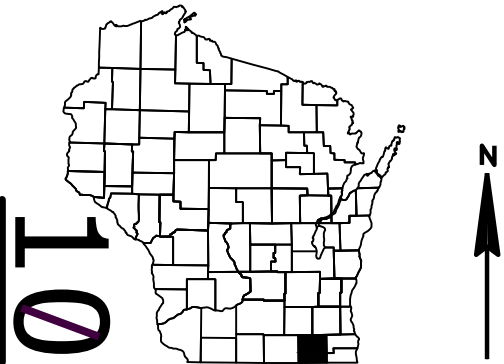


WKE
PROJECT ID: 3390-08-70
WITH:
COUNTY: WALWORTH

SEPTEMBER 2026
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 = 226



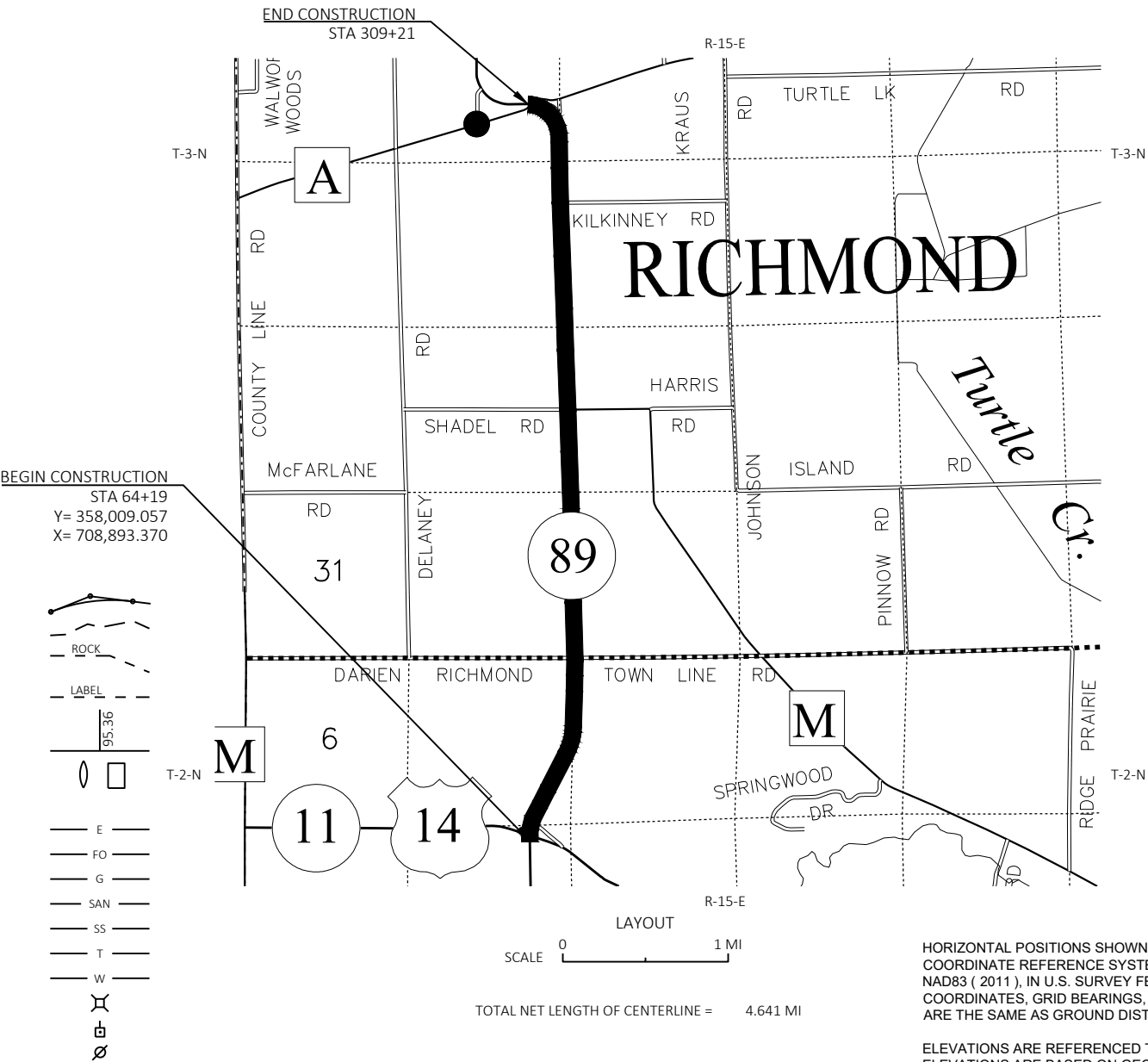
DESIGN DESIGNATION 3390-08-70

A.A.D.T.	2026	=	3,210
A.A.D.T.	2046	=	3,700
D.H.V.		=	425
D.D.		=	60/40
T.		=	11.5%
DESIGN SPEED		=	60 MPH
ESALS		=	850,000

CONVENTIONAL SYMBOLS

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

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



HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WALWORTH 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 G12-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
RICHMOND - WHITEWATER
STH 11 TO CTH A
STH 89
WALWORTH COUNTY

STATE PROJECT NUMBER
3390-08-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3390-08-70		

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	GRAEF
Designer	WISDOT
Project Manager	JONATHAN GILL
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	JANET CANNON
APPROVED FOR THE DEPARTMENT	
DATE: 1/29/2026	(Signature)

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GAS/PETOLEUM

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ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
EROSION CONTROL
CULVERT PLAN
PERMANENT SIGNING
FLASHER REMOVAL
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR
ALIGNMENT

WISCONSIN DNR LIAISON

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GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

PRIOR TO PLACING THE NEW BASE AGGREGATE DENSE COURSE OR PAVED SHOULDERS EXISTING UNCOMPACTED SHOULDER MATERIAL SHALL BE REMOVED OR DEPOSITED ON THE OUTER PORTION OF THE EXISTING SHOULDER OR AS DIRECTED BY THE ENGINEER.

THE EXACT LOCATION AND WIDTH OF DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. DRIVEWAYS SHALL BE REPLACED IN KIND. COMMERCIAL DRIVEWAYS SHALL BE A MINIMUM OF 30 FEET WIDE UNLESS SHOWN OTHERWISE IN THE PLANS. ALL RESIDENTIAL DRIVEWAYS SHALL BE A MAXIMUM OF 35 FEET WIDE.

PIPE AND INLET ELEVATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS

PIPE ELEVATIONS, LENGTHS AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

SAWCUTS, AS SHOWN ON THE PLANS, ARE SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

PRIOR TO PLACEMENT OF BEAM GUARD THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PAVING OR PIPE LAYING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAYS SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER OPERATIONS ARE COMPLETED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

PRIOR TO ORDERING DRAINAGE PIPES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

ALL GRADED OR DISTURBED AREAS THAT WILL NOT BE PERMANENTLY RESORTED WITHIN 14-DAYS TO RECEIVE TEMPORARY SEED AND MULCH WITHIN 5-DAYS OF DISTURBANCE

STH 89 STA 64+19 TO 71+00		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 LT 58-28 S
LOWER	1 3/4-INCHES	4 LT 58-28 S

STH 89 STA 71+00 TO 309+21		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 LT 58 - 28 S
LOWER	2 1/4-INCHES	3 LT 58-28 S

STH 11		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 LT 58-28 S
LOWER	1 3/4-INCHES	4 LT 58-28 S

SIDE ROADS		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 LT 58 - 28 S
LOWER	2 1/4-INCHES	3 LT 58-28 S



STANDARD ABBREVIATIONS

ABUT	ABUTMENT	LT	LEFT
AC	ACRE	LHF	LEFT HAND FORWARD
AGG	AGGREGATE	L	LENGTH OF CURVE
AH	AHEAD	LF	LINEAR FOOT
∠	ANGLE	LC	LONG CHORD OF CURVE
AADT	ANNUAL AVERAGE DAILY TRAFFIC	LS	LUMP SUM
AEW	APRON ENDWALL	MGAL	ONE THOUSAND GALLONS
ASPH	ASPHALTIC	MH	MANHOLE
BK	BACK	ML OR M/L	MATCH LINE
BC	BACK OF CURB	NOM	NOMINAL
BAD	BASE AGGREGATE DENSE	NC	NORMAL CROWN
BL OR B/L	BASE LINE	NB	NORTHBOUND
BM	BENCH MARK	NO	NUMBER
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CL OR C/L	CENTER LINE	PAVT	PAVEMENT
Δ	CENTRAL ANGLE OR DELTA	PLE	PERMANENT LIMITED EASEMENT
CE	COMMERCIAL ENTRANCE	PC	POINT OF CURVATURE
CONC	CONCRETE	PI	POINT OF INTERSECTION
CSW	CONCRETE SIDEWALK	PT	POINT OF TANGENCY
CONST	CONSTRUCTION	PCC	PORTLAND CEMENT CONCRETE
CP	CONTROL POINT	LB	POUND
CO	COUNTY	PSI	POUNDS PER SQUARE INCH
CTH	COUNTY TRUCK HIGHWAY	PE	PRIVATE ENTRANCE
CY	CUBIC YARD	PROJ	PROJECT
CP	CULVERT PIPE	PL	PROPERTY LINE
CPCA	CULVERT PIPE CORRUGATED ALUMINUM	PRW	PROPOSED RIGHT OF WAY
CPCPE	CULVERT PIPE CORRUGATED POLYETHYLENE	R	RADIUS
CPCPP	CULVERT PIPE CORRUGATED POLYPROPYLENE	RL OR R/L	REFERENCE LINE
CPCS	CULVERT PIPE CORRUGATED STEEL	REQD	REQUIRED
CPCSAC	CULVERT PIPE CORRUGATED STEEL ALUMINUM COATED	RT	RIGHT
CPCSPC	CULVERT PIPE CORRUGATED STEEL POLYMER COATED	RHF	RIGHT HAND FORWARD
CPRC	CULVERT PIPE REINFORCED CONCRETE	R/W	RIGHT OF WAY
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	RD	ROAD
CPS	CULVERT PIPE SALVAGED	RDWY	ROADWAY
CPT	CULVERT PIPE TEMPORARY	SHLDR	SHOULDER
C & G	CURB AND GUTTER	SW	SIDEWALK
D	DEGREE OF CURVE	SB	SOUTHBOUND
DHV	DESIGN HOUR VOLUME	SPECS	SPECIFICATIONS
DIA	DIAMETER	SF	SQUARE FEET
DD	DIRECTIONAL DISTRIBUTION	SY	SQUARE YARD
DE	DRAINAGE EASEMENT	SDD	STANDARD DETAIL DRAWINGS
DWY	DRIVEWAY	STH	STATE TRUNK HIGHWAY
EA	EACH	STA	STATION
EB	EASTBOUND	SSPC	STORM SEWER PIPE COMPOSITE
EL OR ELEV	ELEVATION	SSCE	STORM SEWER PIPE CORRUGATED POLYETHYLENE
EMB	EMBANKMENT	SSCPP	STORM SEWER PIPE CORRUGATED POLYPROPYLENE
EW	ENDWALL	SSPNRC	STORM SEWER PIPE NON-REINFORCED CONCRETE
EAT	ENERGY ABSORBING TERMINAL	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
ESALS	EQUIVALENT SINGLE AXLE LOADS	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EXC	EXCAVATION	SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION
EXIST	EXISTING	SL OR S/L	SURVEY LINE
FERT	FERTILIZER	TEMP	TEMPORARY
FE	FIELD ENTRANCE	TI	TEMPORARY INTEREST
FL OR F/L	FLOW LINE	TLE	TEMPORARY LIMITED EASEMENT
FT	FOOT	TC	TOP OF CURB
FTMS	FREE TRAFFIC MANAGEMENT SYSTEM	TL OR T/L	TRANSIT LINE
HES	HIGH EARLY STRENGTH	T	TRUCKS (PERCENT OF)
HE	HIGHWAY EASEMENT	TYP	TYPICAL
CWT	HUNDRED WEIGHT	USH	UNITED STATES HIGHWAY
IN DIA	INCH DIAMETER	VAR	VARIABLE
INL	INLET	VC	VERTICAL CURVE
ID	INSIDE DIAMETER	VPC	VERTICAL POINT OF CURVATURE
INTERS	INTERSECTION	VPI	VERTICAL POINT OF INTERSECTION
IH	INTERSTATE HIGHWAY	VPT	VERTICAL POINT OF TANGENCY
INV	INVERT	W	WEST
JT	JOINT	WB	WESTBOUND

OTHER CONTACTS

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LAKE GENEVA POLICE DEPARTMENT

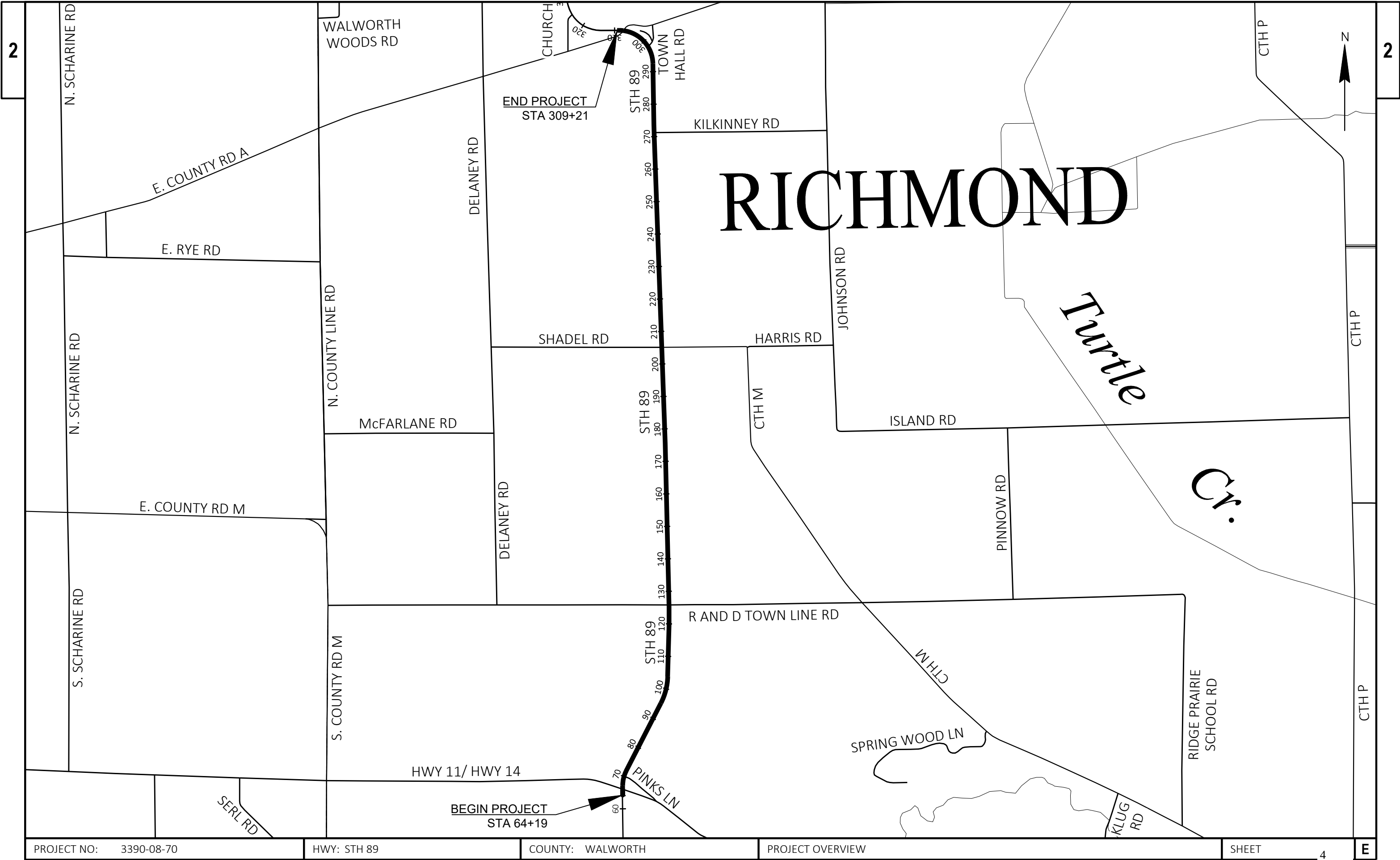
EDWARD GRITZNER, CHIEF OF POLICE
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WALWORTH COUNTY

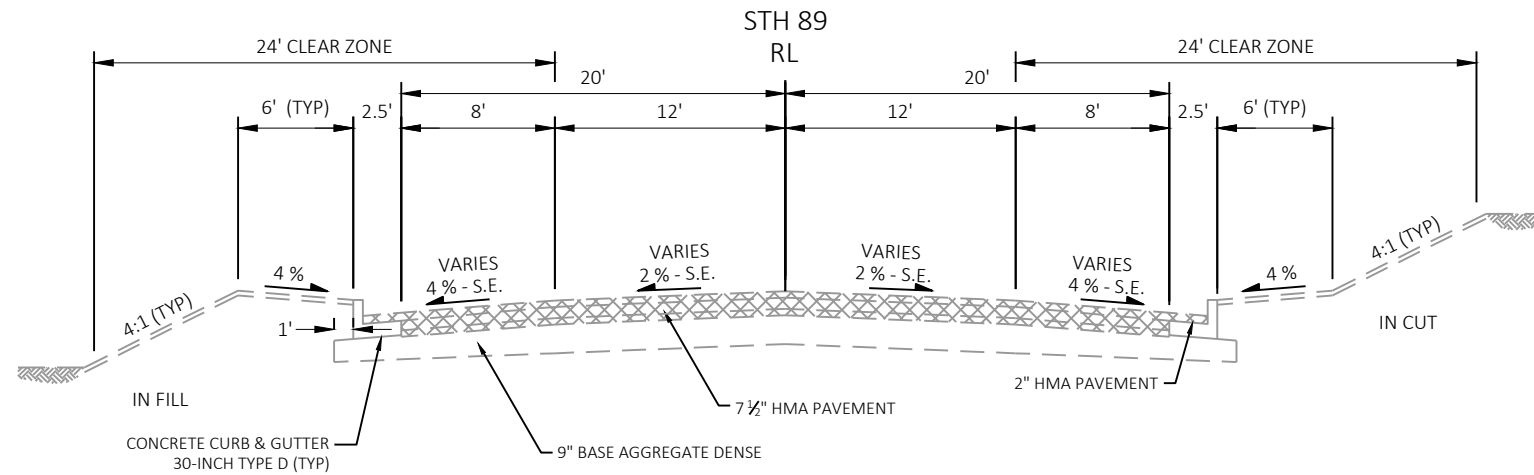
ROAD FACILITY
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WISCONSIN DEPARTMENT OF TRANSPORTATION

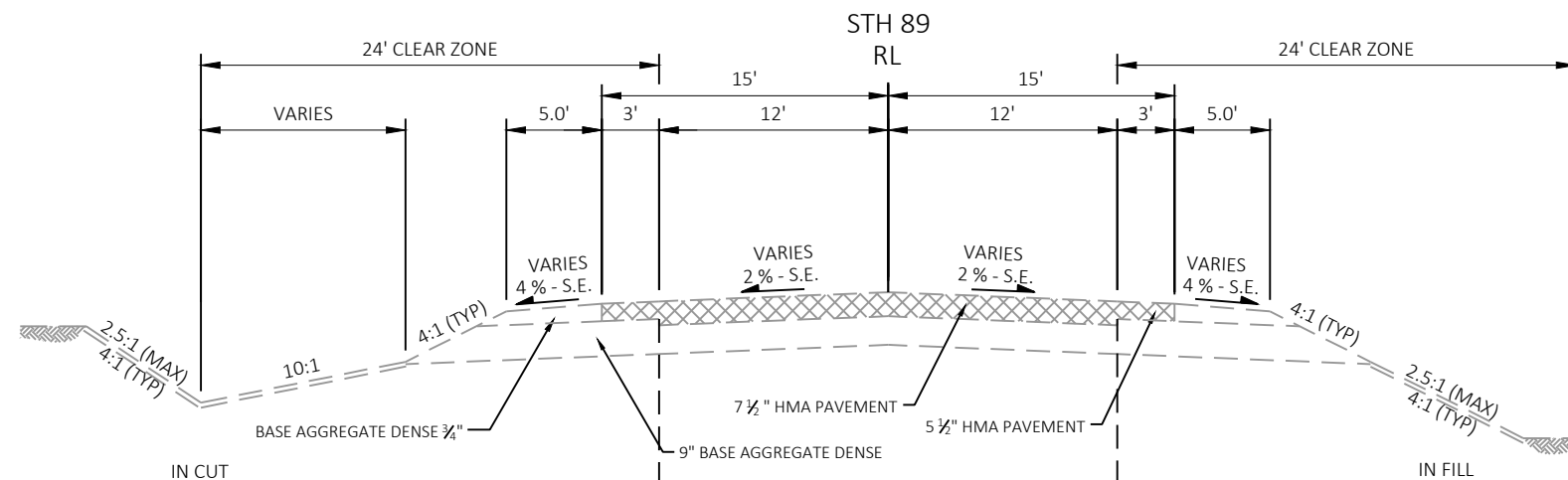
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PROJECT NO: 3390-08-70	HWY: STH 89	COUNTY: WALWORTH	PROJECT OVERVIEW	SHEET 4	E
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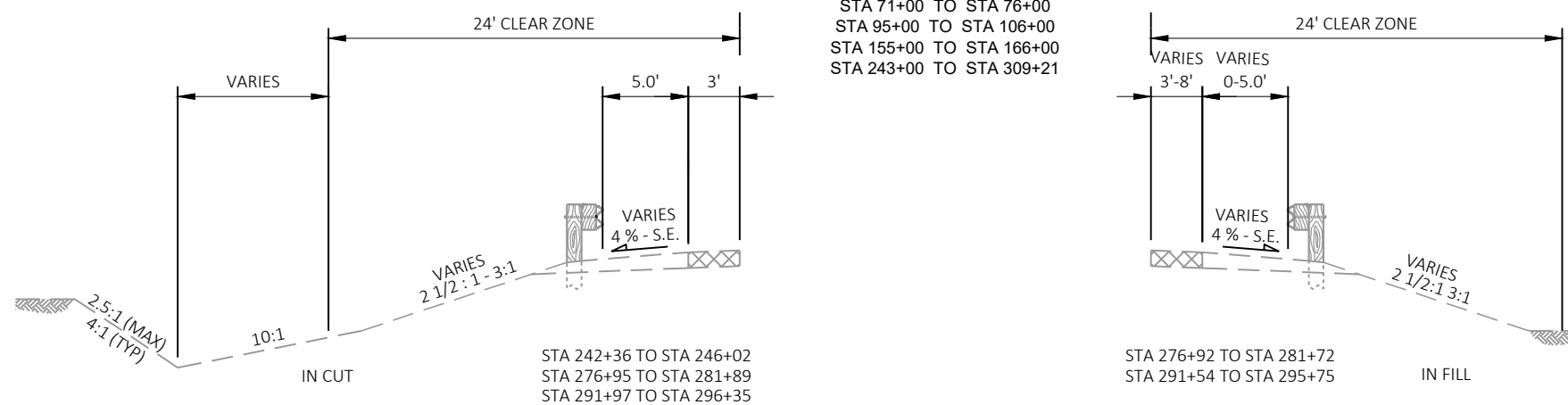


EXISTING TYPICAL SECTION STH 89
STA 64+19 TO STA 71+00

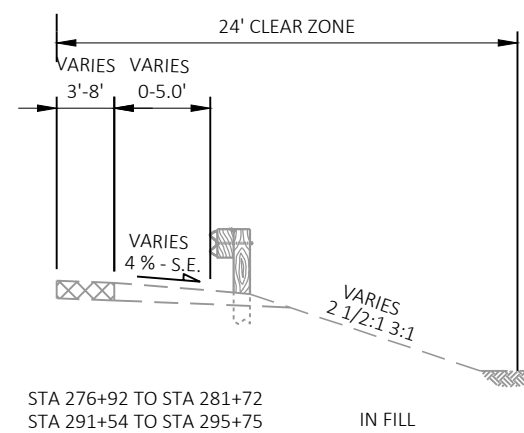


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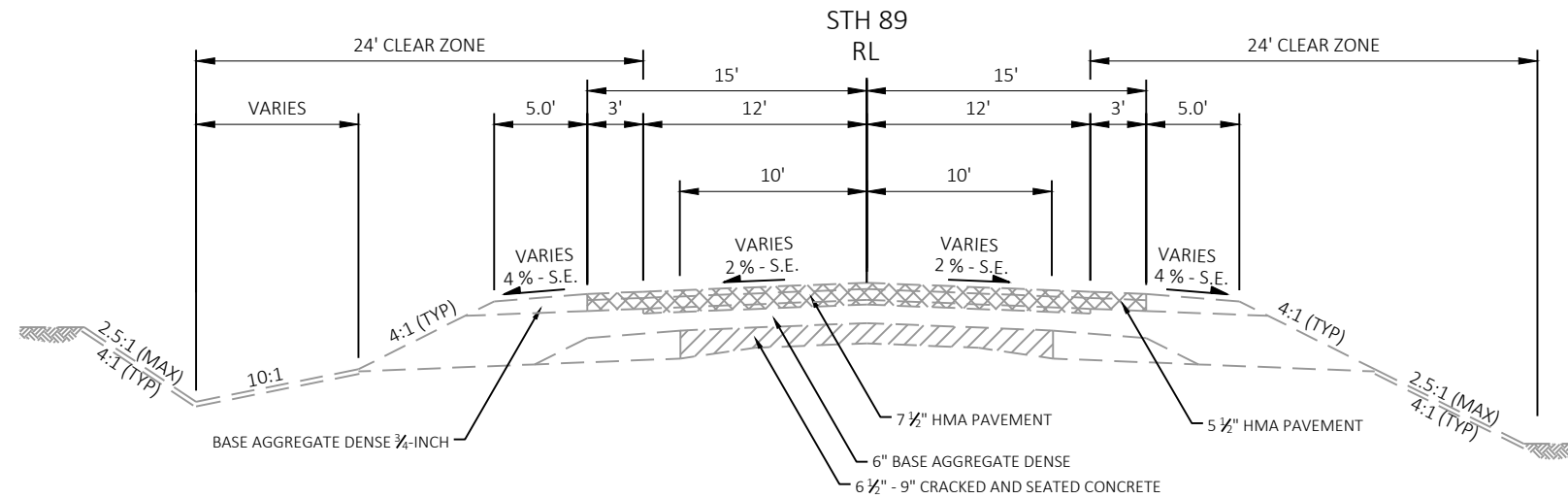
STA 71+00 TO STA 76+00
STA 95+00 TO STA 106+00
STA 155+00 TO STA 166+00
STA 243+00 TO STA 309+21



STA 242+36 TO STA 246+02
STA 276+95 TO STA 281+89
STA 291+97 TO STA 296+35

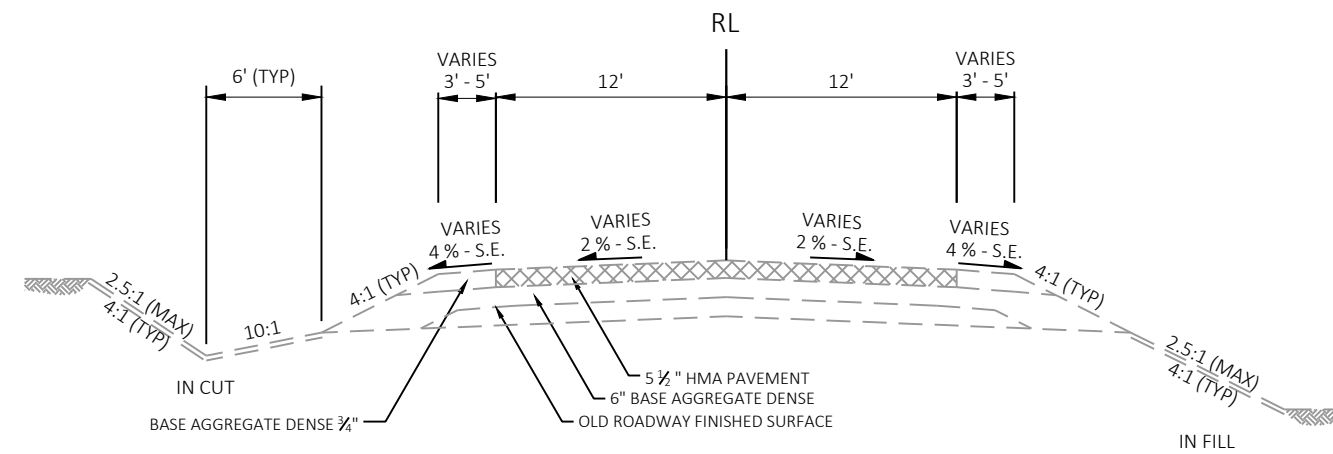


STA 276+92 TO STA 281+72
STA 291+54 TO STA 295+75



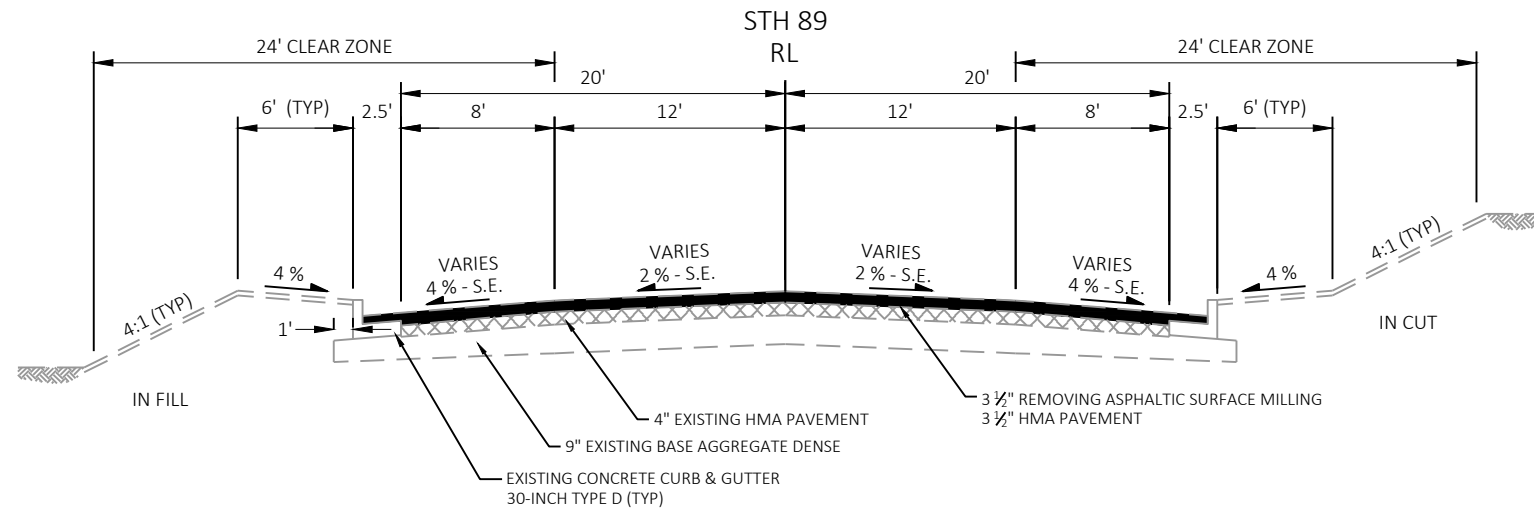
EXISTING TYPICAL SECTION STH 89

STA 76+00 TO STA 95+00
STA 106+00 TO STA 155+00
STA 166+00 TO STA 243+00

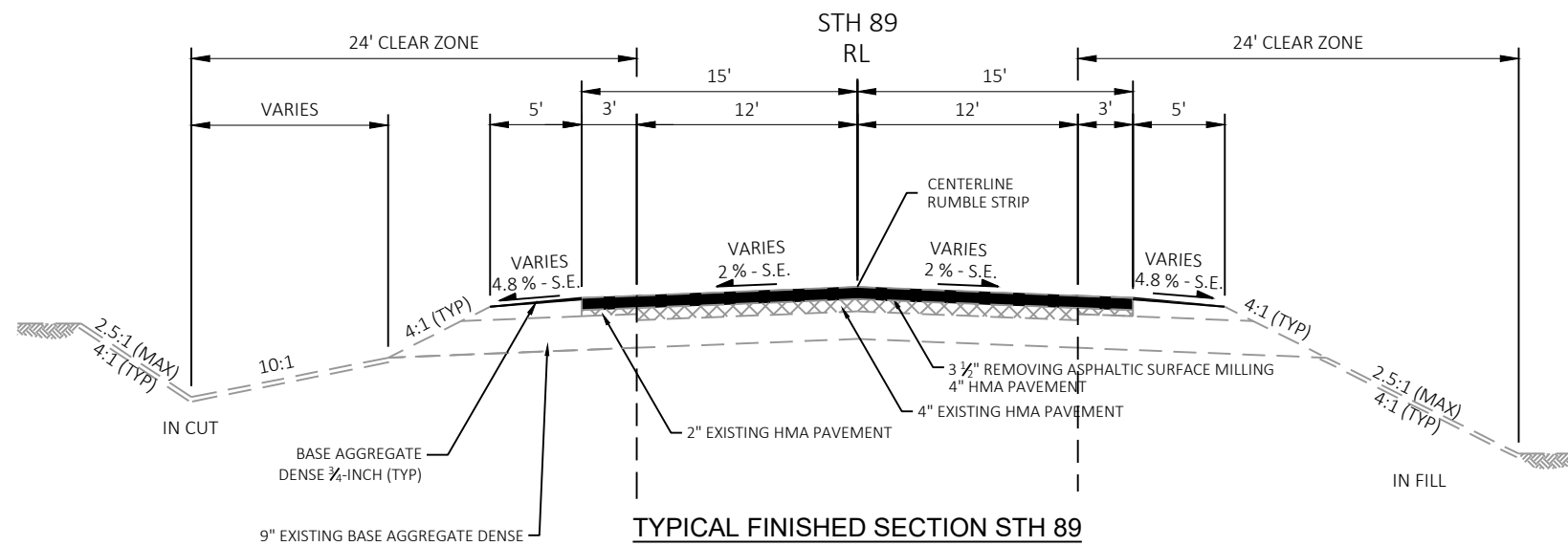


EXISTING TYPICAL SECTION SIDE ROADS

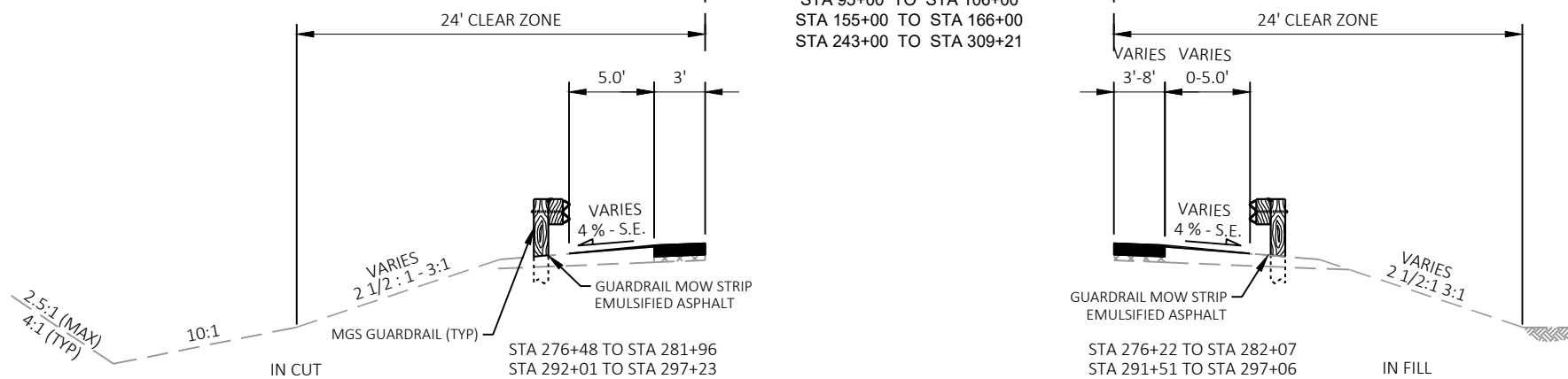
PINKS LANE
R AND D TOWN LINE ROAD
SHADEL ROAD
CTH M
KILKENNY ROAD
TOWN HALL ROAD

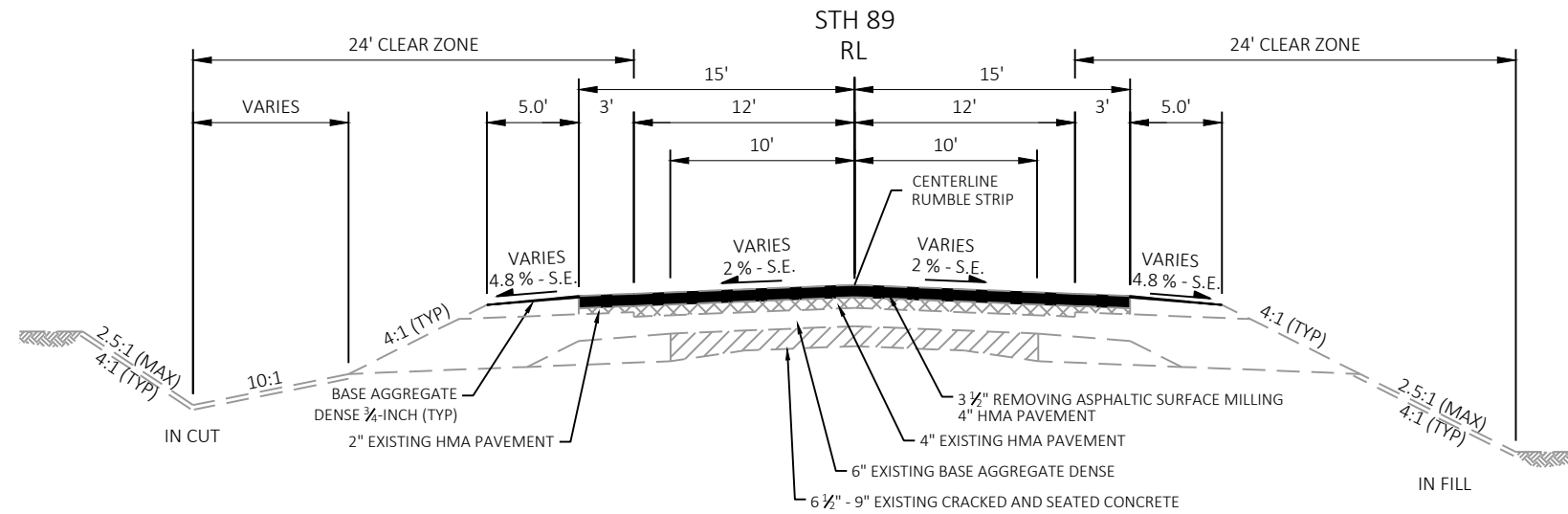


TYPICAL FINISHED SECTION STH 89
STA 64+19 TO STA 71+00



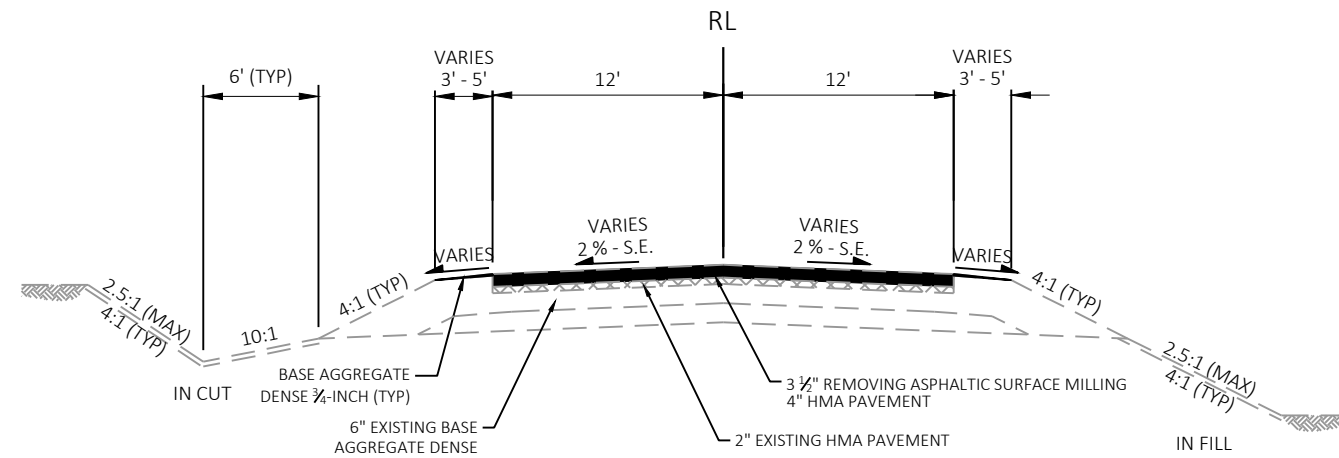
TYPICAL FINISHED SECTION STH 89
STA 71+00 TO STA 76+00
STA 95+00 TO STA 106+00
STA 155+00 TO STA 166+00
STA 243+00 TO STA 309+21





TYPICAL FINISHED SECTION STH 89

STA 76+00 TO STA 95+00
STA 106+00 TO STA 155+00
STA 166+00 TO STA 243+00

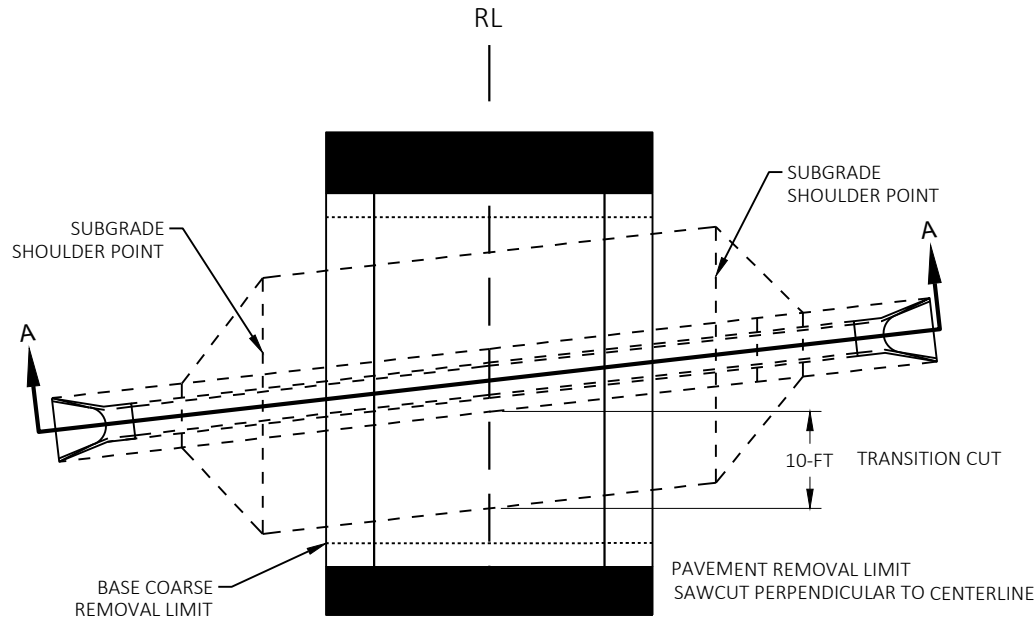


TYPICAL FINISHED SECTION SIDE ROADS

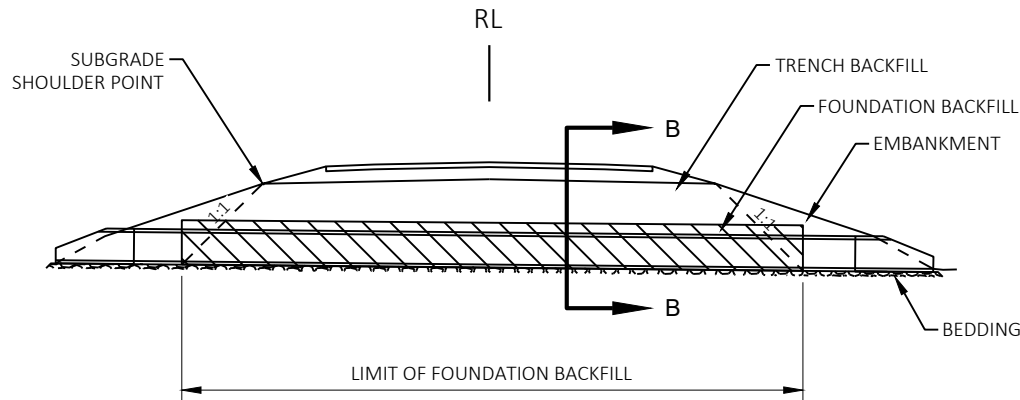
PINKS LANE
R AND D TOWN LINE ROAD
SHADEL ROAD
CTH M
KILKENNY ROAD
TOWN HALL ROAD

CONSTRUCTION NOTES

- 1. TRANSITION CUT IS PAID AS EXCAVATION COMMON
- 2. TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT
- 3. BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520. PAYMENT FOR BACKFILLING TRANSITION CUT IS INCIDENTAL.
- 4. PAYMENT FOR TRENCH EXCAVATION IS INCIDENTAL TO THE CULVERT PIPE BID ITEMS.

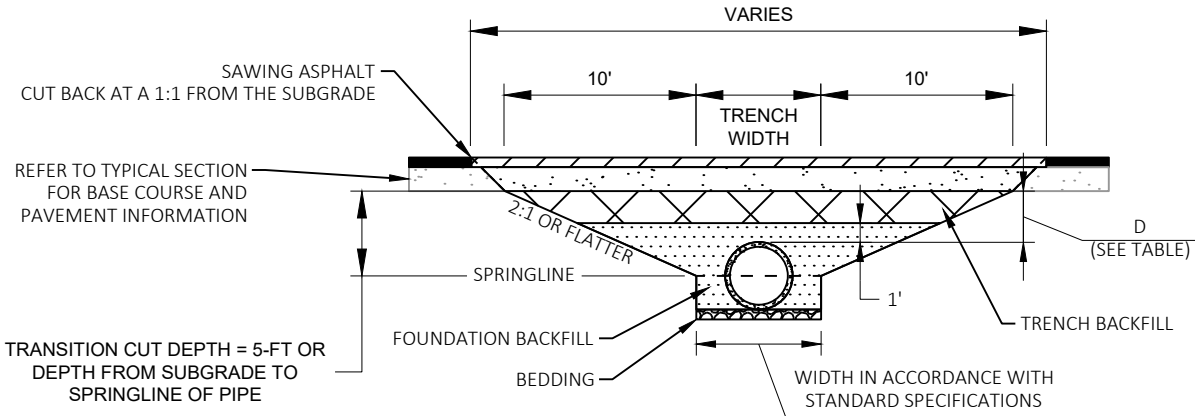


PLAN VIEW

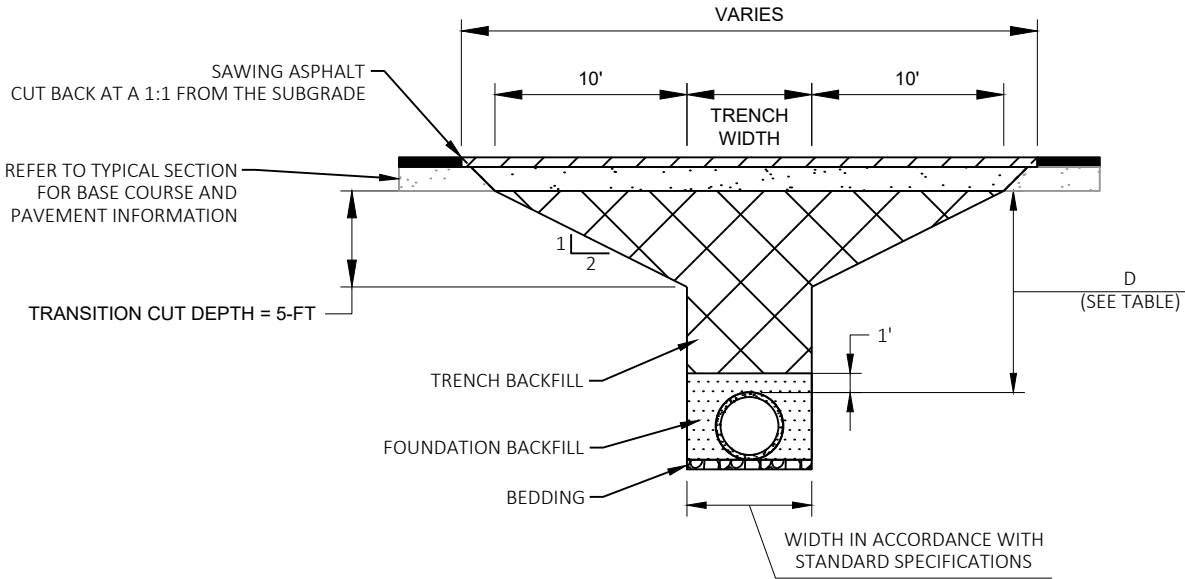


SECTION A-A

CULVERT REPLACEMENT - HMA PAVEMENT



SECTION B-B
(D < 6 FT)



SECTION B-B
(D ≥ 6 FT)

CULVERT PIPE TRANSITIONS				
ROUTE	STA	DEPTH D (FT)	PIE DIA (IN)	REMARKS
STH 89	82+78	1	24	
STH 89	158+50	2	42	
STH 89	294+44	14	42	
STH 89	302+95	5	36	

LEGEND

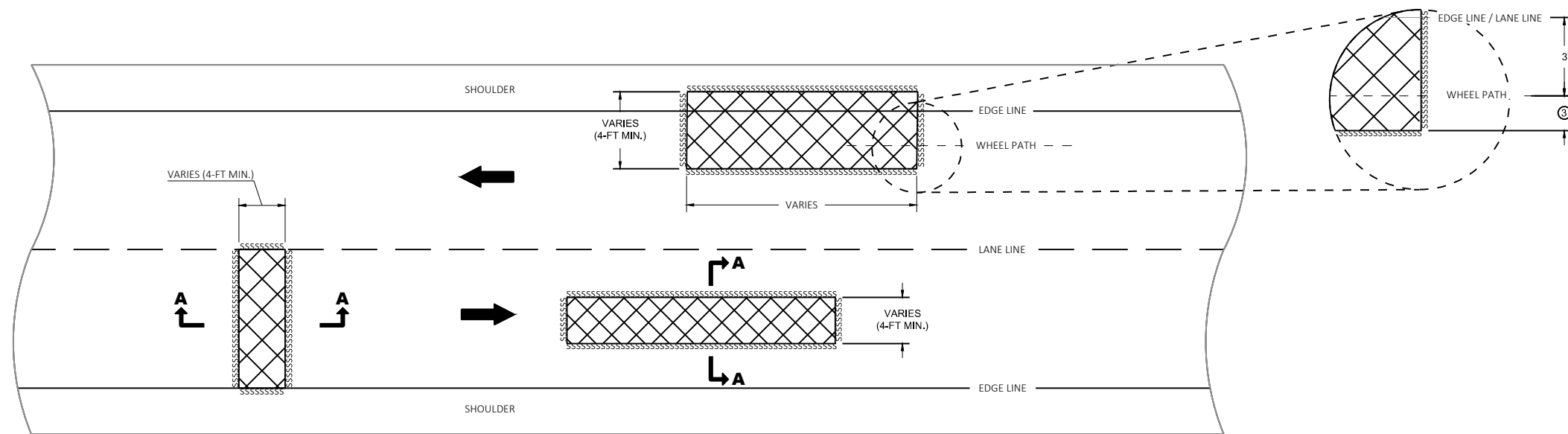
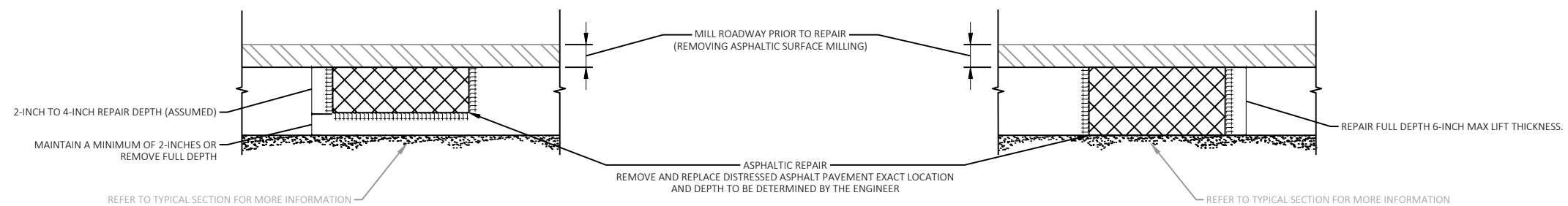
ASPHALTIC REPAIR

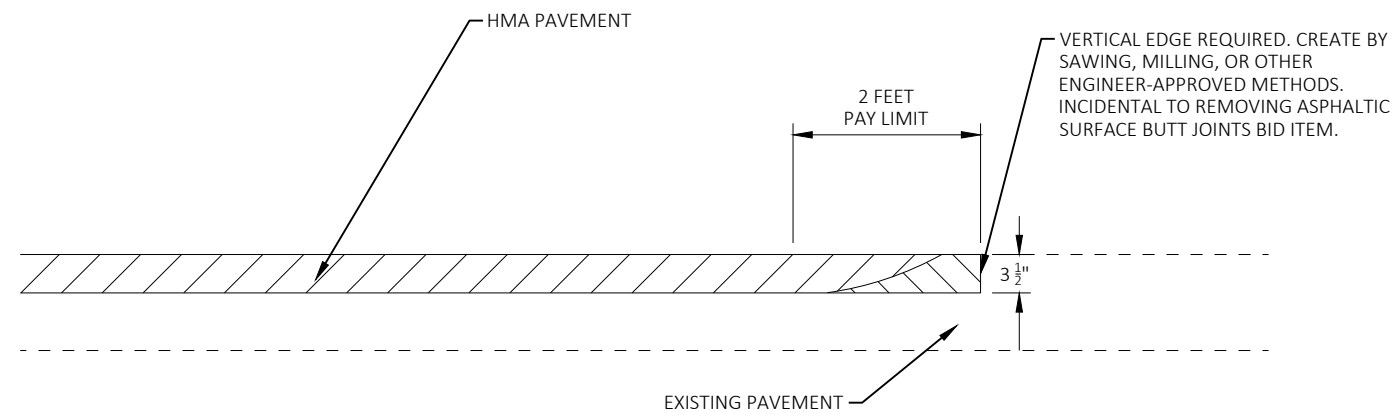
VERTICAL MILLED EDGE
SAW CUTTING AT THE CONTRACTOR'S DISCRETION

TACK COAT

GENERAL NOTES

- ① EXACT LOCATION, DEPTH AND SIZE OF REPAIR TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ② MILL PAVEMENT PER PLAN PRIOR TO MAKING ASPHALTIC REPAIR.
- ③ LOCATE LONGITUDINAL REPAIR JOINTS OUTSIDE OF WHEEL PATH. 12-INCH MINIMUM (24-INCH RECOMMENDED) FROM THE CENTER OF THE WHEEL PATH.
- ④ ASPHALTIC REPAIR PAVING TO BE DONE ON THE SAME DAY AS REMOVAL.

**PLAN VIEW****PARTIAL DEPTH****FULL DEPTH****SECTION A-A****ASPHALTIC REPAIR**

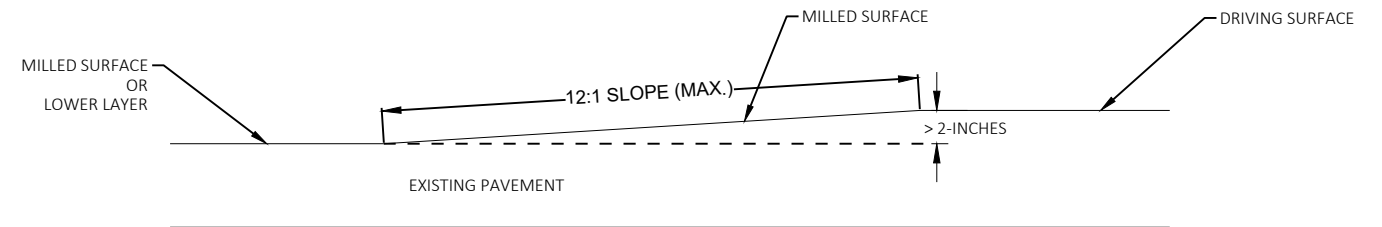


REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALTIC SURFACE BUTT JOINT'

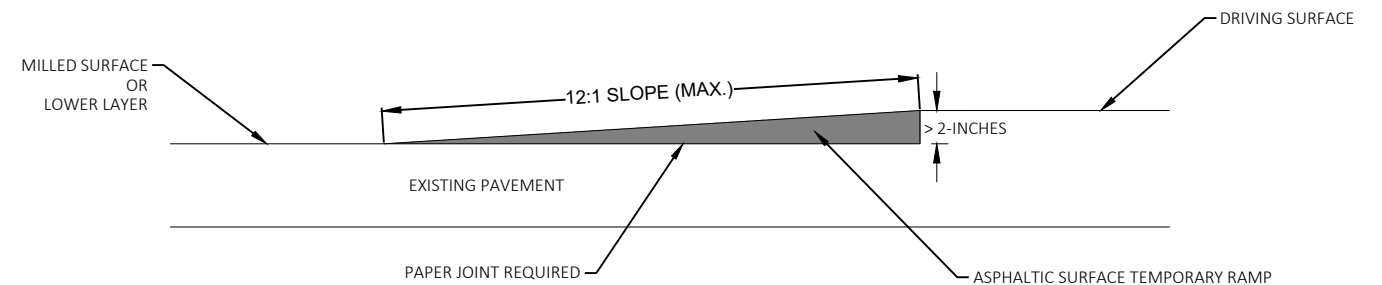


REMOVING ASPHALTIC SURFACE MILLING

BUTT JOINT - NO CHANGE IN PROFILE



MILLED RAMP



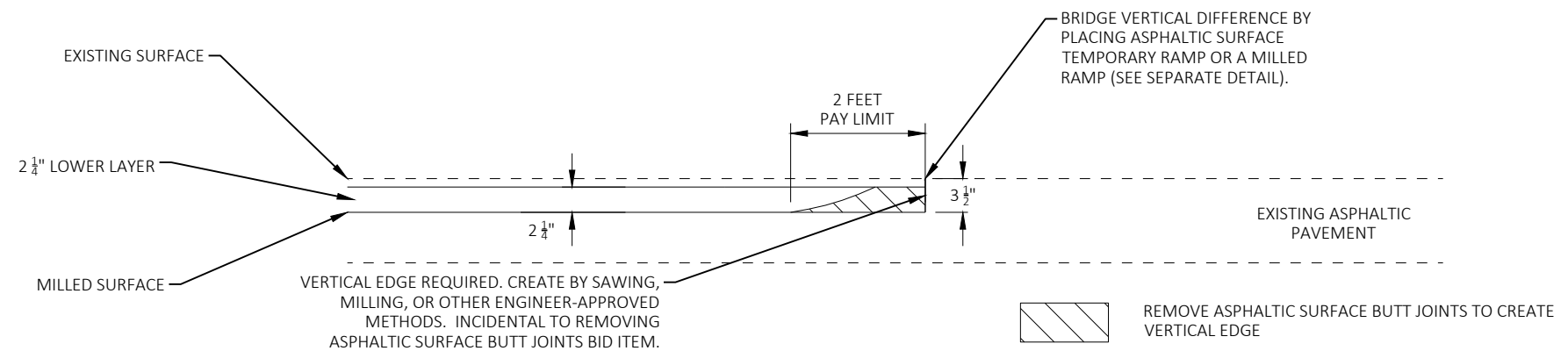
ASPHALTIC SURFACE TEMPORARY RAMP

NOTES:

- THESE CONSTRUCTION DETAILS AND THE SPECIAL PROVISIONS SUPPLEMENT THE REQUIREMENTS FOR PROVIDING DROP-OFF PROTECTION AS STATED IN STANDARD SPECIFICATION 104.6.1.2.3.
- MILLING RAMP PAID AS 'REMOVING ASPHALTIC SURFACE BUTT JOINTS' OR 'REMOVING PAVEMENT BUTT JOINTS'.
- PAVING OF ASPHALTIC SURFACE TEMPORARY RAMP PAID AS 'ASPHALTIC SURFACE TEMPORARY'
- REMOVAL OF RAMPS PAID AS 'REMOVING ASPHALTIC SURFACE BUTT JOINTS' OR 'REMOVING PAVEMENT BUTT JOINTS'.

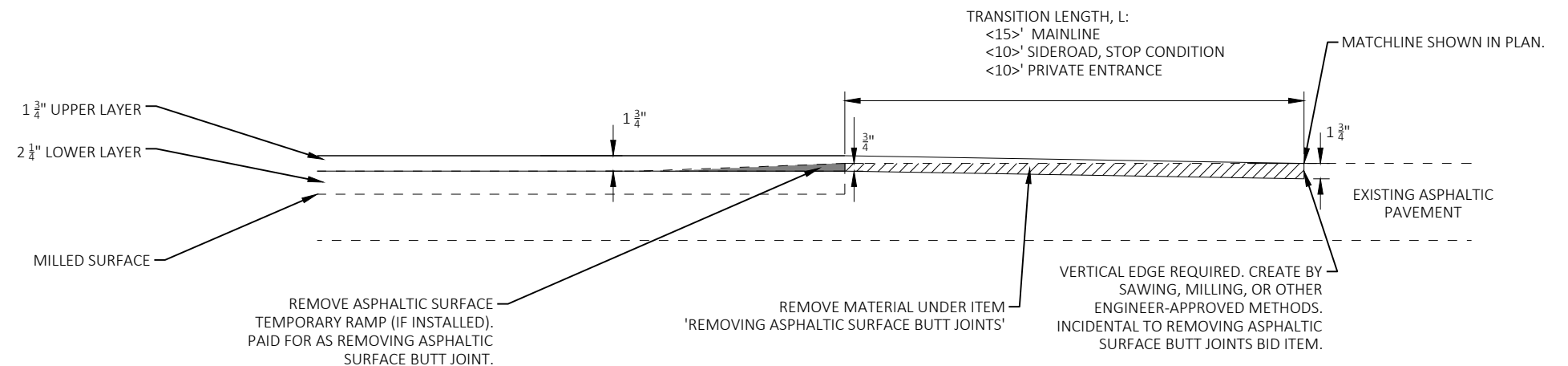
OPERATIONS

- REMOVING ASPHALTIC SURFACE MILLING $3\frac{1}{2}$ -INCHES AND REMOVING ASPHALTIC SURFACE BUTT JOINT.
- PAVE LOWER LAYER, PAVE TEMPORARY RAMP.



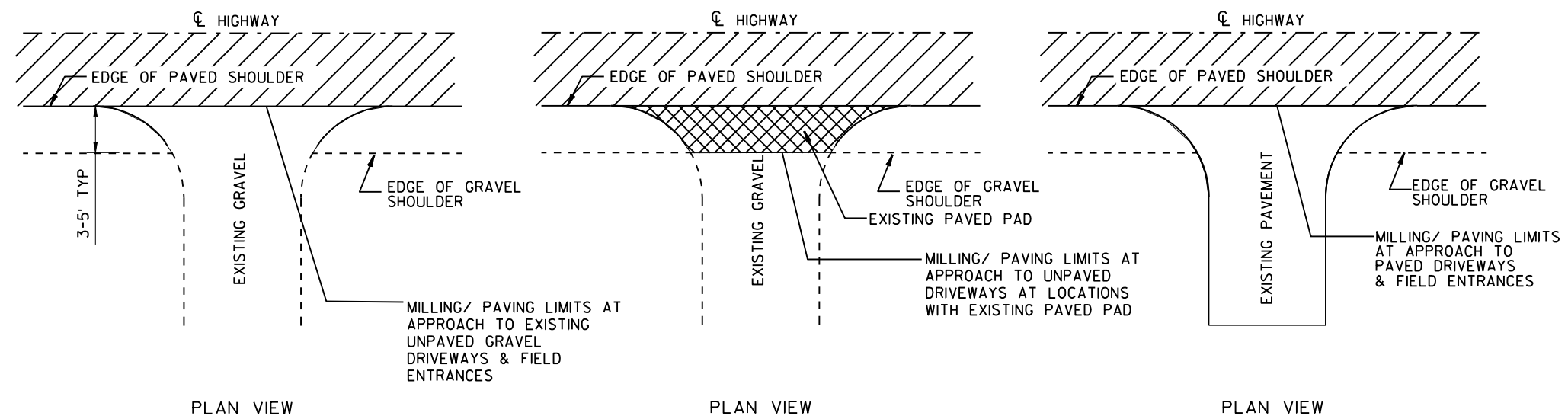
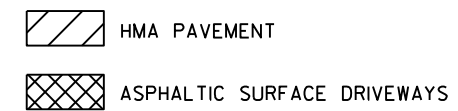
MILLING AND PAVING LOWER LAYER

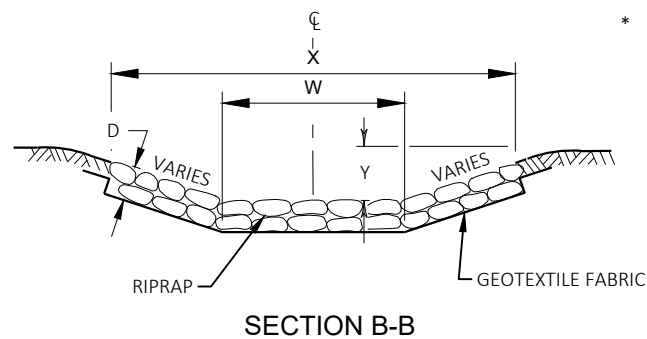
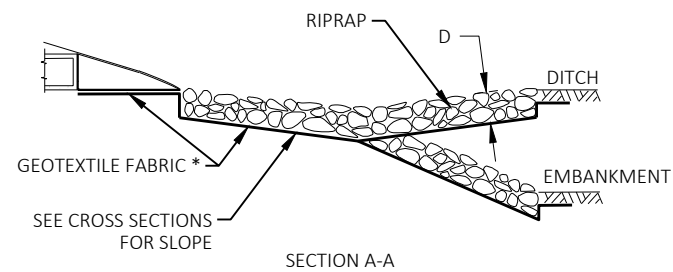
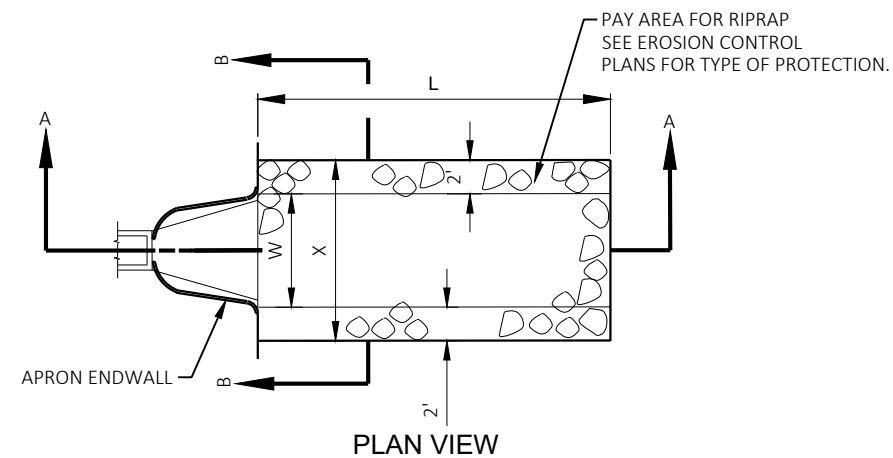
- REMOVING ASPHALTIC SURFACE BUTT JOINT, REMOVE TEMPORARY RAMP.
- PAVE UPPER LAYER.



MILLING BUTT JOINT AND PAVING UPPER LAYER

BUTT JOINT - CHANGE IN PROFILE (MILL 3.5", PAVE 4")

RURAL DRIVEWAY DETAIL



L = 3 x W (NOR) OR 10' MIN
OR AS INDICATED IN THE PLANS
OR AS DIRECTED BY THE ENGINEER

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

X = W+4' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
W+6' FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
6" FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

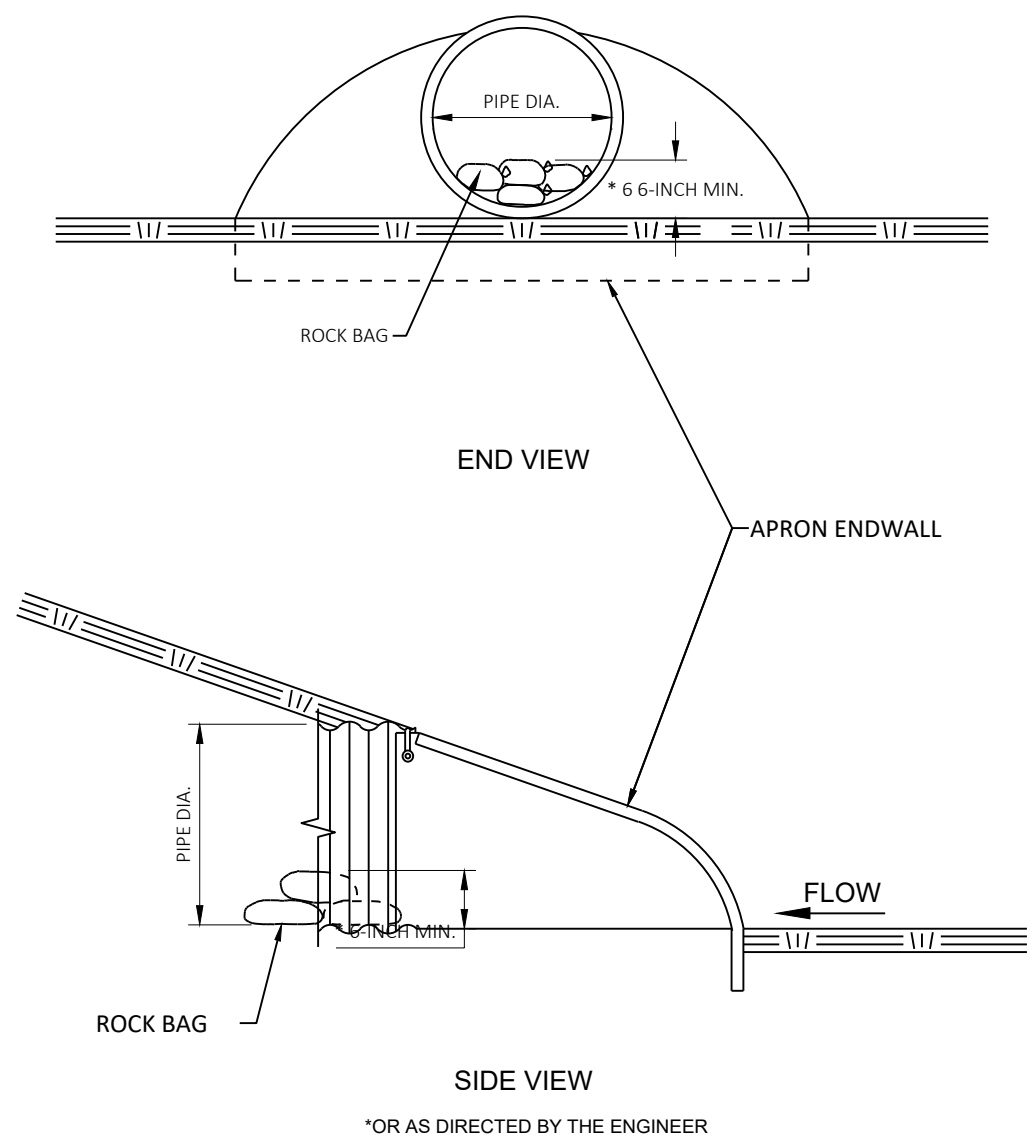
* TYPE R (FOR RIPRAP LIGHT ONLY)
TYPE HR (FOR RIPRAP HEAVY AND MEDIUM ONLY)

CONSTRUCTION NOTES:

1. GEOTEXTILE FABRIC SHALL EXTEND BENEATH THE ENTIRE LENGTH OF THE APRON ENDWALL SECTION. INSTALL ON PREPAVED FOUNDATION. GRADE PRIOR TO END WALL INSTALLATION.
2. COMPLETE GEOTEXTILE FABRIC AND RIPRAP SECTION INSTALLATION PRIOR TO STORM WATER FLOW.

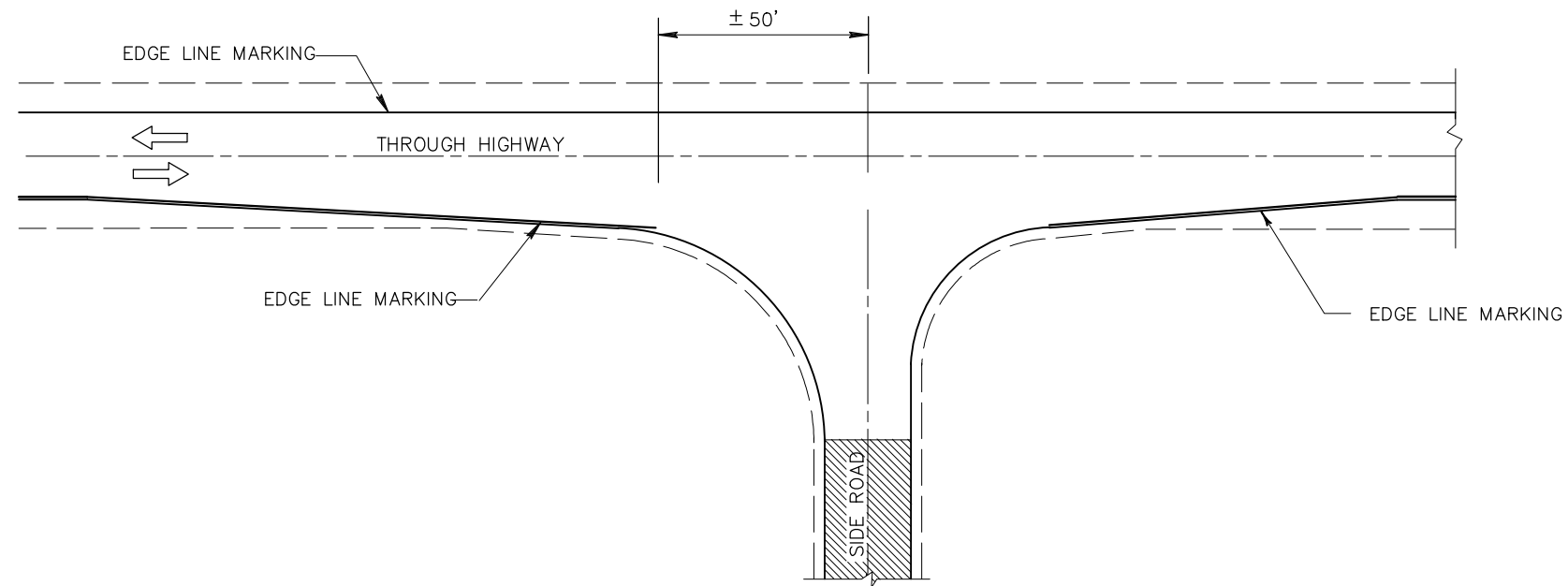
**RIPRAP AND GEOTEXTILE FABRIC DETAIL
AT APRON ENDWALLS**

SER (20180101)

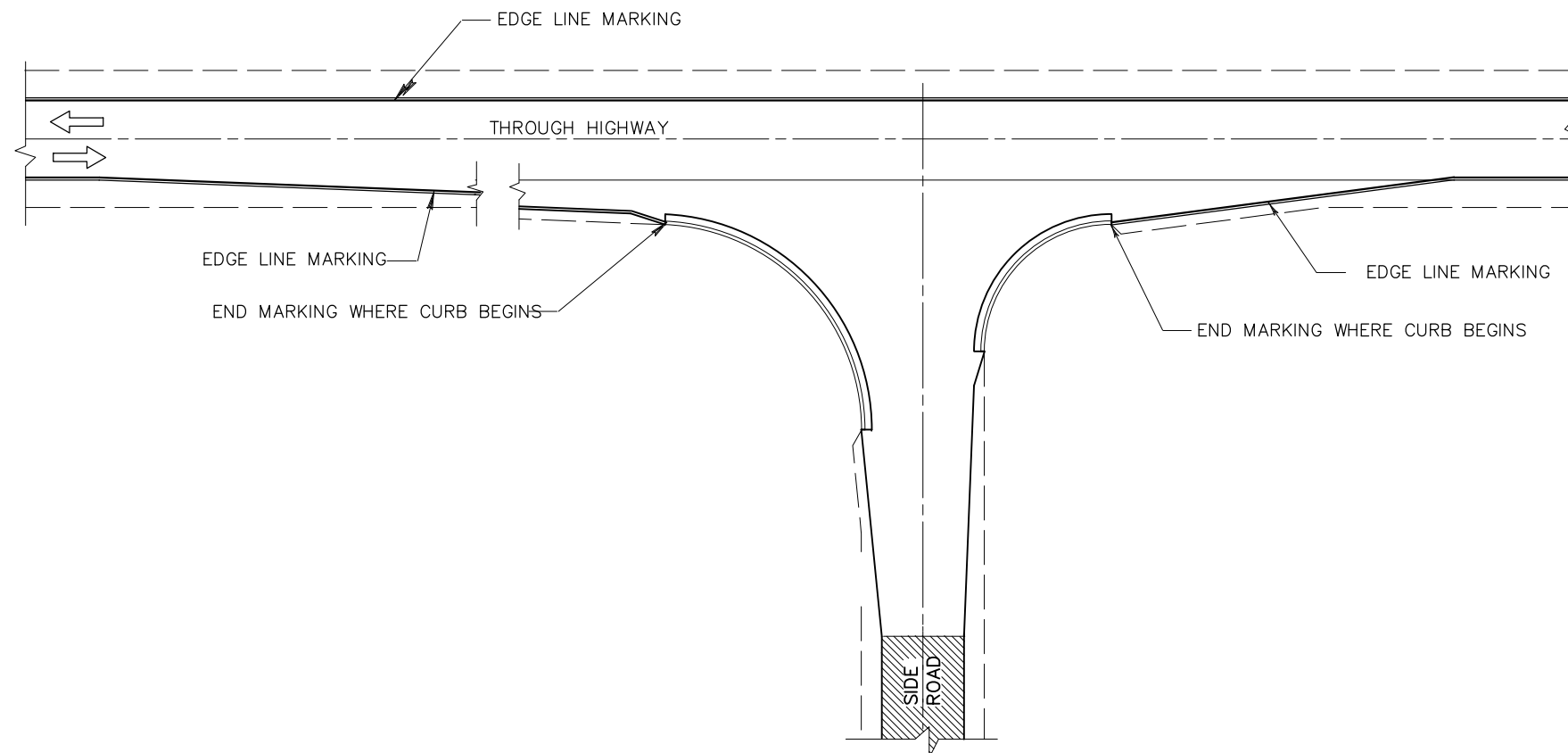


CULVERT PIPE CHECKS
SER (20180101)

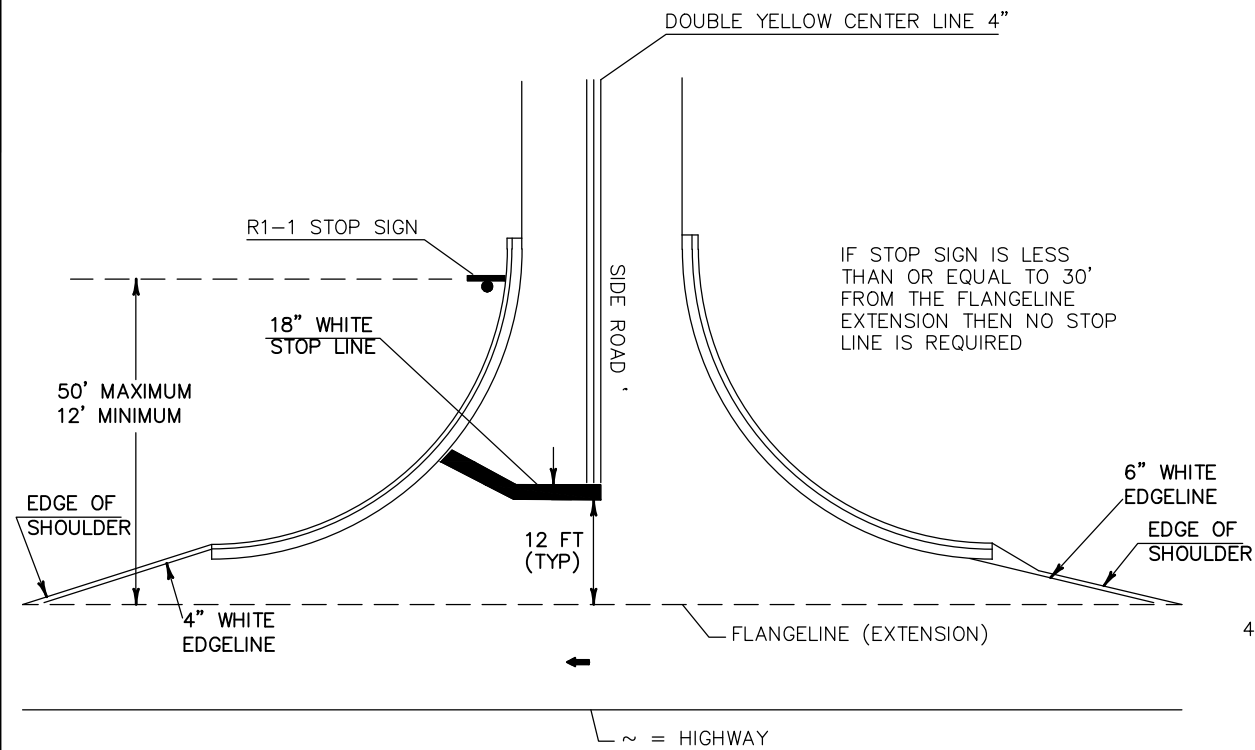
ESTIMATED BAG SIZE 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NUMBER OF BAGS
12"	1
15"	2
18"	2
24"	3
30"	5
36"	7
42"	7
48"	10
54"	10
60"	13
66"	14
72"	16
17"X13"	2
30"X19"	5
38"X24"	7
45"X29"	10
53"X34"	10
60"X38"	13
76"X48"	18
27' WIDE BOX CULVERT	36



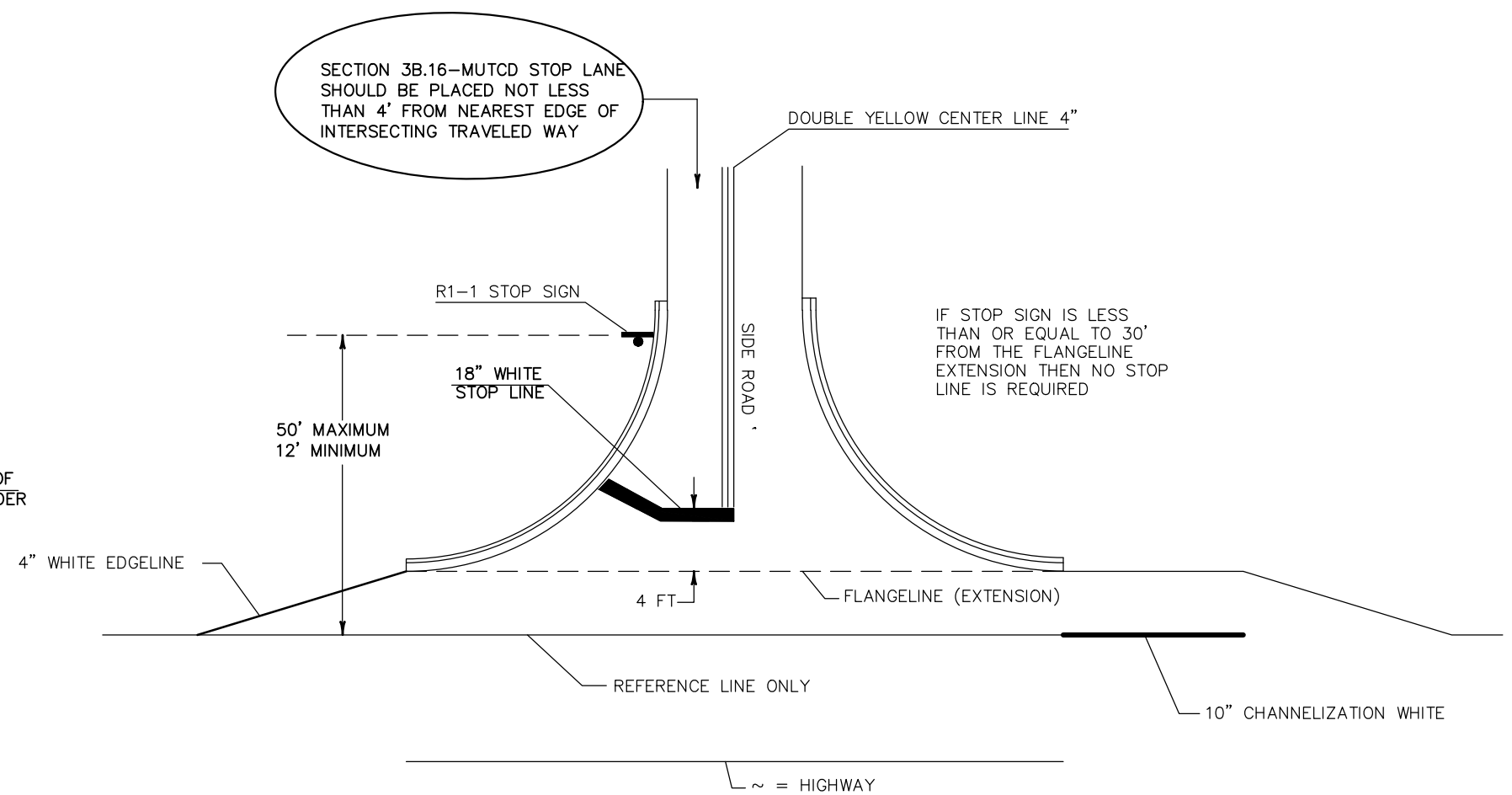
MINOR INTERSECTION WITHOUT CURBS
(TYPICAL MARKING)



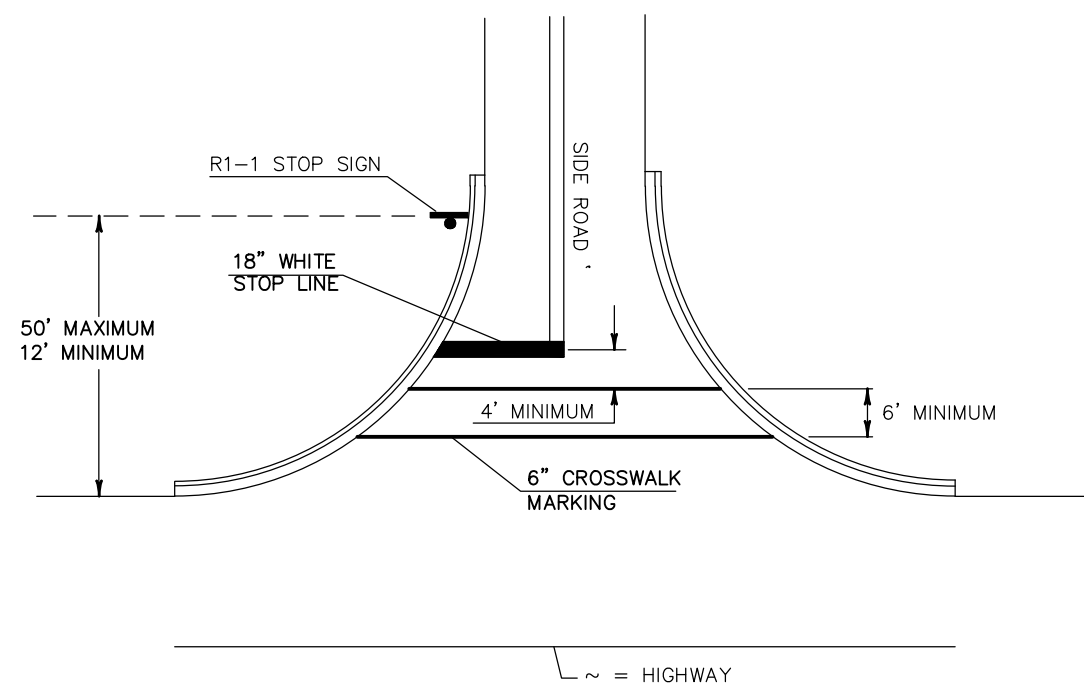
MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



TYPICAL PAVEMENT MARKING FOR SIDEROADS



TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE

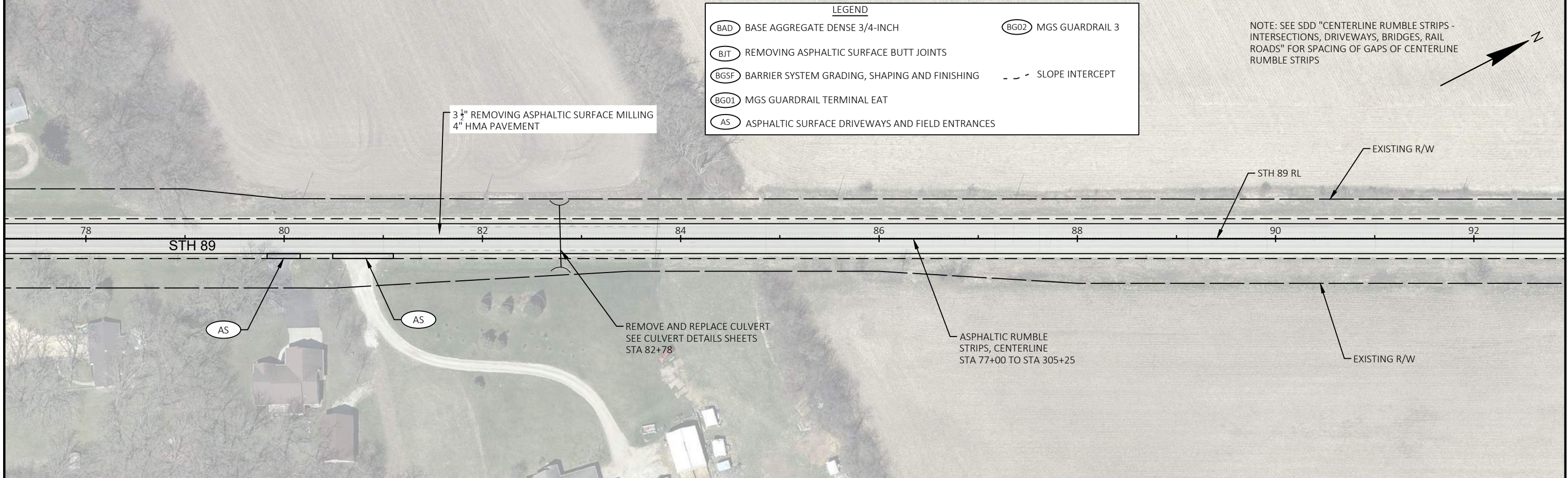
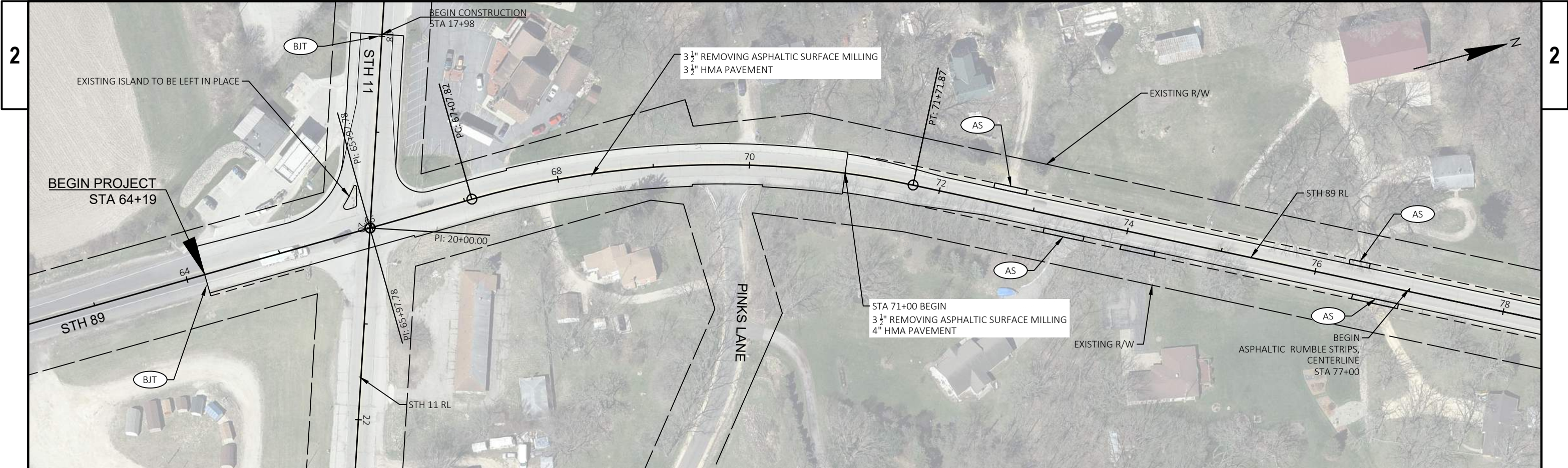


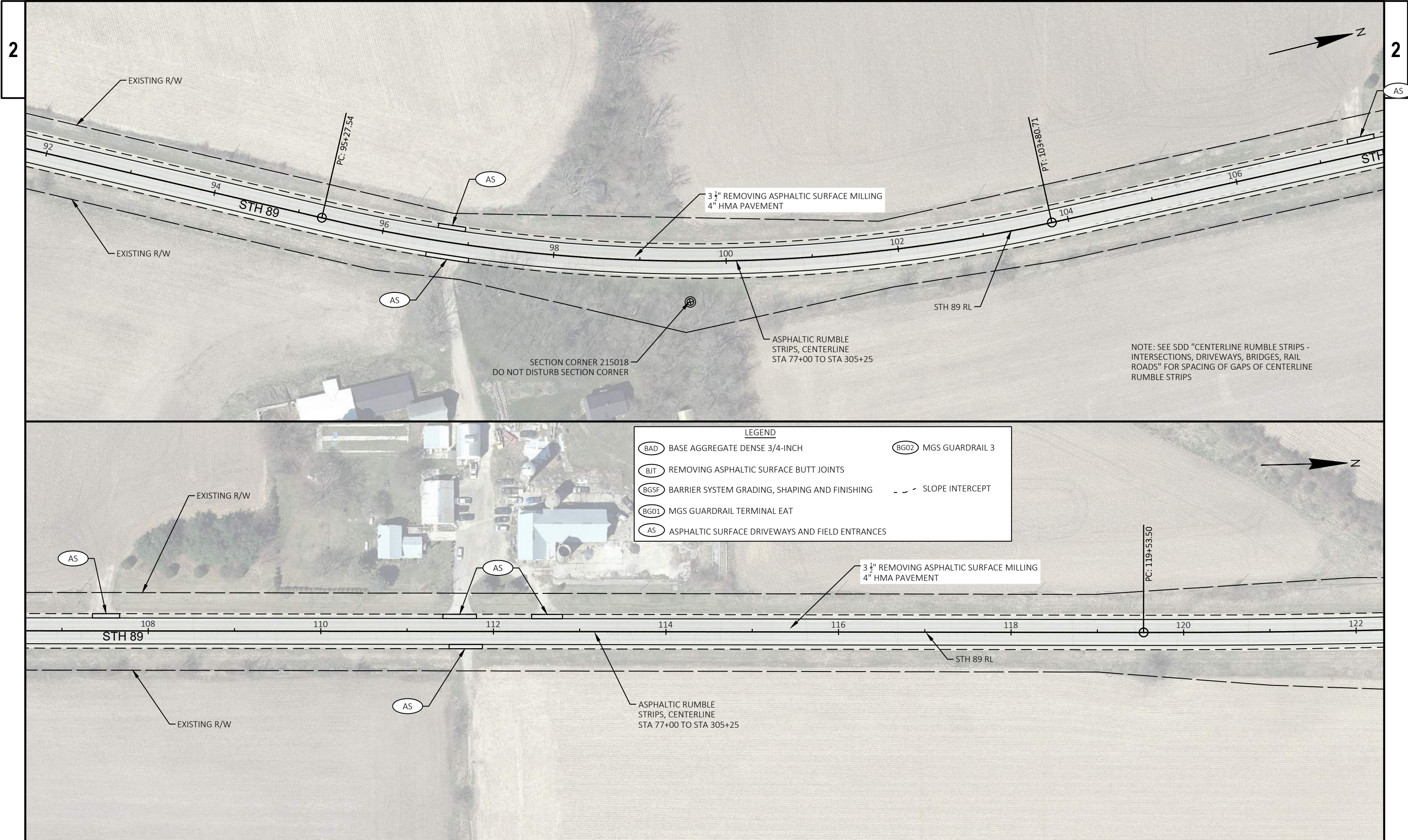
TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

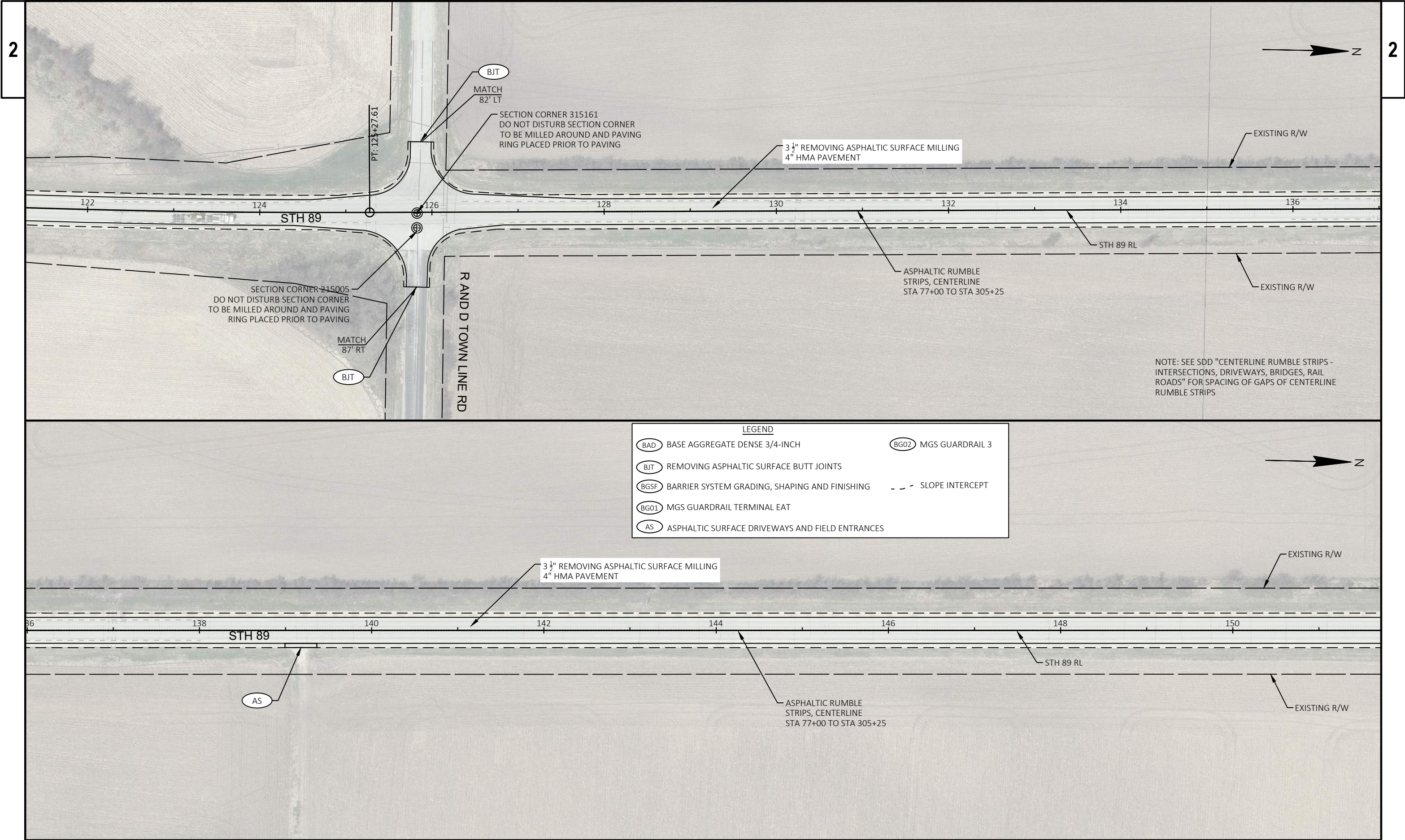
NOTES:
18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

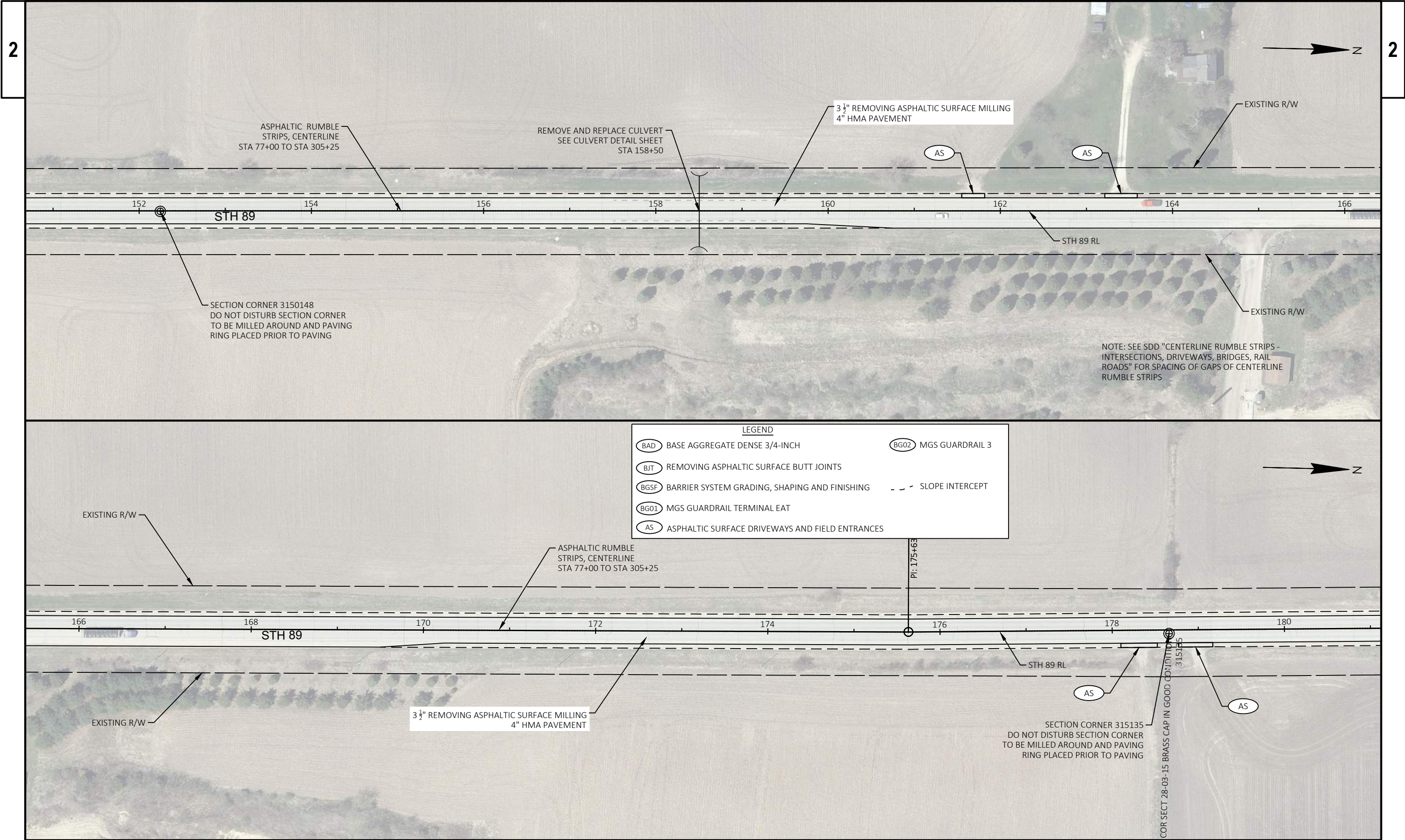
STOP LINES REQUIRED WHERE:

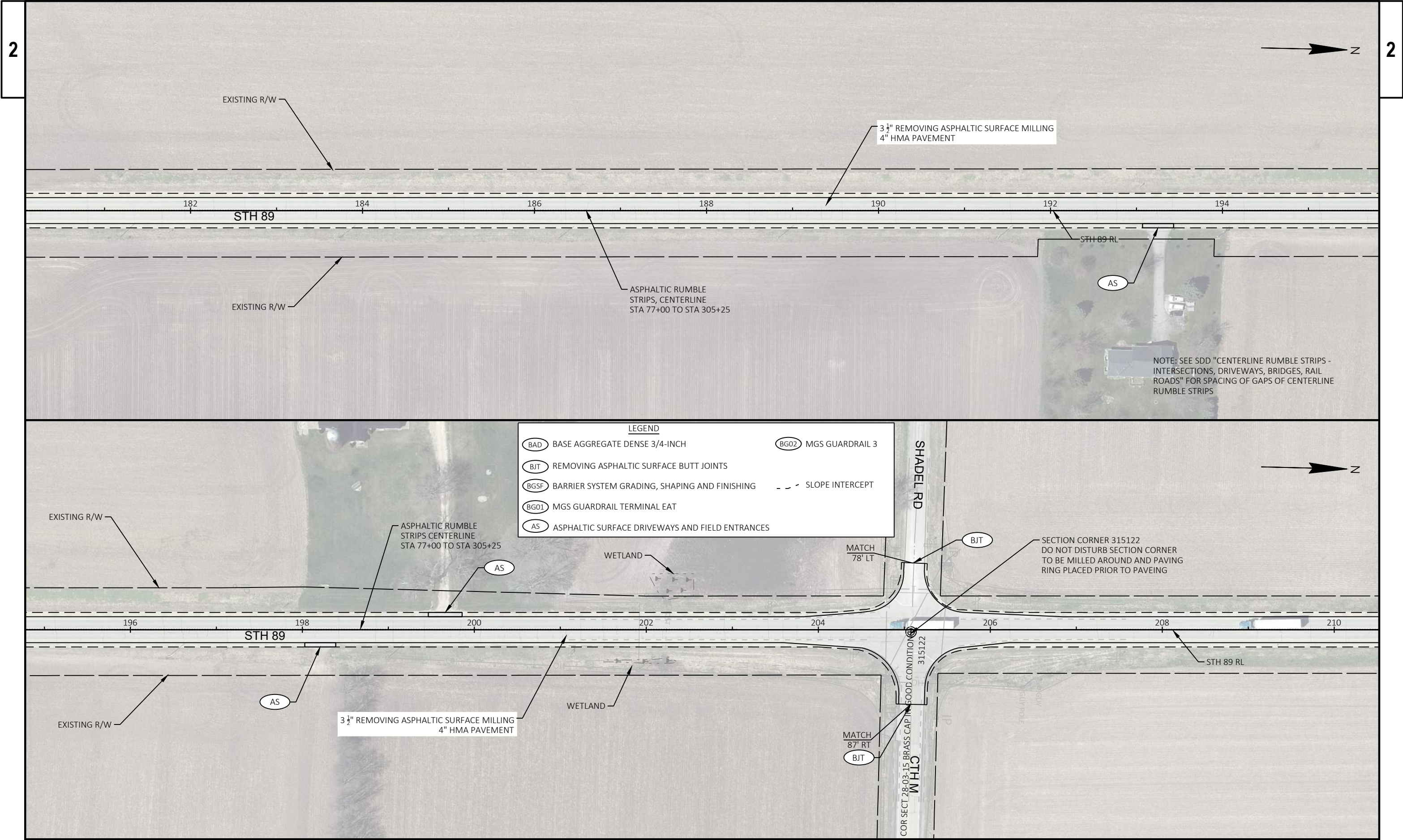
- CROSSWALK MARKINGS EXIST OR BEING PROVIDED
- LARGE RADII
- OFFSET LEFT TURNS WHERE STOP BAR FOR LEFT TURN IS SET BACK FROM THRU MOVEMENT.

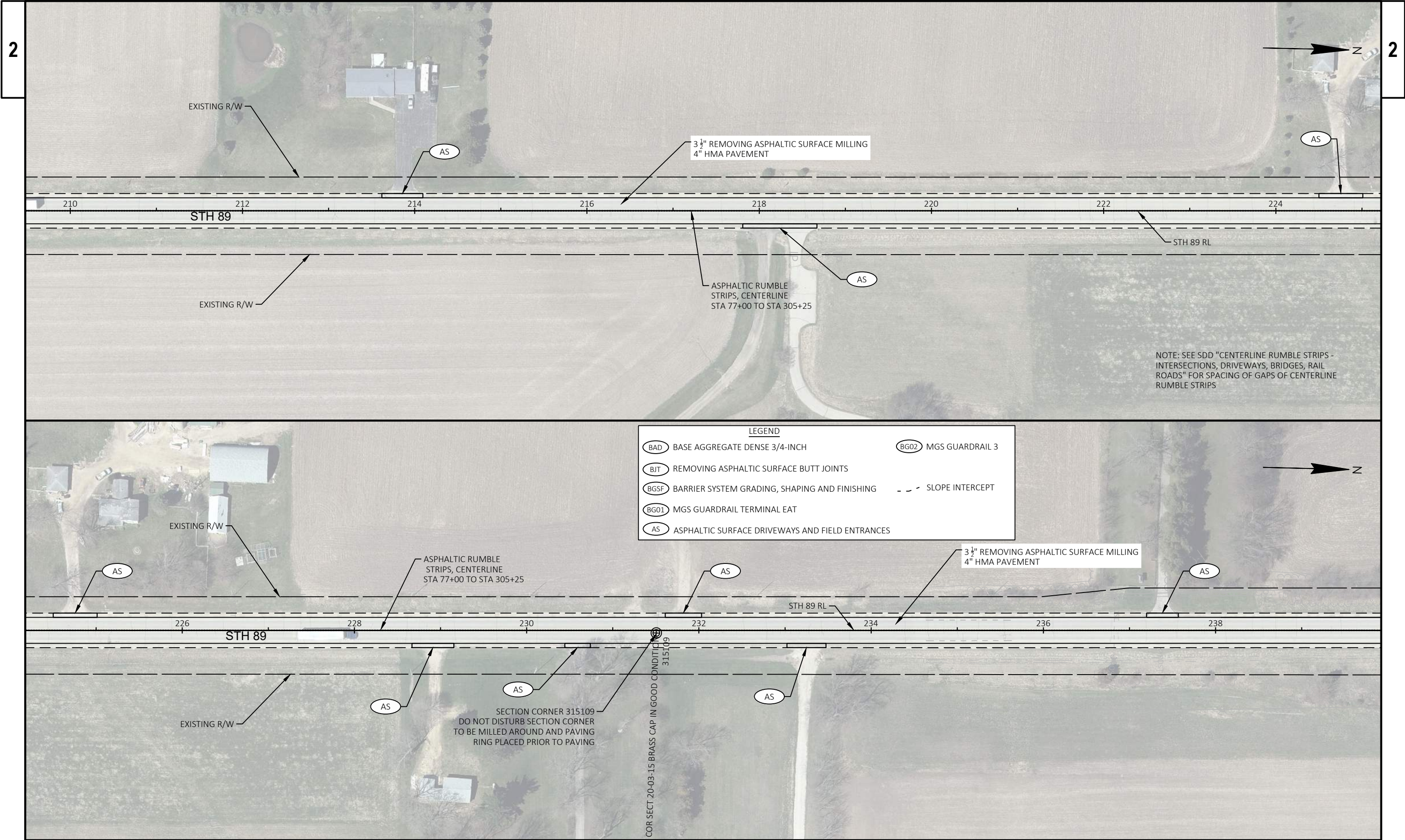


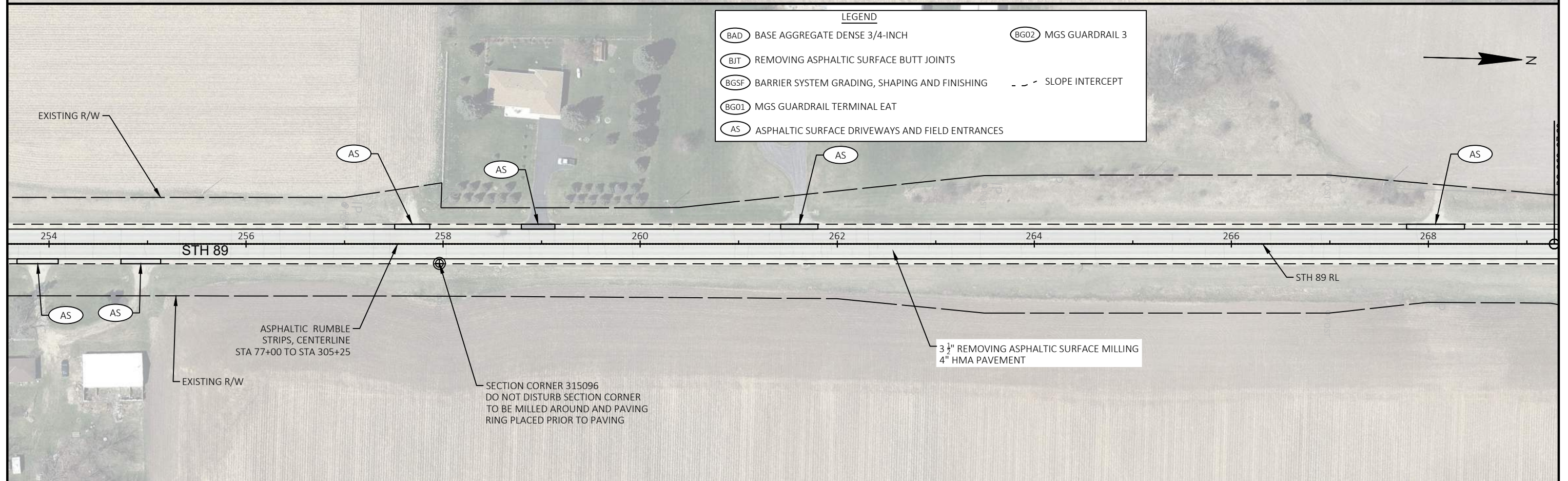
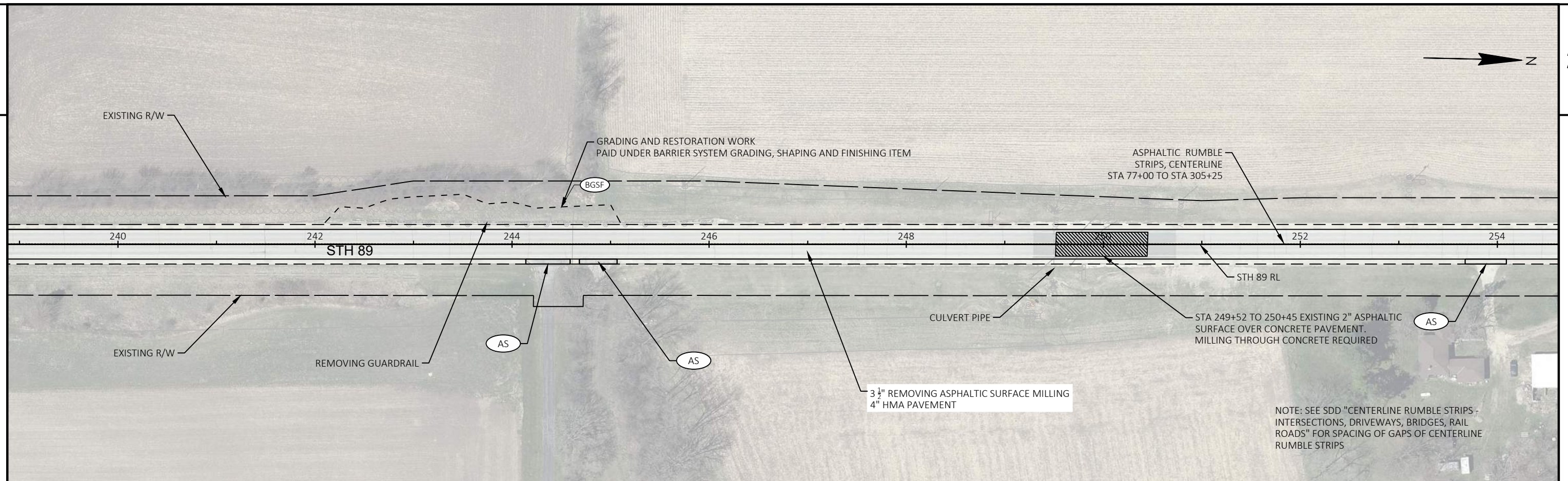




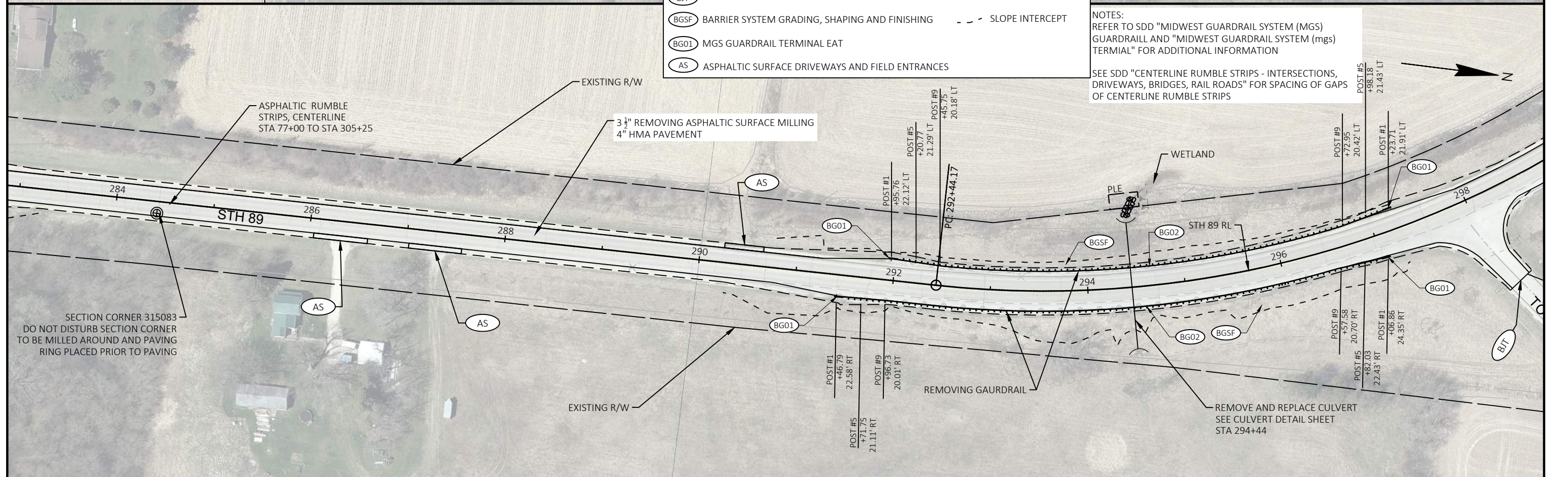
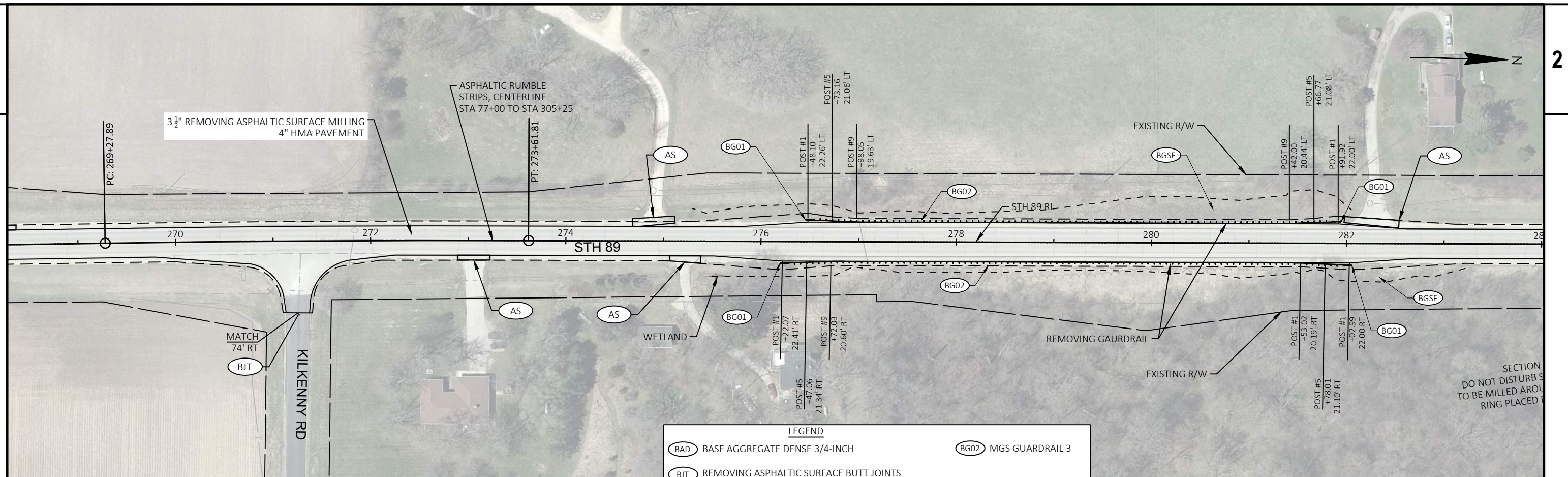








LEGEND	
(BAD)	BASE AGGREGATE DENSE 3/4-INCH
(BJT)	REMOVING ASPHALTIC SURFACE BUTT JOINTS
(BGSF)	BARRIER SYSTEM GRADING, SHAPING AND FINISHING
(BG01)	MGS GUARDRAIL TERMINAL EAT
(AS)	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
(BG02)	MGS GUARDRAIL 3
- - -	SLOPE INTERCEPT



PROJECT NO: 3390-08-70

HWY: STH 89

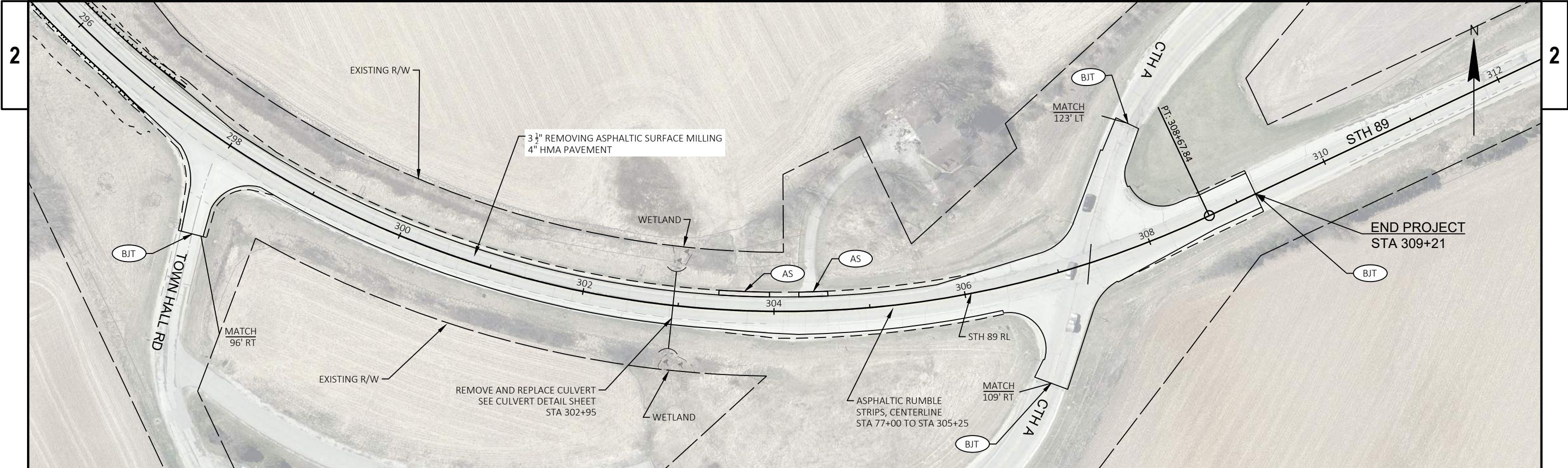
COUNTY: WALWORTH

PLAN DETAILS

SHEET

25

E



LEGEND

BAD

BASE AGGREGATE DENSE 3/4-INCH

BJT

REMOVING ASPHALTIC SURFACE BUTT JOINTS

BGSF

BARRIER SYSTEM GRADING, SHAPING AND FINISHING

BG01

MGS GUARDRAIL TERMINAL EAT

AS

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

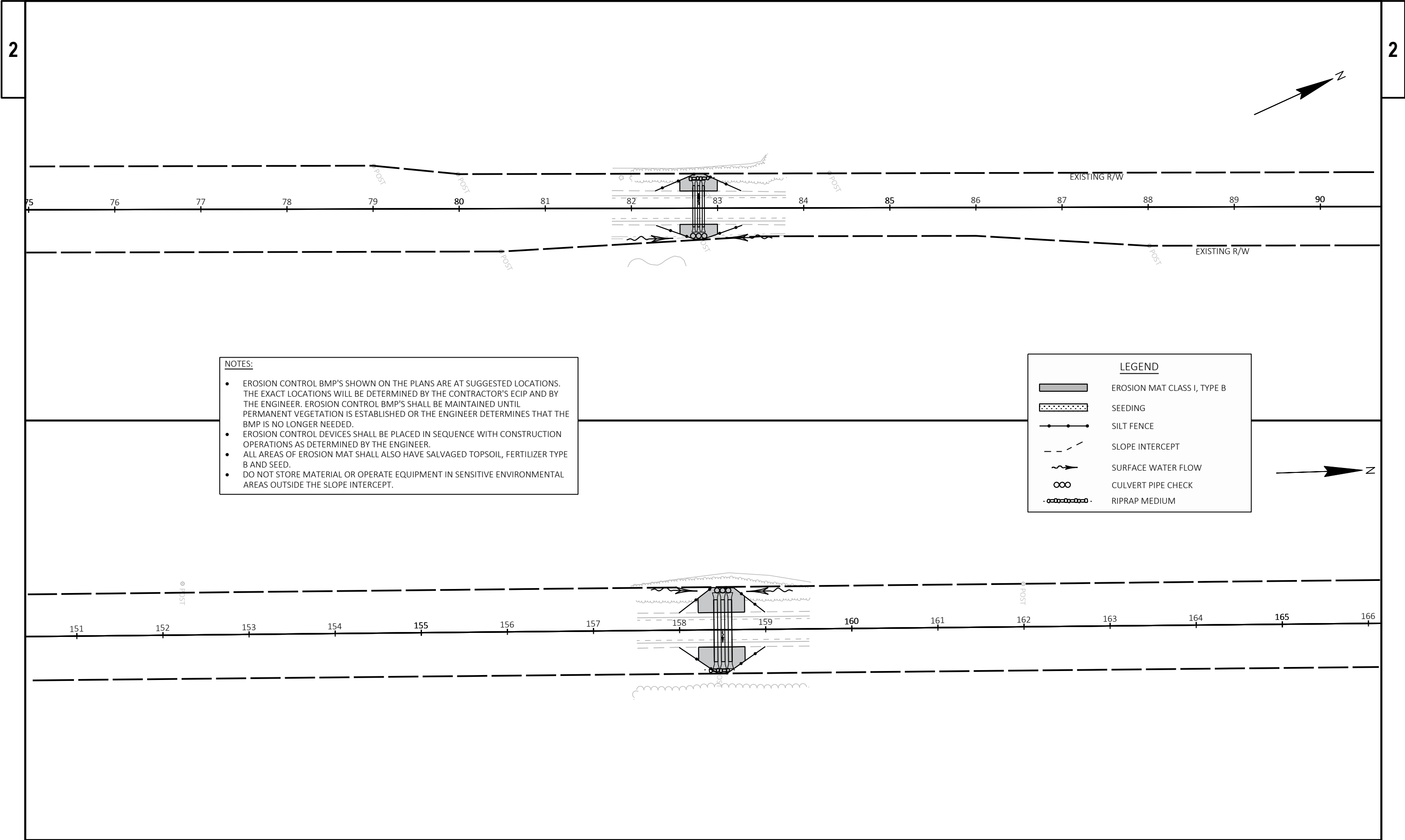
BG02

MGS GUARDRAIL 3

- - -

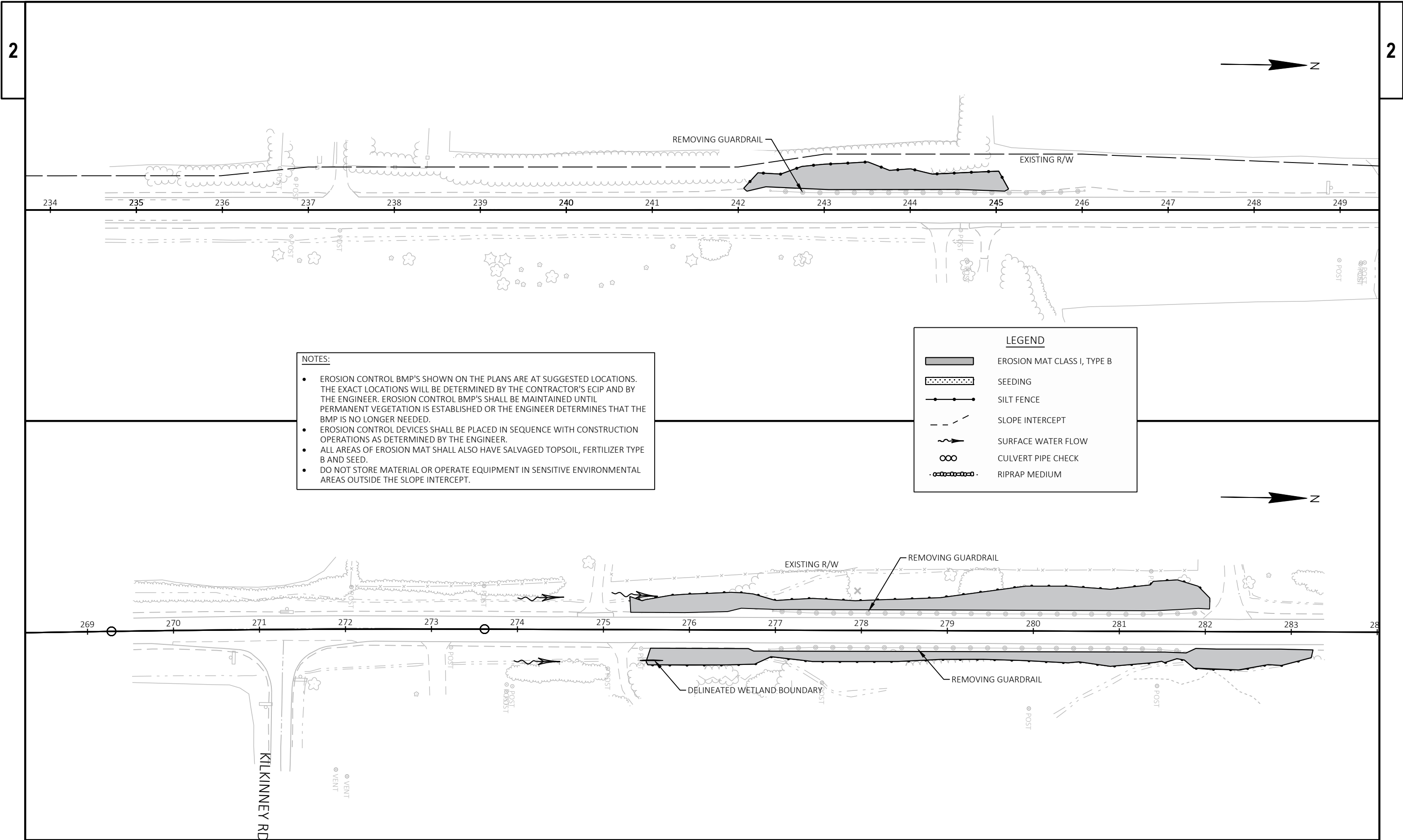
SLOPE INTERCEPT

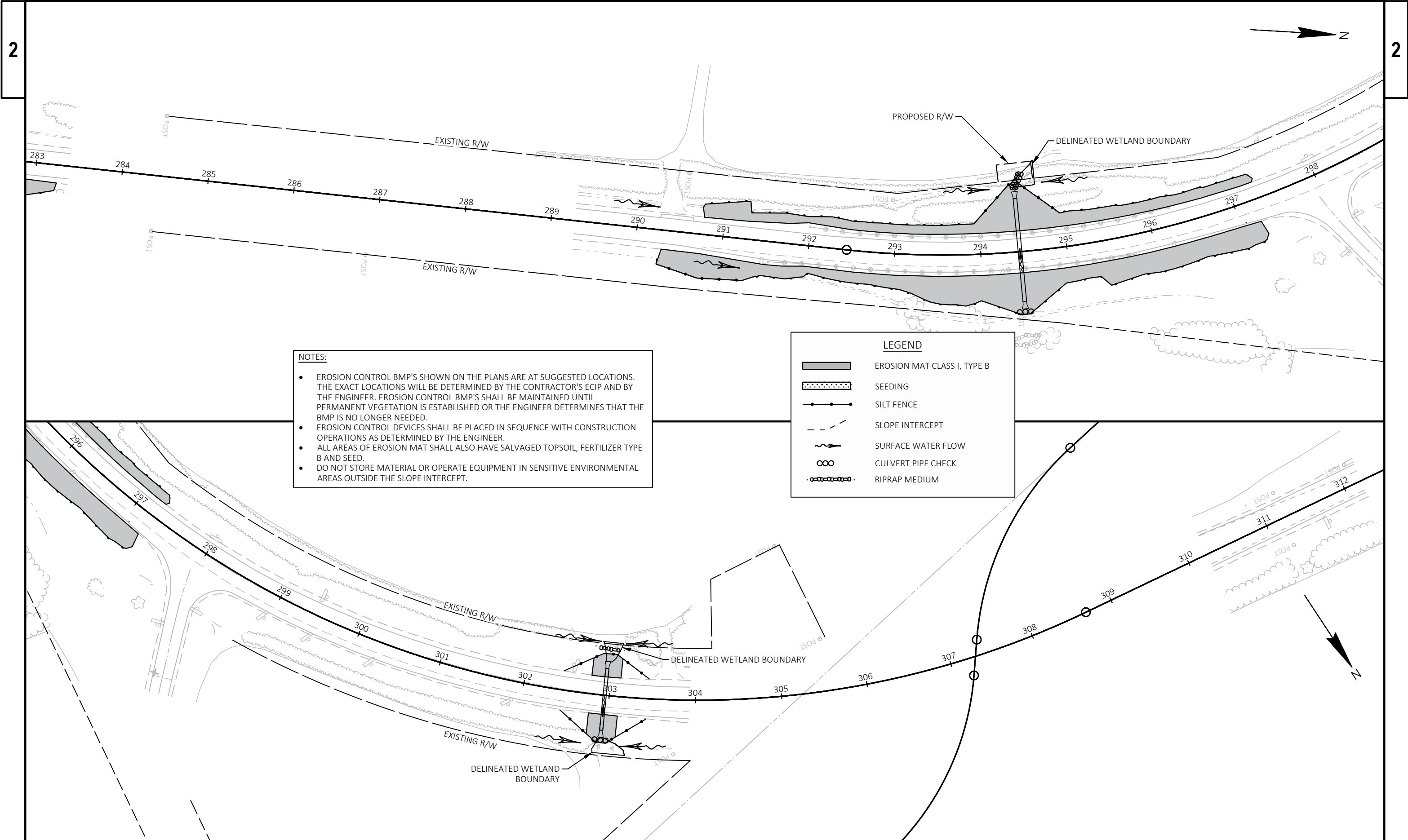
NOTE: SEE SDD "CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS" FOR SPACING OF GAPS OF CENTERLINE RUMBLE STRIPS



- NOTES:
- EROSION CONTROL BMP'S SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER NEEDED.
 - EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS AS DETERMINED BY THE ENGINEER.
 - ALL AREAS OF EROSION MAT SHALL ALSO HAVE SALVAGED TOPSOIL, FERTILIZER TYPE B AND SEED.
 - DO NOT STORE MATERIAL OR OPERATE EQUIPMENT IN SENSITIVE ENVIRONMENTAL AREAS OUTSIDE THE SLOPE INTERCEPT.

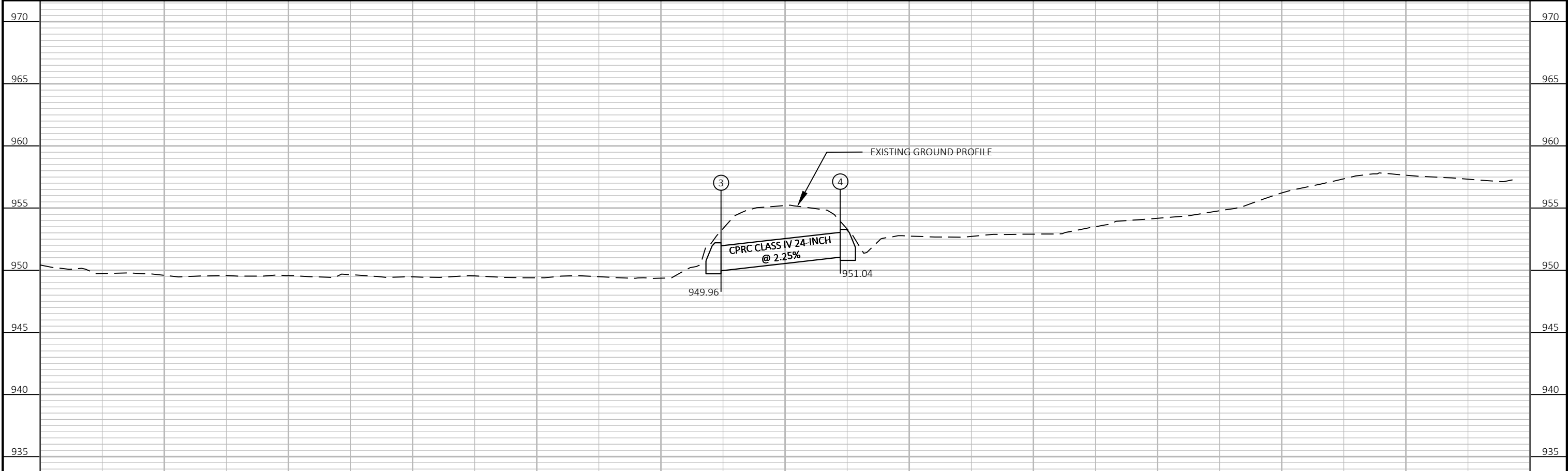
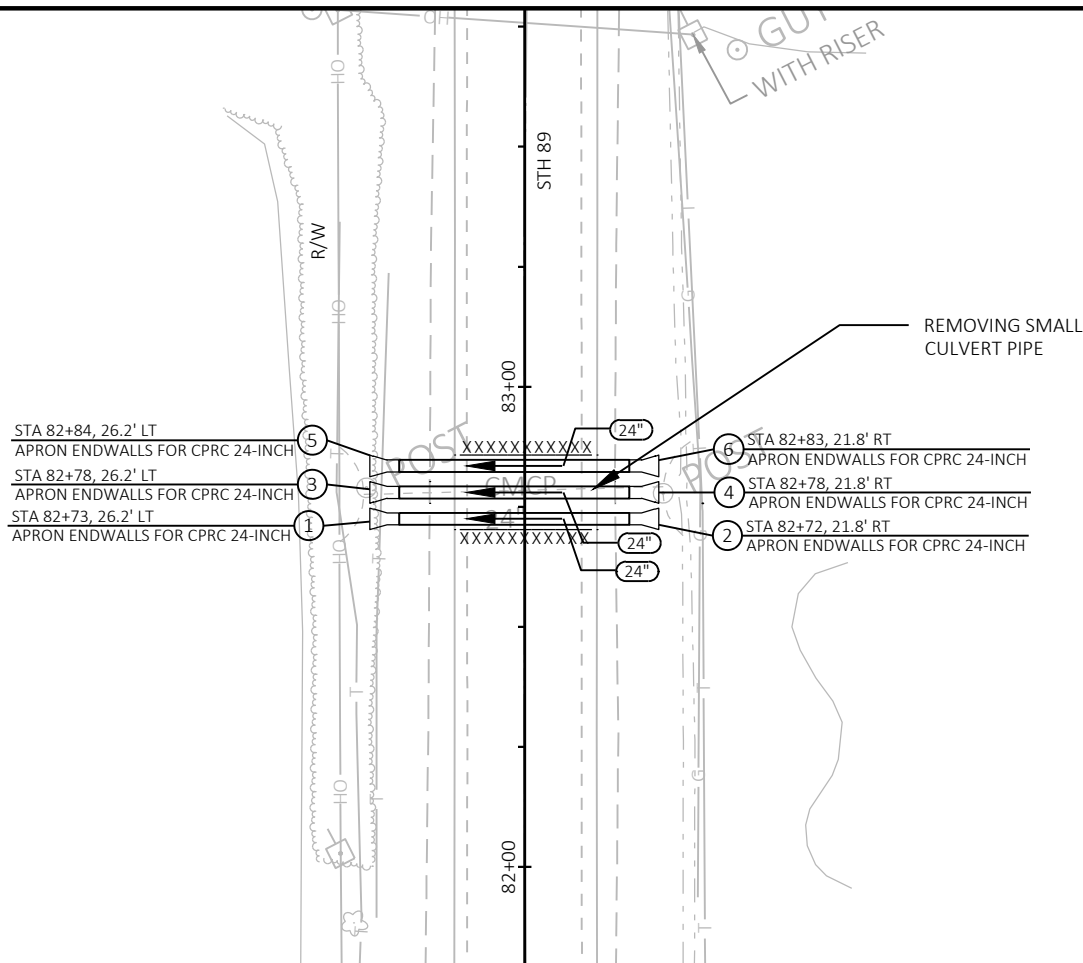
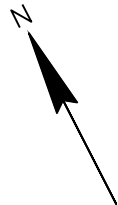
LEGEND	
	EROSION MAT CLASS I, TYPE B
	SEEDING
	SILT FENCE
	SLOPE INTERCEPT
	SURFACE WATER FLOW
	CULVERT PIPE CHECK
	RIPRAP MEDIUM





CULVERT LEGEND

XXX SAWING ASPHALT



PROJECT NO: 3390-08-70

HWY: STH 89

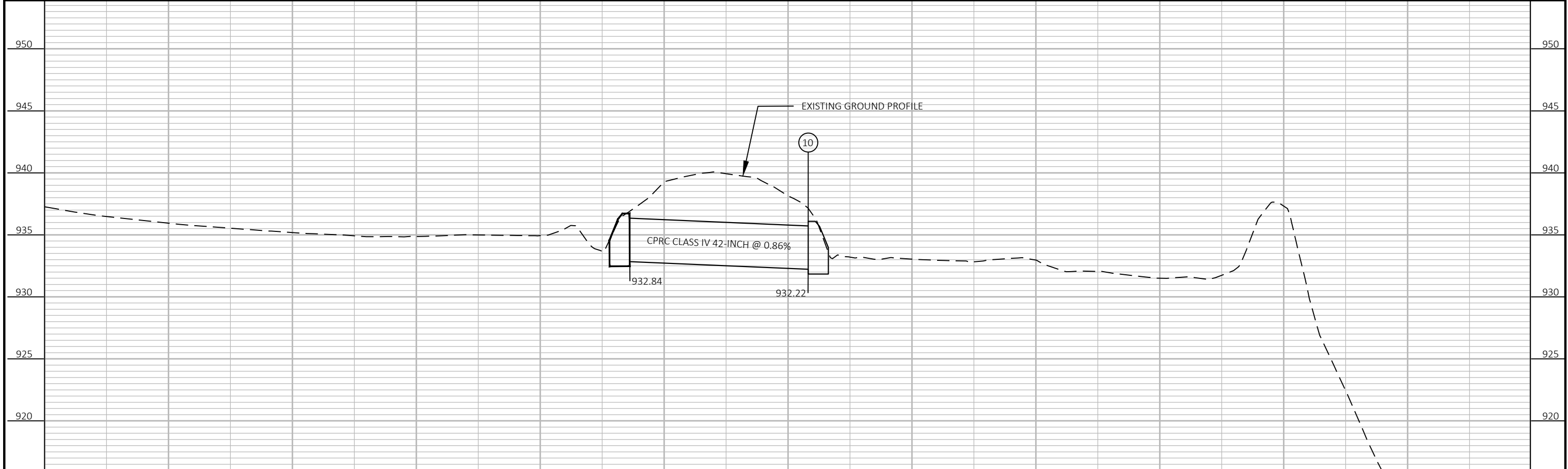
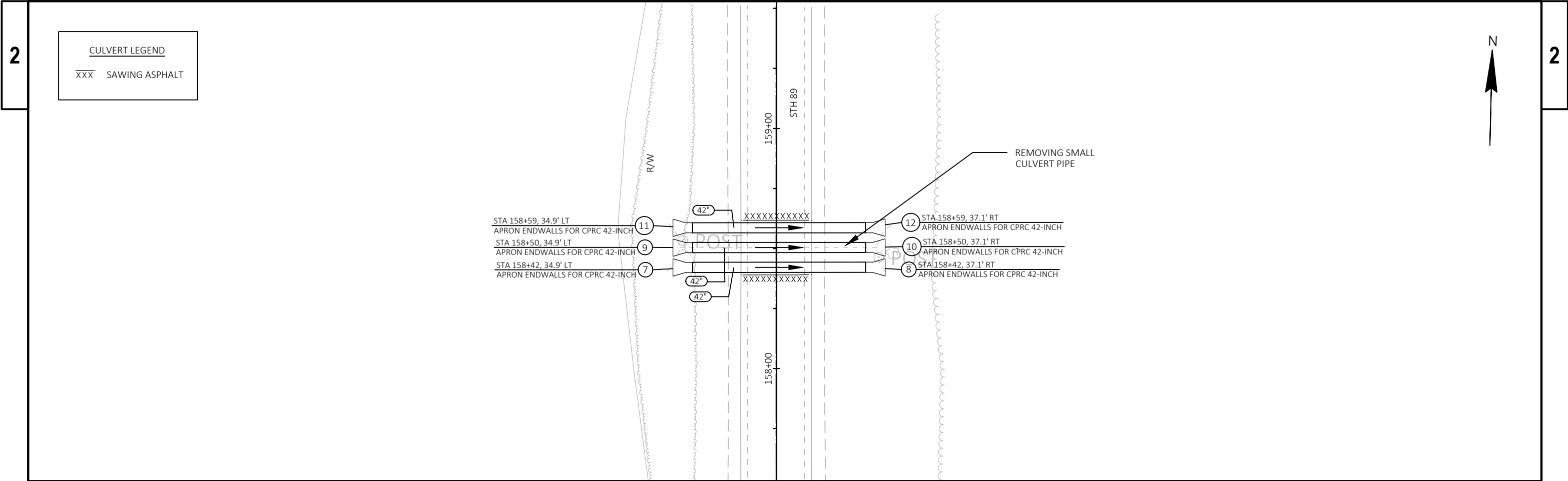
COUNTY: WALWORTH

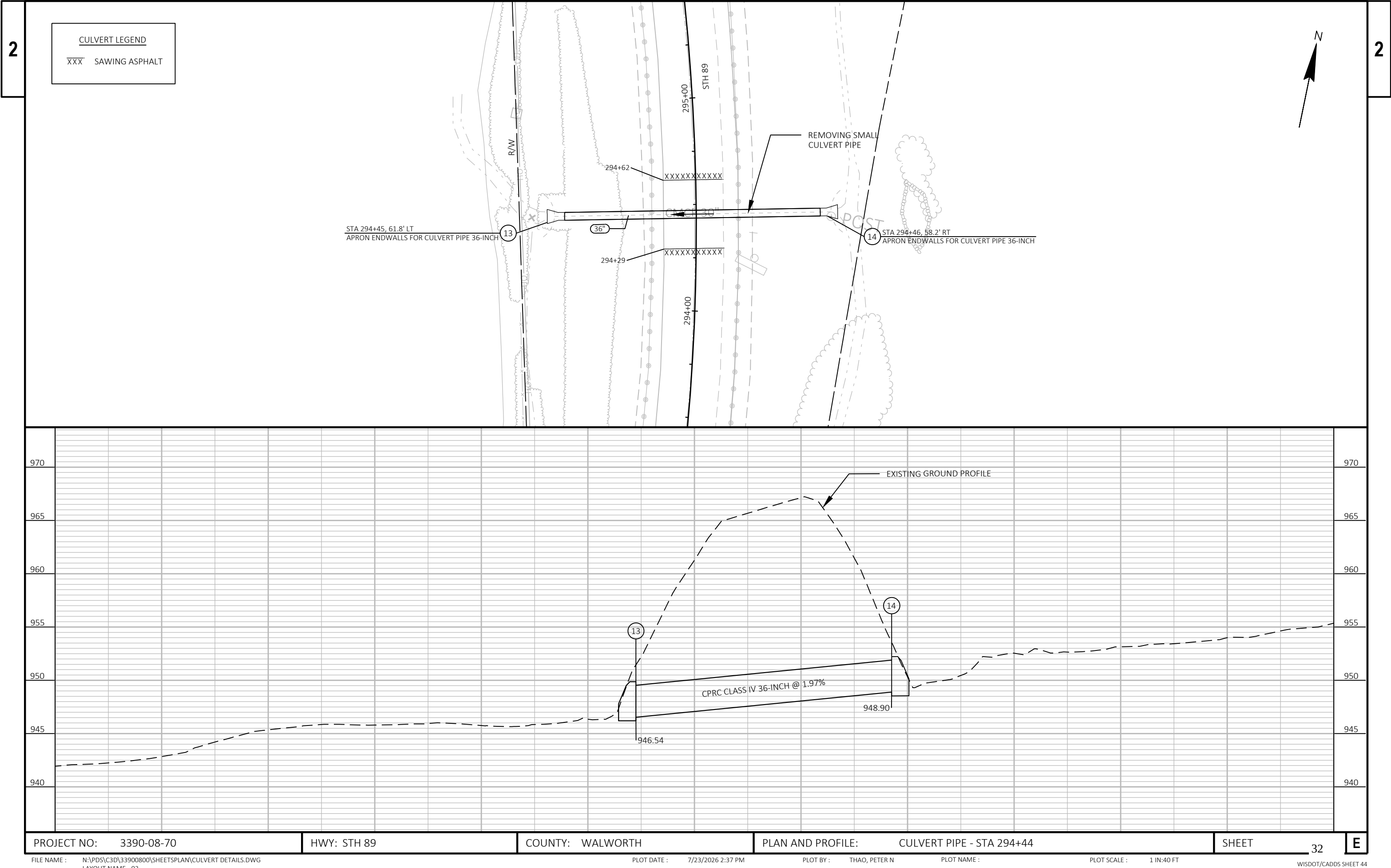
PLAN AND PROFILE: CULVERT PIPE - STA 82+78

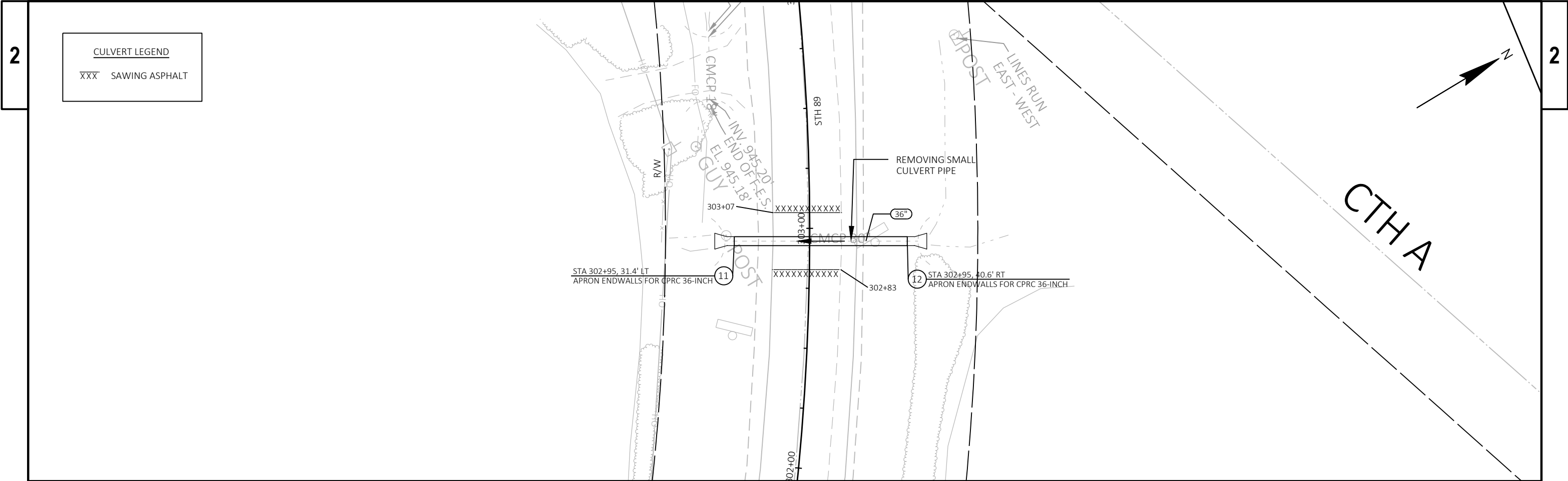
SHEET

30

E

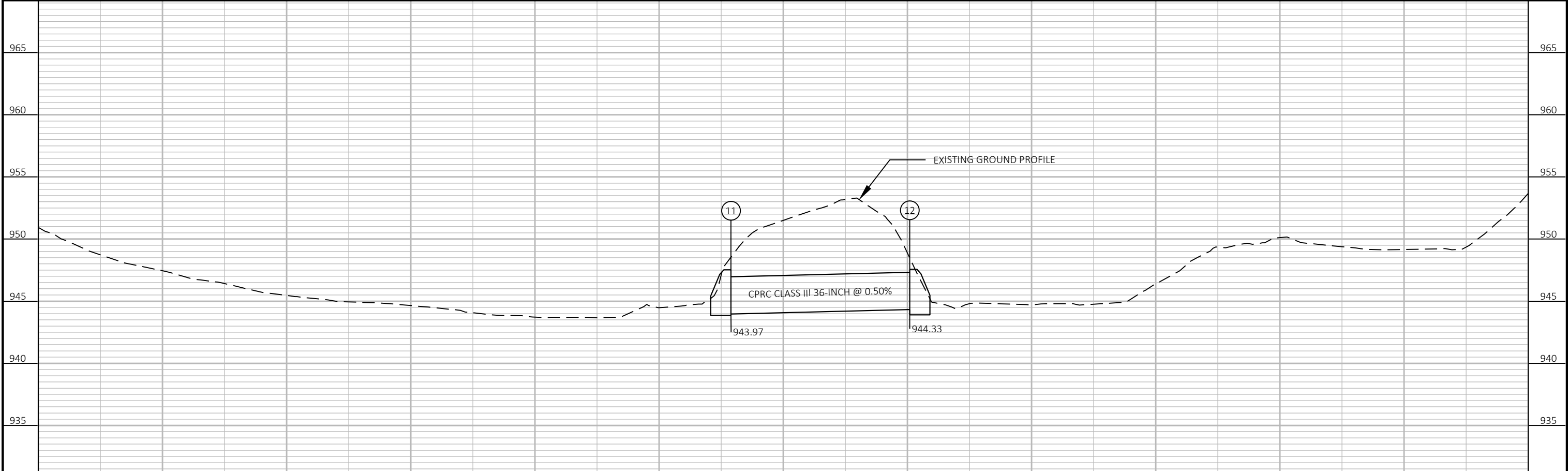






CULVERT LEGEND

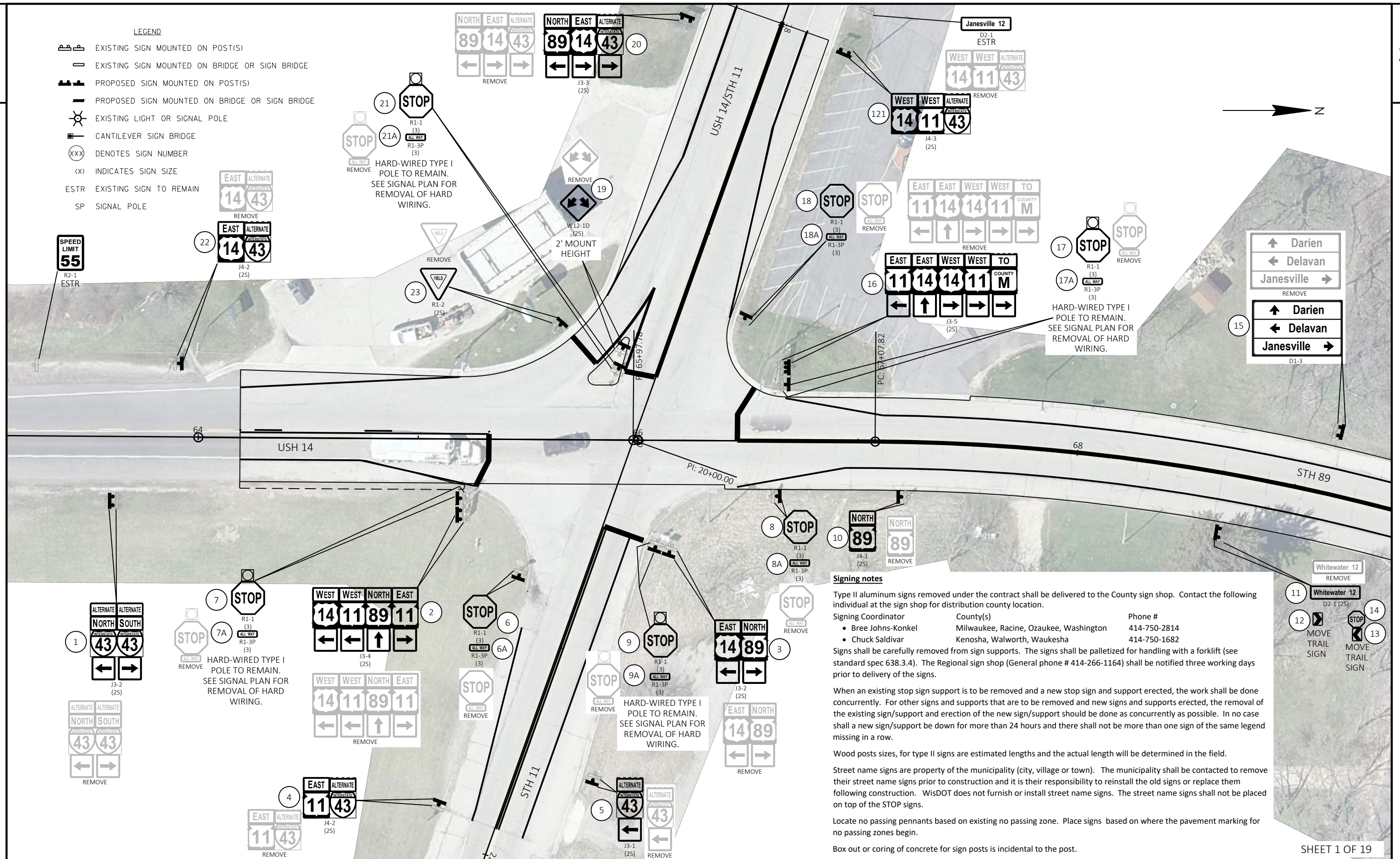
XXX SAWING ASPHALT



PROJECT NO:	3390-08-70	HWY:	STH 89	COUNTY:	WALWORTH	PLAN AND PROFILE:	CULVERT PIPE - STA 302+95	SHEET	33	E
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LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
PROPOSED SIGN MOUNTED ON POST(S)
PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
EXISTING LIGHT OR SIGNAL POLE
CANTILEVER SIGN BRIDGE
DENOTES SIGN NUMBER
(X) INDICATES SIGN SIZE
ESTR EXISTING SIGN TO REMAIN
SP SIGNAL POLE



PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

PERMANENT SIGNING PLAN

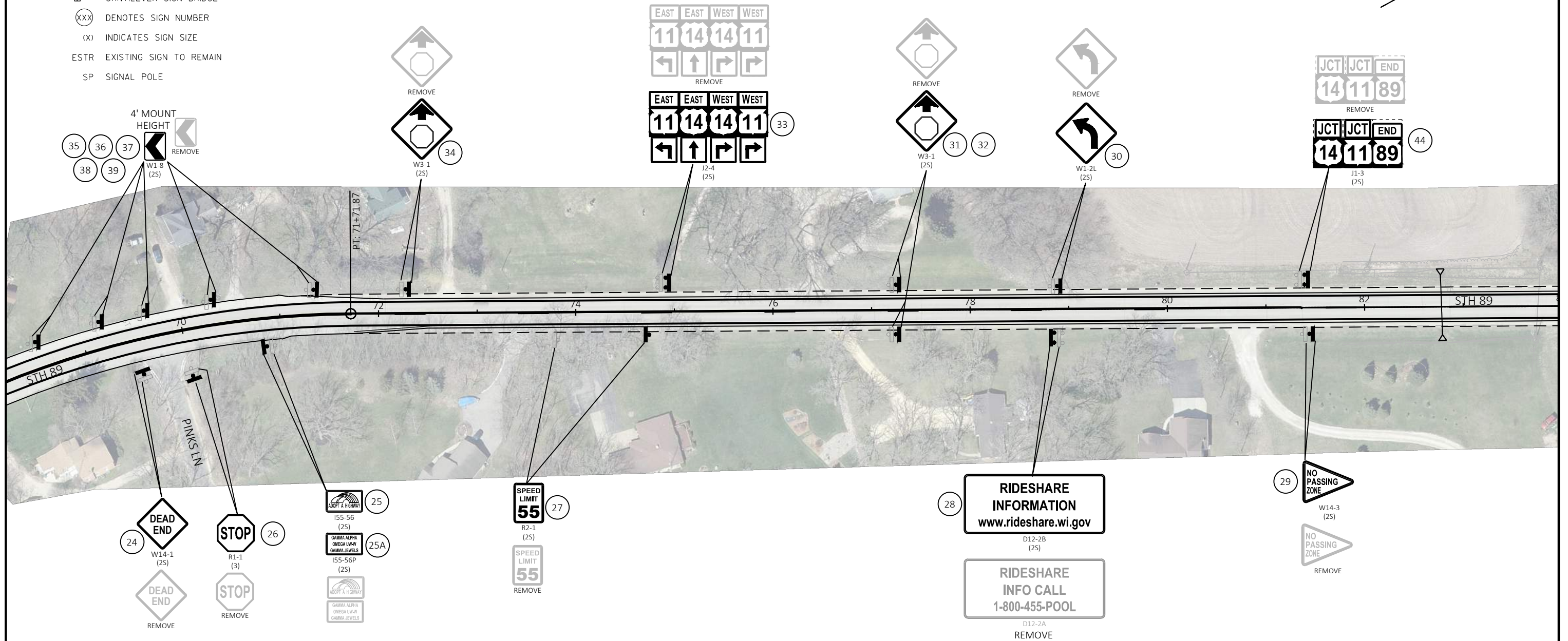
SHEET

34

E

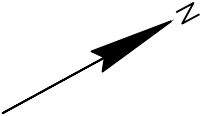
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PROPOSED SIGN MOUNTED ON POST(S)
PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
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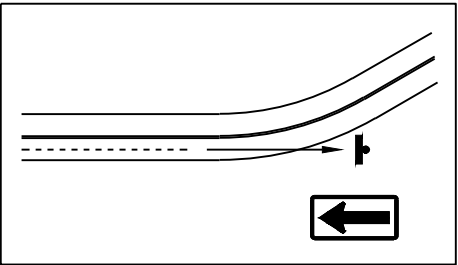


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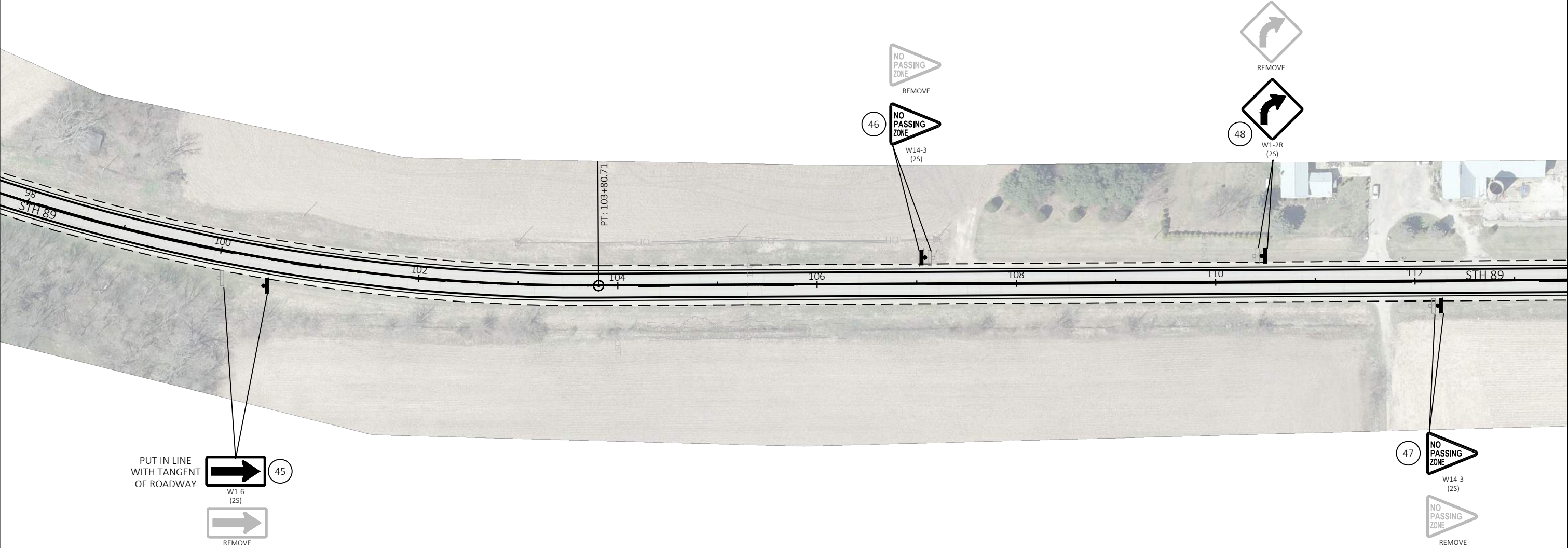


DETAIL



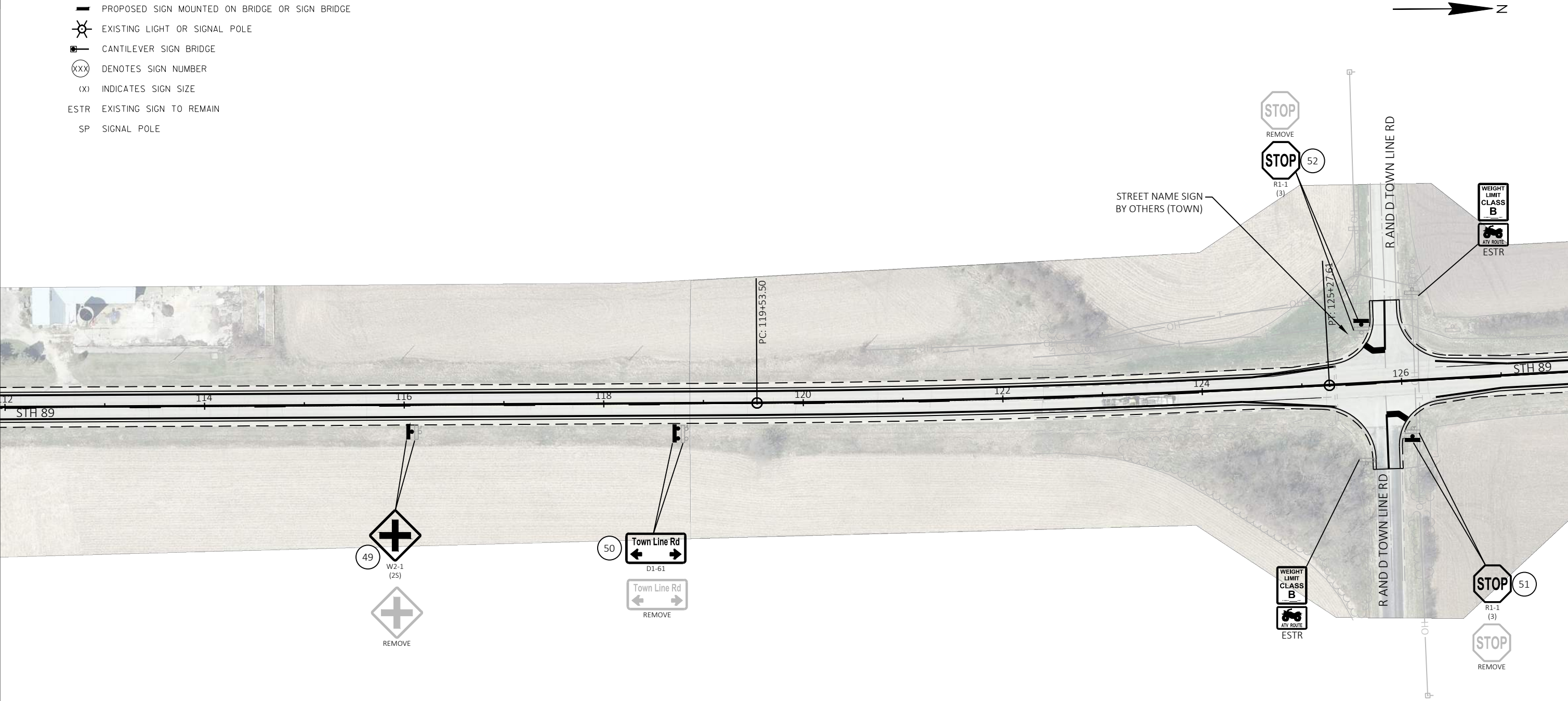
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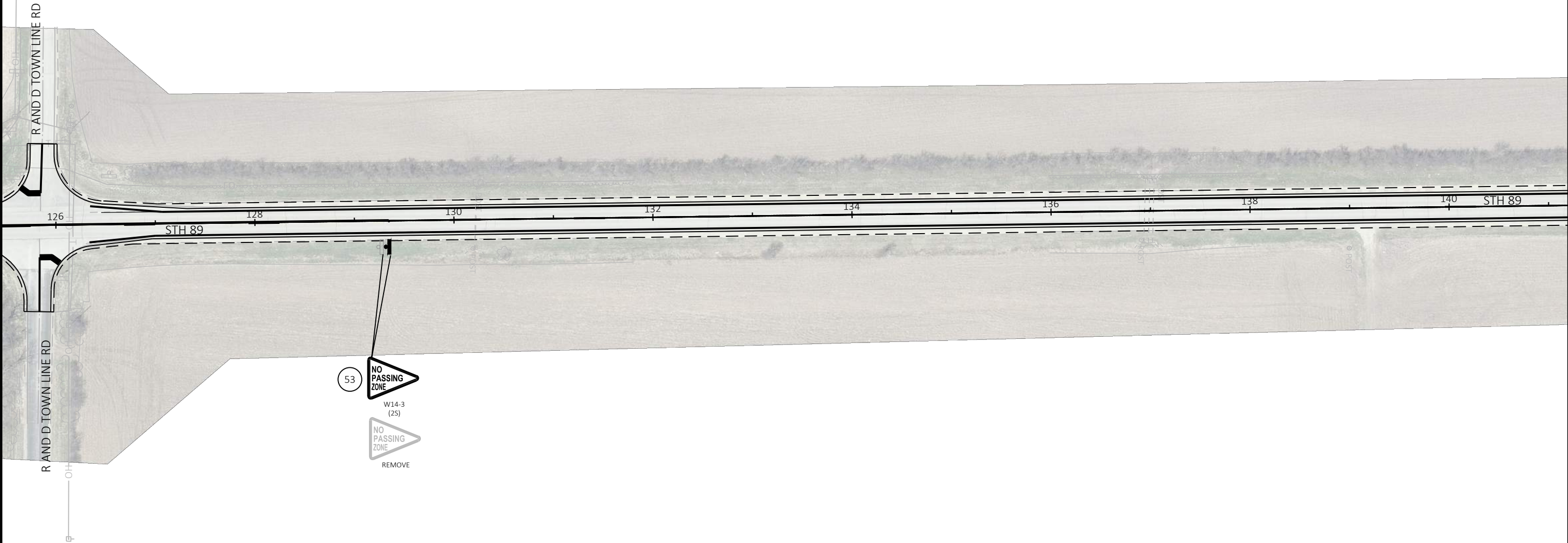
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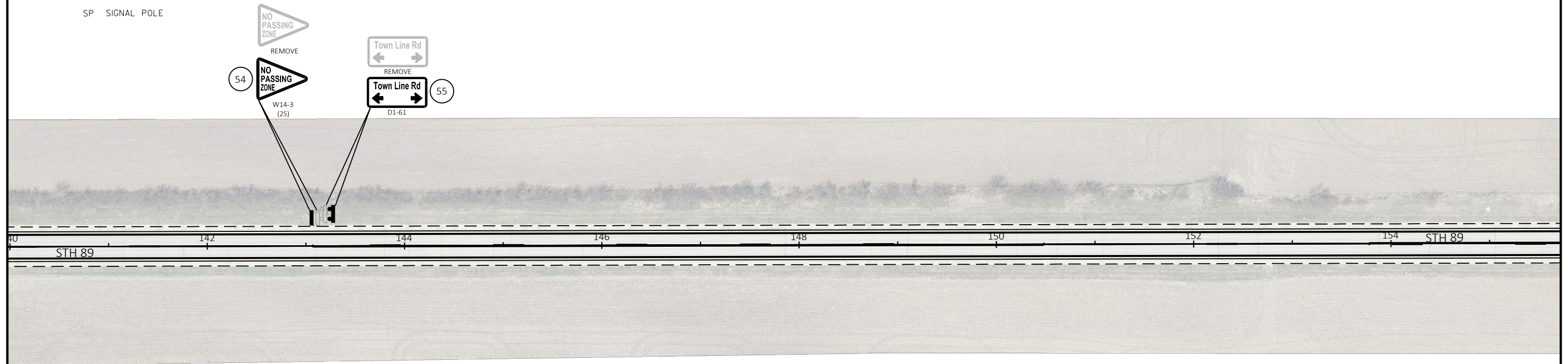
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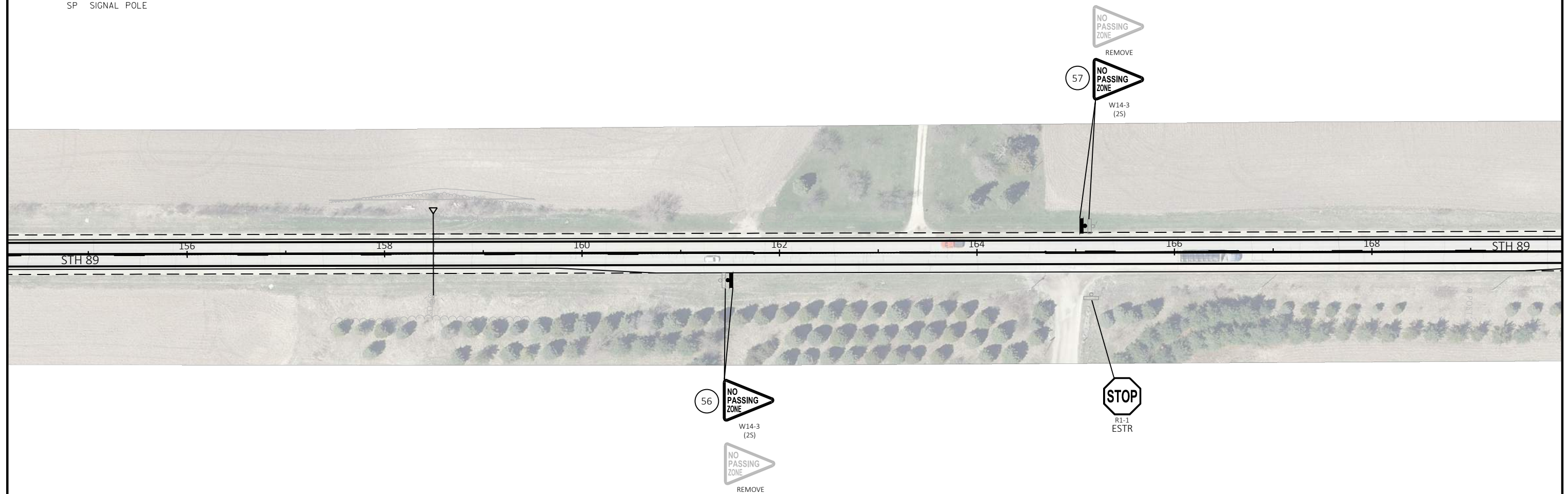
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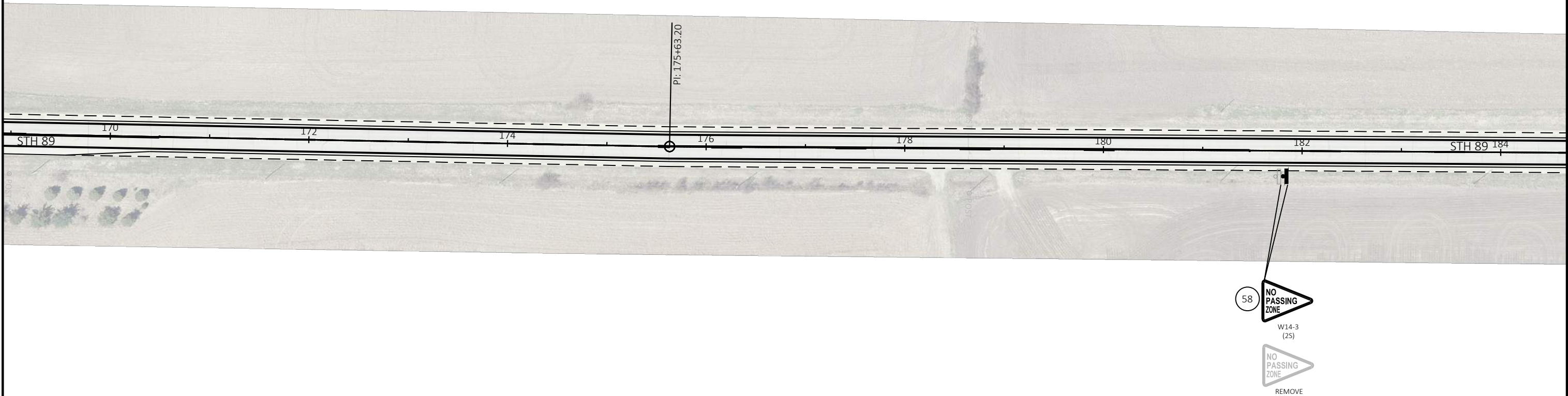


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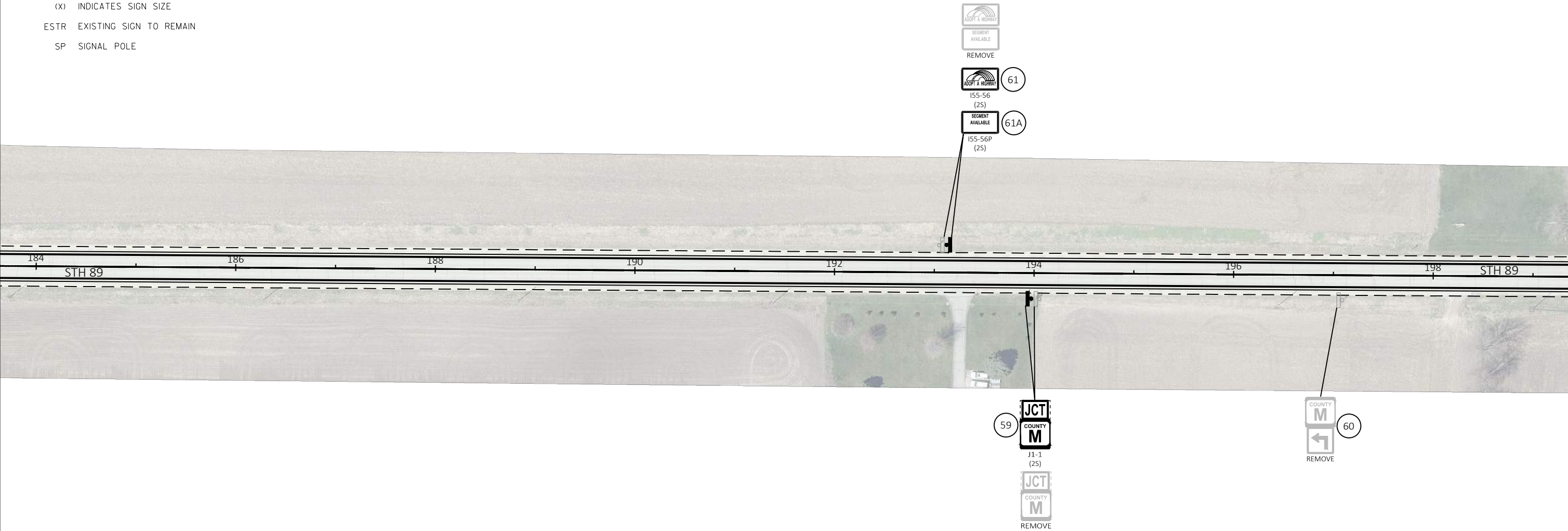


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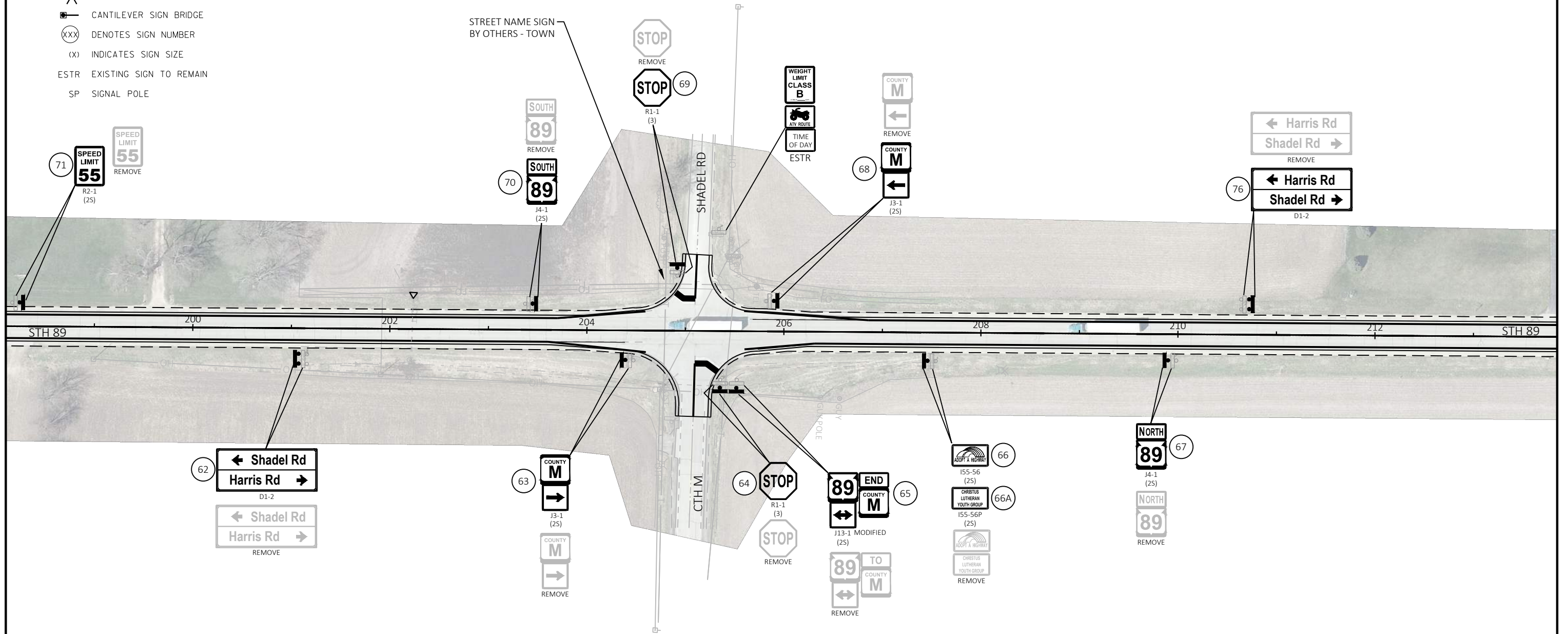
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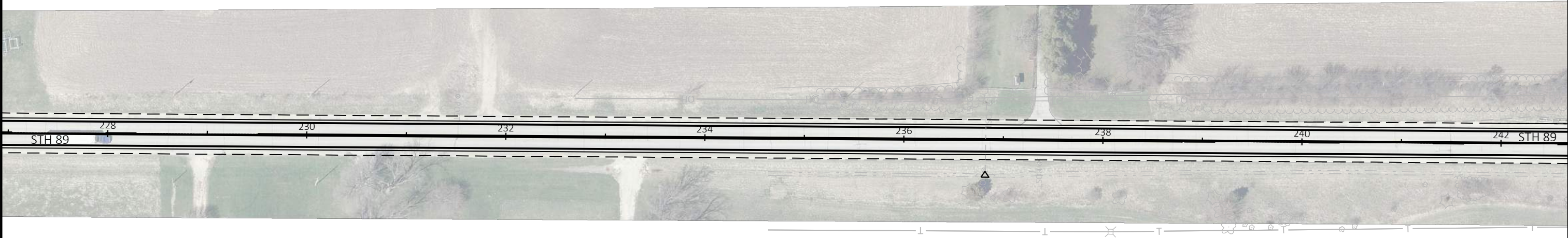




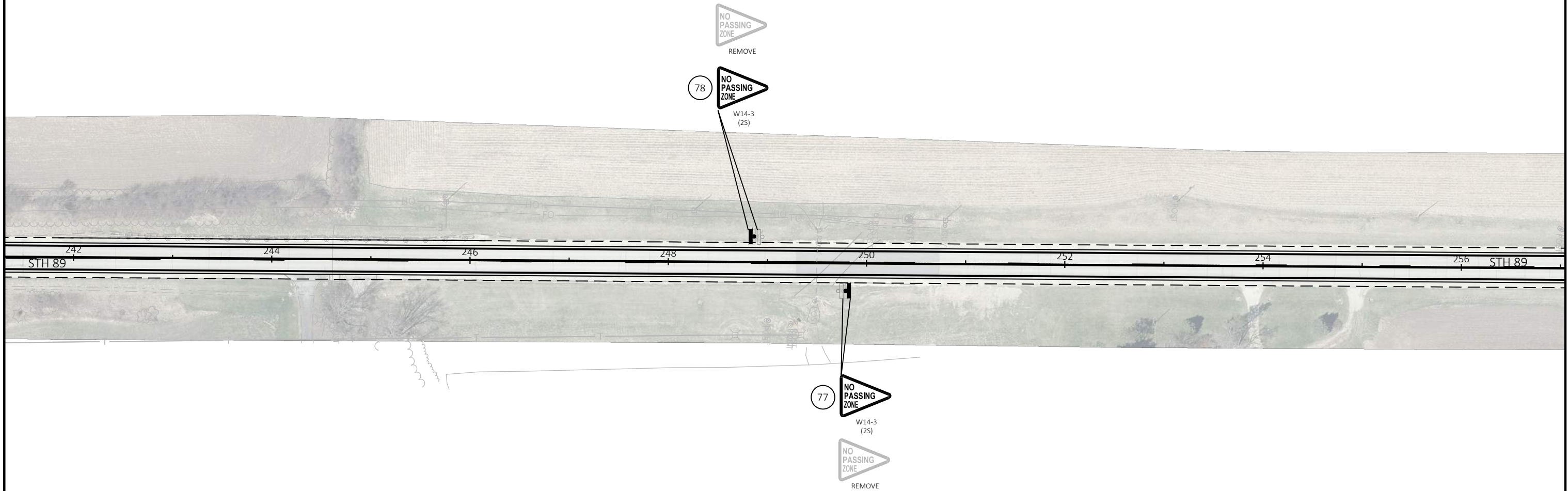
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-  CANTILEVER SIGN BRIDGE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- SP SIGNAL POLE

NO SIGNS
THIS SHEET



- LEGEND
- EXISTING SIGN MOUNTED ON POST(S)
 - EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
 - PROPOSED SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
 - EXISTING LIGHT OR SIGNAL POLE
 - CANTILEVER SIGN BRIDGE
 - DENOTES SIGN NUMBER
 - INDICATES SIGN SIZE
 - EXISTING SIGN TO REMAIN
 - SIGNAL POLE

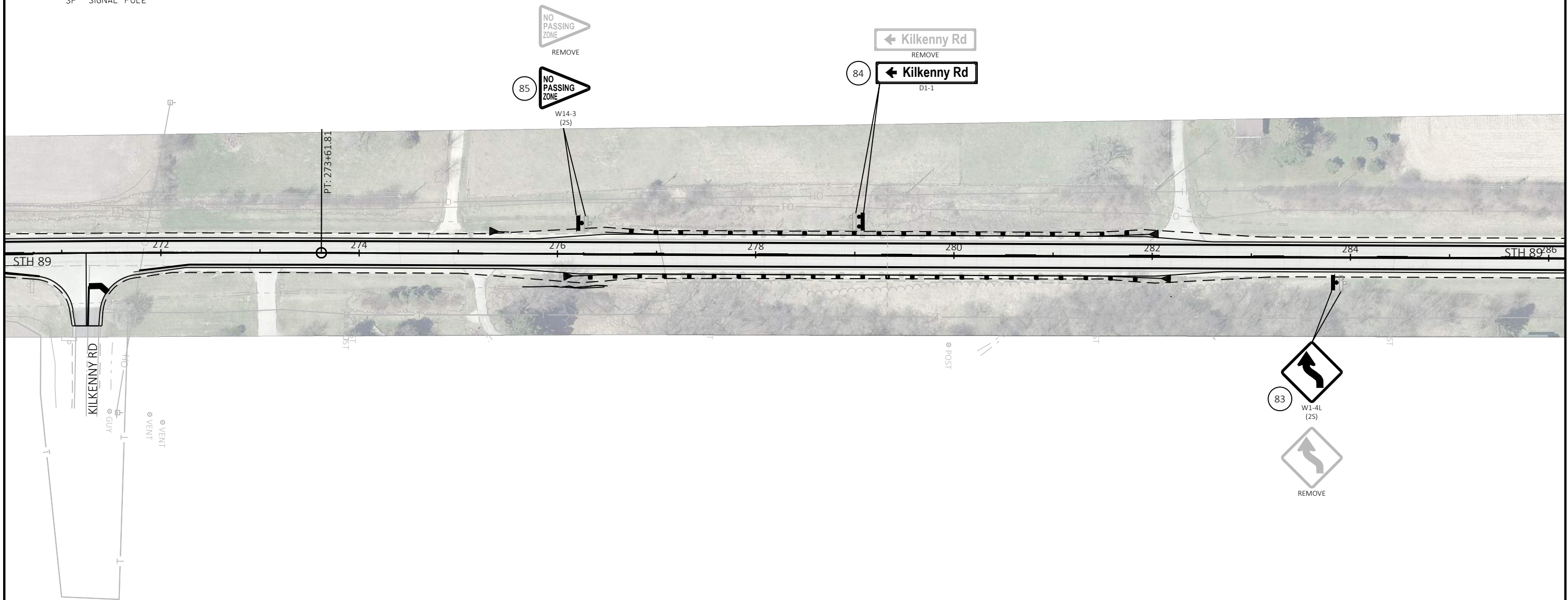


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(X)	INDICATES SIGN SIZE
ESTR	EXISTING SIGN TO REMAIN
SP	SIGNAL POLE

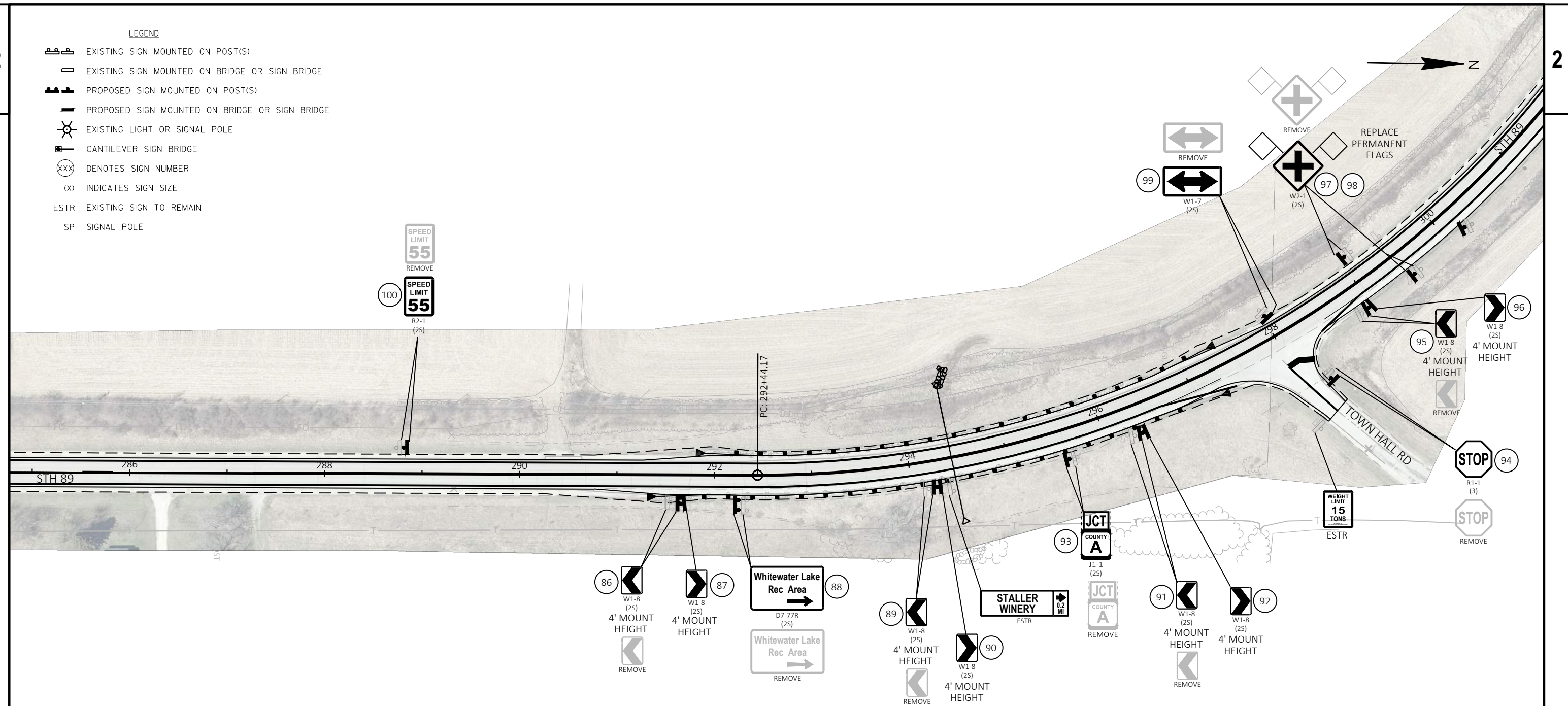


LEGEND

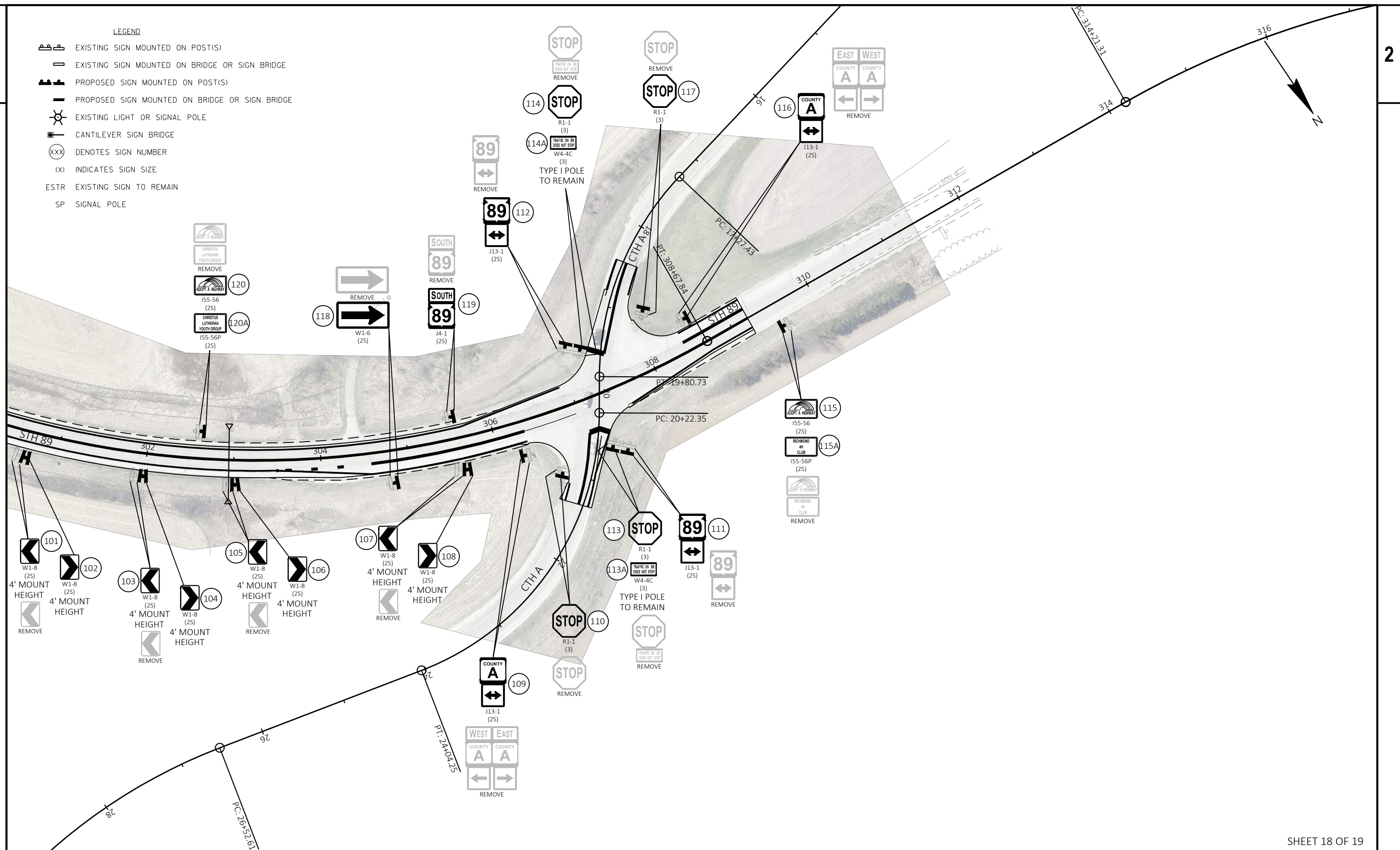
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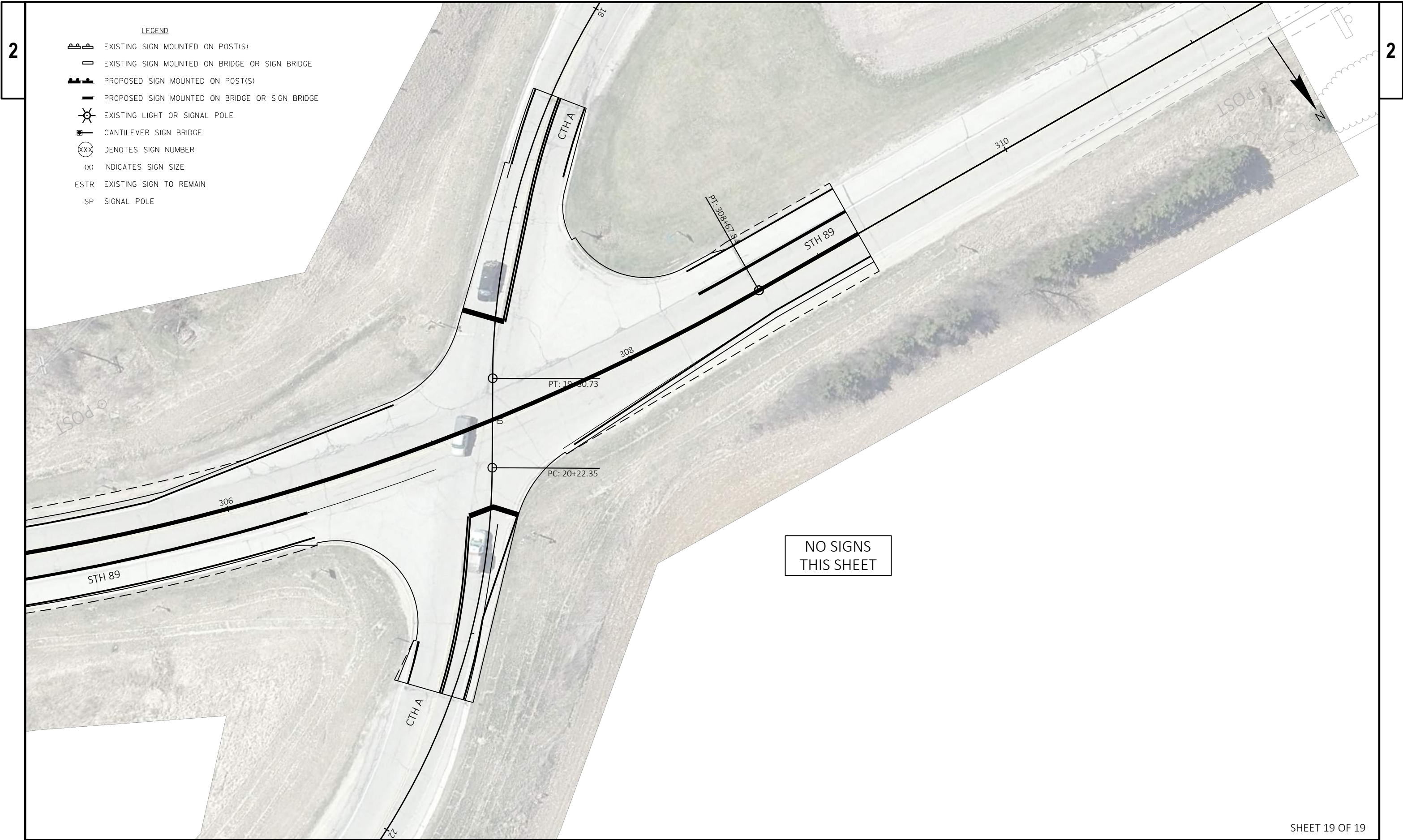


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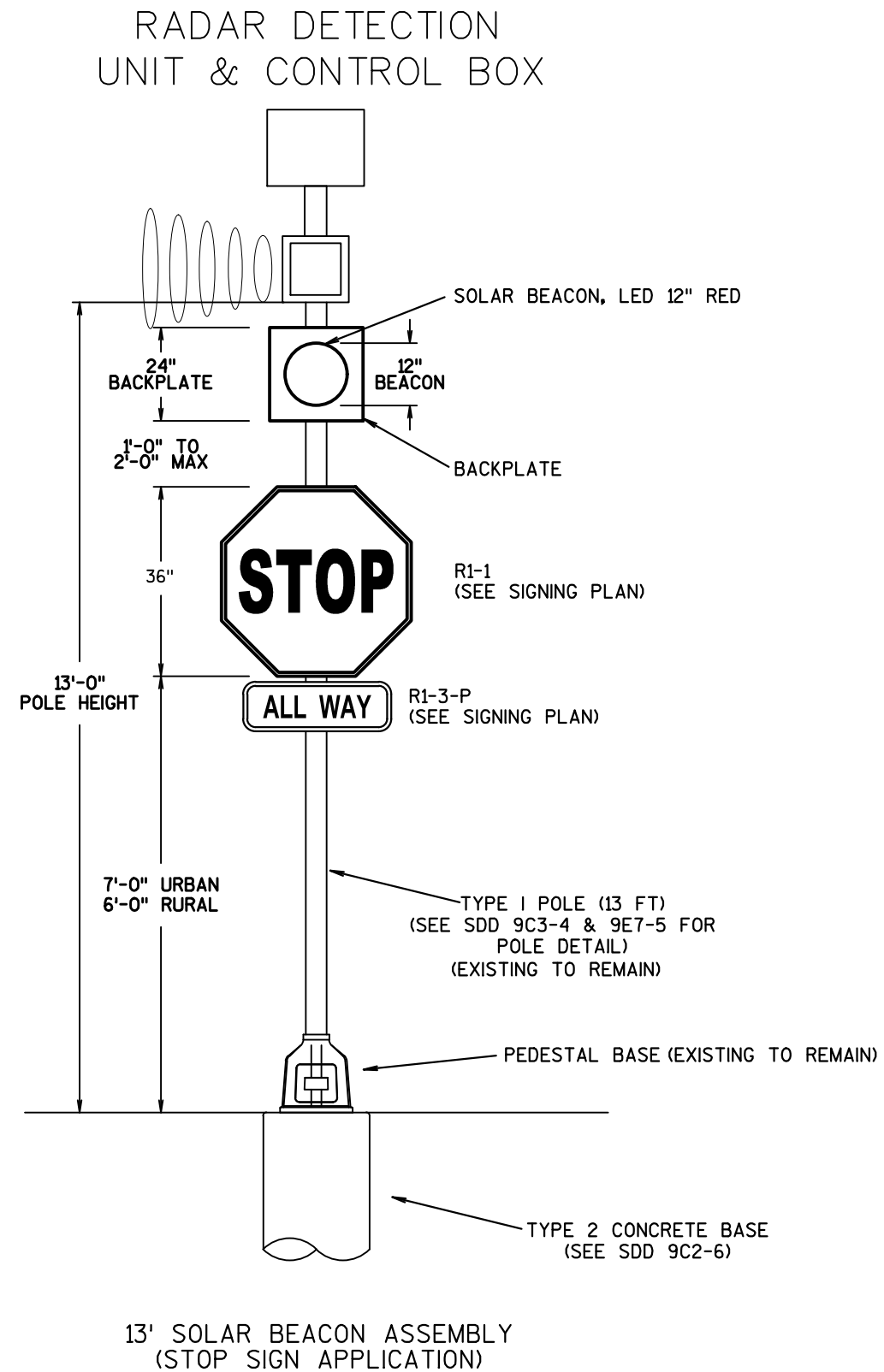
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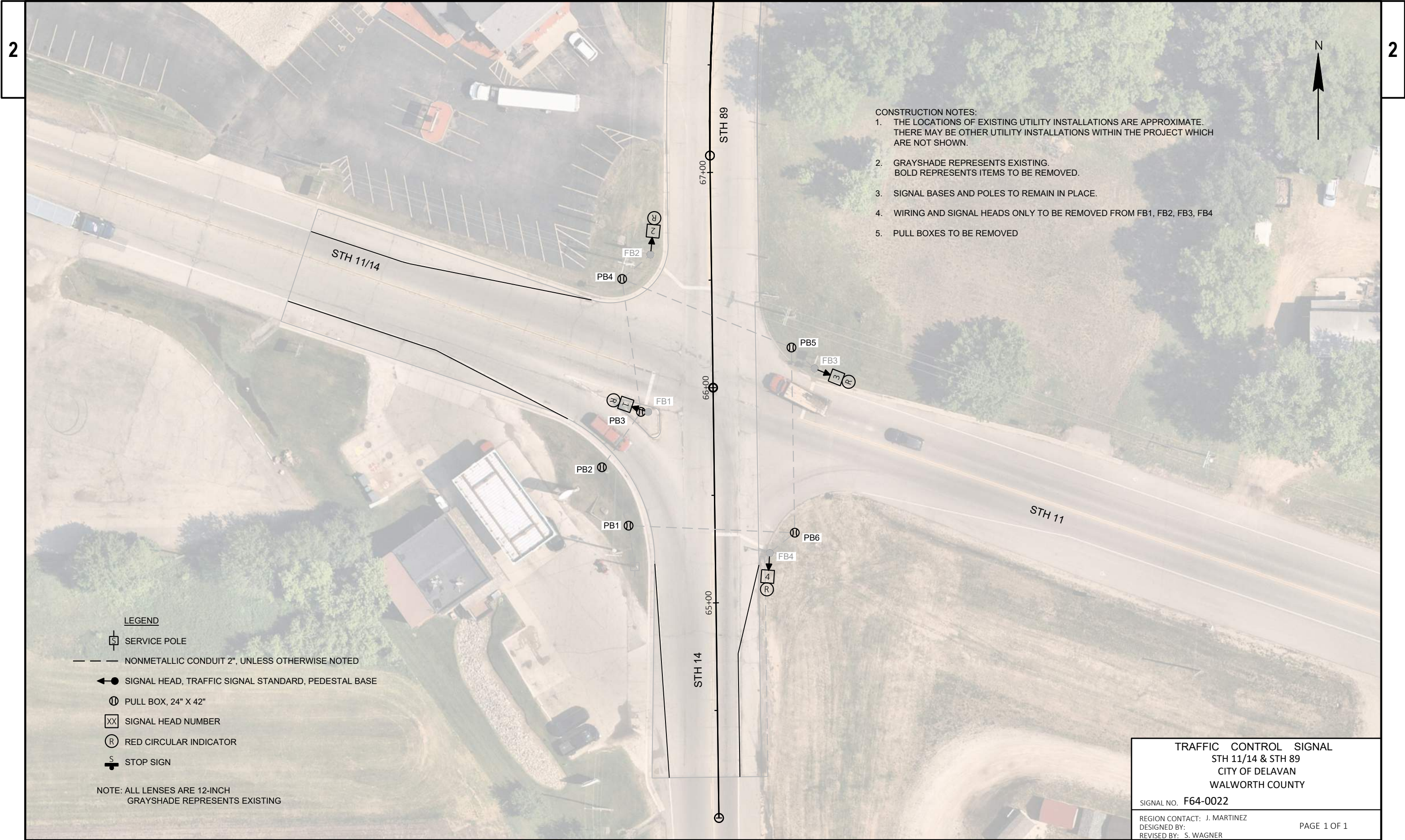


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- (X) INDICATES SIGN SIZE
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- SP SIGNAL POLE



NOTE:
REMOVE EXISTING HARDWIRED BEACON.
SEE ELECTRICAL PLAN FOR REMOVAL OF
ELECTRICAL WIRING SERVICE.



- CONSTRUCTION NOTES:
1. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
 2. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
 3. SIGNAL BASES AND POLES TO REMAIN IN PLACE.
 4. WIRING AND SIGNAL HEADS ONLY TO BE REMOVED FROM FB1, FB2, FB3, FB4
 5. PULL BOXES TO BE REMOVED

LEGEND

- SERVICE POLE
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
STH 11/14 & STH 89
CITY OF DELAVAN
WALWORTH COUNTY

SIGNAL NO. **F64-0022**

REGION CONTACT: J. MARTINEZ
DESIGNED BY:
REVISED BY: S. WAGNER

PAGE 1 OF 1

PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

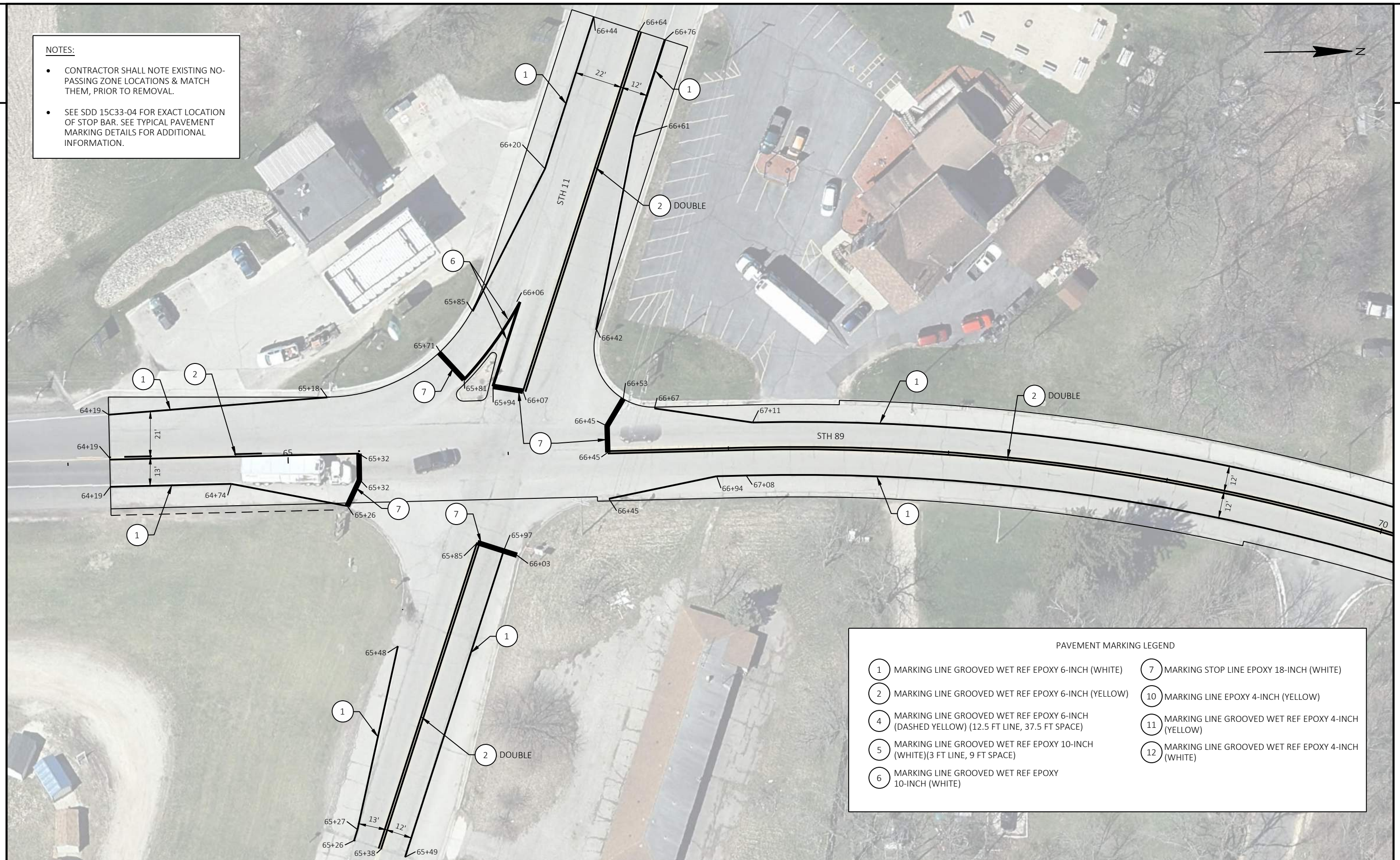
FLASHER REMOVAL PLAN

SHEET

54

E

- CONTRACTOR SHALL NOTE EXISTING NO-PASSING ZONE LOCATIONS & MATCH THEM, PRIOR TO REMOVAL.
- SEE SDD 15C33-04 FOR EXACT LOCATION OF STOP BAR. SEE TYPICAL PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION.



NOTES:

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PAVEMENT MARKING LEGEND

- | | |
|---|---|
| 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | 7 MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) | 10 MARKING LINE EPOXY 4-INCH (YELLOW) |
| 4 MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE) | 11 MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW) |
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PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

PAVEMENT MARKING

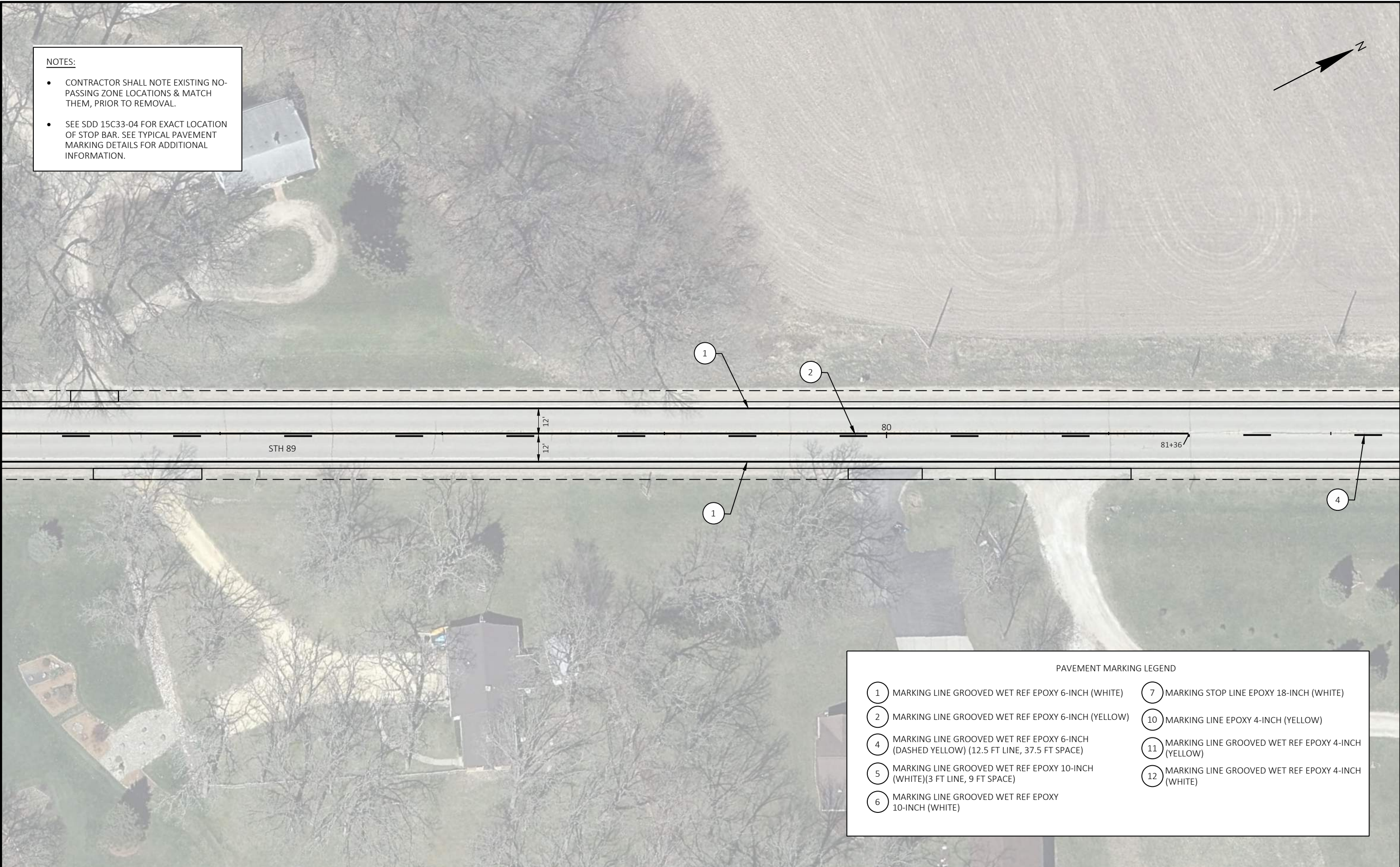
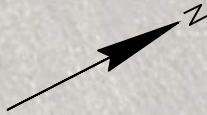
SHEET

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E

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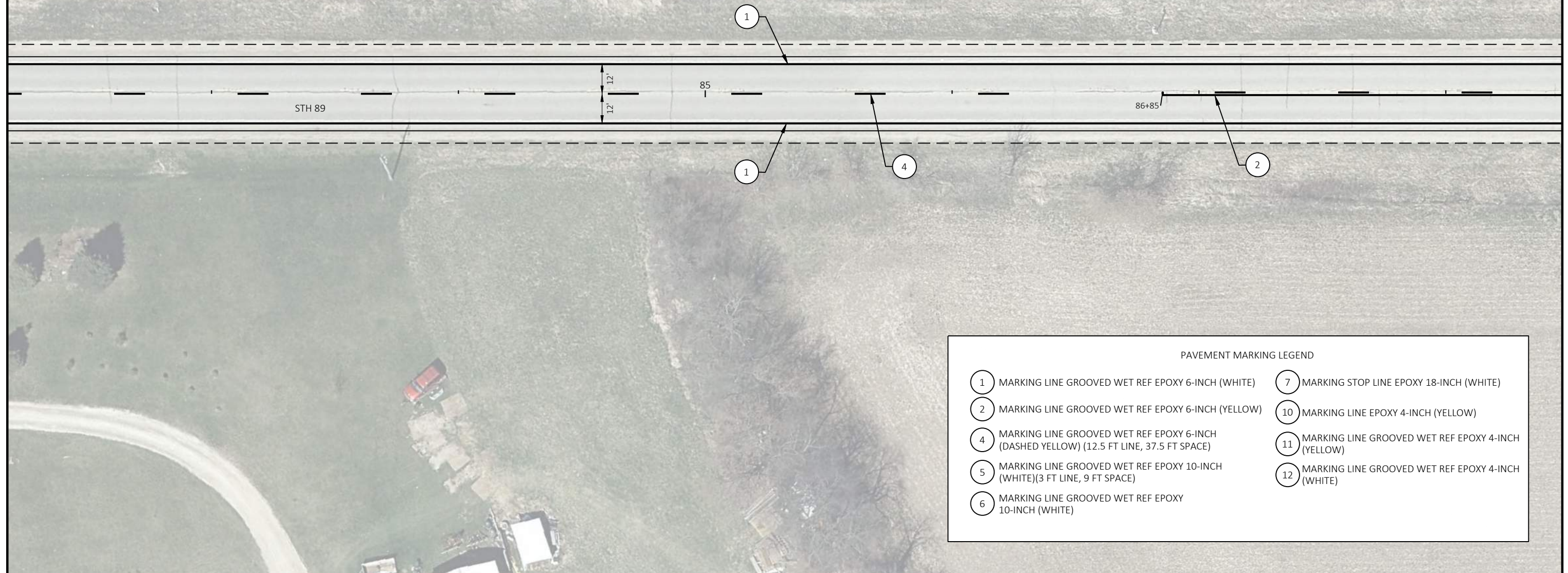


PAVEMENT MARKING LEGEND

- | | |
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PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

PAVEMENT MARKING

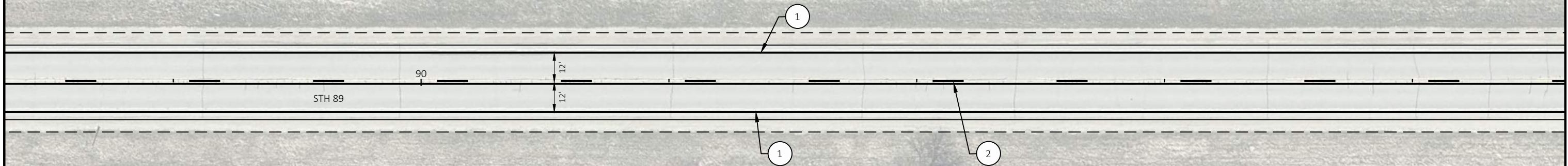
SHEET

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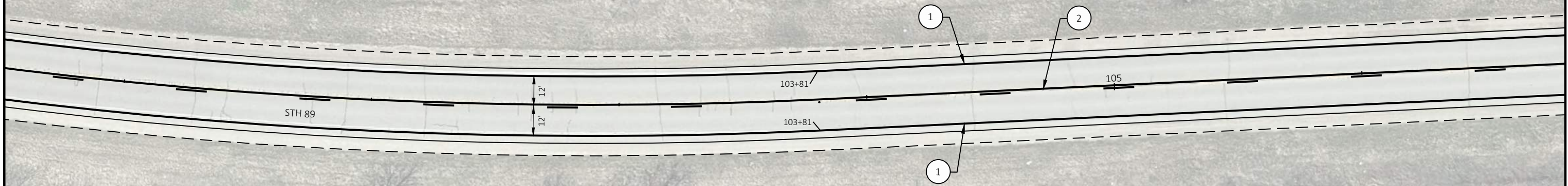
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PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

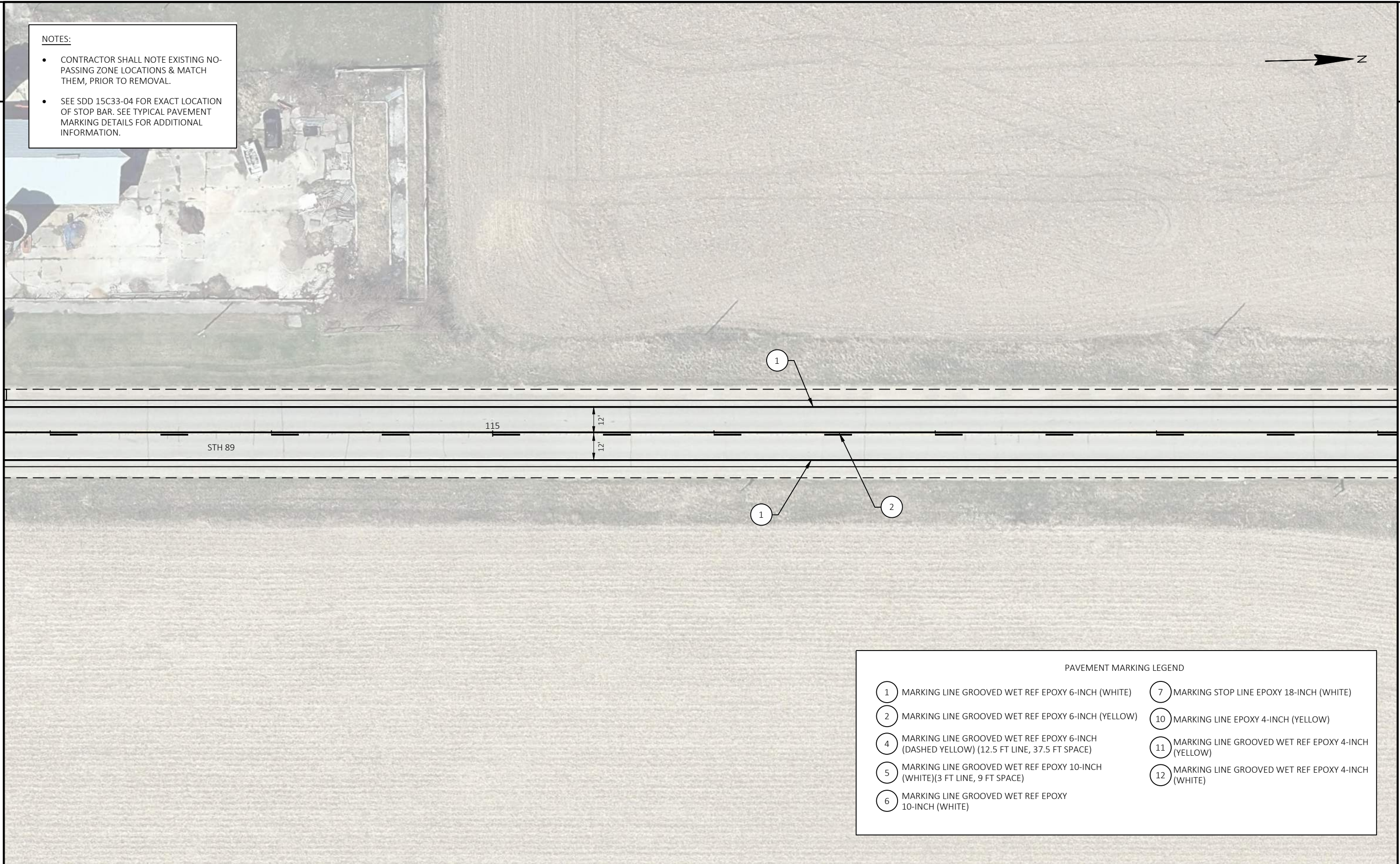
PAVEMENT MARKING

SHEET

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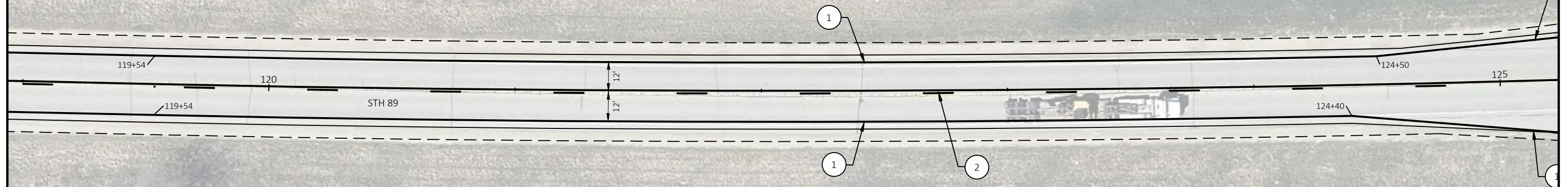
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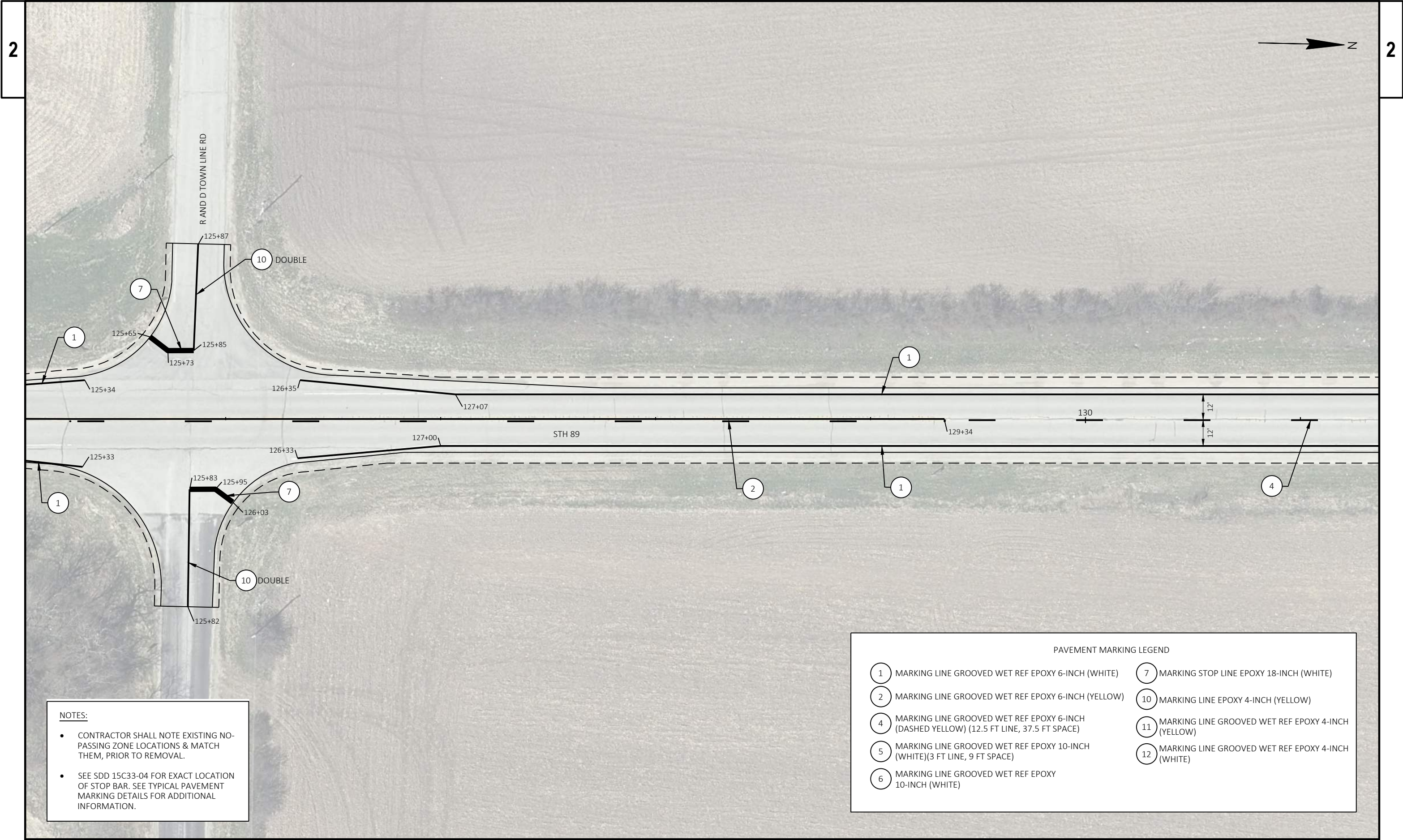
COUNTY: WALWORTH

PAVEMENT MARKING

SHEET

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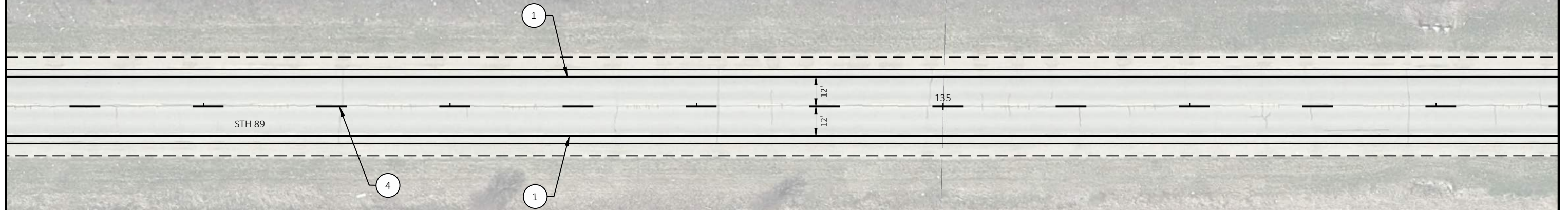
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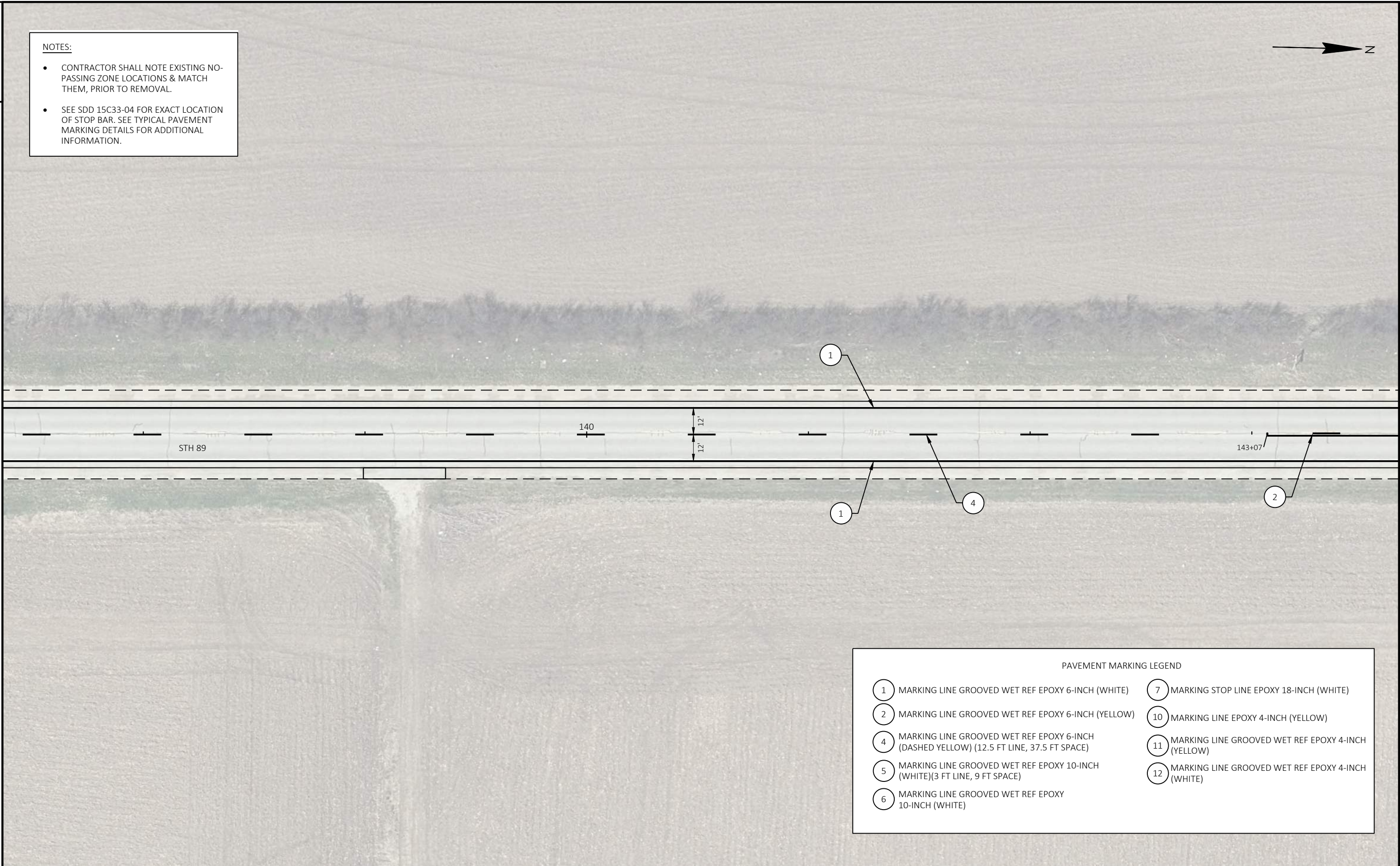
PAVEMENT MARKING

SHEET

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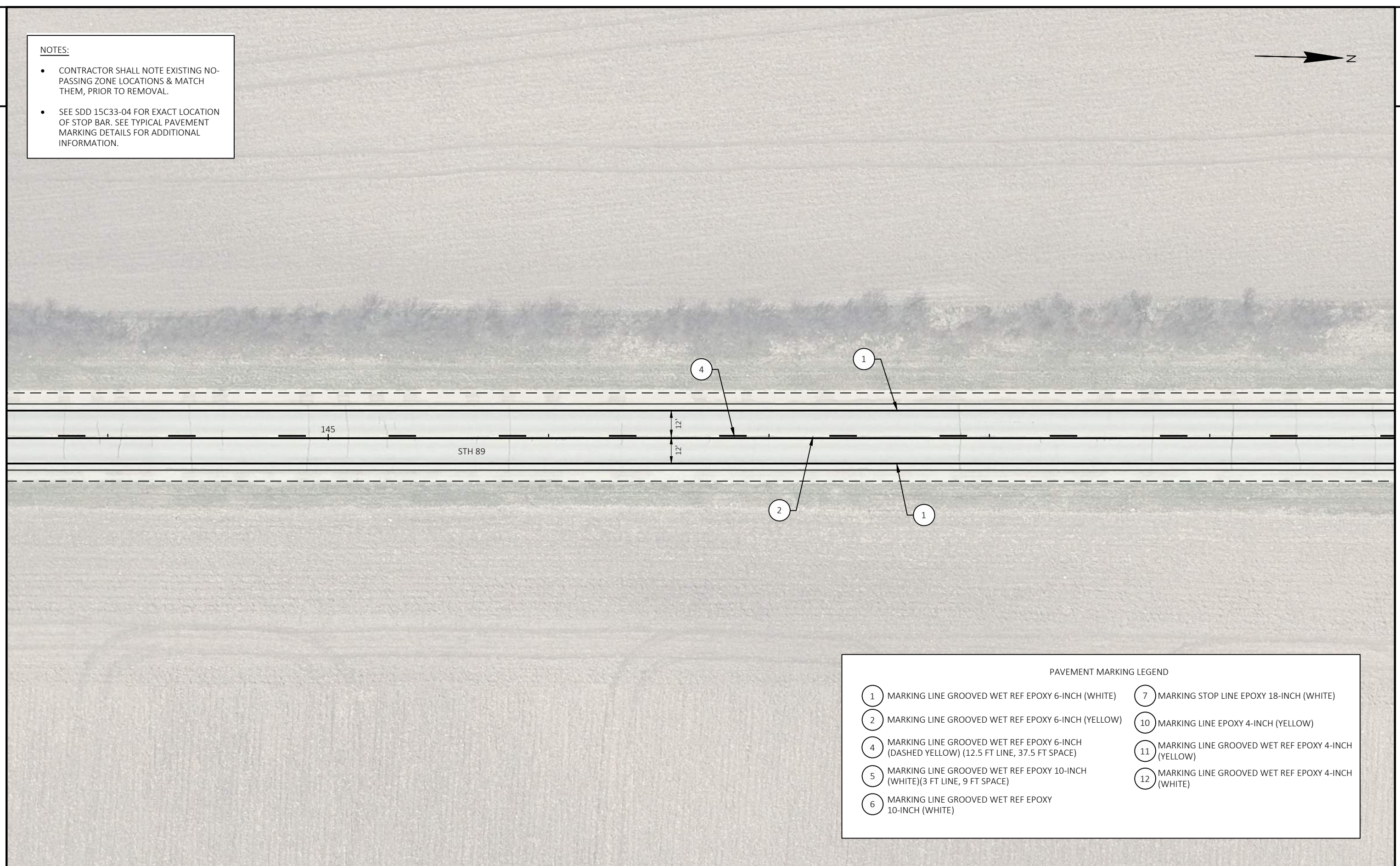
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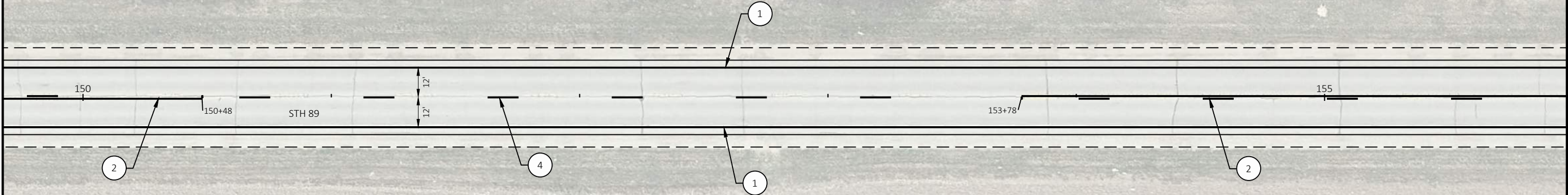


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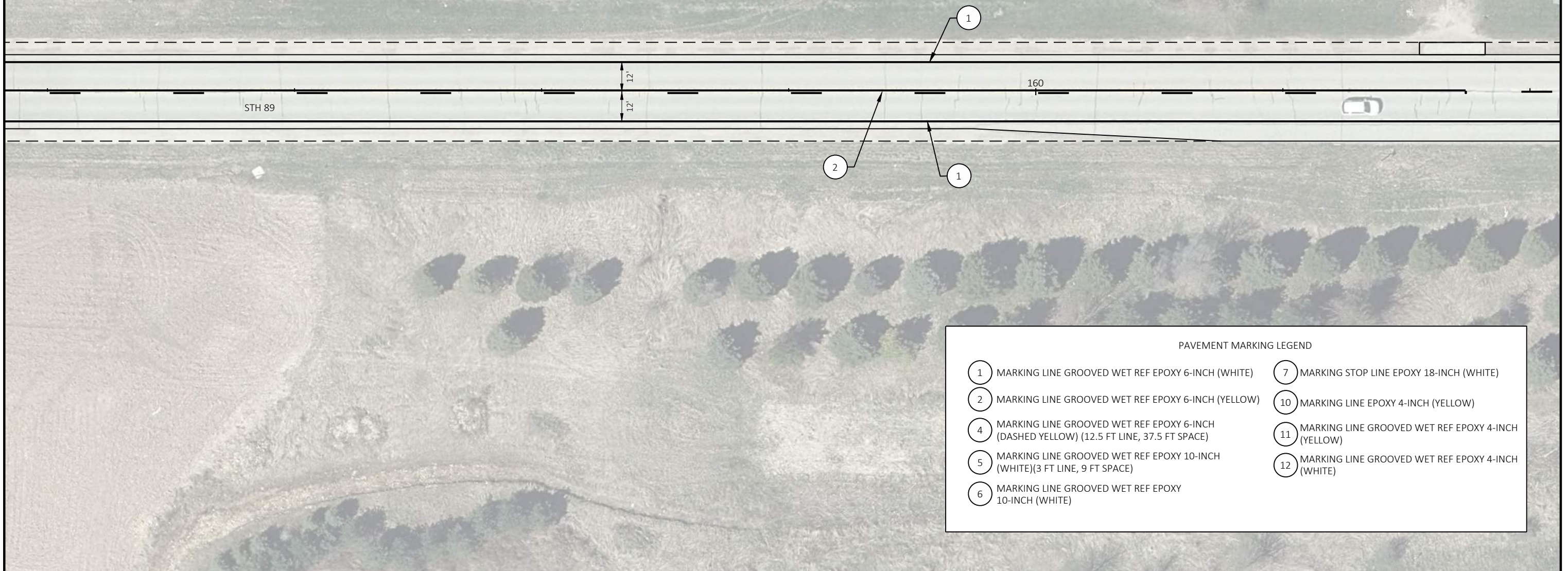


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- | | |
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| 4 MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE) | 11 MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW) |
| 5 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)(3 FT LINE, 9 FT SPACE) | 12 MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) |
| 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) | |

PROJECT NO: 3390-08-70

HWY: STH 89

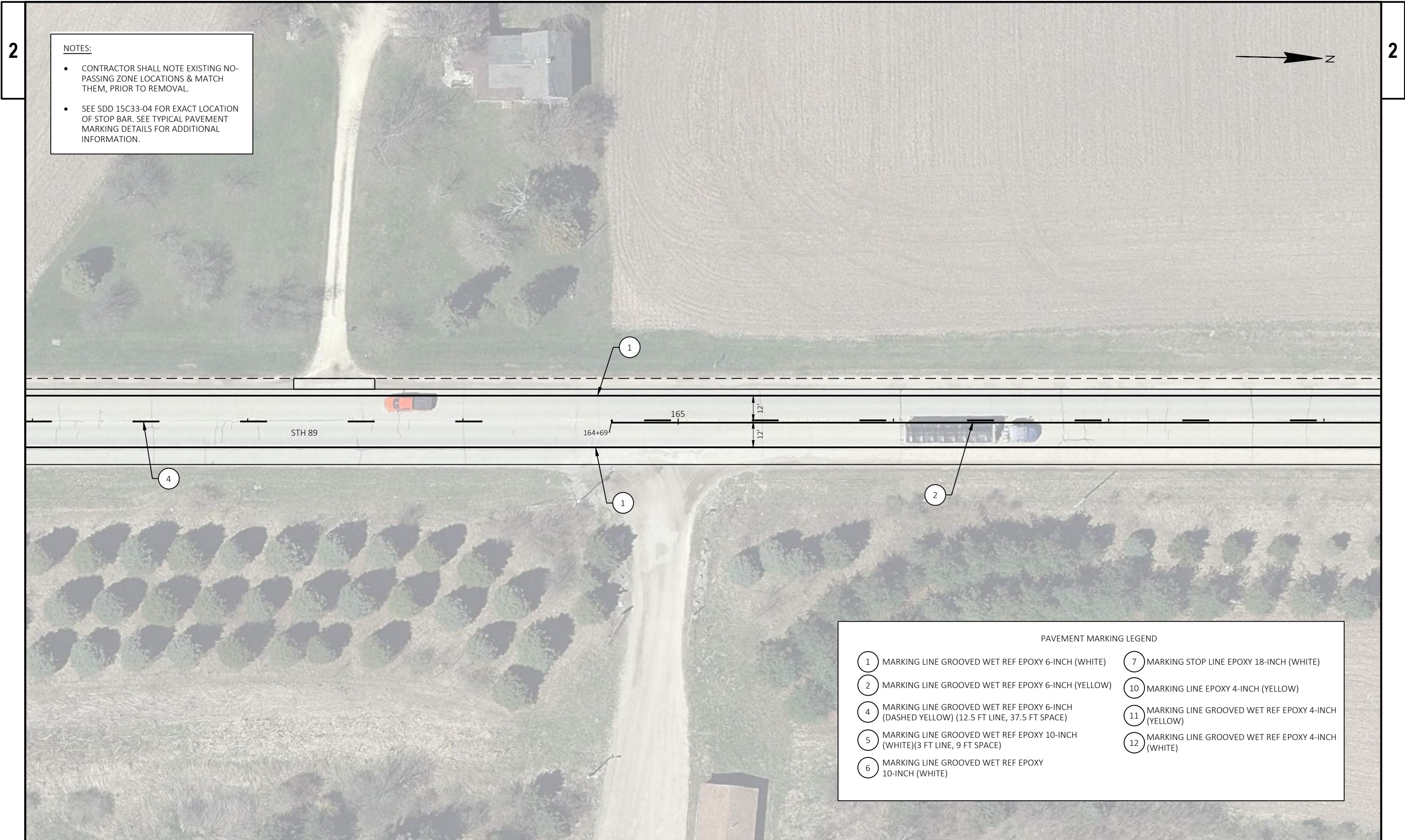
COUNTY: WALWORTH

PAVEMENT MARKING

SHEET

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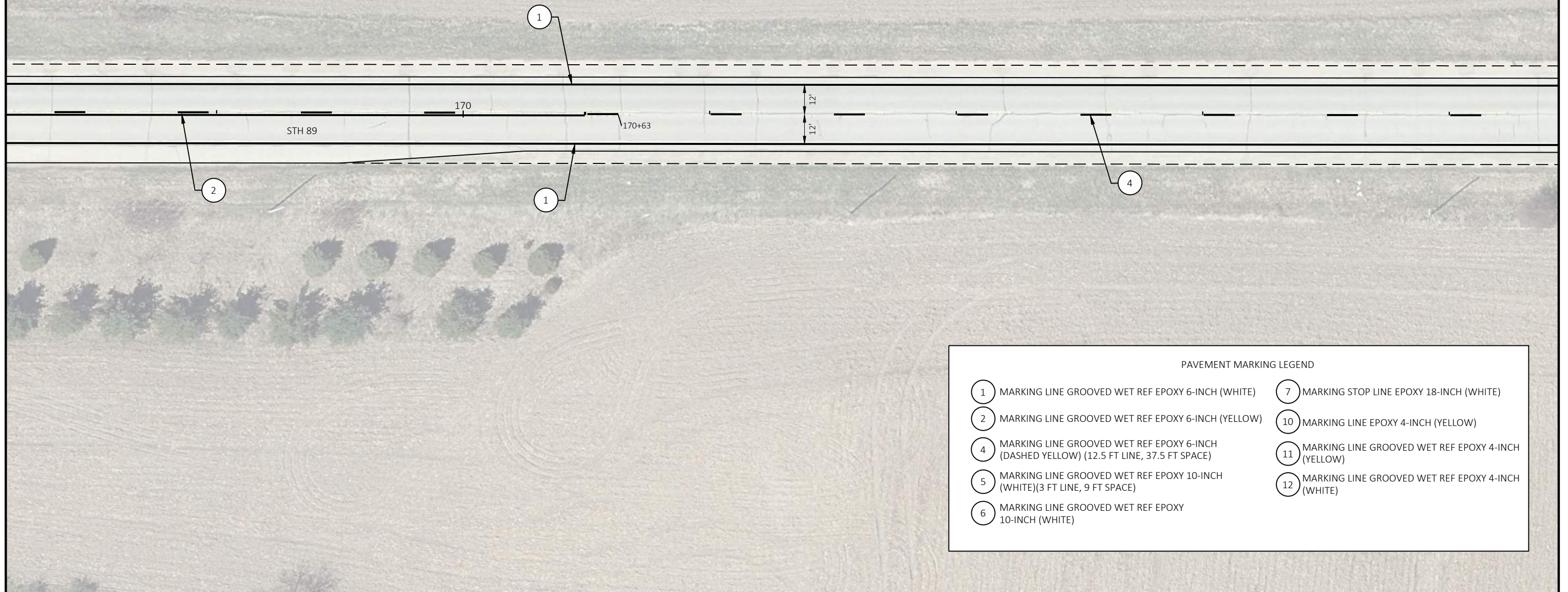


- NOTES:
- CONTRACTOR SHALL NOTE EXISTING NO-PASSING ZONE LOCATIONS & MATCH THEM, PRIOR TO REMOVAL.
 - SEE SDD 15C33-04 FOR EXACT LOCATION OF STOP BAR. SEE TYPICAL PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION.

PAVEMENT MARKING LEGEND	
1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	7 MARKING STOP LINE EPOXY 18-INCH (WHITE)
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PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

PAVEMENT MARKING

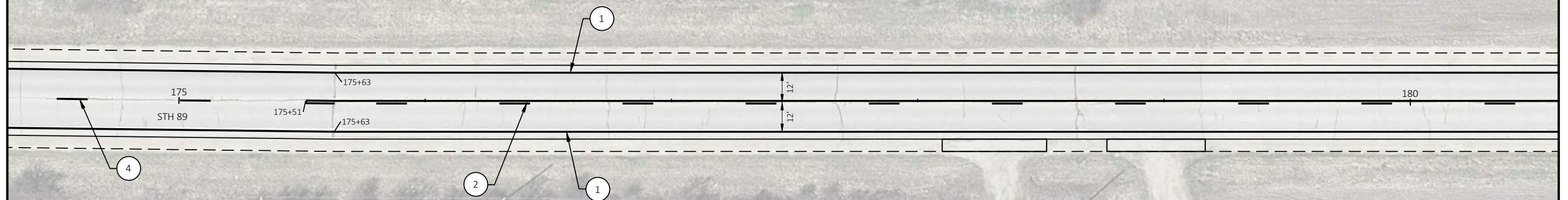
SHEET

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NOTES:

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- SEE SDD 15C33-04 FOR EXACT LOCATION OF STOP BAR. SEE TYPICAL PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION.



PAVEMENT MARKING LEGEND

- | | |
|---|---|
| 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | 7 MARKING STOP LINE EPOXY 18-INCH (WHITE) |
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PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

PAVEMENT MARKING

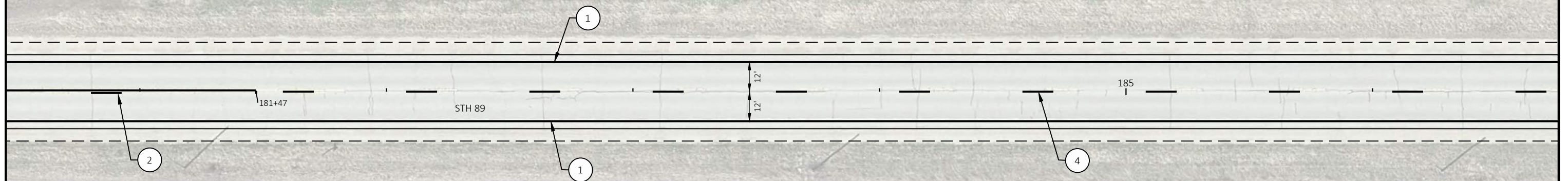
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NOTES:

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PAVEMENT MARKING LEGEND

- | | |
|---|--|
| ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | ⑦ MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) | ⑩ MARKING LINE EPOXY 4-INCH (YELLOW) |
| ④ MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE) | ⑪ MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW) |
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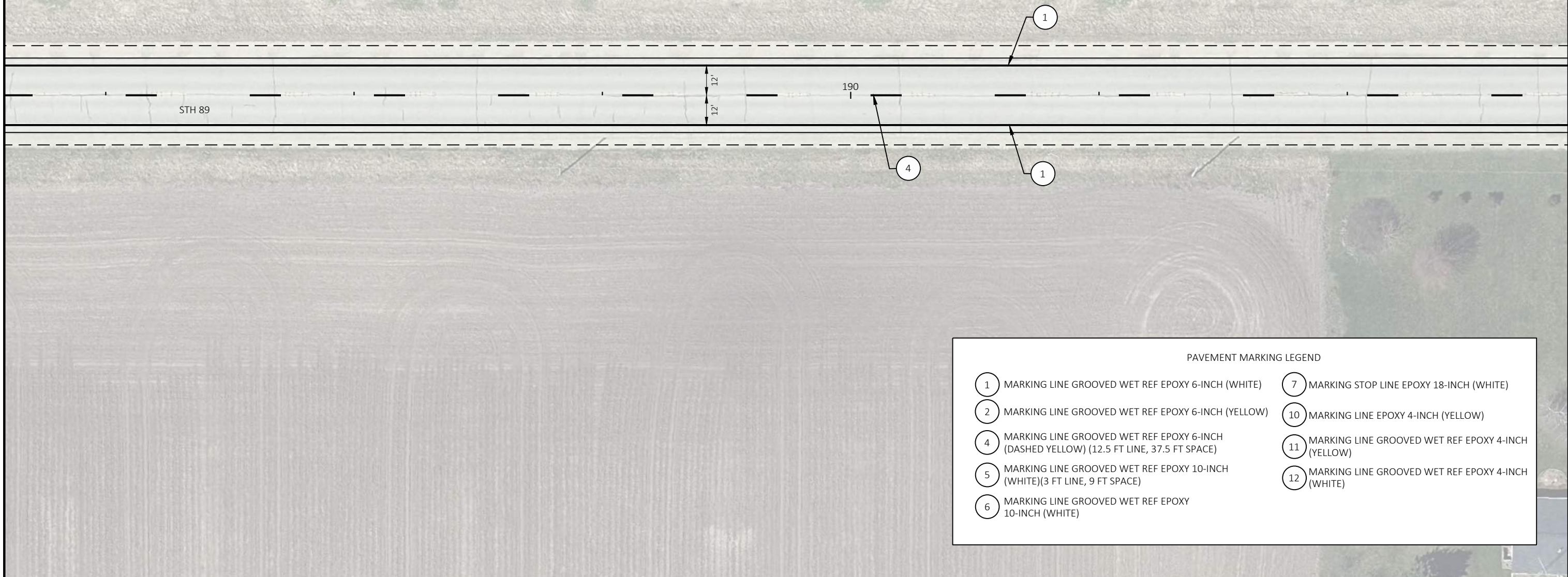
PAVEMENT MARKING

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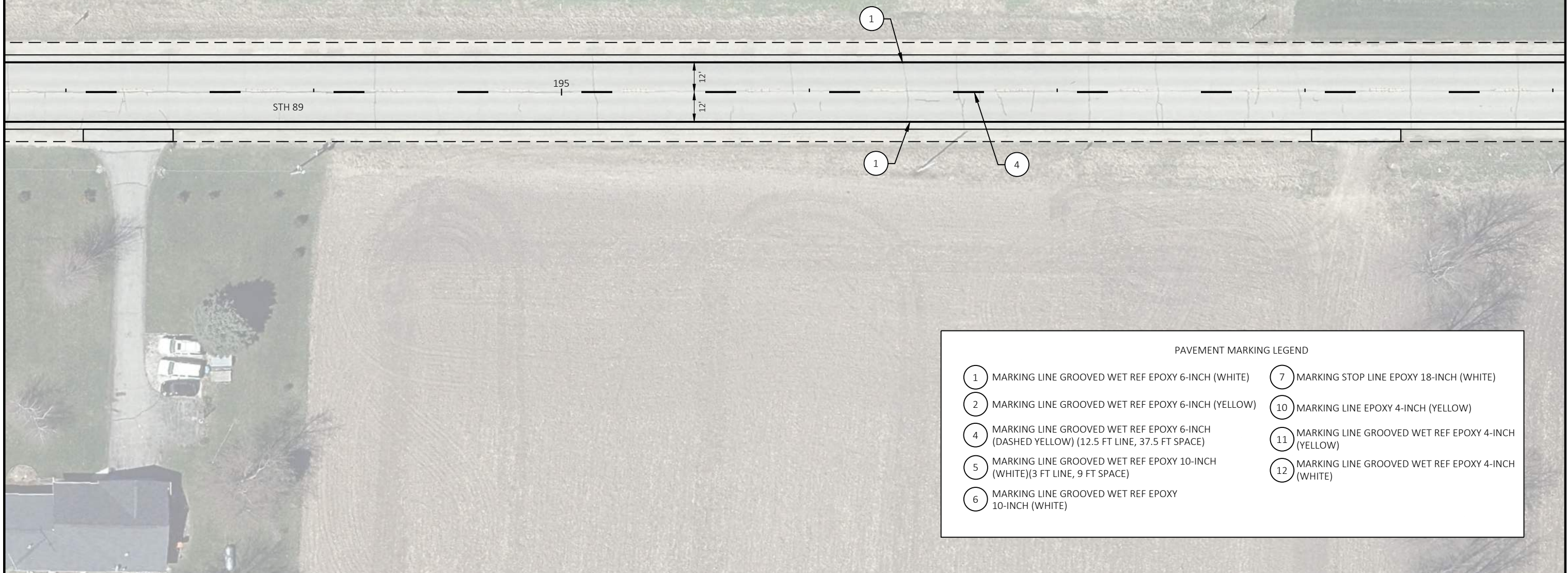
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PAVEMENT MARKING LEGEND

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| 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) | |

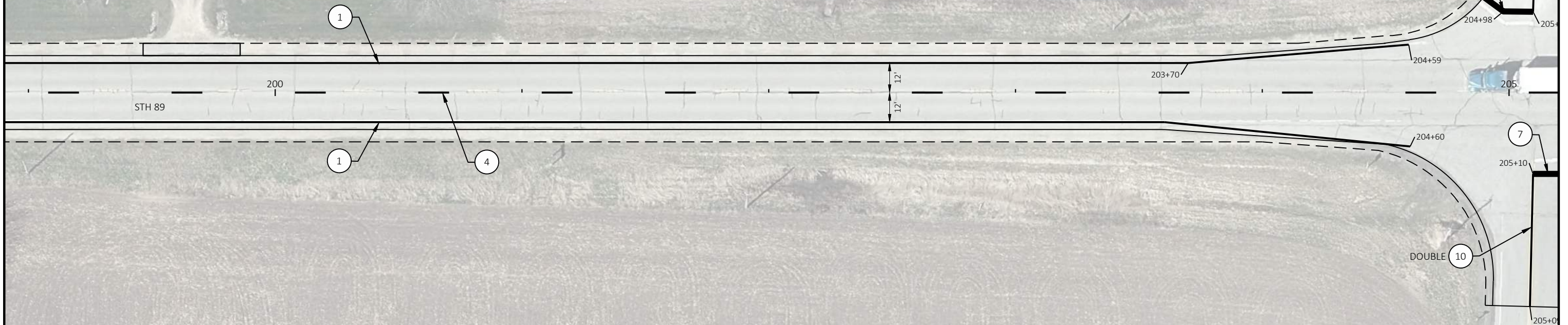
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PAVEMENT MARKING LEGEND			
1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	7	MARKING STOP LINE EPOXY 18-INCH (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	10	MARKING LINE EPOXY 4-INCH (YELLOW)
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NOTES:

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PAVEMENT MARKING LEGEND

- | | |
|---|---|
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| 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) | |

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COUNTY: WALWORTH

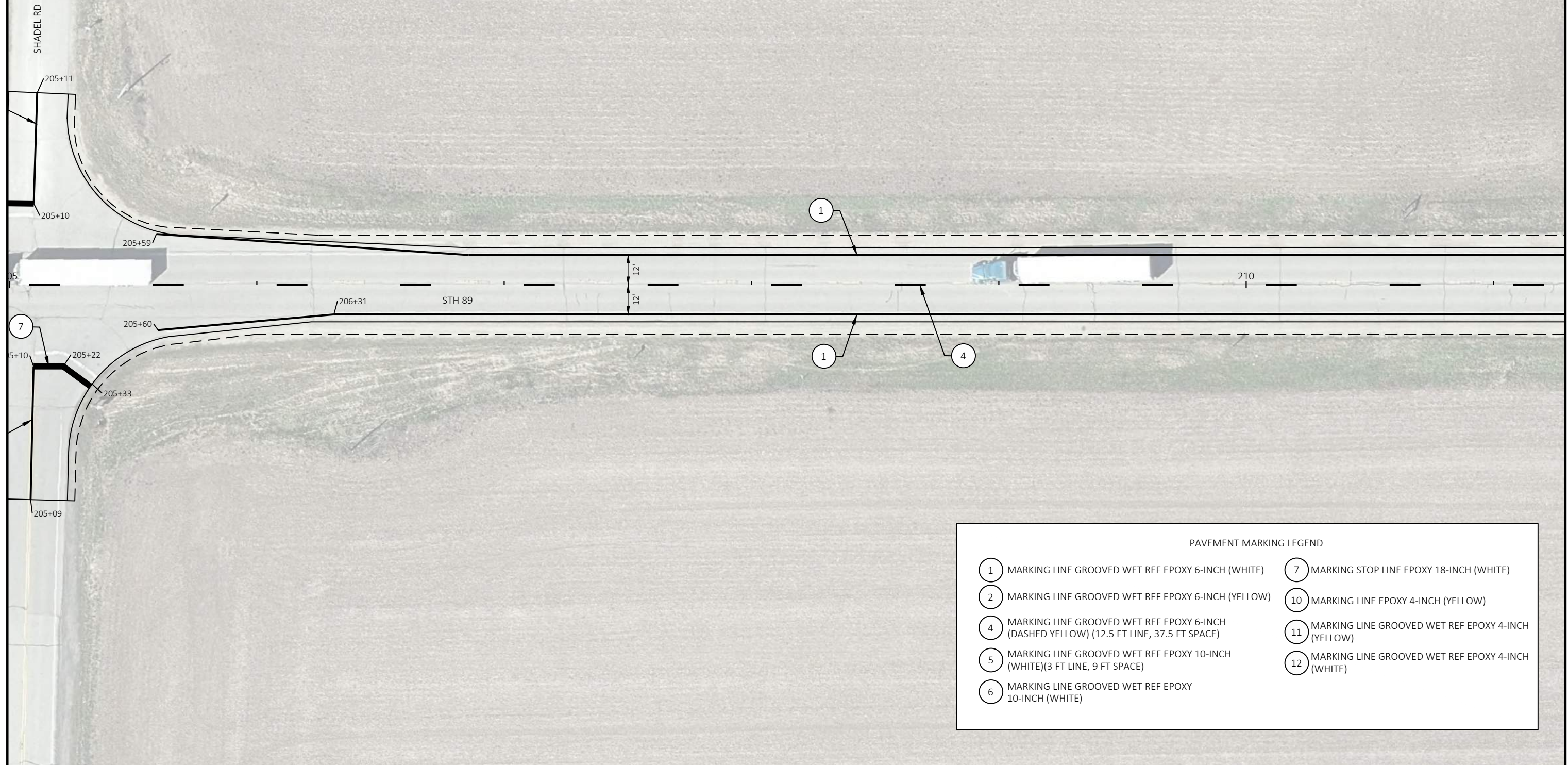
PAVEMENT MARKING

SHEET

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- NOTES:
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1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	7 MARKING STOP LINE EPOXY 18-INCH (WHITE)
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NOTES:

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PAVEMENT MARKING LEGEND

- | | |
|---|---|
| 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | 7 MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) | 10 MARKING LINE EPOXY 4-INCH (YELLOW) |
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| 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) | |

PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

PAVEMENT MARKING

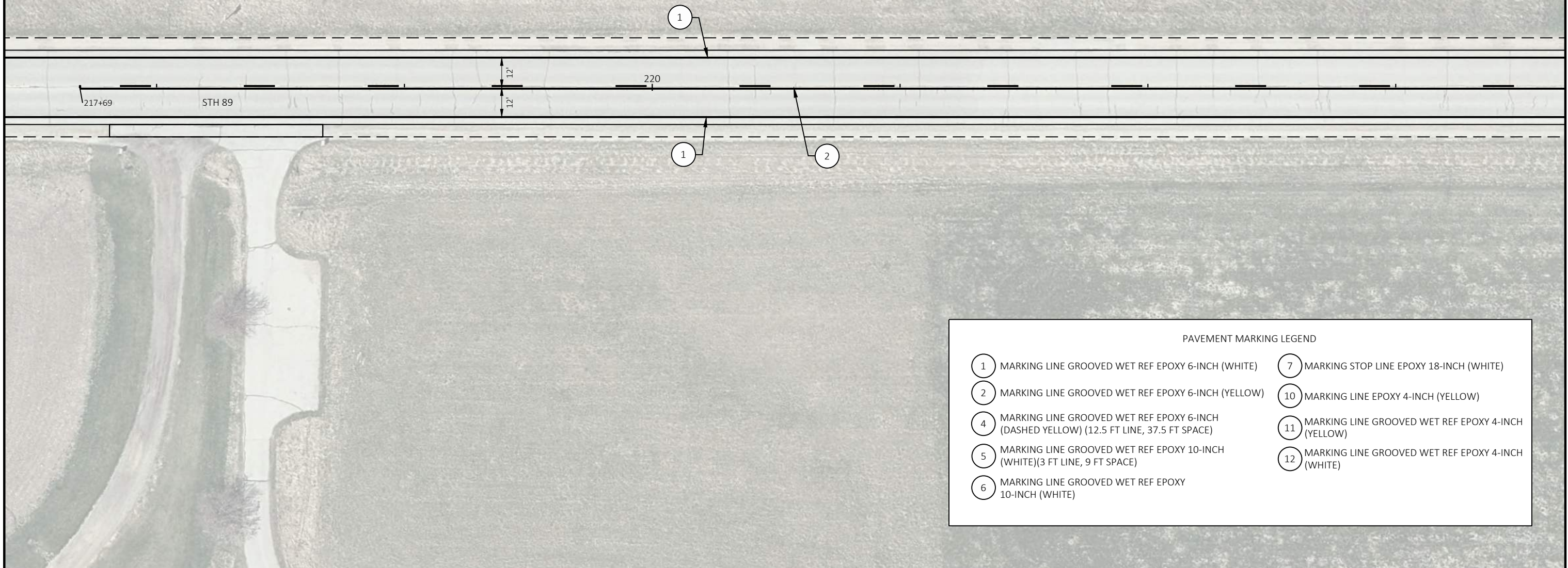
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NOTES:

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PAVEMENT MARKING LEGEND

- | | |
|---|--|
| ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | ⑦ MARKING STOP LINE EPOXY 18-INCH (WHITE) |
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PAVEMENT MARKING LEGEND

- | | |
|---|---|
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PROJECT NO: 3390-08-70

HWY: STH 89

COUNTY: WALWORTH

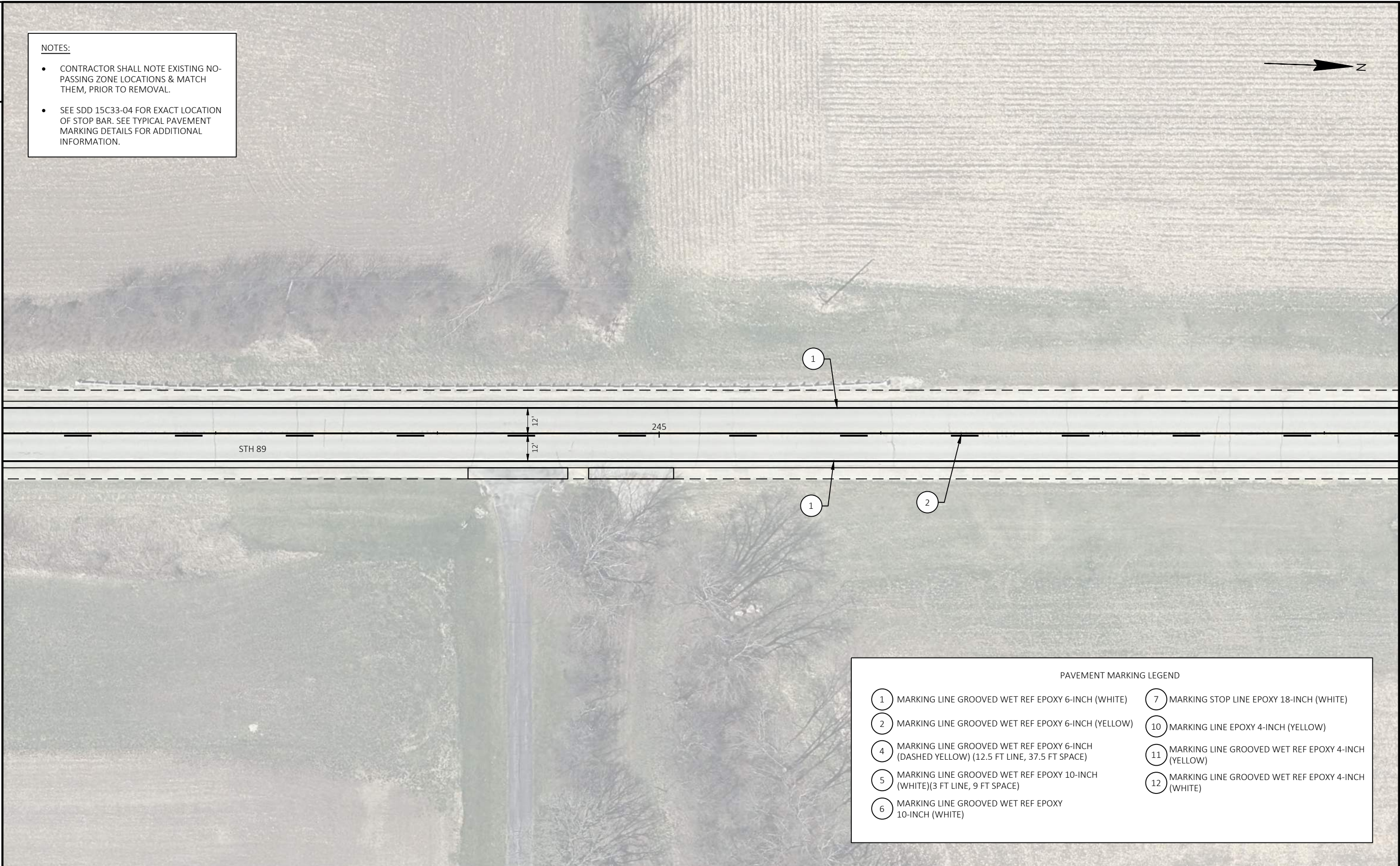
PAVEMENT MARKING

SHEET

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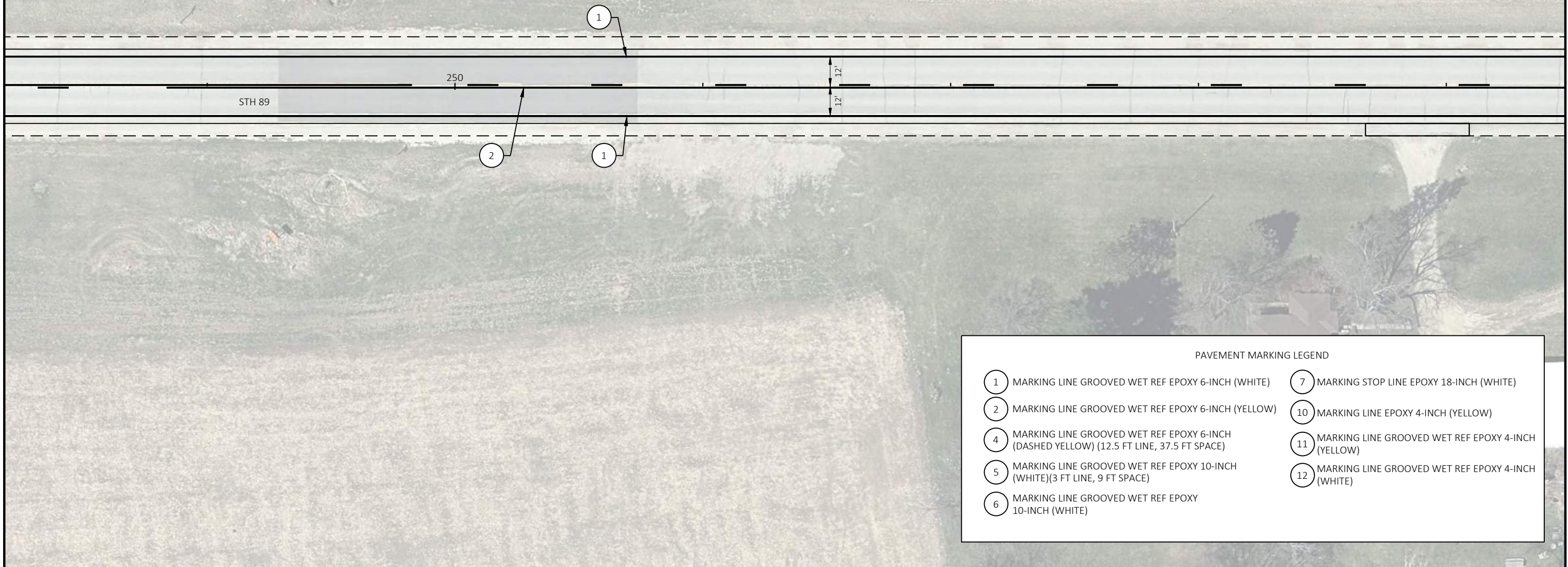
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PAVEMENT MARKING LEGEND	
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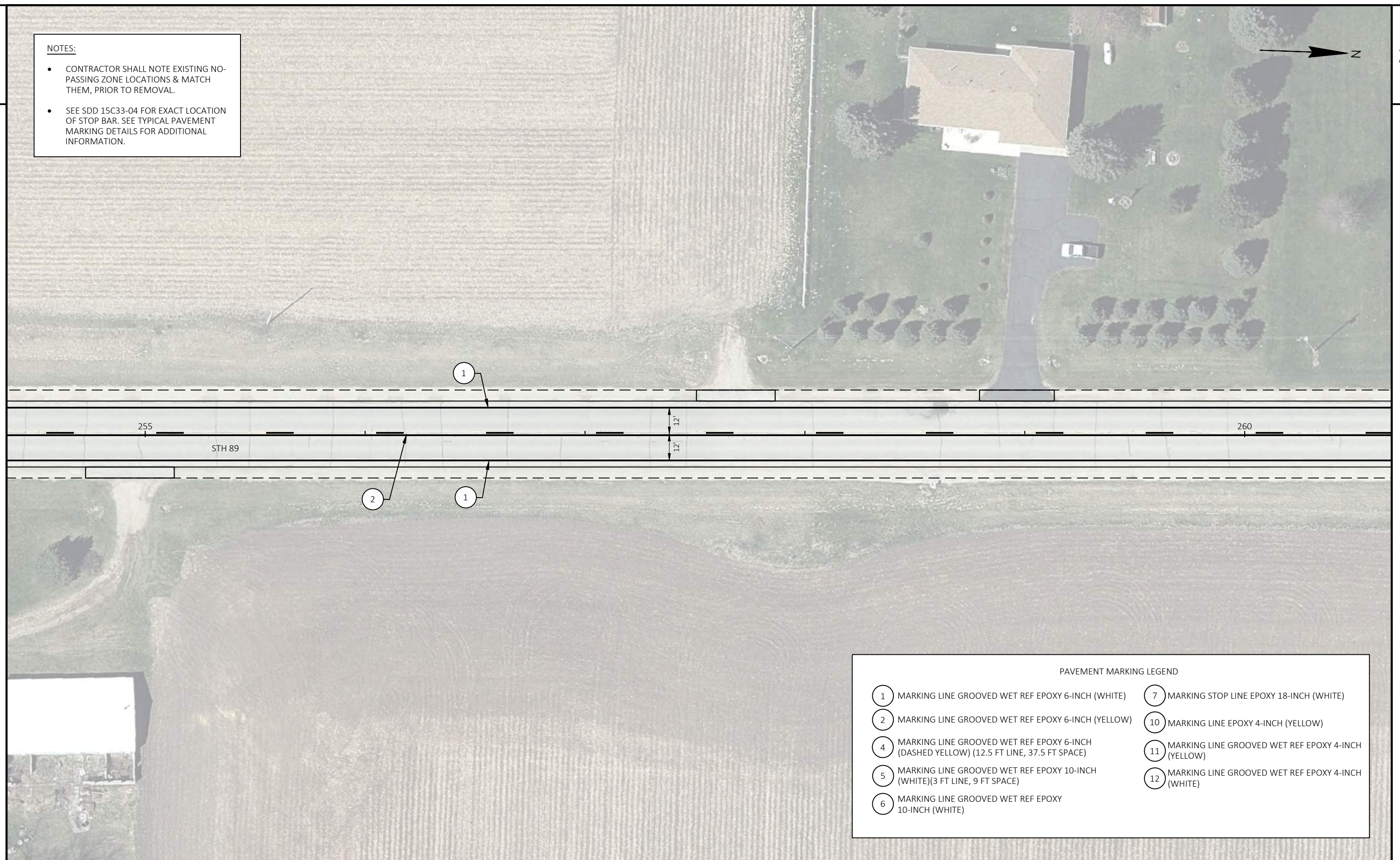
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PAVEMENT MARKING LEGEND			
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HWY: STH 89

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PAVEMENT MARKING

SHEET

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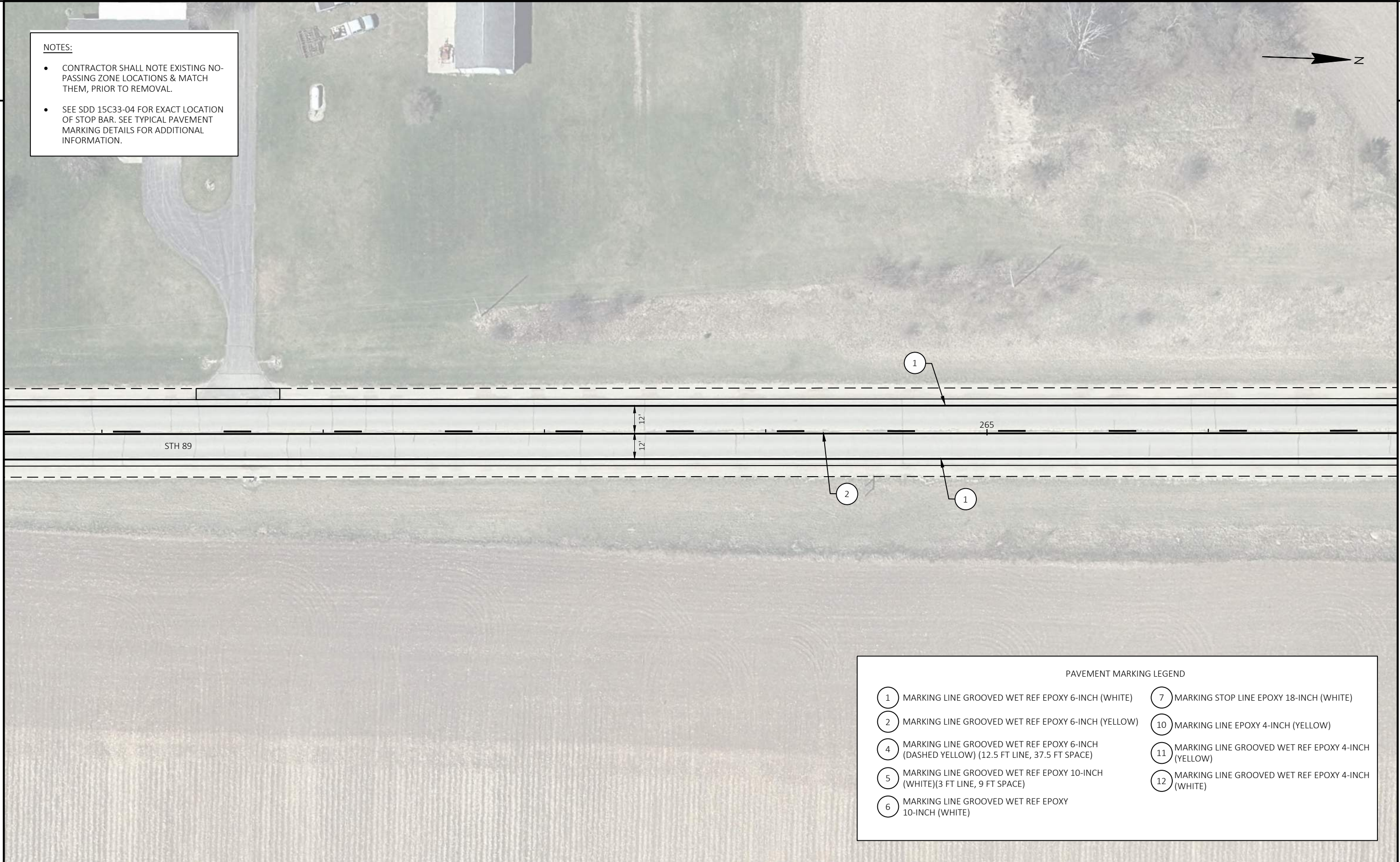
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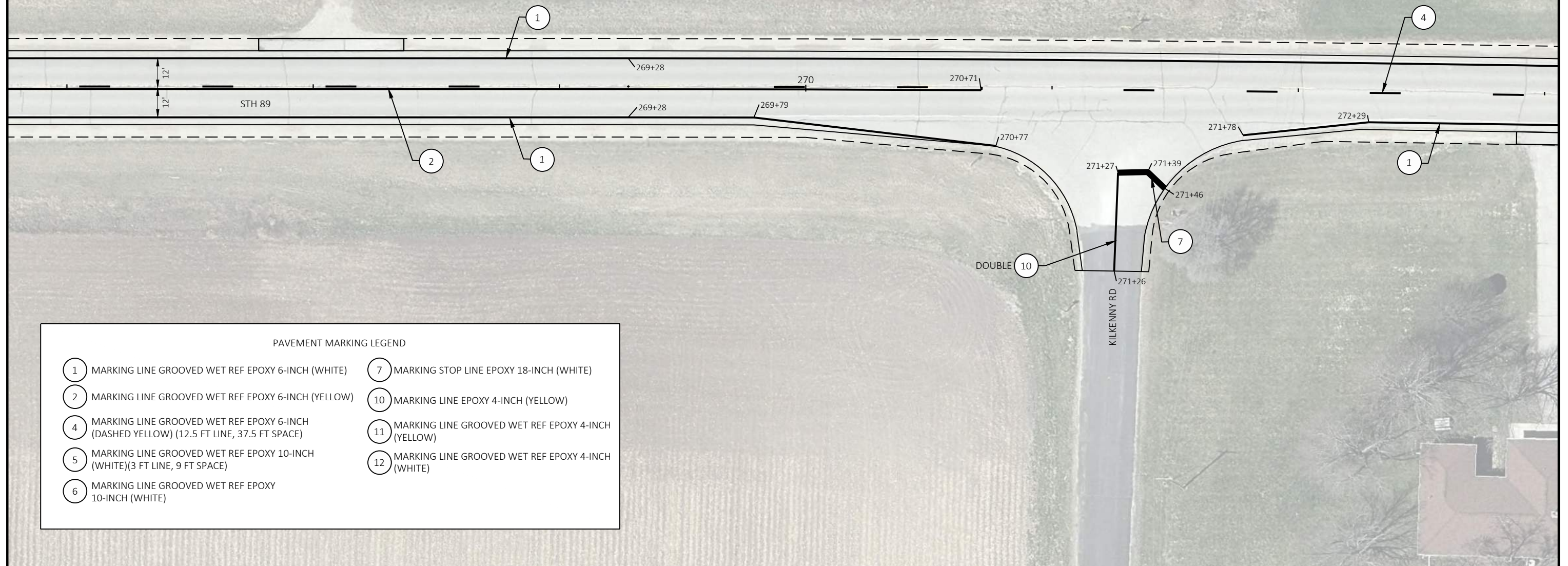
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PAVEMENT MARKING LEGEND	
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10	MARKING LINE EPOXY 4-INCH (YELLOW)
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PAVEMENT MARKING LEGEND

- | | |
|---|---|
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PROJECT NO: 3390-08-70

HWY: STH 89

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PAVEMENT MARKING

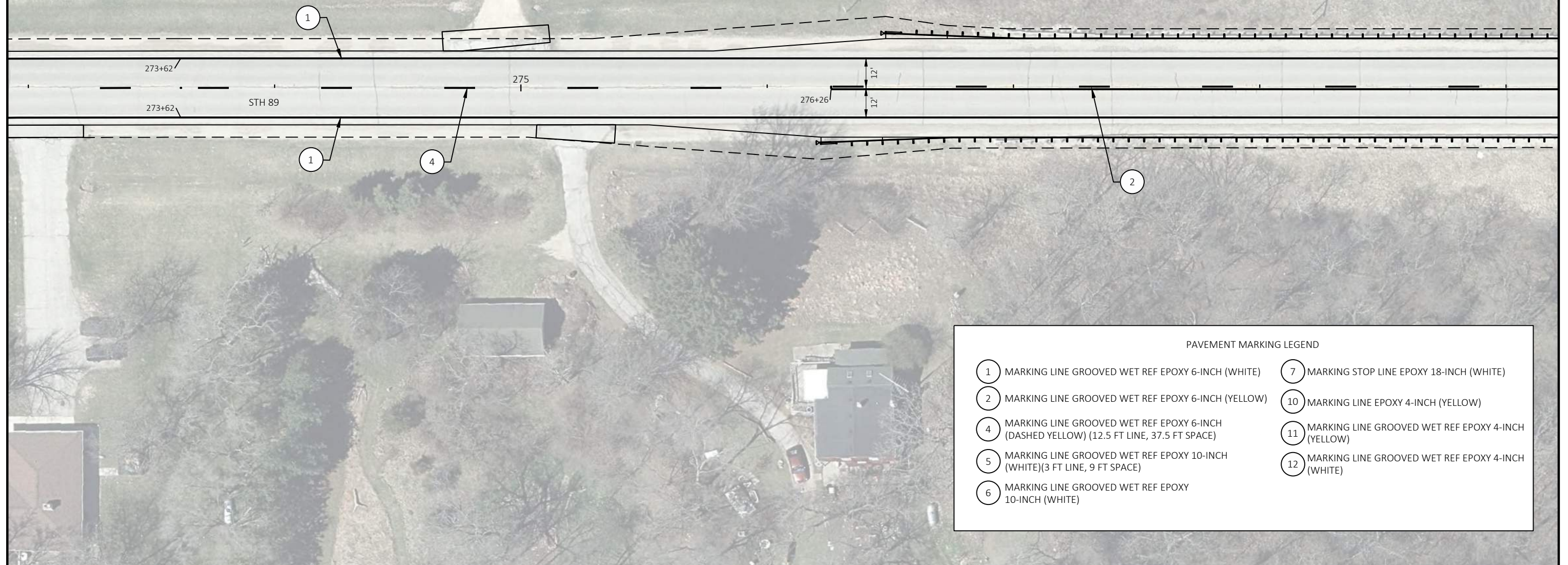
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NOTES:

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PAVEMENT MARKING LEGEND

- | | |
|---|--|
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PROJECT NO: 3390-08-70

HWY: STH 89

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PAVEMENT MARKING

SHEET

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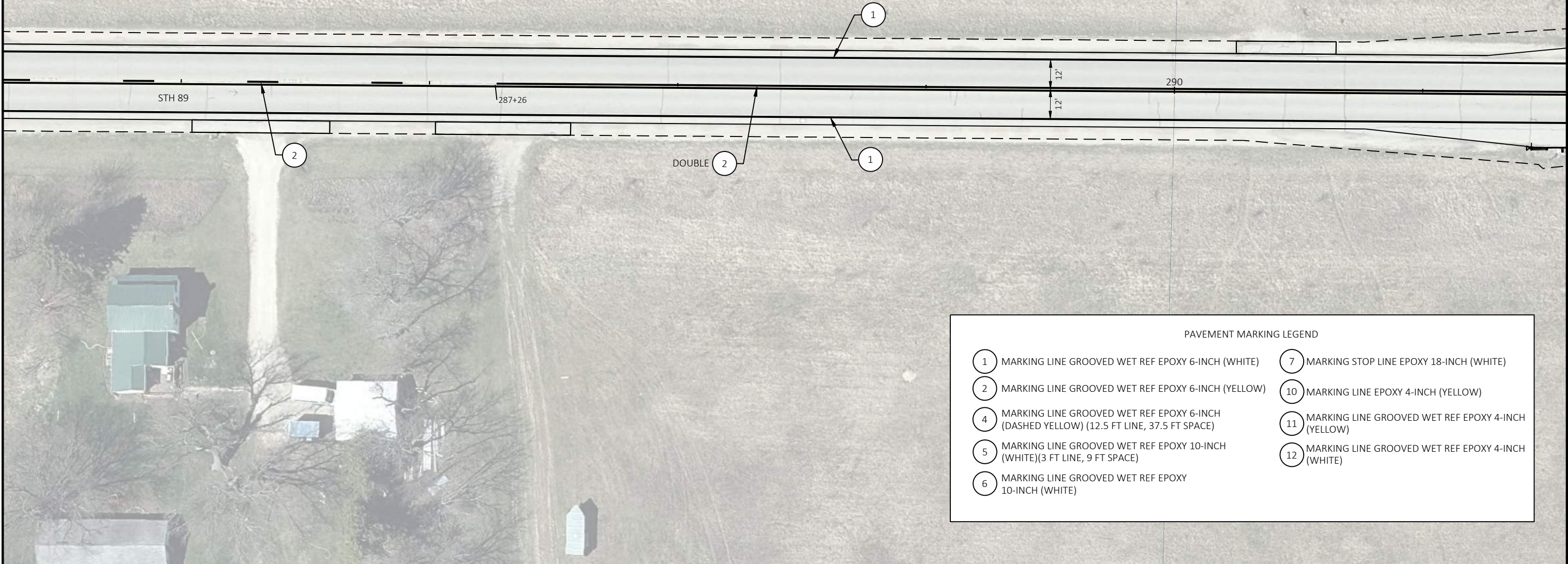
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PAVEMENT MARKING LEGEND			
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2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	10	MARKING LINE EPOXY 4-INCH (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE)	11	MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW)
5	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)(3 FT LINE, 9 FT SPACE)	12	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
6	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)		

- NOTES:
- CONTRACTOR SHALL NOTE EXISTING NO-PASSING ZONE LOCATIONS & MATCH THEM, PRIOR TO REMOVAL.
 - SEE SDD 15C33-04 FOR EXACT LOCATION OF STOP BAR. SEE TYPICAL PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION.



PAVEMENT MARKING LEGEND

- | | |
|---|--|
| ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | ⑦ MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) | ⑩ MARKING LINE EPOXY 4-INCH (YELLOW) |
| ④ MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE) | ⑪ MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW) |
| ⑤ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)(3 FT LINE, 9 FT SPACE) | ⑫ MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) |
| ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) | |

- NOTES:
- CONTRACTOR SHALL NOTE EXISTING NO-PASSING ZONE LOCATIONS & MATCH THEM, PRIOR TO REMOVAL.
 - SEE SDD 15C33-04 FOR EXACT LOCATION OF STOP BAR. SEE TYPICAL PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION.



PAVEMENT MARKING LEGEND	
1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	7 MARKING STOP LINE EPOXY 18-INCH (WHITE)
2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	10 MARKING LINE EPOXY 4-INCH (YELLOW)
4 MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE)	11 MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW)
5 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)(3 FT LINE, 9 FT SPACE)	12 MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	

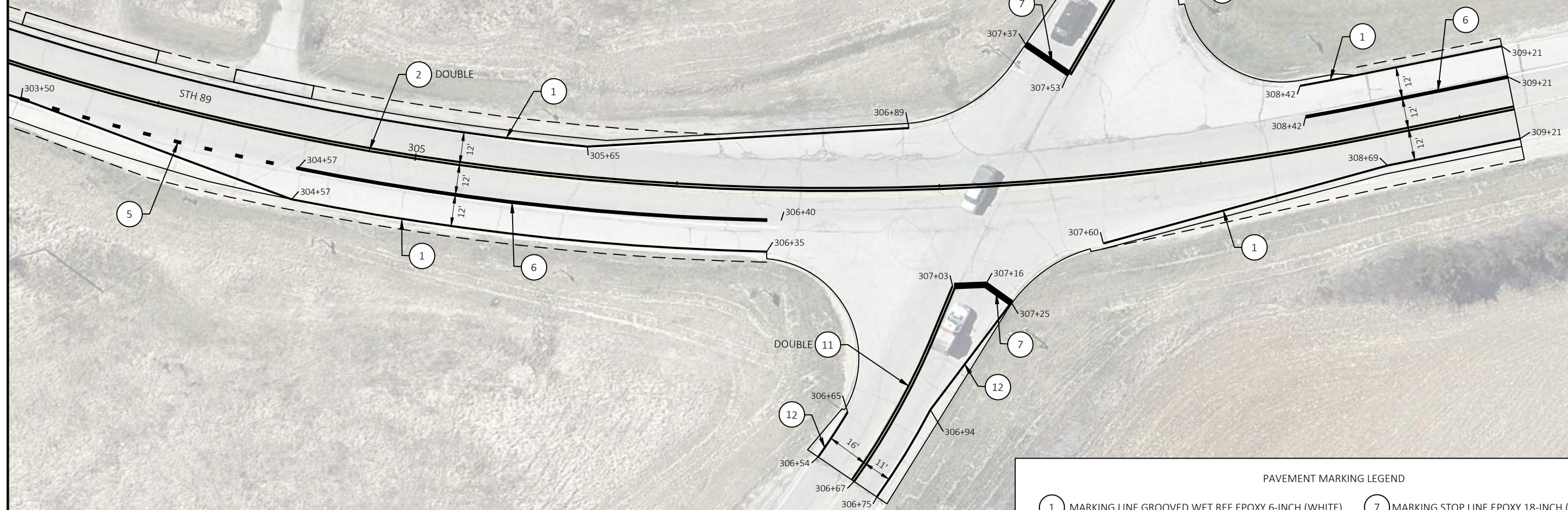


- NOTES:
- CONTRACTOR SHALL NOTE EXISTING NO-PASSING ZONE LOCATIONS & MATCH THEM, PRIOR TO REMOVAL.
 - SEE SDD 15C33-04 FOR EXACT LOCATION OF STOP BAR. SEE TYPICAL PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION.

PAVEMENT MARKING LEGEND			
1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	7	MARKING STOP LINE EPOXY 18-INCH (WHITE)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	10	MARKING LINE EPOXY 4-INCH (YELLOW)
4	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE)	11	MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW)
5	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)(3 FT LINE, 9 FT SPACE)	12	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
6	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)		

NOTES:

- CONTRACTOR SHALL NOTE EXISTING NO-PASSING ZONE LOCATIONS & MATCH THEM, PRIOR TO REMOVAL.
- SEE SDD 15C33-04 FOR EXACT LOCATION OF STOP BAR. SEE TYPICAL PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION.



PAVEMENT MARKING LEGEND

- | | |
|---|---|
| 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | 7 MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) | 10 MARKING LINE EPOXY 4-INCH (YELLOW) |
| 4 MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED YELLOW) (12.5 FT LINE, 37.5 FT SPACE) | 11 MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW) |
| 5 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)(3 FT LINE, 9 FT SPACE) | 12 MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) |
| 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE) | |

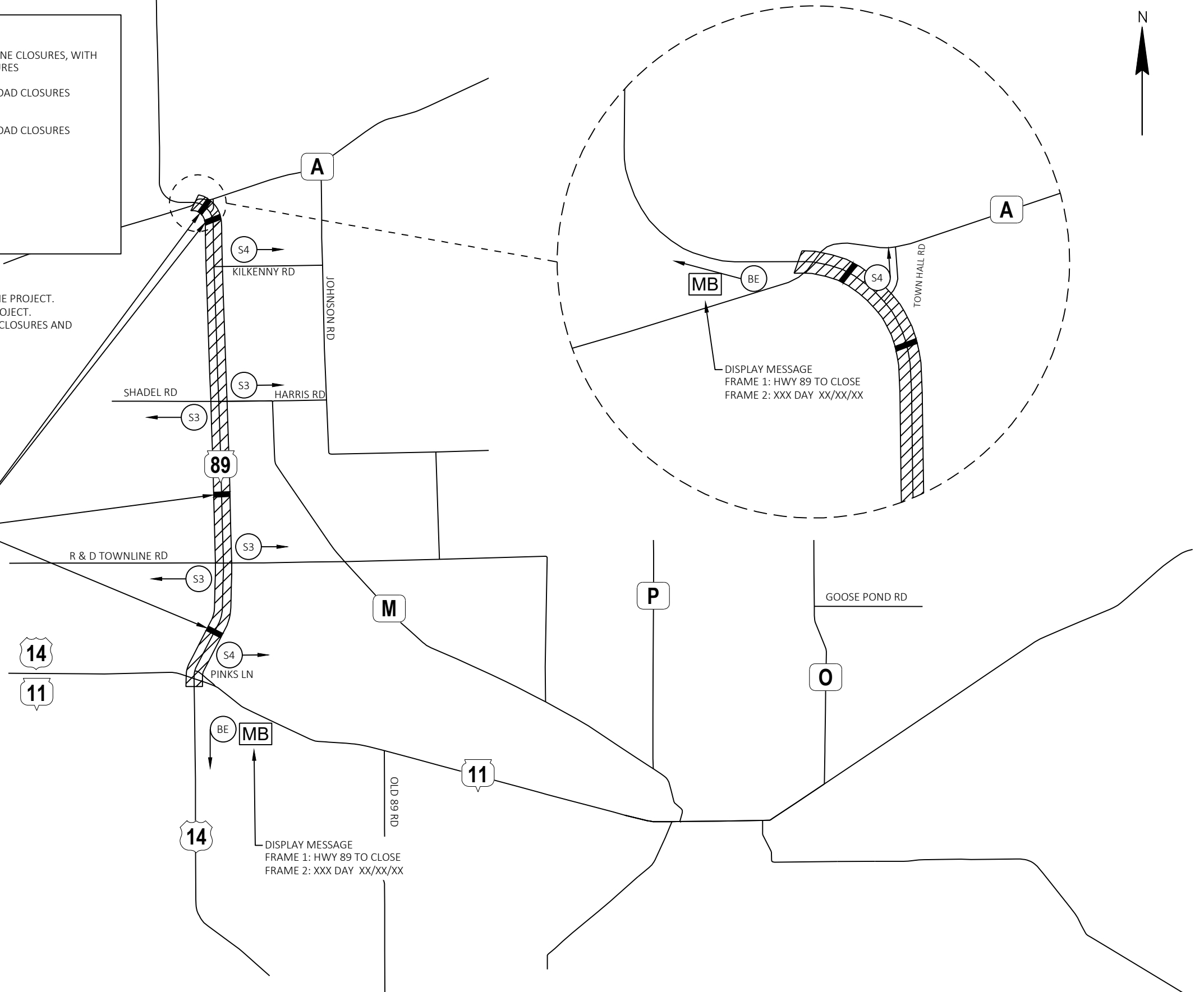
LEGEND

- (BE) MAINLINE CLOSURE DETAIL B FROM SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES, WITH BARRICADE DETAIL E FROM SDD BARRICADES AND SIGNS FOR VARIOUS CLOSURES
- (S3) SIDE ROAD CLOSURE DETAIL 3 FROM SDD BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
- (S4) SIDE ROAD CLOSURE DETAIL 4 FROM SDD BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
- WORK ZONE
- (MB) PORTABLE CHANGEABLE MESSAGE BOARD
- CULVERT REPLACEMENT LOCATION

NOTES:

1. MAINTAIN CROSS TRAFFIC ON R & D TOWNLINE ROAD FOR THE DURATION OF THE PROJECT.
2. MAINTAIN CROSS TRAFFIC ON SHADEL RD/ CTH M FOR THE DURATION OF THE PROJECT.
3. CHANGEABLE MESSAGE BOARDS ARE TO BE DISPLAYED 7 DAYS IN ADVANCED OF CLOSURES AND REMOVED 3 DAYS AFTER CLOSURES BEGINS

FULL CLOSURE WITH NO ACCESS SEE SDD 1502-09B, DETAIL C
CULVERT REPLACEMENT WORK TO BE STAGGERED TO
MAINTAIN LOCAL ACCESS TO PROPERTIES BETWEEN THE CULVERTS



PROJECT NO: 3390-08-70

HWY: STH 89

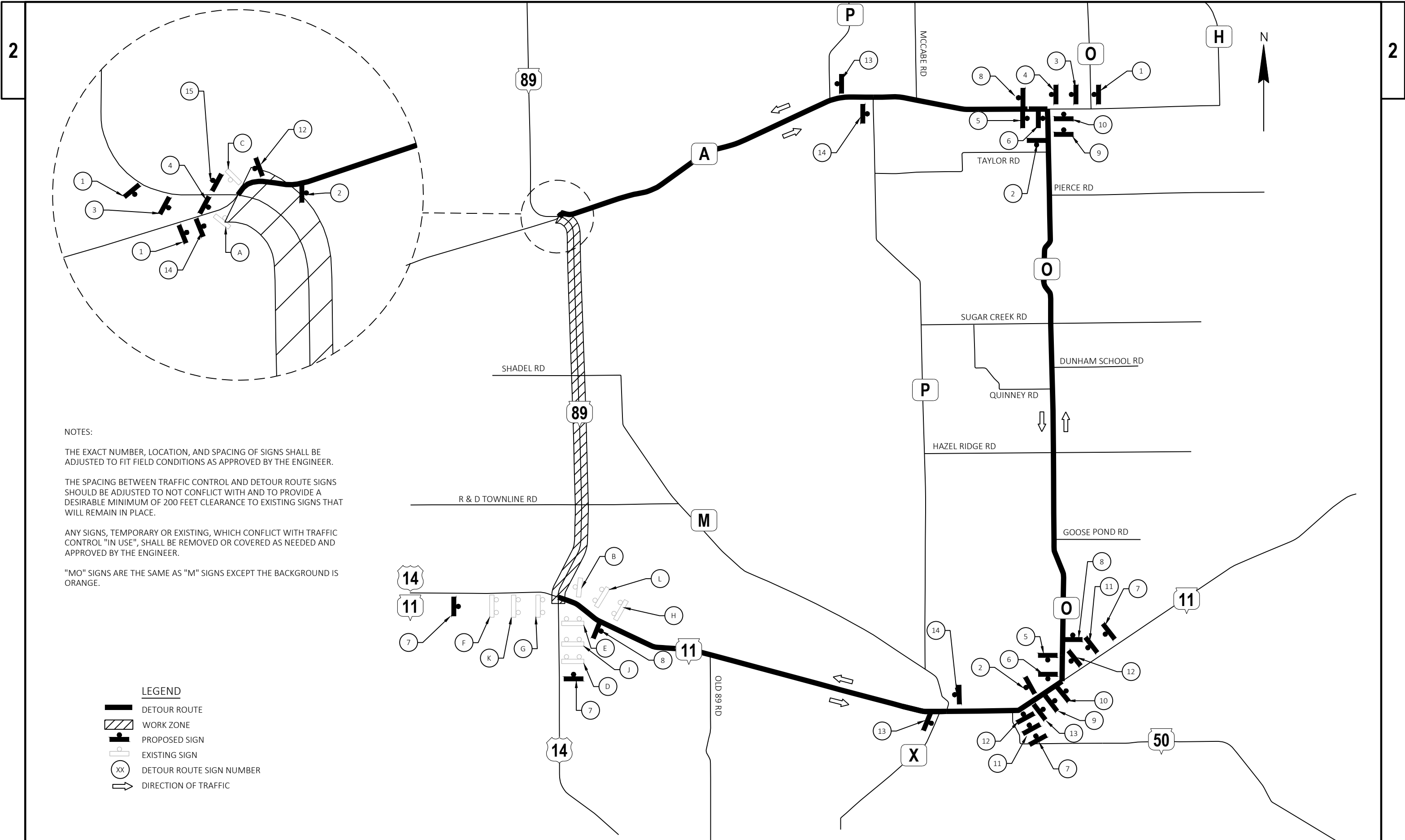
COUNTY: WALWORTH

TRAFFIC CONTROL

SHEET

95

E



NOTES:

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

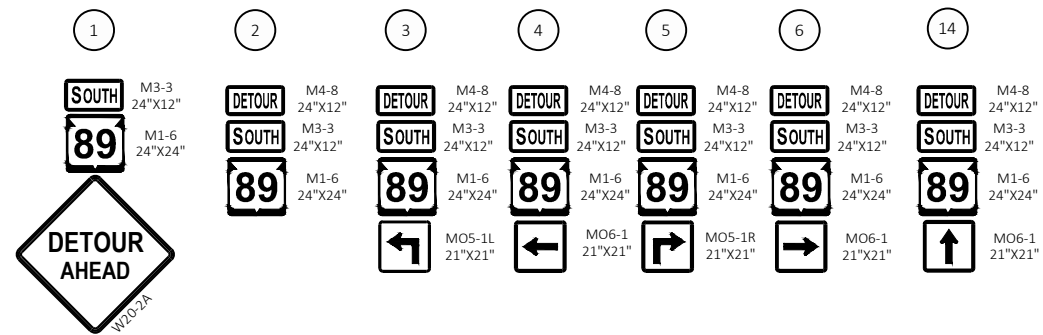
THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR ROUTE SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

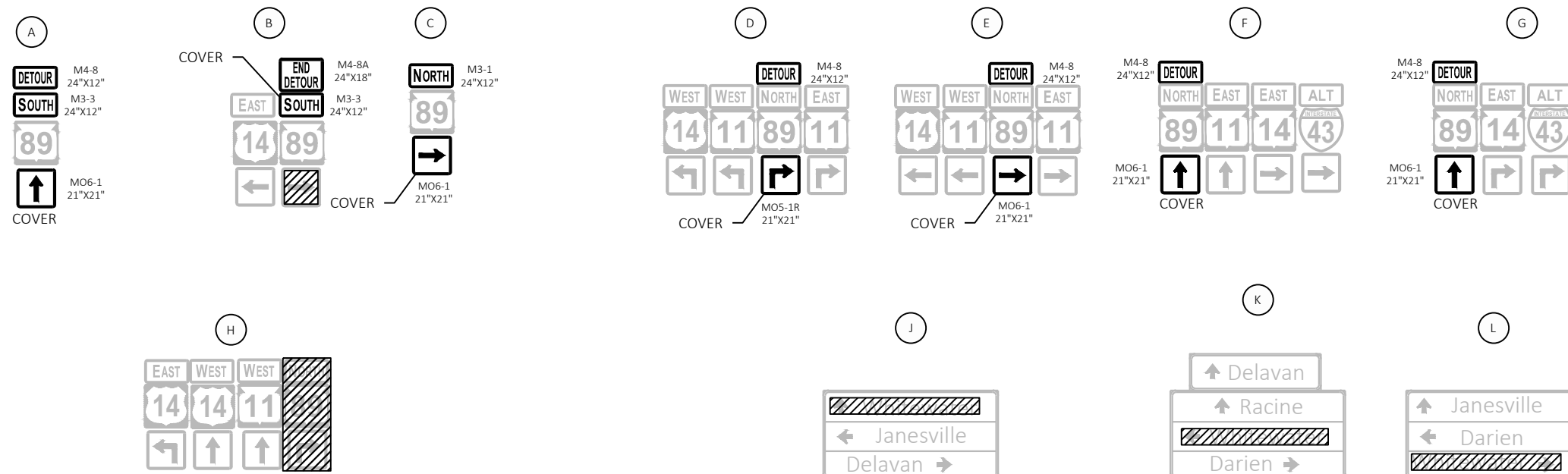
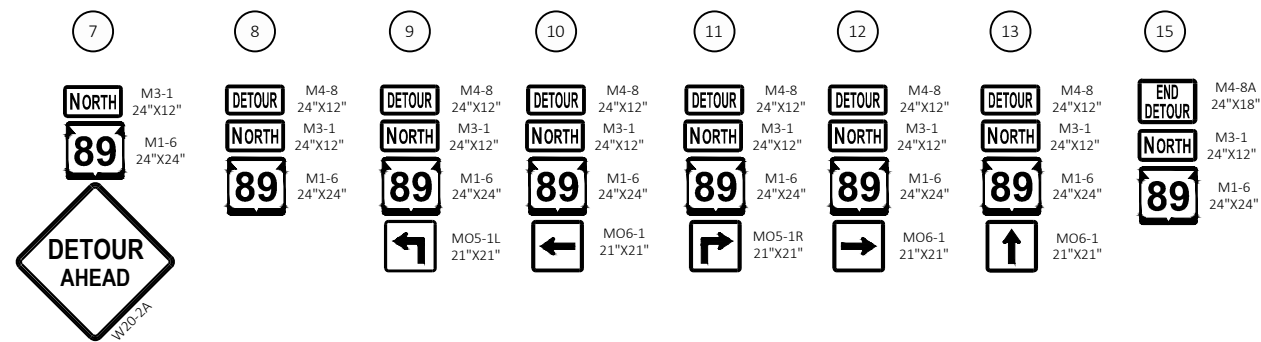
LEGEND

- DETOUR ROUTE
- WORK ZONE
- PROPOSED SIGN
- EXISTING SIGN
- DETOUR ROUTE SIGN NUMBER
- DIRECTION OF TRAFFIC

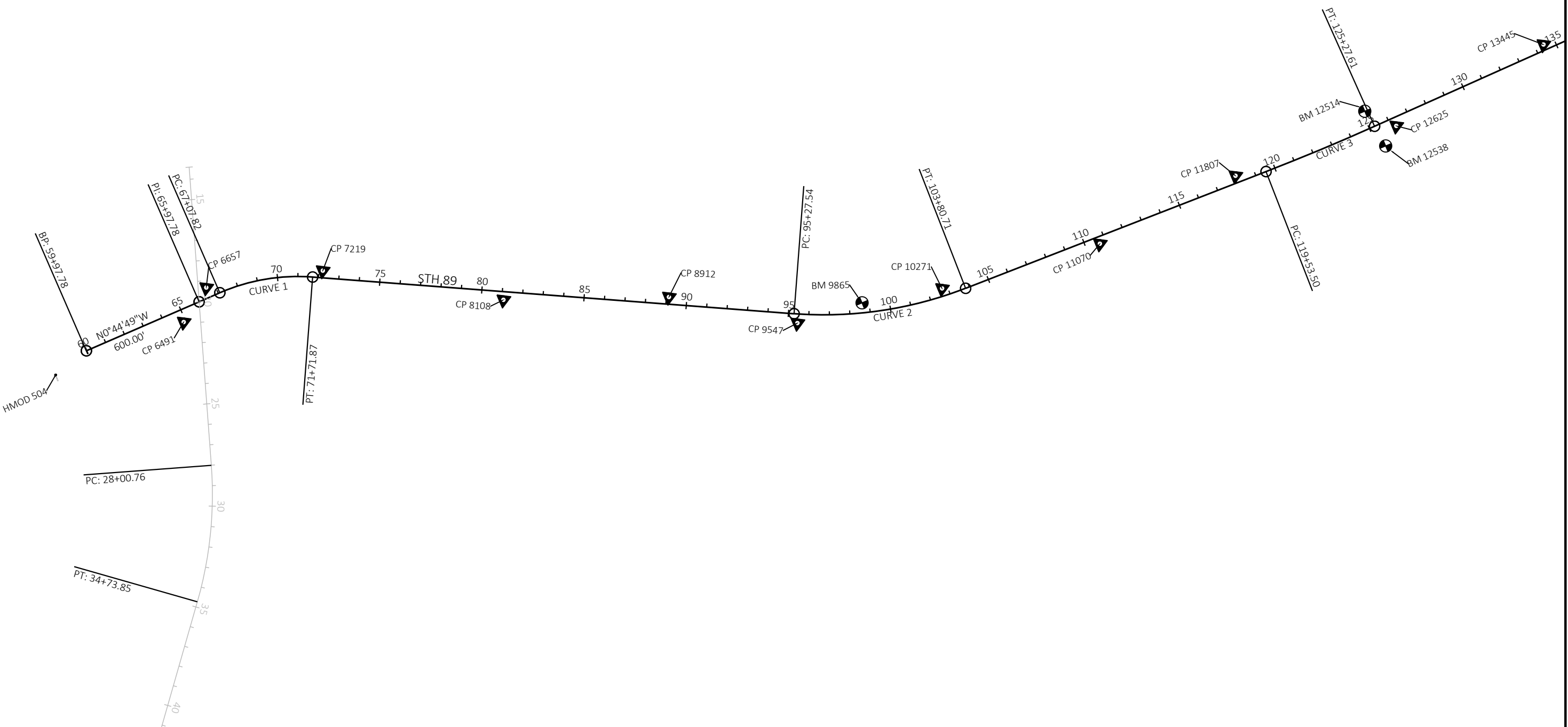
**LEGEND**

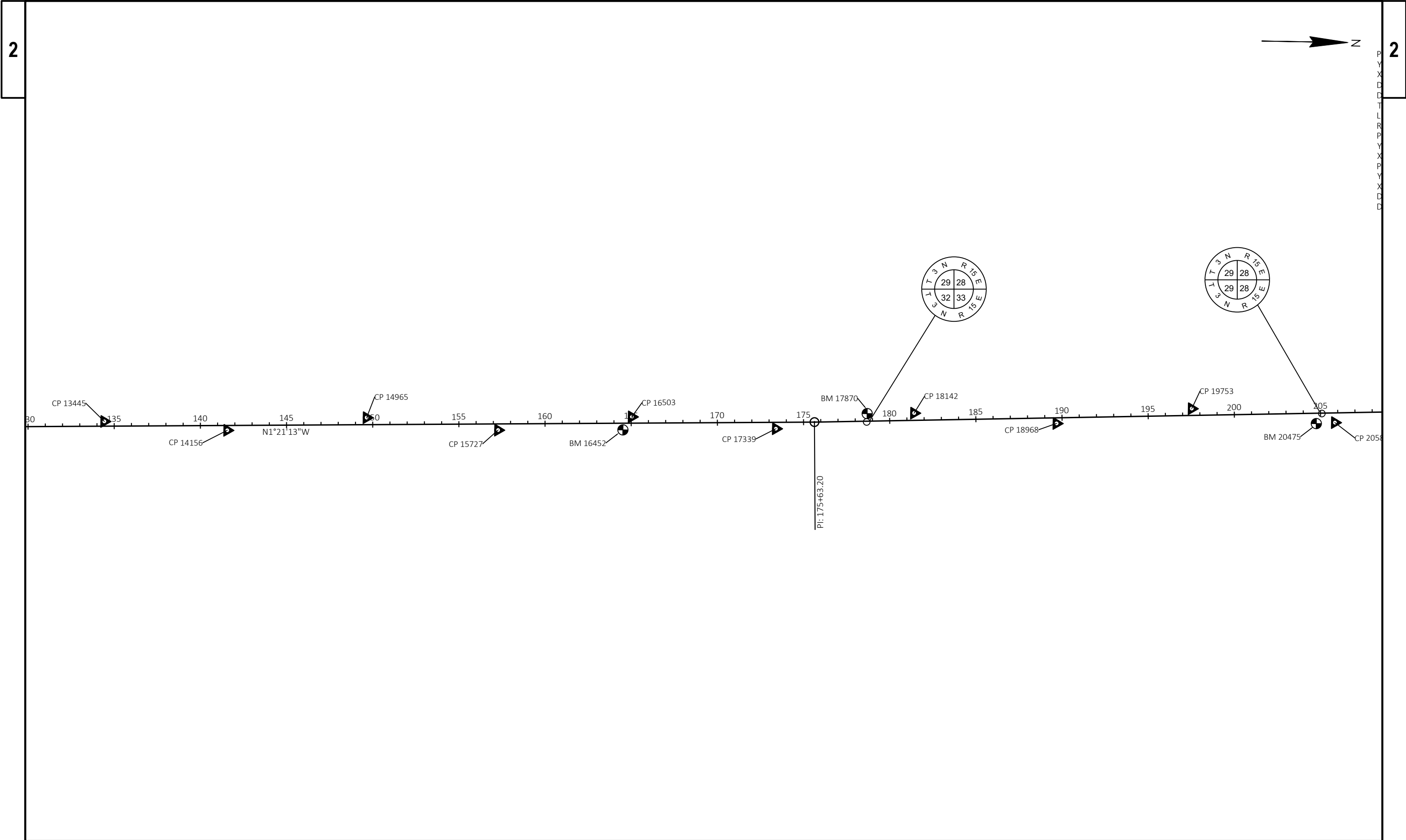
- XX DETOUR ROUTE SIGN NUMBER
- COVER EXISTING SIGN

NOTE: ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED

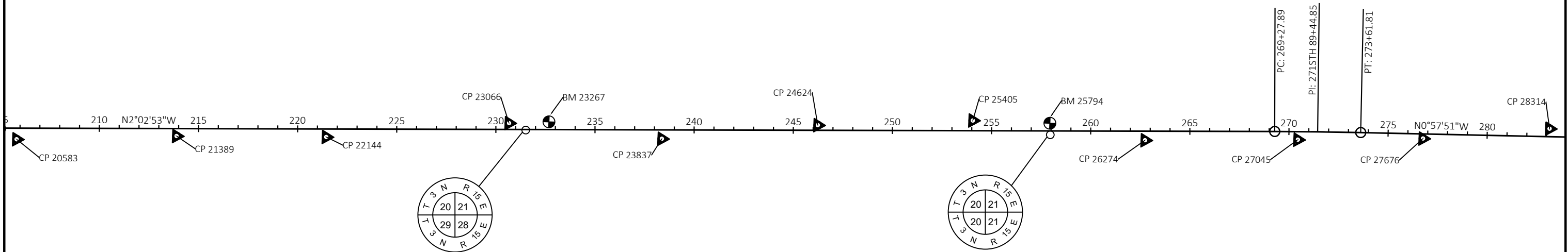


CURVE 1	CURVE 2	CURVE 3
PI STA = 69+44.54	PI STA = 99+61.37	PI STA = 122+40.62
Y = 358534.551	Y = 361228.101	Y = 363521.037
X = 708886.296	X = 710265.708	X = 710326.401
DELTA = 27°54'05" RT	DELTA = 25°36'05" LT	DELTA = 2°52'12" LT
D = 6°00'45"	D = 3°00'03"	D = 0°30'00"
T = 236.72'	T = 433.83'	T = 287.12'
L = 464.05'	L = 853.17'	L = 574.11'
R = 952.93'	R = 1909.38'	R = 11461.72'
PC STA = 67+07.82	PC STA = 95+27.54	PC STA = 119+53.50
Y = 358297.851	Y = 360841.964	Y = 363234.022
X = 708889.534	X = 710067.961	X = 710318.804
PT STA = 71+71.87	PT STA = 103+80.71	PT STA = 125+27.61
Y = 358745.250	Y = 361661.776	Y = 363808.072
X = 708994.199	X = 710277.187	X = 710319.618
DB = N00°47'01"W	DB = N27°07'04"E	DB = N01°30'58"E
DA = N27°07'04"E	DA = N01°30'58"E	DA = N01°21'13"W





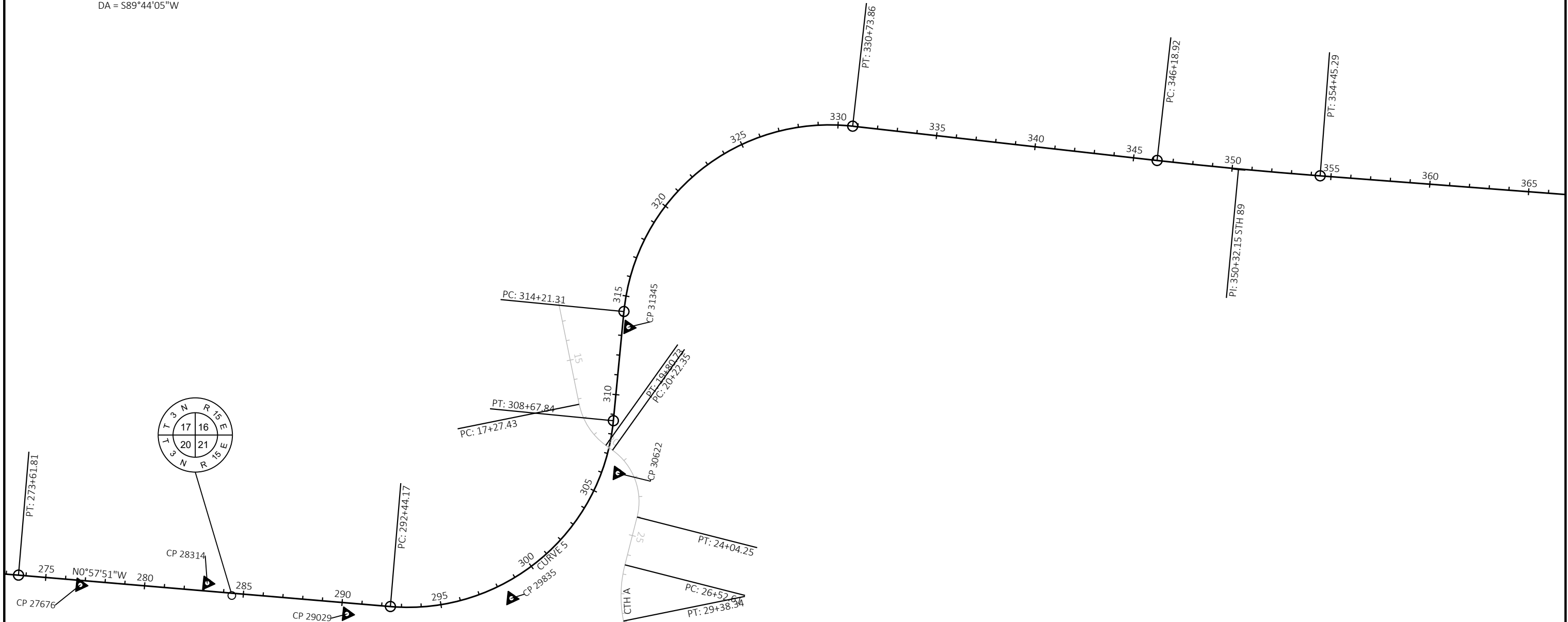
CURVE 4
PI STA = 271+44.85
Y = 378417.783
X = 709858.232
DELTA = 1°05'02" RT
D = 0°14'59"
T = 216.97'
L = 433.92'
R = 22936.40'
PC STA = 269+27.89
Y = 378200.955
X = 709865.986
PT STA = 273+61.81
Y = 378634.719
X = 709854.581
DB = N02°02'53"W
DA = N00°57'51"W

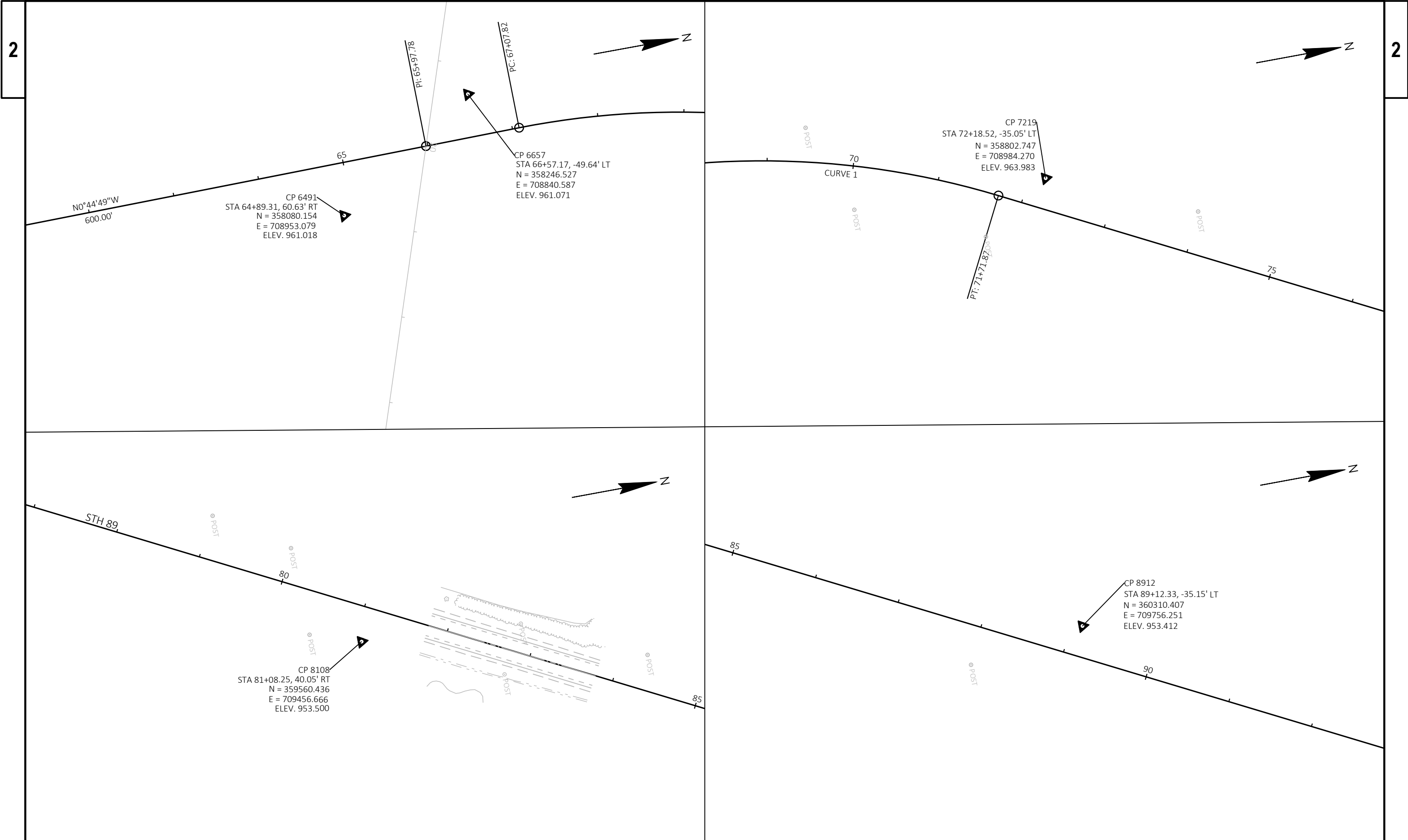


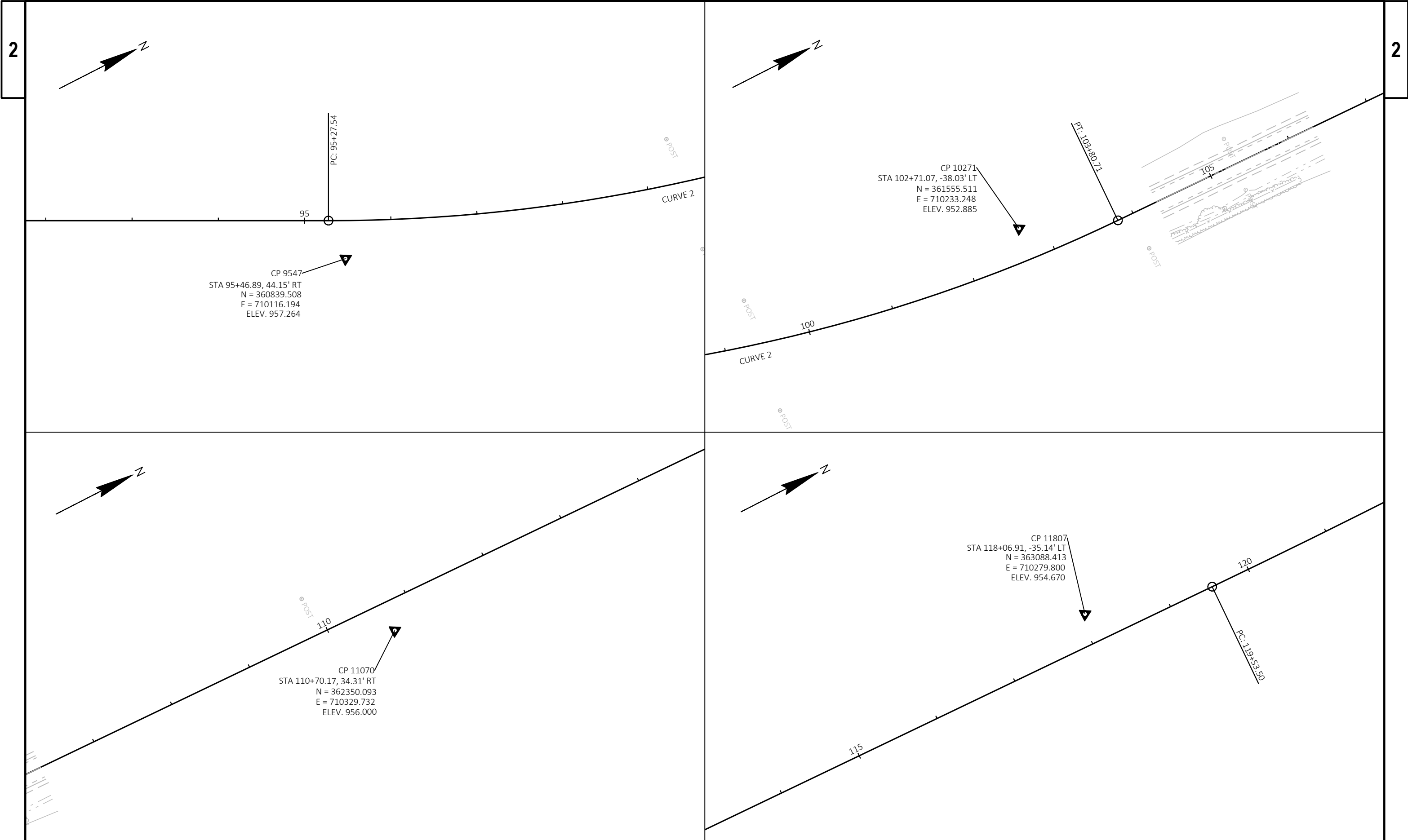


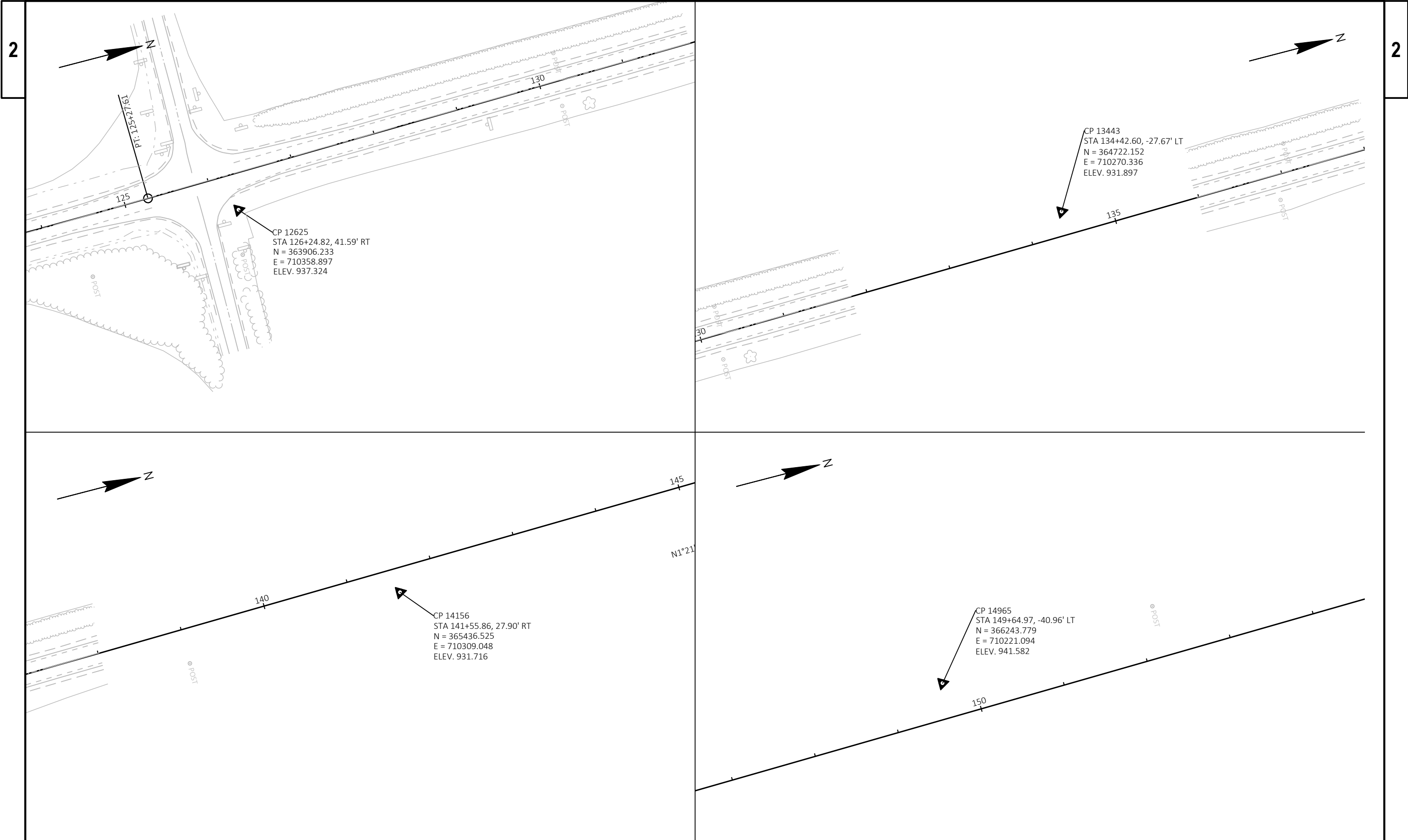
CURVE 5

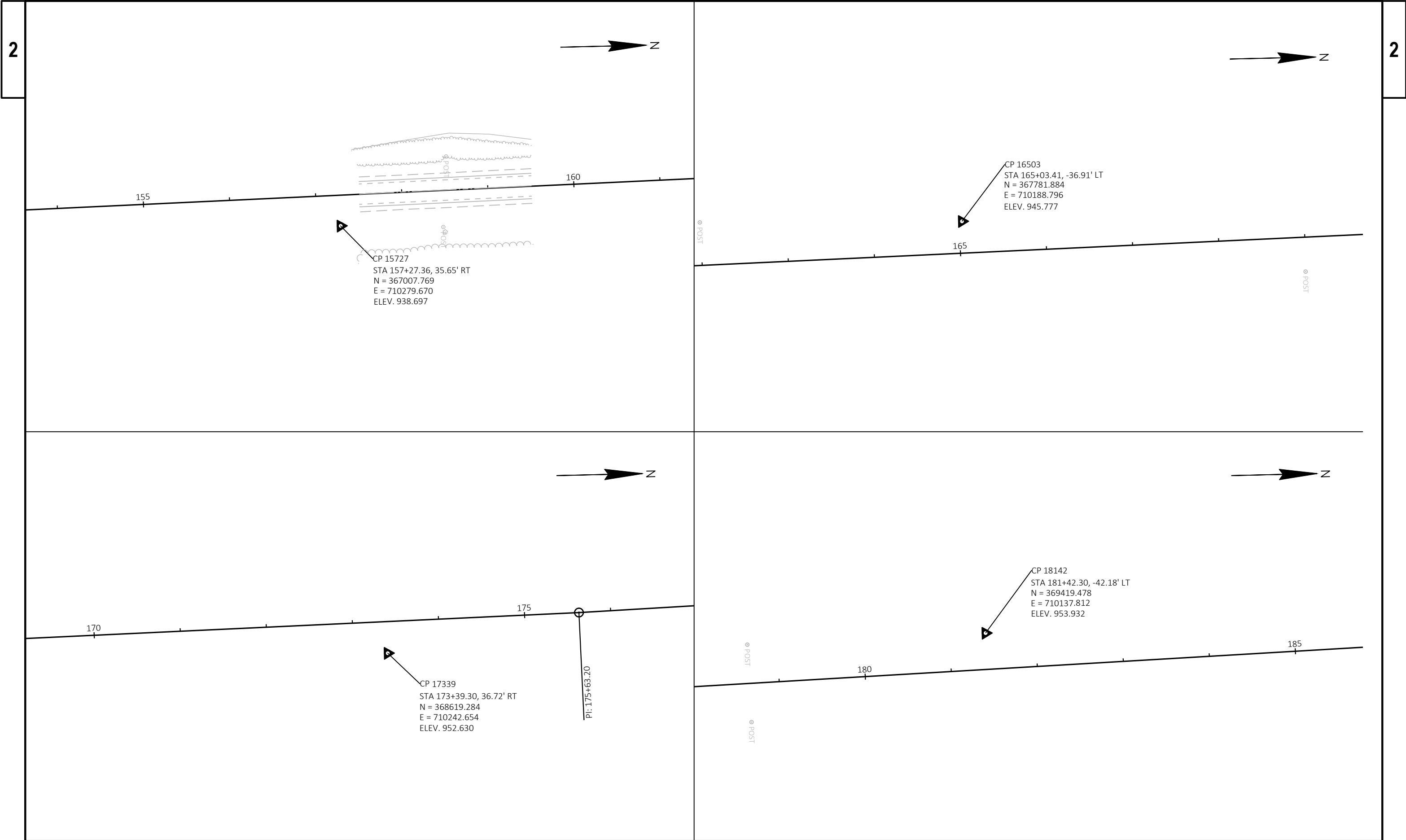
PI STA = 302+73.29
Y = 381545.787
X = 709805.592
DELTA = 89°18'05" LT
D = 5°30'00"
T = 1029.12'
L = 1623.67'
R = 1041.75'
PC STA = 292+44.17
Y = 380516.812
X = 709822.908
PT STA = 308+67.84
Y = 381541.020
X = 708776.482
DB = N00°57'51"W
DA = S89°44'05"W

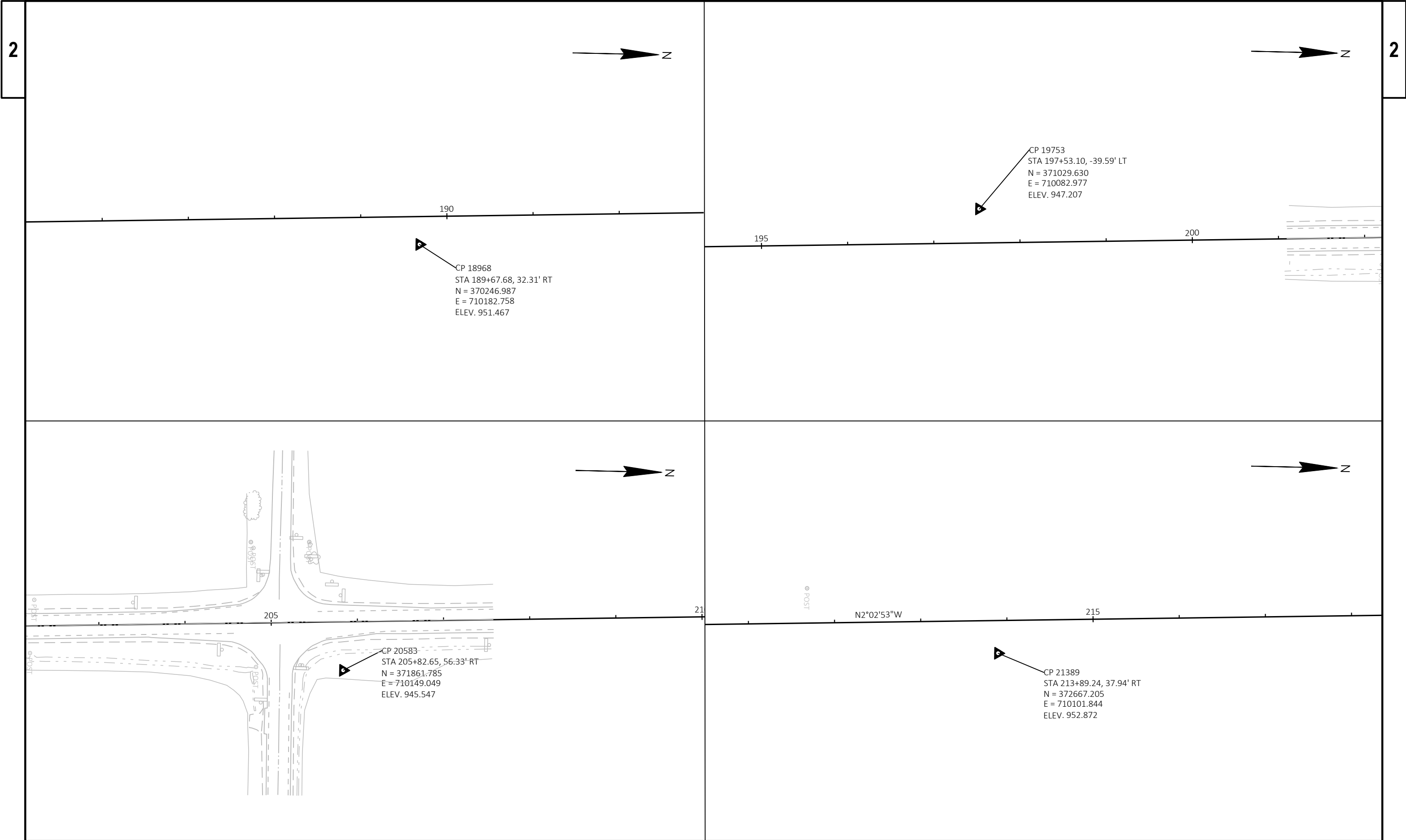


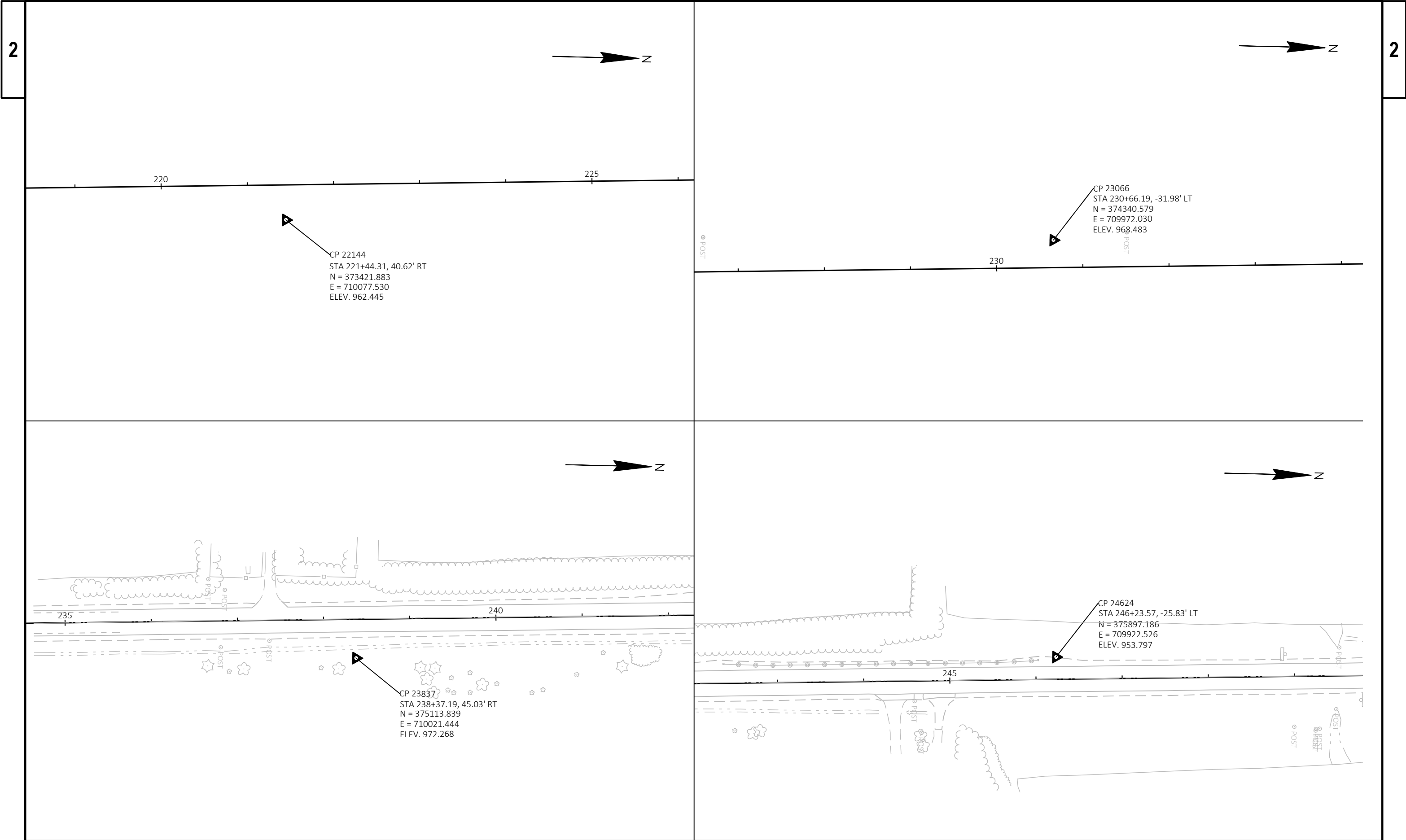


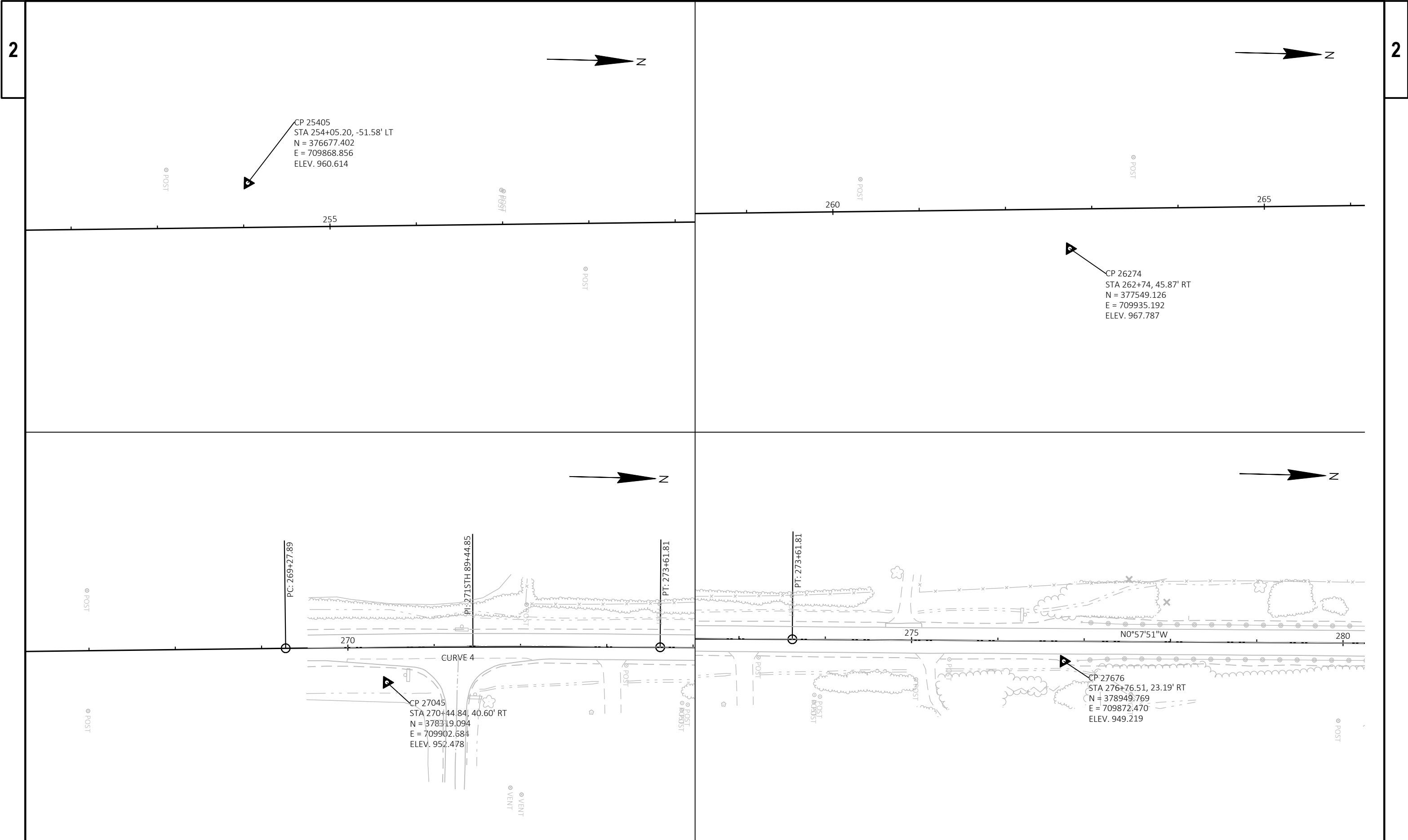


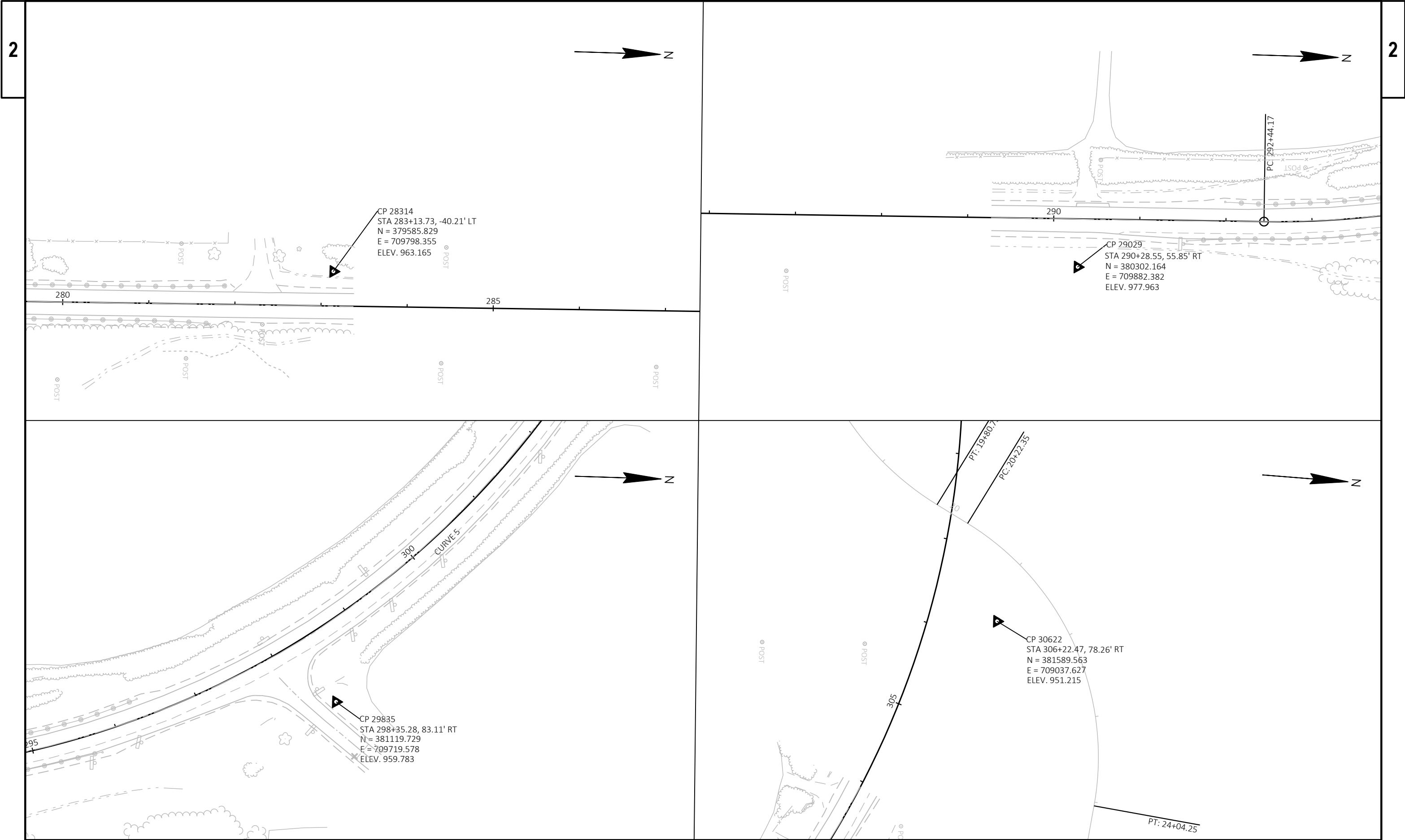


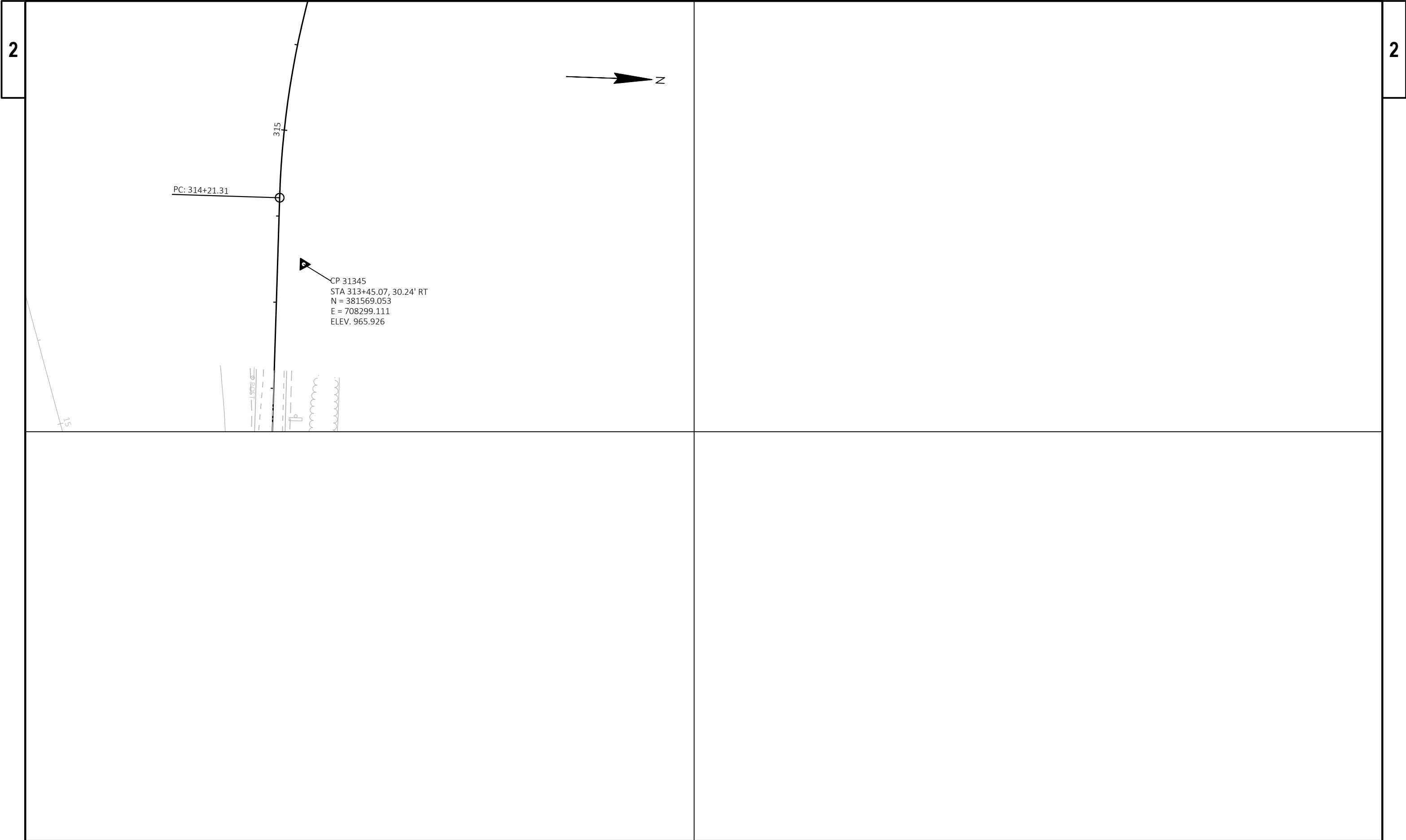












Estimate Of Quantities

3390-08-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	427.000	427.000
0006	204.0125	Removing Asphaltic Surface Milling	TON	18,673.000	18,673.000
0008	204.0165	Removing Guardrail	LF	2,198.000	2,198.000
0010	204.9060.S	Removing (item description) 01. Partial Traffic Signal Removal (STH 11/14 & STH 89)	EACH	4.000	4.000
0012	213.0100	Finishing Roadway (project) 01. 3390-08-70	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,150.000	3,150.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	154.000	154.000
0018	305.0500	Shaping Shoulders	STA	476.000	476.000
0020	455.0605	Tack Coat	GAL	12,660.000	12,660.000
0022	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0024	460.5223	HMA Pavement 3 LT 58-28 S	TON	12,664.000	12,664.000
0026	460.5224	HMA Pavement 4 LT 58-28 S	TON	9,875.000	9,875.000
0028	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	194.000	194.000
0030	465.0125	Asphaltic Surface Temporary	TON	50.000	50.000
0032	465.0560	Asphaltic Rumble Strips, Centerline	LF	22,825.000	22,825.000
0034	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	72.000	72.000
0036	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	144.000	144.000
0038	522.0436	Culvert Pipe Reinforced Concrete Class IV 36-Inch	LF	120.000	120.000
0040	522.0442	Culvert Pipe Reinforced Concrete Class IV 42-Inch	LF	216.000	216.000
0042	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	6.000	6.000
0044	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	4.000	4.000
0046	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	6.000	6.000
0048	606.0200	Riprap Medium	CY	20.000	20.000
0050	614.0010	Barrier System Grading Shaping Finishing	EACH	8.000	8.000
0052	614.0397	Guardrail Mow Strip Emulsified Asphalt	SY	787.000	787.000
0054	614.2300	MGS Guardrail 3	LF	1,600.000	1,600.000
0056	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000
0058	618.0100	Maintenance and Repair of Haul Roads (project) 01. 3390-08-70	EACH	1.000	1.000
0060	619.1000	Mobilization	EACH	1.000	1.000
0062	625.0100	Topsoil	SY	250.000	250.000
0064	625.0500	Salvaged Topsoil	SY	989.000	989.000
0066	628.1504	Silt Fence	LF	3,935.000	3,935.000
0068	628.1520	Silt Fence Maintenance	LF	3,935.000	3,935.000
0070	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0072	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0074	628.2004	Erosion Mat Class I Type B	SY	989.000	989.000
0076	628.7555	Culvert Pipe Checks	EACH	44.000	44.000
0078	629.0210	Fertilizer Type B	CWT	2.000	2.000
0080	630.0175	Seeding Mixture No. 75	LB	20.000	20.000
0082	630.0500	Seed Water	MGAL	100.000	100.000
0084	633.5200	Markers Culvert End	EACH	8.000	8.000
0086	634.0618	Posts Wood 4x6-Inch x 18-FT	EACH	118.000	118.000
0088	634.0814	Posts Tubular Steel 2x2-Inch x 14-FT	EACH	5.000	5.000
0090	637.0620	Sign Flags Permanent Type II	EACH	4.000	4.000
0092	637.2210	Signs Type II Reflective H	SF	691.410	691.410
0094	637.2230	Signs Type II Reflective F	SF	279.100	279.100
0096	638.2102	Moving Signs Type II	EACH	7.000	7.000
0098	638.2602	Removing Signs Type II	EACH	115.000	115.000

Estimate Of Quantities

3390-08-70

Line	Item	Item Description	Unit	Total	Qty
0100	638.3000	Removing Small Sign Supports	EACH	121.000	121.000
0102	643.0300	Traffic Control Drums	DAY	5,000.000	5,000.000
0104	643.0420	Traffic Control Barricades Type III	DAY	4,006.000	4,006.000
0106	643.0705	Traffic Control Warning Lights Type A	DAY	7,052.000	7,052.000
0108	643.0715	Traffic Control Warning Lights Type C	DAY	5,000.000	5,000.000
0110	643.0900	Traffic Control Signs	DAY	20,196.000	20,196.000
0112	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0114	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0116	643.5000	Traffic Control	EACH	1.000	1.000
0118	645.0120	Geotextile Type HR	SY	15.000	15.000
0120	646.1020	Marking Line Epoxy 4-Inch	LF	620.000	620.000
0122	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	563.000	563.000
0124	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	79,141.000	79,141.000
0126	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	84.000	84.000
0128	646.6120	Marking Stop Line Epoxy 18-Inch	LF	289.000	289.000
0130	648.0100	Locating No-Passing Zones	MI	4.000	4.000
0132	650.6000	Construction Staking Pipe Culverts	EACH	8.000	8.000
0134	650.8000	Construction Staking Resurfacing Reference	LF	24,502.000	24,502.000
0136	650.9911	Construction Staking Supplemental Control (project) 01. 3390-08-70	EACH	1.000	1.000
0138	650.9920	Construction Staking Slope Stakes	LF	3,100.000	3,100.000
0140	653.0905	Removing Pull Boxes	EACH	6.000	6.000
0142	680.0100	Public Land Survey Monument Verify and Reset	EACH	8.000	8.000
0144	690.0150	Sawing Asphalt	LF	240.000	240.000
0146	740.0440	Incentive IRI Ride	DOL	18,564.000	18,564.000
0148	SPV.0055	Special .01 HMA Pavement PWL QMP, Core Only Project; Incentive Density PWL HMA Pavement	DOL	14,430.000	14,430.000
0150	SPV.0055	Special .02 HMA Pavement PWL QMP, Core Only Project; Incentive Air Voids HMA Pavement	DOL	31,539.000	31,539.000
0152	SPV.0055	Special .03 HMA Pavement Longitudinal Joint Density, Core Only Project; Incentive Densit	DOL	4,910.000	4,910.000
0154	SPV.0060	Special .01 Stop Sign Traffic Flashing Beacon System, Solar STH 89 SB at STH 11	EACH	1.000	1.000
0156	SPV.0060	Special .02 Stop Sign Traffic Flashing Beacon System, Solar USH 14 NB at STH 89	EACH	1.000	1.000
0158	SPV.0060	Special .03 Stop Sign Traffic Flashing Beacon System, Solar STH 11 WB at STH 89	EACH	1.000	1.000
0160	SPV.0060	Special .04 Stop Sign Traffic Flashing Beacon System, Solar STH 11 EB at STH 89	EACH	1.000	1.000
0162	SPV.0060	Special .05 Field Office Type T	EACH	1.000	1.000
0164	SPV.0195	Special .01 Asphaltic Repair	TON	167.000	167.000

REMOVALS

					203.0100	204.0115	204.0125	204.0165
					REMOVING SMALL PIPE CULVERTS EACH	REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	REMOVING ASPHALTIC SURFACE MILLING TON	REMOVING GUARDRAIL LF
STATION	TO	STATION	OFFSET	LOCATION				
64+19	-	64+21	-	STH 89	-	11	-	-
64+19	-	71+00	-		-	-	943	-
69+45	-	70+10	RT		-	12	-	-
71+00	-	126+50	-		-	-	3,935	-
82+78	-	-	-		1	-	-	-
125+70	-	125+94	RT		-	27	-	-
125+75	-	125+99	LT		-	27	-	-
126+50	-	205+68	-		-	-	5,733	-
158+50	-	-	-		1	-	-	-
204+93	-	205+24	RT		-	33	-	-
204+99	-	205+24	LT		-	27	-	-
205+68	-	272+25	-		-	-	4,669	-
242+37	-	246+03	LT		-	-	-	367
271+11	-	271+38	RT		-	28	-	-
272+25	-	309+27	-		-	-	3,393	-
276+92	-	281+72	RT		-	-	-	480
276+96	-	281+89	LT		-	-	-	492
291+54	-	295+78	RT		-	-	-	430
291+98	-	296+35	LT		-	-	-	429
294+45	-	-	-		1	-	-	-
298+03	-	298+27	RT		-	27	-	-
302+95	-	-	-		1	-	-	-
306+51	-	306+83	RT		-	40	-	-
308+09	-	308+37	LT		-	30	-	-
309+06	-	309+21	-		-	65	-	-
UNDISTRIBUTED - TEMPORARY RAMPS					-	100	-	-
PROJECT TOTALS					4	427	18,673	2,198

ALL ITEMS CATEGORY 0010 THIS SHEET

BASE AGGREGATE DENSE					
				305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0500 SHAPING SHOULDERS STA
STATION	TO	STATION	LOCATION		
71+00	-	126+50	STH 89	-	111
71+00	-	76+00		65	-
76+00	-	95+00		246	-
95+00	-	106+00		143	-
106+00	-	155+00		635	-
126+50	-	205+68		-	158
155+00	-	166+00		143	-
166+00	-	243+00		998	-
205+68	-	272+25		-	133
243+00	-	309+21		858	-
272+25	-	309+21		-	74
-	-	-	R AND D TOWN LINE ROAD	21	-
-	-	-	SHADEL ROAD	10	-
-	-	-	CTH M	10	-
-	-	-	KILKENNY ROAD	10	-
-	-	-	TOWN HALL ROAD	10	-
PROJECT TOTALS				3,150	476

ALL ITEMS CATEGORY 0010 THIS SHEET

HMA ITEMS										
STATION	TO	STATION	LOCATION	455.0605	460.5223	460.5224	465.0125	465.0560	740.0440	SPV.0195.01
				TACK COAT	HMA PAVEMENT 3	HMA PAVEMENT 4	ASPHALTIC	ASPHALTIC	INCENTIVE IRI RIDE	SPECIAL (01.
				GAL	LT 58-28 S	LT 58-28 S	SURFACE	RUMBLE STRIPS,	DOL	ASPHALTIC
					TON	TON	TEMPORARY	CENTERLINE		REPAIR)
							TON	LF		TON
64+19	-	71+00	STH 89	639	-	1,010	-	-	-	-
71+00	-	126+50		2,668	2,811	1,968	-	-	-	-
77+00	-	305+25		-	-	-	-	22,825	-	-
126+50	-	205+68		3,887	4,095	2,866	-	-	-	-
205+68	-	272+25		3,165	3,335	2,334	-	-	-	-
272+25	-	309+21		2,300	2,423	1,696	-	-	-	-
UNDISTRIBUTED				-	-	-	50	-	18,564	167
PROJECT TOTALS				12,660	12,664	9,875	50	22,825	18,564	167

ALL ITEMS CATEGORY 0010 THIS SHEET

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		
STATION	OFFSET	TON
72+72	LT	3
73+36	RT	4
74+15	RT	4
76+44	LT	2
76+68	RT	5
80+00	RT	3
80+80	RT	6
96+79	RT	5
96+79	LT	3
107+51	LT	3
111+61	LT	4
111+68	RT	4
112+62	LT	4
139+18	RT	4
161+69	LT	3
163+40	LT	4
178+31	RT	4
178+97	RT	4
193+25	RT	4
198+21	RT	4

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, CONT'D

465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		
STATION	OFFSET	TON
199+66	LT	4
213+86	LT	5
218+24	RT	8
224+76	LT	5
228+91	RT	5
230+59	RT	3
231+82	LT	4
233+25	RT	4
237+39	LT	4
244+37	RT	4
244+88	RT	4
253+88	RT	4
254+93	RT	4
257+69	LT	4
258+96	LT	3
261+62	LT	4
268+08	LT	6
273+06	RT	3
274+90	LT	7
275+22	RT	4
282+26	LT	8
286+32	RT	5
287+30	RT	5
290+45	LT	4
303+69	LT	5
304+42	LT	3
PROJECT TOTAL		194

ALL ITEMS CATEGORY 0010 THIS SHEET

CULVERT ITEMS															
						305.0120	522.0136	522.0424	522.0436	522.0442	522.1024	522.1036	522.1042	633.5200	690.0150
						BASE AGGREGATE DENSE 1 1/4-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 24- INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 36- INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 42-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH	MARKERS CULVERT END	SAWING ASPHALT
STATION	OFFSET	TO	STATION	OFFSET	LOCATION	TON	LF	LF	LF	LF	EACH	EACH	EACH	EACH	LF
82+73	26.2' LT	-	82+72	21.8' RT	STH 89	-	-	48	-	-	2	-	-	2	-
72+78	26.2' LT	-	82+78	21.8' RT		49	-	48	-	-	2	-	-	-	60
82+84	26.2' LT	-	82+83	21.8' RT		-	-	48	-	-	2	-	-	-	-
						-	-	-	-	-	-	-	-	-	-
158+42	34.9' LT	-	158+42	37.1' RT		-	-	-	-	72	-	-	2	2	-
158+50	34.9' LT	-	158+50	37.1' RT		60	-	-	-	72	-	-	2	-	60
158+59	34.9' LT	-	158+59	37.1' RT		-	-	-	-	72	-	-	2	-	-
						-	-	-	-	-	-	-	-	-	-
294+45	61.8' LT	-	294+46	58.2' RT		23	-	-	120	-	-	2	-	2	60
302+95	31.4' LT	-	302+95	40.6' RT		22	72	-	-	-	-	2	-	2	60
PROJECT TOTALS						154	72	144	120	216	6	4	6	8	240

EROSION CONTROL / RESTORATION																
				606.0200	625.0100	625.0500	628.1504	628.1520	628.1905	628.1910	628.2004	628.7555	629.0210	630.0130	630.0500	645.0120
				RIPRAP MEDIUM	TOPSOIL	SALVAGED	SILT FENCE	SILT FENCE	MOBILIZATIONS	MOBILIZATIONS	EROSION MAT	CULVERT PIPE	FERTILIZER TYPE B	SEEDING MIXTURE	SEED WATER	GEOTEXTILE TYPE
STATION	TO	STATION	LOCATION	CY	SY	TOPSOIL	LF	MAINTENANCE	EROSION	EMERGENCY	CLASS I TYPE B	CHECKS	CWT	NO. 30	MGAL	HR
						SY		LF	CONTROL	EROSION	SY	EACH		LB		SY
64+19	-	309+21	STH 89	20	250	989	3,935	3,935	1	2	989	44	2	20	100	15
PROJECT TOTALS				20	250	989	3,935	3,935	1	2	989	44	2	20	100	15

ALL ITEMS CATEGORY 0010 THIS SHEET

BEAMGUARD								
STATION	TO	STATION	OFFSET	LOCATION	614.0010	614.0397	614.2300	614.2610
					BARRIER SYSTEM	GUARDRAIL MOW	MGS GUARDRAIL 3	MGS GUARDRAIL
					GRADING SHAPING	STRIP EMULSIFIED		TERMINAL EAT
					FINISHING	ASPHALT	LF	TERMINAL EAT
					EACH	SY		EACH
276+21	-	282+02	RT	STH 89	2	226	475	2
276+48	-	281+04	LT		2	177	350	2
291+42	-	296+48	RT		2	197	400	2
291+94	-	296+75	LT		2	187	375	2
PROJECT TOTALS					8	787	1,600	8

BARRIER SYSTEM GRADING SHAPING FINISHING, ITEM 614.0010 - ITEM DETAIL

LOCATION				*CUT	*FILL	*BURROW	*Salvage Topsoil	*FERTLIZER	*SEEDING MIXTURE NO. 30	*EROSION MAT CLASS I TYPE B
STATION	TO	STATION	OFFSET	CY	CY	CY	SY	CWT	LB	SY
241+10	-	245+10	LT/RT	60	32	0	760	1		760
276+21	-	282+02	LT/RT	5	200	195	2709	1		2709
291+42	-	296+48	LT/RT	56	170	114	2675	1		2675
PROJECT TOTAL				61	370	309	5384	3	0	5384

*ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY

ALL ITEMS CATEGORY 0010 THIS SHEET

TRAFFIC CONTROL														
FOR INFORMATION ONLY		643.0300	643.0420		643.0705		643.0715		643.0900		643.1050		643.5000	648.0100
		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 SIGNS PCMS		TRAFFIC CONTROL	LOCATING NO-PASSING ZONES
		DAY	* EACH	DAY	* EACH	DAY	* EACH	DAY	* EACH	DAY	* EACH	DAY	EACH	MI
STH 89		-	74	4,006	148	7,052	-	-	54	5,346	2	14	1	-
DETOUR	120	-	-	-	-	-	-	-	150	14,850	-	-	-	-
UNDISTRIBUTED	100	5,000	-	-	-	-	-	5,000	-	-	-	-	-	4
PROJECT TOTALS		5,000		4,006		7,052		5,000		20,196		14	1	4

FINISHING ROADWAY	
213.0100.01 FINISHING ROADWAY (PROJECT) (01. 3390-08-70)	
PROJECT	EACH
3390-08-70	1
PROJECT TOTAL	1

MOBILIZATION	
619.1000 MOBILIZATION	
PROJECT	EACH
3390-08-70	1
PROJECT TOTAL	1

643.092 TRAFFIC CONTROL COVERING SIGNS TYPE II			
LOCATION	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS
DETOUR	5	1	5
PROJECT TOTALS	5		

ALL ITEMS CATEGORY 0010 THIS SHEET

PAVEMENT MARKING											
STATION	TO	STATION	LOCATION	646.1020		646.1040		646.2040		646.4040	646.6120
				MARKING LINE EPOXY 4-INCH		MARKING LINE GROOVED WET REF EPOXY 4-INCH		MARKING LINE GROOVED WET REF EPOXY 6-INCH		MARKING LINE GROOVED WET REF EPOXY 10-INCH	MARKING STOP LINE EPOXY 18-INCH
				WHITE LF	YELLOW LF	WHITE LF	YELLOW LF	WHITE LF	YELLOW LF	LF	LF
64+19	-	125+34	STH 89	-	-	-	-	11,967	7,384	-	-
125+34	-	204+60		-	-	-	-	15,653	6,337	-	-
204+60	-	270+77		-	-	-	-	13,036	8,303	-	-
270+77	-	297+43		-	-	-	-	5,232	4,225	-	-
297+43	-	309+21		-	-	-	-	1,981	3,871	-	-
-	-	-	STH 11	-	-	-	-	517	635	84	101
-	-	-	R AND D TOWNLINE RD	-	208	-	-	-	-	-	45
-	-	-	SHADEL RD	-	198	-	-	-	-	-	48
-	-	-	KILKENNY RD	-	80	-	-	-	-	-	22
-	-	-	TOWN HALL RD	-	134	-	-	-	-	-	29
-	-	-	CTH A	-	-	181	382	-	-	-	44
SUBTOTALS				-	620	181	382	48,386	30,755	-	-
PROJECT TOTALS					620	563		79,141		84	289

ALL ITEMS CATEGORY 0010 THIS SHEET

CONSTRUCTION STAKING

				650.6000	650.8000	650.9911.01	650.9920
						CONSTRUCTION STAKING	
					CONSTRUCTION	SUPPLEMENTAL	
				CONSTRUCTION	STAKING	CONTROL (3390-	CONSTRUCTION
				STAKING PIPE	RESURFACING	08-00) (01. STH	STAKING SLOPE
				CULVERTS	REFERENCE	89)	STAKES
				EACH	LF	EACH	LF
STATION	TO	STATION	LOCATION				
64+19	-	309+21	STH 89	8	24,502	1	3,100
PROJECT TOTAL				8	24,502	1	3,100

PUBLIC LAND SURVEY MONUMENT VERIFY AND RESET

		680.0100
		PUBLIC LAND
		REFERENCE
		MONUMENT
		VERIFY AND
		RESET
STATION	OFFSET	EACH
125+82	18' RT	1
125+83	1' RT	1
152+24	1' RT	1
178+66	4' RT	1
205+08	2' RT	1
231+50	3' RT	1
257+96	20' RT	1
284+42	12' RT	1
PROJECT TOTAL		8

FIELD OFFICE

	SPV.0060.05
	SPECIAL (05.
	FIELD OFFICE
	TYPE T)
LOCATION	EACH
3390-08-70	1
PROJECT TOTAL	1

ALL ITEMS CATEGORY 0010 THIS SHEET

3

PWL MIXTURE TABLE

DESCRIPTION	STATION	MIX	UNDERLYING SURFACE	BID ITEMS	TONS	THICKNESS	QMP TO USE	
							MIX ACCEPTANCE	DENSITY ACCEPTANCE
12' LANE	64+19 TO 71+00	3LT 58-28S	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3LT 58-28S	188	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	INCENTIVE DENSITY PWL HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.01
12' LANE	64+19 TO 71+01	4LT 58-28S	3LT 58-28S	HMA PAVEMENT 4LT 58-28S	188	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	INCENTIVE DENSITY PWL HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.01
8' SHOULDER	64+19 TO 71+00	3LT 58-28S	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3LT 58-28S	32	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
8' SHOULDER	64+19 TO 71+01	4LT 58-28S	3LT 58-28S	HMA PAVEMENT 4LT 58-28S	32	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
12' LANE	71+00 TO 309+21	3LT 58-28S	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3LT 58-28S	8620	2.25	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	INCENTIVE DENSITY PWL HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.01
12' LANE	71+00 TO 309+21	4LT 58-28S	3LT 58-28S	HMA PAVEMENT 4LT 58-28S	6747	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	INCENTIVE DENSITY PWL HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.01
3' SHOULDER	71+00 TO 309+21	3LT 58-28S	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3LT 58-28S	2138	2.25	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
3' SHOULDER	71+00 TO 309+21	4LT 58-28S	3LT 58-28S	HMA PAVEMENT 4LT 58-28S	1670	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT (CORE ONLY PROJECT) SPV.0055.02	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE

NOTE: ACTUAL QUANTITIES ELEGIBLE FOR INCENTIVE WILL BE DETERMINDED BY THE ENGINEER

3

				460-PWL			
				460.0105.S	SPV.0055.01 SPECIAL (01. HMA Pavement Percent Within Limits (PWL) QMP, Core Only Project; Incentive Density PWL HMA Pavement)	SPV.0055.02 SPECIAL (02. HMA PAVEMENT PERCENT WITHIN LIMITS (PWL) QMP, CORE ONLY PROJECT; INCENTIVE AIR VOIDS HMA PAVEMENT)	SPV.0055.03 SPECIAL (03. HMA PAVEMENT LONGITUDINAL JOINT DENSITY, CORE ONLY PROJECT; INCENTIVE DENSITY HMA PAVEMENT LONGITUDINAL JOINTS)
STATION	TO	STATION	LOCATION	HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	DOL	DOL	DOL
64+19	-	309+21		2	14,430	31,539	4,910
TOTAL 0010				2	14,430	31,539	4,910

ALL ITEMS CATEGORY 0010 THIS SHEET

STH 11/14 & STH 89
WALWORTH COUNTY
CATEGORY 0010
F64-0022

PARTIAL TRAFFIC SIGNAL REMOVAL	
204.9060.S.01 PARTIAL TRAFFIC SIGNAL REMOVAL	
LOCATION	EACH
STH 11/14 & STH 89	4
TOTAL	4

REMOVING PULL BOXES	
653.0905 REMOVING PULL BOXES	
PULL BOX NO.	EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
TOTAL	6

TYPE II PERMANENT SIGNING															
3390-08-70 sth 89															
SIGN NO.		SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2102	638.2602	638.3000	634.0618	634.0814	637.0620	REMARKS / NEW SIGN LOCATION
			W	x	H	SIGNS TYPE II REFLECTIVE H [SF]	SIGNS TYPE II RELFECTIVE F [SF]	SIGNS TYPE II REFLECTIVE H FOLDING (SF)	MOVING SIGNS TYPE II [EA]	REMOVING SIGNS TYPE II (EA)	REM SMALL SIGN SUP [EA]	POSTS WOOD 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	SIGNS FLAGS PERMANENT TYPE II EACH	
1	J3-2(2S) MB4-1 MB3-3		48	x	69	23				1	2	2			
	M1-1 MB6-1 MB4-1 MB3-1	IH 43	24	x	24										
			21	x	21										
			24	x	12										
			24	x	12										
2	M1-1 MB6-1 J3-4(2S) M3-4 M1-4	IH 43 USH 14	24	x	24	38.000				1	3	3			
			21	x	21										
			24	x	12										
			24	x	24										
	M6-1 M3-4 M1-6 M6-1 M3-1 M1-6 M6-1 M3-2 M1-6	STH 11 STH 89 STH 11	24	x	24										
			21	x	21										
			24	x	12										
			24	x	24										
			24	x	24										
3	J3-2(2S) M3-2		48	x	57	19.000				1	1	1			
			24	x	12										
	M1-4 M6-1 M3-1	USH 14	24	x	24										
			21	x	21										
			24	x	12										
	M1-6 M6-1 J4-1(2S)	STH 89	24	x	24										
			21	x	21										
			48	x	36	12.000				1	1	1			
	M3-2 M1-4 MB4-1	USH 14	24	x	12										
			24	x	24										
			24	x	12										
5	M1-1 J3-1(2S) MB4-1	IH 43	24	x	24	9.500				1	1	1			
			24	x	57										
			24	x	12										
			24	x	24										
			21	x	21										
6	R1-1(3)	IH 43	36	x	36	7.460				1	1	1			
6A	R1-3P(3)		24	x	9	1.500								6	
7	R1-1(3)		36	x	36	7.460				1					
7A	R1-3P(3)		24	x	9	1.500				1				7	
8	R1-1(3)		36	x	36	7.460				1	1	1			
8A	R1-3P(3)		24	x	9	1.500								8	
9	R1-1(3)		36	x	36	7.460				1					
9A	R1-3P(3)		24	x	9	1.500				1				9	
10	J4-1(2S)		24	x	36	6.000				1	1	1			
11	M3-1 M1-6	STH 89	24	x	12										
12	D2-1(2S)	WHITEWATER 12	24	x	24					1	2	2			
13	W1-8		84	x	15	8.750								11	
14	W1-8								1					11	
15	R1-1 D1-3	DARIEN (ARROW AHEAD) DELAVAN (ARROW LEFT) JANESVILLE (ARROW RIGHT)	72	x	42	21.000				1	2	2		11	

TYPE II PERMANENT SIGNING

3390-08-70 sth 89

SIGN NO.		SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGN TYPE II REFLECTIVE H [SF]	637.2230 SIGN TYPE II RELFECTIVE F [SF]	637.2215 SIGN TYPE II REFLECTIVE H FOLDING (SF)	638.2102 MOVING SIGN TYPE II [EA]	638.2602 REMOVING SIGN TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	637.0620 SIGN FLAGS PERMANENT TYPE II EACH	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
16	J3-5(2S) M3-2 M1-6 M6-1 M3-2 M1-4 M1-6 M3-4 M1-4 M6-1 M3-4 M6-1 M4-5 M1-5A M6-1	STH 11 USH 14 USH 14 STH 11 CTH M	120 x 57 24 x 12 24 x 24 21 x 21 24 x 12 24 x 24 21 x 21 24 x 12 24 x 24 21 x 21 24 x 24 21 x 21 24 x 12 24 x 24 21 x 21	47.500				1	3	3				
17	R1-1(3)		36 x 36	7.460				1						
17A	R1-3P(3)		24 x 9	1.500				1					17	
18	R1-1(3)		36 x 36	7.460				1	1	1				
18A	R1-3P(3)		24 x 9	1.500	4.000			1	1	1			18	REMOVAL PART OF # 18 2 FOOT MOUNTING HEIGHT
19	W12-1D(2S)		24 x 24					1	1	1				
20	J3-3(2S) M3-1 M1-6	STH 89	72 x 57 24 x 12 24 x 24	28.500				1	2	2				
	M6-1 M3-2 M1-4 M6-1 MB4-1	USH 14	21 x 21 24 x 12 24 x 24 21 x 21 24 x 12											
21	M1-1 MB6-1 R1-1(3)	IH 43	24 x 24 21 x 21 36 x 36	7.460				1					21	MOUNT ON EXISTING TYPE I POLE. SEE ELECTRICAL QTYS FOR REMOVAL OF HARDWIRE. BECOMES SOLOR. SEE QTYS FOR SOLAR BEACONS
21A	R1-3P(3)		24 x 8	1.500				1						
22	J4-2(2S) M3-2		48 x 36 24 x 12	12.000				1	1	1				
	M1-4 MB4-1 M1-1	USH 14 IH 43	24 x 24 24 x 12 24 x 24											
23	R1-2(2S)		36 x 31	3.880	6.250			1	1	1	1			
24	W14-1(2S)		30 x 30					1	1		1			
25	I55-56(2S)		30 x 18	3.750				1	1	1				
25A	I55-56P(2S)	GAMMA ALPHA OMEGA UW-W GAMMA JEWELS	30 x 18	3.750									25	REMOVAL PART OF # 25
26	R1-1(3)		36 x 36	7.460				1	1	1				
27	R2-1(2S)	SPEED LIMIT 55	24 x 30	5.000				1	1	1				
28	D12-2B(2S)		84 x 36	21.000				1	2	2				
29	W14-3(2S)		48 x 36		5.560			1	1	1				
30	W1-2L(2S)		30 x 30		6.250			1	1	1				

TYPE II PERMANENT SIGNING				3390-08-70 sth 89											
SIGN NO.		SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2102	638.2602	638.3000	634.0618	634.0814	637.0620	REMARKS / NEW SIGN LOCATION
			W	x	H	SIGNS TYPE II REFLECTIVE H [SF]	SIGNS TYPE II RELFECTIVE F [SF]	SIGNS TYPE II REFLECTIVE H FOLDING (SF)	MOVING SIGNS TYPE II [EA]	REMOVING SIGNS TYPE II (EA)	REM SMALL SIGN SUP [EA]	POSTS WOOD 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	SIGNS FLAGS PERMANENT TYPE II EACH	
31	W3-1(2S)		36	x	36		9.000			1	1	1			
32	W3-1(2S)		36	x	36		9.000			1	1	1			
33	J2-4(2S)		96	x	57	38.000				1	3	3			
	M3-2	STH 11	24	x	12										
	M1-6		24	x	24										
	M5-1L		21	x	21										
	M3-2		24	x	12										
	M1-4	USH 14	24	x	24										
	M6-1		21	x	21										
	M3-4		24	x	12										
	M1-4	USH 14	24	x	24										
	M5-1R		21	x	21										
	M3-4		24	x	12										
	M1-6	STH 11	24	x	24										
34	M5-1R		21	x	21					1	1	1			
35	W3-1(2S)		36	x	36		9.000			1	1	1			4 FOOT MOUNTING HEIGHT
36	W1-8(2S)		18	x	24		3.000			1	1	1			4 FOOT MOUNTING HEIGHT
37	W1-8(2S)		18	x	24		3.000			1	1	1			4 FOOT MOUNTING HEIGHT
38	W1-8(2S)		18	x	24		3.000			1	1	1			4 FOOT MOUNTING HEIGHT
39	W1-8(2S)		18	x	24		3.000			1	1	1			4 FOOT MOUNTING HEIGHT
40	NOT USED														
41	W1-2L(2S)		30	x	30		6.250			1	1	1			
42	W1-6(2S)		48	x	24		12.000			1	1	1			
43	W14-3(2S)		48	x	36		6.000			1	1	1			
44	J1-3(2S)		72	x	39	19.500				1	2	2			
	M2-1		21	x	15										
	M1-4	USH 14	24	x	24										
	M2-1		21	x	15										
	M1-6	STH 11	24	x	24										
	M4-6		24	x	12										
	M1-6	STH 89	24	x	24										
45	W1-6(2S)		48	x	24		12.000			1	1	1			
46	W14-3(2S)		48	x	36		5.560			1	1	1			
47	W14-3(2S)		48	x	36		5.560			1	1	1			
48	W1-2R(2S)		30	x	30		6.250			1	1	1			
49	W2-1(2S)		30	x	30		6.250			1	1	1			
50	D1-61	TOWN LINE RD	66	x	24	11.000				1	2	2			
		ARROW RIGHT AND LEFT													
51	R1-1(3)		36	x	36	7.460				1	1	1			
52	R1-1(3)		36	x	36	7.460				1	1	1			
53	W14-3(2S)		48	x	36		5.560			1	1	1			
54	W14-3(2S)		48	x	36		5.560			1	1	1			
55	D1-61	TOWN LINE RD	66	x	24	11.000				1	2	2			
		ARROW RIGHT AND LEFT													
56	W14-3(2S)		48	x	36		6.000			1	1	1			
57	W14-3(2S)		48	x	36		6.000			1	1	1			
58	W14-3(2S)		48	x	36		6.000			1	1	1			
59	J1-1(2S)		24	x	39	6.500				1	1	1			
	M2-1		21	x	15										
	M1-5A	CTH M	24	x	24										
60	J2-1									1	1				

TYPE II PERMANENT SIGNING

3390-08-70 sth 89

SIGN NO.		SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGN TYPE II REFLECTIVE H [SF]	637.2230 SIGN TYPE II RELFECTIVE F [SF]	637.2215 SIGN TYPE II REFLECTIVE H FOLDING (SF)	638.2102 MOVING SIGN TYPE II [EA]	638.2602 REMOVING SIGN TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	637.0620 SIGN FLAGS PERMANENT TYPE II EACH	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
61	I55-56(2S)	SEGMENT AVAILABLE SHADEL RD (ARROW LEFT) HARRIS RD (ARROW RIGHT)	30 x 18	3.750				1	1	1			61	REMOVAL PART OF # 61
61A	I55-56P(2S)		30 x 18	3.750										
62	D1-2		72 x 30	15.000				1	2	2				
63	J3-1(2S)	CTH M STH 89 CTH M	24 x 45	7.500				1	1	1				
	M1-5A		24 x 24											
	M6-1		21 x 21											
64	R1-1(3)		36 x 36	7.460				1	1	1				
65	J13-1(2S)		48 x 45	15.000				1	1	1				
	MODIFIED													
	M1-6		24 x 24											
	M6-4		21 x 21											
	M4-6		24 x 12											
	M1-5A	CTH M	24 x 24											
66	I55-56(2S)	CHRISTUS LUTHERAN YOUTH GROUP	30 x 18	3.750				1	1	1			66	REMOVAL PART OF # 66
66A	I55-56P(2S)		30 x 18	3.750										
67	J4-1(2S)		24 x 36	6.000				1	1	1				
68	M3-1	STH 89	24 x 12											
	M1-6		24 x 24											
	J3-1(2S)	CTH M	24 x 45	7.500				1	1	1				
	M1-5A		24 x 24											
69	M6-1	STH 89	21 x 21											
	R1-1(3)		36 x 36	7.460				1	1	1				
	J4-1(2S)		24 x 36	6.000				1	1	1				
	M3-3		24 x 12											
	M1-6		24 x 24											
71	R2-1(2S)	SPEED LIMIT 55	24 x 30	5.000				1	1	1				
72	R2-1(2S)		24 x 30	5.000				1	1	1				
73	W14-3(2S)		48 x 36		5.560			1	1	1				
74	J1-1(2S)		24 x 39	6.500				1	1	1				
	M2-1		21 x 15											
75	M1-5A	CTH M	24 x 24											
	J2-1							1	1					
76	D1-2	HARRIS RD (ARROW LEFT)	72 x 30	15.000				1	2	2				
		SHADEL RD (ARROW RIGHT)												
77	W14-3(2S)		48 x 36		5.560			1	1	1				
78	W14-3(2S)		48 x 36		5.560			1	1	1				
79	D1-1	KILKENNY RD(ARROW RIGHT)	84 x 15	8.750				1	2	2				
80	W14-3(2S)		48 x 36		5.560			1	1	1				
81	R1-1(3)		36 x 36	7.460				1	1	1				
82	W1-7(2S)		48 x 24		8.000			1	1	1				
83	W1-4L(2S)		30 x 30		6.250			1	1	1				
84	D1-1	KILKENNY RD (ARROW LEFT)	84 x 15	8.750				1	2	2				
85	W14-3(2S)	WHITEWATER LAKE REC AREA	48 x 36		5.560			1	1	1			86	4 FOOT MOUNTING HEIGHT BROWN SIGN
86	W1-8(2S)		18 x 24		3.000			1	1	1				
87	W1-8(2S)		18 x 24		3.000									
88	D7-77R(2S)		78 x 36	19.500				1	2	2				
89	W1-8(2S)	ARROW RIGHT	18 x 24		3.000			1	1	1			89	4 FOOT MOUNTING HEIGHT
90	W1-8(2S)		18 x 24		3.000									

TYPE II PERMANENT SIGNING

3390-08-70 sth 89

SIGN NO.	SIGN MESSAGE	SIGN SIZE W X H [IN.] X [IN.]	637.2210 SIGN TYPE II REFLECTIVE H [SF]	637.2230 SIGN TYPE II RELLECTIVE F [SF]	637.2215 SIGN TYPE II REFLECTIVE H FOLDING (SF)	638.2102 MOVING SIGN TYPE II [EA]	638.2602 REMOVING SIGN TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	637.0620 SIGN FLAGS PERMANENT TYPE II EACH	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
91	W1-8(2S)	18 X 24		3.000			1	1	1			91	4 FOOT MOUNTING HEIGHT
92	W1-8(2S)	18 X 24		3.000									
93	J11-1(2S)	24 X 39	6.500				1	1	1				
94	M2-1 M1-5A R1-1(3)	21 X 15 24 X 24 36 X 36	7.460				1	1	1			95	4 FOOT MOUNTING HEIGHT
95	W1-8(2S)	18 X 24		3.000			1	1	1				
96	W1-8(2S)	18 X 24		3.000							2		REPLACE PERMANENT FLAGS REMOVAL OF FLAGS INCLUDED WITH # 97
97	W2-1(2S)	30 X 30		6.250			1	1	1		2		REMOVAL OF FLAGS INCLUDED WITH # 98
98	W2-1(2S)	30 X 30		6.250			1	1	1				
99	W1-7(2S)	48 X 24		8.000			1	1	1				
100	R2-1(2S)	24 X 30	5.000				1	1	1				
101	W1-8(2S)	18 X 24		3.000			1	1	1			101	4 FOOT MOUNTING HEIGHT
102	W1-8(2S)	18 X 24		3.000									
103	W1-8(2S)	18 X 24		3.000			1	1	1			103	4 FOOT MOUNTING HEIGHT
104	W1-8(2S)	18 X 24		3.000									
105	W1-8(2S)	18 X 24		3.000			1	1	1			105	4 FOOT MOUNTING HEIGHT
106	W1-8(2S)	18 X 24		3.000									
107	W1-8(2S)	18 X 24		3.000			1	1	1			107	4 FOOT MOUNTING HEIGHT
108	W1-8(2S)	18 X 24		3.000									
109	J3-2(2S)	24 X 45	7.500				1	1	1				
	M1-5A	24 X 24											
	M6-4	21 X 21											
110	R1-1(3)	36 X 36	7.46				1	1	1				
111	J13-1(2S)	24 X 45	7.500				1	1	1				
	M1-6	24 X 24											
112	M6-4	21 X 21											
	J13-1(2S)	24 X 45	7.500				1	1	1				
	M1-6	24 X 24											
	M6-4	21 X 21											
113	R1-1(3)	36 X 36	7.460				1						MOUNT ON EXISTING TYPE I POLE
113A	W4-4C(3)	36 X 15		3.750			1						MOUNT ON EXISTING TYPE I POLE
114	R1-1(3)	36 X 36	7.460				1						MOUNT ON EXISTING TYPE I POLE
114A	W4-4C(3)	36 X 15		3.750			1						MOUNT ON EXISTING TYPE I POLE
115	I55-56(2S)	30 X 18	3.750				1	1	1				
115A	I55-56P(2S)	24 X 45	7.500				1	1	1			115	REMOVAL PART OF # 115
116	J3-2(2S)	24 X 45											
	M1-5A	24 X 24											
	M6-4	21 X 21											
117	R1-1(3)	36 X 36	7.460				1	1	1				
118	W1-6(2S)	48 X 24		8.000			1	1	1				
119	J4-1(2S)	24 X 36	6.000				1	1	1				
	M3-3	24 X 12											
	M1-6	24 X 24											
120	I55-56(2S)	30 X 18	3.750				1	1	1				
120A	I55-56P(2S)	30 X 18	3.750									120	REMOVAL PART OF # 120
121	J4-3(2S)	72 X 36	18.000				1	2	2				
	M3-4	24 X 12											
	M1-4	24 X 24											
	M3-4	24 X 12											
	M1-6	24 X 24											
	MB4-1	24 X 12											
	M1-1	24 X 24											
UNDISTRIBUTED						4				4			
			691.410	279.100	0.000	7	115	121	118	5	4	--	--

3

STOP SIGN BEACONS MISC QUANTITIES				3390-08-70		
LOCATION		Stop Sign	Stop Sign	Stop Sign	Stop Sign	
		Traffic Flashing Beacon System, Solar	Traffic Flashing Beacon System, Solar	Traffic Flashing Beacon System, Solar	Traffic Flashing Beacon System, Solar	
		STH 89 SB at STH 11	USH 14 NB at STH 89	STH 11 WB at STH 89	STH 11 EB at STH 89	
		Each	Each	Each	Each	
		SPV.0060.01	SPV.0060.02	SPV.0060.03	SPV.0060.04	
STH 89 SB at STH 11		1				
USH 14 NB at STH 89			1			
STH 11 WB at STH 89				1		
STH 11 EB at STH 89					1	
TOTAL		1	1	1	1	

3

4

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

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE REFERENCE
SYSTEM COORDINATES (WISCRS) WALWORTH COUNTY, NAD83 (2011) IN SURVEY FEET.
VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES.
GRID DISTANCES MAY BE USED AS GROUND DISTANCES ON THIS EXHIBIT.

ROAD NAME	BASIS OF R/W	YEAR	WIDTH
STH 89	TOWN ROAD RECORD V1 P19	1925	66'
STH 89	3390-00-22	1978	VARIES

JANE M PLUEMER TRUST
UNPLATTED
TAX KEY: C R 1700014

1

CURVE 1
PI STA = 302+73.29
Y = 381545.787
X = 709805.592
DELTA = 89°18'05" LT
D = 5°30'00"
T = 1029.12'
L = 1623.67'
R = 1041.75'
PC STA = 292+44.17
PT STA = 308+67.84

PLE FOR DRAINAGE AND MAINTENANCE

PLE3294+68.97-103.30'PLE4294+69.05-83.30'20.00'20'N13°13'55"W40.00'20.00'576°28'25"W

PLE2294+24.61-102.31'PLE1294+25.60-82.33'

TOWN OF RICHMOND

SE SE

GN

SCALE, FEET
04080

R/W PROJECT NUMBER: 3390-08-20EXHIBIT NUMBER: 4.01

PLE ACQUISITION EXHIBIT
RICHMOND - WHITEWATER
STH11 TO CTH A

STH 89WALWORTH COUNTY

THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 17 TOWN 3
NORTH RANGE 15 EAST IN THE TOWN OF RICHMOND, WALWORTH COUNTY, WISOCNSIN

CONCRETE
MONUMENT
WITH BRASS CAP
Y = 382360.988
X = 709835.437

3
1716
1716
15
T
N
E
S

STH 89

2645.76'
SECTION LINE
N0°17'05"W

2645.76'

117.00'

SW SW

1792.88'

852.88'

93.70'
N89°42'55"E

CONCRETE
MONUMENT
WITH BRASS CAP
Y = 379715.256
X = 709848.584

3
1716
2021
15
T
N
E
S

SCHEDULE OF LANDS
& INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE
PURPOSES ONLY AND ARE SUBJECT TO CHANGE
PRIOR TO THE TRANSFER OF LAND INTERESTS TO
THE DEPARTMENT

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE S.F.
1	JANE M PLUEMER TRUST	PLE	800

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
-------------------	------------------	-------------------

THIS MAP IS APPROVED FOR THE DEPARTMENT OF TRANSPORTATION
REGION AND CITY REGION OFFICE

SIGNATURE: Robert A. DuffekDATE: 8/30/2024

PRINT NAME:

FILE NAME : PLE_EXHIBIT.DWG PLOT DATE : 8/30/2024 8:48 AM R/W PROJECT: R/W PROJ NO

4

R/W PROJECT NUMBER: 3390-08-20EXHIBIT NUMBER: 4.02

TLE ACQUISITION EXHIBIT
RICHMOND - WHITEWATER
STH11 TO CTH A

STH 89WALWORTH COUNTY

SCHEDULE OF LANDS
& INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE
PURPOSES ONLY AND ARE SUBJECT TO CHANGE
PRIOR TO THE TRANSFER OF LAND INTERESTS TO
THE DEPARTMENT

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE S.F.
------------------	----------	----------------------	-------------

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
-------------------	------------------	-------------------

THIS MAP IS APPROVED FOR THE DEPARTMENT OF TRANSPORTATION
REGION AND CITY REGION OFFICE

SIGNATURE: DATE:

PRINT NAME:

FILE NAME : PLE_EXHIBIT.DWG PLOT DATE : 8/30/2024 8:48 AM R/W PROJECT: R/W PROJ NO

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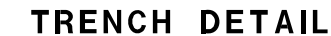
131

Standard Detail Drawing List

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
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
14B28-04A	GUARDRAIL MOW STRIP
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)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-10A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-10B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-11A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D39-03	TRAFFIC CONTROL, DROP-OFF SIGNING



- 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 1½" X 1½" 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.

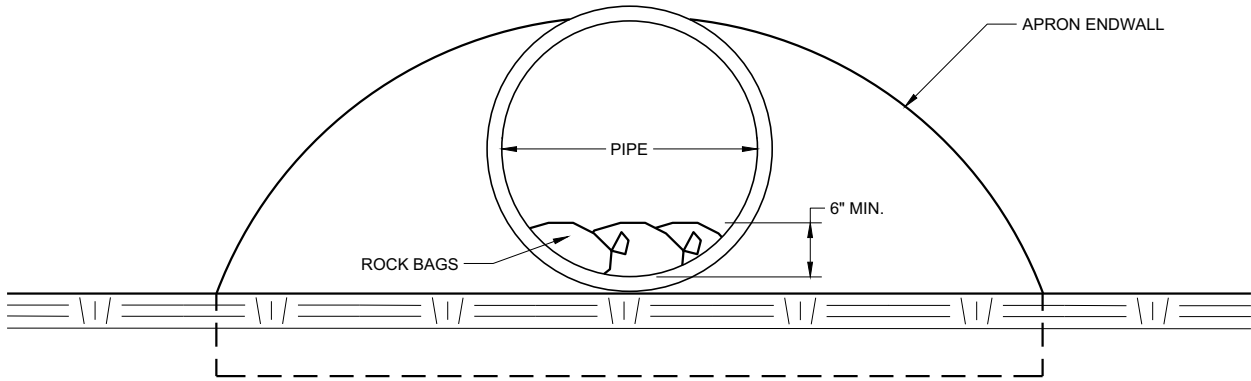


SILT FENCE

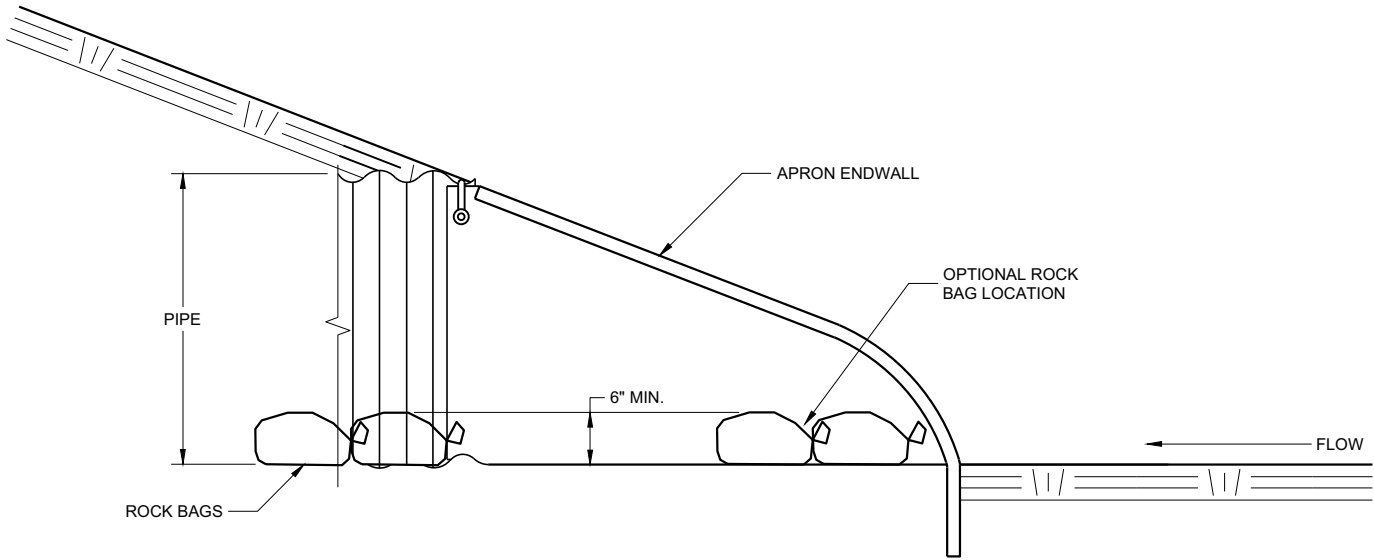
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE _____ /S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT 133 INCHES

FHWA



END VIEW



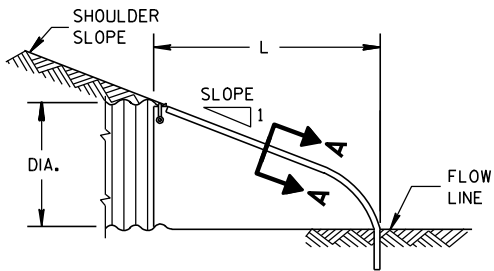
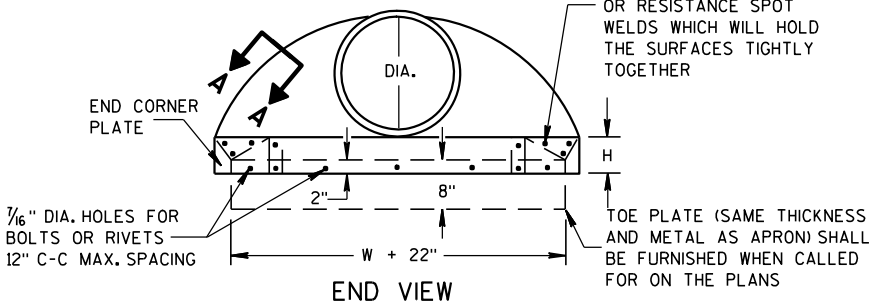
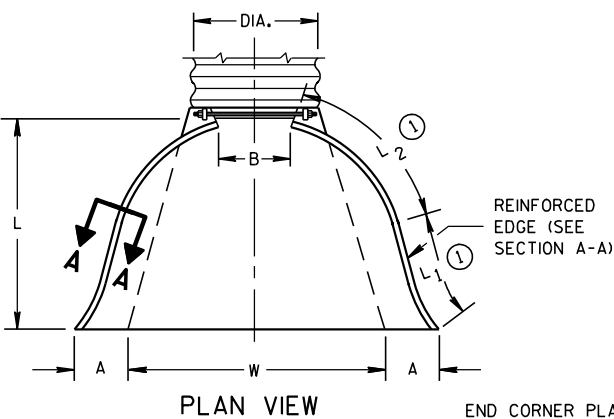
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 134
FHWA	

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ ①	L ₂ ①	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.	

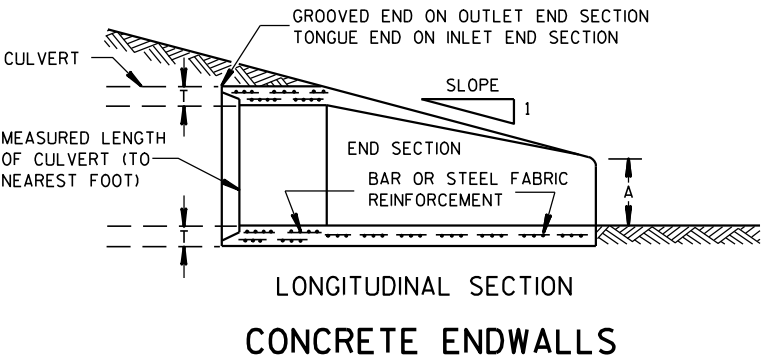
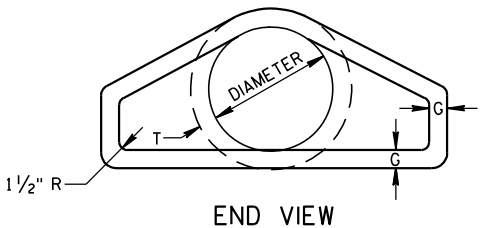
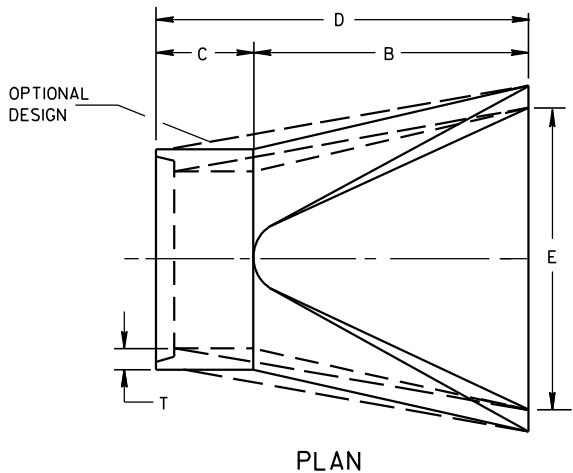
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

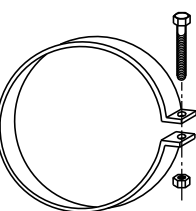
REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ¹ / ₈	72 ¹ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43 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

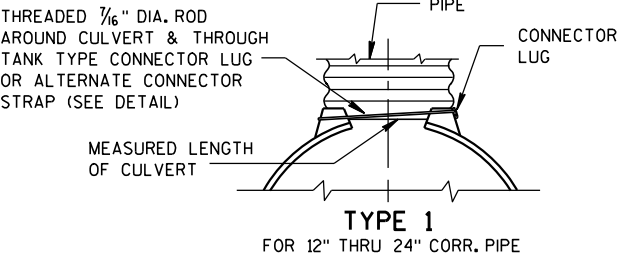


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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

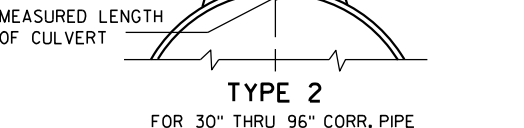


ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP

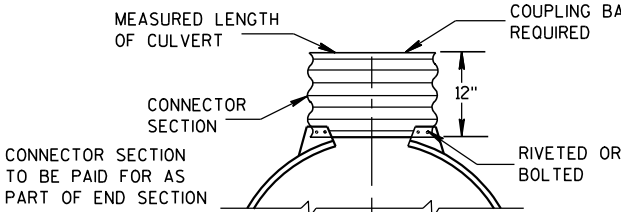


TYPE 1
FOR 12" THRU 24" CORR. PIPE

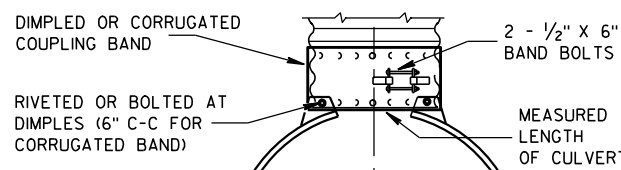
THREADED 1/8" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:

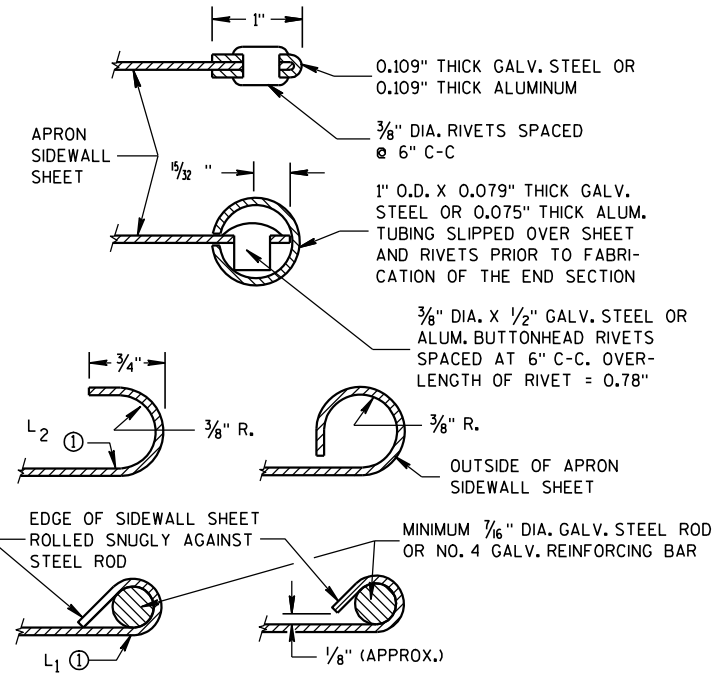
ALL SIZES CORRUGATED CIRCULAR PIPE
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

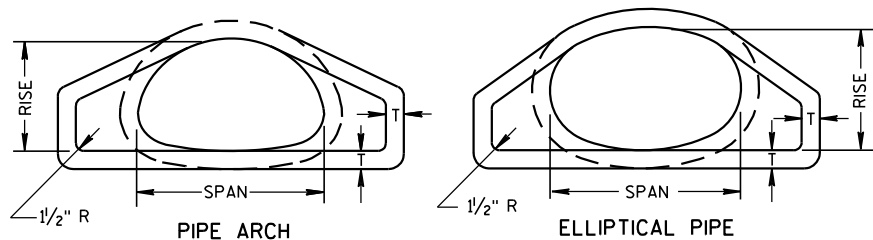
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

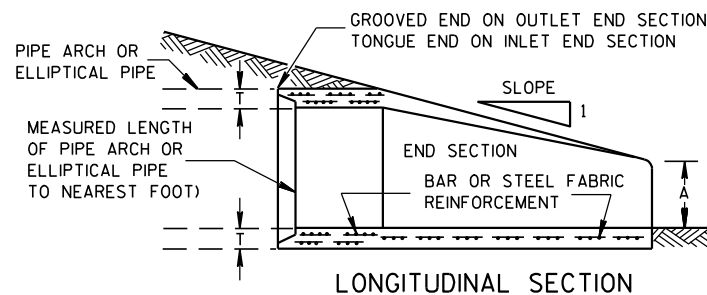
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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	/S/ Rory L. Rhinehart	NEER
DATE		CHIEF ROADWAY DEVELOP	135
FHWA			

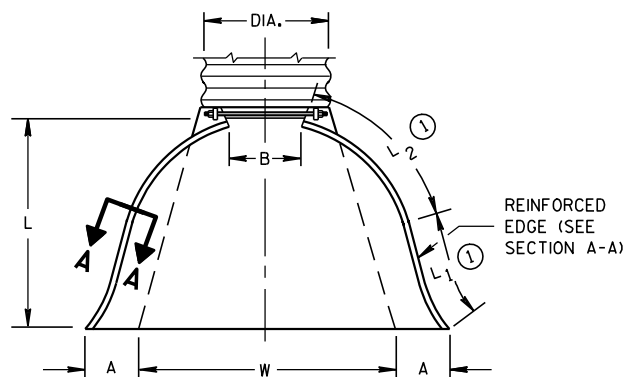


END VIEW

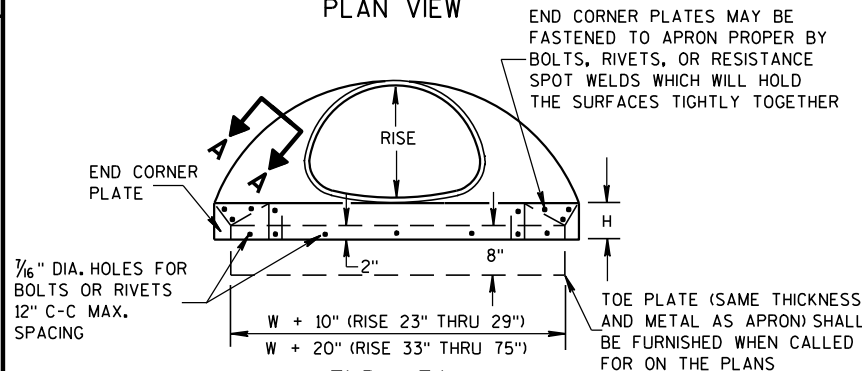


LONGITUDINAL SECTION

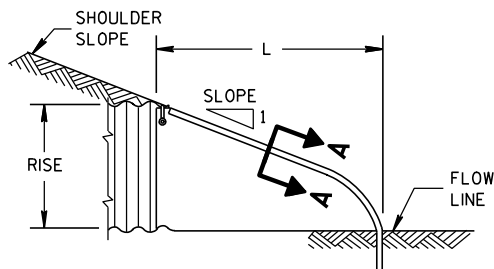
CONCRETE ENDWALLS



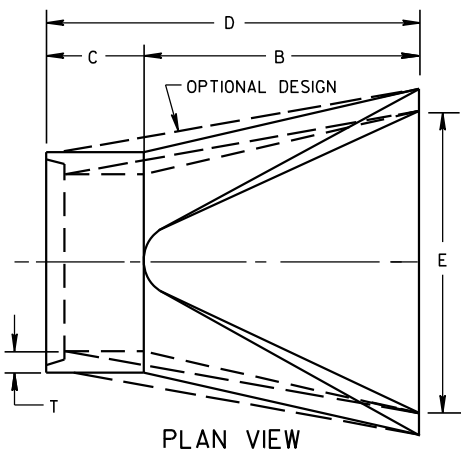
PLAN VIEW



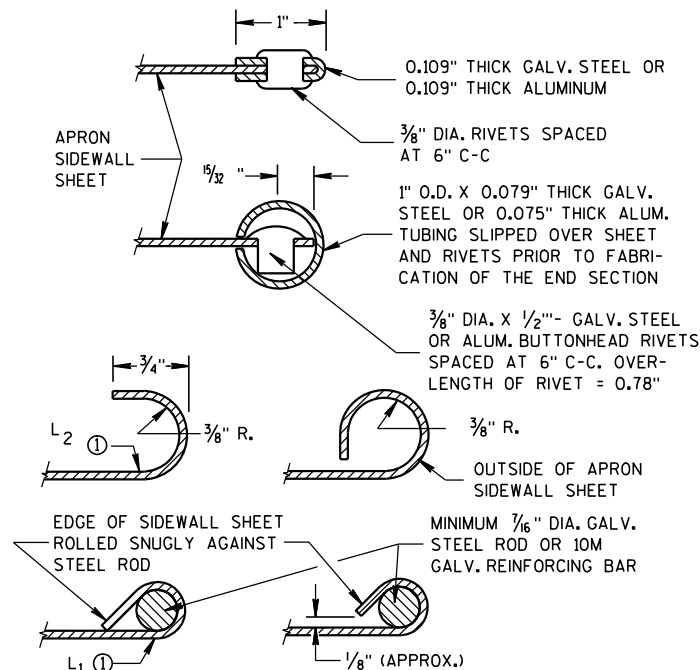
END VIEW



SIDE ELEVATION
METAL ENDWALLS



PLAN VIEW



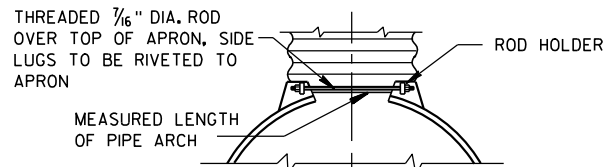
SECTION A-A

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 ①	L2 ①	W (±2")		
					(±1")	(MAX.)	(±1")	(±1 1/2")	①	①	(±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 ①	L2 ①	W (±2")		
					(±1")	(MAX.)	(±1")	(±1 1/2")	①	①	(±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.

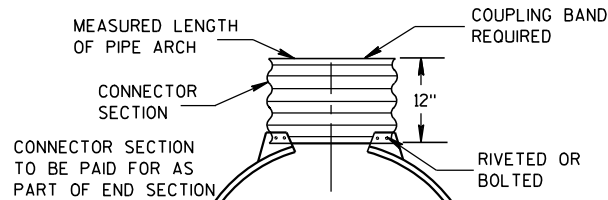
NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



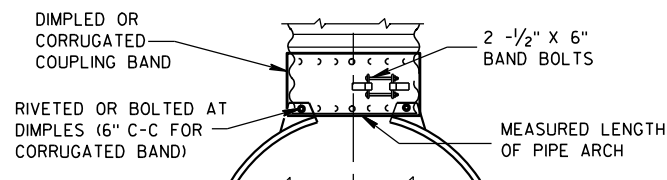
TYPE 2

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

REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	
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 1/16	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	
	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	
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 1/4	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.

① 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.

APRON ENDWALLS FOR
PIPE ARCH AND
ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94

DATE

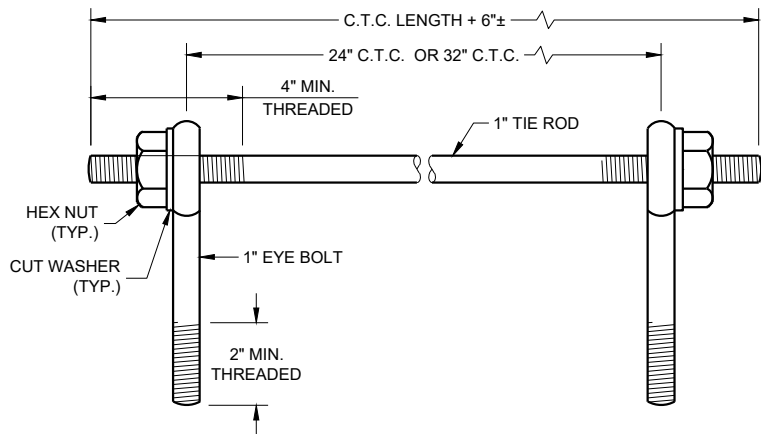
FHWA

/S/ Rory L. Rhinehart

CHIEF ROADWAY DEVELOPER

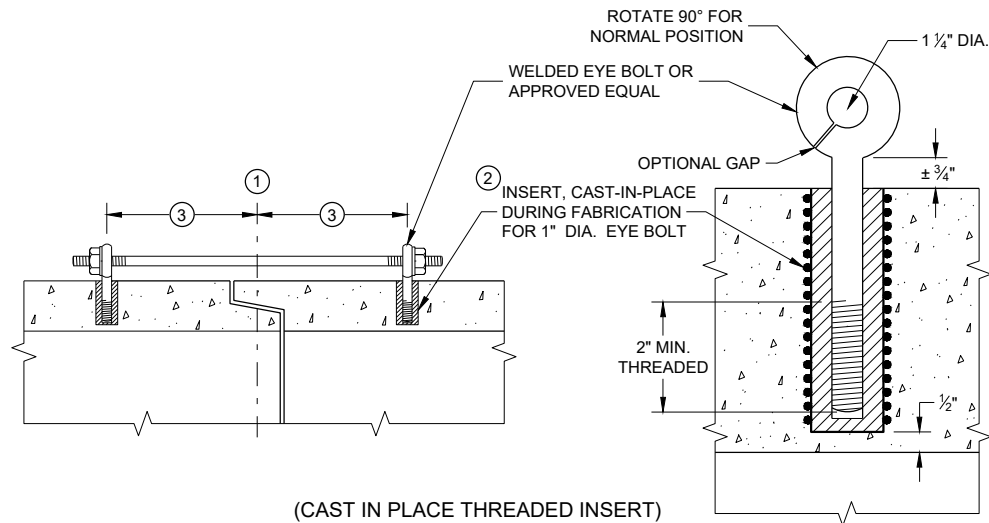
136

ENGINEER



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

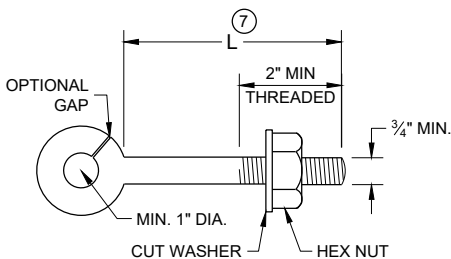
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

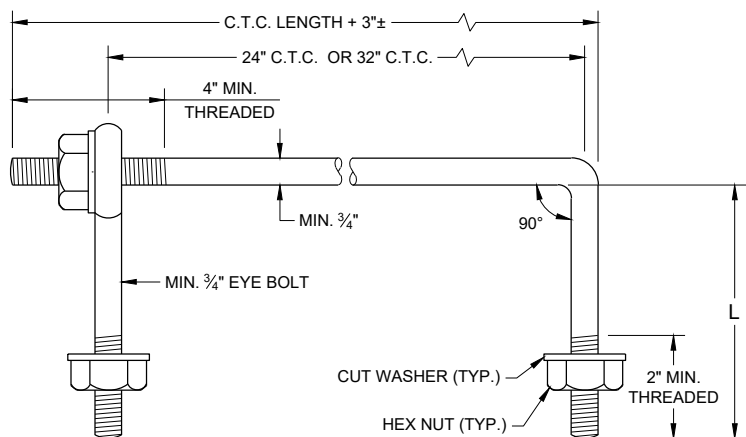
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 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.

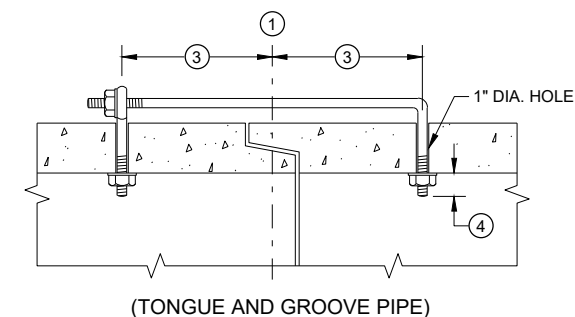


EYE BOLT 7

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

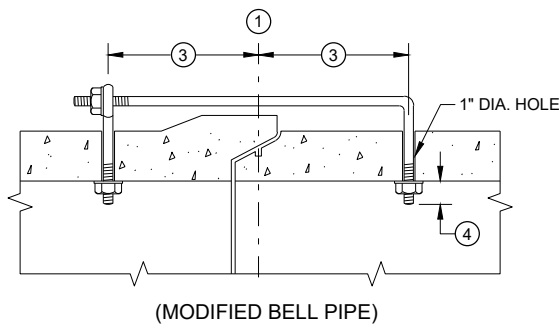


(TONGUE AND GROOVE PIPE)

LONGITUDINAL SECTION

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

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

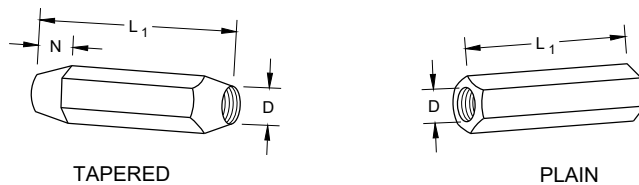


(MODIFIED BELL PIPE)

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 1/16

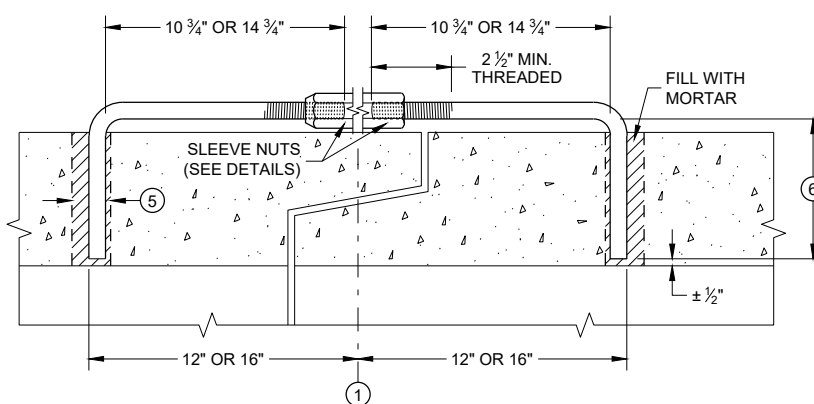
DIMENSIONS SHOWN ARE IN INCHES



TAPERED

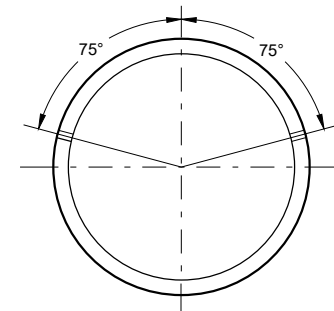
PLAIN

RIGHT AND LEFT THREADS
SLEEVE NUTS



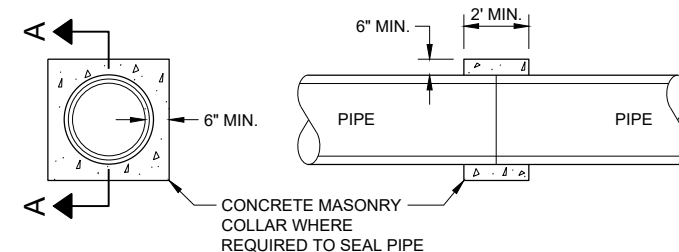
LONGITUDINAL SECTION

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

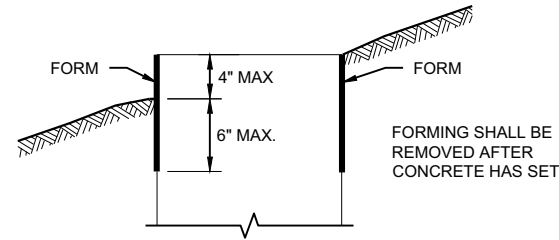
CONCRETE COLLAR DETAIL

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 137
FHWA

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



FORMING DETAIL

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

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

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

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

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

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

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

GENERAL NOTES

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

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

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

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

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

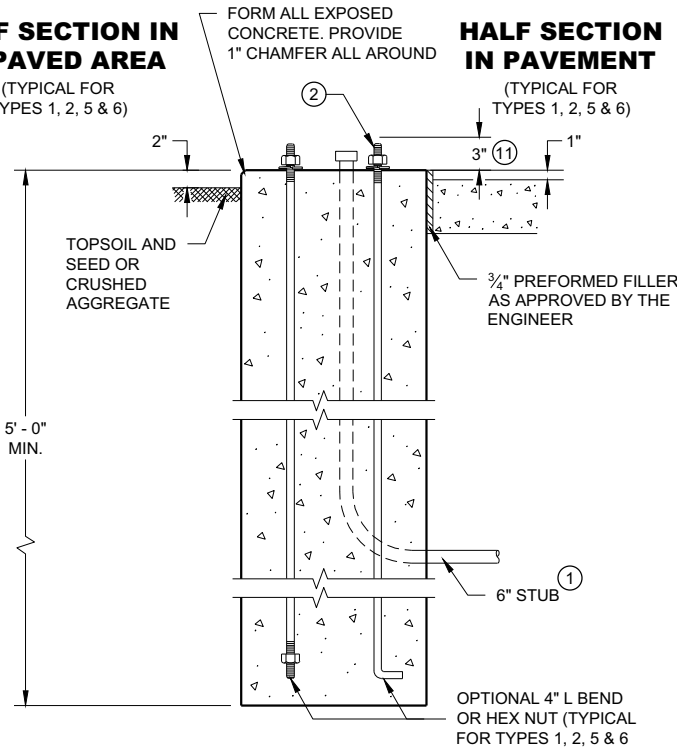
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

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

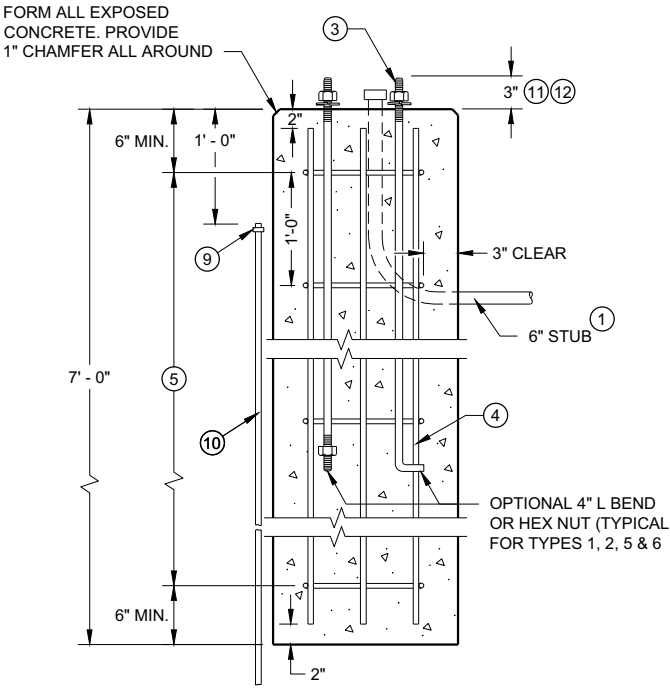
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- 4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



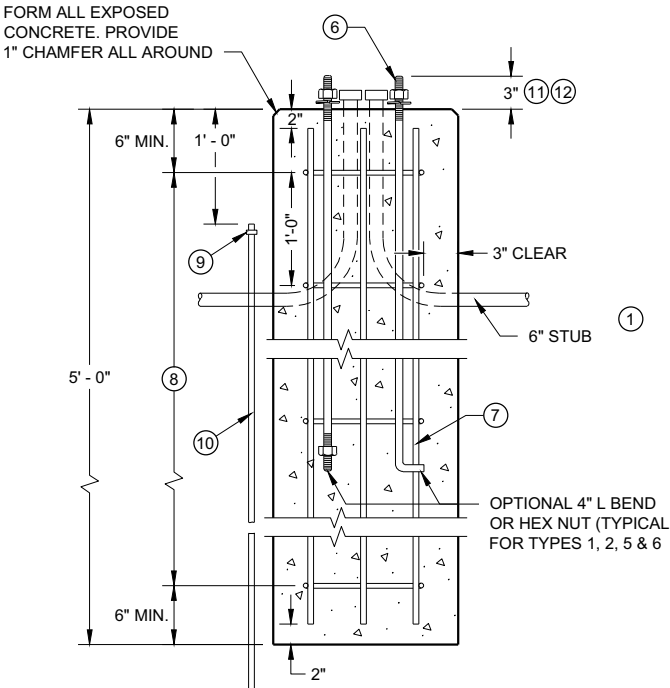
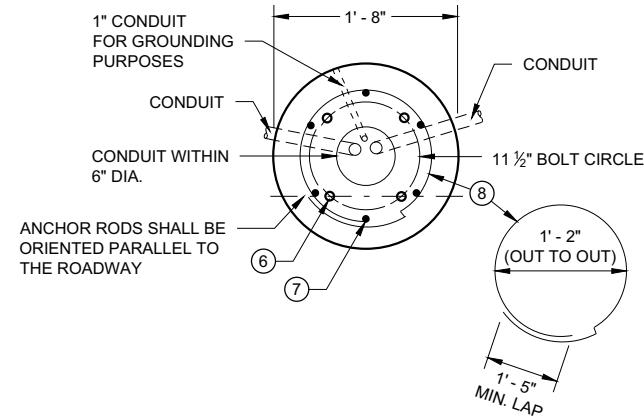
TYPE 1

HALF SECTION IN PAVEMENT

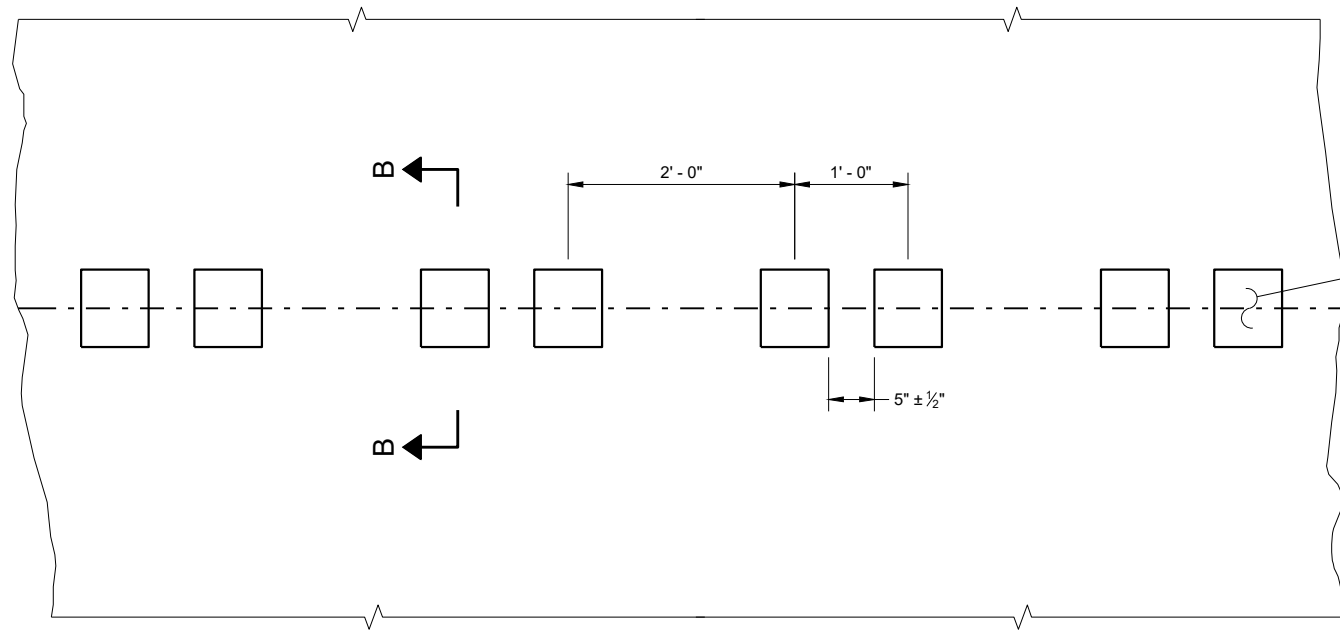


TYPE 2

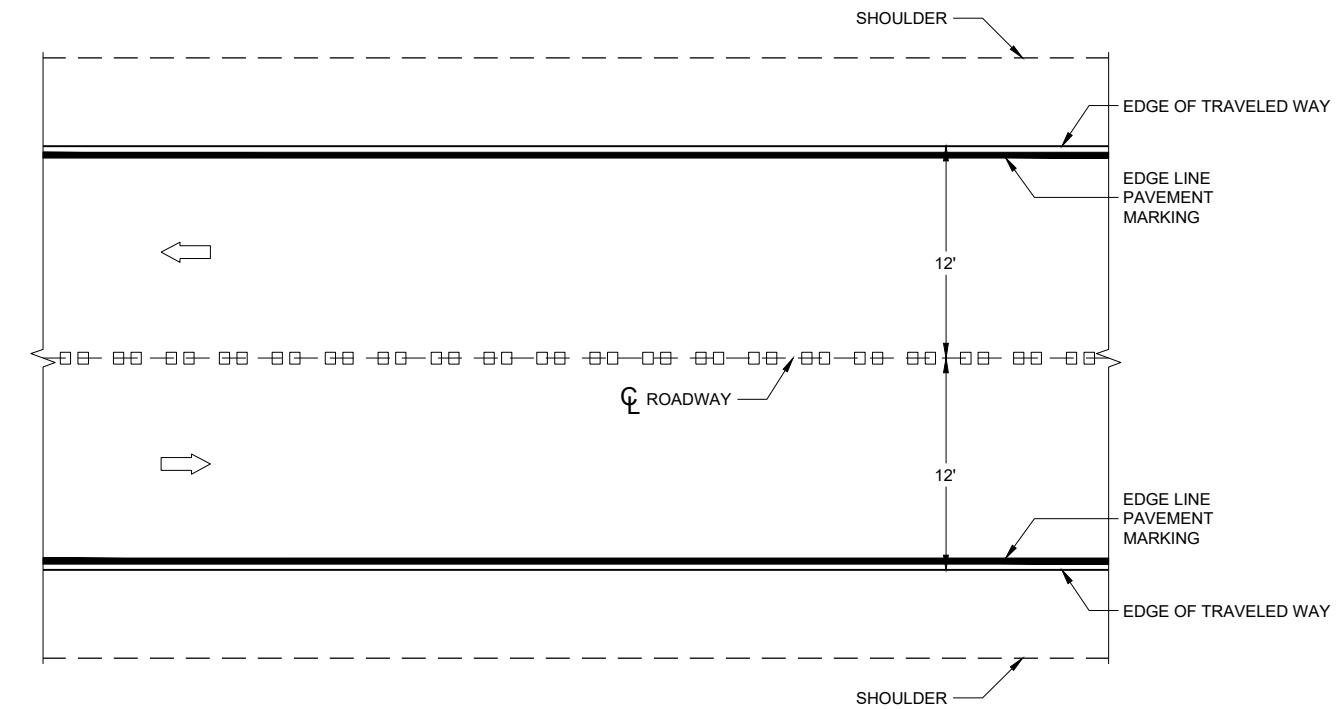
CONCRETE BASES



TYPE 5 & 6

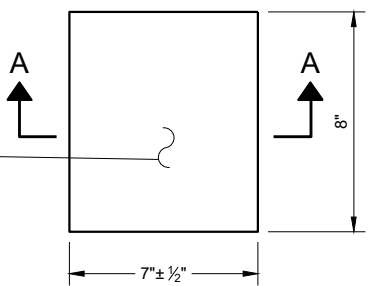


PLAN DETAIL VIEW

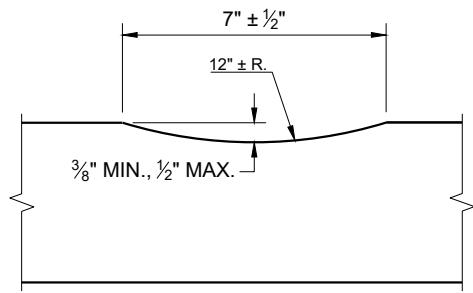


PLAN VIEW

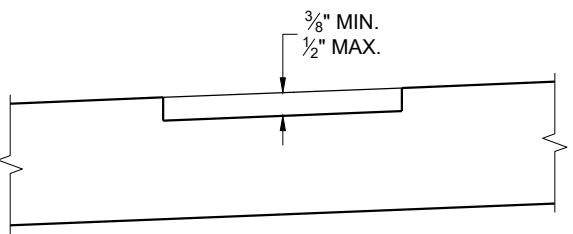
CENTERLINE RUMBLE STRIPS - ASPHALT



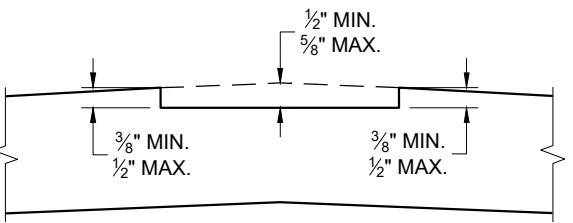
PLAN VIEW
(SINGLE GROOVE)



SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY

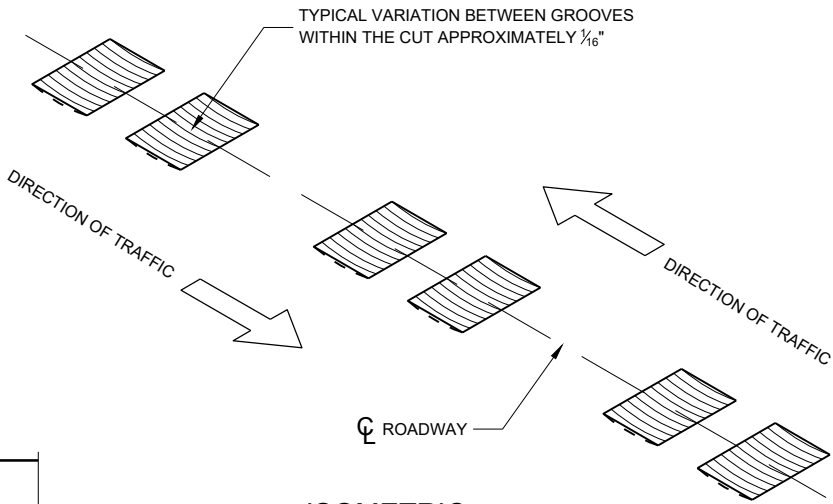


SECTION B - B
CROWNED ROADWAY

GENERAL NOTES

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

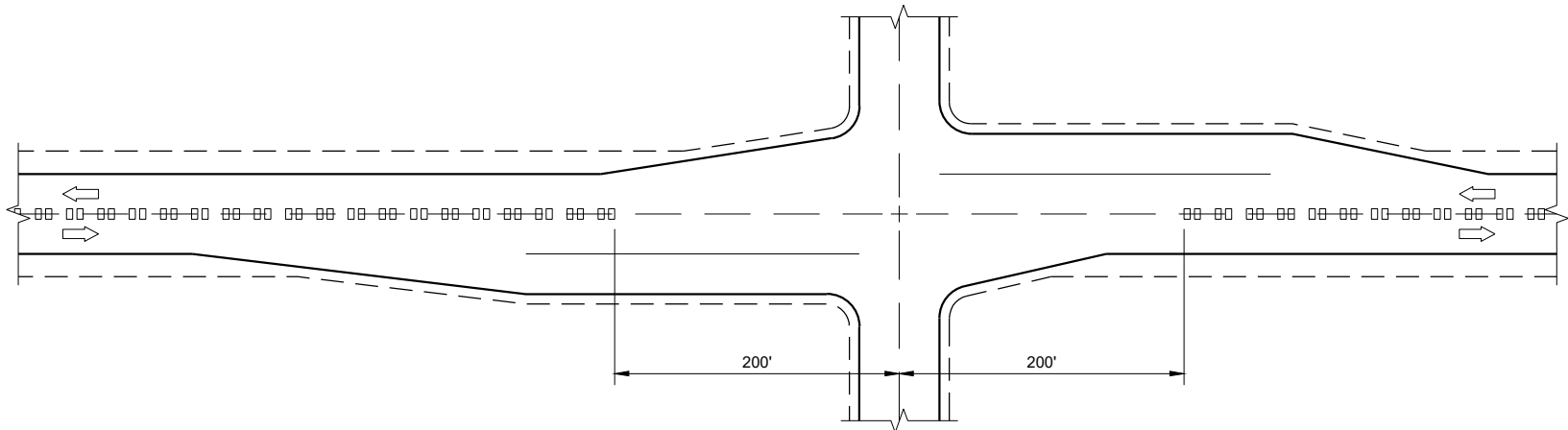
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



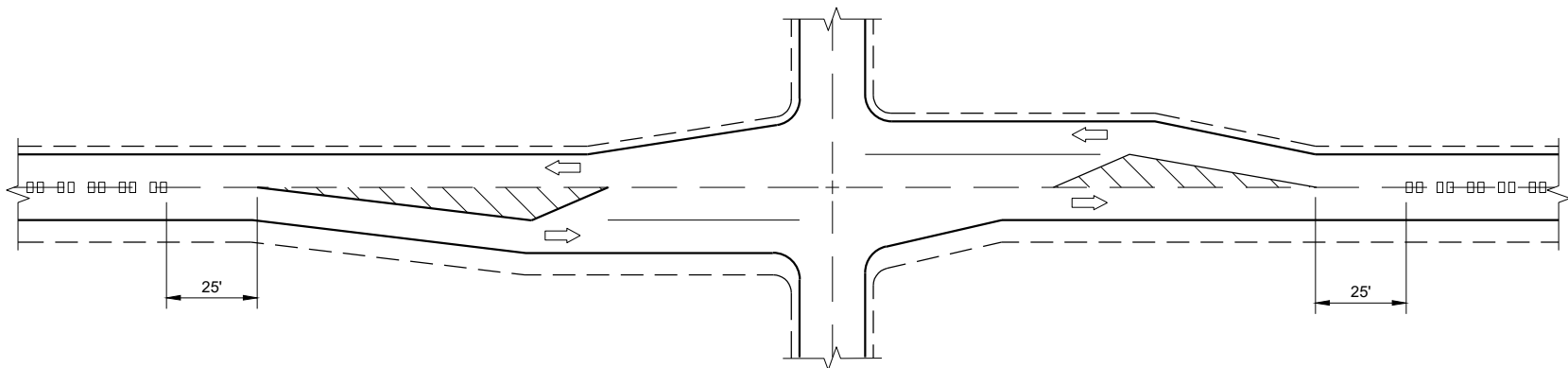
ISOMETRIC

CENTERLINE RUMBLE STRIPS - ASPHALT

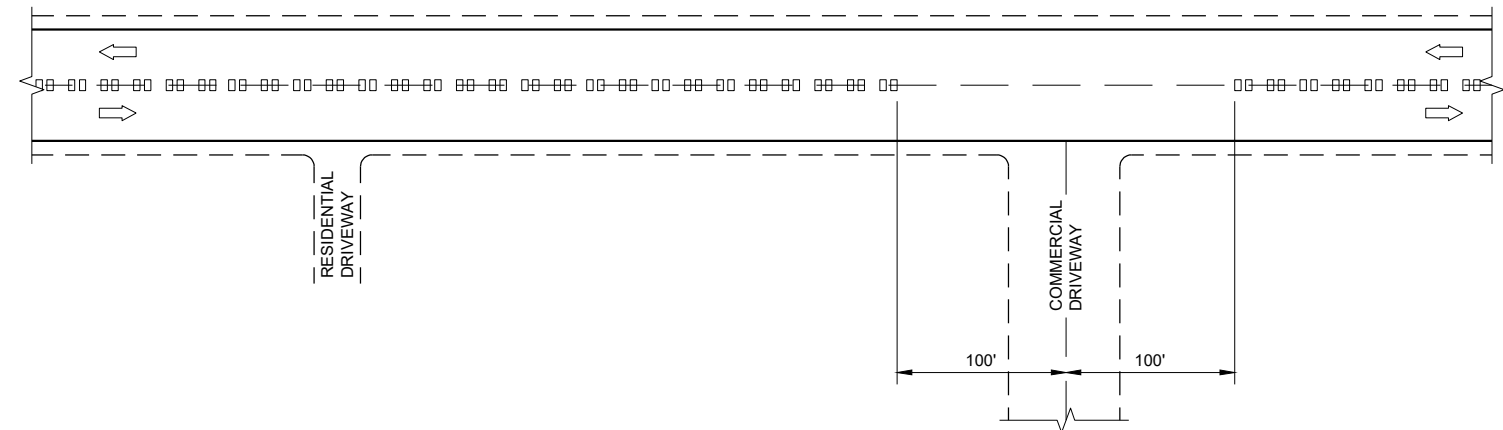
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



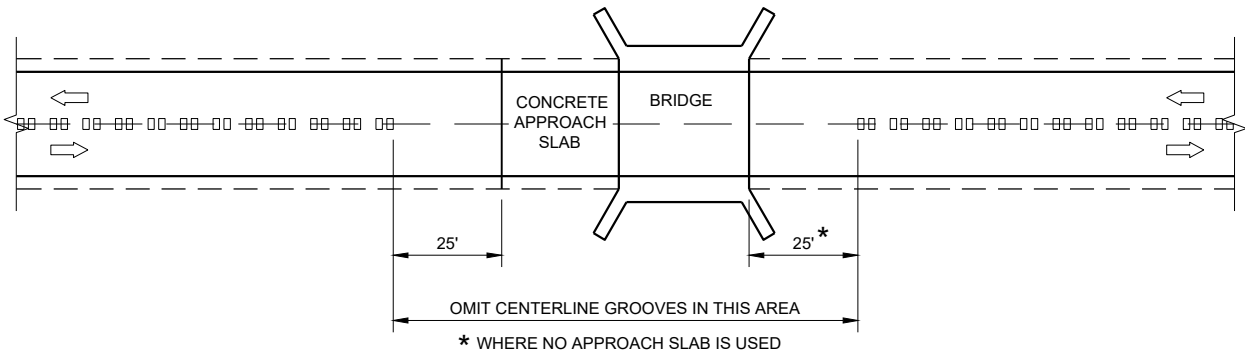
CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



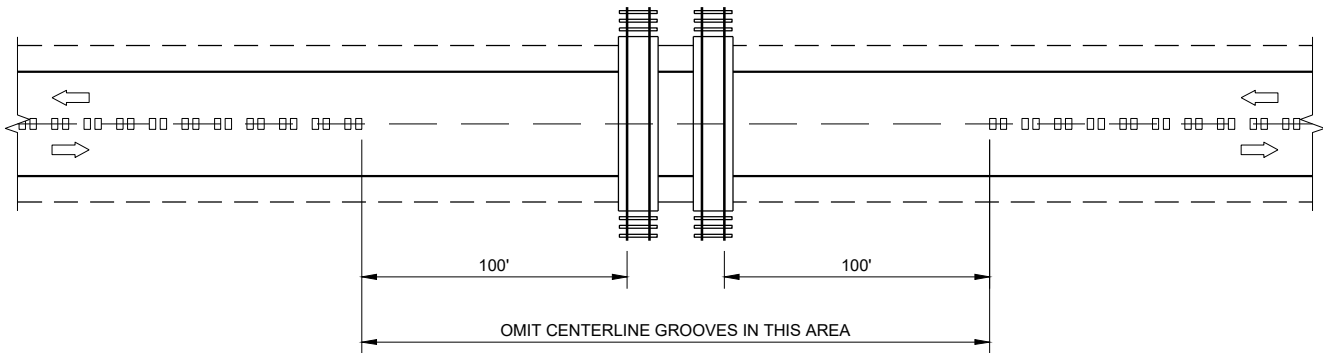
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



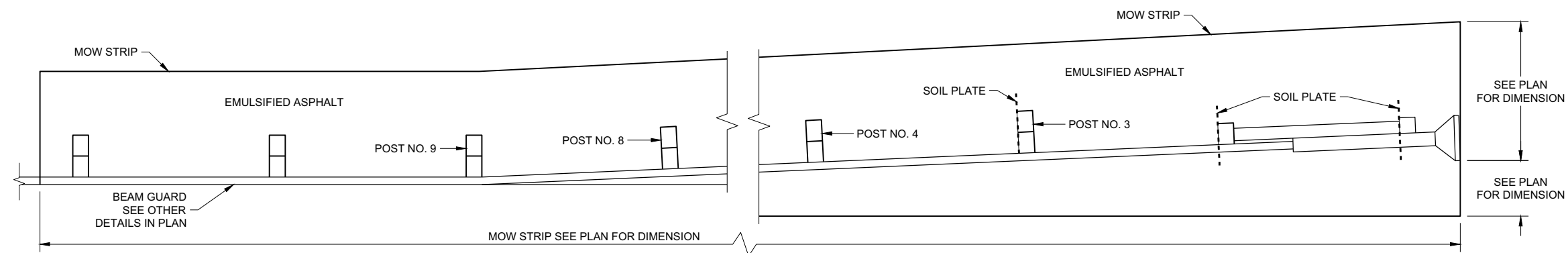
CENTERLINE GROOVES AT RAILROADS

CENTER LINE
RUMBLE STRIPS -
INTERSECTIONS, DRIVEWAYS,
BRIDGES, RAIL ROADS

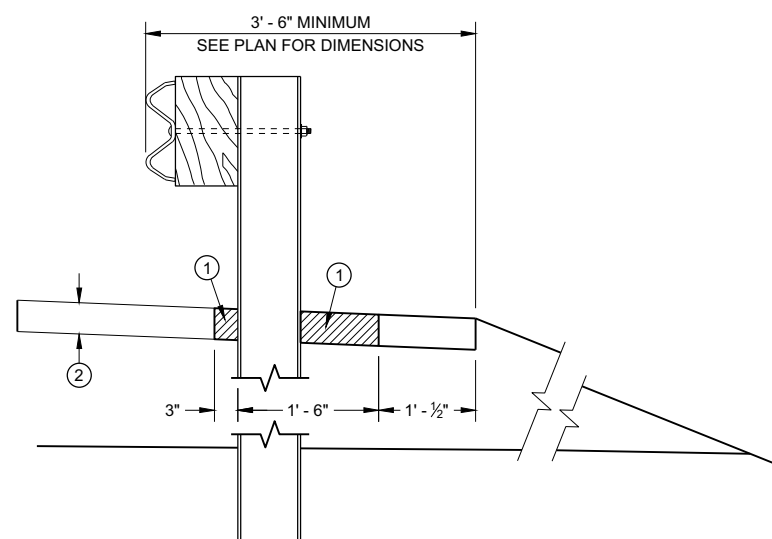
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ John Jenkins
ROADWAY STANDARDS DEVELOPMENT ENGINEER
140

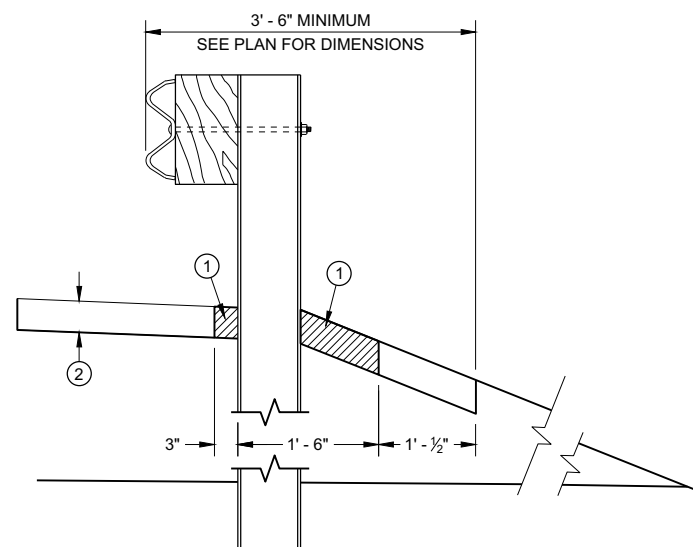
FHWA



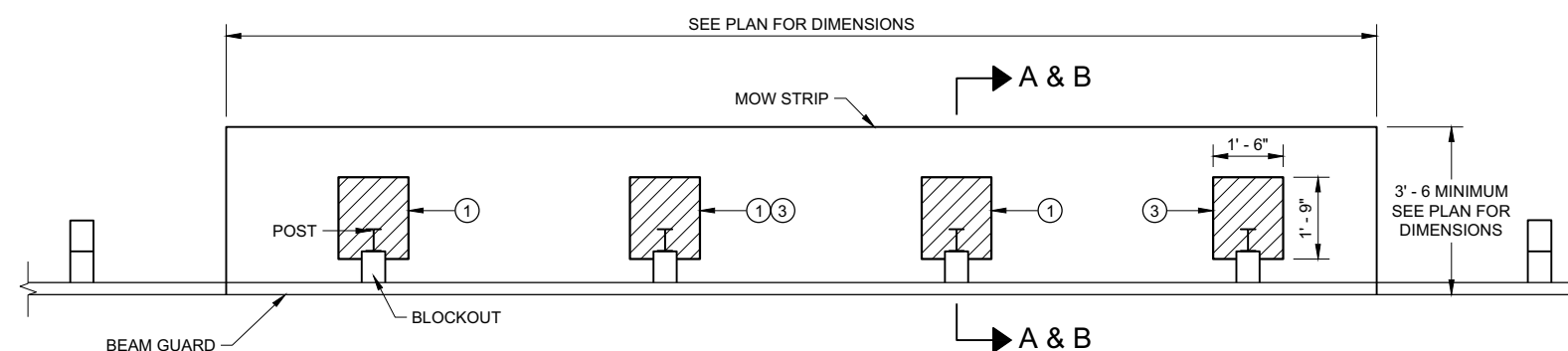
PLAN VIEW
MOW STRIP LAYOUT FOR ENERGY ABSORBING TERMINAL



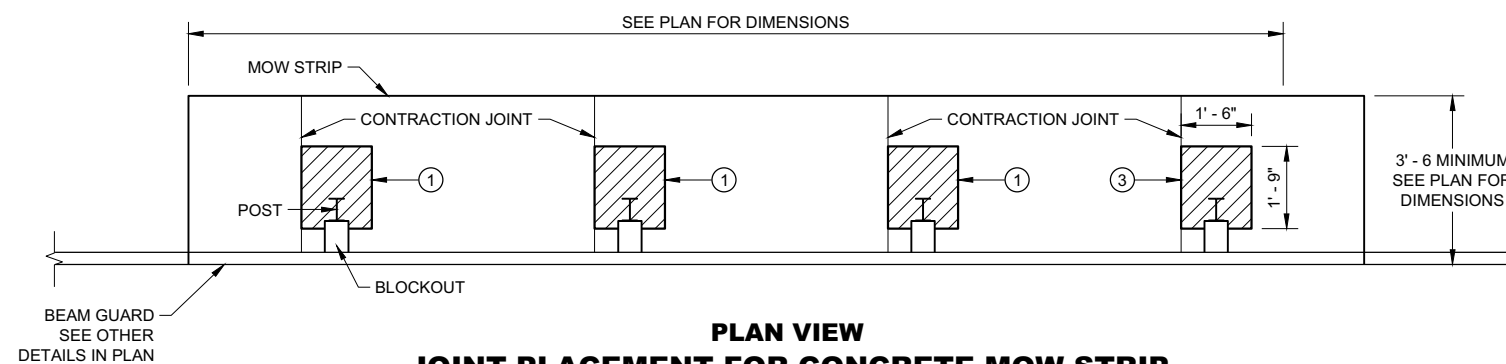
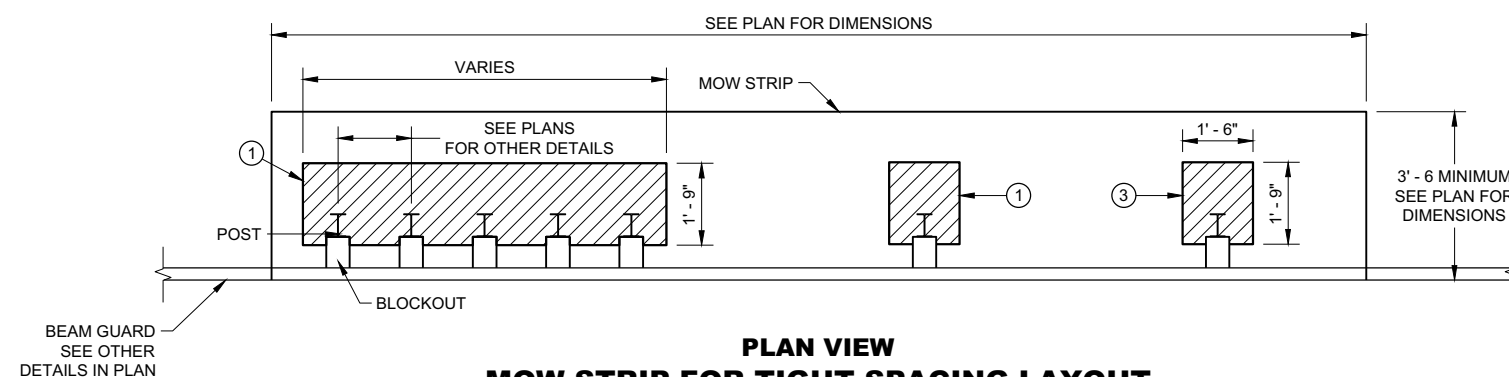
SECTION A - A



SECTION B - B



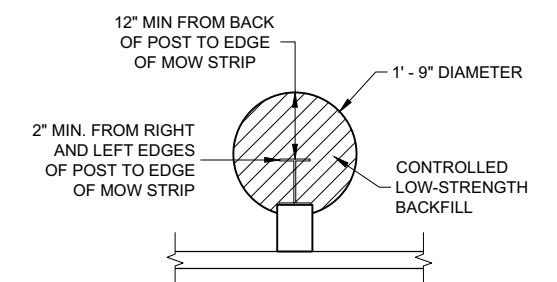
PLAN VIEW



GENERAL NOTES

ONLY USE STEEL POSTS IN CONCRETE AND ASPHALT
MOW STRIPS.

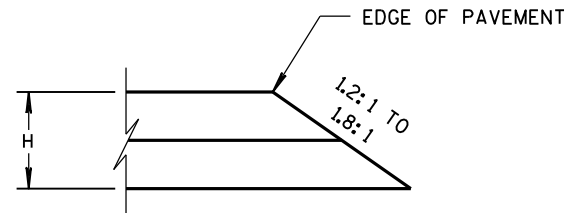
- ① CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.
- ② DEPTH OF MOW STRIP:
ASPHALT - 4"
CONCRETE - 4"
EMULSIFIED ASPHALT - 1" OR LESS
- ③ FOR EMULSIFIED ASPHALT, MOW STRIP STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS)



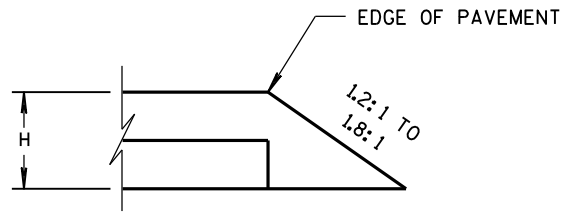
ALTERNATIVE HMA MOW STRIP DESIGN

GUARDRAIL MOW STRIP

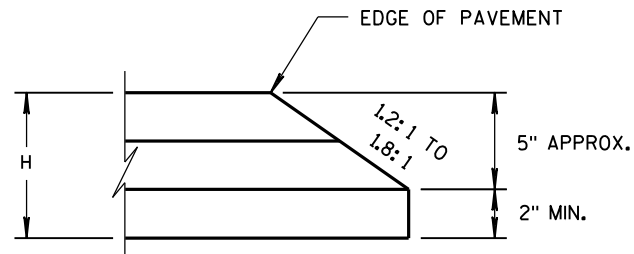
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 141



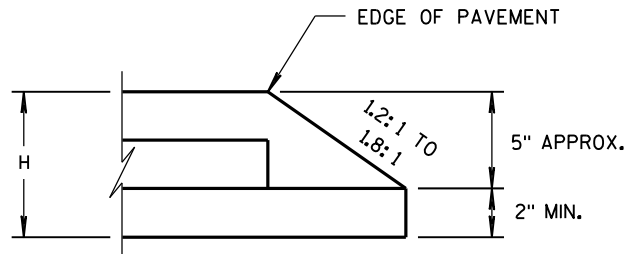
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

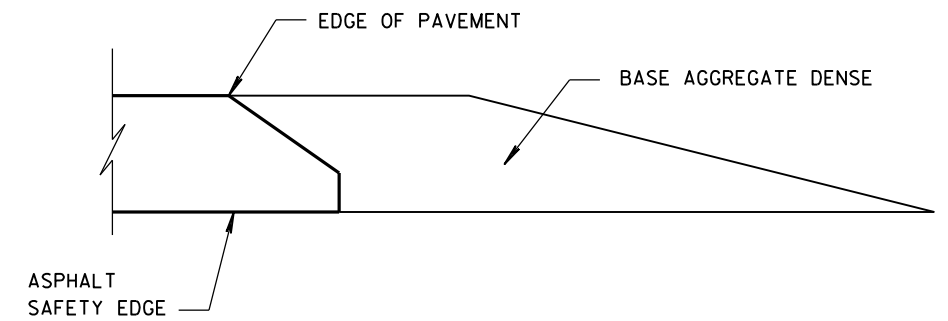


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

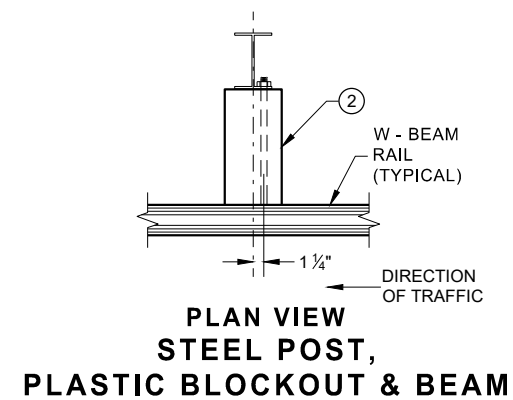
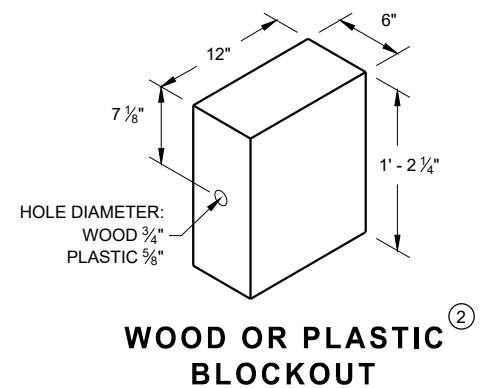
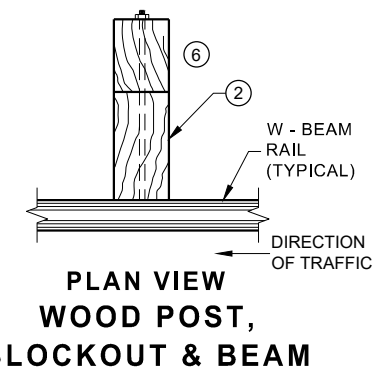
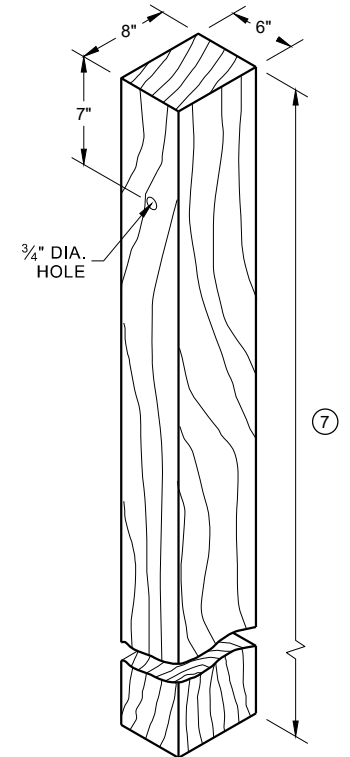
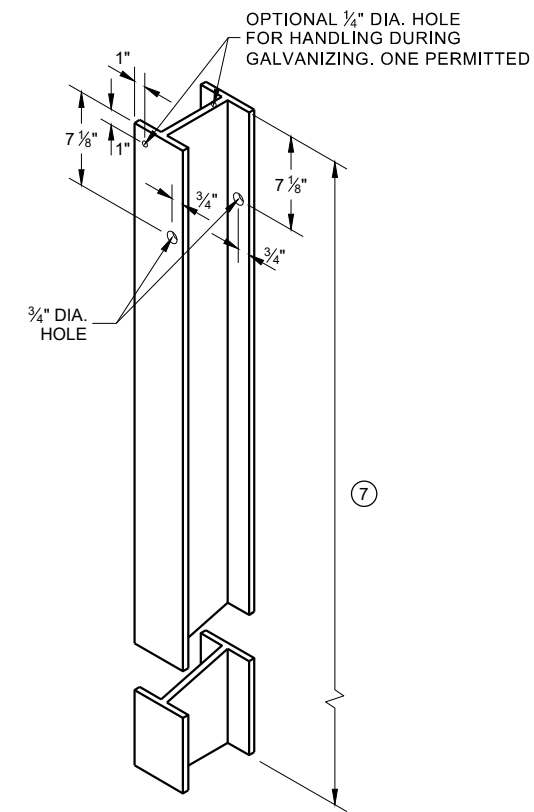
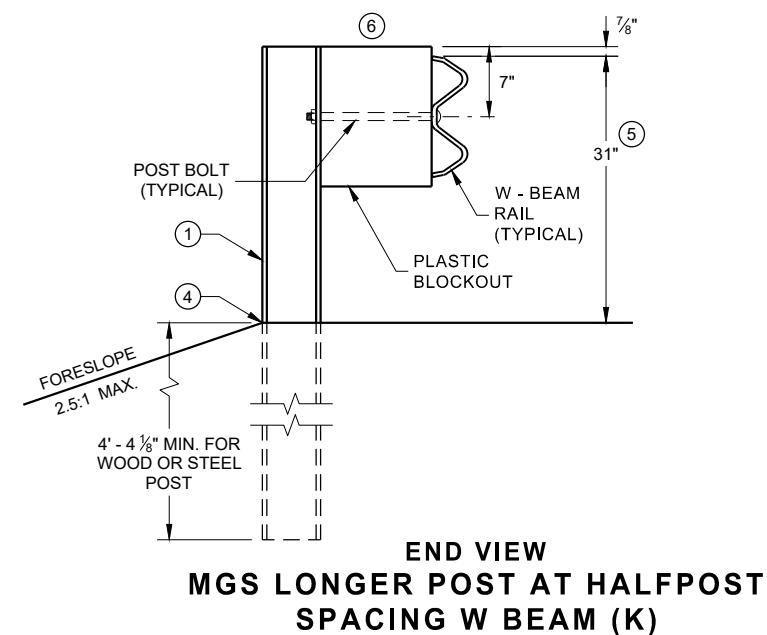
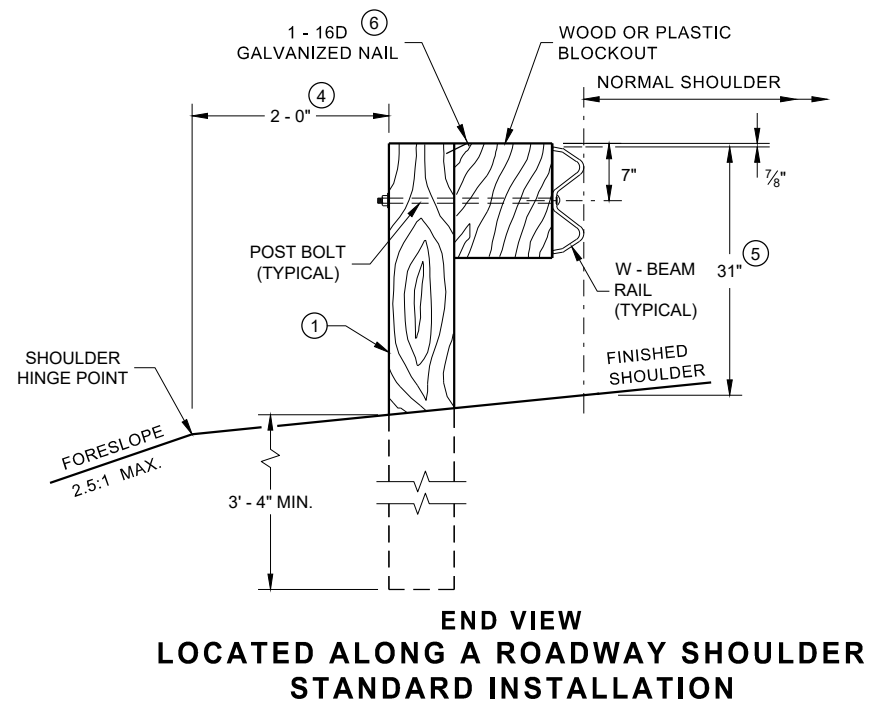
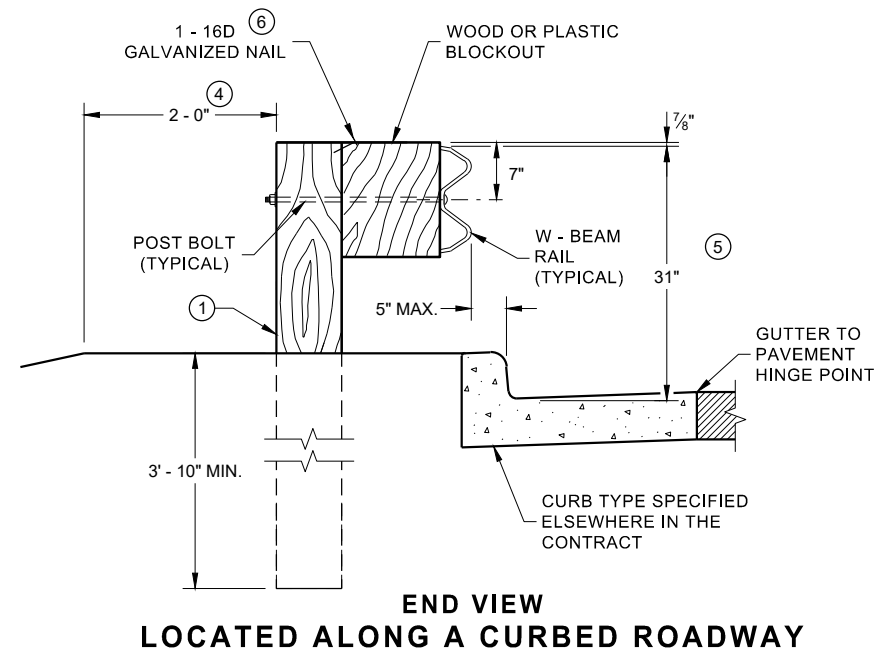
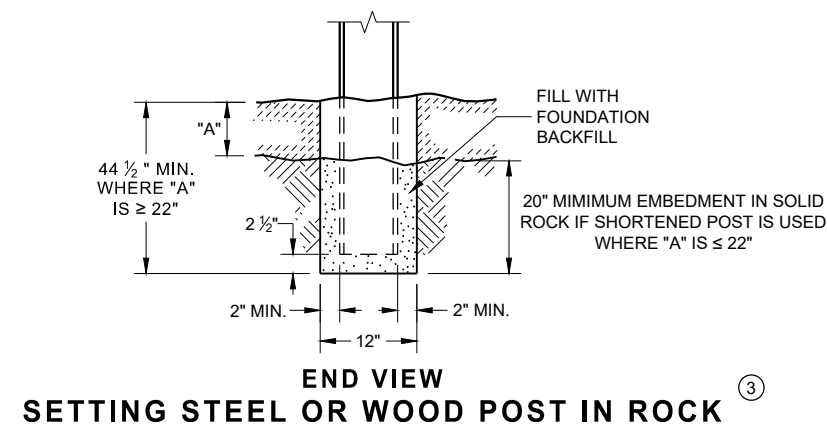
APPROVED

DATE 11/30/2012

FHWA

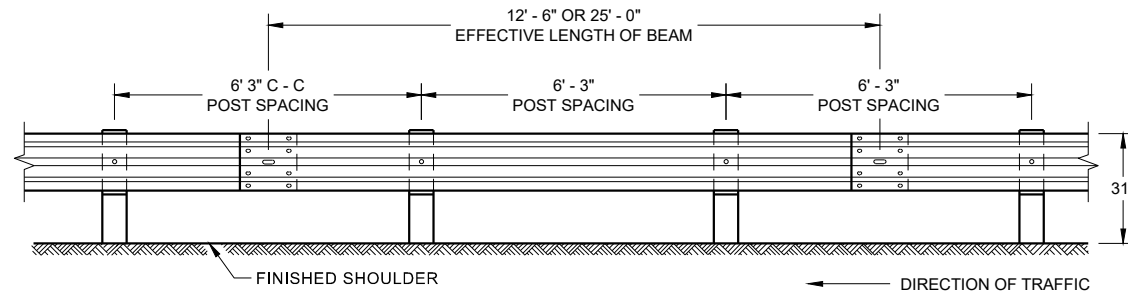
/s/ Jerry H. Zoaga
ROADWAY STANDARDS ENGINEER 142 INT

- 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".

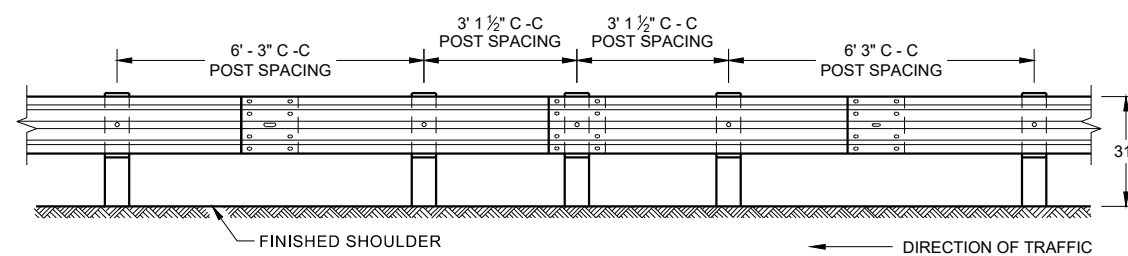


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

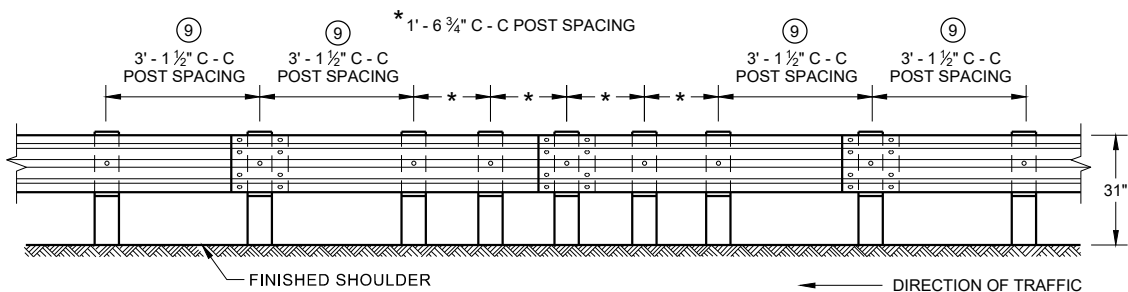
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 143



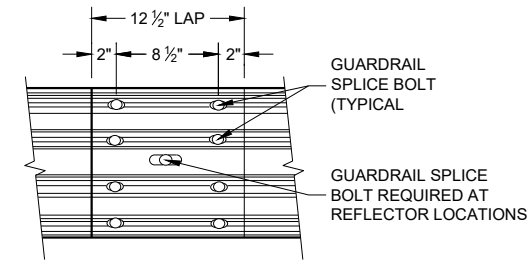
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



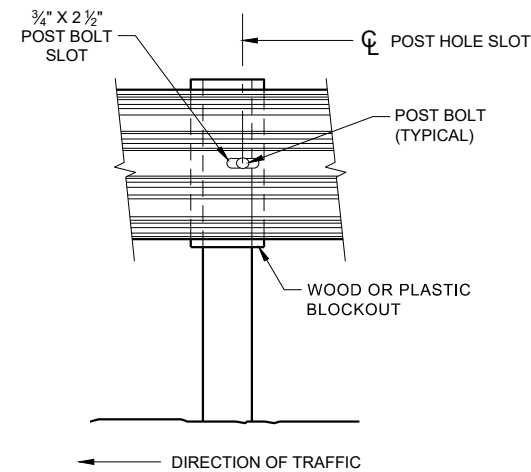
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



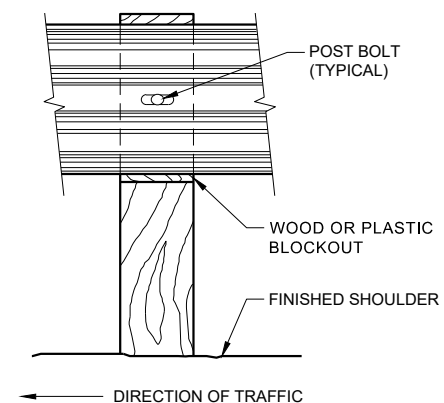
**FRONT VIEW
QUARTER POST SPACING (QS)**



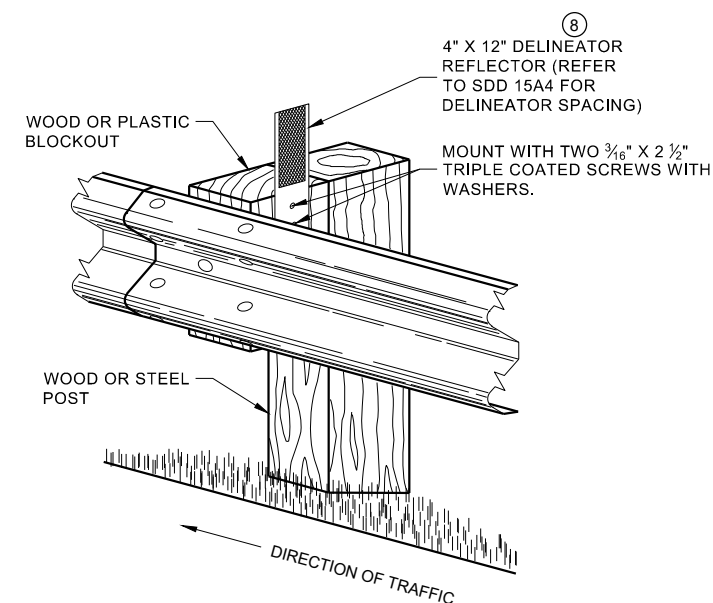
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



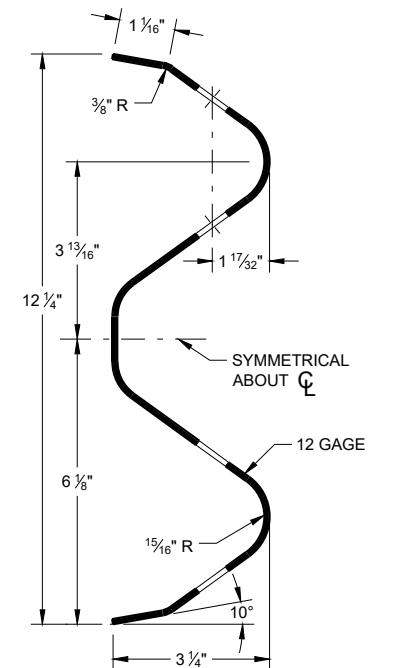
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

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 3/8" 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.

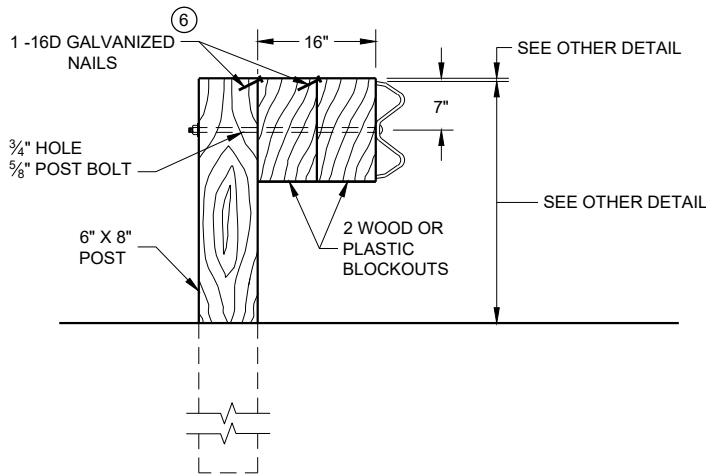
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

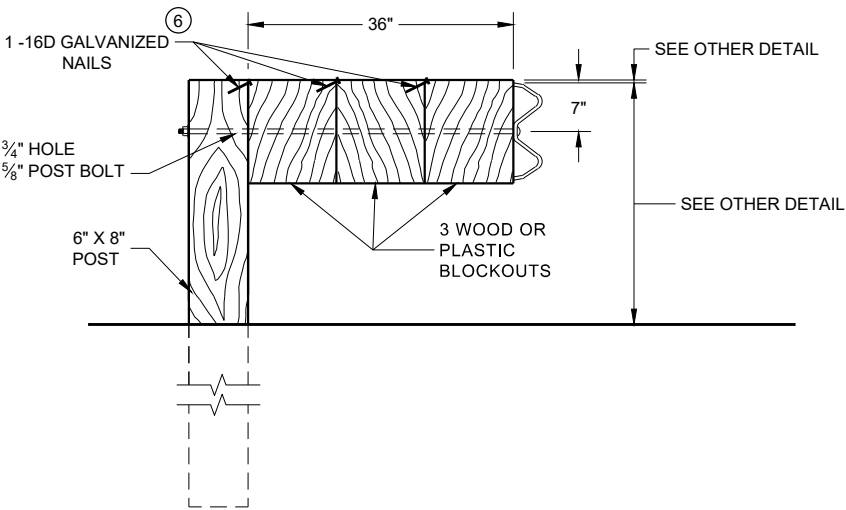
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

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DETAIL FOR 16" BLOCKOUT DEPTH

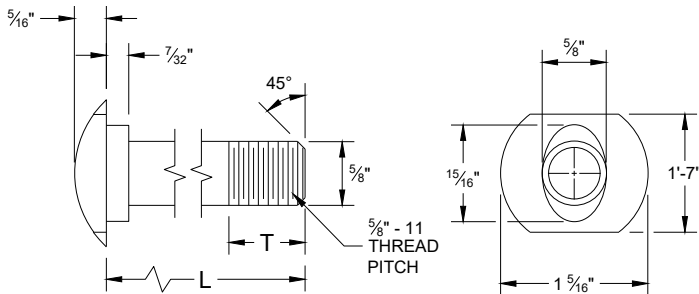
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

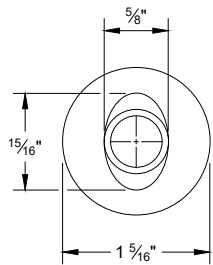
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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

- 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.

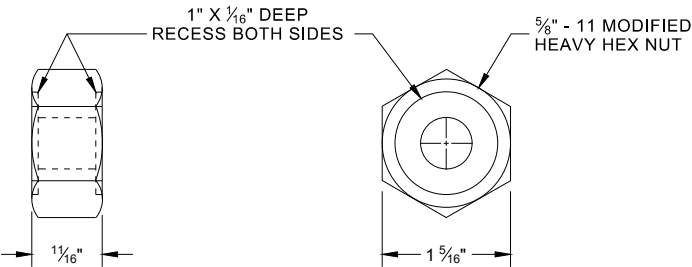


POST BOLT TABLE

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"

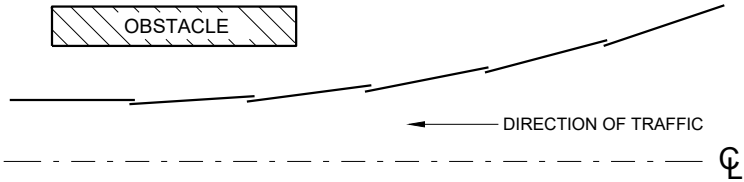


ALTERNATE BOLT HEAD

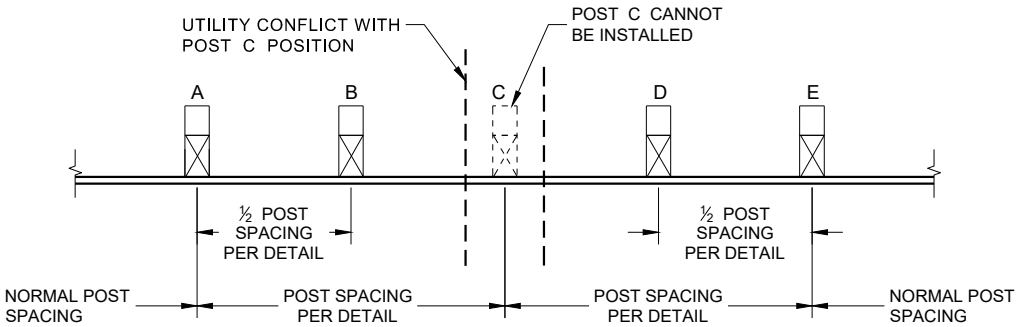


POST BOLT, SPLICE BOLT AND RECESS NUT

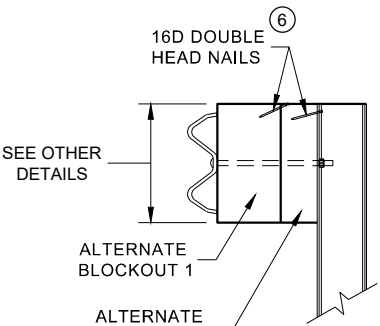
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



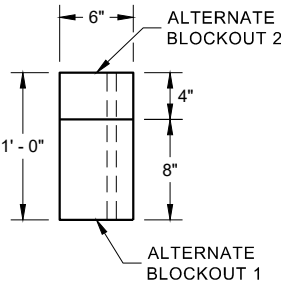
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

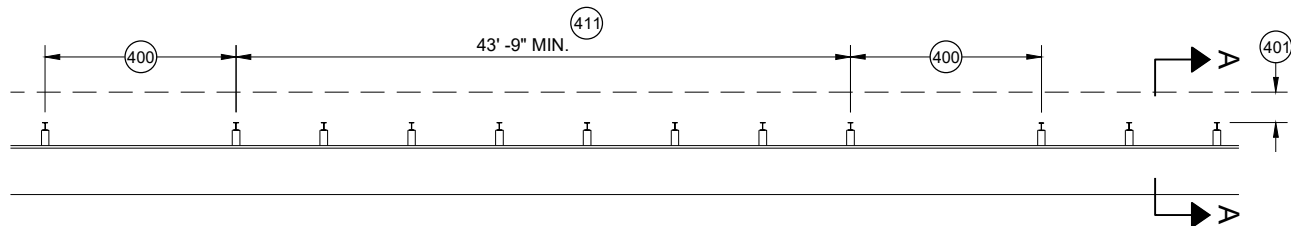


PLAN VIEW

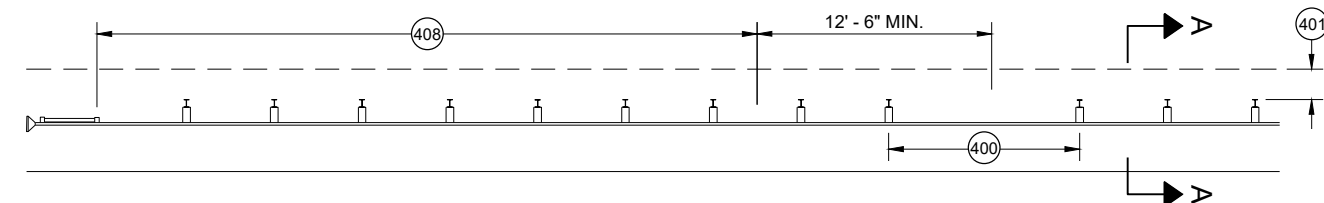
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

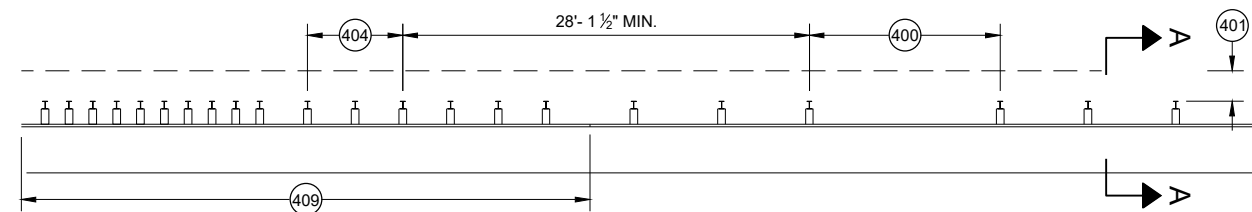
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



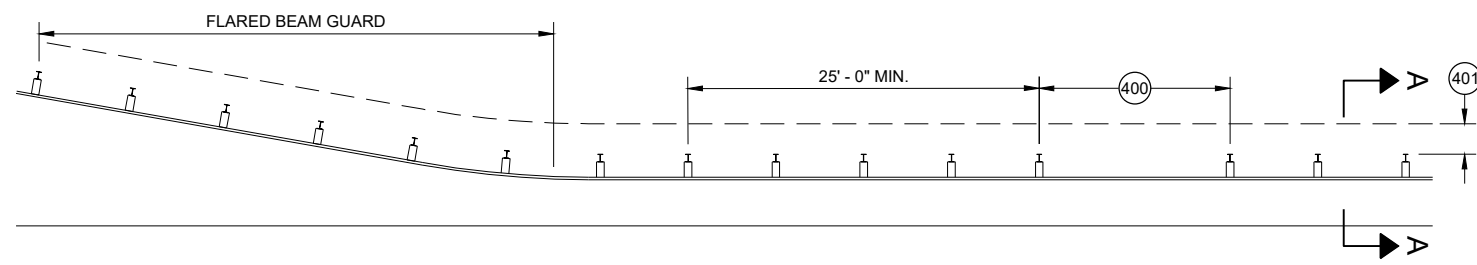
MISSING POST IN MGS GUARDRAIL



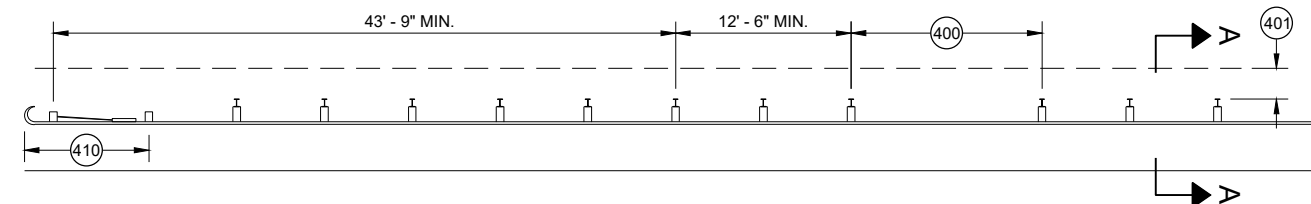
MISSING POST IN MGS GUARDRAIL NEAR EAT



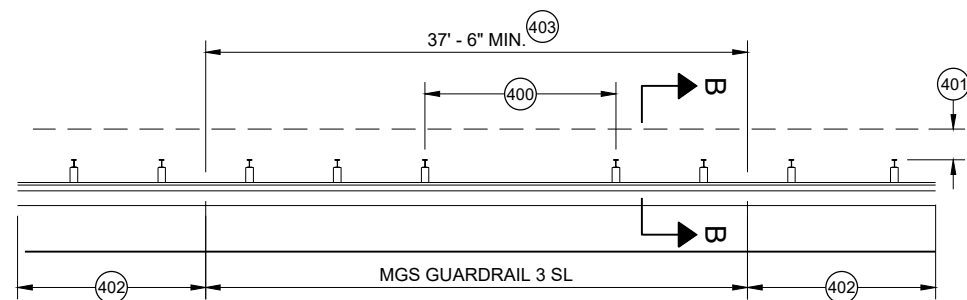
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

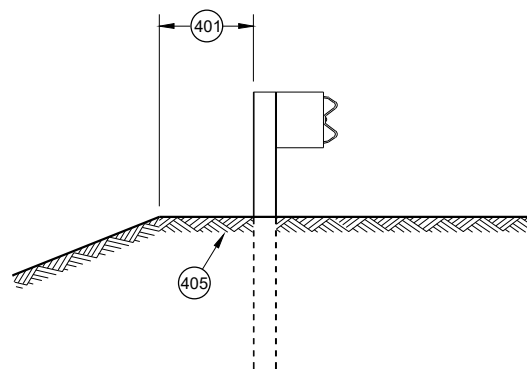


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

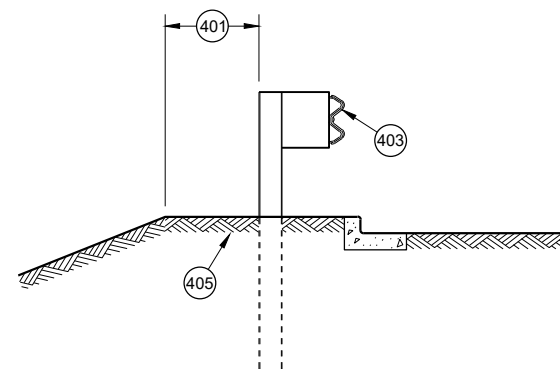


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (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

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

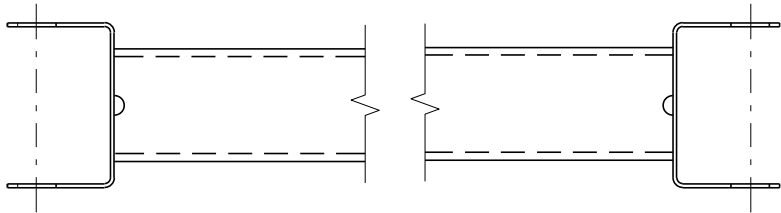
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. 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.

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.

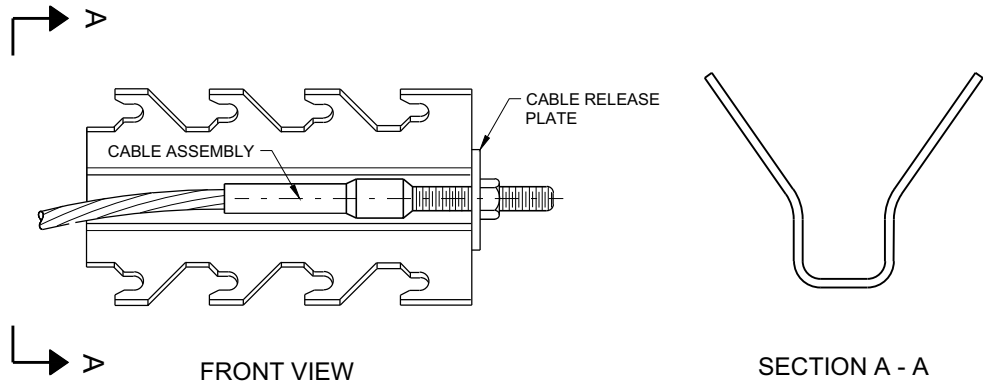


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 147

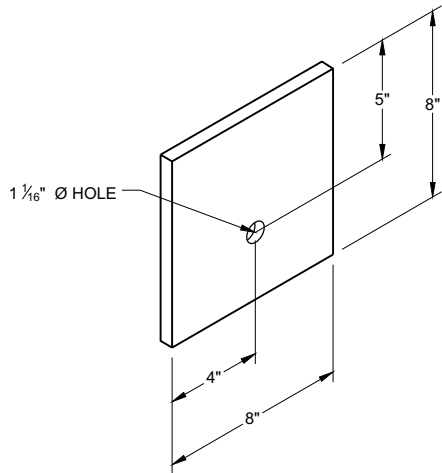


GENERIC GROUND STRUT⁹ ^E

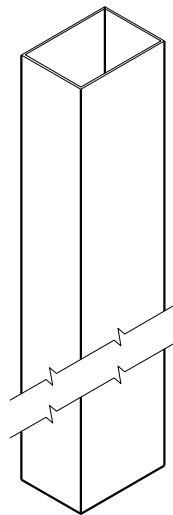
BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED 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



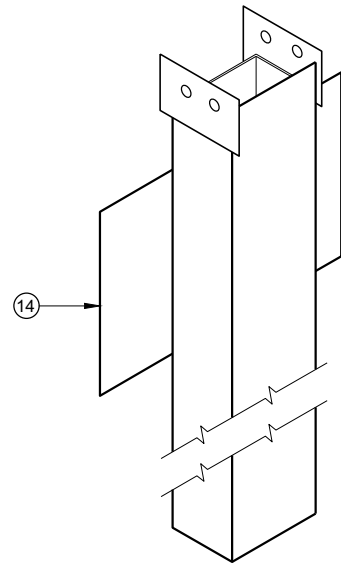
GENERIC ANCHOR CABLE BOX⁹ ^E



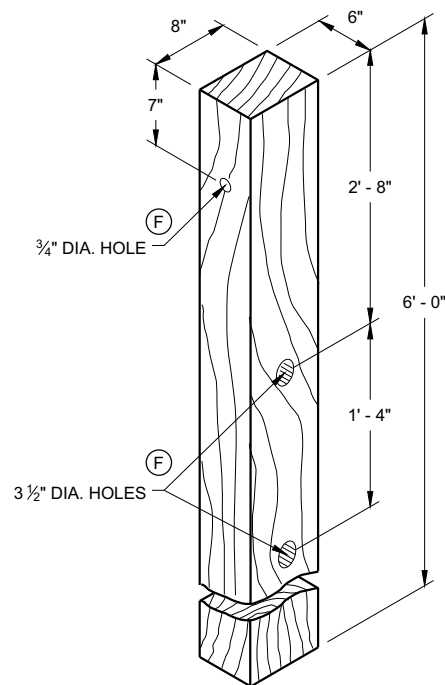
BEARING PLATE⁶ ^E



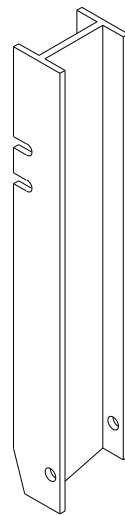
UPPER POST NO. 1 ⁽¹⁾ (E)



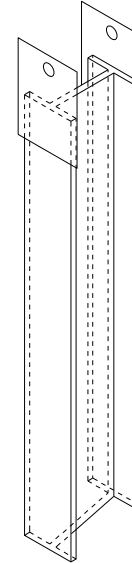
LOWER POST NO. 1 ⁽²⁾ (E)



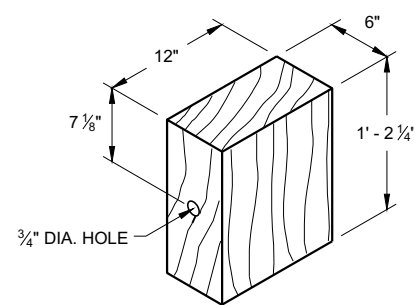
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



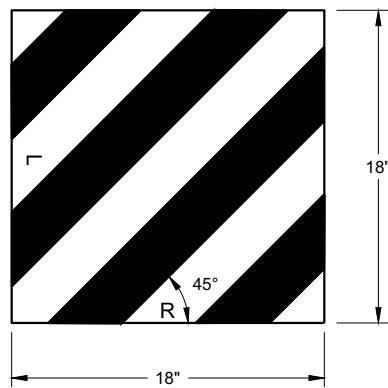
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



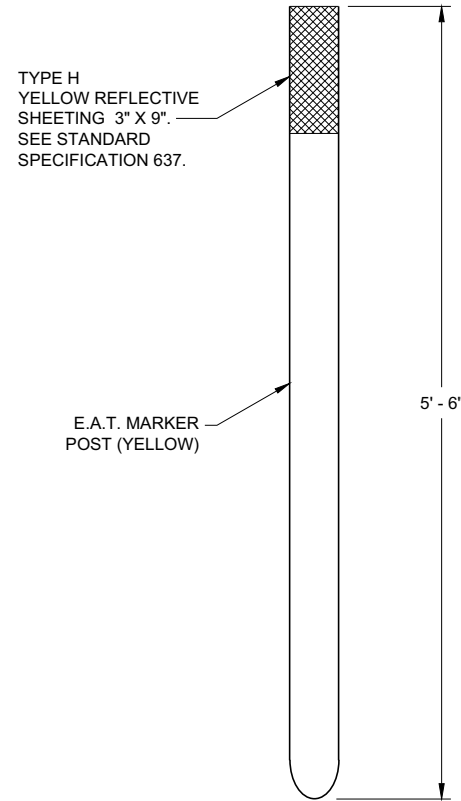
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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



REFLECTIVE SHEETING DETAIL ^(E)

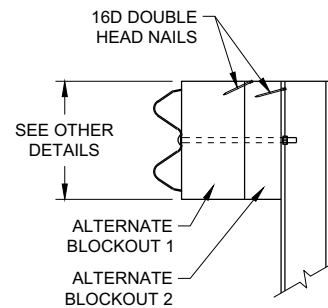


FRONT VIEW

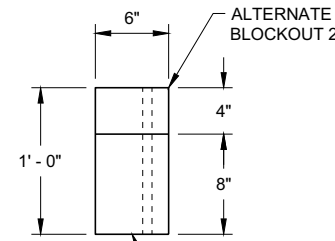


SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

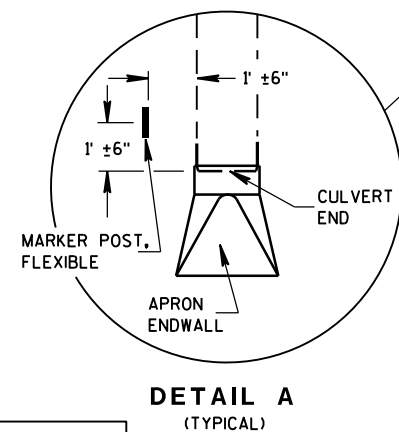
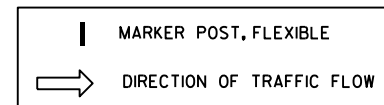
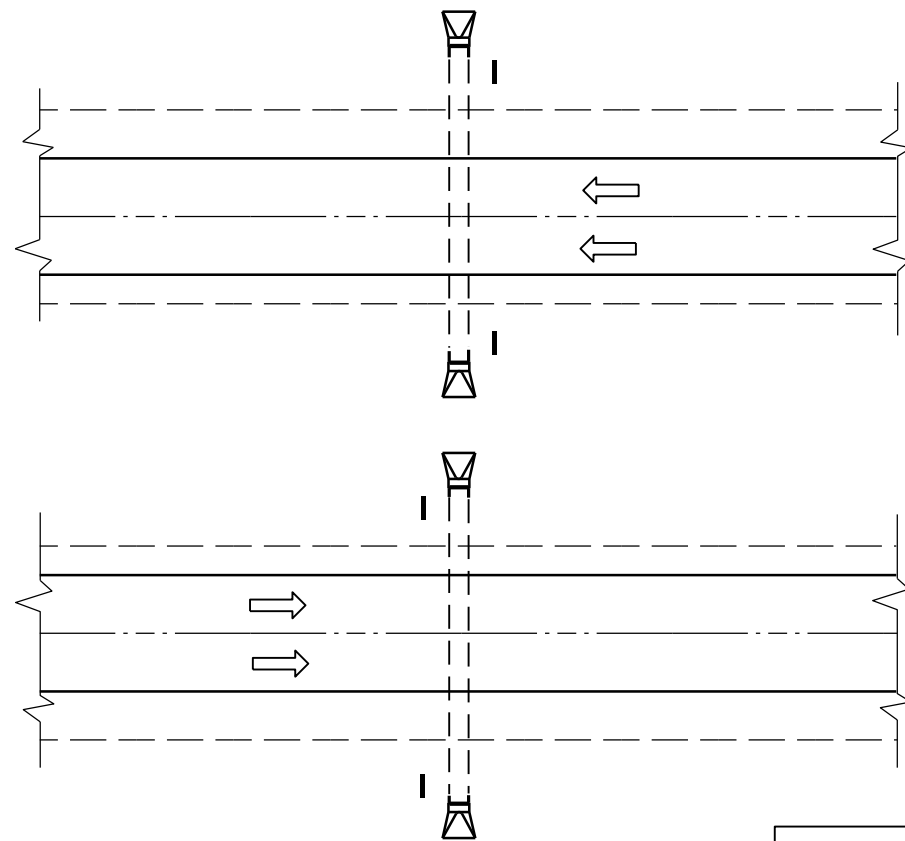
ALTERNATE WOOD
BLOCKOUT DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

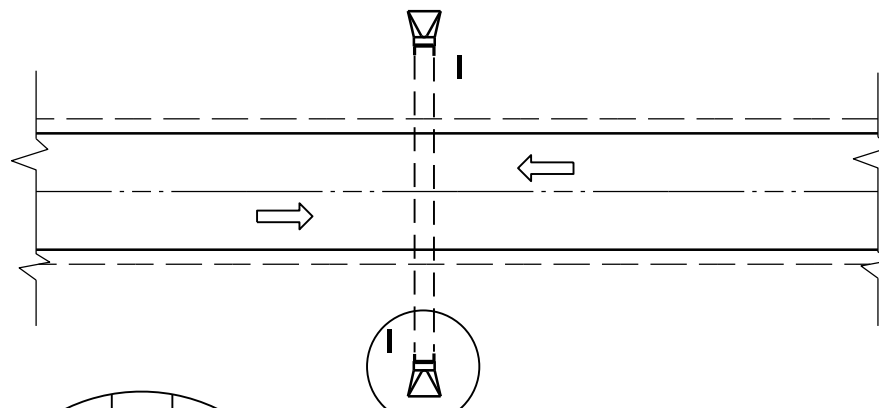
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
149
FHWA

PLAN VIEW
DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

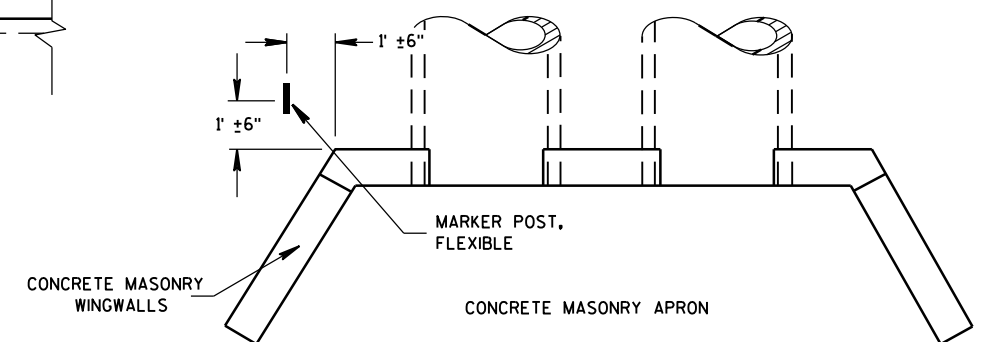
PLAN VIEW
UNDIVIDED HIGHWAY



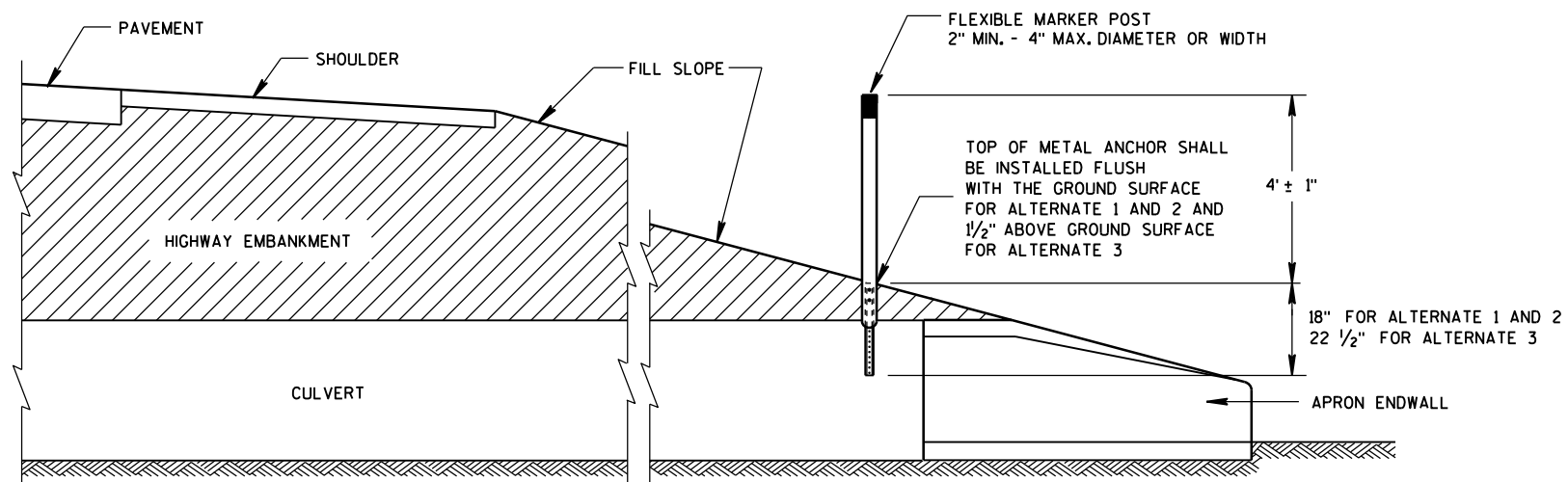
FLEXIBLE MARKER POST LOCATION

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.



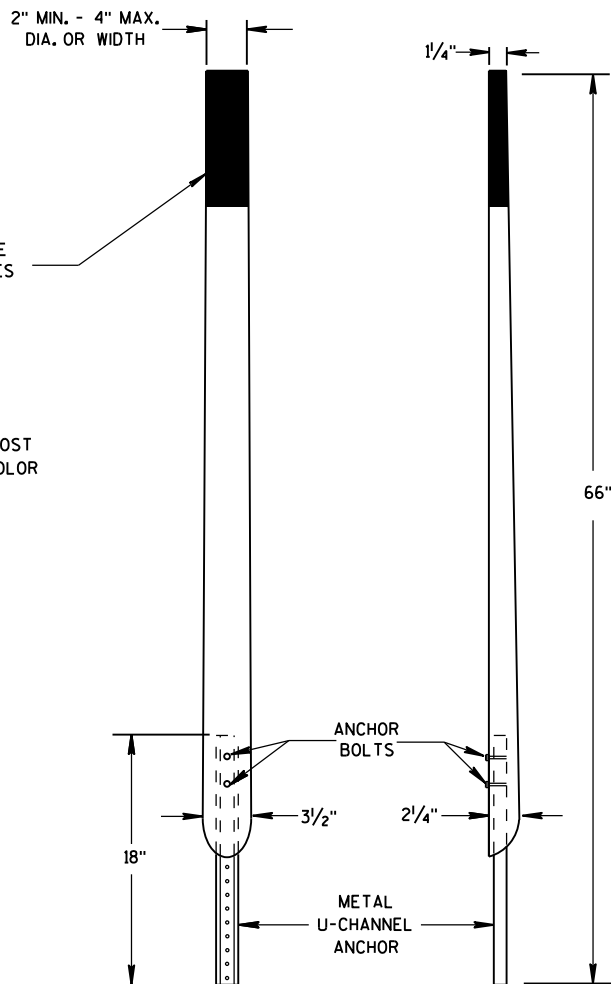
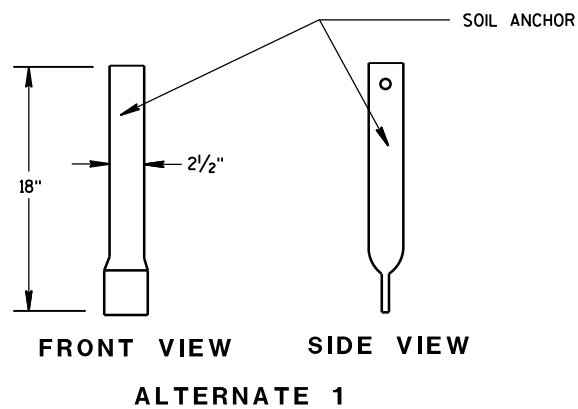
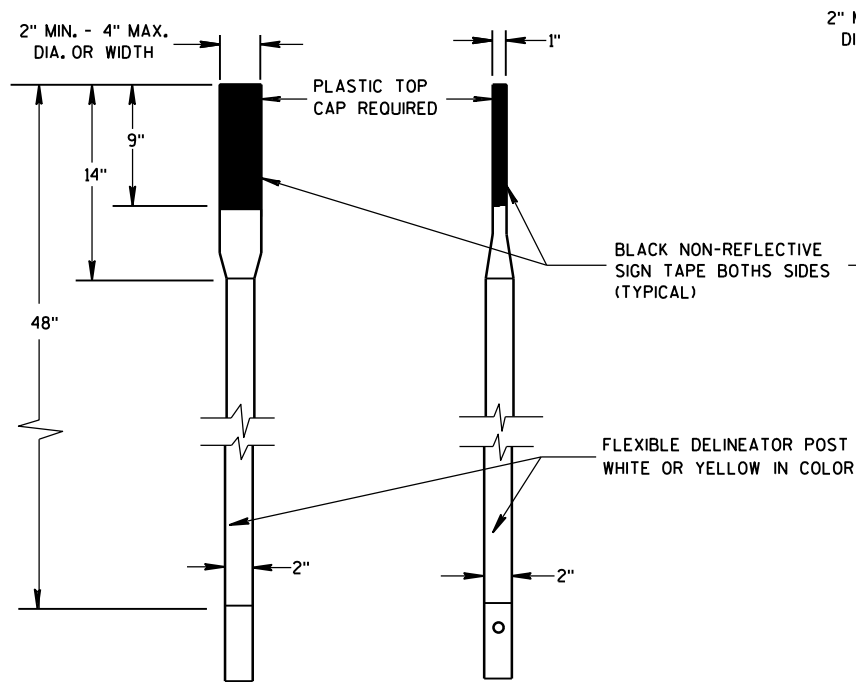
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

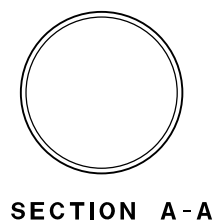
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 150

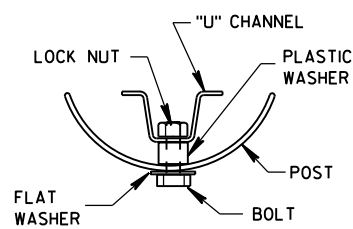
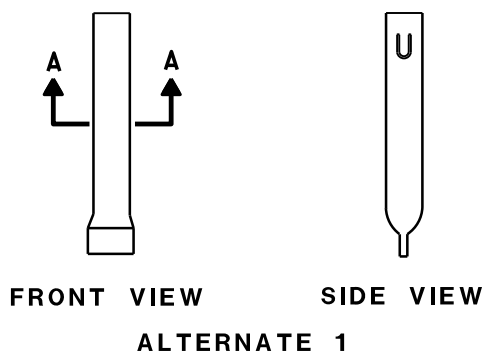


FRONT VIEW SIDE VIEW
ALTERNATE 2

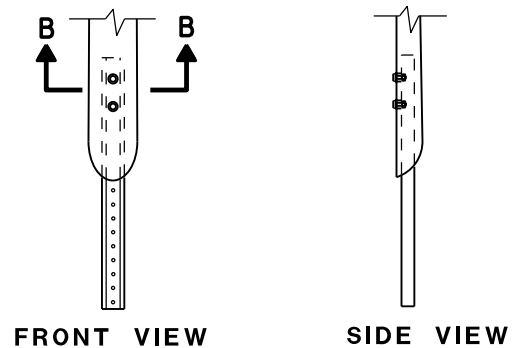
FLEXIBLE MARKER POSTS



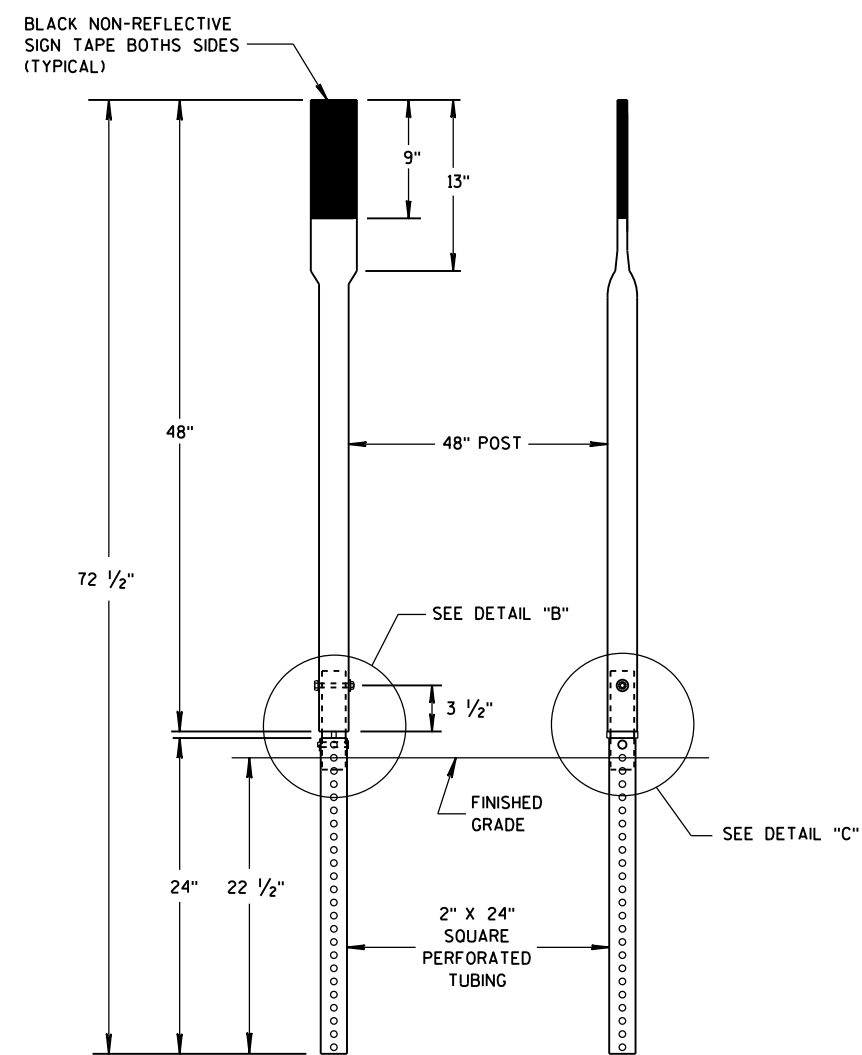
SECTION A-A



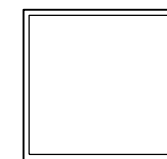
SECTION B-B



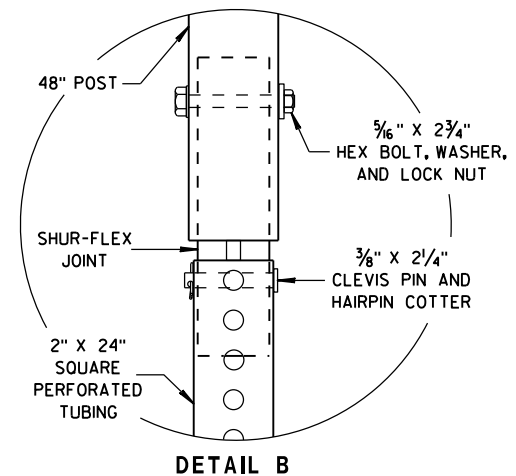
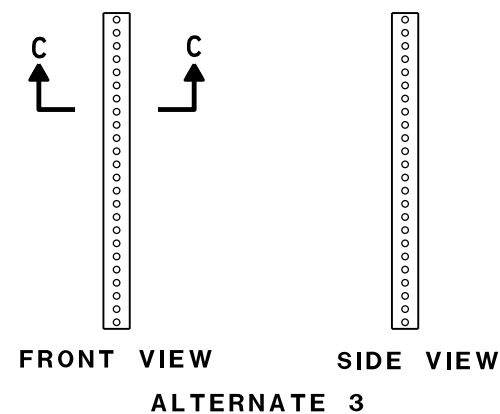
FRONT VIEW SIDE VIEW
ALTERNATE 2
FLEXIBLE MARKER POST ANCHORS



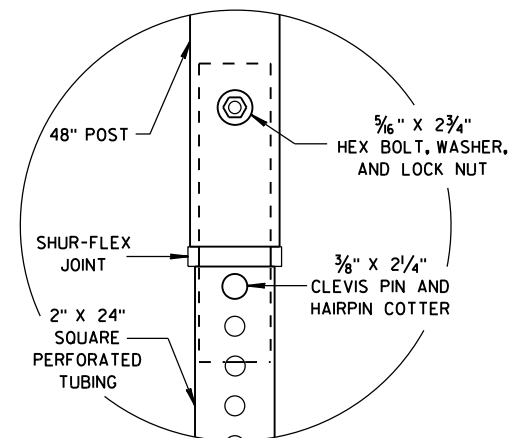
FRONT VIEW SIDE VIEW
ALTERNATE 3



SECTION C-C



DETAIL B



DETAIL C

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

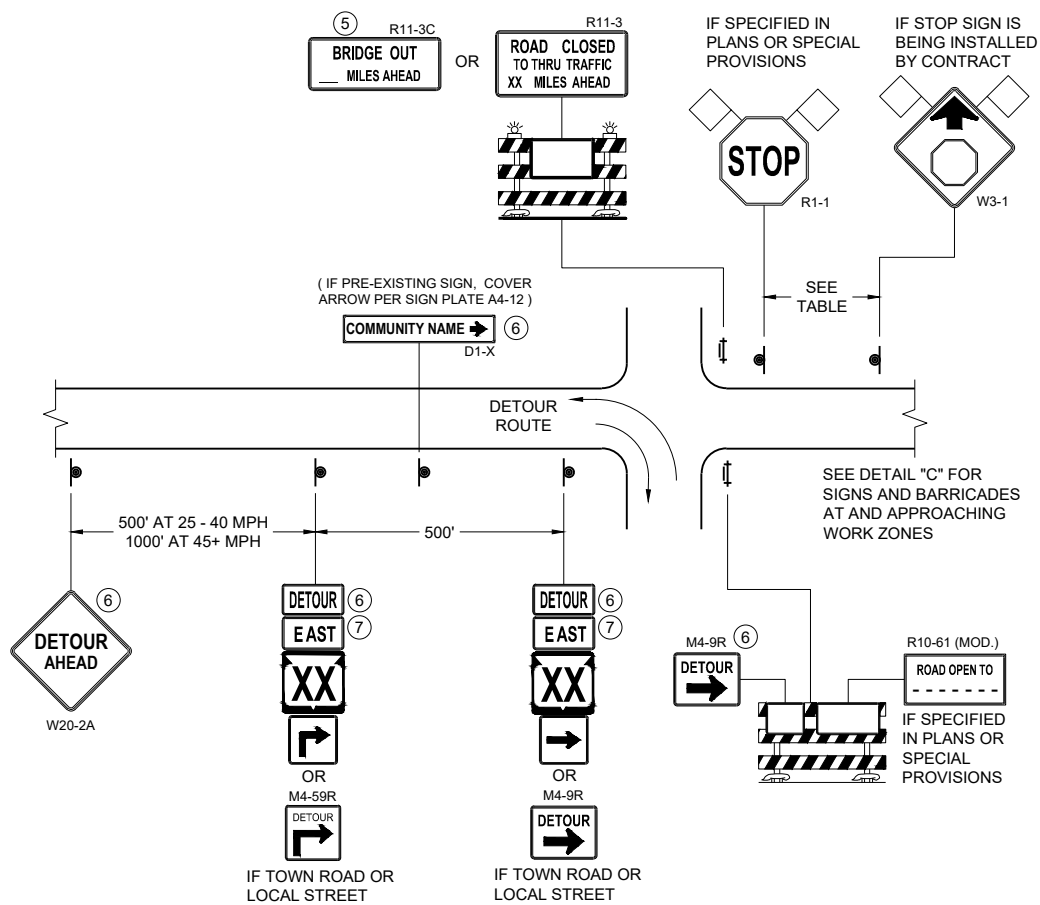
10/1/2012

DATE

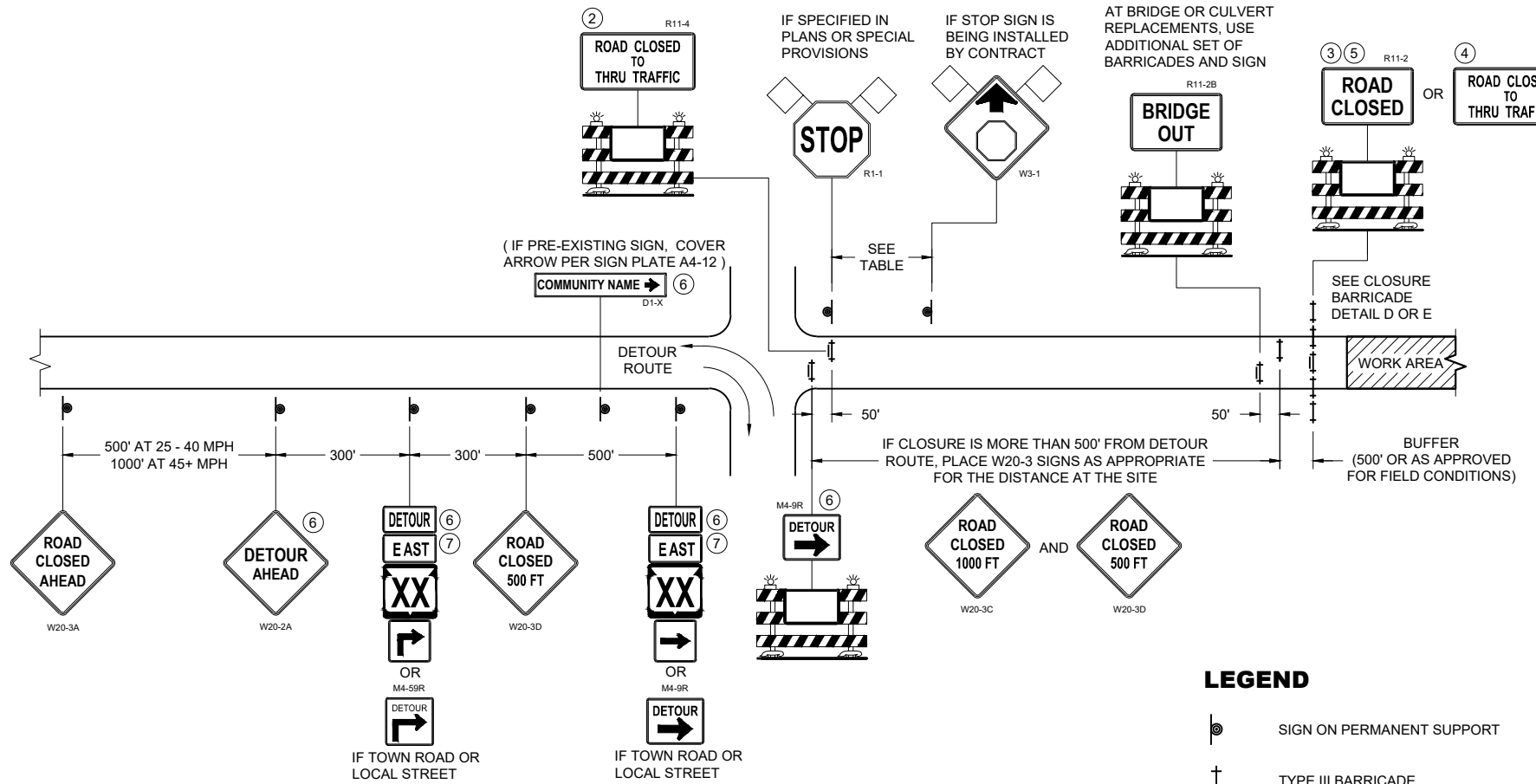
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER 151

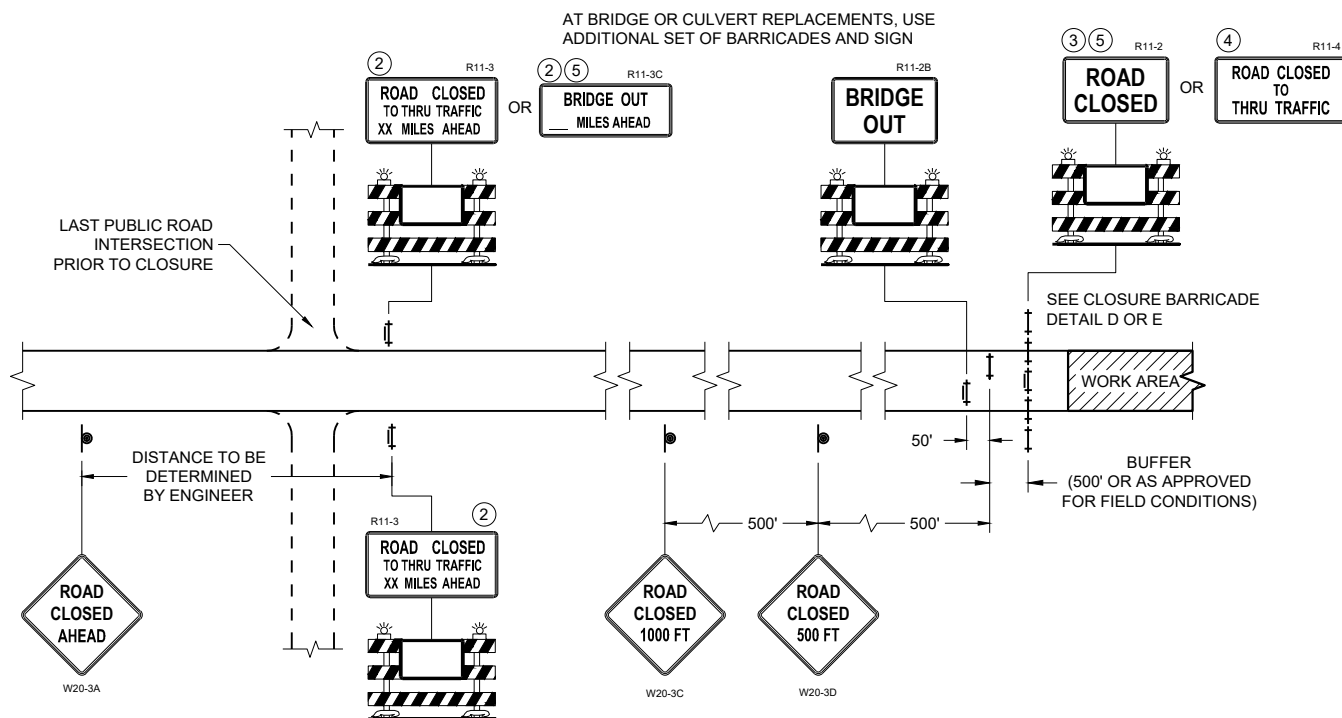
IGN



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)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

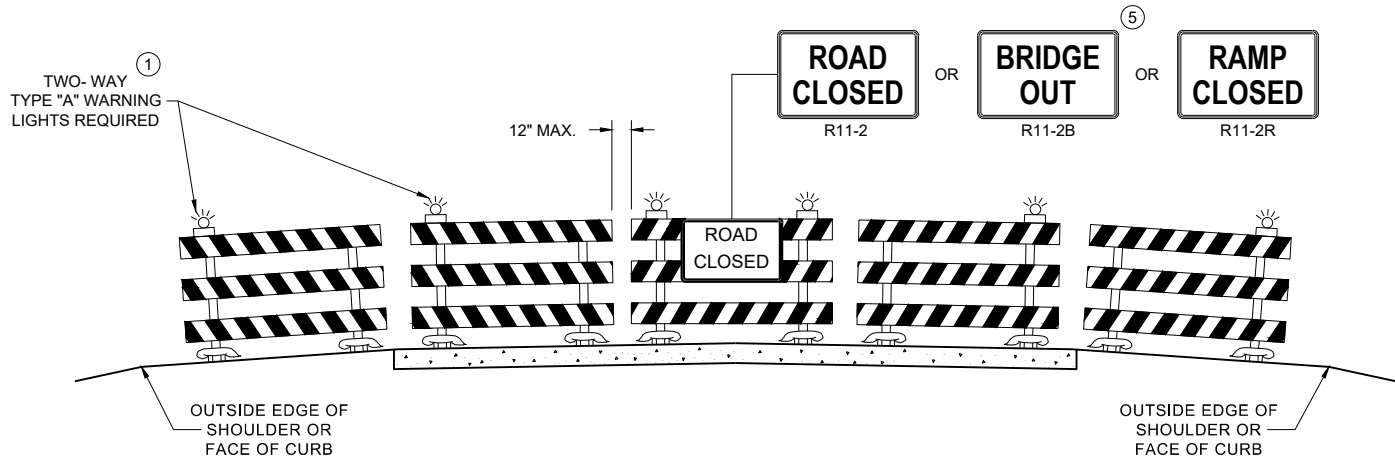
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- M05 - 1 OR M06 - 1

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

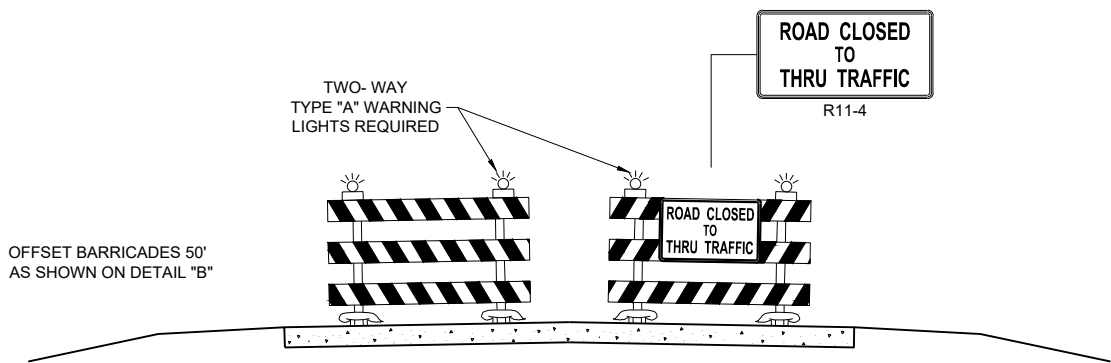
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.

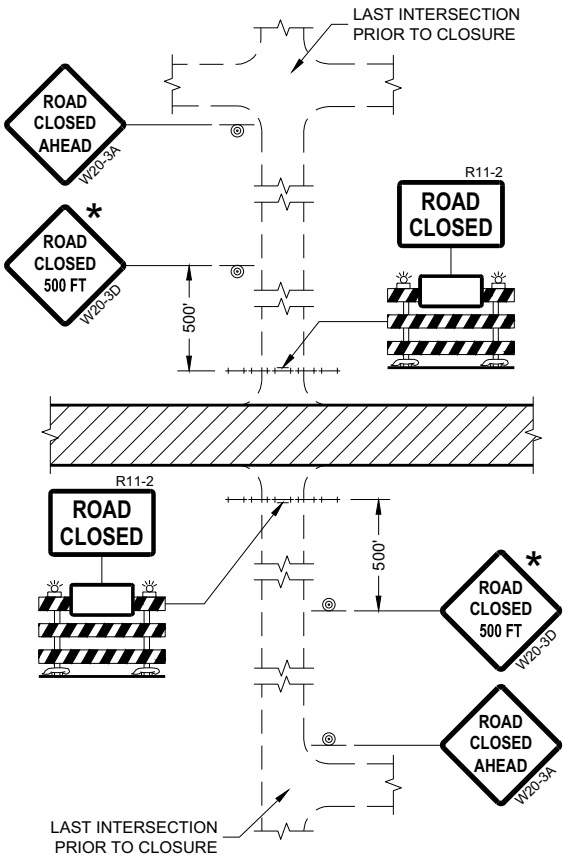
"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

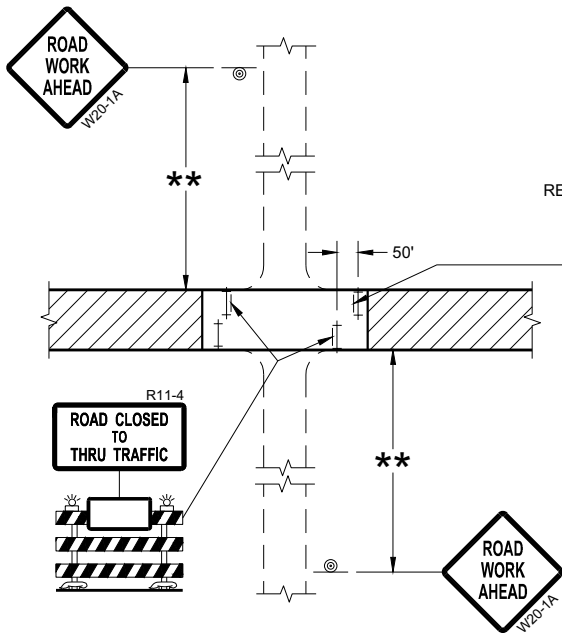
SIGNS PLACED ON TYPE III BARRICADES THAT ARE SIZES OTHER THAN 48"X30" SHALL HAVE A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE.

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

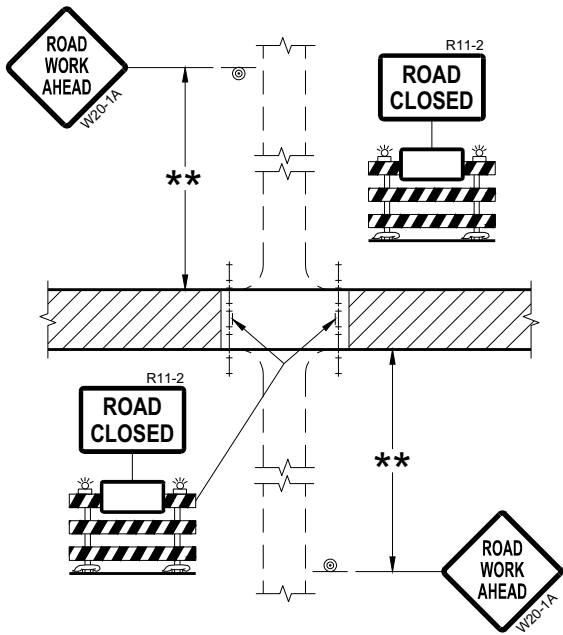
BARRICADES AND SIGNS FOR VARIOUS CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2025 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



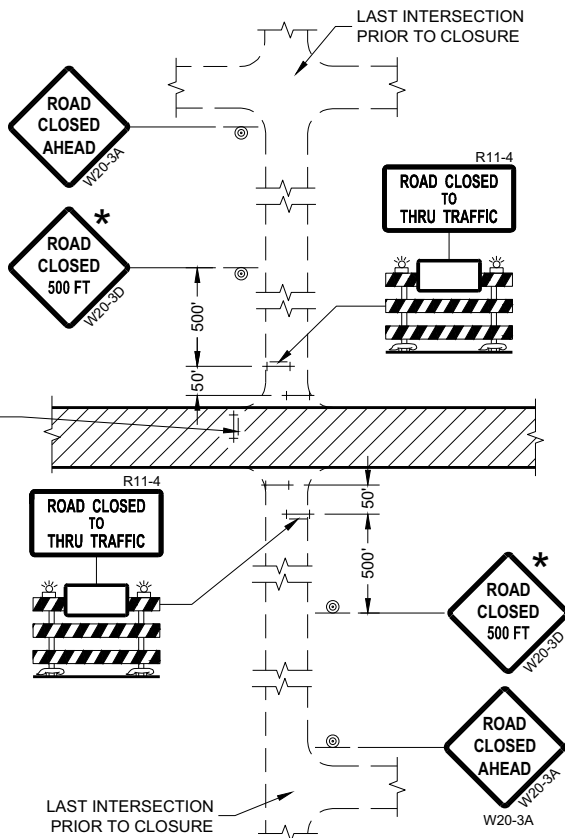
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

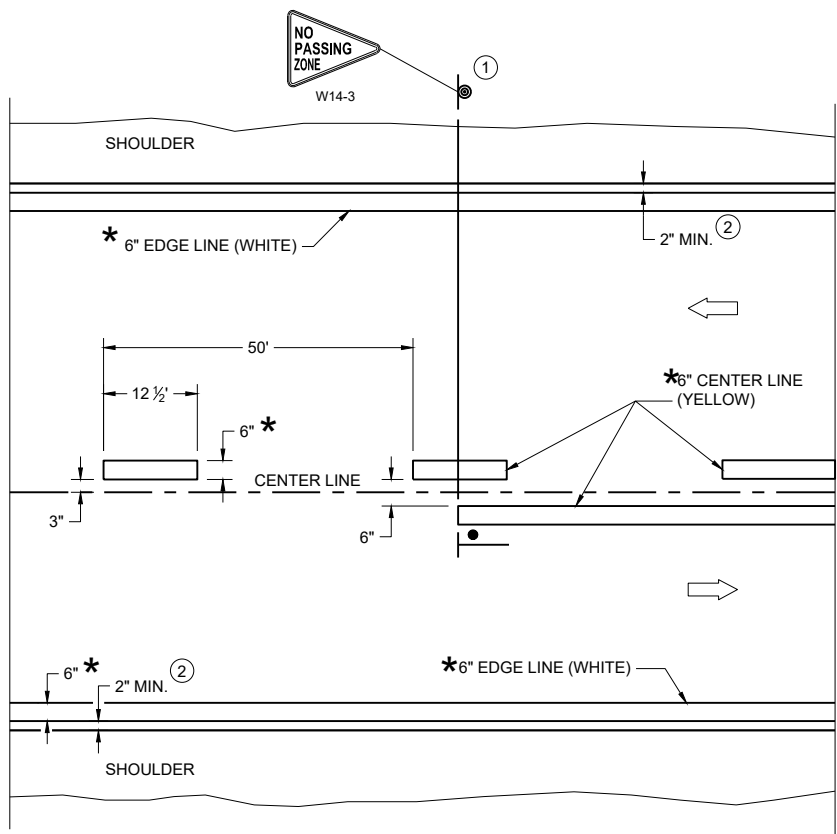
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

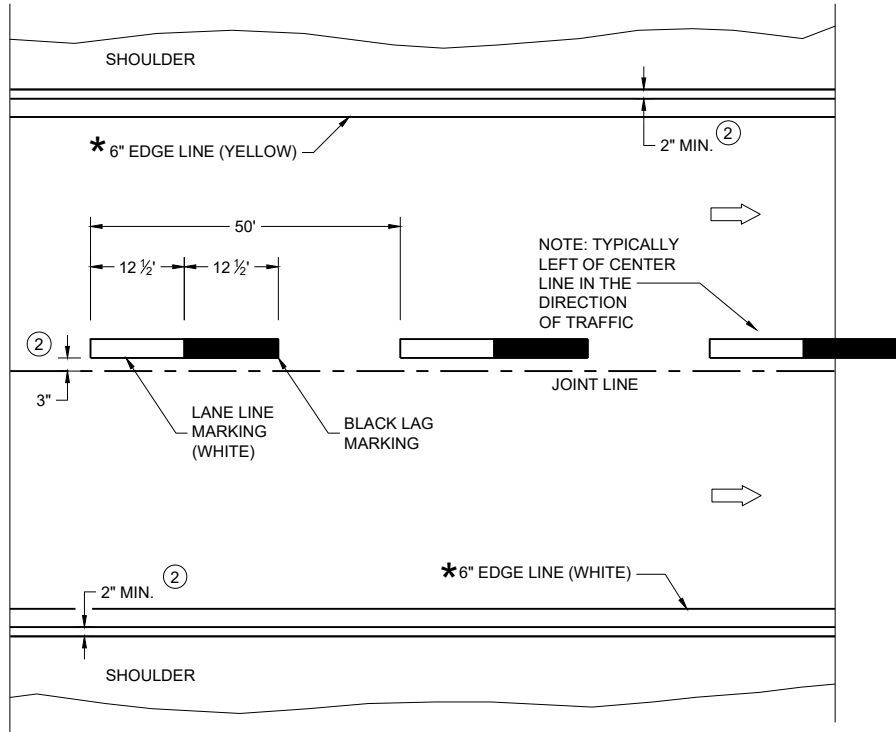
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 154

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

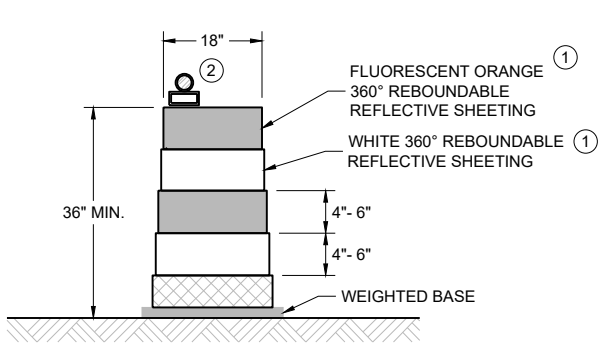
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 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.

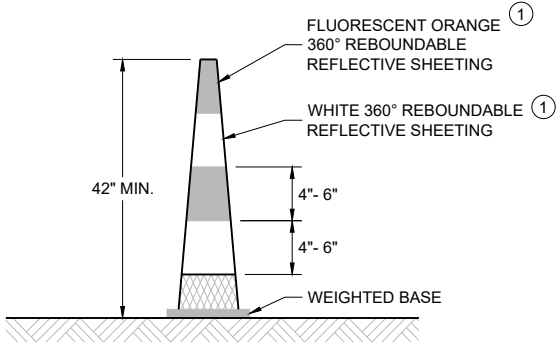
LEGEND

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

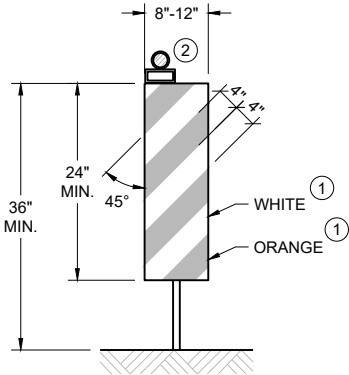
PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA 155	



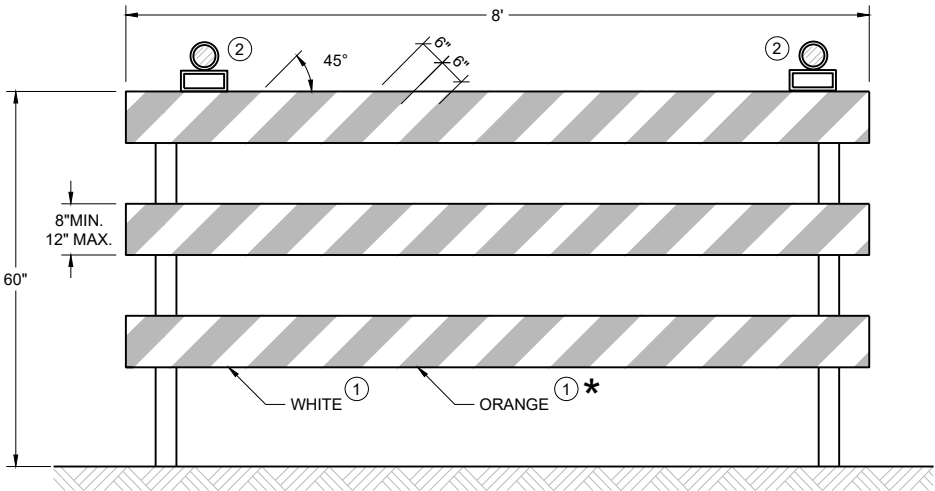
DRUM
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE
DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



VERTICAL PANEL
THE 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.

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.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2026 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

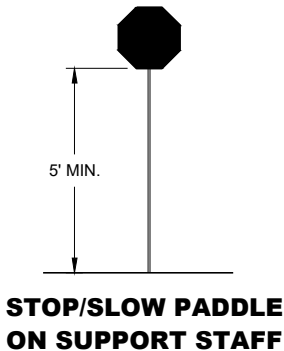
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- 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.

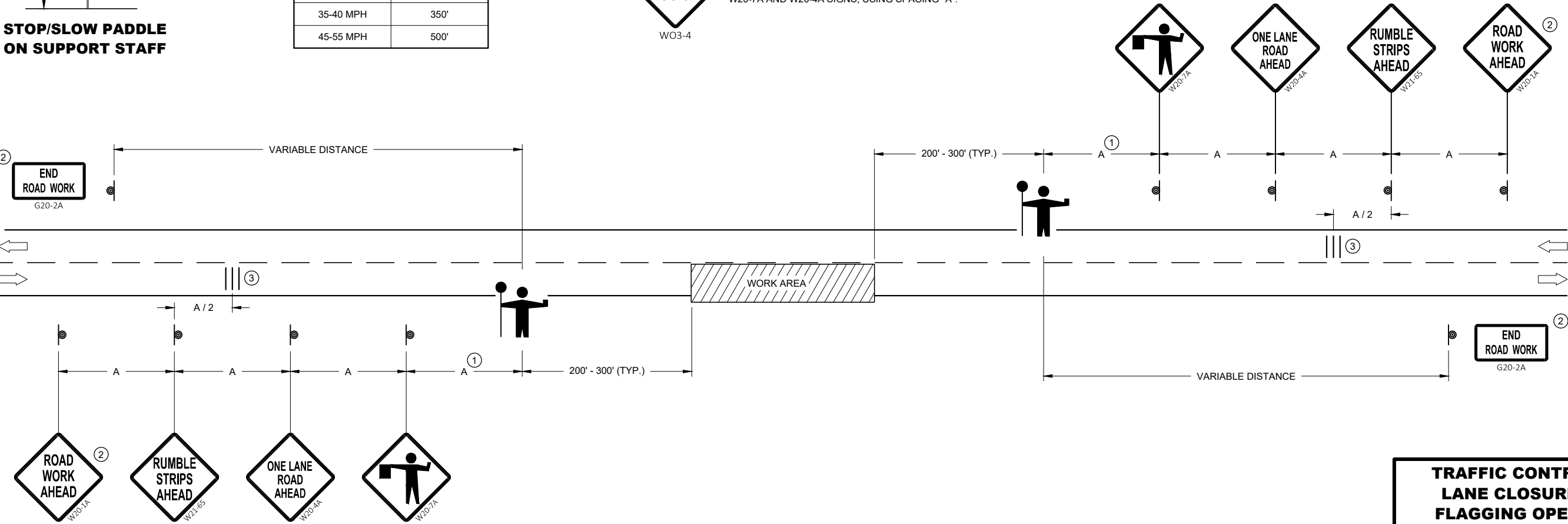


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 157
FHWA	

GENERAL NOTES

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL CONE 42-INCH
-  TRAFFIC CONTROL DRUM
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

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

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, 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.

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.

- ① SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ② IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

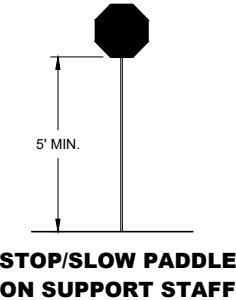
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

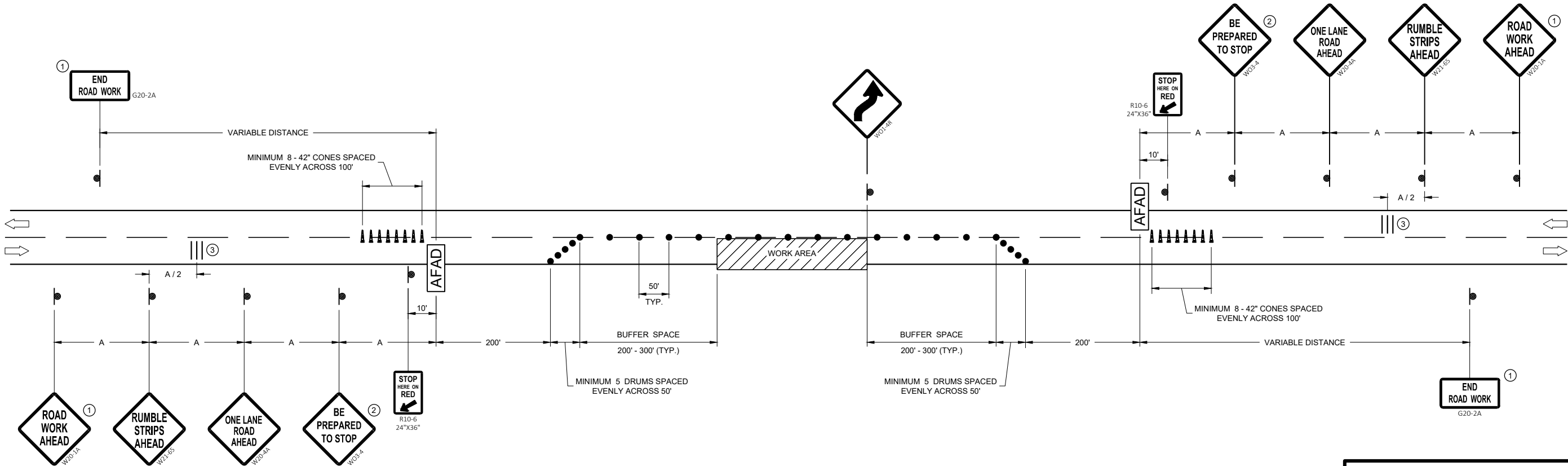
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

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



SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 158
FHWA

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

SIGN ON TEMPORARY SUPPORT
- 

DIRECTION OF TRAFFIC

GENERAL NOTES

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

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, 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 AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH

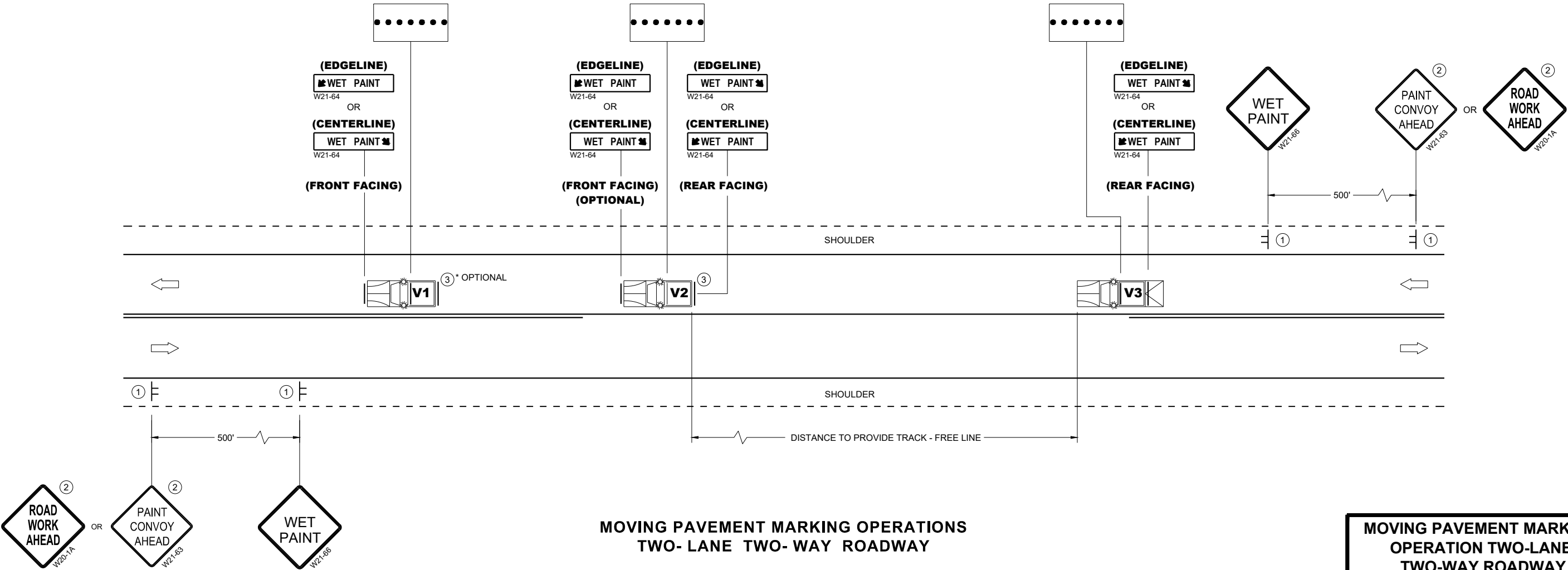
WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

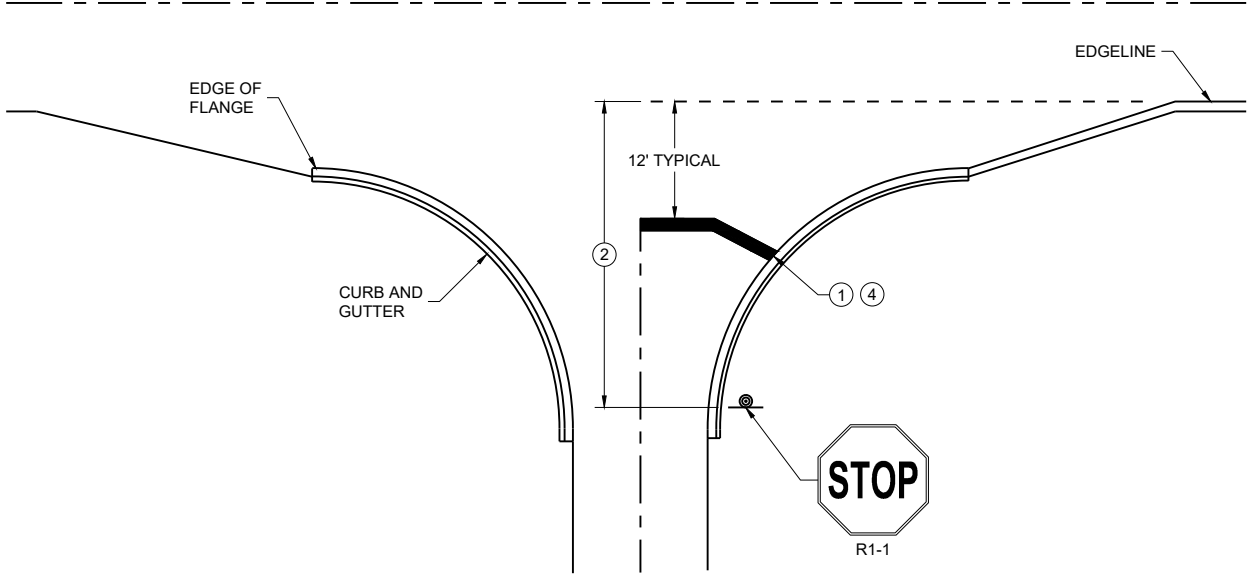


MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY

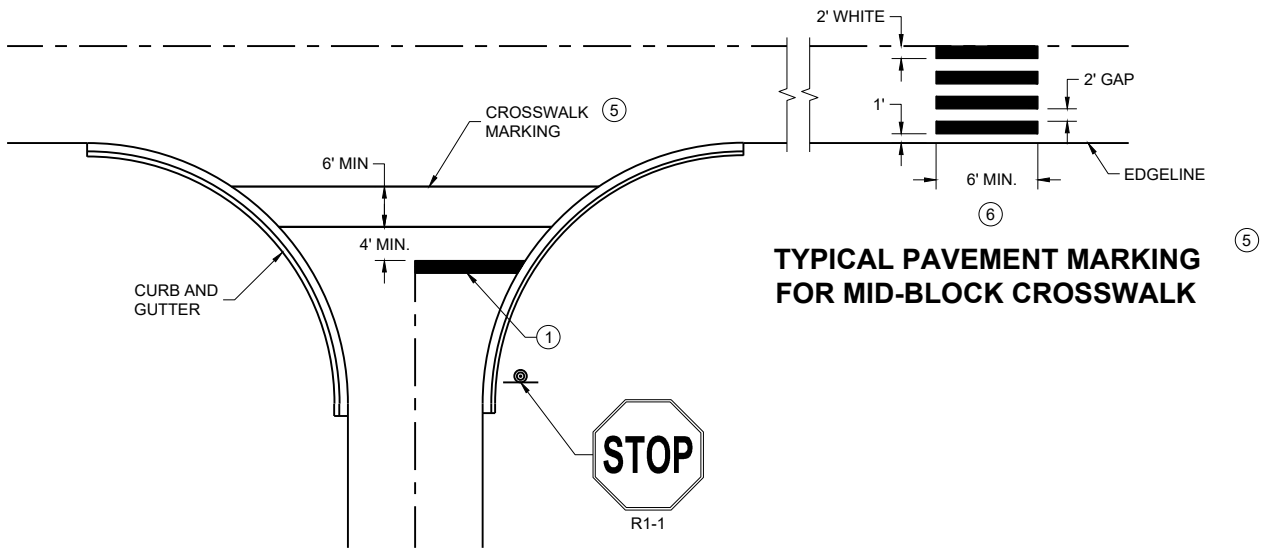
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Andrew Heidtke
DATE STATE ELECTRICAL ENGINEER

FHWA

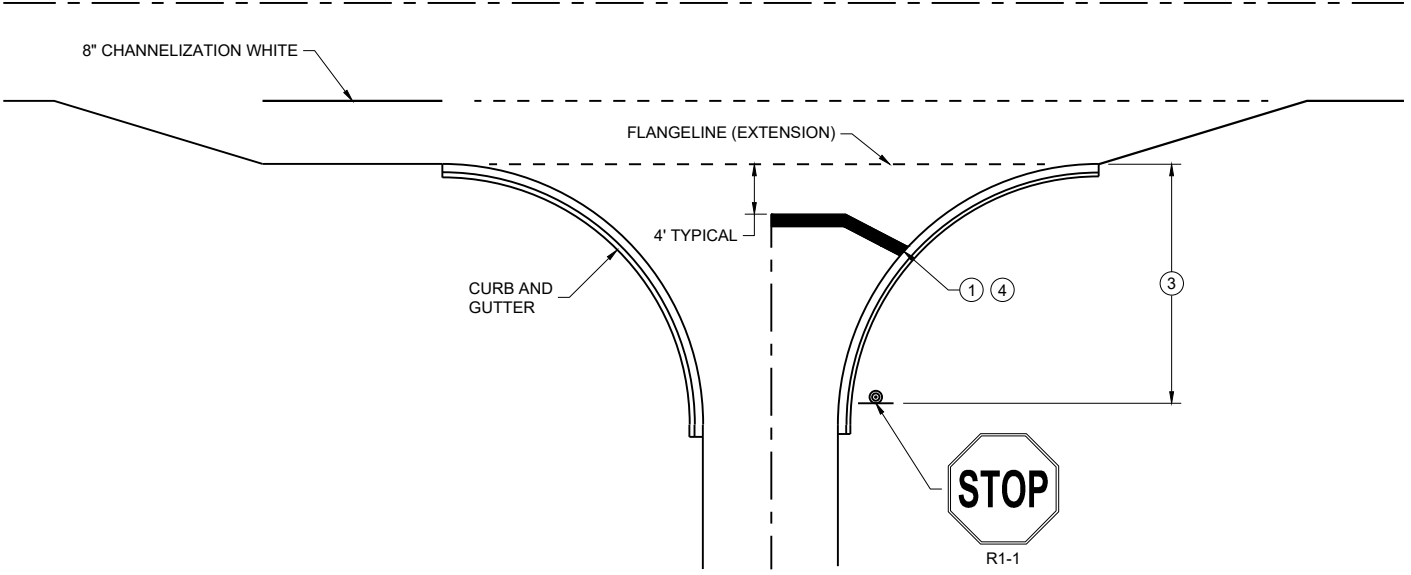


TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

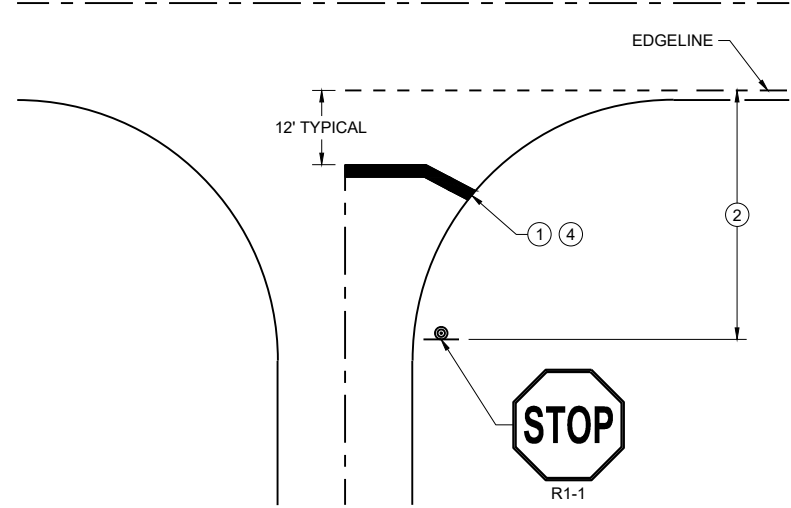


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE 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 EDGE LINE.
- 3 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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.
- 6 POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

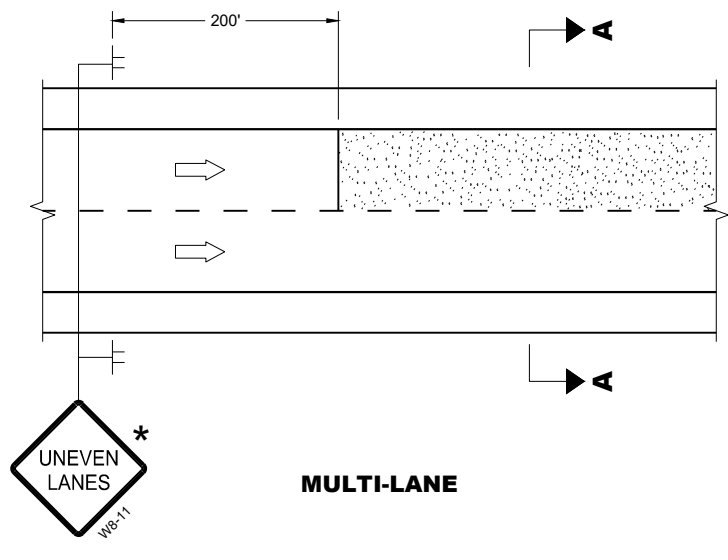
STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

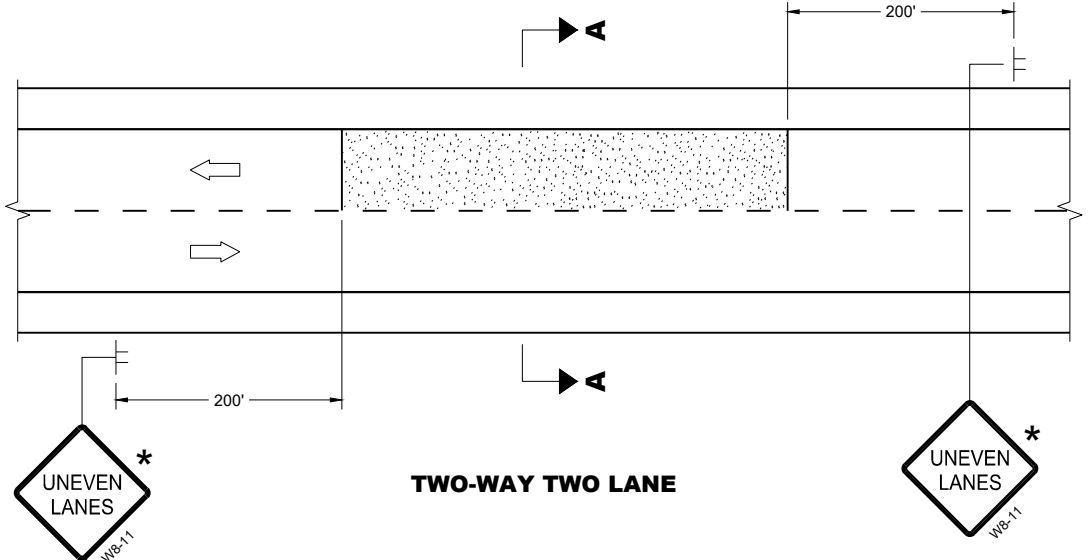
APPROVED
March 2024
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

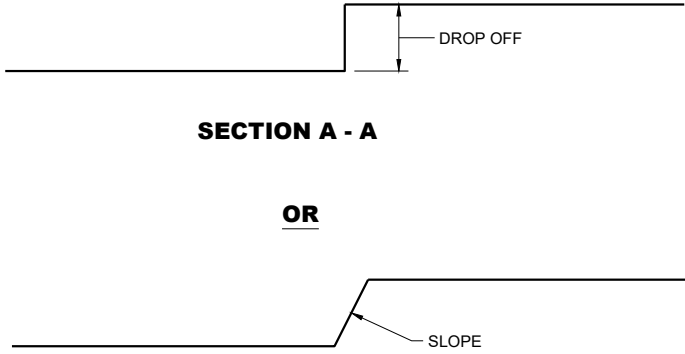
FHWA



MULTI-LANE



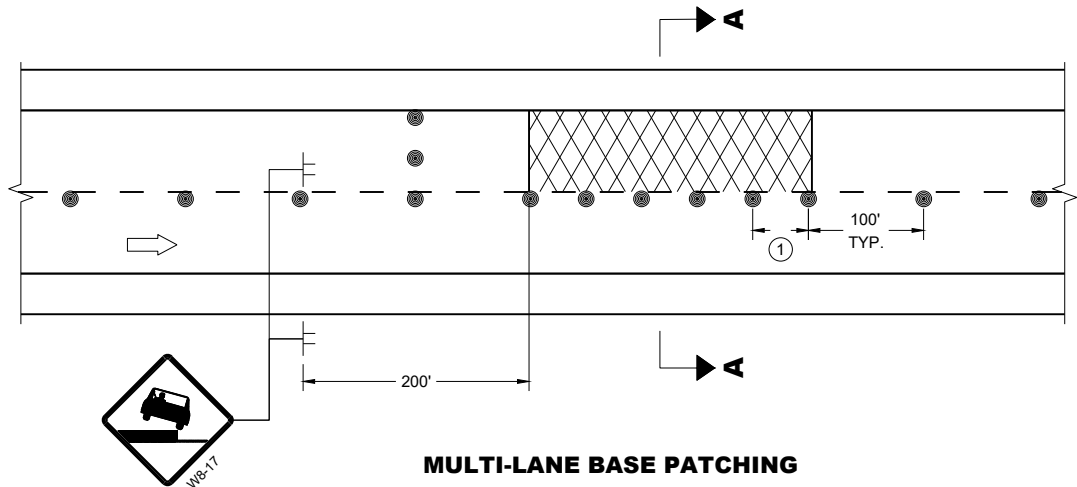
TWO-WAY TWO LANE



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.

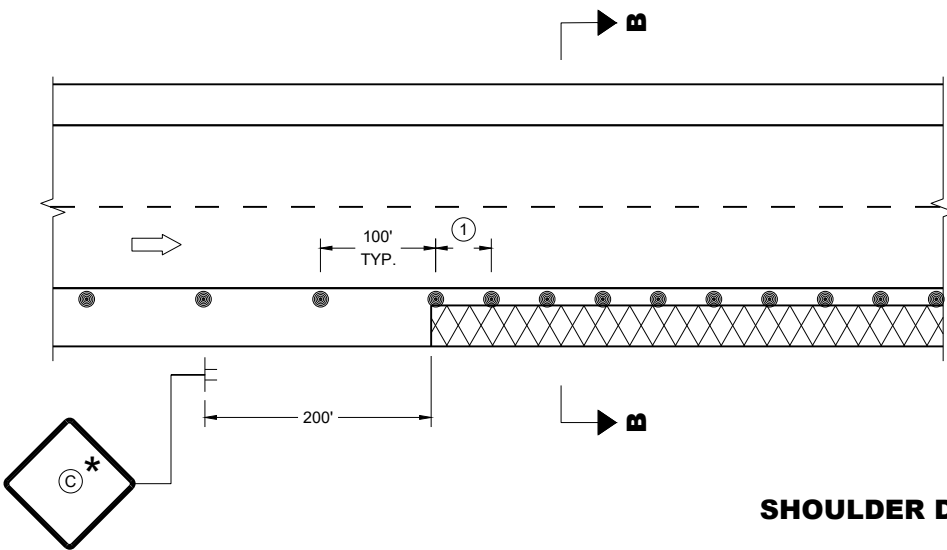
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

★ IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

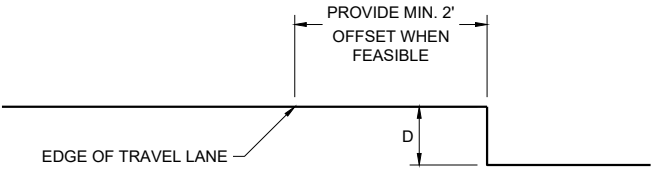
① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

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



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN ③
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF WB-9A
PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT	

TRAFFIC CONTROL,
DROP-OFF SIGNING

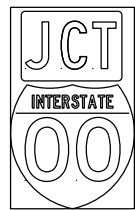
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE

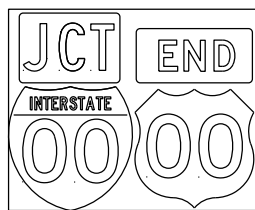
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

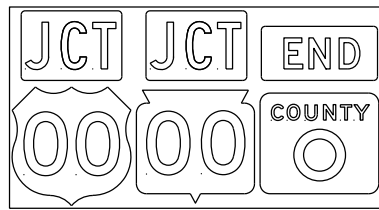
TYPICAL ASSEMBLIES



J1-1



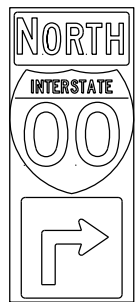
J1-2



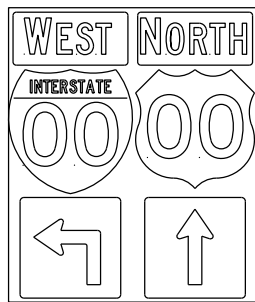
J1-3



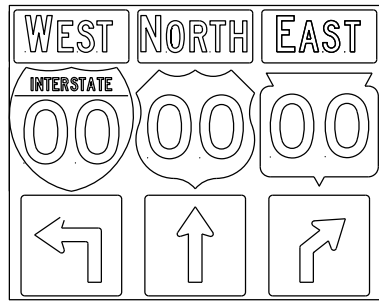
JR1-1



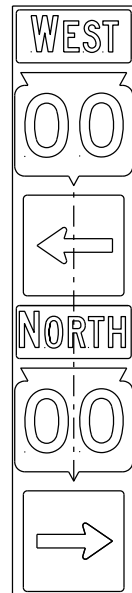
J2-1



J2-2

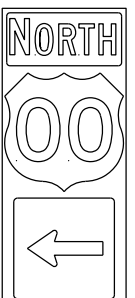


J2-3

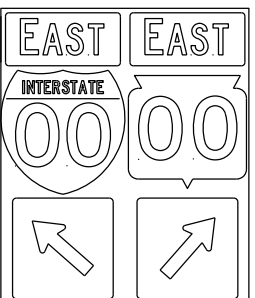


JV

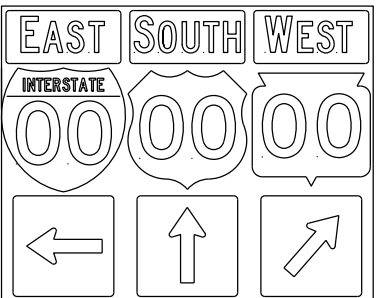
(Typical Vertical J-Assembly
See Note 10 and 11)



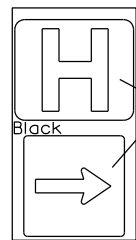
J3-1



J3-2



J3-3



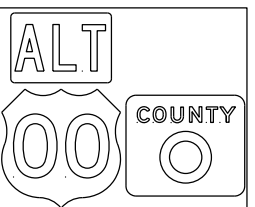
JH-1

Blue Background

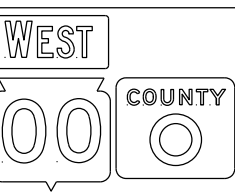
Black



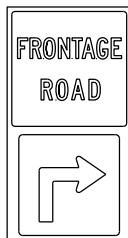
J4-1



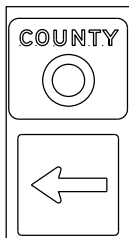
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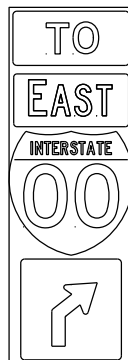
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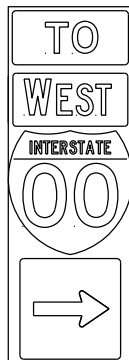
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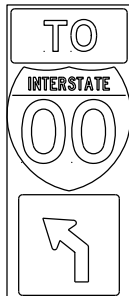
J13-1



J32-1



J33-1



J22-1



J23-1



JR13-1

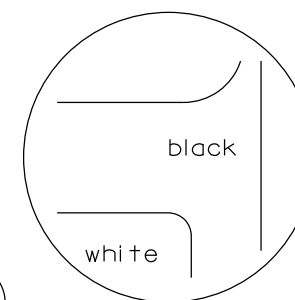
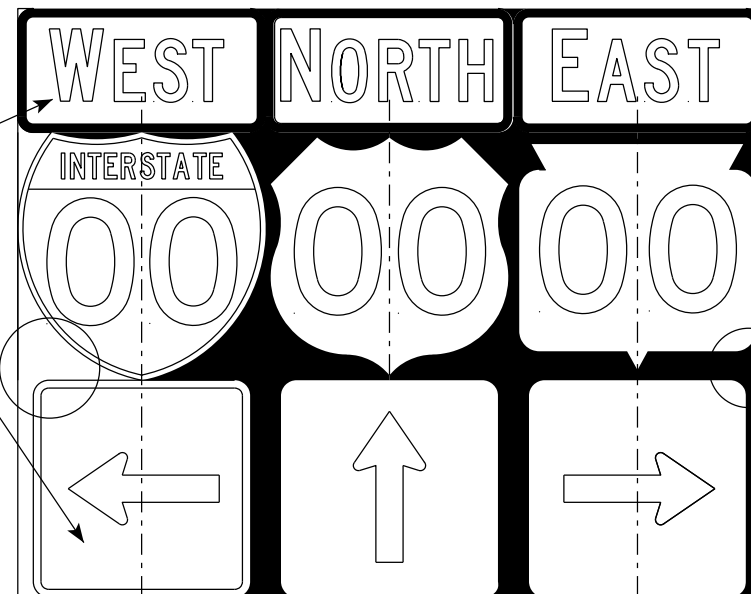
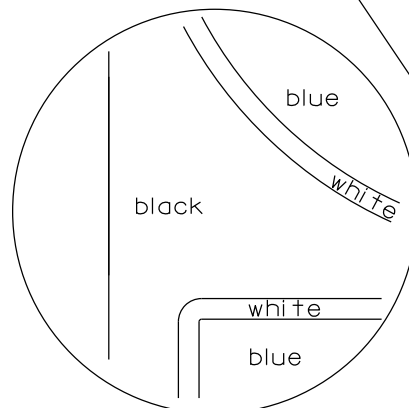


JR23-1



JR99-1

blue background
with interstate



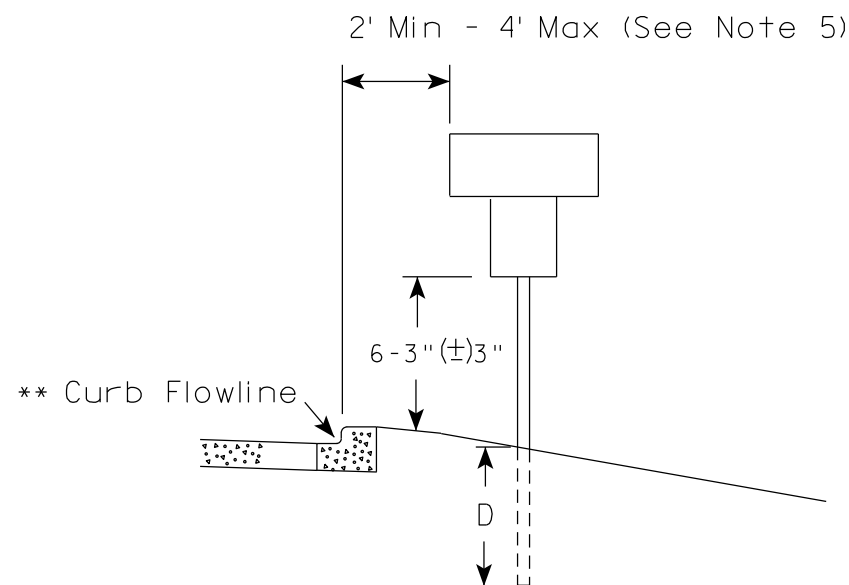
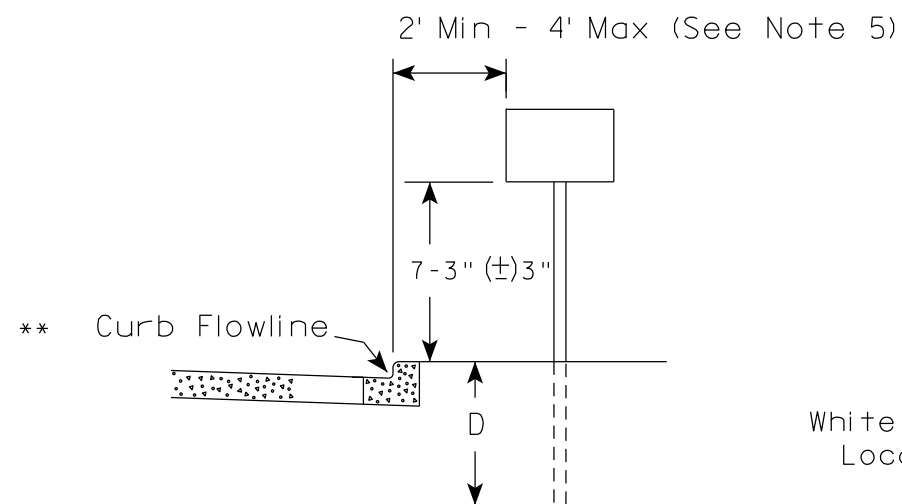
black background

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/7/23	PLATE NO. A2-1S.10

NOTES

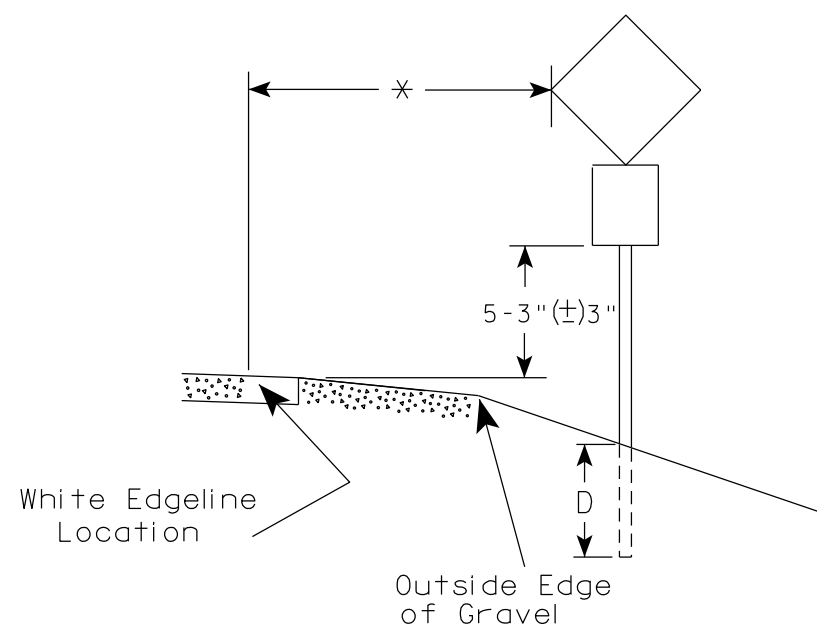
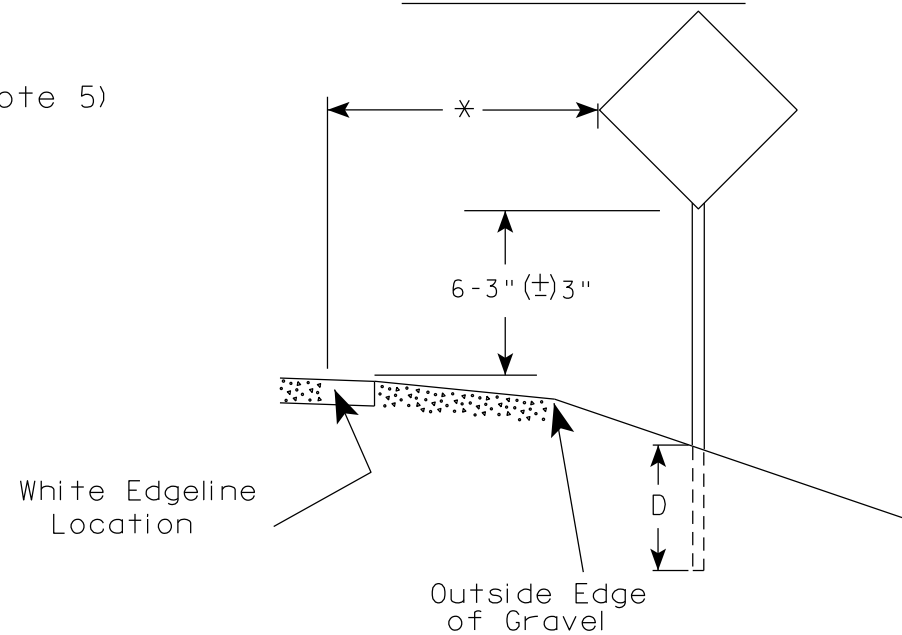
1. Signs are Type II - Type H Reflective
2. Color:
Background - Black Non-reflective
Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
6. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
7. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
8. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. All Vertical J Assemblies are given a Sign Code of JV
10. For JV Assemblies that have a mixture of Interstate and Non-Interstate shields, arrows and cardinals shall be white on blue.
11. For JV Assemblies that have a mixture of Non-Interstate and Auto-Tour shields, arrows and cardinals shall be black on white.

URBAN AREA



* * 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.

RURAL AREA (See Note 2)



* 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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

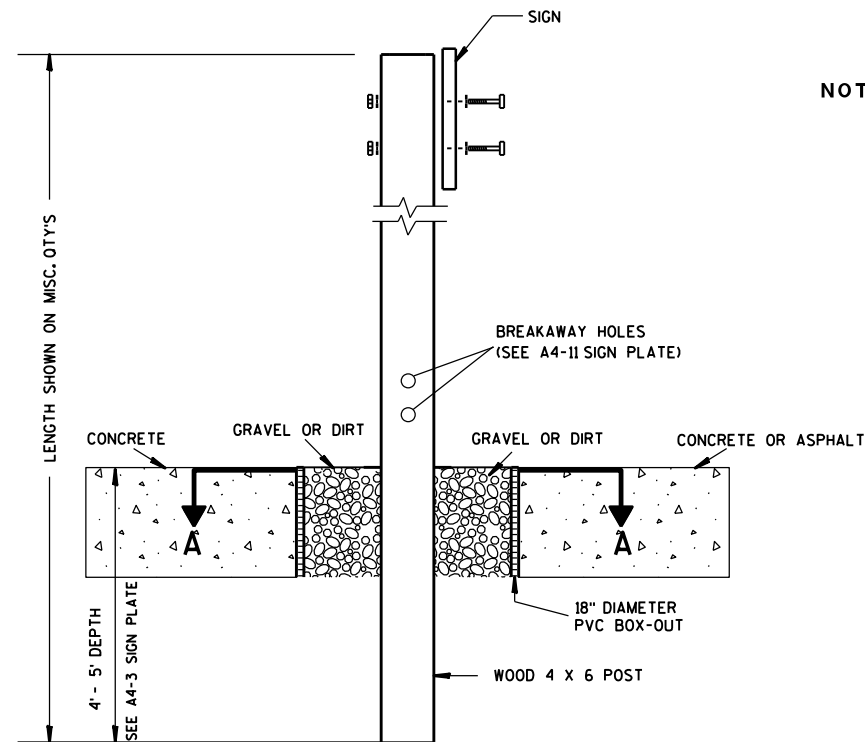
- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (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" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

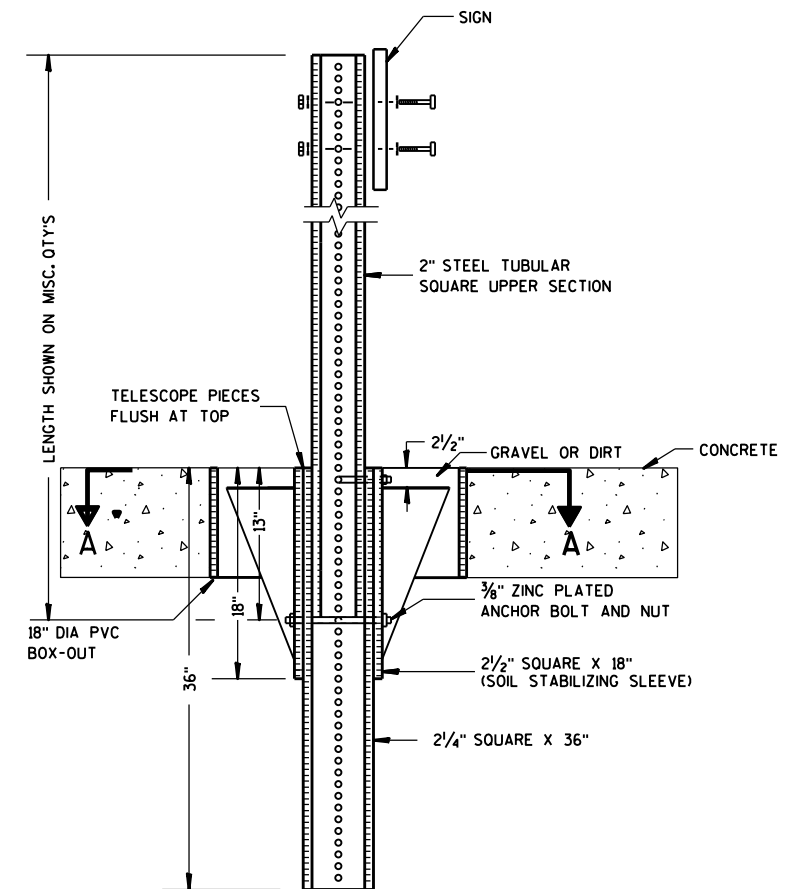
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

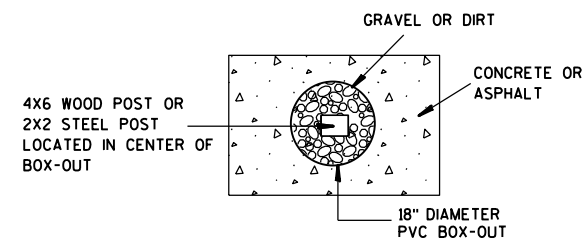
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 PLAT 164 A4-3B.1

PROJECT NO:

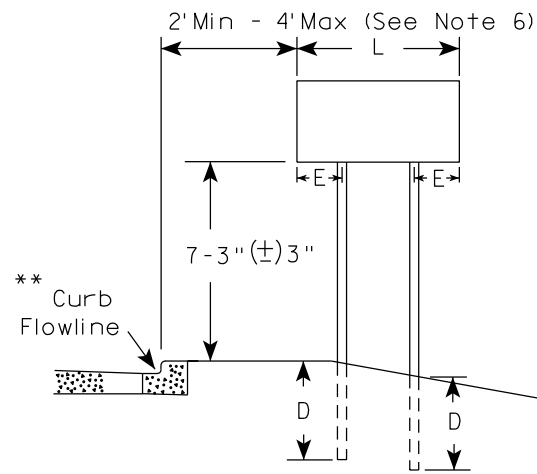
HWY:

COUNTY:

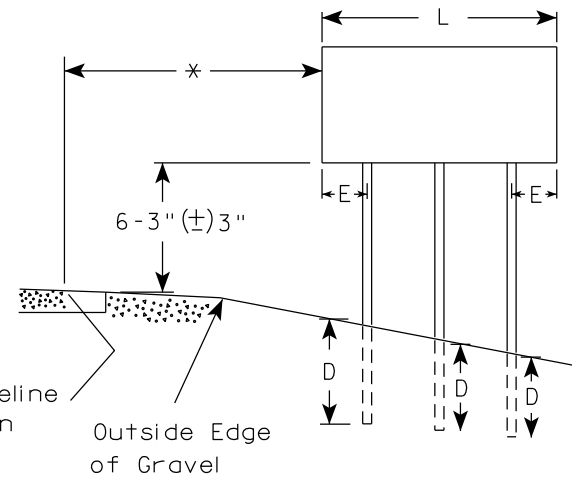
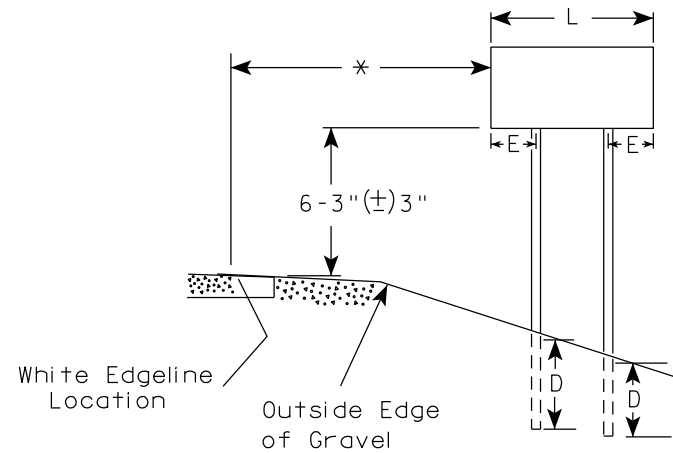
SHEET NO:

E

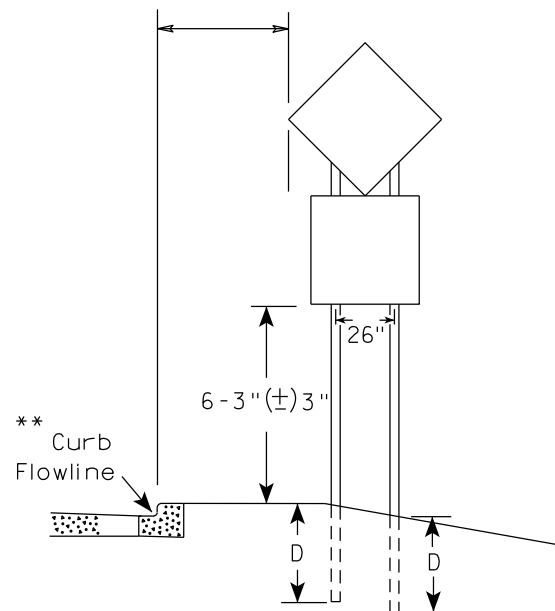
URBAN AREA



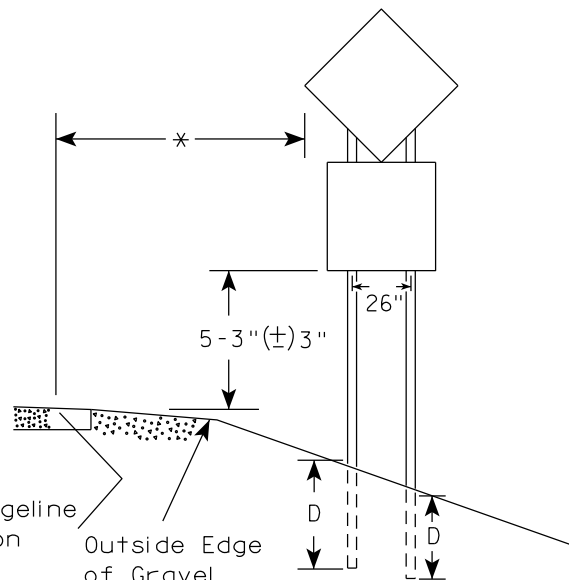
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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 12/6/23 PLATE NO. A4-4.16

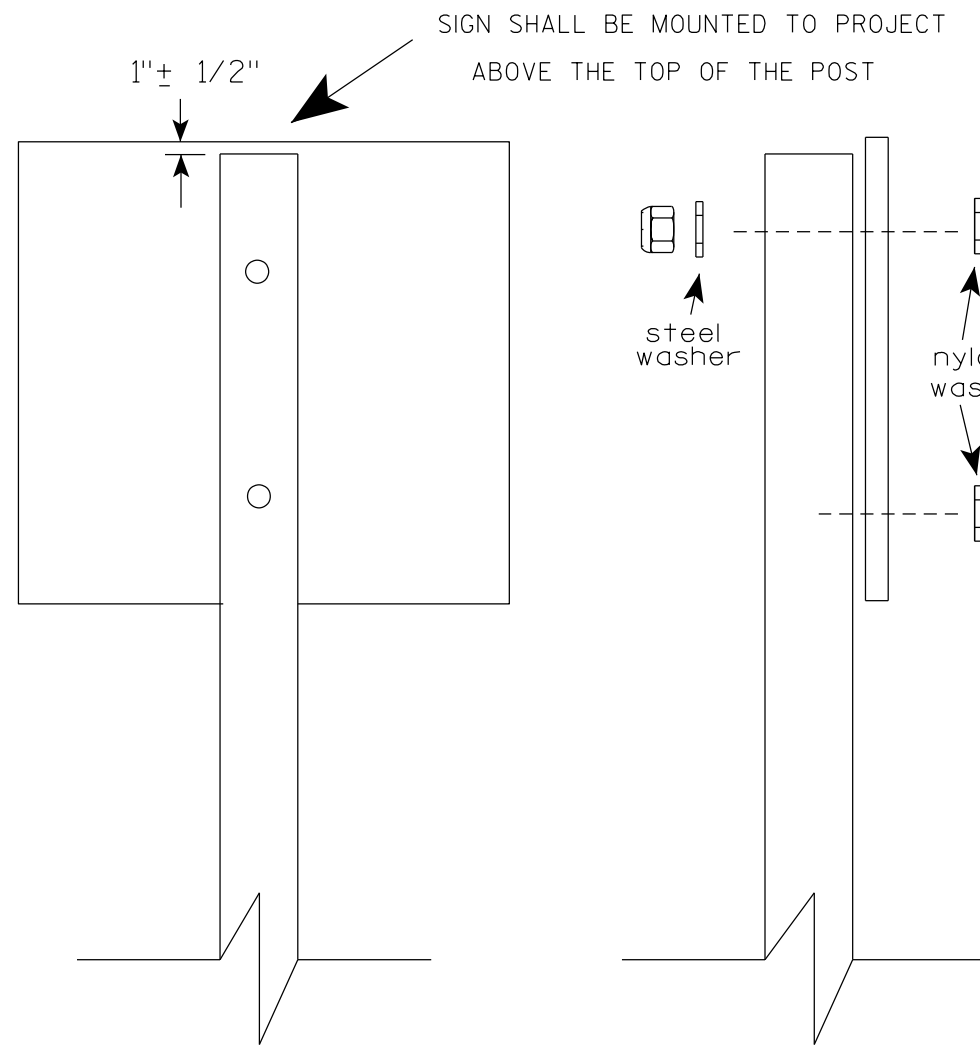
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 165

E



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

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

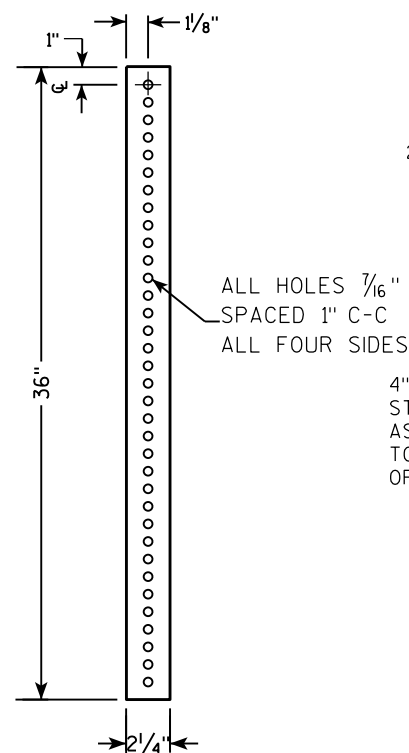
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " 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

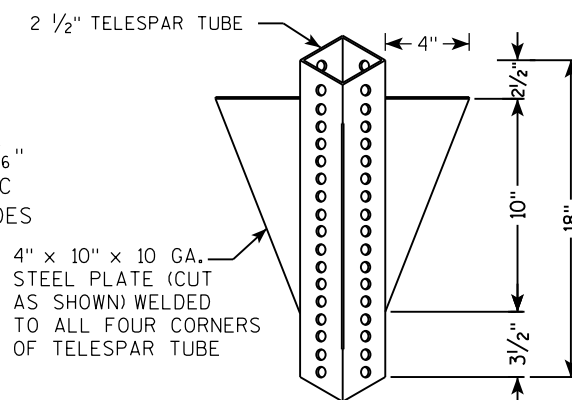
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



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



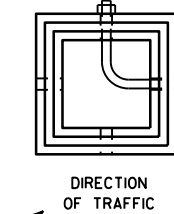
TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- SIGN**: Indicated at the top of the post.
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**: Reference to specific hardware.
- 2" STEEL TUBULAR SQUARE UPPER SECTION**: The main vertical support.
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES**: Specification for the upper section's perforations.
- $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT**: Hardware used for securing the base.
- 2 $\frac{1}{2}$ " GRAVEL OR DIRT**: Material filling the base area around the anchor bolts.
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT**: Hardware used for securing the base.
- 2 $\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)**: Component below the gravel layer.
- 2 $\frac{1}{4}$ " SQUARE X 36"**: The bottom-most section of the post.
- TELESCOPE PIECES FLUSH AT TOP**: Note regarding the connection between sections.
- 18" DIA SCHEDULE 40 PVC BOX-OUT**: The base container for the assembly.
- Dimensions**:
 - Total height of the box-out: 36"
 - Height of the gravel/dirt layer: 18"
 - Width of the gravel/dirt layer: 13"

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- TELESCOPE PIECES FLUSH AT TOP**: Indicated by a dimension line on the left.
- 2" STEEL TUBULAR SQUARE UPPER SECTION**: The main vertical support.
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES**: Specification for the perforations in the upper section.
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT**: Located at the top of the upper section.
- 1"**: Dimension for the offset of the anchor bolt.
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT**: Located at the base of the upper section.
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)**: The sleeve supporting the upper section.
- 2 1/4" SQUARE X 36"**: The main base post.
- SIGN**: The sign plate at the top.
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**: Reference to the sign plate specifications.
- LENGTH SHOWN ON MISC. QTY'S**: Dimension line on the left indicating the total length.
- Dimensions**:
 - 36" (Total length of the main post)
 - 18" (Length of the soil stabilizing sleeve)
 - 12" (Offset of the top anchor bolt)

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



SECTION A-A

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 Matthae R Rauch

for State Traffic Engineer

DATE 2/05/15 PLATI 167 14-9.9

SHEET NO:	E
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PROJECT NO:

HWY:

COUNTY:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN

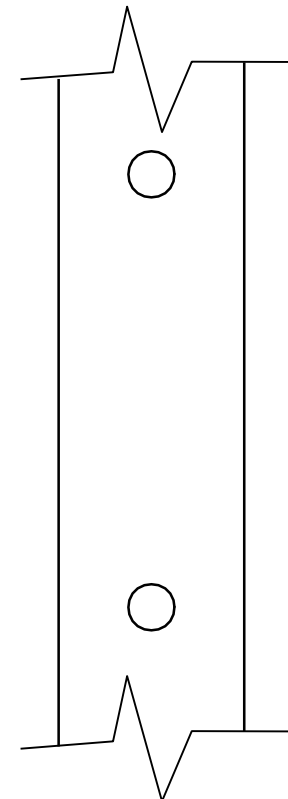
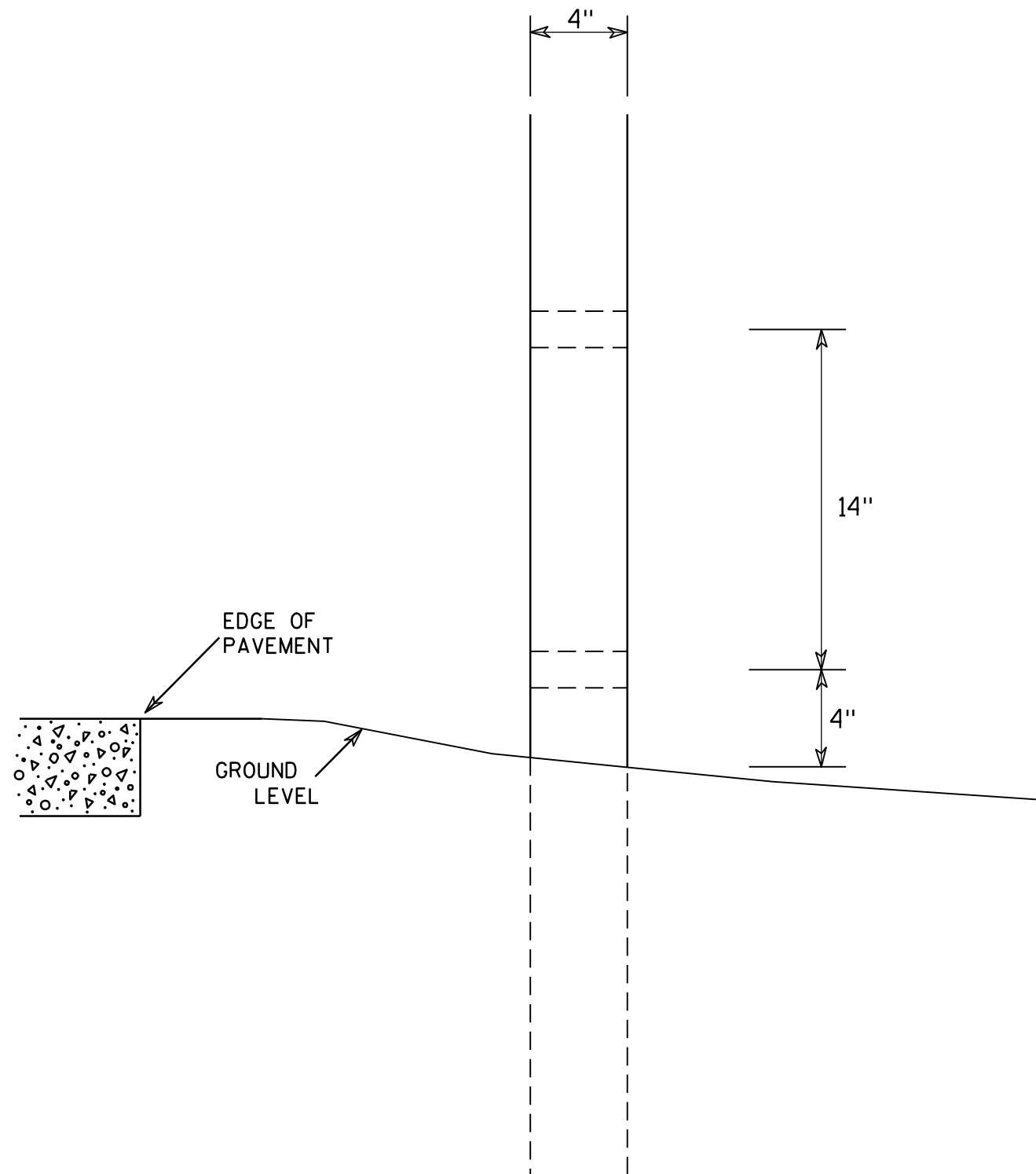
PLOT DATE : 05-FEB-2015 17:09

PLOT BY : mscs_ja

PLOT NAME :

PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

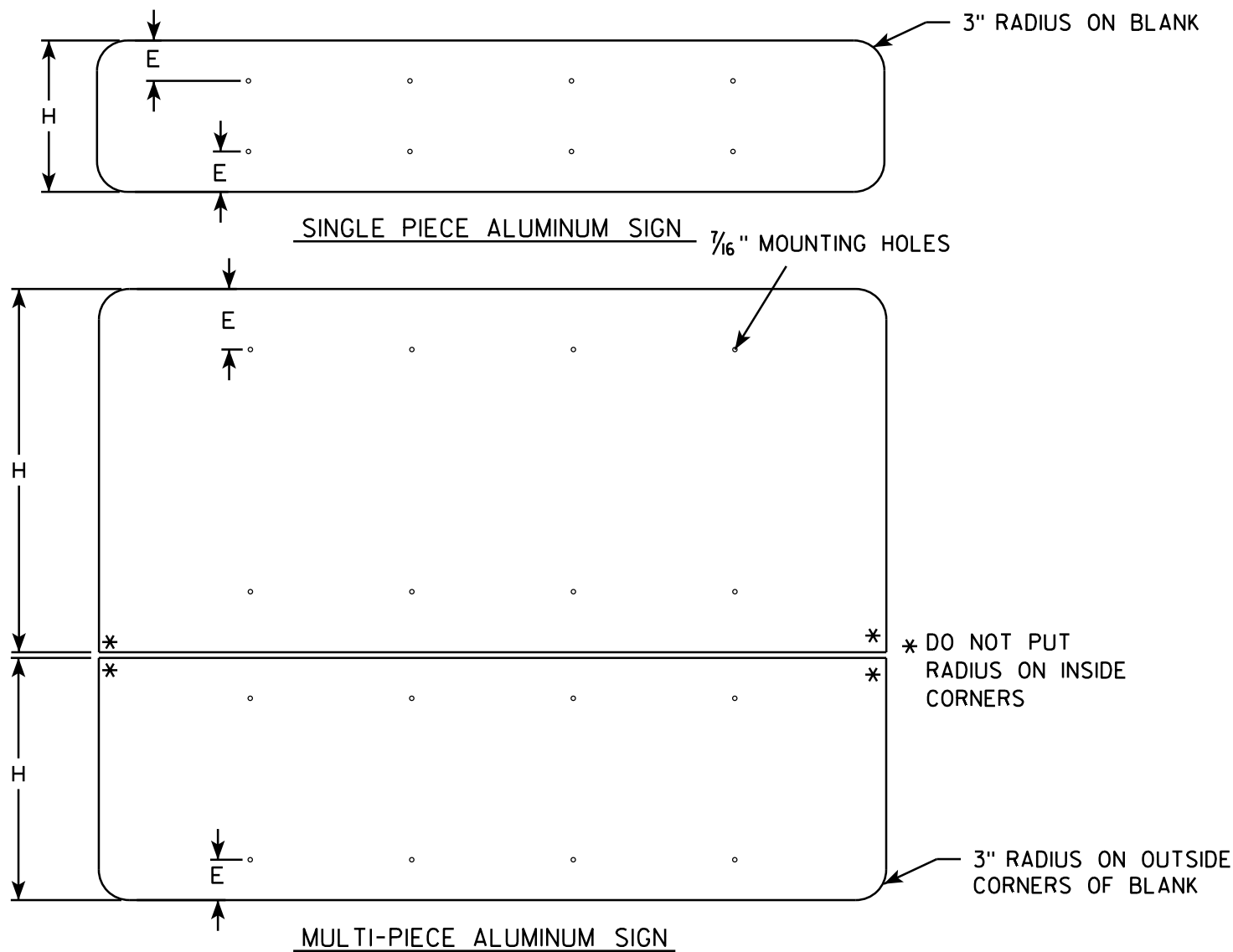
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COUNTY:

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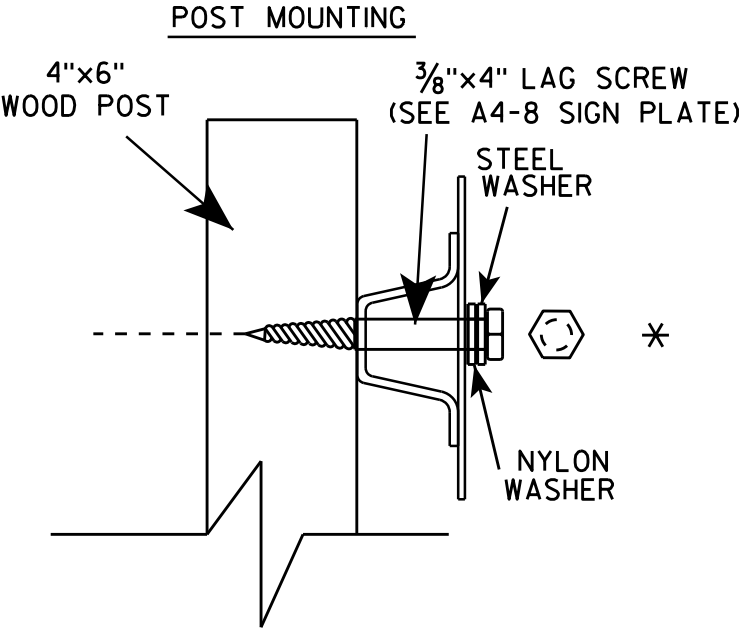
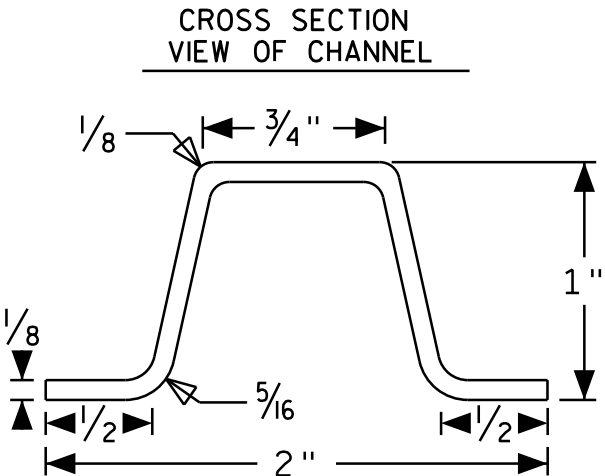
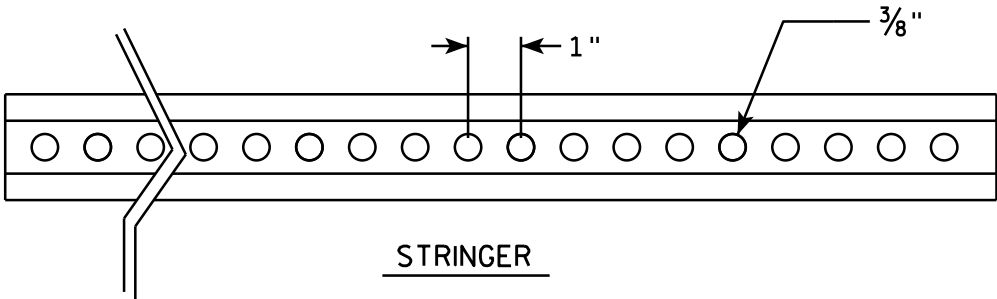
E



GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"



SIGN STRINGER
MOUNTING REQUIREMENTS

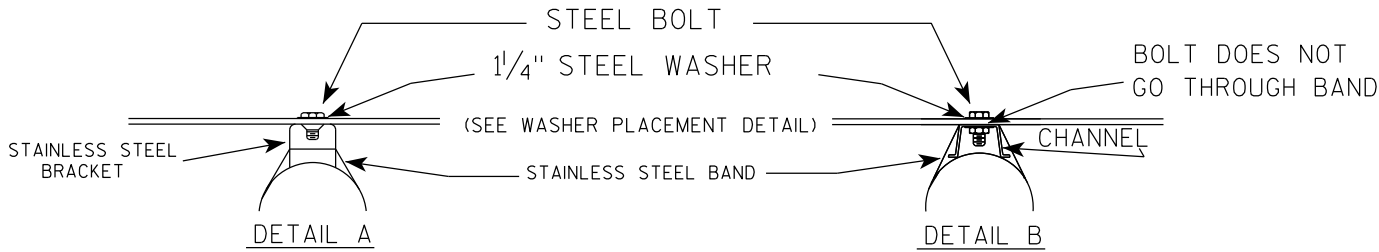
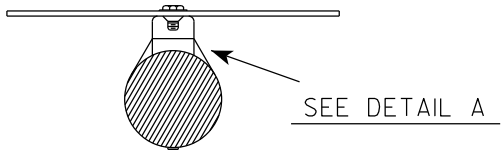
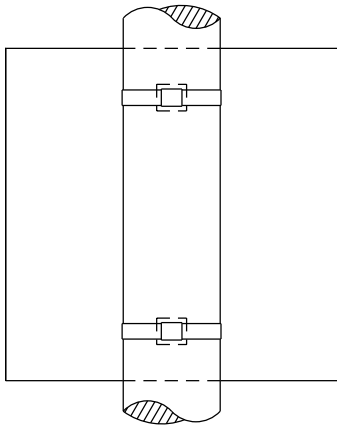
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

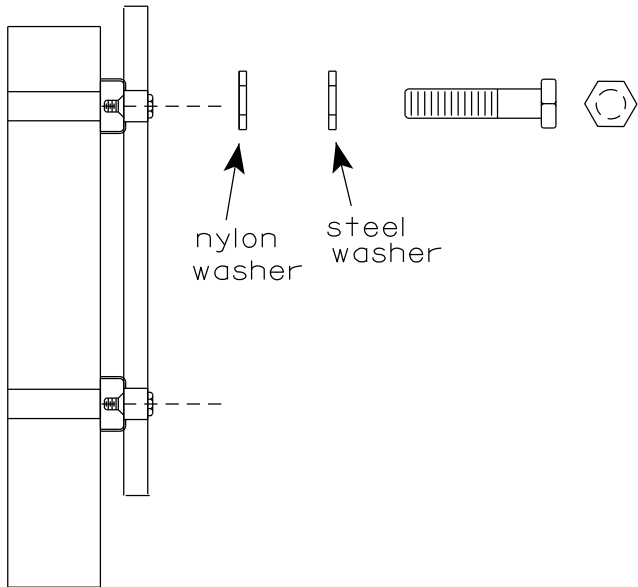
DATE 4/26/16 PLATE No A4-18.1
169

BANDING

SINGLE SIGN



WASHER PLACEMENT

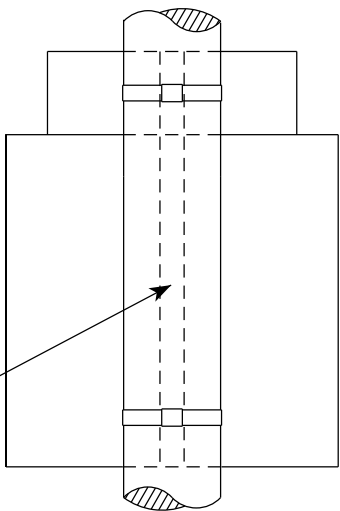


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

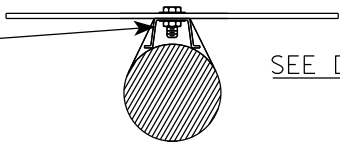
GENERAL NOTES

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

"J" ASSEMBLY



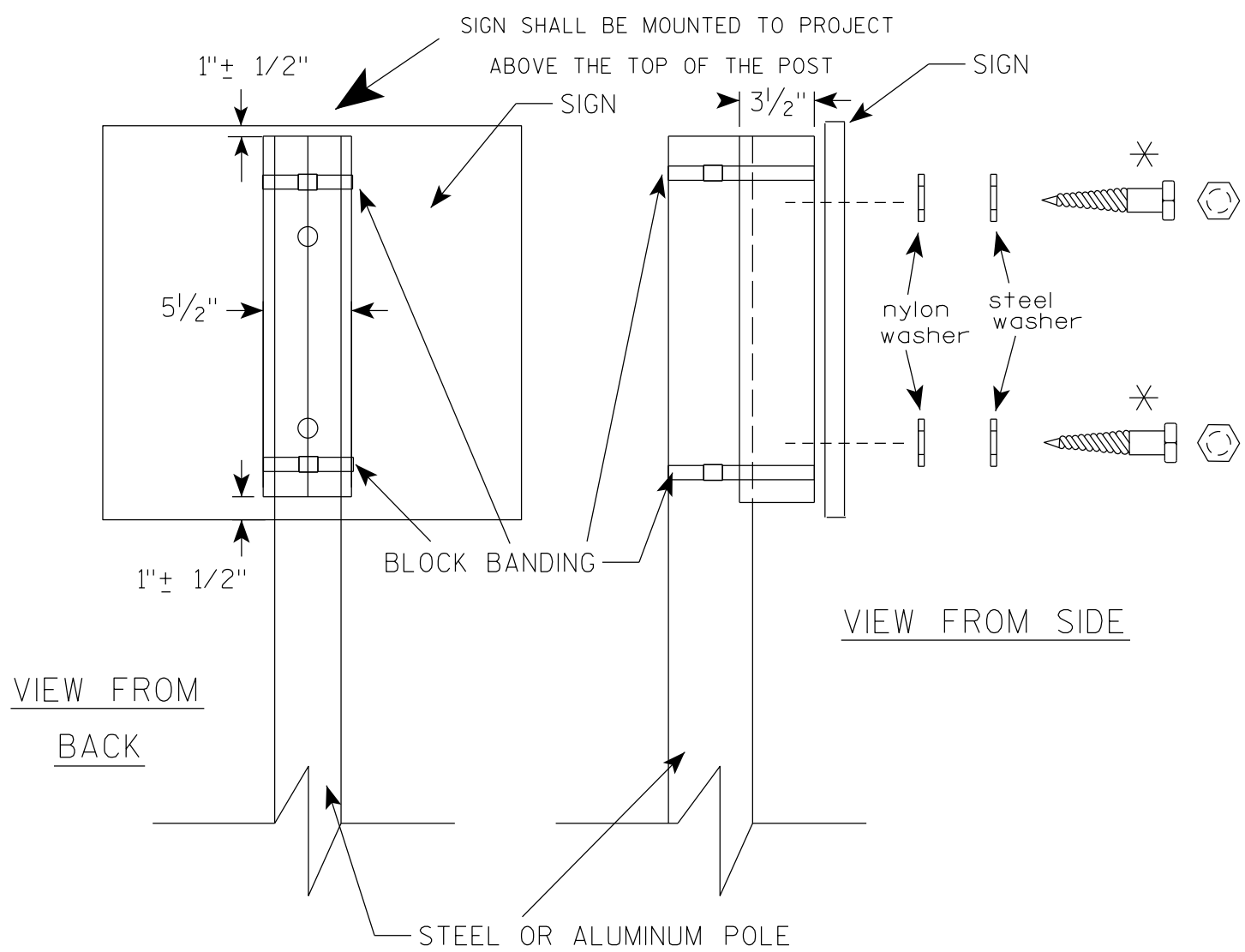
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

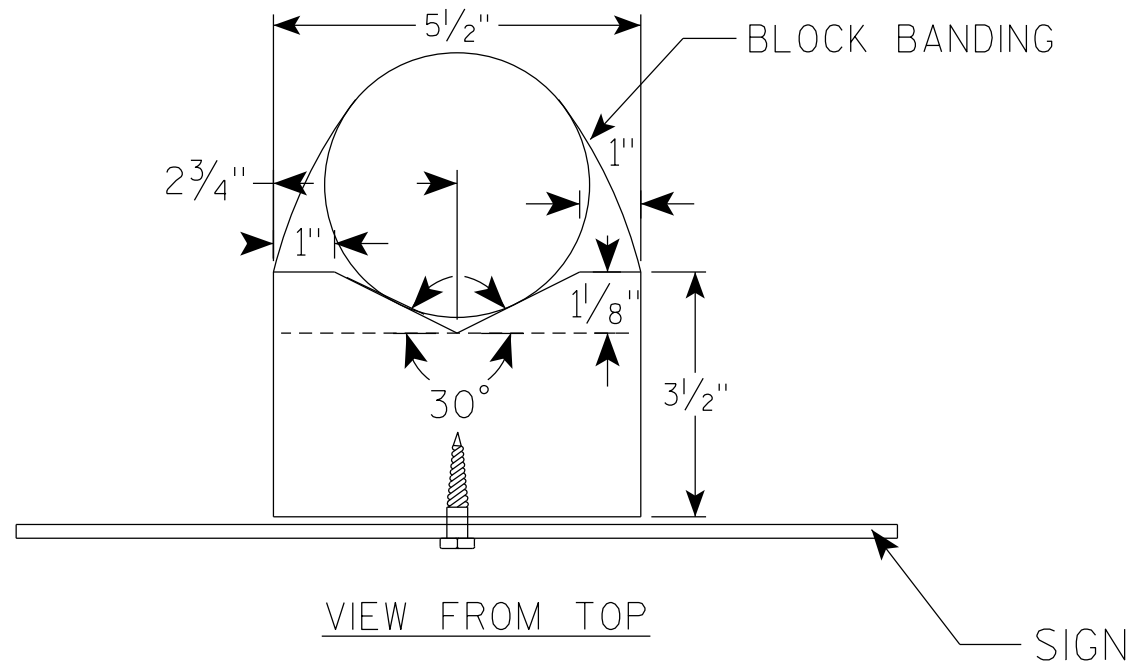
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

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, $\frac{3}{4}$ " 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 $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

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

PROJECT NO:

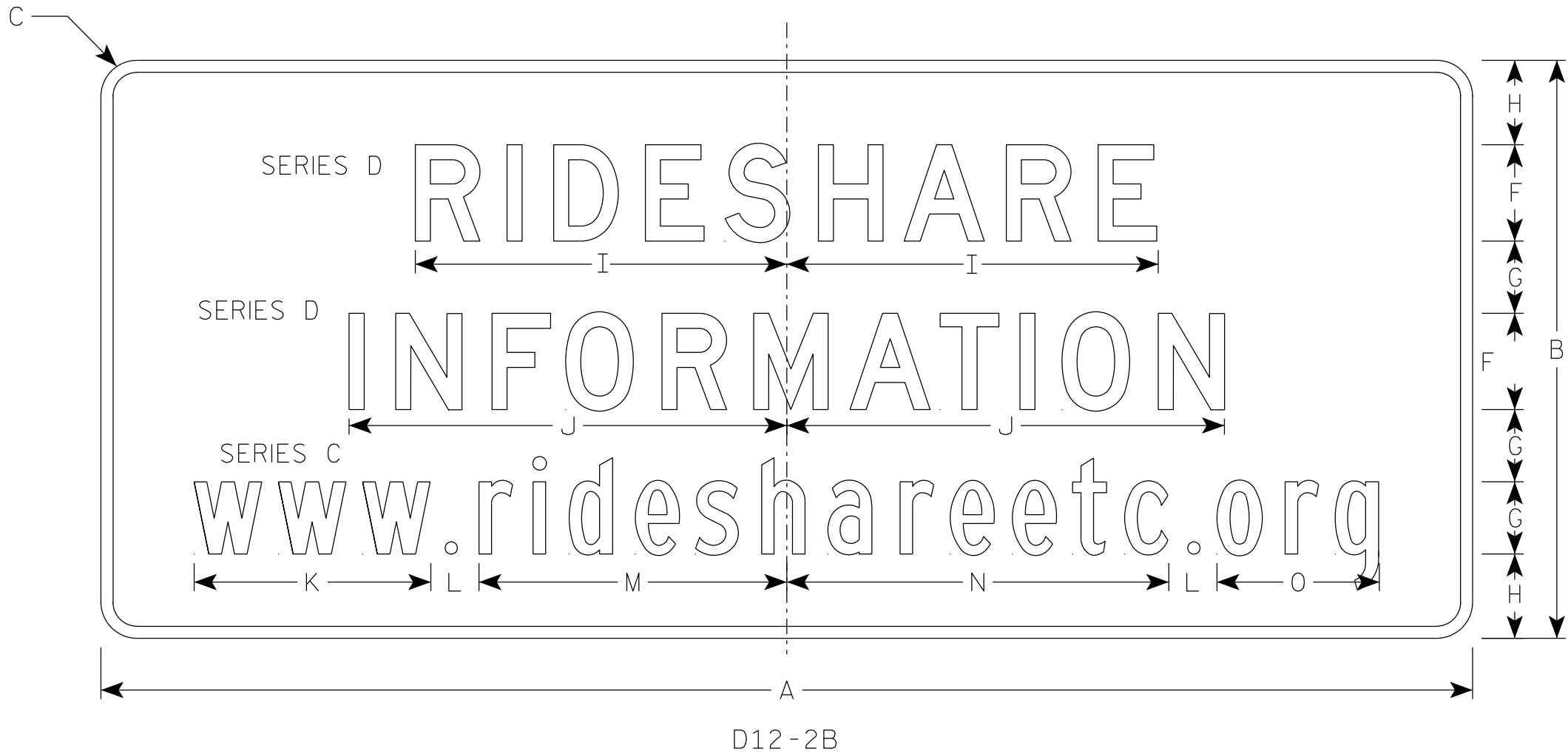
SHEET NO: 171

E

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - Blue
Message - White
- 3. Message Series - Lines 1 & 2 are Series D and Line 3 is Series C



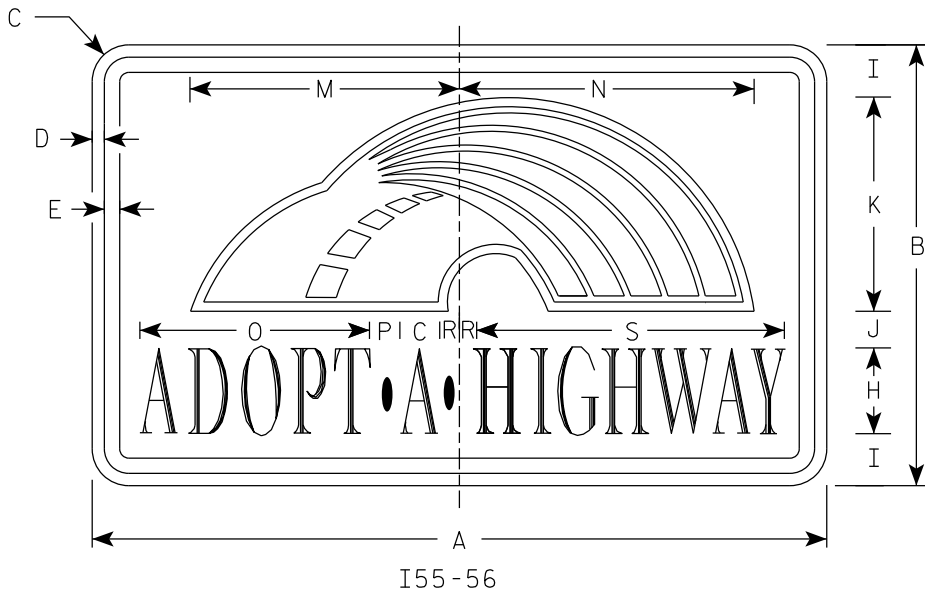
7

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	84	36	2 1/4		3/4	6	4 1/2	5 1/4	24 1/4	28 5/8	14 3/4	3	19 1/4	23 7/8	10 1/8												21.0
2M	84	36	2 1/4		3/4	6	4 1/2	5 1/4	24 1/4	28 5/8	14 3/4	3	19 1/4	23 7/8	10 1/8												21.0
3	84	36	2 1/4		3/4	6	4 1/2	5 1/4	24 1/4	28 5/8	14 3/4	3	19 1/4	23 7/8	10 1/8												21.0
4	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 5/8	31 3/4	13 1/2												38.0
5	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 5/8	31 3/4	13 1/2												38.0

PROJECT NO:

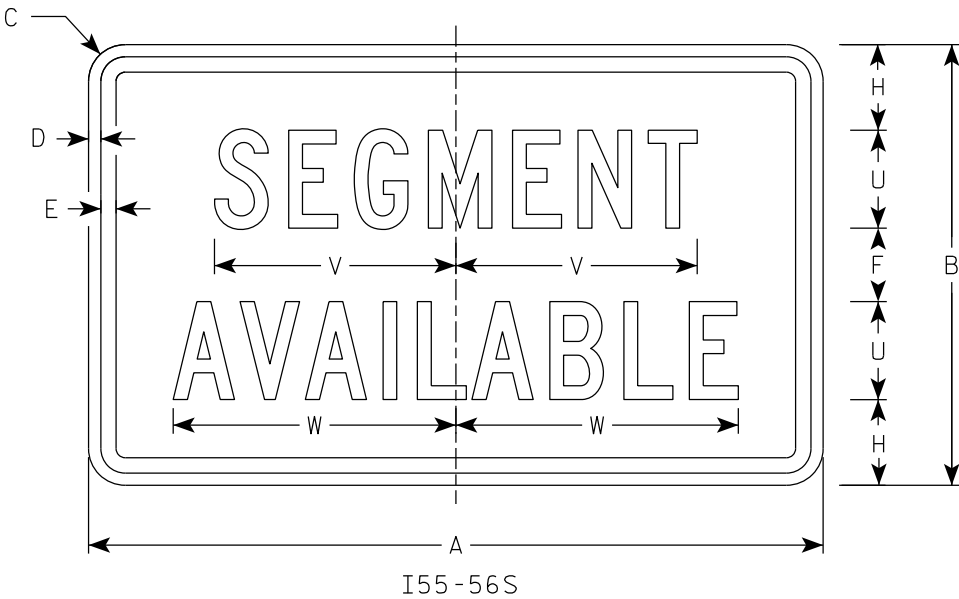
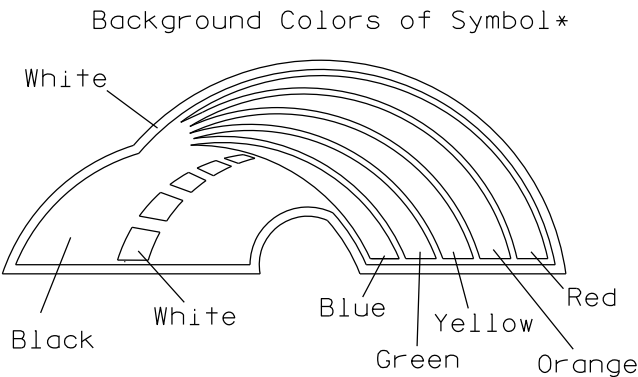
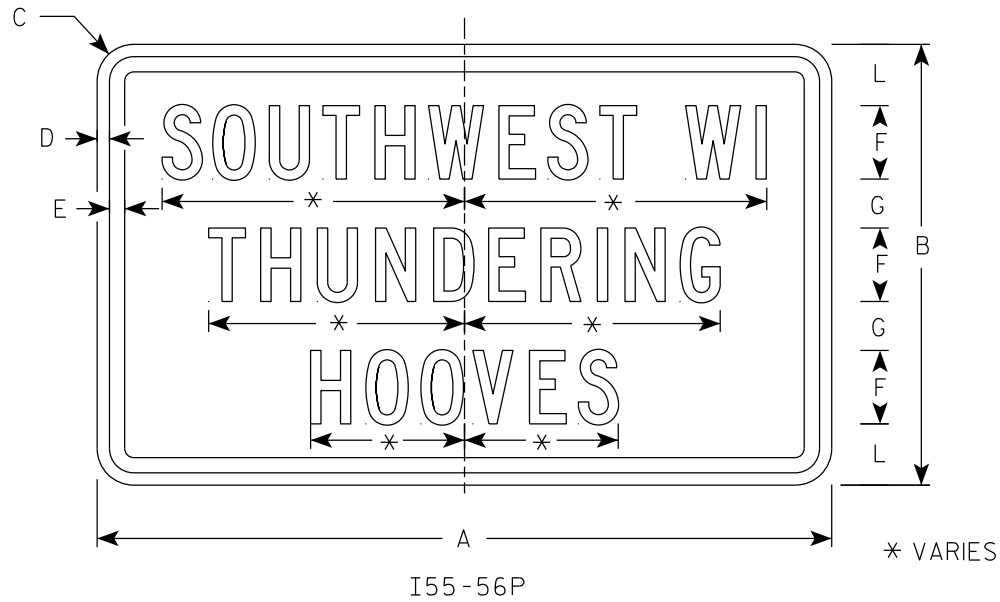
SHEET NO: 172

E



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - Blue
Message - White
Rainbow detail - See Below
3. Message Series - Adopt a Highway - Dutch 8011L
All other Text - Series C
4. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.



*1/4" Black Border between each color of rainbow and border of rainbow
*3/8" White Border surrounds the whole image of the rainbow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	18	1 1/2	1/2	5/8	3	2	3 1/2	2 1/4	1 1/2	8 1/2	2 1/2	11	12	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

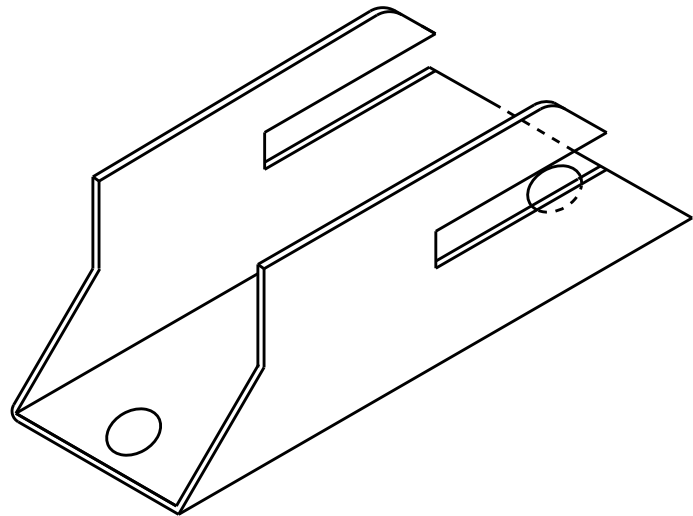
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

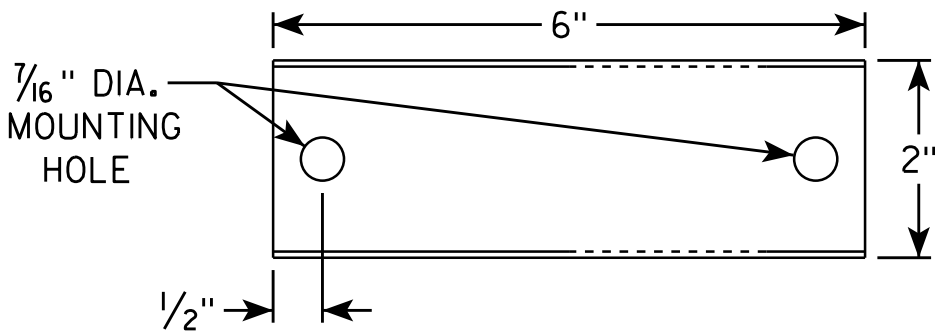
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/13/2025 PLATE NO. I55-56.5

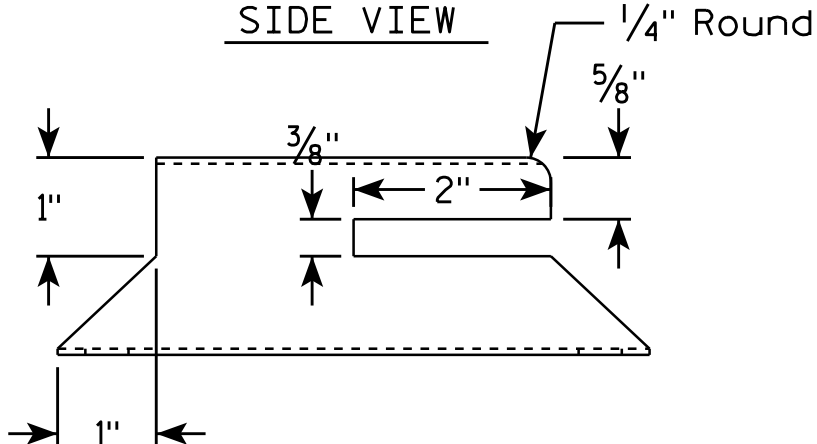
ISOMETRIC VIEW



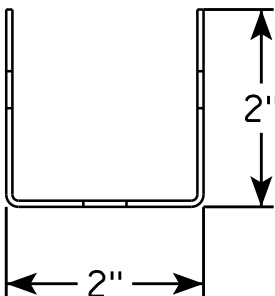
TOP VIEW



SIDE VIEW



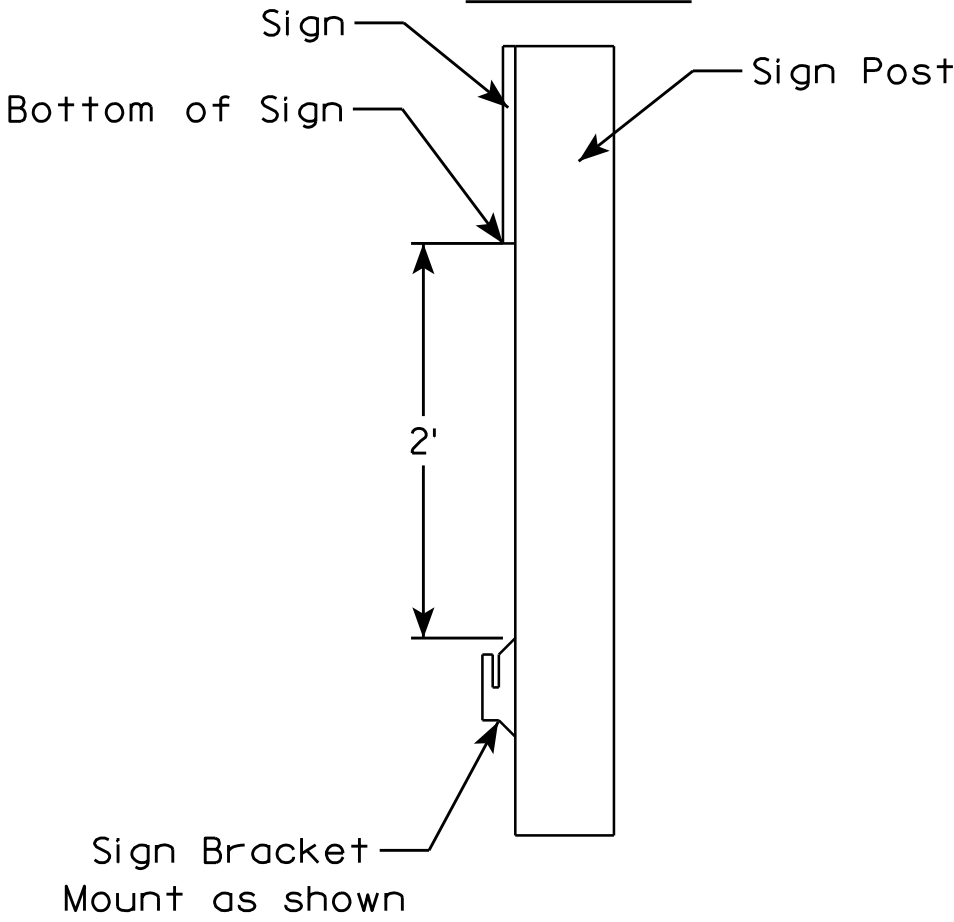
END VIEW



NOTES

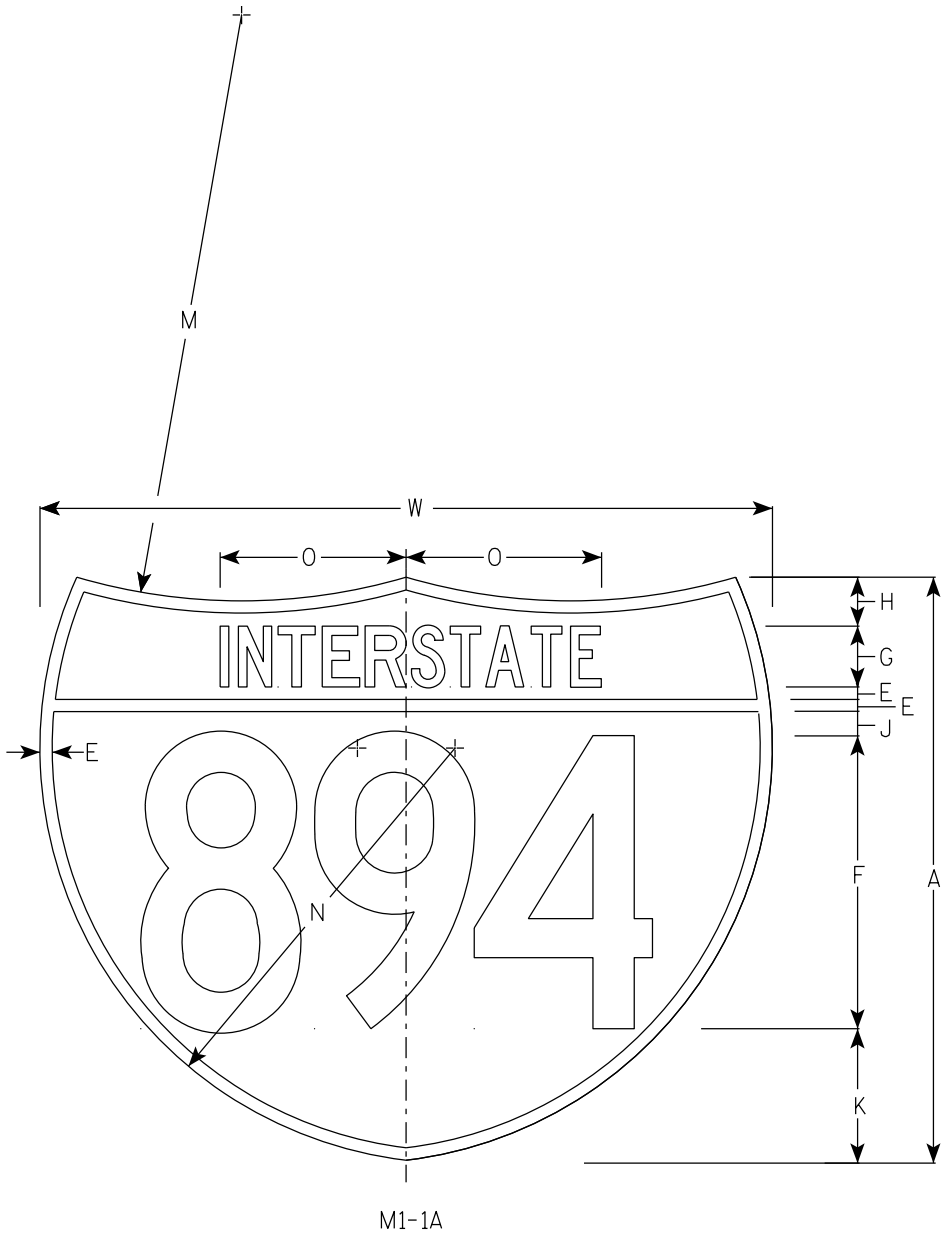
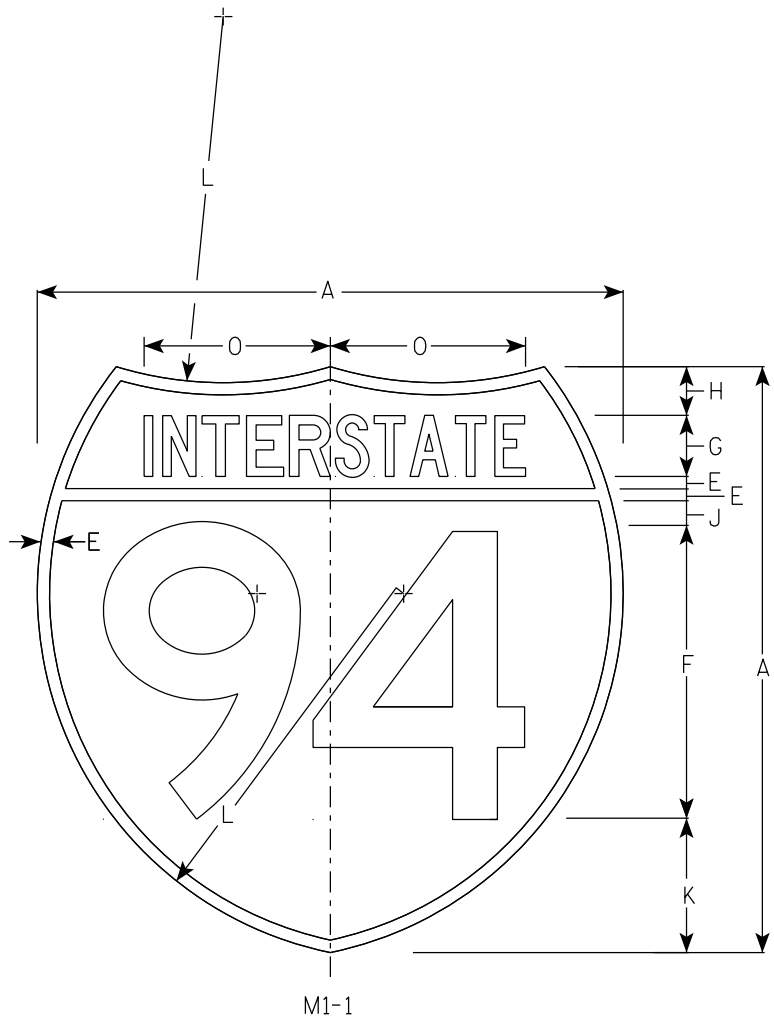
1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET I55-56B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/26/16	PLA 174 I55-56B.2

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - Top Red - Bottom Blue
Message - White
- 3. Message Series - See note 5
- 4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
- 5. M1-1 - Numerals - D
Interstate - C
M1-1A - All copy - C

7

																										M1-1	M1-1A
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	Area sq. ft.	Area sq. ft.
1																											
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91
2M	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79

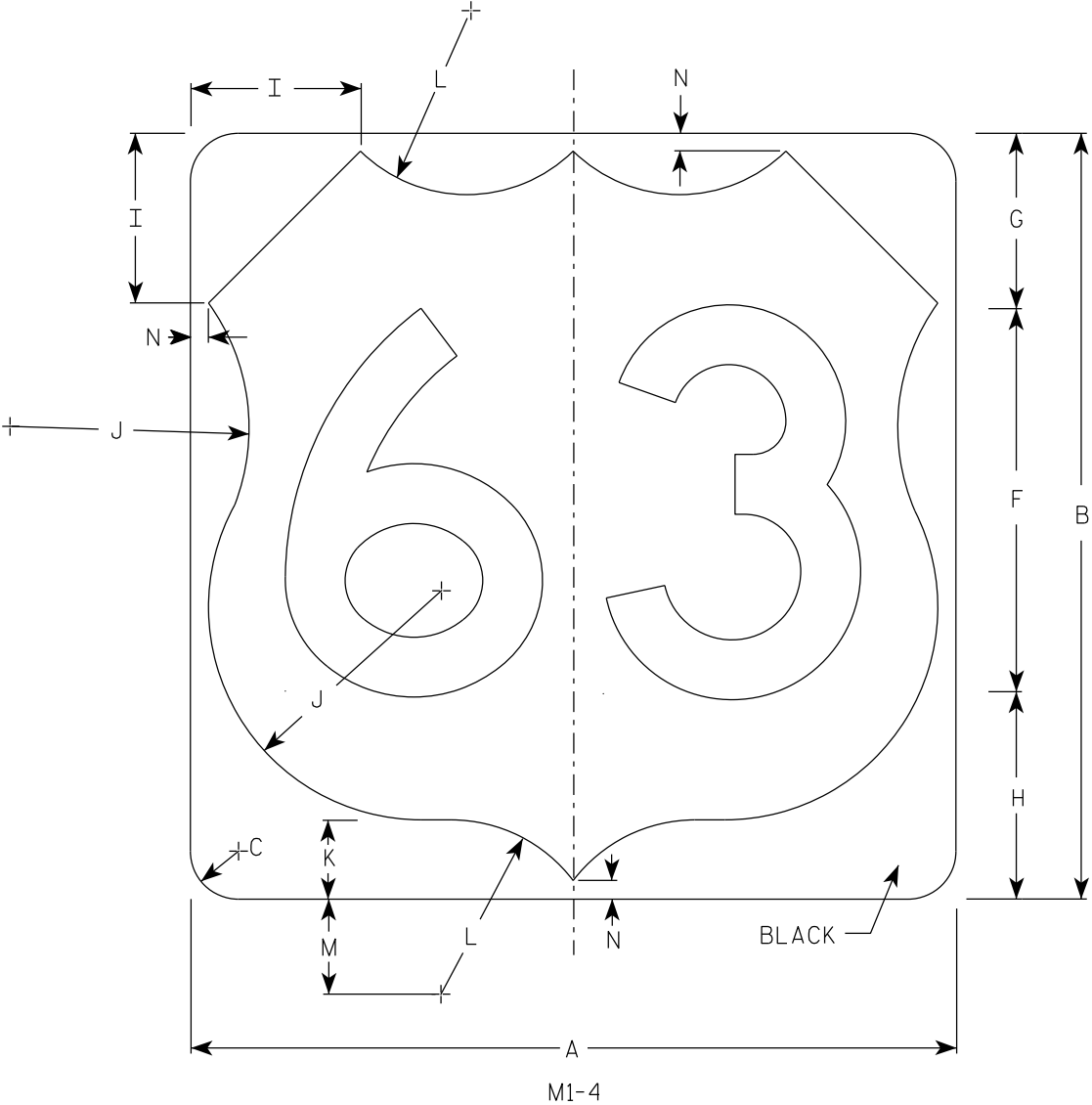
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

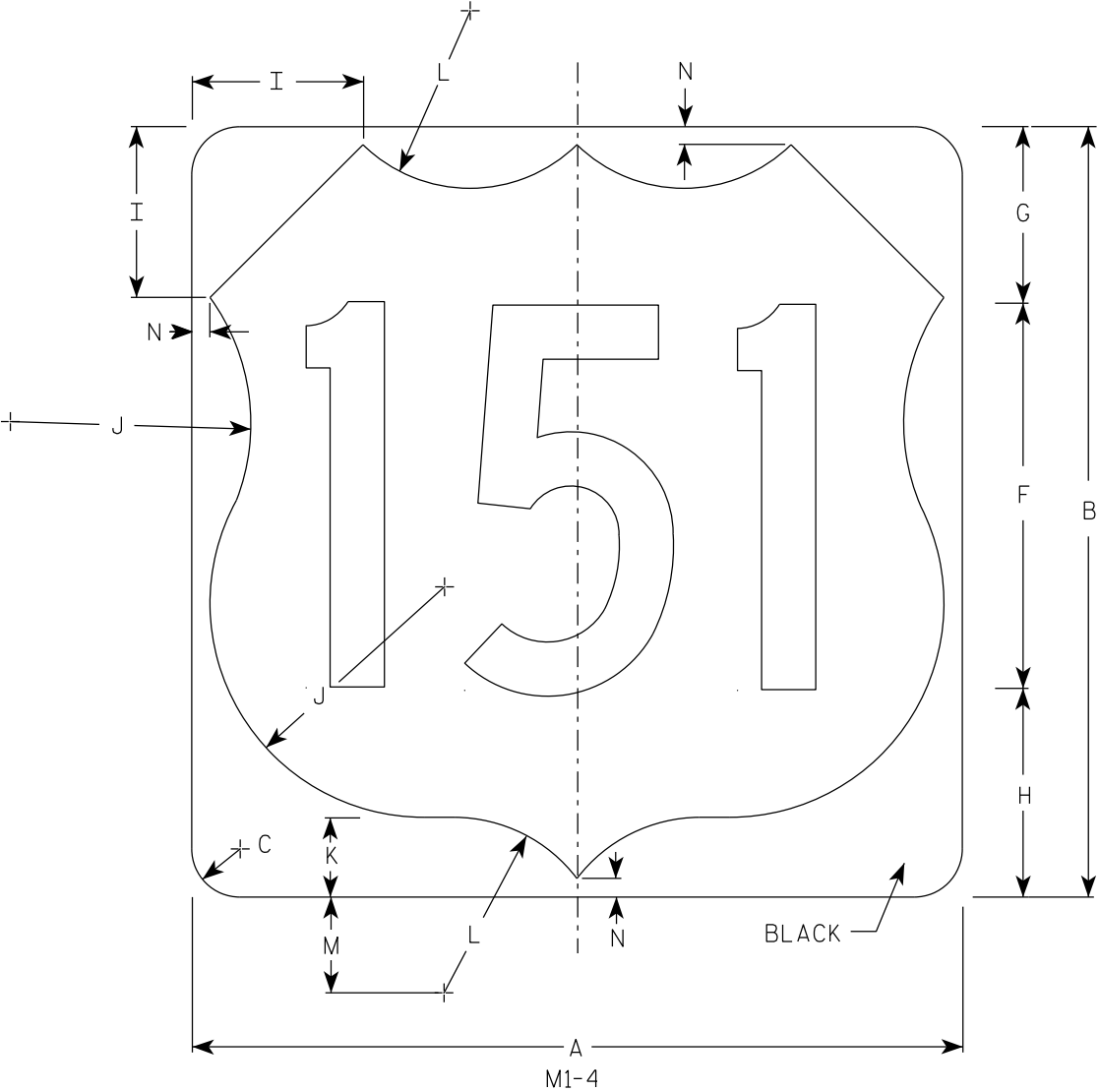
DATE 11/7/2022 PLATE NO. M1-1.9

7



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



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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
2M	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

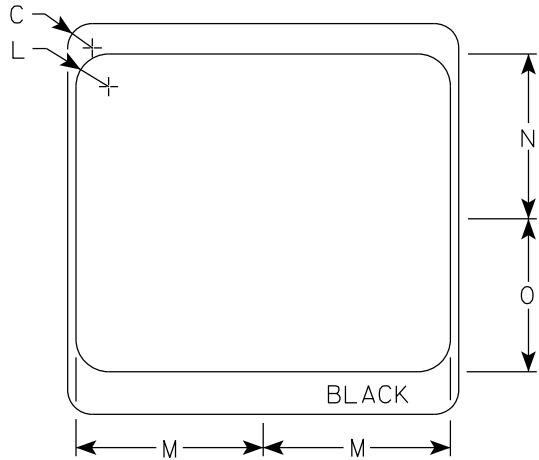
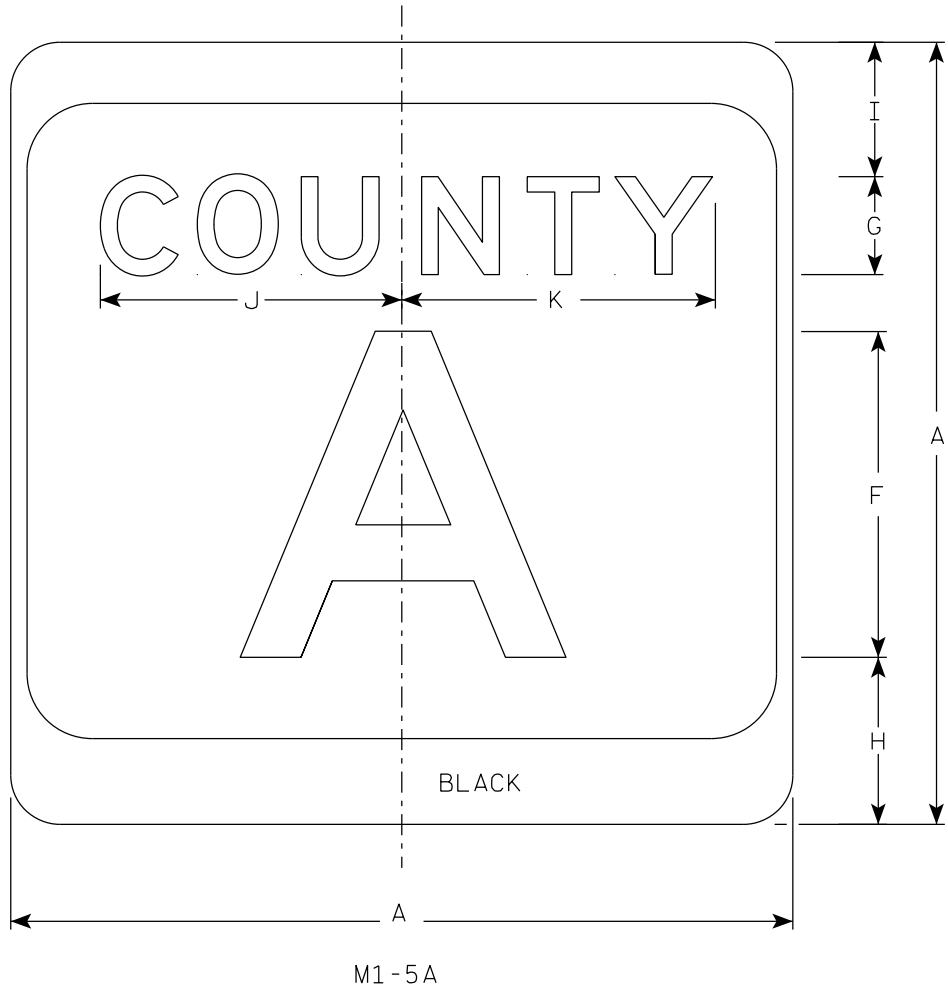
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

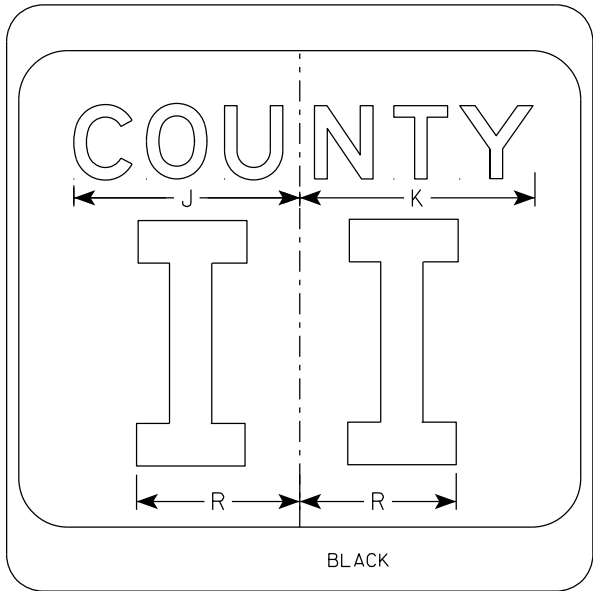
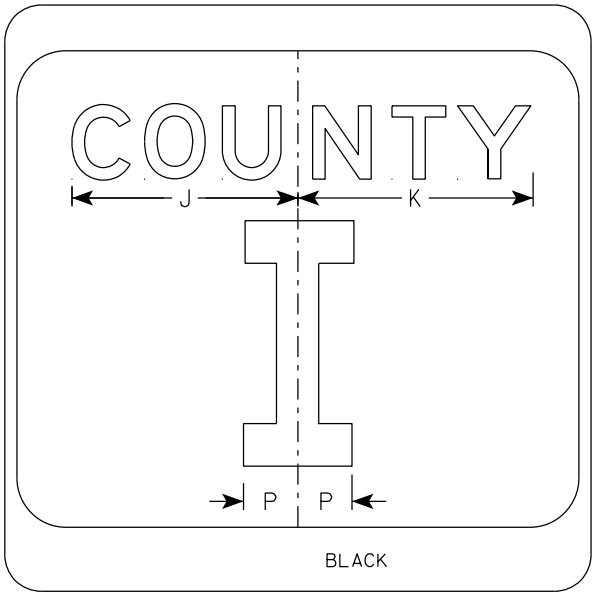
DATE 12/20/22 PLATE NO. M1-4.11

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White & Black
Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

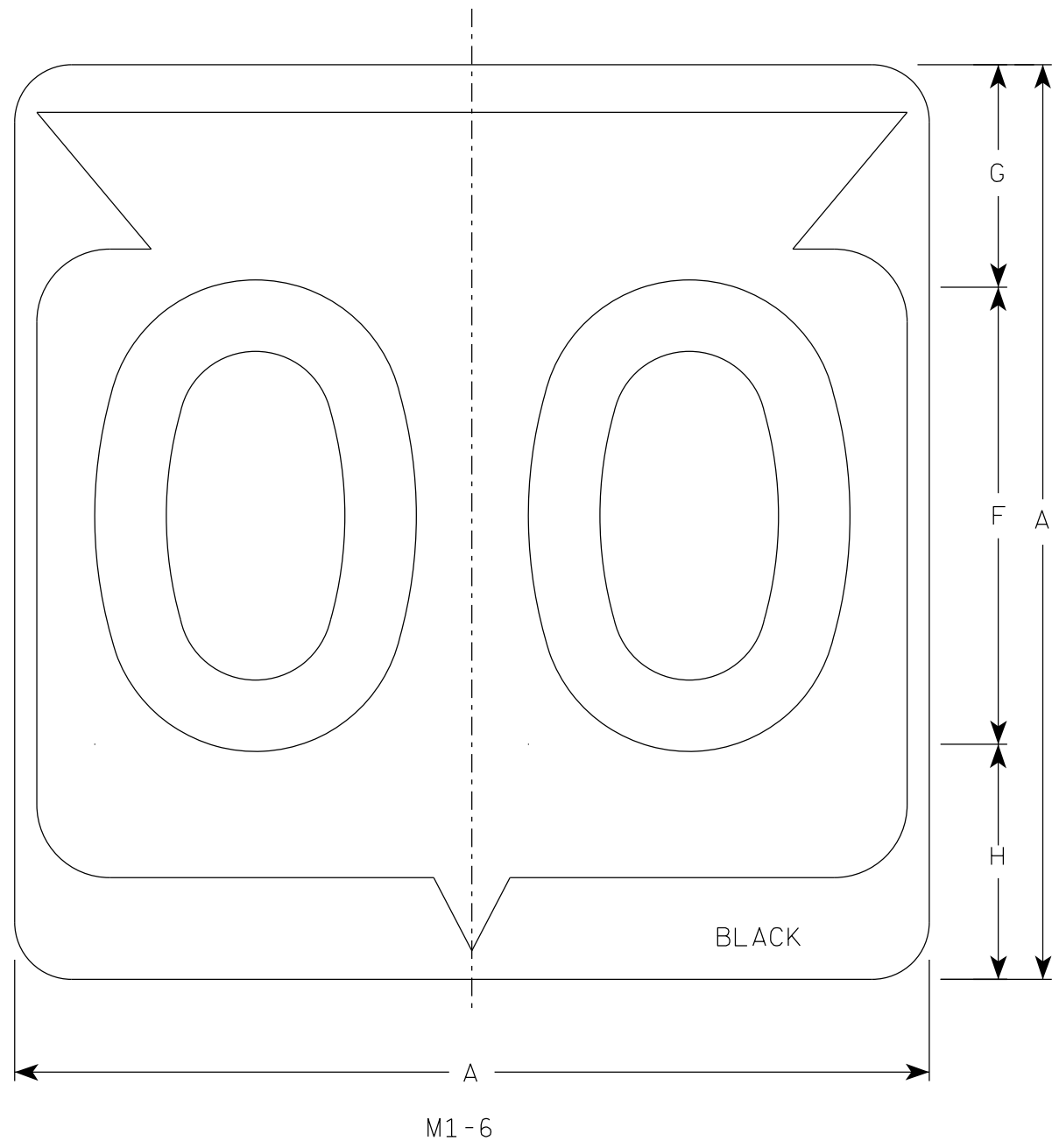
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

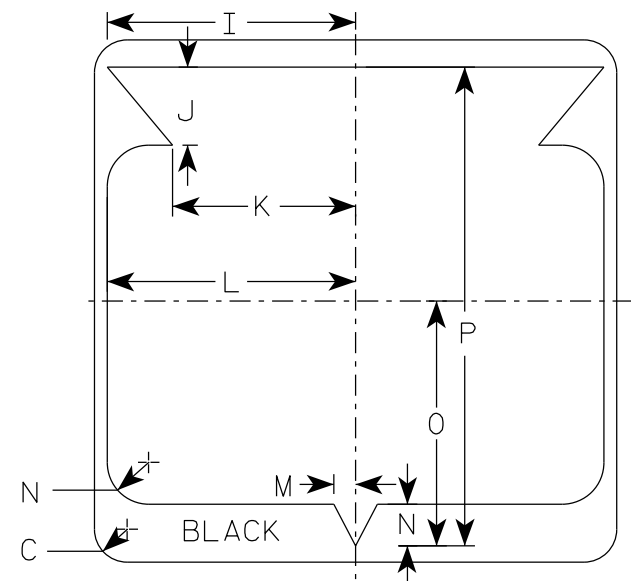
7

7



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



7

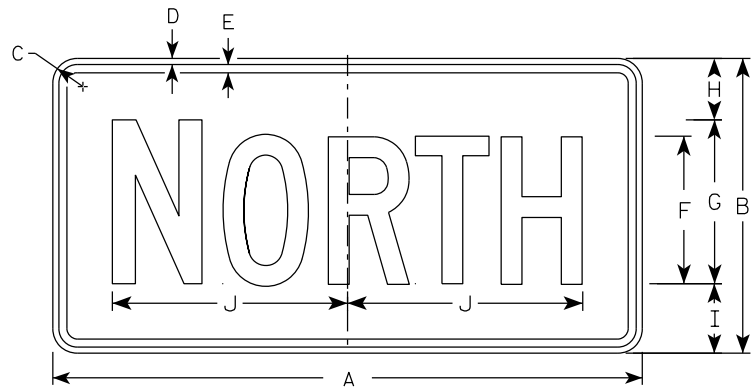
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8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

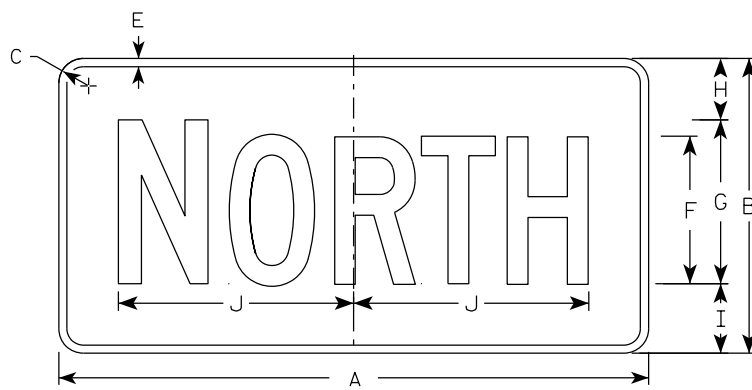
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

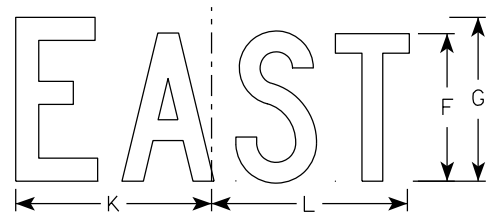
DATE 11/8/2022 PLATE NO. M1-6.11



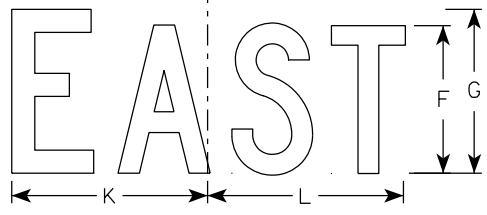
M3-1
MM3-1
MP3-1



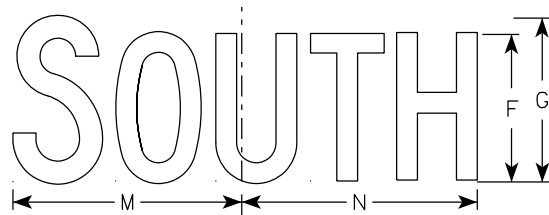
MB3-1
MK3-1
MN3-1



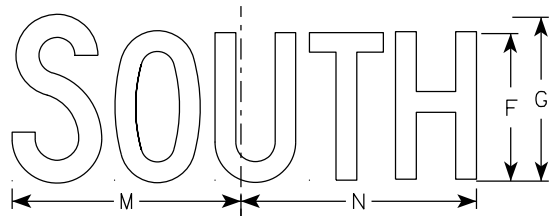
M3-2
MM3-2
MP3-2



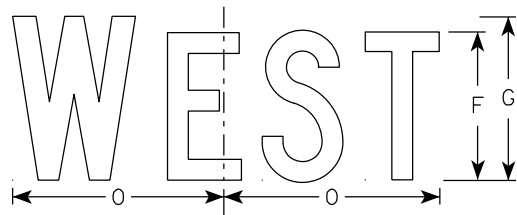
MB3-2
MK3-2
MN3-2



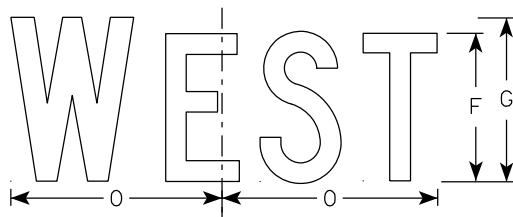
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

- All Signs Type II - Type H Reflective
- 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.

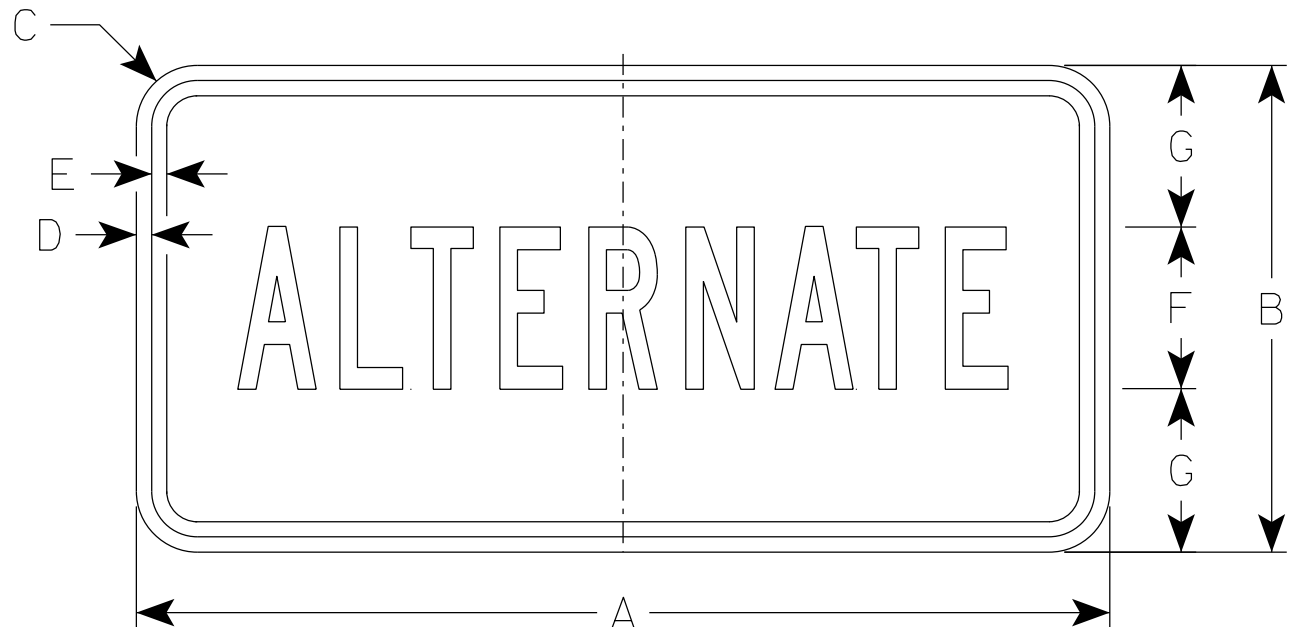
7

7

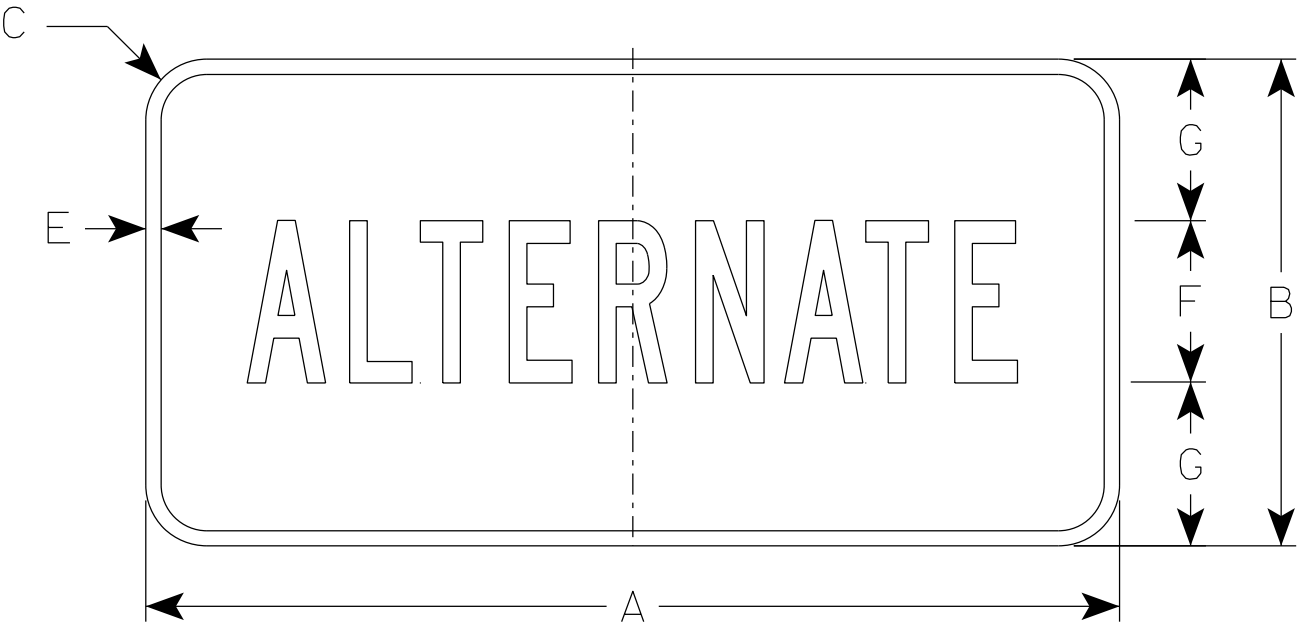
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
2M	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
3	36	18	1 1/2	3/8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

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 179	E
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7



M4 - 1
M04 - 1



MB4 - 1

NOTES

- 1. Sign is Type II - Type H Reflective except as Shown
- 2. Color:
 - Background - See Note 5
 - Message - See note 5
- 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.
- 5. M4-1 Background - White
Message - Black
- MB4-1 Background - Blue
Message - White
- M04-1 Background - Orange - Type F Reflective
Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	4	4	9 3/4	9 1/2																		2.00
2M	24	12	1 1/2	3/8	3/8	4	4	9 3/4	9 1/2																		2.00
3	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5

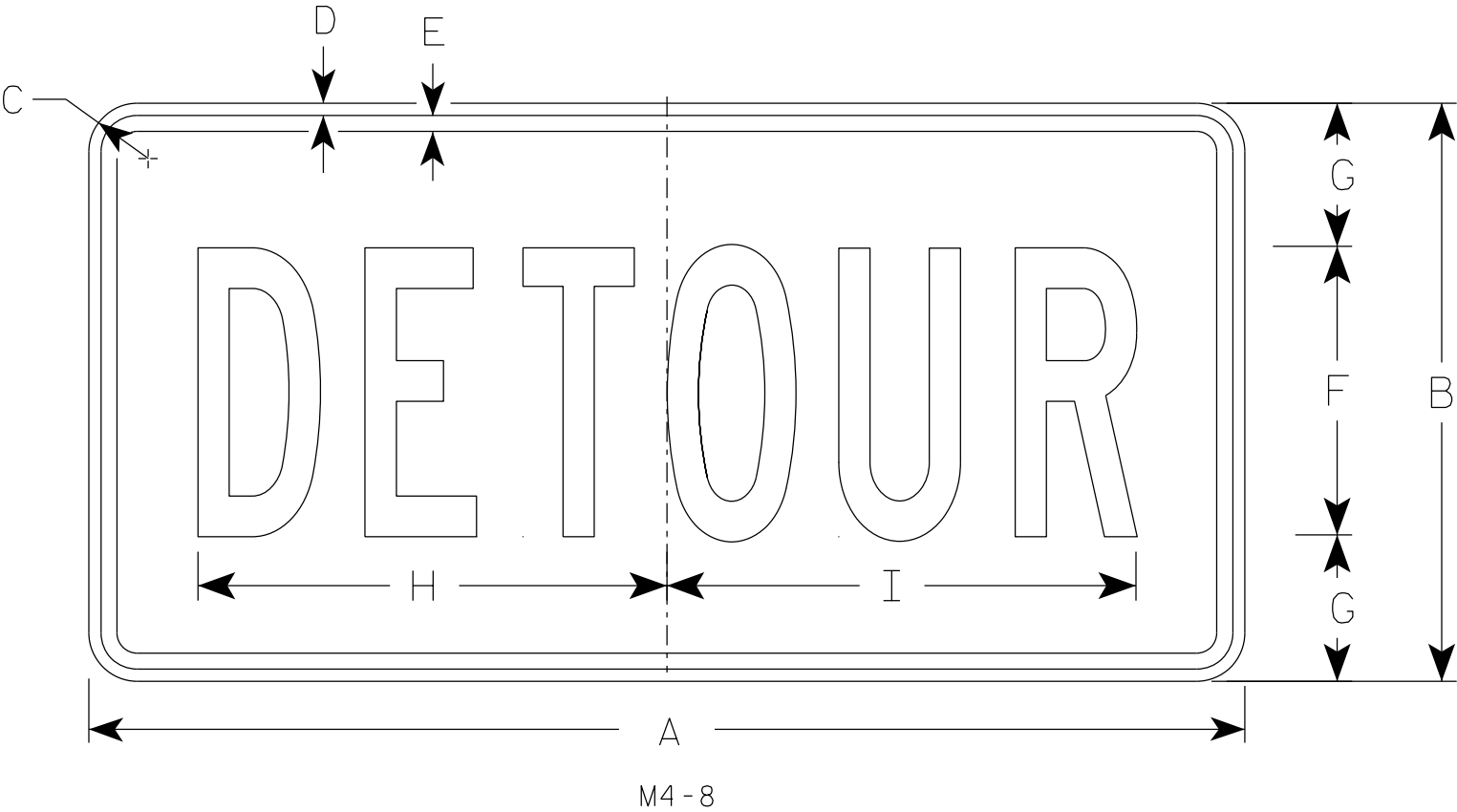
7

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 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.



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 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

STANDARD SIGN

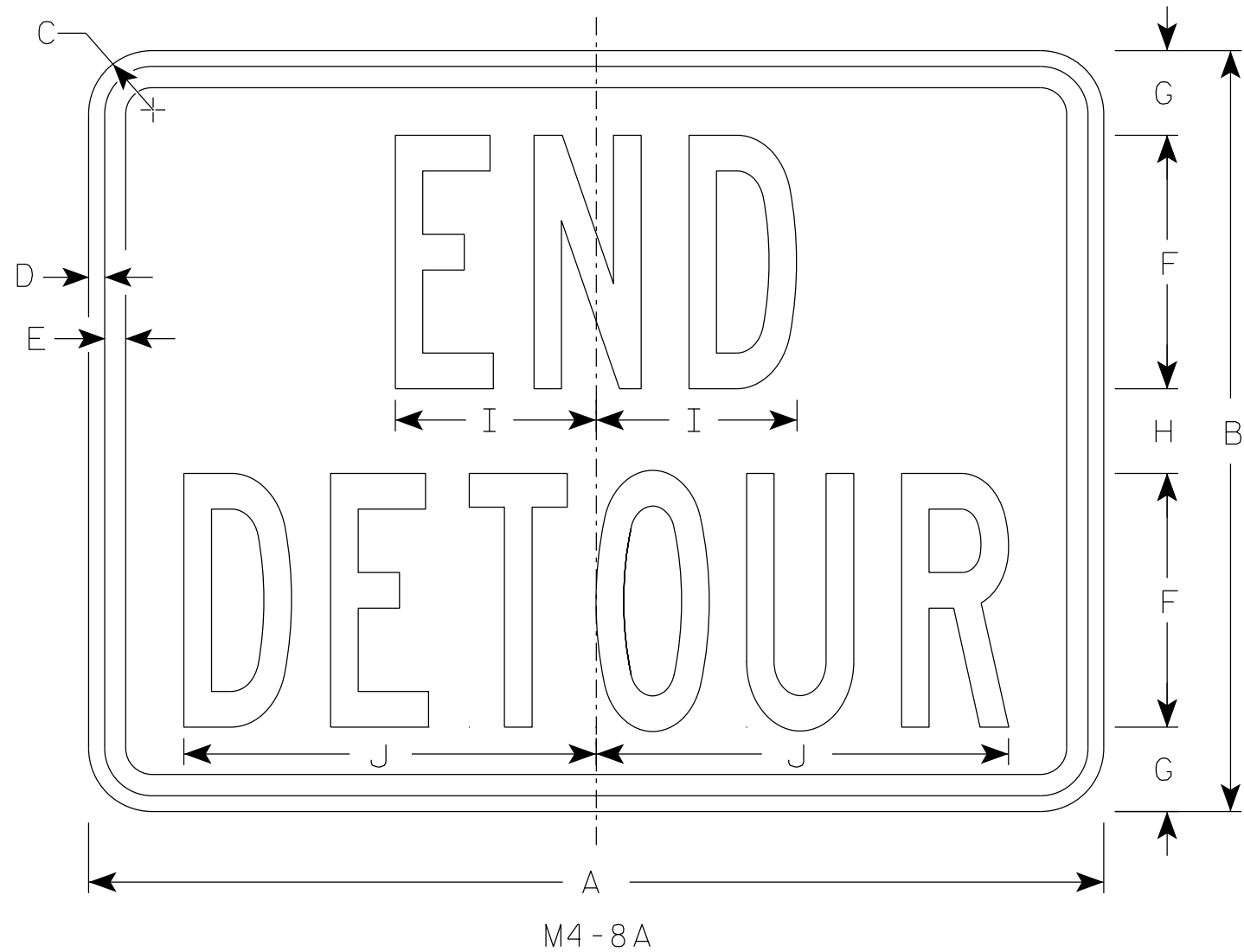
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 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

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 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
2M	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
5	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0

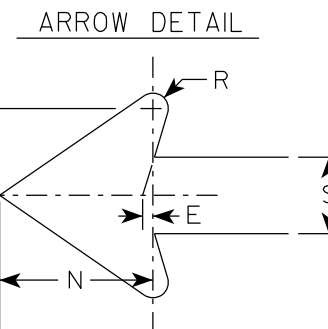
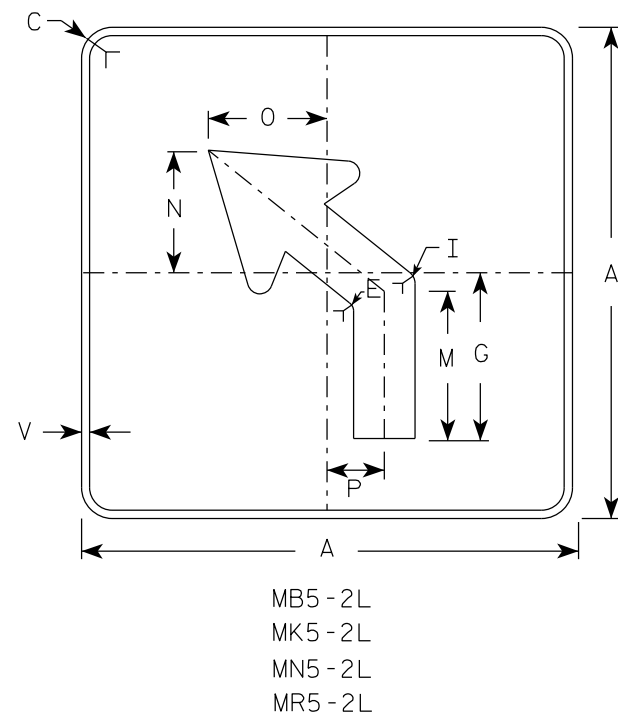
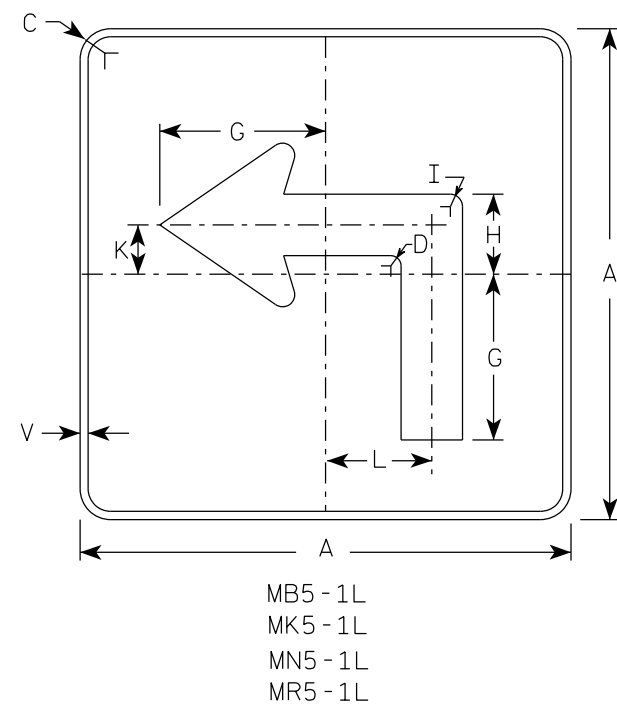
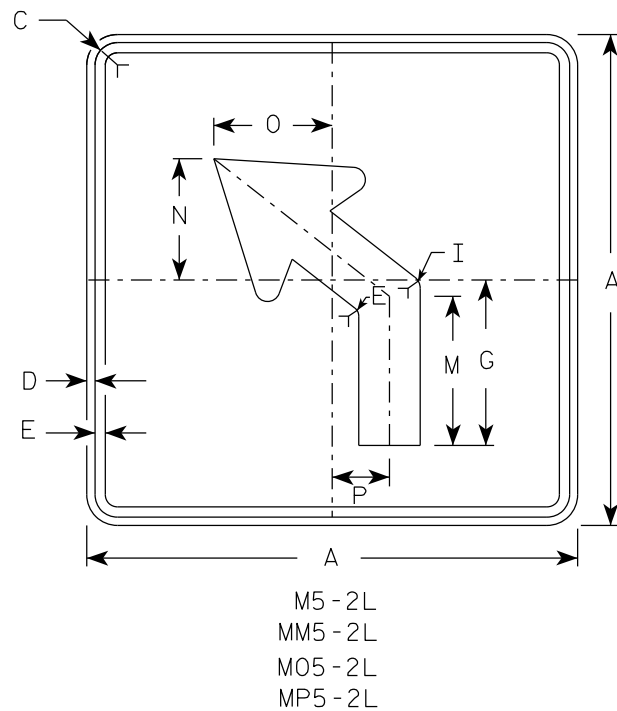
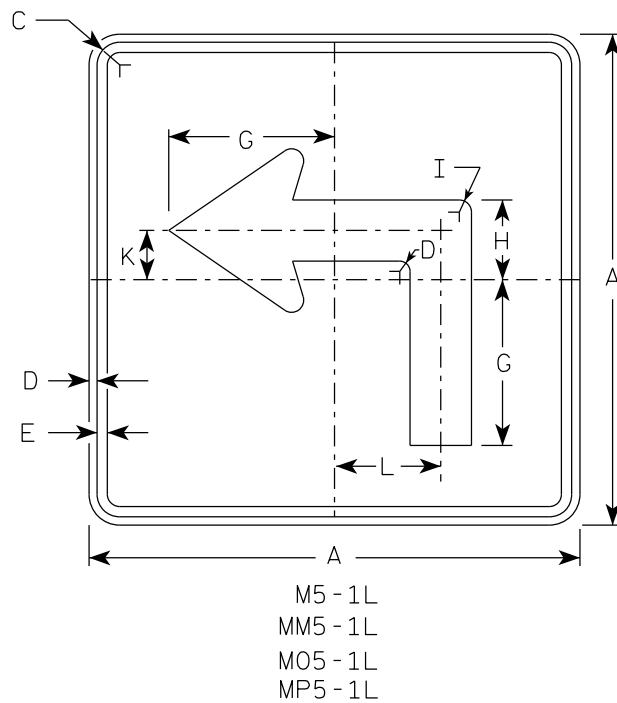
STANDARD SIGN

M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8A.4

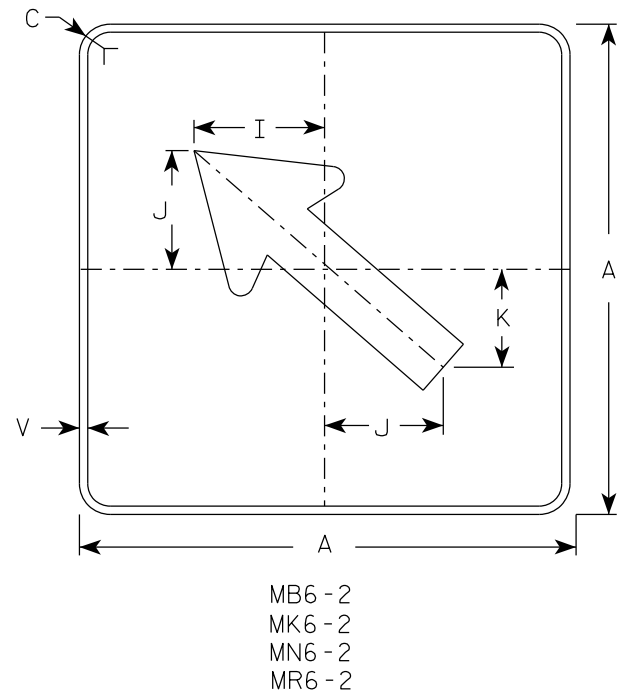
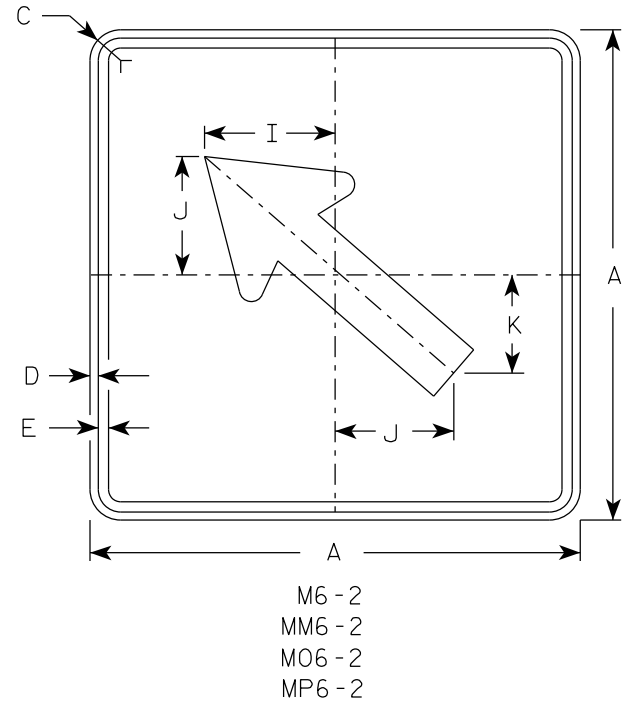
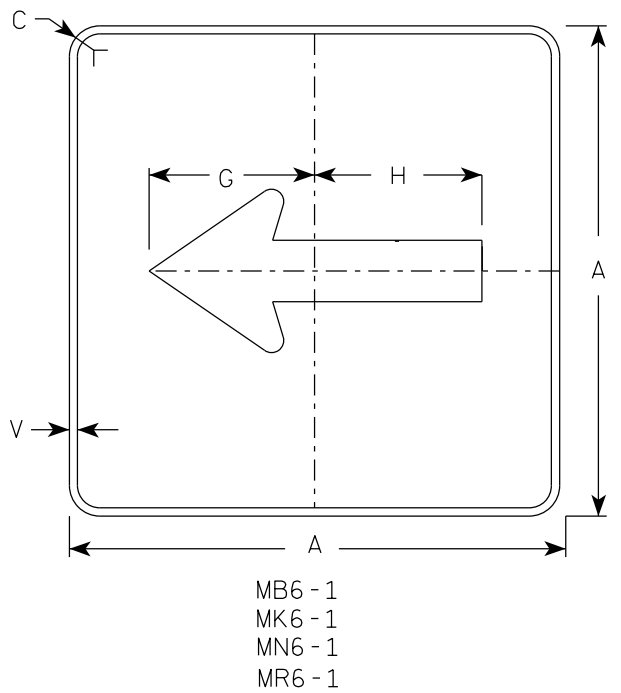
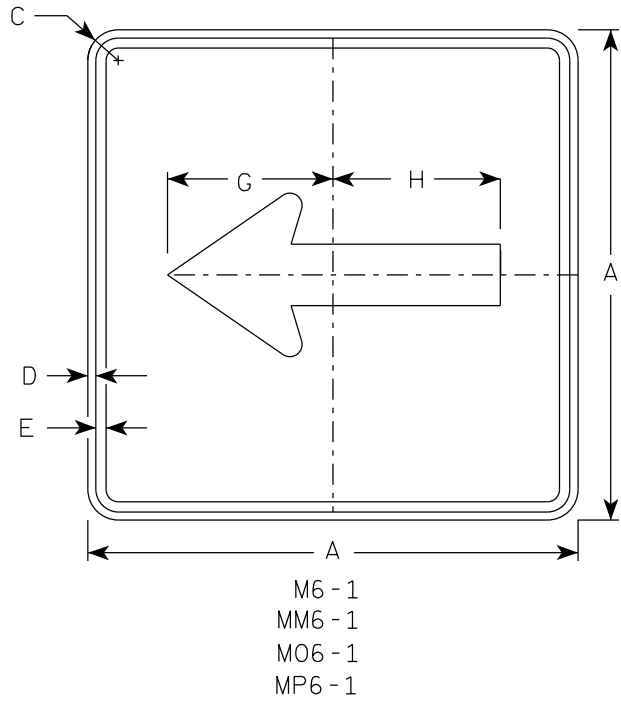


NOTES

- 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 |
| | | 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.

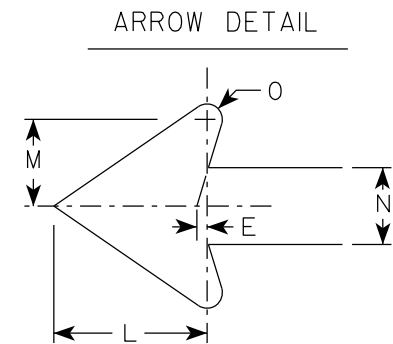
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2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

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 183	E
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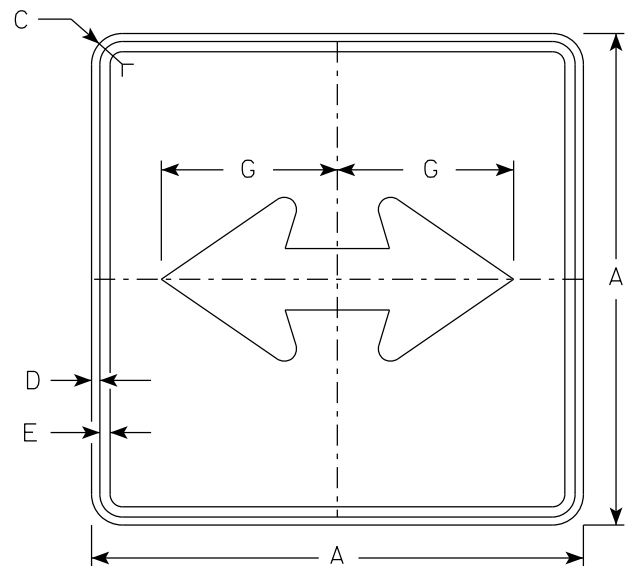


NOTES

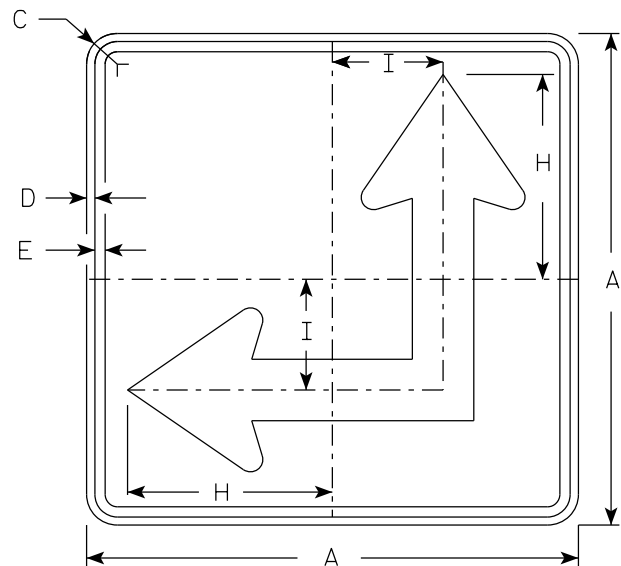
1. Signs are Type II - Type H Reflective except as Shown
2. Color:
Background - See note 4
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 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



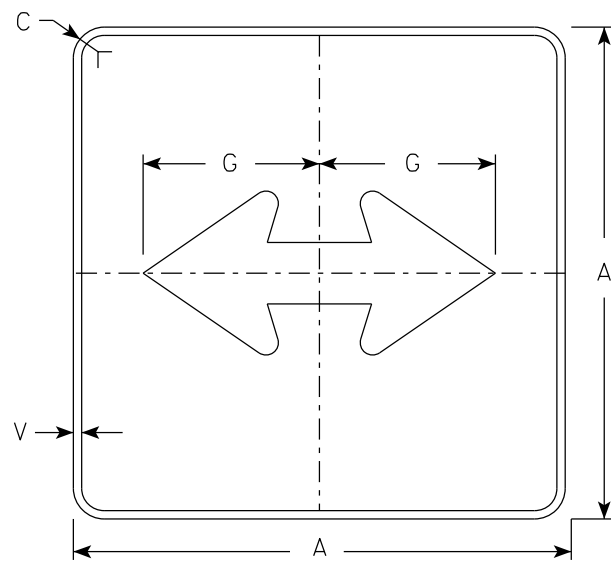
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4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



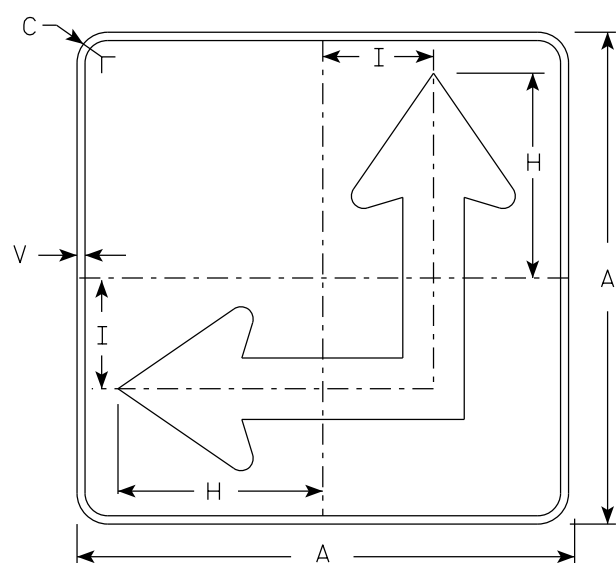
M6 - 4
MM6 - 4
M06 - 4
MP6 - 4



M6 - 6
MM6 - 6
M06 - 6
MP6 - 6



MB6 - 4
MK6 - 4
MN6 - 4
MR6 - 4

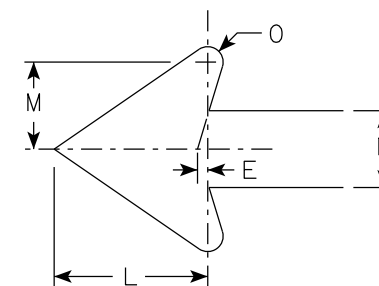


MB6 - 6
MK6 - 6
MN6 - 6
MR6 - 6

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.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.

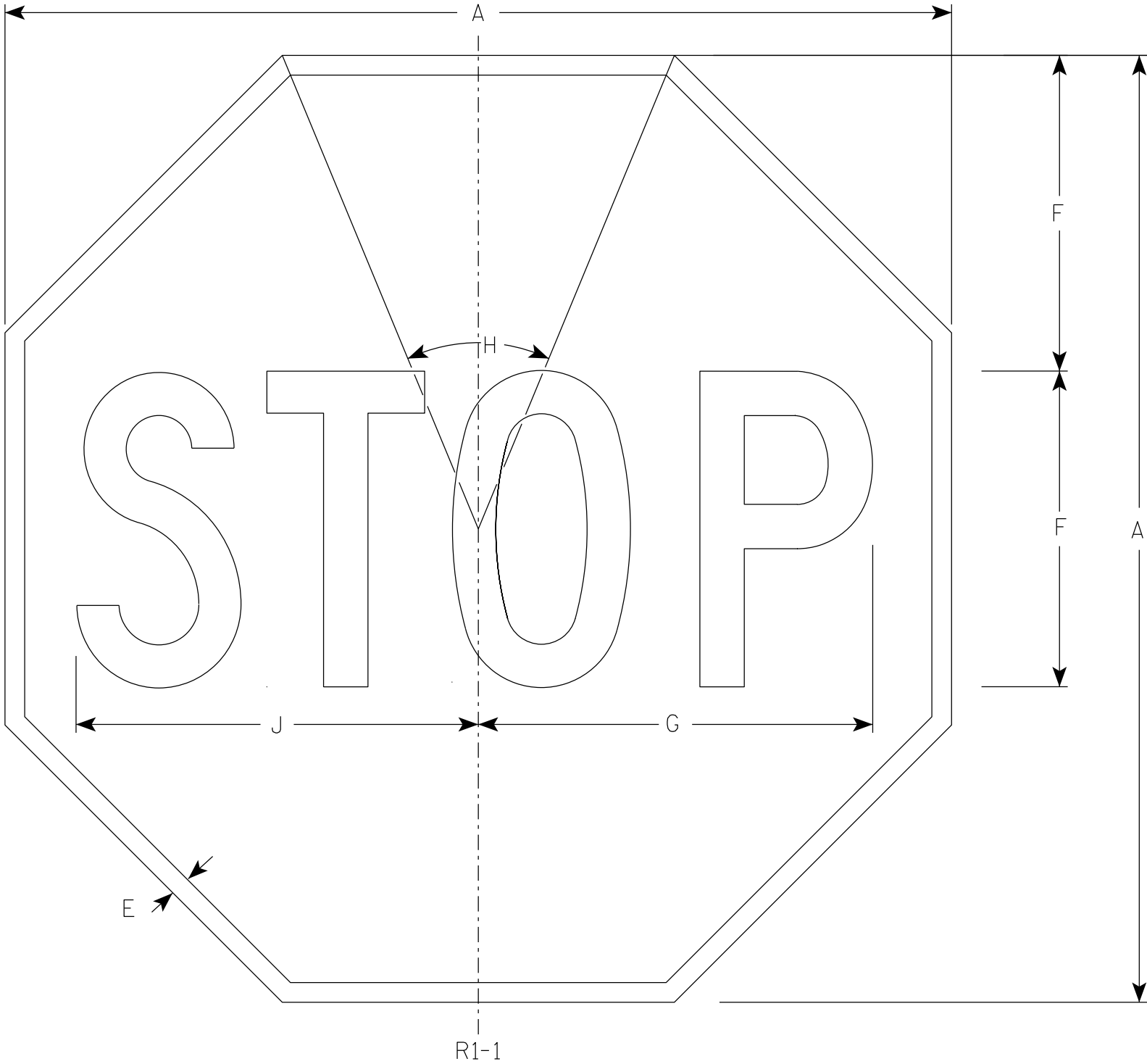
ARROW DETAIL



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	21		1 1/2	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 185												E
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7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

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

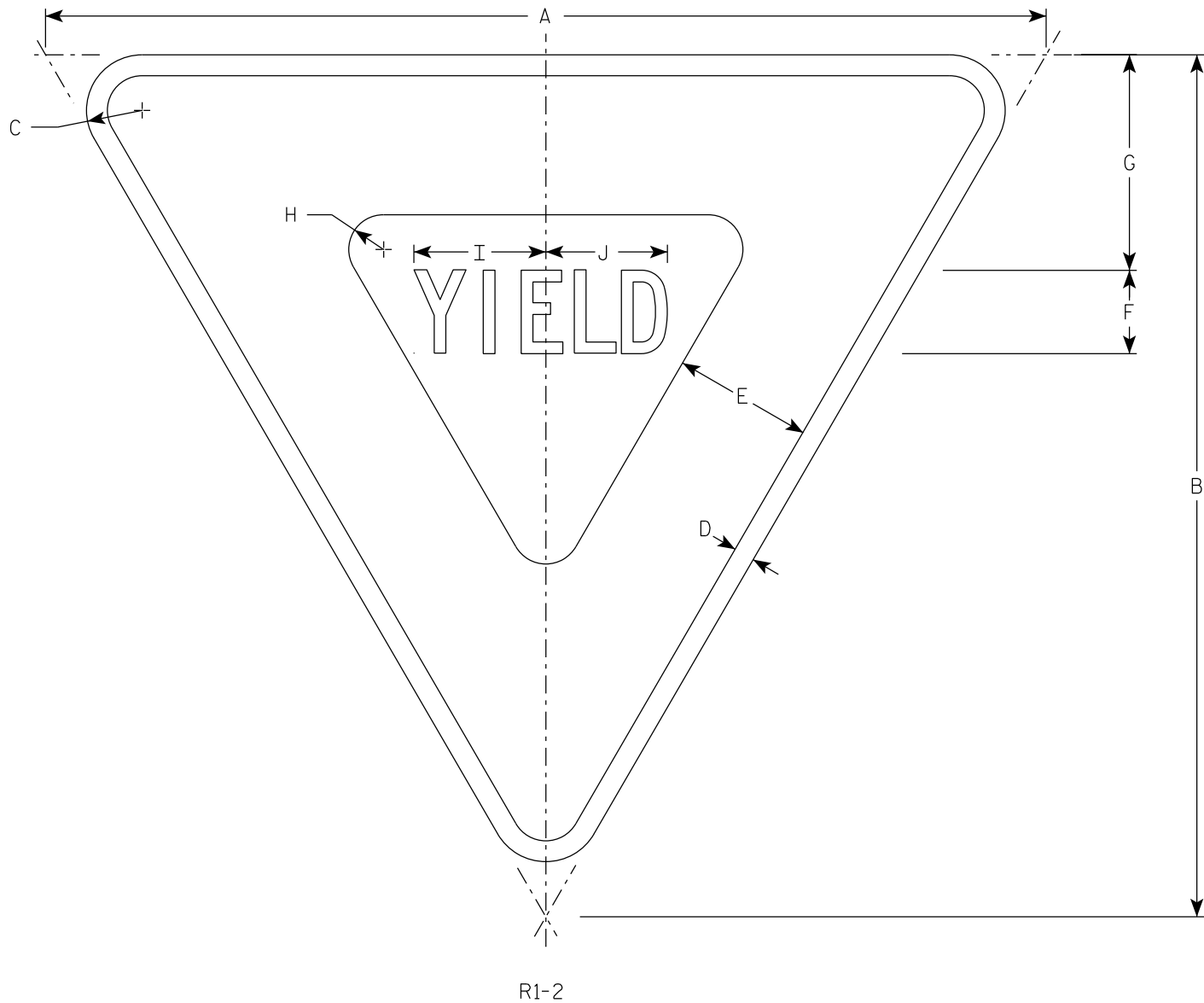
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 7/9/2025 PLATE NO. R1-1.14

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - See note 4
- 3. Message Series - C
- 4. The border strip and word message are reflectorized red.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	2	5⁄8	4	2 1⁄2	6 3⁄8	7⁄8	4	3 5⁄8																	2.71
2S	36	31	2	3⁄4	5	3	7 3⁄4	1 1⁄4	4 3⁄4	4 3⁄8																	3.88
2M	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
3	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
4	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
5	60	52	3	1 1⁄2	8	5	13	2 1⁄2	7 7⁄8	7 1⁄4																	10.83
6																											
7	18	15 1⁄2	1	3⁄8	2 1⁄2	1 1⁄2	3 7⁄8	5⁄8	2 3⁄8	2 1⁄4																	0.97

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 187

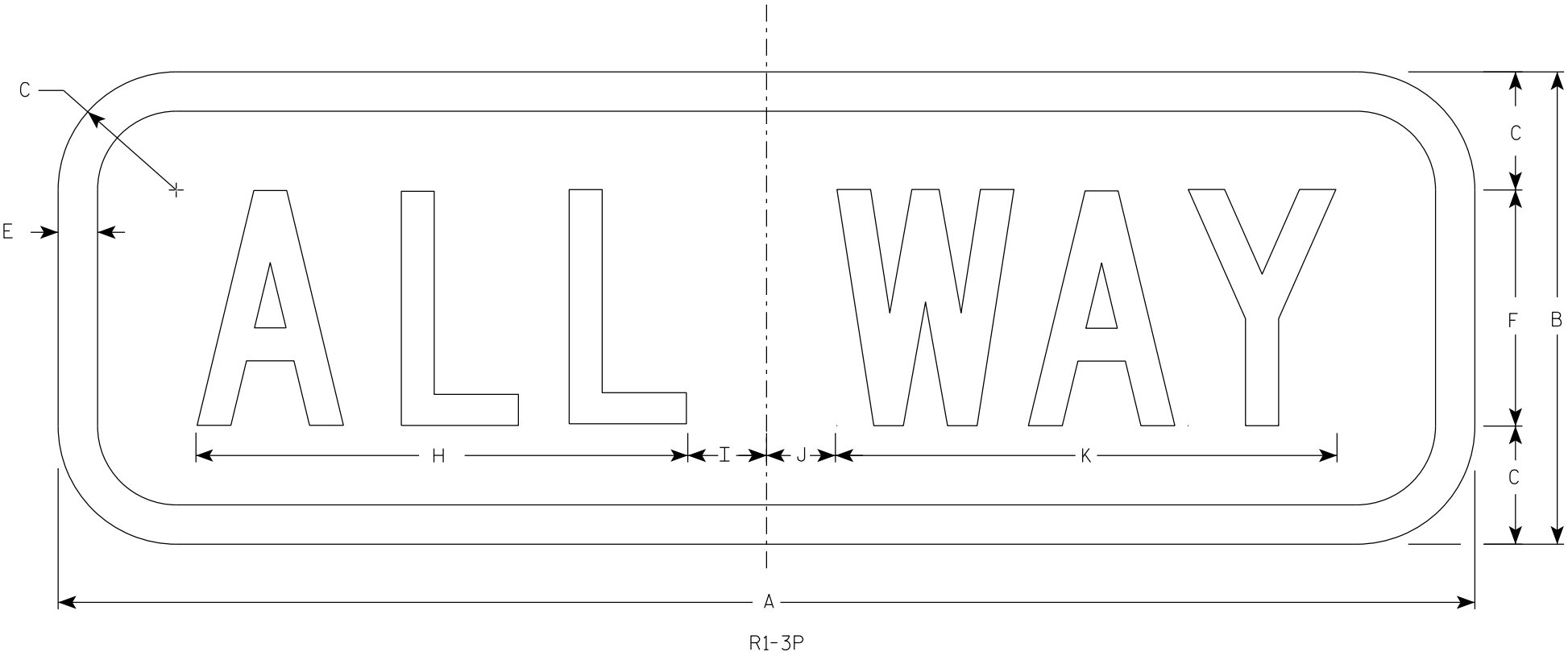
E

7

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - Red
 - Message - White
- 3. Message Series - C
- 4. For 30"x30" R1-1 use 18"x6" R1-3P sign
- For 36"x36" R1-1 use 30"x12" R1-3P sign
- For 48"x48" R1-1 use 30"x12" R1-3P sign



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75
2S	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75
2M	30	12	1 1/2		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5
3	30	12	1 1/2		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5
4	30	12	1 1/2		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5
5	30	12	1 1/2		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5

STANDARD SIGN

R1-3P

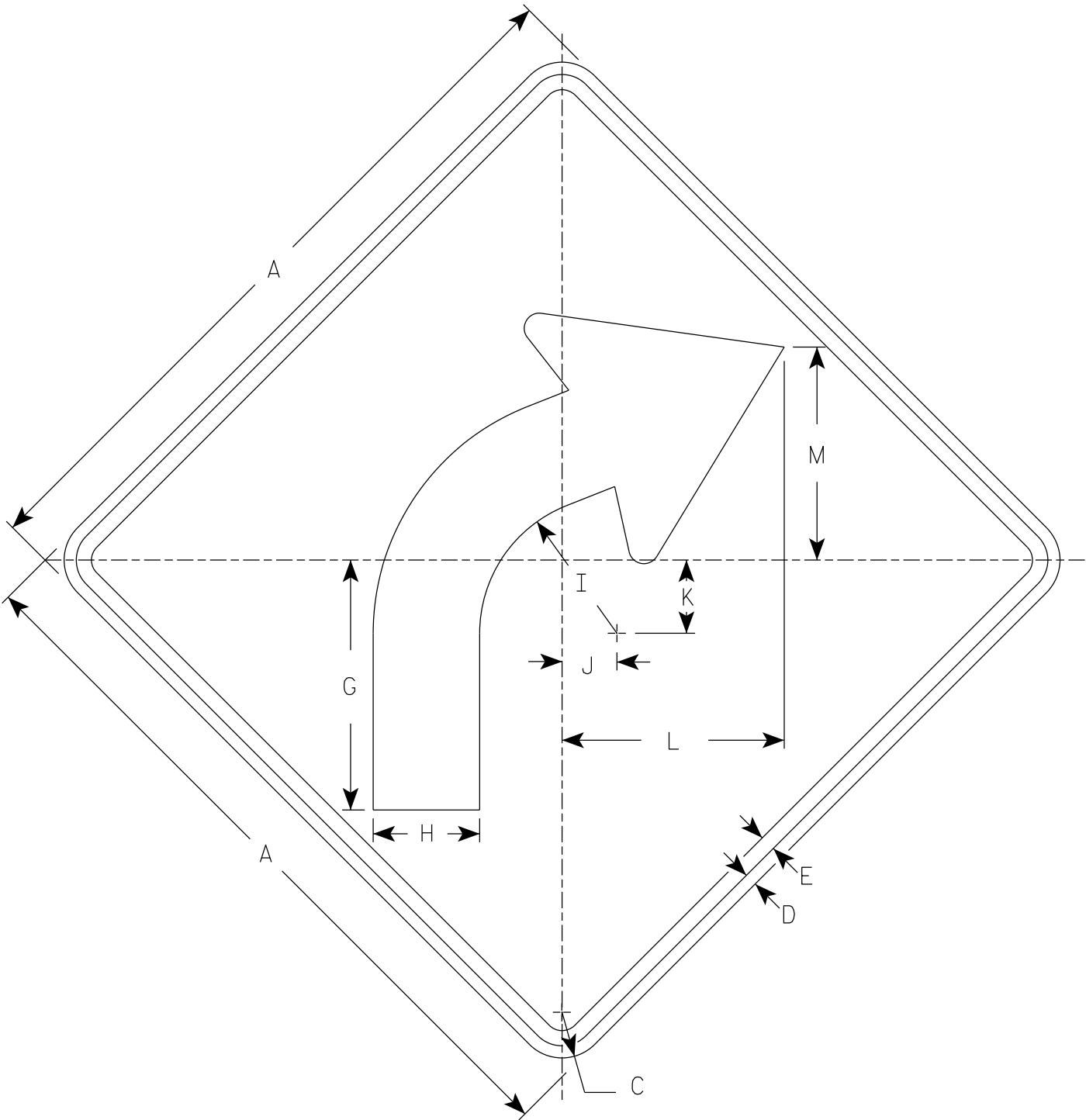
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/9/2025 PLATE NO. R1-3P.5

SHEET NO: 188

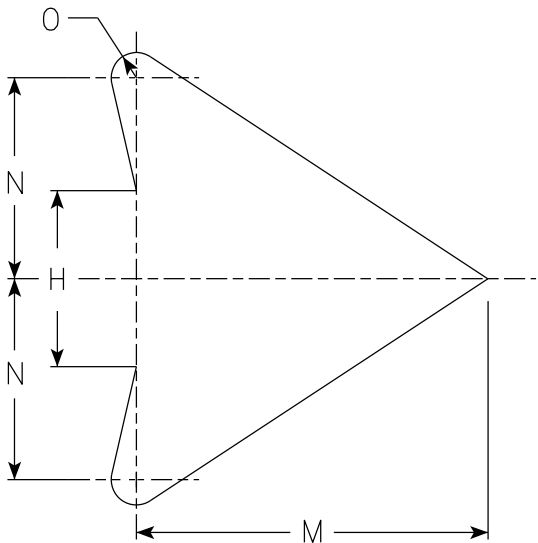
E



W1-2R

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



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 1/2	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 7/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		2 1/4	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		2 1/4	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		2 1/4	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		3	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/23/2023 PLATE NO. W1-2.11

7

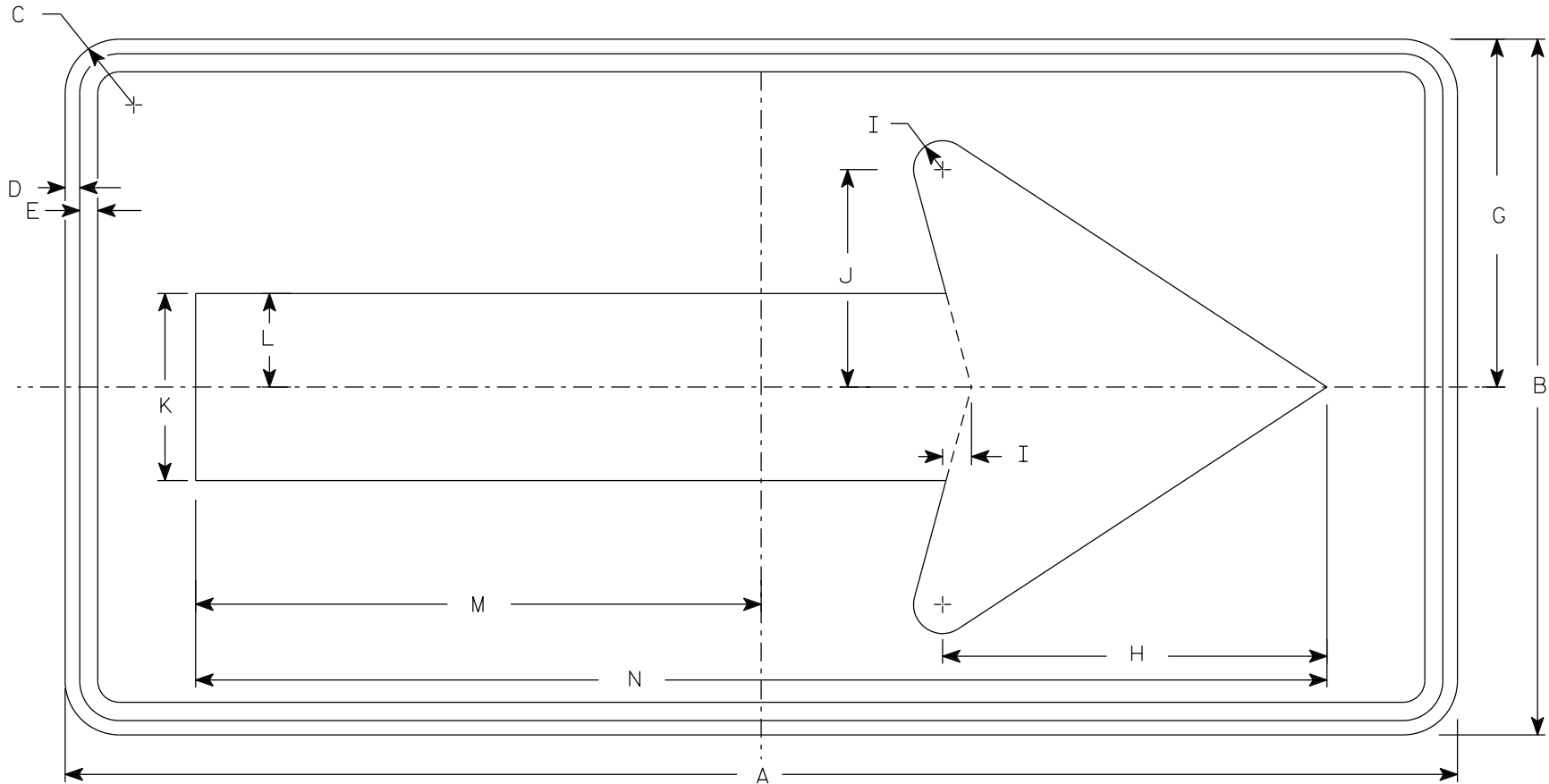
7

NOTES

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

Background - Yellow

Message - Black



W1-6

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 7/8	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 7/8	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 7/8	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 7/8	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	96	48	3	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

PROJECT NO:

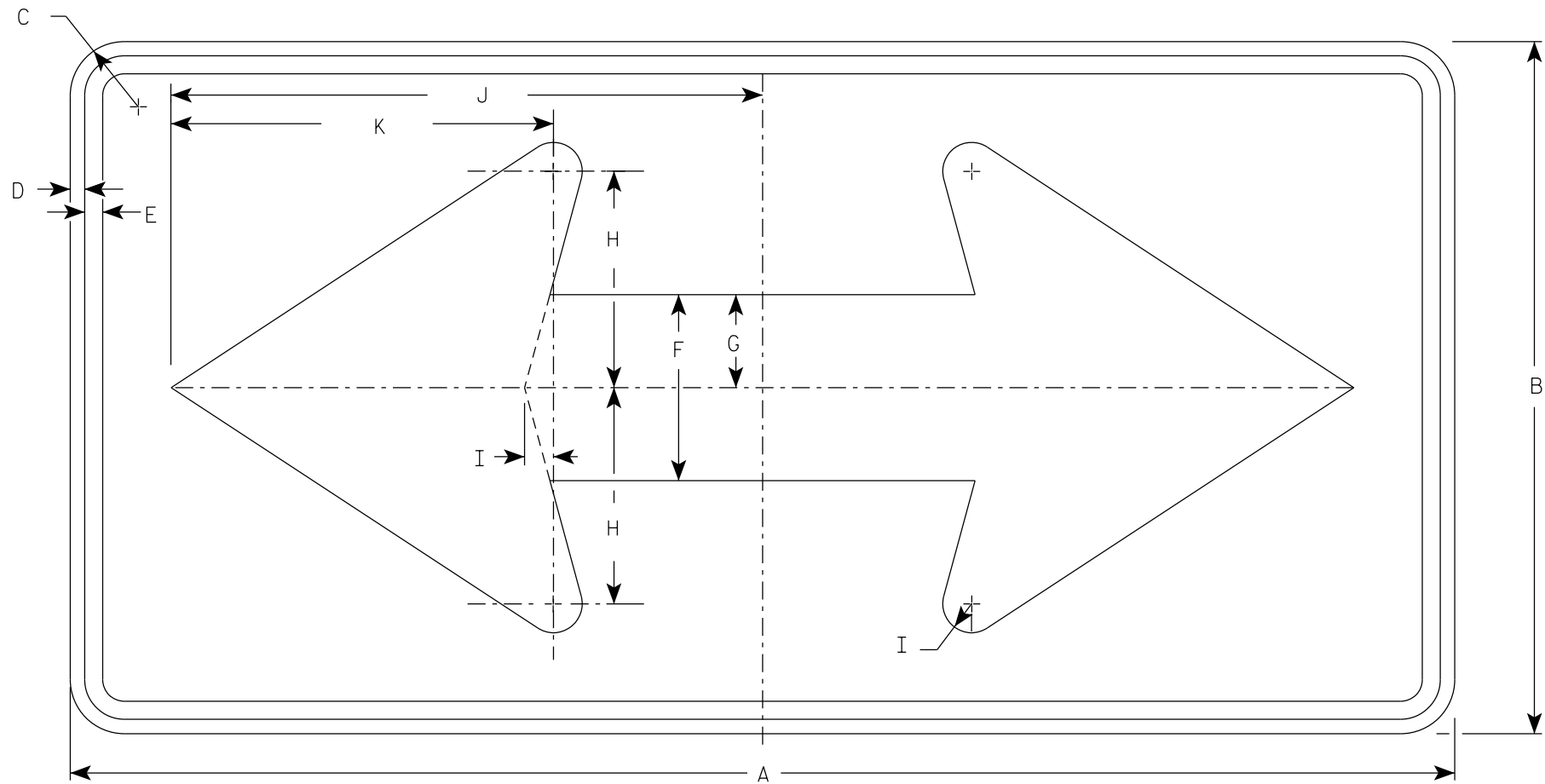
HWY:

COUNTY:

SHEET NO: 190

E

7



W1-7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black

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	18	1 1/2	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 7/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 7/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	3	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

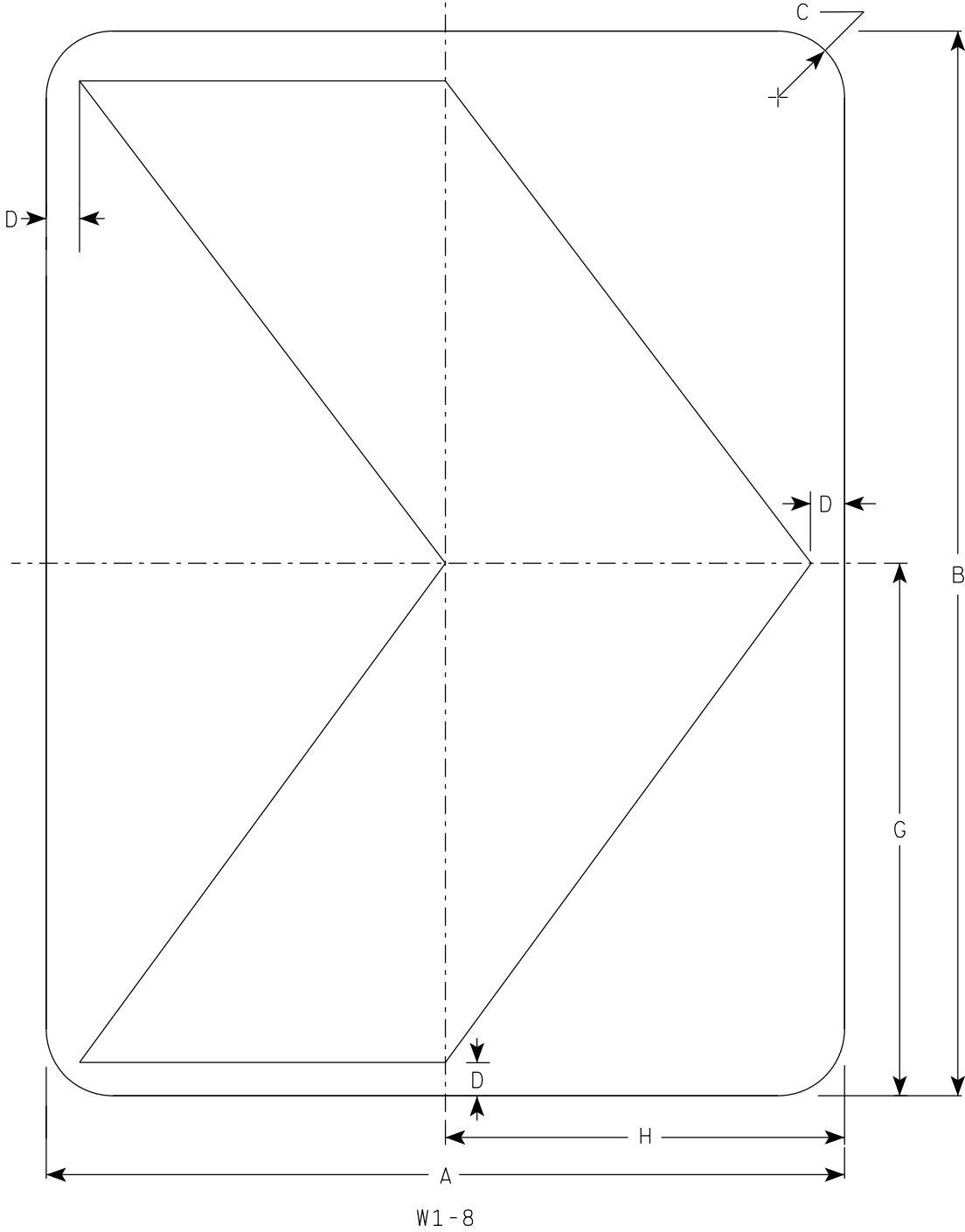
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/10/2023 PLATE NO. W1-7.8

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
- Background - Yellow
- Message - Black

7

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

STANDARD SIGN

W1-8

WISCONSIN DEPT OF TRANSPORTATION

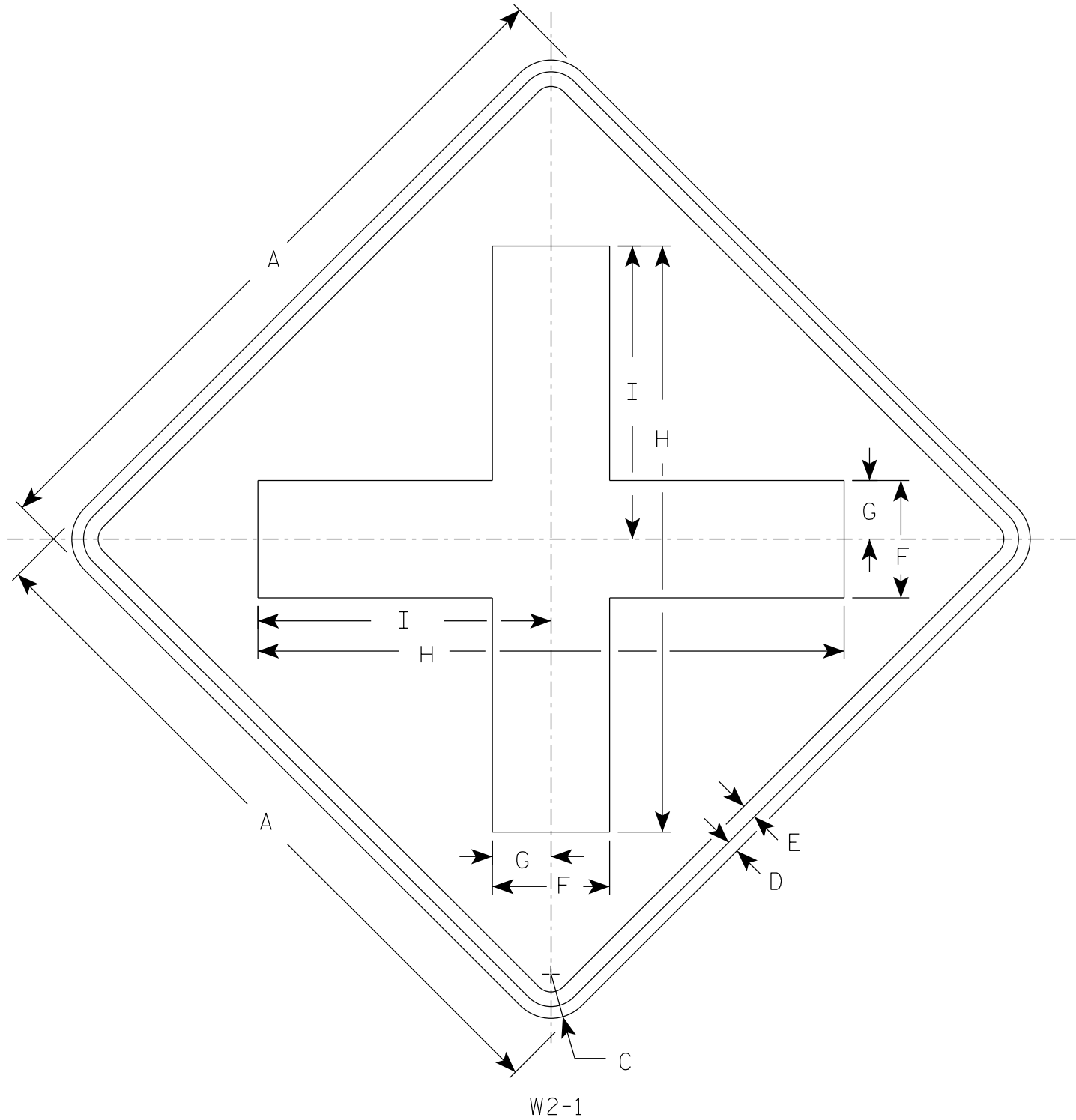
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/11/2023 PLATE NO. W1-8.7

SHEET NO: 192

E

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	4	2	20	10																		4.0
2S	30		1 7/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 7/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		2 1/4	5/8	3/4	6	3	30	15																		9.0
4	48		3	3/4	1	8	4	40	20																		16.0
5																											

PROJECT NO:

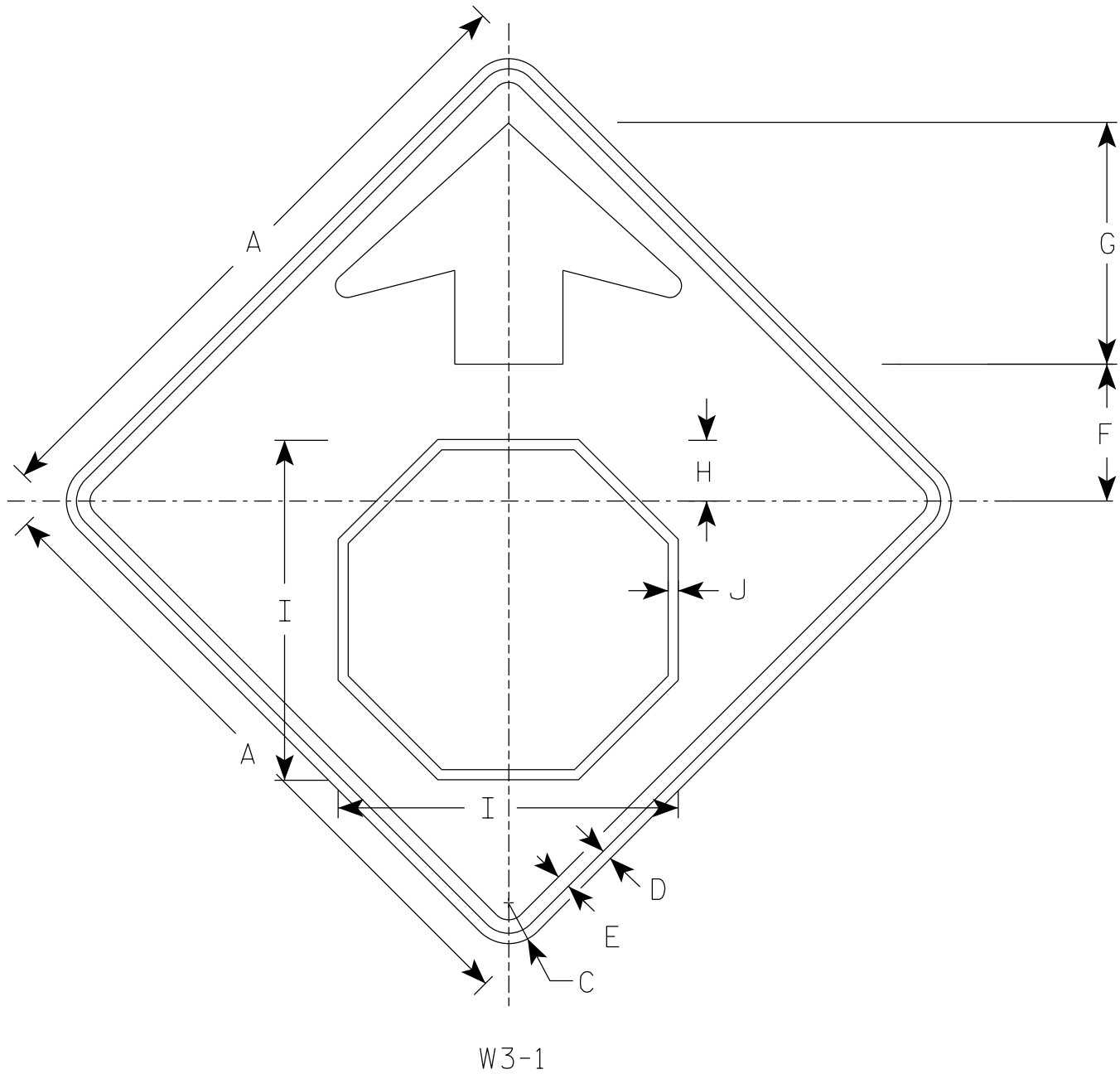
HWY:

COUNTY:

SHEET NO: 193

E

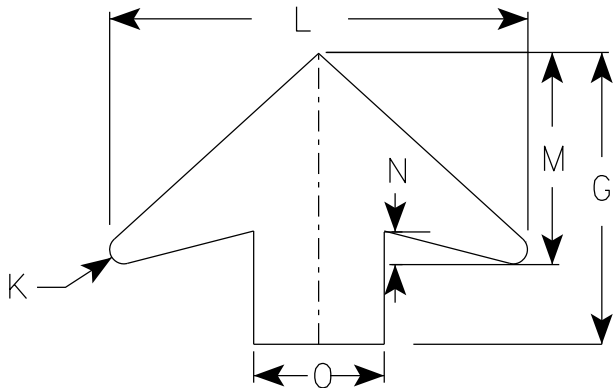
7



W3-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Arrow & Border - Black
 - Stop Symbol - White Border on Red Background



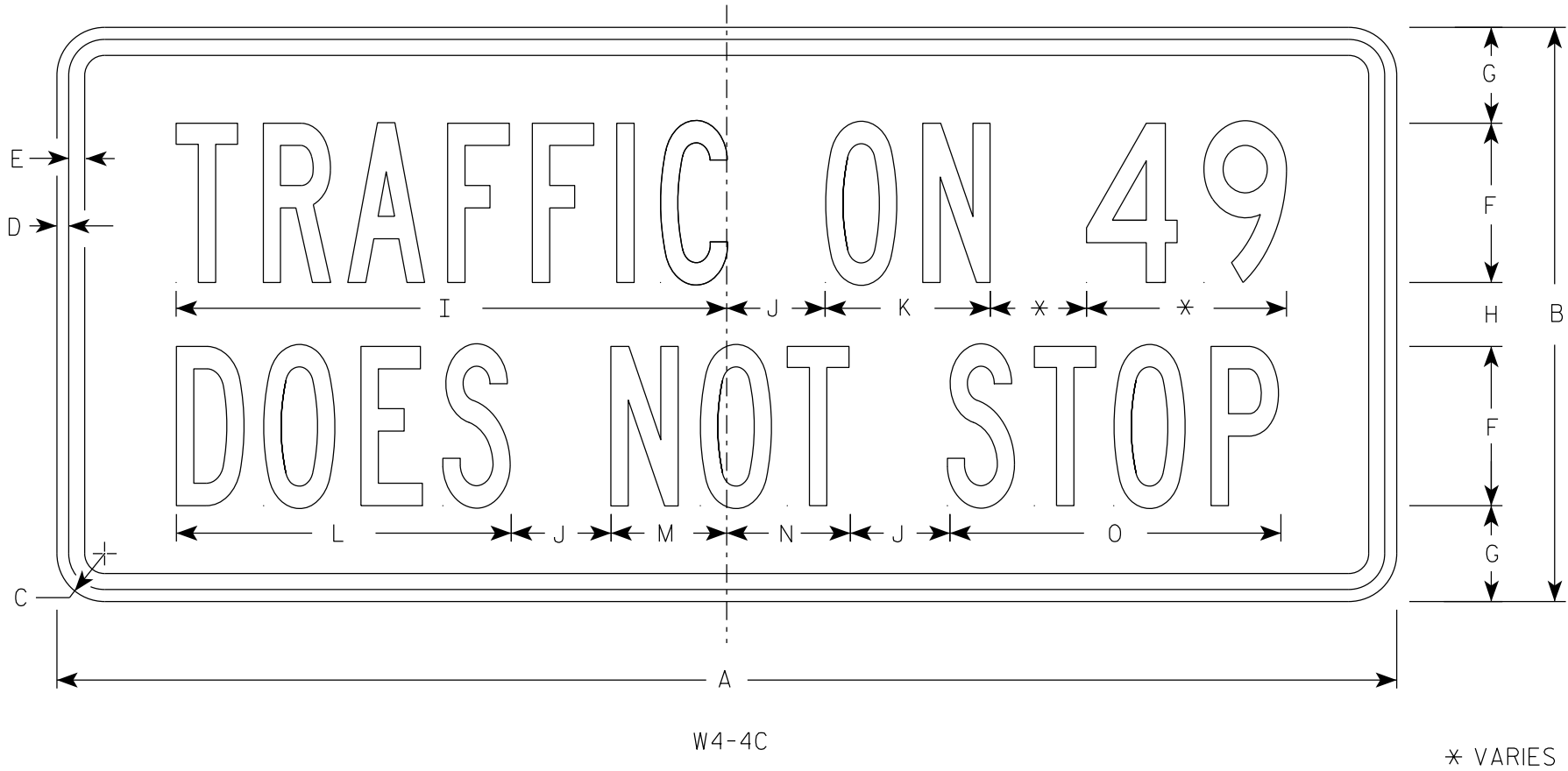
ARROW DETAIL

7

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

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - B (See note 4)
- 4. Highway Number usually Series D. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	3 1/8	6 1/4	2 1/4	2 1/4	6 1/4												2.0
2M	24	12	1 1/2	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	3 1/8	6 1/4	2 1/4	2 1/4	6 1/4												2.0
3	36	15	1 1/2	3/8	1/2	4	2 5/8	1 3/4	13 7/8	2 3/8	4 1/4	8 3/8	3 1/8	3 1/8	8 3/8												3.75
4	42	18	1 1/2	3/8	1/2	5	3	2	17 1/4	3 1/8	5 1/8	10 1/2	3 7/8	3 7/8	10 3/8												5.25
5																											

STANDARD SIGN

W4-4C

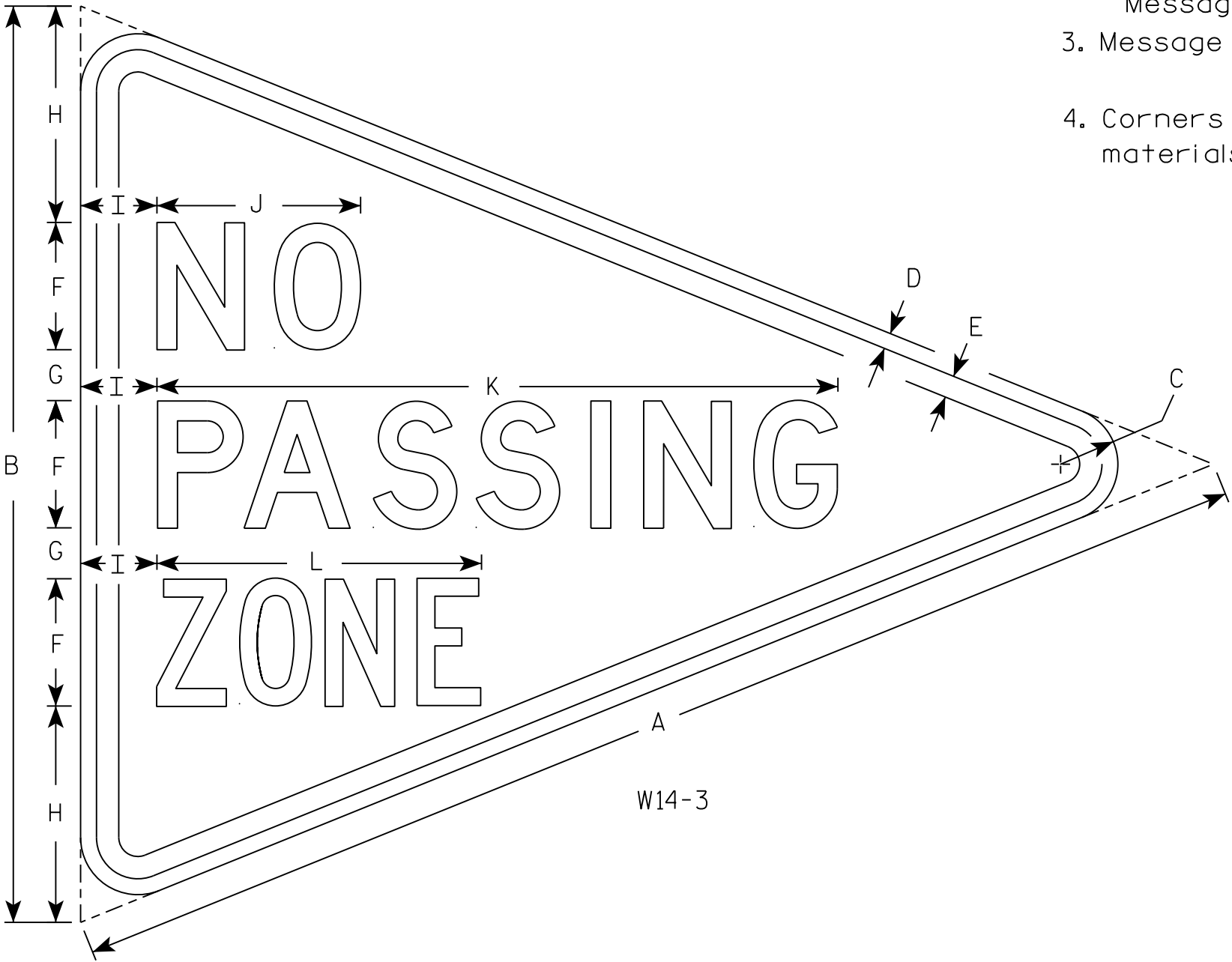
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
Traffic Engineer

DATE 9/5/2023 PLATE NO. W4-4.3

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
- 4. Corners and borders shall be rounded on all base materials for this sign.



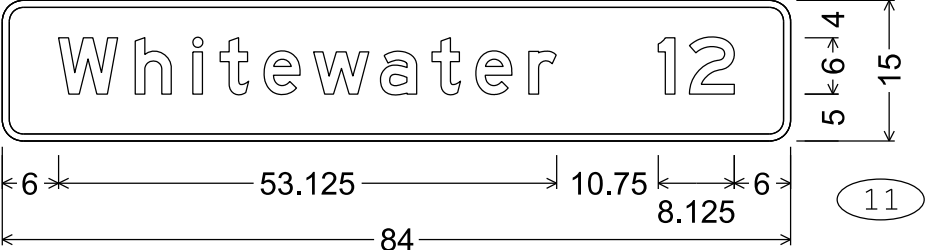
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

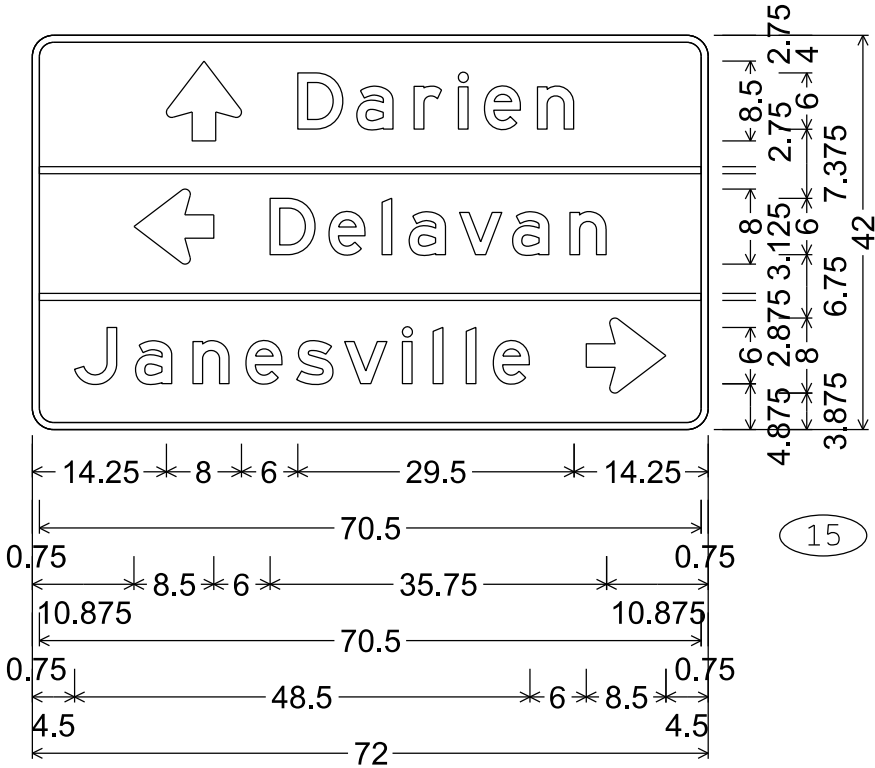
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

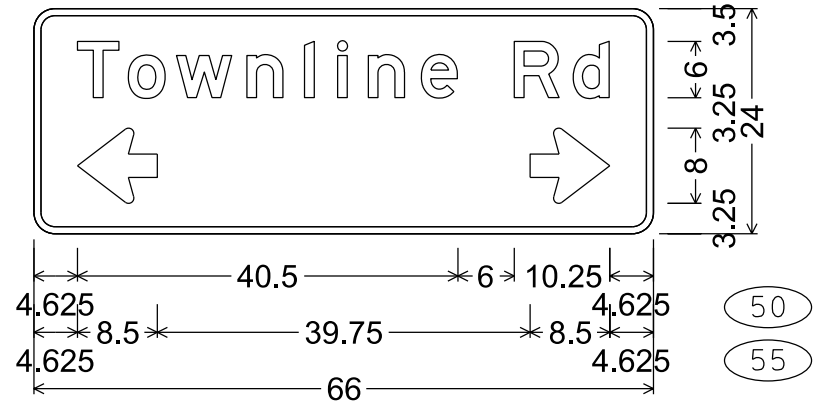
DATE 3/21/17 PLATE NO. W14-3.10



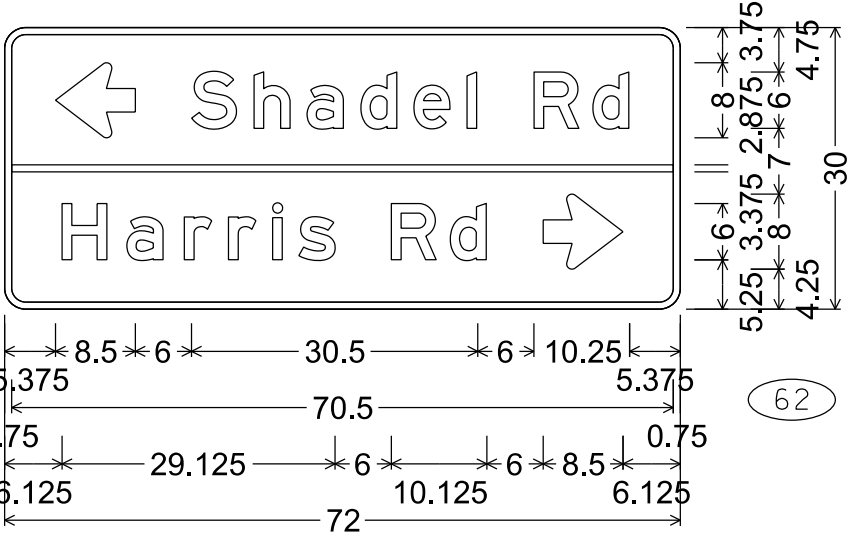
D2-1; 2.250" Radius, 0.750" Border



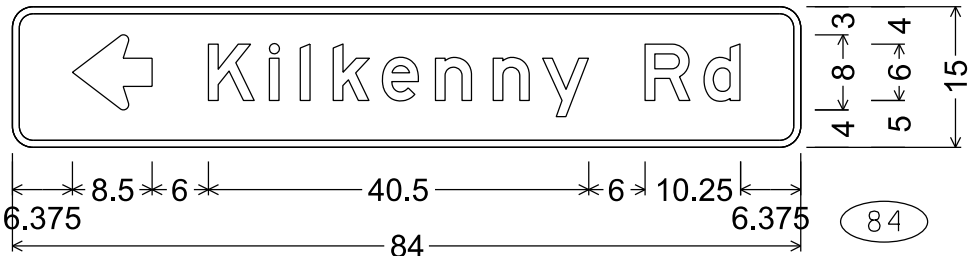
D1-3; 2.250" Radius, 0.750" Border



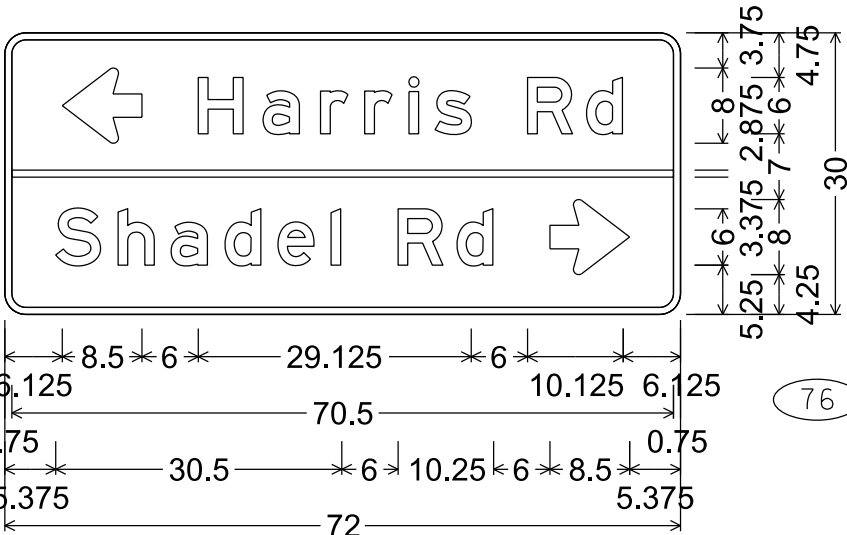
D1-61; 2.250" Radius, 0.750" Border



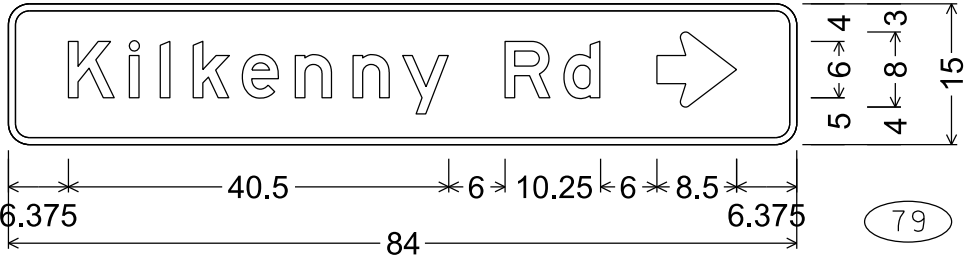
D1-2; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border



D1-2; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border

NOTES

- 1. Signs are Type II - Type H Reflective
- 2. Color:
 - Background - Green
 - Message - White
- 3. Message Series - E

7

7

NOTES

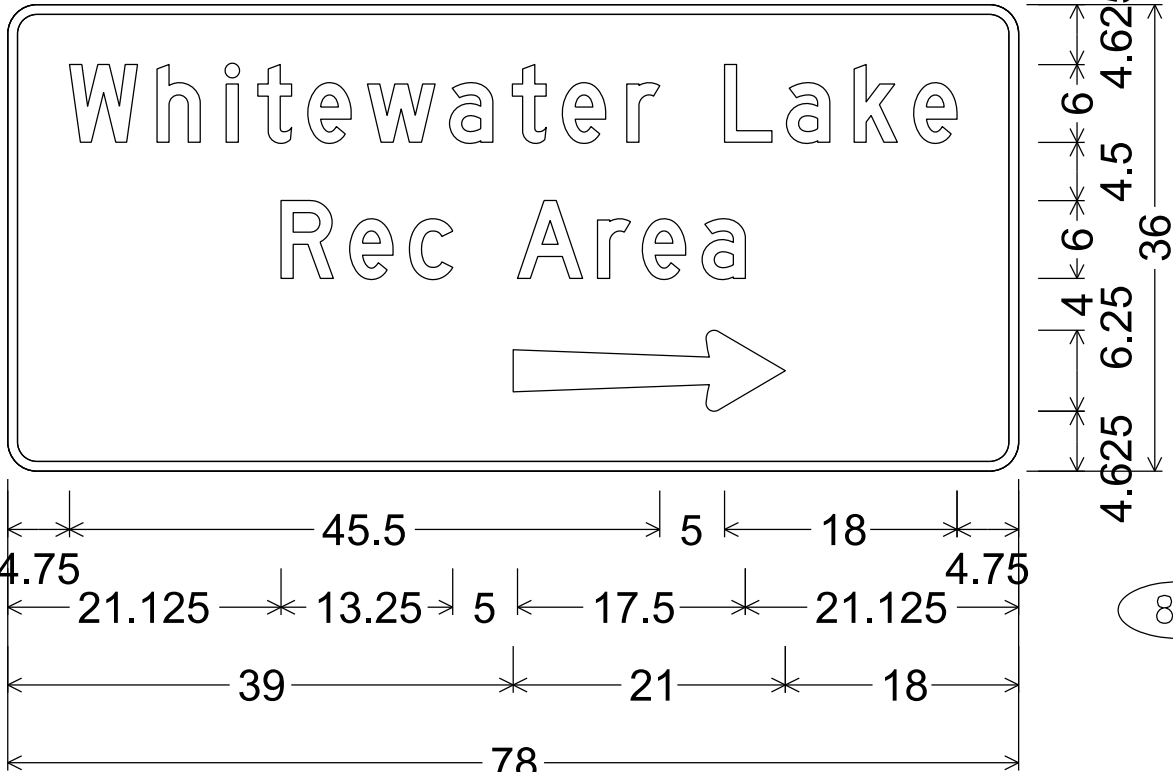
1. Sign is Type II - Type H Reflective

2. Color:

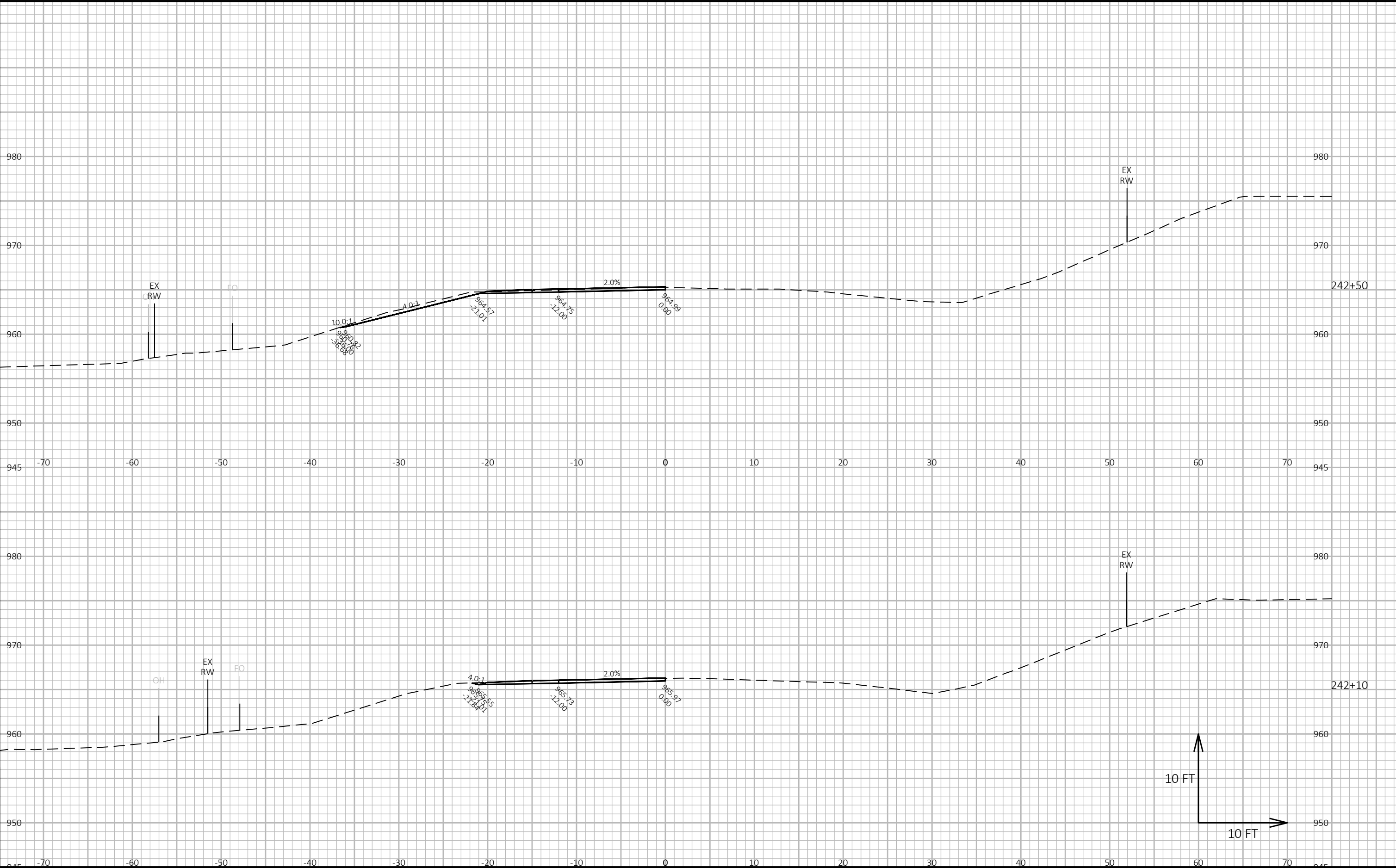
Background - Brown

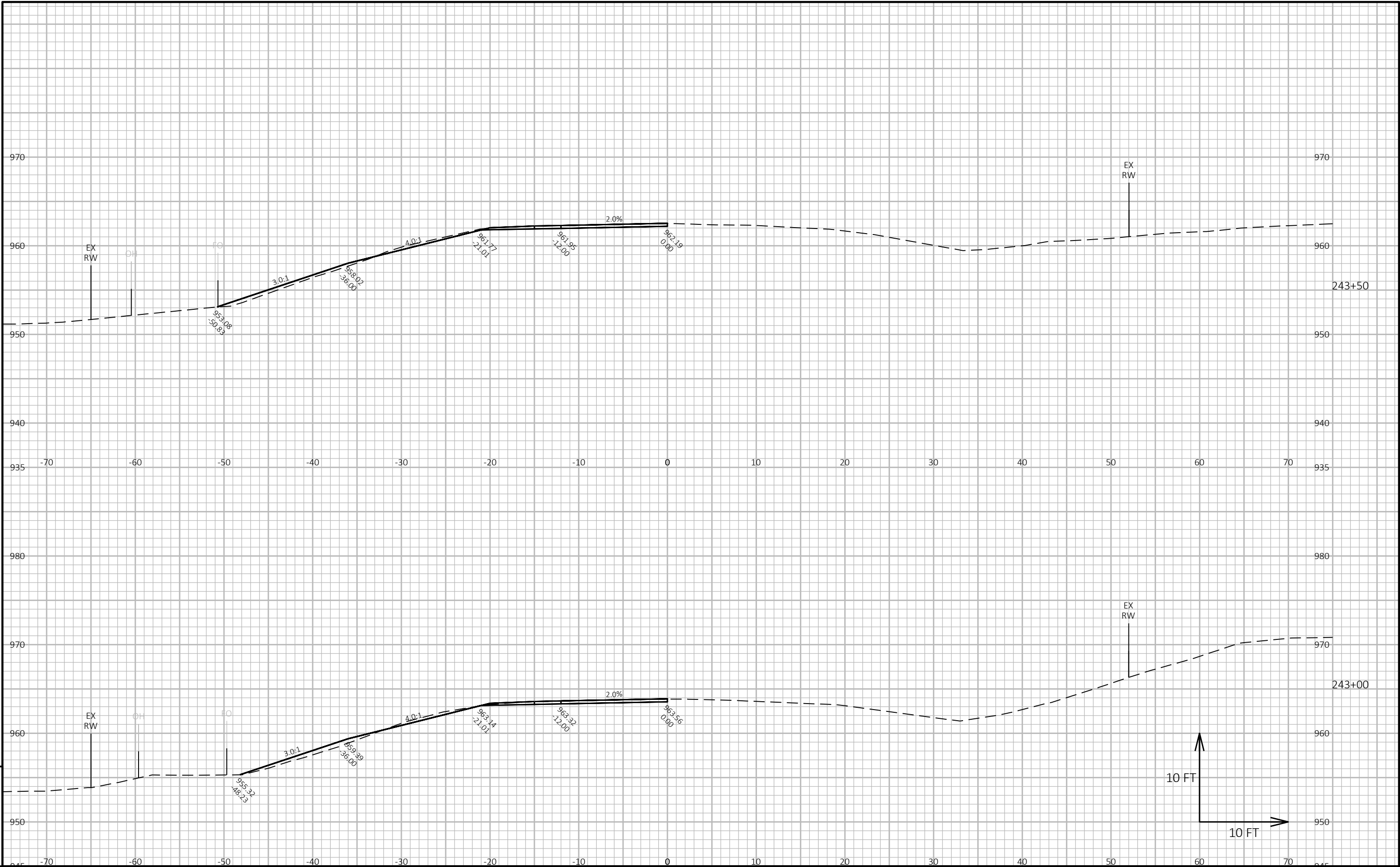
Message - White

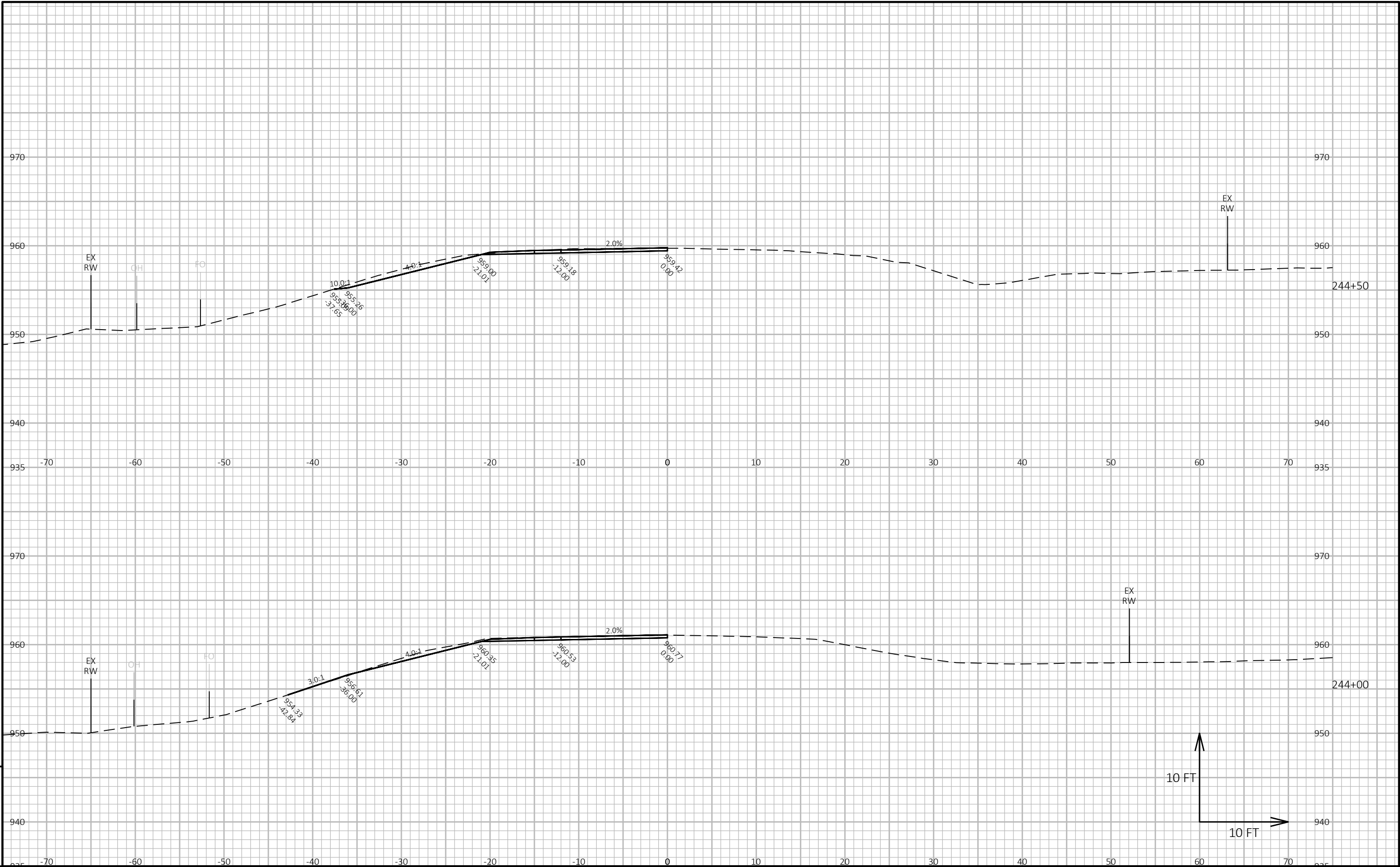
3. Message Series - D

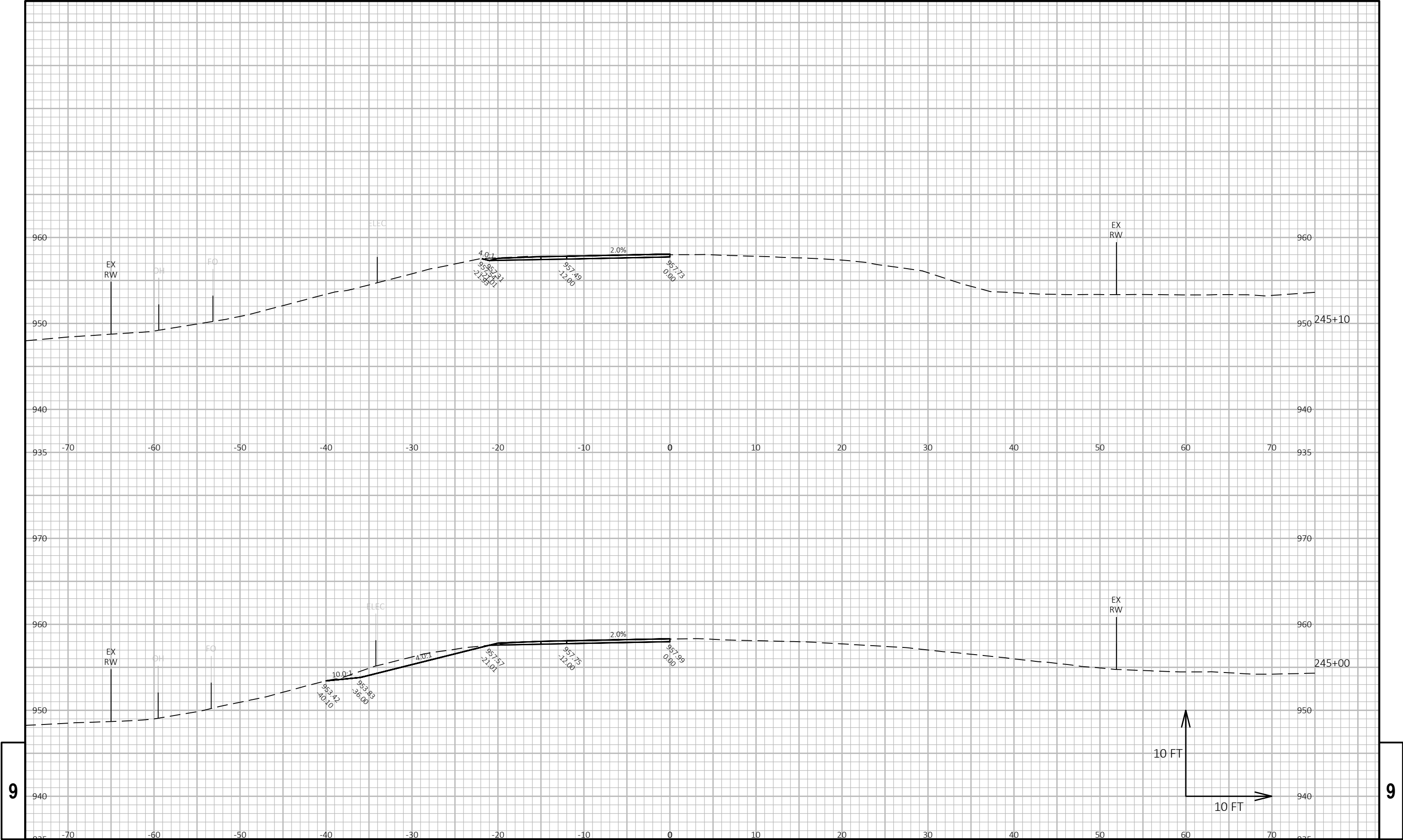


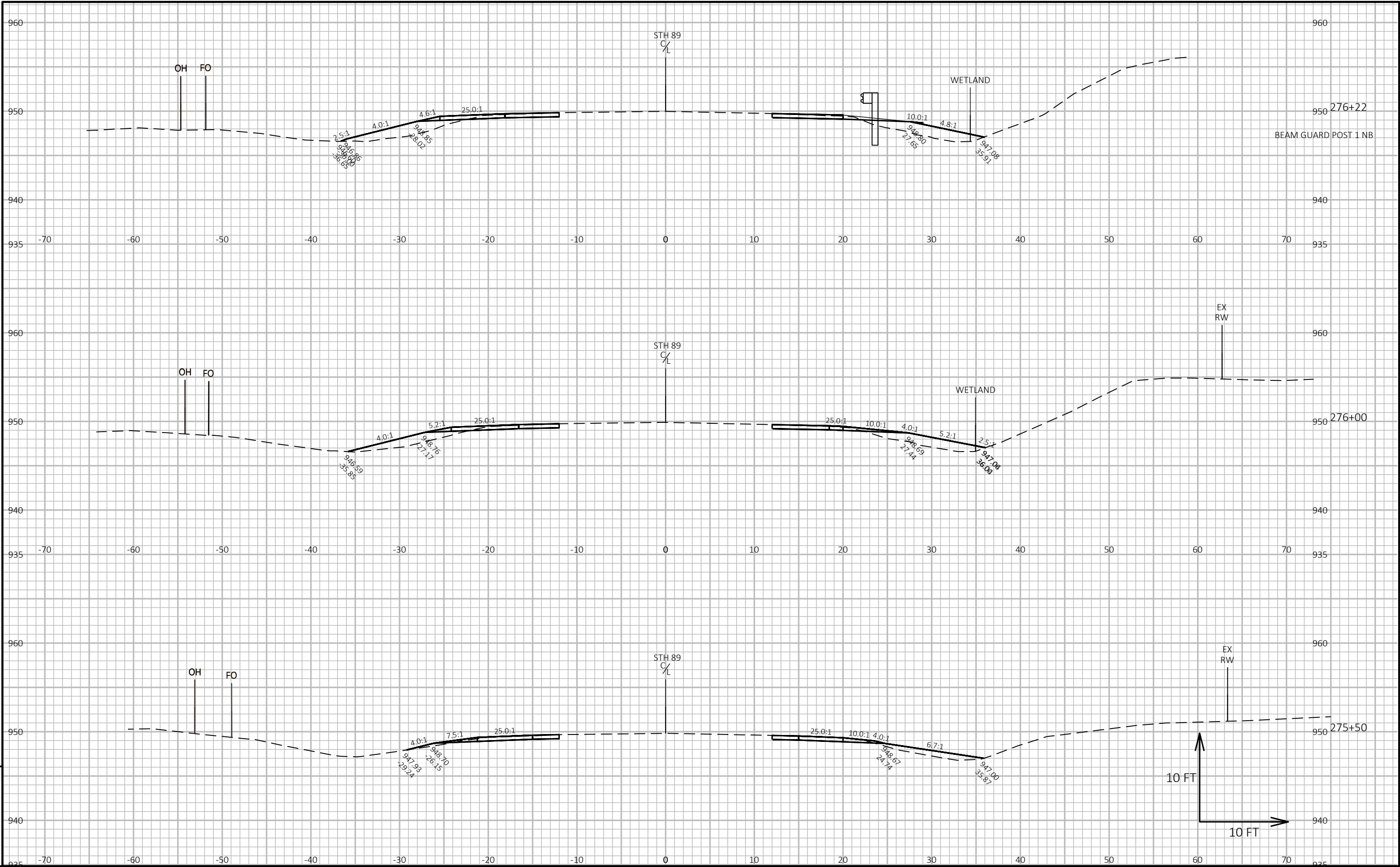
D5-66R; 2.250" Radius, 0.750" Border

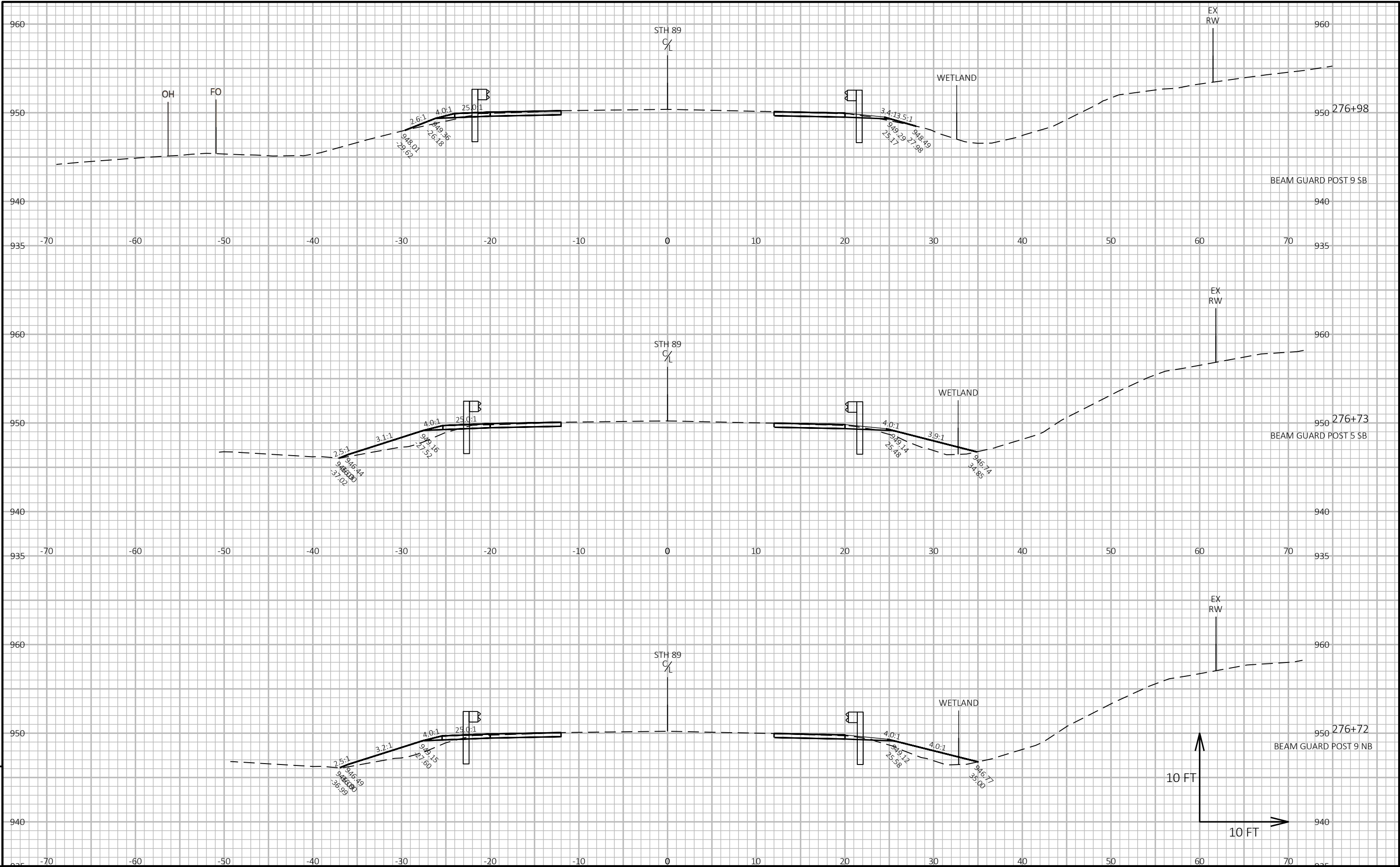


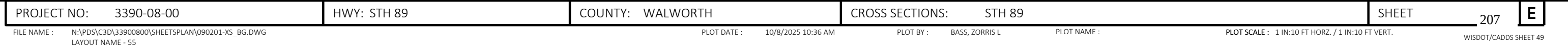
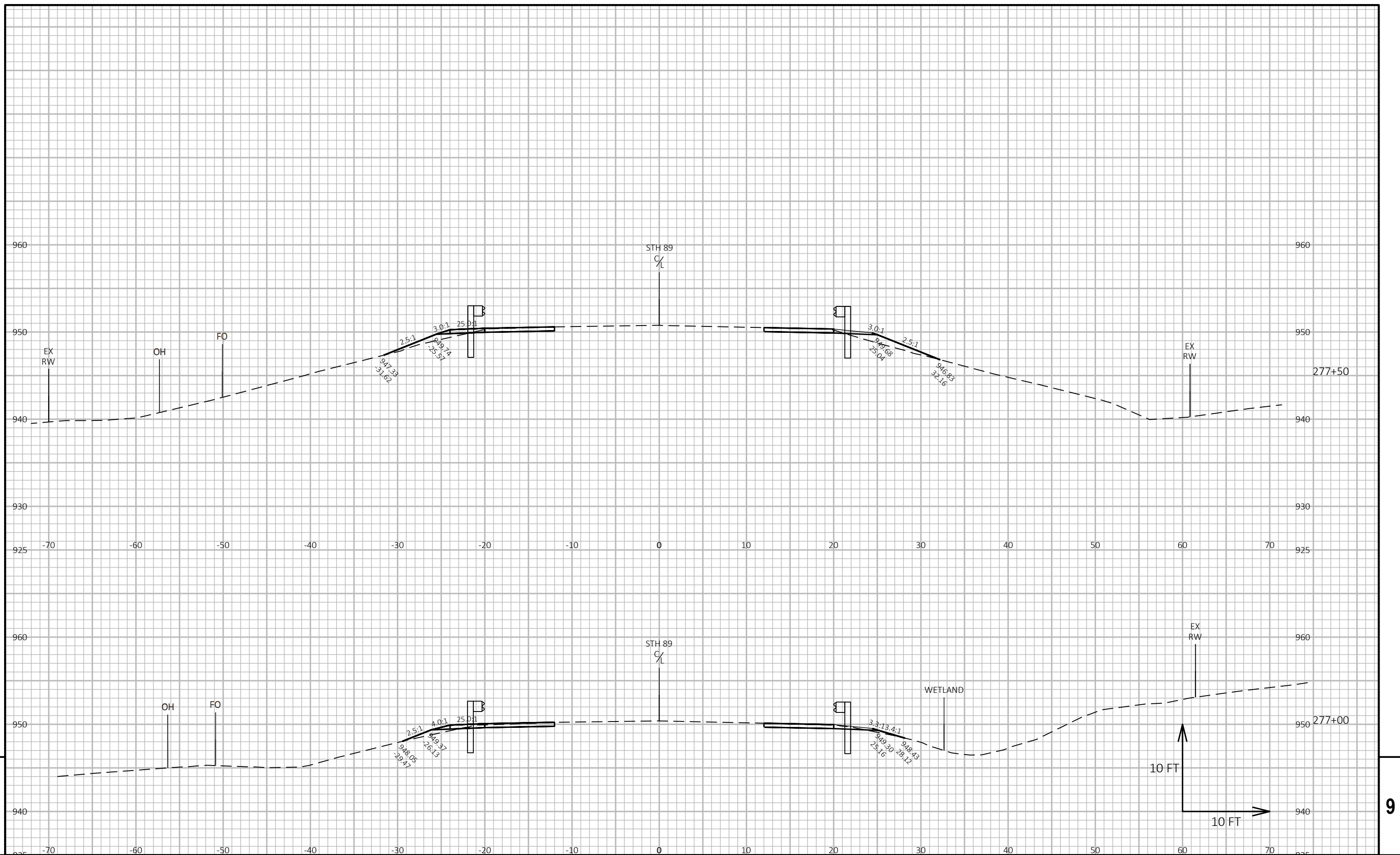


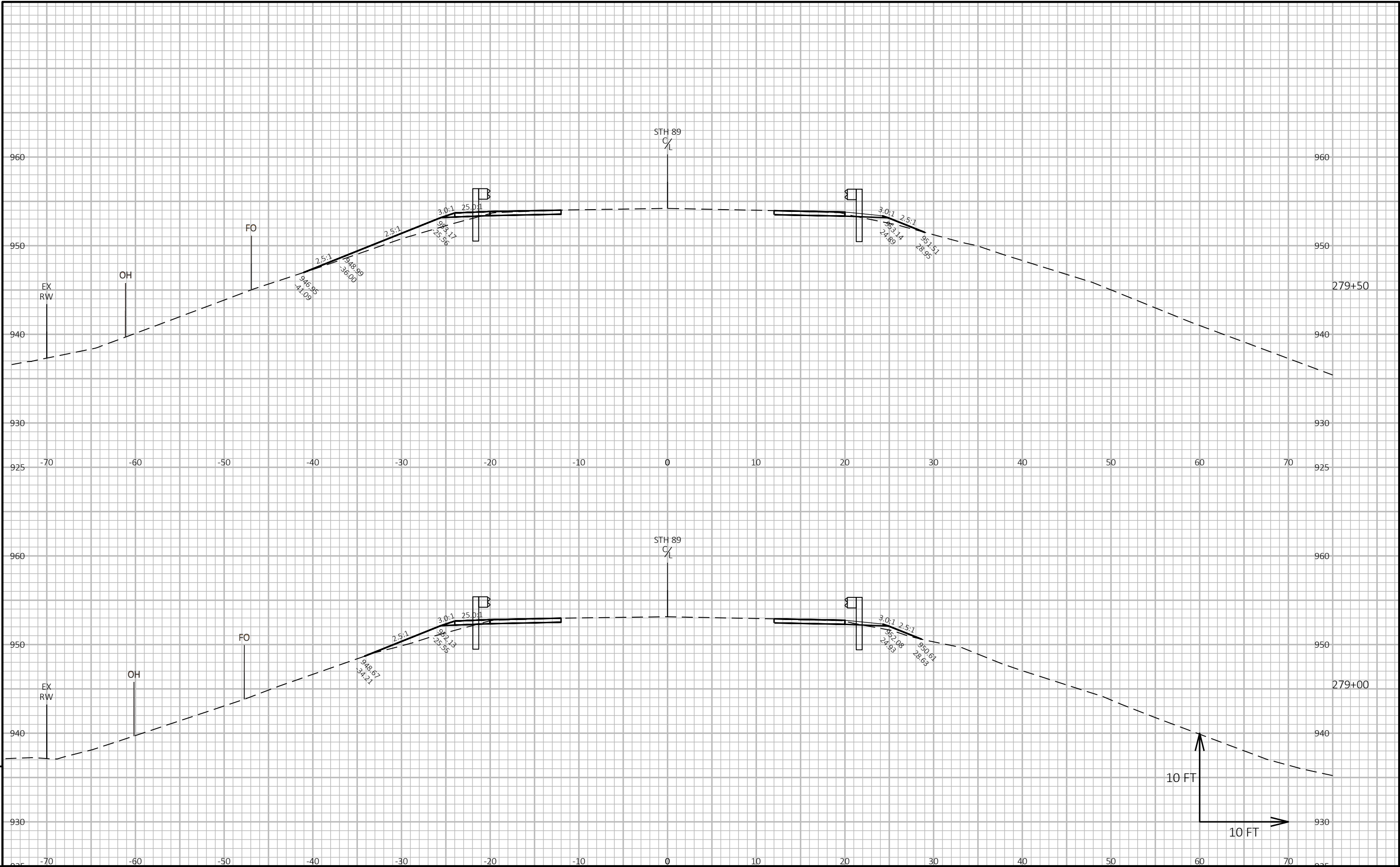








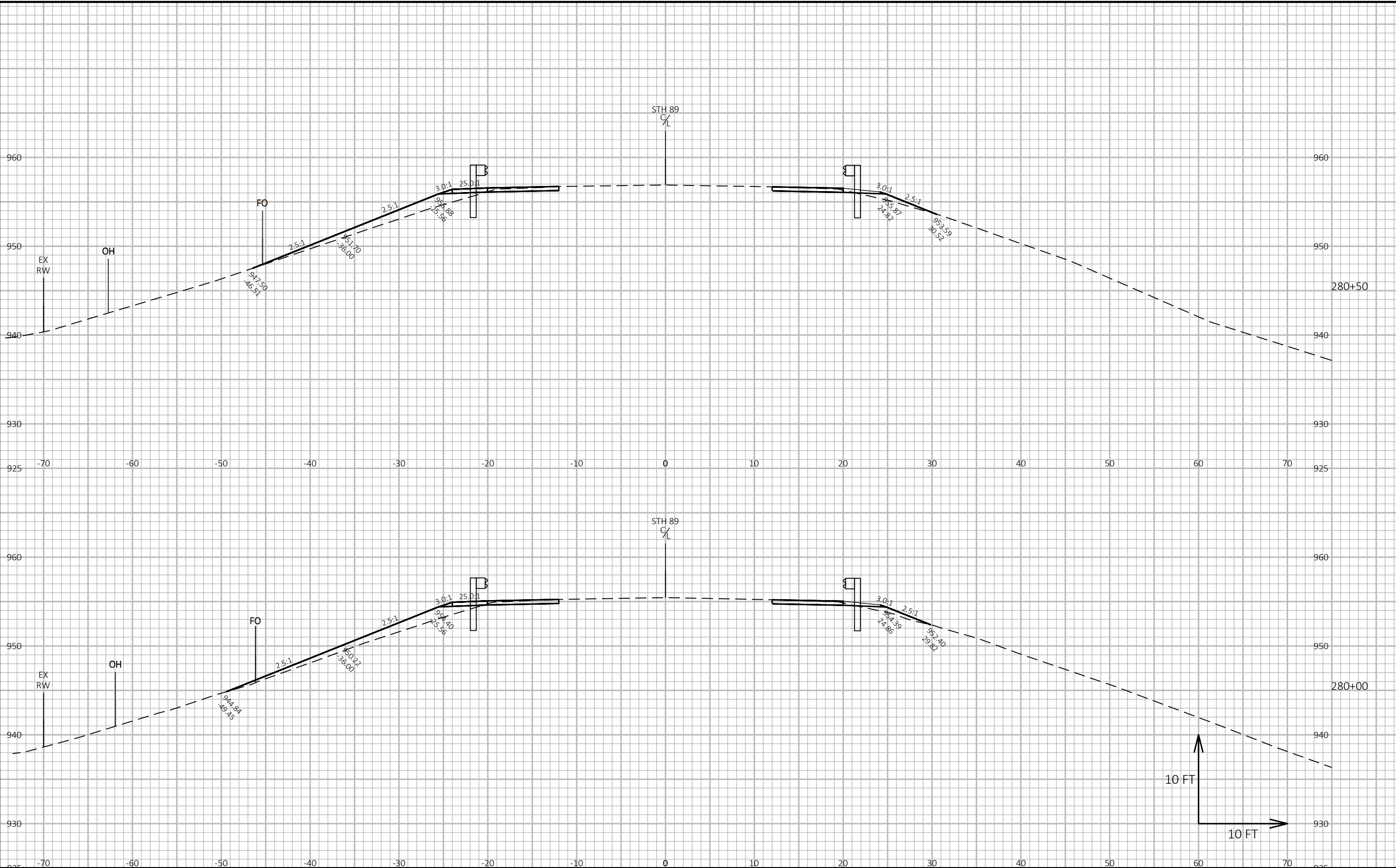


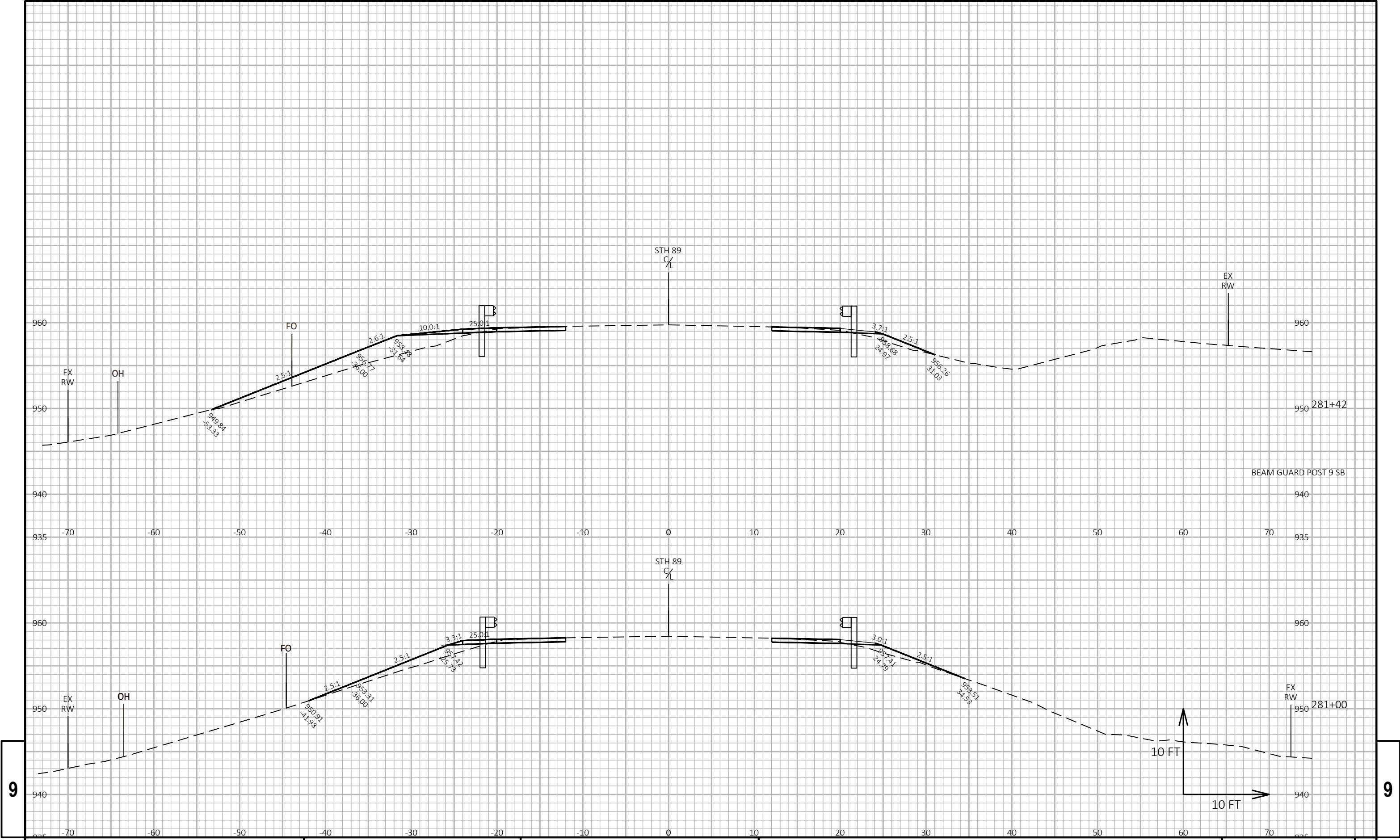


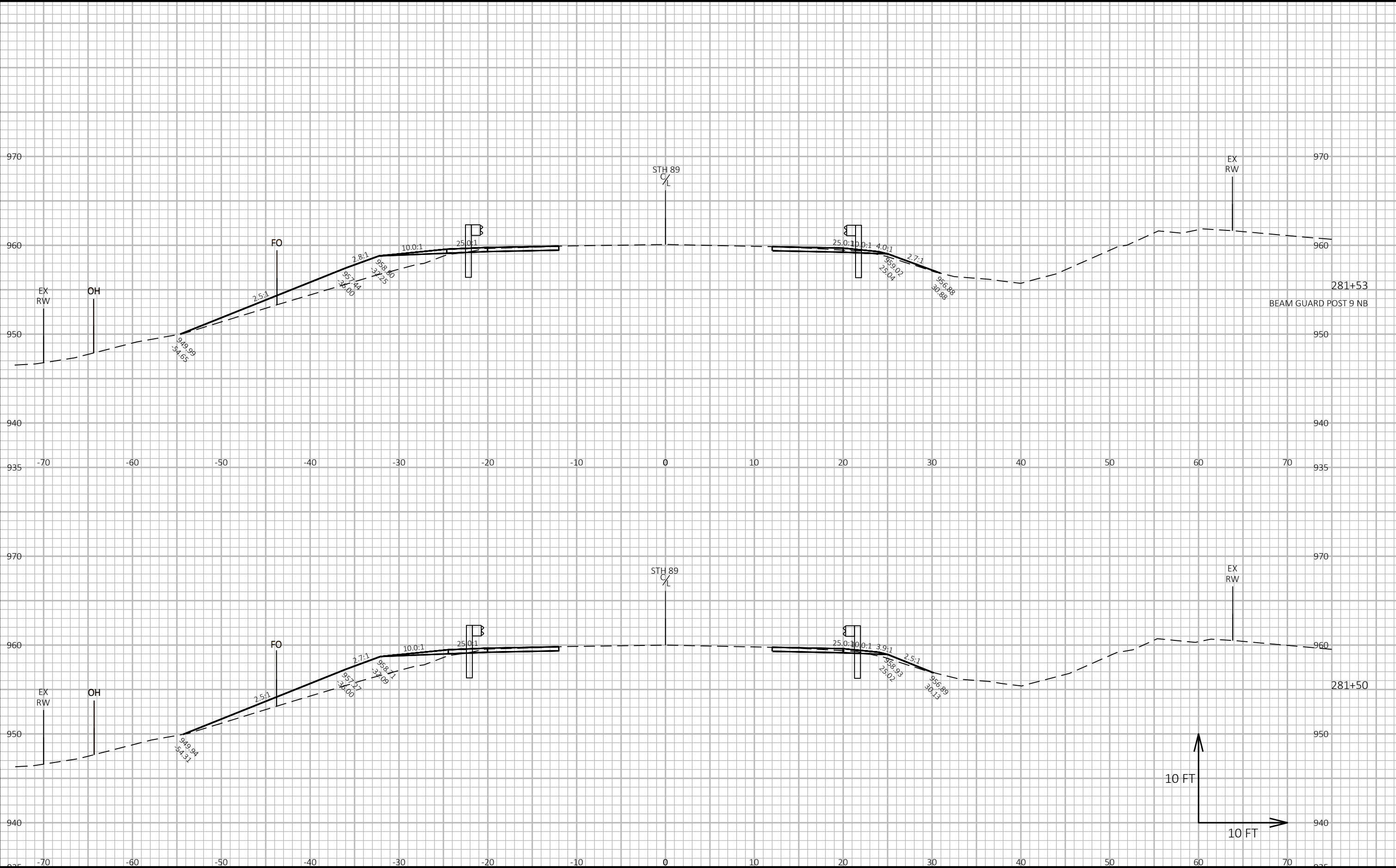
9

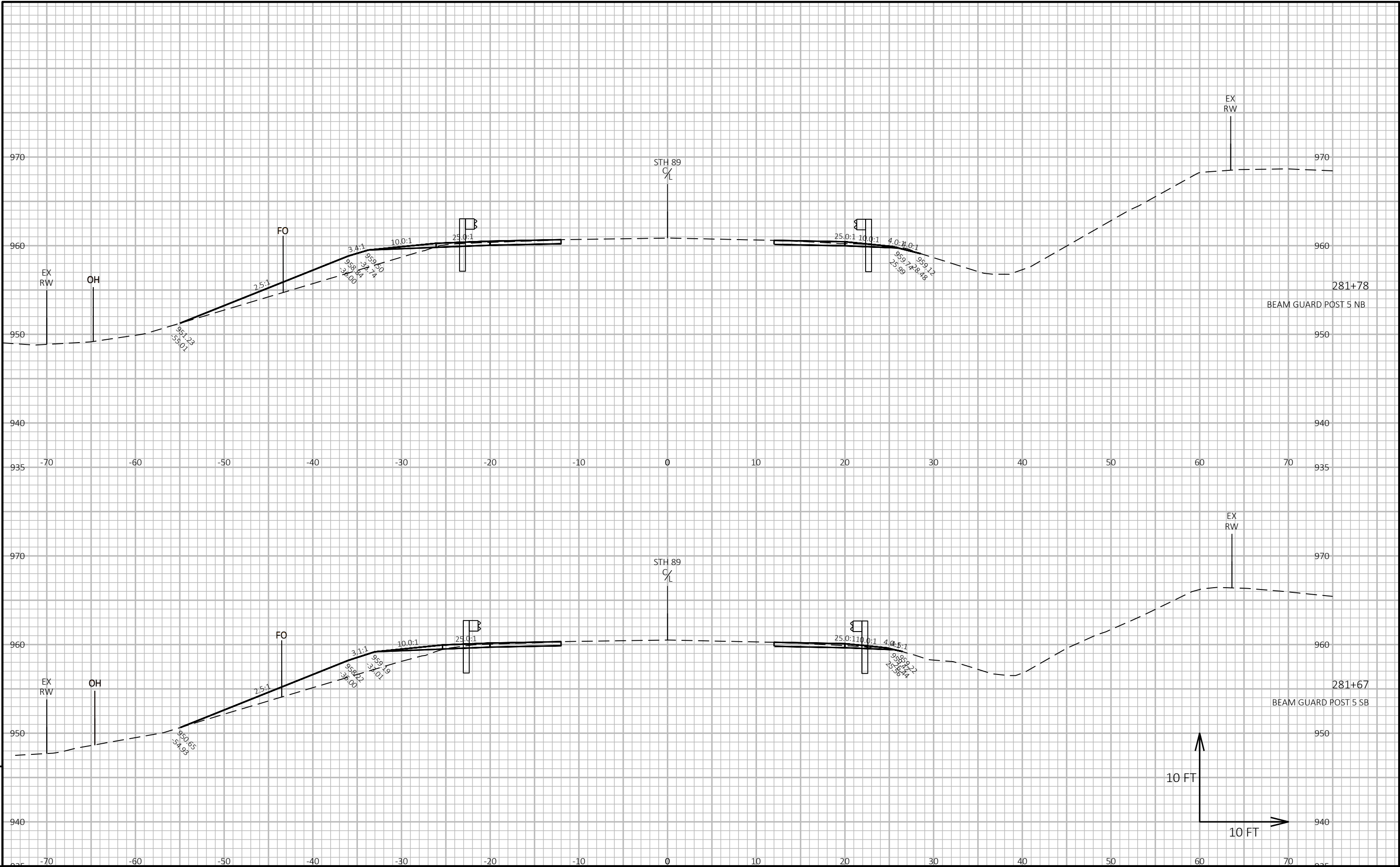
9

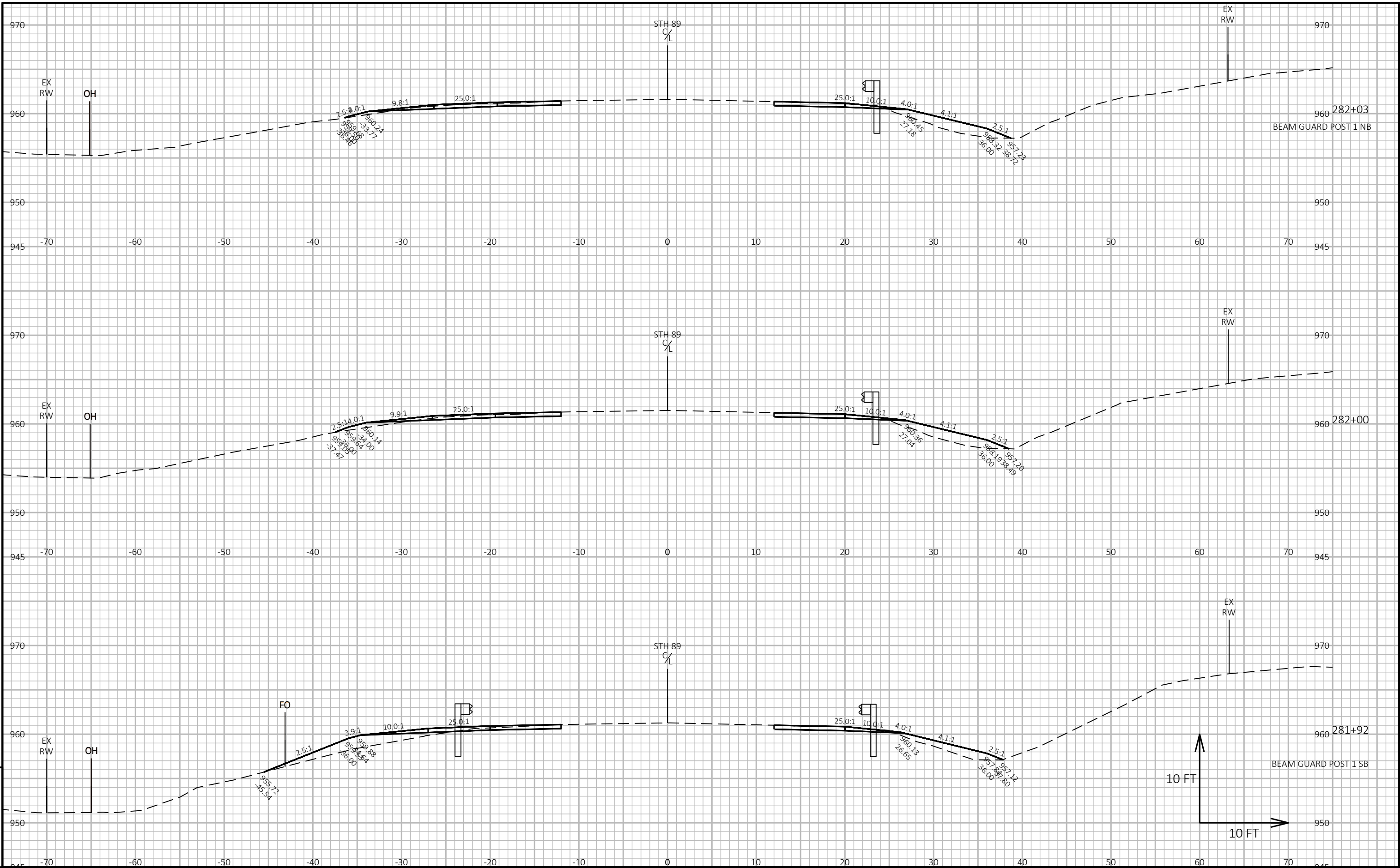
PROJECT NO: 3390-08-00	HWY: STH 89	COUNTY: WALWORTH	CROSS SECTIONS: STH 89	SHEET 209	E
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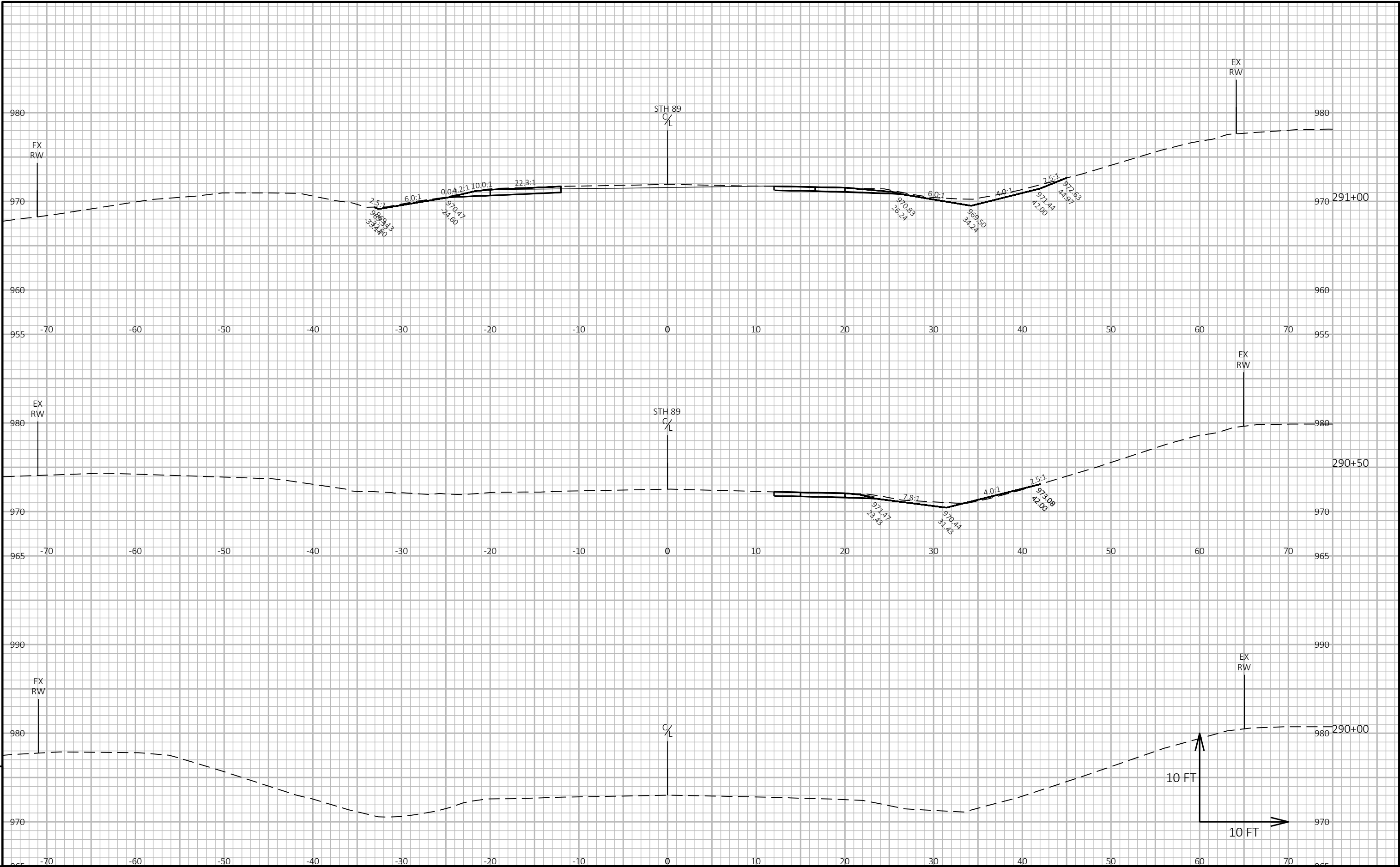


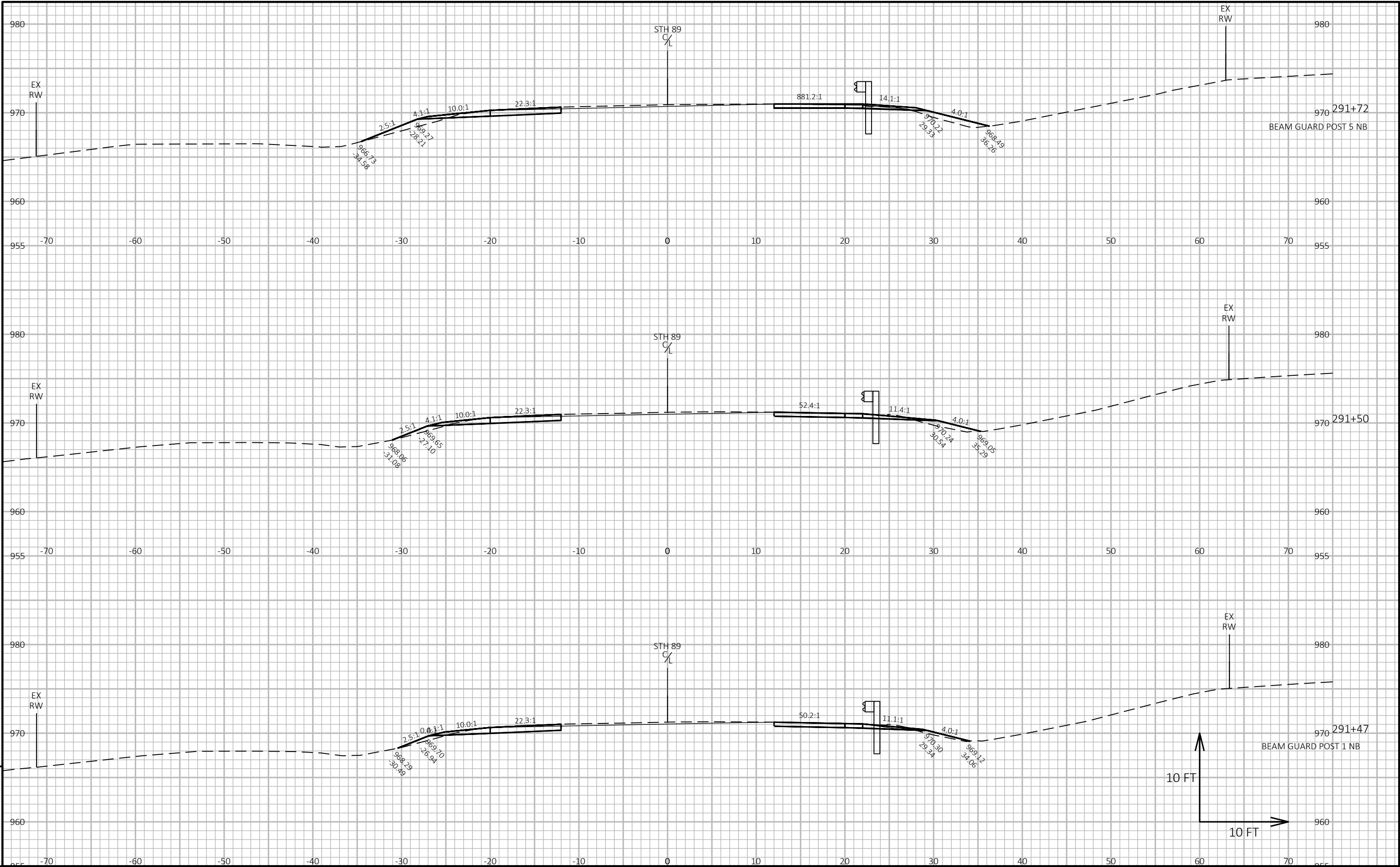


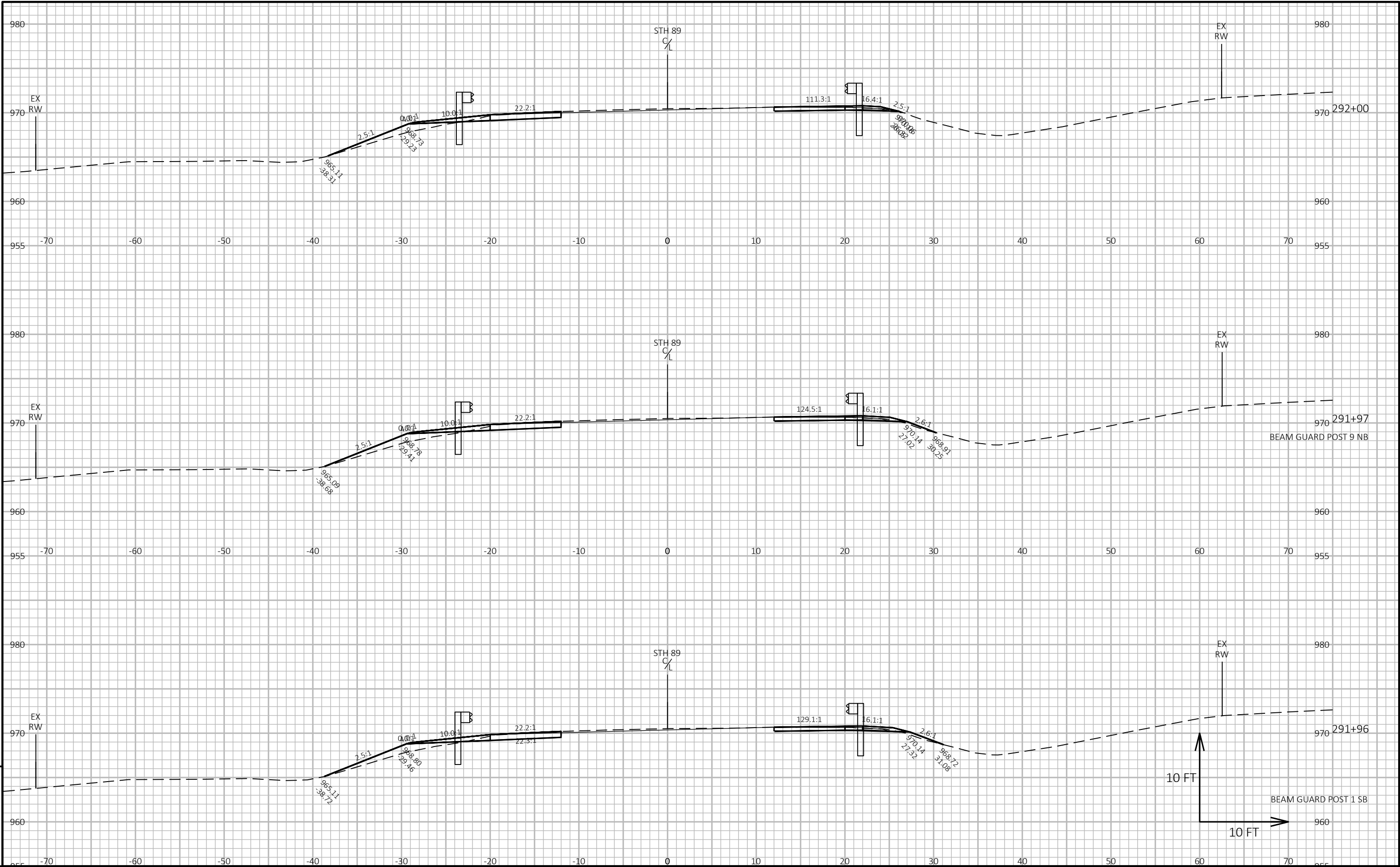


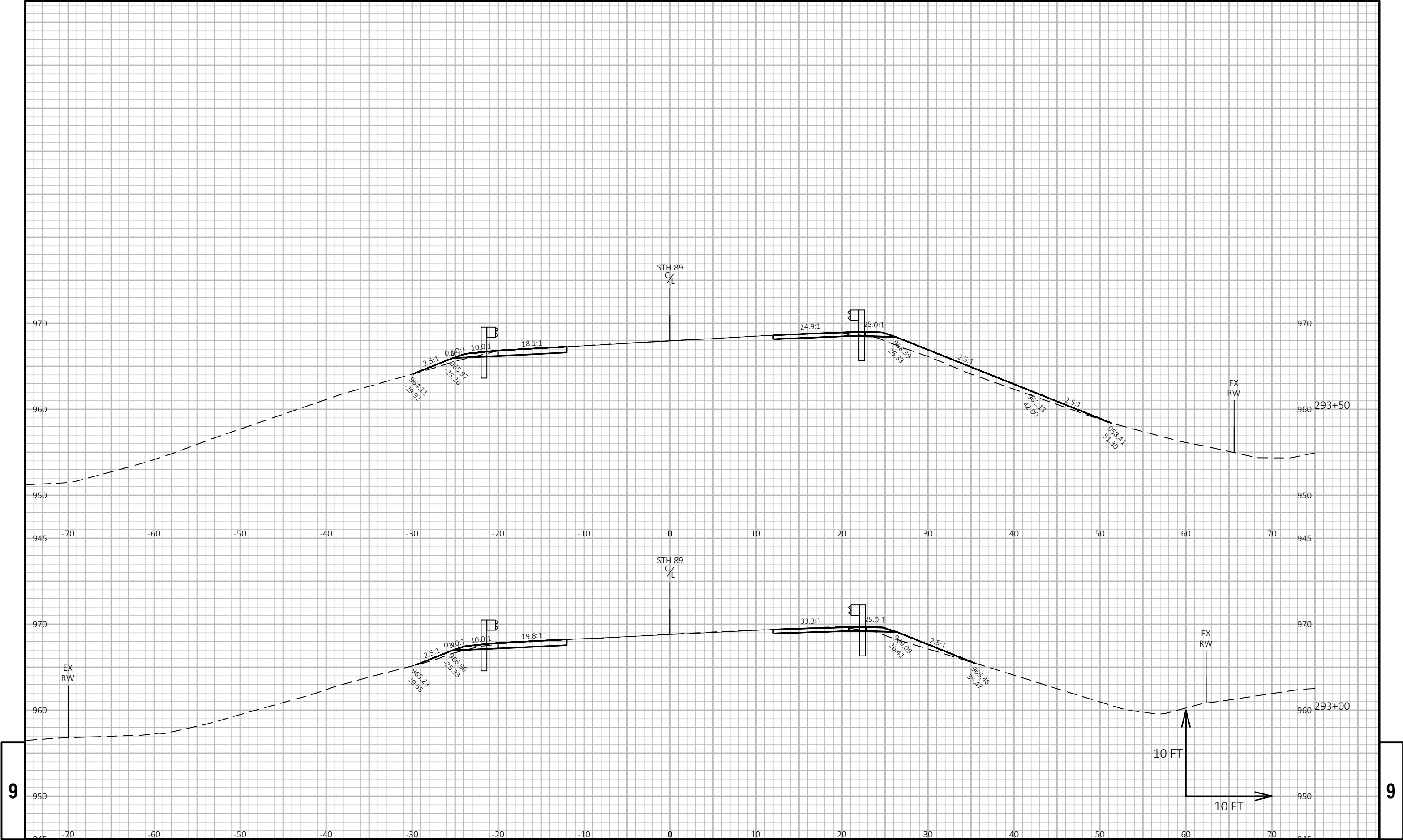


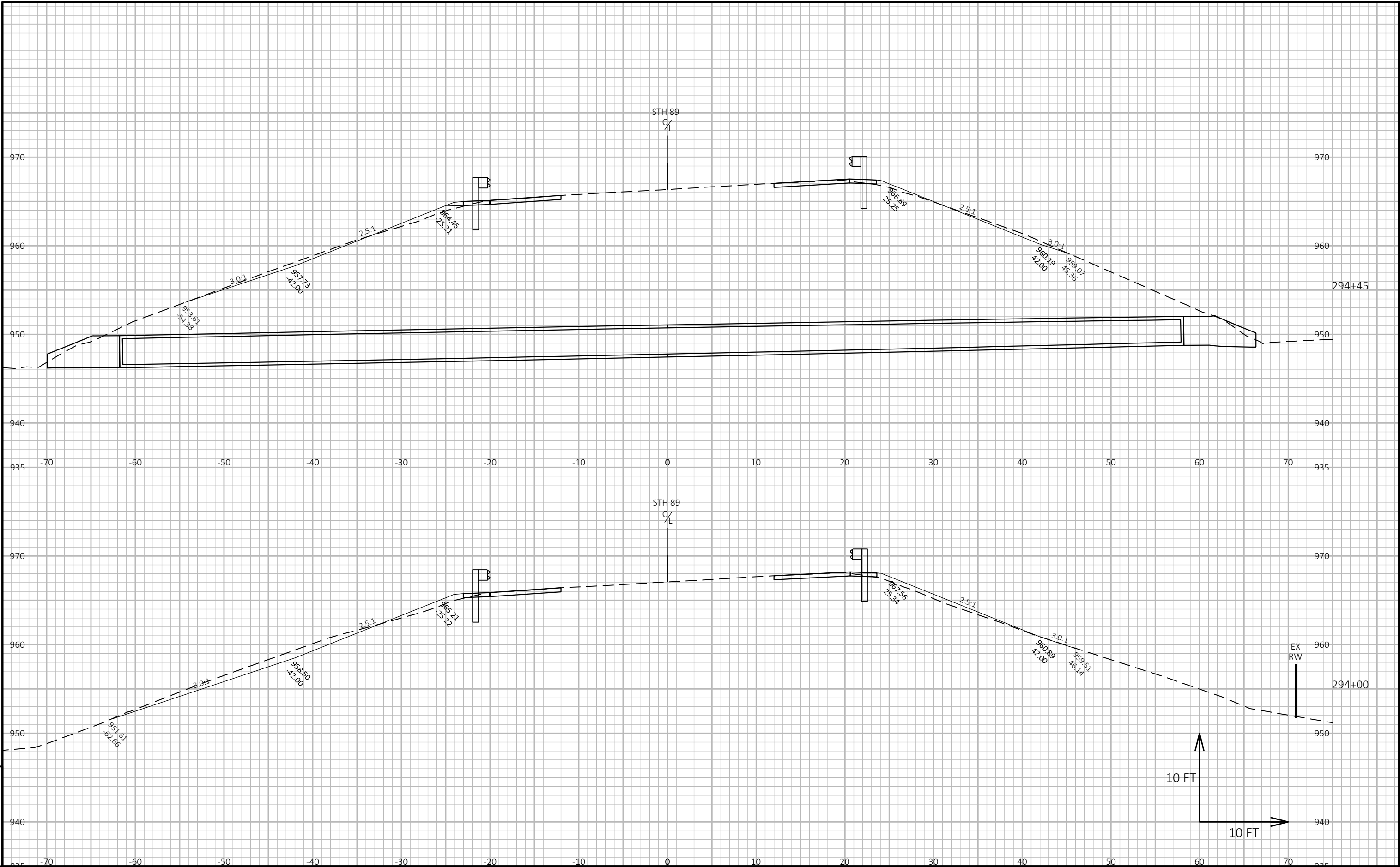


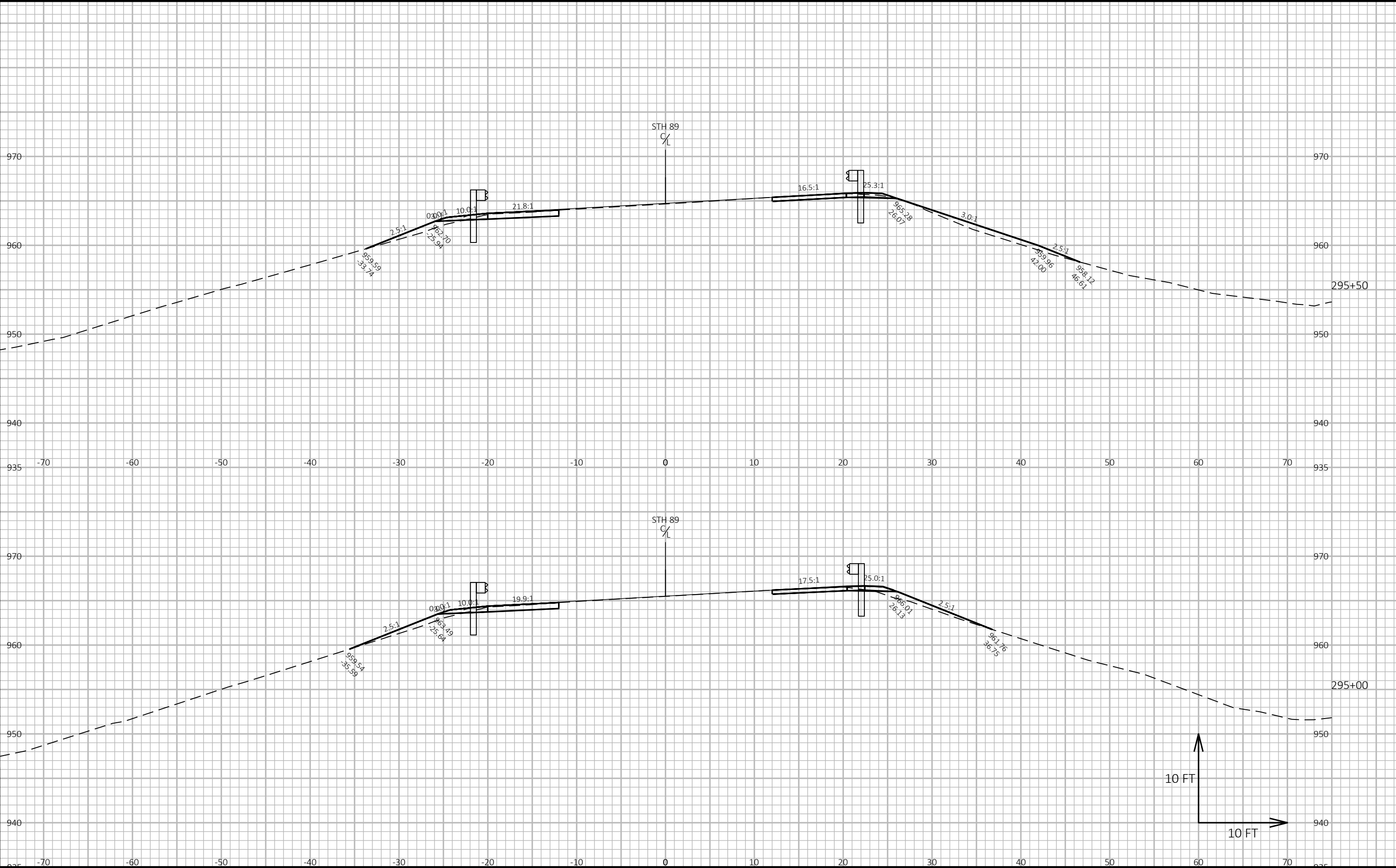


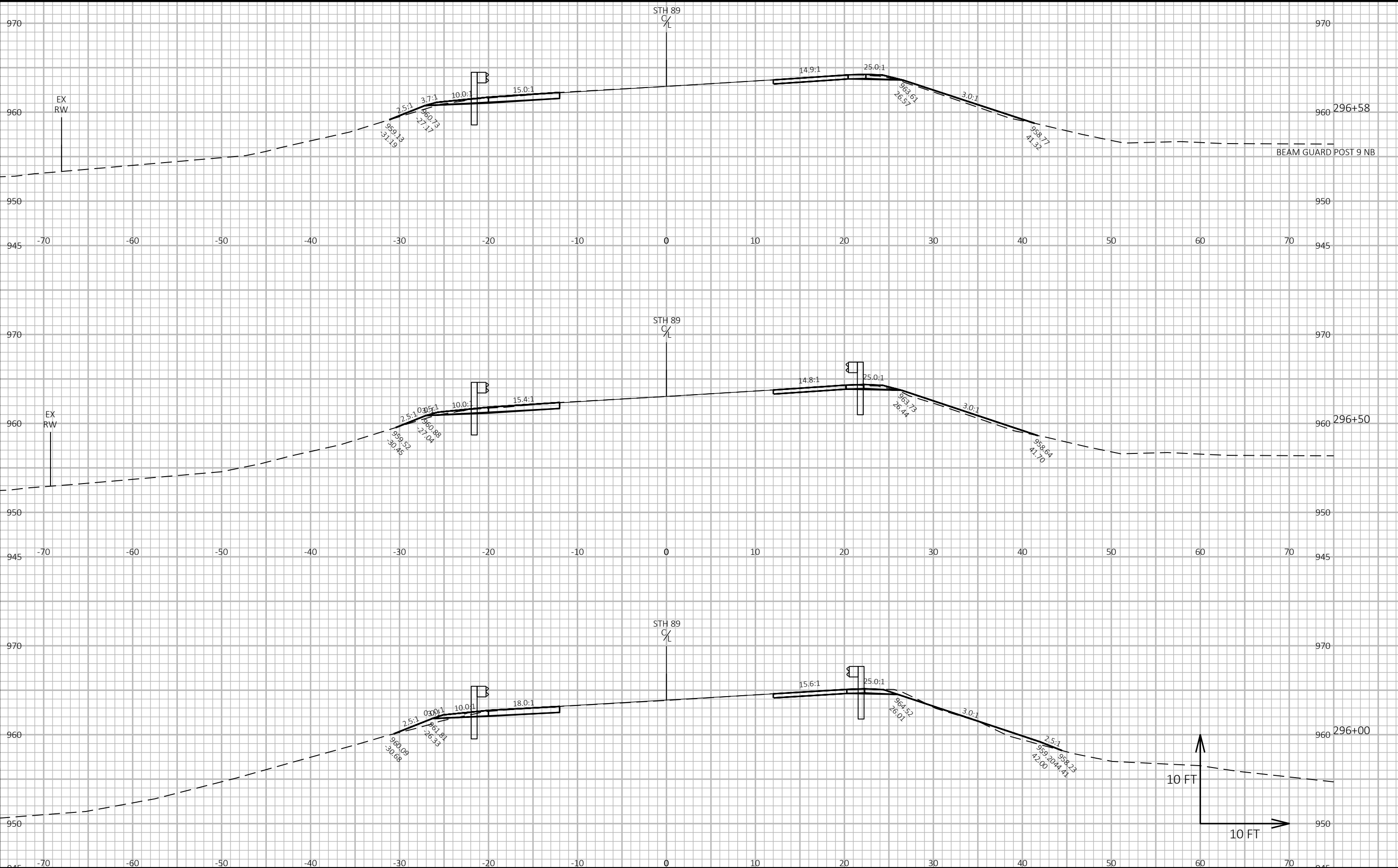


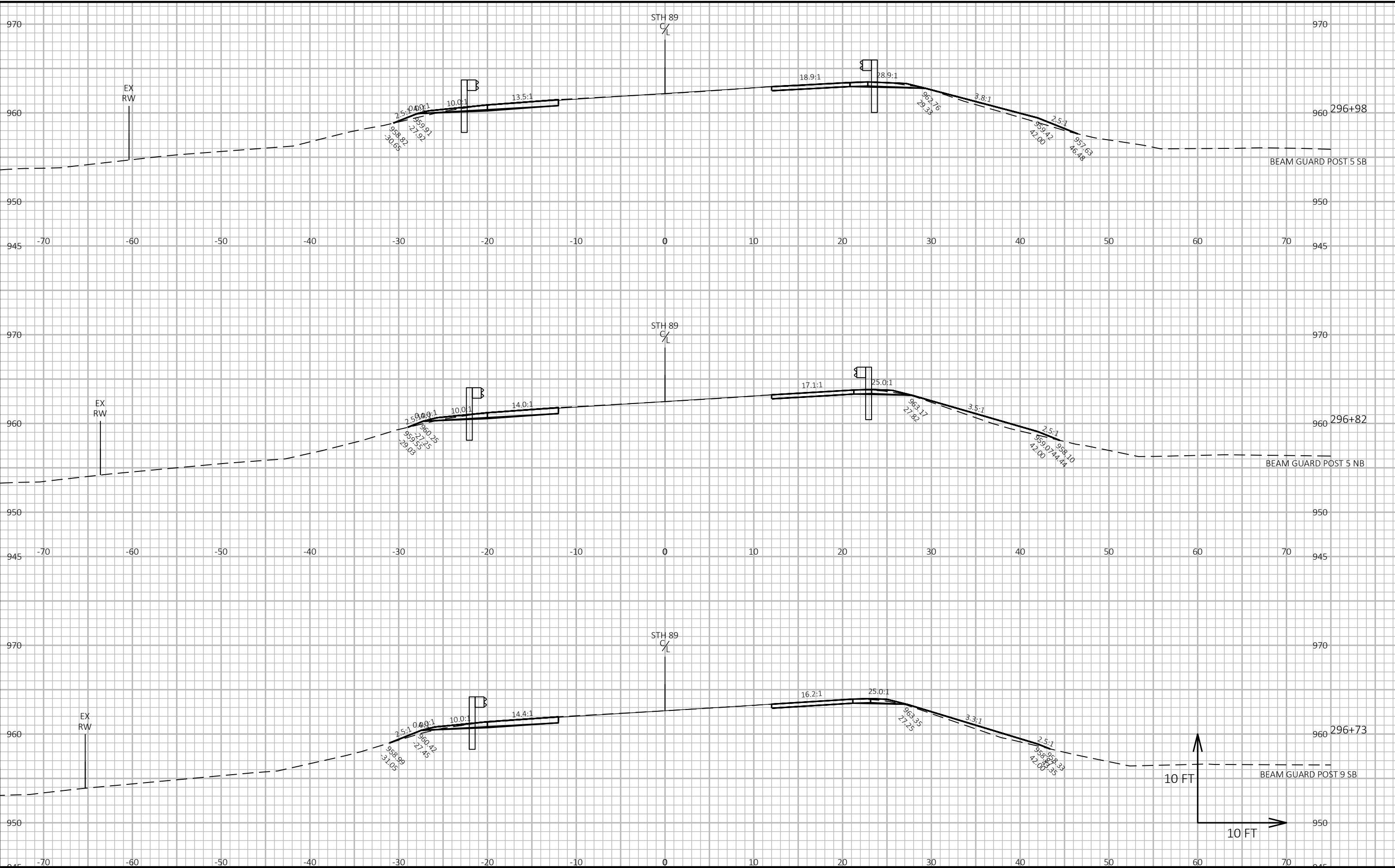


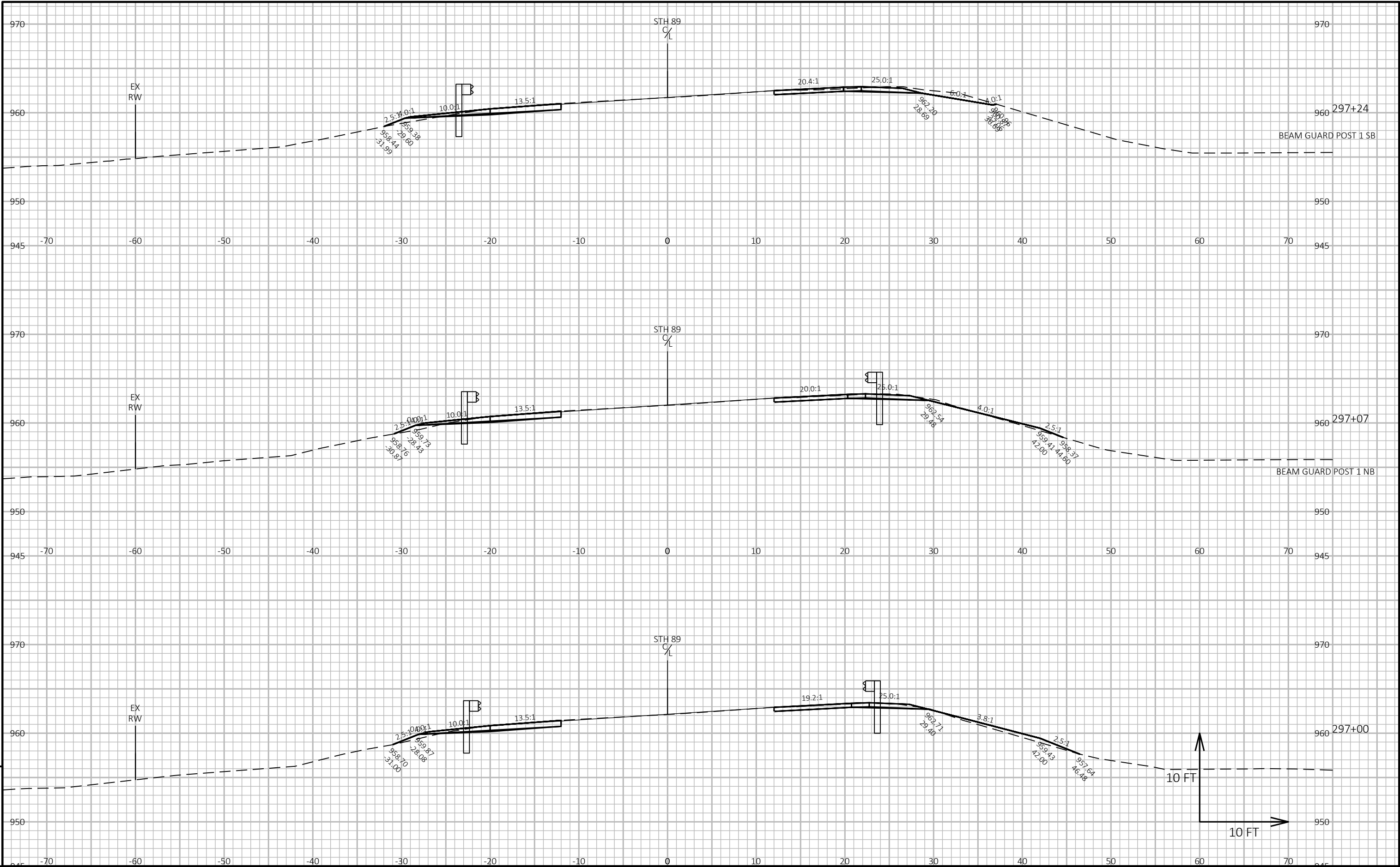


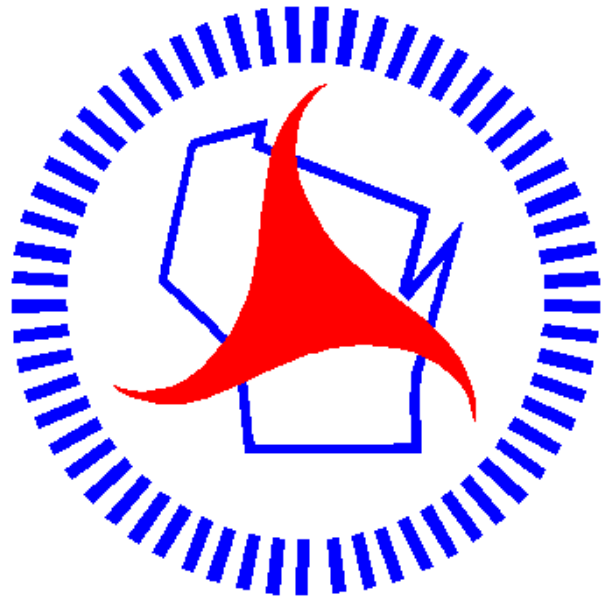












Wisconsin Department of Transportation

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