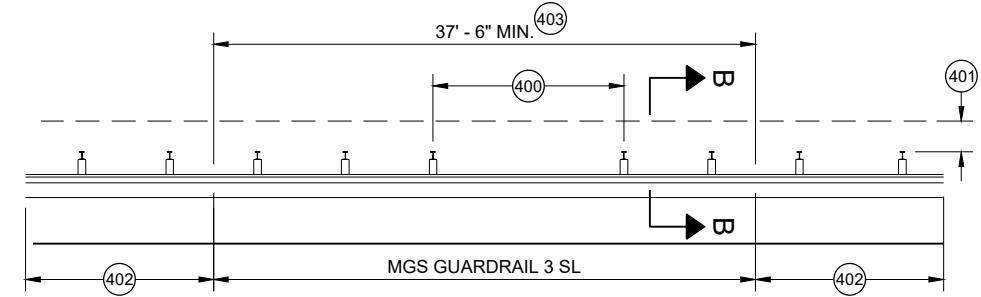
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

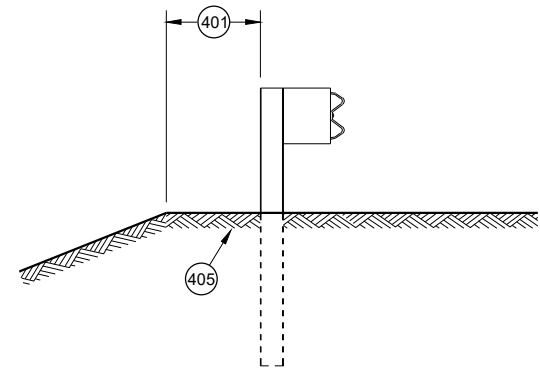


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

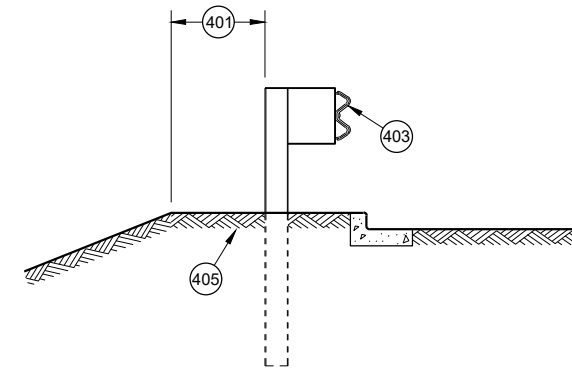


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- ④00 MAX SPAN 12' - 6"
- ④01 2' MIN.
- ④02 MGS GUARDRAIL 3
- ④03 NESTING BEAM GUARD
- ④04 ASYMMETRIC TRANSITION
- ④05 SOIL WELL DRAINED AND COMPACTED
- ④06 SEE OTHER DRAWINGS IN THIS SDD
- ④07 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- ④08 SEE SDD 14B44
- ④09 SEE SDD 14B45
- ④10 SEE SDD 14B47
- ④11 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

6

6

SDD 14B42 - 07d

SDD 14B42 - 07d

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
 - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
 - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

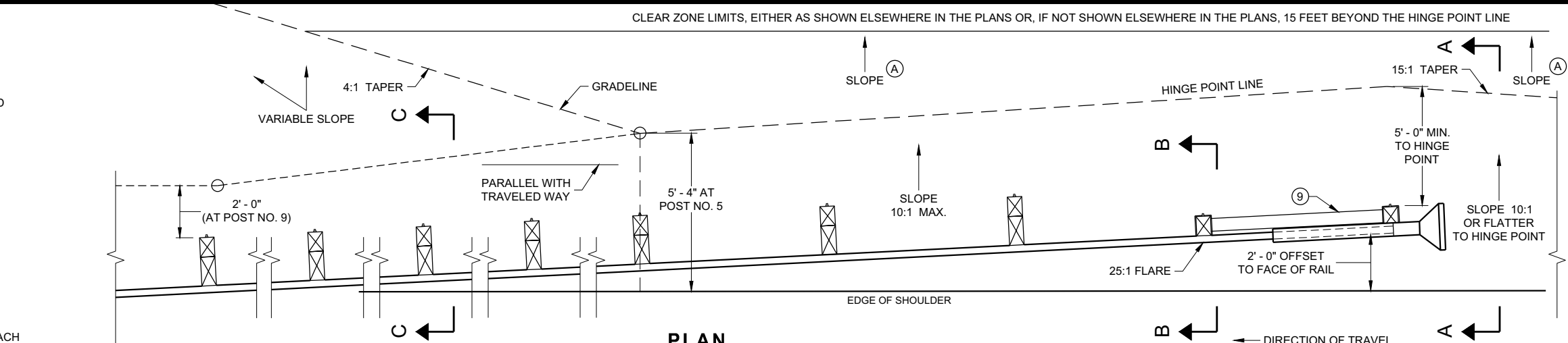
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

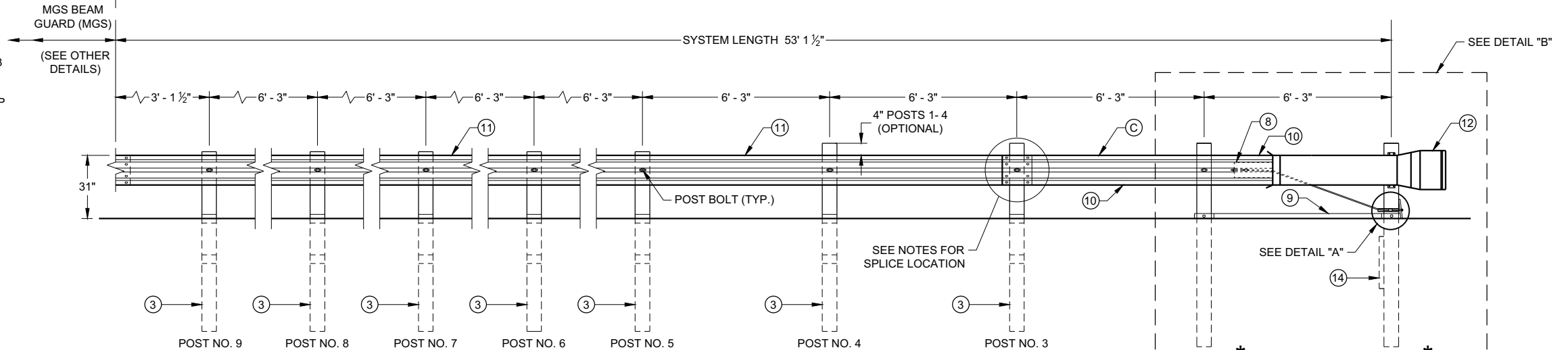
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

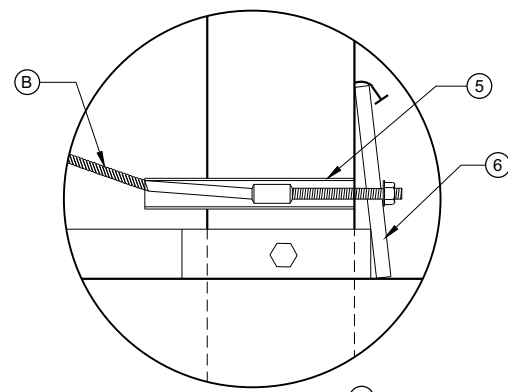
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



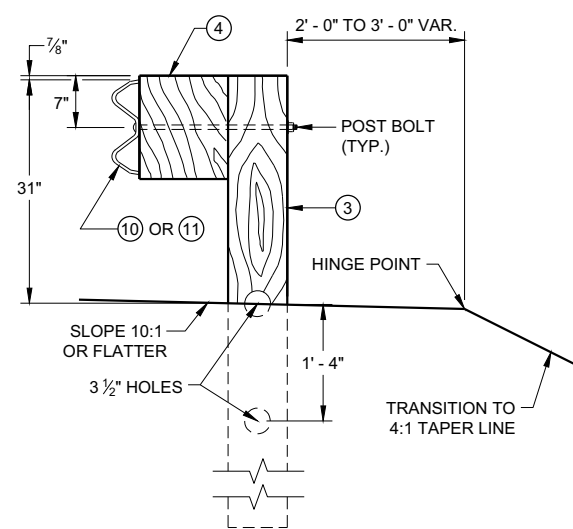
PLAN



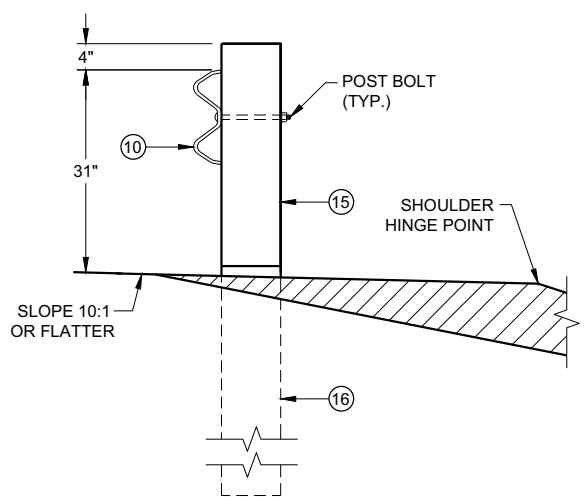
ELEVATION



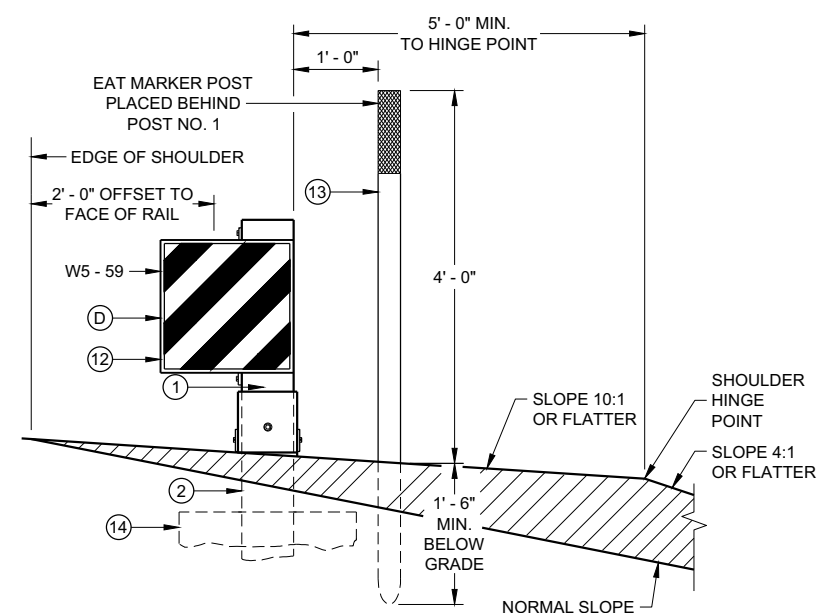
DETAIL "A"



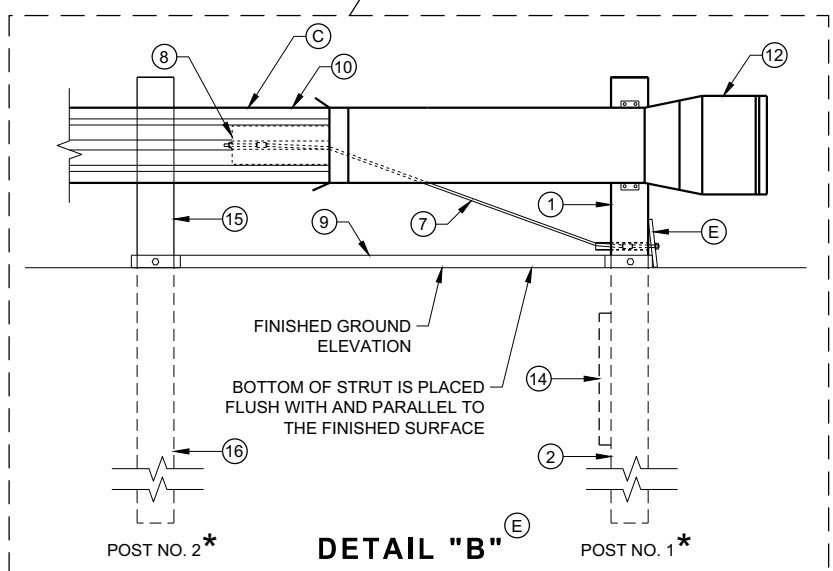
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

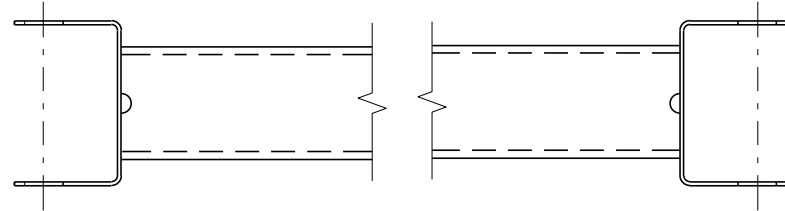
6

SDD 14B44 - 04a

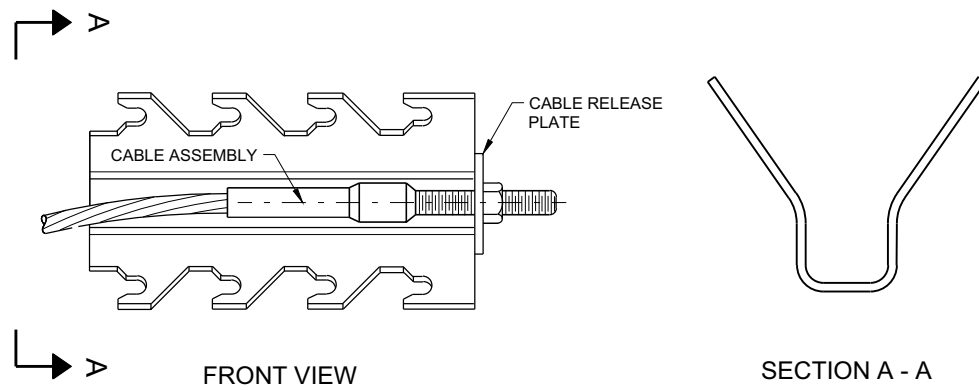
SDD 14B44 - 04a

BILL OF MATERIALS

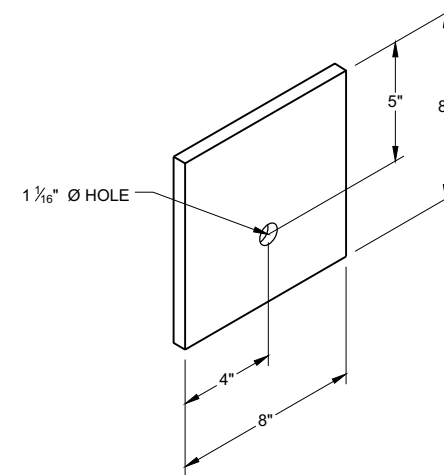
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



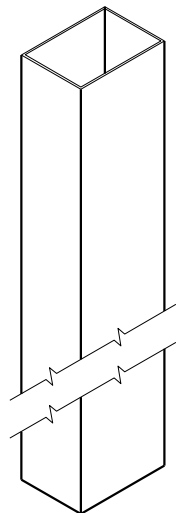
GENERIC GROUND STRUT ⑨ ⑤



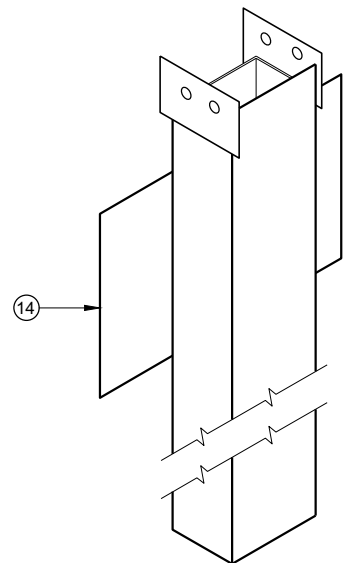
GENERIC ANCHOR CABLE BOX ⑨ ⑤



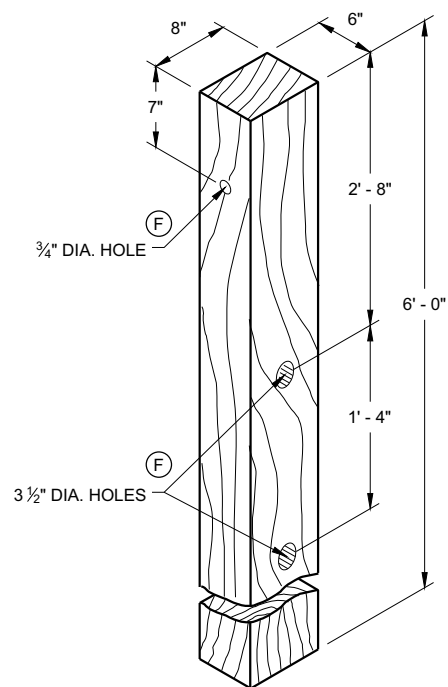
BEARING PLATE ⑥ ⑤



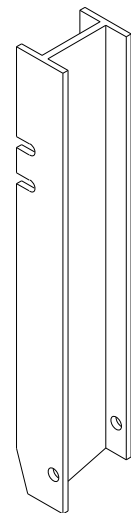
UPPER POST NO. 1 ⁽¹⁾ (E)



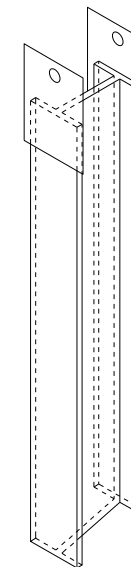
LOWER POST NO. 1 ⁽²⁾ (E)



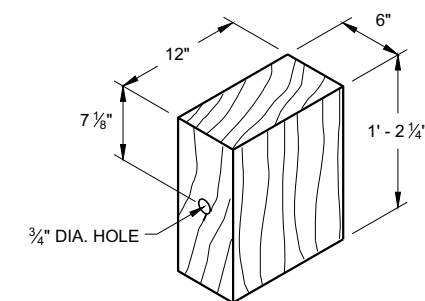
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

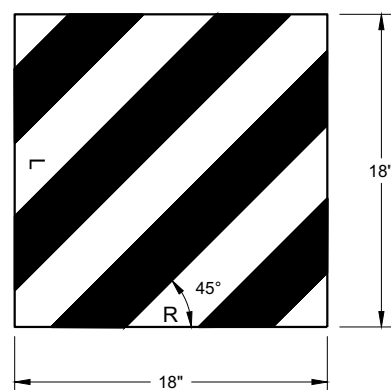


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

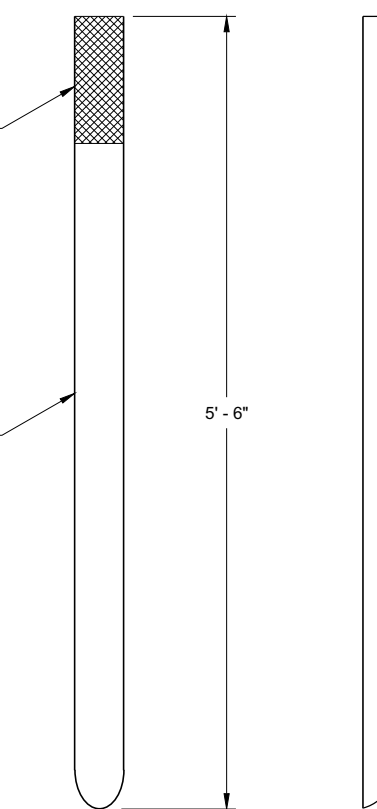
6



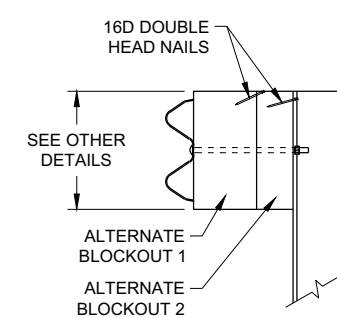
W5 - 59
REFLECTIVE SHEETING DETAIL ^(E)

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

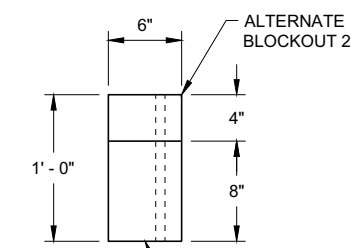
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

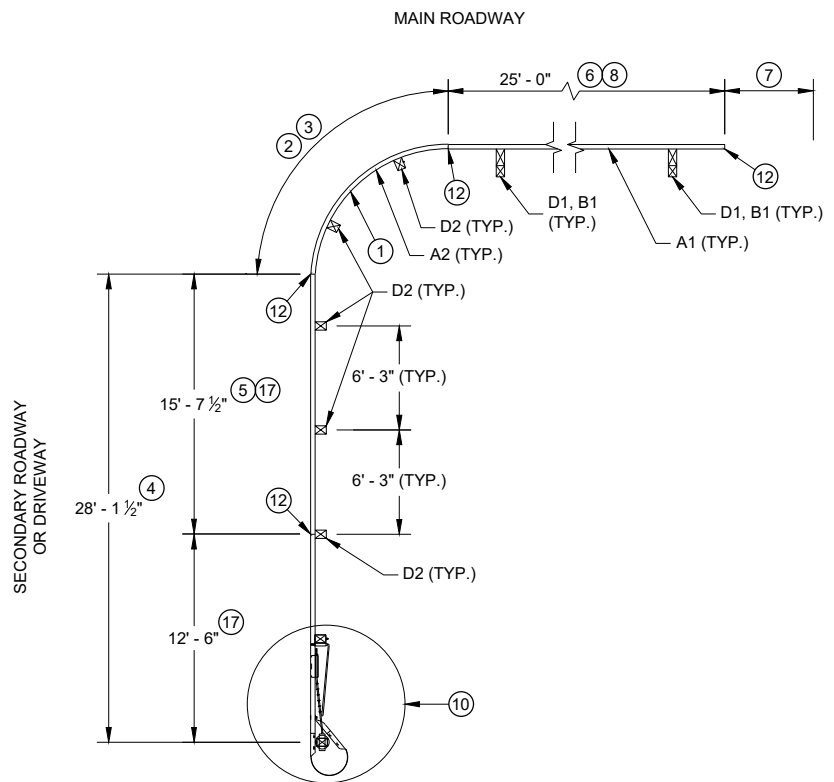
SDD 14B44 - 04c

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

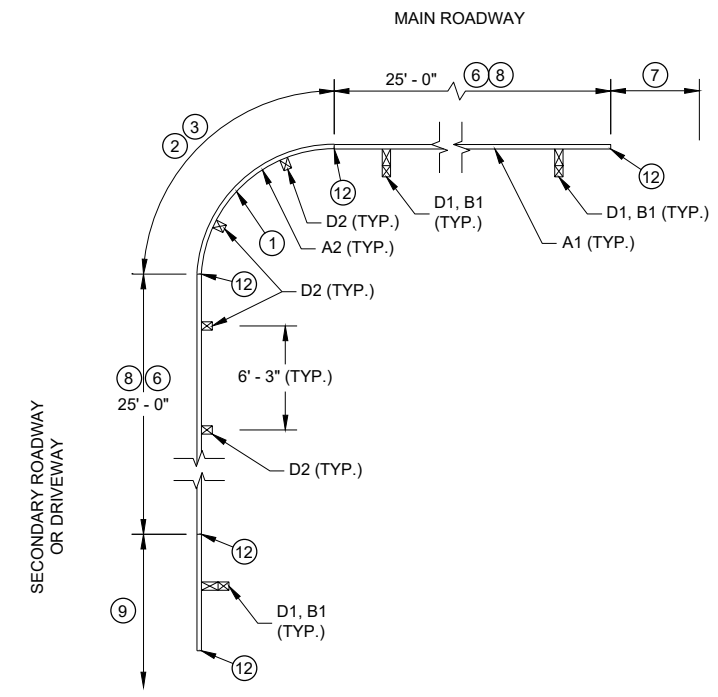
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA



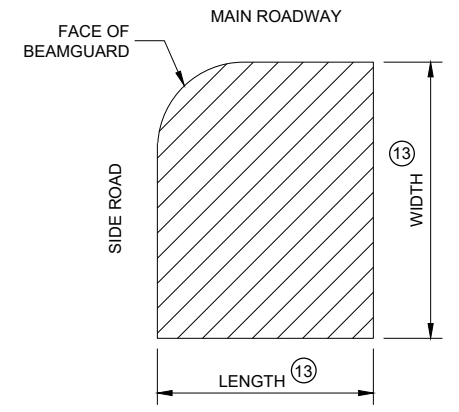
PLAN VIEW
SHORT RADIUS BEAM GUARD WITH
SHORT RADIUS TERMINAL ON
SECONDARY ROAD OR DRIVEWAY



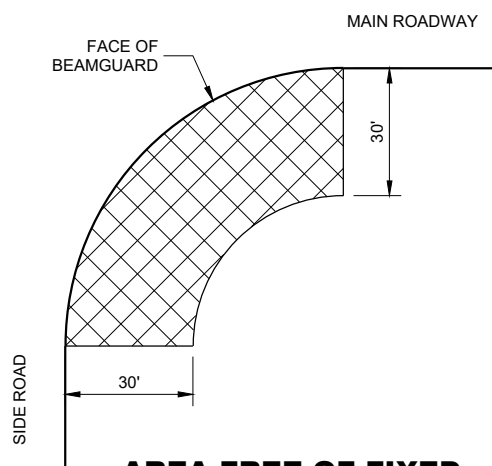
PLAN VIEW
SHORT RADIUS BEAM GUARD WITH
EAT, ADDITIONAL BEAM GUARD
OR
TRANSITION TO RIGID BARRIER ON
SECONDARY ROAD OR DRIVEWAY

TABLE FOR RADIUS OF 32' AND LESS

RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30



AREA FREE OF FIXED
OBJECTS FOR RADIUS
32' AND LESS

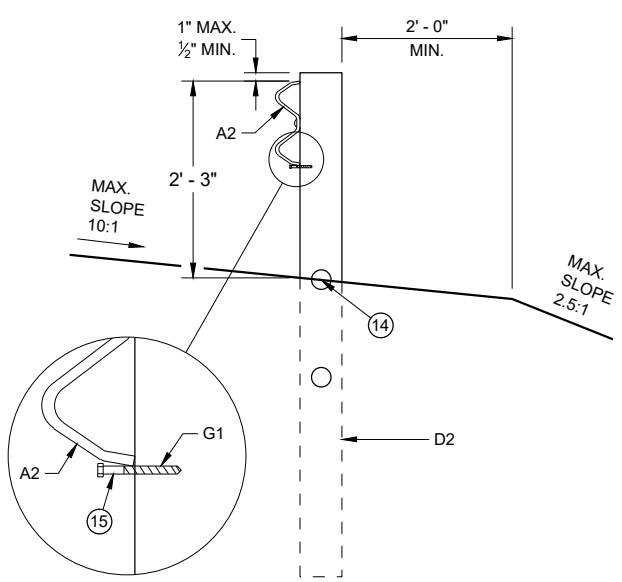


AREA FREE OF FIXED
OBJECTS FOR RADIUS
GREATER THAN 32'

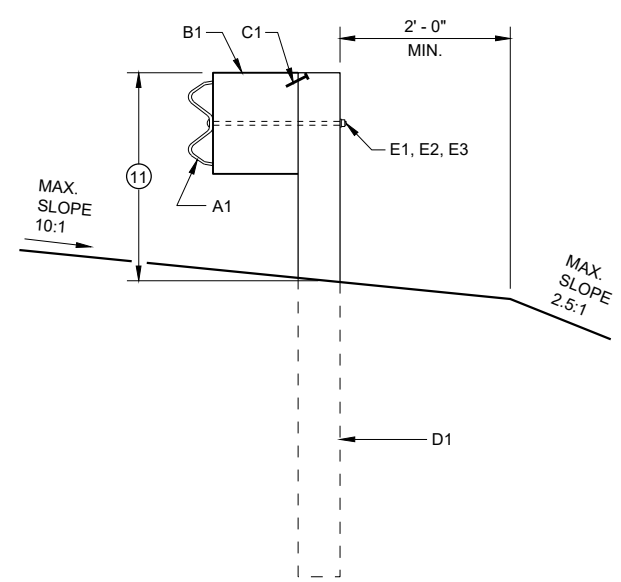
GENERAL NOTES

- SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.
- SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.
- GALVANIZE PARTS AFTER FABRICATION.
- WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.
- UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.
- UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.
- ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.
- UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE 1/4" TO 1/2" BEYOND THE NUT.
- DRAWINGS ARE NOT TO SCALE.

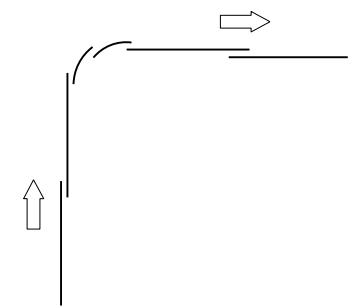
- ① RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.
- ② CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.
- ③ WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.
- ④ MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.
- ⑤ ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.
- ⑥ MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.
- ⑦ BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.
- ⑧ TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.
- ⑨ ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.
- ⑩ SHORT RADIUS TERMINAL (SEE OTHER DETAILS).
- ⑪ HEIGHT VARIES. SEE NOTE ⑧ AND ⑧.
- ⑫ BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.
- ⑬ SEE TABLE FOR VALUES.
- ⑭ MAXIMUM HEIGHT FOR CENTER OF HOLE IS 3/4" ABOVE FINISHED GROUND ±1".
- ⑮ DRILL POST 1 5/8" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.
- ⑯ SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.
- ⑰ TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).



CONTROLLED RELEASE
TERMINAL POST (CRT) IN RADIUS



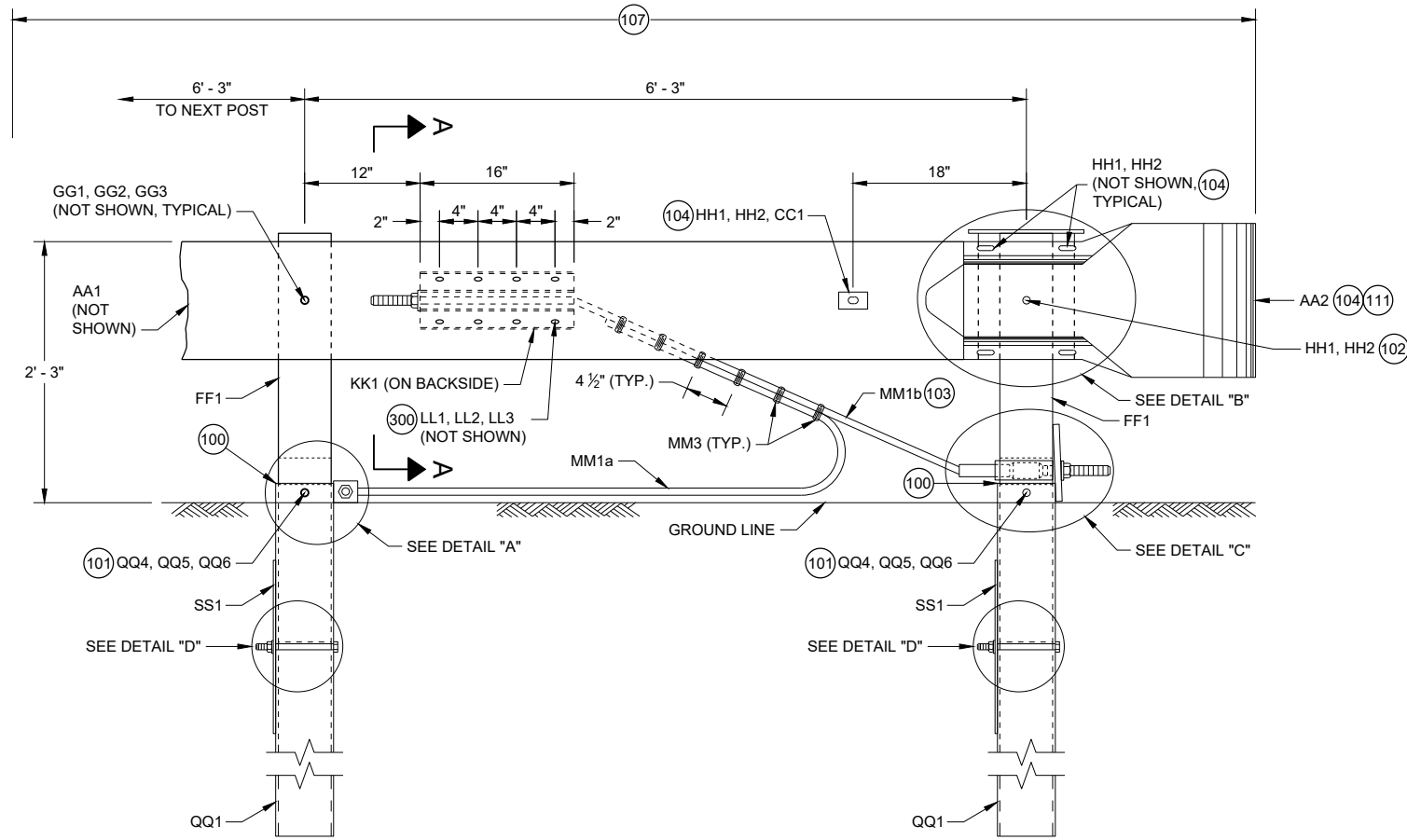
BEAM GUARD POSTS
IN HEIGHT TRANSITION



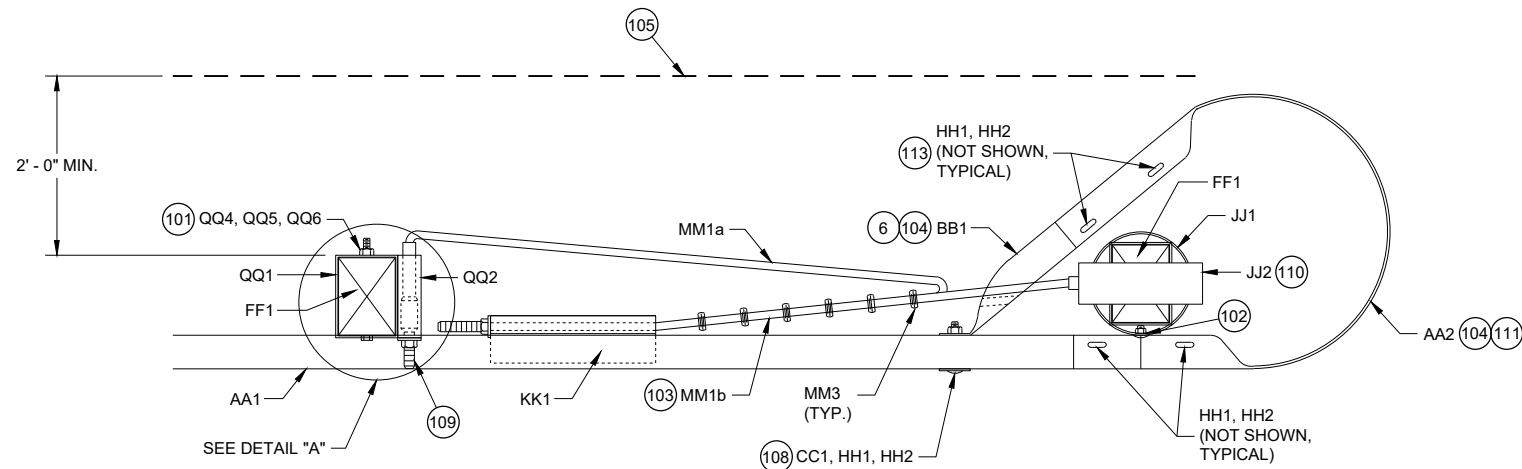
LAP SPLICE DETAIL

SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)

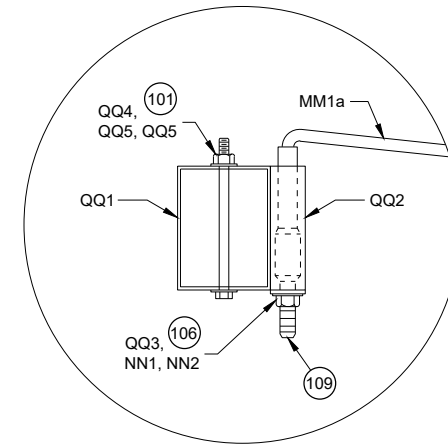
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION



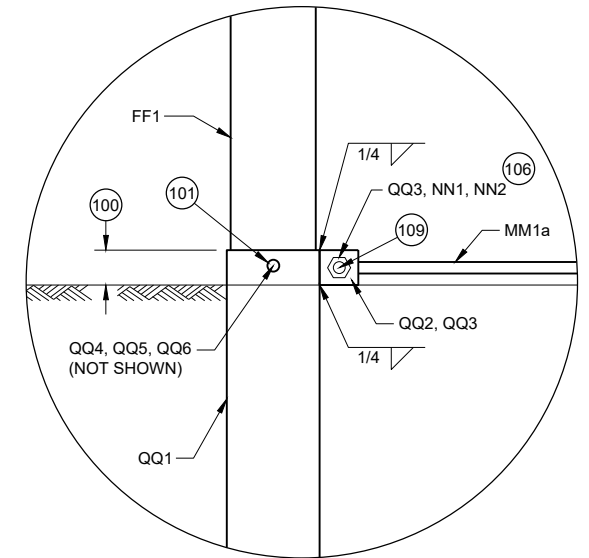
**PROFILE VIEW
SHORT RADIUS TERMINAL**



**TOP VIEW
SHORT RADIUS TERMINAL**



**TOP VIEW
DETAIL "A"
(WOOD BREAKAWAY AND BEAM
GUARD RAIL POSTS NOT SHOWN)**



**PROFILE VIEW
DETAIL "A"**

GENERAL NOTES

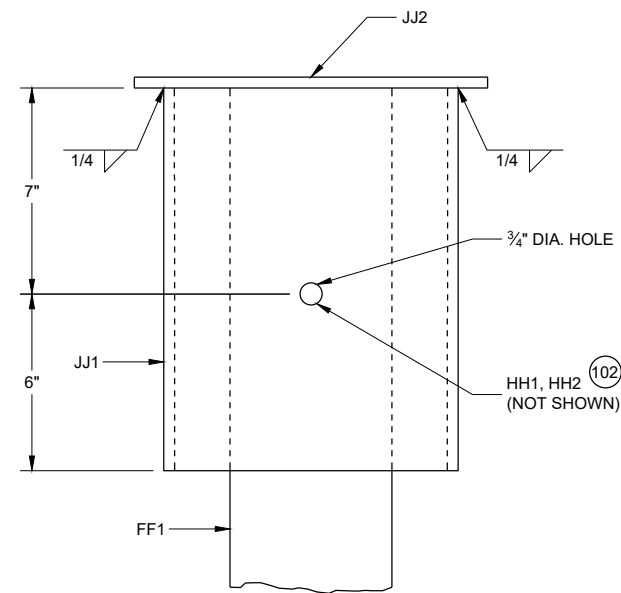
- (100) TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.
- (101) WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.
- (102) SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".
- (103) CABLE IS TAUT.
- (104) ADJUST AA2 AND BB1 TO FIT.
- (105) BREAK POINT OF SHOULDER.
- (106) TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.
- (107) PAY LIMIT FOR BEAM GUARD.
- (108) SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.
- (109) CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS 1/2" TOLERANCE). DEBURR AFTER CUTTING.
- (110) SEE STEEL PIPE ASSEMBLY DETAILS.
- (111) ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.
- (112) FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.
- (113) FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

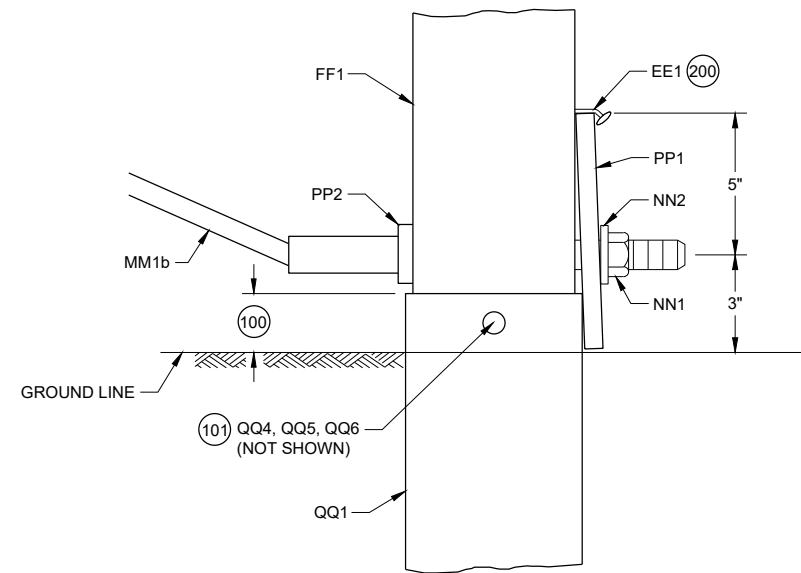
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

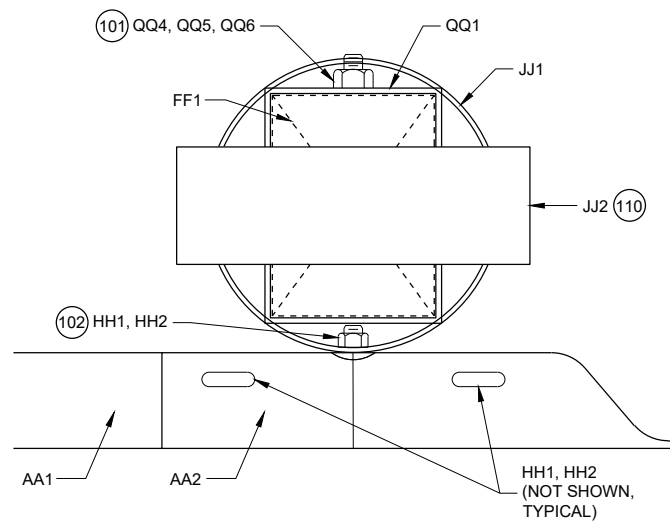
(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



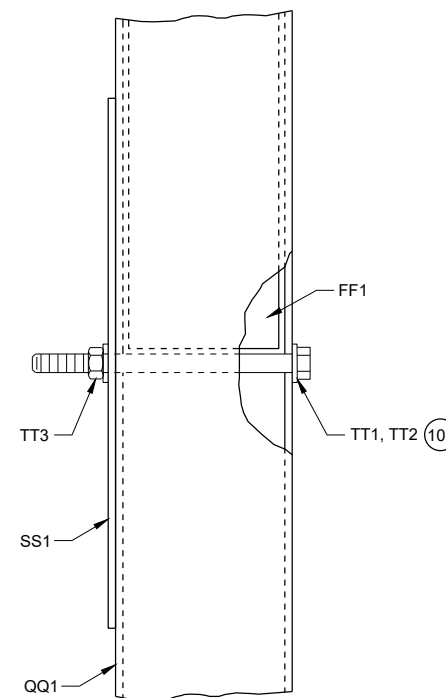
**PROFILE VIEW
DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM
END SECTION NOT SHOWN)**



**PROFILE VIEW
DETAIL "C"**



**PLAN VIEW
DETAIL "B"
STEEL PIPE ASSEMBLY**



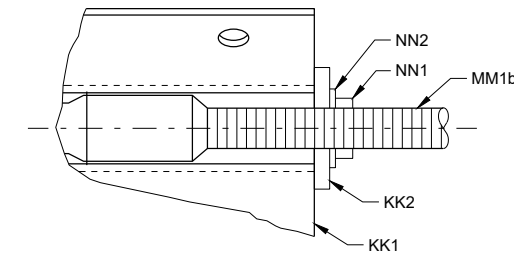
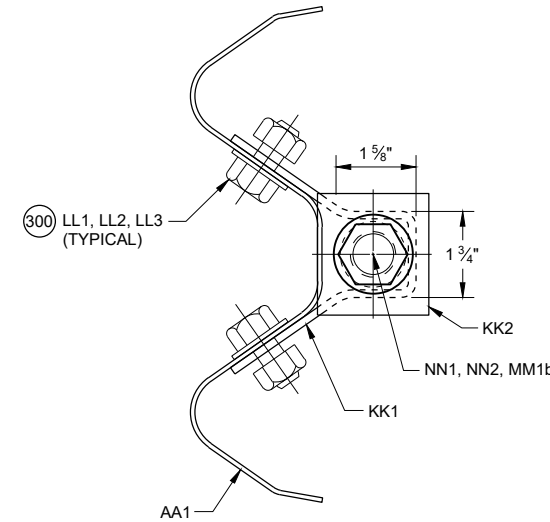
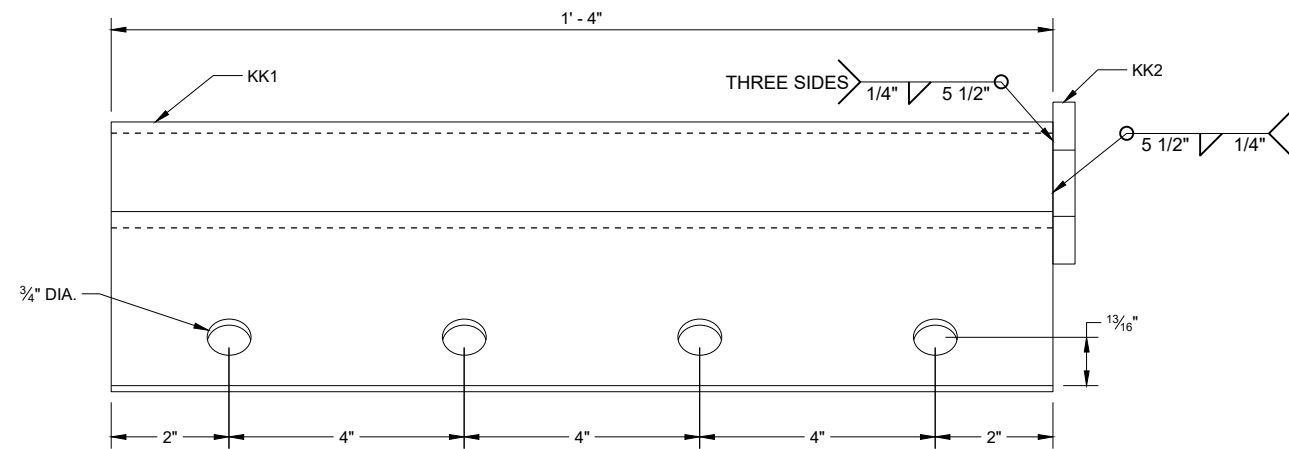
**PROFILE VIEW
DETAIL "D"**

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

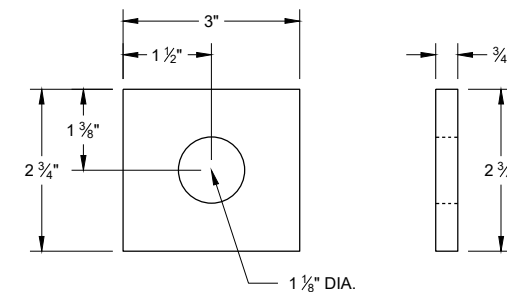
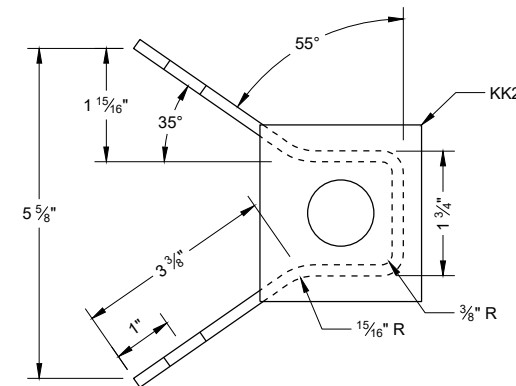
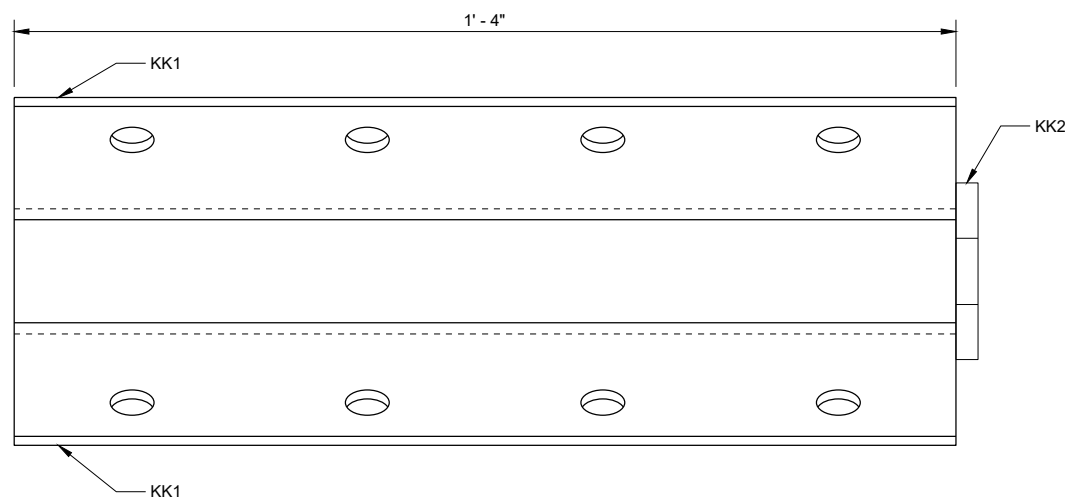
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

300 WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.



6



ANCHOR BRACKET BEARING PLATE (KK2)

ANCHOR BRACKET (KK1, KK2)

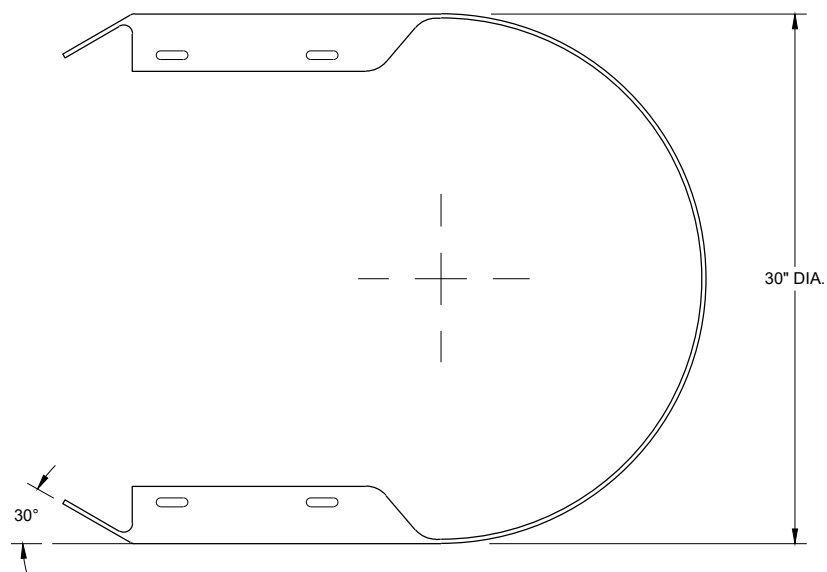
**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

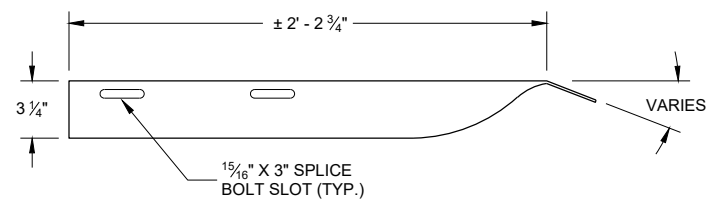
SDD 14B53 - 02d

SDD 14B53 - 02d

6



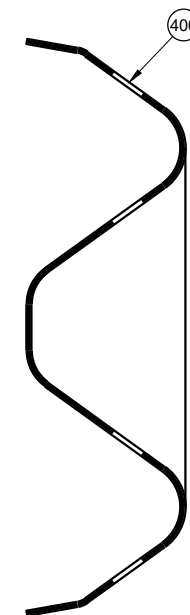
TOP VIEW



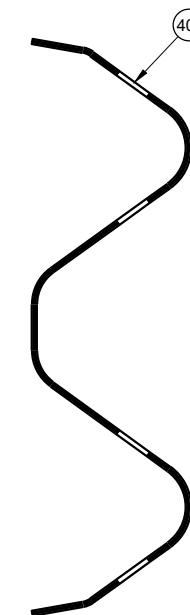
TOP VIEW

GENERAL NOTES

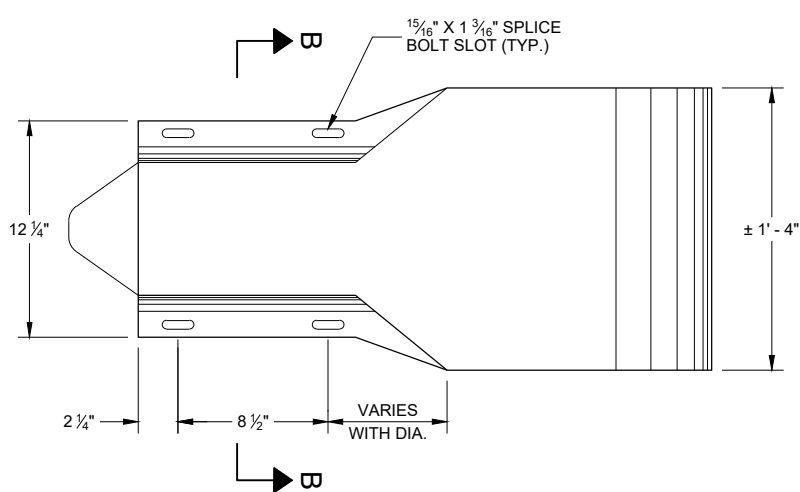
- (400) CROSS SECTION OF PART IS TO FIT OVER AA1 .
- (401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



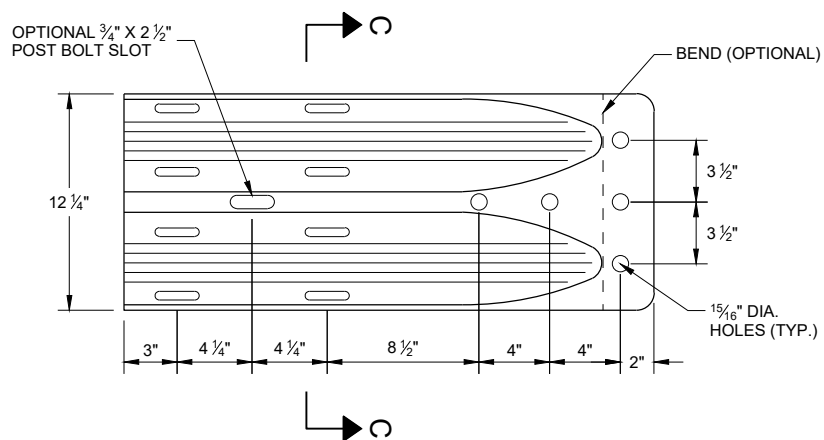
SECTION B - B



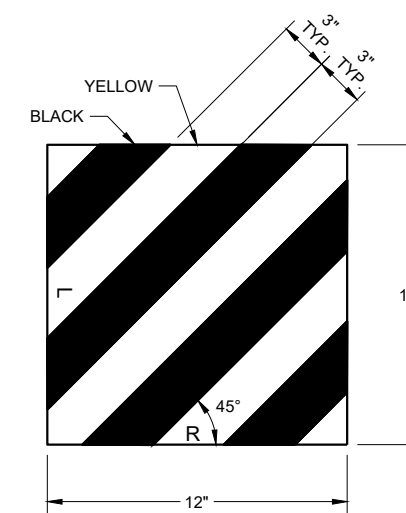
SECTION C - C



**PROFILE VIEW
W BEAM
END SECTION BUFFER (AA2)**



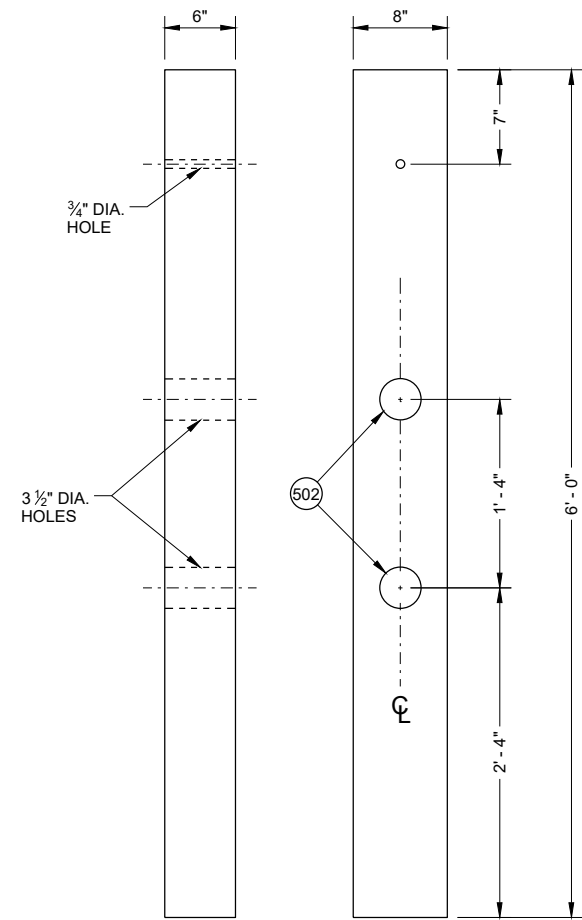
**PROFILE VIEW
W BEAM
TERMINAL CONNECTOR (BB1)**



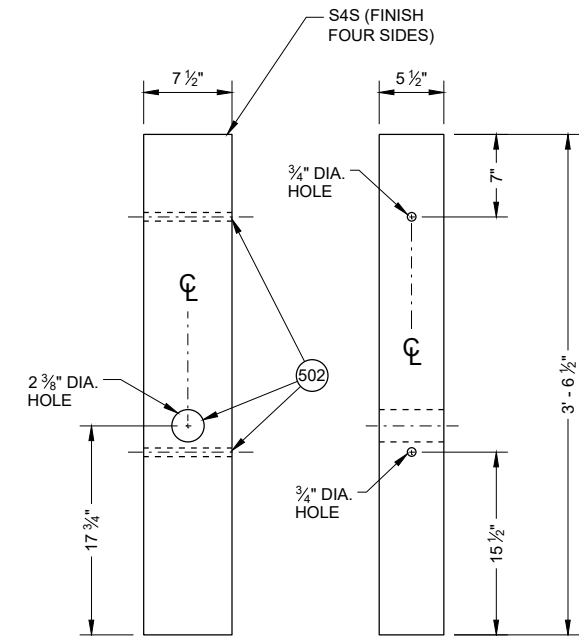
REFLECTIVE SHEETING (UU1, UU2)

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

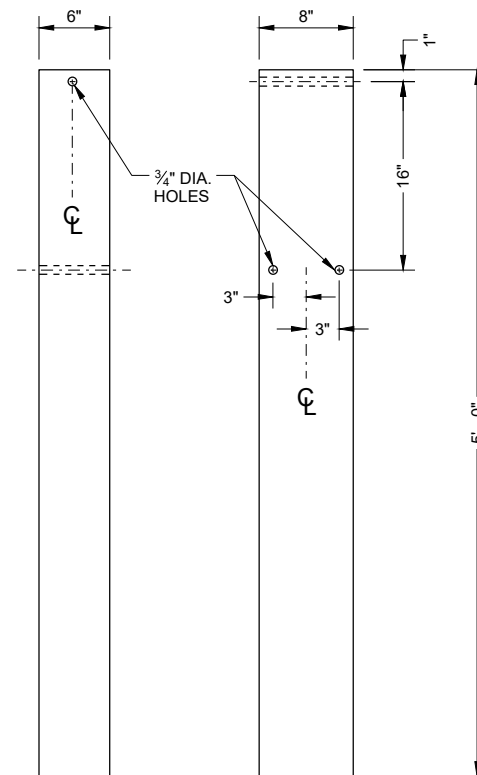
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



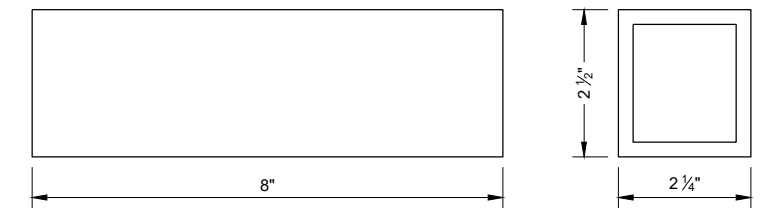
**FRONT VIEW SIDE VIEW
CONTROLLED RELEASE
POST (CRT) (DD2)**



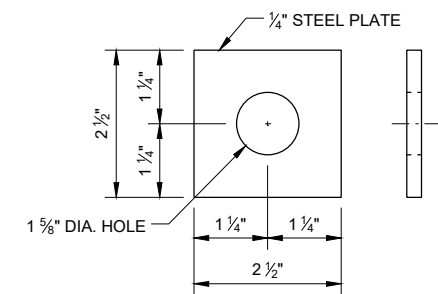
**FRONT VIEW SIDE VIEW
WOOD BREAKAWAY POST (FF1)**



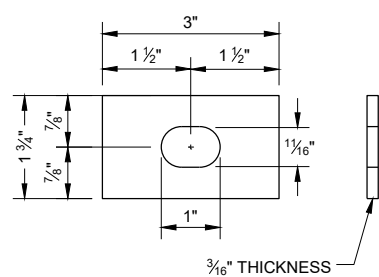
**FRONT VIEW SIDE VIEW
FOUNDATION TUBE (QQ1)**



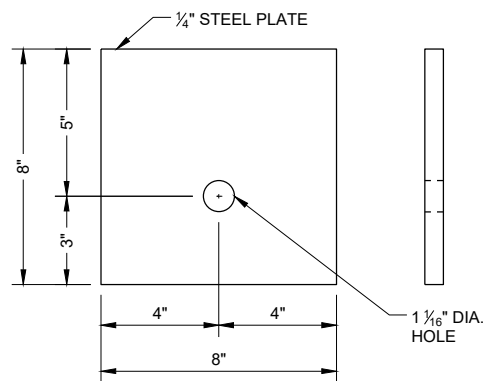
**FOUNDATION TUBE -
ANCHOR CABLE TUBE (QQ2)**



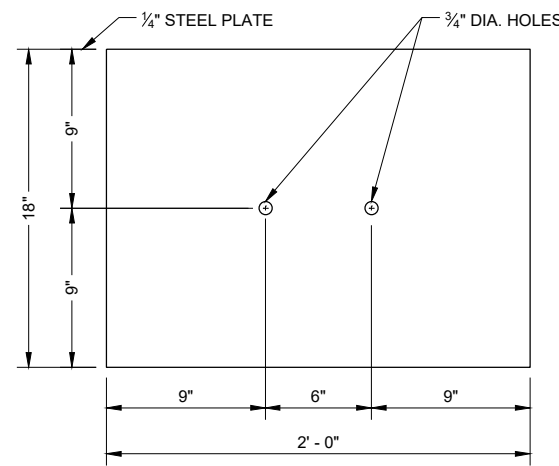
**ANCHOR CABLE TUBE
END PLATE (QQ3)**



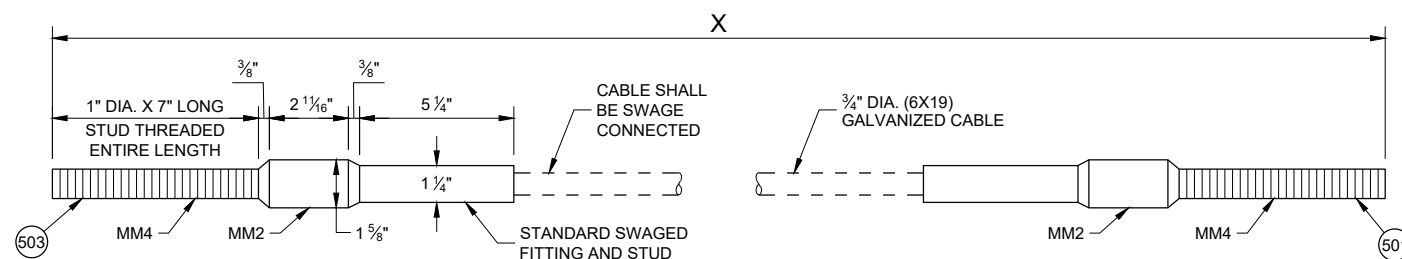
**RECTANGULAR PLATE
WASHER (CC1)**



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

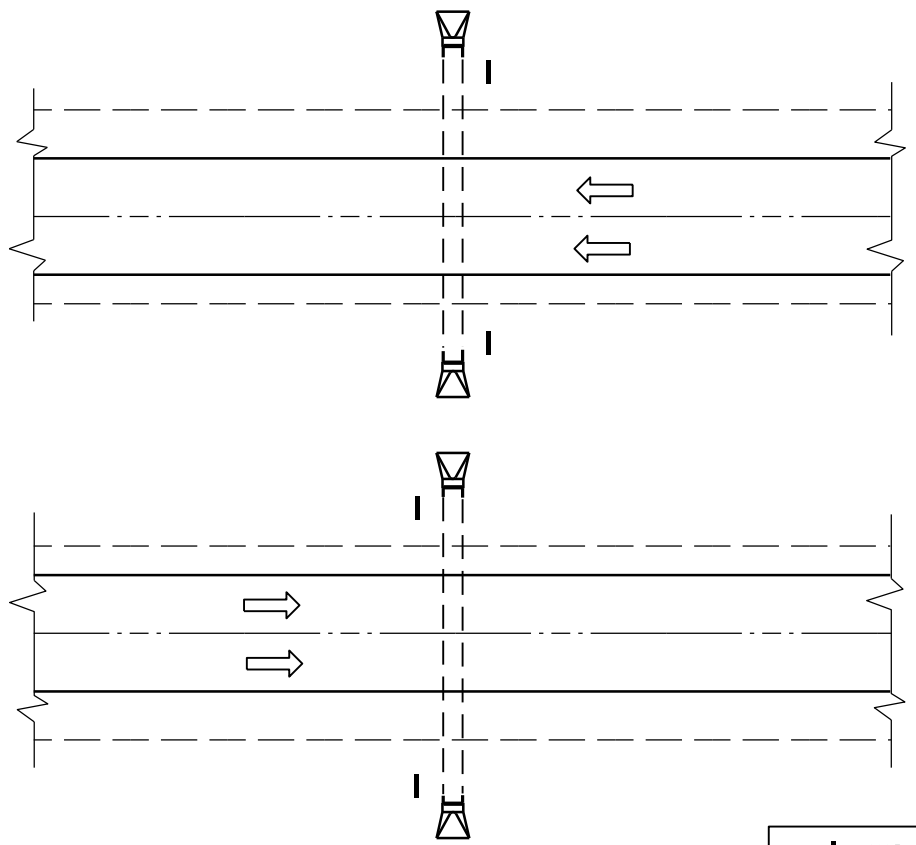
MM1b	9' - 0"
MM1b	6' - 8"

GENERAL NOTES

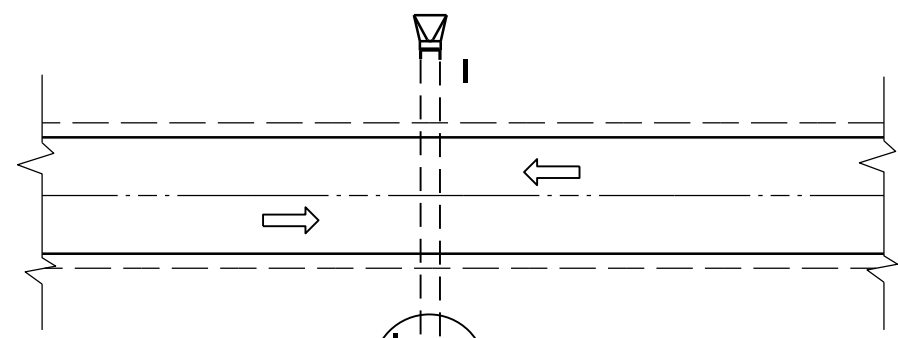
- (500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.
- (501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.
- (502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.
- (503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

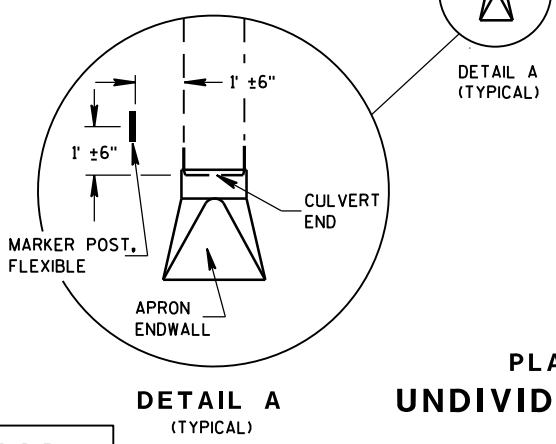
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



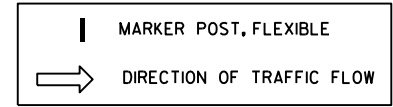
PLAN VIEW
DIVIDED HIGHWAY



PLAN VIEW
UNDIVIDED HIGHWAY

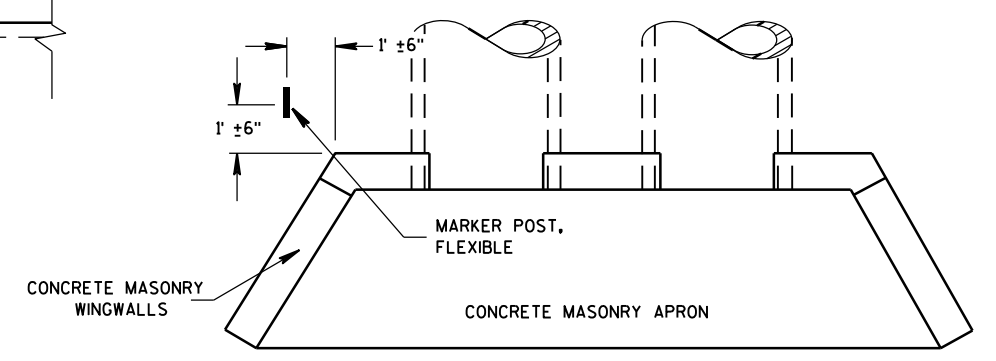


DETAIL A
(TYPICAL)



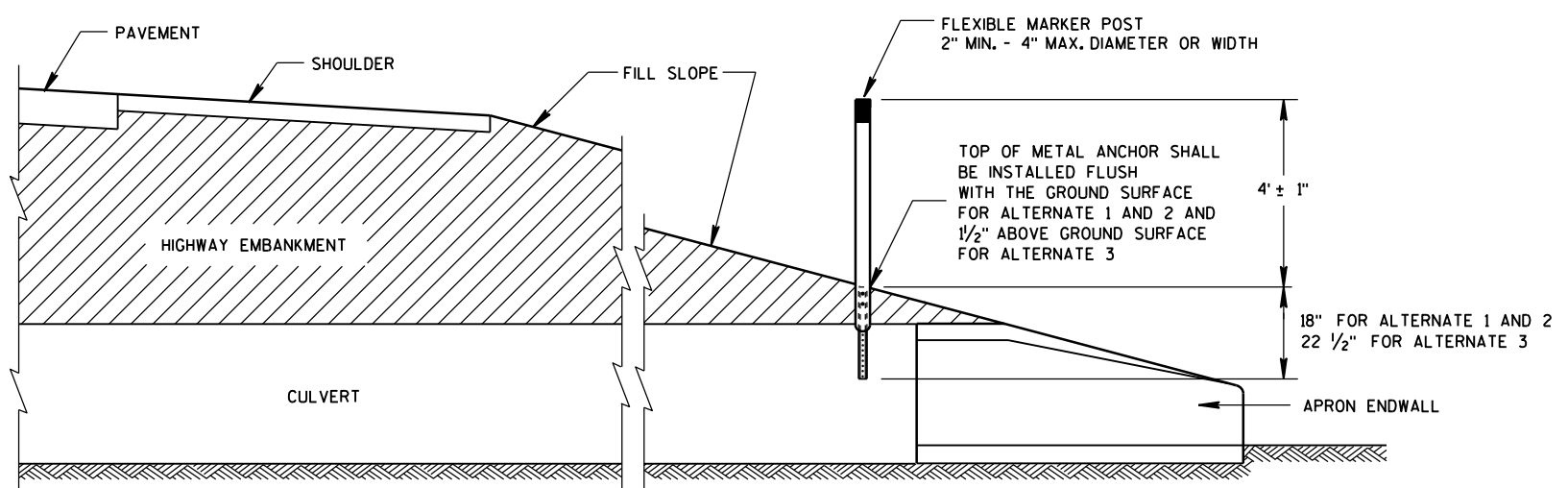
GENERAL NOTES

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**

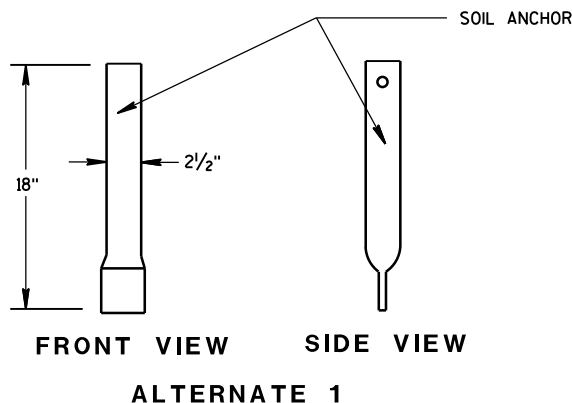
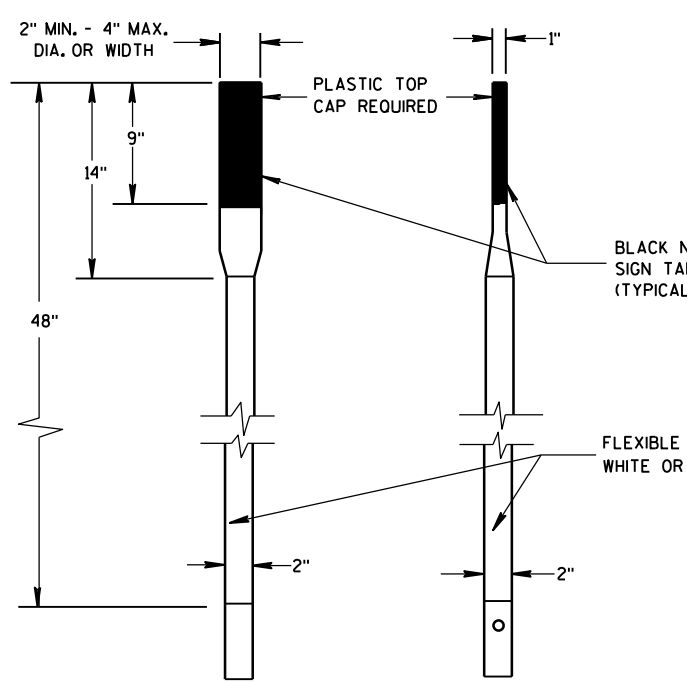
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

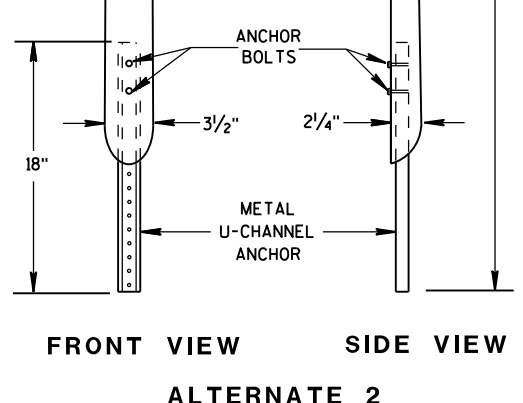
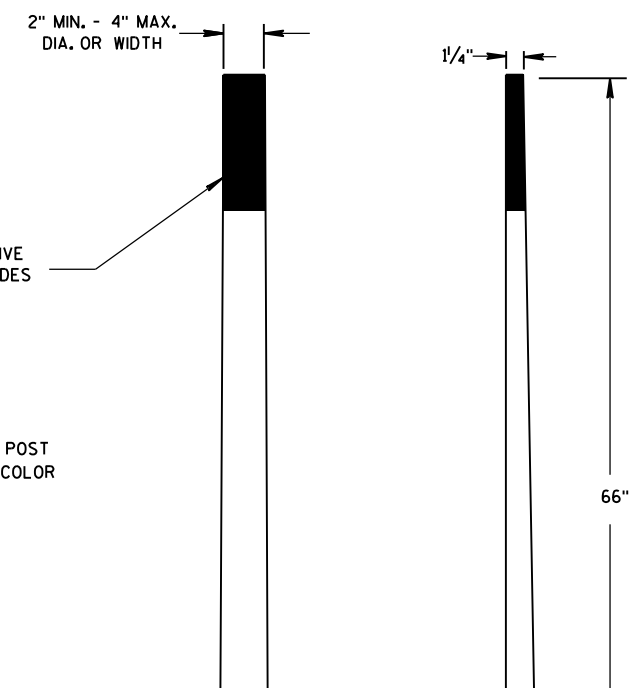
6

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

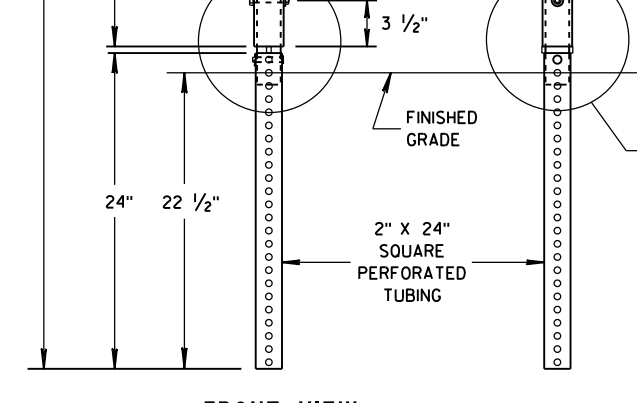
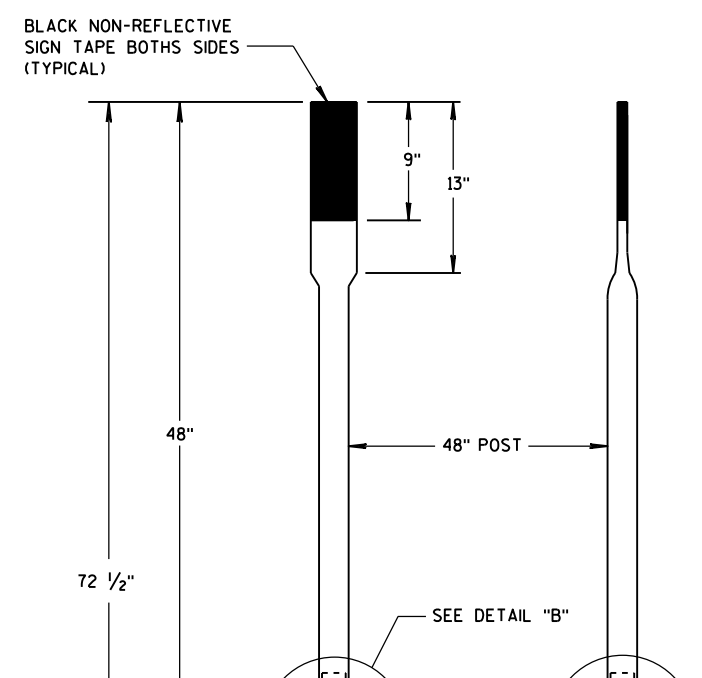
S.D.D. 15 A 3-2a



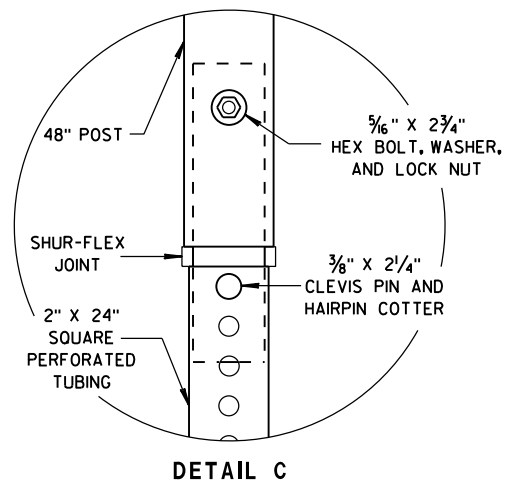
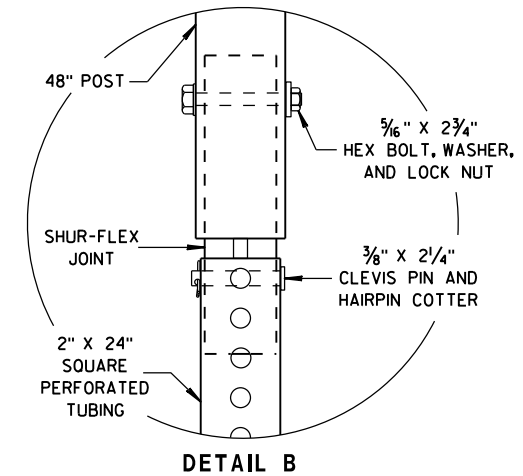
FRONT VIEW SIDE VIEW
ALTERNATE 1



FRONT VIEW SIDE VIEW
ALTERNATE 2

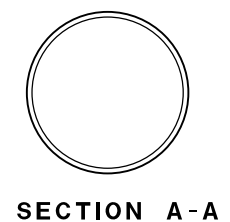


FRONT VIEW SIDE VIEW
ALTERNATE 3

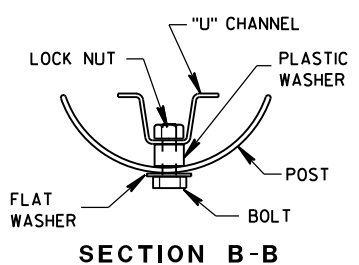


DETAIL B

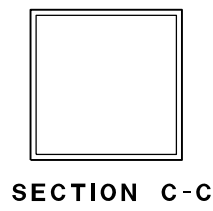
DETAIL C



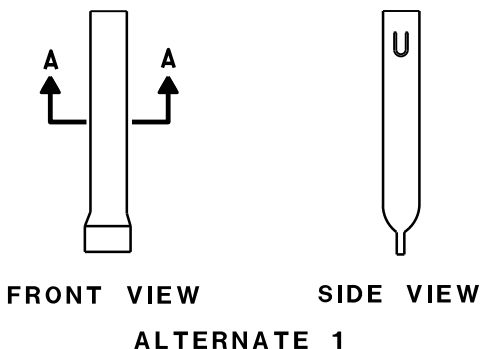
SECTION A-A



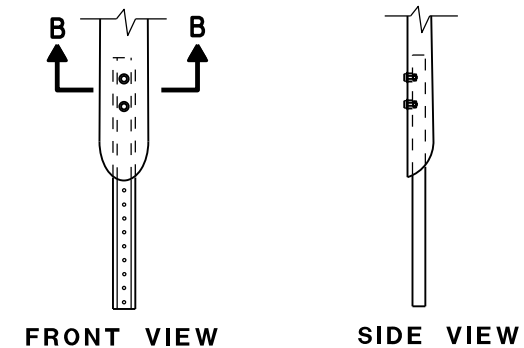
SECTION B-B



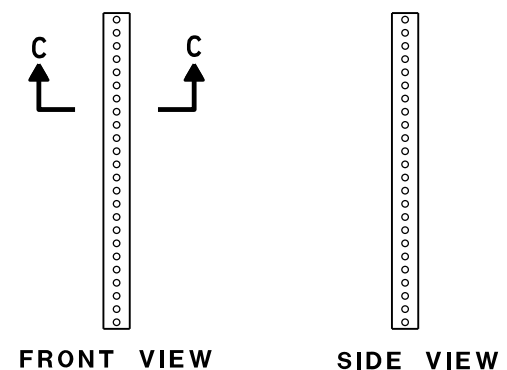
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 1



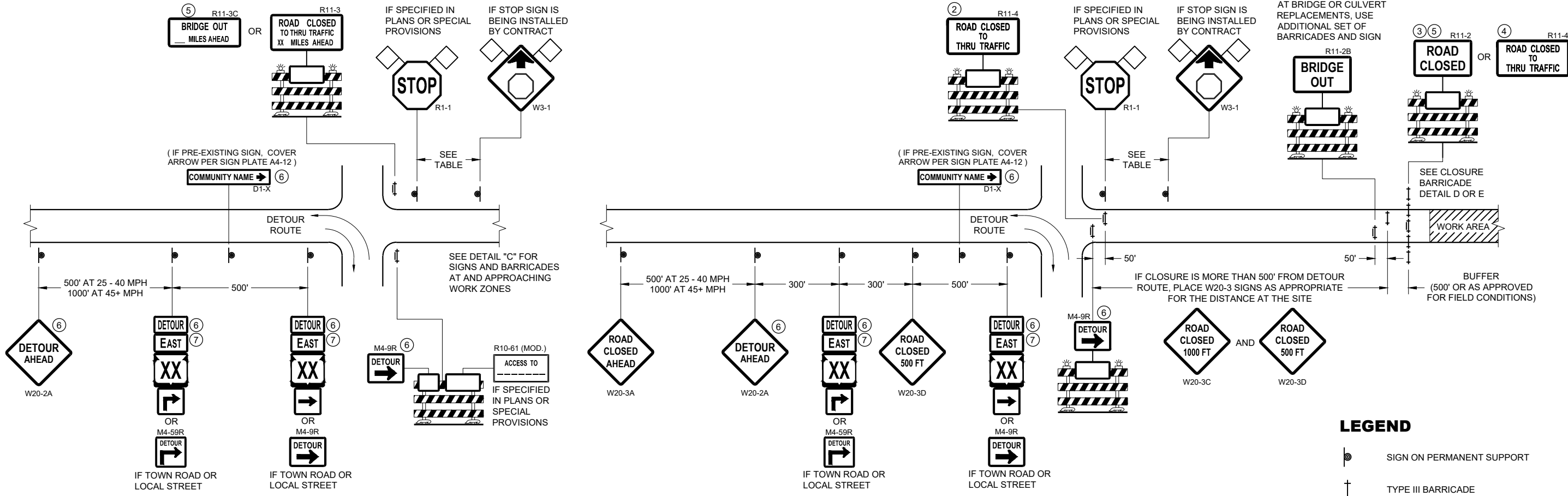
FRONT VIEW SIDE VIEW
ALTERNATE 2



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 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

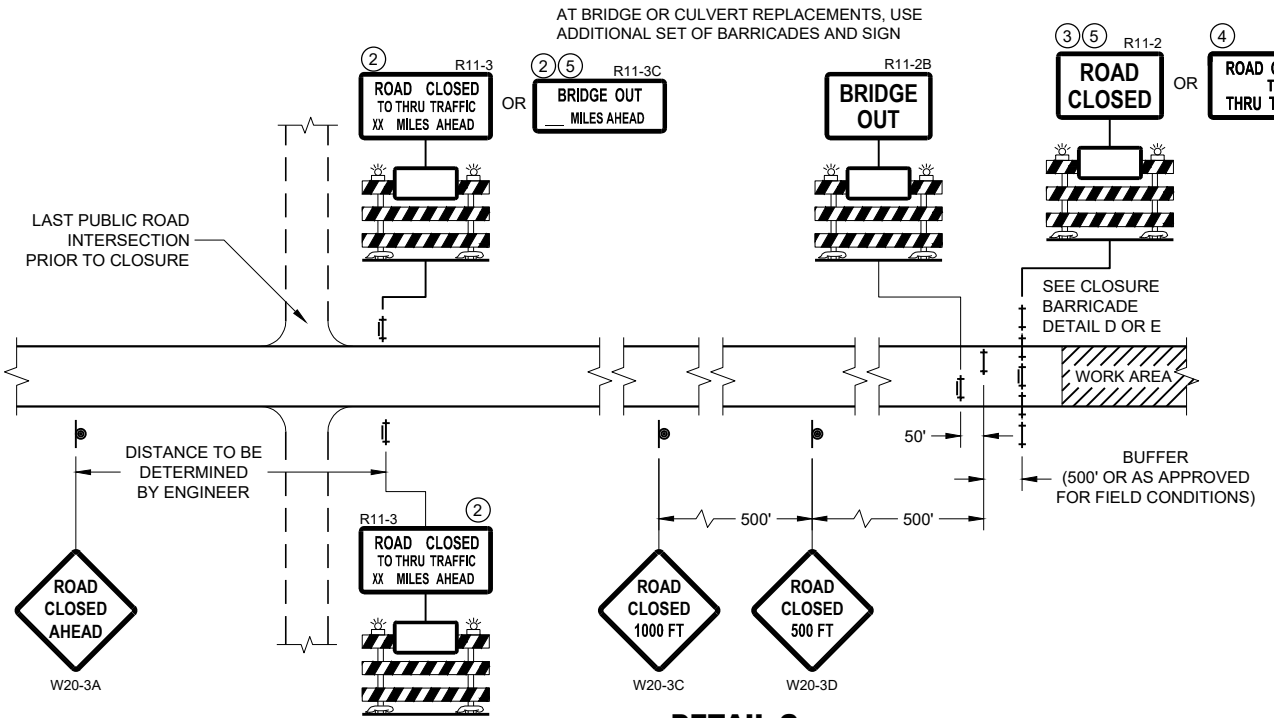
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



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

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

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER
FHWA

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

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- TO EAST MO4 - 5
- TO EAST M3 - X
- XX OR XX OR XX
- M1 - 6 M1 - 4 M1 - 1
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.
- THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 SHALL 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 FOLLOW:
 M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
 MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
 M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
 MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
 W20 - 53A SHALL BE 48" X 48"
- * PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

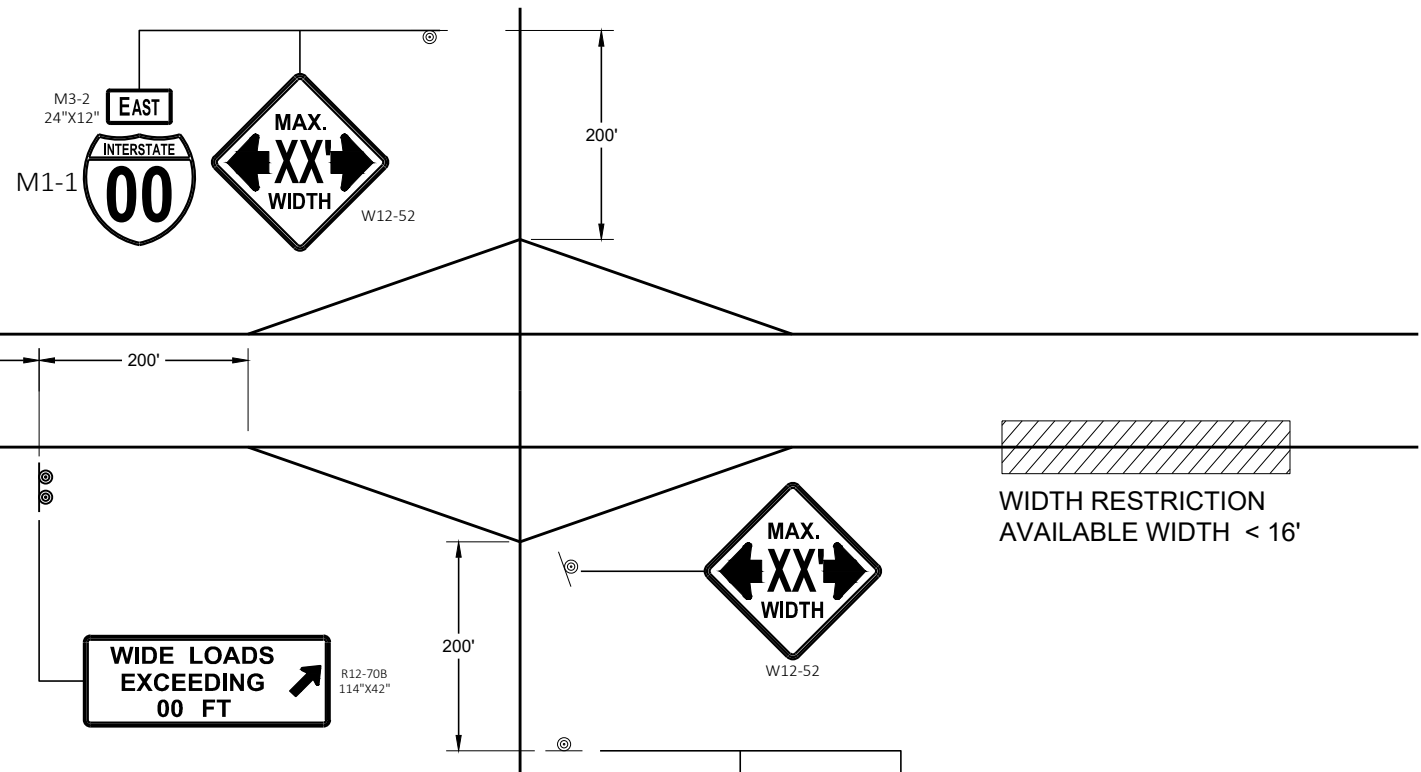
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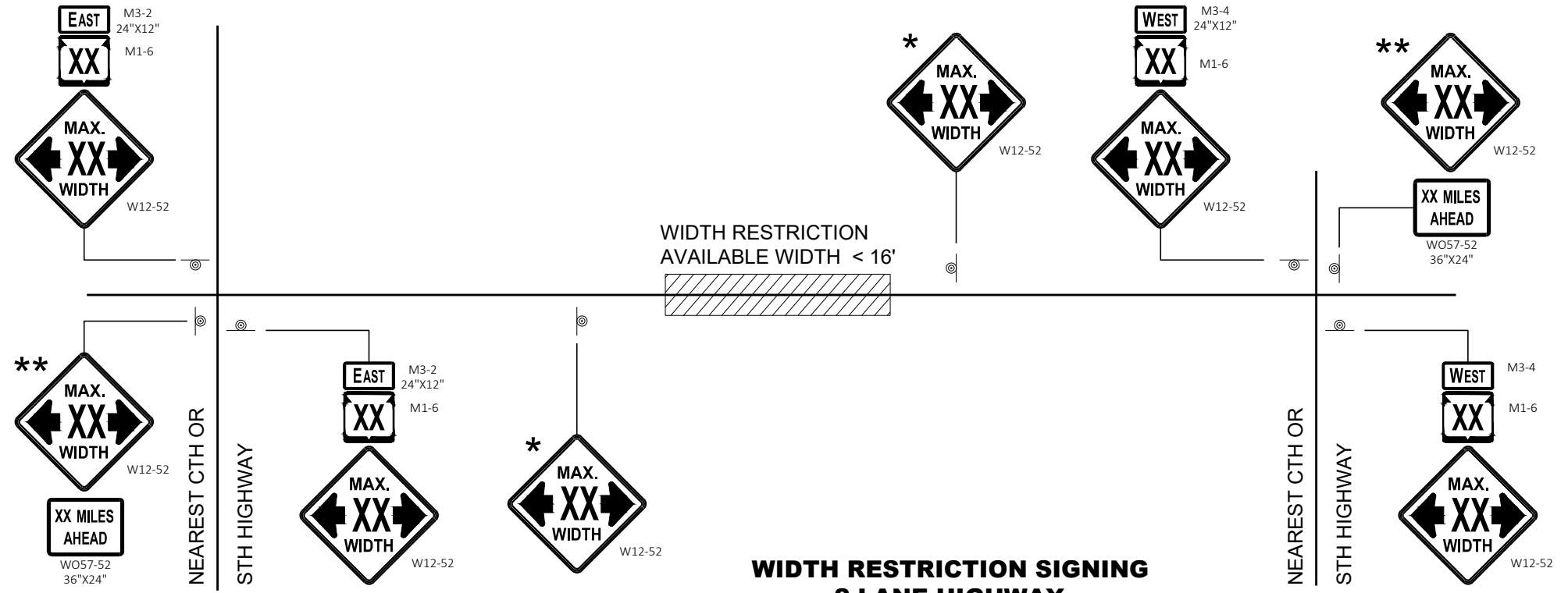
SDD 15C02 - 09d

SDD 15C02 - 09d

ON RAMP LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



WIDTH RESTRICTION SIGNING



**WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY**

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

THE SPACING BETWEEN 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.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	/S/ Andrew Heidtke
DATE	May 2023
FHWA	WORK ZONE ENGINEER

GENERAL NOTES

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

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




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

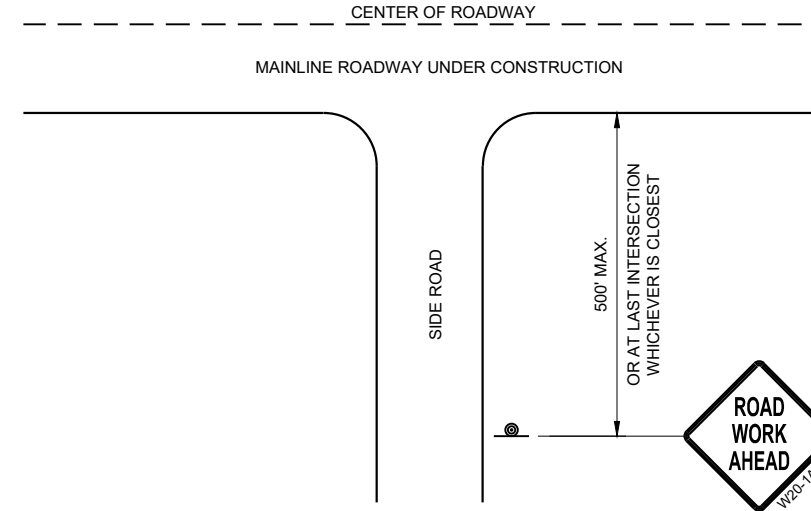
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

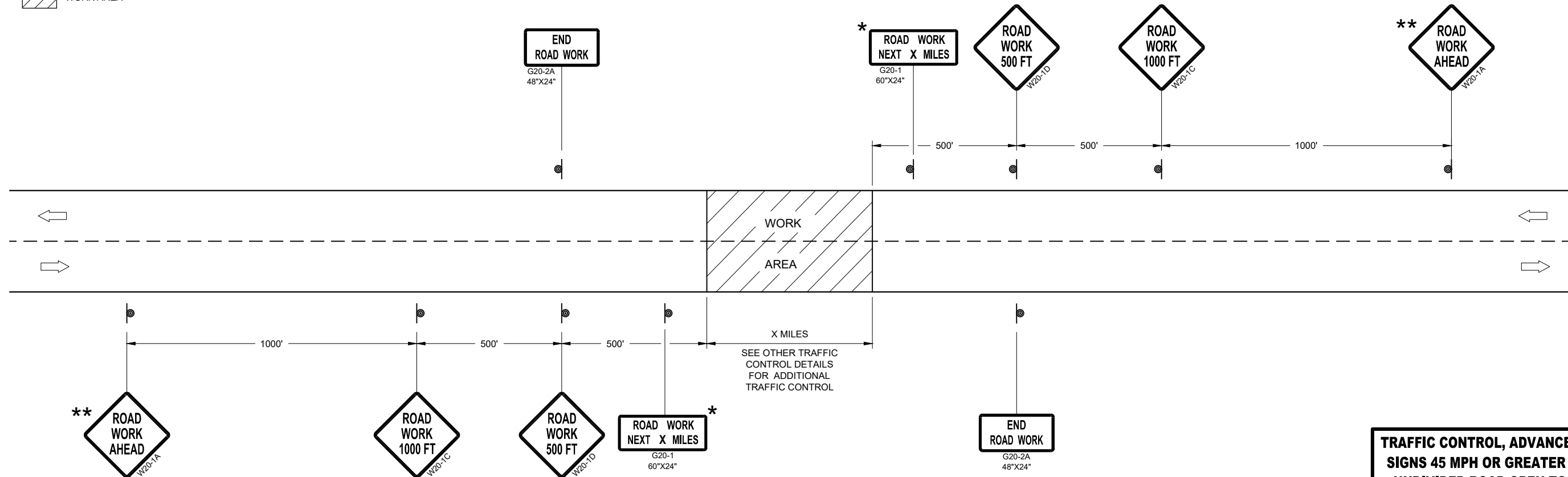
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



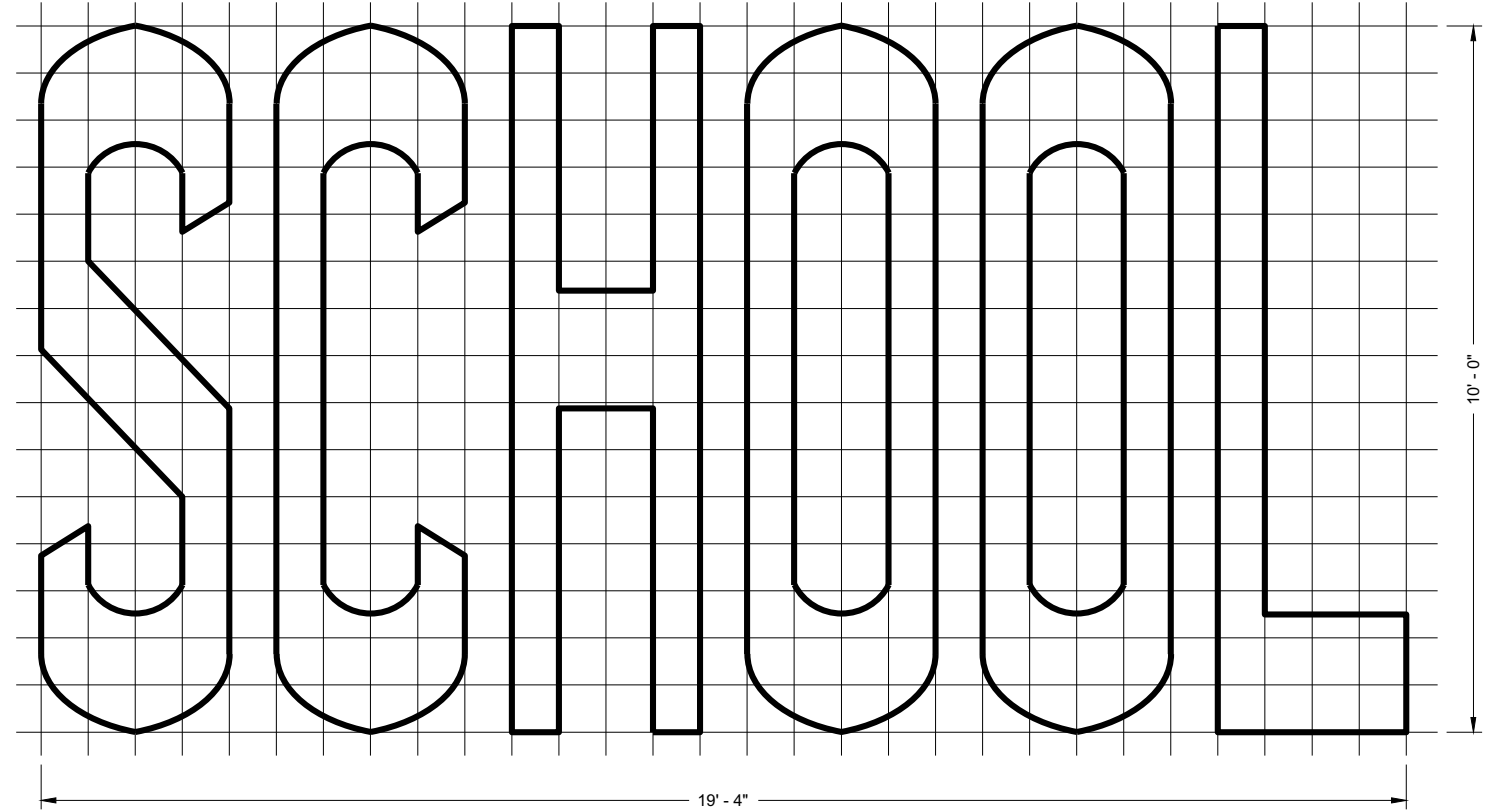
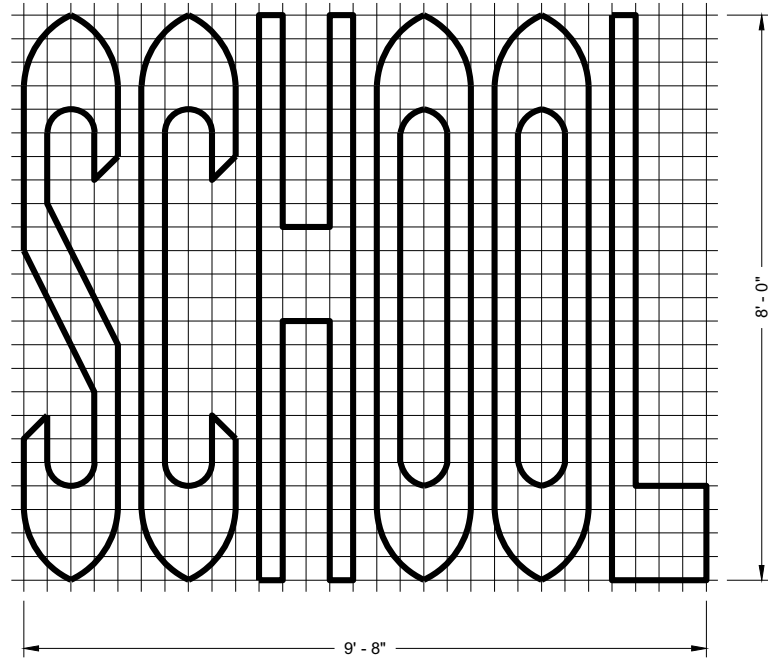
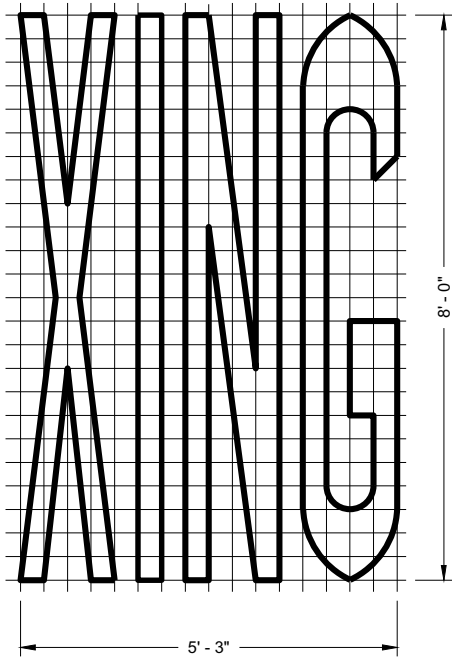
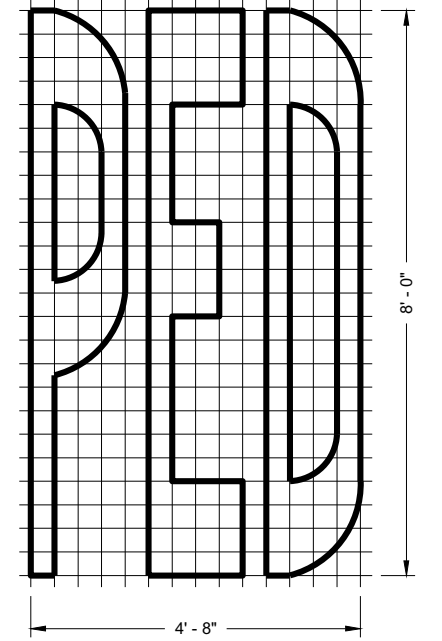
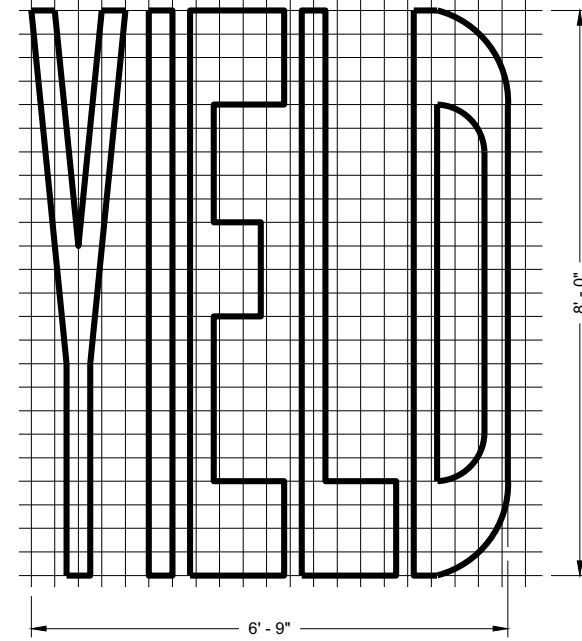
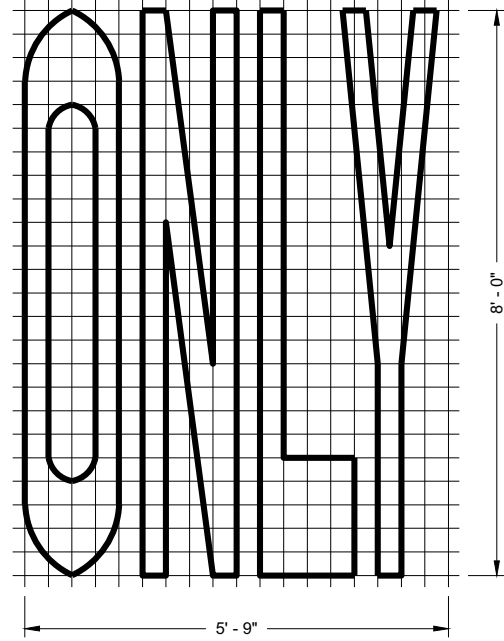
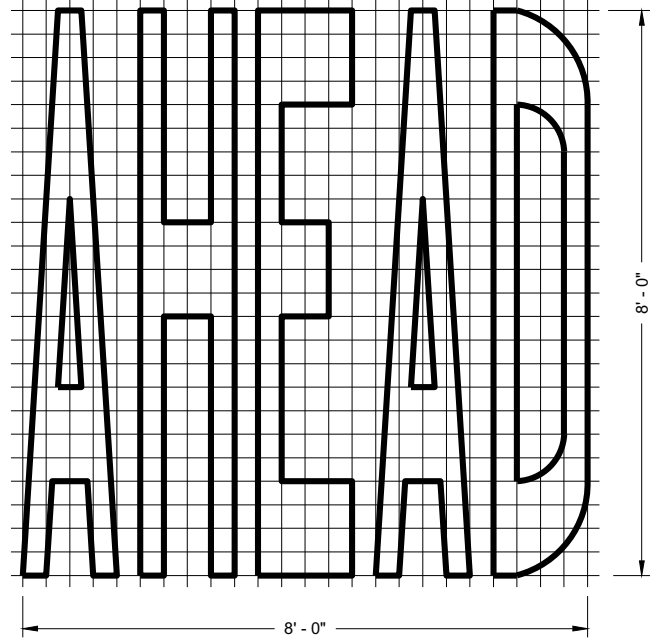
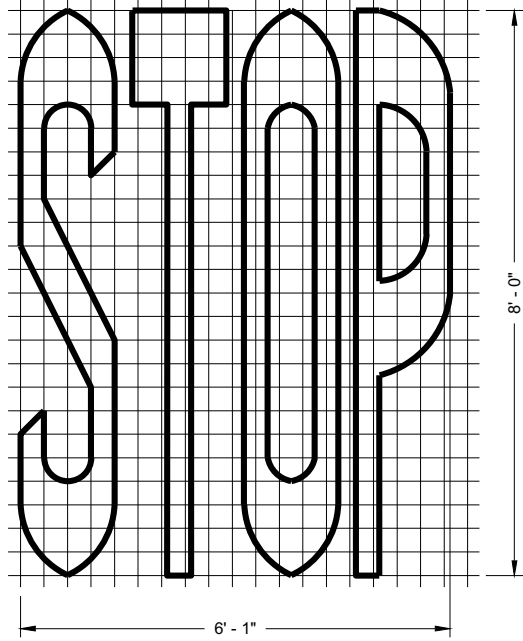
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
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APPROVED _____ /S/ Andrew Heidtke
DATE _____ WORK ZONE ENGINEER

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SINGLE LANE

TWO - LANE

GENERAL NOTES

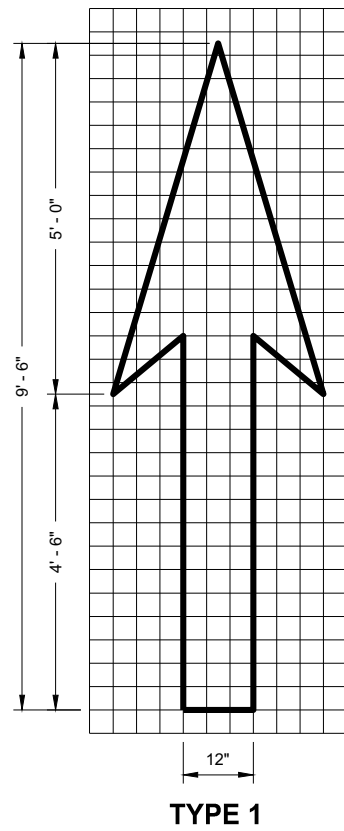
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

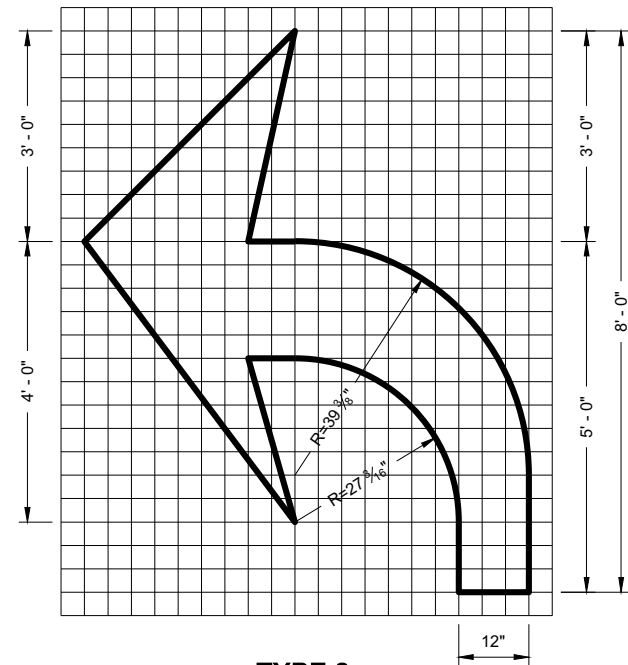
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

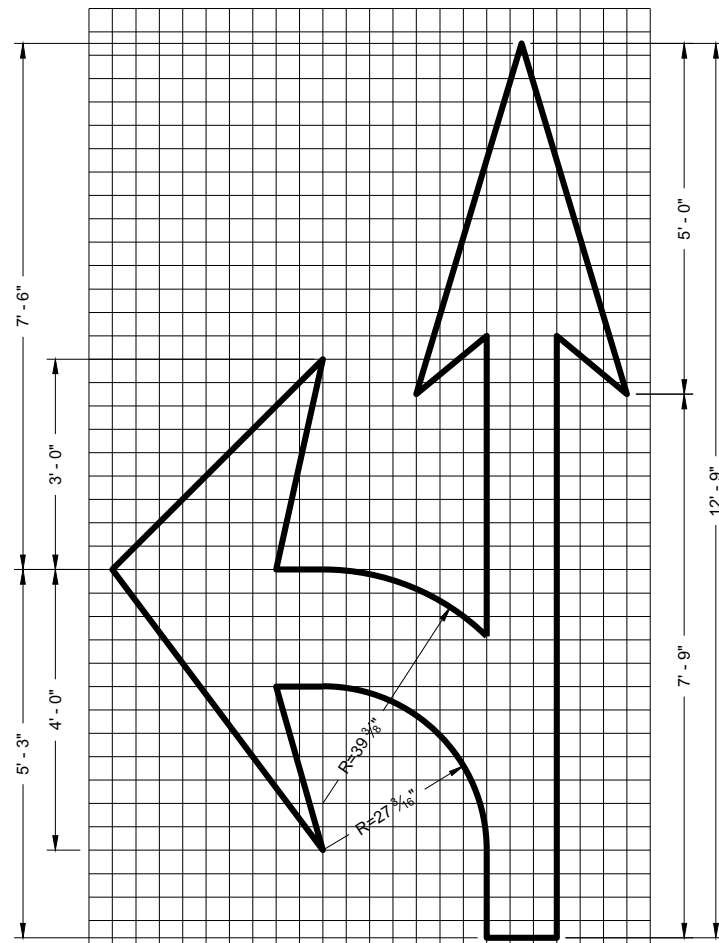
FHWA



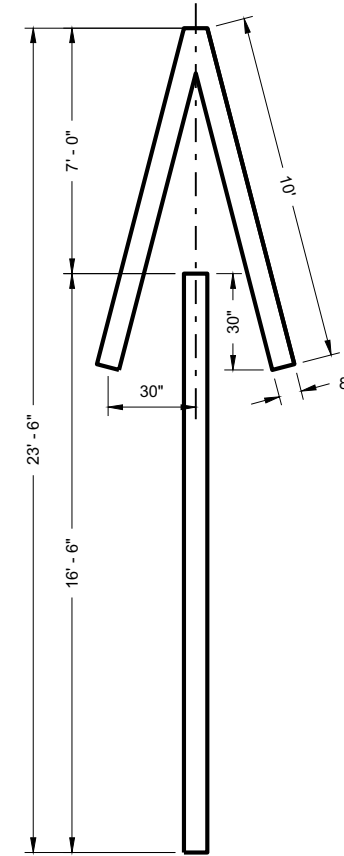
TYPE 1



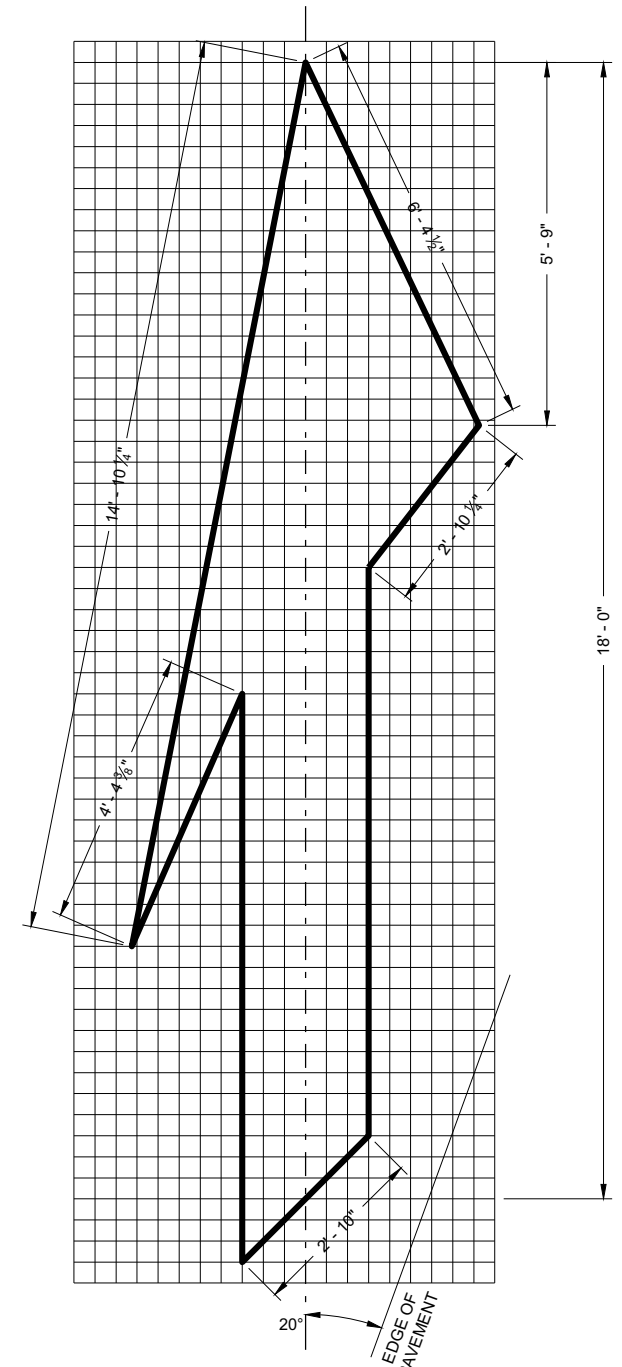
TYPE 2



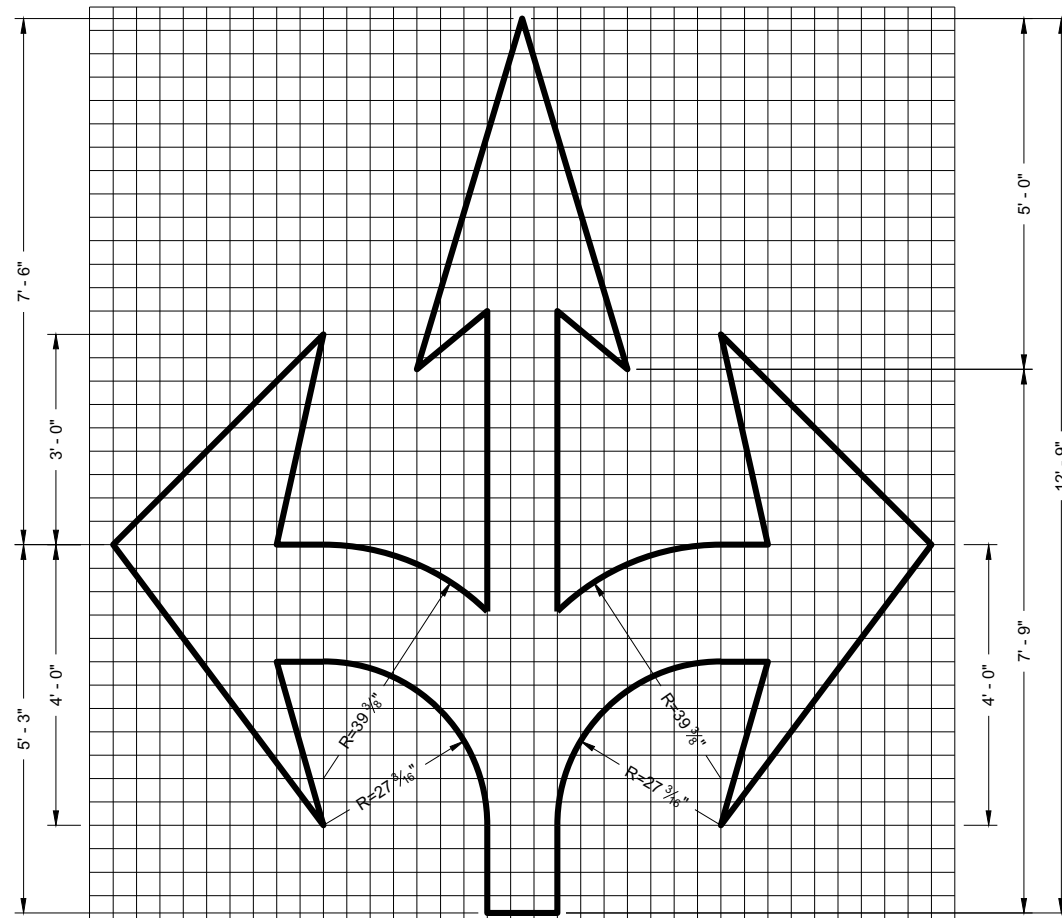
TYPE 3



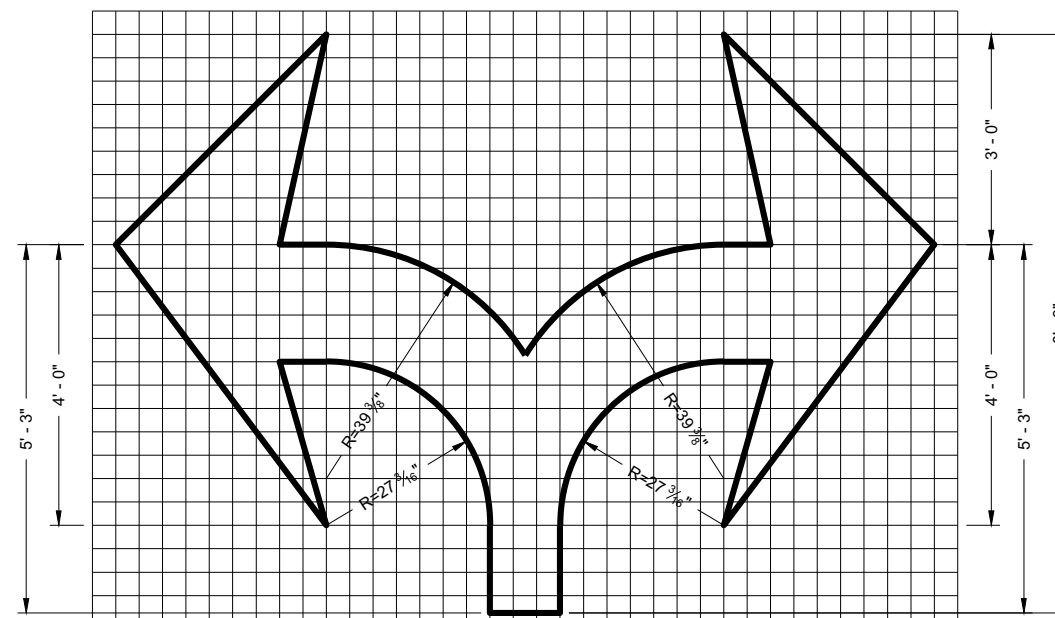
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

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

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

November 2019

DATE

FHWA




/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

GENERAL NOTES

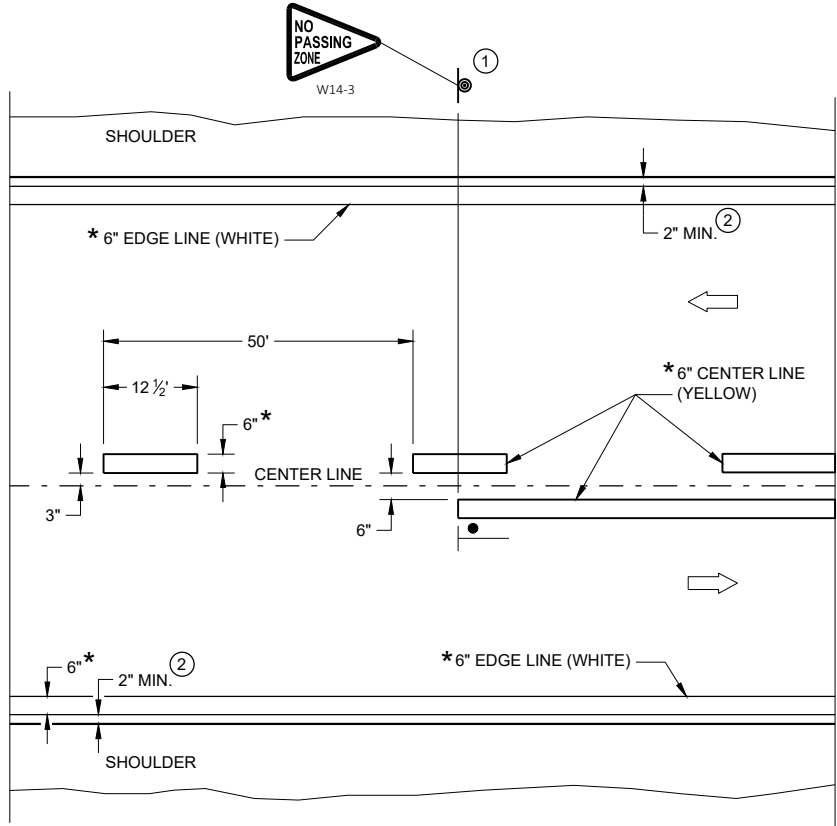
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

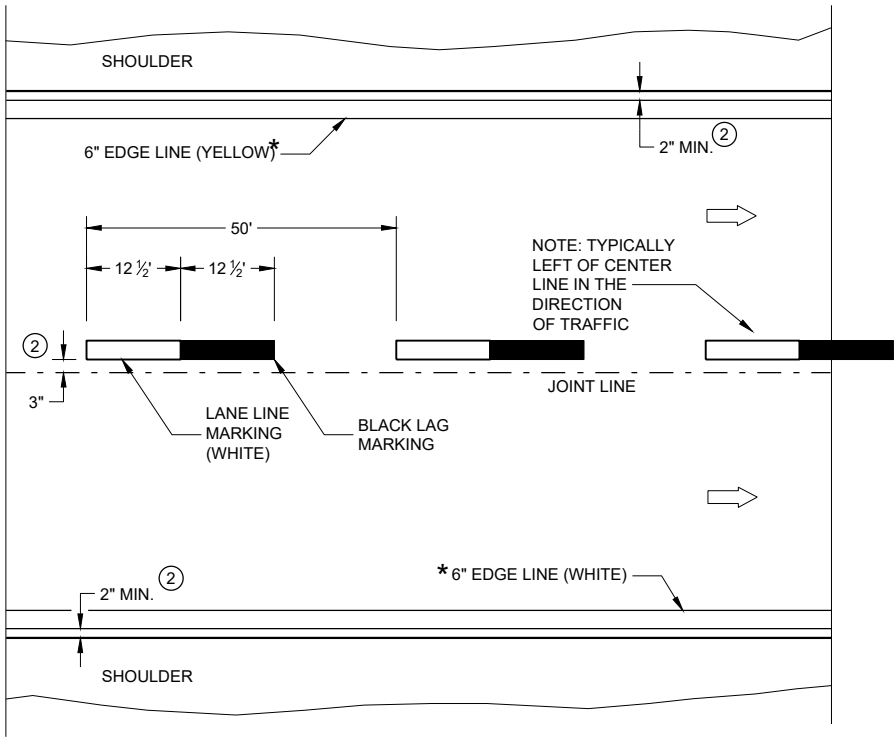
LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

6

SDD 15C08-23a

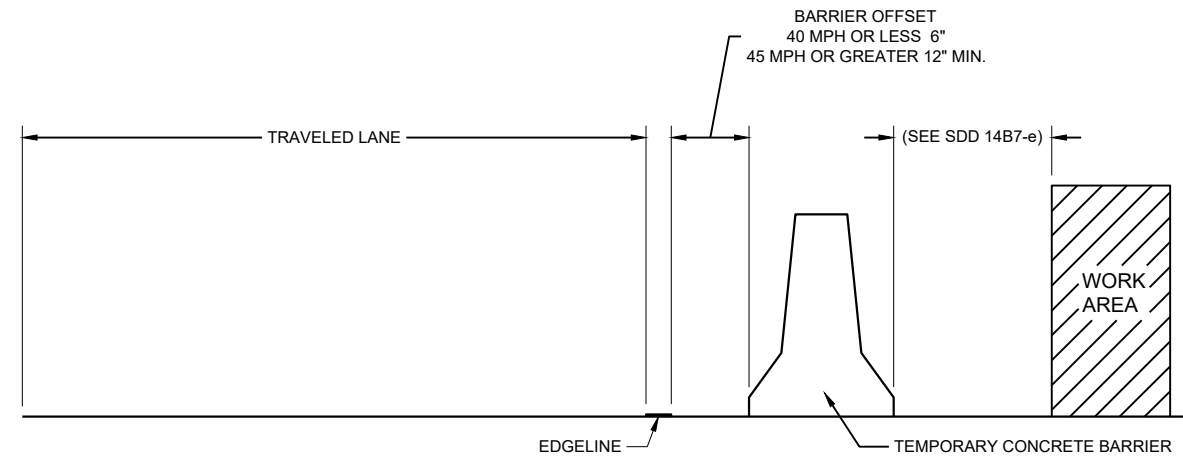
SDD 15C08-23a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

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TEMPORARY BARRIER OFFSET FROM EDGELINE

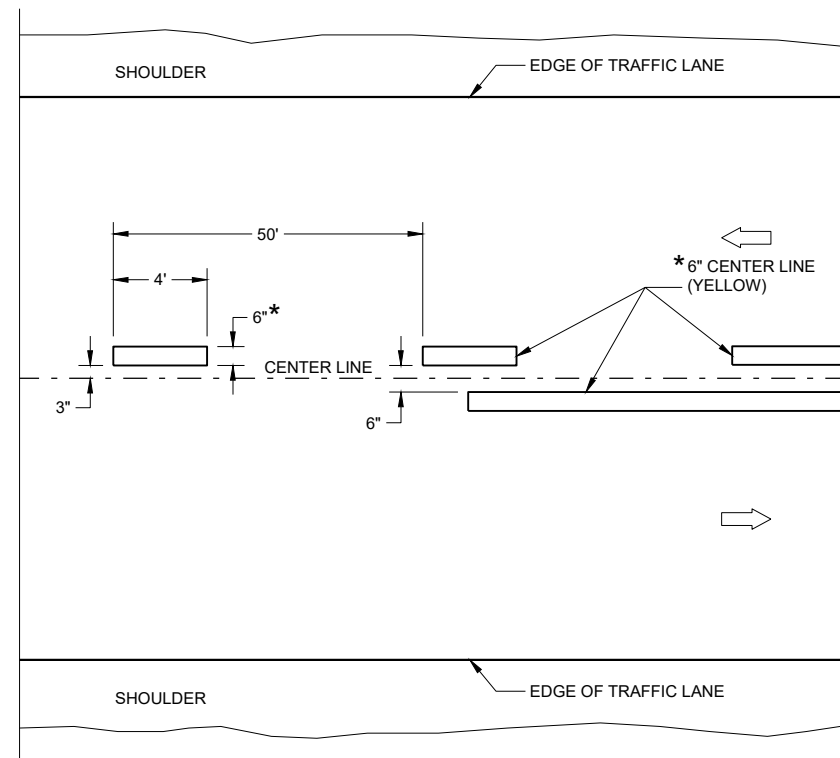
GENERAL NOTES

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

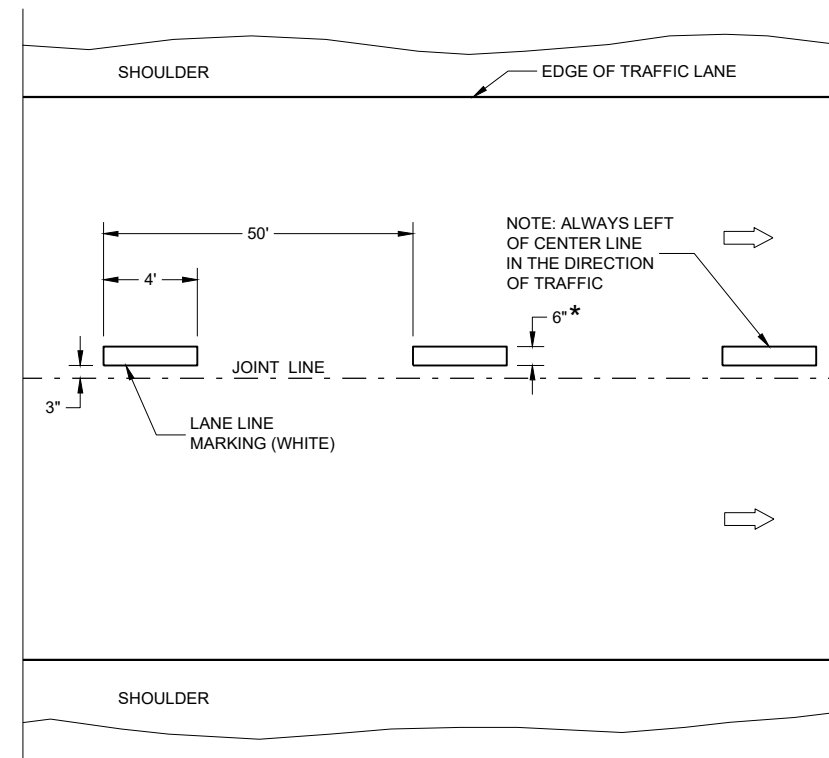
LEGEND

➡ DIRECTION OF TRAFFIC

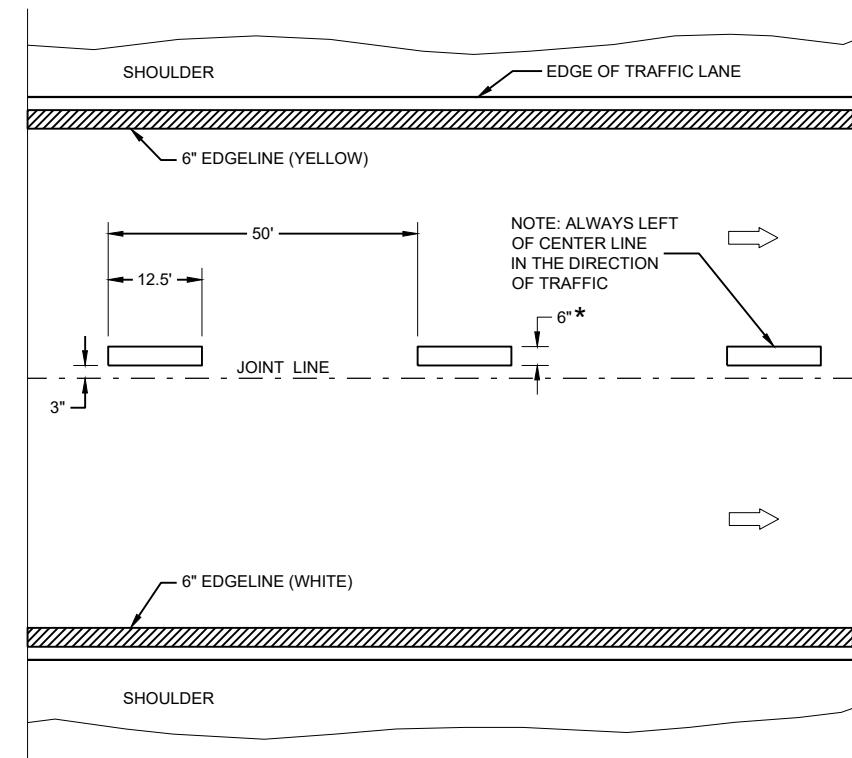
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

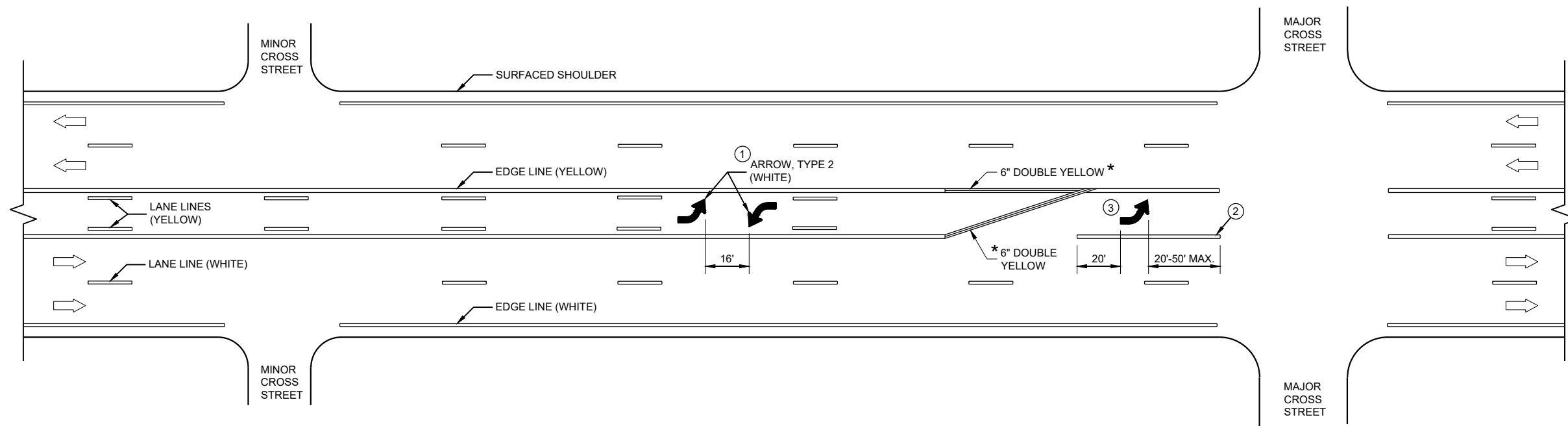
FHWA

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

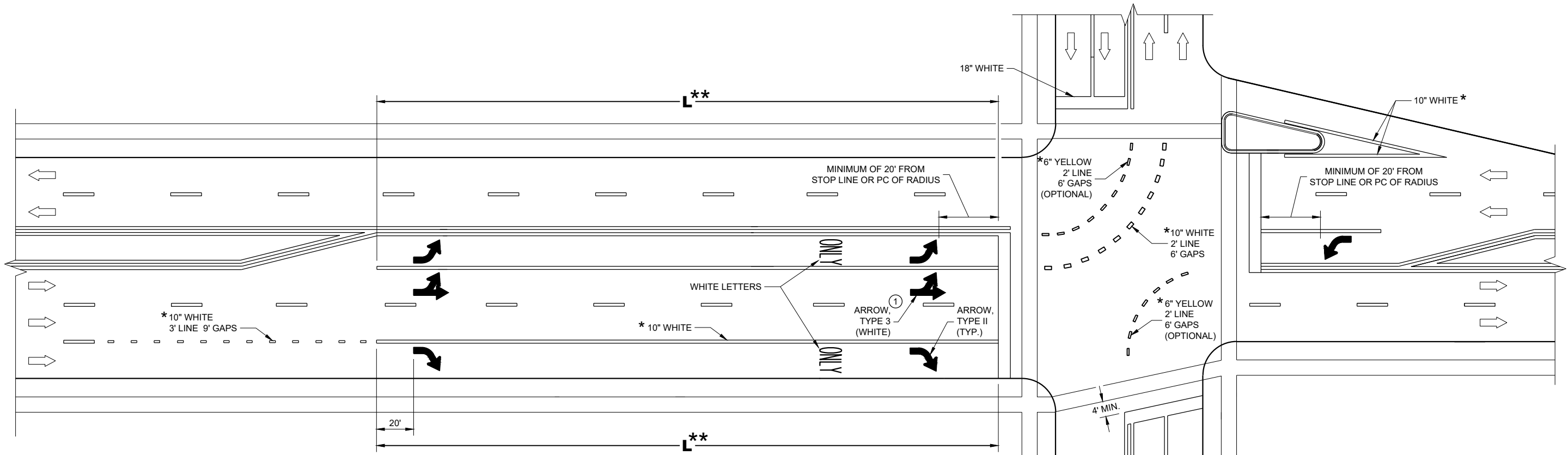
➡ DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



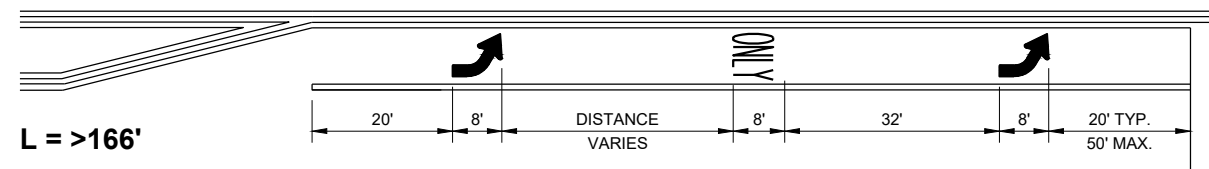
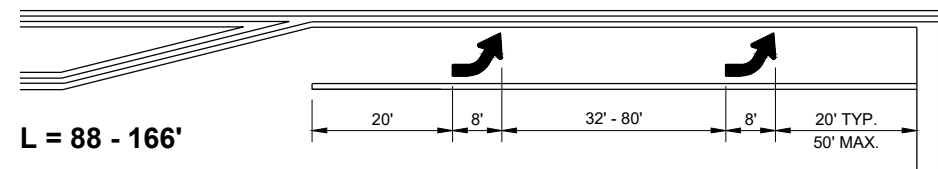
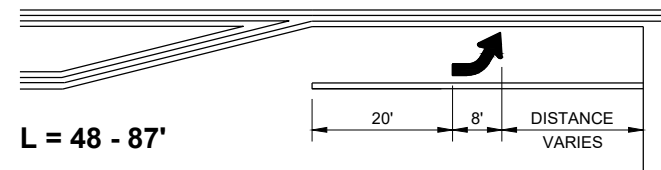
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



TURN LANE OPTIONS

LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

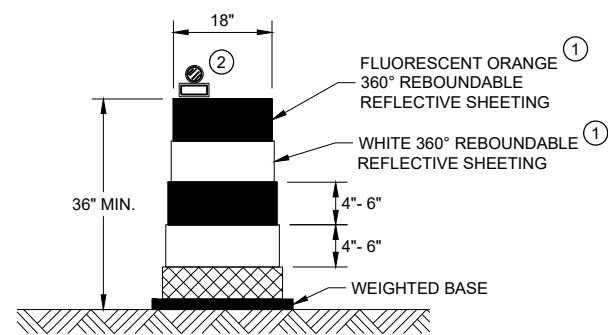
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

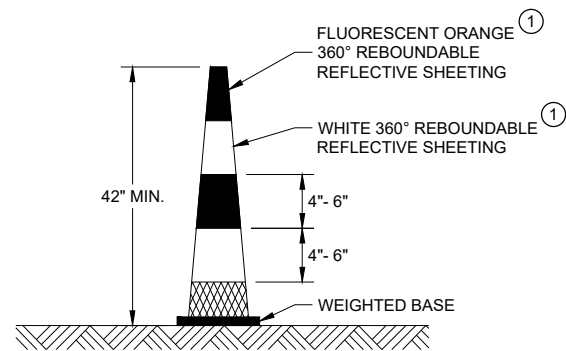
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



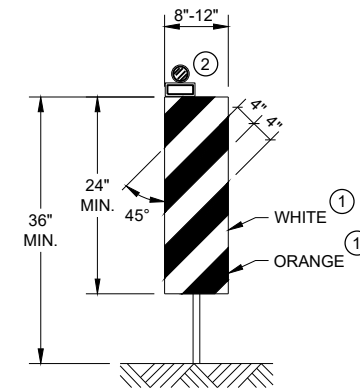
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

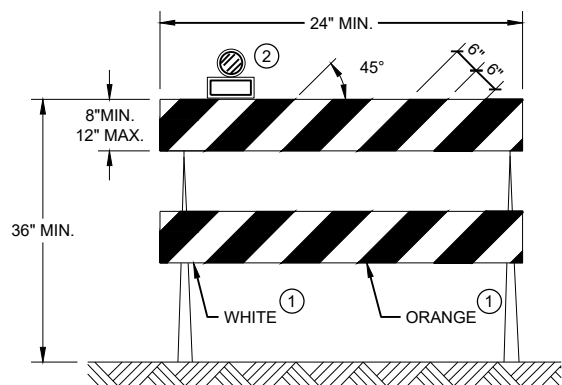


VERTICAL PANEL

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

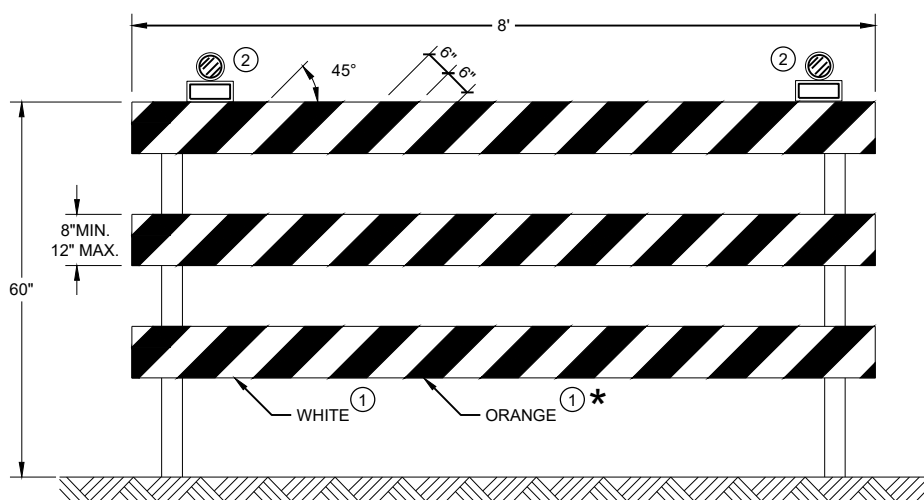
GENERAL NOTES

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



TYPE II BARRICADE

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








TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

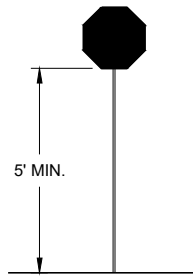
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



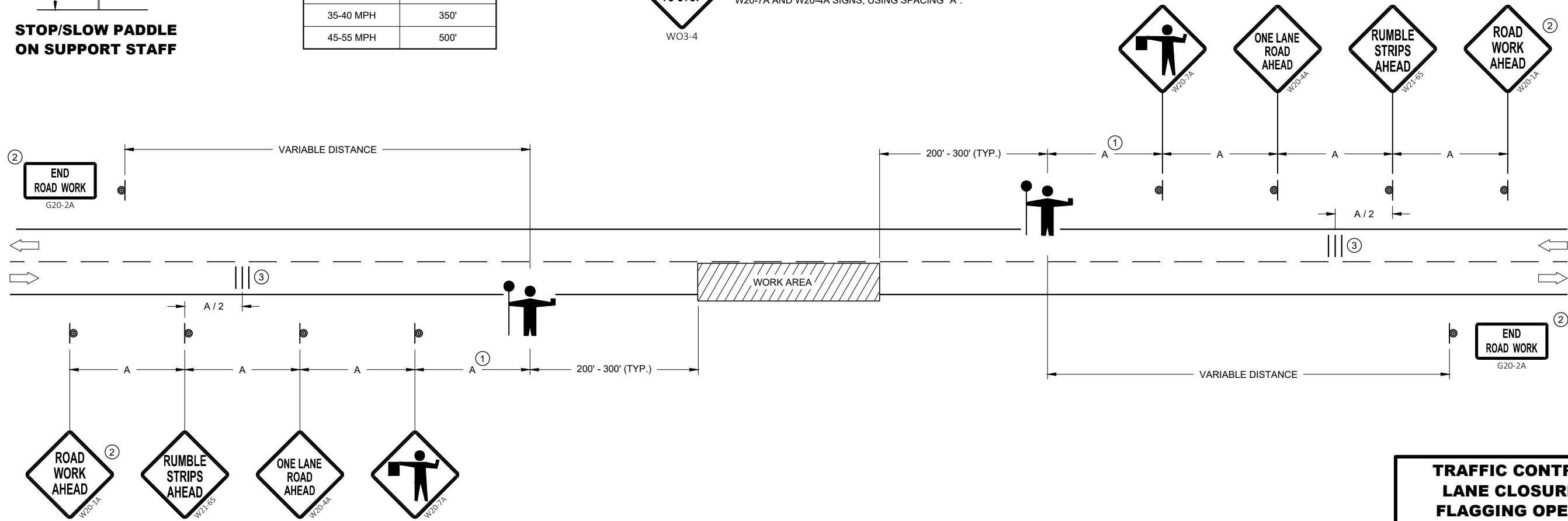
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



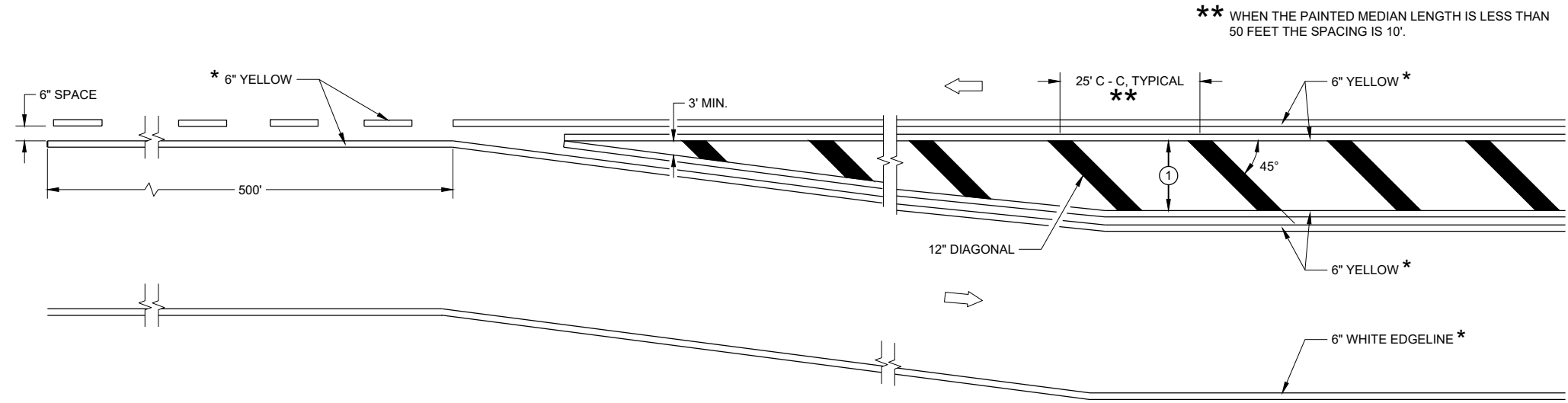
6

6

SDD 15C12 - 09a

SDD 15C12 - 09a

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE May 2022	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



MEDIAN ISLAND DETAIL

** WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.

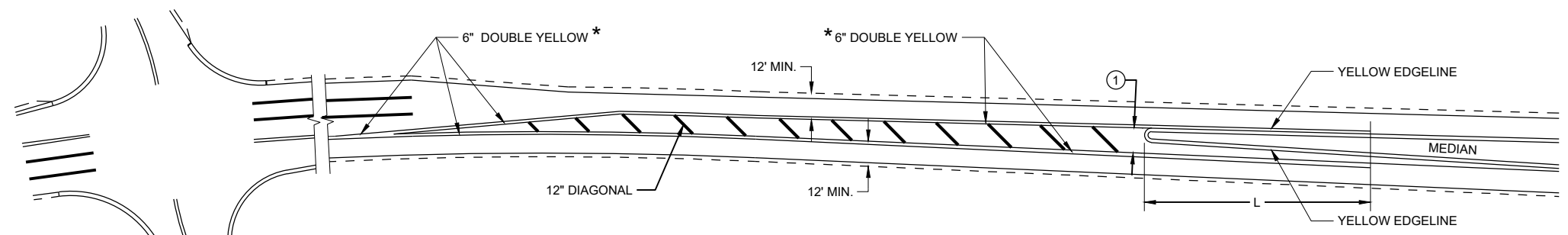
GENERAL NOTES

① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

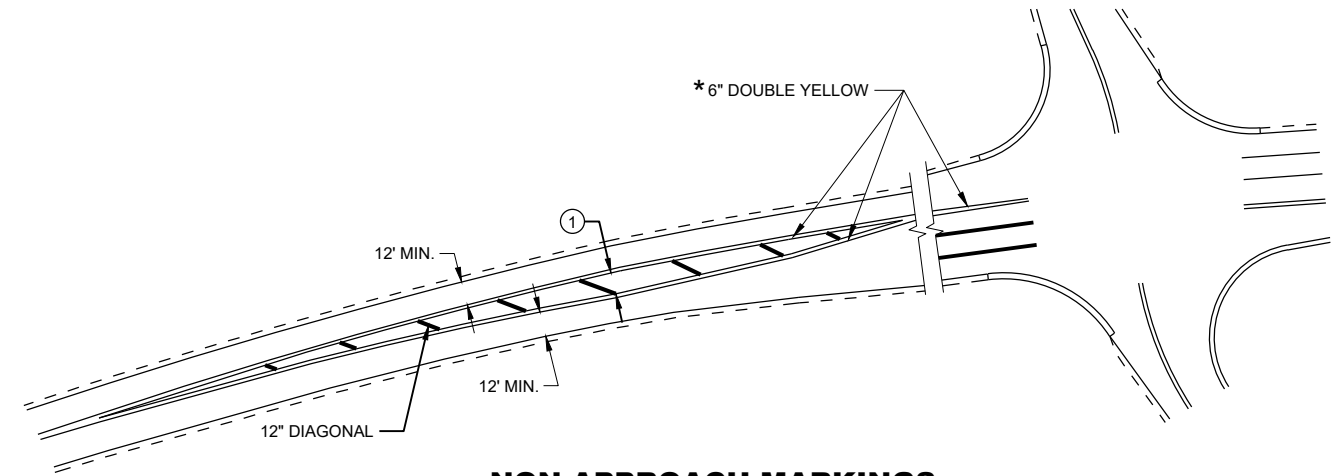
➔ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

6

6

SDD 15C18-08a

SDD 15C18-08a

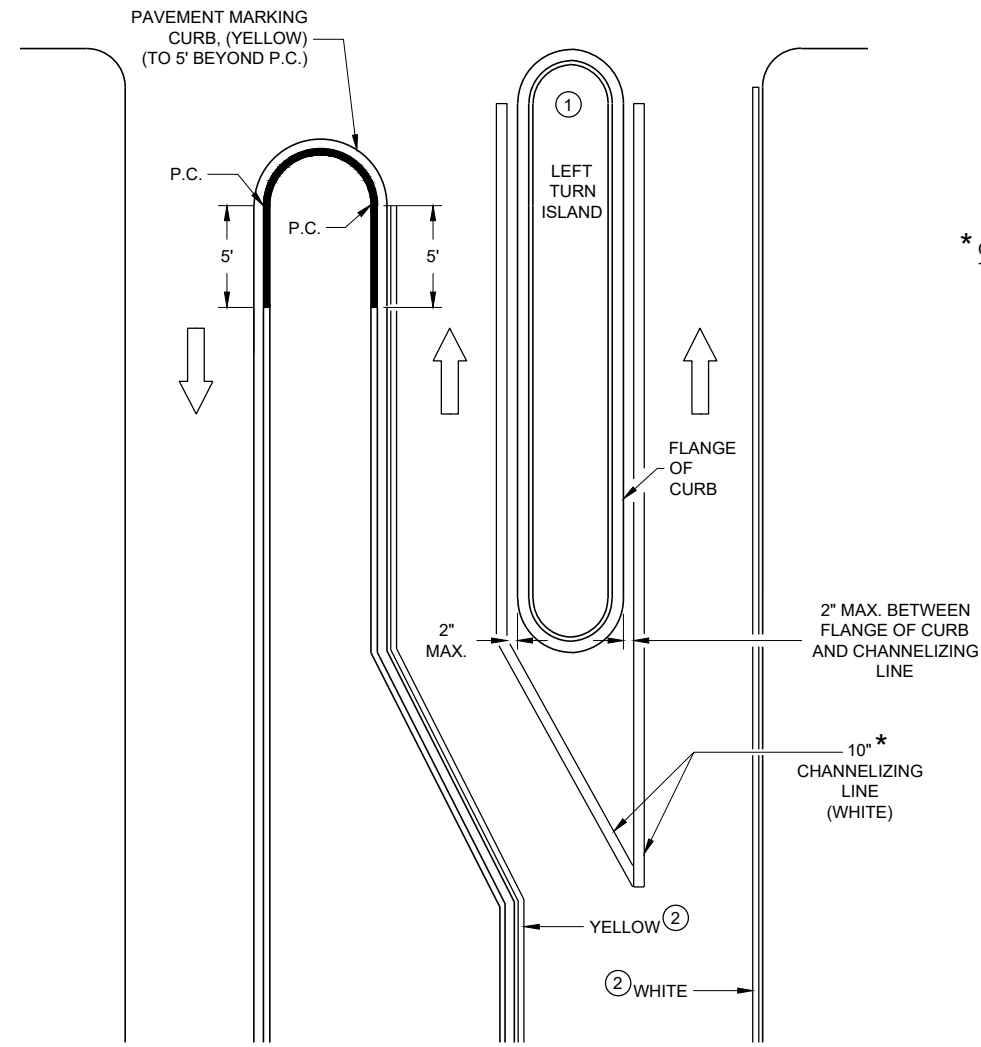
MEDIAN ISLAND PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
FHWA	

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED

GENERAL NOTES

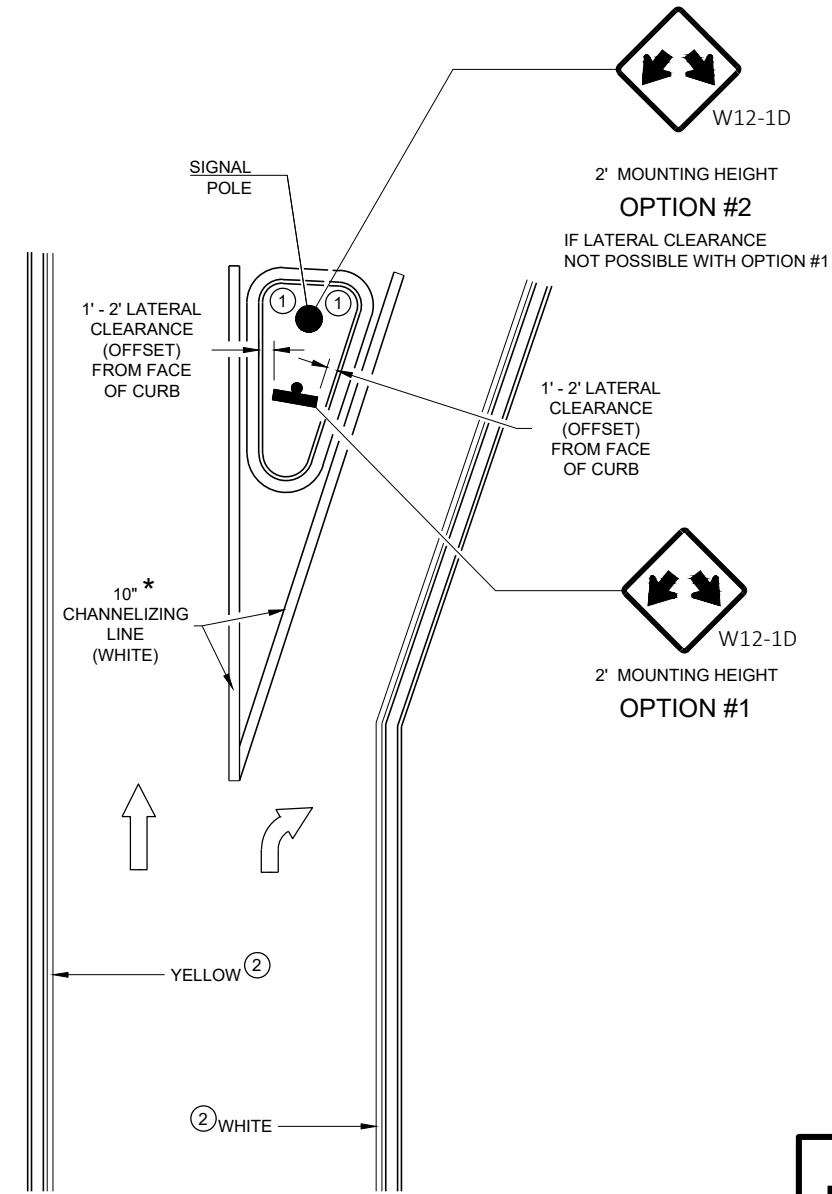
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.



* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND

6

6

SDD 15C18-08C

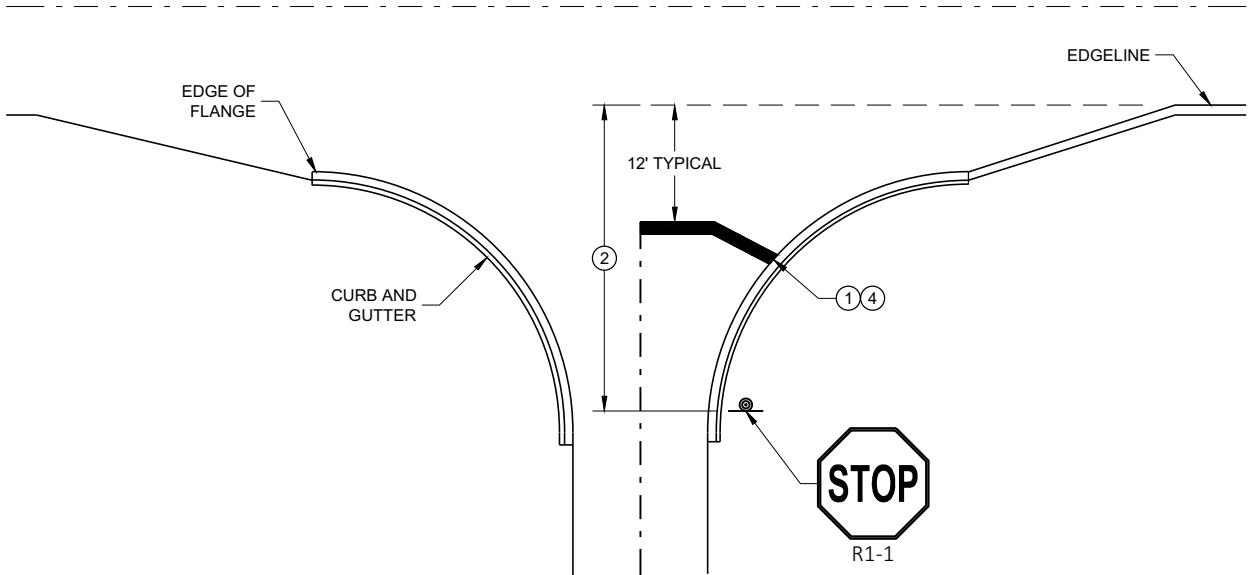
SDD 15C18-08C

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
FHWA	

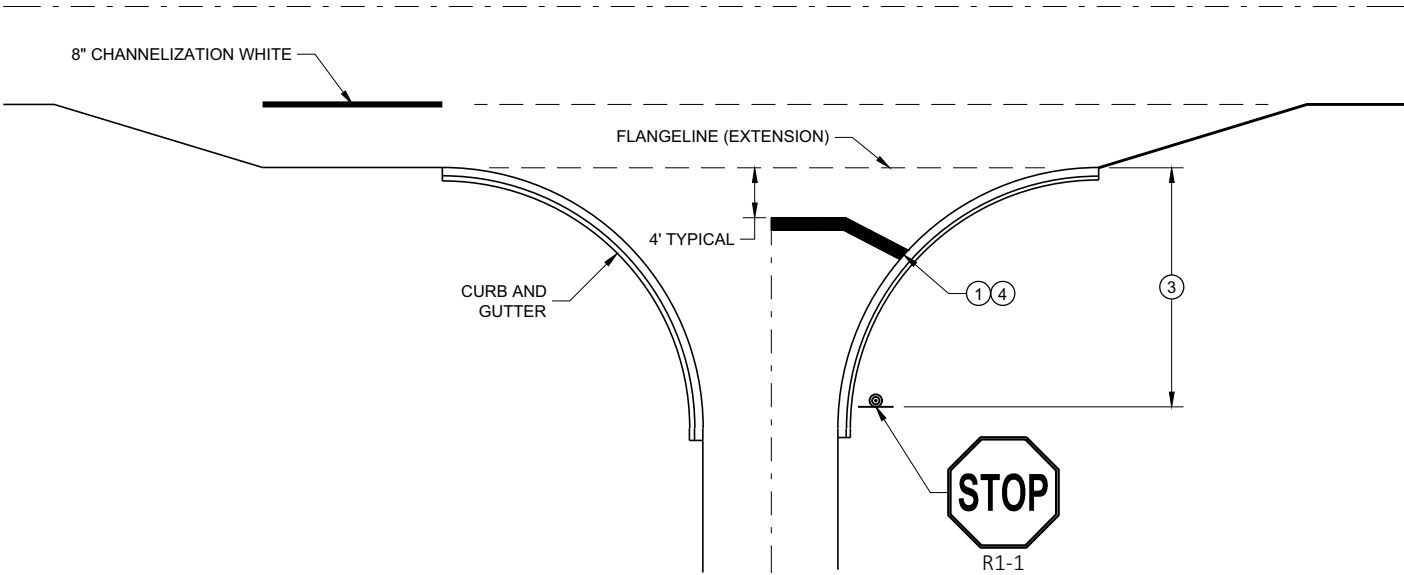
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

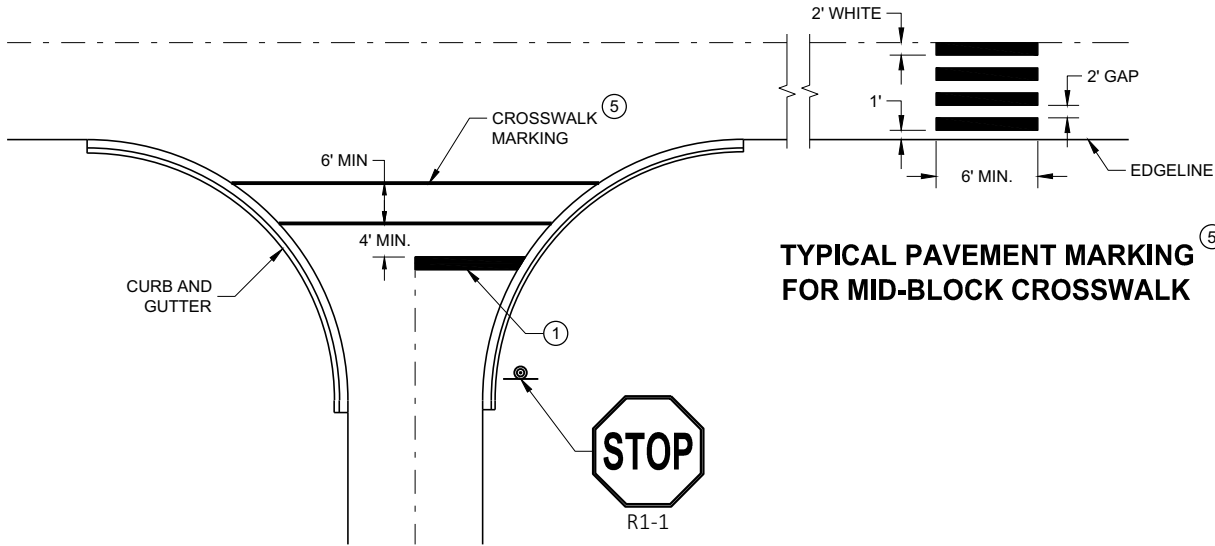
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

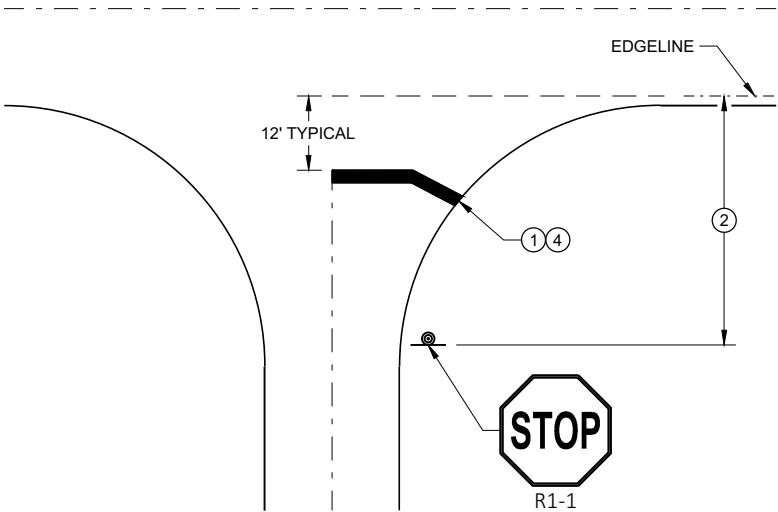


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

GENERAL NOTES

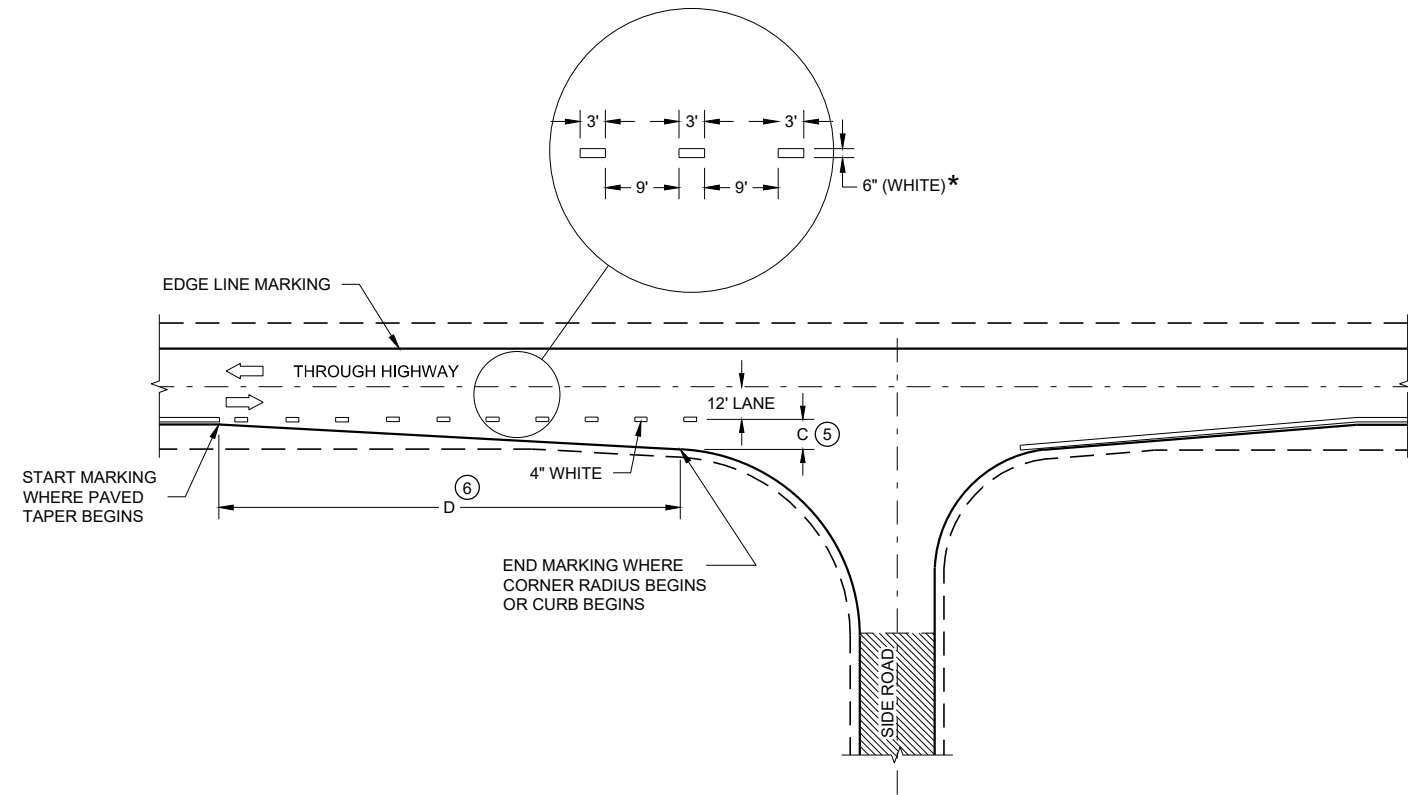
OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

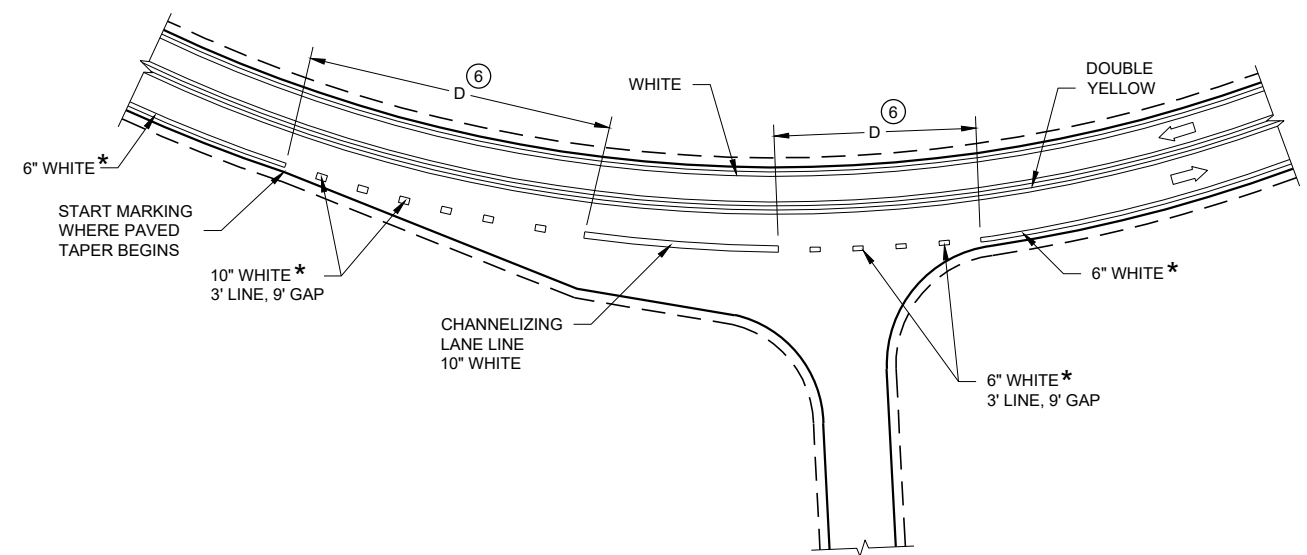
LEGEND

➔ DIRECTION OF TRAVEL

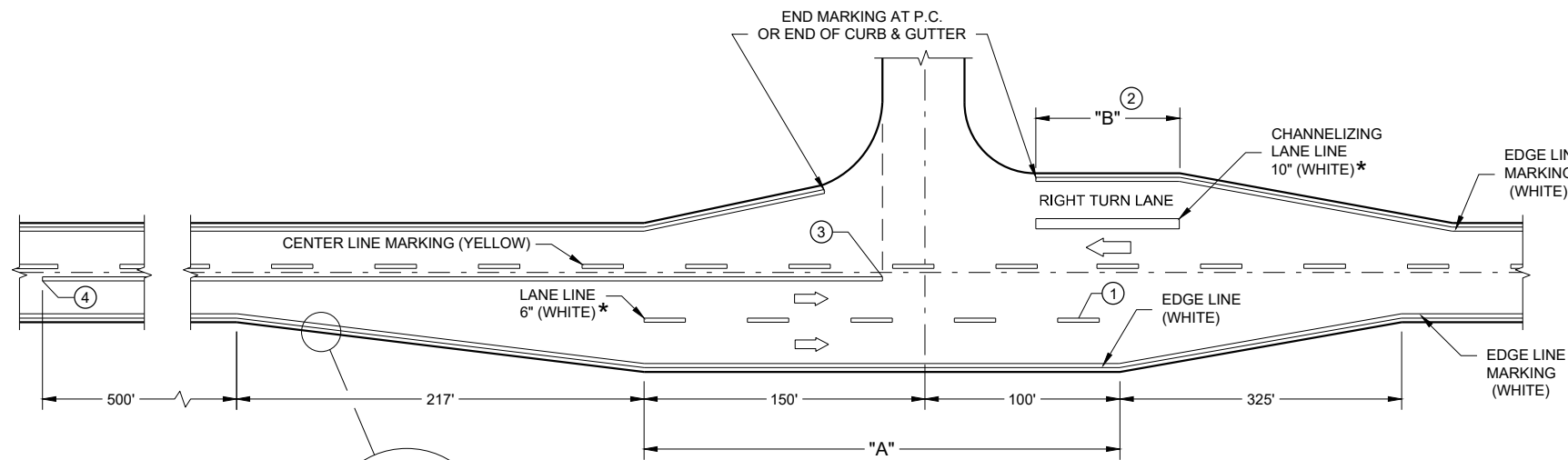
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



MINOR INTERSECTION

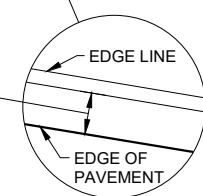


INTERSECTION ON OUTSIDE OF CURVE



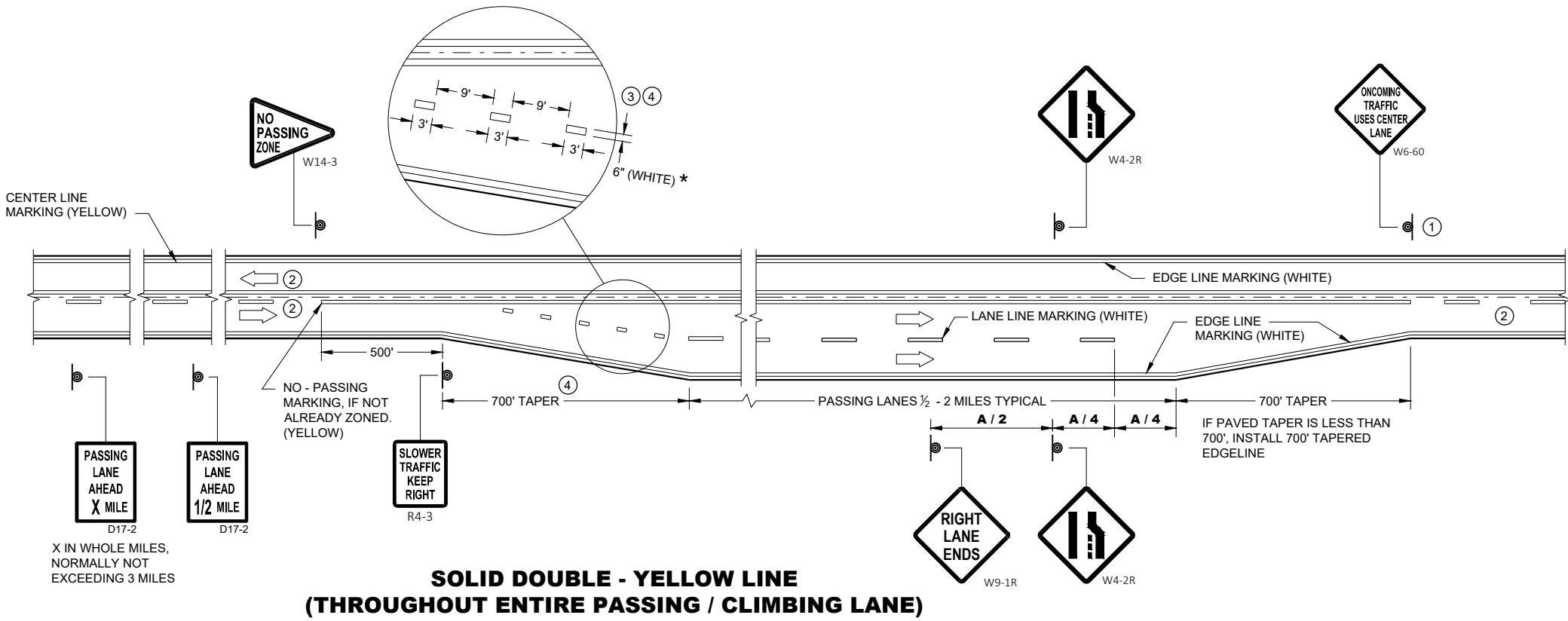
MAJOR INTERSECTIONS (INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE - YELLOW LINE
(THROUGHOUT ENTIRE PASSING / CLIMBING LANE)**

X IN WHOLE MILES,
NORMALLY NOT
EXCEEDING 3 MILES

GENERAL NOTES

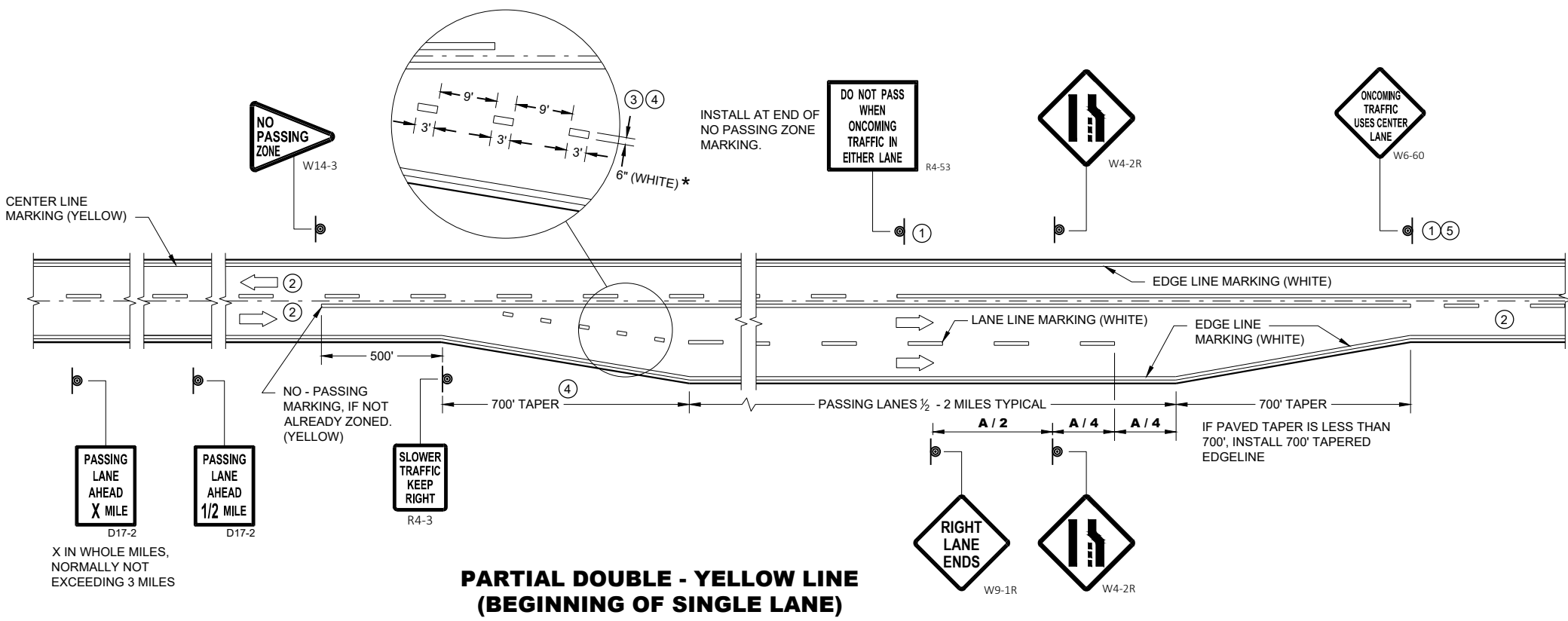
- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

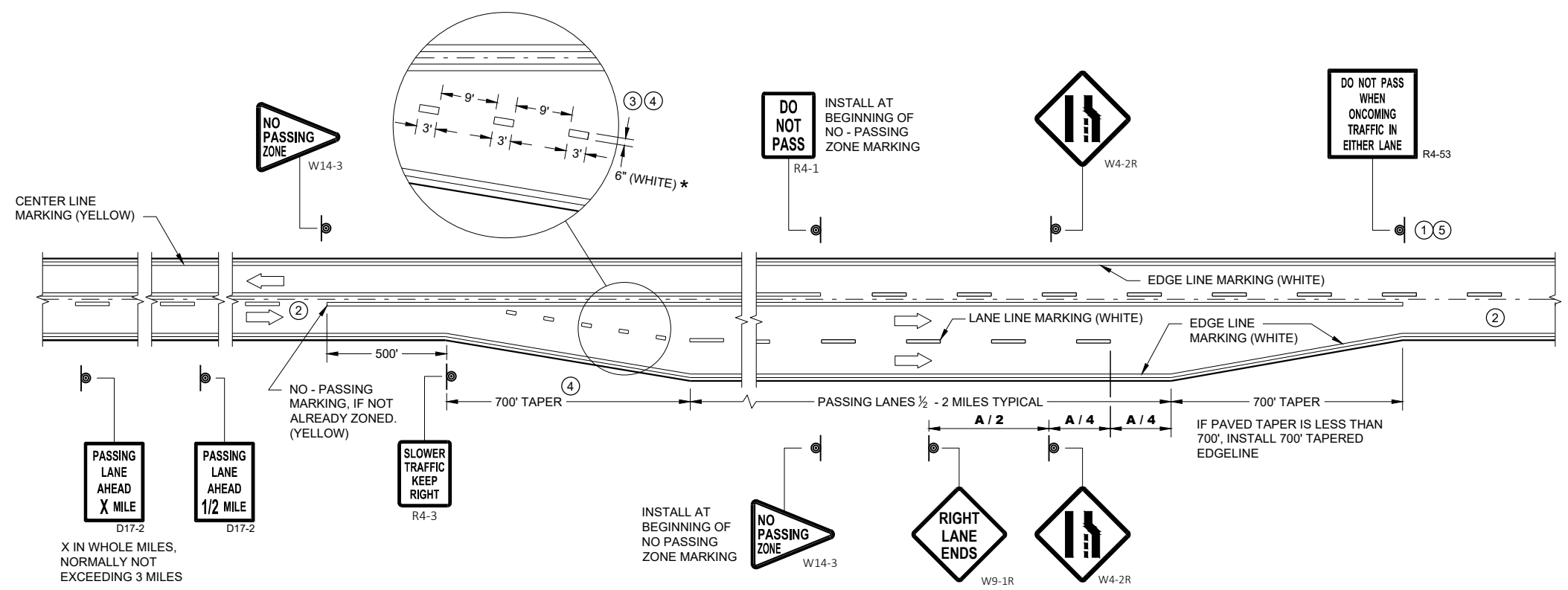


**PARTIAL DOUBLE - YELLOW LINE
(BEGINNING OF SINGLE LANE)**

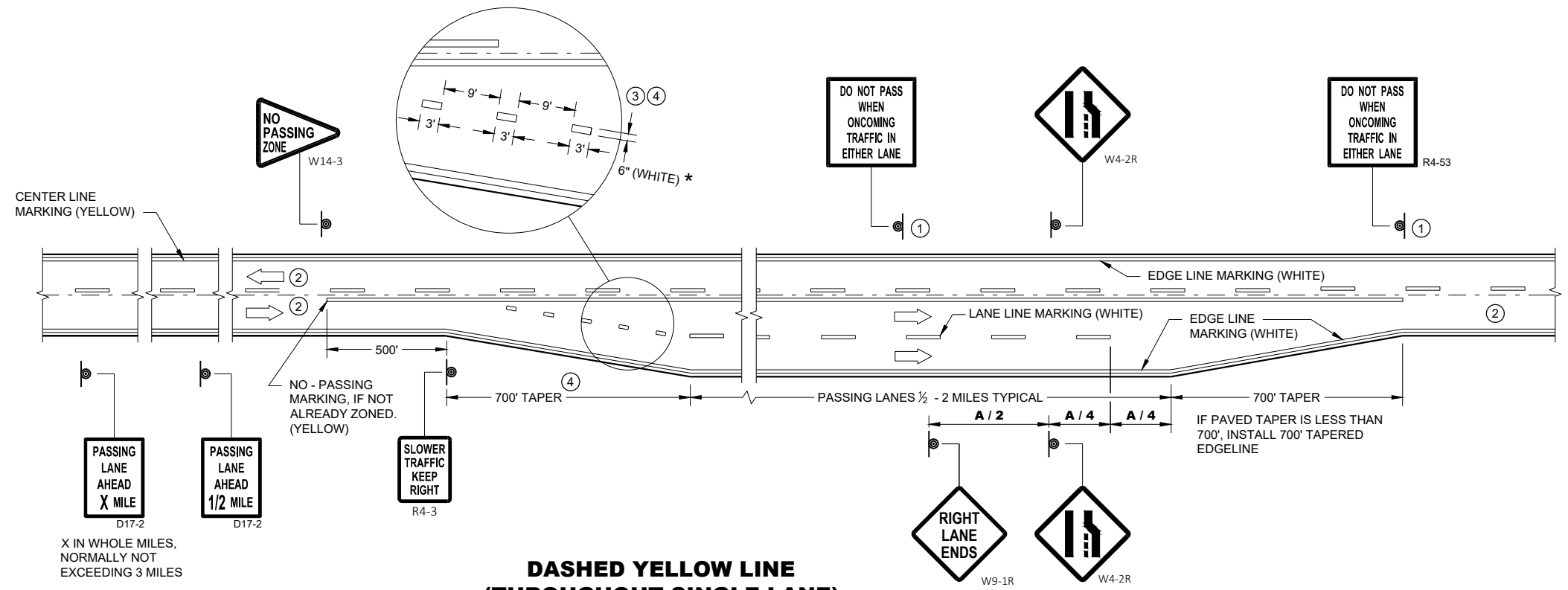
X IN WHOLE MILES,
NORMALLY NOT
EXCEEDING 3 MILES

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE - YELLOW LINE
(END OF SINGLE LANE)**



**DASHED YELLOW LINE
(THROUGHOUT SINGLE LANE)**

GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

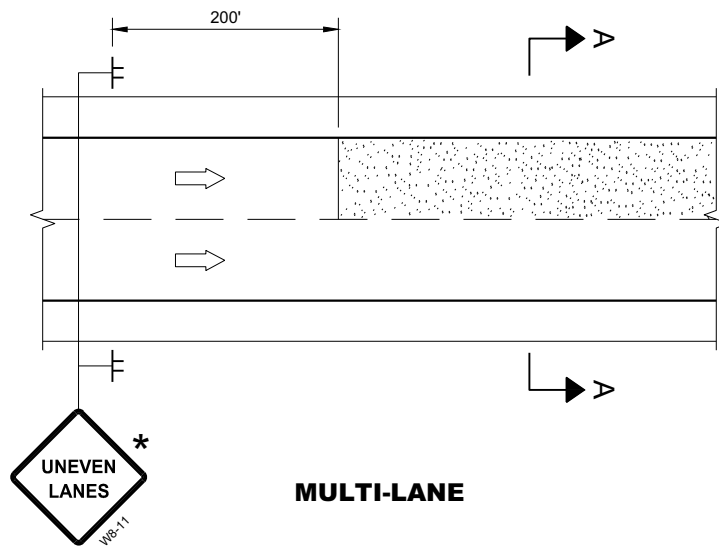
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

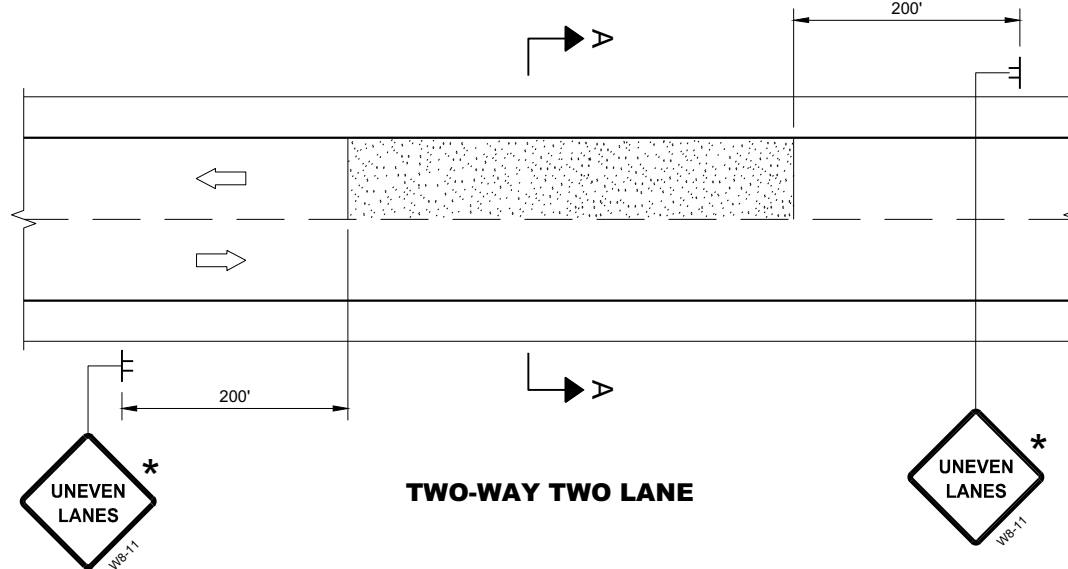
**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

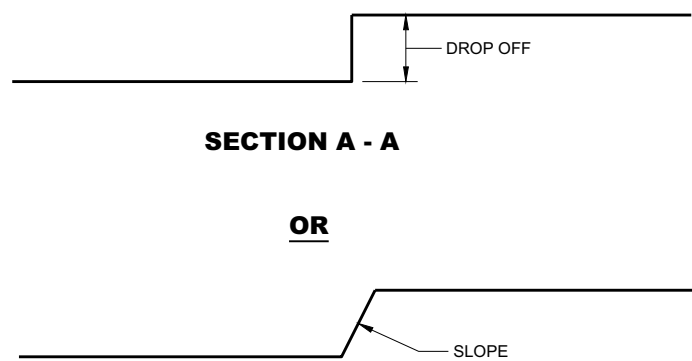
APPROVED
DATE May 2023 /S/ Jeannie Silver
STATE SIGNING AND MARKING ENGINEER



MULTI-LANE



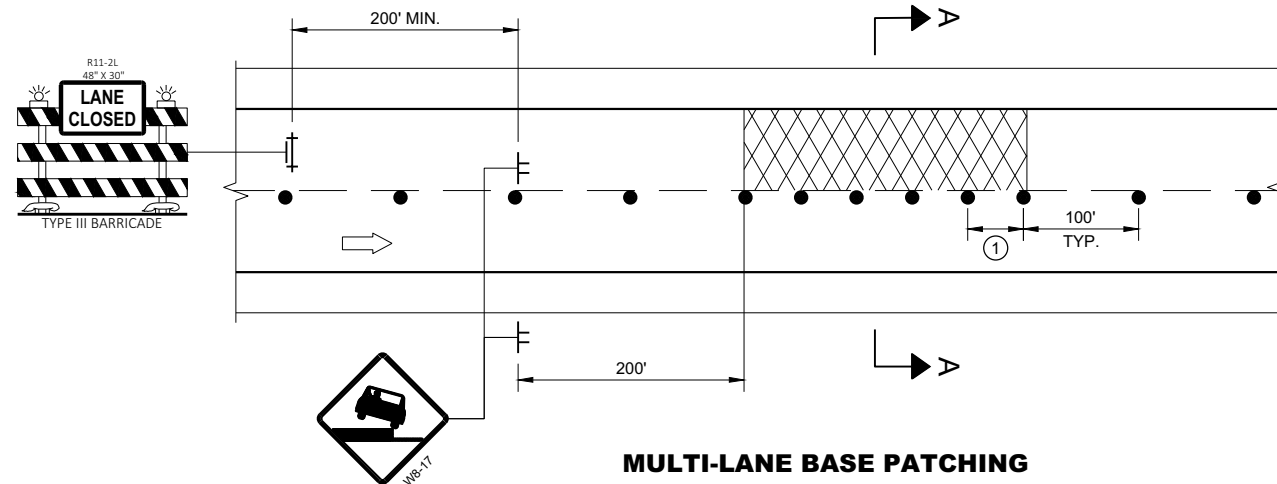
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

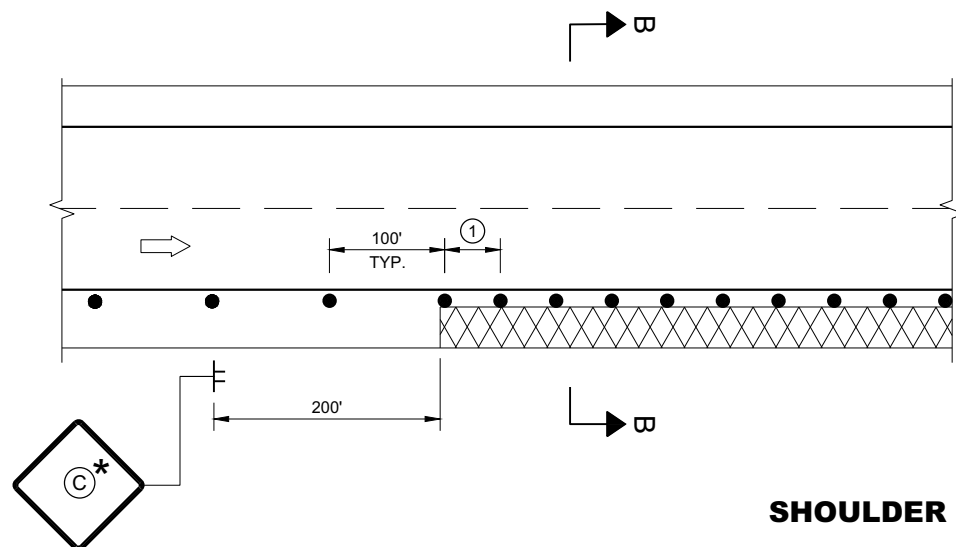
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

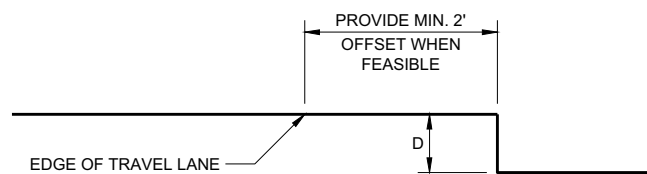
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 W08-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02










**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

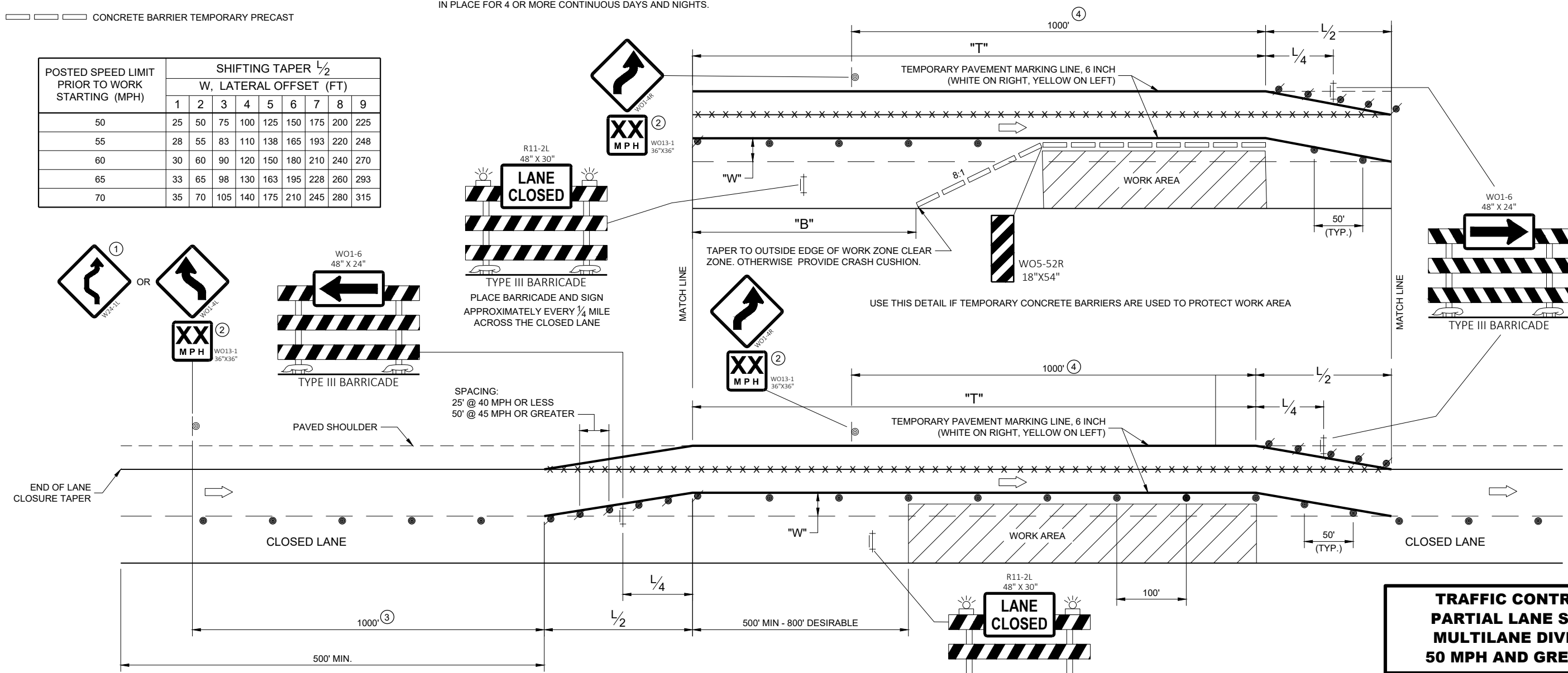
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

- ① USE ONLY WHEN T<600', OMIT WO1-4R.
- ② IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ③ IF THE BEGINNING OF LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.
- ④ IF THE BEGINNING OF THE SECOND LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF THE FIRST LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE FIRST LANE CLOSURE TAPER.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2 W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
50	25	50	75	100	125	150	175	200	225
55	28	55	83	110	138	165	193	220	248
60	30	60	90	120	150	180	210	240	270
65	33	65	98	130	163	195	228	260	293
70	35	70	105	140	175	210	245	280	315



6

6

SDD 15D40-05d

SDD 15D40-05d

**TRAFFIC CONTROL,
PARTIAL LANE SHIFT
MULTILANE DIVIDED
50 MPH AND GREATER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED _____ /S/ Andrew Heidtke
DATE May 2023 WORK ZONE ENGINEER

FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.



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

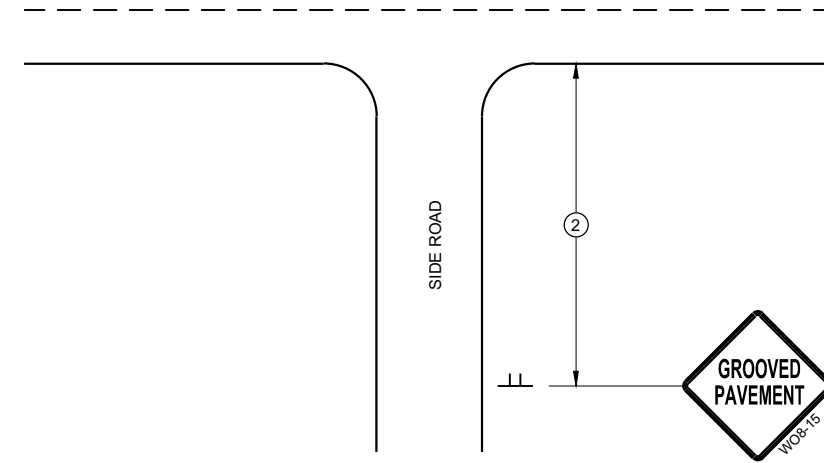
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

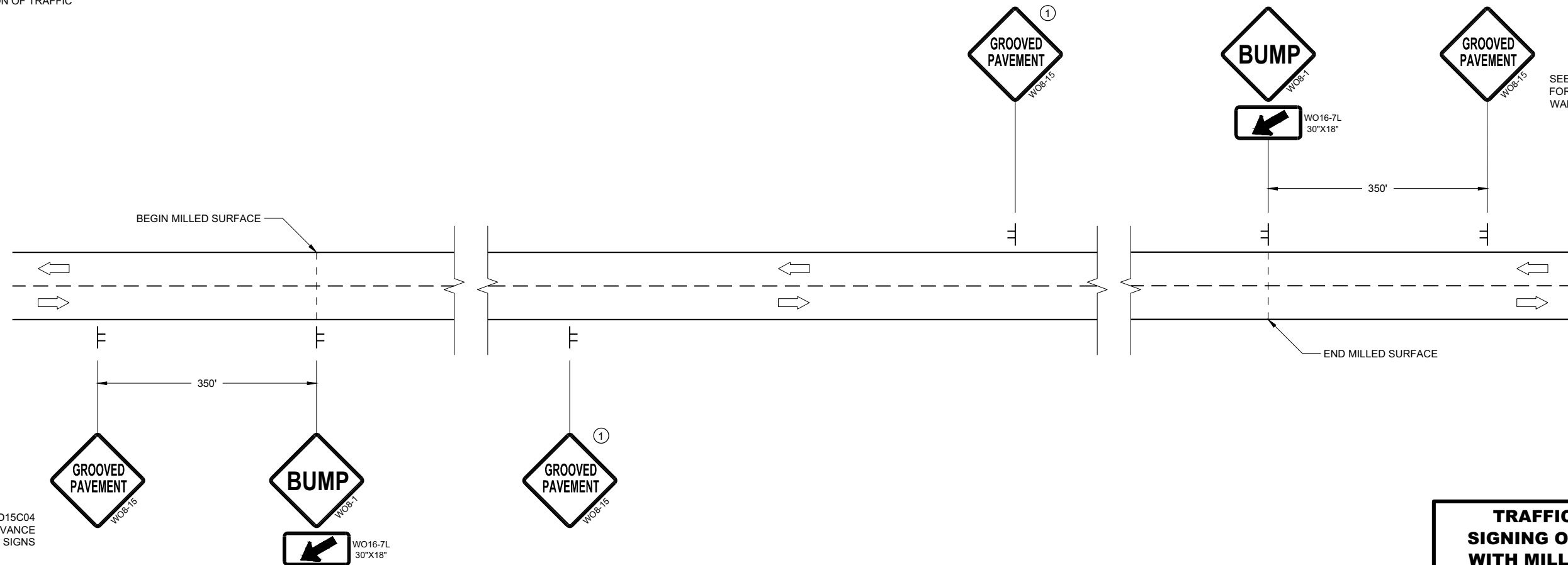
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

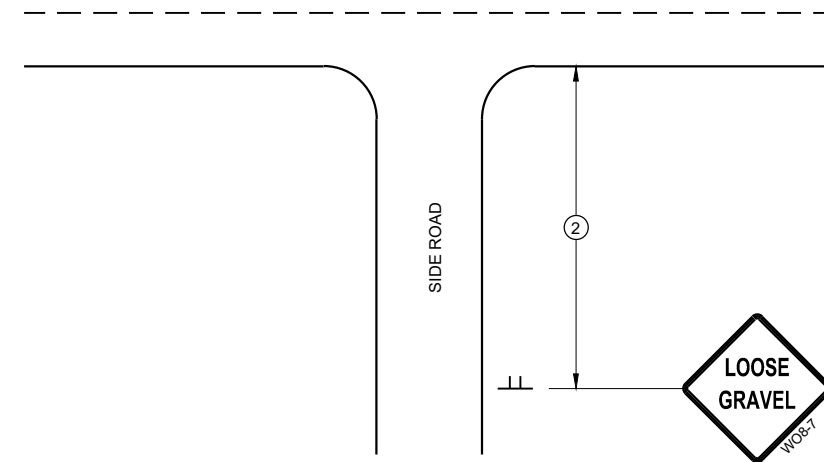
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

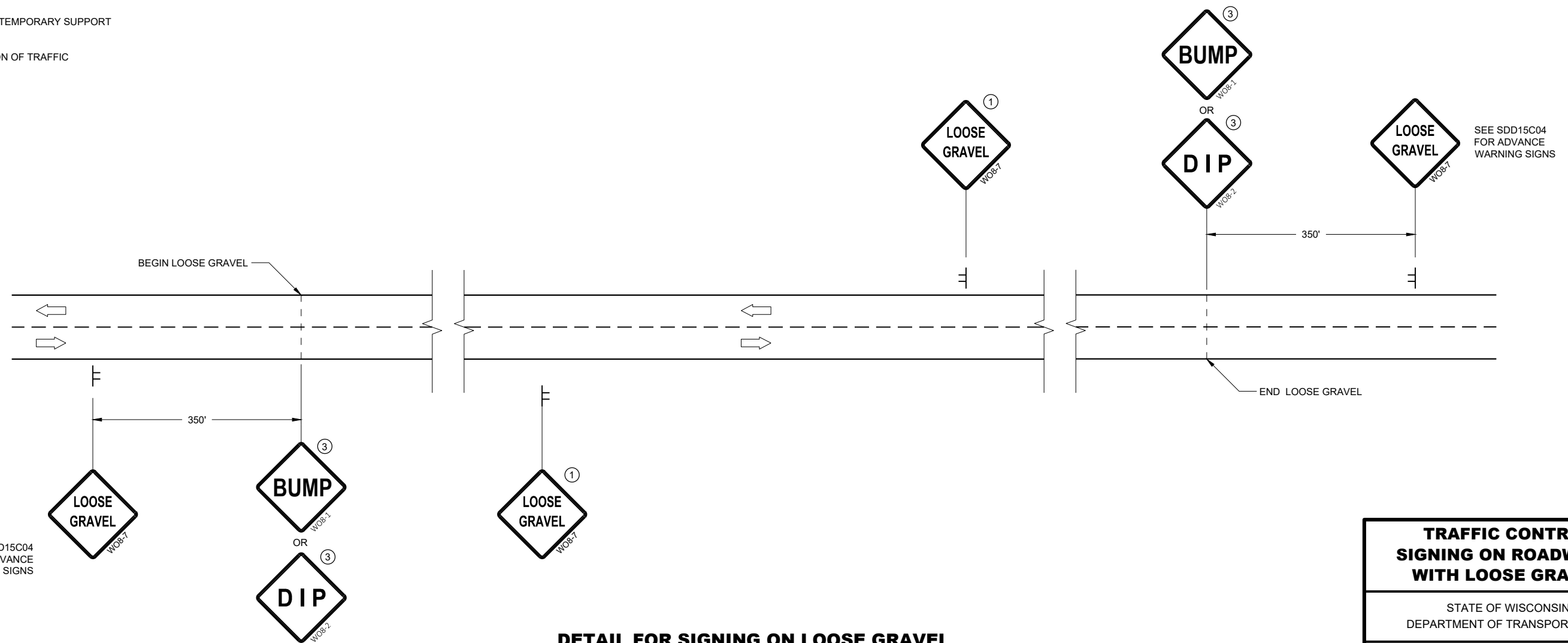
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

- ⊥ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



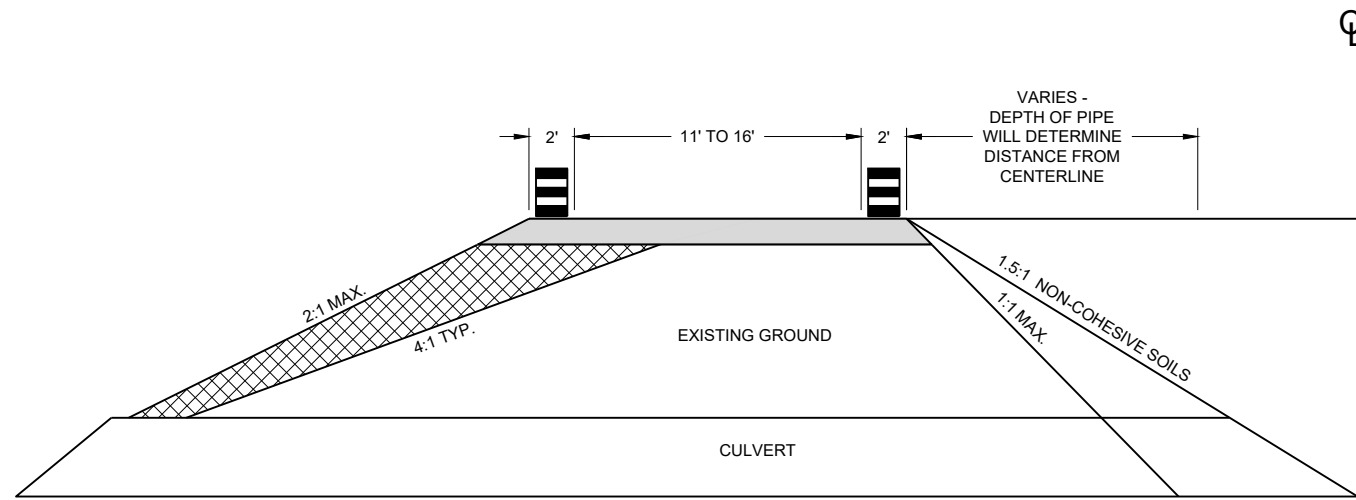
DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
 USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.






ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

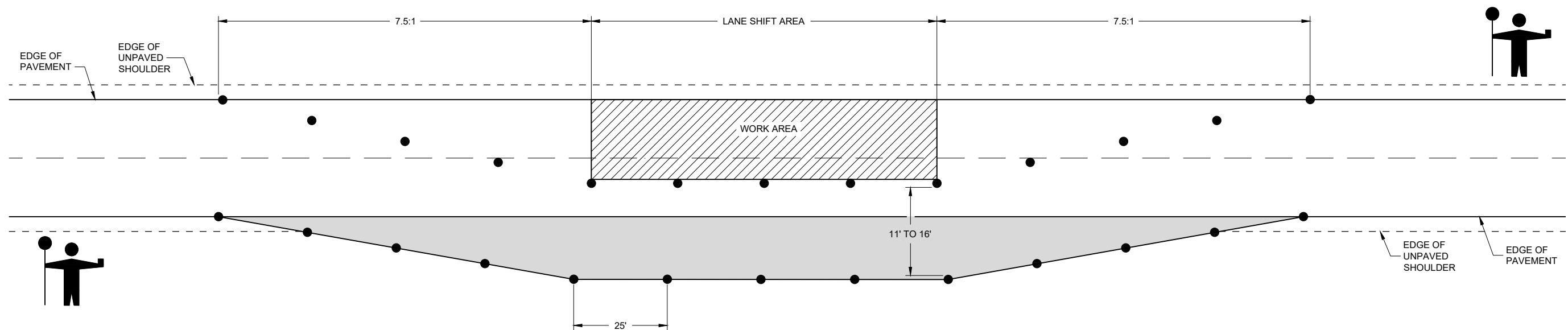
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

-  DRUM WITHOUT WARNING LIGHT
-  6" BASE AGGREGATE DENSE 1 1/2" - INCIDENTAL TO LANE SHIFT ITEM
-  FILL - INCIDENTAL TO LANE SHIFT ITEM
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

**TRAFFIC CONTROL,
 TEMPORARY LANE SHIFT
 DURING CULVERT WORK**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 February 2021 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER

FHWA





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SDD 15D48 - 01

SDD 15D48 - 01

LEGEND

- V1 WORK VEHICLE
- V2 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  FLASHING ARROW PANEL (CAUTION)
-  WORK AREA
-  DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

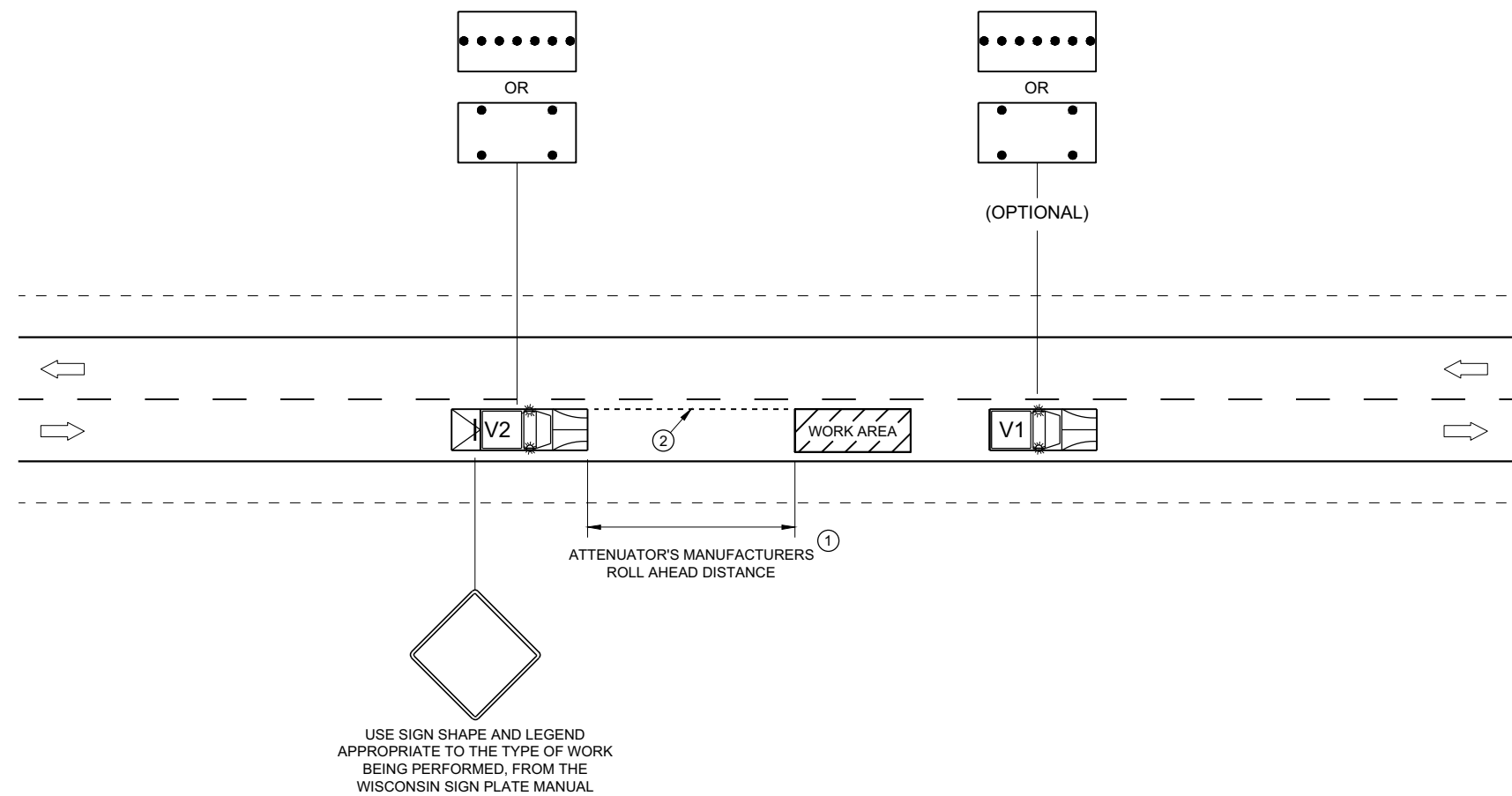
MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

- ① DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ② ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



6

6

SDD 15D51 - 01

SDD 15D51 - 01

**TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY**

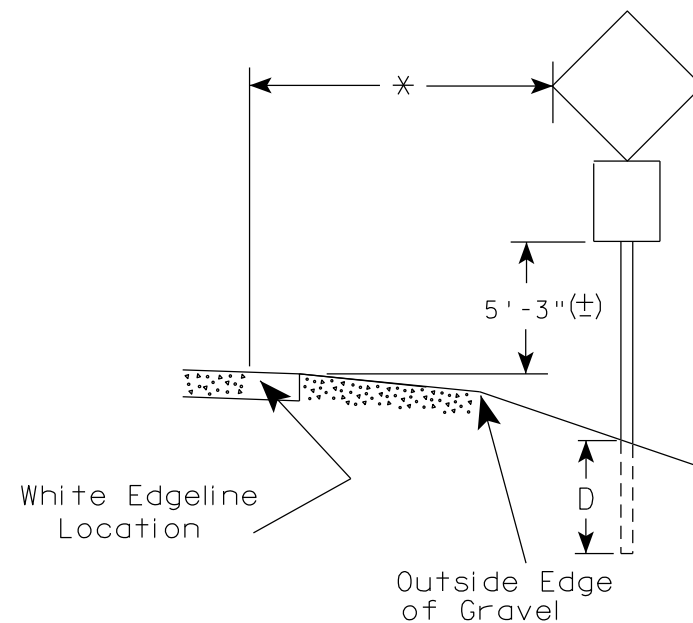
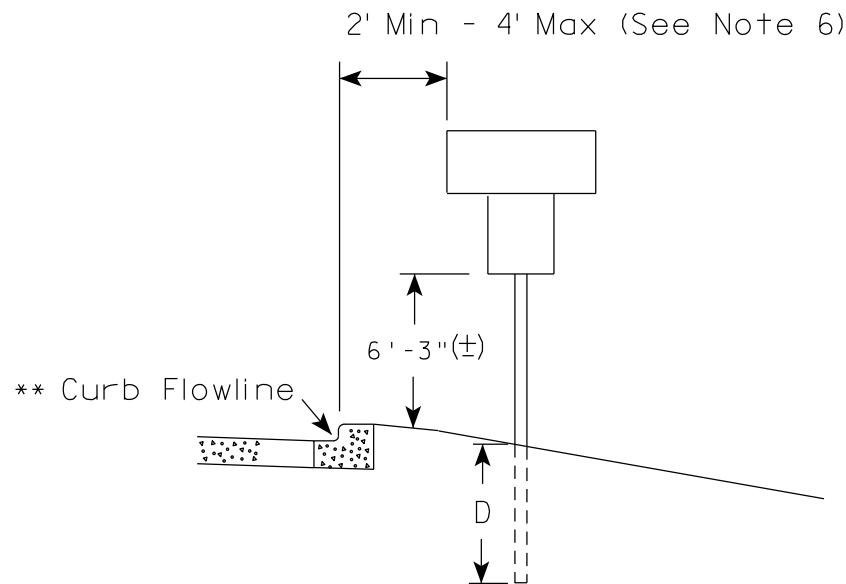
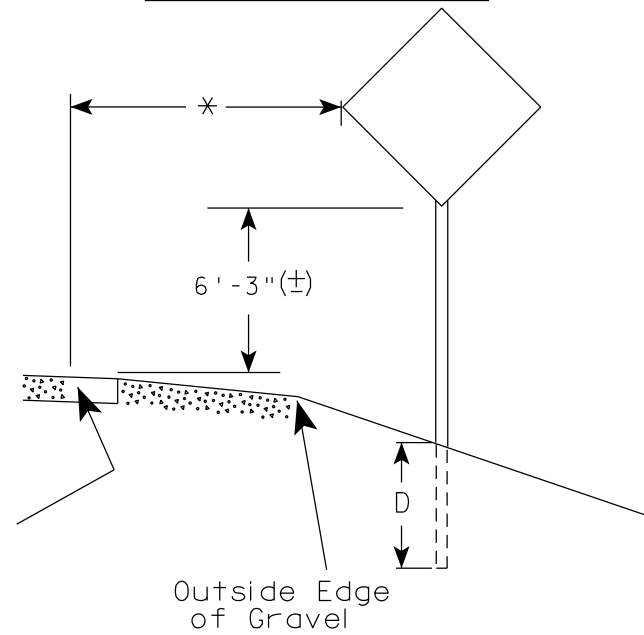
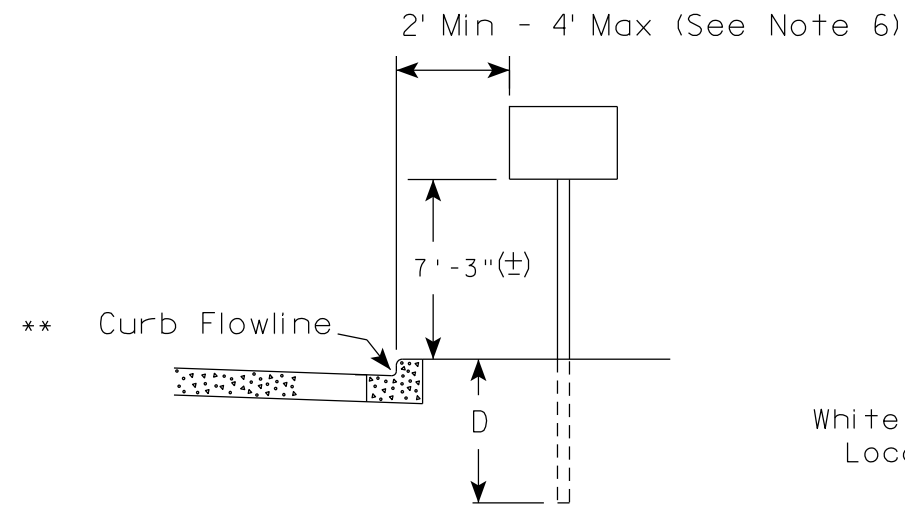
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 DATE /S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

URBAN AREA

RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

- GENERAL NOTES**
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
 2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) 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" (±).
 3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
 4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
 5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 6. The (±) tolerance for mounting height is 3 inches.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the 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.

* 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

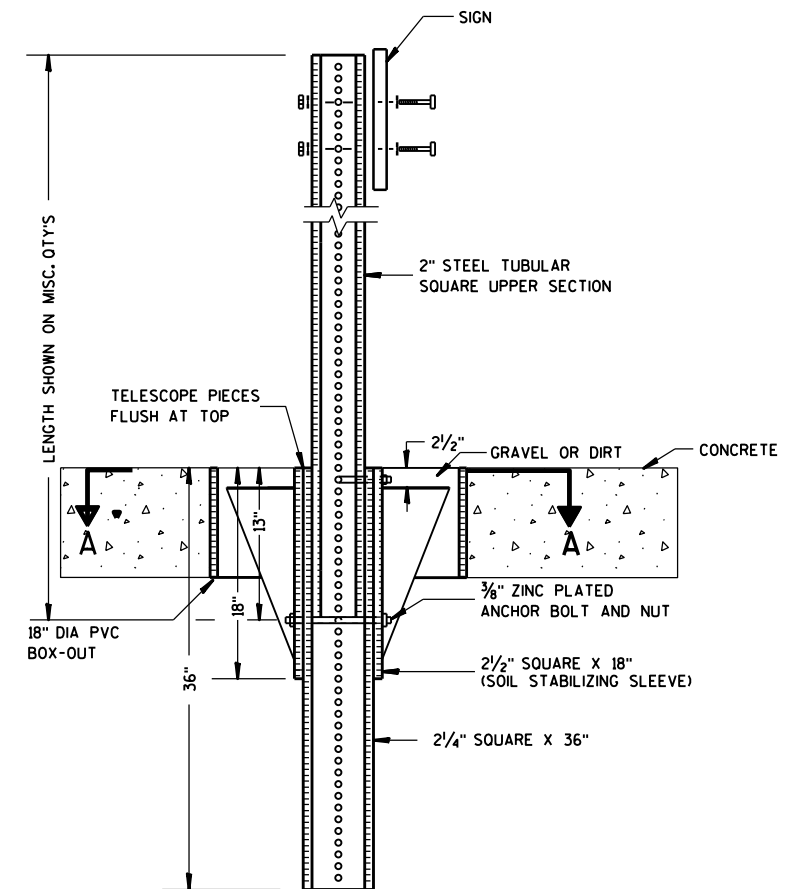
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

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

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

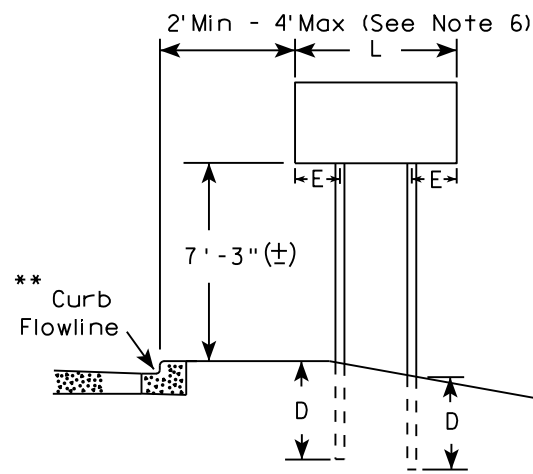
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

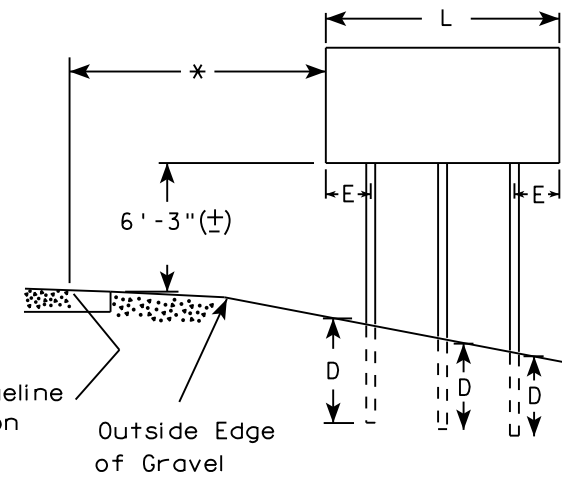
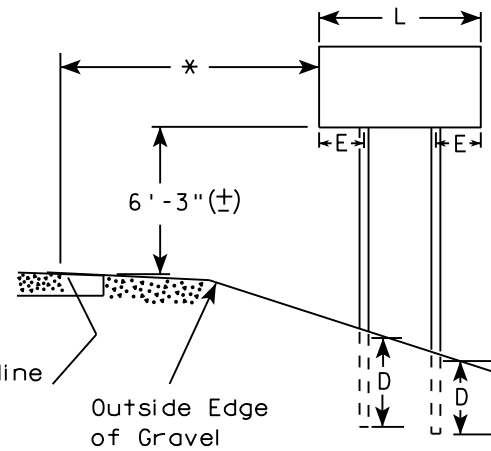
GENERAL NOTES

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" (±).

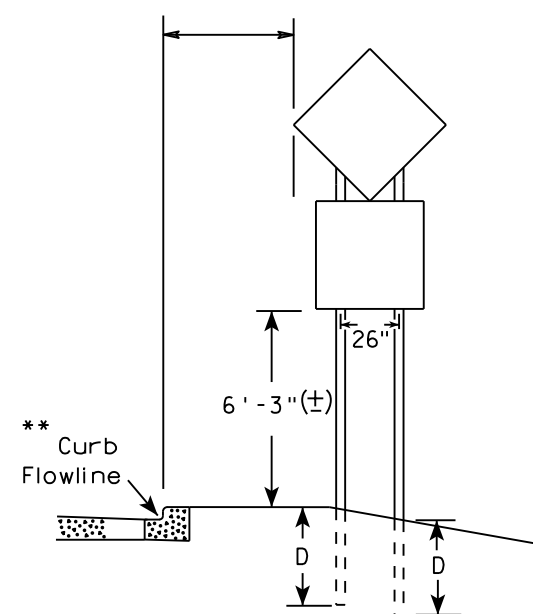
URBAN AREA



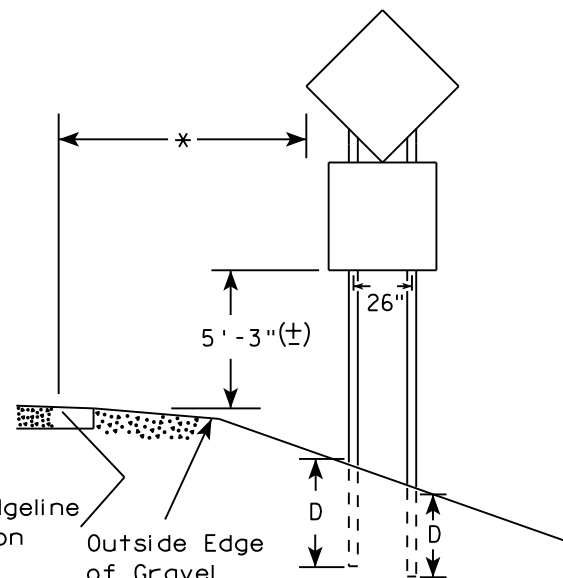
RURAL AREA (See Note 3)



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

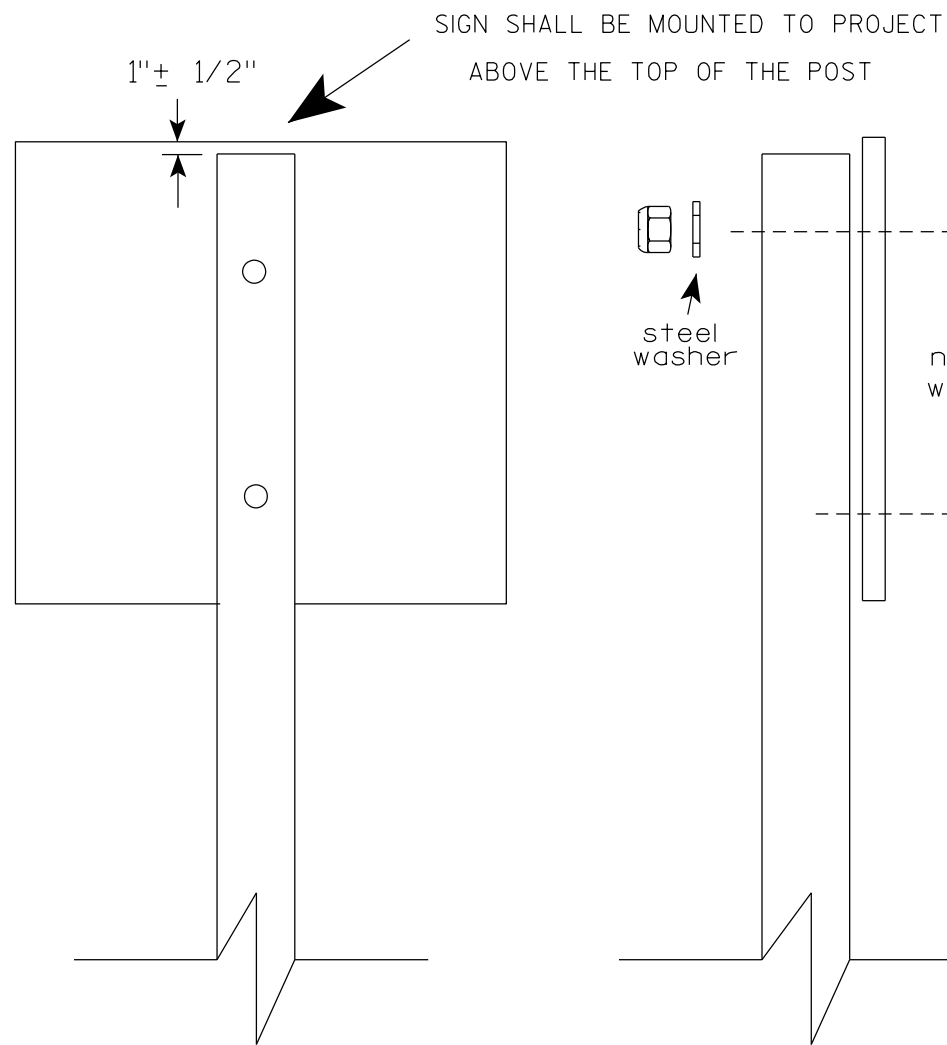
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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



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

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- 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.

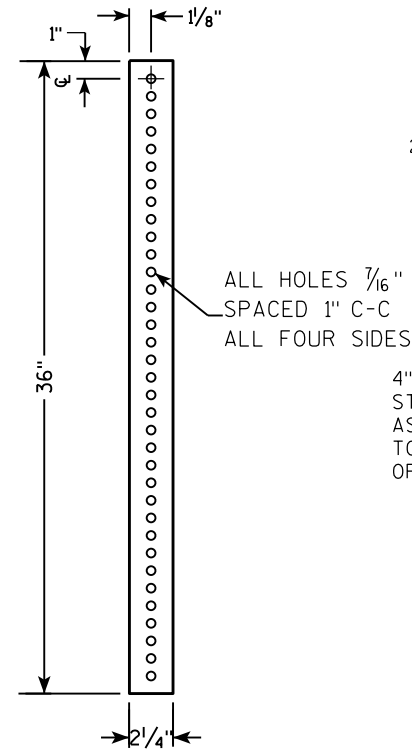
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " 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	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

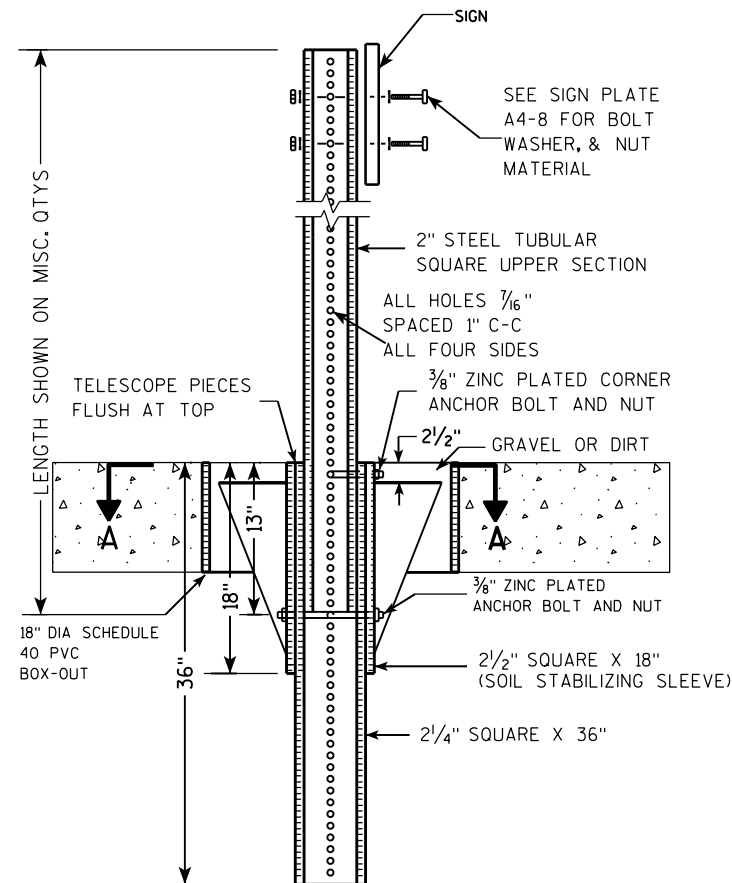
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



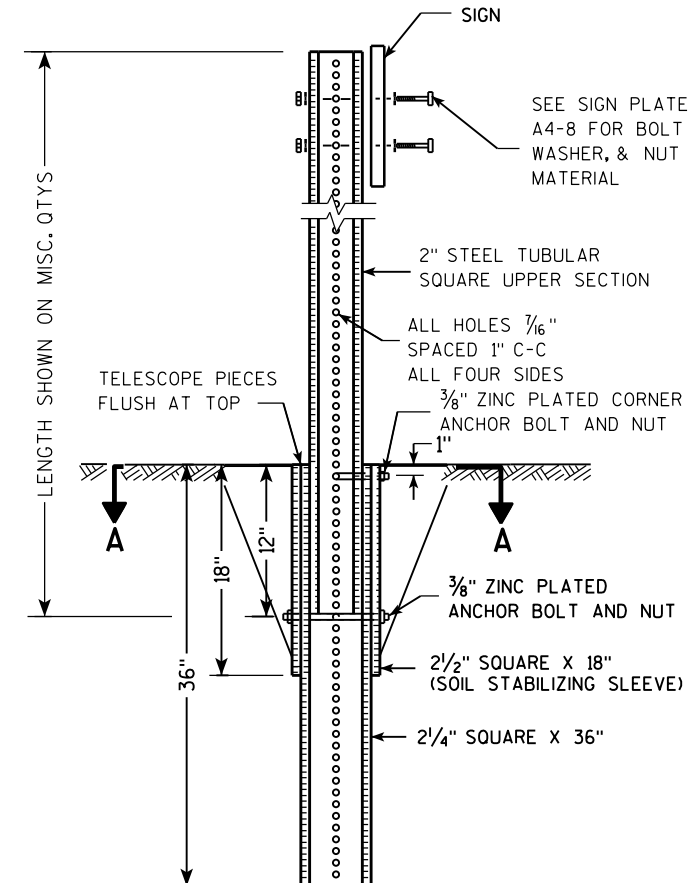
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

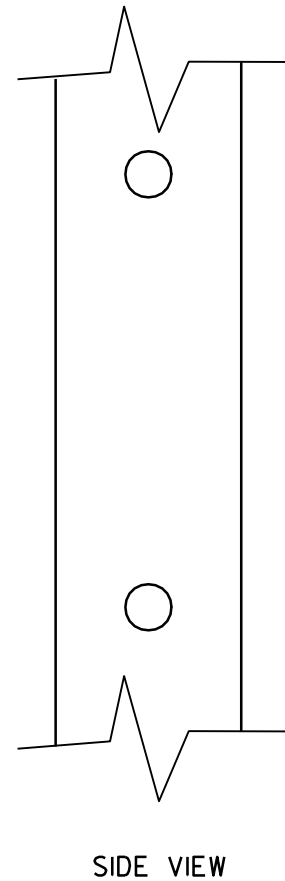
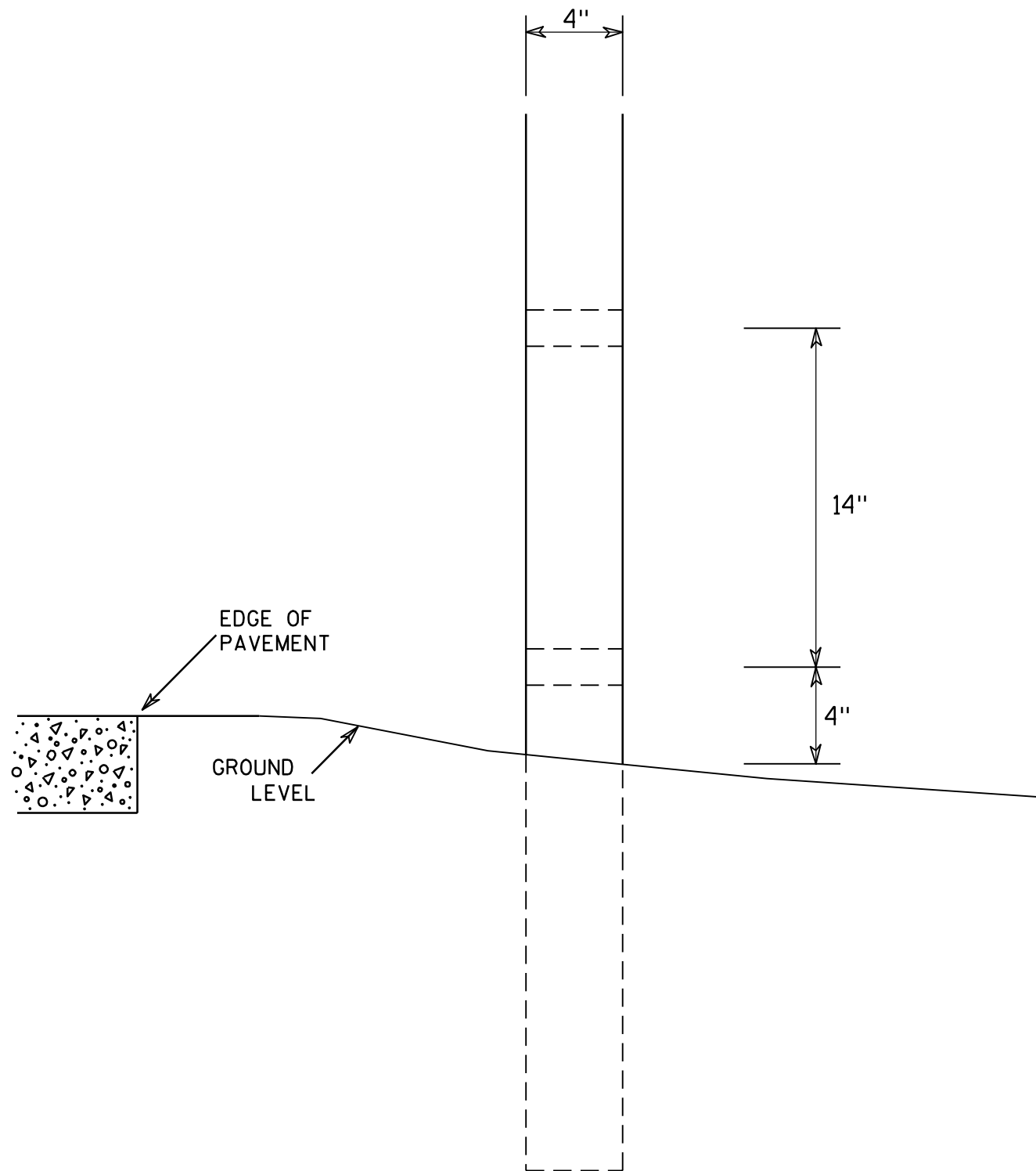
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



GENERAL NOTES

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

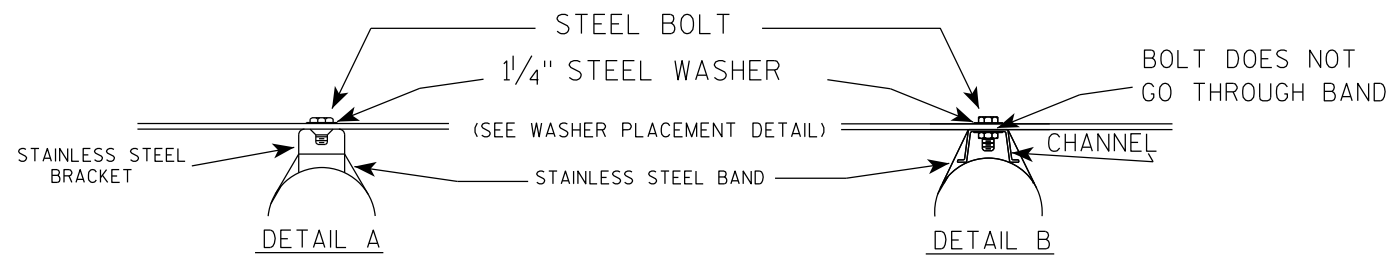
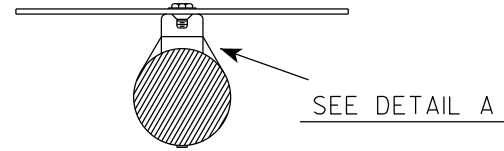
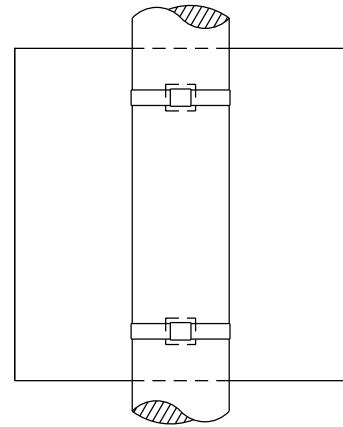
7

7

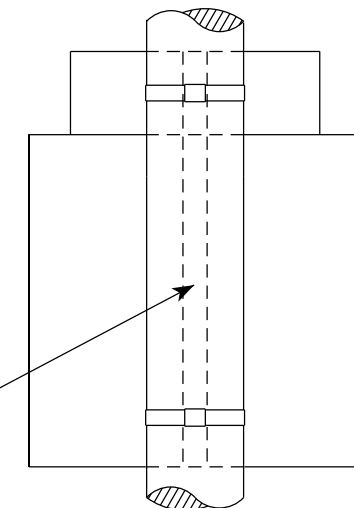
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

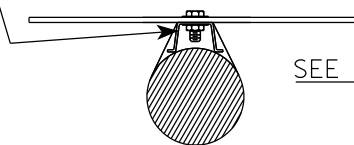
SINGLE SIGN



"J" ASSEMBLY

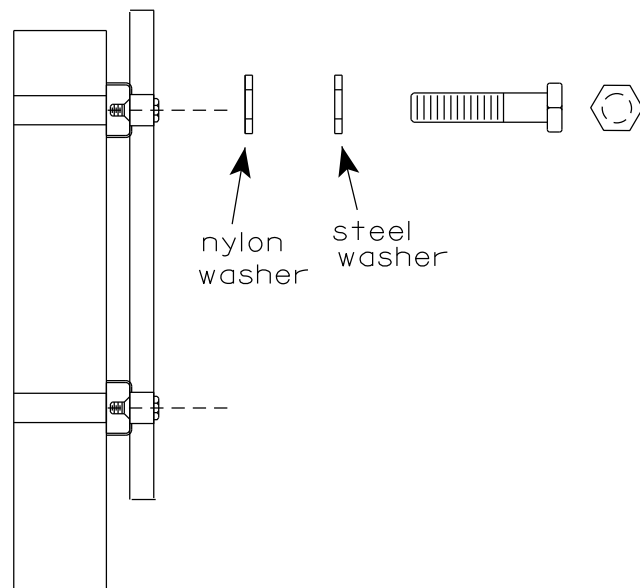


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



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

WASHER PLACEMENT



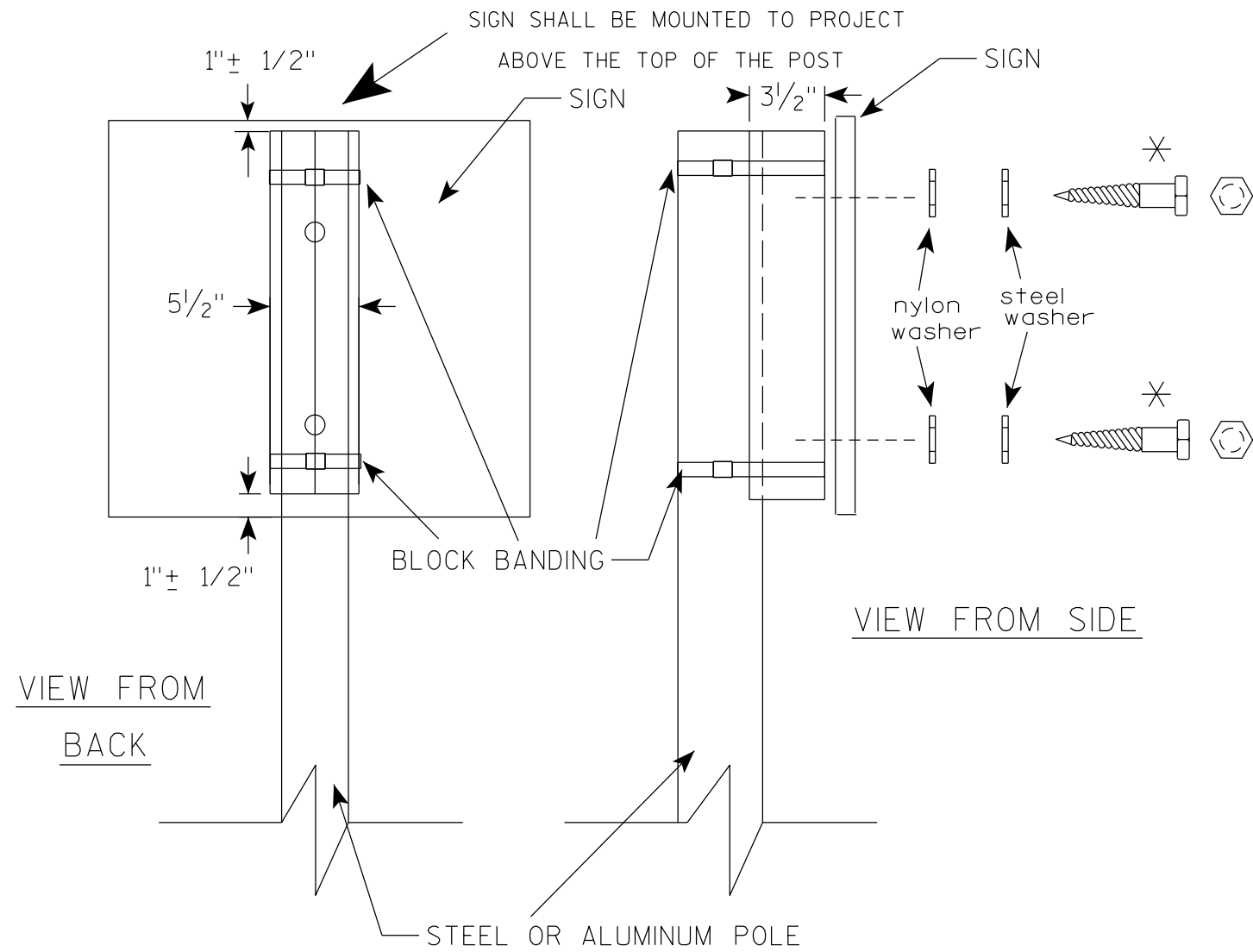
WASHERS (ALL POSTS) -
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON
 FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

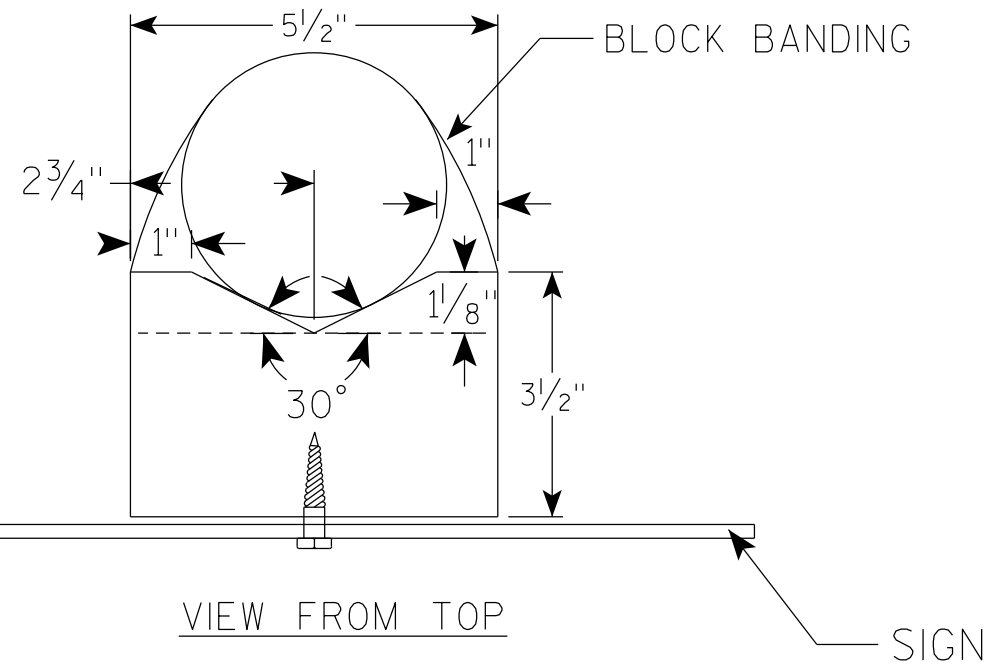
DATE 6/10/19 PLATE NO. A5-9.4



GENERAL NOTES

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

* LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL
(V-BLOCK OPTION)

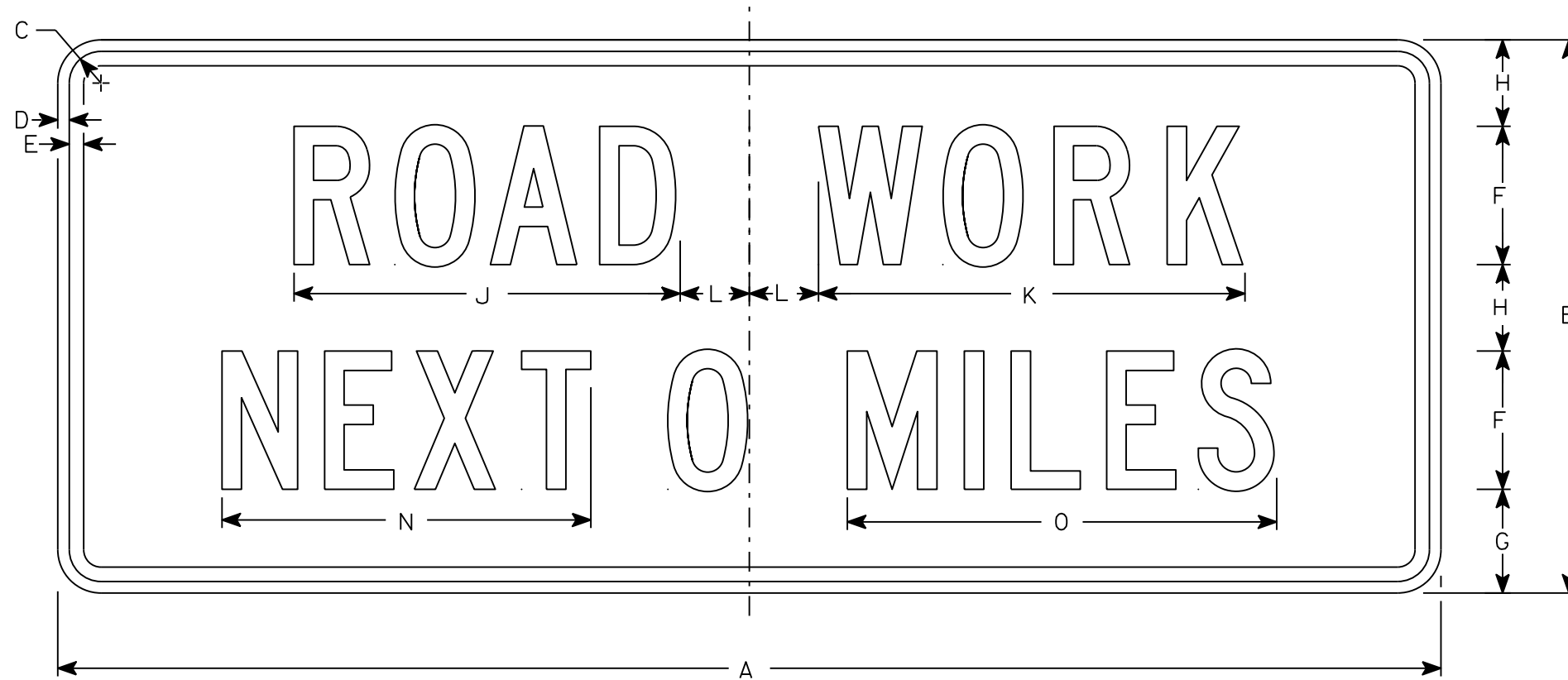
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
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. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-1

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	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8													10
3																												
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8													10
5																												

STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

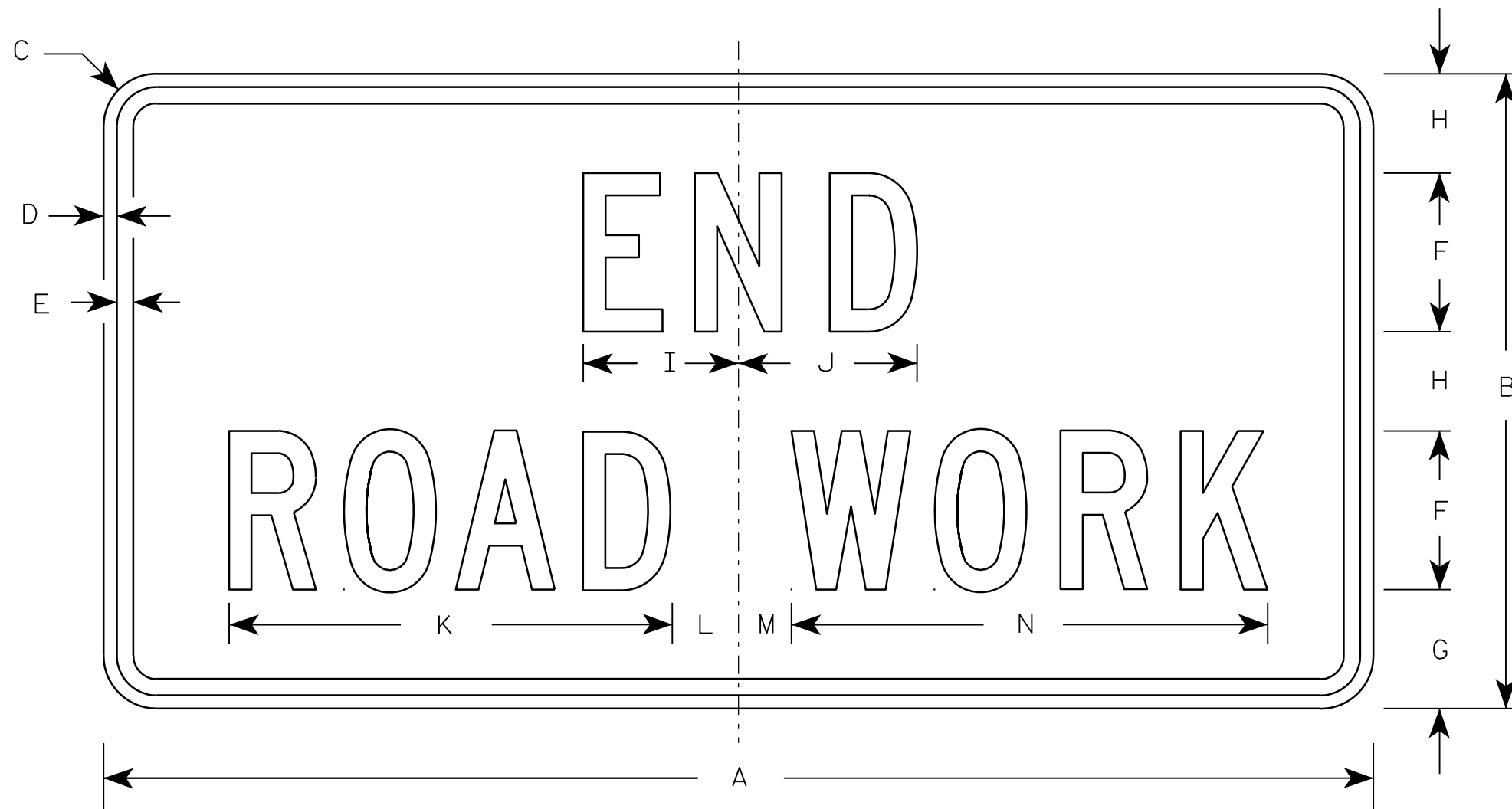
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - 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.



G20-2A

7

7

Metric equivalent for this sign is:

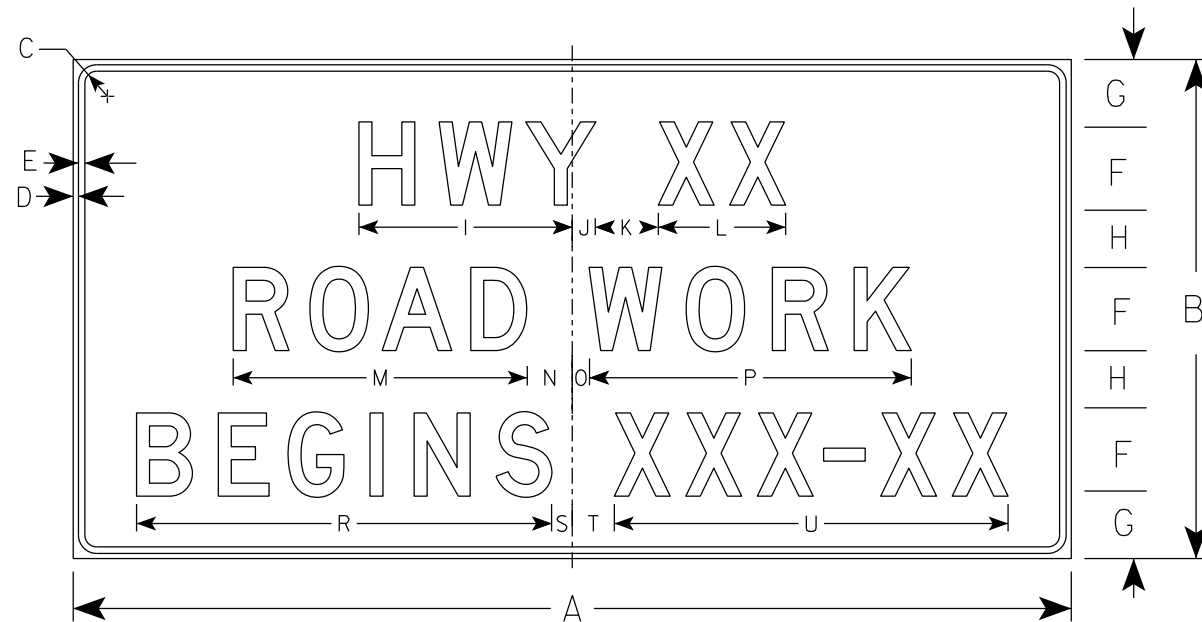
SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area sq. m
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

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																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

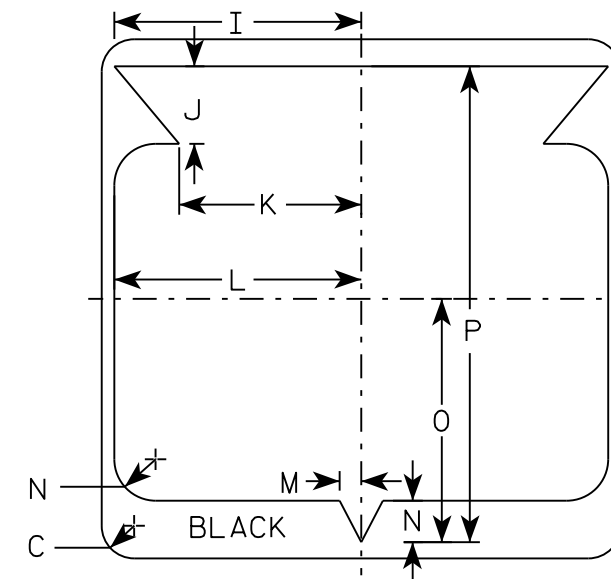
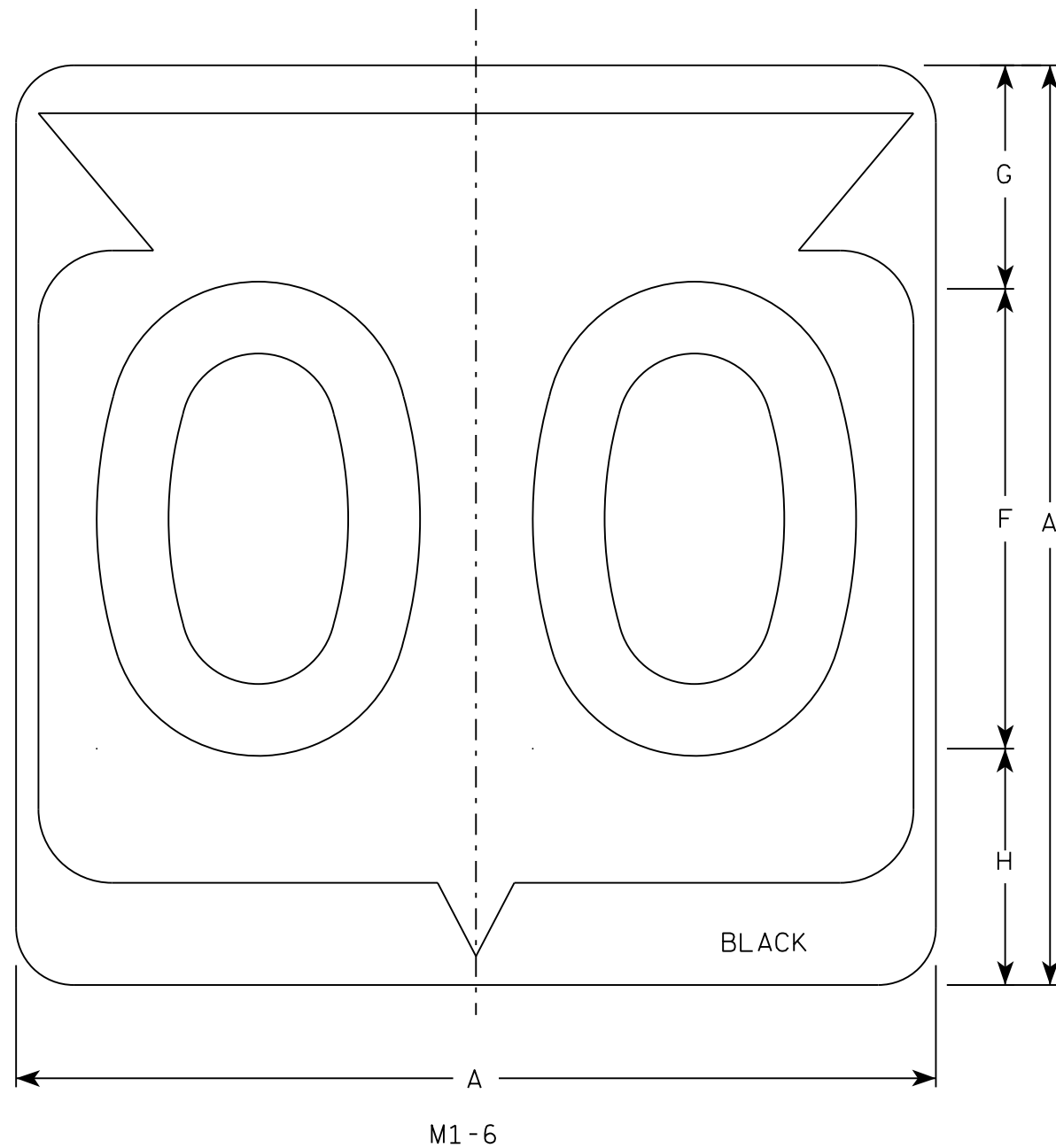
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

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

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs 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.



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			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

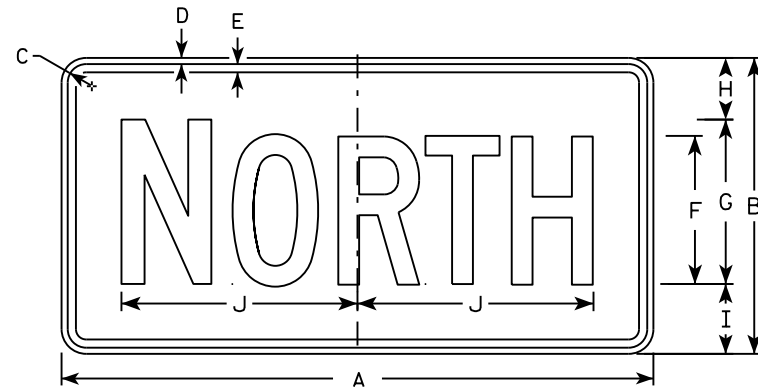
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

7

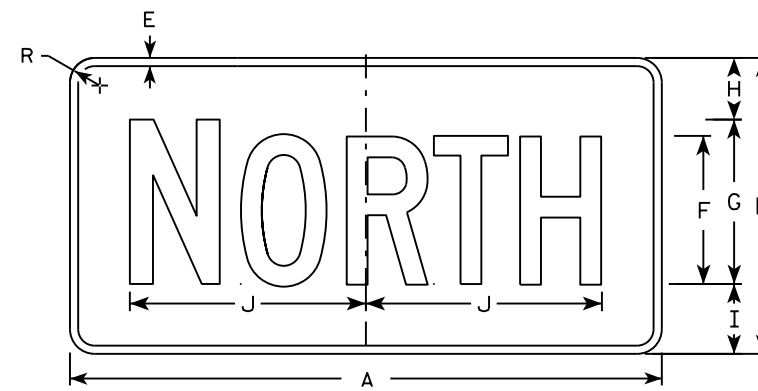
7

NOTES

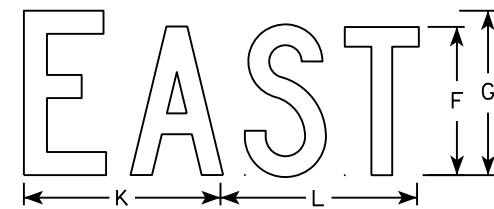
- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 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.



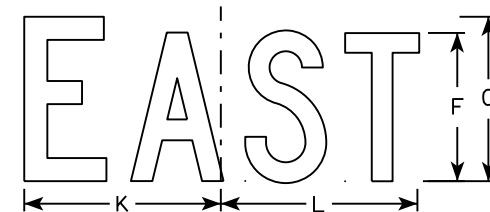
M3-1
MM3-1
MP3-1



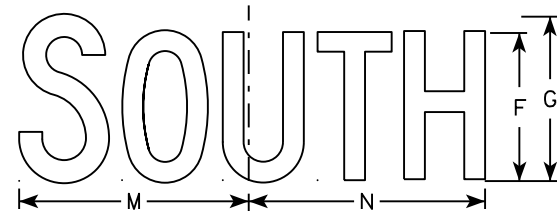
MB3-1
MK3-1
MN3-1



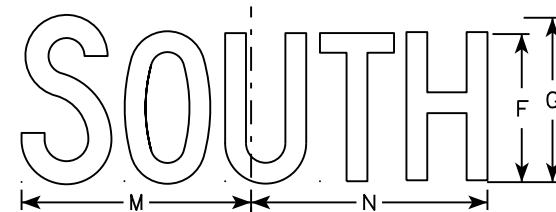
M3-2
MM3-2
MP3-2



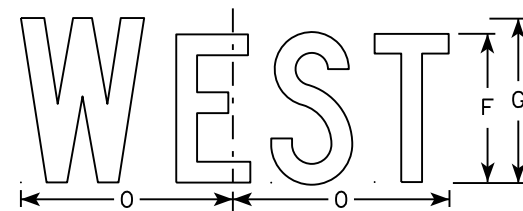
MB3-2
MK3-2
MN3-2



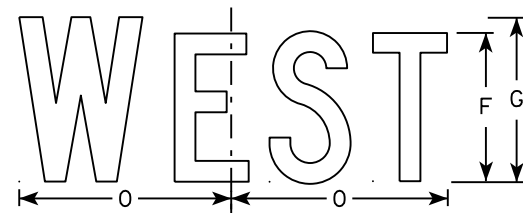
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

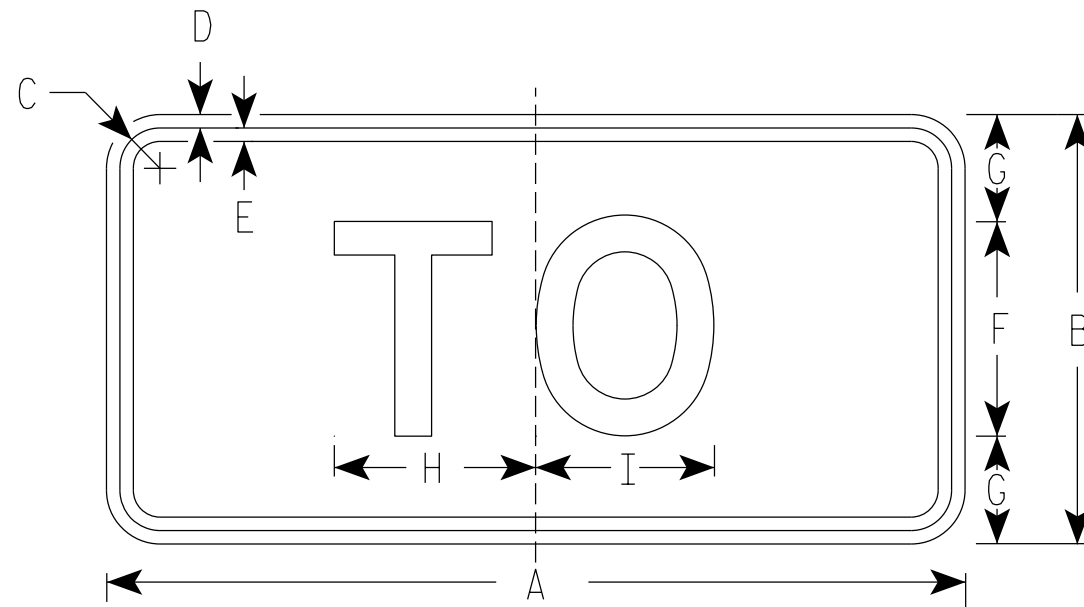
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8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

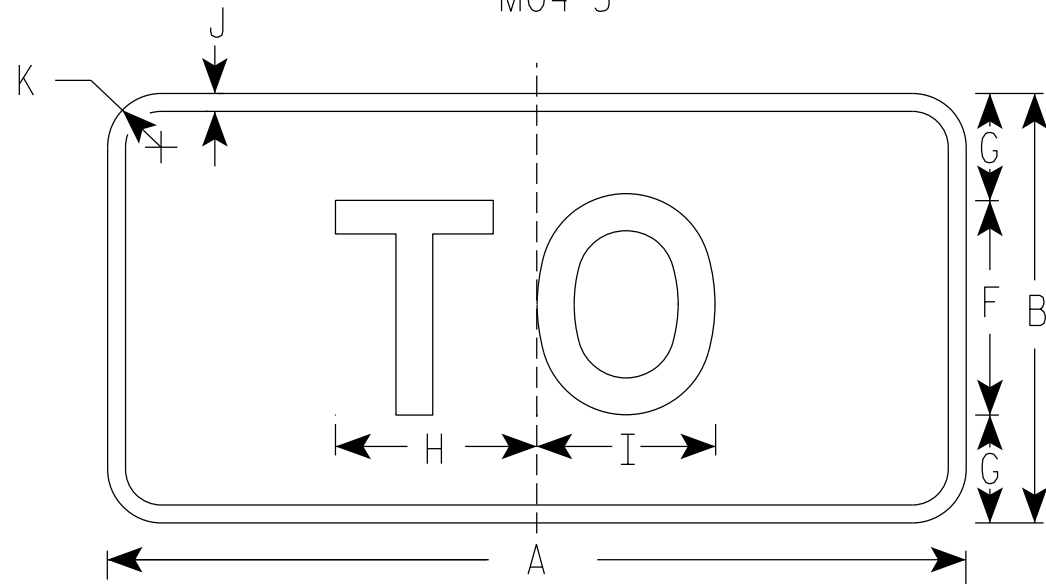
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See note 5
Message - See note 5
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. M4-5 Background - White
Message - Black
MB4-5 Background - Blue
Message - White
MK4-5 Background - Green
Message - White
MM4-5 Background - White
Message - Green
MN4-5 Background - Brown
Message - White
MP4-5 Background - White
Message - Blue
M04-5 Background - Orange Type F Reflective
Message - Black

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	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

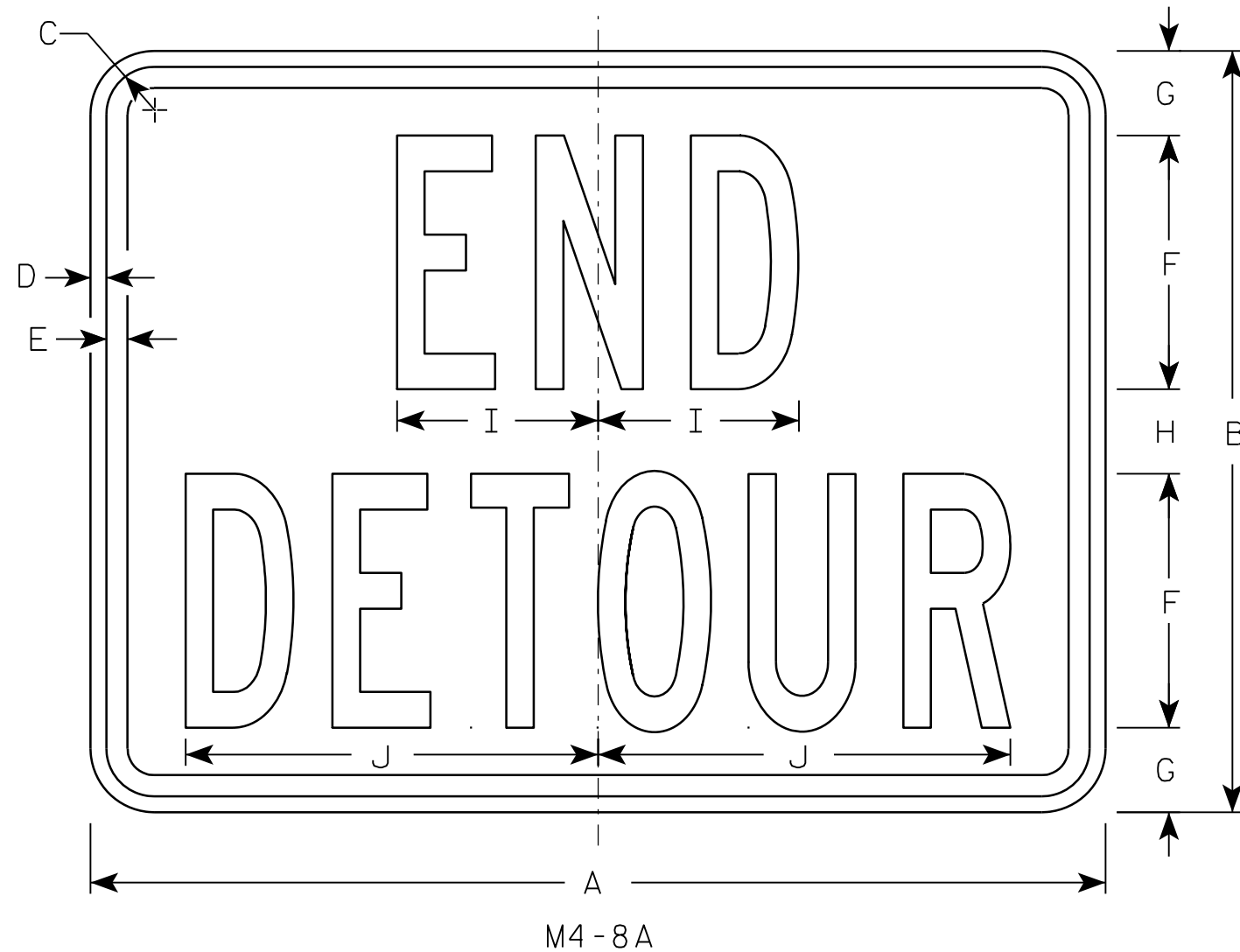
APPROVED *Matthew R. Rauch*
State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

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

NOTES

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



7

7

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

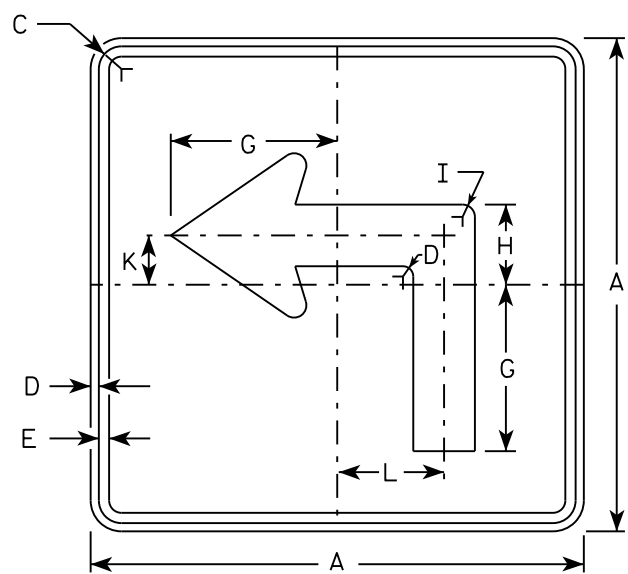
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

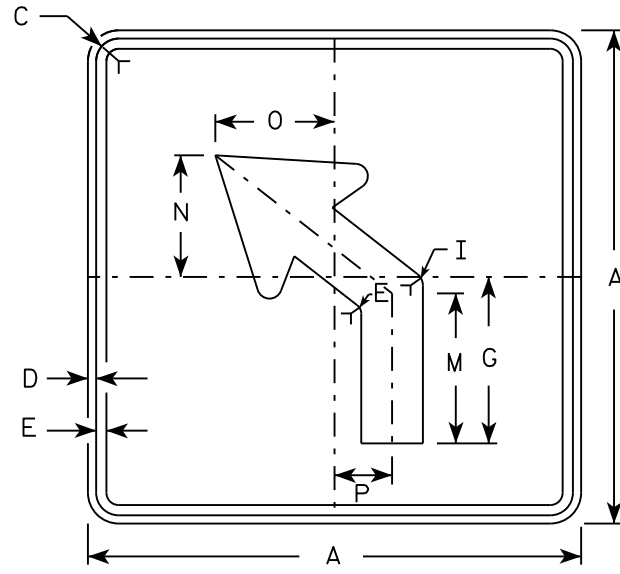
APPROVED *Matthew R Rauch*
for State Traffic Engineer

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

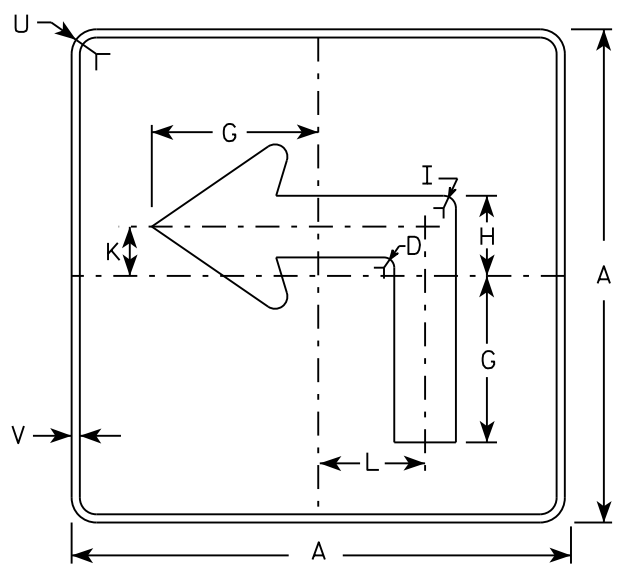
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



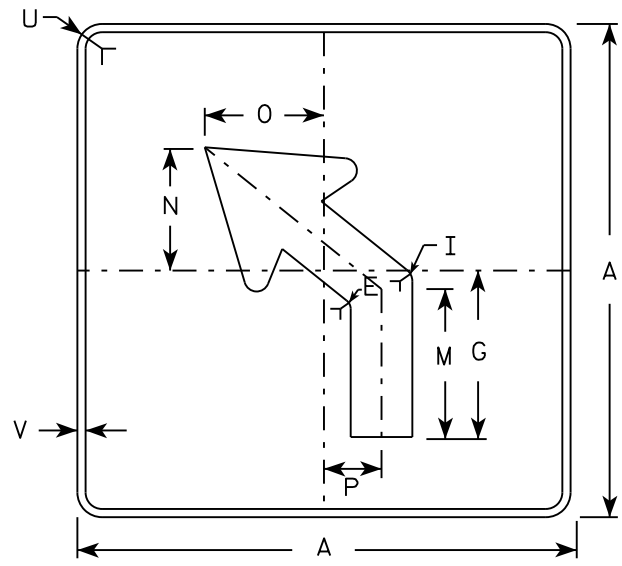
M5-1L
MM5-1L
M05-1L
MP5-1L



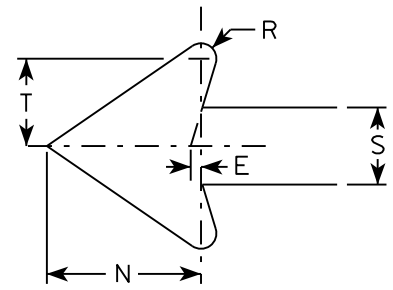
M5-2L
MM5-2L
M05-2L
MP5-2L



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.

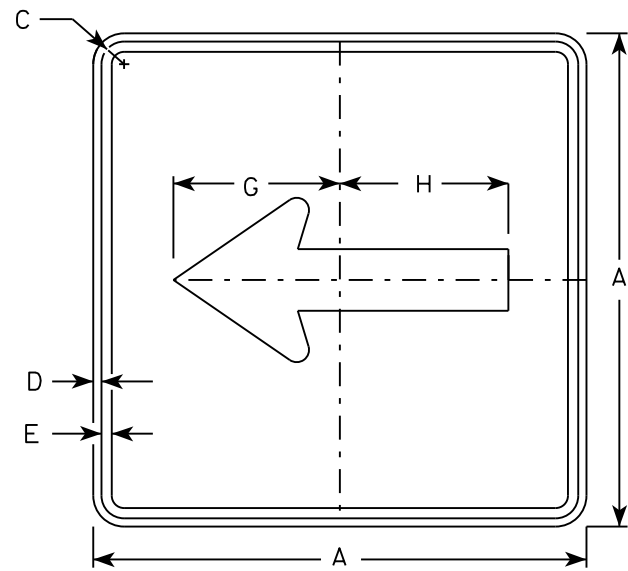
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
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

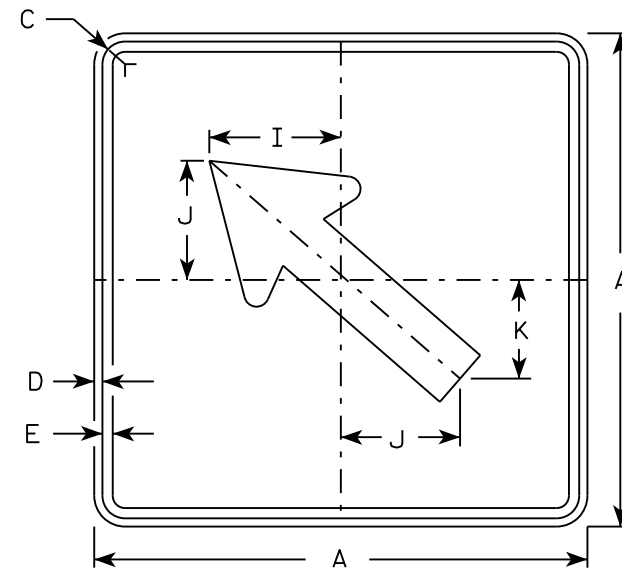
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

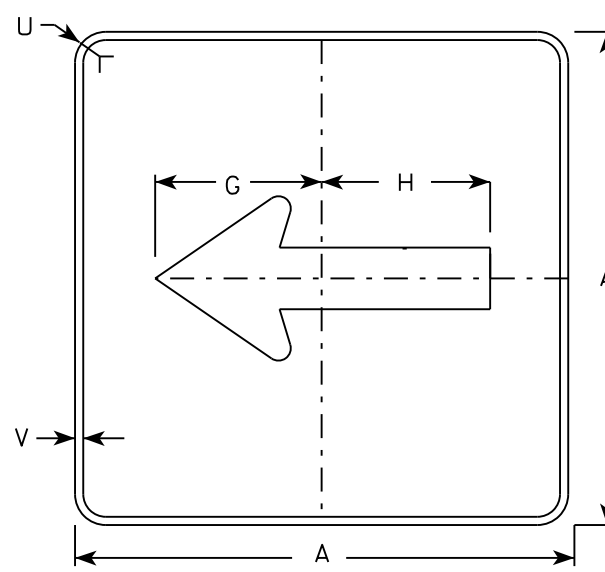
DATE 10/15/15 PLATE NO. M5-1.13



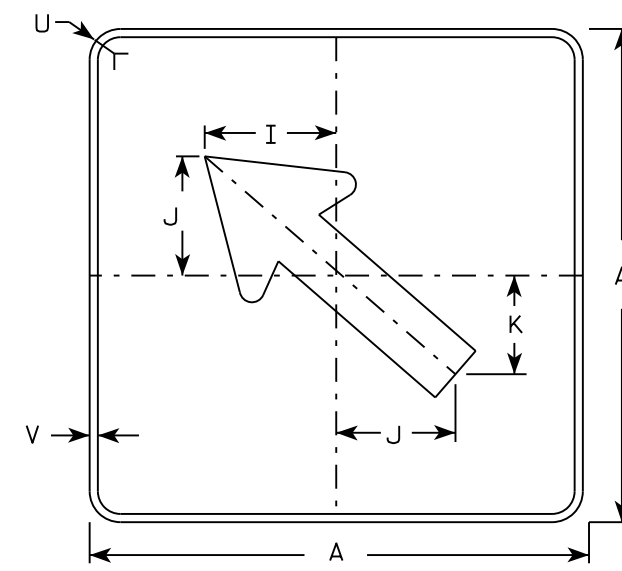
M6-1
MM6-1
M06-1
MP6-1



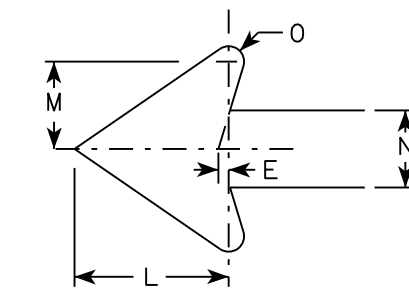
M6-2
MM6-2
M06-2
MP6-2



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

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

STANDARD SIGN
M6-1 & M6-2
SERIES

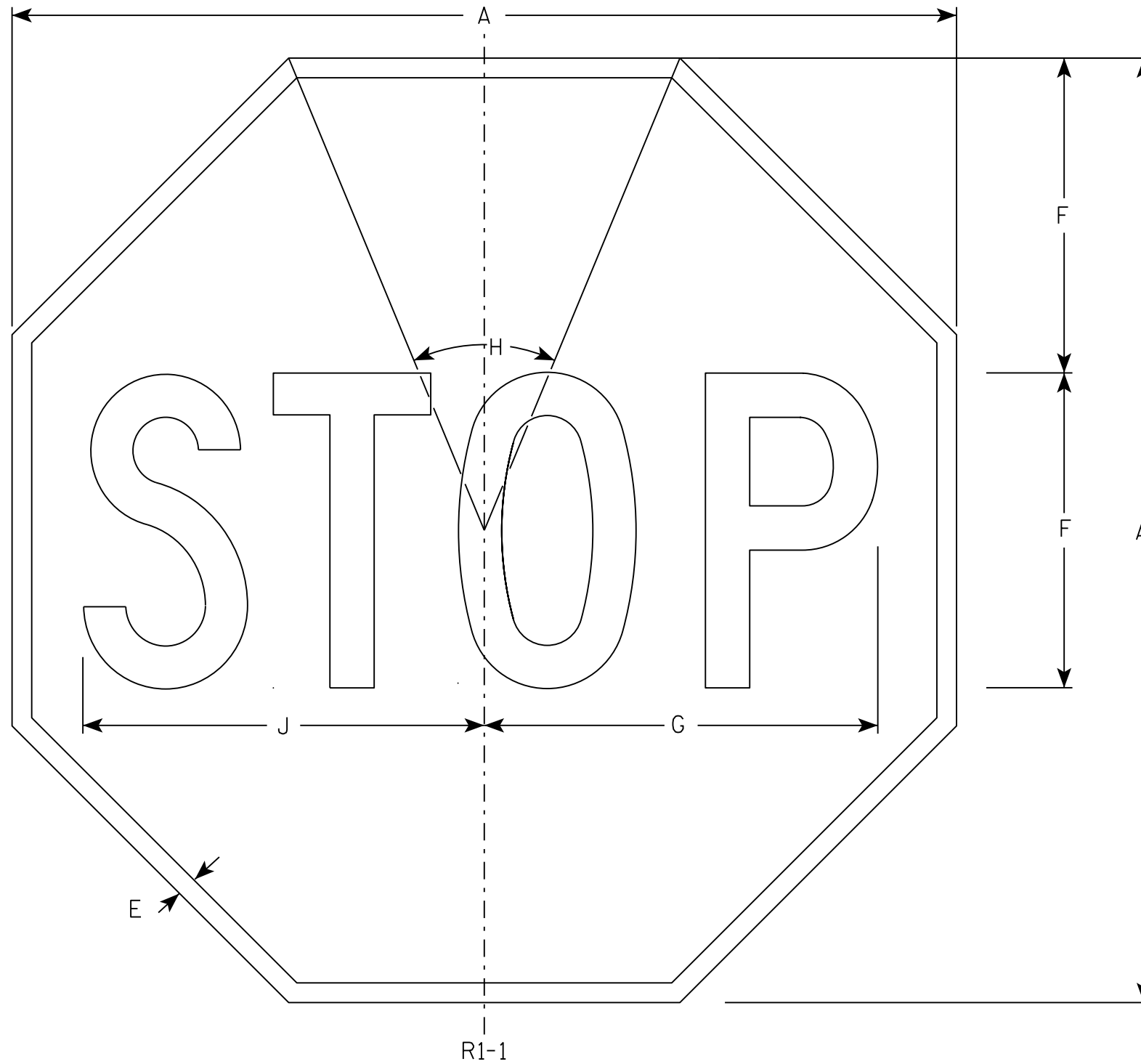
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

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



7

7

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

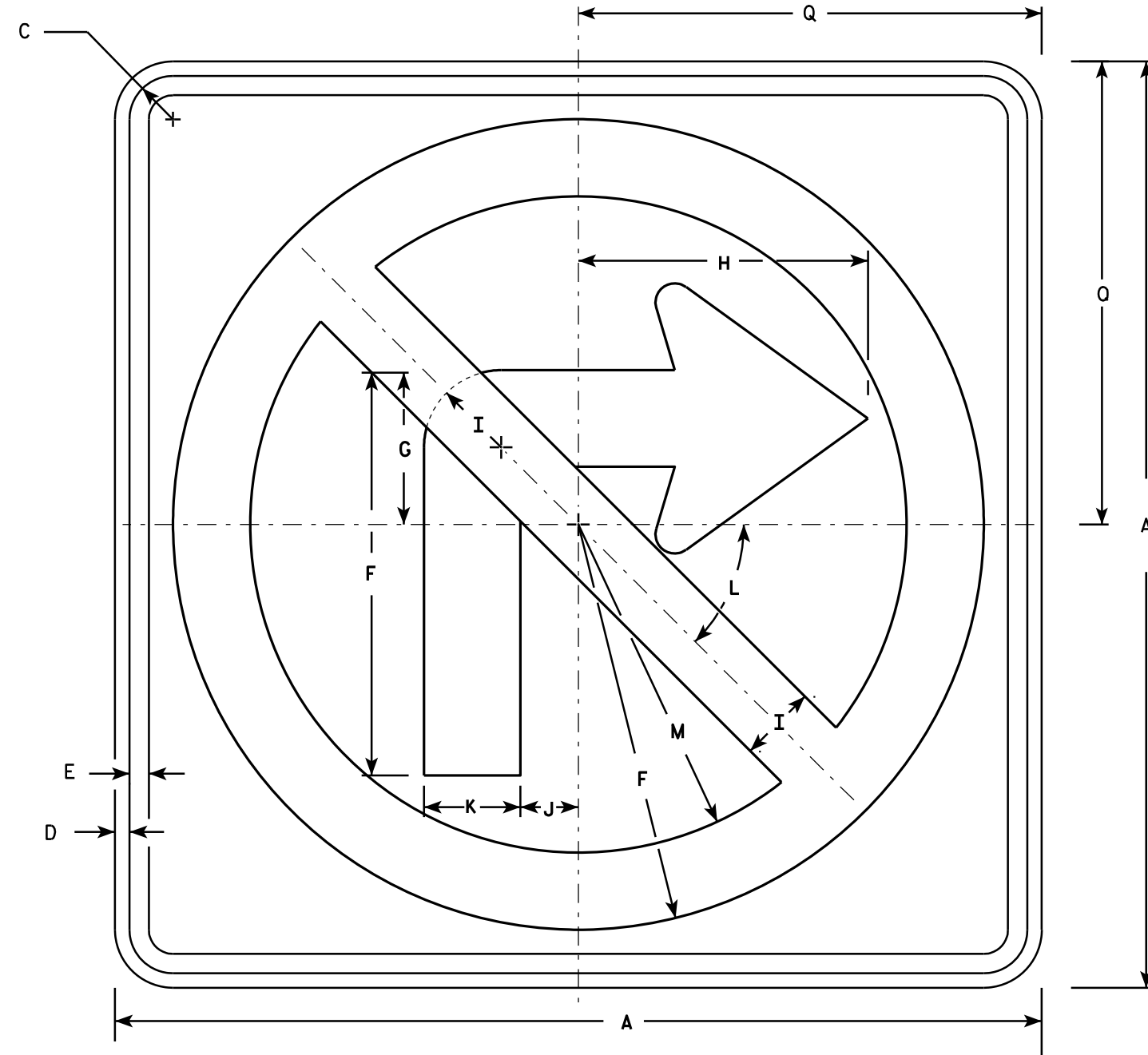
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

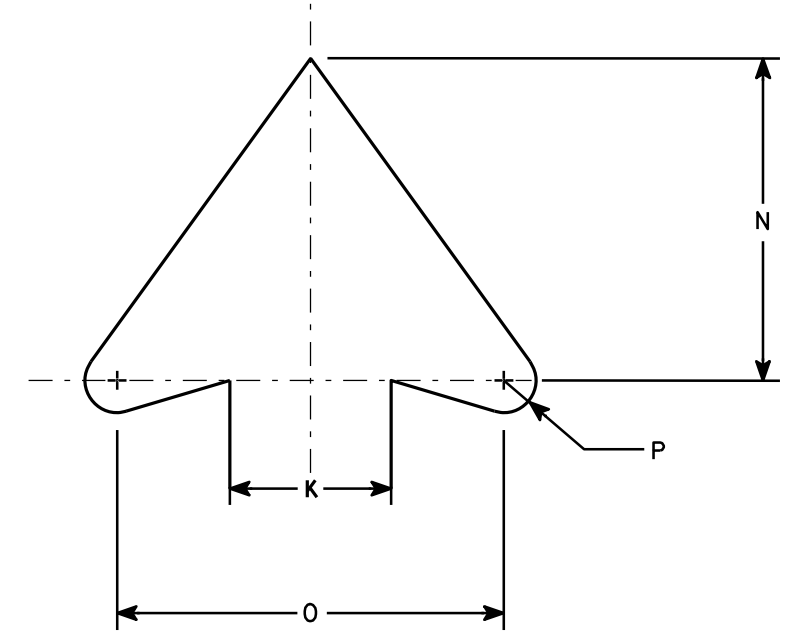
DATE 11/12/15 PLATE NO. R1-1.13



R3-1

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 - See note 4
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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

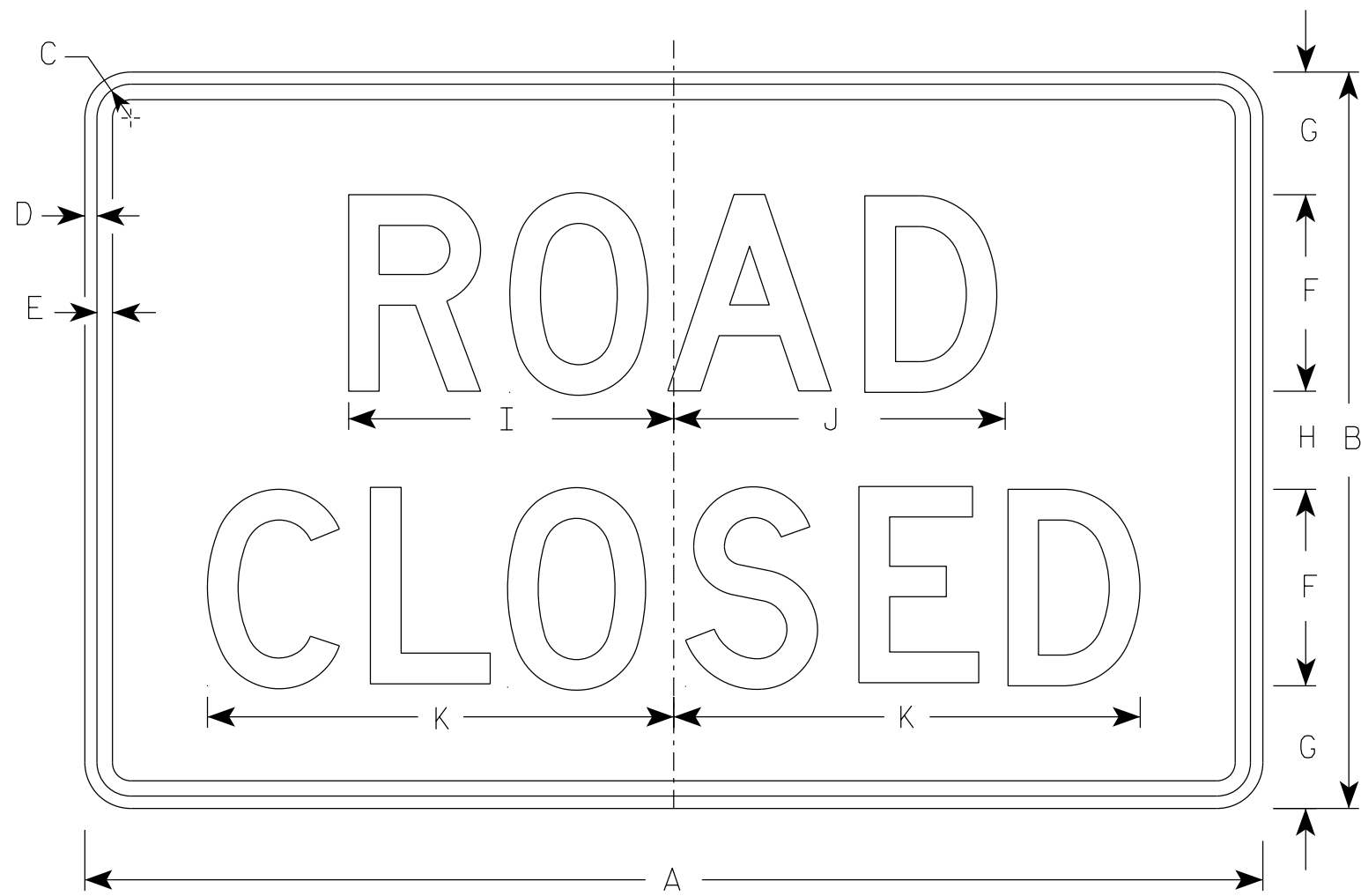
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

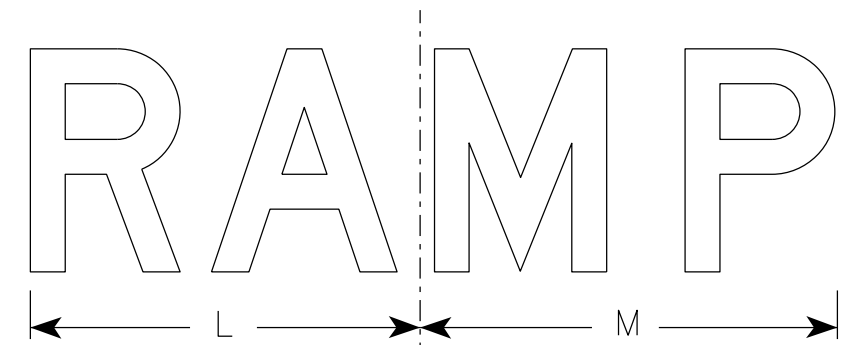
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

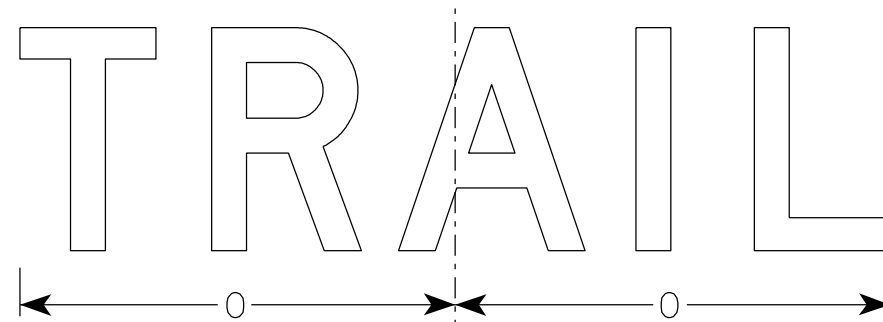
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



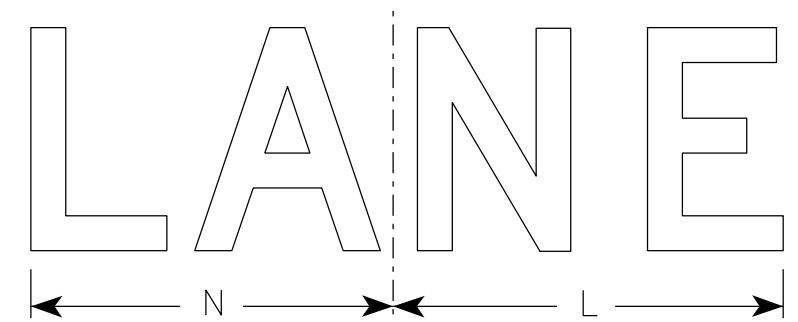
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
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. Modify the message as required.

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	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

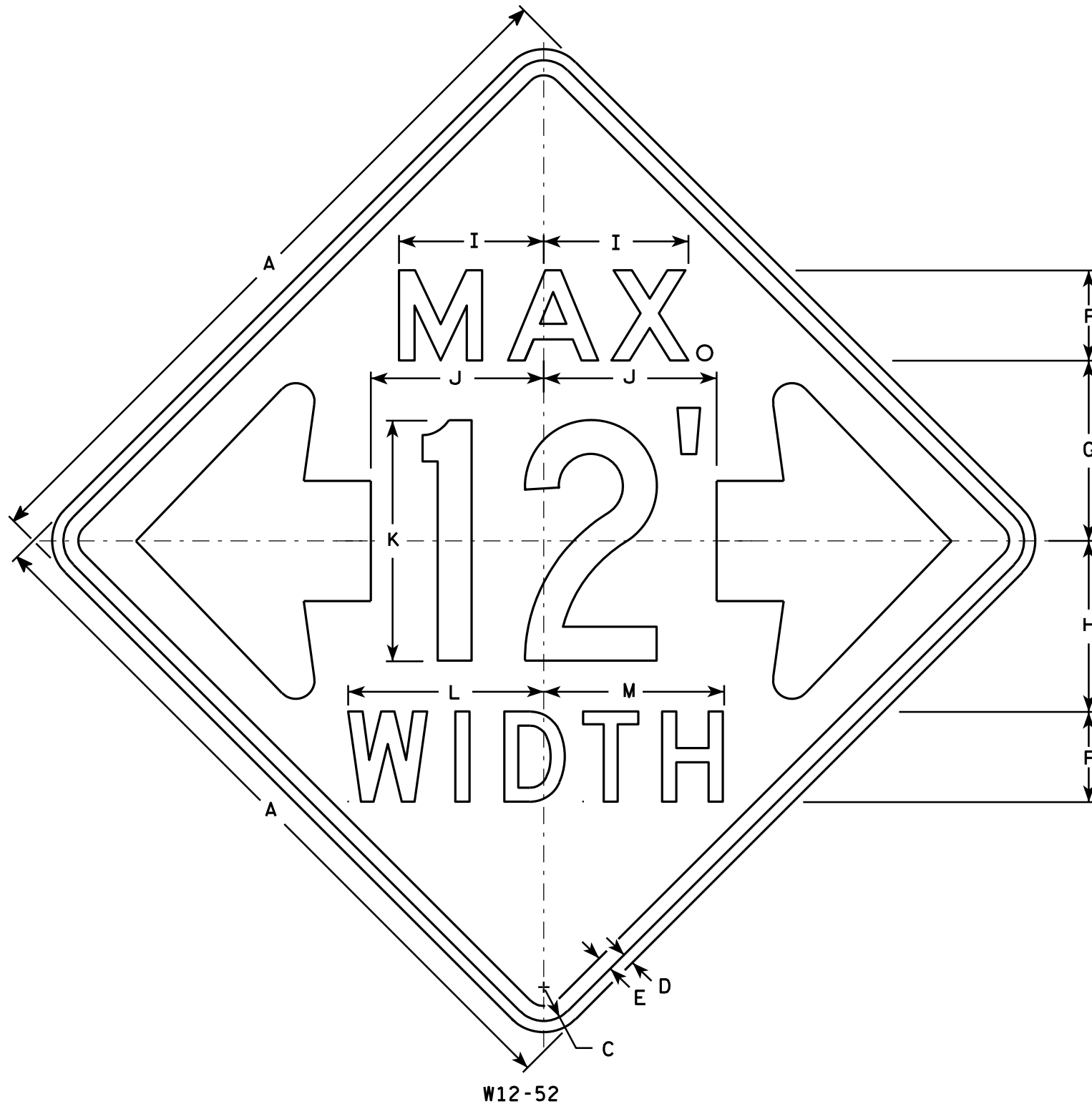
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

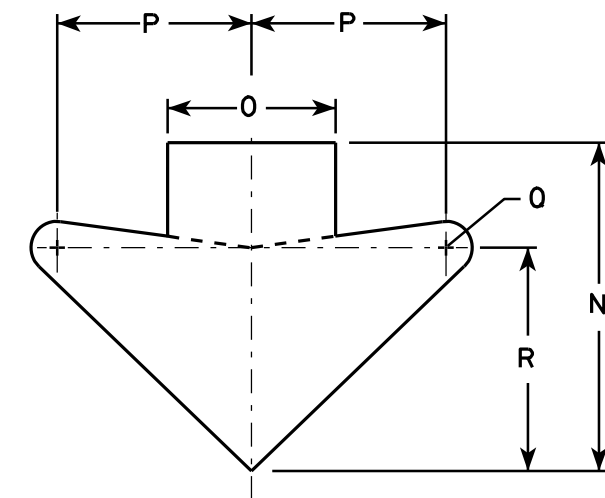
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



W12-52

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. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8								16.0	
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8								16.0	
3																											
4																											
5																											

STANDARD SIGN
W12-52

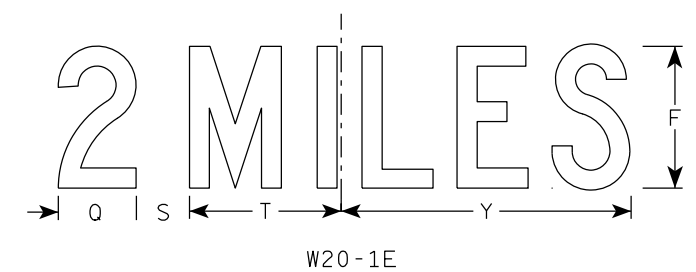
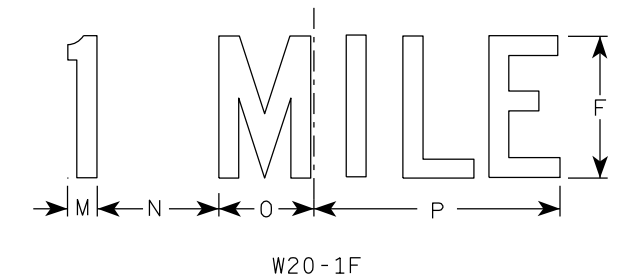
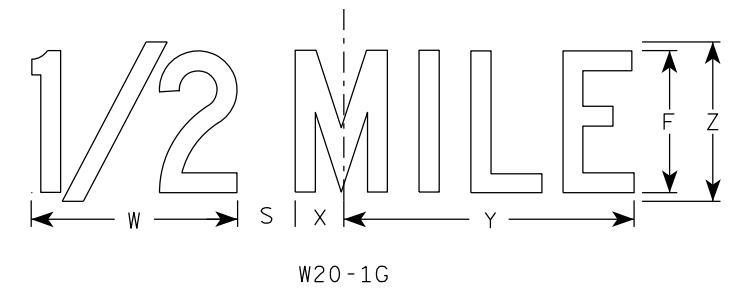
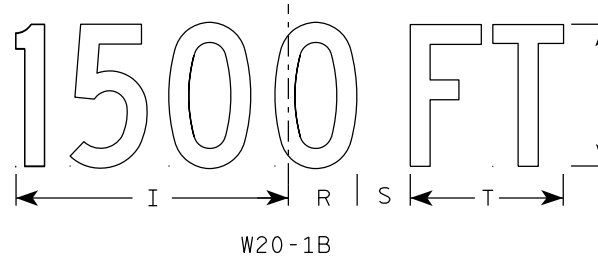
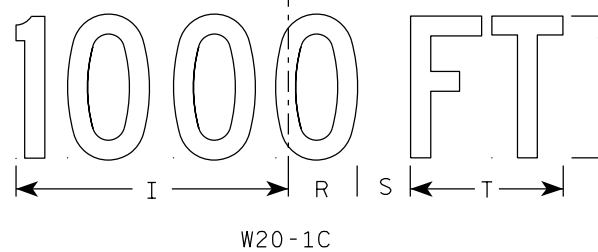
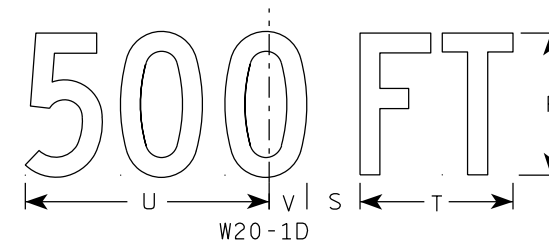
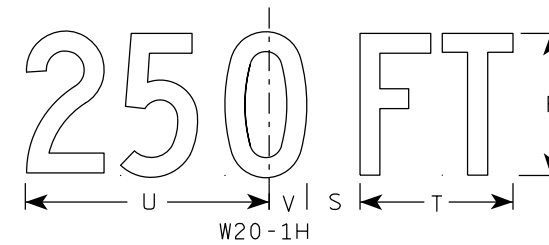
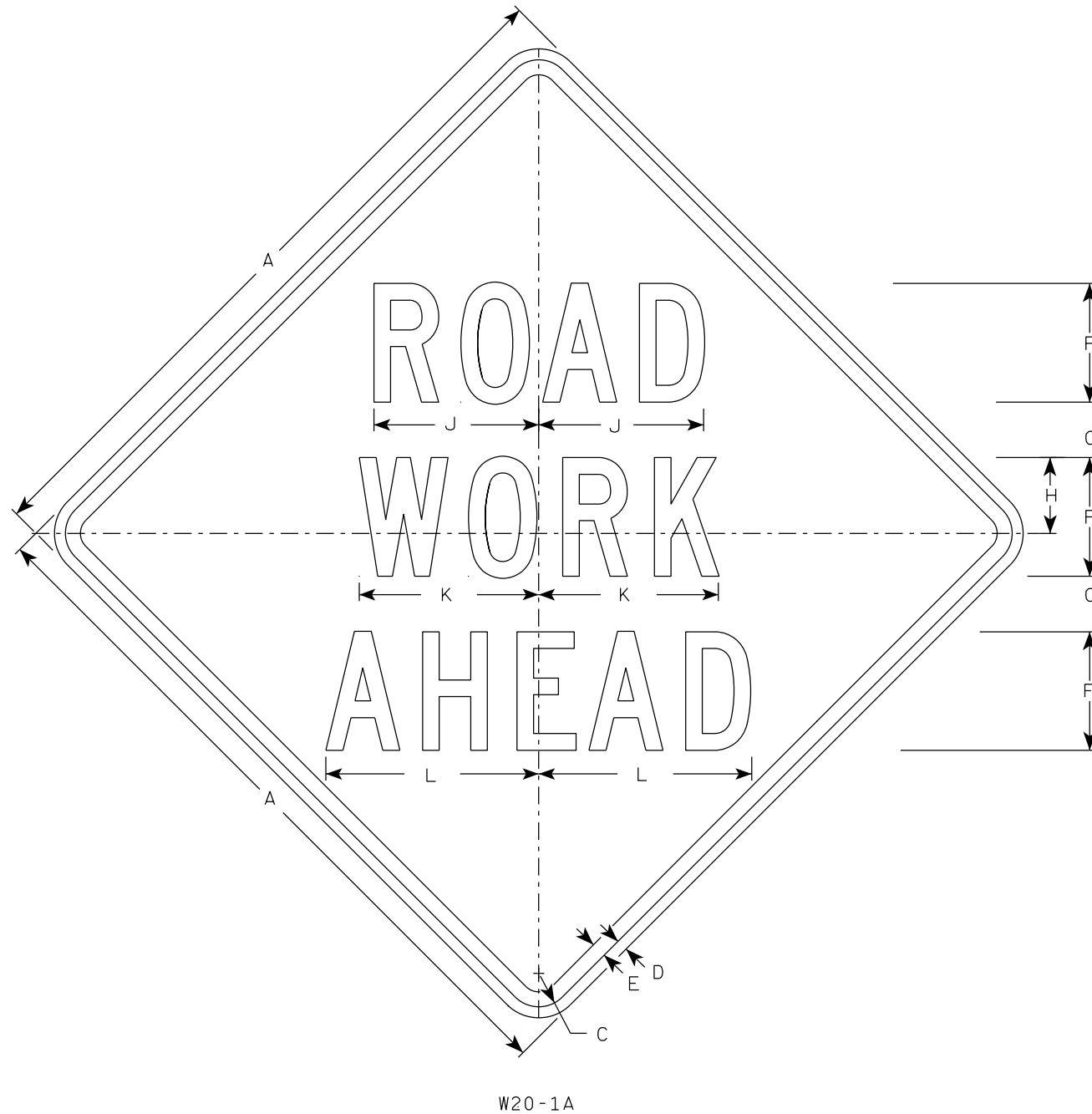
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
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.



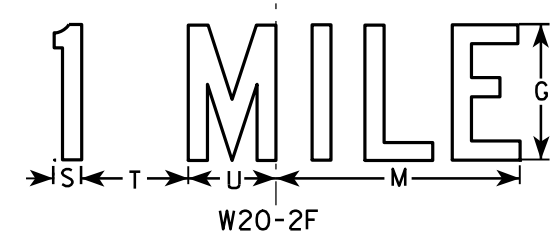
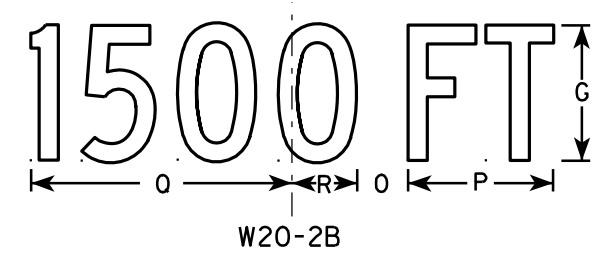
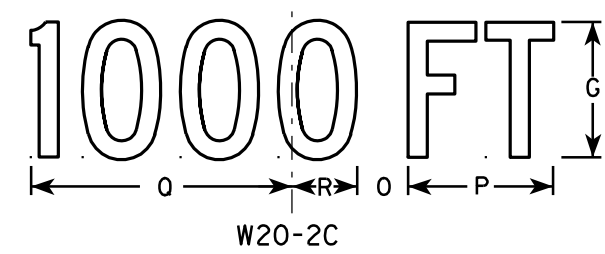
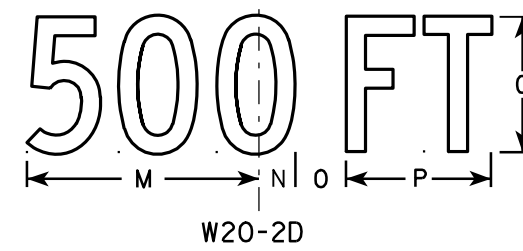
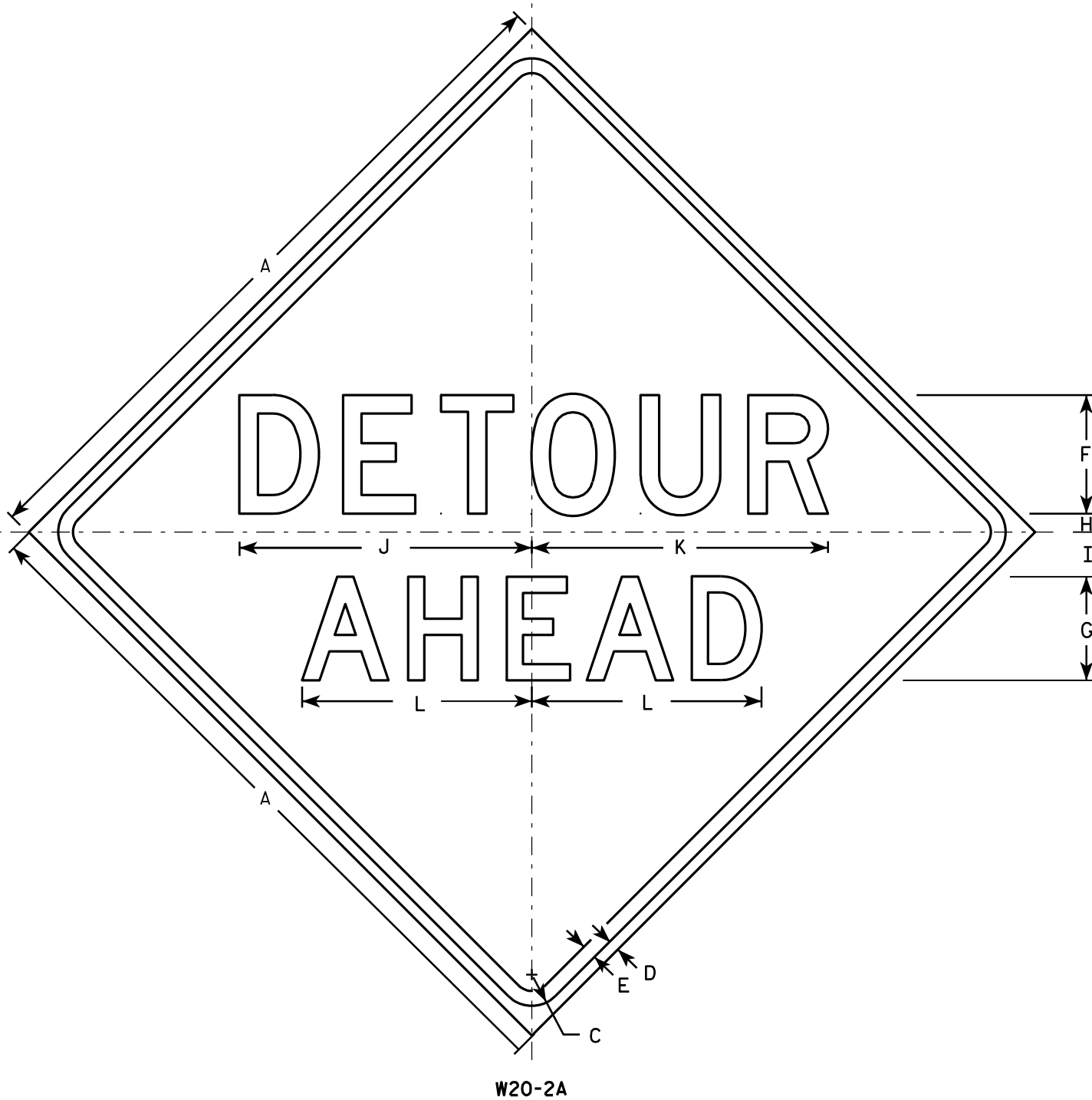
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



NOTES

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

7

7

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

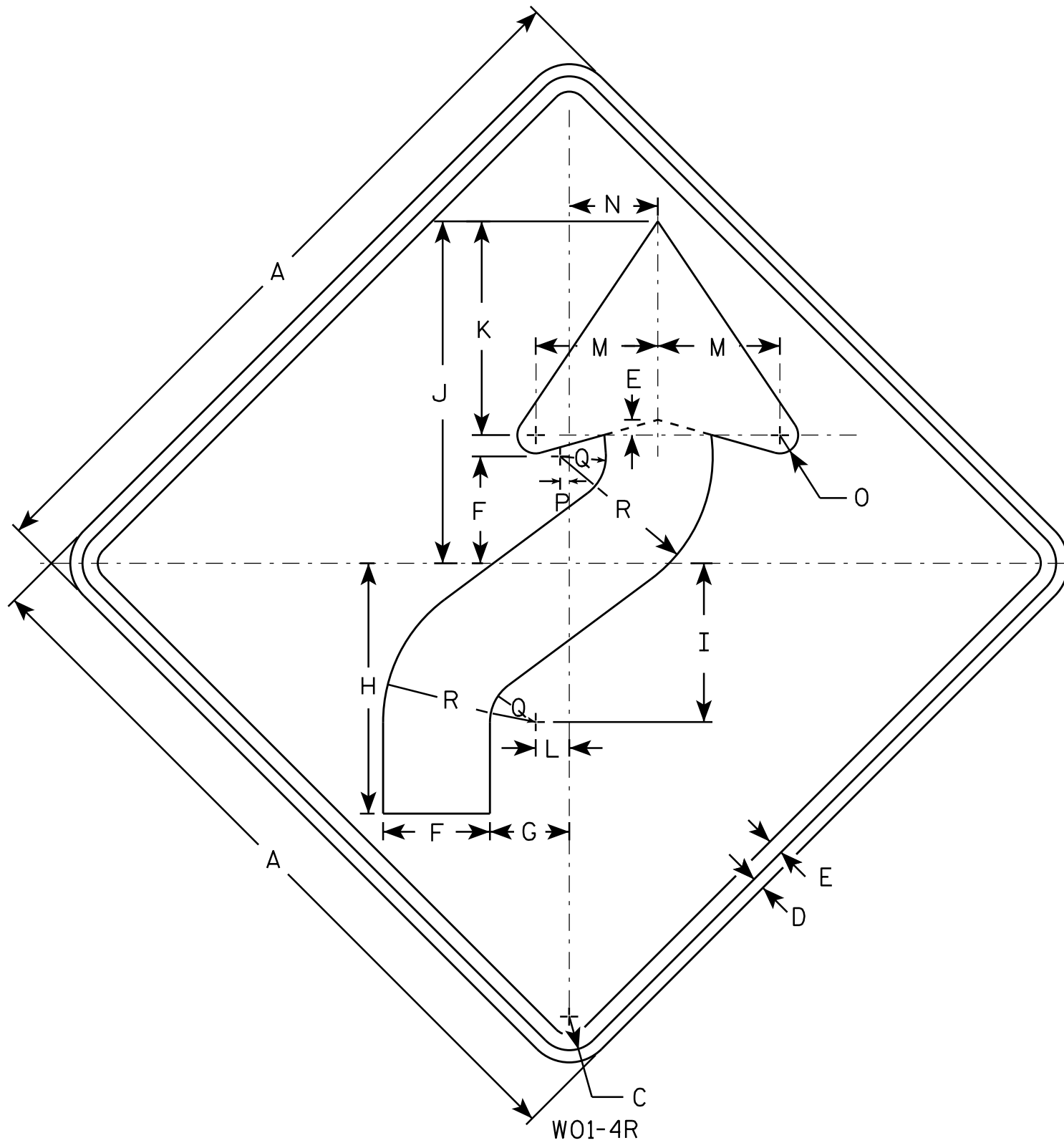
STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*
for State Traffic Engineer

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

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



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. 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. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

7

7

W01-4R

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 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

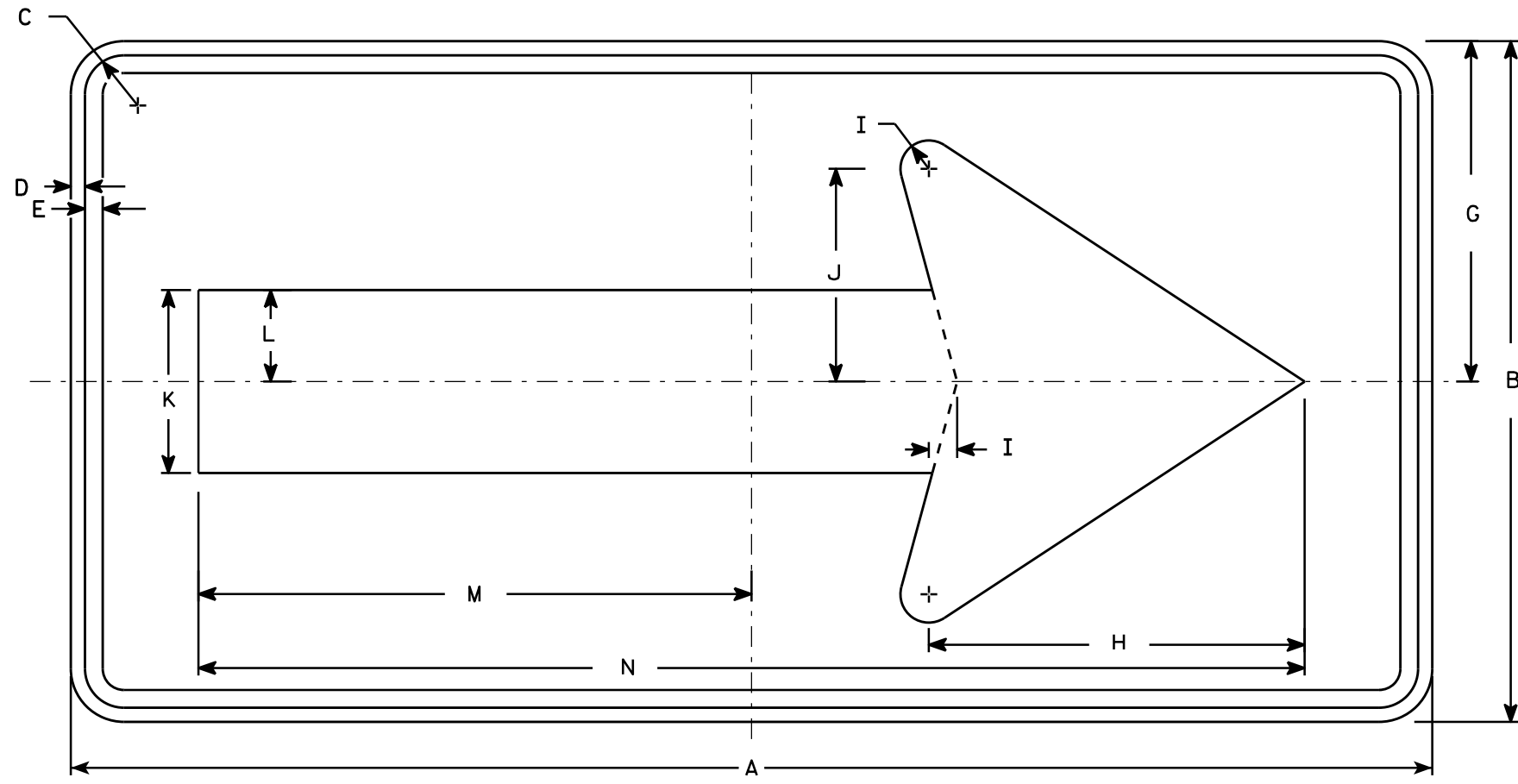
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. 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.



W01-6

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	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

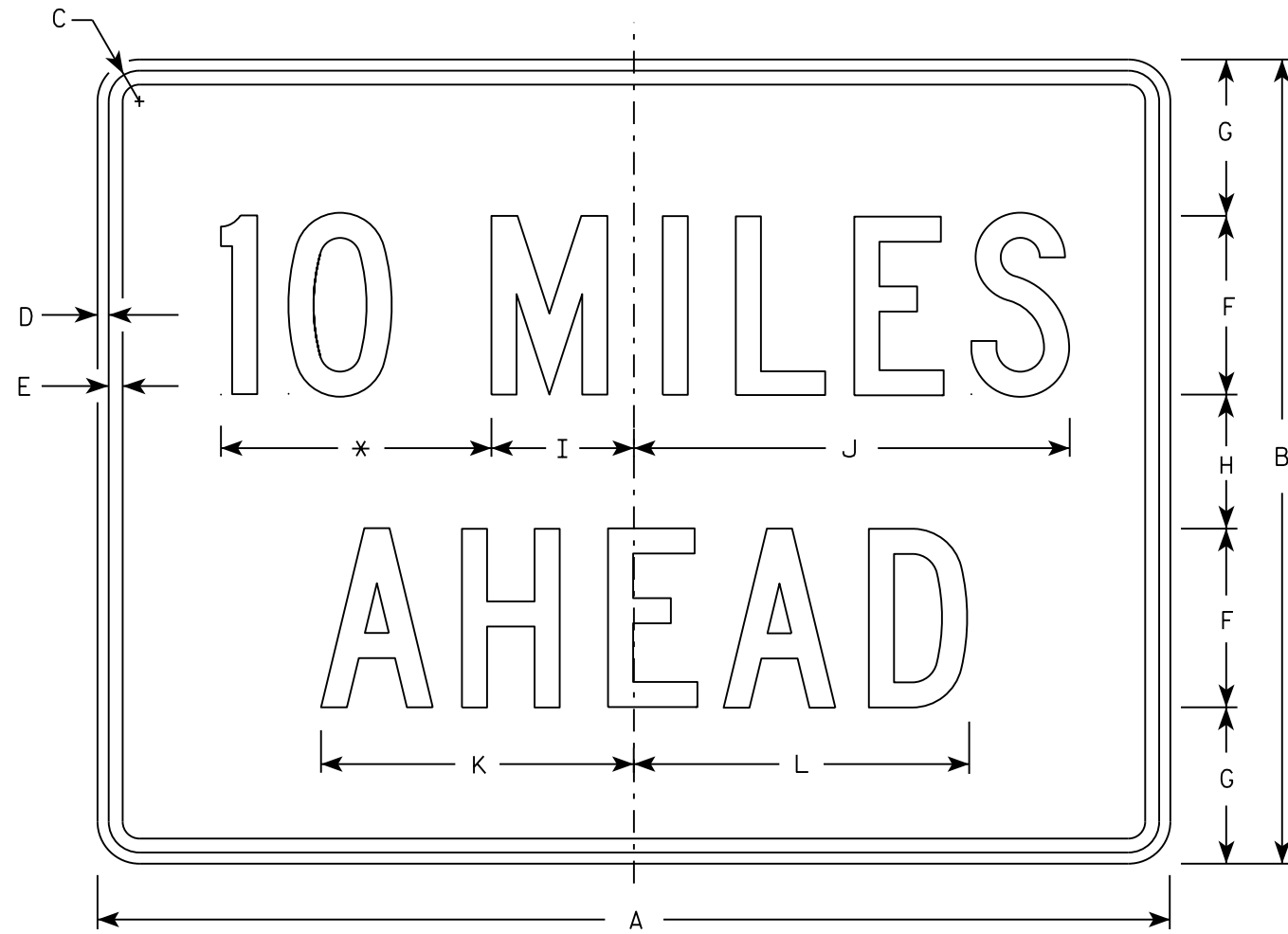
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

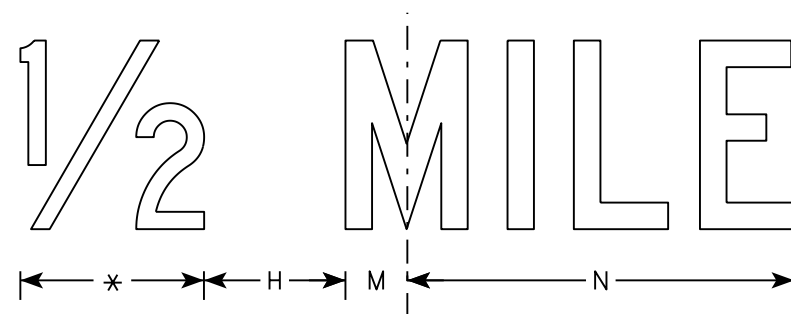
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
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 the nearest quarter mile and optically adjust spacing to achieve proper balance.



W057-52



* 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	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

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

PROJECT ID 1430-08-81
 STH 23 - WEST OF STH 73

CATEGORY	STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
				CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
0010	396+89.69	39689.69	0.00	14.53	4.77	7.08	0	0	0	0	0	0
	397+00	39700.00	10.31	14.31	4.46	8.21	6	2	3	6	4	0
	397+50	39750.00	50.00	13.00	2.90	9.01	25	7	16	31	24	-2
	398+00	39800.00	50.00	12.58	2.84	9.38	24	5	17	55	45	-4
	398+50	39850.00	50.00	13.00	2.83	10.16	24	5	18	79	68	-8
	399+00	39900.00	50.00	14.42	2.90	11.39	25	5	20	104	93	-13
	399+50	39950.00	50.00	18.00	2.89	13.07	30	5	23	134	121	-16
	400+00	40000.00	50.00	19.07	2.88	13.96	34	5	25	168	153	-19
	400+50	40050.00	50.00	19.52	2.84	13.82	36	5	26	204	185	-20
	401+00	40100.00	50.00	20.89	2.86	13.91	37	5	26	241	218	-21
	401+50	40150.00	50.00	18.32	2.85	15.48	36	5	27	277	251	-23
	402+00	40200.00	50.00	16.94	2.85	14.79	33	5	28	310	286	-30
	402+50	40250.00	50.00	18.09	2.84	12.16	32	5	25	342	318	-35
	403+00	40300.00	50.00	16.30	2.90	12.08	32	5	22	374	345	-35
	403+50	40350.00	50.00	20.42	3.79	11.55	34	6	22	408	373	-35
	404+00	40400.00	50.00	24.16	5.72	10.80	41	9	21	449	399	-29
	404+50	40450.00	50.00	34.21	5.10	8.91	54	10	18	503	421	-7
	405+00	40500.00	50.00	18.80	0.00	11.77	49	5	19	552	445	13
	405+50	40550.00	50.00	21.90	0.00	13.90	38	0	24	590	475	21
	406+00	40600.00	50.00	21.88	0.00	8.36	41	0	21	631	501	36
	406+50	40650.00	50.00	9.12	0.00	39.54	29	0	44	660	556	10
	407+00	40700.00	50.00	10.86	0.00	38.66	18	0	72	678	646	-62
	407+50	40750.00	50.00	12.89	0.00	40.11	22	0	73	700	738	-132
	407+73.93	40773.93	23.93	18.39	0.00	32.70	14	0	32	714	778	-158
PROJECT SUBTOTALS 0010							714	94	622			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

9

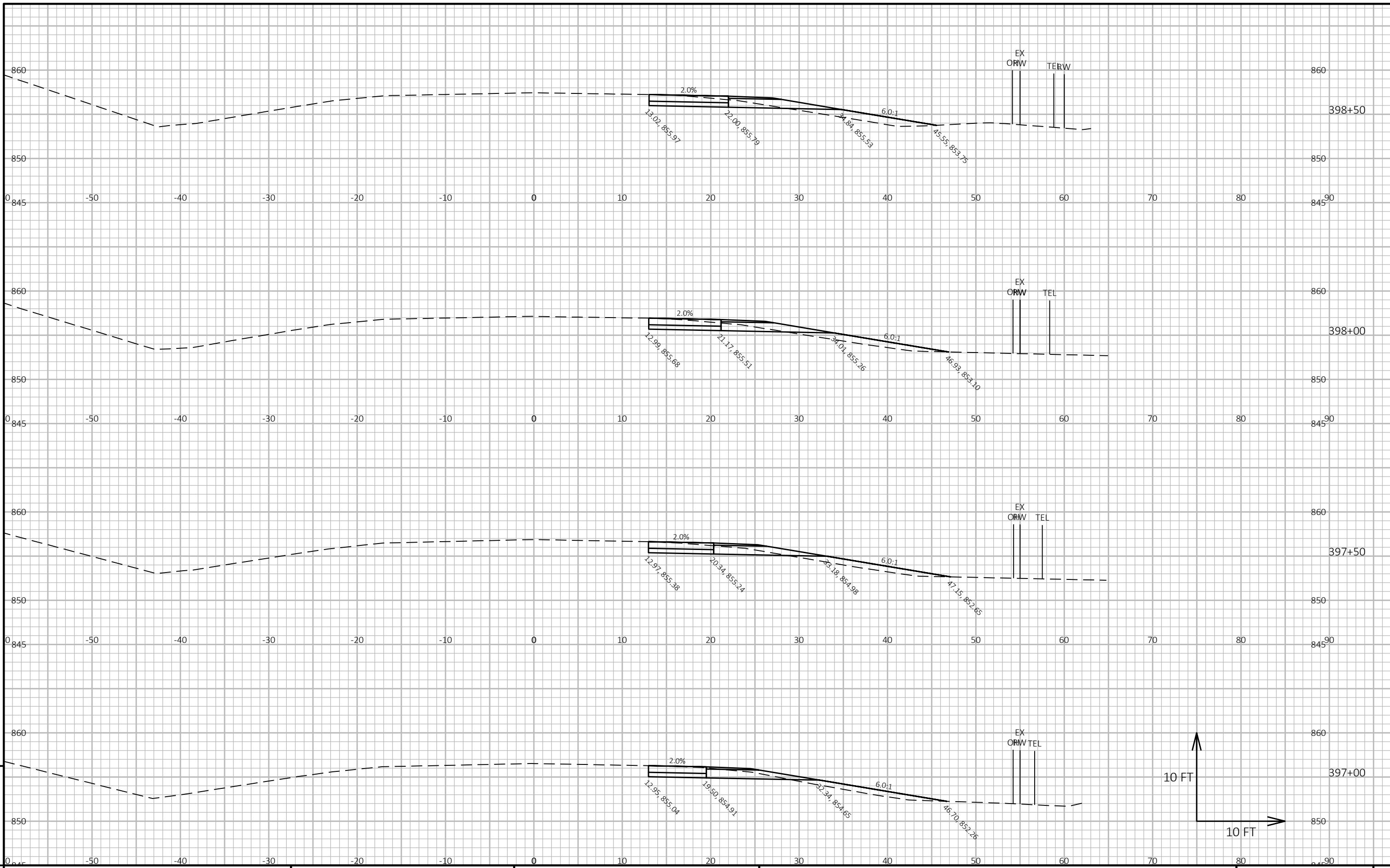
9

PROJECT ID 1430-08-81
 STH 23 - EAST OF STH 73

CATEGORY	STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
				CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
0010	409+18.92	40918.92	0.00	36.63	12.46	12.92	0	0	0	0	0	0
	409+50	40950.00	31.08	22.68	6.94	17.95	34	11	18	34	23	1
	410+00	41000.00	50.00	14.37	3.17	19.58	34	9	35	68	66	-18
	410+50	41050.00	50.00	16.01	2.94	21.81	28	6	38	96	114	-44
	411+00	41100.00	50.00	17.80	2.91	20.88	31	5	40	127	164	-68
	411+50	41150.00	50.00	53.37	2.94	1.05	66	5	20	193	189	-32
	412+00	41200.00	50.00	15.61	2.94	48.29	64	5	46	257	246	-30
	412+50	41250.00	50.00	13.98	2.91	94.38	27	5	132	284	411	-173
	413+00	41300.00	50.00	15.31	2.94	62.28	27	5	145	311	593	-333
	413+50	41350.00	50.00	14.20	2.84	46.58	27	5	101	338	719	-437
	414+00	41400.00	50.00	13.25	2.91	34.22	25	5	75	363	813	-511
	414+50	41450.00	50.00	13.91	2.96	23.87	25	5	54	388	880	-558
	415+00	41500.00	50.00	13.76	2.94	18.15	26	5	39	414	929	-586
	415+50	41550.00	50.00	13.63	2.89	11.99	25	5	28	439	964	-601
	416+00	41600.00	50.00	14.32	2.94	6.87	26	5	17	465	985	-601
	416+50	41650.00	50.00	14.33	2.86	8.23	27	5	14	492	1,003	-597
	417+00	41700.00	50.00	14.15	2.88	15.63	26	5	22	518	1,030	-603
	417+50	41750.00	50.00	15.14	2.88	16.87	27	5	30	545	1,068	-619
	418+00	41800.00	50.00	18.33	7.40	4.54	31	10	20	576	1,093	-623
	418+50	41850.00	50.00	19.25	7.42	0.88	35	14	5	611	1,099	-608
	419+00	41900.00	50.00	16.64	7.46	0.09	33	14	1	644	1,100	-590
	419+50	41950.00	50.00	16.90	7.46	0.11	31	14	0	675	1,100	-573
	420+00	42000.00	50.00	15.56	7.49	0.03	30	14	0	705	1,100	-557
	420+05.81	42005.81	5.81	15.34	7.49	0.03	3	2	0	708	1,100	-556
PROJECT SUBTOTALS 0010							708	164	880			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: $[(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]$
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: $[CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]$
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: $[(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]$
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: $[CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]$

9 9



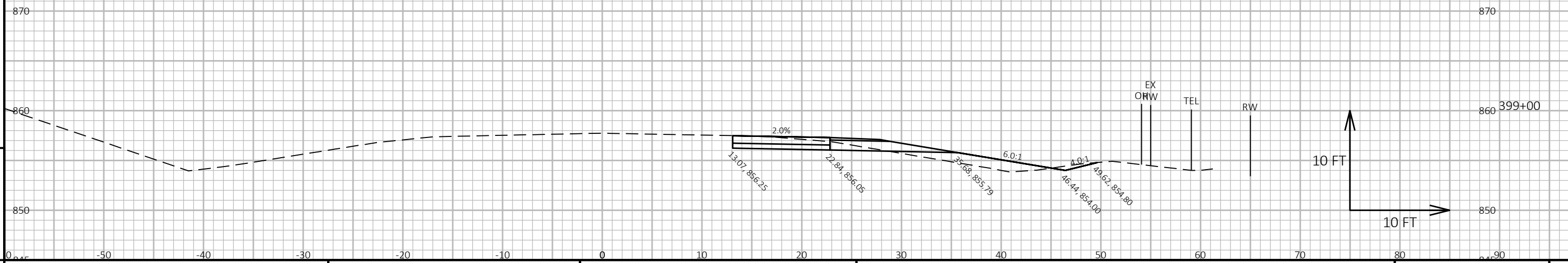
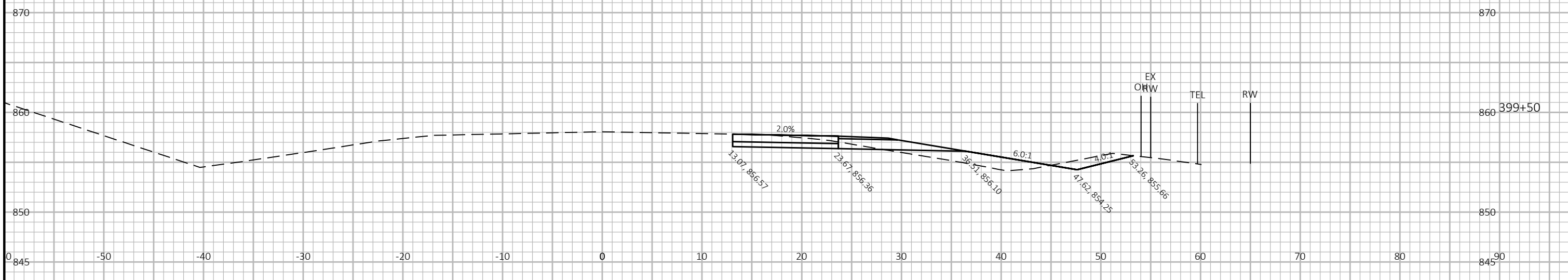
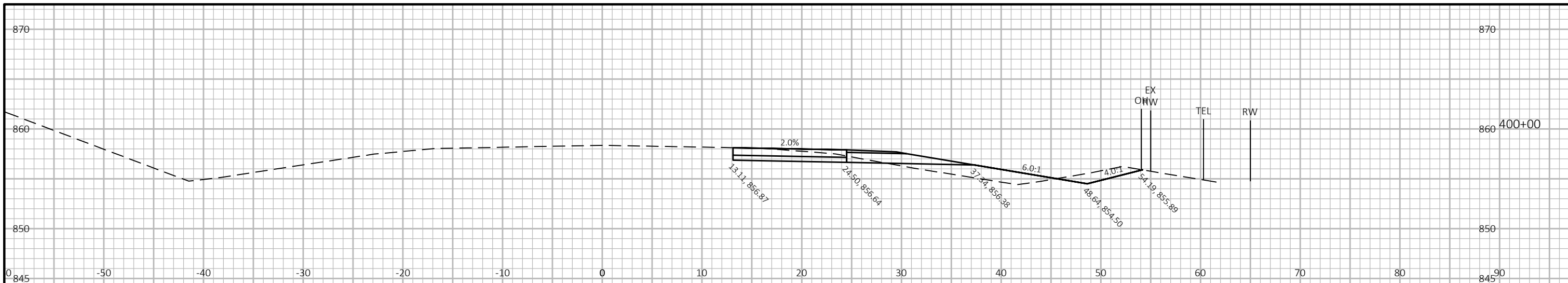
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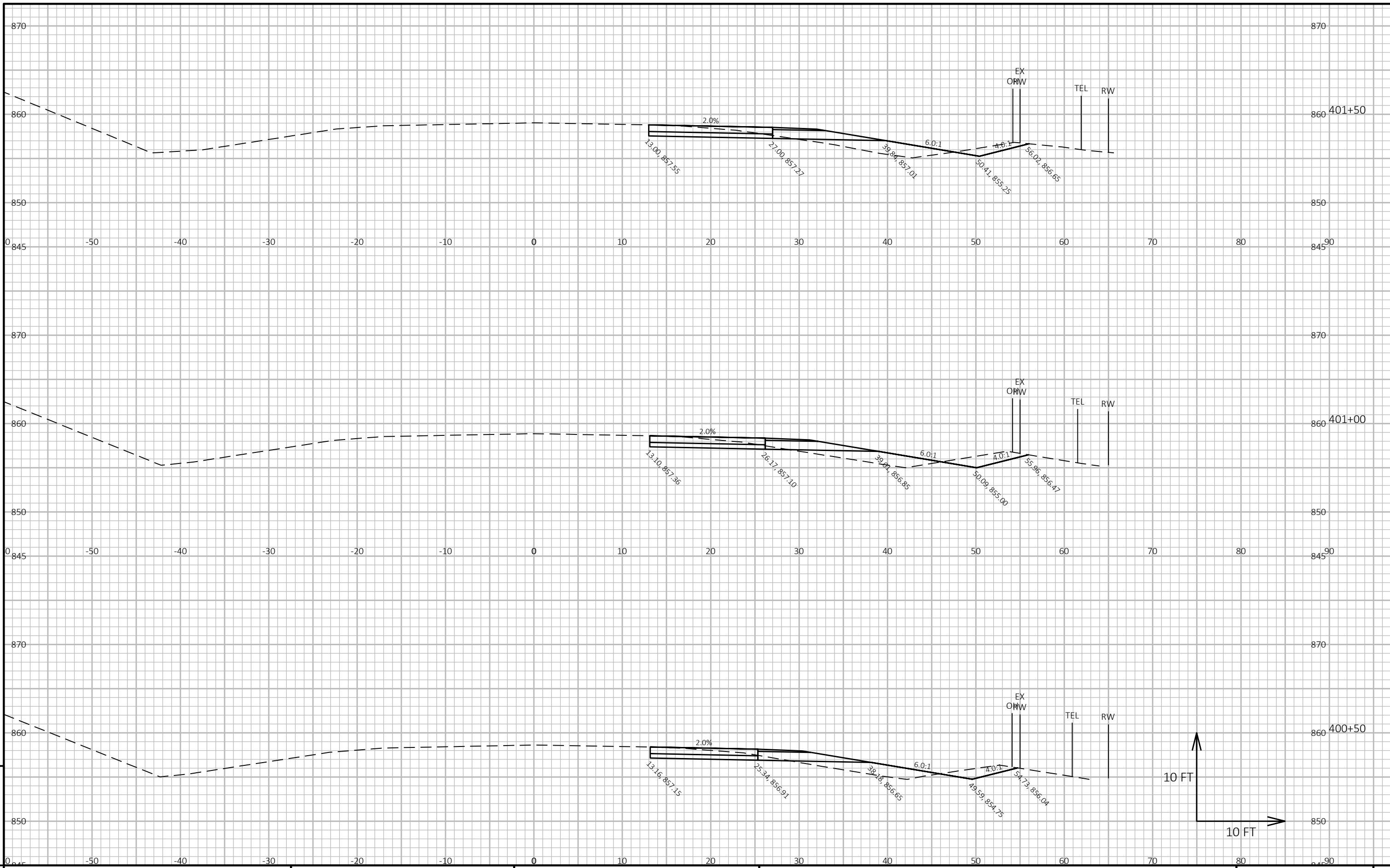
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LAYOUT NAME - 01



PROJECT NO: 1430-08-81 HWY: STH 23 COUNTY: GREEN LAKE CROSS SECTIONS: STH 23 SHEET E



PROJECT NO: 1430-08-81

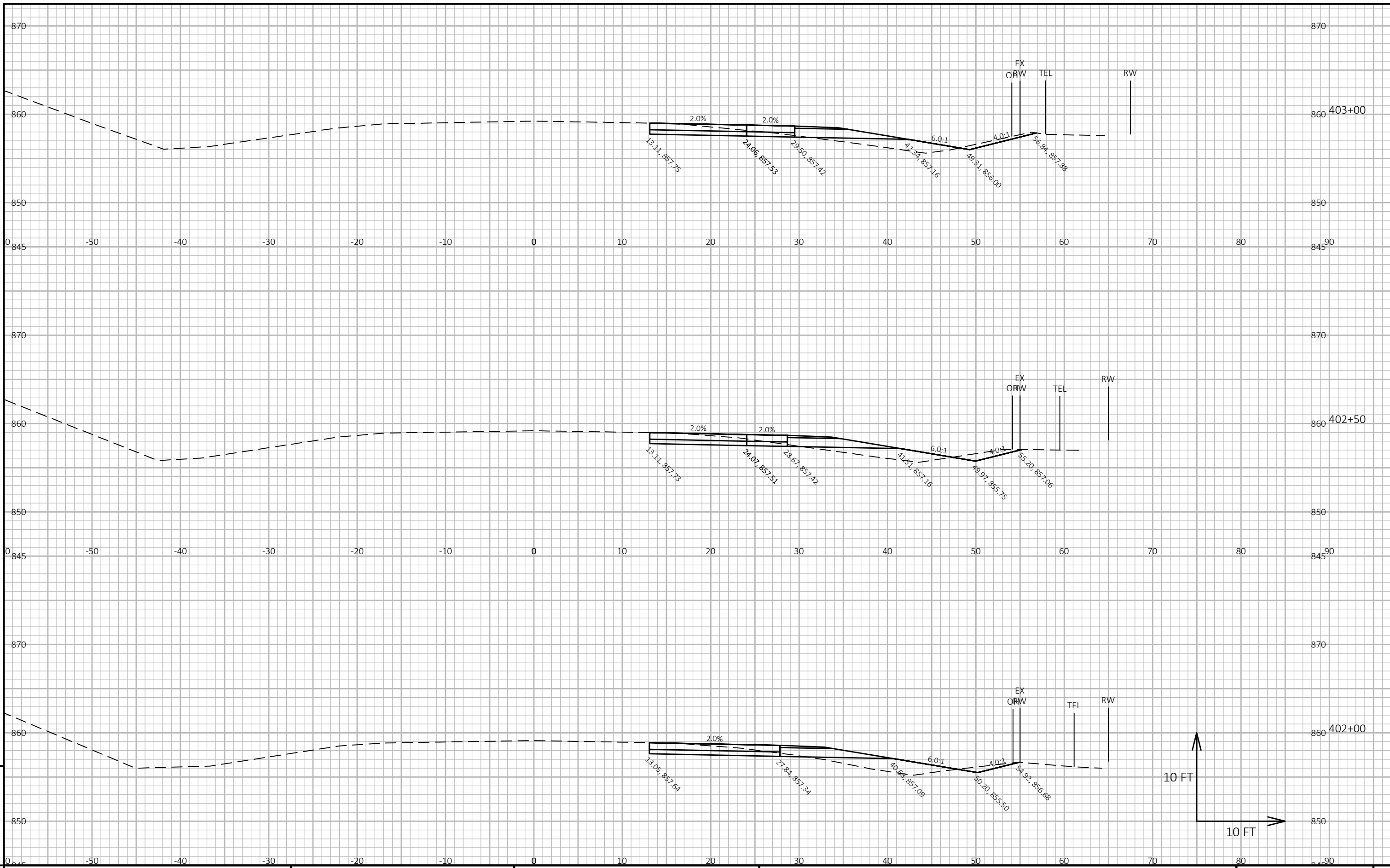
HWY: STH 23

COUNTY: GREEN LAKE

CROSS SECTIONS: STH 23

SHEET

E



PROJECT NO: 1430-08-81

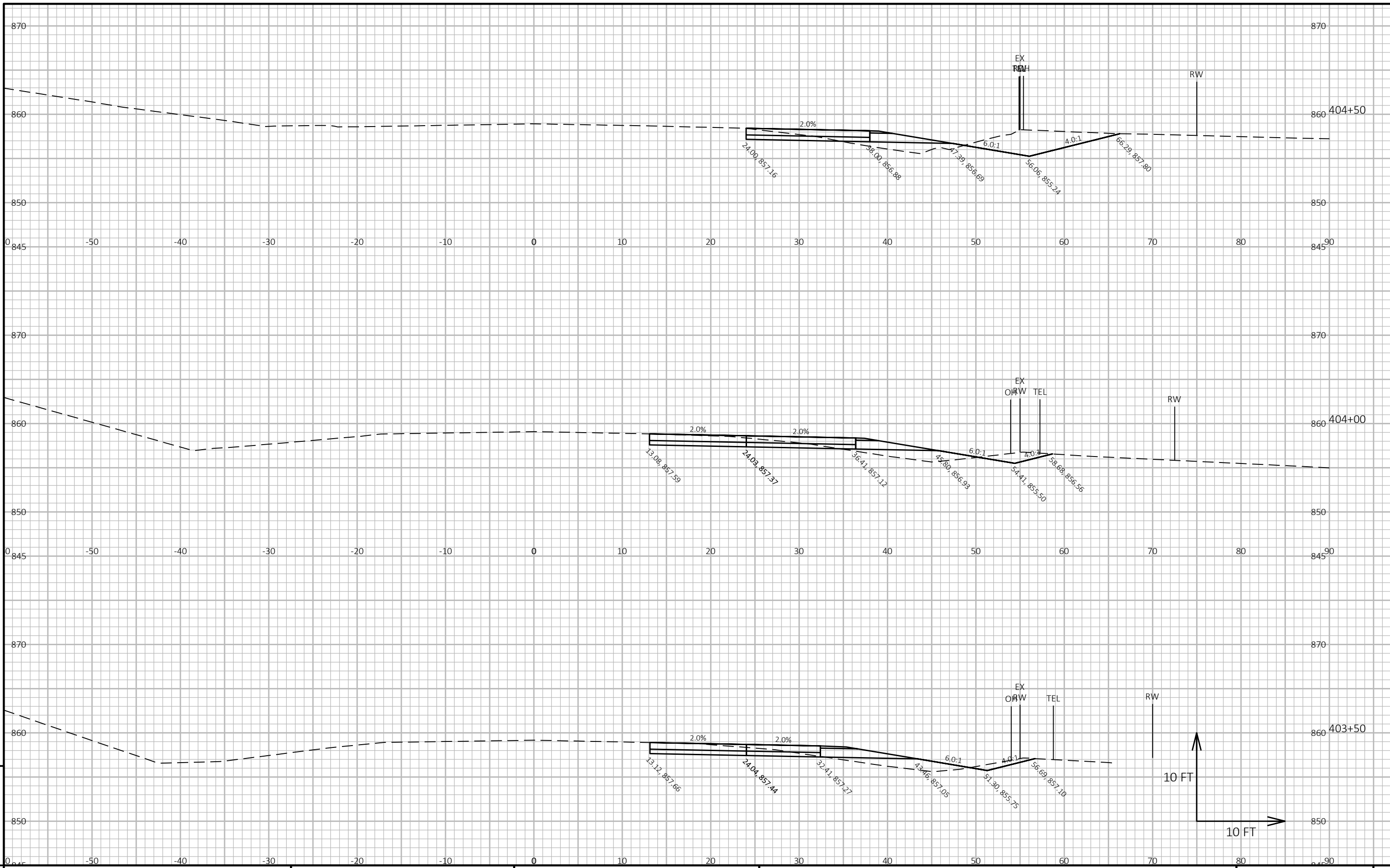
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COUNTY: GREEN LAKE

CROSS SECTIONS: STH 23

SHEET

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PROJECT NO: 1430-08-81

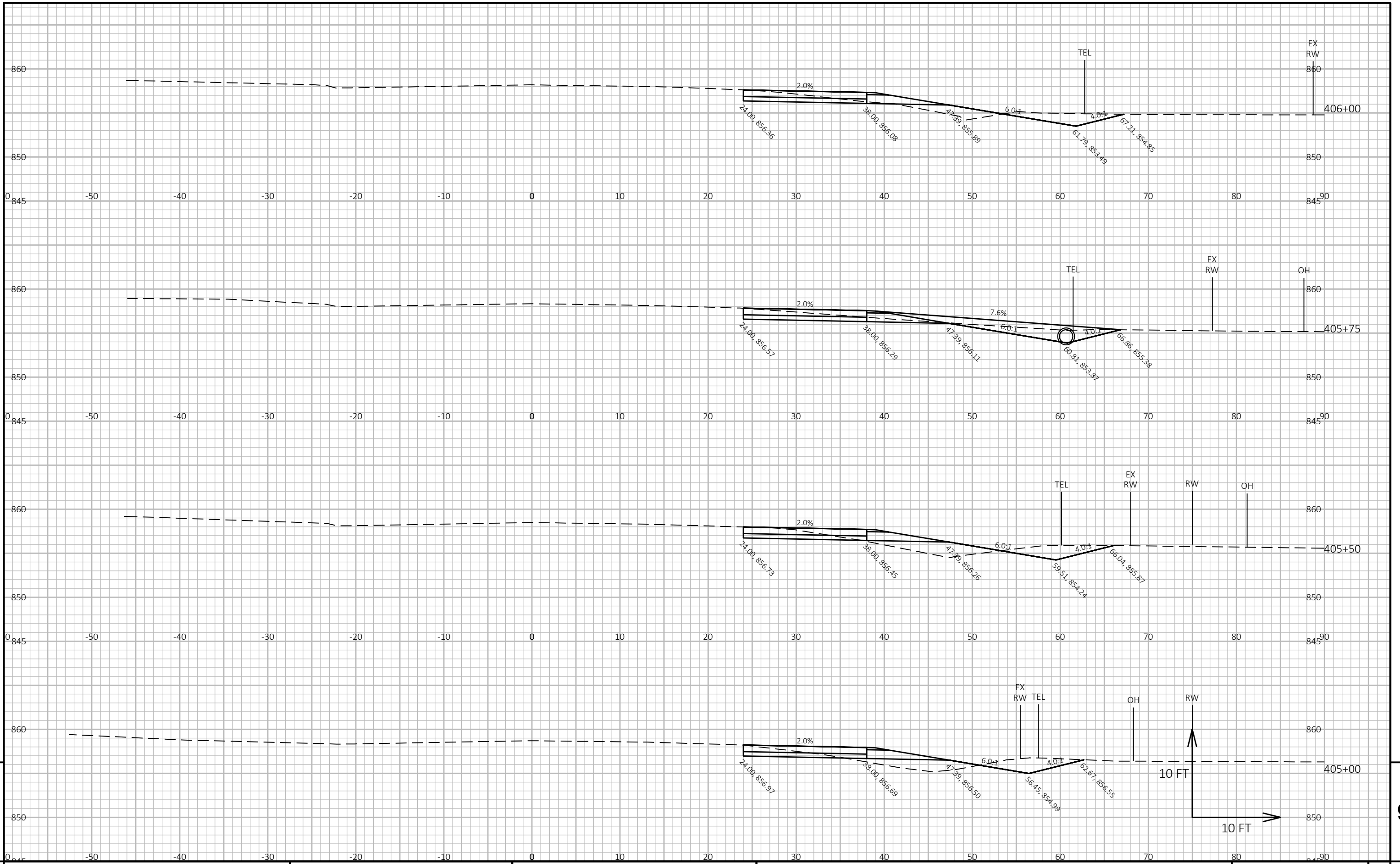
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COUNTY: GREEN LAKE

CROSS SECTIONS: STH 23

SHEET

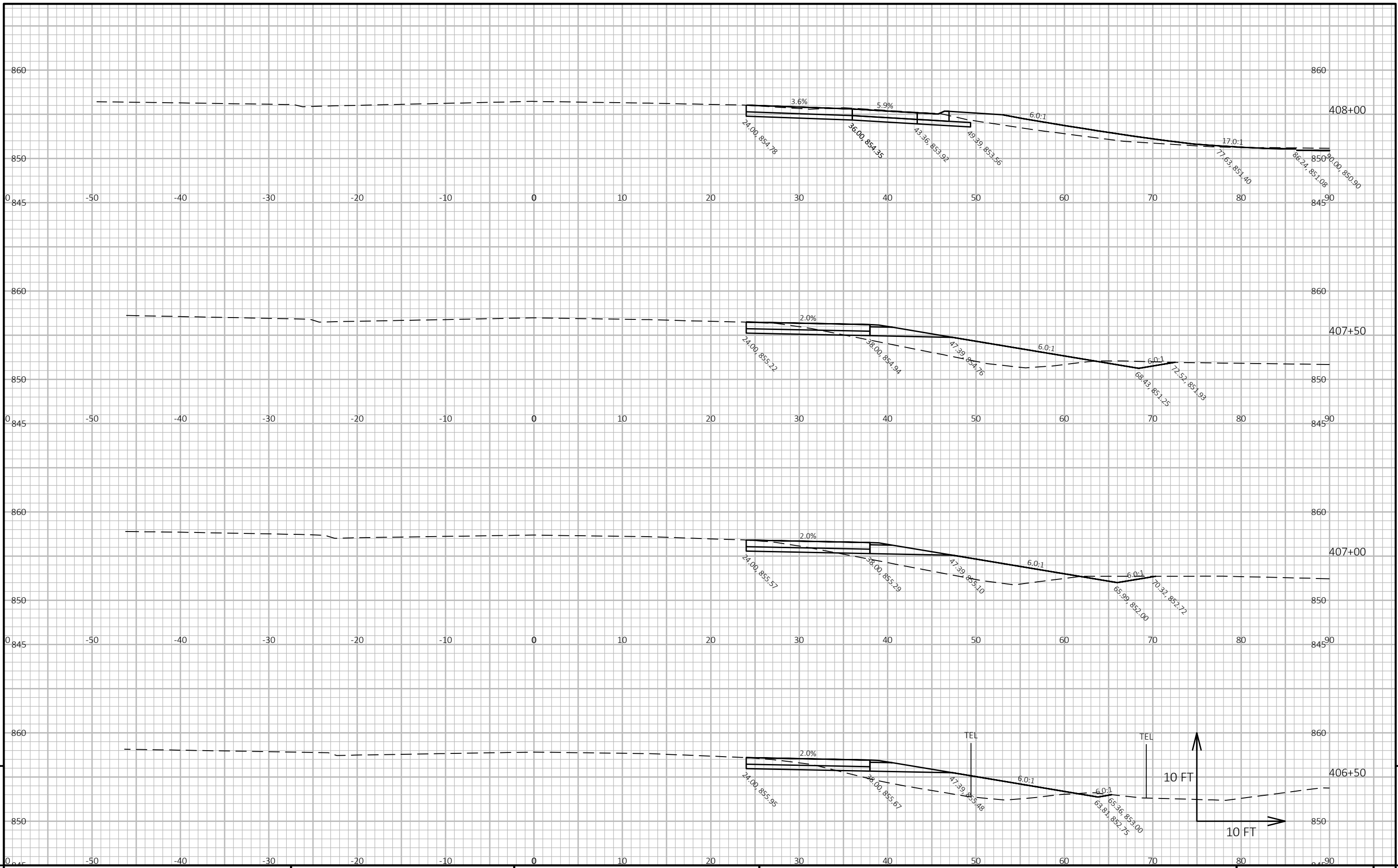
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PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 23	SHEET	E
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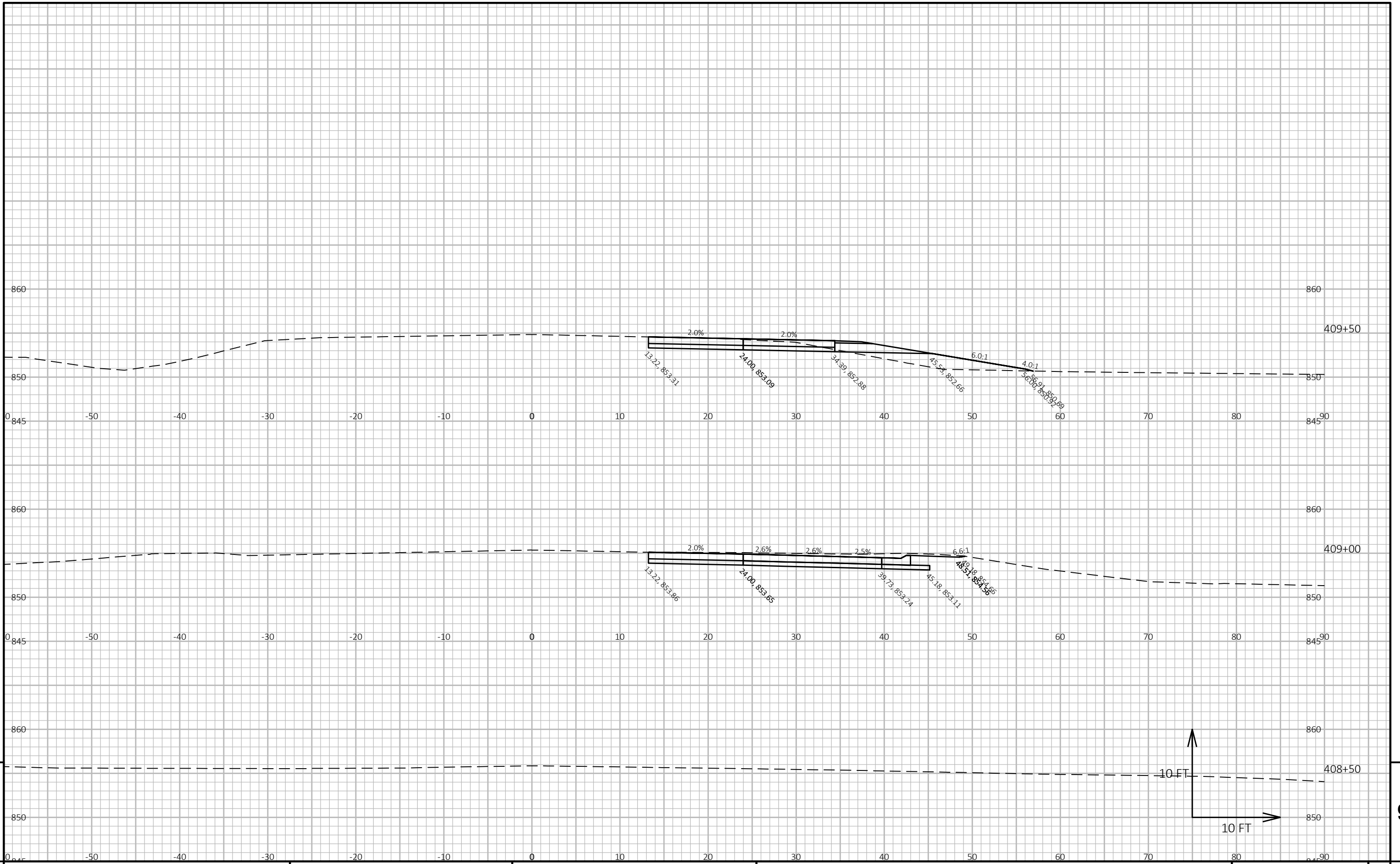
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LAYOUT NAME - 07



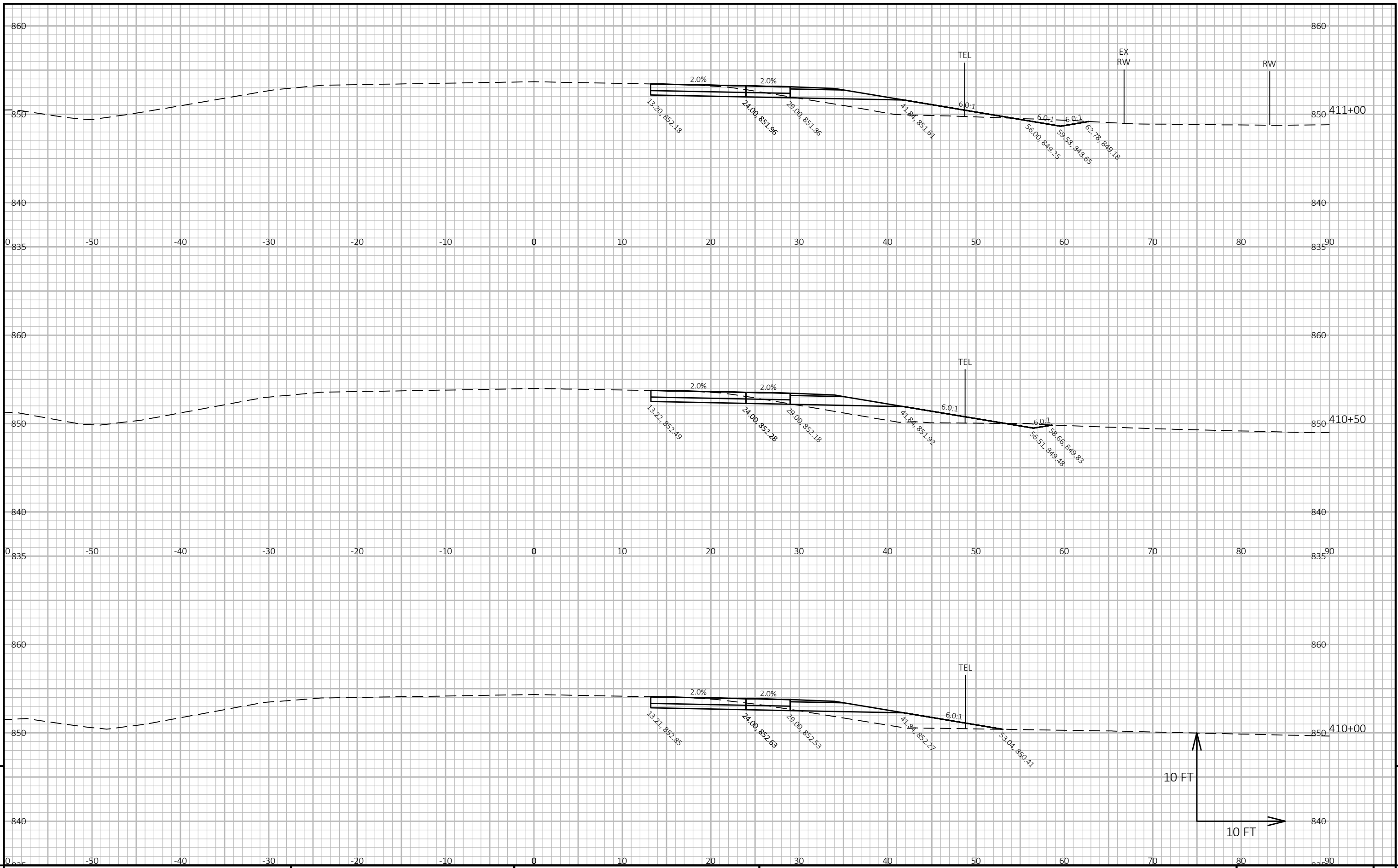
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LAYOUT NAME - 08



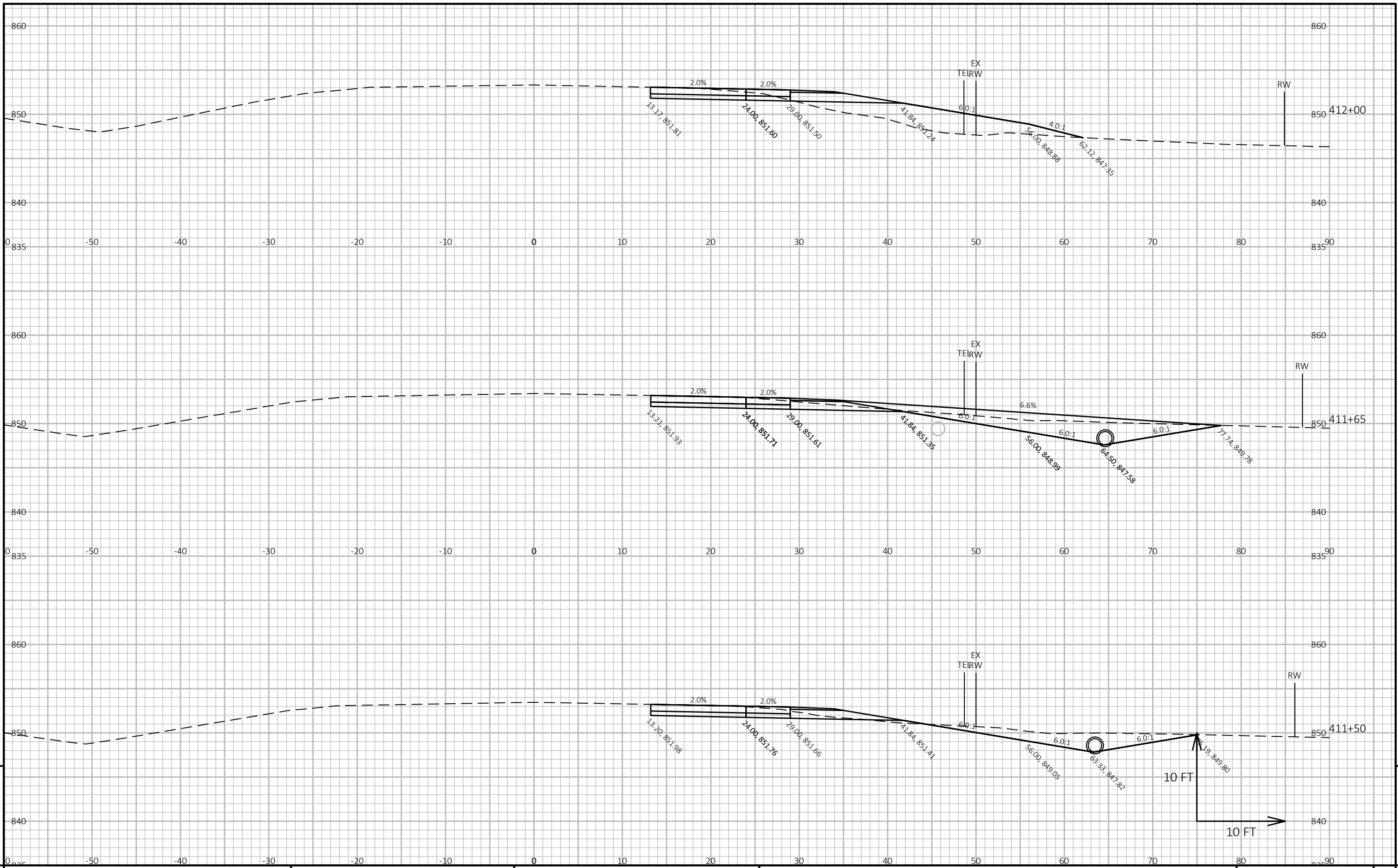
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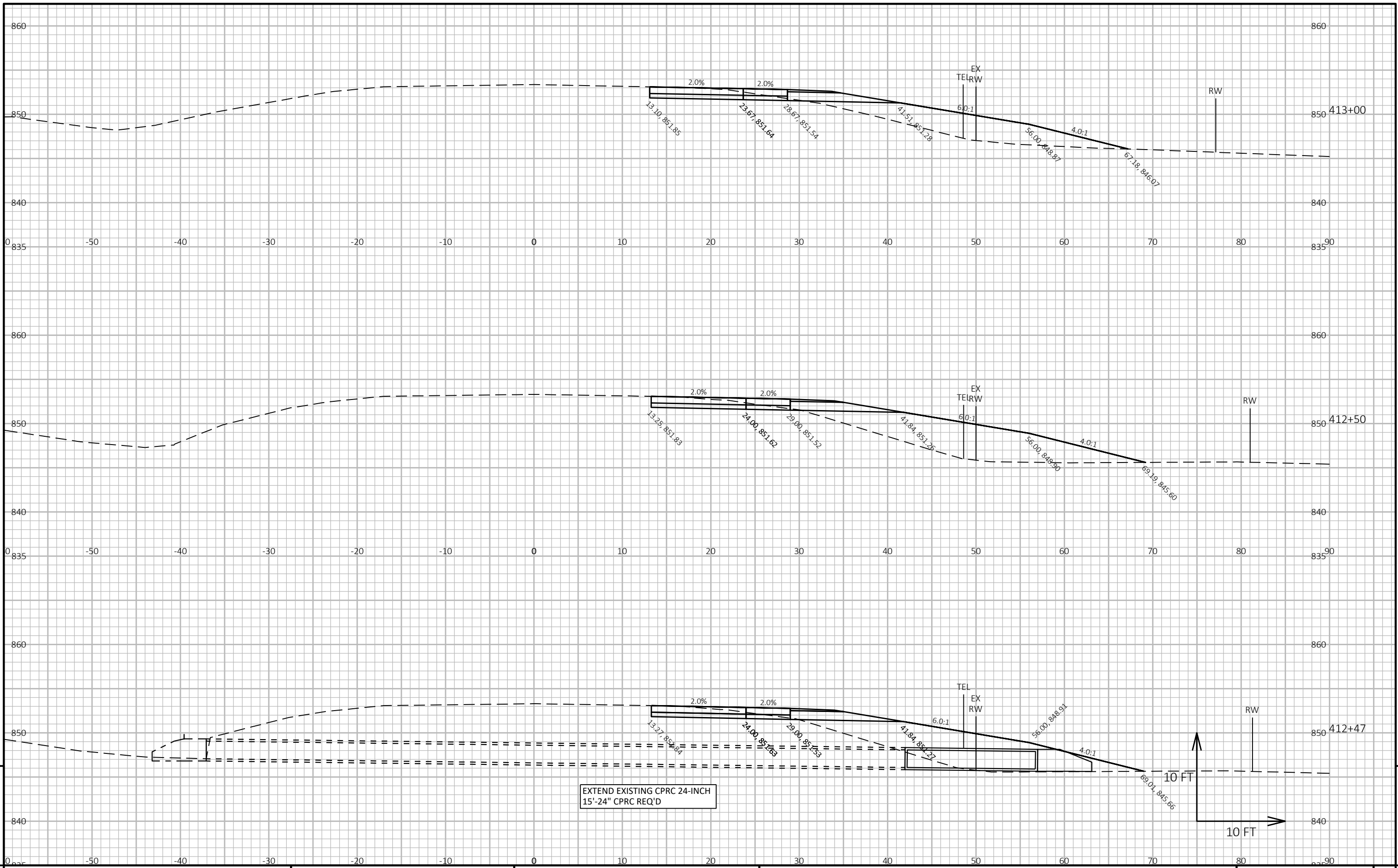
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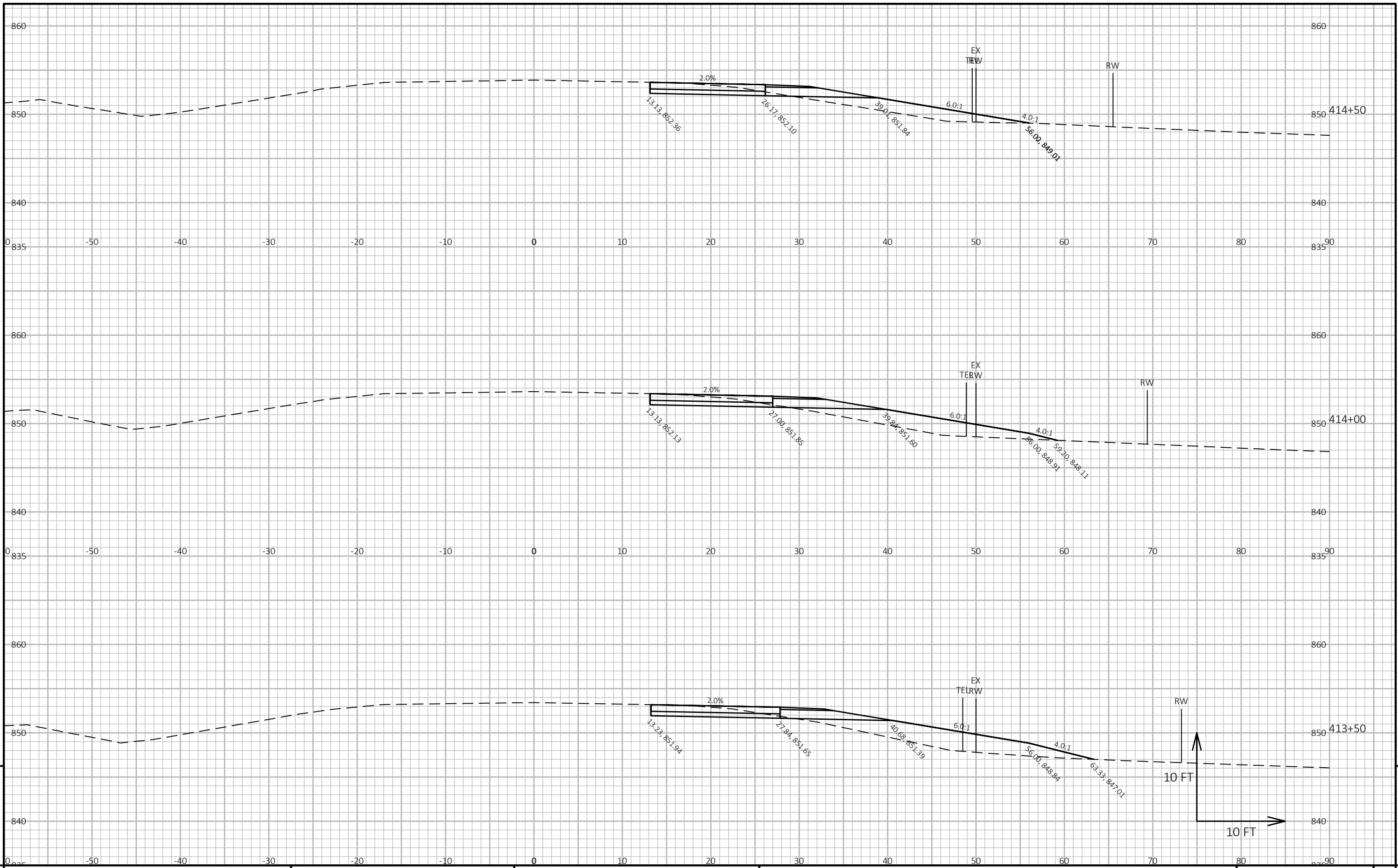
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PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 23	SHEET	E
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PROJECT NO: 1430-08-81 HWY: STH 23 COUNTY: GREEN LAKE CROSS SECTIONS: STH 23 SHEET E



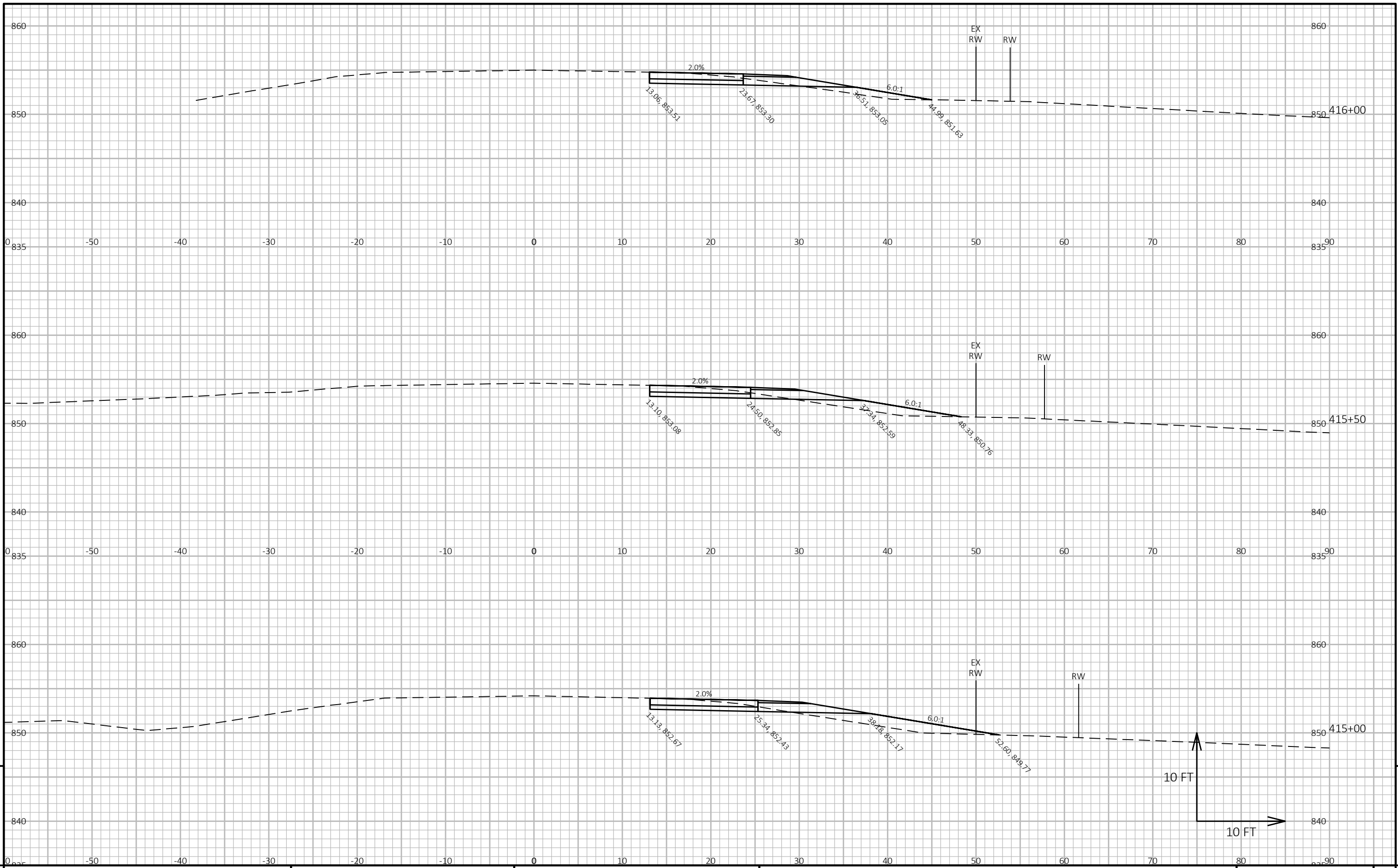
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LAYOUT NAME - 12



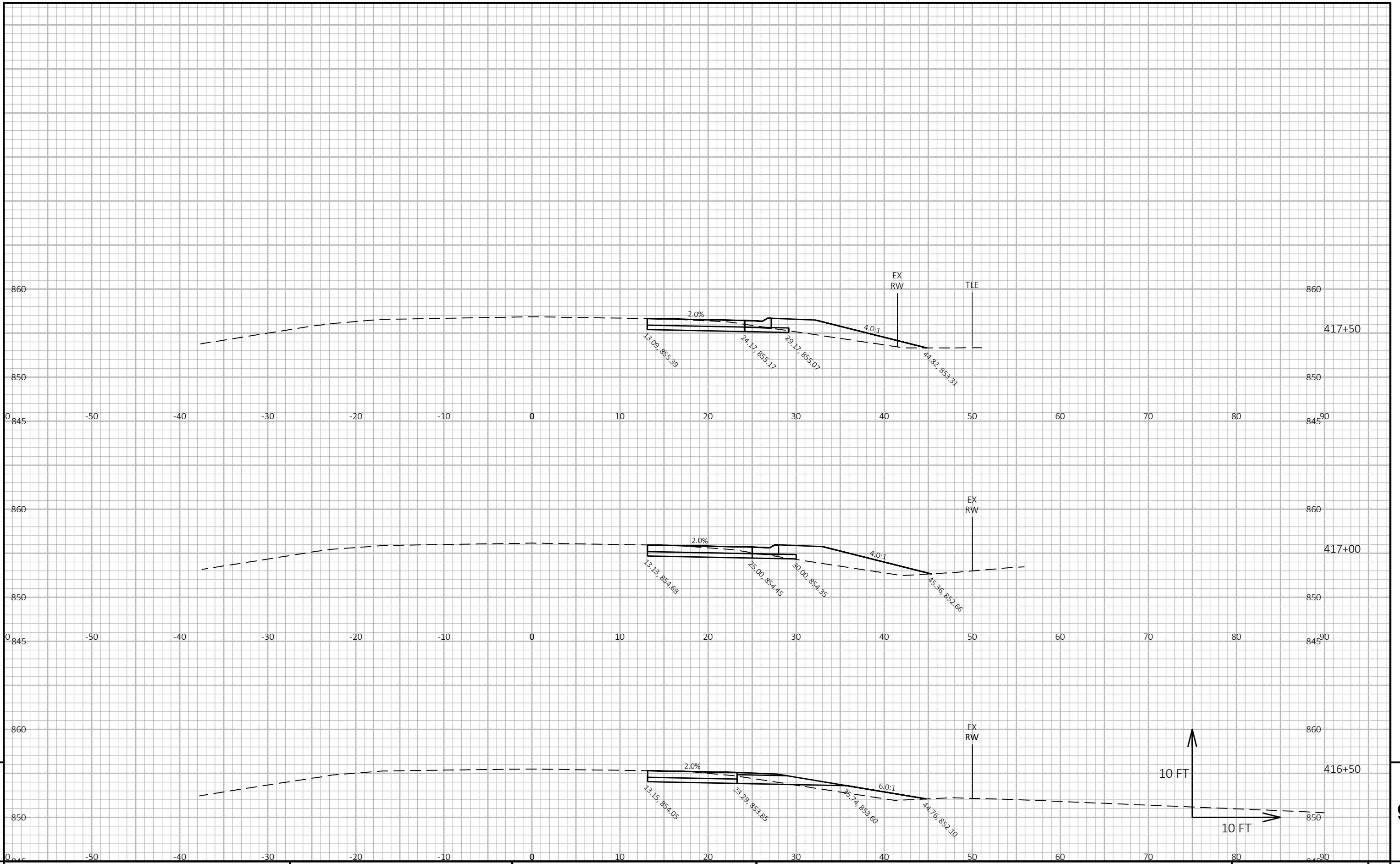
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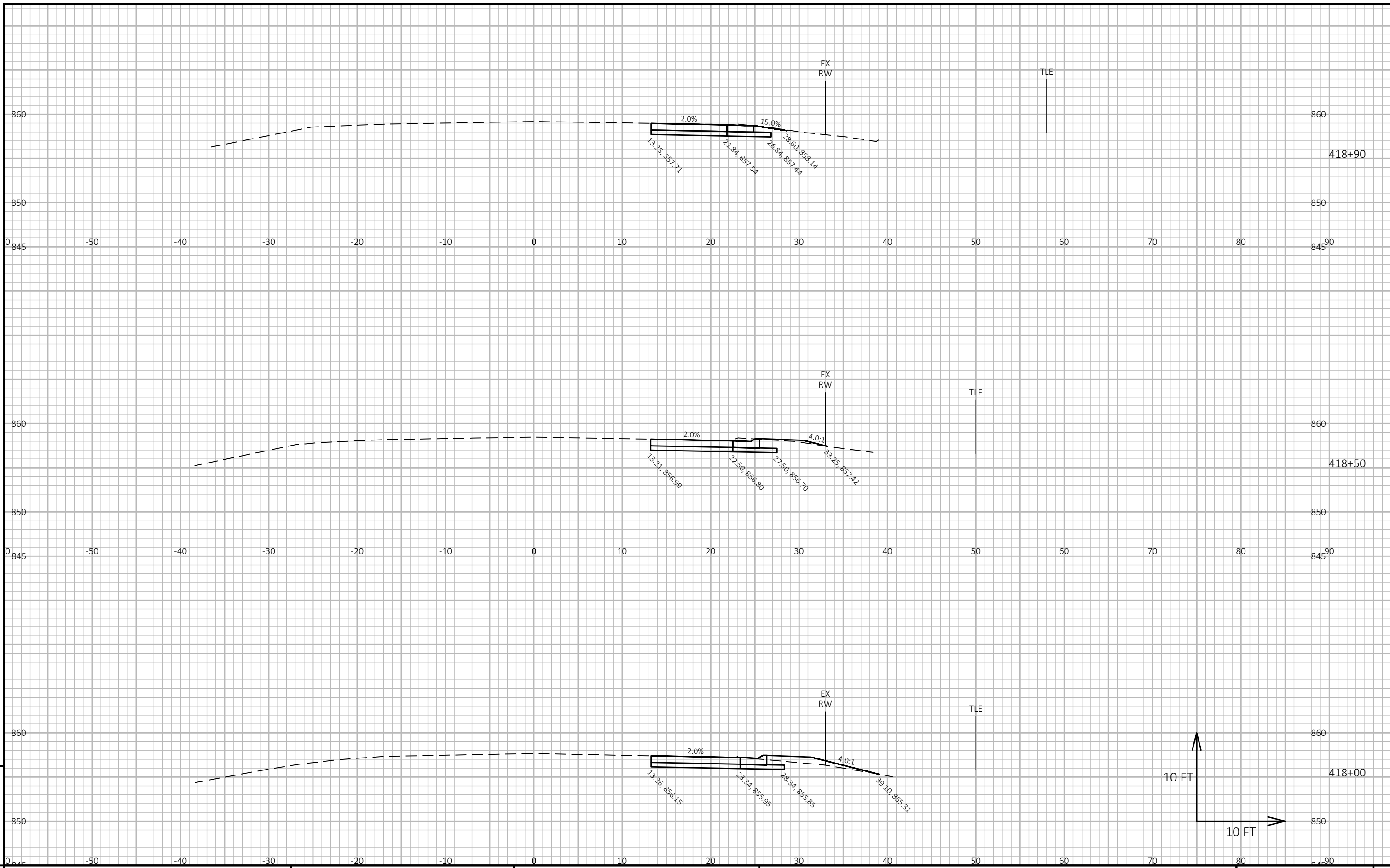
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LAYOUT NAME - 13



PROJECT NO: 1430-08-81 HWY: STH 23 COUNTY: GREEN LAKE CROSS SECTIONS: STH 23 SHEET E



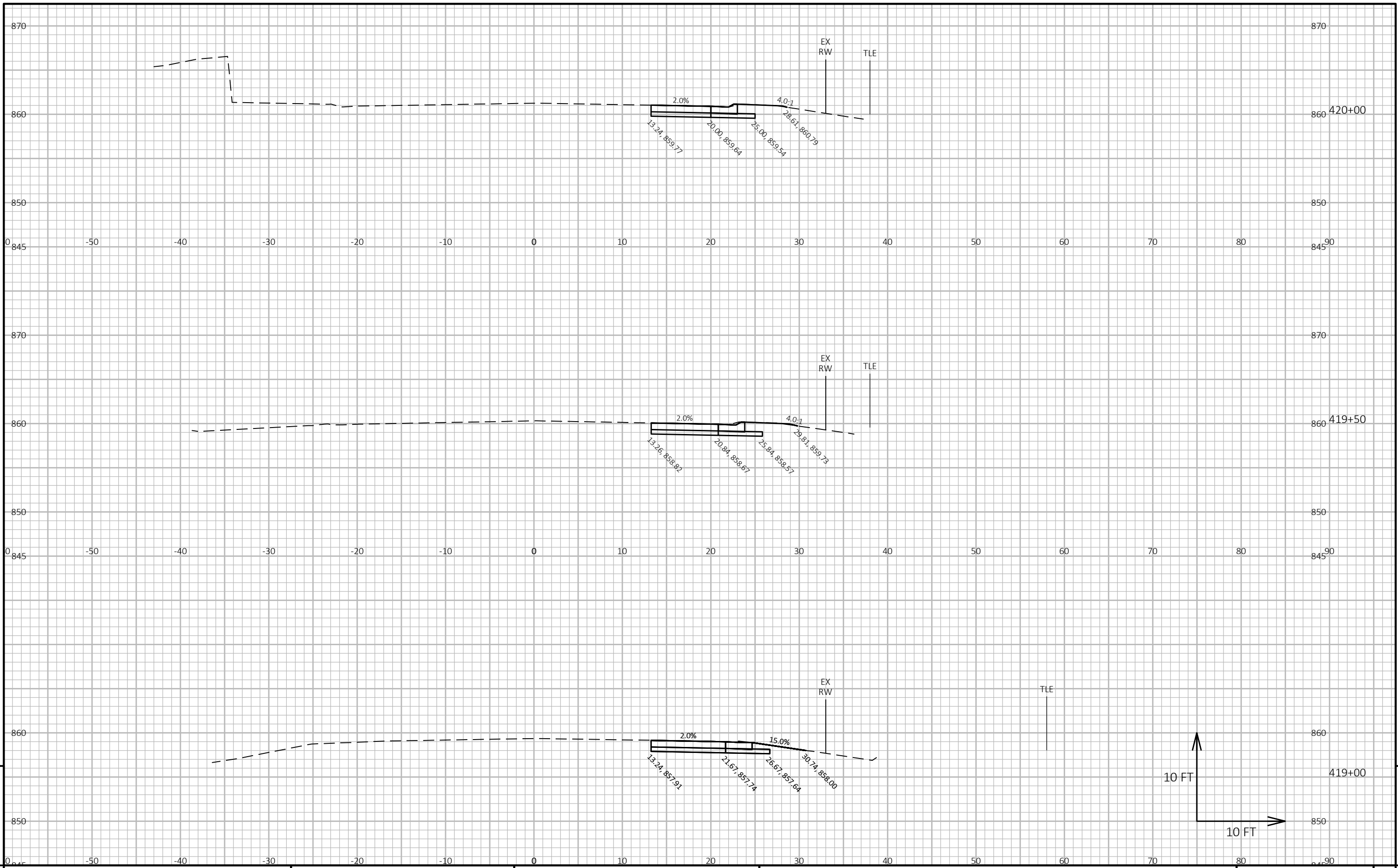
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PROJECT NO: 1430-08-81	HWY: STH 23	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 23	SHEET	E
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LAYOUT NAME - 15



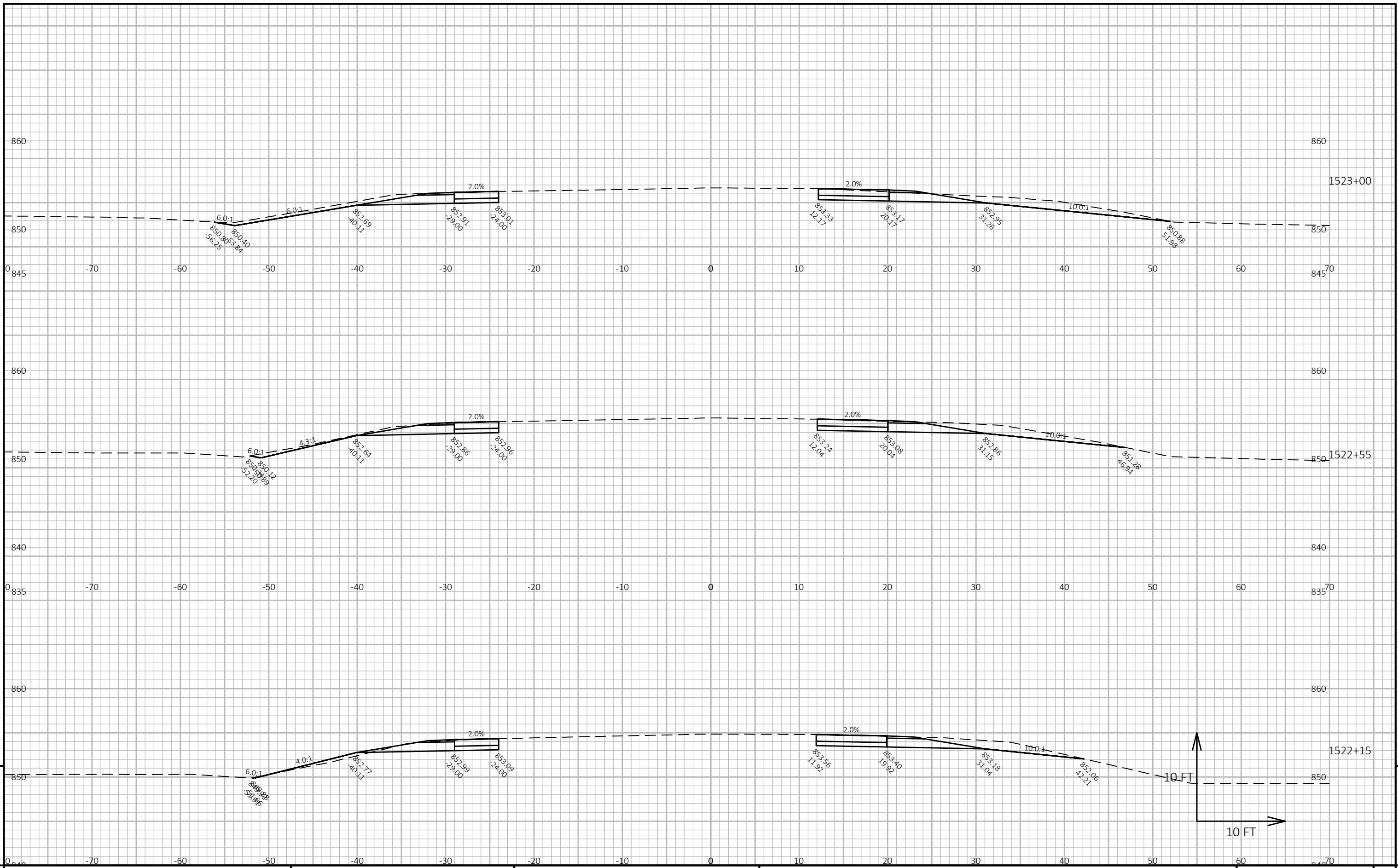
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LAYOUT NAME - 16



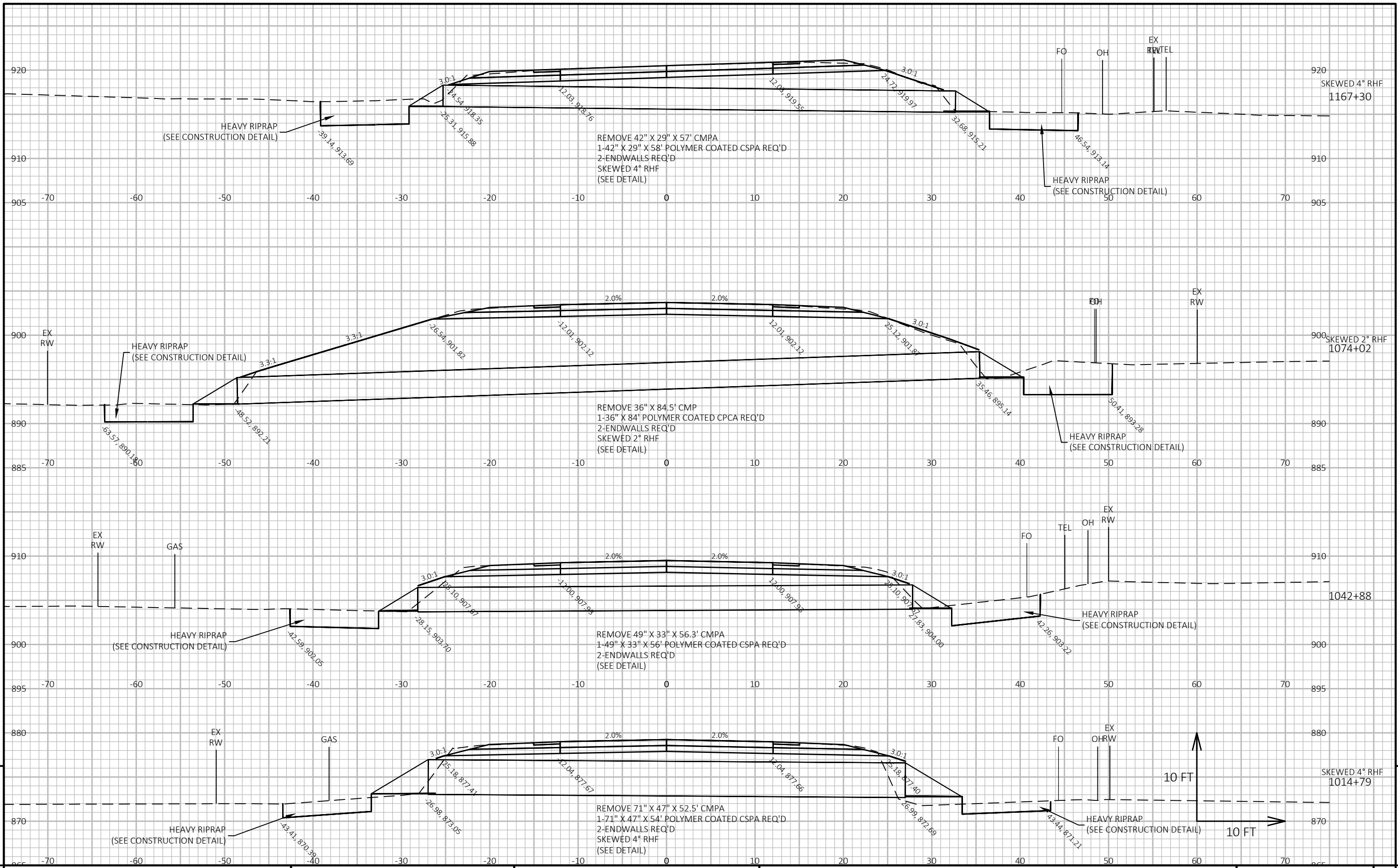
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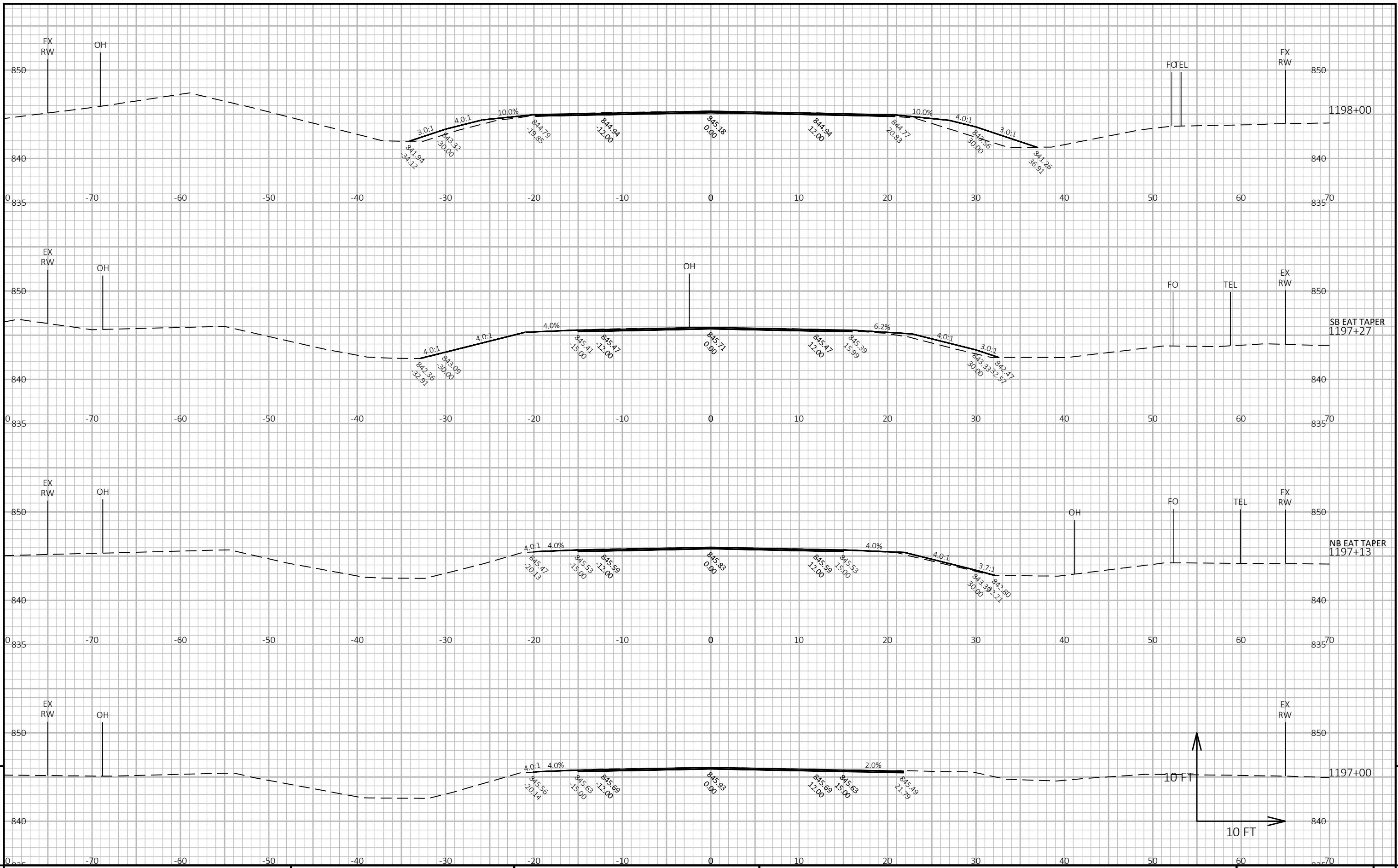
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LAYOUT NAME - 33



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: CULVERT REPLACEMENT SHEET 9



PROJECT NO: 6640-00-70

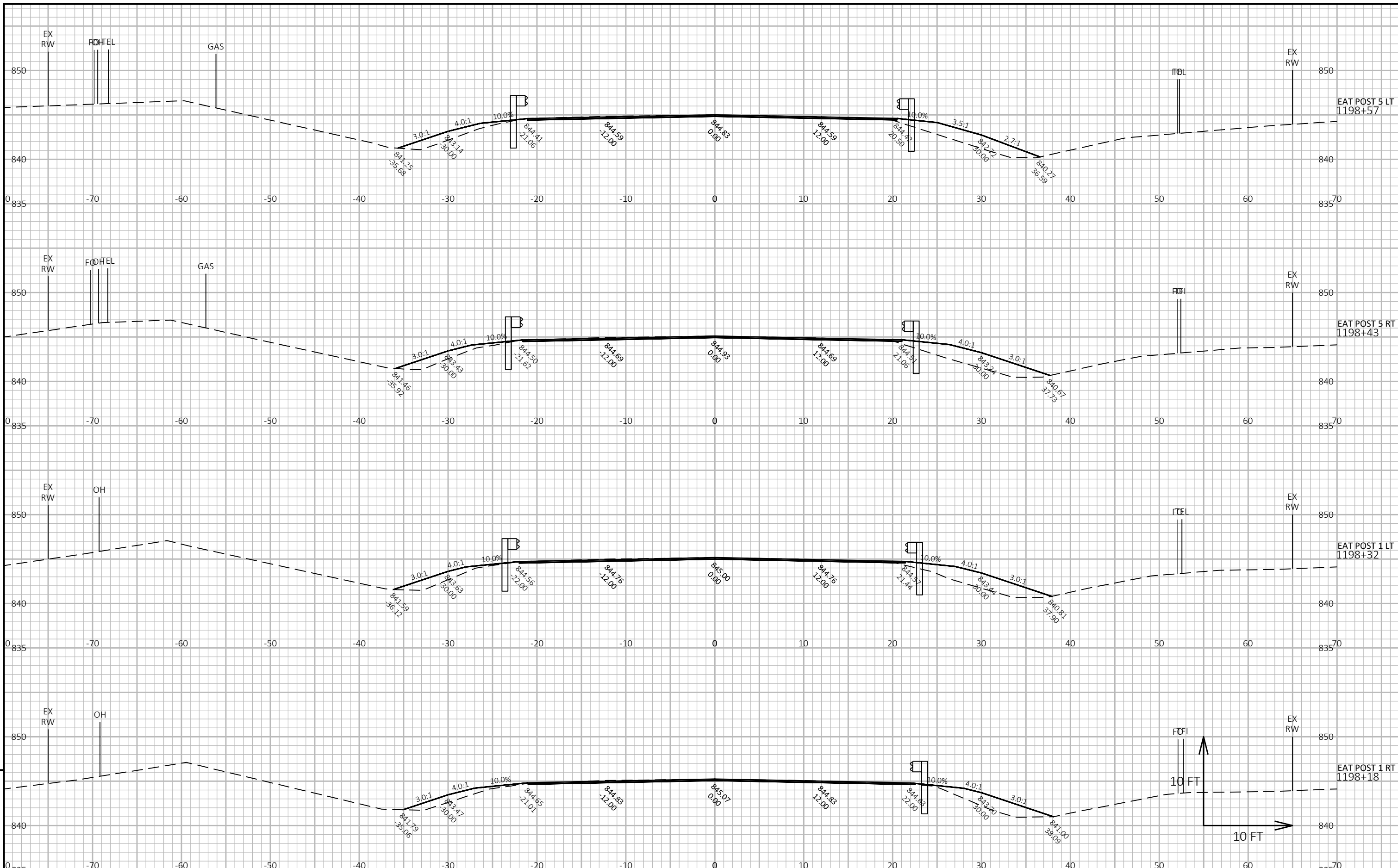
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COUNTY: GREEN LAKE

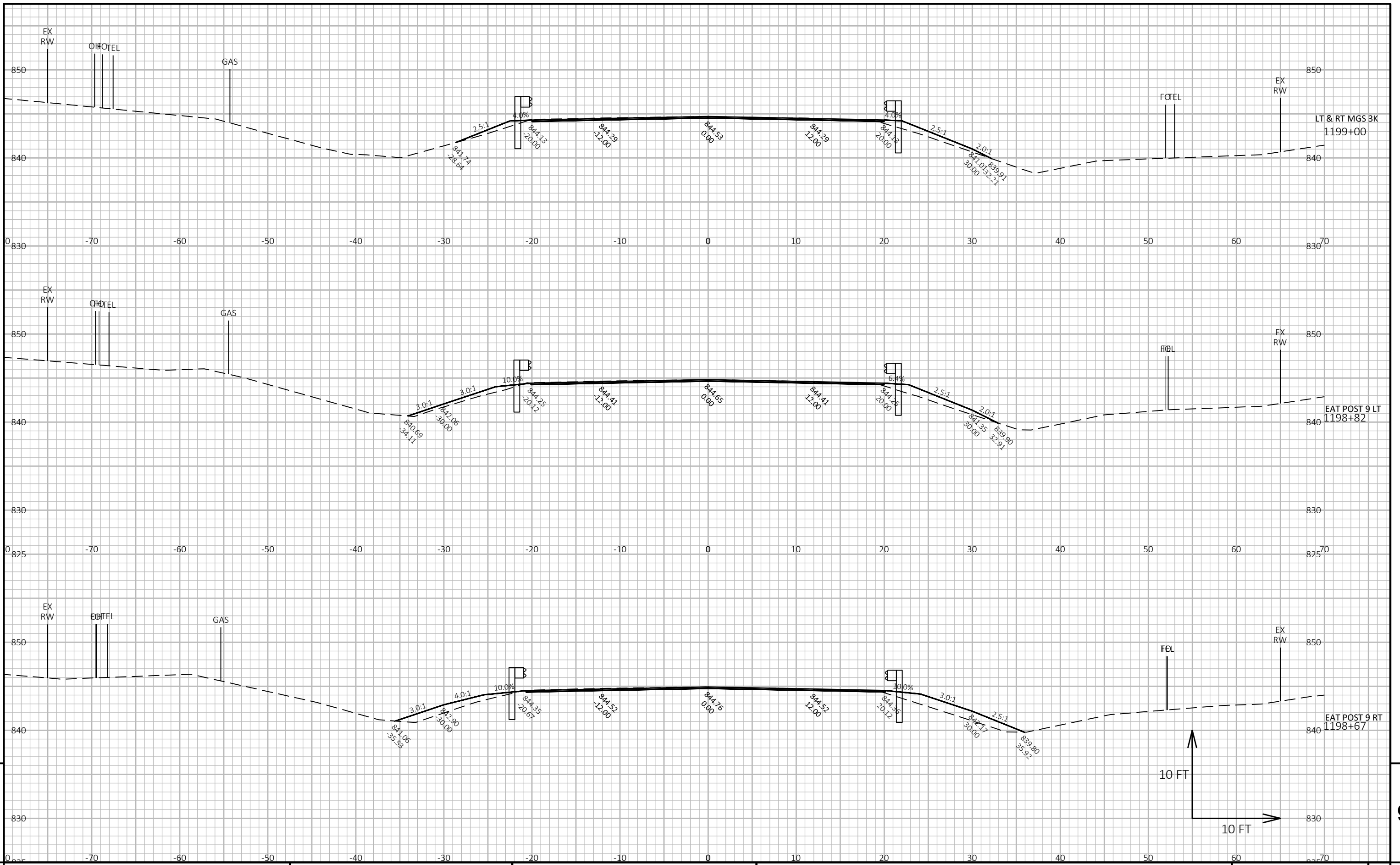
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SHEET

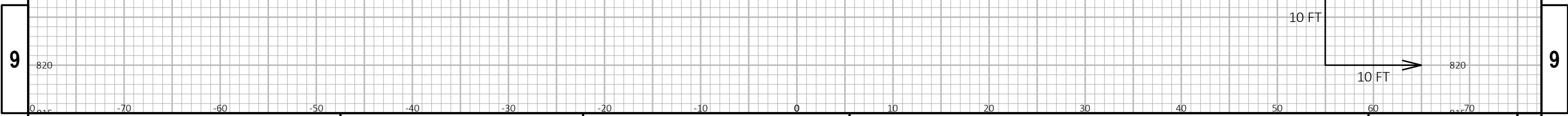
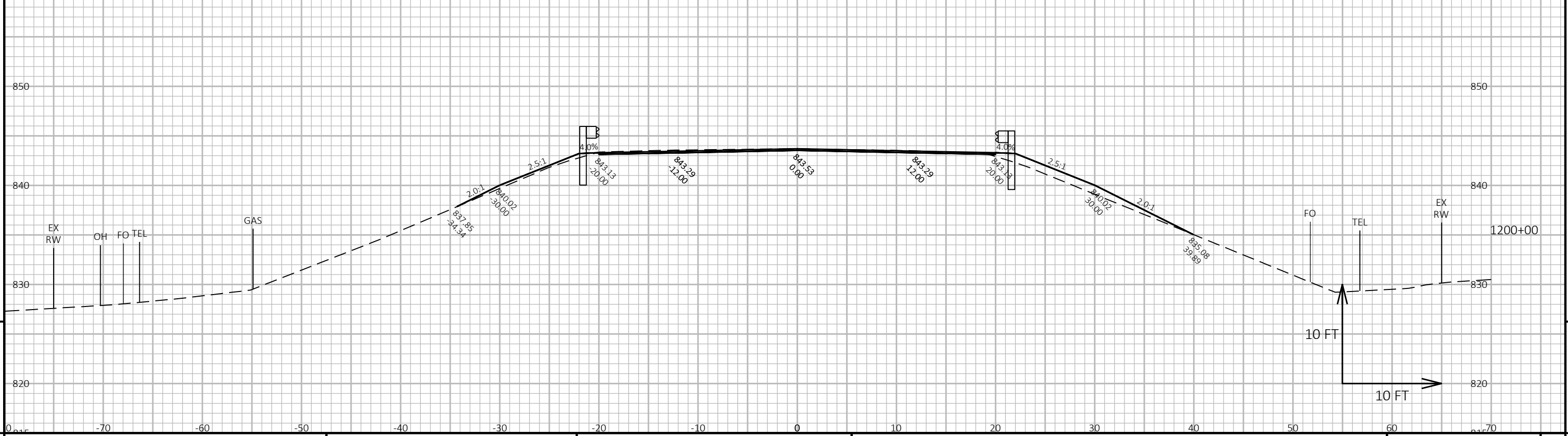
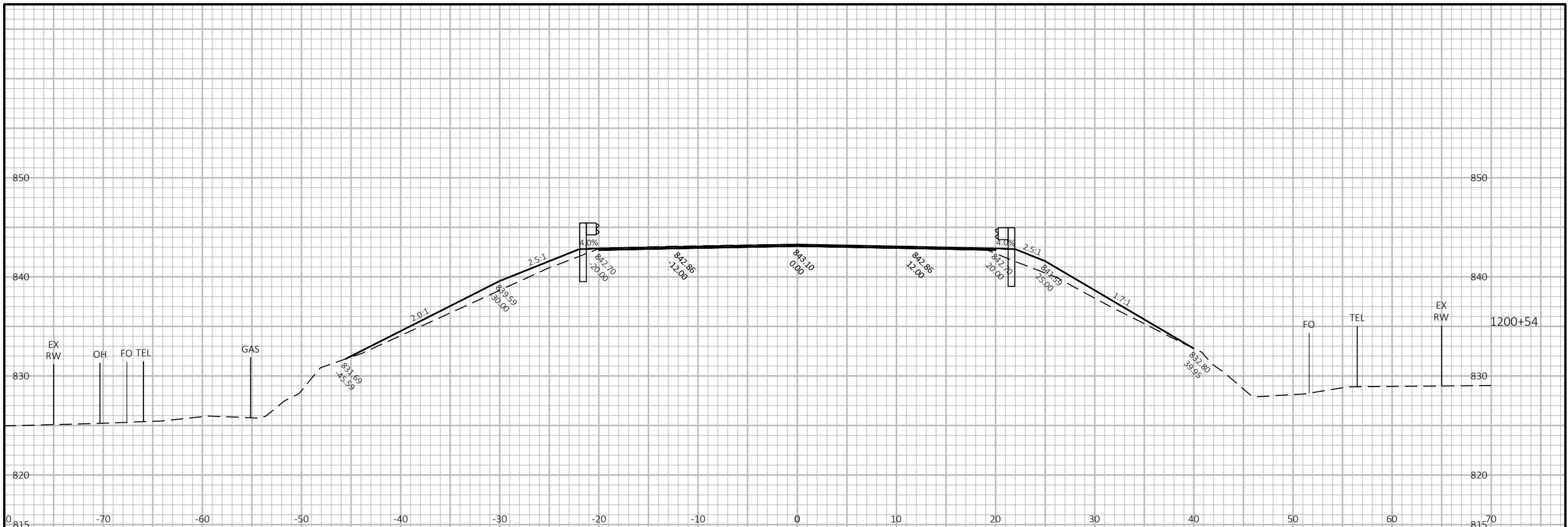
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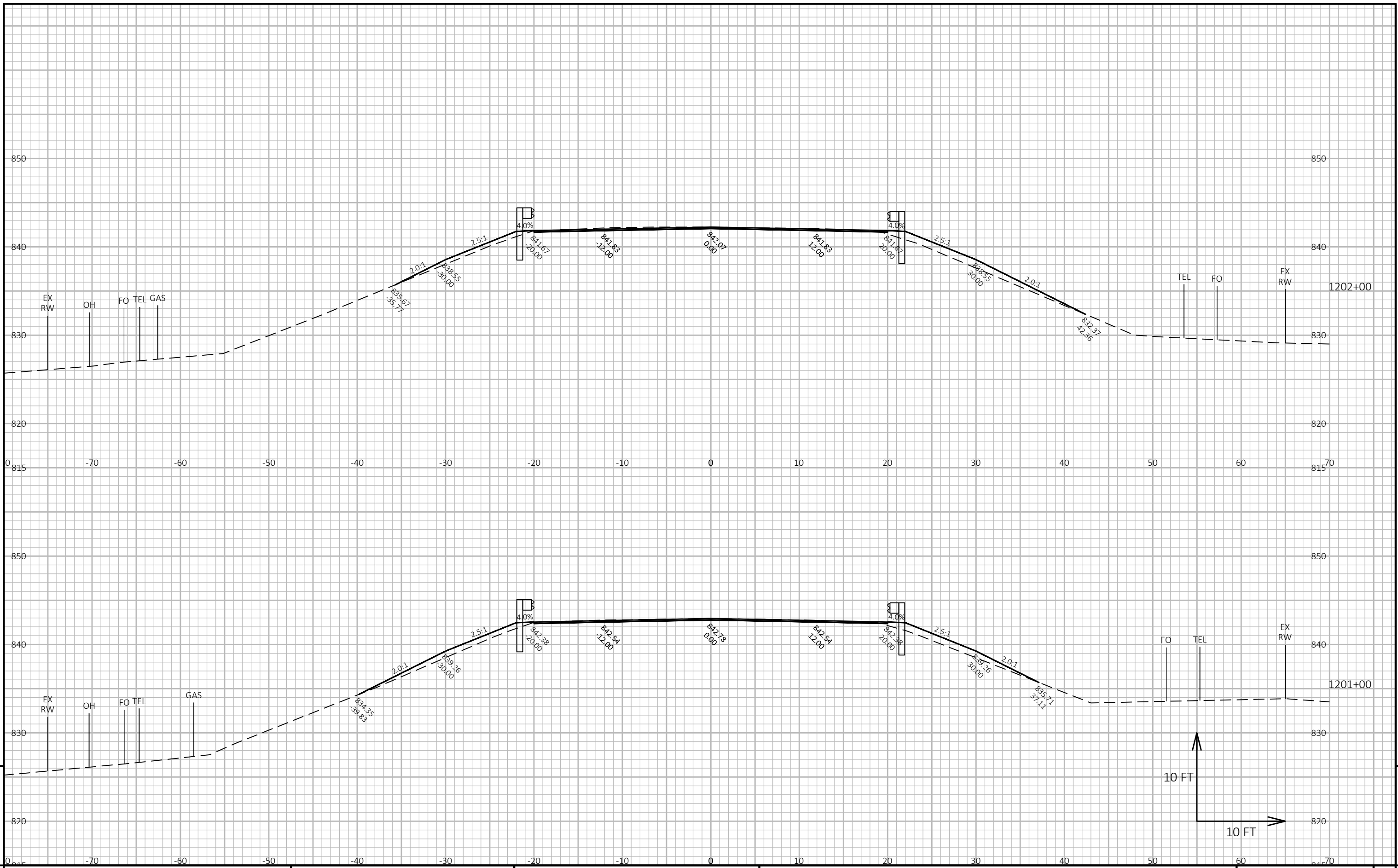
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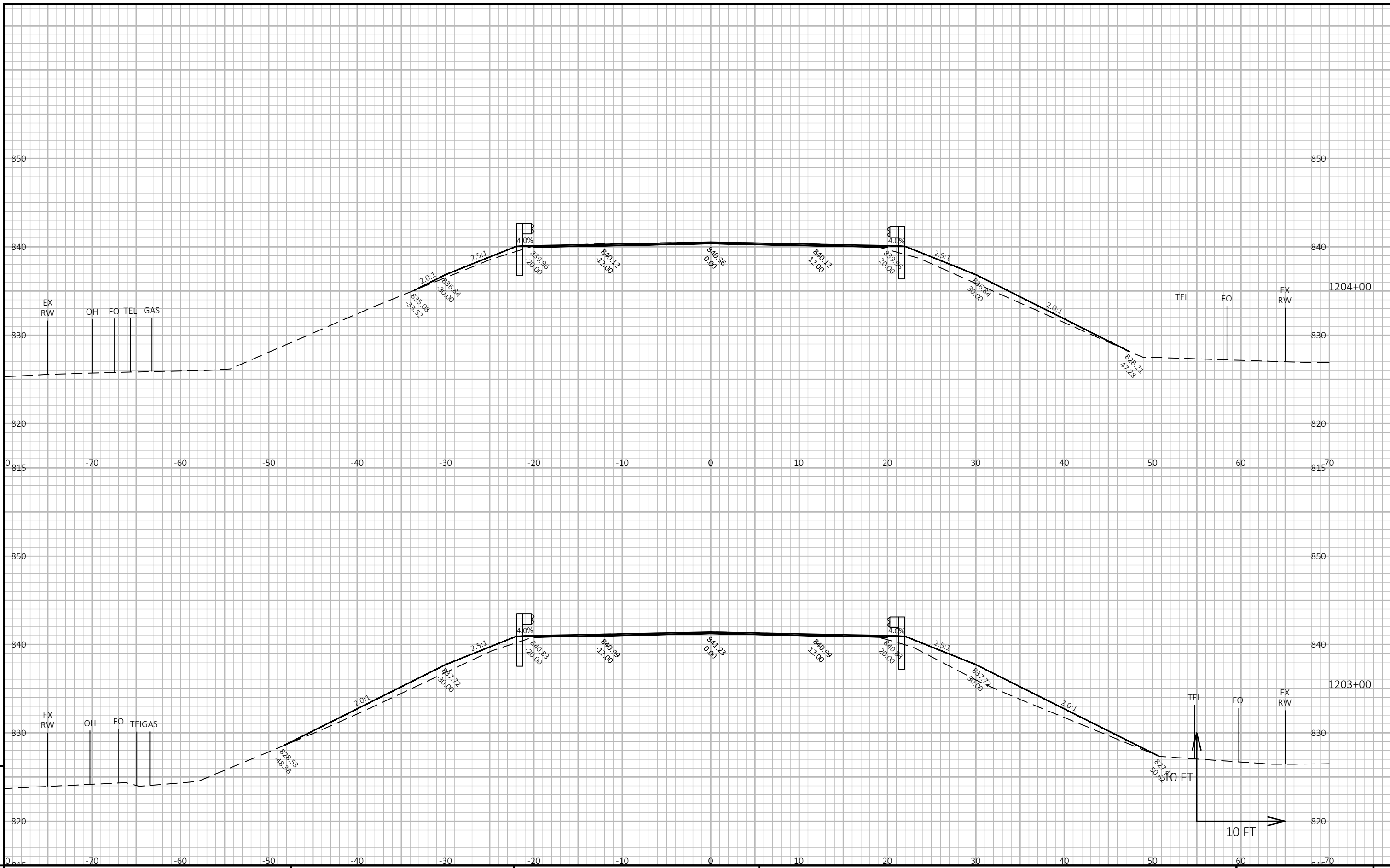
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET 9



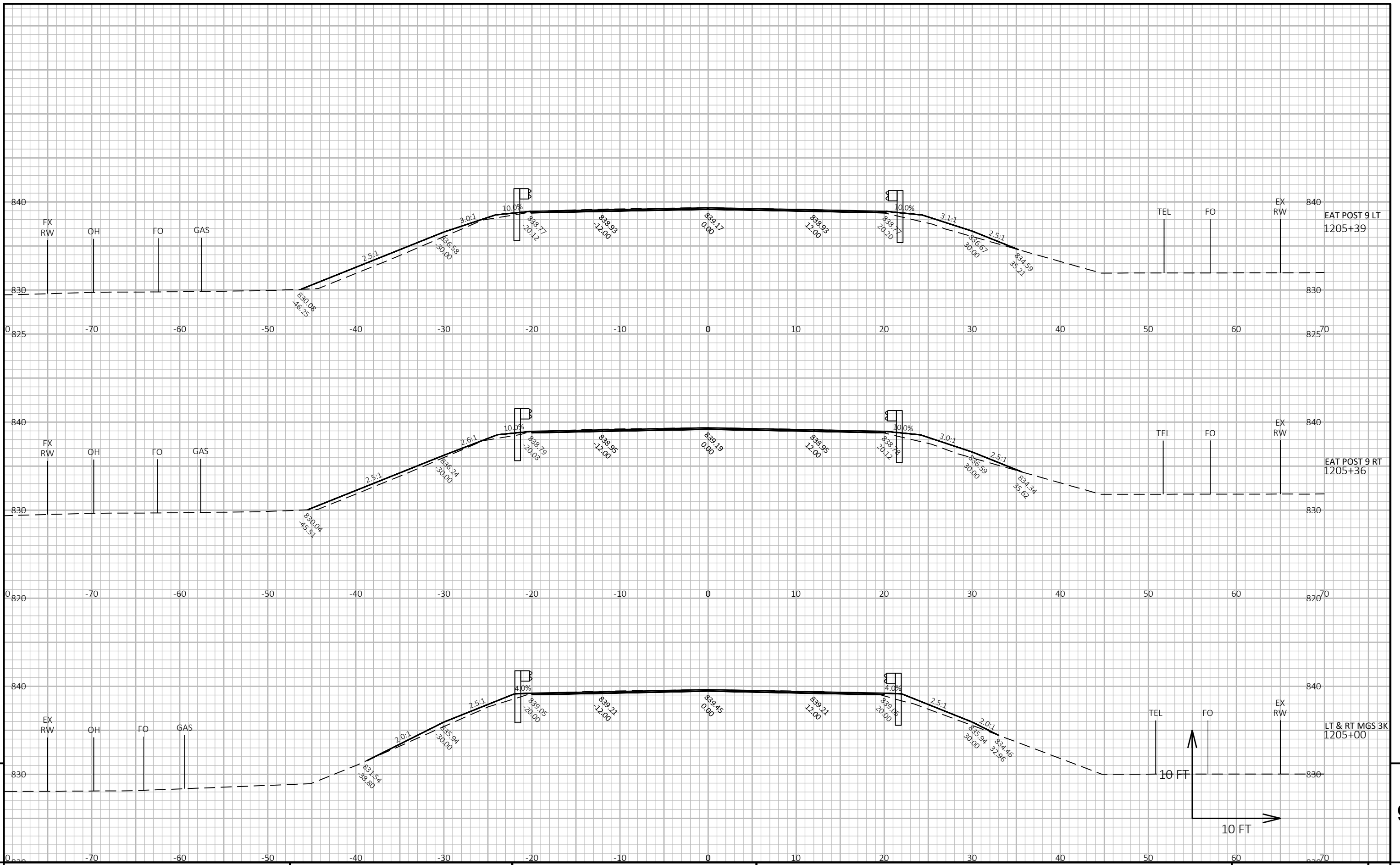
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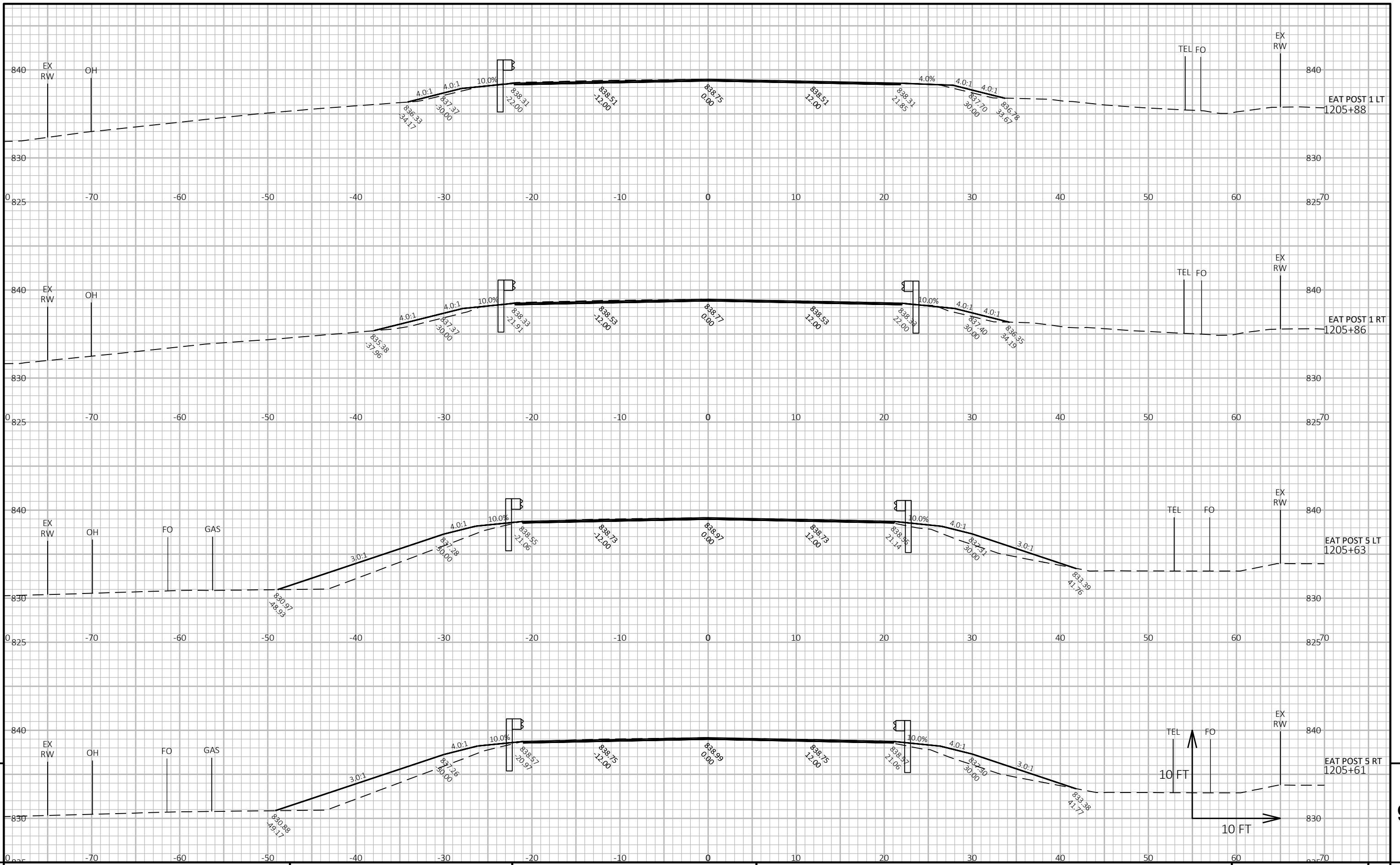
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LAYOUT NAME - 15



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E



PROJECT NO: 6640-00-70

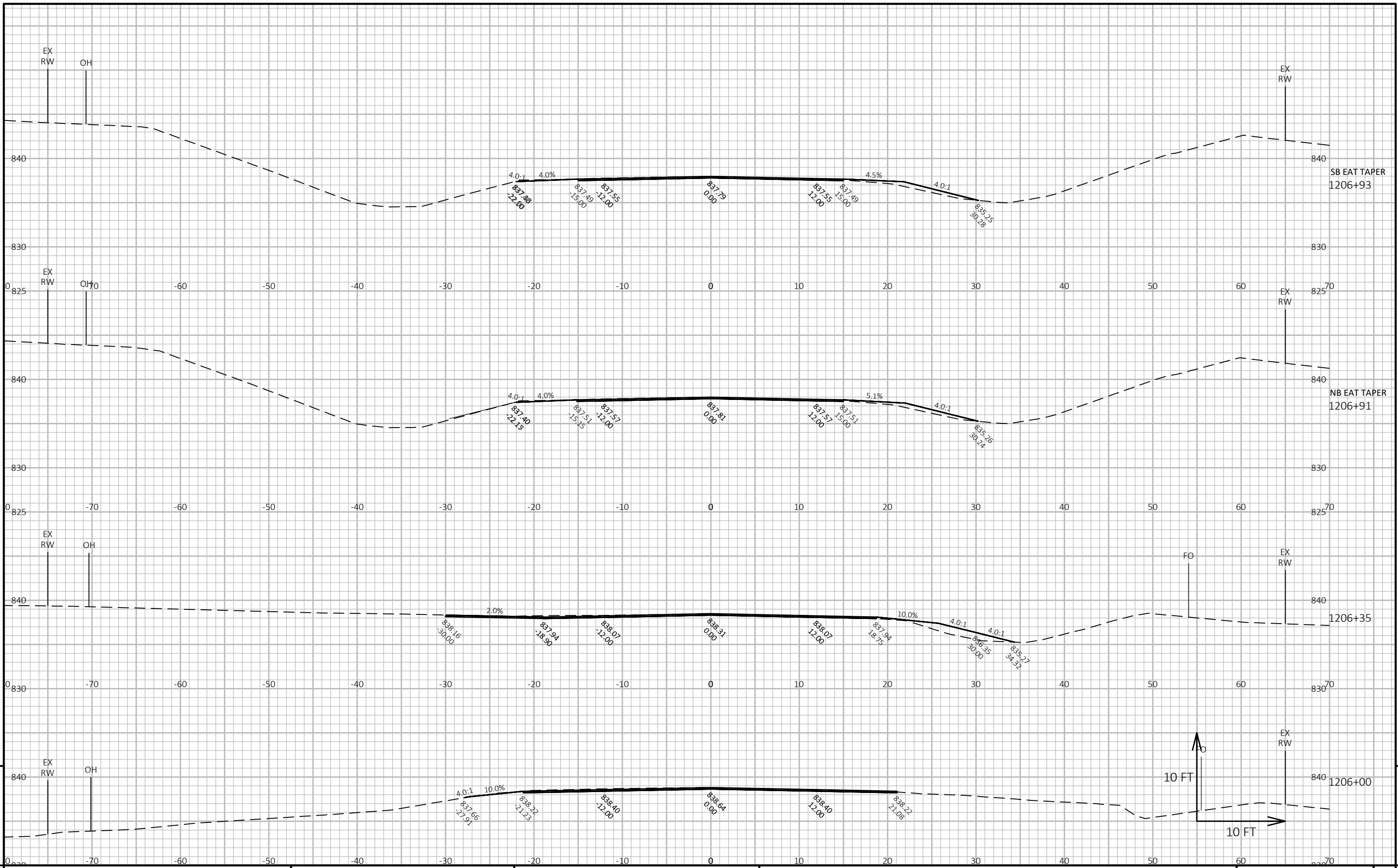
HWY: STH 73

COUNTY: GREEN LAKE

CROSS SECTIONS: STH 73

SHEET

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PROJECT NO: 6640-00-70

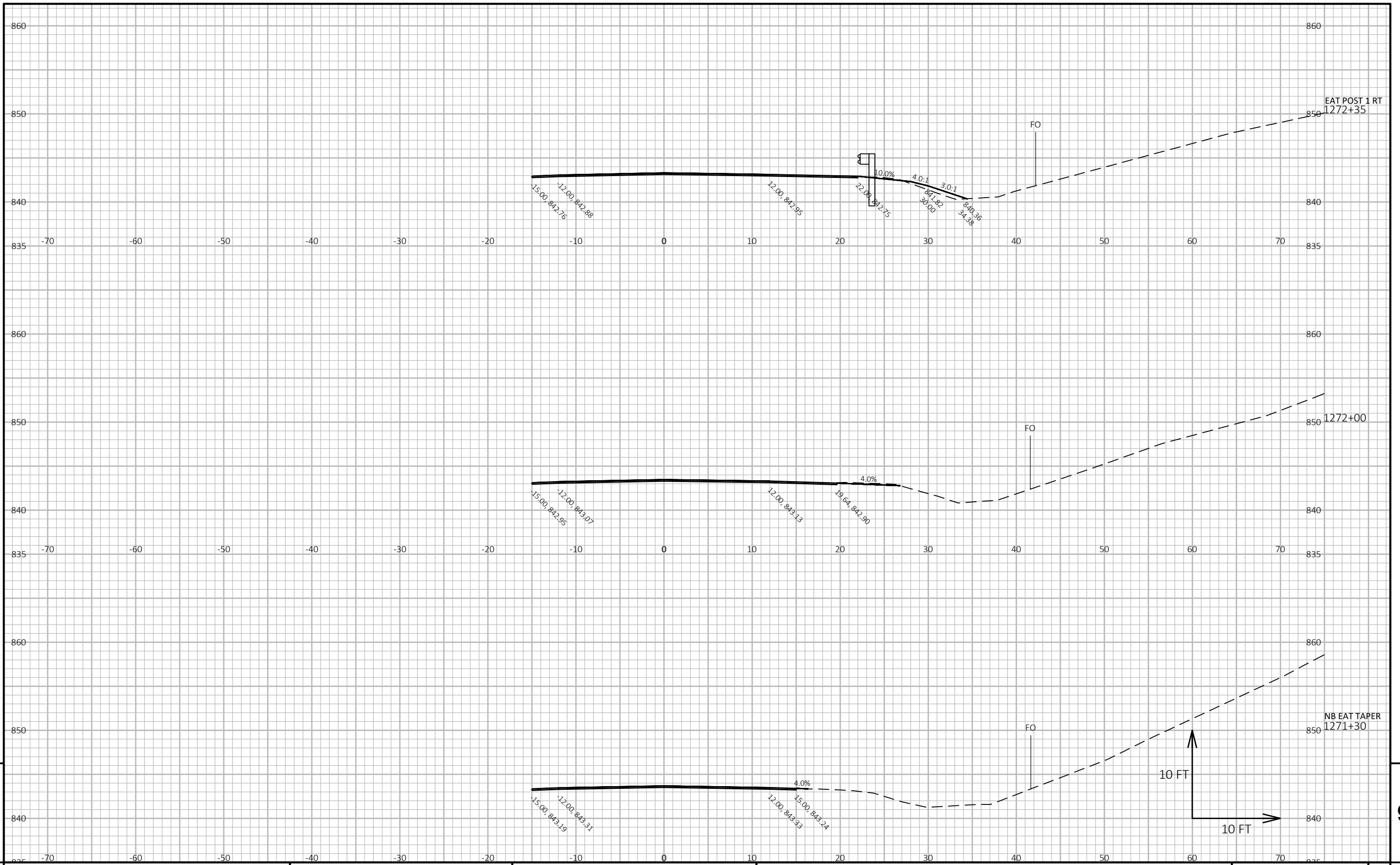
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COUNTY: GREEN LAKE

CROSS SECTIONS: STH 73

SHEET

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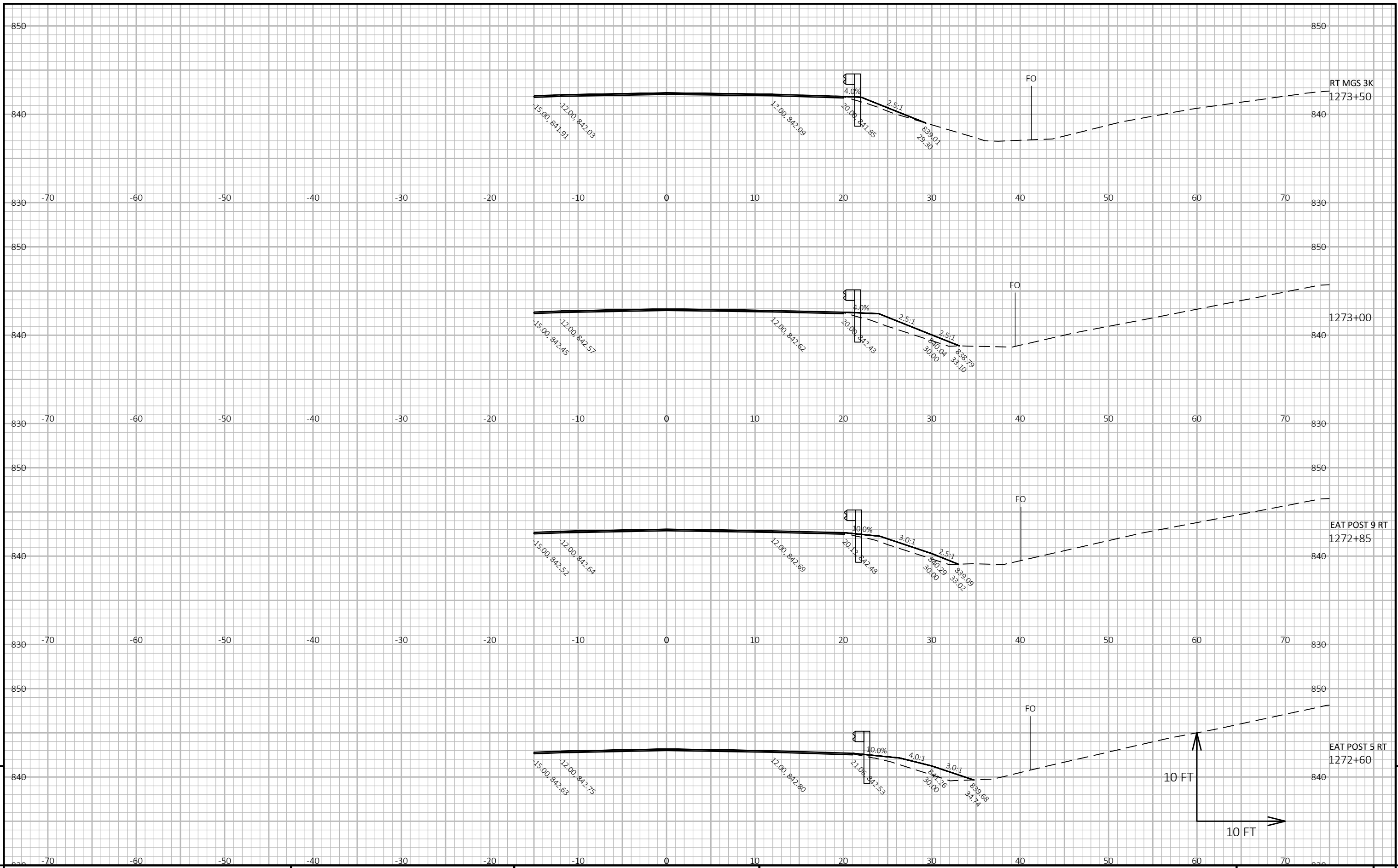
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LAYOUT NAME - 19



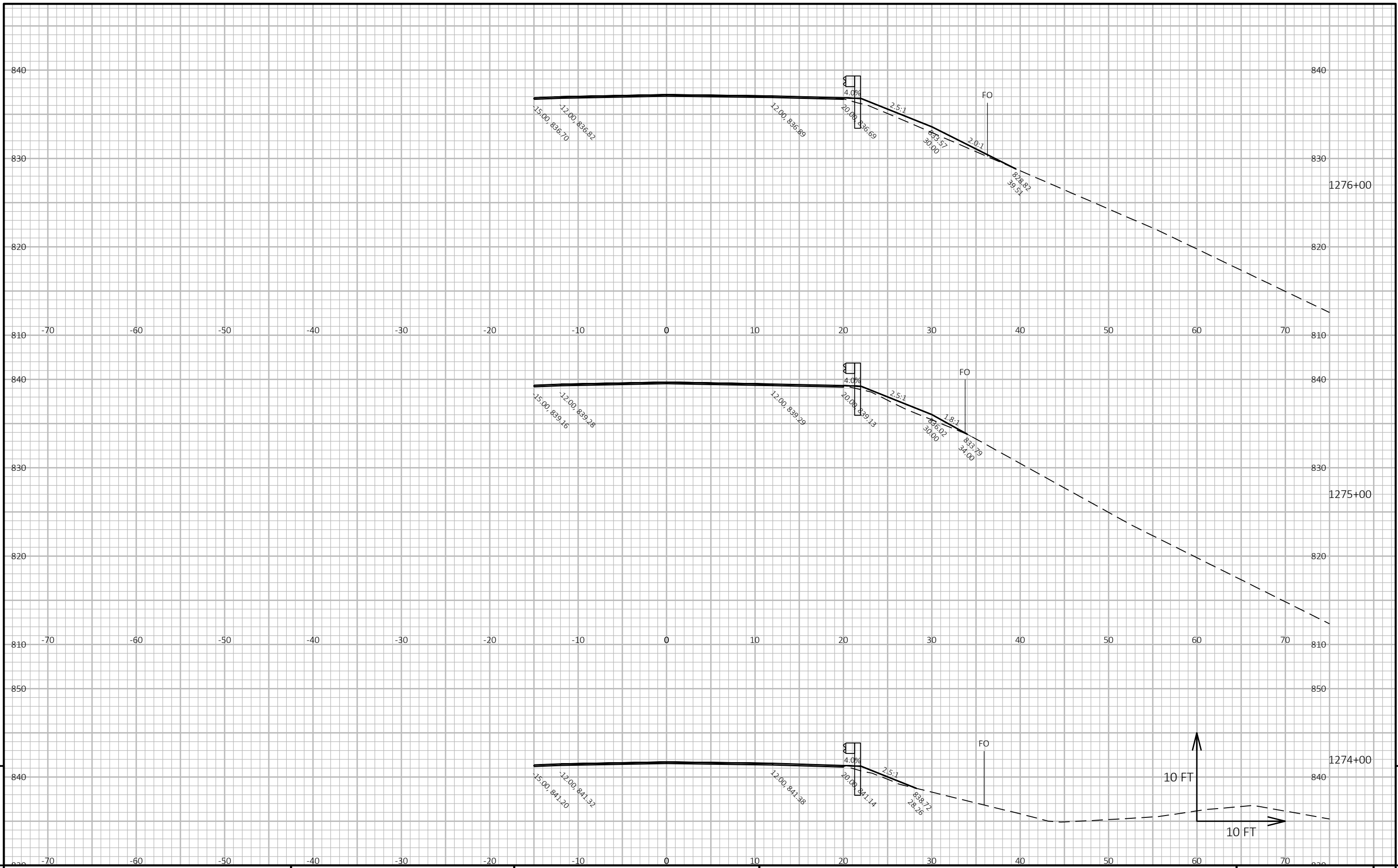
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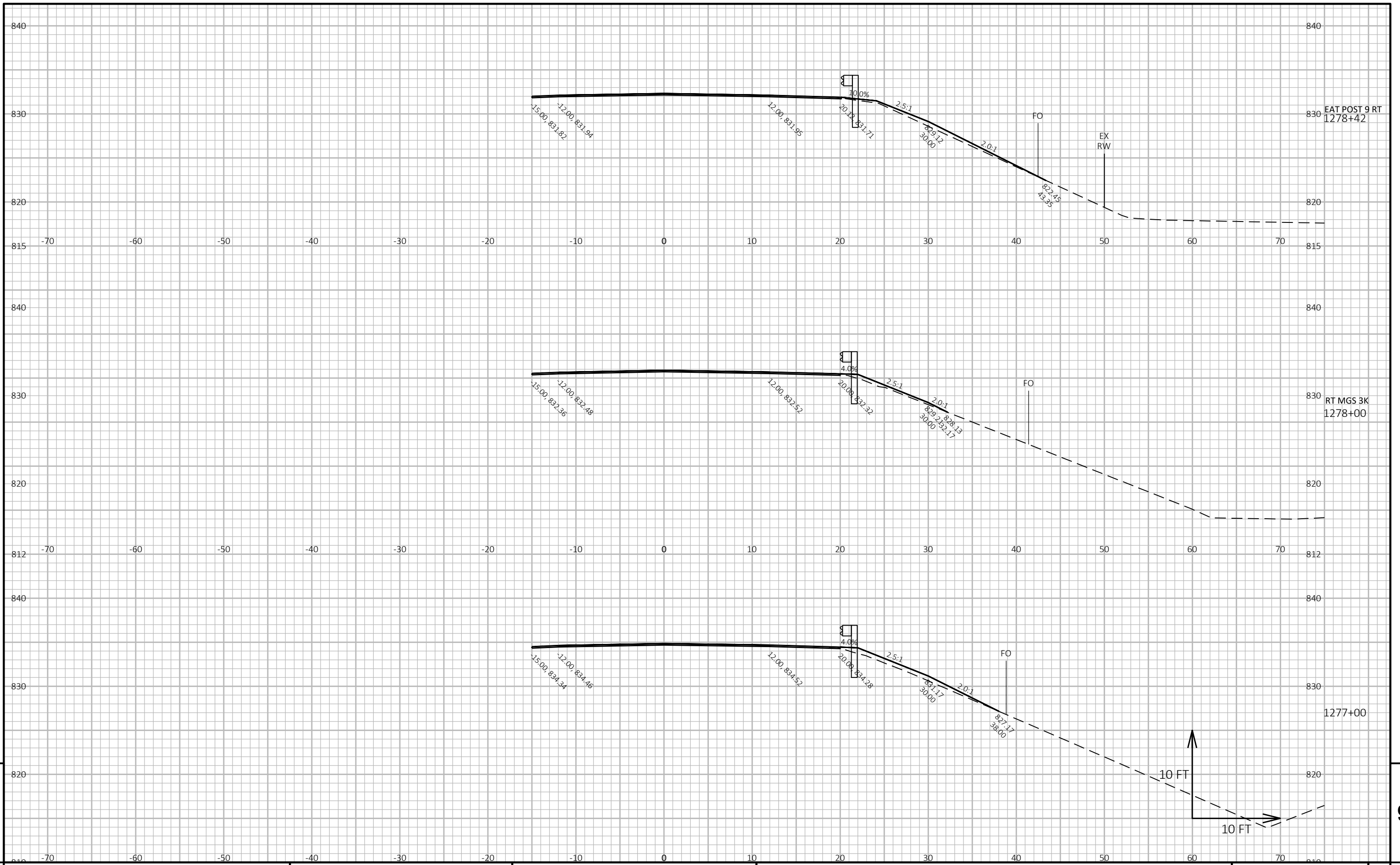
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LAYOUT NAME - 21



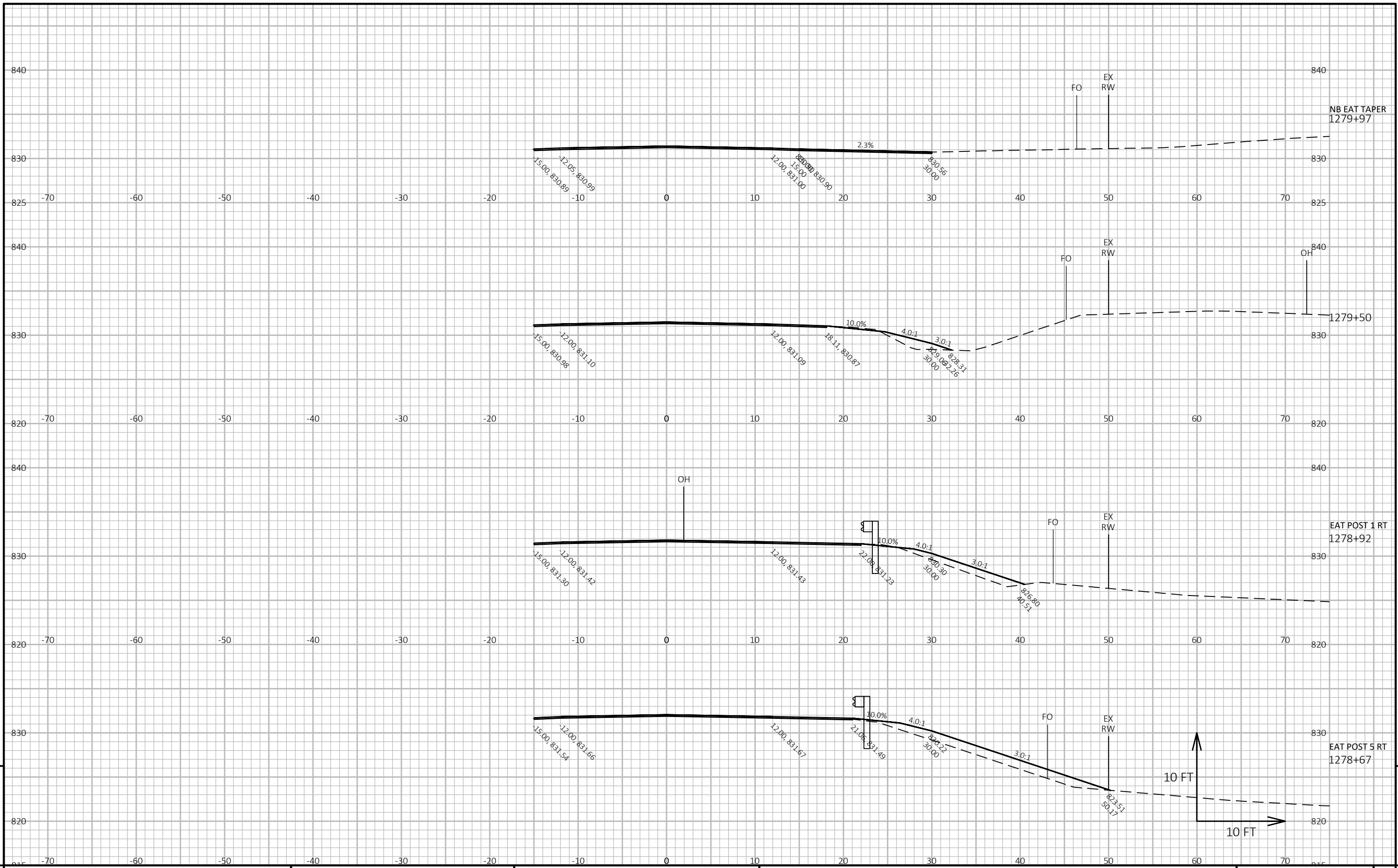
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LAYOUT NAME - 22



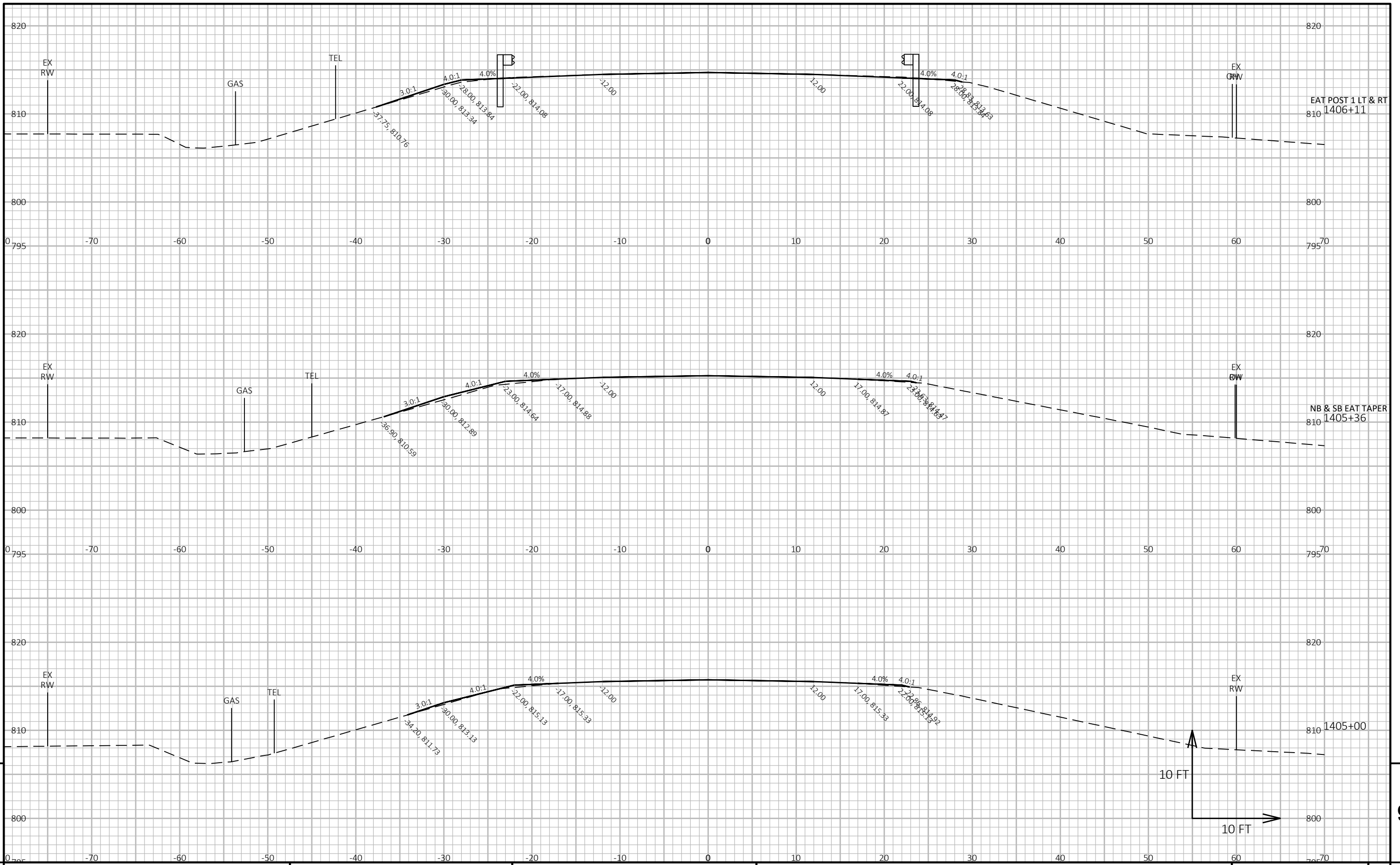
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LAYOUT NAME - 23



PROJECT NO: 6640-00-70

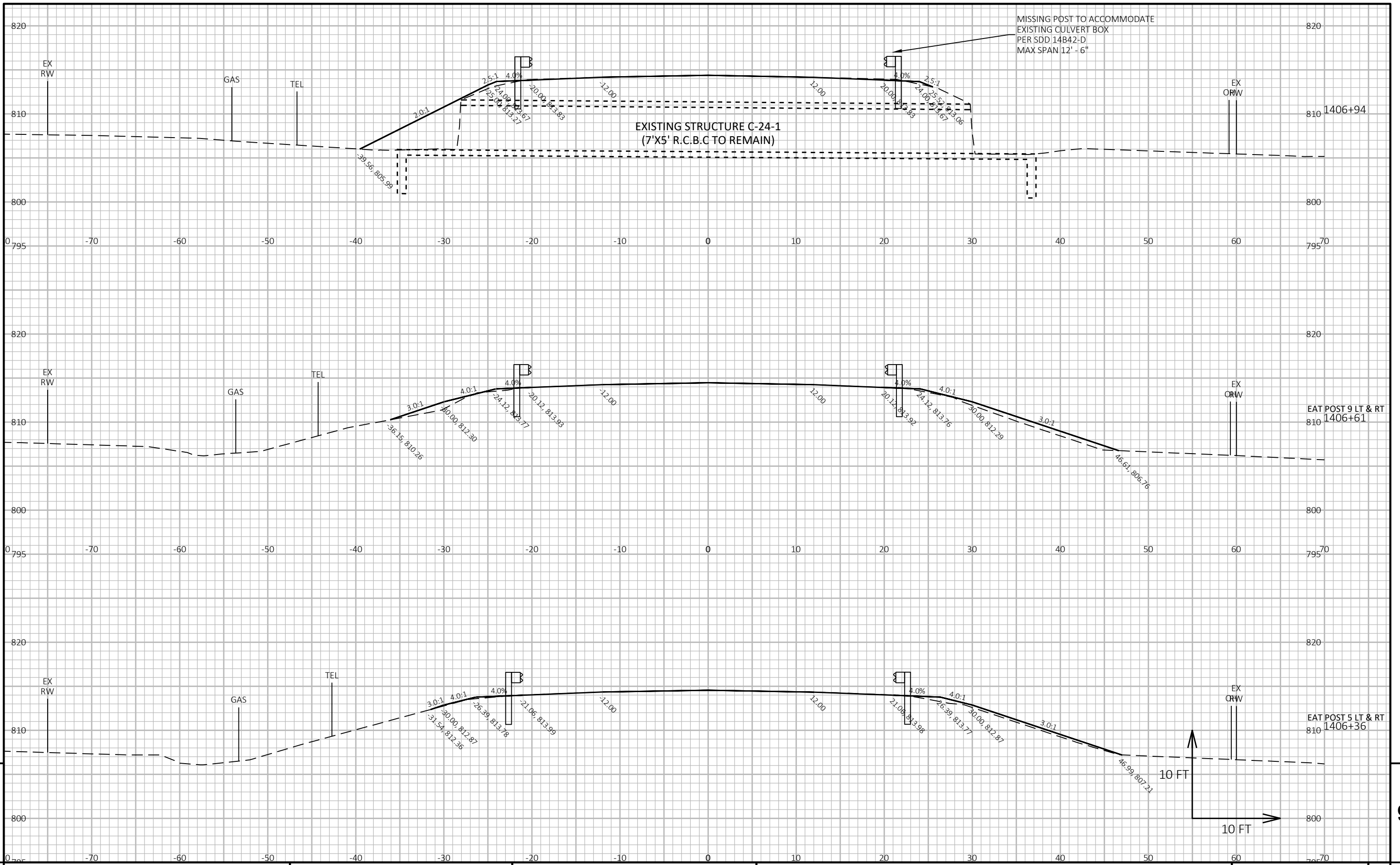
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COUNTY: GREEN LAKE

CROSS SECTIONS: STH 73

SHEET

E



PROJECT NO: 6640-00-70

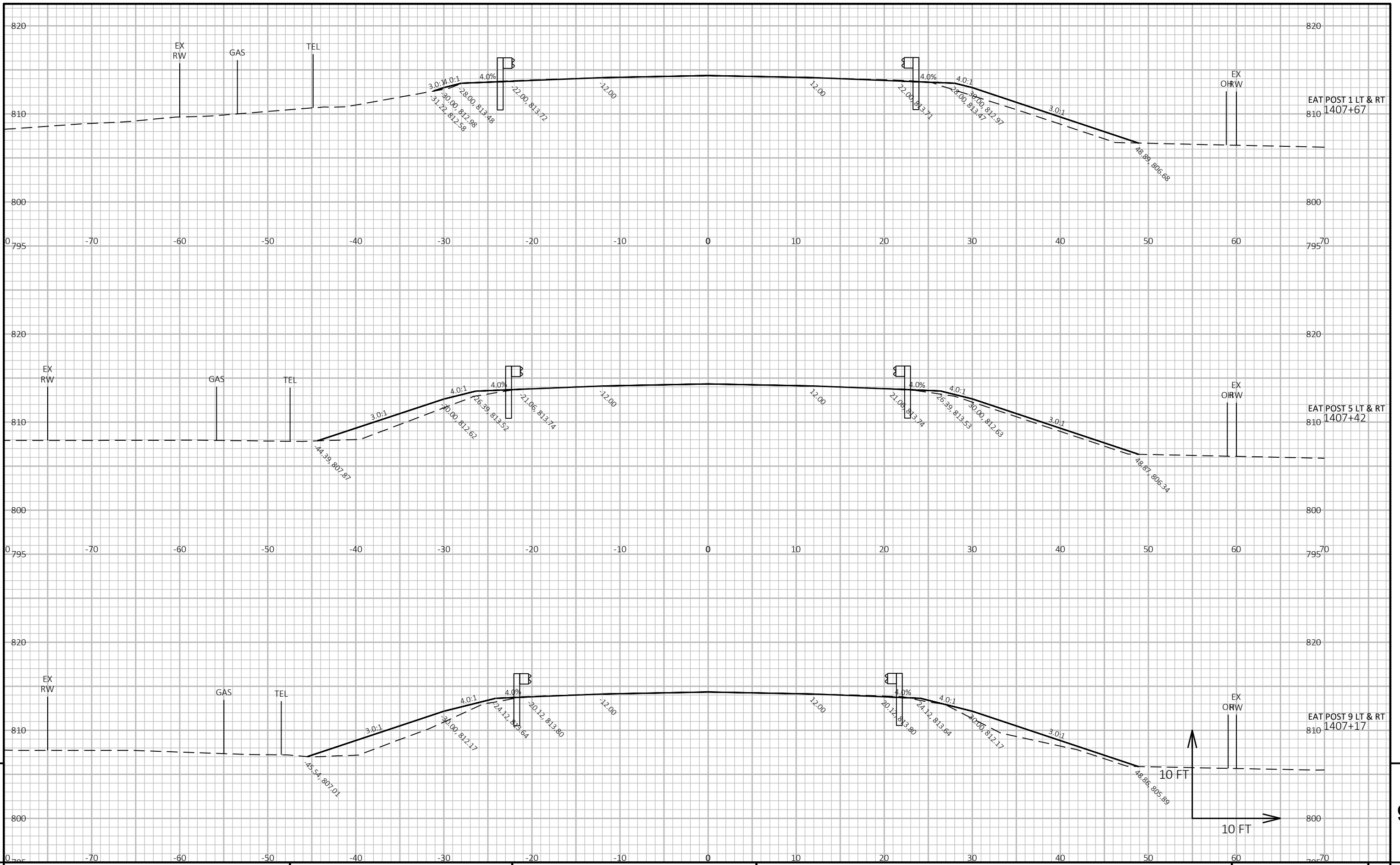
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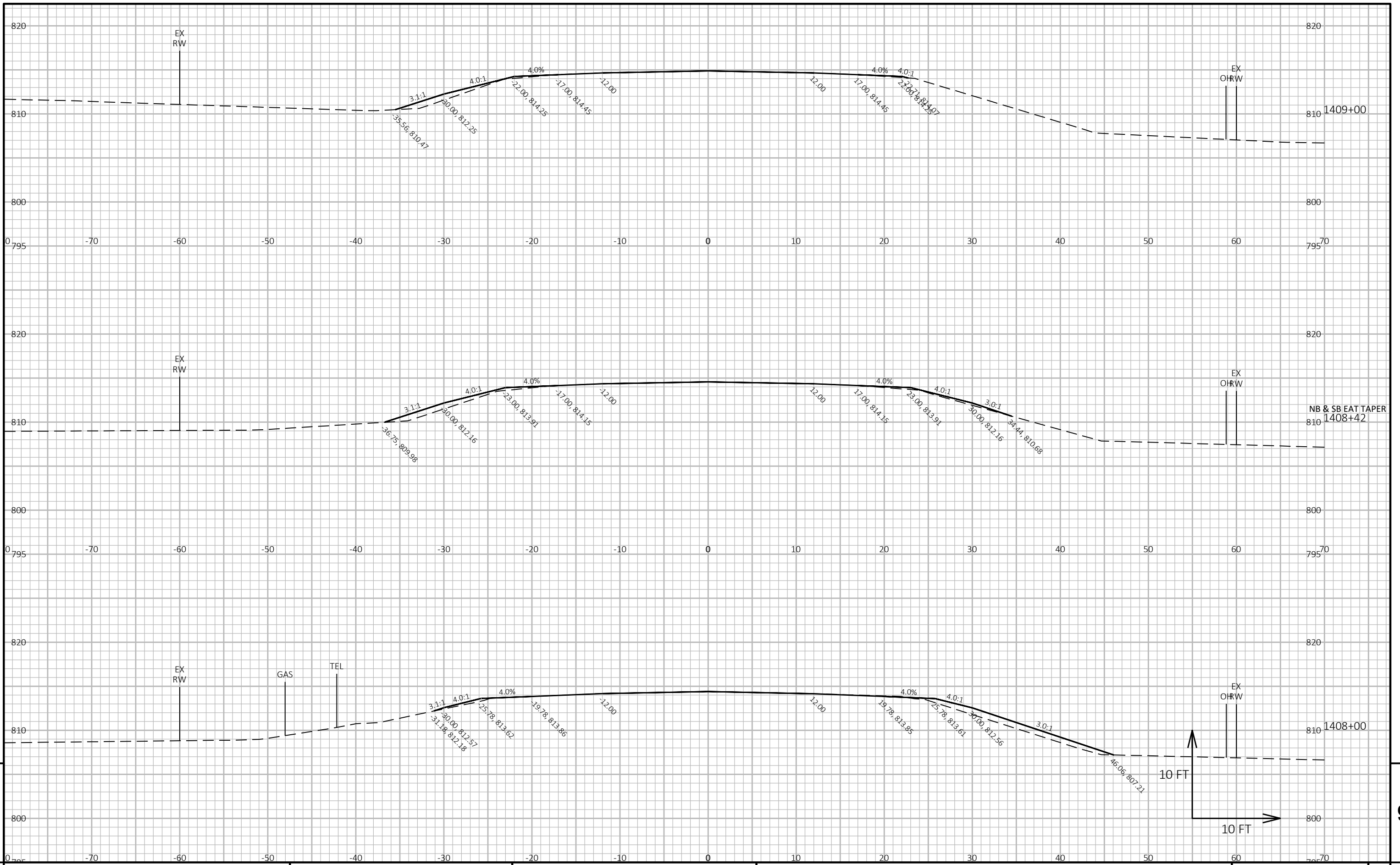
CROSS SECTIONS: STH 73

SHEET

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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E



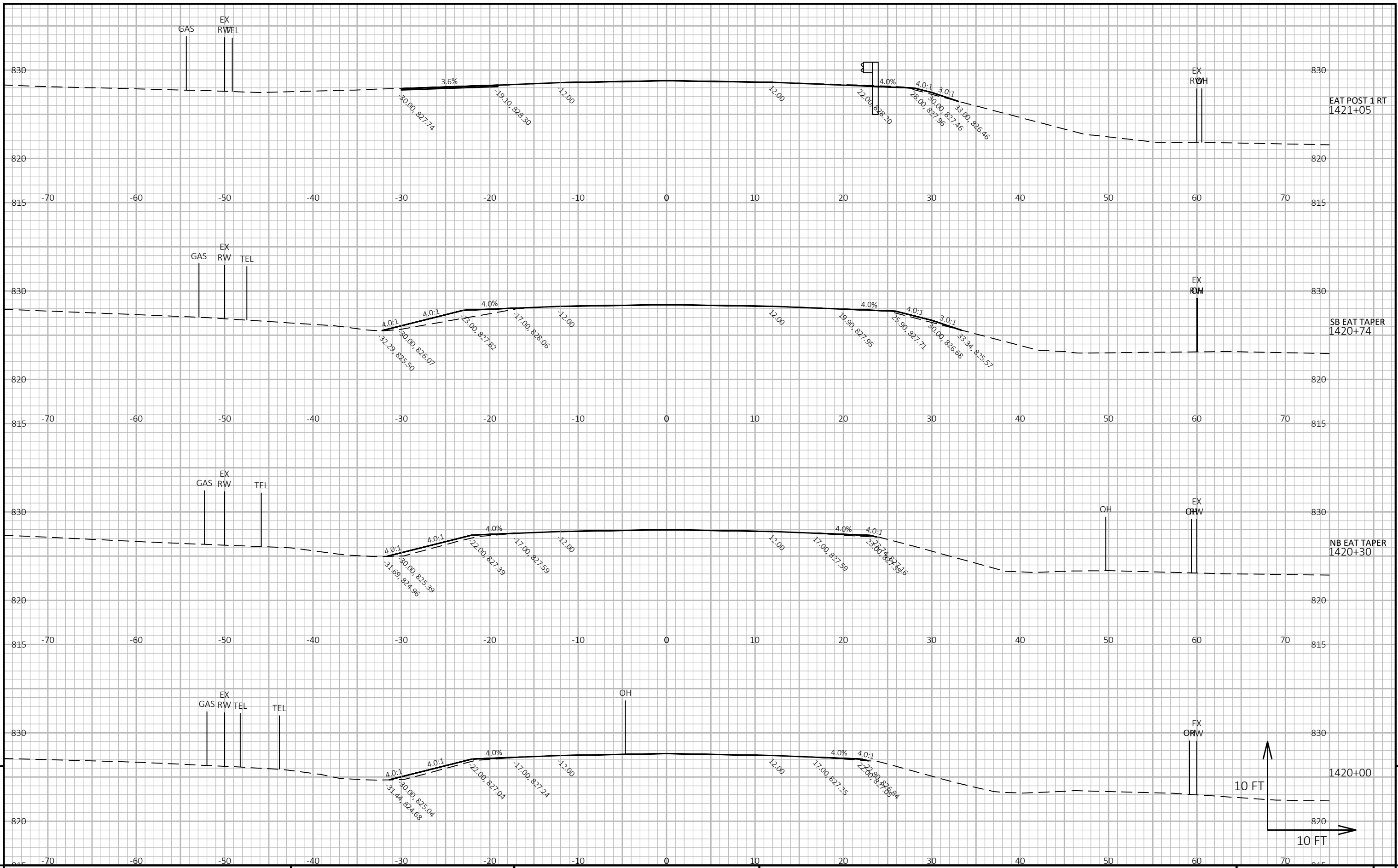
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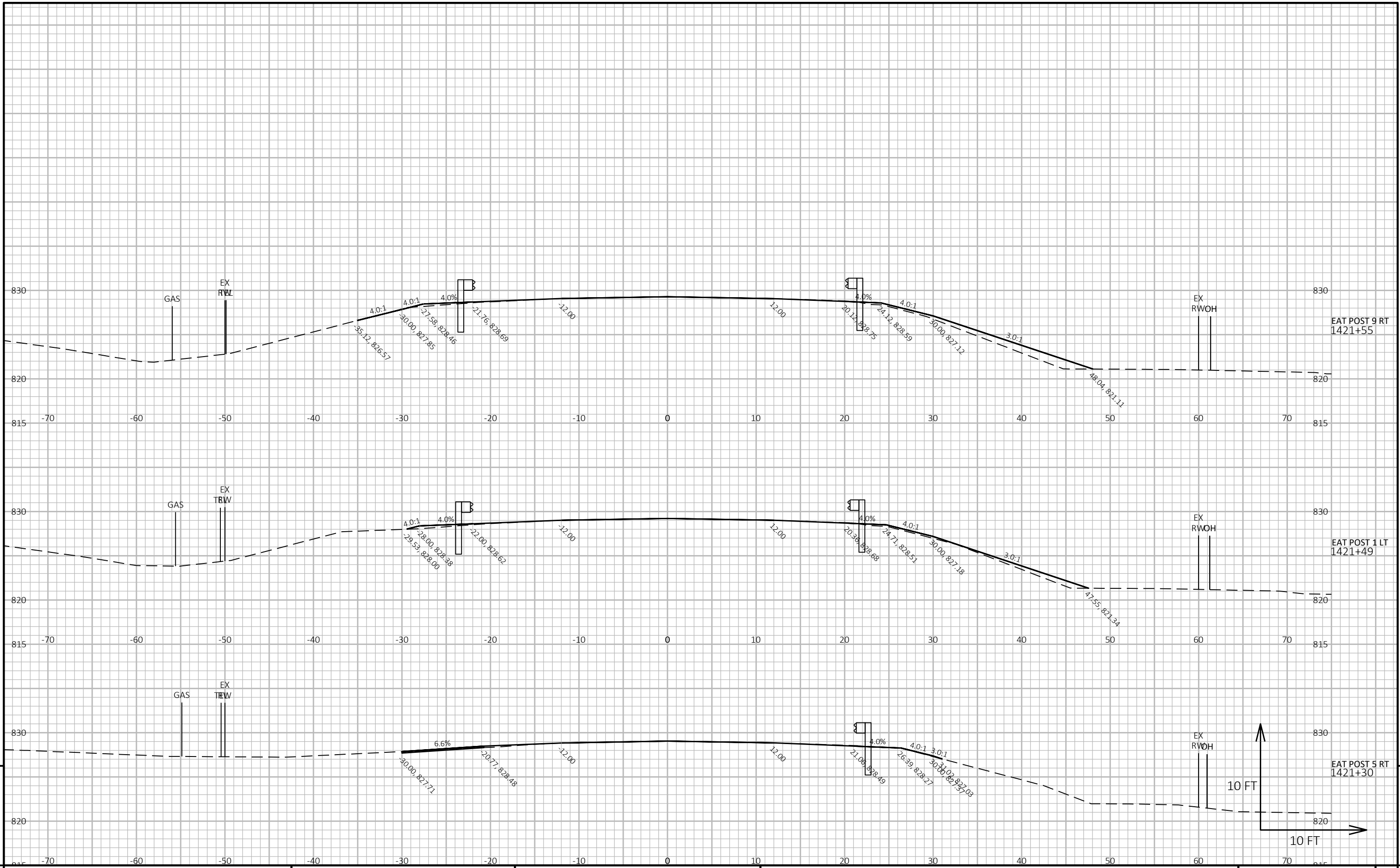
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LAYOUT NAME - 27



PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET 9



PROJECT NO: 6640-00-70

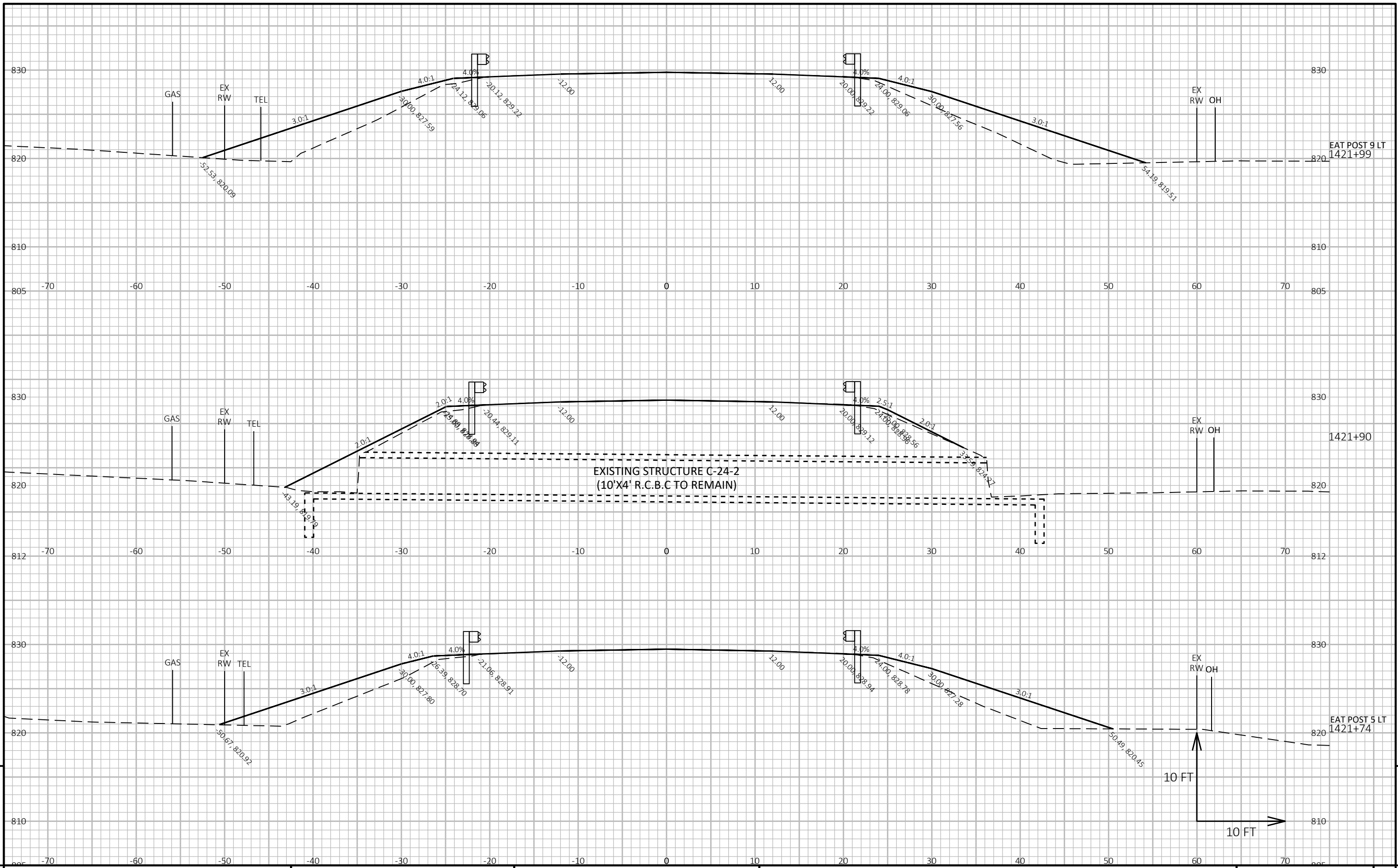
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COUNTY: GREEN LAKE

CROSS SECTIONS: STH 73

SHEET

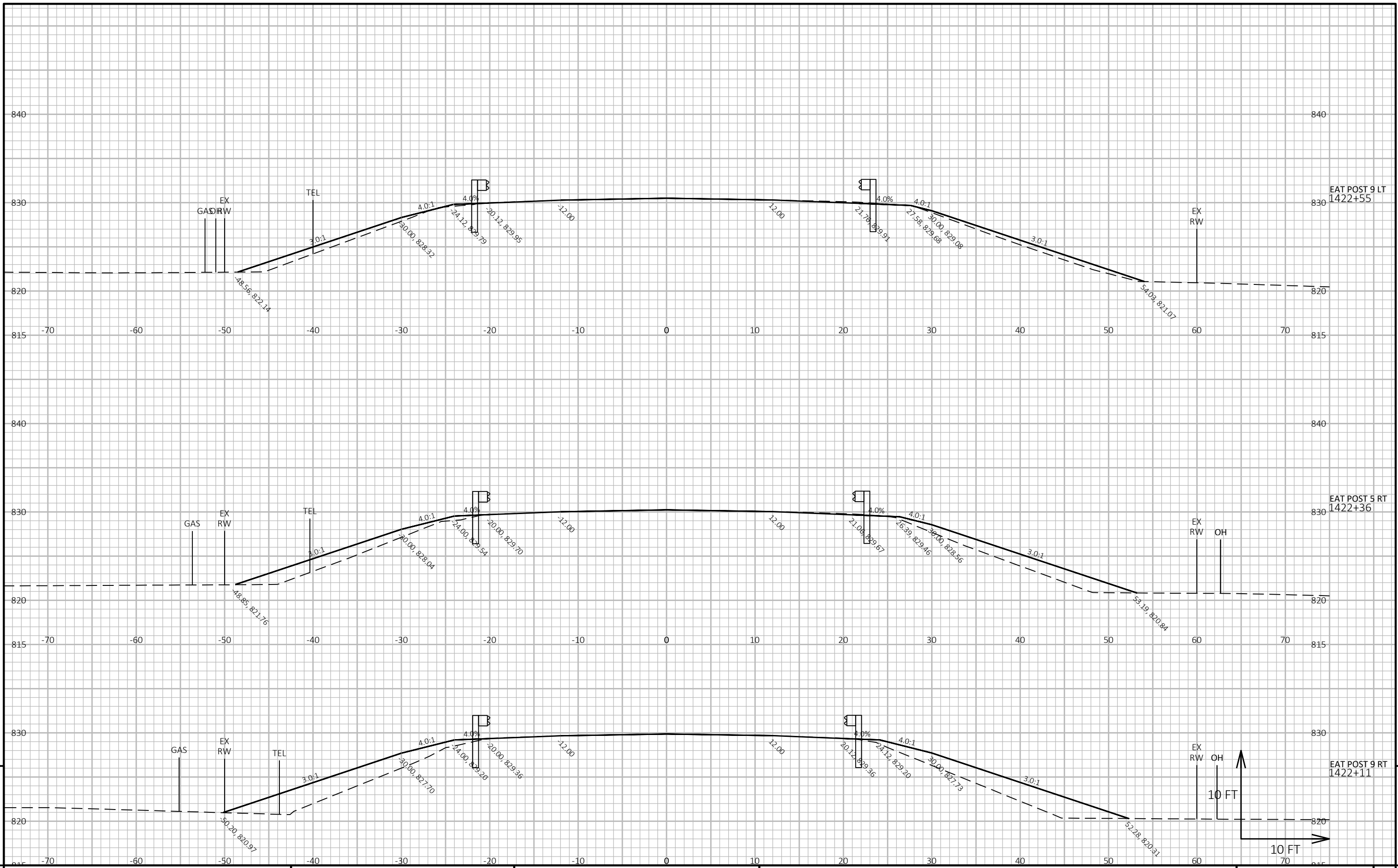
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E

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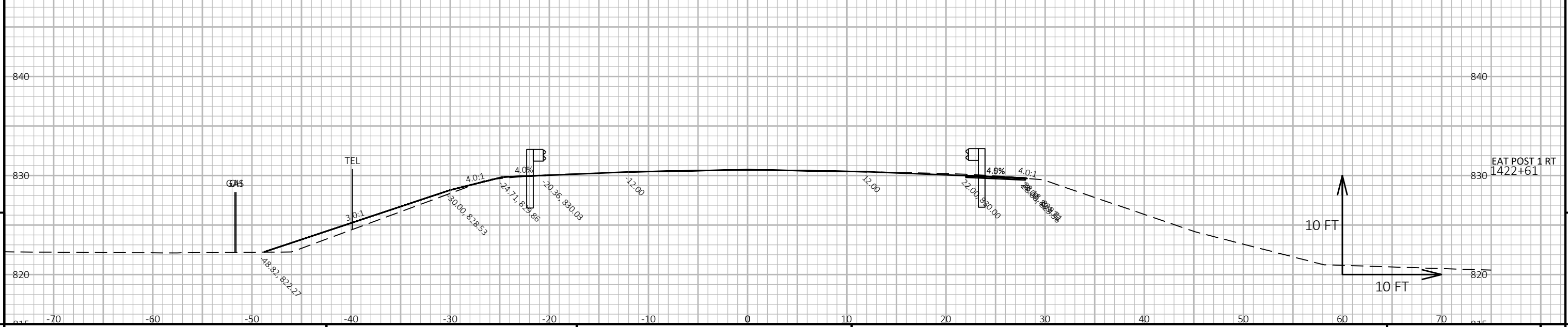
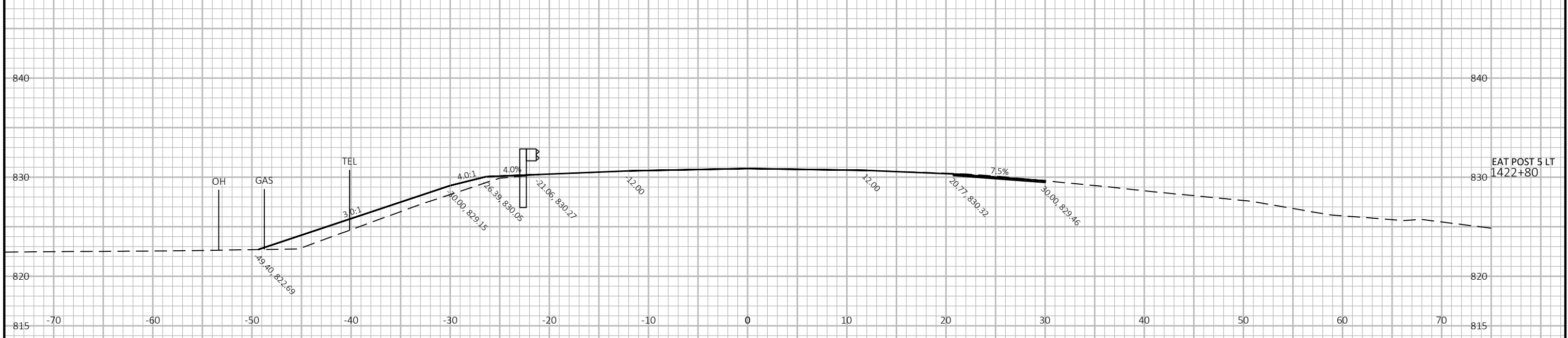
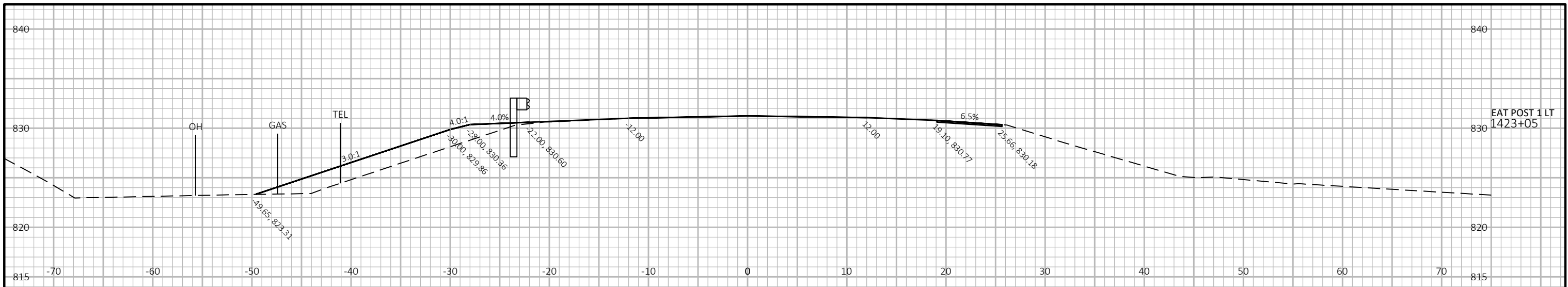
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET 9

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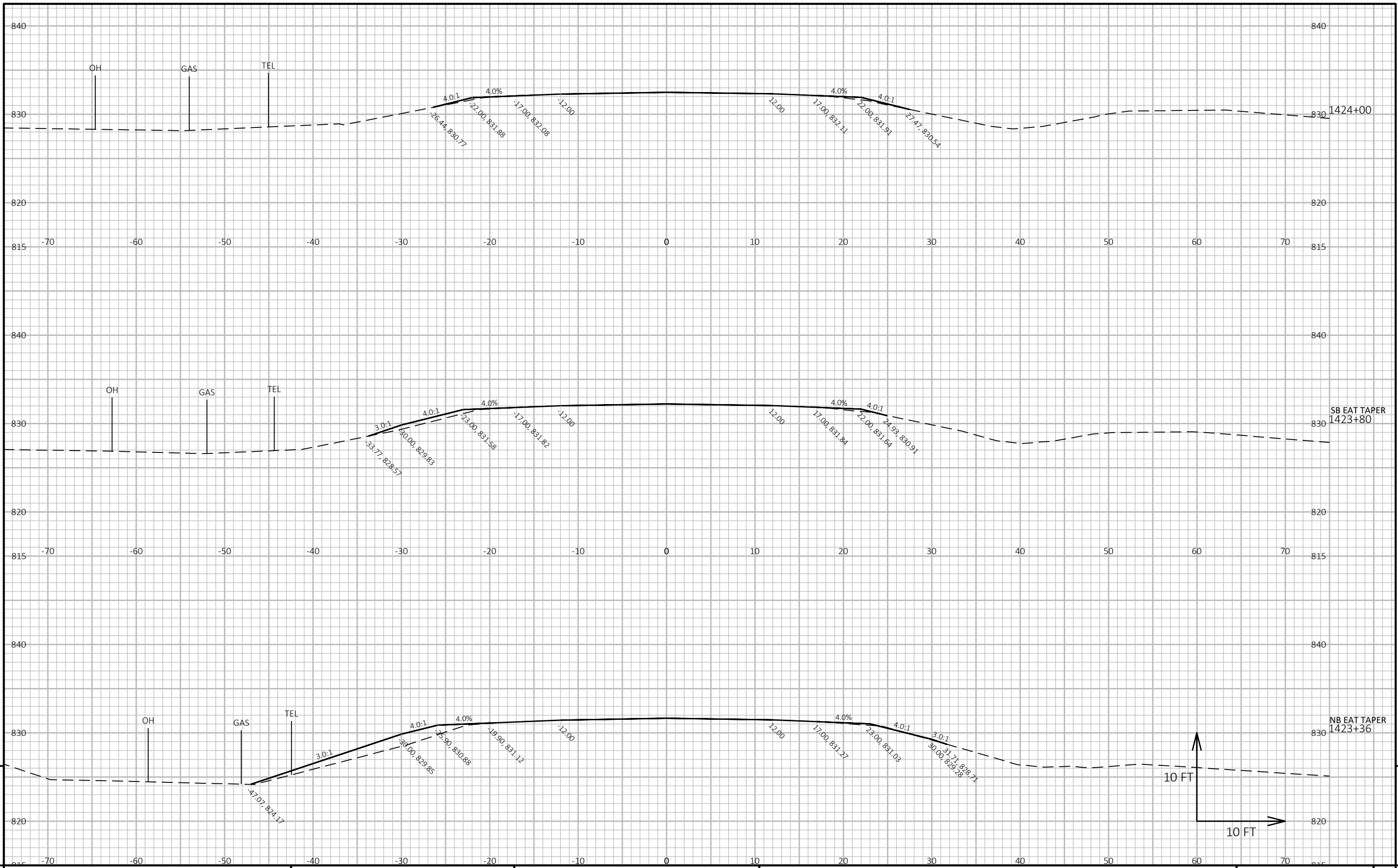
LAYOUT NAME - 31



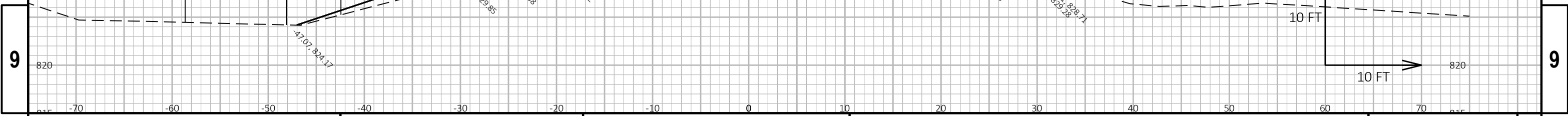
PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E

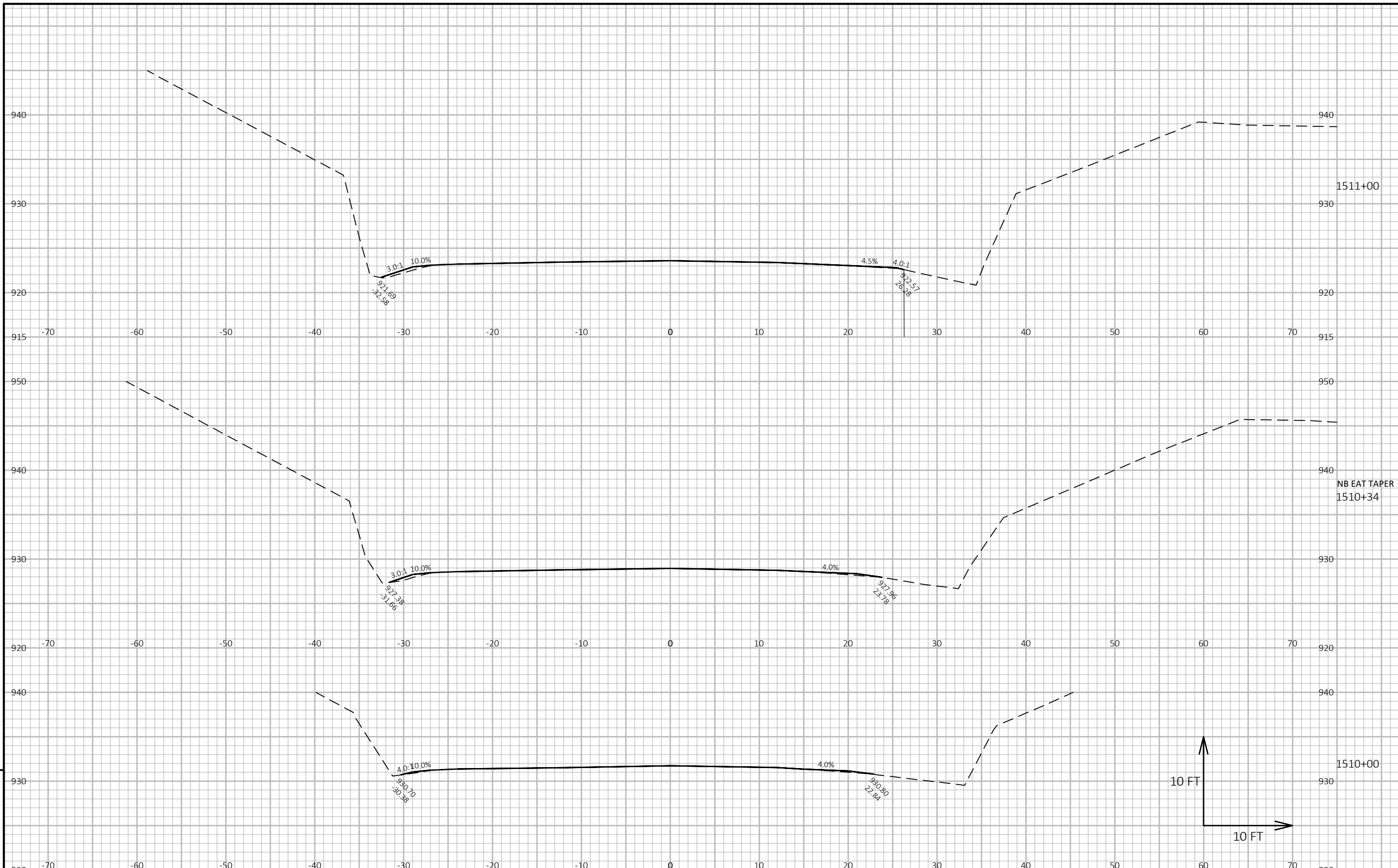
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E

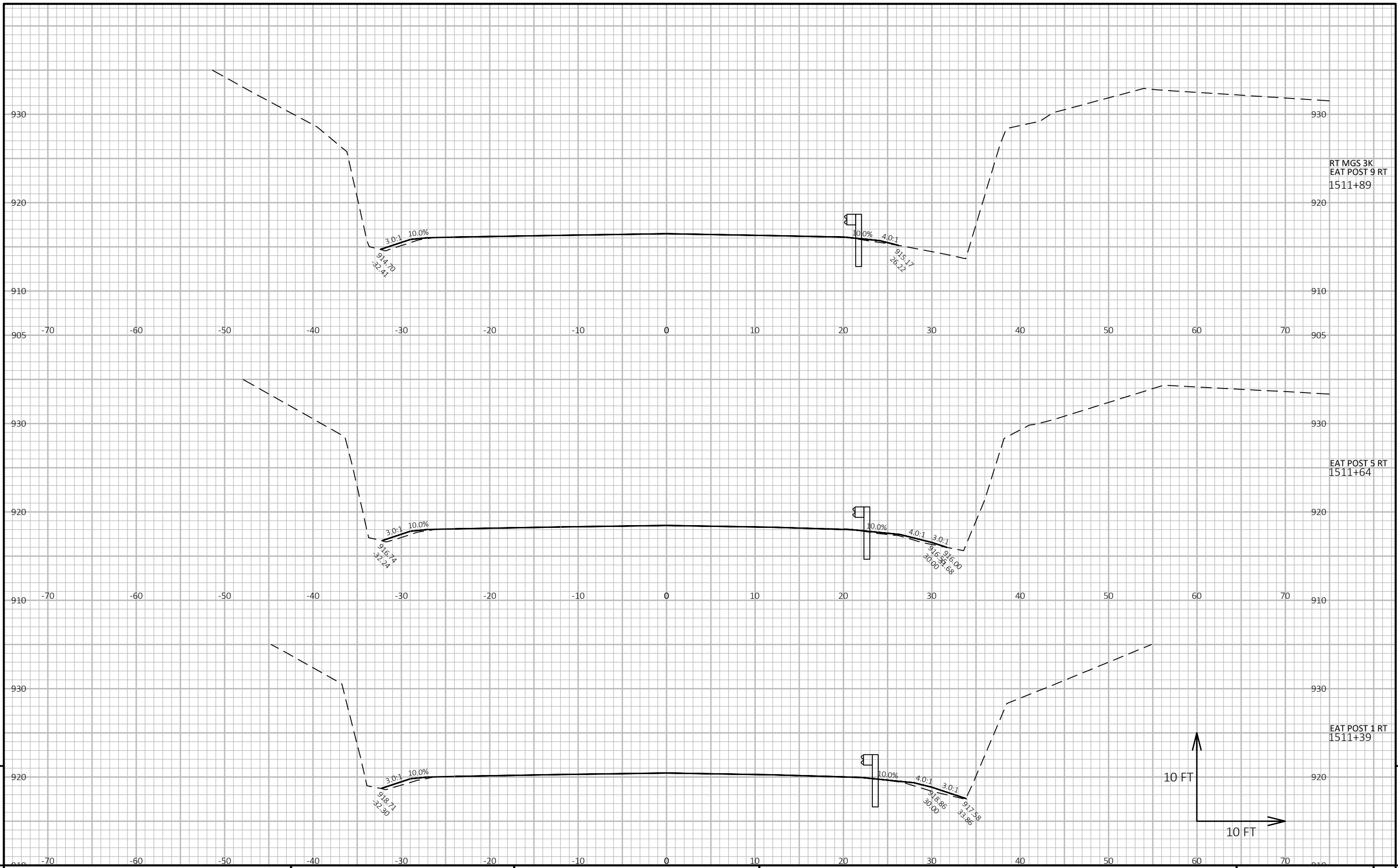




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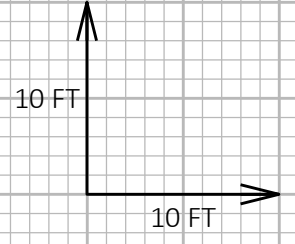
PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 73	SHEET	E
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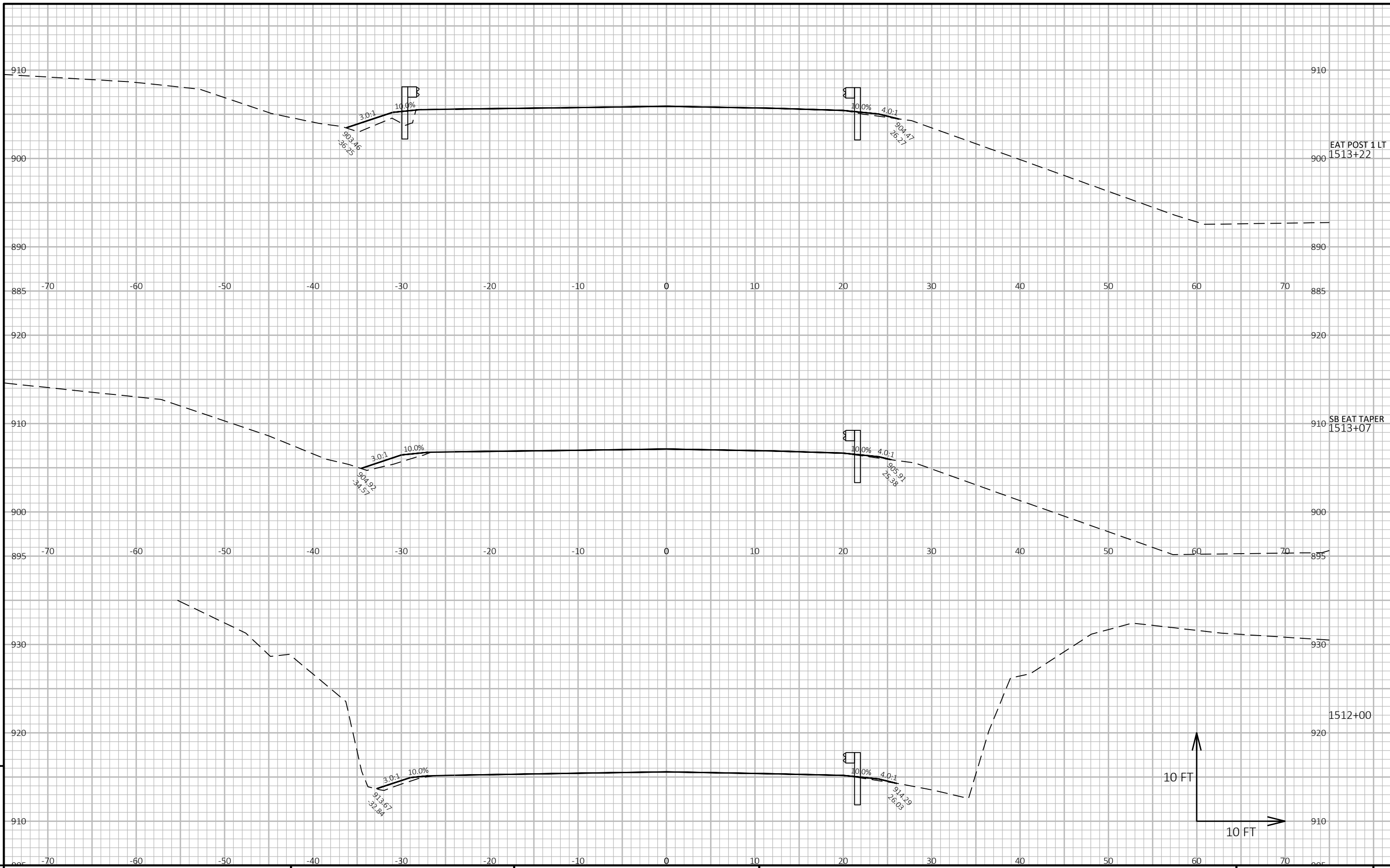


RT MGS 3K
EAT POST 9 RT
1511+89

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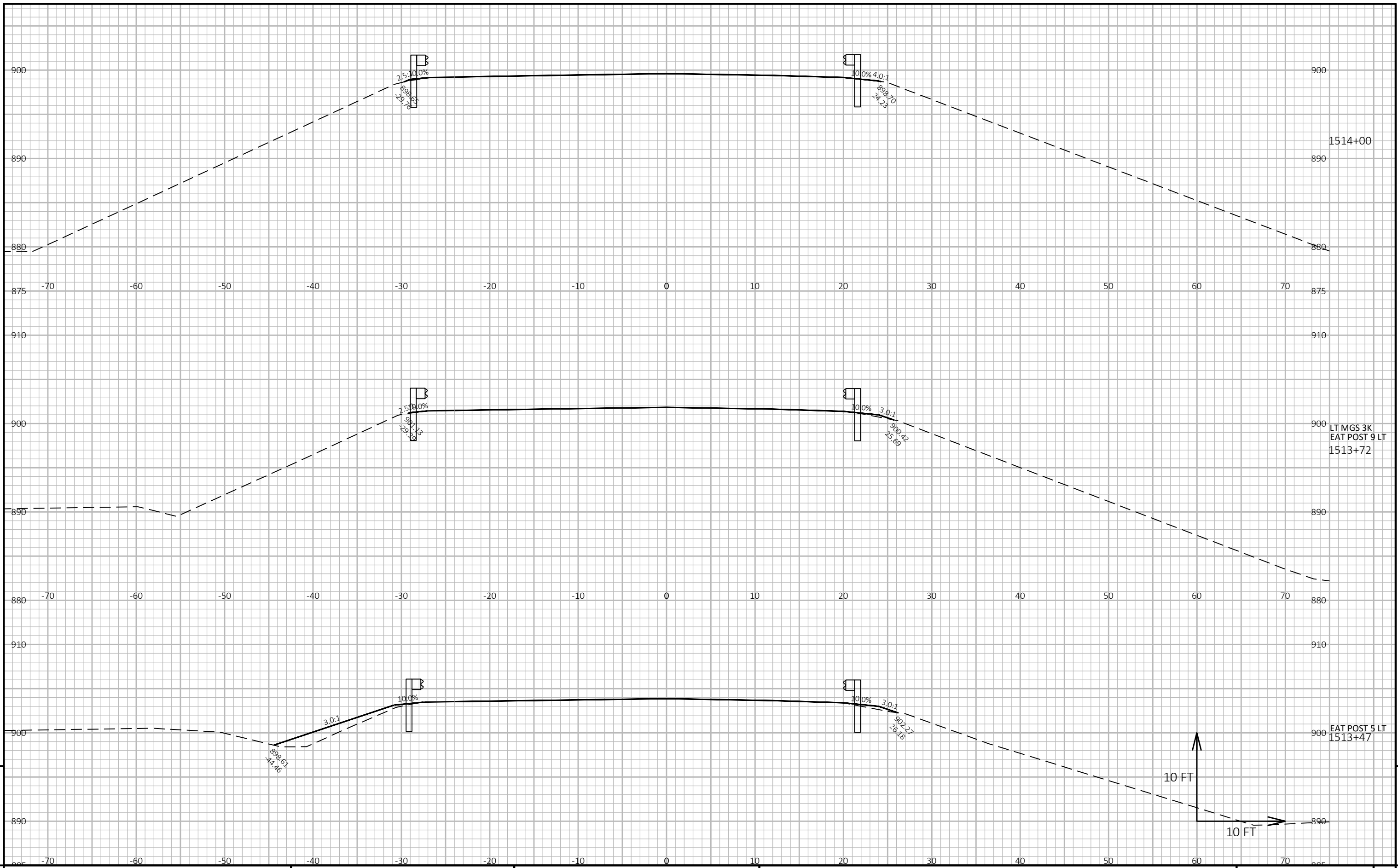
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E

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LAYOUT NAME - 38



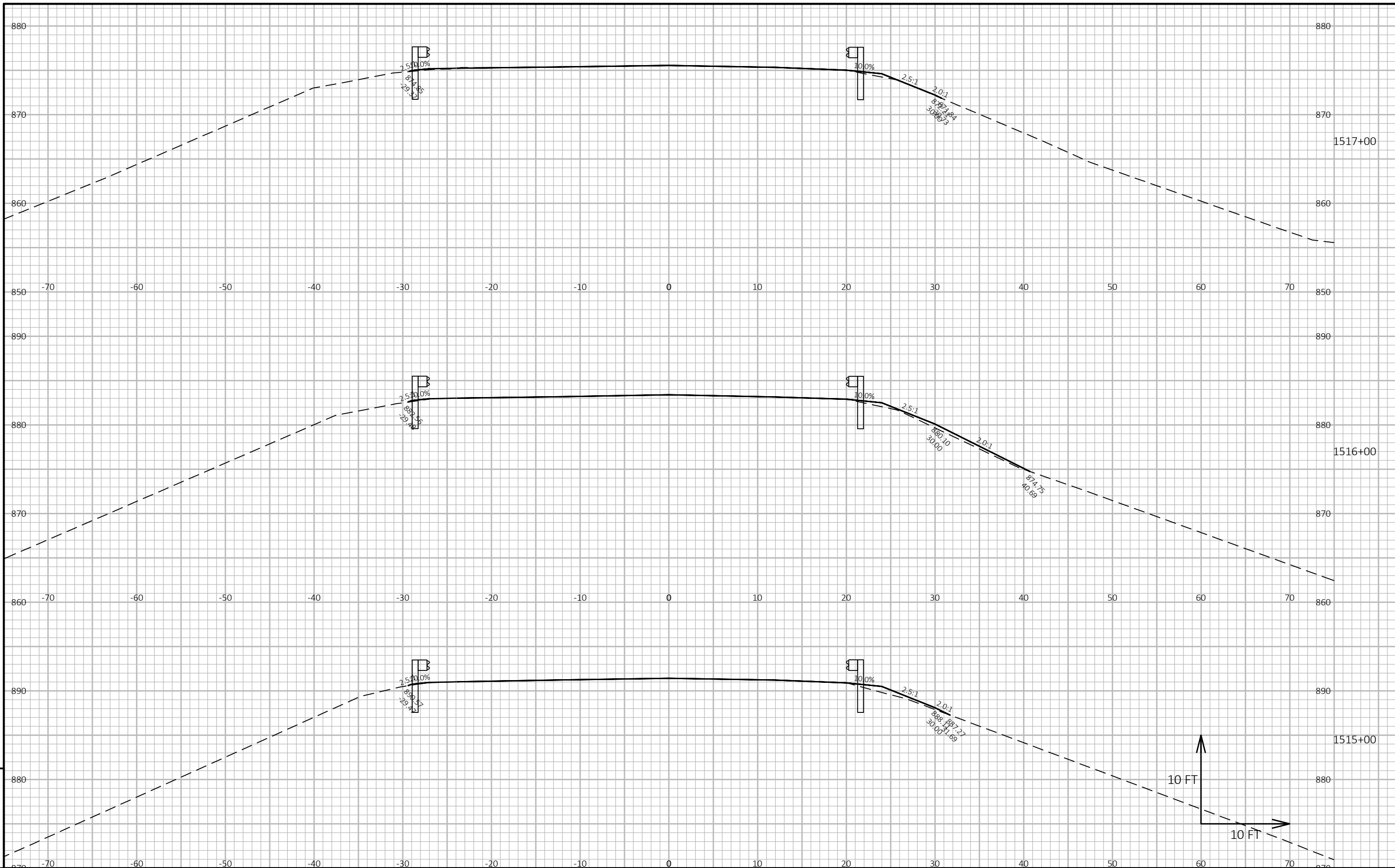
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E

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LAYOUT NAME - 39



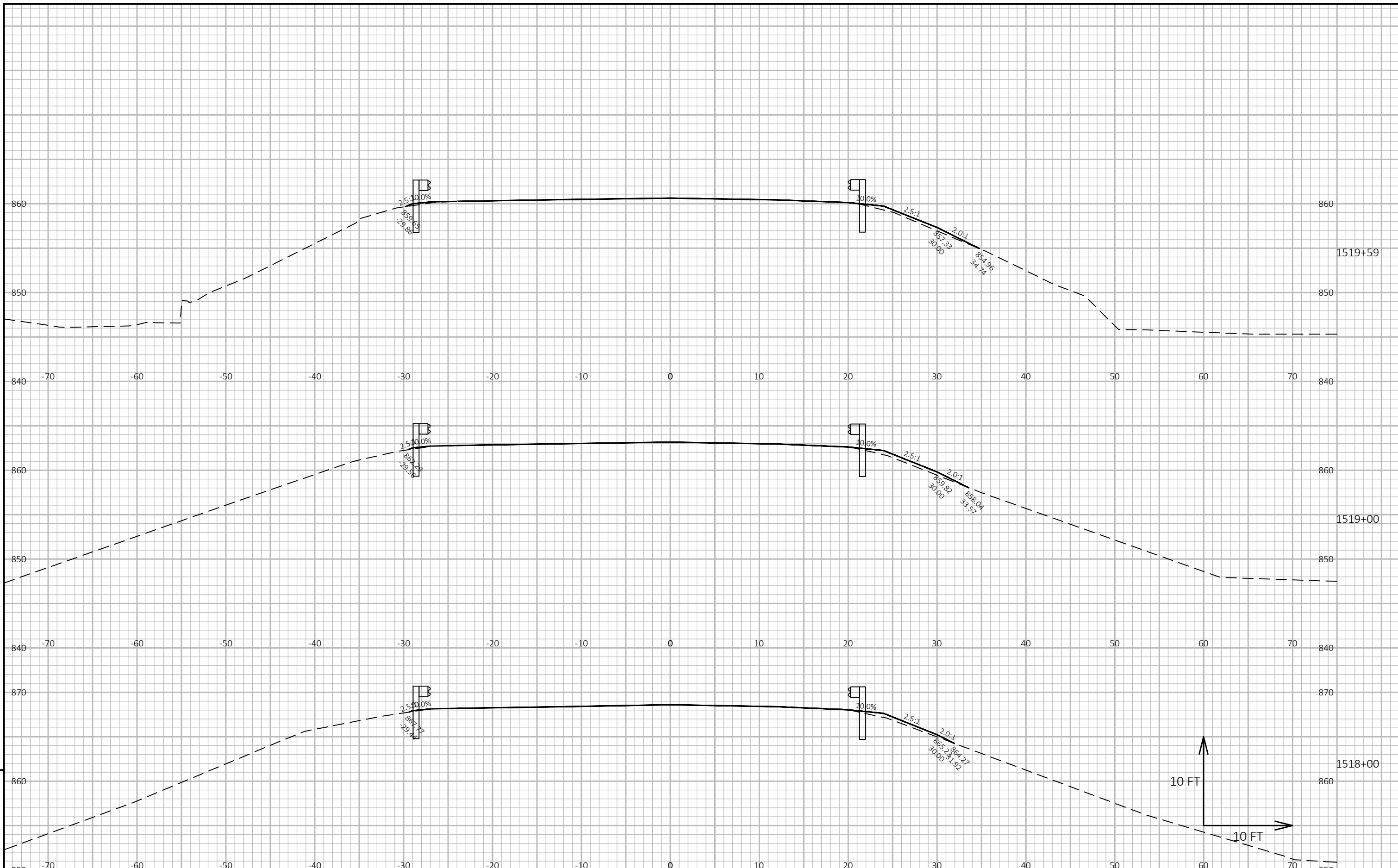
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E

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LAYOUT NAME - 40



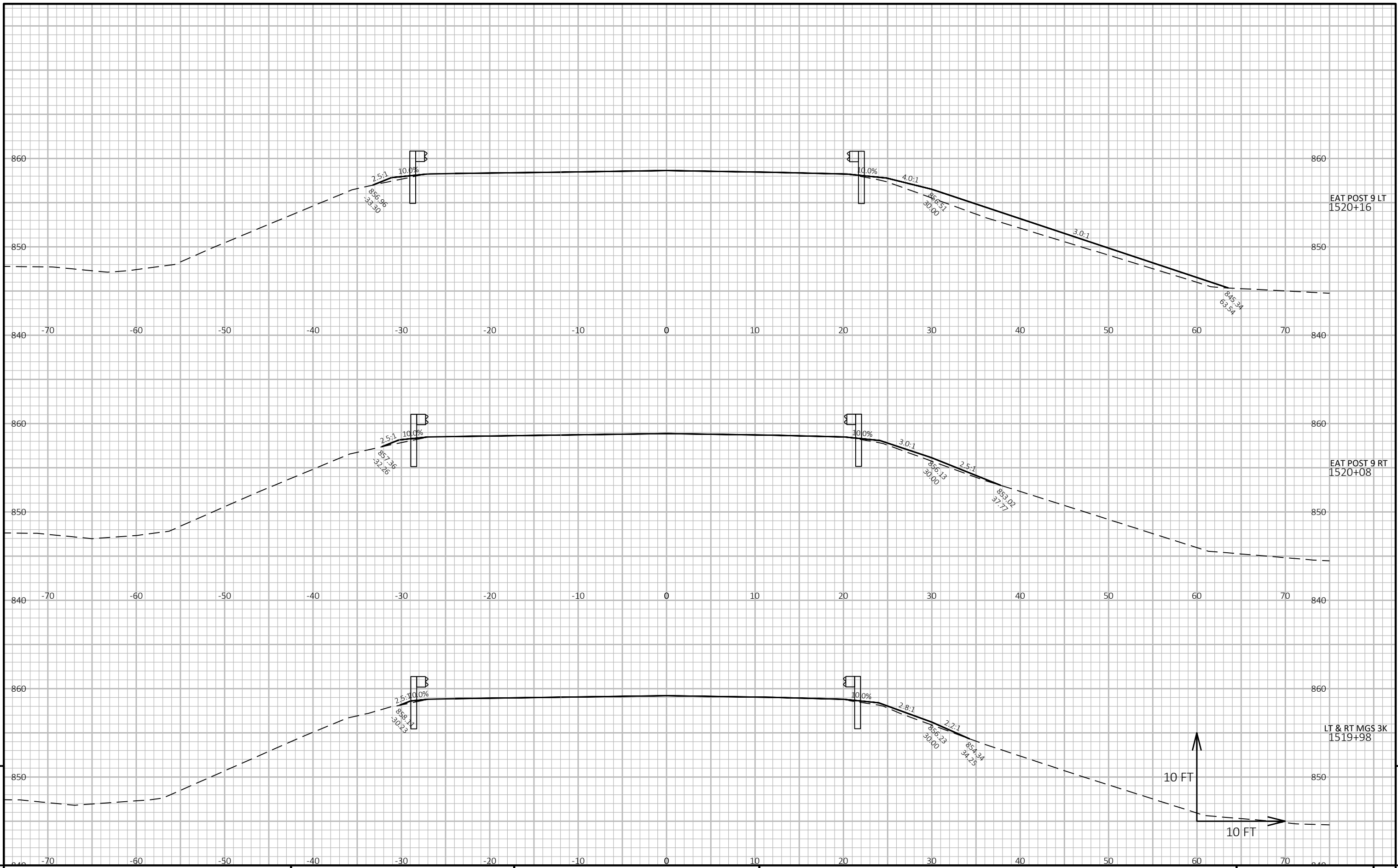
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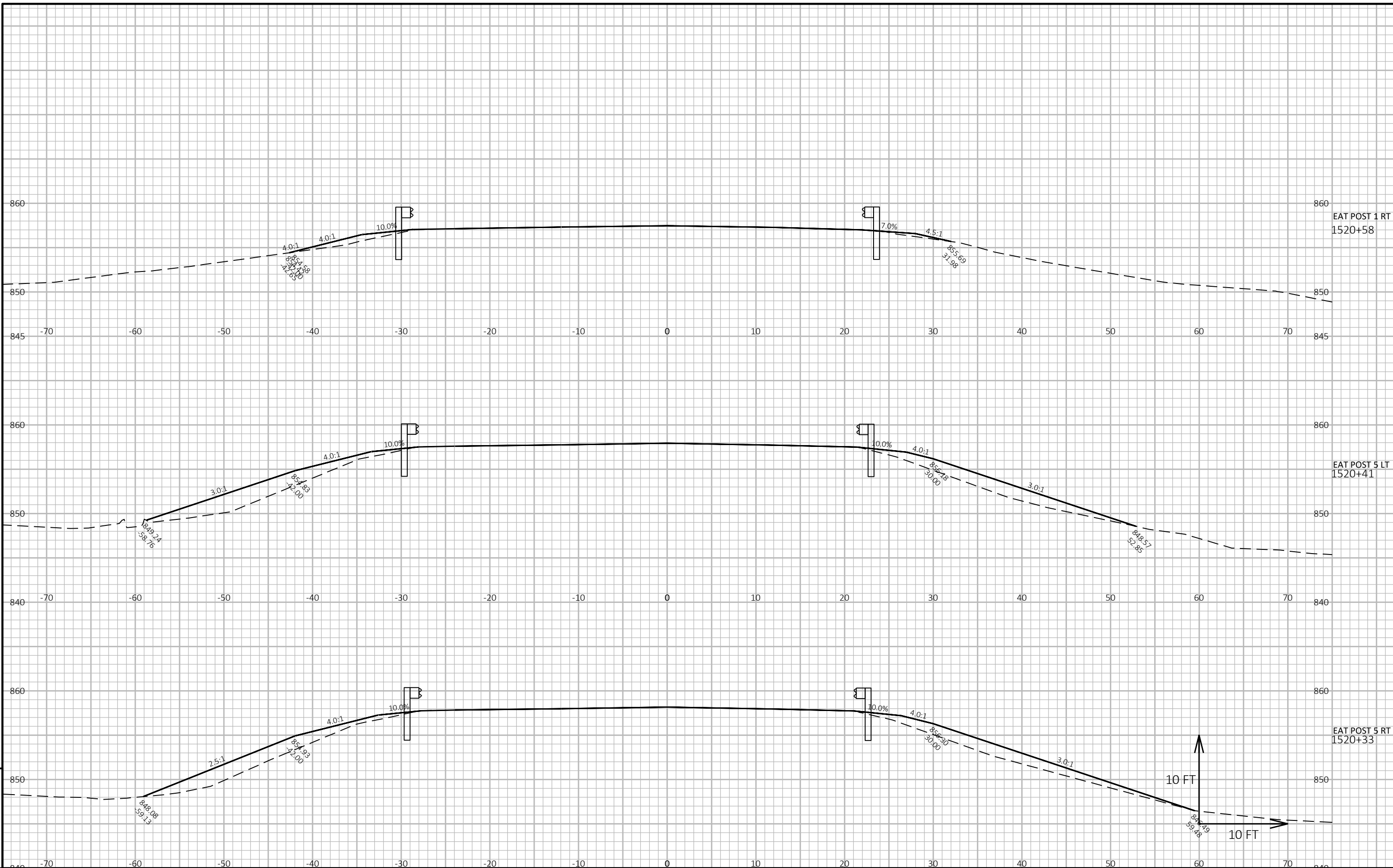
PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 73	SHEET	E
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LAYOUT NAME - 41



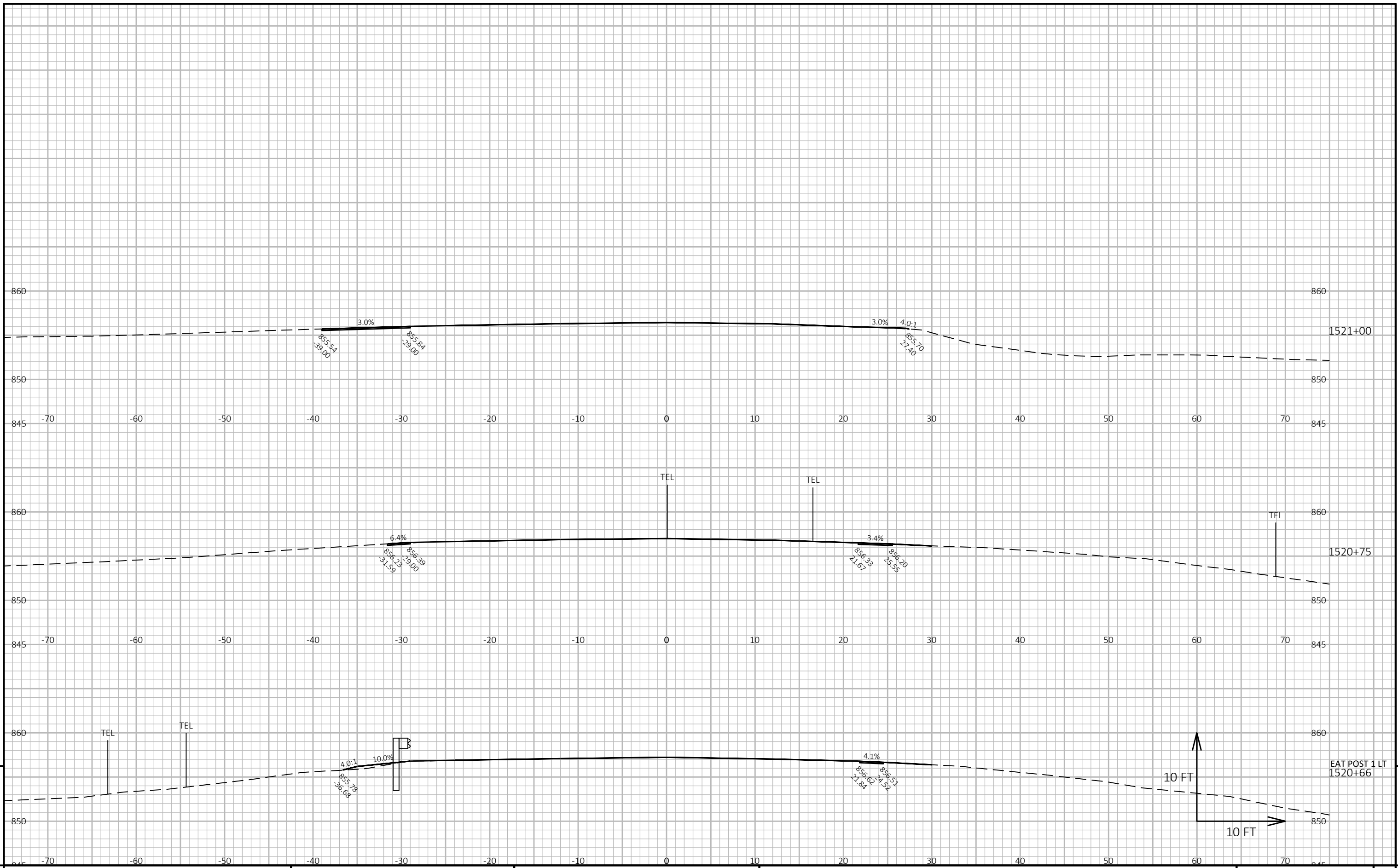
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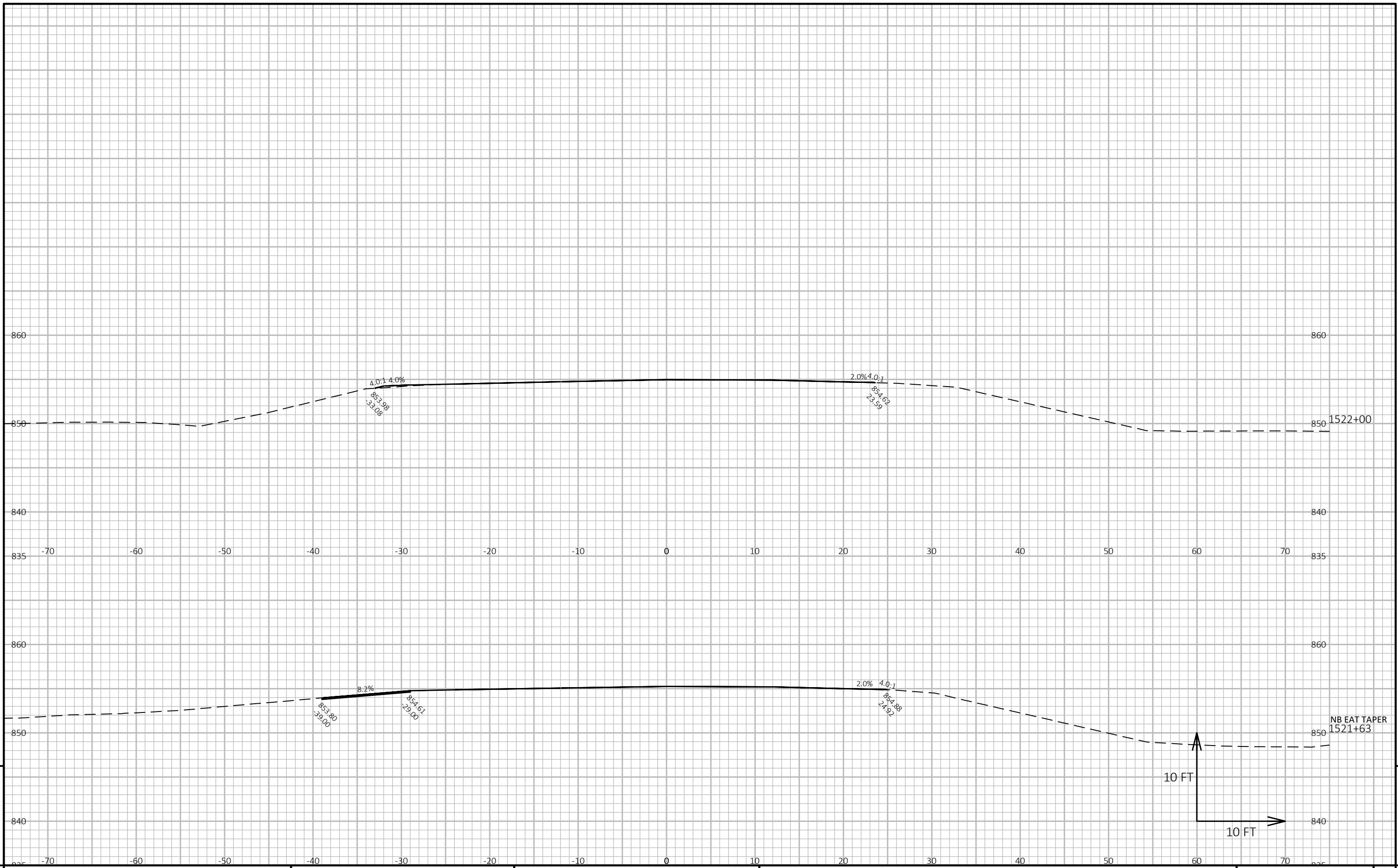
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PROJECT NO: 6640-00-70 HWY: STH 73 COUNTY: GREEN LAKE CROSS SECTIONS: STH 73 SHEET E

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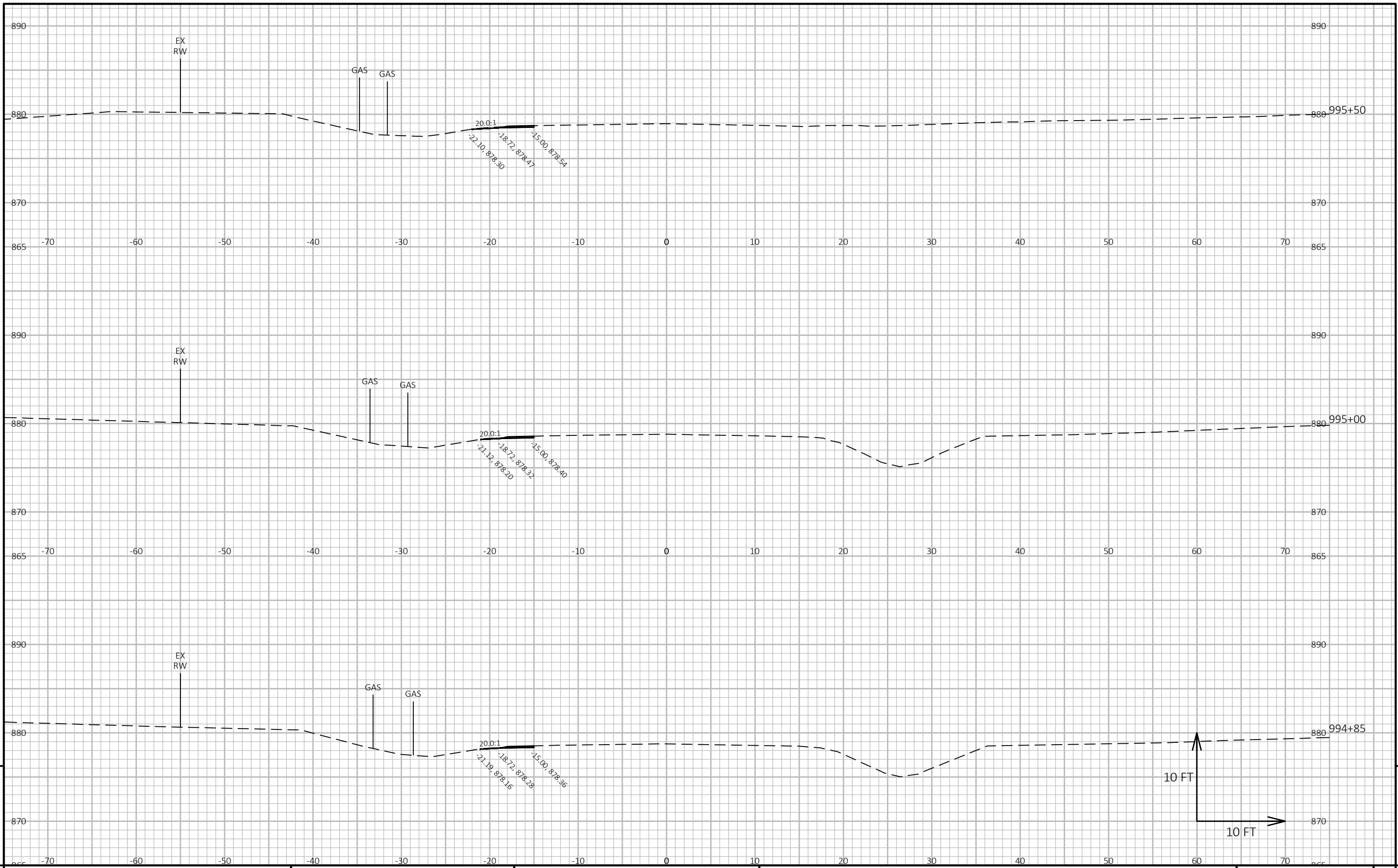
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 73	SHEET	E
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FILE NAME : I:\47\470381 STH 73 REHABILITATION\C3D\DESIGN\CORRIDORS\470381_CRDR MAIN.DWG PLOT DATE : 9/27/2023 3:17 PM PLOT BY : KUSCHEL, LEVI PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 45



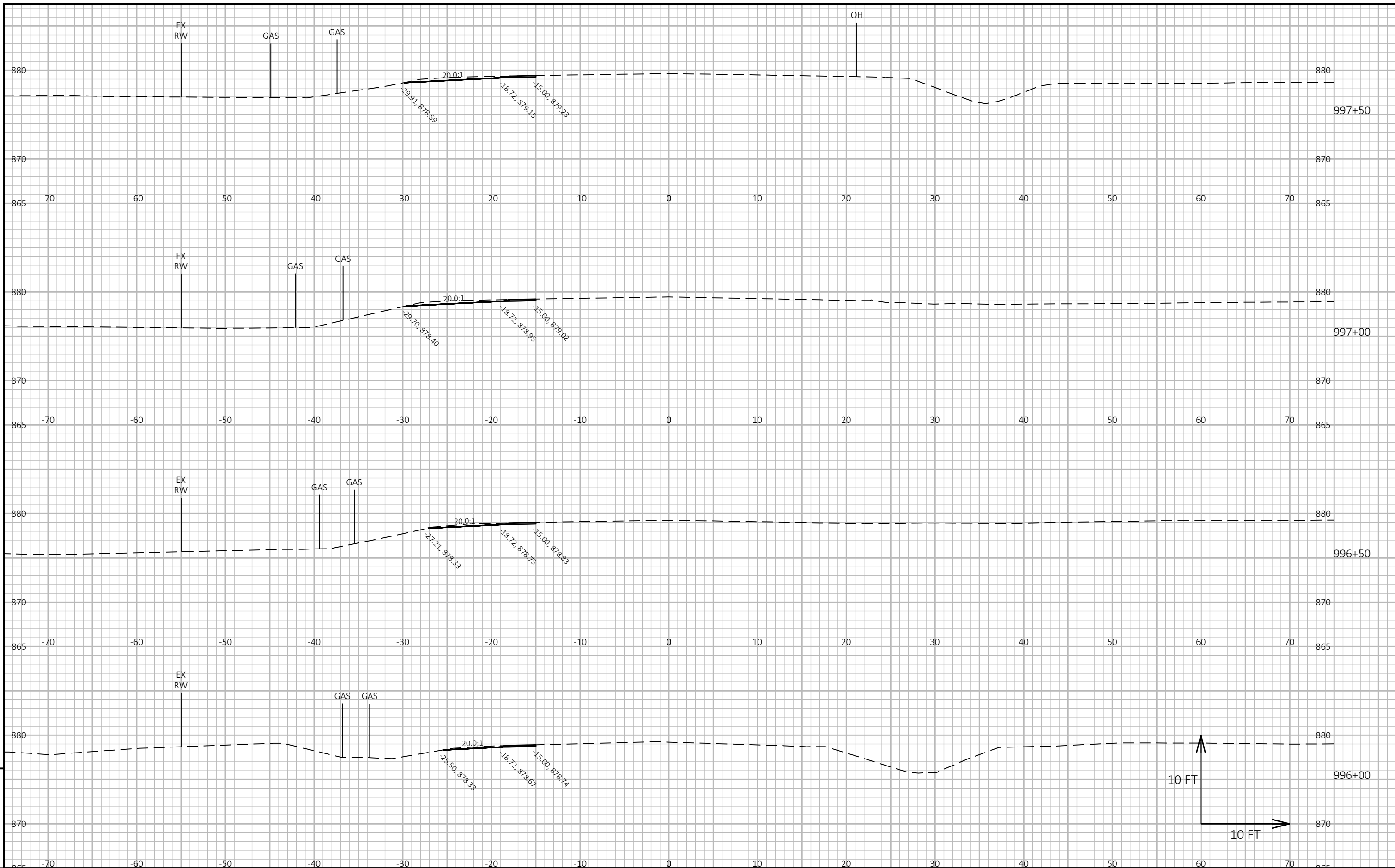
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 44	SHEET	E
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FILE NAME : I:\47\470381 STH 73 REHABILITATION\C3D\DESIGN\CORRIDORS\470381_CRDR MAIN.DWG PLOT DATE : 9/19/2023 6:12 PM PLOT BY : KUSCHEL, LEVI PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - STH 44_01



PROJECT NO: 6640-00-70

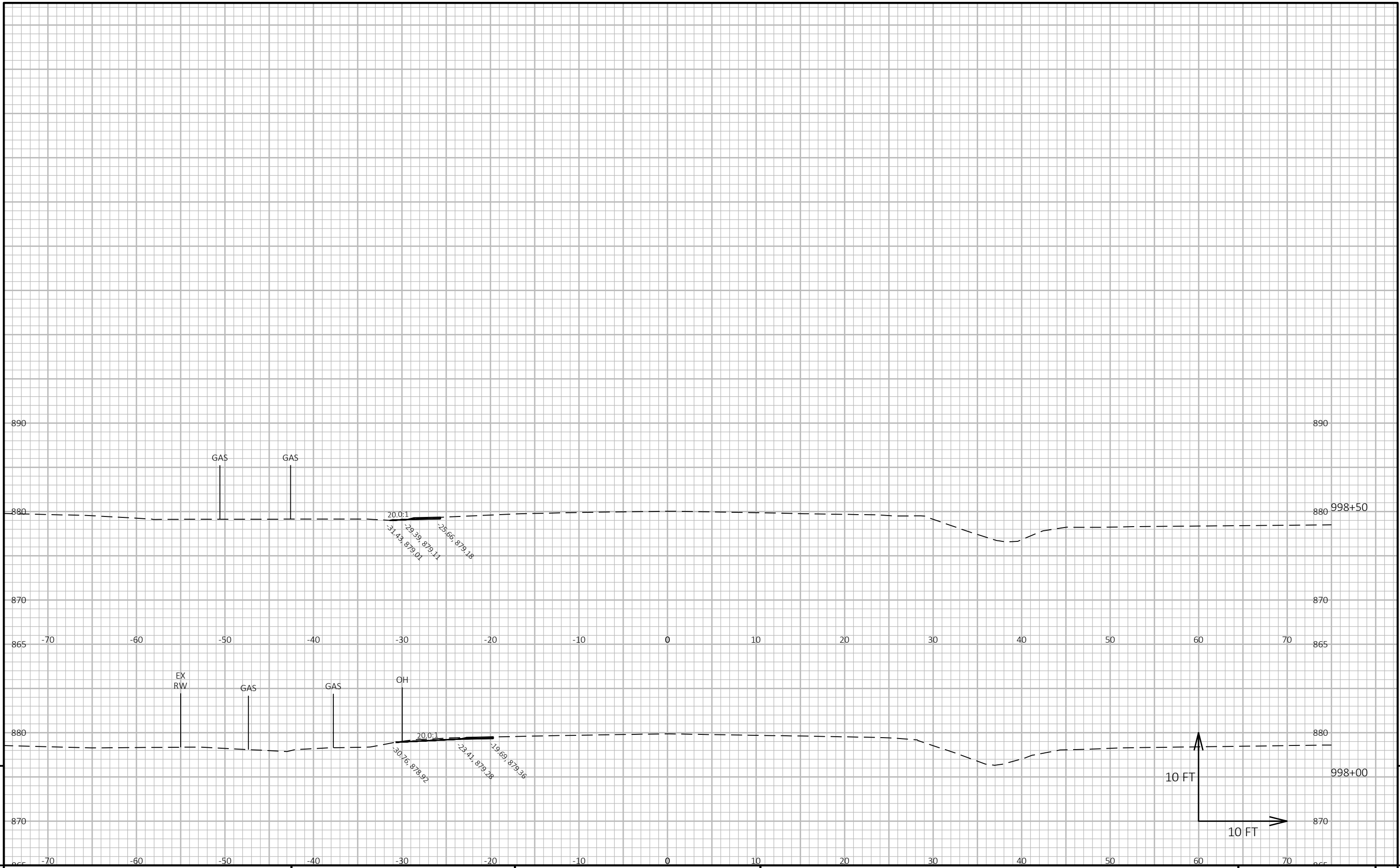
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COUNTY: GREEN LAKE

CROSS SECTIONS: STH 44

SHEET

E



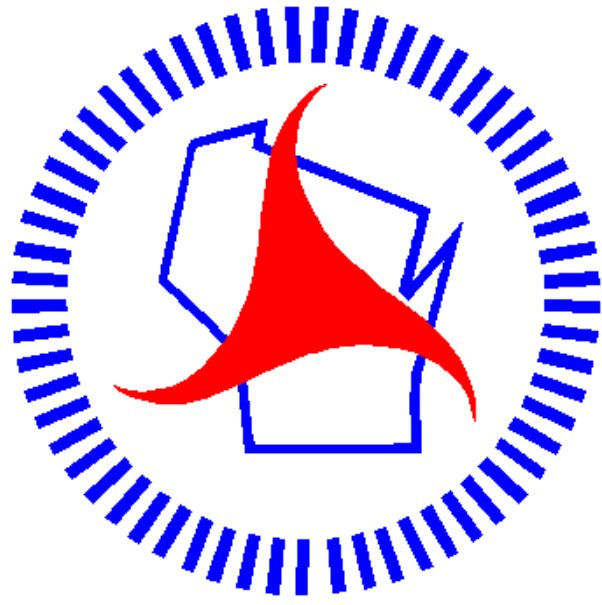
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PROJECT NO: 6640-00-70	HWY: STH 73	COUNTY: GREEN LAKE	CROSS SECTIONS: STH 44	SHEET	E
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FILE NAME : I:\47\470381 STH 73 REHABILITATION\C3D\DESIGN\CORRIDORS\470381_CRDR MAIN.DWG PLOT DATE : 9/19/2023 6:12 PM PLOT BY : KUSCHEL, LEVI PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - STH 44_03



Wisconsin Department of Transportation

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