

GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS.

THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMEBERS OF DIGGERS HOTLINE.

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

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

TACK COAT TO BE APPLIED AT A RATE OF 0.07 GAL/SY ON MILLED SURFACE OR CONCRETE AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

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

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.

CURVE DATA IS BASED ON THE RADIUS DEFINITION.

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 20 FEET WIDE.

CURB AND GUTTER PLAN GRADES AND RADIUS DIMENSIONS ARE AT THE FLANGE LINE UNLESS OTHERWISE NOTED.

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

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. LEAVE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

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.

BEARINGS SHOWN ON THE PLAN ARE GROUND BEARINGS TO THE NEAREST SECOND.

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

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- EROSION CONTROL
- CURBRAMP DETAILS
- PAVEMENT MARKING
- ADVANCED WARNING
- TRAFFIC STAGING
- DETOURS
- ALIGNMENT DETAILS
- CONTROL POINTS

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	SSCPE	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

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Dial 811 or (800)242-8511
www.DiggersHotline.com

USH 61 3.5-INCHES		
LAYER	THICKNESS	TYPE
UPPER	1.75-INCHES	4 SMA 58-28 V
LOWER	1.75-INCHES	4 HT 58-28 H

USH 61 SHOULDER 3.5-INCHES		
LAYER	THICKNESS	TYPE
UPPER	1.75-INCHES	4 MT 58-28 S
LOWER	1.75-INCHES	4 MT 58-28 S

BADGER RD 4-INCHES		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	4 MT 58-28 S
LOWER	2-INCHES	4 MT 58-28 S

CTH HHH/H 3.5-INCHES		
LAYER	THICKNESS	TYPE
UPPER	1.75-INCHES	4 MT 58-28 S
LOWER	1.75-INCHES	4 MT 58-28 S

EAGLE POINT RD 4-INCHES		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	4 MT 58-28 S
LOWER	2-INCHES	4 MT 58-28 S

EAGLE POINT RD SB ON RAMP 2-INCHES		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	4 MT 58-28 S

REST AREA 5-INCHES		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	4 HT 58-28 H
LOWER	3-INCHES	4 HT 58-28 H

USH 61 SHOULDER ONLY 4-INCHES		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	4 MT 58-28 S
LOWER	2-INCHES	4 MT 58-28 S

STH 11 SHOULDER ONLY 4-INCHES		
LAYER	THICKNESS	TYPE
UPPER	3.5-INCHES	4 LT 58-28 S

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 75.2 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.7 ACRES

WISCONSIN DNR LIAISON

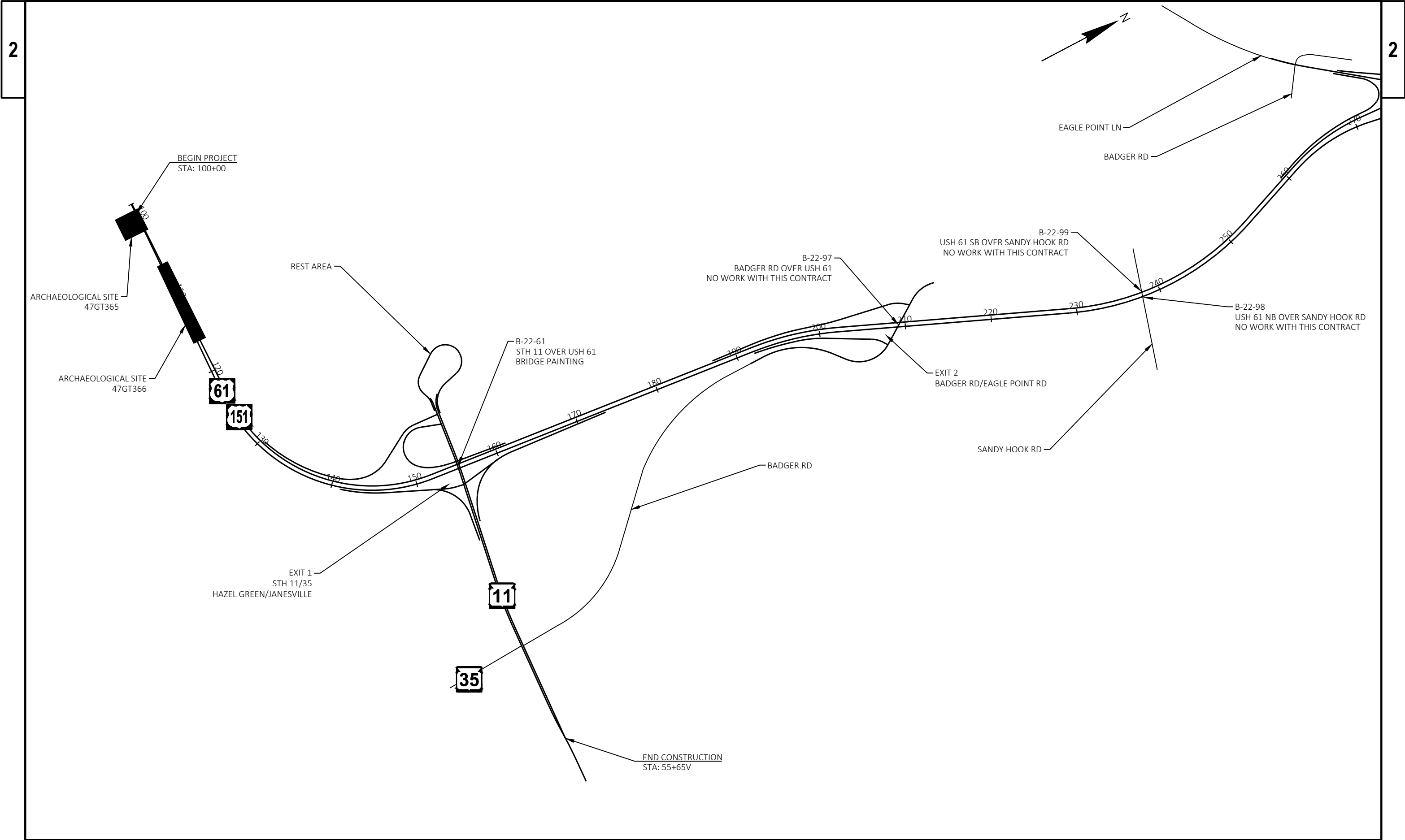
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DESIGN PROJECT MANAGER

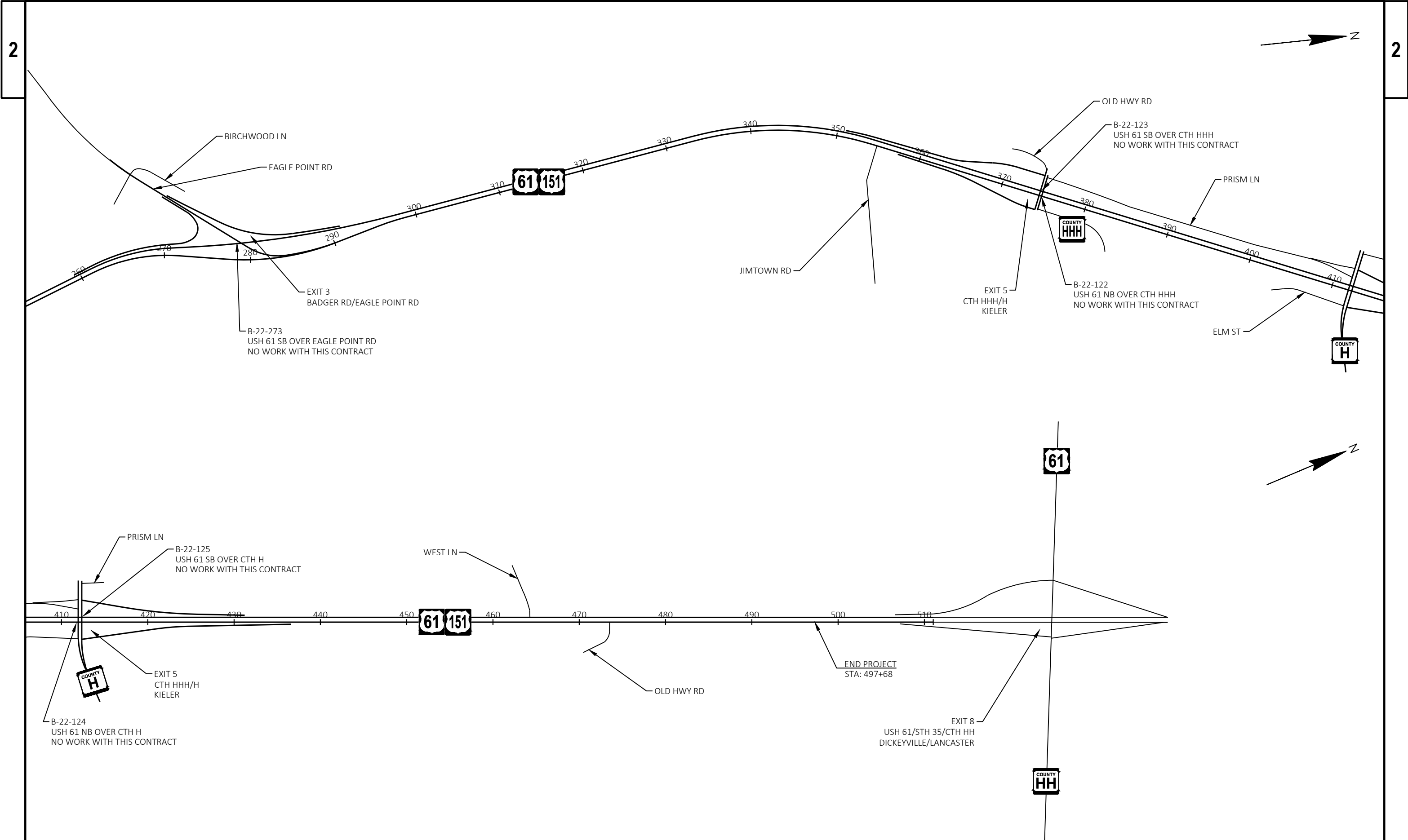
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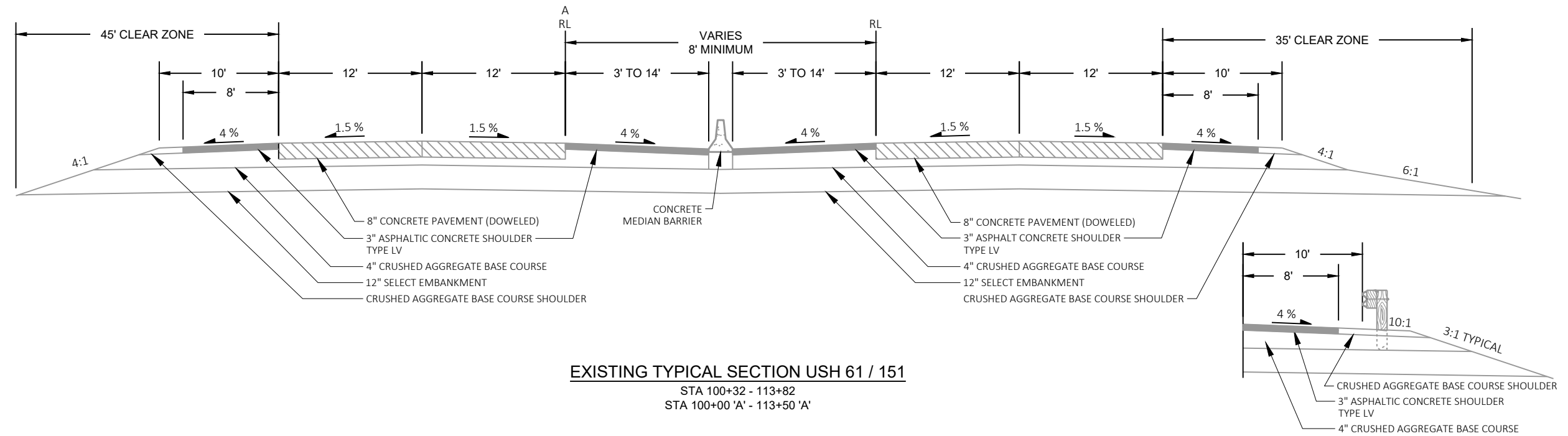
DESIGN PROJECT LEADER

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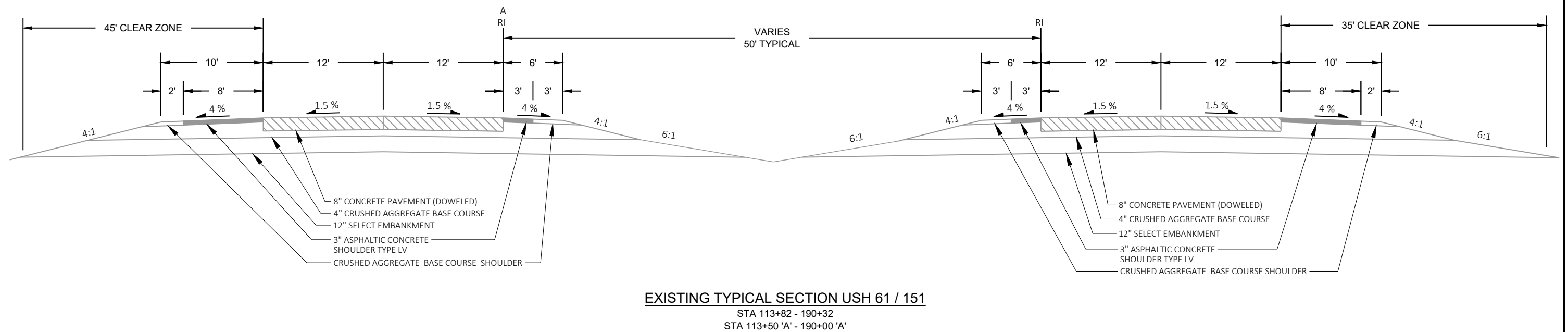


PROJECT NO: 1202-00-75	HWY: USH 61	COUNTY: GRANT	PROJECT OVERVIEW	SHEET 4	E
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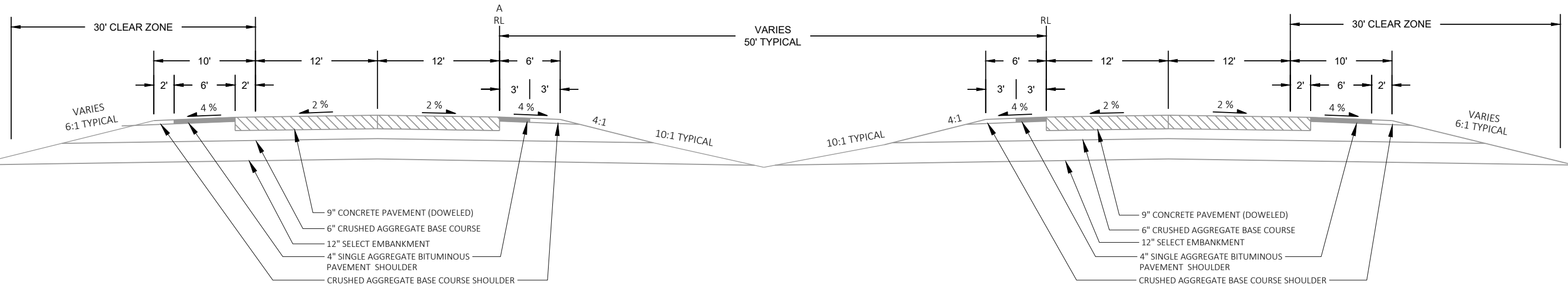




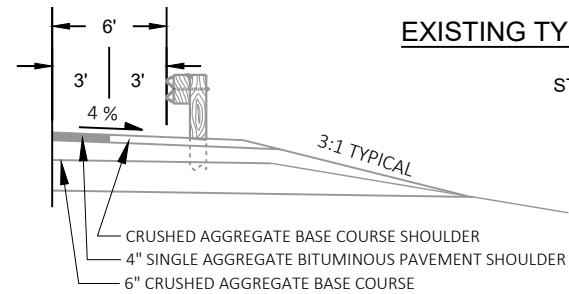
EXISTING BEAMGUARD SECTION USH 61/151



2



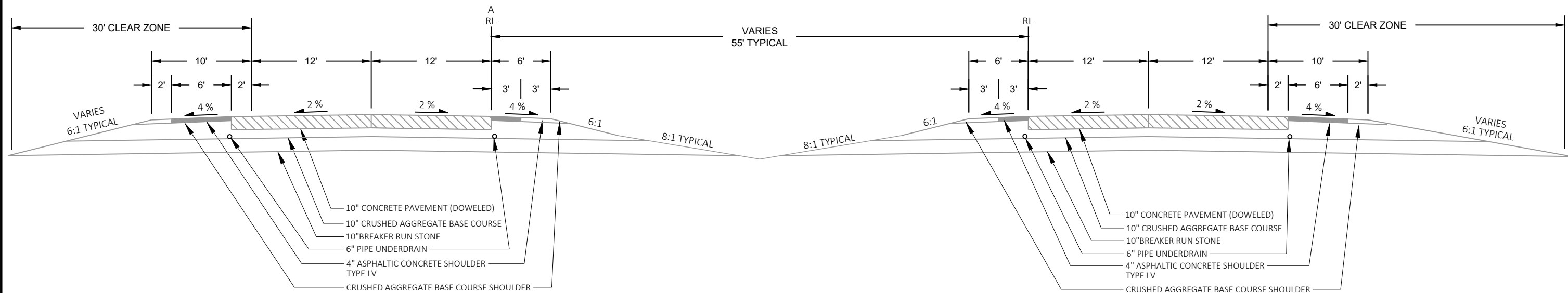
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EXISTING TYPICAL SECTION USH 61 / 151

STA 190+32 - 277+32
STA 189+24 'A' - 276+17 'A'

EXISTING BEAMGUARD SECTION USH 61/151



EXISTING TYPICAL SECTION USH 61 / 151

STA 277+32 - 302+32
STA 359+32 - 440+32
STA 276+17 'A' - 300+74 'A'
STA 358+05 'A' - 439+05 'A'

PROJECT NO: 1202-00-75

HWY: USH 61

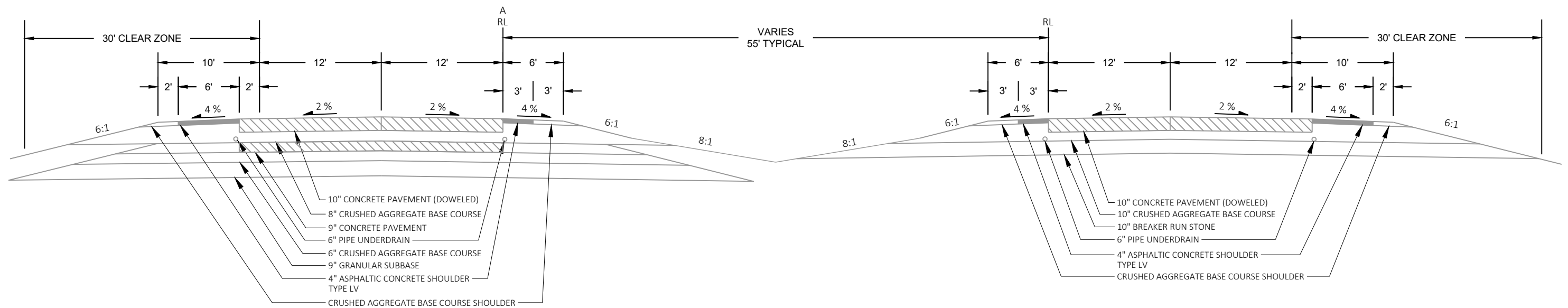
COUNTY: GRANT

TYPICAL SECTIONS

SHEET

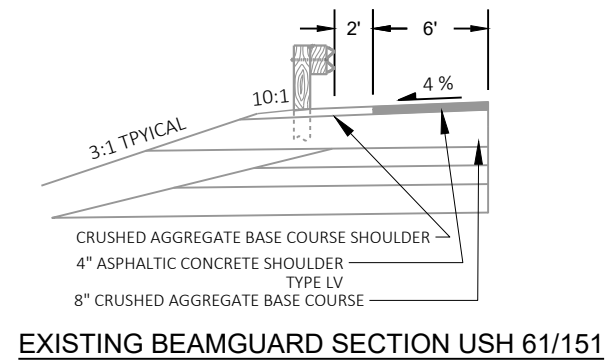
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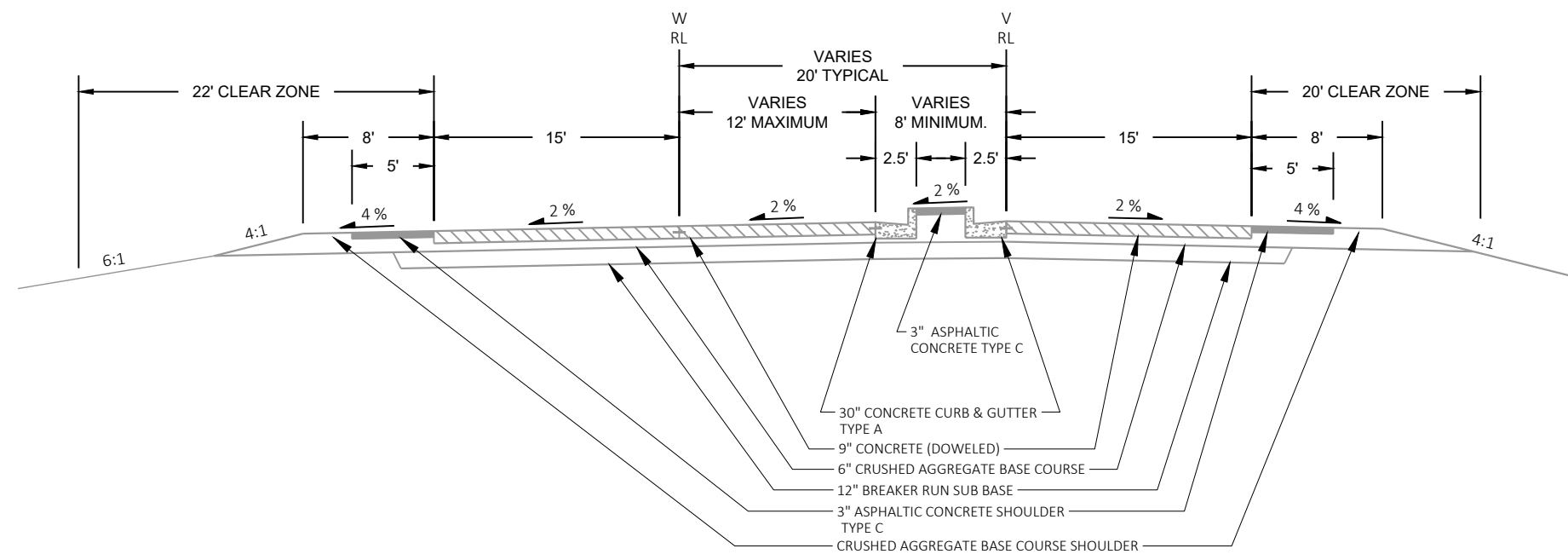


EXISTING TYPICAL SECTION USH 61 / 151

STA 302+32 - 359+32
STA 440+32 - 498+00
STA 300+74 'A' - 358+05 'A'
STA 439+05 'A' - 496+65 'A'

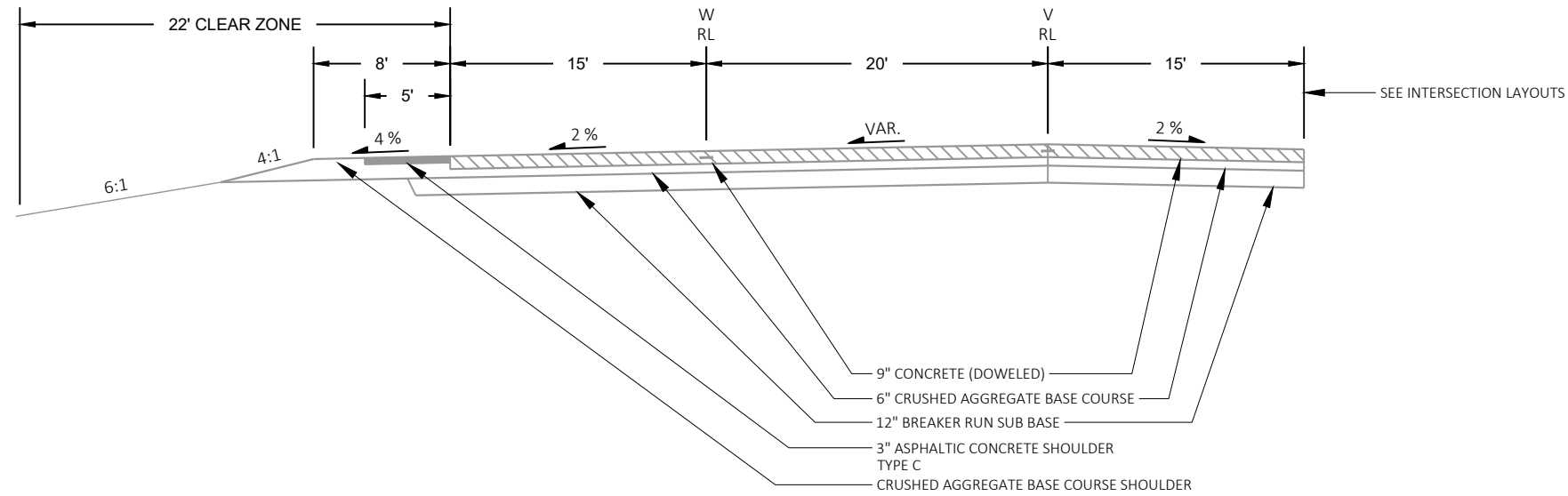


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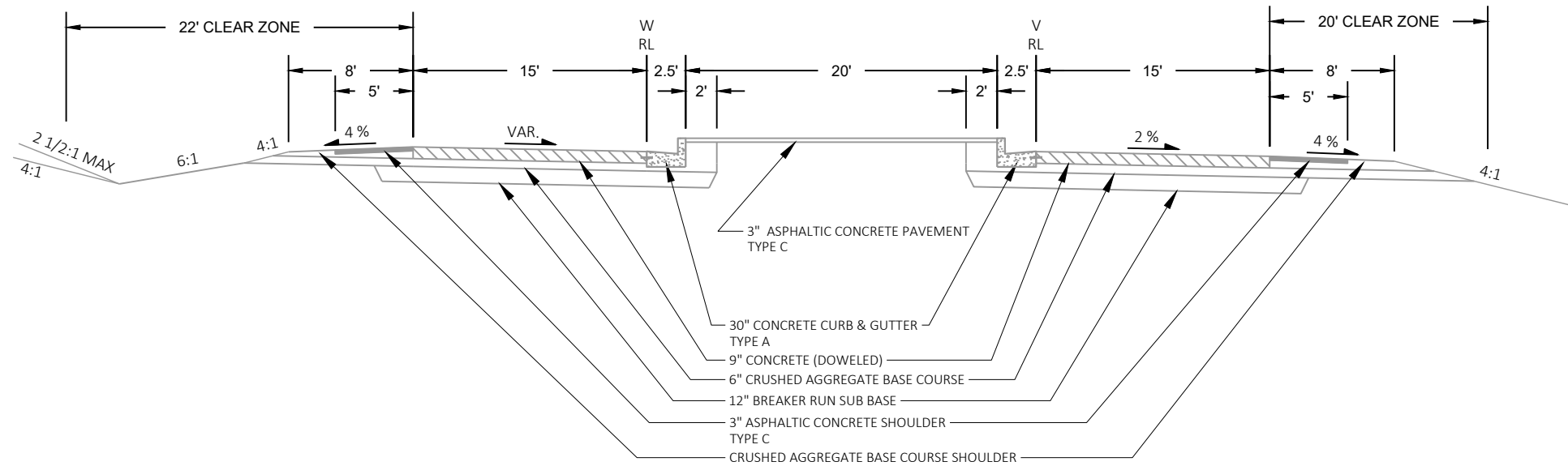


EXISTING TYPICAL SECTION STH 11

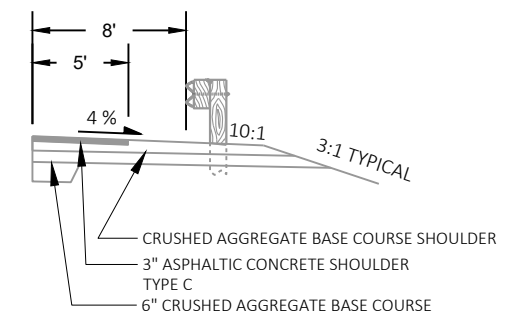
STA 09+33 'V' - 11+16 'V'
STA 10+07 'W' - 11+16 'W'
STA 11+68 'V' - 15+30 'V'
STA 11+68 'W' - 15+30 'W'

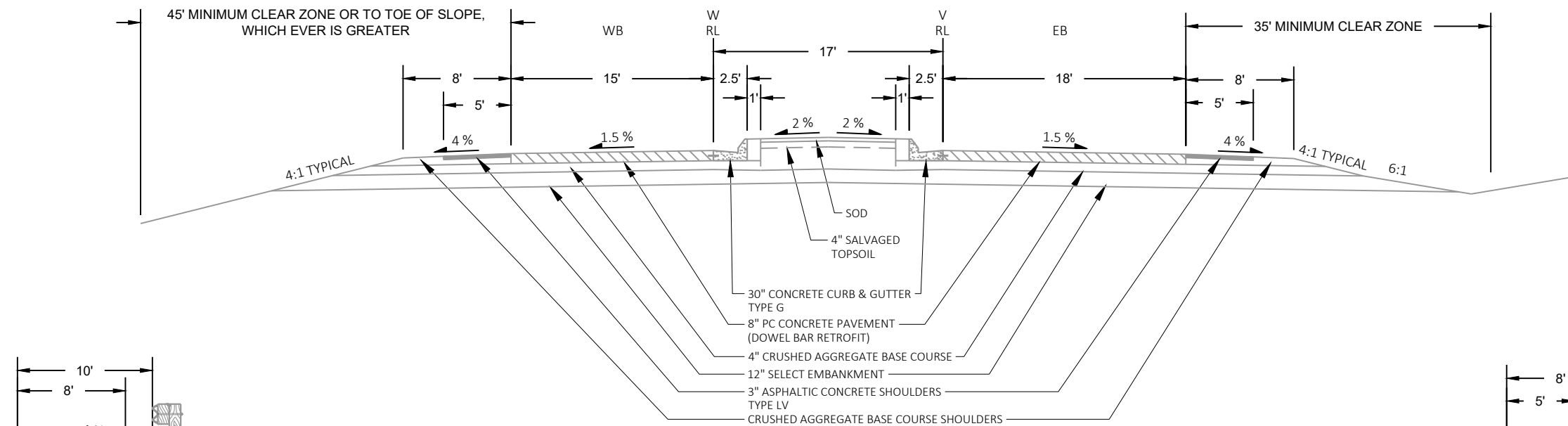
**EXISTING TYPICAL SECTION STH 11**

STA: 11+16 'V' - 11+68 'V'
STA 11+16 'W' - 11+68 'W'

**EXISTING TYPICAL SECTION STH 11**

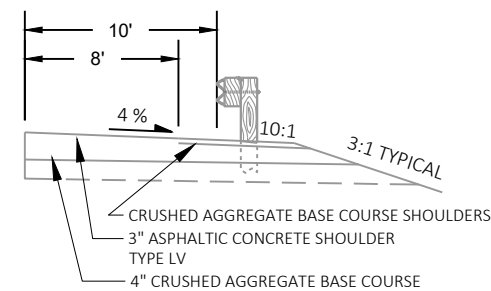
STA: 15+30 'V' - 16+45 'V'
STA 15+30 'W' - 16+45 'W'

**EXISTING BEAMGUARD SECTION STH 11**

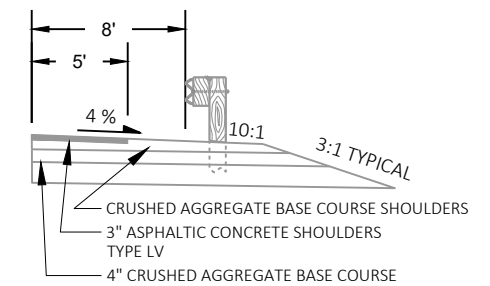


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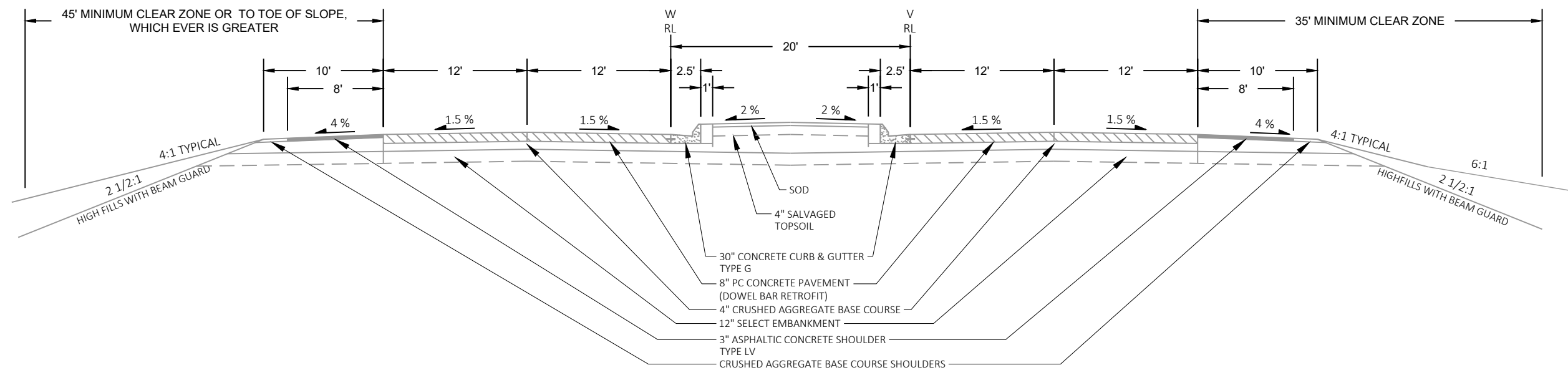
STA: 18+85 'V' - 22+60 'V'
STA 18+85 'W' - 22+60 'W'



EXISTING BEAMGUARD SECTION STH 11 (DUAL LANE)

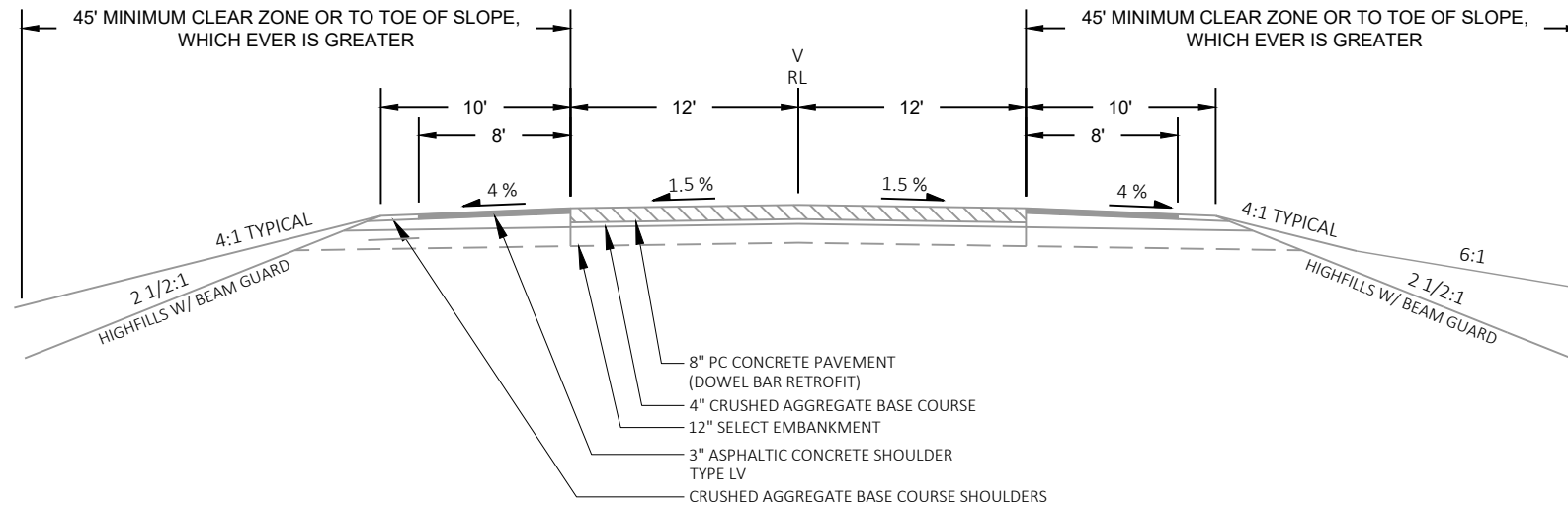


EXISTING BEAMGUARD SECTION STH 11 (SINGLE LANE)

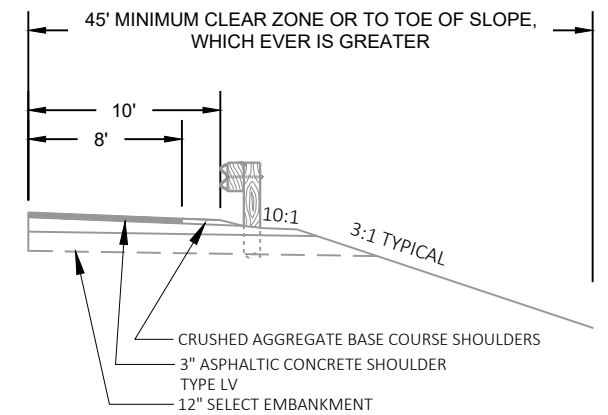


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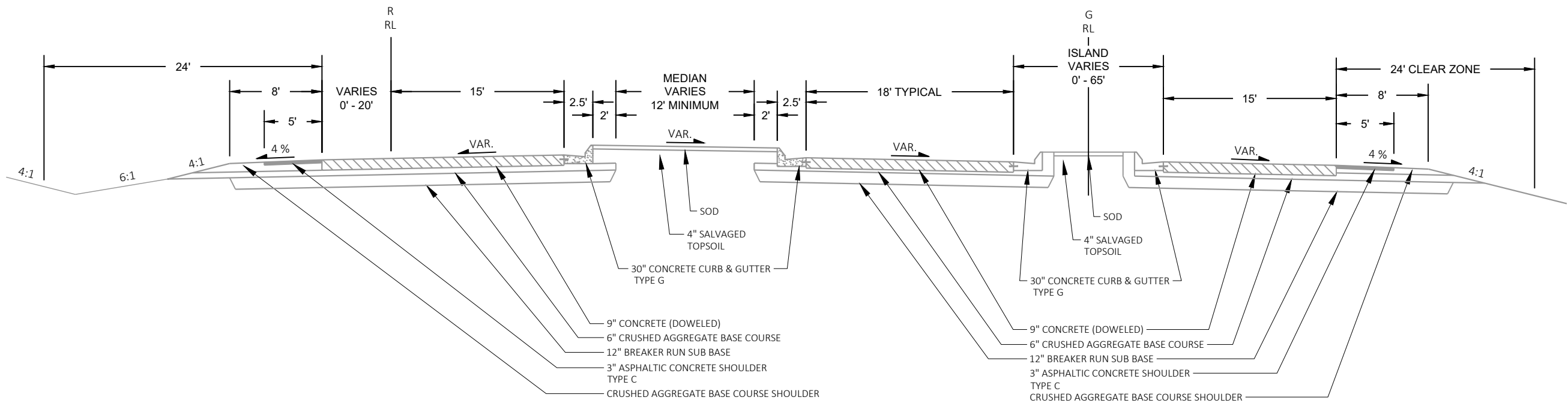
STA: 22+60 'V' - 50+05 'V'
STA 22+60 'W' - 50+05 'W'



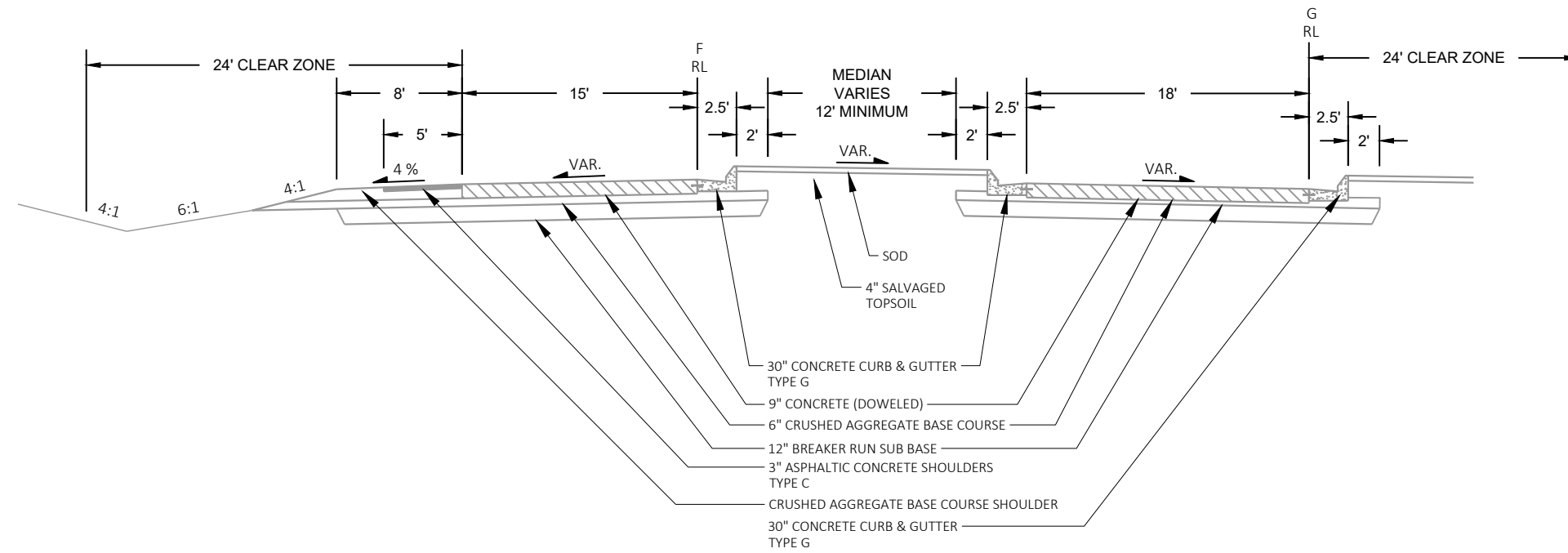
EXISTING TYPICAL SECTION STH 11
STA 50+05 'V' - 55+64 'V'



EXISTING BEAMGUARD SECTION STH 11

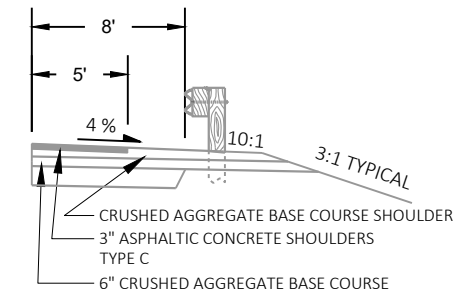


EXISTING TYPICAL SECTION USH 61 SB RAMPS AT STH 11
STA 152+99 'F' - 154+85 'F'
STA 141+67 'G' - 143+59 'G'

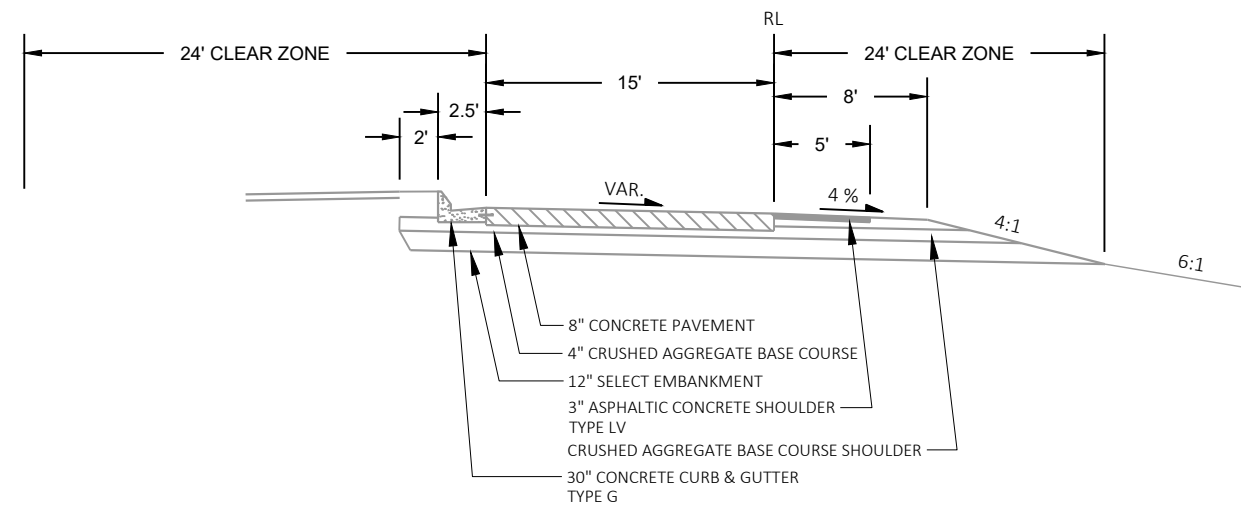


EXISTING TYPICAL SECTION USH 61 SB RAMPS AT STH 11

STA 150+20 'F' - 152+99 'F'
STA 143+59 'G' - 146+09 'G'

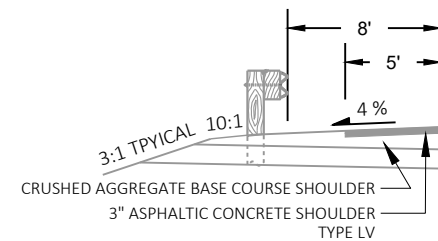


EXISTING BEAMGUARD SECTION USH 61 SB RAMPS AT STH 11

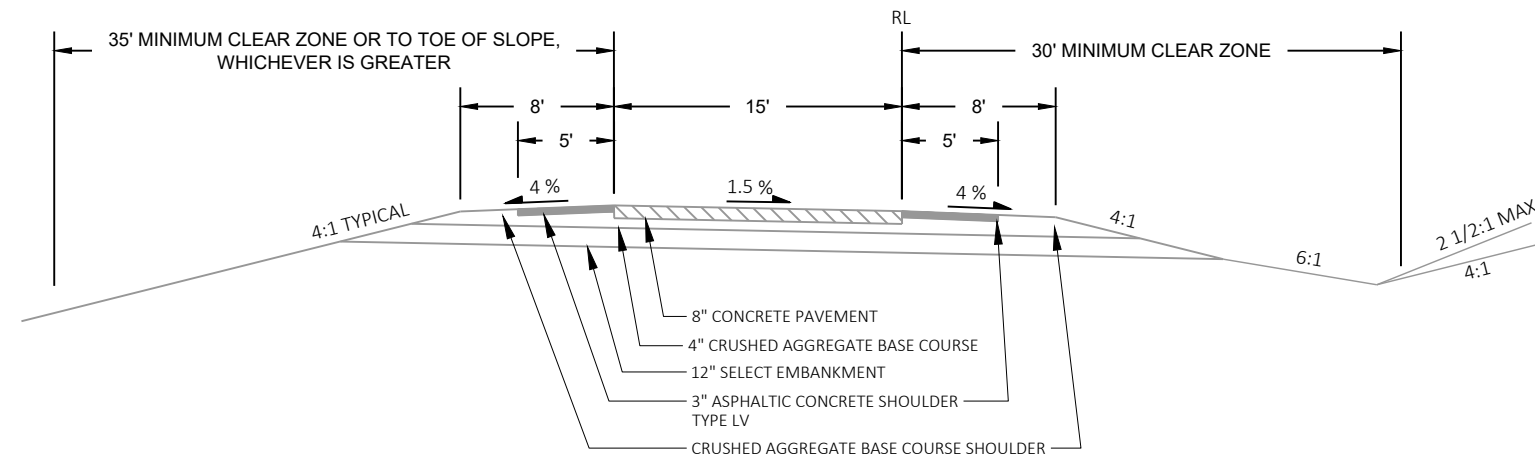


EXISTING TYPICAL SECTION USH 61 SB RAMPS AT STH 11

STA 146+06 'G' - 151+63 'G'

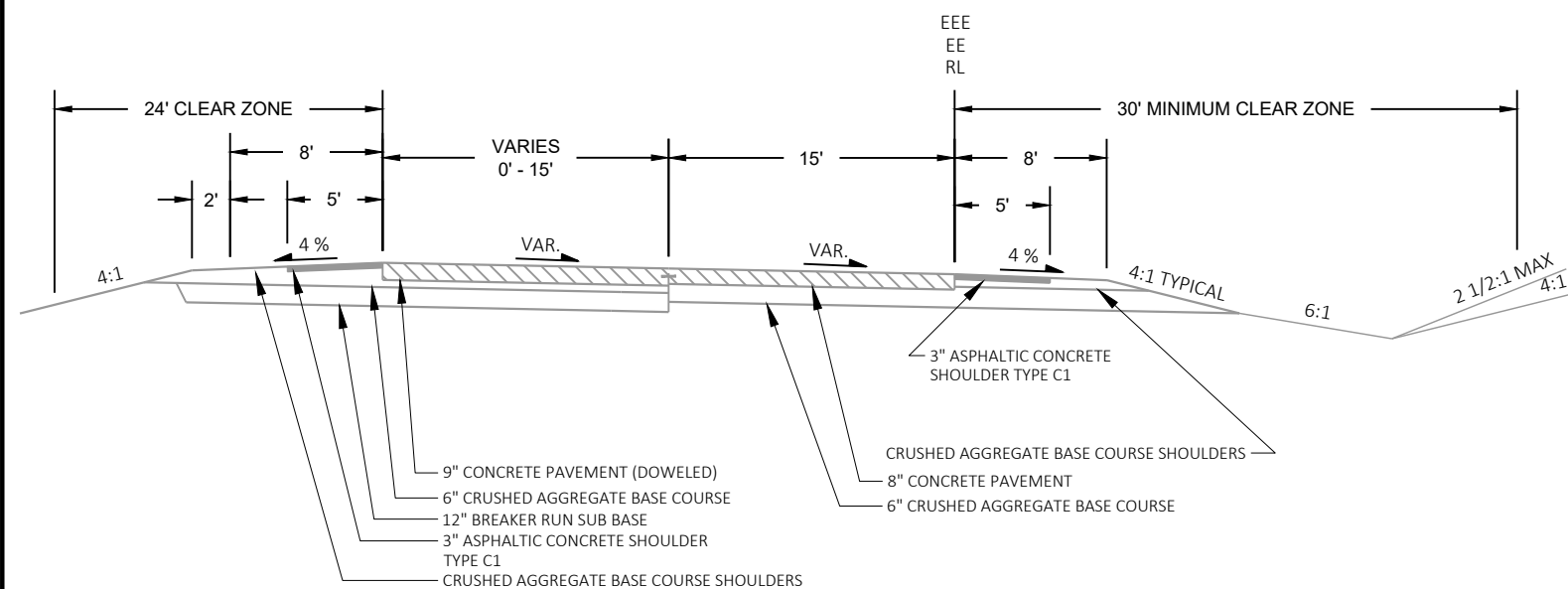


EXISTING BEAMGUARD SECTION USH 61 RAMPS AT STH 11



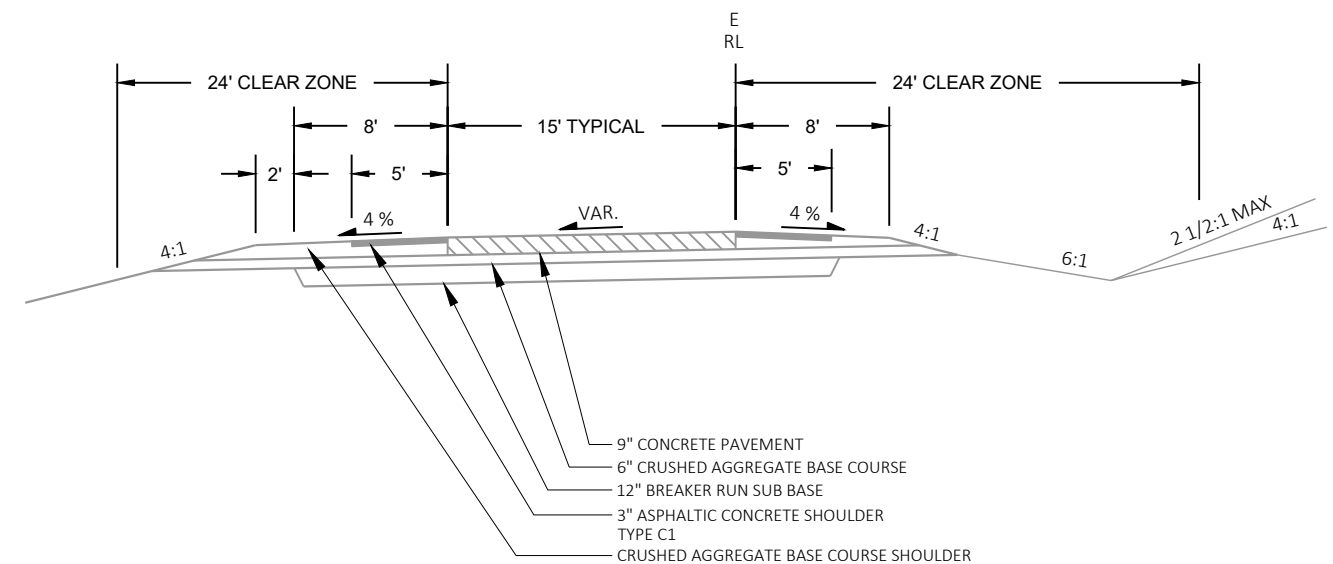
EXISTING TYPICAL SECTION USH 61 RAMPS AT STH 11

STA 147+48 'E' - 153+16 'E'
STA 159+32 'E' - 167+22 'E'
STA 137+31 'F' - 150+20 'F'
STA 151+63 'G' - 154+36 'G'



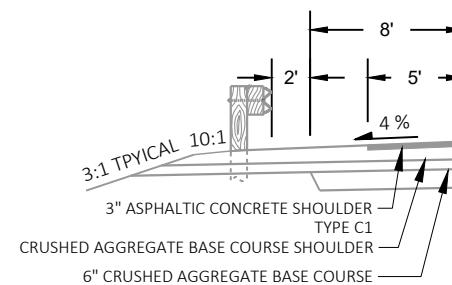
EXISTING TYPICAL SECTION USH 61 NB RAMPS AT STH 11

STA 152+30 'EE' - 153+14 'EE'
STA 159+34 'EEE' - 160+27 'EEE'

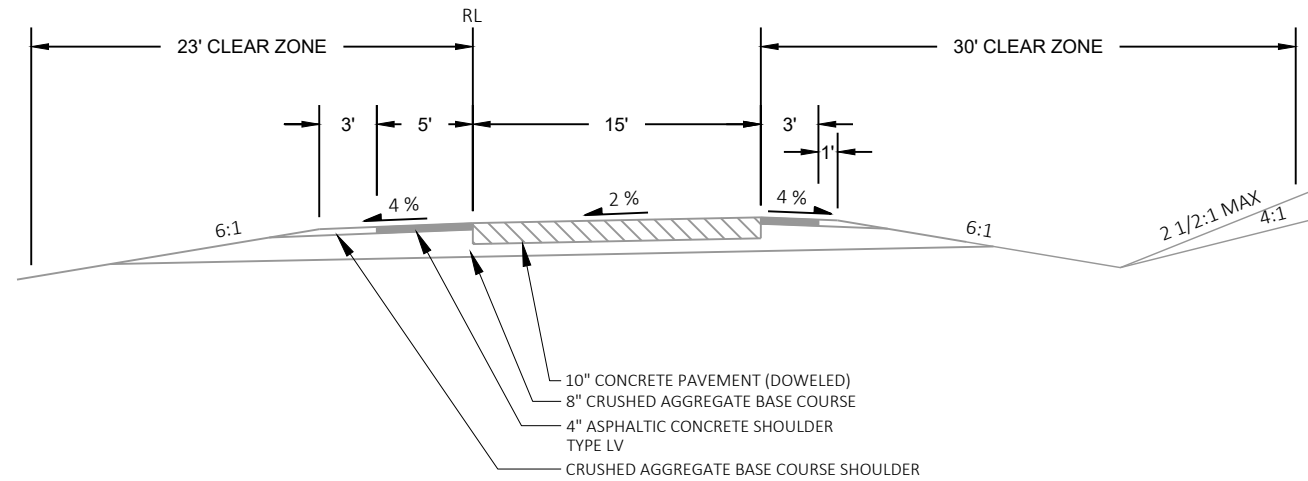


EXISTING TYPICAL SECTION USH 61 NB RAMPS AT STH 11

STA 153+16 'E' - 155+69 'E'
STA 156+21 'E' - 159+32 'E'

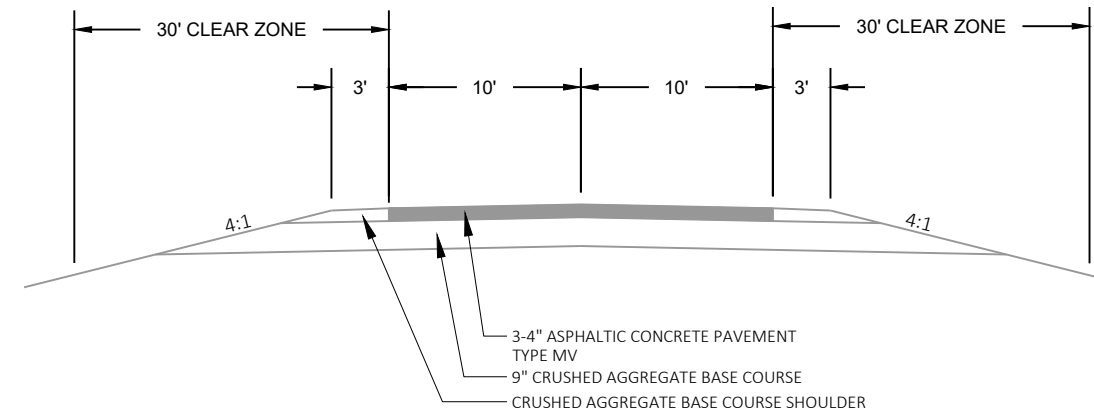


EXISTING BEAMGUARD SECTION USH 61 NB RAMPS AT STH 11

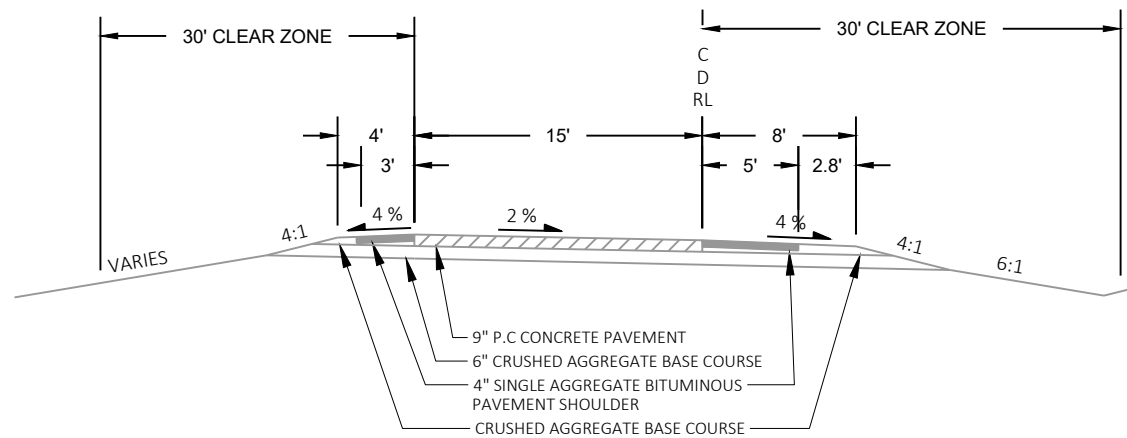


EXISTING TYPICAL SECTION RAMPS AT USH 61 / 151

STA 280+36 'K' - 290+17 'K'
STA 350+32 'N' - 373+62 'N'
STA 357+77 'M' - 374+94 'M'
STA 412+80 'P' - 436+97 'P'
STA 411+80 'R' - 430+63 'R'

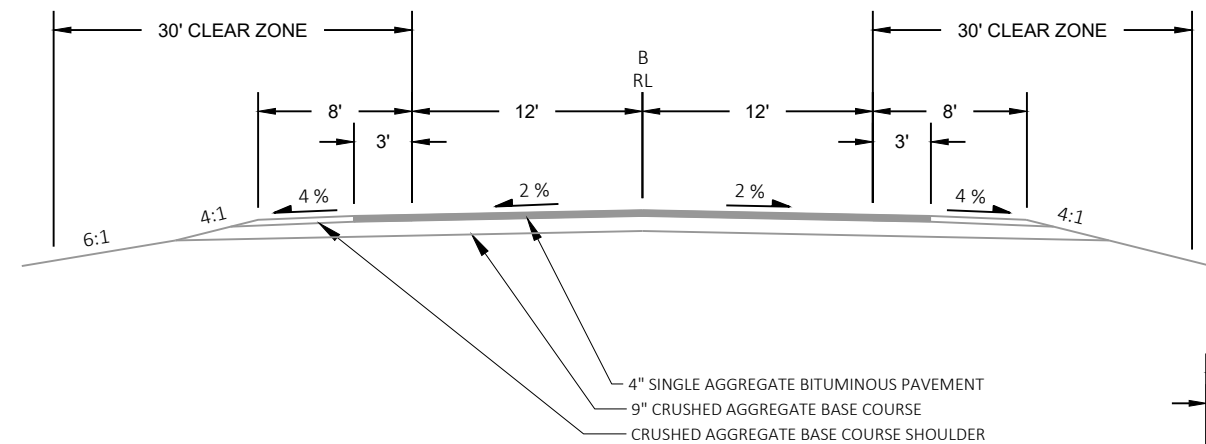


EXISTING TYPICAL SECTION SIDE ROADS



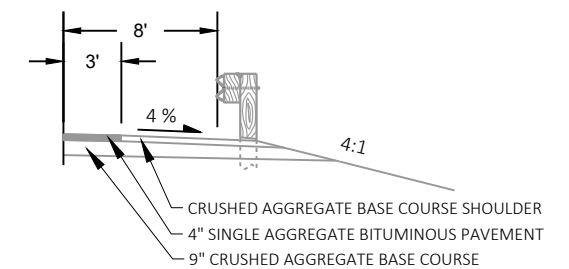
EXISTING TYPICAL SECTION USH 61 RAMPS AT BADGER ROAD

STA 192+43 'C' - 208+15 'C'
STA 213+26 'D' - 189+39 'D'

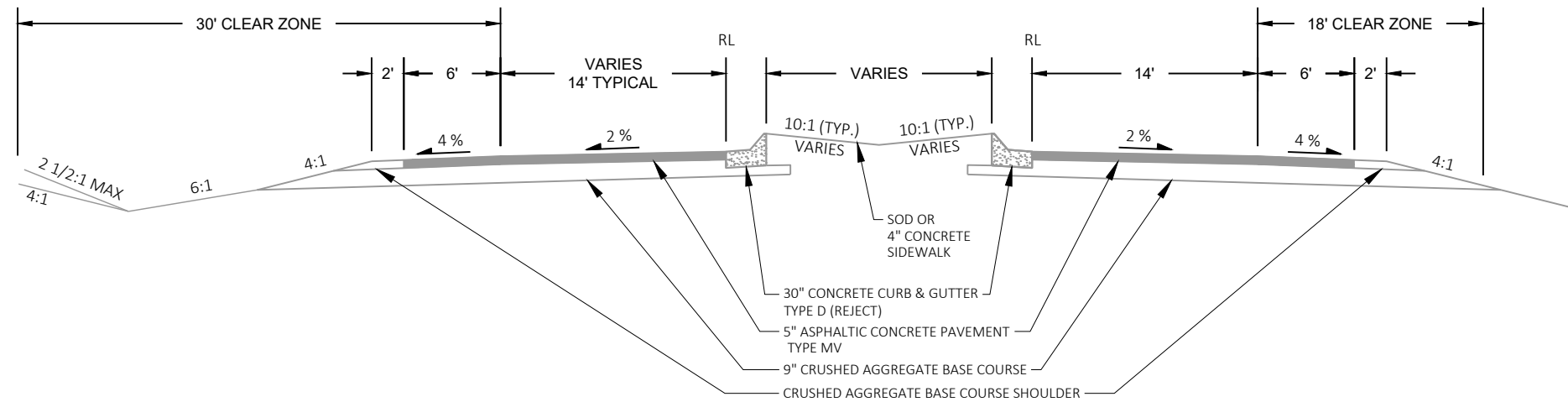


EXISTING TYPICAL SECTION BADGER ROAD

STA 08+30 'B' - 16+02 'B'

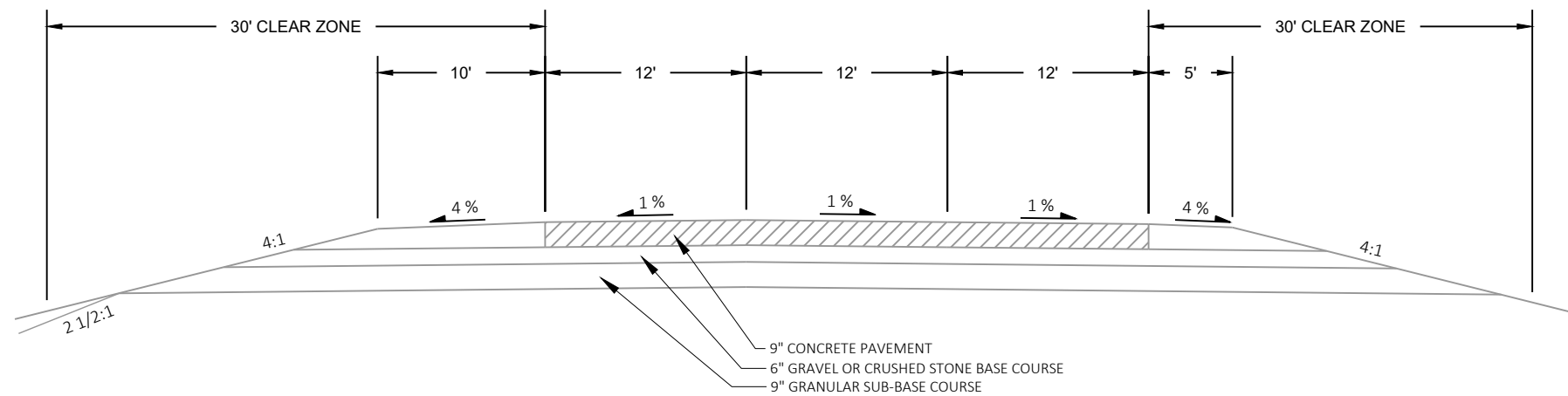


EXISTING BEAMGUARD SECTION BADGER ROAD



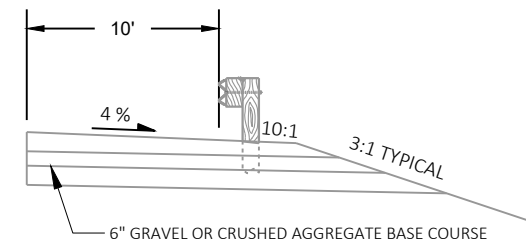
EXISTING TYPICAL SECTION CTH H / HHH

STA 08+87 'S' - 13+85 'S'
STA 09+61 'T' - 13+85 'T'
STA 16+03 'Y' - 23+22 'Y'
STA 16+04 'Z' - 23+23 'Z'

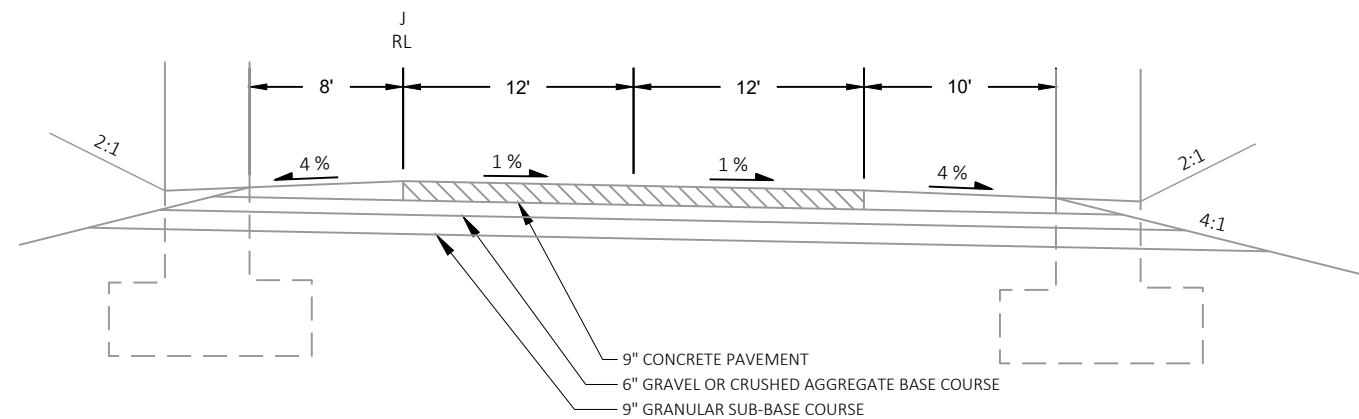


EXISTING TYPICAL SECTION EAGLE POINT ROAD

STA 264+34 'J' - 269+13 'J'

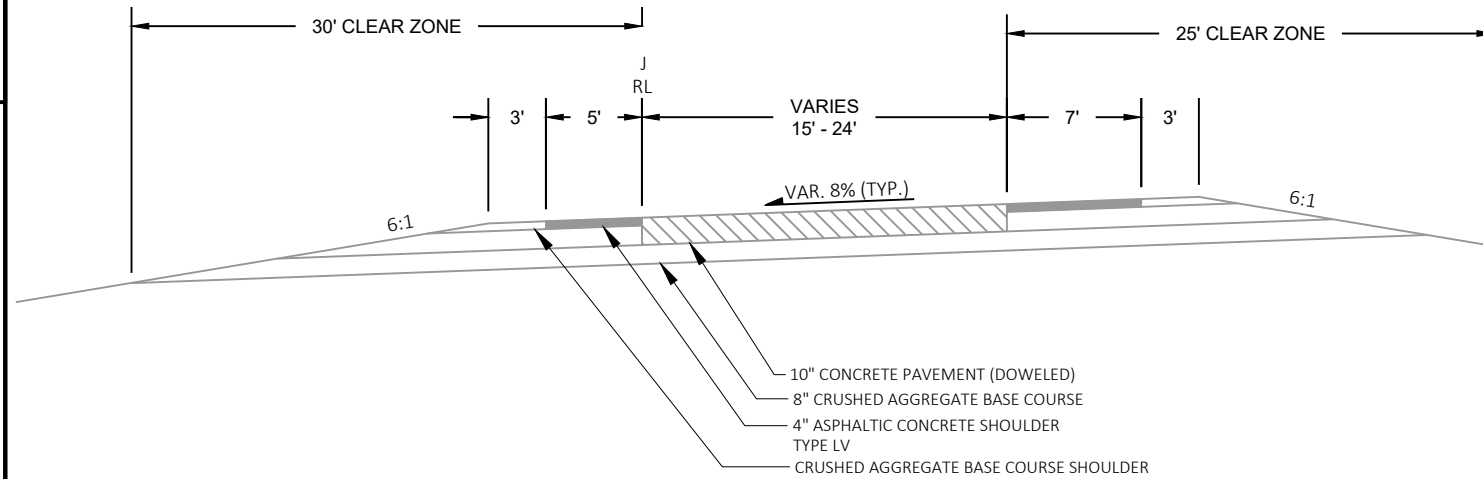


EXISTING BEAMGUARD SECTION USH 61 NB AT EAGLE POINT ROAD

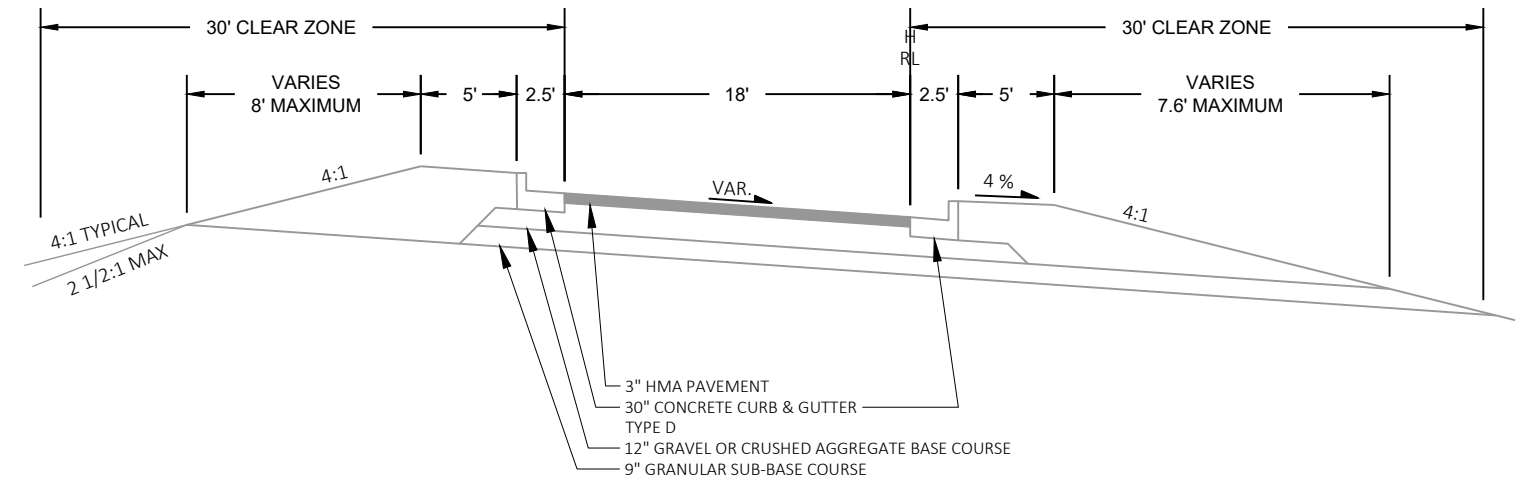


EXISTING TYPICAL SECTION USH 61 NB AT EAGLE POINT ROAD

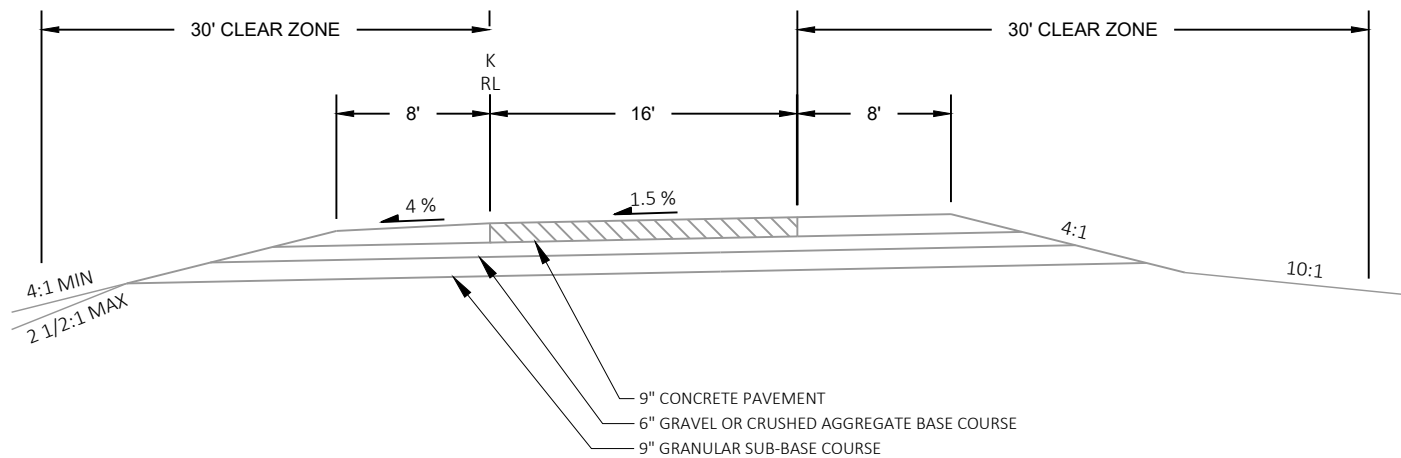
STA 269+13 'J' - 279+89 'J'



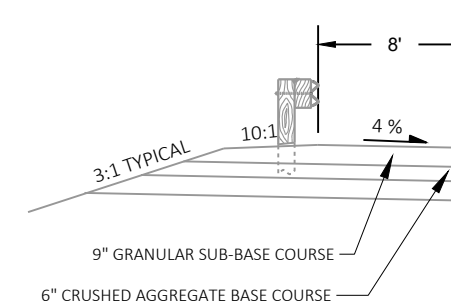
EXISTING TYPICAL SECTION USH 61 NB AT EAGLE POINT ROAD
STA 279+89 'J' - 290+38 'J'



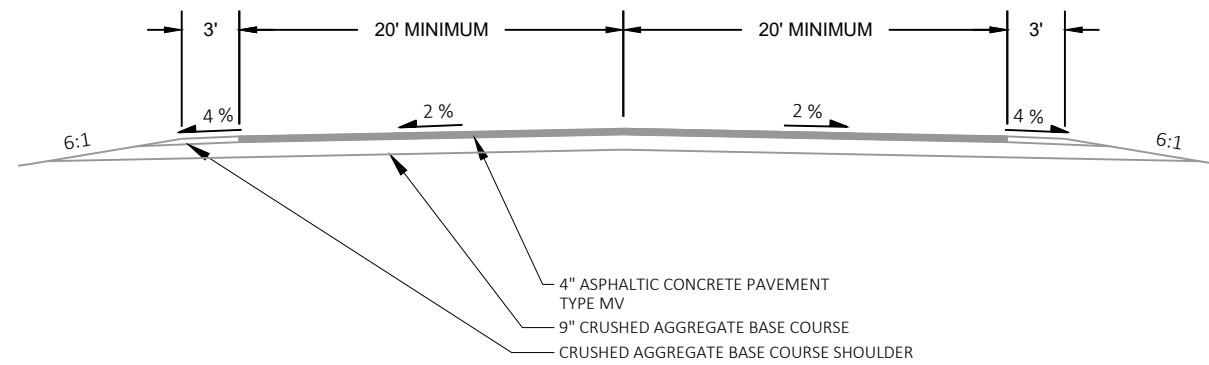
EXISTING TYPICAL SECTION USH 61 SB RAMP AT EAGLE POINT ROAD
STA 258+73 'H' - 276+48 'H'



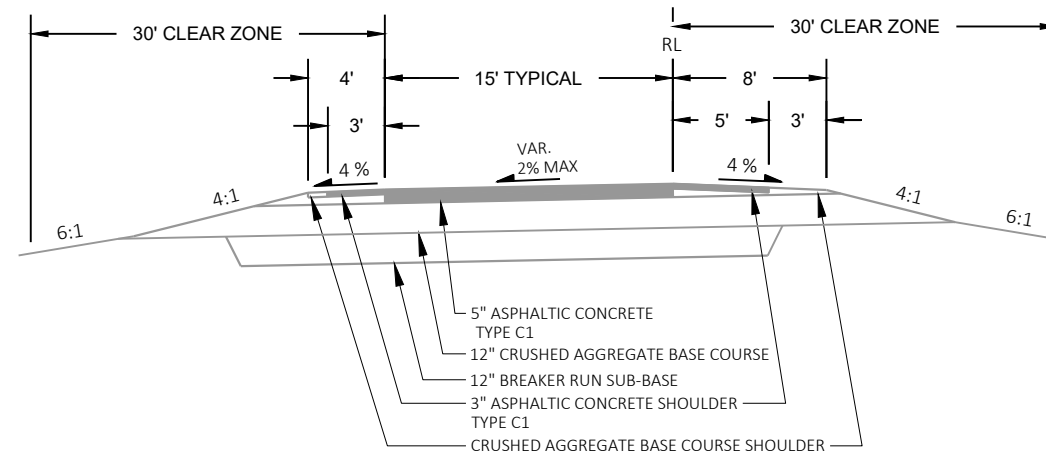
EXISTING TYPICAL SECTION USH 61 SB AT EAGLE POINT ROAD
269+47 'K' - 280+36 'K'



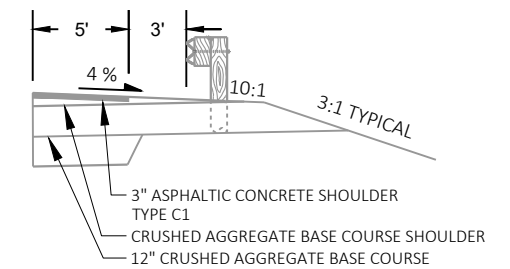
EXISTING BEAMGUARD SECTION USH 61 SB AT EAGLE POINT ROAD



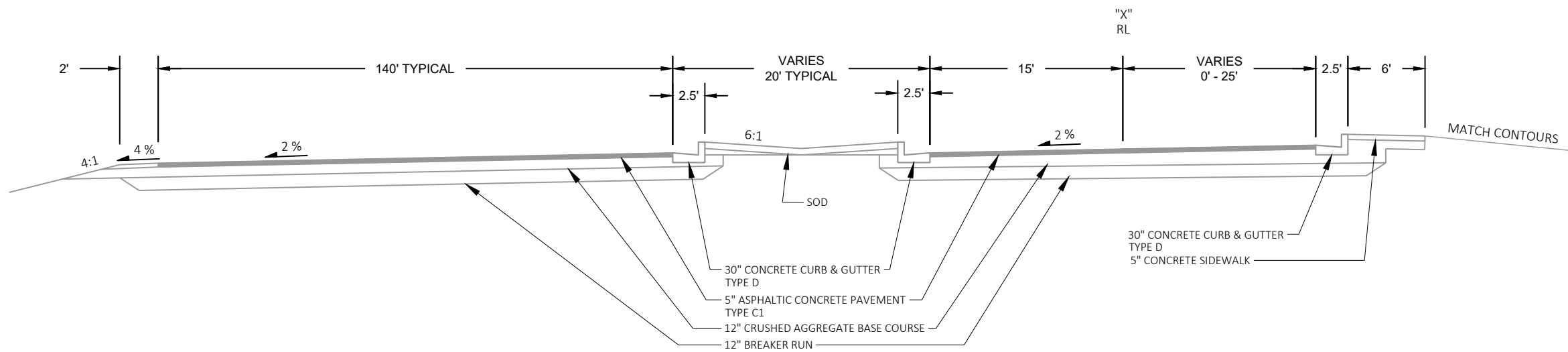
EXISTING TYPICAL SECTION
MEDIAN CROSS OVER



EXISTING TYPICAL SECTION REST AREA RAMP
STA 112+76 'X' - 119+55 'X'
STA 127+20 'X' - 129+45 'X'



EXISTING BEAMGUARD SECTION REST AREA REAMP



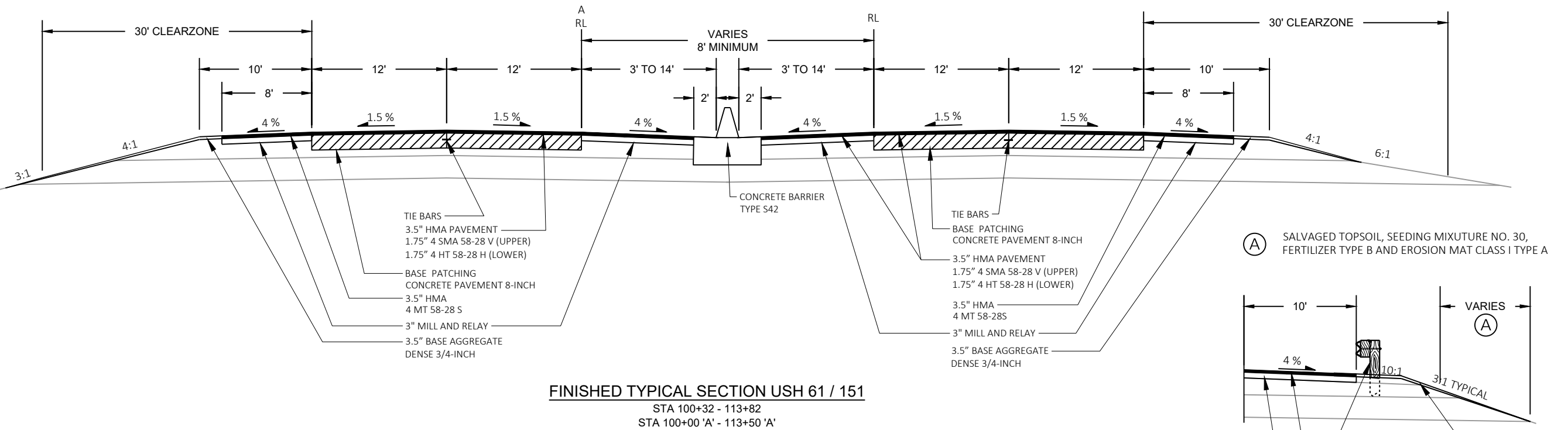
EXISTING TRUCK PARKING

EXISTING PASSENGER VEHICLE PARKING

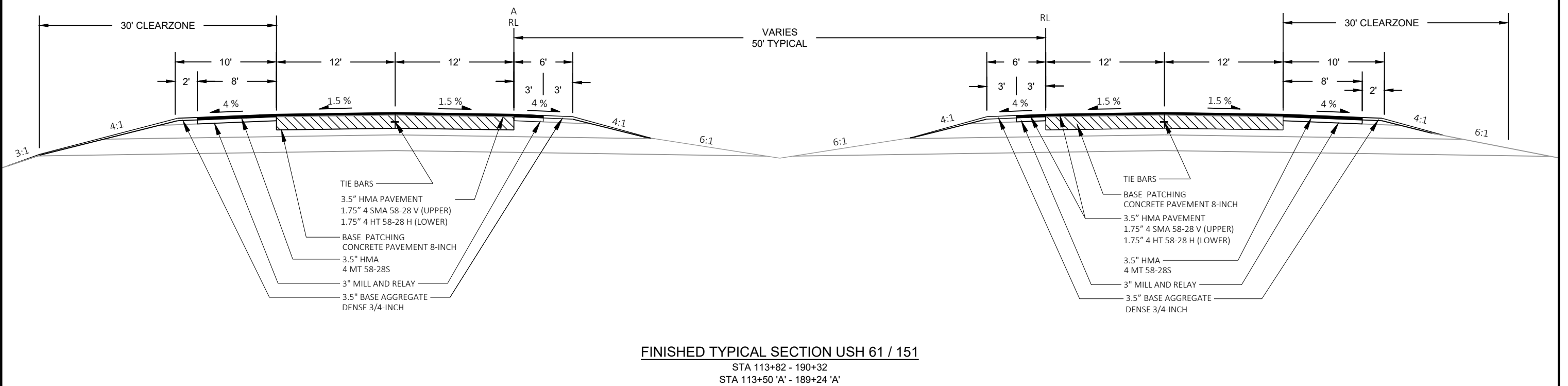
STA 119+55 'X' - 127+20 'X'

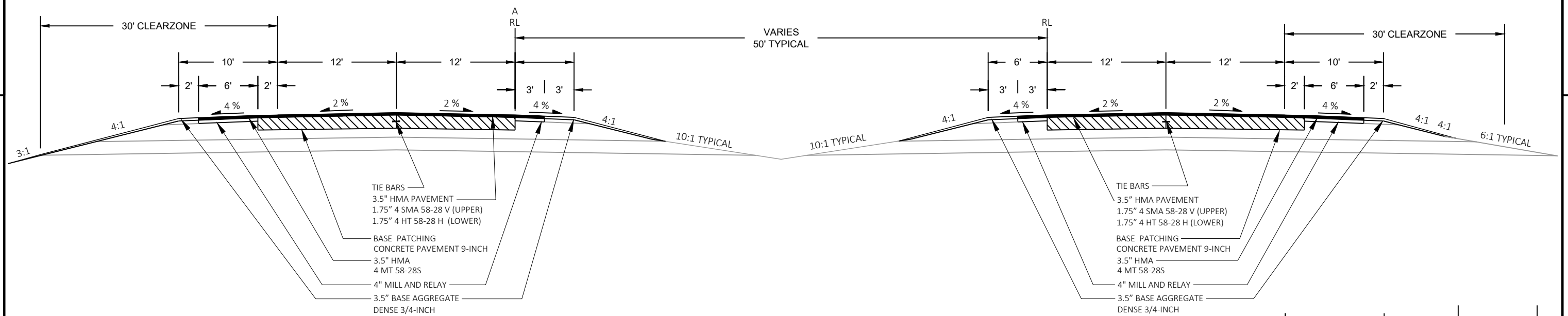
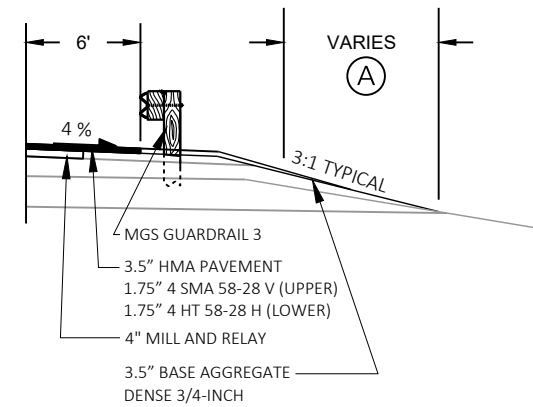
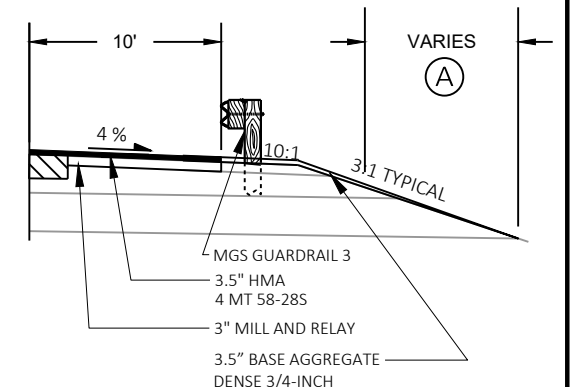
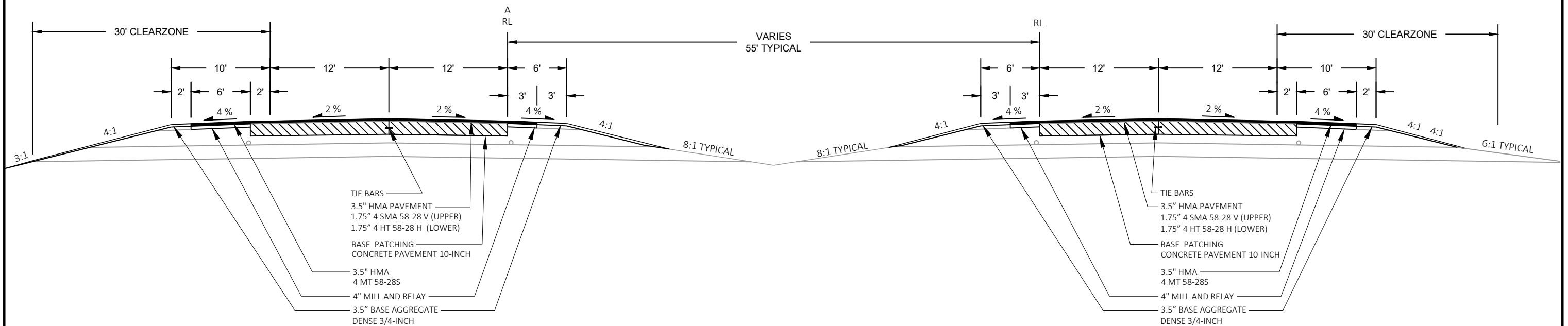
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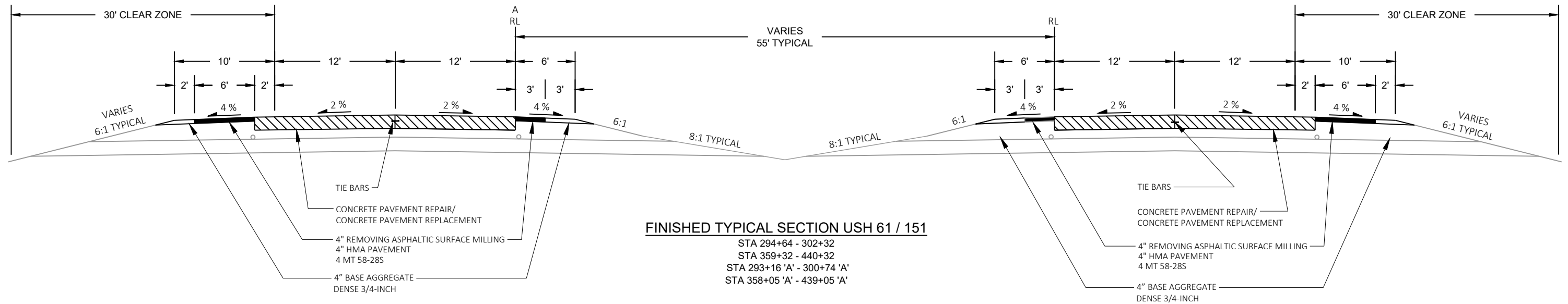


FINISHED BEAMGUARD SECTION USH 61/151

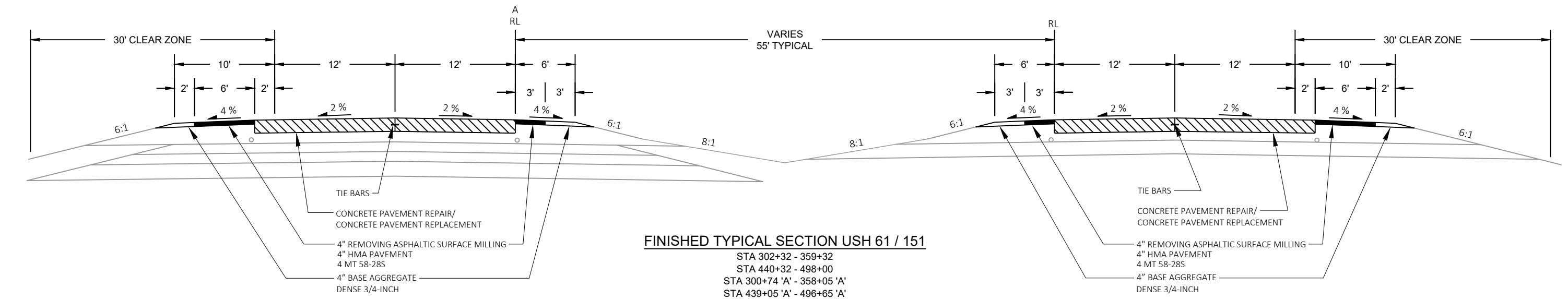
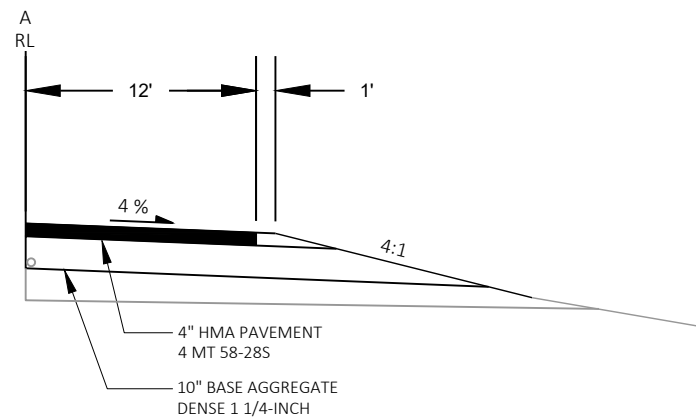


**FINISHED TYPICAL SECTION USH 61 / 151**STA 190+32 - 277+32
STA 189+24 'A' - 276+17 'A'**(A)** SALVAGED TOPSOIL, SEEDING MIXTURE NO. 30,
FERTILIZER TYPE B AND EROSION MAT CLASS I TYPE A**FINISHED BEAMGUARD SECTION USH 61/151****FINISHED BEAMGUARD SECTION****FINISHED TYPICAL SECTION USH 61 / 151**STA 277+32 - 294+62
STA 276+17 'A' - 293+16 'A'

2



2



PROJECT NO: 1202-00-75

HWY: USH 61

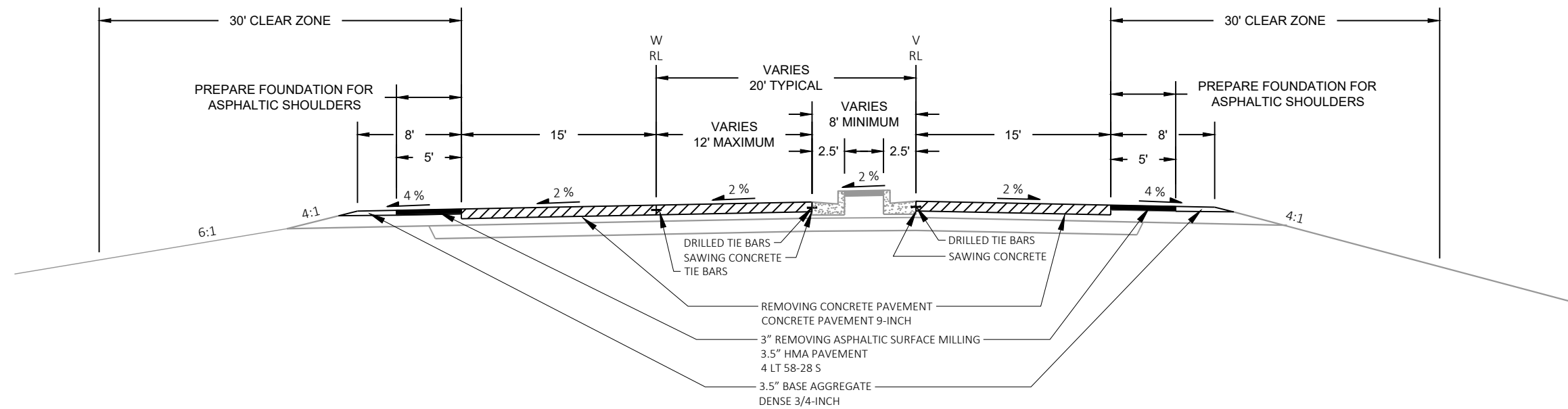
COUNTY: GRANT

TYPICAL SECTIONS

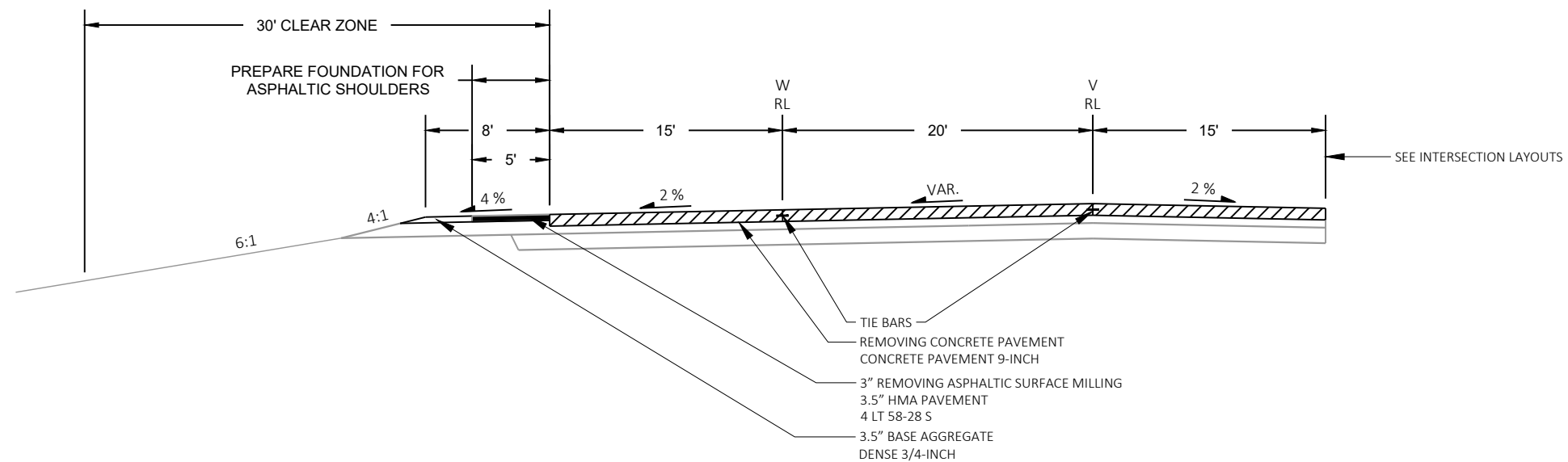
SHEET

20

E

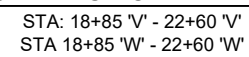
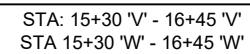
**FINISHED TYPICAL SECTION STH 11**

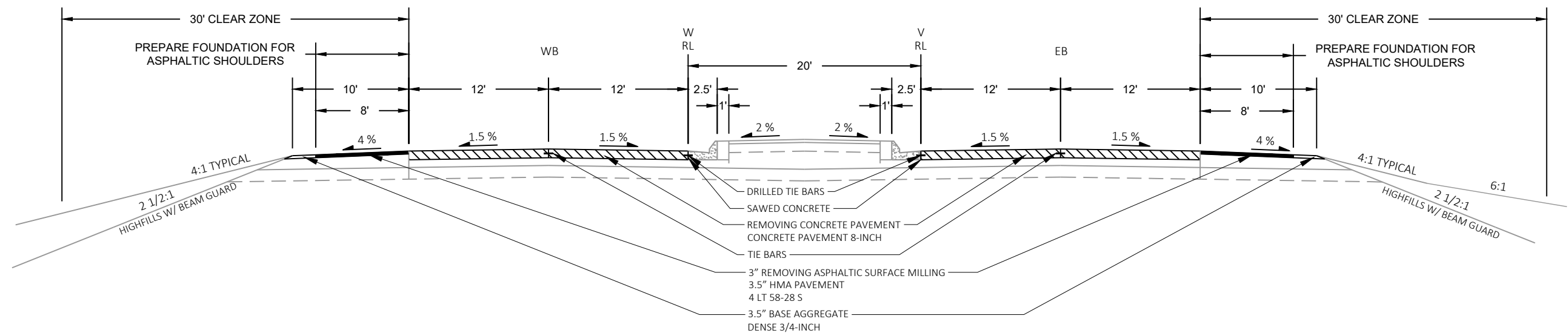
STA 09+33 'V' - 11+16 'V'
STA 10+07 'W' - 11+16 'W'
STA 11+68 'V' - 15+30 'V'
STA 11+68 'W' - 15+30 'W'

**FINISHED TYPICAL SECTION STH 11**

STA: 11+16 'V' - 11+68 'V'
STA 11+16 'W' - 11+68 'W'

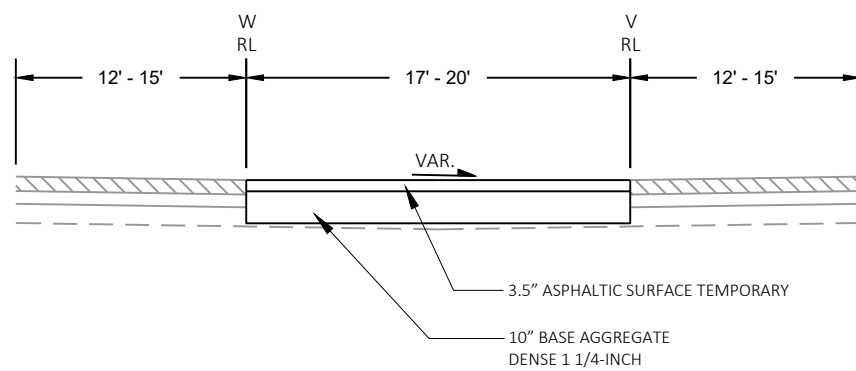
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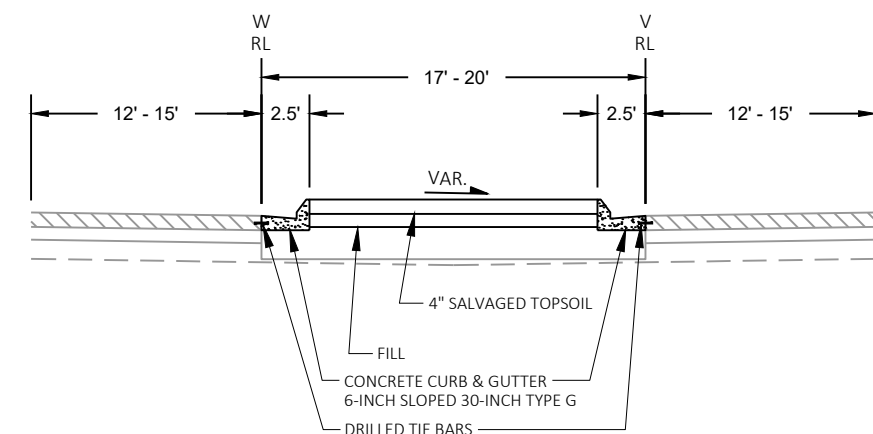
FINISHED TYPICAL SECTION STH 11 (DUAL LANE)

STA 22+60 'V' - 26+58 'V'
STA 22+60 'W' - 26+59 'W'



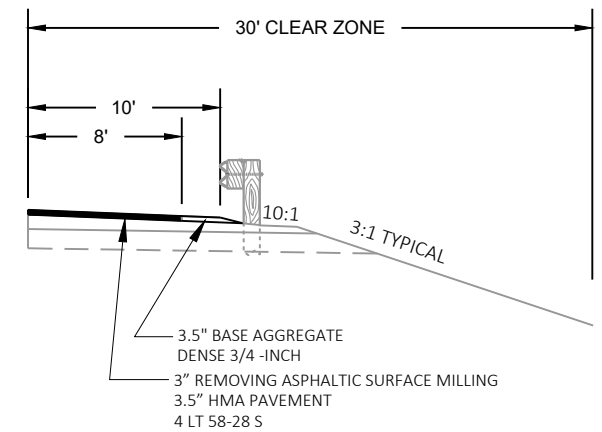
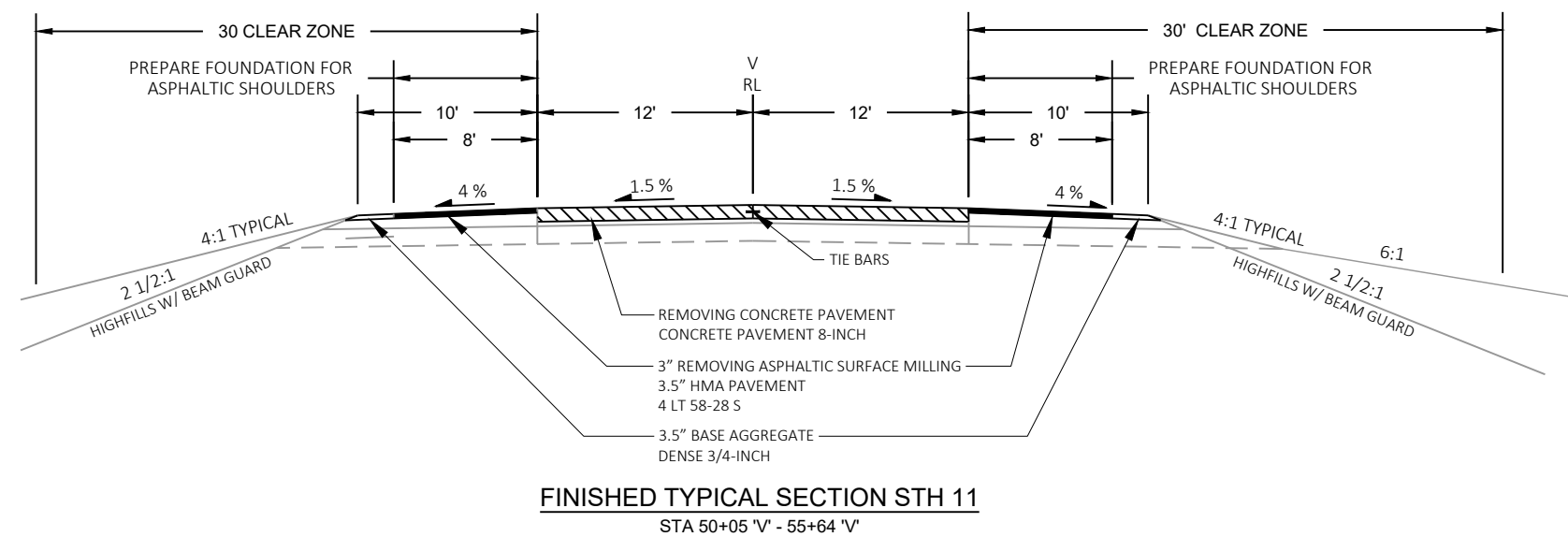
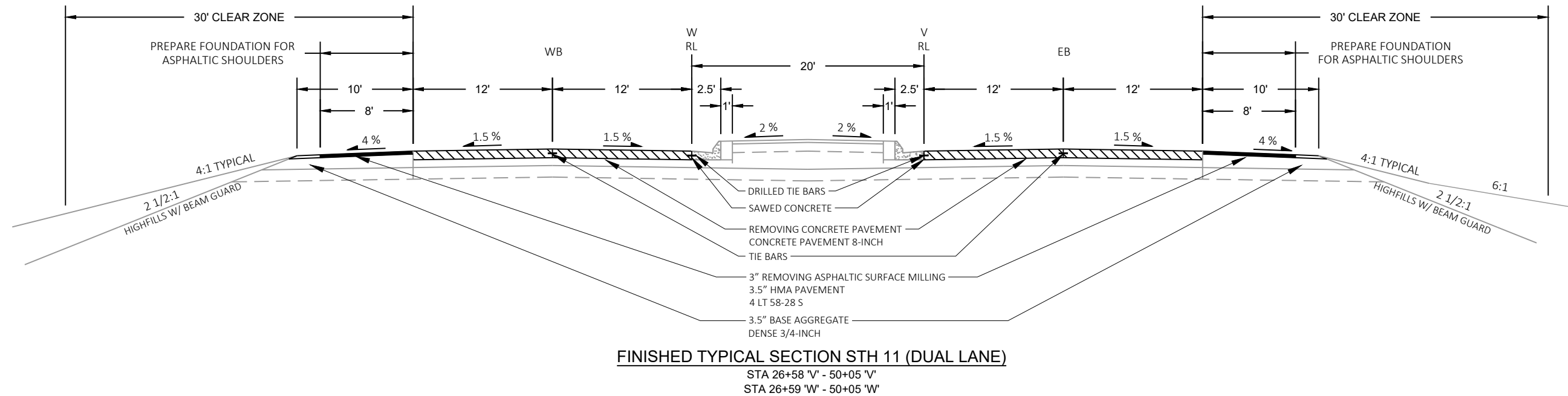
FINISHED TYPICAL SECTION STH 11 TEMPORARY MEDIAN CROSSOVER

STA: 19+81 'V' - 20+48 'V'
STA 19+83 'W' - 21+06 'W'
STA 48+81 'V' - 50+05 'V'
STA 49+09 'W' - 50+04 'W'

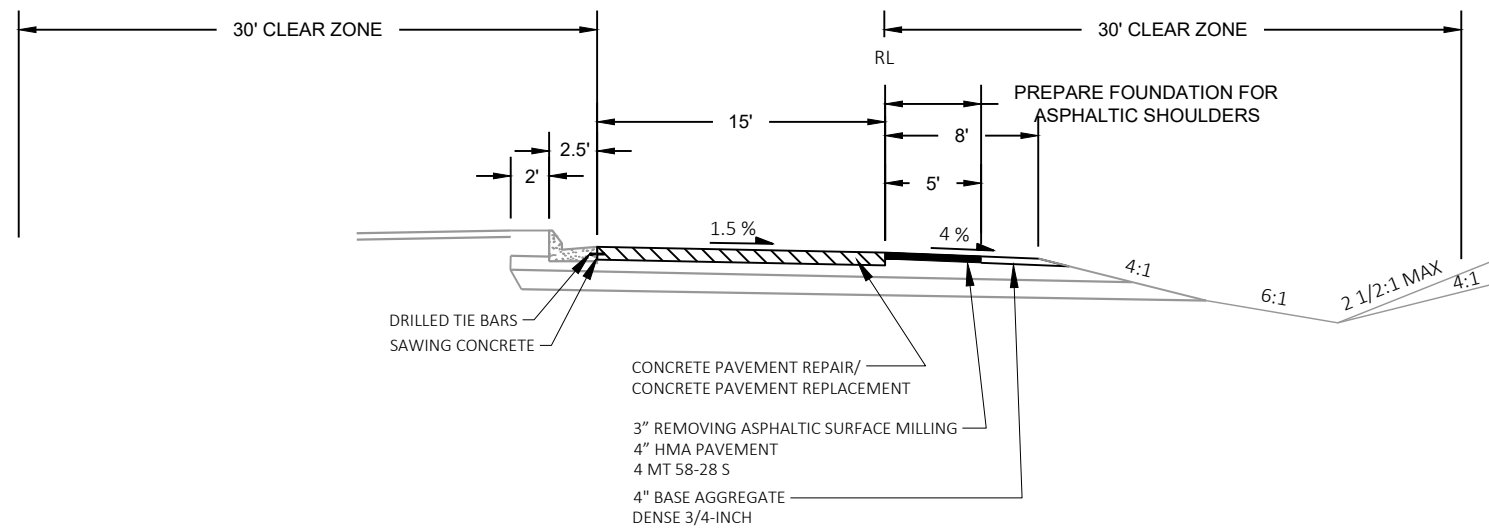


FINISHED TYPICAL SECTION STH 11 MEDIAN REPLACEMENT

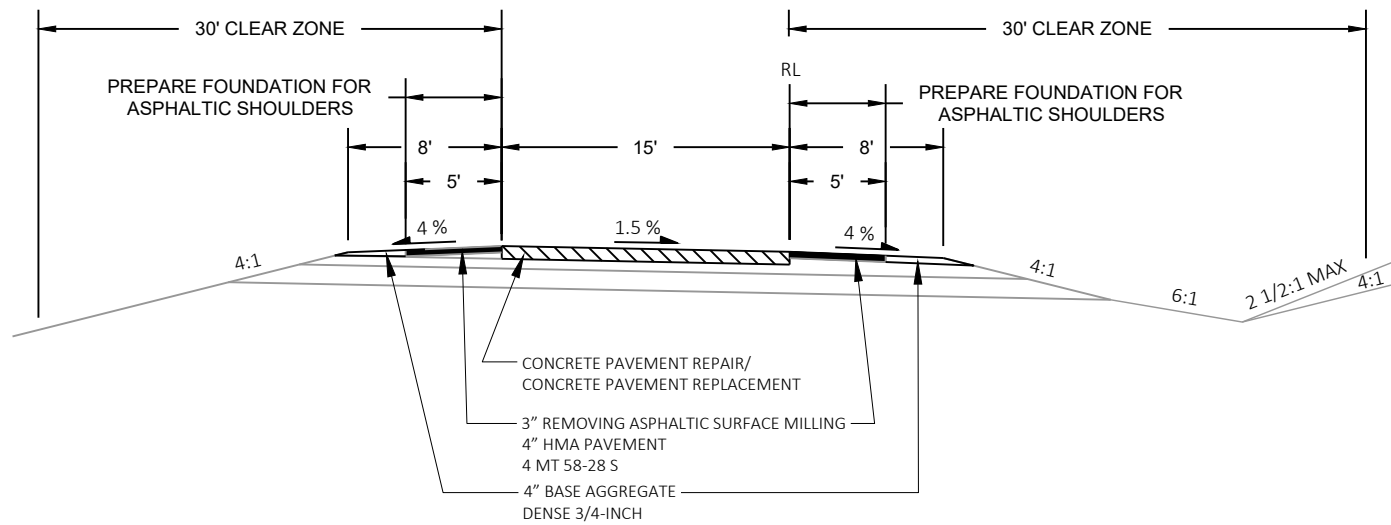
STA: 19+81 'V' - 20+48 'V'
STA 19+83 'W' - 21+06 'W'
STA 48+81 'V' - 50+05 'V'
STA 49+09 'W' - 50+04 'W'



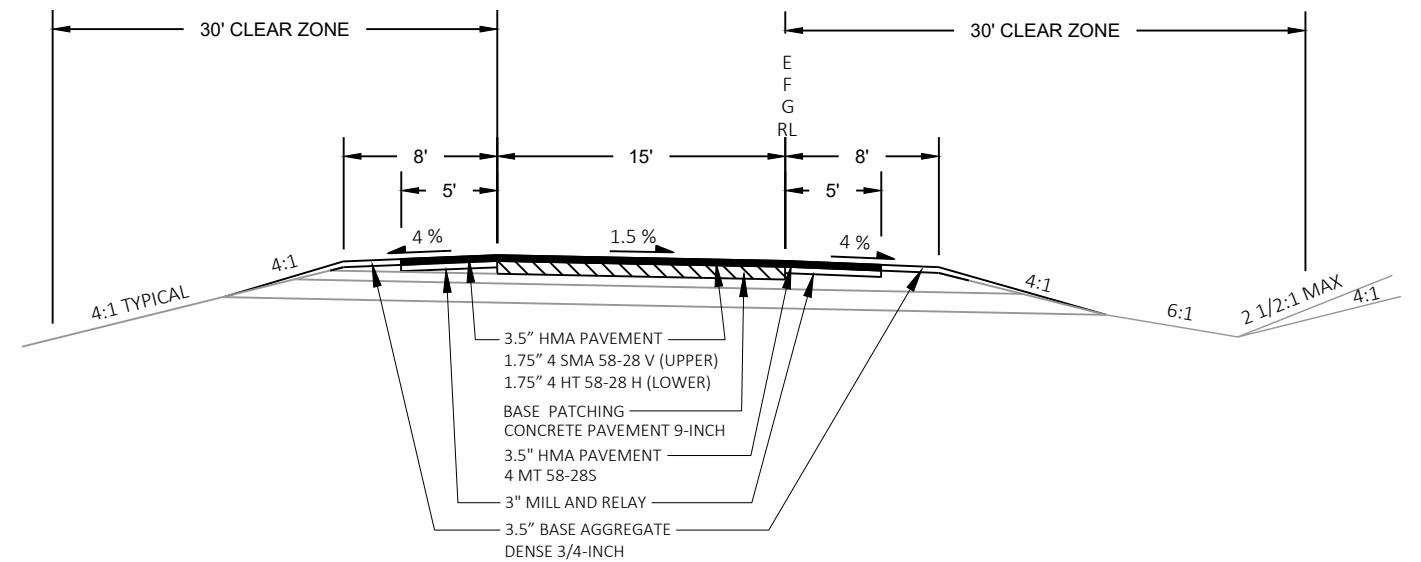
FINISHED BEAMGUARD SECTION STH 11



FINISHED TYPICAL SECTION USH 61 SB RAMPS AT STH 11
STA 146+09 'G' - 151+63 'G'



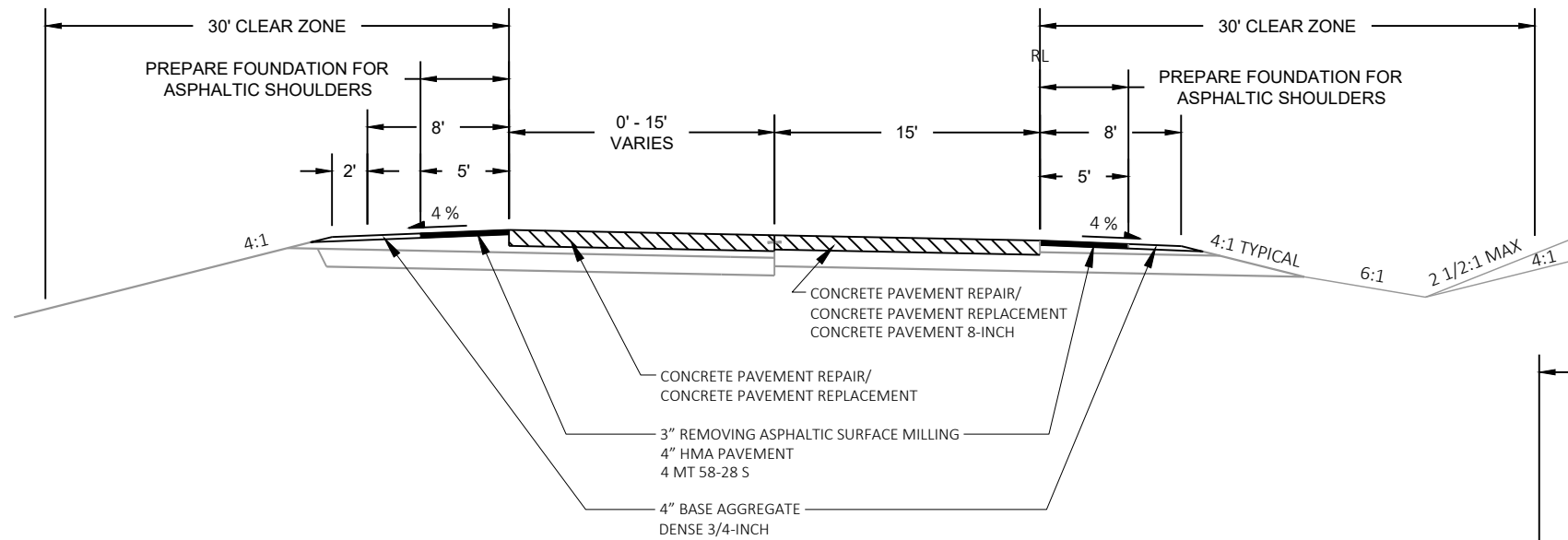
FINISHED TYPICAL SECTION USH 61 RAMPS AT STH 11
STA 150+33 'E' - 153+16 'E'
STA 159+32 'E' - 160+43 'E'
STA 142+83 'F' - 150+20 'F'



FINISHED TYPICAL SECTION USH 61 RAMPS AT STH 11
STA 147+48 'E' - 150+33 'E'
STA 160+43 'E' - 167+22 'E'
STA 137+31 'F' - 142+83 'F'
STA 151+63 'G' - 154+36 'G'

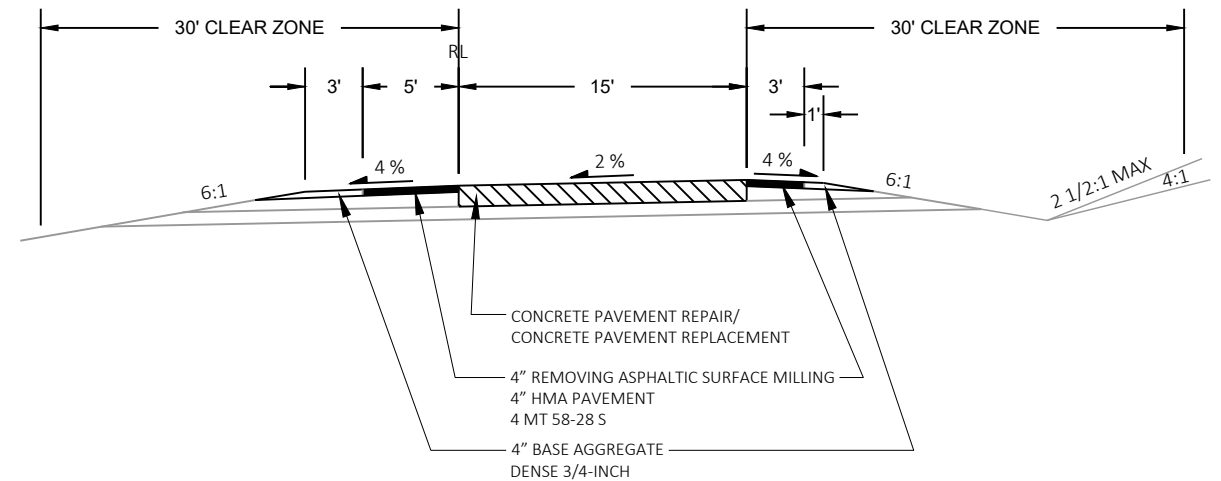
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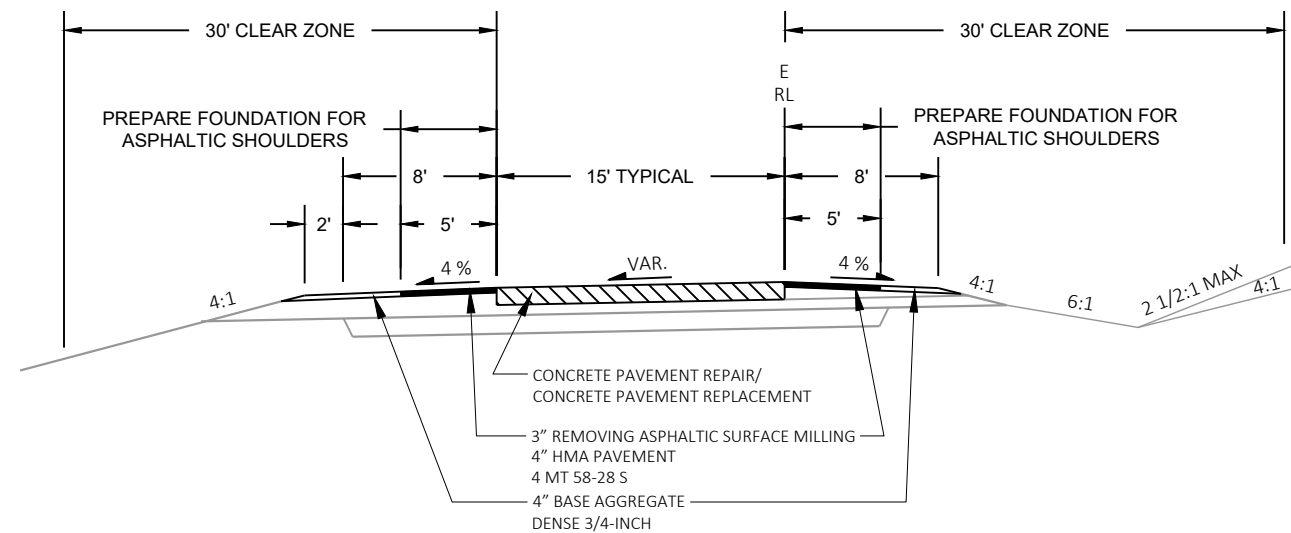
FINISHED TYPICAL SECTION USH 61 NB RAMPS AT STH 11

STA 152+30 'EE' - 153+14 'EE'
STA 159+34 'EEE' - 160+27 'EEE'



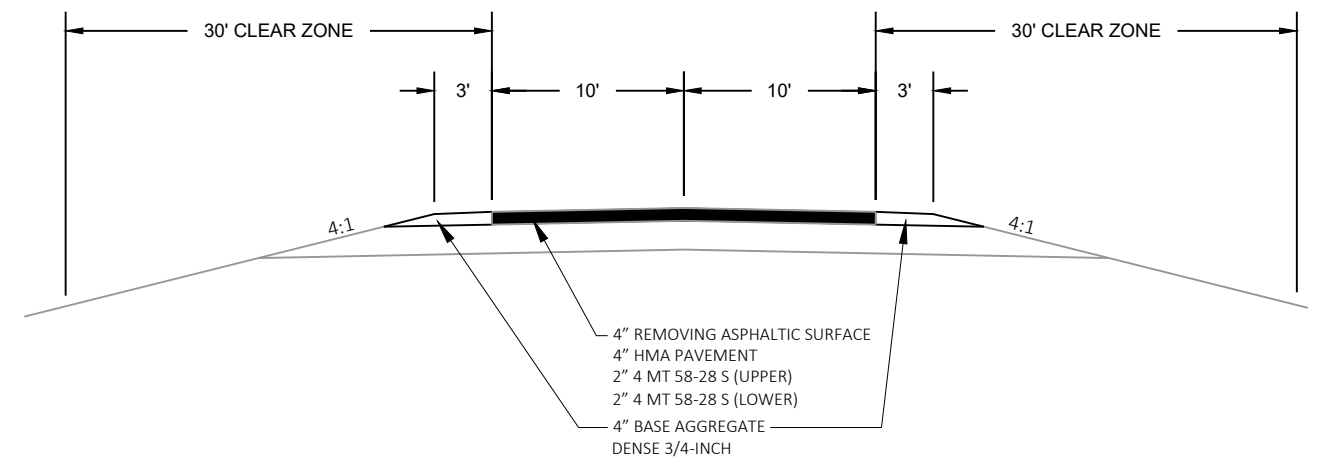
FINISHED TYPICAL SECTION RAMPS

STA 350+32 'N' - 373+62 'N'
STA 357+77 'M' - 374+94 'M'
STA 412+80 'P' - 436+97 'P'
STA 411+80 'R' - 430+63 'R'

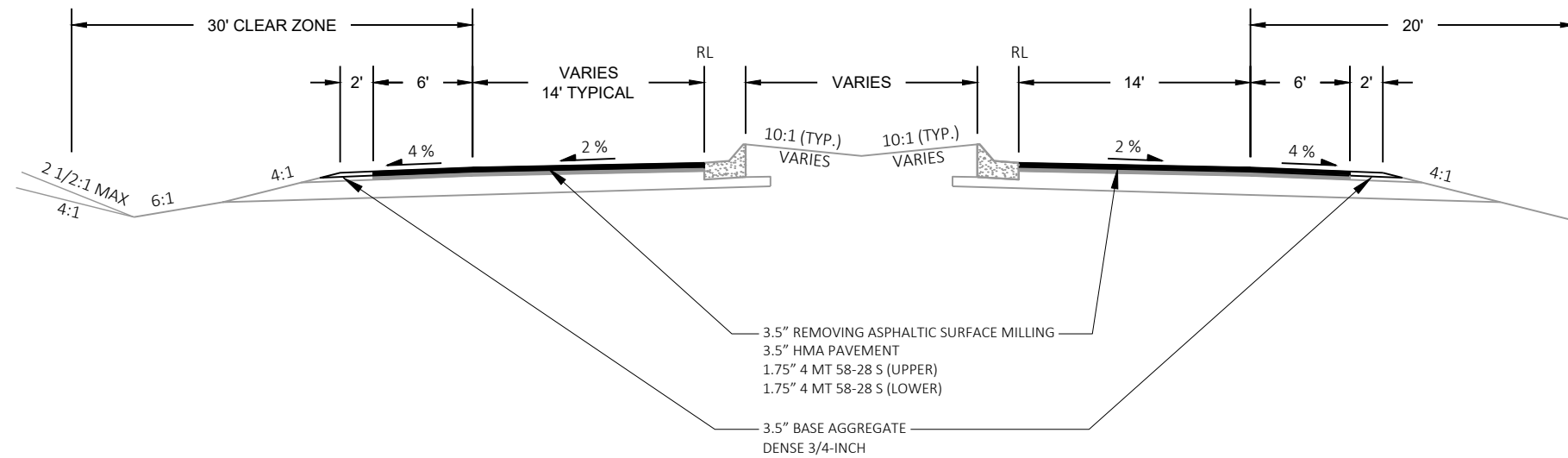


FINISHED TYPICAL SECTION USH 61 NB RAMPS AT STH 11

STA 153+16 'E' - 155+69 'E'
STA 156+21 'E' - 159+32 'E'

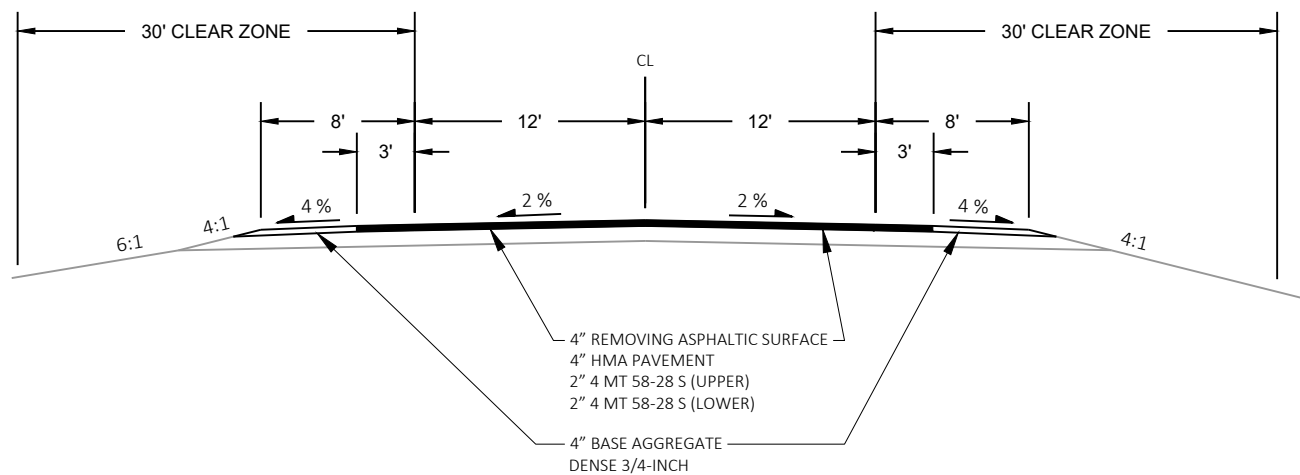


FINISHED TYPICAL SECTION SIDE ROADS



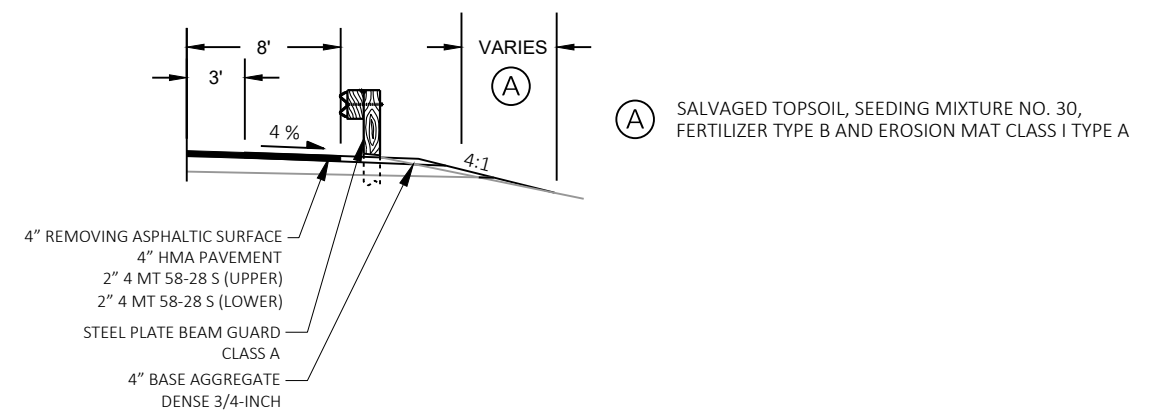
FINISHED TYPICAL SECTION CTH H / HHH

STA 08+87 'S' - 13+85 'S'
STA 09+61 'T' - 13+85 'T'
STA 16+03 'Y' - 23+22 'Y'
STA 16+02 'Z' - 23+23 'Z'

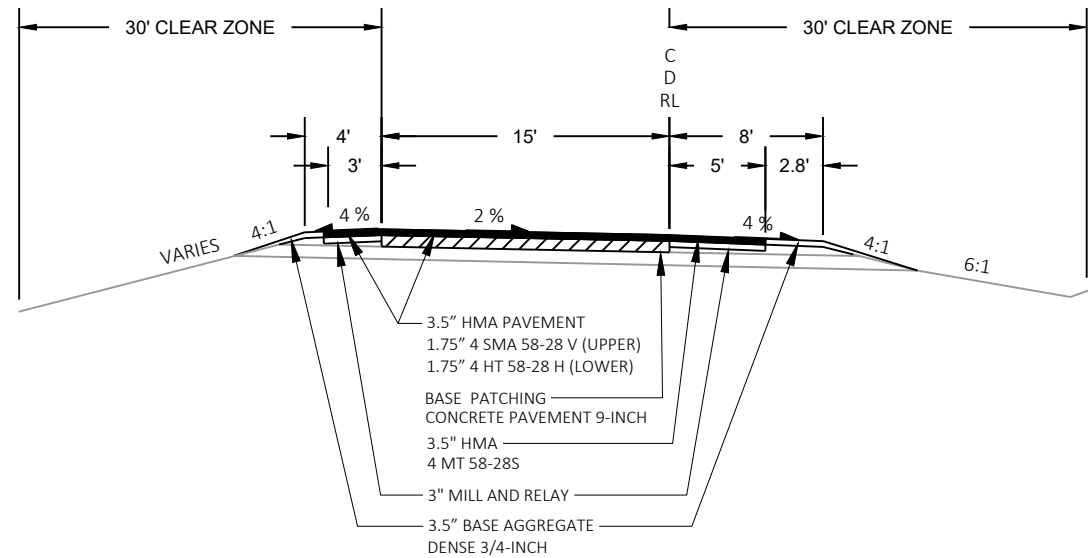


FINISHED TYPICAL SECTION BADGER ROAD

STA 8+30 'B' - 16+02 'B'

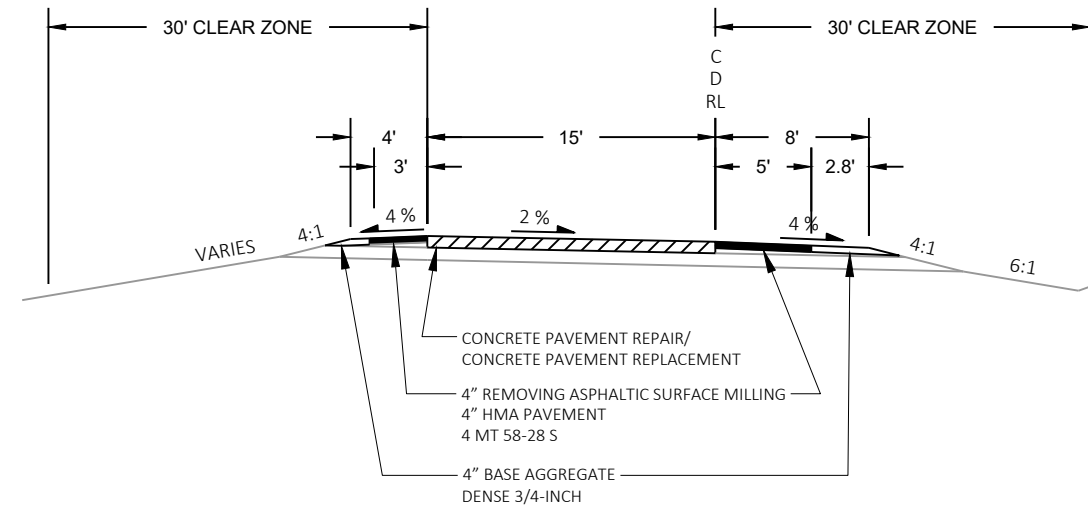


FINISHED BEAMGUARD SECTION BADGER ROAD



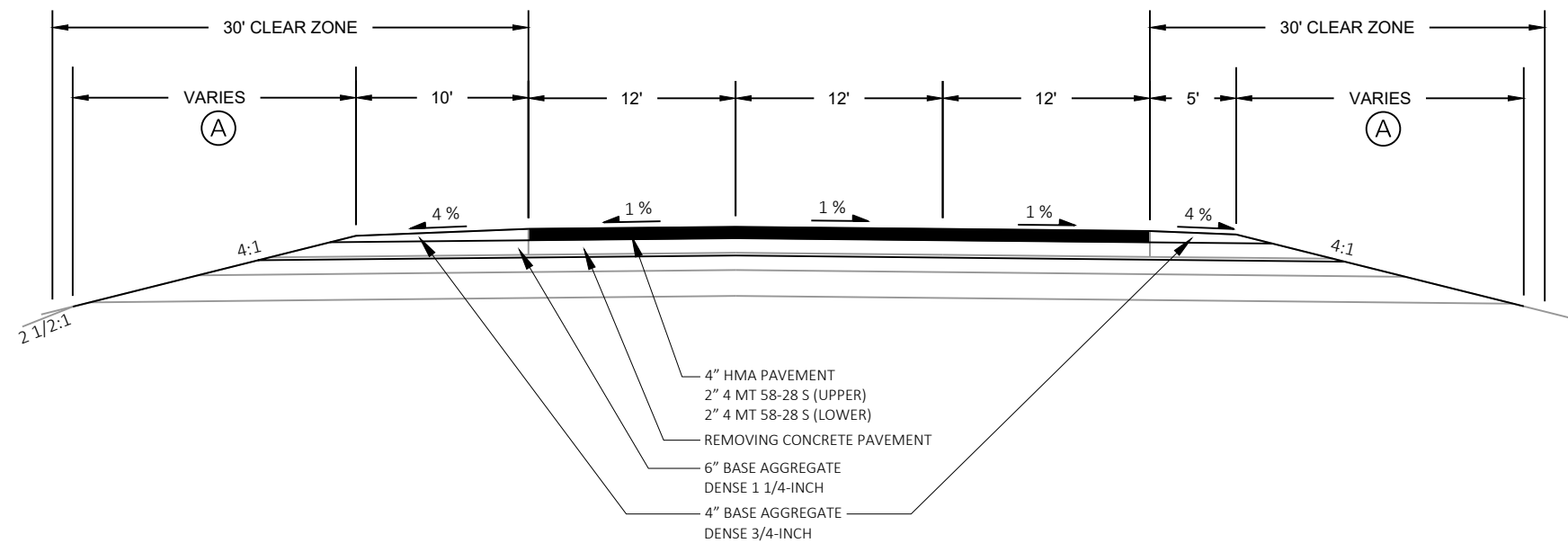
FINISHED TYPICAL SECTION US 61 RAMPS AT BADGER ROAD

STA 192+43 'C' - 201+90 'C'
STA 189+39 'D' - 201+33 'D'



FINISHED TYPICAL SECTION US 61 RAMPS AT BADGER ROAD

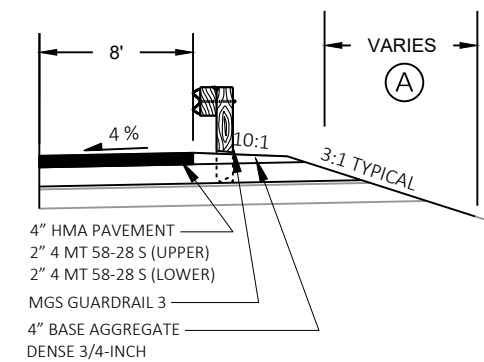
STA 201+90 'C' - 208+15 'C'
STA 201+33 'D' - 213+26 'D'



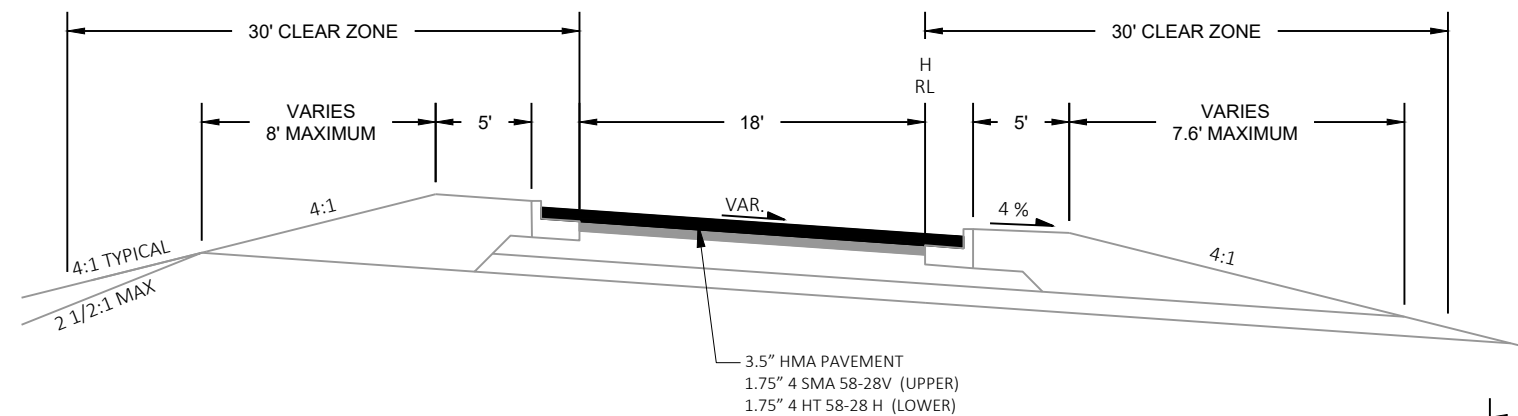
FINISHED TYPICAL SECTION EAGLE POINT ROAD

STA 264+34 'J' - 269+13 'J'

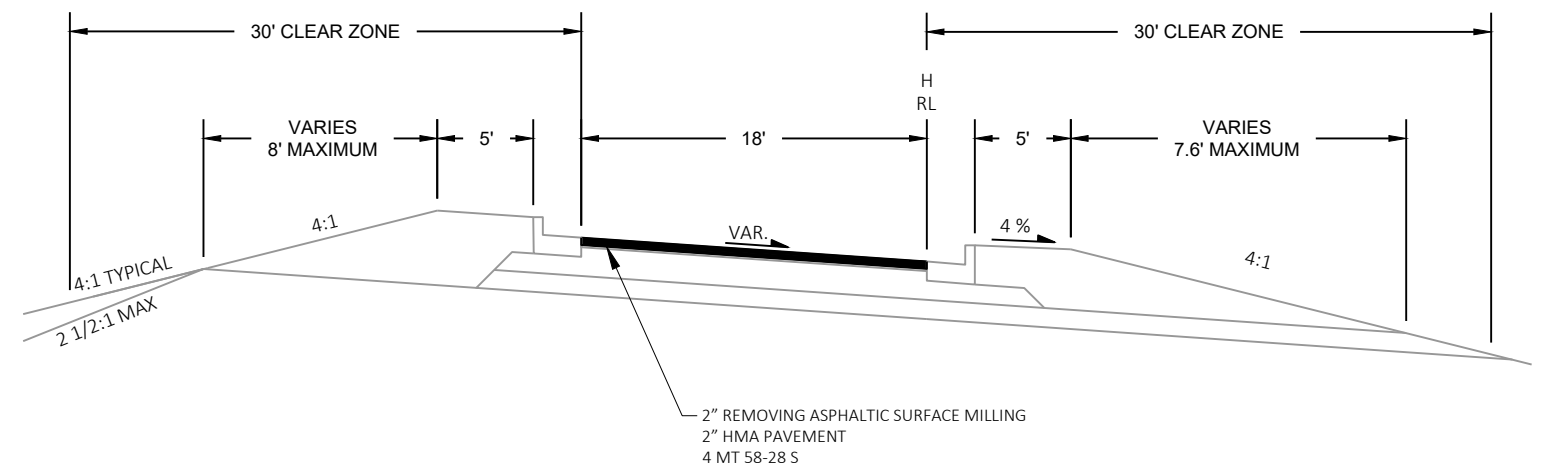
(A) SALVAGED TOPSOIL, SEEDING MIXTURE NO. 30,
FERTILIZER TYPE B AND EROSION MAT CLASS I TYPE A



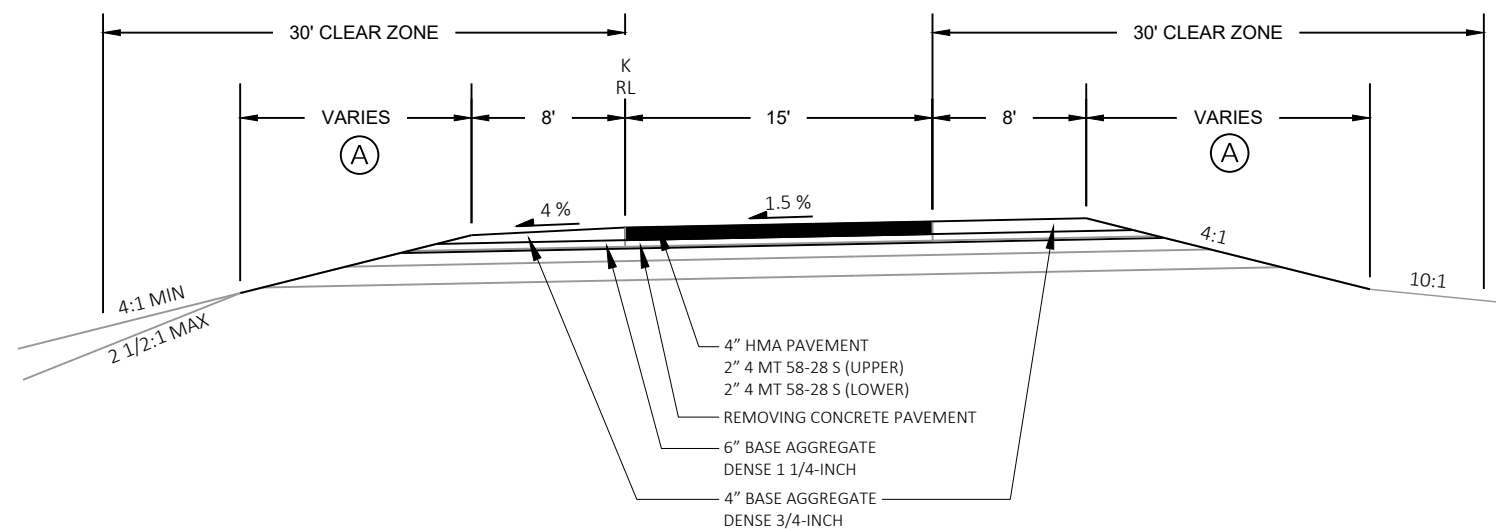
FINISHED BEAMGUARD SECTION EAGLE POINT ROAD



FINISHED TYPICAL SECTION USH 61 SB RAMP AT EAGLE POINT RD
STA 258+73 'H' - 273+05 'H'

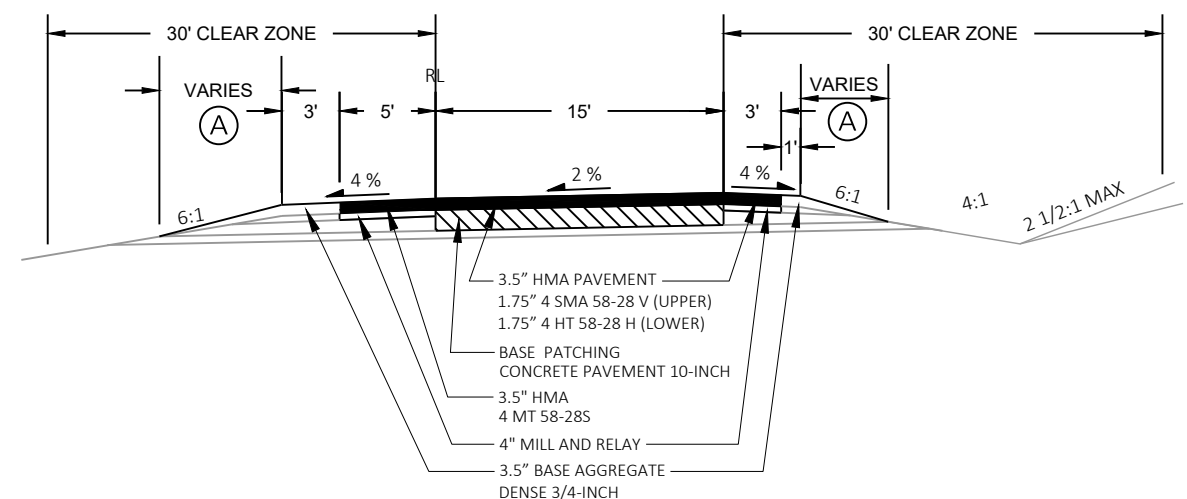


FINISHED TYPICAL SECTION USH 61 SB RAMP AT EAGLE POINT RD
STA 273+05 'H' - 276+48 'H'

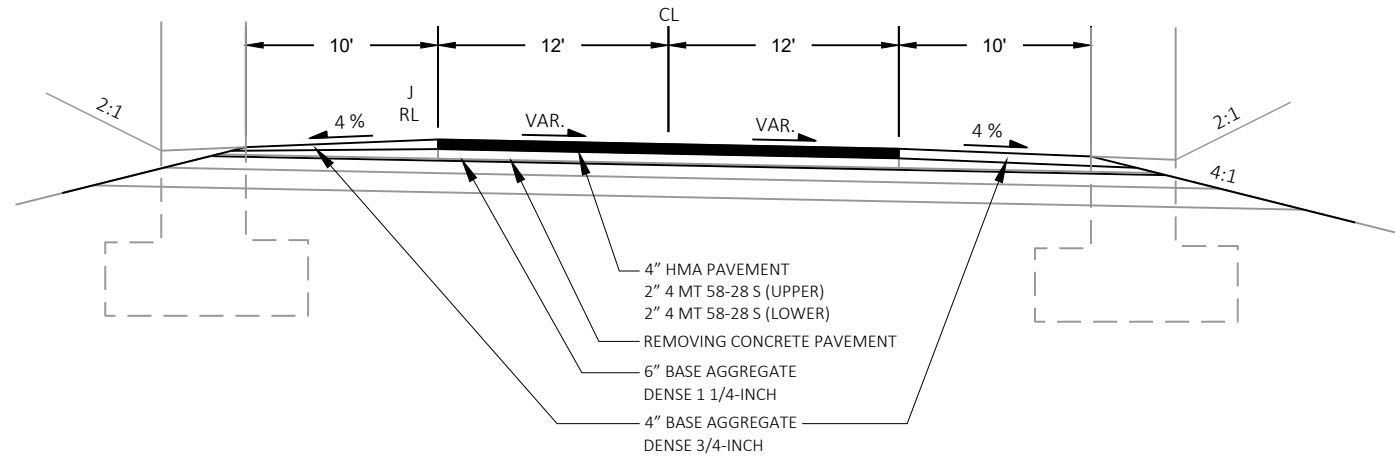


FINISHED TYPICAL SECTION USH 61 SB AT EAGLE POINT ROAD
269+48 'K' - 280+36 'K'

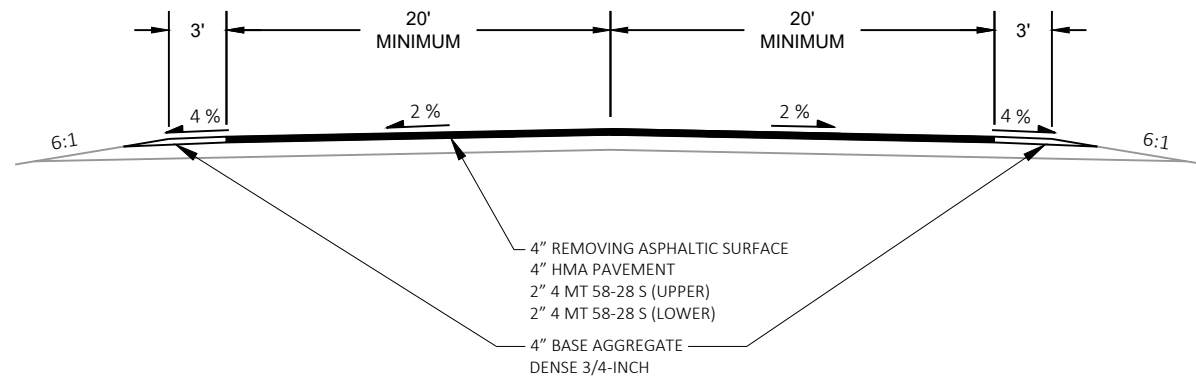
(A) SALVAGED TOPSOIL, SEEDING MIXTURE NO. 30,
FERTILIZER TYPE B AND EROSION MAT CLASS I TYPE A



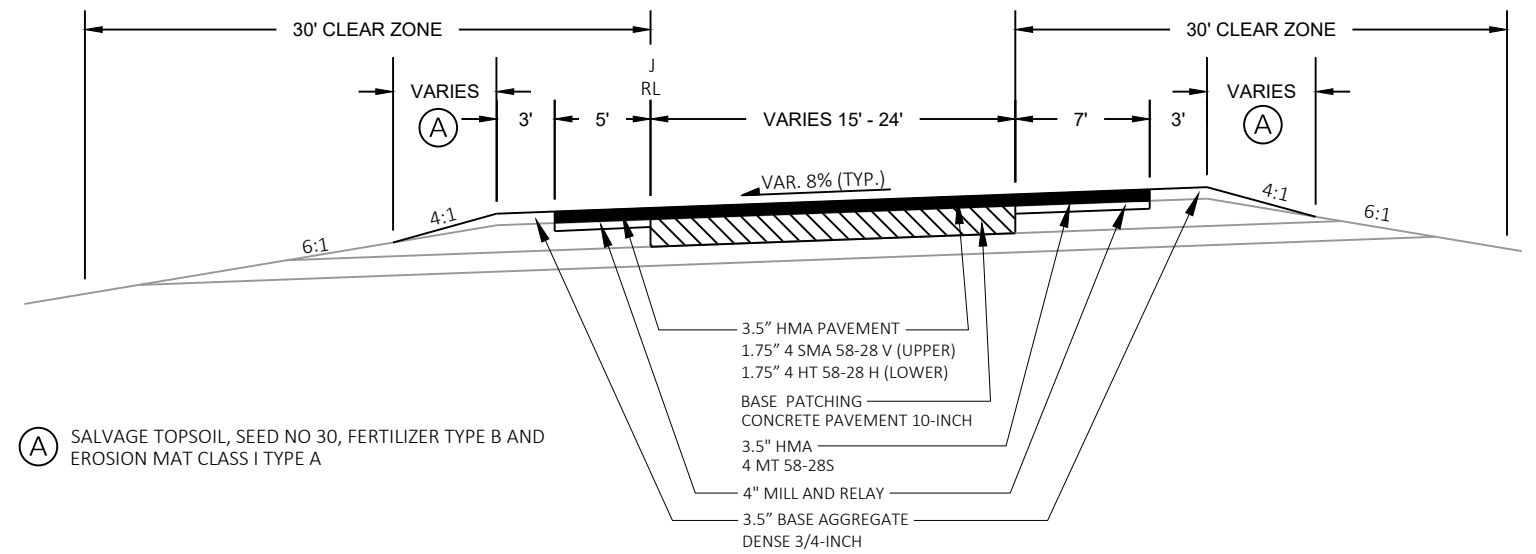
FINISHED TYPICAL SECTION US 61 SB RAMPS AT EAGLE POINT
STA 280+36 'K' - 290+17 'K'



FINISHED TYPICAL SECTION USH 61 NB AT EAGLE POINT RD
STA 269+13 'J' - 279+89 'J'

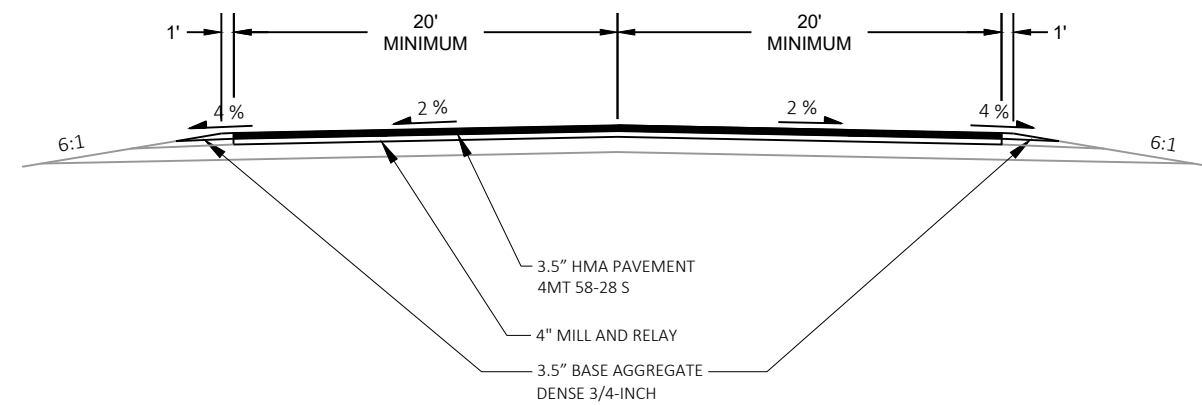


FINISHED TYPICAL SECTION
MEDIAN CROSS OVER
NORTH OF EAGLE PT DR

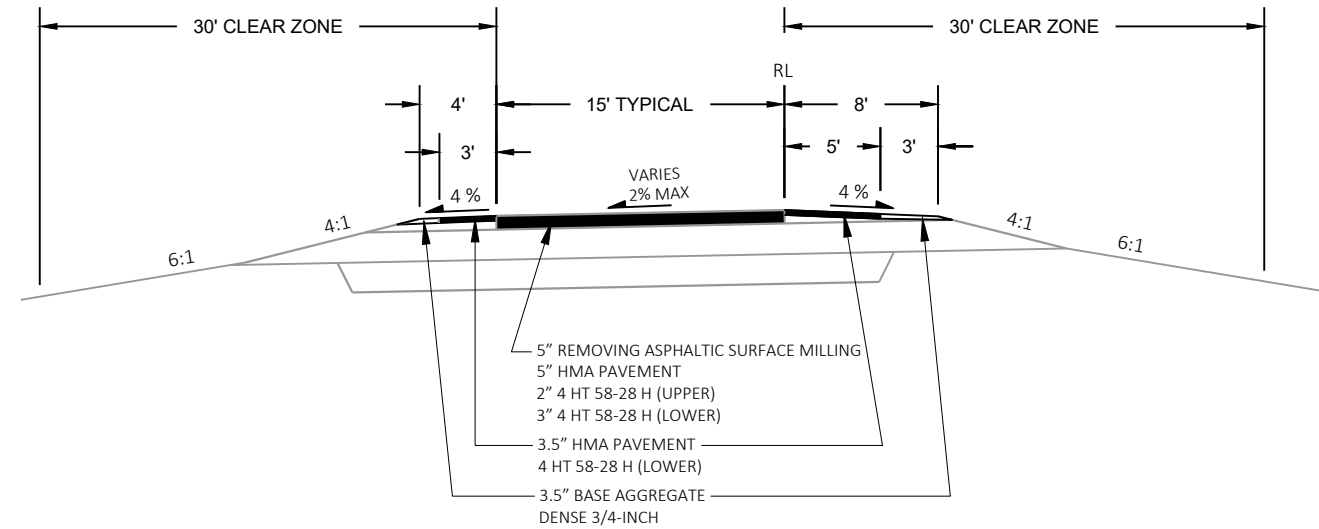


(A) SALVAGE TOPSOIL, SEED NO 30, FERTILIZER TYPE B AND EROSION MAT CLASS I TYPE A

FINISHED TYPICAL SECTION USH 61 NB AT EAGLE POINT ROAD
STA 279+89 'J' - 290+38 'J'

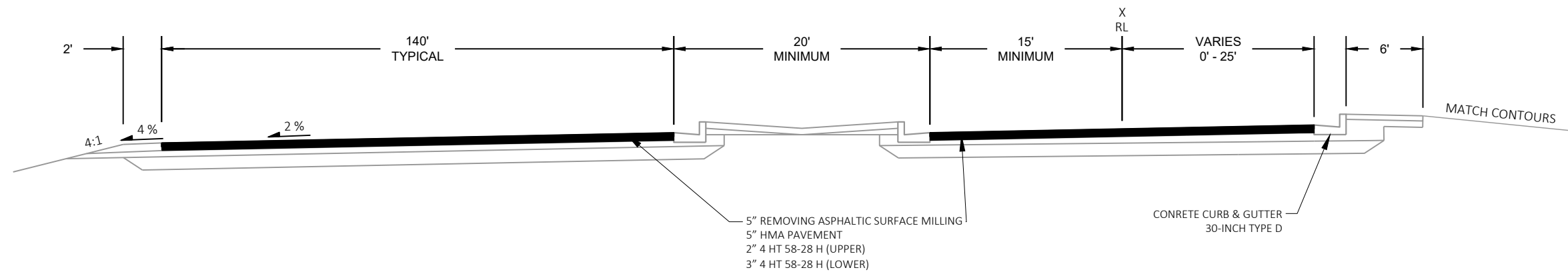


FINISHED TYPICAL SECTION
MEDIAN CROSS OVER
SOUTH OF EAGLE PT DR



FINISHED TYPICAL SECTION REST AREA RAMP

STA 111+99 'X' - 119+55 'X'
STA 127+20 'X' - 129+45 'X'



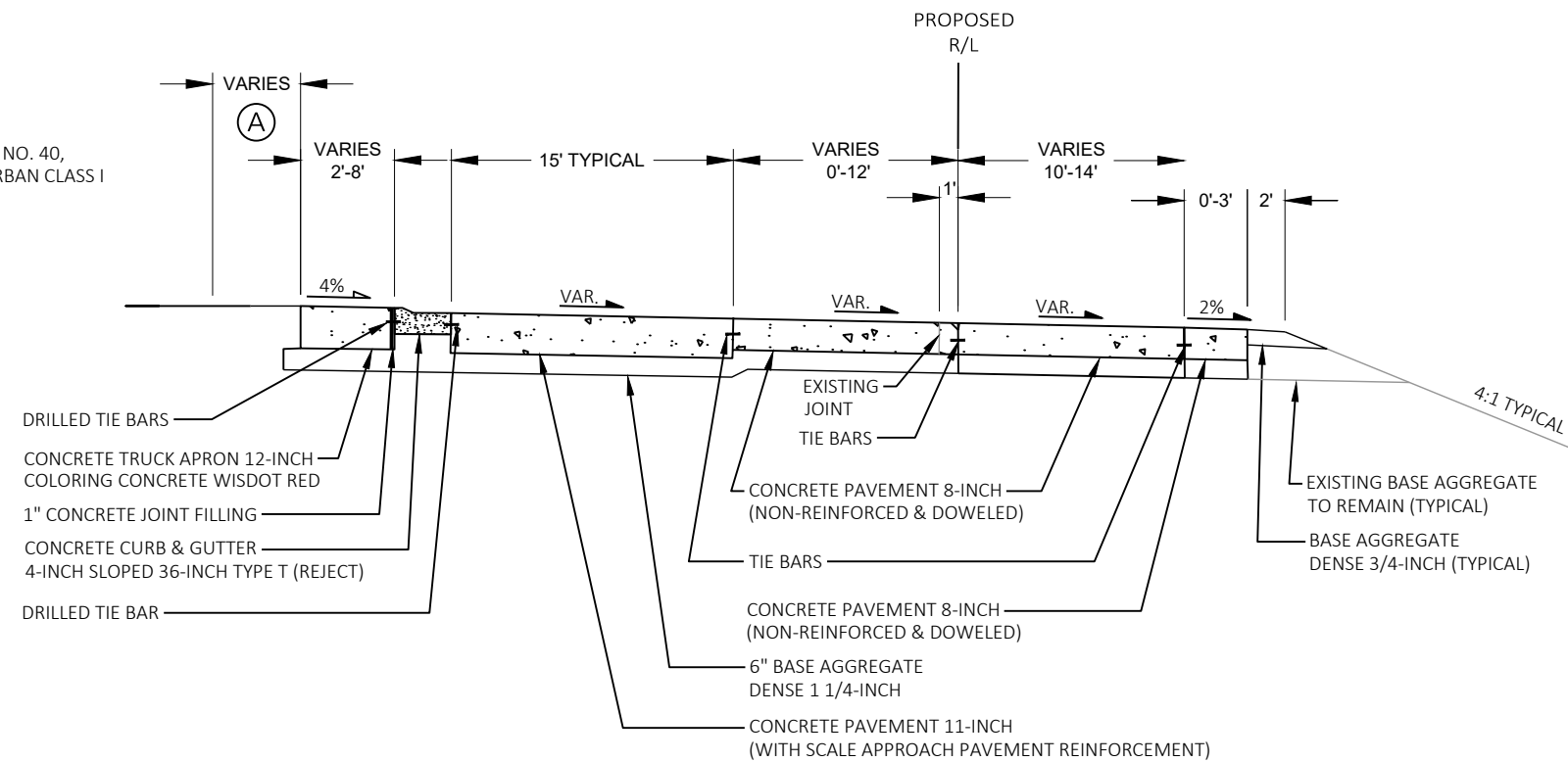
FINISHED TRUCK PARKING

REST AREA

STA 119+55 'X' - 127+20 'X'

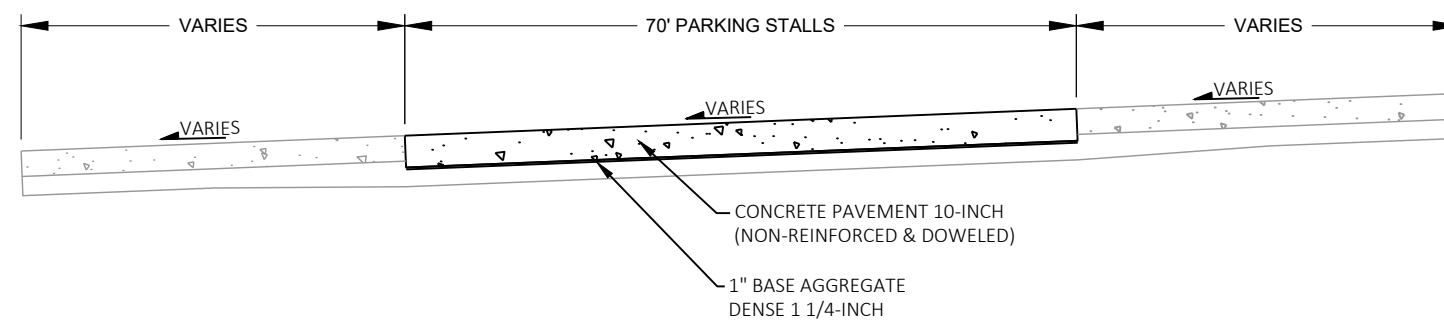
FINISHED PASSENGER VEHICLE PARKING

(A) SALVAGE TOPSOILED, SEEDING MIXTURE NO. 40,
FERTILIZER TYPE B AND EROSION MAT URBAN CLASS I
TYPE A

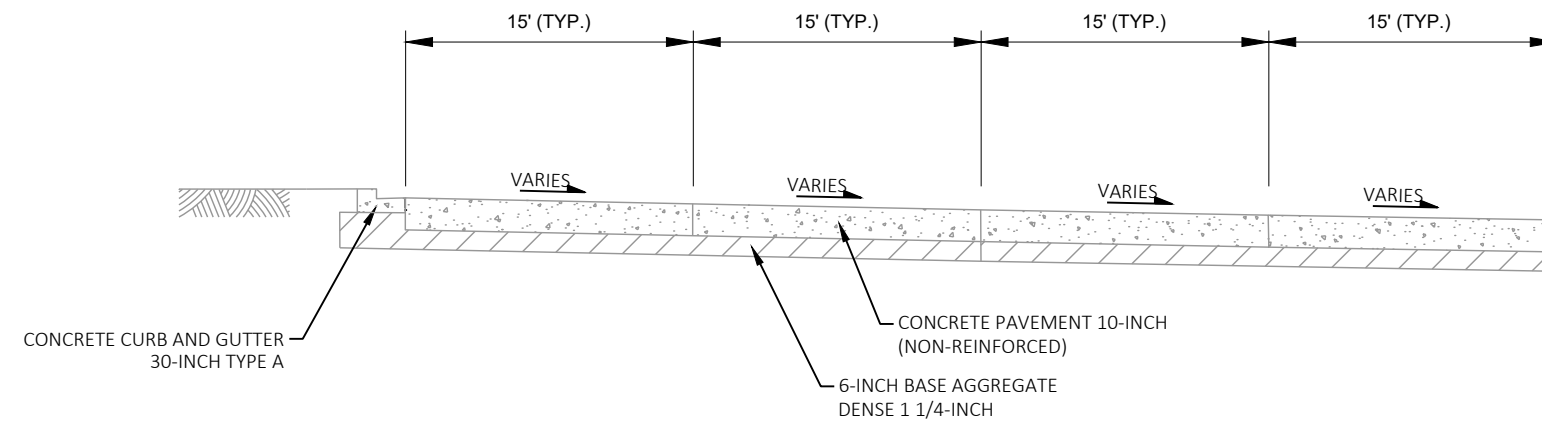


FINISHED TYPICAL SECTION SWEF AREA LOOP

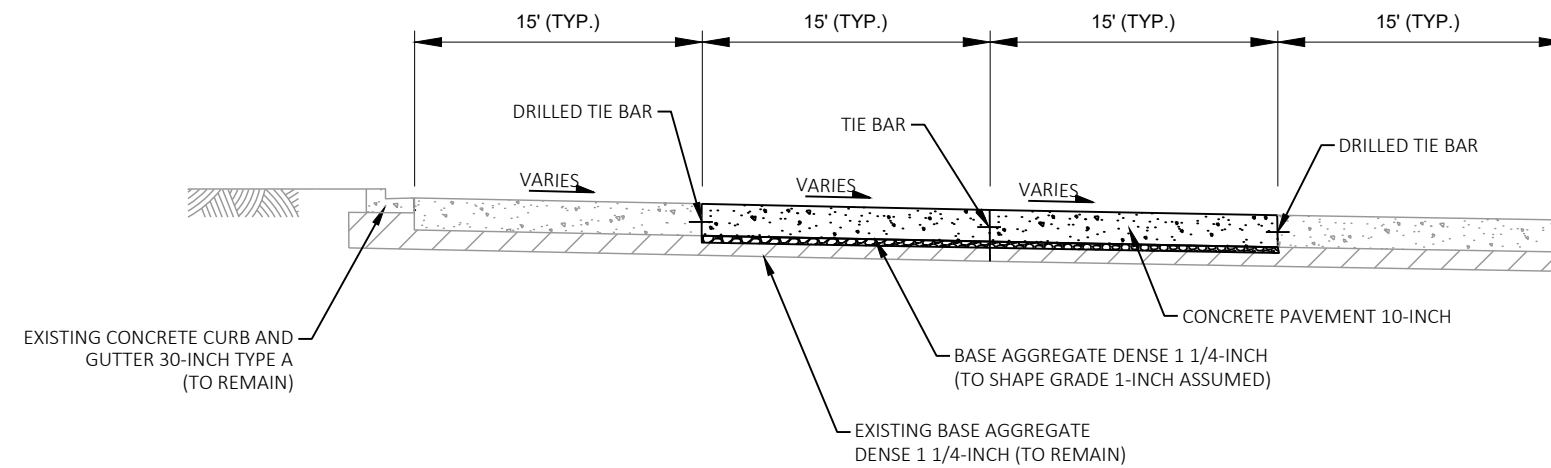
STA 6+00 'XX' - 10+00 'XX'



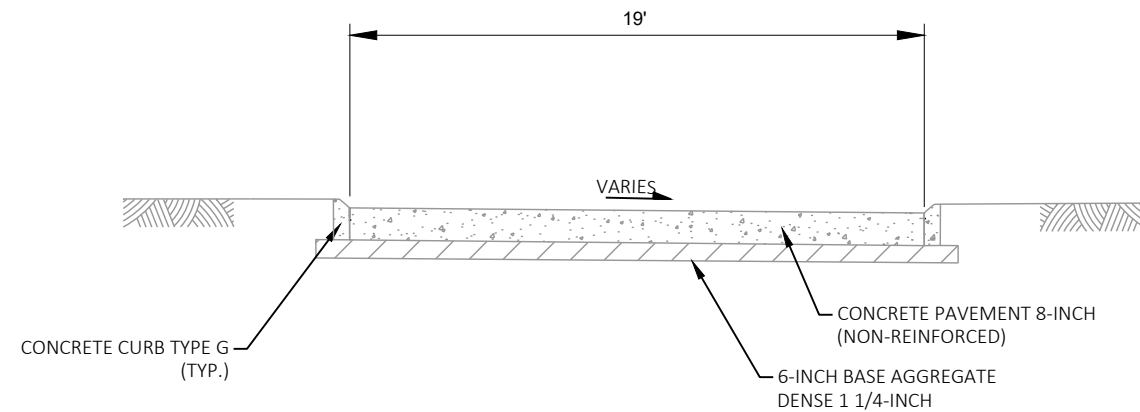
FINISHED TYPICAL SECTION SWEF PARKING AREA



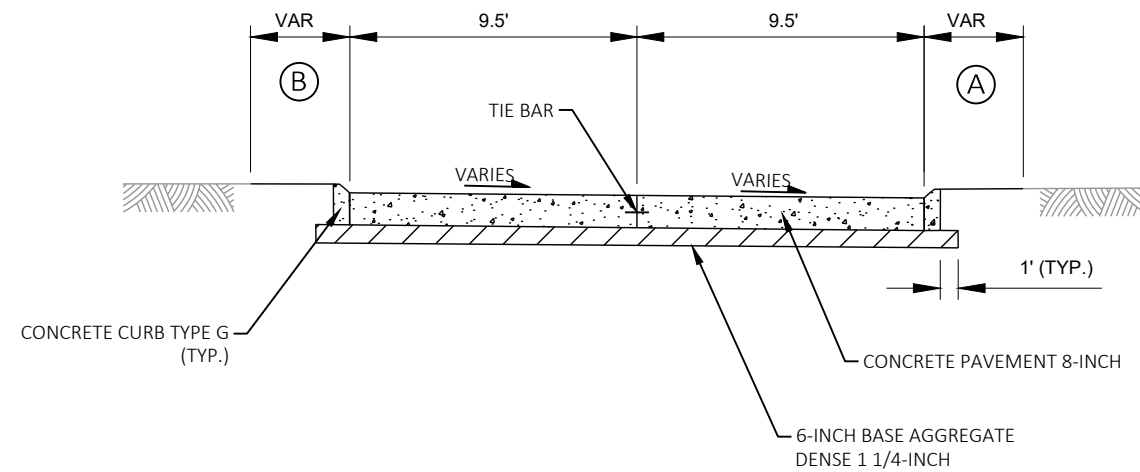
EXISTING TYPICAL CMV PARKING LOT



PROPOSED TYPICAL CMV PARKING LOT



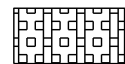
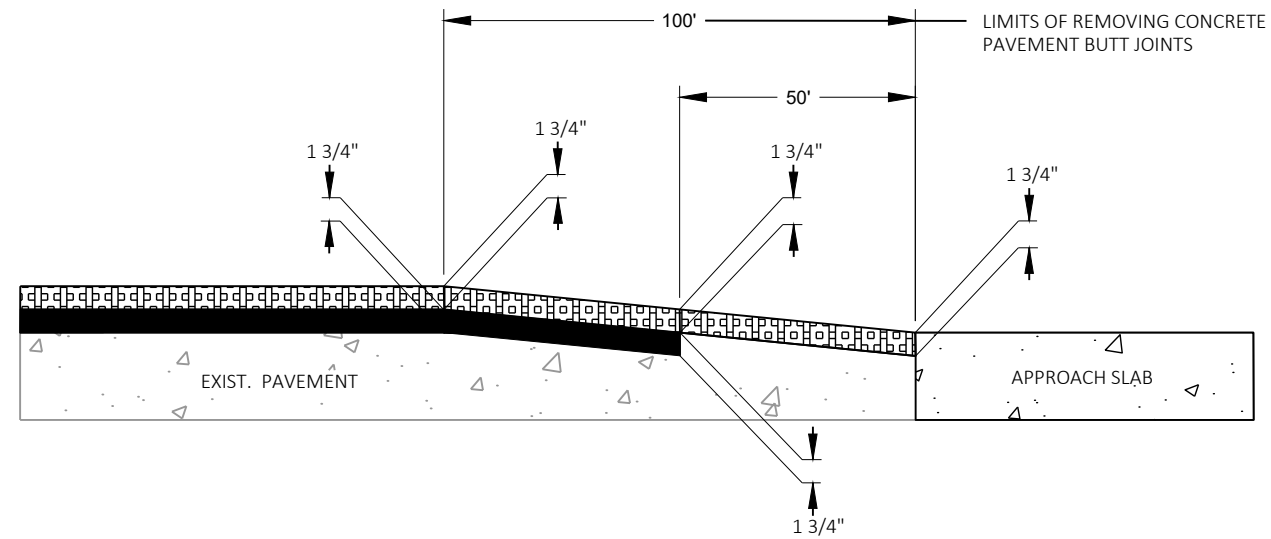
EXISTING TYPICAL VEHICLE PARKING STALL



PROPOSED TYPICAL VEHICLE PARKING STALL

(A) SALVAGE TOPSOIL, SEED NO 40, FERTILIZER TYPE B AND EROSION MAT URBAN CLASS I TYPE A

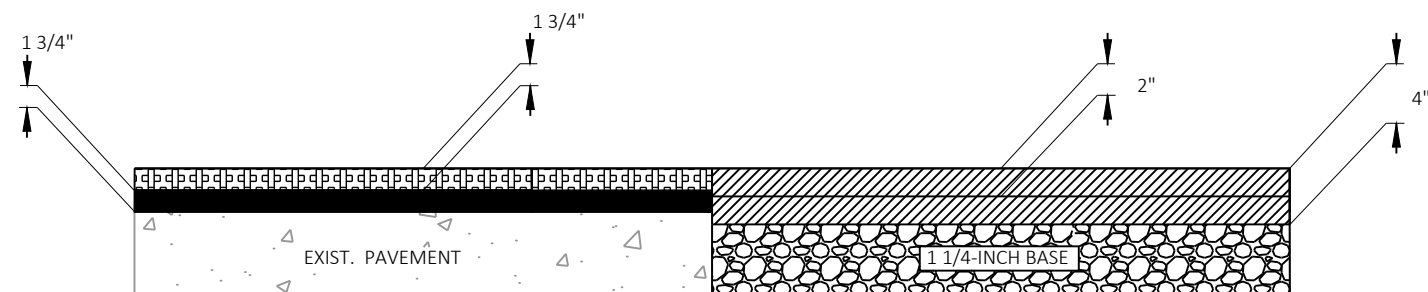
(B) REMOVE, SALVAGE AND REINSTALL LANDSCAPING ROCK



1.75-INCH HMA PAVEMENT 4 SMA 58-28 H



1.75-INCH HMA PAVEMENT 4 HT 58-28 H

END JOINT TRANSITION MAINLINE

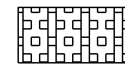
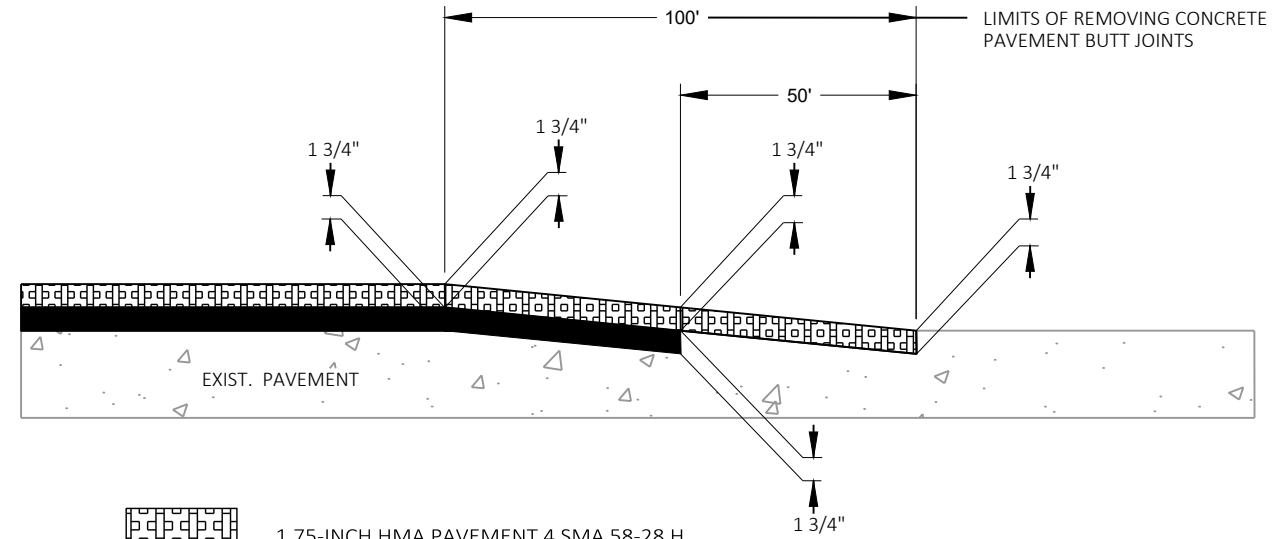
1.75-INCH HMA PAVEMENT 4 SMA 58-28 H



1.75-INCH HMA PAVEMENT 4 HT 58-28 H



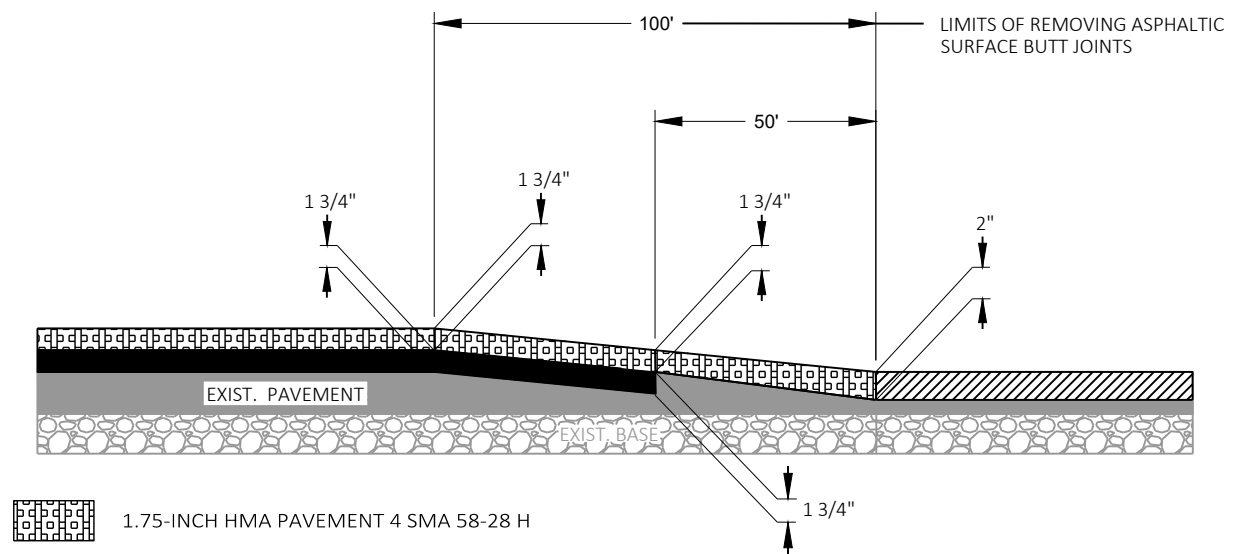
4-INCH HMA PAVEMENT 4 MT 58-28 S

END JOINT TRANSITION MAINLINE
TO EAGLE POINT ROAD RAMPSEND JOINT TRANSITION MAINLINE TO EAGLE
POINT ROAD

1.75-INCH HMA PAVEMENT 4 SMA 58-28 H



1.75-INCH HMA PAVEMENT 4 HT 58-28 H

END JOINT TRANSITION MAINLINE TO RAMP

1.75-INCH HMA PAVEMENT 4 SMA 58-28 H

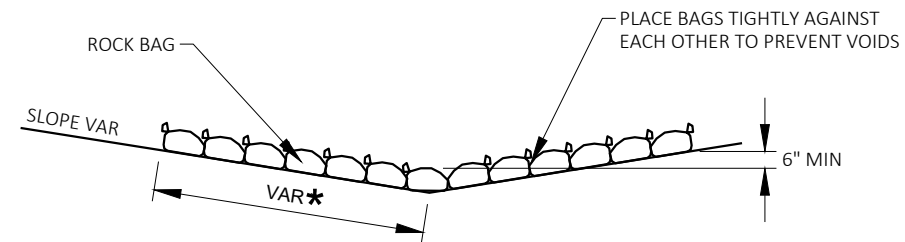


1.75-INCH HMA PAVEMENT 4 HT 58-28 H



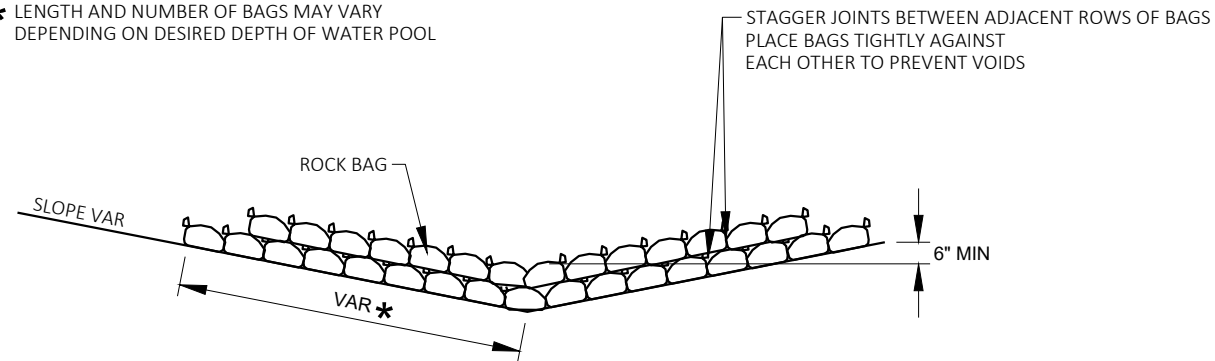
2-INCH HMA PAVEMENT 4 MT 58-28 S

END JOINT TRANSITION EAGLE POINT
ROAD SOUTHBOUND MERGE RAMPEND JOINT TRANSITION EAGLE POINT
ROAD SOUTHBOUND ON RAMP

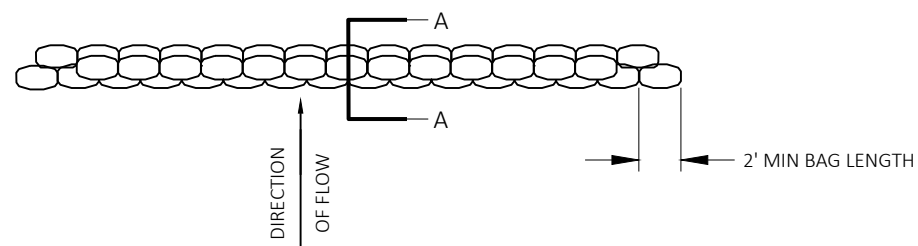


SIDE VIEW (SINGLE LAYER)

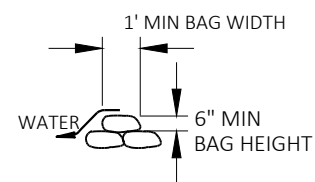
* LENGTH AND NUMBER OF BAGS MAY VARY
DEPENDING ON DESIRED DEPTH OF WATER POOL



SIDE VIEW (MULTIPLE LAYER)

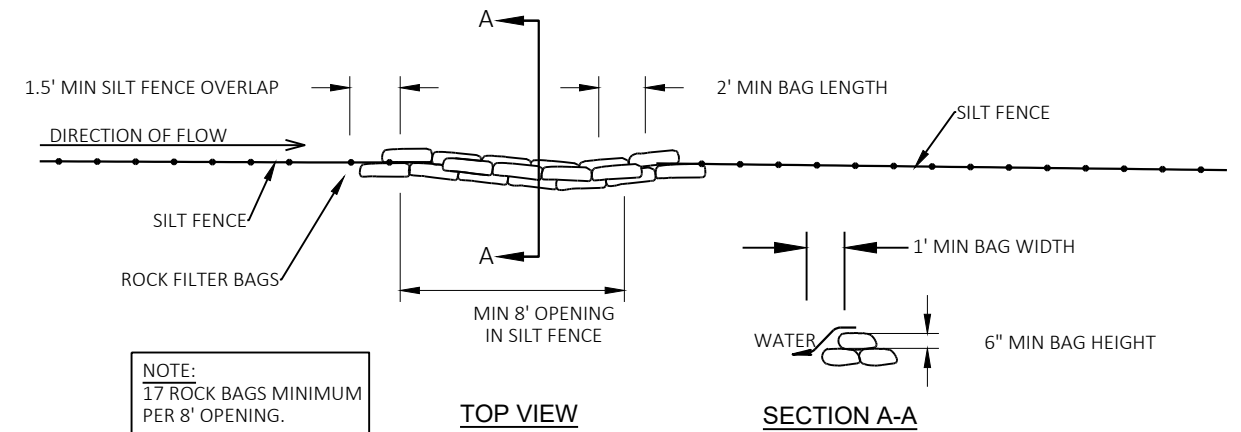


TOP VIEW (MULTIPLE LAYER)



SECTION A-A

ROCK BAGS USED FOR DITCH CHECKS

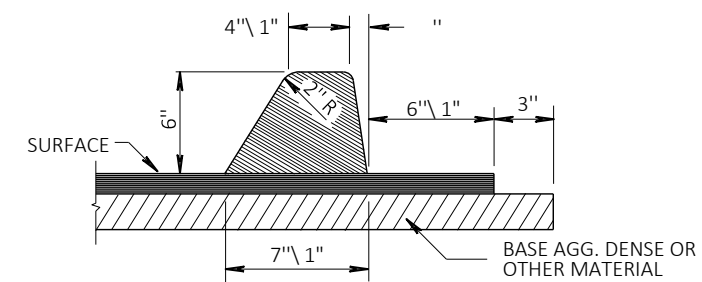


NOTE:
17 ROCK BAGS MINIMUM
PER 8' OPENING.

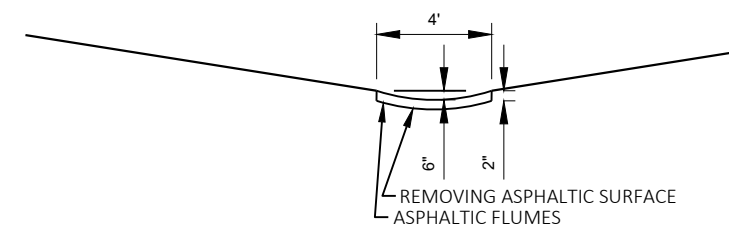
TOP VIEW

SECTION A-A

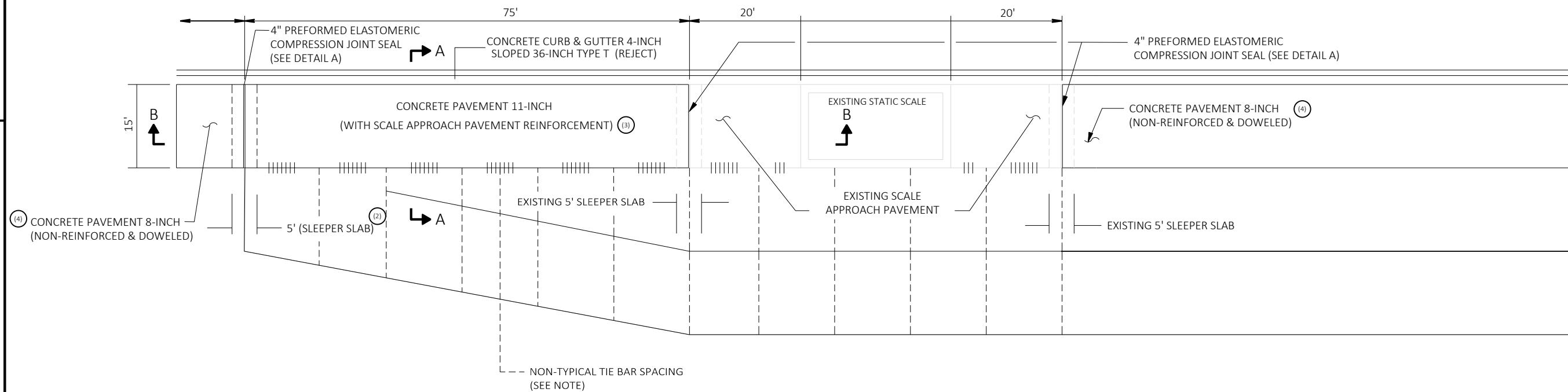
ROCK BAGS USED FOR SILT FENCE RELIEF



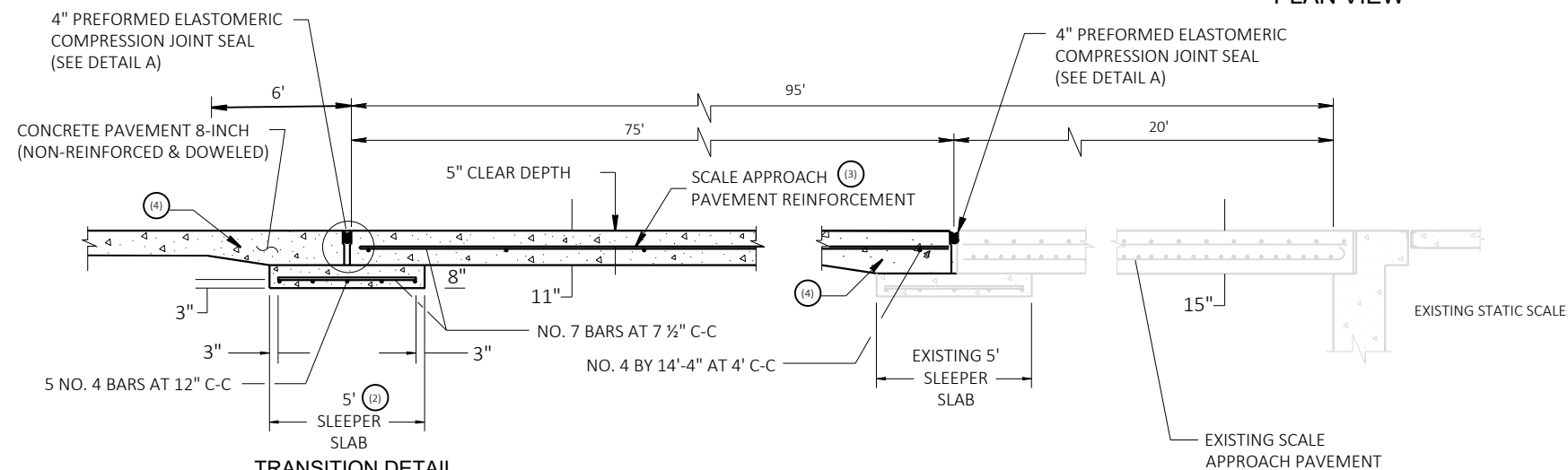
ASPHALTIC CURB DETAIL



REST AREA ASPHALTIC DITCH

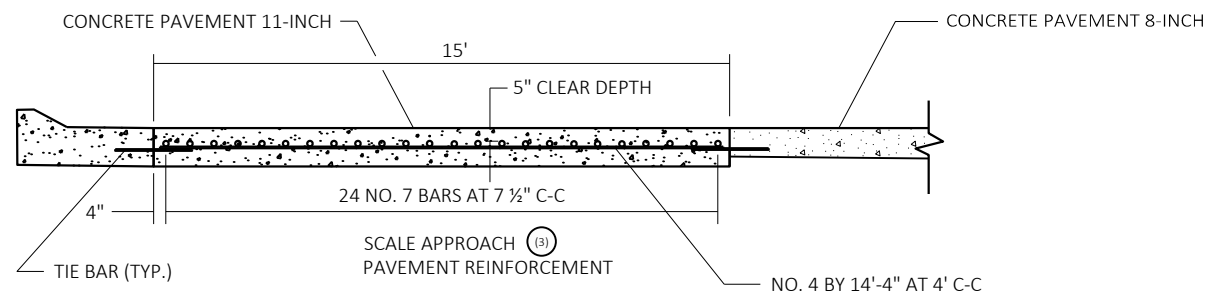


PLAN VIEW



TRANSITION DETAIL

SECTION B-B



SECTION A-A

(CONTINUOUS REINFORCED CONCRETE APPROACH)

PAVEMENT SECTION AT STATIC SCALE LOCATION

- (2) COSTS INCIDENTAL TO CONCRETE PAVEMENT 8-INCH
- (3) SCALE APPROACH PAVEMENT REINFORCEMENT PAID FOR UNDER BID ITEM SPV.0180.01
- (4) ADDITIONAL DEPTH IS INCIDENTAL TO CONCRETE PAVEMENT ITEM
- (5) DEPTH VARIES DEPENDING ON LOCATION

GENERAL NOTES

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

JOINT FILLER

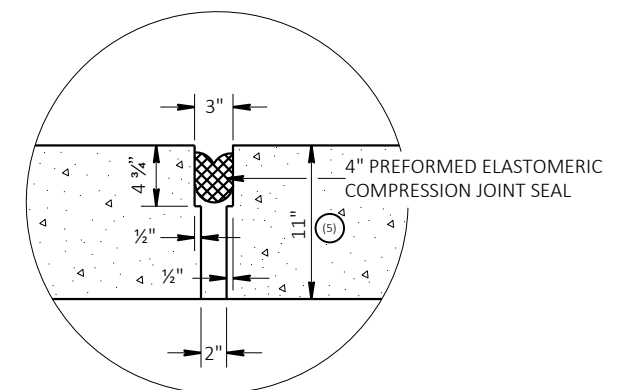
EXPANSION JOINT FILLER BETWEEN APPROACH SLAB AND ROADWAY PAVEMENT AT THE SLEEPER SLAB IS A 4 INCH PREFORMED ELASTOMERIC COMPRESSION SEAL.

STEEL REINFORCEMENT

SPLICING OF NO. 7 BARS IN THE APPROACH SLAB IS PERMITTED. SPLICES SHALL BE STAGGERED, WITH A MAXIMUM OF ONE SPLICE PER BAR. LAPS SHALL CONFORM TO THE STANDARD SPECIFICATIONS. ALL REINFORCEMENT BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

TIE BARS

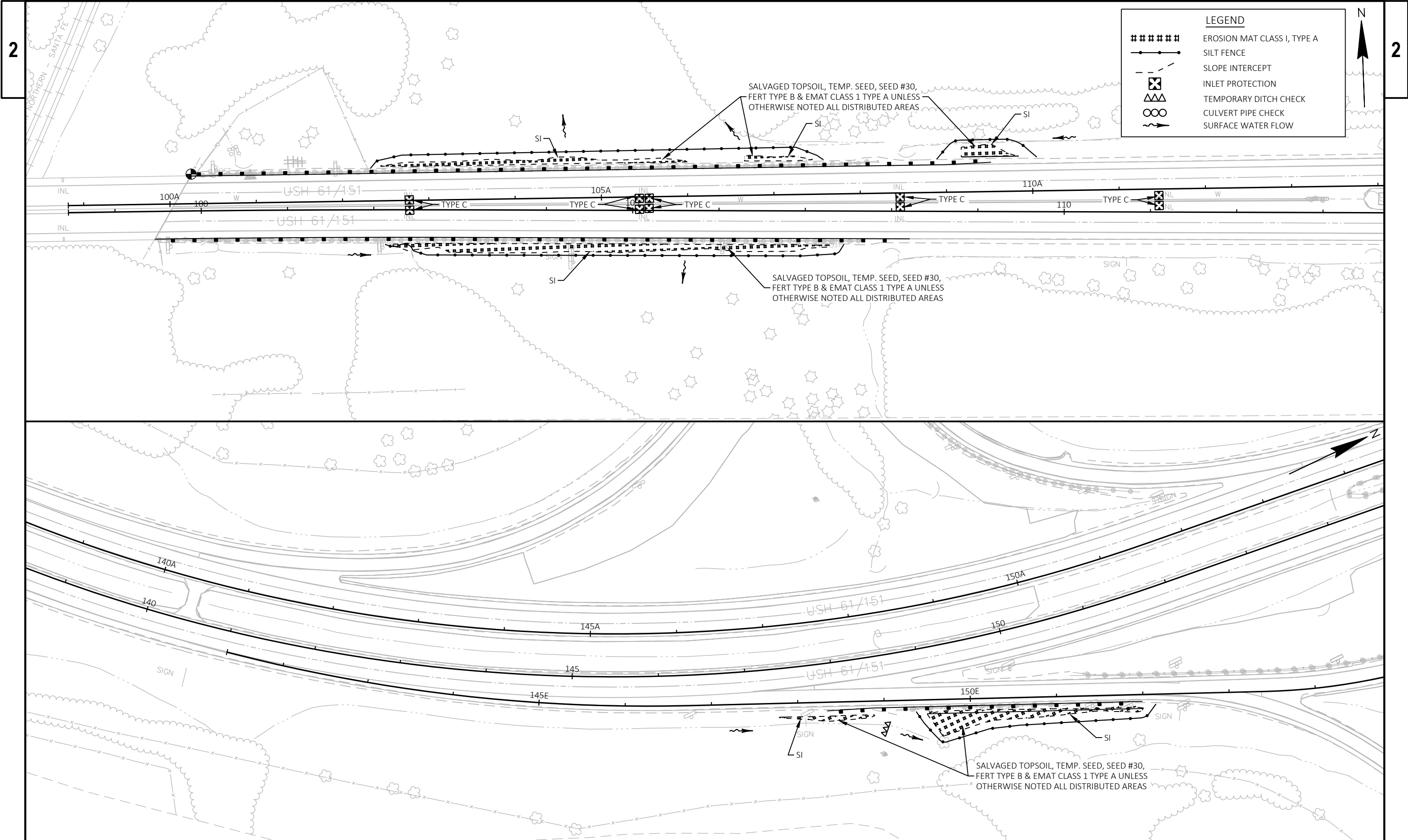
TIE BARS BETWEEN THE CRCP AND THE NON-REINFORCED DOWELED CONCRETE PAVEMENT LONGITUDINAL JOINT SHOULD ONLY BE PLACED WITHIN THE MIDDLE THIRD OF THE SLAB (15 FOOT MAX. LENGTH) BETWEEN THE TRANSVERSE JOINTS. THE SAME NUMBER OF TIE BARS THAT WOULD TYPICALLY BE USED ALONG THE LONGITUDINAL JOINTS PER S.D.D. SHOULD BE USED.

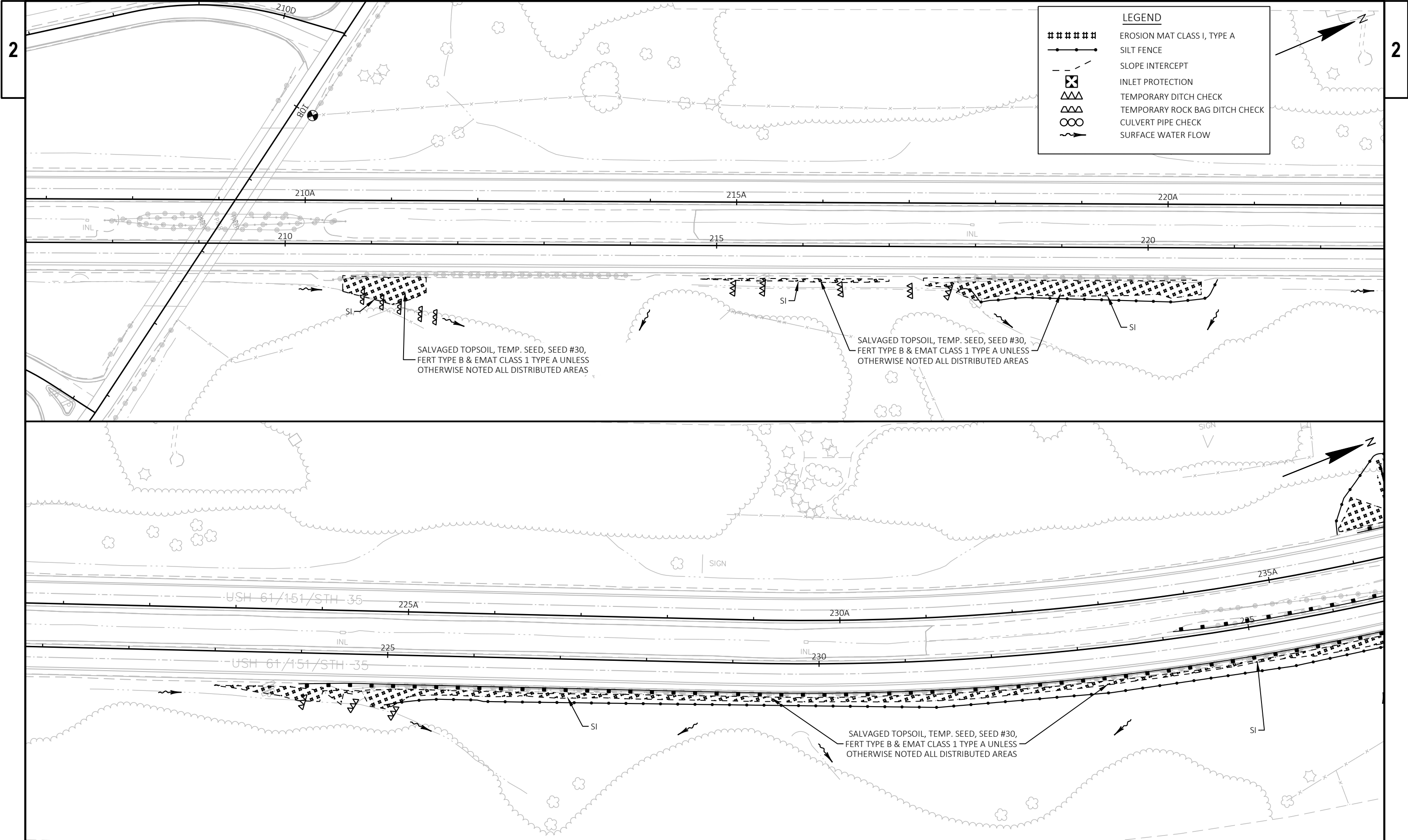


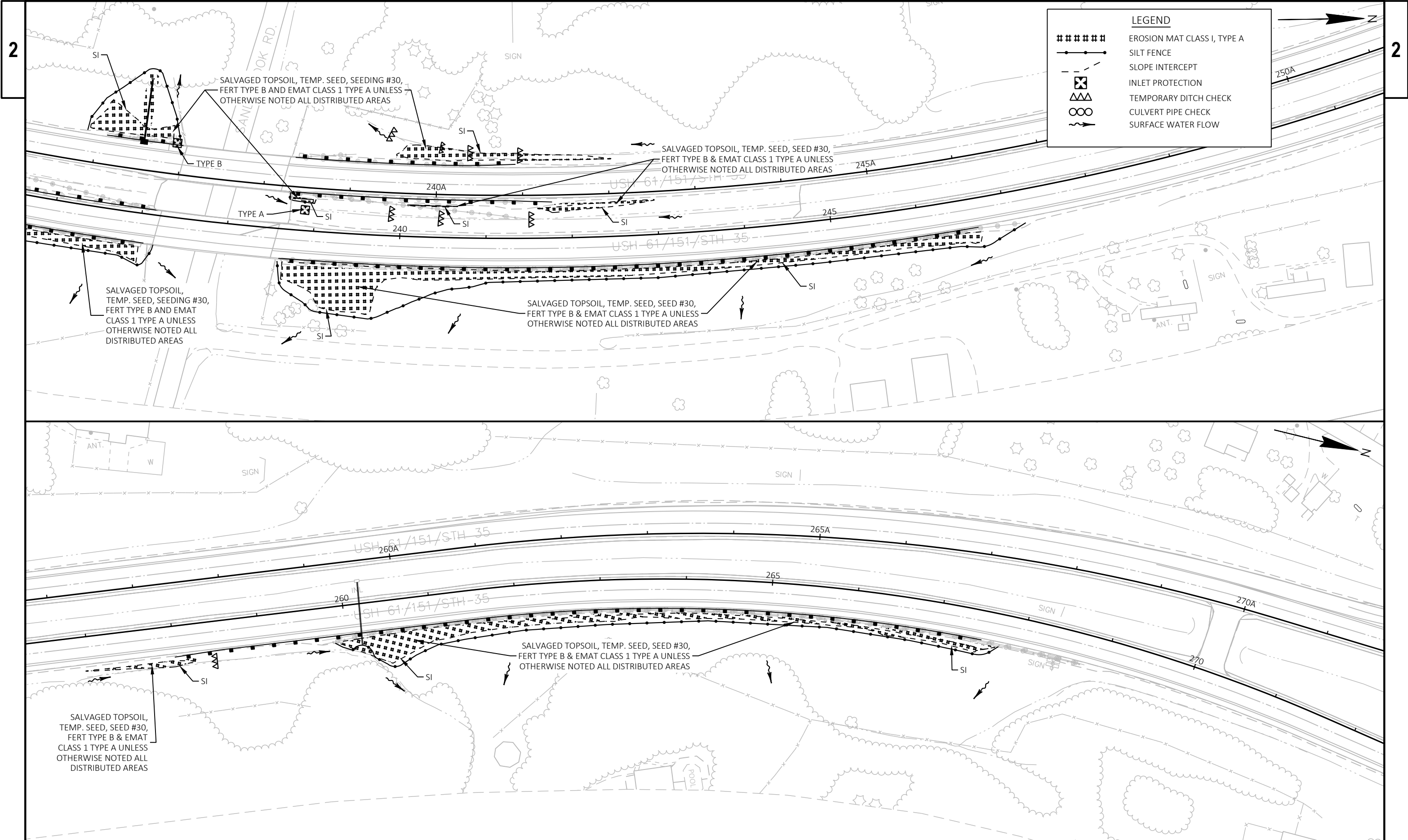
DETAIL A

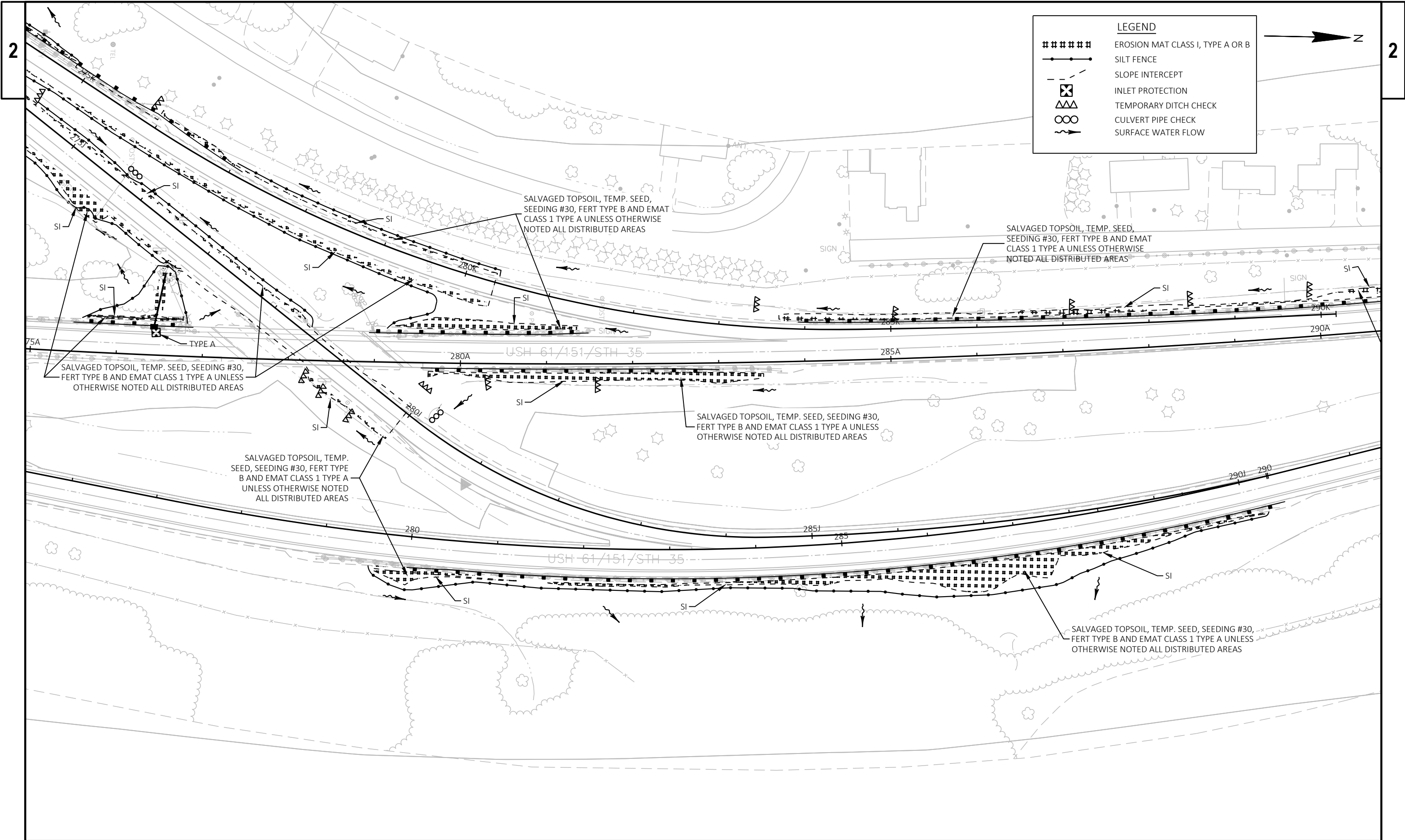
PLAN DETAILS				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
01	5+32.03 'XX'	69.01' LT	EXIST	PT
02	10+53.19 'XX'	70.21' LT	EXIST	PT
03	5+60.51 'XX'	79.13' LT	EXIST	PT
04	10+25.37 'XX'	81.07' LT	EXIST	PT
05	8+20.01 'XX'	85.69' LT	897.28	PT
06	10+07.82 'XX'	76.73' LT	897.28	PT
07	8+08.66 'XX'	60.06' LT	897.70	PT
08	8+26.83 'XX'	60.02' LT	897.60	PT
09	8+08.42 'XX'	26.08' LT	897.87	PT
10	8+27.41 'XX'	25.84' LT	897.99	PT

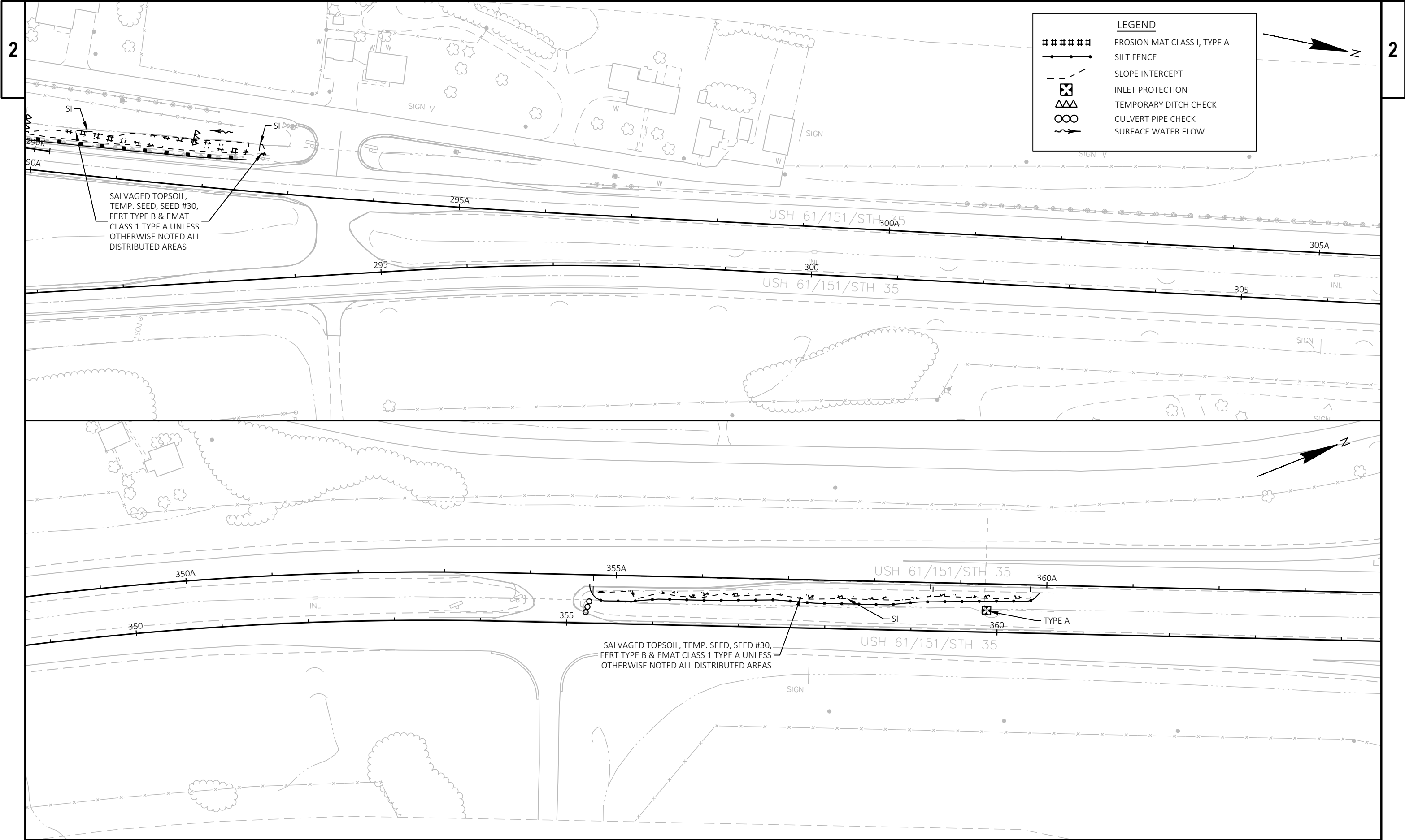


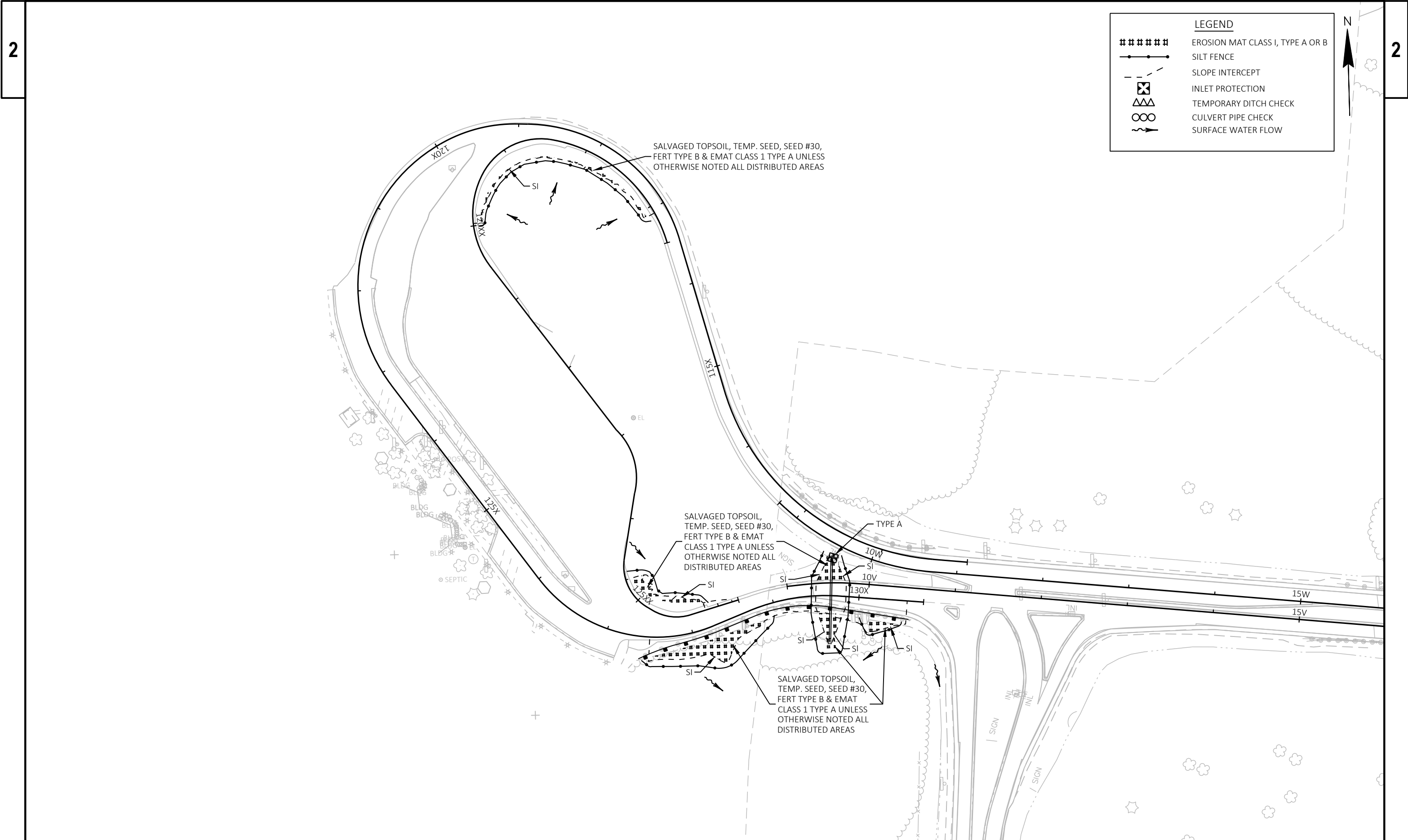


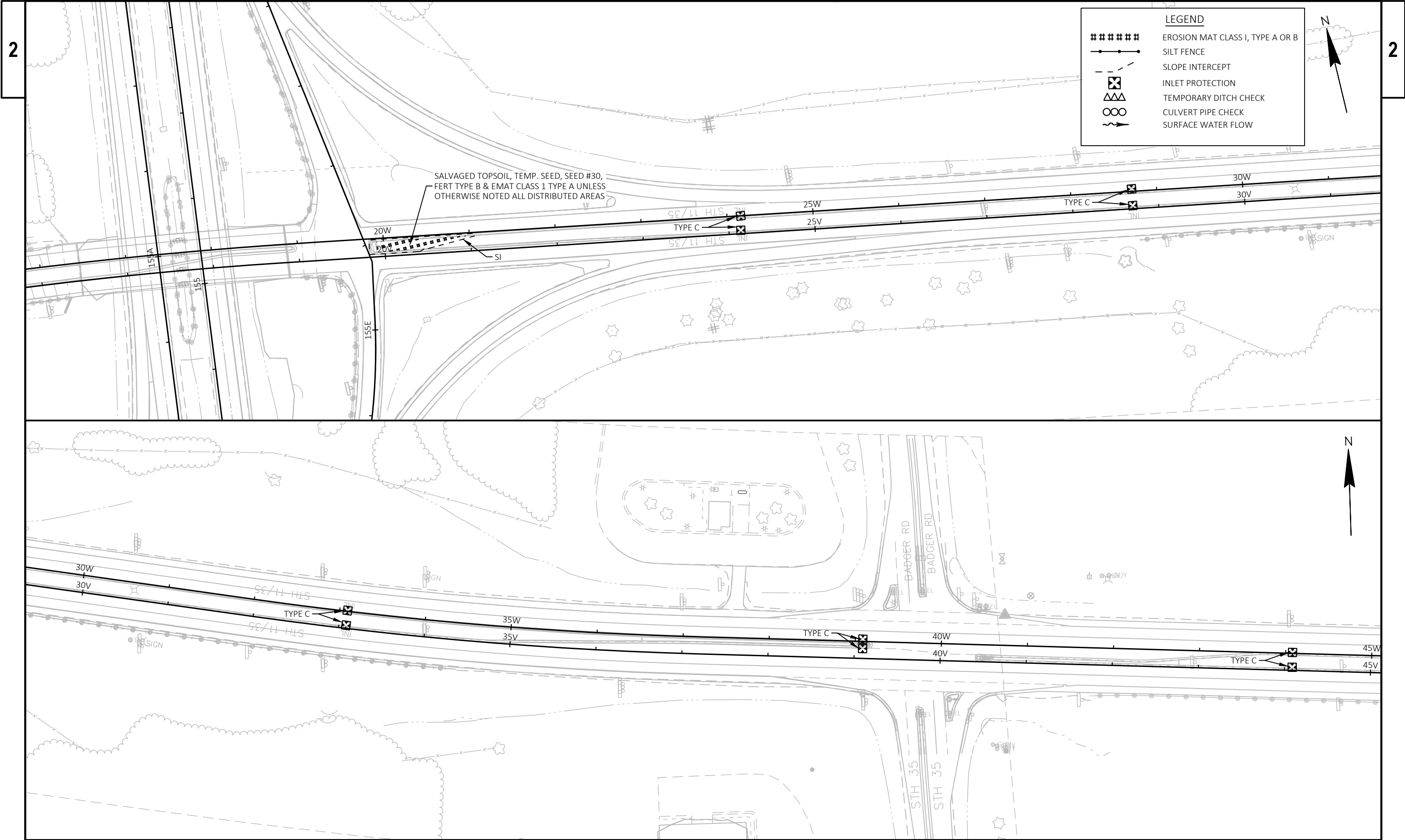


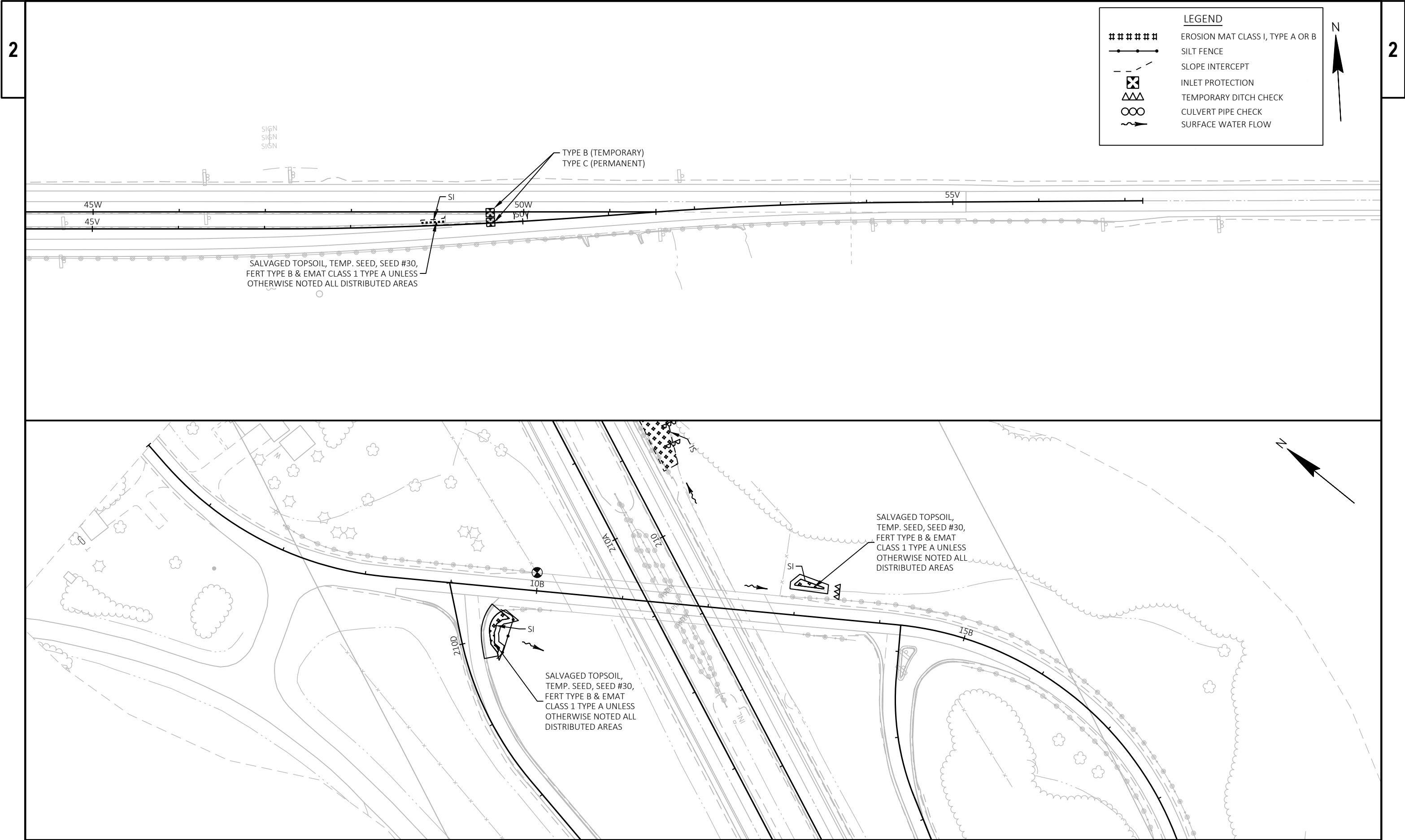












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LEGEND

EROSION MAT CLASS I, TYPE A OR B

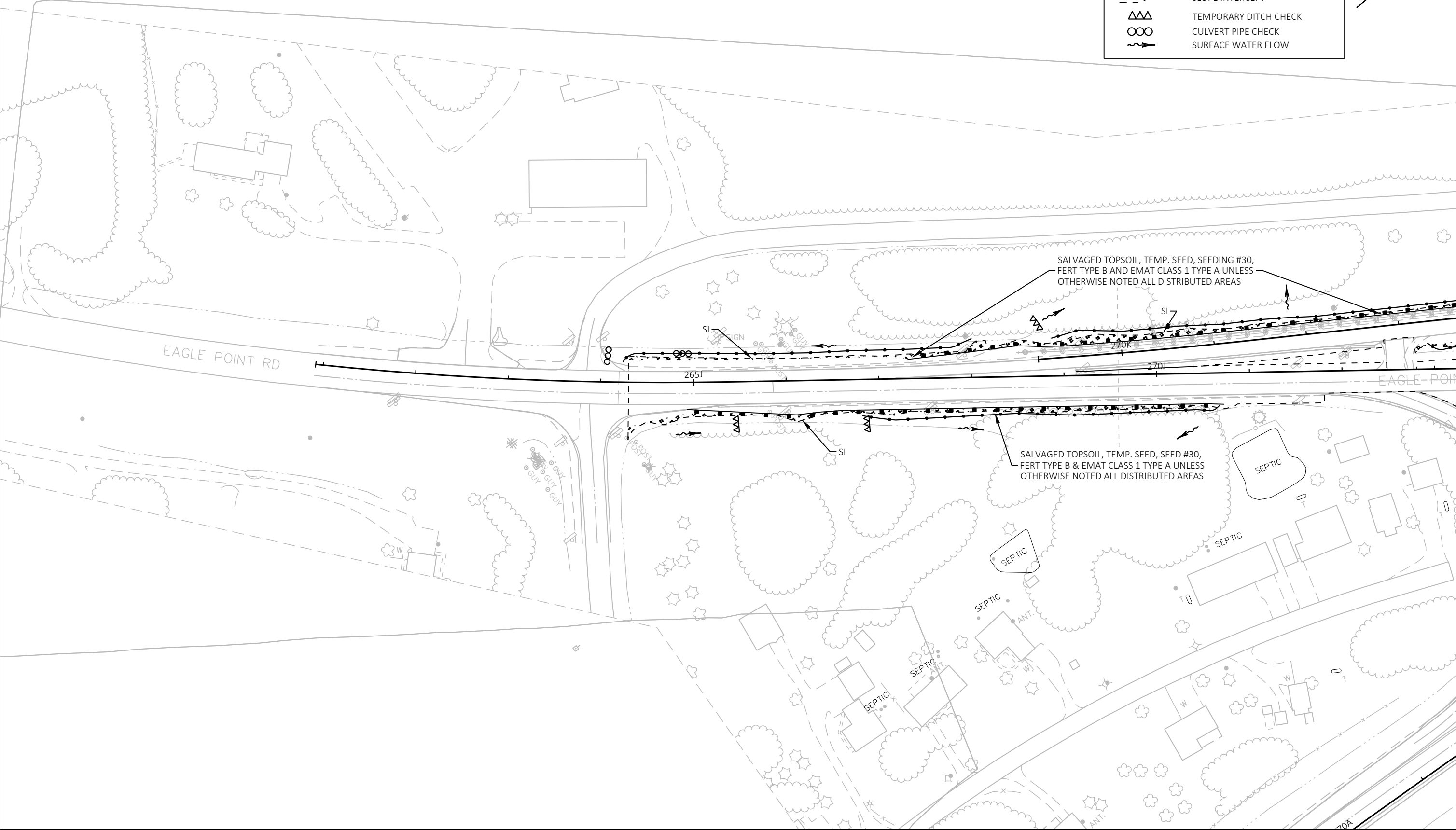
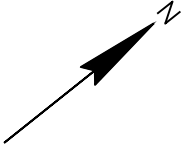
SILT FENCE

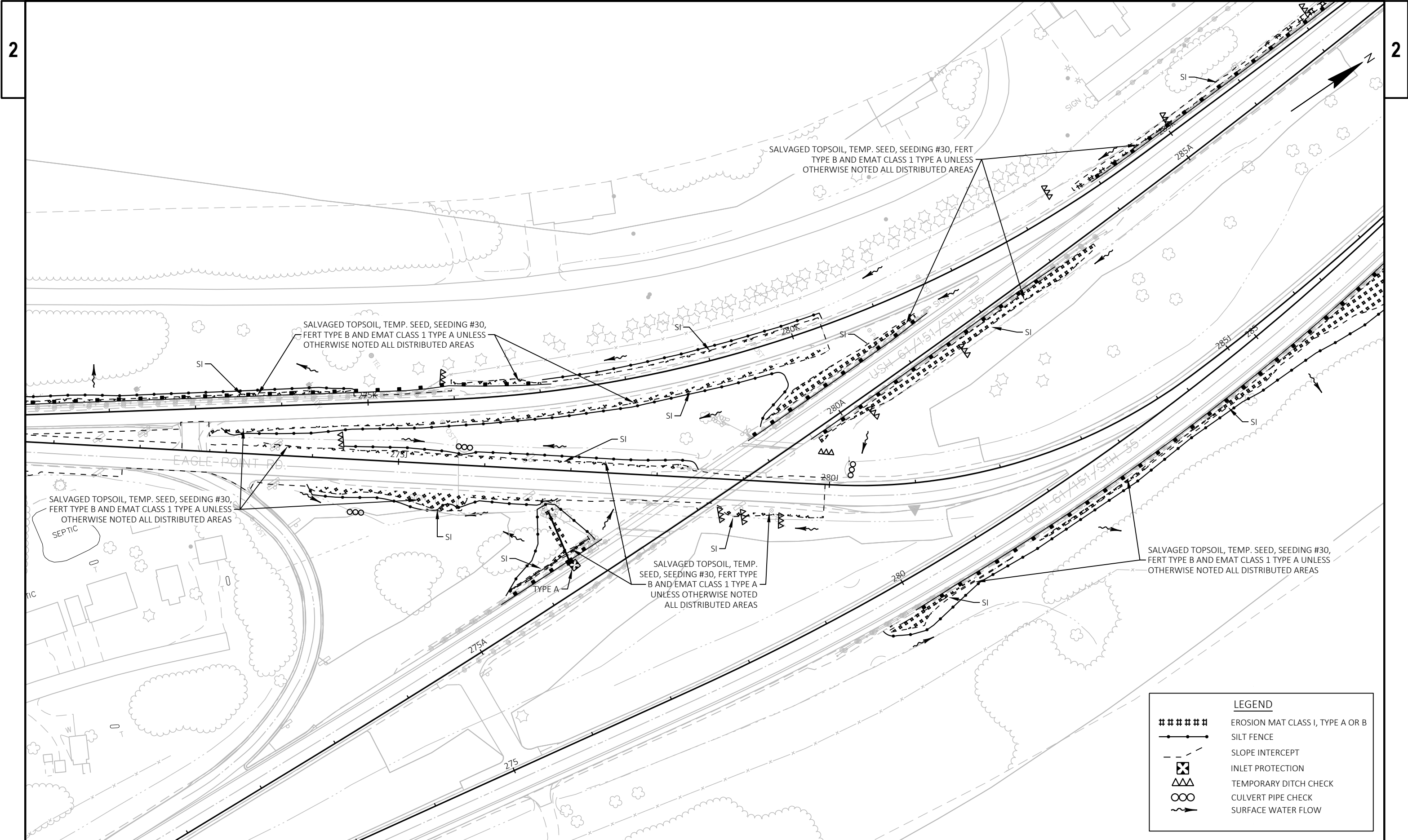
SLOPE INTERCEPT

TEMPORARY DITCH CHECK

CULVERT PIPE CHECK

SURFACE WATER FLOW



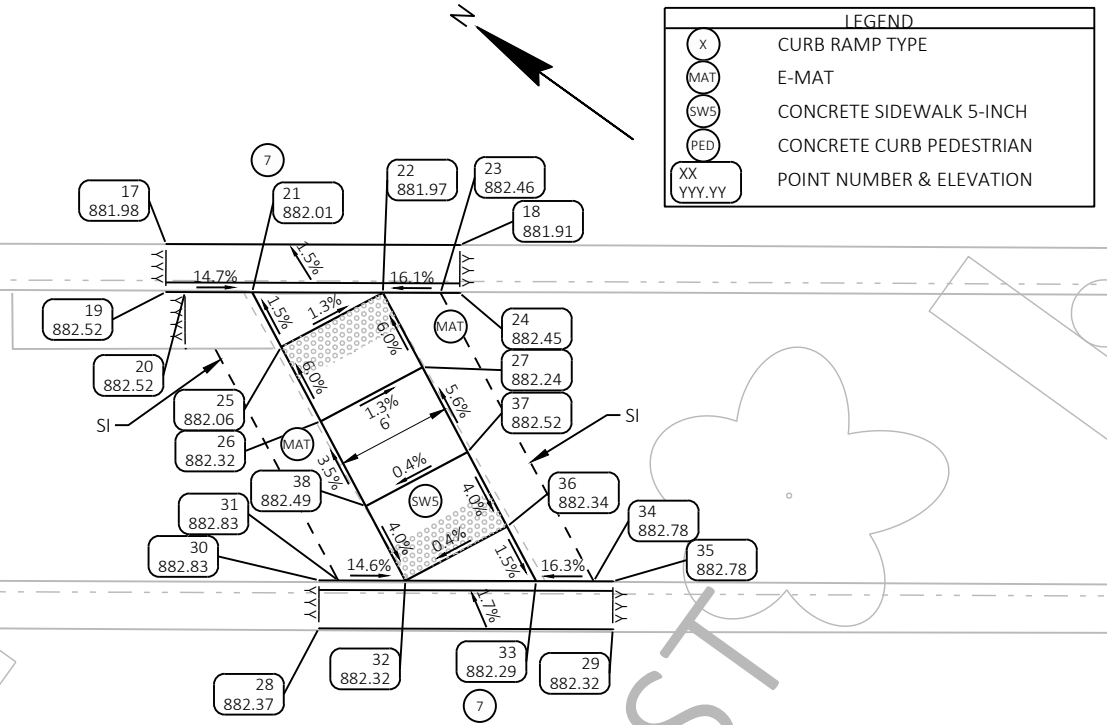


| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 17           | 124+06.38 X | 35.26' LT | 881.98    | 404706.03 | 843718.28 |
| 18           | 124+21.69 X | 35.21' LT | 881.91    | 404693.58 | 843727.18 |
| 19           | 124+06.37 X | 32.76' LT | 882.52    | 404704.58 | 843716.25 |
| 20           | 124+07.37 X | 32.76' LT | 882.52    | 404703.77 | 843716.83 |
| 21           | 124+10.87 X | 32.75' LT | 882.01    | 404700.92 | 843718.86 |
| 22           | 124+17.68 X | 32.72' LT | 881.97    | 404695.38 | 843722.82 |
| 23           | 124+20.68 X | 32.71' LT | 882.46    | 404692.94 | 843724.56 |
| 24           | 124+21.68 X | 32.71' LT | 882.45    | 404692.12 | 843725.14 |
| 25           | 124+12.38 X | 29.91' LT | 882.06    | 404698.04 | 843717.44 |
| 26           | 124+14.44 X | 26.03' LT | 882.32    | 404694.10 | 843715.49 |
| 27           | 124+19.74 X | 28.85' LT | 882.24    | 404691.44 | 843720.87 |

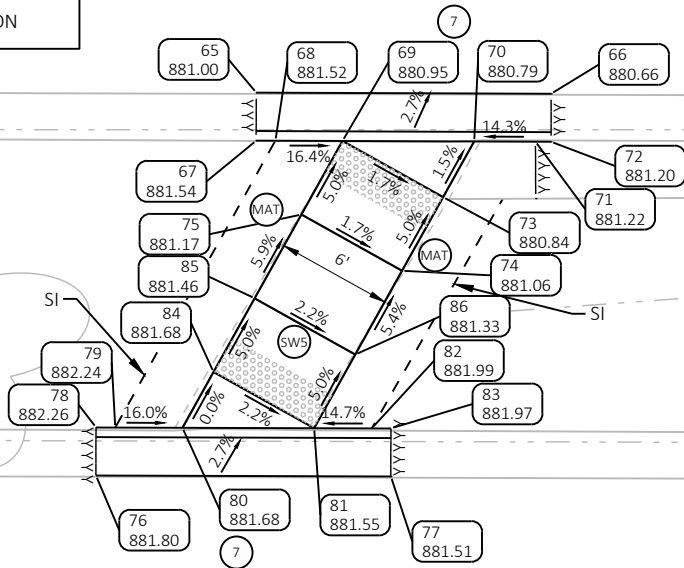
| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 28           | 124+14.34 X | 15.25' LT | 882.37    | 404687.89 | 843706.68 |
| 29           | 124+29.64 X | 15.20' LT | 882.32    | 404675.43 | 843715.58 |
| 30           | 124+14.35 X | 17.75' LT | 882.83    | 404689.34 | 843708.72 |
| 31           | 124+15.35 X | 17.75' LT | 882.83    | 404688.52 | 843709.30 |
| 32           | 124+18.85 X | 17.74' LT | 882.32    | 404685.68 | 843711.33 |
| 33           | 124+25.65 X | 17.71' LT | 882.29    | 404680.14 | 843715.29 |
| 34           | 124+28.65 X | 17.70' LT | 882.78    | 404677.70 | 843717.03 |
| 35           | 124+29.65 X | 17.70' LT | 882.78    | 404676.88 | 843717.61 |
| 36           | 124+24.15 X | 20.55' LT | 882.34    | 404683.02 | 843716.71 |
| 37           | 124+22.08 X | 24.43' LT | 882.52    | 404686.96 | 843718.66 |
| 38           | 124+16.78 X | 21.62' LT | 882.49    | 404689.62 | 843713.28 |

| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 39           | 124+25.04 X | 0.13' LT  | 882.61    | 404670.37 | 843700.65 |
| 40           | 124+40.34 X | 0.11' LT  | 882.49    | 404657.94 | 843709.57 |
| 41           | 124+25.03 X | 2.37' RT  | 883.15    | 404668.92 | 843698.62 |
| 42           | 124+26.03 X | 2.37' RT  | 883.15    | 404668.10 | 843699.21 |
| 43           | 124+29.53 X | 2.38' RT  | 882.64    | 404665.26 | 843701.25 |
| 44           | 124+36.33 X | 2.38' RT  | 882.57    | 404659.73 | 843705.21 |
| 45           | 124+39.33 X | 2.39' RT  | 883.04    | 404657.30 | 843706.96 |
| 46           | 124+40.33 X | 2.39' RT  | 883.03    | 404656.48 | 843707.54 |
| 47           | 124+31.03 X | 5.20' RT  | 882.65    | 404662.39 | 843699.83 |
| 48           | 124+33.85 X | 10.50' RT | 883.07    | 404657.01 | 843697.17 |
| 49           | 124+39.15 X | 7.68' RT  | 882.99    | 404654.35 | 843702.55 |
| 50           | 124+42.25 X | 13.52' RT | 883.36    | 404648.43 | 843699.62 |
| 51           | 124+38.06 X | 18.43' RT | 883.59    | 404648.97 | 843693.19 |

| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 01           | 123+68.78 X | 27.16' RT | 883.16    | 404700.11 | 843645.66 |
| 02           | 123+80.73 X | 27.17' RT | 883.22    | 404690.40 | 843652.62 |
| 03           | 123+80.61 X | 20.23' RT | 883.10    | 404694.56 | 843658.19 |
| 04           | 123+68.77 X | 29.66' RT | 883.70    | 404698.66 | 843643.62 |
| 05           | 123+76.77 X | 29.69' RT | 883.24    | 404692.14 | 843648.26 |
| 06           | 123+82.77 X | 29.72' RT | 883.26    | 404687.26 | 843651.74 |
| 07           | 123+82.77 X | 29.22' RT | 883.71    | 404687.55 | 843652.15 |
| 08           | 123+83.10 X | 20.18' RT | 883.64    | 404692.55 | 843659.68 |
| 09           | 123+90.77 X | 29.20' RT | 883.73    | 404681.06 | 843656.84 |
| 10           | 123+90.77 X | 29.70' RT | 883.73    | 404680.77 | 843656.43 |
| 11           | 123+90.79 X | 35.62' RT | 883.86    | 404677.30 | 843651.63 |
| 12           | 123+90.79 X | 36.12' RT | 883.84    | 404677.01 | 843651.23 |
| 13           | 123+82.76 X | 35.62' RT | 883.35    | 404683.82 | 843646.95 |
| 14           | 123+76.76 X | 35.61' RT | 883.33    | 404688.69 | 843643.45 |
| 15           | 123+68.75 X | 36.09' RT | 883.84    | 404694.92 | 843638.38 |
| 16           | 123+68.75 X | 35.59' RT | 883.84    | 404695.22 | 843638.79 |



| LEGEND       |                          |
|--------------|--------------------------|
| X            | CURB RAMP TYPE           |
| MAT          | E-MAT                    |
| SW5          | CONCRETE SIDEWALK 5-INCH |
| PED          | CONCRETE CURB PEDESTRIAN |
| XX<br>YYY.YY | POINT NUMBER & ELEVATION |

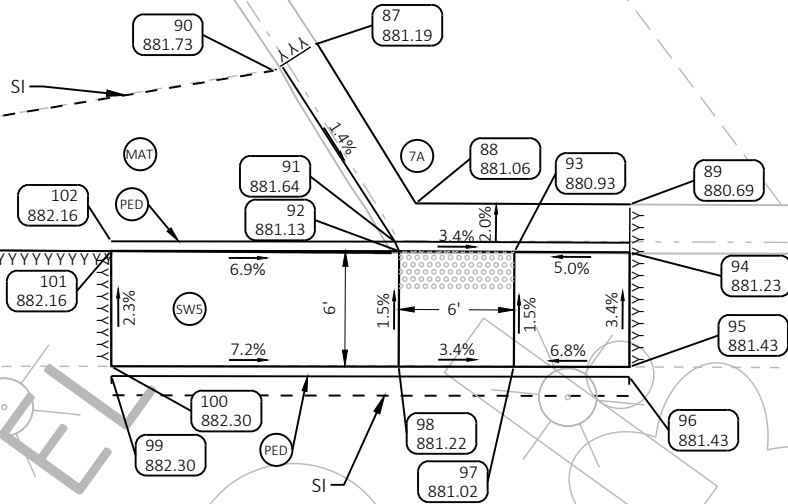
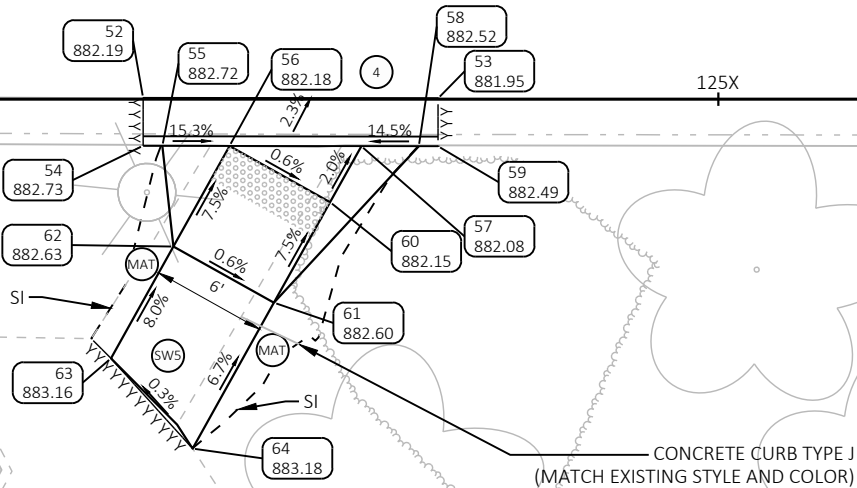


| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 65           | 124+89.53 X | 34.97' LT | 881.00    | 404638.36 | 843766.60 |
| 66           | 125+04.89 X | 34.92' LT | 880.66    | 404625.86 | 843775.52 |
| 67           | 124+89.52 X | 32.47' LT | 881.54    | 404636.90 | 843764.56 |
| 68           | 124+90.52 X | 32.47' LT | 881.52    | 404636.09 | 843765.14 |
| 69           | 124+94.02 X | 32.46' LT | 880.95    | 404633.24 | 843767.18 |
| 70           | 125+00.88 X | 32.43' LT | 880.79    | 404627.66 | 843771.16 |
| 71           | 125+04.07 X | 32.42' LT | 881.22    | 404625.06 | 843773.01 |
| 72           | 125+04.88 X | 32.42' LT | 881.20    | 404624.41 | 843773.49 |
| 73           | 124+99.26 X | 29.53' LT | 880.84    | 404627.28 | 843767.86 |
| 74           | 124+97.12 X | 25.70' LT | 881.06    | 404626.78 | 843763.50 |
| 75           | 124+91.88 X | 28.62' LT | 881.17    | 404632.74 | 843762.82 |

| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 76           | 124+81.18 X | 15.03' LT | 881.80    | 404633.50 | 843745.53 |
| 77           | 124+96.53 X | 14.98' LT | 881.51    | 404621.00 | 843754.46 |
| 78           | 124+81.18 X | 17.53' LT | 882.26    | 404634.95 | 843747.57 |
| 79           | 124+82.18 X | 17.53' LT | 882.24    | 404634.14 | 843748.15 |
| 80           | 124+85.68 X | 17.52' LT | 881.68    | 404631.29 | 843750.18 |
| 81           | 124+92.54 X | 17.50' LT | 881.55    | 404625.71 | 843754.17 |
| 82           | 124+95.54 X | 17.49' LT | 881.99    | 404623.27 | 843755.91 |
| 83           | 124+96.54 X | 17.48' LT | 881.97    | 404622.45 | 843756.49 |
| 84           | 124+87.30 X | 20.42' LT | 881.68    | 404631.67 | 843753.48 |
| 85           | 124+89.44 X | 24.26' LT | 881.46    | 404632.17 | 843757.85 |
| 86           | 124+94.68 X | 21.33' LT | 881.33    | 404626.21 | 843758.53 |

| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 52           | 124+70.05 X | 0.07' LT  | 882.19    | 404633.80 | 843726.88 |
| 53           | 124+85.41 X | 0.05' LT  | 881.95    | 404621.31 | 843735.83 |
| 54           | 124+70.04 X | 2.43' RT  | 882.73    | 404632.34 | 843724.85 |
| 55           | 124+71.04 X | 2.43' RT  | 882.72    | 404631.53 | 843725.43 |
| 56           | 124+74.54 X | 2.44' RT  | 882.18    | 404628.68 | 843727.47 |
| 57           | 124+81.41 X | 2.45' RT  | 882.08    | 404623.10 | 843731.48 |
| 58           | 124+84.40 X | 2.45' RT  | 882.52    | 404620.67 | 843733.22 |
| 59           | 124+85.40 X | 2.45' RT  | 882.49    | 404619.86 | 843733.80 |
| 60           | 124+79.78 X | 5.36' RT  | 882.15    | 404622.72 | 843728.16 |
| 61           | 124+76.86 X | 10.60' RT | 882.60    | 404622.04 | 843722.20 |
| 62           | 124+71.62 X | 7.68' RT  | 882.63    | 404628.00 | 843721.51 |
| 63           | 124+68.37 X | 13.50' RT | 883.16    | 404627.24 | 843714.89 |
| 64           | 124+72.62 X | 18.19' RT | 883.18    | 404621.04 | 843713.56 |

| Rest Area    |             |           |           |           |           |
|--------------|-------------|-----------|-----------|-----------|-----------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | NORTHING  | EASTING   |
| 87           | 125+37.06 X | 19.36' RT | 881.19    | 404568.05 | 843750.24 |
| 88           | 125+42.37 X | 27.61' RT | 881.06    | 404558.92 | 843746.64 |
| 89           | 125+53.51 X | 27.67' RT | 880.69    | 404549.84 | 843753.10 |
| 90           | 125+34.96 X | 20.71' RT | 881.73    | 404568.97 | 843747.92 |
| 91           | 125+41.27 X | 29.61' RT | 881.64    | 404558.64 | 843744.38 |
| 92           | 125+41.50 X | 30.11' RT | 881.13    | 404558.17 | 843744.11 |
| 93           | 125+47.50 X | 30.14' RT | 880.93    | 404553.28 | 843747.59 |
| 94           | 125+53.50 X | 30.17' RT | 881.23    | 404548.39 | 843751.07 |
| 95           | 125+53.49 X | 36.13' RT | 881.43    | 404544.92 | 843746.21 |
| 96           | 125+53.49 X | 36.64' RT | 881.43    | 404544.62 | 843745.80 |
| 97           | 125+47.47 X | 36.10' RT | 881.02    | 404549.82 | 843742.73 |
| 98           | 125+41.47 X | 36.07' RT | 881.22    | 404554.71 | 843739.25 |
| 99           | 125+26.51 X | 36.60' RT | 882.30    | 404566.54 | 843730.08 |
| 100          | 125+26.51 X | 36.10' RT | 882.30    | 404566.84 | 843730.49 |
| 101          | 125+26.50 X | 30.09' RT | 882.16    | 404570.36 | 843735.36 |
| 102          | 125+26.50 X | 29.59' RT | 882.16    | 404570.65 | 843735.77 |



- NOTES:
1. CONTRACTOR TO FEILD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
  2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
  3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
  4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
  5. ALL STATION AND OFFSET INFORMATION REFERENCE REST AREA R/L.

MARKING LINE 10-INCH

MARKING LINE 6-INCH,  
YELLOWMARKING LINE 6-INCH,  
WHITESTA: 121+21  
OFFSET: 93.7' LTMARKING LINE 6-INCH,  
YELLOWSTA: 125+36  
OFFSET: 138.6' LT

MARKING PARKING STALL

STA: 126+28  
OFFSET: 67.5' LTSTA: 123+14  
OFFSET: 71.5' LT

MARKING CROSSWALK

MARKING LINE 10-INCH

MARKING LINE 6-INCH,  
WHITE

Alignment=Rest Area 106  
Station=127+13.43 X  
Offset=27.613  
Northing=404437.2565  
Easting=843885.6655

MARKING PARKING STALL

ADA STALL

ADA STALL

MARKING PARKING STALL

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

PAVEMENT MARKING REST AREA

SHEET

53

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSP\024501\_PM.DWG  
LAYOUT NAME - 01

PLOT DATE : 3/21/2025 2:13 PM

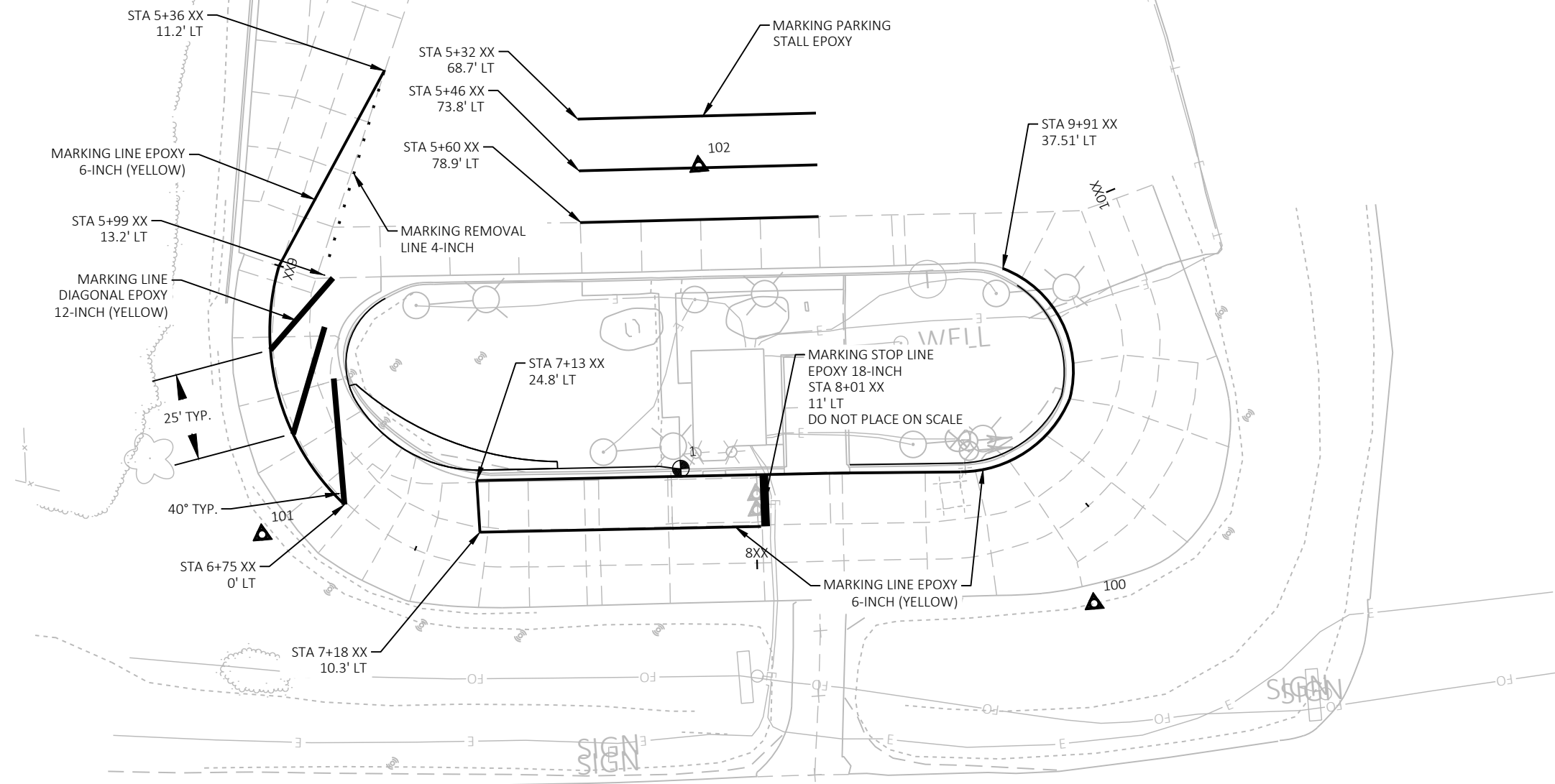
PLOT BY : MECUM, BRANDYN W

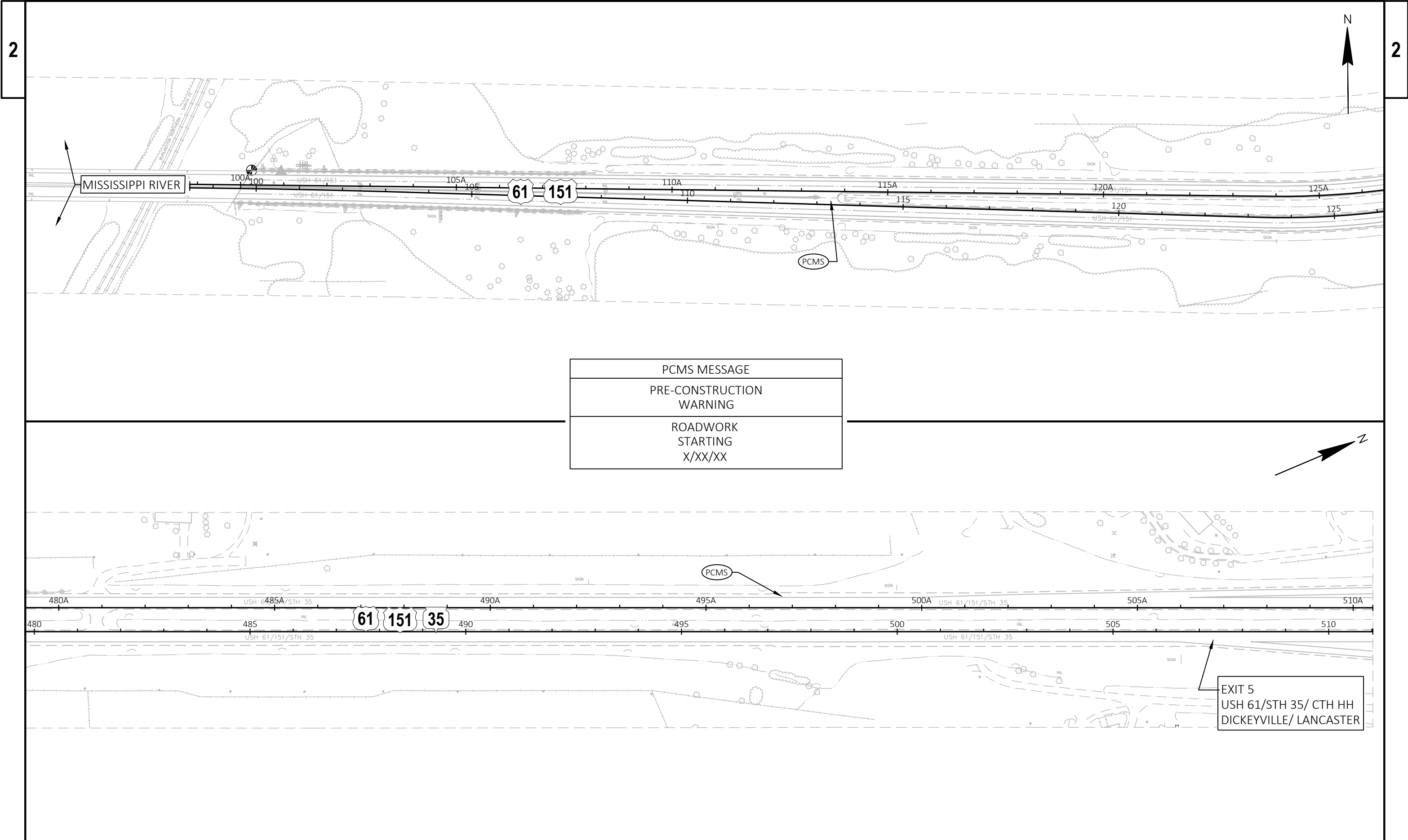
PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDs SHEET 42



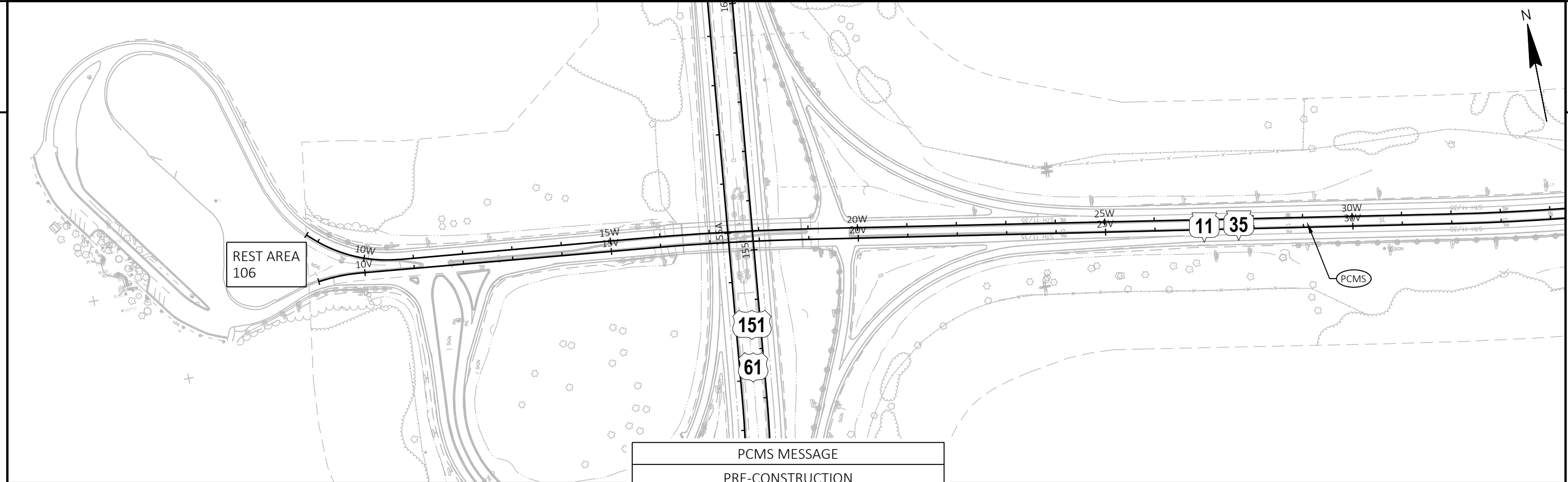




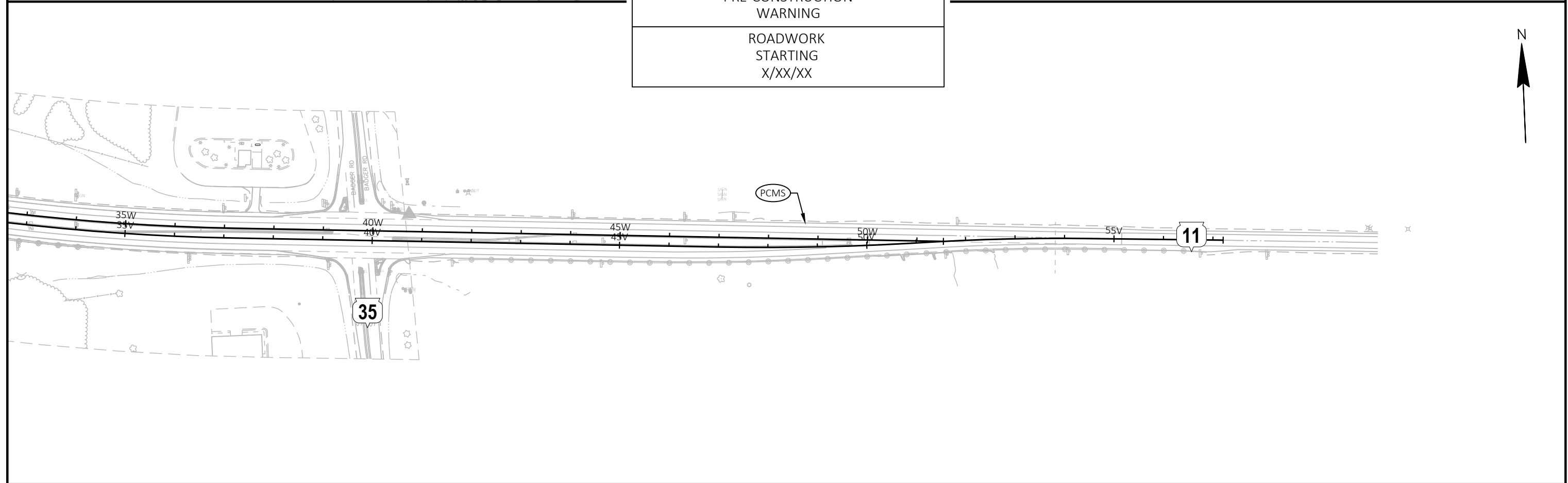


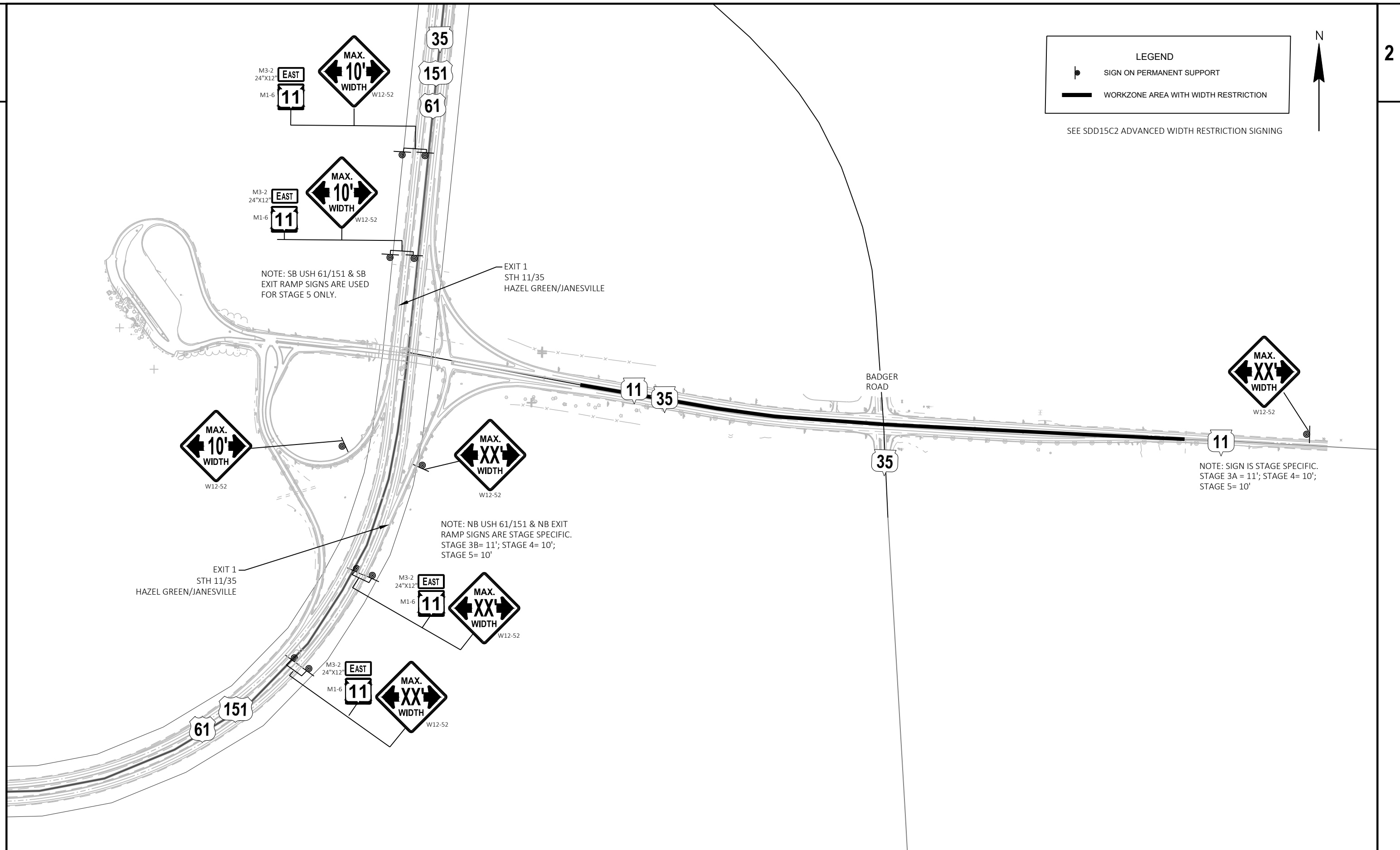
2

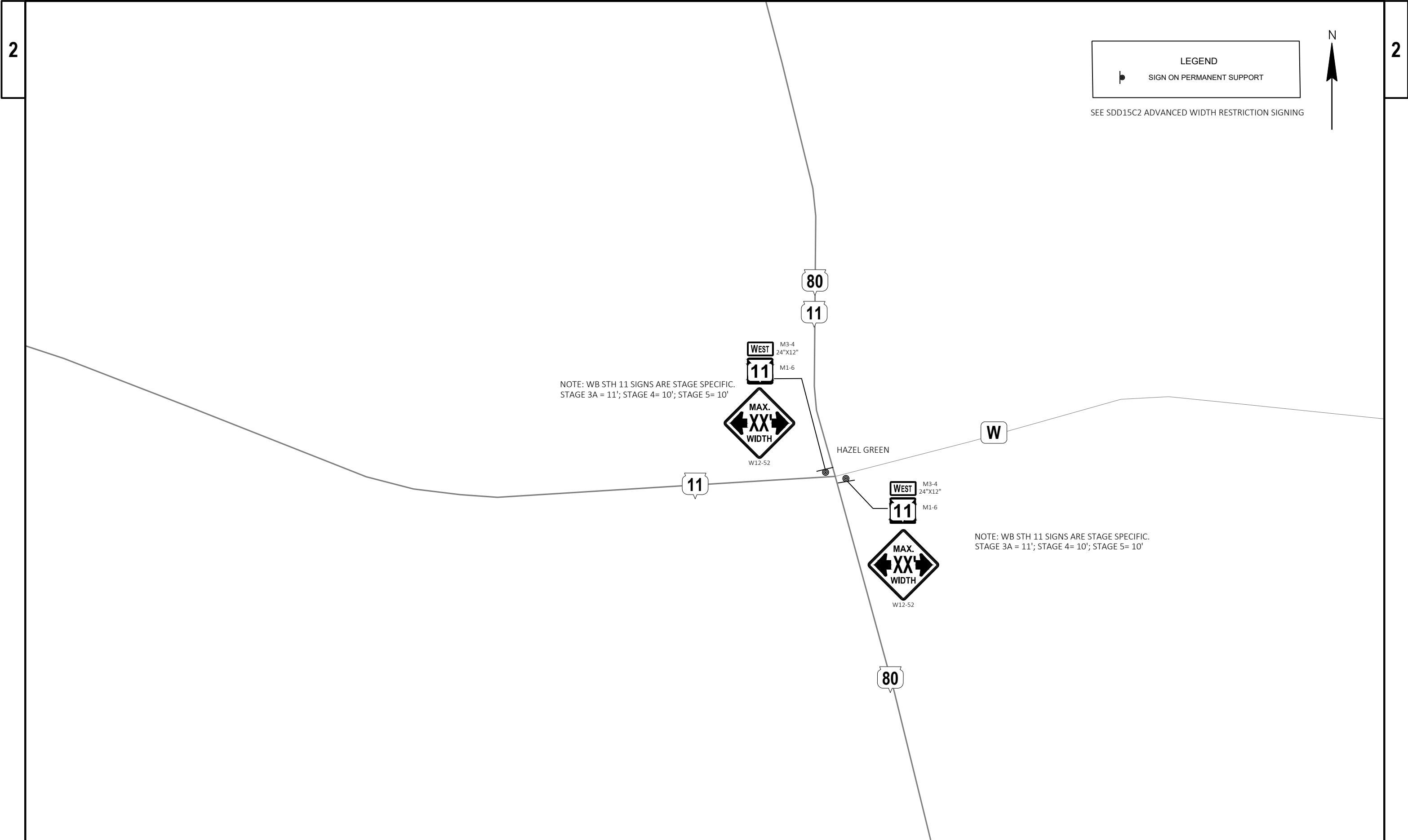
2

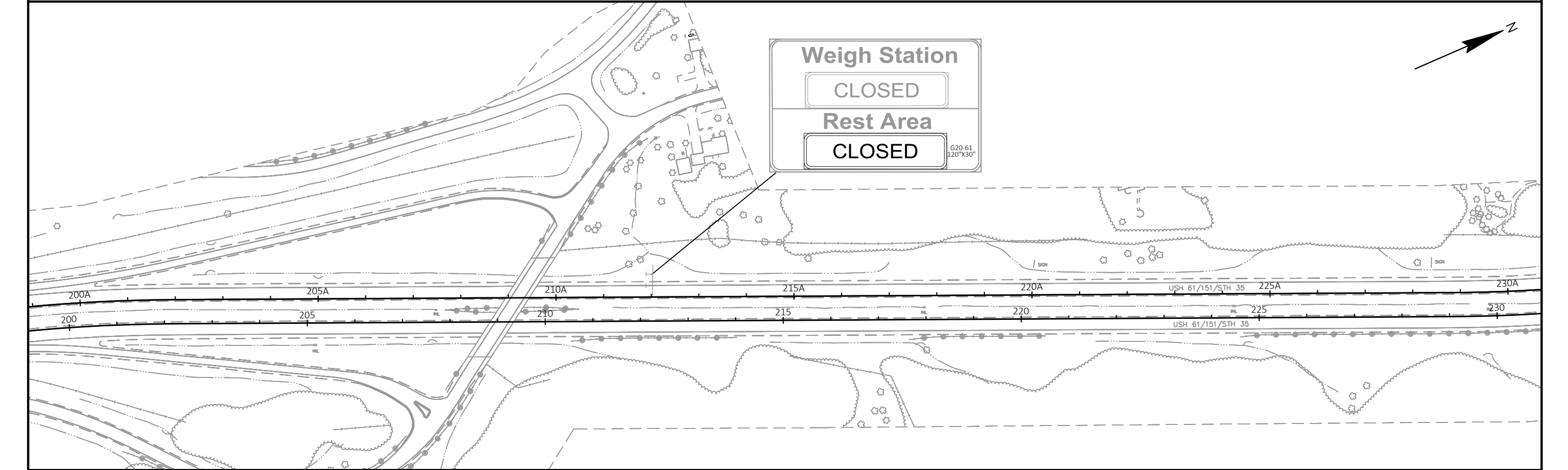
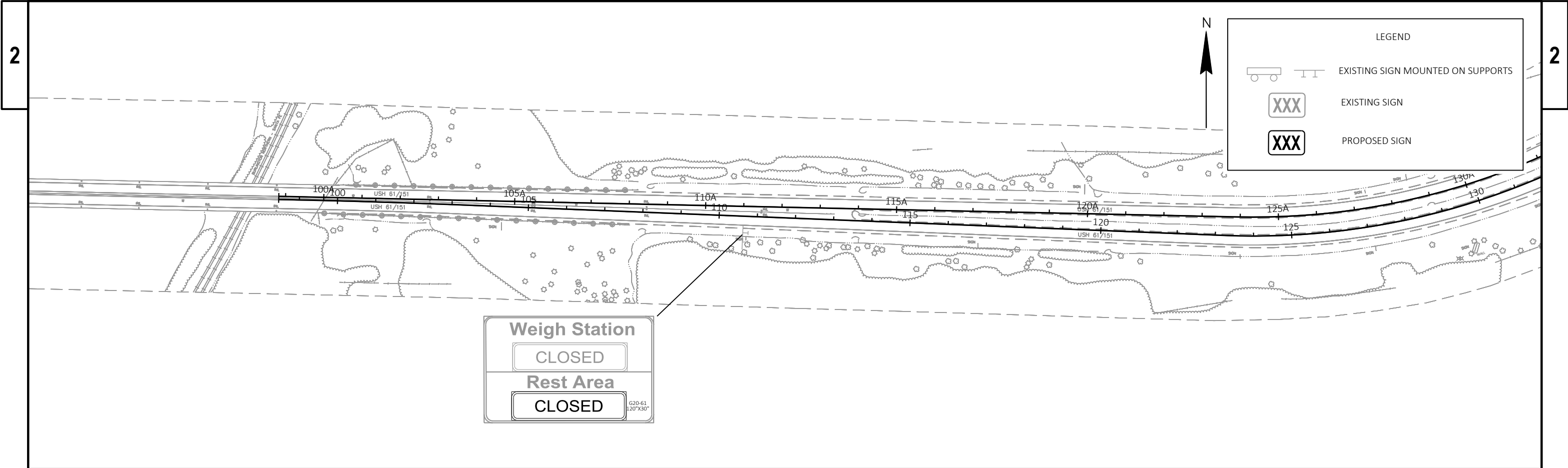


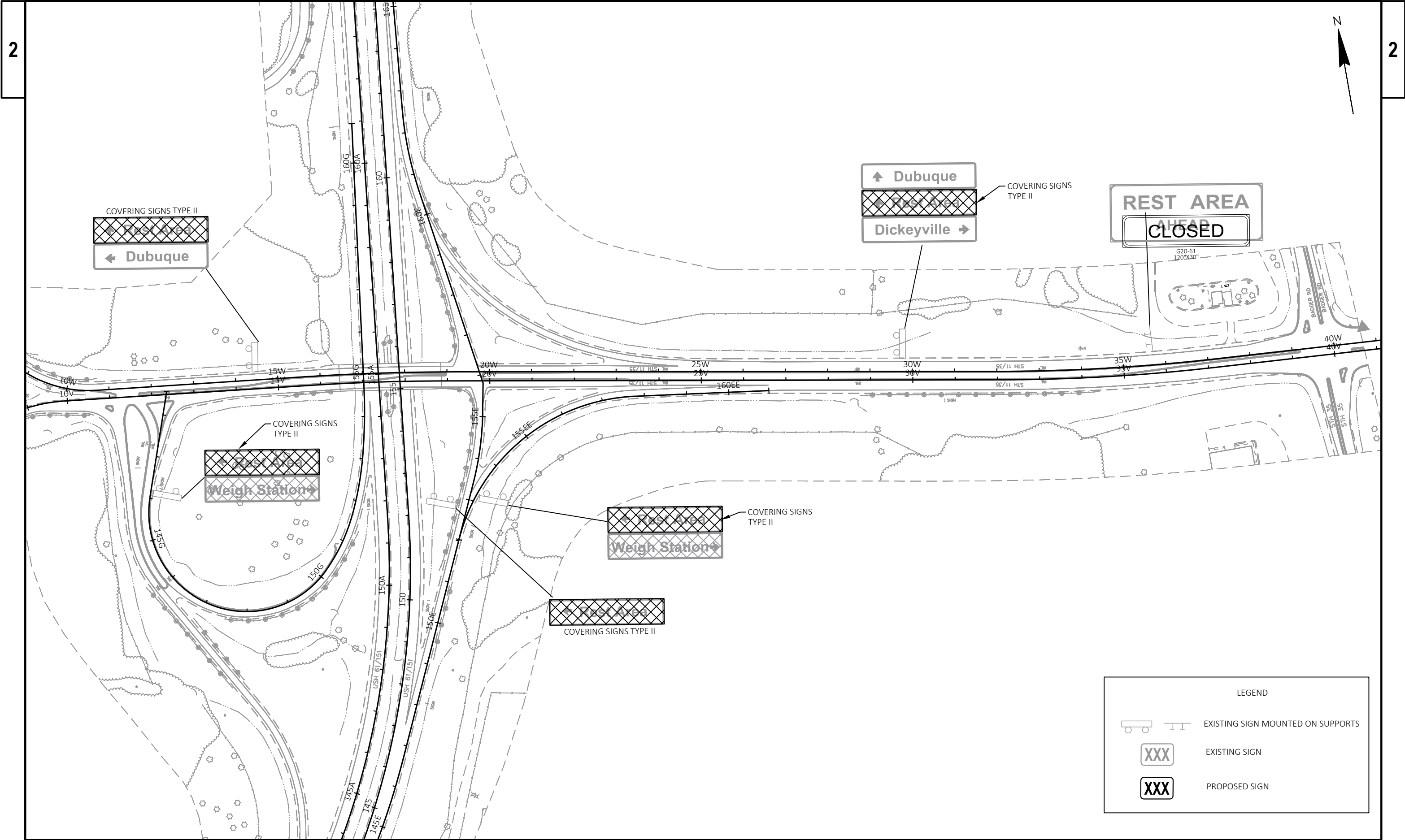
|                                 |
|---------------------------------|
| PCMS MESSAGE                    |
| PRE-CONSTRUCTION<br>WARNING     |
| ROADWORK<br>STARTING<br>X/XX/XX |

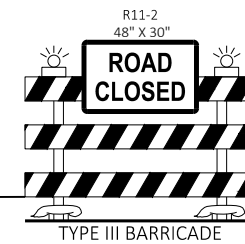
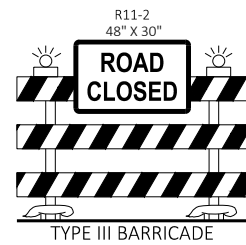












TRAFFIC CONTROL DRUMS, 25' SPACING

102

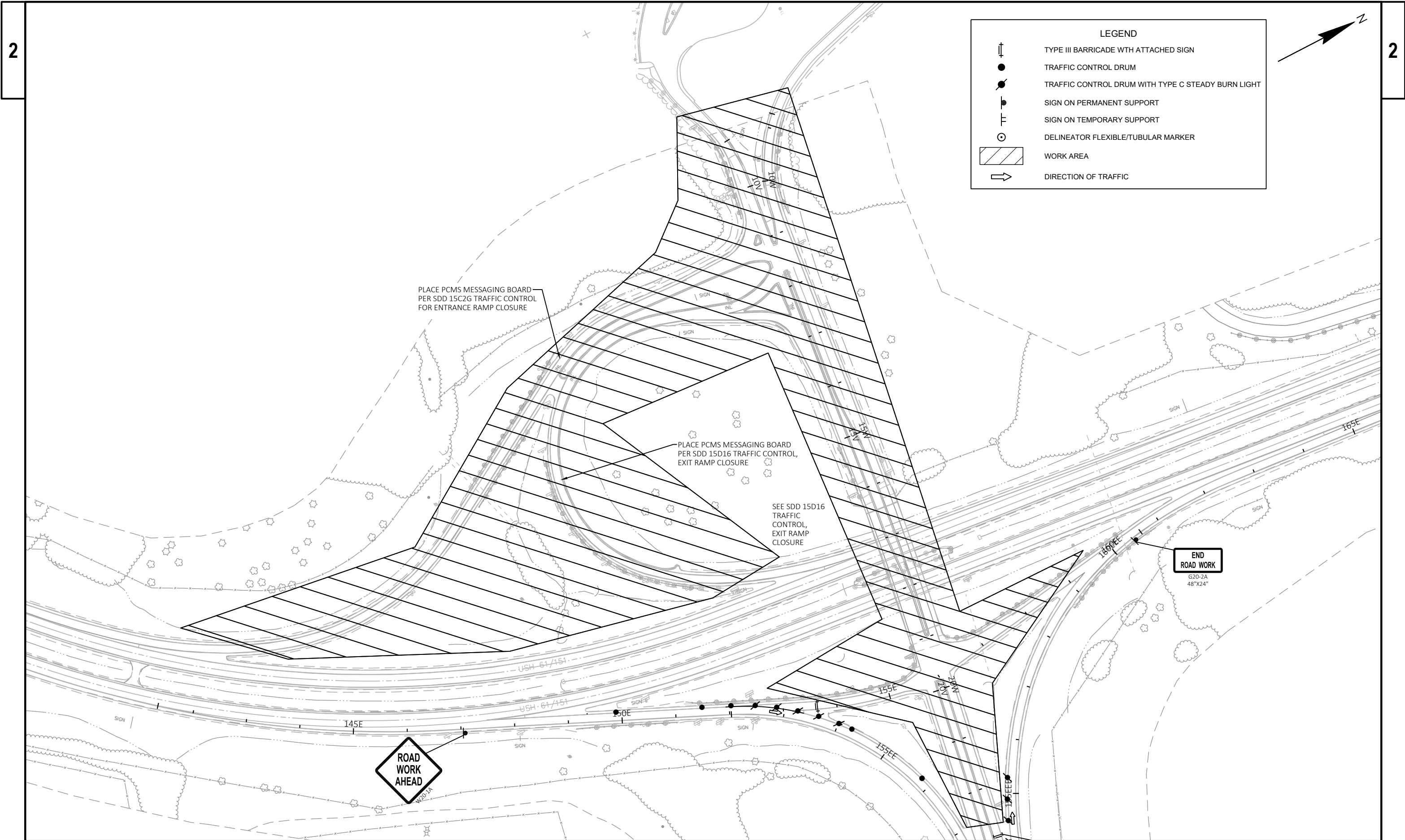
TRAFFIC CONTROL DRUMS, 15' SPACING

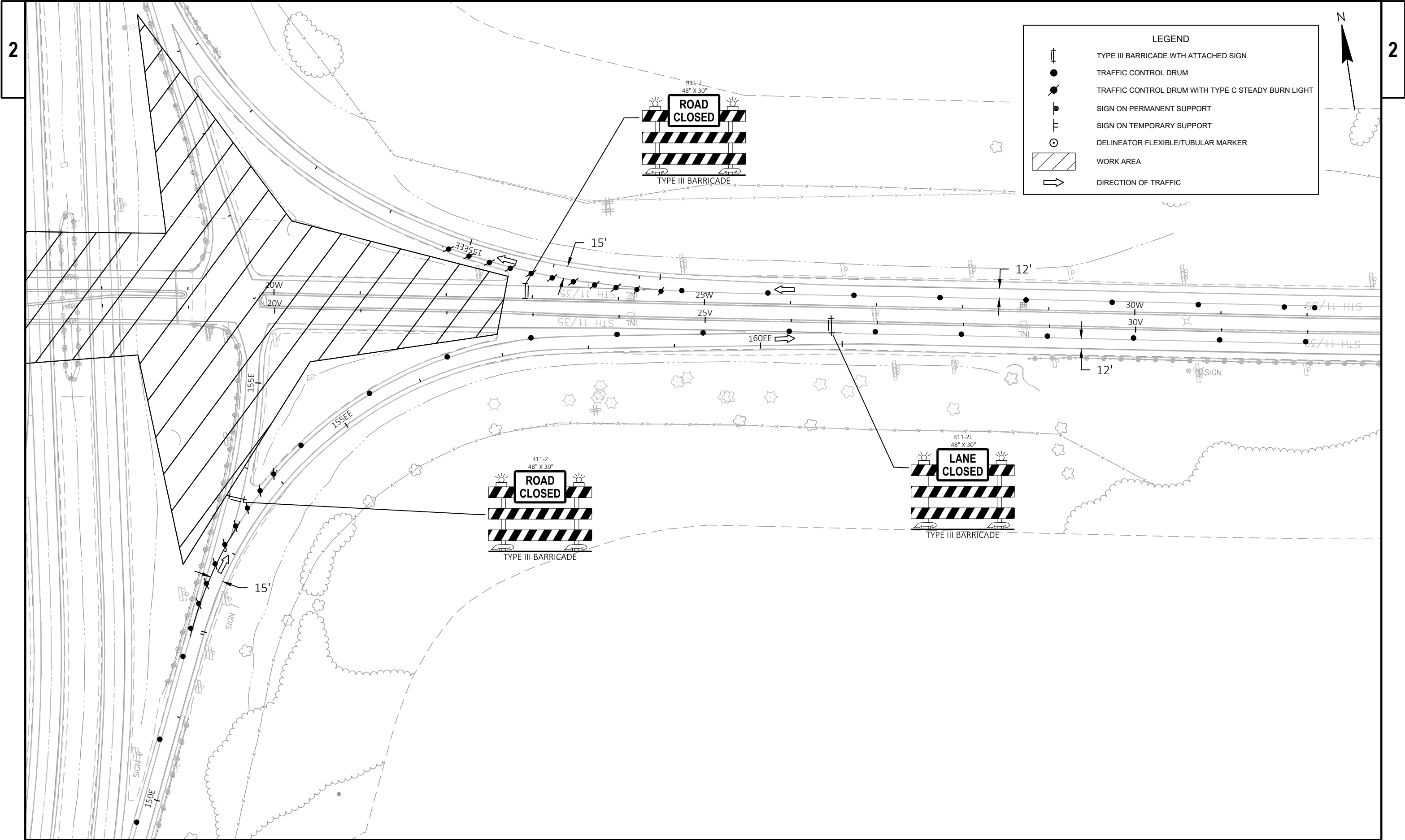
CONTRACTOR SHALL NOT TRAVEL  
ACROSS OR PARK ON SCALE DECK

WELL

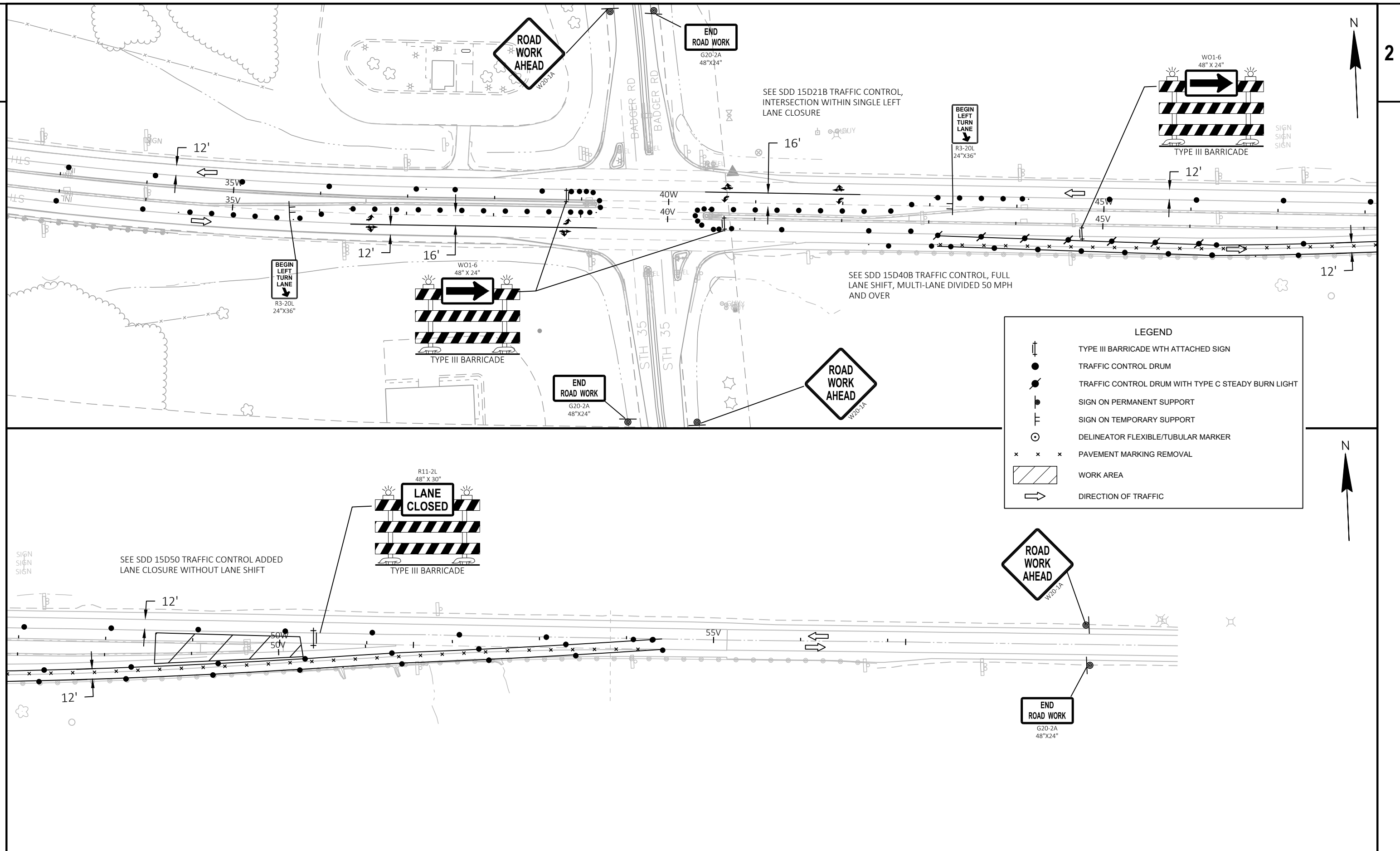
100

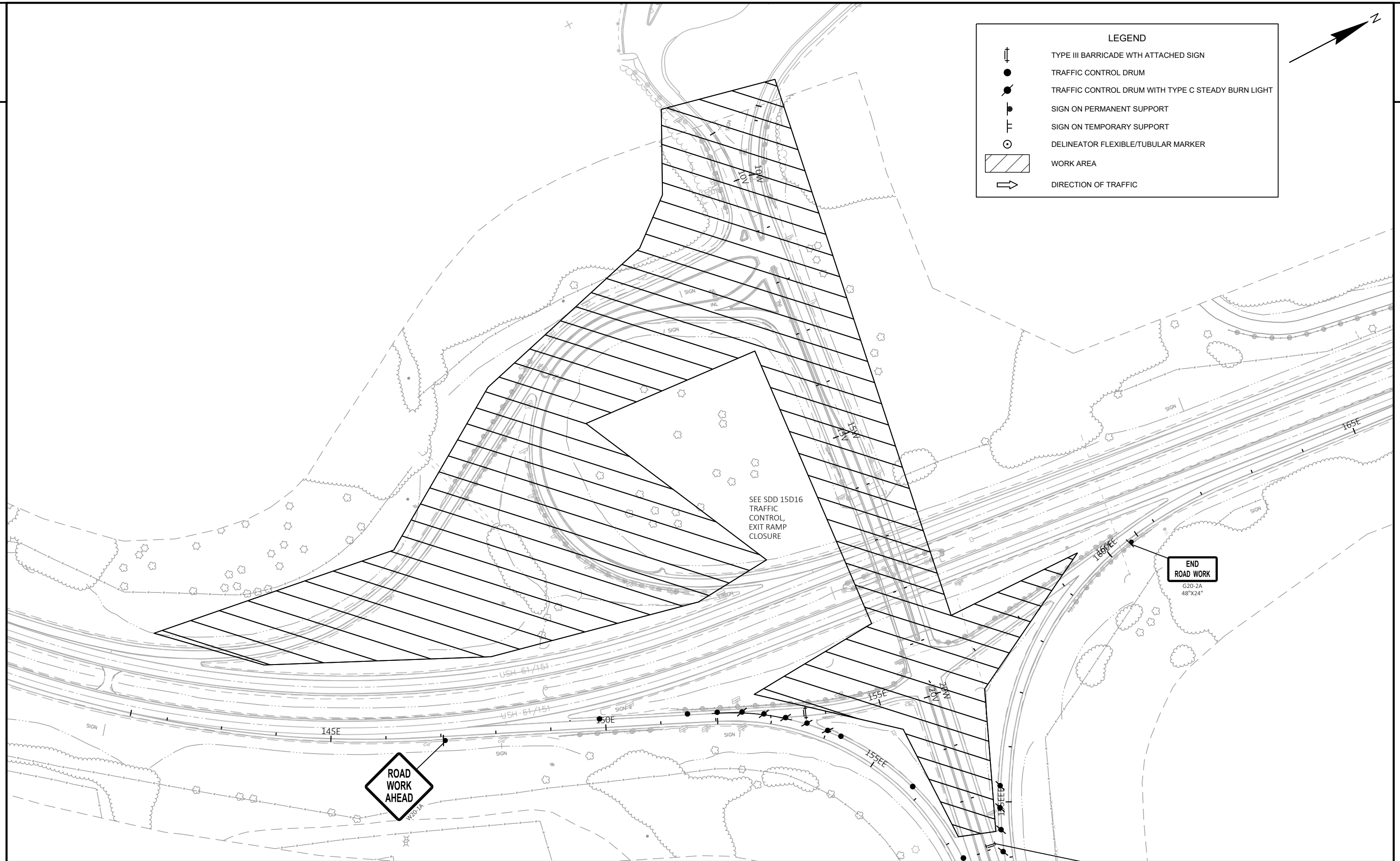


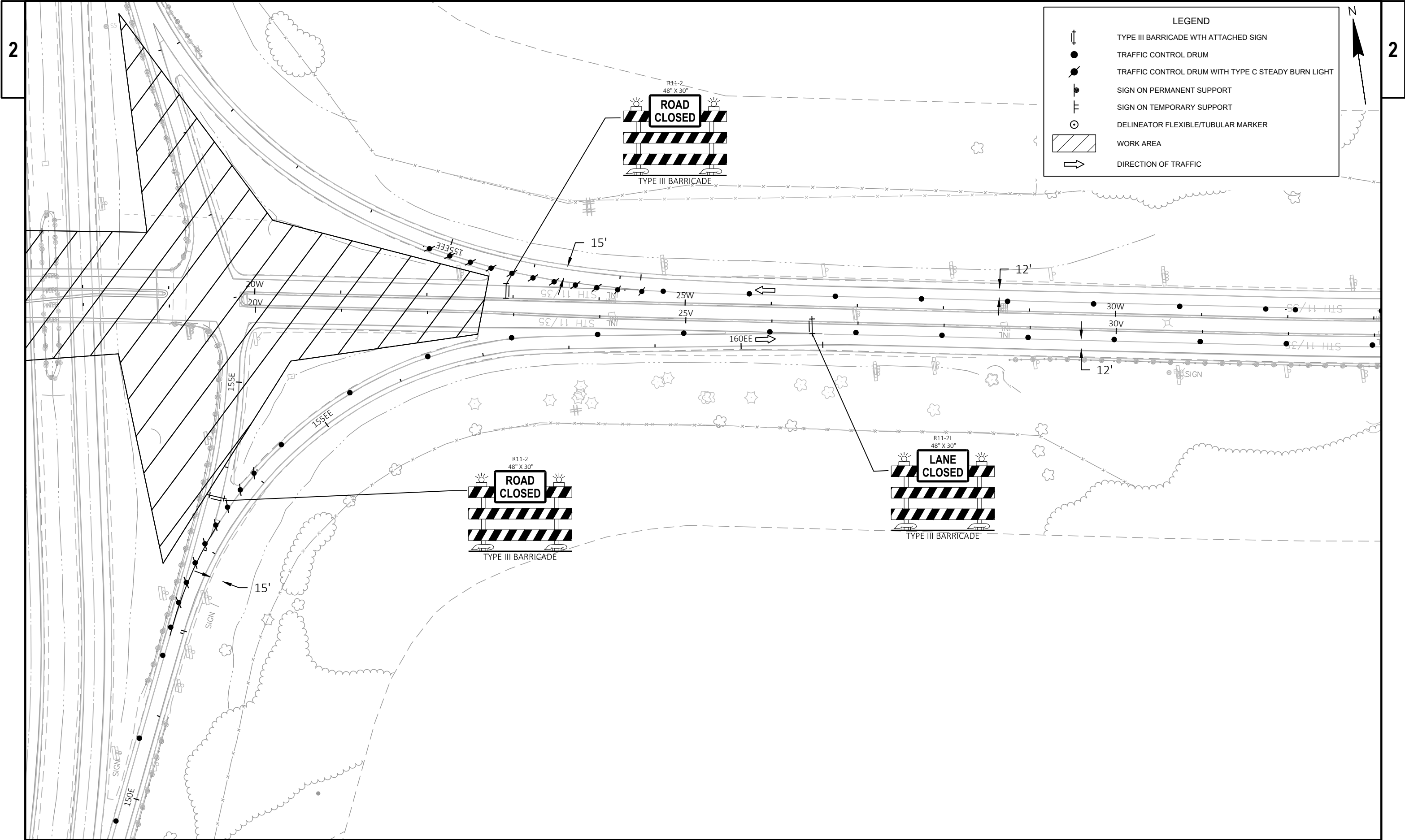


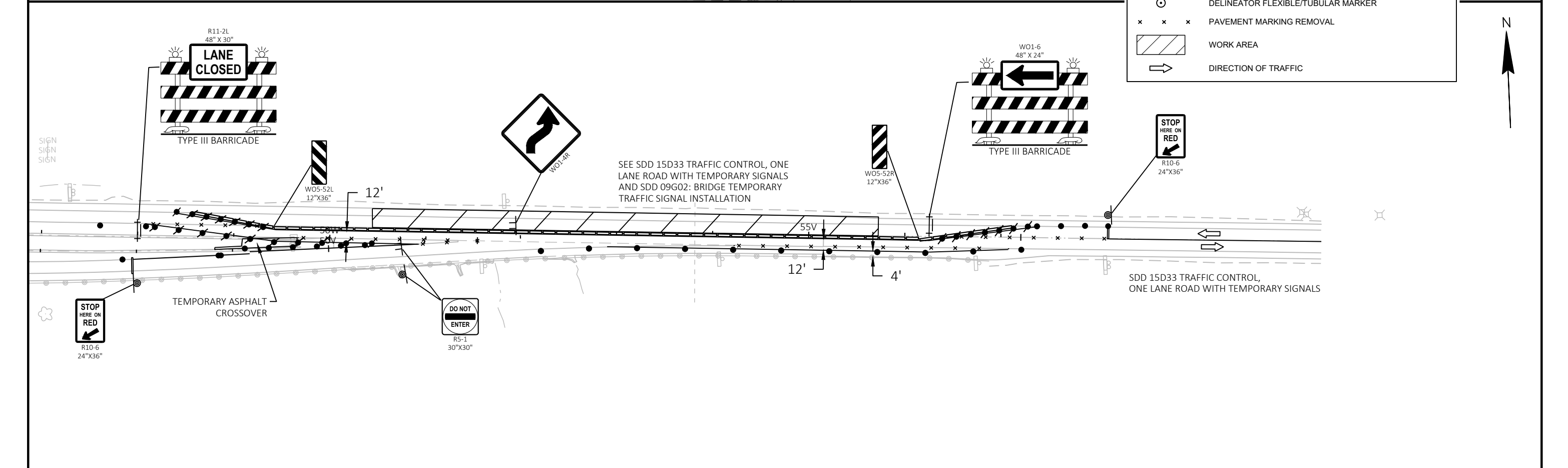
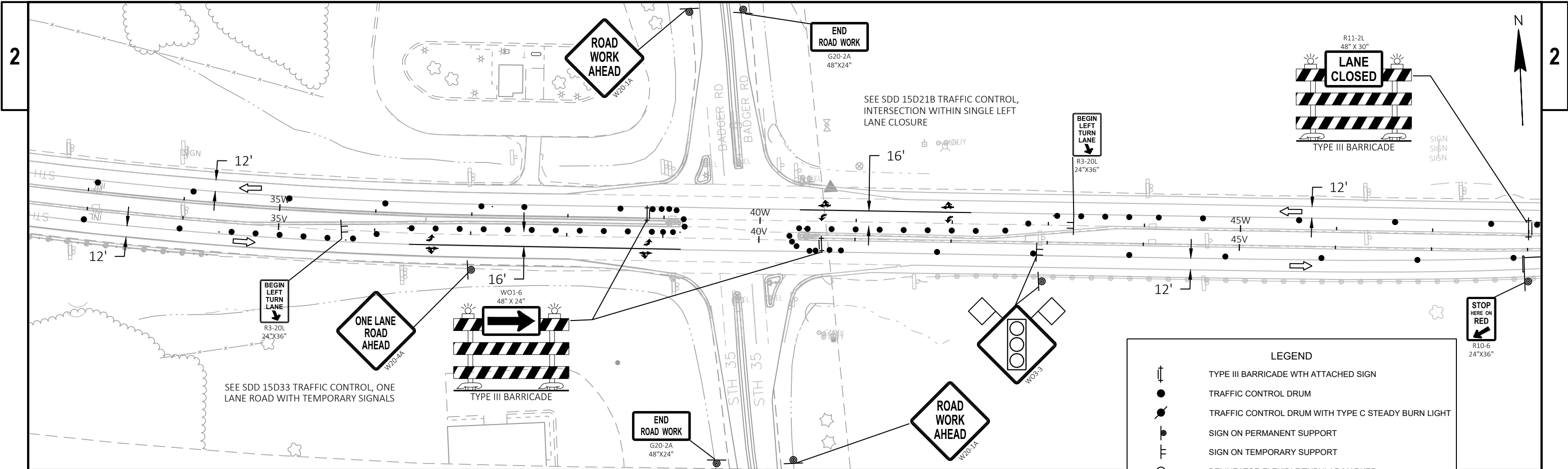


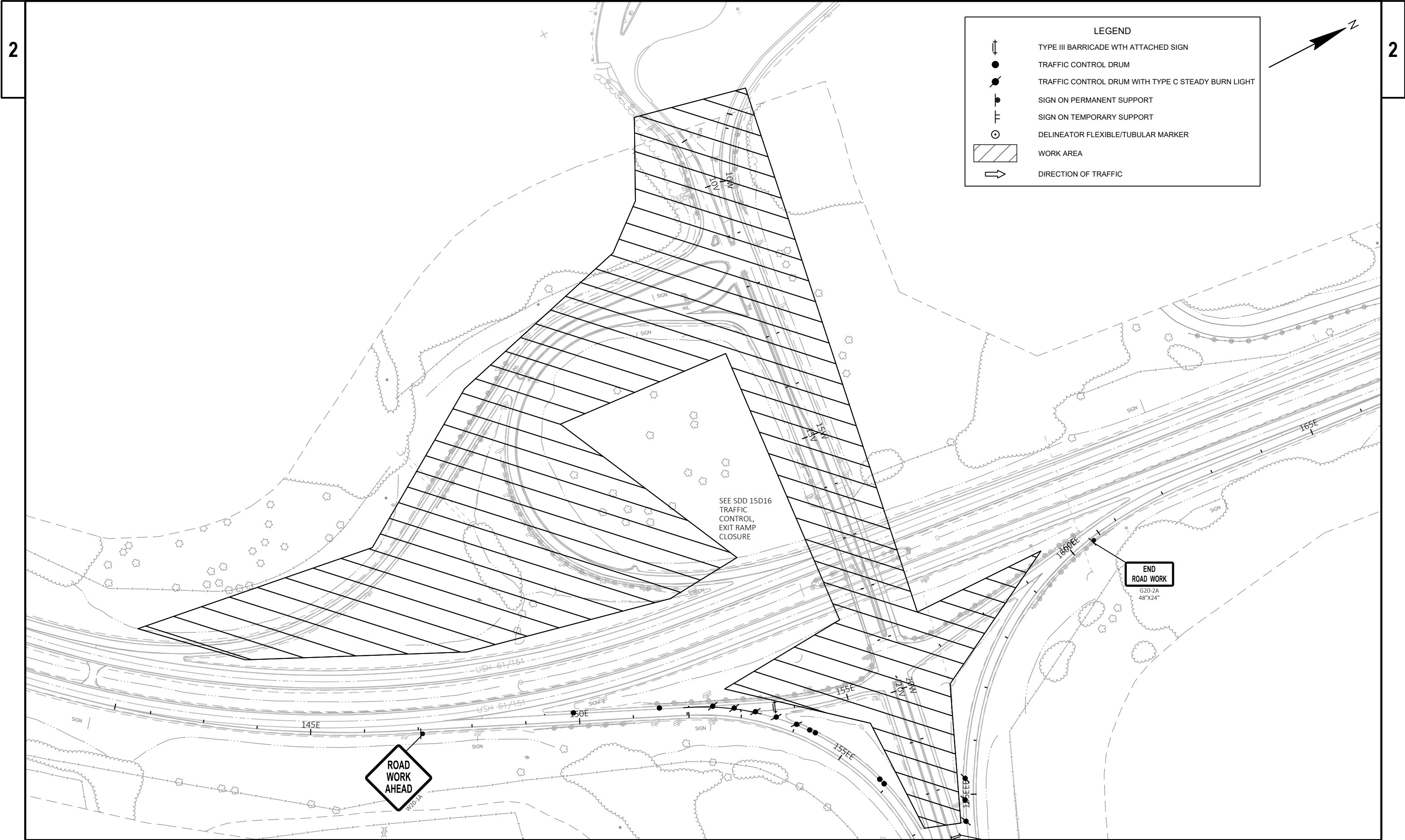


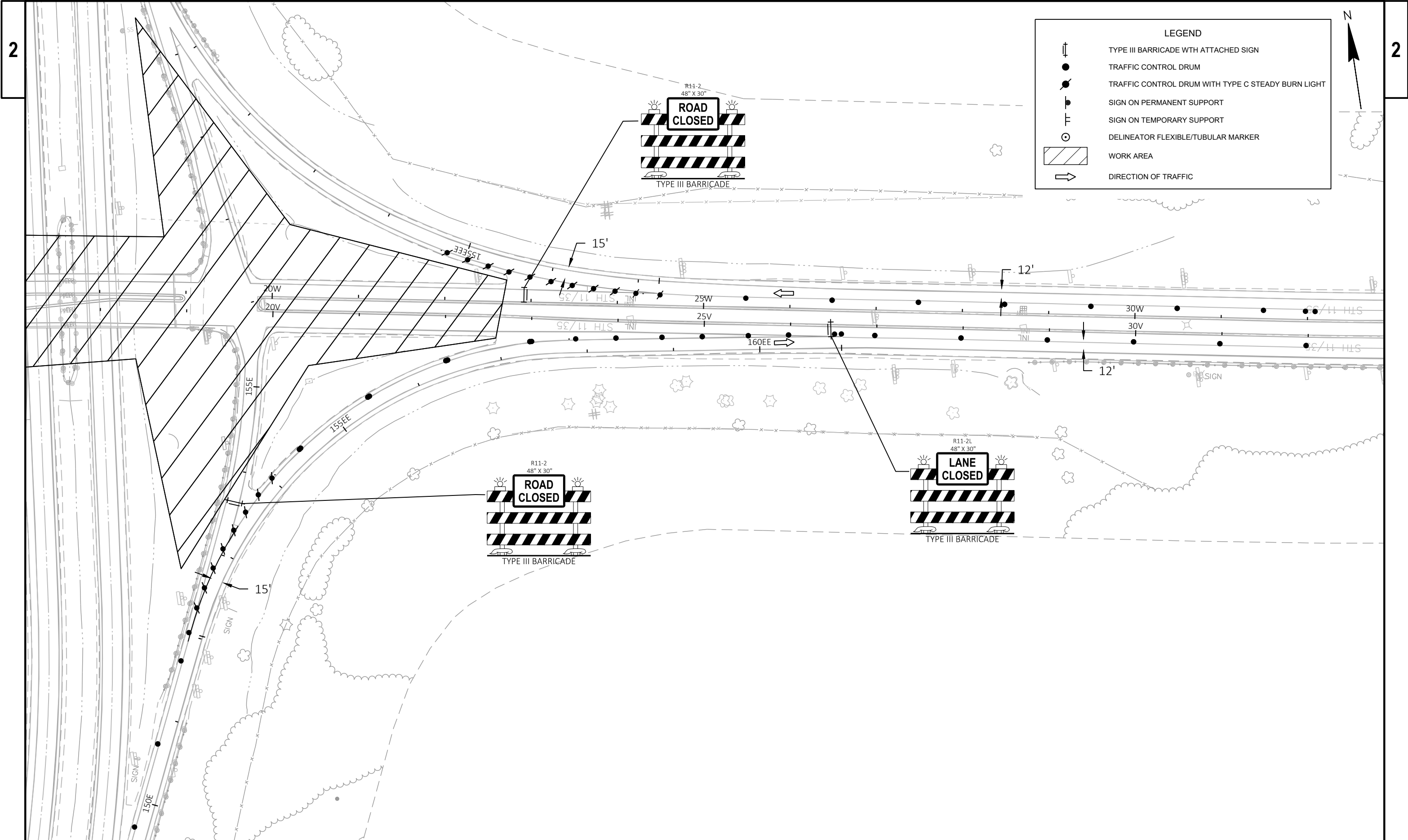




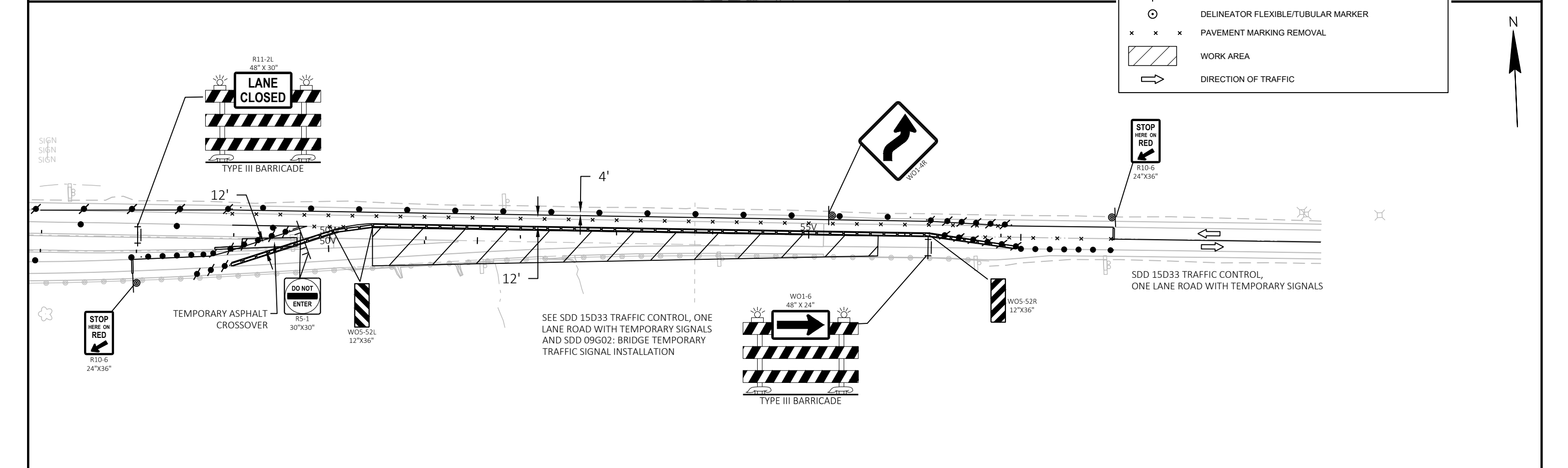
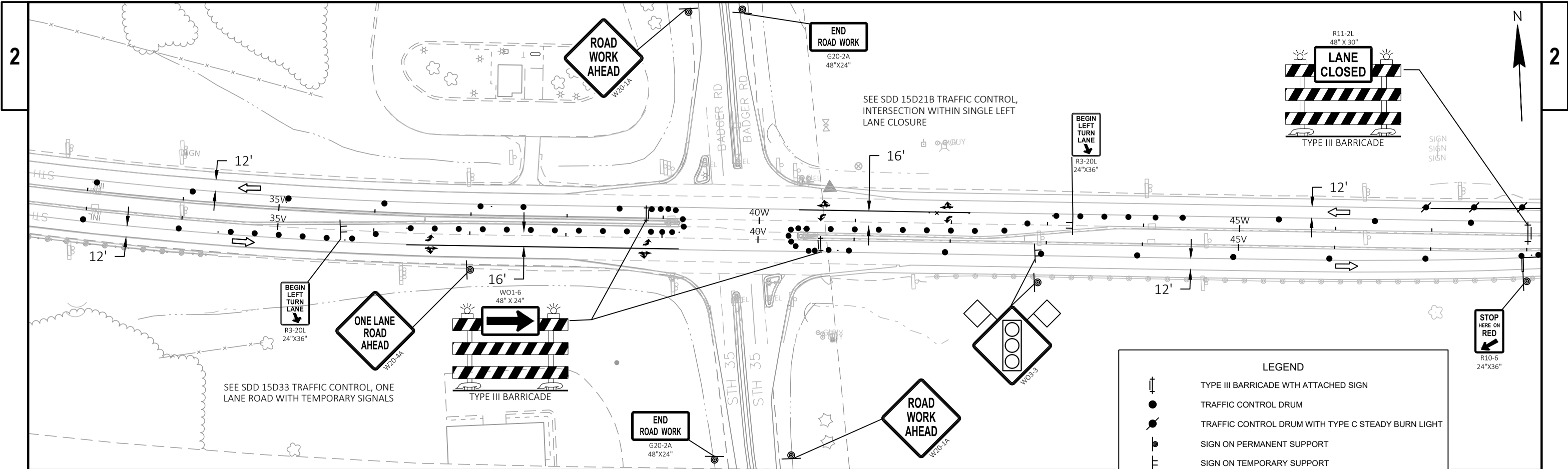




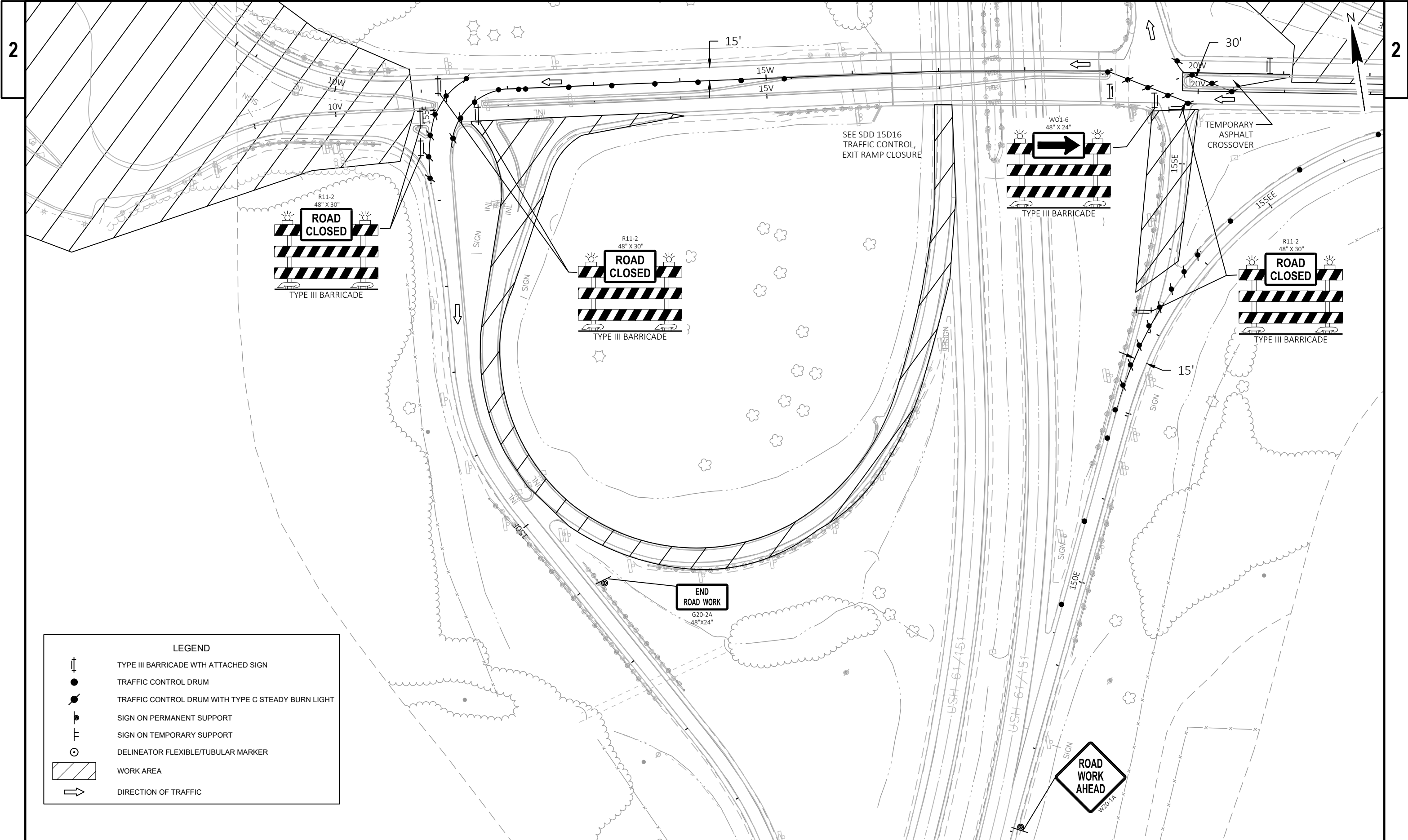












LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

SIGN ON PERMANENT SUPPORT

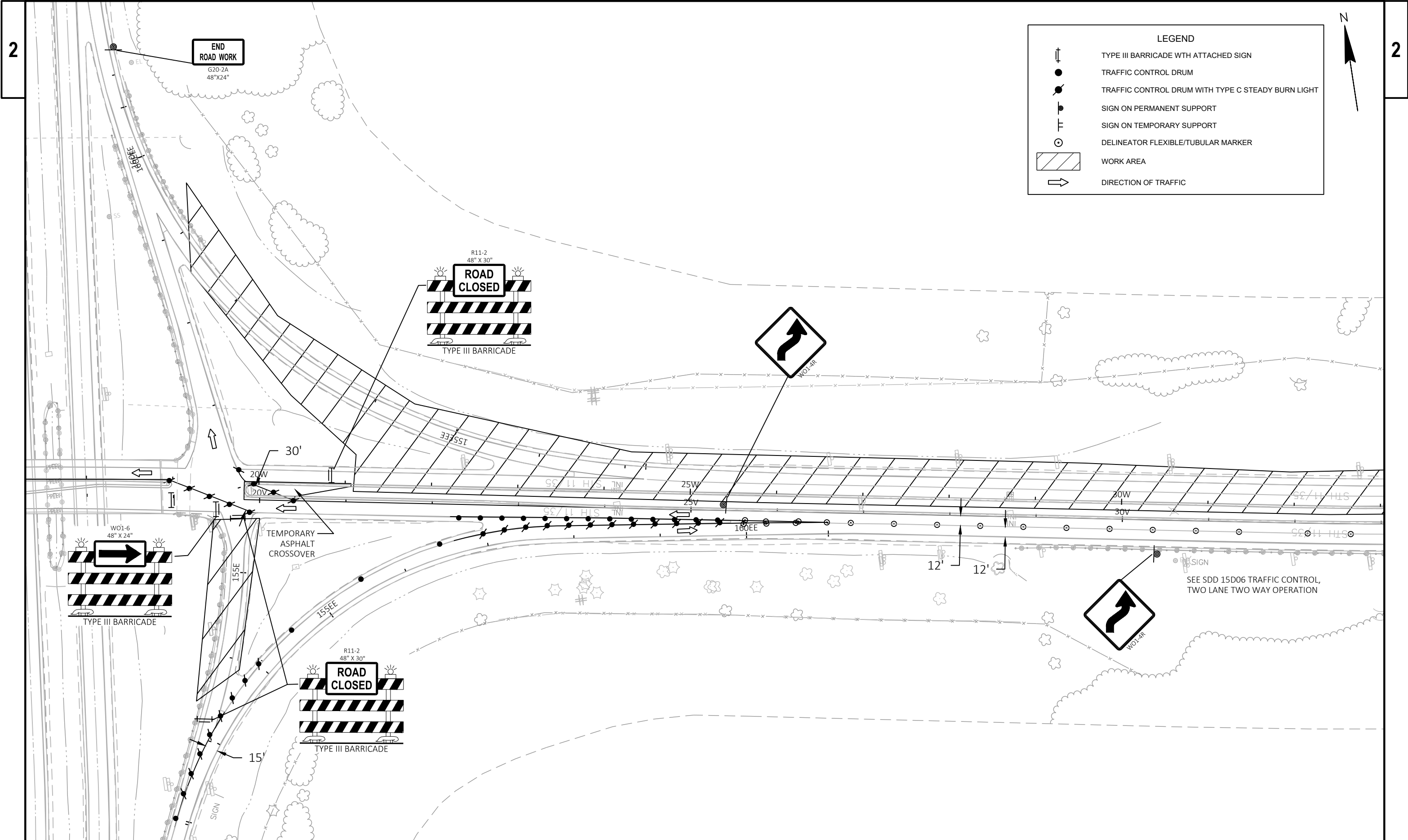
SIGN ON TEMPORARY SUPPORT

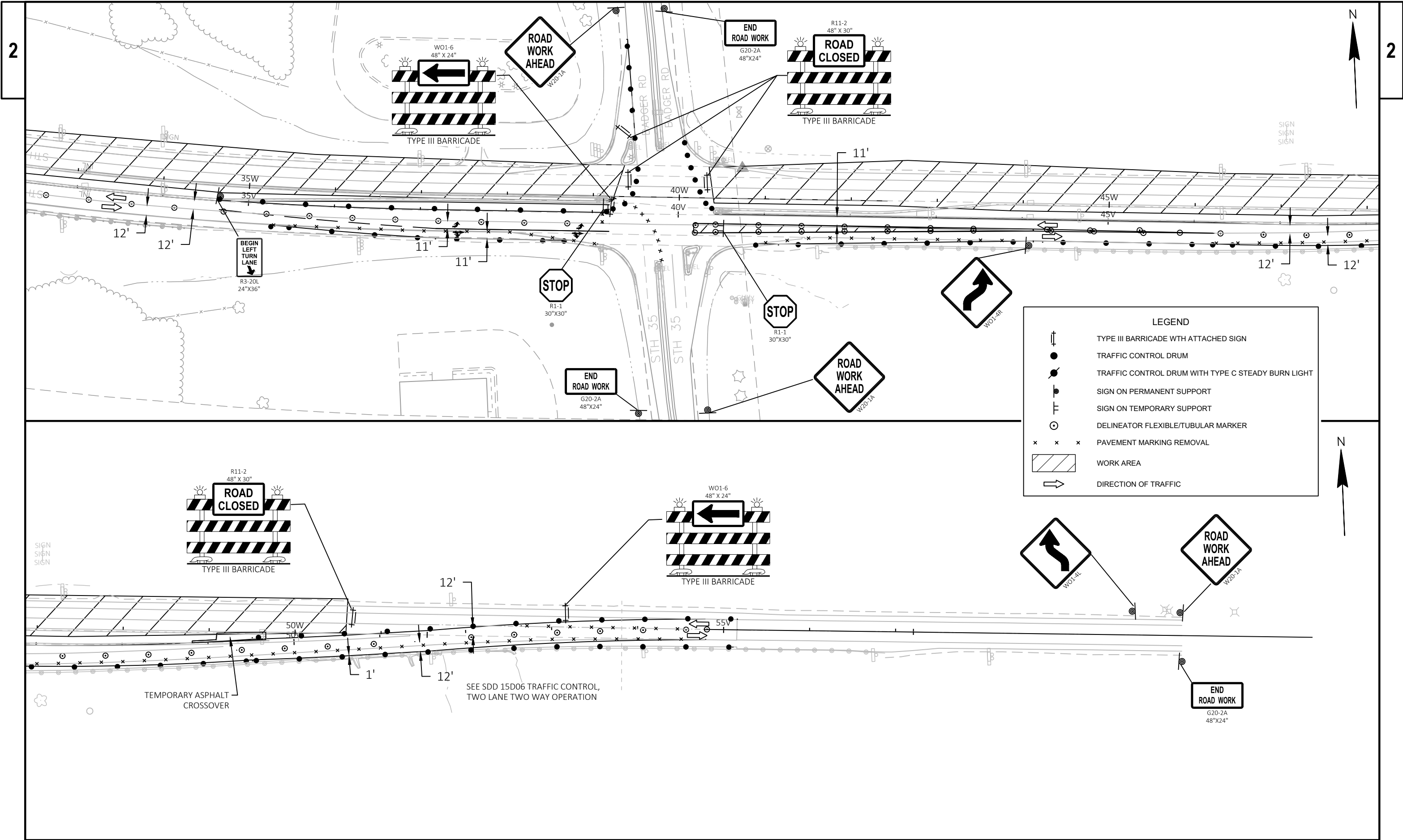
DELINEATOR FLEXIBLE/TUBULAR MARKER

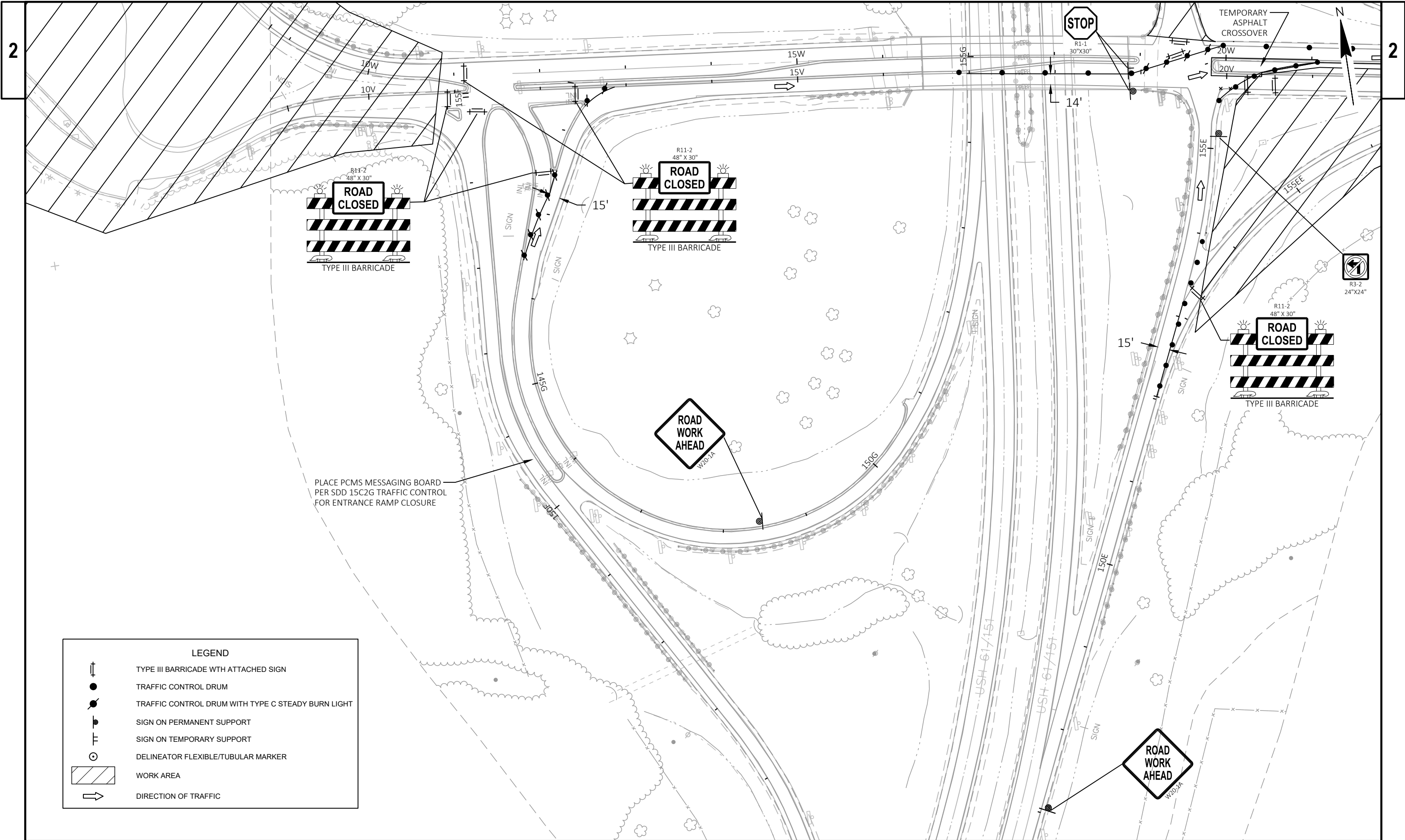
WORK AREA

DIRECTION OF TRAFFIC









PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

TRAFFIC CONTROL STH 11- STAGE 5

SHEET

74

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSP\PLAN\026001\_55.DWG  
LAYOUT NAME - 01

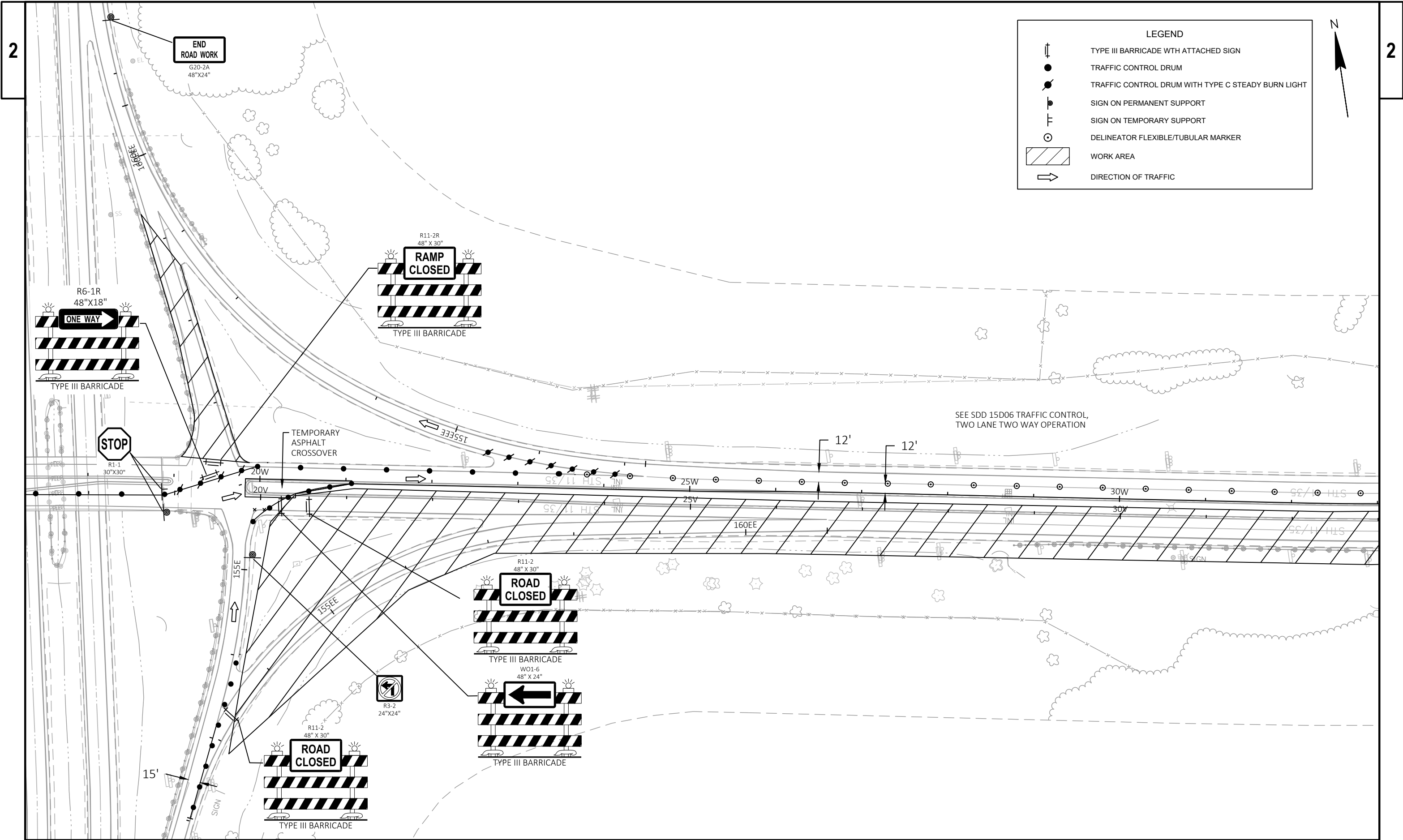
PLOT DATE : 2/26/2025 2:44 PM

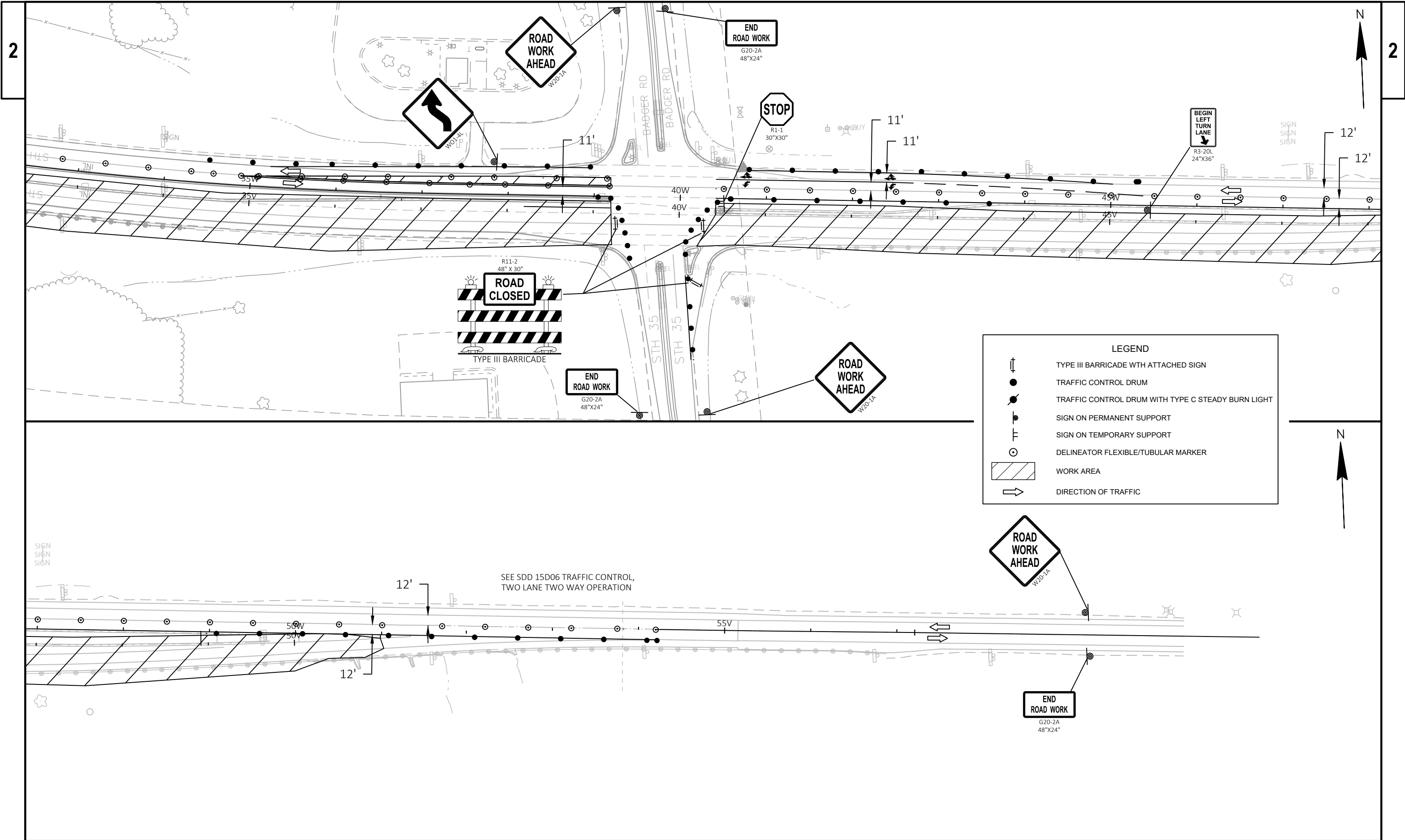
PLOT BY : SCHUMAKER, ERICA R

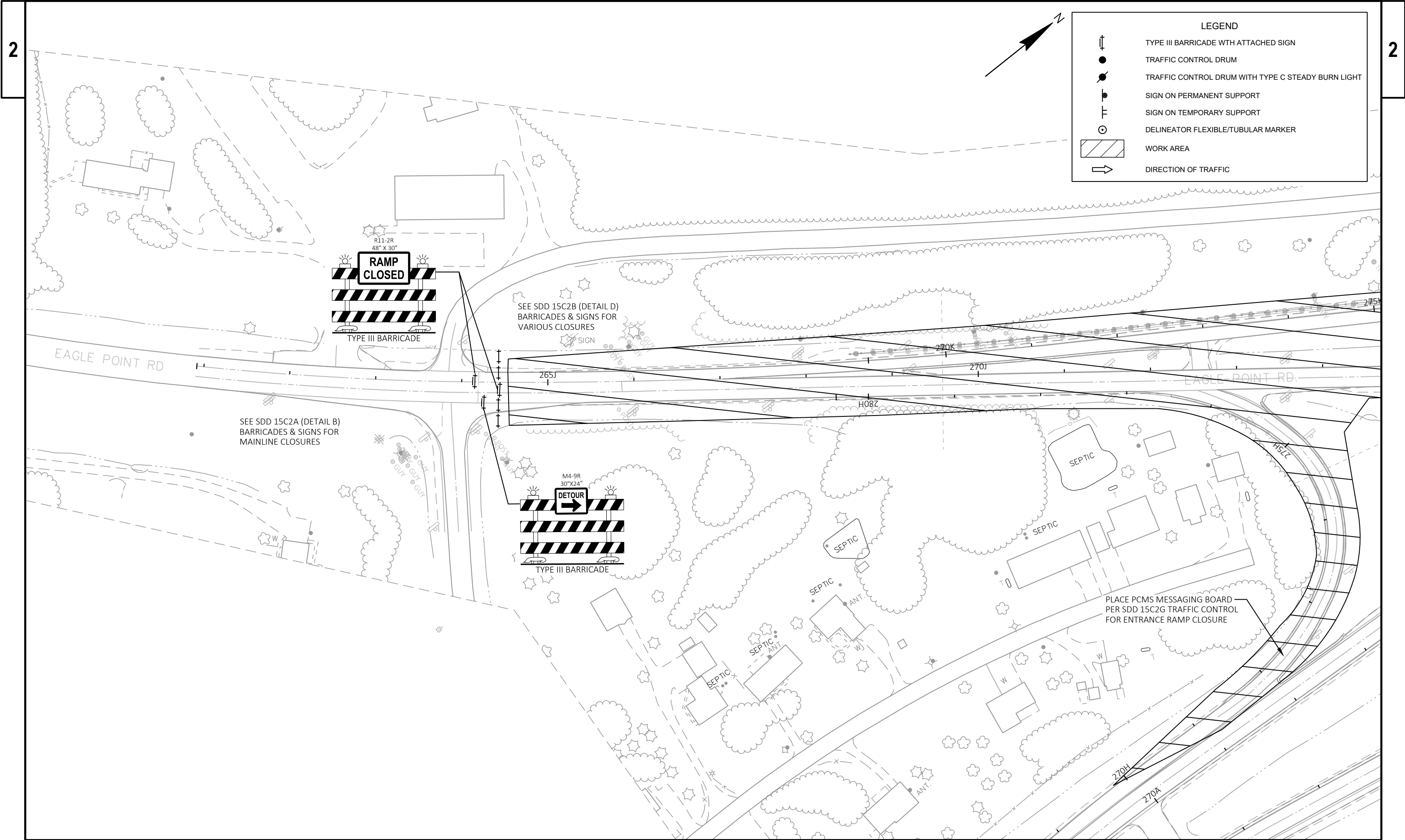
PLOT NAME :

PLOT SCALE : Custom

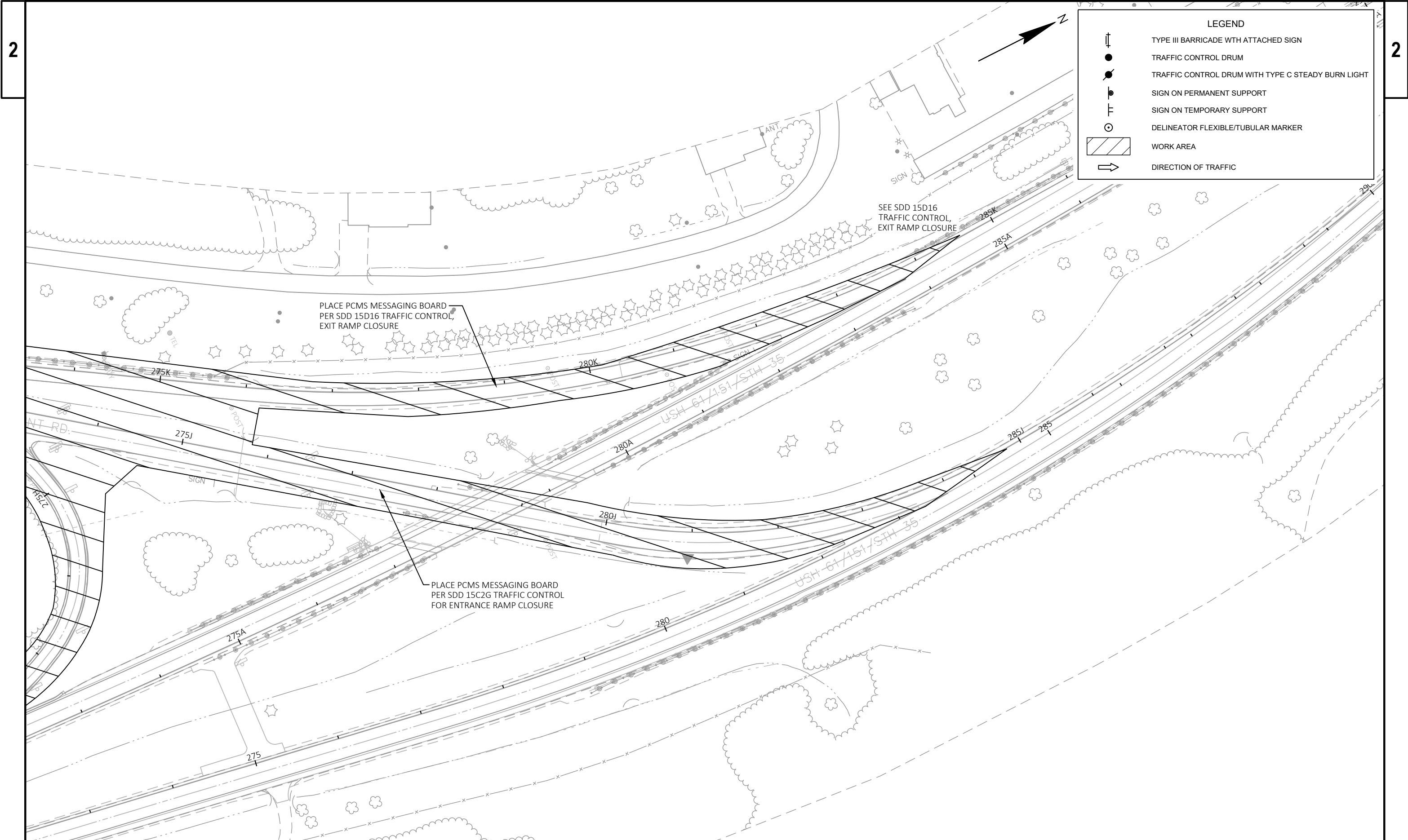
WISDOT/CADDs SHEET 42

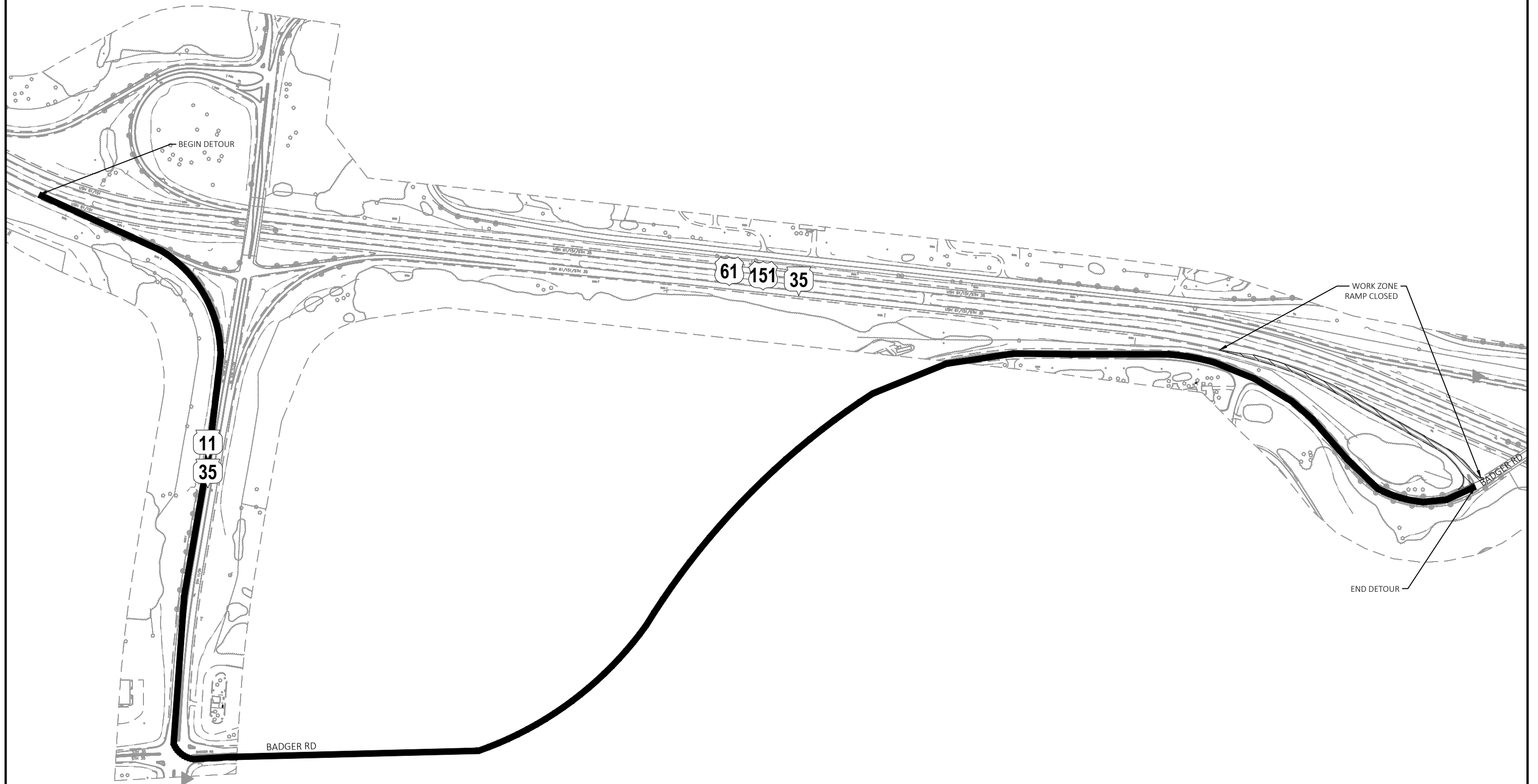












PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

TRAFFIC CONTROL - DETOUR SIGNING BADGER RD/USH 61 NB OFF RAMP

SHEET

79

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\027001\_DT.DWG  
LAYOUT NAME - Layout01

PLOT DATE : 2/25/2025 12:49 PM

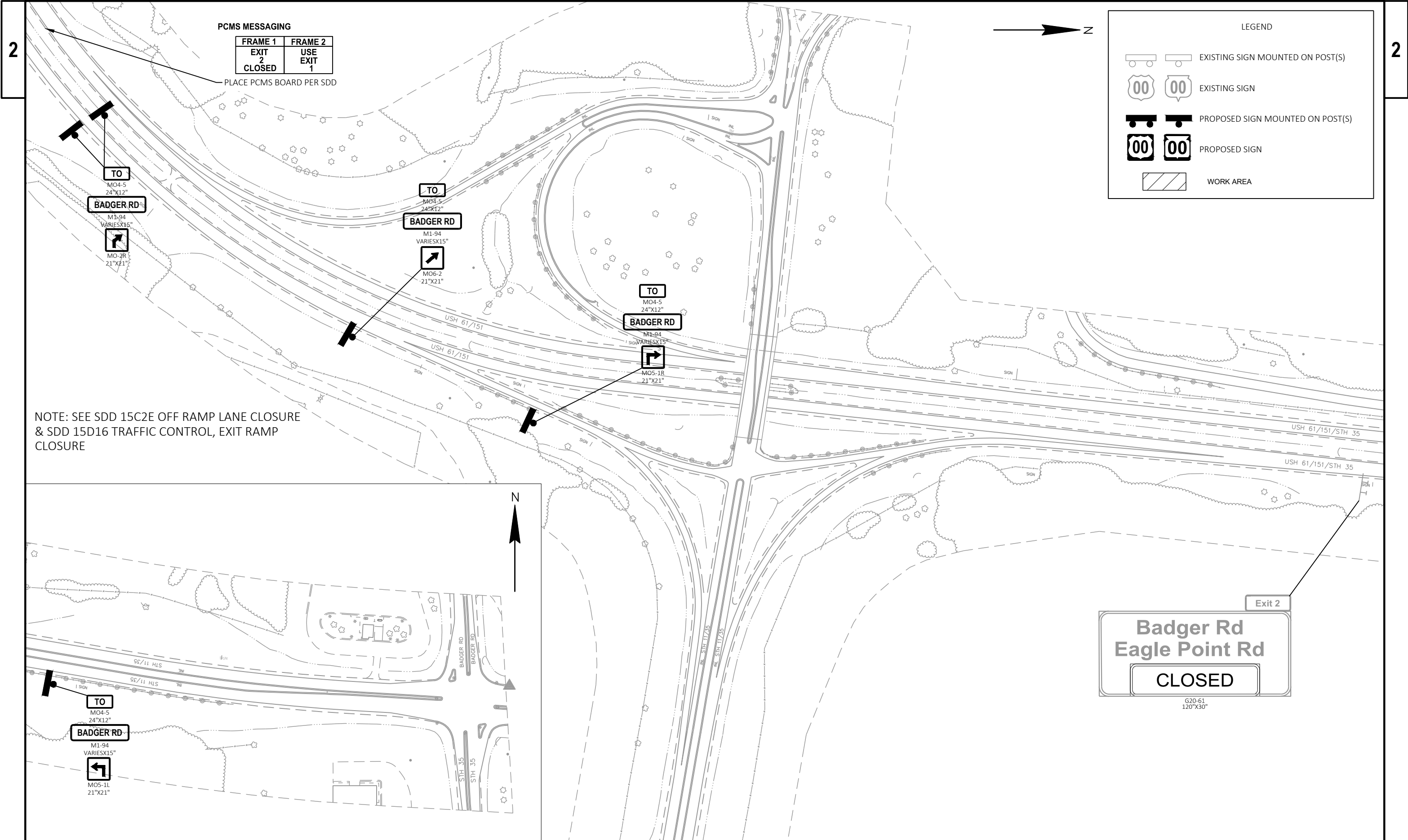
PLOT BY : SCHUMAKER, ERICA R

PLOT NAME :

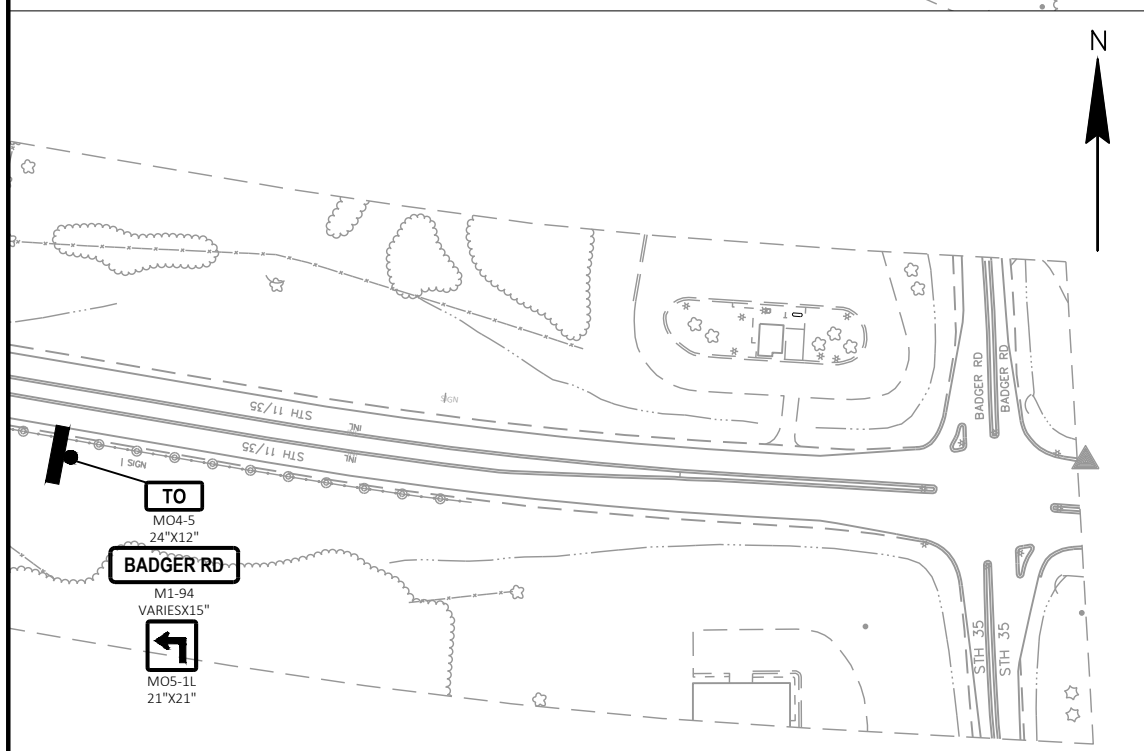
PLOT SCALE : 1 IN:400 FT

WISDOT/CADDs SHEET 42





NOTE: SEE SDD 15C2E OFF RAMP LANE CLOSURE  
& SDD 15D16 TRAFFIC CONTROL, EXIT RAMP CLOSURE



LEGEND

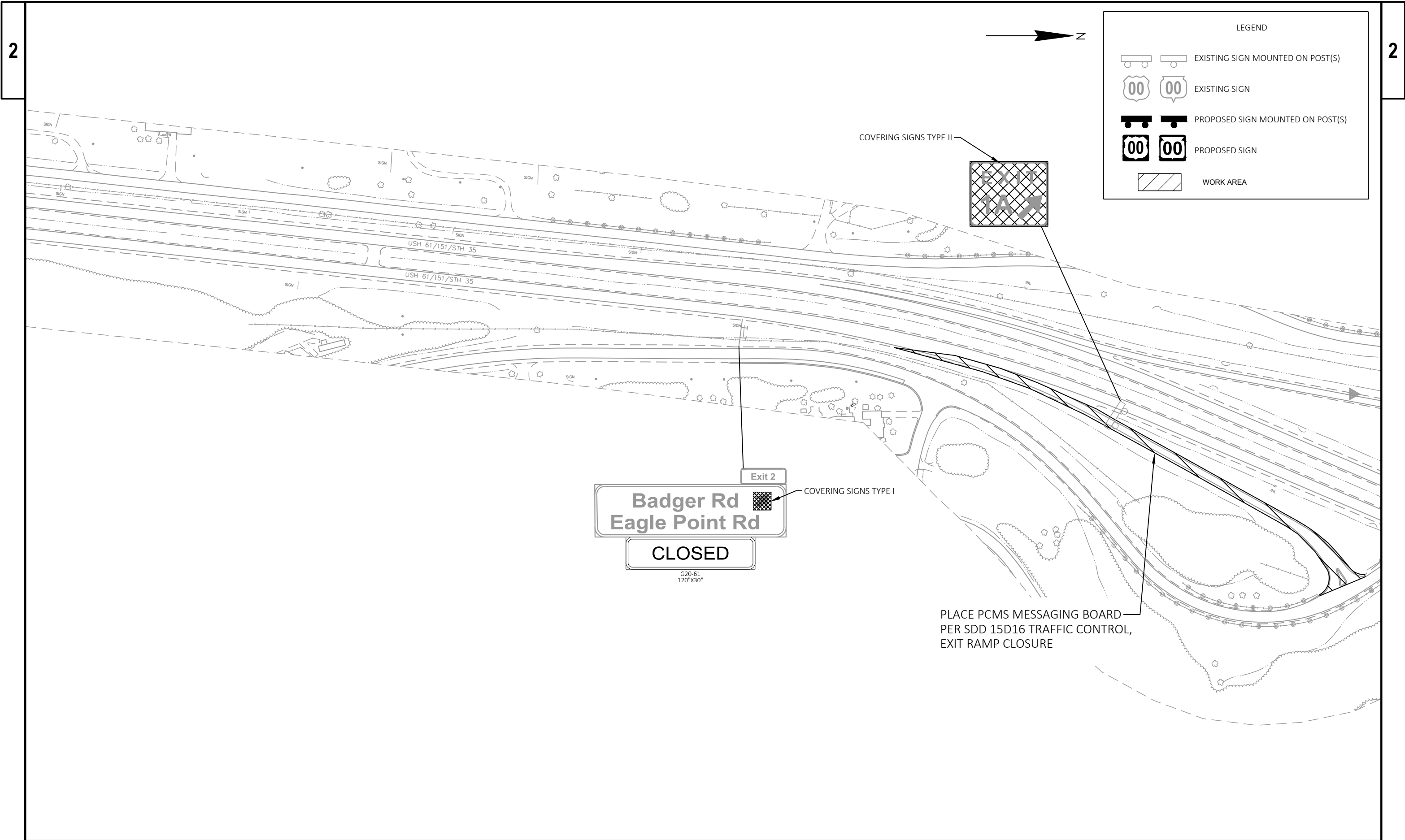
EXISTING SIGN MOUNTED ON POST(S)

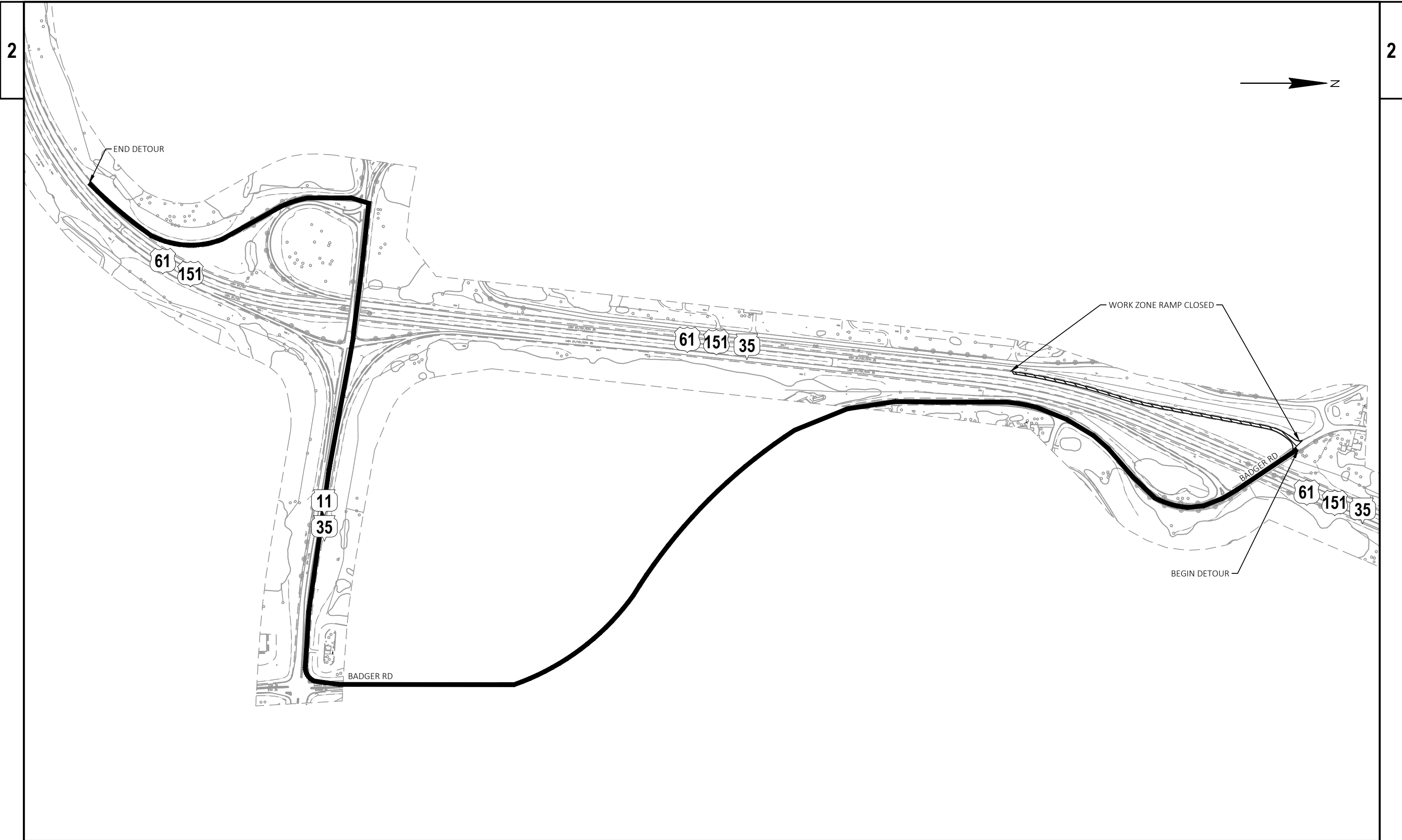
EXISTING SIGN

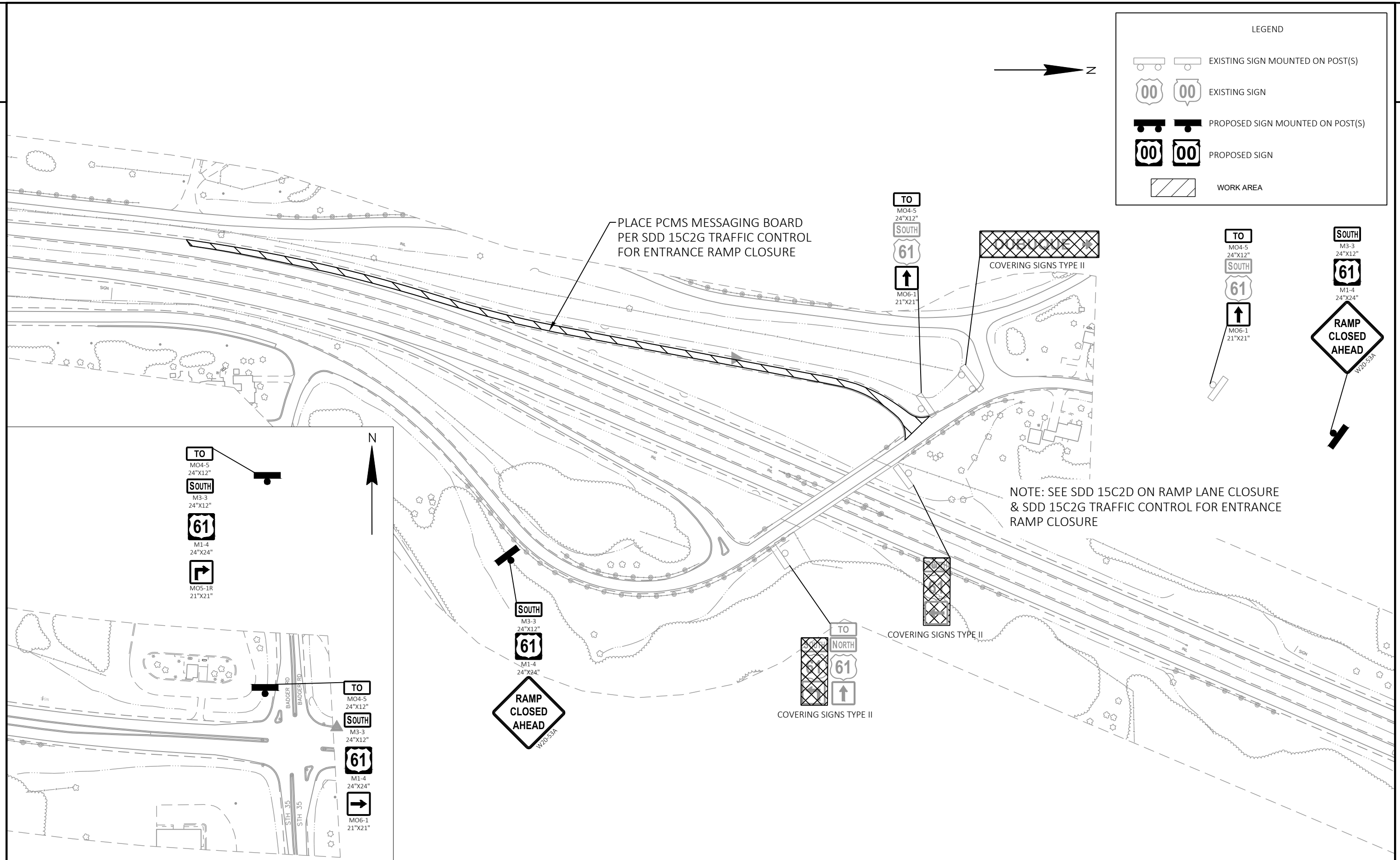
PROPOSED SIGN MOUNTED ON POST(S)

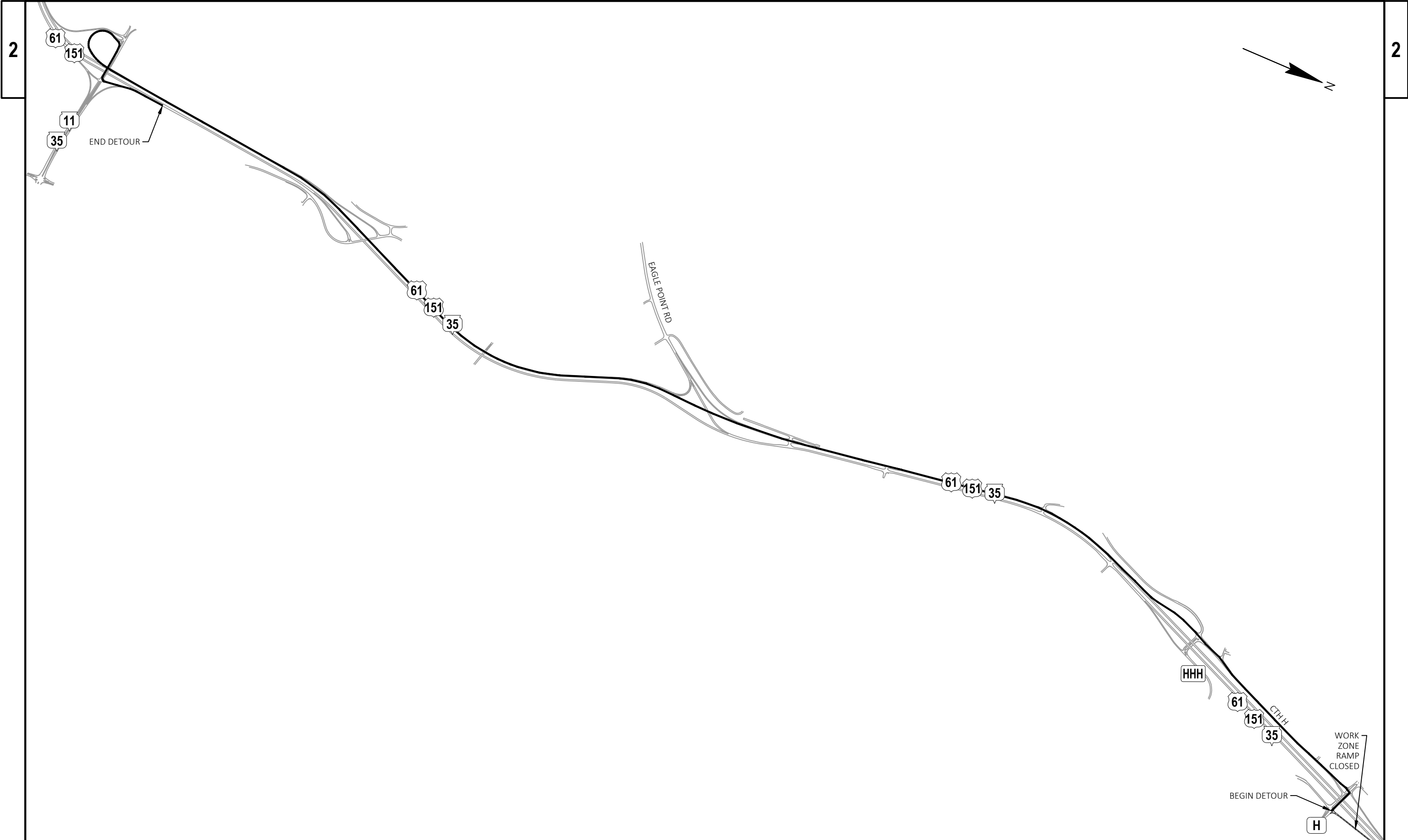
PROPOSED SIGN

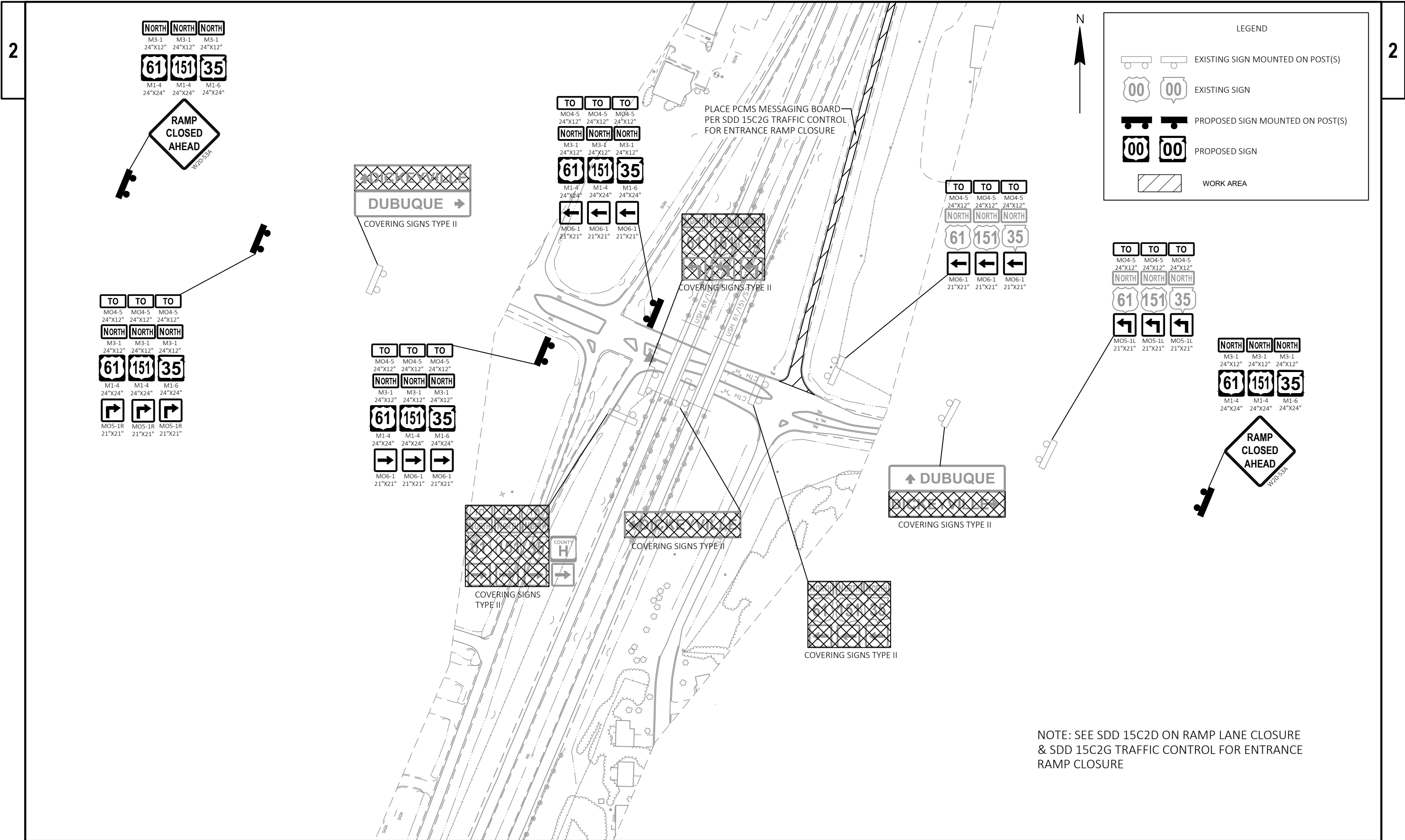
WORK AREA



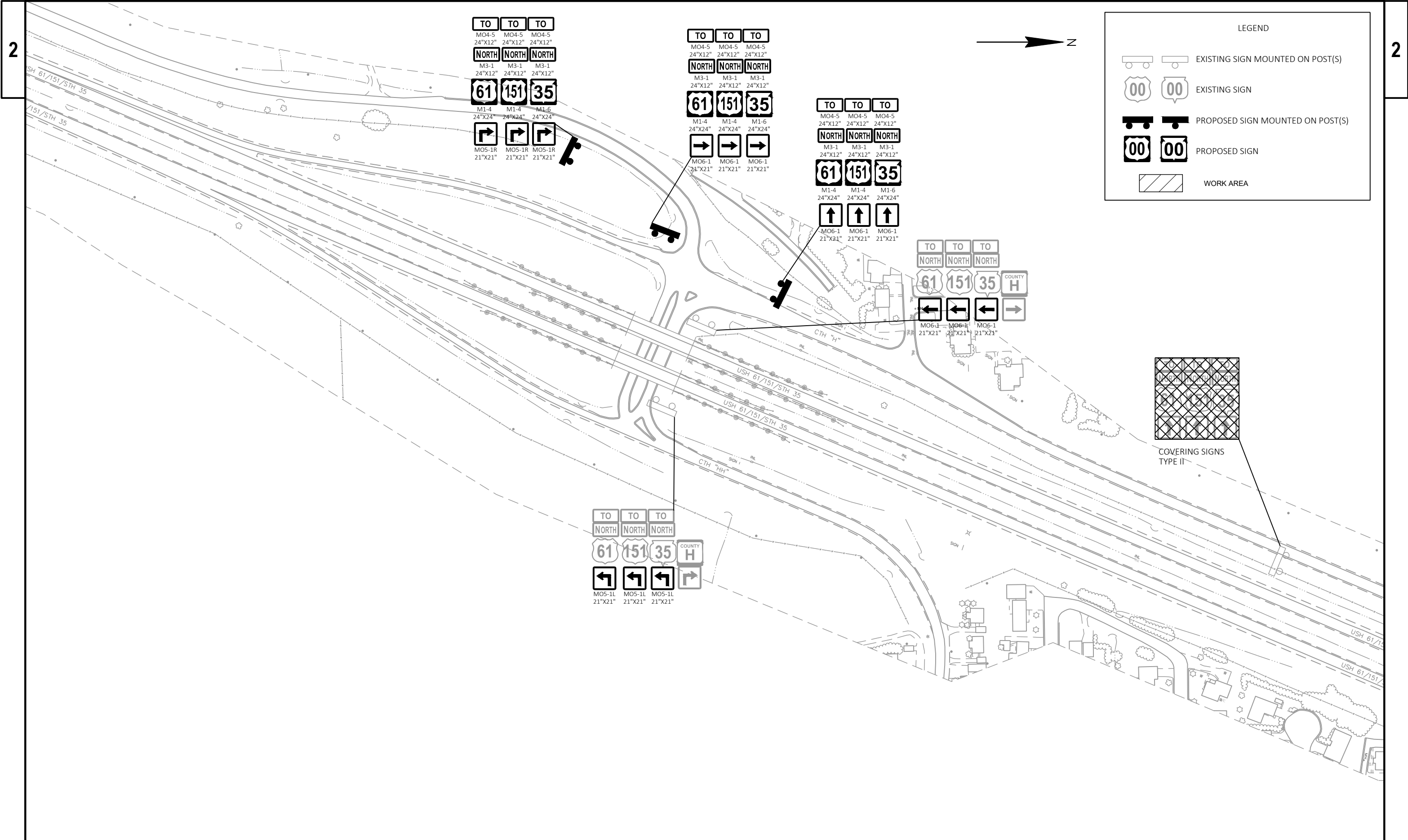


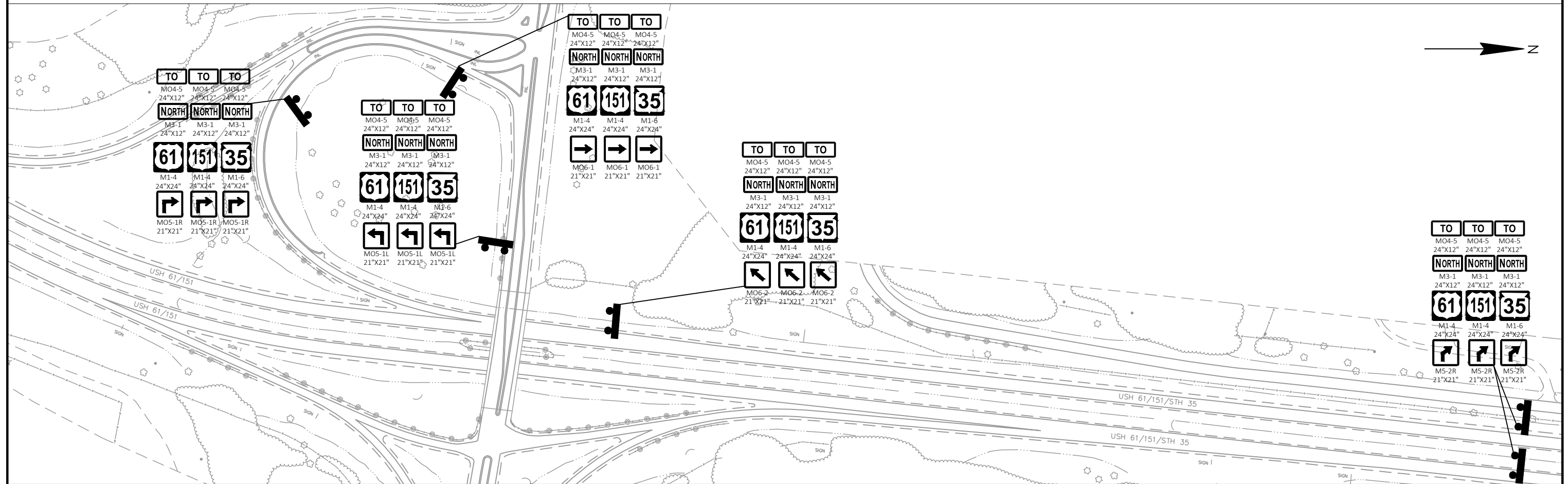




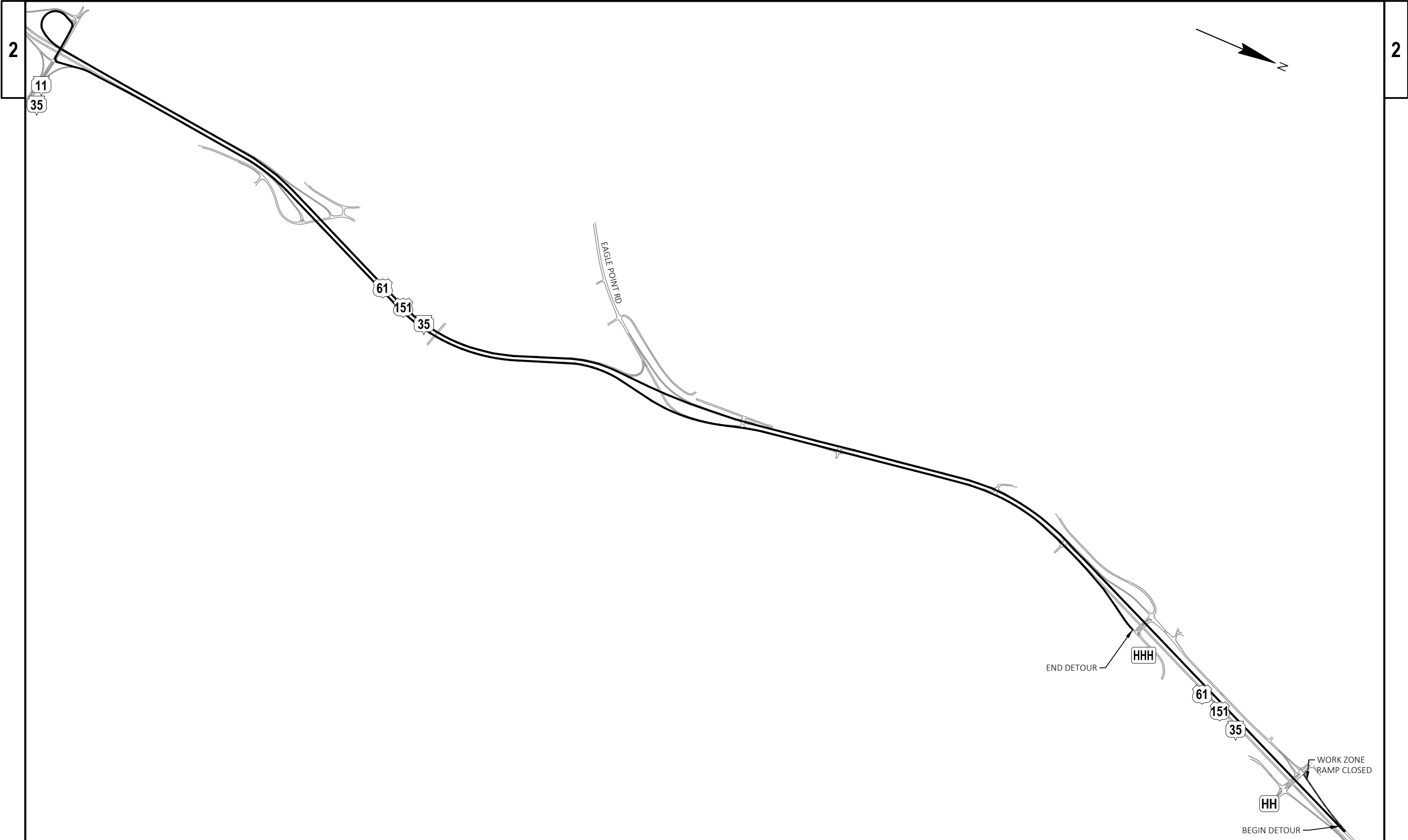


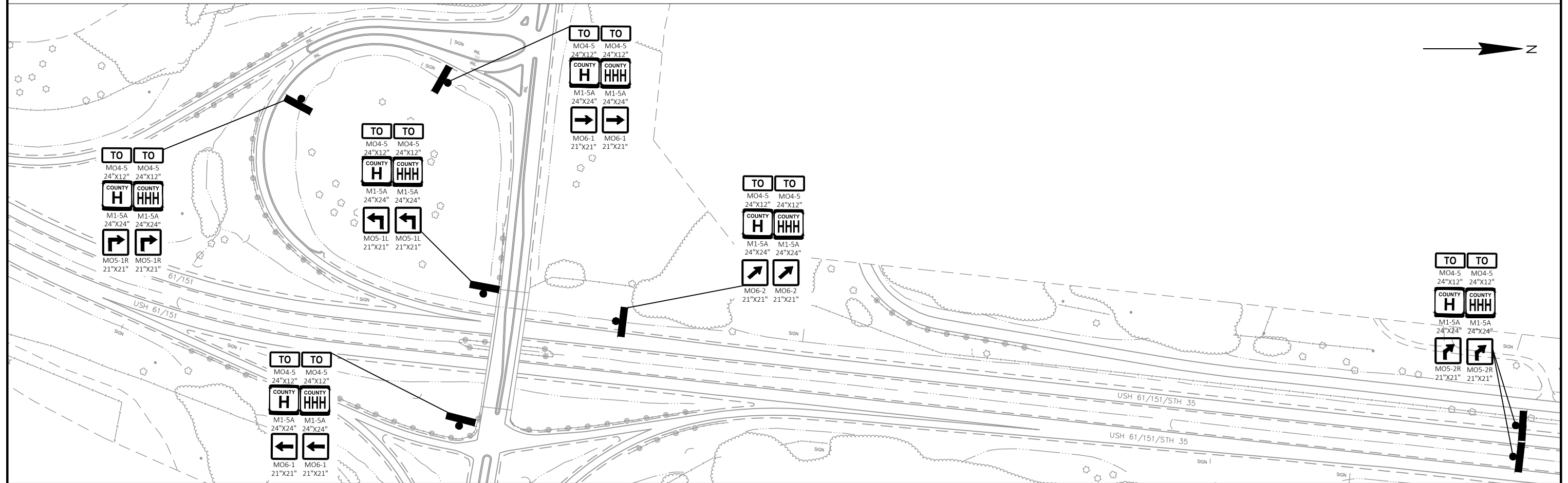




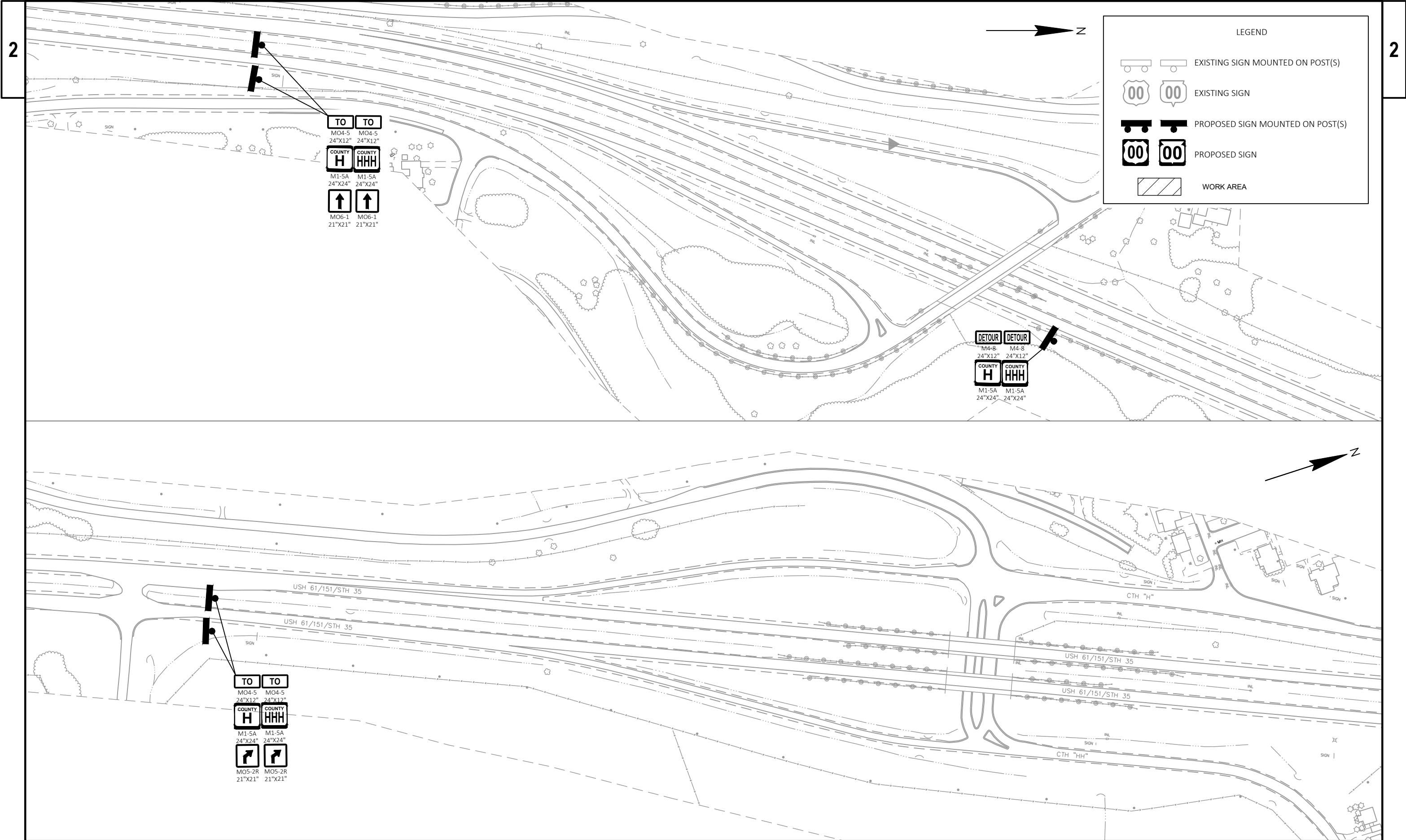


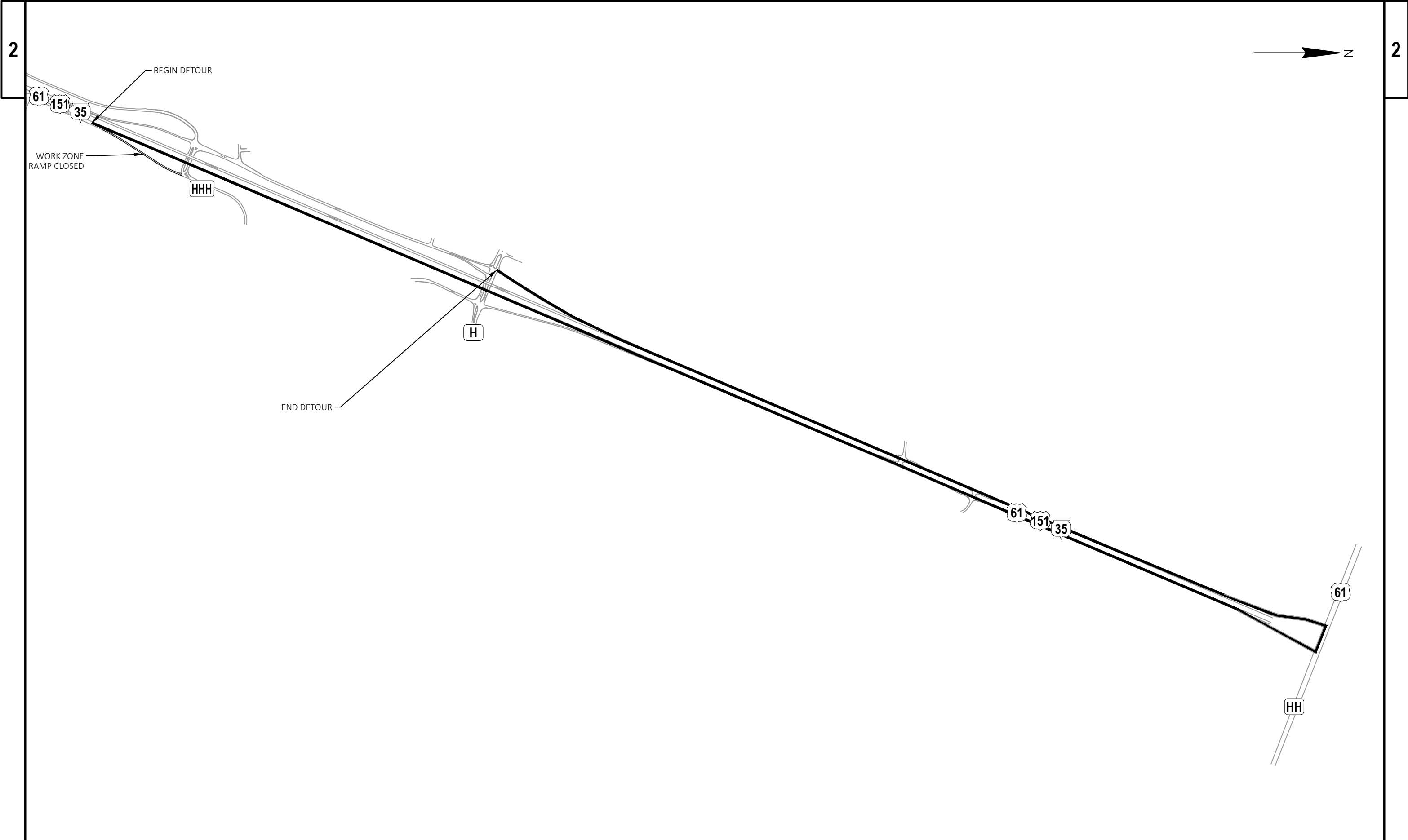






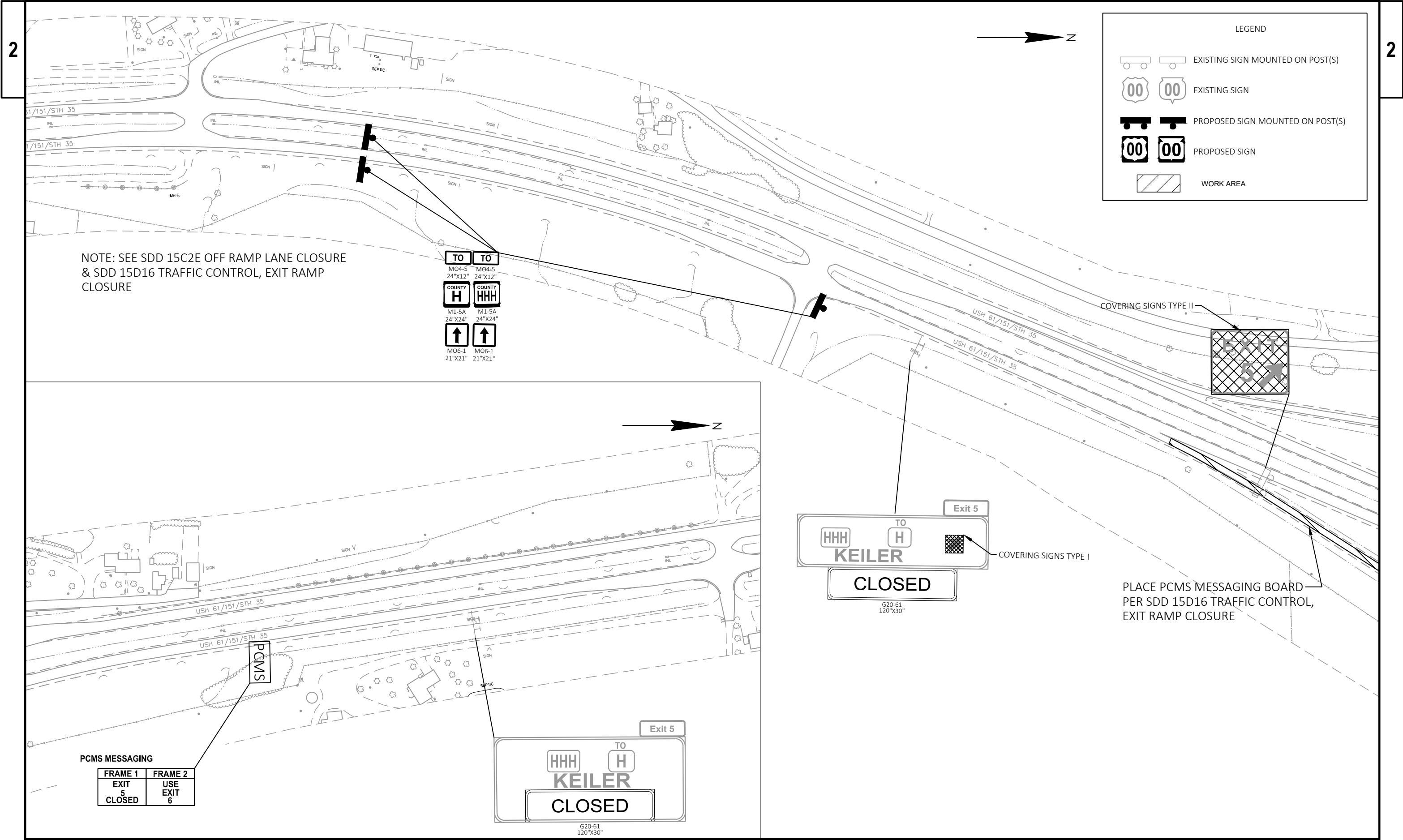




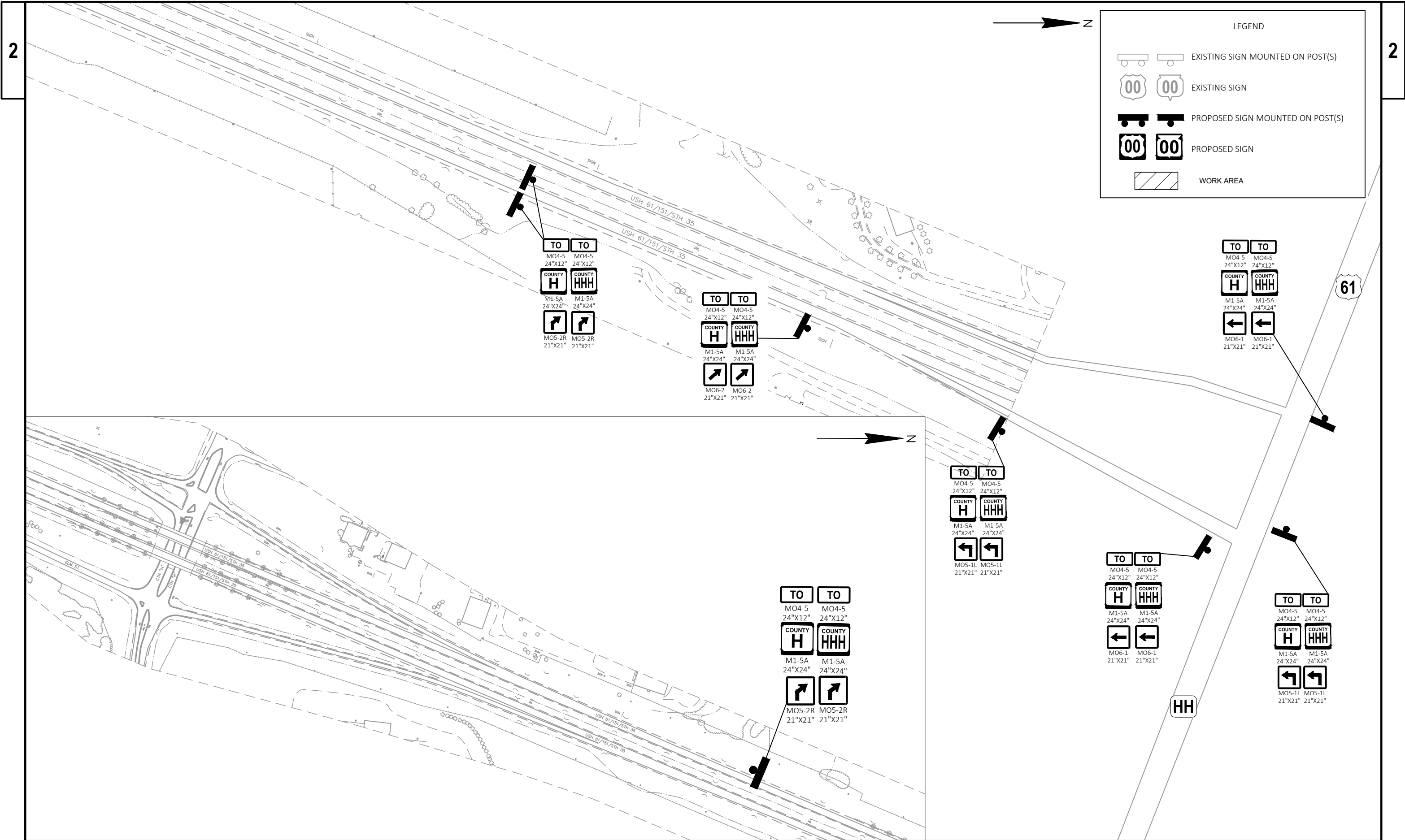


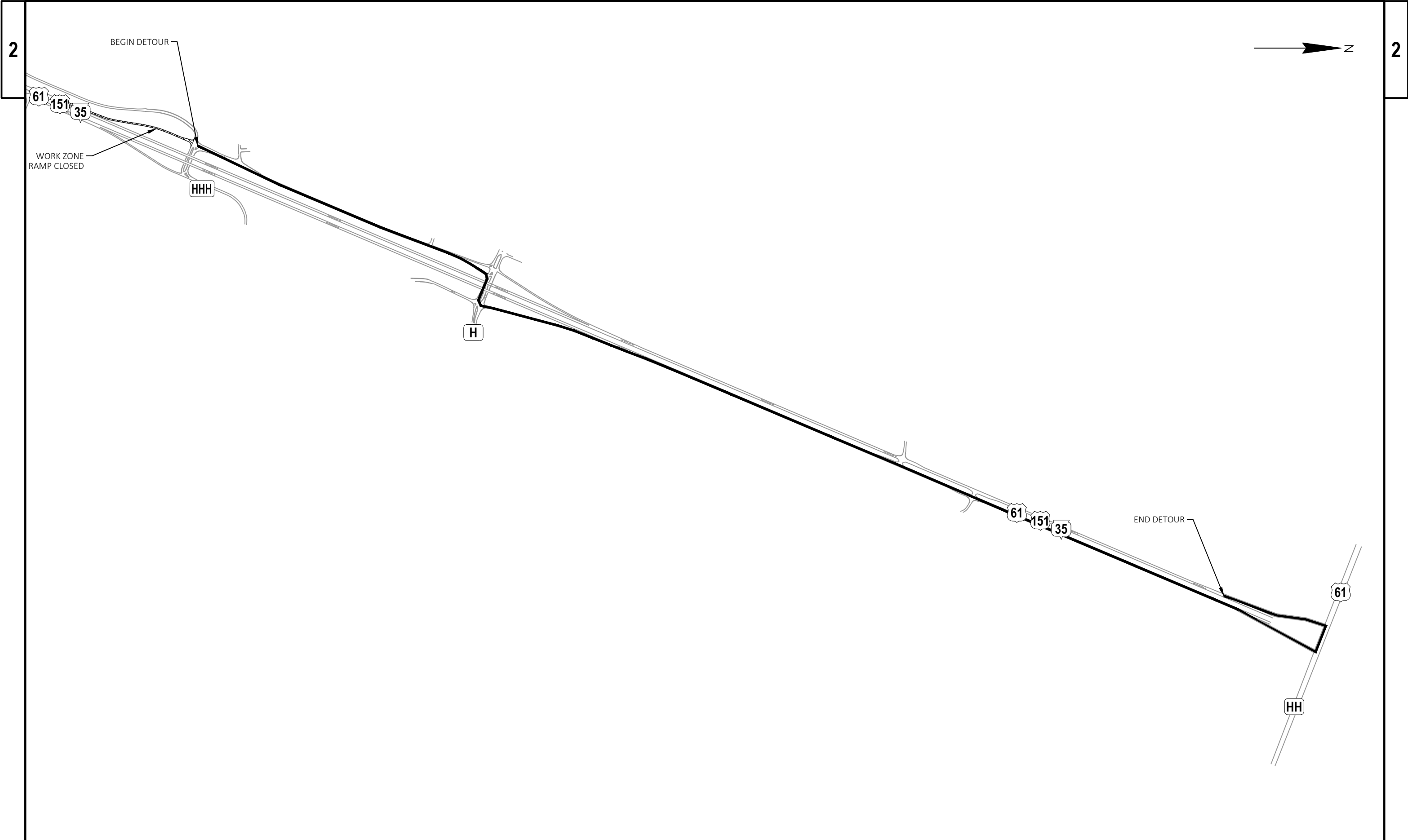
2

2

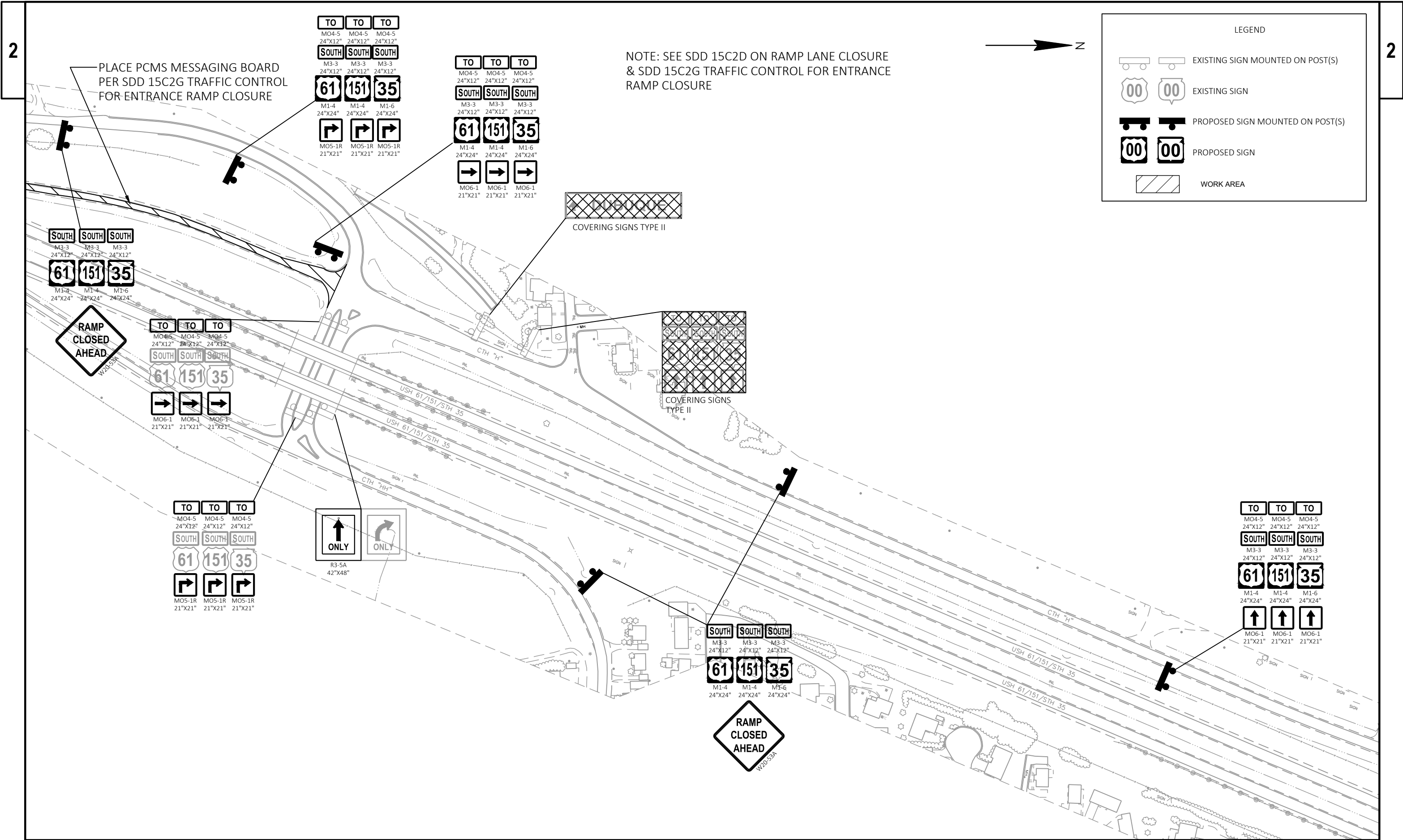




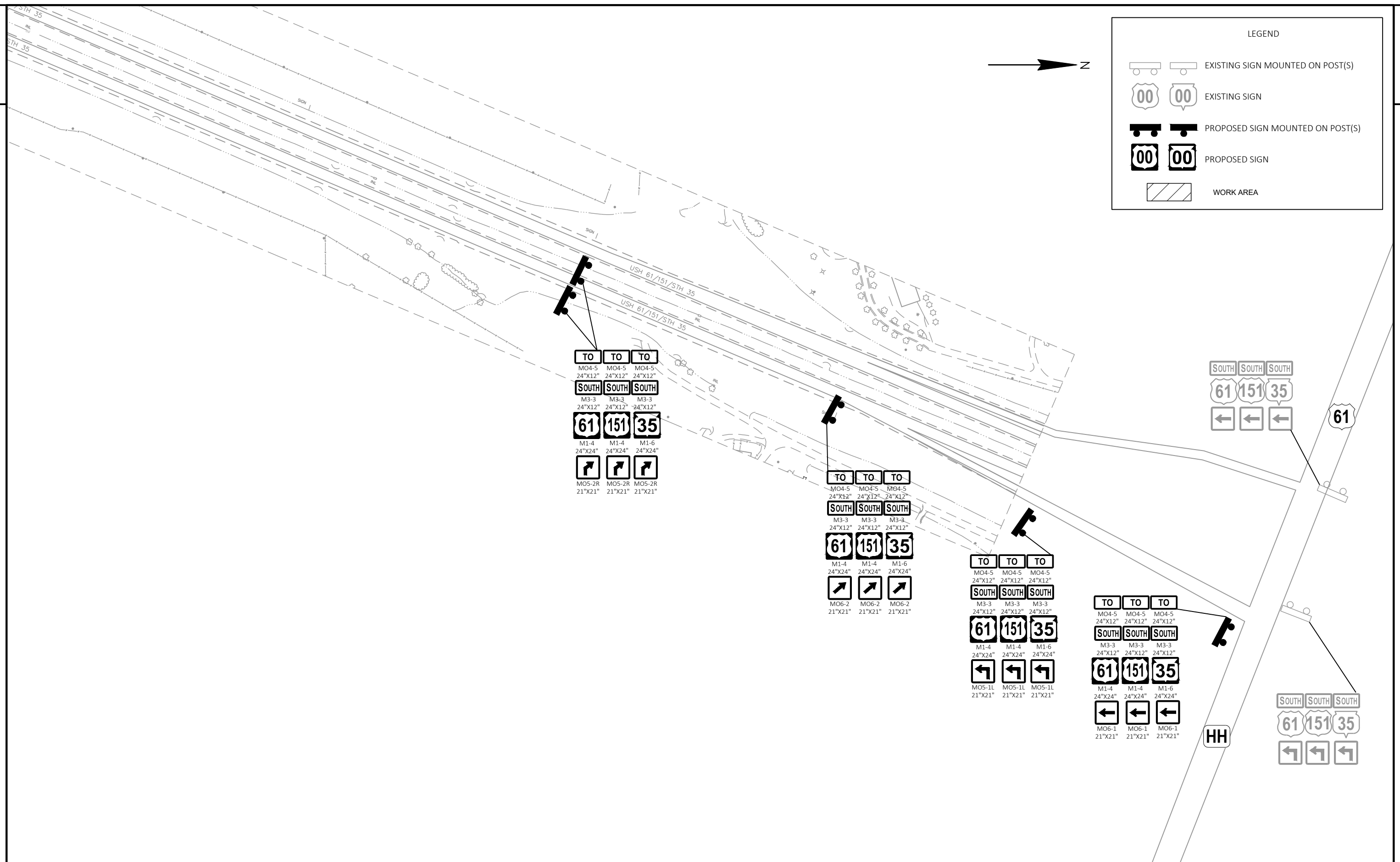


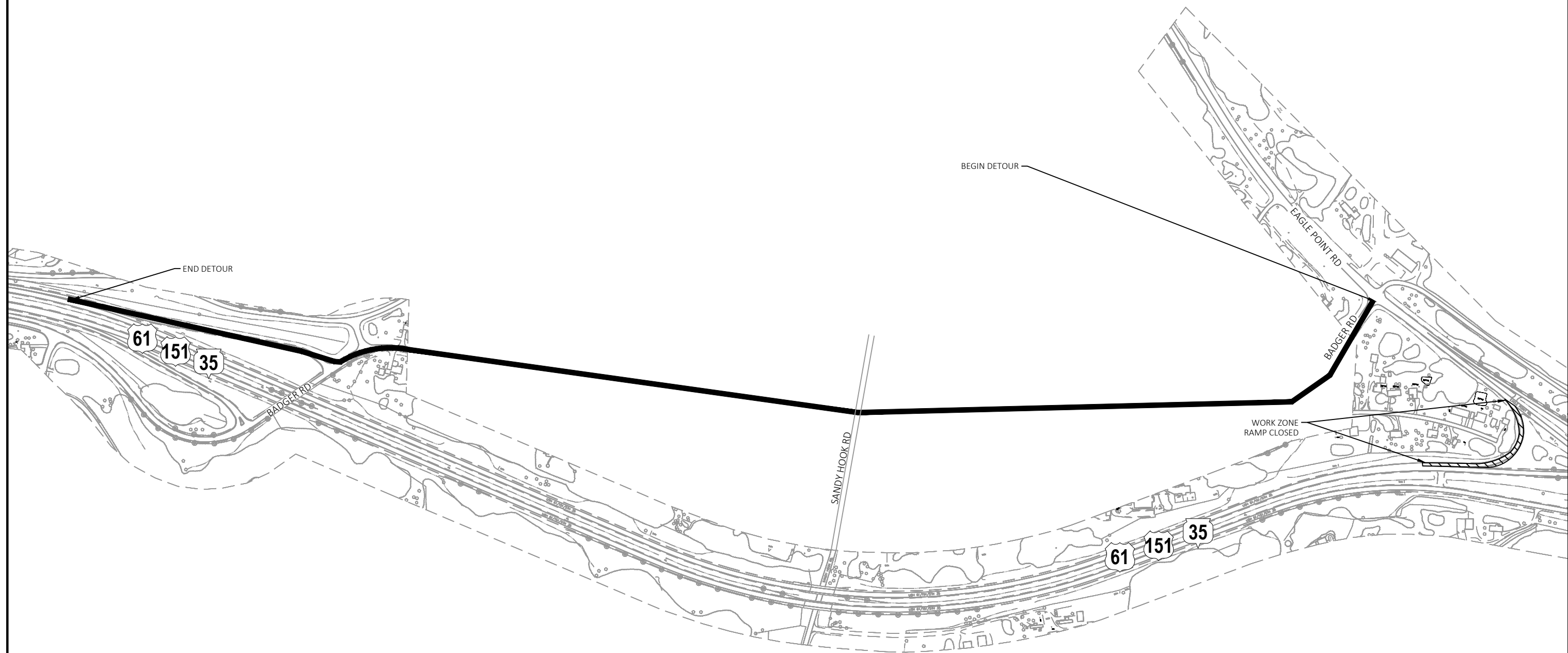




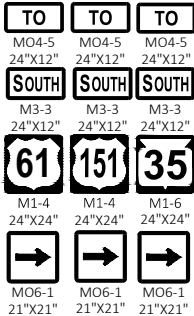
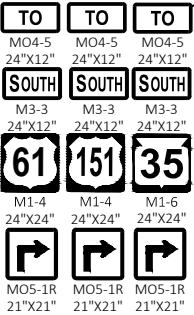
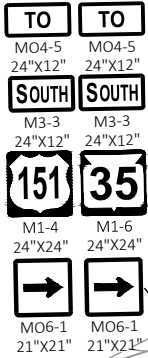
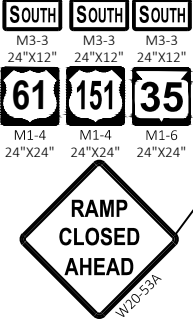






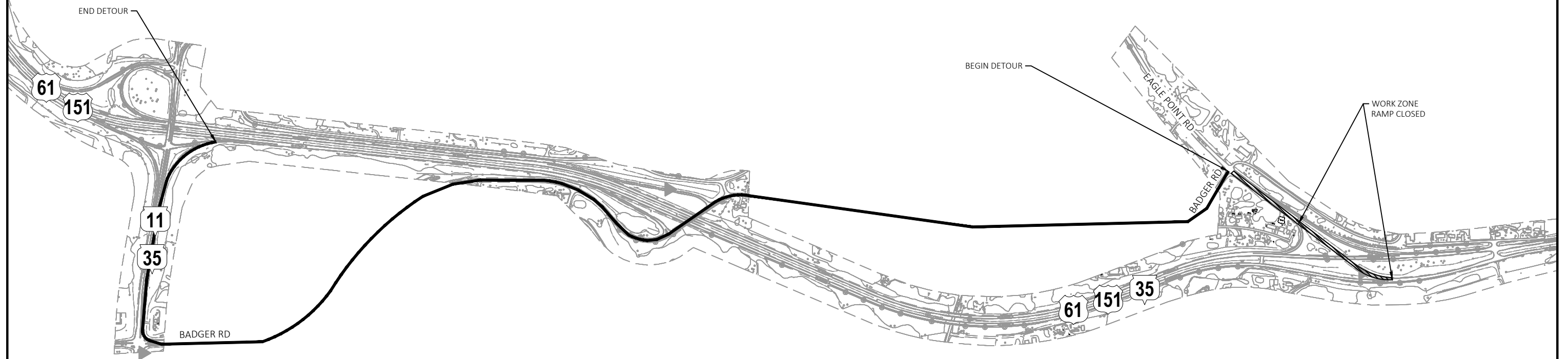


NOTE: SEE SDD 15C2A (DETAIL B)  
BARRICADES AND SIGNS FOR MAINLINE  
CLOSURES & SDD 15C2D ON RAMP LANE  
CLOSURE

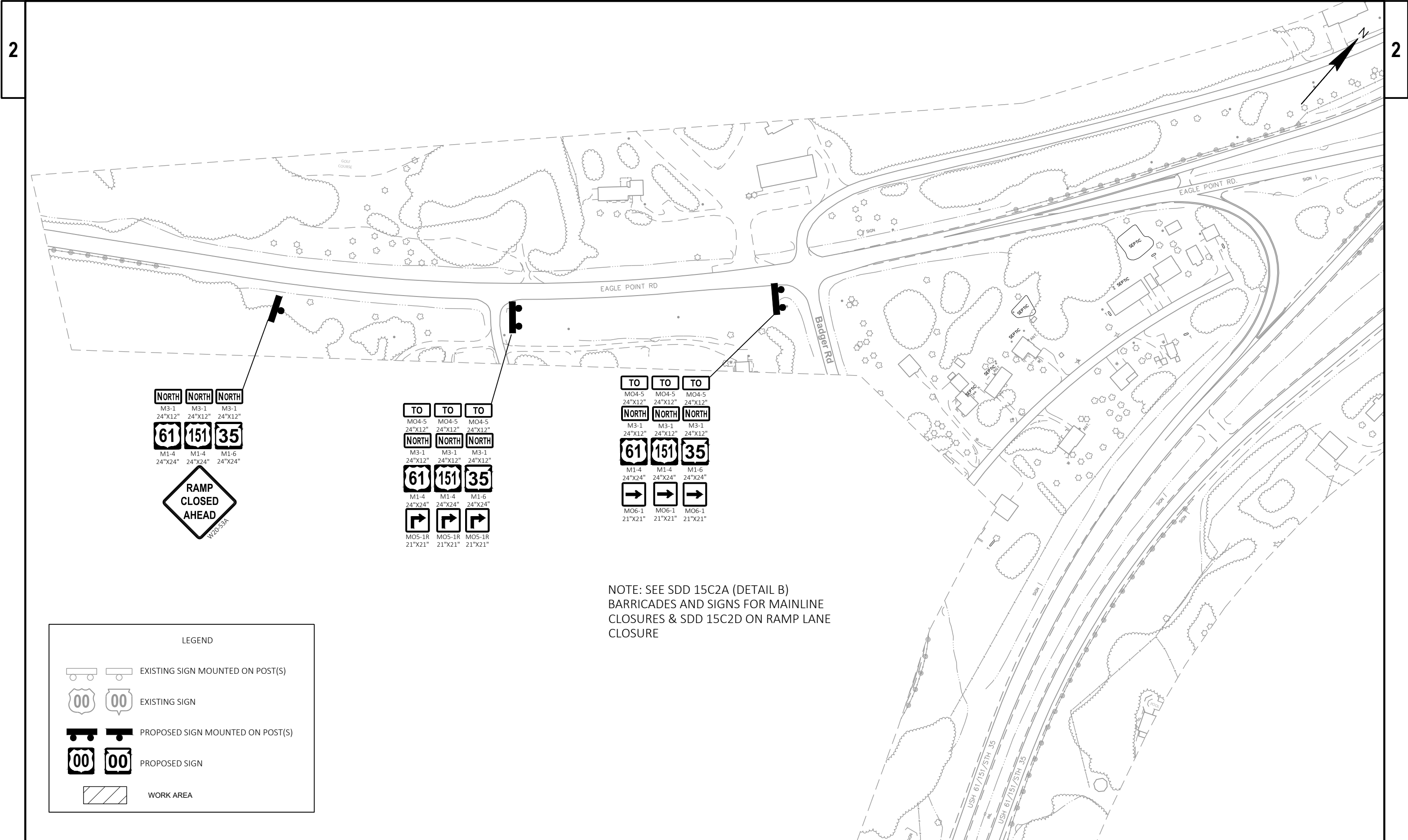


LEGEND

|  |                                  |
|--|----------------------------------|
|  | EXISTING SIGN MOUNTED ON POST(S) |
|  | EXISTING SIGN                    |
|  | PROPOSED SIGN MOUNTED ON POST(S) |
|  | PROPOSED SIGN                    |
|  | WORK AREA                        |







NOTE: SEE SDD 15C2A (DETAIL B)  
BARRICADES AND SIGNS FOR MAINLINE  
CLOSURES & SDD 15C2D ON RAMP LANE  
CLOSURE

LEGEND

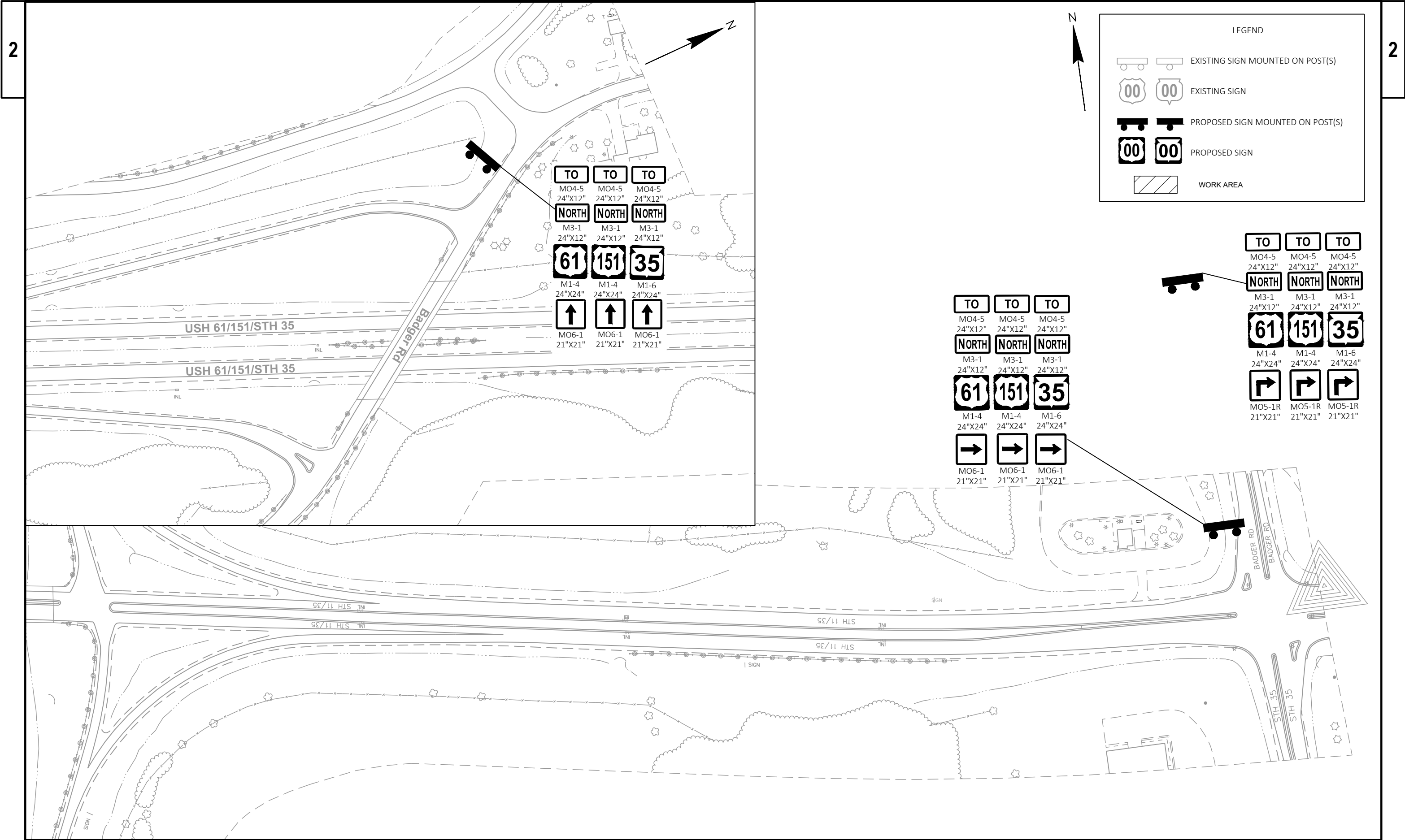
EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN

WORK AREA



LEGEND

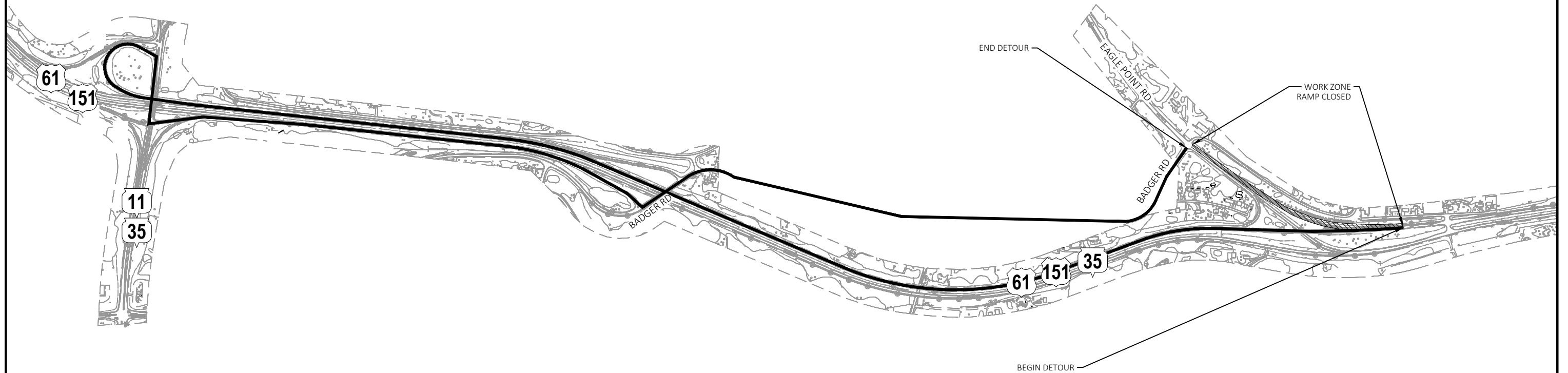
|  |  |                                  |
|--|--|----------------------------------|
|  |  | EXISTING SIGN MOUNTED ON POST(S) |
|  |  | EXISTING SIGN                    |
|  |  | PROPOSED SIGN MOUNTED ON POST(S) |
|  |  | PROPOSED SIGN                    |
|  |  | WORK AREA                        |

|                  |                  |                  |
|------------------|------------------|------------------|
| TO               | TO               | TO               |
| MO4-5<br>24"X12" | MO4-5<br>24"X12" | MO4-5<br>24"X12" |
| NORTH            | NORTH            | NORTH            |
| M3-1<br>24"X12"  | M3-1<br>24"X12"  | M3-1<br>24"X12"  |
| 61               | 151              | 35               |
| M1-4<br>24"X24"  | M1-4<br>24"X24"  | M1-6<br>24"X24"  |
| ↑                | ↑                | ↑                |
| MO6-1<br>21"X21" | MO6-1<br>21"X21" | MO6-1<br>21"X21" |

|                  |                  |                  |
|------------------|------------------|------------------|
| TO               | TO               | TO               |
| MO4-5<br>24"X12" | MO4-5<br>24"X12" | MO4-5<br>24"X12" |
| NORTH            | NORTH            | NORTH            |
| M3-1<br>24"X12"  | M3-1<br>24"X12"  | M3-1<br>24"X12"  |
| 61               | 151              | 35               |
| M1-4<br>24"X24"  | M1-4<br>24"X24"  | M1-6<br>24"X24"  |
| →                | →                | →                |
| MO6-1<br>21"X21" | MO6-1<br>21"X21" | MO6-1<br>21"X21" |

|                   |                   |                   |
|-------------------|-------------------|-------------------|
| TO                | TO                | TO                |
| MO4-5<br>24"X12"  | MO4-5<br>24"X12"  | MO4-5<br>24"X12"  |
| NORTH             | NORTH             | NORTH             |
| M3-1<br>24"X12"   | M3-1<br>24"X12"   | M3-1<br>24"X12"   |
| 61                | 151               | 35                |
| M1-4<br>24"X24"   | M1-4<br>24"X24"   | M1-6<br>24"X24"   |
| ↗                 | ↗                 | ↗                 |
| MO5-1R<br>21"X21" | MO5-1R<br>21"X21" | MO5-1R<br>21"X21" |





PROJECT NO: 1202-00-75

HWY: USH 61

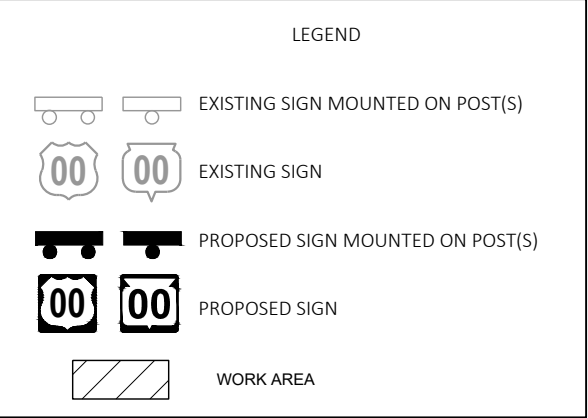
COUNTY: GRANT

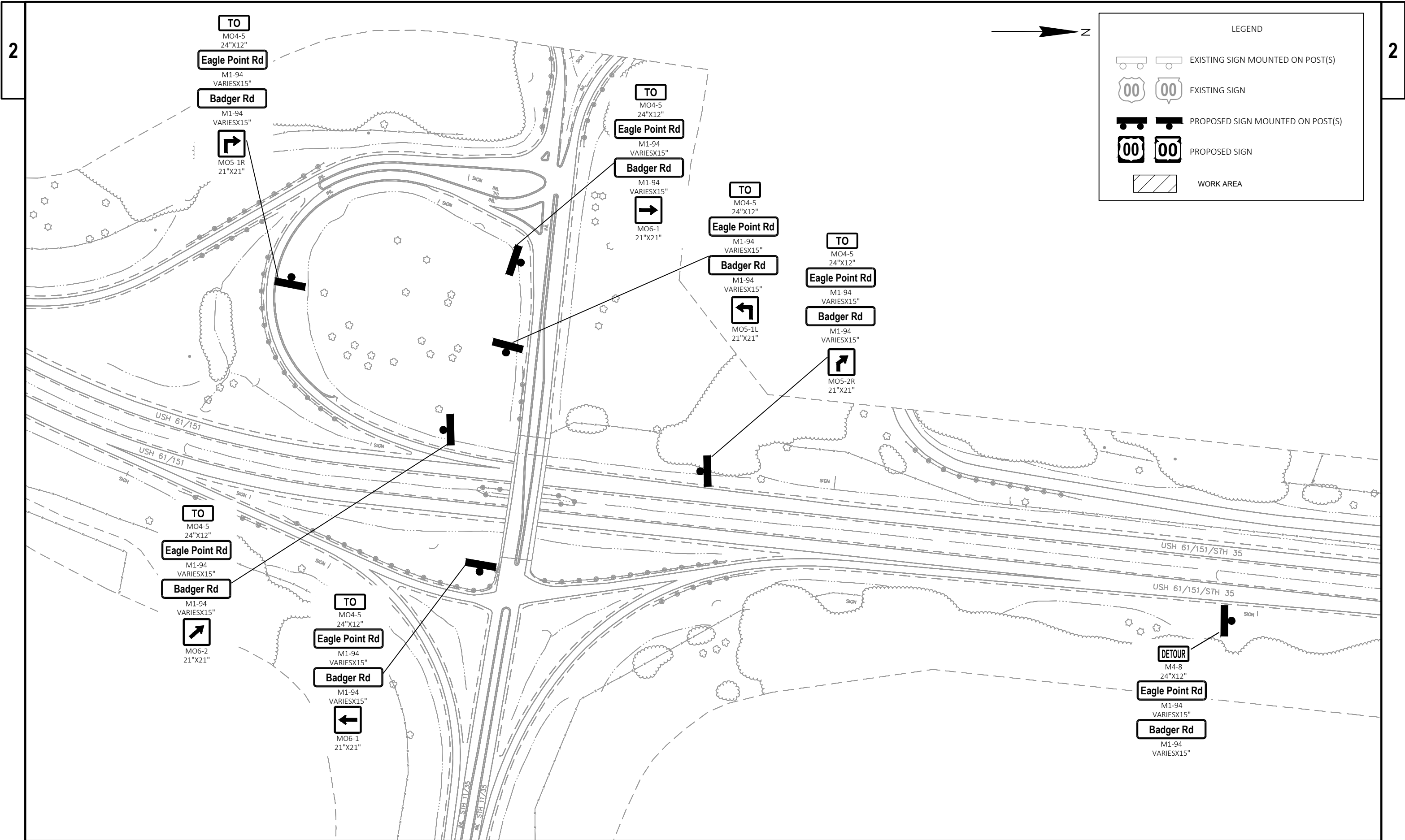
TRAFFIC CONTROL - DETOUR SIGNING EAGLEPOINT/USH 61 SB OFF RAMP

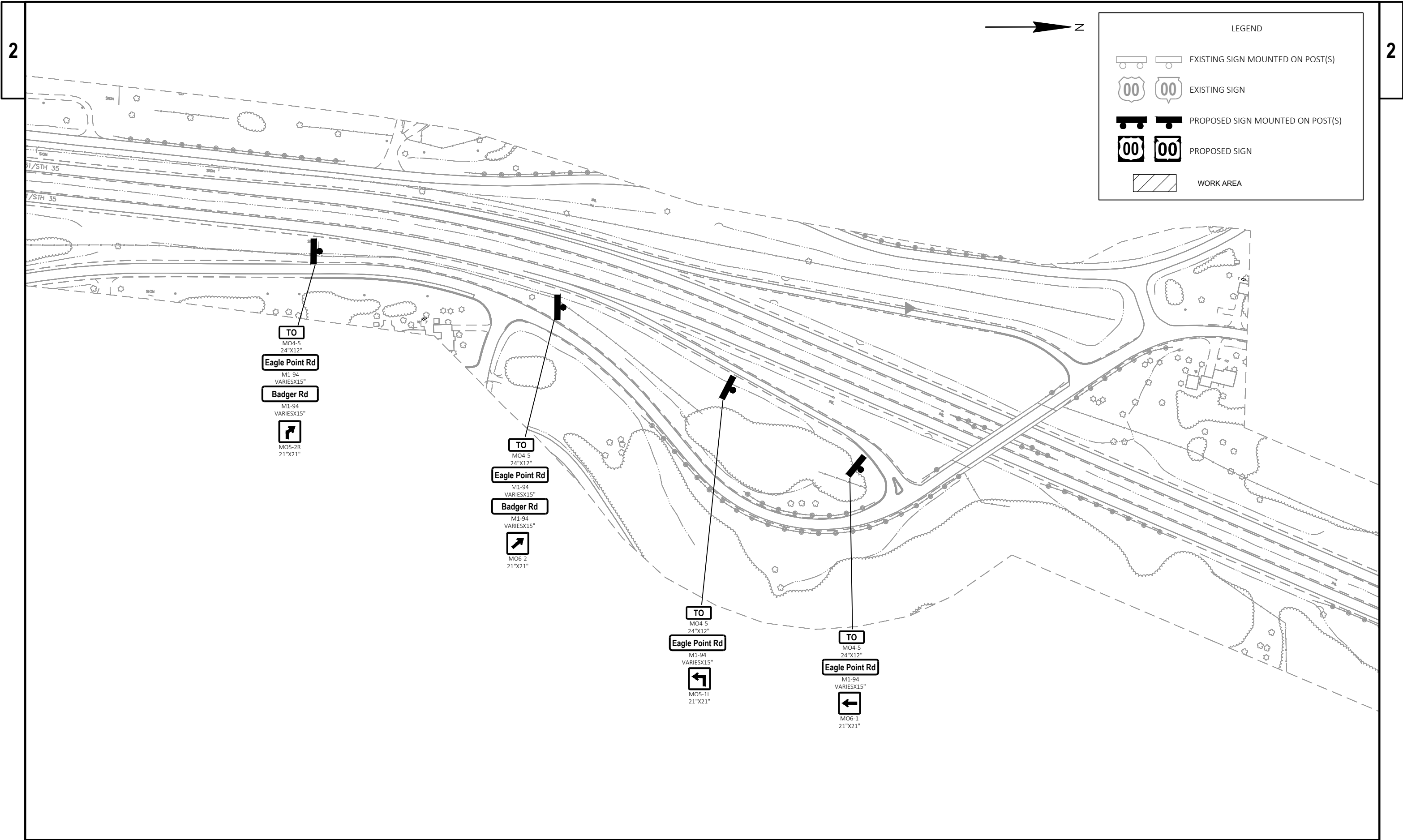
SHEET

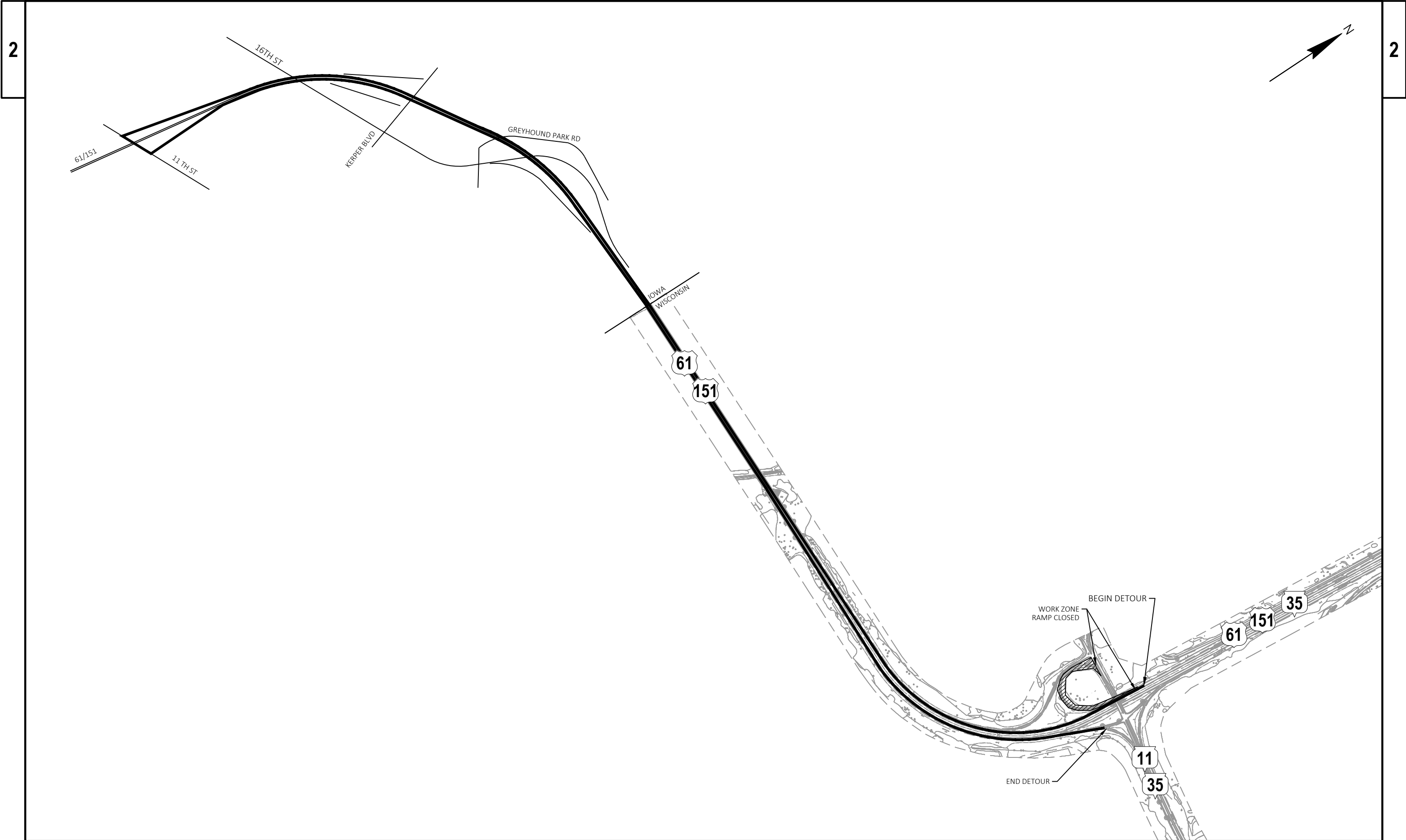
104

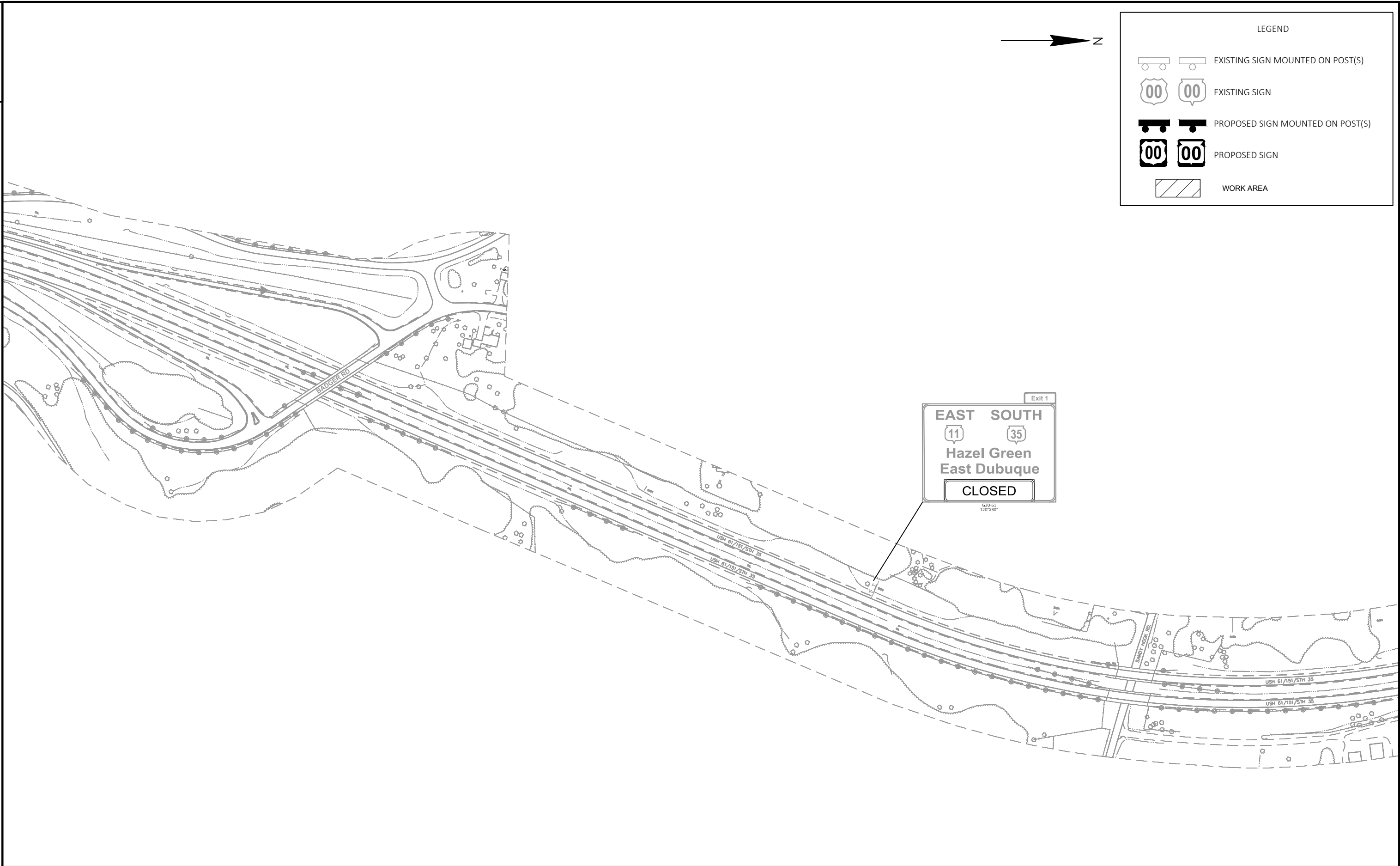
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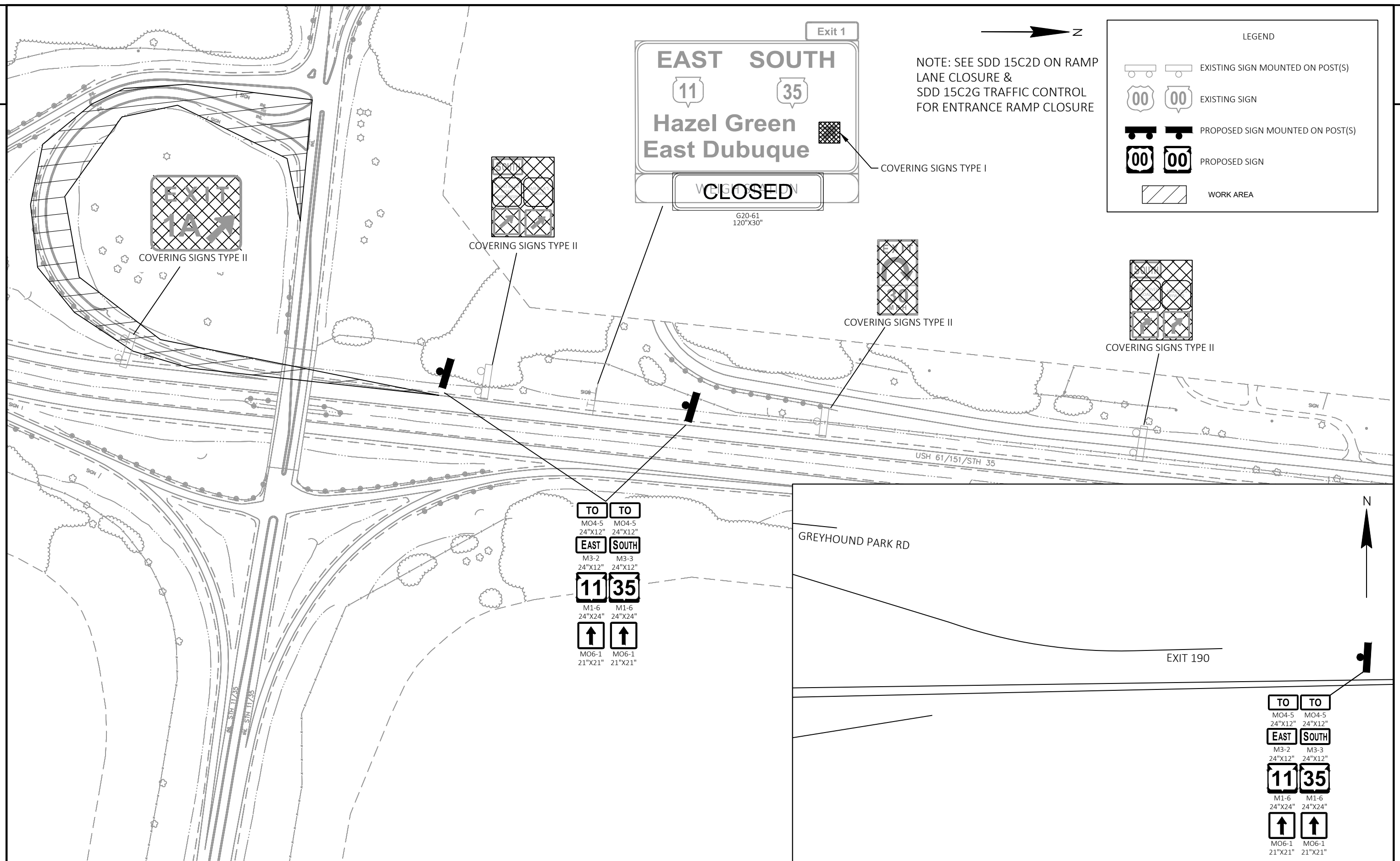


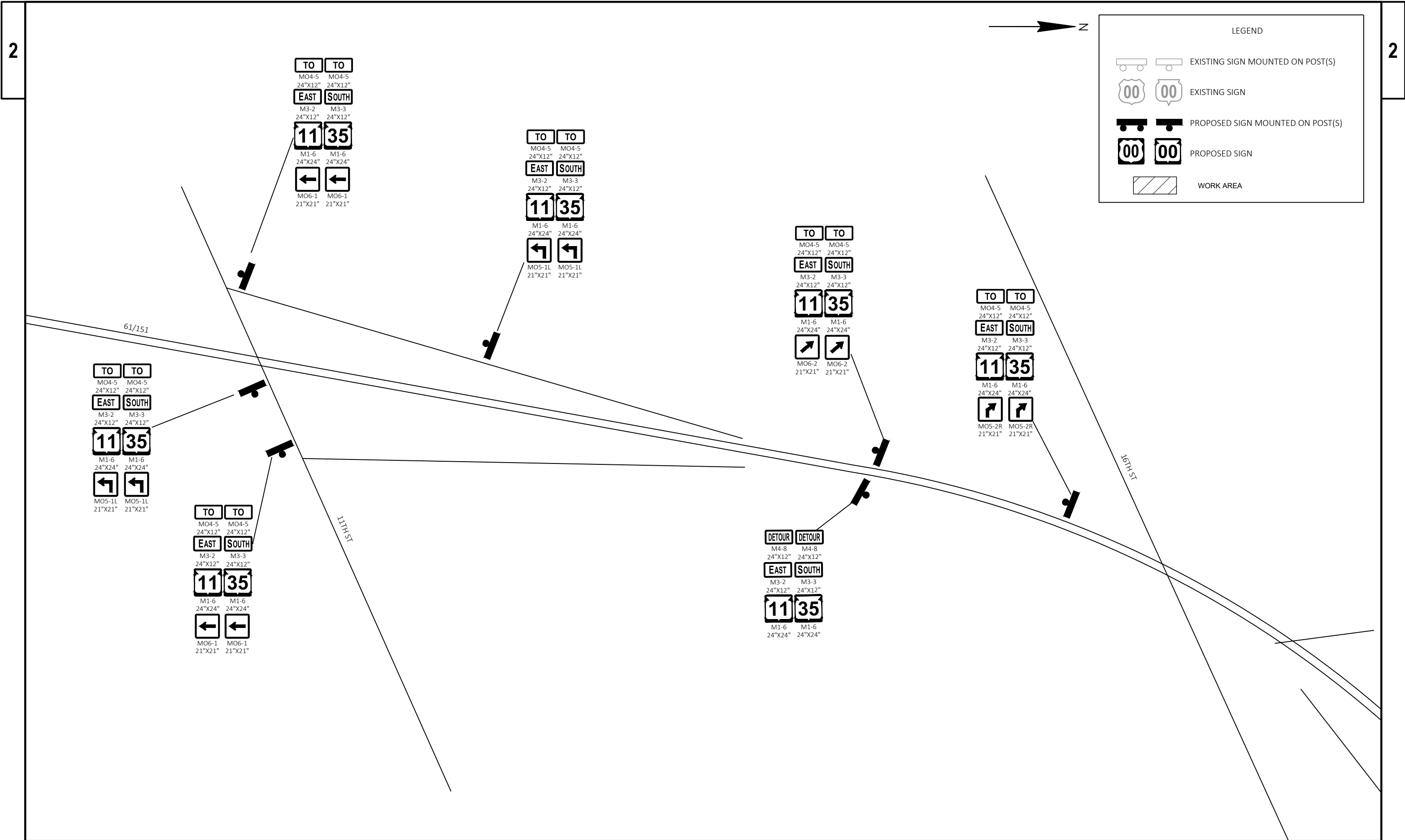




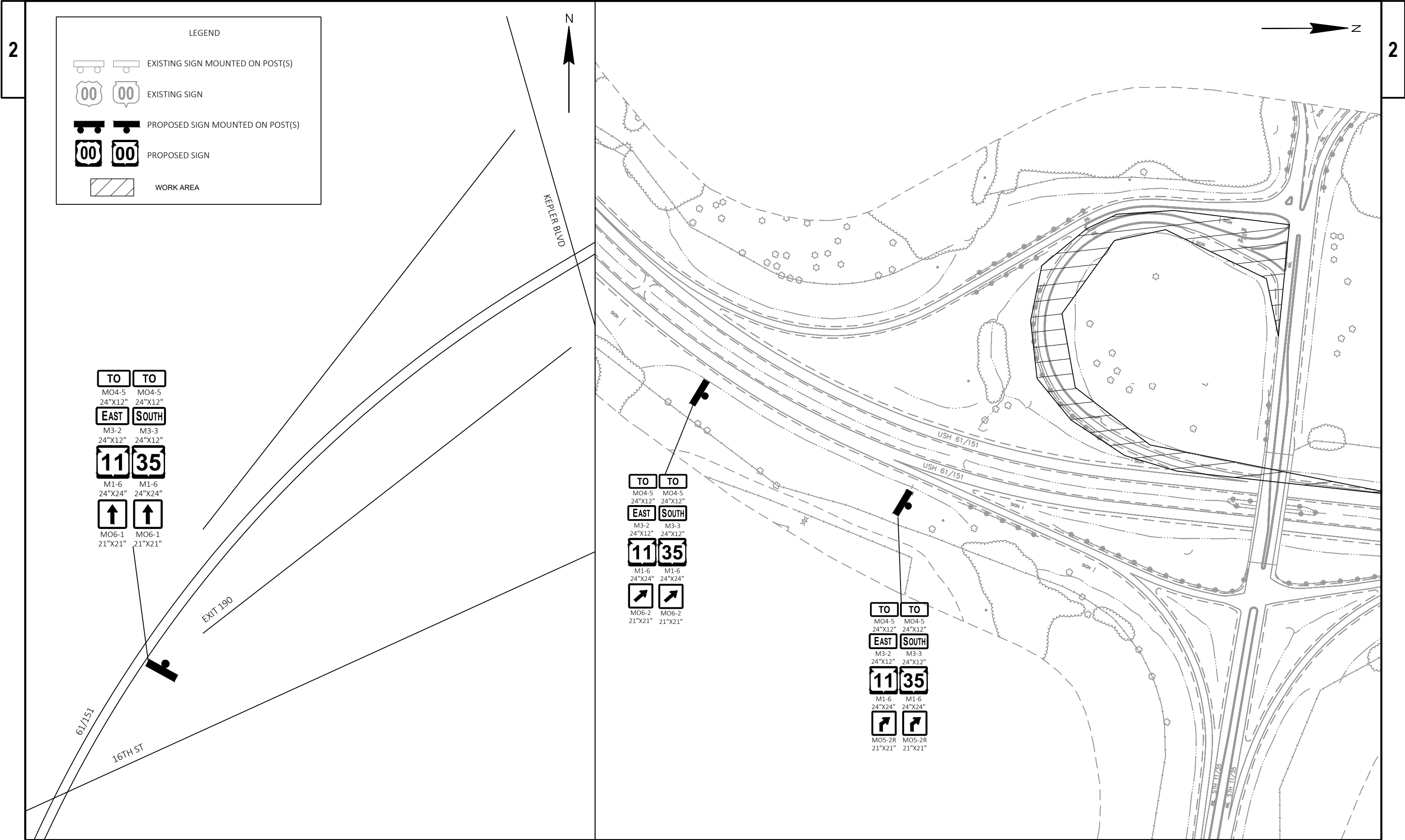


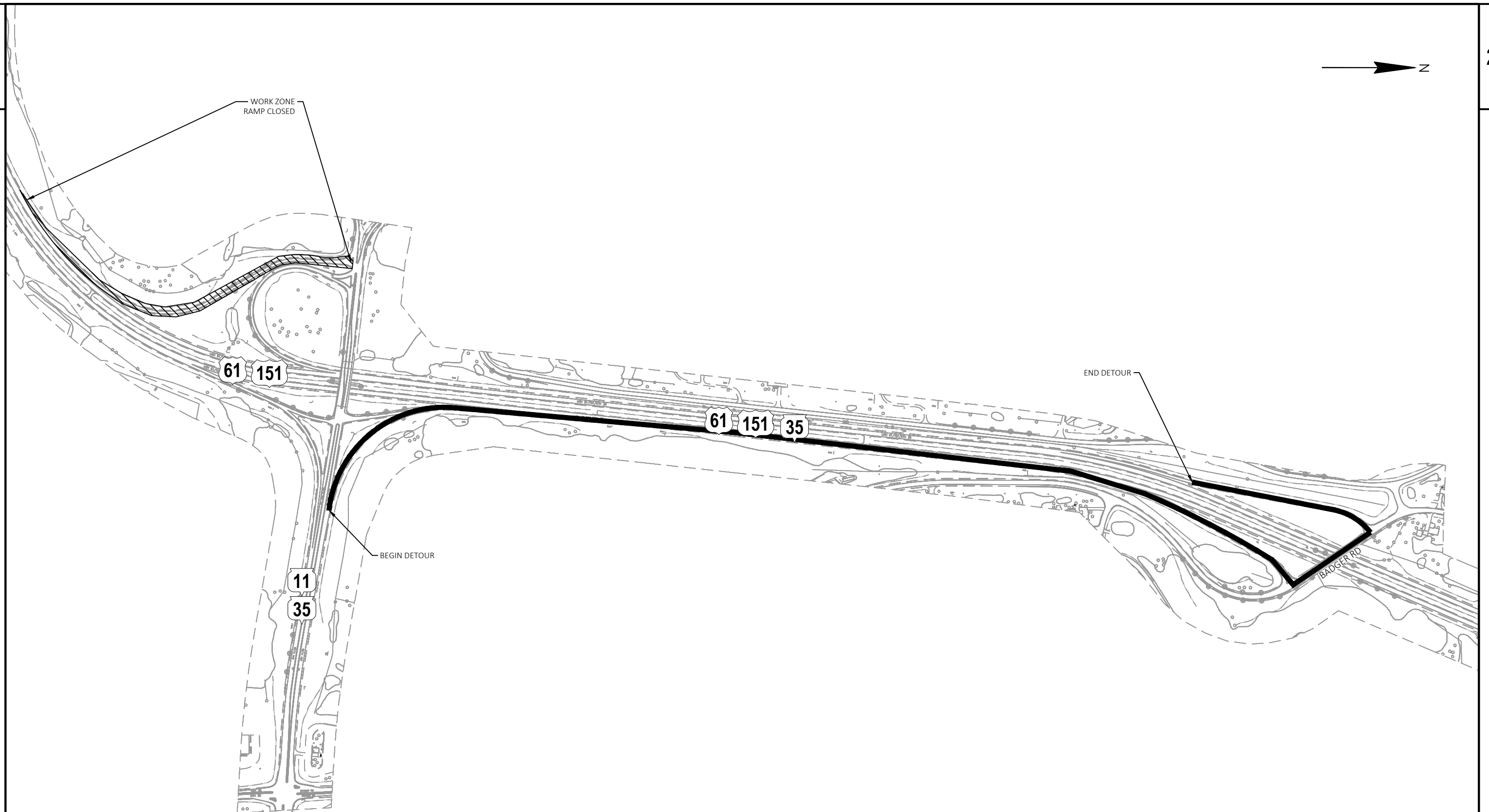








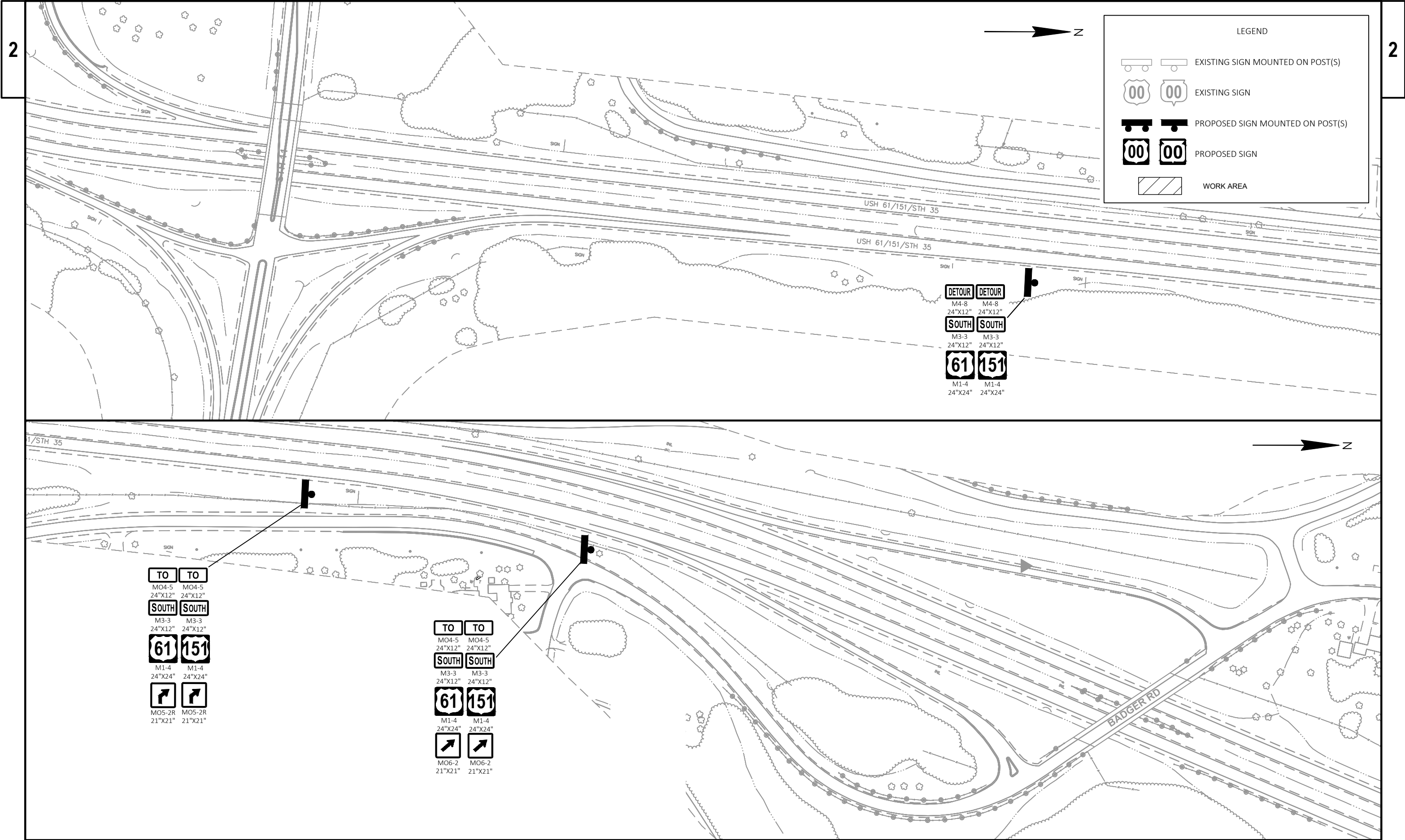


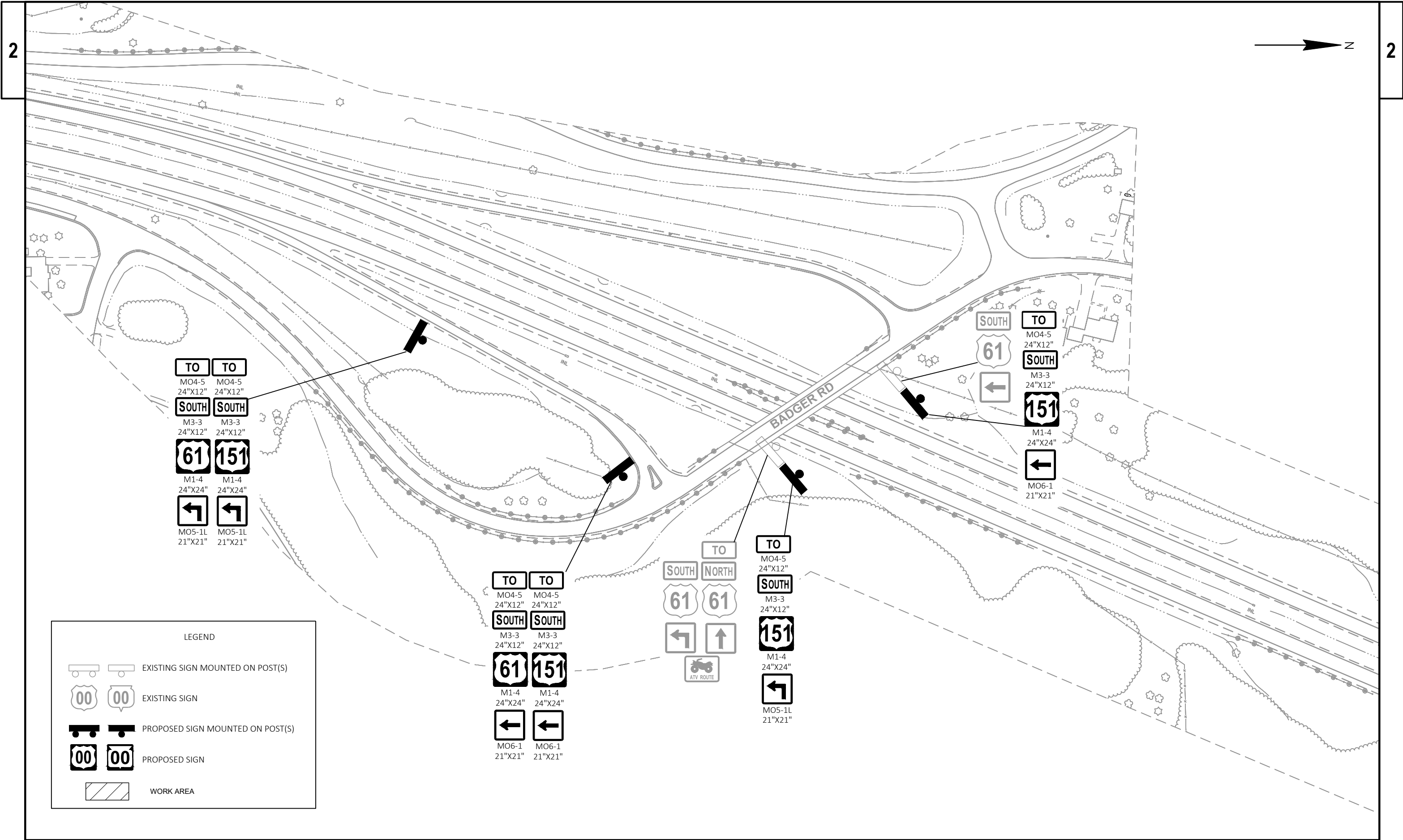


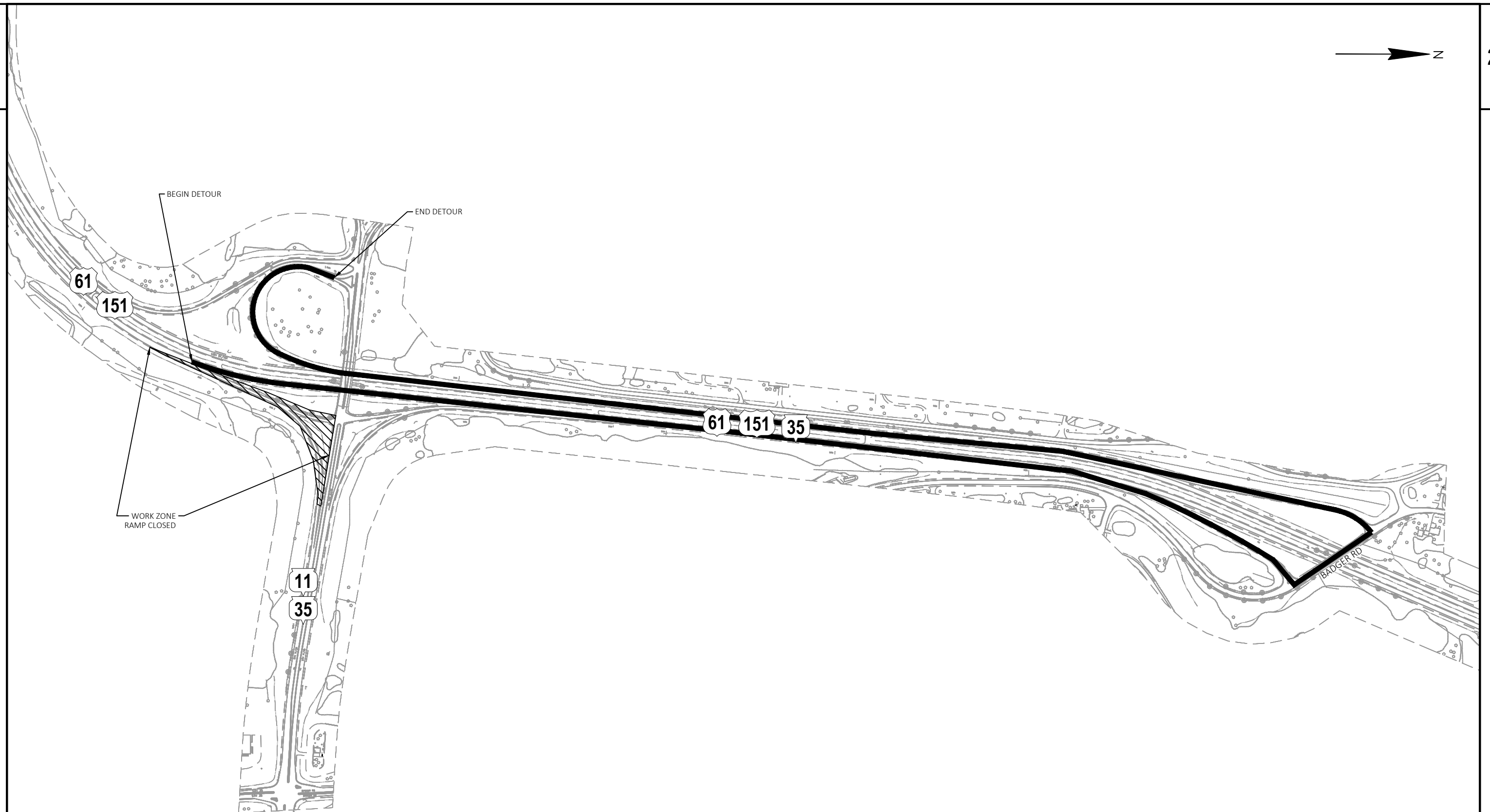
|                                                                                     |                                                                                     |                                  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------|
|  |  | EXISTING SIGN MOUNTED ON POST(S) |
|  |  | EXISTING SIGN                    |
|  |  | PROPOSED SIGN MOUNTED ON POST(S) |
|  |  | PROPOSED SIGN                    |
|  |                                                                                     | WORK AREA                        |



3











LEGEND



EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN

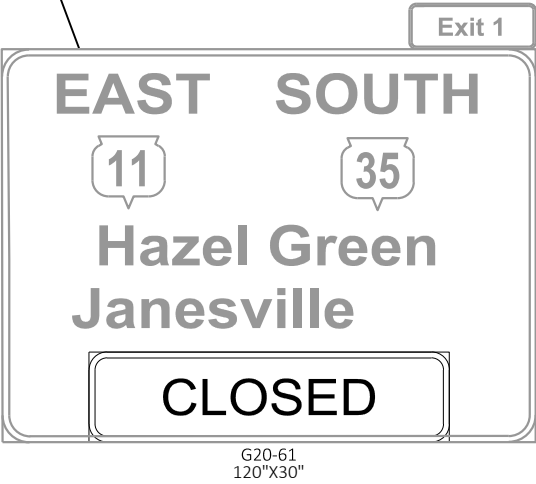
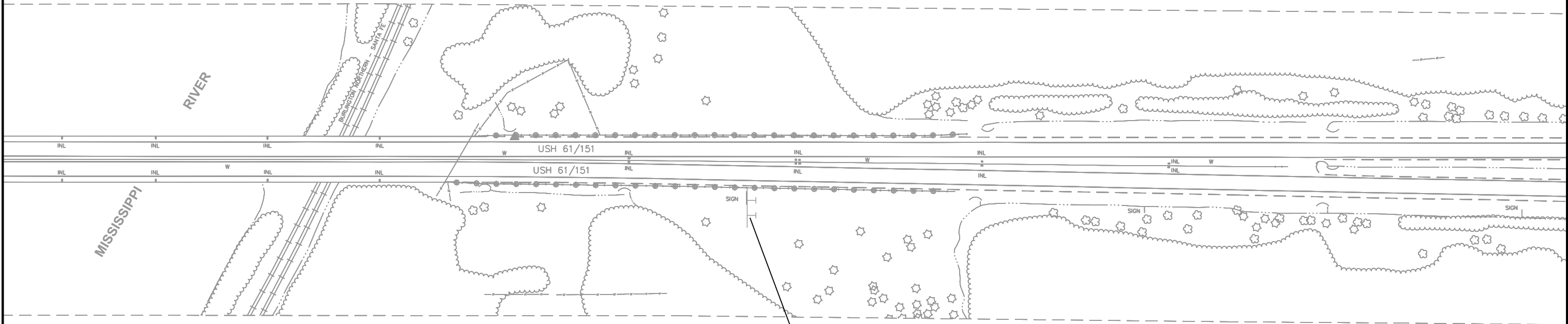


PROPOSED SIGN MOUNTED ON POST(S)

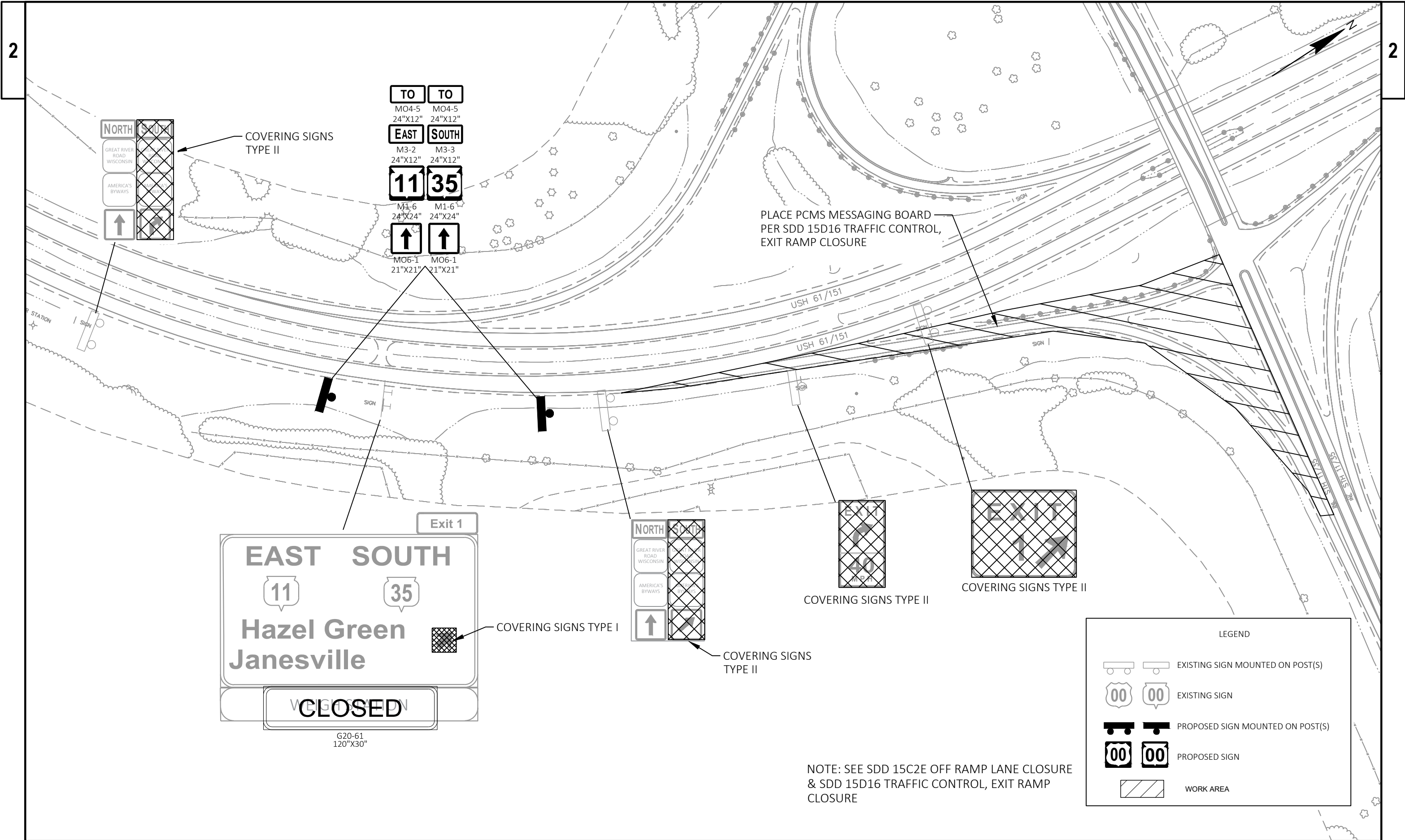
PROPOSED SIGN



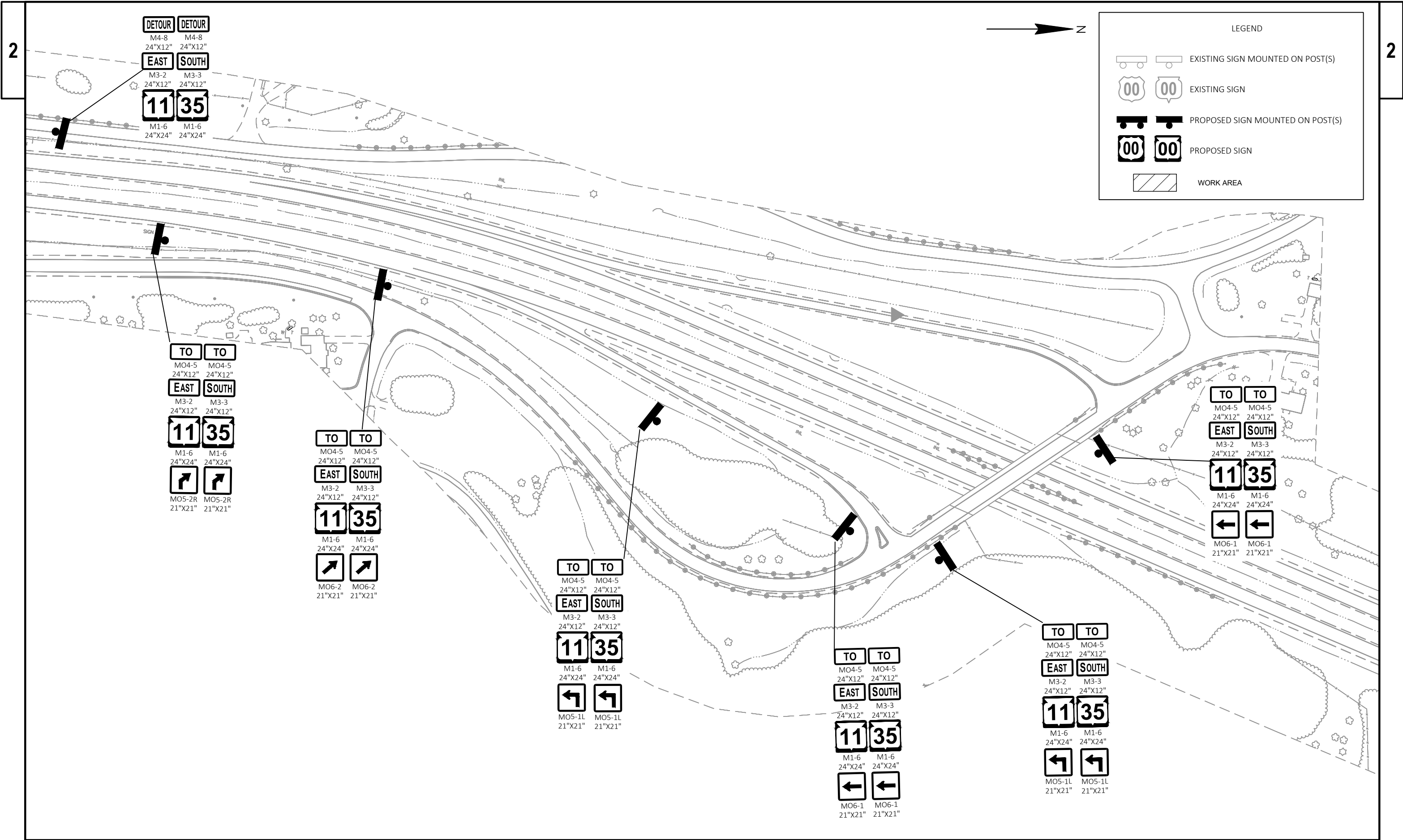
WORK AREA

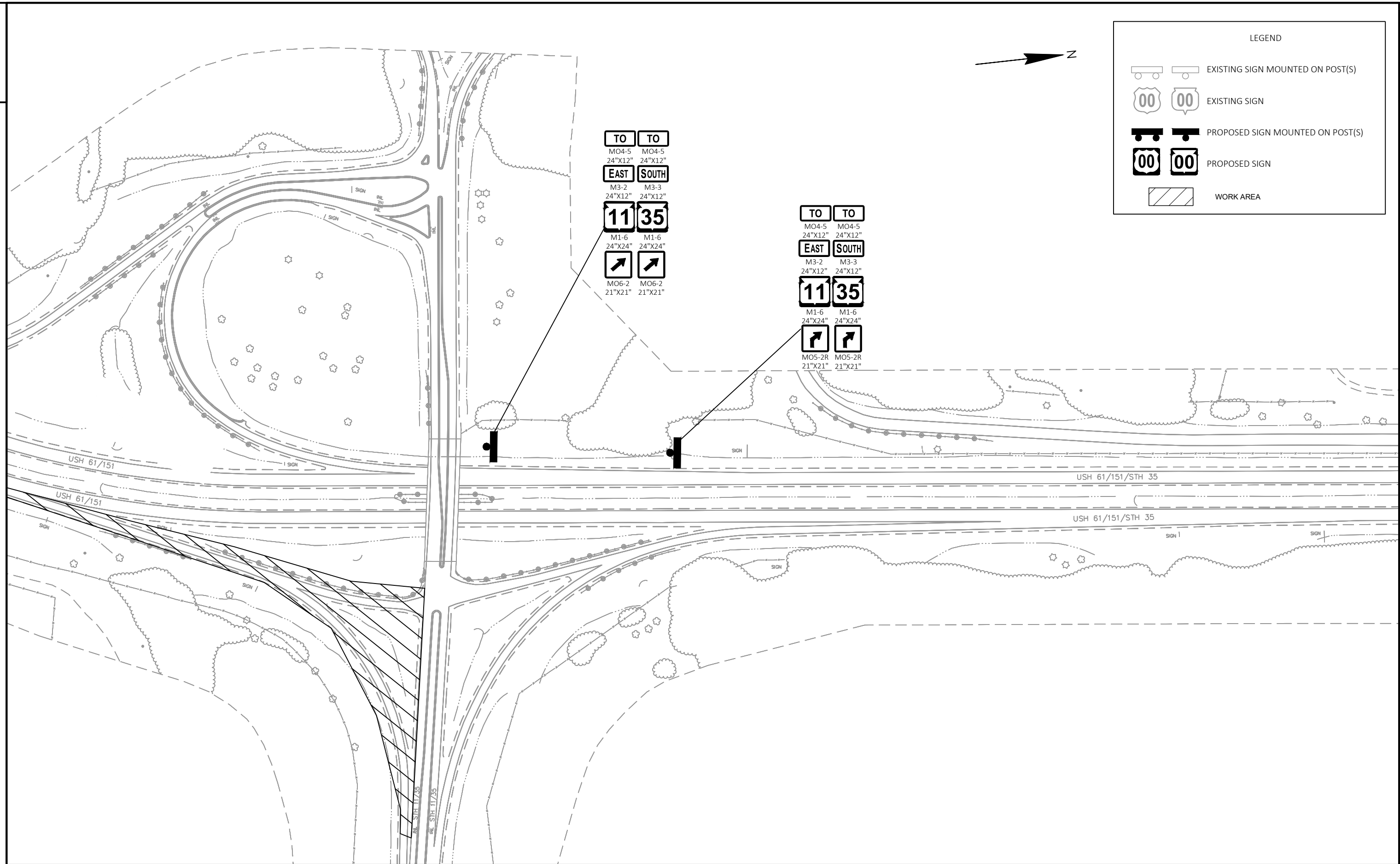


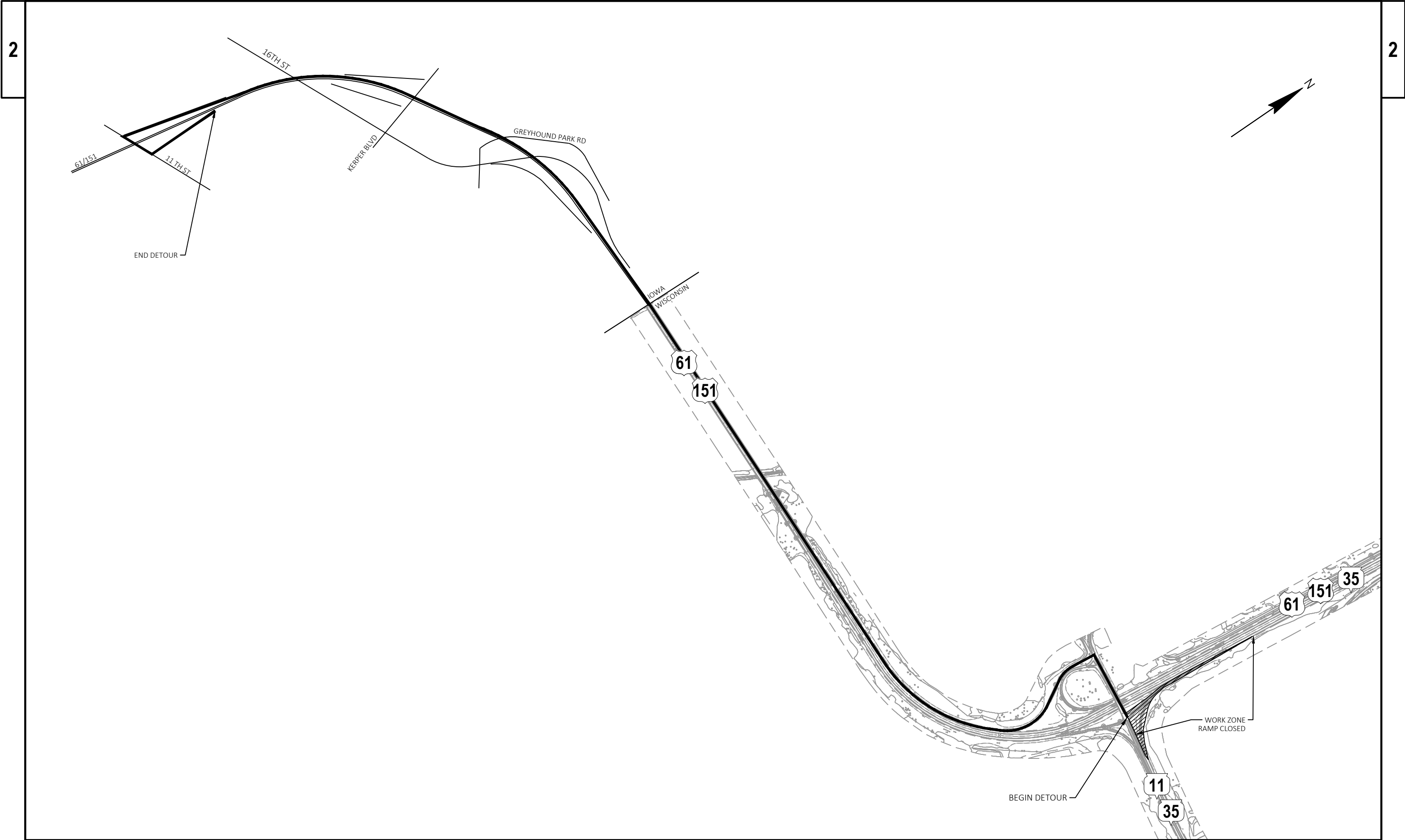


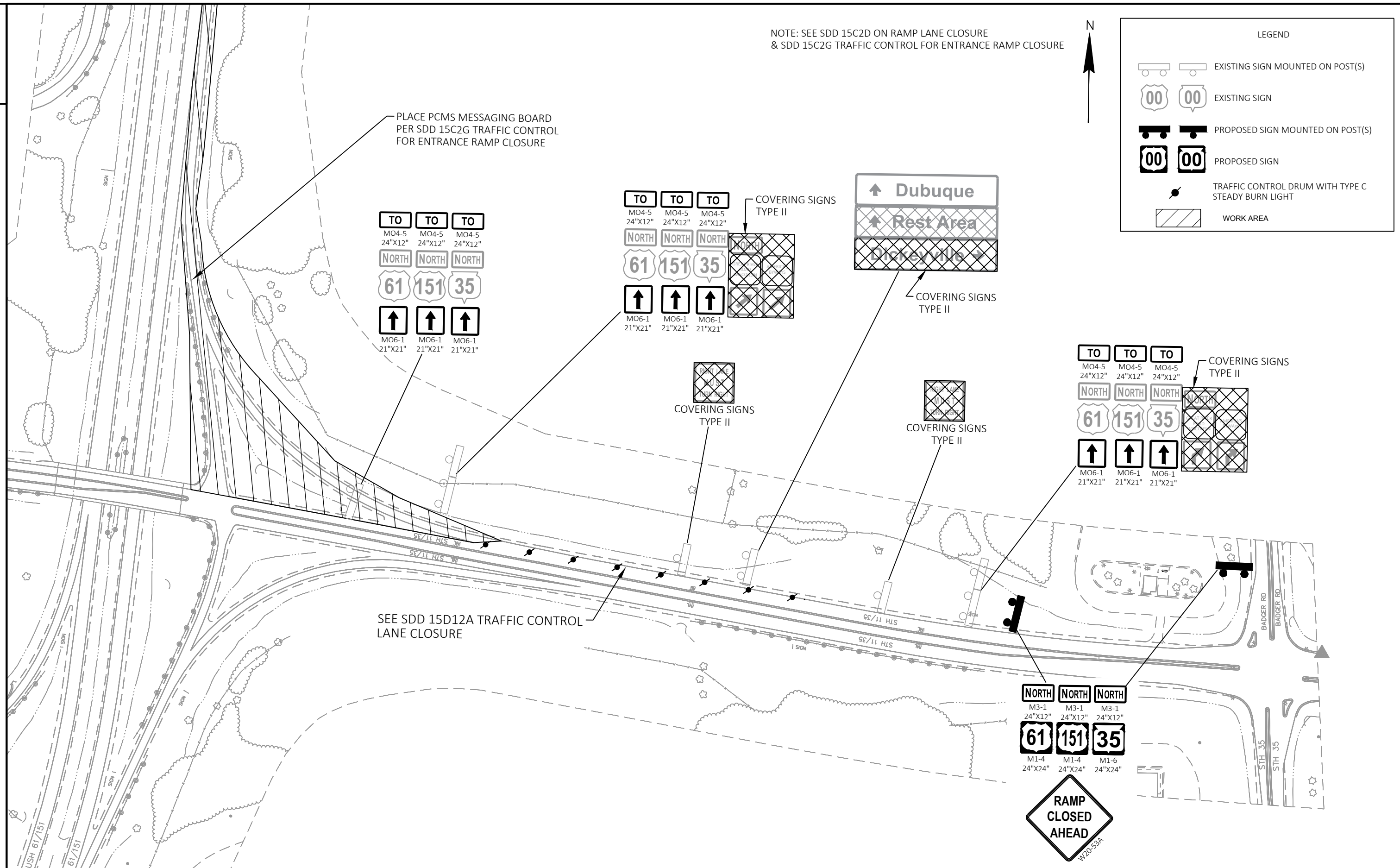








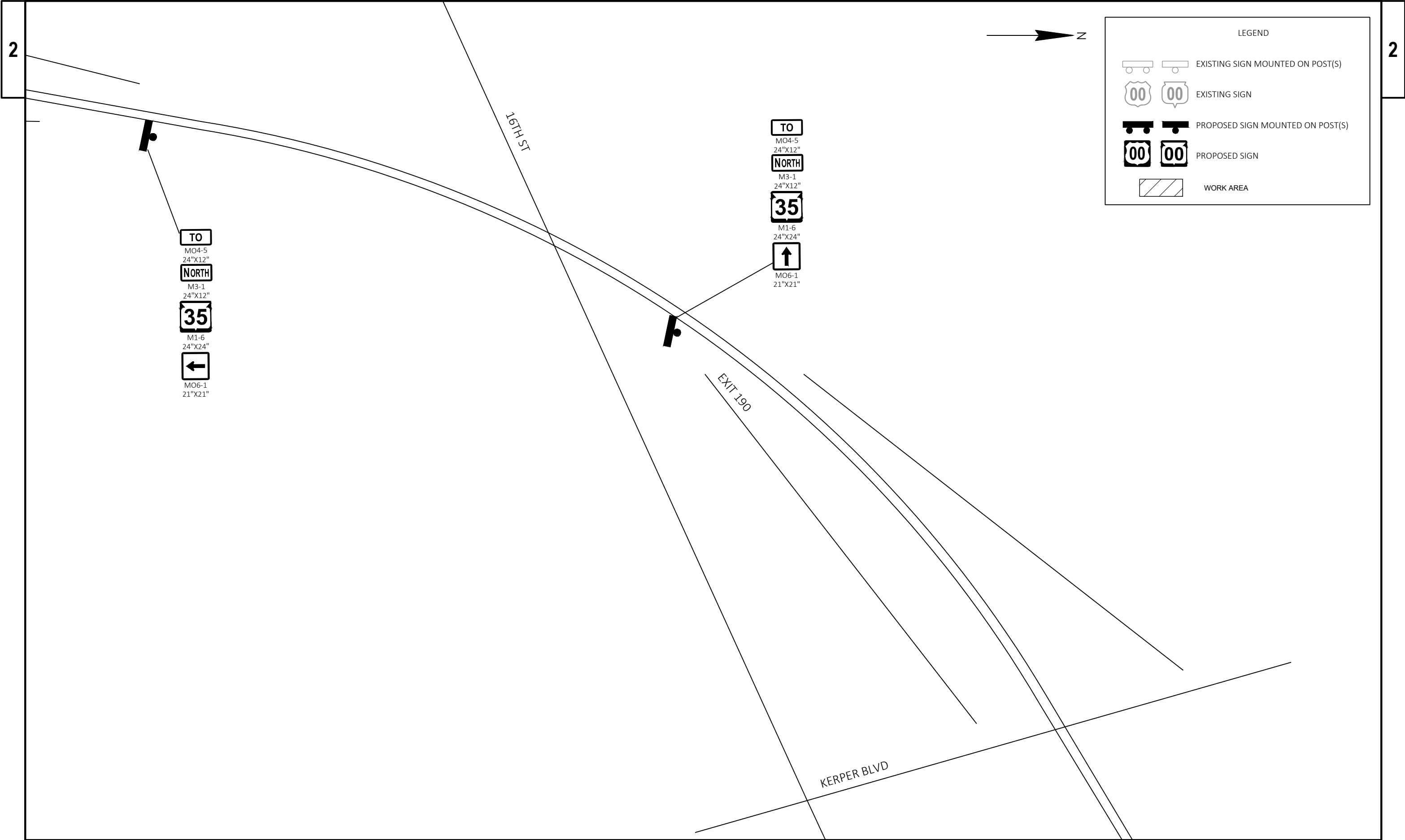


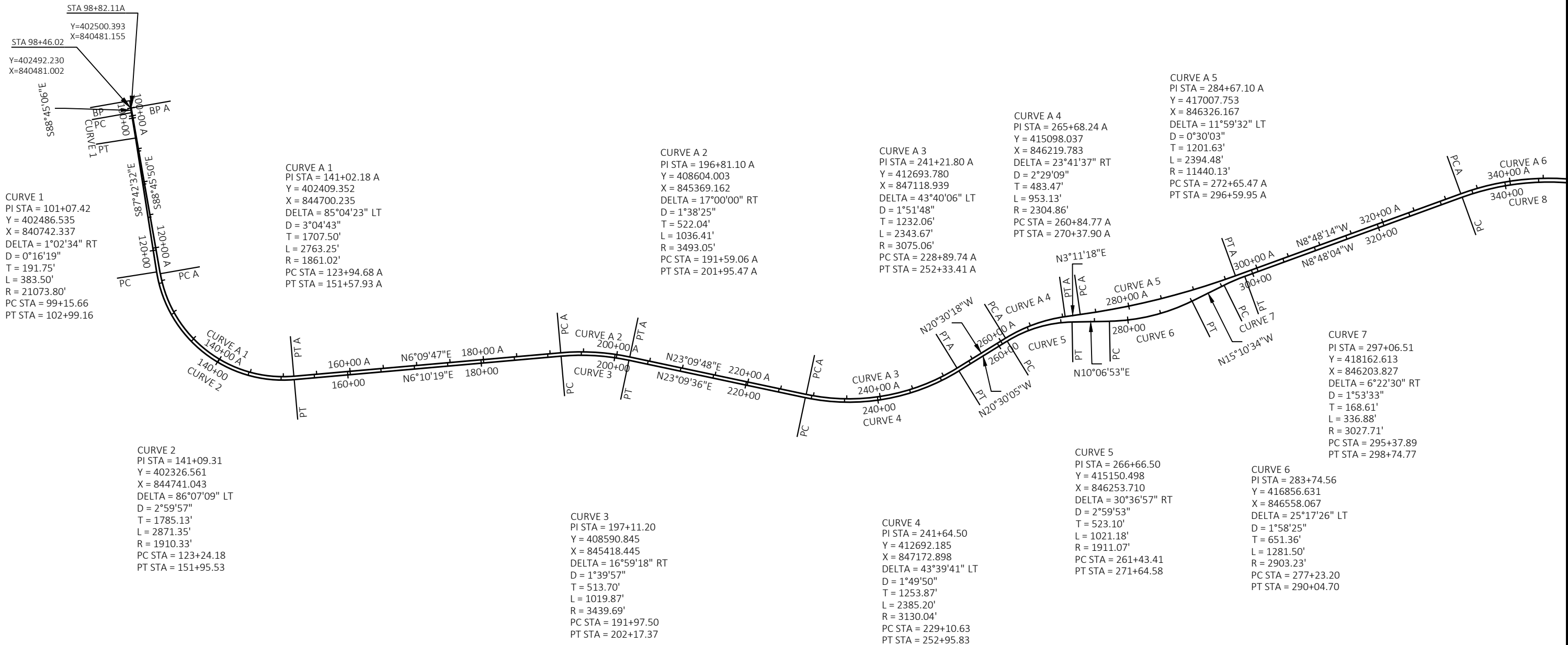










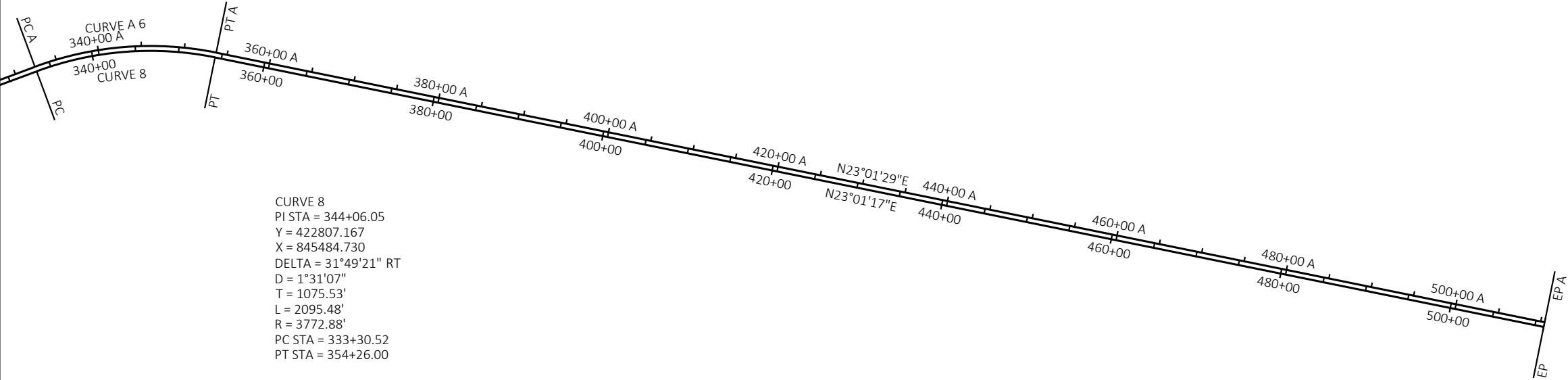


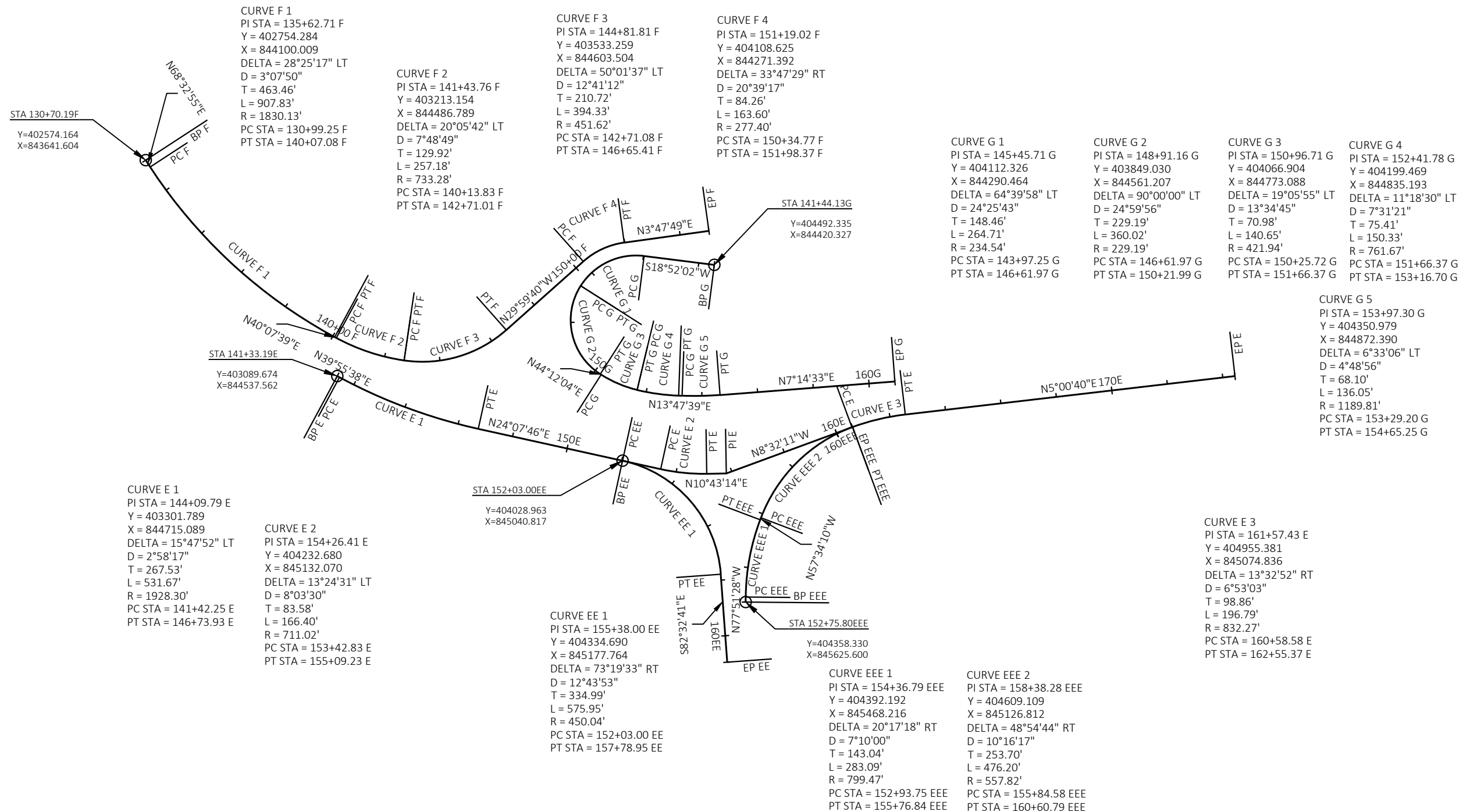




CURVE A 6  
PI STA = 343+34.55 A  
Y = 422814.747  
X = 845426.798  
DELTA = 31°49'43" RT  
D = 1°29'40"  
T = 1093.17'  
L = 2129.82'  
R = 3833.95'  
PC STA = 332+41.38 A  
PT STA = 353+71.20 A

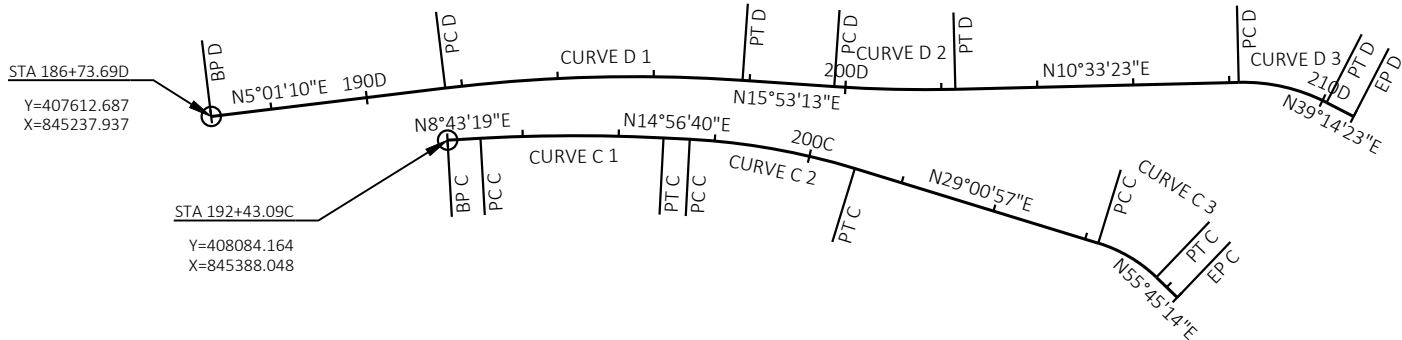
CURVE 8  
PI STA = 344+06.05  
Y = 422807.167  
X = 845484.730  
DELTA = 31°49'21" RT  
D = 1°31'07"  
T = 1075.53'  
L = 2095.48'  
R = 3772.88'  
PC STA = 333+30.52  
PT STA = 354+26.00







|                      |                      |                      |
|----------------------|----------------------|----------------------|
| CURVE D 1            | CURVE D 2            | CURVE D 3            |
| PI STA = 194+76.04 D | PI STA = 201+03.08 D | PI STA = 209+16.64 D |
| Y = 408411.959       | Y = 409016.840       | Y = 409816.810       |
| X = 845308.139       | X = 845480.295       | X = 845629.376       |
| DELTA = 10°52'03" RT | DELTA = 5°19'50" LT  | DELTA = 28°41'00" RT |
| D = 1°45'04"         | D = 2°06'42"         | D = 15°08'01"        |
| T = 311.22'          | T = 126.31'          | T = 96.80'           |
| L = 620.57'          | L = 252.43'          | L = 189.53'          |
| R = 3271.84'         | R = 2713.25'         | R = 378.60'          |
| PC STA = 191+64.82 D | PC STA = 199+76.77 D | PC STA = 208+19.84 D |
| PT STA = 197+85.40 D | PT STA = 202+29.20 D | PT STA = 210+09.37 D |



|                      |                      |                      |
|----------------------|----------------------|----------------------|
| CURVE C 1            | CURVE C 2            | CURVE C 3            |
| PI STA = 195+02.69 C | PI STA = 199+23.93 C | PI STA = 207+00.65 C |
| Y = 408340.761       | Y = 408748.120       | Y = 409428.895       |
| X = 845427.413       | X = 845536.142       | X = 845913.750       |
| DELTA = 6°13'22" RT  | DELTA = 14°04'17" RT | DELTA = 26°44'17" RT |
| D = 1°37'52"         | D = 4°01'09"         | D = 18°54'19"        |
| T = 190.93'          | T = 175.93'          | T = 72.03'           |
| L = 381.48'          | L = 350.10'          | L = 141.43'          |
| R = 3512.51'         | R = 1425.52'         | R = 303.07'          |
| PC STA = 193+11.76 C | PC STA = 197+48.00 C | PC STA = 206+28.62 C |
| PT STA = 196+93.24 C | PT STA = 200+98.09 C | PT STA = 207+70.05 C |



CURVE J 1  
PI STA = 263+15.64 J  
Y = 415148.413  
X = 845311.393  
DELTA = 6°56'41" LT  
D = 1°34'42"  
T = 220.29'  
L = 440.03'  
R = 3630.42'  
PC STA = 260+95.35 J  
PT STA = 265+35.39 J

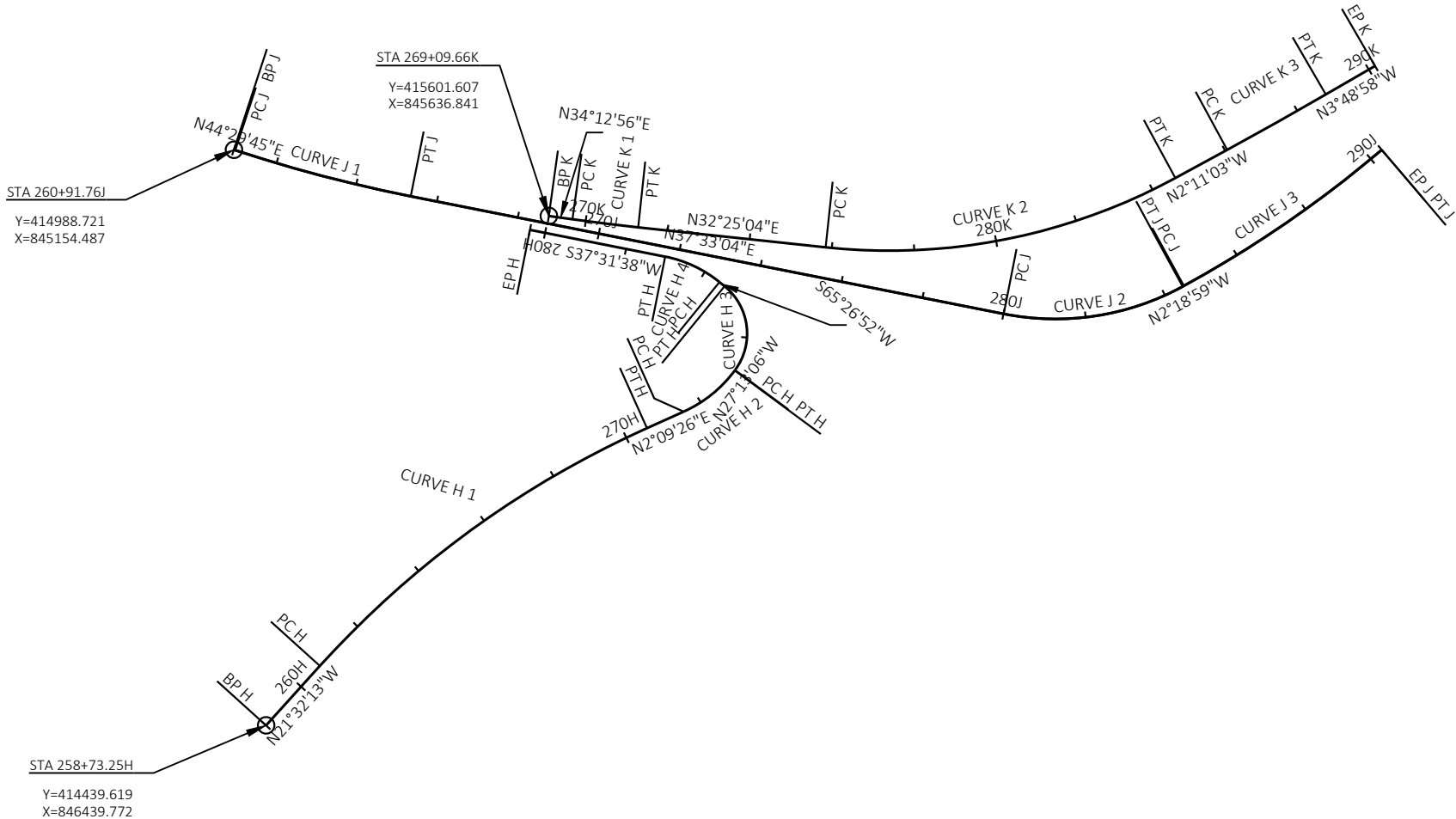
CURVE J 2  
PI STA = 282+33.84 J  
Y = 416669.611  
X = 846480.808  
DELTA = 39°52'03" LT  
D = 8°54'17"  
T = 233.35'  
L = 447.71'  
R = 643.43'  
PC STA = 280+00.50 J  
PT STA = 284+48.21 J

CURVE J 3  
PI STA = 287+43.85 J  
Y = 417198.173  
X = 846459.428  
DELTA = 11°43'39" LT  
D = 2°00'46"  
T = 292.34'  
L = 582.63'  
R = 2846.51'  
PC STA = 284+51.52 J  
PT STA = 290+34.15 J

CURVE K 1  
PI STA = 270+47.94 K  
Y = 415715.952  
X = 845714.595  
DELTA = 1°47'52" LT  
D = 1°07'07"  
T = 80.37'  
L = 160.72'  
R = 5122.35'  
PC STA = 269+67.57 K  
PT STA = 271+28.30 K

CURVE K 2  
PI STA = 280+37.58 K  
Y = 416551.382  
X = 846245.139  
DELTA = 34°36'08" LT  
D = 3°56'38"  
T = 452.52'  
L = 877.36'  
R = 1452.78'  
PC STA = 275+85.07 K  
PT STA = 284+62.43 K

CURVE K 3  
PI STA = 287+42.49 K  
Y = 417283.429  
X = 846217.218  
DELTA = 1°37'54" LT  
D = 0°35'43"  
T = 137.07'  
L = 274.13'  
R = 9625.80'  
PC STA = 286+05.41 K  
PT STA = 288+79.54 K



CURVE H 1  
PI STA = 265+68.59 H  
Y = 415086.415  
X = 846184.509  
DELTA = 23°41'39" RT  
D = 2°24'00"  
T = 500.77'  
L = 987.22'  
R = 2387.22'  
PC STA = 260+67.82 H  
PT STA = 270+55.04 H

CURVE H 2  
PI STA = 272+34.73 H  
Y = 415766.384  
X = 846210.123  
DELTA = 29°22'32" LT  
D = 18°17'24"  
T = 82.11'  
L = 160.61'  
R = 313.26'  
PC STA = 271+52.62 H  
PT STA = 273+13.23 H

CURVE H 3  
PI STA = 274+56.22 H  
Y = 415966.565  
X = 846107.163  
DELTA = 87°20'03" LT  
D = 38°40'03"  
T = 141.44'  
L = 225.86'  
R = 148.18'  
PC STA = 273+14.78 H  
PT STA = 275+40.64 H

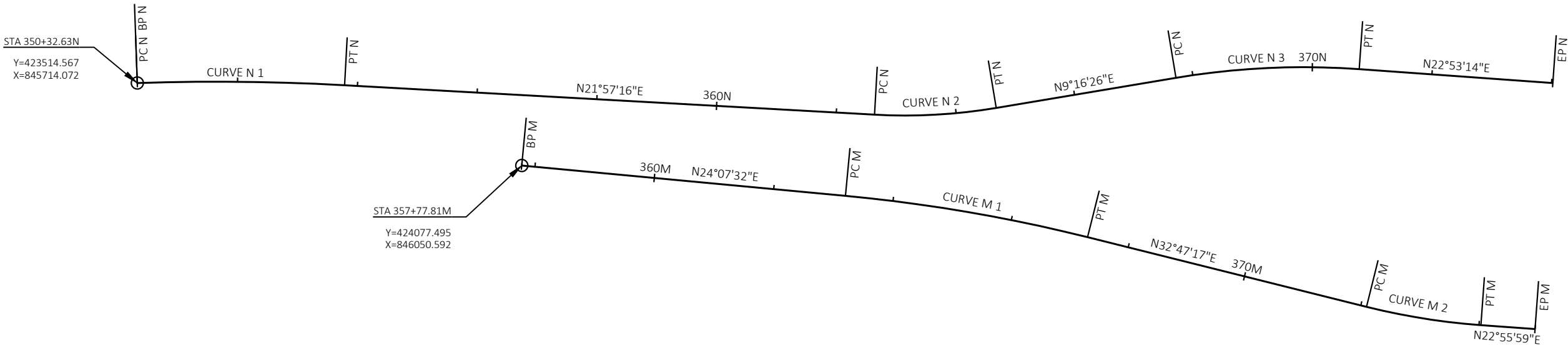
CURVE H 4  
PI STA = 276+31.57 H  
Y = 415870.012  
X = 845895.809  
DELTA = 27°55'14" LT  
D = 19°00'28"  
T = 74.93'  
L = 146.89'  
R = 301.44'  
PC STA = 275+56.64 H  
PT STA = 277+03.53 H



CURVE N 1  
PI STA = 352+05.70 N  
Y = 423680.256  
X = 845764.059  
DELTA = 5°09'59" RT  
D = 1°29'37"  
T = 173.06'  
L = 345.89'  
R = 3835.99'  
PC STA = 350+32.63 N  
PT STA = 353+78.53 N

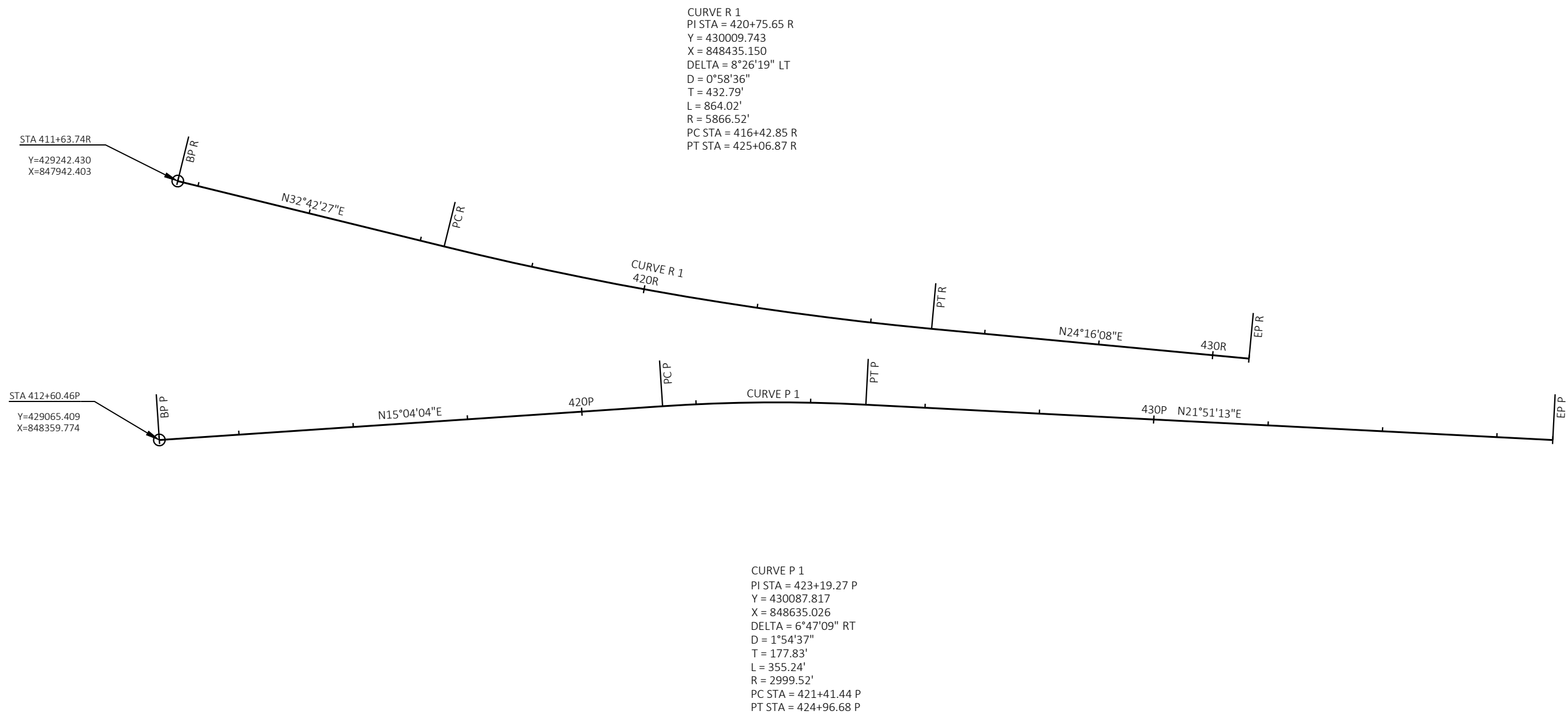
CURVE N 2  
PI STA = 363+66.20 N  
Y = 424756.816  
X = 846198.021  
DELTA = 12°40'50" LT  
D = 6°13'30"  
T = 102.27'  
L = 203.71'  
R = 920.42'  
PC STA = 362+63.93 N  
PT STA = 364+67.63 N

CURVE N 3  
PI STA = 369+25.63 N  
Y = 425309.762  
X = 846288.310  
DELTA = 13°36'48" RT  
D = 4°26'21"  
T = 154.05'  
L = 306.66'  
R = 1290.66'  
PC STA = 367+71.58 N  
PT STA = 370+78.23 N



CURVE M 1  
PI STA = 365+25.59 M  
Y = 424759.960  
X = 846356.239  
DELTA = 8°39'45" RT  
D = 2°06'44"  
T = 205.44'  
L = 410.10'  
R = 2712.47'  
PC STA = 363+20.15 M  
PT STA = 367+30.25 M

CURVE M 2  
PI STA = 373+06.70 M  
Y = 425417.282  
X = 846779.659  
DELTA = 9°51'18" LT  
D = 5°05'25"  
T = 97.04'  
L = 193.60'  
R = 1125.56'  
PC STA = 372+09.67 M  
PT STA = 374+03.26 M



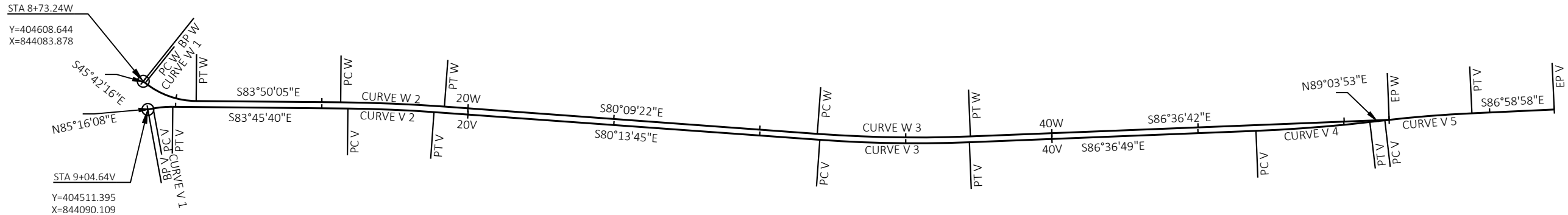




CURVE W 1  
PI STA = 9+79.78 W  
Y = 404534.240  
X = 844160.135  
DELTA = 38°07'49" LT  
D = 20°15'55"  
T = 97.71'  
L = 188.16'  
R = 282.73'  
PC STA = 8+82.07 W  
PT STA = 10+70.23 W

CURVE W 2  
PI STA = 17+41.91 W  
Y = 404451.609  
X = 844925.080  
DELTA = 3°40'43" RT  
D = 1°02'09"  
T = 177.63'  
L = 355.14'  
R = 5531.69'  
PC STA = 15+64.28 W  
PT STA = 19+19.42 W

CURVE W 3  
PI STA = 34+59.47 W  
Y = 404157.950  
X = 846617.473  
DELTA = 6°27'20" LT  
D = 1°13'59"  
T = 262.03'  
L = 523.50'  
R = 4646.37'  
PC STA = 31+97.44 W  
PT STA = 37+20.94 W



CURVE V 1  
PI STA = 9+57.06 V  
Y = 404515.719  
X = 844142.356  
DELTA = 10°58'13" RT  
D = 16°18'54"  
T = 33.72'  
L = 67.24'  
R = 351.19'  
PC STA = 9+23.34 V  
PT STA = 9+90.58 V

CURVE V 2  
PI STA = 17+36.63 V  
Y = 404430.977  
X = 844917.508  
DELTA = 3°31'55" RT  
D = 1°11'56"  
T = 147.35'  
L = 294.61'  
R = 4779.26'  
PC STA = 15+89.28 V  
PT STA = 18+83.88 V

CURVE V 3  
PI STA = 34+62.40 V  
Y = 404138.085  
X = 846618.337  
DELTA = 6°23'04" LT  
D = 1°14'52"  
T = 256.09'  
L = 511.64'  
R = 4591.54'  
PC STA = 32+06.31 V  
PT STA = 37+17.95 V

CURVE V 4  
PI STA = 48+93.62 V  
Y = 404053.515  
X = 848047.592  
DELTA = 4°19'17" LT  
D = 1°06'21"  
T = 195.50'  
L = 390.81'  
R = 5181.43'  
PC STA = 46+98.13 V  
PT STA = 50+88.93 V

CURVE V 5  
PI STA = 52+89.73 V  
Y = 404059.983  
X = 848443.830  
DELTA = 3°57'09" RT  
D = 1°19'25"  
T = 149.37'  
L = 298.63'  
R = 4328.95'  
PC STA = 51+40.35 V  
PT STA = 54+38.98 V

CURVE X 1  
PI STA = 113+28.84 X  
Y = 404558.902  
X = 844072.154  
DELTA = 68°43'31" RT  
D = 20°45'52"  
T = 188.67'  
L = 330.98'  
R = 275.93'  
PC STA = 111+40.17 X  
PT STA = 114+71.15 X

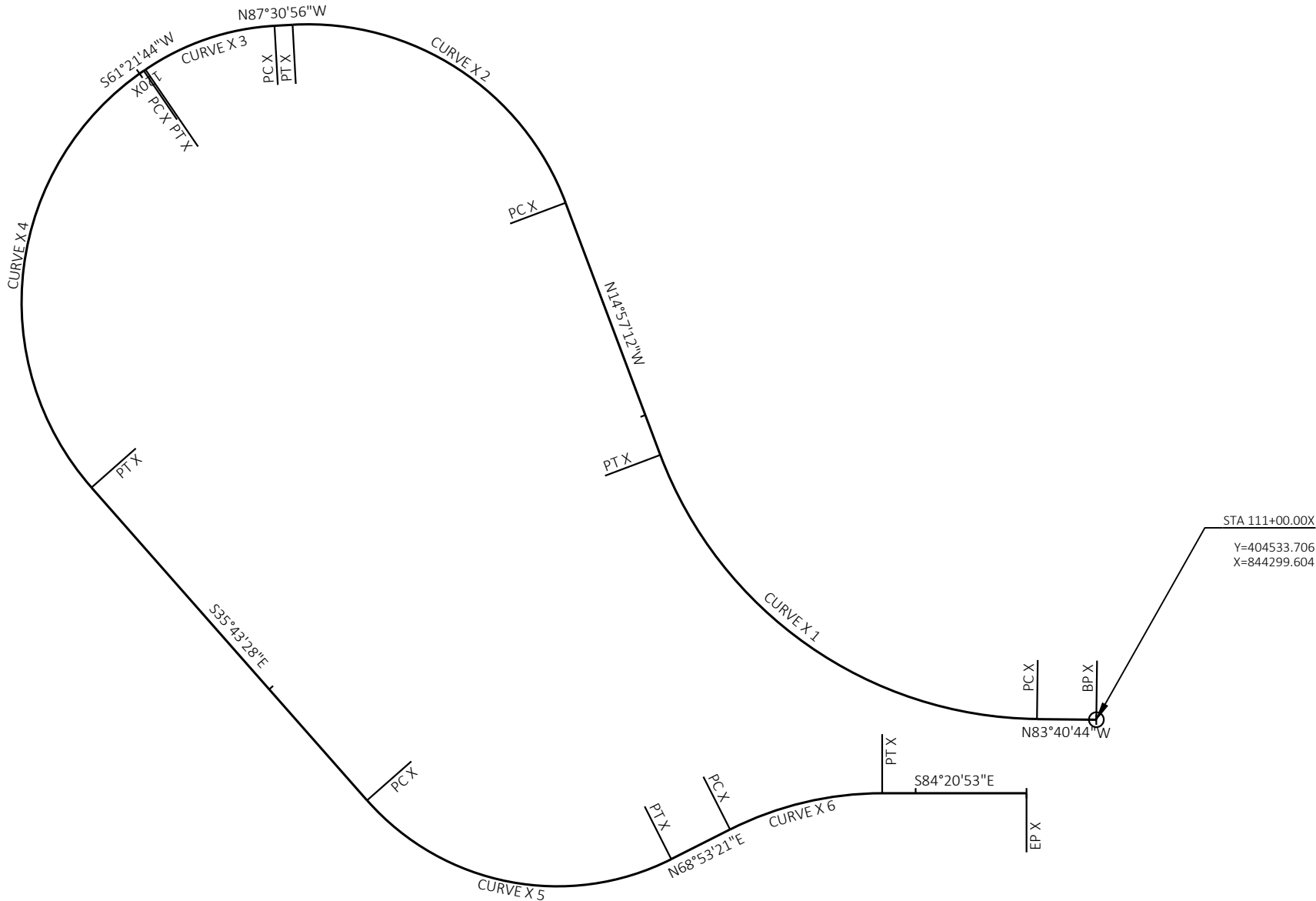
CURVE X 2  
PI STA = 117+90.30 X  
Y = 405049.524  
X = 843941.119  
DELTA = 72°33'43" LT  
D = 30°44'05"  
T = 136.84'  
L = 236.09'  
R = 186.42'  
PC STA = 116+53.45 X  
PT STA = 118+89.54 X

CURVE X 3  
PI STA = 119+49.63 X  
Y = 405058.061  
X = 843744.369  
DELTA = 31°07'20" LT  
D = 33°20'59"  
T = 47.84'  
L = 93.32'  
R = 171.80'  
PC STA = 119+01.79 X  
PT STA = 119+95.11 X

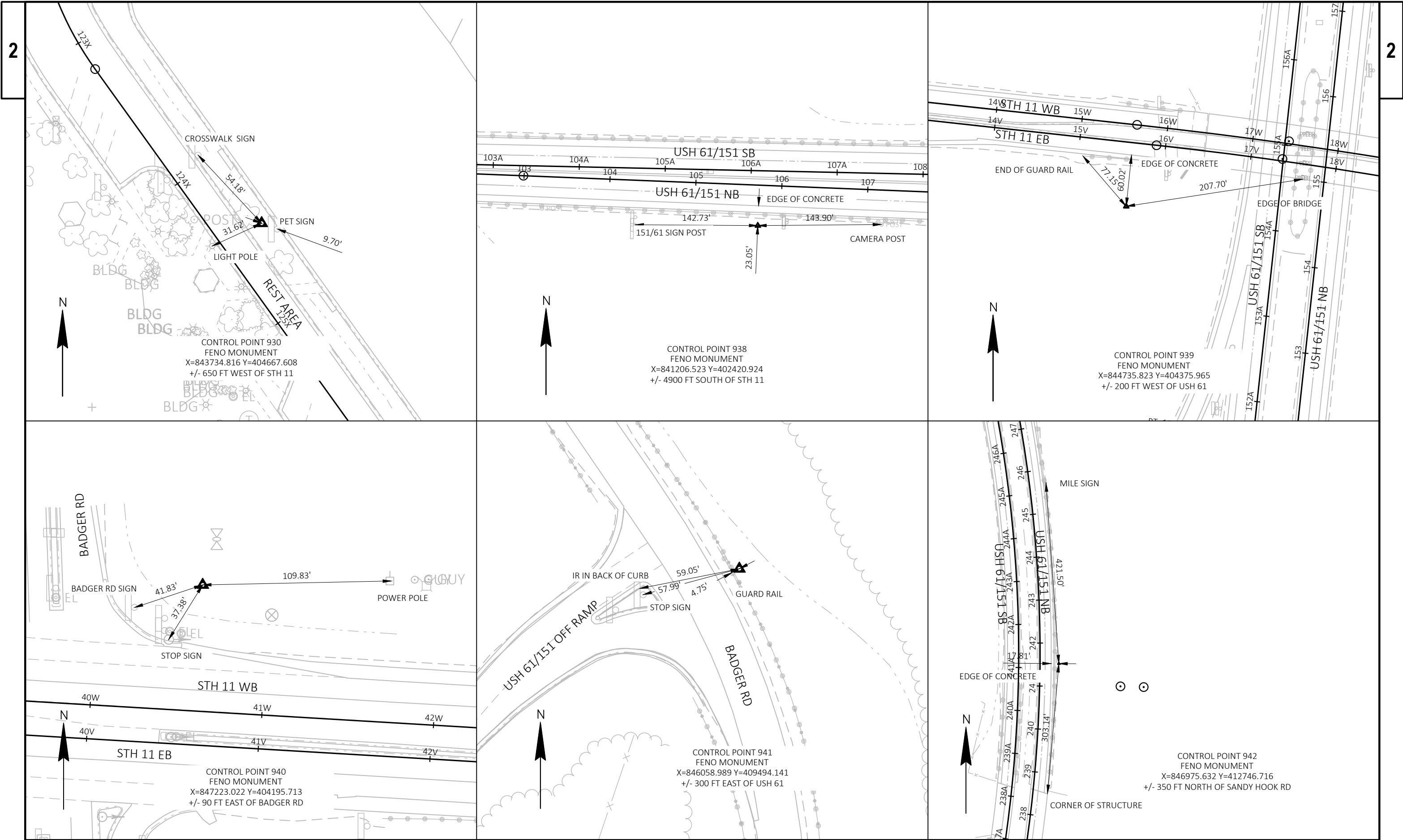
CURVE X 4  
PI STA = 122+11.27 X  
Y = 404931.533  
X = 843512.662  
DELTA = 97°05'12" LT  
D = 30°12'37"  
T = 214.69'  
L = 321.37'  
R = 189.66'  
PC STA = 119+96.58 X  
PT STA = 123+17.95 X

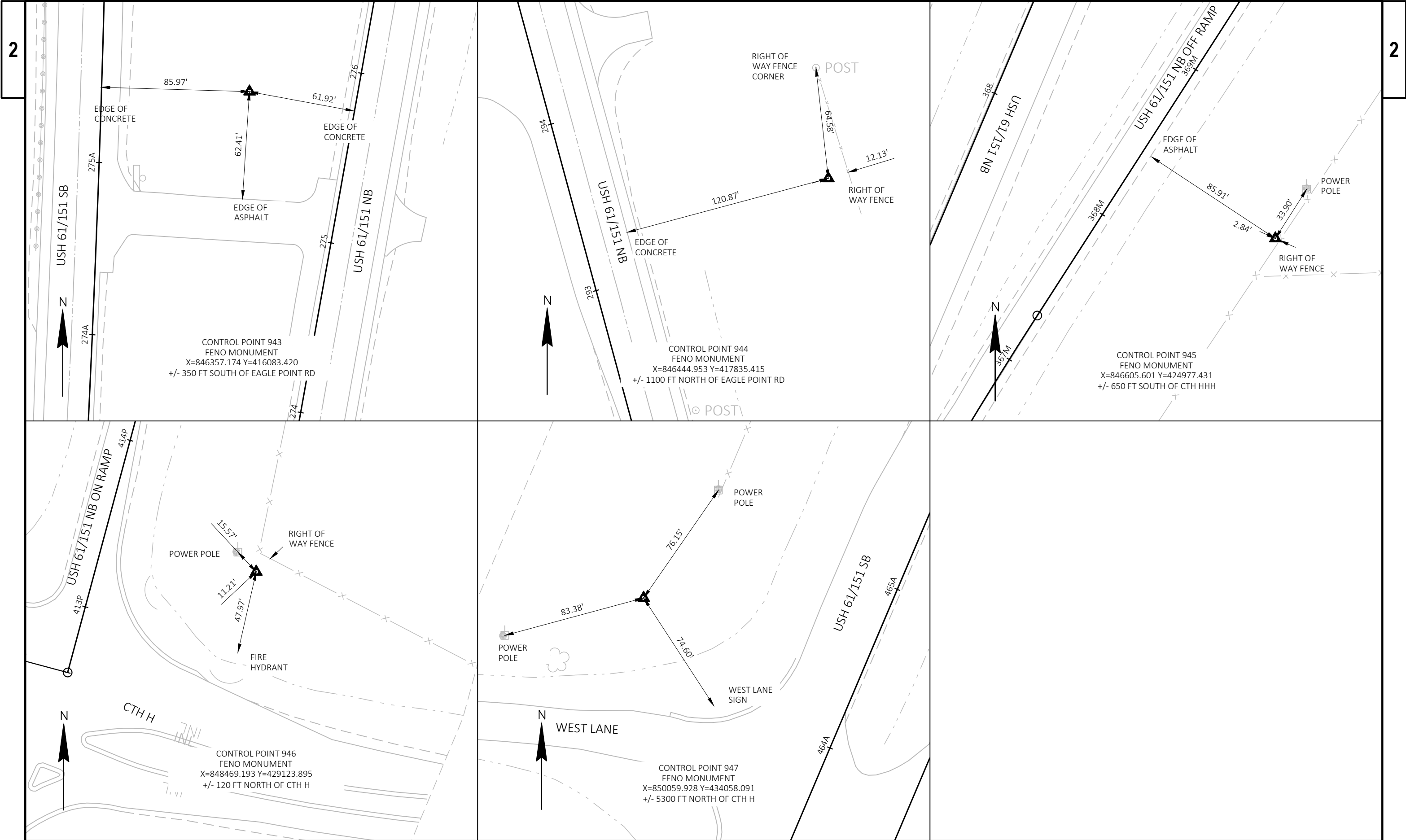
CURVE X 5  
PI STA = 127+32.77 X  
Y = 404420.472  
X = 843880.227  
DELTA = 75°23'11" LT  
D = 33°23'43"  
T = 132.57'  
L = 225.74'  
R = 171.57'  
PC STA = 126+00.19 X  
PT STA = 128+25.93 X

CURVE X 6  
PI STA = 129+24.93 X  
Y = 404503.876  
X = 844096.254  
DELTA = 26°45'46" RT  
D = 25°02'03"  
T = 54.45'  
L = 106.90'  
R = 228.87'  
PC STA = 128+70.49 X  
PT STA = 129+77.39 X









Estimate Of Quantities

|      |            |                                                                  |      | 1200-02-63  | 1202-00-75  |
|------|------------|------------------------------------------------------------------|------|-------------|-------------|
| Line | Item       | Item Description                                                 | Unit | Total       | Qty         |
| 0002 | 201.0205   | Grubbing                                                         | STA  | 3.000       | 3.000       |
| 0004 | 203.0100   | Removing Small Pipe Culverts                                     | EACH | 5.000       | 5.000       |
| 0006 | 204.0100   | Removing Concrete Pavement                                       | SY   | 28,278.000  | 1,746.000   |
| 0008 | 204.0105   | Removing Concrete Pavement Butt Joints                           | SY   | 4,793.000   | 4,793.000   |
| 0010 | 204.0110   | Removing Asphaltic Surface                                       | SY   | 508.000     | 508.000     |
| 0012 | 204.0115   | Removing Asphaltic Surface Butt Joints                           | SY   | 3,144.000   | 3,144.000   |
| 0014 | 204.0120   | Removing Asphaltic Surface Milling                               | SY   | 85,544.000  | 85,544.000  |
| 0016 | 204.0150   | Removing Curb & Gutter                                           | LF   | 855.000     | 270.000     |
| 0018 | 204.0155   | Removing Concrete Sidewalk                                       | SY   | 212.000     | 3.000       |
| 0020 | 204.0157   | Removing Concrete Barrier                                        | LF   | 1,257.000   | 1,257.000   |
| 0022 | 204.0165   | Removing Guardrail                                               | LF   | 12,836.000  | 12,836.000  |
| 0024 | 204.0190   | Removing Surface Drains                                          | EACH | 13.000      | 13.000      |
| 0026 | 205.0100   | Excavation Common                                                | CY   | 4,359.000   | 648.000     |
| 0028 | 211.0101   | Prepare Foundation for Asphaltic Paving (project) 01. 1202-00-75 | EACH | 1.000       | 1.000       |
| 0030 | 211.0400   | Prepare Foundation for Asphaltic Shoulders                       | STA  | 180.000     | 180.000     |
| 0032 | 213.0100   | Finishing Roadway (project) 01. 1202-00-75                       | EACH | 1.000       | 1.000       |
| 0034 | 305.0110   | Base Aggregate Dense 3/4-Inch                                    | TON  | 14,519.000  | 12.000      |
| 0036 | 305.0120   | Base Aggregate Dense 1 1/4-Inch                                  | TON  | 6,616.000   | 574.000     |
| 0038 | 330.0100   | Mill and Relay                                                   | SY   | 41,961.000  | 41,961.000  |
| 0040 | 390.0100   | Removing Pavement for Base Patching                              | CY   | 980.000     | 980.000     |
| 0042 | 390.0305   | Base Patching Concrete HES                                       | CY   | 980.000     | 980.000     |
| 0044 | 405.0100   | Coloring Concrete WisDOT Red                                     | CY   | 14.000      | 14.000      |
| 0046 | 415.0080   | Concrete Pavement 8-Inch                                         | SY   | 23,784.000  | 1,424.000   |
| 0048 | 415.0090   | Concrete Pavement 9-Inch                                         | SY   | 4,172.000   | 4,172.000   |
| 0050 | 415.0100   | Concrete Pavement 10-Inch                                        | SY   | 230.000     | 230.000     |
| 0052 | 415.0110   | Concrete Pavement 11-Inch                                        | SY   | 123.000     | 123.000     |
| 0054 | 415.0410   | Concrete Pavement Approach Slab                                  | SY   | 552.000     | 552.000     |
| 0056 | 415.2010   | Concrete Truck Apron 12-inch                                     | SY   | 40.000      | 40.000      |
| 0058 | 415.6000.S | Rout and Seal                                                    | LF   | 106,943.000 | 106,943.000 |
| 0060 | 416.0610   | Drilled Tie Bars                                                 | EACH | 5,431.000   | 75.000      |
| 0062 | 416.0620   | Drilled Dowel Bars                                               | EACH | 7,741.000   | 105.000     |
| 0064 | 416.1710   | Concrete Pavement Repair                                         | SY   | 5,897.000   | 5,897.000   |
| 0066 | 416.1720   | Concrete Pavement Replacement                                    | SY   | 1,077.000   | 1,077.000   |
| 0068 | 455.0605   | Tack Coat                                                        | GAL  | 17,075.000  | 17,075.000  |
| 0070 | 460.0105.S | HMA Percent Within Limits (PWL) Test Strip Volumetrics           | EACH | 2.000       | 2.000       |
| 0072 | 460.0110.S | HMA Percent Within Limits (PWL) Test Strip Density               | EACH | 1.000       | 1.000       |
| 0074 | 460.0115.S | HMA Pavement Test Strip Volumetrics                              | EACH | 1.000       | 1.000       |
| 0076 | 460.0120.S | HMA Pavement Test Strip Density                                  | EACH | 1.000       | 1.000       |
| 0078 | 460.2000   | Incentive Density HMA Pavement                                   | DOL  | 16,461.000  | 16,461.000  |
| 0080 | 460.2005   | Incentive Density PWL HMA Pavement                               | DOL  | 10,143.000  | 10,143.000  |
| 0082 | 460.2007   | Incentive Density HMA Pavement Longitudinal Joints               | DOL  | 19,030.000  | 19,030.000  |
| 0084 | 460.2010   | Incentive Air Voids HMA Pavement                                 | DOL  | 12,663.000  | 12,663.000  |
| 0086 | 460.5224   | HMA Pavement 4 LT 58-28 S                                        | TON  | 1,274.000   | 1,274.000   |
| 0088 | 460.6224   | HMA Pavement 4 MT 58-28 S                                        | TON  | 22,876.000  | 22,876.000  |
| 0090 | 460.7424   | HMA Pavement 4 HT 58-28 H                                        | TON  | 15,422.000  | 15,422.000  |
| 0092 | 460.8624   | HMA Pavement 4 SMA 58-28 V                                       | TON  | 12,447.000  | 12,447.000  |
| 0094 | 460.9000.S | Material Transfer Vehicle                                        | EACH | 1.000       | 1.000       |
| 0096 | 465.0105   | Asphaltic Surface                                                | TON  | 10.000      | 10.000      |
| 0098 | 465.0120   | Asphaltic Surface Driveways and Field Entrances                  | TON  | 4.000       | 4.000       |

Estimate Of Quantities

|      |            | 1200-02-63                                                            |      | 1202-00-75  |             |
|------|------------|-----------------------------------------------------------------------|------|-------------|-------------|
| Line | Item       | Item Description                                                      | Unit | Total       | Qty         |
| 0100 | 465.0125   | Asphaltic Surface Temporary                                           | TON  | 64.000      | 64.000      |
| 0102 | 465.0310   | Asphaltic Curb                                                        | LF   | 88.000      | 88.000      |
| 0104 | 465.0315   | Asphaltic Flumes                                                      | SY   | 453.000     | 453.000     |
| 0106 | 465.0510   | Asphaltic Rumble Strips, Shoulder Divided Roadway                     | LF   | 143,844.000 | 143,844.000 |
| 0108 | 502.2000   | Compression Joint Sealer Preformed Elastomeric (width) 01. 4-INCH     | LF   | 45.000      | 45.000      |
| 0110 | 517.3001.S | Structure Overcoating Cleaning and Priming (structure) 01. B-22-61    | EACH | 1.000       | 1.000       |
| 0112 | 517.4001.S | Containment and Collection of Waste Materials (structure) 01. B-22-61 | EACH | 1.000       | 1.000       |
| 0114 | 517.6001.S | Portable Decontamination Facility                                     | EACH | 1.000       | 1.000       |
| 0116 | 521.1012   | Apron Endwalls for Culvert Pipe Steel 12-Inch                         | EACH | 2.000       | 2.000       |
| 0118 | 521.1018   | Apron Endwalls for Culvert Pipe Steel 18-Inch                         | EACH | 1.000       | 1.000       |
| 0120 | 521.3118   | Culvert Pipe Corrugated Steel 18-Inch                                 | LF   | 12.000      | 12.000      |
| 0122 | 522.0118   | Culvert Pipe Reinforced Concrete Class III 18-Inch                    | LF   | 92.000      | 92.000      |
| 0124 | 522.1018   | Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch           | EACH | 1.000       | 1.000       |
| 0126 | 530.0112   | Culvert Pipe Corrugated Polyethylene 12-Inch                          | LF   | 142.000     | 142.000     |
| 0128 | 601.0115   | Concrete Curb Type G                                                  | LF   | 80.000      | 80.000      |
| 0130 | 601.0120   | Concrete Curb Type J                                                  | LF   | 15.000      | 15.000      |
| 0132 | 601.0409   | Concrete Curb & Gutter 30-Inch Type A                                 | LF   | 10.000      | 10.000      |
| 0134 | 601.0411   | Concrete Curb & Gutter 30-Inch Type D                                 | LF   | 147.000     | 147.000     |
| 0136 | 601.0413   | Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G                   | LF   | 316.000     | 316.000     |
| 0138 | 601.0582   | Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type T                   | LF   | 245.000     | 245.000     |
| 0140 | 601.0600   | Concrete Curb Pedestrian                                              | LF   | 72.000      | 72.000      |
| 0142 | 602.0410   | Concrete Sidewalk 5-Inch                                              | SF   | 1,530.000   | 1,530.000   |
| 0144 | 602.0505   | Curb Ramp Detectable Warning Field Yellow                             | SF   | 96.000      | 96.000      |
| 0146 | 602.3010   | Concrete Surface Drains                                               | CY   | 81.700      | 2.000       |
| 0148 | 603.1142   | Concrete Barrier Type S42                                             | LF   | 1,232.000   | 1,232.000   |
| 0150 | 603.3313   | Concrete Barrier Transition Type NJ32DF to S36                        | EACH | 1.000       | 1.000       |
| 0152 | 603.3535   | Concrete Barrier Transition Type S36 to S42                           | EACH | 1.000       | 1.000       |
| 0154 | 603.8000   | Concrete Barrier Temporary Precast Delivered                          | LF   | 863.000     | 863.000     |
| 0156 | 603.8125   | Concrete Barrier Temporary Precast Installed                          | LF   | 1,688.000   | 1,688.000   |
| 0158 | 606.0200   | Riprap Medium                                                         | CY   | 15.000      | 15.000      |
| 0160 | 611.0610   | Inlet Covers Type BW                                                  | EACH | 10.000      | 10.000      |
| 0162 | 611.0651   | Inlet Covers Type S                                                   | EACH | 2.000       | 2.000       |
| 0164 | 611.0654   | Inlet Covers Type V                                                   | EACH | 3.000       | 3.000       |
| 0166 | 611.3220   | Inlets 2x2-FT                                                         | EACH | 2.000       | 2.000       |
| 0168 | 611.3225   | Inlets 2x2.5-FT                                                       | EACH | 1.000       | 1.000       |
| 0170 | 611.8115   | Adjusting Inlet Covers                                                | EACH | 5.000       | 5.000       |
| 0172 | 611.9710   | Salvaged Inlet Covers                                                 | EACH | 7.000       | 7.000       |
| 0174 | 614.0200   | Steel Thrie Beam Structure Approach                                   | LF   | 82.400      | 82.400      |
| 0176 | 614.0220   | Steel Thrie Beam Bullnose Terminal                                    | EACH | 4.000       | 4.000       |
| 0178 | 614.0230   | Steel Thrie Beam                                                      | LF   | 325.000     | 325.000     |
| 0180 | 614.0305   | Steel Plate Beam Guard Class A                                        | LF   | 1,550.000   | 1,550.000   |
| 0182 | 614.0345   | Steel Plate Beam Guard Short Radius                                   | LF   | 68.750      | 68.750      |
| 0184 | 614.0370   | Steel Plate Beam Guard Energy Absorbing Terminal                      | EACH | 5.000       | 5.000       |
| 0186 | 614.0390   | Steel Plate Beam Guard Short Radius Terminal                          | EACH | 1.000       | 1.000       |
| 0188 | 614.0800   | Crash Cushions Permanent                                              | EACH | 1.000       | 1.000       |
| 0190 | 614.2300   | MGS Guardrail 3                                                       | LF   | 9,112.500   | 9,112.500   |
| 0192 | 614.2500   | MGS Thrie Beam Transition                                             | LF   | 433.400     | 433.400     |
| 0194 | 614.2610   | MGS Guardrail Terminal EAT                                            | EACH | 14.000      | 14.000      |
| 0196 | 614.2620   | MGS Guardrail Terminal Type 2                                         | EACH | 11.000      | 11.000      |

Estimate Of Quantities

|      |            |                                                               |      |             | 1200-02-63 | 1202-00-75  |
|------|------------|---------------------------------------------------------------|------|-------------|------------|-------------|
| Line | Item       | Item Description                                              | Unit | Total       | Qty        | Qty         |
| 0198 | 616.0700.S | Fence Safety                                                  | LF   | 300.000     | 300.000    |             |
| 0200 | 618.0100   | Maintenance and Repair of Haul Roads (project) 01. 1202-00-75 | EACH | 1.000       |            | 1.000       |
| 0202 | 619.1000   | Mobilization                                                  | EACH | 1.000       | 0.100      | 0.900       |
| 0204 | 620.0100   | Concrete Corrugated Median                                    | SF   | 417.000     |            | 417.000     |
| 0206 | 620.0300   | Concrete Median Sloped Nose                                   | SF   | 145.000     |            | 145.000     |
| 0208 | 624.0100   | Water                                                         | MGAL | 323.000     | 11.000     | 312.000     |
| 0210 | 625.0500   | Salvaged Topsoil                                              | SY   | 11,815.000  | 287.000    | 11,528.000  |
| 0212 | 628.1504   | Silt Fence                                                    | LF   | 12,503.000  | 490.000    | 12,013.000  |
| 0214 | 628.1520   | Silt Fence Maintenance                                        | LF   | 12,503.000  | 490.000    | 12,013.000  |
| 0216 | 628.1905   | Mobilizations Erosion Control                                 | EACH | 5.000       |            | 5.000       |
| 0218 | 628.1910   | Mobilizations Emergency Erosion Control                       | EACH | 5.000       |            | 5.000       |
| 0220 | 628.2002   | Erosion Mat Class I Type A                                    | SY   | 11,528.000  |            | 11,528.000  |
| 0222 | 628.2006   | Erosion Mat Urban Class I Type A                              | SY   | 287.000     | 287.000    |             |
| 0224 | 628.7005   | Inlet Protection Type A                                       | EACH | 3.000       |            | 3.000       |
| 0226 | 628.7010   | Inlet Protection Type B                                       | EACH | 14.000      |            | 14.000      |
| 0228 | 628.7015   | Inlet Protection Type C                                       | EACH | 12.000      |            | 12.000      |
| 0230 | 628.7504   | Temporary Ditch Checks                                        | LF   | 480.000     |            | 480.000     |
| 0232 | 628.7555   | Culvert Pipe Checks                                           | EACH | 13.000      |            | 13.000      |
| 0234 | 628.7570   | Rock Bags                                                     | EACH | 477.000     |            | 477.000     |
| 0236 | 629.0210   | Fertilizer Type B                                             | CWT  | 17.400      | 0.700      | 16.700      |
| 0238 | 630.0130   | Seeding Mixture No. 30                                        | LB   | 900.100     |            | 900.100     |
| 0240 | 630.0140   | Seeding Mixture No. 40                                        | LB   | 30.100      | 30.100     |             |
| 0242 | 630.0200   | Seeding Temporary                                             | LB   | 560.200     | 18.500     | 541.700     |
| 0244 | 630.0500   | Seed Water                                                    | MGAL | 1,326.800   |            | 1,326.800   |
| 0246 | 633.1000   | Delineators Barrier Wall                                      | EACH | 12.000      |            | 12.000      |
| 0248 | 633.5200   | Markers Culvert End                                           | EACH | 4.000       |            | 4.000       |
| 0250 | 642.5001   | Field Office Type B                                           | EACH | 1.000       |            | 1.000       |
| 0252 | 643.0300   | Traffic Control Drums                                         | DAY  | 88,755.000  | 1,215.000  | 87,540.000  |
| 0254 | 643.0370.S | Digital Speed Reduction System (DSRS)                         | DAY  | 356.000     |            | 356.000     |
| 0256 | 643.0420   | Traffic Control Barricades Type III                           | DAY  | 5,077.000   | 270.000    | 4,807.000   |
| 0258 | 643.0500   | Traffic Control Flexible Tubular Marker Posts                 | EACH | 154.000     |            | 154.000     |
| 0260 | 643.0600   | Traffic Control Flexible Tubular Marker Bases                 | EACH | 154.000     |            | 154.000     |
| 0262 | 643.0705   | Traffic Control Warning Lights Type A                         | DAY  | 10,216.000  | 180.000    | 10,036.000  |
| 0264 | 643.0715   | Traffic Control Warning Lights Type C                         | DAY  | 24,465.000  |            | 24,465.000  |
| 0266 | 643.0800   | Traffic Control Arrow Boards                                  | DAY  | 263.000     |            | 263.000     |
| 0268 | 643.0900   | Traffic Control Signs                                         | DAY  | 26,639.000  | 90.000     | 26,549.000  |
| 0270 | 643.0910   | Traffic Control Covering Signs Type I                         | EACH | 5.000       |            | 5.000       |
| 0272 | 643.0920   | Traffic Control Covering Signs Type II                        | EACH | 54.000      |            | 54.000      |
| 0274 | 643.1050   | Traffic Control Signs PCMS                                    | DAY  | 135.000     |            | 135.000     |
| 0276 | 643.3165   | Temporary Marking Line Paint 6-Inch                           | LF   | 34,772.000  |            | 34,772.000  |
| 0278 | 643.3505   | Temporary Marking Arrow Paint                                 | EACH | 16.000      |            | 16.000      |
| 0280 | 643.3805   | Temporary Marking Stop Line Paint 18-Inch                     | LF   | 39.000      |            | 39.000      |
| 0282 | 643.5000   | Traffic Control                                               | EACH | 1.000       | 0.100      | 0.900       |
| 0284 | 645.0120   | Geotextile Type HR                                            | SY   | 65.500      |            | 65.500      |
| 0286 | 646.2020   | Marking Line Epoxy 6-Inch                                     | LF   | 15,385.000  | 464.000    | 14,921.000  |
| 0288 | 646.2025   | Marking Line Grooved Black Epoxy 6-Inch                       | LF   | 21,383.000  |            | 21,383.000  |
| 0290 | 646.2040   | Marking Line Grooved Wet Ref Epoxy 6-Inch                     | LF   | 210,780.000 |            | 210,780.000 |
| 0292 | 646.4020   | Marking Line Epoxy 10-Inch                                    | LF   | 1,133.000   |            | 1,133.000   |
| 0294 | 646.4040   | Marking Line Grooved Wet Ref Epoxy 10-Inch                    | LF   | 15,868.000  |            | 15,868.000  |

Estimate Of Quantities

|      |          |                                                                    |      |             | 1200-02-63 | 1202-00-75  |
|------|----------|--------------------------------------------------------------------|------|-------------|------------|-------------|
| Line | Item     | Item Description                                                   | Unit | Total       | Qty        | Qty         |
| 0296 | 646.5020 | Marking Arrow Epoxy                                                | EACH | 44.000      |            | 44.000      |
| 0298 | 646.5120 | Marking Word Epoxy                                                 | EACH | 6.000       |            | 6.000       |
| 0300 | 646.5220 | Marking Symbol Epoxy                                               | EACH | 2.000       |            | 2.000       |
| 0302 | 646.6120 | Marking Stop Line Epoxy 18-Inch                                    | LF   | 386.000     | 15.000     | 371.000     |
| 0304 | 646.7120 | Marking Diagonal Epoxy 12-Inch                                     | LF   | 100.000     | 100.000    |             |
| 0306 | 646.7420 | Marking Crosswalk Epoxy Transverse Line 6-Inch                     | LF   | 72.000      |            | 72.000      |
| 0308 | 646.7520 | Marking Crosswalk Epoxy Block Style 24-Inch                        | LF   | 48.000      |            | 48.000      |
| 0310 | 646.8320 | Marking Parking Stall Epoxy                                        | LF   | 2,537.000   | 210.000    | 2,327.000   |
| 0312 | 646.9000 | Marking Removal Line 4-Inch                                        | LF   | 62.000      | 62.000     |             |
| 0314 | 646.9002 | Marking Removal Line 6-Inch                                        | LF   | 5,224.000   |            | 5,224.000   |
| 0316 | 646.9200 | Marking Removal Line Wide                                          | LF   | 13.000      |            | 13.000      |
| 0318 | 650.5000 | Construction Staking Base                                          | LF   | 504.000     | 504.000    |             |
| 0320 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter                 | LF   | 512.000     | 335.000    | 177.000     |
| 0322 | 650.6000 | Construction Staking Pipe Culverts                                 | EACH | 4.000       |            | 4.000       |
| 0324 | 650.7000 | Construction Staking Concrete Pavement                             | LF   | 14,099.000  | 504.000    | 13,595.000  |
| 0326 | 650.7500 | Construction Staking Concrete Barrier                              | LF   | 1,257.000   |            | 1,257.000   |
| 0328 | 650.8000 | Construction Staking Resurfacing Reference                         | LF   | 118,068.000 |            | 118,068.000 |
| 0330 | 650.9000 | Construction Staking Curb Ramps                                    | EACH | 8.000       |            | 8.000       |
| 0332 | 650.9911 | Construction Staking Supplemental Control (project) 01. 1202-00-75 | EACH | 1.000       |            | 1.000       |
| 0334 | 650.9911 | Construction Staking Supplemental Control (project) 02. 1200-02-63 | EACH | 1.000       | 1.000      |             |
| 0336 | 661.0101 | Temporary Traffic Signals for Bridges (structure) 01. 53+00V       | EACH | 1.000       |            | 1.000       |
| 0338 | 690.0250 | Sawing Concrete                                                    | LF   | 71,631.000  | 506.000    | 71,125.000  |
| 0340 | 715.0603 | Incentive Strength Concrete Barrier                                | DOL  | 615.000     |            | 615.000     |
| 0342 | 715.0720 | Incentive Compressive Strength Concrete Pavement                   | DOL  | 8,125.000   |            | 8,125.000   |
| 0344 | 740.0440 | Incentive IRI Ride                                                 | DOL  | 27,808.000  |            | 27,808.000  |
| 0346 | ASP.1T0A | On-the-Job Training Apprentice at \$5.00/HR                        | HRS  | 2,100.000   |            | 2,100.000   |
| 0348 | ASP.1T0G | On-the-Job Training Graduate at \$5.00/HR                          | HRS  | 6,480.000   |            | 6,480.000   |
| 0350 | SPV.0060 | Special 01. Cleaning and Painting Bearings                         | EACH | 15.000      |            | 15.000      |
| 0352 | SPV.0060 | Special 02. Bearing Maintenance                                    | EACH | 6.000       |            | 6.000       |
| 0354 | SPV.0060 | Special 03. Locate and Clean 6-Inch PVC Outfall                    | EACH | 1.000       | 1.000      |             |
| 0356 | SPV.0165 | Special 01. Remove, Salvage and Reinstall Landscaping Rocks        | SF   | 40.000      | 40.000     |             |
| 0358 | SPV.0180 | Special 01. Scale Approach Pavement Reinforcement                  | SY   | 123.000     | 123.000    |             |



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3

CULVERT PIPE SUMMARY

|            |         |                    | 203.0100                           | 521.1012                                      | 521.1018                                      | 521.3118                                    | 522.0118                                                    | 522.1018                                                             | 530.0112                                              | 606.0200         | 611.0651                  | 611.0654                  | 611.3220         | 611.3225           | 611.8115                     | 611.9710                    | 633.5200               | 645.0120              | 650.6000                                 | REMARKS                                                                    |
|------------|---------|--------------------|------------------------------------|-----------------------------------------------|-----------------------------------------------|---------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------|------------------|---------------------------|---------------------------|------------------|--------------------|------------------------------|-----------------------------|------------------------|-----------------------|------------------------------------------|----------------------------------------------------------------------------|
|            |         |                    | REMOVING<br>SMALL PIPE<br>CULVERTS | ENDWALLS FOR<br>CULVERT PIPE<br>STEEL 12-INCH | ENDWALLS FOR<br>CULVERT PIPE<br>STEEL 18-INCH | CULVERT PIPE<br>CORRUGATED<br>STEEL 18-INCH | CULVERT PIPE<br>REINFORCED<br>CONCRETE CLASS III<br>18-INCH | APRON ENDWALLS<br>FOR CULVERT PIPE<br>REINFORCED<br>CONCRETE 18-INCH | CULVERT PIPE<br>CORRUGATED<br>POLYETHYLENE<br>12-INCH | RIPRAP<br>MEDIUM | INLET<br>COVERS<br>TYPE S | INLET<br>COVERS<br>TYPE V | INLETS<br>2X2-FT | INLETS<br>2X2.5-FT | ADJUSTING<br>INLET<br>COVERS | SALVAGED<br>INLET<br>COVERS | MARKERS<br>CULVERT END | GEOTEXTILE<br>TYPE HR | CONSTRUCTION<br>STAKING PIPE<br>CULVERTS |                                                                            |
| CATEGORY   | STATION | LOCATION           | EACH                               | EACH                                          | EACH                                          | LF                                          | LF                                                          | EACH                                                                 | LF                                                    | CY               | EACH                      | EACH                      | EACH             | EACH               | EACH                         | EACH                        | EACH                   | SY                    | EACH                                     |                                                                            |
| 0010       | 236+55A | USH 61 SB LT       | 1                                  | 1                                             | -                                             | -                                           | -                                                           | -                                                                    | 76                                                    | 2                | -                         | 1                         | 1                | -                  | -                            | -                           | 1                      | 8.5                   | 1                                        | 0.064" THICKNESS                                                           |
| 0010       | 276+43A | USH 61 SB LT       | 1                                  | 1                                             | -                                             | -                                           | -                                                           | -                                                                    | 66                                                    | 2                | -                         | 1                         | 1                | -                  | -                            | -                           | 1                      | 8.5                   | 1                                        |                                                                            |
| 0010       | 279+02A | USH 61 SB LT       | 1                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | -                | -                         | -                         | -                | -                  | -                            | -                           | -                      | -                     | -                                        |                                                                            |
| 0010       | 374+90A | USH 61 SB          | -                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | -                | -                         | -                         | -                | -                  | 2                            | 2                           | -                      | -                     | -                                        |                                                                            |
| 0010       | 410+50A | USH 61 SB          | -                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | -                | -                         | -                         | -                | -                  | 2                            | 2                           | -                      | -                     | -                                        |                                                                            |
| 0010       | 129+67X | REST AREA          | 1                                  | -                                             | -                                             | -                                           | 92                                                          | 1                                                                    | -                                                     | 2                | -                         | -                         | -                | -                  | -                            | -                           | 1                      | 8.5                   | 1                                        | 0.064" THICKNESS                                                           |
| 0010       | 13+19B  | BADGER RD LT       | 1                                  | -                                             | 1                                             | 12                                          | -                                                           | -                                                                    | -                                                     | -                | -                         | 1                         | -                | 1                  | -                            | -                           | 1                      | -                     | 1                                        |                                                                            |
| 0010       | 13+19B  | BADGER RD RT       | -                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | -                | -                         | -                         | -                | -                  | 1                            | 1                           | -                      | -                     | -                                        |                                                                            |
| 0010       | 15+23B  | BADGER RD RT       | -                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | 3                | -                         | -                         | -                | -                  | -                            | -                           | -                      | 13.8                  | -                                        |                                                                            |
| 0010       | 14+95C  | USH 61 NB OFF RAMP | -                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | 6                | -                         | -                         | -                | -                  | -                            | -                           | -                      | 26.2                  | -                                        | SALVAGE EXISTING INLET<br>COVERS FOR RESTORATION<br>TEMPORARY INLET COVERS |
| 0010       | 49+64V  | STH 11             | -                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | -                | -                         | -                         | -                | -                  | -                            | 2                           | -                      | -                     | -                                        |                                                                            |
| 0010       | 49+64V  | STH 11             | -                                  | -                                             | -                                             | -                                           | -                                                           | -                                                                    | -                                                     | -                | 2                         | -                         | -                | -                  | -                            | -                           | -                      | -                     | -                                        |                                                                            |
| TOTAL 0010 |         |                    | 5                                  | 2                                             | 1                                             | 12                                          | 92                                                          | 1                                                                    | 142                                                   | 15               | 2                         | 3                         | 2                | 1                  | 5                            | 7                           | 4                      | 65.5                  | 4                                        |                                                                            |

CONCRETE PAVMENT REPLACEMENT

INFO FOR REMOVING SMALL PIPE CULVERTS

| STATION | LOCATION     | SIZE (INCH) | MATERIAL | LENGTH (FT) |
|---------|--------------|-------------|----------|-------------|
| 236+55A | USH 61 SB LT | 12          | Metal    | 65          |
| 276+43A | USH 61 SB LT | 12          | HDPE     | 62          |
| 279+02A | USH 61 SB LT | 12          | HDPE     | 35          |
| 129+67X | REST AREA    | 18          | CONCRETE | 92          |
| 13+19B  | BADGER RD LT | 18          | Metal    | 13          |

NOTE FOR INFORMATIONAL PUPOSES ONLY

GRUBBING

|            |         |    |         |              |     | 201.0205 |
|------------|---------|----|---------|--------------|-----|----------|
| CATEGORY   | STATION | TO | STATION | LOCATION     | STA | GRUBBING |
| 0010       | 234+00A | -  | 235+00A | USH 61 SB LT | 1   |          |
| 0010       | 128+00X | -  | 130+00X | REST AREA RT | 2   |          |
| TOTAL 0010 |         |    |         |              |     | 3        |

|               |           |    |           |                               | 204.0100                         | 415.0080                       | 415.0090                       | *                           | *                             | *                                                     | *                        | REMARKS |
|---------------|-----------|----|-----------|-------------------------------|----------------------------------|--------------------------------|--------------------------------|-----------------------------|-------------------------------|-------------------------------------------------------|--------------------------|---------|
|               |           |    |           |                               | REMOVING<br>CONCRETE<br>PAVEMENT | CONCRETE<br>PAVEMENT<br>8-INCH | CONCRETE<br>PAVEMENT<br>9-INCH | 416.0610                    | 416.0620                      | 650.7000                                              | 690.0250                 |         |
| CATEGORY      | STATION   | TO | STATION   | LOCATION                      | SY                               | SY                             | SY                             | DRILLED TIE<br>BARS<br>EACH | DRILLED DOWEL<br>BARS<br>EACH | CONSTRUCTION<br>STAKING<br>CONCRETE<br>PAVEMENT<br>LF | SAWING<br>CONCRETE<br>LF |         |
| 0010          | 9+32V     | -  | 16+16V    | STH 11 EB MAINLINE            | 1,140                            | -                              | 1,140                          | 230                         | 12                            | 684                                                   | 519                      |         |
| 0010          | 19+01V    | -  | 22+65V    | STH 11 EB MAINLINE            | 728                              | 728                            | -                              | 134                         | 12                            | 364                                                   | 274                      |         |
| 0010          | 19+01V    | -  | 19+92V    | STH 11 EB MEDIAN              | 163                              | 163                            | -                              | -                           | 10                            | 91                                                    | 36                       |         |
| 0010          | 22+65V    | -  | 24+11V    | STH 11 EB MAINLINE            | 244                              | 244                            | -                              | 58                          | -                             | 146                                                   | 146                      |         |
| 0010          | 22+65V    | -  | 26+89V    | STH 11 EB MAINLINE            | 664                              | 664                            | -                              | -                           | -                             | 424                                                   | 15                       |         |
| 0010          | 24+11V    | -  | 26+89V    | STH 11 EB MAINLINE            | 371                              | 371                            | -                              | 111                         | -                             | 278                                                   | 278                      |         |
| 0010          | 10+09W    | -  | 16+10W    | STH 11 WB MAINLINE            | 1,002                            | -                              | 1,002                          | 39                          | 12                            | 601                                                   | 116                      |         |
| 0010          | 10+71W    | -  | 15+30W    | STH 11 WB LT TURN LANE/MEDIAN | 554                              | -                              | 554                            | 164                         | -                             | 459                                                   | 405                      |         |
| 0010          | 19+01W    | -  | 23+96W    | STH 11 WB MAINLINE            | 825                              | 825                            | -                              | 164                         | 12                            | 495                                                   | 510                      |         |
| 0010          | 22+78W    | -  | 26+52W    | STH 11 WB MAINLINE            | 581                              | 581                            | -                              | -                           | -                             | 374                                                   | 15                       |         |
| 0010          | 23+96W    | -  | 26+52W    | STH 11 WB MAINLINE            | 372                              | 372                            | -                              | 102                         | -                             | 256                                                   | 256                      |         |
| 0010          | 153+28F   |    | 154+90F   | ON RAMP                       | 694                              | -                              | 694                            | 65                          | 12                            | 162                                                   | 230                      |         |
| 0010          | 141+65G   |    | 143+43G   | OFF RAMP                      | 782                              | -                              | 782                            | 148                         | 12                            | 178                                                   | 399                      |         |
| 0010          | 152+43 E  |    | 155+70 E  | OFF RAMP                      | 528                              | 528                            | -                              | -                           | 12                            | 327                                                   | 97                       |         |
| 0010          | 153+72EE  |    | 156+99EE  | OFF RAMP                      | 547                              | 547                            | -                              | -                           | 12                            | 327                                                   | 15                       |         |
| 0010          | 156+22 E  |    | 160+42 E  | ON RAMP                       | 786                              | 786                            | -                              | -                           | 12                            | 420                                                   | 136                      |         |
| 0010          | 154+48EEE |    | 159+10EEE | ON RAMP                       | 764                              | 764                            | -                              | -                           | 12                            | 462                                                   | 15                       |         |
| TOTAL 0010    |           |    |           |                               | 10,745                           | 6,573                          | 4,172                          | 1,215                       | 130                           | 6,048                                                 | 3,462                    |         |
| 0020          | 26+89V    | -  | 46+12V    | STH 11 EB MAINLINE            | 5,128                            | 5,128                          | -                              | 731                         | -                             | 1,923                                                 | 1,347                    |         |
| 0020          | 35+64V    | -  | 39+81V    | STH 11 EB LT TURN LANE/MEDIAN | 599                              | 599                            | -                              | -                           | -                             | 417                                                   | 457                      |         |
| 0020          | 38+01V    | -  | 41+60V    | STH 11 EB RT                  | 343                              | 343                            | -                              | 61                          | -                             | 359                                                   | 359                      |         |
| 0020          | 46+12V    | -  | 54+08V    | STH 11 EB MAINLINE            | 1,106                            | 1,106                          | -                              | 157                         | -                             | 796                                                   | 393                      |         |
| 0020          | 51+68V    | -  | 55+64V    | STH 11 MAINLINE               | 1,056                            | 1,056                          | -                              | -                           | -                             | 396                                                   | -                        |         |
| 0020          | 26+52W    | -  | 51+67W    | STH 11 WB MAINLINE            | 6,707                            | 6,707                          | -                              | 890                         | -                             | 2,515                                                 | 1,903                    |         |
| 0020          | 37+96W    | -  | 41+51W    | STH 11 WB LT                  | 323                              | 323                            | -                              | 62                          | -                             | 355                                                   | 355                      |         |
| 0020          | 39+80W    | -  | 43+68W    | STH 11 WB LT TURN LANE/MEDIAN | 525                              | 525                            | -                              | -                           | -                             | 388                                                   | 325                      |         |
| TOTAL 0020    |           |    |           |                               | 15,787                           | 15,787                         | 0                              | 1,901                       | 0                             | 7,149                                                 | 5,139                    |         |
| PROJECT TOTAL |           |    |           |                               | 26532                            | 22360                          | 4172                           | 3116                        | 130                           | 13197                                                 | 8601                     |         |

\* = ITEM USED IN MULTIPLE QUANTITY SHEETS.

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

142

E

3

ASPHALT PAVEMENT

| CATEGORY | STATION | TO | STATION | LOCATION                | 204.0105                                        | 204.0115                                        | 204.0120                                    | 211.0400                                            | 330.0100          | 415.6000.S    | 455.0605  | 460.5224                     | 460.6224                     | 460.7424                     | 460.8624                      | REMARKS |
|----------|---------|----|---------|-------------------------|-------------------------------------------------|-------------------------------------------------|---------------------------------------------|-----------------------------------------------------|-------------------|---------------|-----------|------------------------------|------------------------------|------------------------------|-------------------------------|---------|
|          |         |    |         |                         | REMOVING<br>CONCRETE<br>PAVEMENT<br>BUTT JOINTS | REMOVING<br>ASPHALTIC<br>SURFACE BUTT<br>JOINTS | REMOVING<br>ASPHALTIC<br>SURFACE<br>MILLING | PREPARE<br>FOUNDATION FOR<br>ASPHALTIC<br>SHOULDERS | MILL AND<br>RELAY | ROUT AND SEAL | TACK COAT | HMA PAVEMENT 4<br>LT 58-28 S | HMA PAVEMENT 4<br>MT 58-28 S | HMA PAVEMENT 4<br>HT 58-28 H | HMA PAVEMENT 4<br>SMA 58-28 V |         |
|          |         |    |         |                         | SY                                              | SY                                              | SY                                          | STA                                                 | SY                | LF            | GAL       |                              | TON                          | TON                          | TON                           |         |
| 0010     | 99+47   | -  | 100+22  | Mainline RT Shoulder    | -                                               | 12                                              | 35                                          | -                                                   | -                 | -             | -         | -                            | 9                            | -                            | -                             |         |
| 0010     | 99+65   | -  | 100+22  | Mainline LT Shoulder    | -                                               | 4                                               | 8                                           | -                                                   | -                 | -             | -         | -                            | 3                            | -                            | -                             |         |
| 0010     | 100+22  | -  | 154+22  | Mainline                | 267                                             | -                                               | -                                           | -                                                   | -                 | -             | 1722      | -                            | -                            | 1399                         | 1412                          |         |
| 0010     | 100+22  | -  | 141+02  | Mainline RT Shoulder    | -                                               | 89                                              | -                                           | -                                                   | 3538              | -             | -         | -                            | 711                          | -                            | -                             |         |
| 0010     | 100+22  | -  | 113+69  | Mainline LT Shoulder    | -                                               | 34                                              | -                                           | -                                                   | 1217              | -             | -         | -                            | 239                          | -                            | -                             |         |
| 0010     | 113+69  | -  | 154+22  | Mainline LT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 1351              | -             | 68        | -                            | -                            | 133                          | 133                           |         |
| 0010     | 147+78  | -  | 148+90  | Mainline GORE           | -                                               | -                                               | -                                           | -                                                   | 147               | -             | -         | -                            | 29                           | -                            | -                             |         |
| 0010     | 148+90  | -  | 154+22  | Mainline RT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 473               | -             | -         | -                            | 93                           | -                            | -                             |         |
| 0010     | 154+22  | -  | 156+36  | Mainline RT Shoulder    | -                                               | -                                               | 76                                          | -                                                   | -                 | 214           | -         | -                            | 15                           | -                            | -                             |         |
| 0010     | 154+22  | -  | 156+36  | Mainline LT Shoulder    | -                                               | -                                               | 72                                          | -                                                   | -                 | 214           | -         | -                            | 14                           | -                            | -                             |         |
| 0010     | 156+36  | -  | 189+64  | Mainline                | 267                                             | -                                               | -                                           | -                                                   | -                 | -             | 1059      | -                            | -                            | 857                          | 870                           |         |
| 0010     | 156+36  | -  | 160+44  | Mainline RT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 363               | -             | -         | -                            | 72                           | -                            | -                             |         |
| 0010     | 156+36  | -  | 207+94  | Mainline LT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 1720              | -             | 86        | -                            | -                            | 169                          | 169                           |         |
| 0010     | 160+44  | -  | 163+50  | Mainline GORE           | -                                               | -                                               | -                                           | -                                                   | 312               | -             | -         | -                            | 62                           | -                            | -                             |         |
| 0010     | 173+47  | -  | 189+64  | Mainline RT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 1438              | -             | -         | -                            | 282                          | -                            | -                             |         |
| 0010     | 183+17  | -  | 183+60  | MAINTANENCE CROSSOVER   | -                                               | -                                               | -                                           | -                                                   | 157               | -             | 8         | -                            | 31                           | -                            | -                             |         |
| 0010     | 189+64  | -  | 236+86  | Mainline                | 289                                             | -                                               | -                                           | -                                                   | -                 | -             | 1630      | -                            | -                            | 1323                         | 1337                          |         |
| 0010     | 189+64  | -  | 192+04  | Mainline RT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 160               | -             | -         | -                            | 32                           | -                            | -                             |         |
| 0010     | 199+12  | -  | 200+62  | Mainline GORE           | -                                               | -                                               | -                                           | -                                                   | 187               | -             | -         | -                            | 37                           | -                            | -                             |         |
| 0010     | 200+62  | -  | 207+94  | Mainline RT Shoulder    | -                                               | 67                                              | -                                           | -                                                   | 422               | -             | -         | -                            | 96                           | -                            | -                             |         |
| 0010     | 207+94  | -  | 210+09  | Mainline RT Shoulder    | -                                               | -                                               | 77                                          | -                                                   | -                 | 215           | -         | -                            | 16                           | -                            | -                             |         |
| 0010     | 207+94  | -  | 210+09  | Mainline LT Shoulder    | -                                               | -                                               | 72                                          | -                                                   | -                 | 215           | -         | -                            | 15                           | -                            | -                             |         |
| 0010     | 210+09  | -  | 234+39  | Mainline LT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 810               | -             | 41        | -                            | -                            | 80                           | 80                            |         |
| 0010     | 210+09  | -  | 236+86  | Mainline RT Shoulder    | -                                               | 67                                              | -                                           | -                                                   | 1718              | -             | -         | -                            | 350                          | -                            | -                             |         |
| 0010     | 234+39  | -  | 236+86  | Mainline LT Shoulder    | -                                               | 34                                              | -                                           | 4                                                   | 49                | -             | 12        | -                            | -                            | 17                           | 18                            |         |
| 0010     | 236+86  | -  | 237+20  | Mainline LT Shoulder    | -                                               | 12                                              | 26                                          | 1                                                   | -                 | -             | -         | -                            | 5                            | -                            | -                             |         |
| 0010     | 236+86  | -  | 237+20  | Mainline RT Shoulder    | -                                               | 4                                               | 26                                          | 1                                                   | -                 | -             | -         | -                            | 5                            | -                            | -                             |         |
| 0010     | 238+54  | -  | 238+80  | Mainline RT Shoulder    | -                                               | 12                                              | 17                                          | 1                                                   | -                 | -             | -         | -                            | 5                            | -                            | -                             |         |
| 0010     | 238+59  | -  | 238+80  | Mainline LT Shoulder    | -                                               | 9                                               | 8                                           | 1                                                   | -                 | -             | -         | -                            | 3                            | -                            | -                             |         |
| 0010     | 238+80  | -  | 247+05  | Mainline RT Shoulder    | -                                               | 67                                              | -                                           | -                                                   | 242               | -             | -         | -                            | 171                          | -                            | -                             |         |
| 0010     | 238+80  | -  | 293+96  | Mainline                | 578                                             | -                                               | -                                           | -                                                   | -                 | -             | 1898      | -                            | -                            | 1534                         | 1562                          |         |
| 0010     | 238+80  | -  | 282+30  | Mainline LT Shoulder    | -                                               | 34                                              | -                                           | -                                                   | 1417              | -             | 75        | -                            | -                            | 141                          | 143                           |         |
| 0010     | 247+05  | -  | 293+96  | Mainline RT Shoulder    | -                                               | -                                               | -                                           | -                                                   | 3128              | -             | -         | -                            | 613                          | -                            | -                             |         |
| 0010     | 269+84  | -  | 270+44  | MAINTANENCE CROSSOVER   | -                                               | -                                               | -                                           | -                                                   | 286               | -             | 15        | -                            | 56                           | -                            | -                             |         |
| 0010     | 274+37  | -  | 275+36  | MAINTANENCE CROSSOVER   | -                                               | -                                               | -                                           | -                                                   | 569               | -             | 29        | -                            | 112                          | -                            | -                             |         |
| 0010     | 282+30  | -  | 283+25  | Mainline GORE           | -                                               | -                                               | -                                           | -                                                   | 109               | -             | -         | -                            | 22                           | -                            | -                             |         |
| 0010     | 290+00  | -  | 292+00  | Mainline LT Shoulder    | -                                               | 34                                              | -                                           | -                                                   | 67                | -             | 6         | -                            | -                            | 5                            | 7                             |         |
| 0010     | 292+00  | -  | 293+96  | TURNLANE LT             | -                                               | 134                                             | -                                           | -                                                   | 84                | -             | 17        | -                            | 37                           | -                            | -                             |         |
| 0010     | 293+96  | -  | 295+26  | TRAFFIC CROSSING        | -                                               | -                                               | 794                                         | -                                                   | -                 | 328           | 40        | -                            | 178                          | -                            | -                             |         |
| 0010     | 293+96  | -  | 309+51  | Mainline RT Shoulder    | -                                               | -                                               | 1037                                        | -                                                   | -                 | 1555          | -         | -                            | 233                          | -                            | -                             |         |
| 0010     | 295+26  | -  | 311+35  | Mainline LT Shoulder    | -                                               | -                                               | 537                                         | -                                                   | -                 | 1609          | -         | -                            | 121                          | -                            | -                             |         |
| 0010     | 309+51  | -  | 312+59  | TURNLANE/SIDE ROAD RT   | -                                               | 36                                              | 522                                         | -                                                   | -                 | 308           | 28        | -                            | 125                          | -                            | -                             |         |
| 0010     | 311+35  | -  | 312+41  | TRAFFIC CROSSING MEDIAN | -                                               | -                                               | 627                                         | -                                                   | -                 | 394           | 32        | -                            | 141                          | -                            | -                             |         |
| 0010     | 312+59  | -  | 352+58  | Mainline RT Shoulder    | -                                               | -                                               | 2666                                        | -                                                   | -                 | 3999          | -         | -                            | 598                          | -                            | -                             |         |
| 0010     | 312+41  | -  | 323+38  | Mainline LT Shoulder    | -                                               | -                                               | 366                                         | -                                                   | -                 | 1097          | -         | -                            | 82                           | -                            | -                             |         |
| 0010     | 323+38  | -  | 324+47  | TRAFFIC CROSSING MEDIAN | -                                               | -                                               | 324                                         | -                                                   | -                 | 197           | 17        | -                            | 73                           | -                            | -                             |         |
| 0010     | 324+47  | -  | 337+40  | Mainline LT Shoulder    | -                                               | -                                               | 431                                         | -                                                   | -                 | 1293          | -         | -                            | 97                           | -                            | -                             |         |
| 0010     | 337+40  | -  | 340+60  | TRAFFIC CROSSING MEDIAN | -                                               | -                                               | 665                                         | -                                                   | -                 | 401           | 34        | -                            | 149                          | -                            | -                             |         |
| 0010     | 340+60  | -  | 354+20  | Mainline LT Shoulder    | -                                               | -                                               | 454                                         | -                                                   | -                 | 1360          | -         | -                            | 102                          | -                            | -                             |         |
| 0010     | 352+58  | -  | 355+58  | TURNLANE/SIDE ROAD RT   | -                                               | 28                                              | 577                                         | -                                                   | -                 | 300           | 31        | -                            | 136                          | -                            | -                             |         |
| 0010     | 354+20  | -  | 355+45  | TRAFFIC CROSSING MEDIAN | -                                               | -                                               | 821                                         | -                                                   | -                 | 622           | 42        | -                            | 184                          | -                            | -                             |         |
| 0010     | 355+45  | -  | 373+70  | Mainline LT Shoulder    | -                                               | 4                                               | 609                                         | -                                                   | -                 | 1825          | -         | -                            | 137                          | -                            | -                             |         |
| 0010     | 355+58  | -  | 358+64  | Mainline RT Shoulder    | -                                               | -                                               | 204                                         | -                                                   | -                 | 306           | -         | -                            | 46                           | -                            | -                             |         |
| 0010     | 364+50  | -  | 365+64  | Mainline GORE           | -                                               | -                                               | 102                                         | -                                                   | -                 | 228           | 6         | -                            | 23                           | -                            | -                             |         |
| 0010     | 365+64  | -  | 373+70  | Mainline RT Shoulder    | -                                               | 7                                               | 531                                         | -                                                   | -                 | 806           | -         | -                            | 121                          | -                            | -                             |         |
| 0010     | 375+53  | -  | 411+06  | Mainline RT Shoulder    | -                                               | 14                                              | 2355                                        | -                                                   | -                 | 3553          | -         | -                            | 531                          | -                            | -                             |         |
| 0010     | 375+65  | -  | 411+06  | Mainline LT Shoulder    | -                                               | 8                                               | 1181                                        | -                                                   | -                 | 3541          | -         | -                            | 265                          | -                            | -                             |         |
| 0010     | 413+13  | -  | 423+05  | Mainline RT Shoulder    | -                                               | 7                                               | 655                                         | -                                                   | -                 | 992           | -         | -                            | 149                          | -                            | -                             |         |
| 0010     | 413+13  | -  | 459+50  | Mainline LT Shoulder    | -                                               | 4                                               | 1546                                        | -                                                   | -                 | 4637          | -         | -                            | 347                          | -                            | -                             |         |
| 0010     | 423+05  | -  | 423+94  | Mainline GORE           | -                                               | -                                               | 126                                         | -                                                   | -                 | 178           | 7         | -                            | 29                           | -                            | -                             |         |
| SUBTOTAL |         |    |         |                         | 1,401                                           | 721                                             | 17,547                                      | 8                                                   | 19,964            | 30,387        | 6,903     | 0                            | 7,002                        | 5,658                        | 5,731                         |         |

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

E



3

ASPHALT PAVEMENT CONTINUED

| CATEGORY | STATION | TO | STATION | LOCATION                | 204.0105                                              | 204.0115                                              | 204.0120                                          | 211.0400                                                   | 330.0100                | 415.6000.S          | 455.0605         | 460.5224                     | 460.6224                            | 460.7424                            | 460.8624                             | REMARKS |
|----------|---------|----|---------|-------------------------|-------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------|-------------------------|---------------------|------------------|------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|---------|
|          |         |    |         |                         | REMOVING<br>CONCRETE<br>PAVEMENT<br>BUTT JOINTS<br>SY | REMOVING<br>ASPHALTIC<br>SURFACE BUTT<br>JOINTS<br>SY | REMOVING<br>ASPHALTIC<br>SURFACE<br>MILLING<br>SY | PREPARE<br>FOUNDATION FOR<br>ASPHALTIC<br>SHOULDERS<br>STA | MILL AND<br>RELAY<br>SY | ROUT AND SEAL<br>LF | TACK COAT<br>GAL | HMA PAVEMENT 4<br>LT 58-28 S | HMA PAVEMENT 4<br>MT 58-28 S<br>TON | HMA PAVEMENT 4<br>HT 58-28 H<br>TON | HMA PAVEMENT 4<br>SMA 58-28 V<br>TON |         |
| 0010     | 435+64  | -  | 471+32  | Mainline RT Shoulder    | -                                                     | -                                                     | 2379                                              | -                                                          | -                       | 3568                | -                | -                            | 533                                 | -                                   | -                                    |         |
| 0010     | 459+50  | -  | 460+28  | TRAFFIC CROSSING MEDIAN | -                                                     | -                                                     | 313                                               | -                                                          | -                       | 173                 | 16               | -                            | 70                                  | -                                   | -                                    |         |
| 0010     | 460+28  | -  | 461+28  | Mainline LT Shoulder    | -                                                     | -                                                     | 34                                                | -                                                          | -                       | 100                 | -                | -                            | 8                                   | -                                   | -                                    |         |
| 0010     | 461+28  | -  | 464+82  | TRAFFIC CROSSING MEDIAN | -                                                     | -                                                     | 724                                               | -                                                          | -                       | 446                 | 37               | -                            | 163                                 | -                                   | -                                    |         |
| 0010     | 464+82  | -  | 472+92  | Mainline LT Shoulder    | -                                                     | -                                                     | 270                                               | -                                                          | -                       | 810                 | -                | -                            | 61                                  | -                                   | -                                    |         |
| 0010     | 471+32  | -  | 474+38  | TURNLANE/SIDE ROAD RT   | -                                                     | 27                                                    | 556                                               | -                                                          | -                       | 306                 | 30               | -                            | 131                                 | -                                   | -                                    |         |
| 0010     | 474+38  | -  | 497+31  | Mainline RT Shoulder    | -                                                     | 7                                                     | 1529                                              | -                                                          | -                       | 2293                | -                | -                            | 343                                 | -                                   | -                                    |         |
| 0010     | 472+92  | -  | 474+06  | TRAFFIC CROSSING MEDIAN | -                                                     | -                                                     | 657                                               | -                                                          | -                       | 451                 | 33               | -                            | 148                                 | -                                   | -                                    |         |
| 0010     | 474+06  | -  | 481+11  | Mainline LT Shoulder    | -                                                     | -                                                     | 235                                               | -                                                          | -                       | 705                 | -                | -                            | 53                                  | -                                   | -                                    |         |
| 0010     | 481+11  | -  | 481+82  | TRAFFIC CROSSING MEDIAN | -                                                     | -                                                     | 286                                               | -                                                          | -                       | 157                 | 15               | -                            | 64                                  | -                                   | -                                    |         |
| 0010     | 481+82  | -  | 497+31  | Mainline LT Shoulder    | -                                                     | 4                                                     | 517                                               | -                                                          | -                       | 1549                | -                | -                            | 116                                 | -                                   | -                                    |         |
| 0010     | 100+03A | -  | 100+63A | Mainline RT Shoulder    | -                                                     | 4                                                     | 10                                                | -                                                          | -                       | -                   | -                | -                            | 3                                   | -                                   | -                                    |         |
| 0010     | 100+19A | -  | 100+63A | Mainline LT Shoulder    | -                                                     | 13                                                    | 7                                                 | -                                                          | -                       | -                   | -                | -                            | 4                                   | -                                   | -                                    |         |
| 0010     | 100+63A | -  | 153+57A | Mainline                | 267                                                   | -                                                     | -                                                 | -                                                          | -                       | -                   | 1688             | -                            | -                                   | 1371                                | 1384                                 |         |
| 0010     | 100+63A | -  | 101+41A | Mainline RT Shoulder    | -                                                     | 34                                                    | -                                                 | -                                                          | -                       | -                   | 3                | -                            | -                                   | 1                                   | 3                                    |         |
| 0010     | 100+63A | -  | 130+63A | Mainline LT Shoulder    | -                                                     | 89                                                    | -                                                 | -                                                          | 2578                    | -                   | -                | -                            | 523                                 | -                                   | -                                    |         |
| 0010     | 101+41A | -  | 113+97A | Mainline RT Shoulder    | -                                                     | -                                                     | -                                                 | -                                                          | 1322                    | -                   | -                | -                            | 259                                 | -                                   | -                                    |         |
| 0010     | 113+97A | -  | 153+56A | Mainline RT Shoulder    | -                                                     | 34                                                    | -                                                 | -                                                          | 1286                    | -                   | 66               | -                            | -                                   | 128                                 | 130                                  |         |
| 0010     | 140+35A | -  | 142+01A | Mainline GORE           | -                                                     | -                                                     | -                                                 | -                                                          | 221                     | -                   | -                | -                            | 44                                  | -                                   | -                                    |         |
| 0010     | 142+01A | -  | 152+60A | Mainline LT Shoulder    | -                                                     | -                                                     | -                                                 | -                                                          | 942                     | -                   | -                | -                            | 185                                 | -                                   | -                                    |         |
| 0010     | 152+60A | -  | 153+55A | Mainline GORE           | -                                                     | -                                                     | -                                                 | -                                                          | 126                     | -                   | -                | -                            | 25                                  | -                                   | -                                    |         |
| 0010     | 153+56A | -  | 156+00A | Mainline RT Shoulder    | -                                                     | -                                                     | 82                                                | -                                                          | -                       | 244                 | -                | -                            | 16                                  | -                                   | -                                    |         |
| 0010     | 156+00A | -  | 189+24A | Mainline                | 267                                                   | -                                                     | -                                                 | -                                                          | -                       | -                   | 1058             | -                            | -                                   | 856                                 | 869                                  |         |
| 0010     | 156+00A | -  | 208+19A | Mainline RT Shoulder    | -                                                     | 34                                                    | -                                                 | -                                                          | 1706                    | -                   | 87               | -                            | -                                   | 169                                 | 171                                  |         |
| 0010     | 160+93A | -  | 186+80A | Mainline LT Shoulder    | -                                                     | -                                                     | -                                                 | -                                                          | 2300                    | -                   | -                | -                            | 451                                 | -                                   | -                                    |         |
| 0010     | 189+24A | -  | 208+19A | Mainline                | 289                                                   | -                                                     | -                                                 | -                                                          | -                       | -                   | 650              | -                            | -                                   | 523                                 | 537                                  |         |
| 0010     | 196+95A | -  | 200+31A | Mainline GORE           | -                                                     | -                                                     | -                                                 | -                                                          | 282                     | -                   | -                | -                            | 56                                  | -                                   | -                                    |         |
| 0010     | 200+31A | -  | 208+19A | Mainline LT Shoulder    | -                                                     | 67                                                    | -                                                 | -                                                          | 459                     | -                   | -                | -                            | 103                                 | -                                   | -                                    |         |
| 0010     | 208+19A | -  | 210+34A | Mainline RT Shoulder    | -                                                     | -                                                     | 72                                                | -                                                          | -                       | 215                 | -                | -                            | 15                                  | -                                   | -                                    |         |
| 0010     | 208+19A | -  | 210+34A | Mainline LT Shoulder    | -                                                     | -                                                     | 144                                               | -                                                          | -                       | 215                 | -                | -                            | 29                                  | -                                   | -                                    |         |
| 0010     | 210+34A | -  | 236+39A | Mainline                | 578                                                   | -                                                     | -                                                 | -                                                          | -                       | -                   | 896              | -                            | -                                   | 724                                 | 738                                  |         |
| 0010     | 210+34A | -  | 236+39A | Mainline RT Shoulder    | -                                                     | 34                                                    | -                                                 | -                                                          | 835                     | -                   | 44               | -                            | -                                   | 84                                  | 86                                   |         |
| 0010     | 210+34A | -  | 236+39A | Mainline LT Shoulder    | -                                                     | 67                                                    | -                                                 | -                                                          | 1670                    | -                   | -                | -                            | 341                                 | -                                   | -                                    |         |
| 0010     | 236+39A | -  | 237+00A | Mainline RT Shoulder    | -                                                     | 9                                                     | 34                                                | -                                                          | -                       | -                   | -                | -                            | 9                                   | -                                   | -                                    |         |
| 0010     | 236+39A | -  | 236+85A | Mainline LT Shoulder    | -                                                     | 10                                                    | 26                                                | -                                                          | -                       | -                   | -                | -                            | 8                                   | -                                   | -                                    |         |
| 0010     | 238+19A | -  | 239+11A | Mainline RT Shoulder    | -                                                     | 10                                                    | 50                                                | -                                                          | -                       | -                   | -                | -                            | 12                                  | -                                   | -                                    |         |
| 0010     | 238+25A | -  | 239+11A | Mainline LT Shoulder    | -                                                     | 10                                                    | 59                                                | -                                                          | -                       | -                   | -                | -                            | 14                                  | -                                   | -                                    |         |
| 0010     | 239+11A | -  | 276+36A | Mainline                | 578                                                   | -                                                     | -                                                 | -                                                          | -                       | -                   | 1277             | -                            | -                                   | 1027                                | 1055                                 |         |
| 0010     | 239+11A | -  | 259+79A | Mainline LT Shoulder    | -                                                     | 67                                                    | -                                                 | -                                                          | 1312                    | -                   | -                | -                            | 271                                 | -                                   | -                                    |         |
| 0010     | 239+11A | -  | 276+36A | Mainline RT Shoulder    | -                                                     | 68                                                    | -                                                 | -                                                          | 1174                    | -                   | 63               | -                            | -                                   | 119                                 | 122                                  |         |
| 0010     | 272+86A | -  | 276+36A | Mainline LT Shoulder    | -                                                     | 67                                                    | -                                                 | -                                                          | 211                     | -                   | -                | -                            | 55                                  | -                                   | -                                    |         |
| 0010     | 276+36A | -  | 276+79A | Mainline LT Shoulder    | -                                                     | -                                                     | 39                                                | -                                                          | -                       | -                   | -                | -                            | -                                   | -                                   | -                                    |         |
| 0010     | 276+36A | -  | 277+22A | Mainline RT Shoulder    | -                                                     | 7                                                     | 51                                                | -                                                          | -                       | -                   | -                | -                            | 12                                  | -                                   | -                                    |         |
| 0010     | 279+27A | -  | 279+69A | Mainline LT Shoulder    | -                                                     | 8                                                     | 25                                                | -                                                          | -                       | -                   | -                | -                            | 7                                   | -                                   | -                                    |         |
| 0010     | 279+69A | -  | 292+96A | Mainline                | 578                                                   | -                                                     | -                                                 | -                                                          | -                       | -                   | 446              | -                            | -                                   | 348                                 | 376                                  |         |
| 0010     | 279+69A | -  | 282+19A | Mainline LT Shoulder    | -                                                     | 67                                                    | -                                                 | -                                                          | 100                     | -                   | -                | -                            | 33                                  | -                                   | -                                    |         |
| 0010     | 279+69A | -  | 292+96A | Mainline RT Shoulder    | -                                                     | 68                                                    | -                                                 | -                                                          | 375                     | -                   | 23               | -                            | -                                   | 41                                  | 44                                   |         |
| 0010     | 282+19A | -  | 283+25A | Mainline GORE           | -                                                     | -                                                     | -                                                 | -                                                          | 90                      | -                   | -                | -                            | 18                                  | -                                   | -                                    |         |
| 0010     | 289+23A | -  | 292+96A | Mainline LT Shoulder    | -                                                     | 67                                                    | -                                                 | -                                                          | 182                     | -                   | -                | -                            | 49                                  | -                                   | -                                    |         |
| 0010     | 292+94A | -  | 295+44A | TURNLANE/SIDE ROAD LT   | -                                                     | 52                                                    | 785                                               | -                                                          | -                       | 250                 | 42               | -                            | 188                                 | -                                   | -                                    |         |
| 0010     | 294+92A | -  | 310+51A | Mainline RT Shoulder    | -                                                     | -                                                     | 520                                               | -                                                          | -                       | 1559                | -                | -                            | 117                                 | -                                   | -                                    |         |
| 0010     | 295+44A | -  | 297+06A | Mainline LT Shoulder    | -                                                     | 7                                                     | 101                                               | -                                                          | -                       | 162                 | -                | -                            | 25                                  | -                                   | -                                    |         |
| 0010     | 300+62A | -  | 338+10A | Mainline LT Shoulder    | -                                                     | 7                                                     | 2492                                              | -                                                          | -                       | 3748                | -                | -                            | 560                                 | -                                   | -                                    |         |
| 0010     | 313+39A | -  | 322+74A | Mainline RT Shoulder    | -                                                     | -                                                     | 312                                               | -                                                          | -                       | 935                 | -                | -                            | 70                                  | -                                   | -                                    |         |
| 0010     | 323+62A | -  | 338+71A | Mainline RT Shoulder    | -                                                     | -                                                     | 503                                               | -                                                          | -                       | 1509                | -                | -                            | 113                                 | -                                   | -                                    |         |
| 0010     | 338+10A | -  | 341+06A | TURNLANE/SIDE ROAD LT   | -                                                     | 35                                                    | 481                                               | -                                                          | -                       | 296                 | 26               | -                            | 116                                 | -                                   | -                                    |         |
| 0010     | 339+52A | -  | 353+22A | Mainline RT Shoulder    | -                                                     | -                                                     | 457                                               | -                                                          | -                       | 1370                | -                | -                            | 103                                 | -                                   | -                                    |         |
| 0010     | 341+06A | -  | 351+25A | Mainline LT Shoulder    | -                                                     | -                                                     | 680                                               | -                                                          | -                       | 1019                | -                | -                            | 153                                 | -                                   | -                                    |         |
| 0010     | 358+18A | -  | 373+05A | Mainline RT Shoulder    | -                                                     | 4                                                     | 492                                               | -                                                          | -                       | 1487                | -                | -                            | 112                                 | -                                   | -                                    |         |
| 0010     | 360+57A | -  | 363+77A | Mainline GORE           | -                                                     | -                                                     | -                                                 | -                                                          | 278                     | -                   | -                | -                            | 55                                  | -                                   | -                                    |         |
|          |         |    |         | SUBTOTAL                | 2,557                                                 | 977                                                   | 14,922                                            | 0                                                          | 17,449                  | 23,567              | 6,500            | 0                            | 5,844                               | 5,391                               | 5,515                                |         |

3

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

E

3

ASPHALT PAVEMENT CONTINUED

|          |           |    |           |                           | 204.0105<br>REMOVING<br>CONCRETE<br>PAVEMENT<br>BUTT JOINTS | 204.0115<br>REMOVING<br>ASPHALTIC<br>SURFACE BUTT<br>JOINTS | 204.0120<br>REMOVING<br>ASPHALTIC<br>SURFACE<br>MILLING | 211.0400<br>PREPARE<br>FOUNDATION FOR<br>ASPHALTIC<br>SHOULDERS | 330.0100<br><br>MILL AND<br>RELAY | 415.6000.S<br><br>ROUT AND SEAL<br>LF | 455.0605<br><br>TACK COAT<br>GAL | 460.5224<br><br>HMA PAVEMENT 4<br>LT 58-28 S | 460.6224<br><br>HMA PAVEMENT 4<br>MT 58-28 S | 460.7424<br><br>HMA PAVEMENT 4<br>HT 58-28 H | 460.8624<br><br>HMA PAVEMENT 4<br>SMA 58-28 V | REMARKS |
|----------|-----------|----|-----------|---------------------------|-------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------|---------------------------------------|----------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------------------|---------|
| CATEGORY | STATION   | TO | STATION   | LOCATION                  | SY                                                          | SY                                                          | SY                                                      | STA                                                             | SY                                |                                       |                                  |                                              | TON                                          | TON                                          | TON                                           |         |
| 0010     | 363+77A   | -  | 373+05A   | Mainline LT Shoulder      | -                                                           | 7                                                           | 612                                                     | -                                                               | -                                 | 928                                   | -                                | -                                            | 139                                          | -                                            | -                                             |         |
| 0010     | 375+00A   | -  | 410+47A   | Mainline LT Shoulder      | -                                                           | 14                                                          | 2351                                                    | -                                                               | -                                 | 3547                                  | -                                | -                                            | 530                                          | -                                            | -                                             |         |
| 0010     | 375+00A   | -  | 410+47A   | Mainline RT Shoulder      | -                                                           | 8                                                           | 1175                                                    | -                                                               | -                                 | 3547                                  | -                                | -                                            | 265                                          | -                                            | -                                             |         |
| 0010     | 412+66A   | -  | 421+30A   | Mainline LT Shoulder      | -                                                           | 7                                                           | 569                                                     | -                                                               | -                                 | 864                                   | -                                | -                                            | 130                                          | -                                            | -                                             |         |
| 0010     | 412+66A   | -  | 458+80A   | Mainline RT Shoulder      | -                                                           | 4                                                           | 1534                                                    | -                                                               | -                                 | 4614                                  | -                                | -                                            | 345                                          | -                                            | -                                             |         |
| 0010     | 421+30A   | -  | 423+22A   | Mainline GORE             | -                                                           | -                                                           | -                                                       | -                                                               | 188                               | -                                     | -                                | -                                            | 37                                           | -                                            | -                                             |         |
| 0010     | 429+72A   | -  | 462+89A   | Mainline LT Shoulder      | -                                                           | -                                                           | 2212                                                    | -                                                               | -                                 | 3317                                  | -                                | -                                            | 496                                          | -                                            | -                                             |         |
| 0010     | 459+75A   | -  | 463+22A   | Mainline RT Shoulder      | -                                                           | -                                                           | 116                                                     | -                                                               | -                                 | 347                                   | -                                | -                                            | 26                                           | -                                            | -                                             |         |
| 0010     | 462+89A   | -  | 465+80A   | TURNLANE/SIDE ROAD LT     | -                                                           | 32                                                          | 565                                                     | -                                                               | -                                 | 291                                   | 30                               | -                                            | 134                                          | -                                            | -                                             |         |
| 0010     | 464+14A   | -  | 473+12A   | Mainline RT Shoulder      | -                                                           | -                                                           | 300                                                     | -                                                               | -                                 | 898                                   | -                                | -                                            | 68                                           | -                                            | -                                             |         |
| 0010     | 465+80A   | -  | 496+55A   | Mainline LT Shoulder      | -                                                           | 7                                                           | 2043                                                    | -                                                               | -                                 | 3075                                  | -                                | -                                            | 460                                          | -                                            | -                                             |         |
| 0010     | 476+49A   | -  | 480+48A   | Mainline RT Shoulder      | -                                                           | -                                                           | 133                                                     | -                                                               | -                                 | 399                                   | -                                | -                                            | 30                                           | -                                            | -                                             |         |
| 0010     | 481+34A   | -  | 496+55A   | Mainline RT Shoulder      | -                                                           | 4                                                           | 503                                                     | -                                                               | -                                 | 1521                                  | -                                | -                                            | 114                                          | -                                            | -                                             |         |
| 0010     | 141+33E   | -  | 150+33E   | RAMP MAINLINE             | 167                                                         | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 111                              | -                                            | -                                            | 86                                           | 94                                            |         |
| 0010     | 141+33E   | -  | 150+33E   | RAMP RT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | 444                               | -                                     | 3                                | -                                            | 98                                           | -                                            | -                                             |         |
| 0010     | 149+33E   | -  | 150+33E   | RAMP LT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | -                                 | -                                     | 3                                | -                                            | 11                                           | -                                            | -                                             |         |
| 0010     | 150+33E   | -  | 152+03E   | RAMP RT SHOULDER          | -                                                           | -                                                           | 95                                                      | 2                                                               | -                                 | 170                                   | -                                | -                                            | 22                                           | -                                            | -                                             |         |
| 0010     | 150+33E   | -  | 155+70E   | RAMP LT SHOULDER          | -                                                           | -                                                           | 304                                                     | 6                                                               | -                                 | 537                                   | -                                | -                                            | 69                                           | -                                            | -                                             |         |
| 0010     | 153+40E   | -  | 153+84E   | RAMP GORE                 | -                                                           | -                                                           | 73                                                      | 2                                                               | -                                 | 88                                    | -                                | -                                            | 17                                           | -                                            | -                                             |         |
| 0010     | 153+84E   | -  | 155+70E   | RAMP LT SHOULDER          | -                                                           | -                                                           | 109                                                     | 2                                                               | -                                 | 186                                   | -                                | -                                            | 25                                           | -                                            | -                                             |         |
| 0010     | 152+03EE  | -  | 156+99EE  | RAMP RT SHOULDER          | -                                                           | -                                                           | 276                                                     | 5                                                               | -                                 | 496                                   | -                                | -                                            | 62                                           | -                                            | -                                             |         |
| 0010     | 153+80EE  | -  | 156+99EE  | RAMP LT SHOULDER          | -                                                           | -                                                           | 178                                                     | 4                                                               | -                                 | 319                                   | -                                | -                                            | 40                                           | -                                            | -                                             |         |
| 0010     | 154+48EEE | -  | 160+44EEE | RAMP RT SHOULDER          | -                                                           | -                                                           | 332                                                     | 7                                                               | -                                 | 596                                   | -                                | -                                            | 75                                           | -                                            | -                                             |         |
| 0010     | 154+48EEE | -  | 158+69EEE | RAMP LT SHOULDER          | -                                                           | -                                                           | 234                                                     | 5                                                               | -                                 | 421                                   | -                                | -                                            | 53                                           | -                                            | -                                             |         |
| 0010     | 156+21E   | -  | 158+65E   | RAMP RT SHOULDER          | -                                                           | -                                                           | 142                                                     | 3                                                               | -                                 | 244                                   | -                                | -                                            | 32                                           | -                                            | -                                             |         |
| 0010     | 156+39E   | -  | 160+44E   | RAMP LT SHOULDER          | -                                                           | -                                                           | 231                                                     | 5                                                               | -                                 | 405                                   | -                                | -                                            | 52                                           | -                                            | -                                             |         |
| 0010     | 158+65E   | -  | 158+99E   | RAMP GORE                 | -                                                           | -                                                           | 62                                                      | 2                                                               | -                                 | 68                                    | -                                | -                                            | 14                                           | -                                            | -                                             |         |
| 0010     | 160+44E   | -  | 174+44E   | RAMP MAINLINE             | 167                                                         | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 213                              | -                                            | -                                            | 169                                          | 177                                           |         |
| 0010     | 160+44E   | -  | 161+44E   | RAMP LT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | -                                 | -                                     | 3                                | -                                            | 11                                           | -                                            | -                                             |         |
| 0010     | 160+44E   | -  | 174+44E   | RAMP RT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | 722                               | -                                     | 3                                | -                                            | 153                                          | -                                            | -                                             |         |
| 0010     | 130+70F   | -  | 142+85F   | RAMP MAINLINE             | 167                                                         | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 180                              | -                                            | -                                            | 143                                          | 151                                           |         |
| 0010     | 130+70F   | -  | 142+85F   | RAMP LT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | 619                               | -                                     | 3                                | -                                            | 133                                          | -                                            | -                                             |         |
| 0010     | 141+85F   | -  | 142+85F   | RAMP RT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | -                                 | -                                     | 3                                | -                                            | 11                                           | -                                            | -                                             |         |
| 0010     | 142+85F   | -  | 150+22F   | RAMP RT SHOULDER          | -                                                           | -                                                           | 429                                                     | 8                                                               | -                                 | 737                                   | -                                | -                                            | 96                                           | -                                            | -                                             |         |
| 0010     | 142+85F   | -  | 154+87F   | RAMP LT SHOULDER          | -                                                           | -                                                           | 743                                                     | 12                                                              | -                                 | 1337                                  | -                                | -                                            | 167                                          | -                                            | -                                             |         |
| 0010     | 141+67G   | -  | 144+04G   | RAMP LT SHOULDER          | -                                                           | -                                                           | 197                                                     | 3                                                               | -                                 | 353                                   | -                                | -                                            | 44                                           | -                                            | -                                             |         |
| 0010     | 146+08G   | -  | 151+60G   | RAMP RT SHOULDER          | -                                                           | -                                                           | 334                                                     | 6                                                               | -                                 | 552                                   | -                                | -                                            | 75                                           | -                                            | -                                             |         |
| 0010     | 150+52G   | -  | 151+60G   | RAMP LT SHOULDER          | -                                                           | -                                                           | 60                                                      | 2                                                               | -                                 | 108                                   | -                                | -                                            | 14                                           | -                                            | -                                             |         |
| 0010     | 151+60G   | -  | 160+93G   | RAMP LT SHOULDER          | -                                                           | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 3                                | -                                            | 102                                          | -                                            | -                                             |         |
| 0010     | 151+60G   | -  | 152+60G   | RAMP RT SHOULDER          | -                                                           | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 3                                | -                                            | 11                                           | -                                            | -                                             |         |
| 0010     | 192+40C   | -  | 201+91C   | RAMP RT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | 473                               | -                                     | 3                                | -                                            | 104                                          | -                                            | -                                             |         |
| 0010     | 192+96C   | -  | 201+91C   | RAMP MAINLINE             | 167                                                         | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 109                              | -                                            | -                                            | 84                                           | 93                                            |         |
| 0010     | 200+91C   | -  | 201+91C   | RAMP LT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | -                                 | -                                     | 2                                | -                                            | 7                                            | -                                            | -                                             |         |
| 0010     | 201+91C   | -  | 206+40C   | RAMP RT SHOULDER          | -                                                           | 6                                                           | 244                                                     | -                                                               | -                                 | 449                                   | -                                | -                                            | 56                                           | -                                            | -                                             |         |
| 0010     | 201+91C   | -  | 208+19C   | RAMP LT SHOULDER          | -                                                           | -                                                           | 210                                                     | -                                                               | -                                 | 628                                   | -                                | -                                            | 47                                           | -                                            | -                                             |         |
| 0010     | 186+73D   | -  | 201+34D   | RAMP MAINLINE             | 167                                                         | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 197                              | -                                            | -                                            | 156                                          | 165                                           |         |
| 0010     | 186+73D   | -  | 201+34D   | RAMP LT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | 756                               | -                                     | 3                                | -                                            | 160                                          | -                                            | -                                             |         |
| 0010     | 200+34D   | -  | 201+34D   | RAMP RT SHOULDER          | -                                                           | 56                                                          | -                                                       | -                                                               | -                                 | -                                     | 2                                | -                                            | 7                                            | -                                            | -                                             |         |
| 0010     | 201+34D   | -  | 210+09D   | RAMP LT SHOULDER          | -                                                           | 6                                                           | 481                                                     | -                                                               | -                                 | 875                                   | -                                | -                                            | 109                                          | -                                            | -                                             |         |
| 0010     | 201+34D   | -  | 208+33D   | RAMP RT SHOULDER          | -                                                           | 4                                                           | 229                                                     | -                                                               | -                                 | 699                                   | -                                | -                                            | 53                                           | -                                            | -                                             |         |
| 0010     | 8+30B     | -  | 10+30B    | BADGER ROAD               | -                                                           | 77                                                          | 627                                                     | 2                                                               | -                                 | -                                     | 40                               | -                                            | 177                                          | -                                            | -                                             |         |
| 0010     | 12+77B    | -  | 15+91B    | BADGER ROAD               | -                                                           | 75                                                          | 1060                                                    | 4                                                               | -                                 | -                                     | 61                               | -                                            | 270                                          | -                                            | -                                             |         |
| 0010     | 259+79H   | -  | 273+08H   | RAMP MAINLINE             | -                                                           | 200                                                         | -                                                       | -                                                               | -                                 | -                                     | 224                              | -                                            | -                                            | 176                                          | 188                                           |         |
| 0010     | 273+08H   | -  | 277+03H   | RAMP MAINLINE             | -                                                           | -                                                           | 747                                                     | -                                                               | -                                 | -                                     | 53                               | -                                            | 84                                           | -                                            | -                                             |         |
| 0010     | 264+34J   | -  | 279+89J   | EAGLE POINT MAINLINE RT   | -                                                           | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 208                              | -                                            | 929                                          | -                                            | -                                             |         |
| 0010     | 264+34J   | -  | 269+15J   | EAGLE POINT MAINLINE LT   | -                                                           | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 33                               | -                                            | 144                                          | -                                            | -                                             |         |
| 0010     | 264+34J   | -  | 265+41J   | EAGLE POINT RT            | -                                                           | -                                                           | 58                                                      | -                                                               | -                                 | -                                     | 3                                | -                                            | 13                                           | -                                            | -                                             |         |
| 0010     | 267+06J   | -  | 269+15J   | EAGLE POINT GORE          | -                                                           | -                                                           | 106                                                     | -                                                               | -                                 | -                                     | 6                                | -                                            | 24                                           | -                                            | -                                             |         |
| 0010     | 272+38J   | -  | 272+73J   | EAGLE POINT CROSSOVER     | -                                                           | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 5                                | -                                            | 22                                           | -                                            | -                                             |         |
| 0010     | 279+89J   | -  | 290+38J   | EAGLE POINT RAMP MAINLINE | -                                                           | -                                                           | -                                                       | -                                                               | -                                 | -                                     | 169                              | -                                            | -                                            | 138                                          | 138                                           |         |
| SUBTOTAL |           |    |           |                           | 835                                                         | 1,011                                                       | 19,674                                                  | 80                                                              | 3,202                             | 32,616                                | 1,676                            | 0                                            | 6,367                                        | 952                                          | 1,006                                         |         |

3

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

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TEMPORARY MEDIAN CROSSOVER

|            |         |    |         |               | *<br>204.0110<br>REMOVING<br>ASPHALTIC<br>SURFACE | *<br>204.0150<br>REMOVING<br>CURB & GUTTER | 465.0125<br>ASPHALTIC<br>SURFACE<br>TEMPORARY | 465.0310<br>ASPHALTIC CURB |         |
|------------|---------|----|---------|---------------|---------------------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------|---------|
| CATEGORY   | STATION | TO | STATION | LOCATION      | SY                                                | LF                                         | TON                                           | LF                         | REMARKS |
| 0020       | 19+81V  | -  | 20+47V  | STH 11 MEDIAN | -                                                 | 75                                         | -                                             | -                          |         |
| 0020       | 19+83W  | -  | 21+07W  | STH 11 MEDIAN | -                                                 | 133                                        | 34                                            | 60                         |         |
| 0020       | 48+81V  | -  | 50+06V  | STH 11 MEDIAN | 55                                                | 130                                        | 30                                            | 28                         |         |
| 0020       | 49+09W  | -  | 50+04W  | STH 11 MEDIAN | -                                                 | 100                                        | -                                             | -                          |         |
| TOTAL 0020 |         |    |         |               | 55                                                | 438                                        | 64                                            | 88                         |         |

MEDIAN CROSSOVER RESTORATION

|            |         |    |         |               | 465.0105             | 601.0413<br>CONCRETE CURB &<br>GUTTER 6-INCH | 620.0100                         | 620.0300                       |         |
|------------|---------|----|---------|---------------|----------------------|----------------------------------------------|----------------------------------|--------------------------------|---------|
|            |         |    |         |               | ASPHALTIC<br>SURFACE | SLOPED 30-INCH TYPE<br>G                     | CONCRETE<br>CORRUGATED<br>MEDIAN | CONCRETE MEDIAN<br>SLOPED NOSE |         |
| CATEGORY   | STATION | TO | STATION | LOCATION      | TON                  | LF                                           | SF                               | SF                             | REMARKS |
| 0020       | 19+81V  | -  | 20+47V  | STH 11 MEDIAN | -                    | 57                                           | -                                | 145                            |         |
| 0020       | 19+83W  | -  | 21+07W  | STH 11 MEDIAN | -                    | 116                                          | -                                | -                              |         |
| 0020       | 48+81V  | -  | 50+06V  | STH 11 MEDIAN | 10                   | 86                                           | 417                              | -                              |         |
| 0020       | 49+09W  | -  | 50+04W  | STH 11 MEDIAN | -                    | 57                                           | -                                | -                              |         |
| TOTAL 0020 |         |    |         |               | 10                   | 316                                          | 417                              | 145                            |         |

CURB RAMP SUMMARY

| CATEGORY   | STATION       | TO | STATION | LOCATION     | *                               |                                        |                               |                                                   |                                   |                                      |                                                          |                                                                |                                               | *                     | REMARKS |
|------------|---------------|----|---------|--------------|---------------------------------|----------------------------------------|-------------------------------|---------------------------------------------------|-----------------------------------|--------------------------------------|----------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------|-----------------------|---------|
|            |               |    |         |              | 204.0150                        | 204.0155                               | 601.0120                      | 601.0411                                          | 601.0600                          | 602.0410                             | 602.0505                                                 | 650.5500                                                       | 650.9000                                      | 690.0250              |         |
|            |               |    |         |              | REMOVING<br>CURB & GUTTER<br>LF | REMOVING<br>CONCRETE<br>SIDEWALK<br>SY | CONCRETE CURB<br>TYPE J<br>LF | CONCRETE CURB &<br>GUTTER 30-INCH<br>TYPE D<br>LF | CONCRETE CURB<br>PEDESTRIAN<br>LF | CONCRETE<br>SIDEWALK<br>5-INCH<br>SF | CURB RAMP<br>DETECTABLE<br>WARNING FIELD<br>YELLOW<br>SF | CONSTRUCTION STAKING<br>CURB GUTTER AND CURB<br>& GUTTER<br>LF | CONSTRUCTION<br>STAKING CURB<br>RAMPS<br>EACH | SAWING CONCRETE<br>LF |         |
| 0040       | 123+68X       | -  | 123+91X | REST AREA LT | 23                              | 32                                     | -                             | 23                                                | 30                                | 132                                  | 12                                                       | 53                                                             | 1                                             | 31                    |         |
| 0040       | 124+06X       | -  | 124+29X | REST AREA RT | 31                              | 14                                     | -                             | 31                                                | -                                 | 118                                  | 24                                                       | 31                                                             | 2                                             | 15                    |         |
| 0040       | 124+25X       | -  | 124+42X | REST AREA LT | 22                              | 10                                     | 7                             | 22                                                | -                                 | 92                                   | 12                                                       | 22                                                             | 1                                             | 15                    |         |
| 0040       | 124+68X       | -  | 124+85X | REST AREA LT | 18                              | 10                                     | 4                             | 18                                                | -                                 | 92                                   | 12                                                       | 18                                                             | 1                                             | 14                    |         |
| 0040       | 124+81X       | -  | 125+05X | REST AREA RT | 30                              | 14                                     | -                             | 30                                                | -                                 | 114                                  | 24                                                       | 30                                                             | 2                                             | 15                    |         |
| 0040       | 125+26X       | -  | 125+53X | REST AREA LT | 23                              | 37                                     | 4                             | 23                                                | 42                                | 162                                  | 12                                                       | 23                                                             | 1                                             | 30                    |         |
| 0040       | UNDISTRIBUTED |    |         | REST AREA    | -                               | 92                                     | -                             | -                                                 | -                                 | 820                                  | -                                                        | -                                                              | -                                             | 60                    |         |
| TOTAL 0040 |               |    |         |              | 147                             | 209                                    | 15                            | 147                                               | 72.0                              | 1,530                                | 96                                                       | 177                                                            | 8                                             | 180                   |         |

CONCRETE BARRIER

| CATEGORY   | STATION | TO | STATION | LOCATION      | 204.0157<br>REMOVING<br>CONCRETE<br>BARRIER<br>LF | 603.1142<br>CONCRETE BARRIER<br>TYPE S42<br>LF | 603.3313<br>CONCRETE BARRIER<br>TRANSITION TYPE<br>NJ32DF TO S36<br>EACH | 603.3535<br>CONCRETE BARRIER<br>TRANSITION TYPE S36<br>TO S42<br>EACH | 611.0610<br>INLET COVERS<br>TYPE BW<br>EACH | 614.0800<br>CRASH CUSHIONS<br>PERMANENT<br>EACH | 633.1000<br>DELINEATORS<br>BARRIER WALL<br>EACH | 650.7500<br>CONSTRUCTION<br>STAKING CONCRETE<br>BARRIER<br>LF | REMARKS |
|------------|---------|----|---------|---------------|---------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------|---------|
| 0010       | 100+23  | -  | 112+80  | USH 61 MEDIAN | 1,257                                             | 1,232                                          | 1                                                                        | 1                                                                     | 10                                          | 1                                               | 12                                              | 1,257                                                         |         |
| TOTAL 0010 |         |    |         |               | 1,257                                             | 1,232                                          | 1                                                                        | 1                                                                     | 10                                          | 1                                               | 12                                              | 1,257                                                         |         |

STEEL PLATE BEAM GUARD

|          |         |    |         |              | *         |             |                  |                  |                  |                  |                     |
|----------|---------|----|---------|--------------|-----------|-------------|------------------|------------------|------------------|------------------|---------------------|
|          |         |    |         |              | 204.0165  | 614.0200    | 614.0305         | 614.0345         | 614.0370         | 614.0390         |                     |
|          |         |    |         |              | REMOVING  | STEEL THRIE |                  | STEEL PLATE BEAM | STEEL PLATE BEAM | STEEL PLATE BEAM |                     |
|          |         |    |         |              | GUARDRAIL | BEAM        | STEEL PLATE BEAM | GUARD SHORT      | GUARD ENERGY     | GUARD SHORT      |                     |
|          |         |    |         |              |           | STRUCTURE   | GUARD CLASS A    | RADIUS           | ABSORBING        | RADIUS TERMINAL  |                     |
|          |         |    |         |              | LF        | APPROACH    |                  |                  | TERMINAL         |                  |                     |
| CATEGORY | STATION | TO | STATION | LOCATION     | LF        | LF          | LF               | LF               | EACH             | EACH             | REMARKS             |
| 0010     | 6+58B   | -  | 10+00B  | BADGER RD LT | 312       | 20.6        | 262.5            | -                | 1                | -                | 28' RADIUS, 9 POSTS |
| 0010     | 9+46B   | -  | 10+26B  | BADGER RD RT | 64        | 20.6        | 25.0             | 68.75            | -                | 1                |                     |
| 0010     | 12+82B  | -  | 22+01B  | BADGER RD LT | 886       | 20.6        | 875.0            | -                | 1                | -                |                     |
| 0010     | 13+07B  | -  | 13+78B  | BADGER RD RT | 70        | 20.6        | -                | -                | 1                | -                |                     |
| 0010     | 14+57B  | -  | 18+81B  | BADGER RD RT | 332       | -           | 387.5            | -                | 2                | -                |                     |
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## MGS GUARDRAIL

|            |         |    |         |                              | *         |               |             |                 |                |               |               |                  |
|------------|---------|----|---------|------------------------------|-----------|---------------|-------------|-----------------|----------------|---------------|---------------|------------------|
|            |         |    |         |                              | 204.0165  | 614.0220      | 614.0230    | 614.2300        | 614.2500       | 614.2610      | 614.2620      |                  |
|            |         |    |         |                              | REMOVING  | STEEL THRIE   | STEEL THRIE |                 |                |               |               |                  |
|            |         |    |         |                              | GUARDRAIL | BEAM BULLNOSE | BEAM        | MGS GUARDRAIL 3 | MGS THRIE BEAM | MGS GUARDRAIL | MGS GUARDRAIL |                  |
|            |         |    |         |                              | LF        | EACH          | LF          | LF              | LF             | EACH          | EACH          | REMARKS          |
| CATEGORY   | STATION | TO | STATION | LOCATION                     | LF        | EACH          | LF          | LF              | LF             | EACH          | EACH          | REMARKS          |
| 0010       | 99+45   | -  | 108+21  | USH 61 NB RT                 | 821       | -             | -           | 837.5           | 39.4           | -             | 1             |                  |
| 0010       | 100+22A | -  | 109+52A | USH 61 SB LT                 | 800       | -             | -           | 837.5           | 39.4           | 1             | -             |                  |
| 0010       | 148+33E | -  | 152+00E | USH 61 NB OFF RAMP TO STH 11 | 192       | -             | -           | 312.5           | -              | 1             | 1             |                  |
| 0010       | 154+33  | -  | 156+27  | USH 61 MEDIAN                | 400       | 2             | 175         | -               | -              | -             | -             | MEDIAN BULL NOSE |
| 0010       | 208+34  | -  | 210+16  | USH 61 MEDIAN                | 400       | 2             | 150         | -               | -              | -             | -             | MEDIAN BULL NOSE |
| 0010       | 210+76  | -  | 214+03  | USH 61 NB RT                 | 327       | -             | -           | -               | -              | -             | -             |                  |
| 0010       | 217+60  | -  | 220+51  | USH 61 NB RT                 | 291       | -             | -           | -               | -              | -             | -             |                  |
| 0010       | 223+97  | -  | 237+06  | USH 61 NB RT                 | 1,291     | -             | -           | 1225.0          | 39.4           | 1             | -             |                  |
| 0010       | 234+12  | -  | 237+18  | USH 61 NB LT                 | 274       | -             | -           | 212.5           | 39.4           | 1             | -             |                  |
| 0010       | 236+11A | -  | 237+02A | USH 61 SB LT                 | 86        | -             | -           | 50.0            | 39.4           | -             | 1             |                  |
| 0010       | 238+62  | -  | 246+67  | USH 61 NB RT                 | 853       | -             | -           | 775.0           | 39.4           | -             | 1             |                  |
| 0010       | 238+29A | -  | 241+34A | USH 61 SB RT                 | 271       | -             | -           | 212.5           | 39.4           | 1             | -             |                  |
| 0010       | 238+34A | -  | 240+92A | USH 61 SB LT                 | 237       | -             | -           | 162.5           | 39.4           | 1             | -             |                  |
| 0010       | 258+00  | -  | 267+51  | USH 61 NB RT                 | 905       | -             | -           | 887.5           | -              | 1             | 1             |                  |
| 0010       | 275+48A | -  | 276+88A | USH 61 SB LT                 | 241       | -             | -           | 100.0           | 39.4           | -             | 1             |                  |
| 0010       | 276+48A | -  | 277+51A | USH 61 SB RT                 | 103       | -             | -           | -               | -              | -             | -             |                  |
| 0010       | 279+97  | -  | 290+14  | USH 61 NB RT                 | 1,115     | -             | -           | 975.0           | -              | 1             | 1             |                  |
| 0010       | 278+93A | -  | 281+48A | USH 61 SB LT                 | 257       | -             | -           | 162.5           | 39.4           | 1             | -             |                  |
| 0010       | 279+54A | -  | 283+00A | USH 61 SB RT                 | 419       | -             | -           | 250.0           | 39.4           | 1             | -             |                  |
| 0010       | 283+93A | -  | 292+49A | USH 61 SB LT                 | 856       | -             | -           | 800.0           | -              | 1             | 1             |                  |
| 0010       | 266+11J | -  | 270+52J | EAGLE POINT RD NB ENT        | -         | -             | -           | 387.5           | -              | 1             | 1             |                  |
| 0010       | 268+50J | -  | 275+94K | EAGLE POINT RD SB EXT        | 708       | -             | -           | 600.0           | -              | 2             | -             |                  |
| TOTAL 0010 |         |    |         |                              | 10,847    | 4             | 325         | 8,787.5         | 433.4          | 14            | 9             |                  |
| 0040       | 127+39X | -  | 130+59X | REST AREA                    | 325       | -             | -           | 325.0           | -              | -             | 2             |                  |
| TOTAL 0040 |         |    |         |                              | 325       | 0             | 0           | 325             | 0              | 0             | 2             |                  |
| TOTAL      |         |    |         |                              | 11172     | 4             | 325         | 9112.5          | 433.4          | 14            | 11            |                  |

3

## CONCRETE SURFACE DRAIN

| 614.0800 CRASH CUSHIONS |           |               | OBJECT MARKING PATTERN | CRASH TEST LEVEL | TRAFFIC DIRECTION | TRAFFIC LOCATION | CRASH CUSHION SHIELDS                |
|-------------------------|-----------|---------------|------------------------|------------------|-------------------|------------------|--------------------------------------|
| LOCATION                | PERMANENT | BACK WIDTH FT |                        |                  |                   |                  |                                      |
| 112+80                  | 1         | 2             | OM-3C (W5-58M)         | TL-3             | BIDIRECTIONAL     | LT and RT        | PERMANENT CONCRETE BARRIER IN MEDIAN |

| CATEGORY   | STATION | TO | STATION | LOCATION           | 204.0190<br>REMOVING<br>SURFACE<br>DRAINS<br>EACH | 602.3010<br>CONCRETE<br>SURFACE<br>DRAINS<br>CY | REMARKS |
|------------|---------|----|---------|--------------------|---------------------------------------------------|-------------------------------------------------|---------|
| 0010       | 236+65  | -  | 237+22  | USH 61 NB LT       | -                                                 | 8.6                                             |         |
| 0010       | 236+48  | -  | 236+86  | USH 61 SB LT       | 1                                                 | 7.8                                             |         |
| 0010       | 276+35  | -  | 276+95  | USH 61 SB LT       | 1                                                 | 12.6                                            |         |
| 0010       | 278+94  | -  | 279+46  | USH 61 SB LT       | 1                                                 | 11.0                                            |         |
| 0010       | 375+36  | -  | 375+65  | USH 61 NB LT       | 1                                                 | 5.7                                             |         |
| 0010       | 374+80  | -  | 375+02  | USH 61 SB LT       | 1                                                 | 2.2                                             |         |
| 0010       | 374+80  | -  | 375+02  | USH 61 SB RT       | 1                                                 | 3.0                                             |         |
| 0010       | 411+05  | -  | 411+33  | USH 61 NB RT       | 1                                                 | 7.0                                             |         |
| 0010       | 411+05  | -  | 411+33  | USH 61 NB LT       | 1                                                 | 5.6                                             |         |
| 0010       | 410+54  | -  | 410+69  | USH 61 SB LT       | 1                                                 | 3.0                                             |         |
| 0010       | 410+54  | -  | 410+69  | USH 61 SB RT       | 1                                                 | 2.3                                             |         |
| 0010       | 12+65B  | -  | 13+30B  | BADGER RD LT       | -                                                 | 4.7                                             |         |
| 0010       | 12+89B  | -  | 13+29B  | BADGER RD RT       | 1                                                 | 3.0                                             |         |
| 0010       | 15+14B  | -  | 15+23B  | BADGER RD RT       | 1                                                 | 1.5                                             |         |
| 0010       | 14+94C  | -  | 15+02C  | USH 61 NB OFF RAMP | 1                                                 | 1.7                                             |         |
| TOTAL 0010 |         |    |         |                    | 13                                                | 79.7                                            |         |

3

| CATEGORY | DIVISION          | FROM/TO<br>STATION      | LOCATION   |                       | SALVAGED/UNUSABLE<br>PAVEMENT<br>MATERIAL<br>(4) | AVAILABLE<br>MATERIAL<br>(5) | UNEXPANDED<br>FILL | EXPANDED FILL<br>(13) | MASS<br>ORDINATE +/-<br>(14) | WASTE | 208.0100<br>BORROW | COMMENT |
|----------|-------------------|-------------------------|------------|-----------------------|--------------------------------------------------|------------------------------|--------------------|-----------------------|------------------------------|-------|--------------------|---------|
|          |                   |                         | CUT<br>(2) | EBS EXCAVATION<br>(3) |                                                  |                              |                    |                       |                              |       |                    |         |
|          | DIVISION 1        |                         |            |                       |                                                  |                              |                    |                       |                              |       |                    |         |
| 0010     | NB-BG-105         | 99+83.29/108+21.27      |            | 0                     | 0                                                | 0                            | 0                  | 24                    | 30                           | -30   |                    |         |
| 0010     | NB-BG-STH 11 RAMP | 147+14.65E/152+00.56E   |            | 0                     | 0                                                | 0                            | 0                  | 37                    | 46                           | -46   |                    |         |
| 0010     | NB-BG-215-UPDATED | 210+66.89/220+61.86     |            | 35                    | 0                                                | 0                            | 35                 | 62                    | 78                           | -43   |                    |         |
| 0010     | NB-BG-235 LT_RT   | 223+00.00/237+00.77     |            | 0                     | 0                                                | 0                            | 0                  | 122                   | 153                          | -153  |                    |         |
| 0010     | NB-BG-240         | 238+66.31/246+70.38     |            | 0                     | 0                                                | 0                            | 0                  | 152                   | 190                          | -190  |                    |         |
| 0010     | NB-BG-260         | 256+85.38/267+68.38     |            | 0                     | 0                                                | 0                            | 0                  | 92                    | 115                          | -115  |                    |         |
| 0010     | NB-BG-280         | 278+93.45/290+31.00     |            | 0                     | 0                                                | 0                            | 0                  | 71                    | 89                           | -89   |                    |         |
| 0010     | SB-BG-105A        | 100+61.54A/110+41.20A   |            | 0                     | 0                                                | 0                            | 0                  | 11                    | 14                           | -14   |                    |         |
| 0010     | SB-BG-235A        | 235+90.99A/236+89.06A   |            | 0                     | 0                                                | 0                            | 0                  | 22                    | 28                           | -28   |                    |         |
| 0010     | SB-BG-276A        | 275+49.72A/276+76.35A   |            | 0                     | 0                                                | 0                            | 0                  | 2                     | 3                            | -3    |                    |         |
| 0010     | SB-BG-240A RT_LT  | 238+34.81A/242+51.99A   |            | 0                     | 0                                                | 0                            | 0                  | 30                    | 38                           | -38   |                    |         |
| 0010     | SB-BG-280A RT_LT  | 278+99.36A/283+51.88A   |            | 0                     | 0                                                | 0                            | 0                  | 74                    | 93                           | -93   |                    |         |
| 0010     | SB-BG-290A        | 283+70.95A/292+76.00A   |            | 0                     | 0                                                | 0                            | 0                  | 48                    | 60                           | -60   |                    |         |
| 0010     | SB-TURNLANE       | 354+63.24A/359+81.00A   |            | 292                   | 0                                                | 0                            | 292                | 6                     | 8                            | 285   |                    |         |
| 0010     | NB-EAGLE P-ENT    | 264+30.00J/279+95.03J   |            | 2,015                 | 0                                                | 0                            | 2,015              | 36                    | 45                           | 1,970 |                    |         |
| 0010     | SB-EAGLE P-EXIT   | 269+48.87K/280+35.18K   |            | 1,002                 | 0                                                | 0                            | 1,002              | 17                    | 21                           | 981   |                    |         |
| 0010     | BADGER            | 6+58.09B/22+00.82B      |            | 4                     | 0                                                | 0                            | 4                  | 0                     | 0                            | 4     |                    |         |
| 0010     | SB BADGER ENT     | 209+76.54D/210+18.18D   |            | 22                    | 0                                                | 0                            | 22                 | 0                     | 0                            | 22    |                    |         |
|          | TOTAL 0010        |                         |            | 3,370                 | 0                                                | 0                            | 3,370              | 806                   | 1,008                        | 2,363 | 2,363              | 0       |
|          |                   |                         |            |                       |                                                  |                              |                    |                       |                              |       |                    |         |
| 0020     | STH11TEMP_WEST    | 19+83.32W/21+06.80W     |            | 87                    | 0                                                | 0                            | 87                 | 0                     | 0                            | 87    |                    |         |
| 0020     | STH11TEMP_EAST    | 48+81.61V/50+05.69V     |            | 68                    | 0                                                | 0                            | 68                 | 0                     | 0                            | 68    |                    |         |
| 0020     | STH11RESTORE_WEST | 19+83.32W/21+06.83W     |            | 10                    | 0                                                | 0                            | 10                 | 0                     | 0                            | 10    |                    |         |
| 0020     | STH11RESTORE_EAST | 48+81.61V/49+73.28V     |            | 9                     | 0                                                | 0                            | 9                  | 0                     | 0                            | 9     |                    |         |
|          | TOTAL 0020        |                         |            | 174                   |                                                  |                              | 174                | 0                     | 0                            | 174   | 174                | 0       |
|          |                   |                         |            |                       |                                                  |                              |                    |                       |                              |       |                    |         |
| 0040     | RESTAREA 106-BG   | 127+39.47X/130+59.10X   |            | 0                     | 0                                                | 0                            | 0                  | 50                    | 63                           | -63   |                    |         |
| 0040     | TRUCK_NORTH       | 116+91.12XT/119+97.21XT |            | 109                   | 0                                                | 0                            | 109                | 16                    | 20                           | 89    |                    |         |
| 0040     | TRUCK_SOUTH       |                         |            | 58                    | 0                                                | 0                            | 58                 | 10                    | 13                           | 46    |                    |         |
|          | TOTAL 0040        |                         |            | 167                   |                                                  |                              | 167                | 76                    | 95                           | 72    | 72                 | 0       |
|          | GRAND TOTAL       |                         |            | 3,711                 | 0                                                | 0                            | 3,711              | 882                   | 1,103                        | 2,609 | 2,609              | 0       |
|          |                   |                         |            |                       |                                                  |                              |                    |                       |                              |       |                    |         |

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = .00

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) \* FILL FACTOR  
OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) \* FILL FACTOR  
OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) \* FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.



BASE AGGREGATE

| CATEGORY | STATION | TO | STATION | LOCATION                 | 305.0110                                | 305.0120                                  | 624.0100      | REMARKS |
|----------|---------|----|---------|--------------------------|-----------------------------------------|-------------------------------------------|---------------|---------|
|          |         |    |         |                          | BASE AGGREGATE<br>DENSE 3/4-INCH<br>TON | BASE AGGREGATE<br>DENSE 1 1/4-INCH<br>TON | WATER<br>MGAL |         |
| 0010     | 113+50  | -  | 141+33  | USH 61 NB RT SHOULDER    | 163                                     | -                                         | 2             |         |
| 0010     | 148+89  | -  | 160+44  | USH 61 NB RT SHOULDER    | 68                                      | -                                         | 1             |         |
| 0010     | 173+47  | -  | 183+17  | USH 61 NB RT SHOULDER    | 57                                      | -                                         | 1             |         |
| 0010     | 183+53  | -  | 190+00  | USH 61 NB RT SHOULDER    | 38                                      | -                                         | 1             |         |
| 0010     | 190+00  | -  | 192+04  | USH 61 NB RT SHOULDER    | 12                                      | -                                         | 1             |         |
| 0010     | 200+62  | -  | 224+54  | USH 61 NB RT SHOULDER    | 140                                     | -                                         | 2             |         |
| 0010     | 224+56  | -  | 237+03  | USH 61 NB BG RT SHOULDER | 73                                      | 353                                       | 5             |         |
| 0010     | 238+64  | -  | 246+71  | USH 61 NB BG RT SHOULDER | 38                                      | 259                                       | 3             |         |
| 0010     | 246+71  | -  | 256+85  | USH 61 NB RT SHOULDER    | 60                                      | -                                         | 1             |         |
| 0010     | 256+85  | -  | 268+69  | USH 61 NB BG RT SHOULDER | 83                                      | 279                                       | 4             |         |
| 0010     | 268+69  | -  | 274+97  | USH 61 NB RT SHOULDER    | 37                                      | -                                         | 1             |         |
| 0010     | 275+36  | -  | 278+93  | USH 61 NB RT SHOULDER    | 21                                      | -                                         | 1             |         |
| 0010     | 278+93  | -  | 289+95  | USH 61 NB BG RT SHOULDER | 59                                      | 194                                       | 3             |         |
| 0010     | 289+95  | -  | 294+13  | USH 61 NB RT SHOULDER    | 25                                      | -                                         | 1             |         |
| 0010     | 294+72  | -  | 309+52  | USH 61 NB RT SHOULDER    | 102                                     | -                                         | 2             |         |
| 0010     | 312+59  | -  | 352+95  | USH 61 NB RT SHOULDER    | 277                                     | -                                         | 3             |         |
| 0010     | 355+81  | -  | 357+41  | USH 61 NB RT SHOULDER    | 11                                      | -                                         | 1             |         |
| 0010     | 365+64  | -  | 370+54  | USH 61 NB RT SHOULDER    | 34                                      | -                                         | 1             |         |
| 0010     | 378+31  | -  | 395+15  | USH 61 NB RT SHOULDER    | 116                                     | -                                         | 2             |         |
| 0010     | 395+15  | -  | 402+79  | USH 61 NB BG RT SHOULDER | 53                                      | -                                         | 1             |         |
| 0010     | 402+79  | -  | 408+13  | USH 61 NB RT SHOULDER    | 37                                      | -                                         | 1             |         |
| 0010     | 415+86  | -  | 423+06  | USH 61 NB RT SHOULDER    | 50                                      | -                                         | 1             |         |
| 0010     | 436+62  | -  | 471+29  | USH 61 NB RT SHOULDER    | 238                                     | -                                         | 3             |         |
| 0010     | 474+48  | -  | 497+31  | USH 61 NB RT SHOULDER    | 157                                     | -                                         | 2             |         |
| 0010     | 113+50  | -  | 140+30  | USH 61 NB LT SHOULDER    | 215                                     | -                                         | 3             |         |
| 0010     | 140+69  | -  | 183+17  | USH 61 NB LT SHOULDER    | 341                                     | -                                         | 4             |         |
| 0010     | 183+53  | -  | 190+00  | USH 61 NB LT SHOULDER    | 52                                      | -                                         | 1             |         |
| 0010     | 190+00  | -  | 234+40  | USH 61 NB LT SHOULDER    | 356                                     | -                                         | 4             |         |
| 0010     | 234+40  | -  | 237+00  | USH 61 NB BG LT SHOULDER | 21                                      | -                                         | 1             |         |
| 0010     | 238+70  | -  | 269+87  | USH 61 NB LT SHOULDER    | 250                                     | -                                         | 3             |         |
| 0010     | 270+44  | -  | 282+30  | USH 61 NB LT SHOULDER    | 96                                      | -                                         | 1             |         |
| 0010     | 290+02  | -  | 292+01  | USH 61 NB LT SHOULDER    | 32                                      | -                                         | 1             |         |
| 0010     | 295+28  | -  | 311+33  | USH 61 NB LT SHOULDER    | 150                                     | -                                         | 2             |         |
| 0010     | 312+59  | -  | 323+58  | USH 61 NB LT SHOULDER    | 103                                     | -                                         | 2             |         |
| 0010     | 324+48  | -  | 337+18  | USH 61 NB LT SHOULDER    | 119                                     | -                                         | 2             |         |
| 0010     | 340+60  | -  | 354+42  | USH 61 NB LT SHOULDER    | 129                                     | -                                         | 2             |         |
| 0010     | 355+46  | -  | 369+92  | USH 61 NB LT SHOULDER    | 135                                     | -                                         | 2             |         |
| 0010     | 369+92  | -  | 373+85  | USH 61 NB BG LT SHOULDER | 37                                      | -                                         | 1             |         |
| 0010     | 375+37  | -  | 377+68  | USH 61 NB BG LT SHOULDER | 22                                      | -                                         | 1             |         |
| 0010     | 377+68  | -  | 407+39  | USH 61 NB LT SHOULDER    | 278                                     | -                                         | 3             |         |
| 0010     | 407+39  | -  | 411+32  | USH 61 NB BG LT SHOULDER | 37                                      | -                                         | 1             |         |
| 0010     | 412+98  | -  | 415+18  | USH 61 NB BG LT SHOULDER | 21                                      | -                                         | 1             |         |
| 0010     | 415+18  | -  | 459+51  | USH 61 NB LT SHOULDER    | 414                                     | -                                         | 5             |         |
| 0010     | 460+24  | -  | 461+27  | USH 61 NB LT SHOULDER    | 10                                      | -                                         | 1             |         |
| 0010     | 464+81  | -  | 472+90  | USH 61 NB LT SHOULDER    | 76                                      | -                                         | 1             |         |
| 0010     | 474+04  | -  | 481+12  | USH 61 NB LT SHOULDER    | 67                                      | -                                         | 1             |         |
| 0010     | 481+82  | -  | 497+31  | USH 61 NB LT SHOULDER    | 145                                     | -                                         | 2             |         |
| 0010     | 113+95A | -  | 130+63A | USH 61 SB LT SHOULDER    | 98                                      | -                                         | 1             |         |
| 0010     | 142+01A | -  | 152+62A | USH 61 SB LT SHOULDER    | 62                                      | -                                         | 1             |         |
| 0010     | 160+95A | -  | 186+81A | USH 61 SB LT SHOULDER    | 151                                     | -                                         | 2             |         |
| 0010     | 200+33A | -  | 236+11A | USH 61 SB LT SHOULDER    | 209                                     | -                                         | 3             |         |
| 0010     | 236+11A | -  | 236+96A | USH 61 SB BG LT SHOULDER | 4                                       | 25                                        | 1             |         |
| 0010     | 238+38A | -  | 239+05A | USH 61 SB BG LT SHOULDER | 19                                      | 74                                        | 1             |         |
| 0010     | 239+05A | -  | 258+74A | USH 61 SB LT SHOULDER    | 115                                     | -                                         | 2             |         |
| 0010     | 272+88A | -  | 275+50A | USH 61 SB LT SHOULDER    | 16                                      | -                                         | 1             |         |
| 0010     | 275+50A | -  | 276+95A | USH 61 SB BG LT SHOULDER | 5                                       | 19                                        | 1             |         |
| 0010     | 279+00A | -  | 281+55A | USH 61 SB BG LT SHOULDER | 9                                       | 21                                        | 1             |         |
| 0010     | 281+55A | -  | 282+19A | USH 61 SB LT SHOULDER    | 4                                       | -                                         | 1             |         |
| 0010     | 283+92A | -  | 292+44A | USH 61 SB BG LT SHOULDER | 50                                      | -                                         | 1             |         |
| 0010     | 292+44A | -  | 292+69A | USH 61 SB LT SHOULDER    | 2                                       | -                                         | 1             |         |
| SUBTOTAL |         |    |         |                          | 5,799                                   | 1,224                                     | 106           |         |

BASE AGGREGATE CONTINUED

| CATEGORY | STATION   | TO | STATION   | LOCATION                          | 305.0110                                | 305.0120                                  | 624.0100      | REMARKS |
|----------|-----------|----|-----------|-----------------------------------|-----------------------------------------|-------------------------------------------|---------------|---------|
|          |           |    |           |                                   | BASE AGGREGATE<br>DENSE 3/4-INCH<br>TON | BASE AGGREGATE<br>DENSE 1 1/4-INCH<br>TON | WATER<br>MGAL |         |
| 0010     | 295+52A   | -  | 296+38A   | USH 61 SB LT SHOULDER             | 6                                       | -                                         | 1             |         |
| 0010     | 296+38A   | -  | 297+06A   | USH 61 SB BG LT SHOULDER          | 5                                       | -                                         | 1             |         |
| 0010     | 297+06A   | -  | 300+76A   | USH 61 SB LT SHOULDER             | 26                                      | -                                         | 1             |         |
| 0010     | 300+76A   | -  | 310+61A   | USH 61 SB BG LT SHOULDER          | 68                                      | -                                         | 1             |         |
| 0010     | 310+61A   | -  | 338+08A   | USH 61 SB LT SHOULDER             | 189                                     | -                                         | 2             |         |
| 0010     | 341+21A   | -  | 350+36A   | USH 61 SB LT SHOULDER             | 63                                      | -                                         | 1             |         |
| 0010     | 363+79A   | -  | 370+21A   | USH 61 SB LT SHOULDER             | 44                                      | -                                         | 1             |         |
| 0010     | 370+21A   | -  | 373+15A   | USH 61 SB BG LT SHOULDER          | 21                                      | -                                         | 1             |         |
| 0010     | 374+93A   | -  | 378+12A   | USH 61 SB BG LT SHOULDER          | 22                                      | -                                         | 1             |         |
| 0010     | 378+12A   | -  | 407+75A   | USH 61 SB LT SHOULDER             | 203                                     | -                                         | 3             |         |
| 0010     | 407+75A   | -  | 410+68A   | USH 61 SB BG LT SHOULDER          | 21                                      | -                                         | 1             |         |
| 0010     | 412+48A   | -  | 416+00A   | USH 61 SB BG LT SHOULDER          | 25                                      | -                                         | 1             |         |
| 0010     | 416+00A   | -  | 421+31A   | USH 61 SB LT SHOULDER             | 37                                      | -                                         | 1             |         |
| 0010     | 430+66A   | -  | 438+77A   | USH 61 SB LT SHOULDER             | 56                                      | -                                         | 1             |         |
| 0010     | 438+77A   | -  | 441+11A   | USH 61 SB BG LT SHOULDER          | 16                                      | -                                         | 1             |         |
| 0010     | 441+11A   | -  | 462+91A   | USH 61 SB LT SHOULDER             | 150                                     | -                                         | 2             |         |
| 0010     | 465+82A   | -  | 473+25A   | USH 61 SB LT SHOULDER             | 51                                      | -                                         | 1             |         |
| 0010     | 473+25A   | -  | 480+25A   | USH 61 SB BG LT SHOULDER          | 48                                      | -                                         | 1             |         |
| 0010     | 480+25A   | -  | 496+67A   | USH 61 SB LT SHOULDER             | 113                                     | -                                         | 2             |         |
| 0010     | 113+85A   | -  | 140+24A   | USH 61 SB RT SHOULDER             | 212                                     | -                                         | 3             |         |
| 0010     | 140+61A   | -  | 182+75A   | USH 61 SB RT SHOULDER             | 338                                     | -                                         | 4             |         |
| 0010     | 183+16A   | -  | 236+87A   | USH 61 SB RT SHOULDER             | 431                                     | -                                         | 5             |         |
| 0010     | 238+29A   | -  | 242+52A   | USH 61 SB BG RT SHOULDER          | 27                                      | 69                                        | 1             |         |
| 0010     | 242+52A   | -  | 269+54A   | USH 61 SB RT SHOULDER             | 217                                     | -                                         | 3             |         |
| 0010     | 270+06A   | -  | 274+52A   | USH 61 SB RT SHOULDER             | 36                                      | -                                         | 1             |         |
| 0010     | 274+52A   | -  | 277+40A   | USH 61 SB BG RT SHOULDER          | 24                                      | -                                         | 1             |         |
| 0010     | 279+22A   | -  | 283+72A   | USH 61 SB BG RT SHOULDER          | 22                                      | 88                                        | 2             |         |
| 0010     | 283+72A   | -  | 293+00A   | USH 61 SB RT SHOULDER             | 87                                      | -                                         | 1             |         |
| 0010     | 294+94A   | -  | 310+53A   | USH 61 SB RT SHOULDER             | 146                                     | -                                         | 2             |         |
| 0010     | 313+41A   | -  | 322+78A   | USH 61 SB RT SHOULDER             | 88                                      | -                                         | 1             |         |
| 0010     | 232+63A   | -  | 338+08A   | USH 61 SB RT SHOULDER             | 985                                     | -                                         | 10            |         |
| 0010     | 339+54A   | -  | 353+32A   | USH 61 SB RT SHOULDER             | 129                                     | -                                         | 2             |         |
| 0010     | 357+29A   | -  | 370+83A   | USH 61 SB RT SHOULDER             | 127                                     | -                                         | 2             |         |
| 0010     | 370+83A   | -  | 373+16A   | USH 61 SB BG RT SHOULDER          | 22                                      | -                                         | 1             |         |
| 0010     | 374+93A   | -  | 378+74A   | USH 61 SB BG RT SHOULDER          | 36                                      | -                                         | 1             |         |
| 0010     | 378+74A   | -  | 408+37A   | USH 61 SB RT SHOULDER             | 277                                     | -                                         | 3             |         |
| 0010     | 408+37A   | -  | 410+68A   | USH 61 SB BG RT SHOULDER          | 22                                      | -                                         | 1             |         |
| 0010     | 412+48A   | -  | 416+28A   | USH 61 SB BG RT SHOULDER          | 36                                      | -                                         | 1             |         |
| 0010     | 416+28A   | -  | 458+81A   | USH 61 SB RT SHOULDER             | 397                                     | -                                         | 4             |         |
| 0010     | 459+74A   | -  | 463+24A   | USH 61 SB RT SHOULDER             | 33                                      | -                                         | 1             |         |
| 0010     | 464+17A   | -  | 472+17A   | USH 61 SB RT SHOULDER             | 75                                      | -                                         | 1             |         |
| 0010     | 475+56A   | -  | 480+50A   | USH 61 SB RT SHOULDER             | 47                                      | -                                         | 1             |         |
| 0010     | 481+36A   | -  | 496+67A   | USH 61 SB RT SHOULDER             | 143                                     | -                                         | 2             |         |
| 0010     | 141+33E   | -  | 147+15E   | USH 61 RAMP STH 11 NB RT SHOULDER | 50                                      | -                                         | 1             |         |
| 0010     | 147+15E   | -  | 152+00E   | USH 61 RAMP STH 11 NB RT SHOULDER | 33                                      | 53                                        | 1             |         |
| 0010     | 153+82E   | -  | 155+61E   | USH 61 RAMP STH 11 NB RT SHOULDER | 13                                      | -                                         | 1             |         |
| 0010     | 156+25E   | -  | 159+32E   | USH 61 RAMP STH 11 NB RT SHOULDER | 22                                      | -                                         | 1             |         |
| 0010     | 160+61E   | -  | 160+89E   | USH 61 RAMP STH 11 NB RT SHOULDER | 2                                       | -                                         | 1             |         |
| 0010     | 160+89E   | -  | 174+44E   | USH 61 RAMP STH 11 NB RT SHOULDER | 115                                     | -                                         | 2             |         |
| 0010     | 149+33E   | -  | 151+19E   | USH 61 RAMP STH 11 NB LT SHOULDER | 20                                      | -                                         | 1             |         |
| 0010     | 151+19E   | -  | 155+65E   | USH 61 RAMP STH 11 NB LT SHOULDER | 49                                      | -                                         | 1             |         |
| 0010     | 156+56E   | -  | 160+20E   | USH 61 RAMP STH 11 NB LT SHOULDER | 40                                      | -                                         | 1             |         |
| 0010     | 160+20E   | -  | 161+43E   | USH 61 RAMP STH 11 NB LT SHOULDER | 14                                      | -                                         | 1             |         |
| 0010     | 152+30EE  | -  | 160+95EE  | USH 61 RAMP STH 11 NB RT SHOULDER | 61                                      | -                                         | 1             |         |
| 0010     | 153+77EE  | -  | 156+99EE  | USH 61 RAMP STH 11 NB LT SHOULDER | 36                                      | -                                         | 1             |         |
| 0010     | 152+76EEE | -  | 158+71EEE | USH 61 RAMP STH 11 NB RT SHOULDER | 42                                      | -                                         | 1             |         |
| 0010     | 158+71EEE | -  | 160+61EEE | USH 61 RAMP STH 11 NB LT SHOULDER | 21                                      | -                                         | 1             |         |
| 0010     | 141+83F   | -  | 147+36F   | USH 61 RAMP STH 11 SB RT SHOULDER | 47                                      | -                                         | 1             |         |
| 0010     | 147+36F   | -  | 149+26F   | USH 61 RAMP STH 11 SB RT SHOULDER | 17                                      | -                                         | 1             |         |
| 0010     | 149+26F   | -  | 149+83F   | USH 61 RAMP STH 11 SB RT SHOULDER | 5                                       | -                                         | 1             |         |
| SUBTOTAL |           |    |           |                                   | 5,708                                   | 210                                       | 96            |         |



3

3

BASE AGGREGATE CONTINUED

| CATEGORY      | STATION  | TO | STATION  | LOCATION                             | 305.0110                                | 305.0120                                  | 624.0100      | REMARKS |
|---------------|----------|----|----------|--------------------------------------|-----------------------------------------|-------------------------------------------|---------------|---------|
|               |          |    |          |                                      | BASE AGGREGATE<br>DENSE 3/4-INCH<br>TON | BASE AGGREGATE<br>DENSE 1 1/4-INCH<br>TON | WATER<br>MGAL |         |
| 0010          | 130+70F  | -  | 142+83F  | USH 61 RAMP STH 11 SB LT SHOULDER    | 131                                     | -                                         | 2             |         |
| 0010          | 142+83F  | -  | 147+52F  | USH 61 RAMP STH 11 SB LT SHOULDER    | 31                                      | -                                         | 1             |         |
| 0010          | 147+52F  | -  | 150+50F  | USH 61 RAMP STH 11 SB LT SHOULDER    | 20                                      | -                                         | 1             |         |
| 0010          | 150+50F  | -  | 154+70F  | USH 61 RAMP STH 11 SB LT SHOULDER    | 36                                      | -                                         | 1             |         |
| 0010          | 146+42G  | -  | 147+52G  | USH 61 RAMP STH 11 SB RT SHOULDER    | 11                                      | -                                         | 1             |         |
| 0010          | 147+52G  | -  | 151+22G  | USH 61 RAMP STH 11 SB RT SHOULDER    | 36                                      | -                                         | 1             |         |
| 0010          | 151+22G  | -  | 152+60G  | USH 61 RAMP STH 11 SB RT SHOULDER    | 14                                      | -                                         | 1             |         |
| 0010          | 141+76G  | -  | 144+00G  | USH 61 RAMP STH 11 SB LT SHOULDER    | 16                                      | -                                         | 1             |         |
| 0010          | 150+90G  | -  | 160+93G  | USH 61 RAMP STH 11 SB LT SHOULDER    | 86                                      | -                                         | 1             |         |
| 0010          | 192+43C  | -  | 208+15C  | USH 61 RAMP BADGER RD NB RT SHOULDER | 142                                     | -                                         | 2             |         |
| 0010          | 200+91C  | -  | 208+15C  | USH 61 RAMP BADGER RD NB LT SHOULDER | 29                                      | -                                         | 1             |         |
| 0010          | 186+74D  | -  | 210+47D  | USH 61 RAMP BADGER RD SB LT SHOULDER | 215                                     | -                                         | 3             |         |
| 0010          | 200+34D  | -  | 210+47D  | USH 61 RAMP BADGER RD SB RT SHOULDER | 40                                      | -                                         | 1             |         |
| 0010          | 264+30J  | -  | 268+73J  | EAGLE POINT RD                       | 128                                     | 1,035                                     | 12            |         |
| 0010          | 268+73J  | -  | 279+95J  | EAGLE POINT RD USH 61 NB             | 221                                     | 1,714                                     | 20            |         |
| 0010          | 269+10K  | -  | 280+35K  | EAGLE POINT RD USH 61 SB             | 428                                     | 1,409                                     | 19            |         |
| 0010          | 357+77M  | -  | 374+94M  | USH 61 RAMP CTH HHH NB RT SHOULDER   | 155                                     | -                                         | 2             |         |
| 0010          | 365+99M  | -  | 374+94M  | USH 61 RAMP CTH HHH NB LT SHOULDER   | 35                                      | -                                         | 1             |         |
| 0010          | 350+32N  | -  | 373+45N  | USH 61 RAMP CTH HHH SB LT SHOULDER   | 209                                     | -                                         | 3             |         |
| 0010          | 363+75N  | -  | 373+45N  | USH 61 RAMP CTH HHH SB RT SHOULDER   | 38                                      | -                                         | 1             |         |
| 0010          | 413+17P  | -  | 423+43P  | USH 61 RAMP CTH H NB LT SHOULDER     | 40                                      | -                                         | 1             |         |
| 0010          | 413+48P  | -  | 436+98P  | USH 61 RAMP CTH H NB RT SHOULDER     | 213                                     | -                                         | 3             |         |
| 0010          | 411+91R  | -  | 421+30R  | USH 61 RAMP CTH H SB RT SHOULDER     | 37                                      | -                                         | 1             |         |
| 0010          | 412+27R  | -  | 430+64R  | USH 61 RAMP CTH H SB LT SHOULDER     | 166                                     | -                                         | 2             |         |
| SUBTOTAL      |          |    |          |                                      | 2,477                                   | 4,158                                     | 82            |         |
| TOTAL 0010    |          |    |          |                                      | 13,984                                  | 5,592                                     | 284           |         |
| 0020          | 9+33V    | -  | 10+51V   | STH 11 EB RT SHOULDER                | 13                                      | -                                         | 1             |         |
| 0020          | 12+78V   | -  | 15+10V   | STH 11 EB RT SHOULDER                | 24                                      | -                                         | 1             |         |
| 0020          | 15+10V   | -  | 15+30V   | STH 11 EB RT SHOULDER                | 3                                       | -                                         | 1             |         |
| 0020          | 15+30V   | -  | 16+31V   | STH 11 EB RT SHOULDER                | 8                                       | -                                         | 1             |         |
| 0020          | 20+00V   | -  | 22+60V   | STH 11 EB RT SHOULDER                | 12                                      | -                                         | 1             |         |
| 0020          | 26+60V   | -  | 28+76V   | STH 11 EB RT SHOULDER                | 10                                      | -                                         | 1             |         |
| 0020          | 28+76V   | -  | 34+28V   | STH 11 EB RT SHOULDER                | 26                                      | -                                         | 1             |         |
| 0020          | 34+28V   | -  | 39+06V   | STH 11 EB RT SHOULDER                | 22                                      | -                                         | 1             |         |
| 0020          | 40+76V   | -  | 55+63V   | STH 11 EB RT SHOULDER                | 69                                      | -                                         | 1             |         |
| 0020          | 51+55V   | -  | 55+62V   | STH 11 EB LT SHOULDER                | 19                                      | -                                         | 1             |         |
| 0020          | 8+73W    | -  | 10+56W   | STH 11 WB LT SHOULDER                | 9                                       | -                                         | 1             |         |
| 0020          | 10+56W   | -  | 15+51W   | STH 11 WB LT SHOULDER                | 23                                      | -                                         | 1             |         |
| 0020          | 15+51W   | -  | 16+12W   | STH 11 WB LT SHOULDER                | 3                                       | -                                         | 1             |         |
| 0020          | 19+82W   | -  | 22+72W   | STH 11 WB LT SHOULDER                | 14                                      | -                                         | 1             |         |
| 0020          | 24+47W   | -  | 37+41W   | STH 11 WB LT SHOULDER                | 60                                      | -                                         | 1             |         |
| 0020          | 37+80W   | -  | 38+43W   | STH 11 WB LT SHOULDER                | 3                                       | -                                         | 1             |         |
| 0020          | 40+89W   | -  | 51+54W   | STH 11 WB LT SHOULDER                | 49                                      | -                                         | 1             |         |
| TOTAL 0020    |          |    |          |                                      | 367                                     | 0                                         | 17            |         |
| 0040          | 112+00 X | -  | 121+69 X | REST AREA RT                         | 88                                      | -                                         | 1             |         |
| 0040          | 112+00 X | -  | 116+91 X | REST AREA LT                         | 20                                      | -                                         | 1             |         |
| 0040          | 119+58 X | -  | 121+99 X | REST AREA LT                         | 10                                      | -                                         | 1             |         |
| 0040          | 116+91 X | -  | 120+13 X | REST AREA 106 TRUCK PARKING          | 9                                       | 317                                       | 4             |         |
| 0040          | 127+03 X | -  | 128+56 X | REST AREA 106 TRUCK PARKING          | 4                                       | 133                                       | 2             |         |
| 0040          | 127+20 X | -  | 129+45 X | REST AREA RT                         | 21                                      | -                                         | 1             |         |
| 0040          | 128+56 X | -  | 129+45 X | REST AREA LT                         | 4                                       | -                                         | 1             |         |
| TOTAL 0040    |          |    |          |                                      | 156                                     | 450                                       | 11            |         |
| PROJECT TOTAL |          |    |          |                                      | 14507                                   | 6042                                      | 312           |         |

3

CONCRETE PAVEMENT

| CATEGORY   | STATION   | TO | STATION   | LOCATION                 | 390.0100                                  | 390.0305     | 416.0610         | 416.0620              | 416.1710                       | 416.1720                            | 650.7000                                     | 690.0250           | REMARKS |
|------------|-----------|----|-----------|--------------------------|-------------------------------------------|--------------|------------------|-----------------------|--------------------------------|-------------------------------------|----------------------------------------------|--------------------|---------|
|            |           |    |           |                          | REMOVING<br>PAVEMENT FOR<br>BASE PATCHING | CONCRETE HES | DRILLED TIE BARS | DRILLED<br>DOWEL BARS | CONCRETE<br>PAVEMENT<br>REPAIR | CONCRETE<br>PAVEMENT<br>REPLACEMENT | CONSTRUCTION<br>STAKING CONCRETE<br>PAVEMENT | SAWING<br>CONCRETE |         |
|            |           |    |           |                          | CY                                        | CY           | EACH             | EACH                  | SY                             | SY                                  | LF                                           | LF                 |         |
| 0010       | 100+34    | -  | 294+00    | USH 61 NB                | 500                                       | 500          | 460              | 1,518                 | -                              | -                                   | -                                            | 26,325             |         |
| 0010       | 100+41A   | -  | 293+17A   | USH 61 SB                | 480                                       | 480          | 440              | 1,452                 | -                              | -                                   | -                                            | 25,272             |         |
| 0010       | 237+22    | -  | 237+40    | USH 61 NB Mainline       | -                                         | -            | -                | -                     | -                              | 50                                  | 18                                           | 42                 |         |
| 0010       | 239+10    | -  | 239+17    | USH 61 NB Mainline       | -                                         | -            | -                | -                     | 19                             | -                                   | 7                                            | 31                 |         |
| 0010       | 236+40A   | -  | 236+85A   | USH 61 SB Mainline       | -                                         | -            | -                | -                     | -                              | 131                                 | 45                                           | 69                 |         |
| 0010       | 238+40A   | -  | 239+12A   | USH 61 SB Mainline       | -                                         | -            | -                | -                     | -                              | 205                                 | 72                                           | 96                 |         |
| 0010       | 373+48    | -  | 374+06    | USH 61 NB Mainline       | -                                         | -            | -                | -                     | -                              | 166                                 | 58                                           | 82                 |         |
| 0010       | 375+89    | -  | 376+04    | USH 61 NB Mainline       | -                                         | -            | -                | -                     | 44                             | -                                   | 15                                           | 39                 |         |
| 0010       | 372+61A   | -  | 373+11A   | USH 61 SB Mainline       | -                                         | -            | -                | -                     | -                              | 144                                 | 50                                           | 74                 |         |
| 0010       | 374+94A   | -  | 375+29A   | USH 61 SB Mainline       | -                                         | -            | -                | -                     | -                              | 100                                 | 35                                           | 59                 |         |
| 0010       | 411+30    | -  | 411+55    | USH 61 NB Mainline       | -                                         | -            | -                | -                     | -                              | 70                                  | 25                                           | 49                 |         |
| 0010       | 413+50    | -  | 413+67    | USH 61 NB Mainline       | -                                         | -            | -                | -                     | -                              | 49                                  | 17                                           | 41                 |         |
| 0010       | 410+15A   | -  | 410+53A   | USH 61 SB Mainline       | -                                         | -            | -                | -                     | -                              | 108                                 | 38                                           | 62                 |         |
| 0010       | 412+61A   | -  | 412+79A   | USH 61 SB Mainline       | -                                         | -            | -                | -                     | -                              | 54                                  | 18                                           | 42                 |         |
| 0010       | 294+32    | -  | 497+68    | Northern NB Mainline     | -                                         | -            | 460              | 1,564                 | 1,840                          | -                                   | -                                            | 3772               |         |
| 0010       | 293+17A   | -  | 496+65A   | Northern SB Mainline     | -                                         | -            | 440              | 1,564                 | 1,760                          | -                                   | -                                            | 3608               |         |
| 0010       | 137+31F   | -  | 154+85F   | Exit 1 SB ON Ramp        | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| 0010       | 147+48E   | -  | 155+69E   | Exit 1 NB OFF Ramp       | -                                         | -            | 20               | 64                    | 100                            | -                                   | -                                            | 120                |         |
| 0010       | 152+30EE  | -  | 153+14EE  | Exit 1 NB OFF Ramp       | -                                         | -            | 20               | 64                    | 100                            | -                                   | -                                            | 120                |         |
| 0010       | 141+67G   | -  | 154+36G   | Exit 1 SB OFF Ramp       | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| 0010       | 156+21E   | -  | 159+32E   | Exit 1 NB ON Ramp        | -                                         | -            | 20               | 64                    | 100                            | -                                   | -                                            | 120                |         |
| 0010       | 159+34EEE | -  | 160+27EEE | Exit 1 NB ON Ramp        | -                                         | -            | 20               | 64                    | 100                            | -                                   | -                                            | 120                |         |
| 0010       | 189+39D   | -  | 213+26D   | Exit 2 SB ON Ramp        | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| 0010       | 192+43C   | -  | 208+15C   | Exit 2 NB OFF Ramp       | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| 0010       | 280+35K   | -  | 290+17K   | Exit 3 SB OFF Ramp       | -                                         | -            | 20               | 64                    | 100                            | -                                   | -                                            | 120                |         |
| 0010       | 279+89J   | -  | 290+38J   | Exit 3 NB ON Ramp        | -                                         | -            | 20               | 64                    | 134                            | -                                   | -                                            | 161                |         |
| 0010       | 350+32N   | -  | 373+62N   | Exit 5 South SB ON Ramp  | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| 0010       | 357+77M   | -  | 374+94M   | Exit 5 South NB OFF Ramp | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| 0010       | 411+80R   | -  | 430+63R   | Exit 5 North SB OFF Ramp | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| 0010       | 412+80P   | -  | 436+97P   | Exit 5 North NB ON Ramp  | -                                         | -            | 40               | 128                   | 200                            | -                                   | -                                            | 240                |         |
| TOTAL 0010 |           |    |           |                          | 980                                       | 980          | 2,240            | 7,506                 | 5,897                          | 1,077                               | 398                                          | 62,344             |         |

CONCRETE PAVEMENT APPROACH SLAB

| CATEGORY   | STATION | TO | STATION | LOCATION  | 415.0410                              | REMARKS |
|------------|---------|----|---------|-----------|---------------------------------------|---------|
|            |         |    |         |           | CONCRETE<br>PAVEMENT<br>APPROACH SLAB |         |
|            |         |    |         |           | SY                                    |         |
| 0010       | 237+04  | -  | 237+19  | USH 61 NB | 50                                    |         |
| 0010       | 238+56  | -  | 238+71  | USH 61 NB | 50                                    |         |
| 0010       | 236+87A | -  | 237+02A | USH 61 SB | 50                                    |         |
| 0010       | 238+24A | -  | 238+39A | USH 61 SB | 50                                    |         |
| 0010       | 373+70  | -  | 373+85  | USH 61 NB | 44                                    |         |
| 0010       | 375+37  | -  | 375+52  | USH 61 NB | 44                                    |         |
| 0010       | 373+13A | -  | 373+28A | USH 61 SB | 44                                    |         |
| 0010       | 374+80A | -  | 374+95A | USH 61 SB | 44                                    |         |
| 0010       | 411+18  | -  | 411+33  | USH 61 NB | 44                                    |         |
| 0010       | 412+98  | -  | 413+13  | USH 61 NB | 44                                    |         |
| 0010       | 410+54A | -  | 410+69A | USH 61 SB | 44                                    |         |
| 0010       | 412+47A | -  | 412+62A | USH 61 SB | 44                                    |         |
| TOTAL 0010 |         |    |         |           | 552                                   |         |

RUMBLE STRIP SUMMARY

| 465.0510<br>ASPHALTIC RUMBLE<br>STRIPS, SHOULDER<br>DIVIDED ROADWAY |         |    |         |              |         | REMARKS |
|---------------------------------------------------------------------|---------|----|---------|--------------|---------|---------|
| CATEGORY                                                            | STATION | TO | STATION | LOCATION     | LF      |         |
| 0010                                                                | 100+23  | -  | 140+02  | USH 61 NB RT | 3,979   |         |
| 0010                                                                | 100+23  | -  | 112+02  | USH 61 NB LT | 1,179   |         |
| 0010                                                                | 113+55  | -  | 140+31  | USH 61 NB LT | 2,676   |         |
| 0010                                                                | 140+68  | -  | 183+16  | USH 61 NB LT | 4,248   |         |
| 0010                                                                | 148+89  | -  | 160+43  | USH 61 NB RT | 1,154   |         |
| 0010                                                                | 167+47  | -  | 191+04  | USH 61 NB RT | 2,357   |         |
| 0010                                                                | 183+60  | -  | 236+78  | USH 61 NB LT | 5,318   |         |
| 0010                                                                | 200+62  | -  | 236+78  | USH 61 NB RT | 3,616   |         |
| 0010                                                                | 238+99  | -  | 274+84  | USH 61 NB RT | 3,585   |         |
| 0010                                                                | 238+99  | -  | 269+81  | USH 61 NB LT | 3,082   |         |
| 0010                                                                | 270+44  | -  | 274+44  | USH 61 NB LT | 400     |         |
| 0010                                                                | 275+45  | -  | 282+30  | USH 61 NB LT | 685     |         |
| 0010                                                                | 275+50  | -  | 294+06  | USH 61 NB RT | 1,856   |         |
| 0010                                                                | 284+00  | -  | 291+76  | USH 61 NB LT | 776     |         |
| 0010                                                                | 294+75  | -  | 308+37  | USH 61 NB RT | 1,362   |         |
| 0010                                                                | 295+51  | -  | 311+22  | USH 61 NB LT | 1,571   |         |
| 0010                                                                | 312+53  | -  | 323+58  | USH 61 NB LT | 1,105   |         |
| 0010                                                                | 313+80  | -  | 323+48  | USH 61 NB RT | 968     |         |
| 0010                                                                | 324+39  | -  | 339+51  | USH 61 NB RT | 1,512   |         |
| 0010                                                                | 324+47  | -  | 336+98  | USH 61 NB LT | 1,251   |         |
| 0010                                                                | 340+25  | -  | 351+52  | USH 61 NB RT | 1,127   |         |
| 0010                                                                | 340+75  | -  | 354+09  | USH 61 NB LT | 1,334   |         |
| 0010                                                                | 355+60  | -  | 373+45  | USH 61 NB LT | 1,785   |         |
| 0010                                                                | 365+63  | -  | 373+45  | USH 61 NB RT | 782     |         |
| 0010                                                                | 375+77  | -  | 410+93  | USH 61 NB RT | 3,516   |         |
| 0010                                                                | 375+77  | -  | 410+93  | USH 61 NB LT | 3,516   |         |
| 0010                                                                | 413+37  | -  | 423+06  | USH 61 NB RT | 969     |         |
| 0010                                                                | 413+37  | -  | 459+42  | USH 61 NB LT | 4,605   |         |
| 0010                                                                | 430+62  | -  | 470+33  | USH 61 NB RT | 3,971   |         |
| 0010                                                                | 464+88  | -  | 472+66  | USH 61 NB LT | 778     |         |
| 0010                                                                | 474+19  | -  | 481+04  | USH 61 NB LT | 685     |         |
| 0010                                                                | 475+47  | -  | 497+32  | USH 61 NB RT | 2,185   |         |
| 0010                                                                | 481+82  | -  | 497+32  | USH 61 NB LT | 1,550   |         |
| 0010                                                                | 100+66A | -  | 113+37A | USH 61 SB RT | 1,271   |         |
| 0010                                                                | 100+66A | -  | 136+73A | USH 61 SB LT | 3,607   |         |
| 0010                                                                | 113+92A | -  | 140+23A | USH 61 SB RT | 2,631   |         |
| 0010                                                                | 140+63A | -  | 182+71A | USH 61 SB RT | 4,208   |         |
| 0010                                                                | 142+00A | -  | 152+61A | USH 61 SB LT | 1,061   |         |
| 0010                                                                | 154+94A | -  | 192+78A | USH 61 SB LT | 3,784   |         |
| 0010                                                                | 183+32A | -  | 236+59A | USH 61 SB RT | 5,327   |         |
| 0010                                                                | 200+31A | -  | 236+59A | USH 61 SB LT | 3,628   |         |
| 0010                                                                | 238+65A | -  | 269+51A | USH 61 SB RT | 3,086   |         |
| 0010                                                                | 238+65A | -  | 264+74A | USH 61 SB LT | 2,609   |         |
| 0010                                                                | 270+13A | -  | 274+39A | USH 61 SB RT | 426     |         |
| 0010                                                                | 272+87A | -  | 276+66A | USH 61 SB LT | 379     |         |
| 0010                                                                | 279+77A | -  | 282+20A | USH 61 SB LT | 243     |         |
| 0010                                                                | 279+77A | -  | 292+72A | USH 61 SB RT | 1,295   |         |
| 0010                                                                | 291+00A | -  | 292+40A | USH 61 SB LT | 140     |         |
| 0010                                                                | 295+27A | -  | 310+42A | USH 61 SB RT | 1,515   |         |
| 0010                                                                | 296+31A | -  | 310+66A | USH 61 SB LT | 1,435   |         |
| 0010                                                                | 311+66A | -  | 322+78A | USH 61 SB LT | 1,112   |         |
| 0010                                                                | 313+71A | -  | 322+74A | USH 61 SB RT | 903     |         |
| 0010                                                                | 323+52A | -  | 337+61A | USH 61 SB LT | 1,409   |         |
| 0010                                                                | 323+61A | -  | 338+64A | USH 61 SB RT | 1,503   |         |
| 0010                                                                | 339+61A | -  | 353+03A | USH 61 SB RT | 1,342   |         |
| 0010                                                                | 342+14A | -  | 356+32A | USH 61 SB LT | 1,418   |         |
| 0010                                                                | 357+59A | -  | 372+86A | USH 61 SB RT | 1,527   |         |
| 0010                                                                | 363+77A | -  | 372+86A | USH 61 SB LT | 909     |         |
| 0010                                                                | 375+18A | -  | 410+28A | USH 61 SB RT | 3,510   |         |
| 0010                                                                | 375+18A | -  | 410+28A | USH 61 SB LT | 3,510   |         |
| SUBTOTAL                                                            |         |    |         |              | 123,271 |         |

RUMBLE STRIP SUMMARY CONTINUED

| 465.0510<br>ASPHALTIC RUMBLE<br>STRIPS, SHOULDER<br>DIVIDED ROADWAY |         |    |         |              |         | REMARKS |
|---------------------------------------------------------------------|---------|----|---------|--------------|---------|---------|
| CATEGORY                                                            | STATION | TO | STATION | LOCATION     | LF      |         |
| 0010                                                                | 412+85A | -  | 458+80A | USH 61 SB RT | 4,595   |         |
| 0010                                                                | 412+85A | -  | 421+31A | USH 61 SB LT | 846     |         |
| 0010                                                                | 431+64A | -  | 462+53A | USH 61 SB LT | 3,089   |         |
| 0010                                                                | 459+75A | -  | 463+16A | USH 61 SB RT | 341     |         |
| 0010                                                                | 464+22A | -  | 471+99A | USH 61 SB RT | 777     |         |
| 0010                                                                | 466+53A | -  | 480+48A | USH 61 SB LT | 1,395   |         |
| 0010                                                                | 475+93A | -  | 480+48A | USH 61 SB RT | 455     |         |
| 0010                                                                | 481+34A | -  | 496+65A | USH 61 SB RT | 1,531   |         |
| 0010                                                                | 481+34A | -  | 496+65A | USH 61 SB LT | 1,531   |         |
| SUBTOTAL                                                            |         |    |         |              | 14,560  |         |
| TOTAL 0010                                                          |         |    |         |              | 137,831 |         |
| 0020                                                                | 13+91V  | -  | 16+30V  | STH 11 EB RT | 239     |         |
| 0020                                                                | 20+00V  | -  | 22+59V  | STH 11 EB RT | 259     |         |
| 0020                                                                | 26+89V  | -  | 38+01V  | STH 11 EB RT | 1,112   |         |
| 0020                                                                | 42+08V  | -  | 55+15V  | STH 11 EB RT | 1,307   |         |
| 0020                                                                | 51+57V  | -  | 55+15V  | STH 11 EB LT | 358     |         |
| 0020                                                                | 11+69W  | -  | 16+30W  | STH 11 WB LT | 461     |         |
| 0020                                                                | 19+85W  | -  | 22+71W  | STH 11 WB LT | 286     |         |
| 0020                                                                | 27+62W  | -  | 37+46W  | STH 11 WB LT | 984     |         |
| 0020                                                                | 41+47W  | -  | 51+54W  | STH 11 WB LT | 1,007   |         |
| TOTAL 0020                                                          |         |    |         |              | 6,013   |         |
| TOTAL                                                               |         |    |         |              | 143,844 |         |

ASPHALTIC FLUMES

| *<br>204.0110<br>REMOVING<br>ASPHALTIC<br>SURFACE |         |    |         |              |     | 465.0315<br>ASPHALTIC<br>FLUMES | REMARKS |
|---------------------------------------------------|---------|----|---------|--------------|-----|---------------------------------|---------|
| CATEGORY                                          | STATION | TO | STATION | LOCATION     | SY  | SY                              |         |
| 0040                                              | 112+46X | -  | 120+24X | REST AREA LT | 338 | 338                             |         |
| 0040                                              | 127+00X | -  | 129+69X | REST AREA LT | 115 | 115                             |         |
| TOTAL 0040                                        |         |    |         |              | 453 | 453                             |         |

CONCRETE BARRIER TEMPORARY

| 603.8000<br>CONCRETE<br>BARRIER<br>TEMPORARY<br>PRECAST<br>DELIVERED |         |    |         |           |     | 603.8125<br>CONCRETE<br>BARRIER<br>TEMPORARY<br>PRECAST<br>INSTALLED | REMARKS  |
|----------------------------------------------------------------------|---------|----|---------|-----------|-----|----------------------------------------------------------------------|----------|
| CATEGORY                                                             | STATION | TO | STATION | LOCATION  | LF  | LF                                                                   |          |
| 0010                                                                 | 48+58V  | -  | 57+13V  | STH 11 EB | 863 | 863                                                                  | STAGE 3A |
| 0010                                                                 | 48+97V  | -  | 57+17V  | STH 11 EB | -   | 825                                                                  | STAGE 3B |
| TOTAL 0010                                                           |         |    |         |           | 863 | 1,688                                                                |          |

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

E

3

LANDSCAPING

| CATEGORY      | STATION  | TO | STATION  | LOCATION                          | 625.0500<br>SALVAGED<br>TOPSOIL<br>SY | 628.2002<br>EROSION MAT<br>CLASS I TYPE A<br>SY | 629.0210<br>FERTILIZER TYPE<br>B<br>CWT | 630.0130<br>SEEDING<br>MIXTURE NO. 30<br>LB | 630.0200<br>SEEDING<br>TEMPORARY<br>LB | 630.0500<br>SEED WATER<br>MGAL | REMARKS |
|---------------|----------|----|----------|-----------------------------------|---------------------------------------|-------------------------------------------------|-----------------------------------------|---------------------------------------------|----------------------------------------|--------------------------------|---------|
| 0010          | 102+19   | -  | 107+29   | US 61 NB                          | 456                                   | 456                                             | 0.5                                     | 35.6                                        | 21.4                                   | 53.3                           |         |
| 0010          | 102+45 A | -  | 106+00 A | US 61 SB                          | 197                                   | 197                                             | 0.3                                     | 21.0                                        | 12.6                                   | 31.5                           |         |
| 0010          | 106+67 A | -  | 107+45 A | US 61 SB                          | 39                                    | 39                                              | 0.1                                     | 4.9                                         | 3.0                                    | 7.3                            |         |
| 0010          | 109+18 A | -  | 109+79 A | US 61 SB                          | 71                                    | 71                                              | 0.1                                     | 6.3                                         | 3.8                                    | 9.5                            |         |
| 0010          | 147+78 E | -  | 148+89 E | US 61 NB RAMP STH 11 EXIT         | 47                                    | 47                                              | 0.2                                     | 7.6                                         | 4.6                                    | 11.4                           |         |
| 0010          | 149+50 E | -  | 152+01 E | US 61 NB RAMP STH 11 EXIT         | 317                                   | 317                                             | 0.4                                     | 23.3                                        | 14.0                                   | 34.9                           |         |
| 0010          | 210+67   | -  | 211+69   | US 61 NB                          | 263                                   | 263                                             | 0.3                                     | 15.5                                        | 9.3                                    | 23.2                           |         |
| 0010          | 214+79   | -  | 217+00   | US 61 NB                          | 72                                    | 72                                              | 0.2                                     | 12.9                                        | 7.8                                    | 19.3                           |         |
| 0010          | 217+40   | -  | 220+62   | US 61 NB                          | 554                                   | 554                                             | 0.5                                     | 34.1                                        | 20.5                                   | 51.0                           |         |
| 0010          | 223+00   | -  | 237+01   | US 61 NB                          | 1,039                                 | 1,039                                           | 1.3                                     | 86.5                                        | 51.9                                   | 129.6                          |         |
| 0010          | 235+91 A | -  | 236+89 A | US 61 SB                          | 279                                   | 279                                             | 0.3                                     | 19.4                                        | 11.6                                   | 29.0                           |         |
| 0010          | 238+66   | -  | 246+70   | US 61 NB                          | 1,104                                 | 1,104                                           | 1.1                                     | 72.2                                        | 43.3                                   | 108.0                          |         |
| 0010          | 238+35 A | -  | 238+59 A | US 61 SB RT                       | 8                                     | 8                                               | 0.1                                     | 1.4                                         | 0.9                                    | 2.1                            |         |
| 0010          | 239+67 A | -  | 240+25 A | US 61 SB RT                       | 10                                    | 10                                              | 0.1                                     | 2.7                                         | 1.7                                    | 4.1                            |         |
| 0010          | 241+17 A | -  | 242+52 A | US 61 SB RT                       | 85                                    | 85                                              | 0.2                                     | 7.6                                         | 4.6                                    | 11.3                           |         |
| 0010          | 239+52 A | -  | 242+04 A | US 61 SB LT                       | 234                                   | 234                                             | 0.3                                     | 20.3                                        | 12.2                                   | 30.4                           |         |
| 0010          | 256+96   | -  | 258+25   | US 61 NB                          | 57                                    | 57                                              | 0.2                                     | 7.5                                         | 4.5                                    | 11.2                           |         |
| 0010          | 259+92   | -  | 267+68   | US 61 NB                          | 776                                   | 776                                             | 0.9                                     | 57.8                                        | 34.7                                   | 86.5                           |         |
| 0010          | 275+65 A | -  | 276+76 A | US 61 SB                          | 1,263                                 | 1,263                                           | 0.2                                     | 12.5                                        | 7.5                                    | 18.8                           |         |
| 0010          | 279+58   | -  | 281+25   | US 61 NB                          | 135                                   | 135                                             | 0.2                                     | 10.9                                        | 6.6                                    | 16.4                           |         |
| 0010          | 281+60   | -  | 289+90   | US 61 NB                          | 850                                   | 850                                             | 0.9                                     | 60.4                                        | 36.2                                   | 90.4                           |         |
| 0010          | 279+23 A | -  | 281+35 A | US 61 SB                          | 189                                   | 189                                             | 0.3                                     | 15.2                                        | 9.1                                    | 22.8                           |         |
| 0010          | 279+63 A | -  | 283+52 A | US 61 SB                          | 392                                   | 392                                             | 0.4                                     | 28.1                                        | 16.9                                   | 42.0                           |         |
| 0010          | 283+71 A | -  | 292+50 A | US 61 SB                          | 675                                   | 675                                             | 0.9                                     | 59.4                                        | 35.7                                   | 89.0                           |         |
| 0010          | 292+63 A | -  | 292+71 A | US 61 SB                          | 9                                     | 9                                               | 0.1                                     | 1.6                                         | 1.0                                    | 2.4                            |         |
| 0010          | 354+73 A | -  | 358+65 A | US 61 SB                          | 146                                   | 146                                             | 0.5                                     | 30.0                                        | 18.0                                   | 45.0                           |         |
| 0010          | 358+68 A | -  | 359+81 A | US 61 SB                          | 40                                    | 40                                              | 0.1                                     | 2.0                                         | 1.2                                    | 3.0                            |         |
| 0010          | 264+30 J | -  | 268+72 J | US 61 NB RAMP EAGLE POINT ENT LT  | 119                                   | 119                                             | 0.4                                     | 22.1                                        | 13.3                                   | 33.1                           |         |
| 0010          | 273+41 J | -  | 278+39 J | US 61 NB RAMP EAGLE POINT ENT LT  | 141                                   | 141                                             | 0.3                                     | 19.2                                        | 11.5                                   | 28.7                           |         |
| 0010          | 264+30 J | -  | 270+56 J | US 61 NB RAMP EAGLE POINT ENT RT  | 221                                   | 221                                             | 0.5                                     | 28.6                                        | 17.2                                   | 42.9                           |         |
| 0010          | 274+04 J | -  | 276+81 J | US 61 NB RAMP EAGLE POINT ENT RT  | 226                                   | 226                                             | 0.3                                     | 17.4                                        | 10.5                                   | 26.1                           |         |
| 0010          | 278+79 J | -  | 279+95 J | US 61 NB RAMP EAGLE POINT ENT RT  | 36                                    | 36                                              | 0.1                                     | 6.8                                         | 4.1                                    | 10.1                           |         |
| 0010          | 269+10 K | -  | 274+84 K | US 61 SB RAMP EAGLE POINT EXIT LT | 208                                   | 208                                             | 0.4                                     | 24.1                                        | 14.5                                   | 36.0                           |         |
| 0010          | 275+97 K | -  | 280+35 K | US 61 SB RAMP EAGLE POINT EXIT LT | 87                                    | 87                                              | 0.3                                     | 18.6                                        | 11.2                                   | 27.8                           |         |
| 0010          | 273+15 K | -  | 280+35 K | US 61 SB RAMP EAGLE POINT EXIT RT | 264                                   | 264                                             | 0.5                                     | 30.9                                        | 18.6                                   | 46.2                           |         |
| 0010          | 12+98 B  | -  | 13+32 B  | BADGER RD                         | 17                                    | 17                                              | 0.1                                     | 3.2                                         | 1.9                                    | 4.7                            |         |
| 0010          | 209+75 D | -  | 210+28 D | US 61 SB RAMP BADGER RD EXIT      | 37                                    | 37                                              | 0.1                                     | 3.6                                         | 2.2                                    | 5.4                            |         |
| 0010          |          |    |          | UNDISTRIBUTED                     | 160                                   | 160                                             | 0.3                                     | 12.5                                        | 7.5                                    | -                              |         |
| TOTAL 0010    |          |    |          |                                   | 10,823                                | 10,823                                          | 14.0                                    | 843.7                                       | 507.1                                  | 1,244.4                        |         |
| 0020          | 48+82 V  | -  | 49+11 V  | STH 11 EB EAST CROSSOVER          | 14                                    | 14                                              | 0.1                                     | 1.4                                         | 0.8                                    | 2.0                            |         |
| 0020          | 19+92 W  | -  | 21+07 W  | STH 11 WB WEST CROSSOVER          | 119                                   | 119                                             | 0.1                                     | 6.7                                         | 4.0                                    | 10.0                           |         |
| 0020          |          |    |          | UNDISTRIBUTED                     | 2                                     | 2                                               | 0.1                                     | 0.2                                         | 0.1                                    | -                              |         |
| TOTAL 0020    |          |    |          |                                   | 135                                   | 135                                             | 0.3                                     | 8.3                                         | 4.9                                    | 12.0                           |         |
| 0040          | 112+40 X | -  | 129+83 X | REST AREA 106 PIPE INLET          | 70                                    | 70                                              | 0.1                                     | 5.4                                         | 3.3                                    | 8.1                            |         |
| 0040          | 129+51 X | -  | 129+83 X | REST AREA 106 PIPE OUTLET         | 75                                    | 75                                              | 0.1                                     | 6.1                                         | 3.7                                    | 9.2                            |         |
| 0040          | 127+49 X | -  | 128+89 X | REST AREA 106                     | 196                                   | 196                                             | 0.2                                     | 13.4                                        | 8.1                                    | 20.1                           |         |
| 0040          | 130+12 X | -  | 130+47 X | REST AREA 106                     | 32                                    | 32                                              | 0.1                                     | 3.1                                         | 1.9                                    | 4.6                            |         |
| 0040          | 116+91 X | -  | 120+13 X | REST AREA 106 TRUCK PARKING       | 47                                    | 47                                              | 0.2                                     | 9.1                                         | 5.5                                    | 13.6                           |         |
| 0040          | 127+03 X | -  | 128+56 X | REST AREA 106 TRUCK PARKING       | 65                                    | 65                                              | 0.1                                     | 6.4                                         | 3.9                                    | 9.5                            |         |
| 0040          | 123+68 X |    | 123+91 X | REST AREA CURB RAMPS RT           | 19                                    | 19                                              | 0.1                                     | 0.9                                         | 0.6                                    | 1.3                            |         |
| 0040          | 124+06 X |    | 124+30 X | REST AREA CURB RAMPS LT           | 10                                    | 10                                              | 0.1                                     | 0.5                                         | 0.3                                    | 0.7                            |         |
| 0040          | 124+25 X |    | 124+42 X | REST AREA CURB RAMPS RT           | 9                                     | 9                                               | 0.1                                     | 0.4                                         | 0.3                                    | 0.6                            |         |
| 0040          | 124+70 X |    | 124+85 X | REST AREA CURB RAMPS RT           | 7                                     | 7                                               | 0.1                                     | 0.3                                         | 0.2                                    | 0.5                            |         |
| 0040          | 124+81 X |    | 125+05 X | REST AREA CURB RAMPS LT           | 10                                    | 10                                              | 0.1                                     | 0.5                                         | 0.3                                    | 0.7                            |         |
| 0040          | 125+26 X |    | 125+53 X | REST AREA CURB RAMPS RT           | 21                                    | 21                                              | 0.1                                     | 1.0                                         | 0.6                                    | 1.5                            |         |
| 0040          |          |    |          | UNDISTRIBUTED                     | 9                                     | 9                                               | 1.0                                     | 1.0                                         | 1.0                                    | -                              |         |
| TOTAL 0040    |          |    |          |                                   | 570                                   | 570                                             | 2.4                                     | 48.1                                        | 29.7                                   | 70.4                           |         |
| PROJECT TOTAL |          |    |          |                                   | 11528                                 | 11528                                           | 16.7                                    | 900.1                                       | 541.7                                  | 1326.8                         |         |

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

155

E

EROSION CONTROL

| CATEGORY | STATION  | TO | STATION  | LOCATION                         | 628.1504         | 628.1520                        | 628.7005                           | 628.7010                           | 628.7015                           | 628.7504                        | 628.7555                       | 628.7570          | REMARKS                         |
|----------|----------|----|----------|----------------------------------|------------------|---------------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------|--------------------------------|-------------------|---------------------------------|
|          |          |    |          |                                  | SILT FENCE<br>LF | SILT FENCE<br>MAINTENANCE<br>LF | INLET PROTECTION<br>TYPE A<br>EACH | INLET PROTECTION<br>TYPE B<br>EACH | INLET PROTECTION<br>TYPE C<br>EACH | TEMPORARY DITCH<br>CHECKS<br>LF | CULVERT PIPE<br>CHECKS<br>EACH | ROCK BAGS<br>EACH |                                 |
| 0010     | 102+16   | -  | 107+36   | US 61 NB                         | 537              | 537                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 102+42   | -  | 102+42   | US 61 NB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 105+10   | -  | 105+10   | US 61 NB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 105+16   | -  | 105+17   | US 61 NB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 108+10   | -  | 108+10   | US 61 NB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 111+10   | -  | 111+10   | US 61 NB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 102+39 A | -  | 107+50 A | US 61 SB                         | 524              | 524                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 102+77 A | -  | 102+77 A | US 61 SB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 105+46 A | -  | 105+46 A | US 61 SB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 105+53 A | -  | 105+53 A | US 61 SB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 108+45 A | -  | 108+45 A | US 61 SB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 108+89 A | -  | 110+05 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 111+47 A | -  | 111+47 A | US 61 SB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 149+07 E | -  | 149+07 E | USH 61 NB RAMP TO STH 11         | -                | -                               | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 149+40 E | -  | 152+07 E | USH 61 NB RAMP TO STH 11         | 294              | 294                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 210+94   | -  | 210+94   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | -                               | -                              | 13                | TEMPORARY STONE BAG DITCH CHECK |
| 0010     | 211+11   | -  | 211+11   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | -                               | -                              | 11                | TEMPORARY STONE BAG DITCH CHECK |
| 0010     | 211+28   | -  | 211+28   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | -                               | -                              | 9                 | TEMPORARY STONE BAG DITCH CHECK |
| 0010     | 211+47   | -  | 211+47   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | -                               | -                              | 9                 | TEMPORARY STONE BAG DITCH CHECK |
| 0010     | 211+75   | -  | 211+84   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | -                               | -                              | 10                | TEMPORARY STONE BAG DITCH CHECK |
| 0010     | 215+22   | -  | 215+22   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 215+56   | -  | 215+56   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 216+46   | -  | 216+46   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 217+28   | -  | 217+28   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 217+72   | -  | 217+72   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 217+78   | -  | 220+68   | US 61 NB                         | 321              | 321                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 224+00   | -  | 224+00   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 224+63   | -  | 224+63   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 224+97   | -  | 237+17   | US 61 NB                         | 1252             | 1252                            | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 225+08   | -  | 225+08   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 235+88 A | -  | 236+98 A | US 61 SB                         | 201              | 201                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 236+55 A | -  | 236+56 A | US 61 SB BARRIER WALL            | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 238+61   | -  | 247+25   | US 61 NB                         | 921              | 921                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 238+31 A | -  | 238+61 A | US 61 SB RT                      | 42               | 42                              | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 238+50 A | -  | 238+50 A | US 61 SB MEDIAN                  | -                | -                               | 1                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 239+34 A | -  | 239+34 A | US 61 SB RT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 239+69 A | -  | 239+69 A | US 61 SB RT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 241+08 A | -  | 241+08 A | US 61 SB RT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 239+46 A | -  | 239+46 A | US 61 SB LT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 240+04 A | -  | 240+04 A | US 61 SB LT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 240+37 A | -  | 240+37 A | US 61 SB LT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 240+97 A | -  | 240+97 A | US 61 SB LT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 258+48   | -  | 264+73   | US 61 NB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 259+90   | -  | 267+72   | US 61 NB                         | 793              | 793                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 275+59 A | -  | 276+80 A | US 61 SB                         | 192              | 192                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 276+44 A | -  | 276+44 A | US 61 SB RT SHOULDER             | -                | -                               | -                                  | 1                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 279+53   | -  | 289+93   | US 61 NB                         | 1075             | 1075                            | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 279+52 A | -  | 279+52 A | US 61 SB RT                      | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 274+14 A | -  | 279+72 A | US 61 SB LT                      | 71               | 71                              | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 283+41 A | -  | 283+41 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 285+06 A | -  | 285+06 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 287+09 A | -  | 287+09 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 288+48 A | -  | 288+48 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 289+89 A | -  | 289+89 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 291+88 A | -  | 291+88 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | 15                              | -                              | -                 |                                 |
| 0010     | 354+69 A | -  | 359+83 A | US 61 SB                         | 535              | 535                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 354+67 A | -  | 354+67 A | US 61 SB                         | -                | -                               | -                                  | -                                  | -                                  | -                               | 3                              | -                 | DIAMETER 24 INCH                |
| 0010     | 359+31 A | -  | 359+31 A | US 61 SB MEDIAN                  | -                | -                               | 1                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| 0010     | 264+07 J | -  | 264+07 J | US 61 NB RAMP EAGLE POINT ENT LT | -                | -                               | -                                  | -                                  | -                                  | -                               | 2                              | -                 | DIAMETER 15 INCH                |
| 0010     | 264+26 J | -  | 268+11 J | US 61 NB RAMP EAGLE POINT ENT LT | 392              | 392                             | -                                  | -                                  | -                                  | -                               | -                              | -                 |                                 |
| SUBTOTAL |          |    |          |                                  | 7150             | 7150                            | 2                                  | 12                                 | 0                                  | 345                             | 5                              | 52                |                                 |

3

3

EROSION CONTROL CONTINUED

| CATEGORY      | STATION   | TO | STATION   | LOCATION                          | 628.1504<br>SILT FENCE<br>LF | 628.1520<br>SILT FENCE<br>MAINTENANCE<br>LF | 628.7005<br>INLET PROTECTION<br>TYPE A<br>EACH | 628.7010<br>INLET PROTECTION<br>TYPE B<br>EACH | 628.7015<br>INLET PROTECTION<br>TYPE C<br>EACH | 628.7504<br>TEMPORARY DITCH<br>CHECKS<br>LF | 628.7555<br>CULVERT PIPE<br>CHECKS<br>EACH | 628.7570<br>ROCK BAGS<br>EACH | REMARKS                         |
|---------------|-----------|----|-----------|-----------------------------------|------------------------------|---------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|---------------------------------------------|--------------------------------------------|-------------------------------|---------------------------------|
| 0010          | 274+35 J  | -  | 274+35 J  | US 61 NB RAMP EAGLE POINT ENT LT  | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 274+36 J  | -  | 278+44 J  | US 61 NB RAMP EAGLE POINT ENT LT  | 417                          | 417                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0010          | 275+71 J  | -  | 275+71 J  | US 61 NB RAMP EAGLE POINT ENT LT  | -                            | -                                           | -                                              | -                                              | -                                              | -                                           | 2                                          | -                             | DIAMETER 18 INCH                |
| 0010          | 280+26 J  | -  | 280+26 J  | US 61 NB RAMP EAGLE POINT ENT LT  | -                            | -                                           | -                                              | -                                              | -                                              | -                                           | 3                                          | -                             | DIAMETER 24 INCH                |
| 0010          | 265+51 J  | -  | 265+51 J  | US 61 NB RAMP EAGLE POINT ENT RT  | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 266+82 J  | -  | 270+62 J  | US 61 NB RAMP EAGLE POINT ENT RT  | 387                          | 387                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0010          | 266+88 J  | -  | 266+88 J  | US 61 NB RAMP EAGLE POINT ENT RT  | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 273+95 J  | -  | 276+86 J  | US 61 NB RAMP EAGLE POINT ENT RT  | 308                          | 308                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0010          | 274+53 J  | -  | 274+53 J  | US 61 NB RAMP EAGLE POINT ENT RT  | -                            | -                                           | -                                              | -                                              | -                                              | -                                           | 3                                          | -                             | DIAMETER 24 INCH                |
| 0010          | 278+75 J  | -  | 278+75 J  | US 61 NB RAMP EAGLE POINT ENT RT  | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 279+04 J  | -  | 279+04 J  | US 61 NB RAMP EAGLE POINT ENT RT  | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 279+44 J  | -  | 279+44 J  | US 61 NB RAMP EAGLE POINT ENT RT  | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 269+13 K  | -  | 269+13 K  | US 61 SB RAMP EAGLE POINT EXIT LT | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 269+25 K  | -  | 274+88 K  | US 61 SB RAMP EAGLE POINT EXIT LT | 566                          | 566                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0010          | 275+86 K  | -  | 275+86 K  | US 61 SB RAMP EAGLE POINT EXIT LT | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 273+29 K  | -  | 279+78 K  | US 61 SB RAMP EAGLE POINT EXIT RT | 663                          | 663                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0010          | 13+48 B   | -  | 13+48 B   | BADGER RD                         | -                            | -                                           | -                                              | -                                              | -                                              | 15                                          | -                                          | -                             |                                 |
| 0010          | 209+72 D  | -  | 210+31 D  | US 61 SB RAMP BADGER RD EXIT      | 69                           | 69                                          | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0010          |           |    |           | UNDISTRIBUTED                     | 1,434                        | 1,434                                       | -                                              | -                                              | -                                              | -                                           | -                                          | 357                           | ROCK BAGS FOR SILT FENCE RELIEF |
| SUBTOTAL      |           |    |           |                                   | 3,844                        | 3,844                                       | 0                                              | 0                                              | 0                                              | 135                                         | 8                                          | 357                           |                                 |
| TOTAL 0010    |           |    |           |                                   | 10,994                       | 10,994                                      | 2                                              | 12                                             | 0                                              | 480                                         | 13                                         | 409                           |                                 |
| 0020          | 24+16 V   | -  | 24+16 V   | STH 11 EB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 28+70 V   | -  | 28+70 V   | STH 11 EB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 33+09 V   | -  | 33+10 V   | STH 11 EB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 39+10 V   | -  | 39+10 V   | STH 11 EB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 44+09 V   | -  | 44+09 V   | STH 11 EB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 49+63 V   | -  | 49+63 V   | STH 11 EB CROSS-OVER              | -                            | -                                           | -                                              | 1                                              | -                                              | -                                           | -                                          | -                             | TEMPORARY STAGE                 |
| 0020          | 49+63 V   | -  | 49+63 V   | STH 11 EB CROSS-OVER              | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | PERMENANT STAGE                 |
| 0020          | 24+15 W   | -  | 24+15 W   | STH 11 WB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 28+69 W   | -  | 28+69 W   | STH 11 WB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 33+10 W   | -  | 33+11 W   | STH 11 WB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 39+08 W   | -  | 39+09 W   | STH 11 WB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 44+08 W   | -  | 44+08 W   | STH 11 WB CURB                    | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | TEMPORARY & PERMANENET STAGES   |
| 0020          | 49+63 W   | -  | 49+63 W   | STH 11 WB CROSS-OVER              | -                            | -                                           | -                                              | 1                                              | -                                              | -                                           | -                                          | -                             | TEMPORARY STAGE                 |
| 0020          | 49+63 W   | -  | 49+63 W   | STH 11 WB CROSS-OVER              | -                            | -                                           | -                                              | -                                              | 1                                              | -                                           | -                                          | -                             | PERMENANT STAGE                 |
| TOTAL 0020    |           |    |           |                                   | 0                            | 0                                           | 0                                              | 2                                              | 12                                             | 0                                           | 0                                          | 0                             |                                 |
| 0040          | 112+47 X  | -  | 112+47 X  | REST AREA 106 PIPE INLET          | -                            | -                                           | 1                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0040          | 112+33 X  | -  | 129+89 X  | REST AREA 106 PIPE                | 260                          | 260                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0040          | 127+47 X  | -  | 128+93 X  | REST AREA 106                     | 182                          | 182                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0040          | 130+08 X  | -  | 130+51 X  | REST AREA 106                     | 67                           | 67                                          | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0040          | 116+88 XX | -  | 120+01 XX | REST AREA 106 TRUCK PARKING       | 264                          | 264                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0040          | 124+62 XX | -  | 125+90 XX | REST AREA 106 TRUCK PARKING       | 113                          | 113                                         | -                                              | -                                              | -                                              | -                                           | -                                          | -                             |                                 |
| 0040          |           |    |           | UNDISTRIBUTED                     | 133                          | 133                                         | -                                              | -                                              | -                                              | -                                           | -                                          | 68                            | ROCK BAGS FOR SILT FENCE RELIEF |
| TOTAL 0040    |           |    |           |                                   | 1,019                        | 1,019                                       | 1                                              | 0                                              | 0                                              | 0                                           | 0                                          | 68                            |                                 |
| PROJECT TOTAL |           |    |           |                                   | 12013                        | 12013                                       | 3                                              | 14                                             | 12                                             | 480                                         | 13                                         | 477                           |                                 |



## TRAFFIC CONTROL SUMMARY

| 643.0300                             |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 | 643.0370.S            |  |  |  | 643.0420                        |  |  |  | 643.0500                             |  |  |  | 643.0600                      |  |  |  | 643.0705                      |  |  |  | 643.0715                              |  |  |  | 643.0800                              |  |  |  | 643.0900     |  |  |  | 643.0910              |  |  |  | 643.0920                               |  |  |  | 643.1050                                |  |  |  |      |  |  |  |                            |  |  |  |
|--------------------------------------|---------|----|---------|--------------------------------|---------|-----------|--------|-------|--------|-----|-------------|-------|------|------|--------|-------|--------|-------|--------|-----|--------|-------|------|------|-------|----------------------|---------------------------------|-----------------------|--|--|--|---------------------------------|--|--|--|--------------------------------------|--|--|--|-------------------------------|--|--|--|-------------------------------|--|--|--|---------------------------------------|--|--|--|---------------------------------------|--|--|--|--------------|--|--|--|-----------------------|--|--|--|----------------------------------------|--|--|--|-----------------------------------------|--|--|--|------|--|--|--|----------------------------|--|--|--|
|                                      |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 | TRAFFIC CONTROL DRUMS |  |  |  | DIGITAL SPEED REDUCTIO N SYSTEM |  |  |  | TRAFFIC CONTROL BARRICAD ES TYPE III |  |  |  | FLEXIBLE TUBULAR MARKER POSTS |  |  |  | FLEXIBLE TUBULAR MARKER BASES |  |  |  | TRAFFIC CONTROL WARNING LIGHTS TYPE A |  |  |  | TRAFFIC CONTROL WARNING LIGHTS TYPE C |  |  |  | ARROW BOARDS |  |  |  | TRAFFIC CONTROL SIGNS |  |  |  | TRAFFIC CONTROL COVERIN G SIGNS TYPE I |  |  |  | TRAFFIC CONTROL COVERIN G SIGNS TYPE II |  |  |  | PCMS |  |  |  | TRAFFIC CONTROL SIGNS PCMS |  |  |  |
| CATEGOR Y                            | STATION | TO | STATION | LOCATION                       | STAGE   | DURATIO N | DRUMS  | DAY   | SYSTEM | DAY | BARRICADE S | DAY   | EACH | EACH | TYPE A | DAY   | TYPE C | DAY   | BOARDS | DAY | SIGNS  | DAY   | EACH | EACH | SIGNS | DAY                  | REMARKS                         |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| STG 1                                |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         | US 61                          | PREWARN | 7         | 10     | 70    |        |     | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | -    | 2     | 14                   |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 98+46   | -  | 155+00  | US 61 NB                       | 1       | 41        | 100    | 4100  | -      | -   | 5           | 205   | -    | -    | 10     | 410   | 40     | 1640  | 1      | 41  | 13     | 533   | -    | 1    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 98+82A  | -  | 155+00A | US 61 SB                       | 1       | 41        | 168    | 6888  | -      | -   | 6           | 246   | -    | -    | 12     | 492   | 75     | 3075  | 1      | 41  | 15     | 615   | -    | 1    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| REST AREA CLOSED SIGNING             |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         |                                | 2-5     | 90        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 3      | 270   | -    | 5    | -     | -                    | ENTIRE PROJECT AREA             |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| DETOUR STH 11/USH 61 SB OFF RAMP     |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 141+44G | -  | 160+93G | US 61 SB RAMP STH 11 EXIT      | 2-4     | 7         | 5      | 35    | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | 1    | 7     | PREWARN RAMP CLOSURE |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 141+44G | -  | 160+93G | US 61 SB RAMP STH 11 EXIT      | 2-4     | 71        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 9      | 639   | 1    | 4    | -     | -                    | DETOUR                          |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| DETOUR STH 11/USH 61 SB ON RAMP      |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 130+70F | -  | 155+04F | US 61 SB RAMP STH 11 ENT       | 2-3B    | 7         | 5      | 35    | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | 1    | 7     | PREWARN RAMP CLOSURE |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 130+70F | -  | 155+04F | US 61 SB RAMP STH 11 ENT       | 2-3B    | 36        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 67     | 2412  | -    | 2    | -     | -                    | DETOUR                          |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| STG 2                                |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         | STH 11                         | PREWARN | 7         | 10     | 70    | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | -    | 2     | 14                   |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 9+05V   | -  | 57+21V  | STH 11 EB                      | 2       | 19        | 77     |       | -      | -   | 10          | -     | -    | -    | 20     | 380   | 18     | 342   | -      | -   | 18     | 342   | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 8+73W   | -  | 51+54W  | STH 11 WB                      | 2       | 19        | 123    | 2337  | -      | -   | 3           | -     | -    | -    | 6      | 114   | 11     | 209   | -      | -   | 6      | 114   | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| STG 3                                |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         |                                | 3A      | 9         | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 7      | 63    | -    | -    | -     | -                    | WIDTH RESTRICTIONS              |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 9+05V   | -  | 57+21V  | STH 11 EB                      | 3A      | 9         | 50     | 450   | -      | -   | 8           | 72    | -    | -    | 16     | 144   | 9      | 81    | -      | -   | 16     | 144   | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 9+05V   | -  | 57+21V  | STH 11 EB                      | 3A      | 9         | 149    | 1,341 | -      | -   | 4           | 36    | -    | -    | 2      | 18    | 26     | 234   | -      | -   | 22     | 198   | -    | -    | -     | -                    | ONE LANE ROAD                   |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 8+73W   | -  | 51+54W  | STH 11 WB                      | 3A      | 9         | 82     | 738   | -      | -   | 2           | 18    | -    | -    | 4      | 36    | 11     | 99    | -      | -   | 6      | 54    | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         |                                | 3B      | 8         | -      | -     |        | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 13     | 104   | -    | -    | -     | -                    | WIDTH RESTRICTIONS              |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 9+05V   | -  | 57+21V  | STH 11 EB                      | 3B      | 8         | 52     | 416   | -      | -   | 8           | 64    | -    | -    | 16     | 128   | -      | -     | -      | -   | 32     | 256   | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 8+73W   | -  | 51+54W  | STH 11 WB                      | 3B      | 8         | 82     | 656   | -      | -   | 2           | 16    | -    | -    | 4      | 32    | 11     | 88    | -      | -   | 5      | 40    | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 9+05V   | -  | 57+21V  | STH 11 EB                      | 3B      | 8         | 111    | 888   | -      | -   | 3           | 24    | -    | -    | 6      | 48    | 26     | 208   | -      | -   | 3      | 24    | -    | -    | -     | -                    | ONE LANE ROAD                   |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| STG 4                                |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         |                                | 4       | 35        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 20     | 700   | -    | -    | -     | -                    | WIDTH RESTRICTIONS              |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 9+05V   | -  | 57+21V  | STH 11 EB                      | 4       | 35        | 244    | 8540  | -      | -   | 30          | 1,050 | 64   | 64   | 60     | 2,100 | 39     | 1,365 | -      | -   | 49     | 1,715 | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 |         |    |         | UNDISTRIBUTED                  | 4       | 35        | -      | -     | -      | -   | -           | -     | 10   | 10   | -      | -     | -      | -     | -      | -   | -      | -     | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| STG 5                                |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 130+70F | -  | 155+04F | US 61 SB RAMP STH 11 ENT       | 5       | 7         | 5      | 35    | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | 1    | 7     | PREWARN RAMP CLOSURE |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         |                                | 5       | 34        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 67     | 2278  | -    | 2    | -     | -                    | DETOUR STH 11/USH 61 SB ON RAMP |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | PROJECT |    |         |                                | 5       | 34        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 20     | 680   | -    | -    | -     | -                    | WIDTH RESTRICTIONS              |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 8+73W   | -  | 51+54W  | STH 11 WB                      | 5       | 34        | 129    | 4386  | -      | -   | 24          | 816   | 69   | 69   | 48     | 1,632 | 26     | 884   | -      | -   | 39     | 1,326 | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 |         |    |         | UNDISTRIBUTED                  | 5       | 34        | -      | -     | -      | -   | -           | -     | 11   | 11   | -      | -     | -      | -     | -      | -   | -      | -     | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| DETOUR EAGLE POINT/USH 61 SB ON RAMP |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 280+37H | -  | 259+00H | US 61 SB RAMP EAGLE POINT ENT  | 6E      | 7         | 5      | 35    | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | 1    | 7     | PREWARN RAMP CLOSURE |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 280+37H | -  | 259+00H | US 61 SB RAMP EAGLE POINT ENT  | 6E      | 45        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 39     | 1755  | -    | -    | -     | -                    | DETOUR                          |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| DETOUR EAGLE POINT/USH 61 NB ON RAMP |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 260+92J |    | 290+34J | US 61 NB RAMP EAGLE POINT ENT  | 6E      | 7         | 5      | 35    | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | 1    | 7     | PREWARN RAMP CLOSURE |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 260+92J |    | 290+34J | US 61 NB RAMP EAGLE POINT ENT  | 6E      | 45        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 36     | 1620  | -    | -    | -     | -                    | DETOUR                          |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| DETOUR EAGLEPOINT/USH 61 SB OFF RAMP |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 269+18K | -  | 290+11K | US 61 SB RAMP EAGLE POINT EXIT | 6E      | 7         | 5      | 35    | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | 1    | 7     | PREWARN RAMP CLOSURE |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 269+18K | -  | 290+11K | US 61 SB RAMP EAGLE POINT EXIT | 6E      | 45        | -      | -     | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | 47     | 2115  | 2    | 1    | -     | -                    | DETOUR                          |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| STG 6E                               |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 281+18A | -  | 292+13A | US 61 SB                       | 6E      | 45        | 44     | 1980  | -      | -   | -           | -     | -    | -    | -      | -     | -      | -     | -      | -   | -      | -     | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 269+00K |    | 290+00K | US 61 SB RAMP EAGLE POINT EXIT | 6E      | 45        | -      | -     | -      | -   | 4           | -     | -    | -    | 8      |       | -      | -     | -      | -   | 5      | 225   | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| 0010                                 | 264+39J | -  | 265+00J | US 61 NB RAMP EAGLE POINT ENT  | 6E      | 45        | -      | -     | -      | -   | 7           | -     | -    | -    | 14     |       | -      | -     | -      | -   | 5      | 225   | -    | -    | -     | -                    |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
| SUBTOTAL                             |         |    |         |                                |         |           |        |       |        |     |             |       |      |      |        |       |        |       |        |     |        |       |      |      |       |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |
|                                      |         |    |         |                                |         |           | 33,070 |       | 0      |     | 2,547       | 154   | 154  |      | 5,534  |       | 8,225  |       | 82     |     | 18,447 | 3     | 16   |      | 70    |                      |                                 |                       |  |  |  |                                 |  |  |  |                                      |  |  |  |                               |  |  |  |                               |  |  |  |                                       |  |  |  |                                       |  |  |  |              |  |  |  |                       |  |  |  |                                        |  |  |  |                                         |  |  |  |      |  |  |  |                            |  |  |  |

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| TRAFFIC CONTROL SUMMARY CONTINUED                                                    |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
|--------------------------------------------------------------------------------------|---------|---------|---------|------------------------------|-------|--------------|-------|-----------------------------|------------------------------------------|-----------------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------------------|---------------------------------------------------|----------|---------------------------------------|-----------------------------|-----------------------------------------|------------------------------------------|---------|------|-------------------------------------|---|--------|---|---|-----------------------|----|--|
| CATEGOR<br>Y                                                                         | STATION | TO      | STATION | LOCATION                     | STAGE | DURATIO<br>N | DRUMS | 643.0300                    | 643.0370.S                               | 643.0420                                      | 643.0500                               | 643.0600                               | 643.0705                                          | 643.0715                                          | 643.0800 | 643.0900                              | 643.0910                    | 643.0920                                | 643.1050                                 | REMARKS |      |                                     |   |        |   |   |                       |    |  |
|                                                                                      |         |         |         |                              |       |              |       | TRAFFIC<br>CONTROL<br>DRUMS | DIGITAL<br>SPEED<br>REDUCTIO<br>N SYSTEM | TRAFFIC<br>CONTROL<br>BARRICAD<br>ES TYPE III | FLEXIBLE<br>TUBULAR<br>MARKER<br>POSTS | FLEXIBLE<br>TUBULAR<br>MARKER<br>BASES | TRAFFIC<br>CONTROL<br>WARNING<br>LIGHTS<br>TYPE A | TRAFFIC<br>CONTROL<br>WARNING<br>LIGHTS<br>TYPE C | ARROW    | TRAFFIC<br>CONTROL<br>ARROW<br>BOARDS | TRAFFIC<br>CONTROL<br>SIGNS | TRAFFIC<br>COVERIN<br>G SIGNS<br>TYPE I | TRAFFIC<br>COVERIN<br>G SIGNS<br>TYPE II |         | PCMS | TRAFFIC<br>CONTROL<br>SIGNS<br>PCMS |   |        |   |   |                       |    |  |
|                                                                                      |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| STG 6                                                                                |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 | 155+00  |         | 511+02  | US 61 NB                     | 6     | 89           | 303   | 26967                       | 2                                        | 178                                           | 13                                     | 1,157                                  | -                                                 | -                                                 | 26       | 2314                                  | 84                          | 7476                                    | 1                                        | 89      | 29   | 2581                                | - | 4      | - | - |                       |    |  |
| 0010                                                                                 | 155+00A |         | 510+46A | US 61 SB                     | 6     | 89           | 295   | 26255                       | 2                                        | 178                                           | 11                                     | 979                                    | -                                                 | -                                                 | 22       | 1958                                  | 98                          | 8722                                    | 1                                        | 89      | 30   | 2670                                | - | 4      | - | - |                       |    |  |
| DETOUR BADGER RD/USH 61 NB OFF RAMP                                                  |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 |         |         |         | US 61 NB RAMP BADGER RD EXIT |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 |         |         |         | US 61 NB                     |       | 3            | 5     | 15                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 3 | DETOUR NOTICE         |    |  |
| 0010                                                                                 | 192+43C | -       | 208+31C | US 61 NB RAMP BADGER RD EXIT |       | 3            | 37    | 111                         | -                                        | -                                             | 4                                      | 12                                     | -                                                 | -                                                 | 8        | 24                                    | -                           | -                                       | -                                        | -       | 19   | 57                                  | 1 | 1      | - | - | DETOUR                |    |  |
| DETOUR BADGER RD/USH 61 SB ON RAMP                                                   |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 |         |         |         | USH 61 SB RAMP BADGER RD ENT |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 | 9+35D   | -       | 9+35D   | USH 61 SB RAMP BADGER RD ENT |       | 3            | 11    | 33                          | -                                        | -                                             | 4                                      | 12                                     | -                                                 | -                                                 | 8        | 24                                    | -                           | -                                       | -                                        | -       | 23   | 69                                  | - | 3      | - | - | DETOUR                |    |  |
| DETOUR CTH H/USH 61 NB ON RAMP                                                       |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 |         |         |         | US 61 NB RAMP CTH H ENT      |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 | 412+60P | -       | 436+98P | US 61 NB RAMP CTH H ENT      |       | 3            | 21    | 63                          | -                                        | -                                             | 6                                      | 18                                     | -                                                 | -                                                 | 12       | 36                                    | -                           | -                                       | -                                        | -       | 216  | 648                                 | - | 7      | - | - | DETOUR                |    |  |
| DETOUR CTH H/USH 61 SB OFF RAMP                                                      |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 |         | PROJECT |         | US 61 SB RAMP CTH H EXIT     |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 |         |         |         | US 61 SB                     |       | 3            | 5     | 15                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 3 | DETOUR NOTICE         |    |  |
| 0010                                                                                 | 411+64R | -       | 430+64R | US 61 SB RAMP CTH H EXIT     |       | 3            | 62    | 186                         | -                                        | -                                             | 4                                      | 12                                     | -                                                 | -                                                 | 8        | 24                                    | -                           | -                                       | -                                        | -       | 108  | 324                                 | - | 1      | - | - | DETOUR                |    |  |
| DETOUR CTH HHH/USH 61 NB OFF RAMP                                                    |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 |         |         |         | US 61 NB RAMP CTH HHH EXIT   |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 |         |         |         | US 61 NB                     |       | 3            | 5     | 15                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 3 | DETOUR NOTICE         |    |  |
| 0010                                                                                 | 357+78M | -       | 374+94M | US 61 NB RAMP CTH HHH EXIT   |       | 7            | 35    | 245                         | -                                        | -                                             | 4                                      | 28                                     | -                                                 | -                                                 | 8        | 56                                    | -                           | -                                       | -                                        | -       | 46   | 322                                 | - | 2      | - | - | DETOUR                |    |  |
| DETOUR CTH HHH/USH 61 SB ON RAMP                                                     |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 |         |         |         | US 61 SB RAMP CTH HHH ENT    |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 | 350+33N | -       | 374+02N | US 61 SB RAMP CTH HHH ENT    |       | 3            | 6     | 18                          | -                                        | -                                             | 3                                      | 9                                      | -                                                 | -                                                 | 6        |                                       | -                           | -                                       | -                                        | -       | 215  | 645                                 | - | 6      | - | - | DETOUR                |    |  |
| DETOUR STH 11/USH 61 NB OFF RAMP                                                     |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 |         |         |         | US 61 NB RAMP STH 11         |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 | 141+33E | -       | 174+44E | US 61 NB RAMP STH 11         |       | 3            | 45    | 135                         | -                                        | -                                             | 4                                      | 12                                     | -                                                 | -                                                 | 8        | 24                                    | -                           | -                                       | -                                        | -       | 96   | 288                                 | 1 | 4      | - | - | DETOUR                |    |  |
| DETOUR STH 11/USH 61 NB ON RAMP                                                      |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| 0010                                                                                 | 141+33E | -       | 174+44E | US 61 NB RAMP STH 11         |       | 7            | 5     | 35                          | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | -    | -                                   | - | -      | 1 | 7 | PREWARN RAMP CLOSURE  |    |  |
| 0010                                                                                 | 141+33E | -       | 174+44E | US 61 NB RAMP STH 11         |       | 3            | -     | -                           | -                                        | -                                             | -                                      | -                                      | -                                                 | -                                                 | -        | -                                     | -                           | -                                       | -                                        | -       | 157  | 471                                 | - | 6      | - | - | DETOUR                |    |  |
| 0010                                                                                 | 9+05V   | -       | 57+21V  | STH 11 EB                    |       | 3            | 9     | 27                          | -                                        | -                                             | 2                                      |                                        | -                                                 | -                                                 | 4        |                                       | -                           | -                                       | -                                        | -       | 4    |                                     | - | -      | - | - | DETOUR                |    |  |
| 0010                                                                                 | 8+73W   | -       | 51+54W  | STH 11 WB                    |       | 3            | 35    | 105                         | -                                        | -                                             | 7                                      | 21                                     | -                                                 | -                                                 | 14       | 42                                    | 14                          | 42                                      | 1                                        | 3       | 9    | 27                                  | - | -      | - | - | DETOUR & LANE CLOSURE |    |  |
|                                                                                      |         |         |         |                              |       | SUBTOTAL     |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
|                                                                                      |         |         |         |                              |       | L            |       | 54,470                      |                                          | 356                                           |                                        | 2,260                                  |                                                   | 0                                                 |          | 0                                     |                             | 4,502                                   |                                          | 16,240  |      | 181                                 |   | 8,102  |   | 2 |                       | 38 |  |
|                                                                                      |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
|                                                                                      |         |         |         |                              |       | TOTAL        |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
|                                                                                      |         |         |         |                              |       | 0010         |       | 87,540                      |                                          | 356                                           |                                        | 4,807                                  |                                                   | 154                                               |          | 154                                   |                             | 10,036                                  |                                          | 24,465  |      | 263                                 |   | 26,549 |   | 5 |                       | 54 |  |
|                                                                                      |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |
| *NOTE: EACH TRAFFIC CONTROL COVERING SIGN WILL BE COVERED FOR 1 CYCLE PER EACH SIGN. |         |         |         |                              |       |              |       |                             |                                          |                                               |                                        |                                        |                                                   |                                                   |          |                                       |                             |                                         |                                          |         |      |                                     |   |        |   |   |                       |    |  |

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TEMPORARY PAVEMENT MARKING

|          |          |    |          |                                  |       | 643.3165               | 643.3505      |                             | 643.3805     | 646.9002     | 646.9200 |    |                              |
|----------|----------|----|----------|----------------------------------|-------|------------------------|---------------|-----------------------------|--------------|--------------|----------|----|------------------------------|
|          |          |    |          |                                  |       | TEMPORARY MARKING LINE | MARKING ARROW | TEMPORARY MARKING STOP LINE | REMOVAL LINE | REMOVAL LINE |          |    |                              |
|          |          |    |          |                                  |       | PAINT 6-INCH           | PAINT         | PAINT 18-INCH               | 6-INCH       | WIDE         |          |    |                              |
| CATEGORY | STATION  | TO | STATION  | LOCATION                         | STAGE | WHITE                  | YELLOW        | EACH                        | LF           | LF           | LF       | LF | REMARKS                      |
| 0010     | 154+43A  | -  | 160+85A  | USH 61-151 SB                    | 2-4   | 642                    | -             | -                           | -            | -            | -        | -  | OUTSIDE EDGE                 |
| 0010     | 152+03EE | -  | 153+35EE | USH 61 NB - Ramp - STH 11 RT ENT | 2-4   | 147                    | -             | -                           | -            | -            | -        | -  | OUTSIDE EDGE                 |
| 0010     | 36+36V   | -  | 39+19V   | STH 11 EB                        | 2-3B  | 283                    | -             | -                           | -            | -            | -        | -  | TURN LANE                    |
| 0010     | 36+58V   | -  | 38+84V   | STH 11 EB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 36+58V   | -  | 36+59V   | STH 11 EB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 38+81V   | -  | 38+81V   | STH 11 EB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 38+83V   | -  | 38+84V   | STH 11 EB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 43+10V   | -  | 54+41V   | STH 11 EB                        | 2     | -                      | 1132          | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 43+10V   | -  | 54+42V   | STH 11 EB                        | 2     | 1133                   | -             | -                           | -            | -            | -        | -  | OUTSIDE SHIFT                |
| 0010     | 43+10V   | -  | 54+42V   | STH 11 EB                        | 2     | -                      | -             | -                           | -            | 1132         | -        | -  | OUTSIDE SHIFT                |
| 0010     | 40+42W   | -  | 42+20W   | STH 11 WB                        | 2-3B  | 178                    | -             | -                           | -            | -            | -        | -  | TURN LANE                    |
| 0010     | 40+65W   | -  | 40+66W   | STH 11 WB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 40+67W   | -  | 40+68W   | STH 11 WB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 41+96W   | -  | 41+97W   | STH 11 WB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 41+96W   | -  | 41+96W   | STH 11 WB                        | 2-3B  | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 47+96V   | -  | 47+96V   | STH 11 EB                        | 3A-3B | -                      | -             | -                           | 13           | -            | -        | -  |                              |
| 0010     | 47+97V   | -  | 50+93V   | STH 11 EB                        | 3A    | -                      | 296           | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 50+93V   | -  | 51+53V   | STH 11 EB                        | 3A    | -                      | -             | -                           | -            | 60           | -        | -  | OUTSIDE SHIFT                |
| 0010     | 51+56V   | -  | 57+21V   | STH 11 EB                        | 3A    | 586                    | -             | -                           | -            | -            | -        | -  | OUTSIDE EDGE                 |
| 0010     | 52+90V   | -  | 57+08V   | STH 11 EB                        | 3A    | 418                    | -             | -                           | -            | -            | -        | -  | RIGHT SHIFT                  |
| 0010     | 52+95V   | -  | 57+08V   | STH 11 EB                        | 3A    | -                      | -             | -                           | -            | 412          | -        | -  | RIGHT SHIFT                  |
| 0010     | 56+58V   | -  | 57+21V   | STH 11 EB                        | 3A    | -                      | -             | -                           | -            | 51           | -        | -  | CENTERLINE                   |
| 0010     | 57+21V   | -  | 57+21V   | STH 11 EB                        | 3A    | -                      | -             | -                           | 13           | -            | -        | -  |                              |
| 0010     | 57+21V   | -  | 57+21V   | STH 11 EB                        | 3A-5  | -                      | 654           | -                           | -            | -            | -        | -  | NO PASSING                   |
| 0010     | 57+21V   | -  | 57+21V   | STH 11 EB                        | 3A-4  | -                      | 128           | -                           | -            | -            | -        | -  | NO PASSING                   |
| 0010     | 57+21V   | -  | 57+21V   | STH 11 EB                        | 3A-3B | -                      | 608           | -                           | -            | -            | -        | -  | NO PASSING                   |
| 0010     | 48+08W   | -  | 50+92W   | STH 11 WB                        | 3A    | -                      | 285           | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 48+08W   | -  | 49+24W   | STH 11 WB                        | 3A    | -                      | -             | -                           | -            | 39           | -        | -  | CENTERLINE                   |
| 0010     | 48+39W   | -  | 51+54W   | STH 11 WB                        | 3A    | 316                    | -             | -                           | -            | -            | -        | -  | LEFT SHIFT                   |
| 0010     | 49+67W   | -  | 51+54W   | STH 11 WB                        | 3A    | -                      | -             | -                           | -            | 187          | -        | -  | INSIDE EDGE                  |
| 0010     | 47+96V   | -  | 49+78V   | STH 11 EB                        | 3B    | -                      | 185           | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 48+99V   | -  | 57+15V   | STH 11 EB                        | 3B    | 823                    | -             | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 51+56V   | -  | 57+21V   | STH 11 EB                        | 3B    | 662                    | -             | -                           | -            | -            | -        | -  | LEFT SHIFT                   |
| 0010     | 51+56V   | -  | 57+07V   | STH 11 EB                        | 3B    | -                      | -             | -                           | -            | 552          | -        | -  | LEFT SHIFT                   |
| 0010     | 56+51V   | -  | 57+21V   | STH 11 EB                        | 3B    | -                      | -             | -                           | -            | 54           | -        | -  | CENTERLINE                   |
| 0010     | 57+21V   | -  | 57+21V   | STH 11 EB                        | 3B    | -                      | -             | -                           | 13           | -            | -        | -  |                              |
| 0010     | 46+98W   | -  | 51+53W   | STH 11 WB                        | 3B    | 455                    | -             | -                           | -            | -            | -        | -  | LEFT SHIFT                   |
| 0010     | 48+92W   | -  | 51+53W   | STH 11 WB                        | 3B    | -                      | -             | -                           | -            | 261          | -        | -  | LEFT SHIFT                   |
| 0010     | 48+98W   | -  | 49+75W   | STH 11 WB                        | 3B    | -                      | 77            | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 49+75W   | -  | 50+17W   | STH 11 WB                        | 3B    | -                      | -             | -                           | -            | 14           | -        | -  |                              |
| 0010     | 156+63EE | -  | 160+94EE | USH 61 NB - Ramp - STH 11 RT ENT | 4     | -                      | 435           | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 18+94V   | -  | 19+99V   | STH 11 EB                        | 4     | -                      | 111           | -                           | -            | -            | -        | -  | RIGHT TAPER                  |
| 0010     | 19+74V   | -  | 20+41V   | STH 11 EB                        | 4     | 79                     | -             | -                           | -            | -            | -        | -  | LEFT EDGE                    |
| 0010     | 20+41V   | -  | 39+20V   | STH 11 EB                        | 4     | 1879                   | -             | -                           | -            | -            | -        | -  | WESTBOUND OUTSIDE            |
| 0010     | 22+21V   | -  | 26+59V   | STH 11 EB                        | 4     | -                      | 438           | -                           | -            | -            | -        | -  | INSIDE EDGE                  |
| 0010     | 26+59V   | -  | 39+20V   | STH 11 EB                        | 4     | -                      | 2524          | -                           | -            | -            | -        | -  | NO PASSING                   |
| 0010     | 34+66V   | -  | 37+18V   | STH 11 EB                        | 4     | 85                     | -             | -                           | -            | -            | -        | -  | EASTBOUND TURN LANE          |
| 0010     | 35+28V   | -  | 38+78V   | STH 11 EB                        | 4     | 351                    | -             | -                           | -            | -            | -        | -  | EASTBOUND OUTSIDE SHIFT      |
| 0010     | 35+28V   | -  | 39+07V   | STH 11 EB                        | 4     | -                      | -             | -                           | -            | 380          | -        | -  | EASTBOUND OUTSIDE SHIFT      |
| 0010     | 37+18V   | -  | 39+20V   | STH 11 EB                        | 4     | 202                    | -             | -                           | -            | -            | -        | -  | EASTBOUND TURN LANE          |
| 0010     | 37+42V   | -  | 37+42V   | STH 11 EB                        | 4     | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 37+43V   | -  | 37+43V   | STH 11 EB                        | 4     | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 38+82V   | -  | 38+82V   | STH 11 EB                        | 4     | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 38+86V   | -  | 38+87V   | STH 11 EB                        | 4     | -                      | -             | 1                           | -            | -            | -        | -  |                              |
| 0010     | 39+12V   | -  | 39+12V   | STH 11 EB                        | 4     | -                      | -             | -                           | -            | -            | -        | 13 | EXISTING STOP BAR            |
| 0010     | 39+27V   | -  | 39+82V   | STH 11 EB                        | 4     | -                      | -             | -                           | -            | 33           | -        | -  | INTERSECTION TURN LANE GUIDE |
| 0010     | 40+18V   | -  | 46+22V   | STH 11 EB                        | 4     | -                      | 604           | -                           | -            | -            | -        | -  | WESTBOUND INSIDE             |
| 0010     | 40+18V   | -  | 46+22V   | STH 11 EB                        | 4     | -                      | 604           | -                           | -            | -            | -        | -  | EASTBOUND INSIDE             |
| 0010     | 40+42V   | -  | 54+79V   | STH 11 EB                        | 4     | 1437                   | -             | -                           | -            | -            | -        | -  | WESTBOUND OUTSIDE            |
| 0010     | 40+90V   | -  | 44+13V   | STH 11 EB                        | 4     | 323                    | -             | -                           | -            | -            | -        | -  | EASTBOUND OUTSIDE            |
| SUBTOTAL |          |    |          |                                  |       | 9999                   | 8081          | 12                          | 39           | 3175         | 13       |    |                              |

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TEMPORARY PAVEMENT MARKING CONTINUED

|            |         |    |         |                                |       | 643.3165                            | 643.3505                      | 643.3805                                  | 646.9002                    | 646.9200                  |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------|---------|----|---------|--------------------------------|-------|-------------------------------------|-------------------------------|-------------------------------------------|-----------------------------|---------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            |         |    |         |                                |       | TEMPORARY MARKING LINE PAINT 6-INCH | TEMPORARY MARKING ARROW PAINT | TEMPORARY MARKING STOP LINE PAINT 18-INCH | MARKING REMOVAL LINE 6-INCH | MARKING REMOVAL LINE WIDE |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CATEGORY   | STATION | TO | STATION | LOCATION                       | STAGE | WHITE LF                            | YELLOW LF                     | EACH                                      | LF                          | LF                        | LF | REMARKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 0010       | 40+91V  | -  | 44+13V  | STH 11 EB                      | 4     | -                                   |                               | -                                         | -                           | 322                       | -  | NO PASSING<br>WESTBOUND OUTSIDE<br>EASTBOUND OUTSIDE SHIFT<br>EASTBOUND OUTSIDE SHIFT<br>WESTBOUND OUTSIDE SHIFT<br>BADGER ROAD<br>OUTSIDE CURVE<br>INSIDE CURVE<br>OUTSIDE EDGE<br>OUTSIDE EDGE<br>OUTSIDE LANE EDGE<br>LEFT TAPER<br>RIGHT EDGE<br>RIGHT EDGE<br>STH 35<br>OUTSIDE EDGE<br>EASTBOUND OUTSIDE<br>NO PASSING<br>EASTBOUND INSIDE<br>WESTBOUND INSIDE<br>WESTBOUND OUTSIDE SHIFT<br>NO PASSING<br>WESTBOUND TURN LANE<br>EASTBOUND OUTSIDE<br>WESTBOUND OUTSIDE SHIFT<br>WESTBOUND TURN LANE<br>OUTSIDE EDGE |
| 0010       | 46+22V  | -  | 57+21V  | STH 11 EB                      | 4     | -                                   | 2390                          | -                                         | -                           | -                         | -  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0010       | 46+22V  | -  | 54+79V  | STH 11 EB                      | 4     | 858                                 | -                             | -                                         | -                           | -                         | -  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0010       | 46+23V  | -  | 54+79V  | STH 11 EB                      | 4     | -                                   | -                             | -                                         | -                           | 856                       | -  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0010       | 46+22V  | -  | 54+79V  | STH 11 EB                      | 4     | 858                                 | -                             | -                                         | -                           | -                         | -  | EASTBOUND OUTSIDE SHIFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 0010       | 46+23V  | -  | 54+79V  | STH 11 EB                      | 4     | -                                   | -                             | -                                         | -                           | 856                       | -  | EASTBOUND OUTSIDE SHIFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 0010       | 11+99W  | -  | 18+95W  | STH 11 WB                      | 4     | 697                                 | -                             | -                                         | -                           | -                         | -  | WESTBOUND OUTSIDE SHIFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 0010       | 39+37W  | -  | 39+37W  | BADGER ROAD                    | 4     | 116                                 | -                             | -                                         | -                           | -                         | -  | BADGER ROAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 0010       | 154+20F | -  | 155+04F | USH 61 SB - Ramp - STH 11 ENT  | 4     | 136                                 | -                             | -                                         | -                           | -                         | -  | OUTSIDE CURVE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 0010       | 154+60F | -  | 155+04F | USH 61 SB - Ramp - STH 11 ENT  | 4     | -                                   | 101                           | -                                         | -                           | -                         | -  | INSIDE CURVE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 0010       | 141+45G | -  | 154+74G | USH 61 SB - Ramp - STH 11 EXIT | 5     | 42                                  | -                             | -                                         | -                           | -                         | -  | OUTSIDE EDGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 0010       | 142+48G | -  | 143+58G | USH 61 SB - Ramp - STH 11 EXIT | 5     | 111                                 | -                             | -                                         | -                           | -                         | -  | OUTSIDE EDGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 0010       | 16+97V  | -  | 18+88V  | STH 11 EB                      | 5     | 191                                 | -                             | -                                         | -                           | -                         | -  | OUTSIDE LANE EDGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 0010       | 18+88V  | -  | 19+95V  | STH 11 EB                      | 5     | 113                                 | -                             | -                                         | -                           | -                         | -  | LEFT TAPER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 0010       | 19+91V  | -  | 21+05V  | STH 11 EB                      | 5     | 127                                 | -                             | -                                         | -                           | -                         | -  | RIGHT EDGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 0010       | 19+93V  | -  | 20+07V  | STH 11 EB                      | 5     | -                                   | -                             | -                                         | -                           | 15                        | -  | RIGHT EDGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 0010       | 40+16V  | -  | 40+16V  | STH 35                         | 5     | 98                                  | -                             | -                                         | -                           | -                         | -  | STH 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 0010       | 152+03E | -  | 153+16E | USH 61 NB - Ramp - STH 11      | 5     | 113                                 | -                             | -                                         | -                           | -                         | -  | OUTSIDE EDGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 0010       | 21+07W  | -  | 39+19W  | STH 11 WB                      | 5     | 1813                                | -                             | -                                         | -                           | -                         | -  | EASTBOUND OUTSIDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 0010       | 24+46W  | -  | 34+90W  | STH 11 WB                      | 5     | -                                   | 2086                          | -                                         | -                           | -                         | -  | NO PASSING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 0010       | 34+89W  | -  | 39+19W  | STH 11 WB                      | 5     | -                                   | 429                           | -                                         | -                           | -                         | -  | EASTBOUND INSIDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 0010       | 34+89W  | -  | 39+19W  | STH 11 WB                      | 5     | -                                   | 429                           | -                                         | -                           | -                         | -  | WESTBOUND INSIDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 0010       | 35+23W  | -  | 38+95W  | STH 11 WB                      | 5     | 372                                 | -                             | -                                         | -                           | -                         | -  | WESTBOUND OUTSIDE SHIFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 0010       | 40+41W  | -  | 51+54W  | STH 11 WB                      | 5     | -                                   | 2876                          | -                                         | -                           | -                         | -  | NO PASSING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 0010       | 40+41W  | -  | 42+41W  | STH 11 WB                      | 5     | 200                                 | -                             | -                                         | -                           | -                         | -  | WESTBOUND TURN LANE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 0010       | 40+41W  | -  | 51+54W  | STH 11 WB                      | 5     | 1379                                | -                             | -                                         | -                           | -                         | -  | EASTBOUND OUTSIDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 0010       | 40+77W  | -  | 45+02W  | STH 11 WB                      | 5     | 426                                 | -                             | -                                         | -                           | -                         | -  | WESTBOUND OUTSIDE SHIFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 0010       | 42+41W  | -  | 45+38W  | STH 11 WB                      | 5     | 99.00                               | -                             | -                                         | -                           | -                         | -  | WESTBOUND TURN LANE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 0010       | 40+77W  | -  | 40+78W  | STH 11 WB                      | 5     | -                                   | -                             | 1                                         | -                           | -                         | -  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0010       | 40+78W  | -  | 40+78W  | STH 11 WB                      | 5     | -                                   | -                             | 1                                         | -                           | -                         | -  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0010       | 42+46W  | -  | 42+46W  | STH 11 WB                      | 5     | -                                   | -                             | 1                                         | -                           | -                         | -  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0010       | 42+46W  | -  | 42+47W  | STH 11 WB                      | 5     | -                                   | -                             | 1                                         | -                           | -                         | -  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0010       | 283+80A | -  | 290+13A | USH 61-151 SB                  | 6E    | 632                                 | -                             | -                                         | -                           | -                         | -  | OUTSIDE EDGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SUBTOTAL   |         |    |         |                                |       | 8381                                | 8311                          | 4                                         | 0                           | 2049                      | 0  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TOTAL 0010 |         |    |         |                                |       |                                     | 34,772                        | 16                                        | 39                          | 5,224                     | 13 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

REST AREA MARKING

|            |         |    |         |              | 646.5220             | 646.7420                                       | 646.7520                            | 646.8320                    |               |  |
|------------|---------|----|---------|--------------|----------------------|------------------------------------------------|-------------------------------------|-----------------------------|---------------|--|
|            |         |    |         |              | MARKING SYMBOL EPOXY | MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH | CROSSWALK EPOXY BLOCK STYLE 24-INCH | MARKING PARKING STALL EPOXY |               |  |
| CATEGORY   | STATION | TO | STATION | LOCATION     | EACH                 | LF                                             | LF                                  | LF                          | REMARKS       |  |
| 0040       | 121+21X | -  | 126+29X | REST AREA LT | -                    | -                                              | -                                   | 1,484                       | TRUCK PARKING |  |
| 0040       | 121+89  | -  | 123+81  | REST AREA RT | 1                    | -                                              | -                                   | 428                         | CAR PARKING   |  |
| 0040       | 124+20  | -  | 124+35  | REST AREA LT | -                    | 36                                             | 24                                  | -                           | PED CROSSING  |  |
| 0040       | 124+76  | -  | 124+91  | REST AREA LT | -                    | 36                                             | 24                                  | -                           | PED CROSSING  |  |
| 0040       | 125+32  | -  | 127+13  | REST AREA RT | 1                    | -                                              | -                                   | 415                         | CAR PARKING   |  |
| TOTAL 0040 |         |    |         |              | 2                    | 72                                             | 48                                  | 2,327                       |               |  |

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PERMANENT PAVEMENT MARKING CONTINUED

| CATEGORY | STATION | TO | STATION | LOCATION                   | 646.2020           |        | 646.2025                   | 646.2040             |        | 646.4020            | 646.4040            | REMARKS |
|----------|---------|----|---------|----------------------------|--------------------|--------|----------------------------|----------------------|--------|---------------------|---------------------|---------|
|          |         |    |         |                            | MARKING LINE EPOXY |        | MARKING LINE               | MARKING LINE GROOVED |        | MARKING LINE        | GROOVED WET REF     |         |
|          |         |    |         |                            | WHITE              | YELLOW | GROOVED BLACK EPOXY 6-INCH | WET REF EPOXY 6-INCH | WHITE  | EPOXY 10-INCH WHITE | EPOXY 10-INCH WHITE |         |
|          |         |    |         |                            | LF                 | LF     | LF                         | LF                   | LF     | LF                  | LF                  |         |
| 0010     | 474+08  | -  | 497+32  | NB Mainline RT Line        | -                  | -      | -                          | 2,324                | -      | -                   | -                   |         |
| 0010     | 100+13A | -  | 496+67A | SB Mainline Centerline     | -                  | -      | 9,914                      | 9,914                | -      | -                   | -                   |         |
| 0010     | 100+06A | -  | 292+74A | SB Mainline RT Line        | -                  | -      | -                          | -                    | 19,268 | -                   | -                   |         |
| 0010     | 100+20A | -  | 130+63A | SB Mainline LT Line        | -                  | -      | -                          | 3,043                | -      | -                   | -                   |         |
| 0010     | 130+70F | -  | 154+61F | Exit 1 SB On Ramp LT Line  | -                  | -      | -                          | 2,391                | -      | -                   | -                   |         |
| 0010     | 137+31F | -  | 142+35F | Exit 1 SB On Ramp Gore     | -                  | -      | -                          | -                    | -      | -                   | 504                 |         |
| 0010     | 142+35F | -  | 154+65F | Exit 1 SB On Ramp RT Line  | -                  | -      | -                          | -                    | 1,230  | -                   | -                   |         |
| 0010     | 137+35A | -  | 142+52A | Exit 1 SB On Ramp Gore     | -                  | -      | -                          | -                    | -      | -                   | 517                 |         |
| 0010     | 142+52A | -  | 152+10A | SB Mainline LT Line        | -                  | -      | -                          | 958                  | -      | -                   | -                   |         |
| 0010     | 152+10A | -  | 154+37A | Exit 1 SB Off Ramp Gore    | -                  | -      | -                          | -                    | -      | -                   | 227                 |         |
| 0010     | 154+37A | -  | 160+54A | Exit 1 SB Off Ramp Skips   | -                  | -      | -                          | 155                  | -      | -                   | -                   |         |
| 0010     | 141+90G | -  | 152+12G | Exit 1 SB Off Ramp RT Line | -                  | -      | -                          | -                    | 1,022  | -                   | -                   |         |
| 0010     | 141+72G | -  | 160+52G | Exit 1 SB Off Ramp LT Line | -                  | -      | -                          | 1,880                | -      | -                   | -                   |         |
| 0010     | 141+68G | -  | 142+41G | Exit 1 SB Off Ramp RT Line | -                  | -      | -                          | -                    | 73     | -                   | -                   |         |
| 0010     | 141+85G | -  | 142+41G | Exit 1 SB Off Ramp LT Line | -                  | -      | -                          | 56                   | -      | -                   | -                   |         |
| 0010     | 142+41G | -  | 142+76G | EXIT 1 SB ISLAND GORE      | -                  | -      | -                          | -                    | -      | -                   | 70                  |         |
| 0010     | 152+12G | -  | 154+35G | Exit 1 SB Off Ramp Gore    | -                  | -      | -                          | -                    | -      | -                   | 223                 |         |
| 0010     | 160+54A | -  | 186+89A | SB Mainline LT Line        | -                  | -      | -                          | 2,635                | -      | -                   | -                   |         |
| 0010     | 200+85D | -  | 210+28D | Exit 2 SB On Ramp RT Line  | -                  | -      | -                          | -                    | 943    | -                   | -                   |         |
| 0010     | 186+81D | -  | 210+10D | Exit 2 SB On Ramp LT Line  | -                  | -      | -                          | 2,329                | -      | -                   | -                   |         |
| 0010     | 193+36D | -  | 200+85D | Exit 2 SB On Ramp Gore     | -                  | -      | -                          | -                    | -      | -                   | 749                 |         |
| 0010     | 193+30A | -  | 200+82A | Exit 2 SB On Ramp Gore     | -                  | -      | -                          | -                    | -      | -                   | 752                 |         |
| 0010     | 200+82A | -  | 258+74A | SB Mainline LT Line        | -                  | -      | -                          | 5,792                | -      | -                   | -                   |         |
| 0010     | 258+73H | -  | 276+94H | Exit 3 SB On Ramp LT Line  | -                  | -      | -                          | 1,821                | -      | -                   | -                   |         |
| 0010     | 269+87H | -  | 272+53H | EXIT 3 SB ON RAMP GORE     | -                  | -      | -                          | -                    | -      | -                   | 266                 |         |
| 0010     | 272+53H | -  | 275+04H | Exit 3 SB On Ramp RT Line  | -                  | -      | -                          | -                    | 251    | -                   | -                   |         |
| 0010     | 275+04H | -  | 275+99H | EXIT 3 SB ON RAMP GORE     | -                  | -      | -                          | -                    | -      | -                   | 95                  |         |
| 0010     | 268+87A | -  | 272+45A | Exit 3 SB On Ramp Gore     | -                  | -      | -                          | -                    | -      | -                   | 358                 |         |
| 0010     | 272+45A | -  | 281+68A | SB Mainline LT Line        | -                  | -      | -                          | 923                  | -      | -                   | -                   |         |
| 0010     | 281+68A | -  | 283+81A | Exit 3 SB Off Ramp Gore    | -                  | -      | -                          | -                    | -      | -                   | 213                 |         |
| 0010     | 283+81A | -  | 290+20A | Exit 3 SB Off Ramp Skips   | -                  | -      | -                          | 160                  | -      | -                   | -                   |         |
| 0010     | 290+20A | -  | 293+07A | SB Mainline LT Line        | -                  | -      | -                          | 287                  | -      | -                   | -                   |         |
| 0010     | 293+80A | -  | 295+10A | SB TURN LANE               | -                  | -      | -                          | -                    | -      | -                   | 130                 |         |
| 0010     | 293+82A | -  | 294+39A | SB TURN LANE               | -                  | -      | -                          | -                    | -      | -                   | 57                  |         |
| 0010     | 293+95A | -  | 338+64A | SB Mainline LT Line        | -                  | -      | -                          | 4,469                | -      | -                   | -                   |         |
| 0010     | 293+98A | -  | 310+75A | SB Mainline RT Line        | -                  | -      | -                          | -                    | 1,677  | -                   | -                   |         |
| 0010     | 311+09A | -  | 312+61A | SB TURN LANE               | -                  | -      | -                          | -                    | -      | -                   | 152                 |         |
| 0010     | 311+10A | -  | 338+65A | SB Mainline RT Line        | -                  | -      | -                          | -                    | 2,755  | -                   | -                   |         |
| 0010     | 339+45A | -  | 340+65A | SB TURN LANE               | -                  | -      | -                          | -                    | -      | -                   | 120                 |         |
| 0010     | 339+59A | -  | 353+05A | SB Mainline RT Line        | -                  | -      | -                          | -                    | 1,346  | -                   | -                   |         |
| 0010     | 339+75A | -  | 350+36A | SB Mainline LT Line        | -                  | -      | -                          | 1,061                | -      | -                   | -                   |         |
| 0010     | 350+33N | -  | 373+39N | EXIT 5 SB ON RAMP LT LANE  | -                  | -      | -                          | 2,306                | -      | -                   | -                   |         |
| 0010     | 358+31N | -  | 364+25N | EXIT 5 SB ON RAMP GORE     | -                  | -      | -                          | -                    | -      | -                   | 594                 |         |
| 0010     | 364+25N | -  | 373+50N | EXIT 5 SB ON RAMP RT LANE  | -                  | -      | -                          | -                    | -      | -                   | -                   |         |
| 0010     | 354+63A | -  | 463+18A | SB Mainline RT Line        | -                  | -      | -                          | -                    | 10,855 | -                   | -                   |         |
| 0010     | 354+63A | -  | 358+32A | SB TURN LANE               | -                  | -      | -                          | -                    | -      | -                   | 369                 |         |
| 0010     | 358+32A | -  | 364+28A | EXIT 5 SB ON RAMP GORE     | -                  | -      | -                          | -                    | -      | -                   | 596                 |         |
| 0010     | 364+28A | -  | 420+82A | SB Mainline LT Line        | -                  | -      | -                          | 5,654                | -      | -                   | -                   |         |
| 0010     | 420+82A | -  | 424+21A | EXIT 5 SB OFF RAMP GORE    | -                  | -      | -                          | -                    | -      | -                   | 339                 |         |
| 0010     | 424+21A | -  | 430+66A | EXIT 5 SB OFF RAMP SKIPS   | -                  | -      | -                          | 162                  | -      | -                   | -                   |         |
| 0010     | 412+00R | -  | 420+80R | EXIT 5 SB OFF RAMP RT LANE | -                  | -      | -                          | -                    | 880    | -                   | 7                   |         |
| 0010     | 412+35R | -  | 430+64R | EXIT 5 SB OFF RAMP LT LANE | -                  | -      | -                          | 1,829                | -      | -                   | -                   |         |
| 0010     | 420+80R | -  | 424+19R | EXIT 5 SB OFF RAMP GORE    | -                  | -      | -                          | -                    | -      | -                   | 339                 |         |
| 0010     | 430+66A | -  | 463+18A | SB Mainline LT Line        | -                  | -      | -                          | -                    | -      | -                   | -                   |         |
| 0010     | 464+00A | -  | 465+36A | SB TURN LANE               | -                  | -      | -                          | -                    | -      | -                   | 136                 |         |
| 0010     | 464+11A | -  | 472+48A | SB Mainline RT Line        | -                  | -      | -                          | -                    | 837    | -                   | -                   |         |
| 0010     | 464+40A | -  | 496+67A | SB Mainline LT Line        | -                  | -      | -                          | 3,227                | -      | -                   | -                   |         |
| 0010     | 473+19A | -  | 474+77A | SB TURN LANE               | -                  | -      | -                          | -                    | -      | -                   | 158                 |         |
| 0010     | 473+37A | -  | 496+67A | SB Mainline RT Line        | -                  | -      | -                          | -                    | 2,330  | -                   | -                   |         |
| 0010     | 10+64V  | -  | 11+00V  | EB STH 11 ISLAND GORE      | -                  | -      | -                          | -                    | -      | -                   | 75                  |         |
| SUBTOTAL |         |    |         |                            | 0                  | 0      | 9,914                      | 53,376               | 43,467 | 0                   | 7,046               |         |

3

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

163

E

3

PERMANENT PAVEMENT MARKING CONTINUED

| CATEGORY | STATION | TO | STATION | LOCATION                   | 646.2020                     |        | 646.2025                                      | 646.2040                                     |        | 646.4020                      | 646.4040                                         | REMARKS       |
|----------|---------|----|---------|----------------------------|------------------------------|--------|-----------------------------------------------|----------------------------------------------|--------|-------------------------------|--------------------------------------------------|---------------|
|          |         |    |         |                            | MARKING LINE EPOXY<br>6-INCH |        | MARKING LINE<br>GROOVED BLACK<br>EPOXY 6-INCH | MARKING LINE GROOVED<br>WET REF EPOXY 6-INCH |        | MARKING LINE<br>EPOXY 10-INCH | MARKING LINE<br>GROOVED WET REF<br>EPOXY 10-INCH |               |
|          |         |    |         |                            | WHITE                        | YELLOW |                                               | WHITE                                        | YELLOW | WHITE                         | WHITE                                            |               |
|          |         |    |         |                            | LF                           | LF     | LF                                            | LF                                           | LF     | LF                            | LF                                               |               |
| 0010     | 11+71V  | -  | 18+97V  | EB STH 11 LT Line          | -                            | -      | -                                             | -                                            | 726    | -                             | -                                                |               |
| 0010     | 11+85V  | -  | 12+58V  | EB STH 11 RT Line          | -                            | -      | -                                             | 73                                           | -      | -                             | -                                                |               |
| 0010     | 12+75V  | -  | 19+54V  | EB STH 11 RT Line          | -                            | -      | -                                             | 679                                          | -      | -                             | -                                                |               |
| 0010     | 18+10V  | -  | 18+97V  | EB STH 11 TURN LANE        | -                            | -      | -                                             | -                                            | -      | -                             | 87                                               |               |
| 0010     | 19+81V  | -  | 26+59V  | EB STH 11 LT Line          | -                            | -      | -                                             | -                                            | 678    | -                             | -                                                |               |
| 0010     | 19+97V  | -  | 22+10V  | EB STH 11 RT Line          | -                            | -      | -                                             | 213                                          | -      | -                             | -                                                |               |
| 0010     | 22+10V  | -  | 26+59V  | EB STH 11 GORE             | -                            | -      | -                                             | -                                            | -      | -                             | 449                                              |               |
| 0010     | 11+11W  | -  | 19+19W  | WB STH 11 LT Line          | -                            | -      | -                                             | 808                                          | -      | -                             | -                                                |               |
| 0010     | 11+73W  | -  | 14+18W  | WB STH 11 TURN LANE        | -                            | -      | -                                             | -                                            | -      | -                             | 245                                              |               |
| 0010     | 11+73W  | -  | 18+99W  | WB STH 11 RT Line          | -                            | -      | -                                             | -                                            | 726    | -                             | -                                                |               |
| 0010     | 19+74W  | -  | 22+21W  | WB STH 11 LT Line          | -                            | -      | -                                             | 247                                          | -      | -                             | -                                                |               |
| 0010     | 19+83W  | -  | 26+60W  | WB STH 11 RT Line          | -                            | -      | -                                             | -                                            | 677    | -                             | -                                                |               |
| 0010     | 22+21W  | -  | 24+46W  | WB STH 11 GORE             | -                            | -      | -                                             | -                                            | -      | -                             | 225                                              |               |
| 0010     | 24+46W  | -  | 26+60W  | EB STH 11 CENTER LINE      | -                            | -      | 54                                            | 54                                           | -      | -                             | -                                                |               |
| 0010     | 24+46W  | -  | 26+60W  | WB STH 11 LT Line          | -                            | -      | -                                             | 214                                          | -      | -                             | -                                                |               |
| 0010     | 264+34J | -  | 269+13J | EAGLEPOINT LT LANE         | 479                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 264+34J | -  | 269+13J | EAGLEPOINT CENTER LINE     | -                            | 958    | -                                             | -                                            | -      | -                             | -                                                | DOUBLE YELLOW |
| 0010     | 264+34J | -  | 281+31J | EAGLE POINT LANE LINE      | 425                          | -      | 425                                           | -                                            | -      | -                             | -                                                |               |
| 0010     | 264+34J | -  | 271+77J | EAGLEPOINT RT LANE         | 743                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 269+13J | -  | 279+89J | EAGLEPOINT NB LT LANE      | -                            | 1,076  | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 272+77J | -  | 273+84J | EXIT 3 SB ON RAMP GORE     | -                            | -      | -                                             | -                                            | -      | 107                           | -                                                |               |
| 0010     | 273+84J | -  | 279+89J | EAGLEPOINT NB RT LANE      | 605                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 279+89J | -  | 290+33J | Exit 3 NB On Ramp LT Line  | -                            | -      | -                                             | -                                            | 1,044  | -                             | -                                                |               |
| 0010     | 279+89J | -  | 282+22J | Exit 3 NB On Ramp RT Line  | -                            | -      | -                                             | 233                                          | -      | -                             | -                                                |               |
| 0010     | 282+19J | -  | 284+07J | Exit 3 NB On Ramp GORE     | -                            | -      | -                                             | -                                            | -      | -                             | 188                                              |               |
| 0010     | 269+47K | -  | 280+24K | EAGLEPOINT SB LT LANE      | 1,077                        | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 269+47K | -  | 280+24K | EAGLEPOINT SB RT LANE      | -                            | 1,077  | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 280+24K | -  | 290+17K | Exit 3 SB Off Ramp LT Line | -                            | -      | -                                             | 993                                          | -      | -                             | -                                                |               |
| 0010     | 280+24K | -  | 281+73K | Exit 3 SB Off Ramp RT Line | -                            | -      | -                                             | -                                            | 149    | -                             | -                                                |               |
| 0010     | 281+73K | -  | 283+81K | Exit 3 SB Off Ramp GORE    | -                            | -      | -                                             | -                                            | -      | -                             | 208                                              |               |
| 0010     | 10+35S  | -  | 13+45S  | CTH HHH EB RT LINE         | 310                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 10+35S  | -  | 13+32S  | CTH HHH EB LT LINE         | -                            | 297    | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 9+62T   | -  | -       | PRISM LN LT LINE           | 106                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 9+75T   | -  | -       | PRISM LN TURN LANE         | -                            | -      | -                                             | -                                            | -      | 145                           | -                                                |               |
| 0010     | 9+87T   | -  | -       | PRISM LN TURN LANE         | -                            | -      | -                                             | -                                            | -      | 145                           | -                                                |               |
| 0010     | 9+99T   | -  | -       | PRISM LN CENTER LINE       | -                            | 290    | -                                             | -                                            | -      | -                             | -                                                | DOUBLE YELLOW |
| 0010     | 10+28T  | -  | 12+07T  | CTH HHH WB TURN LANE       | -                            | -      | -                                             | -                                            | -      | 231                           | -                                                |               |
| 0010     | 10+36T  | -  | 13+20T  | CTH HHH WB RT LINE         | -                            | 284    | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 10+40T  | -  | -       | PRISM LN RT LINE           | 105                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 10+40T  | -  | 12+85T  | CTH HHH WB LT LINE         | 245                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 13+54T  | -  | -       | CTH HHH CENTER LINE        | -                            | 182    | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 13+85T  | -  | -       | CTH HHH RT LINE            | 127                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 16+02Y  | -  | 16+72Y  | CTH H EB LT LINE           | -                            | 70     | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 16+02Y  | -  | 16+79Y  | CTH H EB RT LINE           | 122                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 16+45Y  | -  | 16+81Y  | CTH H EB ISLAND            | 77                           | 55     | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 16+96Y  | -  | -       | PRISM LN RT LINE           | -                            | 59     | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 17+15Y  | -  | 17+70Y  | CTH H EB RT LINE           | 55                           | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 17+70Y  | -  | -       | PRISM LN RT LINE           | -                            | 31     | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 17+88Y  | -  | 21+12Y  | CTH H EB RT LINE           | 375                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 17+90Y  | -  | 21+00Y  | CTH H EB LT LINE           | -                            | 310    | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 19+74Y  | -  | 21+04Y  | CTH H EB TURN LANE         | -                            | -      | -                                             | -                                            | -      | 130                           | -                                                |               |
| 0010     | 20+86Y  | -  | 21+19Y  | CTH H EB ISLAND            | 61                           | 140    | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 21+31Y  | -  | -       | ELM ST CENTER LINE         | -                            | 160    | -                                             | -                                            | -      | -                             | -                                                | DOUBLE YELLOW |
| 0010     | 21+42Y  | -  | 21+65Y  | CTH H EB ISLAND            | 49                           | 35     | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 21+65Y  | -  | 23+22Y  | CTH H EB LT LINE           | -                            | 157    | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 21+96Y  | -  | 23+22Y  | CTH H EB RT LINE           | 126                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 16+04Z  | -  | 16+75Z  | CTH H WB RT LANE           | -                            | 71     | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 17+13Y  | -  | 21+00Y  | CTH H WB LT LANE           | 387                          | -      | -                                             | -                                            | -      | -                             | -                                                |               |
| 0010     | 17+83Y  | -  | 18+49Y  | CTH H WB TURN LANE         | -                            | -      | -                                             | -                                            | -      | 66                            | -                                                |               |
| 0010     | 17+83Y  | -  | 21+00Y  | CTH H WB RT LANE           | -                            | 317    | -                                             | -                                            | -      | -                             | -                                                |               |
|          |         |    |         | SUBTOTAL                   | 5,474                        | 5,569  | 479                                           | 3,514                                        | 4,000  | 824                           | 1,402                                            |               |

3

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

E

3

PERMANENT PAVEMENT MARKING CONTINUED

| CATEGORY      | STATION | TO | STATION | LOCATION              | 646.2020           |        | 646.2025      | 646.2040             |                      | 646.4020      | 646.4040        | REMARKS    |
|---------------|---------|----|---------|-----------------------|--------------------|--------|---------------|----------------------|----------------------|---------------|-----------------|------------|
|               |         |    |         |                       | MARKING LINE EPOXY |        | MARKING LINE  | MARKING LINE GROOVED |                      | MARKING LINE  | MARKING LINE    |            |
|               |         |    |         |                       | 6-INCH             | 6-INCH | GROOVED BLACK | WET REF EPOXY 6-INCH | WET REF EPOXY 6-INCH | EPOXY 10-INCH | GROOVED WET REF |            |
|               |         |    |         |                       | WHITE              | YELLOW | EPOXY 6-INCH  | WHITE                | YELLOW               | WHITE         | EPOXY 10-INCH   |            |
|               |         |    |         |                       | LF                 | LF     | LF            | LF                   | LF                   | LF            | LF              |            |
| 0010          | 21+62Y  | -  | 22+85Y  | CTH H WB TURN LANE    | -                  | -      | -             | -                    | -                    | 123           | -               |            |
| 0010          | 21+62Y  | -  | 23+14Y  | CTH H WB RT LANE      | -                  | 152    | -             | -                    | -                    | -             | -               |            |
| 0010          | 22+17Y  | -  | 23+14Y  | CTH H WB LT LANE      | 97                 | -      | -             | -                    | -                    | -             | -               |            |
| SUBTOTAL      |         |    |         |                       | 97                 | 152    | 0             | 0                    | 0                    | 123           | 0               |            |
| TOTAL 0010    |         |    |         |                       | 11,292             |        | 20,337        | 198,967              |                      | 947           | 15,473          |            |
| 0020          | 26+59V  | -  | 39+10V  | EB STH 11 LT Line     | -                  | -      | -             | -                    | 1,251                | -             | -               |            |
| 0020          | 26+59V  | -  | 39+10V  | EB STH 11 CENTER LINE | -                  | -      | 313           | 313                  | -                    | -             | -               |            |
| 0020          | 26+59V  | -  | 39+10V  | EB STH 11 RT Line     | -                  | -      | -             | 1,251                | -                    | -             | -               |            |
| 0020          | 36+93V  | -  | 39+10V  | EB STH 11 TURN LANE   | -                  | -      | -             | -                    | -                    | -             | 217             |            |
| 0020          | 40+45V  | -  | 51+68V  | EB STH 11 LT Line     | -                  | -      | -             | -                    | 1,123                | -             | -               |            |
| 0020          | 40+45V  | -  | 46+00V  | EB STH 11 CENTER LINE | -                  | -      | 139           | 139                  | -                    | -             | -               |            |
| 0020          | 40+67V  | -  | 55+64V  | EB STH 11 RT Line     | -                  | -      | -             | 1,497                | -                    | -             | -               |            |
| 0020          | 51+55V  | -  | 55+64V  | EB STH 11 CENTER LINE | -                  | -      | -             | -                    | 512                  | -             | -               | SOLID/SKIP |
| 0020          | 51+55V  | -  | 55+64V  | EB STH 11 LT Line     | -                  | -      | -             | 409                  | -                    | -             | -               |            |
| 0020          | 26+60W  | -  | 39+17W  | WB STH 11 RT Line     | -                  | -      | -             | -                    | 1,257                | -             | -               |            |
| 0020          | 26+60W  | -  | 39+17W  | EB STH 11 CENTER LINE | -                  | -      | 315           | 315                  | -                    | -             | -               |            |
| 0020          | 26+60W  | -  | 38+95W  | WB STH 11 LT Line     | -                  | -      | -             | 1,235                | -                    | -             | -               |            |
| 0020          | 40+51W  | -  | 51+67W  | WB STH 11 LT Line     | -                  | -      | -             | 1,116                | -                    | -             | -               |            |
| 0020          | 40+51W  | -  | 51+67W  | EB STH 11 CENTER LINE | -                  | -      | 279           | 279                  | -                    | -             | -               |            |
| 0020          | 40+51W  | -  | 42+29W  | WB STH 11 TURN LANE   | -                  | -      | -             | -                    | -                    | -             | 178             |            |
| 0020          | 40+51W  | -  | 51+67W  | WB STH 11 RT Line     | -                  | -      | -             | -                    | 1,116                | -             | -               |            |
| SUBTOTAL      |         |    |         |                       | 0                  | 0      |               | 6,554                | 5,259                |               |                 |            |
| TOTAL 0020    |         |    |         |                       | 0                  |        | 1,046         | 11,813               |                      | 0             | 395             |            |
| 0040          | 111+00X | -  | 121+72X | REST AREA RT LINE     | 1,072              | -      | -             | -                    | -                    | -             | -               |            |
| 0040          | 111+00X | -  | 130+74X | REST AREA LT LINE     | -                  | 1,809  | -             | -                    | -                    | -             | -               |            |
| 0040          | 119+07X | -  | 120+10X | REST AREA GORE        | -                  | -      | -             | -                    | -                    | 186           | -               |            |
| 0040          | 120+10X | -  | 121+95X | REST AREA RT LINE     | 185                | -      | -             | -                    | -                    | -             | -               | TRUCK PARK |
| 0040          | 120+10X | -  | 121+96X | REST AREA LT LINE     | -                  | 186    | -             | -                    | -                    | -             | -               | CAR PARK   |
| 0040          | 127+24X | -  | 130+74X | REST AREA RT LINE     | 377                | -      | -             | -                    | -                    | -             | -               |            |
| SUBTOTAL      |         |    |         |                       | 1,634              | 1,995  |               | 0                    | 0                    |               |                 |            |
| TOTAL 0040    |         |    |         |                       | 3,629              |        | 0             | 0                    |                      | 186           | 0               |            |
| PROJECT TOTAL |         |    |         |                       | 14,921             |        | 21,383        | 210,780              |                      | 1,133         | 15,868          |            |

3



3

PAVEMENT MARKING

| CATEGORY      | STATION | LOCATION       | 646.5020                       | 646.5120                      | 646.6120                                 | REMARKS |
|---------------|---------|----------------|--------------------------------|-------------------------------|------------------------------------------|---------|
|               |         |                | MARKING<br>ARROW EPOXY<br>EACH | MARKING WORD<br>EPOXY<br>EACH | MARKING STOP LINE<br>EPOXY 18-INCH<br>LF |         |
| 0010          | 10+88V  | STH 11 EB RT   | -                              | -                             | 22                                       |         |
| 0010          | 11+00V  | STH 11 EB RT   | -                              | -                             | 17                                       |         |
| 0010          | 141+85G | SB OFF RAMP LT | -                              | -                             | 26                                       |         |
| 0010          | 11+97W  | STH 11 WB RT   | 1                              | -                             | -                                        |         |
| 0010          | 12+38W  | STH 11 WB RT   | -                              | 1                             | -                                        |         |
| 0010          | 13+94W  | STH 11 WB RT   | 1                              | -                             | -                                        |         |
| 0010          | 18+35V  | STH 11 EB LT   | 1                              | -                             | -                                        |         |
| 0010          | 155+56E | NB RAMP LT     | -                              | -                             | 30                                       |         |
| 0010          | 293+12  | USH 61 NB LT   | -                              | -                             | -                                        |         |
| 0010          | 293+85  | USH 61 NB LT   | 1                              | -                             | -                                        |         |
| 0010          | 294+03A | USH 61 SB LT   | 1                              | -                             | -                                        |         |
| 0010          | 294+15A | USH 61 SB RT   | 1                              | -                             | -                                        |         |
| 0010          | 294+85A | USH 61 SB LT   | 1                              | -                             | -                                        |         |
| 0010          | 310+30  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| 0010          | 310+98  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| 0010          | 311+45A | USH 61 SB RT   | 1                              | -                             | -                                        |         |
| 0010          | 312+35A | USH 61 SB RT   | 1                              | -                             | -                                        |         |
| 0010          | 338+54  | USH 61 NB LT   | 1                              | -                             | -                                        |         |
| 0010          | 339+34  | USH 61 NB LT   | 1                              | -                             | -                                        |         |
| 0010          | 339+81A | USH 61 SB LT   | 1                              | -                             | -                                        |         |
| 0010          | 340+43A | USH 61 SB LT   | 1                              | -                             | -                                        |         |
| 0010          | 353+27  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| 0010          | 354+09  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| 0010          | 354+85A | USH 61 SB RT   | 1                              | -                             | -                                        |         |
| 0010          | 356+00A | USH 61 SB RT   | 1                              | -                             | -                                        |         |
| 0010          | 9+69T   | CTH HHH WB LT  | 2                              | 1                             | -                                        |         |
| 0010          | 9+92T   | CTH HHH WB LT  | 2                              | 1                             | -                                        |         |
| 0010          | 9+36T   | CTH HHH WB LT  | -                              | -                             | 55                                       |         |
| 0010          | 10+31T  | CTH HHH WB LT  | -                              | -                             | 25                                       |         |
| 0010          | 10+86T  | CTH HHH WB RT  | 1                              | -                             | -                                        |         |
| 0010          | 10+86T  | CTH HHH WB LT  | 1                              | -                             | -                                        |         |
| 0010          | 11+25T  | CTH HHH WB LT  | -                              | 1                             | -                                        |         |
| 0010          | 11+82T  | CTH HHH WB RT  | 1                              | -                             | -                                        |         |
| 0010          | 11+82T  | CTH HHH WB LT  | 1                              | -                             | -                                        |         |
| 0010          | 374+89M | NB OFF RAMP LT | -                              | -                             | 25                                       |         |
| 0010          | 412+00R | SB OFF RAMP    | -                              | -                             | 31                                       |         |
| 0010          | 18+25Z  | CTH H WB RT    | 1                              | -                             | -                                        |         |
| 0010          | 17+81Y  | CTH H EB RT    | -                              | -                             | 32                                       |         |
| 0010          | 19+98Y  | CTH H EB LT    | 1                              | -                             | -                                        |         |
| 0010          | 20+70Y  | CTH H EB LT    | 1                              | -                             | -                                        |         |
| 0010          | 21+35Y  | CTH H EB RT    | -                              | -                             | 12                                       |         |
| 0010          | 22+02Z  | CTH H WB RT    | 1                              | -                             | -                                        |         |
| 0010          | 22+60Z  | CTH H WB RT    | 1                              | -                             | -                                        |         |
| 0010          | 462+60  | USH 61 NB LT   | 1                              | -                             | -                                        |         |
| 0010          | 463+65  | USH 61 NB LT   | 1                              | -                             | -                                        |         |
| 0010          | 464+43A | USH 61 SB LT   | 1                              | -                             | -                                        |         |
| 0010          | 465+10A | USH 61 SB LT   | 1                              | -                             | -                                        |         |
| 0010          | 472+01  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| 0010          | 472+81  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| 0010          | 473+41  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| 0010          | 474+52  | USH 61 NB RT   | 1                              | -                             | -                                        |         |
| TOTAL 0010    |         |                | 40                             | 4                             | 275                                      |         |
| 0020          | 37+17V  | STH 11 EB LT   | 1                              | -                             | -                                        |         |
| 0020          | 38+45V  | STH 11 EB LT   | -                              | 1                             | -                                        |         |
| 0020          | 38+86V  | STH 11 EB LT   | 1                              | -                             | -                                        |         |
| 0020          | 39+11V  | STH 11 EB      | -                              | -                             | 49                                       |         |
| 0020          | 40+51W  | STH 11 EB      | -                              | -                             | 47                                       |         |
| 0020          | 40+75W  | STH 11 WB RT   | 1                              | -                             | -                                        |         |
| 0020          | 41+15W  | STH 11 WB RT   | -                              | 1                             | -                                        |         |
| 0020          | 42+05W  | STH 11 WB RT   | 1                              | -                             | -                                        |         |
| TOTAL 0020    |         |                | 4                              | 2                             | 96                                       |         |
| PROJECT TOTAL |         |                | 44                             | 6                             | 371                                      |         |

CONSTRUCTION STAKING RESURFACING REFERENCE

| CATEGORY      | STATION   | TO | STATION   | LOCATION  | 650.8000                                                  | REMARKS |
|---------------|-----------|----|-----------|-----------|-----------------------------------------------------------|---------|
|               |           |    |           |           | CONSTRUCTION<br>STAKING<br>RESURFACING<br>REFERENCE<br>LF |         |
| 0010          | 100+34    | -  | 237+22    | USH 61 NB | 13,688                                                    |         |
| 0010          | 239+17    | -  | 294+32    | USH 61 NB | 5,515                                                     |         |
| 0010          | 100+41A   | -  | 236+39A   | USH 61 SB | 13,598                                                    |         |
| 0010          | 239+11A   | -  | 276+77A   | USH 61 SB | 3,766                                                     |         |
| 0010          | 279+68A   | -  | 292+94A   | USH 61 SB | 1,326                                                     |         |
| 0010          | 294+32    | -  | 374+00    | USH 61 NB | 7,968                                                     |         |
| 0010          | 375+94    | -  | 411+48    | USH 61 NB | 3,554                                                     |         |
| 0010          | 413+55    | -  | 497+58    | USH 61 NB | 8,403                                                     |         |
| 0010          | 292+94A   | -  | 373+05A   | USH 61 SB | 8,011                                                     |         |
| 0010          | 374+99A   | -  | 410+46A   | USH 61 SB | 3,547                                                     |         |
| 0010          | 412+66A   | -  | 496+65A   | USH 61 SB | 8,399                                                     |         |
| 0010          | 141+33E   | -  | 155+70E   | RAMP      | 1,437                                                     |         |
| 0010          | 152+03EE  | -  | 156+99EE  | RAMP      | 496                                                       |         |
| 0010          | 156+22E   | -  | 174+44E   | RAMP      | 1,822                                                     |         |
| 0010          | 154+48EEE | -  | 160+44EEE | RAMP      | 596                                                       |         |
| 0010          | 130+70F   | -  | 154+87F   | RAMP      | 2,417                                                     |         |
| 0010          | 141+67G   | -  | 160+93G   | RAMP      | 1,926                                                     |         |
| 0010          | 192+96C   | -  | 208+19C   | RAMP      | 1,523                                                     |         |
| 0010          | 186+73D   | -  | 210+09D   | RAMP      | 2,336                                                     |         |
| 0010          | 8+30B     | -  | 10+30B    | RAMP      | 200                                                       |         |
| 0010          | 12+76B    | -  | 15+91B    | RAMP      | 315                                                       |         |
| 0010          | 259+79H   | -  | 277+03H   | RAMP      | 1,724                                                     |         |
| 0010          | 264+34J   | -  | 290+38J   | RAMP      | 2,604                                                     |         |
| 0010          | 269+48K   | -  | 289+23K   | RAMP      | 1,975                                                     |         |
| 0010          | 358+82M   | -  | 374+94M   | RAMP      | 1,612                                                     |         |
| 0010          | 351+23N   | -  | 373+50N   | RAMP      | 2,227                                                     |         |
| 0010          | 9+12S     | -  | 13+85S    | RAMP      | 473                                                       |         |
| 0010          | 9+61T     | -  | 13+96T    | RAMP      | 435                                                       |         |
| 0010          | 16+02Y    | -  | 23+23Y    | RAMP      | 721                                                       |         |
| 0010          | 16+04Z    | -  | 23+12Z    | RAMP      | 708                                                       |         |
| 0010          | 413+18P   | -  | 435+99P   | RAMP      | 2,281                                                     |         |
| 0010          | 412+66R   | -  | 429+71R   | RAMP      | 1,705                                                     |         |
| 0010          | 9+35V     | -  | 16+28V    | STH 11 EB | 693                                                       |         |
| 0010          | 19+05V    | -  | 25+47V    | STH 11 EB | 642                                                       |         |
| 0010          | 10+08W    | -  | 16+28W    | STH 11 WB | 620                                                       |         |
| 0010          | 19+05W    | -  | 25+47W    | STH 11 WB | 642                                                       |         |
| TOTAL 0010    |           |    |           |           | 109,905                                                   |         |
| 0020          | 25+47V    | -  | 51+55V    | STH 11 EB | 2,608                                                     |         |
| 0020          | 25+47W    | -  | 51+55W    | STH 11 WB | 2,608                                                     |         |
| 0020          | 51+55V    | -  | 55+16V    | STH 11    | 361                                                       |         |
| TOTAL 0020    |           |    |           |           | 5,577                                                     |         |
| 0040          | 111+99X   | -  | 129+45X   | REST AREA | 1,746                                                     |         |
| 0040          | 119+63X   | -  | 128+03X   | REST AREA | 840                                                       |         |
| TOTAL 0040    |           |    |           |           | 2,586                                                     |         |
| PROJECT TOTAL |           |    |           |           | 118,068                                                   |         |

3

PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

3

CONCRETE PAVEMENT

|            |         |    |         |          | 204.0100                               | 405.0100                                 | 415.0080                             | 415.0100                              | 415.0110                              | 415.2010                              | 416.0610                    | 416.0620                      | 502.2000.01<br>COMPRESSION JOINT<br>SEALER PREFORMED<br>ELASTOMERIC (WIDTH) (01.<br>4-INCH) | 650.7000                                           | 690.0250                 | SPV.0180.01                                                     |
|------------|---------|----|---------|----------|----------------------------------------|------------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------------|-------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------|-----------------------------------------------------------------|
|            |         |    |         |          | REMOVING<br>CONCRETE<br>PAVEMENT<br>SY | COLORING<br>CONCRETE<br>WISDOT RED<br>CY | CONCRETE<br>PAVEMENT<br>8-INCH<br>SY | CONCRETE<br>PAVEMENT<br>10-INCH<br>SY | CONCRETE<br>PAVEMENT<br>11-INCH<br>SY | CONCRETE TRUCK<br>APRON 12-INCH<br>SY | DRILLED TIE<br>BARS<br>EACH | DRILLED<br>DOWEL BARS<br>EACH |                                                                                             | CONSTRUCTION<br>STAKING CONCRETE<br>PAVEMENT<br>LF | SAWING<br>CONCRETE<br>LF | SPECIAL (01. SCALE<br>APPROACH PAVEMENT<br>REINFORCEMENT)<br>SY |
| CATEGORY   | STATION | TO | STATION | LOCATION | SY                                     | CY                                       | SY                                   | SY                                    | SY                                    | SY                                    |                             |                               | LF                                                                                          | LF                                                 | LF                       | REMARKS                                                         |
| 0010       | 5+94    | -  | 6+21    | SWEF LT  | 18                                     | -                                        | 19                                   | -                                     | -                                     | -                                     | 2                           | 10                            | -                                                                                           | -                                                  | 21                       | -                                                               |
| 0010       | 6+00    | -  | 6+06    | SWEF LT  | 11                                     | -                                        | 11                                   | -                                     | -                                     | -                                     | -                           | 12                            | -                                                                                           | -                                                  | 16                       | -                                                               |
| 0010       | 6+00    | -  | 10+00   | SWEF     | 1,280                                  | -                                        | 1,324                                | -                                     | -                                     | -                                     | 16                          | 51                            | -                                                                                           | 400                                                | 224                      | -                                                               |
| 0010       | 6+06    | -  | 6+89    | SWEF LT  | 137                                    | -                                        | -                                    | -                                     | 123                                   | -                                     | -                           | -                             | 45                                                                                          | -                                                  | -                        | 123                                                             |
| 0010       | 6+42    | -  | 7+42    | SWEF LT  | -                                      | 14                                       | -                                    | -                                     | -                                     | 40                                    | -                           | -                             | -                                                                                           | -                                                  | -                        | -                                                               |
| 0010       | 5+33    | -  | 5+60    | SWEF LT  | 230                                    | -                                        | -                                    | 230                                   | -                                     | -                                     | 57                          | 32                            | -                                                                                           | 70                                                 | 200                      | -                                                               |
| 0010       | 8+08    | -  | 8+27    | SWEF LT  | 70                                     | -                                        | 70                                   | -                                     | -                                     | -                                     | -                           | -                             | -                                                                                           | 34                                                 | 25                       | -                                                               |
| TOTAL 0010 |         |    |         |          | 1,746                                  | 14                                       | 1,424                                | 230                                   | 123                                   | 40                                    | 75                          | 105                           | 45                                                                                          | 504                                                | 486                      | 123                                                             |

CONCRETE SURFACE DRAIN

| CATEGORY   | STATION | TO | STATION | LOCATION | 204.0155<br>REMOVING<br>CONCRETE<br>SIDEWALK<br>SY | 602.3010<br>CONCRETE<br>SURFACE<br>DRAINS<br>CY | REMARKS |  |
|------------|---------|----|---------|----------|----------------------------------------------------|-------------------------------------------------|---------|--|
| 0010       | 8+26    | -  | 10+08   | SWEF LT  | 3                                                  | 2                                               |         |  |
| TOTAL 0010 |         |    |         |          | 3                                                  | 2                                               |         |  |

CURB AND GUTTER

|            |         |    |         |          | 204.0150<br>REMOVING<br>CURB &<br>GUTTER<br>LF | 601.0115<br>CONCRETE CURB<br>TYPE G<br>LF | 601.0409<br>CONCRETE CURB &<br>GUTTER 30-INCH TYPE A<br>LF | 601.0582<br>CONCRETE CURB &<br>GUTTER 4-INCH SLOPED<br>36-INCH TYPE T<br>LF | 650.5500<br>CONSTRUCTION STAKING<br>CURB GUTTER AND CURB<br>& GUTTER<br>LF | 690.0250                 |         |
|------------|---------|----|---------|----------|------------------------------------------------|-------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------|---------|
| CATEGORY   | STATION | TO | STATION | LOCATION | LF                                             | LF                                        | LF                                                         | LF                                                                          | LF                                                                         | SAWING<br>CONCRETE<br>LF | REMARKS |
| 0010       | 6+00    | -  | 6+12    | SWEF RT  | 15                                             | -                                         | -                                                          | -                                                                           | -                                                                          | -                        |         |
| 0010       | 6+00    | -  | 7+78    | SWEF LT  | 57                                             | -                                         | -                                                          | 137                                                                         | 137                                                                        | -                        |         |
| 0010       | 8+27    | -  | 9+85    | SWEF LT  | 108                                            | -                                         | -                                                          | 108                                                                         | 108                                                                        | -                        |         |
| 0010       | 8+08    | -  | 8+27    | SWEF LT  | 80                                             | 80                                        | -                                                          | -                                                                           | 80                                                                         | -                        |         |
| 0010       | 10+06   |    |         | SWEF LT  | 10                                             | -                                         | 10                                                         | -                                                                           | 10                                                                         | 20                       |         |
| TOTAL 0010 |         |    |         |          | 270                                            | 80                                        | 10                                                         | 245                                                                         | 335                                                                        | 20                       |         |

PROJECT NO: 1200-02-63

HWY: STH 11

COUNTY: GRANT

MISCELLANEOUS QUANTITIES

SHEET

E



BASE AGGREGATE DENSE

|            |         |    |         |          | 305.0110                            | 305.0120                                 | 624.0100      | 650.5000                     |         |
|------------|---------|----|---------|----------|-------------------------------------|------------------------------------------|---------------|------------------------------|---------|
|            |         |    |         |          | BASE<br>AGGREGATE<br>DENSE 3/4-INCH | BASE<br>AGGREGATE<br>DENSE 1<br>1/4-INCH |               | CONSTRUCTION<br>STAKING BASE |         |
| CATEGORY   | STATION | TO | STATION | LOCATION | TON                                 | TON                                      | WATER<br>MGAL | LF                           | REMARKS |
| 0010       | 5+94    | -  | 6+21    | SWEF LT  | -                                   | 7                                        | 1             | -                            |         |
| 0010       | 6+00    | -  | 6+06    | SWEF LT  | -                                   | 4                                        | 1             | -                            |         |
| 0010       | 6+00    | -  | 10+00   | SWEF     | 12                                  | 464                                      | 5             | 400                          |         |
| 0010       | 6+06    | -  | 6+89    | SWEF LT  | -                                   | 43                                       | 1             | -                            |         |
| 0010       | 6+42    | -  | 7+42    | SWEF LT  | -                                   | 14                                       | 1             | -                            |         |
| 0010       | 5+33    | -  | 5+60    | SWEF LT  | -                                   | 13                                       | 1             | 70                           |         |
| 0010       | 8+08    | -  | 8+27    | SWEF LT  | -                                   | 29                                       | 1             | 34                           |         |
| TOTAL 0010 |         |    |         |          | 12                                  | 574                                      | 11            | 504                          |         |

3

TRAFFIC CONTROL

|            |         |         |         |          |                 | 616.0700.S   | 643.0300                    |                             | 643.0420               |                        | 643.0705                 |                          | 643.0900           |              |         |
|------------|---------|---------|---------|----------|-----------------|--------------|-----------------------------|-----------------------------|------------------------|------------------------|--------------------------|--------------------------|--------------------|--------------|---------|
| CATEGORY   | STATION | TO      | STATION | LOCATION | DURATION<br>DAY | FENCE SAFETY | TRAFFIC<br>CONTROL<br>DRUMS | TRAFFIC<br>CONTROL<br>DRUMS | TRAFFIC CONTROL        | TRAFFIC CONTROL        | TRAFFIC<br>CONTROL       | TRAFFIC<br>CONTROL       | TRAFFIC<br>CONTROL | TRAFFIC      | REMARKS |
|            |         |         |         |          |                 | LF           | EACH                        | DAY                         | BARRICADES TYPE<br>III | BARRICADES TYPE<br>III | WARNING<br>LIGHTS TYPE A | WARNING<br>LIGHTS TYPE A | SIGNS<br>EACH      | SIGNS<br>DAY |         |
| 0010       | 5+13    | PROJECT | 8+20    | SWEF     | 45              | -            | 9                           | 405                         | 4                      | 180                    | 4                        | 180                      | 2                  | 90           |         |
| 0010       | 6+92    |         |         | SWEF LT  | 45              | -            | 18                          | 810                         | 2                      | 90                     | -                        | -                        | -                  | -            |         |
| 0010       |         |         |         | SWEF     | -               | 300          | -                           | -                           | -                      | -                      | -                        | -                        | -                  | -            | -       |
| TOTAL 0010 |         |         |         |          |                 | 300          |                             | 1215                        |                        | 270                    |                          | 180                      |                    | 90           |         |

3

LANDSCAPING

|            |         |    |         |          | 625.0500            | 628.2006                     | 629.0210        | 630.0140               | 630.0200             | SPV.0165.01                                                         | REMARKS |
|------------|---------|----|---------|----------|---------------------|------------------------------|-----------------|------------------------|----------------------|---------------------------------------------------------------------|---------|
|            |         |    |         |          | SALVAGED<br>TOPSOIL | EROSION MAT<br>URBAN CLASS I | FERTILIZER TYPE | SEEDING<br>MIXTURE NO. | SEEDING<br>TEMPORARY | SPECIAL (01. REMOVE,<br>SALVAGE AND REINSTALL<br>LANDSCAPING ROCKS) |         |
| CATEGORY   | STATION | TO | STATION | LOCATION | SY                  | A<br>SY                      | B<br>CWT        | 40<br>LB               | LB                   | SF                                                                  |         |
| 0010       | 6+00    | -  | 7+78    | SWEF LT  | 43                  | 43                           | 0.1             | 5.0                    | 3.0                  | -                                                                   |         |
| 0010       | 6+00    | -  | 8+10    | SWEF RT  | 90                  | 90                           | 0.2             | 10.0                   | 6.0                  | -                                                                   |         |
| 0010       | 8+27    | -  | 9+85    | SWEF LT  | 42                  | 42                           | 0.1             | 4.3                    | 2.6                  | -                                                                   |         |
| 0010       | 8+27    | -  | 10+00   | SWEF RT  | 92                  | 92                           | 0.2             | 9.8                    | 5.9                  | -                                                                   |         |
| 0010       | 8+27    | -  | 10+07   | SWEF LT  | 20                  | 20                           | 0.1             | 1.0                    | 1.0                  | 40                                                                  |         |
|            |         |    |         |          |                     |                              |                 |                        |                      |                                                                     |         |
|            |         |    |         |          |                     |                              |                 |                        |                      |                                                                     |         |
| TOTAL 0010 |         |    |         |          | 287                 | 287                          | 0.7             | 30.1                   | 18.5                 | 40                                                                  |         |

EROSION CONTROL

|            |         |    |         |          | 628.1504         | 628.1520                        | REMARKS |
|------------|---------|----|---------|----------|------------------|---------------------------------|---------|
| CATEGORY   | STATION | TO | STATION | LOCATION | SILT FENCE<br>LF | SILT FENCE<br>MAINTENANCE<br>LF |         |
| 0010       | 5+93    | -  | 8+03    | SWEF RT  | 257              | 257                             |         |
| 0010       | 8+30    | -  | 10+03   | SWEF RT  | 233              | 233                             |         |
| TOTAL 0010 |         |    |         |          | 490              | 490                             |         |

PERMANENT PAVEMENT MARKING

|            |         |    |         |          | 646.2020                           | 646.6120                                    | 646.7120                                   | 646.8320                                | 646.9000                                | REMARKS |
|------------|---------|----|---------|----------|------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------------|-----------------------------------------|---------|
| CATEGORY   | STATION | TO | STATION | LOCATION | MARKING LINE<br>EPOXY 6-INCH<br>LF | MARKING STOP<br>LINE EPOXY<br>18-INCH<br>LF | MARKING<br>DIAGONAL<br>EPOXY 12-INCH<br>LF | MARKING<br>PARKING STALL<br>EPOXY<br>LF | MARKING<br>REMOVAL LINE<br>4-INCH<br>LF |         |
| 0010       | 5+36    | -  | 6+75    | SWEF     | 140                                | -                                           | -                                          | -                                       | 62                                      |         |
| 0010       | 5+99    | -  | 6+75    | SWEF LT  | -                                  | -                                           | 100                                        | -                                       | -                                       |         |
| 0010       | 7+13    | -  | 8+01    | SWEF LT  | 180                                | 15                                          | -                                          | -                                       | -                                       |         |
| 0010       | 8+01    | -  | 9+91    | SWEF LT  | 144                                | -                                           | -                                          | -                                       | -                                       |         |
| 0010       | 5+32    | -  | 5+60    | SWEF LT  | -                                  | -                                           | -                                          | 210                                     | -                                       |         |
| TOTAL 0010 |         |    |         |          | 464                                | 15                                          | 100                                        | 210                                     | 62                                      |         |

3

| MIXTURE TESTING TABLE  |                                      |              |                                         |               |        |           |                                               |                                                                                                          |
|------------------------|--------------------------------------|--------------|-----------------------------------------|---------------|--------|-----------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Location               | Station                              | Mixture Use: | Underlying Surface                      | Bid Item      | Tons   | Thickness | Quality Management Program to be used for:    |                                                                                                          |
|                        |                                      |              |                                         |               |        |           | Mixture Acceptance                            | Density Acceptance                                                                                       |
| USH 61                 |                                      |              |                                         |               |        |           |                                               |                                                                                                          |
| 2 - 12' Driving Lanes  | 100+22 - 293+82<br>100+64A - 292+96A | Lower Layer  | Concrete Pavement                       | 4 HT 58-28 H  | 11,003 | 1 3/4"    | PWL Incentive Air Voids HMA Pavement 460.2010 | Incentive Density PWL HMA Pavement 460.2005, Incentive Density HMA Pavement Longitudinal Joints 460.2007 |
| 3' Shoulder            | 100+22 - 293+82<br>100+64A - 292+96A | Lower Layer  | Recycled Bituminous                     | 4 HT 58-28 H  | 1,192  | 1 3/4"    | PWL Incentive Air Voids HMA Pavement 460.2010 | Acceptance testing by the department; Not eligible for incentive                                         |
| 8' Shoulder            | 100+22 - 293+82<br>100+64A - 292+96A | Lower Layer  | Recycled Bituminous / Concrete Pavement | 4 MT 58-28 S  | 2,271  | 1 3/4"    | PWL Incentive Air Voids HMA Pavement 460.2010 | Acceptance testing by the department; Not eligible for incentive                                         |
| 2 - 12' Driving Lanes  | 100+22 - 293+82<br>100+64A - 292+96A | Upper Layer  | 4 HT 58-28 H                            | 4 SMA 58-28 V | 11,233 | 1 3/4"    | QMP as per SS 460.                            | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 3' Shoulder            | 100+22 - 293+82<br>100+64A - 292+96A | Upper Layer  | 4 HT 58-28 H                            | 4 SMA 58-28 V | 1,212  | 1 3/4"    | QMP as per SS 460.                            | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 8' Shoulder            | 100+22 - 293+82<br>100+64A - 292+96A | Upper Layer  | 4 MT 58-28 S                            | 4 MT 58-28 S  | 2,272  | 1 3/4"    | PWL Incentive Air Voids HMA Pavement 460.2010 | Acceptance testing by the department; Not eligible for incentive                                         |
| USH 61 SHOULDER ONLY   |                                      |              |                                         |               |        |           |                                               |                                                                                                          |
| 3' Shoulder            | 293+82 - 497+32<br>292+96A - 496+65A | Lower Layer  | Base Aggregate                          | 4 MT 58-28 S  | 1,860  | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 8' Shoulder            | 293+82 - 497+32<br>292+96A - 496+65A | Lower Layer  | Base Aggregate                          | 4 MT 58-28 S  | 2,523  | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 3' Shoulder            | 293+82 - 497+32<br>292+96A - 496+65A | Upper Layer  | 4 MT 58-28 S                            | 4 MT 58-28 S  | 1,860  | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 8' Shoulder            | 293+82 - 497+32<br>292+96A - 496+65A | Upper Layer  | 4 MT 58-28 S                            | 4 MT 58-28 S  | 2,524  | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| Eagle Point RD         |                                      |              |                                         |               |        |           |                                               |                                                                                                          |
| 2 - 12' Driving Lanes  | 264+34J - 27989J                     | Lower Layer  | Base Aggregate                          | 4 MT 58-28 S  | 587    | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 15' Driving Lanes      | 269+48K - 280+36K                    | Lower Layer  | Base Aggregate                          | 4 MT 58-28 S  | 210    | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 2 - 12' Driving Lanes  | 264+34J - 27989J                     | Upper Layer  | 4 MT 58-28 S                            | 4 MT 58-28 S  | 587    | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| 15' Driving Lanes      | 269+48K - 280+36K                    | Upper Layer  | 4 MT 58-28 S                            | 4 MT 58-28 S  | 210    | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |
| Eagle Point RD On Ramp |                                      |              |                                         |               |        |           |                                               |                                                                                                          |
| 15' Driving Lanes      | 273+08H - 277+03H                    | Upper Layer  | Milled Asphalt                          | 4 MT 58-28 S  | 84     | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000                                                |

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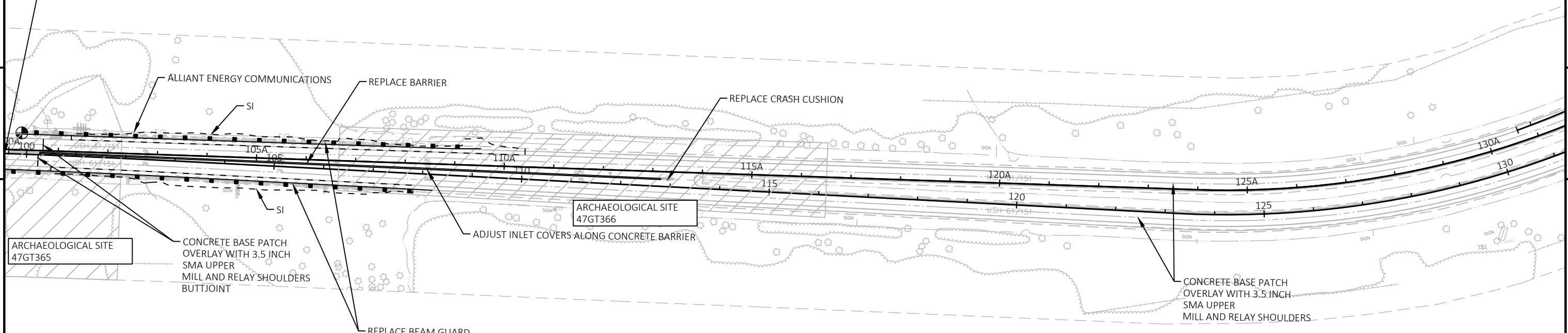
| MIXTURE TESTING TABLE |                                                                        |              |                    |              |       |           |                                               |                                                           |
|-----------------------|------------------------------------------------------------------------|--------------|--------------------|--------------|-------|-----------|-----------------------------------------------|-----------------------------------------------------------|
| Location              | Station                                                                | Mixture Use: | Underlying Surface | Bid Item     | Tons  | Thickness | Quality Management Program to be used for:    |                                                           |
|                       |                                                                        |              |                    |              |       |           | Mixture Acceptance                            | Density Acceptance                                        |
| RAMP SHOULDERS        |                                                                        |              |                    |              |       |           |                                               |                                                           |
| 5' SHOULDERS          | Ramp Shoulders                                                         | UPPER LAYER  | Base Aggregate     | 4 MT 58-28 S | 3,190 | 4"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| STH 11 SHOULDERS      |                                                                        |              |                    |              |       |           |                                               |                                                           |
| 8' SHOULDERS          | 9+33V - 55+64V<br>10+09W - 51+67W                                      | UPPER LAYER  | Base Aggregate     | 4 LT 58-28 S | 1,274 | 3.5"      | QMP as per SS 460.                            | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| Badger Rd             |                                                                        |              |                    |              |       |           |                                               |                                                           |
| 2 - 12' Driving Lanes | 8+30B - 10+30B<br>12+77B - 15+91B                                      | LOWER LAYER  | Base Aggregate     | 4 MT 58-28 S | 224   | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| 2 - 12' Driving Lanes | 8+30B - 10+30B<br>12+77B - 15+91B                                      | UPPER LAYER  | 4 MT 58-28 S       | 4 MT 58-28 S | 224   | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| CTH H/HHH             |                                                                        |              |                    |              |       |           |                                               |                                                           |
| 2 - 12' Driving Lanes | 9+12S - 13+86S<br>9+61T - 13+86T<br>16+02Y - 23+23Y<br>16+04Z - 23+12Z | LOWER LAYER  | Base Aggregate     | 4 MT 58-28 S | 970   | 1 3/4"    | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| 2 - 12' Driving Lanes | 9+12S - 13+86S<br>9+61T - 13+86T<br>16+02Y - 23+23Y<br>16+04Z - 23+12Z | UPPER LAYER  | 4 MT 58-28 S       | 4 MT 58-28 S | 970   | 1 3/4"    | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| Rest Area             |                                                                        |              |                    |              |       |           |                                               |                                                           |
| 12' Driving Lane      | 111+99X - 129+45X                                                      | LOWER LAYER  | Base Aggregate     | 4 MT 58-28 S | 1,844 | 3"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| 12' Driving Lane      | 111+99X - 129+45X                                                      | UPPER LAYER  | 4 MT 58-28 S       | 4 MT 58-28 S | 1,229 | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |
| Shoulder              | 111+99X - 129+45X                                                      | UPPER LAYER  | 4 MT 58-28 S       | 4 MT 58-28 S | 154   | 2"        | PWL Incentive Air Voids HMA Pavement 460.2010 | QMP HMA Pavement Nuclear Density; Incentive Paid 460.2000 |

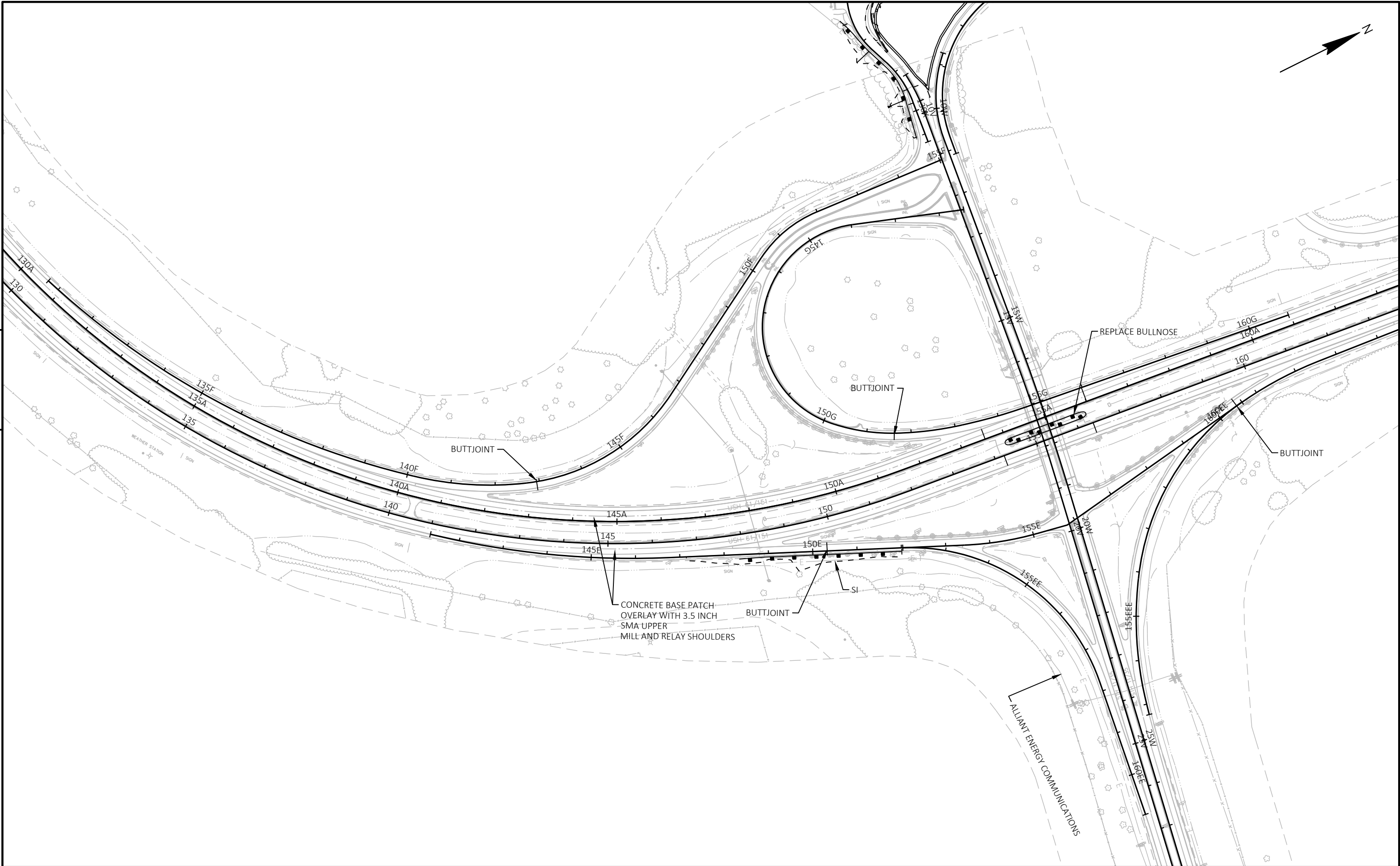
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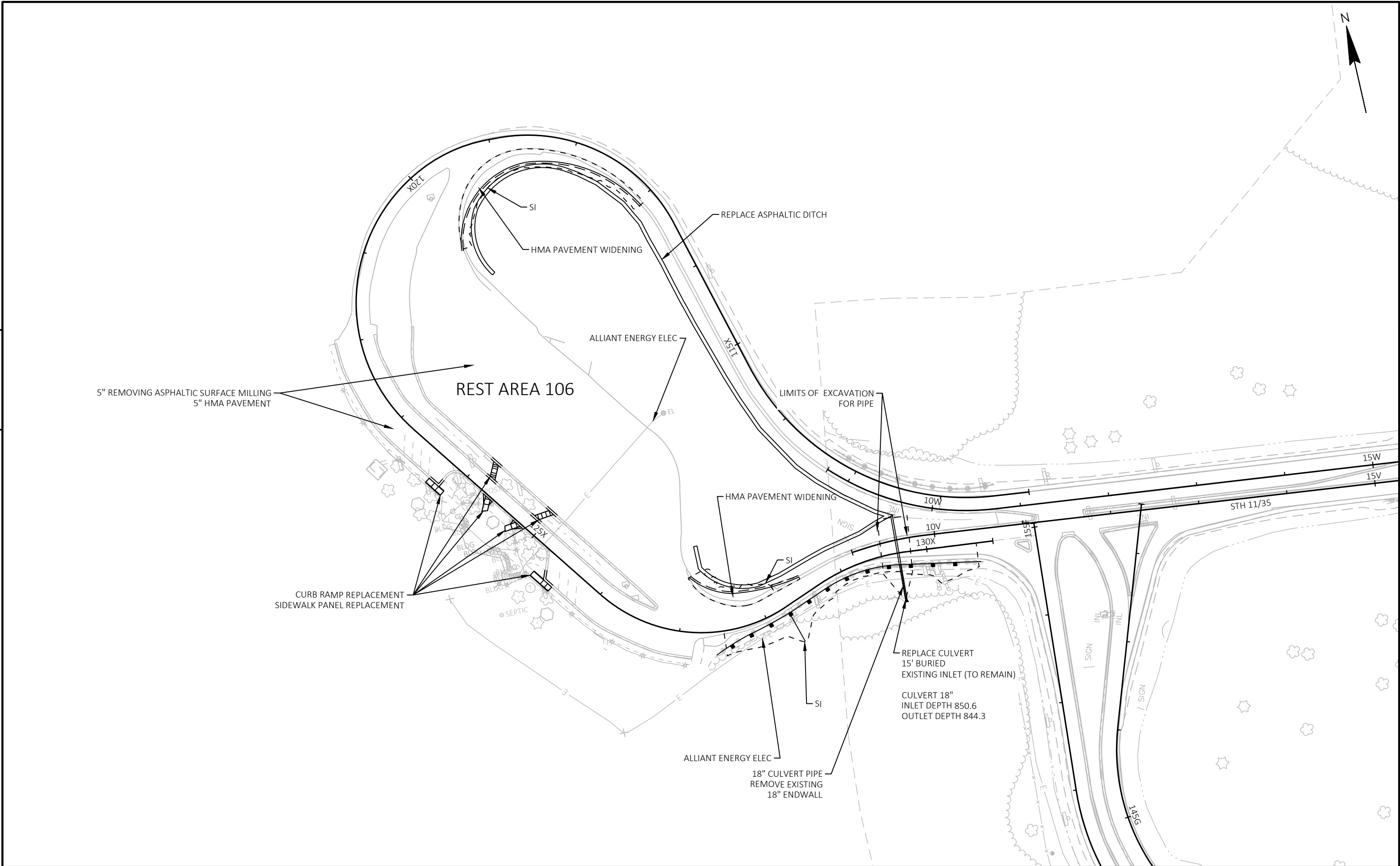
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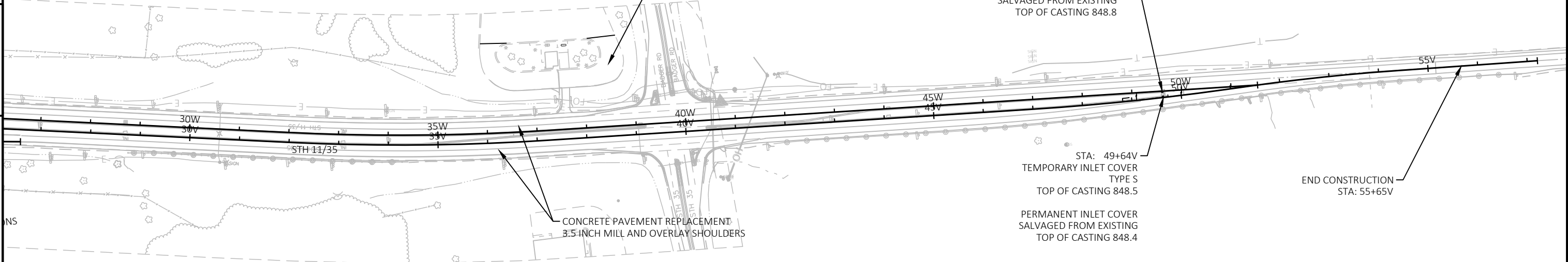








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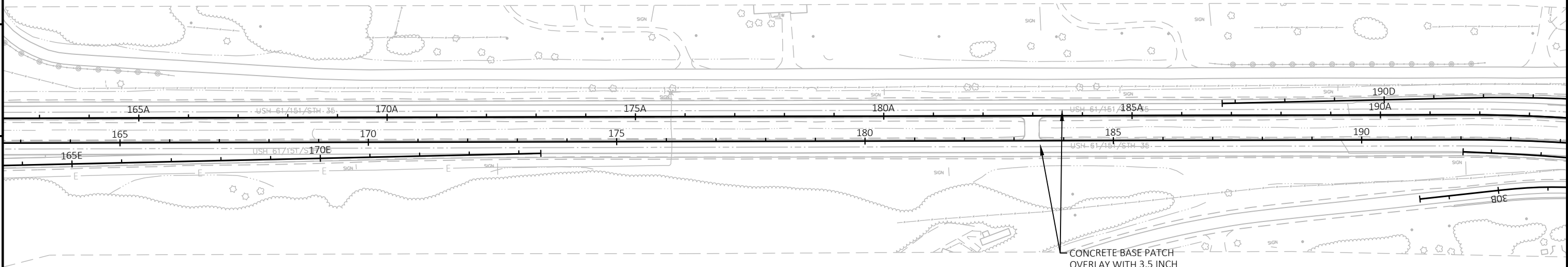


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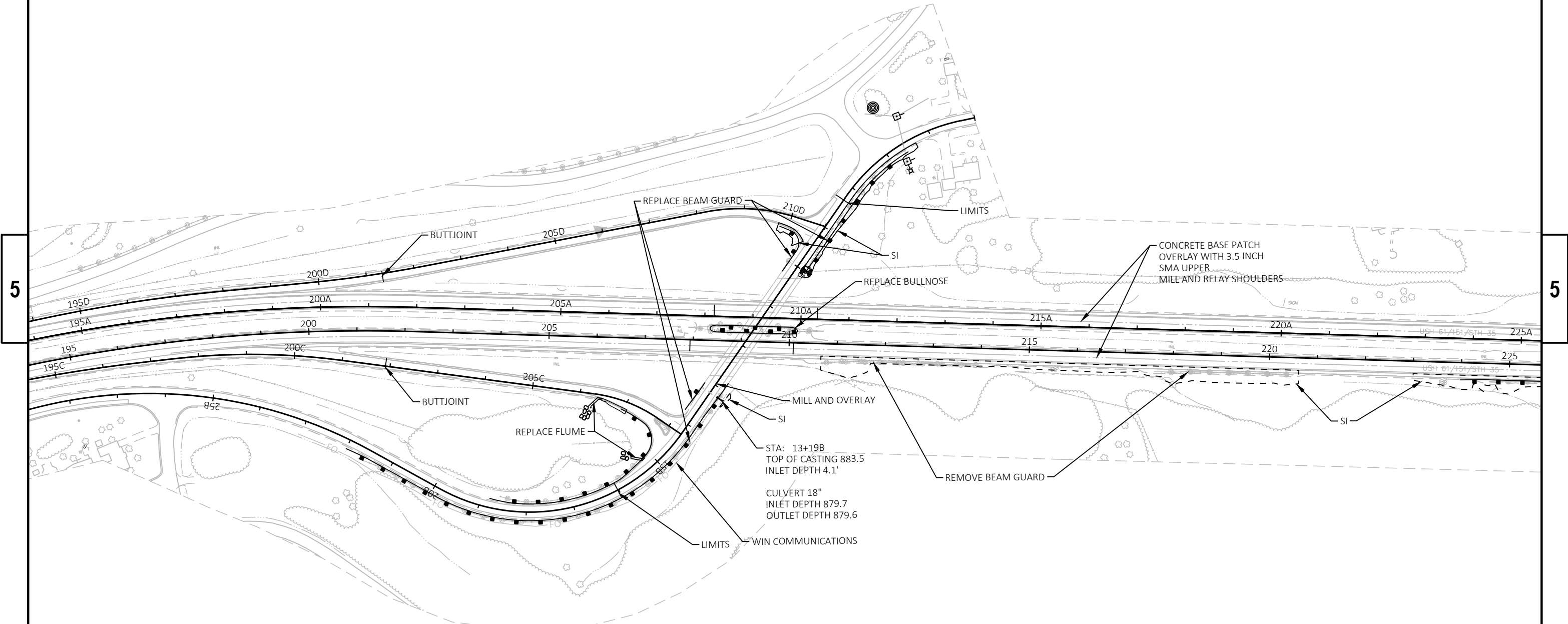




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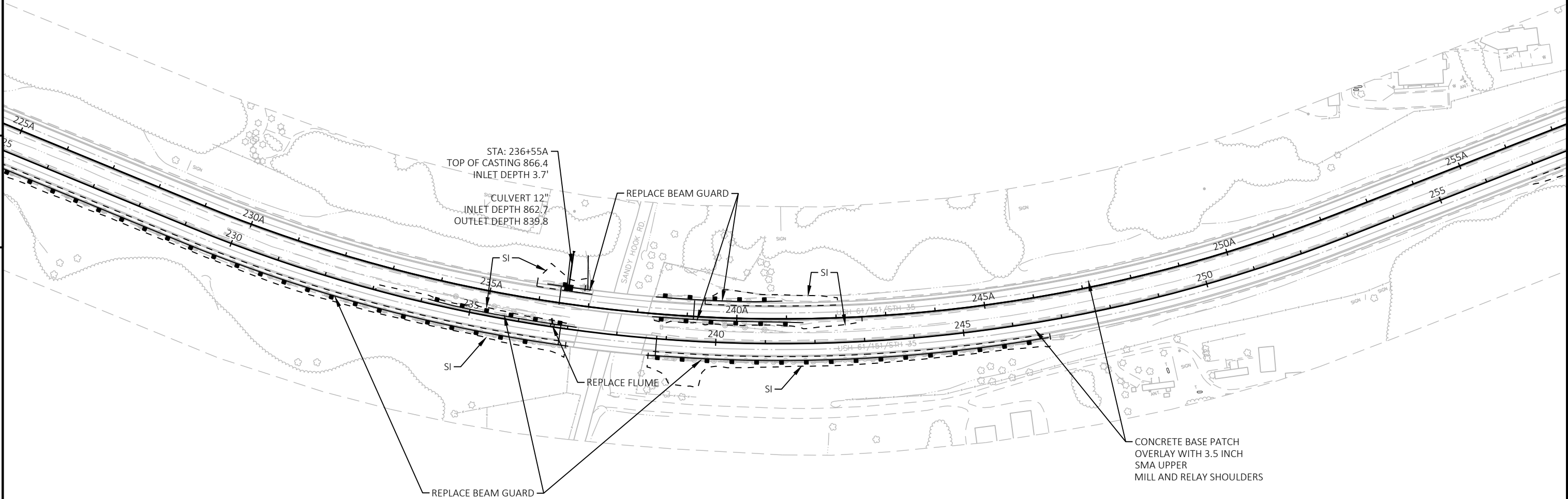


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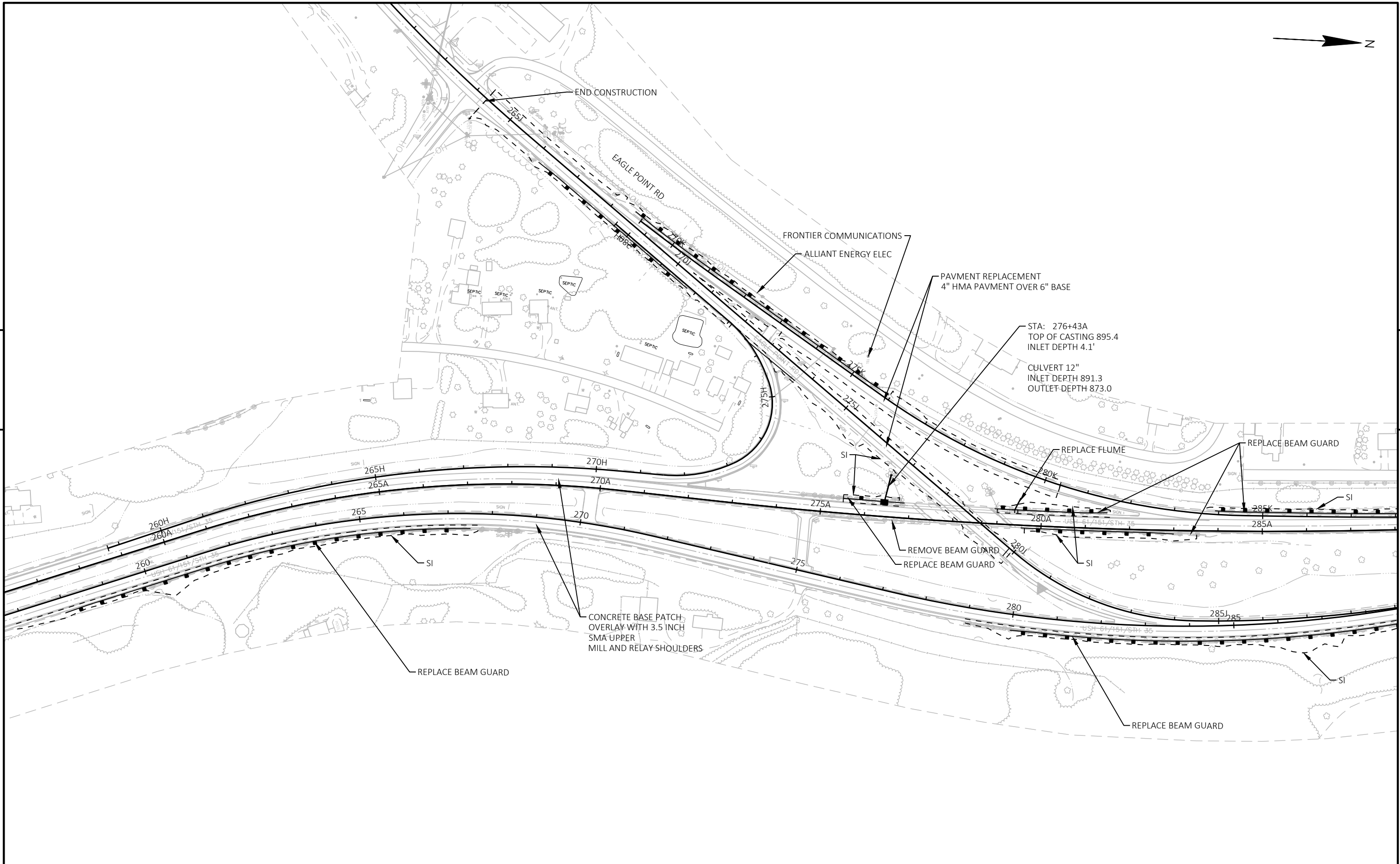




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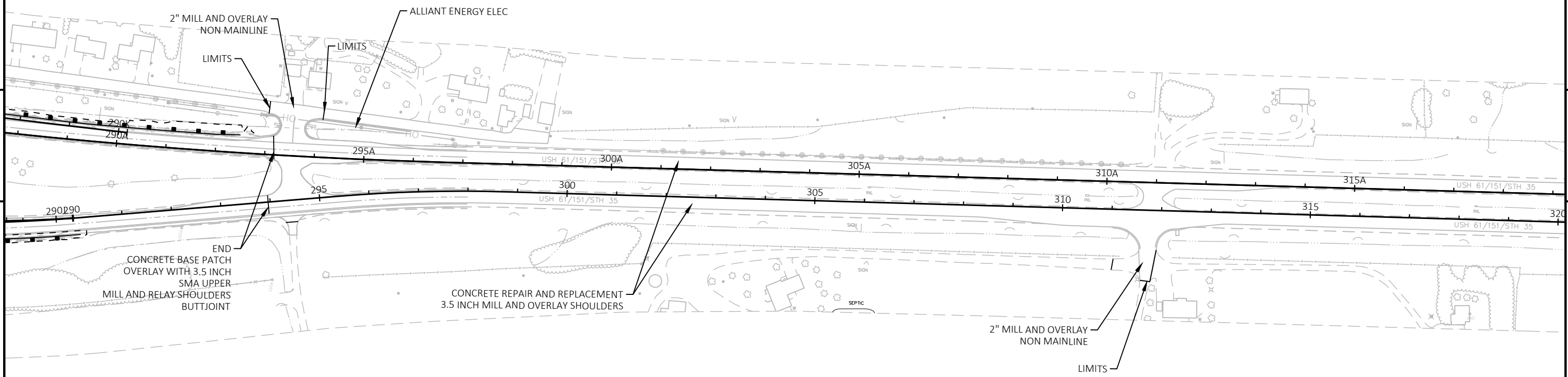
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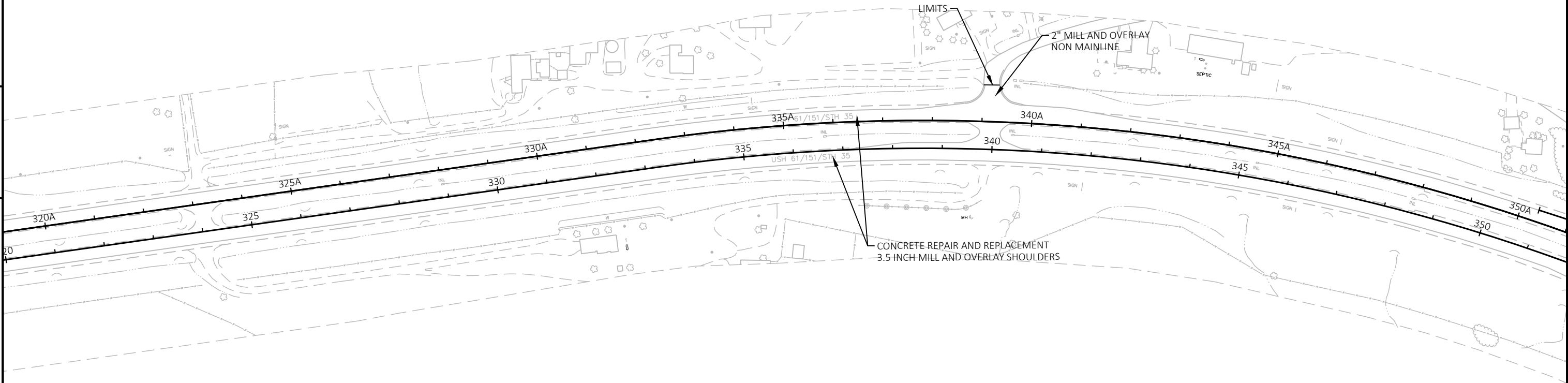
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|                        |             |               |      |           |   |
|------------------------|-------------|---------------|------|-----------|---|
| PROJECT NO: 1202-00-75 | HWY: USH 61 | COUNTY: GRANT | PLAN | SHEET 180 | E |
|------------------------|-------------|---------------|------|-----------|---|

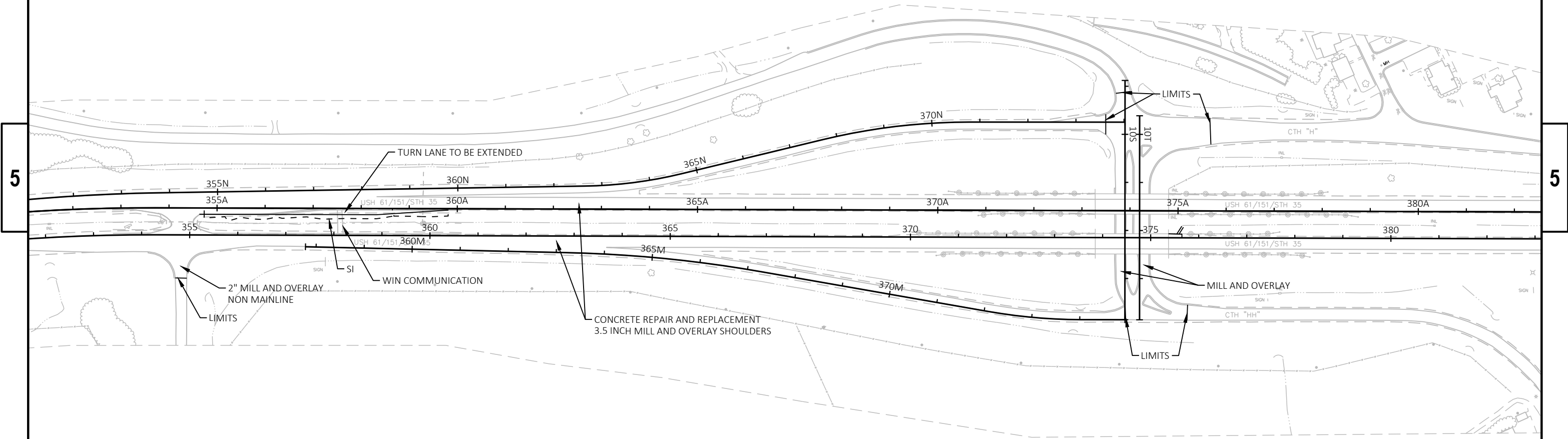


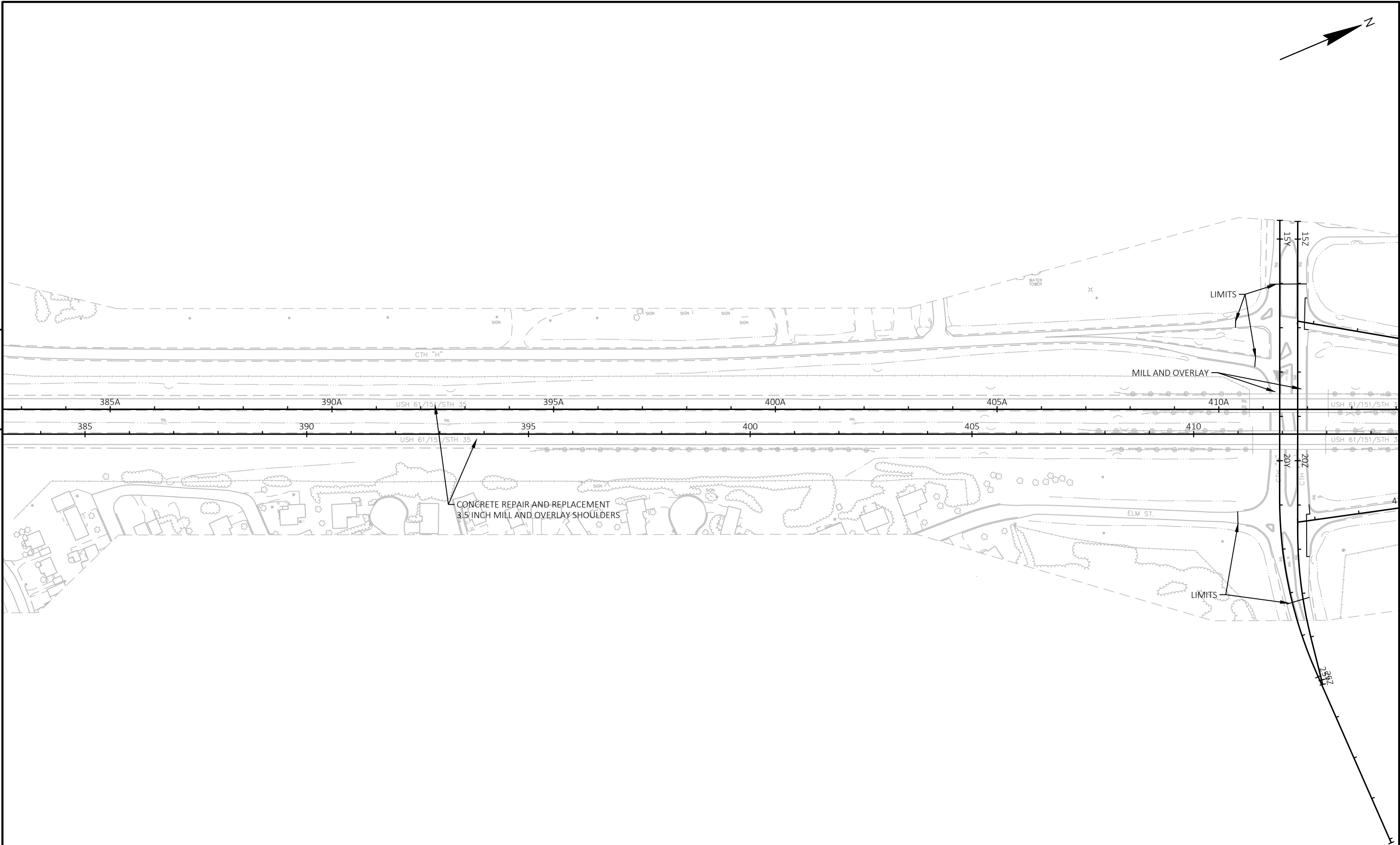
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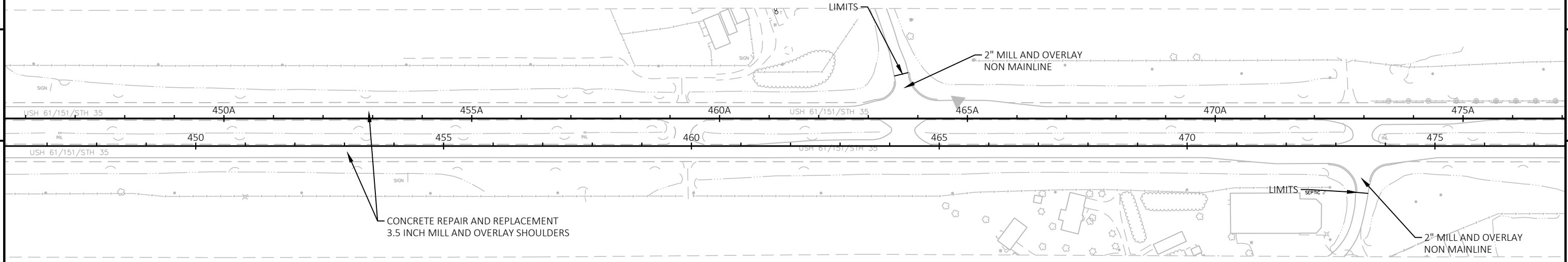






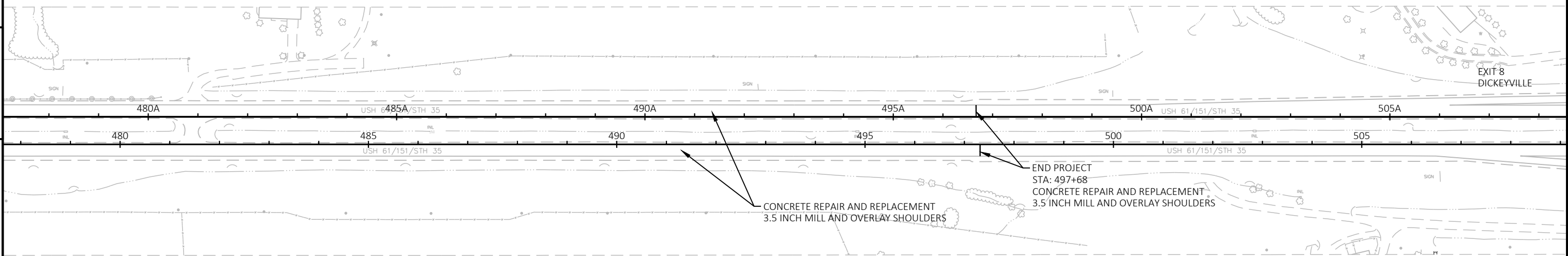
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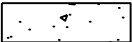
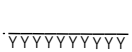
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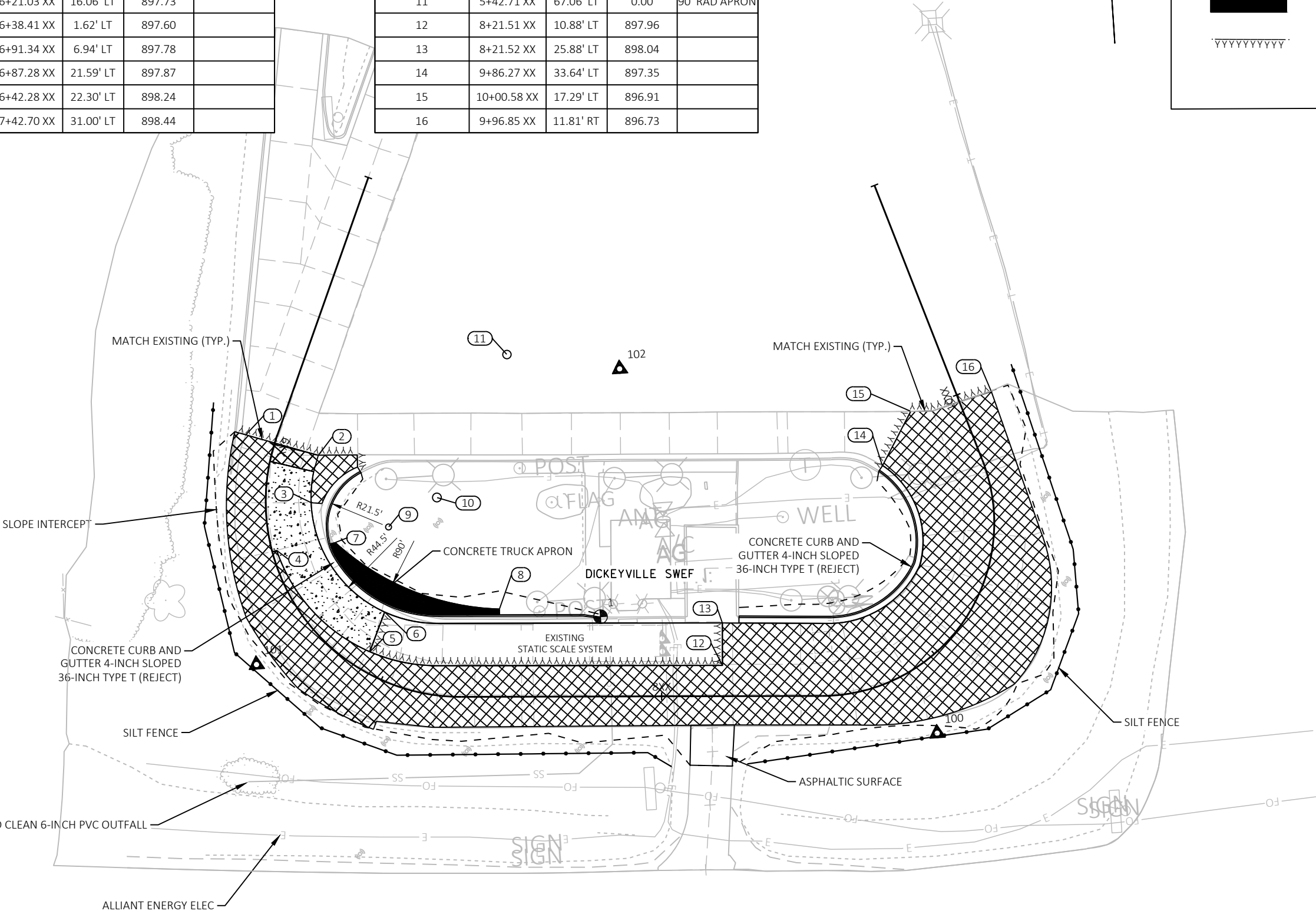
|                        |             |               |      |           |   |
|------------------------|-------------|---------------|------|-----------|---|
| PROJECT NO: 1202-00-75 | HWY: USH 61 | COUNTY: GRANT | PLAN | SHEET 186 | E |
|------------------------|-------------|---------------|------|-----------|---|

| Details SWEF |            |           |           |             |
|--------------|------------|-----------|-----------|-------------|
| POINT NUMBER | STATION    | OFFSET    | ELEVATION | DESCRIPTION |
| 1            | 5+99.78 XX | 10.60' RT | 897.32    |             |
| 2            | 5+98.84 XX | 16.00' LT | 897.60    |             |
| 3            | 6+21.03 XX | 16.06' LT | 897.73    |             |
| 4            | 6+38.41 XX | 1.62' LT  | 897.60    |             |
| 5            | 6+91.34 XX | 6.94' LT  | 897.78    |             |
| 6            | 6+87.28 XX | 21.59' LT | 897.87    |             |
| 7            | 6+42.28 XX | 22.30' LT | 898.24    |             |
| 8            | 7+42.70 XX | 31.00' LT | 898.44    |             |

| Details SWEF |             |           |           |               |
|--------------|-------------|-----------|-----------|---------------|
| POINT NUMBER | STATION     | OFFSET    | ELEVATION | DESCRIPTION   |
| 9            | 6+43.80 XX  | 41.91' LT | 0.00      | 21.5' RAD BOC |
| 10           | 6+08.66 XX  | 60.39' LT | 0.00      | 44.5' RAD C&G |
| 11           | 5+42.71 XX  | 67.06' LT | 0.00      | 90' RAD APRON |
| 12           | 8+21.51 XX  | 10.88' LT | 897.96    |               |
| 13           | 8+21.52 XX  | 25.88' LT | 898.04    |               |
| 14           | 9+86.27 XX  | 33.64' LT | 897.35    |               |
| 15           | 10+00.58 XX | 17.29' LT | 896.91    |               |
| 16           | 9+96.85 XX  | 11.81' RT | 896.73    |               |

LEGEND

-  CONCRETE PAVEMENT 11-INCH  
(WITH SCALE APPROACH PAVEMENT REINFORCEMENT)
-  CONCRETE PAVEMENT 8-INCH
-  CONCRETE TRUCK APRON 12-INCH  
(COLORING CONCRETE WISDOT RED)
-  SAWING CONCRETE



Standard Detail Drawing List

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| 08A05-21D | INLET COVERS TYPE V, V-B, & VV-B                                           |
| 08A05-21E | INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M                 |
| 08C07-03  | INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT                       |
| 08D02-08A | CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES                           |
| 08D02-08B | CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES                           |
| 08D02-08C | CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES                           |
| 08D03-09A | CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES                      |
| 08D03-09B | CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES                      |
| 08D04-07  | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES                                 |
| 08D05-21A | CURB RAMPS TYPES 1 AND 1-A                                                 |
| 08D05-21B | CURB RAMPS TYPES 2 AND 3                                                   |
| 08D05-21C | CURB RAMPS TYPES 4A AND 4A1                                                |
| 08D05-21D | CURB RAMPS TYPE 4B AND 4B1                                                 |
| 08D05-21E | CURB RAMPS TYPES 5, 6, 7A, 7B & 8                                          |
| 08D05-21F | CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS                    |
| 08D05-21G | CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES                |
| 08E08-03  | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS            |
| 08E09-06  | SILT FENCE                                                                 |
| 08E10-02  | INLET PROTECTION TYPE A, B, C AND D                                        |
| 08E15-01  | CULVERT PIPE CHECK                                                         |
| 08F01-11  | APRON ENDWALLS FOR CULVERT PIPE                                            |
| 08F04-08  | JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL                    |
| 09G02-05A | BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION                               |
| 09G02-05B | BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION                               |
| 09G02-05C | BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION                               |
| 11A01-06  | MAINTENANCE CROSSOVER FOR FREEWAYS                                         |
| 11B01-05  | CONCRETE CORRUGATED MEDIAN                                                 |
| 11B02-02  | CONCRETE MEDIAN NOSE                                                       |
| 13A05-06A | SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY                                    |
| 13A05-06B | SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY                                    |
| 13A07-02  | CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR AND REPLACEMENT           |
| 13B02-09A | CONCRETE PAVEMENT APPROACH SLAB                                            |
| 13C01-19  | CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES                             |
| 13C09-17A | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                   |
| 13C09-17B | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                   |
| 13C09-17C | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                   |
| 13C11-14A | RURAL DOWELED CONCRETE PAVEMENT                                            |
| 13C11-14B | RURAL DOWELED CONCRETE PAVEMENT                                            |
| 13C13-11  | URBAN DOWELED CONCRETE PAVEMENT                                            |
| 13C14-07A | BASE PATCHING CONCRETE                                                     |
| 13C14-07B | BASE PATCHING CONCRETE                                                     |
| 13C14-07C | BASE PATCHING CONCRETE                                                     |
| 13C18-08A | CONCRETE PAVEMENT JOINTING                                                 |
| 13C18-08B | CONCRETE PAVEMENT STEEL REINFORCEMENT                                      |
| 13C18-08C | CONCRETE PAVEMENT JOINT TYPES                                              |
| 13C18-08D | CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES                             |
| 13C18-08E | CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS          |
| 13C18-08F | CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER         |
| 13C18-08G | CONCRETE PAVEMENT JOINTING ACCELERATION/DECELERATION LANE                  |
| 13C19-03  | HMA LONGITUDINAL JOINTS                                                    |
| 14B07-16A | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16B | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16C | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16D | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16E | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16F | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16G | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16H | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16I | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16J | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16K | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16L | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16M | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B07-16N | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                 |
| 14B08-02A | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |
| 14B08-02B | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |
| 14B08-02C | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS |

Standard Detail Drawing List

|           |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| 14B08-02D | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS          |
| 14B08-02E | CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS          |
| 14B15-11A | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS                           |
| 14B15-11B | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS                           |
| 14B15-11C | STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS                          |
| 14B20-12A | STEEL THRIE BEAM STRUCTURE APPROACH                                                 |
| 14B20-12B | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS              |
| 14B20-12C | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS          |
| 14B20-12D | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS              |
| 14B20-12E | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W" |
| 14B20-12F | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"          |
| 14B20-12G | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL                         |
| 14B20-12H | STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT                        |
| 14B24-09A | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL                                    |
| 14B24-09B | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL                                    |
| 14B24-09C | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL                                    |
| 14B26-05A | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B26-05B | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B26-05C | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B26-05D | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B26-05E | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B26-05F | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B26-05G | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B26-05H | STEEL THRIE BEAM BULLNOSE TERMINAL                                                  |
| 14B27-01A | STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL                                        |
| 14B27-01B | STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL                                        |
| 14B27-01C | STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL                                        |
| 14B32-11A | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B32-11B | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B32-11C | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B32-11D | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B32-11E | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B32-11F | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B32-11G | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B32-11H | CONCRETE BARRIER SINGLE SLOPE (CBSS)                                                |
| 14B37-01A | 32-INCH DOUBLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION           |
| 14B37-01B | 32-INCH DOUBLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION           |
| 14B39-02B | 36-INCH SSCB TO 42-INCH SSCB HEIGHT TRANSITION                                      |
| 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)                            |
| 14B45-05A | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05B | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05C | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05D | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05E | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05F | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05G | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05H | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05I | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05J | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05K | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B45-05L | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)                                |
| 14B47-05A | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                      |
| 14B47-05B | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                      |
| 14B47-05C | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                      |
| 14B47-05D | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                      |
| 14B47-05E | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                      |
| 14B47-05F | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                      |
| 14B47-05G | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                      |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END                                                |
| 15A03-02B | FLEXIBLE MARKER POST FOR CULVERT END                                                |
| 15A04-08B | BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING                                    |



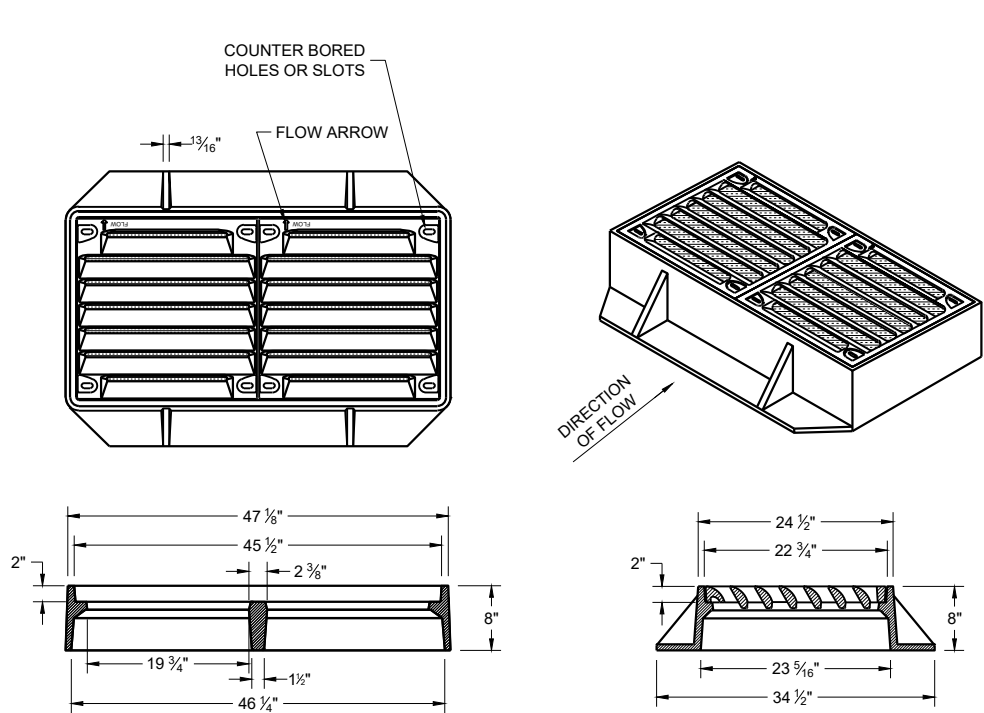
Standard Detail Drawing List

|           |                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------|
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES                                                         |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES                                                          |
| 15C02-09C | DETOUR SIGNING FOR MAINLINE CLOSURES                                                               |
| 15C02-09D | ON RAMP LANE CLOSURE                                                                               |
| 15C02-09E | OFF RAMP LANE CLOSURE                                                                              |
| 15C02-09F | ADVANCED WIDTH RESTRICTION SIGNING                                                                 |
| 15C02-09G | TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE                                                          |
| 15C02-09H | MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING                                                         |
| 15C04-05  | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC |
| 15C07-16A | PAVEMENT MARKING SYMBOLS                                                                           |
| 15C07-16B | PAVEMENT MARKING WORDS                                                                             |
| 15C07-16C | PAVEMENT MARKING ARROWS                                                                            |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS                                                           |
| 15C08-23B | TEMPORARY LONGITUDINAL PAVEMENT MARKING                                                            |
| 15C08-23C | PAVEMENT MARKING (TURN LANES)                                                                      |
| 15C08-23D | PAVEMENT MARKING (TURN LANES)                                                                      |
| 15C11-10A | CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST                                                  |
| 15C11-10B | 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                             |
| 15C18-09A | MEDIAN ISLAND MARKINGS                                                                             |
| 15C18-09B | PAVEMENT MARKINGS, MEDIAN ISLAND NOSE                                                              |
| 15C21-11  | SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS                                  |
| 15C31-08A | PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP                                                  |
| 15C31-08C | PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP                                          |
| 15C33-05  | STOP LINE AND CROSSWALK PAVEMENT MARKING                                                           |
| 15D06-06  | TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION                                                        |
| 15D12-14A | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE                                           |
| 15D12-14B | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE                                           |
| 15D12-14F | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH                   |
| 15D12-14G | TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY                               |
| 15D15-07A | TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE                                        |
| 15D15-07B | TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE                                                 |
| 15D15-07C | TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE                                         |
| 15D15-07D | TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE                                         |
| 15D15-07E | TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE                                            |
| 15D16-06  | TRAFFIC CONTROL, EXIT RAMP CLOSURE                                                                 |
| 15D20-09A | TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY                               |
| 15D20-09C | TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY                        |
| 15D21-07A | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE                                           |
| 15D21-07B | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE                                           |
| 15D33-09  | TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS                                              |
| 15D40-05B | TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND OVER                                 |
| 15D47-03B | TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER                                                    |
| 15D49-04  | TRAFFIC CONTROL, SYSTEM RAMP CLOSURE                                                               |
| 15D50-03A | TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT                                             |

GENERAL NOTES

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

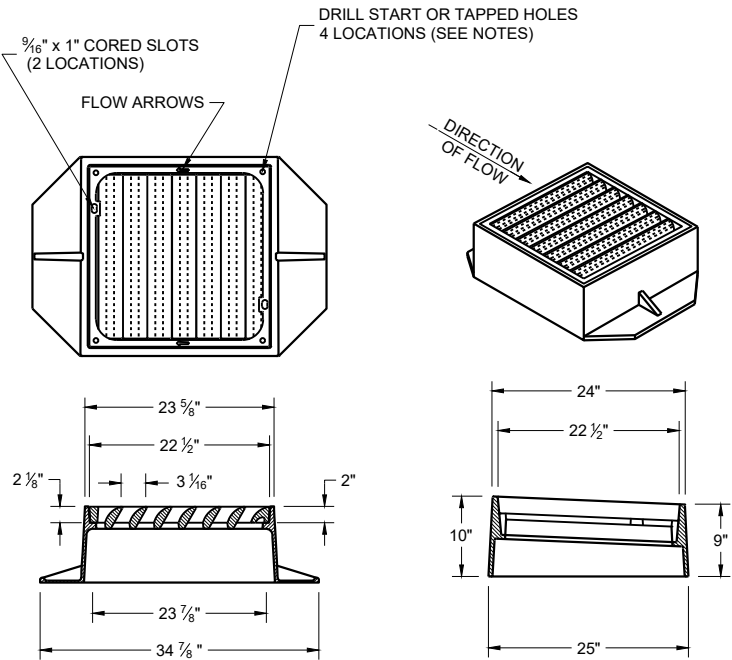
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "VV-B"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER  
ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

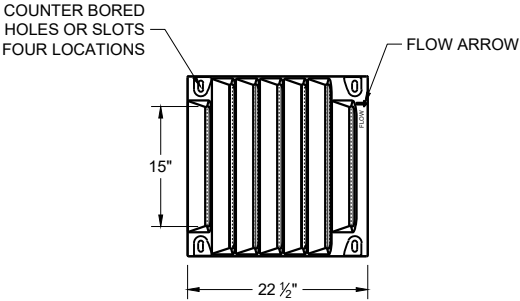
TYPE V  
FRAME - CAST GRAY IRON ASTM A48 CLASS 35B  
3/8" DIA. X 1/16" DRILL START IN 8 LOCATIONS  
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V  
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A  
3/8" DIA. X 1/16" DRILL START IN 4 LOCATIONS  
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR  
TYPE "V" AND "VV-B" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER  
NOTED AS TYPE "V-B" OR "VV-B" (FOR DOUBLE GRATE) ON DRAINAGE TABLE

TAP 1/2" -13 HOLES IN FOUR LOCATIONS PER GRATE IN FRAME TO BOLT GRATE(S).  
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD  
BOLTS - 1/2" -13 STAINLESS STEEL BOLTS WITH WASHERS  
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

INLET COVERS  
TYPES V, V-B, AND VV-B

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR

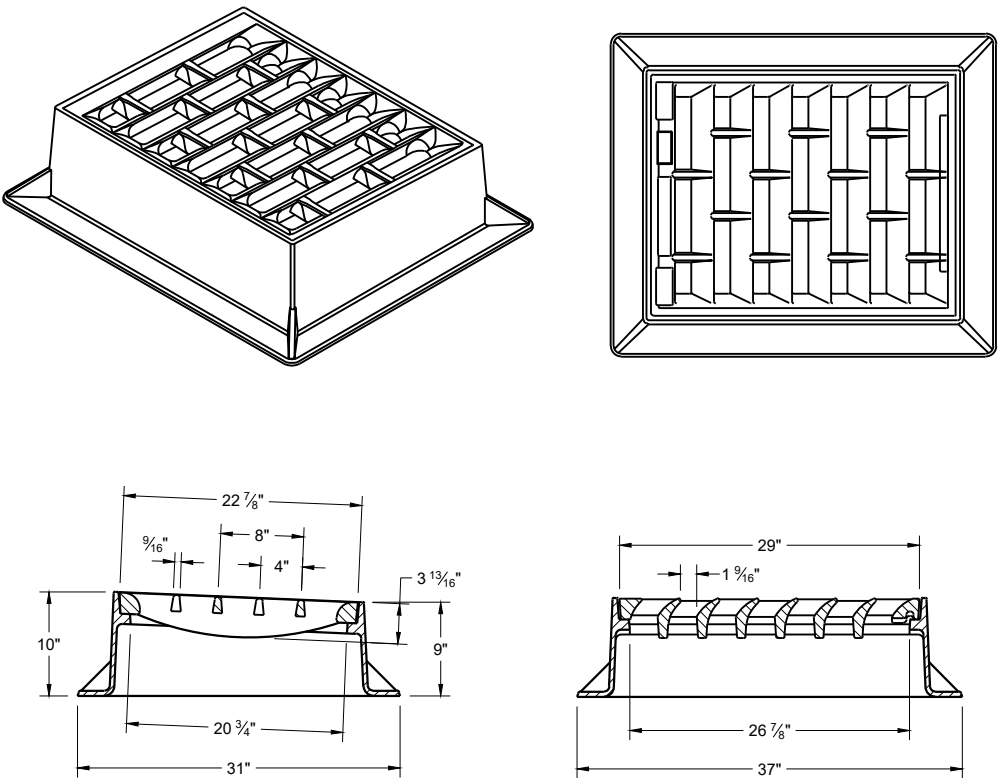
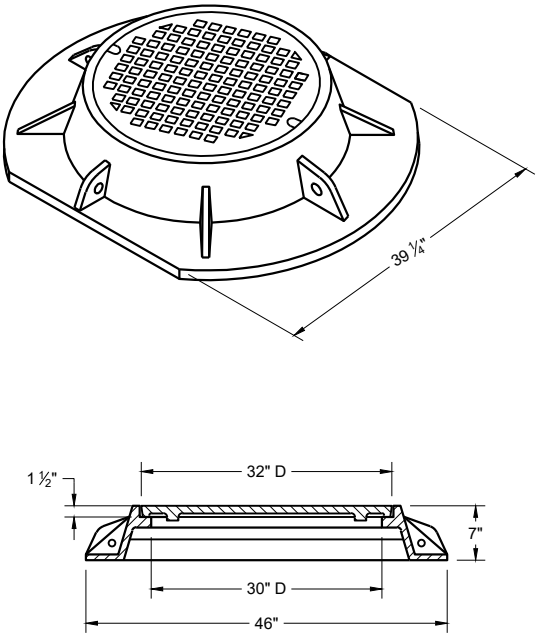
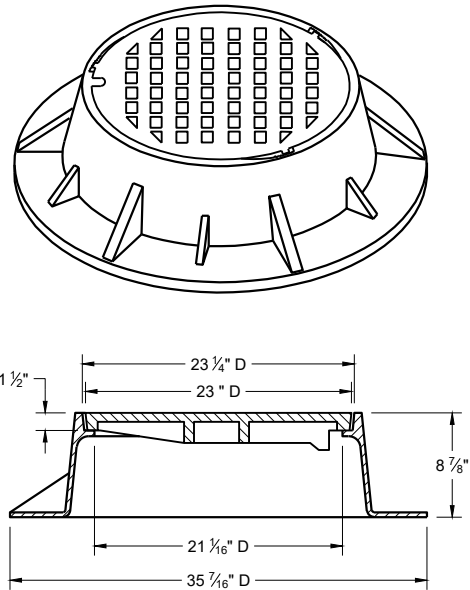
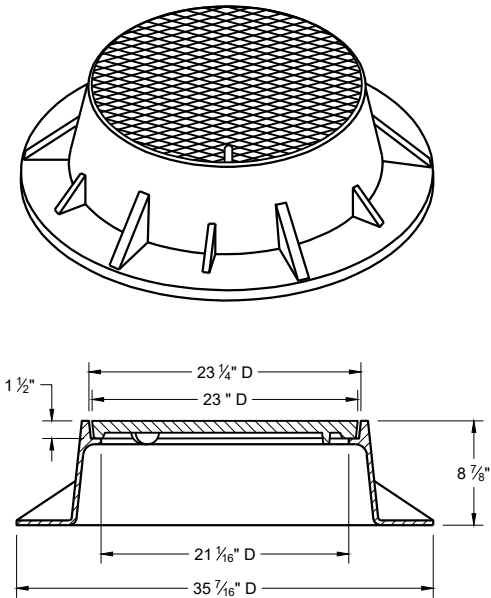


GENERAL NOTES

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

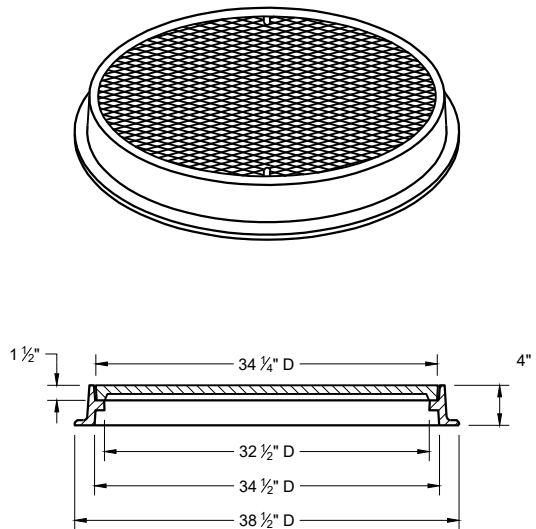
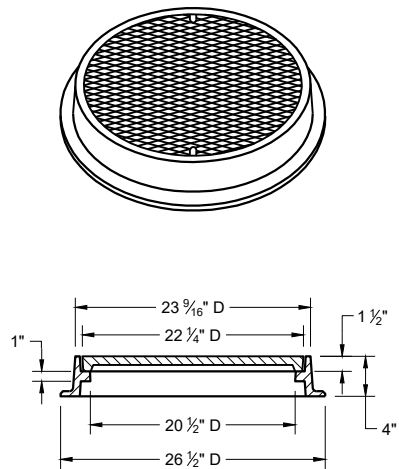
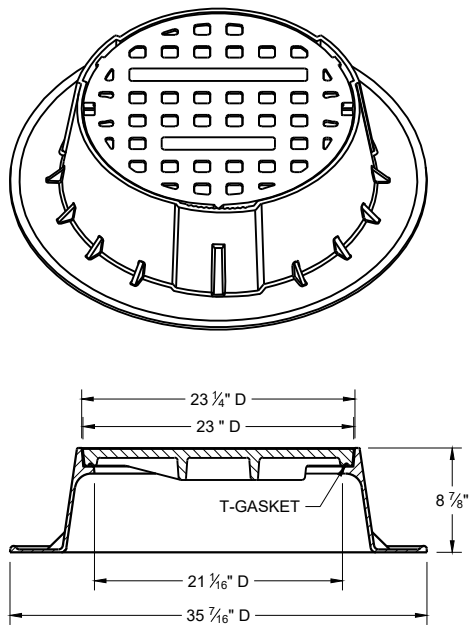
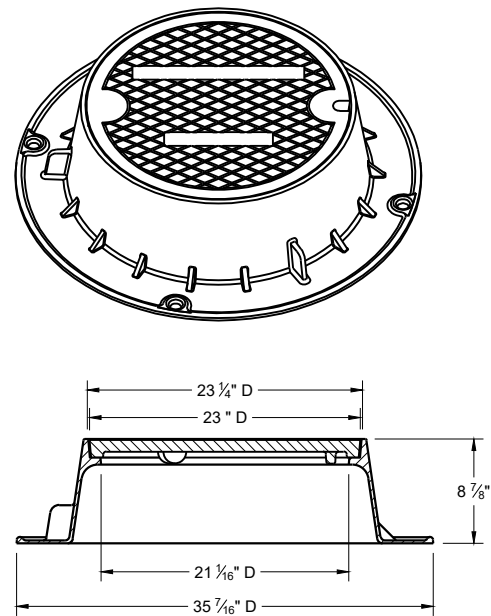
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



TYPE "K"

INLET COVER TYPE "BW"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

TYPE "J" SPECIAL

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

NOTE: EITHER CASTING IS ACCEPTABLE

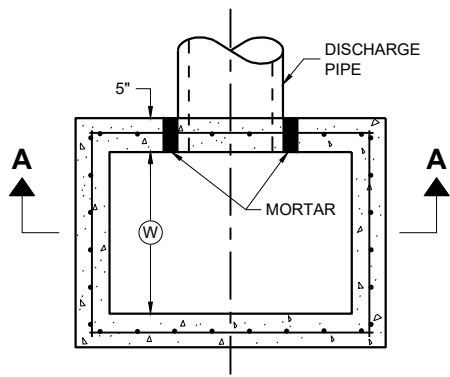
TYPE "L"

TYPE "M"

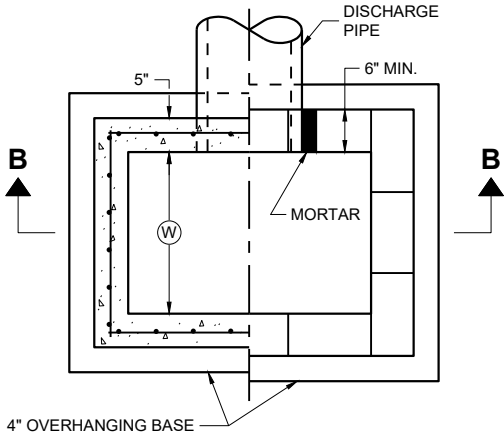
INLET COVERS TYPES BW  
MANHOLE COVERS TYPES K,  
J, J-S, L, AND M

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

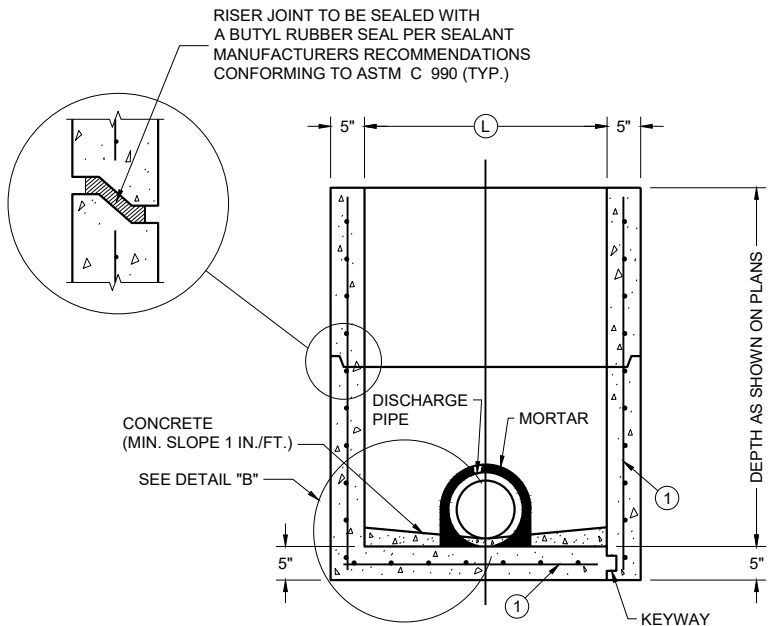
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DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



PLAN VIEW



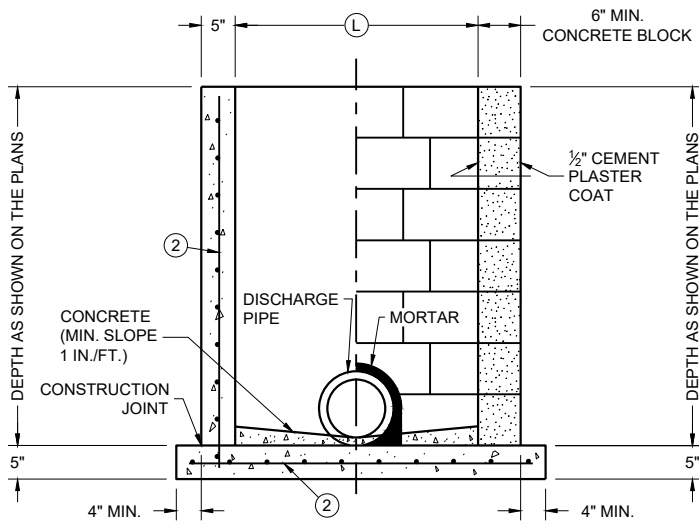
PLAN VIEW



PRECAST REINFORCED  
CONCRETE WITH  
MONOLITHIC BASE

PRECAST REINFORCED  
CONCRETE WITH  
INTEGRAL BASE

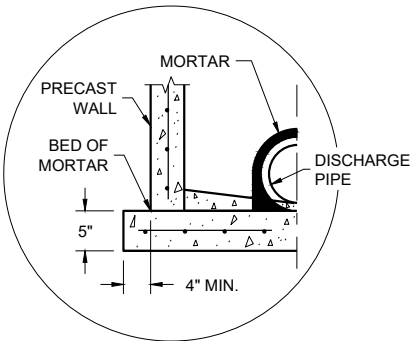
SECTION A - A



CAST IN PLACE  
REINFORCED  
CONCRETE

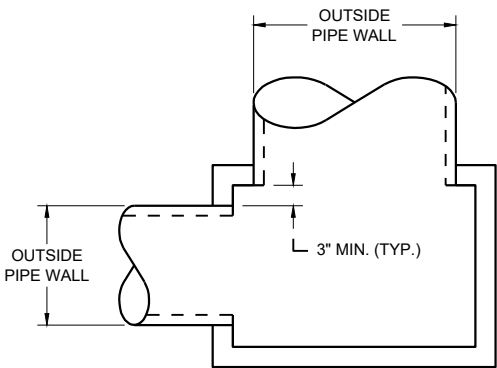
CONCRETE BLOCK WITH  
CAST IN PLACE OR  
PRECAST REINFORCED  
CONCRETE BASE ①

SECTION B - B



SEPARATE PRECAST REINFORCED  
CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

GENERAL NOTES

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

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

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

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

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

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

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

CATCH BASIN COVER MATRIX

| INLET<br>SIZE | WIDTH<br>(W) (FT.) | LENGTH<br>(L) (FT.) | INLET COVER TYPE |         |    |   |         |   |   |   |    |       |
|---------------|--------------------|---------------------|------------------|---------|----|---|---------|---|---|---|----|-------|
|               |                    |                     | ALL A'S          | ALL B'S | BW | F | ALL H'S | S | T | V | WM | V V-B |
| 2 X 2-FT      | 2                  | 2                   | X                | X       |    |   |         | X |   |   |    |       |
| 2 X 2.5-FT    | 2                  | 2.5                 |                  |         | X  |   |         | X | X | X | X  |       |
| 2 X 3-FT      | 2                  | 3                   |                  |         |    |   | X       |   |   |   |    |       |
| 2.5 X 3-FT    | 2.5                | 3                   |                  |         |    | X |         |   |   |   |    |       |
| 2 X 3.5-FT    | 2                  | 3.5                 |                  |         |    |   |         |   |   |   |    | X     |

PIPE MATRIX

| CATCH<br>BASIN<br>SIZE | MAXIMUM INSIDE PIPE DIAMETER<br>FOR TWO PIPES |             |
|------------------------|-----------------------------------------------|-------------|
|                        | WIDTH (IN)                                    | LENGTH (IN) |
| 2 X 2-FT               | 12                                            | 12          |
| 2 X 2.5-FT             | 12                                            | 18          |
| 2 X 3-FT               | 12                                            | 24          |
| 2.5 X 3-FT             | 18                                            | 24          |
| 2 X 3.5-FT             | 12                                            | 30          |

INLETS 2 X 2-FT, 2 X 2.5-FT,  
2 X 3-FT, 2.5 X 3-FT  
AND 2 X 3.5-FT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR

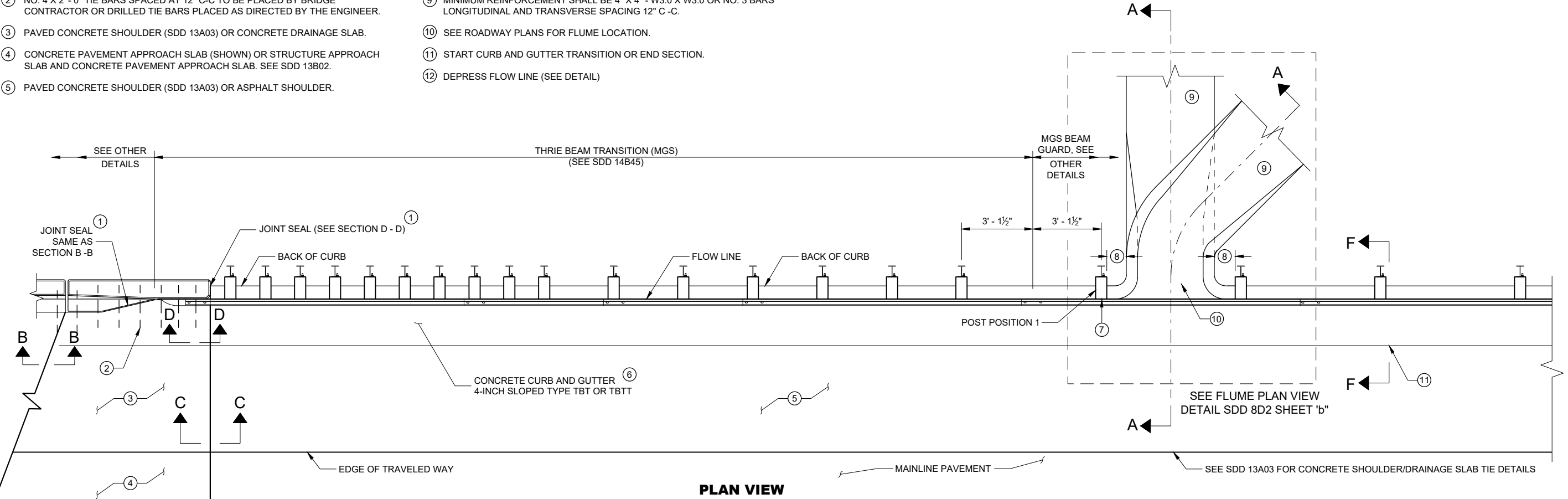
GENERAL NOTES

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.

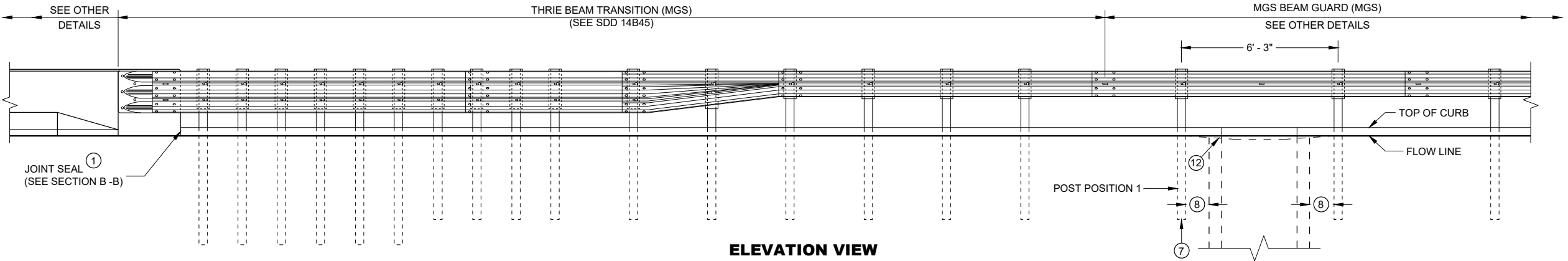
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- 1 USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- 2 NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- 3 PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- 4 CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- 5 PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- 6 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- 7 PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- 8 CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- 9 MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- 10 SEE ROADWAY PLANS FOR FLUME LOCATION.
- 11 START CURB AND GUTTER TRANSITION OR END SECTION.
- 12 DEPRESS FLOW LINE (SEE DETAIL)



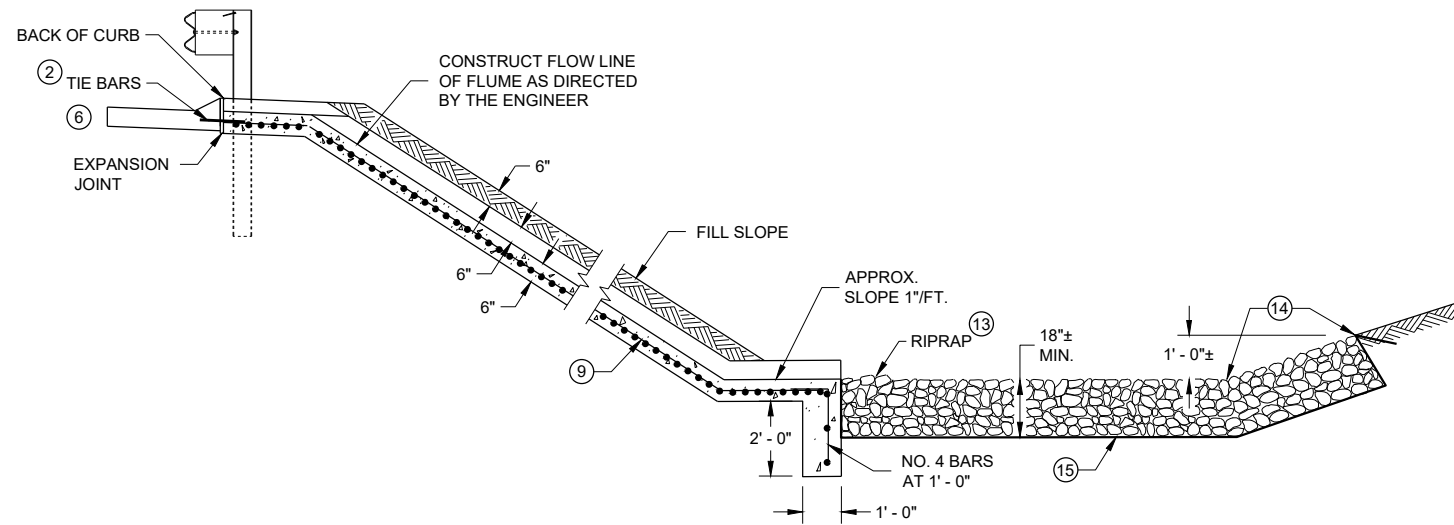
PLAN VIEW



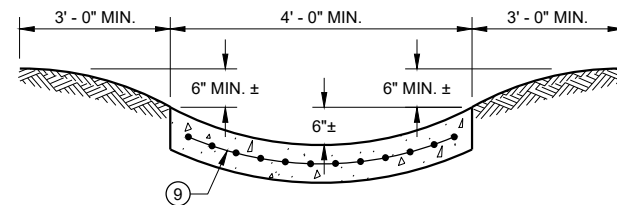
ELEVATION VIEW

CONCRETE SURFACE  
DRAINS FLUME TYPE  
AT STRUCTURES

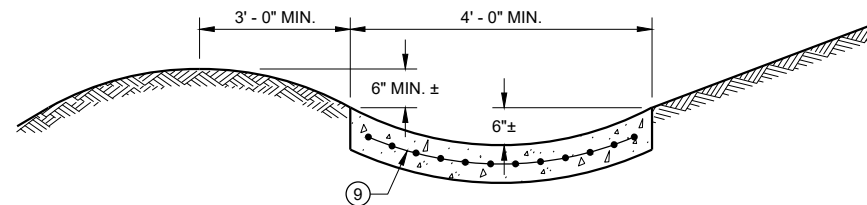
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



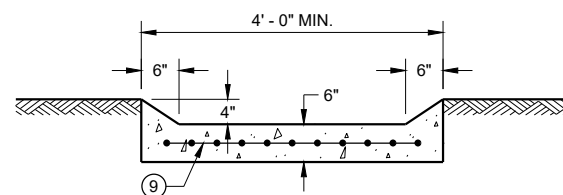
SECTION A - A



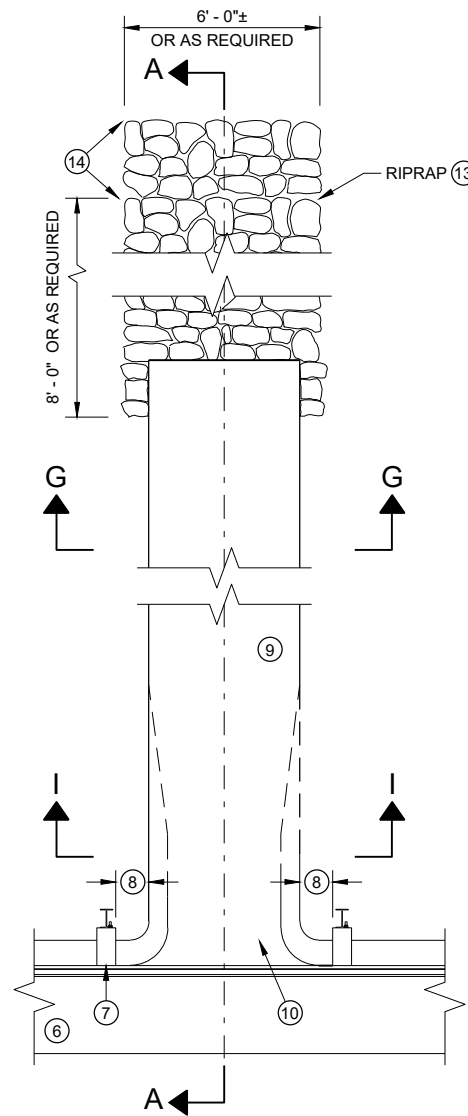
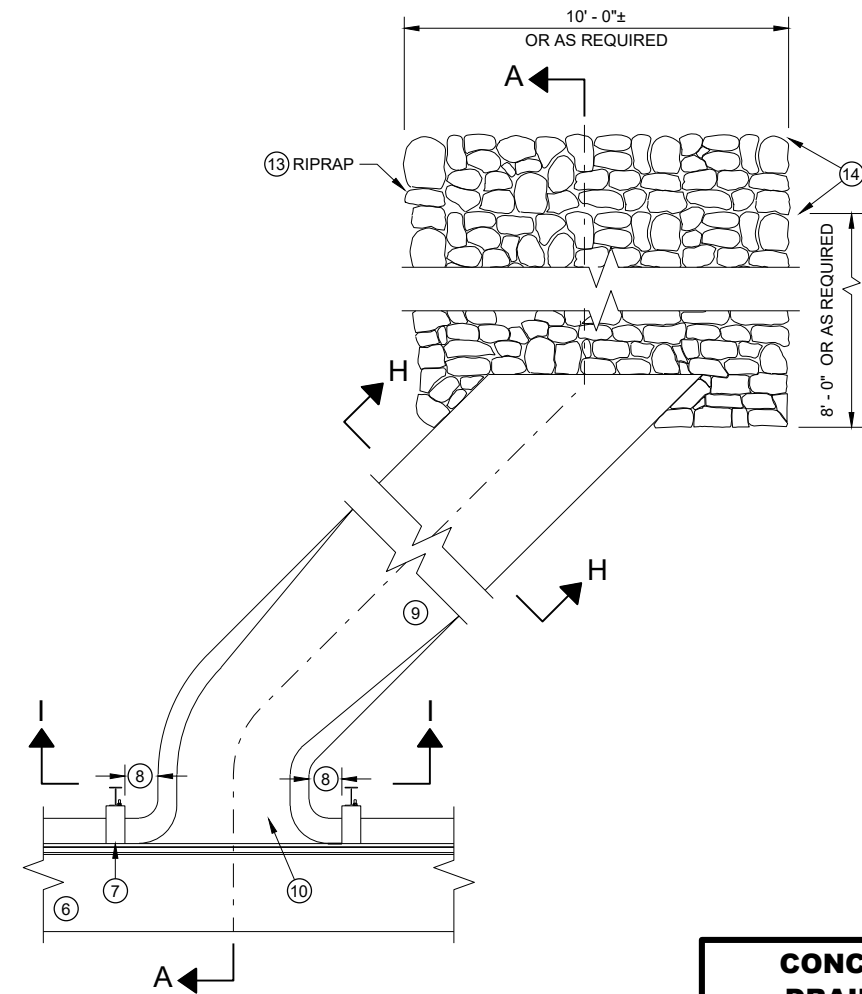
SECTION G - G



SECTION H - H



SECTION I - I

PLAN VIEW  
PERPENDICULAR FLUMEPLAN VIEW  
SKEWED FLUME

## GENERAL NOTES

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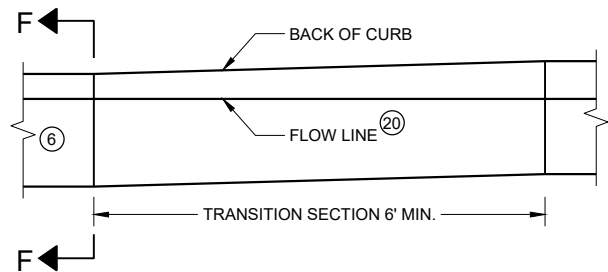
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBT. USE TYPE TBT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

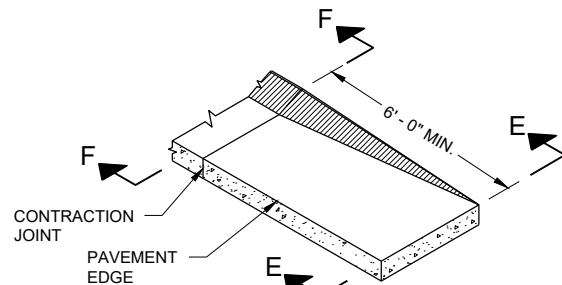
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.

**CONCRETE SURFACE  
DRAINS FLUME TYPE  
AT STRUCTURES**

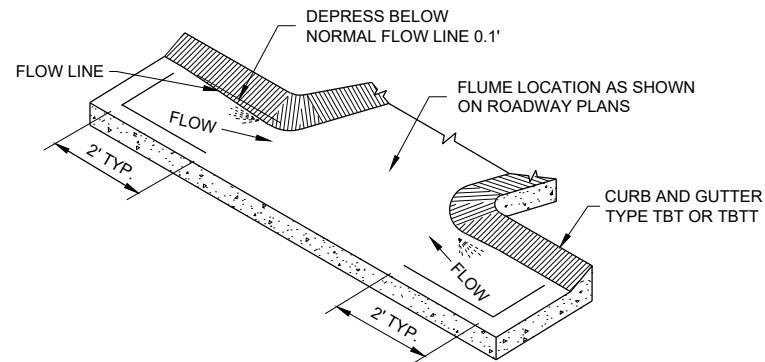
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 195



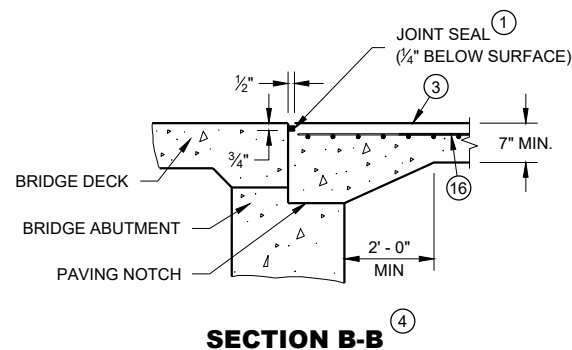
**CURB AND GUTTER TRANSITION SECTION  
CONCRETE CURB AND GUTTER 4-INCH SLOPED  
36 INCH TYPE TBT OR TBTT**



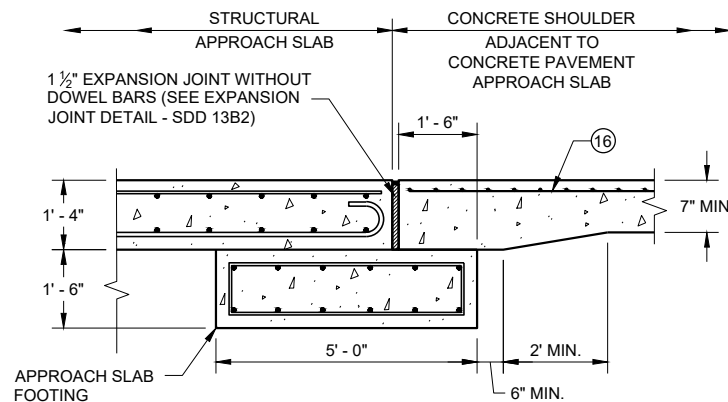
**CURB AND GUTTER END SECTION  
CONCRETE CURB AND GUTTER 4-INCH SLOPED  
36 INCH TYPE TBT OR TBTT**



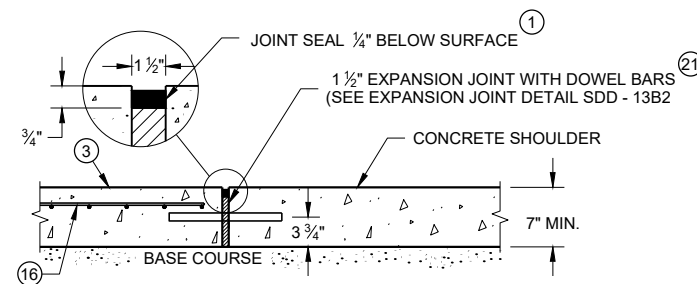
**CURB AND GUTTER FLOW LINE DEPRESSION  
AT FLUMES CONCRETE CURB AND GUTTER  
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**



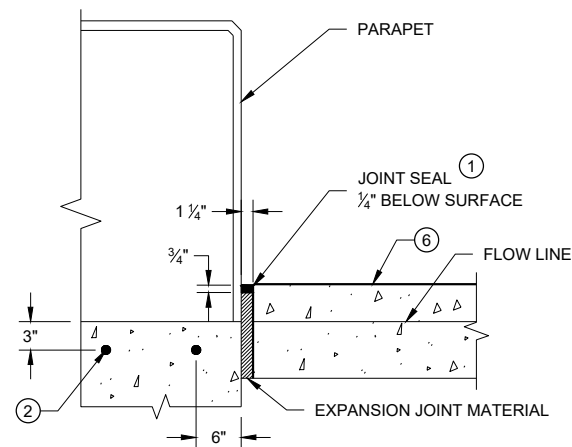
**SECTION B-B**



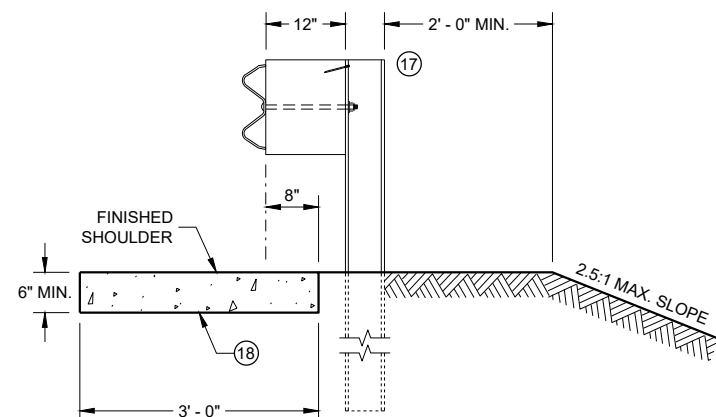
**SECTION C - C  
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL  
APPROACH SLAB AND CONCRETE APPROACH SLAB**



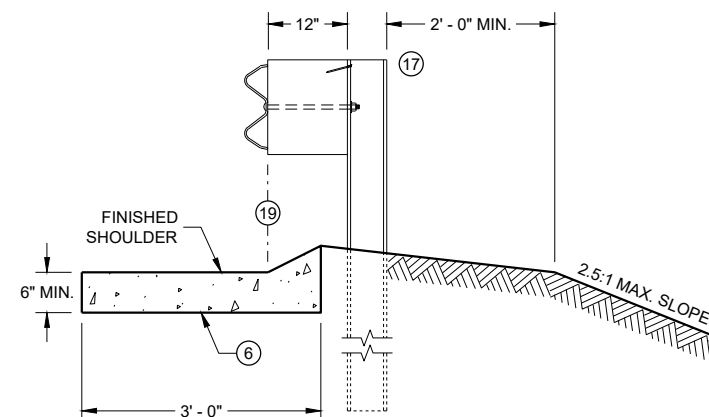
**SECTION C - C  
JOINT DETAIL FOR BRIDGE APPROACH  
WITH CONCRETE SHOULDERS**



**SECTION D - D**



**SECTION E - E**



**SECTION F - F**

## 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.

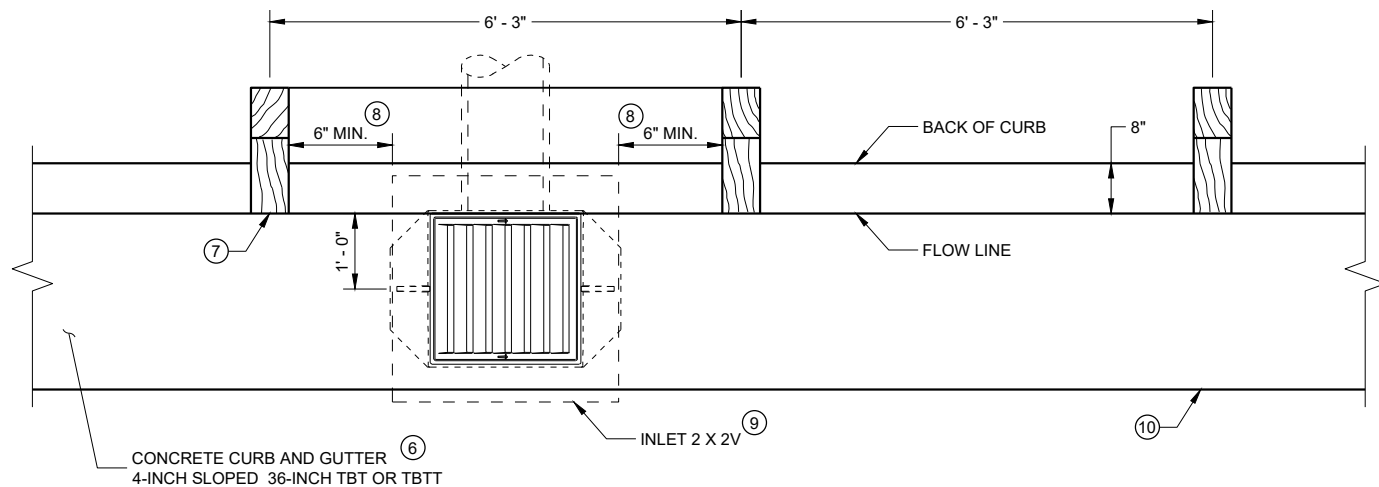
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

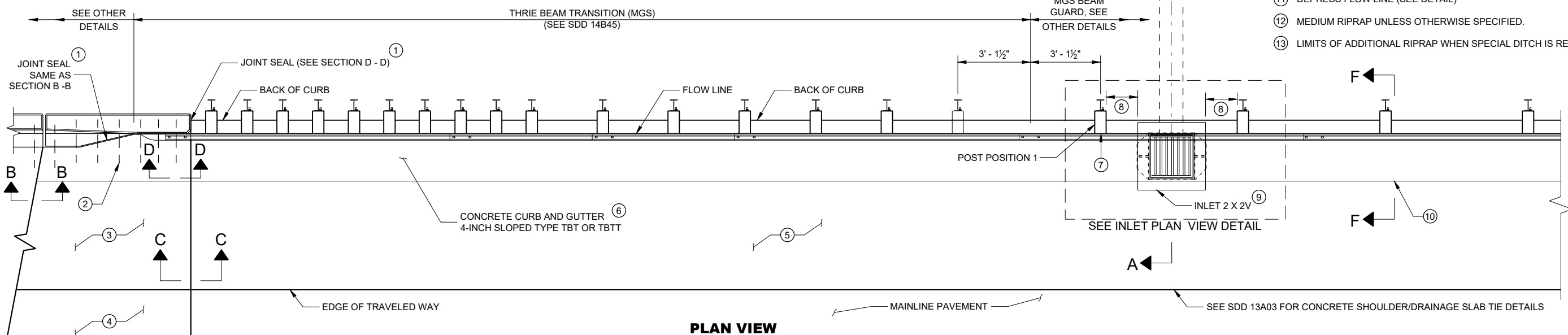
## CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

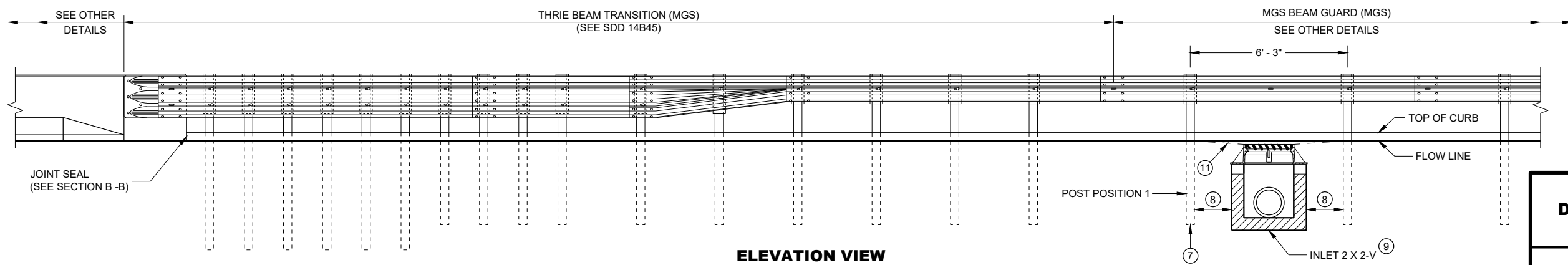
APPROVED  
May 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 196  
FHWA



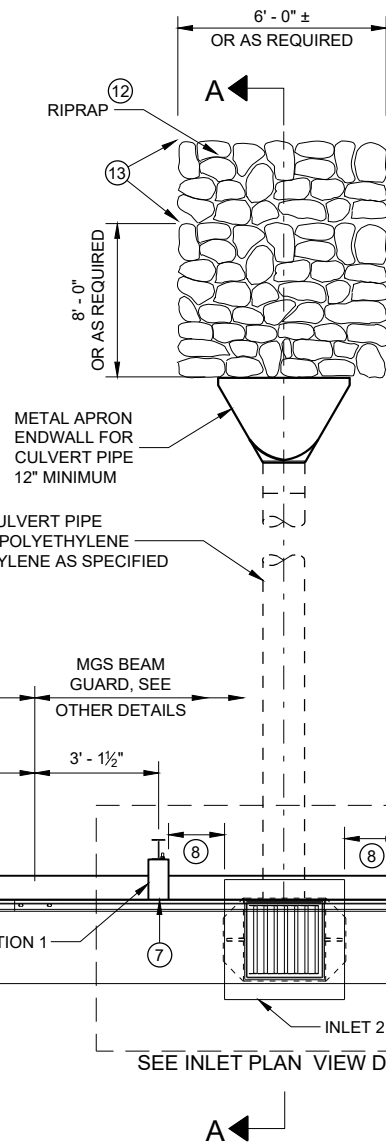
**INLET PLAN VIEW**  
(NOTE: RAIL NOT SHOWN FOR CLARITY)



**PLAN VIEW**



**ELEVATION VIEW**



**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.

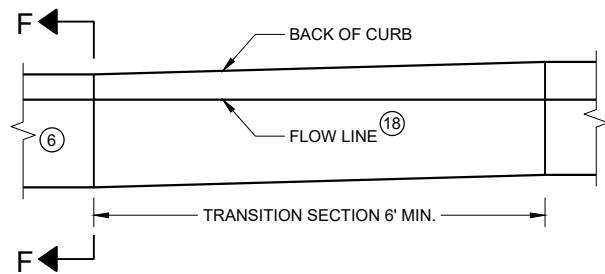
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
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- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBT. USE TYPE TBT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.
- ⑨ SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.
- ⑩ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑪ DEPRESS FLOW LINE (SEE DETAIL)
- ⑫ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑬ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

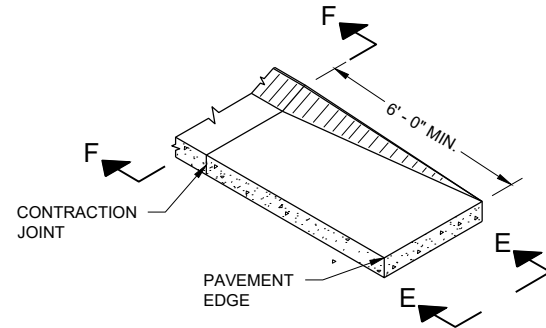
**CONCRETE SURFACE  
DRAINS DROP INLET TYPE  
AT STRUCTURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

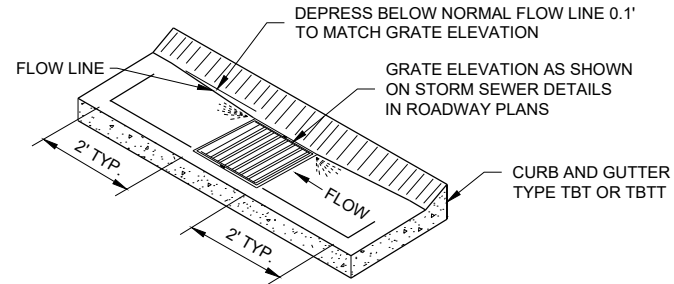




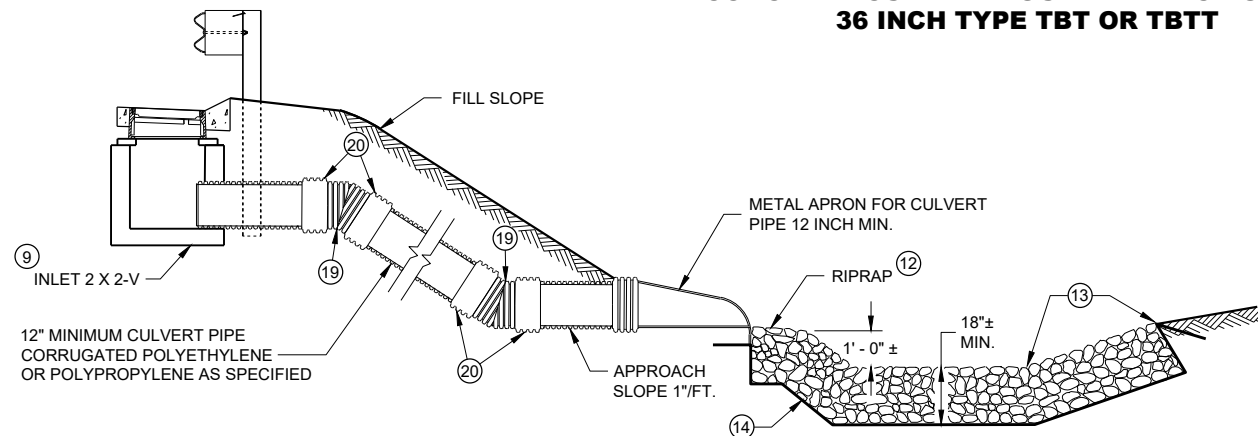
**CURB AND GUTTER TRANSITION SECTION  
CONCRETE CURB AND GUTTER 4-INCH SLOPED  
36 INCH TYPE TBT OR TBTT**



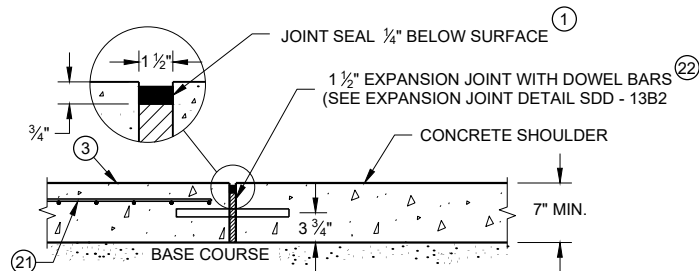
**CURB AND GUTTER END SECTION  
CONCRETE CURB AND GUTTER 4-INCH SLOPED  
36 INCH TYPE TBT OR TBTT**



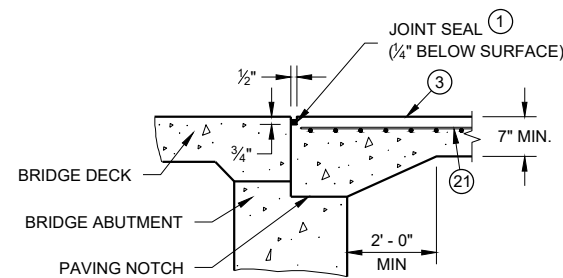
**CURB AND GUTTER FLOW LINE DEPRESSION  
AT INLETS CONCRETE CURB AND GUTTER  
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**



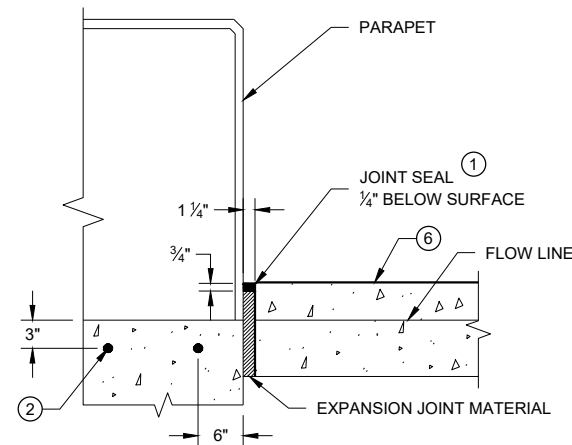
**SECTION A - A**



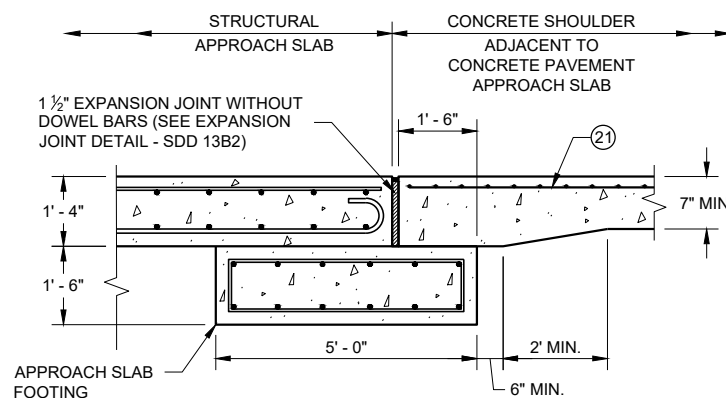
**SECTION C - C  
JOINT DETAIL FOR BRIDGE APPROACH  
WITH CONCRETE SHOULDERS**



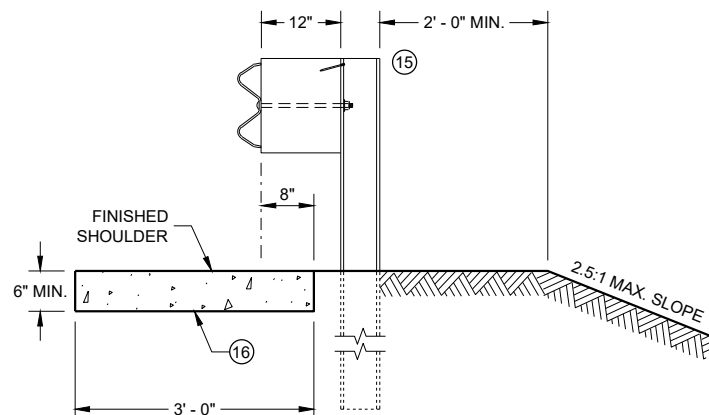
**SECTION B-B**



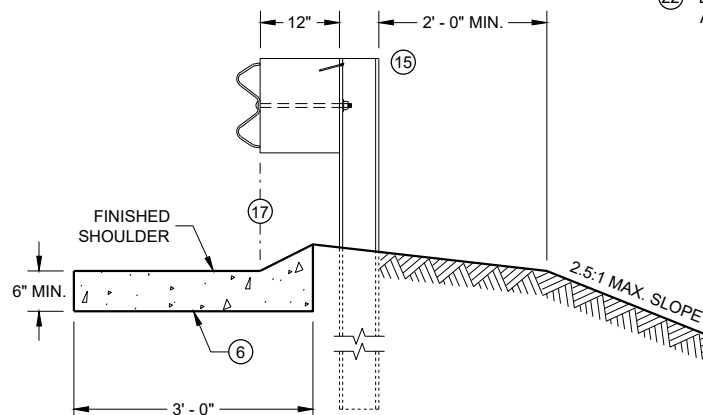
**SECTION D - D**



**SECTION C - C  
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL  
APPROACH SLAB AND CONCRETE APPROACH SLAB**



**SECTION E - E**



**SECTION F - F**

## 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.

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

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.
- ⑨ SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.
- ⑩ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑪ DEPRESS FLOW LINE (SEE DETAIL)
- ⑫ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑬ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑭ GEOTEXTILE TYPE HR.
- ⑮ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑯ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑰ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑱ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ⑲ MANUFACTURER SUPPLIED BEND.
- ⑳ MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.
- ㉑ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ㉒ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

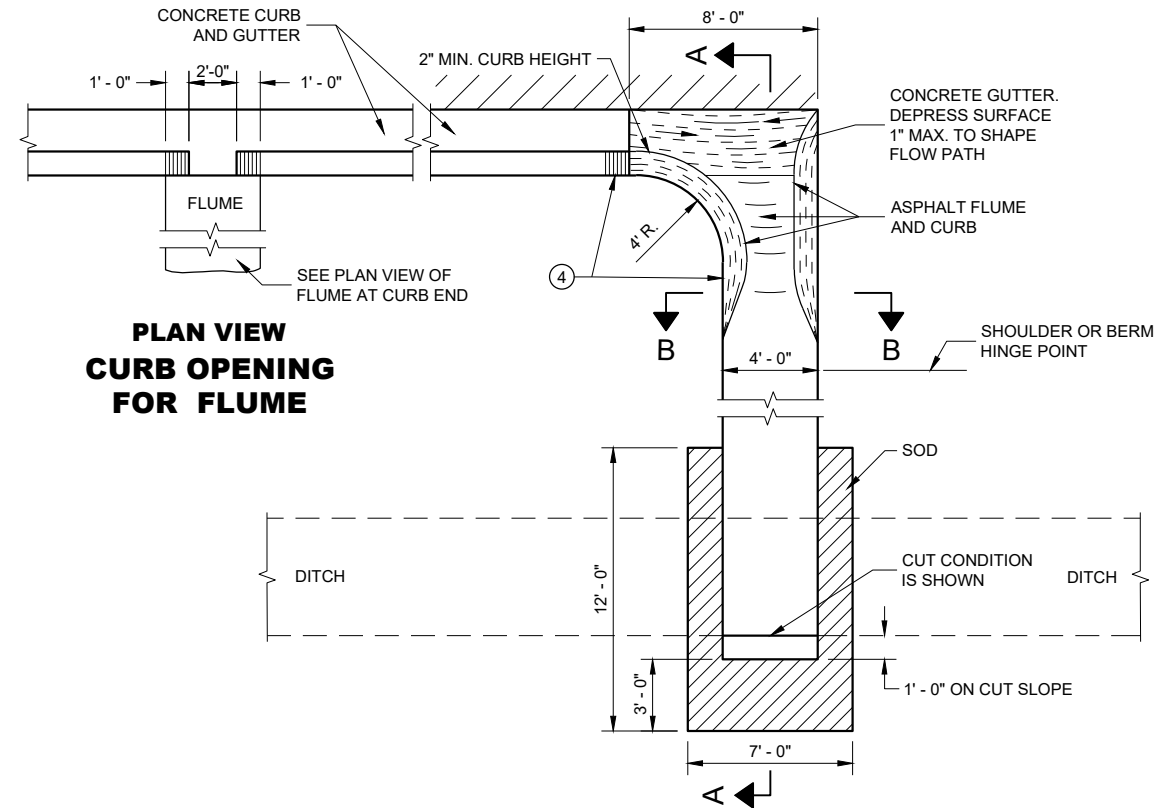
## CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 198  
FHWA

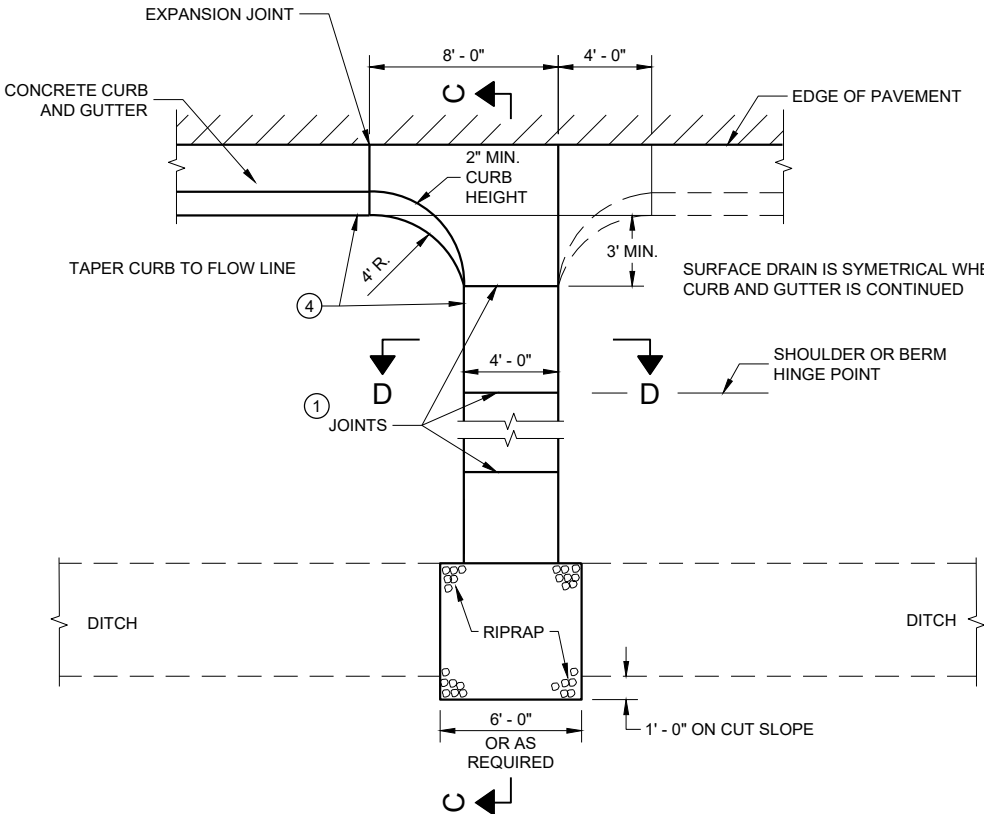
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW  
CURB OPENING  
FOR FLUME

PLAN VIEW  
FLUME AT CURB END



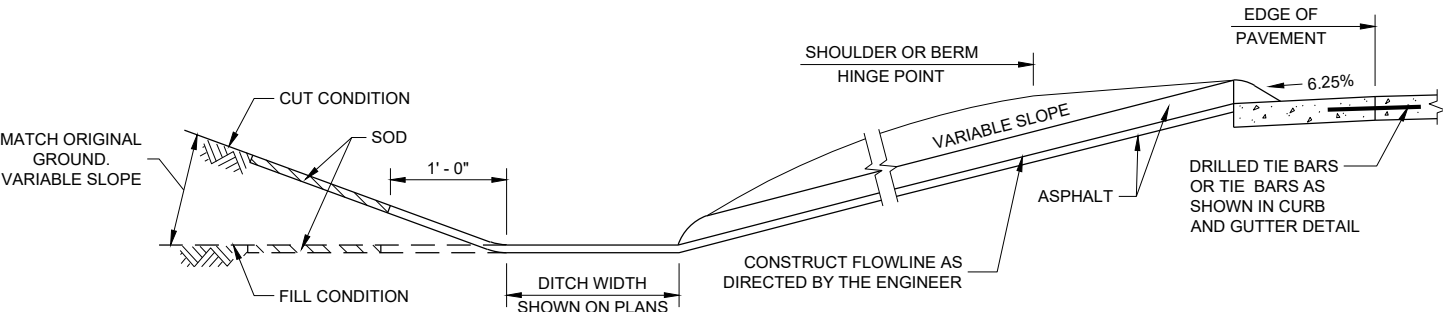
PLAN VIEW  
CONCRETE SURFACE DRAIN

GENERAL NOTES

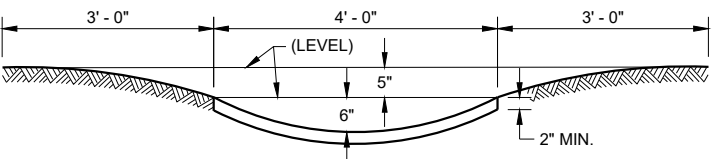
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

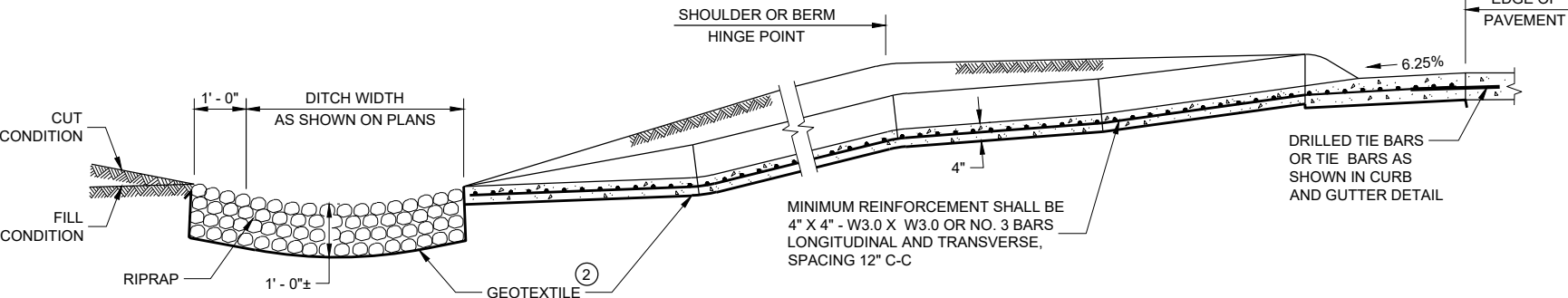
- JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.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



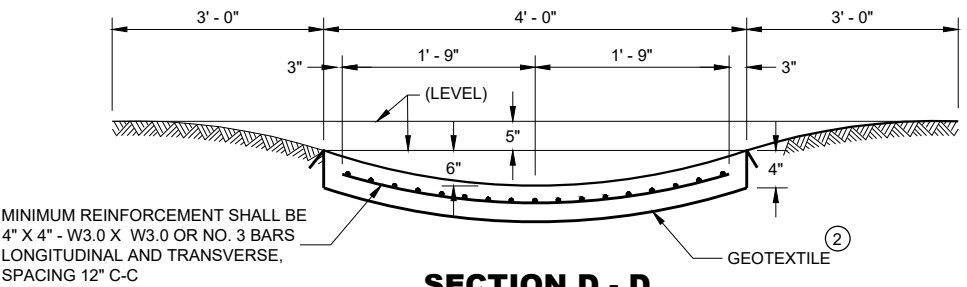
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE  
DRAINS AND  
ASPHALTIC FLUMES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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







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

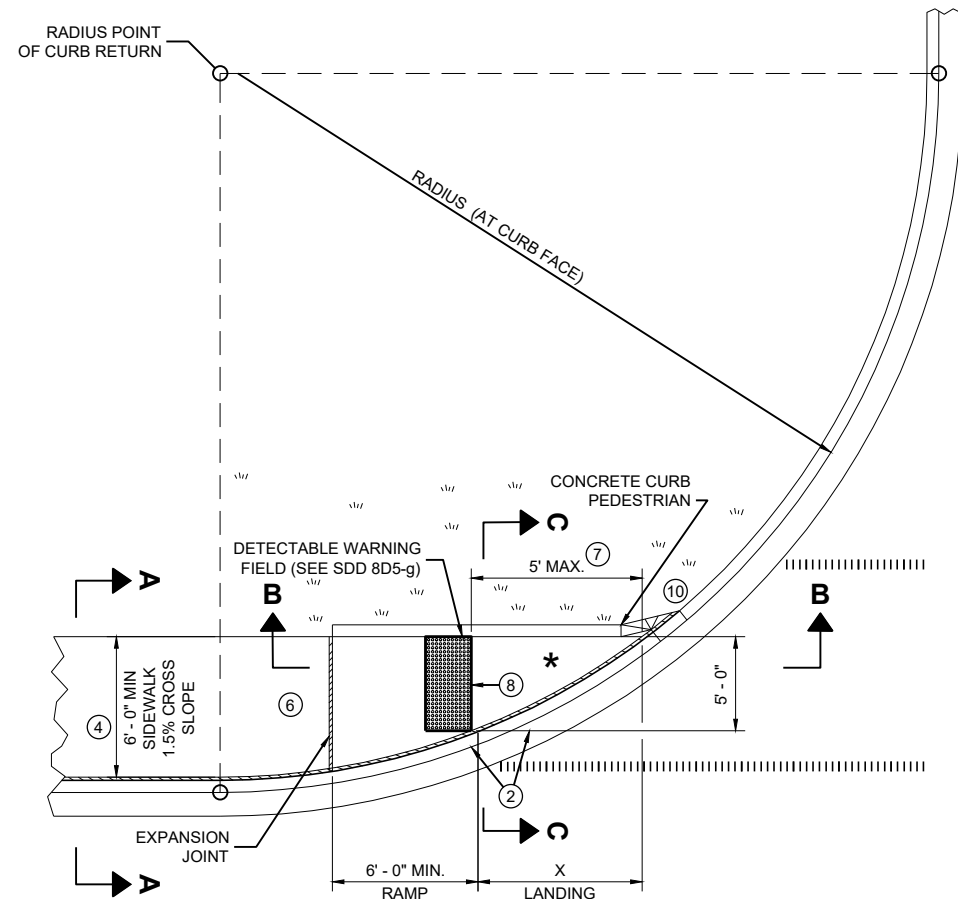


- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN  $\frac{1}{4}$ " - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④  $\pm 0.5\%$  CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-F.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

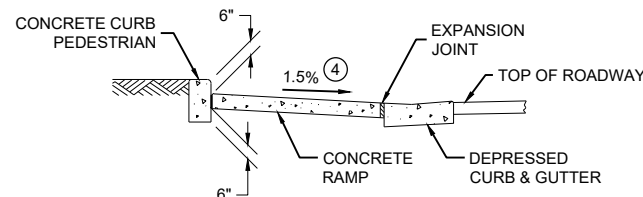
++ CONSTRUCT 6" WEDGE TO  
AVOID CONCRETE BREAKAGE

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

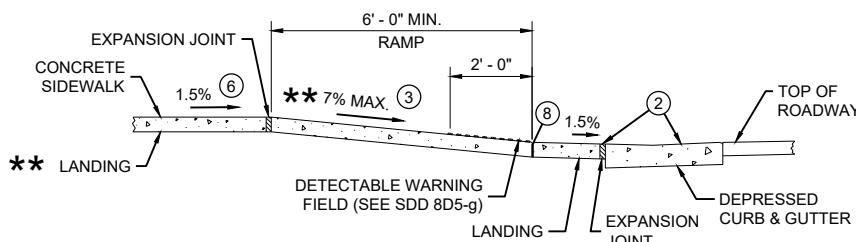
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



PLAN VIEW  
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A

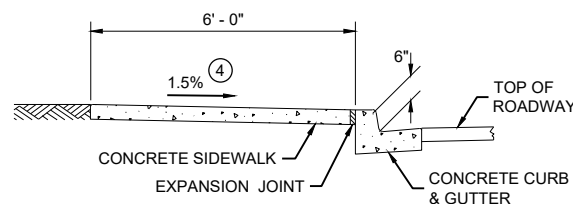


SECTION B - B FOR  
TYPE 4A AND TYPE 4A1

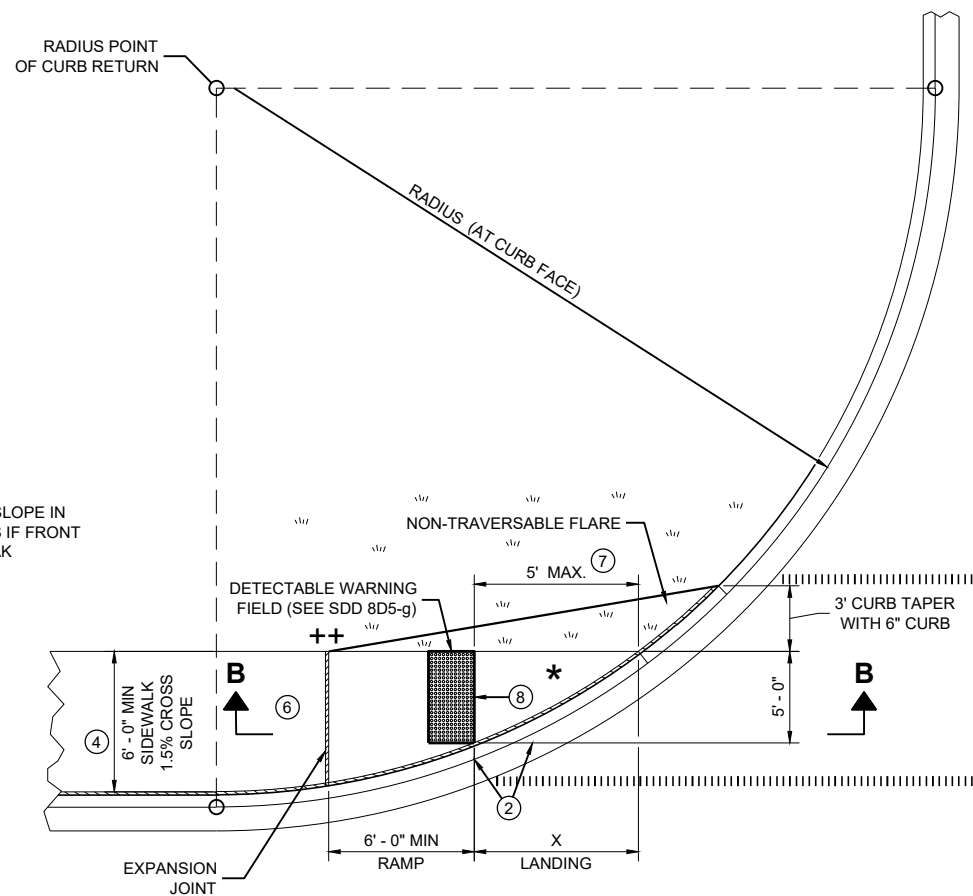
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

| RADIUS<br>(AT CURB FACE) | X       |
|--------------------------|---------|
| 10 FEET                  | 4' - 7" |

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



PLAN VIEW  
CURB RAMP TYPE 4A1

## GENERAL NOTES

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

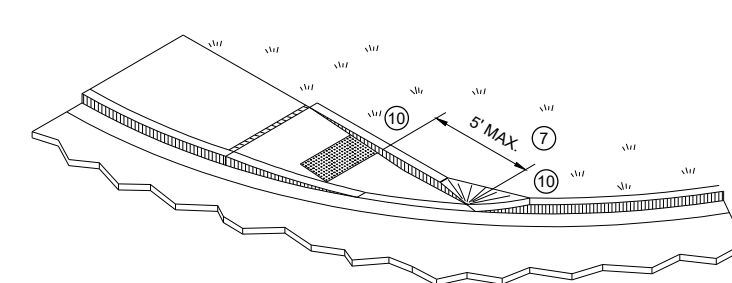
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

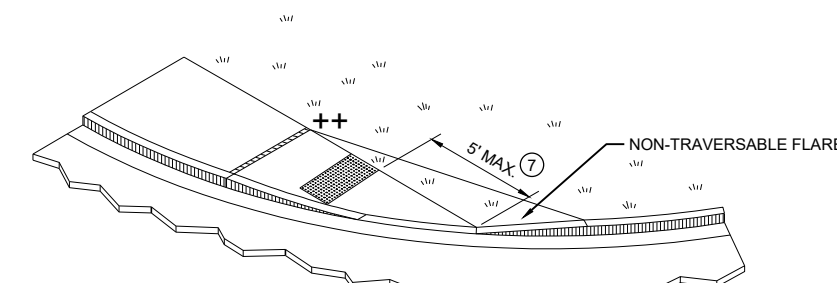
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

## LEGEND

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



ISOMETRIC VIEW FOR TYPE 4A

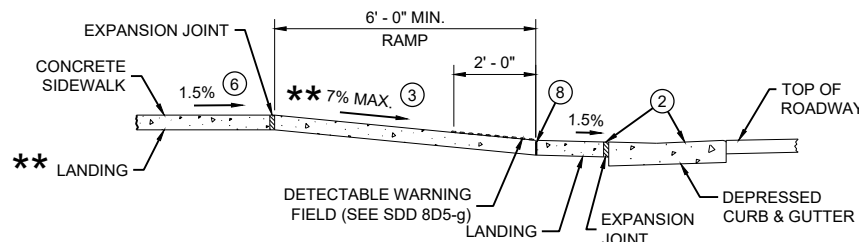
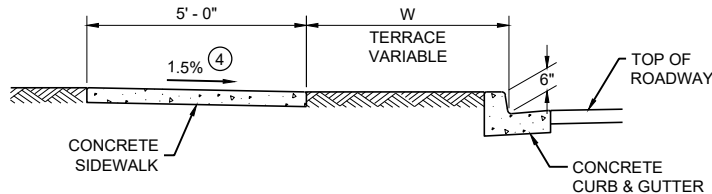
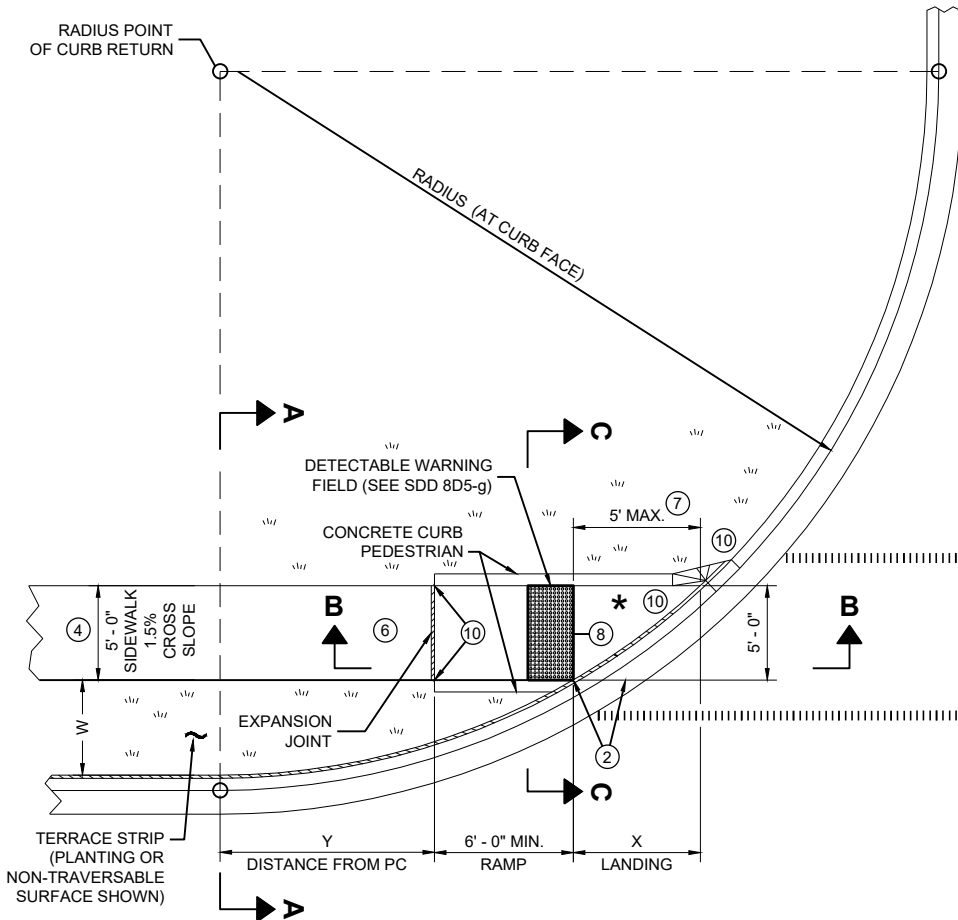


ISOMETRIC VIEW FOR TYPE 4A1

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

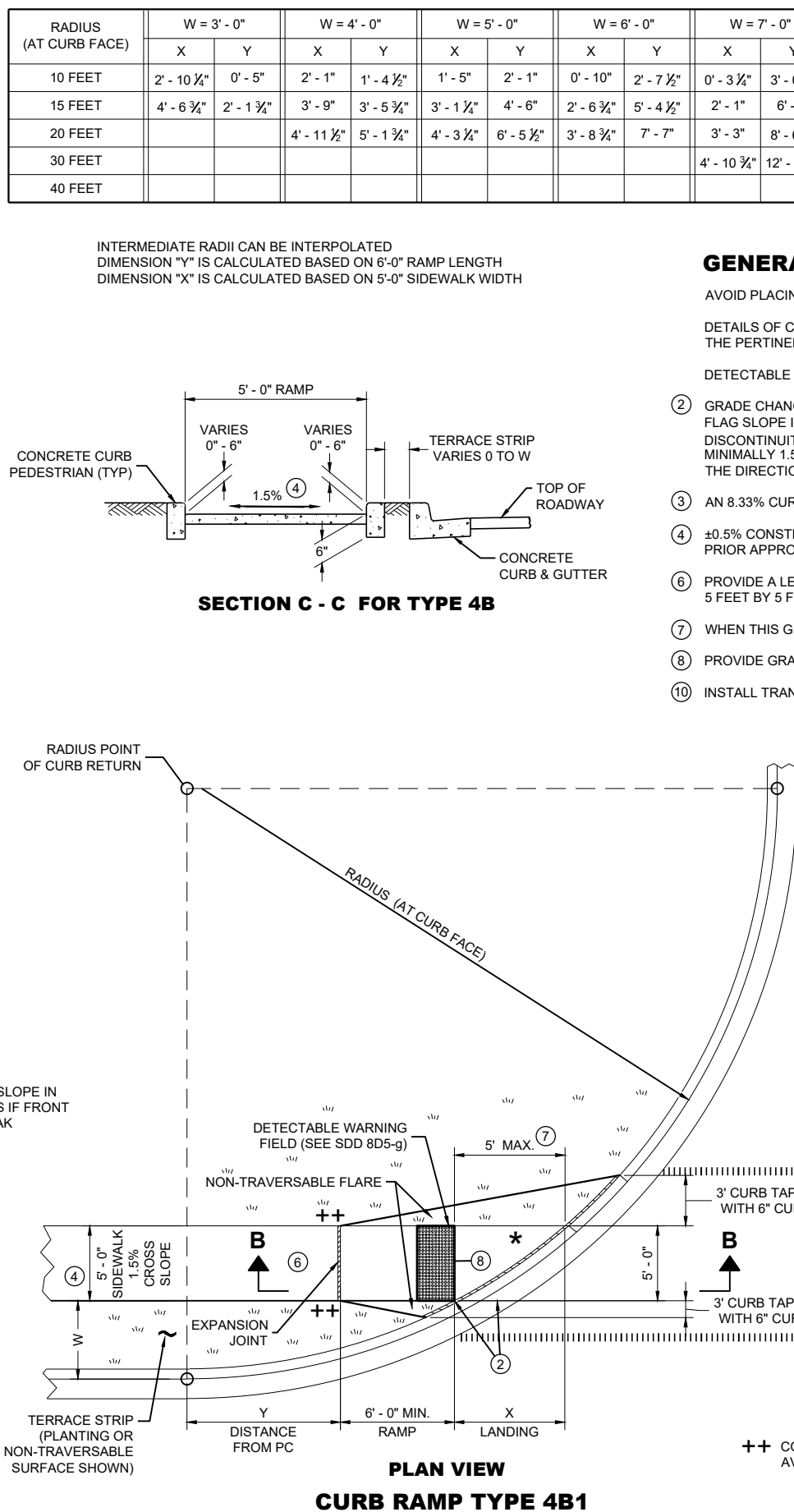
## CURB RAMPS TYPE 4A AND 4A1

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

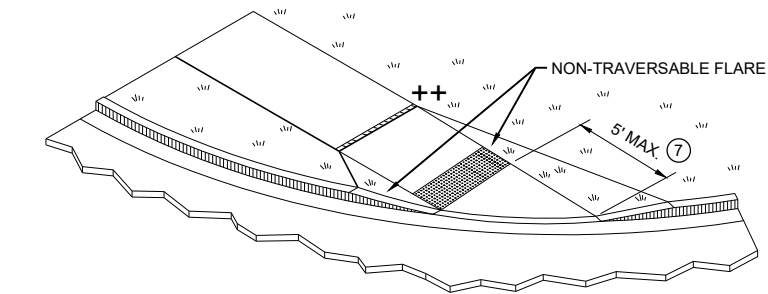
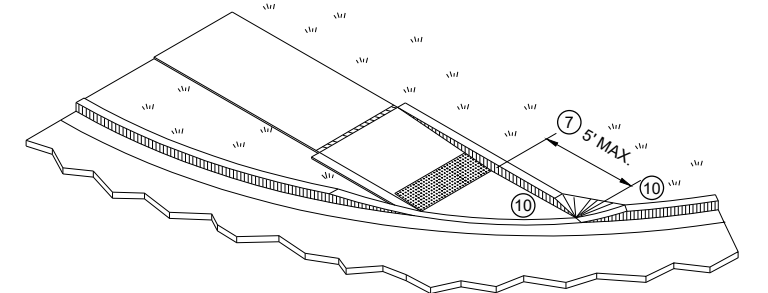
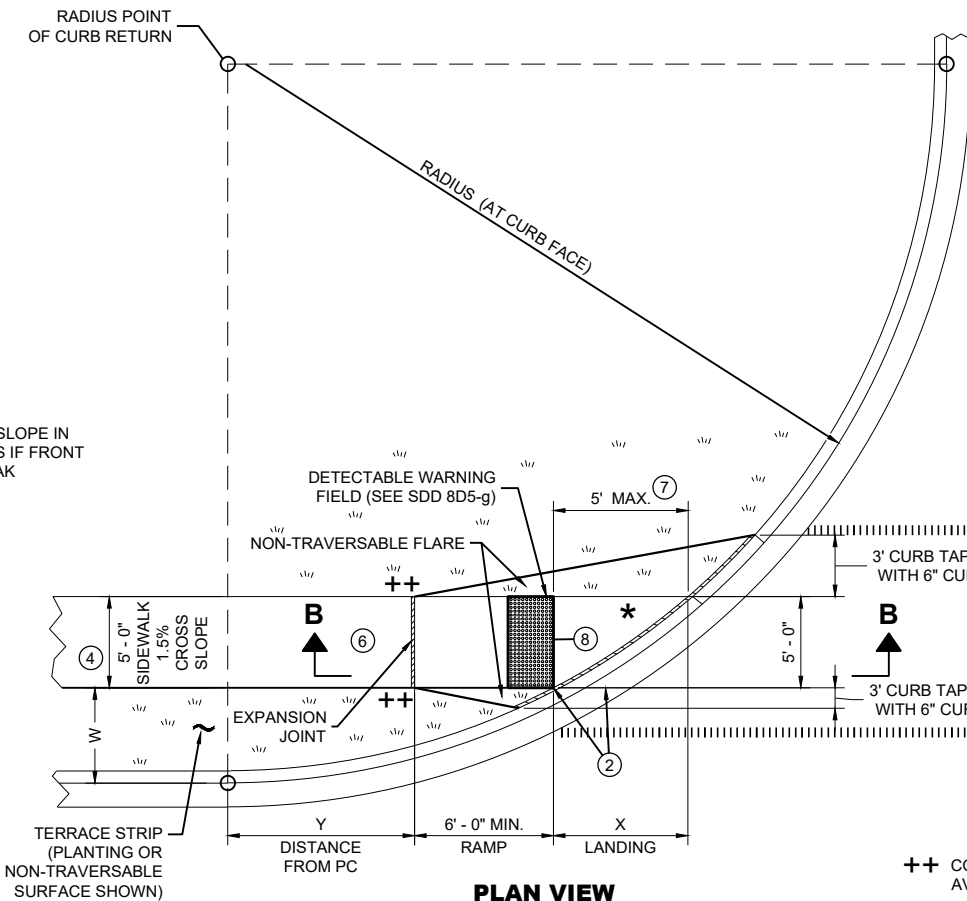
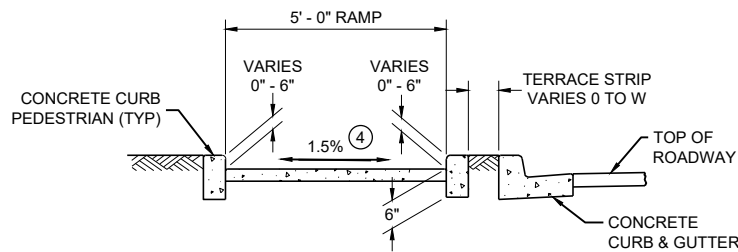


\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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



++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



**LEGEND**

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

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

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

**GENERAL NOTES**

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

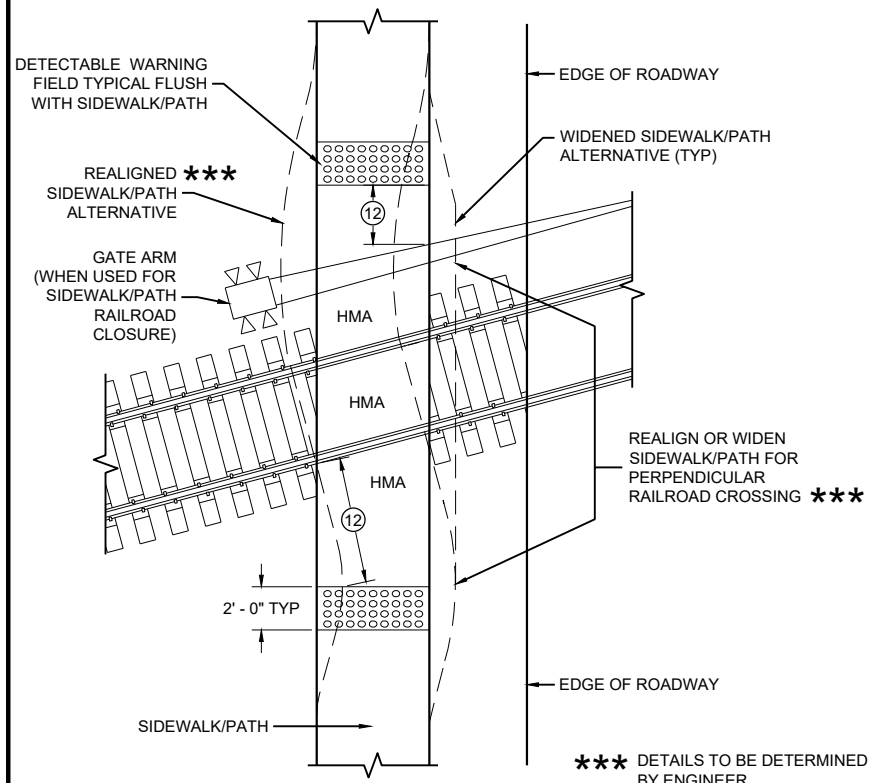
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

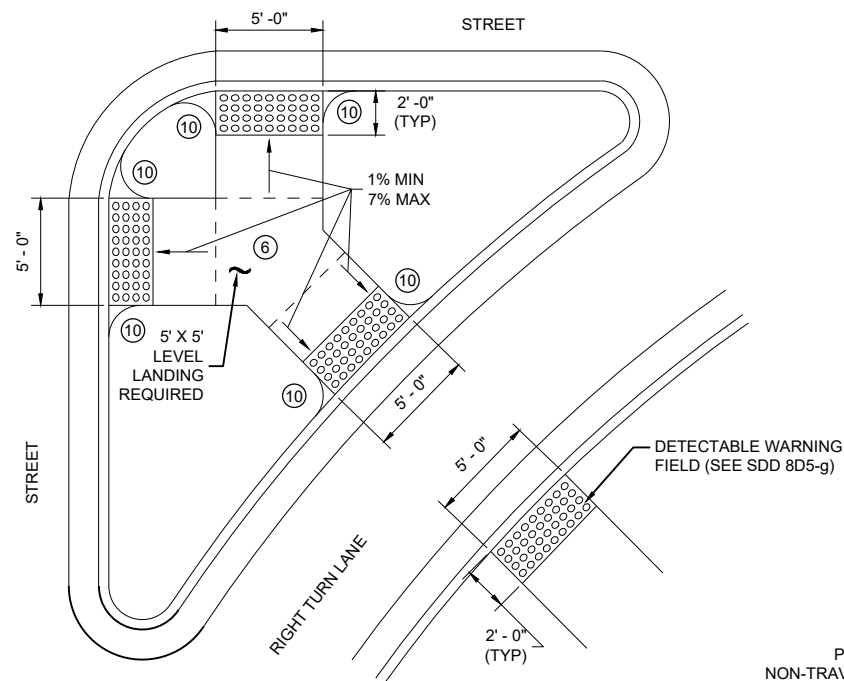
**CURB RAMPS  
TYPE 4B AND 4B1**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



### CURB RAMP TYPE 8

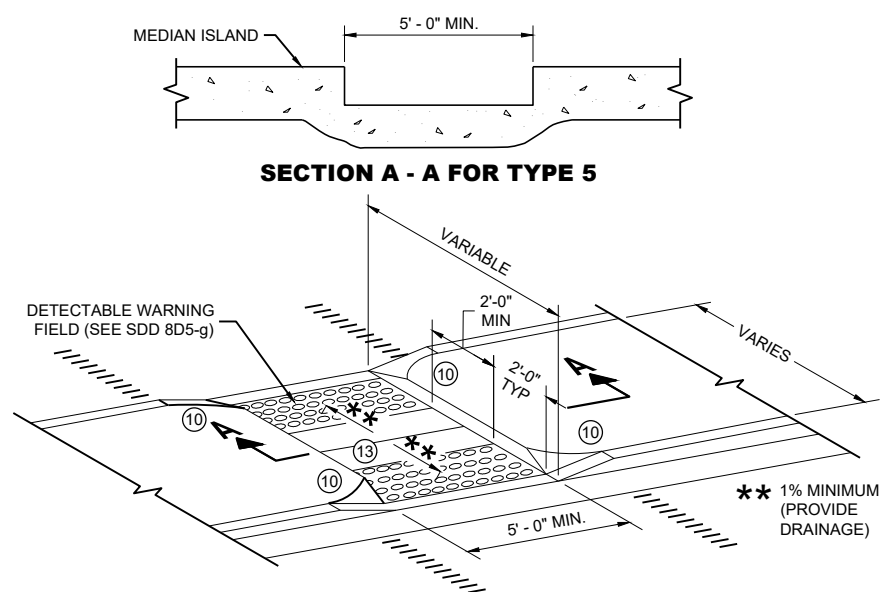
#### DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



### CURB RAMP TYPE 6

#### DETECTABLE WARNING AT ISLANDS

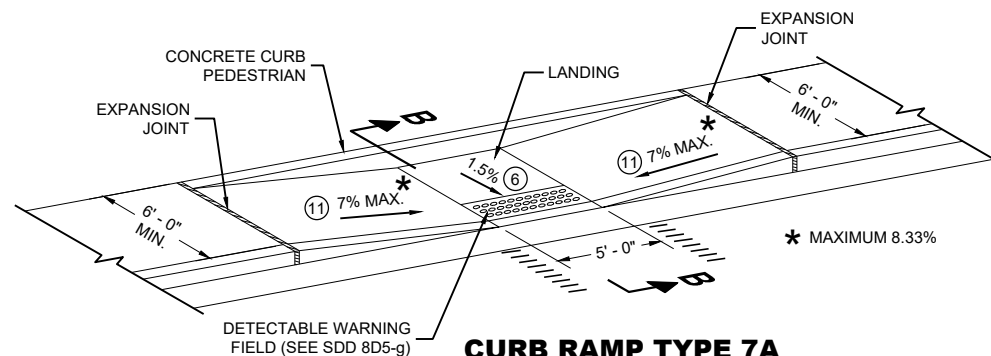
REFER TO GENERAL NOTES ② AND ③  
FOR ALL ISLAND CURB RAMPS



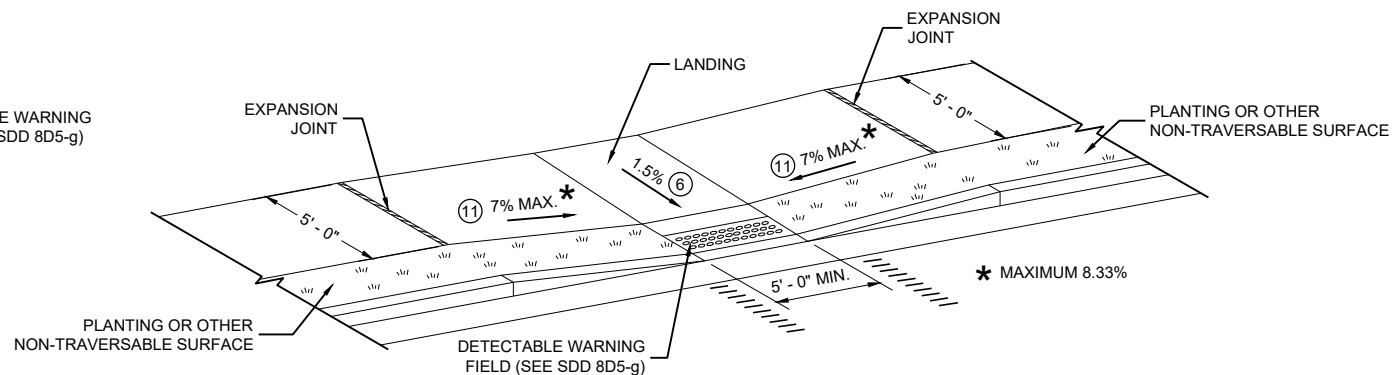
### SECTION A - A FOR TYPE 5

### CURB RAMP TYPE 5

#### MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING



### CURB RAMP TYPE 7A FOR INTERSECTIONS AND MID BLOCK CROSSINGS



### CURB RAMP TYPE 7B FOR INTERSECTIONS AND MID BLOCK CROSSINGS

## GENERAL NOTES

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

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

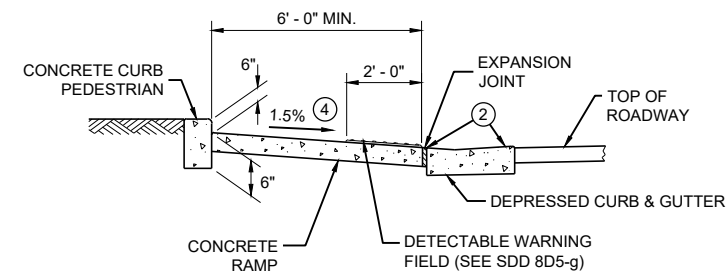
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/8 INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④  $\pm 0.5\%$  CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET  $\pm 0.1'$  FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

## LEGEND

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

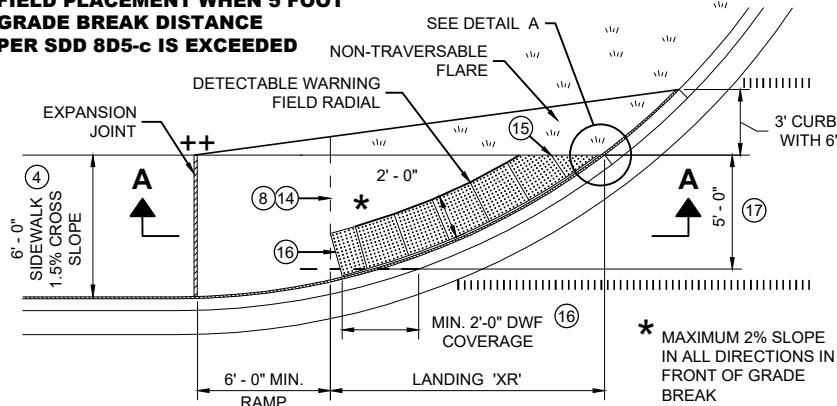


### SECTION B - B FOR TYPE 7A

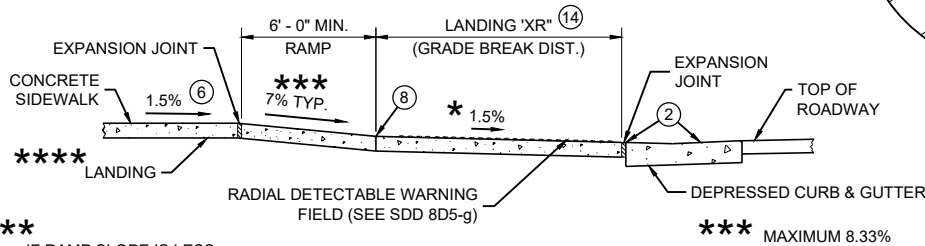
## CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

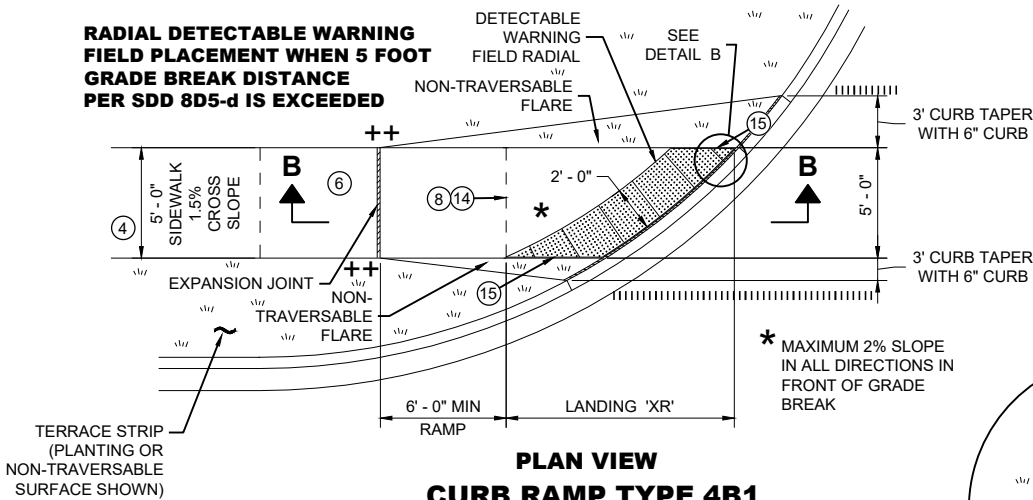


**PLAN VIEW  
CURB RAMP TYPE 4A1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

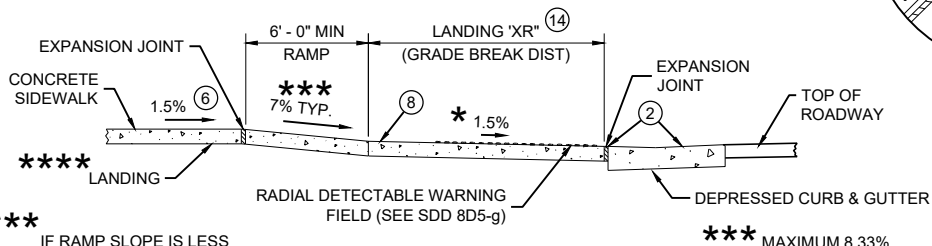


**SECTION A - A FOR TYPE 4A1**

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



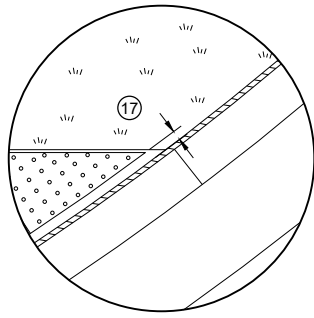
**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



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

**LEGEND**

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



**DETAIL A**

**GENERAL NOTES**

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

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

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

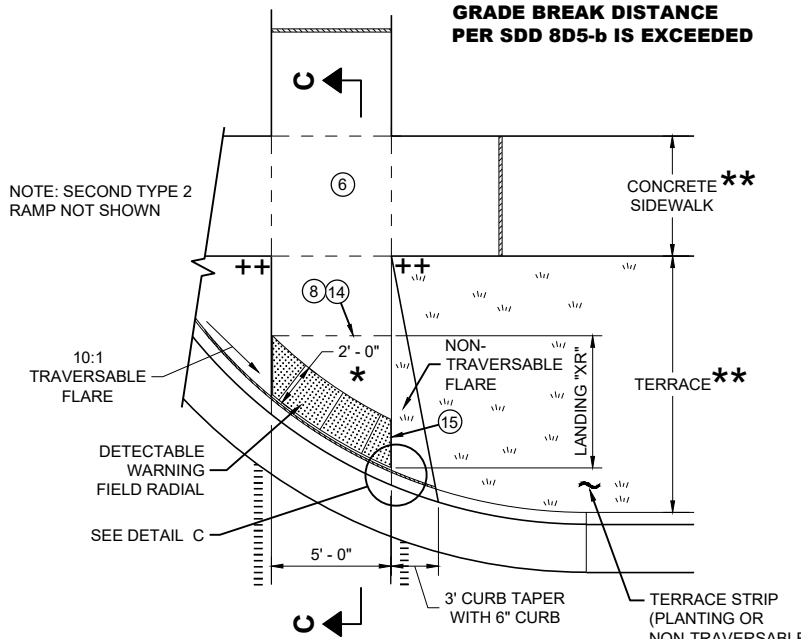
REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

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

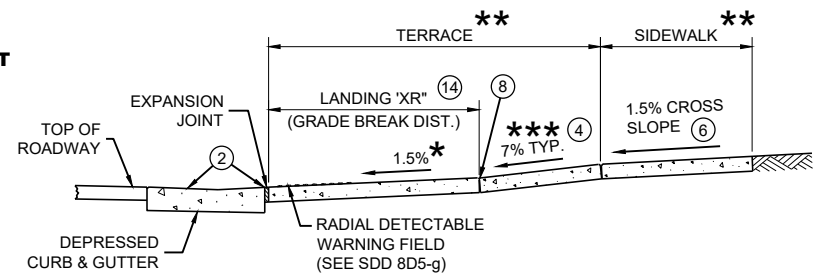
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/2" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17 A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

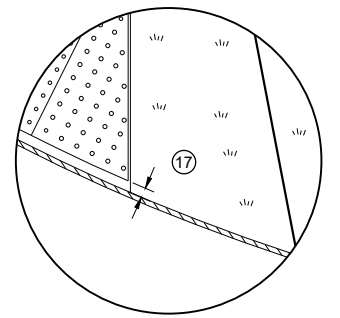
**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-b IS EXCEEDED**



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



**SECTION C - C FOR TYPE 2**



**DETAIL C**

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

\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS

\*\*\* MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO  
AVOID CONCRETE BREAKAGE

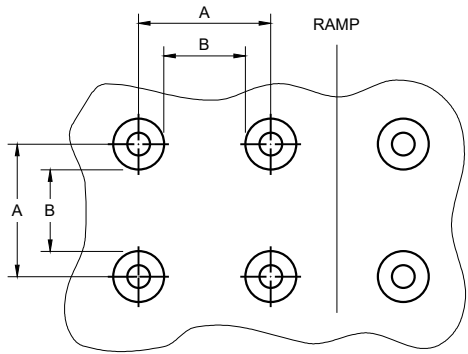
**CURB RAMPS  
RADIAL DETECTABLE WARNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

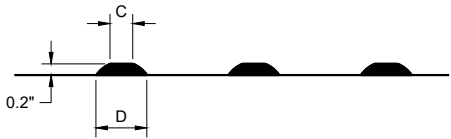


|   | MIN.  | MAX. |
|---|-------|------|
| A | 1.6"  | 2.4" |
| B | 0.65" | 1.5" |
| C | *     | *    |
| D | 0.9"  | 1.4" |

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

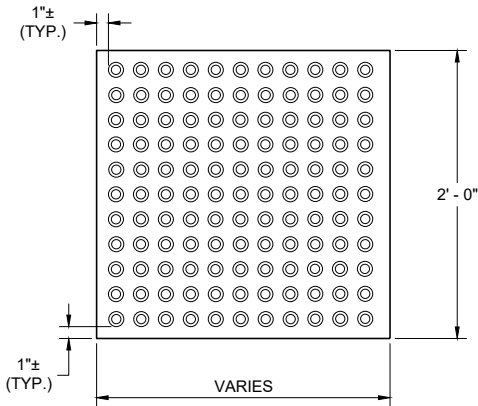


PLAN VIEW

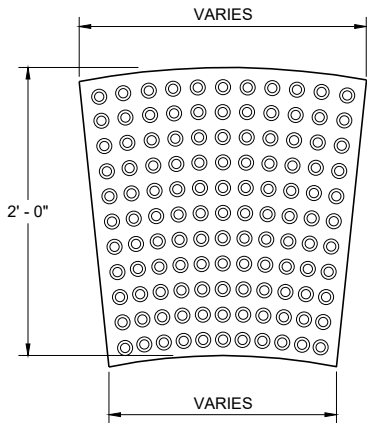


ELEVATION VIEW

TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL

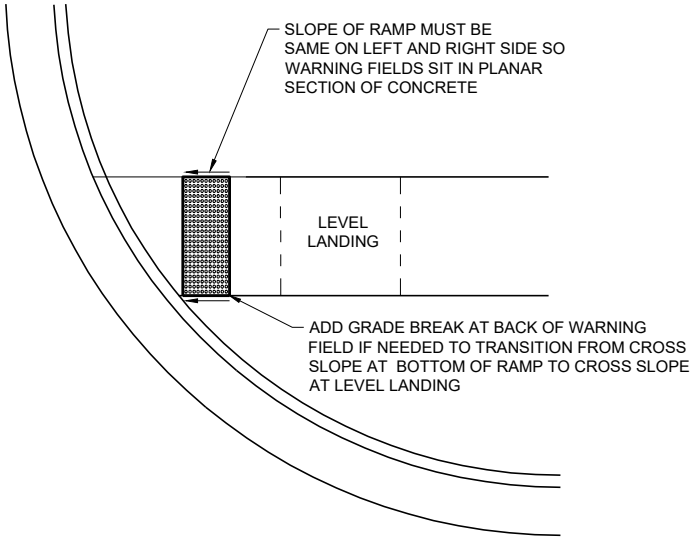


RECTANGULAR  
PLATES

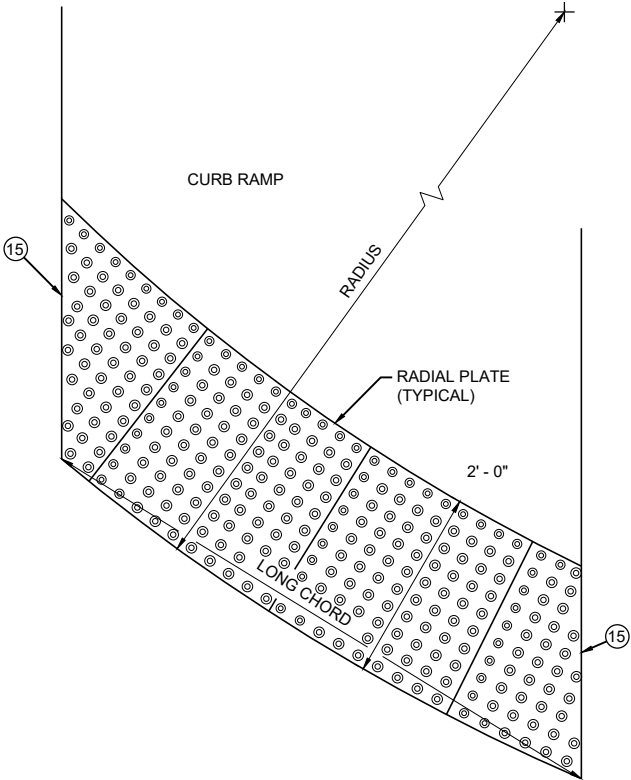


RADIAL  
PLATES

PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD  
PLANAR INSTALLATION



PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES

GENERAL NOTES

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

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

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

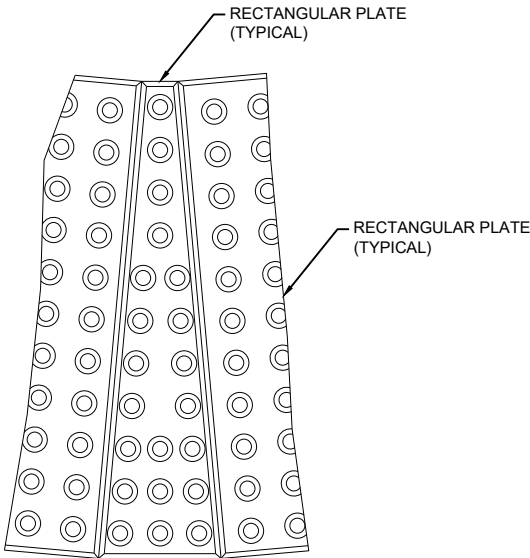
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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



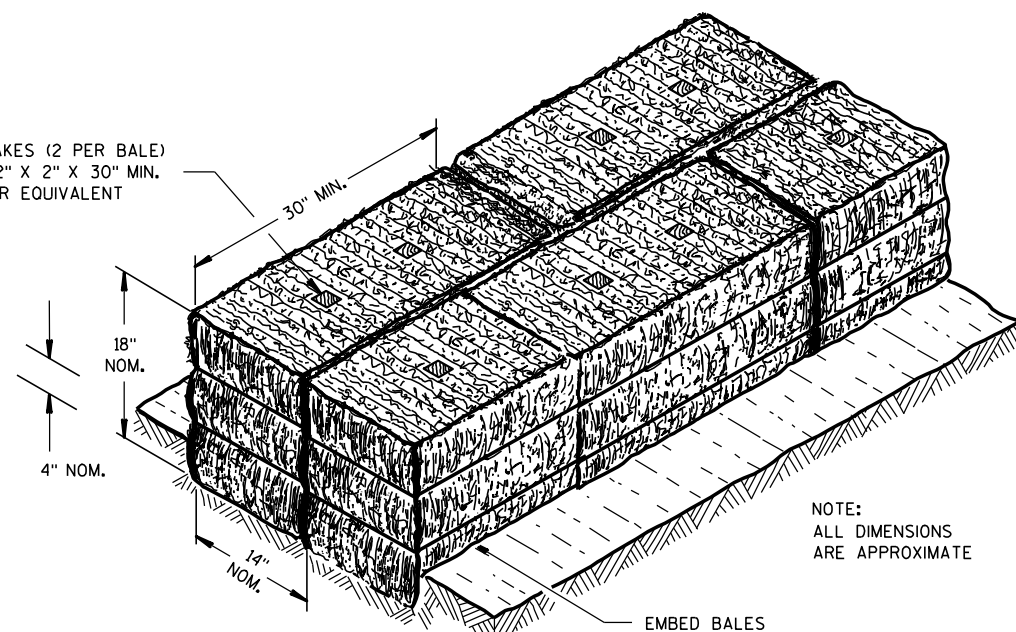
PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL

CURB RAMPS  
RECTANGULAR AND RADIAL  
DETECTABLE WARNING PLATES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR

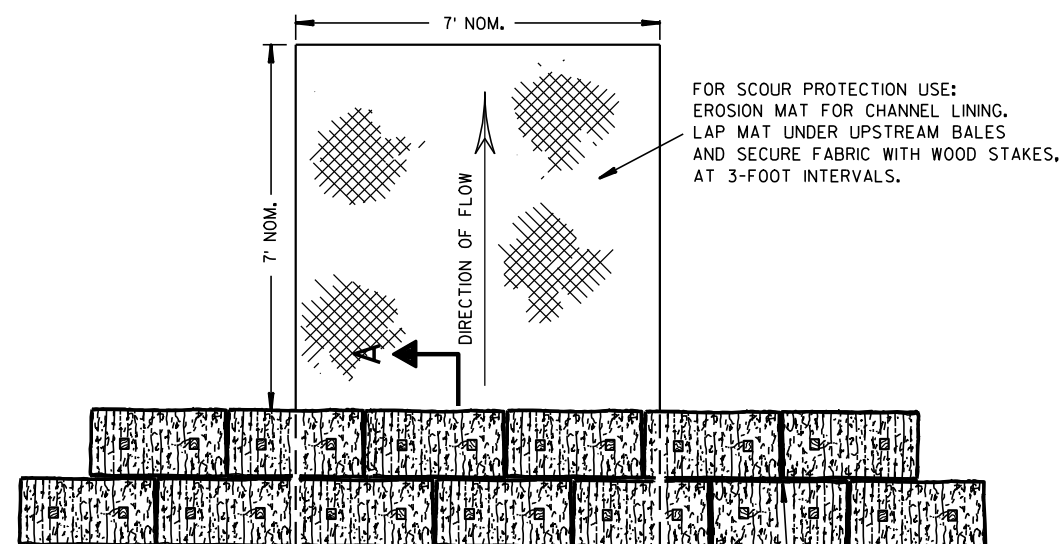
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

EMBED BALES

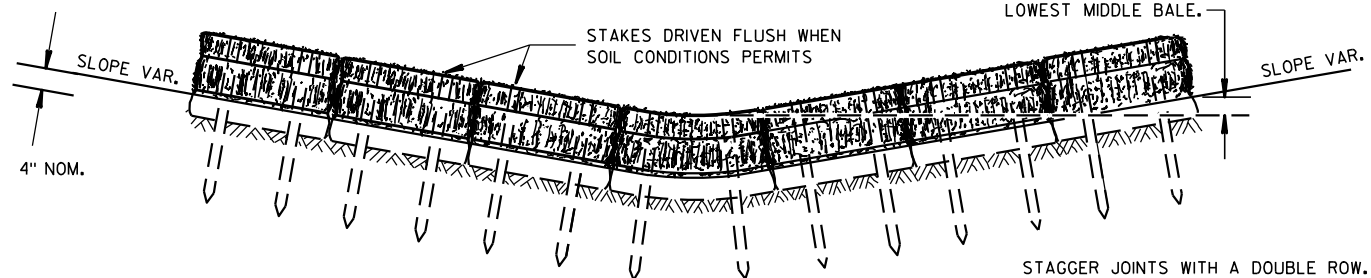
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

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



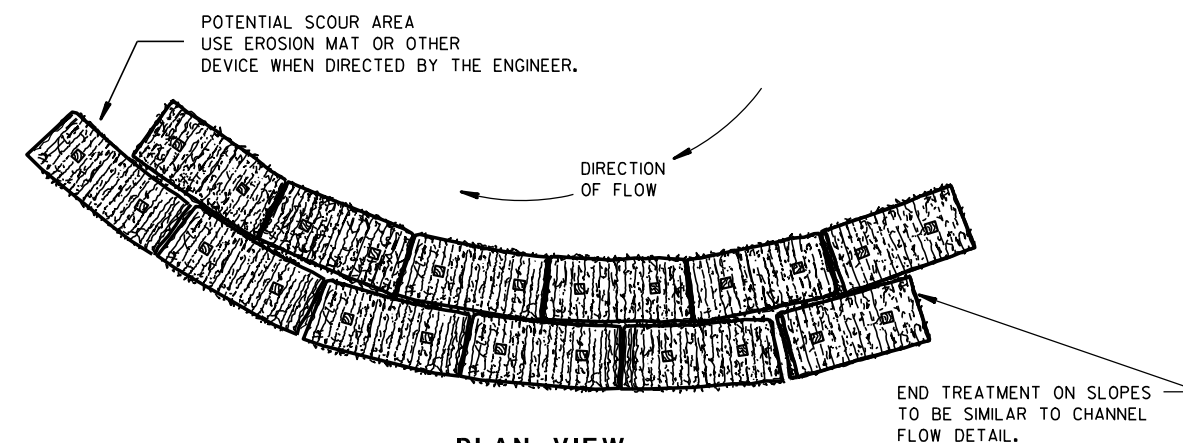
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

## GENERAL NOTES

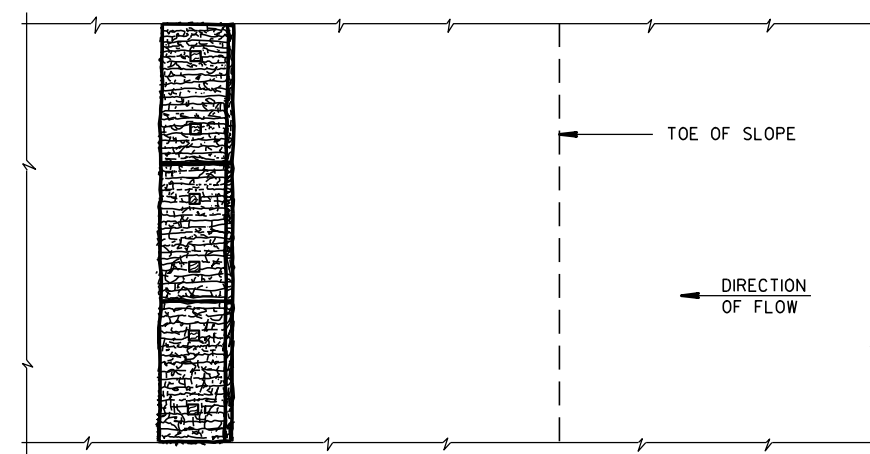
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

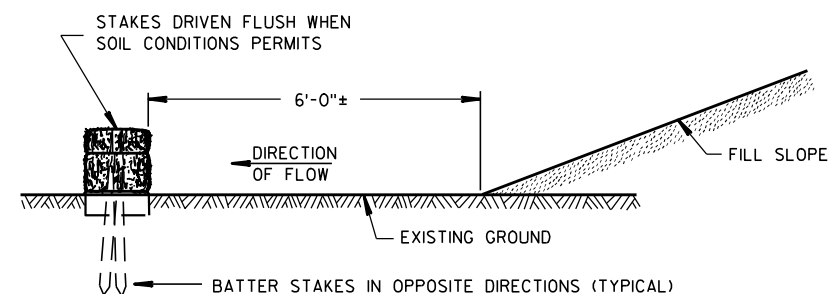


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

## TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02  
DATE

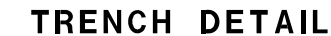
/S/ Beth Connors  
CHIEF ROADWAY DEVELOPER 207 ENGINEER

FHWA





- 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.

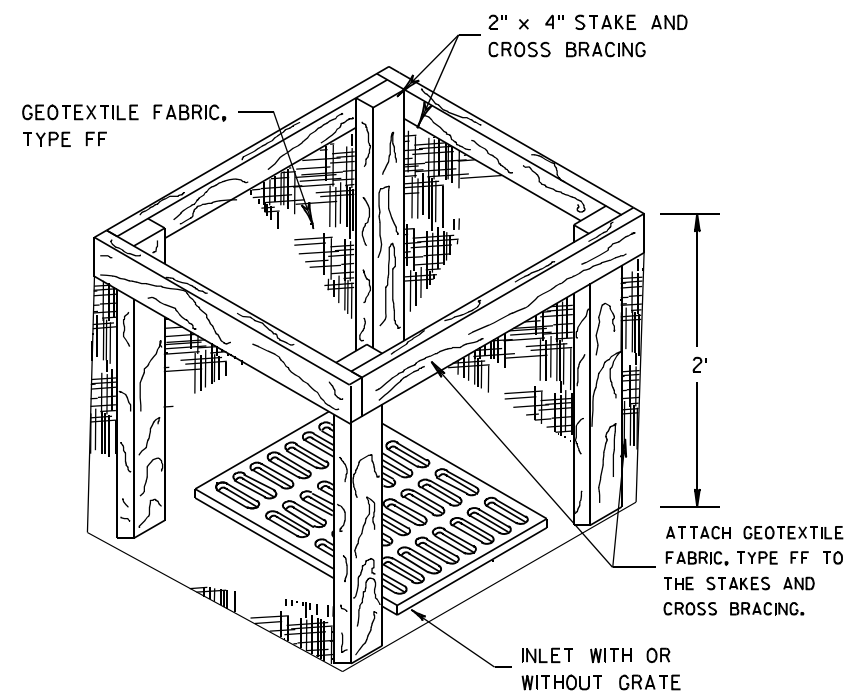
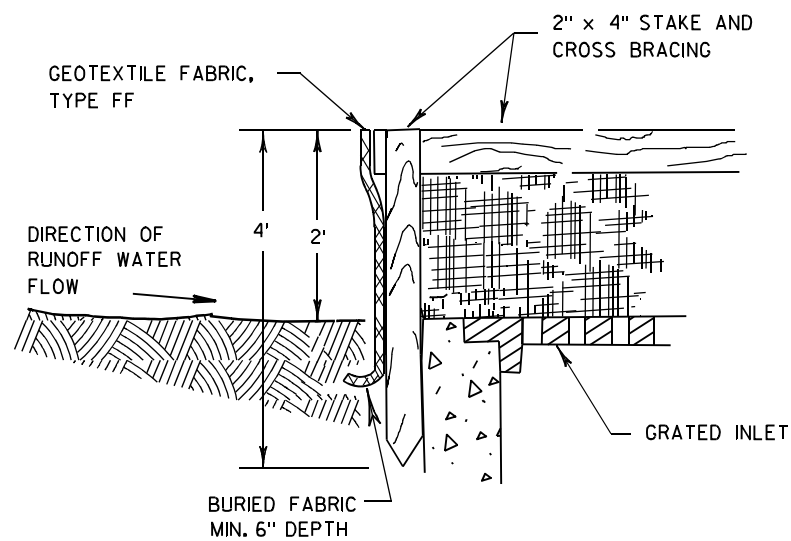


SILT FENCE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
4-29-05 /S/ Beth Connolly  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



**INLET PROTECTION, TYPE A**

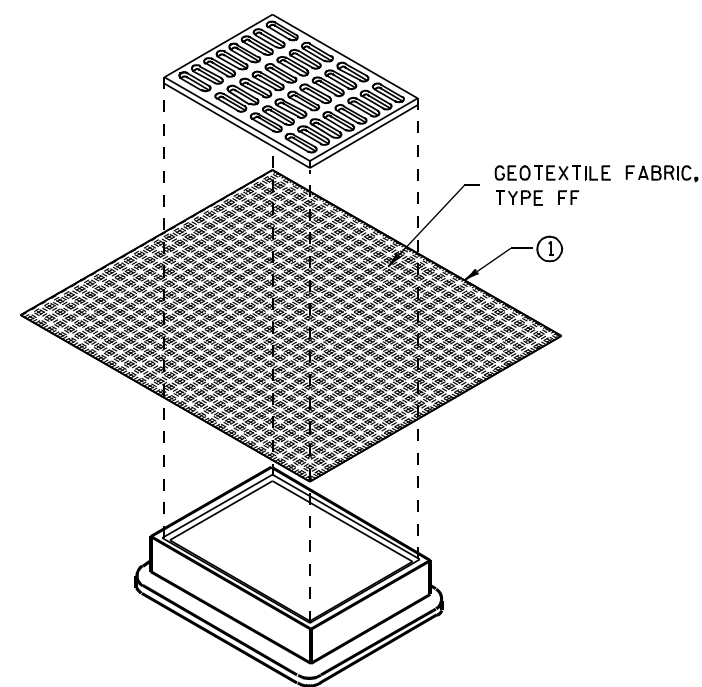
**GENERAL NOTES**

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

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

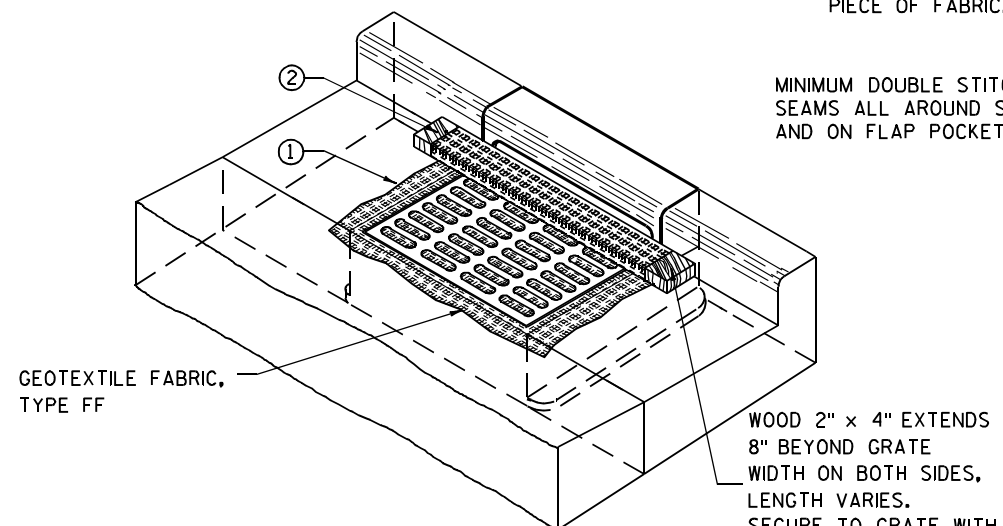
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

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

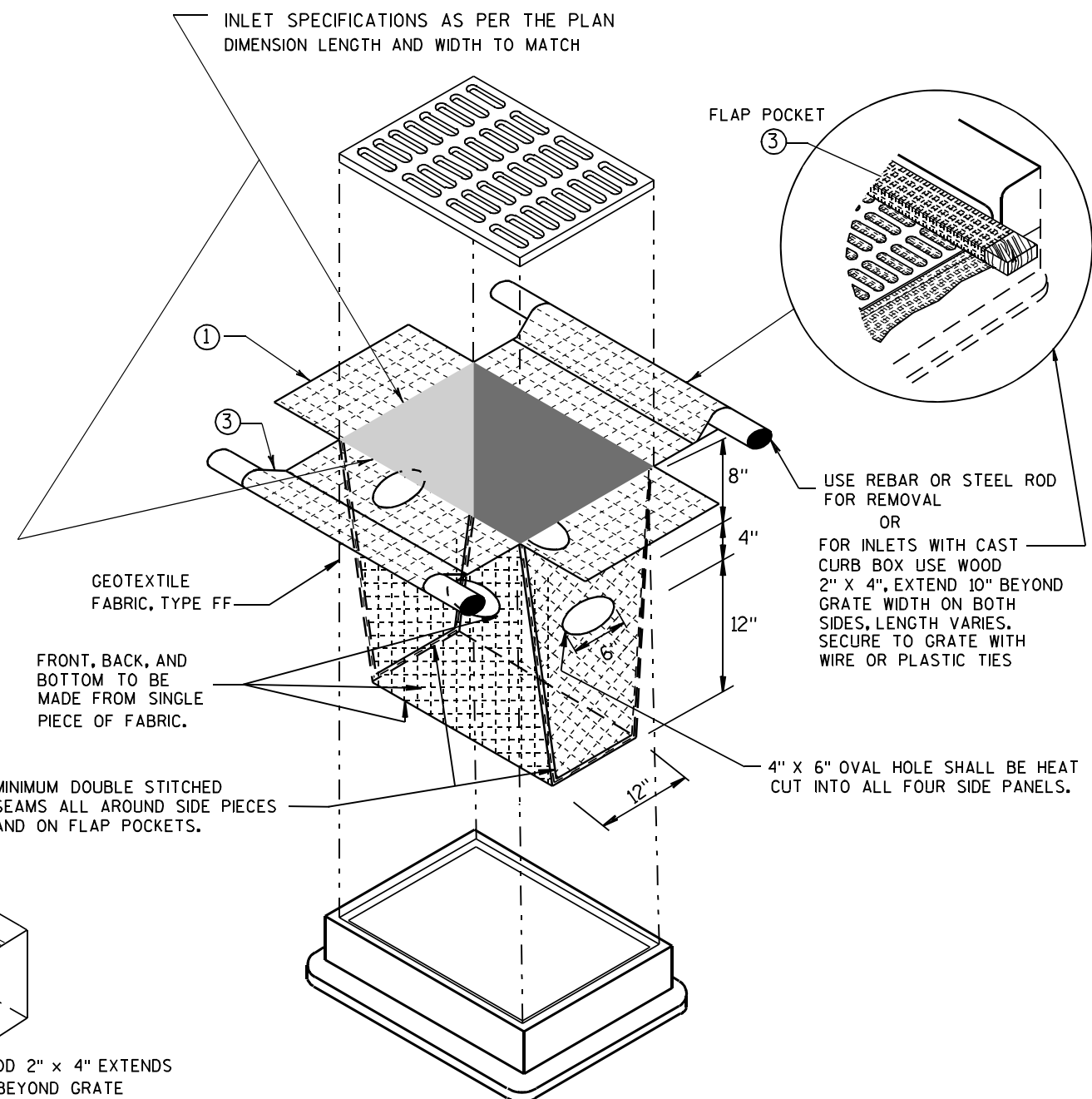
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

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

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

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



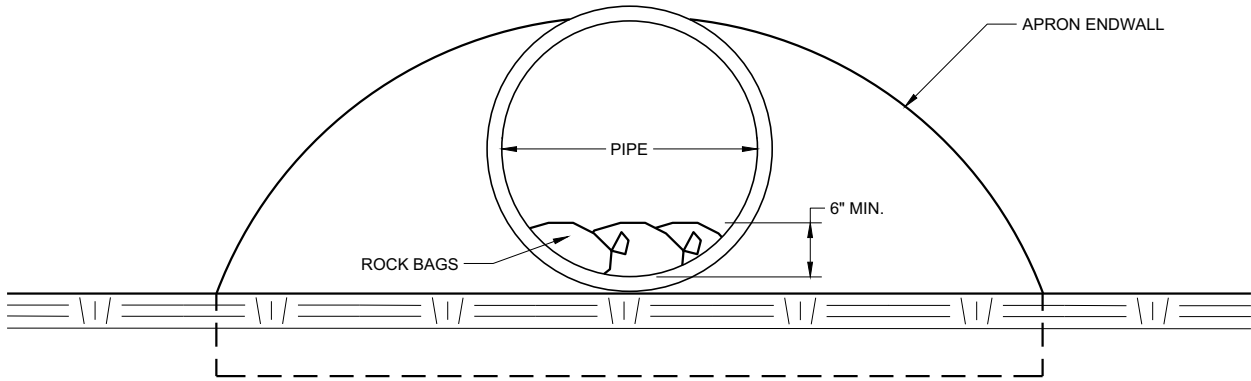
**INLET PROTECTION, TYPE D**

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

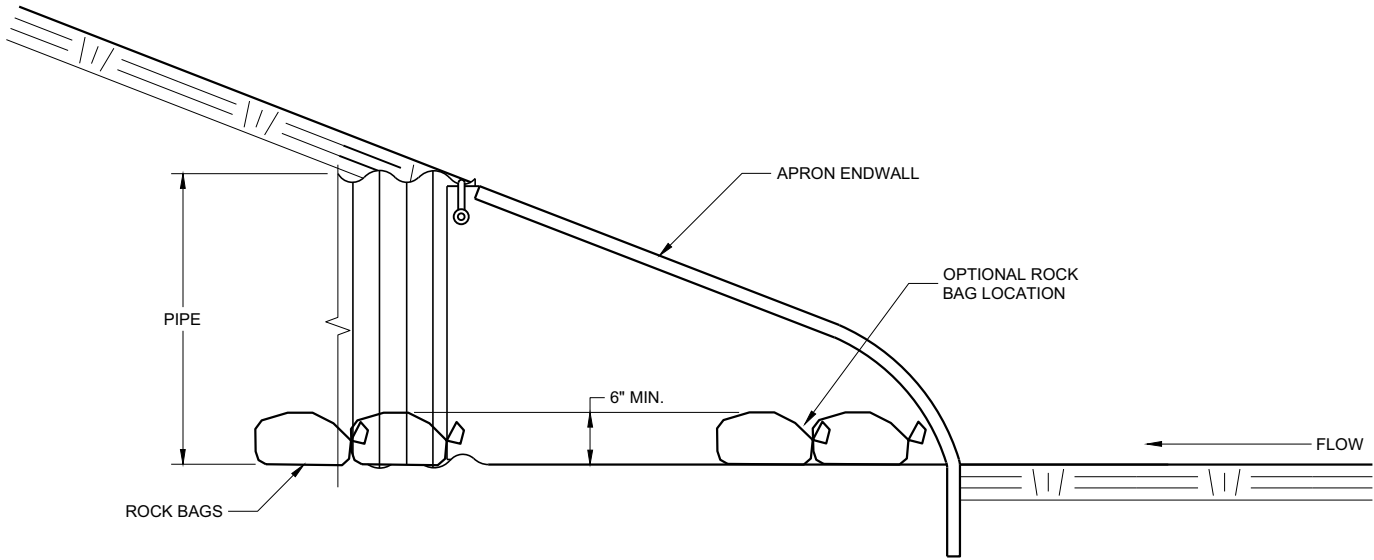
**INLET PROTECTION  
TYPE A, B, C, AND D**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/16/02 /S/ Beth Connolly  
DATE 209  
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



END VIEW



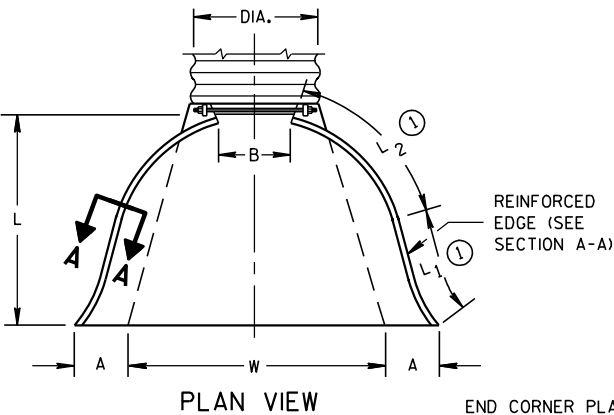
SIDE VIEW

**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

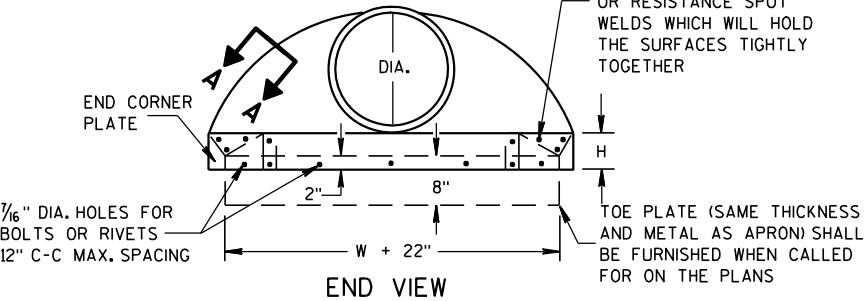
|                                                    |                                               |
|----------------------------------------------------|-----------------------------------------------|
| <b>CULVERT PIPE CHECK</b>                          |                                               |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                               |
| APPROVED<br>May 2019<br>DATE                       | /S/ Daniel Schave<br>EROSION CONTROL ENGI 210 |
| FHWA                                               |                                               |

| METAL APRON ENDWALLS |                         |       |                     |             |            |                |         |         |            |                  |  |       |
|----------------------|-------------------------|-------|---------------------|-------------|------------|----------------|---------|---------|------------|------------------|--|-------|
| PIPE DIA.<br>(IN.)   | MIN. THICK.<br>(Inches) |       | DIMENSIONS (Inches) |             |            |                |         |         |            | APPROX.<br>SLOPE |  | BODY  |
|                      | STEEL                   | ALUM. | A<br>(±1")          | B<br>(MAX.) | H<br>(±1") | L<br>(±1 1/2") | L1<br>① | L2<br>① | W<br>(±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. |

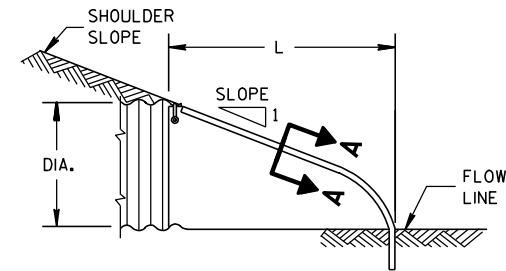
\* EXCEPT CENTER PANEL  
SEE GENERAL NOTES



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



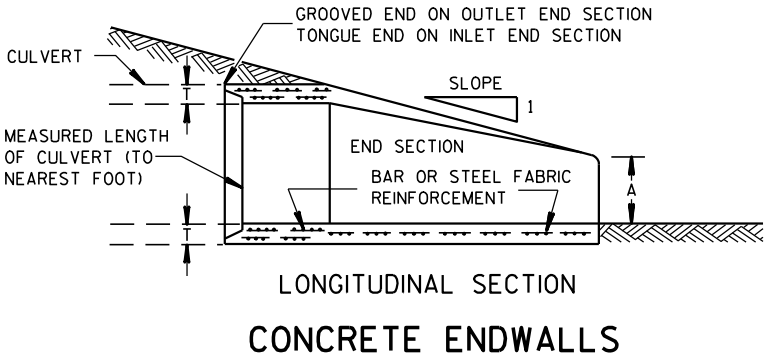
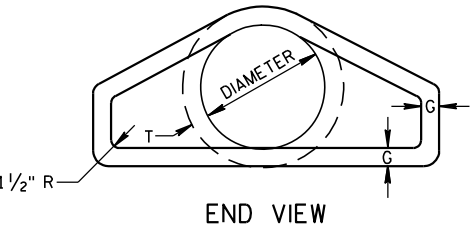
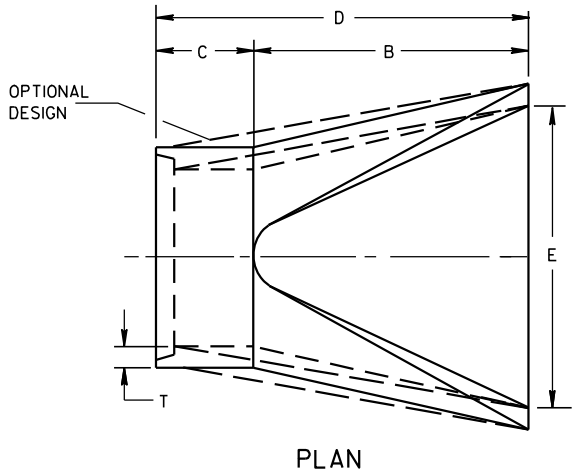
TOE PLATE (SAME THICKNESS  
AND METAL AS APRON) SHALL  
BE FURNISHED WHEN CALLED  
FOR ON THE PLANS



SIDE ELEVATION  
METAL ENDWALLS

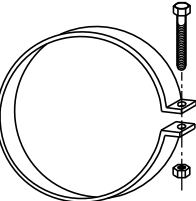
| REINFORCED CONCRETE APRON ENDWALLS |                     |        |        |           |            |     |       |                  |  |  |  |  |
|------------------------------------|---------------------|--------|--------|-----------|------------|-----|-------|------------------|--|--|--|--|
| PIPE DIA.<br>(IN.)                 | DIMENSIONS (Inches) |        |        |           |            |     |       | APPROX.<br>SLOPE |  |  |  |  |
|                                    | T                   | A      | B      | C         | D          | E   | G     |                  |  |  |  |  |
| 12                                 | 2                   | 4      | 24     | 48 7/8    | 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

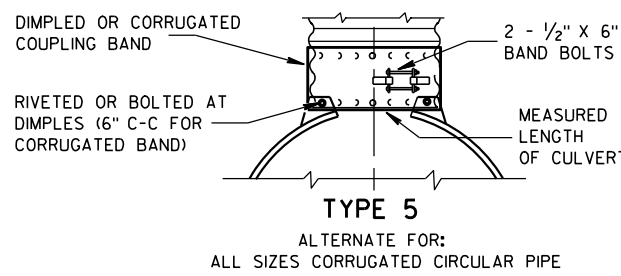
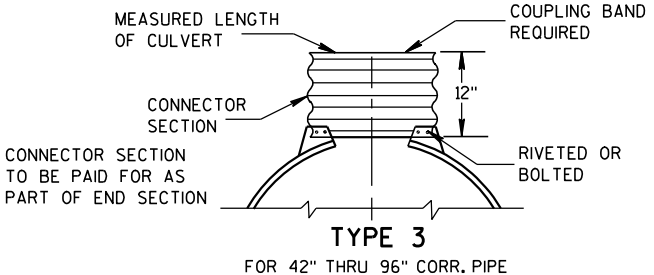
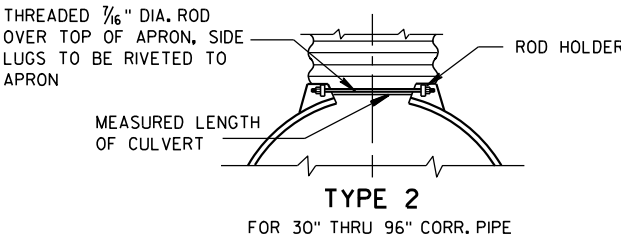
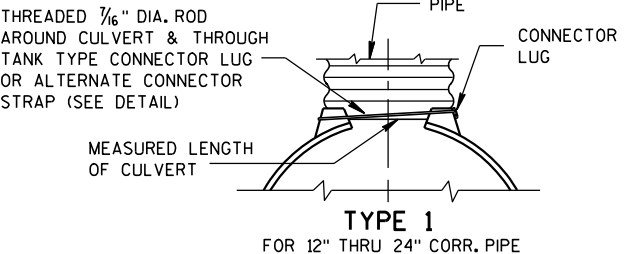


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

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



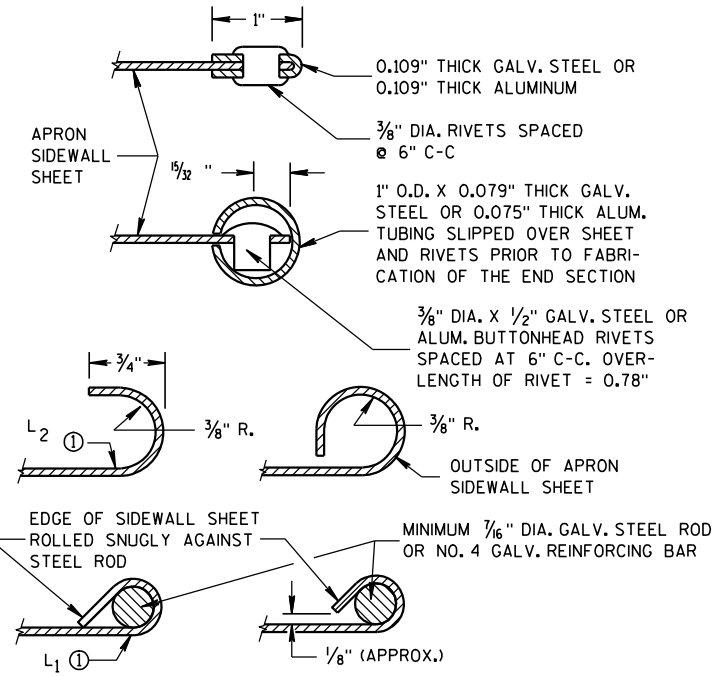
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,  
AND CORRUGATED BAND FITS INSIDE ENDWALL.  
DIMPLED BAND MAY BE USED WITH HELICALLY  
CORRUGATED PIPE.

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.

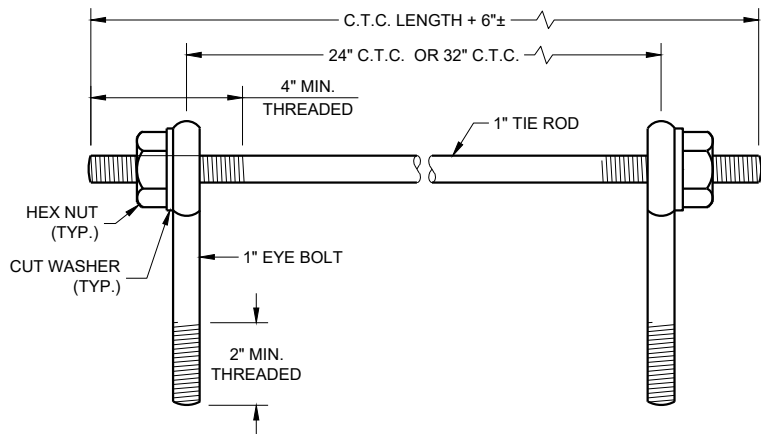
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND  
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL  
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND  
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH  
OF CENTER PANELS SHALL BE GREATER THAN 20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

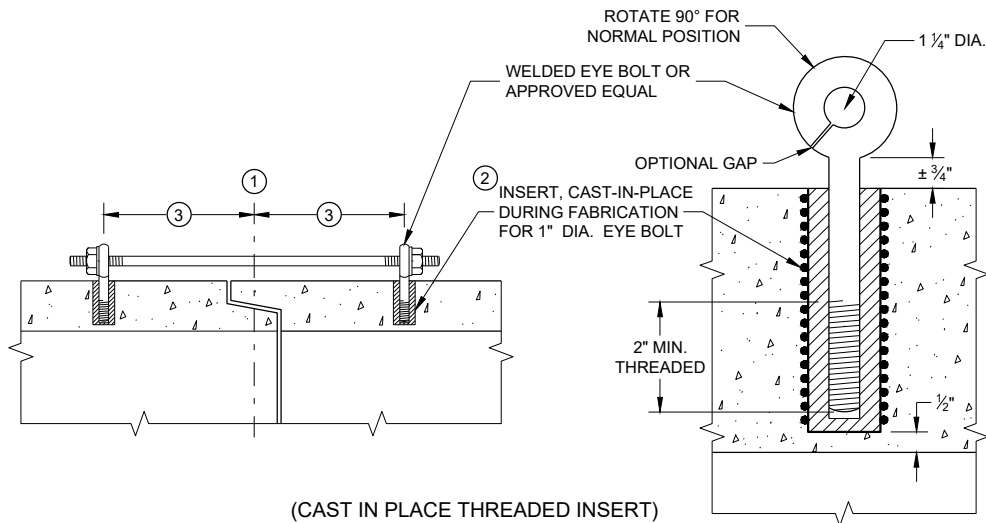
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED  
INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

| APRON ENDWALLS FOR<br>CULVERT PIPE                 |          |                       |      |
|----------------------------------------------------|----------|-----------------------|------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |          |                       |      |
| APPROVED                                           | 11/30/94 | /S/ Rory L. Rhinehart | NEER |
|                                                    | DATE     | CHIEF ROADWAY DEVELOP | 211  |
| FHWA                                               |          |                       |      |



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)  
LONGITUDINAL SECTIONS

## GENERAL NOTES

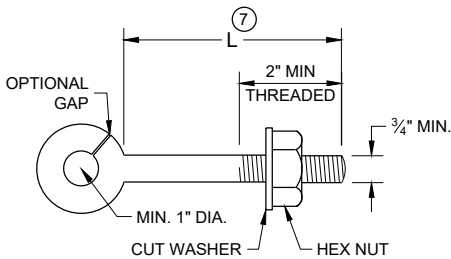
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

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

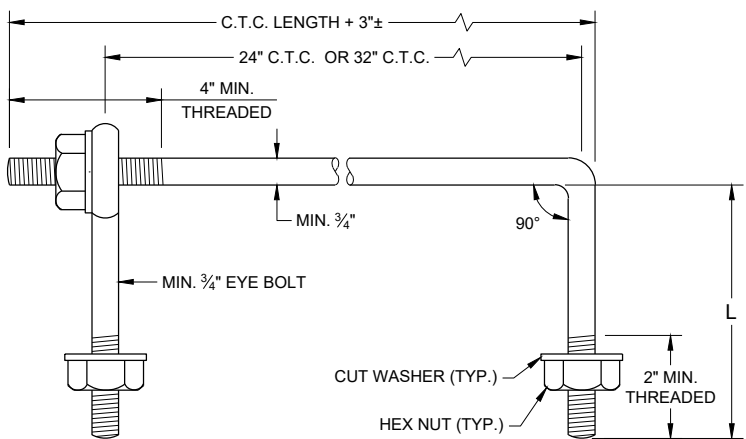
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

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

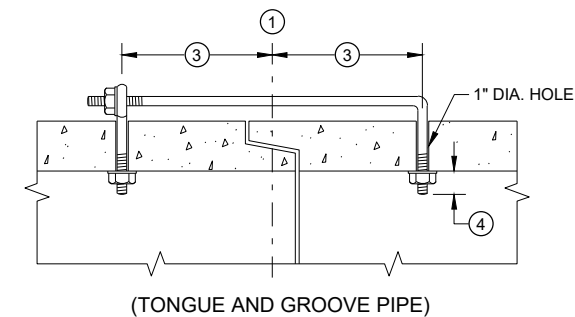


EYE BOLT 7

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



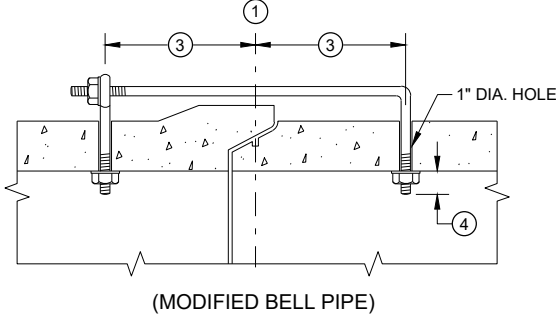
EYE BOLT AND TIE ROD



LONGITUDINAL SECTION

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

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

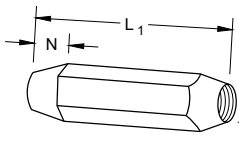


(MODIFIED BELL PIPE)

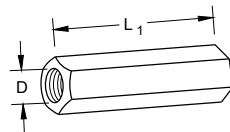
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES

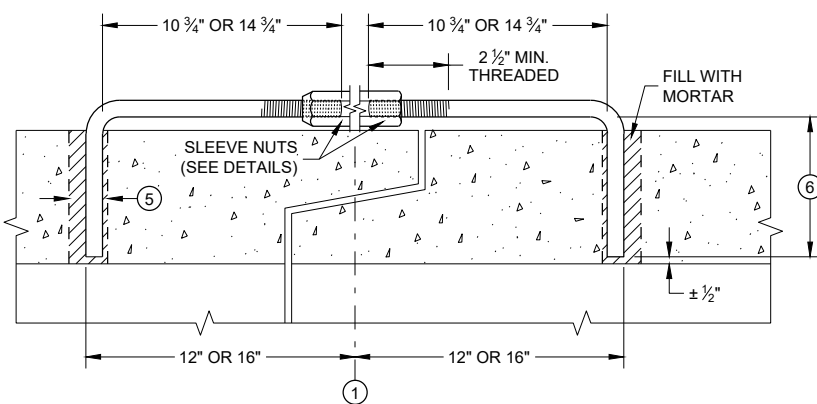


TAPERED



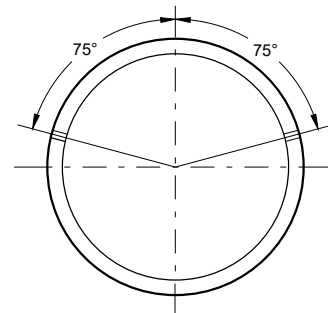
PLAIN

RIGHT AND LEFT THREADS  
SLEEVE NUTS



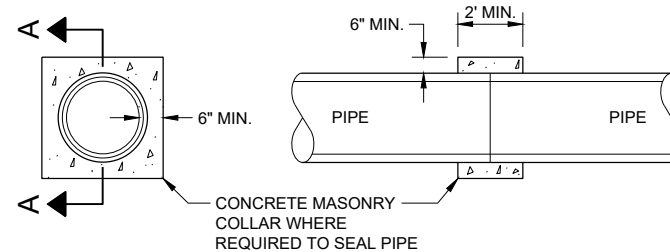
LONGITUDINAL SECTION

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



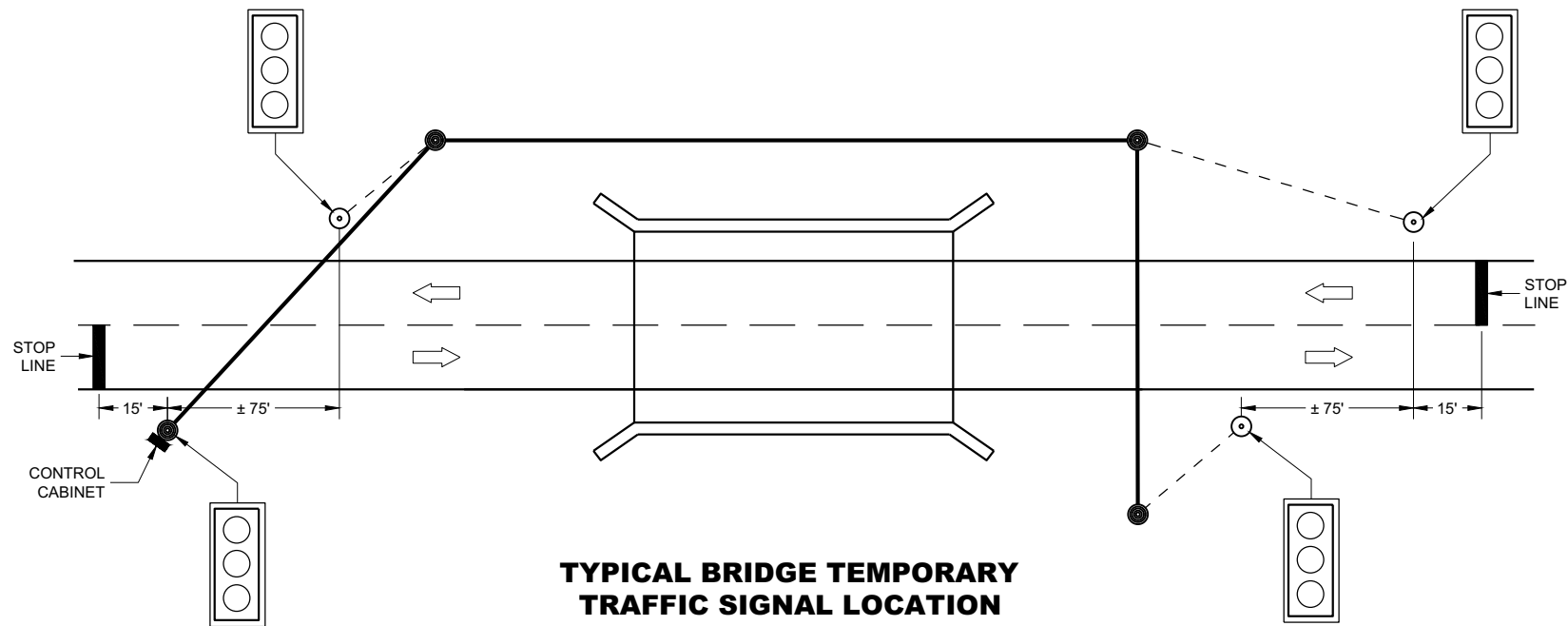
SECTION A - A

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  
FHWA 212



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

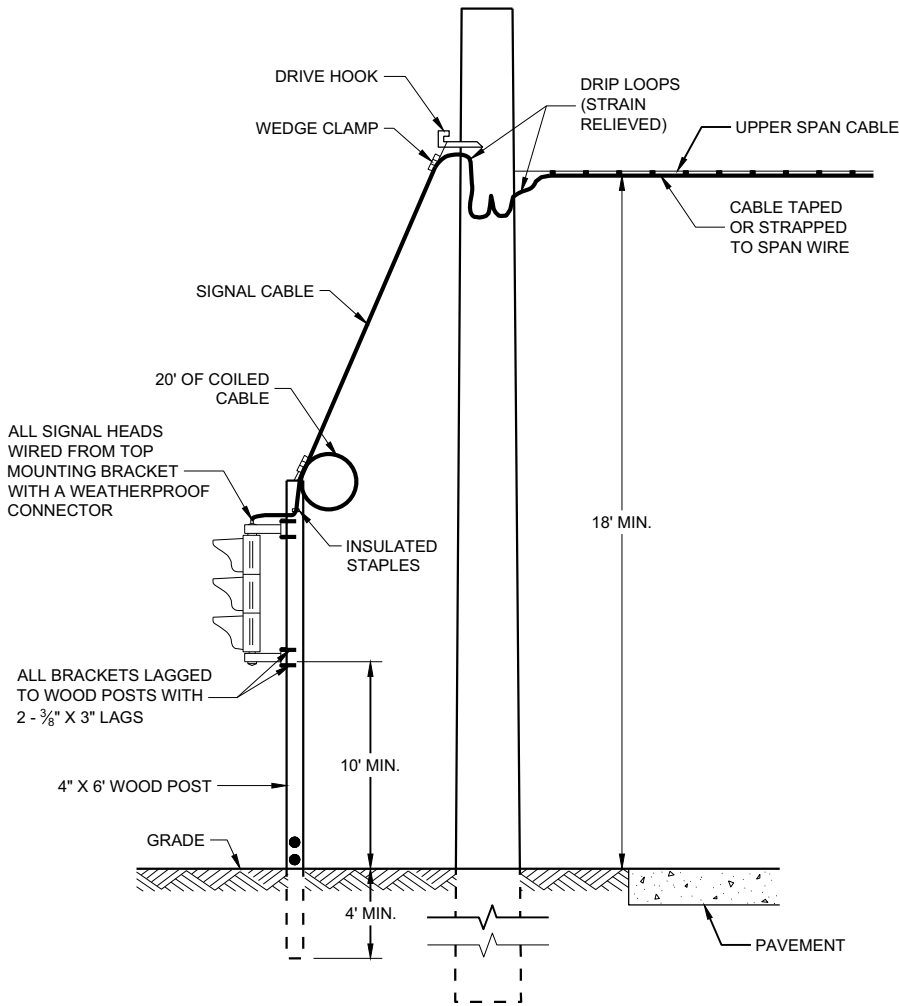
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

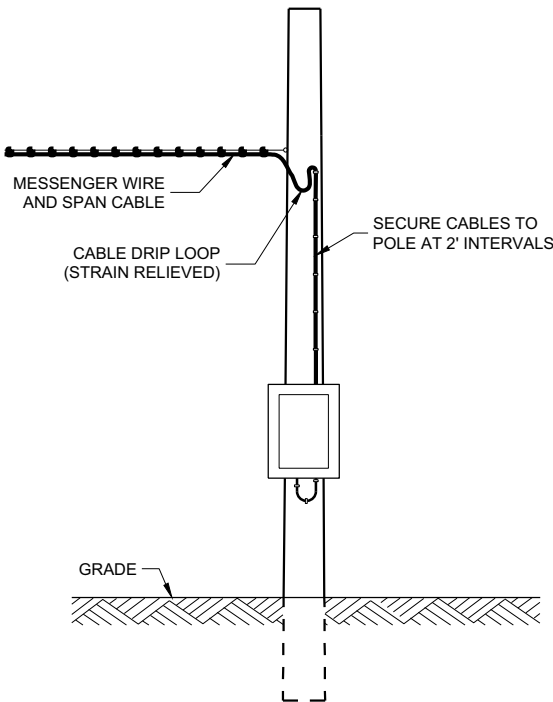
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

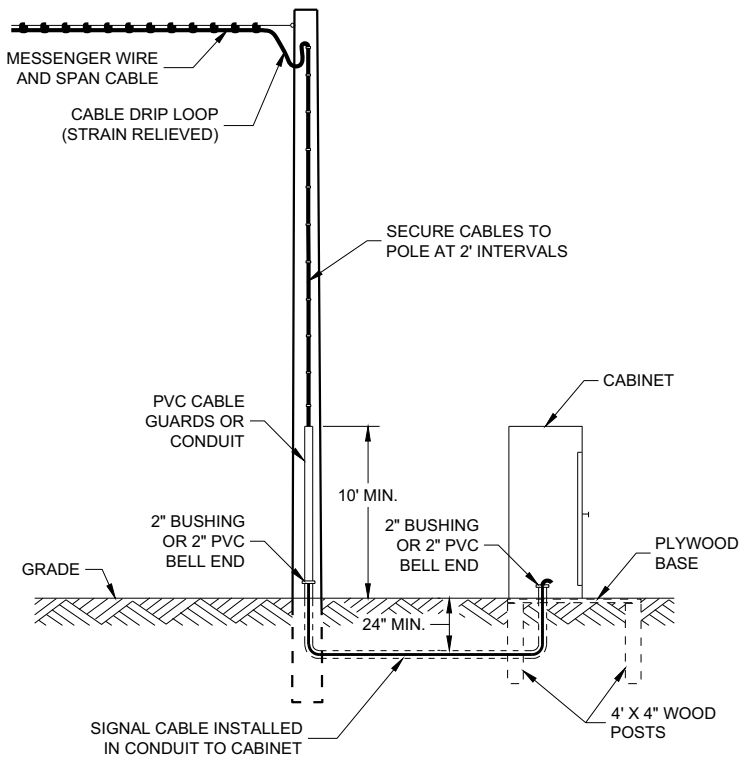
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

| MINIMUM POLE LENGTHS | CLASS | POLE BURIAL DEPTHS |
|----------------------|-------|--------------------|
| 25'                  | V     | 5'                 |
| 30'                  | V     | 6'                 |
| 35'                  | IV    | 7'                 |
| 40'                  | IV    | 8'                 |
| 45'                  | IV    | 9'                 |

| OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES |                  |
|----------------------------------------------------|------------------|
| SPEED LIMIT                                        | OFFSET DISTANCE* |
| GREATER THAN 45 MPH                                | 18 FT            |
| 45 MPH OR LESS                                     | 12 FT            |
| 45 MPH OR LESS W/CURBS                             | 2 FT             |

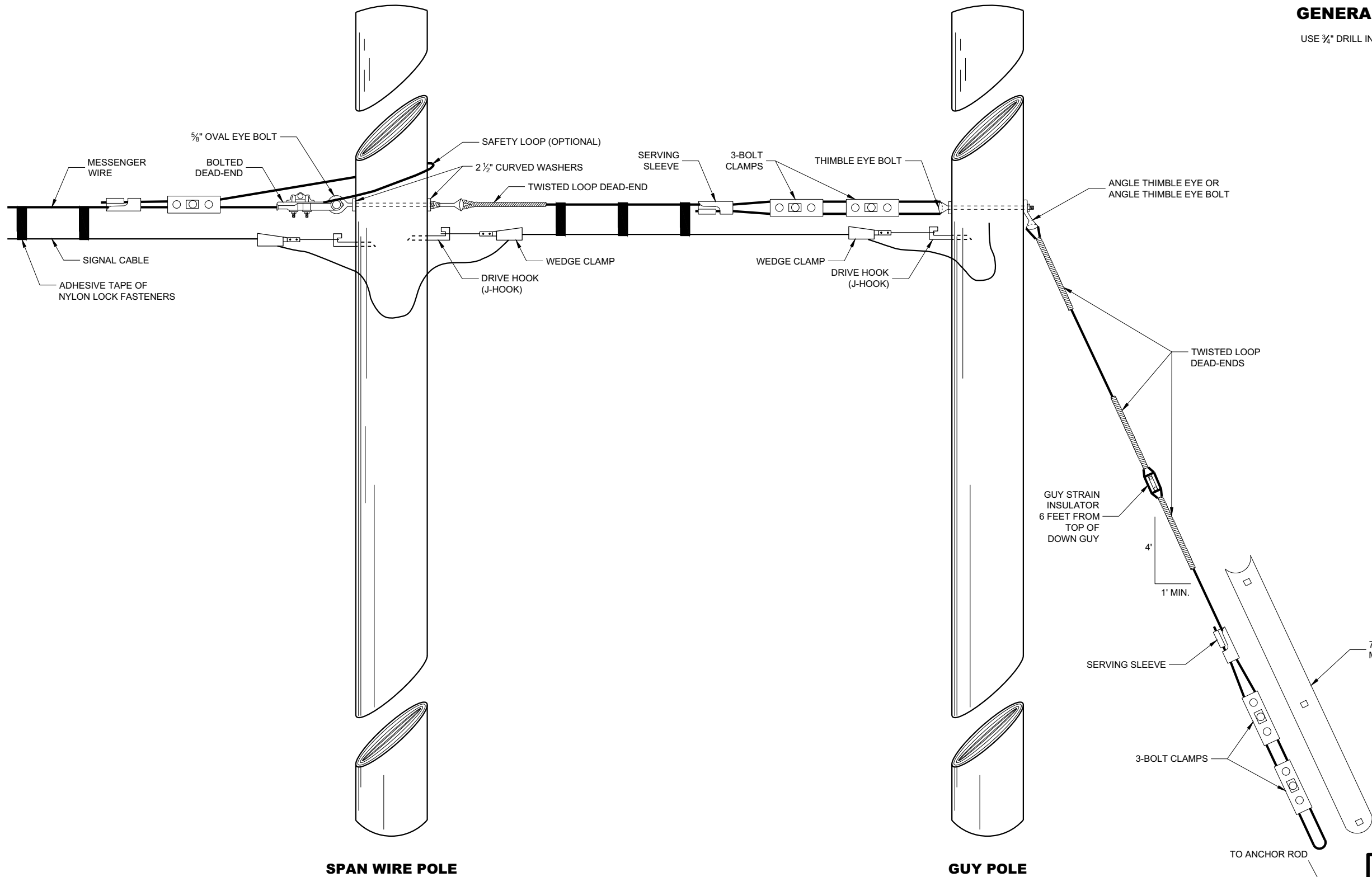
\* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018  
DATE  
/S/ Ahmet Demirbilek  
ROADWAY STANDARDS DEVELOPMENT ENGINEER  
213  
FHWA





**GENERAL NOTES**

USE 3/4" DRILL IN WOOD POLE TO PROVIDE FOR 5/8" BOLTS.

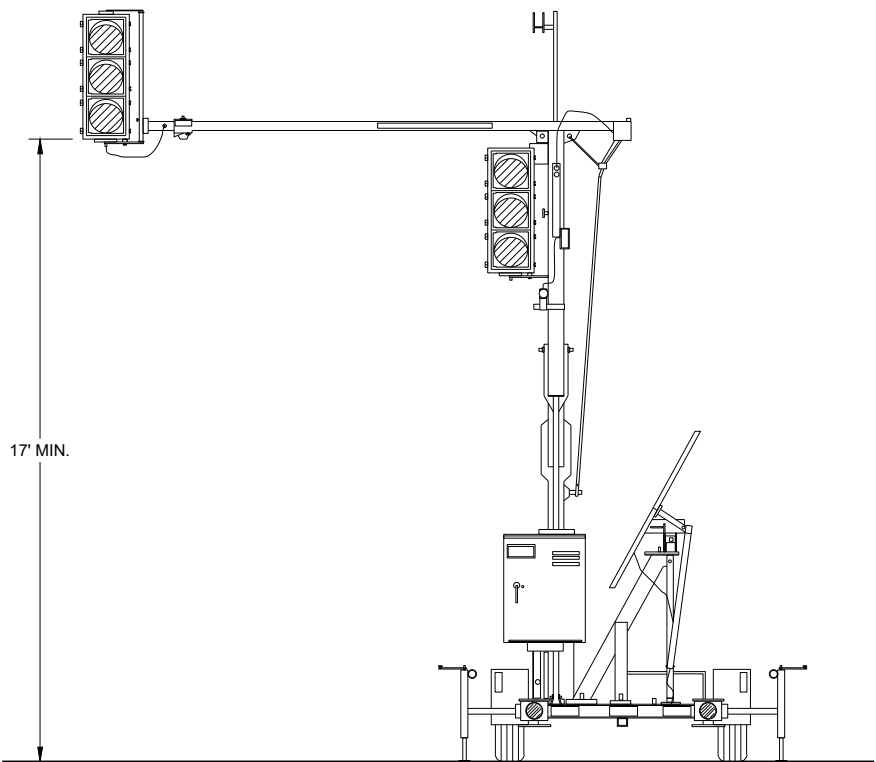
**TYPICAL DEAD-ENDINGS OR GUYING**

**BRIDGE TEMPORARY TRAFFIC  
SIGNAL INSTALLATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 DATE /S/ Ahmet Demerbilek  
ROADWAY STANDARDS DEVELOPMENT ENGINEER 214

FHWA

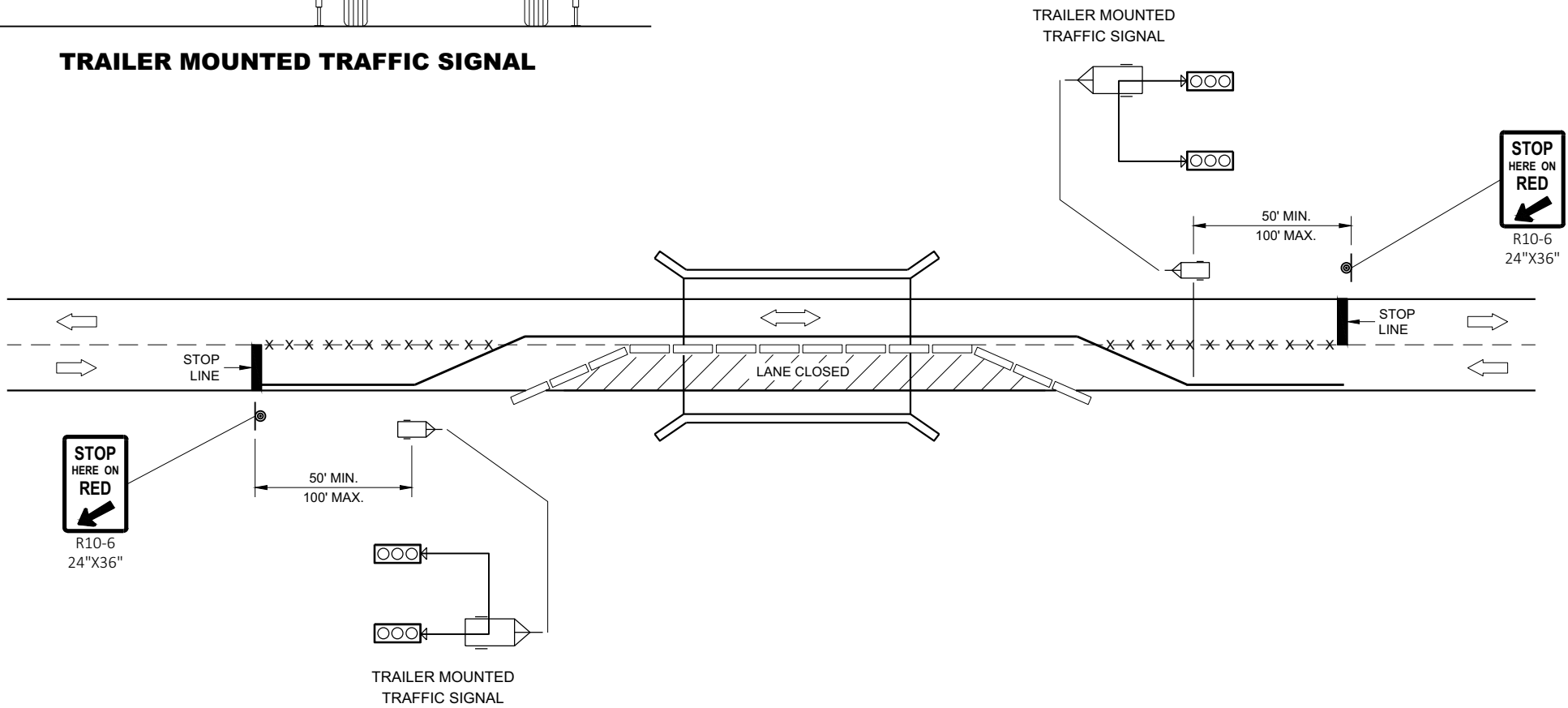


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

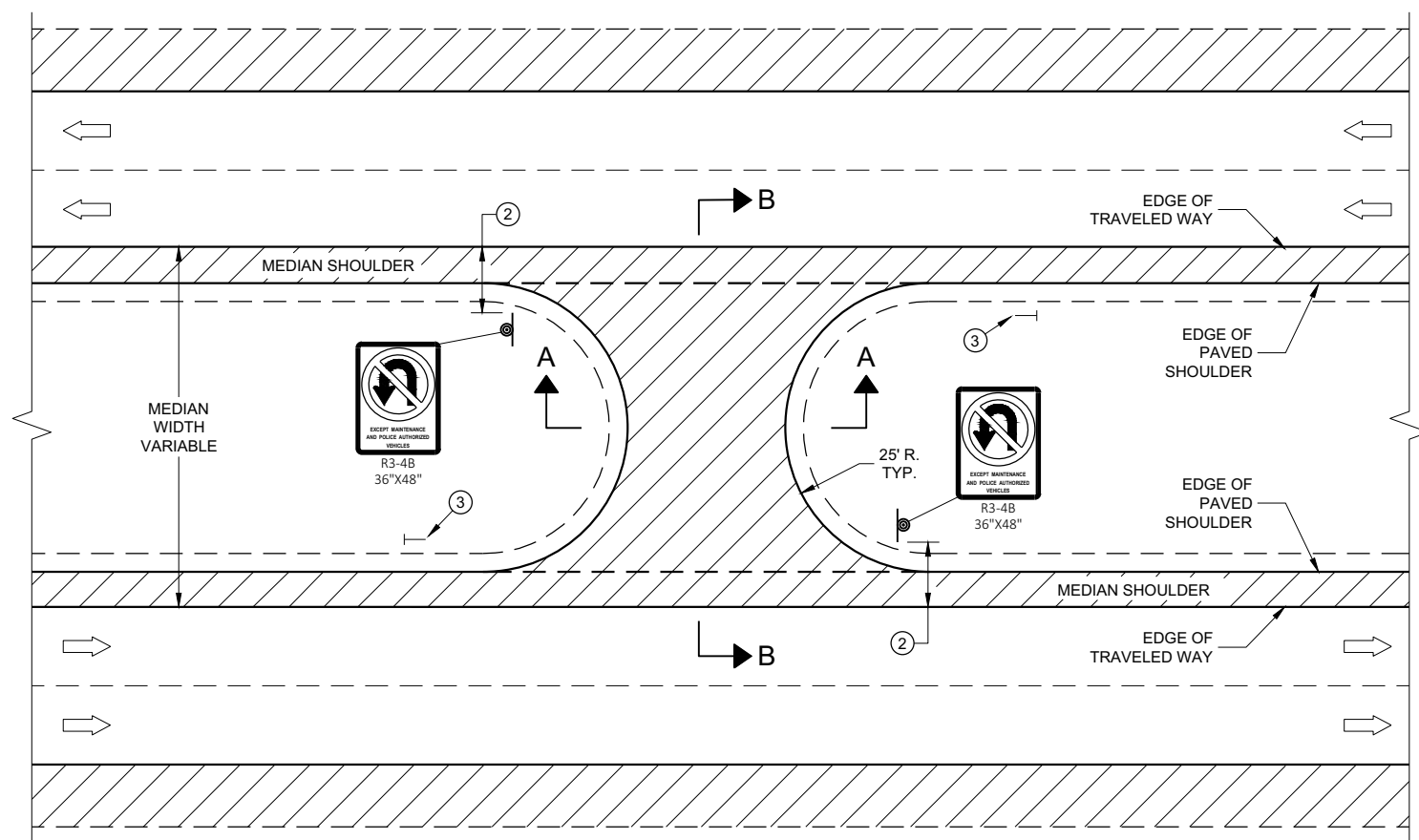
APPROVED  
June 2015  
DATE

/S/ Ahmet Demerbilek  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

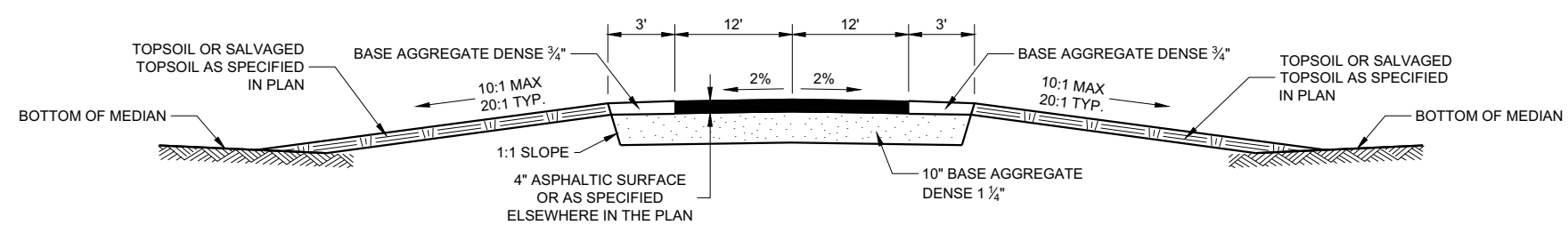
215

FHWA

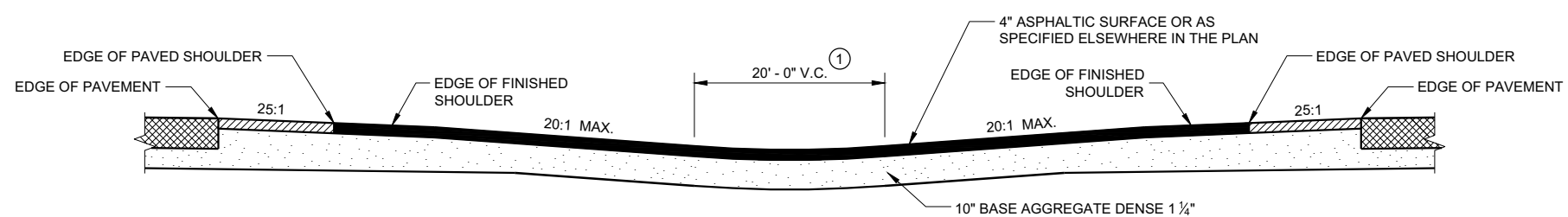




### PLAN VIEW



## SECTION A-A



## SECTION B-B

## GENERAL NOTES

- ① ADJUST VERTICAL CURVE LOCATION Laterally to maintain 20:1 max.
- ② Signing details and specifications are provided elsewhere in the contract.
- ③ Install delineator. See standard detail drawing 15A4.

## LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DELINEATOR
-  DIRECTION OF TRAFFIC

## MAINTENANCE CROSSOVER FOR FREEWAYS

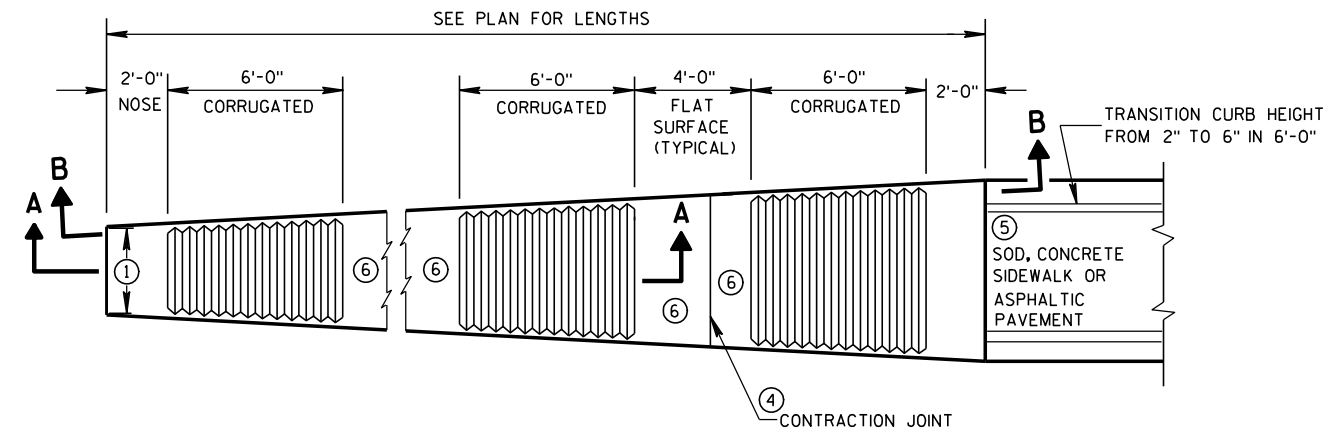
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019  
DATE

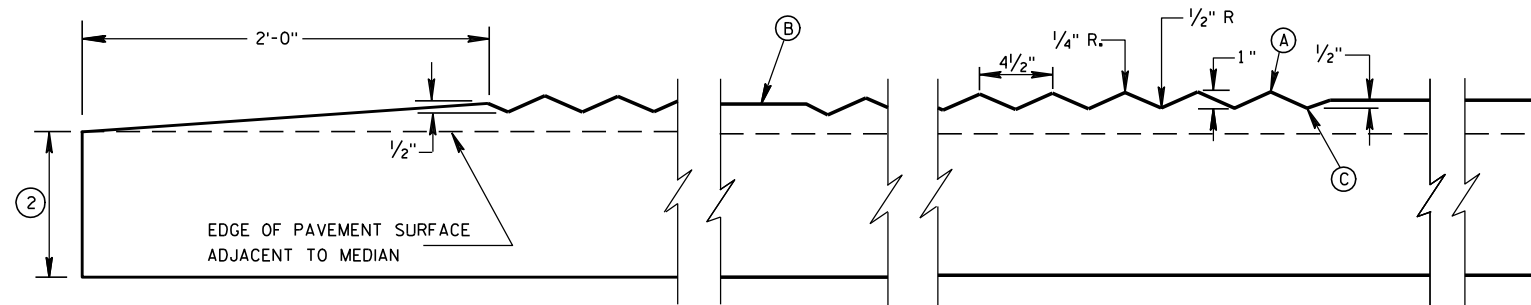
/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

216

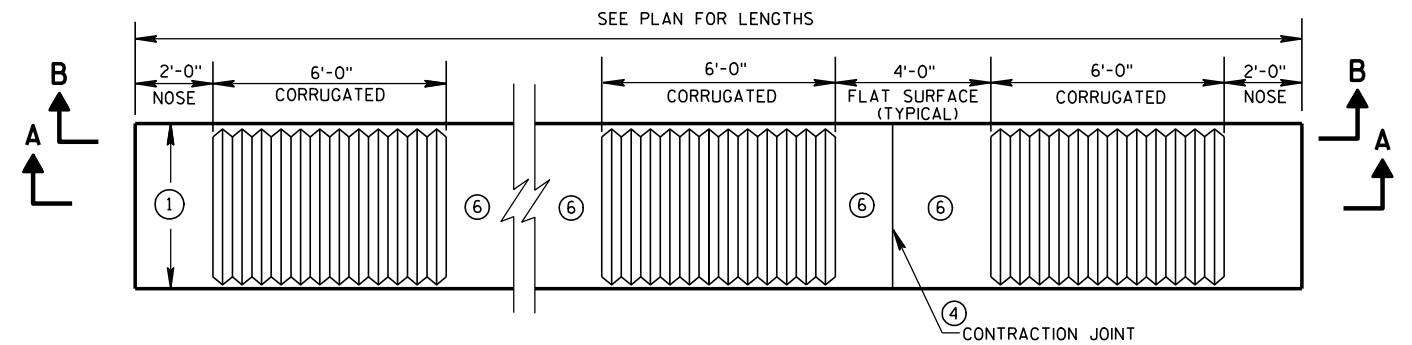
FHWA



PLAN VIEW  
VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



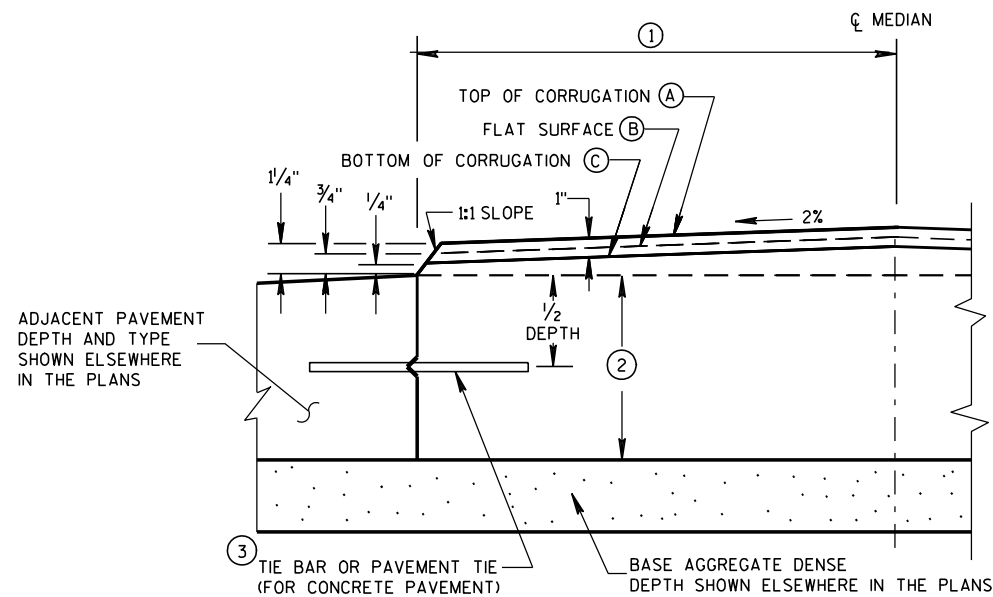
SECTION A-A  
LONGITUDINAL SECTION



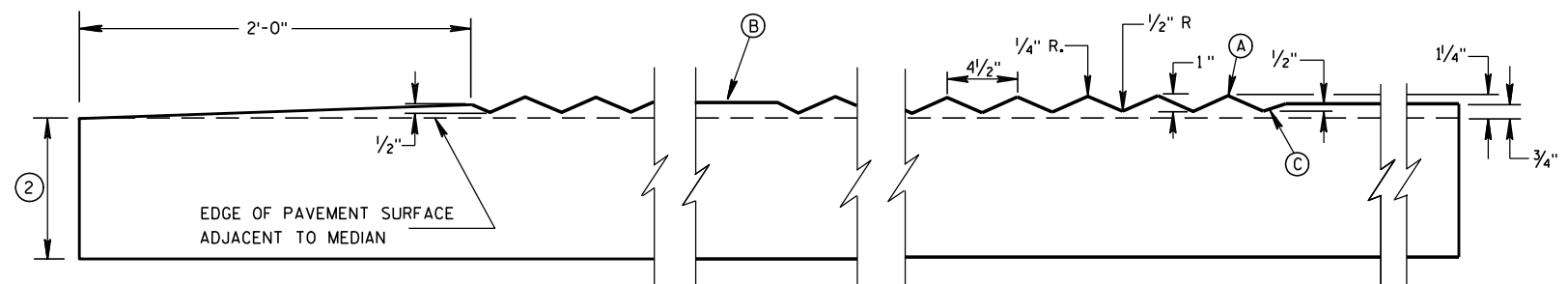
PLAN VIEW  
UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN

### GENERAL NOTES

- ① SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.
- ② THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE OVER NEW OR EXISTING CONCRETE BASE COURSE, OR PAVEMENT.
  - (3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.
- ③ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C. INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP). PAVEMENT TIES REQUIRED IN EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE, PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ④ CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE, TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.
- ⑤ SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.
- ⑥ YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION  
② CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT

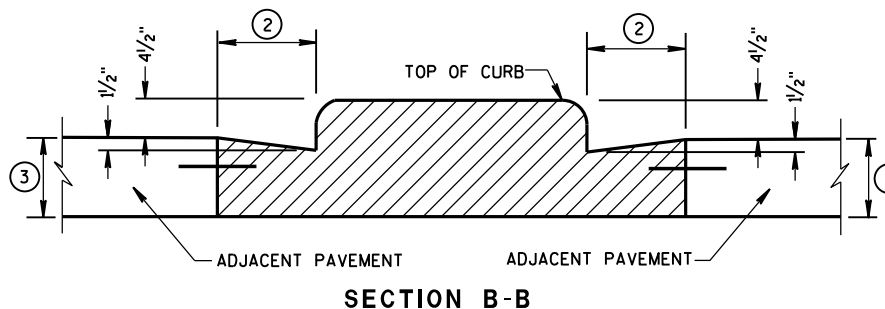
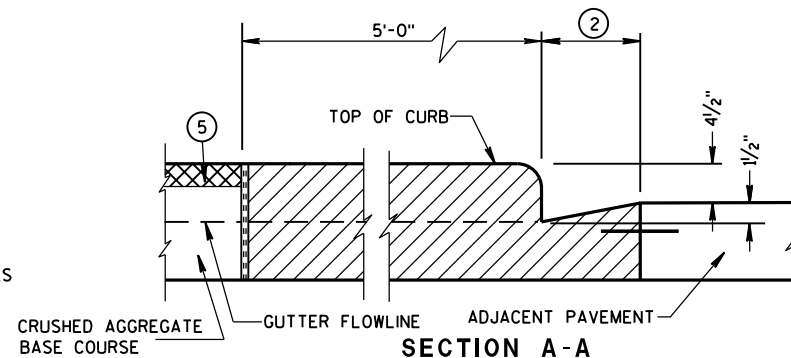
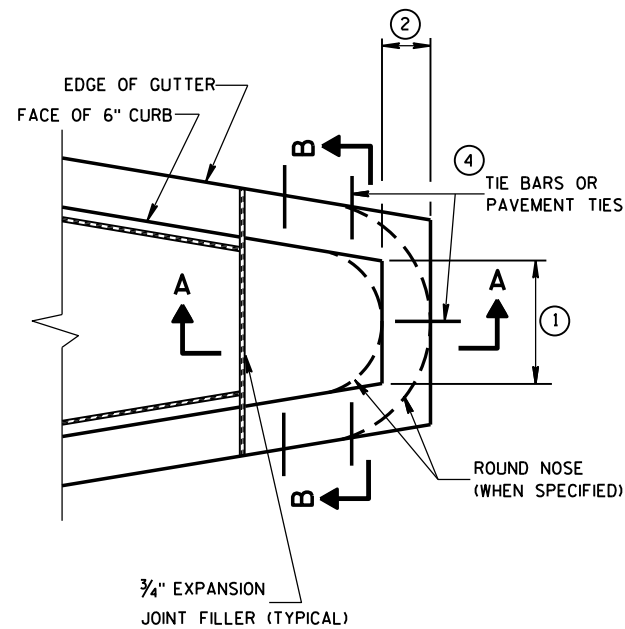
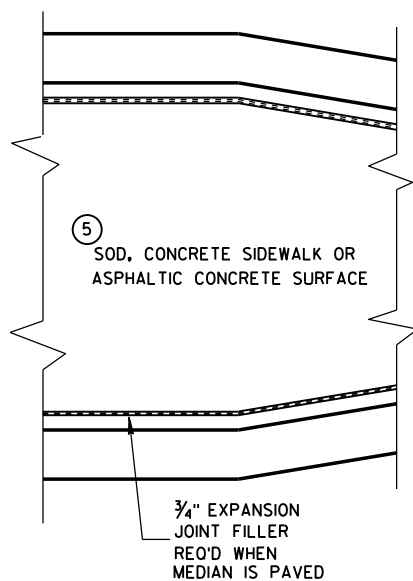


SECTION B-B  
LONGITUDINAL SECTION

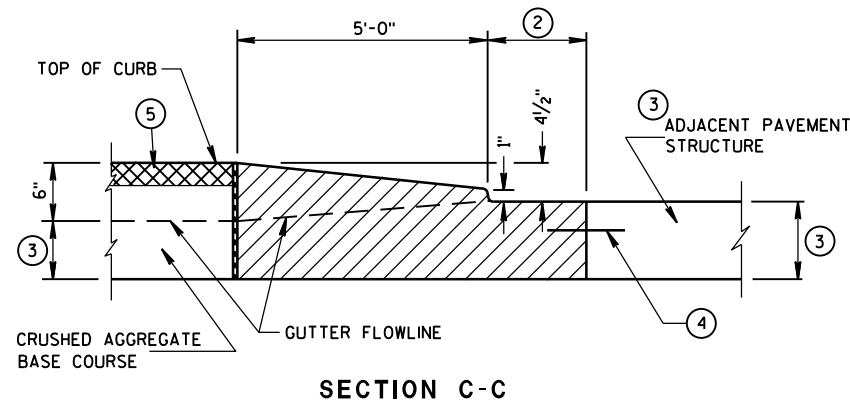
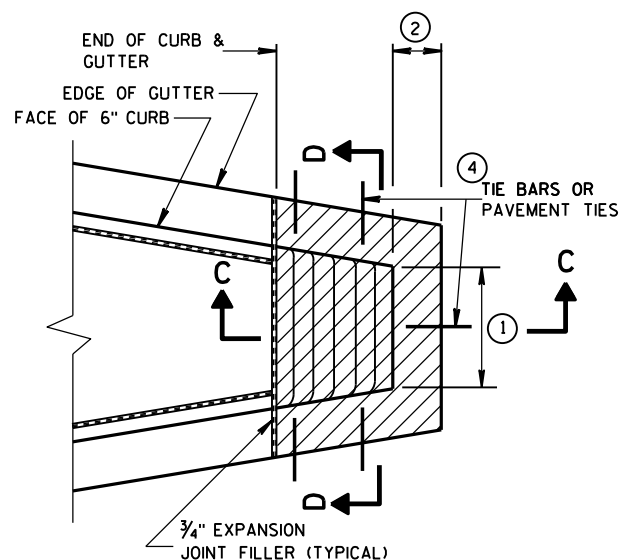
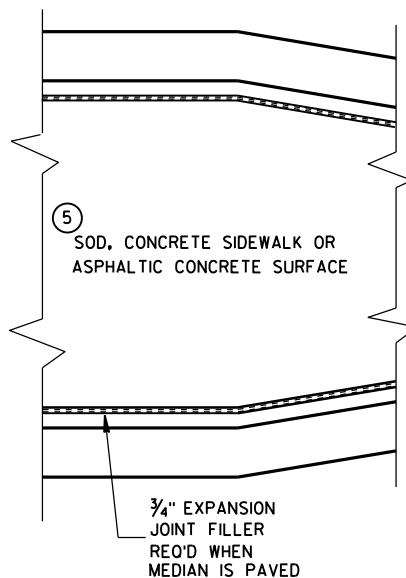
### CONCRETE CORRUGATED MEDIAN

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

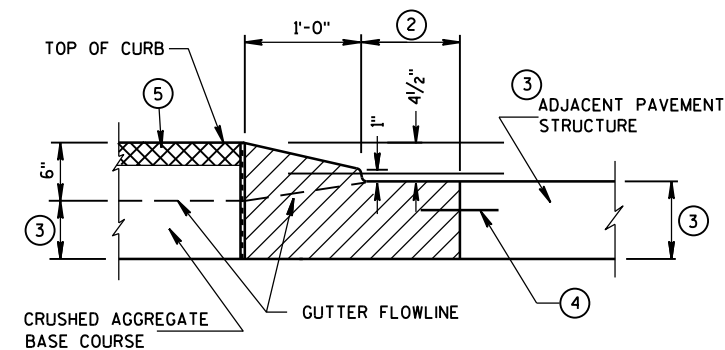
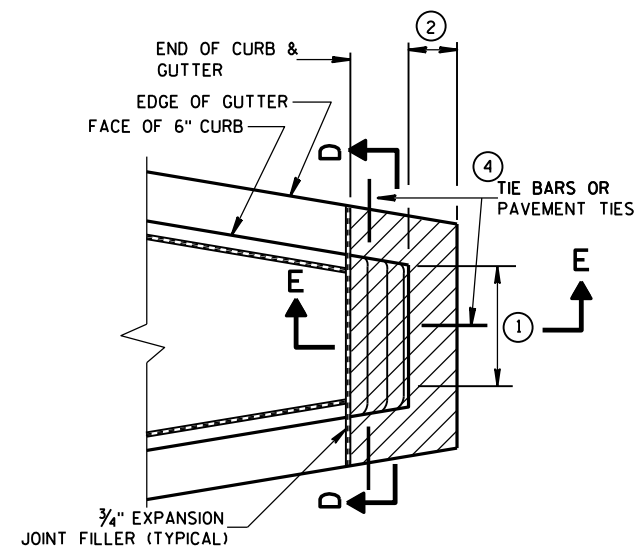
APPROVED  
12/17/07 /S/ Jerry H. Zapp  
DATE ROADWAY STANDARDS 217  
FHWA ENGINEER



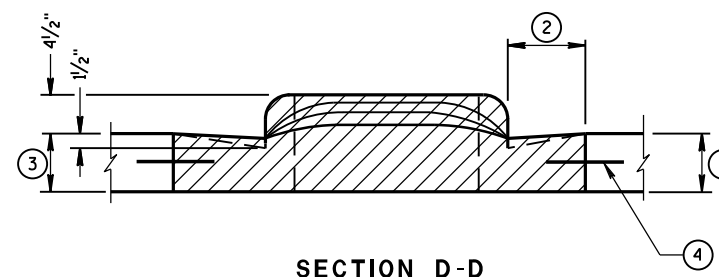
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



## GENERAL NOTES

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

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

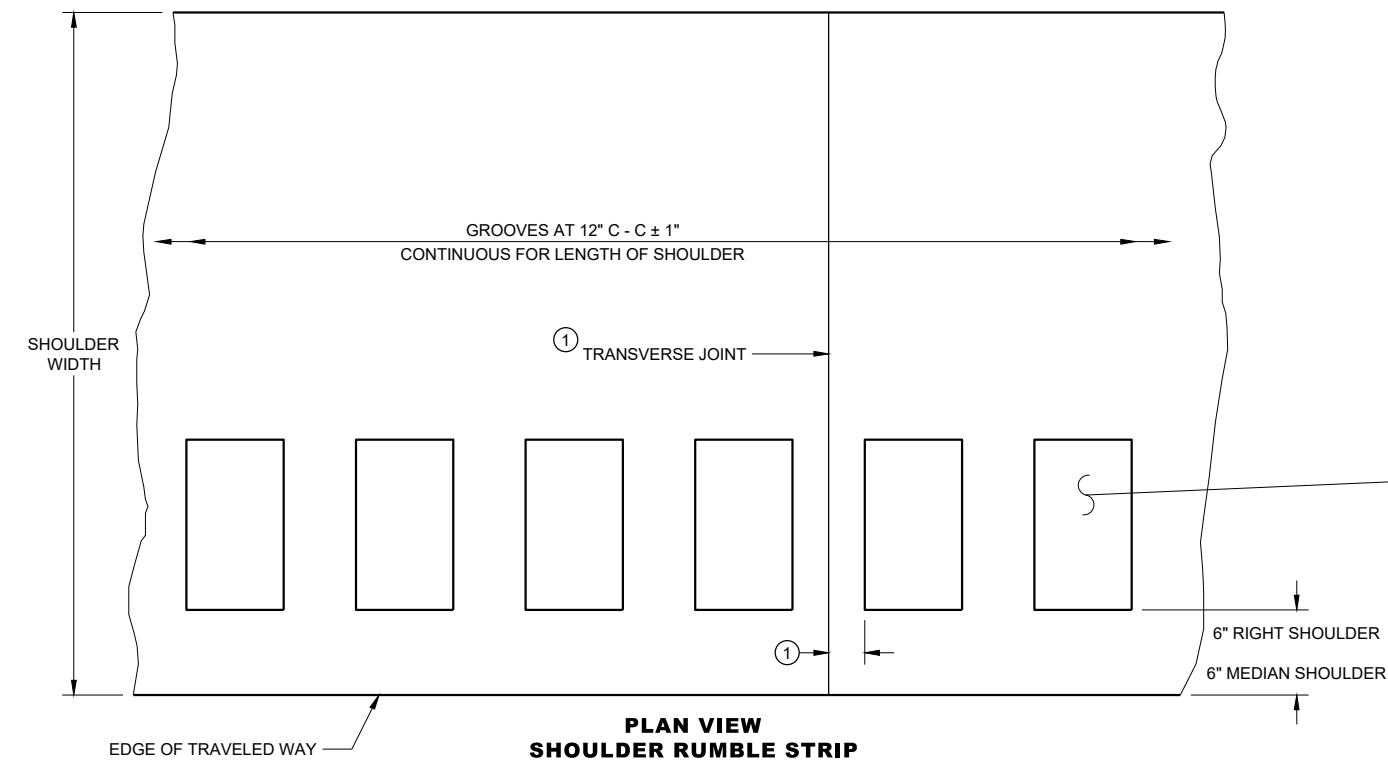
6/8/2006

DATE

FHWA

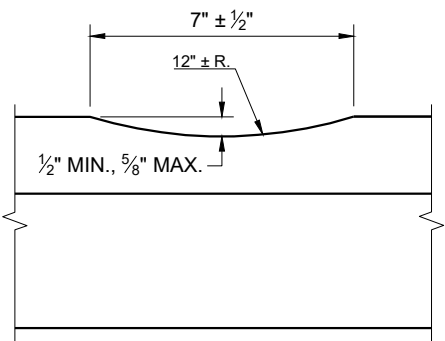
/S/ Jerry H. Zogg  
ROADWAY STANDARDS D 218  
ENGINEER

4T

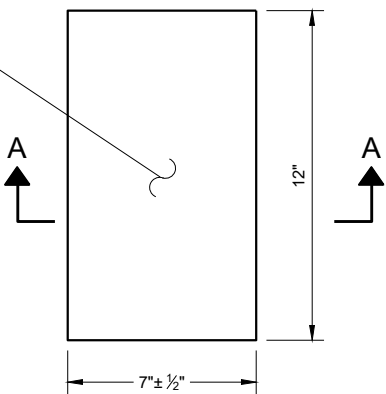


6

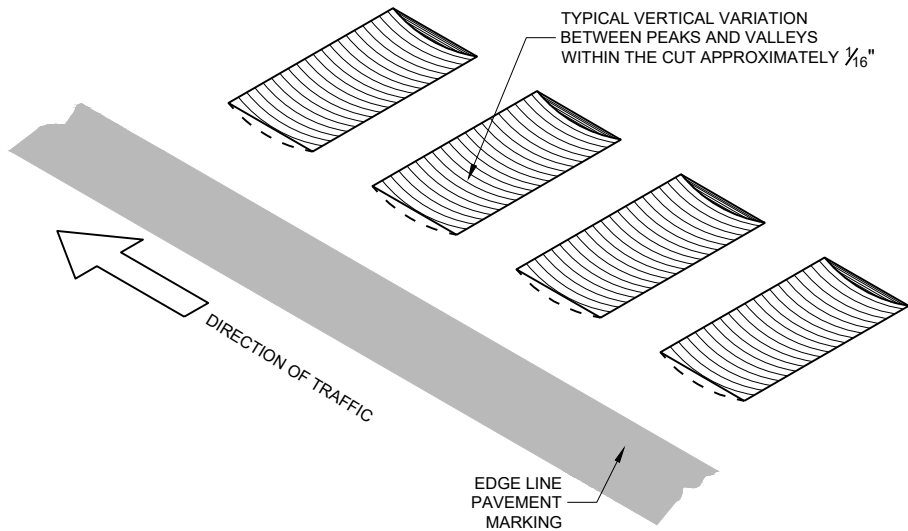
PLACEMENT DETAIL FOR RUMBLE STRIP



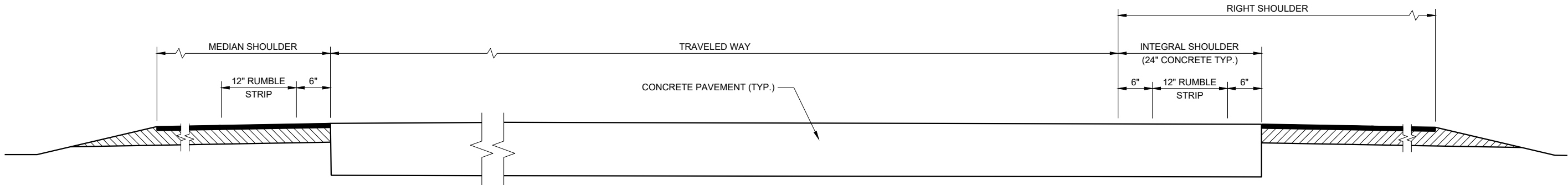
SECTION A - A



PLAN VIEW  
(SINGLE GROOVE)



ISOMETRIC



SECTION VIEW

TYPICAL SHOULDER RUMBLE STRIPS  
(ONE ROADWAY IS SHOWN)

GENERAL NOTES

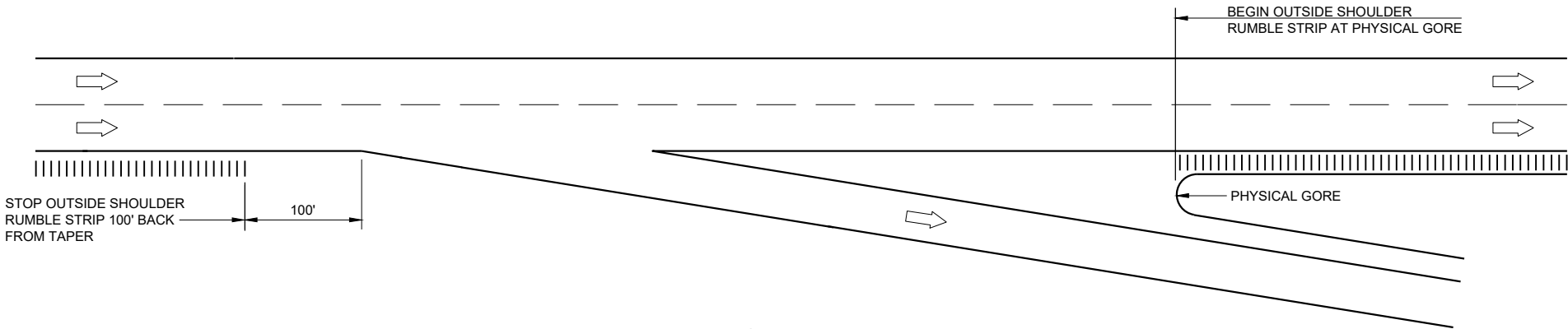
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

RUMBLE STRIPS ON EXPRESSWAYS:  
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

- ① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.

SHOULDER RUMBLE STRIPS,  
DIVIDED ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



TYPICAL EXIT RAMP

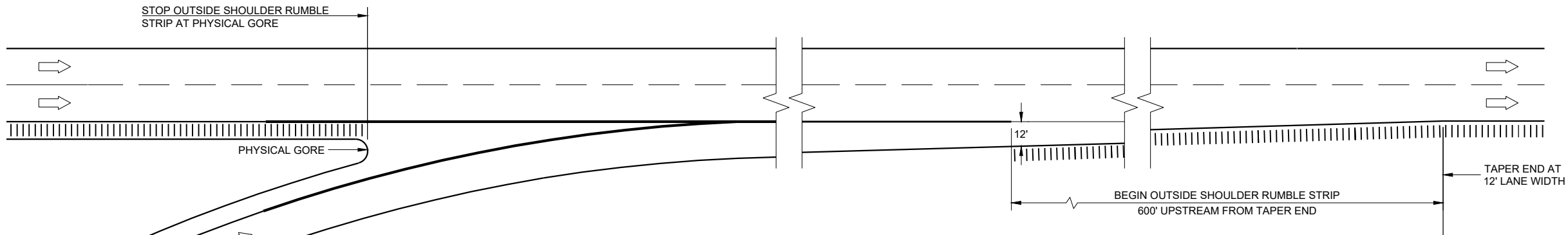
GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMP, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

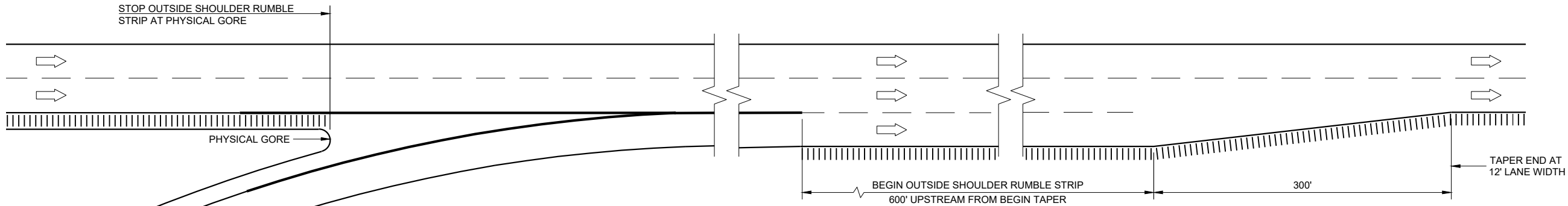
RUMBLE STRIPS ON EXPRESSWAYS:  
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

LEGEND

➡ DIRECTION OF TRAFFIC



TYPICAL TAPERED ENTRANCE RAMP  
RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

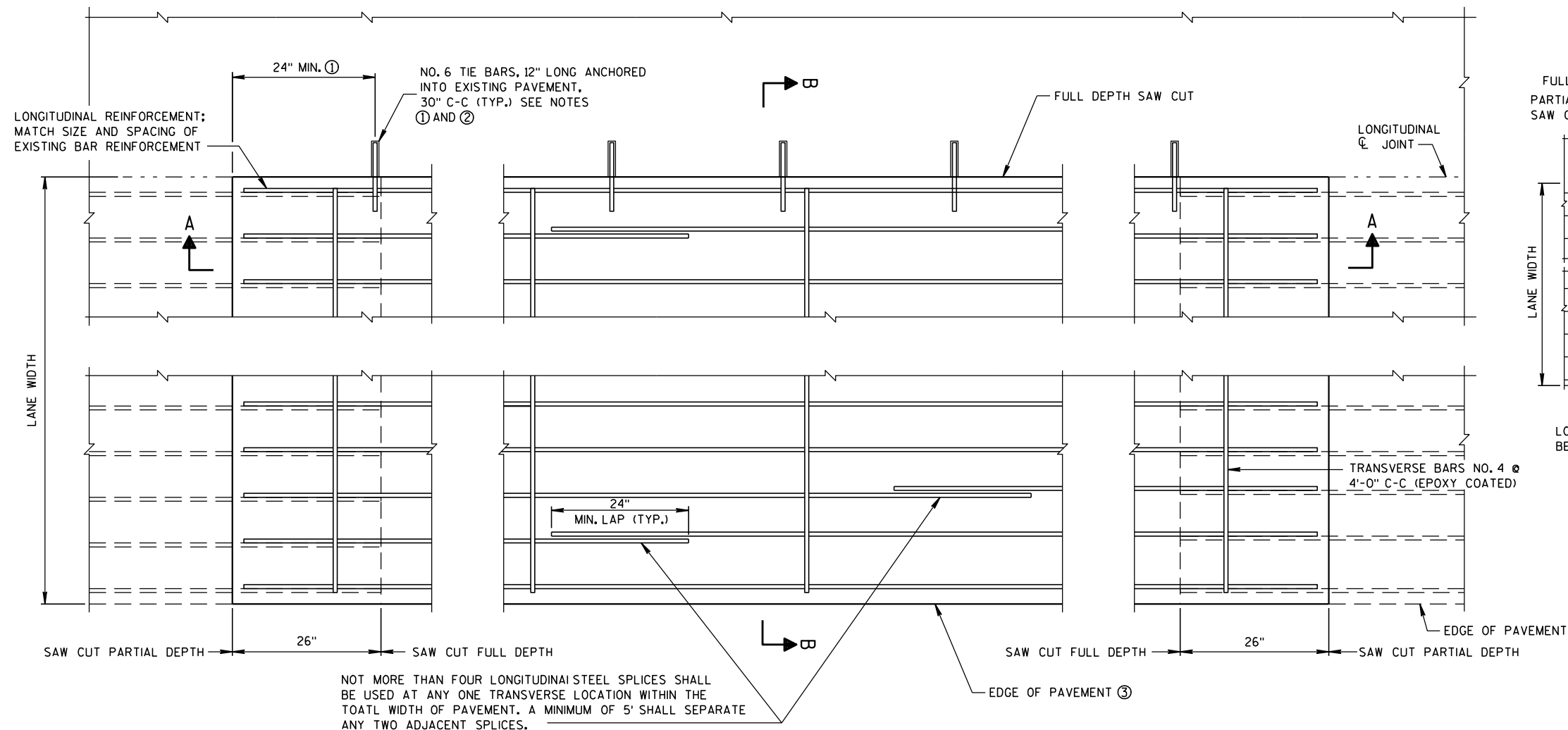
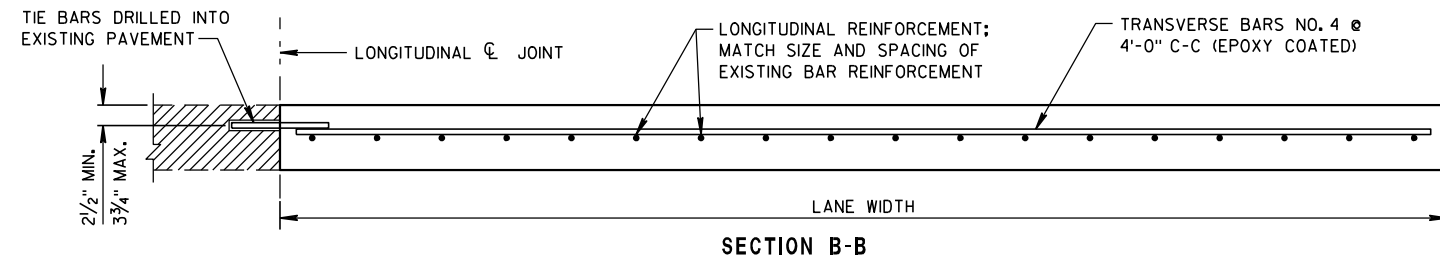
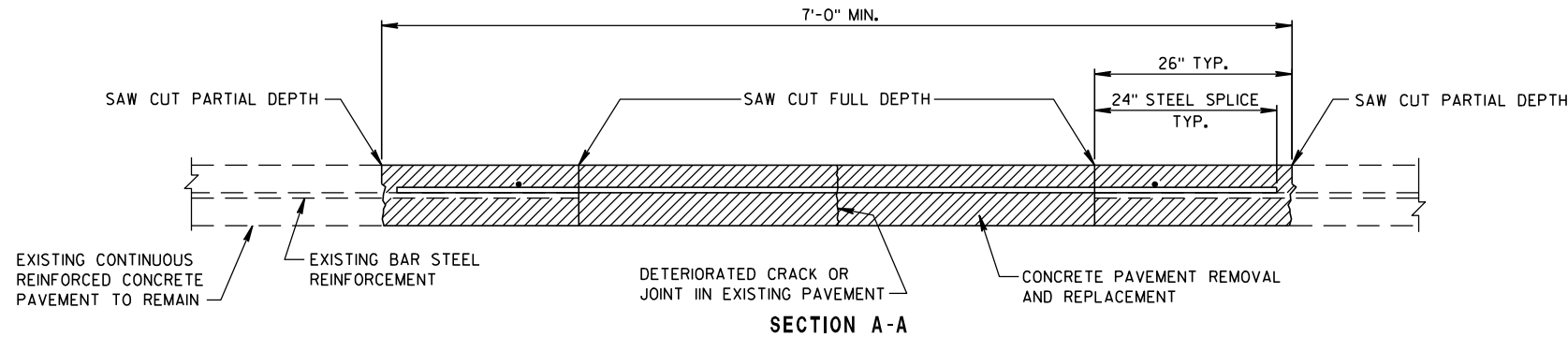


TYPICAL PARALLEL ENTRANCE RAMP  
RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIPS,  
DIVIDED ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023  
DATE  
/S/ Rodney Taylor  
ROADWAY DESIGN STAFF  
UNIT SUPERVISOR  
220  
FHWA



REINFORCEMENT STEEL PLACEMENT IN  
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPLACEMENT

GENERAL NOTES

PLACE ALL BAR STEEL REINFORCEMENT AT MID PAVEMENT DEPTH UNLESS OTHERWISE NOTED.

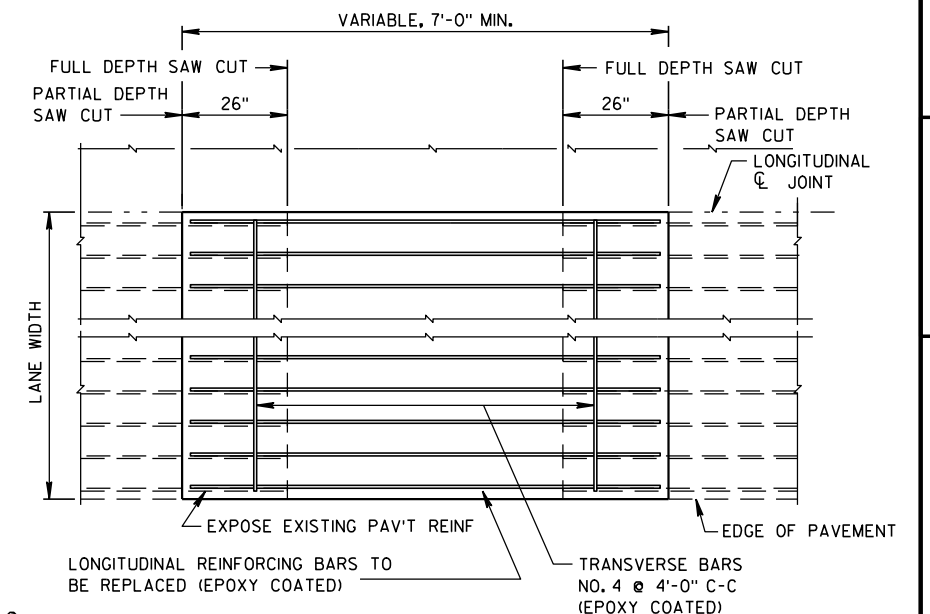
PAY FOR THE TRANSVERSE AND LONGITUDINAL JOINT SAW CUT AS LINEAR FEET OF "SAWING CONCRETE".

WHEN THE PASSING AND TRAVELING LANES ARE TO BE REPLACED, REPLACE THE PASSING LANE FIRST.

ADD TRANSVERSE STEEL BARS TO REPAIRS GREATER THAN 6' IN LENGTH, USE NO. 4 BARS PLACED TRANSVERSELY AND SPACED 4' C-C. PAYMENT SHALL BE INCIDENTAL TO "CONCRETE PAVEMENT CONTINUOUS REINFORCEMENT".

TIE ALL CONCRETE PAVEMENT REPAIRS WHICH ARE GREATER THAN 15' IN LENGTH, AND ARE ADJACENT TO EXISTING CONCRETE PAVEMENT, TO THE EXISTING PAVEMENT USING TIE BARS. DETAILS FOR TIE BAR CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS.

- ① PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.
- ② ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ③ SAW CUT THE LONGITUDINAL EDGE JOINT IF THE ADJACENT SHOULDER IS CONCRETE.



LONGITUDINAL STEEL PLACEMENT  
IN CRCP REPAIRS  
PLAN VIEW

CONTINUOUSLY REINFORCED  
CONCRETE PAVEMENT  
REPAIR AND REPLACEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

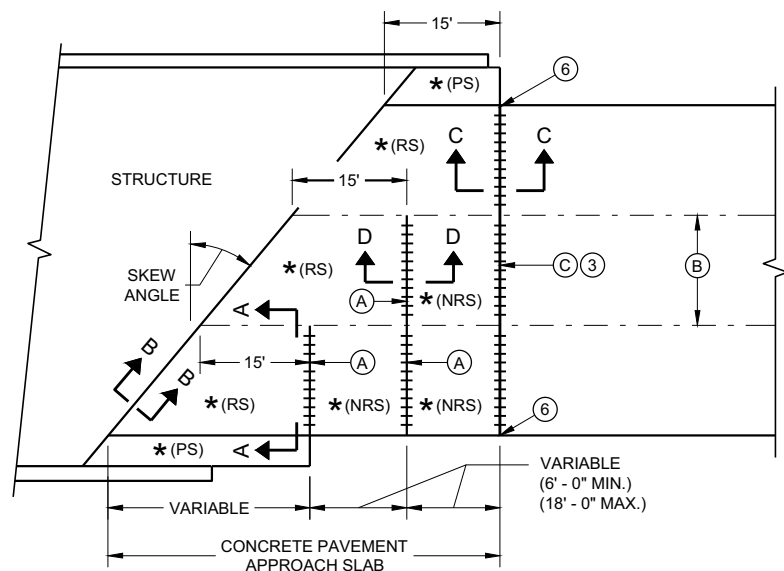
11/1/2011  
DATE

FHWA

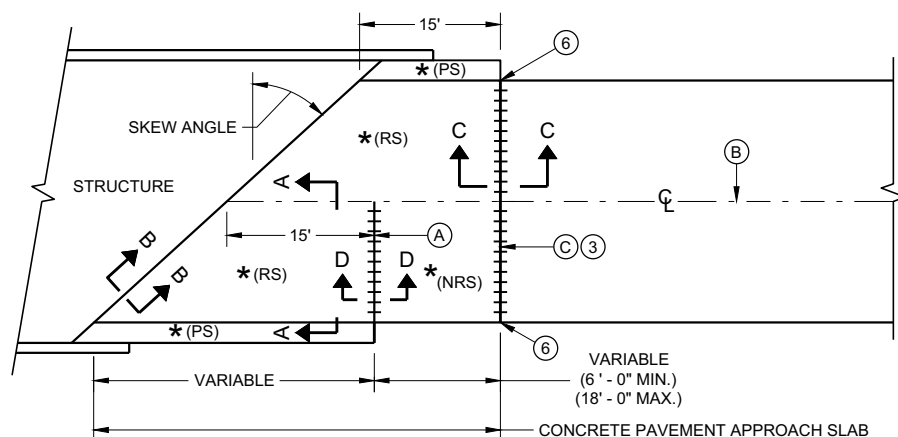
/S/ Deb Bischoff  
PAVEMENT POLICY & DE 221

NEER

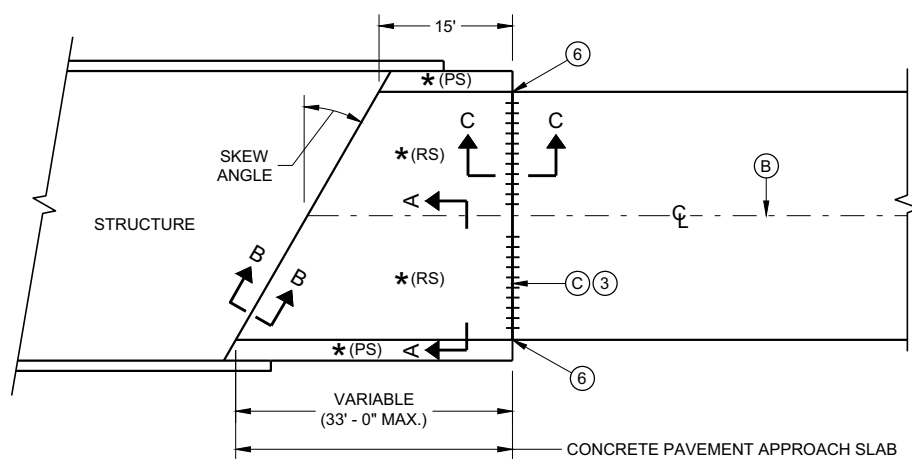




**SKewed APPROACH  
(PAVEMENT MORE THAN TWO LANES)**



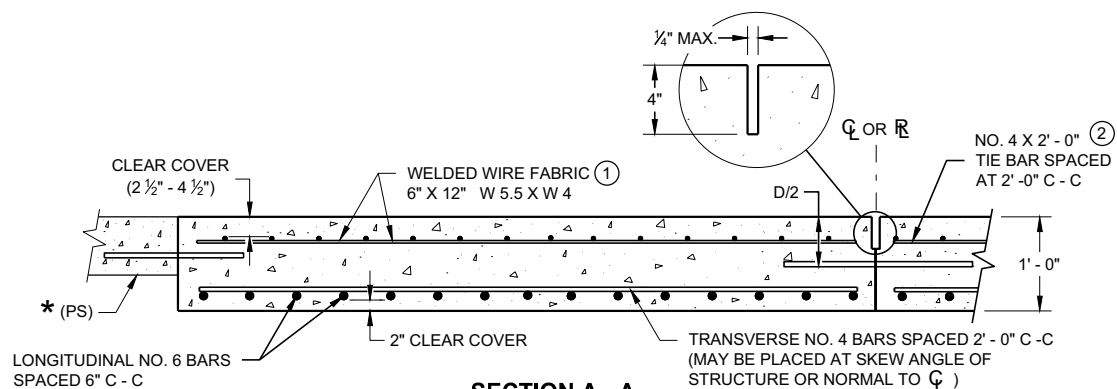
**SKews > 20°  
(PAVEMENT WIDTH ≤ 30')**



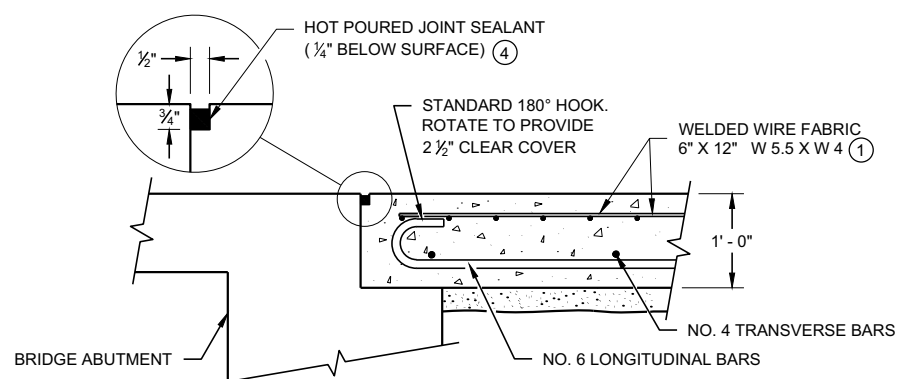
**SKews ≤ 20°  
(PAVEMENT WIDTH ≤ 30')**

**APPROACH SLAB AND ADJACENT PAVEMENT**

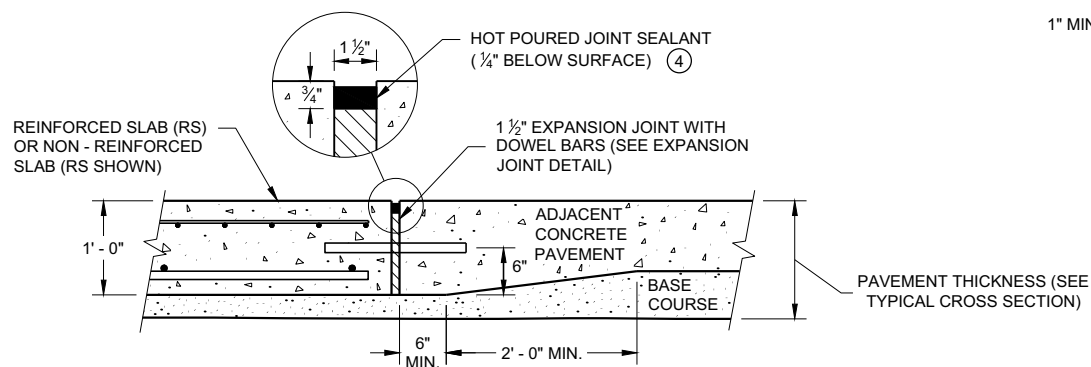
- \* (RS) = REINFORCED CONCRETE SLAB
- \* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- \* (NRS) = NON - REINFORCED CONCRETE SLAB
- \*\*\* STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A  
REINFORCEMENT POSITIONING DETAIL**



**SECTION B - B  
BEND DETAIL  
BOTTOM REINFORCEMENT**



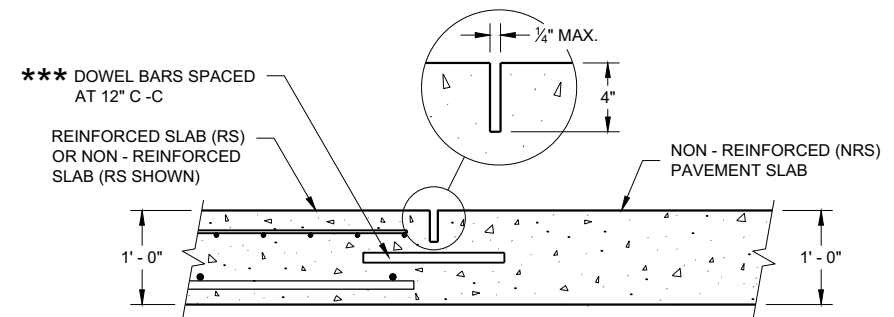
**SECTION C - C  
TRANSITION DETAIL  
APPROACH SLAB TO ADJACENT PAVEMENT**

## GENERAL NOTES

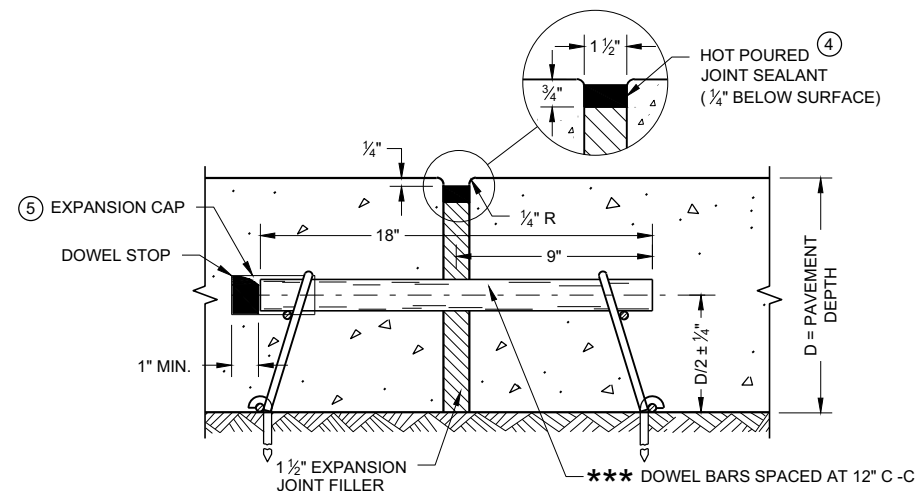
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
- ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- (A) STANDARD CONTRACTION JOINT NORMAL TO  $\mathcal{C}$  OR  $\mathcal{R}$ .
- (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
- (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO  $\mathcal{C}$  OR  $\mathcal{R}$ .



**SECTION D - D  
CONTRACTION JOINT**



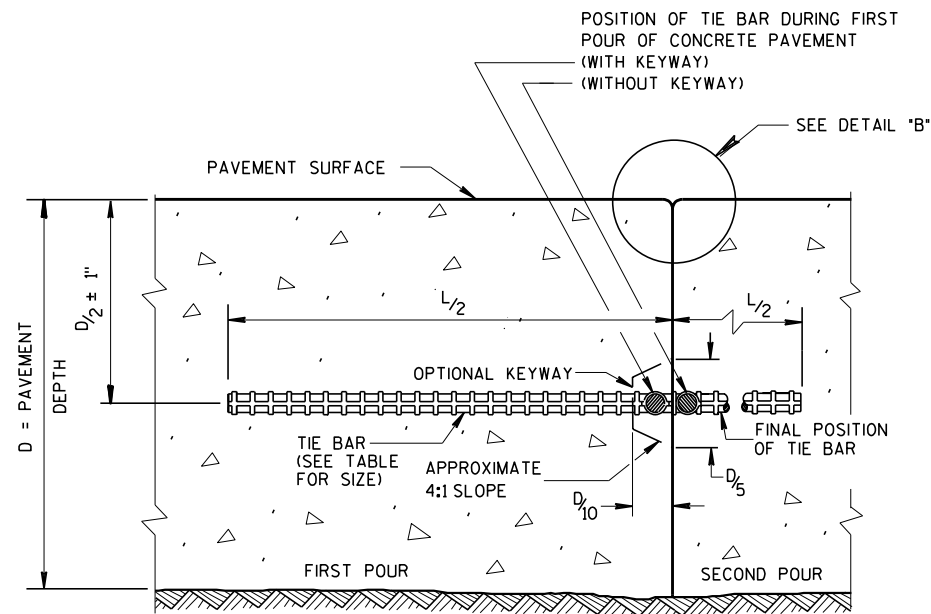
**EXPANSION JOINT DETAIL**

## CONCRETE PAVEMENT APPROACH SLAB

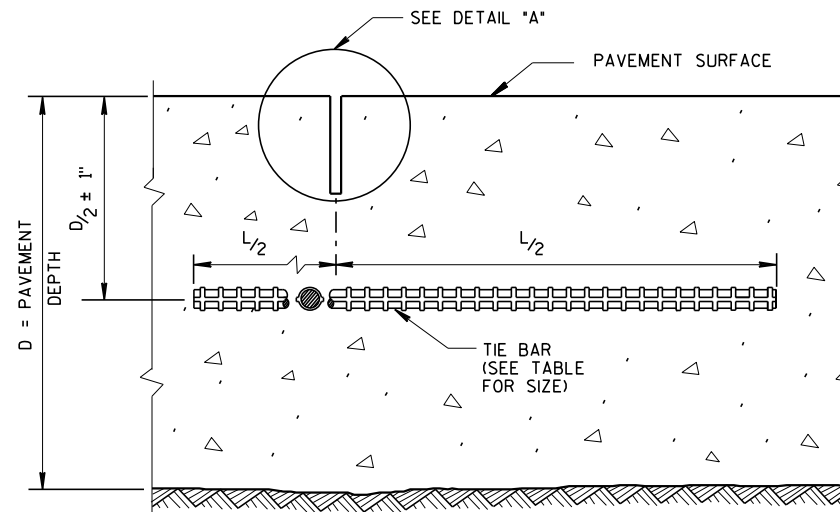
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR 222

FHWA



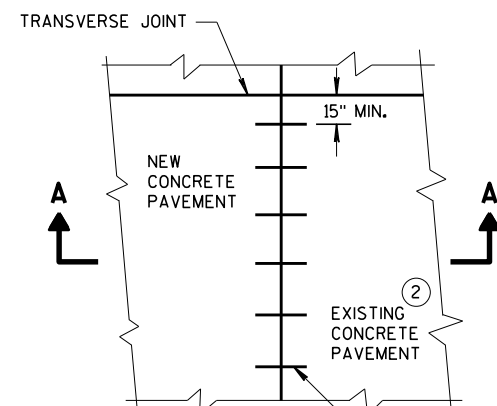
CONSTRUCTION JOINT



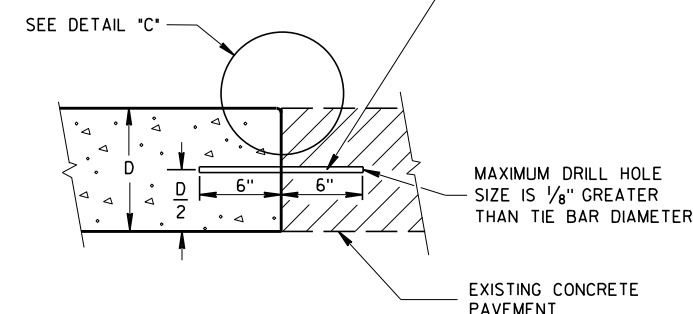
SAWED JOINT

GENERAL NOTES

- CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
- 1 ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
  - 2 PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

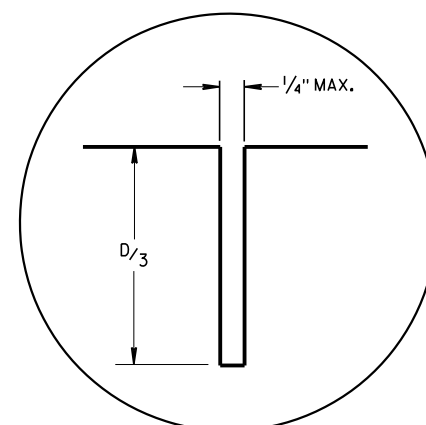


PLAN VIEW

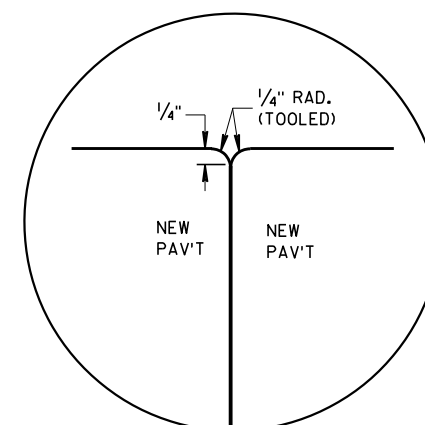


SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT

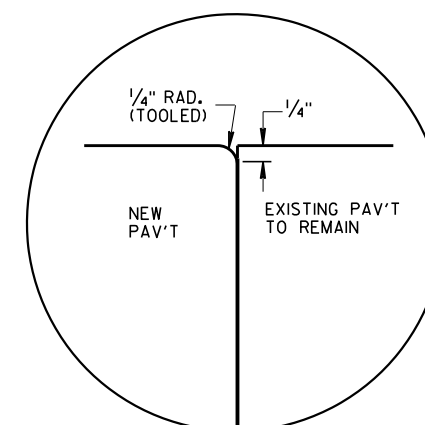
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



DETAIL "A"



DETAIL "B"



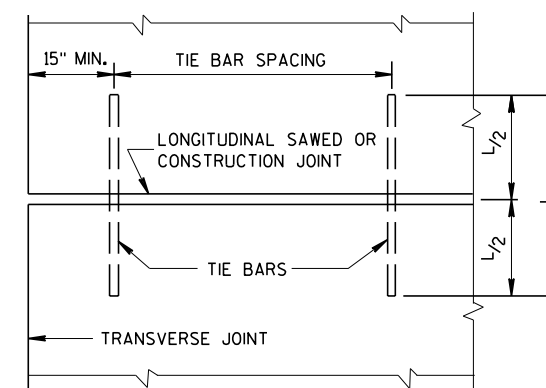
DETAIL "C"

TIE BAR TABLE

| PAVEMENT DEPTH (D)     | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|------------------------|--------------|--------------------|----------------------|
| $< 10 \frac{1}{2}"$    | NO. 4        | 30"                | 36"                  |
| $\geq 10 \frac{1}{2}"$ | NO. 5        | 36"                | 36"                  |
|                        | NO. 4 *      | 30"                | 24" **               |

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

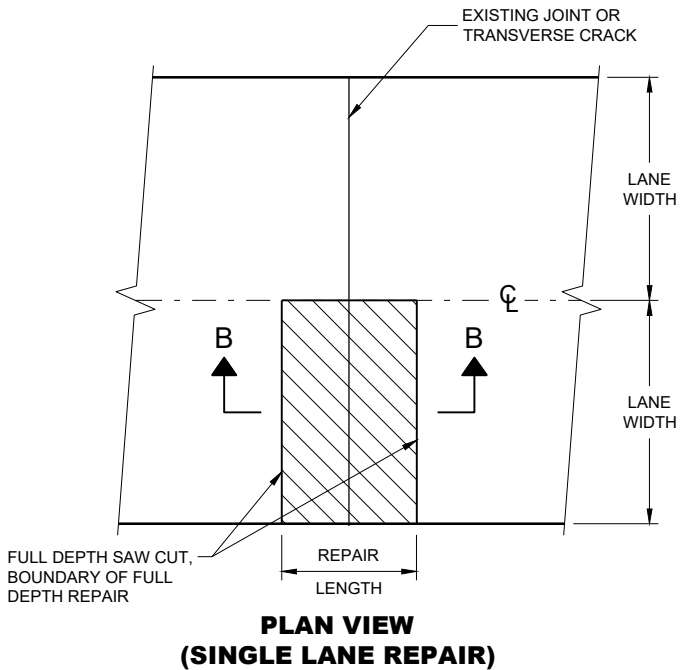
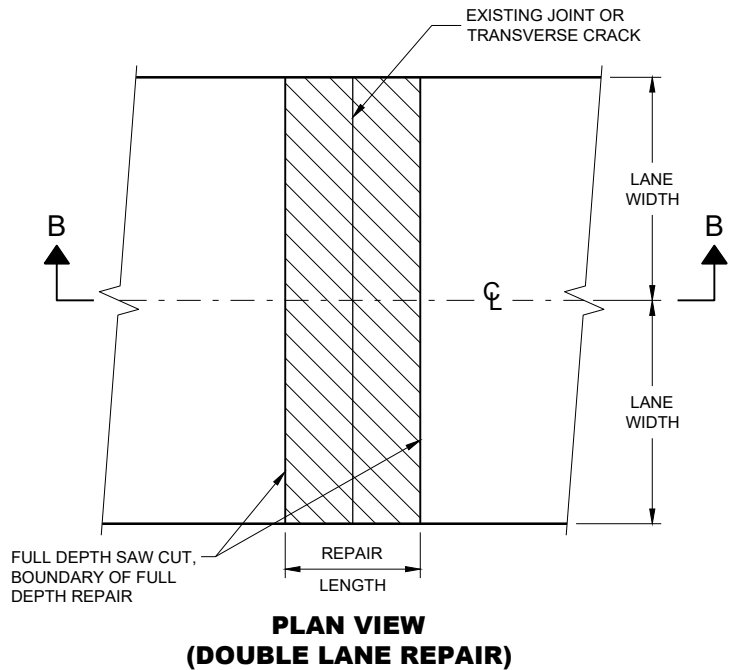
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



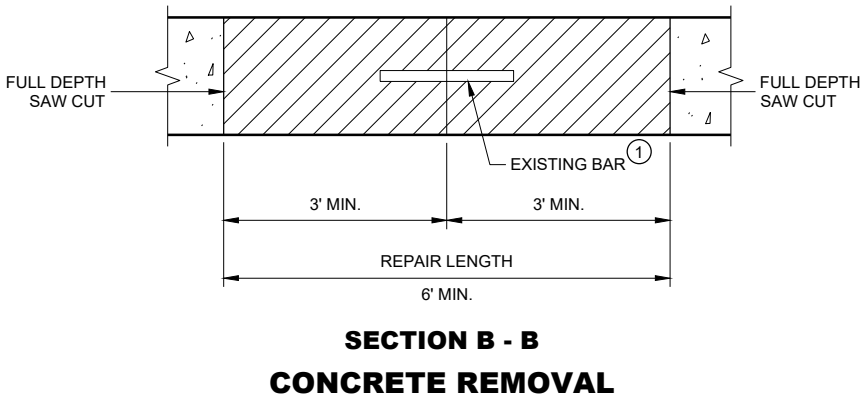
PLAN VIEW  
SHOWING LOCATION OF TIE BARS

|                                                    |                                     |
|----------------------------------------------------|-------------------------------------|
| CONCRETE PAVEMENT<br>LONGITUDINAL JOINTS AND TIES  |                                     |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                     |
| APPROVED<br>March 2018<br>DATE                     | /S/ Peter Kern<br>PAVEMENT SUPE 223 |
| FHWA                                               |                                     |





**FULL DEPTH CONCRETE PAVEMENT REMOVAL**



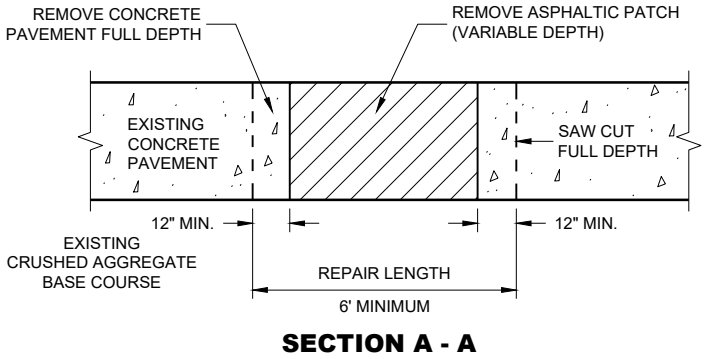
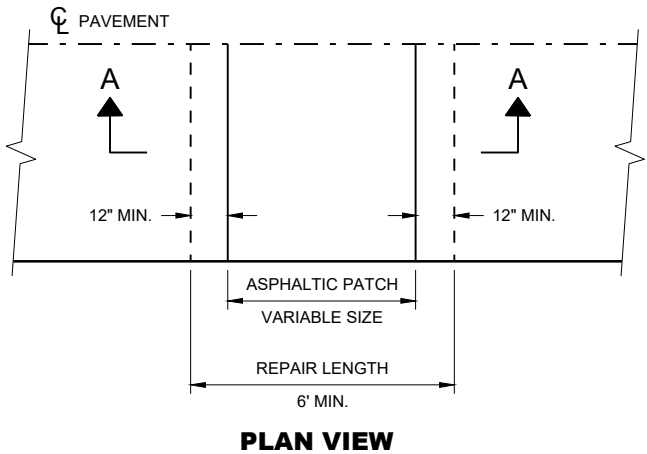
**GENERAL NOTES**

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

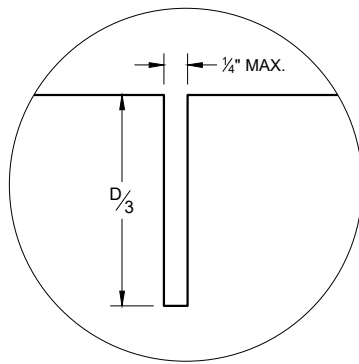
① DOWEL BARS MAY NOT BE PRESENT.



**HMA PATCH REMOVAL**

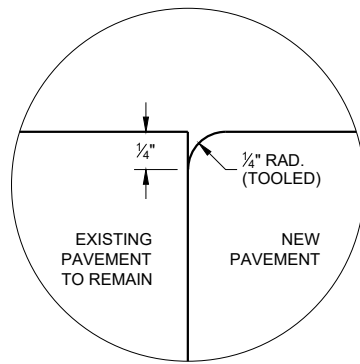
**CONCRETE PAVEMENT  
REPAIR AND REPLACEMENT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 224

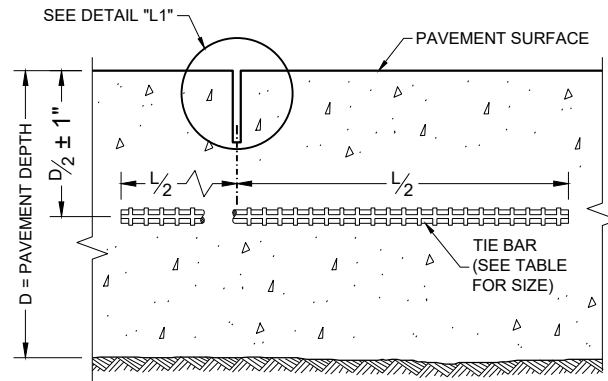


C1

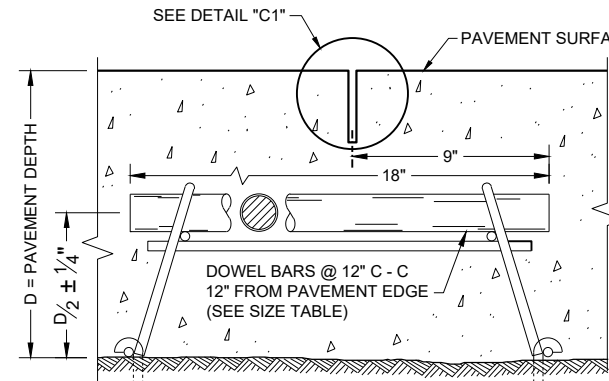
### TRANSVERSE JOINTS



C2



SECTION C - C  
SAWED LONGITUDINAL JOINT



SECTION F - F  
DOWELED CONTRACTION JOINT

### GENERAL NOTES

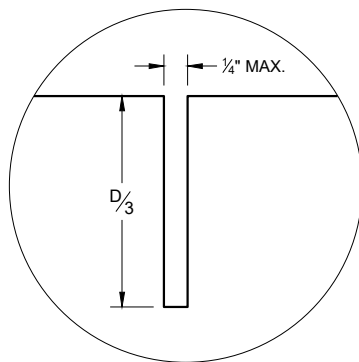
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

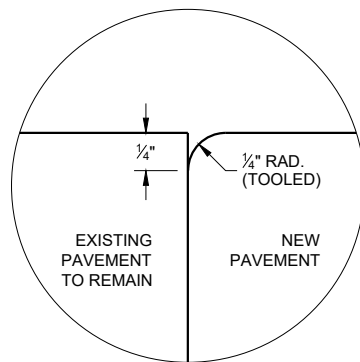
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

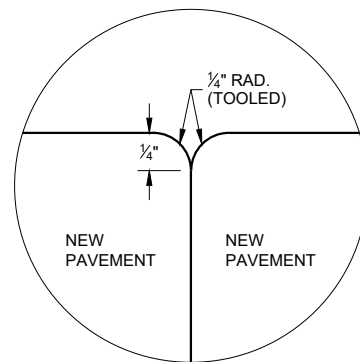


L1

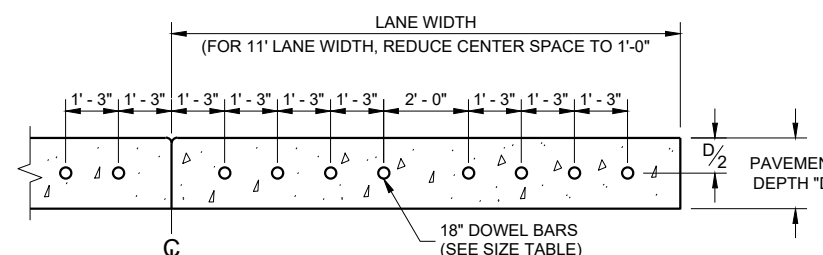


L2

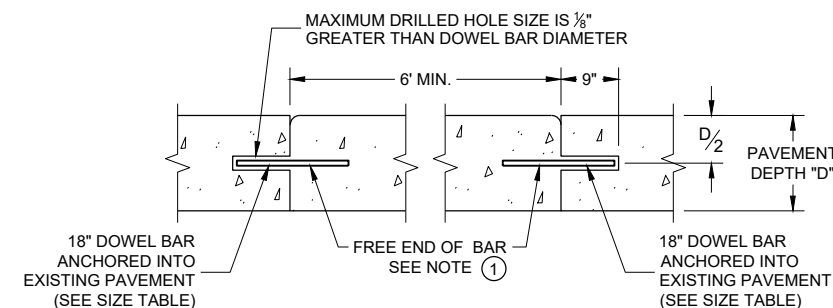
### LONGITUDINAL JOINTS



L3



SECTION E - E  
DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

### TIE BAR TABLE

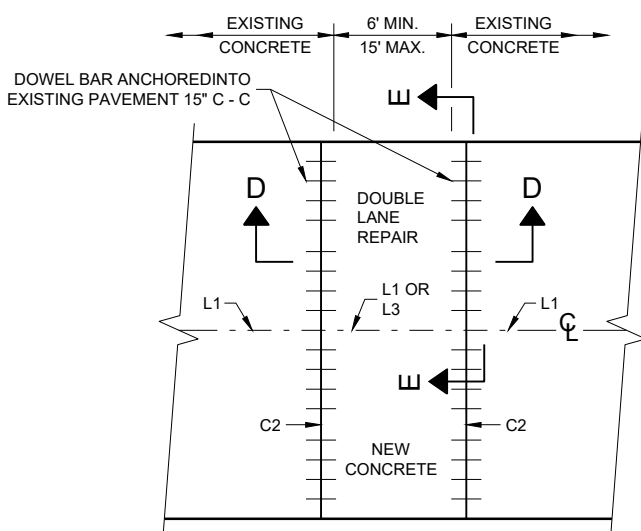
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|--------------------|--------------|--------------------|----------------------|
| < 10 1/2"          | NO. 4        | 30"                | 36"                  |
| ≥ 10 1/2"          | NO. 5        | 36"             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

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

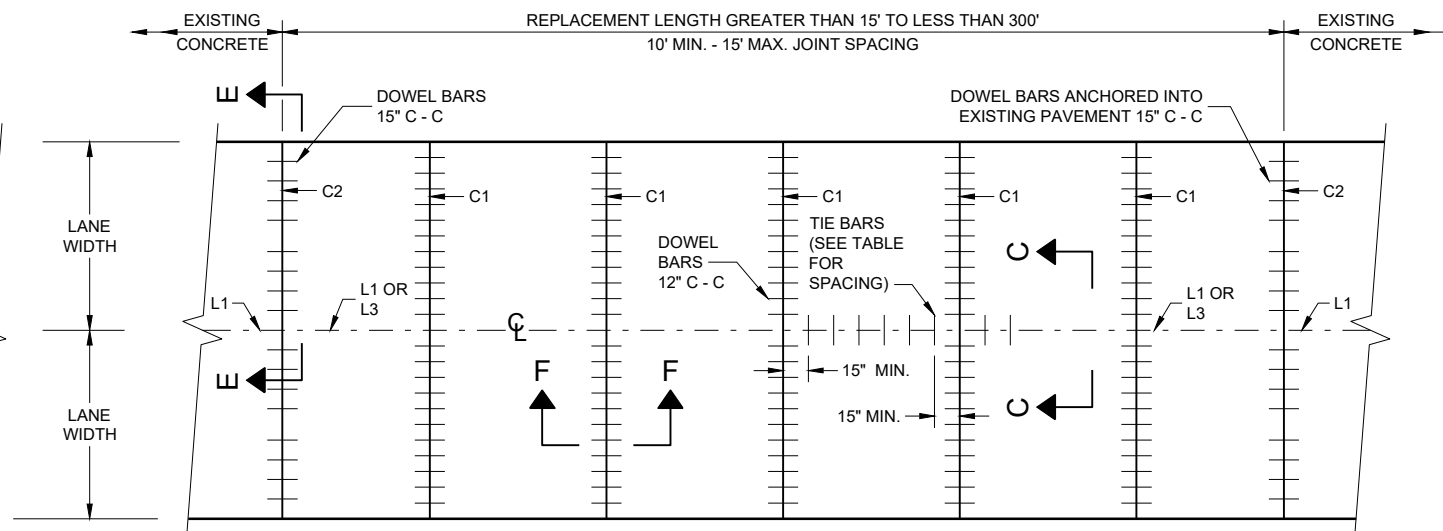
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

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

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



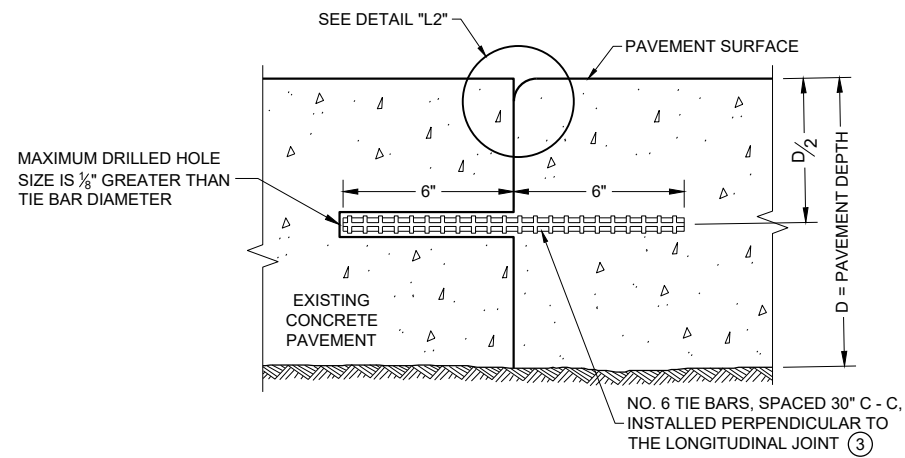
PLAN VIEW  
MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW  
MULTILANE CONCRETE PAVEMENT REPLACEMENT

### CONCRETE PAVEMENT REPAIR AND REPLACEMENT

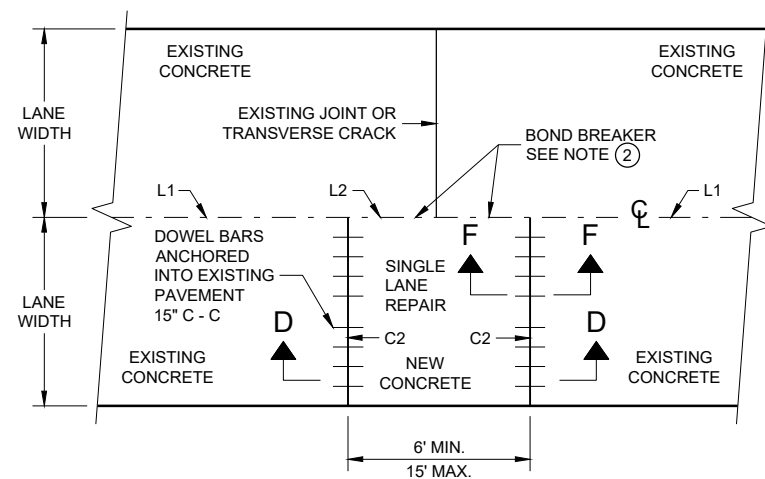
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



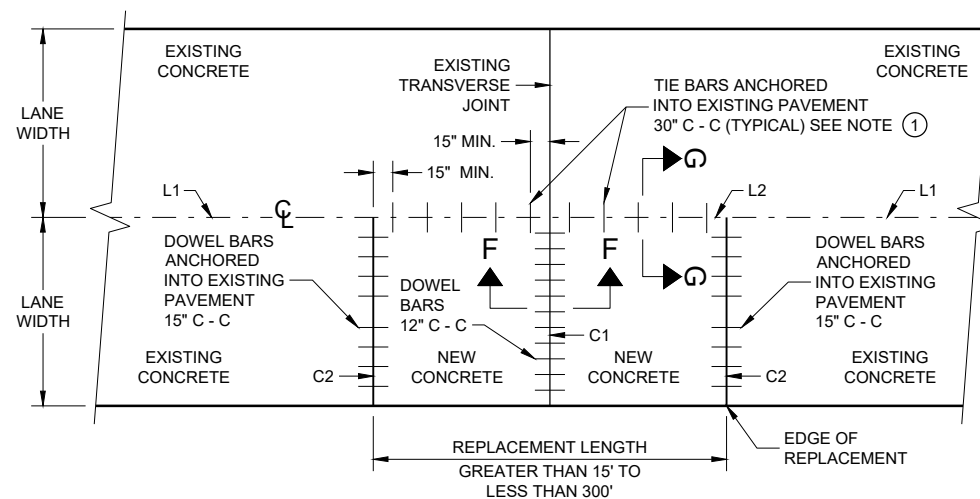
**SECTION G - G**  
**TIE BARS ANCHORED INTO EXISTING PAVEMENT**

### GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



**PLAN VIEW**  
**SINGLE LANE CONCRETE PAVEMENT REPAIR**

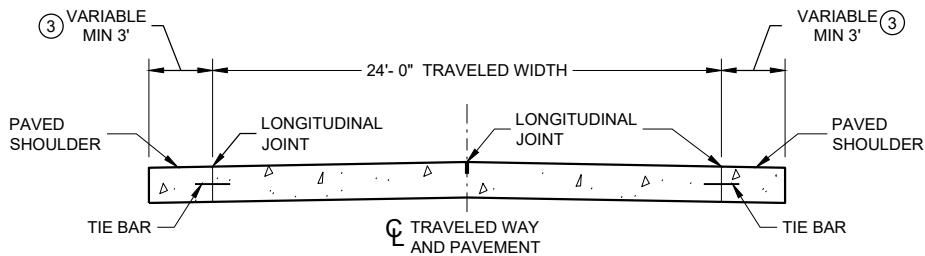


**PLAN VIEW**  
**SINGLE LANE CONCRETE PAVEMENT REPLACEMENT**

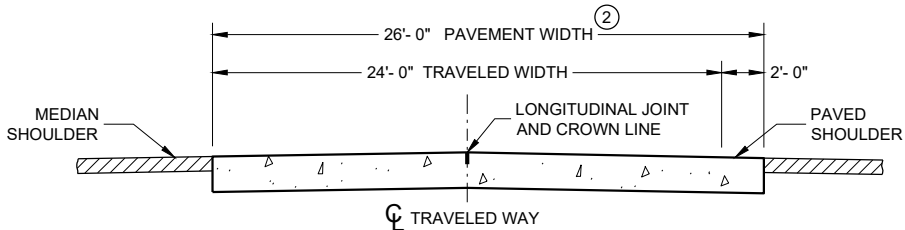
### CONCRETE REPAIR AND REPLACEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

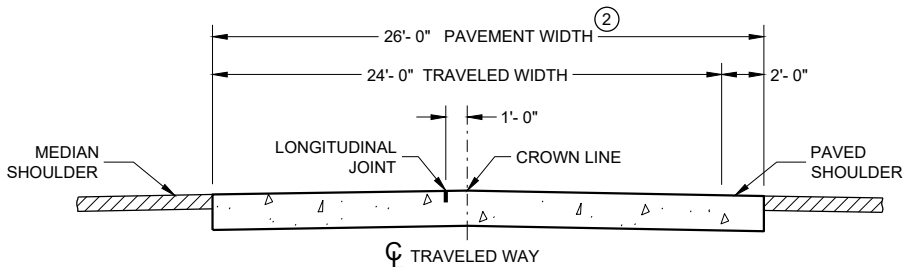
APPROVED  
November 2022  
DATE  
/S/ Peter Kemp P.E.  
PAVEMENT SUPERVISOR 226  
FHWA



**SECTION A - A**  
**TWO-LANE TWO-WAY HIGHWAY** ①



**SECTION B - B**



**ALTERNATIVE SECTION B - B**  
**DIVIDED HIGHWAY** ①

**GENERAL NOTES**

CONTRACTION JOINTS

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

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

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

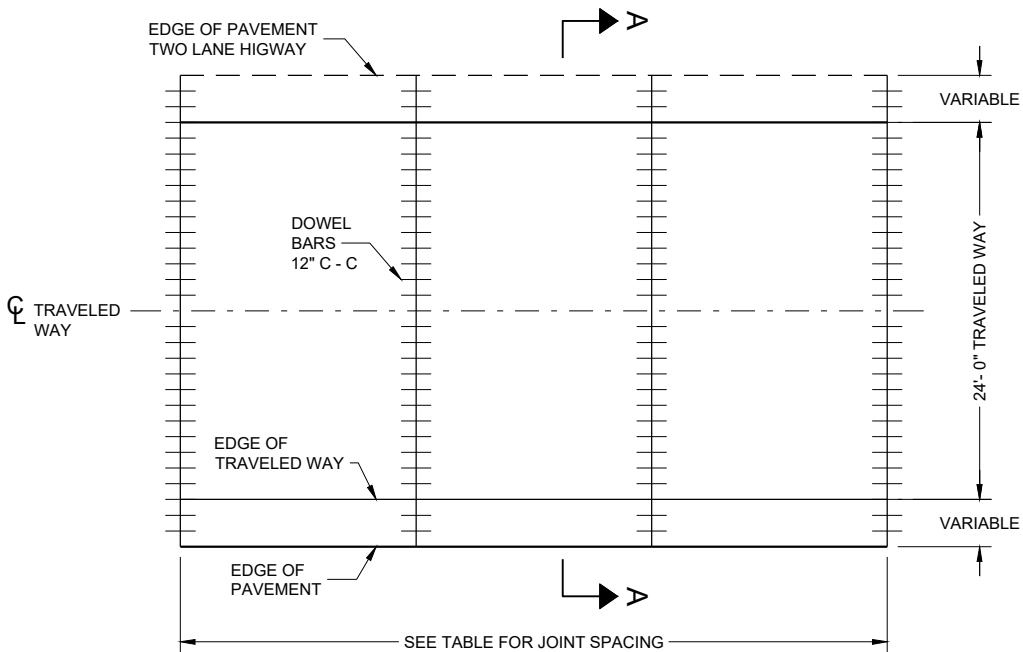
CONSTRUCTION JOINTS

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

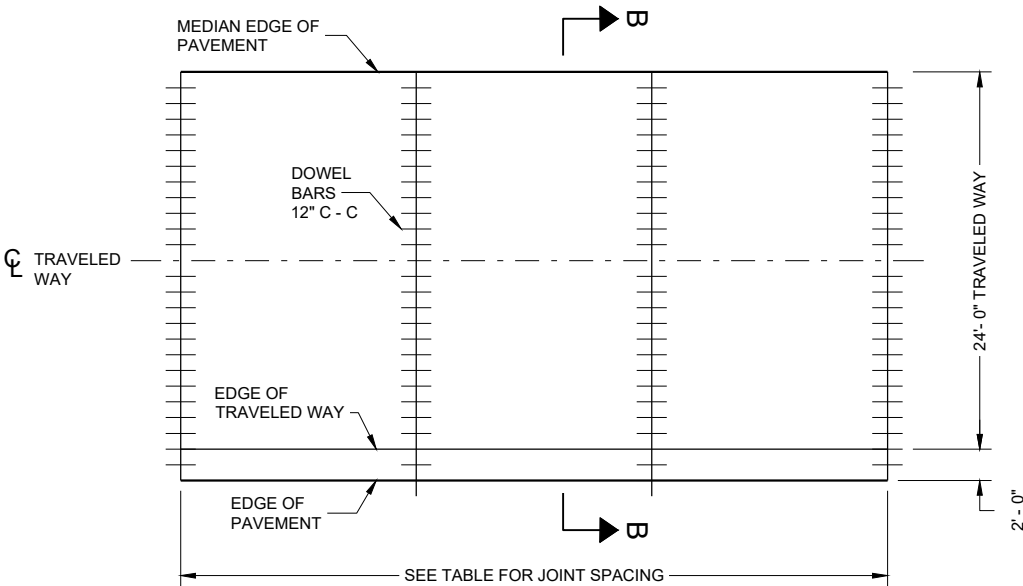
- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED "PAVED SHOULDER" AS CONCRETE PAVEMENT.
- ③ SHOULDER WIDTHS LESS THAN 3 FEET SHALL BE PAVED INTEGRAL TO THE MAINLINE CONCRETE PAVEMENT, SEE SECTION B-B.

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

| PAVEMENT DEPTH (D) | DOWEL BAR DIAMETER | CONTRACTION JOINT SPACING |
|--------------------|--------------------|---------------------------|
| 6", 6 ½"           | NONE               | 12'                       |
| 7", 7 ½"           | 1"                 | 14'                       |
| 8" & ABOVE         | 1 ¼"               | 15'                       |



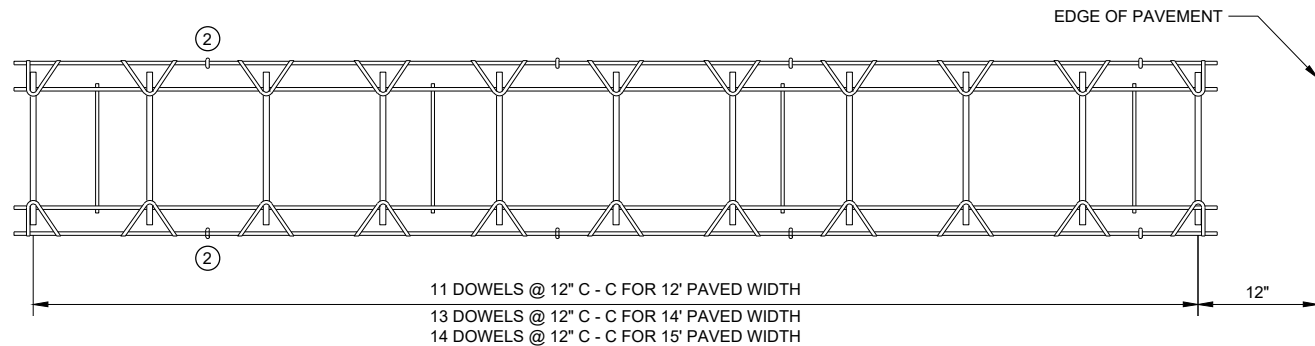
**CONTRACTION JOINT LAYOUT FOR TWO-LANE TWO-WAY HIGHWAY**



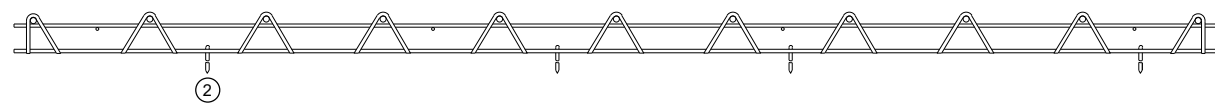
**CONTRACTION JOINT LAYOUT FOR DIVIDED HIGHWAY**

**RURAL DOWELED CONCRETE PAVEMENT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 227

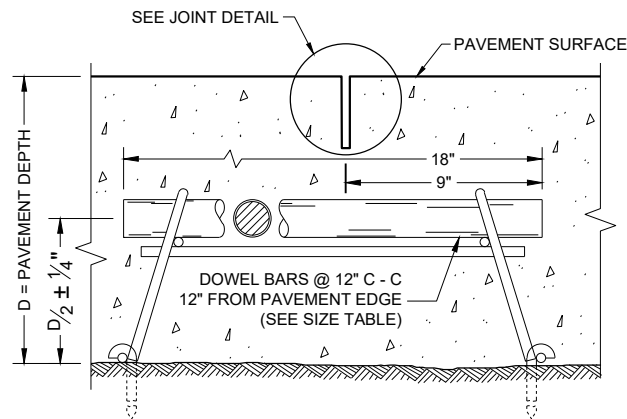


PLAN VIEW

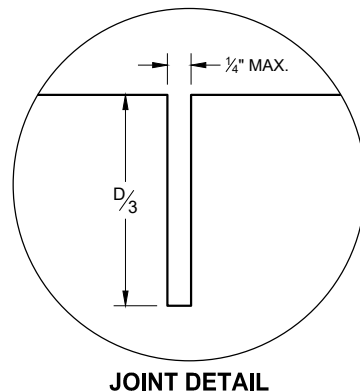


SIDE VIEW  
(NORMAL TO CENTERLINE)

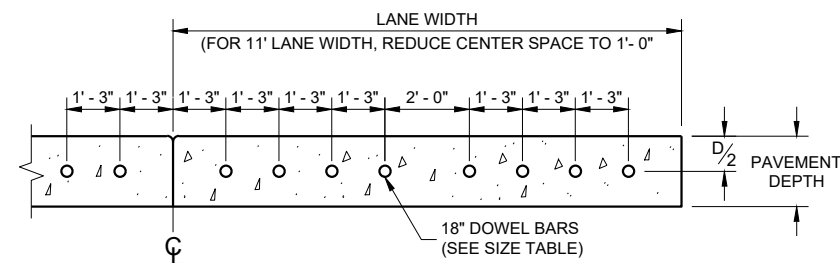
CONTRACTION JOINT DOWEL ASSEMBLY ①



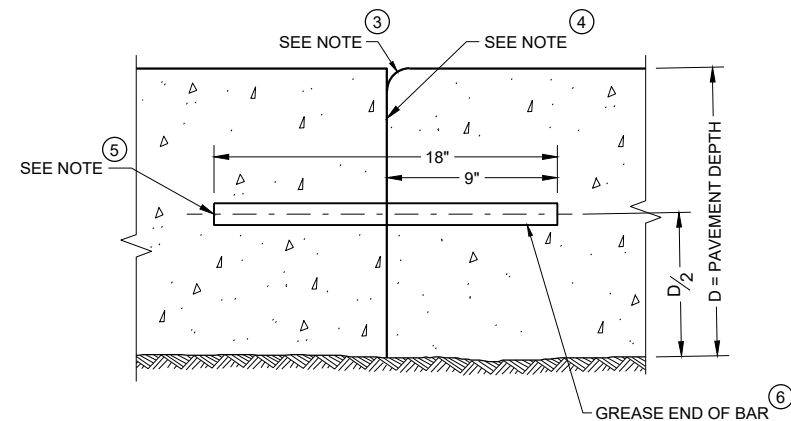
DOWELED CONTRACTION JOINT



JOINT DETAIL



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



TRANSVERSE CONSTRUCTION JOINT

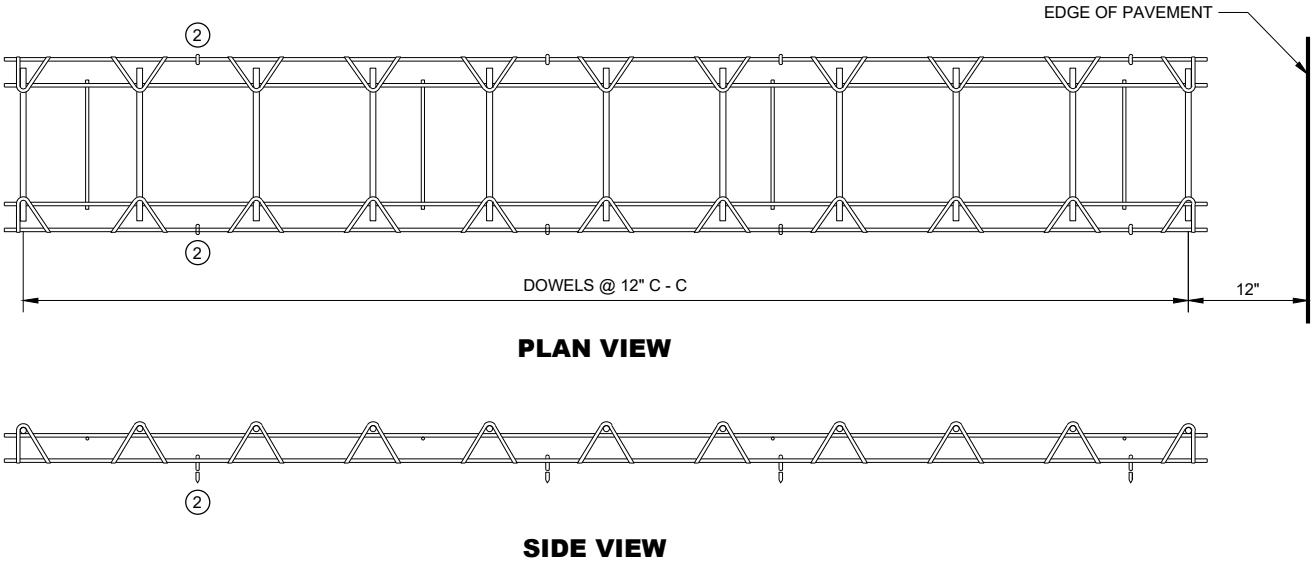
GENERAL NOTES

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

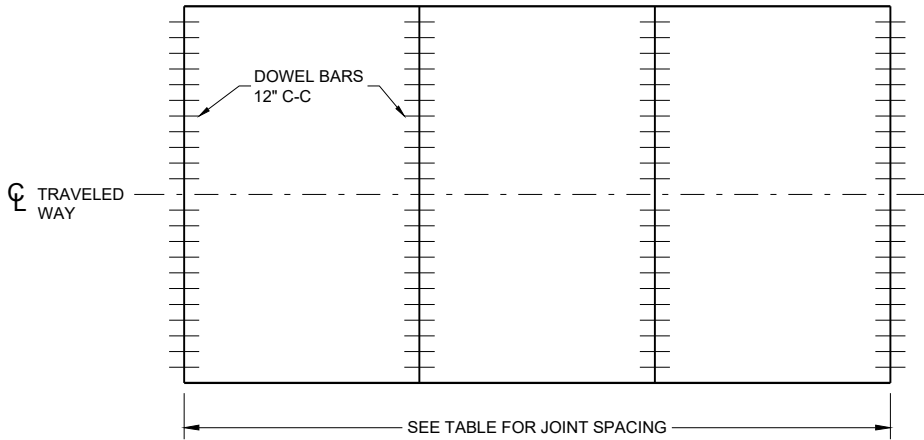
RURAL DOWELED  
CONCRETE PAVEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

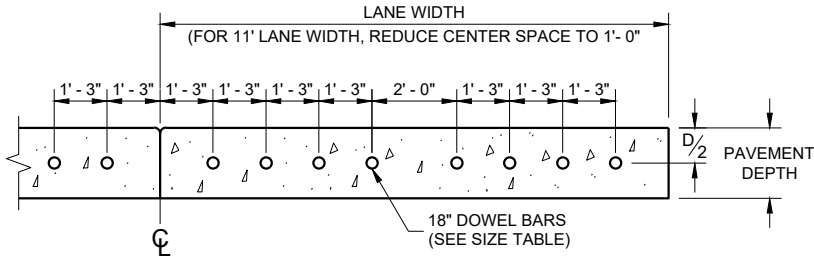
APPROVED  
November 2022 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR 228  
FHWA



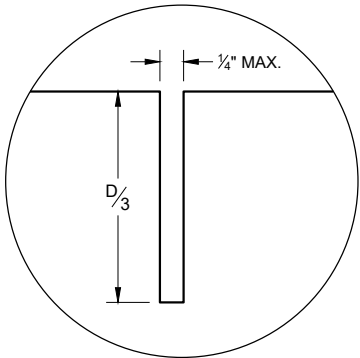
CONTRACTION JOINT DOWEL ASSEMBLY ①



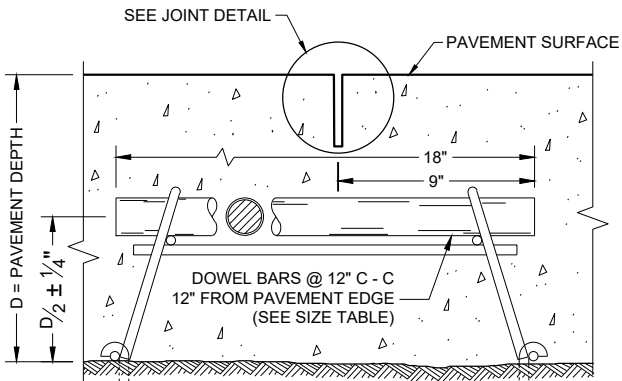
CONTRACTION JOINT LOCATIONS



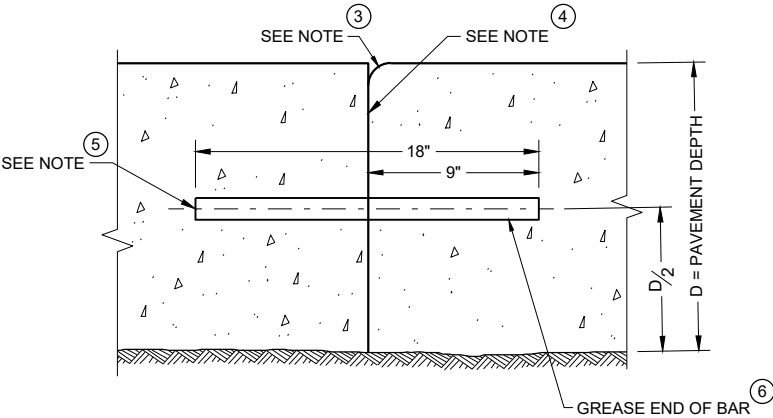
DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



JOINT DETAIL



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT

GENERAL NOTES

CONTRACTION JOINTS

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

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

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

CONSTRUCTION JOINTS

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

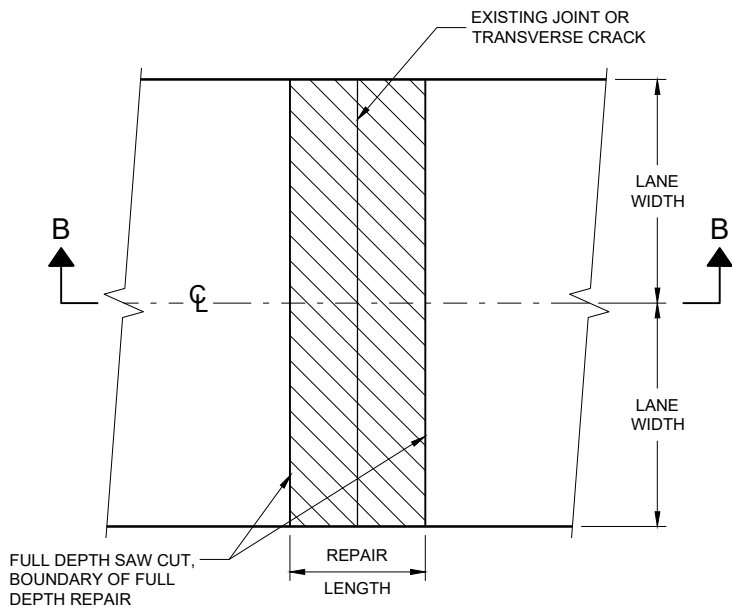
| PAVEMENT DEPTH (D) | DOWEL BAR DIAMETER | CONTRACTION JOINT SPACING |
|--------------------|--------------------|---------------------------|
| 6", 6 1/2"         | NONE               | 12'                       |
| 7", 7 1/2"         | 1"                 | 14'                       |
| 8" & ABOVE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

URBAN DOWELED CONCRETE PAVEMENT

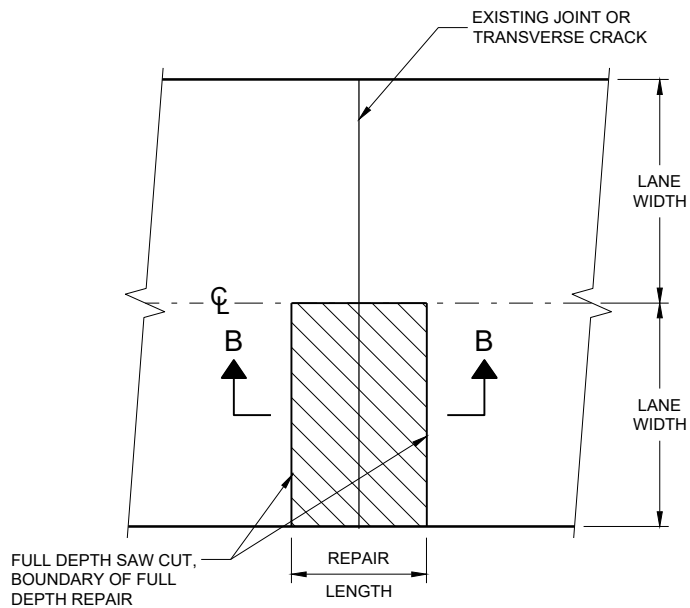
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2022 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR 229  
FHWA



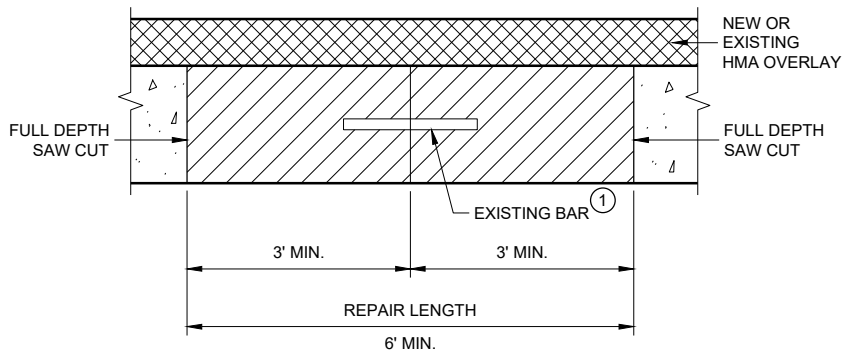


**PLAN VIEW  
DOUBLE LANE REPAIR**



**PLAN VIEW  
SINGLE LANE REPAIR**

**FULL DEPTH CONCRETE PAVEMENT REMOVAL**



**SECTION B - B  
CONCRETE REMOVAL**

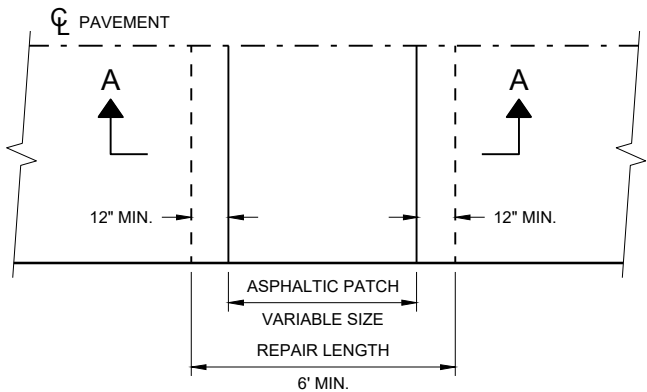
**GENERAL NOTES**

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

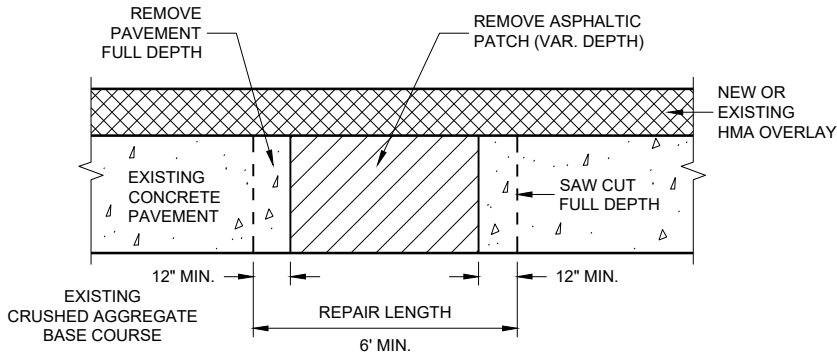
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MAY NOT BE PRESENT.



**PLAN VIEW**

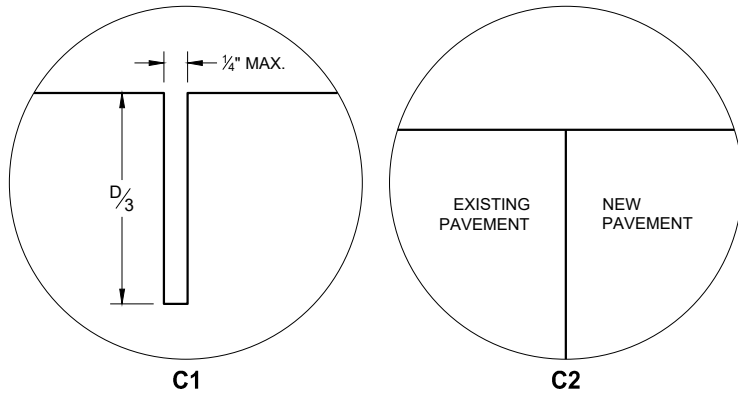


**SECTION A - A**

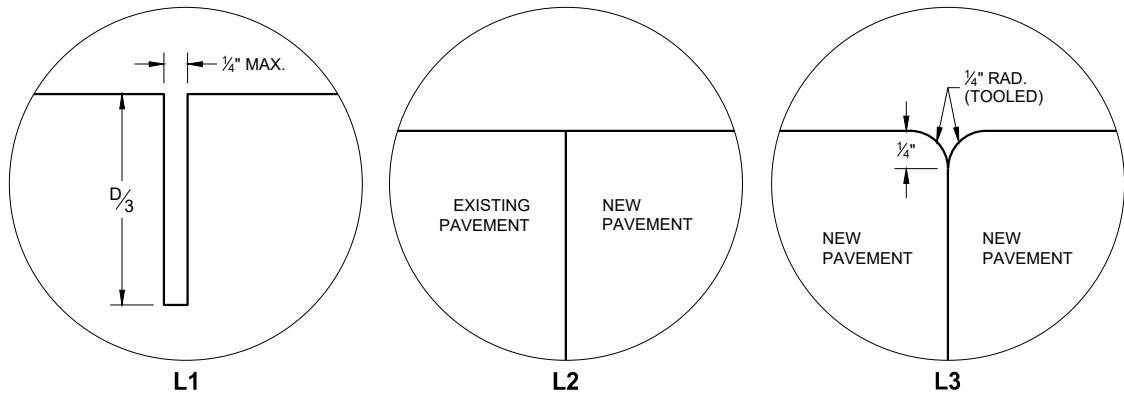
**HMA PATCH REMOVAL**

**BASE PATCHING CONCRETE**

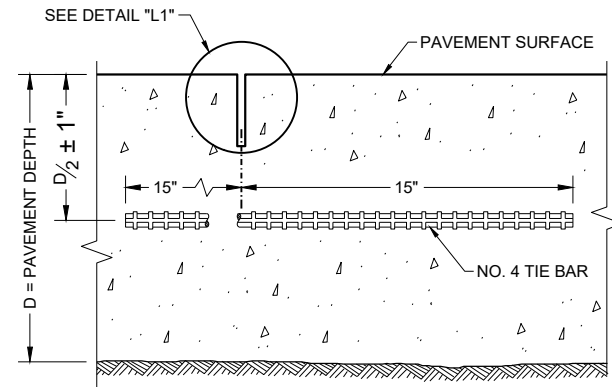
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 230



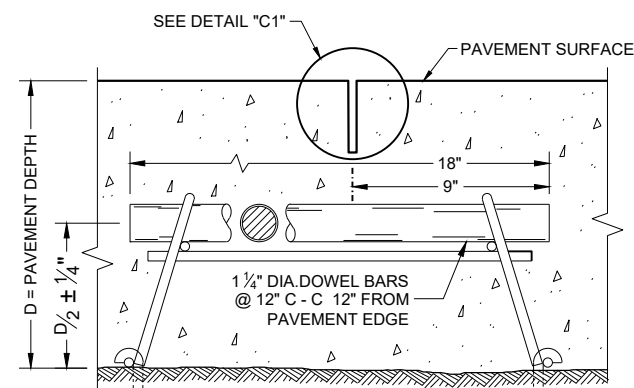
**TRANSVERSE JOINTS**



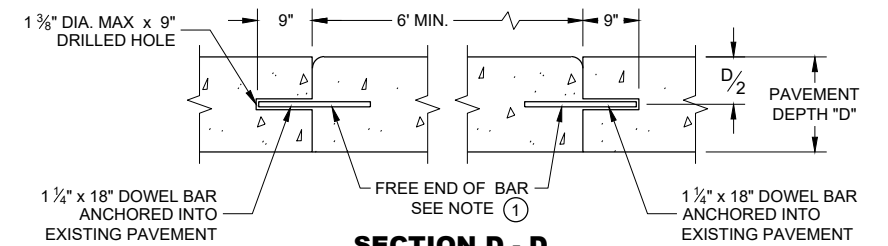
**LONGITUDINAL JOINTS**



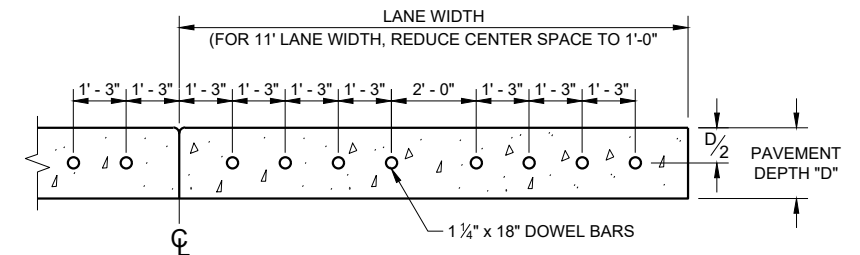
**SECTION C - C  
SAWED LONGITUDINAL JOINT**



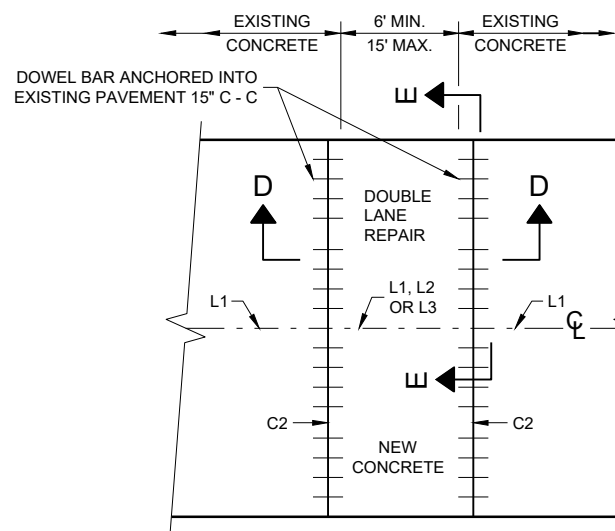
**SECTION F - F  
CONTRACTION JOINT**



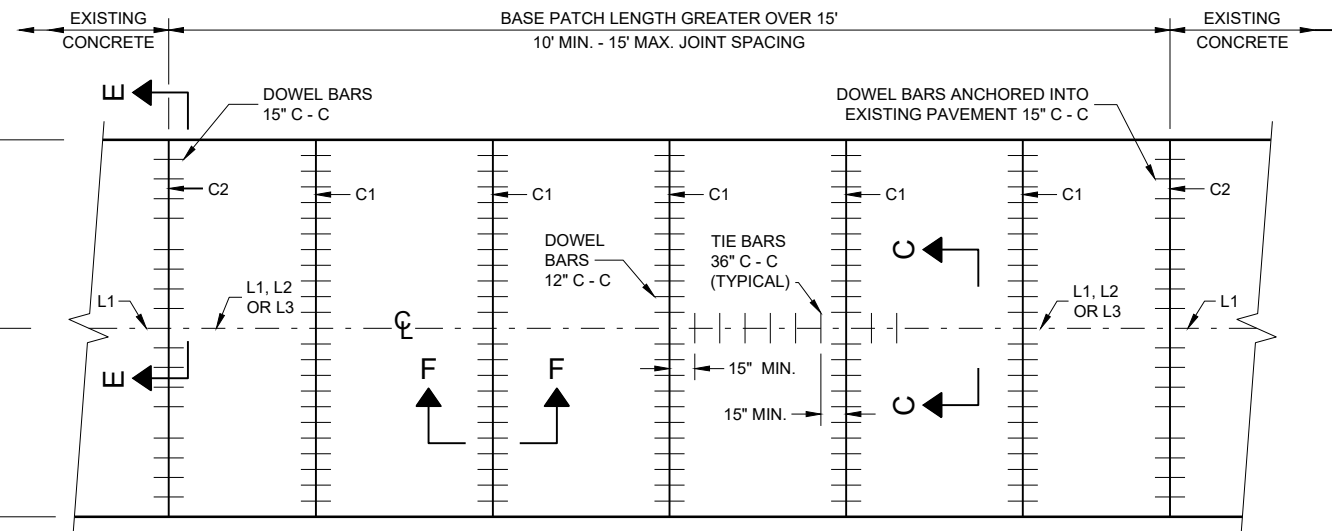
**SECTION D - D**



**SECTION E - E  
SPACING OF DOWEL BARS  
ANCHORED INTO EXISTING PAVEMENT**



**PLAN VIEW  
MULTILANE CONCRETE BASE PATCH  
15' MAXIMUM LENGTH**

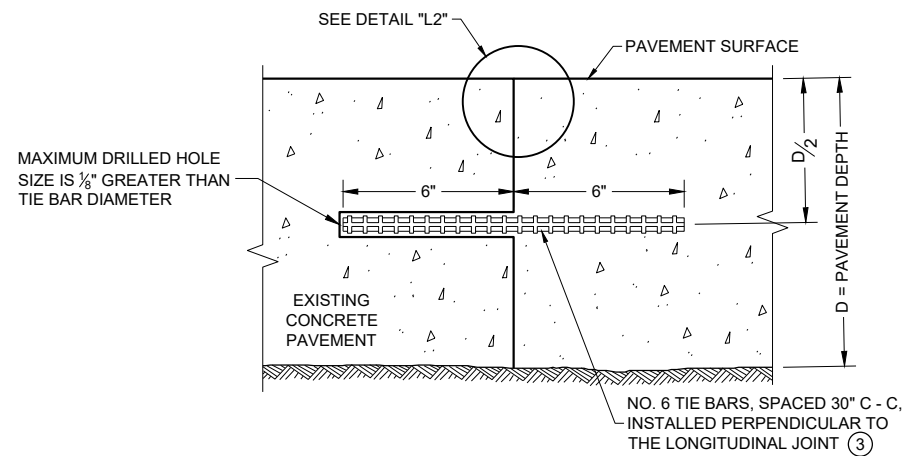


**PLAN VIEW  
MULTILANE CONCRETE BASE PATCH  
GREATER THAN 15' IN LENGTH**

**BASE PATCHING CONCRETE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

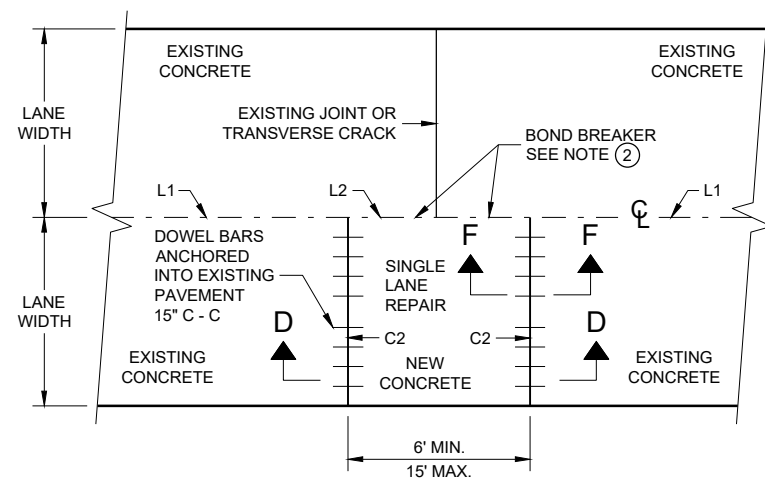




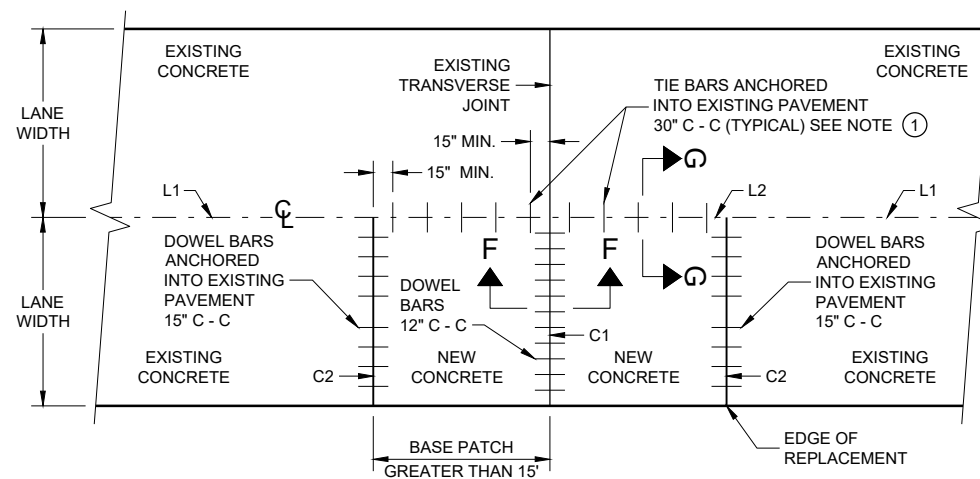
**SECTION G - G**  
**TIE BARS ANCHORED INTO EXISTING PAVEMENT**

### GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOES WITH AN EPOXY.



**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**15' MAXIMUM LENGTH**



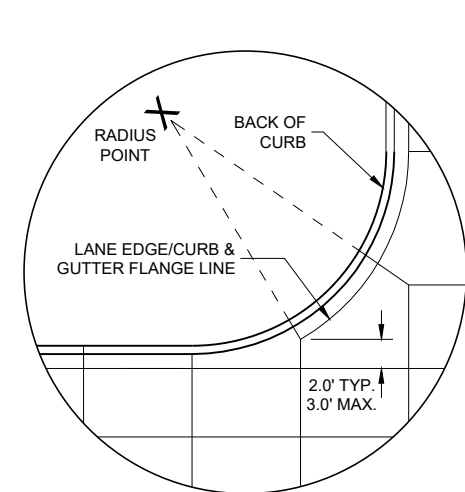
**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**GREATER THAN 15' LENGTH**

### BASE PATCHING CONCRETE

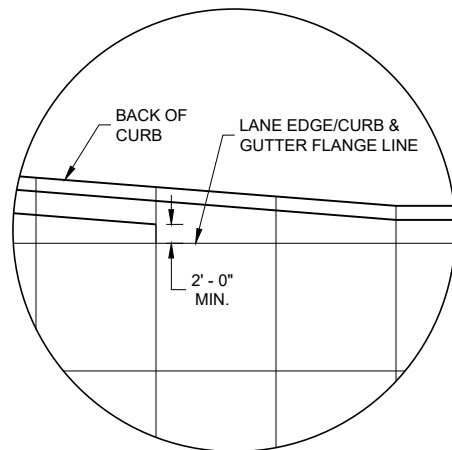
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR 232

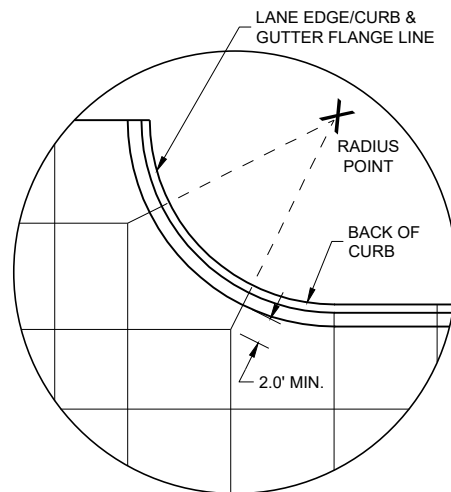
FHWA



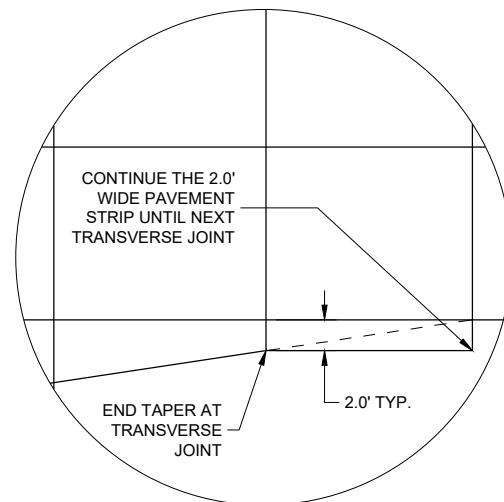
DETAIL "A"



DETAIL "B"



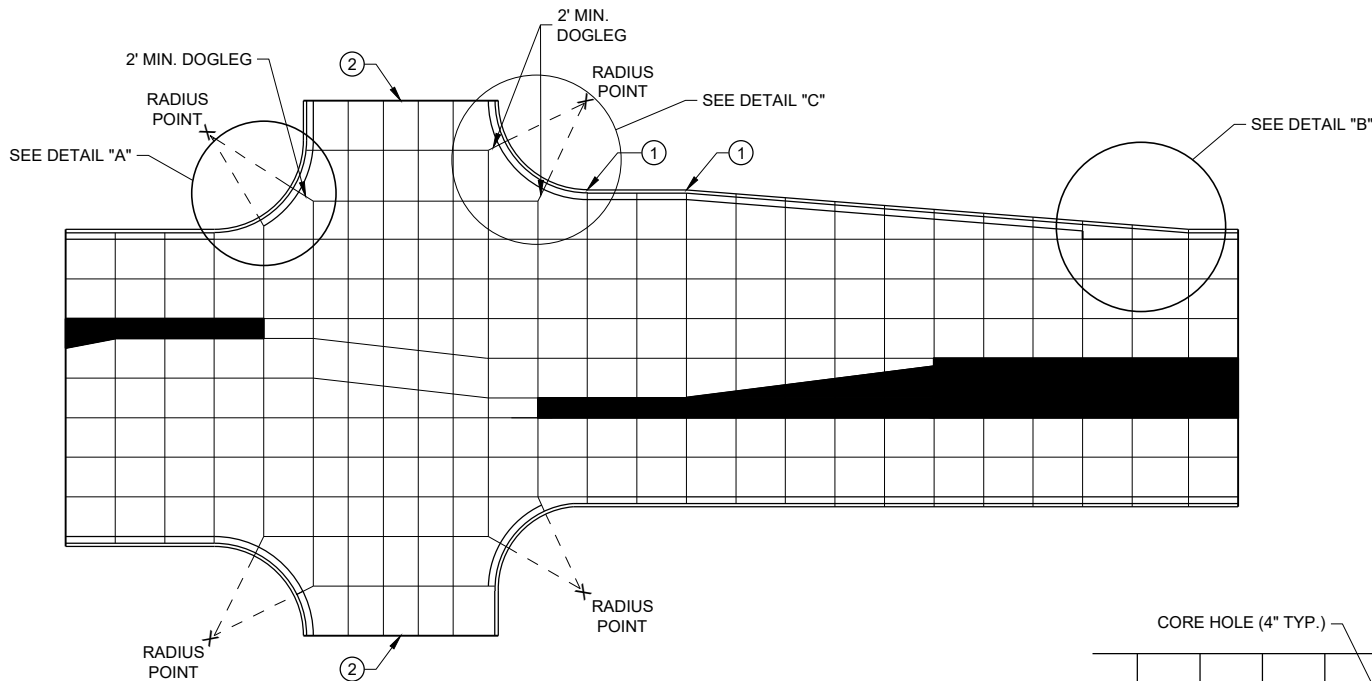
DETAIL "C"



DETAIL "D"

GENERAL NOTES

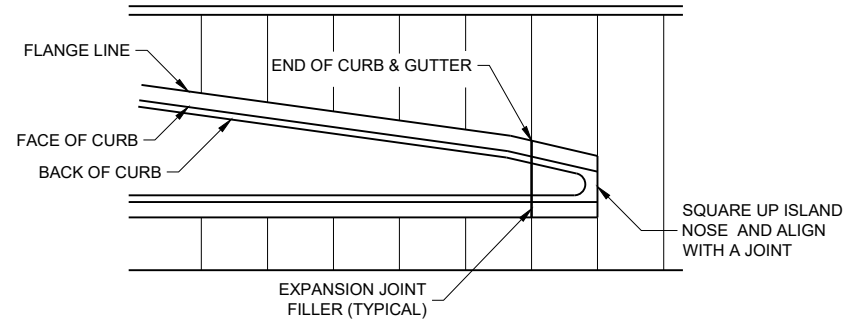
- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER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



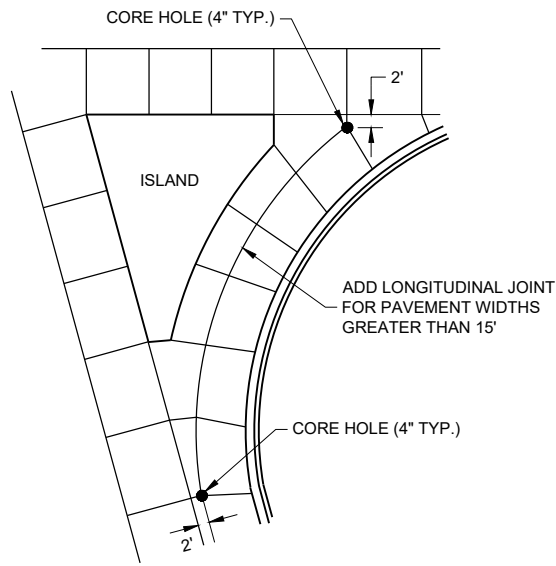
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

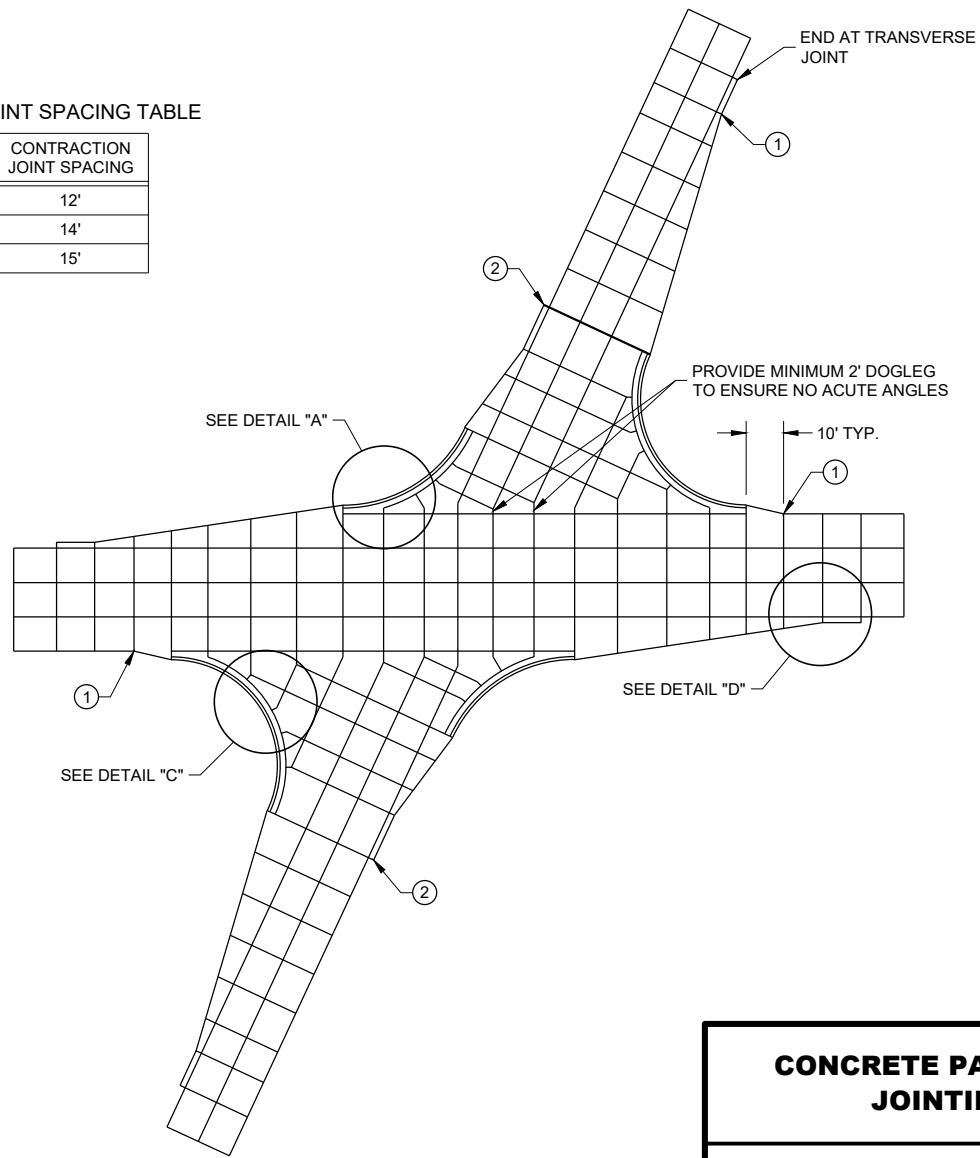
| PAVEMENT DEPTH (D) | CONTRACTION JOINT SPACING |
|--------------------|---------------------------|
| 6", 6 1/2"         | 12'                       |
| 7", 7 1/2"         | 14'                       |
| 8" & ABOVE         | 15'                       |



APPROACH TO MEDIAN



LARGE RIGHT TURN



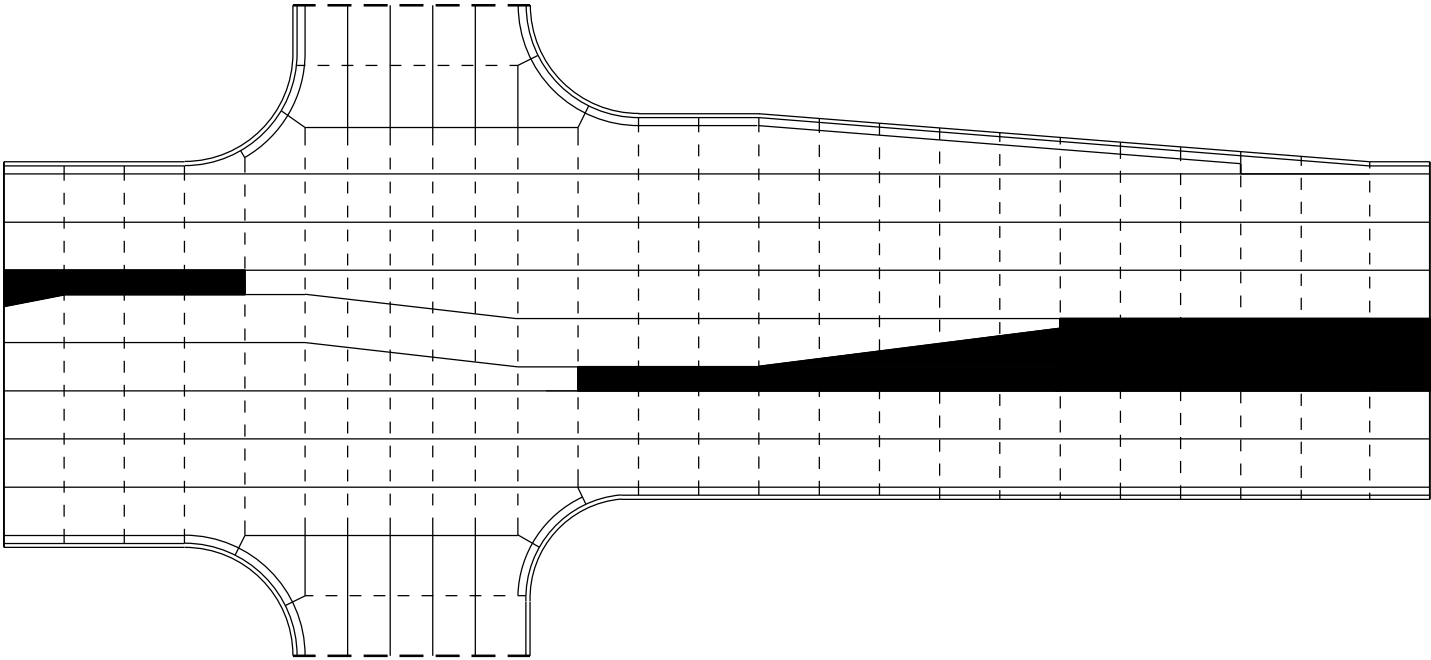
SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

LEGEND

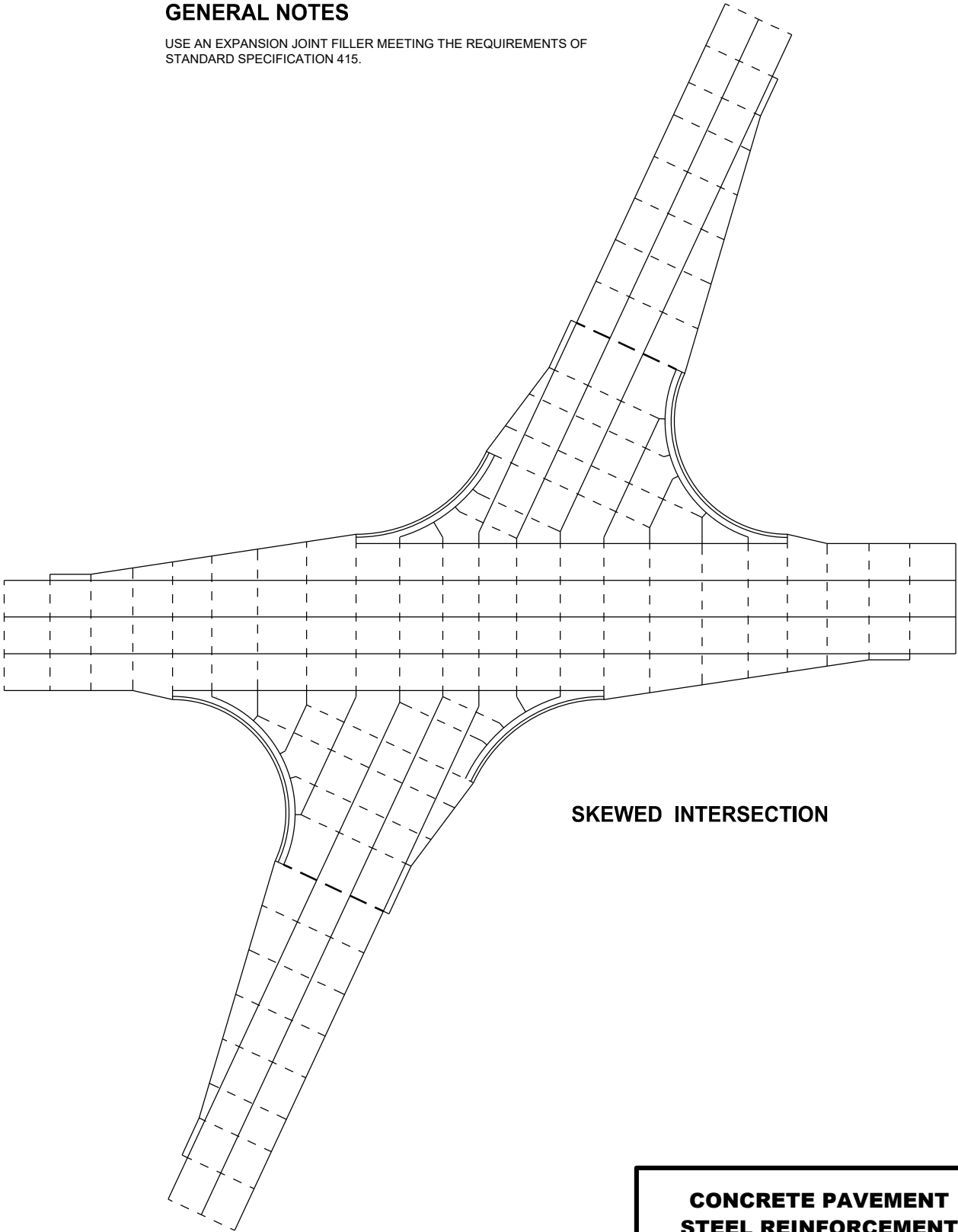
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

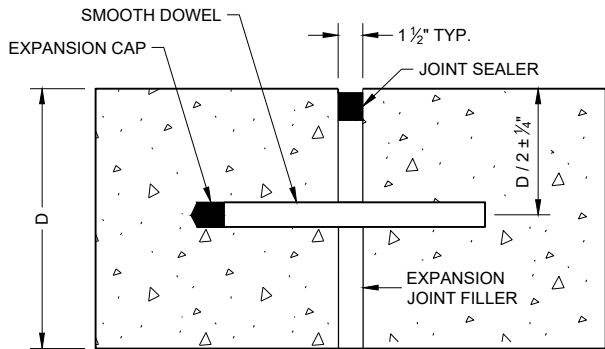
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



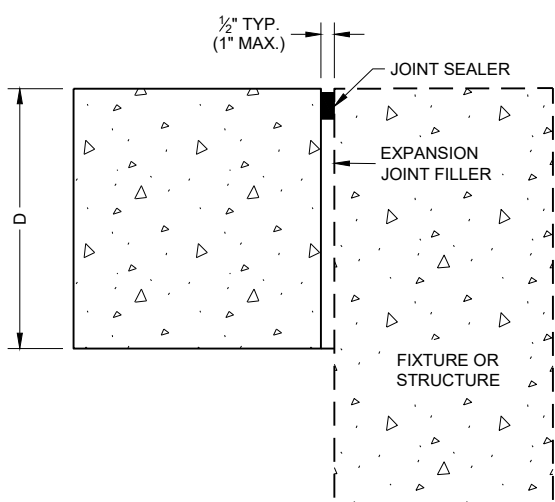
SKEWED INTERSECTION

CONCRETE PAVEMENT  
STEEL REINFORCEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

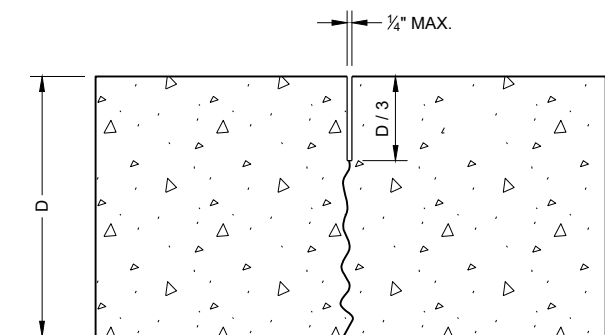


DOWELED TRANSVERSE ①

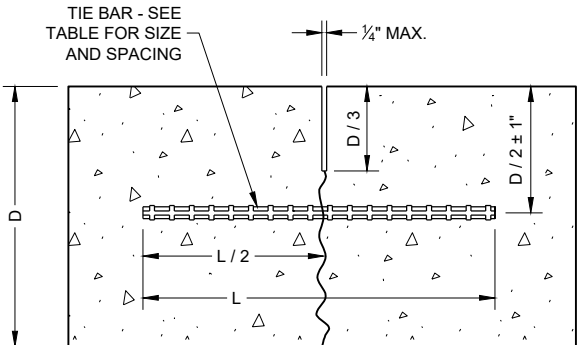


UNTIED - LONGITUDINAL

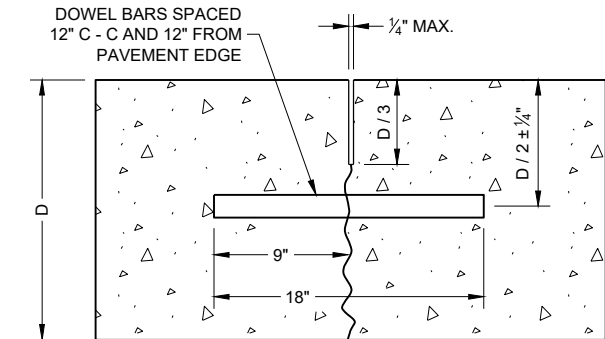
EXPANSION JOINTS



UNDOWELED TRANSVERSE



TIED LONGITUDINAL



DOWELED TRANSVERSE

CONTRACTION JOINTS ②

TIE BAR TABLE

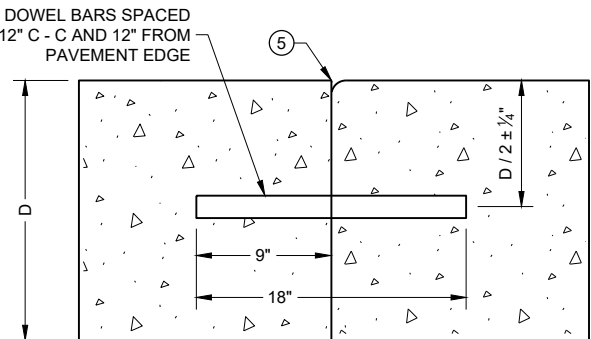
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|--------------------|--------------|--------------------|----------------------|
| < 10 1/2"          | NO. 4        | 30"                | 36"                  |
| ≥ 10 1/2"          | NO. 5        | 36"             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

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

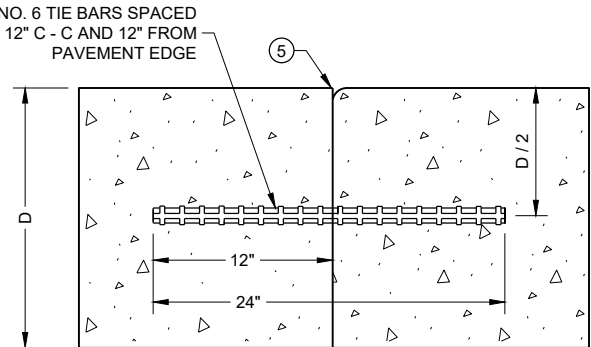
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

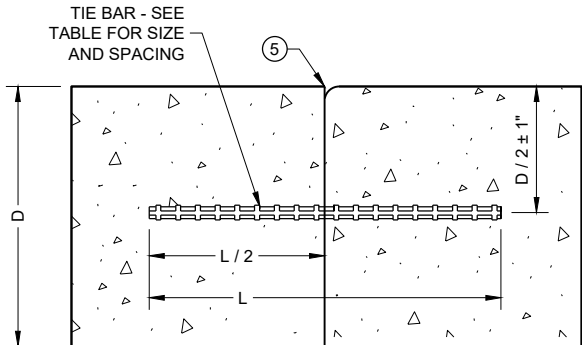
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM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



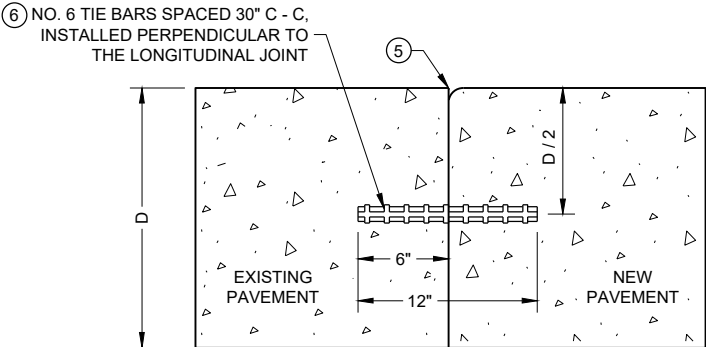
DOWELED TRANSVERSE ③



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



TIED LONGITUDINAL

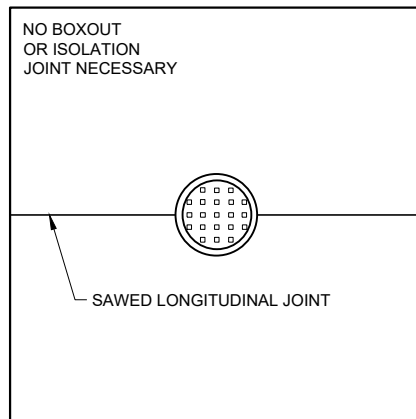


TIED LONGITUDINAL TO EXISTING

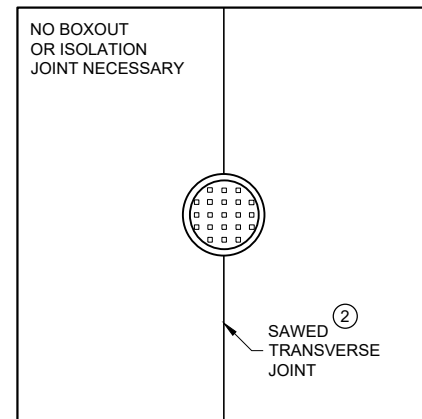
CONSTRUCTION JOINTS ④

CONCRETE PAVEMENT  
JOINT TYPES

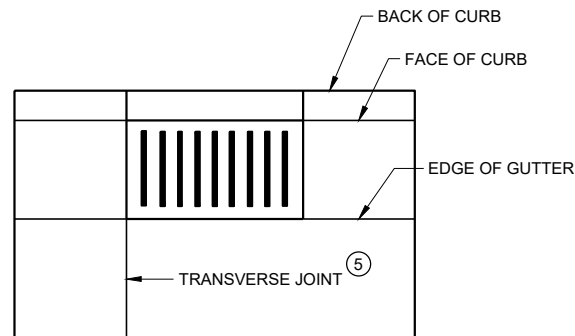
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 235



**MANHOLE WITH  
LONGITUDINAL JOINT**



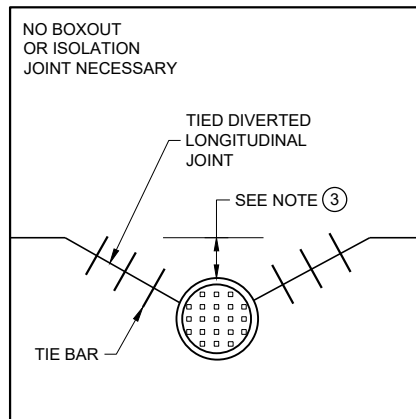
**MANHOLE WITH  
TRANSVERSE JOINT**



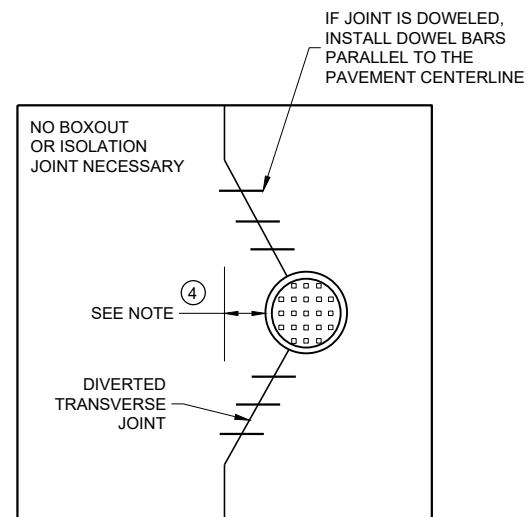
**INLET WITH  
TRANSVERSE JOINT**

### GENERAL NOTES

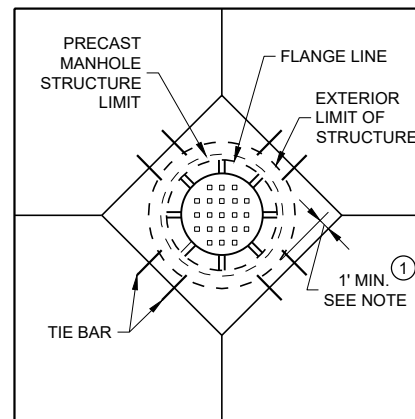
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE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



**MANHOLE WITH DIVERTED  
LONGITUDINAL CONTRACTION JOINT**



**MANHOLE WITH DIVERTED  
TRANSVERSE CONTRACTION JOINT**

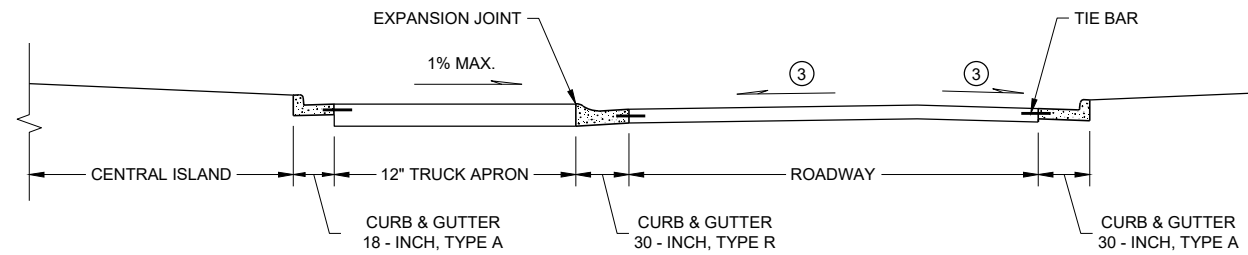


**DIAGONAL MANHOLE BOXOUT  
FOR CONSTRUCTION JOINTS**

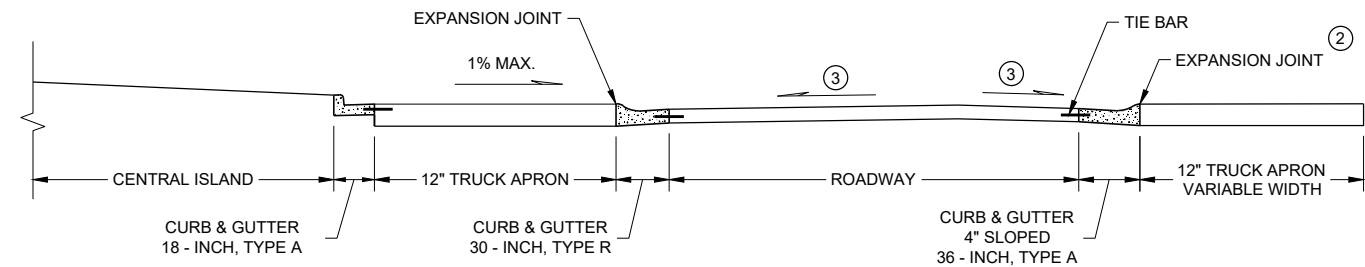
**CONCRETE PAVEMENT  
JOINTING AT UTILITY  
FIXTURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

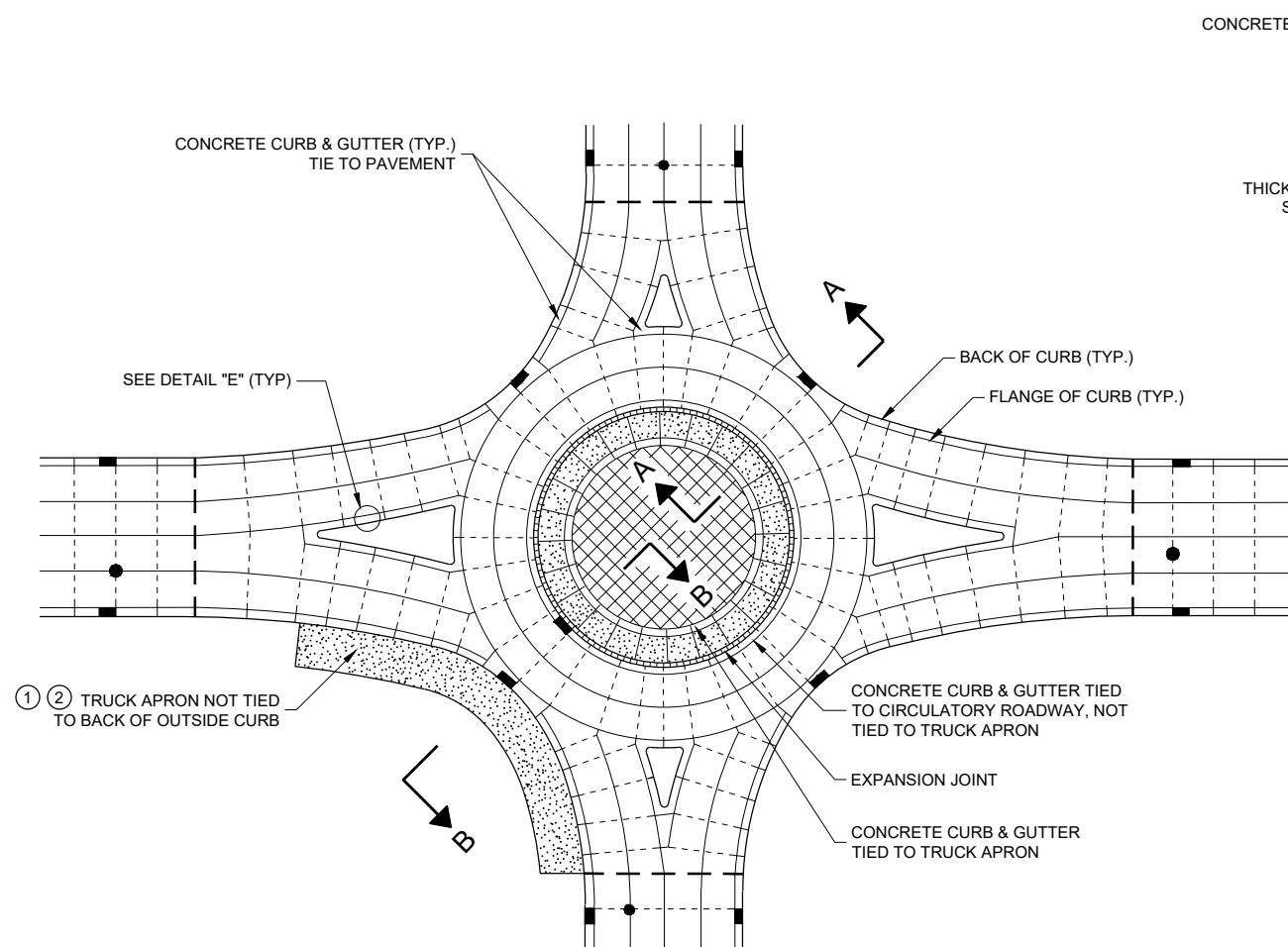
APPROVED  
May 2023 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR 236  
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**SECTION A - A**



**SECTION B - B**

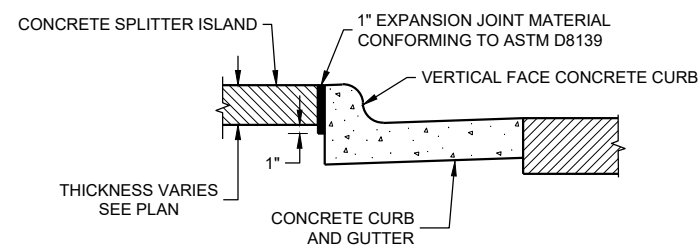


**ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS**

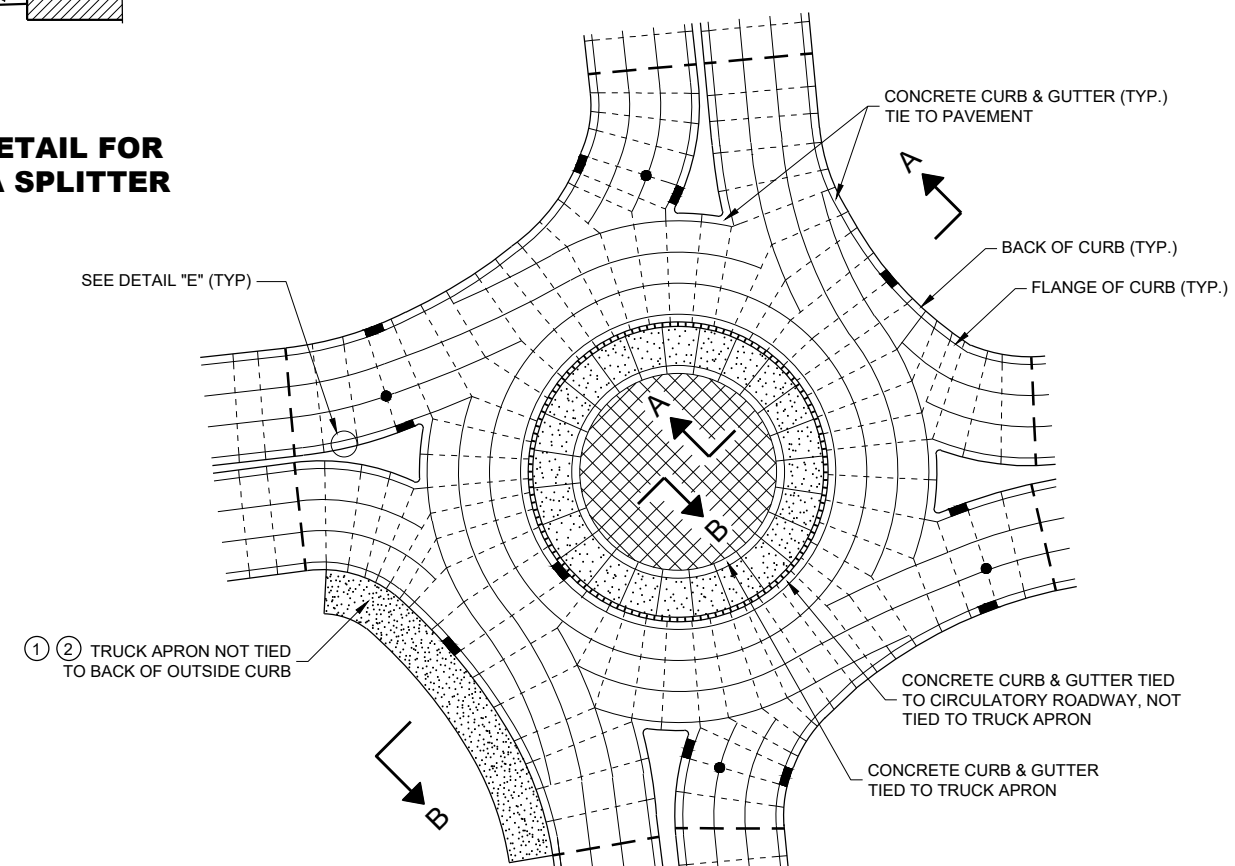
**GENERAL NOTES**

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"  
 USE EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.  
 DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

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



**DETAIL 'E'  
EXPANSION JOINT DETAIL FOR  
VERTICAL CURB AT A SPLITTER  
ISLAND**



**PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS**

**LEGEND**

- DOWELED JOINT
- TIED JOINT
- ===== EXPANSION JOINT
- — — — — POTENTIAL DOWELED EXPANSION JOINT
- [Pattern] TRUCK APRON
- [Pattern] CENTRAL ISLAND
- ● UTILITY STRUCTURES

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

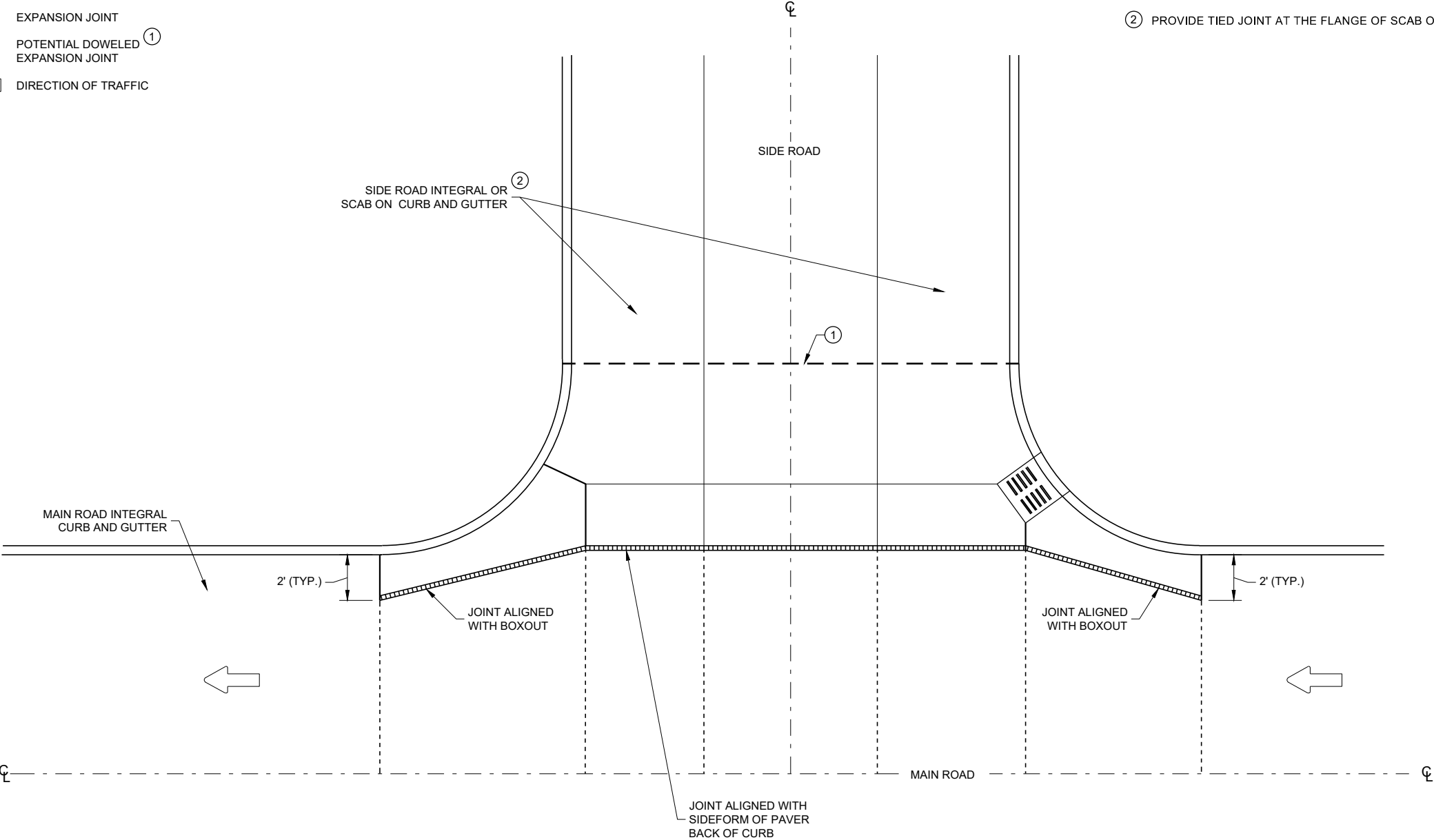
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May 2023 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR 237  
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- LEGEND**
- DOWELED JOINT
  - TIED JOINT
  - ===== EXPANSION JOINT
  - — — — — POTENTIAL DOWELED EXPANSION JOINT ①
  - ← DIRECTION OF TRAFFIC

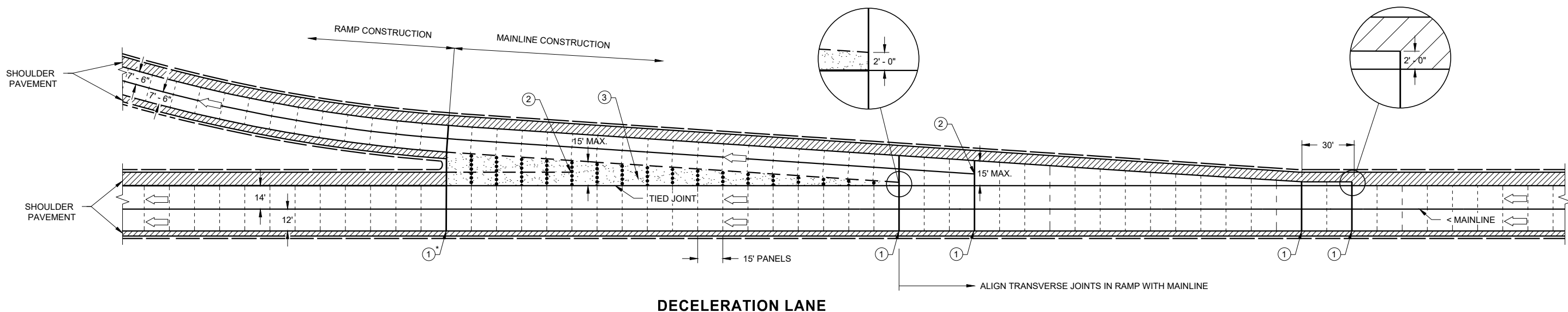
**GENERAL NOTES**

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

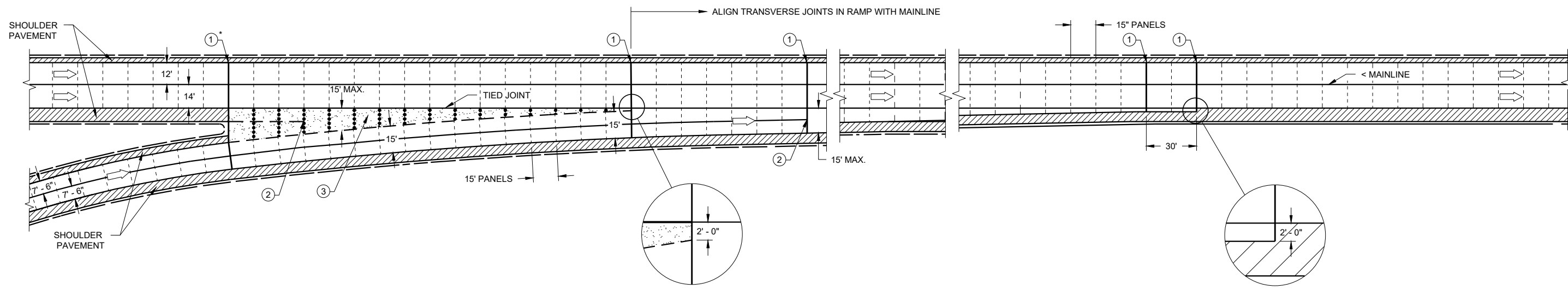


INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

|                                                                                   |                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------|
| <b>CONCRETE PAVEMENT<br/>INTERSECTION BOXOUT FOR<br/>INTEGRAL CURB AND GUTTER</b> |                                                |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                                |                                                |
| APPROVED<br>May 2023<br>DATE                                                      | /S/ Peter Kemp P.E.<br>PAVEMENT SUPERVISOR 238 |
| FHWA                                                                              |                                                |



DECELERATION LANE



ACCELERATION LANE

GENERAL NOTES

PAVEMENT AND BASE THICKNESS, PANEL LENGTHS, JOINTS AND REINFORCEMENT FOR THE DECELERATION AND ACCELERATION LANES, INCLUDING TAPERS, SHALL BE THE SAME AS THE MAINLINE, EXCEPT WHERE OTHERWISE NOTED.

ALL REINFORCEMENT BARS SHALL BE EPOXY COATED CONFORMING TO SUBSECTION 505.2.6 OF THE STANDARD SPECIFICATIONS.

LANE AND SHOULDER WIDTHS MAY VARY FROM SHOWN. SEE CONSTRUCTION PLANS FOR ACTUAL PROPOSED WIDTHS.

- ① CRITICAL TRANSVERSE JOINT LOCATIONS AT PAVEMENT WIDTH CHANGES.  
(①\* IS NOT A CRITICAL TRANSVERSE JOINT WHEN ASPHALTIC GORE IS INSTALLED).
- ② STOP LONGITUDINAL JOINT WITH CORE HOLE (2" TYP.) WHEN IT MEETS THE FIRST TRANSVERSE JOINT LESS THAN 15' WIDE OR STOP LONGITUDINAL JOINT WHEN IT MEETS 2' AWAY FROM THE TIED JOINT OF THE MAINLINE.
- ③ DISREGARD THE JOINT DETAILS IN AND AROUND THE GORE WHEN ASPHALTIC GORE IS INSTALLED.

LEGEND

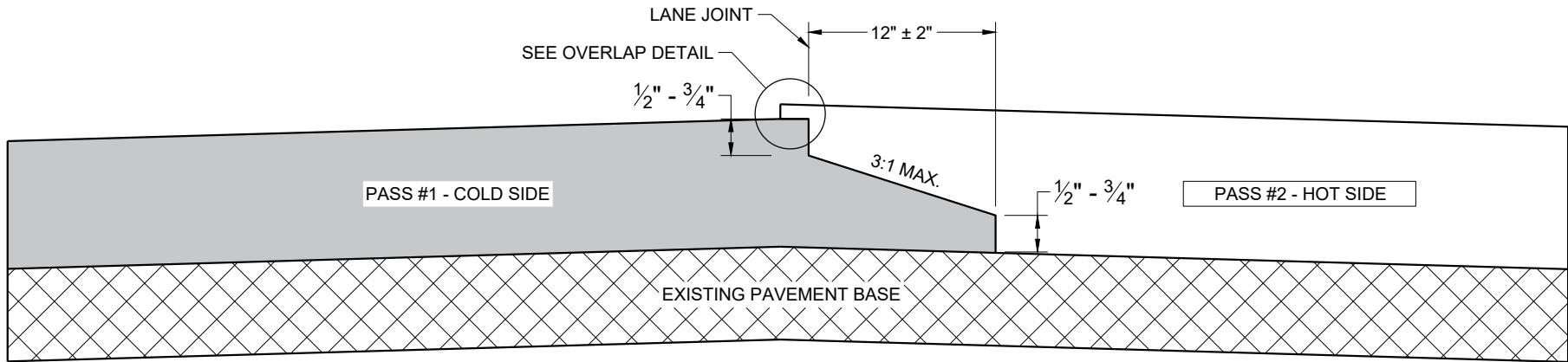
- DOWELED JOINT
- ..... UNDOWELED JOINT
- TIED JOINT
- - - - UNTIED JOINT
- [Pattern] GORE
- ➡ DIRECTION OF TRAVEL

CONCRETE PAVEMENT JOINTING  
ACCELERATION/  
DECELERATION LANE

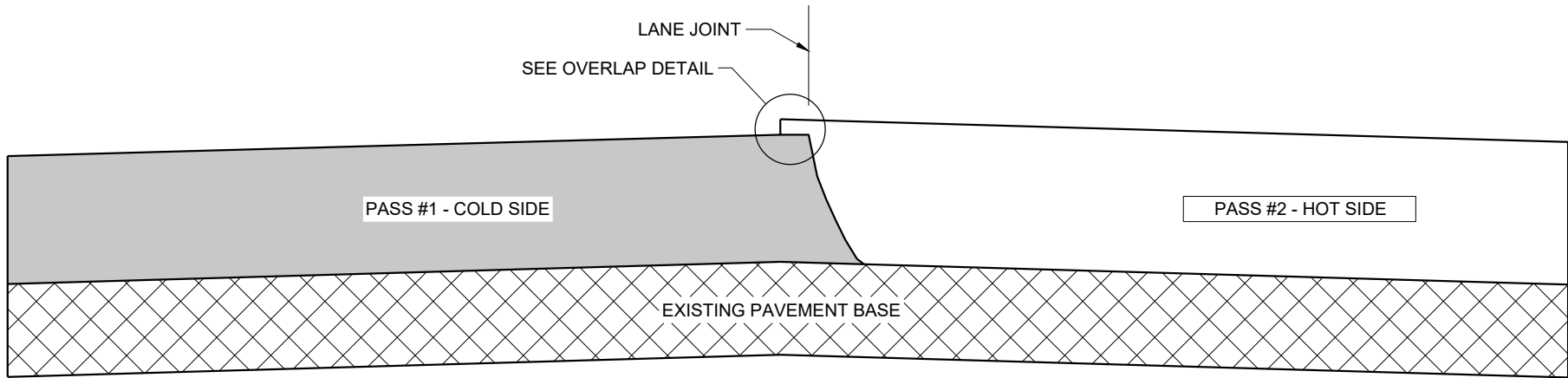
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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May 2023 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR 239  
FHWA

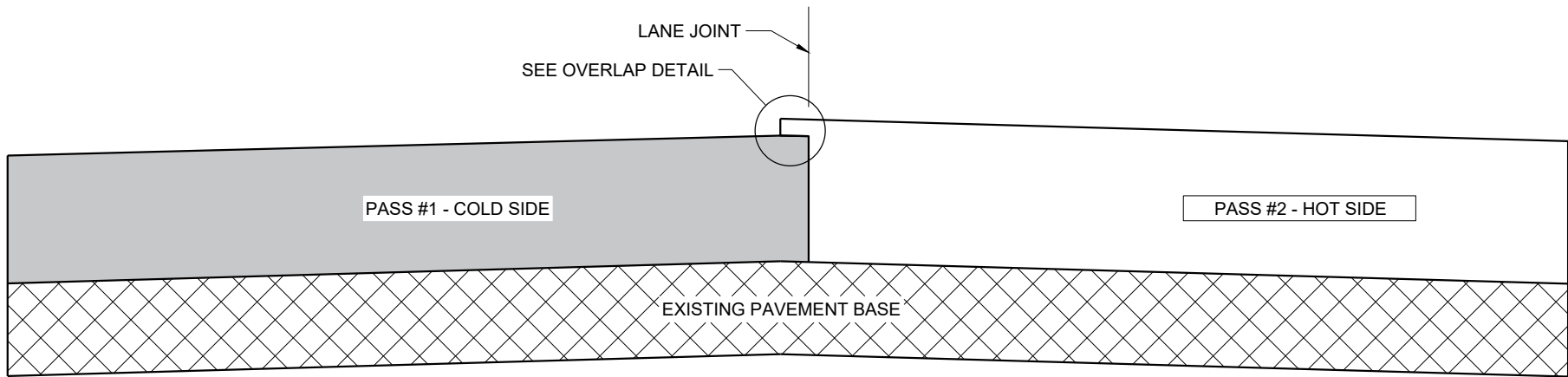




**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



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

**GENERAL NOTES**

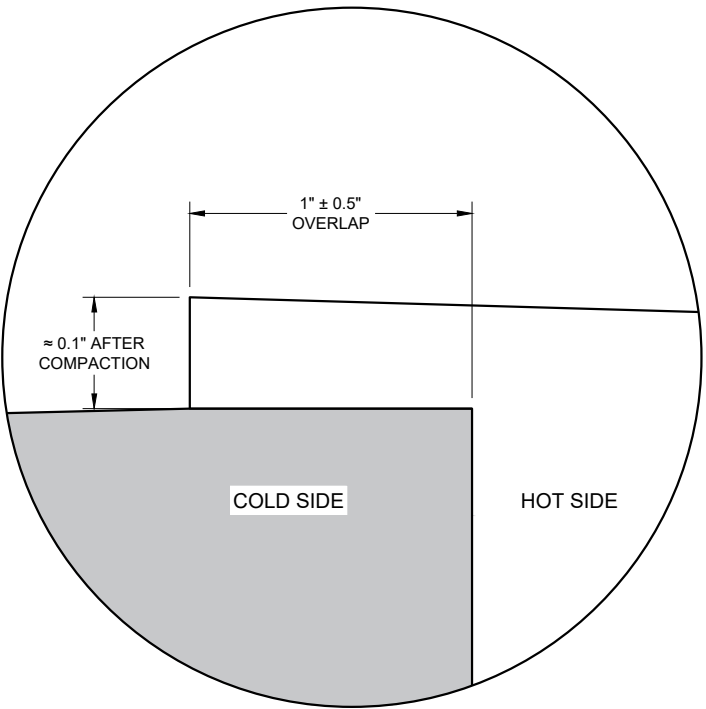
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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

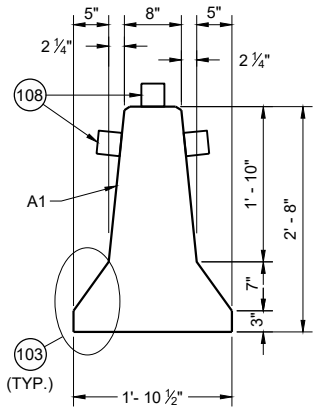


**OVERLAP DETAIL (TYPICAL)**

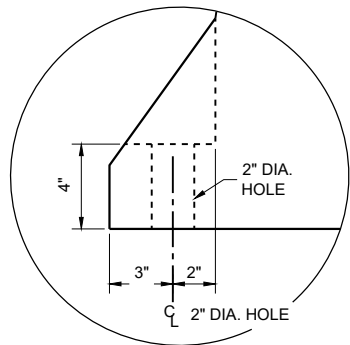
**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN  
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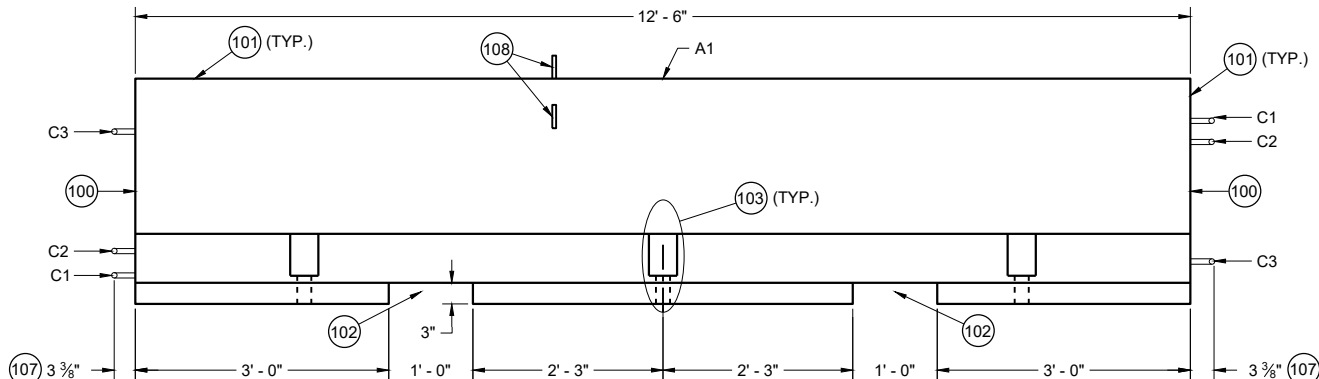
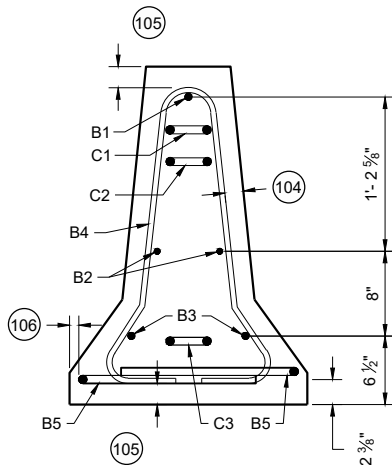
APPROVED  
November 2020 /S/ Steven Hefel  
DATE HMA PAVEMENT ENGIN 240  
FHWA



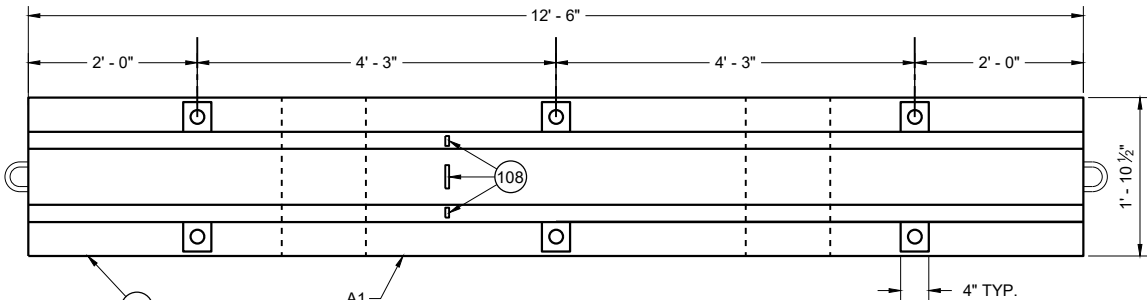
CROSS SECTION



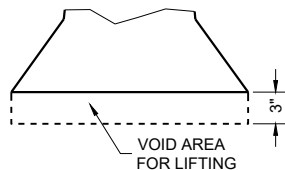
ANCHOR BLOCK  
DETAIL



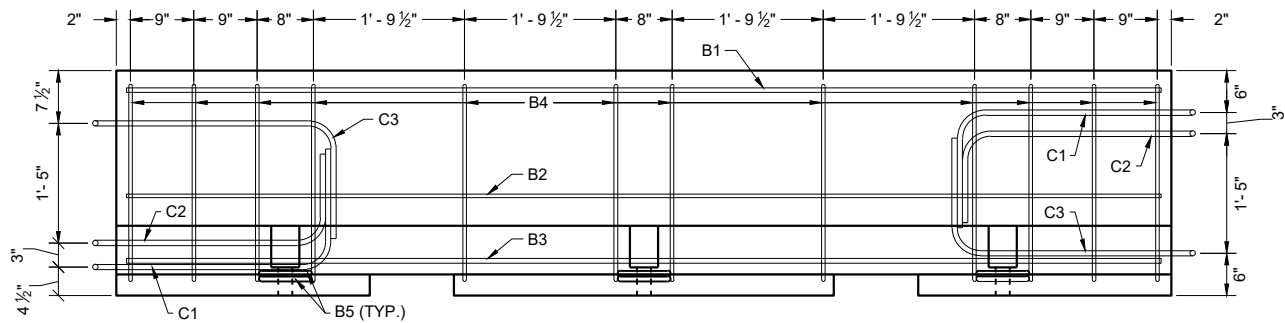
PROFILE VIEW



PLAN VIEW  
TEMPORARY BARRIER



LIFTING SLOT DETAIL  
(TYP.)



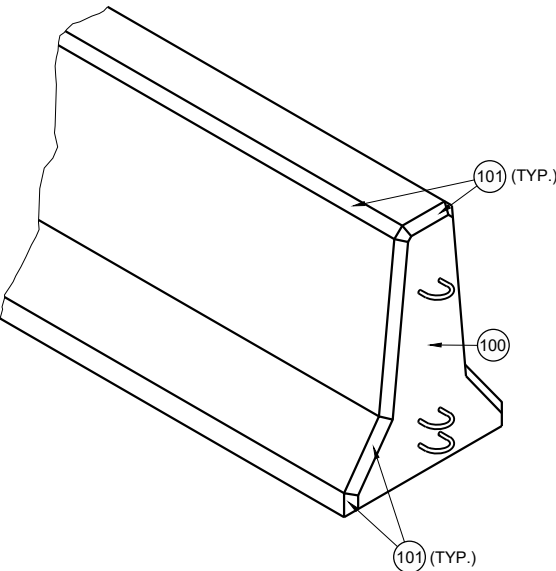
PROFILE VIEW  
TEMPORARY BARRIER REINFORCEMENT

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

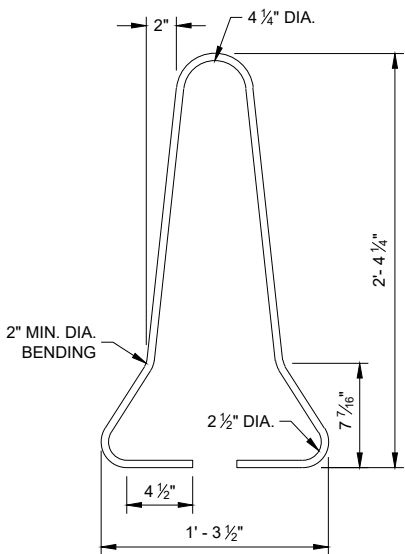
LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

- 100 PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
  - A. TYPE OF BARRIER: WI-CBTP
  - B. MANUFACTURER
  - C. DATE OF MANUFACTURE (MONTH AND YEAR)
- 101 1" OPTIONAL CHAMFER
- 102 SEE LIFTING SLOT DETAIL
- 103 SEE ANCHOR BLOCK DETAIL
- 104 1 3/4" MIN. CLEAR COVER
- 105 2" MIN. CLEAR COVER
- 106 1" MIN. CLEAR COVER
- 107 ± 1/8" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)
- 108 USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

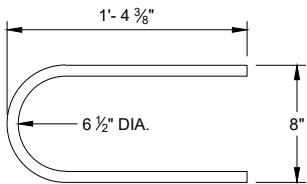


CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

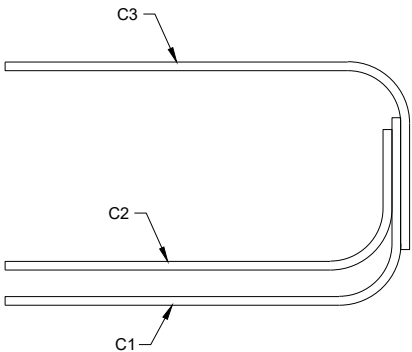
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



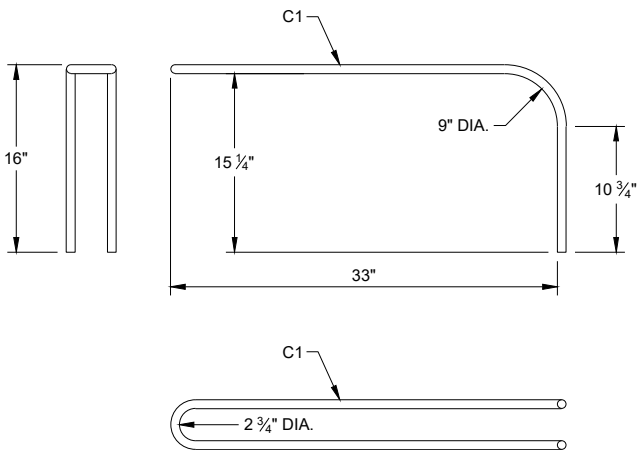
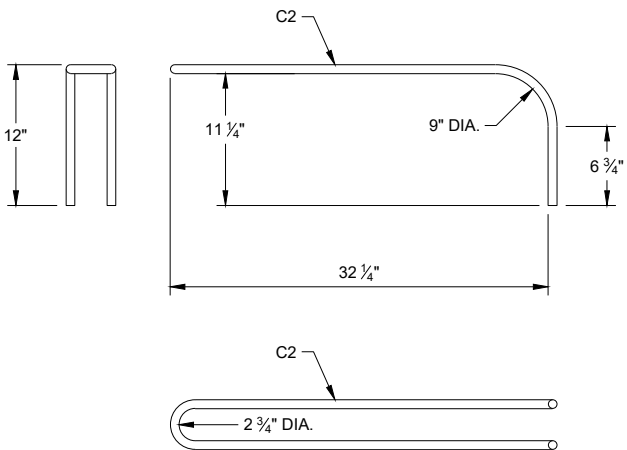
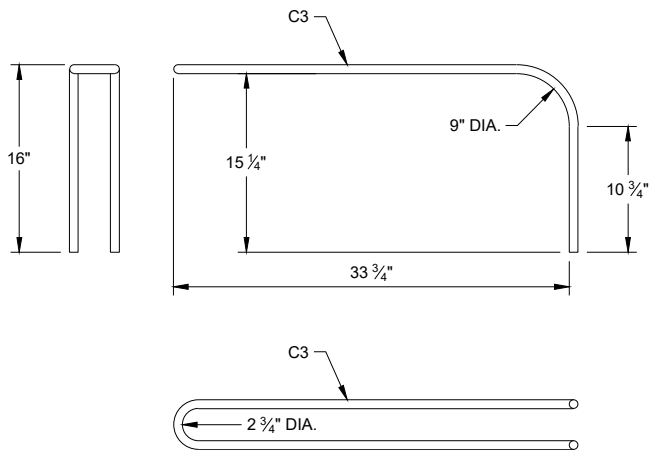
B4 BAR DETAIL



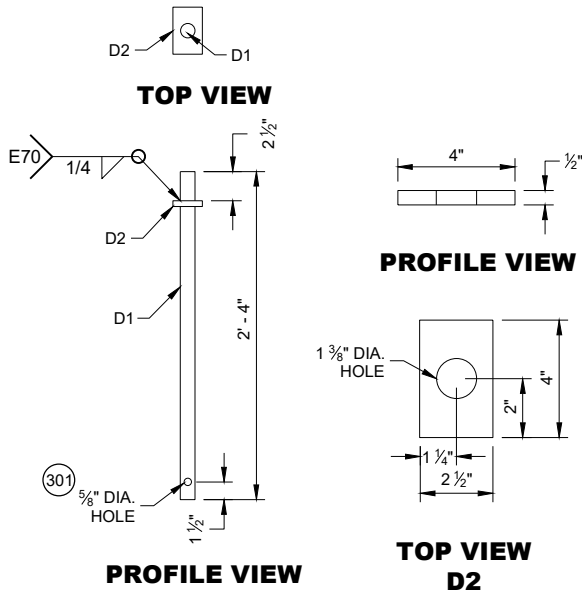
B5 BAR DETAIL



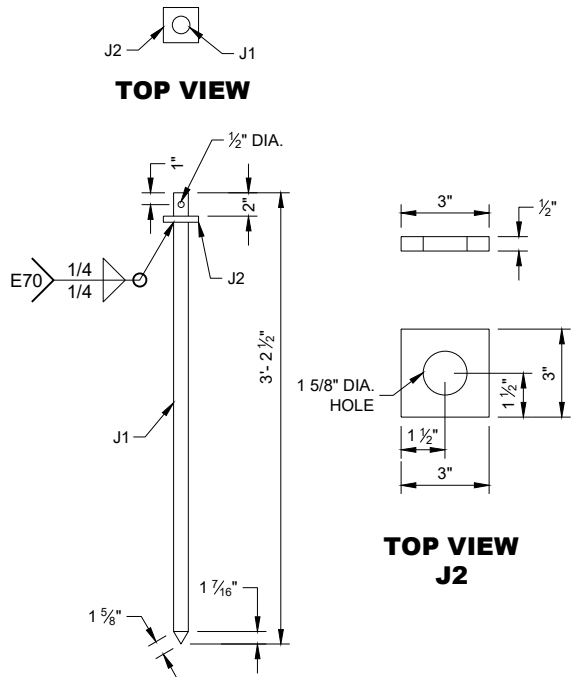
PROFILE VIEW  
LOOP BAR ASSEMBLY



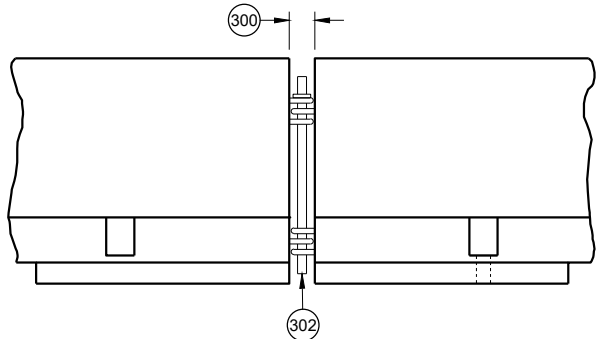
C BAR DETAILS



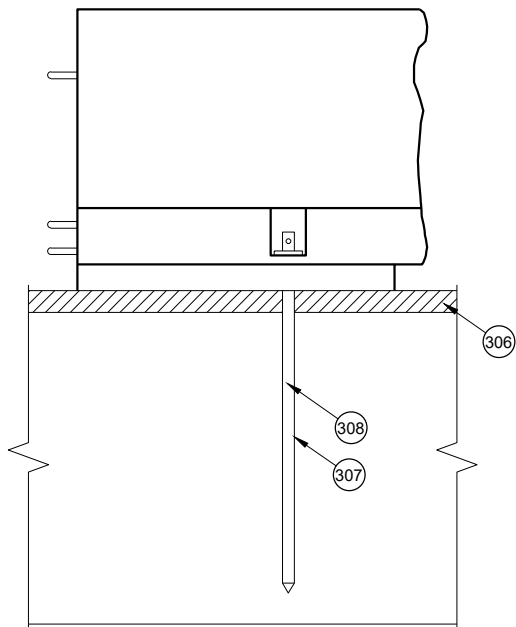
CONNECTOR PIN ASSEMBLY



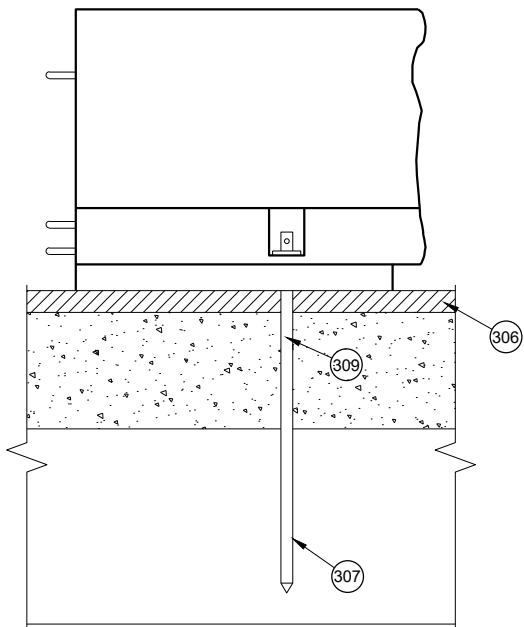
ASPHALT ANCHOR PIN ASSEMBLY



CONNECTING TEMPORARY BARRIER SECTIONS



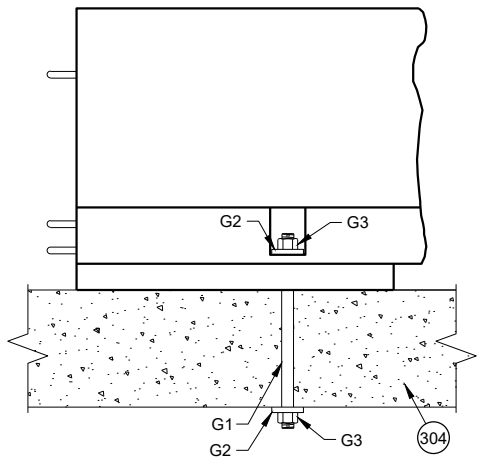
ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



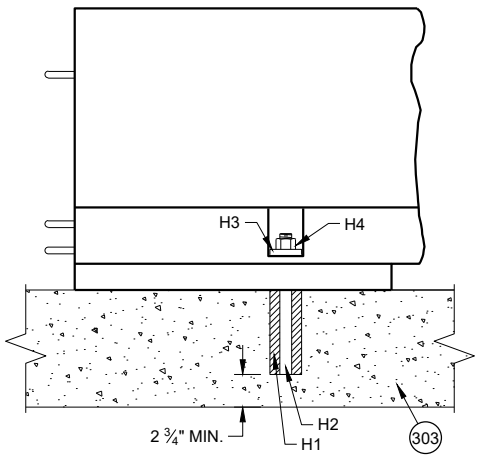
ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT

GENERAL NOTES

- (300) SET WITH 3 5/8" WOOD BLOCK.
- (301) HOLE IS OPTIONAL.
- (302) CONNECTOR PIN ASSEMBLY.
- (303) CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.
- (304) CONCRETE DECK.
- (305) DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.
- (306) MINIMUM OF 2" OF ASPHALT.
- (307) ASPHALT ANCHOR PIN ASSEMBLY
- (308) IF DRILLING A PILOT HOLE, THE MAX. DIA. OF THE HOLE IS 3/4"
- (309) WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



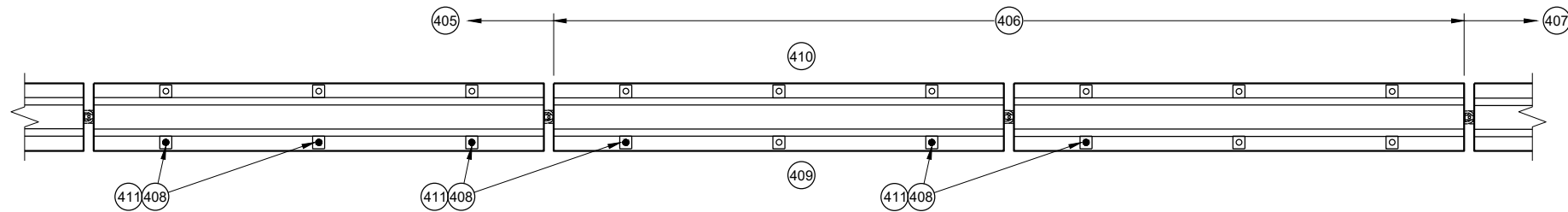
SIDE VIEW THROUGH BOLT ANCHOR INSTALLATION



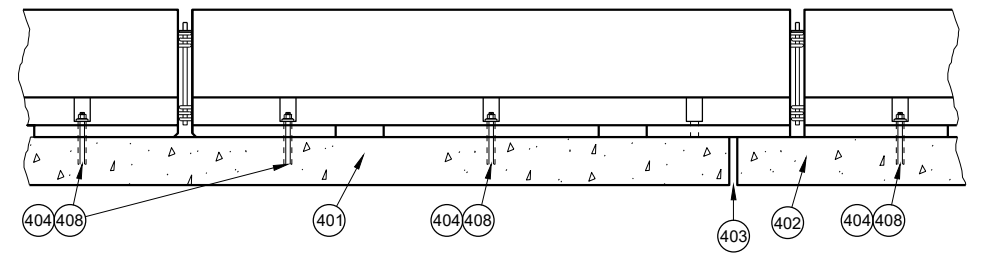
SIDE VIEW ADHESIVE ANCHOR INSTALLATION

CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

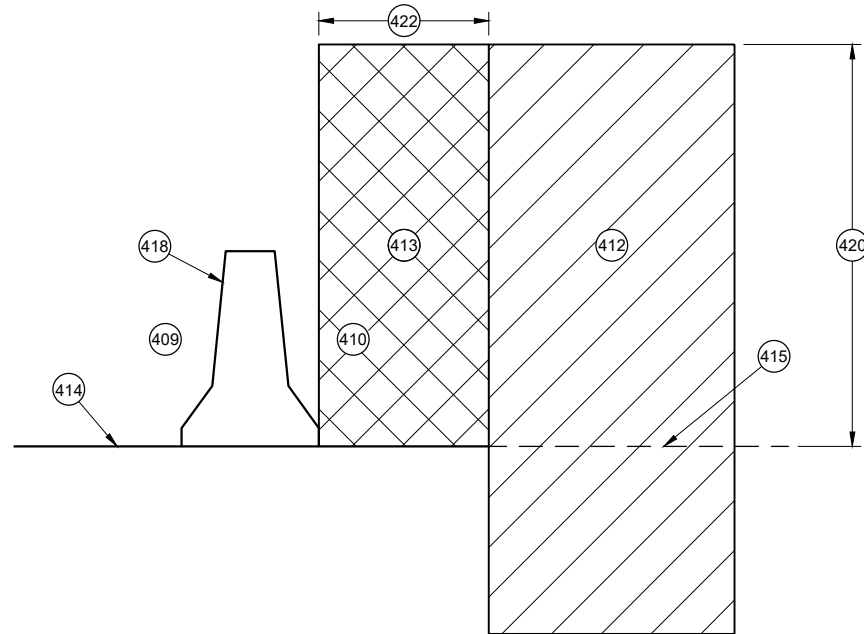
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



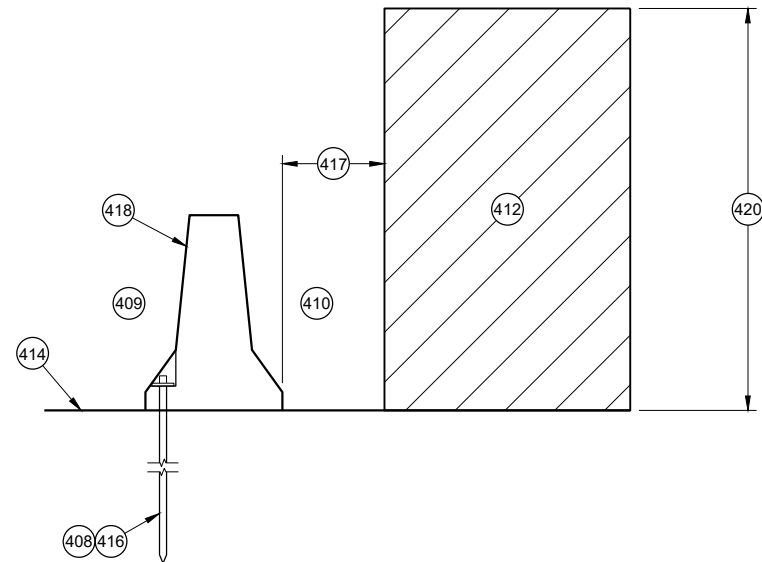
**PLAN VIEW**  
**TRANSITION FROM FREE STANDING TO ANCHORED BARRIER**



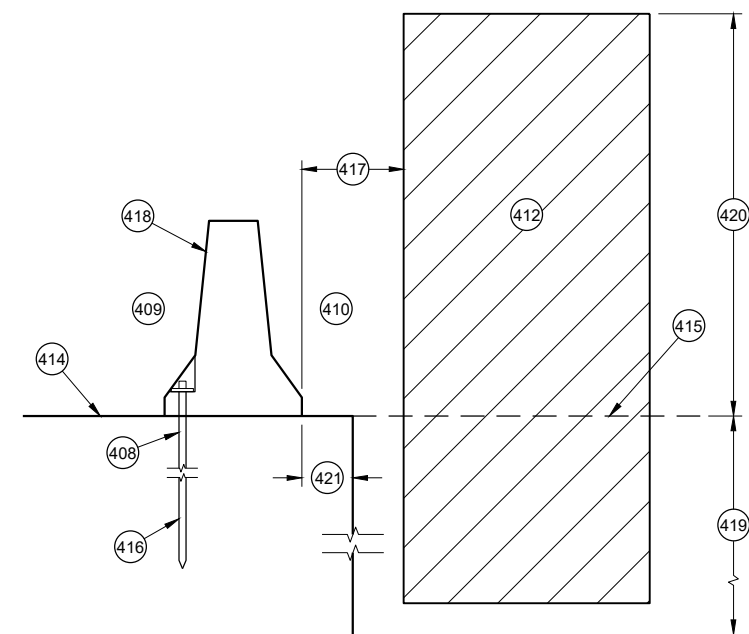
**PROFILE VIEW**  
**ANCHORED BARRIER NEAR EXPANSION JOINT**



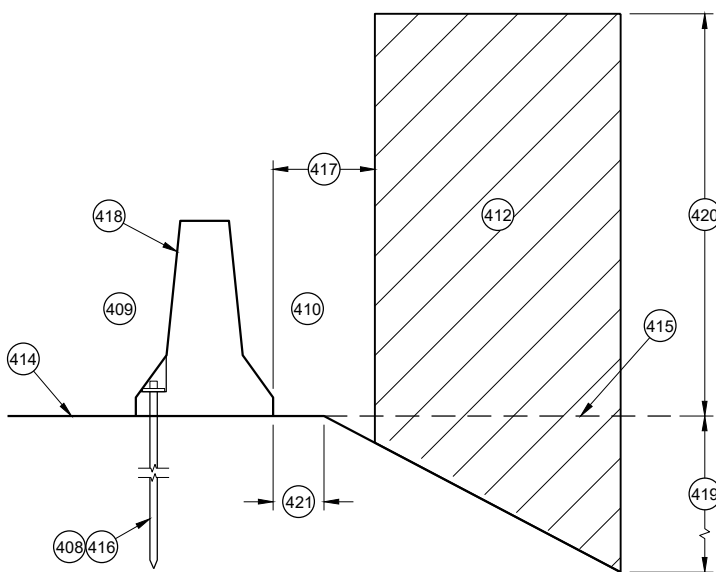
**CROSS SECTION**  
**FREE STANDING BARRIER**



**CROSS SECTION**  
**ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER**



**CROSS SECTION**  
**ANCHORED BARRIER NEAR VERTICAL DROP OFF**



**CROSS SECTION**  
**ANCHORED BARRIER NEAR A SLOPE**

### GENERAL NOTES

- (400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.
- (401) CONCRETE DECK
- (402) CONCRETE DECK OR APPROACH SLAB.
- (403) EXPANSION JOINT
- (404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.
- (405) ANCHORED TEMPORARY BARRIER
- (406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING
- (407) FREE STANDING BARRIER
- (408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.
- (409) TRAFFIC SIDE
- (410) NON-TRAFFIC SIDE
- (411) ANCHOR LOCATION. SEE ANCHORING DETAILS.
- (412) WORK AREA
- (413) AREA FREE OF OBJECTS AND WORKERS
- (414) GRADE LINE
- (415) EXTENDED GRADE LINE
- (416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.
- (417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.
- (418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.
- (419) DEPTHS OF 3 FEET OR MORE.
- (420)  $Y = 6.5'$
- (421) OFFSET FROM BACK OF BARRIER EDGE:
 

|                   |      |
|-------------------|------|
| CONCRETE PAVEMENT | 0.5' |
| ASPHALT           | 0.5' |
- (422) POSTED SPEED (MPH):
 

|               |      |
|---------------|------|
| 45 OR GREATER | 4.0' |
| 40 OR LOWER   | 2.0' |

**CONCRETE BARRIER**  
**TEMPORARY PRECAST,**  
**12' - 6"**

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GENERAL NOTES

- 500 EXISTING RIGID BARRIERS (VARIES)

501 TEMPORARY BARRIER

502 SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

503 ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

504 NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

505 TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.
- 506 TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

507 VERTICAL BARRIER

508 SAFETY SHAPE BARRIER

509 SINGLE SLOPE BARRIER

510 CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

511 BENT THRIE BEAM TO FIT.

512 THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
- 513 TWO (2) P1, P2 AND P3 ARE REQUIRED

514 FIVE (5) N1, N2 AND N3 ARE REQUIRED

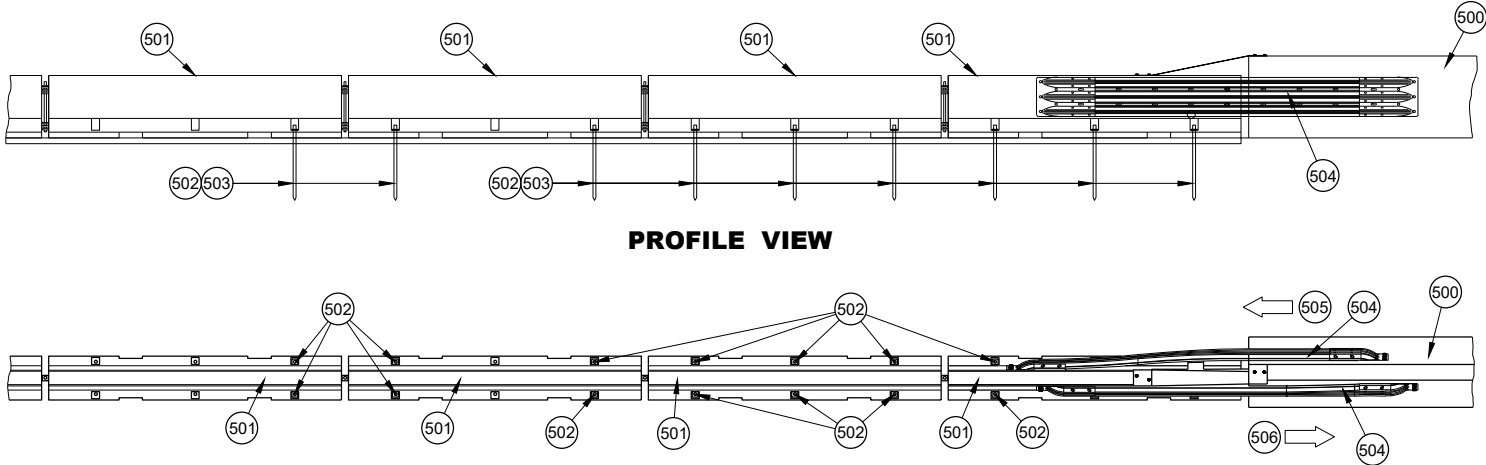
515 TWO (2) R1, R2 AND R3 ARE REQUIRED

516 CUT WOOD BLOCK TO FIT.

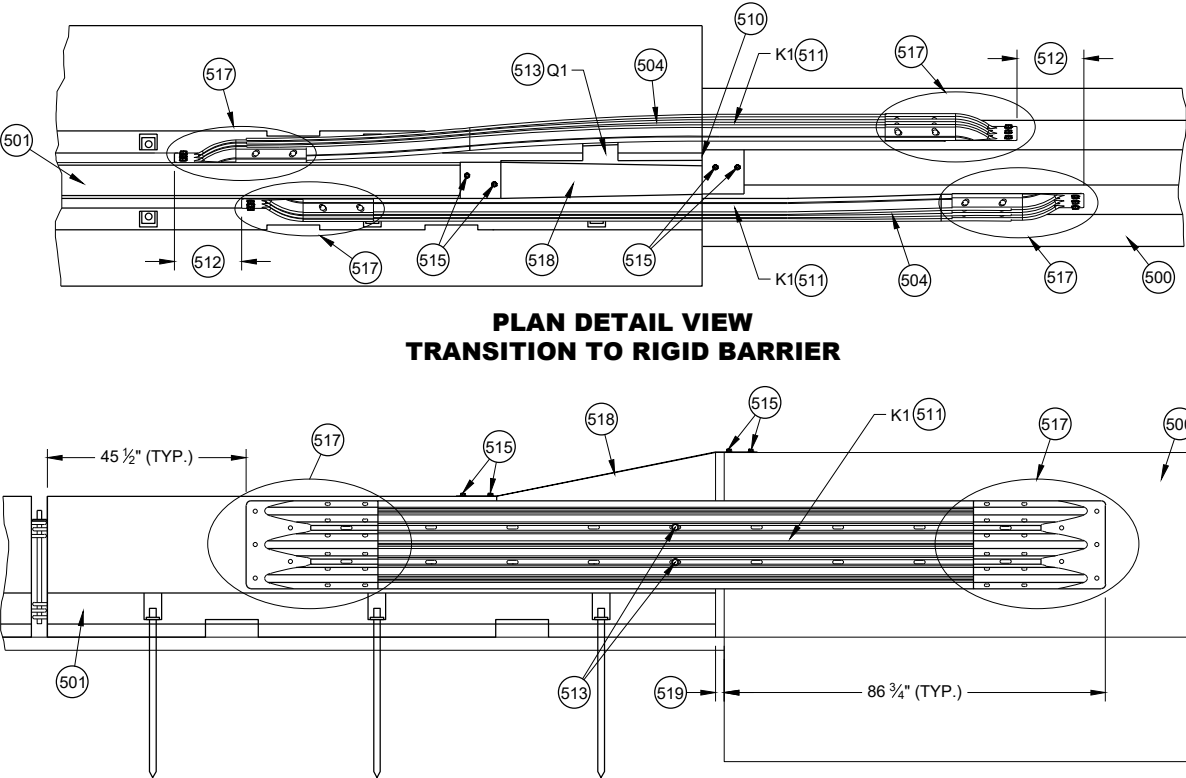
517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

518 CAP ASSEMBLY

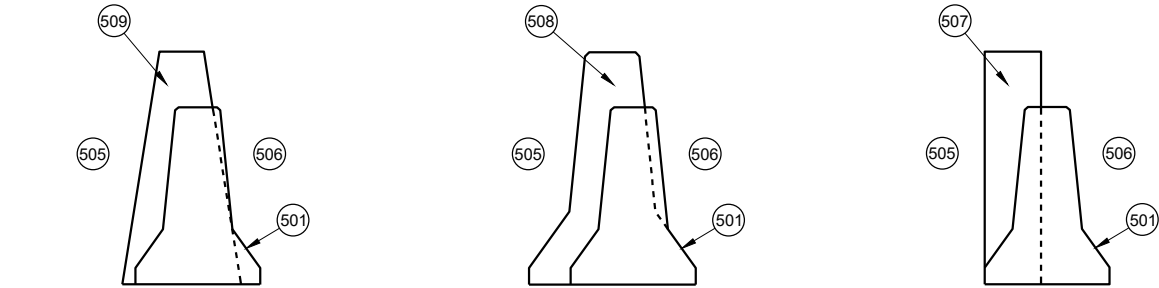
519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.
- 520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



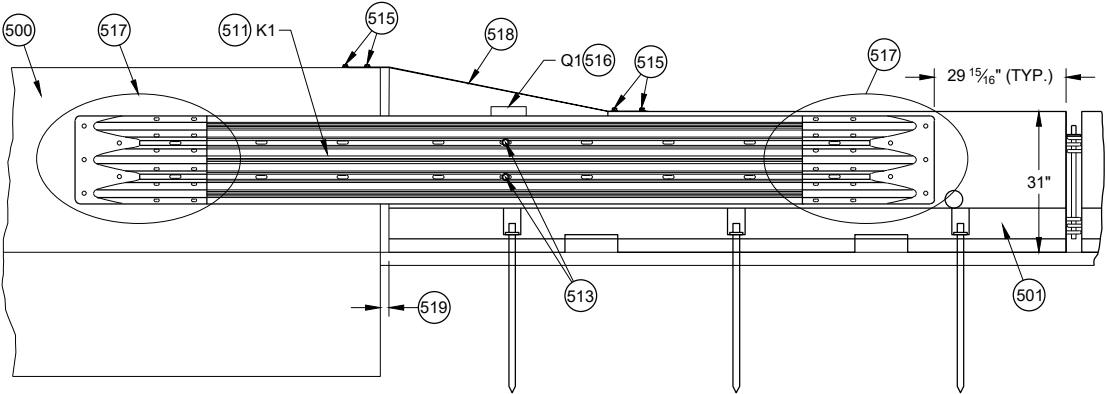
TRANSITION TO RIGID BARRIER



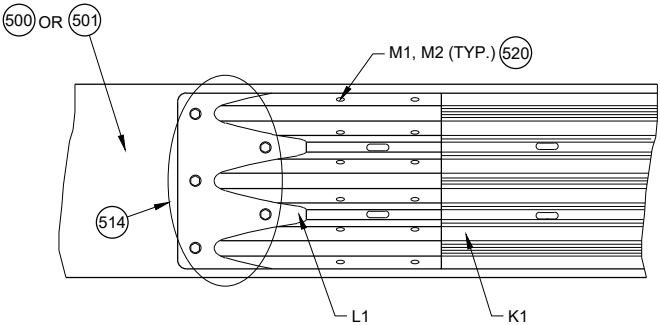
TRANSITION TO RIGID BARRIER



TEMPORARY BARRIER PLACEMENT SINGLE SLOPE  
TEMPORARY BARRIER PLACEMENT SAFETY SHAPE  
TEMPORARY BARRIER PLACEMENT VERTICAL



TRANSITION TO RIGID BARRIER

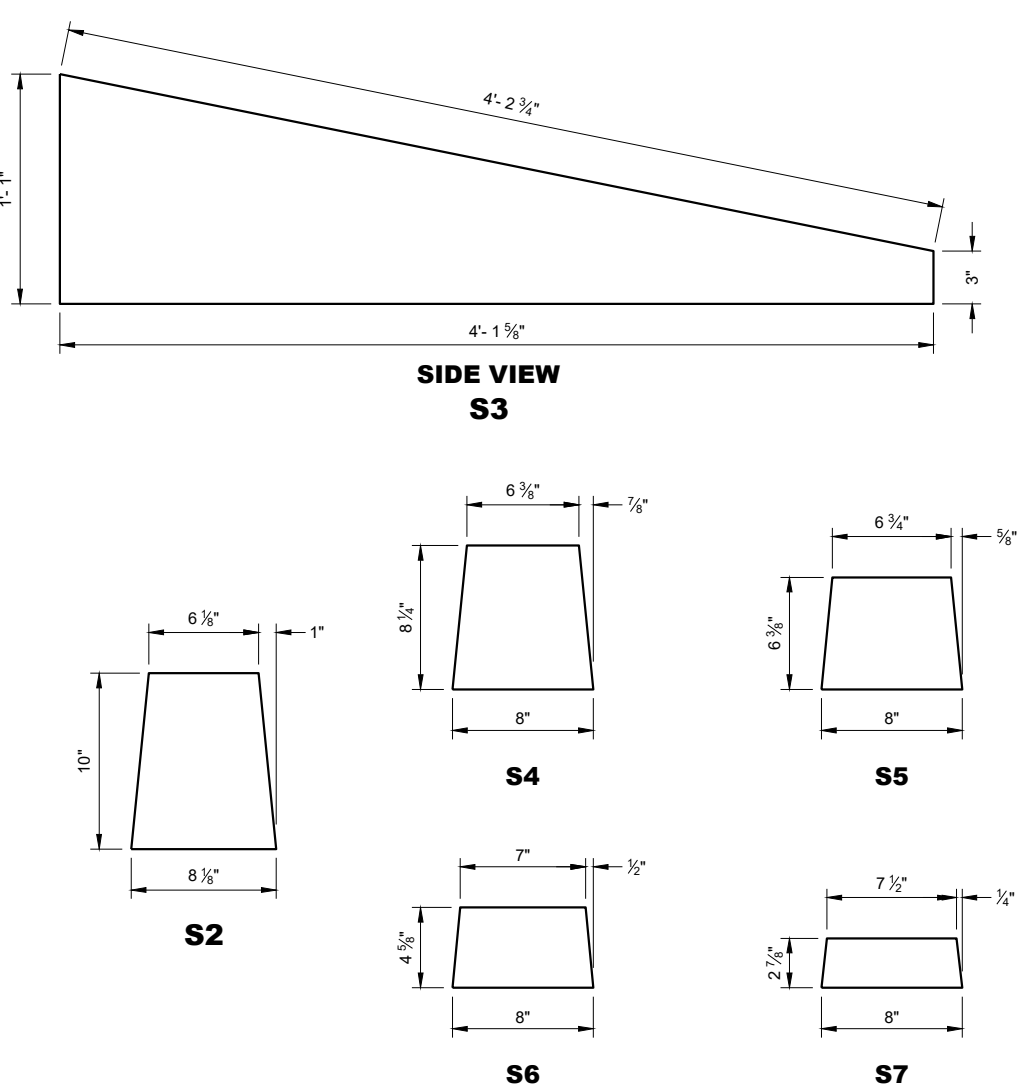
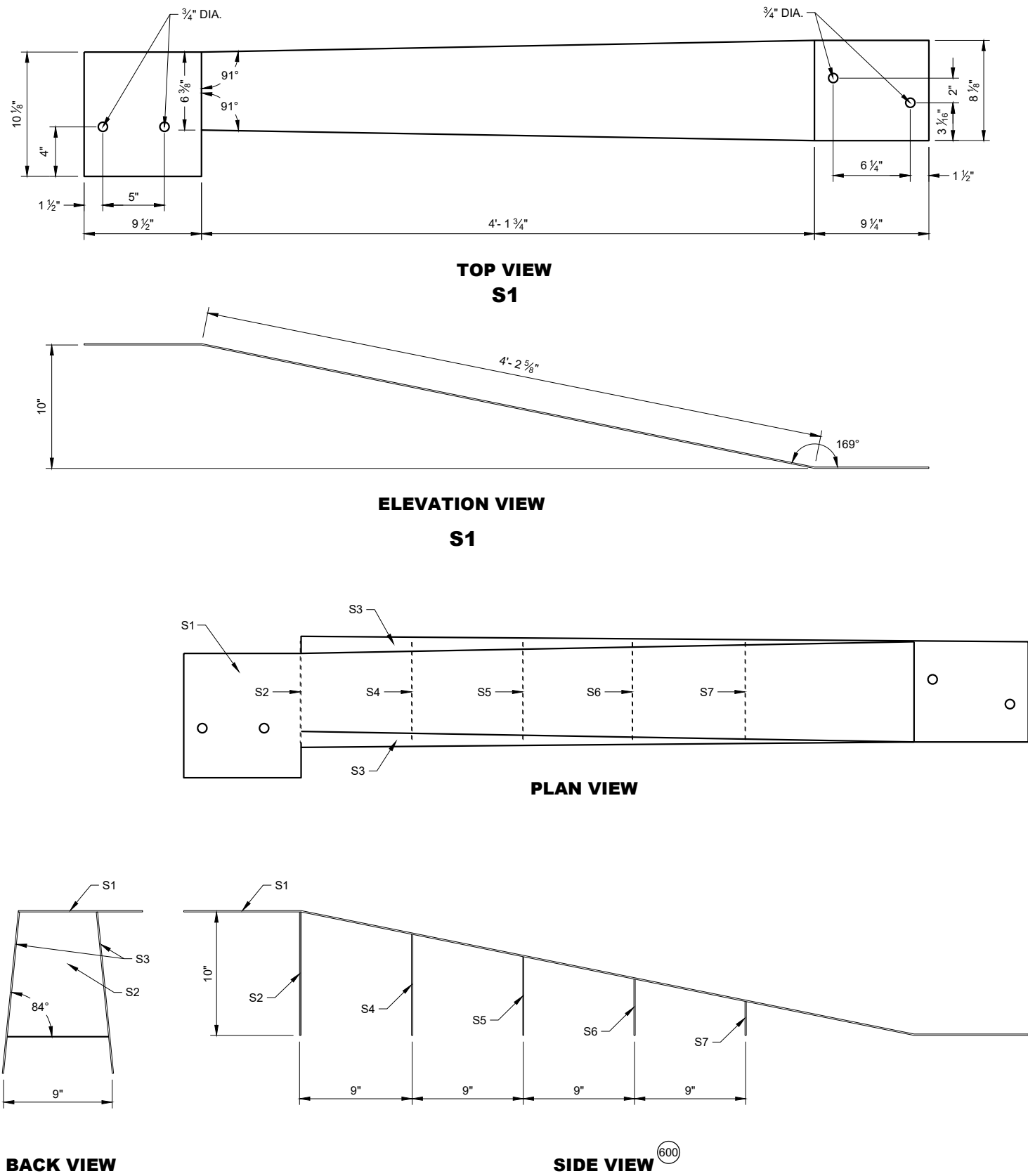


THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION





**GENERAL NOTES**

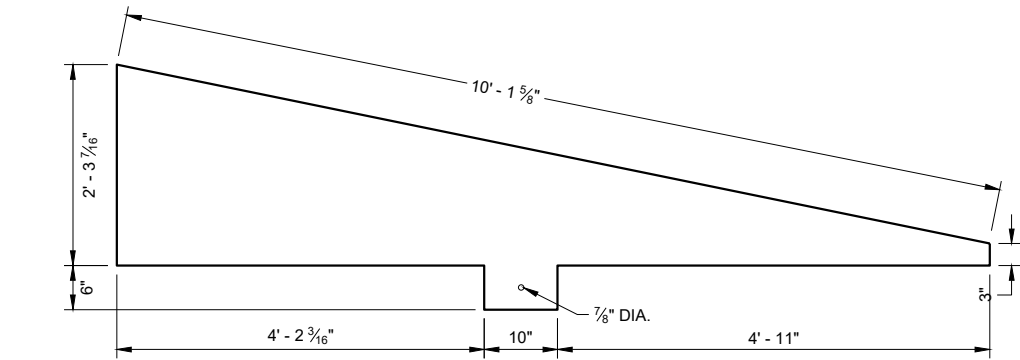
STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

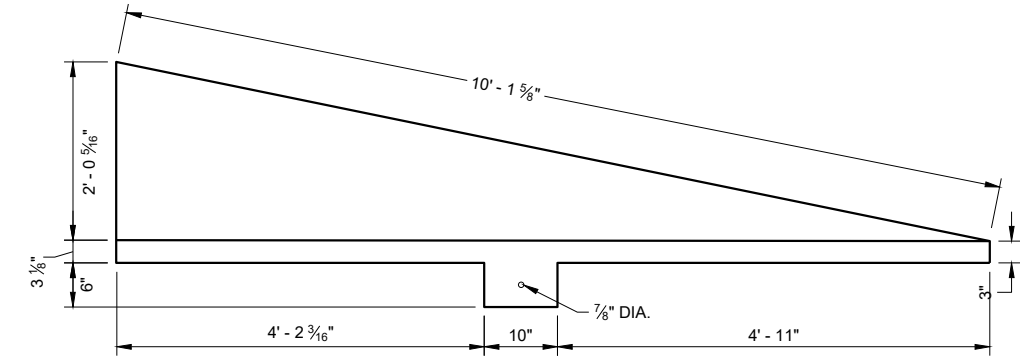
600 SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

**CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"**

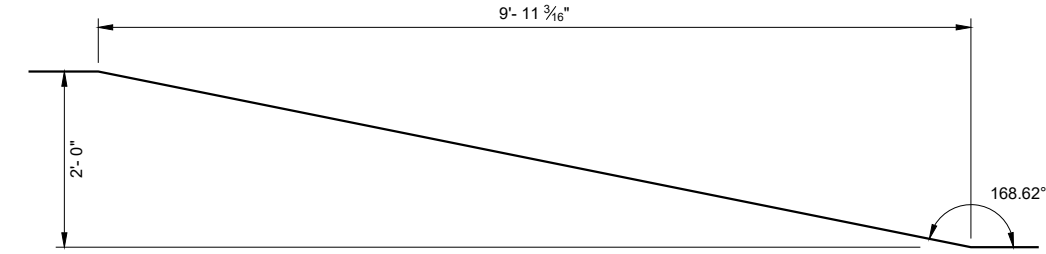
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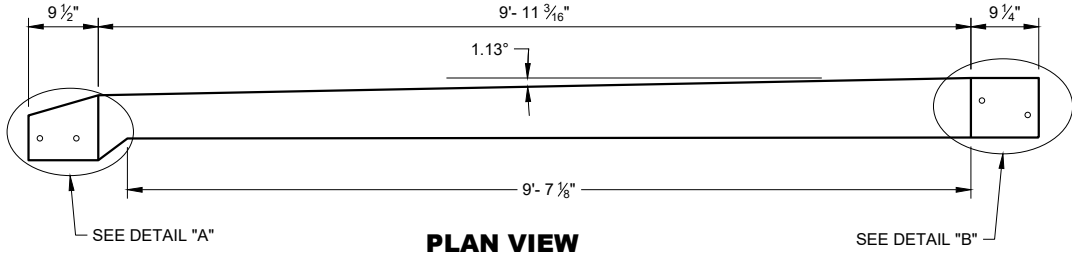
SIDE VIEW  
T4



SIDE VIEW  
T3



SIDE VIEW  
TOP PLATE T1



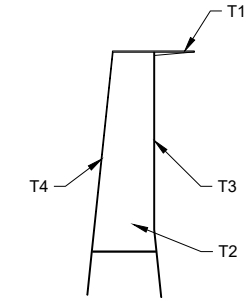
PLAN VIEW  
TOP PLATE T1

END  
VIEW

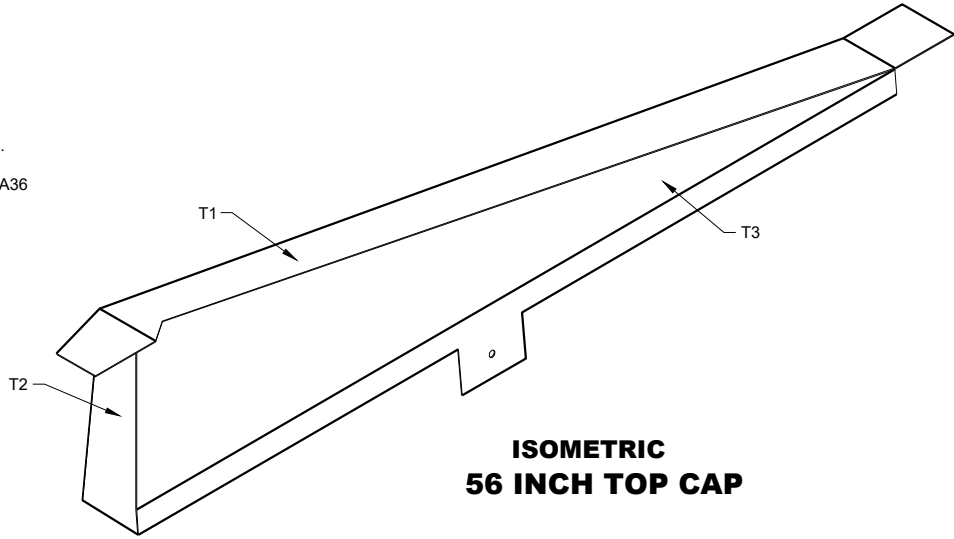
END  
VIEW

GENERAL NOTES

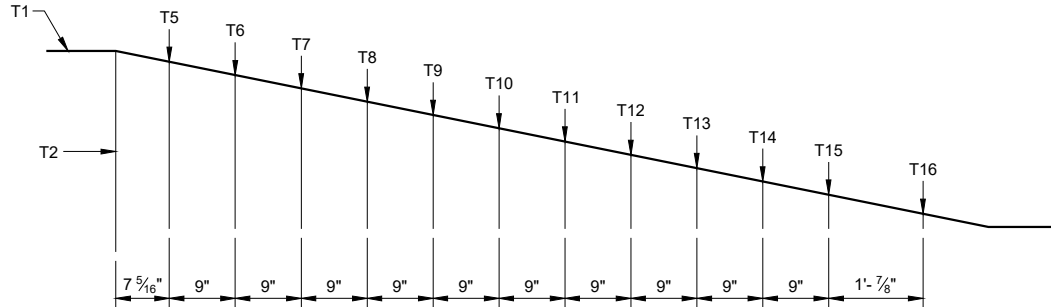
- STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES
- STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.
- SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.
- (700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



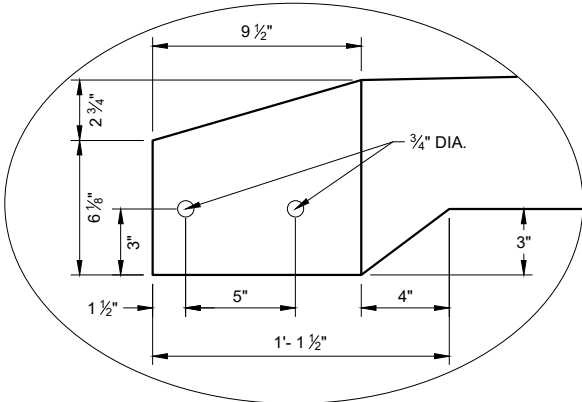
END VIEW  
56 INCH TOP CAP



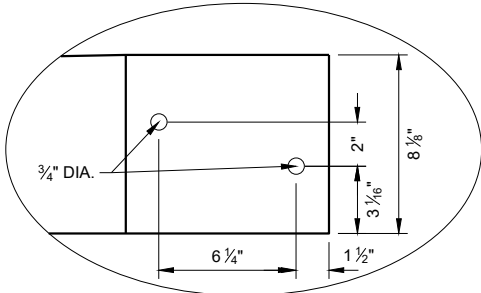
ISOMETRIC  
56 INCH TOP CAP



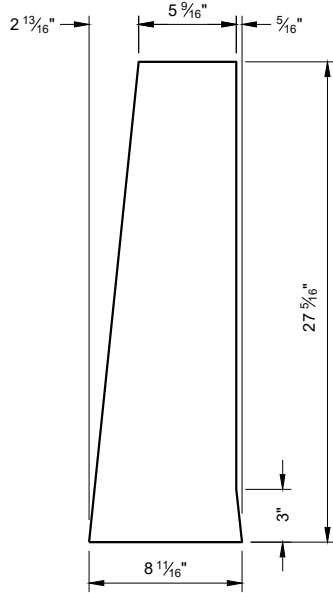
SIDE VIEW  
56 INCH TOP CAP (700)



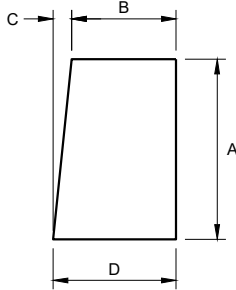
DETAIL "A"



DETAIL "B"



END PLATE T2



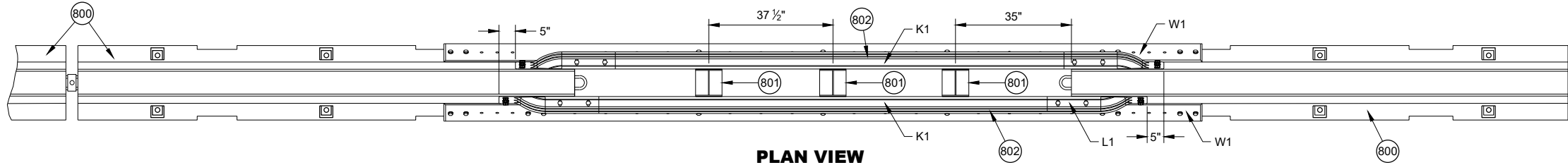
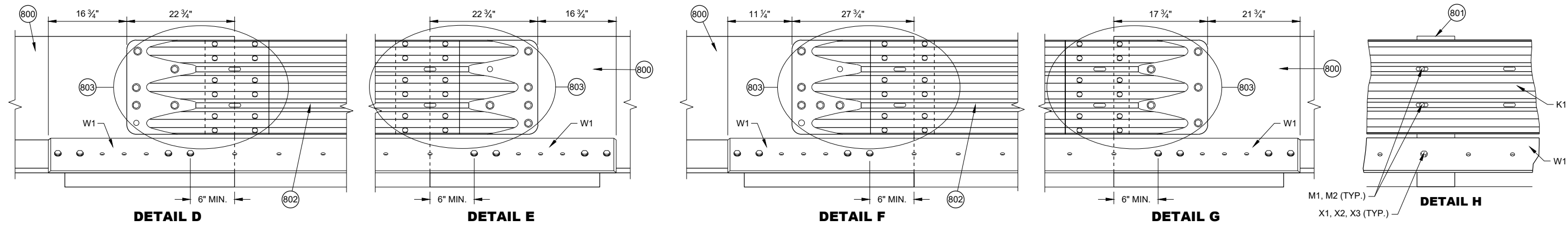
GUSSET PLATES  
T5 - T16

| GUSSET DIMENSIONS |           |          |          |         |
|-------------------|-----------|----------|----------|---------|
| GUSSET NO.        | A         | B        | C        | D       |
| T5                | 22 13/16" | 5 1/16"  | 2 5/16"  | 8 1/16" |
| T6                | 21"       | 5 7/8"   | 2 3/16"  | 8 1/16" |
| T7                | 19 3/16"  | 6 1/16"  | 1 15/16" | 8 1/16" |
| T8                | 17 3/8"   | 6 1/4"   | 1 13/16" | 8 1/16" |
| T9                | 15 9/16"  | 6 5/16"  | 1 9/16"  | 8 1/16" |
| T10               | 13 3/4"   | 6 5/8"   | 1 7/16"  | 8 1/16" |
| T11               | 11 15/16" | 6 13/16" | 1 1/4"   | 8 1/16" |
| T12               | 10 1/8"   | 7"       | 1 1/16"  | 8 1/16" |
| T13               | 8 5/16"   | 7 3/16"  | 7/8"     | 8 1/16" |
| T14               | 6 1/2"    | 7 3/8"   | 1 1/16"  | 8 1/16" |
| T15               | 4 1/16"   | 7 9/16"  | 1/2"     | 8"      |
| T16               | 2 7/8"    | 7 3/4"   | 1/4"     | 8"      |

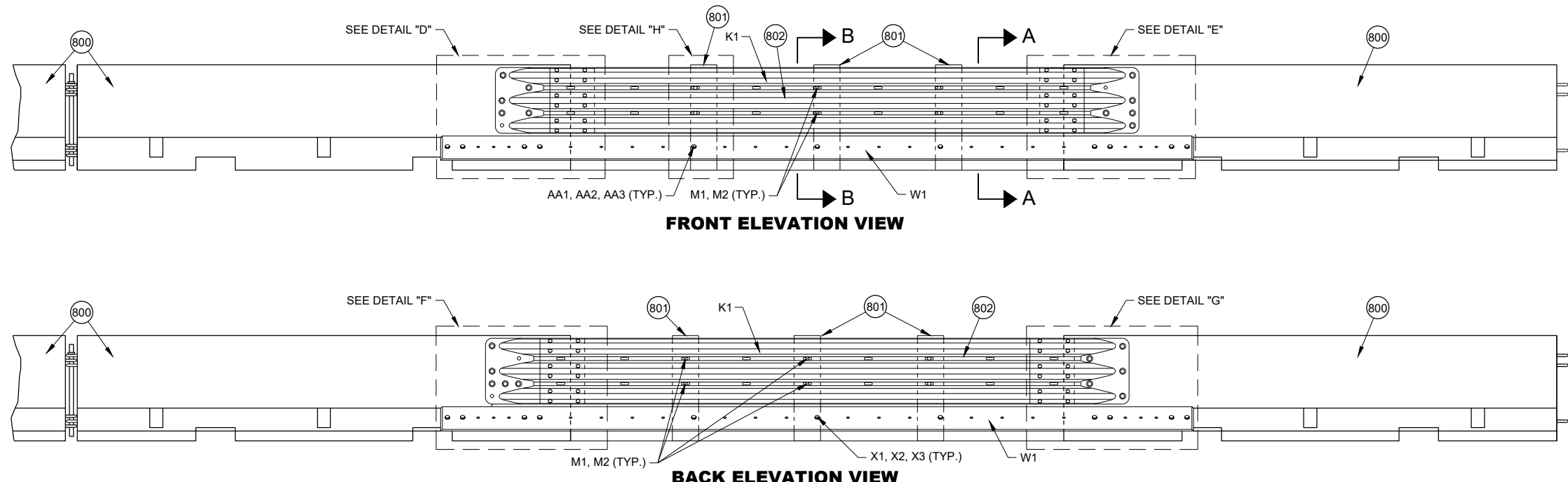
CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



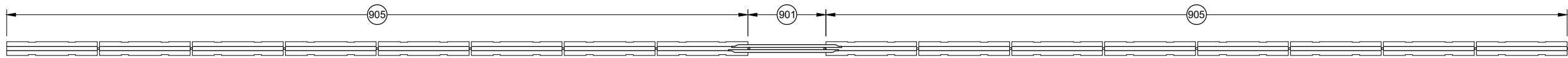


- GENERAL NOTES**
- 800 FREE STANDING TEMPORARY BARRIER
  - 801 GAP STIFFENER ASSEMBLY
  - 802 THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.
  - 803 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL

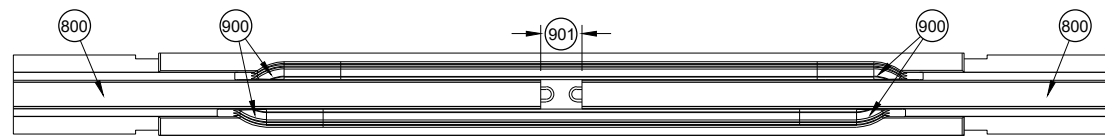


**PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER**

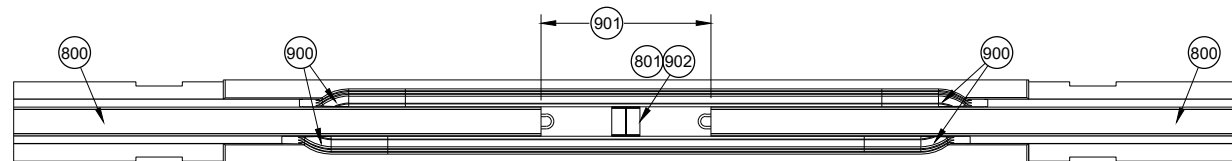
|                                                             |
|-------------------------------------------------------------|
| <b>CONCRETE BARRIER<br/>TEMPORARY PRECAST,<br/>12' - 6"</b> |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION 248      |



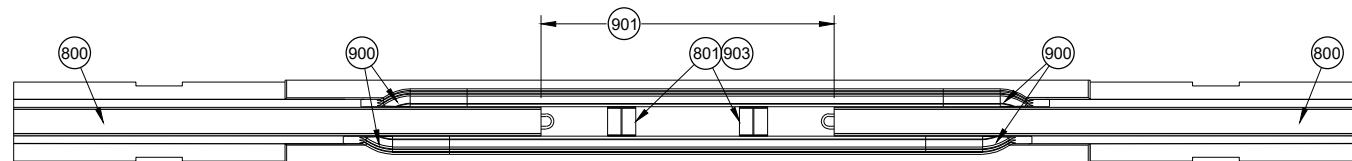
**PLAN VIEW  
GAP WITHIN SPACING**



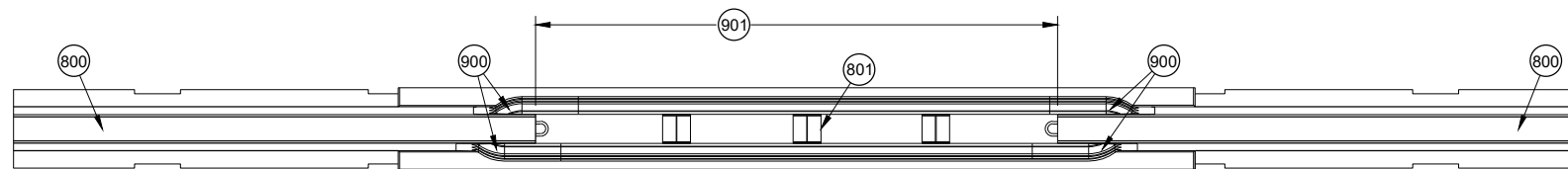
**PLAN VIEW  
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX.**



**PLAN VIEW  
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX.**



**PLAN VIEW  
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX.**



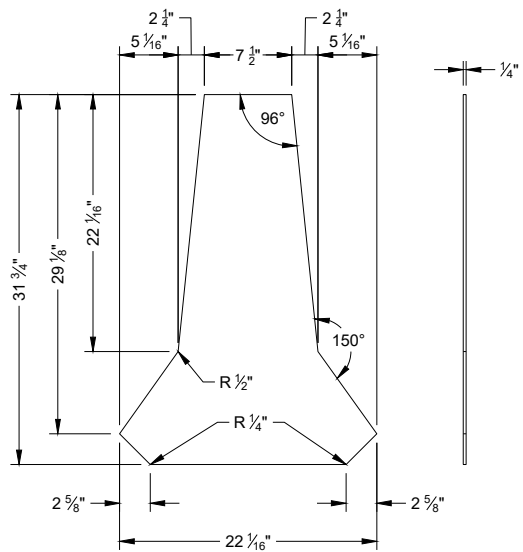
**PLAN VIEW  
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX.**

**GENERAL NOTES**

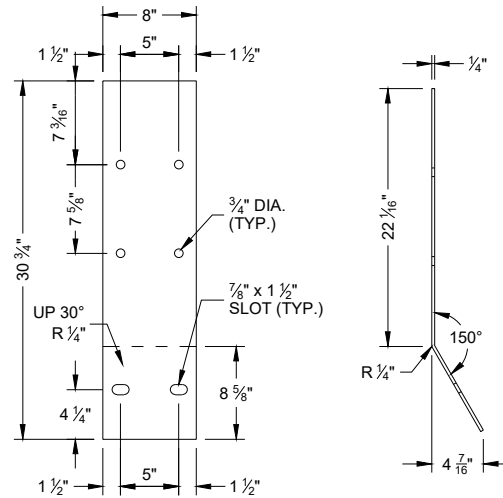
- (900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
- (901) TEMPORARY BARRIER GAP
- (902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
- (903) GAP STIFFENER ASSEMBLY IS OFFSET 18 3/4" FROM CENTER
- (904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
- (905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS

**CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"**

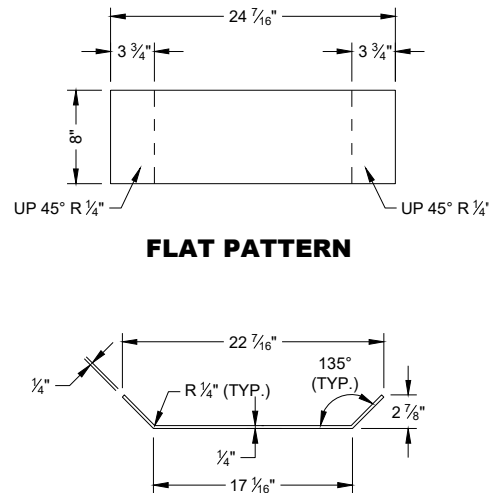
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 249



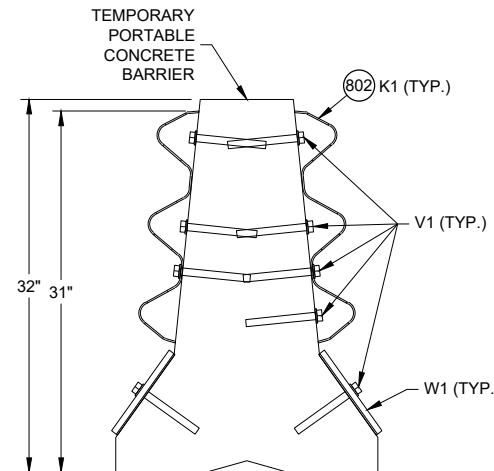
**PROFILE VIEW**  
**STIFFENER ASSEMBLY**  
**CENTER PANEL U1**



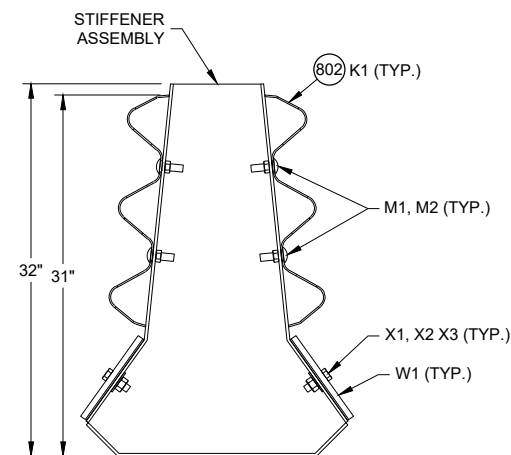
**FLAT PATTERN**  
**STIFFENER ASSEMBLY**  
**SIDE PANEL U2**



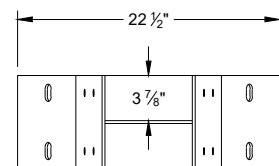
**PROFILE VIEW**  
**STIFFENER ASSEMBLY**  
**BOTTOM PANEL U3**



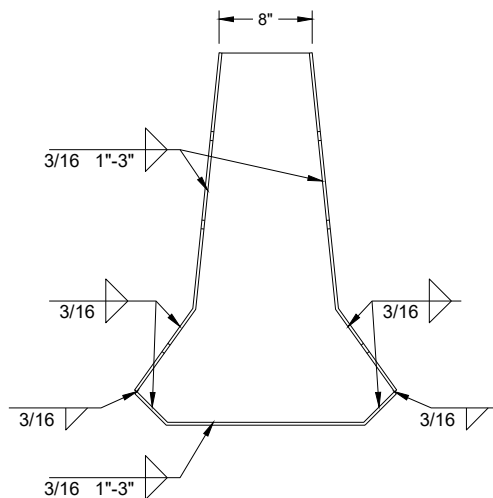
**SECTION A - A**



**SECTION B - B**

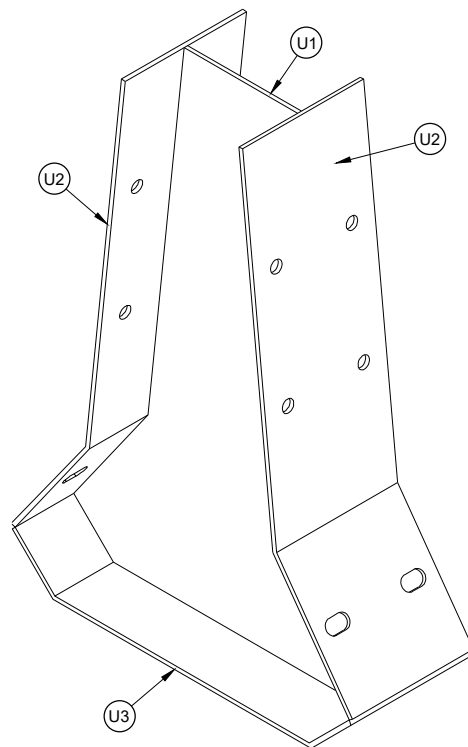


**PLAN VIEW**

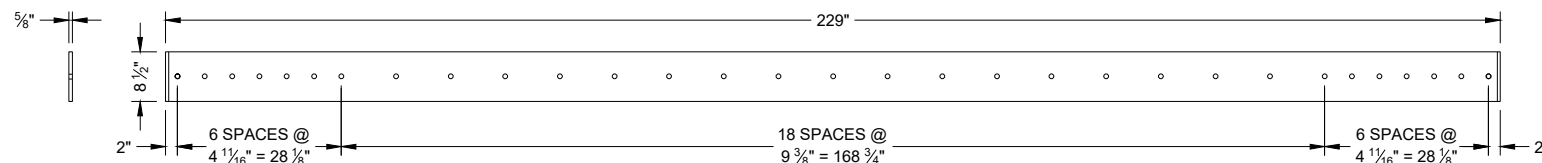


**PROFILE VIEW**  
**SIDE VIEW**

**GAP STIFFENER ASSEMBLY**

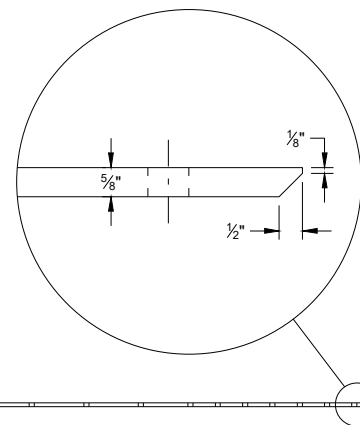


**ISOMETRIC**



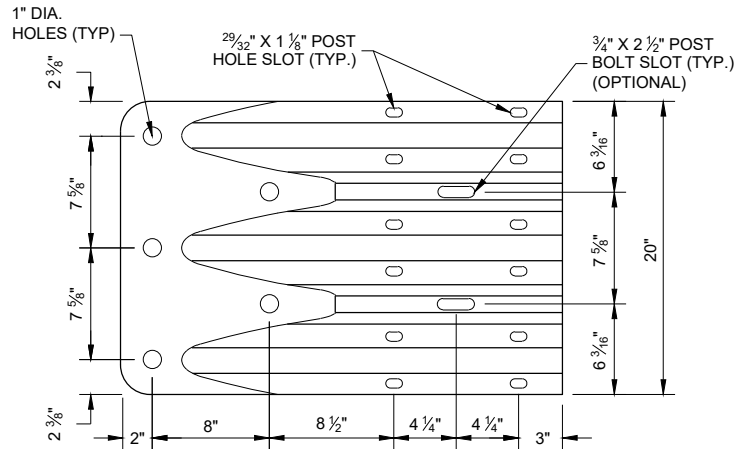
**SIDE VIEW**

**ELEVATION VIEW**  
**W1 TOE PLATE**



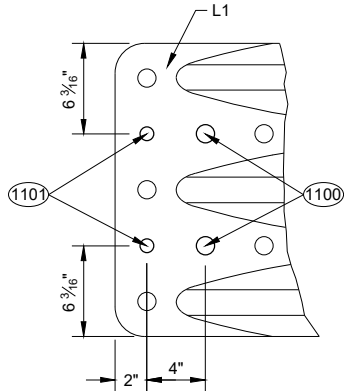
**CONCRETE BARRIER**  
**TEMPORARY PRECAST,**  
**12' - 6"**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



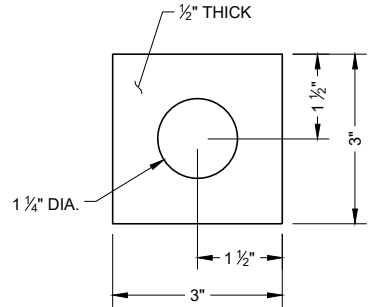
ELEVATION VIEW

**THRIE BEAM  
TERMINAL CONNECTOR**



ELEVATION VIEW

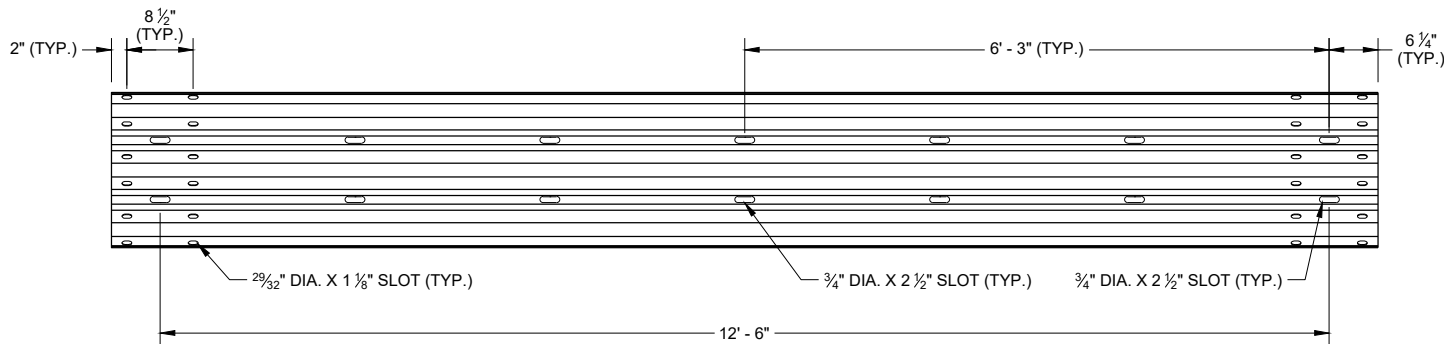
**ADDITIONAL THRIE BEAM  
TERMINAL CONNECTOR HOLE DETAIL**



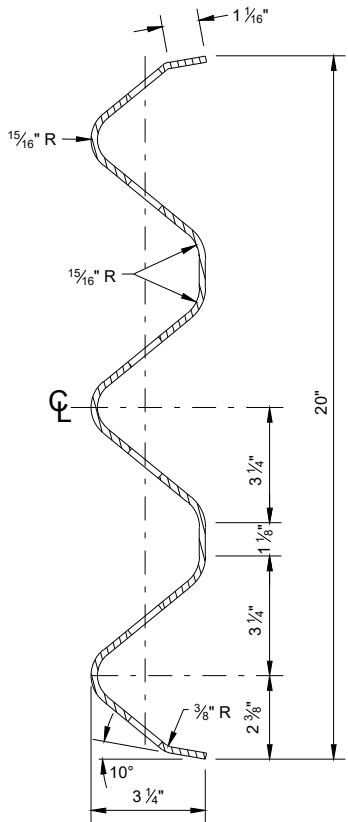
**PLATE WASHER DETAIL  
G2, H3**

**GENERAL NOTES**

- (1100) 1" DIA. HOLE
- (1101)  $\frac{3}{4}"$  DIA. HOLE
- (1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



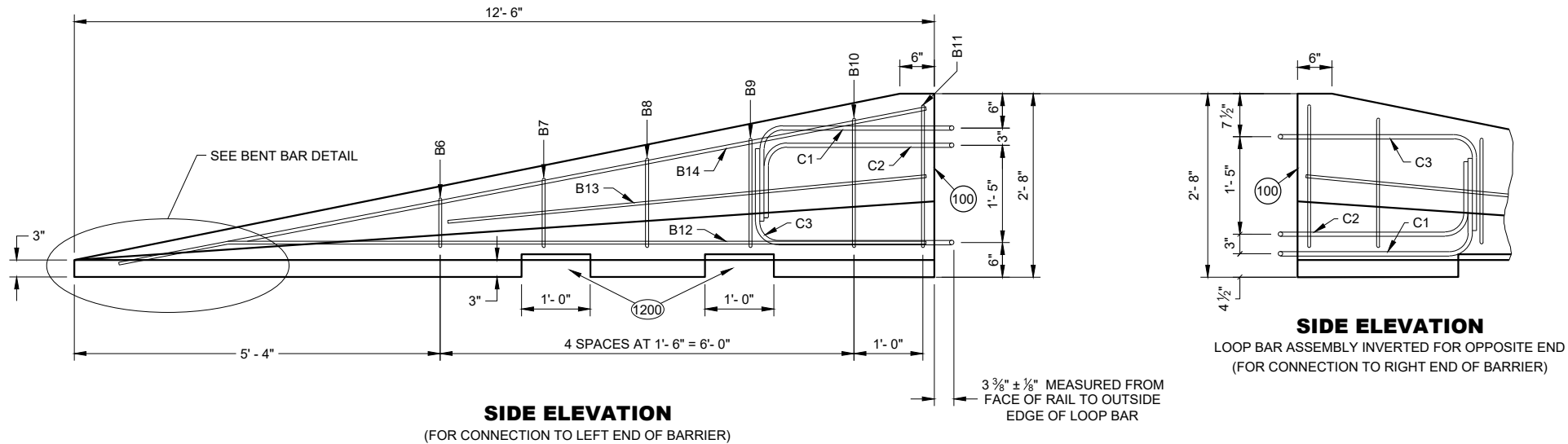
**SLOTTED THRIE BEAM RAIL K1**



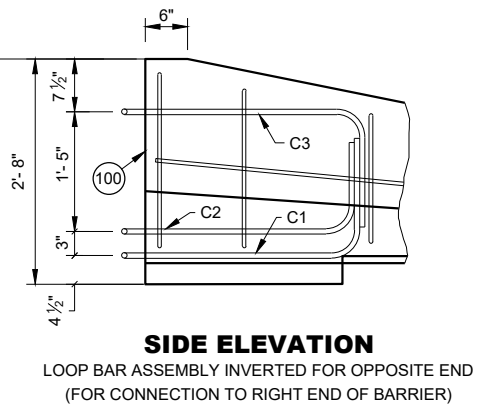
**SECTION THROUGH  
BEAM K1**

**CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



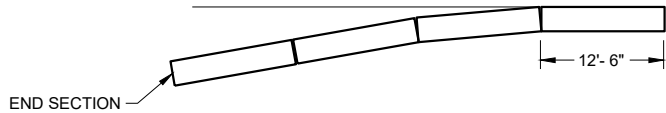
**SIDE ELEVATION**  
(FOR CONNECTION TO LEFT END OF BARRIER)



**SIDE ELEVATION**  
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END  
(FOR CONNECTION TO RIGHT END OF BARRIER)

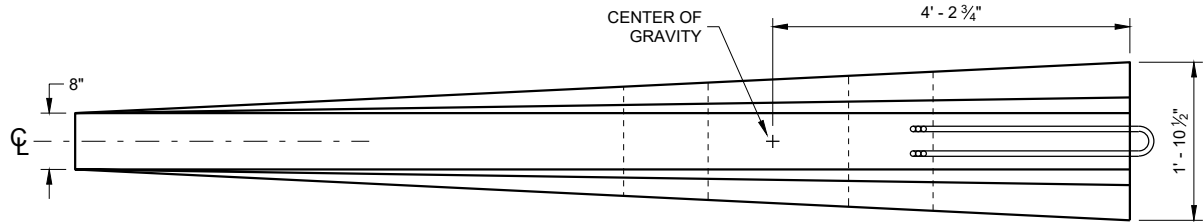
**GENERAL NOTES**

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

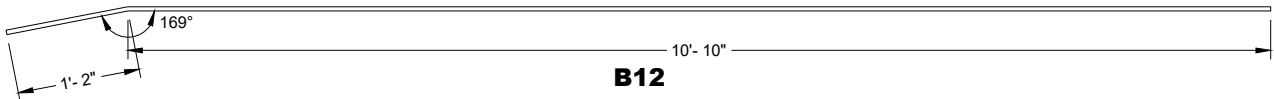


**FLARE AT BARRIER END**

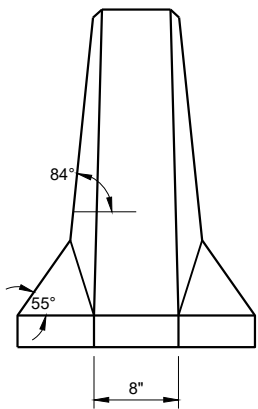
| POSTED SPEED, (MPH) | FLARE RATE |
|---------------------|------------|
| 40 OR LESS          | 6:1        |
| 45 OR GREATER       | 8:1        |



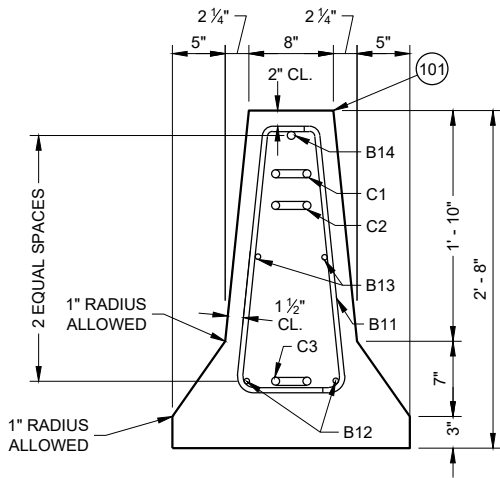
**PLAN VIEW**



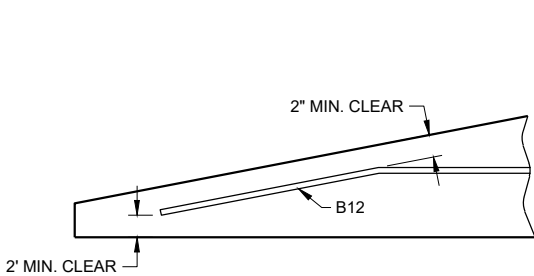
**B12**



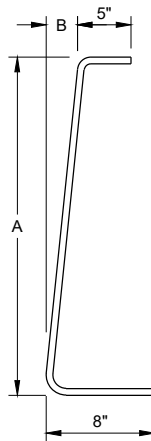
**FRONT ELEVATION**



**END SECTION**



**BENT BAR DETAIL**



| BAR | A          | B      |
|-----|------------|--------|
| B6  | 10"        | 1"     |
| B7  | 1'- 1"     | 1 1/4" |
| B8  | 1'- 5"     | 1 5/8" |
| B9  | 1'- 8"     | 1 7/8" |
| B10 | 2'- 0 1/2" | 2 3/8" |
| B11 | 2'- 3"     | 2 3/4" |

**B BARS**

2 OF EACH SIZE REQUIRED  
FOR STIRRUP ASSEMBLY

**CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 252

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SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

| PART | DESCRIPTION                          | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                          | NOTES                   |
|------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| A1   | PRECAST TEMPORARY BARRIER - CONCRETE | MIN. = f'c 5000 PSI                                                                                                                                                                                                                               |                         |
| B1   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #5 REBAR, LENGTH 12'-2" |
| B2   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 12'-2" |
| B3   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #5 REBAR, LENGTH 12'-2" |
| B4   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 6'-0"  |
| B5   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #6 REBAR, LENGTH 2'-11" |
| B6   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 1'-11" |
| B7   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 2'-2"  |
| B8   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 2'-6"  |
| B9   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 2'-9"  |
| B10  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 3'-2"  |
| B11  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 3'-4"  |
| B12  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 12'-0" |
| B13  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 7'-9"  |
| B14  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #5 REBAR, LENGTH 11'-9" |
| C1   | LOOP BAR                             | ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED                                                                                                                                                                                | ¾" DIA.                 |
| C2   | LOOP BAR                             | ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED                                                                                                                                                                                | ¾" DIA.                 |
| C3   | LOOP BAR                             | ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED                                                                                                                                                                                | ¾" DIA.                 |
| D1   | CONNECTION PIN - ROD                 | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    | 1 ¼" DIA.               |
| D2   | CONNECTION PIN - TOP PLATE           | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| G1   | BOLT THROUGH ANCHOR - THREADED ROD   | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC                                                              | 1 ⅝" DIA.               |
| G2   | BOLT THROUGH ANCHOR - WASHER, SQUARE | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| G3   | BOLT THROUGH ANCHOR - NUT            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |                         |
| H1   | ADHESIVE ANCHOR - ADHESIVE           | ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                                                                    |                         |
| H2   | ADHESIVE ANCHOR - THREADED ROD       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC                                                               | 1 ⅝" DIA.               |
| H3   | ADHESIVE ANCHOR - WASHER, SQUARE     | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| H4   | ADHESIVE ANCHOR - NUT                | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |                         |
| J1   | ASPHALT ANCHOR PIN - ROD             | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    | 1 ½" DIA.               |
| J2   | ASPHALT ANCHOR PIN - STOP PLATE      | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| K1   | THRIE BEAM RAIL                      | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER                                                                                                                                                                                                      | 12 GAUGE                |
| L1   | THRIE BEAM RAIL - TERMINAL           | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER                                                                                                                                                                                                      | 12 GAUGE                |

| PART | DESCRIPTION                                                | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                               | NOTES             |
|------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| M1   | SPLICE BOLT                                                | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                           | ⅝" DIA.           |
| M2   | SPLICE BOLT - NUT                                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |                   |
| N1   | THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR               | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 | ¾" DIA. LENGTH 6" |
| N2   | THRIE BEAM RAIL TERMINAL - WASHER                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1                                                                                                            |                   |
| N3   | THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR     | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                            |                   |
| P1   | THRIE BEAM RAIL CONNECTION 1-BOLT                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 | ¾" DIA.           |
| P2   | THRIE BEAM RAIL CONNECTION 1-WASHER                        | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1                                                                                                                 |                   |
| P3   | THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                            |                   |
| Q1   | BLOCK WOOD                                                 | SEE STANDARD SPEC. 614                                                                                                                                                                                                                                                 |                   |
| R1   | CAP - BOLT                                                 | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 | ⅝" DIA.           |
| R2   | CAP- BOLT - WASHER                                         | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1                                                                                                                 |                   |
| R3   | CAP - BOLT - MECHANICAL ANCHOR                             | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                              | 12 GAUGE          |
| S1   | CAP 42-INCH TOP PLATE                                      | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S2   | CAP 42-INCH END PLATE                                      | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S3   | CAP 42-INCH SIDE PLATE                                     | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S4   | CAP 42-INCH GUSSET 1                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S5   | CAP 42-INCH GUSSET 2                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S6   | CAP 42-INCH GUSSET 3                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S7   | CAP 42-INCH GUSSET 4                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |

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SDD 14B07-16m

CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIALS - CONCRETE BARRIER PRECAST

| PART | DESCRIPTION                       | MATERIALS SPECIFICATIONS                                                                                                                                                                          | NOTES    |
|------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| T1   | CAP 56-INCH TOP PLATE             | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T2   | CAP 56-INCH END PLATE             | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T3   | CAP 56-INCH SIDE PLATE 1          | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T4   | CAP 56-INCH SIDE PLATE 2          | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T5   | CAP 56-INCH GUSSET 1              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T6   | CAP 56-INCH GUSSET 2              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T7   | CAP 56-INCH GUSSET 3              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T8   | CAP 42-INCH GUSSET 4              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T9   | CAP 42-INCH GUSSET 5              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T10  | CAP 42-INCH GUSSET 6              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T11  | CAP 42-INCH GUSSET 7              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T12  | CAP 42-INCH GUSSET 8              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T13  | CAP 42-INCH GUSSET 9              | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T14  | CAP 42-INCH GUSSET 10             | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T15  | CAP 42-INCH GUSSET 11             | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T16  | CAP 42-INCH GUSSET 12             | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| U1   | GAP STIFFENER                     | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |          |
| U2   | GAP STIFFENER - CONNECTOR PLATE 1 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |          |
| U3   | GAP STIFFENER - CONNECTOR PLATE 2 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |          |

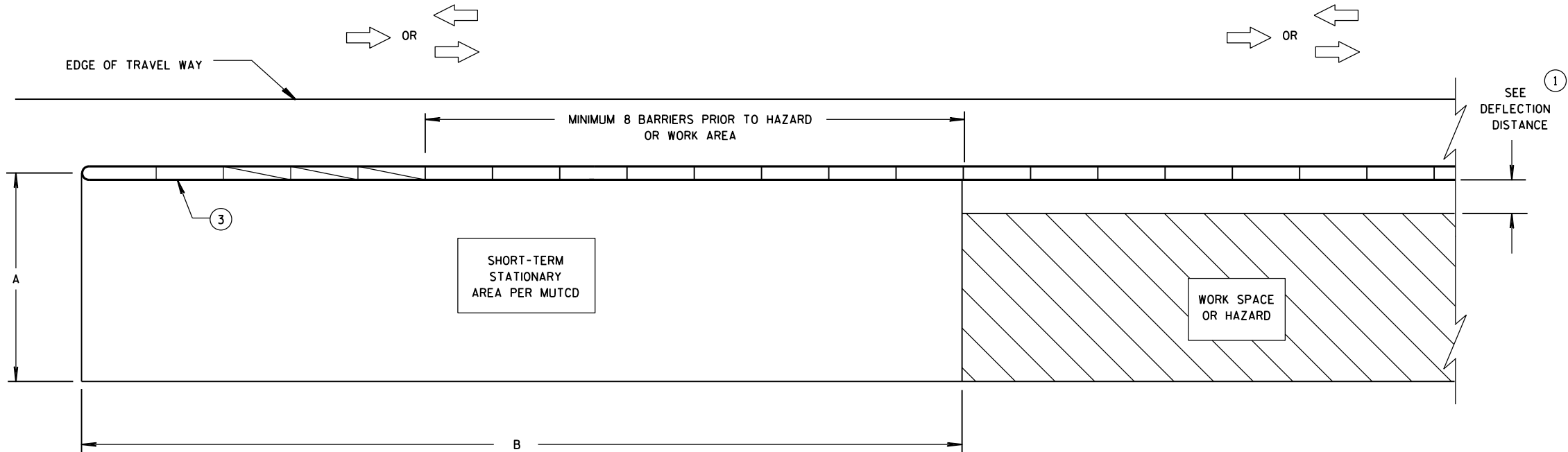
| PART | DESCRIPTION                                            | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                       | NOTES   |
|------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| V1   | THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                                                                                                                                                      | ¾" DIA. |
| V2   | GAP STIFFENER - BOLT - NUT                             | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                                        |         |
| W1   | TOE PLATE                                              | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                                                                                                                                                 |         |
| X1   | TOE PLATE - CONNECTION BOLT                            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT. | ¾" DIA. |
| X2   | TOE PLATE - CONNECTION BOLT - WASHER                   | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                                               |         |
| X3   | TOE PLATE - CONNECTION BOLT - NUT                      | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                                              |         |

CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

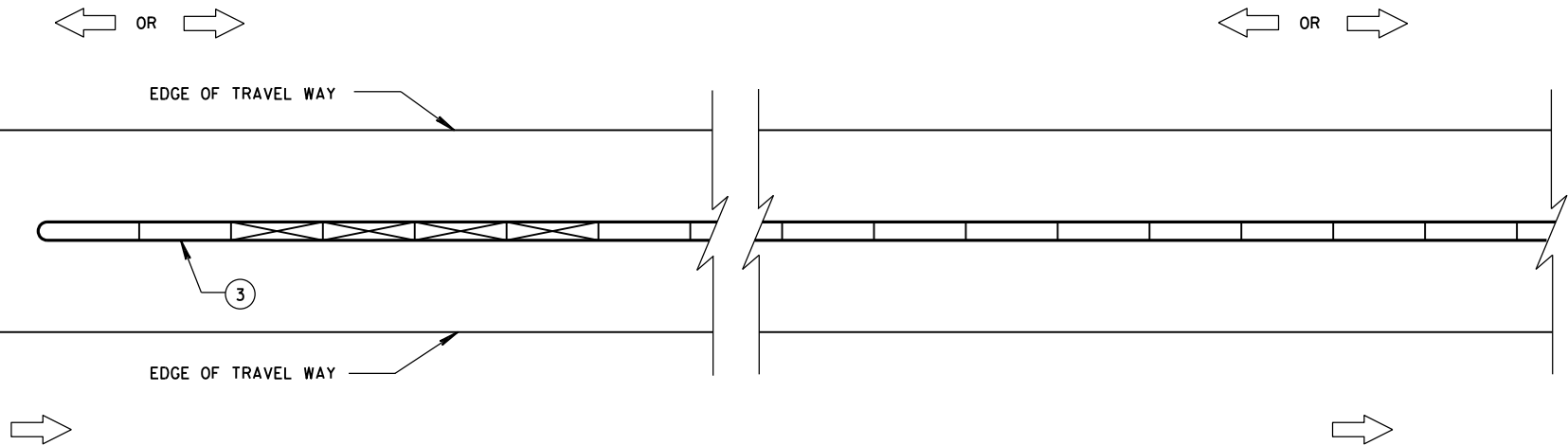
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2023  
DATE  
/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER  
254

FHWA



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER  
INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER  
INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

- 1 FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.
- 2 VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.
- 3 ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

DIMENSION A TABLE 2

| FACILITY               | POSTED SPEED<br>MPH            | DIMENSION A |            |
|------------------------|--------------------------------|-------------|------------|
|                        |                                | MIN.<br>FT  | MAX.<br>FT |
| FREEWAY/EXPRESSWAY     | ALL                            | 15          | 20         |
| NON-FREEWAY/EXPRESSWAY | GREATER THAN<br>OR EQUAL TO 45 | 10          | 15         |
| NON-FREEWAY/EXPRESSWAY | LESS THAN 45                   | 8           | 10         |
| AADT LESS THAN 1,500   | ALL                            | 8           | 10         |

DIMENSION B TABLE 2

| POSTED<br>SPEEDS<br>MPH | DIMENSION<br>B<br>FT |
|-------------------------|----------------------|
| 20                      | 115                  |
| 25                      | 155                  |
| 30                      | 200                  |
| 35                      | 250                  |
| 40                      | 305                  |
| 45                      | 360                  |
| 50                      | 425                  |
| 55                      | 495                  |
| 60                      | 570                  |
| 65                      | 645                  |

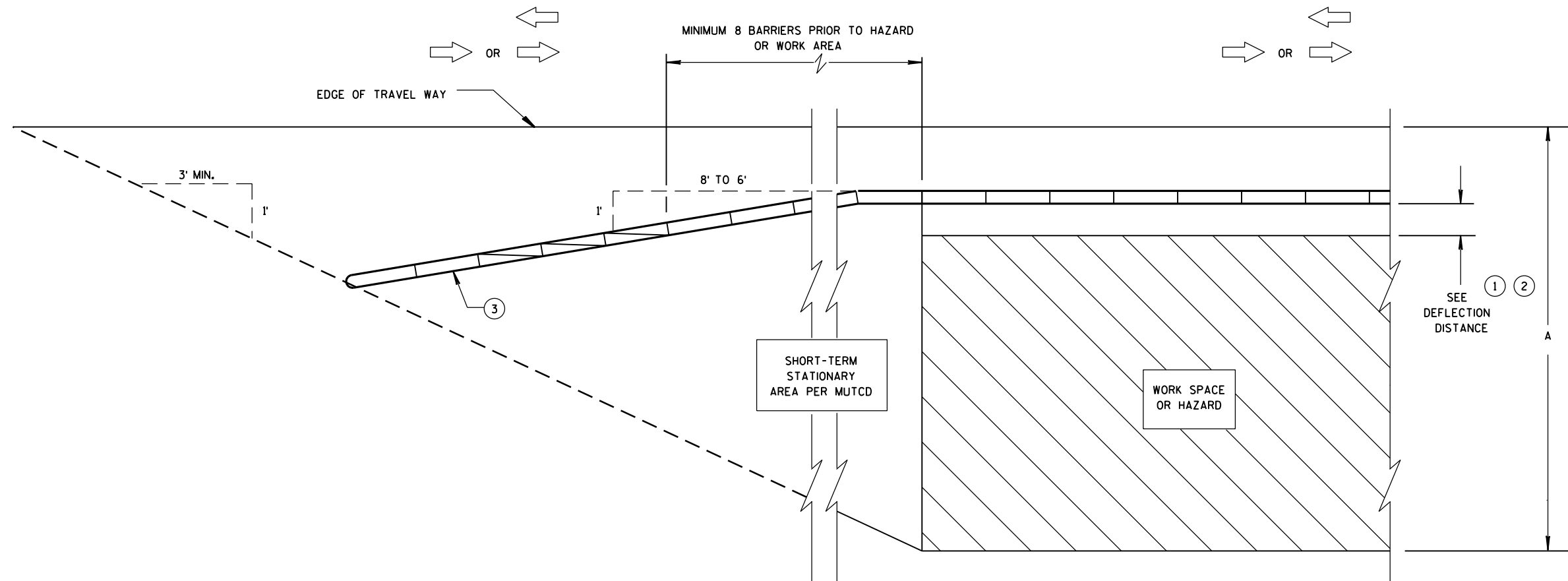
LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

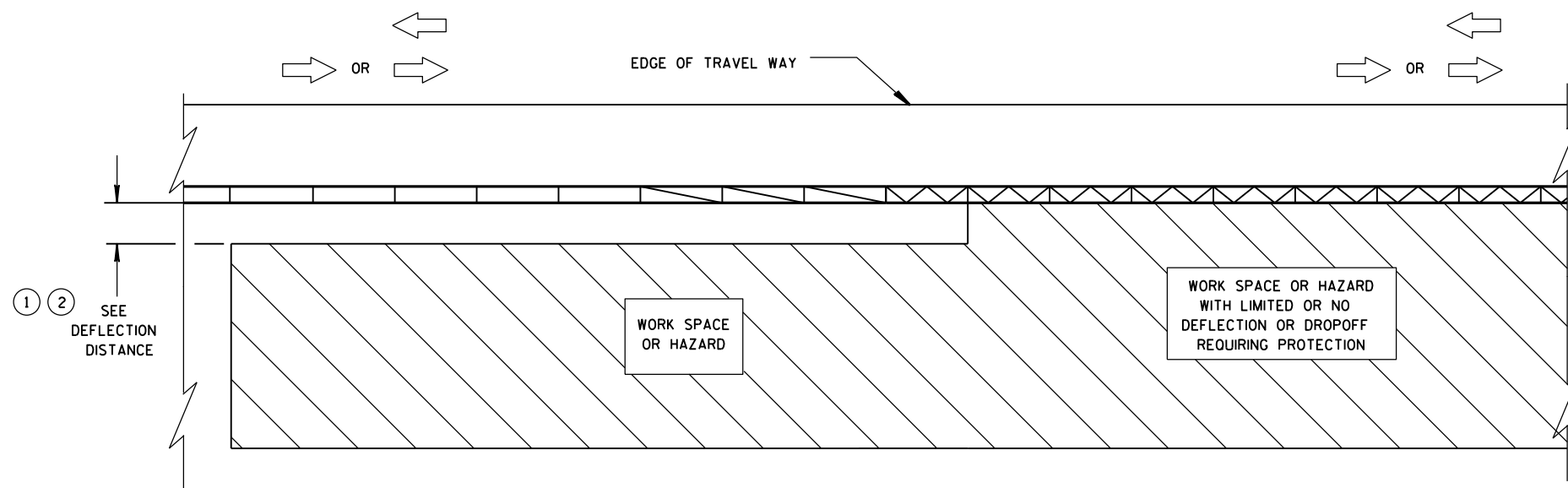
CRASH CUSHION/SAND BARREL  
ARRAY AND OTHER TEMPORARY  
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION





**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER  
INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION**



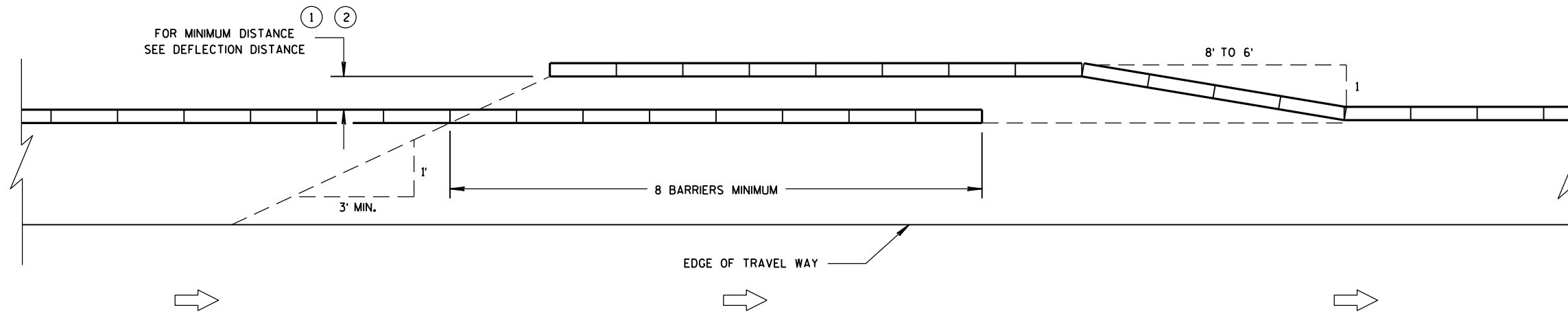
**TRANSITION FROM FREE STANDING TEMPORARY BARRIER  
TO ANCHORED BARRIER**

**LEGEND**

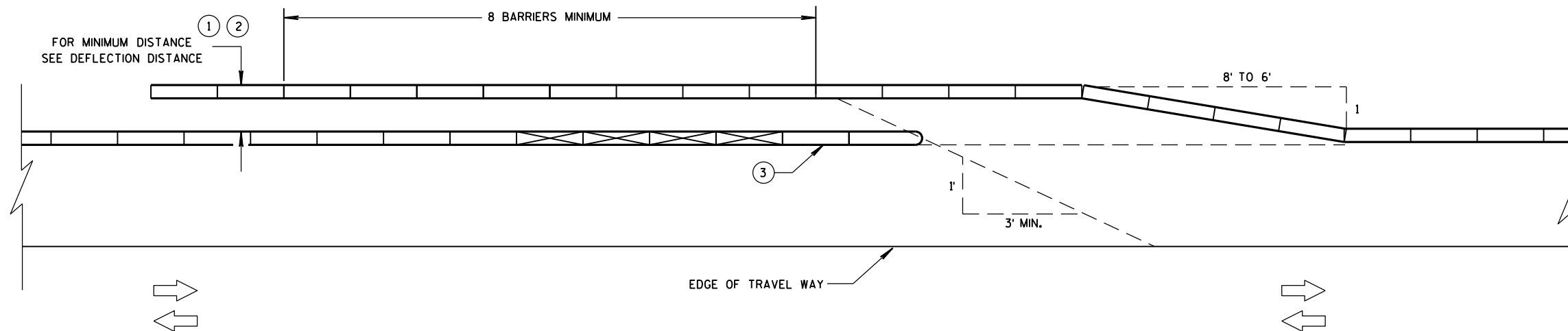
|                                                           |  |
|-----------------------------------------------------------|--|
| DIRECTION OF TRAVEL                                       |  |
| CRASH CUSHION OR SAND BARREL ARRAY                        |  |
| SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS  |  |
| SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS |  |
| 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER                  |  |
| PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET            |  |
| FREE STANDING TEMPORARY BARRIER                           |  |

**CRASH CUSHION/SAND BARREL  
ARRAY AND OTHER TEMPORARY  
BARRIER LAYOUT DETAILS**

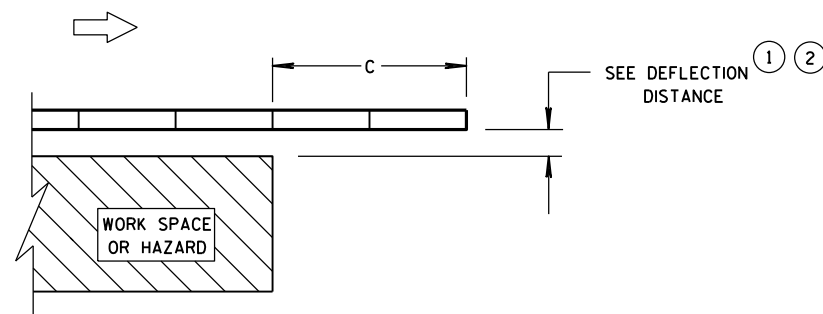
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



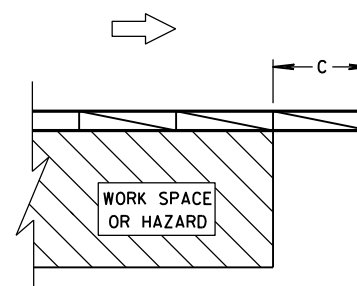
**TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC**



**TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC**



**ENDING TEMPORARY BARRIER  
DOWNSTREAM - UNANCHORED**



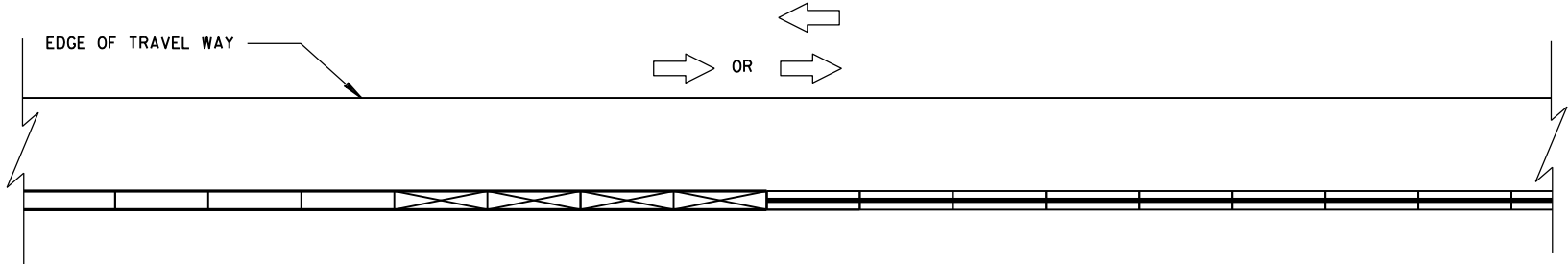
**ENDING TEMPORARY BARRIER  
DOWNSTREAM - ANCHORED**

**LEGEND**

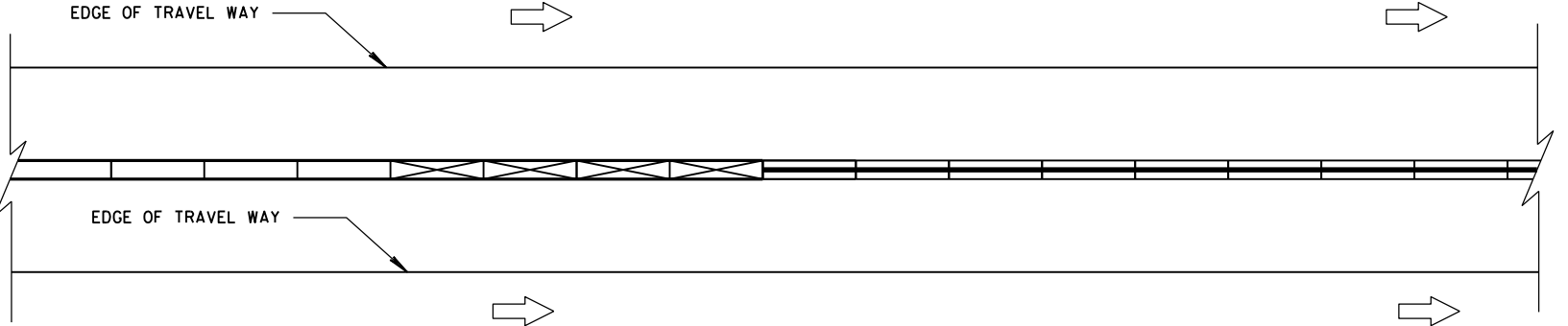
|                                                           |  |
|-----------------------------------------------------------|--|
| DIRECTION OF TRAVEL                                       |  |
| CRASH CUSHION OR SAND BARREL ARRAY                        |  |
| SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS  |  |
| SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS |  |
| 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER                  |  |
| PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET            |  |
| FREE STANDING TEMPORARY BARRIER                           |  |

**CRASH CUSHION/SAND BARREL  
ARRAY AND OTHER TEMPORARY  
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



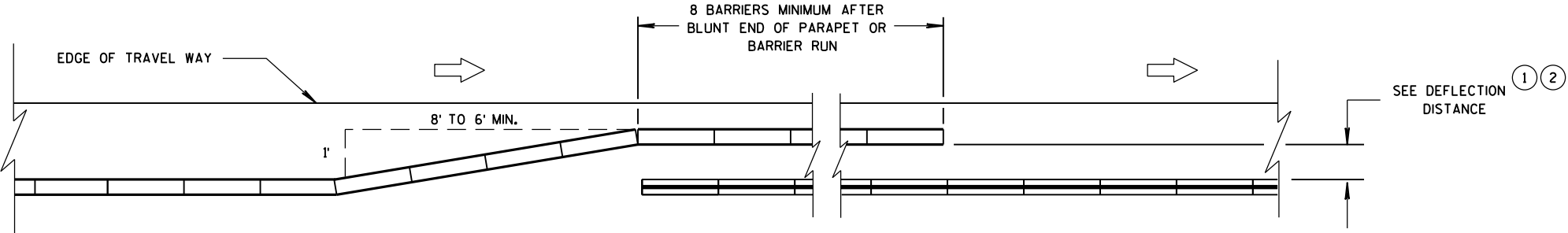
CONNECTING TEMPORARY BARRIER TO PERMANENT  
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



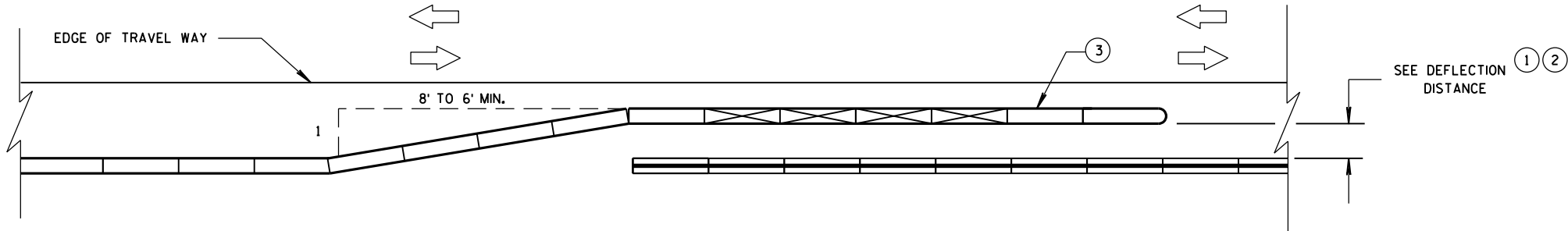
CONNECTING TEMPORARY BARRIER TO PERMANENT  
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -  
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -  
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL  
ARRAY AND OTHER TEMPORARY  
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 258

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE

| AVAILABLE DEFLECTION DISTANCE                | MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT |
|----------------------------------------------|--------------------------------------------|
| GREATER THAN 8'                              | 12.5                                       |
| LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4' | 50                                         |
| LESS THAN OR EQUAL TO 4'                     | 100                                        |

6

6

CRASH CUSHION/SAND BARREL  
ARRAY AND OTHER TEMPORARY  
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June, 2015 /S/ Jerry H. Zogg  
DATE ROADWAY STANDARDS 259 ENT  
FHWA ENGINEER

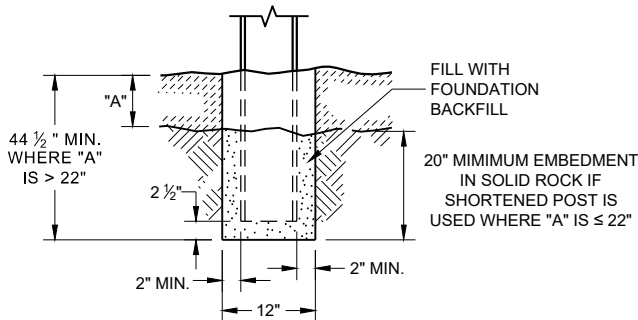
# SDD 14B15a Steel Plate Beam Guard, Class "A", Installation and Elements

## GENERAL NOTES

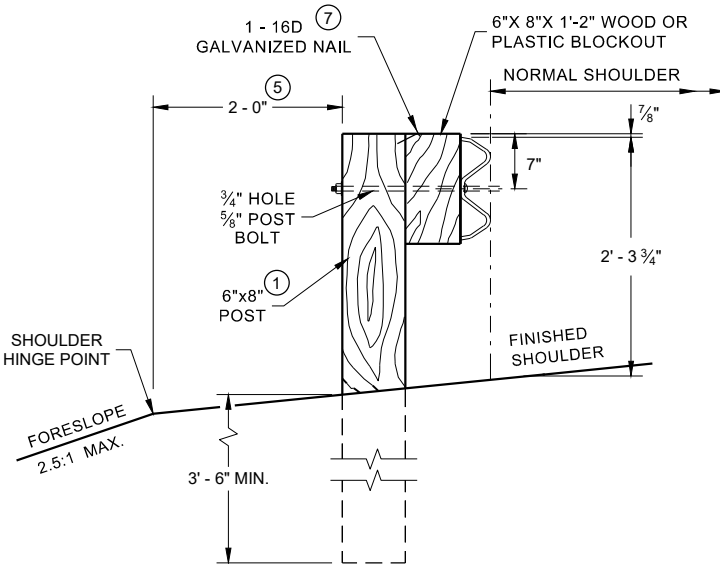
- WOOD OR STEEL POSTS (w6x9 OR w6x8.5) AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6"x8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL AND WOOD POSTS IN A SINGLE INSTALLATION.
- USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGE SPALTER COATING ON GALVANIZED POSTS.
- INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- IF THE DISTANCE FROM BACK OF POST TO SHOULDER HIGHE POINT IS LESS THAN 2 FEET, INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCHES IN DIAMETER POST HOLE 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 ADEQUATELY.
- WHEN USING STEEL POSTS 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.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

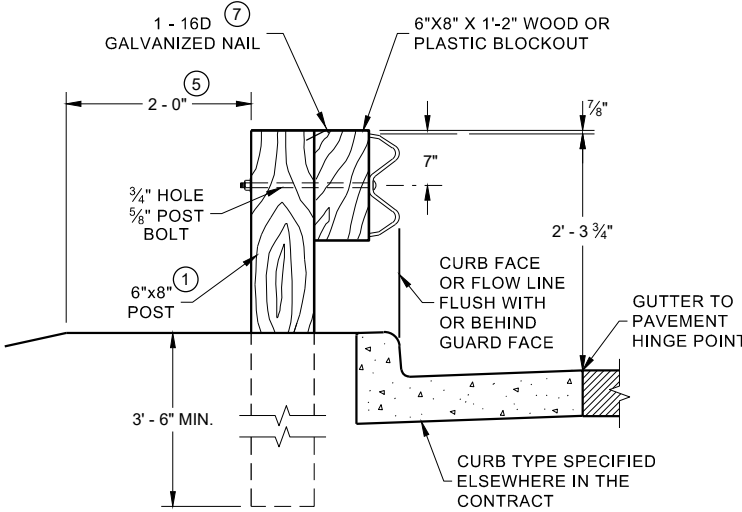
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



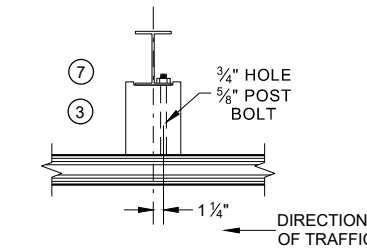
**END VIEW  
SETTING STEEL OR WOOD POST IN ROCK ⑥**



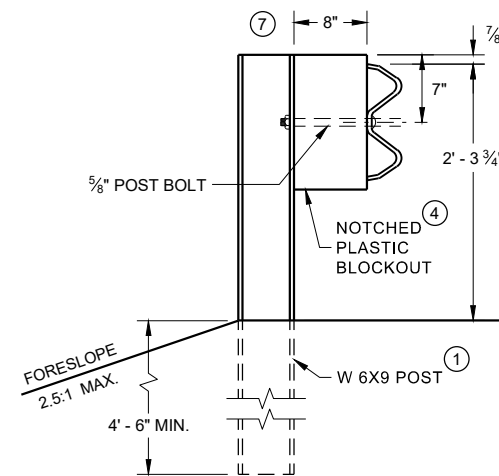
**END VIEW  
LOCATED ALONG A ROADWAY  
SHOULDER STANDARD INSTALLATION**



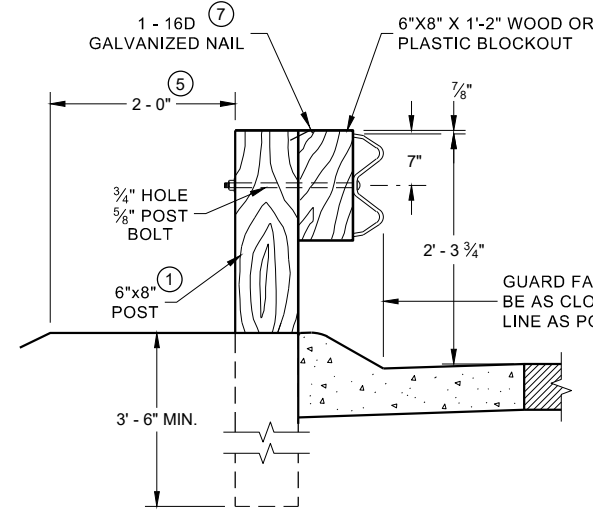
**END VIEW  
LOCATED ALONG A CURBED ROADWAY**



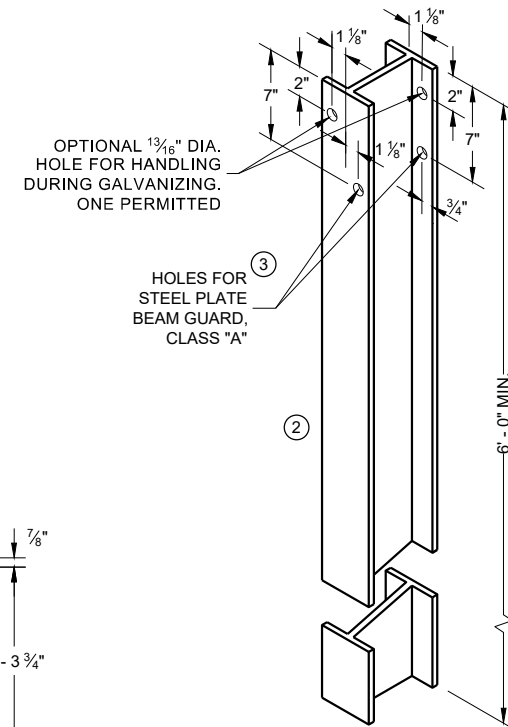
**PLAN VIEW  
WOOD POST, BLOCKOUT  
AND BEAM**



**END VIEW  
LONGER POST AT HALF POST  
SPACING W BEAM (LHW)**

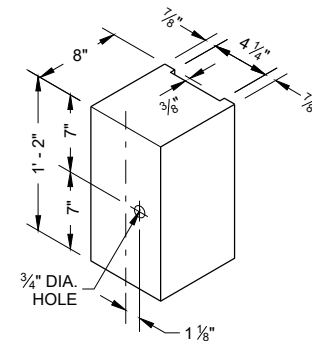


**END VIEW  
LOCATED ALONG A  
MOUNTABLE CURBED ROADWAY**

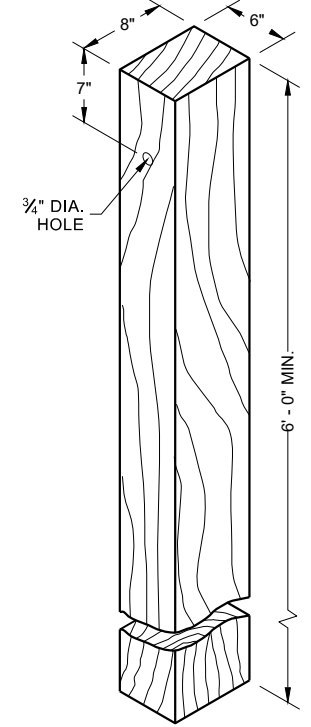


**STEEL POST & HOLE  
PUNCHING DETAIL  
(W 6 X 9) ①**

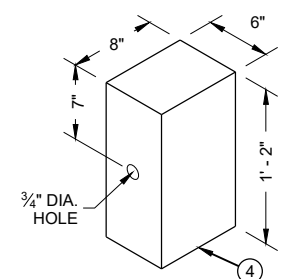
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



**TYPICAL NOTCHED  
PLASTIC BLOCKOUT  
FOR STEEL POSTS**



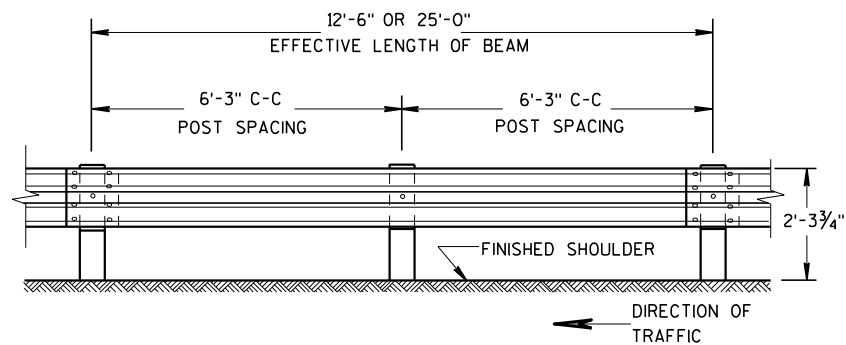
**WOOD POST  
(6" X 8") NOMINAL ①**



**WOOD OR PLASTIC  
BLOCKOUT FOR  
WOOD POSTS**

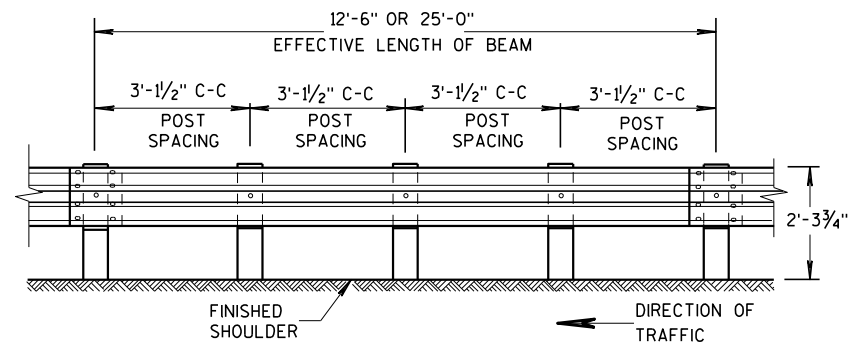
**STEEL PLATE BEAM GUARD,  
CLASS "A" INSTALLATION  
AND ELEMENTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 260



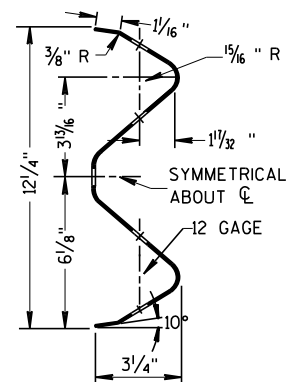
FRONT VIEW

POST SPACING STANDARD INSTALLATION

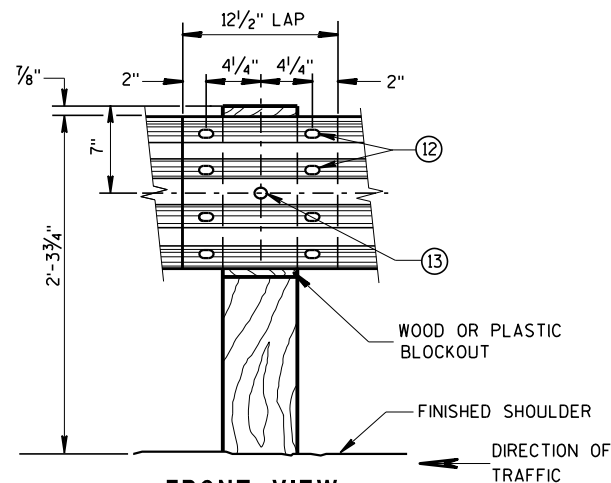


FRONT VIEW

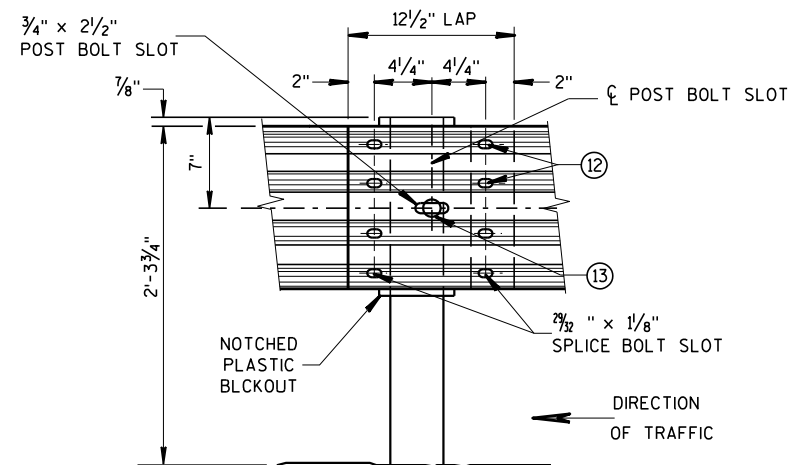
POST SPACING FOR LONGER POST  
AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



FRONT VIEW  
BEAM SPLICE AT WOOD POST  
AND POST MOUNTING DETAIL

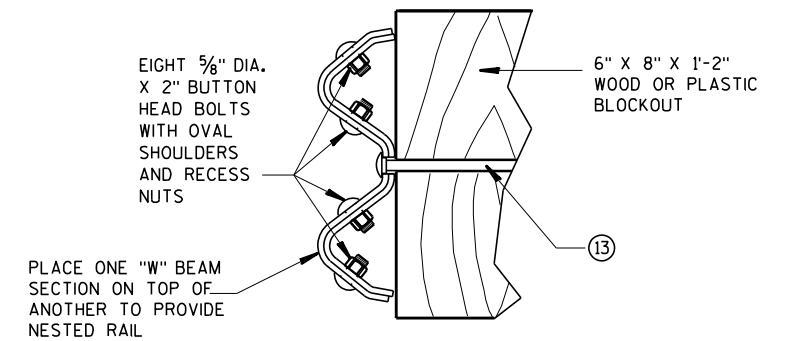


FRONT VIEW  
BEAM SPLICE AT STEEL POST  
TYPICAL SPlicing DETAILS  
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

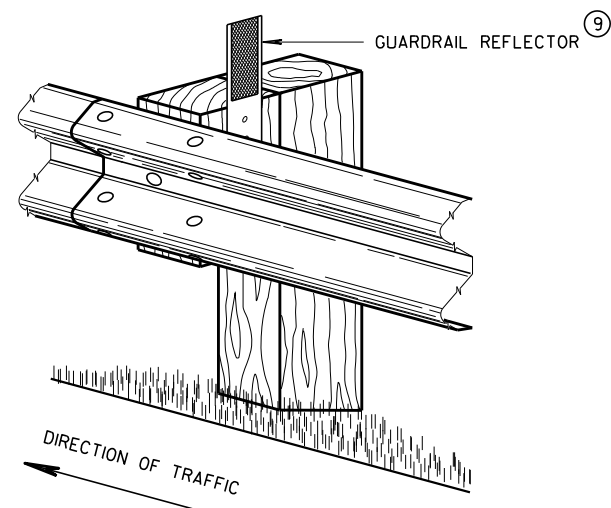
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8"  $\phi$  X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



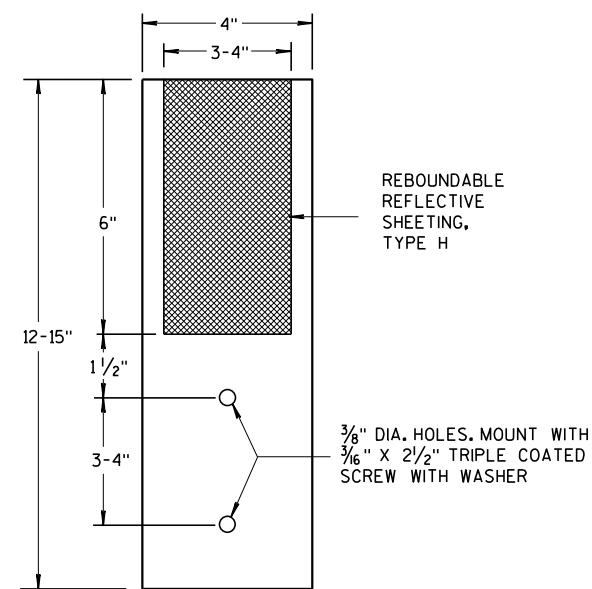
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR  
CONSTRUCTING NESTED W BEAM (NW)

\* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL  
AND TYPICAL INSTALLATION \*

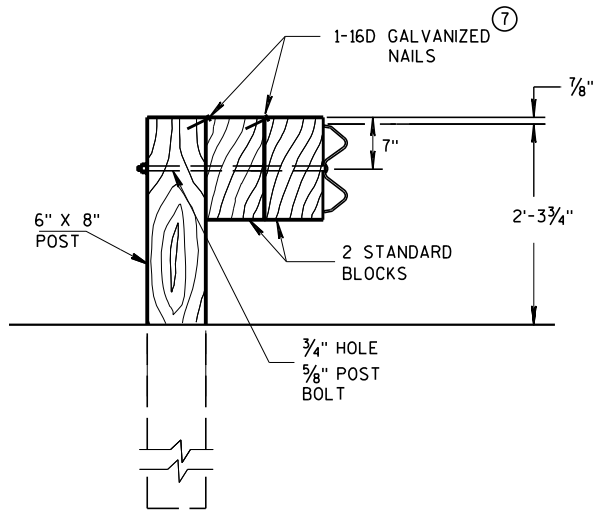


4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD,  
CLASS "A",  
INSTALLATION & ELEMENTS

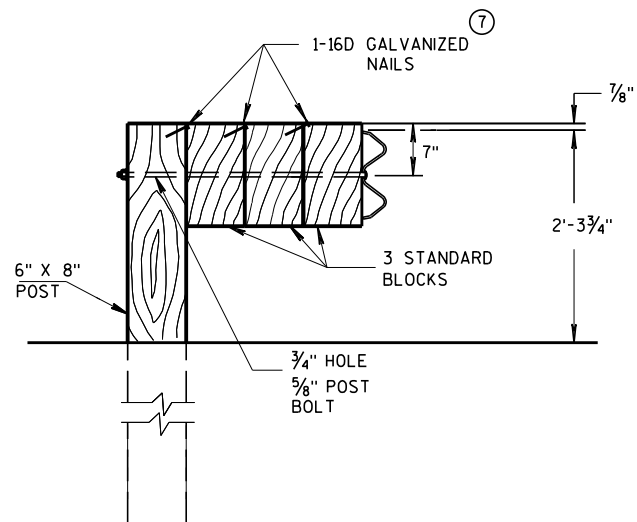
STATE OF WISCO<sup>261</sup>  
DEPARTMENT OF TRANSPORTATION





#### DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS  
WITHIN A BARRIER RUN IS UNLIMITED

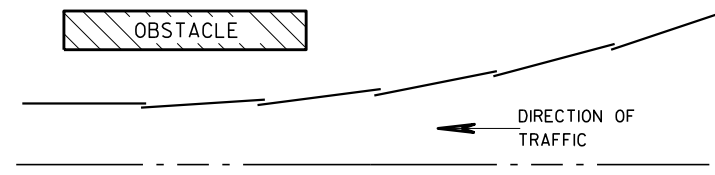


#### DETAIL FOR TRIPLE BLOCKS

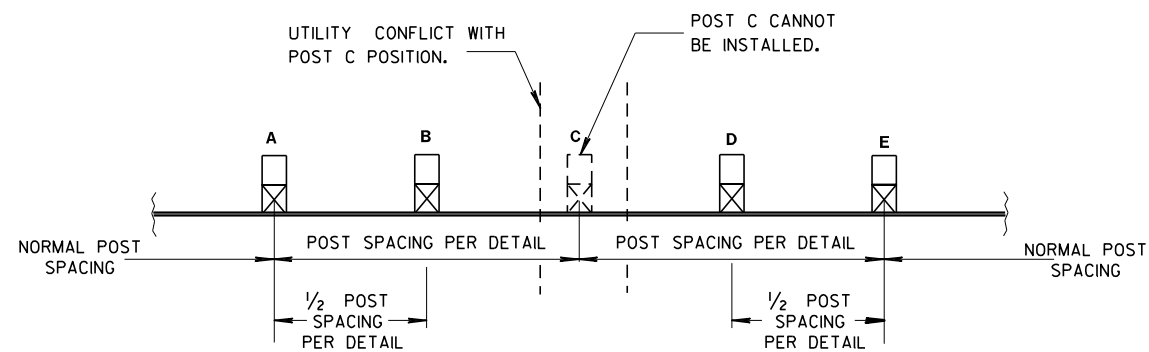
TRIPLE BLOCK DETAIL IS LIMITED TO ONE  
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES  
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



#### PLAN VIEW BEAM LAPPING DETAIL



#### POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD,  
CLASS "A",  
INSTALLATION & ELEMENTS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS 262 UNIT SUPERVISOR  
FHWA

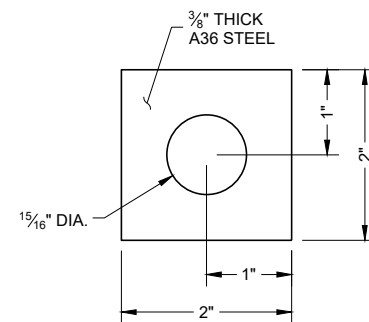
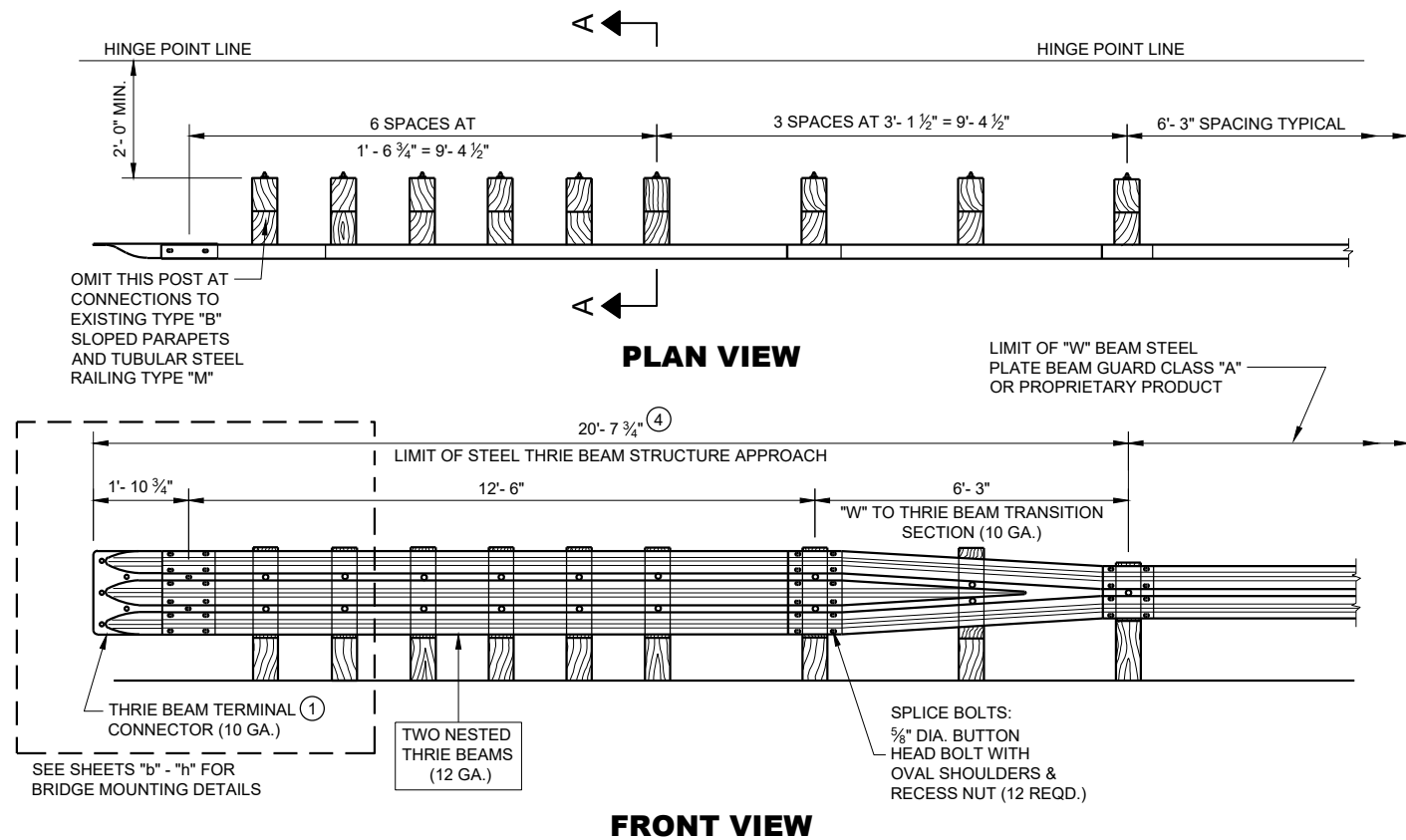


PLATE WASHER DETAIL

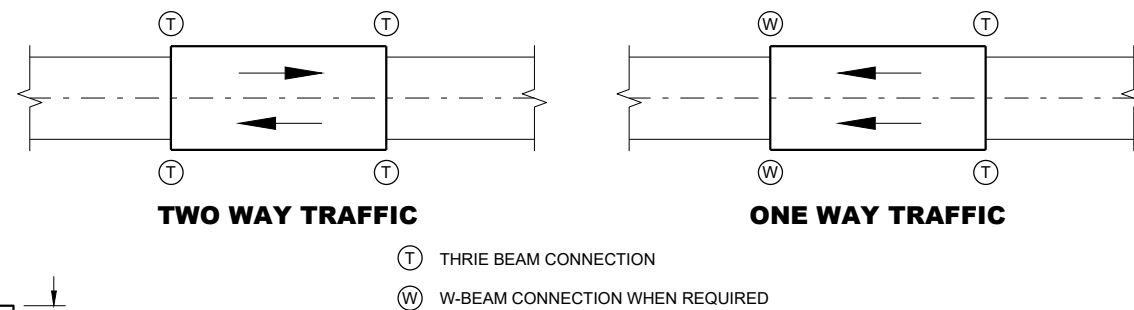
**GENERAL NOTES**

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

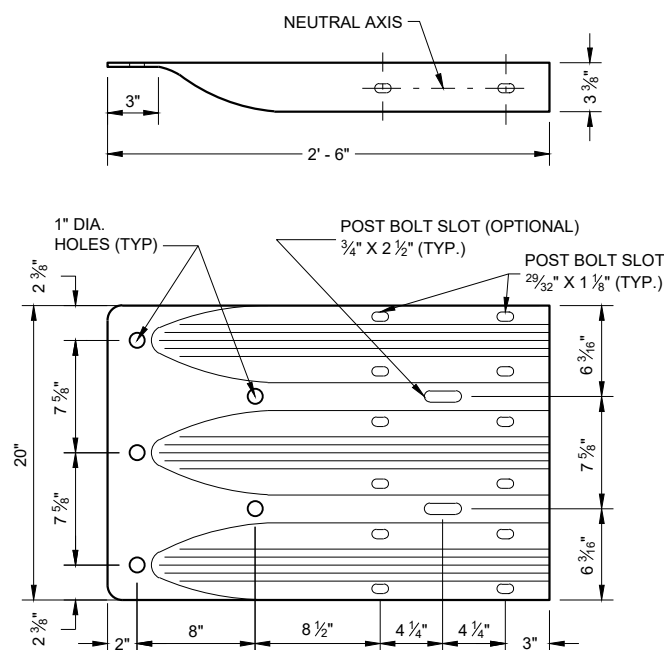
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

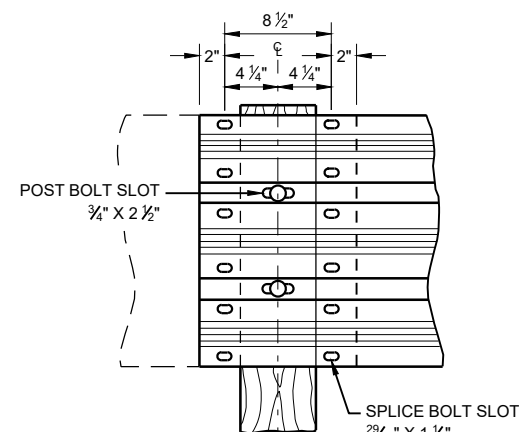
- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0".
- ③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



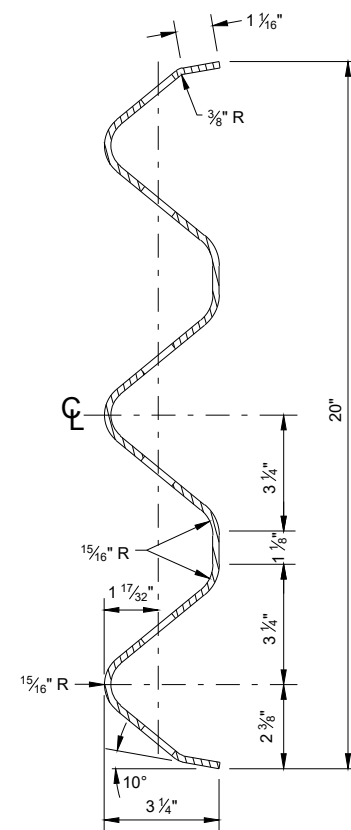
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



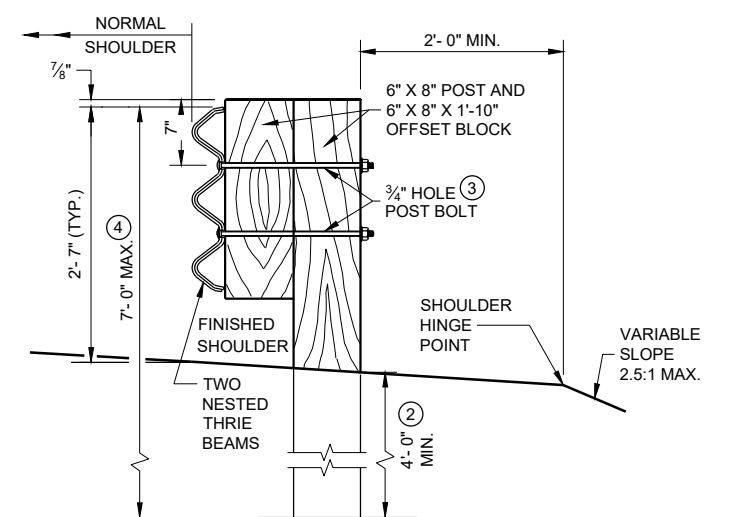
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU BEAM RAIL ELEMENT



SECTION A-A

**STEEL THRIE BEAM STRUCTURE APPROACH**

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DEPARTMENT OF TRANSPORTATION

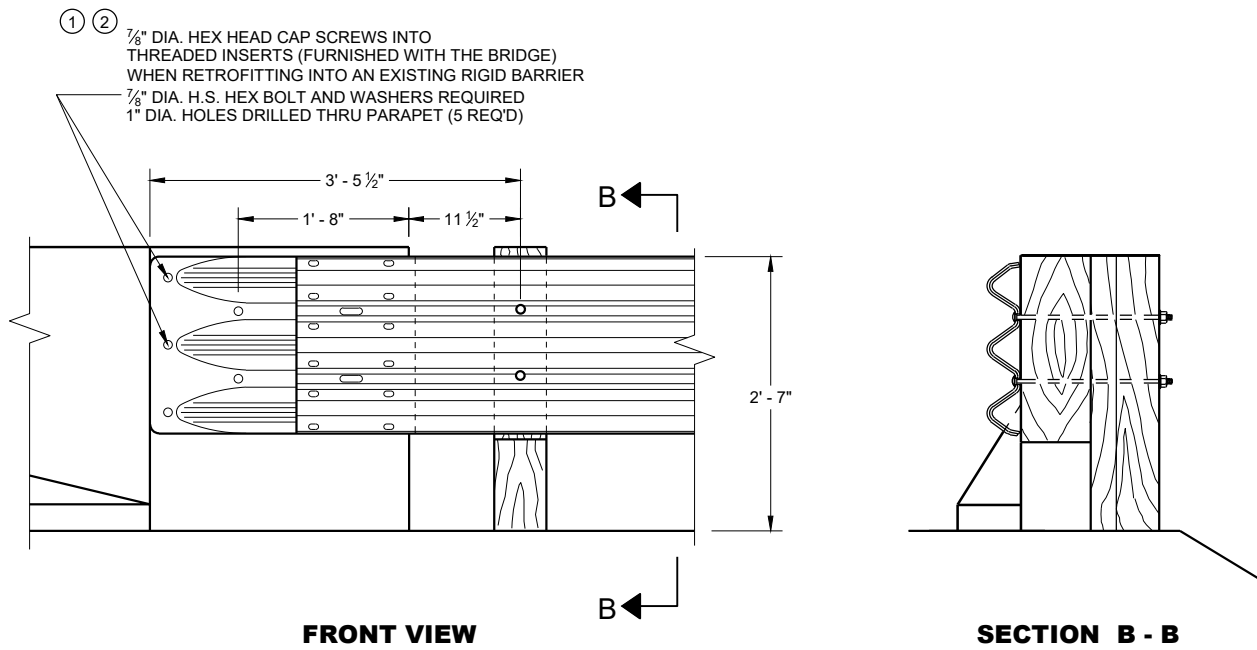
APPROVED  
November 2022  
DATE

/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

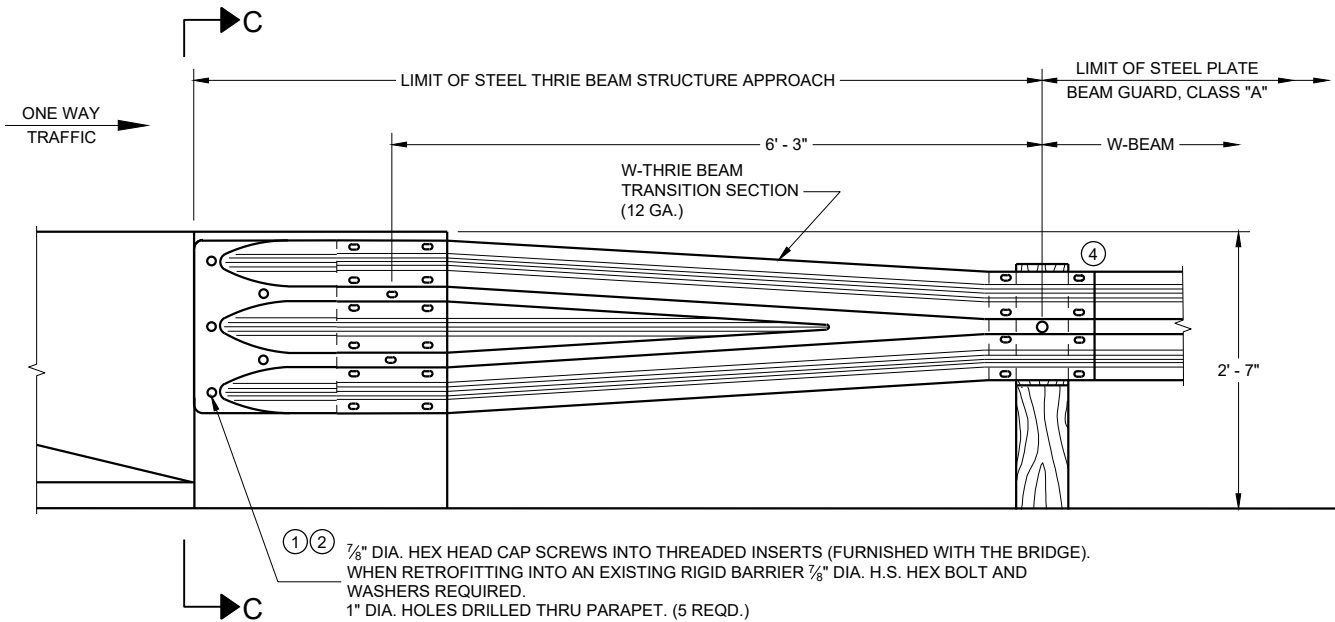
263

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**THRIE BEAM CONNECTION TO BRIDGE  
PARAPET WITH SQUARE ENDS**



**FRONT VIEW**

**W BEAM TRANSITION AND CONNECTION TO  
BRIDGE PARAPETS WITH SQUARE ENDS**

**(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGE)**

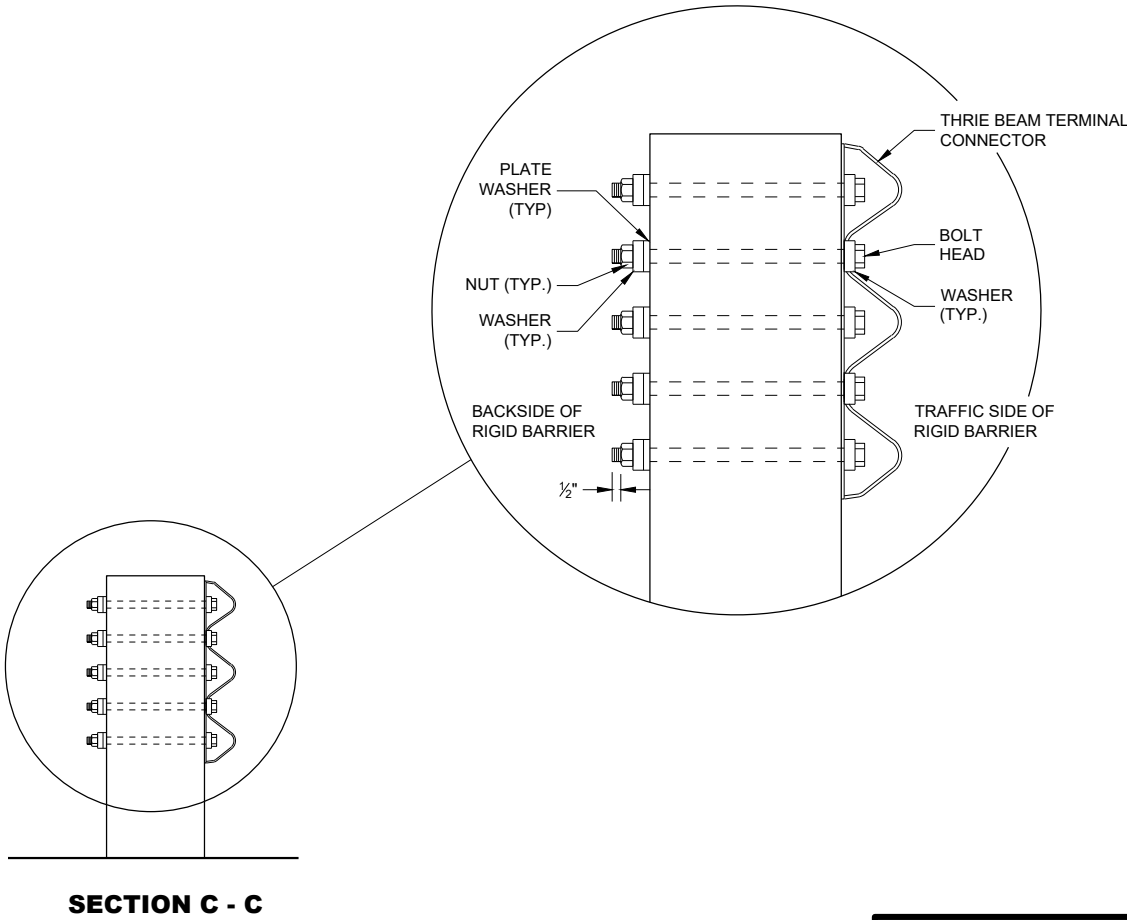
**GENERAL NOTES**

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



**STEEL THRIE BEAM STRUCTURE  
APPROACH, CONNECTION TO  
SQUARE END PARAPETS**

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November 2022  
DATE

/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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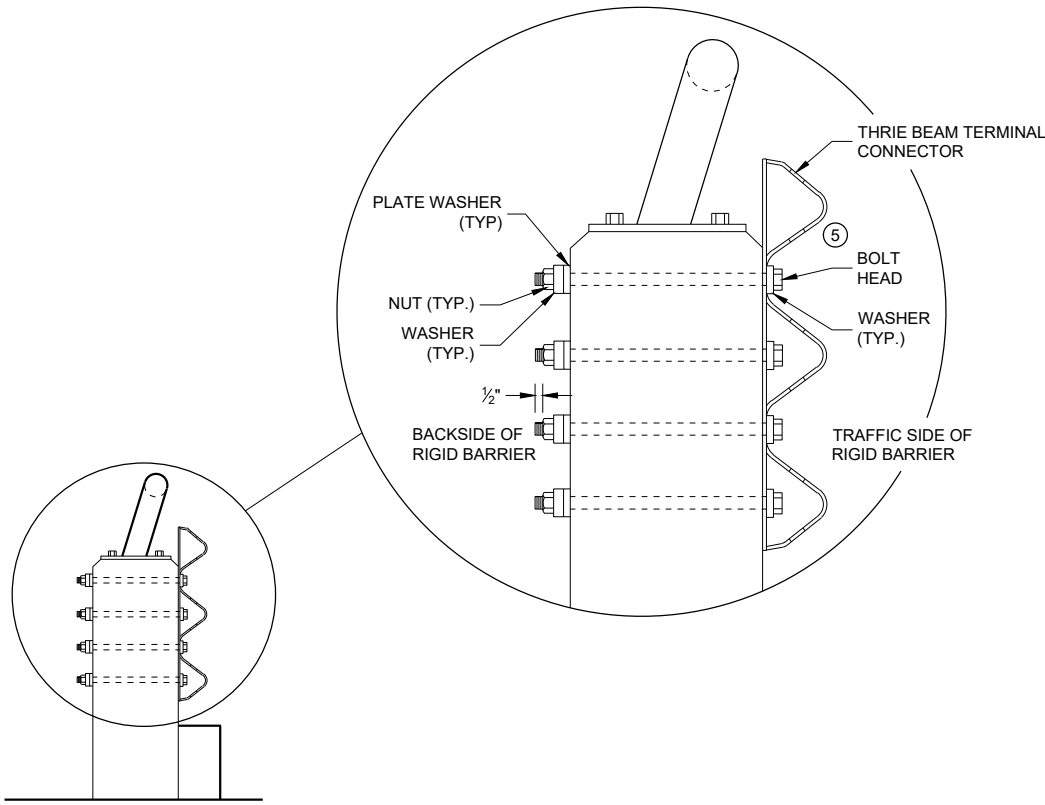
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

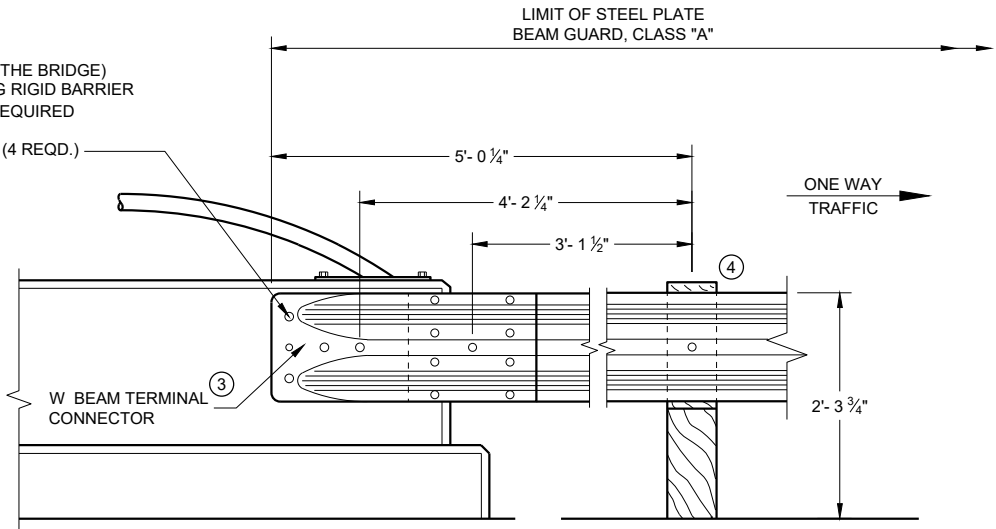
- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.
- ⑤ BOLT, NUT AND WASHERS NO REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PARAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE THE EDGE OF PARAPET.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



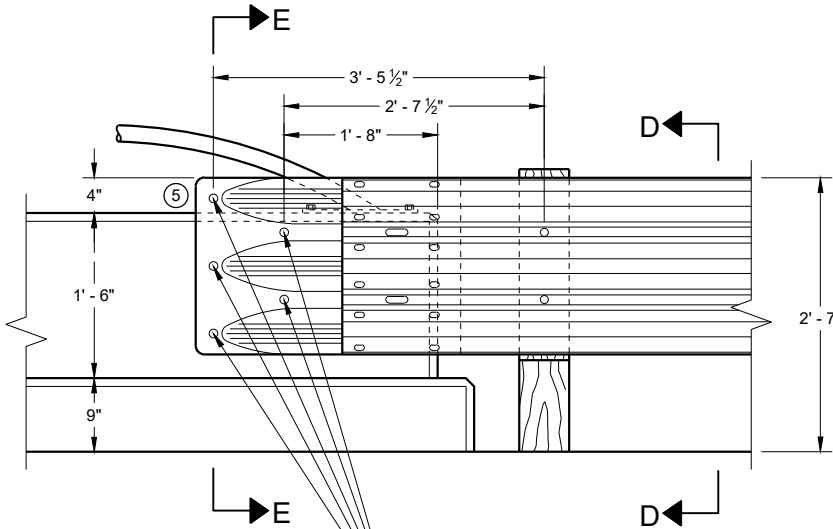
SECTION E - E

- ①② 7/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER 7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
- 1" DIA. HOLES DRILLED THRU PARAPET. (4 REQD.)



FRONT VIEW

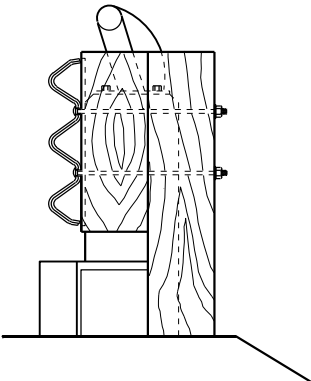
W BEAM CONNECTION TO VERTICAL FACE PARAPET  
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

- ①② 7/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER 7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED.
- 1" DIA. HOLES DRILLED THRU PARAPET. (4 REQD.)

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

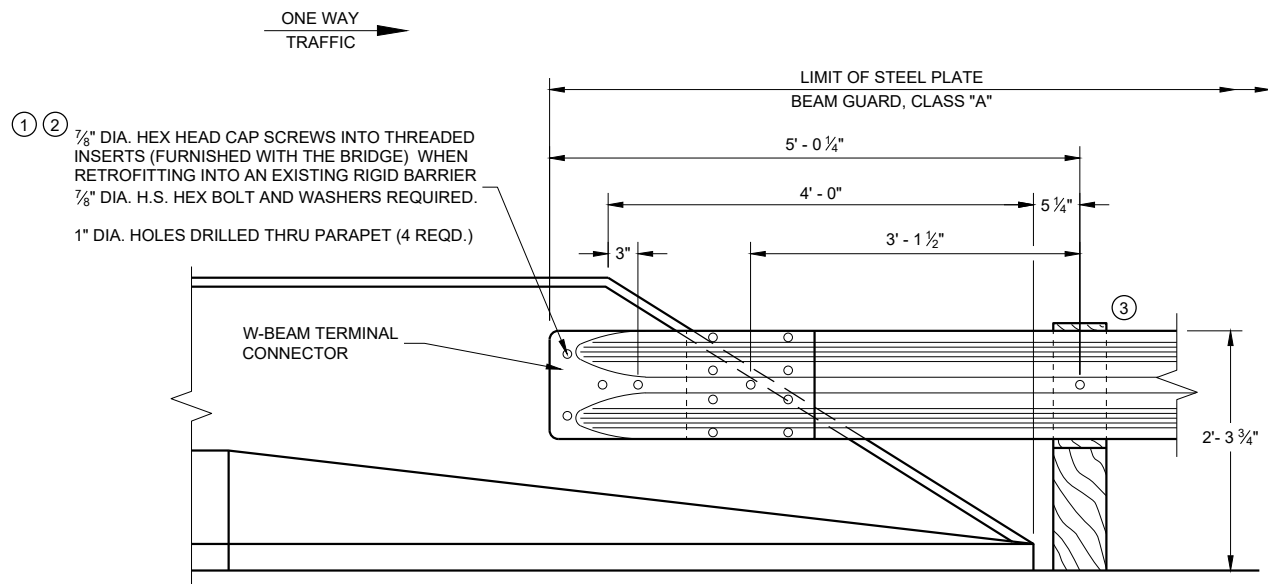


SECTION D - D

STEEL THRIE BEAM STRUCTURE  
APPROACH, CONNECTION TO  
VERTICAL FACED PARAPETS

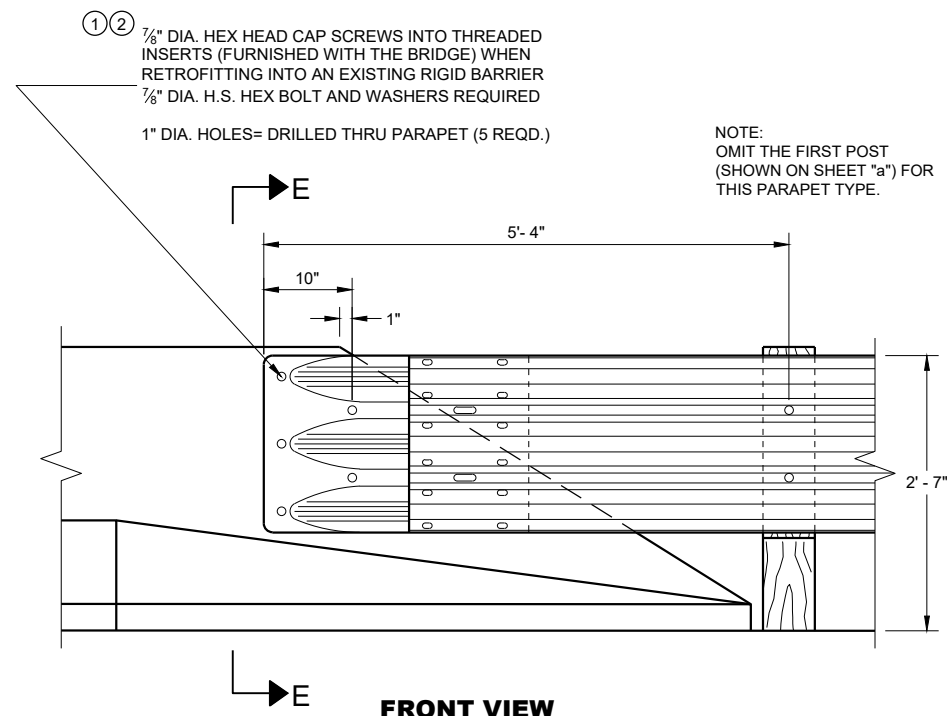
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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November 2022 /S/ Rodney Taylor  
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ENGINEER  
FHWA



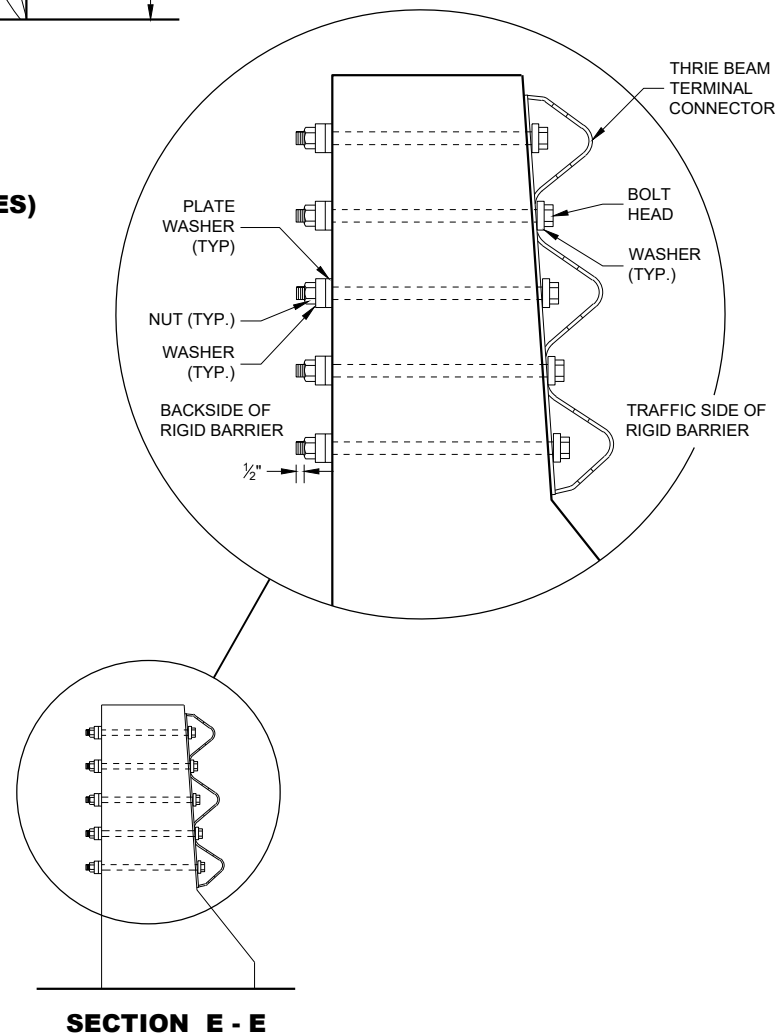
FRONT VIEW

**W BEAM CONNECTION TO BRIDGE  
PARAPETS WITH SLOPED ENDS**  
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

**THRIE BEAM CONNECTION TO BRIDGE  
PARAPETS WITH SLOPED ENDS**



SECTION E - E

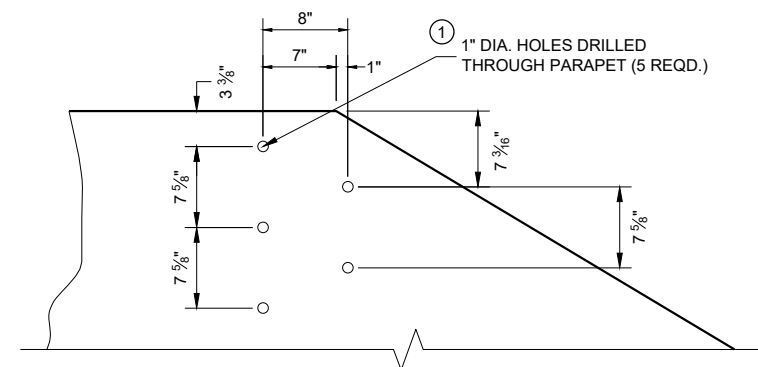
**GENERAL NOTES**

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

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- ③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

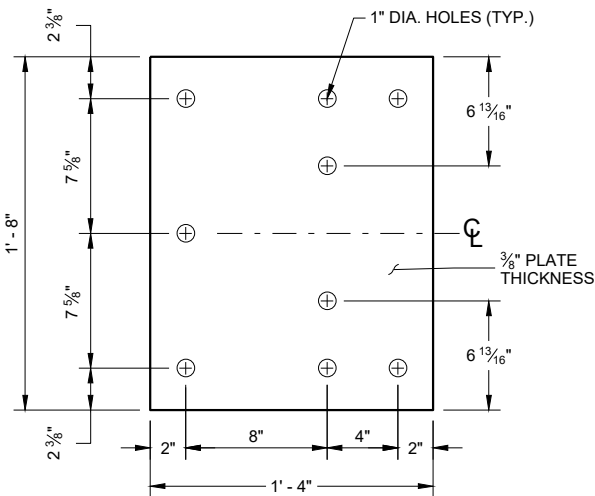


**DRILL HOLE LOCATION AND PATTERN  
FOR THRIE BEAM CONNECTION**

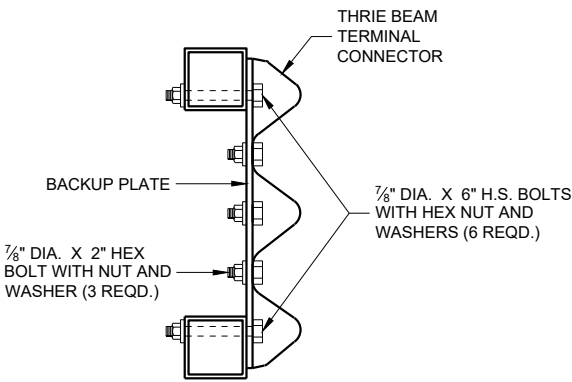
**STEEL THRIE BEAM STRUCTURE  
APPROACH, CONNECTION TO  
SLOPED END PARAPETS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

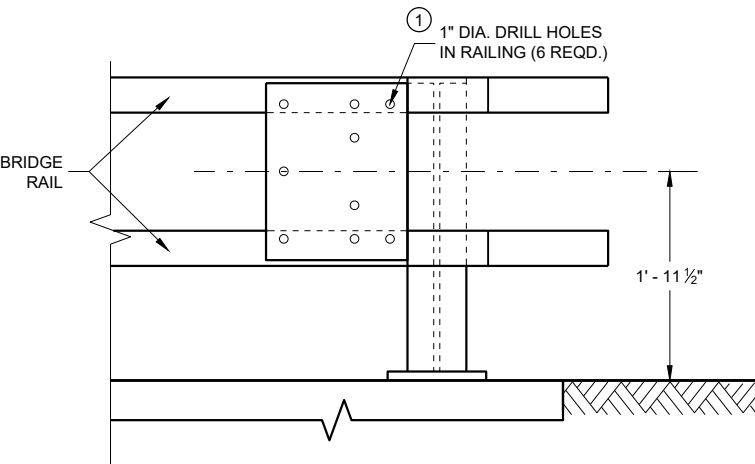
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FHWA



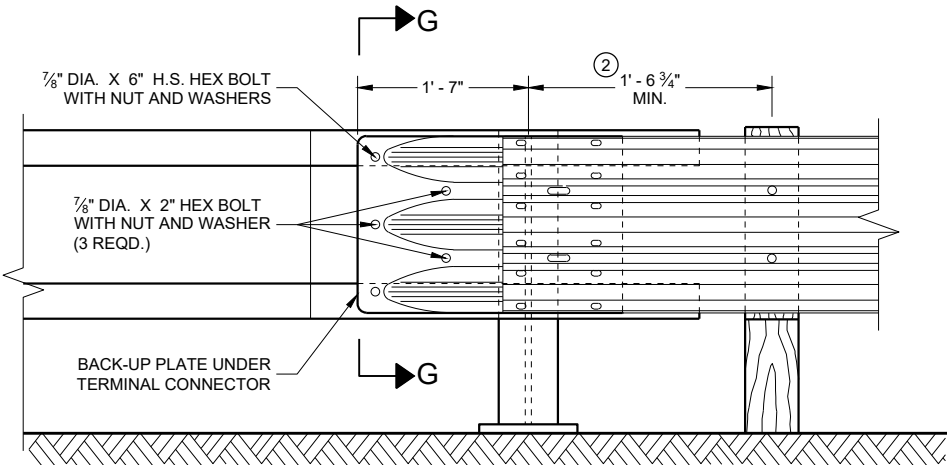
BACK-UP PLATE DETAIL



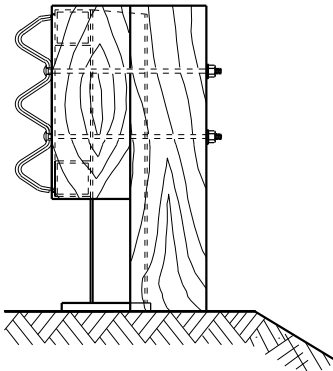
SECTION G - G



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

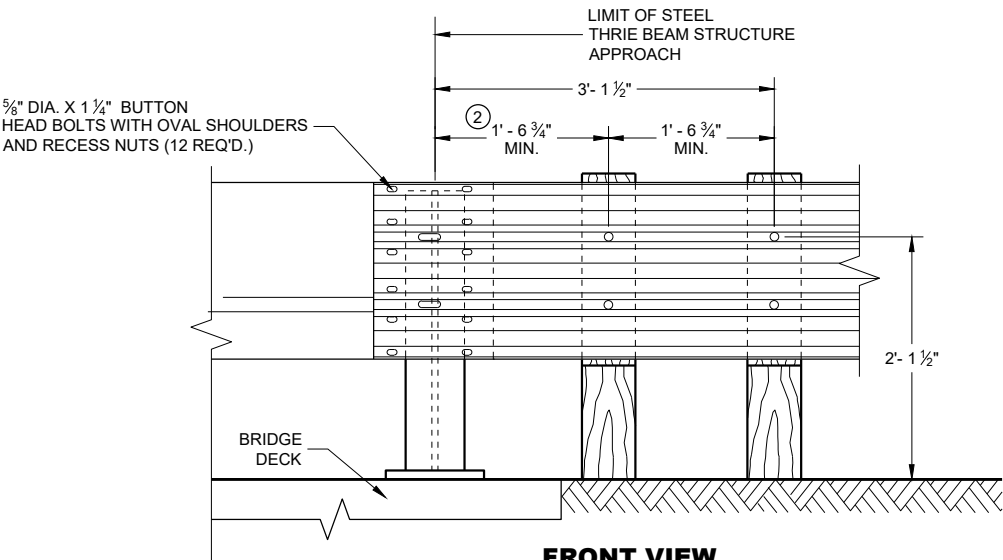


END VIEW

GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.



THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

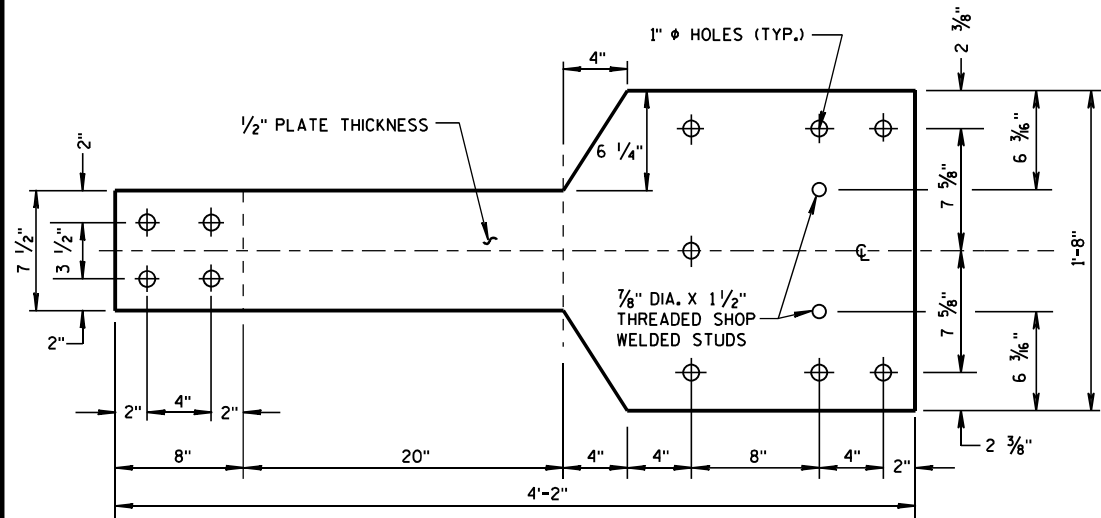
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" & "W"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

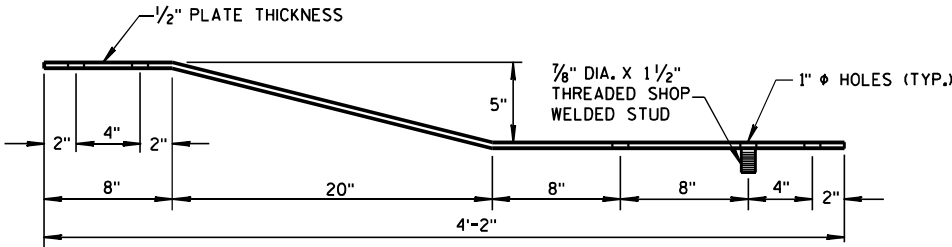
APPROVED  
November 2022 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 267  
FHWA

GENERAL NOTES

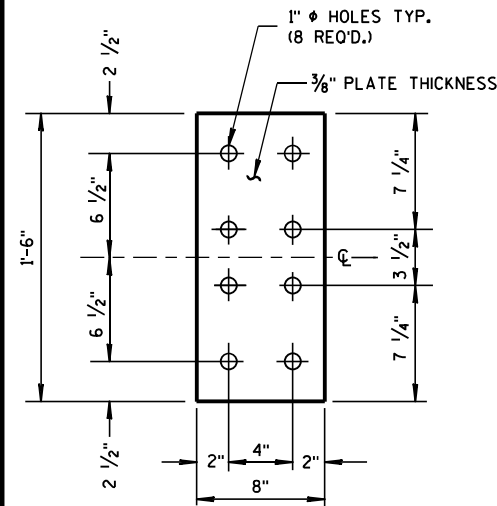
① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.



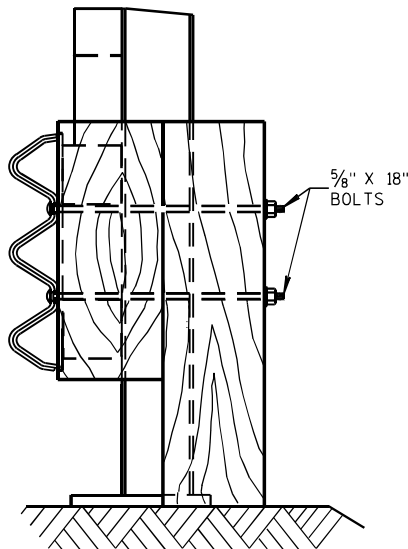
FRONT VIEW



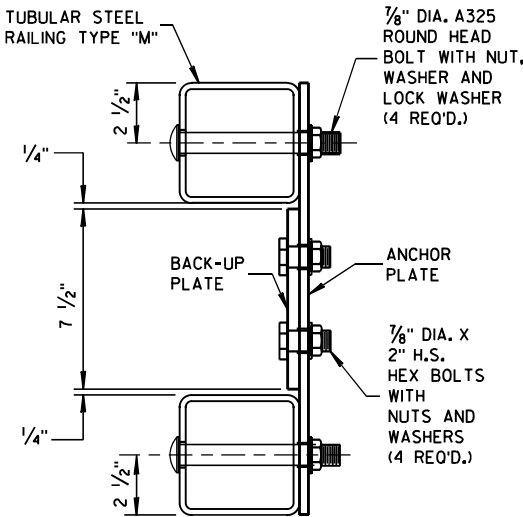
PLAN VIEW  
BACK-UP PLATE DETAIL, TYPE "M"



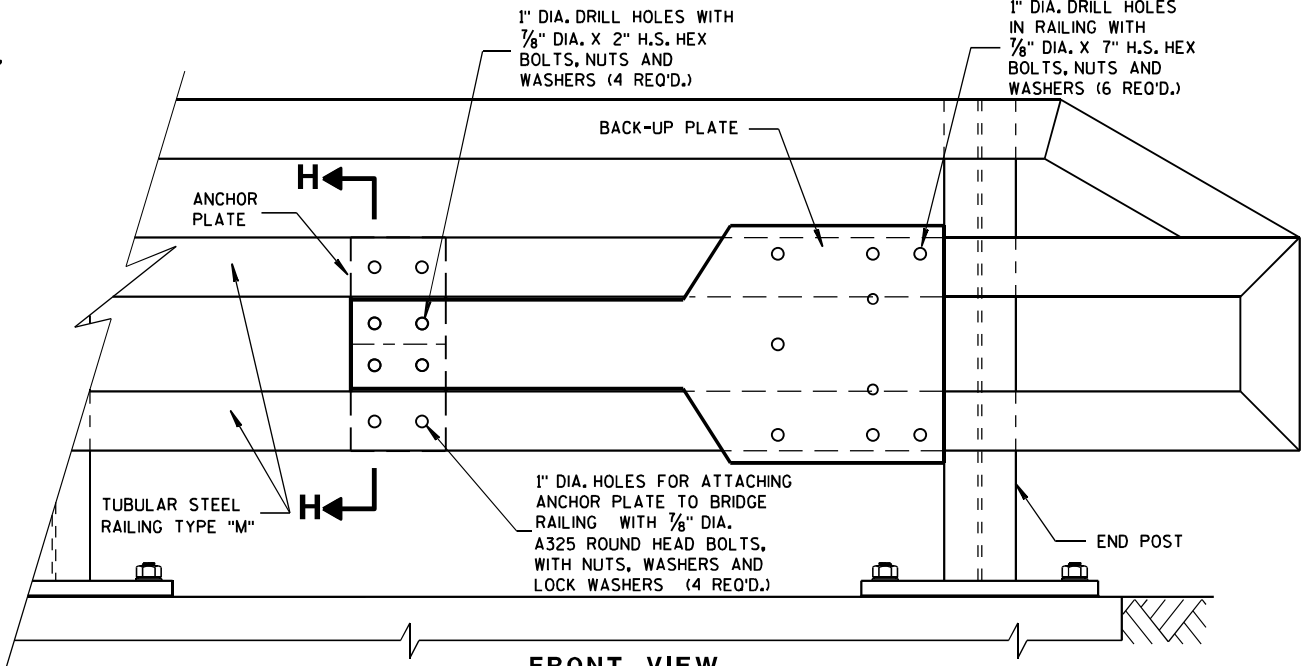
FRONT VIEW  
ANCHOR  
PLATE DETAIL,  
TYPE "M"



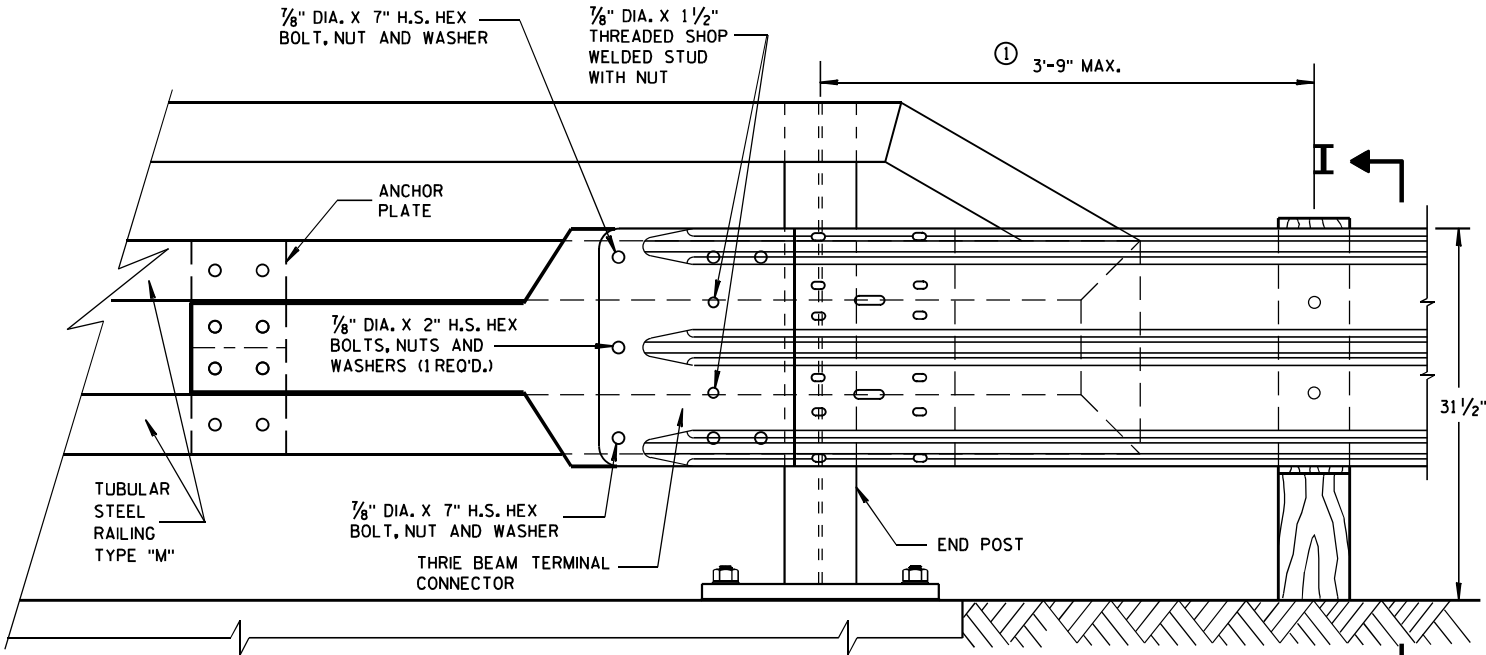
SECTION I-I



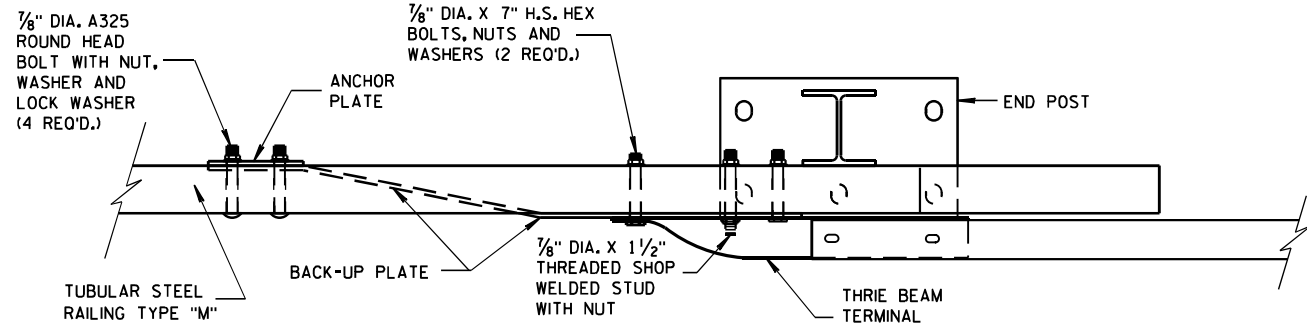
SECTION H-H



ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW

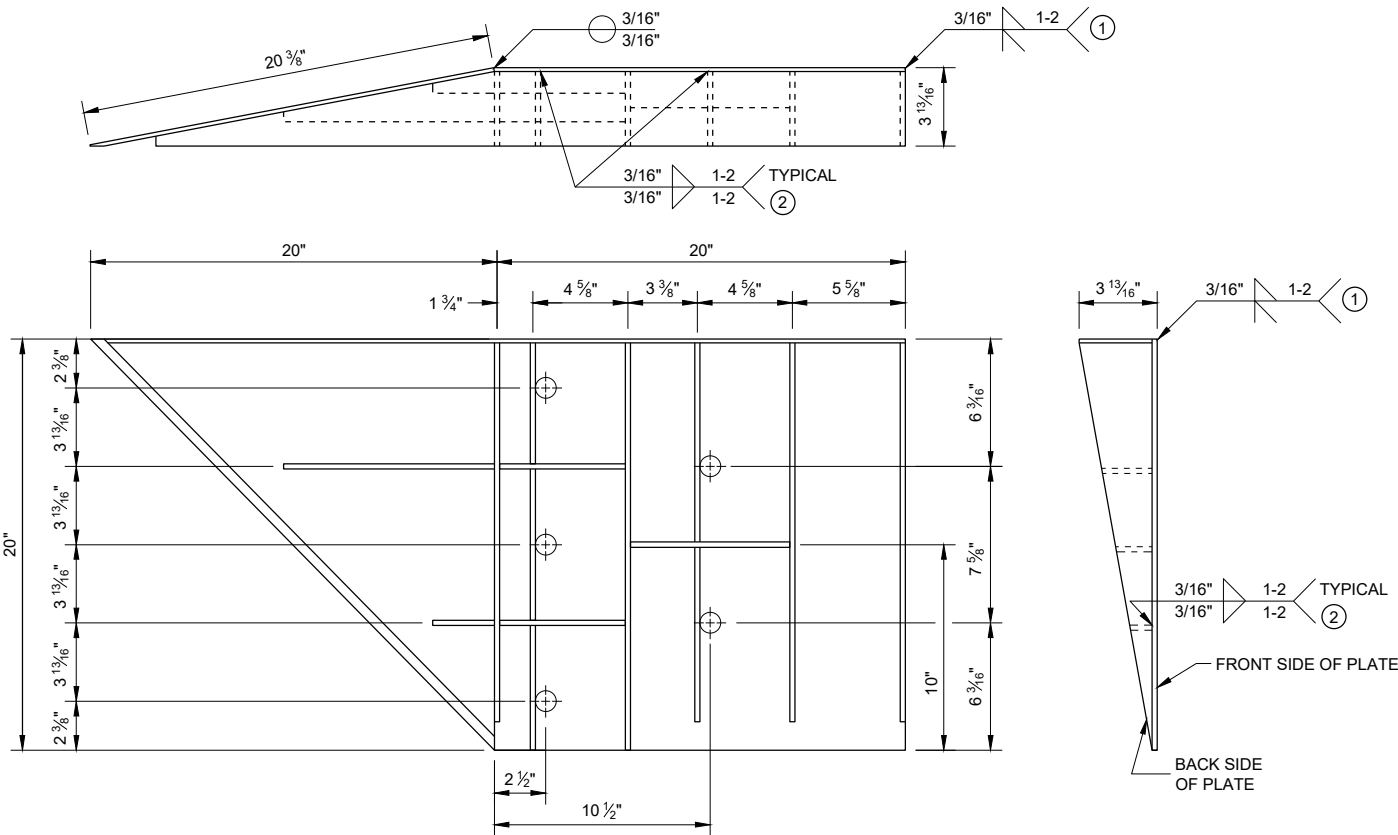


PLAN VIEW  
THREE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

STEEL THREE BEAM STRUCTURE  
APPROACH, CONNECTION TO  
BRIDGE RAILING TYPE "M"

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November 2022  
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/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER  
268  
FHWA



WELDING INSTRUCTION  
(VIEWED FROM BACK SIDE OF PLATE)

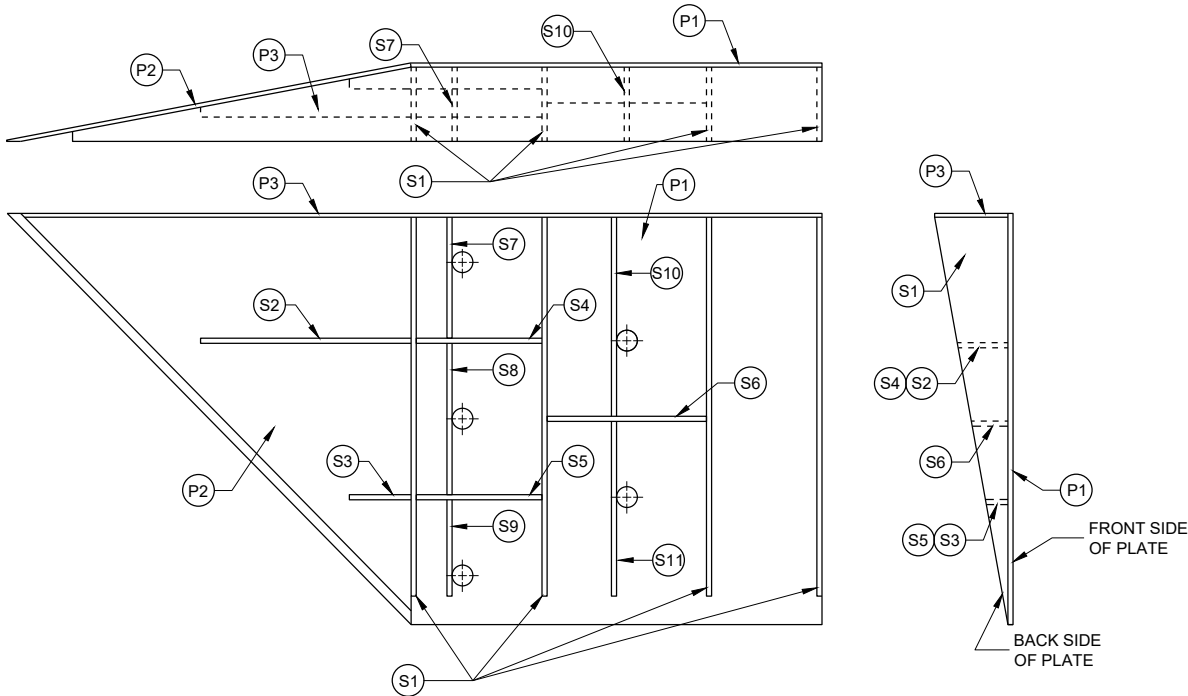


PLATE AND STIFFENER IDENTIFICATION  
(VIEWED FROM BACK SIDE OF PLATE)

STEEL THRIE BEAM STRUCTURE APPROACH

GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION, MIRROR DRAWINGS.
- ① STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:  
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- ② STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:  
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

| CONNECTOR PLATED DIMENSION (PER ASSEMBLY) |          |       |                                    |           |
|-------------------------------------------|----------|-------|------------------------------------|-----------|
| PLATE                                     | QUANTITY | SHAPE | SIZE (A x B x C x D)               | THICKNESS |
| P1                                        | 1        |       | 20" x 20"                          | 3/16"     |
| P2                                        | 1        |       | 20" x 20" x 28 9/16"               | 3/16"     |
| P3                                        | 1        |       | 39" x 3 5/8" x 20" x 19 5/16"      | 3/16"     |
| S1                                        | 4        |       | 18 7/16" x 3 5/8" x 18 3/4"        | 1/4"      |
| S2                                        | 1        |       | 10 1/4" x 2 7/16" x 10 3/8" x 1/2" | 1/4"      |
| S3                                        | 1        |       | 3" x 1 1/16" x 3 1/8" x 1/2"       | 1/4"      |
| S4                                        | 1        |       | 6 1/8" x 2 7/16"                   | 1/4"      |
| S5                                        | 1        |       | 6 1/8" x 1 1/16"                   | 1/4"      |
| S6                                        | 1        |       | 7 3/4" x 1 3/4"                    | 1/4"      |
| S7                                        | 1        |       | 2 9/16" x 6" x 3 5/8" x 5 7/8"     | 1/4"      |
| S8                                        | 1        |       | 1 5/32" x 7 1/2" x 2 1/2" x 7 3/8" | 1/4"      |
| S9                                        | 1        |       | 6 1/16" x 6 3/16" x 1 3/32"        | 1/4"      |
| S10                                       | 1        |       | 1 7/8" x 9 7/8" x 3 5/8" x 9 1/16" | 1/4"      |
| S11                                       | 1        |       | 8 1/2" x 8 3/4" x 1 13/16"         | 1/4"      |

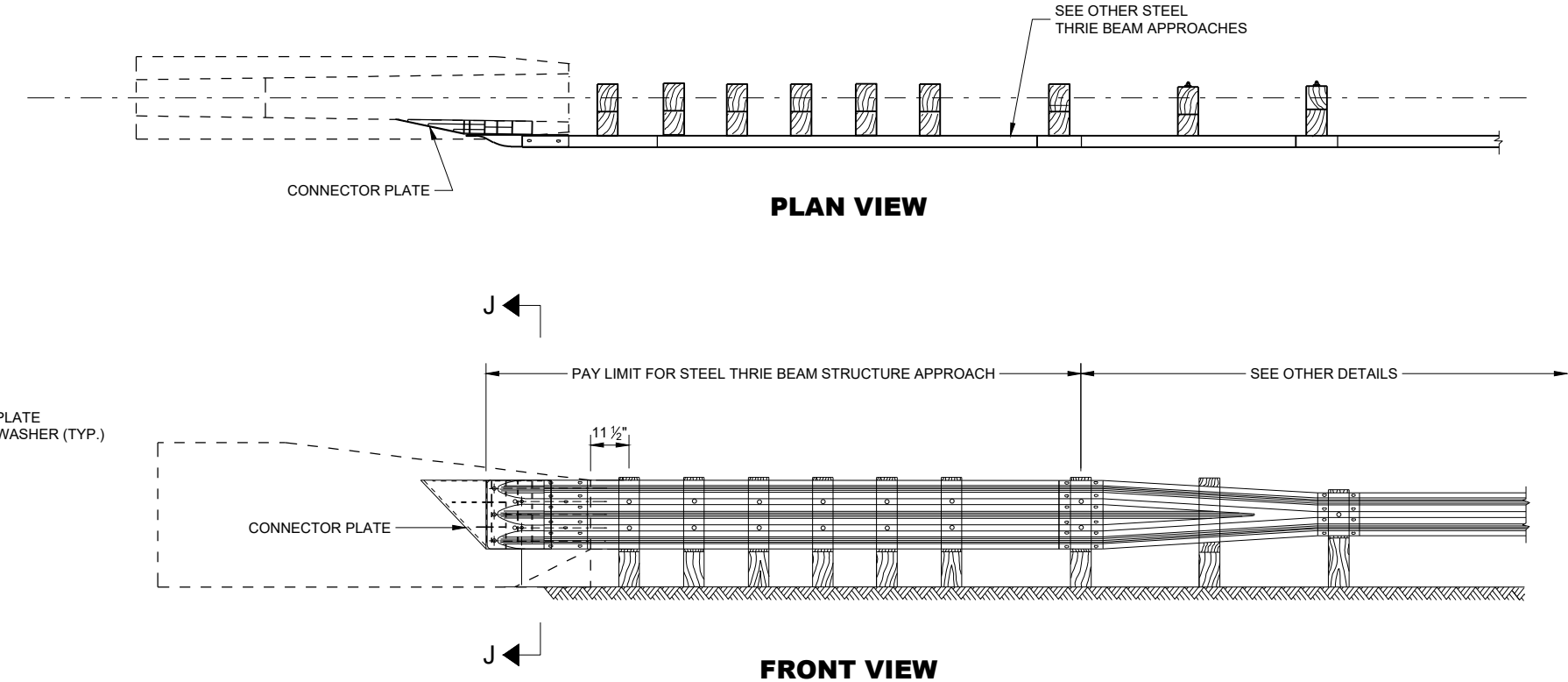
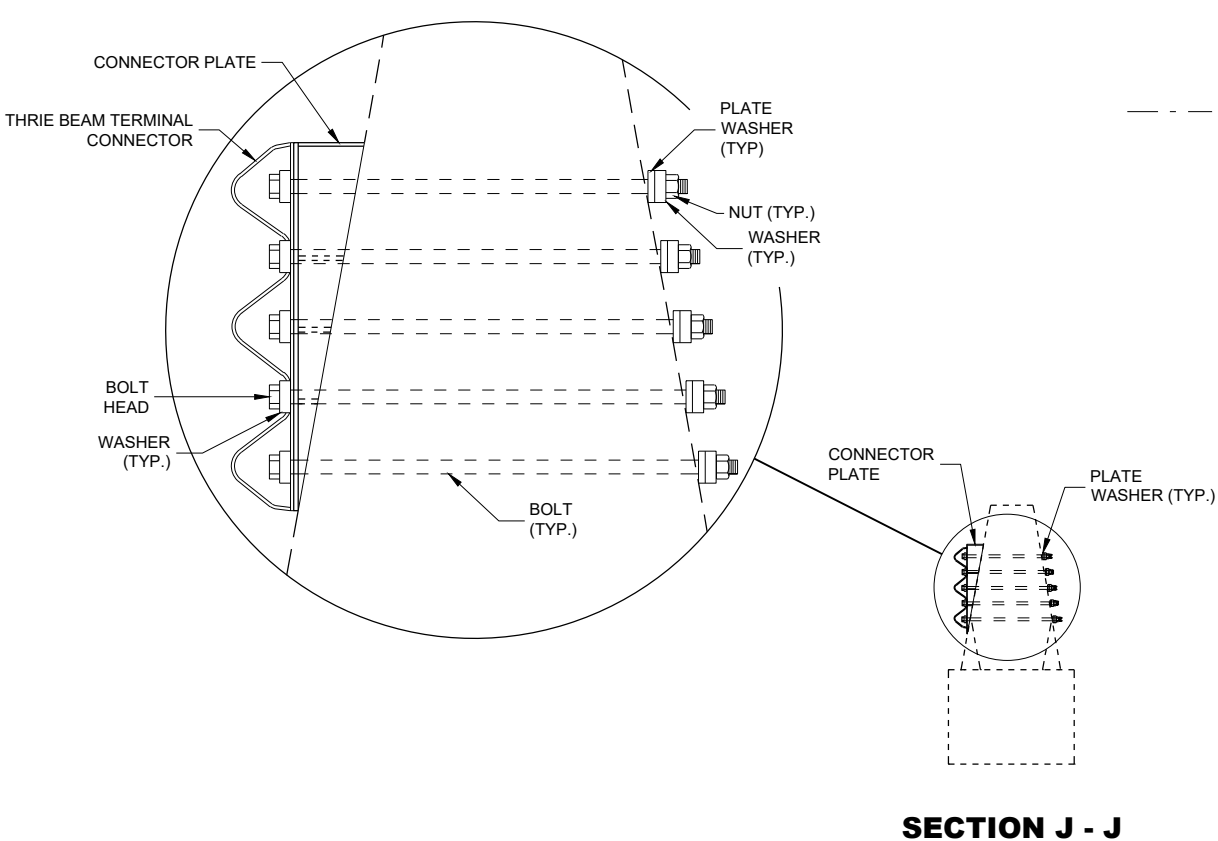
STEEL THRIE BEAM  
STRUCTURE APPROACH,  
CONNECTOR PLATE DETAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2022 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 269

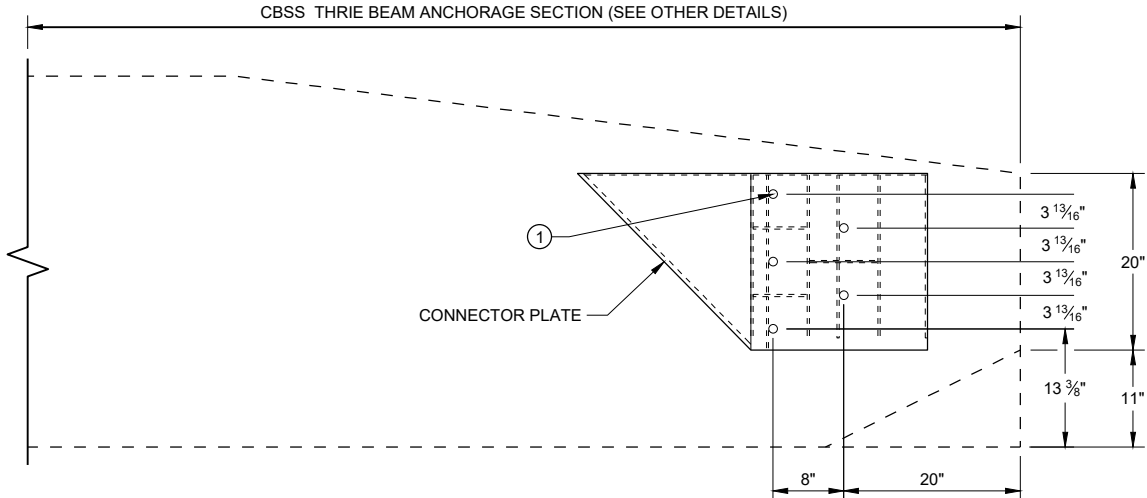
FHWA





**GENERAL NOTES**

- CONSTRUCT PER STANDARD SPECIFICATION 614.
- CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ① BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



**CONNECTOR PLATE PLACEMENT**

**STEEL THRIE BEAM STRUCTURE APPROACH**

|                                                                     |                                                                    |
|---------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>MIDWEST GUARDRAIL<br/>SYSTEM (MGS)<br/>THRIE BEAM TRANSITION</b> |                                                                    |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                  |                                                                    |
| APPROVED<br>November 2022<br>DATE                                   | /S/ Rodney Taylor<br>ROADWAY STANDARDS DEVELOPMENT<br>ENGINEER 270 |
| FHWA                                                                |                                                                    |

BILL OF MATERIALS

| NOTE NO. | DESCRIPTION                                                                                                |
|----------|------------------------------------------------------------------------------------------------------------|
| ①        | WOOD BREAKAWAY TERMINAL POST:<br>5½" X 7½" X 3'-9"                                                         |
| ②        | STEEL TUBE<br>TS 8" X 6" X 0.188", 6'-0"                                                                   |
| ④        | WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"                                                                   |
| ⑤        | WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"                                                                        |
| ⑥        | PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE                                                                       |
| ⑦        | BEARING PLATE                                                                                              |
| ⑧        | BCT CABLE ASSEMBLY                                                                                         |
| ⑨        | CABLE ANCHOR BOX                                                                                           |
| ⑩        | STRUT & YOKE                                                                                               |
| ⑪        | STEEL PLATE BEAM, END PANEL 12 GA.                                                                         |
| ⑫        | STEEL PLATE BEAM: 12 GA. 13'-6½"                                                                           |
| ⑬        | IMPACT HEAD                                                                                                |
| ⑭        | 0.040" ALUMINUM SHEET WITH REFLECTIVE<br>SHEETING TYPE F PER SECTION 637 OF THE<br>STANDARD SPECIFICATIONS |

GENERAL NOTES

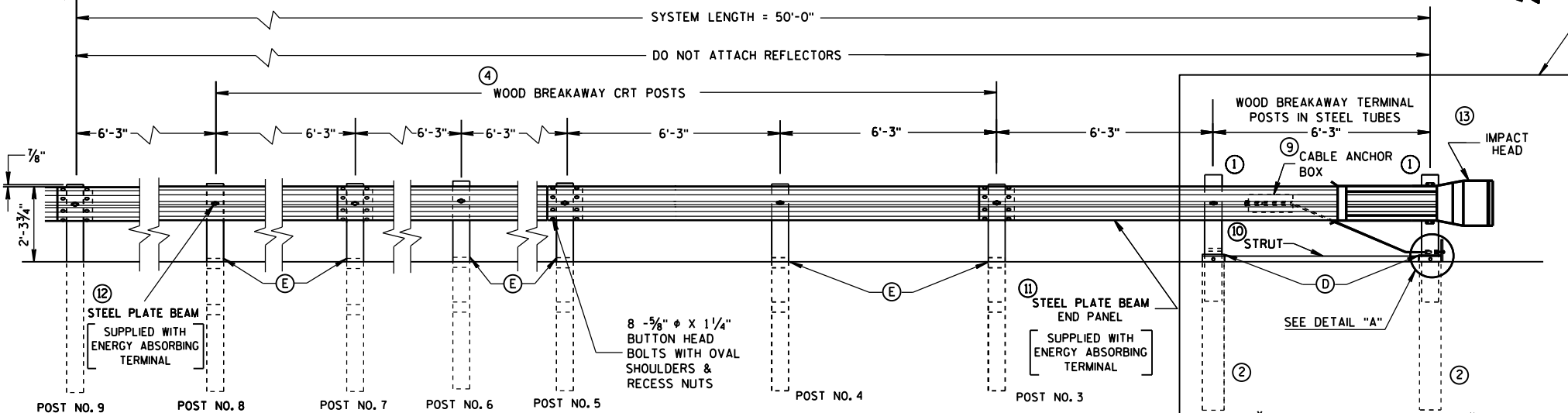
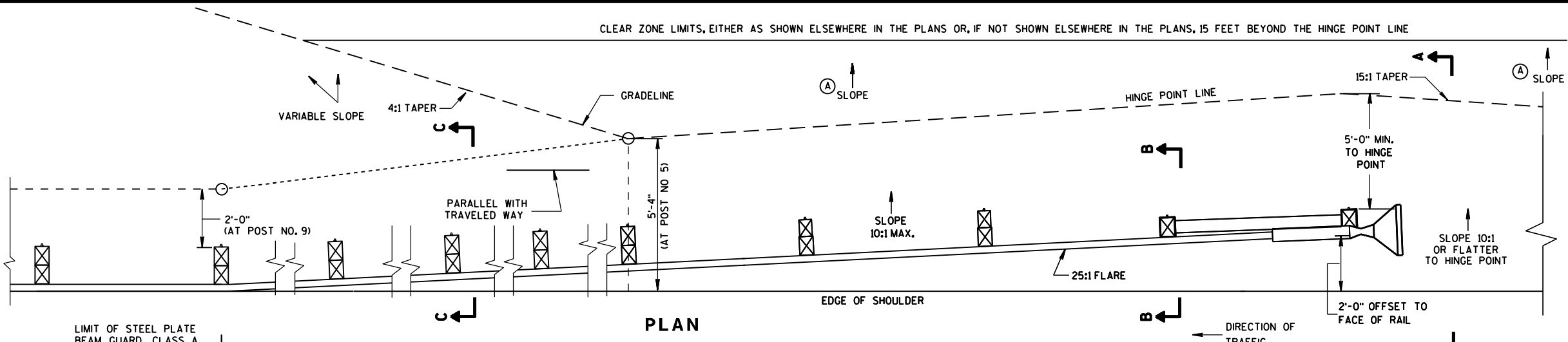
FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

- (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.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.
- (F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.

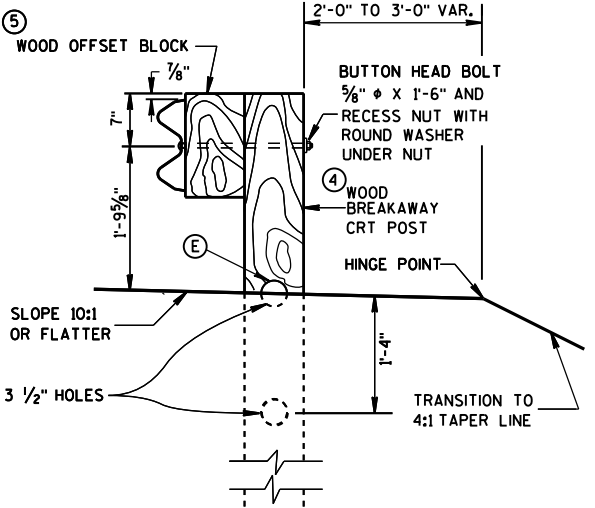
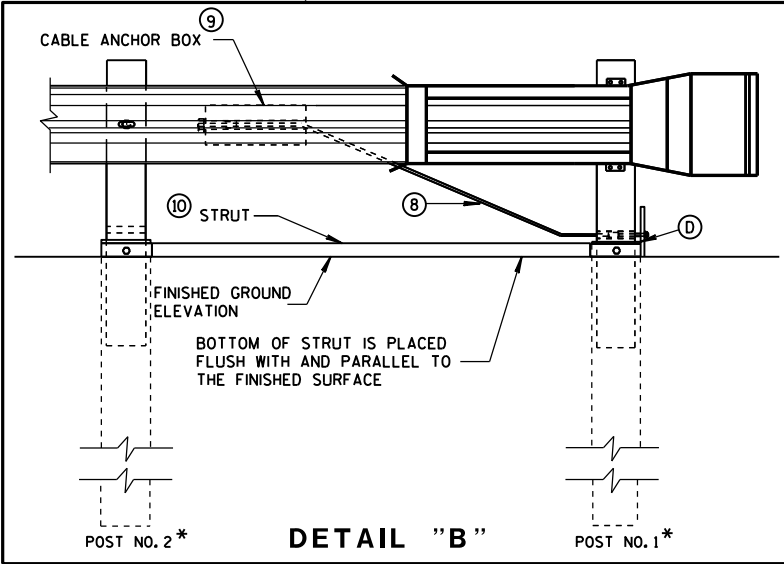
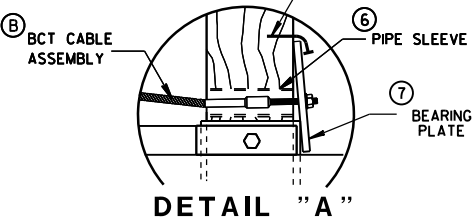
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

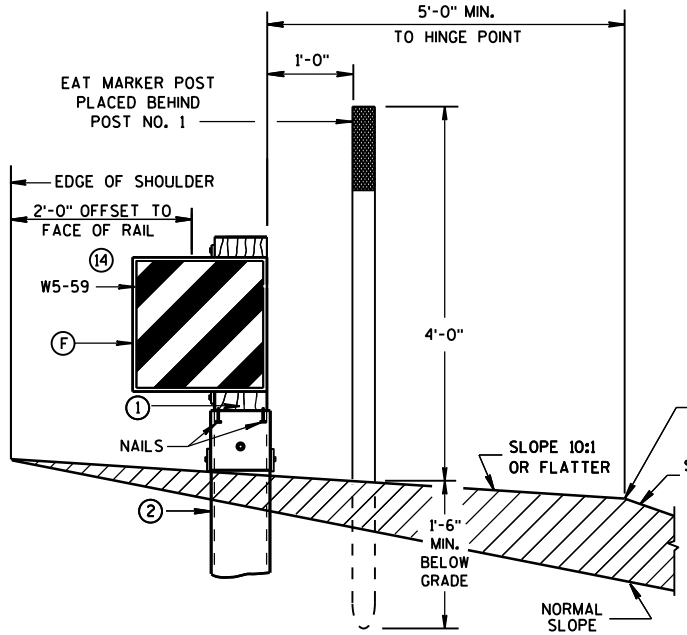
\*DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



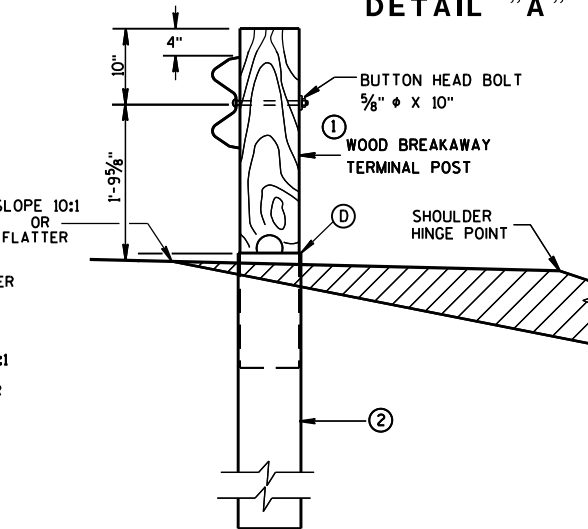
ELEVATION



SECTION C-C  
TYPICAL AT POST NOS. 6, 8



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

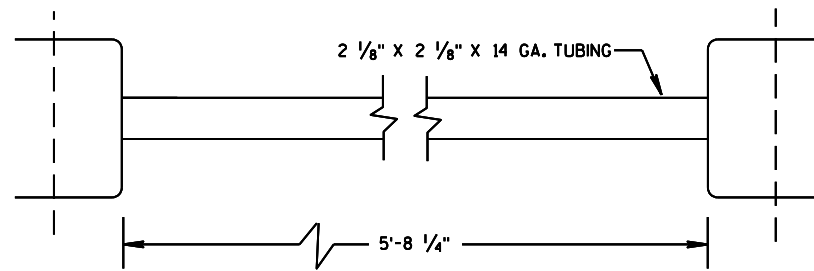


SECTION B-B  
TYPICAL AT POST NO. 2\*

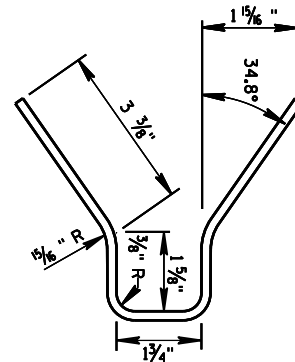
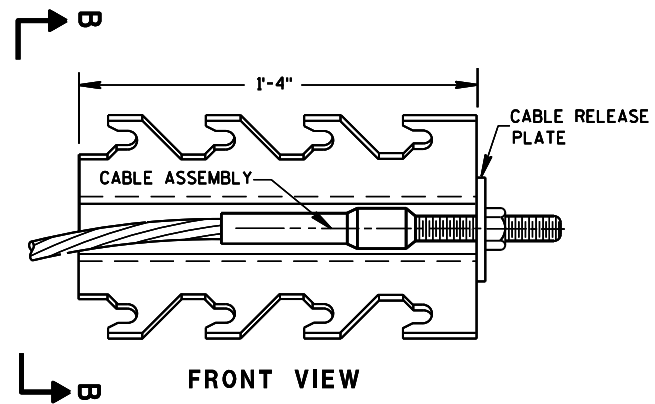
STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

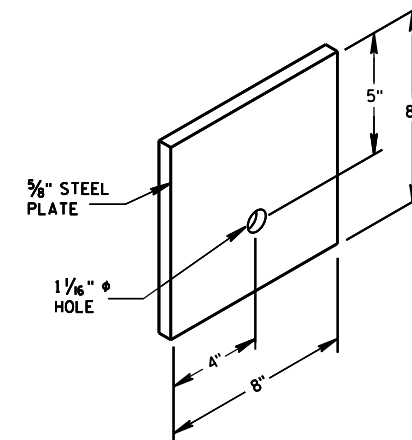




⑩ STRUT DETAIL



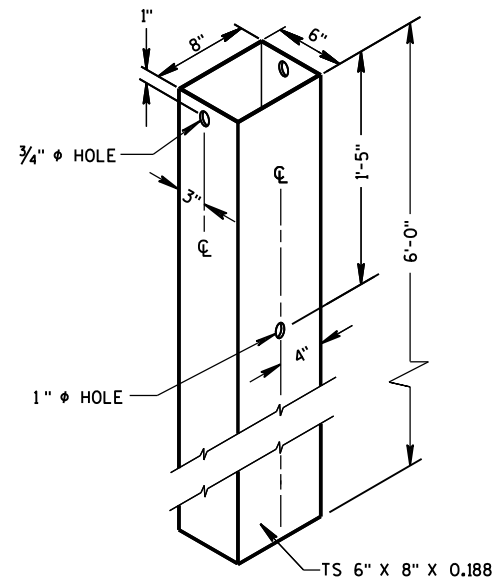
⑨ CABLE ANCHOR BOX



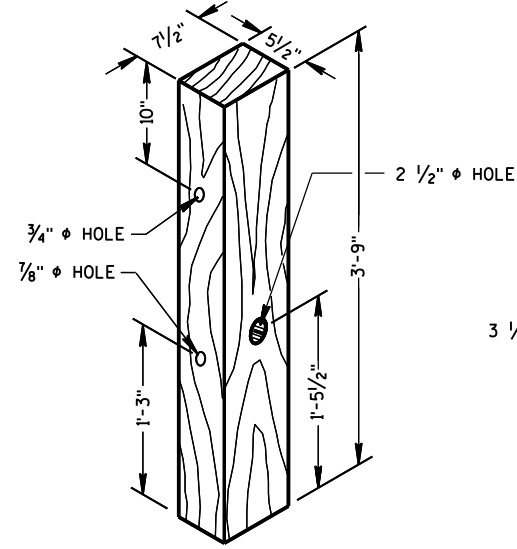
⑦ STEEL BEARING PLATE

STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

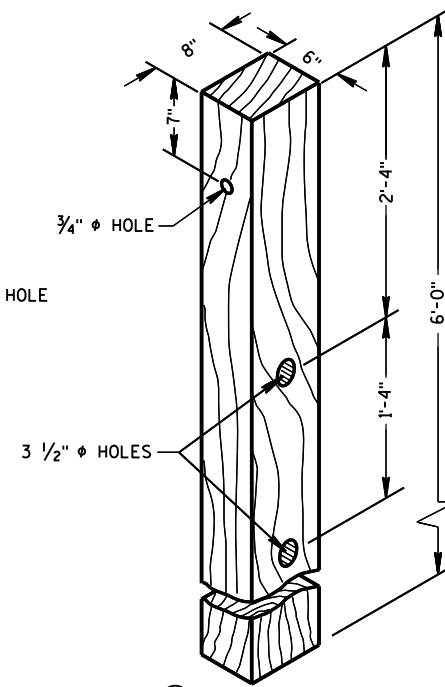
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



② **72" STEEL TUBE**  
(POSTS NO. 1-2)

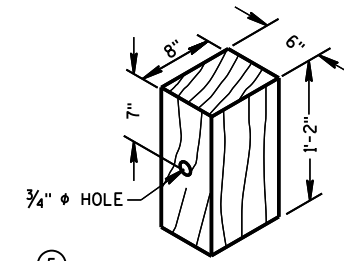


① **TERMINAL POST**



④ **CRT POST**  
(POSTS NO'S 5-8)

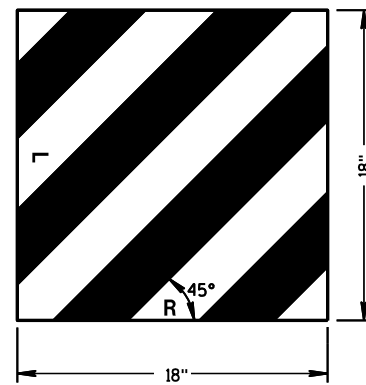
### WOOD BREAKAWAY POSTS



⑤ **WOOD OFFSET BLOCK**  
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

### GENERAL NOTES

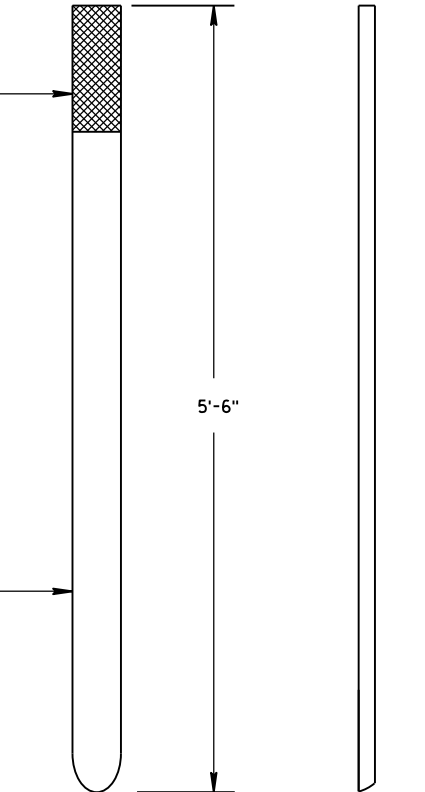
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑭ **REFLECTIVE SHEETING DETAILS**

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

E.A.T. MARKER  
POST (YELLOW)  
SEE APPROVED  
PRODUCTS LIST

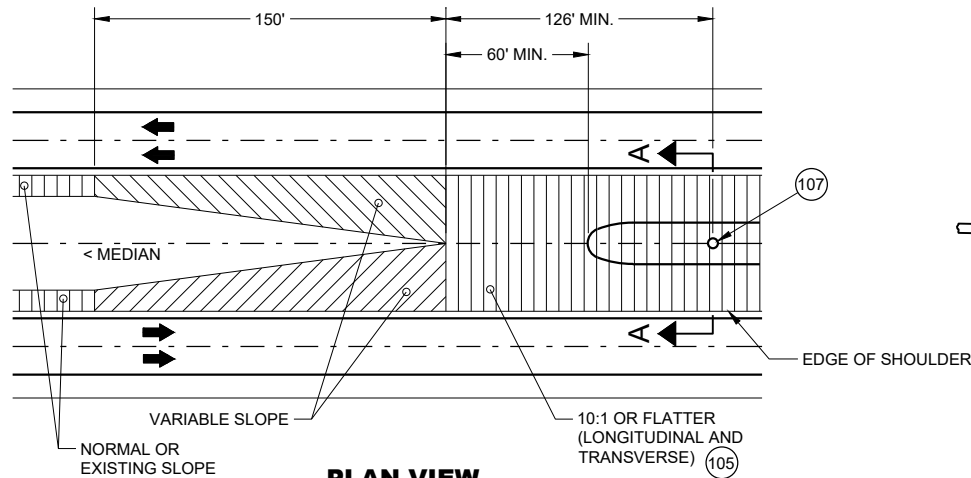


FRONT VIEW SIDE VIEW  
**E.A.T. MARKER POST**

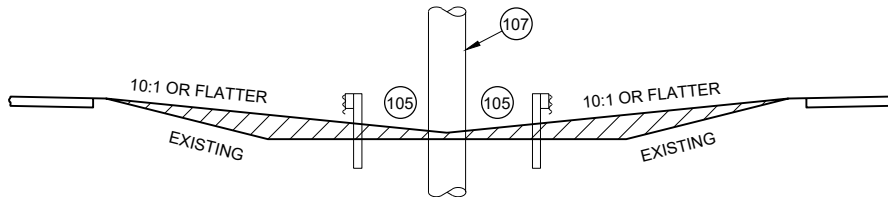
**STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

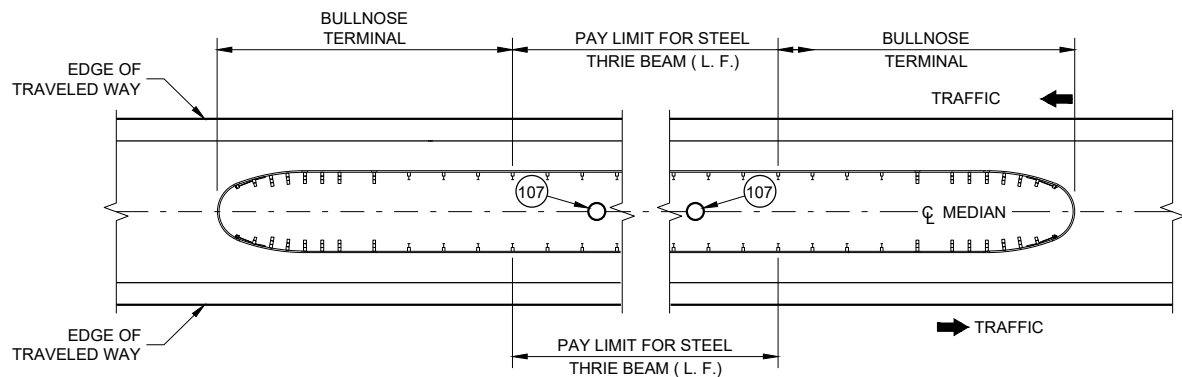
APPROVED  
June 2017 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS 273 ENT  
FHWA UNIT SUPERVISOR



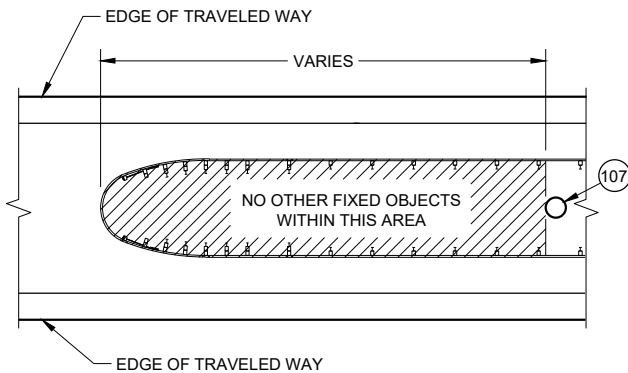
**PLAN VIEW  
GRADING AT BULLNOSE**  
(ALL INSTALLATIONS)



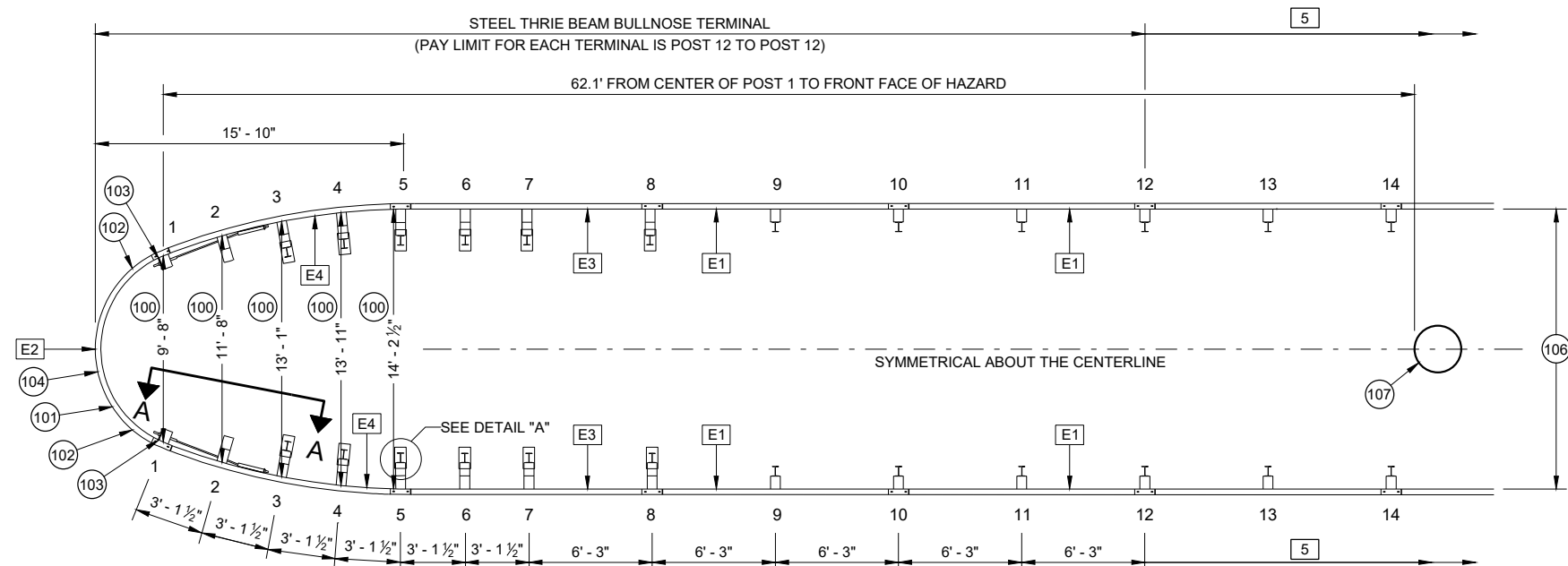
**SECTION A -A  
MEDIAN GRADING**  
(ALL INSTALLATIONS)



**MEDIAN HAZARD PROTECTION PAY LIMITS**



**HAZARD FREE AREA  
INSIDE BULLNOSE**



**PLAN VIEW  
TYPICAL BULLNOSE LAYOUT**

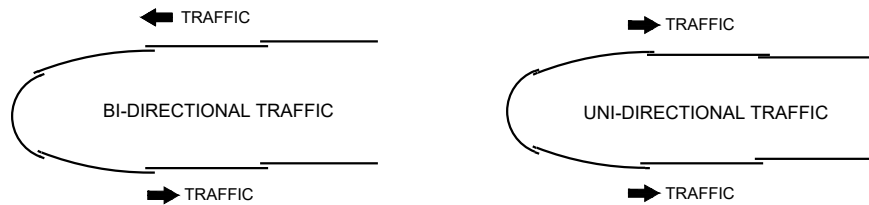
**GENERAL NOTES**

THRIE BEAM RAILS MAY NEED TO BE FIELD BENT TO FIT THE LOCATION.

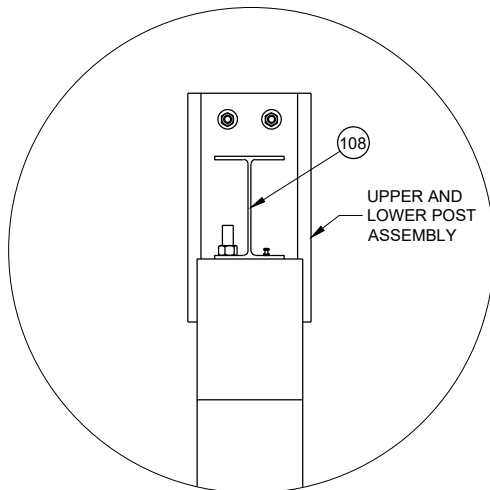
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2". MINIMUM DIAMETER OF THE ROCK REMOVAL IS 12" DIAMETER

- [E1] UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- [E2] SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- [E3] SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- [E4] SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- [5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.
- (100) DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- (101) U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- (102) NOSE CABLE WITH SWAGGED END BUTTONS.
- (103) NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- (104) THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- (105) MINIMUM WORKING WIDTH 4' - 2".
- (106) MAX. WIDTH OF SYSTEM IS 14' - 2 1/2" MEASURED FROM THE BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.
- (107) FIXED OBJECT OR OTHER HAZARD.
- (108) PLAN IS TO PROVIDE STATION OFFSET TO CENTER OF POST 5 IN PLANS.



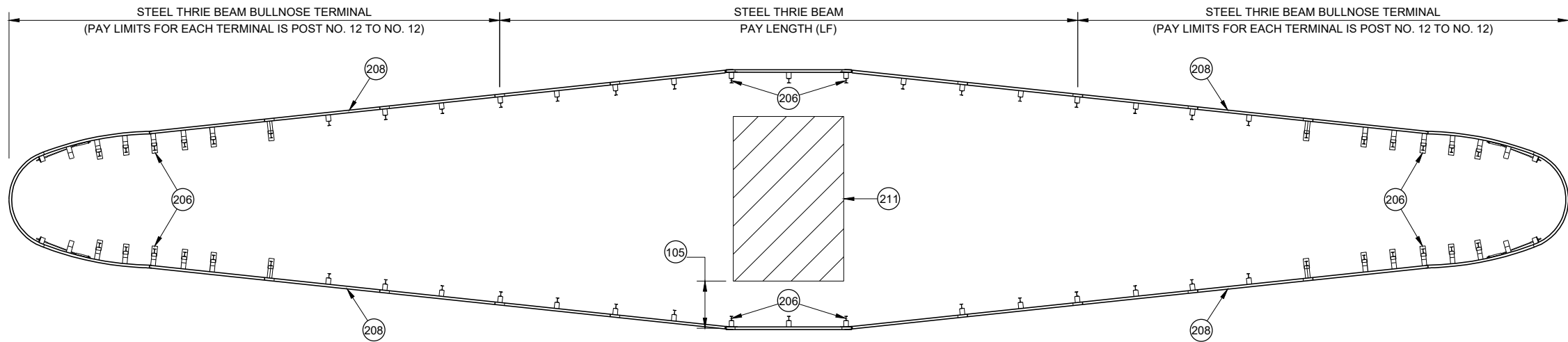
**LAPPING DETAIL**



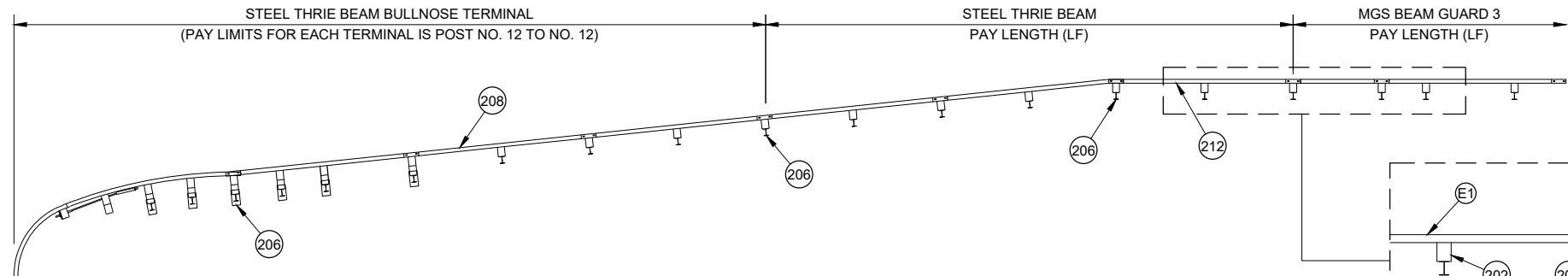
**DETAIL "A"**

**STEEL THRIE BEAM  
BULLNOSE TERMINAL**

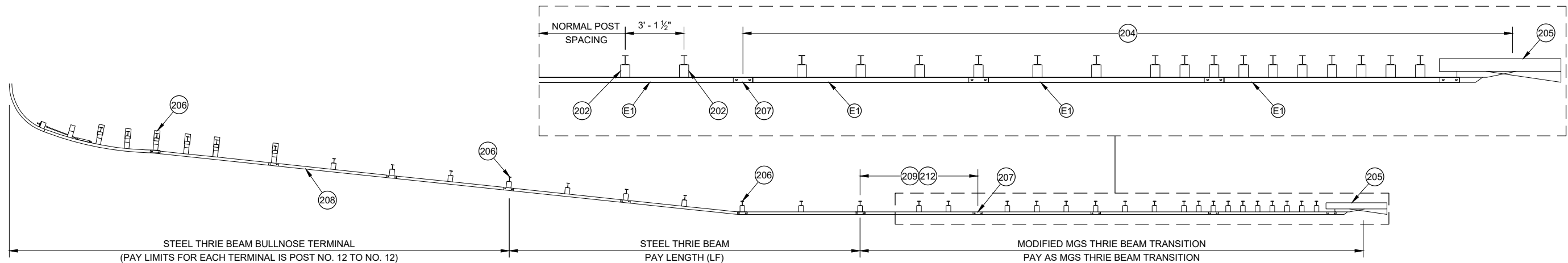
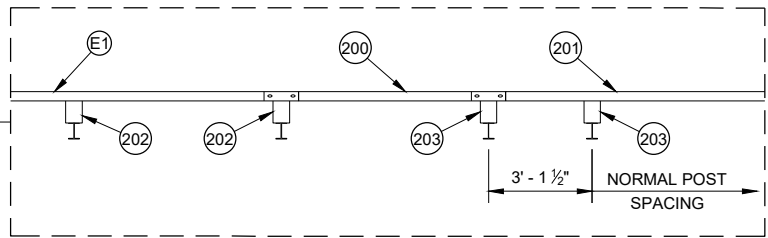
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 274



**VARIABLE WIDTH BULLNOSE**



**1/2 PLAN VIEW  
VARIABLE WIDTH BULLNOSE  
WITH CONNECTION TO MGS BEAM GUARD**



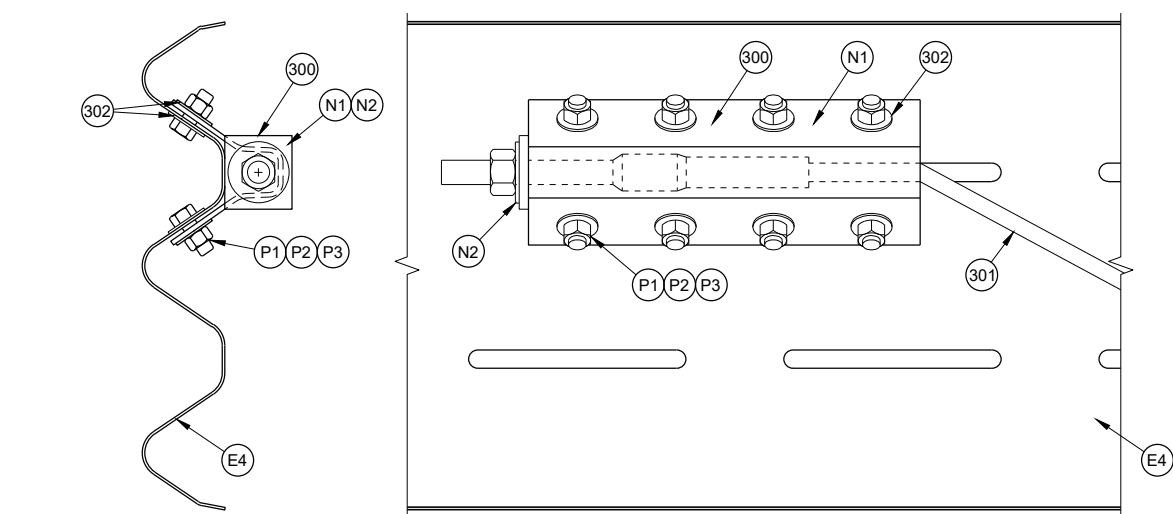
**1/2 PLAN VIEW  
VARIABLE WIDTH BULLNOSE  
WITH CONNECTION TO RIGID BARRIER**

**GENERAL NOTES**

- 200 6' - 3" ASYMMETRICAL 10-GAUGE W-BEAM TO THRIE BEAM GUARD TRANSITION. SEE SDD 14B45 FOR MORE INFORMATION.
- 201 W-BEAM RAIL. SEE SDD 14B42 FOR MORE INFORMATION.
- 202 SEE POST NO. 9 AND ALL STEEL THRIE BEAM POST BEYOND DETAIL.
- 203 SEE SDD 14B42 FOR INSTALLATION INFORMATION.
- 204 SEE SDD 14B45 FOR INSTALLATION DETAILS. REPLACE ASYMMETRICAL W-BEAM TO THRIE BEAM TRANSITION AND W-BEAM RAIL WITH E1. PAY FOR MODIFIED THRIE BEAM TRANSITION.
- 205 CONCRETE BARRIER OR BRIDGE RAIL.
- 206 SEE PLAN FOR STATION AND OFFSET TO CENTER OF POST.
- 207 SEE PLAN FOR STATION AND OFFSET TO CENTER OF SPLICE.
- 208 SEE PLAN FOR FLARE RATE.
- 209 A MINIMUM OF 25 FT OF THRIE BEAM TANGENT BEFORE TRANSITIONING TO BEAM GUARD OR THRIE BEAM TRANSITION.
- 210 NOT ALL BULLNOSE HARDWARE SHOWN. SEE OTHER SHEETS IN 14B26.
- 211 WIDER HAZARD TO BE SHIELDED.
- 212 TRANSITION RAIL HEIGHT TO 31" OVER THE LENGTH OF A 12' - 6" BEAM SECTION.

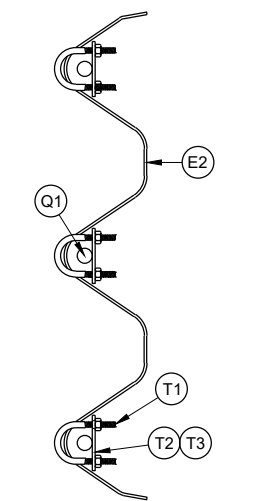
**STEEL THRIE BEAM  
BULLNOSE TERMINAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 275

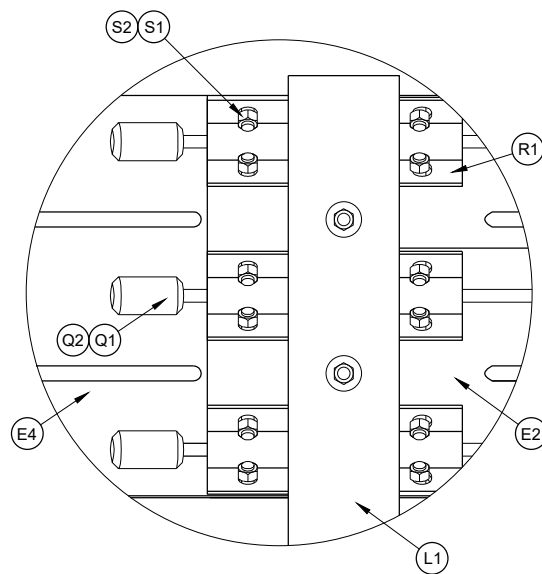


**PROFILE VIEW  
CABLE ANCHOR  
ASSEMBLY CONNECTION**

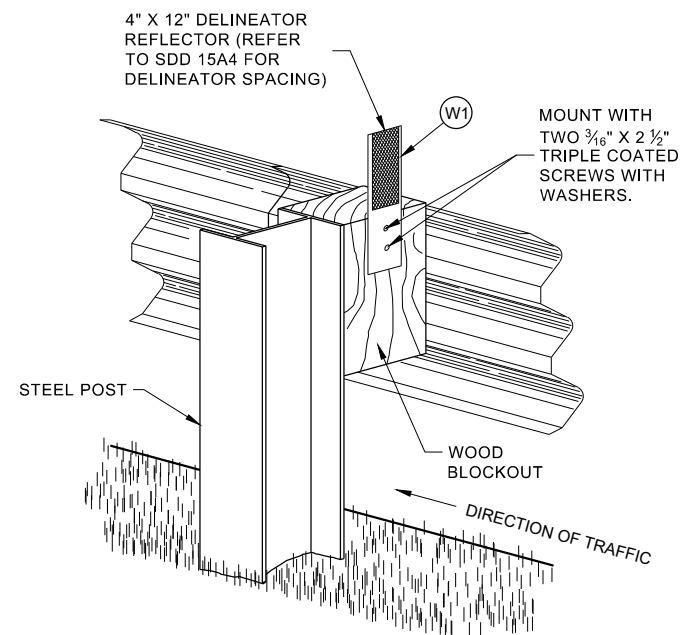
**CABLE ANCHOR ASSEMBLY**



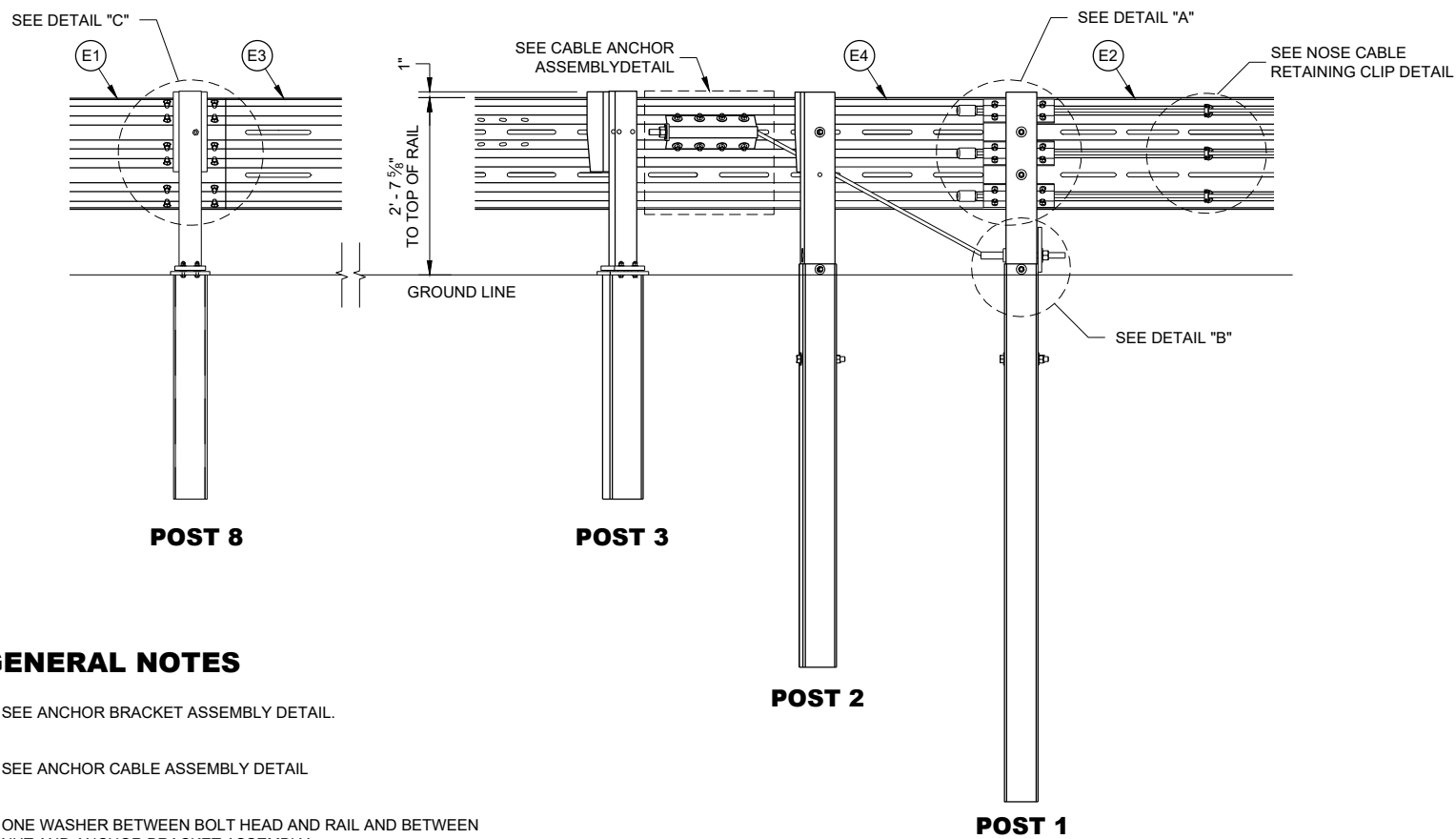
**NOSE CABLE  
RETAINING CLIP**



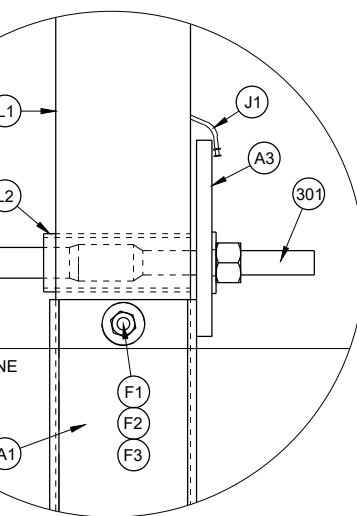
**DETAIL "A"**



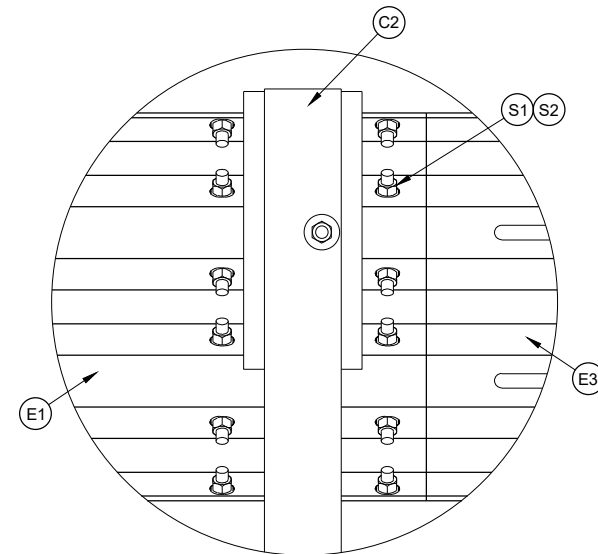
**ONE SIDED REFLECTOR DETAIL  
AND TYPICAL INSTALLATION**



**CROSS SECTION A - A**



**DETAIL "B"**



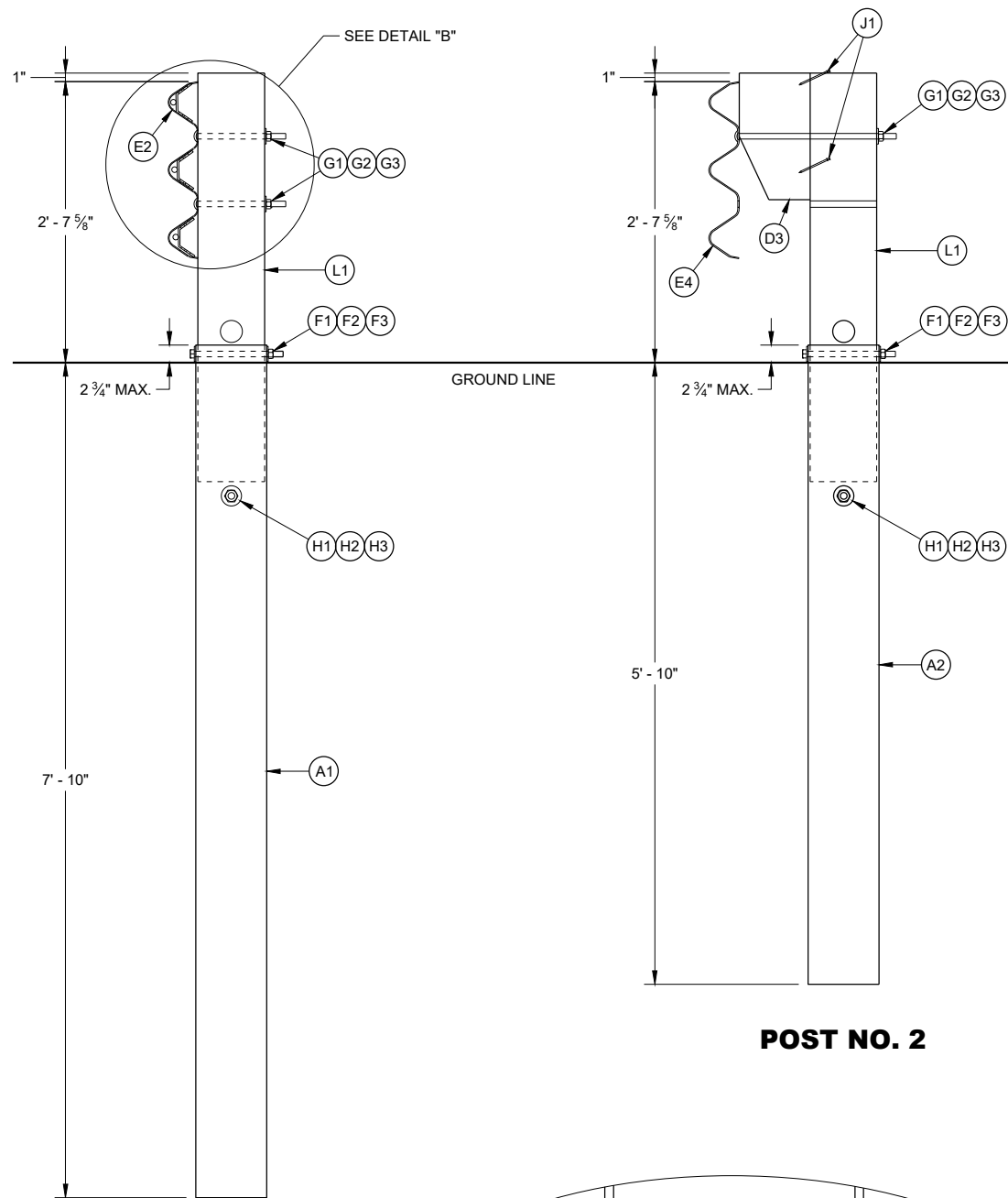
**DETAIL "C"  
THRIE BEAM SPLICE**

**GENERAL NOTES**

- (300) SEE ANCHOR BRACKET ASSEMBLY DETAIL.
- (301) SEE ANCHOR CABLE ASSEMBLY DETAIL.
- (302) ONE WASHER BETWEEN BOLT HEAD AND RAIL AND BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.
- (303) ONE WASHER BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

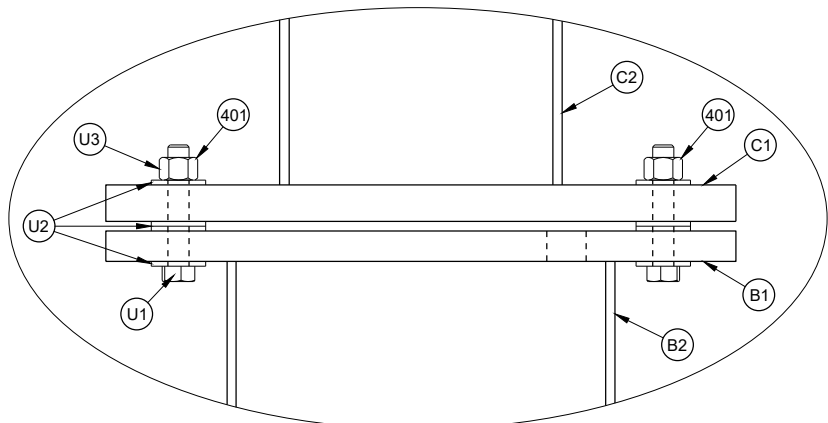
**STEEL THRIE BEAM  
BULLNOSE TERMINAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 276

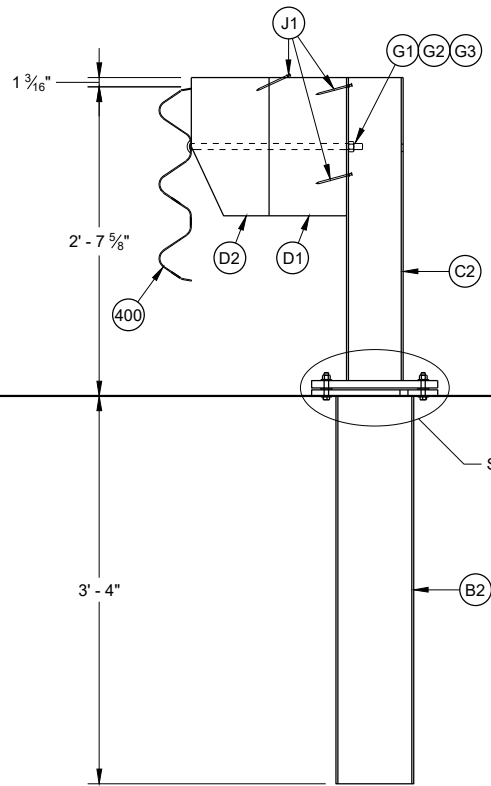


POST NO. 1

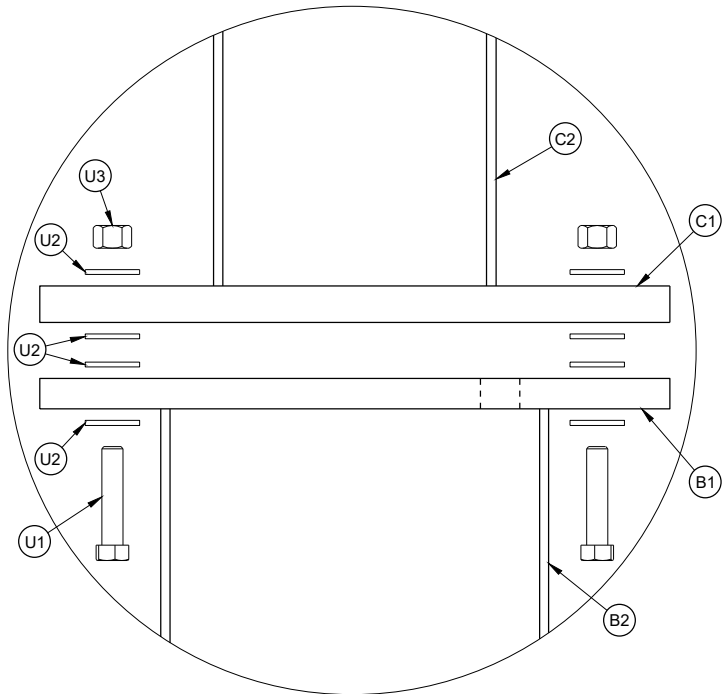
POST NO. 2



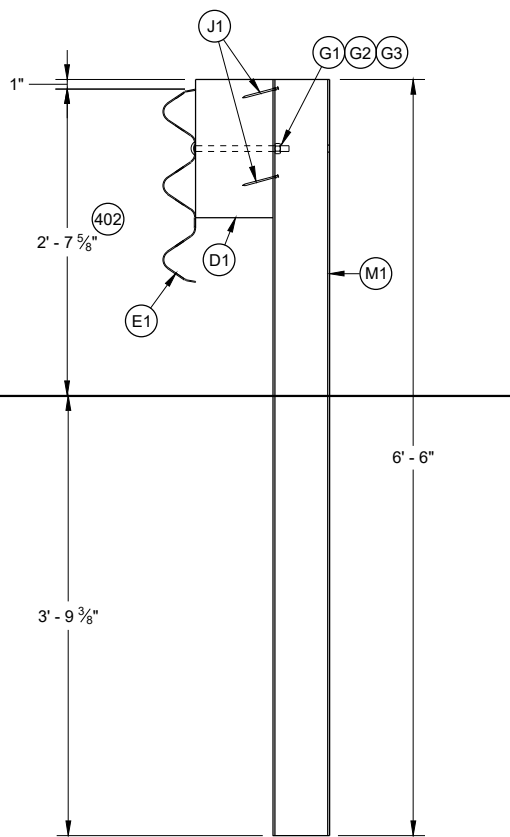
DETAIL "A"



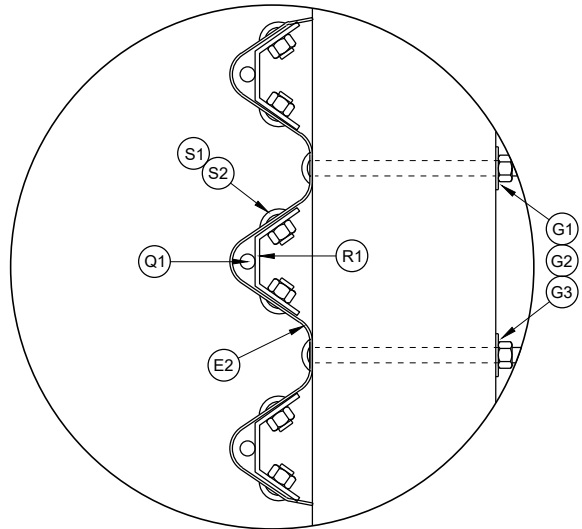
POST NOS. 3-8



EXPLODED VIEW  
DETAIL "A"



POST NOS. 9 AND ALL STEEL  
THRIE BEAM POSTS BEYOND



DETAIL "B"

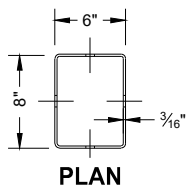
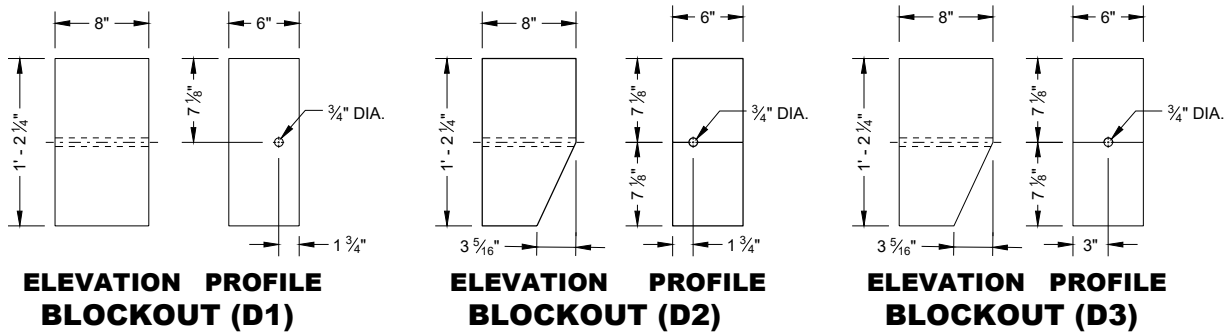
GENERAL NOTES

- 400 RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.
- 401 TORQUE BOLD BETWEEN 60-75 FT-LB
- 402 HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".

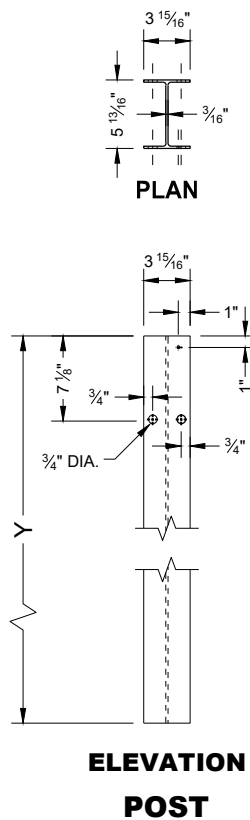
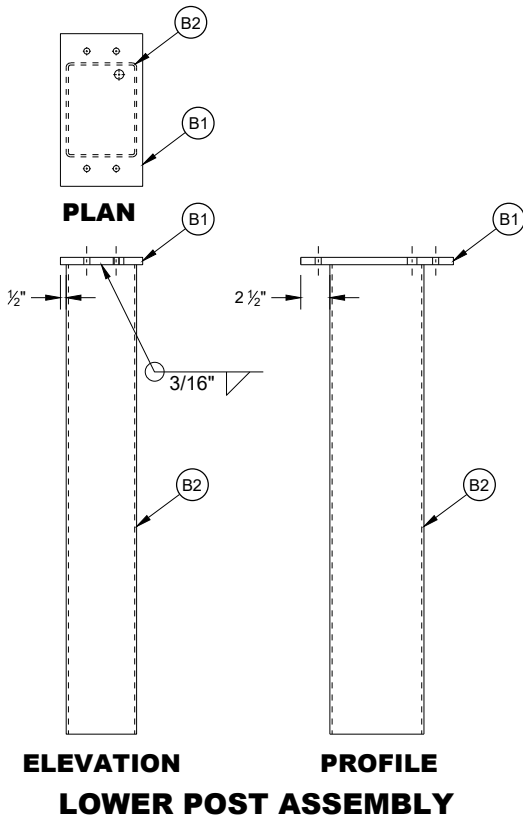
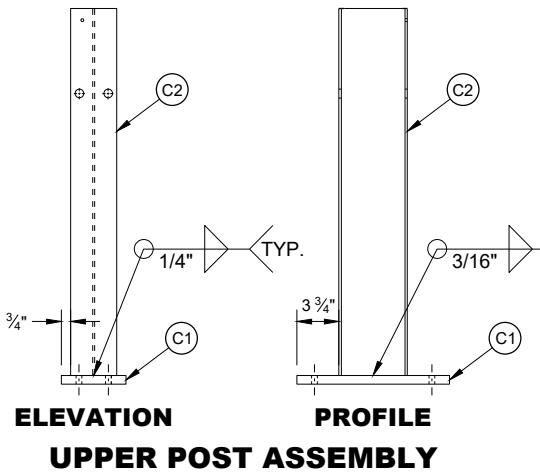
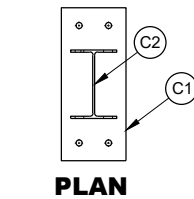
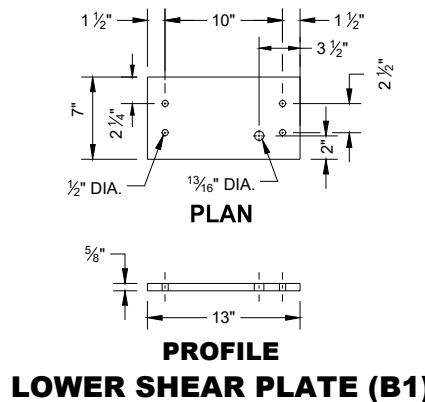
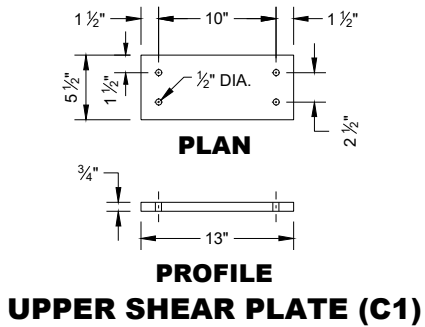
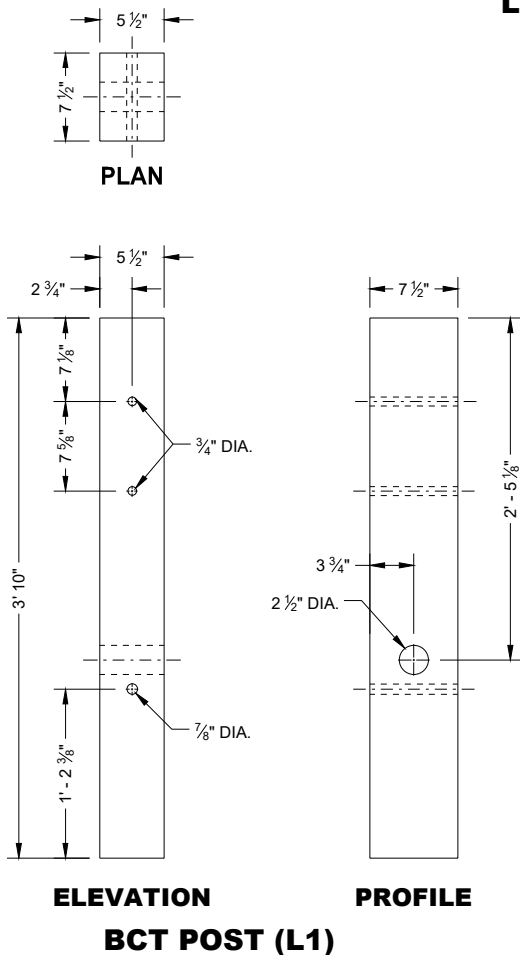
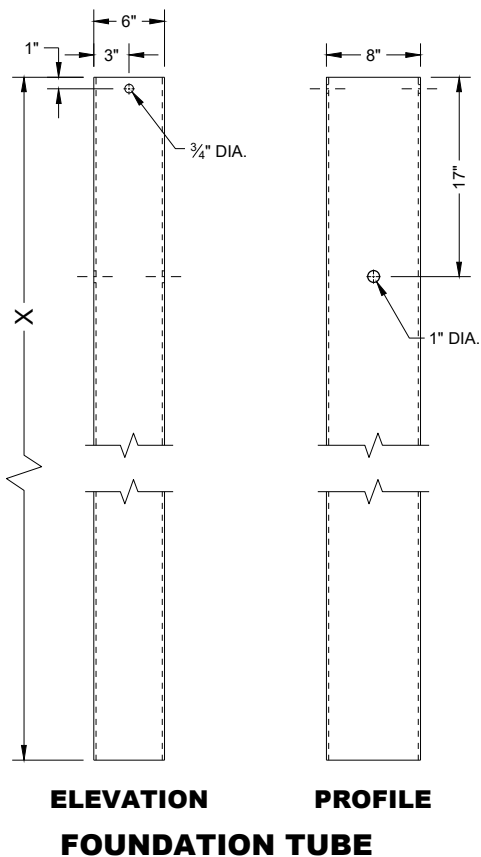
STEEL THRIE BEAM  
BULLNOSE TERMINAL

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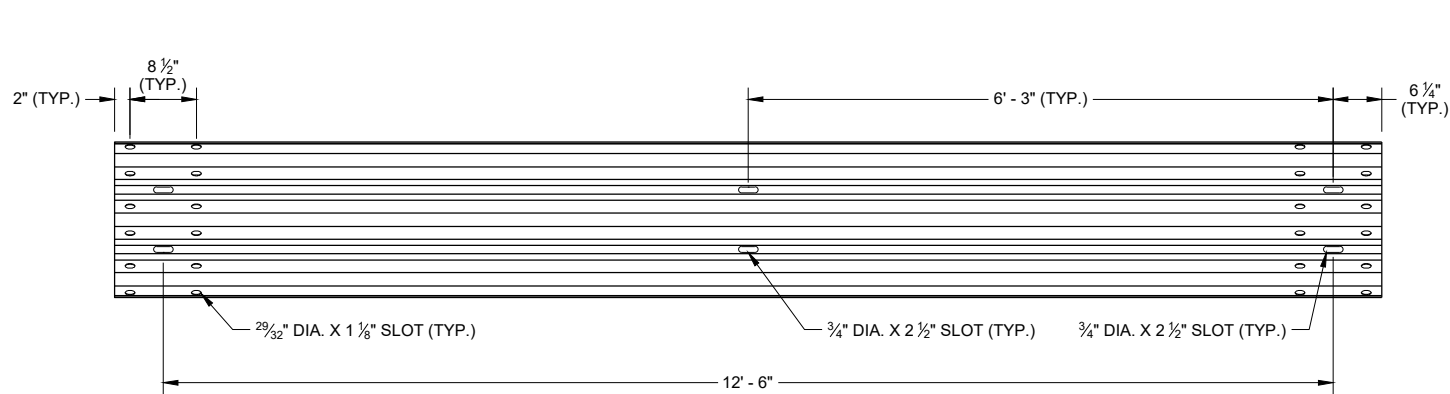
| PART | LENGTH "X" |
|------|------------|
| A1   | 8' - 0"    |
| A2   | 6' - 0"    |
| B2   | 3' - 4"    |



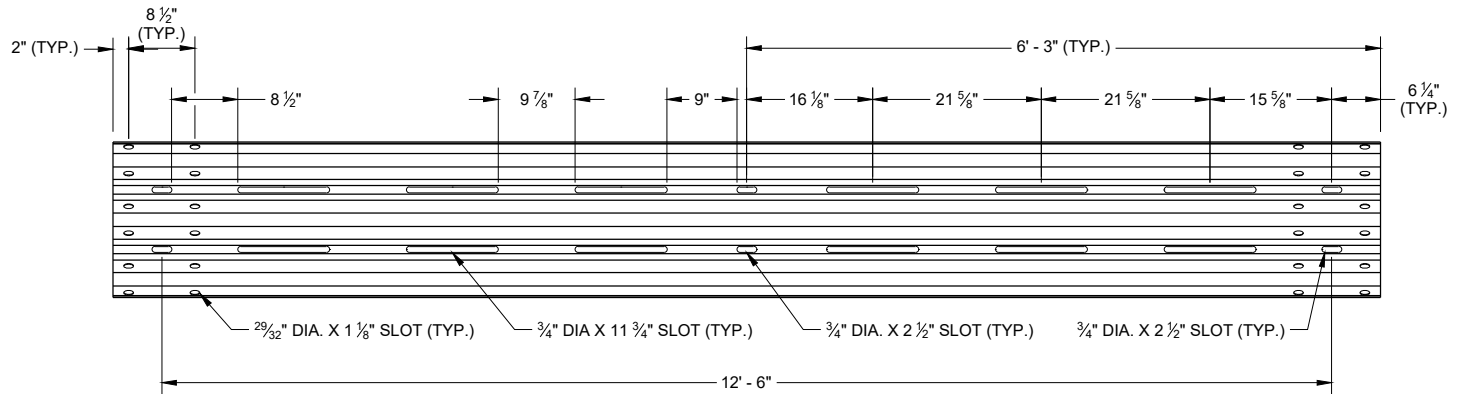
| PART | LENGTH "Y"  |
|------|-------------|
| M1   | 6' - 6"     |
| M2   | 5' - 8 5/8" |
| C2   | 2' - 7 5/8" |

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BULLNOSE TERMINAL

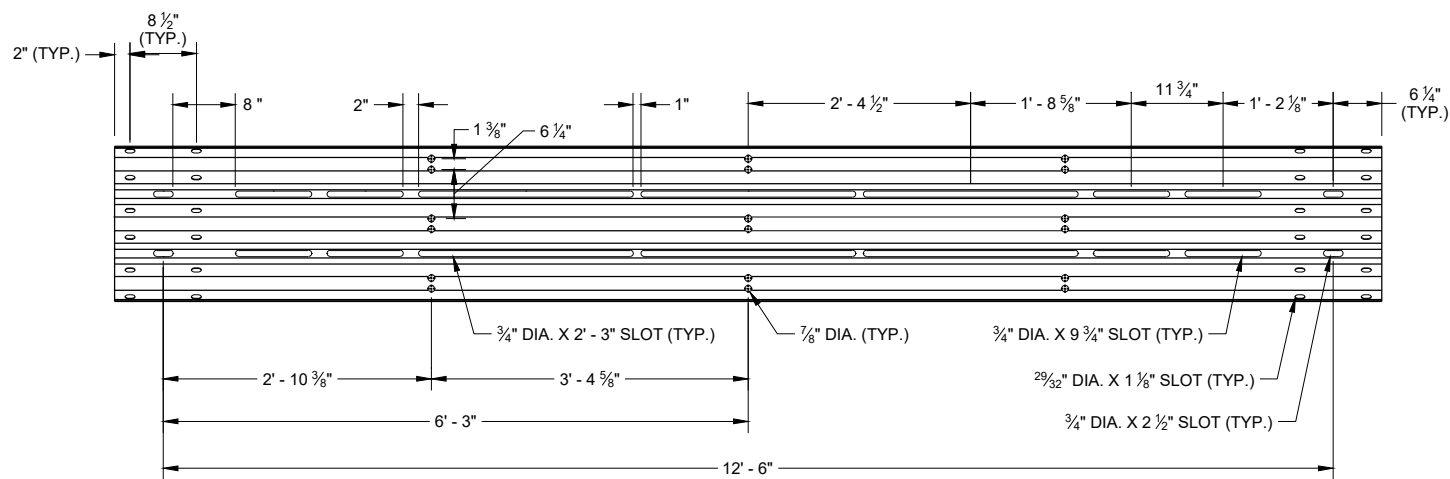
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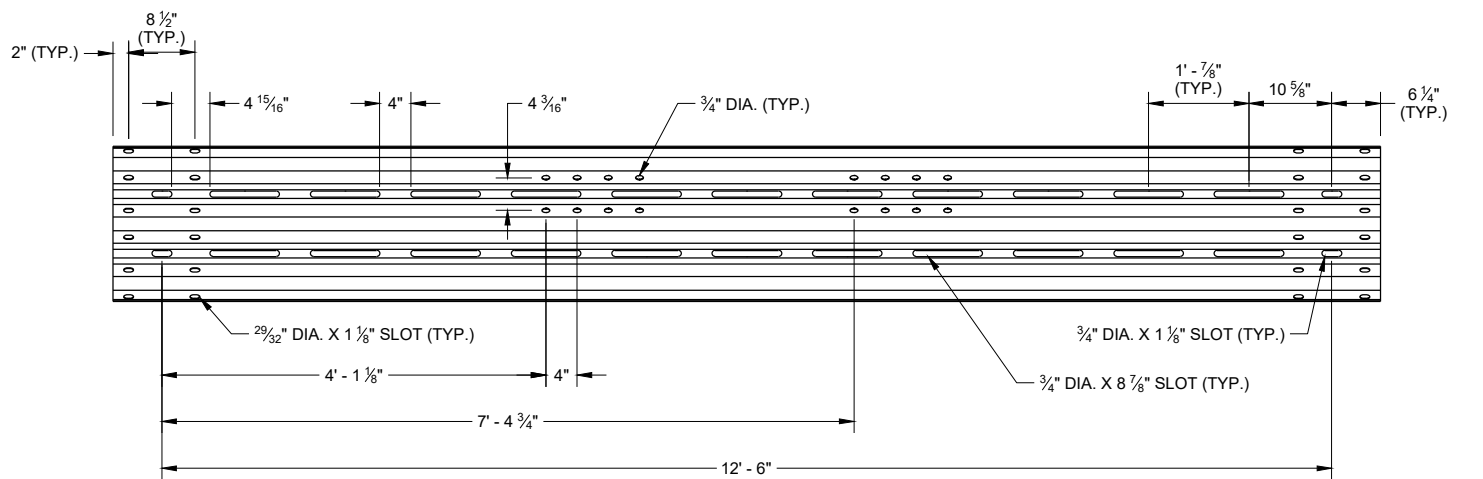
**SLOTTED THRIE BEAM RAIL E1**



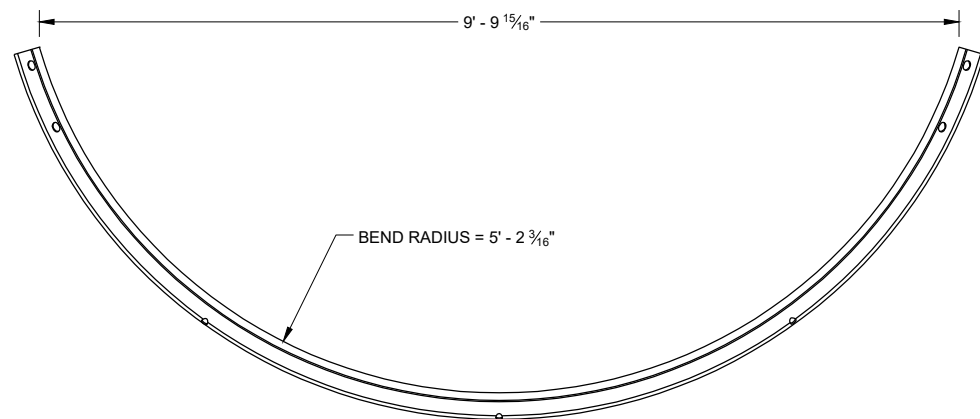
**SLOTTED THRIE BEAM RAIL E3**



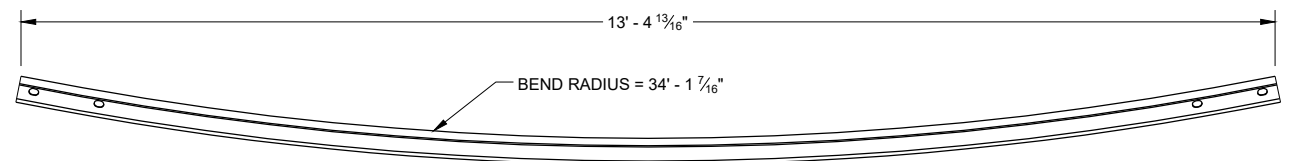
**ELEVATION VIEW NON - RADIUS  
SLOTTED THRIE BEAM RAIL E2**



**ELEVATION VIEW NON - RADIUS  
SLOTTED THRIE BEAM RAIL E4**



**PLAN VIEW  
SLOTTED THRIE BEAM RAIL E2**

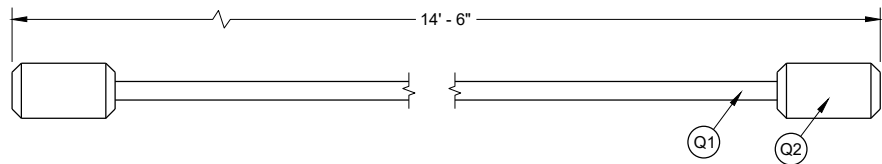


**PLAN VIEW  
SLOTTED THRIE BEAM RAIL E4**

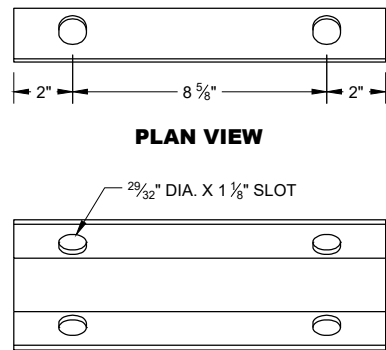
**STEEL THRIE BEAM  
BULLNOSE TERMINAL**

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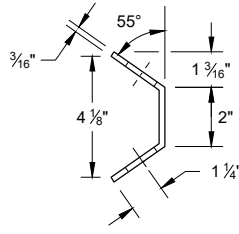




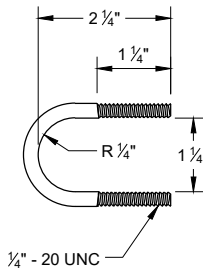
**NOSE CABLE AND SWAGE BUTTON**



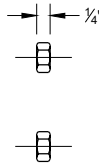
**ELEVATION VIEW  
NOSE CABLE ANCHOR (R1)**



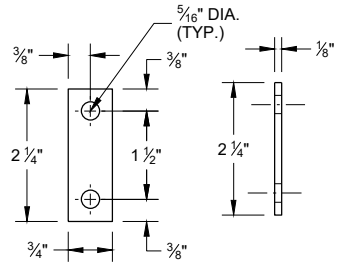
**PROFILE VIEW**



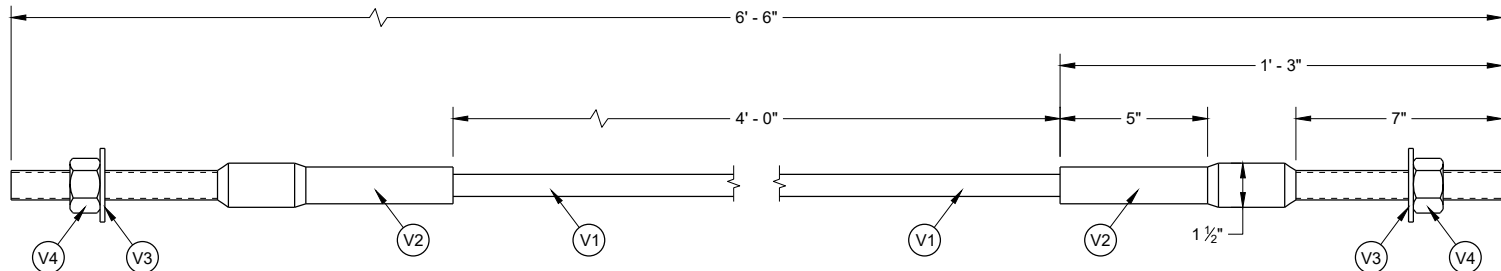
**U - BOLT  
(T1)**



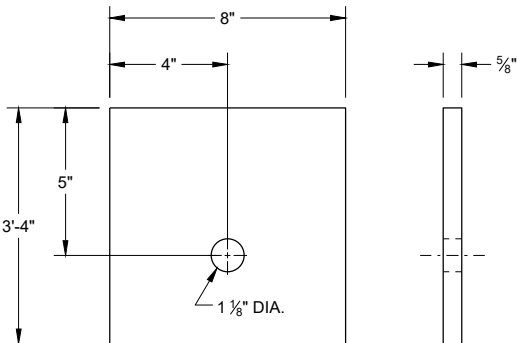
**U - BOLT  
NUT (T3)**



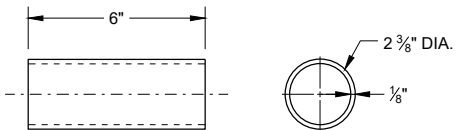
**ELEVATION VIEW PROFILE VIEW  
U - BOLT  
PLATE WASHER (T2)**



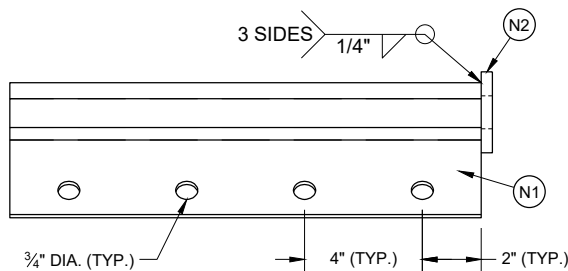
**ANCHOR CABLE ASSEMBLY**



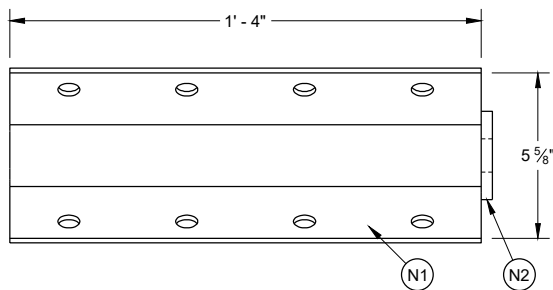
**ELEVATION VIEW PROFILE VIEW  
BCT BEARING PLATE (A3)**



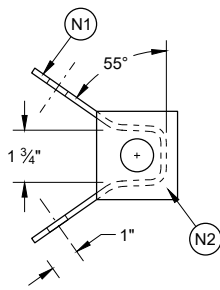
**ELEVATION VIEW PROFILE VIEW  
BCT POST SLEEVE (L2)**



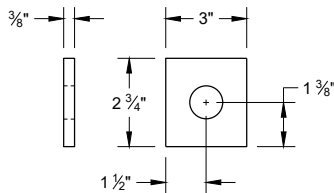
**PLAN VIEW**



**ELEVATION VIEW  
ANCHOR BRACKET ASSEMBLY (N1)**



**PROFILE VIEW**



**ANCHOR BRACKET  
END PLATE (N2)**

**STEEL THRIE BEAM  
BULLNOSE TERMINAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 280

BILL OF MATERIALS LIST

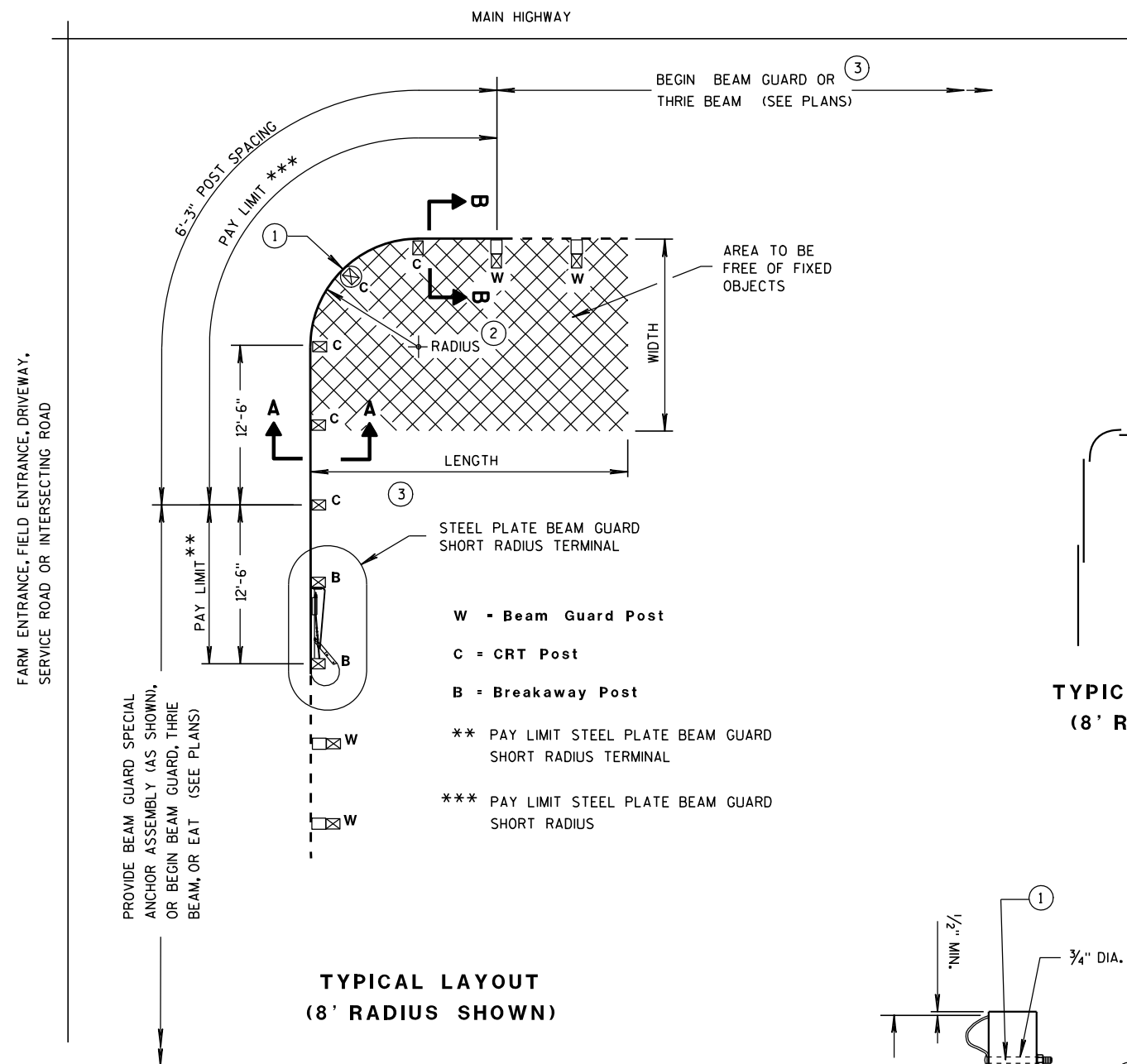
| PART NUMBER | DESCRIPTION                                   | MATERIAL SPECIFICATION                                                                                                                                                                                                                                                |
|-------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A1          | LONG FOUNDATION TUBE                          | AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                 |
| A2          | FOUNDATION TUBE                               | AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                 |
| A3          | BEARING PLATE AT POST                         | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                        |
| B1          | LOWER SLIP POST ASSEMBLY - PLATE              | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                        |
| B2          | LOWER SLIP POST ASSEMBLY - TUBE               | AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                 |
| C1          | UPPER SLIP POST ASSEMBLY - PLATE              | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                        |
| C2          | UPPER SLIP POST ASSEMBLY - POST               | AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                 |
| D1          | BLOCK FOR STEEL POST - WOOD                   | WISDOT SPEC. 614                                                                                                                                                                                                                                                      |
| D2          | TAPERED BLOCK FOR STEEL POST - WOOD           | WISDOT SPEC. 614                                                                                                                                                                                                                                                      |
| D3          | TAPERED BLOCK FOR BCT POST - WOOD             | WISDOT SPEC. 614                                                                                                                                                                                                                                                      |
| E1          | THRIE BEAM RAIL                               | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER                                                                                                                                                                                                                          |
| E2          | THRIE BEAM RAIL - SHOP BENT AND PUNCHED       | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.                                                                                                                         |
| E3          | THRIE BEAM RAIL - PUNCHED                     | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER                                                                                                                                                                                                                          |
| E4          | THRIE BEAM RAIL - SHOP BENT AND PUNCHED       | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.                                                                                                                         |
| F1          | 5/8" DIA. HEX HEAD GROUND STRUT AND YOKE BOLT | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                             |
| F2          | 5/8" DIA. GROUND STRUT AND YOKE BOLT - WASHER | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                            |
| F3          | GROUND STRUT AND YOKE BOLT - NUT              | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                      |
| G1          | 5/8 " DIA. POST BOLT                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)       |
| G2          | POST BOLT - WASHER                            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)       |
| G3          | POST BOLT - NUT                               | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |
| H1          | 7/8" DIA. SOIL TUBE BOLT                      | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5                 |
| H2          | SOIL TUBE BOLT - WASHER                       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDEN WASHER ONLY)                                                                                  |
| H3          | SOIL TUBE BOLT - NUT                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5                 |
| J1          | 16D DOUBLE HEAD NAIL                          | ASTM A153 HOT DIPPED CLASS D DOUBLE HEAD ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)                                                                                                                                                                                |
| L1          | BCT TIMBER POST                               | WISDOT SPEC. 614 S4S FINISH ON 4 SIDE                                                                                                                                                                                                                                 |
| L2          | BCT POST SLEEVE                               | AASHTO M111/ASTM A123 2 3/8" OD ASTM 53 GRADE B                                                                                                                                                                                                                       |
| M1          | W6X8.5 OR W6X9 STEEL POST                     | AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                |
| M2          | W6X8.5 OR W6X9 STEEL POST                     | AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                |
| N1          | ANCHOR BRACKET                                | AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                       |
| N2          | ANCHOR BRACKET - BEARING PLATE                | AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                       |

| PART NUMBER | DESCRIPTION                                             | MATERIAL SPECIFICATION                                                                                                                                                                                                                                                                             |
|-------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P1          | 5/8" DIA. ANCHOR BRACKET BOLT                           | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                     |
| P2          | ANCHOR BRACKET BOLT - WASHER                            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                         |
| P3          | SOIL TUBE BOLT - NUT                                    | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                   |
| Q1          | 5/8" DIA. NOSE CABLE                                    | 6X19 AASTHO M30 / ASTM A741 XIPS INDEPENDENT WIRE CORE (IWRC) PR 6X25 XIPS, IWRC NOMINAL BREAKING STRENGTH OF 41.2 KIPS.                                                                                                                                                                           |
| Q2          | NOSE CABLE-SWAGE BUTTON                                 | COLD TUFF BUTTON, S-409 SIZE NO. 12 STOCK NUMBER 1040395 OR ANY OTHER SIMILAR SIZED WAGED-GRIP-BUTTON FERRULES. ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FIELD SWAGED PER MANUFACTURERS RECOMMENDATION. NOMINAL BREAKING STRENGTH OF 41.2 KIPS.                                                |
| R1          | NOSE CABLE ANCHOR BRACKET                               | AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                                                    |
| S1          | 5/8" DIA. SPLICE BOLT - BOLT                            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                       |
| S2          | SPLICE - BOLT NUT                                       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD 5/8" ASTM A563DH OR SAE J995 GRADE 5                        |
| T1          | 1/4" DIA. NOSE CABLE - U BOLT                           | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                         |
| T2          | U-BOLT - PLATE WASHER                                   | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                        |
| T3          | U-BOLT NUT                                              | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                 |
| U1          | 7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT          | ASTM A153 OR B695 CLASS 55 OR F2329 UNC FULLY THREADED HEX HEAD TAP BOLT ASTM A449 OR SAE J429 GRADE 5                                                                                                                                                                                             |
| U2          | 7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT - WASHER | ASTM F436 TYPE I (HARDEN TYPICALLY USED WITH STEEL) GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO POST BOLT CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 55, F2329                              |
| U3          | SLIP POST ASSEMBLY - BREAKAWAY BOLT - NUT               | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / STM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                   |
| V1          | ¾" DIA. BCT CABLE                                       | AASHTO M30 / ASTM A741 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN BREAKING STRENGTH OF 42.7 KIPS                                                                             |
| V2          | ANCHOR CABLE-SWAGE FITTING                              | UNC ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FACTORY SWAGED. MIN. BREAKING STRENGTH OF 42.7 KIPS. ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS." |
| V3          | 1" DIA. ANCHOR CABLE-WASHER                             | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                        |
| V4          | 1" DIA. ANCHOR CABLE-NUT                                | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                 |
| W1          | REFLECTOR                                               | SEE SDD 15A4                                                                                                                                                                                                                                                                                       |

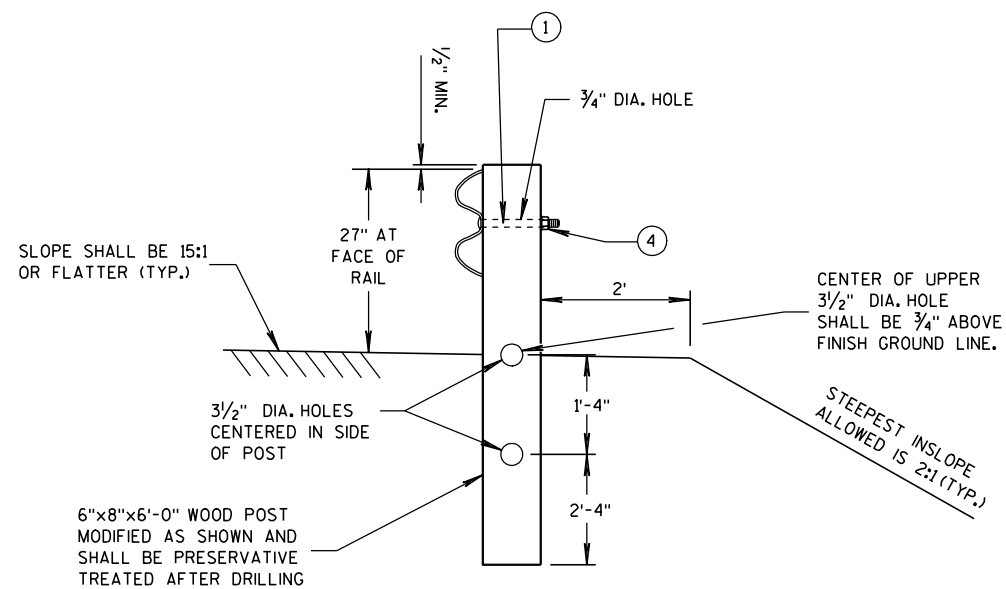
STEEL THRIE BEAM  
BULLNOSE TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2022 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 281  
FHWA



TYPICAL LAYOUT  
(8' RADIUS SHOWN)



SECTION A-A  
(CRT POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

TYPICAL LAP SPLICES  
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2, UNLESS NOTED OTHERWISE.

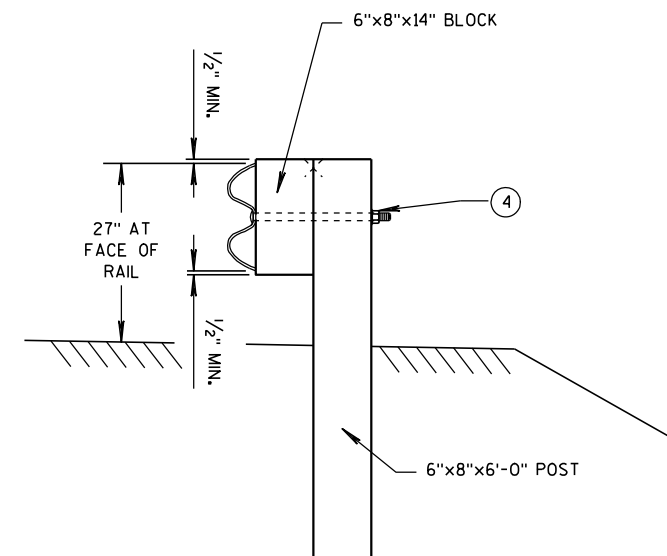
SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

- ① ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.
- ② RADIUS FROM 8' - 36'. SEE PLAN.
- ③ HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.
- ④ 5/8"  $\phi$  X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

| RADIUS | NUMBER OF CRT POSTS | *NUMBER AND LENGTH OF CURVED RAILS | REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH) |
|--------|---------------------|------------------------------------|------------------------------------------------------|
| 8'     | 5                   | 1 at 12.5'                         | 25' x 15'                                            |
| 16'    | 7                   | 1 at 25'                           | 30' x 15'                                            |
| 24'    | 9                   | 1 at 25' and 1 at 12.5'            | 40' x 20'                                            |
| 32'    | 11                  | 2 at 25'                           | 50' x 20'                                            |

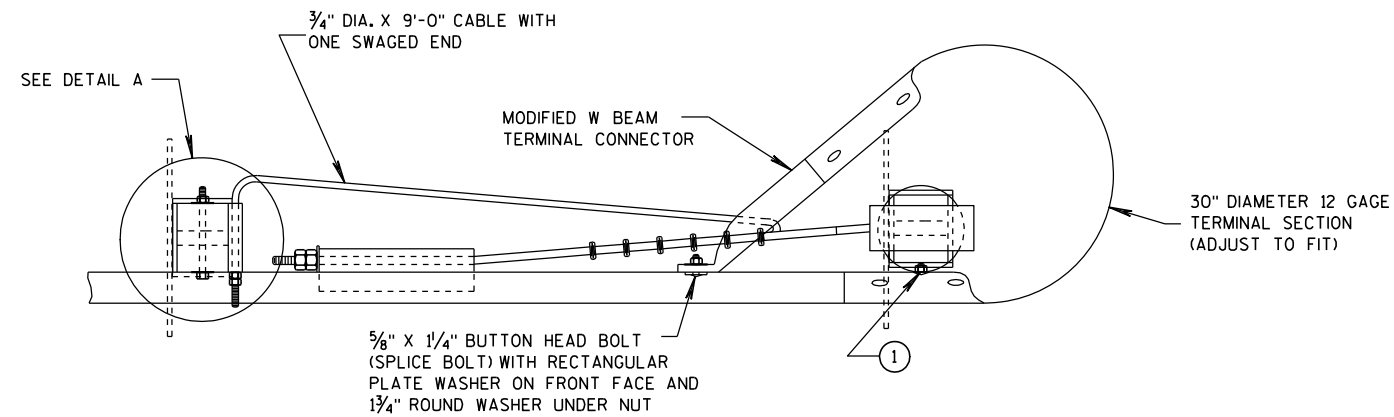
\* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



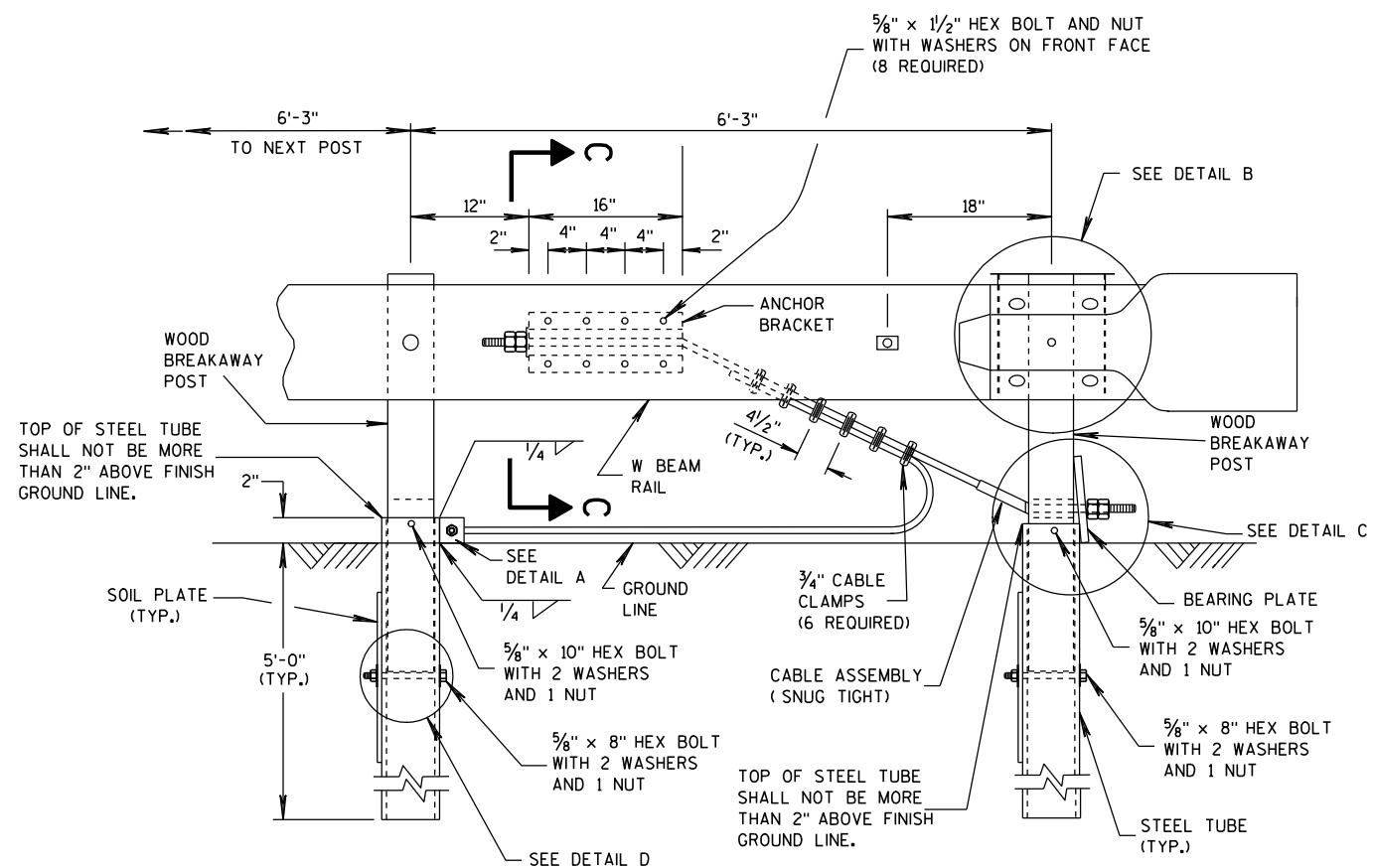
SECTION B-B  
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD  
SHORT RADIUS TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



PLAN VIEW

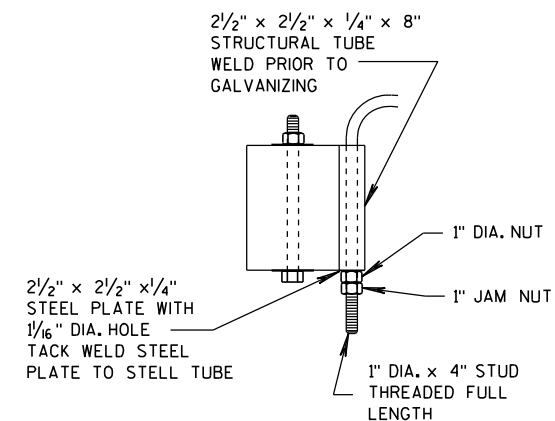


ELEVATION VIEW

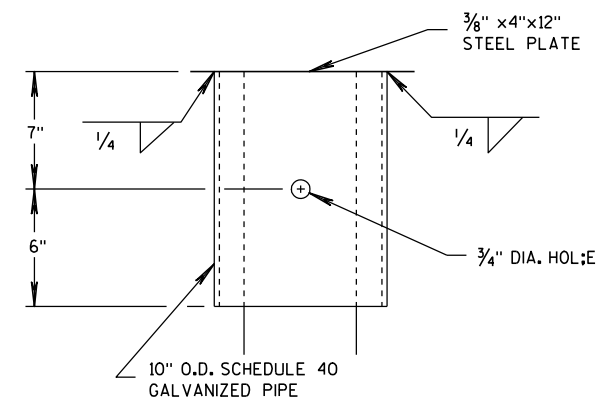
## STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

## GENERAL NOTES

- 1 ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A 5/8" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.
- INSTALL GALVANIZED 3/4" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



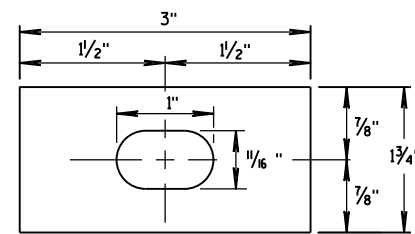
DETAIL A



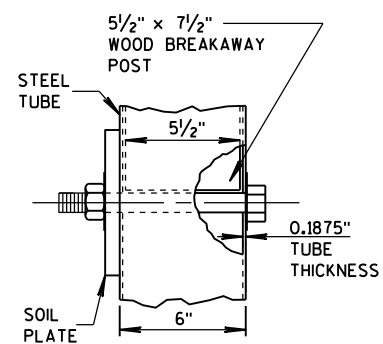
DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

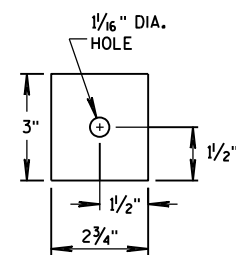
STEEL PLATE BEAM GUARD  
SHORT RADIUS TERMINALSTATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



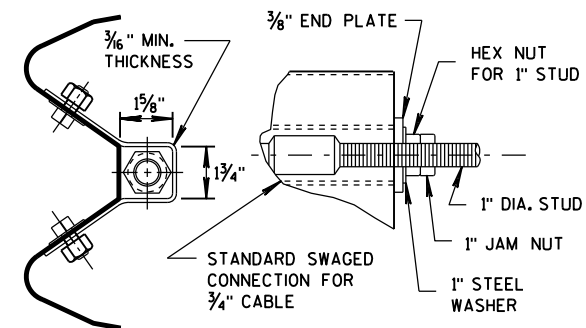
# RECTANGULAR PLATE WASHER



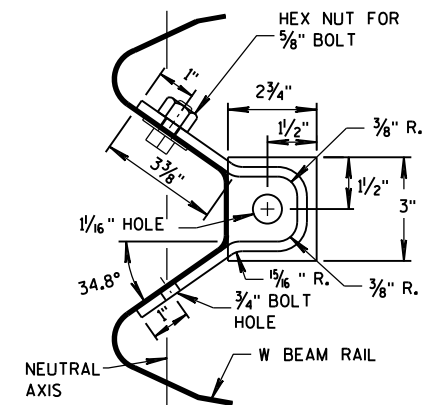
### DETAIL D



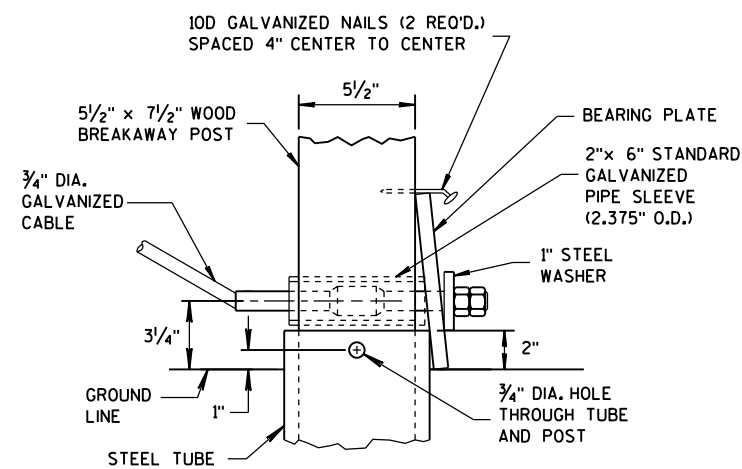
## END PLATE



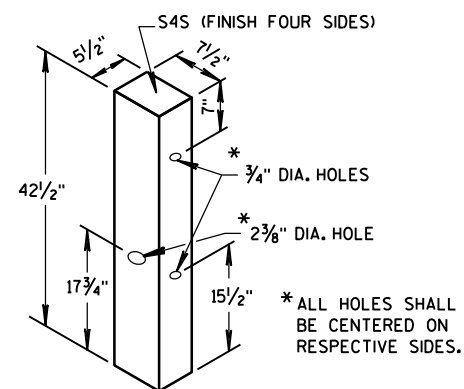
**SECTION C-C**  
**(END PLATE REMOVED)**



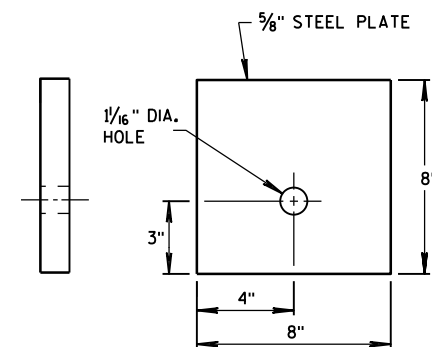
## ANCHOR BRACKET



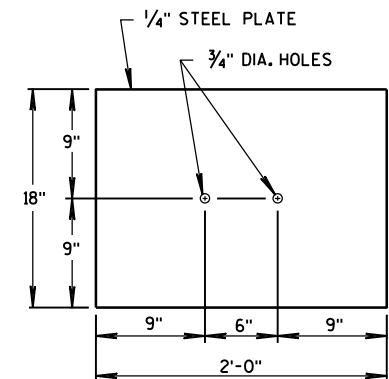
### DETAIL C



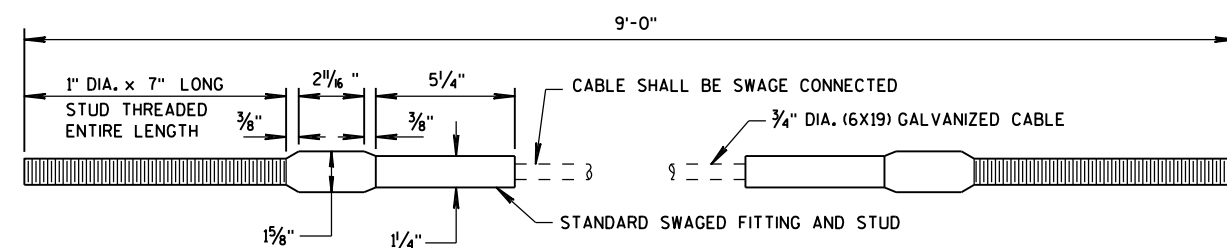
## WOOD BREAKAWAY POST



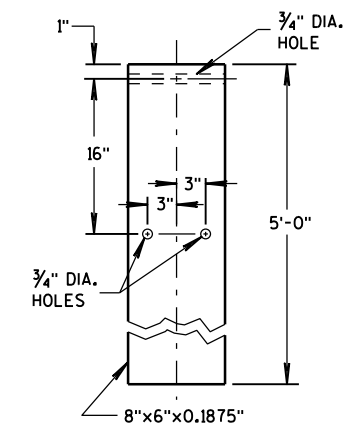
## BEARING PLATE



## SOIL PLATE

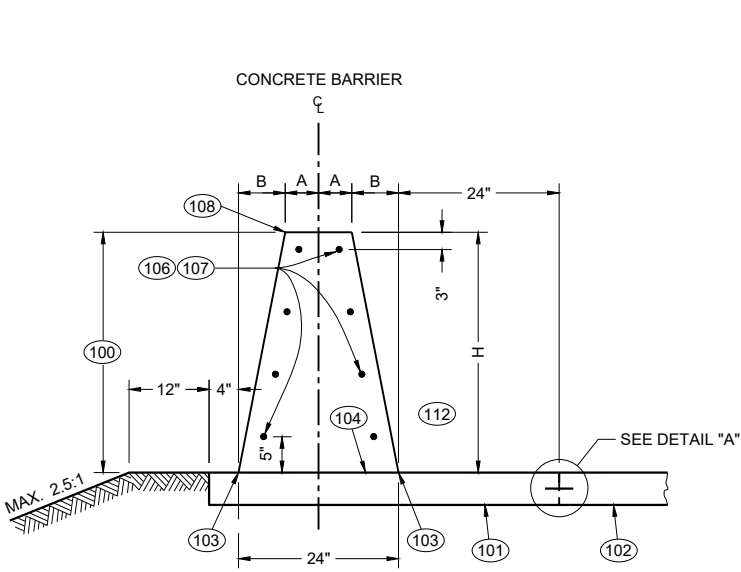


## CABLE ASSEMBLY



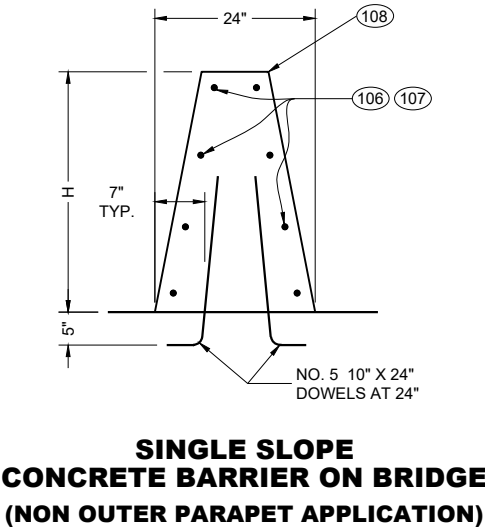
## STEEL TUBE

|                                                    |                                                     |
|----------------------------------------------------|-----------------------------------------------------|
| STEEL PLATE BEAM GUARD<br>SHORT RADIUS TERMINAL    |                                                     |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                     |
| APPROVED<br>12/18/08<br>DATE                       | /S/ Jerry H. Zogg<br>ROADWAY STANDARDS ENGINEER 284 |
| FHWA                                               |                                                     |

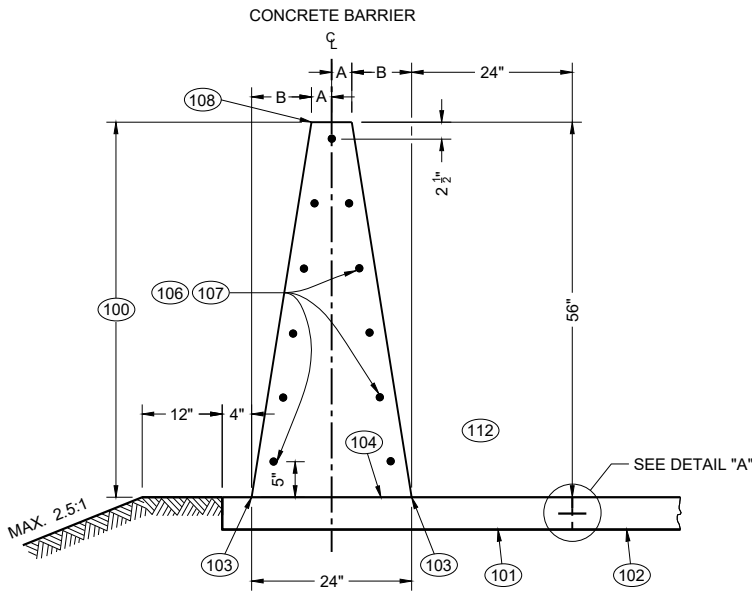


**32 - INCH, 36 - INCH OR 42 - INCH  
SINGLE SLOPE CONCRETE BARRIER**  
(TYPE S32, TYPE S36, TYPE S42)

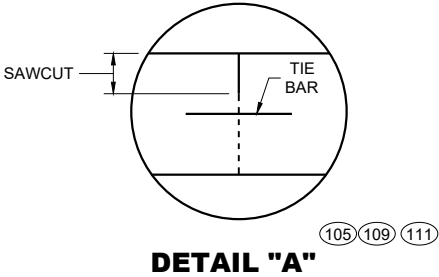
| TABLE "A"                     |             |             |                                 |
|-------------------------------|-------------|-------------|---------------------------------|
| BARRIER HEIGHT<br>H<br>INCHES | A<br>INCHES | B<br>INCHES | NUMBER OF<br>NO. 5 BARS<br>EACH |
| 32                            | 7           | 5           | 8                               |
| 36                            | 6 ¼         | 5 ¾         | 8                               |
| 42                            | 5 ¼         | 6 ¾         | 10                              |
| 56                            | 3           | 9           | 11                              |



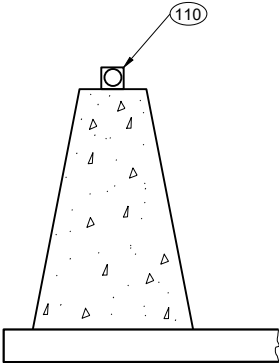
**SINGLE SLOPE  
CONCRETE BARRIER ON BRIDGE**  
(NON OUTER PARAPET APPLICATION)



**56 - INCH SINGLE  
SLOPE CONCRETE BARRIER**  
(TYPE S56)



**DETAIL "A"**



**DELINEATION**

**GENERAL NOTES**

WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

LOCATE EXPANSION JOINTS IN CONCRETE BARRIER SHALL AT ALL DECK AND PRINCIPAL WALL JOINTS. FILL EXPANSION JOINT WITH EXPANSION JOINT MATERIAL. SEAL THE EXPANSION JOINT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.

2" CLEAR COVER TYPICAL

ANCHORS ARE REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN IN THIS SDD OR DETAIL SHOWN ON SDD 14B33. ANCHORS INCIDENTAL TO CBSS.

PROVIDE A 1" DEEP CONTRACTION JOINT IN BARRIER PAD AND BARRIER. JOINT IS TO MATCH ADJACENT CONCRETE JOINTS. NO DOWEL BARS ARE REQUIRED FOR BARRIER PAD. IF ADJACENT TO ASPHALT, CONTRACTION JOINT IS REQUIRED EVERY 15'.

ALL REBAR SHALL BE EPOXY COATED M31 TYPE S. SEE STANDARD SPECIFICATION 505.

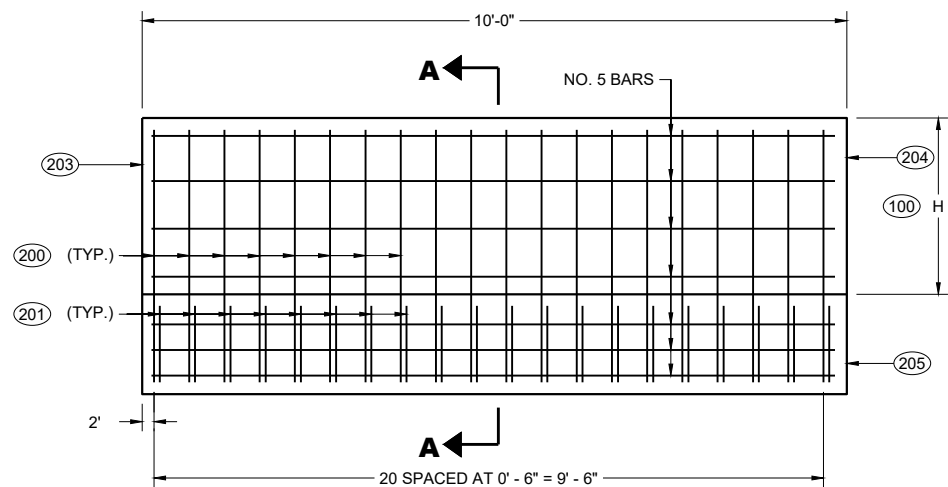
CONCRETE BARRIER, UPPER CONCRETE BARRIER, LOWER CONCRETE BARRIER, CONCRETE BARRIER PAD, AND FOOTINGS ARE TERMS USED TO DESCRIBE PARTS OF SINGLE SLOPE CONCRETE BARRIER BID ITEMS. THESE PARTS ARE INCIDENTAL TO THE SINGLE SLOPE CONCRETE BARRIER BID ITEMS.

- (100) CONCRETE BARRIER
- (101) CONCRETE BARRIER PAD
- (102) PAVEMENT
- (103) WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1 ½", USE TYPE A SINGLE SLOPE BARRIER.
- (104) OPTIONAL CONSTRUCTION JOINT.
- (105) CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAT 10'.
- (106) STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL IS 2' BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
- (107) NO. 5 CONTINUOUS BARS EVENLY SPACED (SEE TABLE "A").
- (108) USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
- (109) CONCRETE BARRIER PAD UNDER CBSS MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ½ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
- (110) SEE SDD 15A04 FOR DELINEATOR DETAILS AND SPACING.
- (111) SEE SDD 13C01 FOR DETAILS TYPING CONCRETE BARRIER TO ADJACENT CONCRETE
- (112) TRAFFIC SIDE

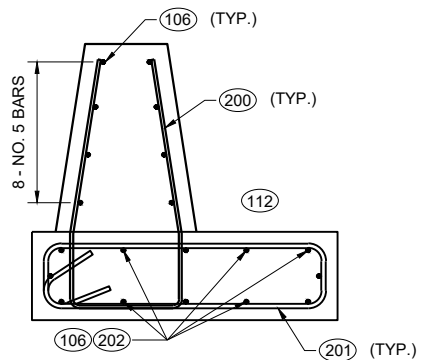
**CONCRETE BARRIER  
SINGLE SLOPE (CBSS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

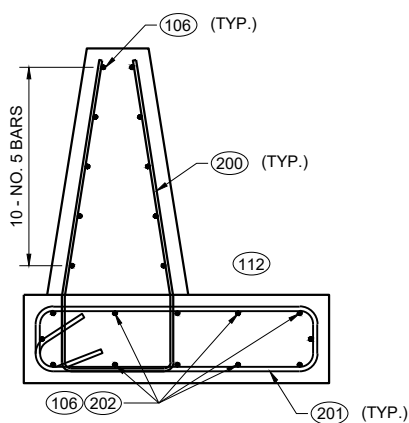




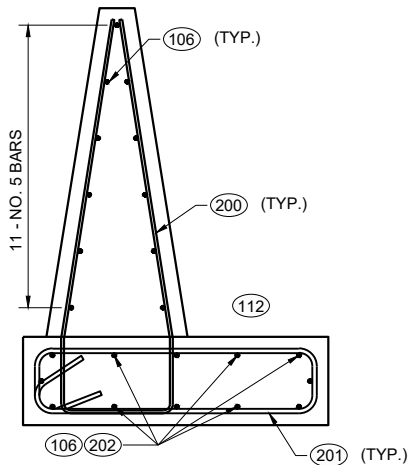
END ANCHOR SINGLE  
SLOPE CONCRETE BARRIER



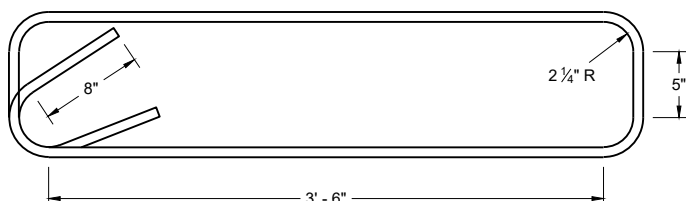
32" AND 36" CBSS



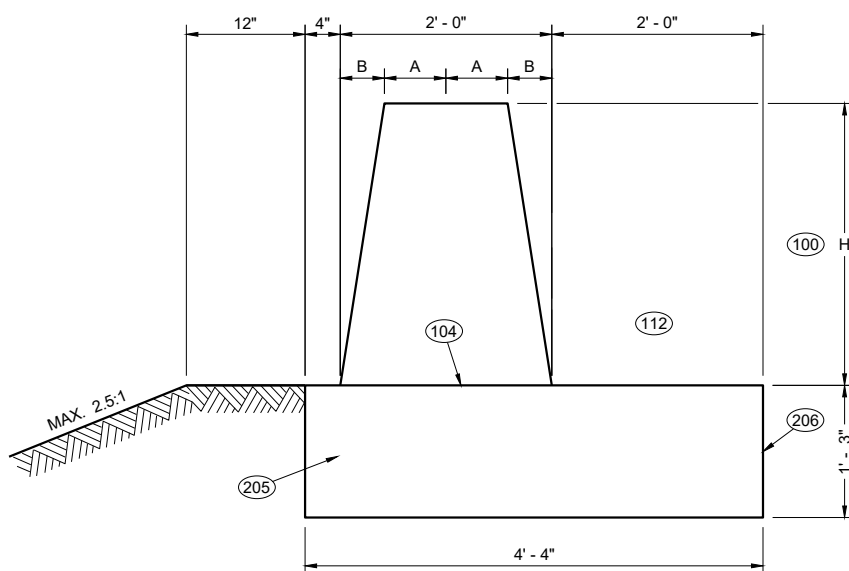
42" CBSS



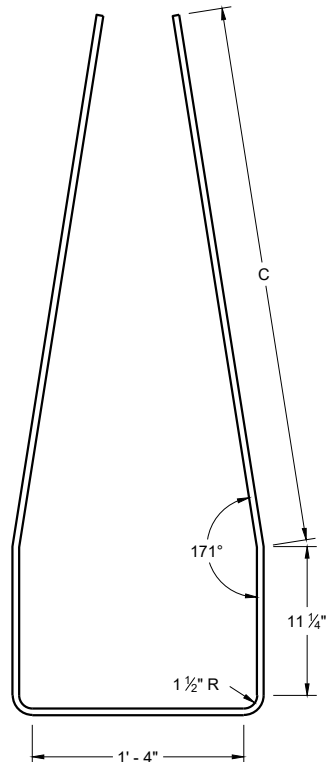
56" CBSS



STIRRUP BAR  
BENDING DETAIL



SECTION A - A



V1 BAR  
BENDING DETAIL

TABLE "B"

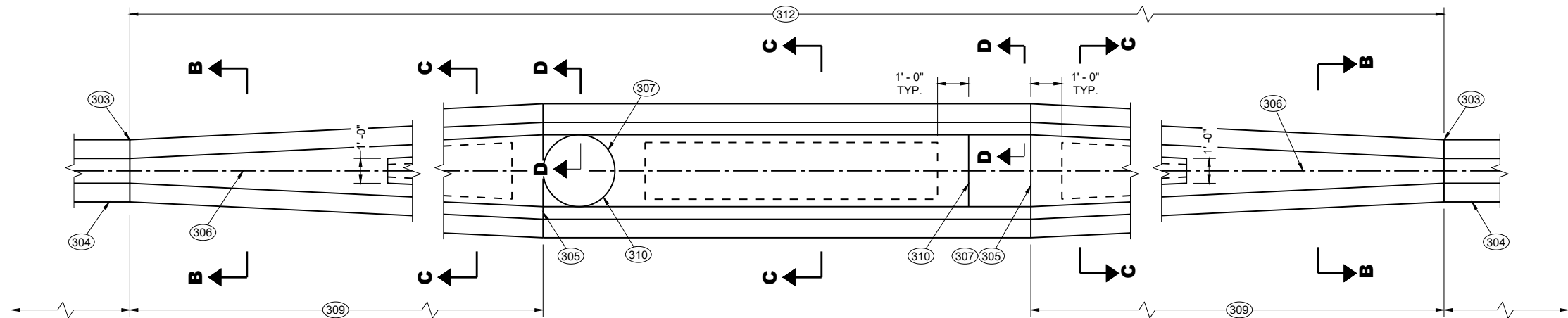
| BARRIER HEIGHT<br>H<br>INCHES | C<br>INCHES |
|-------------------------------|-------------|
| 32                            | 2' - 6"     |
| 36                            | 2' - 11"    |
| 42                            | 3' - 4"     |
| 56                            | 4' - 6 1/2" |

GENERAL NOTES

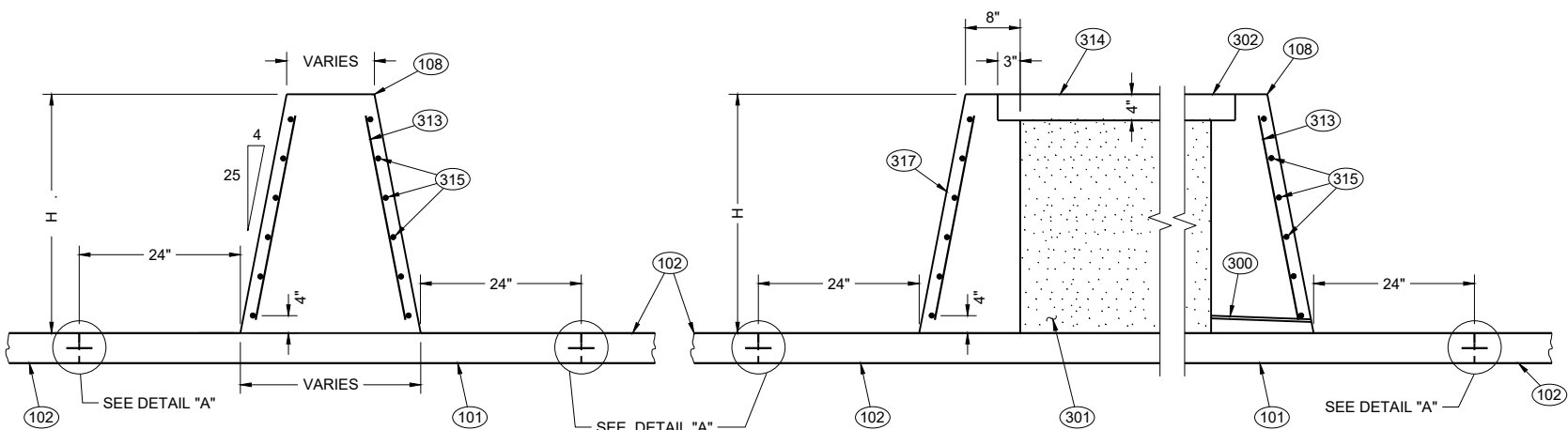
- (200) V1 BARS ARE NO. 5 BARS. (SEE BAR BENDING DETAIL)
- (201) STIRRUPS ARE NO. 6 BARS. (SEE BAR BENDING DETAIL)
- (202) TWELVE (12) NO. 5 BARS EVENLY SPACED
- (203) END OF INSTALLATION OR EXPANSION JOINT.
- (204) SEE COLD JOINT DETAIL TO CONNECT END ANCHOR SINGLE SLOPE CONCRETE BARRIER TO SINGLE SLOPE CONCRETE BARRIER.
- (205) FOOTING
- (206) DO NOT TIE TO FOOTING TO ADJACENT PAVEMENT.

CONCRETE BARRIER  
SINGLE SLOPE (CBSS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

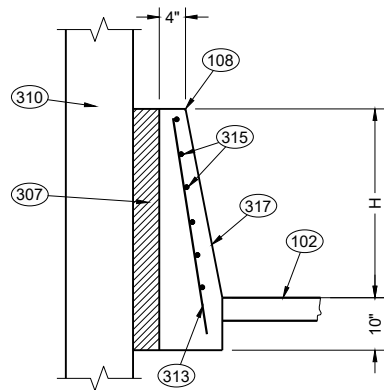


**LARGE FIXED OBJECTS PROTECTION  
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)**

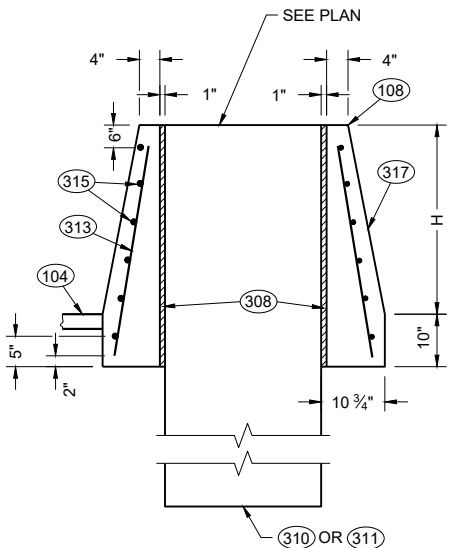


**SECTION B - B**

**SECTION C - C**



**SECTION D - D**



**SECTION E - E**

**TABLE "C"**

| BARRIER HEIGHT<br>H<br>INCHES | BAR SIZE | NUMBER OF<br>BARS EACH |
|-------------------------------|----------|------------------------|
| 32                            | 4        | 6                      |
| 36                            | 4        | 6                      |
| 42                            | 5        | 6                      |
| 56                            | 5        | 6                      |

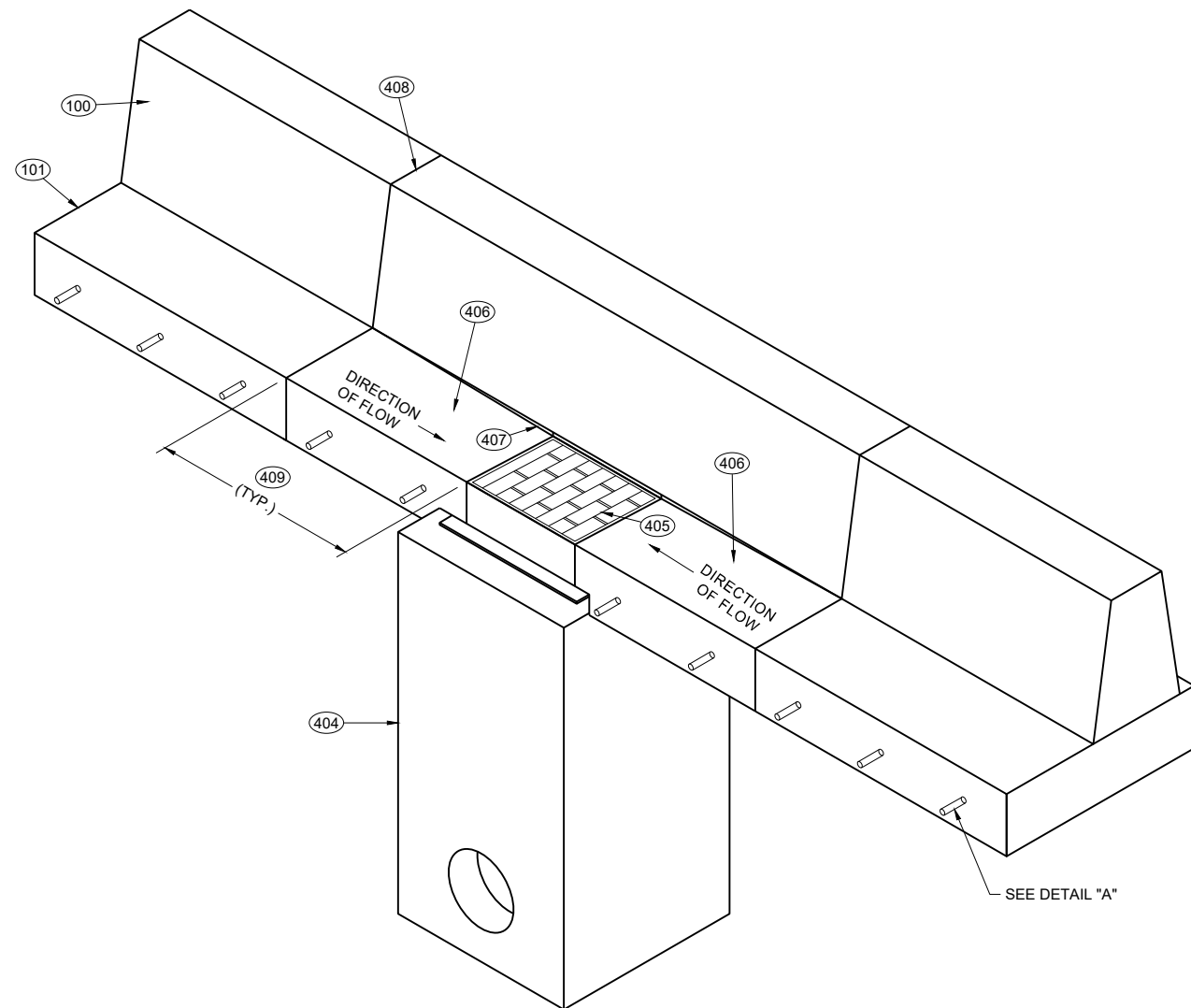
**GENERAL NOTES**

- (300) INSTALL 1 INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM ONE DRAIN CAVITY.
- (301) BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.
- (302) LEVEL THE TOP OF CONCRETE BARRIER CAP ACROSS TOP OF BARRIER. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
- (303) USE COLD JOINTS BETWEEN FIXED OBJECT PROTECTION AND CONCRETE BARRIER ANCHOR.
- (304) INSTALL END ANCHOR SINGLE SLOPE CONCRETE BARRIER.
- (305) SEE COLD JOINT DETAIL
- (306) CENTERLINE OF CONCRETE BARRIER.
- (307) INSTALL 4" EXPANDED POLYSTYRENE BETWEEN COLUMN AND CONCRETE BARRIER.
- (308) INSTALL 1" EXPANDED POLYSTYRENE BETWEEN PEDESTAL AND CONCRETE BARRIER.
- (309) 20:1 MIN. TRANSITION.
- (310) COLUMN
- (311) PEDESTAL
- (312) LIMITS OF PAYMENT FOR LARGE FIXED OBJECT PROTECTION (SEE PLAN)
- (313) NO. 4 BARS SPACED 12" CENTER TO CENTER (TYP.)
- (314) USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.
- (315) SEE TABLE "C" FOR BAR INFORMATION
- (316) ELECTRICAL PULL BOX FOR SIGN FLUSH WITH TOP OF CONCRETE BARRIER.
- (317) VARIABLE SLOPE

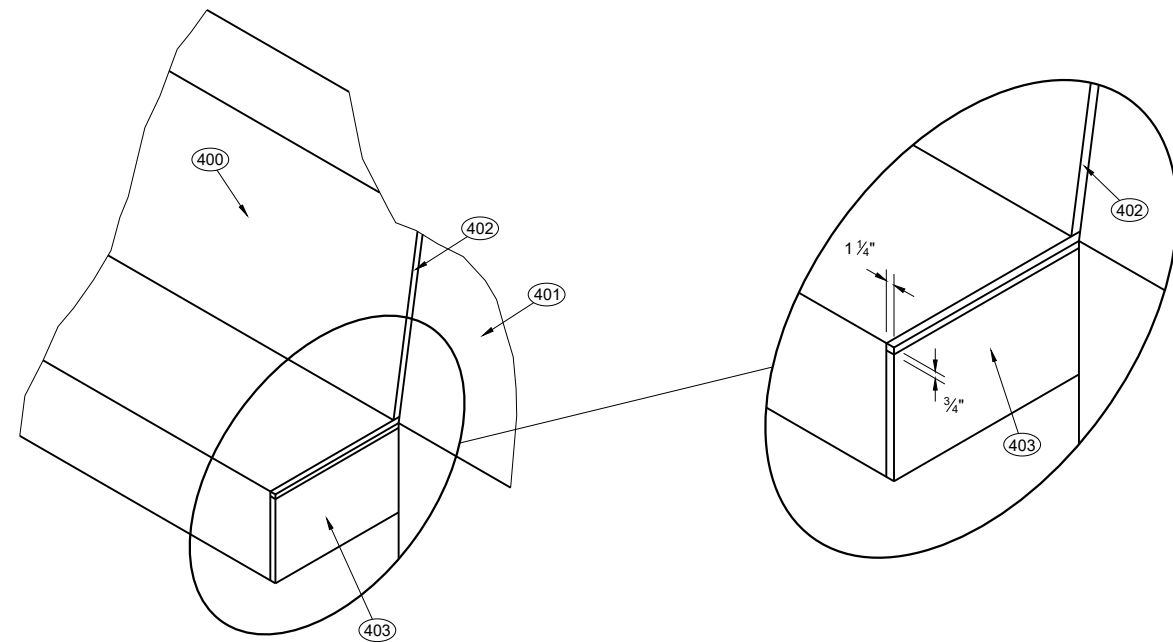
**CONCRETE BARRIER  
SINGLE SLOPE (CBSS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**DRAINAGE DETAIL****GENERAL NOTES**

- (400) END ANCHOR SINGLE SLOPE CONCRETE BARRIER.
- (401) PARAPET, SIGN BRIDGE BASE, LIGHT POLE BASE OR OTHER OBJECT SINGLE SLOPE CONCRETE BARRIER CANNOT TIE INTO.
- (402) JOINT SEAL CONFORMING TO STANDARD SPECIFICATION 415.2.6
- (403) EXPANSION JOINT MATERIAL.
- (404) INLET (SEE PLAN)
- (405) INLET COVER BW (SEE PLAN)
- (406) WARP PAN TO MATCH INLET COVER.
- (407) EXTEND BARRIER SLOPE TO INLET. SEE PLAN FOR THE LENGTH OF EXTENSION.
- (408) CONTRACTION JOINT.
- (409) WHEN ADJACENT TO CONCRETE PAVEMENT OR SHOULDER, JOINT SHOULD MATCH CONCRETE JOINTS. OTHERWISE, 3' (TYP.). SEE SDD 13C18 FOR MORE INFORMATION.

**EXPANSION JOINT DETAIL**

**CONCRETE BARRIER  
SINGLE SLOPE (CBSS)**

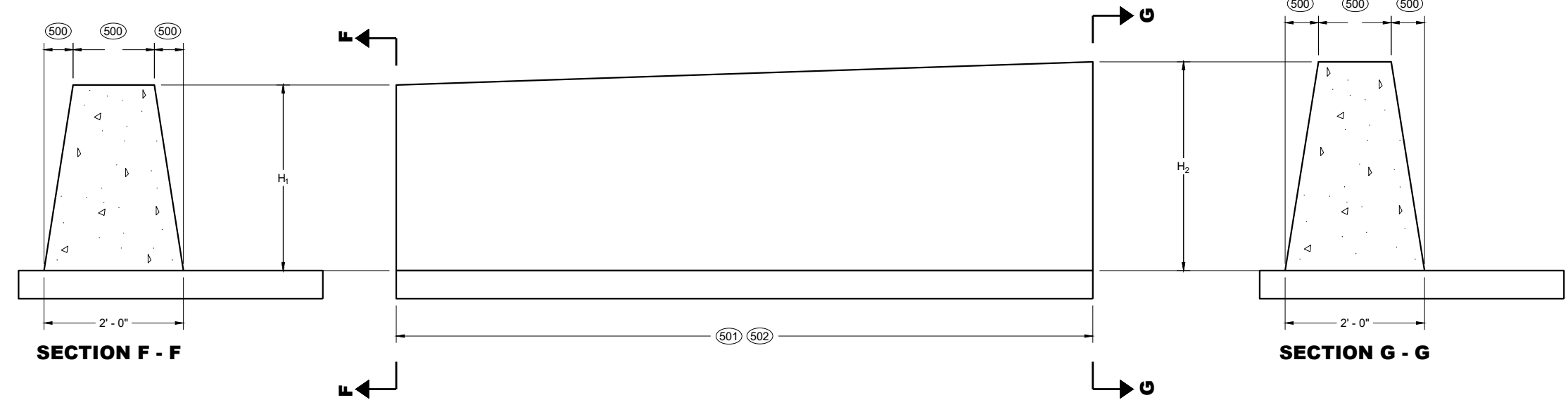
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

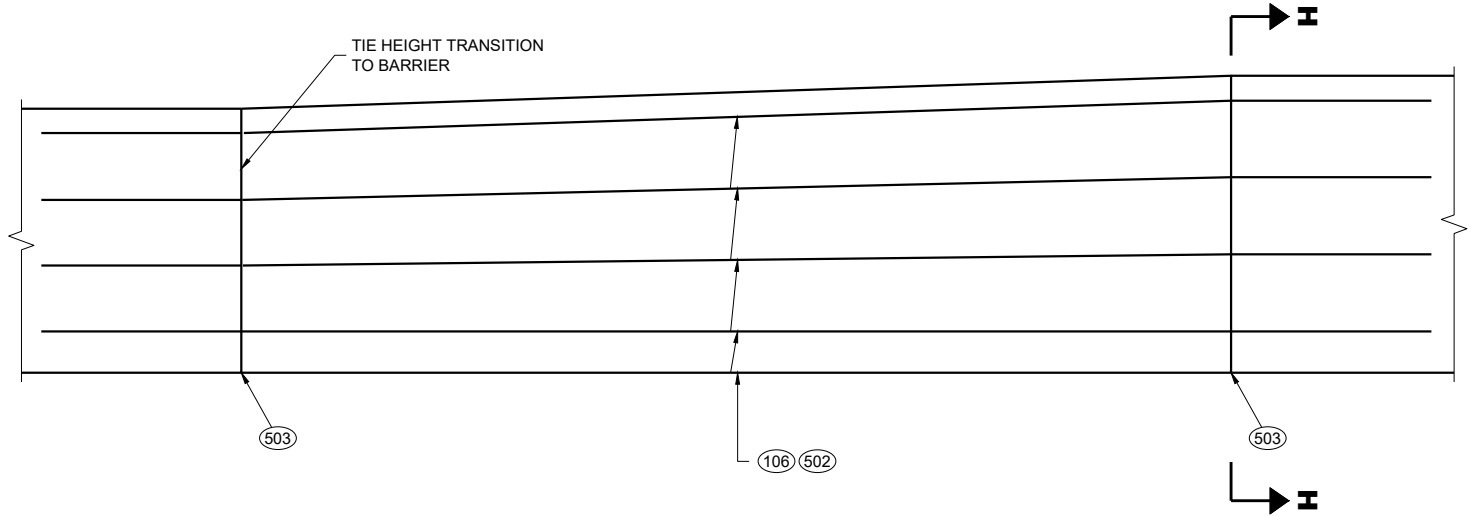
USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

- 500 SEE TABLE "A" FOR DIMENSIONS
- 501 SEE TABLE "D"
- 502 MULTIPLE HEIGHT TRANSITION MAY BE USED IN SEQUENCE TO GET APPROPRIATE HEIGHT.
- 503 COLD JOINT
- 504 BARRIER REBAR (SEE OTHER DETAILS FOR BAR SIZE, QUANTITY AND LOCATION). SINGLE SLOPE BARRIER SHOWN. SIMILAR DETAIL CAN BE USED FOR COLD JOINT IN

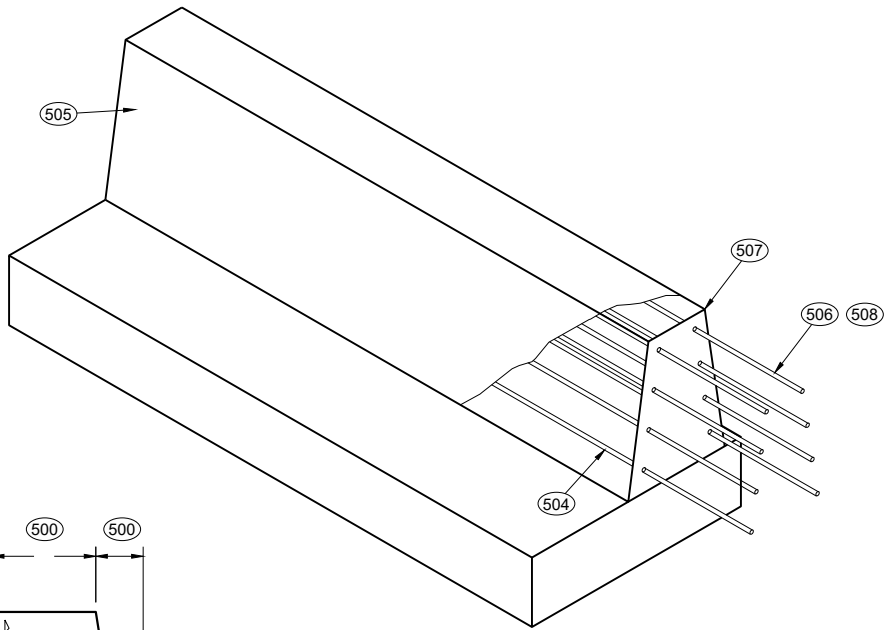
- 505 END ANCHORS AND TRANSITIONS.
- 506 NO. 5 REBAR FOR SPLICE. 3' OF SPLICE REBAR IS LAPPED AND TIED TO BARRIER REBAR. EXTEND 3' OF SPLICE REBAR BEYOND END OF POUR. ALL BARS ARE FIRMLY TIED OR CONNECTED. EVERY REBAR IN THE BARRIER SECTION REQUIRES A SPLICE BAR.
- 507 END OF POUR.
- 508 LAP AND TIE 3' OF NEXT POUR'S REBAR TO SPLICE REBAR.



DOUBLE COLD JOINT HEIGHT TRANSITION



STEEL REINFORCEMENT DETAIL

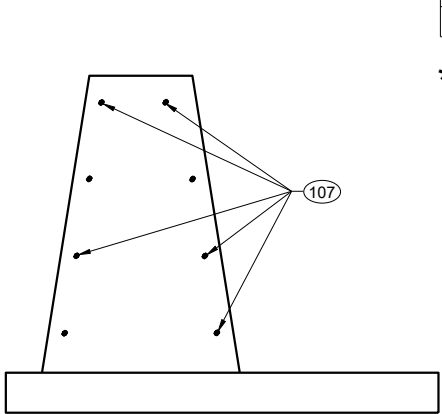


COLD JOINT DETAIL

TABLE "D"

| H <sub>1</sub> | H <sub>2</sub> | L *      | NUMBER OF NO. 5 BARS |
|----------------|----------------|----------|----------------------|
| 32"            | 36"            | 10' - 0" | 8                    |
| 36"            | 42"            | 10' - 6" | 10                   |
| 42"            | 56"            | 24' - 6" | 11                   |

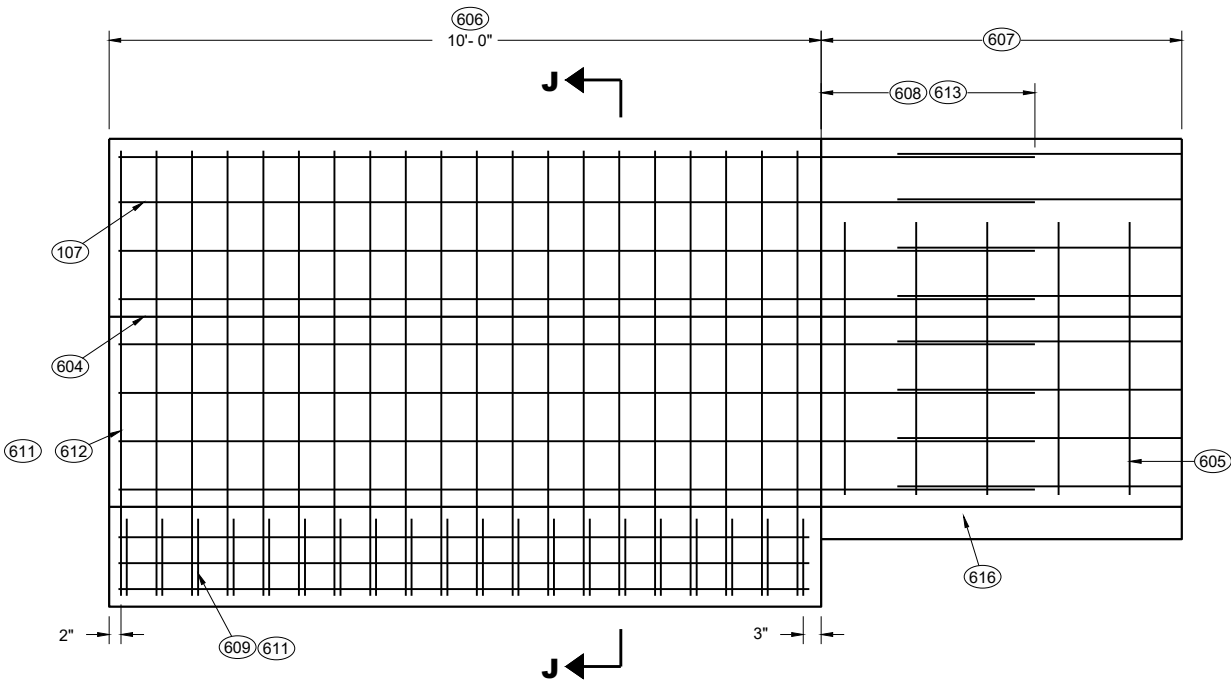
\* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



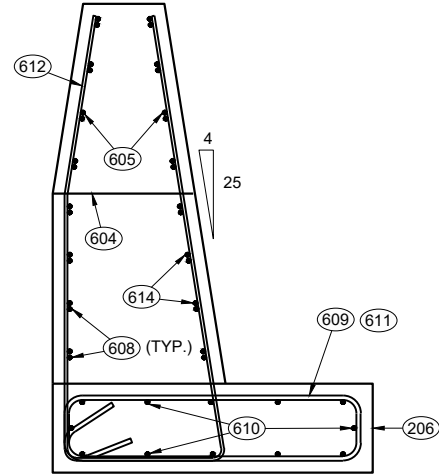
SECTION H - H

CONCRETE BARRIER  
SINGLE SLOPE (CBSS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

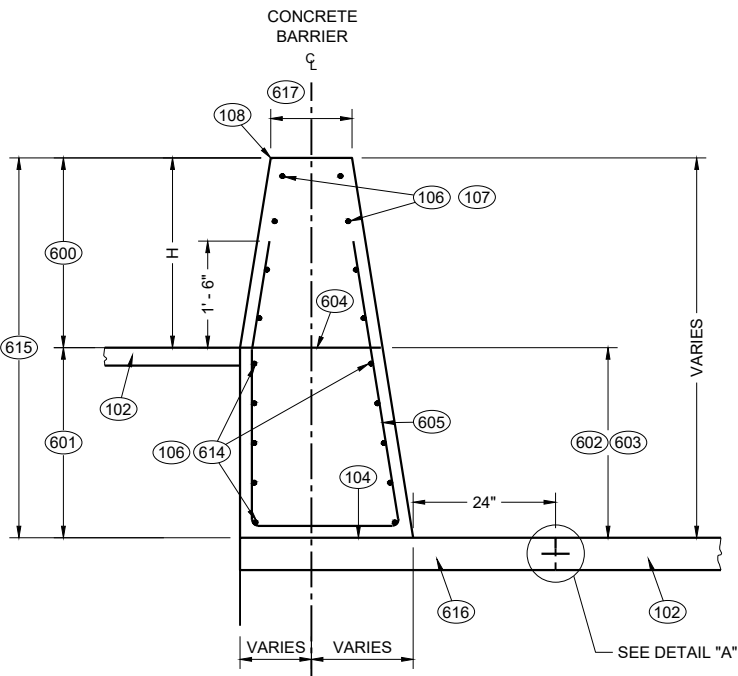


**END ANCHOR MEDIAN BARRIER  
AND RETAINING WALL**

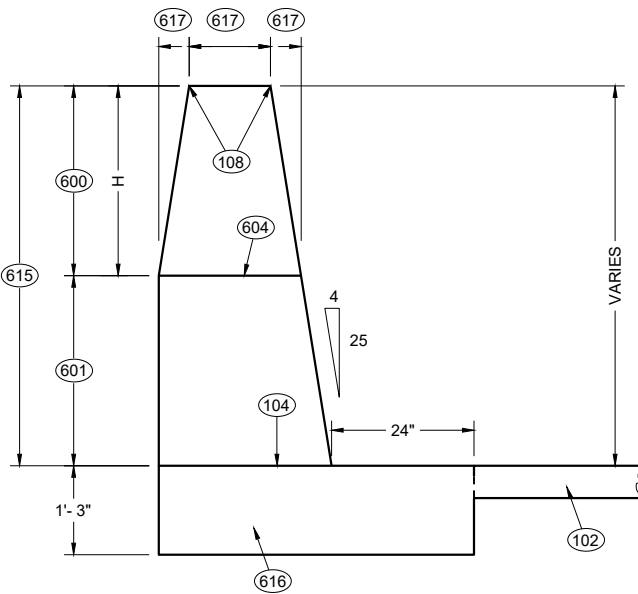


**SECTION J - J  
END ANCHOR AND MEDIAN WALL END  
ANCHOR REINFORCEMENT DETAIL**

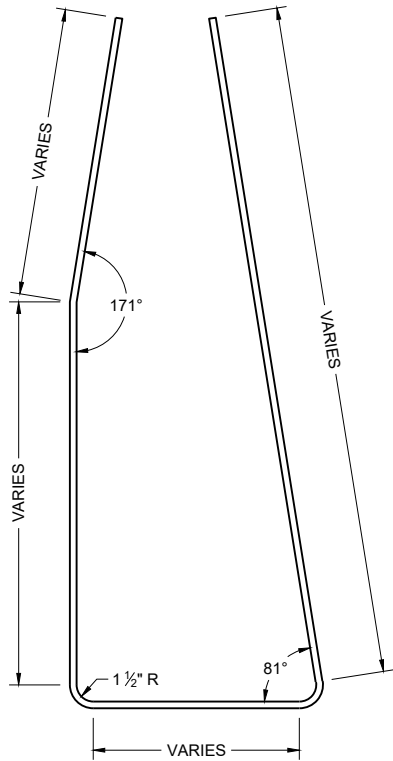
- GENERAL NOTES**
- (600) UPPER CONCRETE BARRIER
  - (601) LOWER CONCRETE BARRIER
  - (602) MAX HEIGHT 36".
  - (603) VERTICAL OFFSET FROM TOP ROADWAY SURFACES
  - (604) OPTIONAL CONSTRUCTION JOINT WHEN HEIGHT IS GREATER THAN 1 ½".
  - (605) NO. 4 BARRIER LOOP BARS ARE NOT REQUIRED FOR ROADWAY OFFSETS ARE LESS THAN 1'-0", EXCEPT WHEN USED IN ANCHORS. BARRIER LOOP BARS ARE SPACED 12" CENTER TO CENTER OUTSIDE OF MEDIAN BARRIER AND RETAINING WALL END ANCHOR.
  - (606) SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL ANCHOR
  - (607) SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (SEE OTHER DETAILS)
  - (608) NO. 5 REBAR 3' OF LAP OF LONGITUDINAL STEEL.
  - (609) NO. 6 REBAR END ANCHOR FOOTING LOOP
  - (610) TWELVE (12) NO. 5 BARS EVENLY SPACED.
  - (611) SS ANCHOR END LOOP AND END ANCHOR FOOTING LOOP ARE SPACED 6" CENTER TO CENTER.
  - (612) END ANCHOR LOOP BAR IS NO. 5 REBAR.
  - (613) SEE COLD JOINT DETAIL.
  - (614) SEE TABLE "E" FOR REQUIRED REBAR
  - (615) TOTAL BARRIER HEIGHT (SEE PLAN FOR HEIGHT)
  - (616) FOR SOME LOCATIONS, NO PAN IS NEEDED. SEE OTHER DETAILS.
  - (617) SEE TABLE "A" FOR DIMENSIONS



**SINGLE SLOPE CONCRETE  
BARRIER AND RETAINING WALL  
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)  
(BETWEEN ADJACENT ROADWAYS)**



**SECTION J - J  
MEDIAN BARRIER AND RETAINING  
WALL END ANCHOR DIMENSIONS**



**LOOP BAR  
BENDING DETAIL**



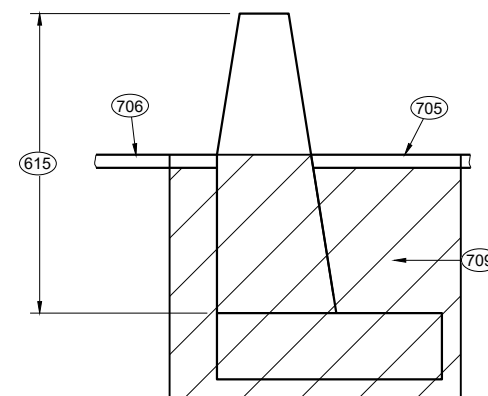
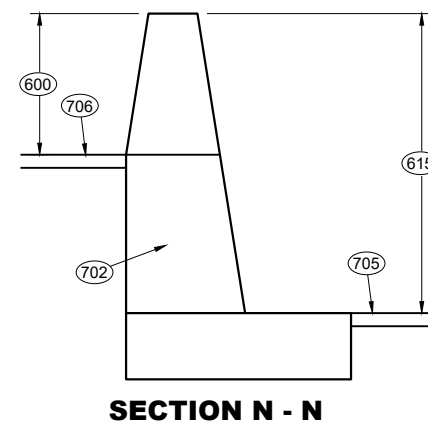
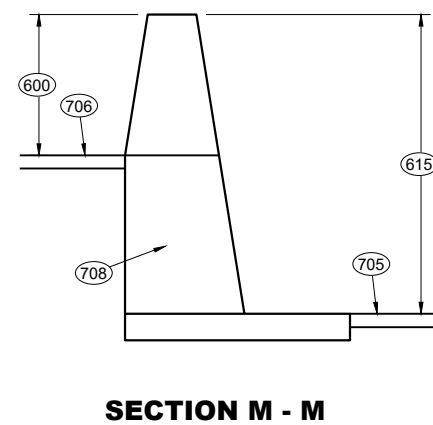
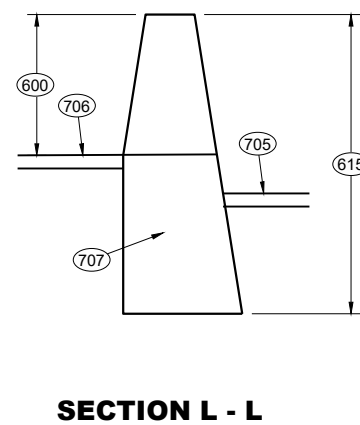
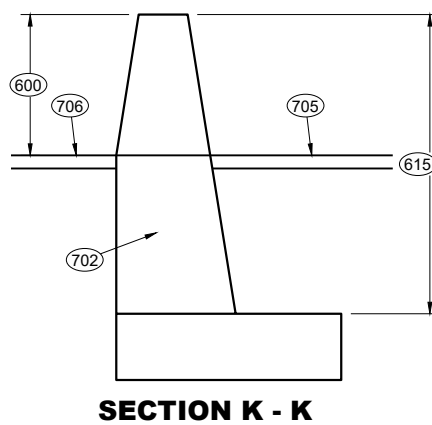
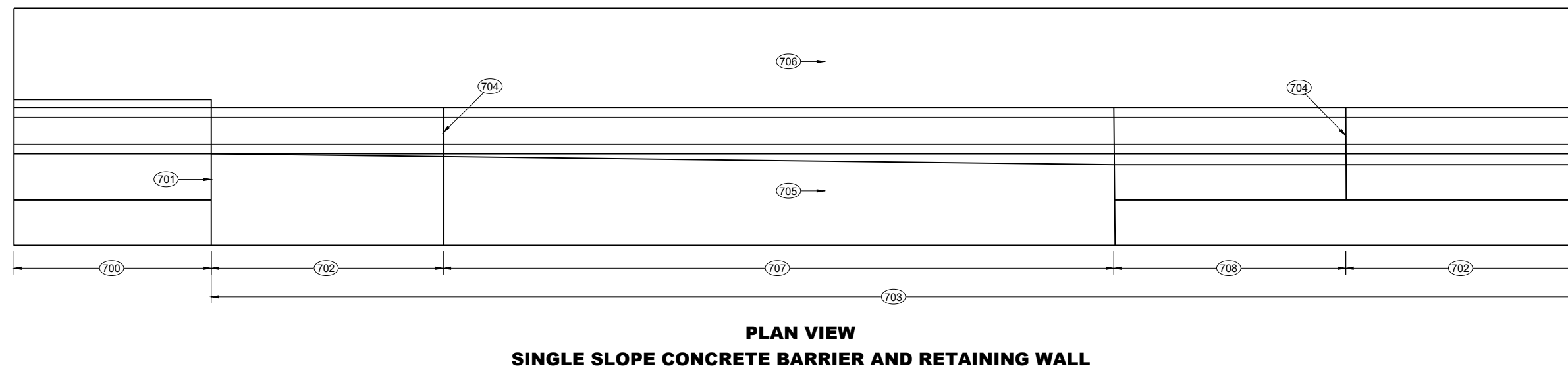
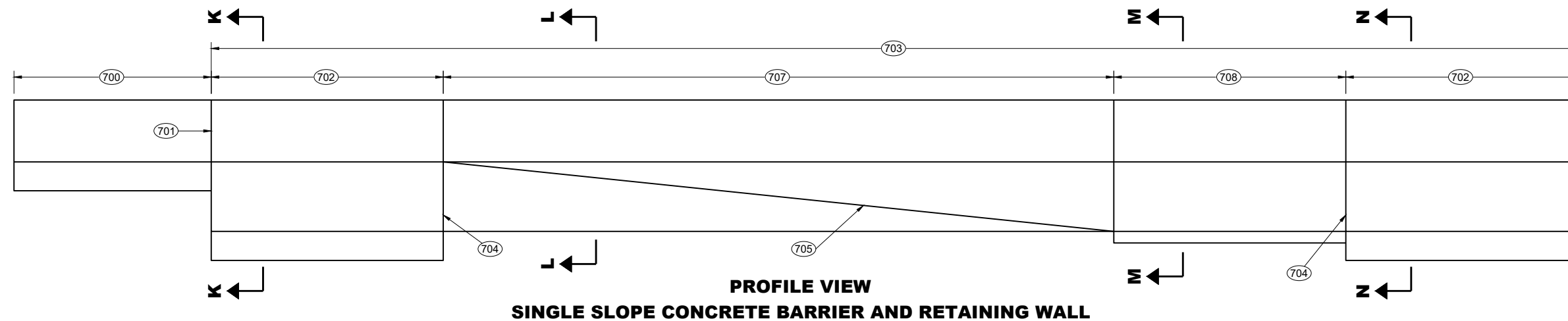
**END ANCHOR STIRRUP BAR  
BENDING DETAIL**

**TABLE "E"**

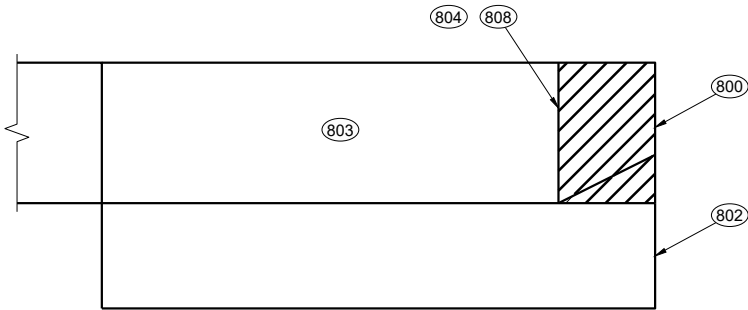
| HEIGHT BETWEEN<br>ROADWAY | QUANTITY OF<br>NO. 6 BARS |
|---------------------------|---------------------------|
| 0 TO 3"                   | 0                         |
| GREATER THAN 3" TO 8"     | 2                         |
| GREATER THAN 8" TO 12"    | 4                         |
| GREATER THAN 12" TO 36"   | 8                         |

**CONCRETE BARRIER  
SINGLE SLOPE (CBSS)**

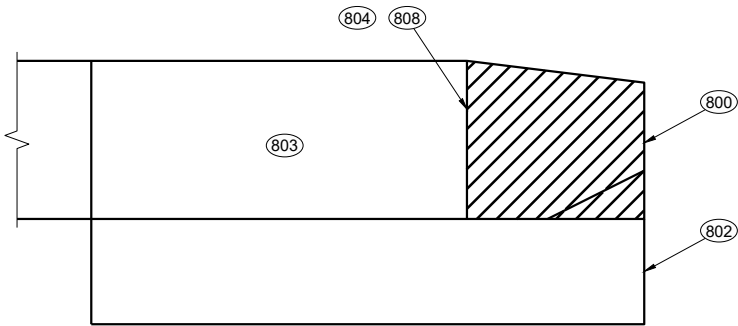
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



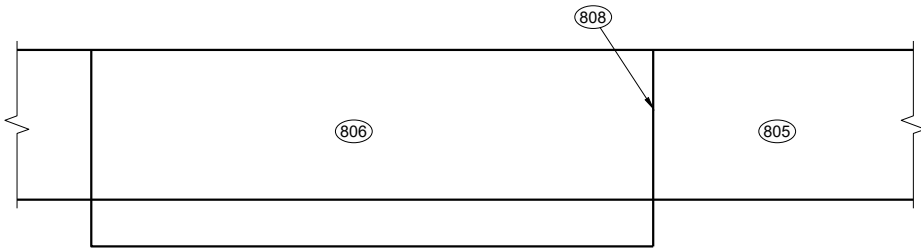
- ## GENERAL NOTES
- |     |                                                                           |
|-----|---------------------------------------------------------------------------|
| 700 | END ANCHOR SINGLE SLOPE CONCRETE BARRIER                                  |
| 701 | SEE EXPANSION JOINT DETAIL                                                |
| 702 | END ANCHOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL               |
| 703 | PAY LIMIT FOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL            |
| 704 | SEE COLD JOINT DETAIL                                                     |
| 705 | LOW SIDE SHOULDER                                                         |
| 706 | HIGH SIDE SHOULDER                                                        |
| 707 | SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITHOUT A PAN. |
| 708 | SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITH A PAN.    |
| 709 | EXCAVATION AND COMPACTION                                                 |



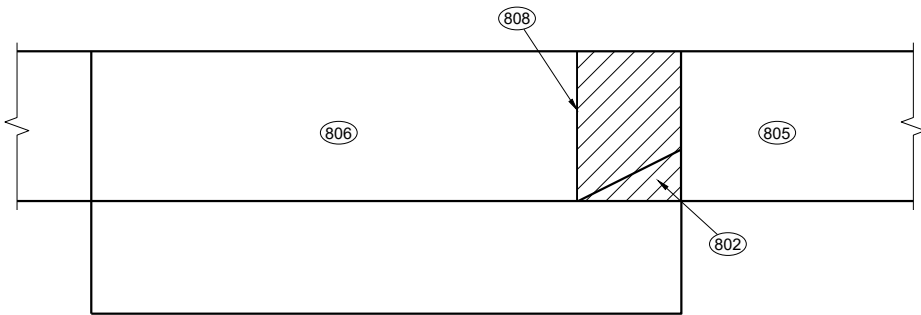
**REMOVAL AREA OF  
32" CONCRETE THRIE BEAM ANCHORAGE**



**REMOVAL AREA OF CONCRETE THRIE BEAM  
ANCHORAGE WITH HEIGHT GREATER THAN 32"**



**CONCRETE BARRIER EXTENSION NEAR END ANCHORAGE**



**CONCRETE BARRIER EXTENSION NEAR THRIE BEAM TERMINAL**

**RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER**

**GENERAL NOTES**

END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.

REMOVE THRIE BEAM ANCHORAGE AS SHOWN.

(800) AREA OF BARRIER REMOVAL AN NEW CONCRETE AND STEEL IS INSTALLED.

(801) MINIMUM LENGTH OF REMOVAL IS 15'

(802) FOOTING BELOW GROUND MAY REMAIN IN PLACE.

(803) CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

(804) SAW CUT

(805) NEW SINGLE SLOPE CONCRETE BARRIER.

(806) CONCRETE BARRIE SINGLE SLOPE TO REMAIN.

(807) SINGLE SLOPE CONCRETE BARRIER OR CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

(808) SEE CONNECTION DETAIL.

(809) NO. 5 CONTINUOUS BAR.

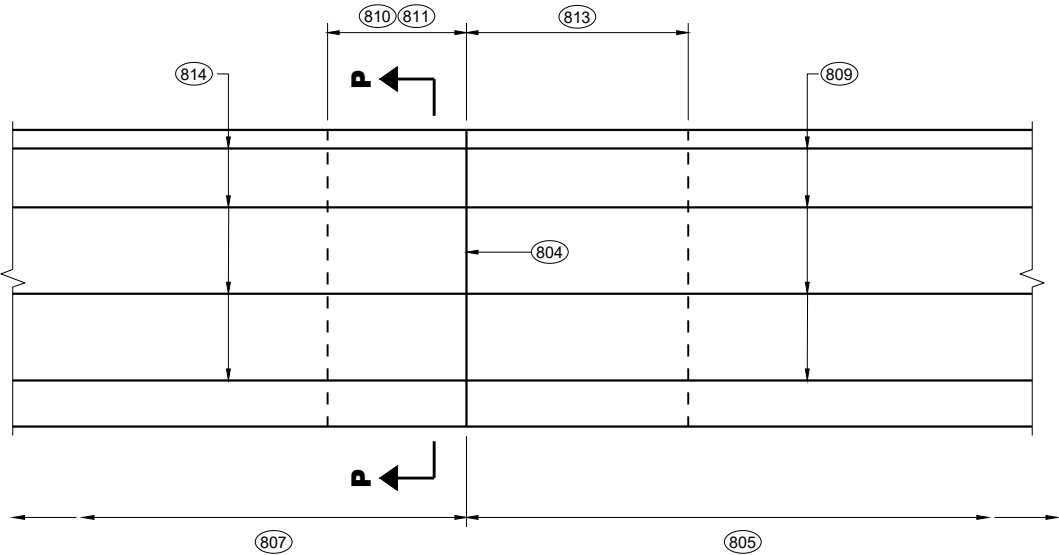
(810) 3' MIN. DRILL HOLES. USES NO. 5 ADHESIVE ANCHORS.

(811) THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF HORIZONTAL REBAR IN BARRIER. DRILL HOLES ARE TO BE A MINIMUM OF 4" FROM EDGE OF CONCRETE.

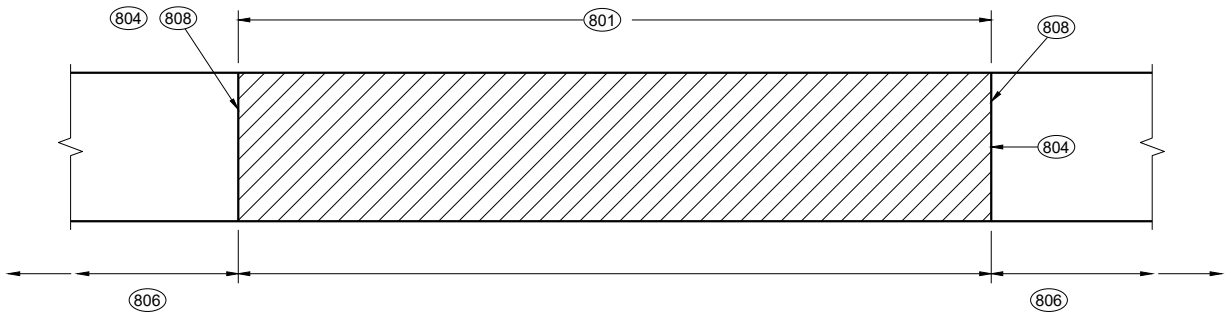
(812) EXISTING REBAR IN EXISTING BARRIER OR END ANCHOR.

(813) 3' BAR OVERLAP

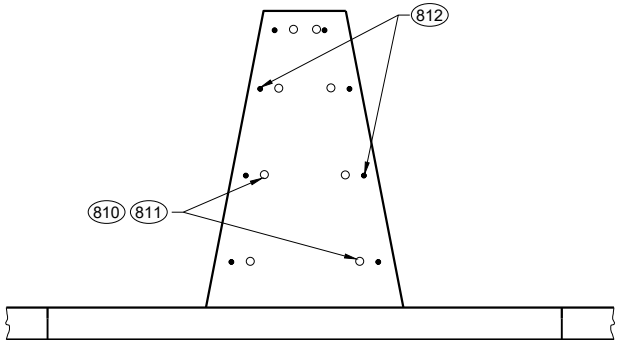
(814) EXISTING REINFORCEMENT



**CONNECTION DETAIL  
SINGLE SLOPE CONCRETE BARRIER TO  
NEW SINGLE SLOPE CONCRETE BARRIER**



**BARRIER REMOVAL AND REPLACEMENT**



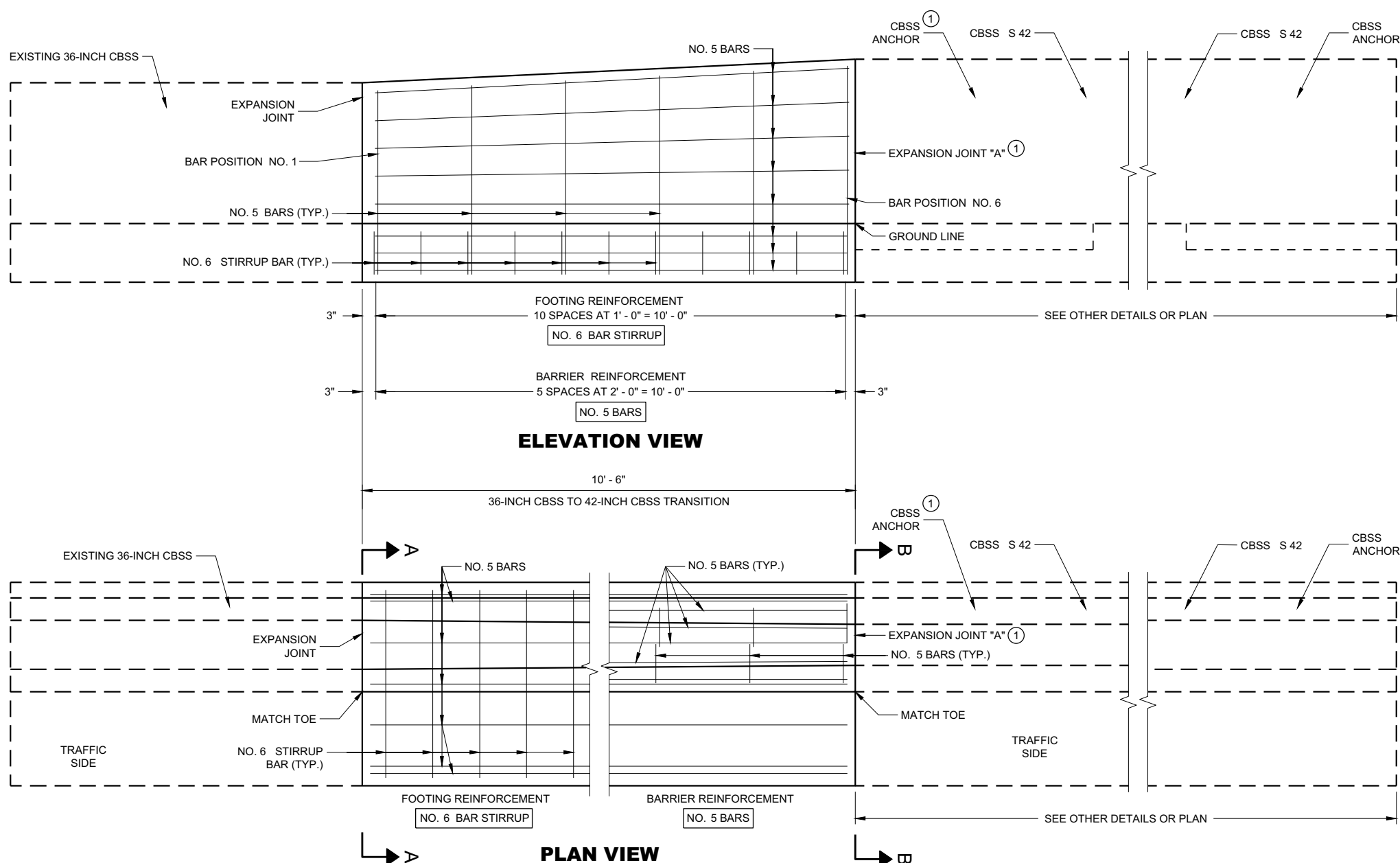
**SECTION P - P**

**CONCRETE BARRIER  
SINGLE SLOPE (CBSS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

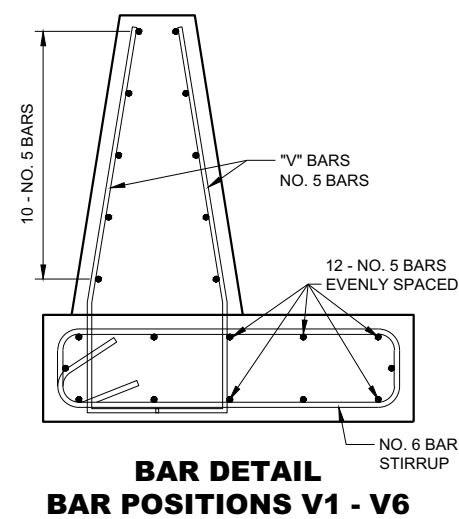
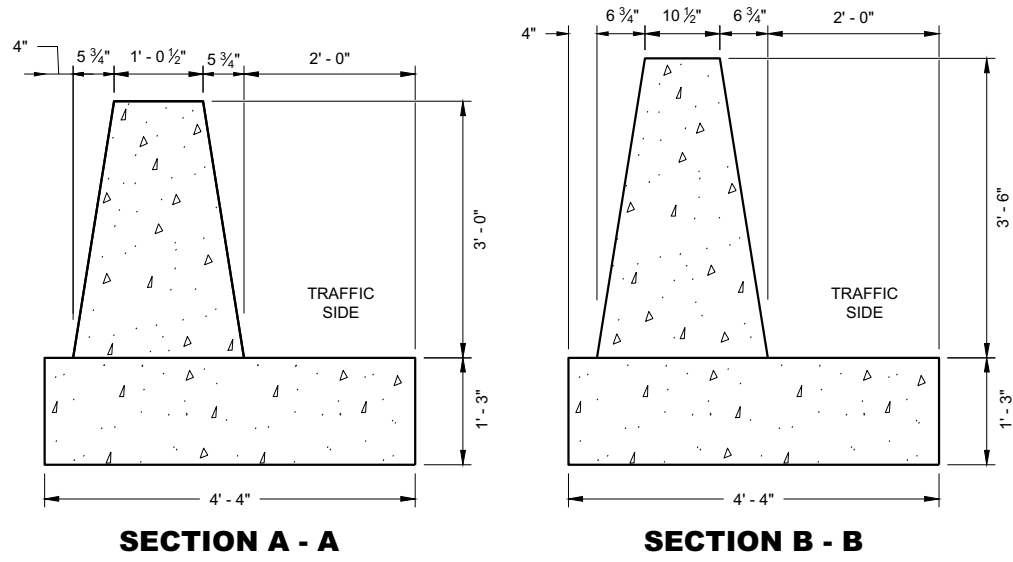
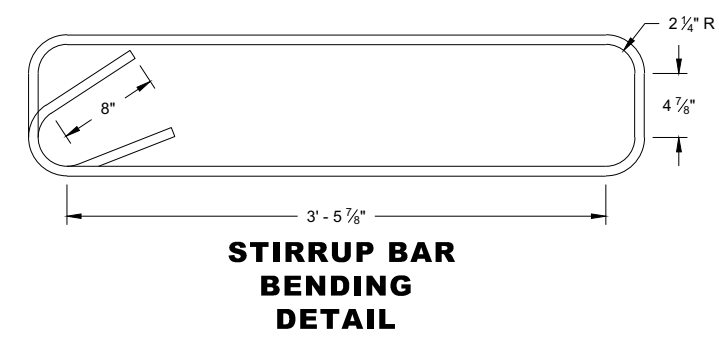
APPROVED  
November 2024 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



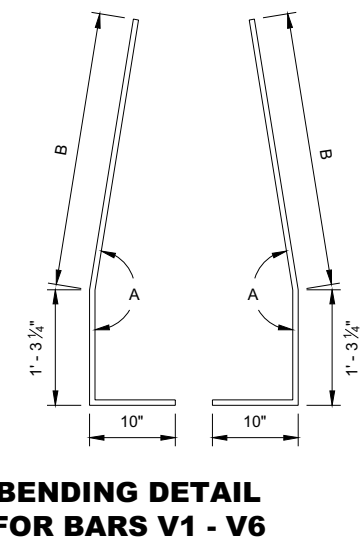
GENERAL NOTES

- CONSTRUCT PER STANDARD SPECIFICATION 603.
- SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.
- 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.
- USE 3/4" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
- THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.
- 2" CLEAR COVER TYPICAL.
- ① EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD JOINT IS USED, ANCHOR IS NOT REQUIRED.



BAR CHART  
BAR POSITIONS  
V1 - V6

| BAR | A    | B            |
|-----|------|--------------|
| V1  | 170° | 2' - 7 1/2"  |
| V2  | 170° | 2' - 9"      |
| V3  | 170° | 2' - 9 3/4"  |
| V4  | 170° | 2' - 11 1/4" |
| V5  | 170° | 3' - 0 1/2"  |
| V6  | 170° | 3' - 2"      |



**36" SINGLE SLOPE CONCRETE BARRIER TO 42" SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020  
DATE

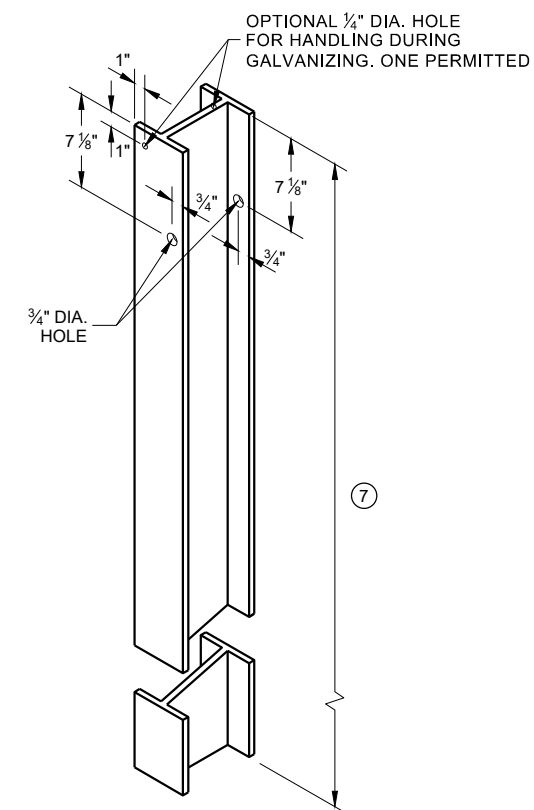
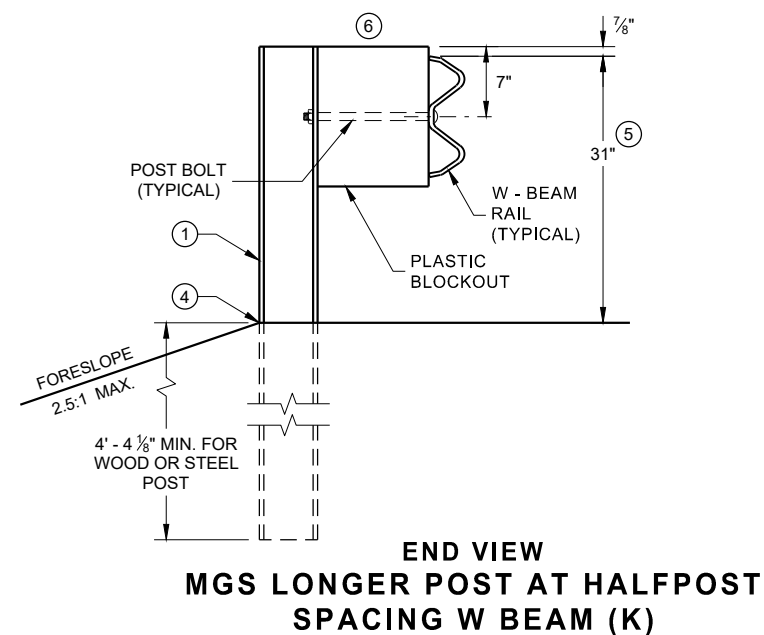
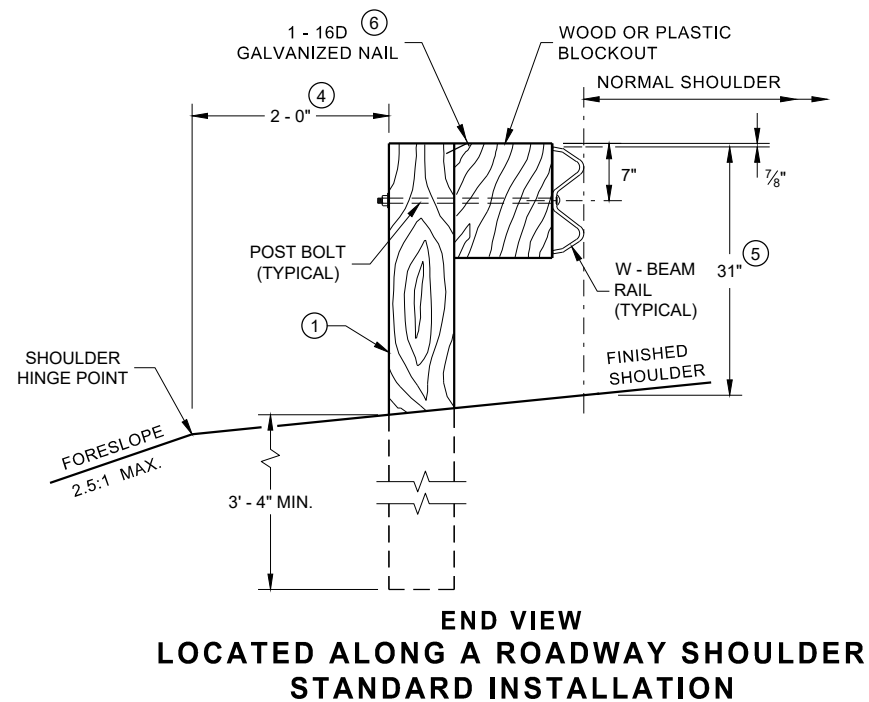
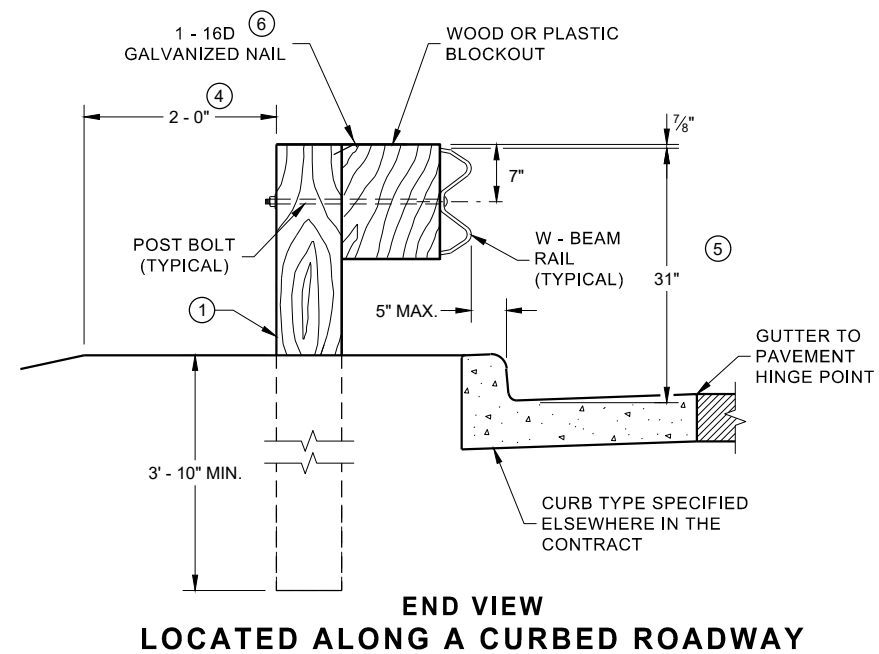
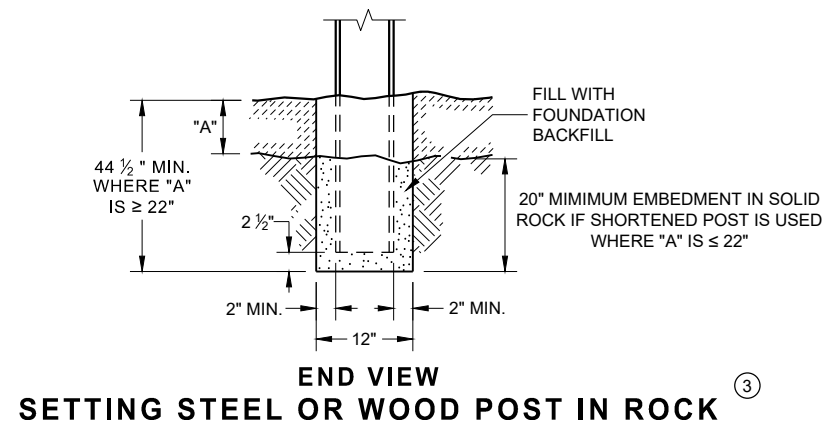
/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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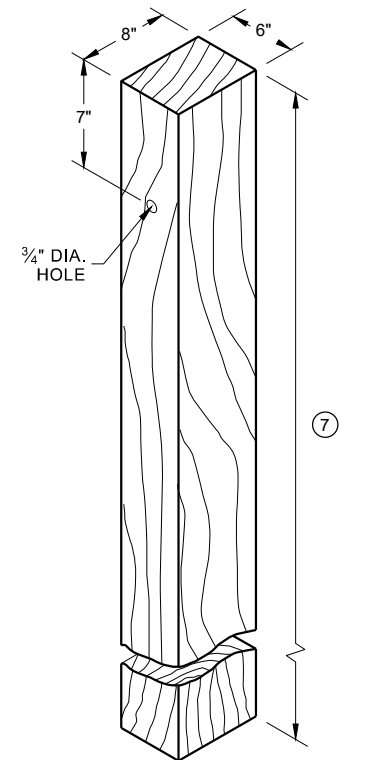
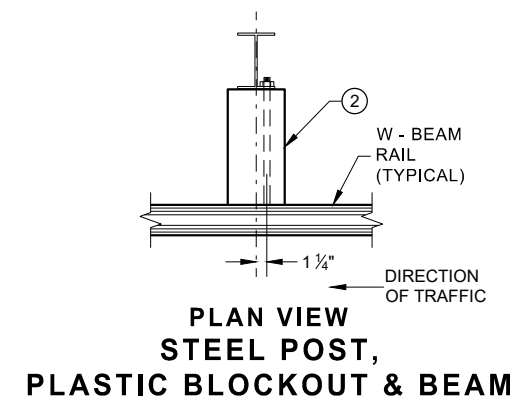
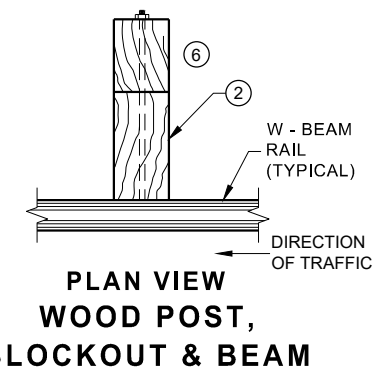
FHWA



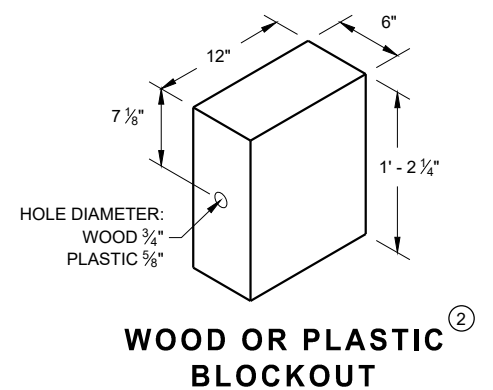
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL.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



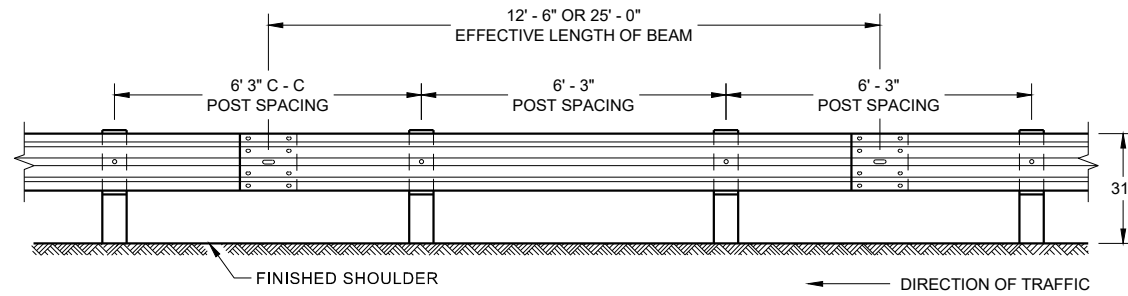
**STEEL POST & HOLE  
PUNCHING DETAIL  
(W 6 X 9) ①**



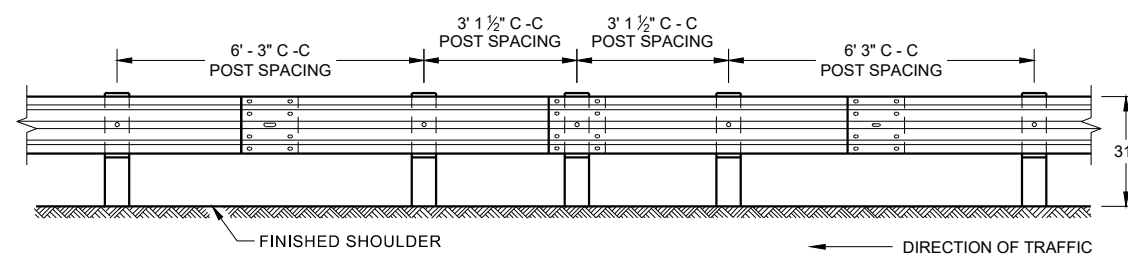
**WOOD POST (6" X 8") NOMINAL** <sup>①</sup>



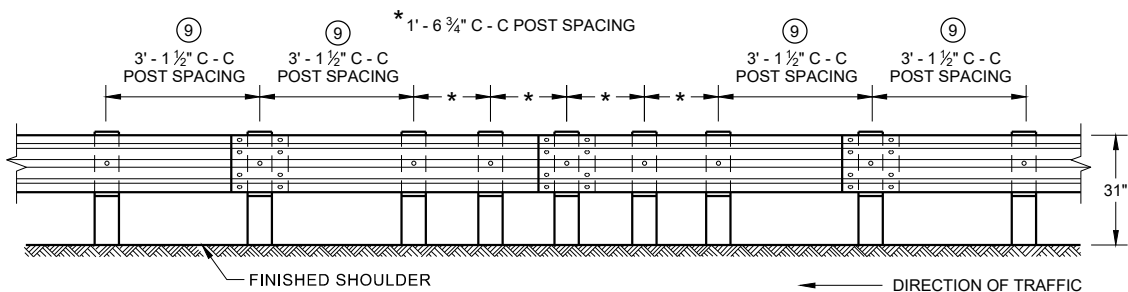
**WOOD OR PLASTIC  
BLOCKOUT**



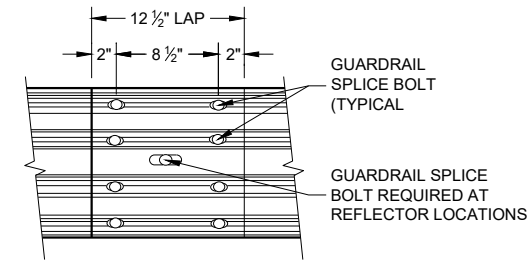
**FRONT VIEW  
POST SPACING STANDARD INSTALLATION**



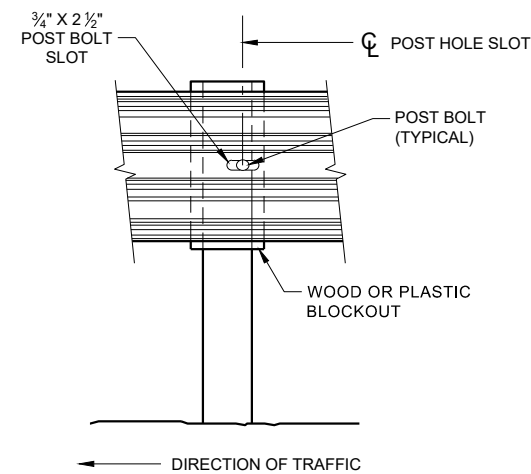
**FRONT VIEW  
HALF POST SPACING (HS) AND  
HALF POST SPACING WITH LONGER POSTS (K)**



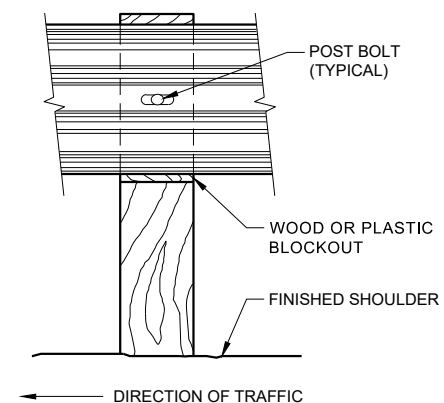
**FRONT VIEW  
QUARTER POST SPACING (QS)**



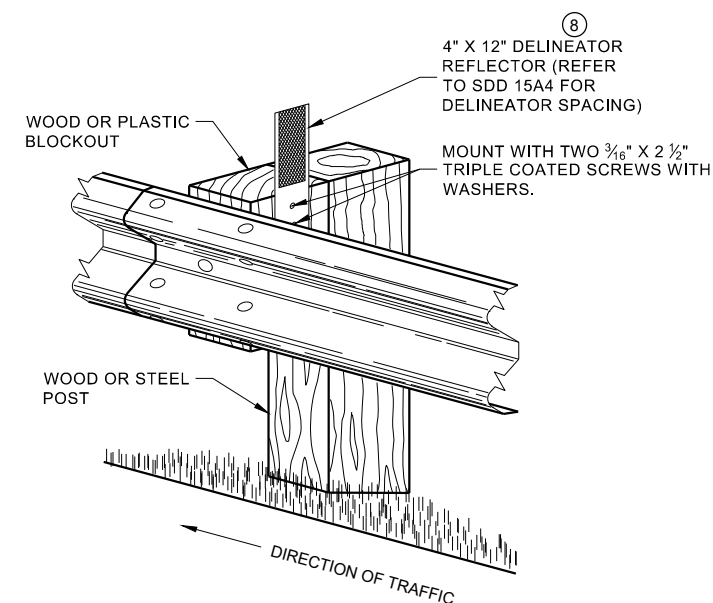
**FRONT VIEW  
MID-SPAN BEAM SPLICE**



**FRONT VIEW AT STEEL POST**



**FRONT VIEW AT WOOD POST**



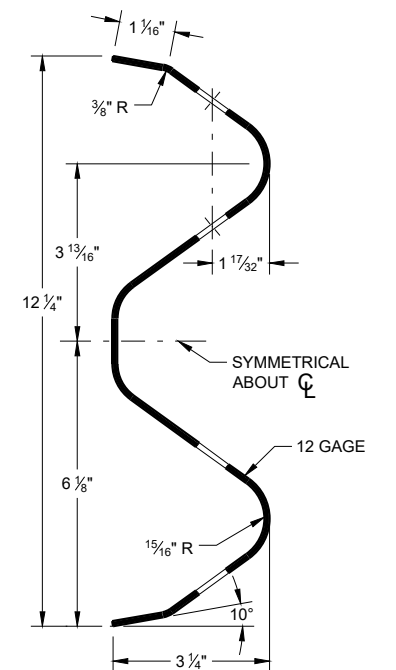
**ONE SIDED REFLECTOR DETAIL  
AND TYPICAL INSTALLATION**

## 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 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

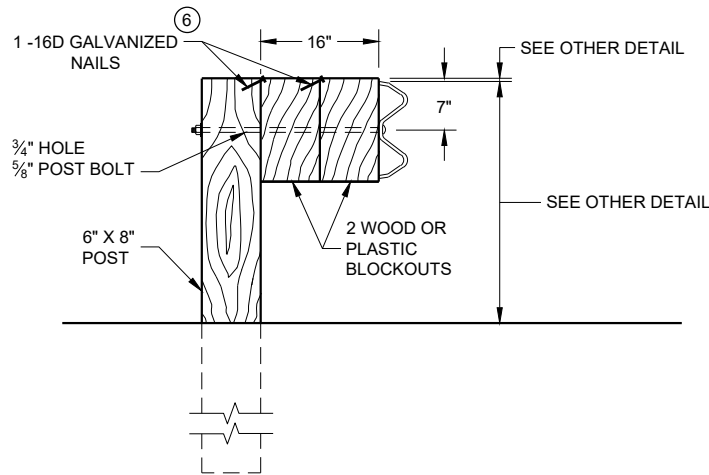


**SECTION THRU W-BEAM RAIL**

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

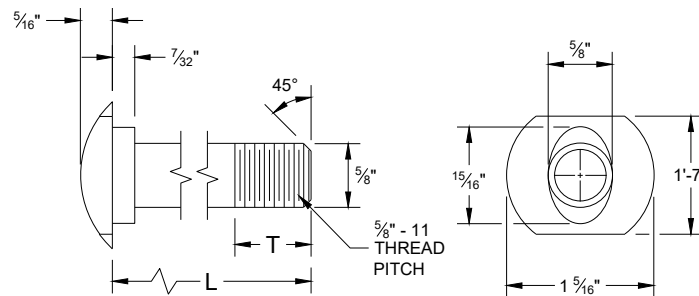




DETAIL FOR 16" BLOCKOUT DEPTH

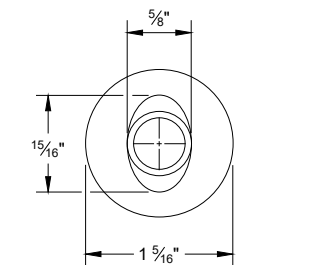
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

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

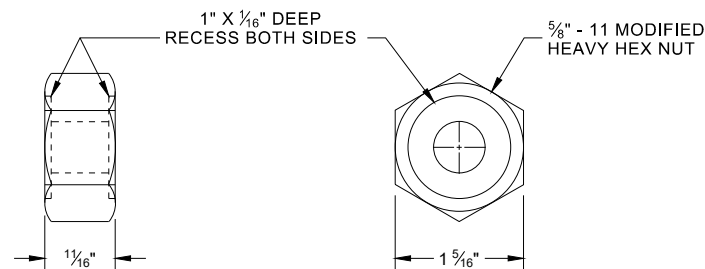


POST BOLT TABLE

| 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"       |

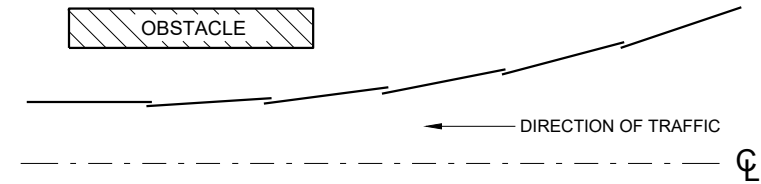


ALTERNATE BOLT HEAD

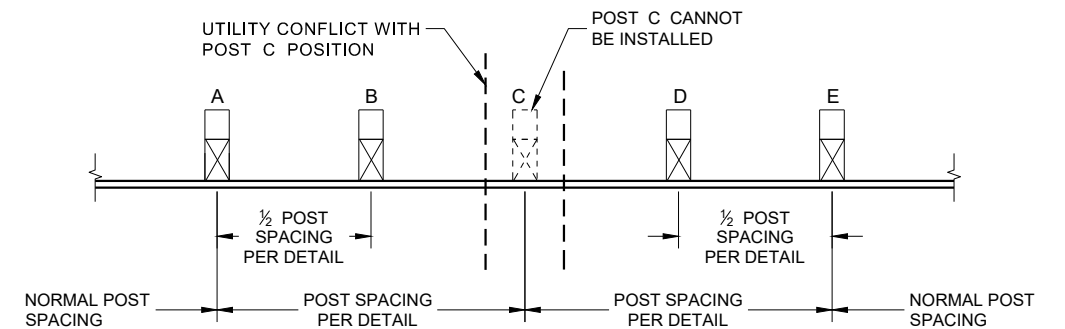


POST BOLT, SPLICE BOLT AND RECESS NUT

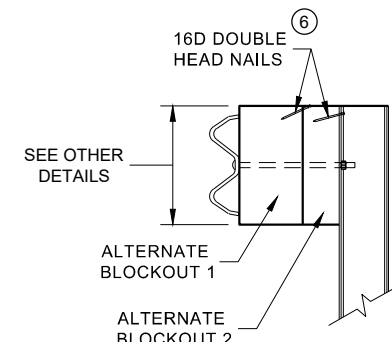
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



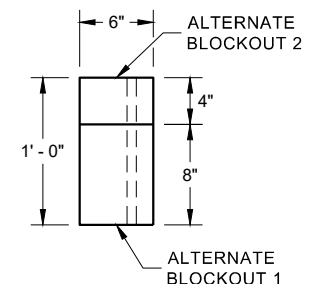
PLAN VIEW  
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS  
UNDERGROUND OBSTRUCTION



SIDE VIEW



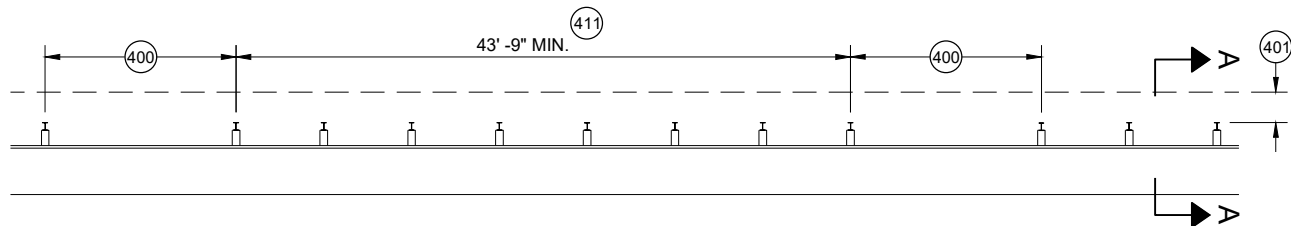
PLAN VIEW

ALTERNATE WOOD  
BLOCKOUT DETAIL

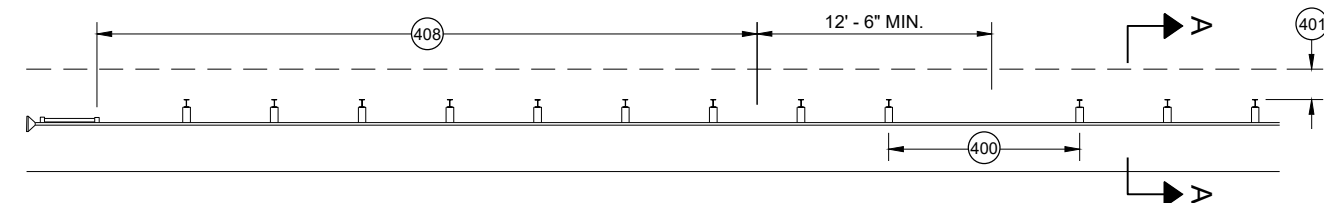
- NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
- DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE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

MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL

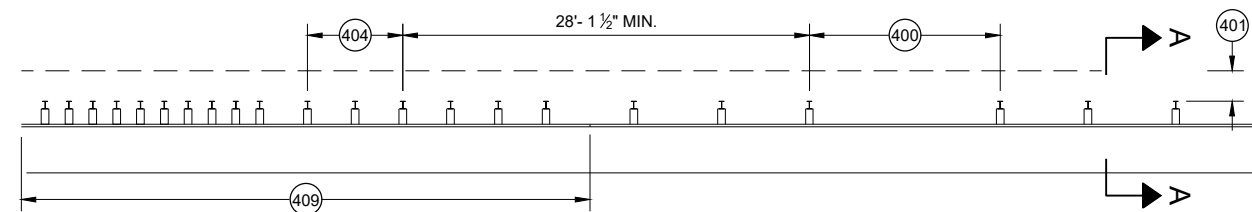
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 296



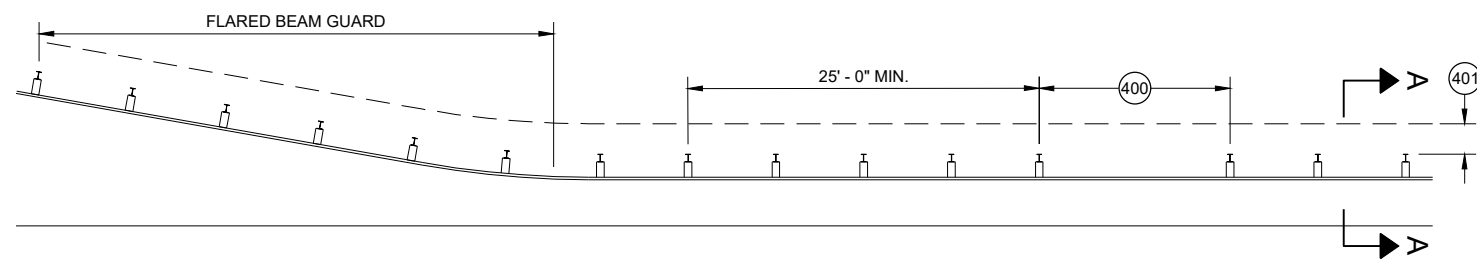
**MISSING POST IN MGS GUARDRAIL**



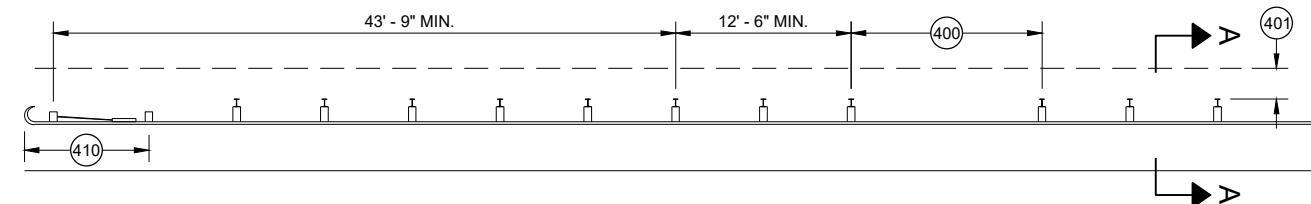
**MISSING POST IN MGS GUARDRAIL NEAR EAT**



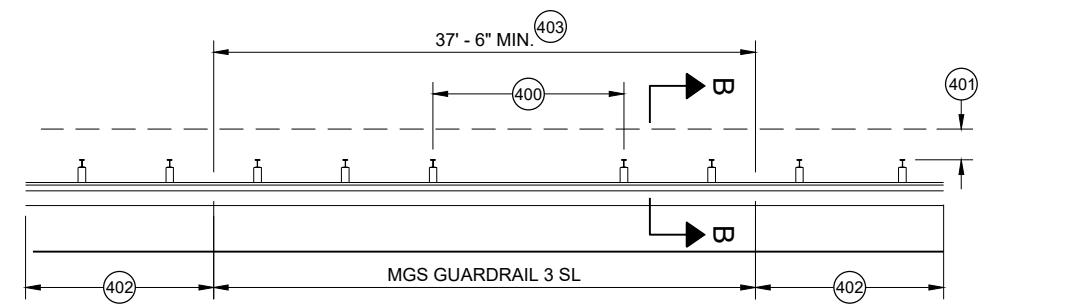
**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**



**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

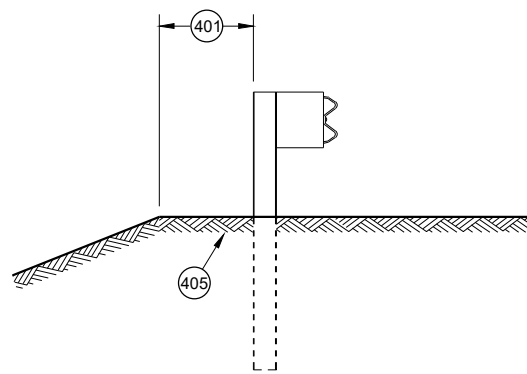


**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

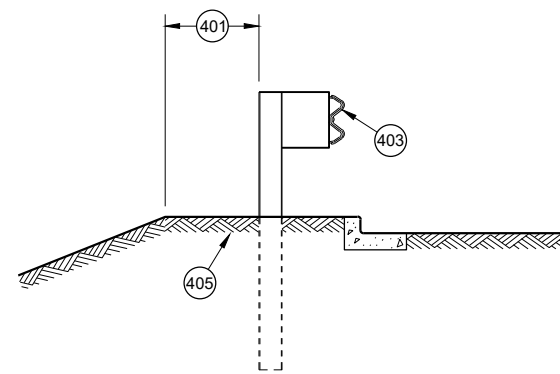


**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)**

- (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

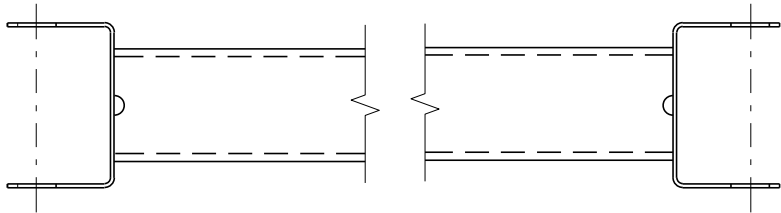
FHWA

- (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.

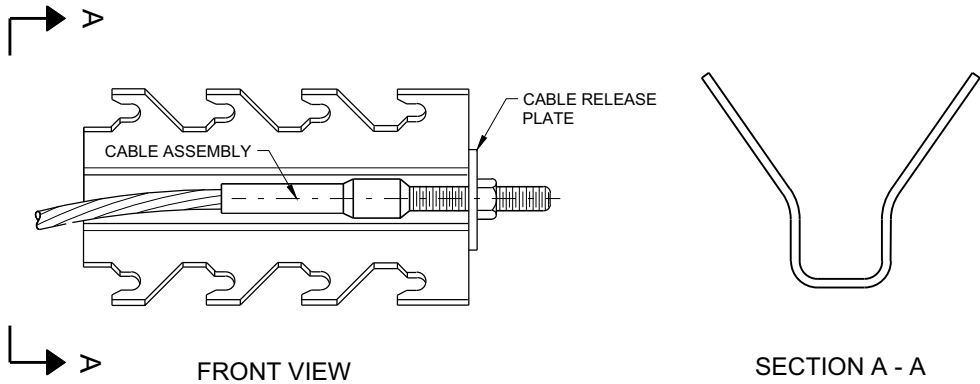
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 298

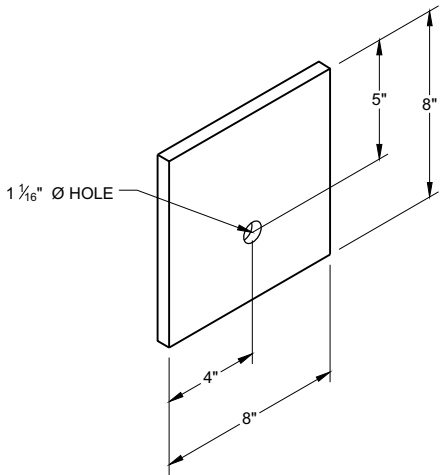


GENERIC GROUND STRUT<sup>9</sup> (E)

| BILL OF MATERIALS |                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------|
| PART NO.          | DESCRIPTION<br>MATERIALS PROVIDED BY MGS EAT MANUFACTURER.<br>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.<br>SECTIONS VARY IN LENGTH.                                  |
| ⑫                 | IMPACT HEAD                                                                                                    |
| ⑬                 | EAT MARKER POST - YELLOW<br>(SEE APPROVED PRODUCTS LIST)                                                       |
| ⑭                 | SOIL PLATE                                                                                                     |
| ⑮                 | UPPER POST NO. 2                                                                                               |
| ⑯                 | LOWER POST NO. 2                                                                                               |



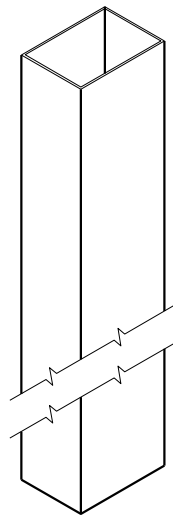
GENERIC ANCHOR CABLE BOX<sup>9</sup> (E)



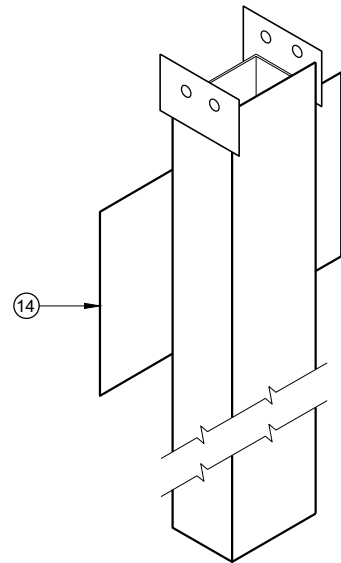
BEARING PLATE<sup>6</sup> (E)

MIDWEST GUARDRAIL SYSTEM  
ENERGY ABSORBING TERMINAL  
(MGS)

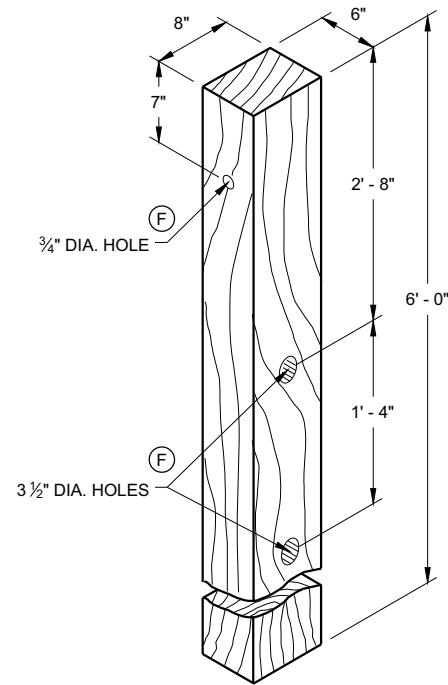
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



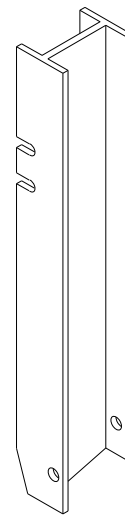
UPPER POST NO. 1 <sup>(1)</sup> (E)



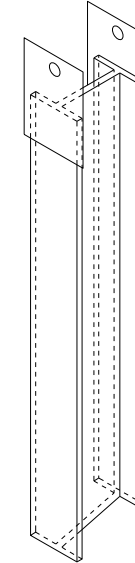
LOWER POST NO. 1 <sup>(2)</sup> (E)



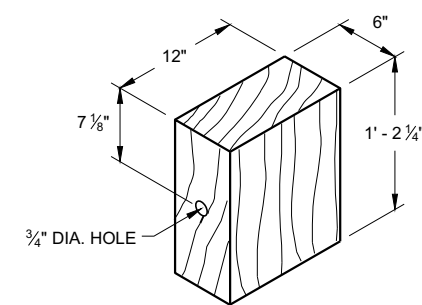
WOOD CRT POST <sup>(3)</sup> (E)  
POSTS NUMBER 3-9



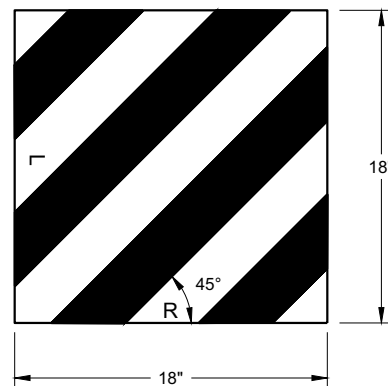
UPPER POST NO. 2 <sup>(15)</sup> (E)



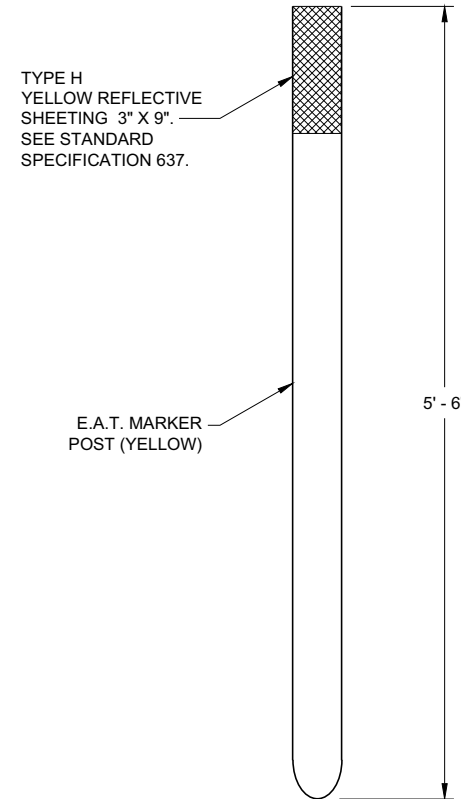
LOWER POST NO. 2 <sup>(16)</sup> (E)



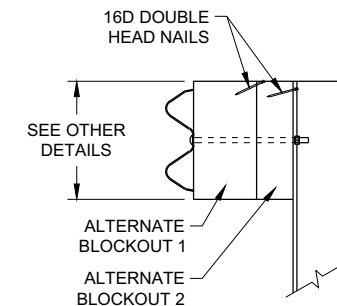
WOOD BLOCKOUT <sup>(4)</sup>  
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



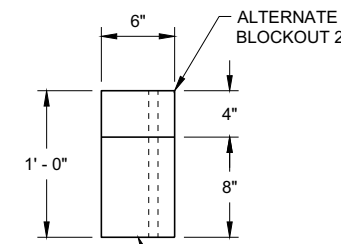
W5 - 59  
REFLECTIVE SHEETING DETAIL <sup>(E)</sup>



FRONT VIEW  
SIDE VIEW  
E.A.T. MARKER POST <sup>(13)</sup>



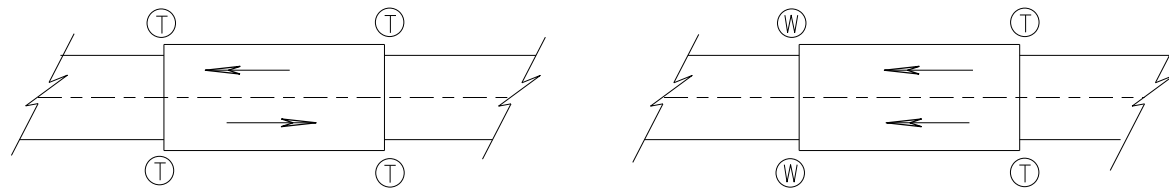
SIDE VIEW



TOP VIEW

ALTERNATE WOOD  
BLOCKOUT DETAIL

| MIDWEST GUARDRAIL SYSTEM<br>ENERGY ABSORBING TERMINAL<br>(MGS) |                                                                       |
|----------------------------------------------------------------|-----------------------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION             |                                                                       |
| APPROVED<br>7/2018<br>DATE                                     | /S/ Rodney Taylor<br>ROADWAY STANDARDS DEVELOPMENT<br>UNIT SUPERVISOR |
| FHWA                                                           | 300                                                                   |



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

## TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

## GENERAL NOTES

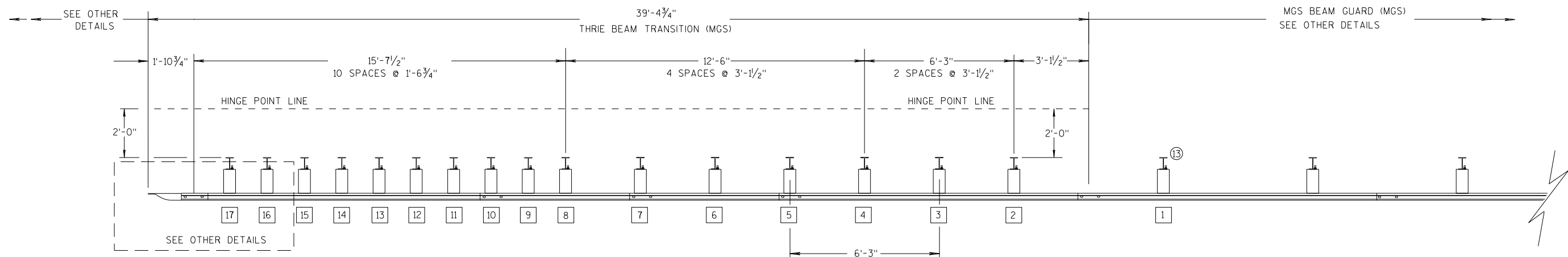
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

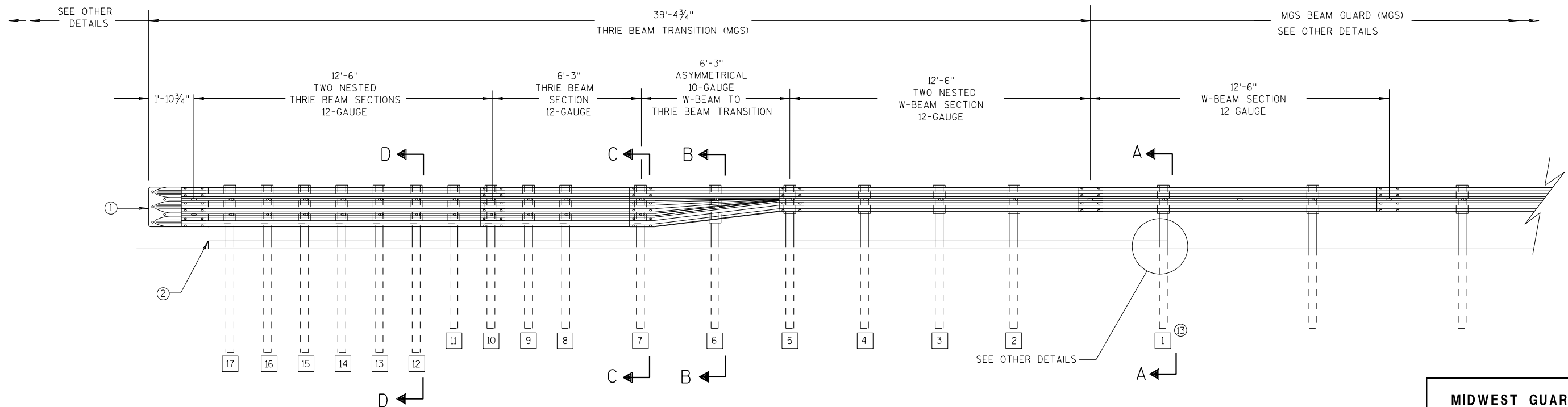
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

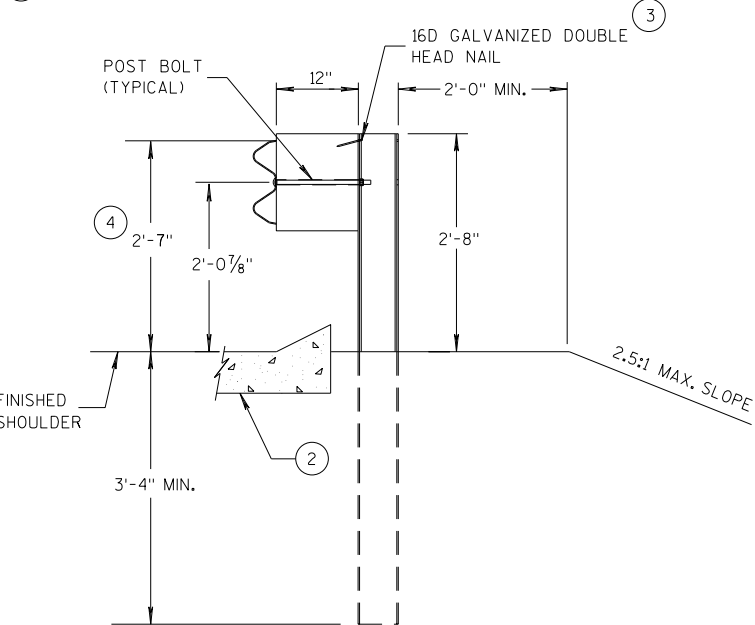
MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 301

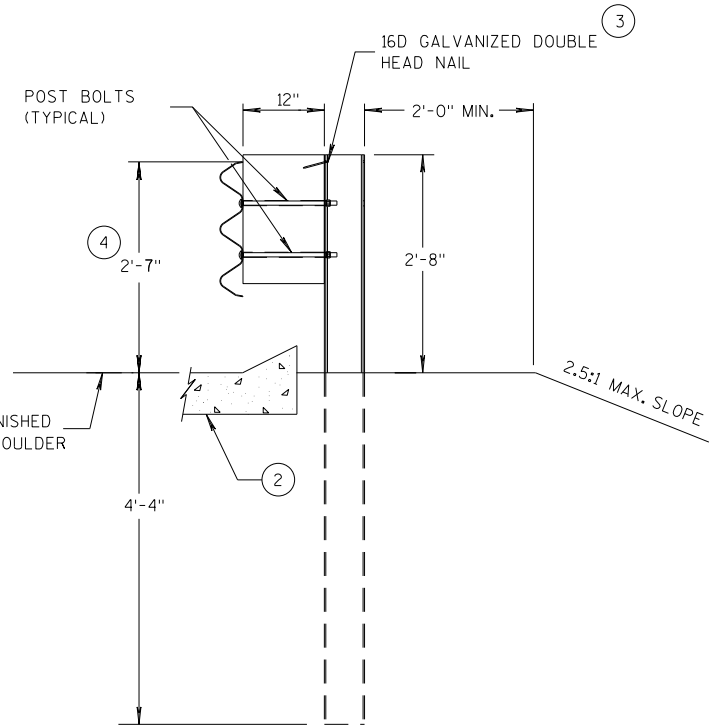


GENERAL NOTES

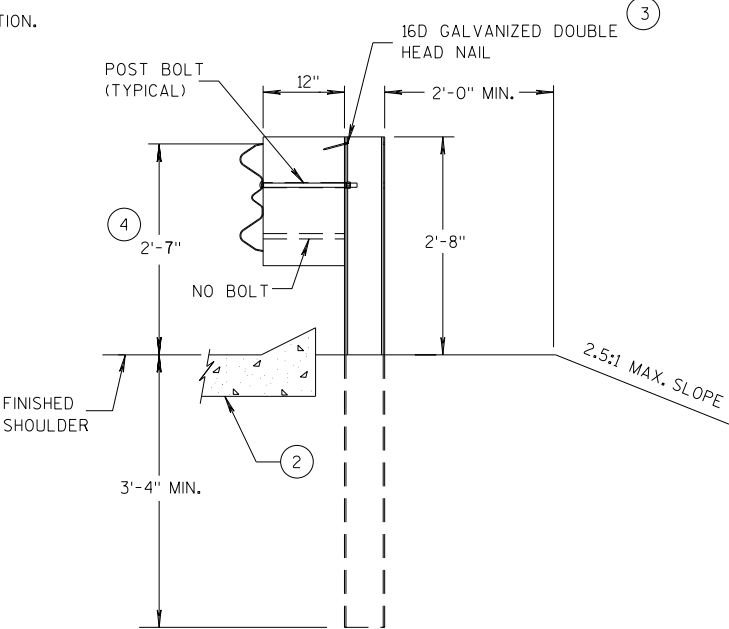
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS  $\pm 1"$ .
- 13 STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



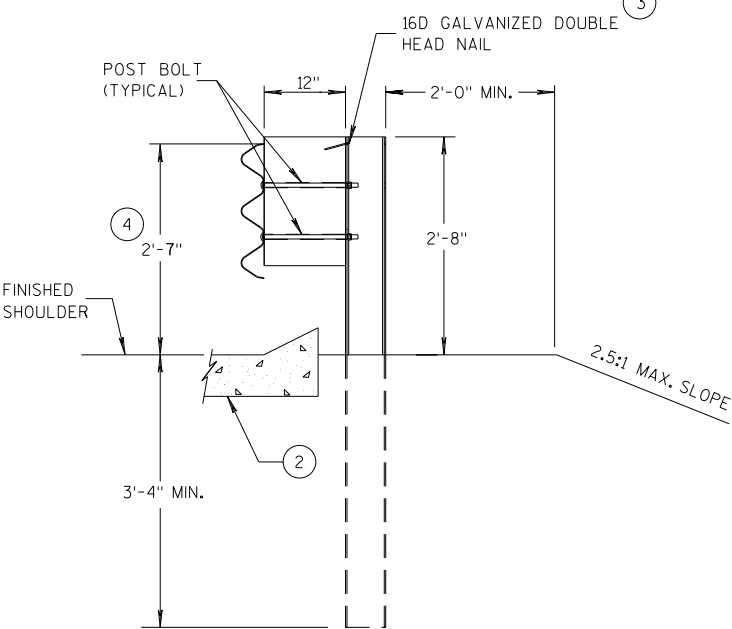
SECTION A-A  
POSTS 1-5



SECTION D-D  
POSTS 12-17



SECTION B-B  
POST 6



SECTION C-C  
POSTS 7-11

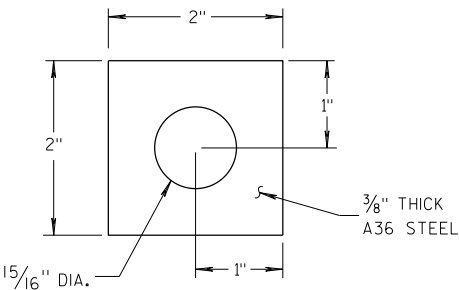
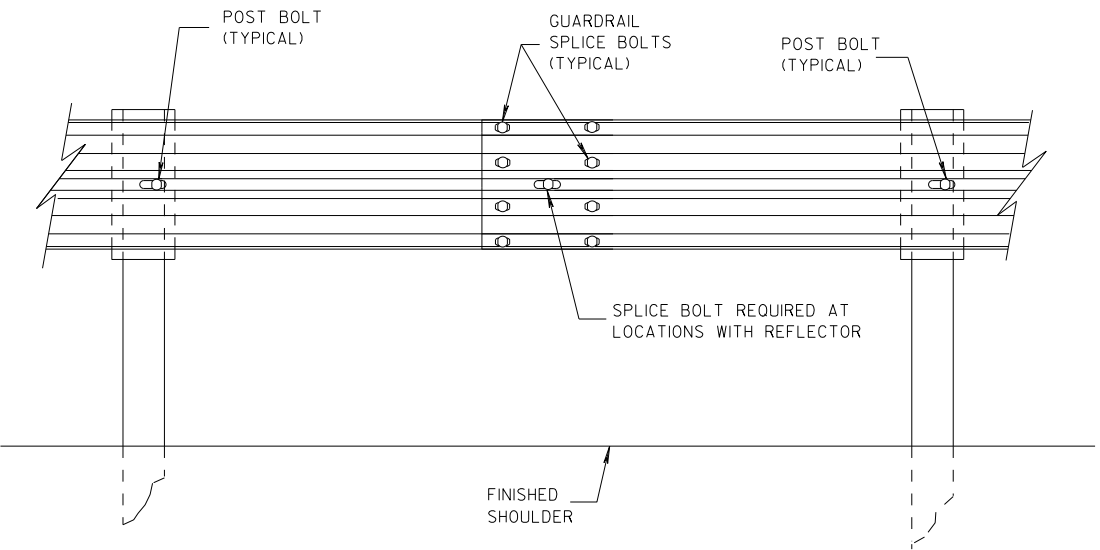
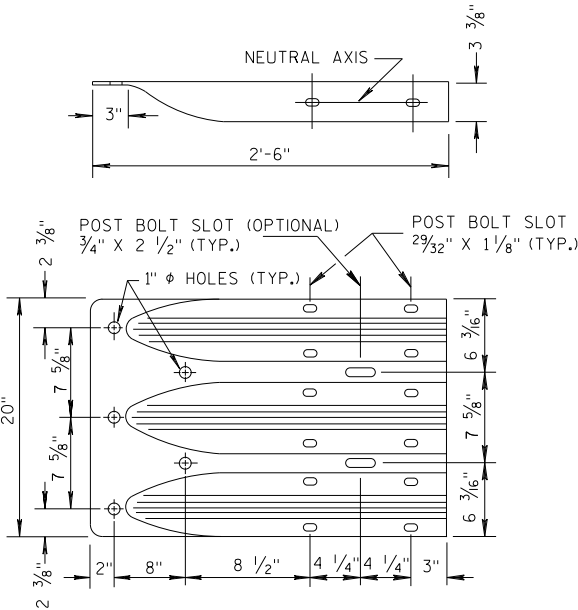


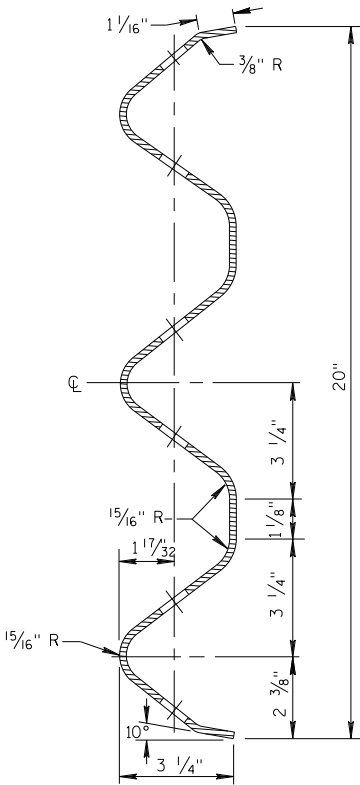
PLATE WASHER DETAIL



SPLICE DETAIL



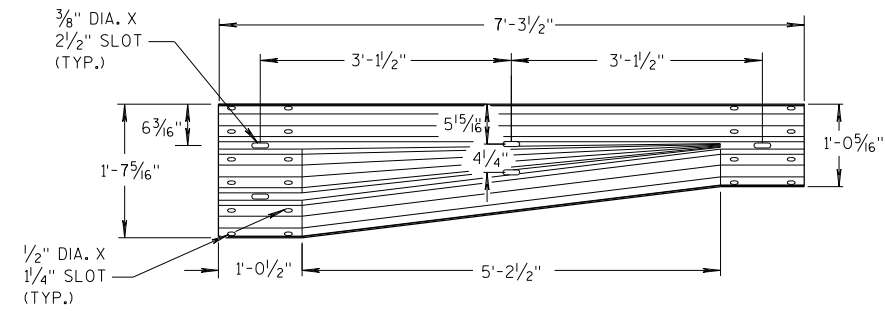
THRIE BEAM  
TERMINAL CONNECTOR



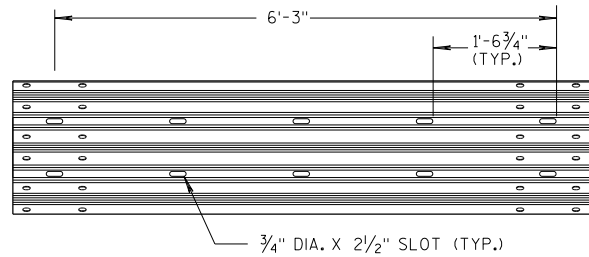
SECTION THRU THRIE  
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

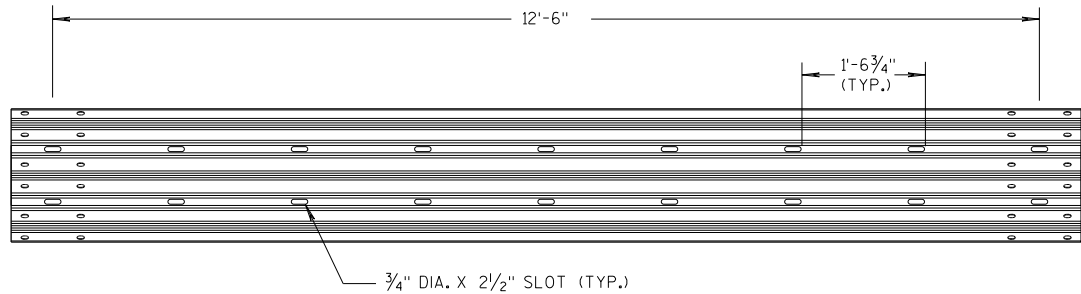
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



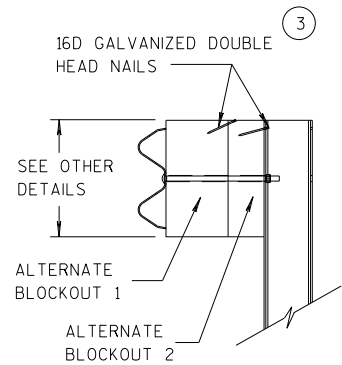
W-BEAM TO THRIE BEAM TRANSITION SECTION



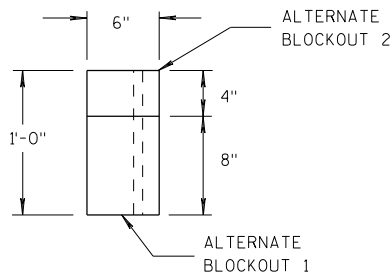
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

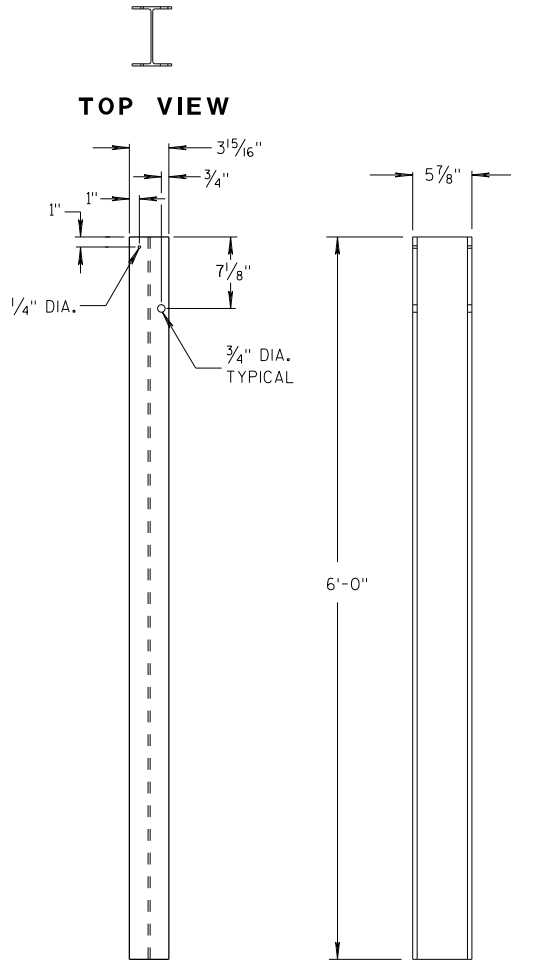


SIDE VIEW



TOP VIEW

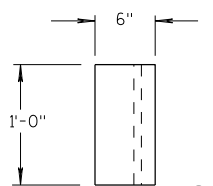
ALTERNATE WOOD BLOCKOUT DETAIL



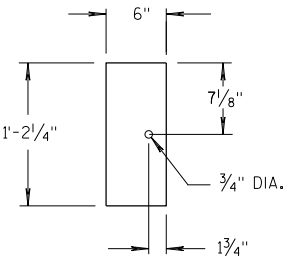
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

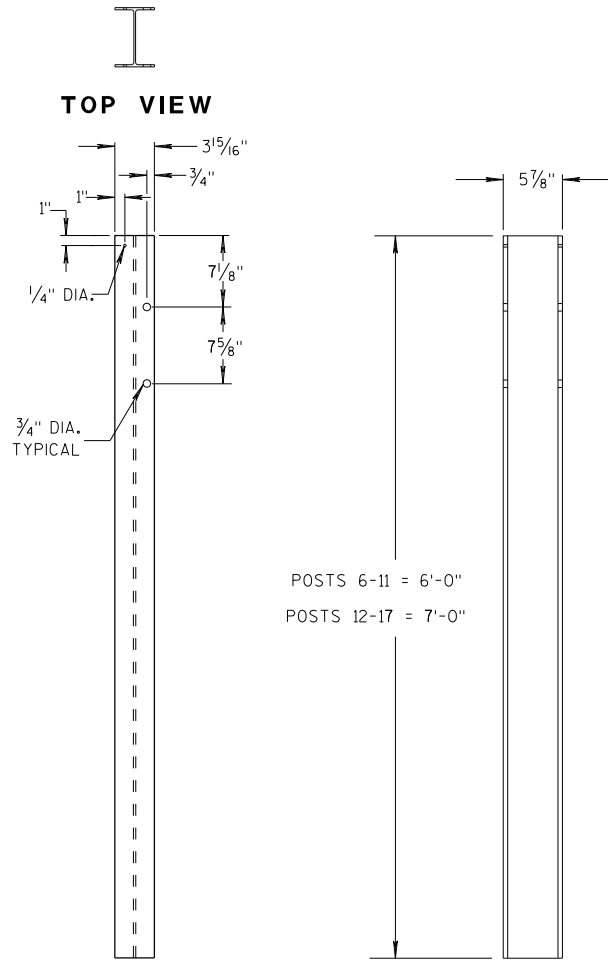


TOP VIEW



FRONT VIEW

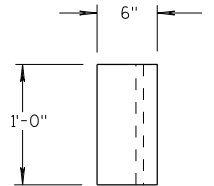
BLOCKOUT POSTS 1-5



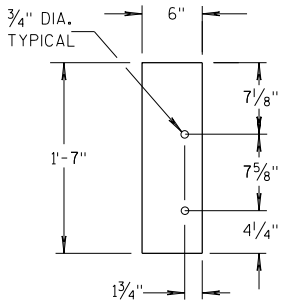
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

### GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

③ WHEN USING STEEL POSTS 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.

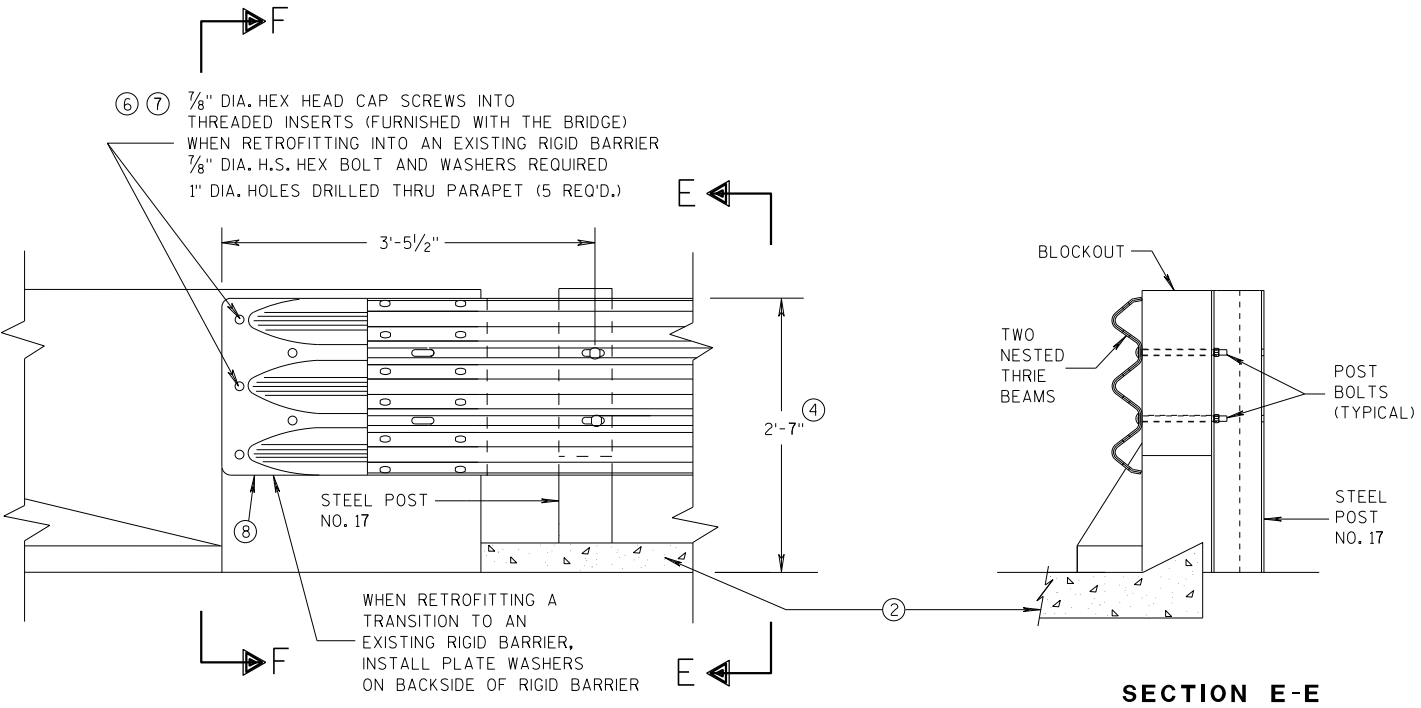
⑤ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

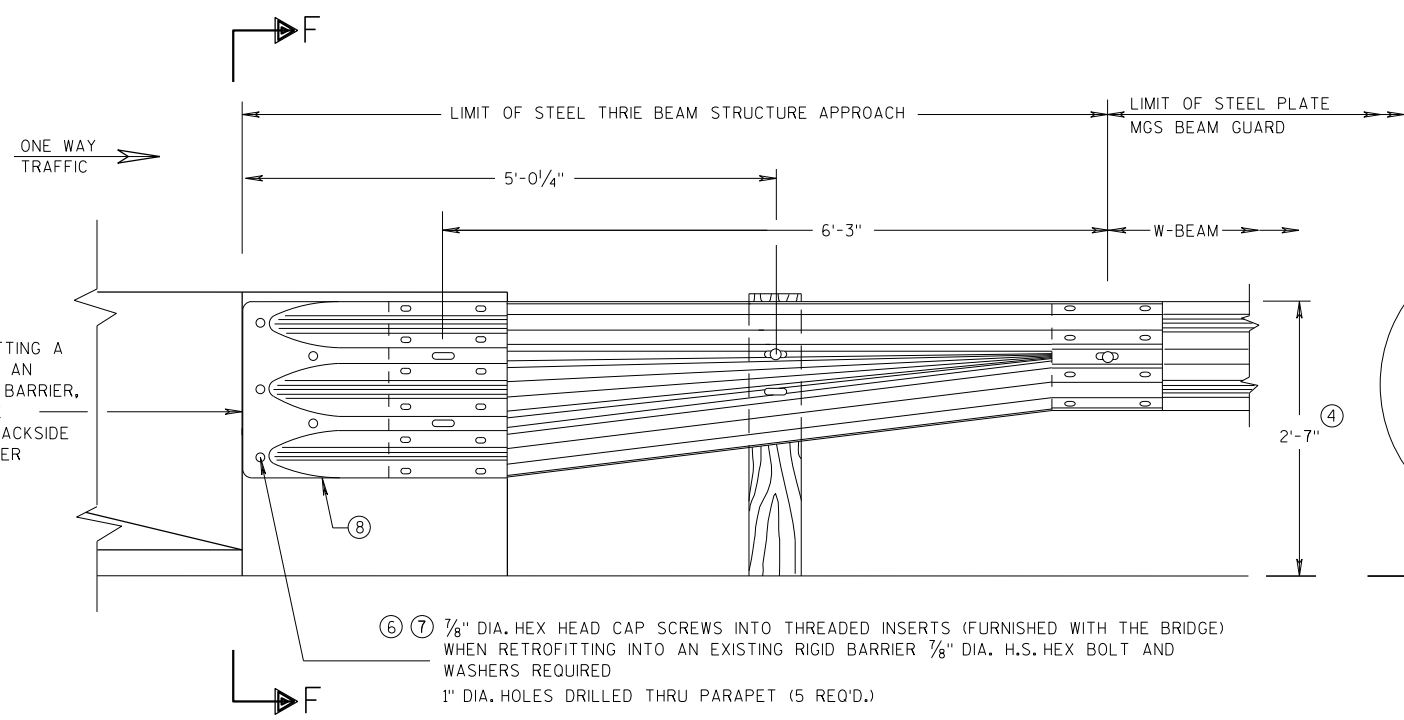
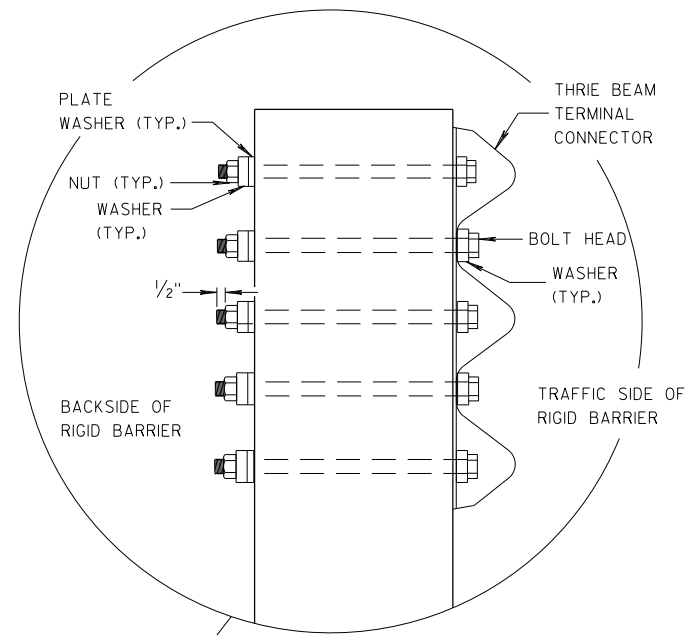
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



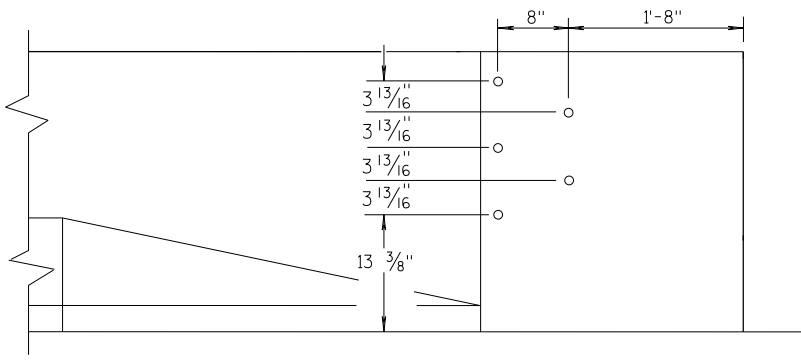


GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



SECTION F-F



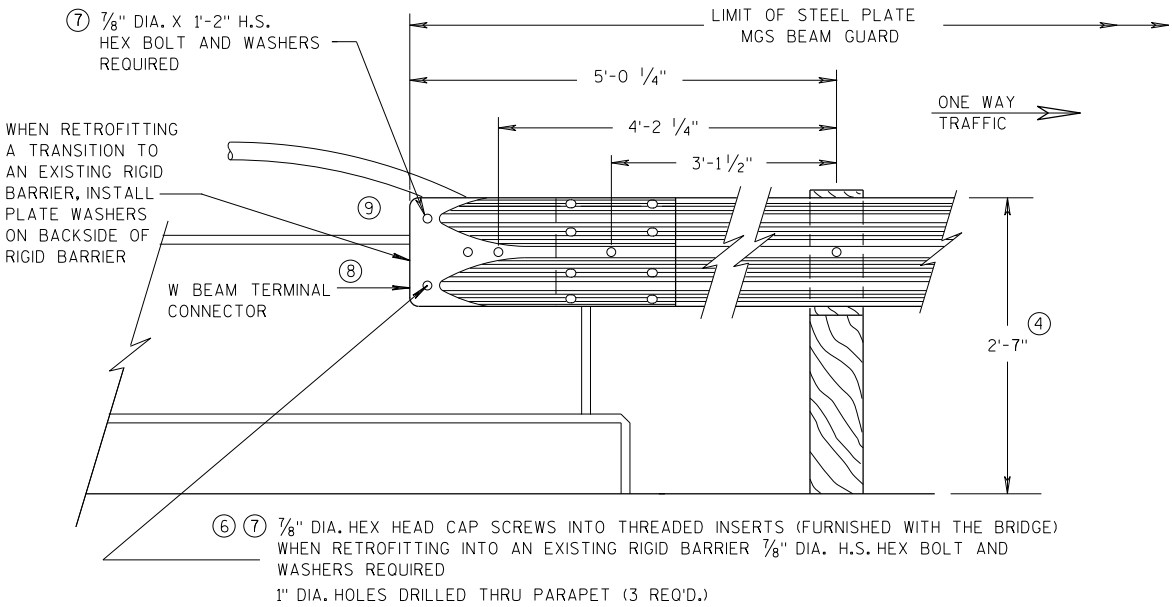
DRILL HOLE LOCATION

|                                                         |                                                        |     |    |
|---------------------------------------------------------|--------------------------------------------------------|-----|----|
| MIDWEST GUARDRAIL SYSTEM<br>THRIE BEAM TRANSITION (MGS) |                                                        |     |    |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION      |                                                        |     |    |
| APPROVED<br>07/2018<br>DATE                             | /S/ Rodney Taylor<br>ROADWAY STANDARDS UNIT SUPERVISOR |     |    |
| FHWA                                                    |                                                        | 304 | NT |

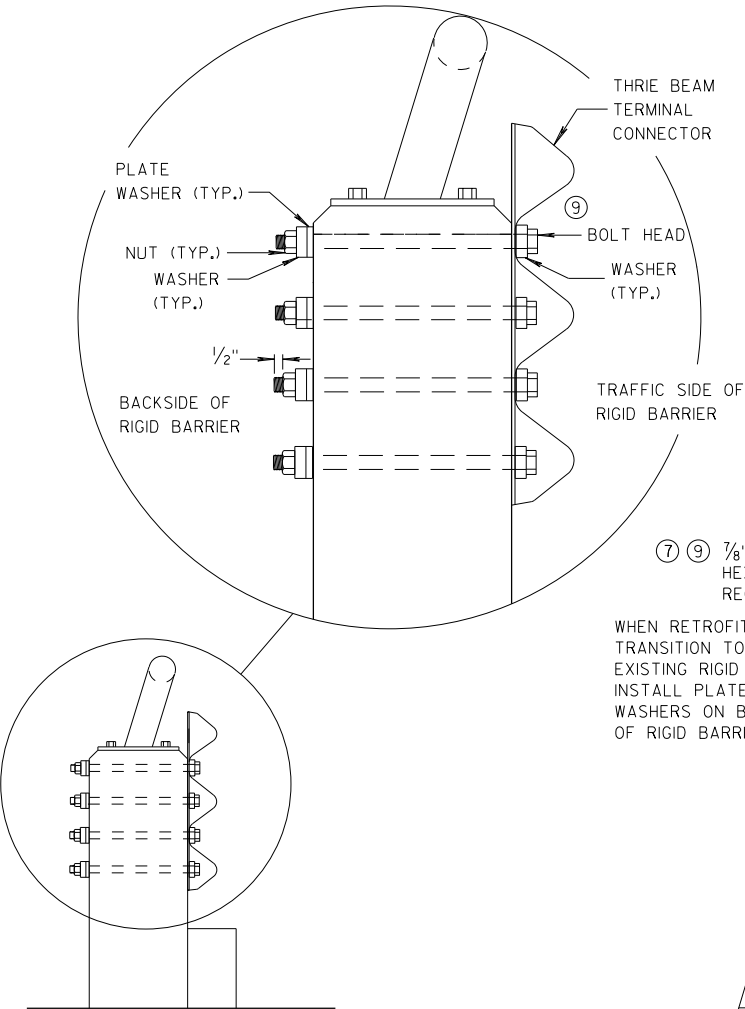
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

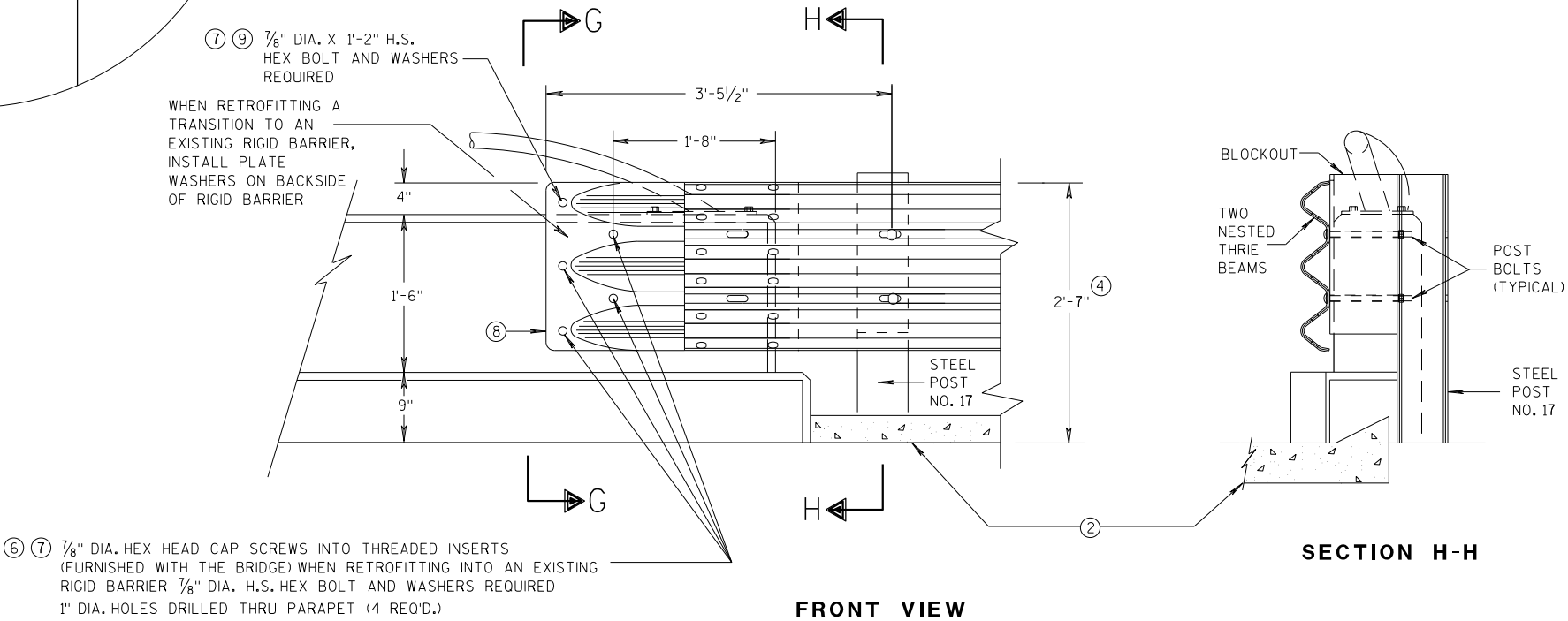
- OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X  $\frac{5}{32}"$  THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3  $\frac{1}{2}"$ .
- BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



FRONT VIEW  
W BEAM CONNECTION TO VERTICAL FACE PARAPET  
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION G-G



FRONT VIEW

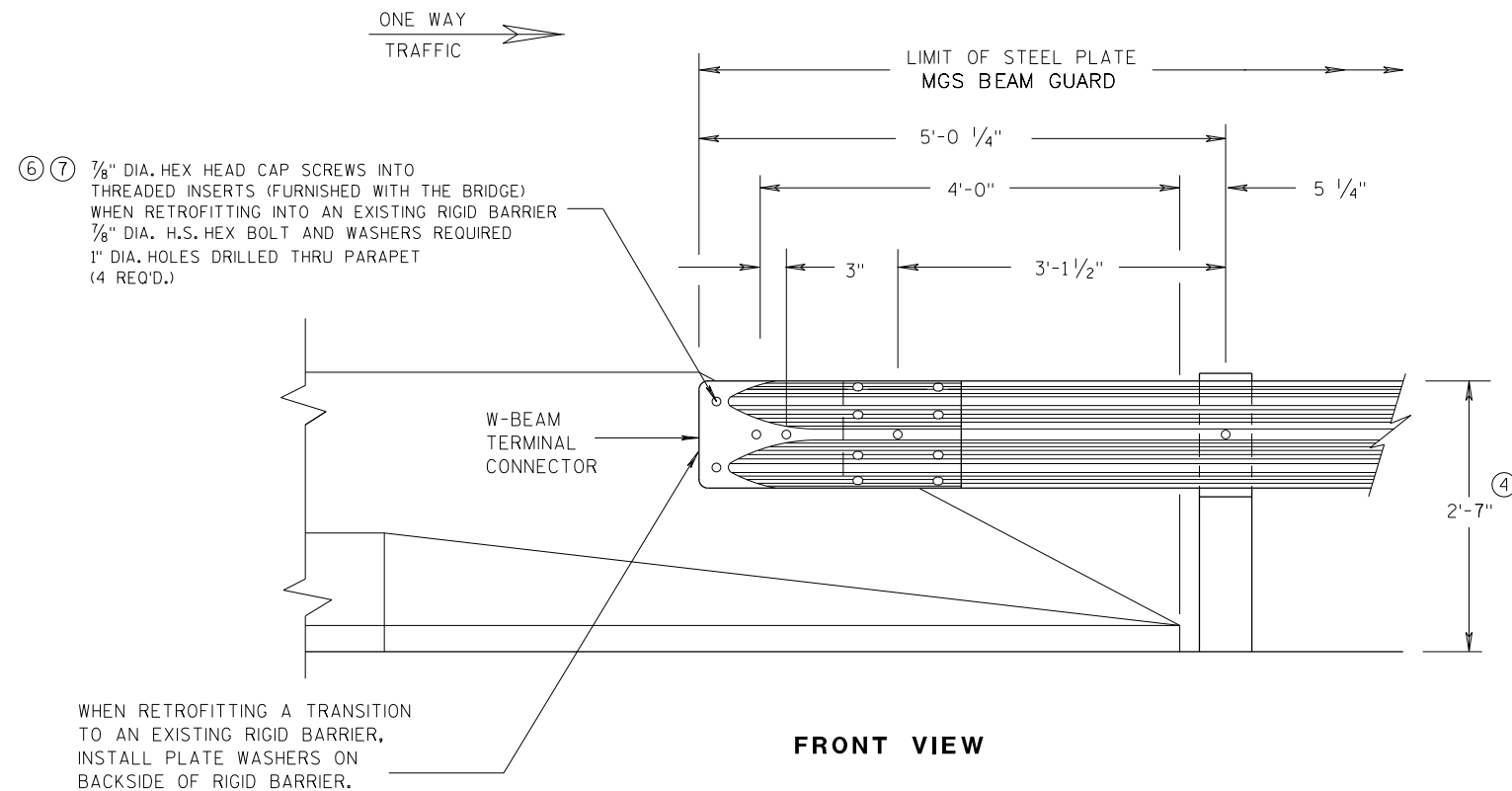
THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

SECTION H-H

MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

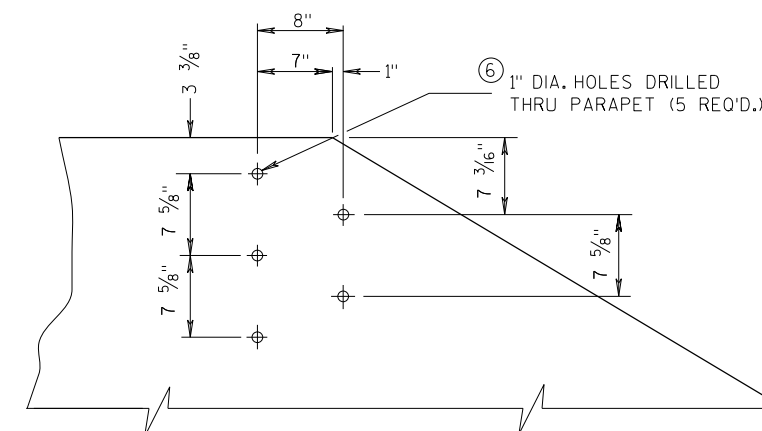
APPROVED  
07/2018  
DATE  
FHWA  
/S/ Rodney Taylor  
ROADWAY STANDARDS UNIT SUPERVISOR  
305  
NT



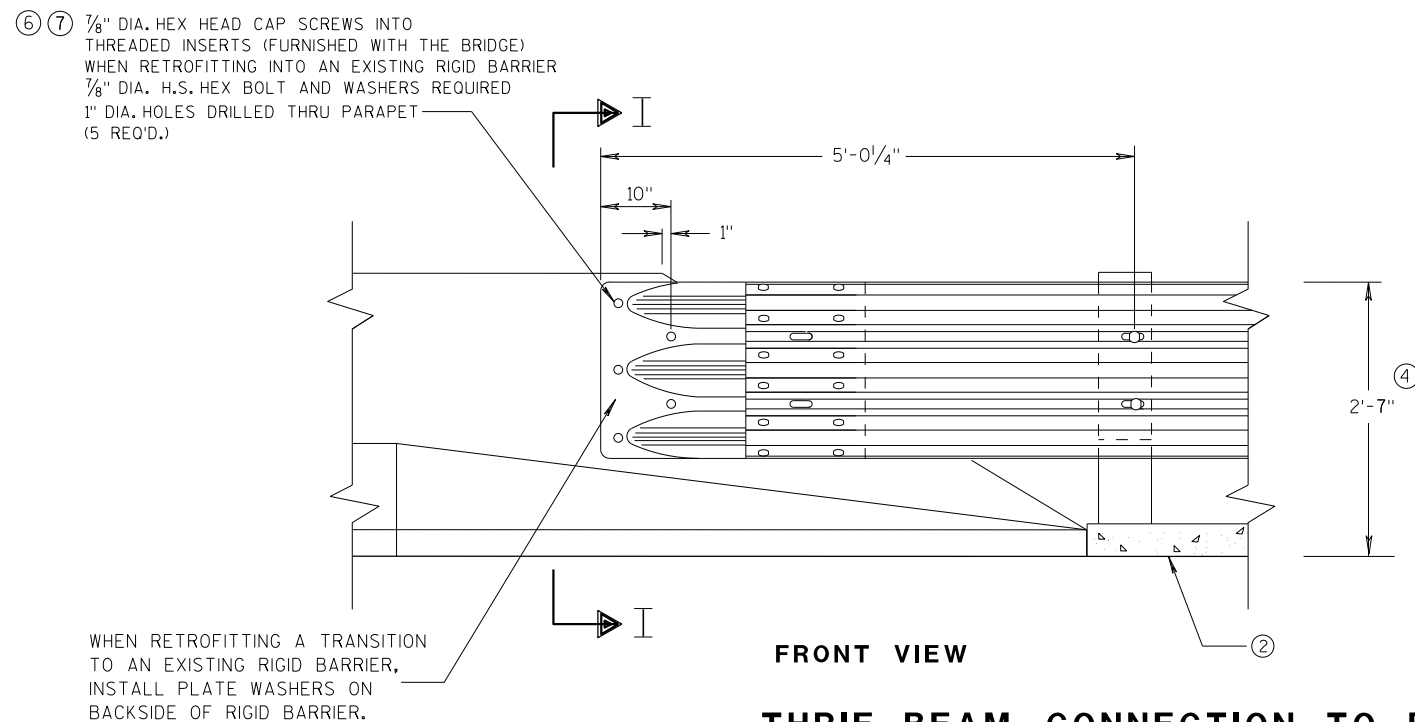
**W BEAM CONNECTION TO  
PARAPETS WITH SLOPED ENDS**  
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

## GENERAL NOTES

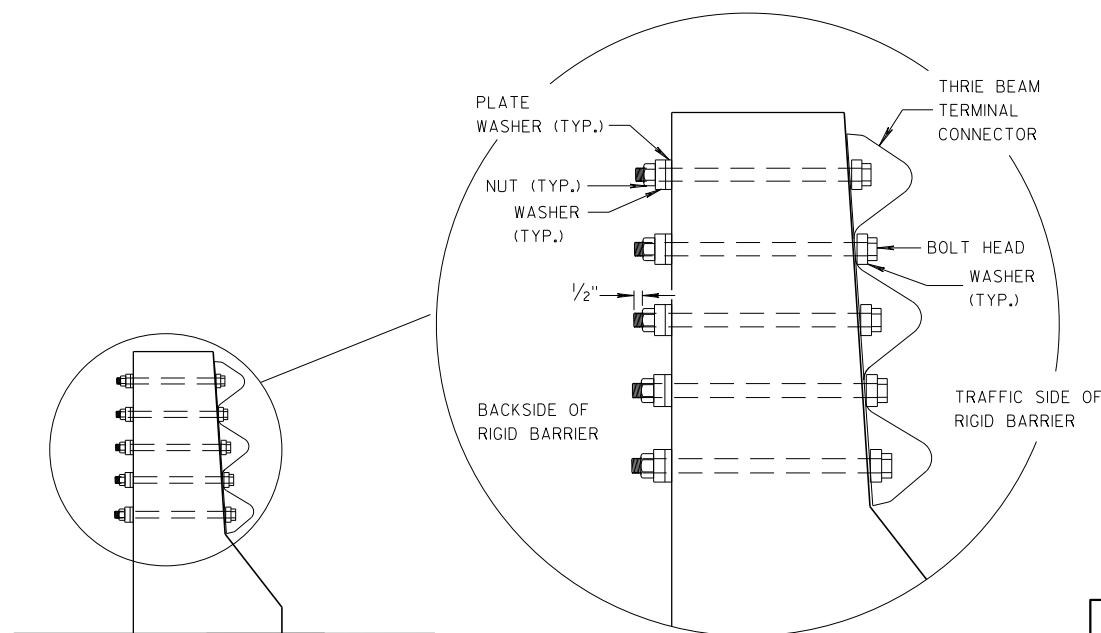
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



**DRILL HOLE LOCATION AND PATTERN  
FOR THRIE BEAM CONNECTION**



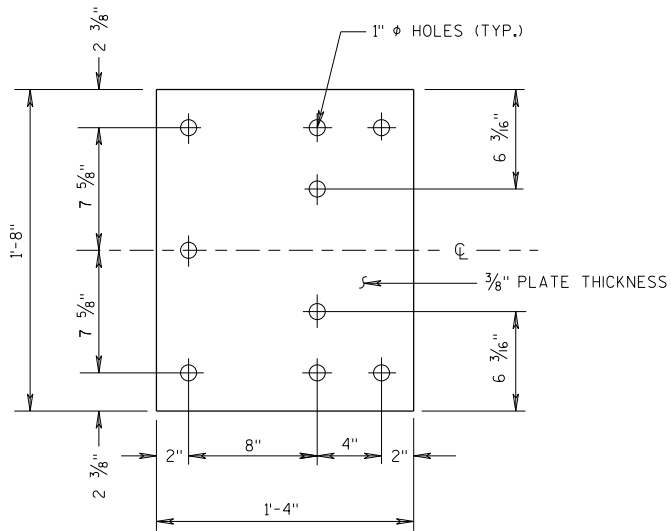
**THRIE BEAM CONNECTION TO BRIDGE  
PARAPETS WITH SLOPED ENDS**



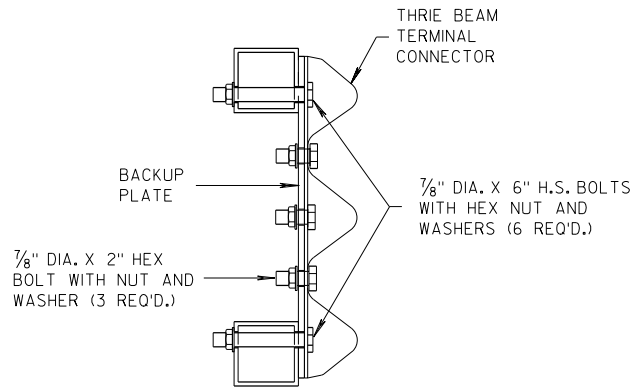
**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

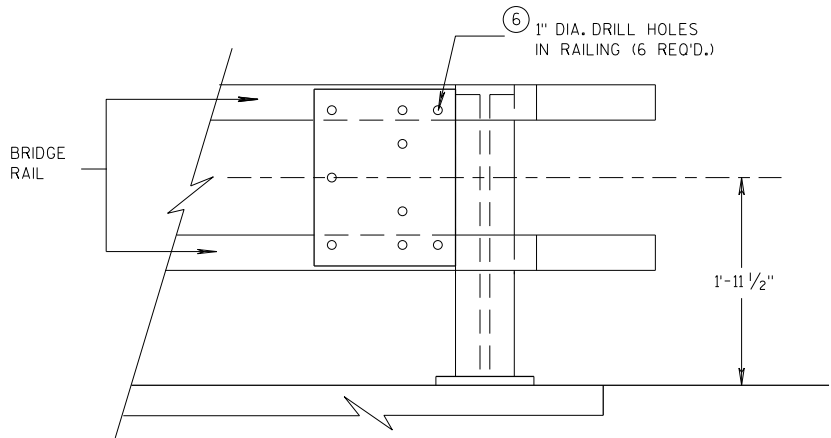
APPROVED  
DATE 07/2018 /S/ Rodney Taylor  
ROADWAY STANDARDS UNIT SUPERVISOR 306  
FHWA



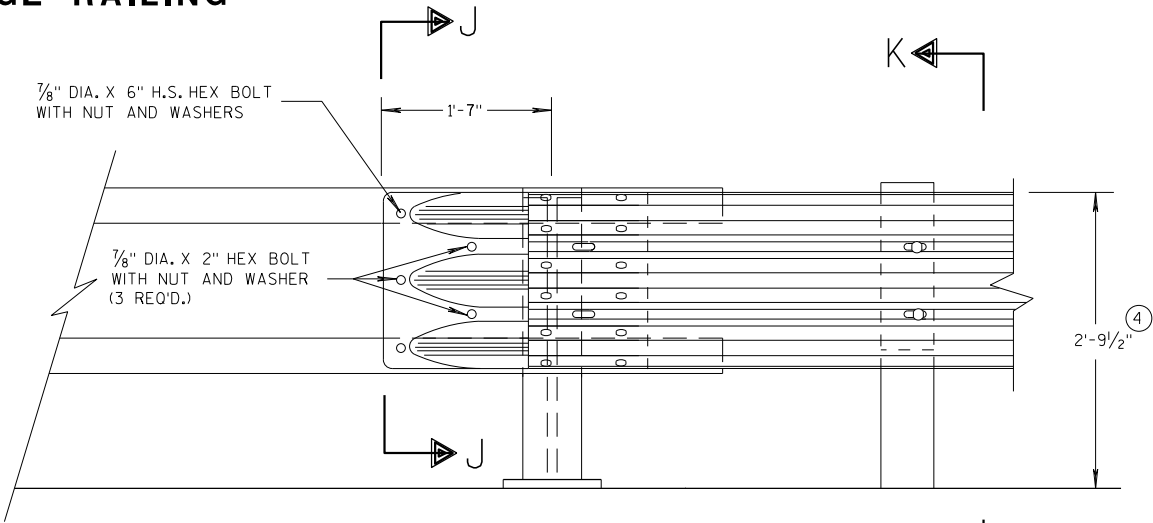
BACK-UP PLATE DETAIL



SECTION J-J

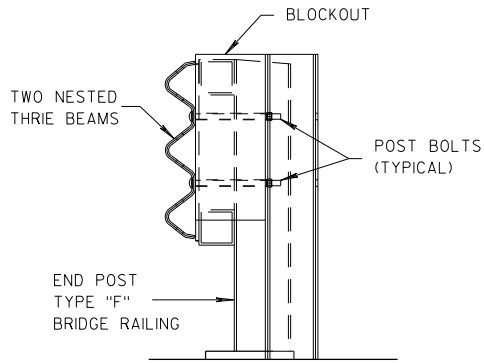


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

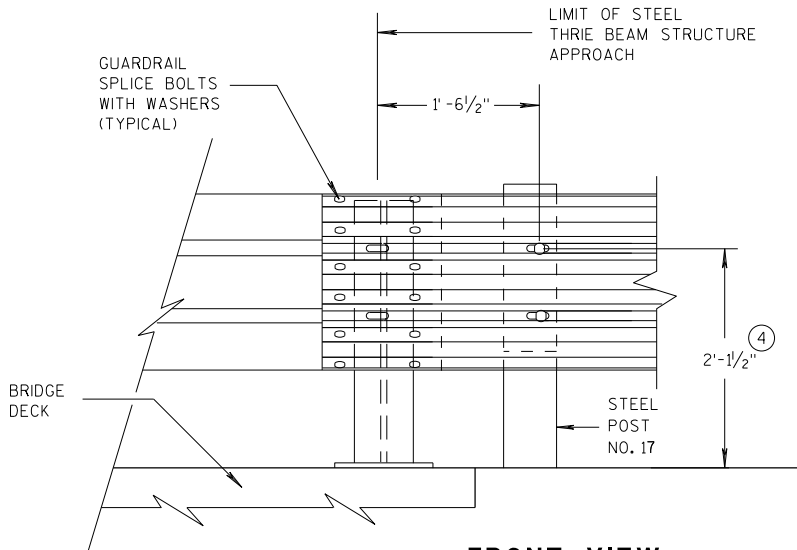
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.



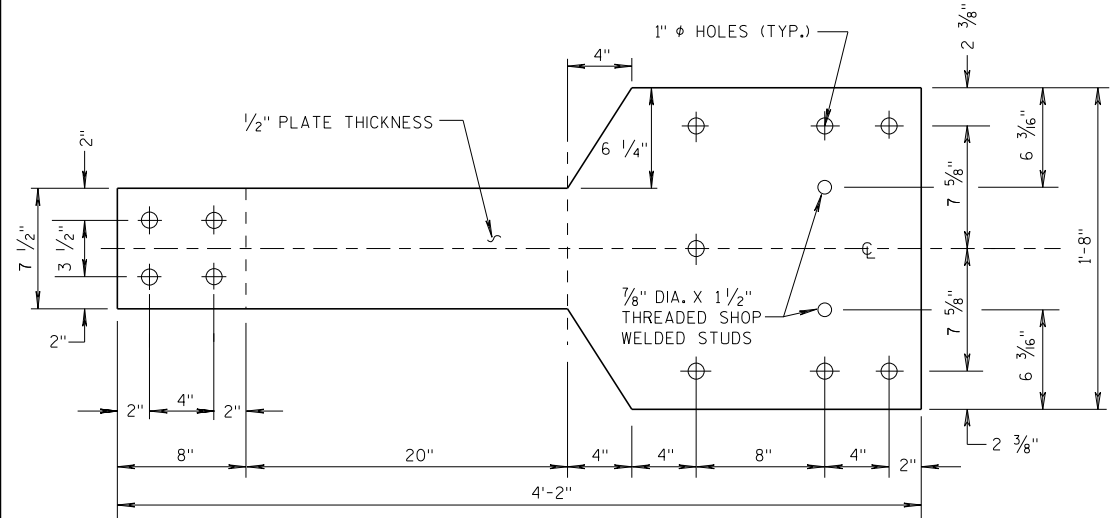
FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

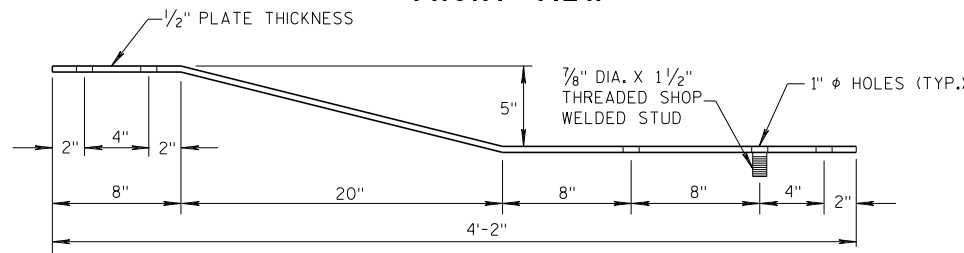
|                                                         |                               |                 |
|---------------------------------------------------------|-------------------------------|-----------------|
| MIDWEST GUARDRAIL SYSTEM<br>THRIE BEAM TRANSITION (MGS) |                               |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION      |                               |                 |
| APPROVED<br>07/2018                                     | /S/ Rodney Taylor             | 307             |
| DATE                                                    | ROADWAY STANDARDS DEVELOPMENT | UNIT SUPERVISOR |
| FHWA                                                    |                               |                 |

**GENERAL NOTES**

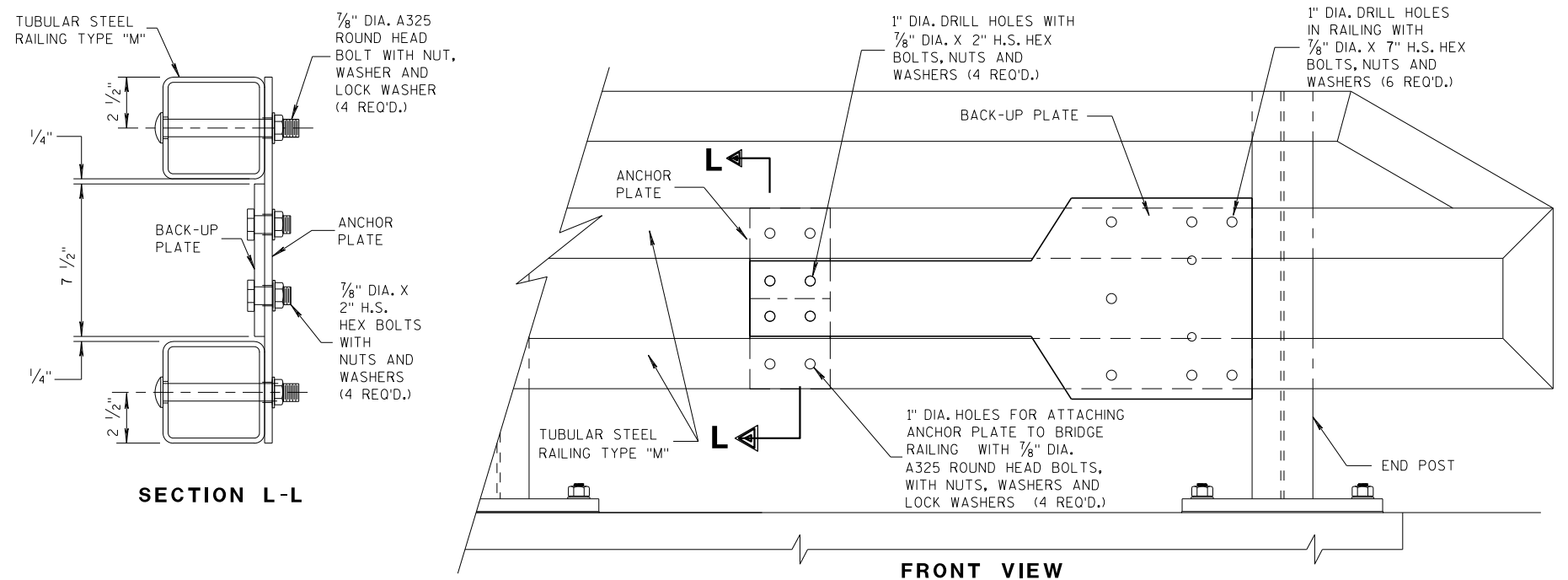
④ TOLERANCE FOR TOP OF W-BEAM RAIL IS  $\pm 1"$ .



**FRONT VIEW**



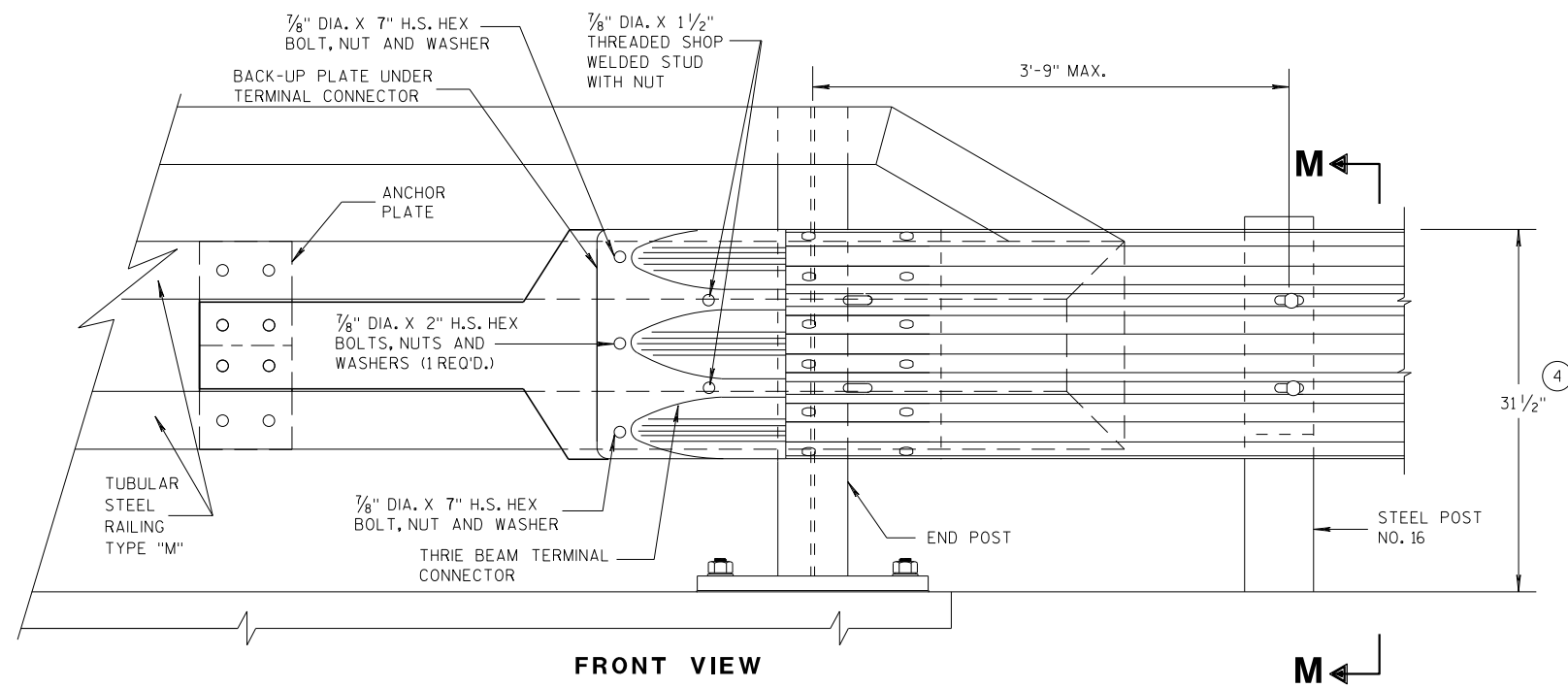
**PLAN VIEW  
BACK-UP PLATE DETAIL, TYPE "M"**



**SECTION L-L**

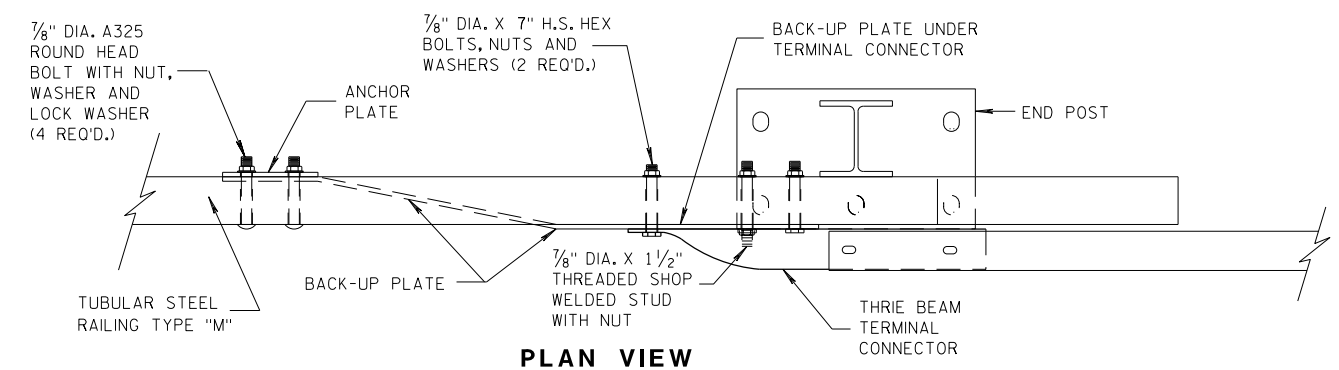
**FRONT VIEW**

**ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"**



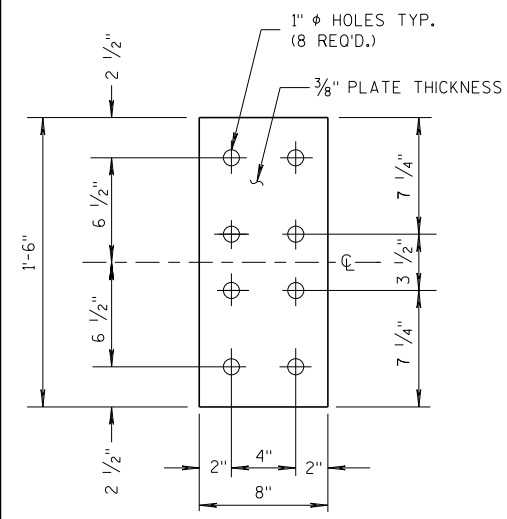
**FRONT VIEW**

**M**



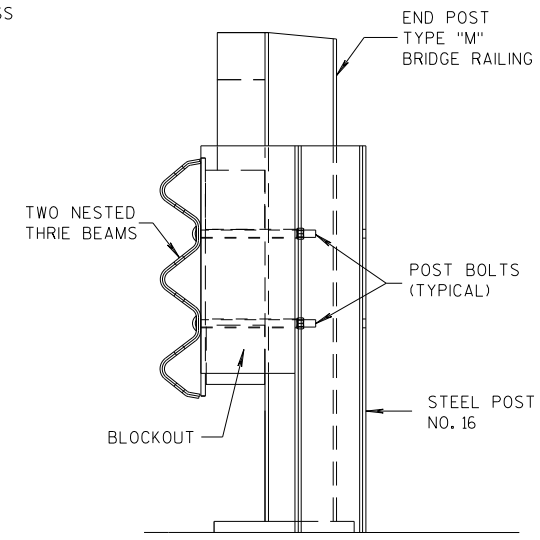
**PLAN VIEW**

**THREE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"**



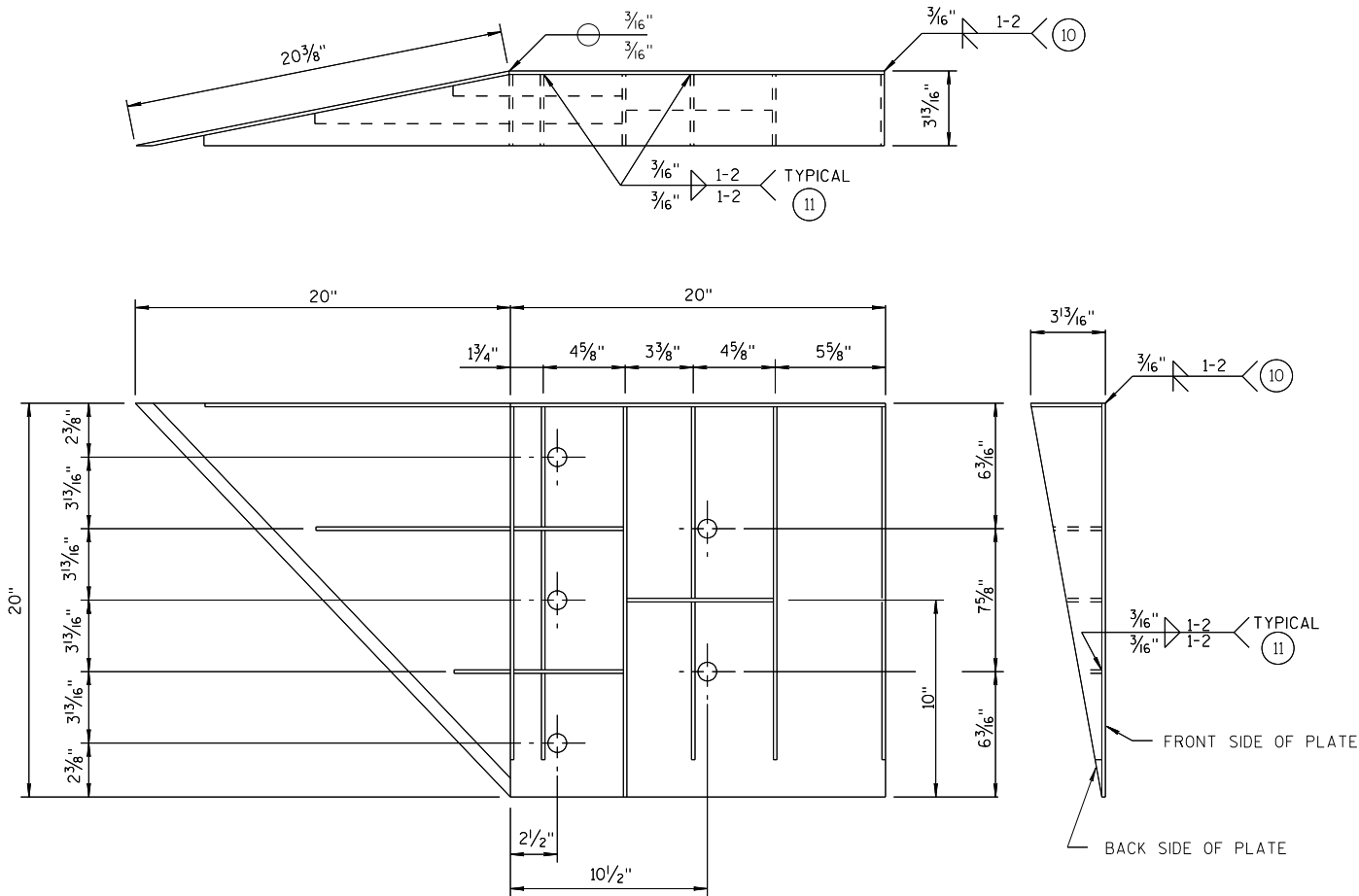
**FRONT VIEW**

**ANCHOR  
PLATE DETAIL,  
TYPE "M"**



**SECTION M-M**

|                                                                 |                                                        |  |  |
|-----------------------------------------------------------------|--------------------------------------------------------|--|--|
| <b>MIDWEST GUARDRAIL SYSTEM<br/>THREE BEAM TRANSITION (MGS)</b> |                                                        |  |  |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION              |                                                        |  |  |
| APPROVED<br>07/2018<br>DATE                                     | /S/ Rodney Taylor<br>ROADWAY STANDARDS UNIT SUPERVISOR |  |  |
| FHWA                                                            | 308                                                    |  |  |

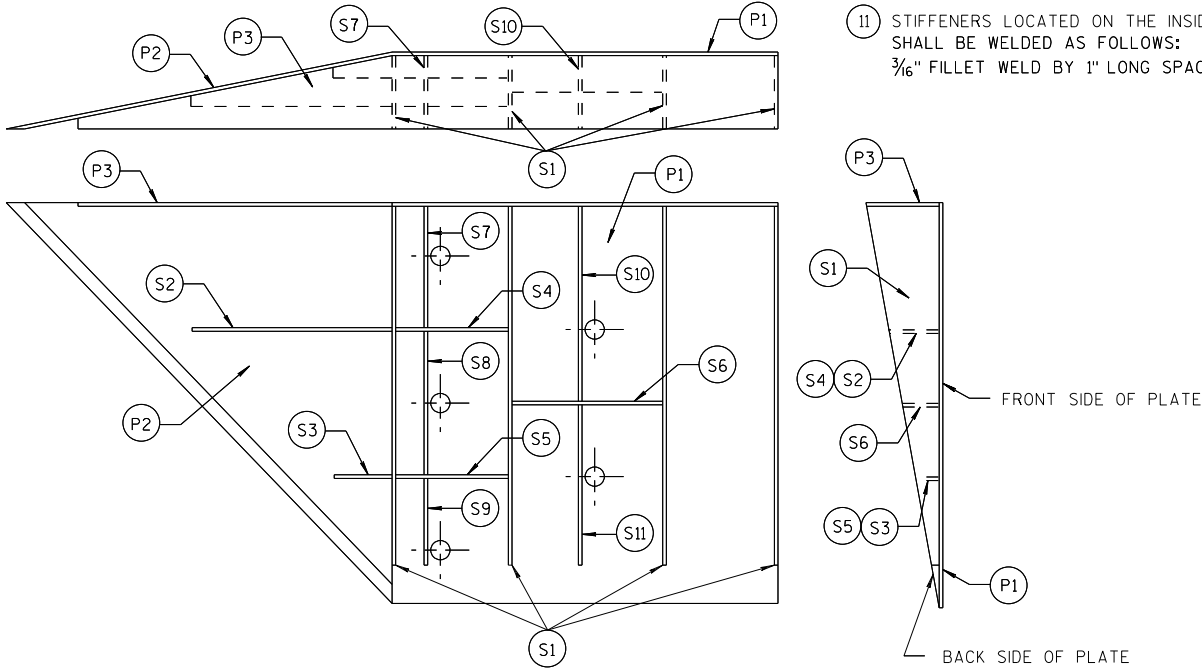


WELDING INSTRUCTION  
(VIEWED FROM BACK SIDE OF PLATE)

SINGLE SLOPE CONNECTION PLATE

| CONNECTOR PLATE DIMENSION<br>(PER ASSEMBLY) |          |       |                                     |           |
|---------------------------------------------|----------|-------|-------------------------------------|-----------|
| PLATE                                       | QUANTITY | SHAPE | SIZE (A x B x C x D)                | THICKNESS |
| P1                                          | 1        |       | 20" x 20"                           | 3/16"     |
| P2                                          | 1        |       | 20" x 20" x 28 3/16"                | 3/16"     |
| P3                                          | 1        |       | 39" x 3 5/8" x 20" x 19 5/16"       | 3/16"     |
| S1                                          | 4        |       | 18 7/16" x 3 5/8" x 18 3/4"         | 1/4"      |
| S2                                          | 1        |       | 10 1/4" x 2 1/16" x 10 3/8" x 1/2"  | 1/4"      |
| S3                                          | 1        |       | 3" x 1 1/16" x 3 3/8" x 1/2"        | 1/4"      |
| S4                                          | 1        |       | 6 1/8" x 2 7/16"                    | 1/4"      |
| S5                                          | 1        |       | 6 1/8" x 1 1/16"                    | 1/4"      |
| S6                                          | 1        |       | 7 3/4" x 1 3/4"                     | 1/4"      |
| S7                                          | 1        |       | 2 3/16" x 6" x 3 5/8" x 5 7/8"      | 1/4"      |
| S8                                          | 1        |       | 1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"  | 1/4"      |
| S9                                          | 1        |       | 6 1/16" x 6 3/16" x 1 3/32"         | 1/4"      |
| S10                                         | 1        |       | 1 7/8" x 9 7/8" x 3 5/8" x 9 11/16" | 1/4"      |
| S11                                         | 1        |       | 8 1/2" x 8 3/4" x 1 3/16"           | 1/4"      |

PLATE AND STIFFENER IDENTIFICATION  
(VIEWED FROM BACK SIDE OF PLATE)



GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:  
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:  
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

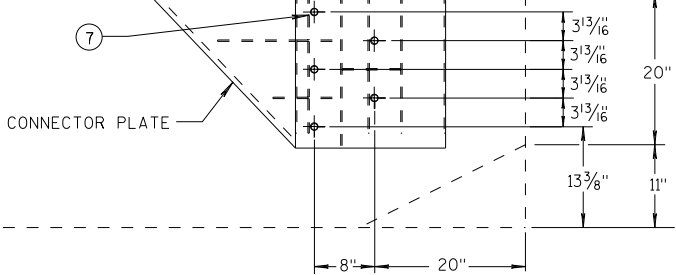
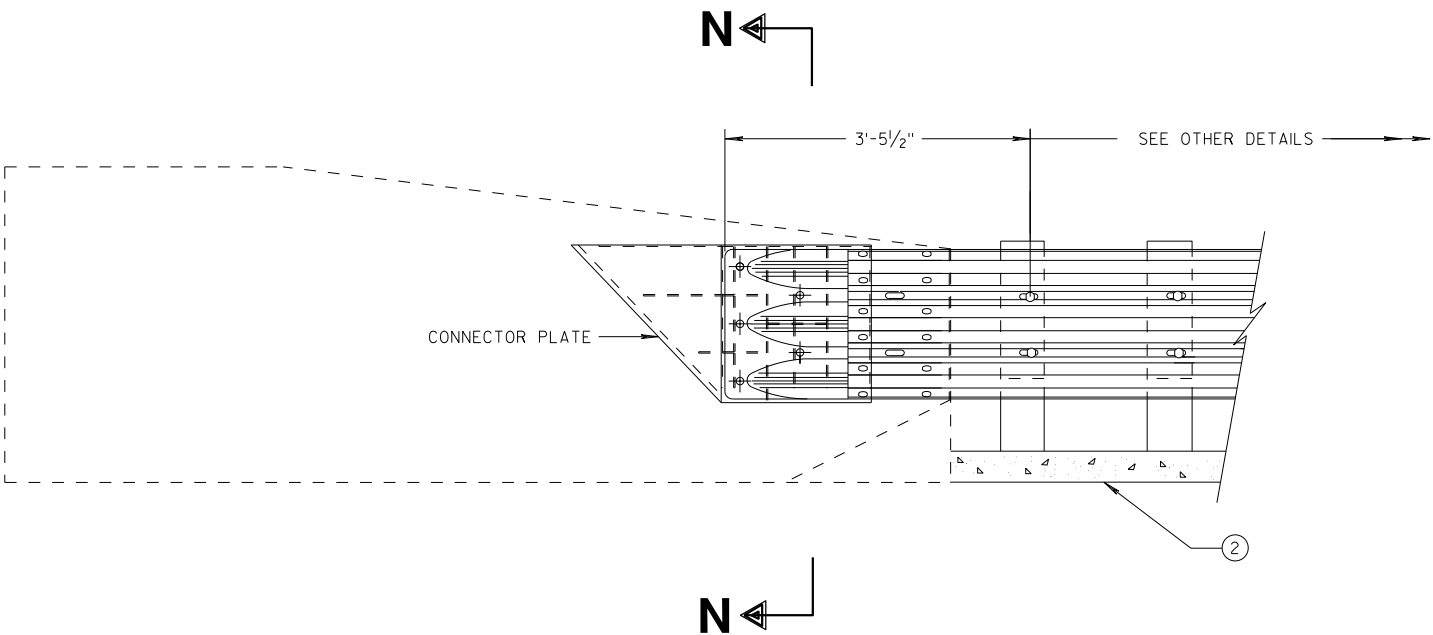
MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
7/2018  
DATE  
/S/ Rodney Taylor  
ROADWAY STANDARDS UNIT SUPERVISOR  
309  
FHWA



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



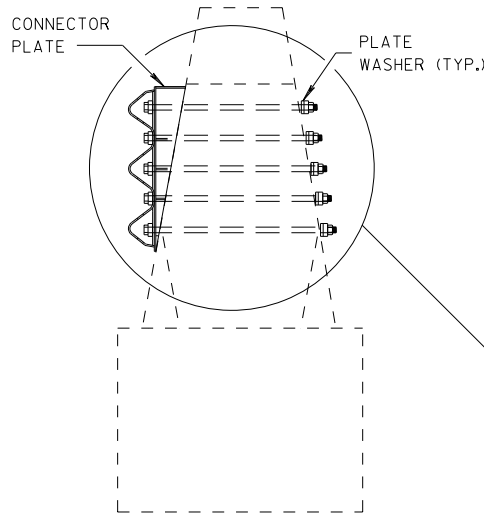
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

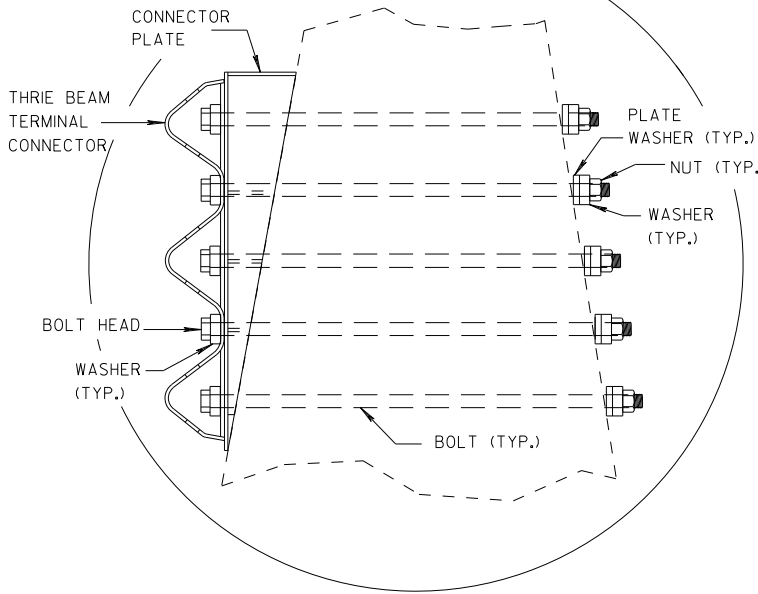
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTION PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

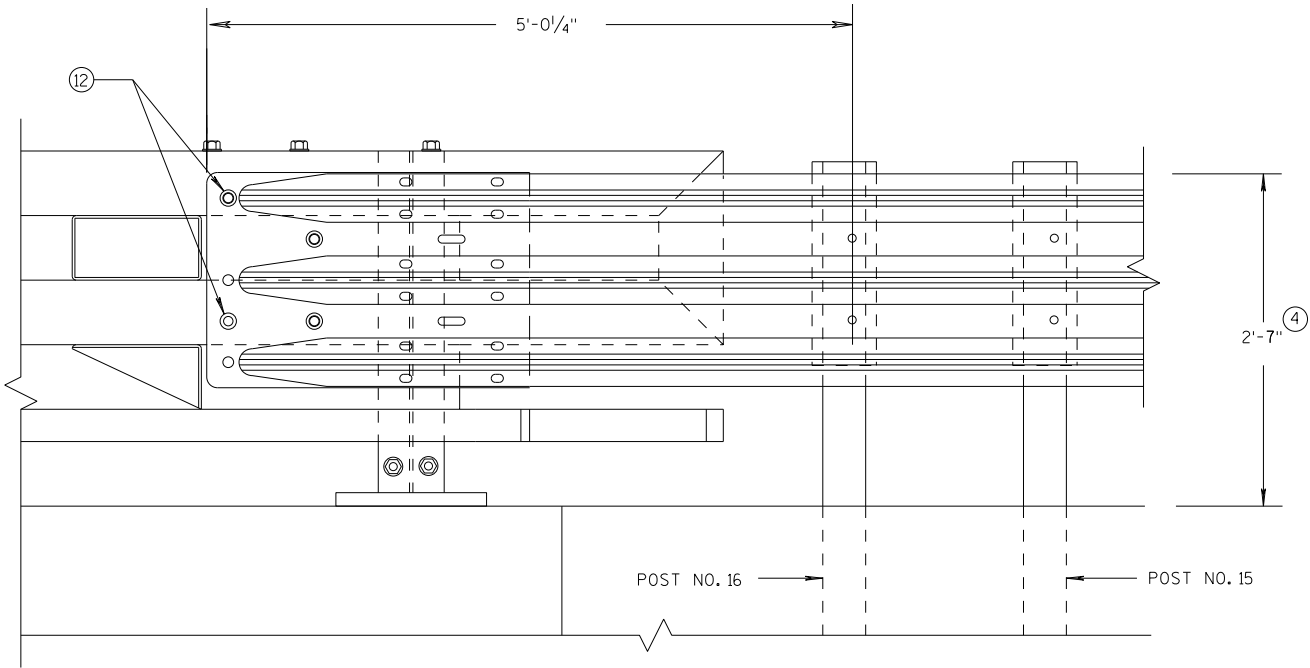
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 7/2018  
FHWA

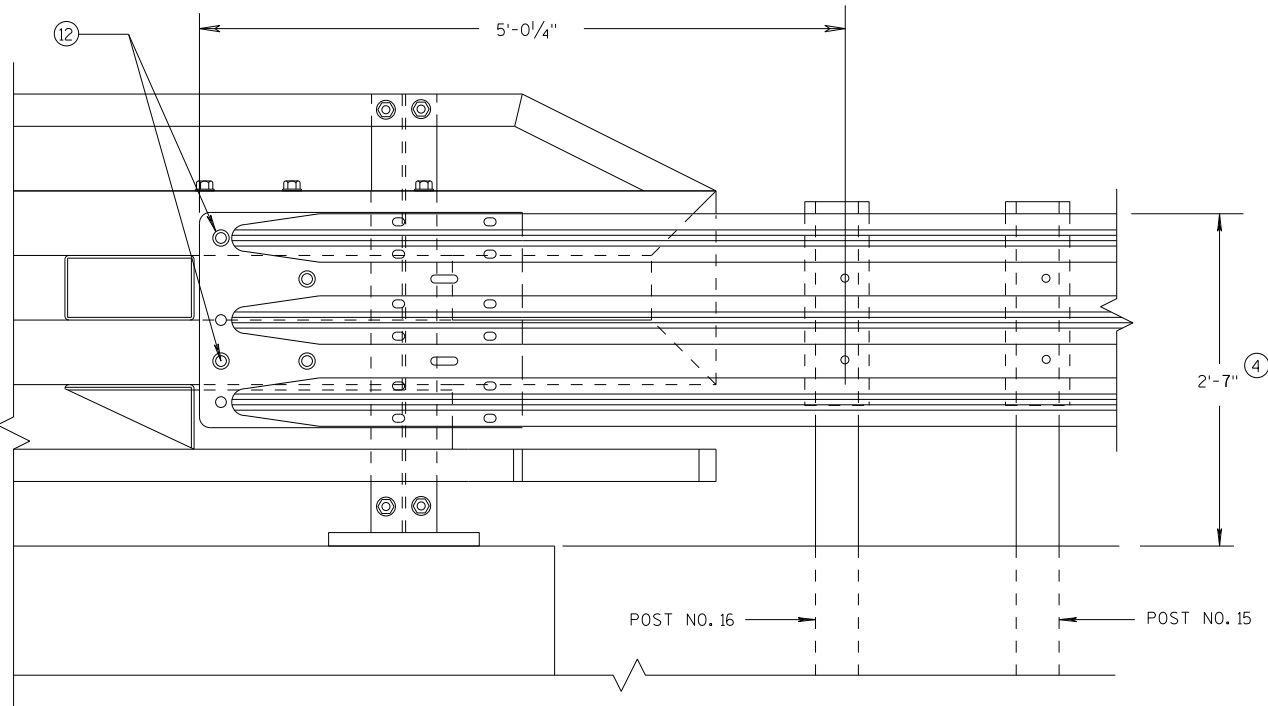
/S/ Rodney Taylor  
ROADWAY STANDARDS DISTRICT UNIT SUPERVISOR 310

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND  $\frac{1}{2}$ -INCH BEYOND NUT.



ELEVATION OF DETAIL AT NY3 END POST  
THRIE BEAM RAIL ATTACHMENT



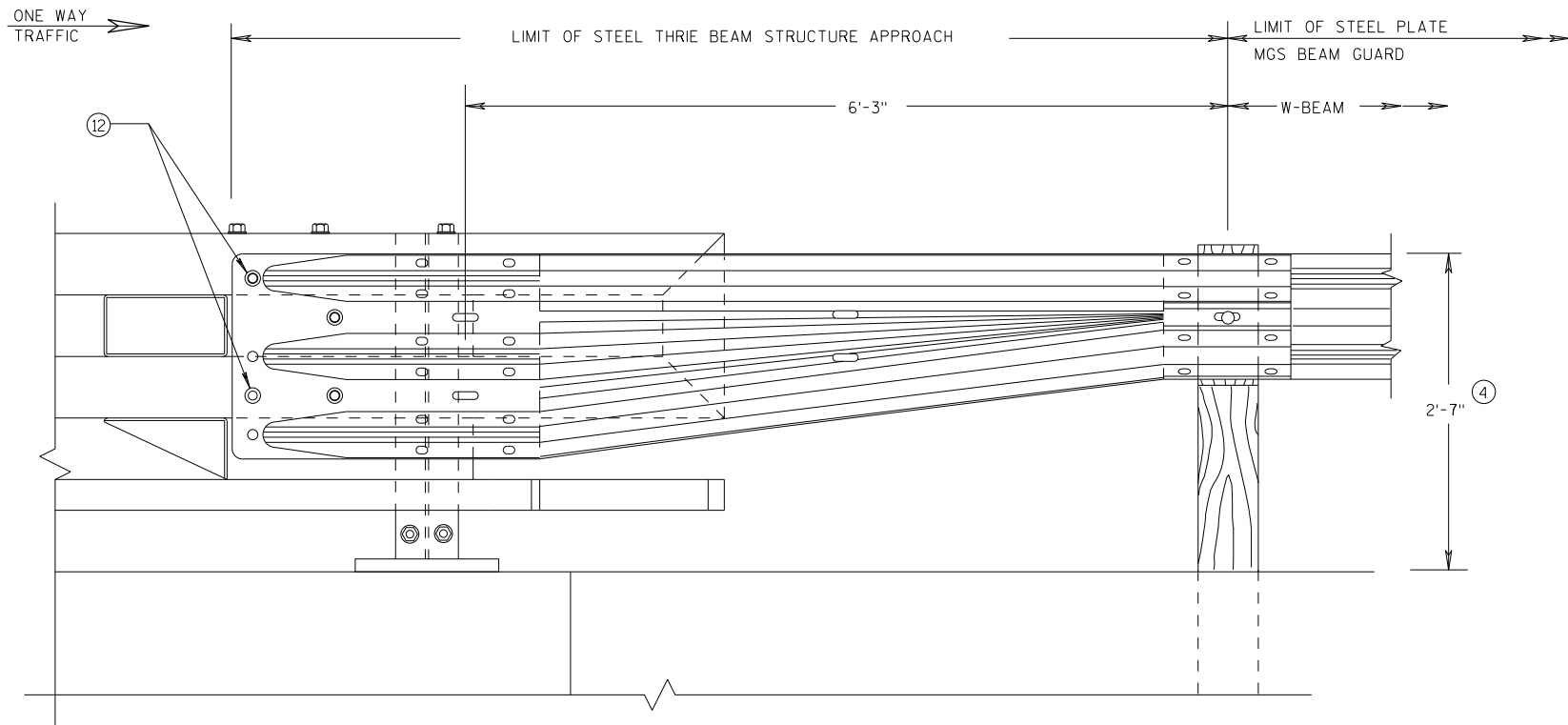
ELEVATION OF DETAIL AT NY4 END POST  
THRIE BEAM RAIL ATTACHMENT

MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 7/2018 /S/ Rodney Taylor  
FHWA ROADWAY STANDARDS UNIT SUPERVISOR 311 NT





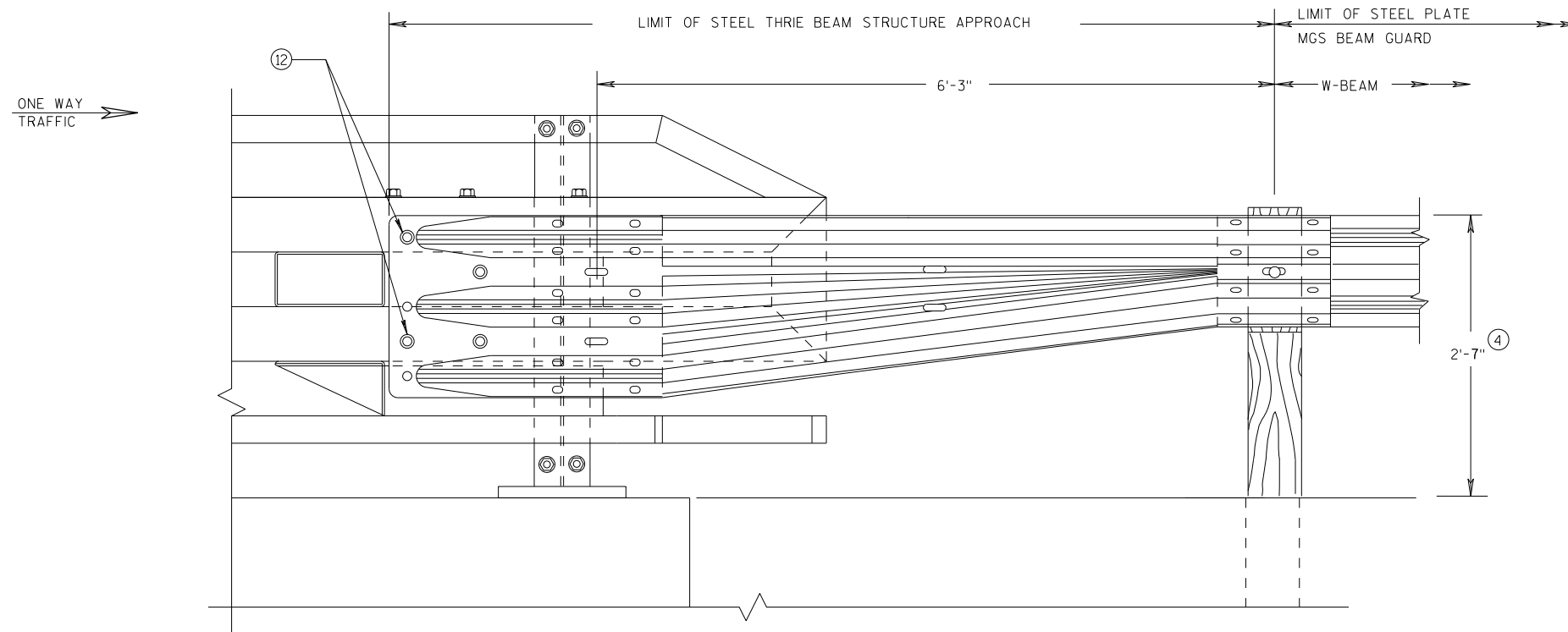
## GENERAL NOTES

④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .

⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND  $\frac{1}{2}$ -INCH BEYOND NUT.

FRONT VIEW

### W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3" (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

### W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4" (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

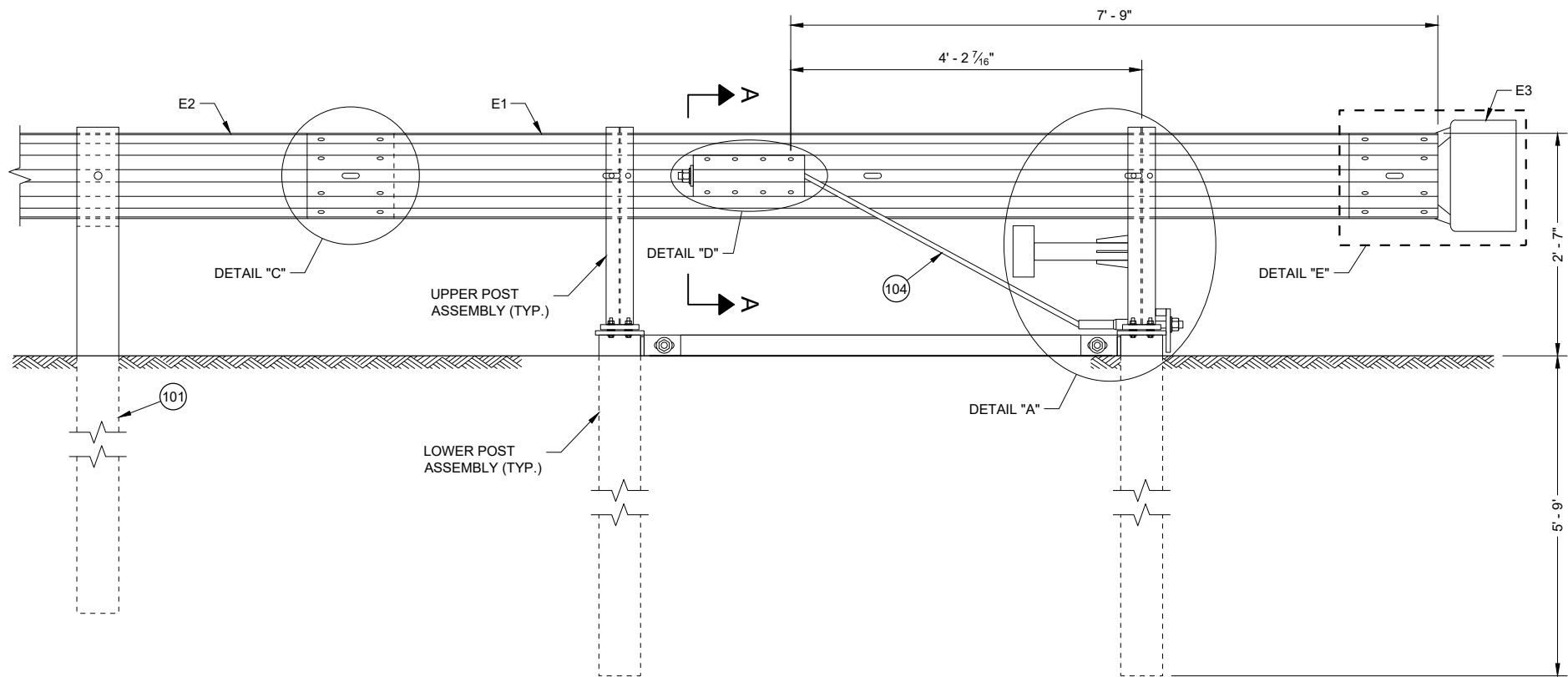
APPROVED

7/2018  
DATE

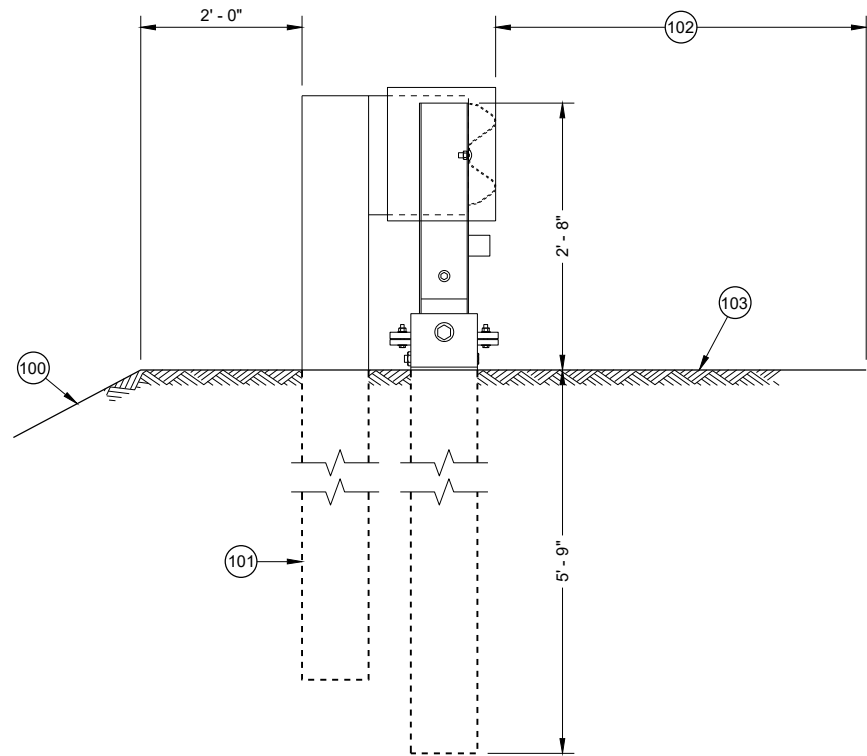
FHWA

/S/ Rodney Taylor  
ROADWAY STANDARDS C 312  
UNIT SUPERVISOR

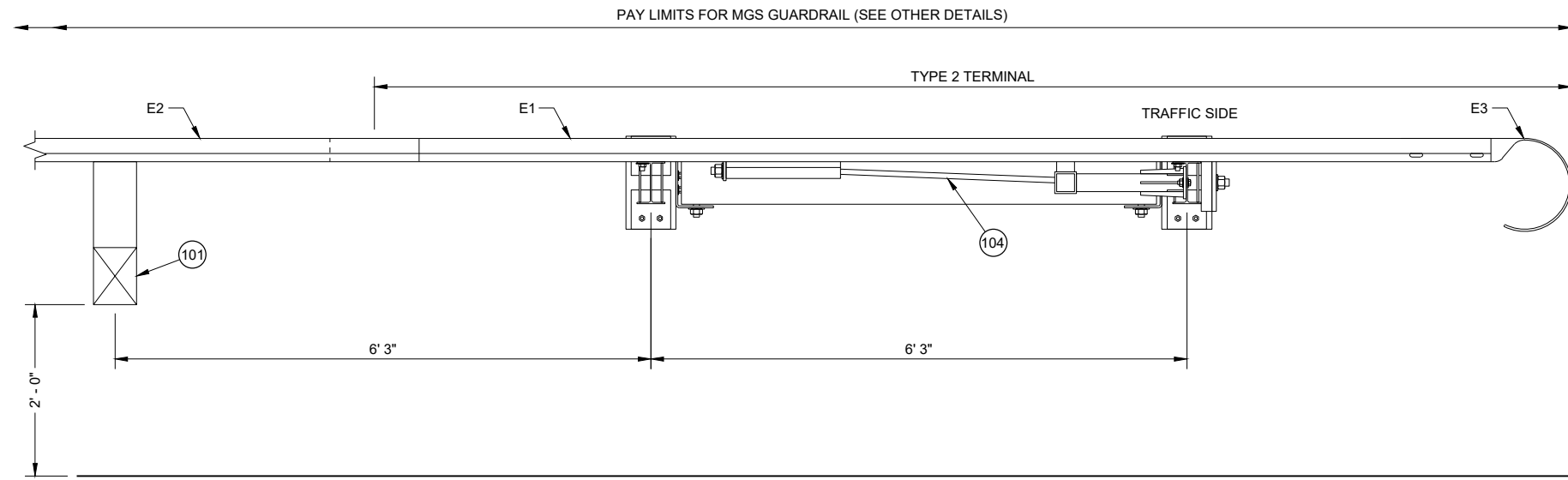
S.D.D. 14 B 45-5L



**BACK VIEW  
TYPE 2 TERMINAL**



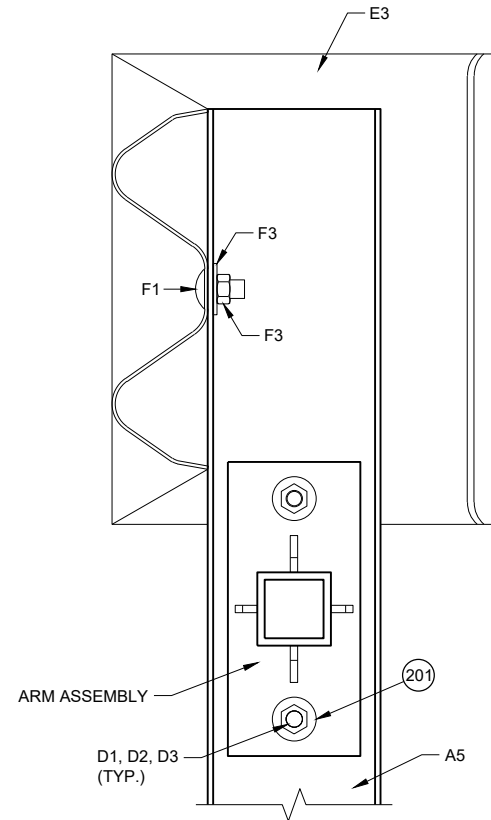
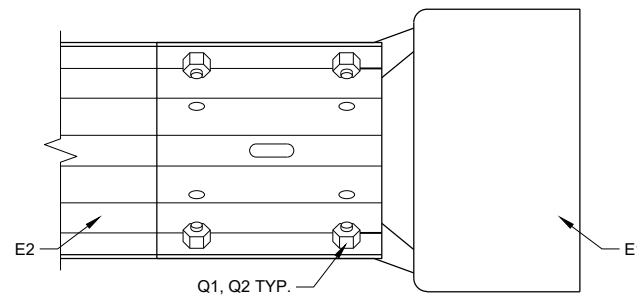
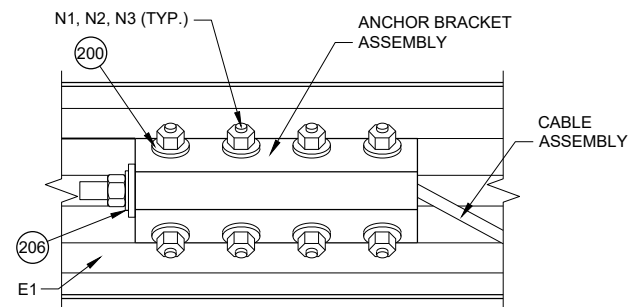
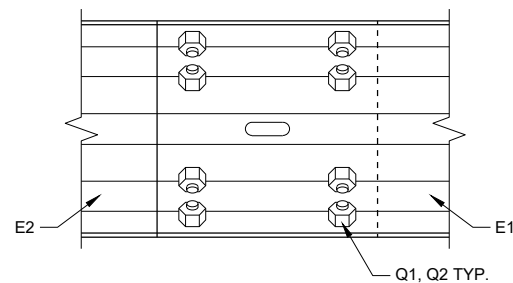
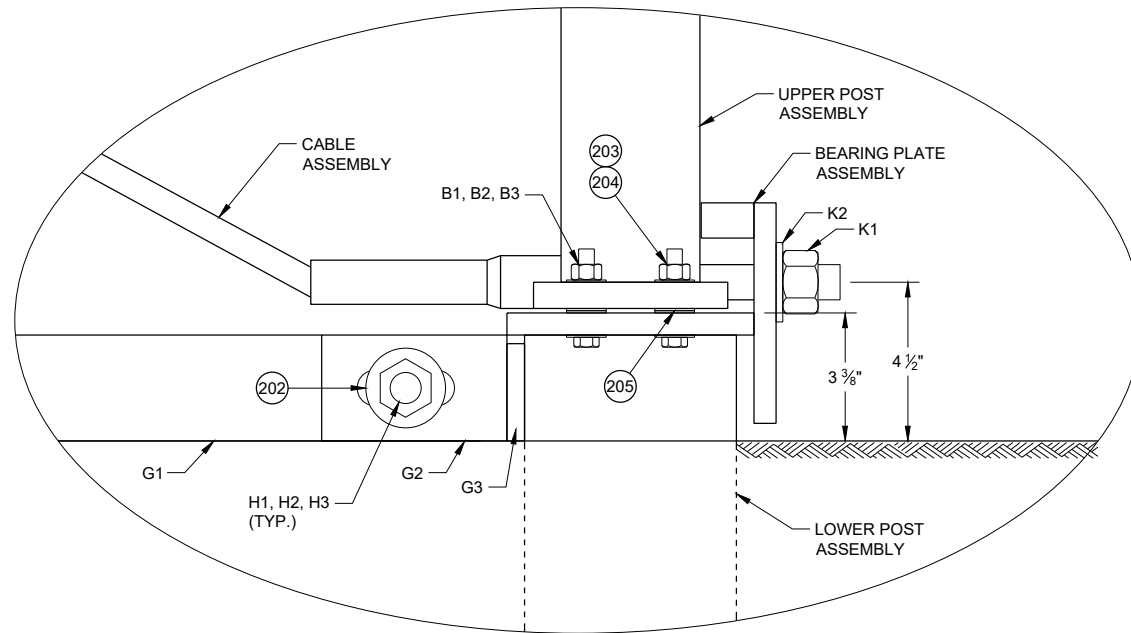
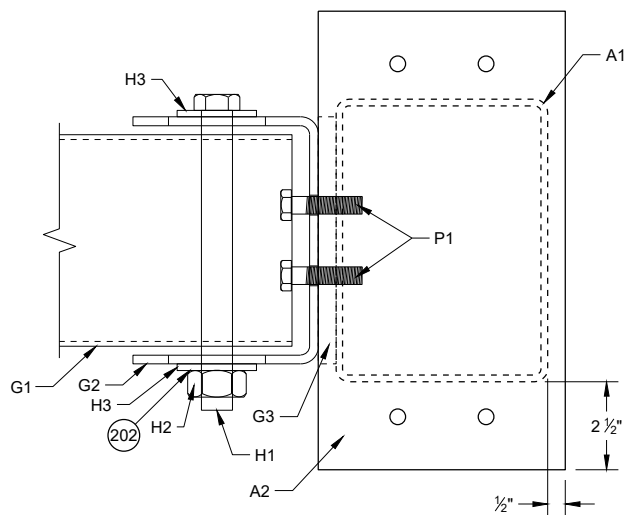
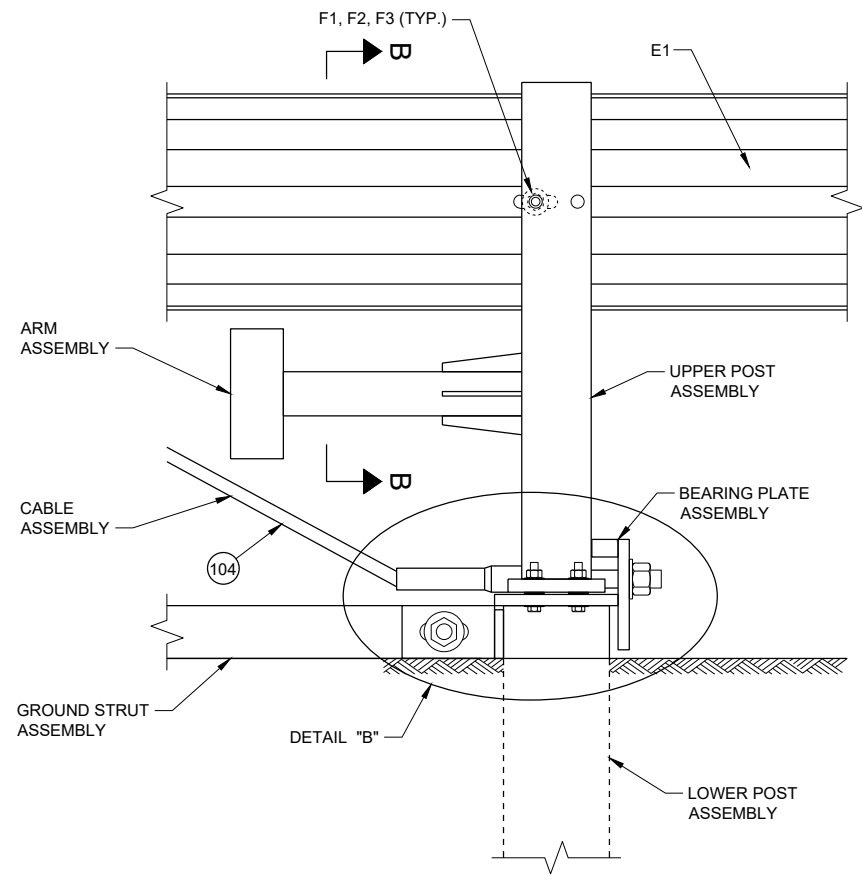
**SIDE VIEW  
TYPE 2 TERMINAL**



**TOP VIEW  
TYPE 2 TERMINAL**

- GENERAL NOTES**
- (100) MAXIMUM SLOPE IS 2.5:1.
  - (101) SEE SDD 14B42 FOR MORE INFORMATION.
  - (102) SHOULDER
  - (103) MAXIMUM SLOPE IS 10:1.
  - (104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

|                                                               |
|---------------------------------------------------------------|
| <b>MIDWEST GUARDRAIL<br/>SYSTEM (MGS)<br/>TYPE 2 TERMINAL</b> |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION 313        |

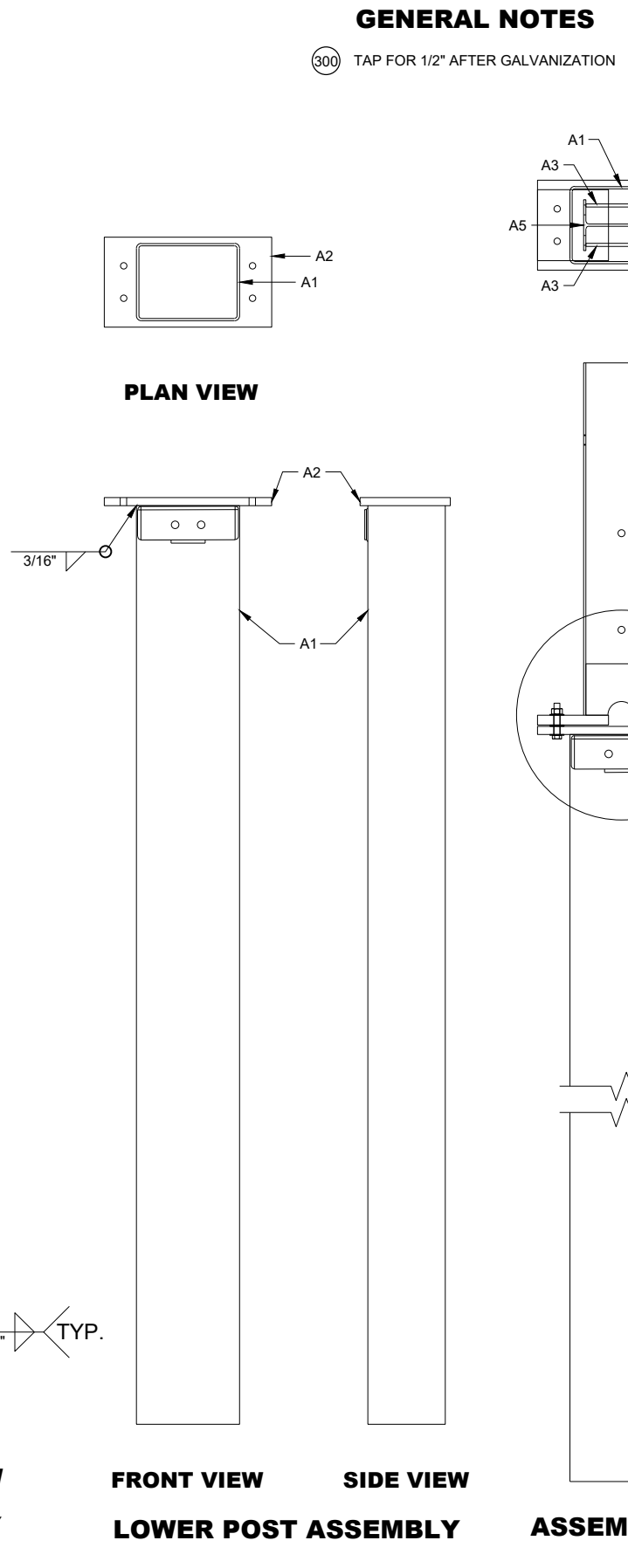
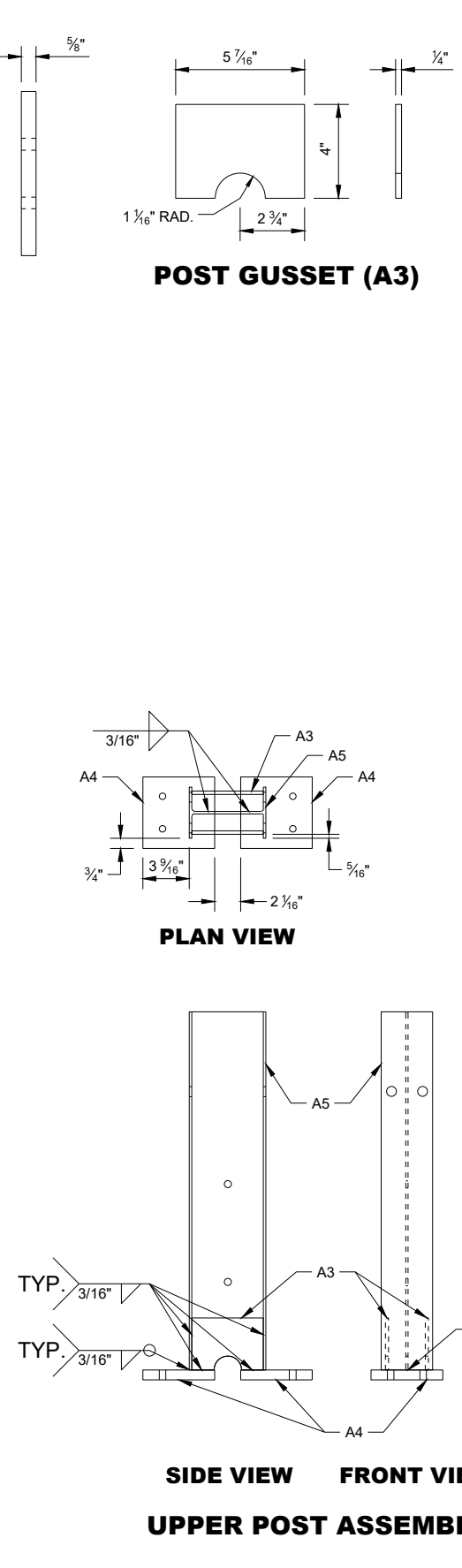
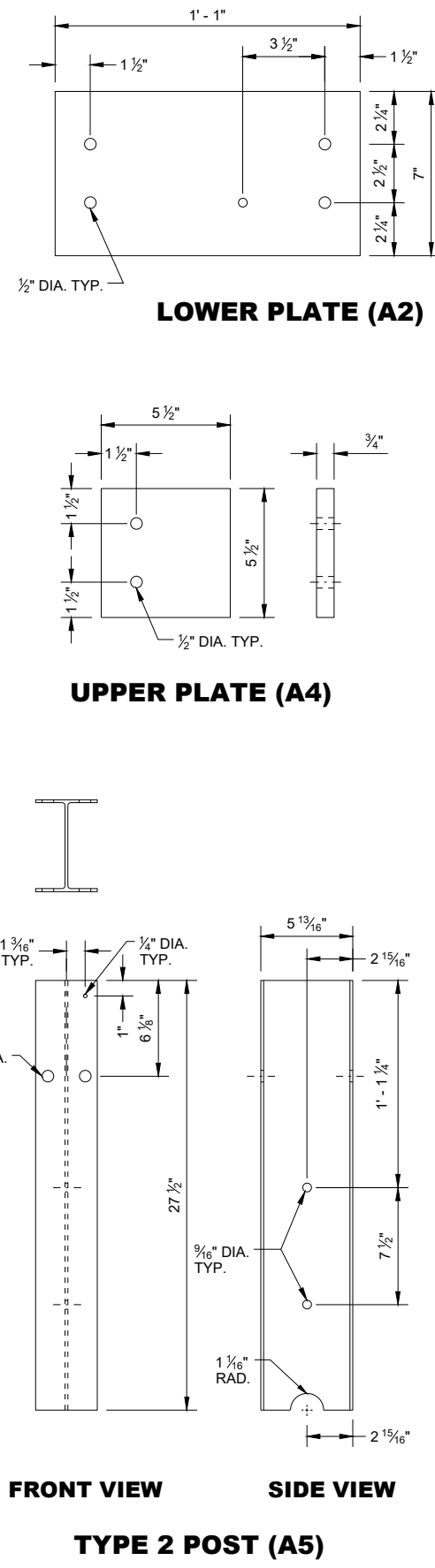
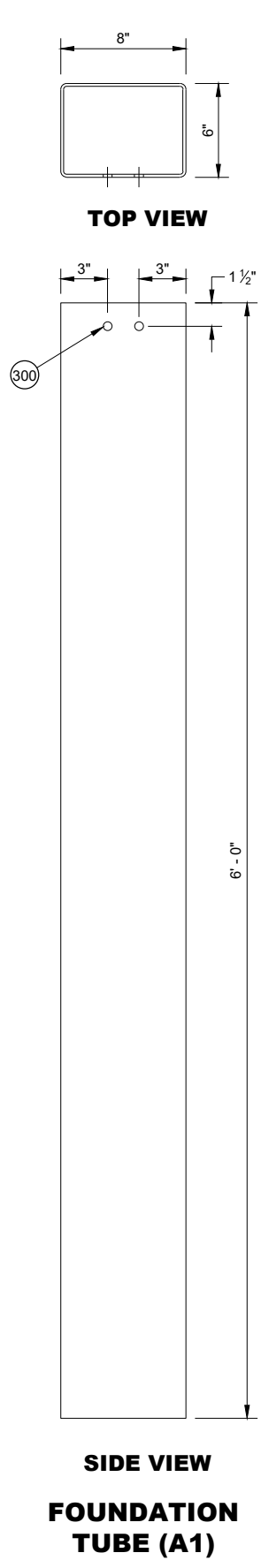


GENERAL NOTES

- 200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.
- 201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.
- 202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.
- 203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.
- 204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.
- 205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.
- 206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

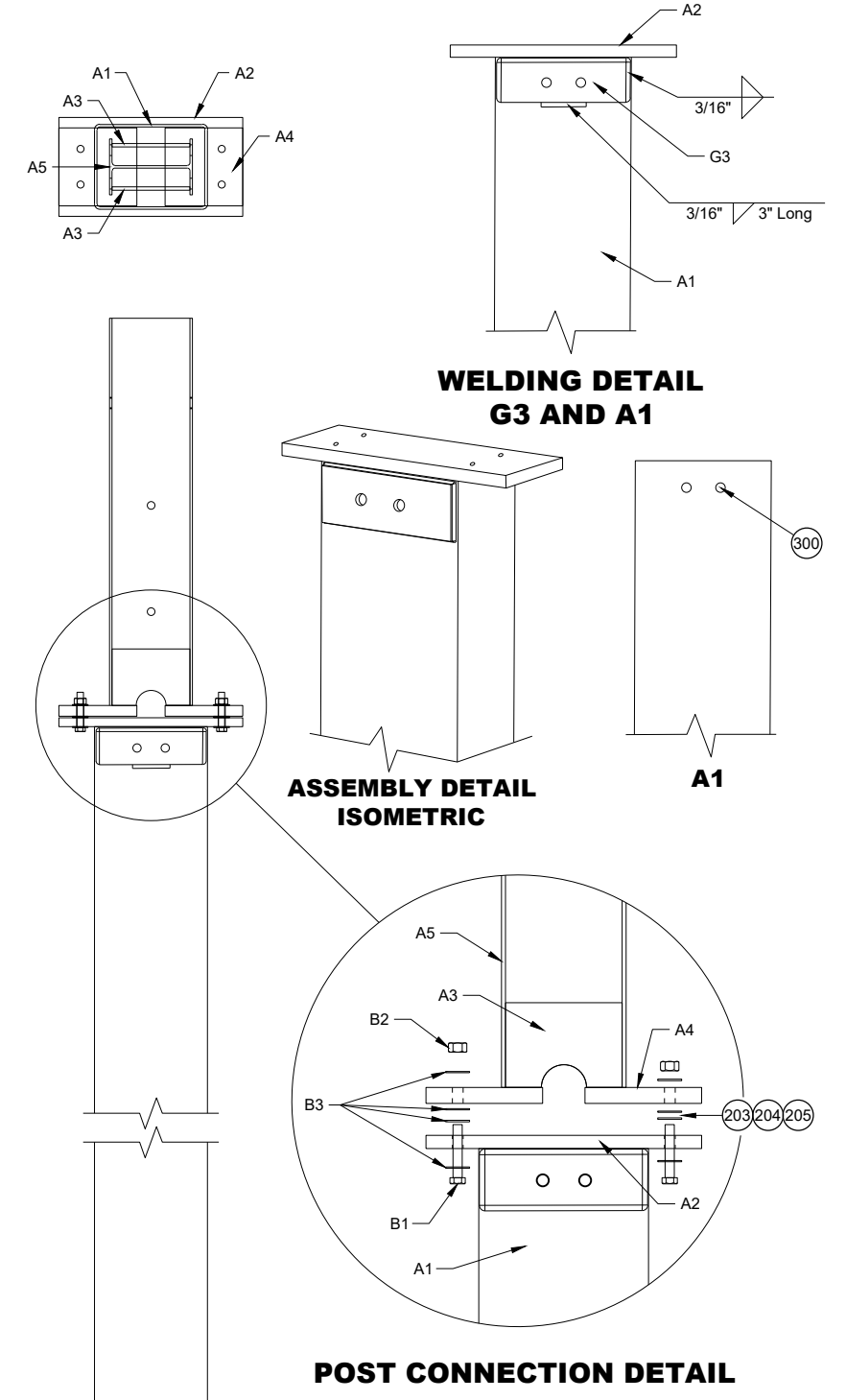
MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 314



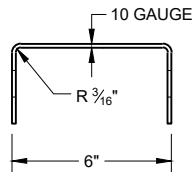
**GENERAL NOTES**

(300) TAP FOR 1/2" AFTER GALVANIZATION

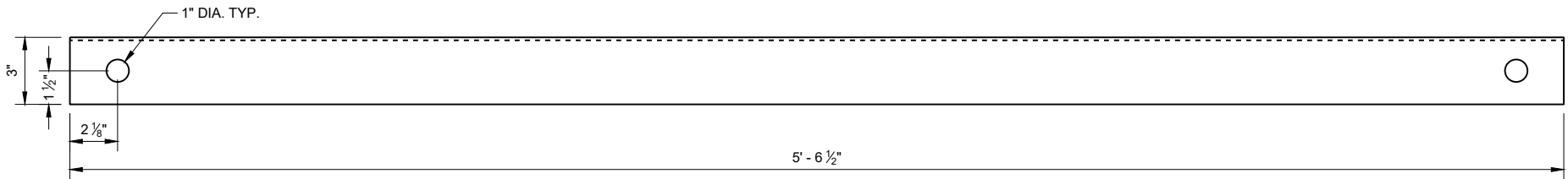


**MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 315

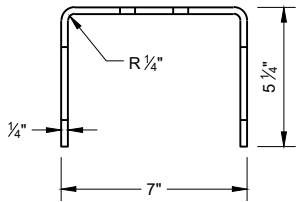


SIDE VIEW

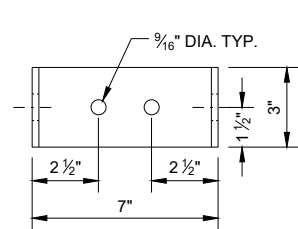


FRONT VIEW

GROUND STRUT CHANNEL (G1)

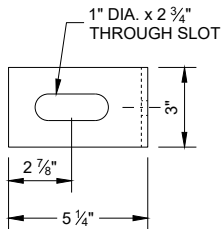


TOP VIEW



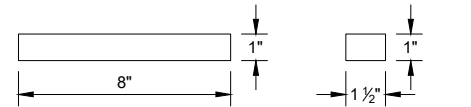
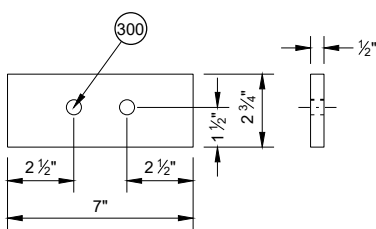
FRONT VIEW

GROUND STRUT CONNECTOR (G2)

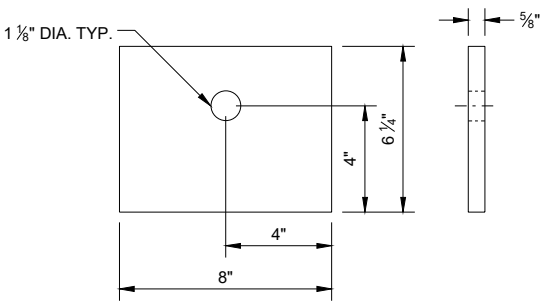


SIDE VIEW

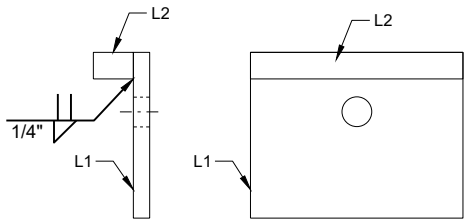
GROUND STRUT PLATE (G3)



BEARING PLATE FLANGE (L2)



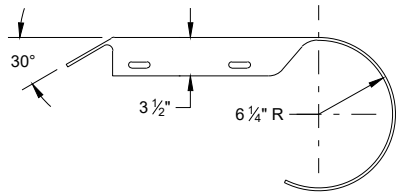
BEARING PLATE (L1)



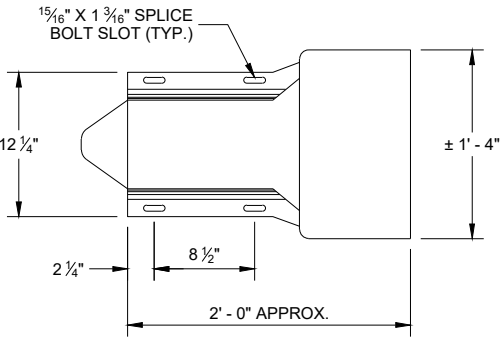
SIDE VIEW

FRONT VIEW

BEARING PLATE ASSEMBLY



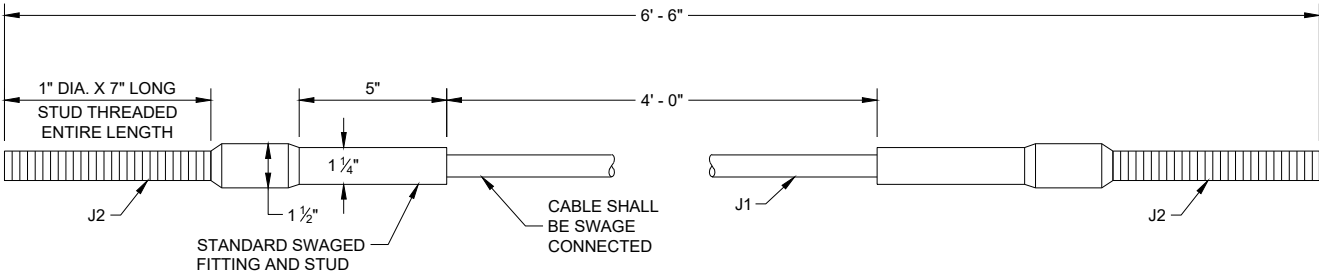
PLAN VIEW



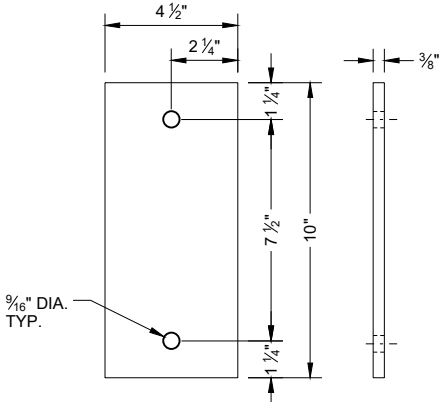
ELEVATION VIEW  
ROUNDED BUFFER END (E3)

MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

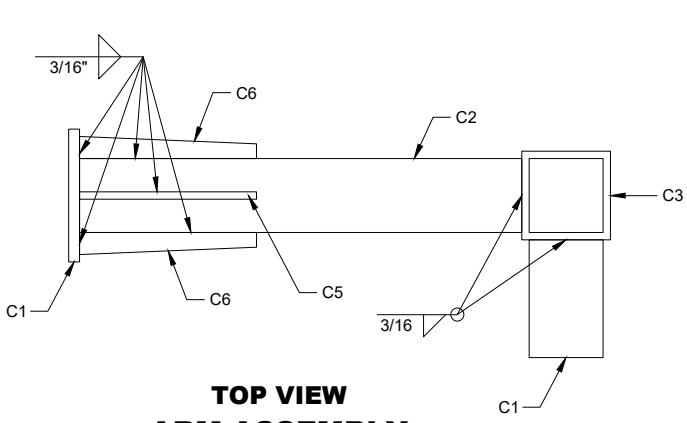
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 316



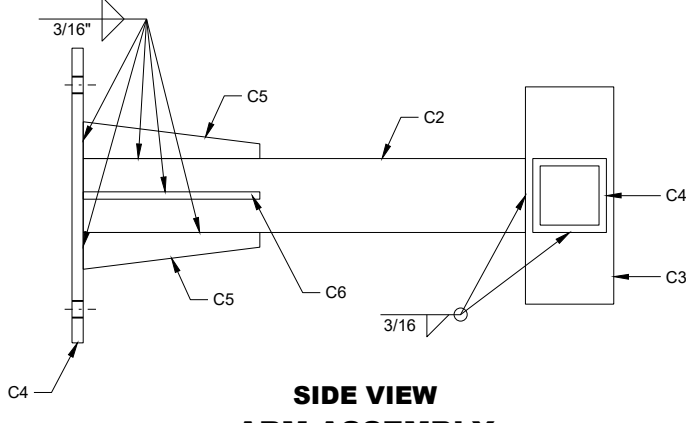
CABLE ASSEMBLY



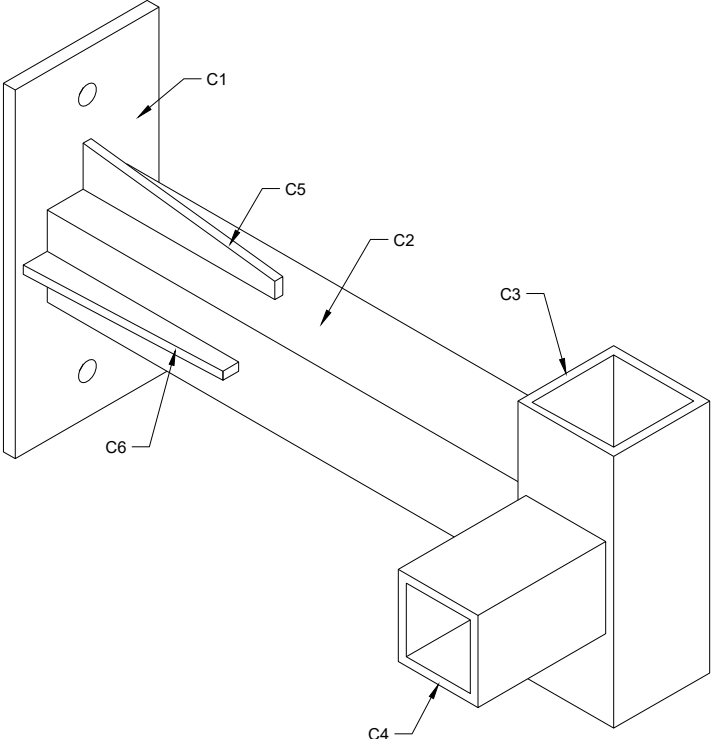
ARM PLATE (C1)



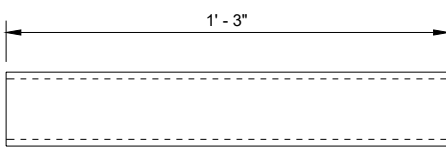
TOP VIEW  
ARM ASSEMBLY



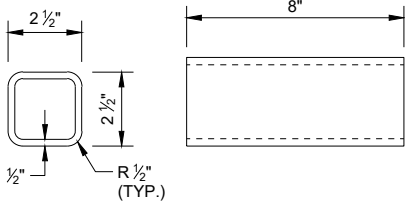
SIDE VIEW  
ARM ASSEMBLY



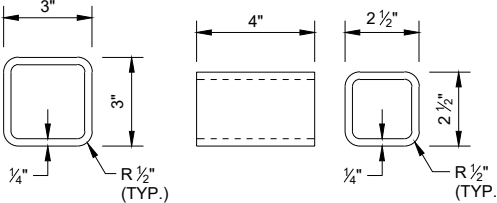
ISOMETRIC VIEW  
ARM ASSEMBLY



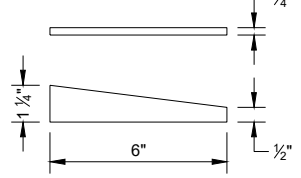
ARM TUBE 1 (C2)



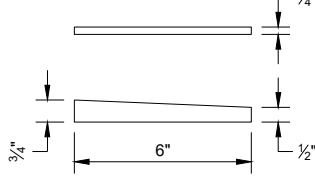
ARM TUBE 2 (C3)



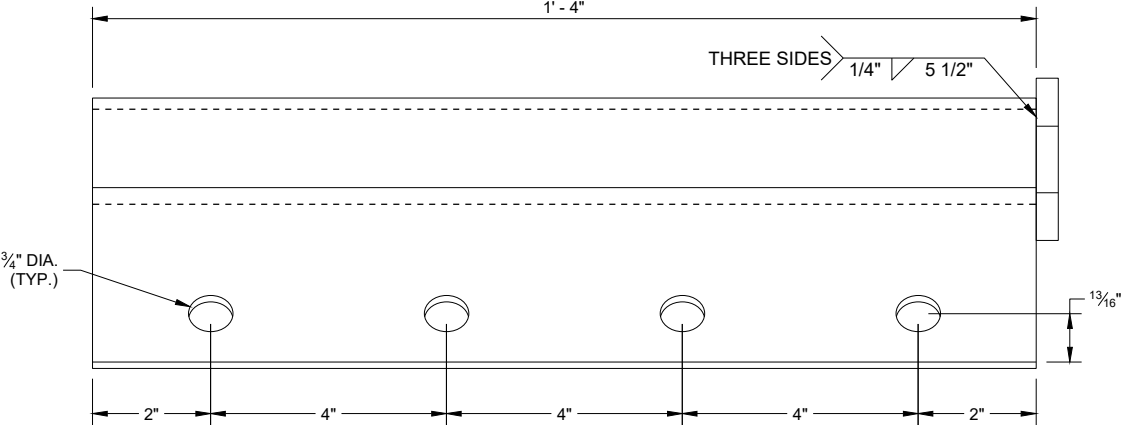
ARM TUBE 3 (C4)



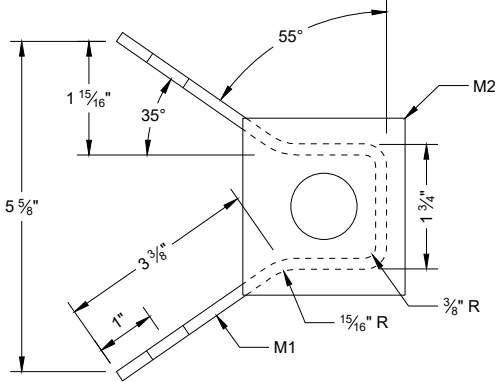
ARM GUSSET  
PLATE 1 (C5)



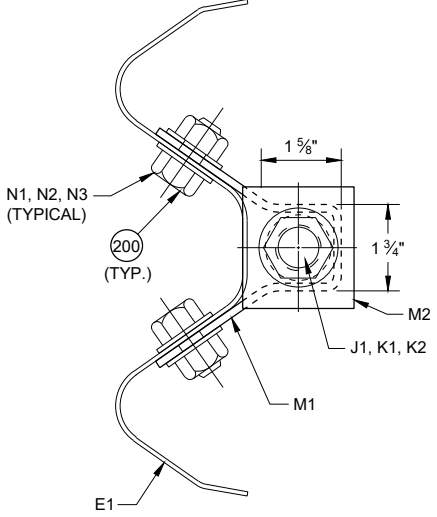
ARM GUSSET  
PLATE 2 (C6)



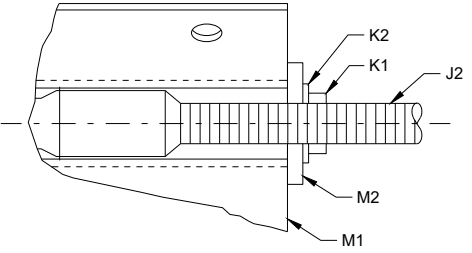
ANCHOR BRACKET (M1, M2)



ANCHOR BRACKET BEARING PLATE (M2)



SECTION A - A



MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 317



BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

| PART | DESCRIPTION                   | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                              | NOTES                     |
|------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| A1   | TYPE 2 FOUNDATION TUBE        | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 8" x 6" x 3⁄16"        |
| A2   | LOWER PLATE                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 5⁄8" THICKNESS            |
| A3   | POST GUSSET                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| A4   | UPPER PLATE                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 3⁄4" THICKNESS            |
| A5   | TYPE 2 POST                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5                                                                                                                                                        |                           |
| B1   | BREAKAWAY BOLT                | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT. | 7⁄16" DIA.                |
| B2   | BREAKAWAY BOLT WASHER         | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                           | 7⁄16" DIA.                |
| B3   | BREAKAWAY BOLT NUT            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                     |                           |
| C1   | ARM ASSEMBLY PLATE            | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 3⁄8" THICKNESS            |
| C2   | ARM ASSEMBLY TUBE 1           | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 8" x 6" x 3⁄16"        |
| C3   | ARM ASSEMBLY TUBE 2           | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 3" x 3" x 1⁄4"         |
| C4   | ARM ASSEMBLY TUBE 3           | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 2 1⁄2" x 2 1⁄2" X 1⁄4" |
| C5   | ARM ASSEMBLY GUSSET PLATE 1   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| C6   | ARM ASSEMBLY GUSSET PLATE 2   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| D1   | ARM ASSEMBLY BOLT             | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                                                                                            | 1⁄2" DIA.                 |
| D2   | ARM ASSEMBLY WASHER           | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                           | 1⁄2" DIA.                 |
| D3   | ARM ASSEMBLY NUT              | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                   | 1⁄2" DIA.                 |
| E1   | TYPE 2 GUARD RAIL             | AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER                                                                                                                                                                                                                                                                                                                 |                           |
| E2   | BEAM GUARD RAIL               | AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER                                                                                                                                                                                                                                                                                                                 |                           |
| E3   | BEAM GUARD ROUNDED BUFFER END | AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER                                                                                                                                                                                                                                                                                                                 |                           |
| F1   | POST BOLT                     | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                                                                                            | 5⁄8" DIA.                 |
| F2   | POST BOLT WASHER              | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                           | 5⁄8" DIA.                 |
| F3   | POST BOLT NUT                 | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                |                           |
| G1   | GROUND STRUT CHANNEL          | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄2" x 11 3⁄4" x 10 GAUGE |
| G2   | GROUND STRUT CONNECTOR        | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| G3   | GROUND STRUT PLATE            | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄2" THICKNESS            |

MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 318

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

| PART | DESCRIPTION                 | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                                                                    | NOTES          |
|------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| H1   | GROUND STRUT BOLT           | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                               | 7/8" DIA.      |
| H2   | GROUND STRUT BOLT WASHER    | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1<br>F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                               | 7/8" DIA.      |
| H3   | GROUND STRUT BOLT NUT       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                          |                |
| J1   | BCT CABLE                   | AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS)<br>TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS                                                                              | 3/4" DIA.      |
| J2   | BCT CABLE                   | UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE<br>STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE<br>FOR ALLOY EYEBOLTS." |                |
| K1   | CABLE ASSEMBLY NUT          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                      | 1" DIA.        |
| K2   | CABLE ASSEMBLY WASHER       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1                                                                                                                                                                                              | 1" DIA.        |
| L1   | BEARING PLATE               | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           | 5/8" THICKNESS |
| L2   | BEARING PLATE FLANGE        | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           | 1" THICKNESS   |
| M1   | BEAM GUARD ANCHOR BRACKET   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           |                |
| M2   | BEAM GUARD ANCHOR END PLATE | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           | 3/8" THICKNESS |
| N1   | ANCHOR BRACKET BOLT         | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                             | 5/8" DIA.      |
| N2   | ANCHOR BRACKET BOLT WASHER  | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1<br>F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                               | 5/8" DIA.      |
| N3   | ANCHOR BRACKET BOLT NUT     | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                       |                |
| P1   | FOUNDATION TUBE BOLT        | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                       | 1/2" DIA.      |
| Q1   | SPLICE BOLT                 | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                             |                |
| Q2   | SPLICE NUT                  | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                 | 5/8" DIA.      |

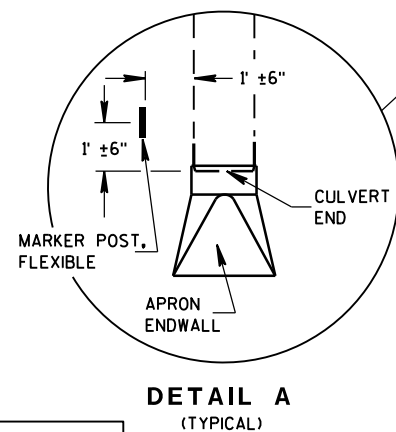
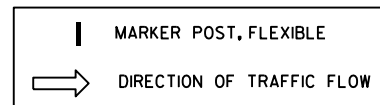
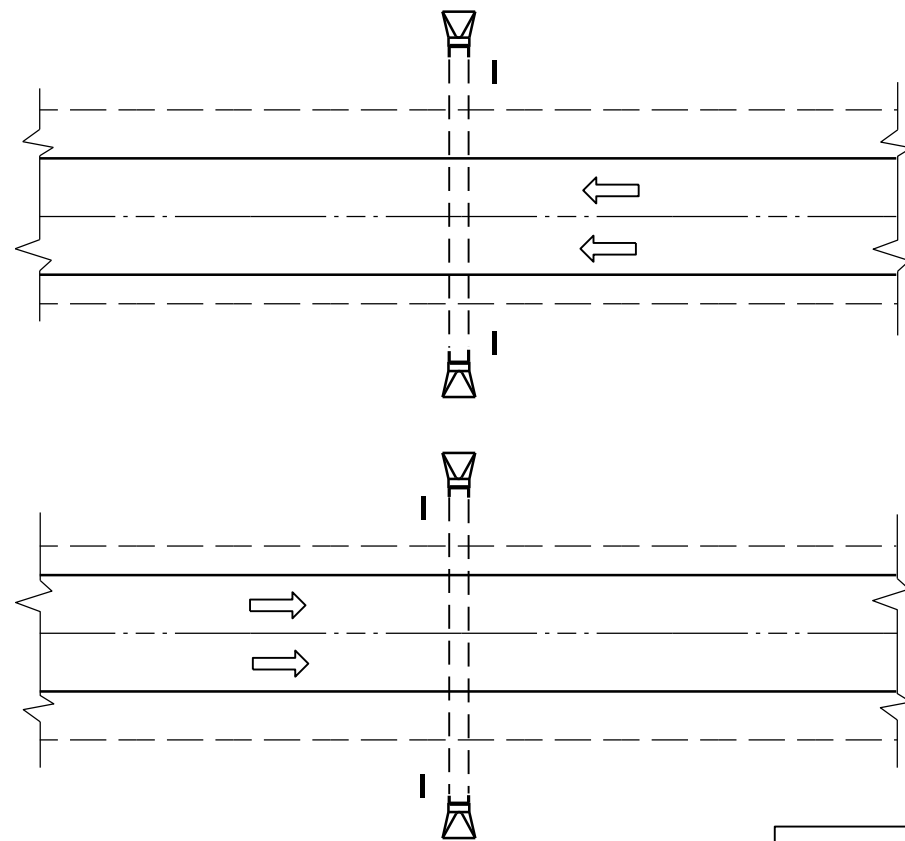
MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 319  
FHWA

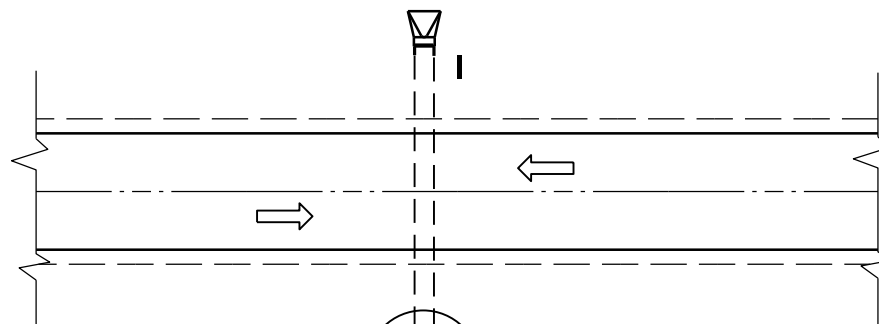


PLAN VIEW  
DIVIDED HIGHWAY



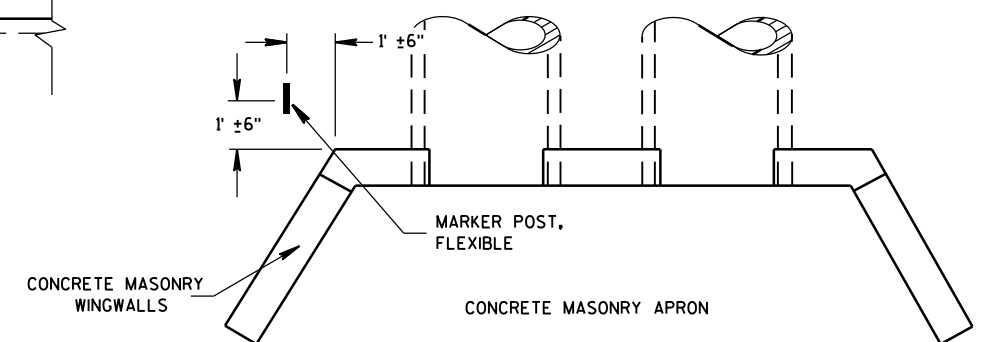
DETAIL A  
(TYPICAL)

PLAN VIEW  
UNDIVIDED HIGHWAY



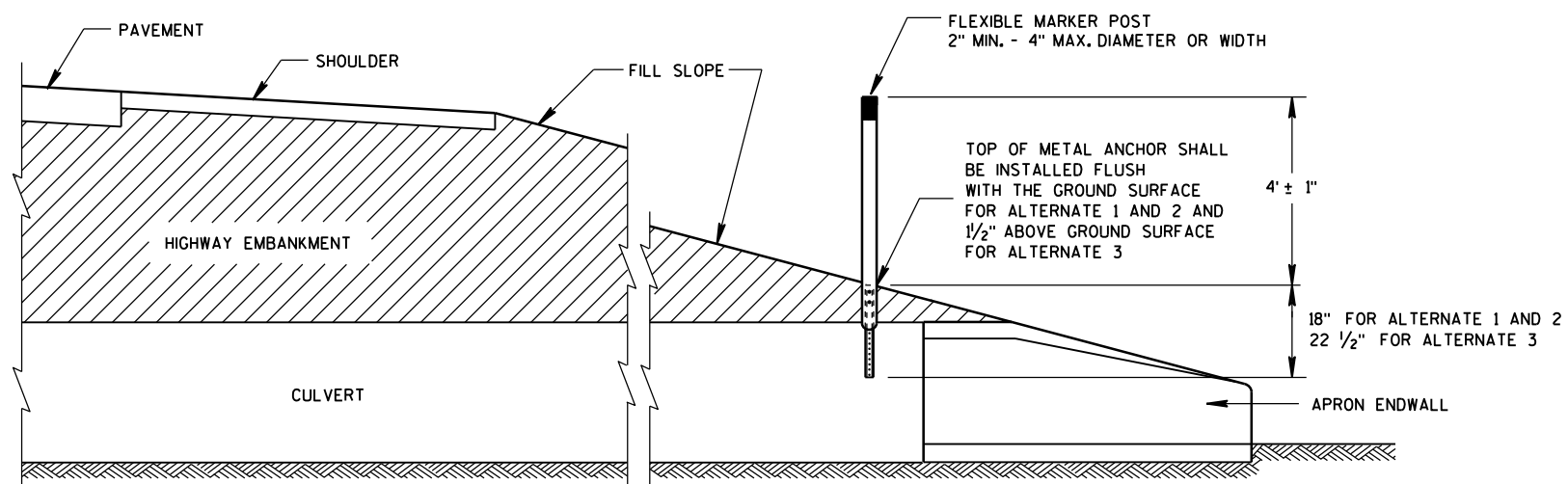
## GENERAL NOTES

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



PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH

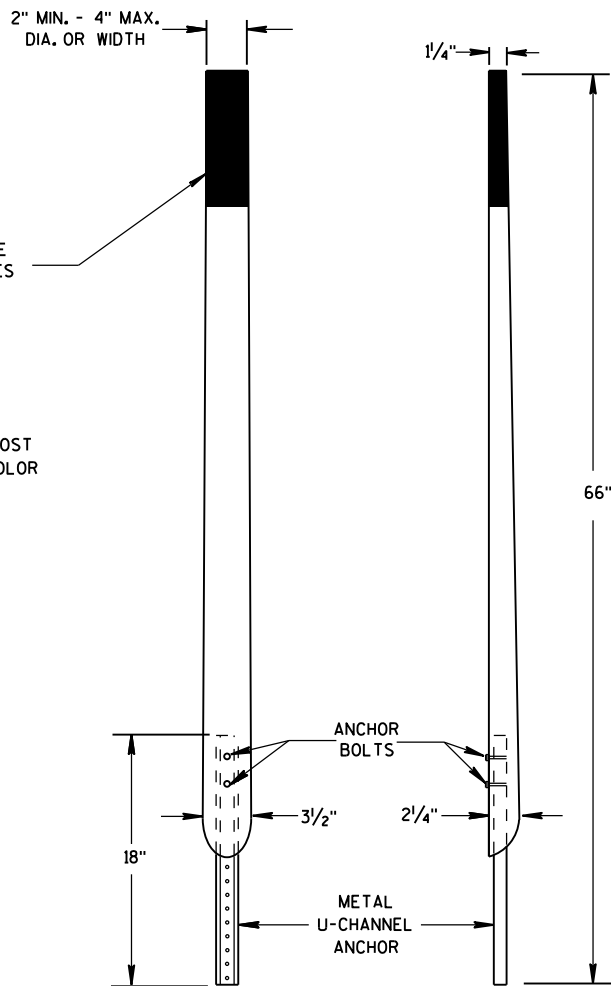
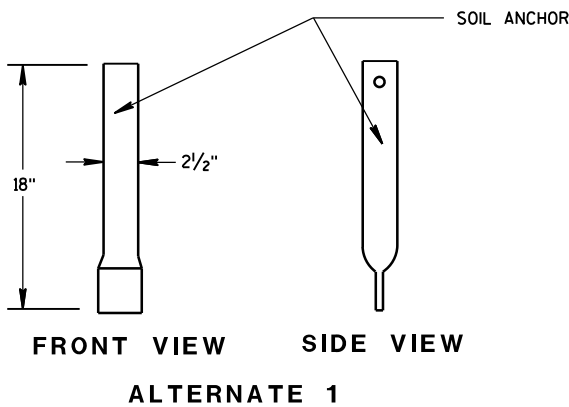
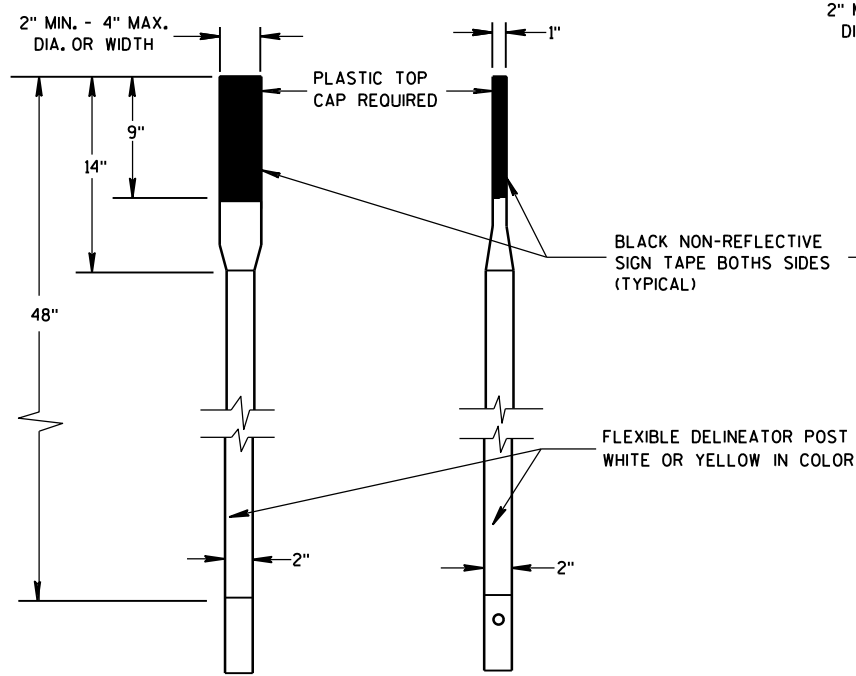
## FLEXIBLE MARKER POST LOCATION



CROSS SECTION  
FLEXIBLE MARKER POST

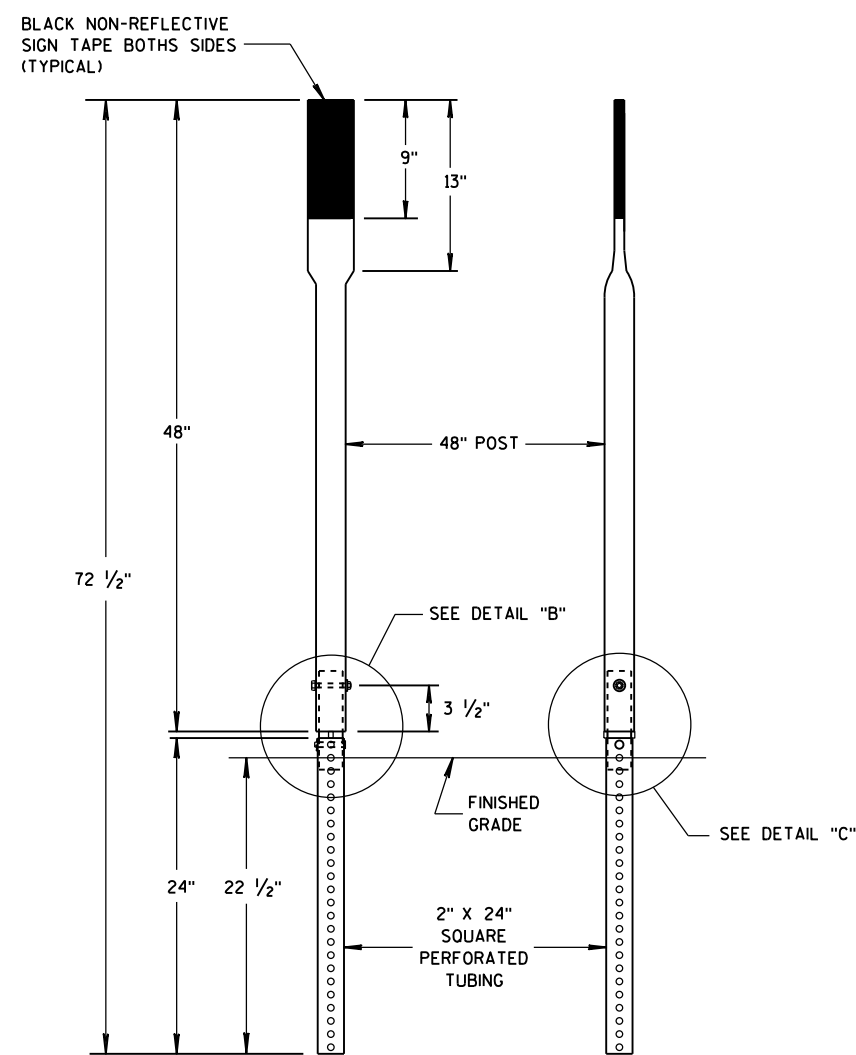
FLEXIBLE MARKER POST  
FOR CULVERT END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

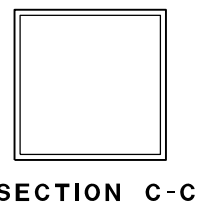


FRONT VIEW SIDE VIEW  
ALTERNATE 2

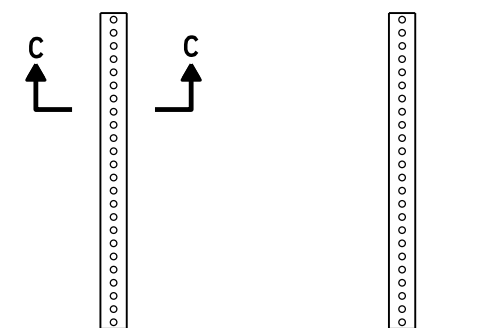
FLEXIBLE MARKER POSTS



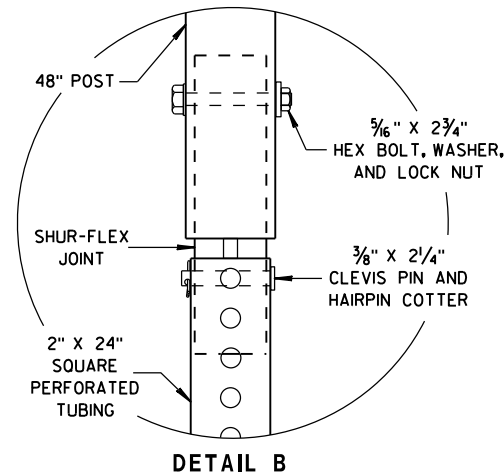
FRONT VIEW SIDE VIEW  
ALTERNATE 3



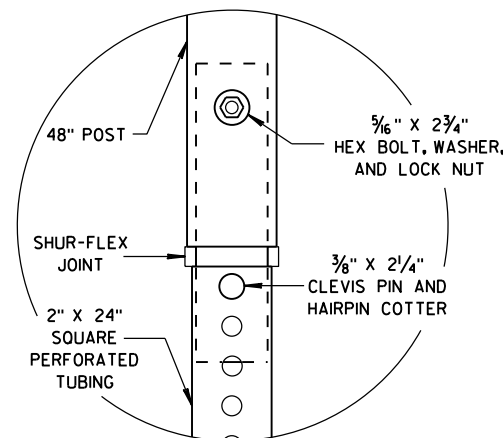
SECTION C-C



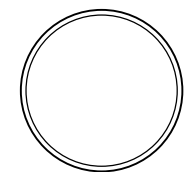
FRONT VIEW SIDE VIEW  
ALTERNATE 3



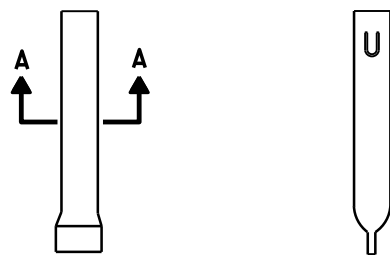
DETAIL B



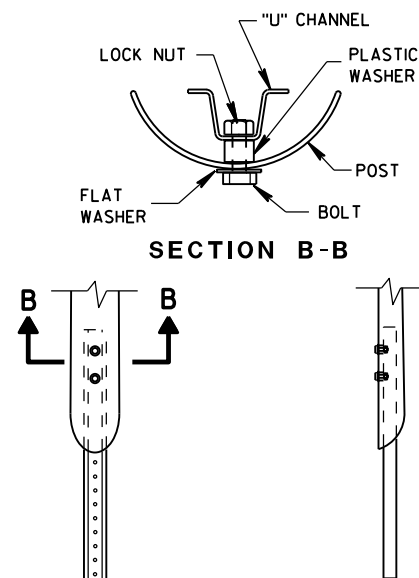
DETAIL C



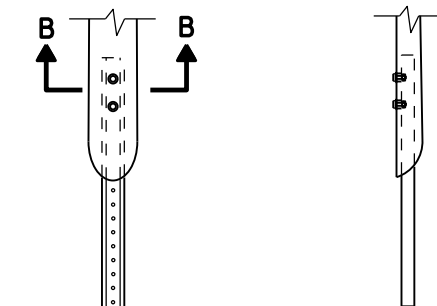
SECTION A-A



FRONT VIEW SIDE VIEW  
ALTERNATE 1



SECTION B-B



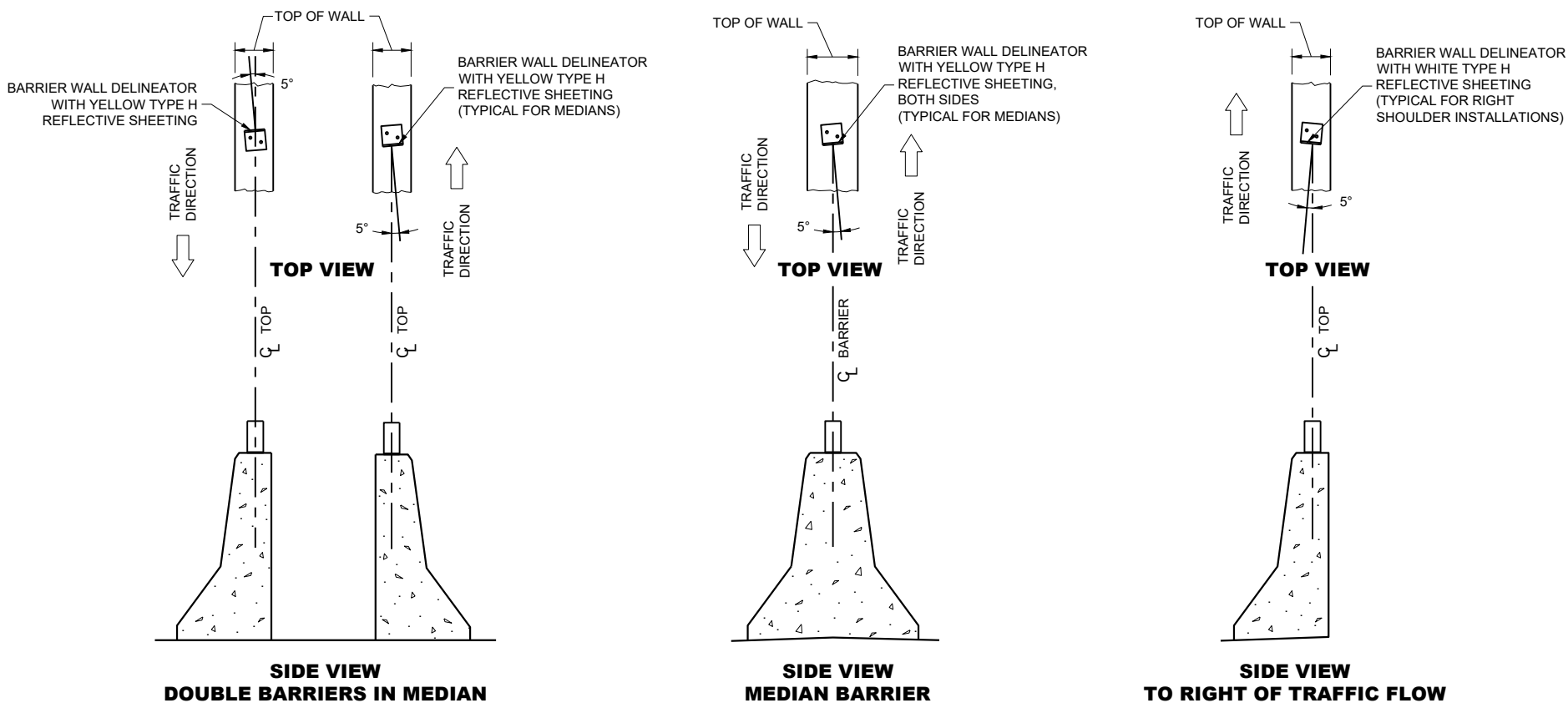
FRONT VIEW SIDE VIEW  
ALTERNATE 2

FLEXIBLE MARKER POST ANCHORS

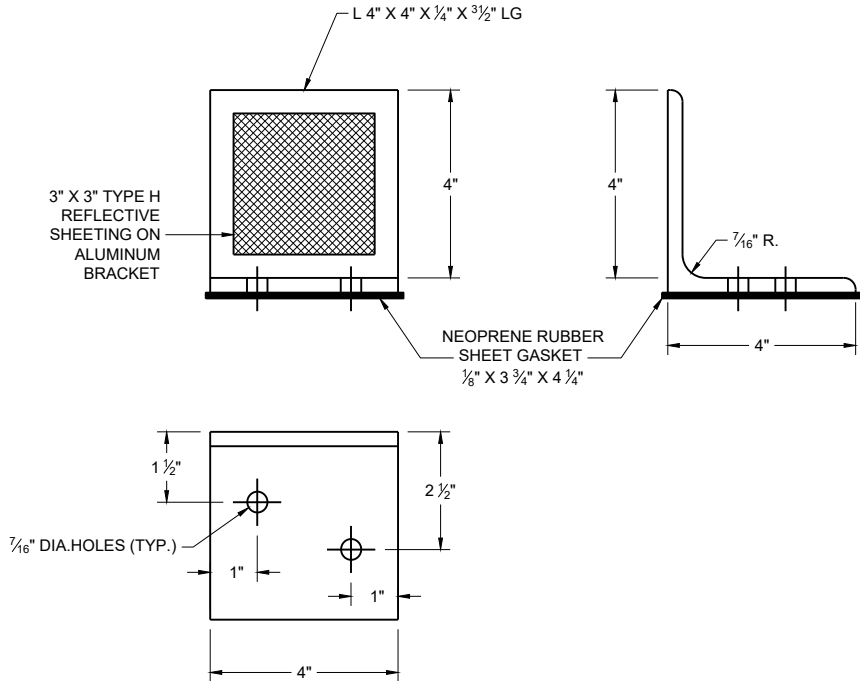
FLEXIBLE MARKER POST  
FOR CULVERT END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/1/2012 /S/ Travis Feltes  
DATE STATE TRAFFIC ENGINEER 321 IGN  
FHWA



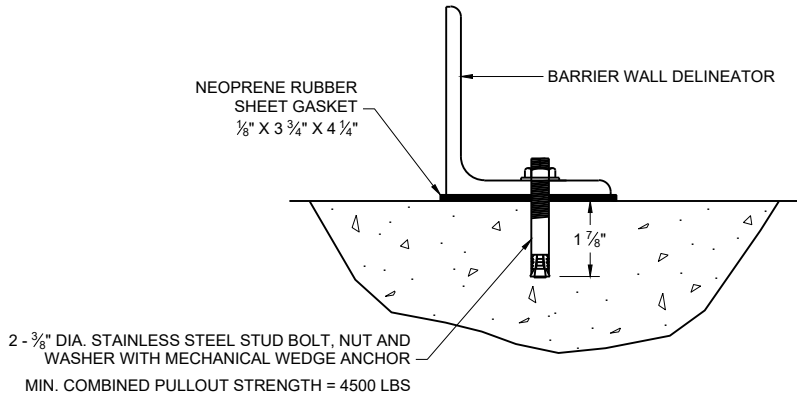
LOCATION AND AIMING DETAILS FOR BARRIER WALL DELINEATOR MOUNTED ON CONCRETE BARRIERS



BARRIER WALL DELINEATOR

REFLECTOR SPACING TABLE

| REFLECTOR SPACING | MINIMUM NUMBER OF REFLECTORS |
|-------------------|------------------------------|
| 100' C-C          | 3                            |



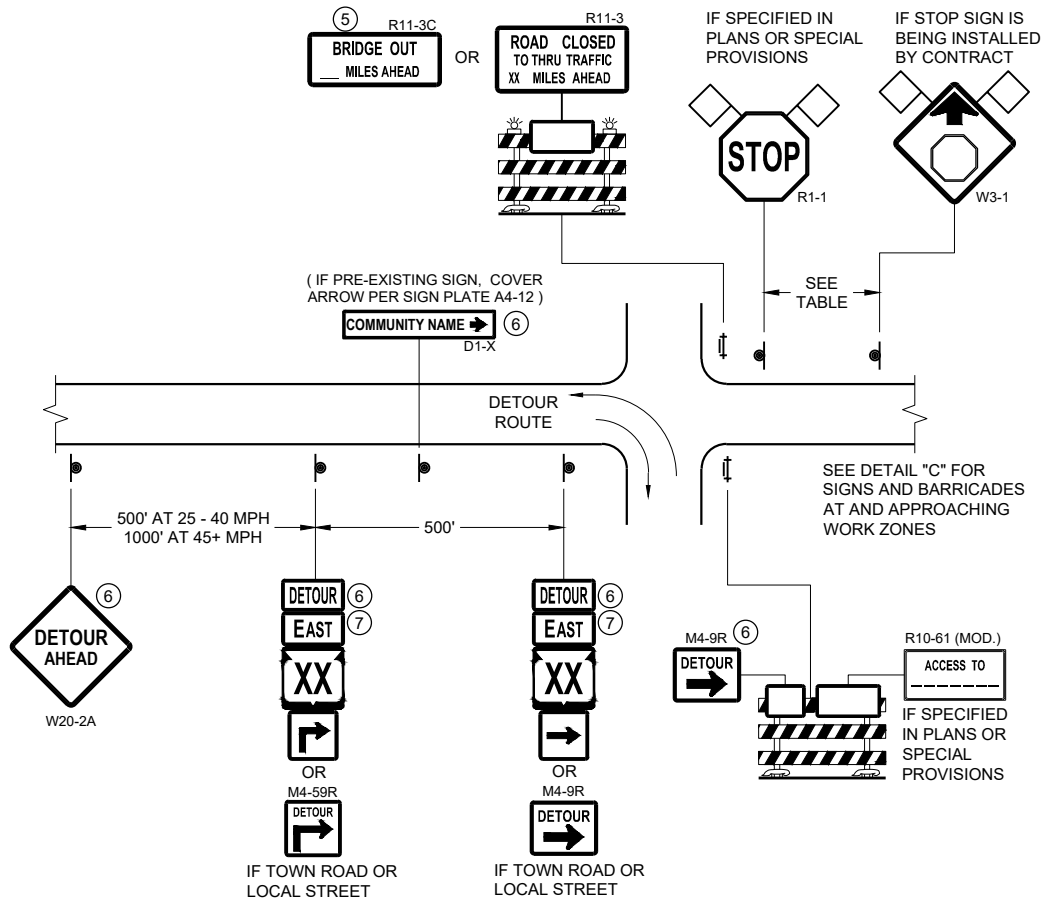
BARRIER WALL DELINEATOR MOUNTING DETAIL

**BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING**

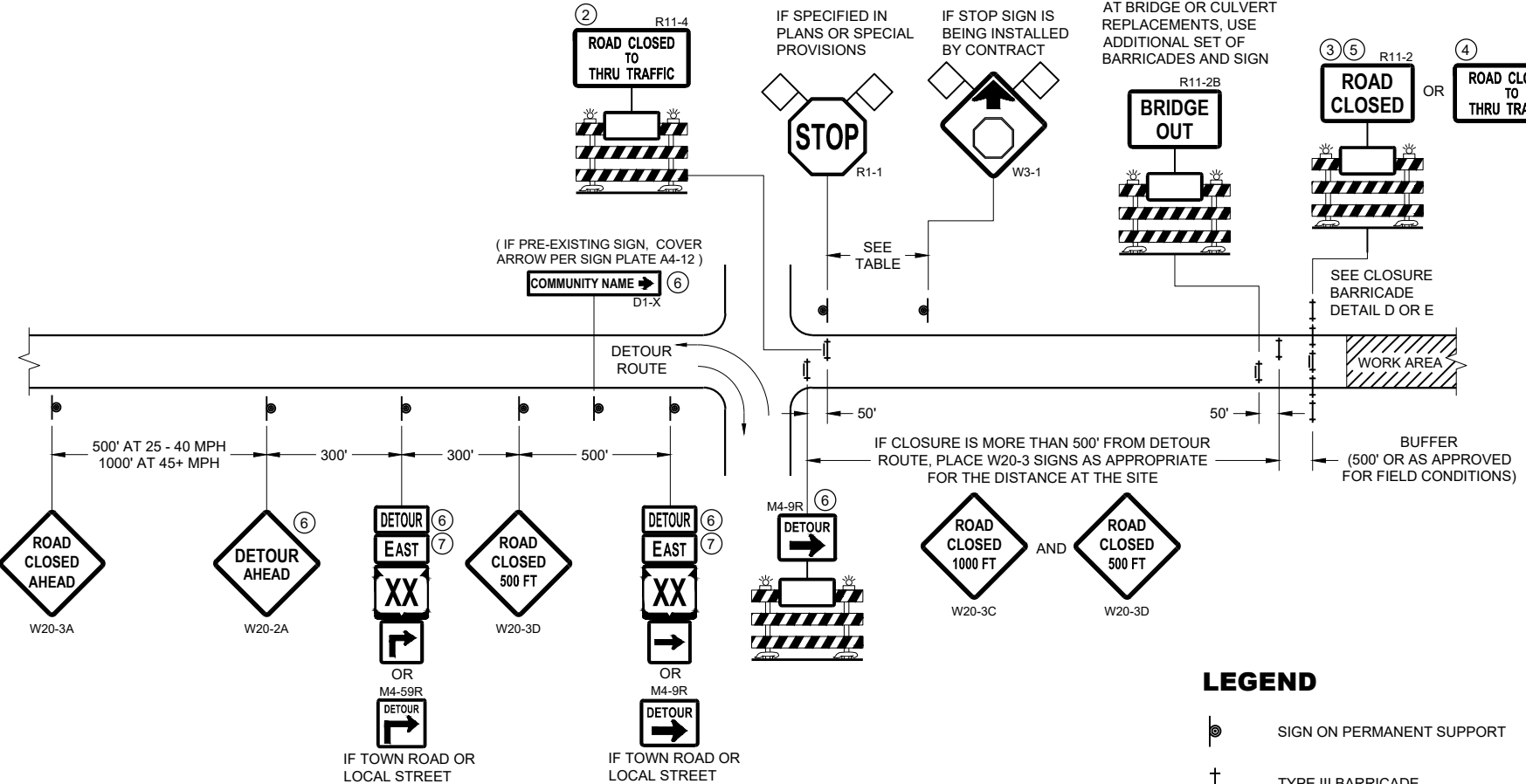
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2024 /S/ Jeannie Silver  
DATE Statewide Pavement Marking Engineer

FHWA 322



**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )



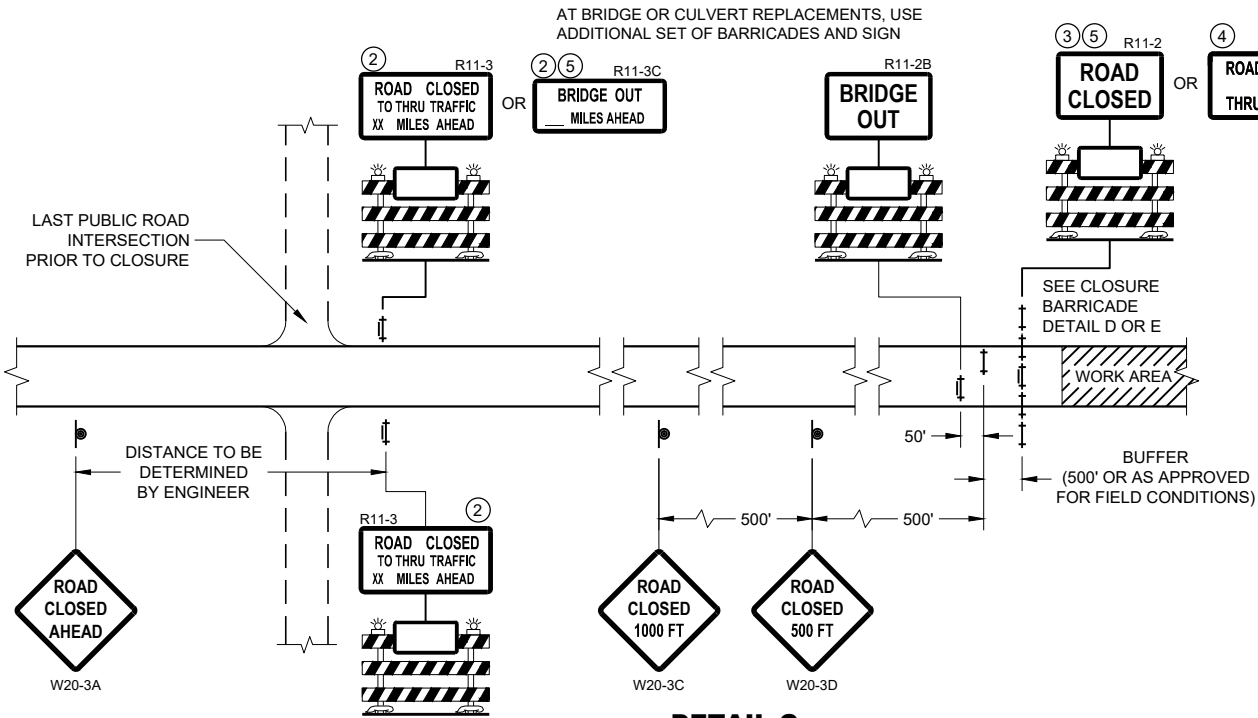
**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE LESS THAN ½ MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

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

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

| 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



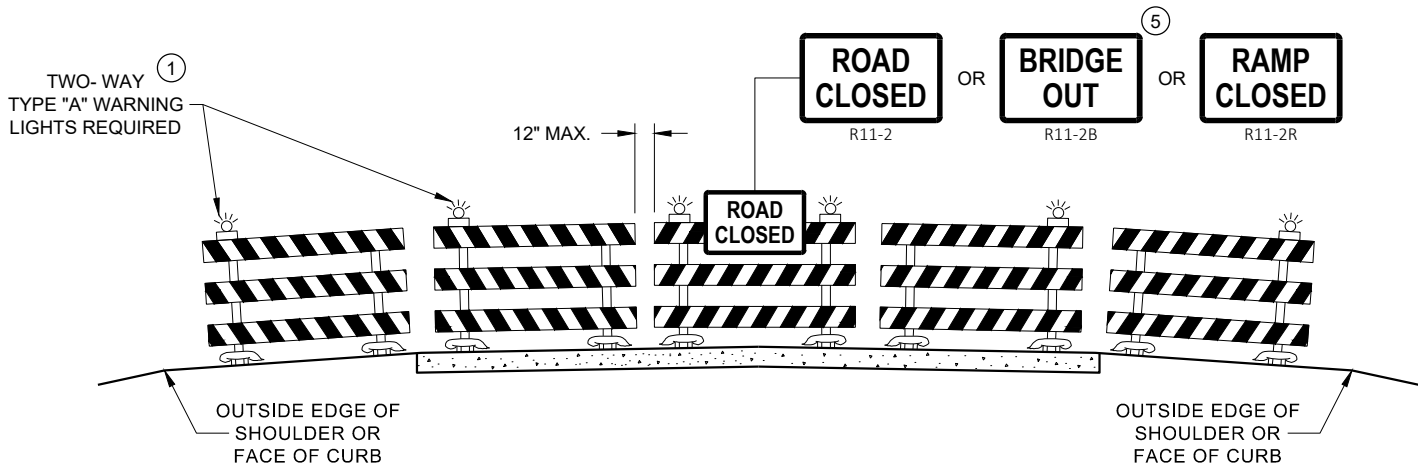
**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

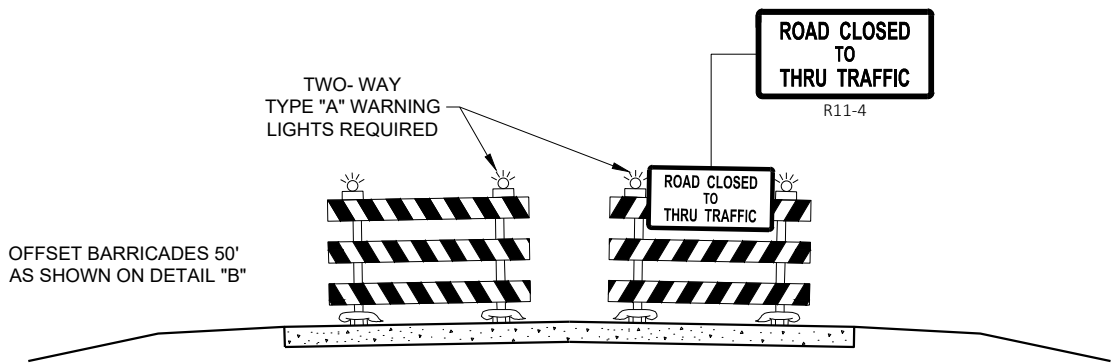
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DATE WORK ZONE ENGINEER 323

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



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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

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

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

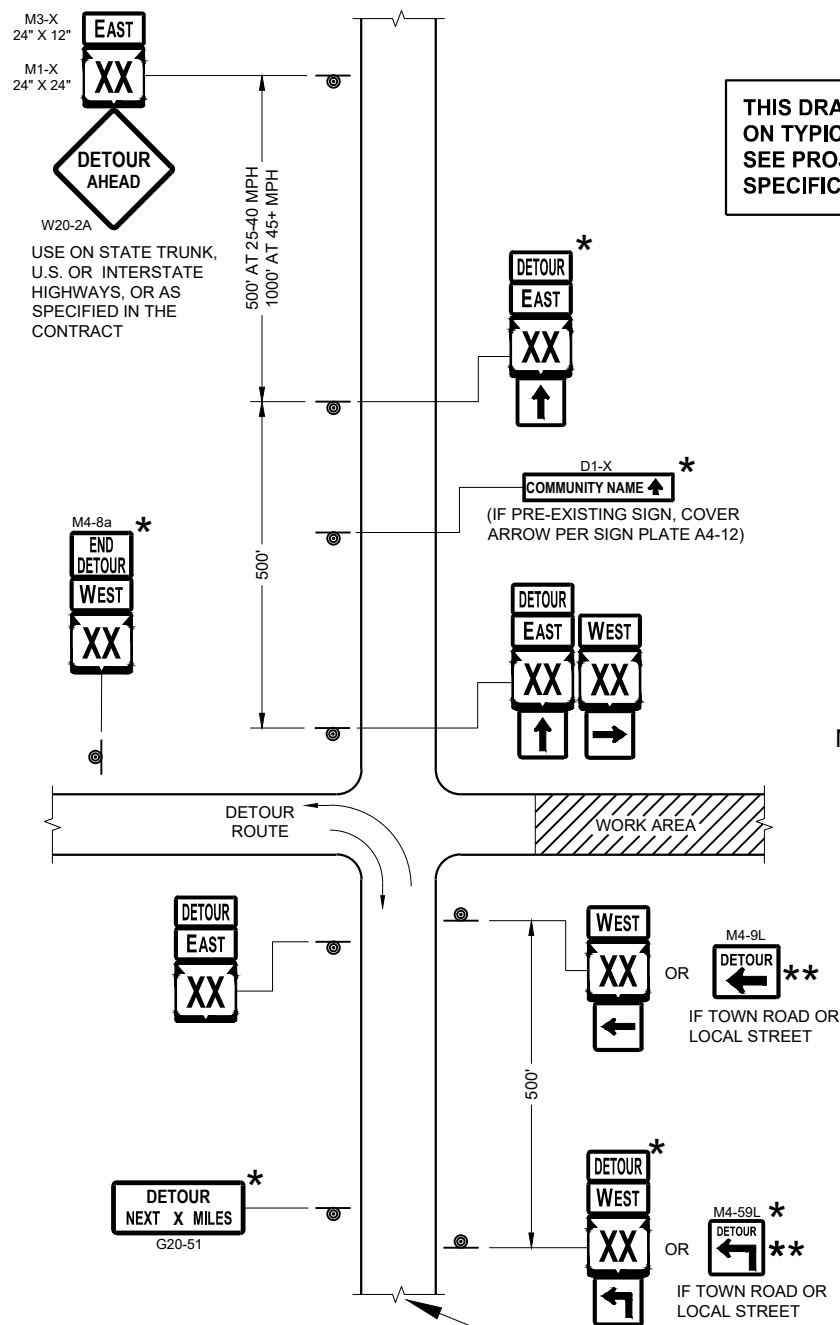
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

**BARRICADES AND SIGNS**  
**FOR**  
**VARIOUS CLOSURES**

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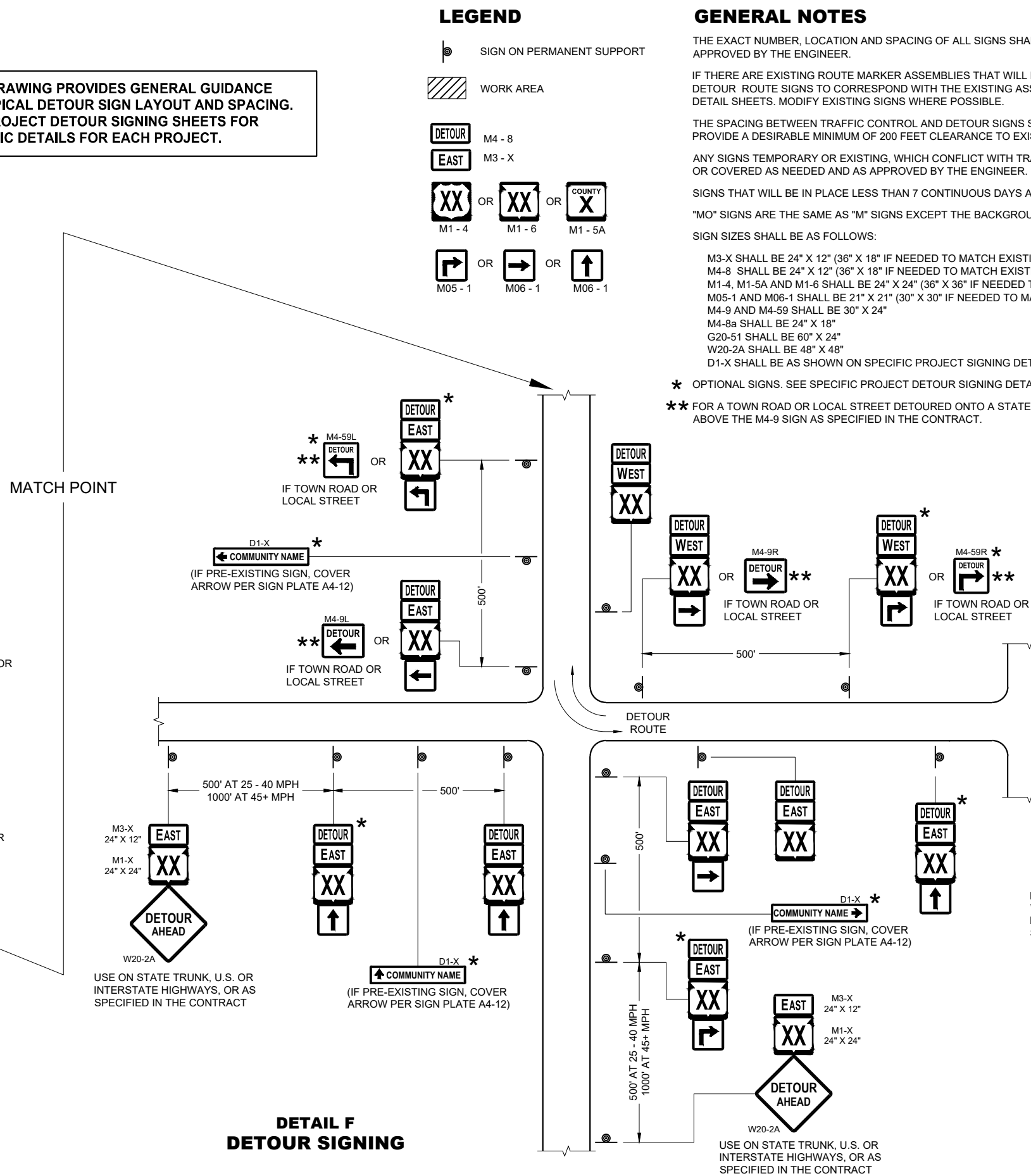
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**THIS DRAWING PROVIDES GENERAL GUIDANCE  
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.  
SEE PROJECT DETOUR SIGNING SHEETS FOR  
SPECIFIC DETAILS FOR EACH PROJECT.**

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

**SDD 15C02 - 09c**



## DETAIL F DETOUR SIGNING

## GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

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

\* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

**\*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.**

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

## DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN  
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May 2023  
DATE

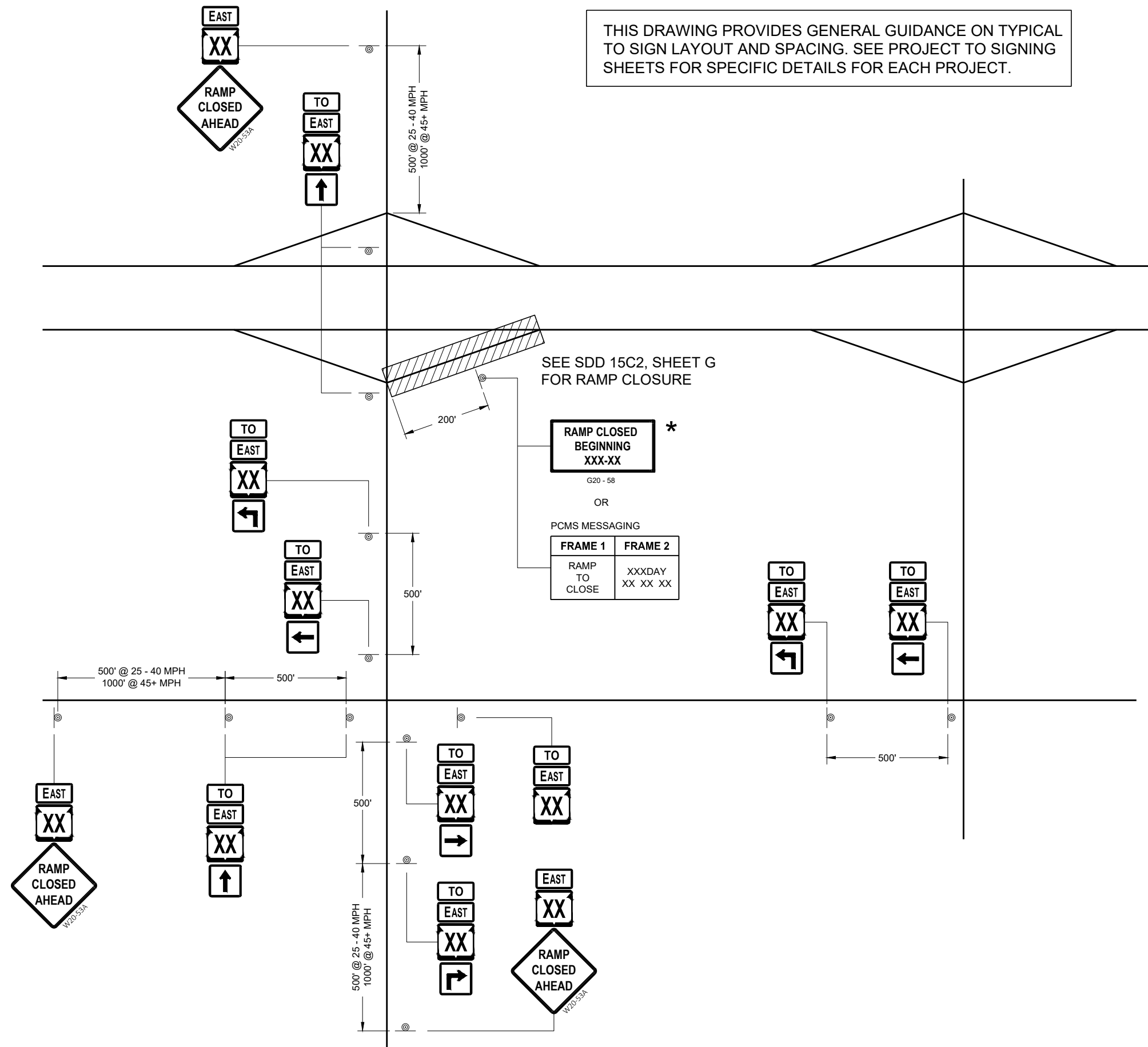
/S/ Andrew Heidtke  
WORK ZONE ENGINEER

325

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**SDD15C02 - 09c**





THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

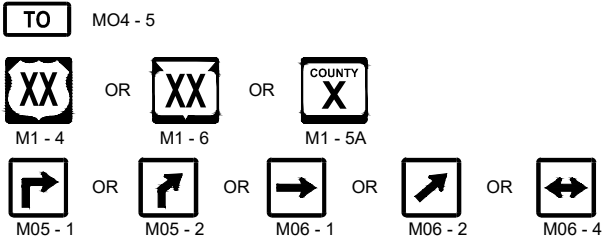
## LEGEND



## SIGN ON PERMANENT SUPPORT



## PORTABLE CHANGEABLE MESSAGE SIGN



## GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET. CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:  
MO4 - 5 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, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

① ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

# OFF RAMP LANE CLOSURE

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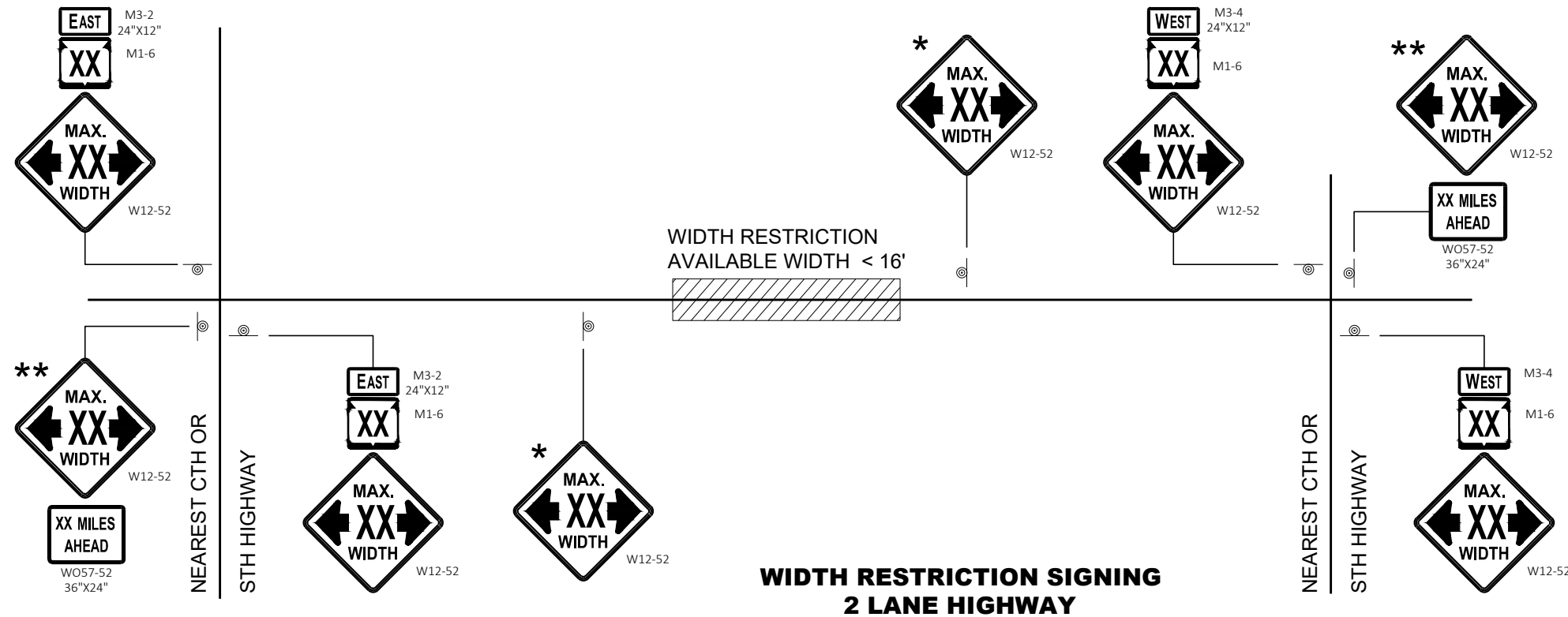
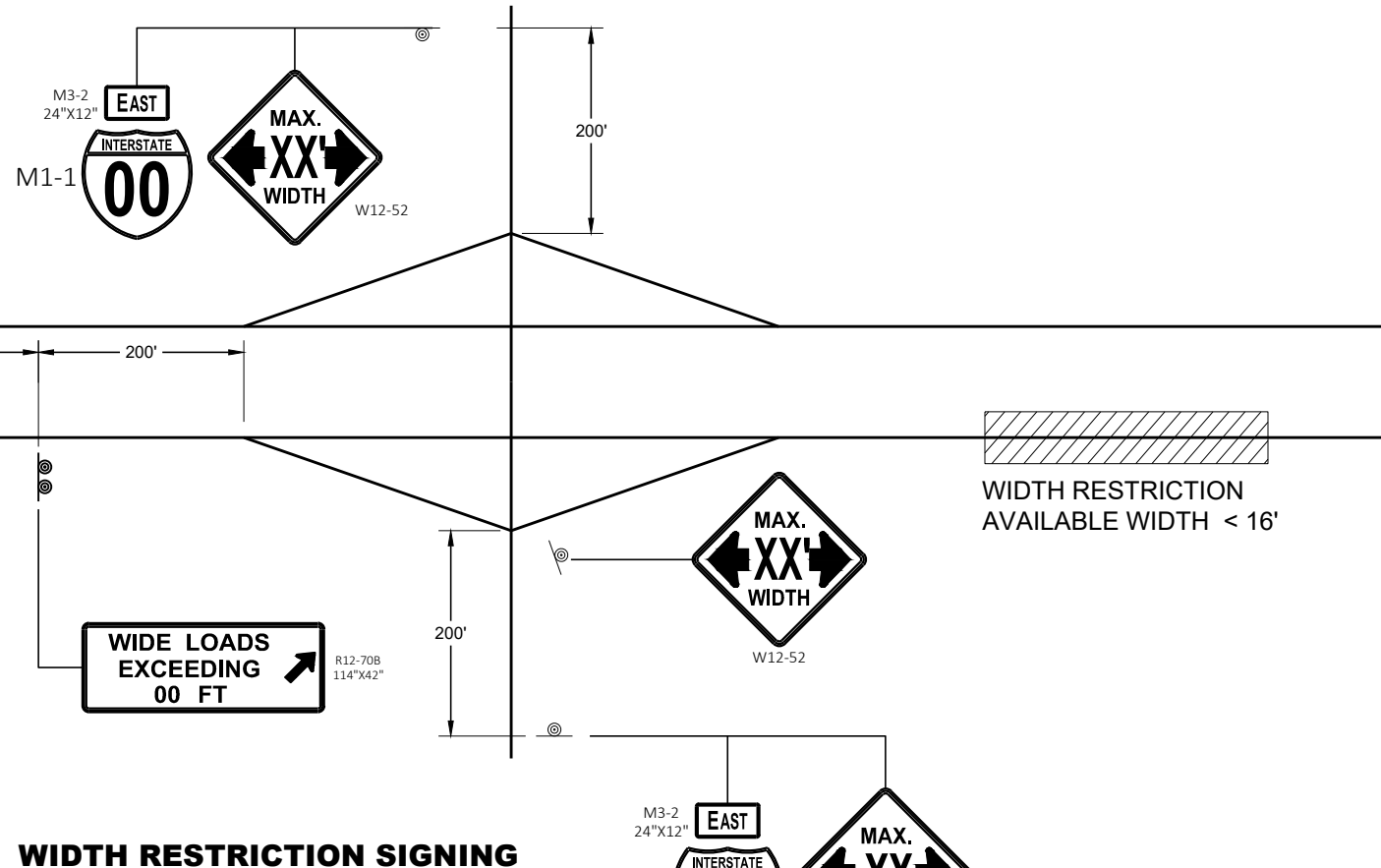
6

**SDD 15C02 - 09e**

6

**SDD15C02 - 09e**





## LEGEND

⊙ SIGN ON PERMANENT SUPPORT

## GENERAL NOTES

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

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

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

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

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

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

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

\*\* SIGN SHALL BE VISIBLE FROM ROADWAY.

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

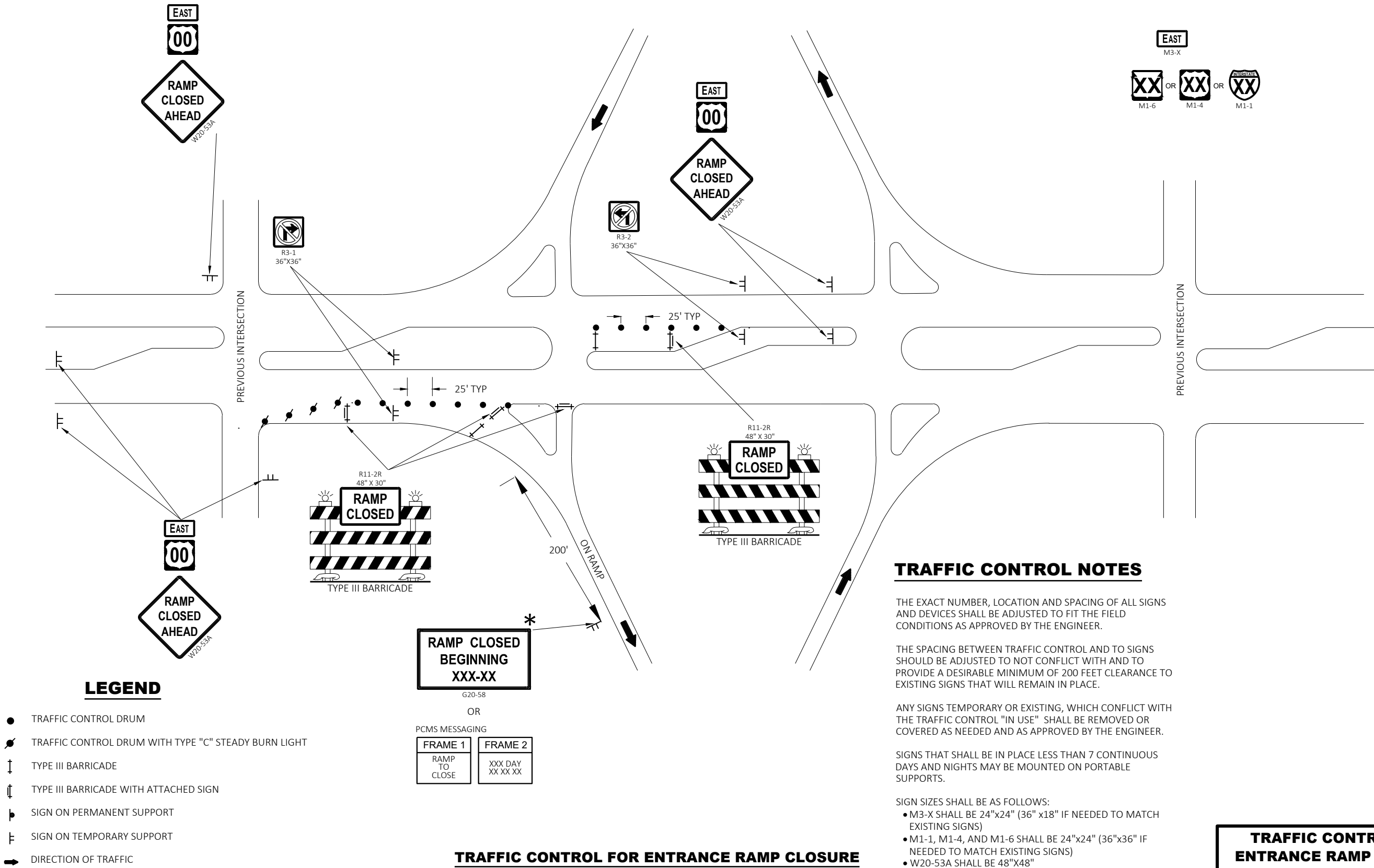


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

## ADVANCED WIDTH RESTRICTION SIGNING

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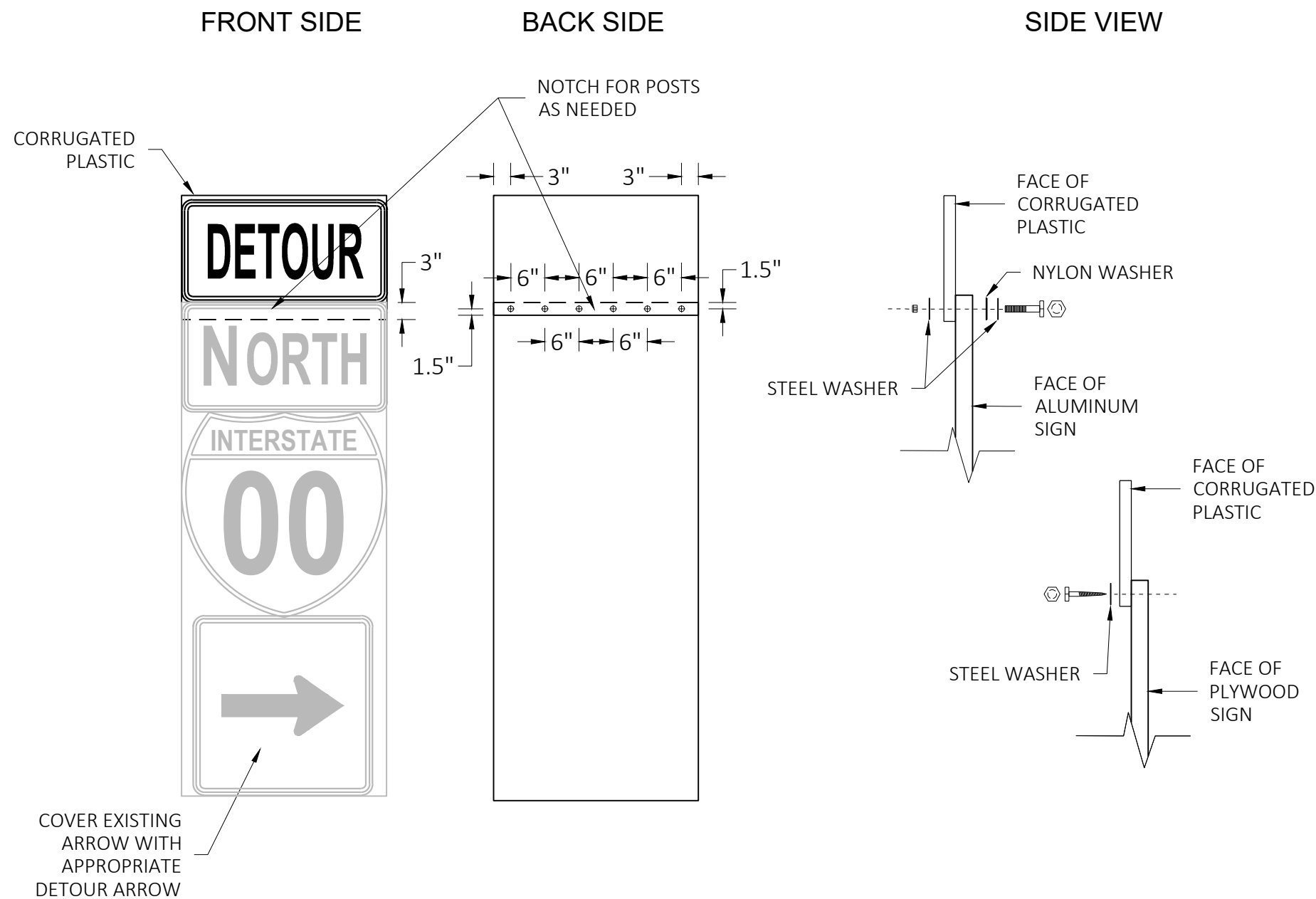


**TRAFFIC CONTROL FOR  
ENTRANCE RAMP CLOSURE**

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DEPARTMENT OF TRANSPORTATION

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May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEE 329

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## GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3.
- ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC3

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.

PLYWOOD SIGNS:

LAG SCREWS - 5/16" x 1"

ALUMINUM SIGNS:

MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS

WASHERS:

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

## MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

### MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023  
DATE

/S/ Andrew Heidtke  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA

330

GENERAL NOTES

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

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

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

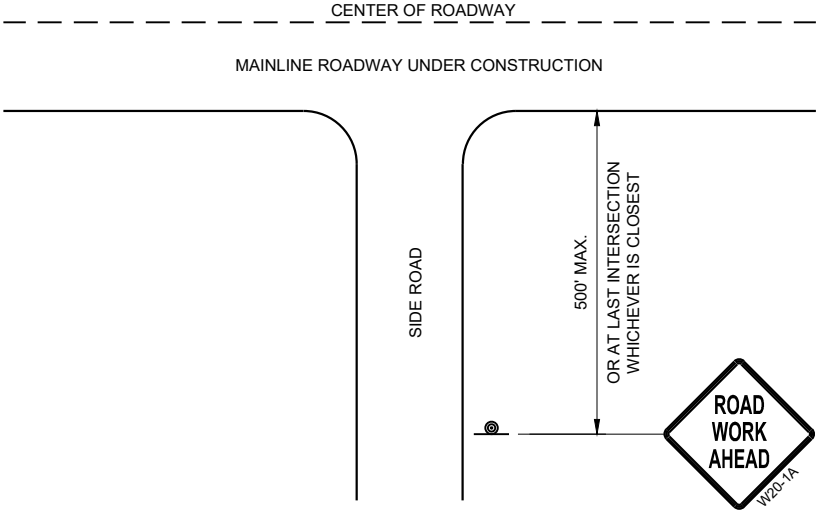
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

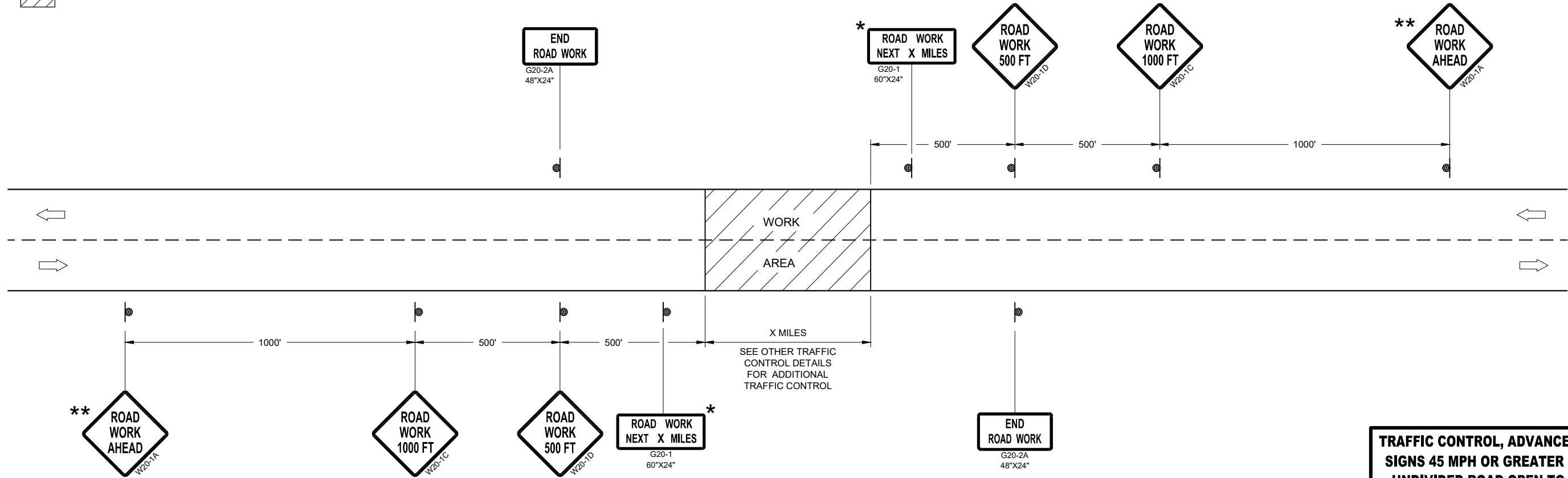
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL

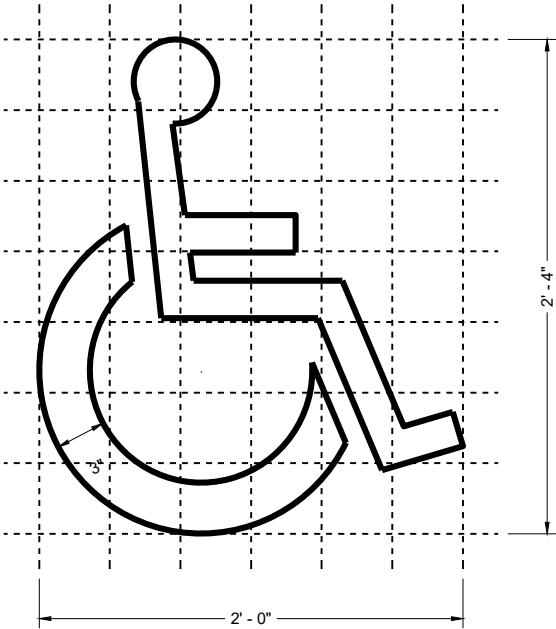


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

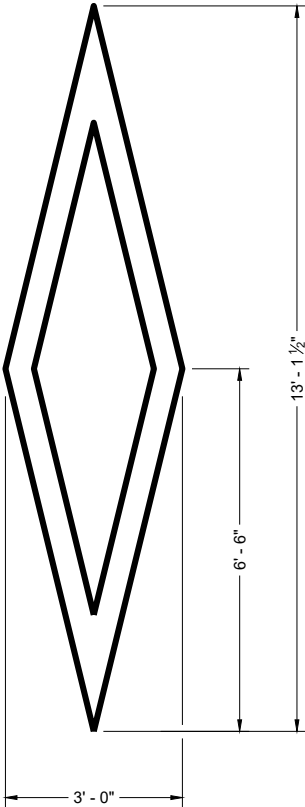
TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 45 MPH OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN  
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APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 331  
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HANDICAP SYMBOL

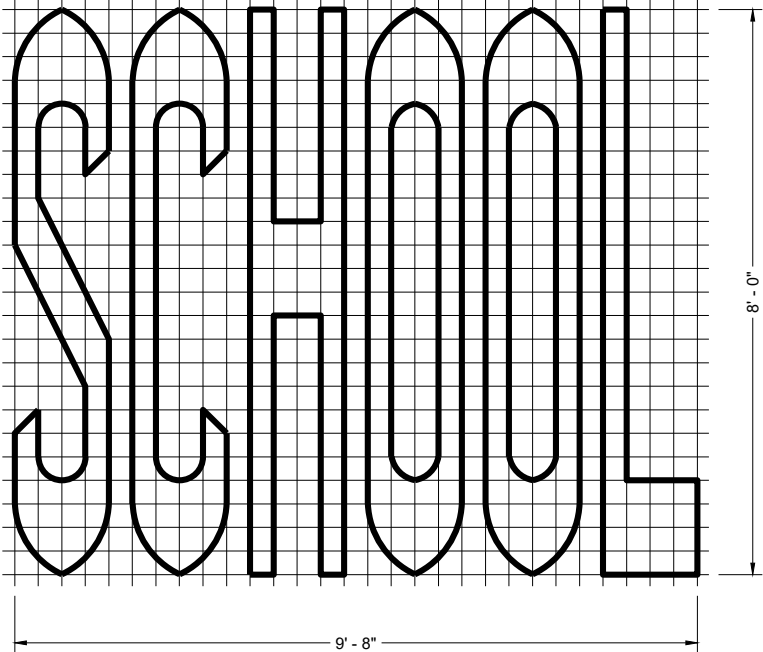
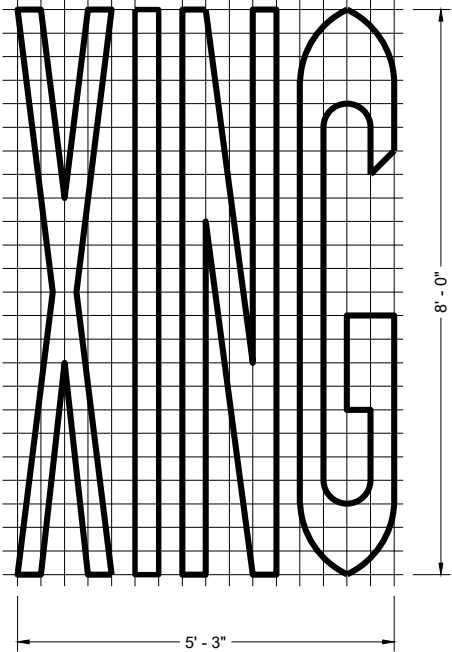
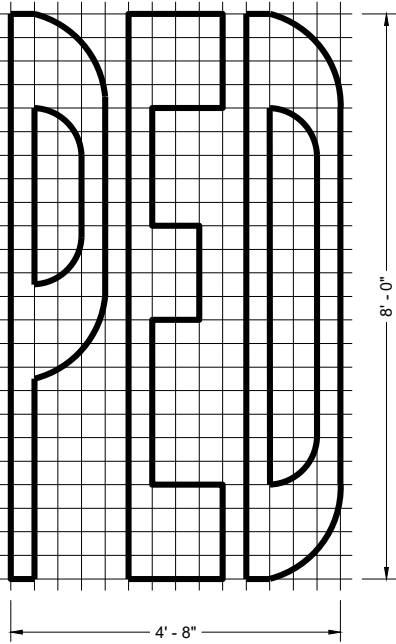
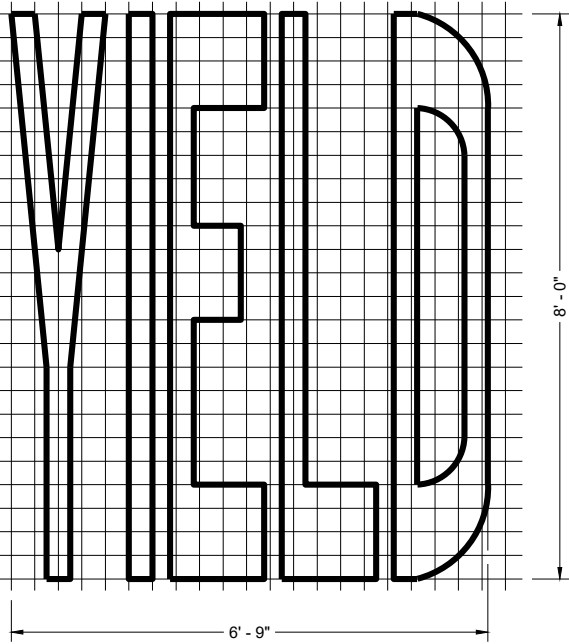
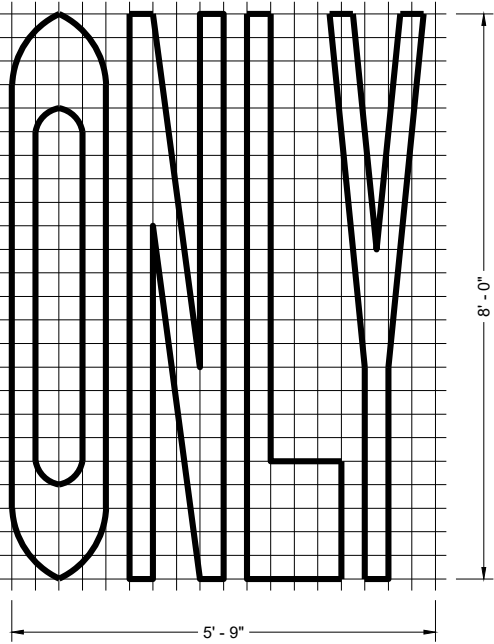
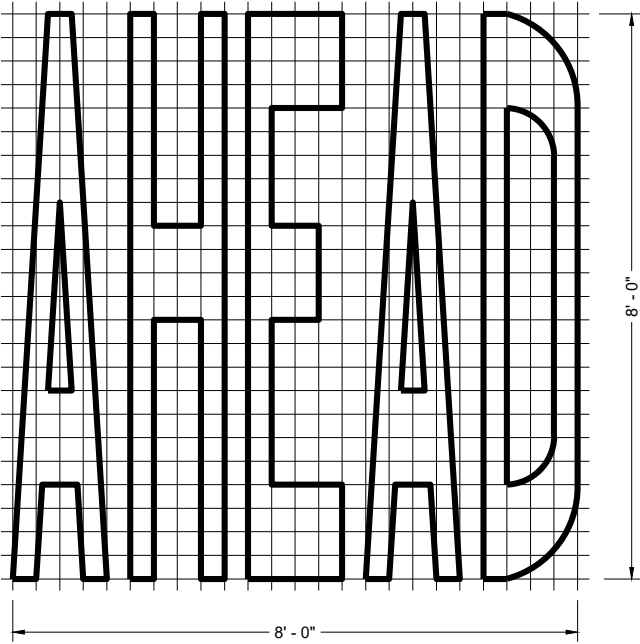
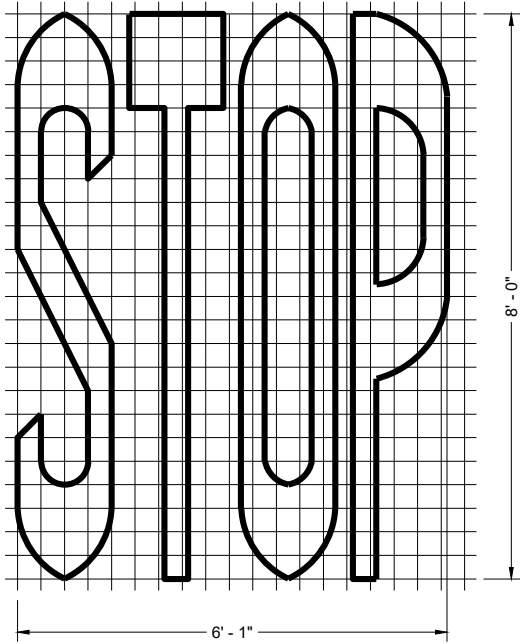


PREFERENTIAL  
LANE SYMBOL

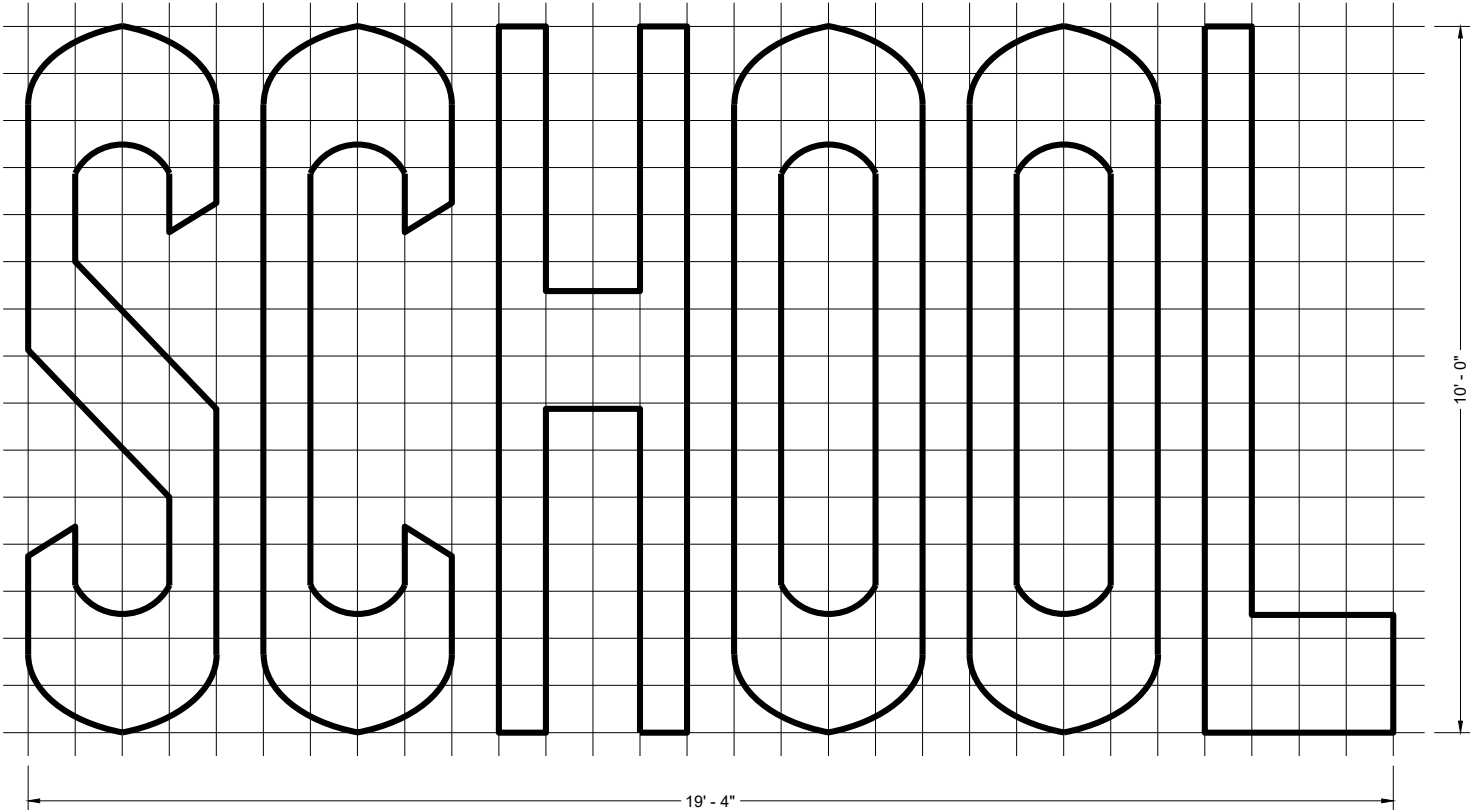
GENERAL NOTES

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

|                                                    |                                                         |
|----------------------------------------------------|---------------------------------------------------------|
| PAVEMENT MARKING SYMBOLS                           |                                                         |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                         |
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| FHWA                                               |                                                         |



SINGLE LANE



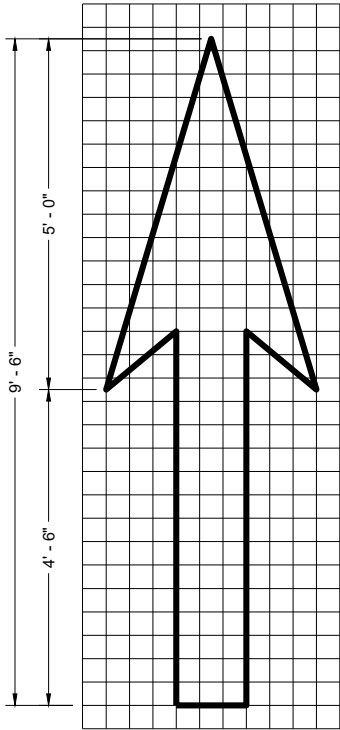
TWO - LANE

GENERAL NOTES

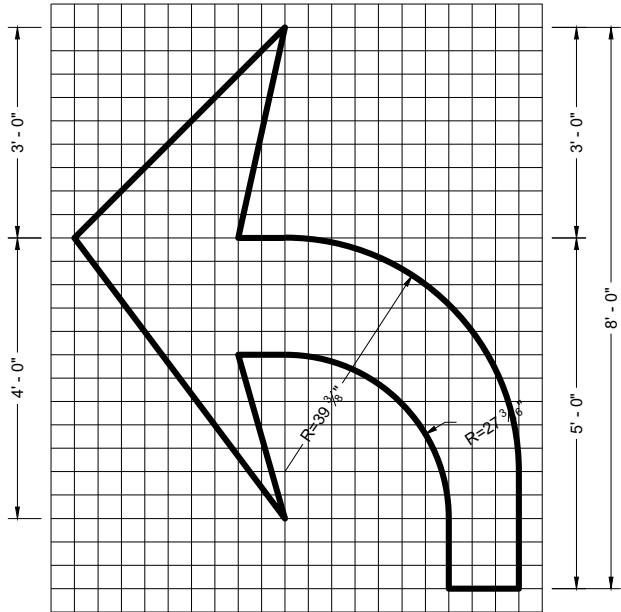
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

| PAVEMENT MARKING WORDS                             |                                                         |
|----------------------------------------------------|---------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                         |
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| FHWA                                               | 333                                                     |

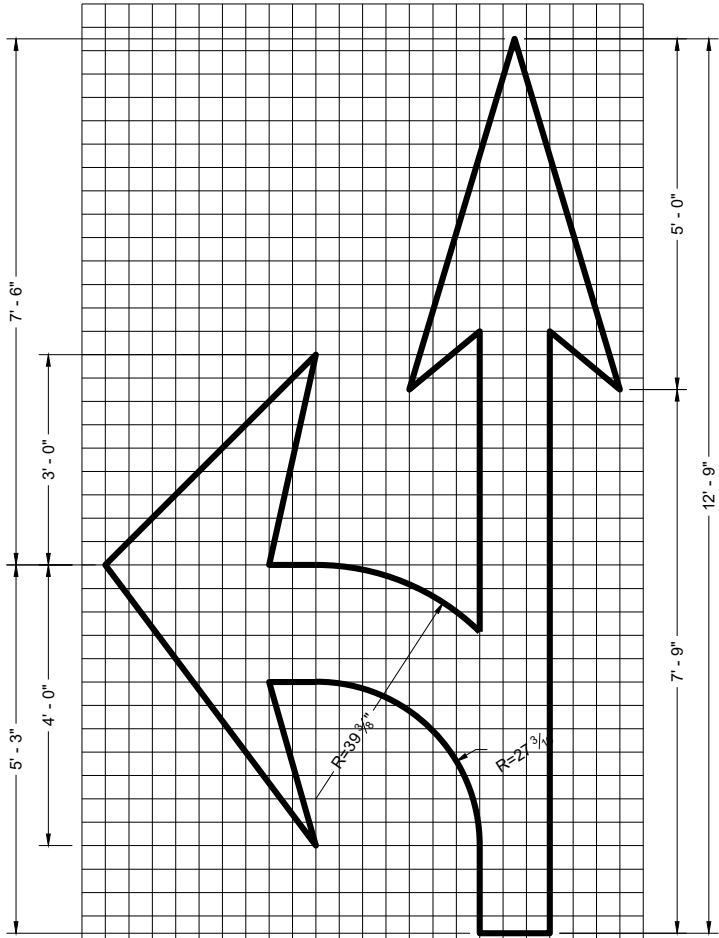




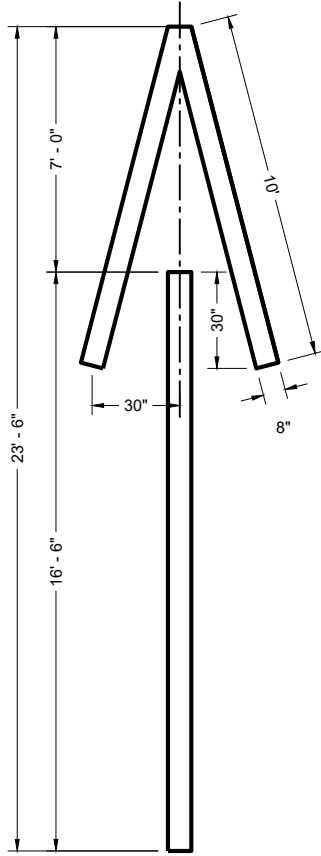
TYPE 1



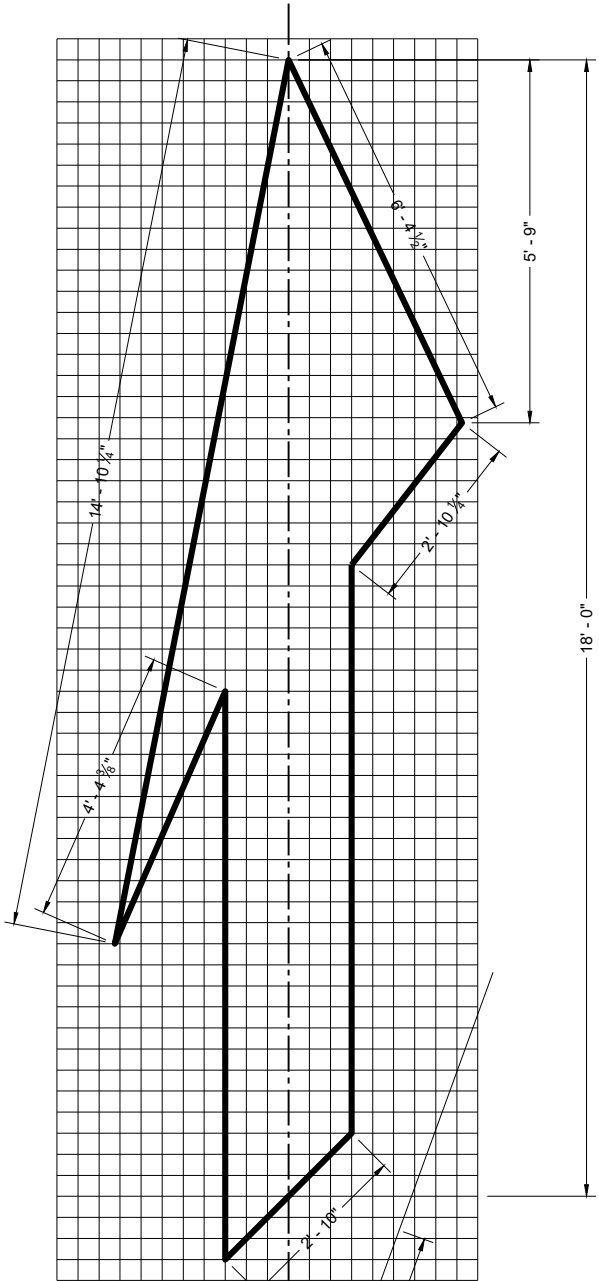
TYPE 2



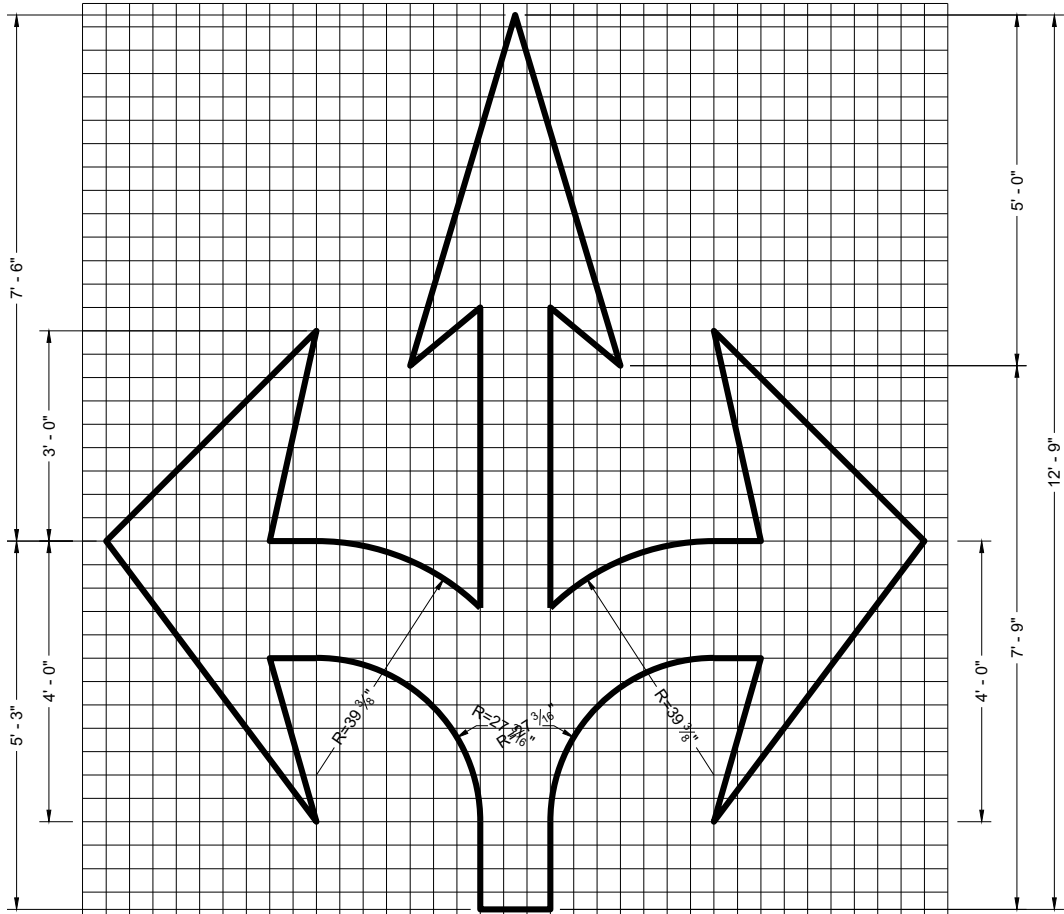
TYPE 3



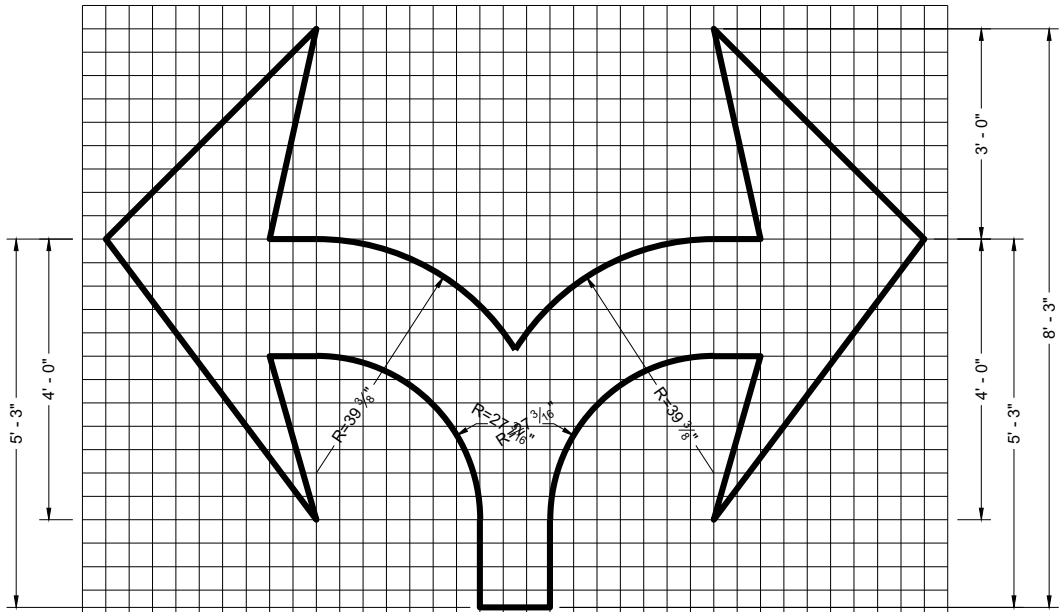
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

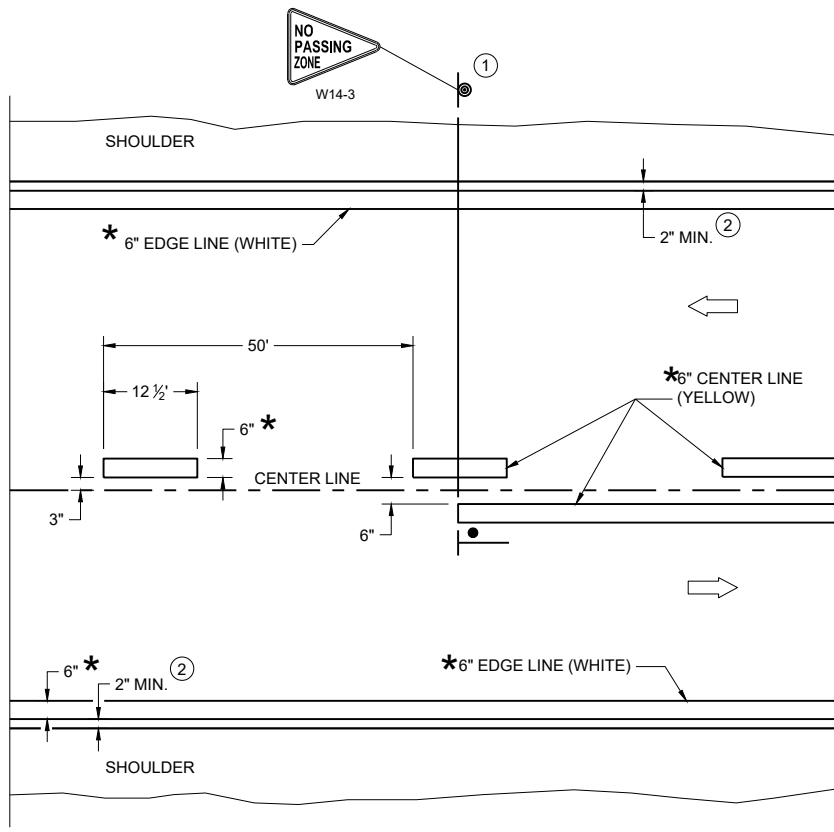
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

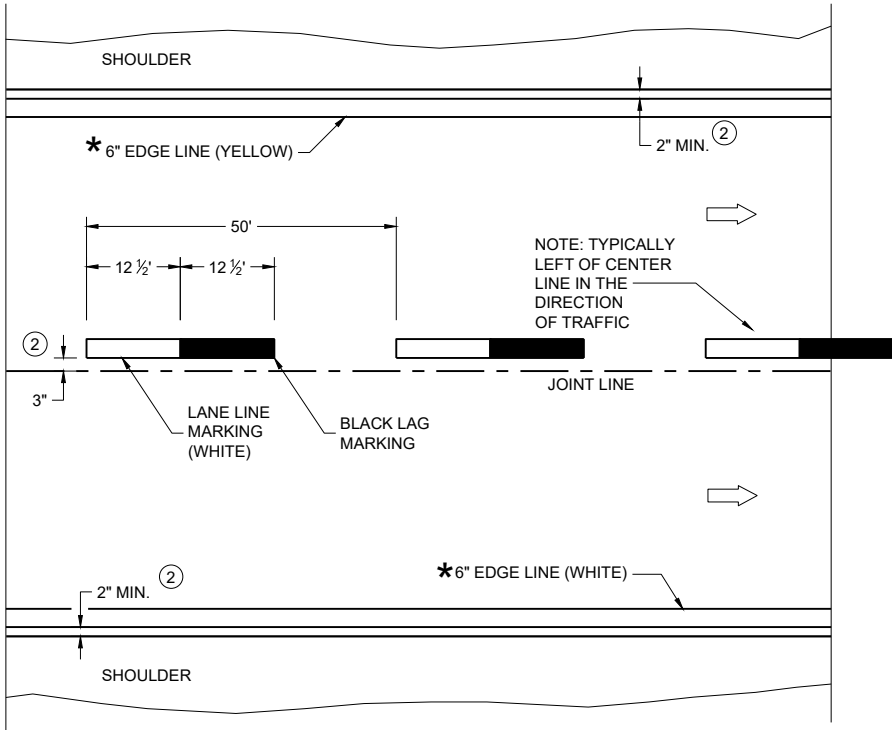
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DATE STATE SIGNING AND MARKING ENGINEER

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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.

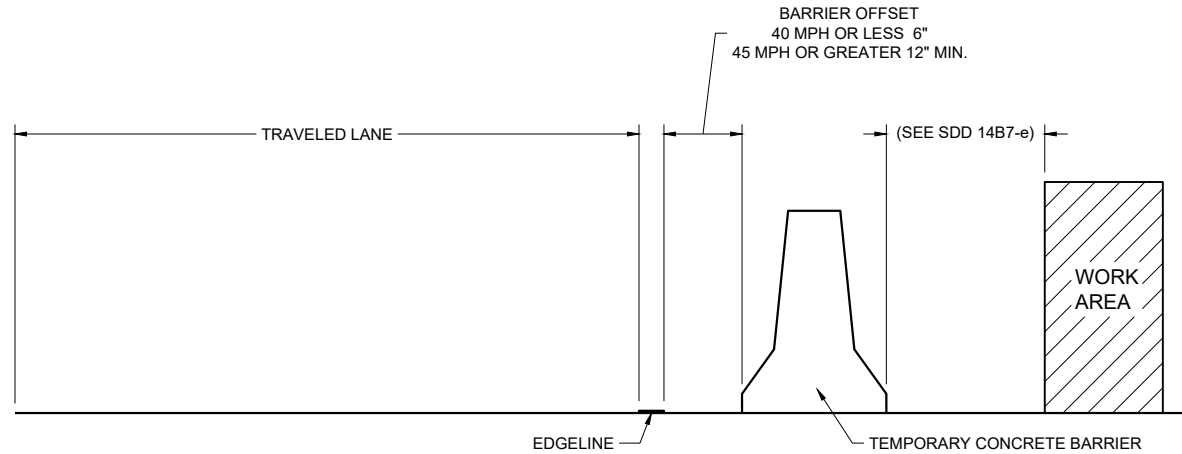
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

| PERMANENT LONGITUDINAL PAVEMENT MARKINGS           |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                           |
| APPROVED<br>May 2023<br>DATE                       | /S/ Jeannie Silver<br>Statewide Pavement Marking Engineer |
| FHWA 335                                           |                                                           |





TEMPORARY BARRIER OFFSET FROM EDGE LINE

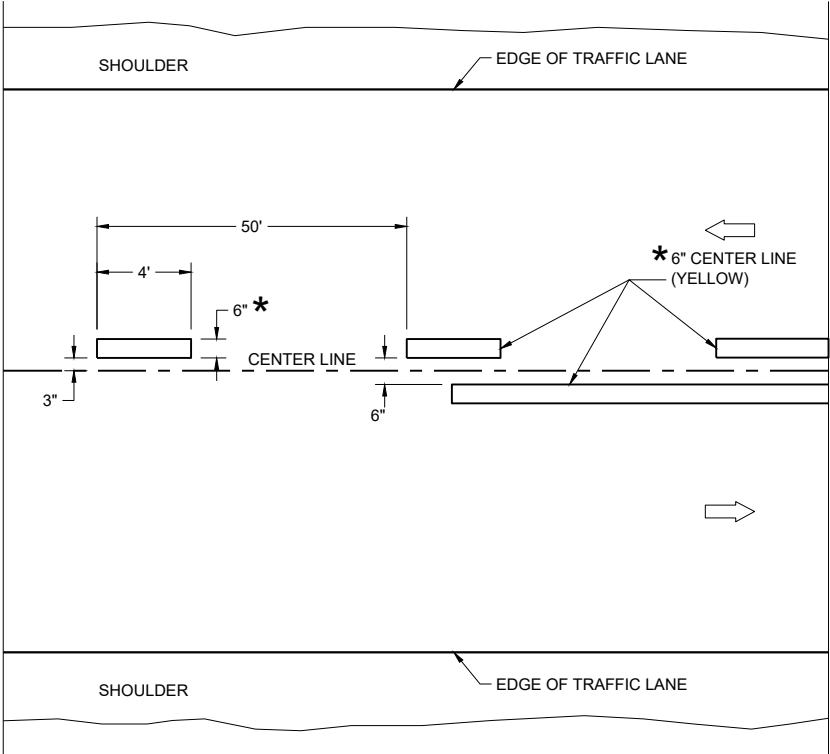
GENERAL NOTES

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

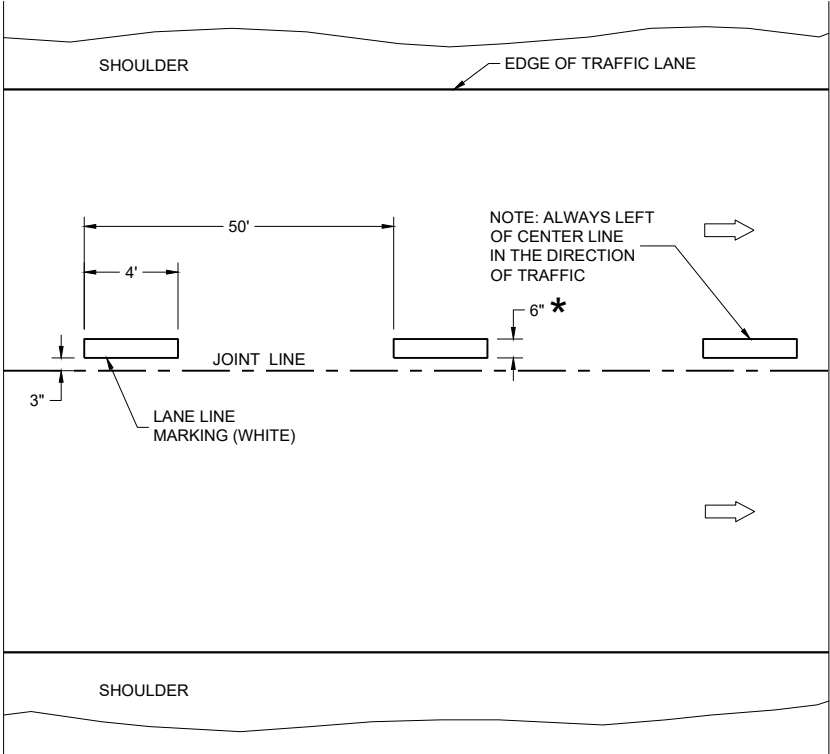
LEGEND

➡ DIRECTION OF TRAFFIC

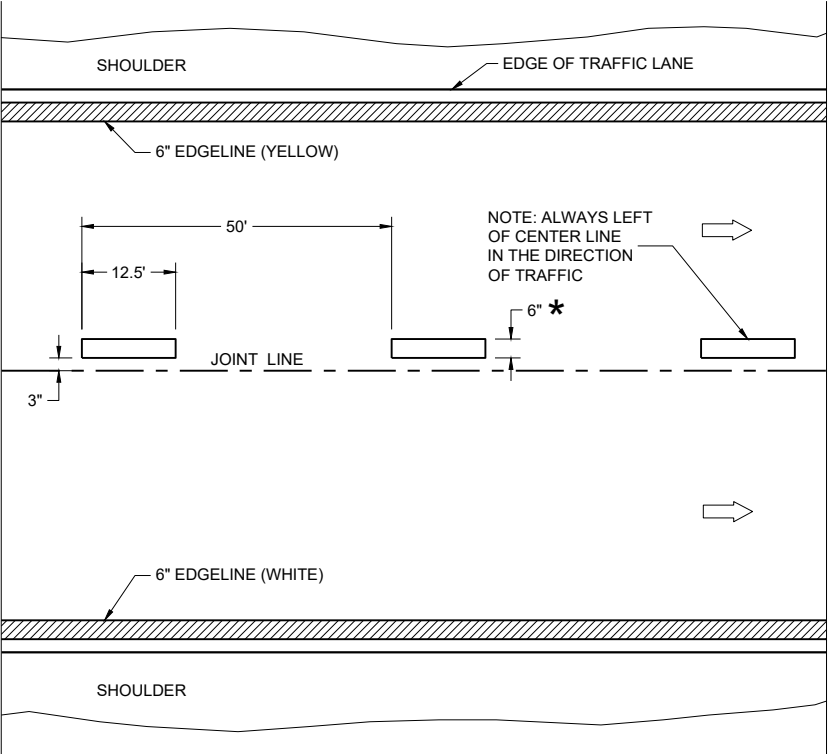
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



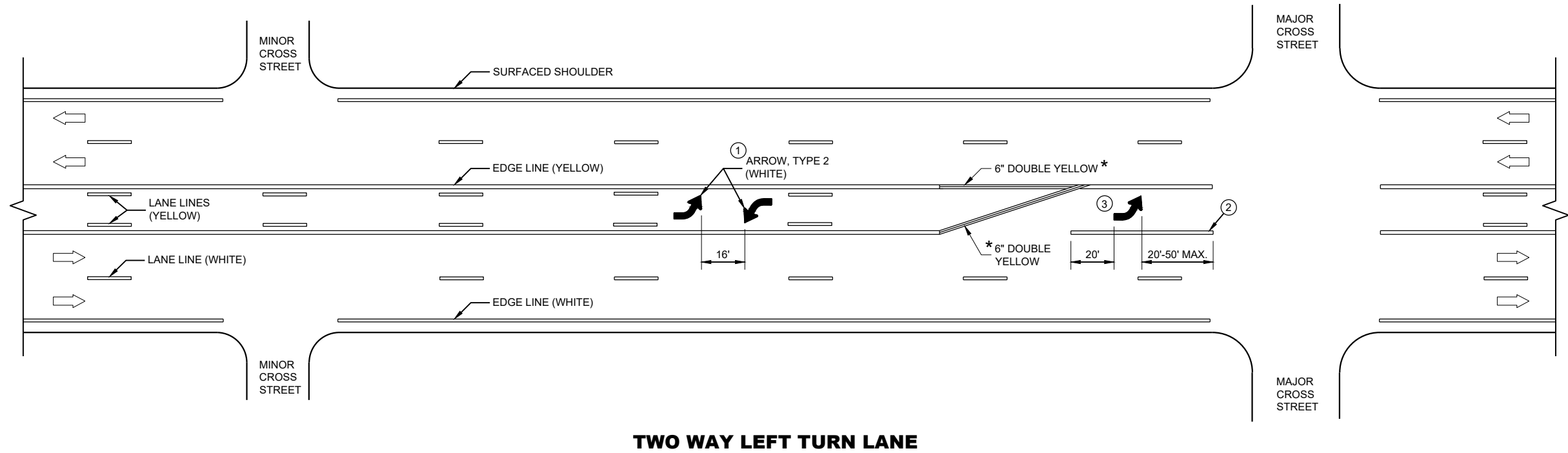
ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

| TEMPORARY LONGITUDINAL PAVEMENT MARKING            |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                           |
| APPROVED<br>May 2023<br>DATE                       | /S/ Jeannie Silver<br>Statewide Pavement Marking Engineer |
| FHWA                                               | 336                                                       |



**GENERAL NOTES**

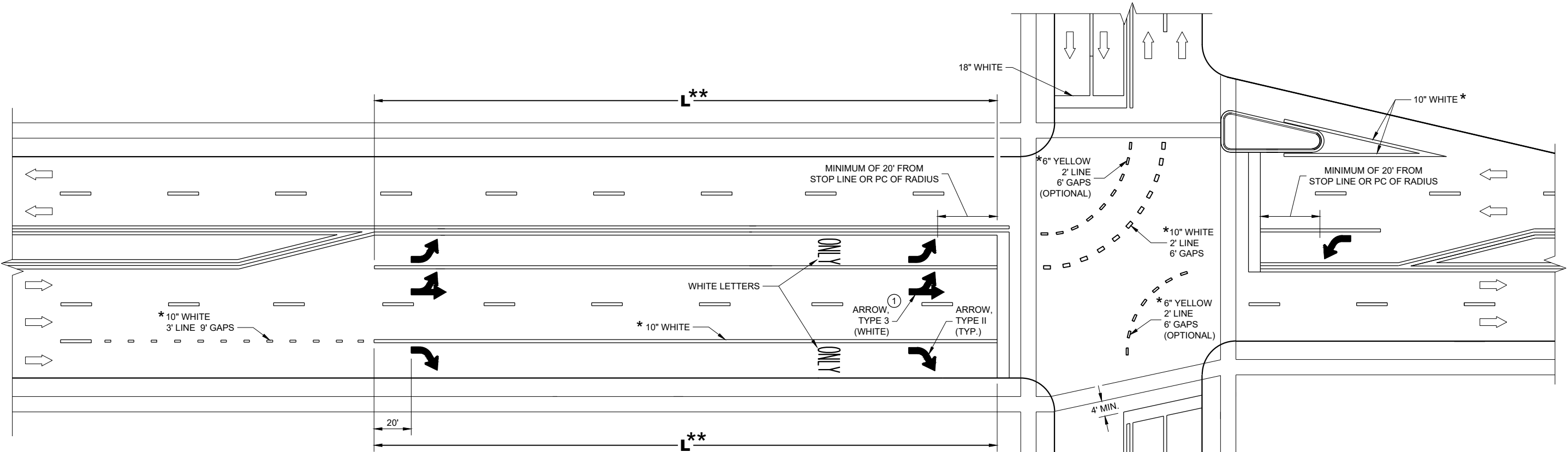
- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

**PAVEMENT MARKING  
(TURN LANES)**

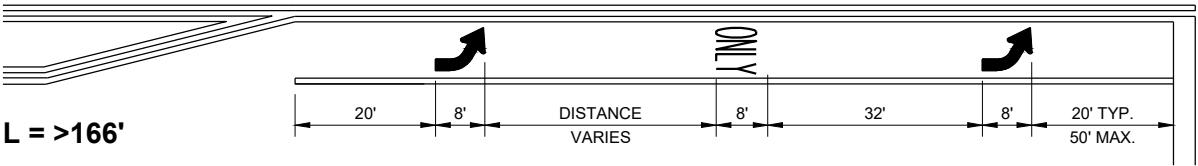
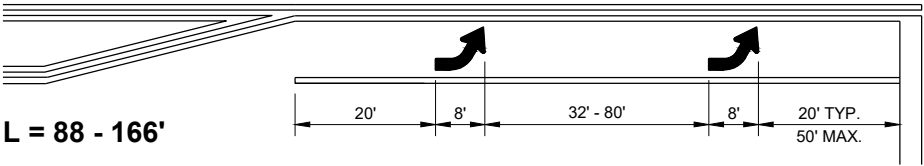
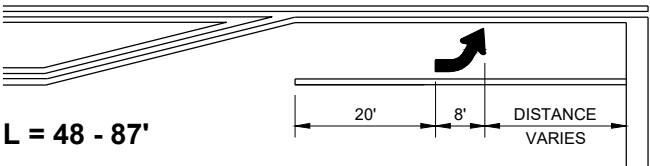
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 337



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

TURN LANE OPTIONS

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



GENERAL NOTES

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

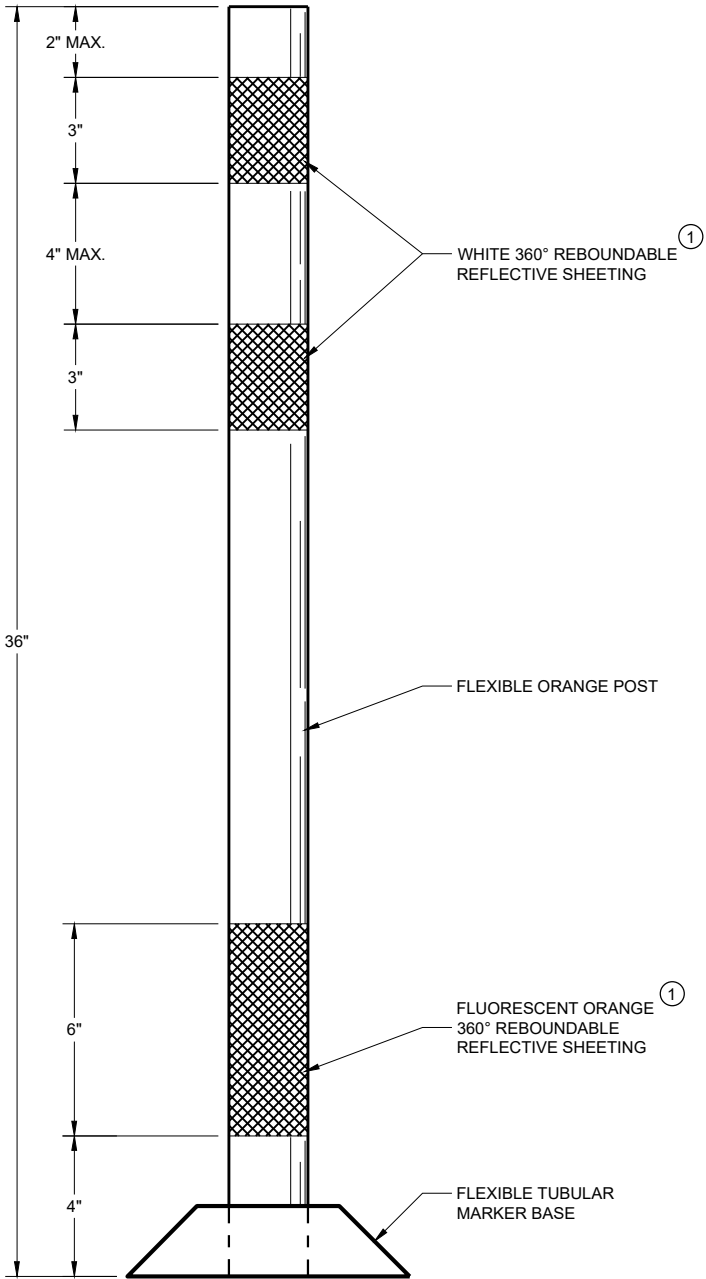
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 338



FLEXIBLE TUBULAR  
MARKER POST  
WORK ZONE

GENERAL NOTES

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

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

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

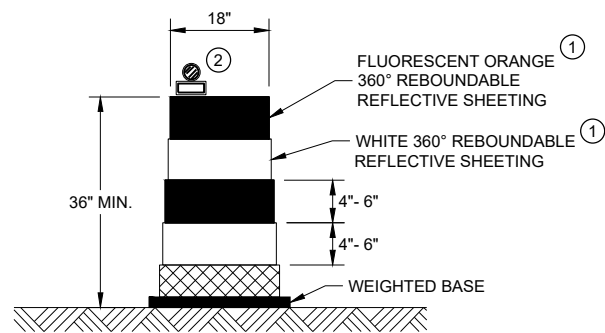
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES  
FLEXIBLE TUBULAR  
MARKER POST

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

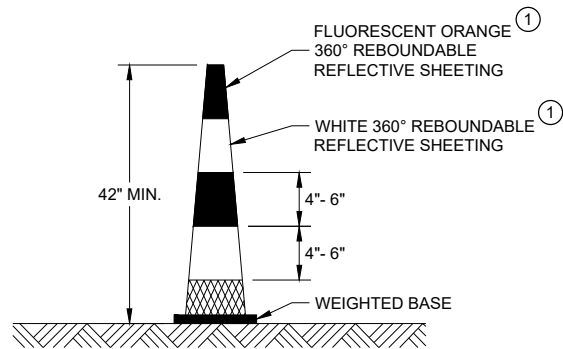
APPROVED  
November 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 339

FHWA



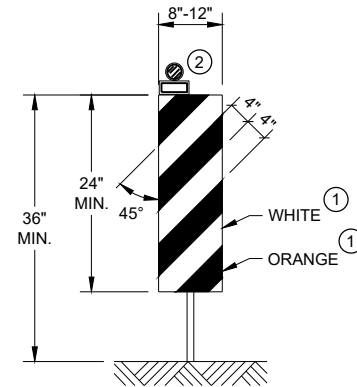
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



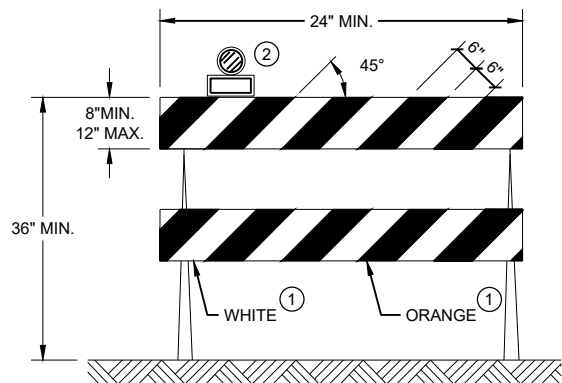
**42" CONE**

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



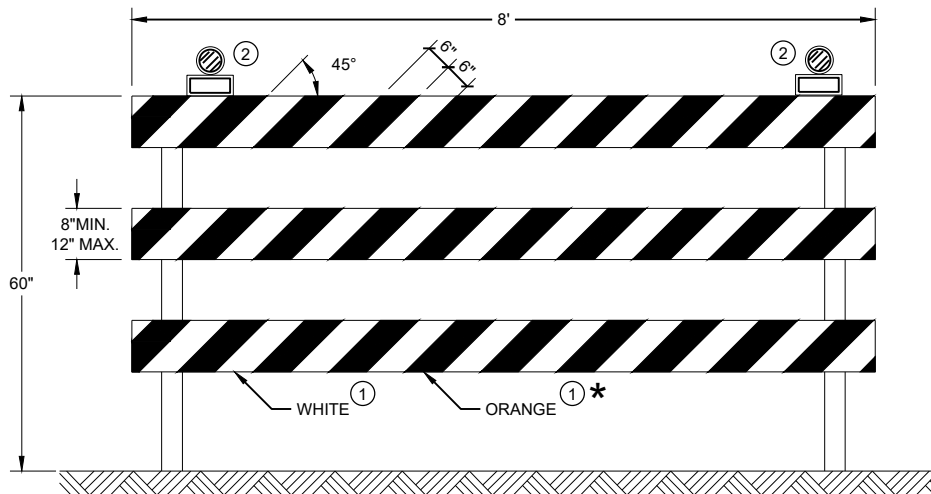
**VERTICAL PANEL**

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



**TYPE II BARRICADE**

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



**TYPE III BARRICADE**

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

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**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<br>DRUMS, CONES, BARRICADES<br>AND VERTICAL PANELS |                                              |
|-------------------------------------------------------------------------|----------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                      |                                              |
| APPROVED<br>November 2022<br>DATE                                       | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER 340 |
| 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

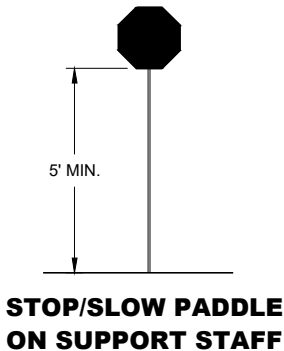
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- 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.

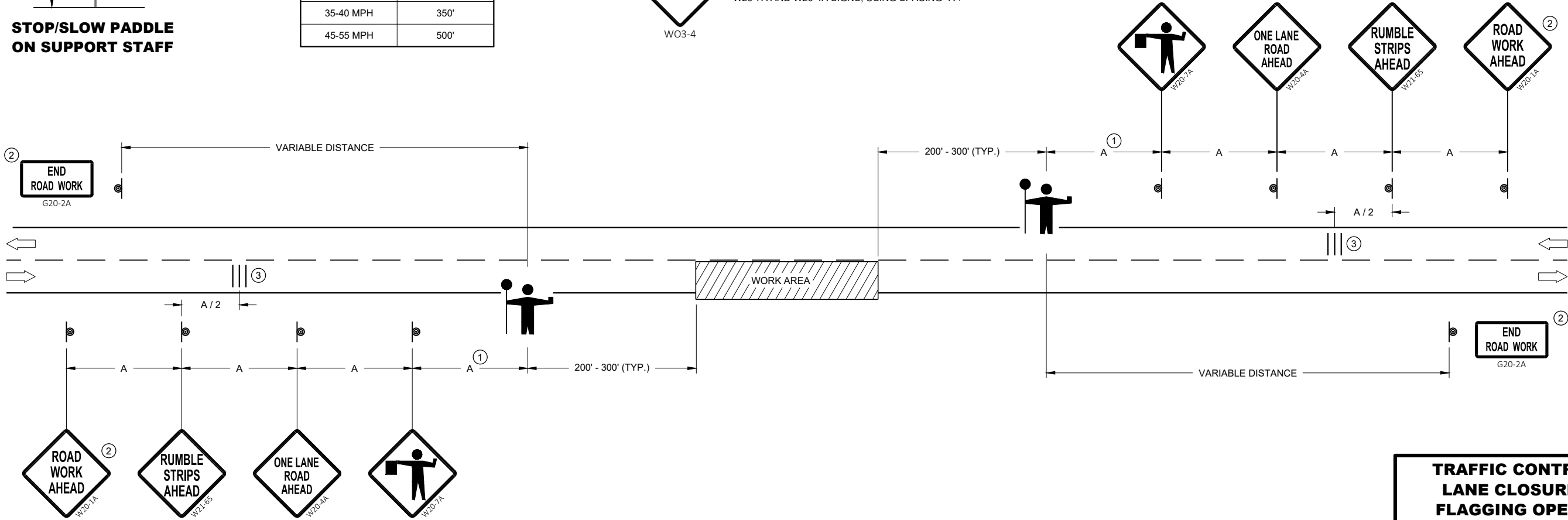


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

| 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".



|                                                                         |                                              |
|-------------------------------------------------------------------------|----------------------------------------------|
| <b>TRAFFIC CONTROL FOR<br/>LANE CLOSURE WITH<br/>FLAGGING OPERATION</b> |                                              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                      |                                              |
| APPROVED<br>May 2022<br>DATE                                            | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER 341 |
| 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

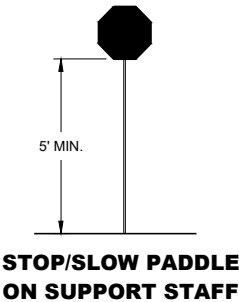
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

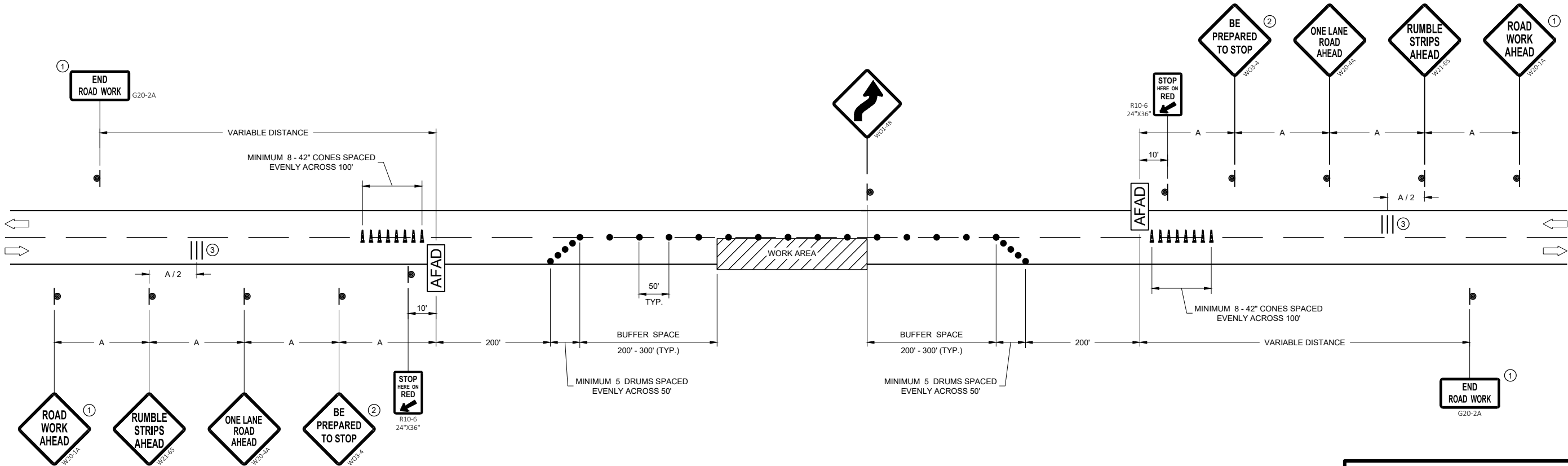
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

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'        |

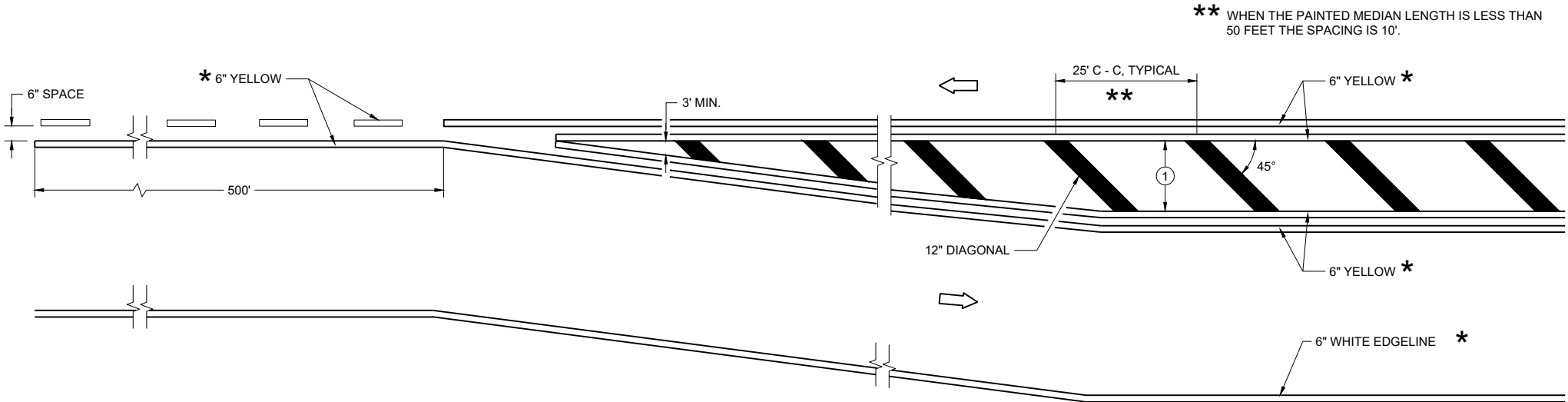


TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

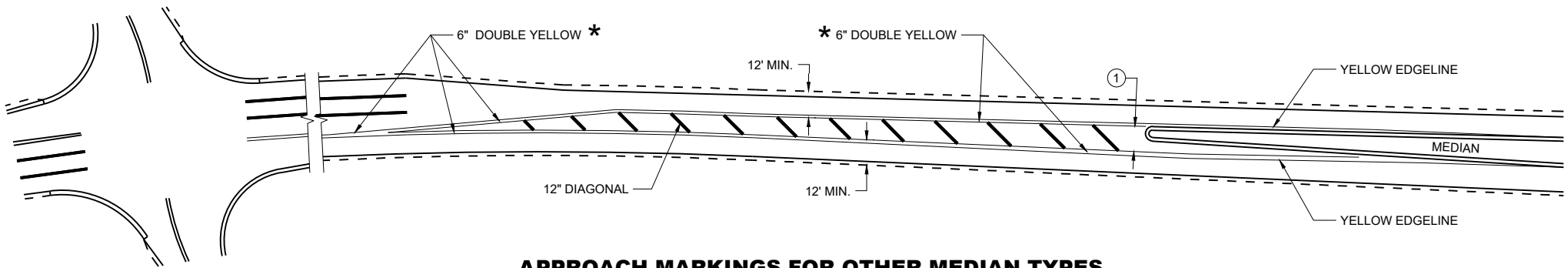
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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May 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 342

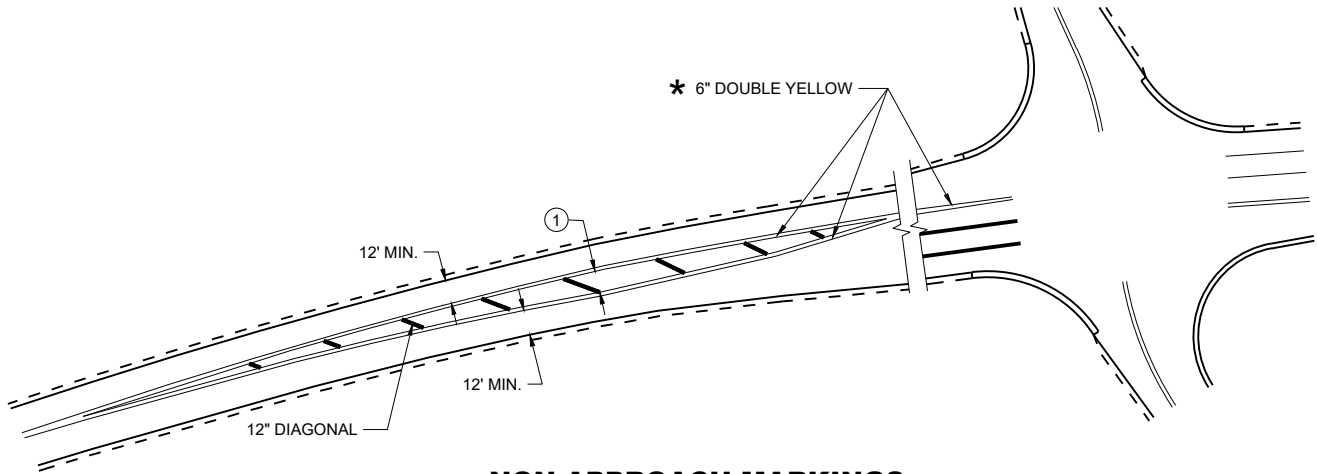
FHWA



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

GENERAL NOTES

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

➡ DIRECTION OF TRAVEL

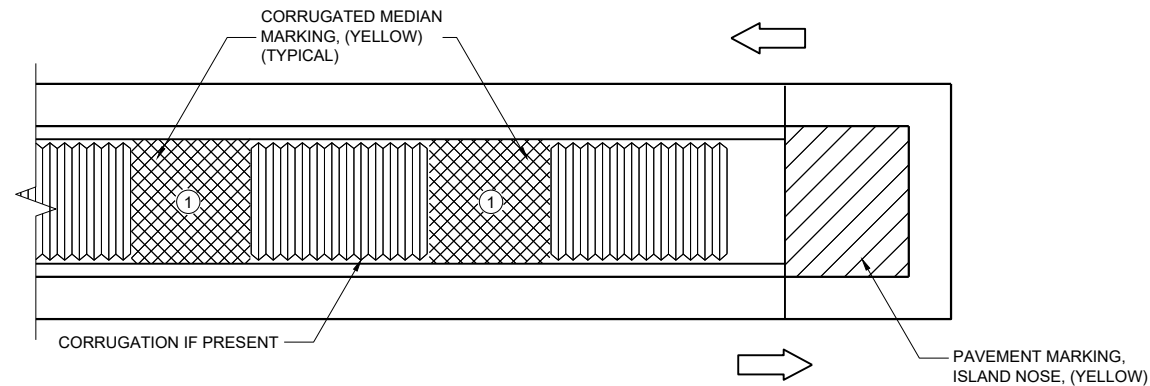
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

MEDIAN ISLAND  
PAVEMENT MARKINGS

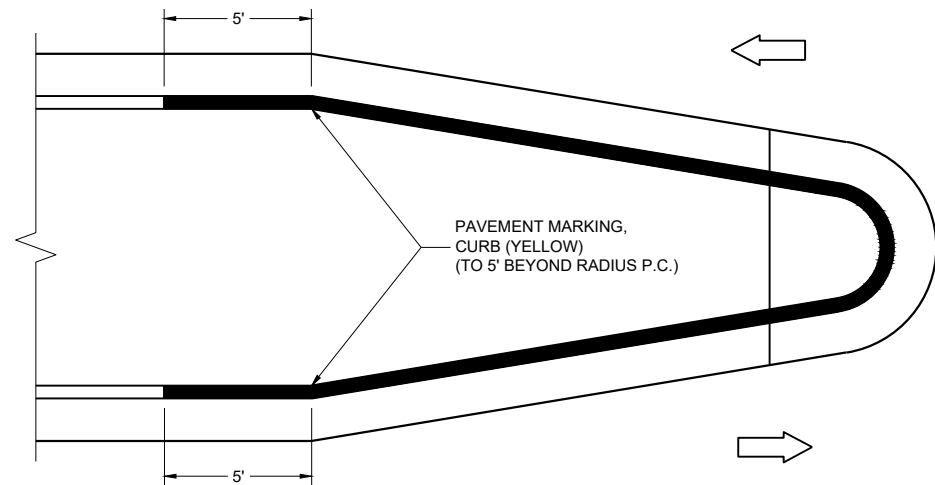
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2024 /S/ Jeannie Silver  
DATE Statewide Pavement Marking Engineer

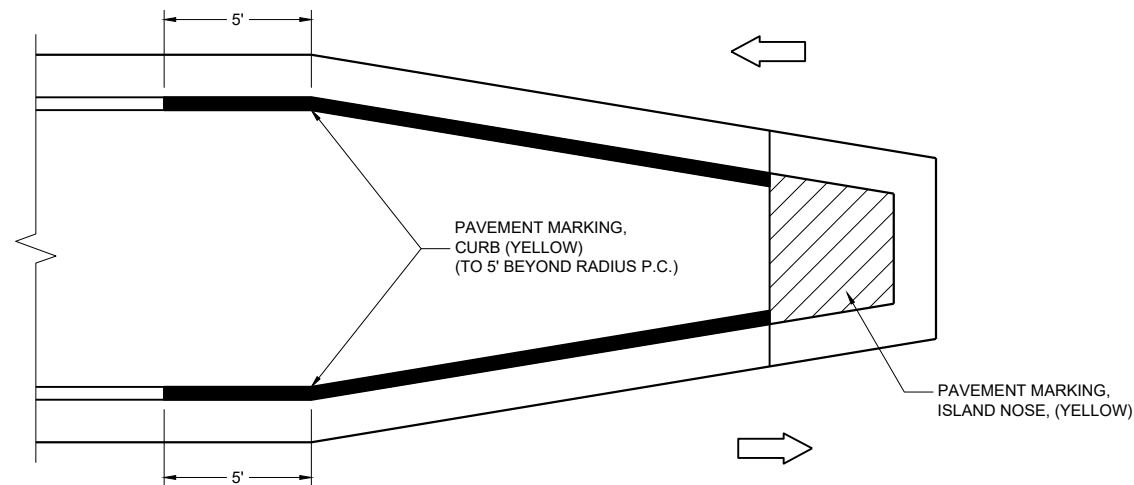




MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

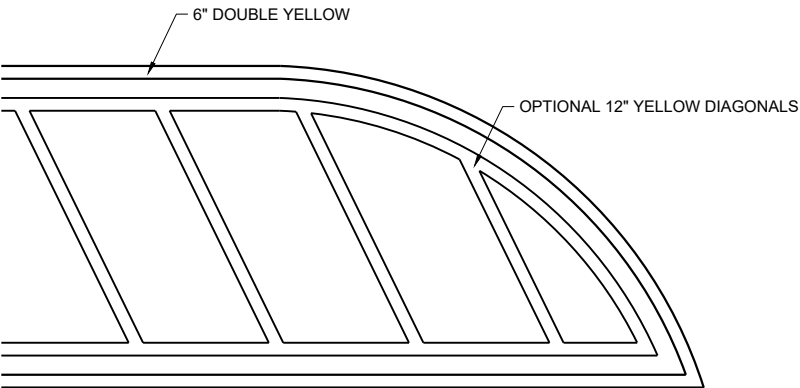
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

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

① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

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



FLUSH MEDIAN ISLAND NOSE

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2024 /S/ Jeannie Silver  
DATE Statewide Pavement Marking Engineer

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

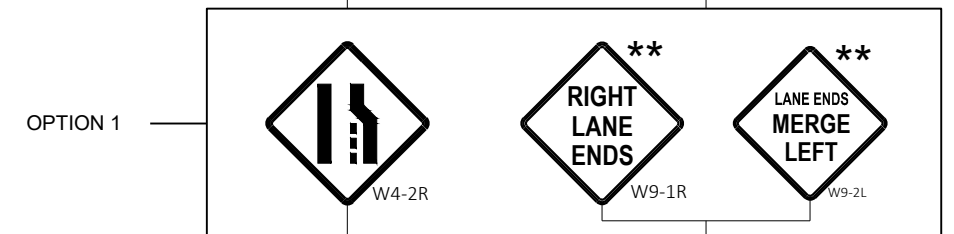
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

**\*\*\* IF POSTED SPEED IS 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN).**

**A** DISTANCE DEPENDENT ON SPEED (SEE TABLE)

 DIRECTION OF TRAFFIC

| POSTED OR 85TH<br>PERCENTILE SPEED | DISTANCE "A" |
|------------------------------------|--------------|
| 25                                 | 325'         |
| 30                                 | 460'         |
| 35                                 | 565'         |
| 40                                 | 670'         |
| 45                                 | 775'         |
| 50                                 | 885'         |
| 55                                 | 990'         |
| 65                                 | 1200'        |
| 70                                 | 1250'        |

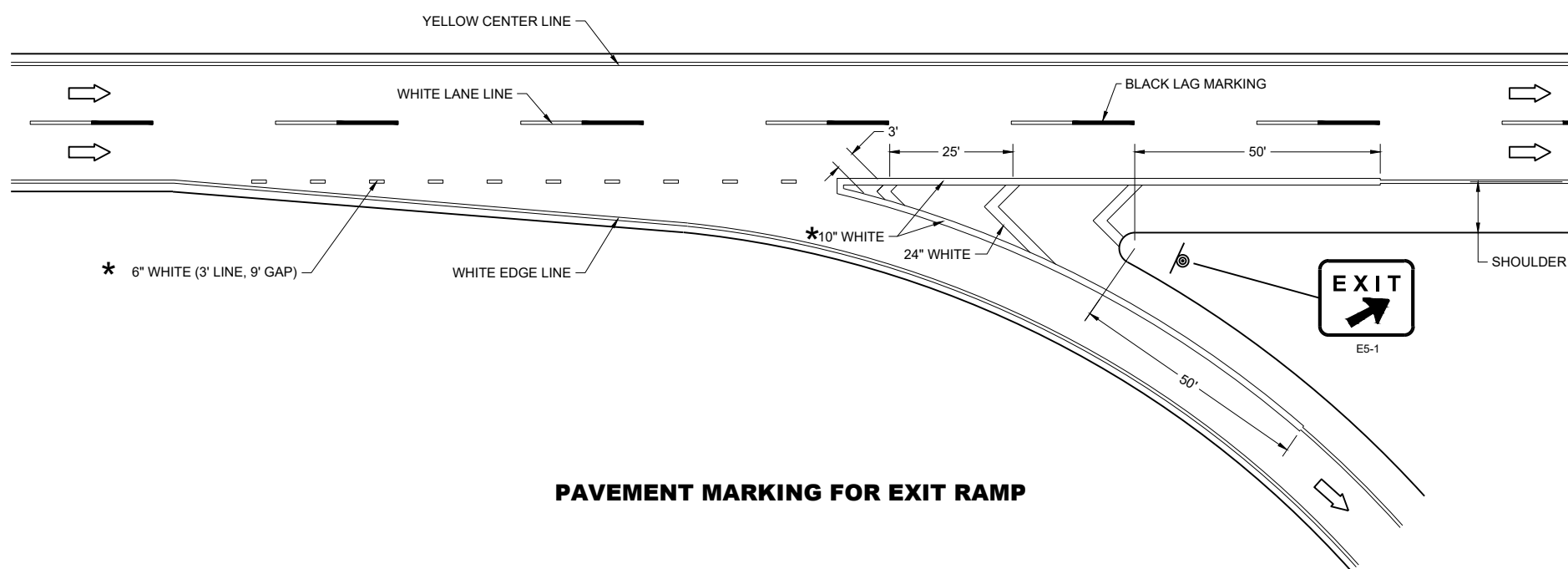


APPROVED  
May 2023  
DATE

/S/ Matthew Rauch  
STATE SIGNING AND MAP  
ENGINEER

345

FHWA



## GENERAL NOTES

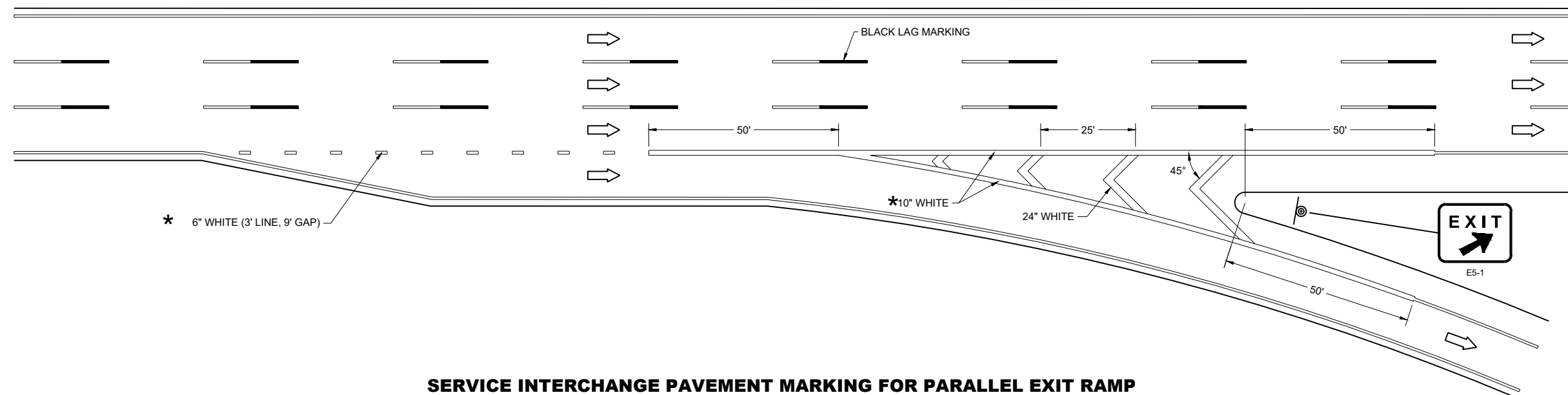
PLACE GROOVE 3 INCHES LEFT OF JOINT.

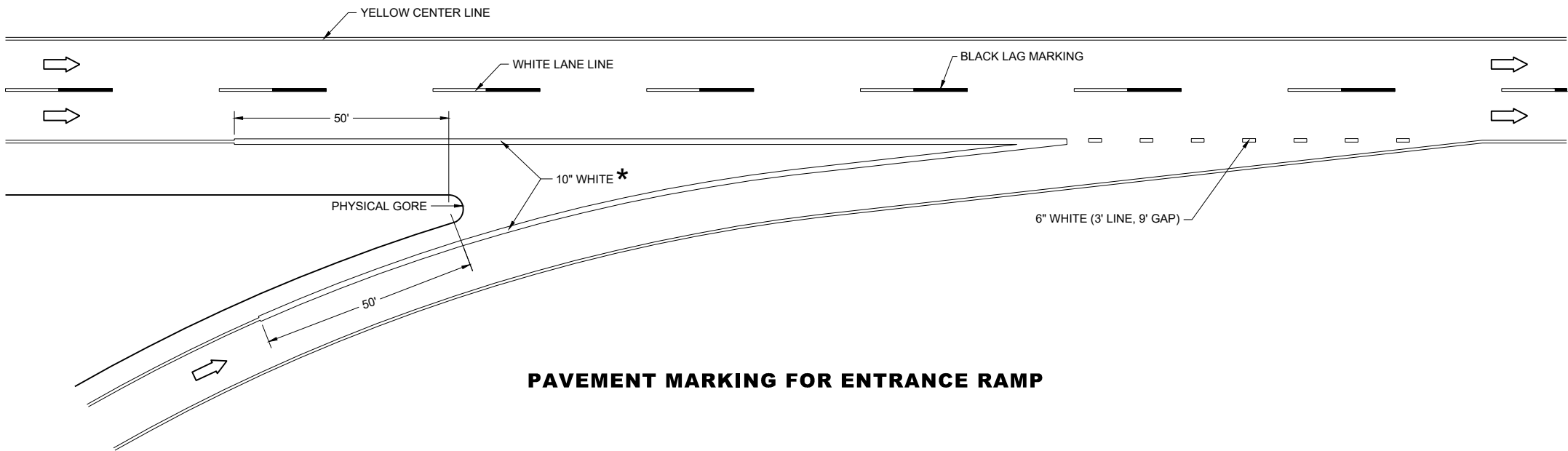
## LEGEND

 SIGN ON PERMANENT SUPPORT

 DIRECTION OF TRAVEL

\*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES





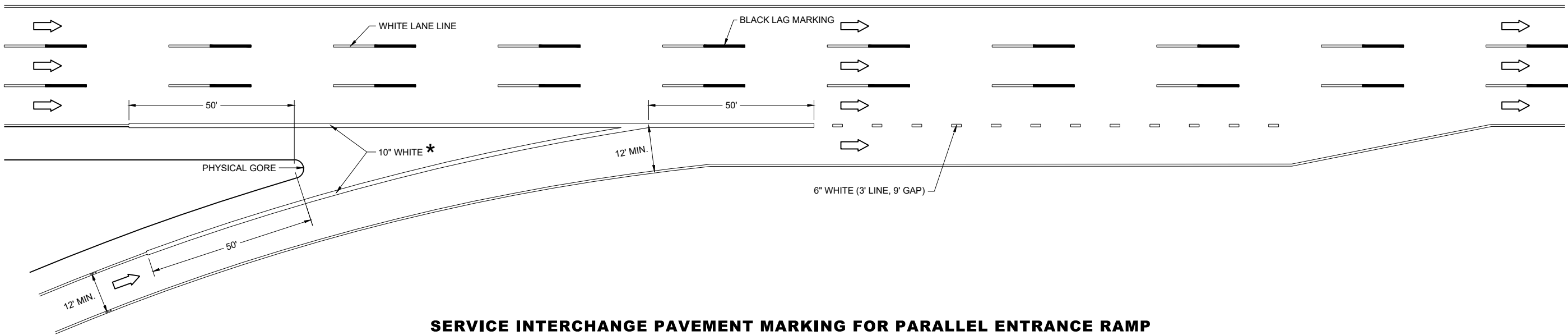
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

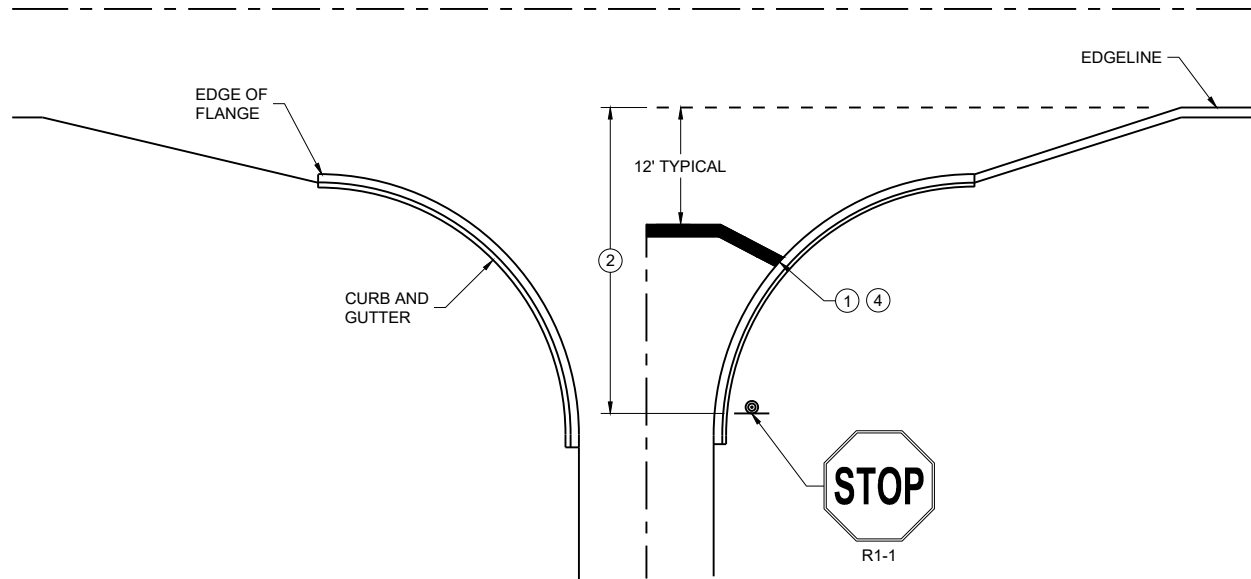
DIRECTION OF TRAVEL

\*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

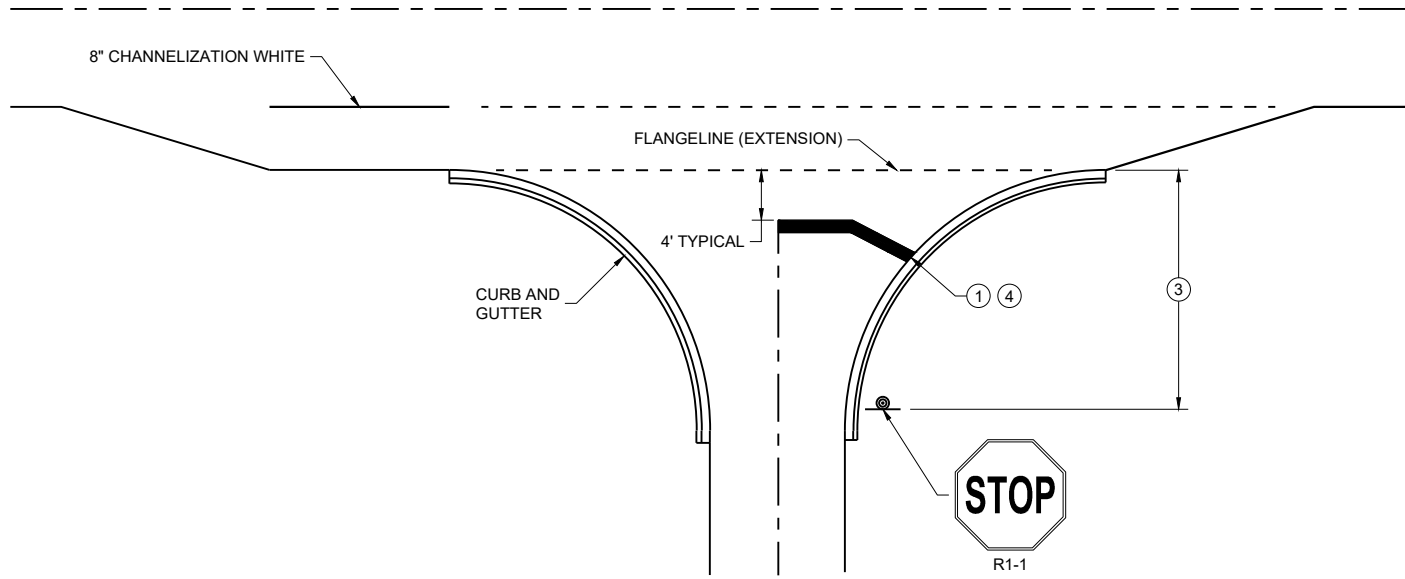


PAVEMENT MARKING,  
ENTRANCE RAMP AND  
PARALLEL ENTRANCE RAMP

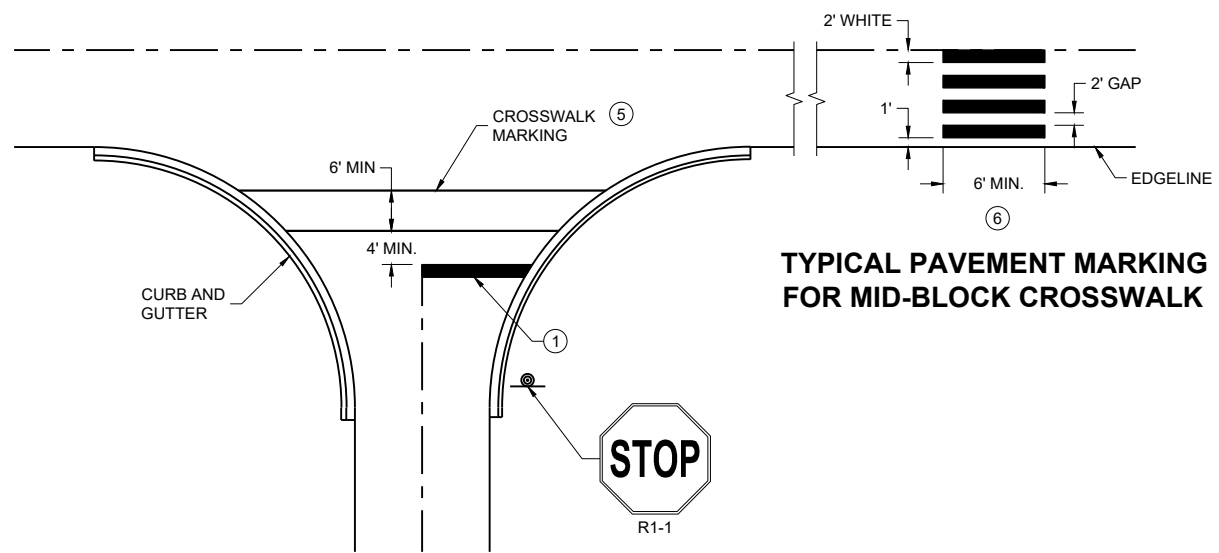
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



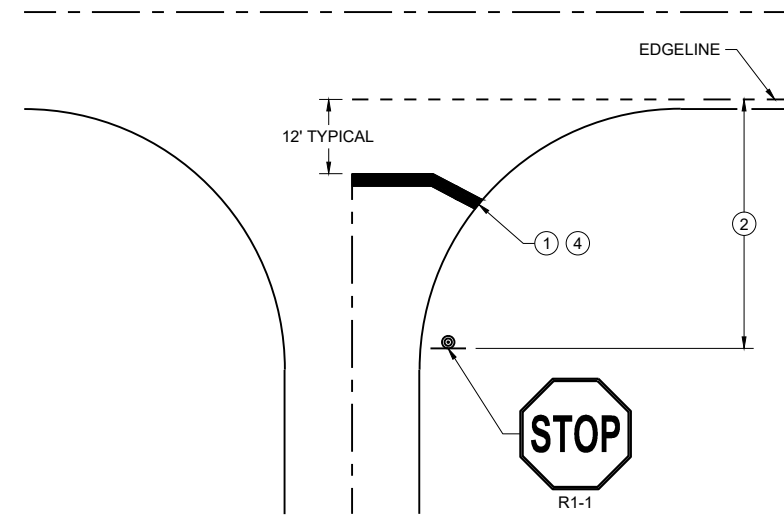
TYPICAL STOP LINE PAVEMENT MARKING  
WITH CURB AND GUTTER



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



TYPICAL STOP LINE PAVEMENT MARKING FOR  
SIDE ROADS WITH CROSSWALK MARKING



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 EDGELINE LOCATION.

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE 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 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING  
ENGINEER  
FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DELINEATOR, FLEXIBLE/TUBULAR MARKER
-  DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

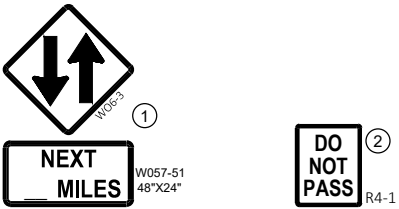
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

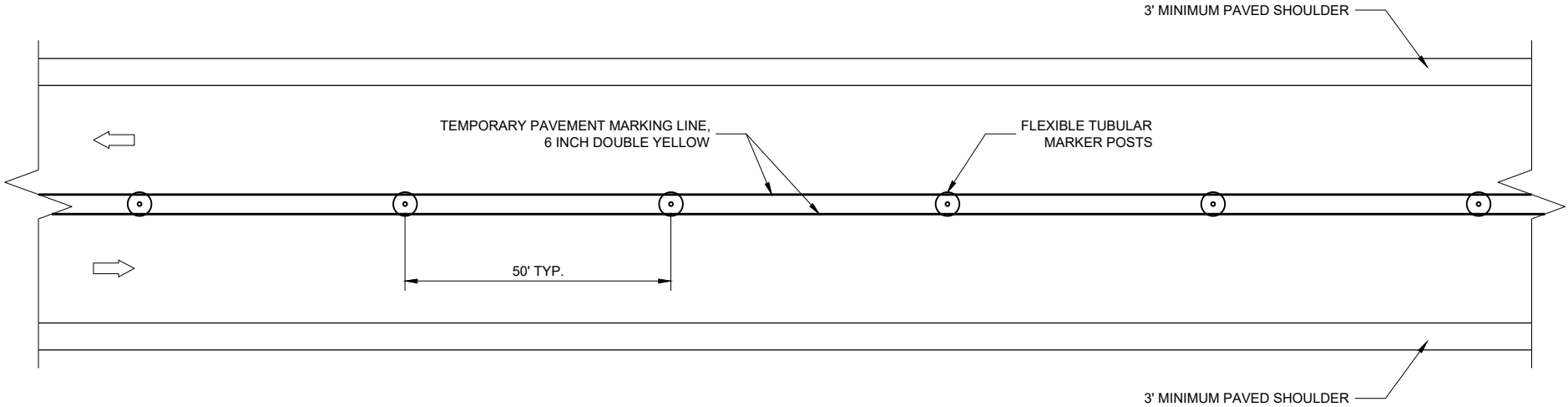
THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50 FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW.



- ① THE WO6-3 AND WO57-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND / OR 500 FEET BEYOND ANY SIDE ROAD. THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE WO6-3 AND THE WO57-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN THE SIGNS.
- ② CONVENTIONAL: 24" X 30"  
FREEWAY AND EXPRESSWAY: 36" X 48"



TWO LANE, TWO WAY OPERATION

**TRAFFIC CONTROL  
TWO LANE TWO WAY  
OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 349

FHWA



GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

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

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

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

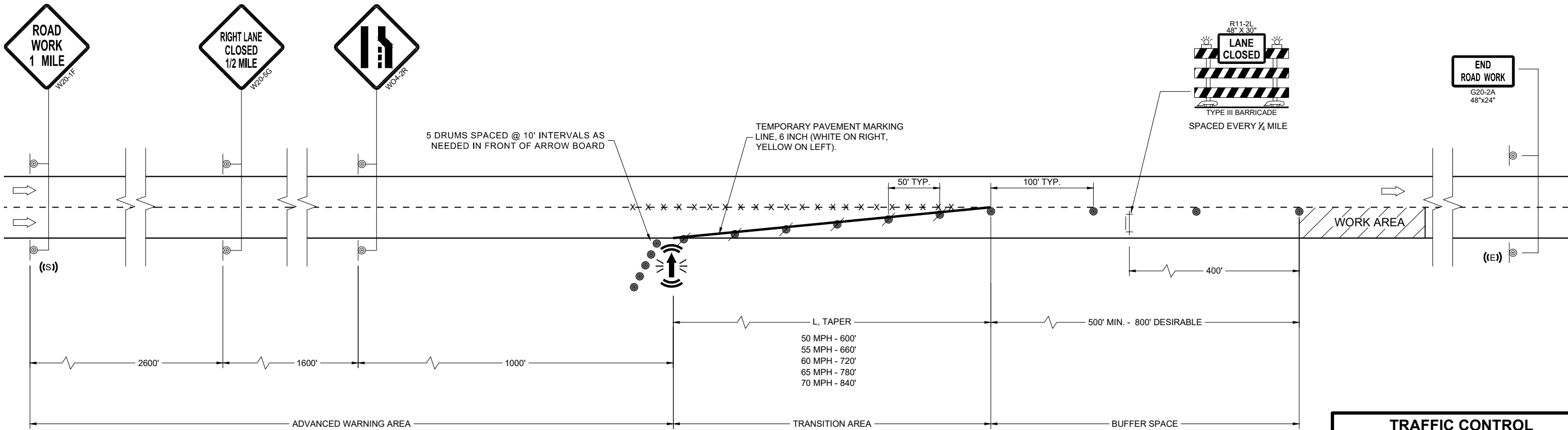
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER



TRAFFIC CONTROL  
LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Andrew Heidtke  
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

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

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

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

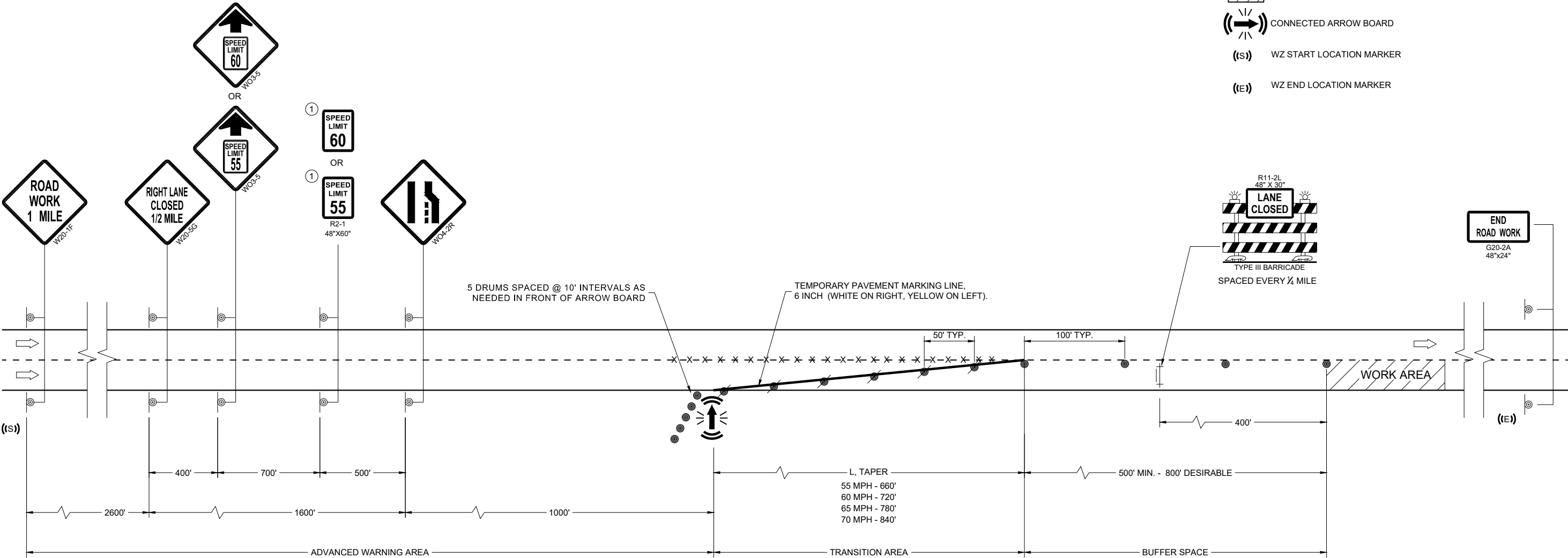
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

1 A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

- ⦿ SIGN ON PERMANENT SUPPORT
- ⦿ TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ⦿ TYPE III BARRICADE WITH ATTACHED SIGN
- ⦿ TYPE "A" WARNING LIGHT (FLASHING)
- ✕ ✕ ✕ REMOVING PAVEMENT MARKINGS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ⦿ CONNECTED ARROW BOARD
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER



|                                                      |                                                                     |
|------------------------------------------------------|---------------------------------------------------------------------|
| TRAFFIC CONTROL,<br>LANE CLOSURE,<br>SPEED REDUCTION |                                                                     |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION   |                                                                     |
| APPROVED<br>November 2024<br>DATE                    | /S/ Andrew Heidtke<br>ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR |
| FHWA                                                 |                                                                     |



LEGEND

- 

SIGN ON PERMANENT SUPPORT
- 

TRAFFIC CONTROL DRUM
- 

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- 

TYPE III BARRICADE WITH ATTACHED SIGN
- 

TYPE "A" WARNING LIGHT (FLASHING)
- 

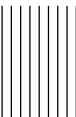
REMOVING PAVEMENT MARKINGS
- 

DIRECTION OF TRAFFIC
- 

WORK AREA
- 

CONNECTED ARROW BOARD
- 

WZ START LOCATION MARKER
- 

WZ END LOCATION MARKER
- 

TEMPORARY TAPE RUMBLE STRIPS (VARIABLE SPACING)
- 

PORTABLE TRAFFIC SENSOR (PTS)

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS

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

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

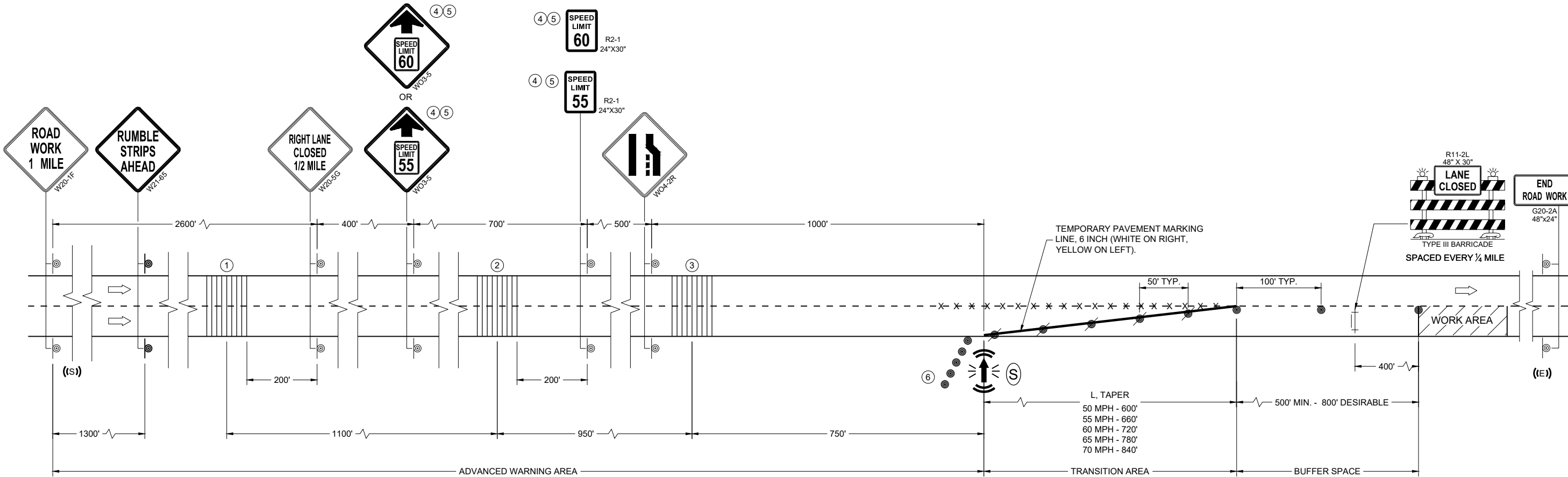
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ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

USE THIS DETAIL FOR PLACEMENT OF TEMPORARY TAPE RUMBLE STRIPS AND W21-65 SIGNS. SEE APPROPRIATE LANE CLOSURE SDD FOR DETAILS OF OTHER TRAFFIC CONTROL DEVICES AND SIGNS.

- ① NINE RUMBLE STRIPS WITH 10 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP.
- ② NINE RUMBLE STRIPS WITH 5 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP.
- ③ NINE RUMBLE STRIPS WITH 1.5 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP.
- ④ COVER OR REMOVE PER APPROVED TEMPORARY SPEED DECLARATION.
- ⑤ IF NO APPROVED SPEED DECLARATION, OMIT SIGNS.
- ⑥ 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.



TRAFFIC CONTROL,  
LANE CLOSURE, WITH  
TEMPORARY TAPE RUMBLE STRIPS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Andrew Heidtke  
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA 352

GENERAL NOTES

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

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

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CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

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

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

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

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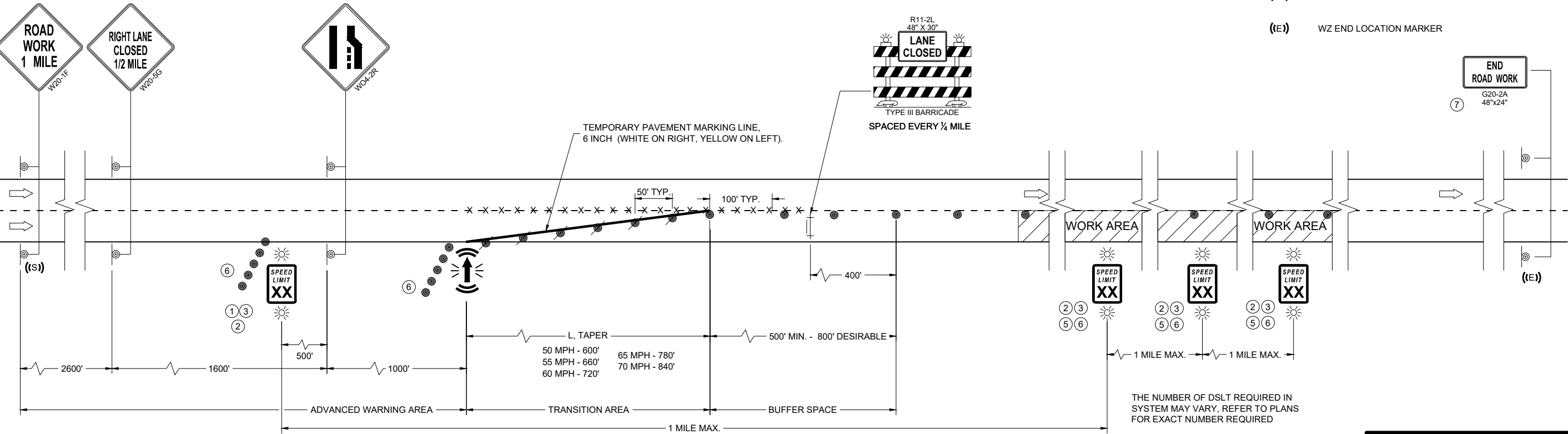
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IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

- 1
- EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.
- 2
- PLACE DSLT IN ADVANCE WARNING AREA AND THROUGHOUT PROJECT LIMITS. IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.
- 3
- AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP
- 4
- IF WORK AREA STARTS LESS THAN 1,000 FEET FROM END OF LANE CLOSURE TAPER, OMIT DIGITAL SPEED LIMIT TRAILER AT THAT LOCATION.
- 5
- PLACE A DIGITAL SPEED LIMIT TRAILER A MINIMUM OF EVERY ONE MILE. MODIFY PLACEMENT AS DIRECTED BY ENGINEER WHEN DIGITAL SPEED LIMIT TRAILER IS LOCATED IN CLOSE PROXIMITY TO AN ACCELERATION LANE OF AN ENTRANCE RAMP.
- 6
- 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.
- 7
- INCLUDE NON-DIGITAL R2-1 RESUME SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGN.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSL)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER



TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Andrew Heidtke  
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

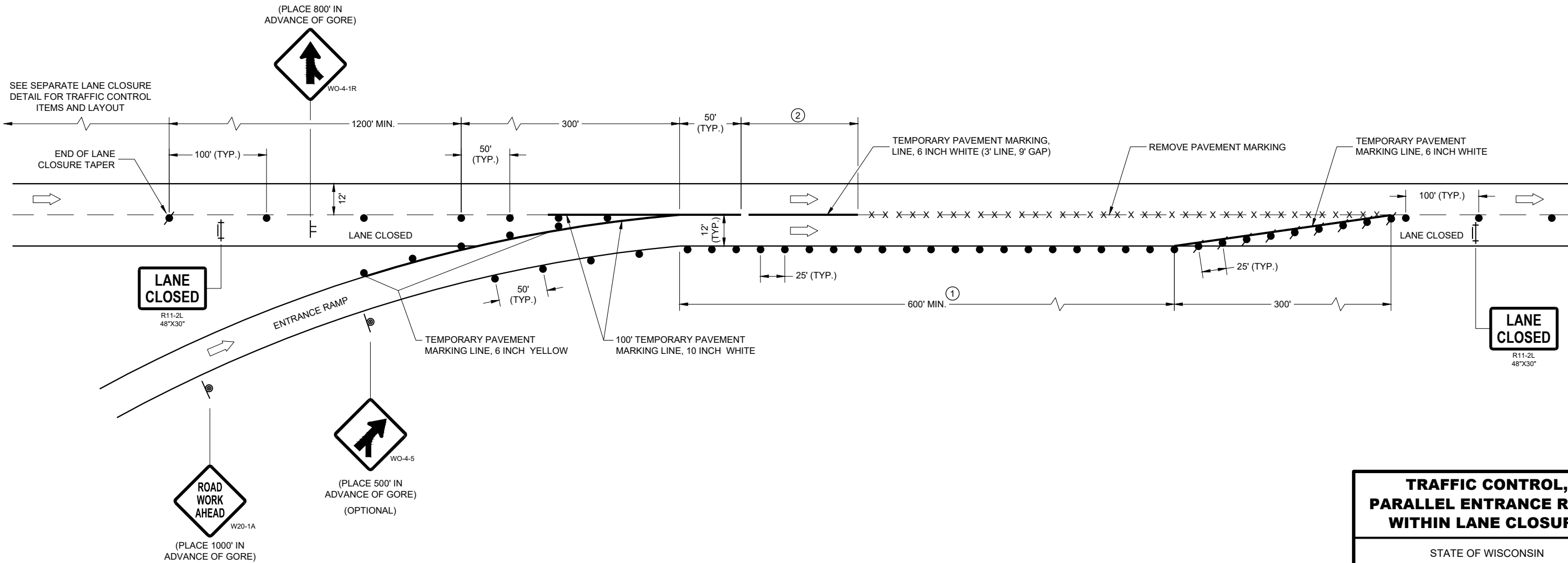
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

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

- ① EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- ② END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



**TRAFFIC CONTROL,  
PARALLEL ENTRANCE RAMP  
WITHIN LANE CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 354

FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

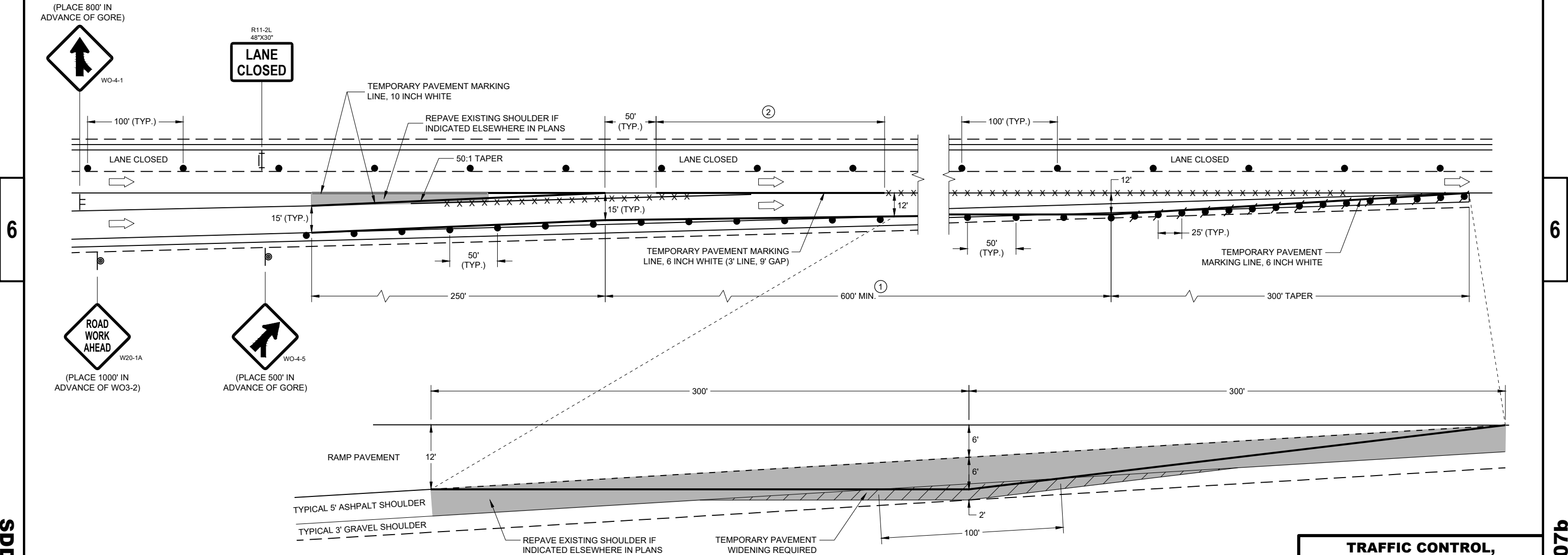
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS /OR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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.

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

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

- 1 EXTEND THE LENGTH OF THE MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- 2 END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY, ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

TRAFFIC CONTROL,  
ENTRANCE RAMP  
WITHIN LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 355

FHWA

SDD 15D15-07b

SDD 15D15-07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" X 16" MIN., ORANGE
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

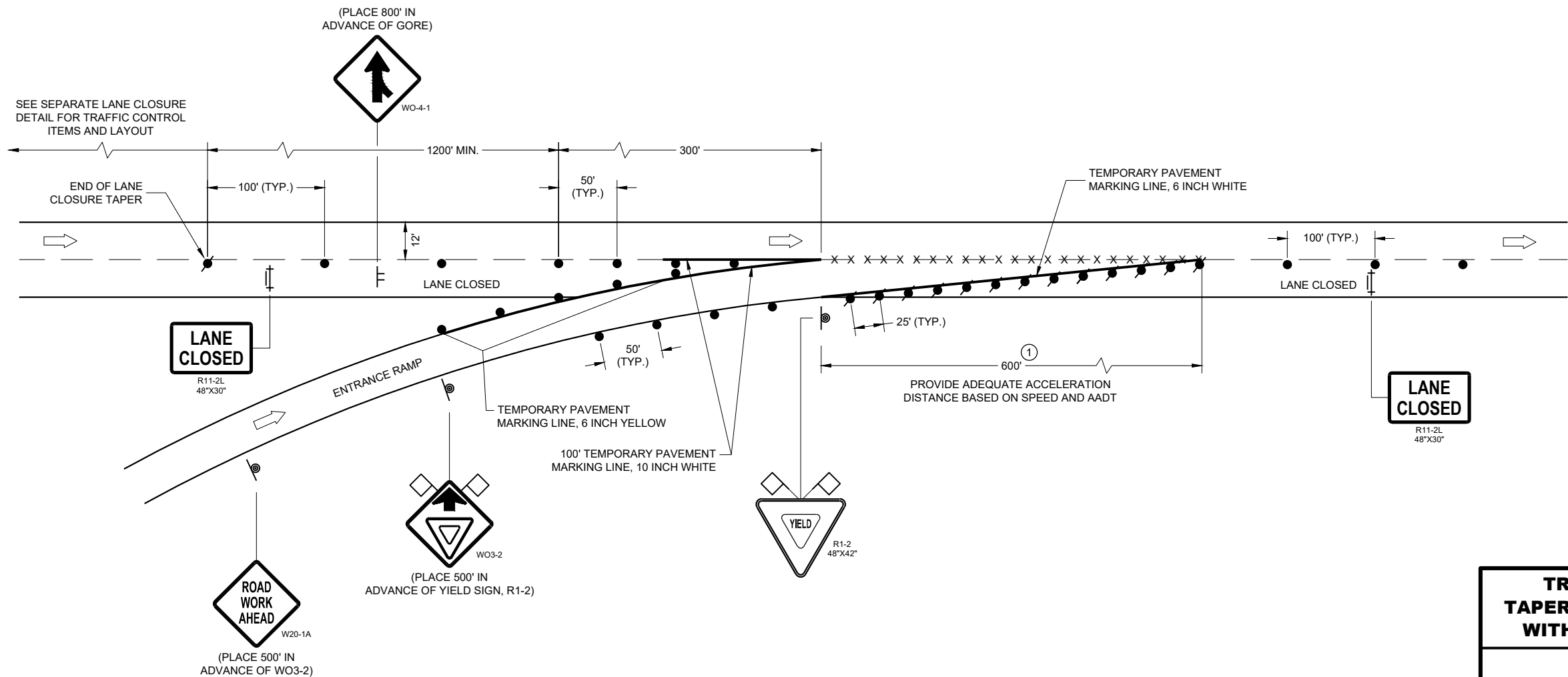
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ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

1 CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



**TRAFFIC CONTROL,  
TAPERED ENTRANCE RAMP  
WITHIN LANE CLOSURE**

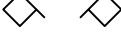
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER 356

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

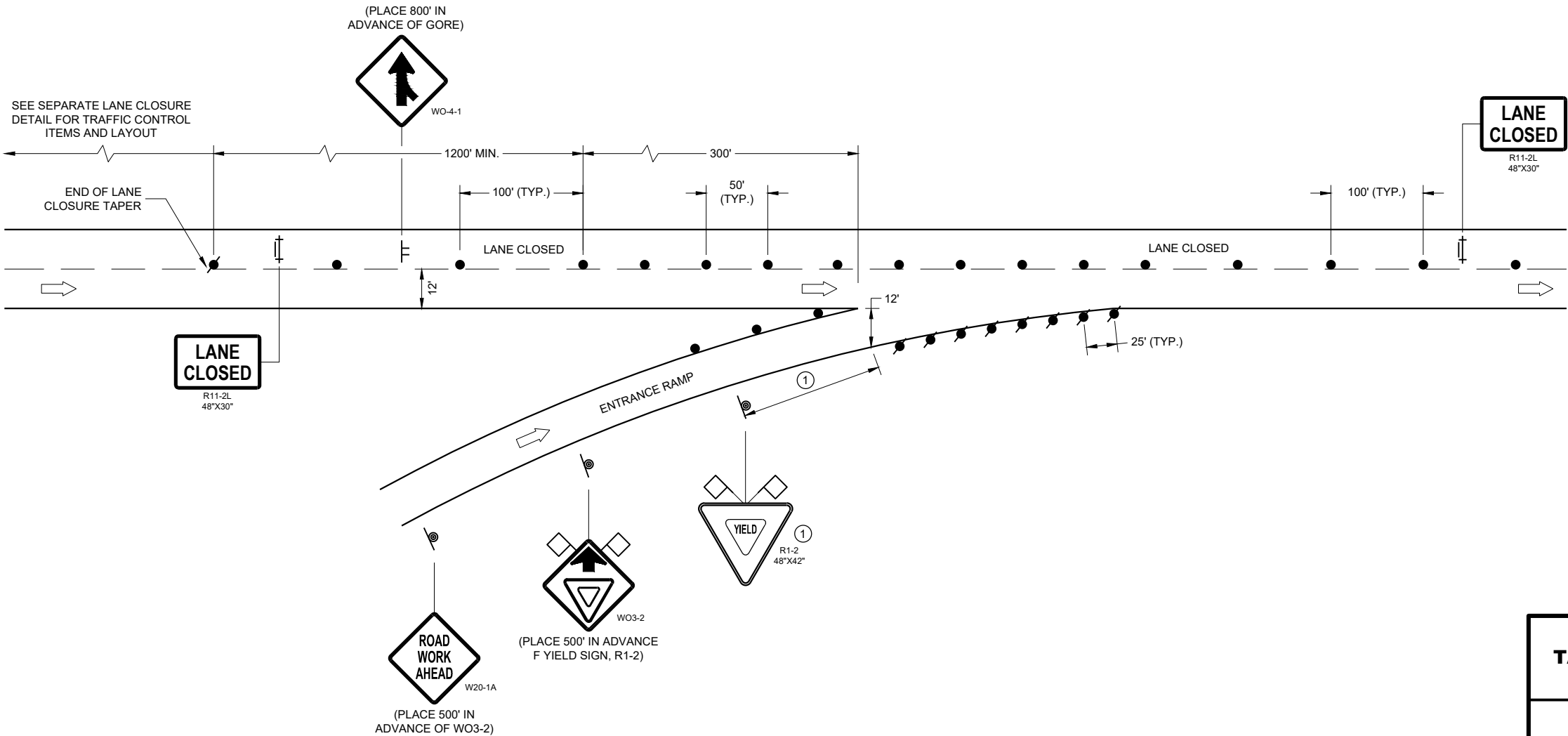
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

- ① PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



| TRAFFIC CONTROL,<br>TAPERED ENTRANCE RAMP<br>WITHIN LANE CLOSURE |                                              |
|------------------------------------------------------------------|----------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION               |                                              |
| APPROVED<br>May 2023<br>DATE                                     | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER 357 |
| FHWA                                                             |                                              |



LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

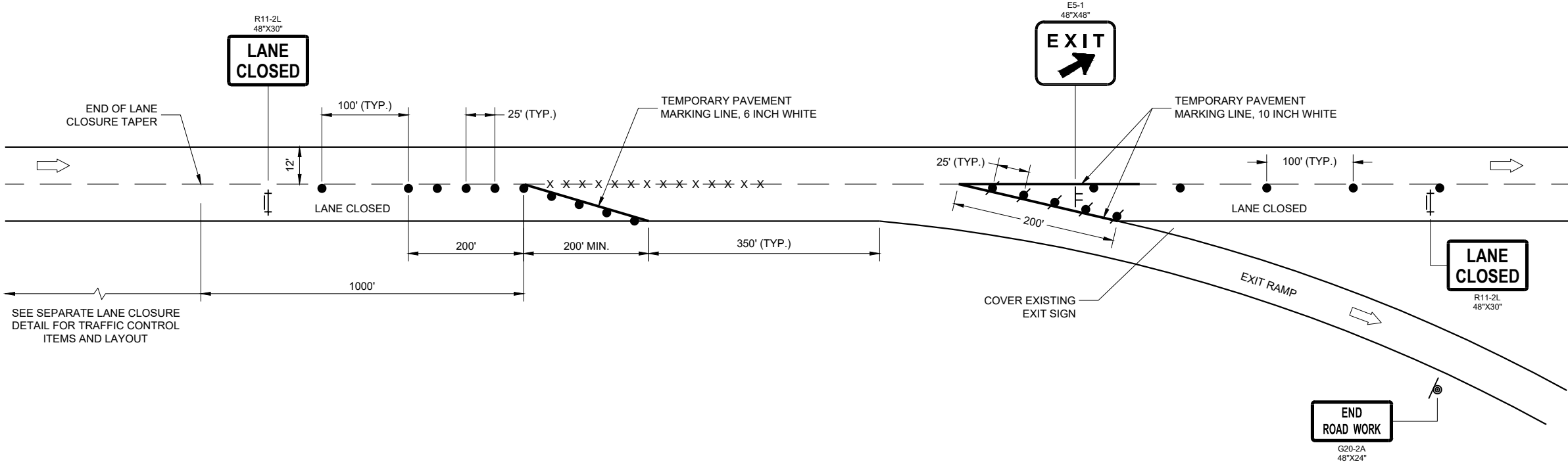
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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.

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

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

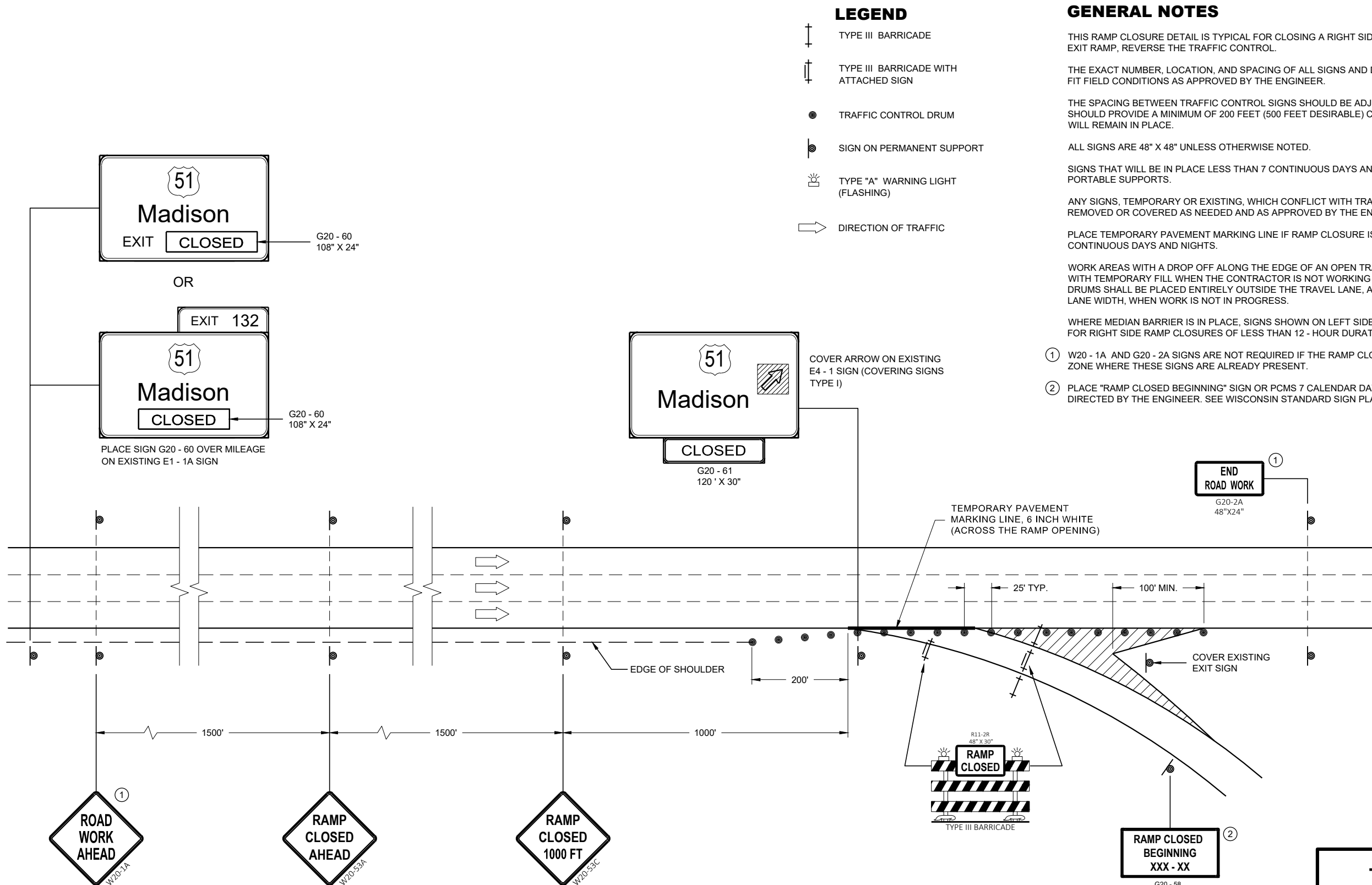


TRAFFIC CONTROL,  
PARALLEL EXIT RAMP  
WITHIN LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 358

FHWA



**TRAFFIC CONTROL,  
EXIT RAMP CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023  
DATE

/S/ Andrew Heidtke  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

359

FHWA



|                                                                                   |                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------|
|  | SIGN ON PERMANENT SUPPORT                            |
|  | TRAFFIC CONTROL DRUM                                 |
|  | TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT |
|  | TYPE III BARRICADE WITH ATTACHED SIGN                |
|  | TYPE "A" WARNING LIGHT (FLASHING)                    |
|  | REMOVING PAVEMENT MARKINGS                           |
|  | DIRECTION OF TRAFFIC                                 |
|  | WORK AREA                                            |
|  | CONNECTED ARROW BOARD                                |
|  | WZ START LOCATION MARKER                             |
|  | WZ END LOCATION MARKER                               |

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

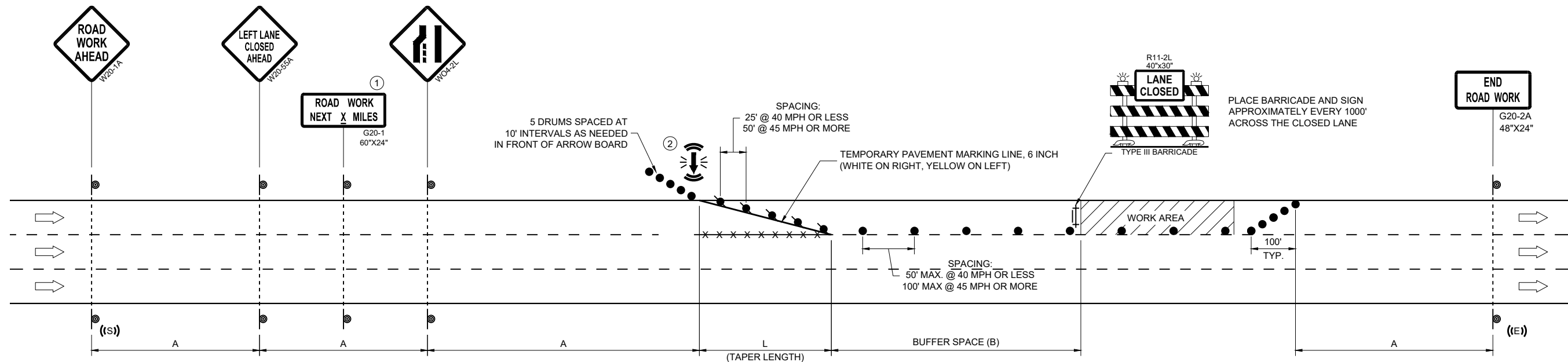
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE

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

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | TAPER LENGTH<br>(12 FT. LANE)<br>(L) FEET | BUFFER<br>SPACE<br>(B) FEET |
|-------------------------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------|
| 25                                                    | 200'                                        | 125'                                      | 55'                         |
| 30                                                    | 200'                                        | 180'                                      | 85'                         |
| 35                                                    | 350'                                        | 245'                                      | 120'                        |
| 40                                                    | 350'                                        | 320'                                      | 170'                        |
| 45                                                    | 500'                                        | 540'                                      | 220'                        |

APPROVED  
November 2024  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

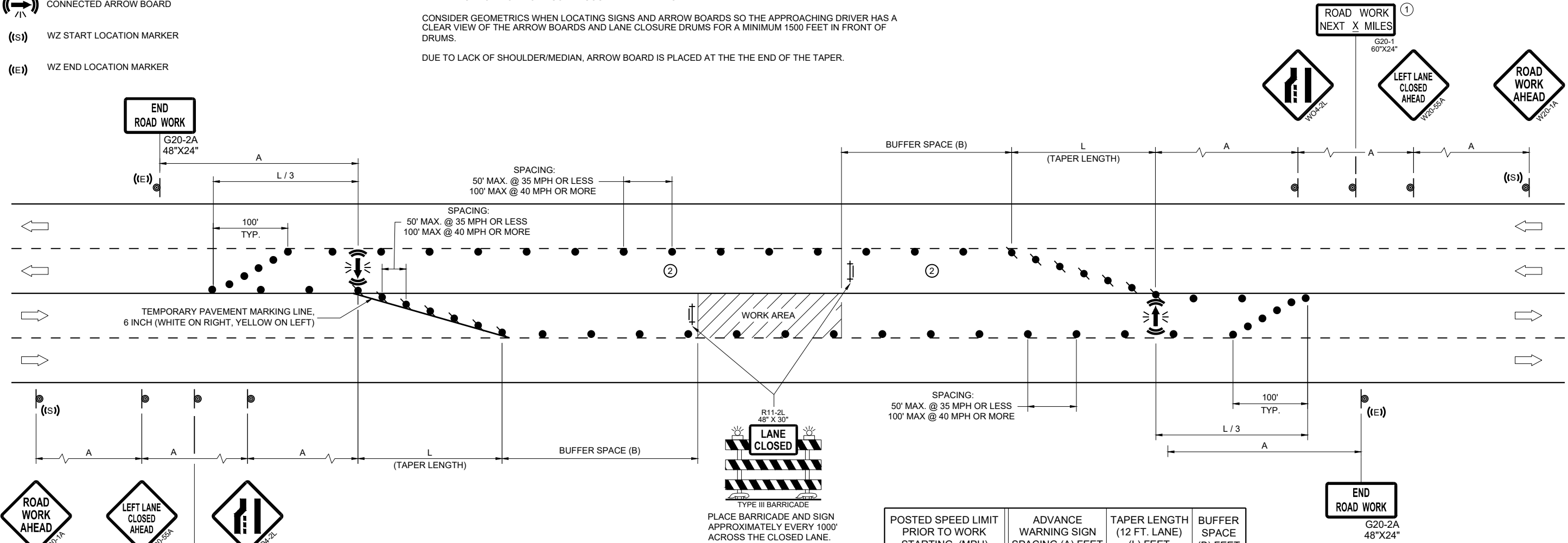
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

BARRICADES IN A CLOSED LANE 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.

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

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

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



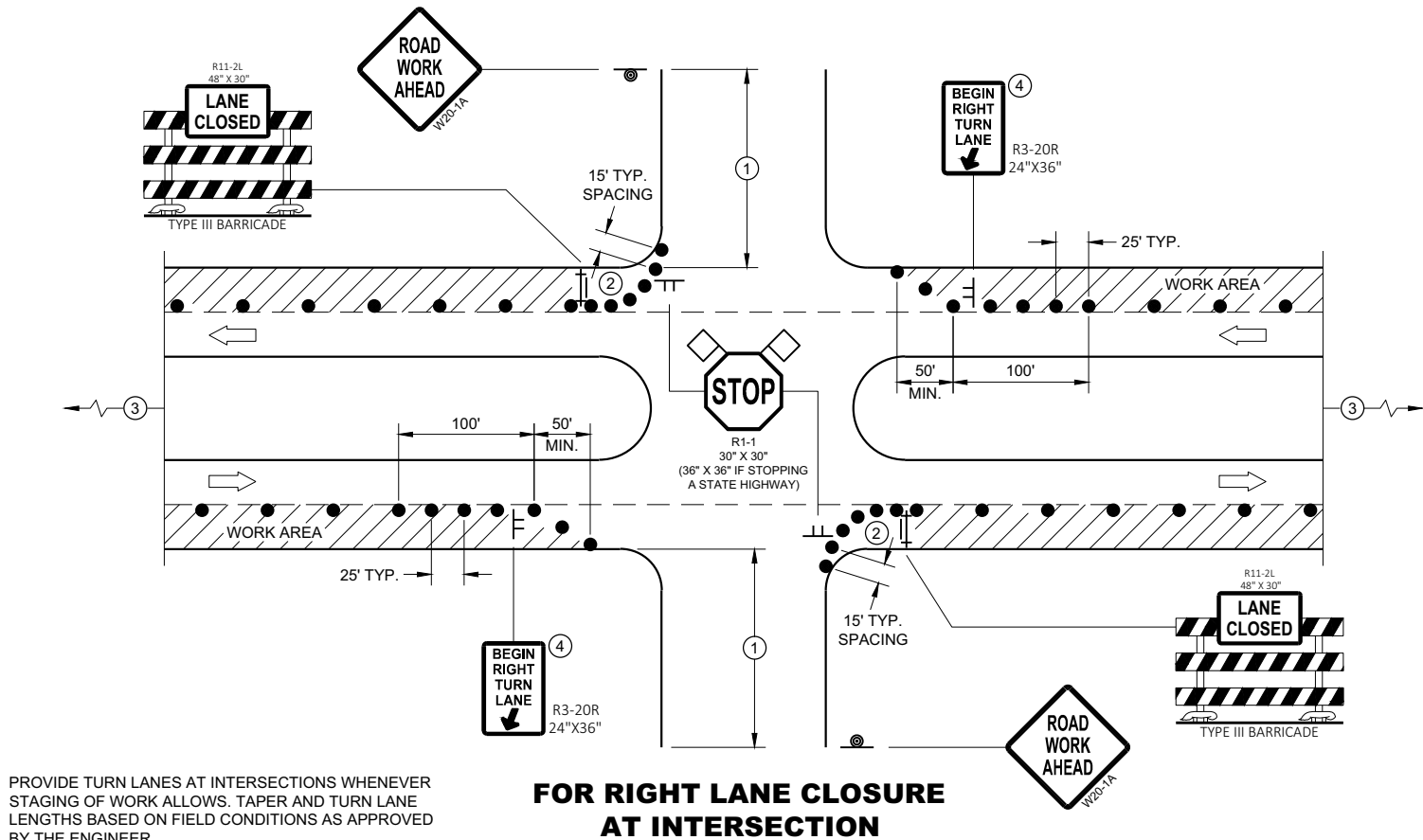
| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | TAPER LENGTH<br>(12 FT. LANE)<br>(L) FEET | BUFFER<br>SPACE (B) FEET |
|-------------------------------------------------------|---------------------------------------------|-------------------------------------------|--------------------------|
| 25                                                    | 200'                                        | 125'                                      | 55'                      |
| 30                                                    | 200'                                        | 180'                                      | 85'                      |
| 35                                                    | 350'                                        | 245'                                      | 120'                     |
| 40                                                    | 350'                                        | 320'                                      | 170'                     |
| 45                                                    | 500'                                        | 540'                                      | 220'                     |
| 50                                                    | 500'                                        | 600'                                      | 280'                     |
| 55                                                    | 500'                                        | 660'                                      | 335'                     |

**TRAFFIC CONTROL,  
SINGLE LEFT LANE  
CLOSURE, UNDIVIDED  
NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

**FOR RIGHT LANE CLOSURE AT INTERSECTION**

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

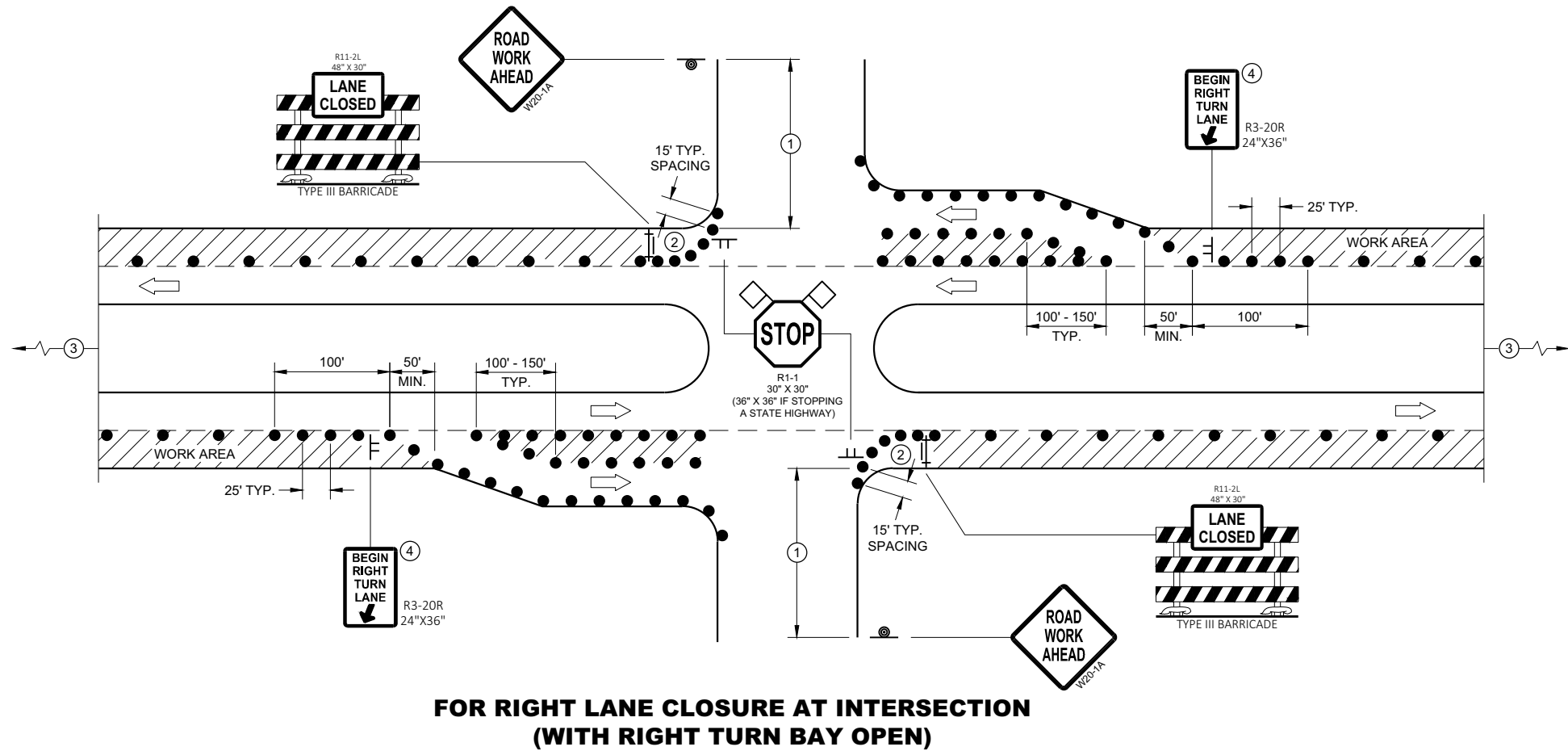
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE 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.

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

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



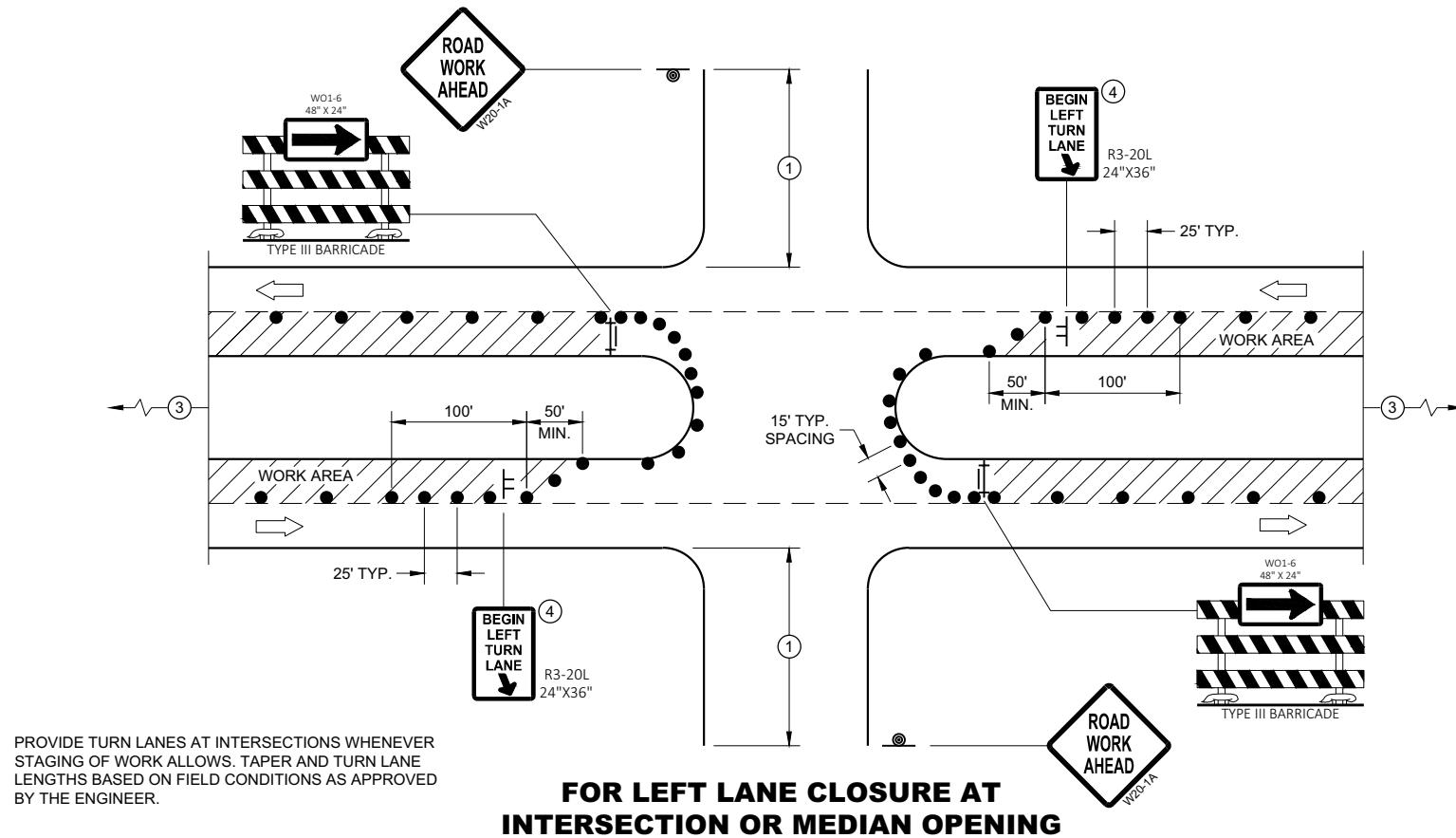
**FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)**

**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- ◇ ◇ FLAGS, 16" X 16" MIN., ORANGE
- ▨ WORK AREA

**TRAFFIC CONTROL,  
INTERSECTION WITHIN SINGLE  
RIGHT LANE CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 362

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

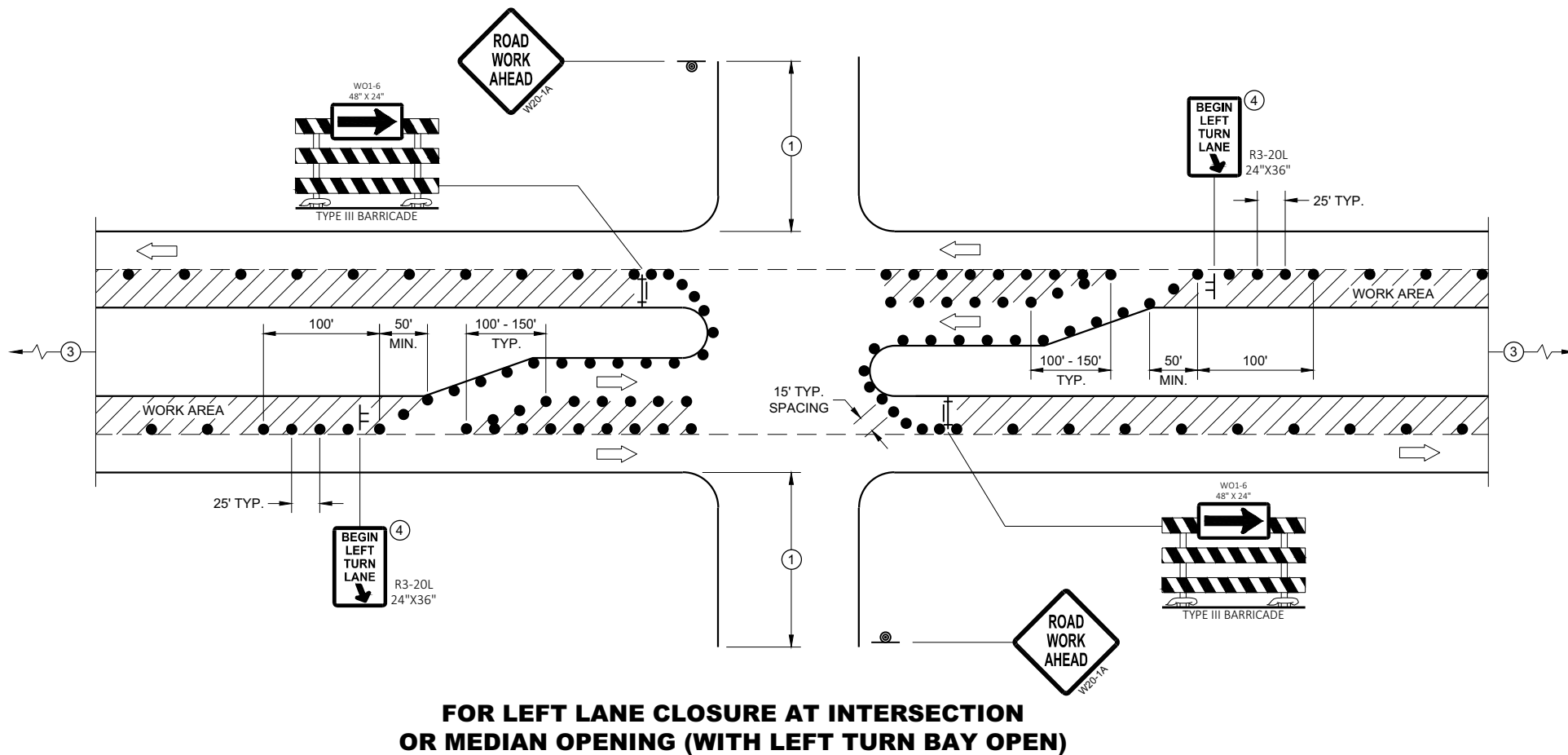
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

- 1 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- 2 ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- 3 SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- 4 MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- ◇ FLAGS, 16" X 16" MIN., ORANGE
- ▨ WORK AREA

**TRAFFIC CONTROL,  
INTERSECTION WITHIN SINGLE  
LEFT LANE CLOSURE**

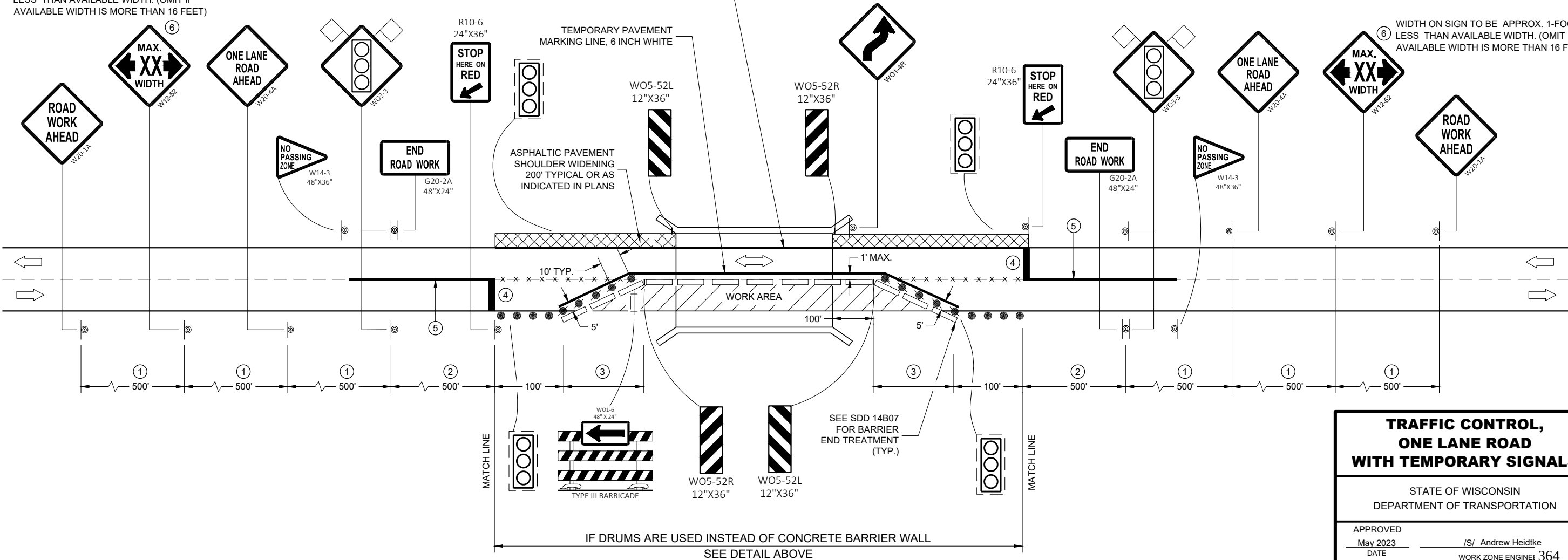
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 363  
FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT

WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET)



GENERAL NOTES

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE..
- THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.
- ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.
- "WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.
- REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.
- INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.
- 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
  - USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
  - DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
  - TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
  - 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
  - SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.

**TRAFFIC CONTROL,  
ONE LANE ROAD  
WITH TEMPORARY SIGNALS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 364

FHWA

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

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

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

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

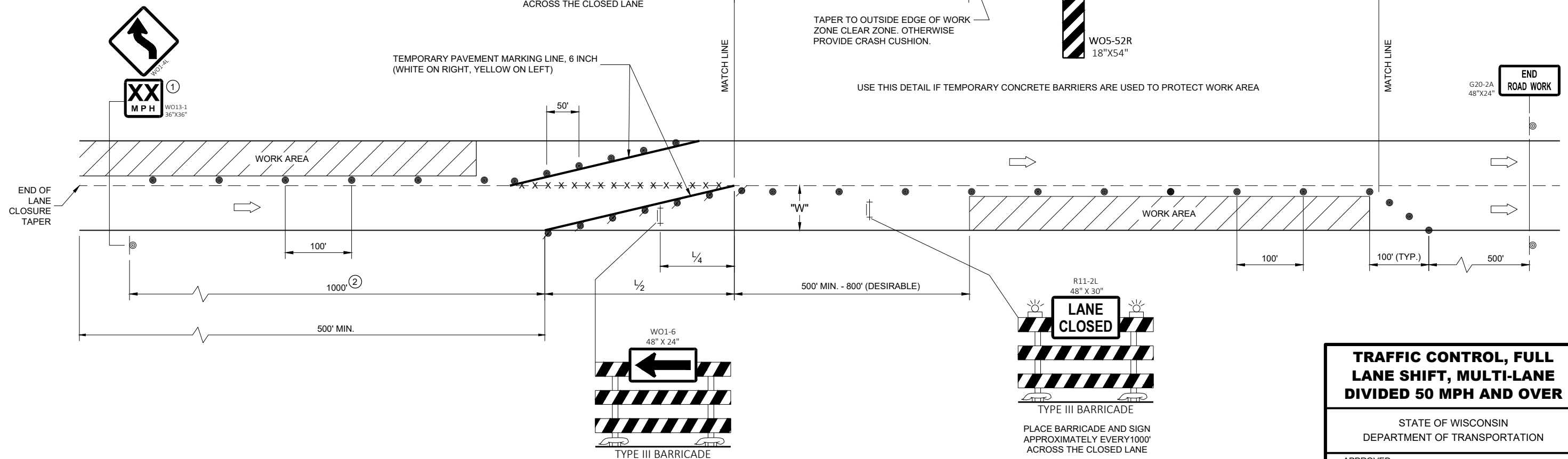
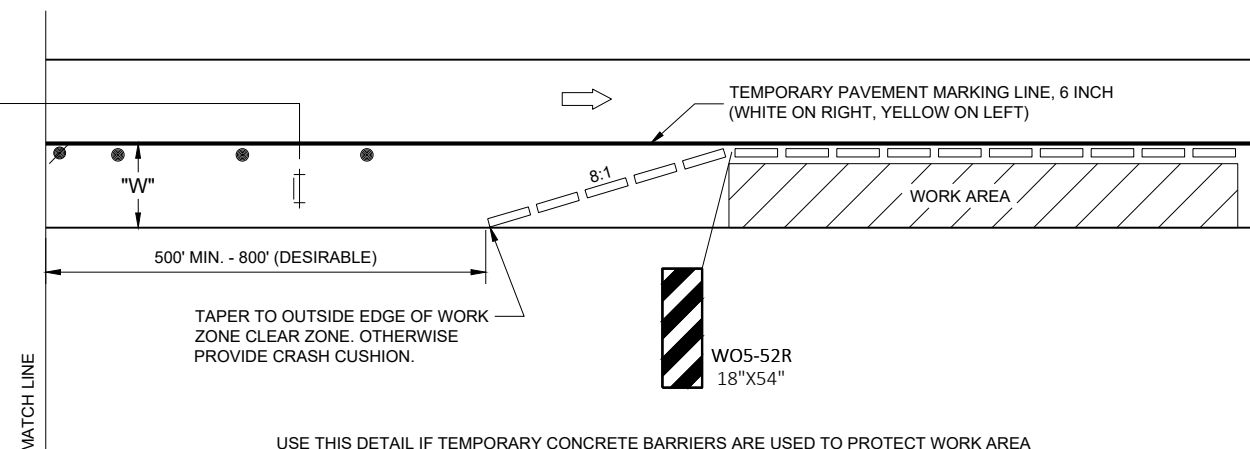
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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

- ① USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ② IF BEGINNING OF LANE SHIFT IS 1200' OF LESS FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE W01-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.

| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | SHIFTING TAPER $L/2$   |     |     |     |     |
|-------------------------------------------------------|------------------------|-----|-----|-----|-----|
|                                                       | W, LATERAL OFFSET (FT) |     |     |     |     |
|                                                       | 10                     | 11  | 12  | 13  | 14  |
| 50                                                    | 250                    | 275 | 300 | 325 | 350 |
| 55                                                    | 275                    | 303 | 330 | 358 | 385 |
| 60                                                    | 300                    | 330 | 360 | 390 | 420 |
| 65                                                    | 325                    | 358 | 390 | 423 | 455 |
| 70                                                    | 350                    | 385 | 420 | 455 | 490 |



**TRAFFIC CONTROL, FULL  
LANE SHIFT, MULTI-LANE  
DIVIDED 50 MPH AND OVER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER

365

FHWA



LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA

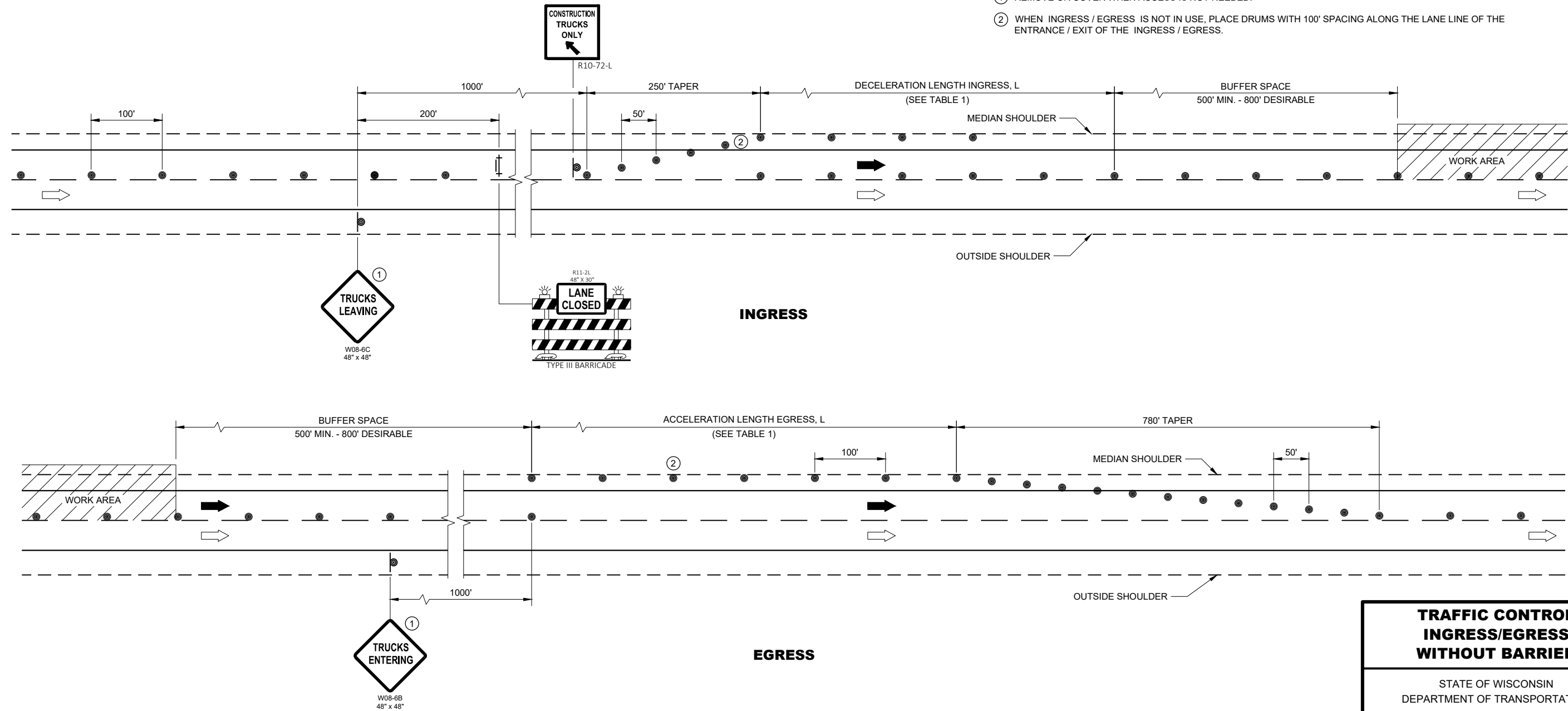
TABLE 1

| S (MPH) | INGRESS, L | EGRESS, L |
|---------|------------|-----------|
| 50      | 435'       | 720'      |
| 55      | 480'       | 960'      |
| 60      | 530'       | 1200'     |
| 65      | 570'       | 1410'     |
| 70      | 615'       | 1620'     |

LEGEND

- ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.
- "WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.
- THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL
- TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL
- TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

- ① REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.
- ② WHEN INGRESS / EGRESS IS NOT IN USE, PLACE DRUMS WITH 100' SPACING ALONG THE LANE LINE OF THE ENTRANCE / EXIT OF THE INGRESS / EGRESS.



**TRAFFIC CONTROL  
INGRESS/EGRESS  
WITHOUT BARRIER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

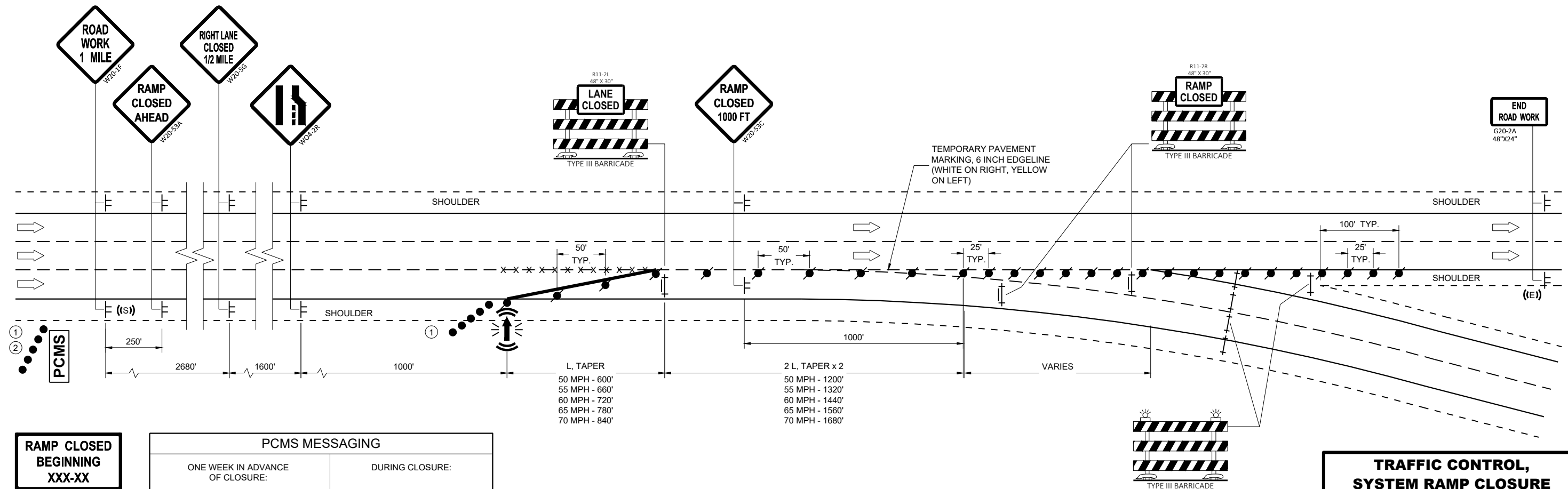
APPROVED  
May 2023  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER 366

FHWA

|                                                                                   |                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------|
|  | SIGN ON TEMPORARY SUPPORT                            |
|  | TRAFFIC CONTROL DRUM                                 |
|  | TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT |
|  | TYPE III BARRICADE                                   |
|  | TYPE III BARRICADE WITH ATTACHED SIGN                |
|  | TYPE "A" WARNING LIGHT (FLASHING)                    |
|  | REMOVING PAVEMENT MARKINGS                           |
|  | DIRECTION OF TRAFFIC                                 |
|  | WORK AREA                                            |
|  | CONNECTED ARROW BOARD                                |
|  | WZ START LOCATION MARKER                             |
|  | WZ END LOCATION MARKER                               |

- ① 5 DRUMS SPACED AT 10 FOOT INTERVALS.
- ② DURING THE PRE-WARNING PERIOD, PLACE THE PCMS AT THE SYSTEM RAMP THAT IS TO BE CLOSED. DURING CLOSURE PERIOD, PLACE PCMS OR FMS AT LAST AVAILABLE EXIT IN ADVANCE OF SYSTEM RAMP CLOSURE. IF DYNAMIC MESSAGE SIGNS (DMS) ARE AVAILABLE, COORDINATE POTENTIAL SIGN MESSAGES WITH THE TRAFFIC MANAGEMENT CENTER (TMC).



SEE SDD 15C2 (SHEET "b"), DETAIL "D"  
"BARRICADES AND SIGNS FOR MAINLINE  
CLOSURES" PLACE BARRICADES TO FULLY  
SEAL OFF ROAD

The diagram illustrates the layout of a PCMS Messaging sign. It is divided into two main sections: a 'RAMP CLOSED BEGINNING' section on the left and a 'PCMS MESSAGING' section on the right. The 'RAMP CLOSED BEGINNING' section is a rectangular sign with a thick black border, containing the text 'RAMP CLOSED BEGINNING' and 'XXX-XX' in large, bold, black letters, with the code 'G20-58' below it. The 'PCMS MESSAGING' section is a larger rectangular sign with a thin black border, divided into two columns. The left column is titled 'ONE WEEK IN ADVANCE OF CLOSURE:' and contains two sub-sections: 'FRAME 1' and 'FRAME 2', each in a box. 'FRAME 1' contains 'RAMP TO CLOSE' and 'FRAME 2' contains 'XXXDAY XX XX XX'. The right column is titled 'DURING CLOSURE:' and also contains two sub-sections: 'FRAME 1' and 'FRAME 2', each in a box. 'FRAME 1' contains 'HWY XX RAMP CLOSED' and 'FRAME 2' contains 'USE ALT ROUTE'.

| PCMS MESSAGING                                                                                                                                                        |                 |         |               |                 |                                                                                                                                                                          |         |         |                    |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|---------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|--------------------|---------------|
| ONE WEEK IN ADVANCE OF CLOSURE:                                                                                                                                       | DURING CLOSURE: |         |               |                 |                                                                                                                                                                          |         |         |                    |               |
| <table border="1"> <thead> <tr> <th>FRAME 1</th> <th>FRAME 2</th> </tr> </thead> <tbody> <tr> <td>RAMP TO CLOSE</td> <td>XXXDAY XX XX XX</td> </tr> </tbody> </table> | FRAME 1         | FRAME 2 | RAMP TO CLOSE | XXXDAY XX XX XX | <table border="1"> <thead> <tr> <th>FRAME 1</th> <th>FRAME 2</th> </tr> </thead> <tbody> <tr> <td>HWY XX RAMP CLOSED</td> <td>USE ALT ROUTE</td> </tr> </tbody> </table> | FRAME 1 | FRAME 2 | HWY XX RAMP CLOSED | USE ALT ROUTE |
| FRAME 1                                                                                                                                                               | FRAME 2         |         |               |                 |                                                                                                                                                                          |         |         |                    |               |
| RAMP TO CLOSE                                                                                                                                                         | XXXDAY XX XX XX |         |               |                 |                                                                                                                                                                          |         |         |                    |               |
| FRAME 1                                                                                                                                                               | FRAME 2         |         |               |                 |                                                                                                                                                                          |         |         |                    |               |
| HWY XX RAMP CLOSED                                                                                                                                                    | USE ALT ROUTE   |         |               |                 |                                                                                                                                                                          |         |         |                    |               |

## TRAFFIC CONTROL, SYSTEM RAMP CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024  
DATE

/s/ Andrew Heidtke  
WORK ZONE ENGINEER



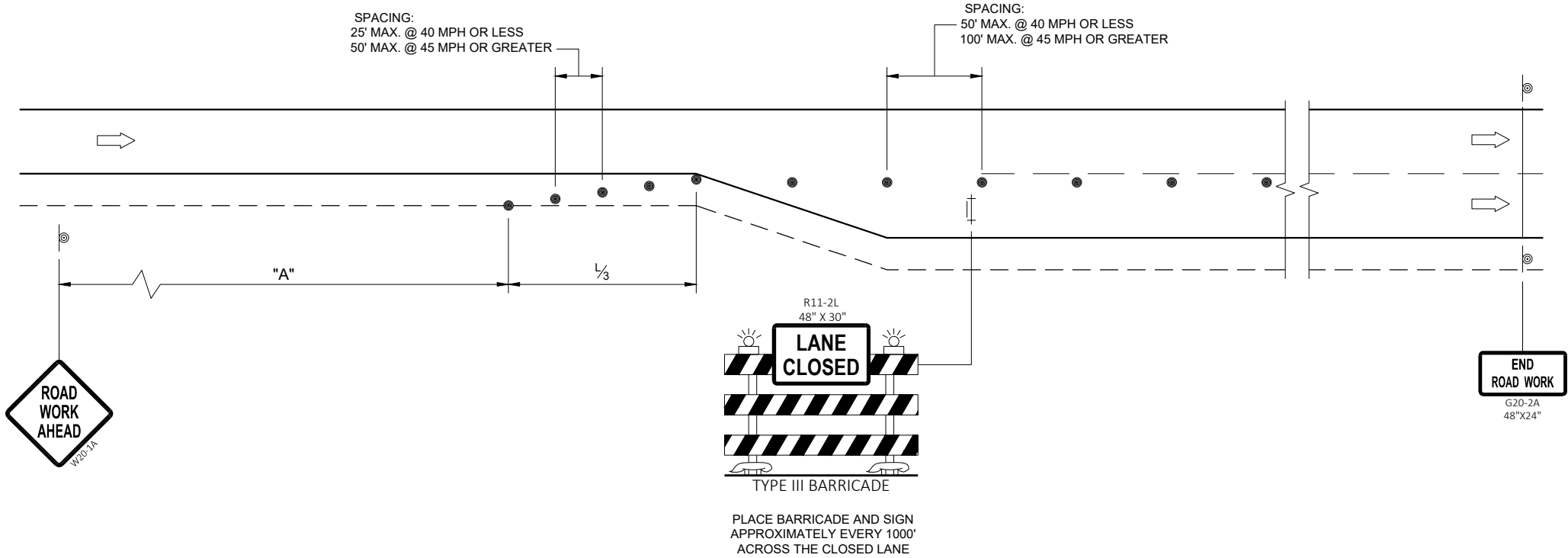
LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA

| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | SHIFTING TAPER $L\frac{1}{2}$ |    |    |     |     |     |
|-------------------------------------------------------|---------------------------------------------|-------------------------------|----|----|-----|-----|-----|
|                                                       |                                             | W, LATERAL OFFSET (FT)        |    |    |     |     |     |
| 3                                                     | 4                                           | 5                             | 6  | 7  | 8   |     |     |
| 25                                                    | 200                                         | 10                            | 14 | 17 | 21  | 24  | 28  |
| 30                                                    | 200                                         | 15                            | 20 | 25 | 30  | 35  | 40  |
| 35                                                    | 350                                         | 20                            | 27 | 34 | 40  | 47  | 54  |
| 40                                                    | 350                                         | 26                            | 35 | 44 | 53  | 62  | 70  |
| 45                                                    | 500                                         | 45                            | 59 | 74 | 89  | 104 | 119 |
| 50                                                    | 500                                         | 50                            | 66 | 83 | 99  | 116 | 132 |
| 55                                                    | 500                                         | 54                            | 73 | 91 | 109 | 127 | 145 |

GENERAL NOTES

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.
- "WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.



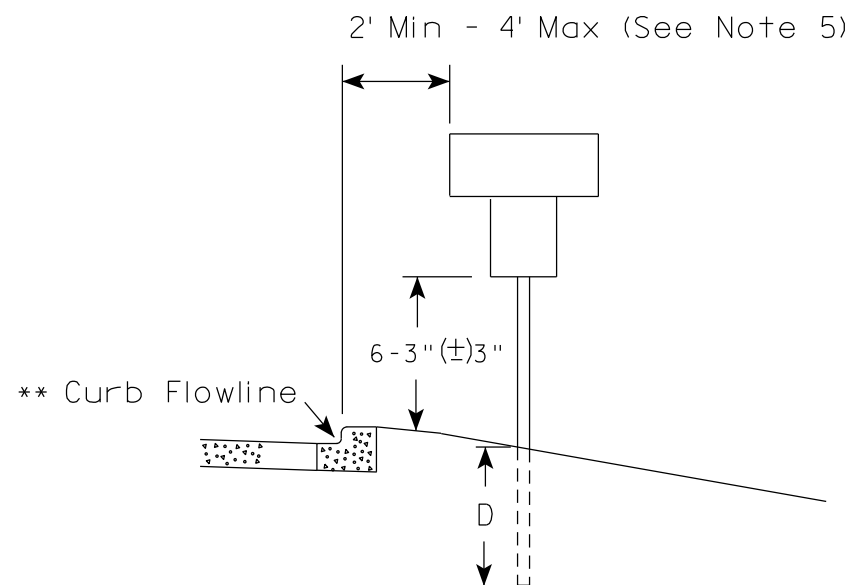
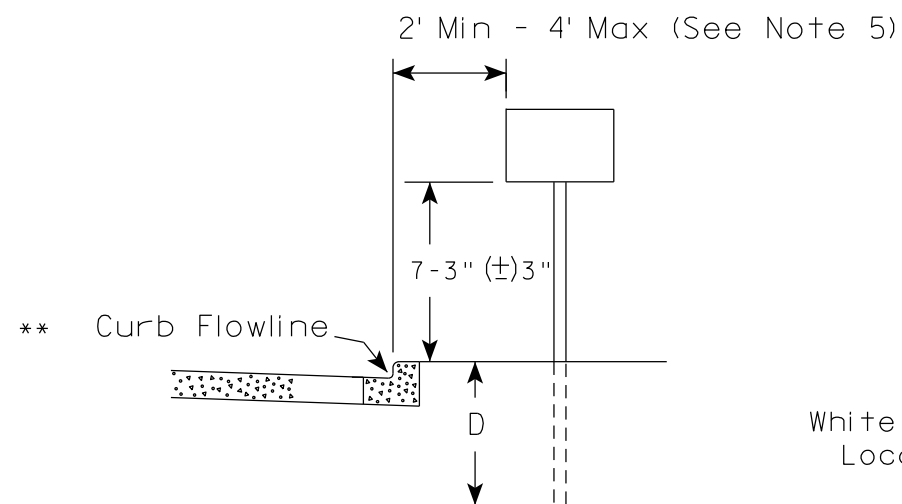
**TRAFFIC CONTROL  
ADDED LANE CLOSURE  
WITHOUT LANE SHIFT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 368

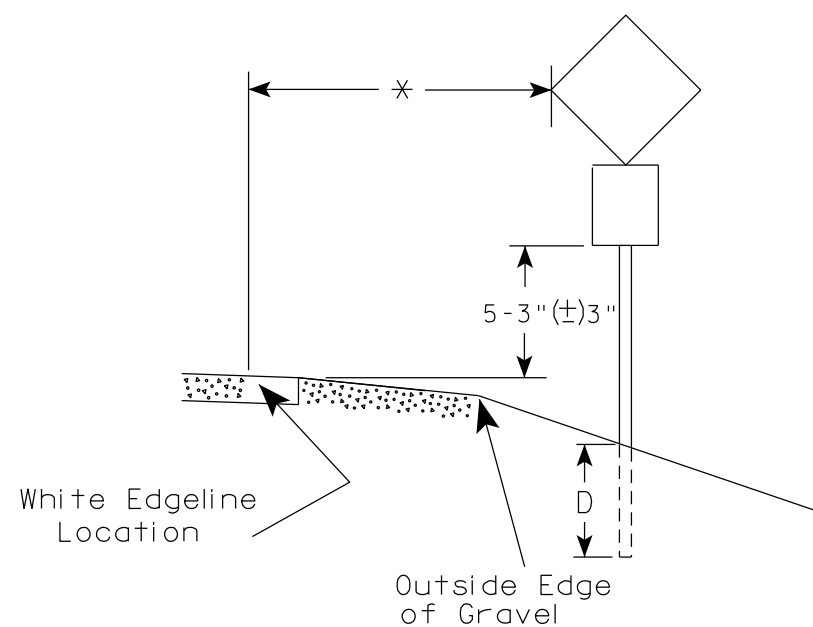
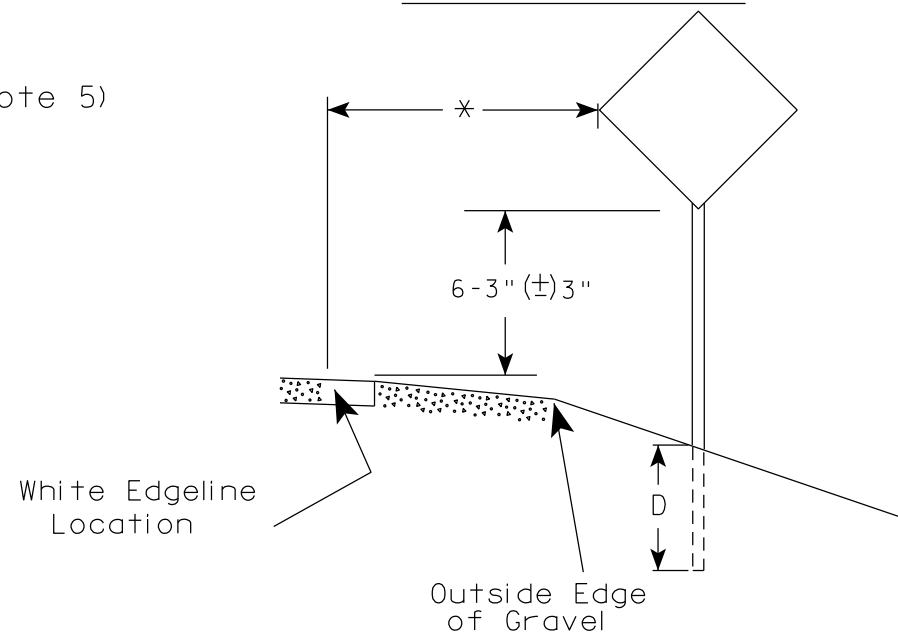
FHWA

## 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<br>( Sq. Ft. ) | D<br>( Min ) |
|------------------------------------------|--------------|
| 20 or Less                               | 4'           |
| Greater than 20                          | 5'           |

## GENERAL NOTES

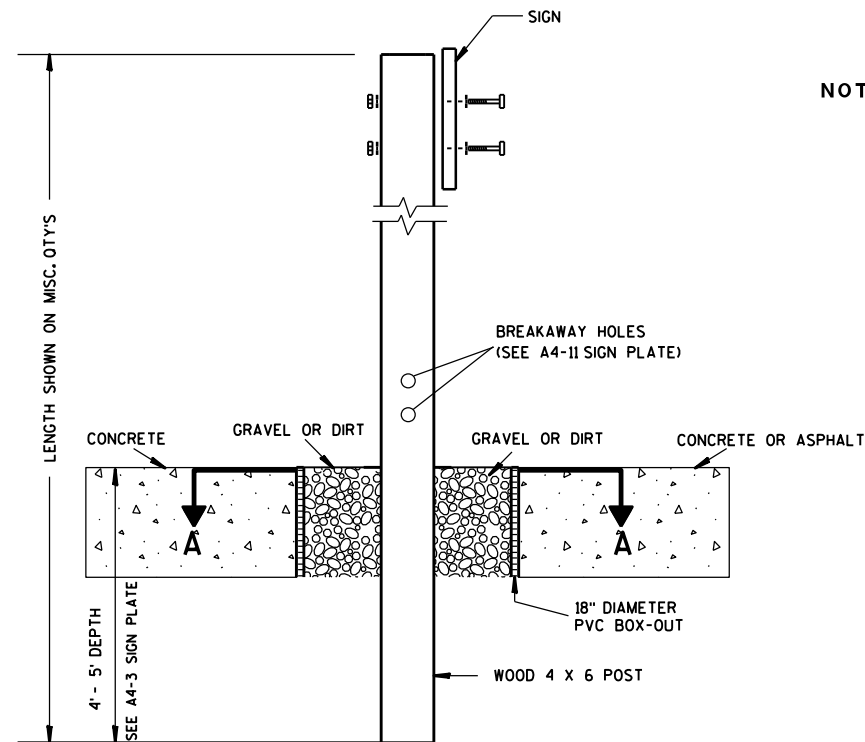
- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron 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

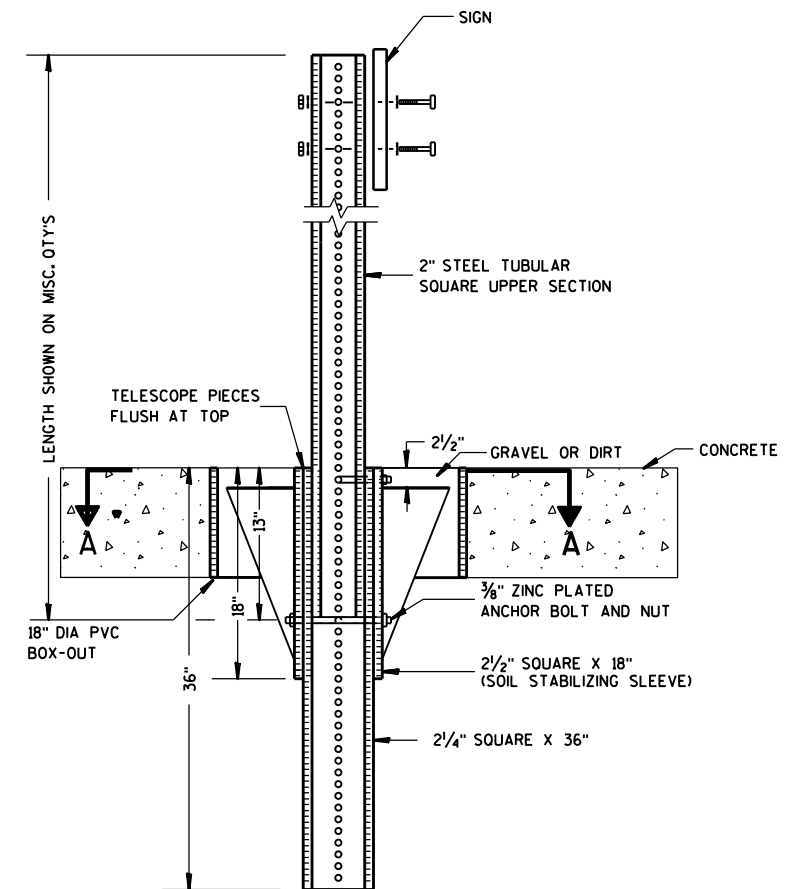
DATE 12/6/23 PLATE NO. A4-3.23



### ELEVATION VIEW

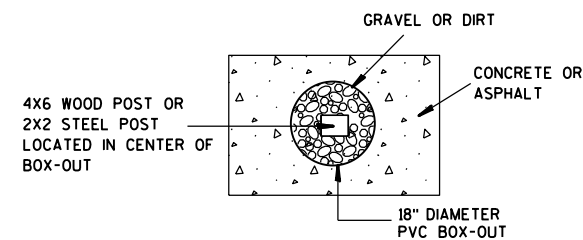
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 370 A4-3B.1

PROJECT NO:

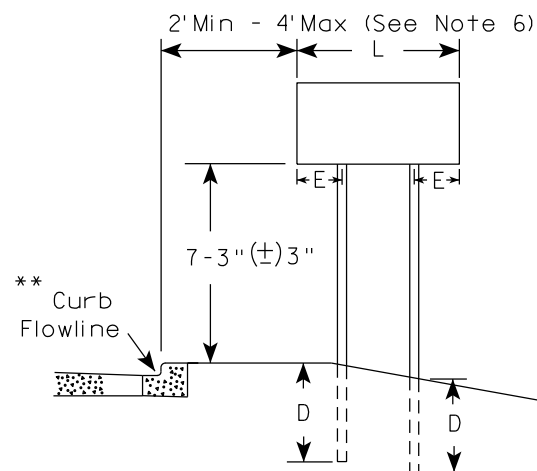
HWY:

COUNTY:

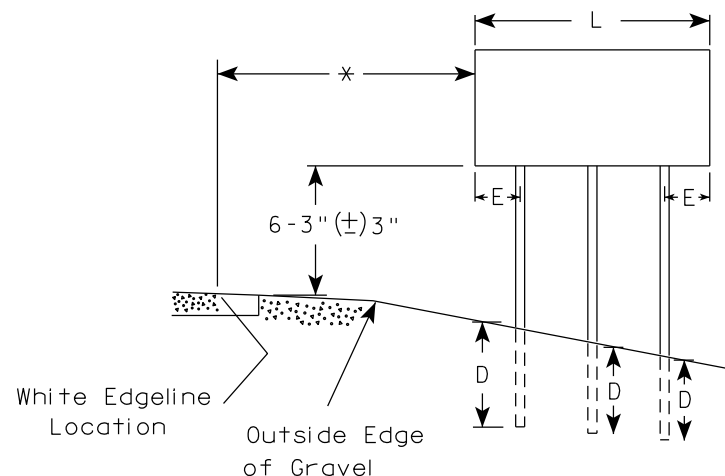
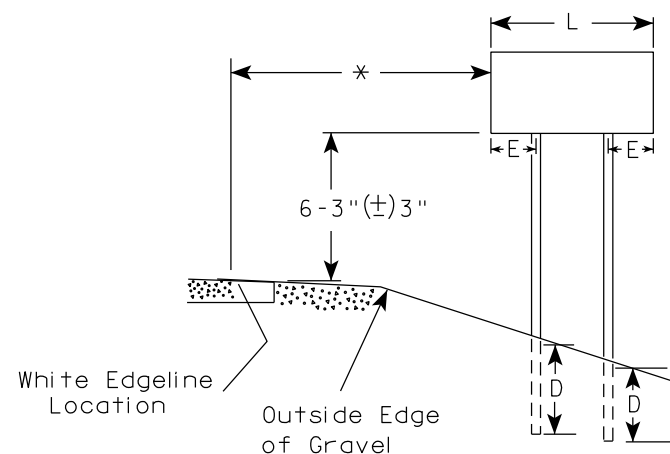
SHEET NO:

E

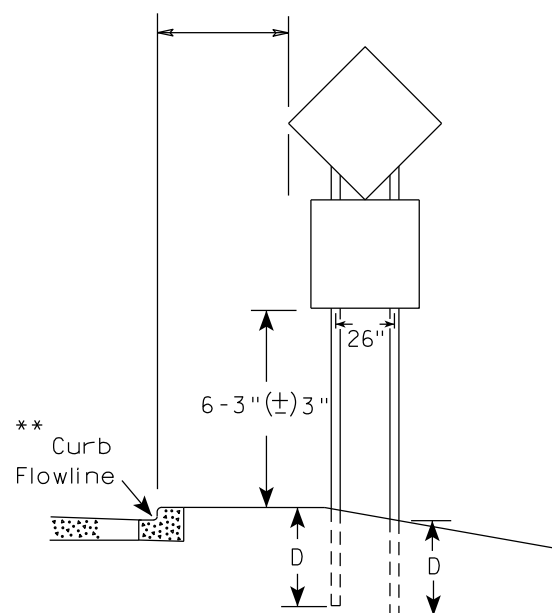
URBAN AREA



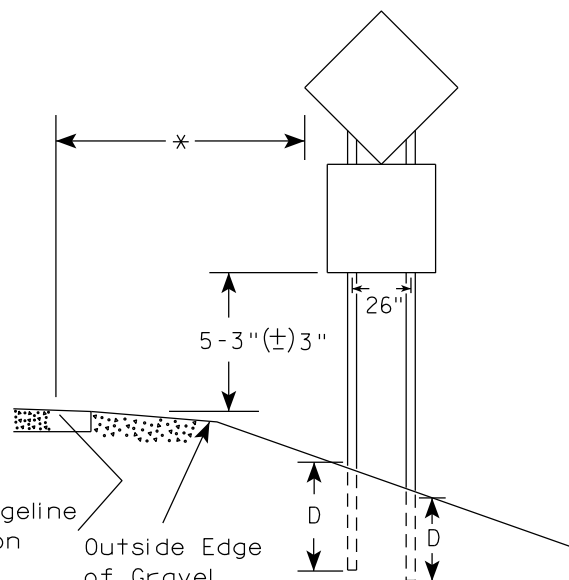
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\*\*\*

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

| SIGN SHAPE OTHER THAN DIAMOND<br>(THREE POSTS REQUIRED) |     |
|---------------------------------------------------------|-----|
| L                                                       | E   |
| Greater than 108"<br>to 144"                            | 12" |

POST EMBEDMENT DEPTH

| Area of Sign<br>Installation<br>( Sq.Ft. ) | D<br>( 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

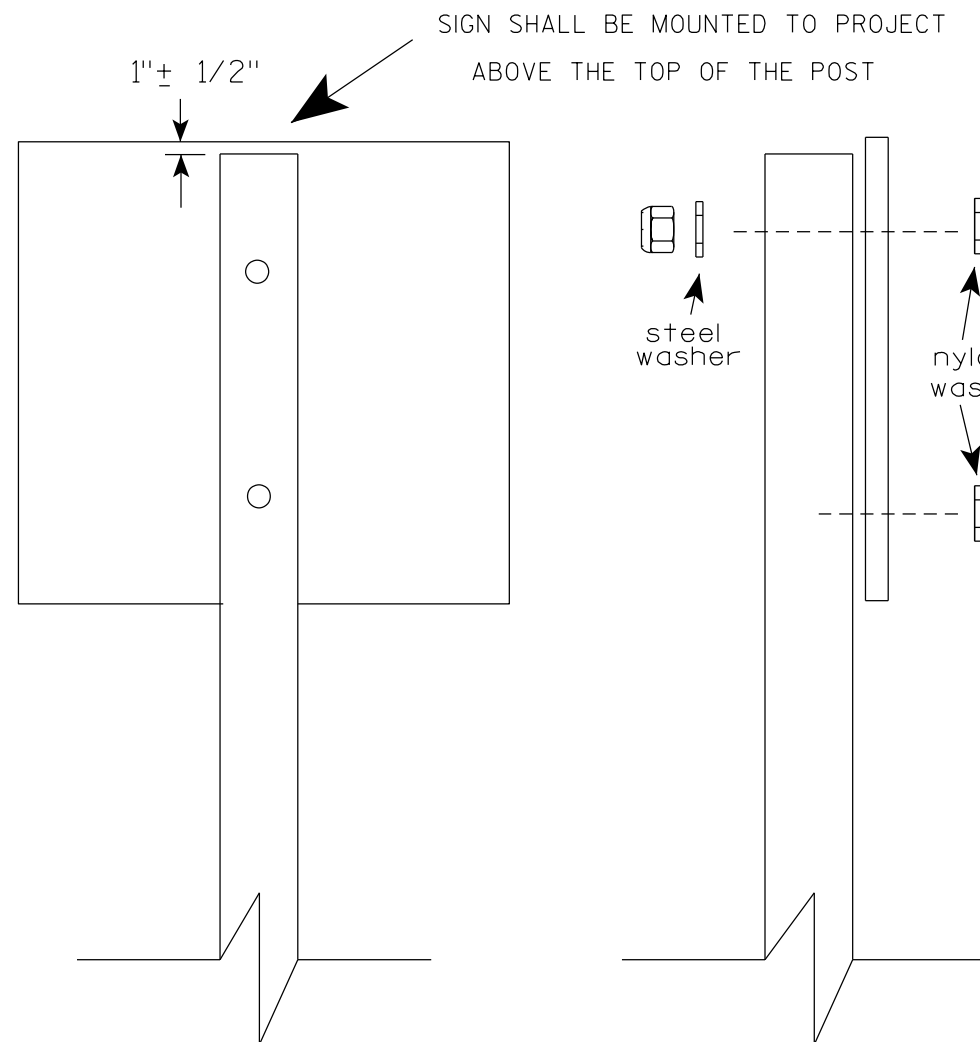
GENERAL NOTES

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

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

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

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



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.

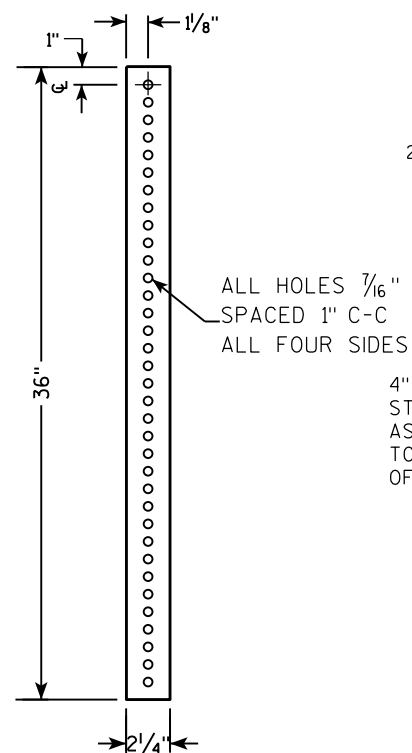
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- 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

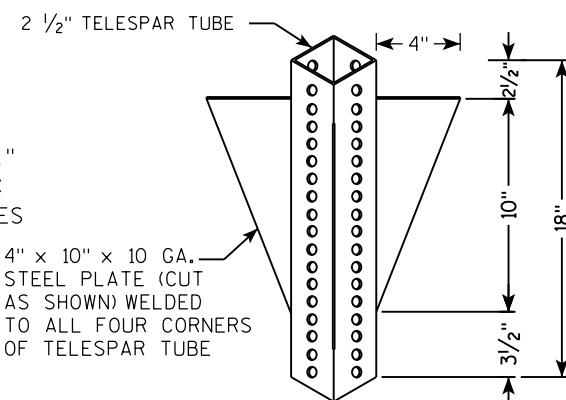
\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS  |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 4/1/2020                    | PLATE NO. A4-8.9                                      |

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

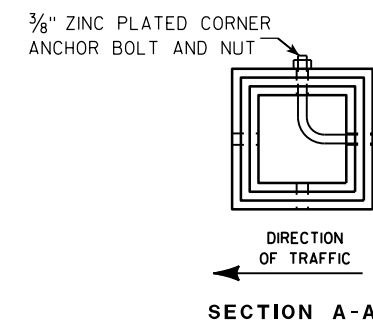


**2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH**



TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- 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 upper section's holes.
- 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.
- 36"**: Total height of the main base post.
- 18"** and **12"**: Vertical dimensions for the sleeve section.
- 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 for the total length of the assembly.



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

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

TUBULAR STEEL  
SIGN POST  
A4-9

WISCONSIN DEPT OF TRANSPORTATION

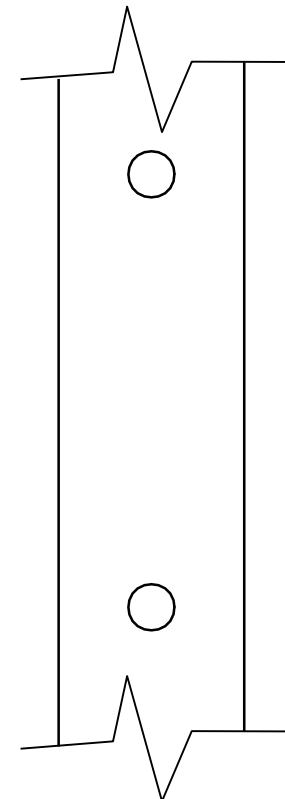
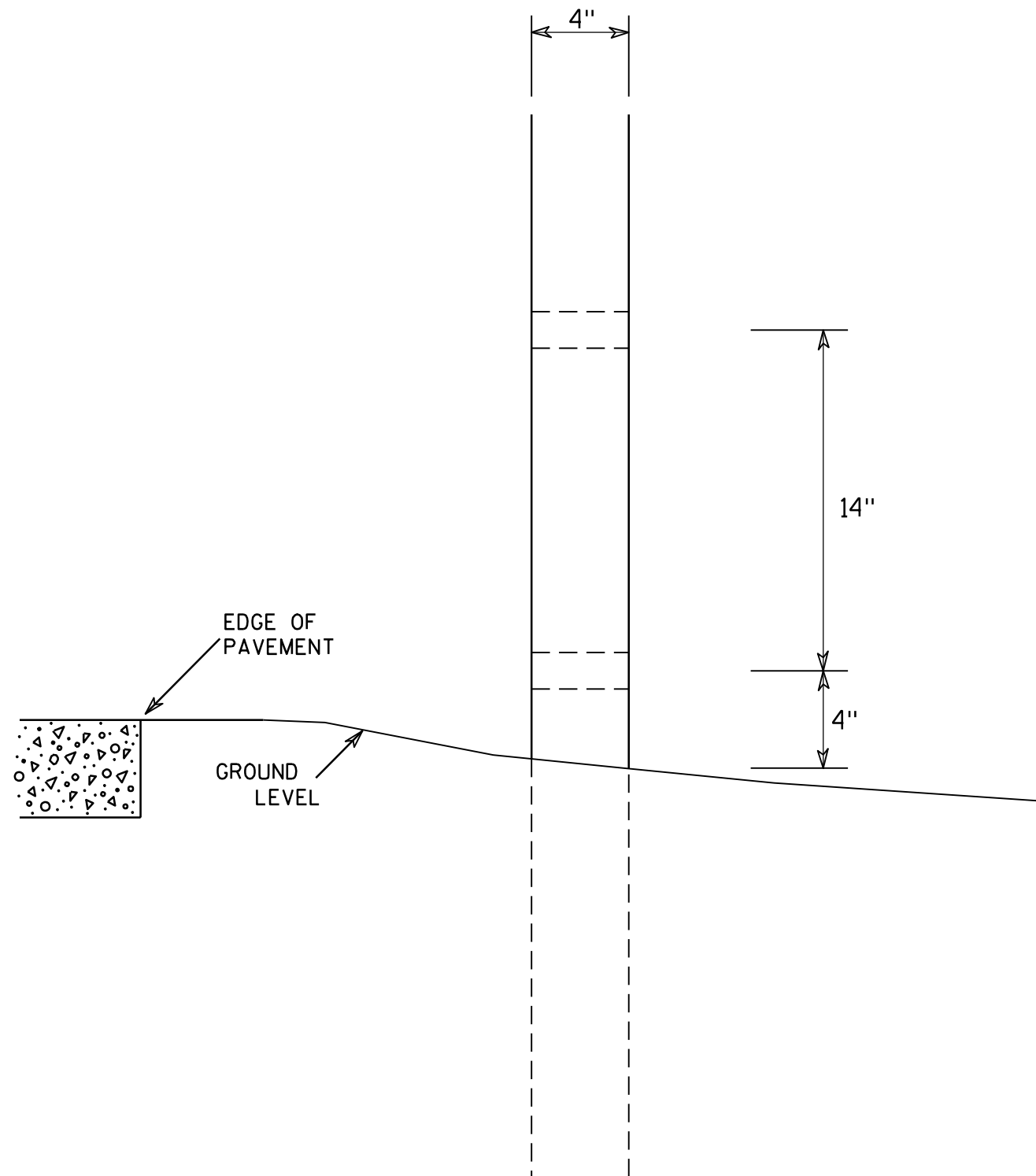
APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 2/05/15 PLATI 373 14-9.9

|             |      |         |           |   |
|-------------|------|---------|-----------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: | E |
|-------------|------|---------|-----------|---|





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

PROJECT NO:

HWY:

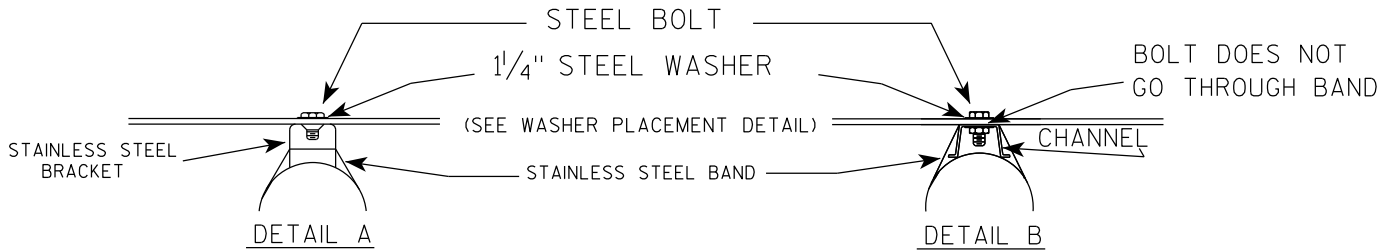
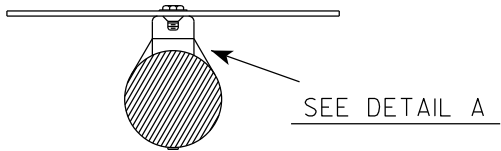
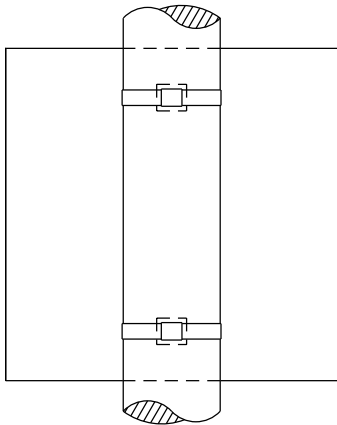
COUNTY:

SHEET NO: 374

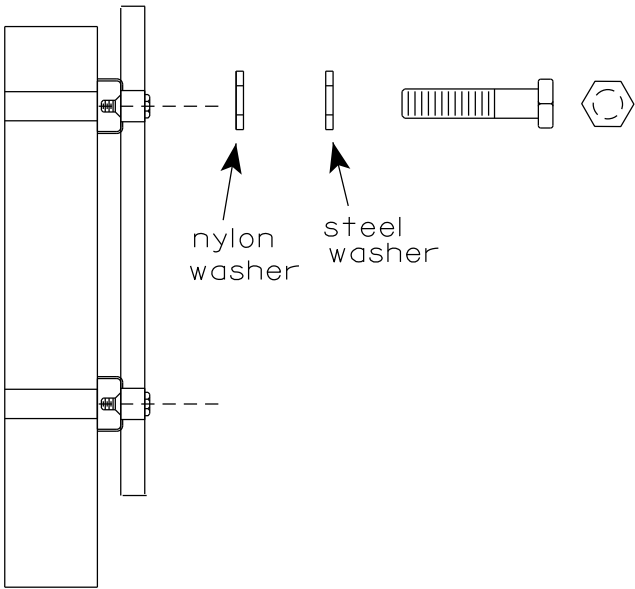
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

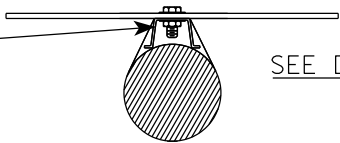
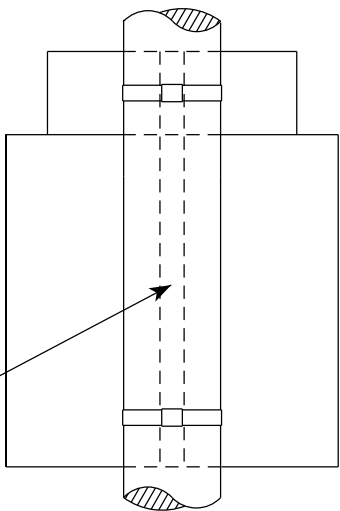


WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

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

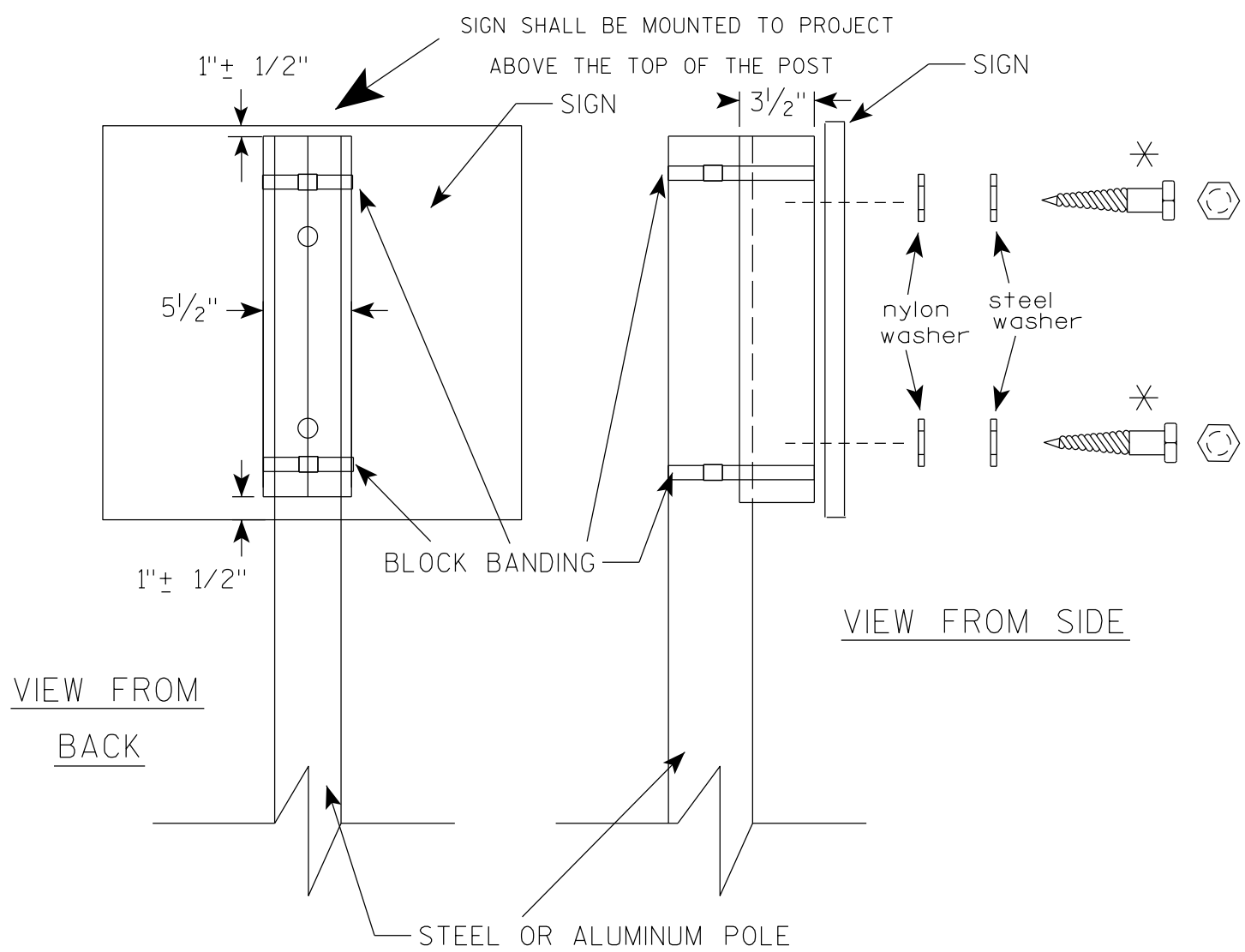


STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

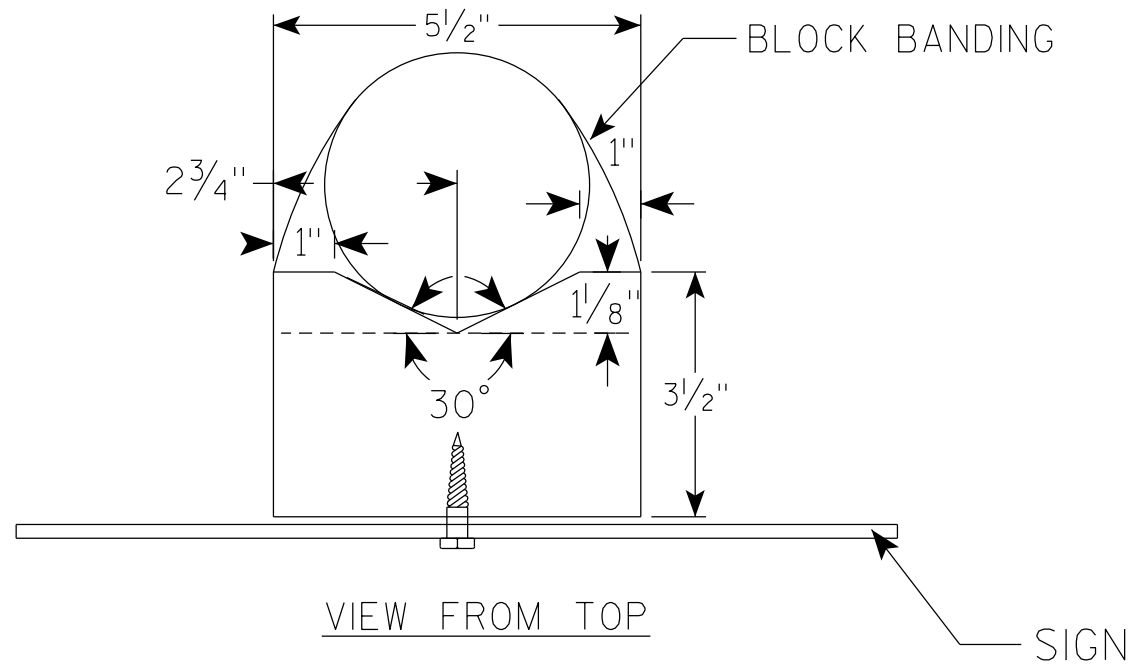
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 6/10/19 PLATE NO. A5-9.4





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

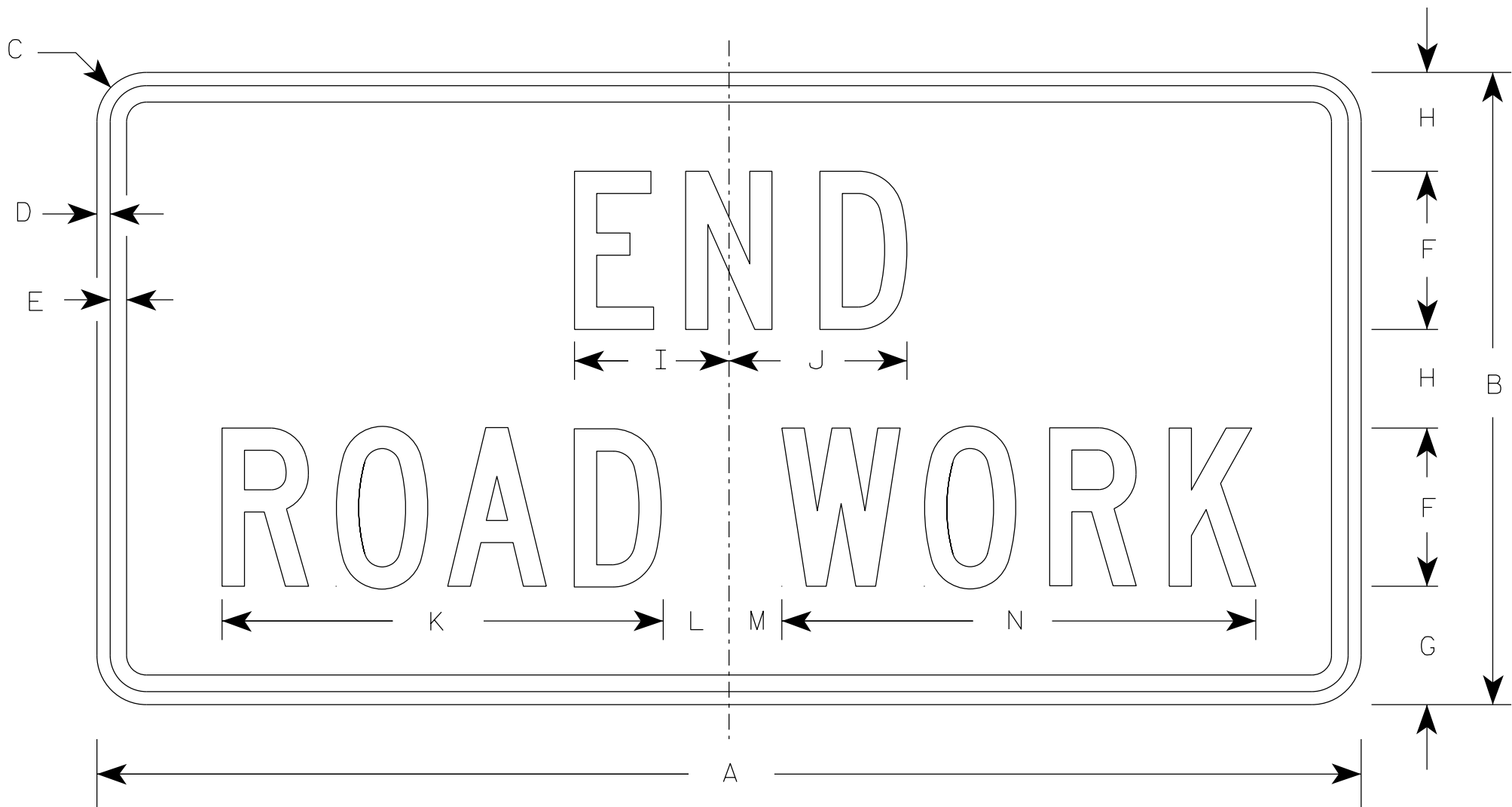
PROJECT NO:

SHEET NO: 376

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

| 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<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|-------|-------|--------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 4 | 3 3/4 | 2 1/2 | 4 1/8 | 4 1/8 | 11 1/8 | 2     | 1     | 12 1/8 |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 2    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 4    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 5    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - E



G20-61

| 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<br>sq. ft. |
|------|-----|----|---|---|---|----|---|----|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 3    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    | 120 | 30 | 6 |   | 2 | 12 | 9 | 21 | 78 1/4 | 20 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 25.0            |
| 5    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN

G20-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch

for State Traffic Engineer

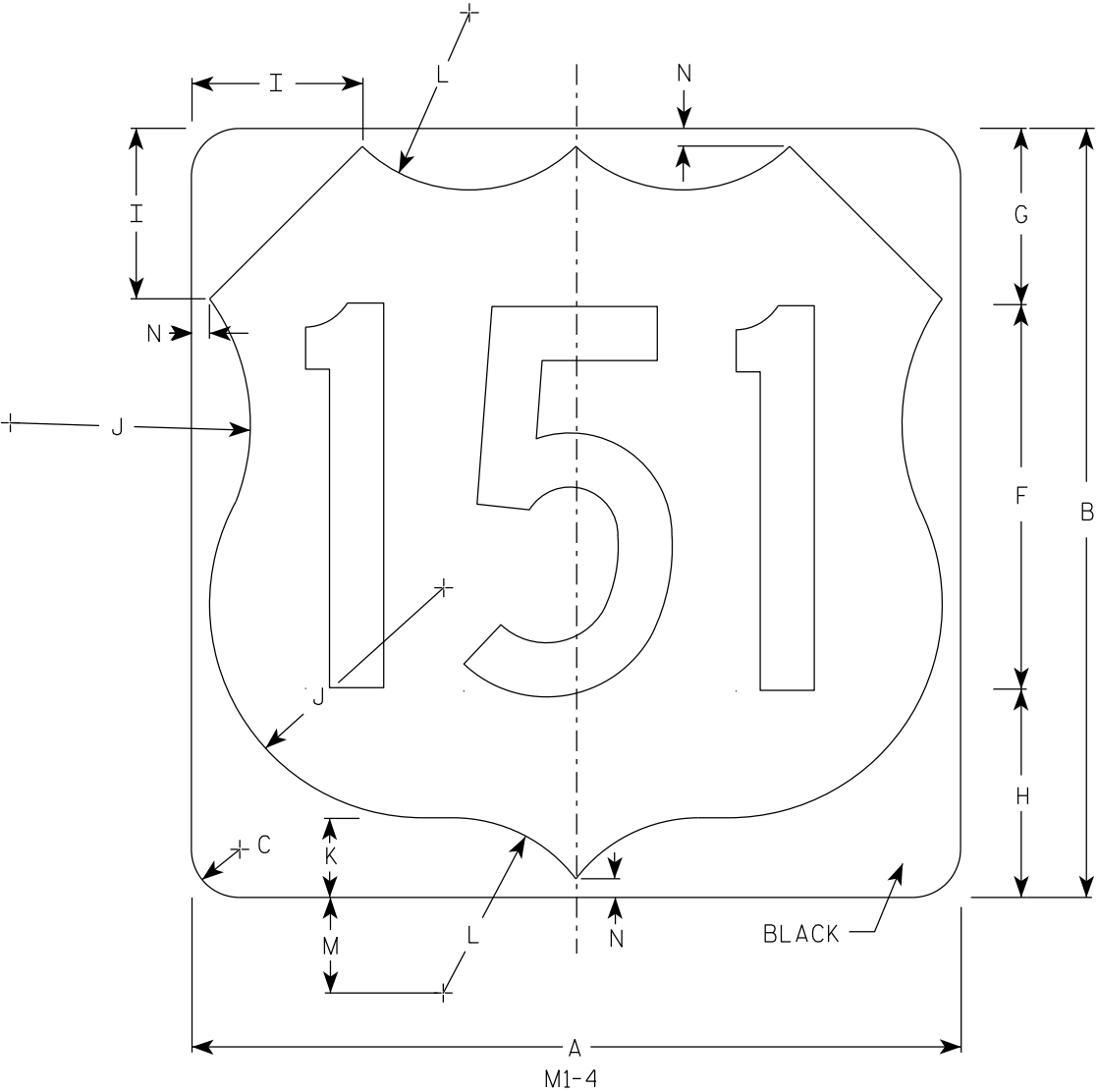
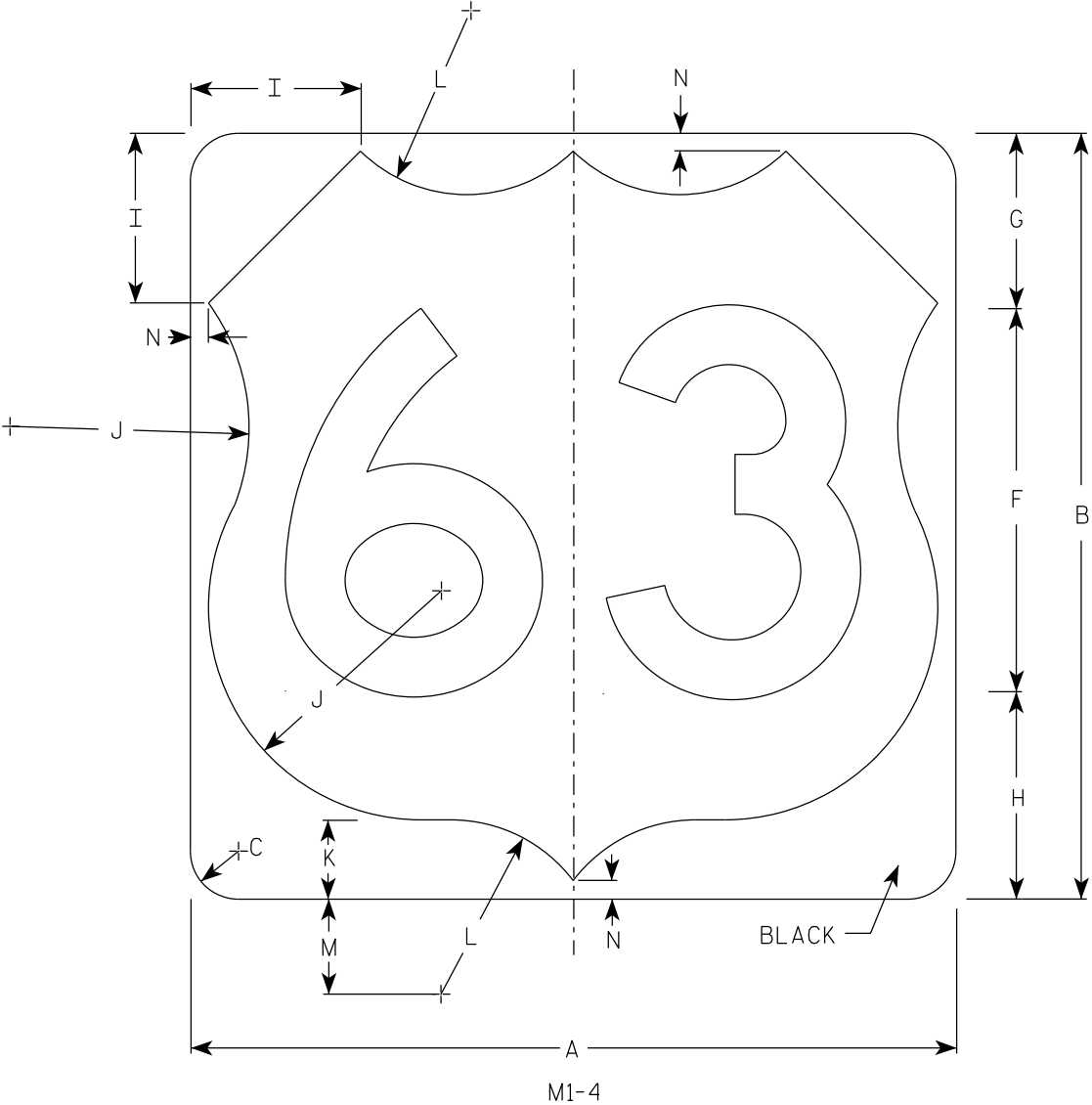
DATE 5/07/15

PLATE NO. 378

G20-61.1

SHEET NO:

E



NOTES

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

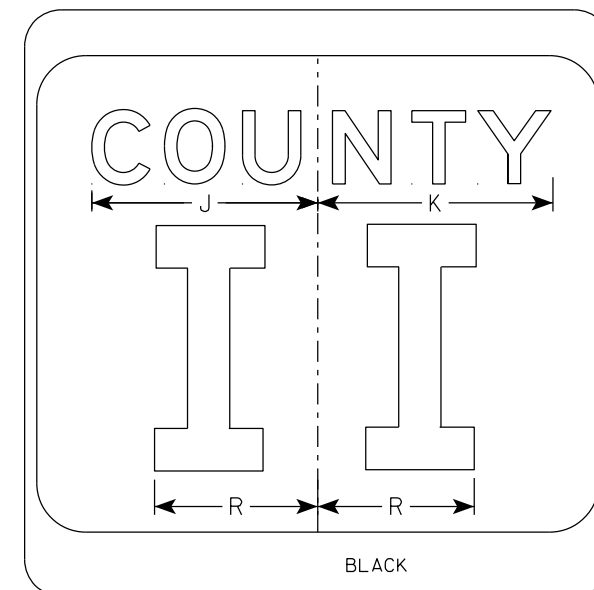
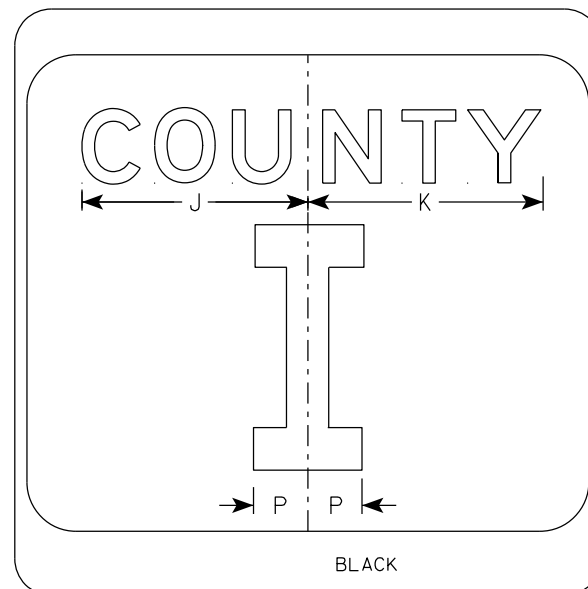
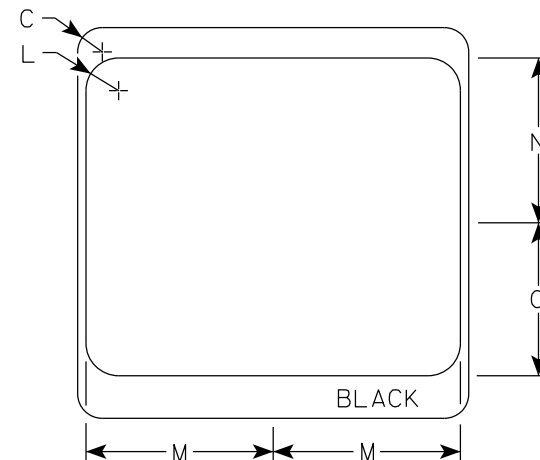
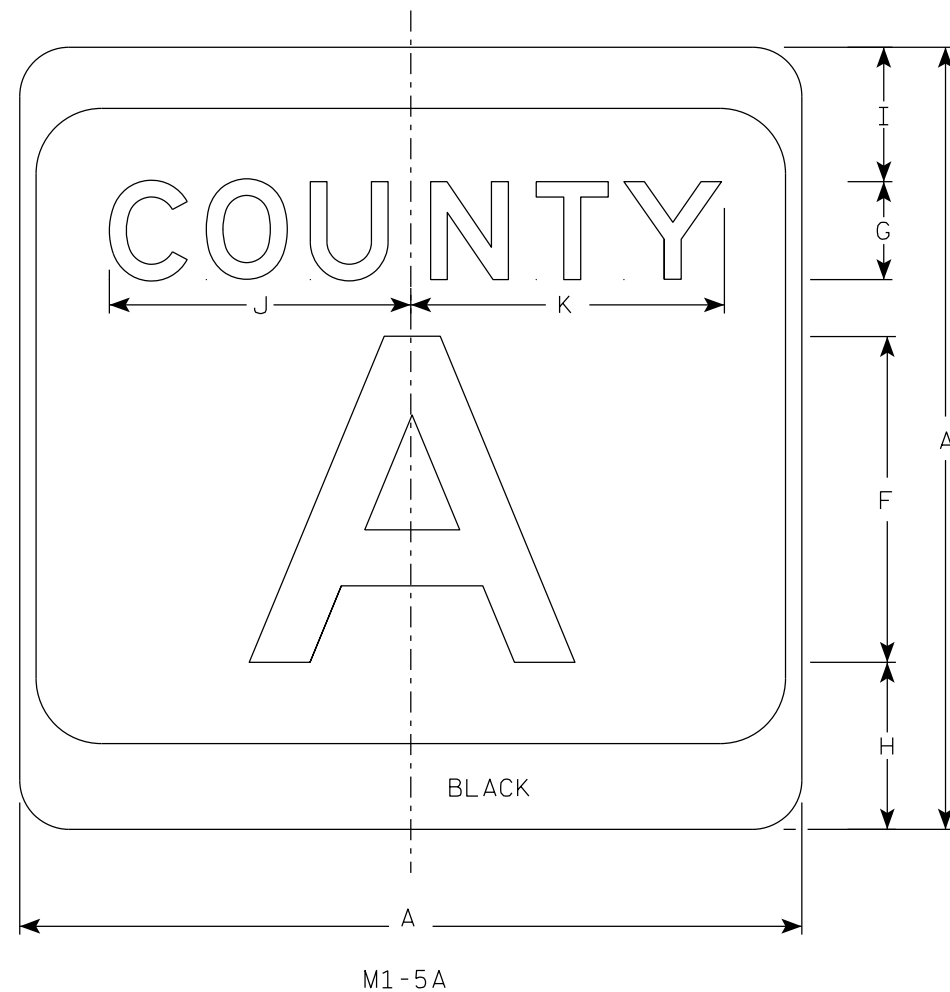
| SIZE | A  | B  | C     | D | E | F  | G     | H     | I     | J      | K     | L     | M     | N   | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|---|---|----|-------|-------|-------|--------|-------|-------|-------|-----|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 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



NOTES

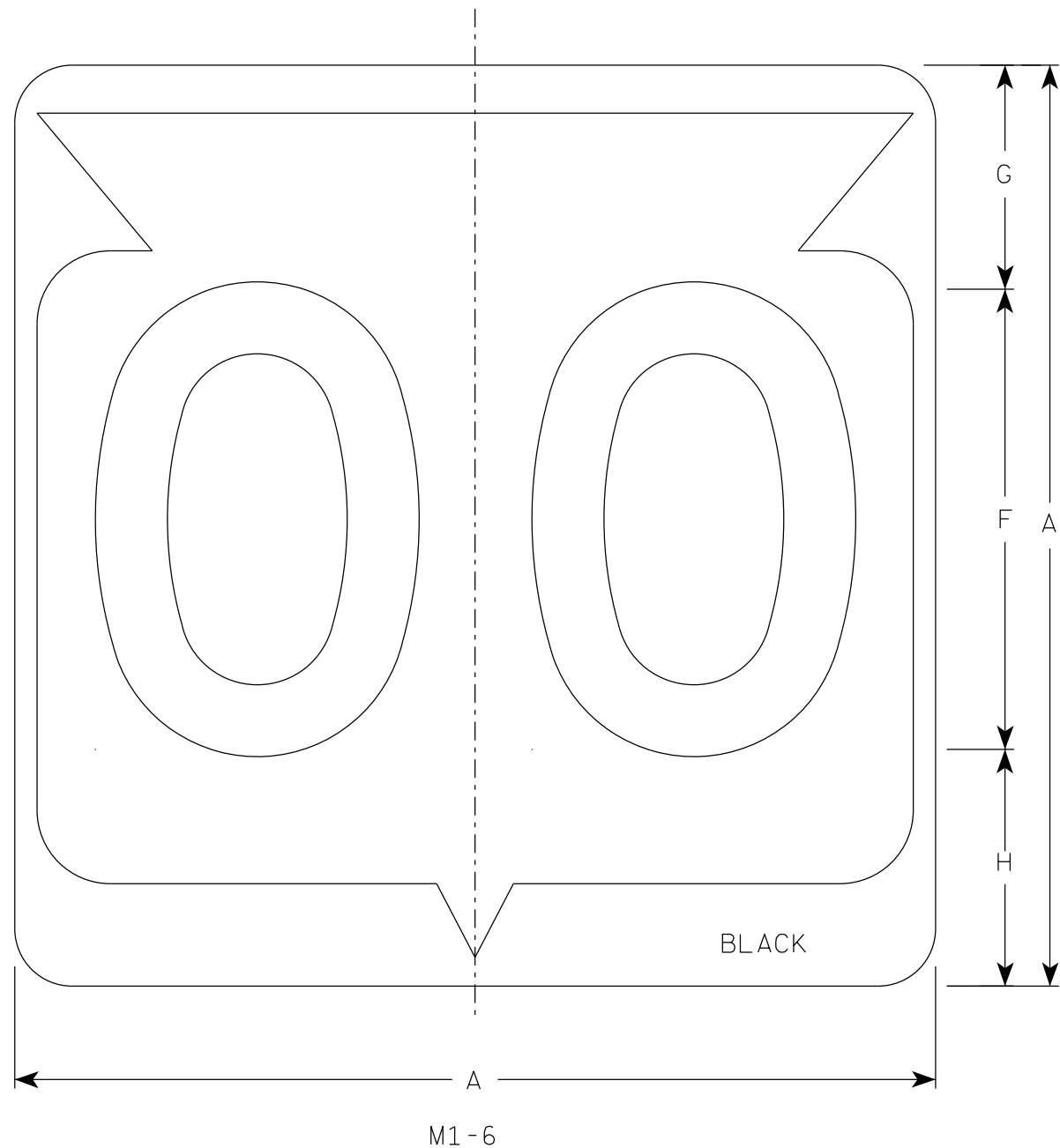
1. Sign is Type II - Type H Reflective
2. Color:  
Background - White & Black  
Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.  
Message Series D for 2 letters unless  
message is too big then Series C.  
Message Series C for 3 letters unless  
message is too big then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

[illegible]

|                                  |                                                      |
|----------------------------------|------------------------------------------------------|
| CTH MARKER                       |                                                      |
| M1-5A FOR ASSEMBLIES             |                                                      |
| WISCONSIN DEPT OF TRANSPORTATION |                                                      |
| APPROVED                         | <u>Matthew R Rauch</u><br>For State Traffic Engineer |
| DATE 11/8/2022                   | PLATE NO. M1-5A.9                                    |

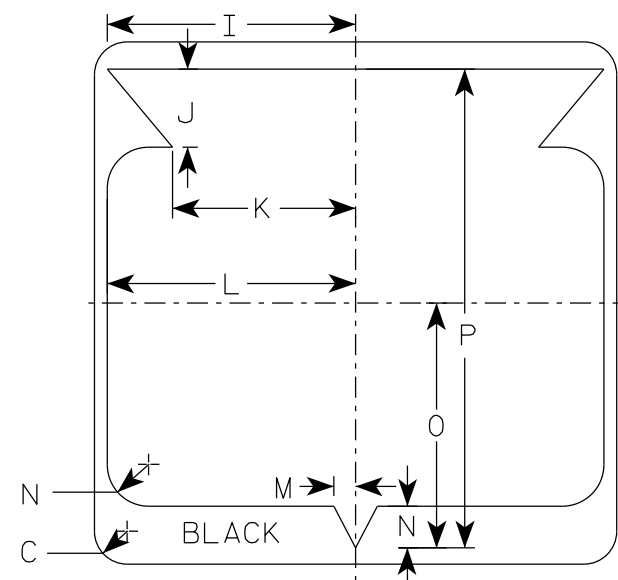
|              |       |         |            |          |
|--------------|-------|---------|------------|----------|
| PROJECT NO.: | HWY.: | COUNTY: | SHEET NO.: | <b>E</b> |
|--------------|-------|---------|------------|----------|

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



| 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<br>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

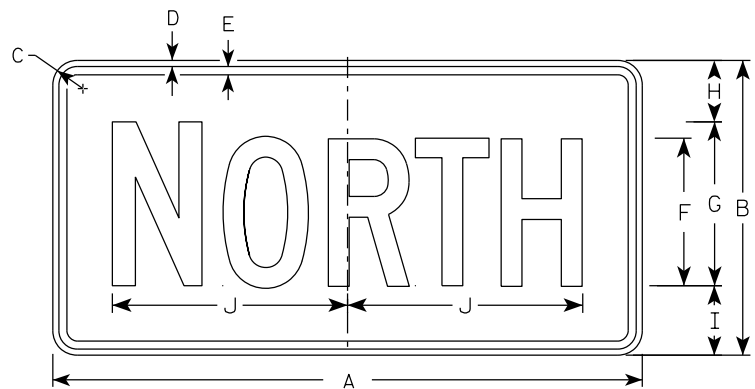
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

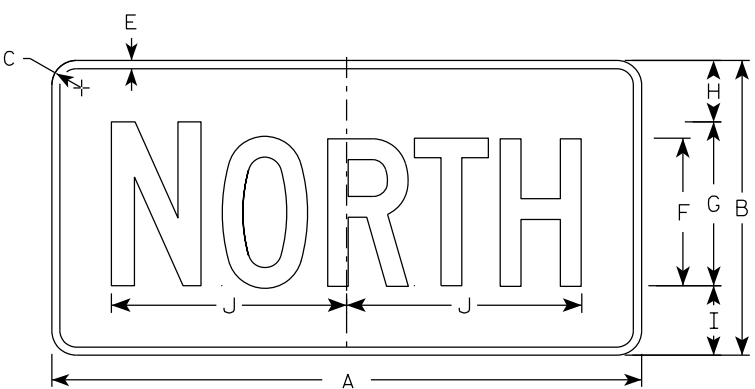
DATE 11/8/2022 PLATE NO. M1-6.11

7

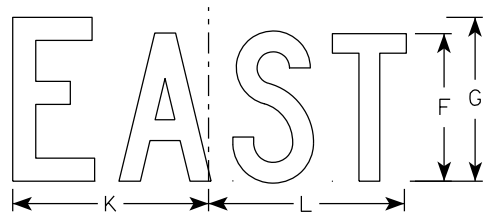




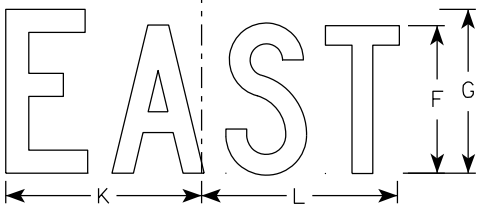
M3-1  
MM3-1  
MP3-1



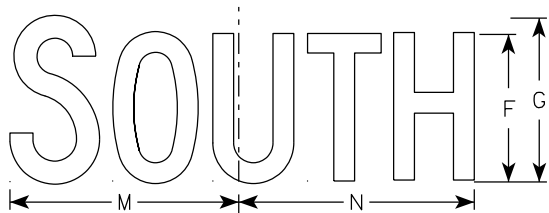
MB3-1  
MK3-1  
MN3-1



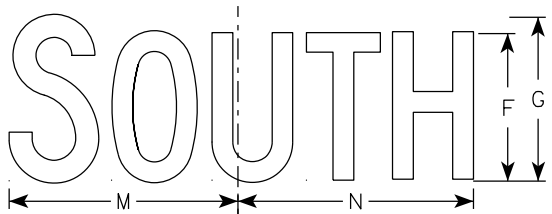
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MM3-2  
MP3-2



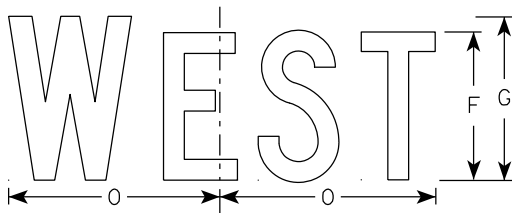
MB3-2  
MK3-2  
MN3-2



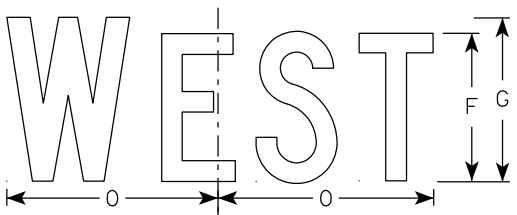
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

NOTES

1. All Signs Type II - Type H Reflective
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. 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
6. Note the first letter of each direction is larger than the remainder of the message.

| 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<br>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: 382

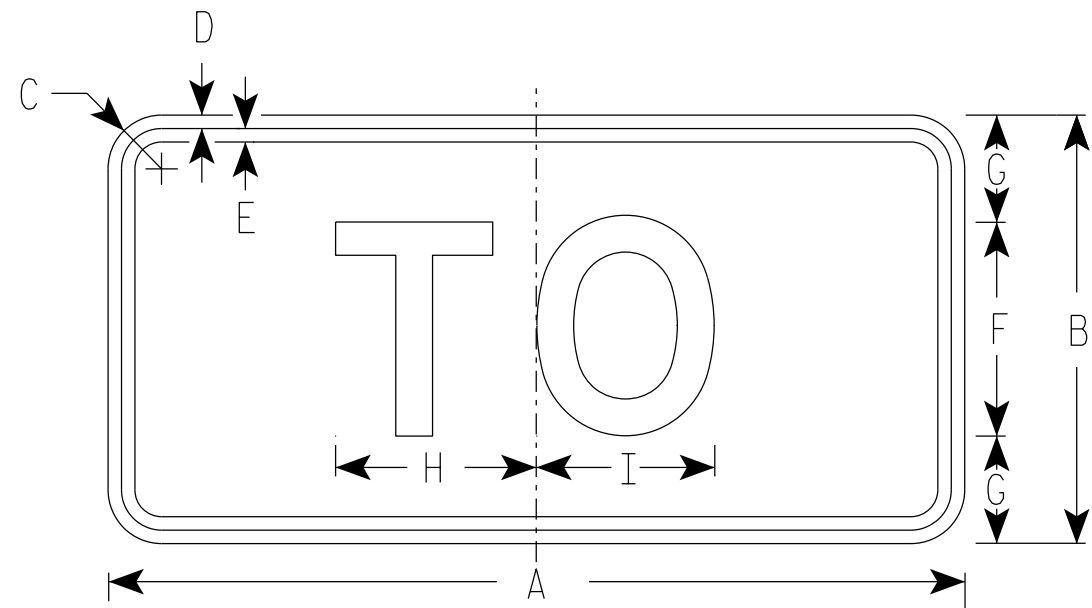
E

STANDARD SIGNS  
M3-1 THRU M3-4  
SERIES

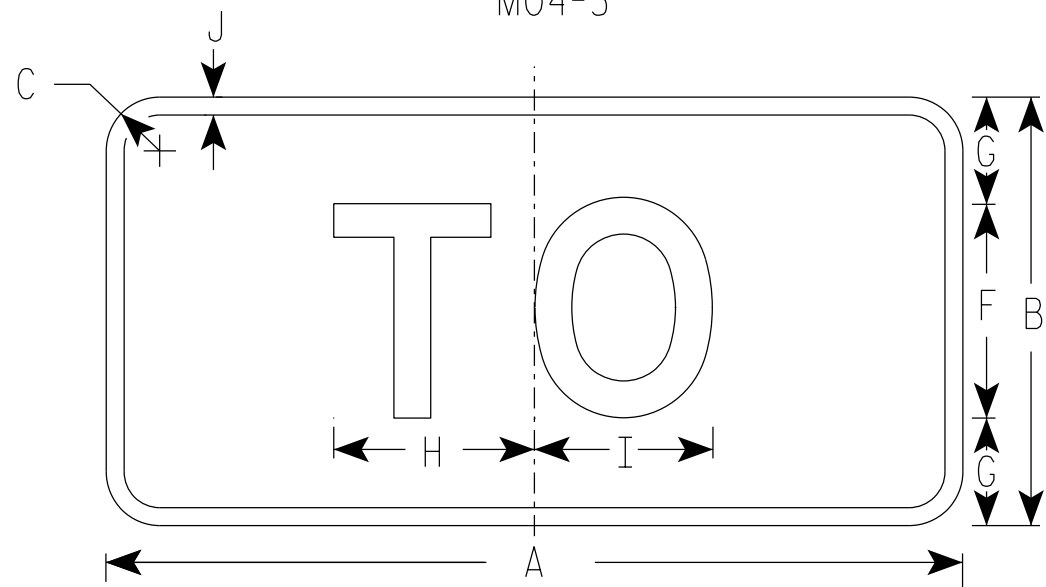
WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15



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



MB4-5  
MK4-5  
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White  
Message - Black  
MB4-5 Background - Blue  
Message - White  
MK4-5 Background - Green  
Message - White  
MM4-5 Background - White  
Message - Green  
MN4-5 Background - Brown  
Message - White  
MP4-5 Background - White  
Message - Blue  
M04-5 Background - Orange Type F Reflective  
Message - Black

| 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<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|-------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |       |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 5 3/8 | 5 1/4 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 2M   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 5 3/8 | 5 1/4 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 3    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 8 1/4 | 8 3/8 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 8 1/4 | 8 3/8 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 8 1/4 | 8 3/8 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |

|             |  |      |  |         |  |               |  |   |
|-------------|--|------|--|---------|--|---------------|--|---|
| PROJECT NO: |  | HWY: |  | COUNTY: |  | SHEET NO: 383 |  | E |
|-------------|--|------|--|---------|--|---------------|--|---|

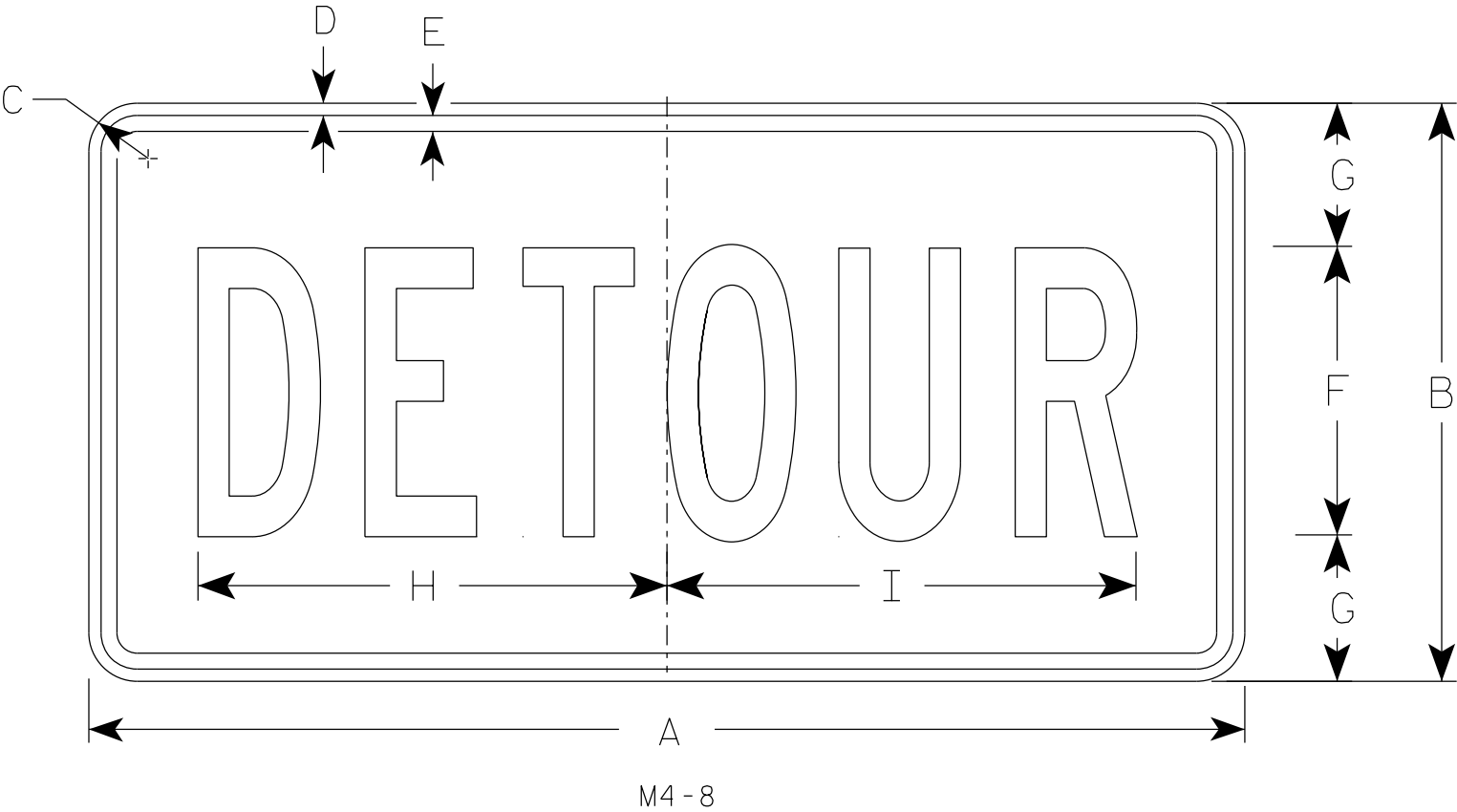


7

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<br>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             |

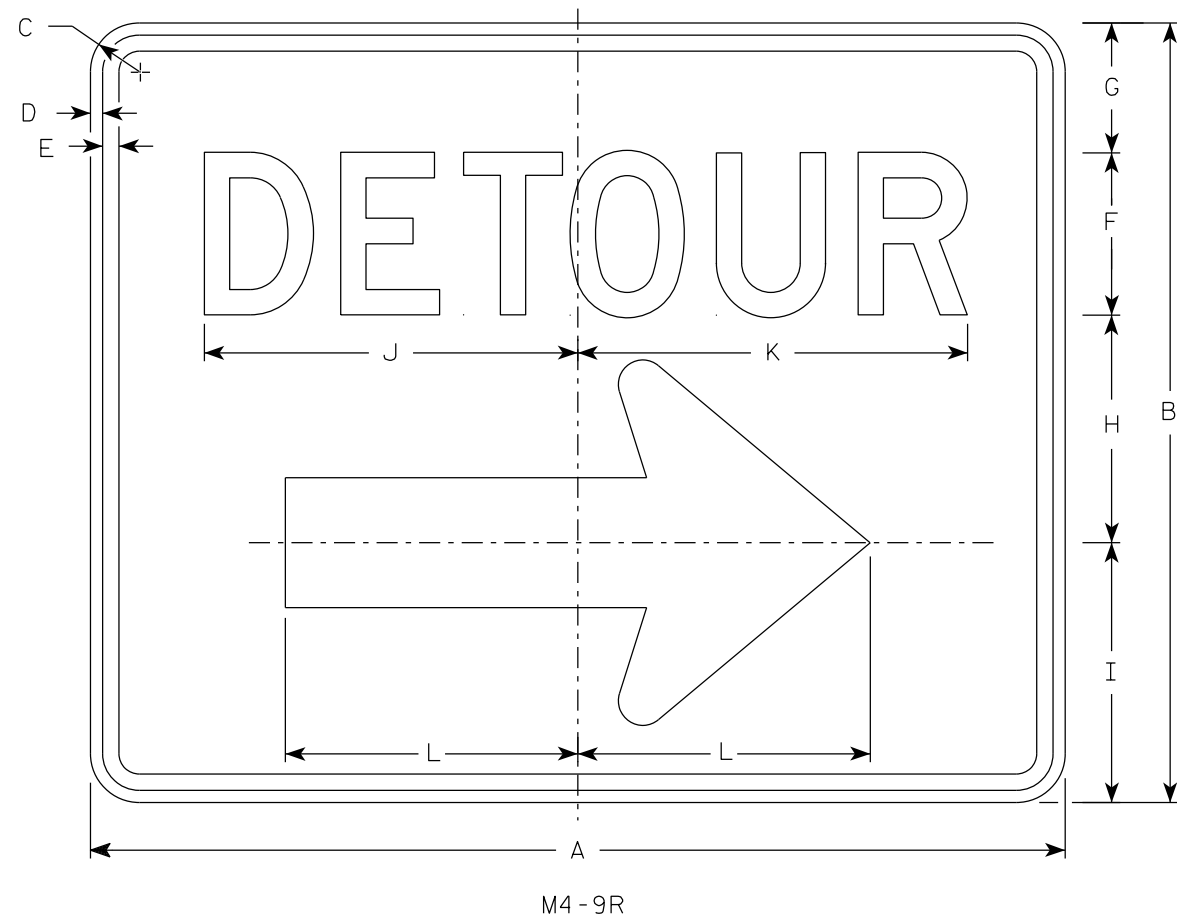
STANDARD SIGN

M4-8

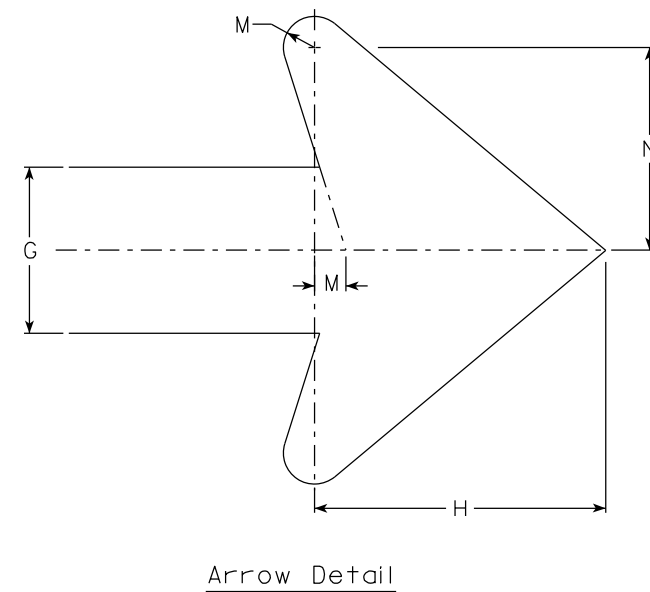
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

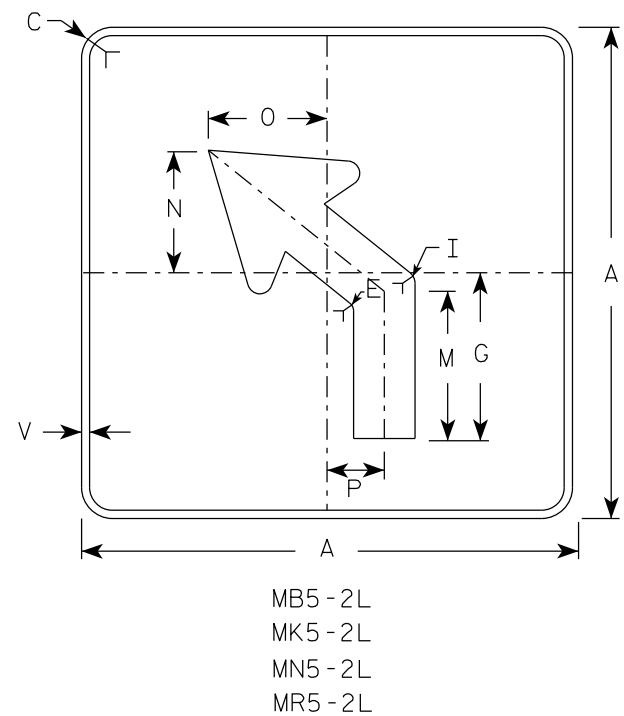
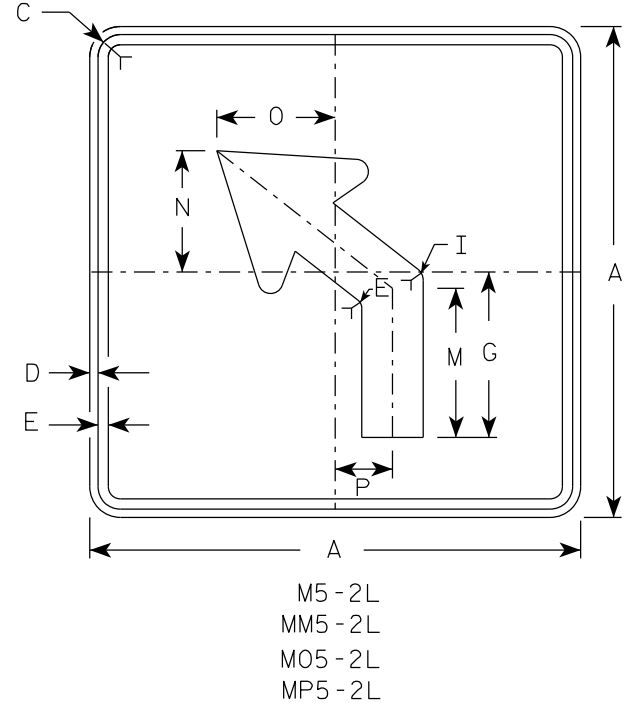
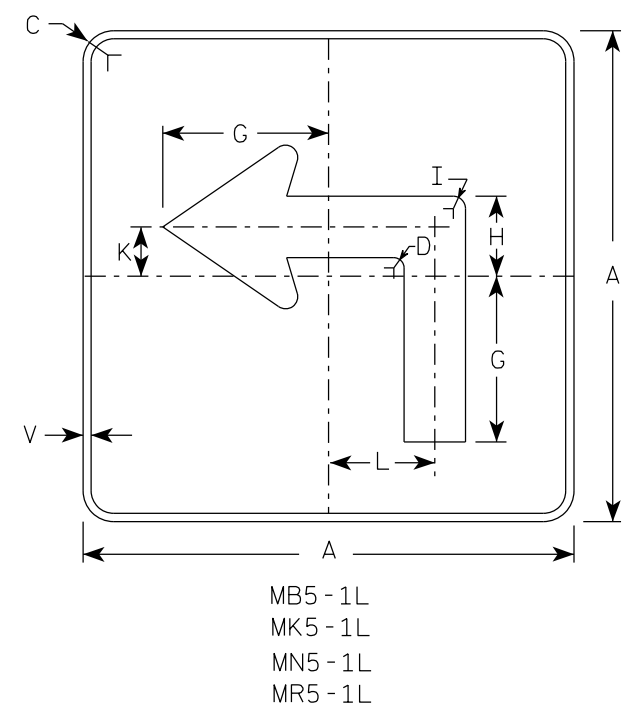
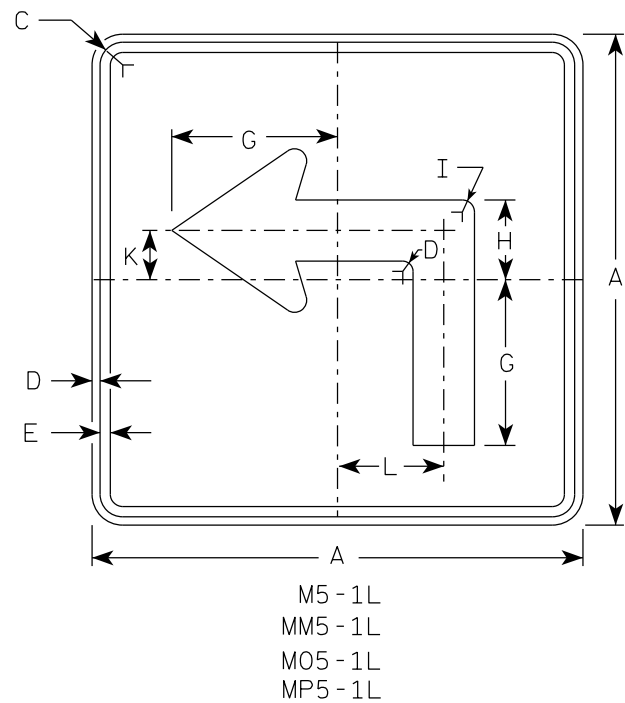


- NOTES
1. Sign is Type II - Type F Reflective
  2. Color:  
Background - Orange  
Message - Black
  3. Message Series - D
  4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  4. M4-9L is the same as M4-9R except the arrow is reversed.

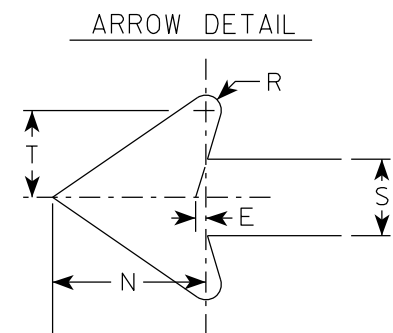


| SIZE | A  | B  | C     | D   | E   | F | G | H      | I      | J      | K      | L      | M     | N     | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|--------|--------|--------|--------|--------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|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

|                                                       |  |                                |  |                  |  |               |  |                                                               |
|-------------------------------------------------------|--|--------------------------------|--|------------------|--|---------------|--|---------------------------------------------------------------|
| PROJECT NO:                                           |  | HWY:                           |  | COUNTY:          |  | SHEET NO: 385 |  | E                                                             |
| FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49R.dgn |  | PLOT DATE : 21-MARCH 2023 1:40 |  | PLOT BY : dotc4c |  | PLOT NAME :   |  | PLOT SCALE : \$\$.....plotscale.....\$\$WISDOT/CADDs SHEET 42 |

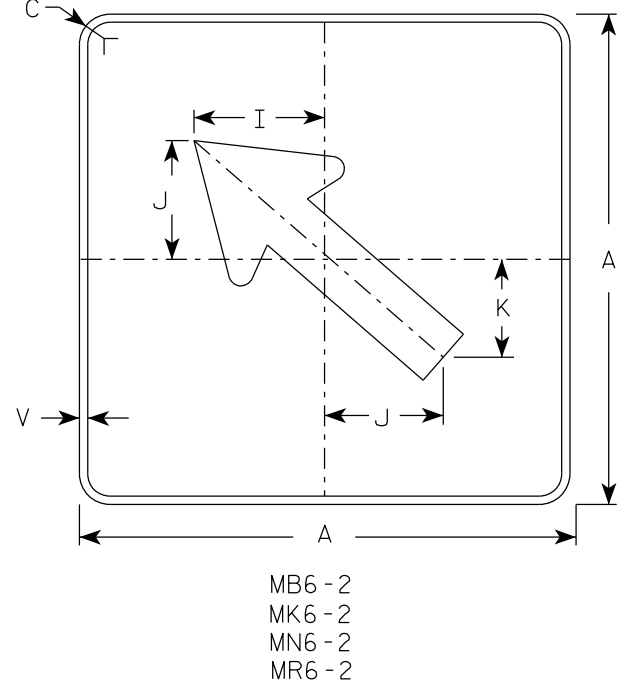
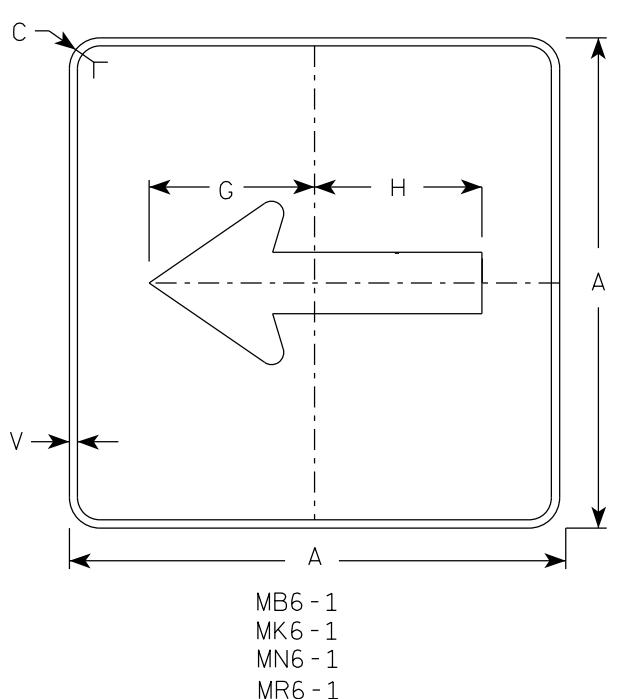
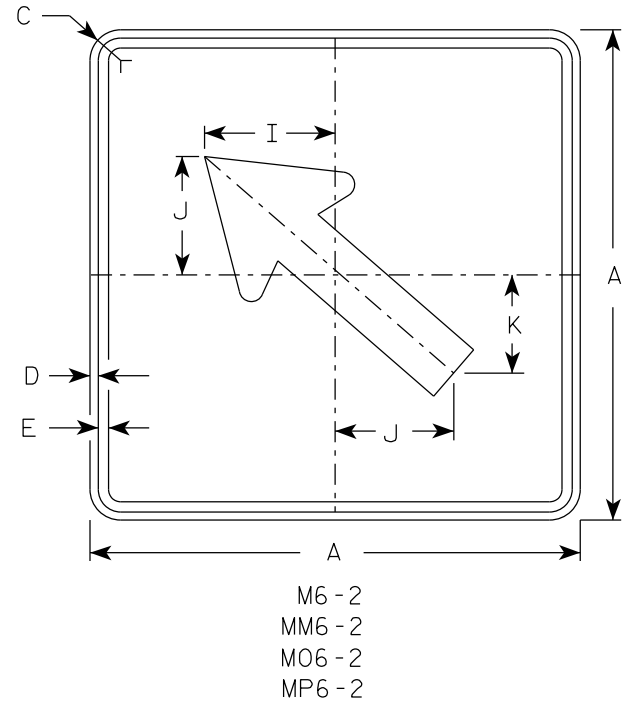
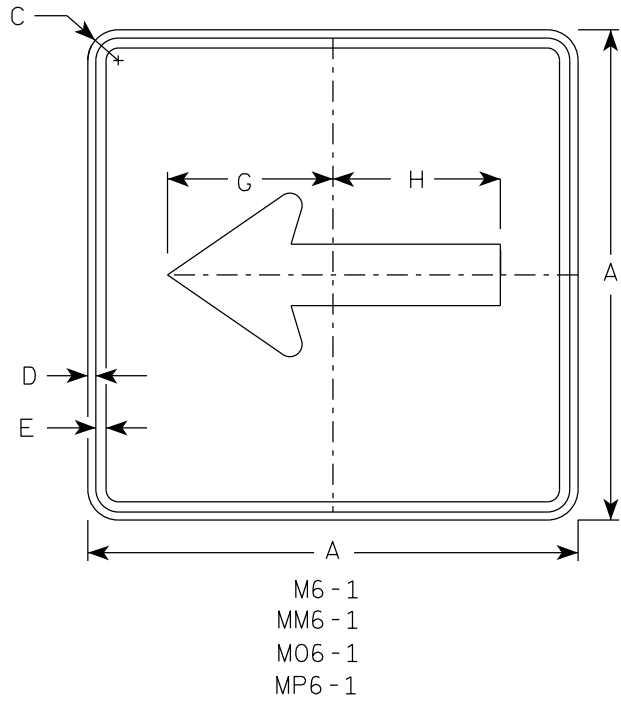


- NOTES
- Signs are Type II - Type H reflective except as shown
  - Color:  
Background - See note 4  
Message - See note 4
  - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.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

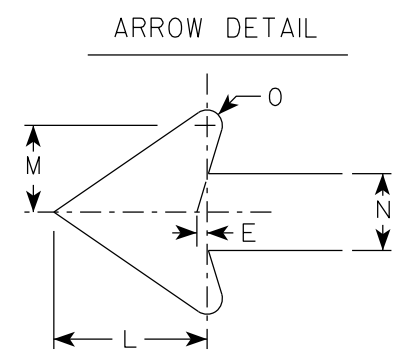


| SIZE | A  | B | C     | D   | E   | F | G      | H     | I   | J | K     | L     | M     | N     | O     | P     | Q | R   | S     | T     | U | V   | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|-----|---|-------|-------|-------|-------|-------|-------|---|-----|-------|-------|---|-----|---|---|---|---|-----------------|
| 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: 386 |  | E |
|-------------|--|------|--|---------|--|---------------|--|---|



- 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.
  - M6-1 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<br>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            |

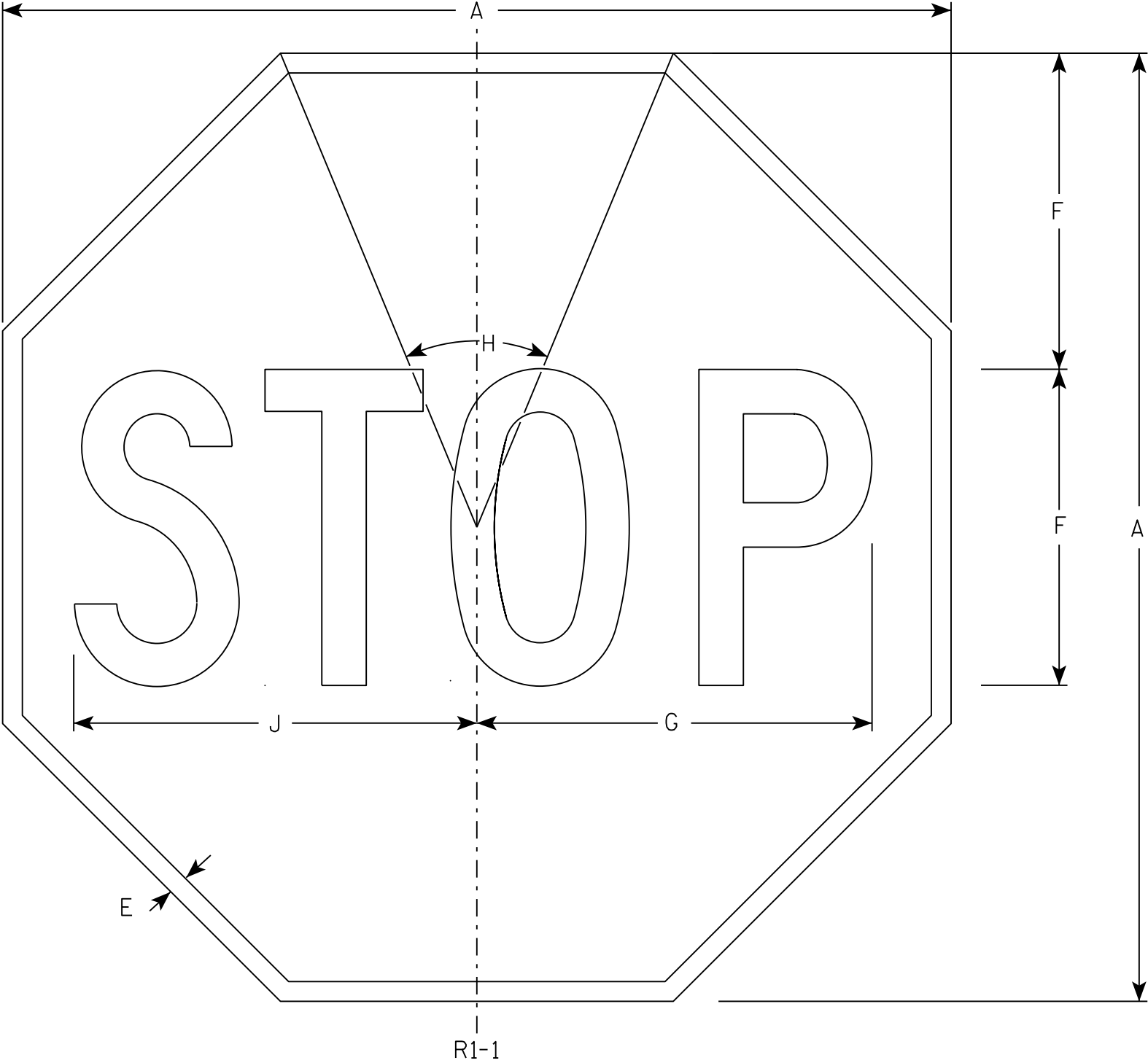
STANDARD SIGN  
M6 - 1 & M6 - 2  
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

7



NOTES

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

7

R1-1

| 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<br>sq. ft. |
|------|----|---|---|---|-----|----|--------|-----|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   |   |   | 5/8 | 10 | 12 1/2 | 45° |   | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.18            |
| 2S   | 30 |   |   |   | 5/8 | 10 | 12 1/2 | 45° |   | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.18            |
| 2M   | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 3    | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 4    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 5    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 6    | 18 |   |   |   | 3/8 | 6  | 7 3/4  | 45° |   | 7 3/4  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1.86            |
| 7    | 12 |   |   |   | 1/4 | 4  | 5      | 45° |   | 5 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0.78            |

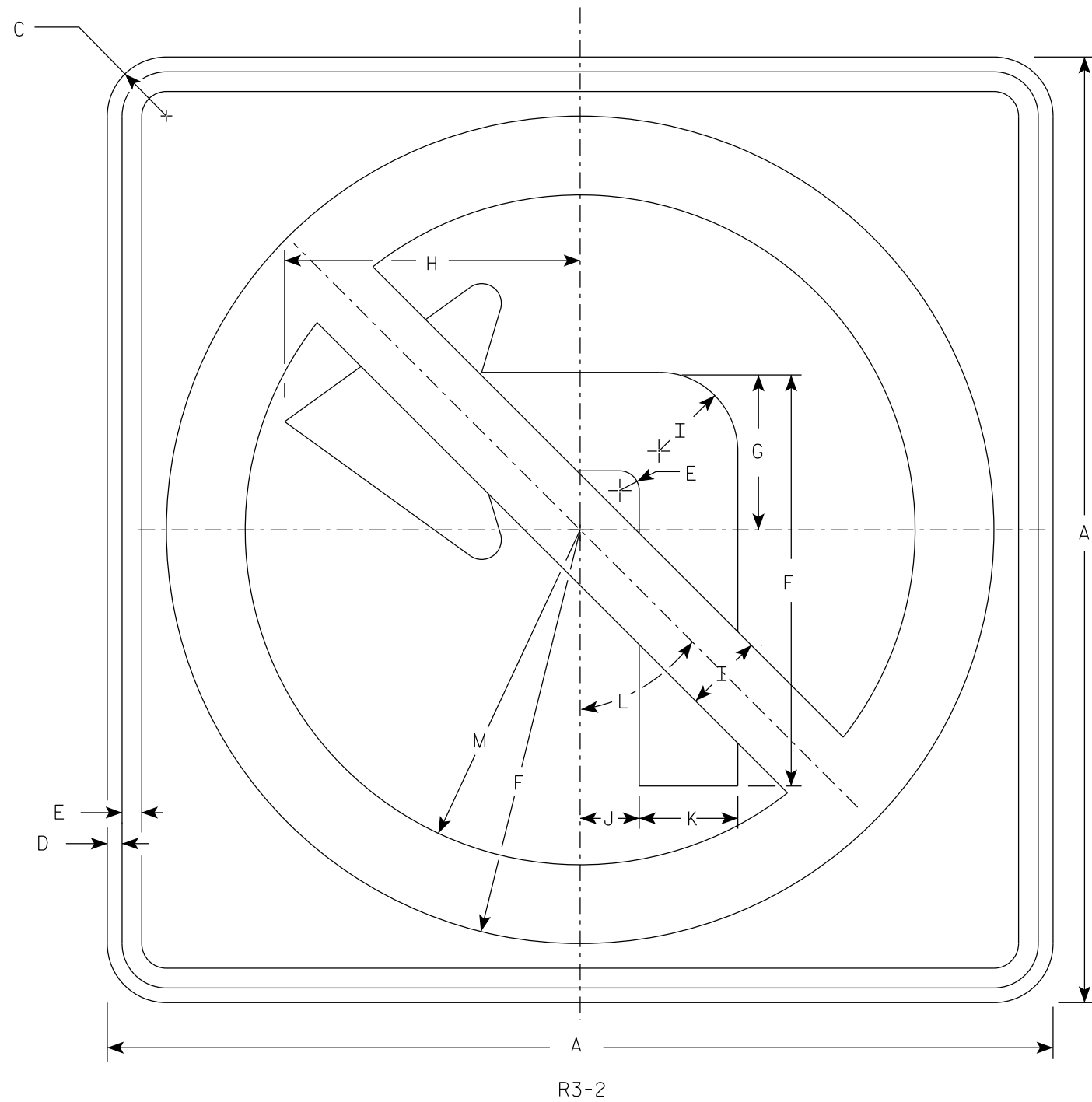
STANDARD SIGN  
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

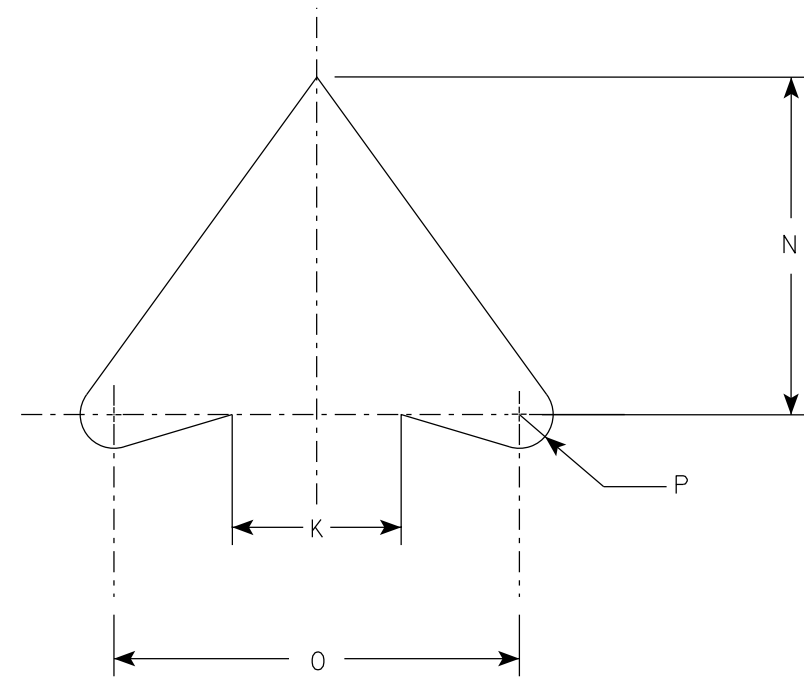
DATE 11/12/15 PLATE NO. R1-1.13

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|---|--------|---|-------|-------|-----|--------|-------|----|-----|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2  | 5     | 6  | 1/2 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2  | 5     | 6  | 1/2 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 21     | 8 | 15     | 4 | 3     | 5     | 45° | 17     | 10    | 12 | 1   |   |   |   |   |   |   |   |   |   |   | 16.0            |

PROJECT NO:

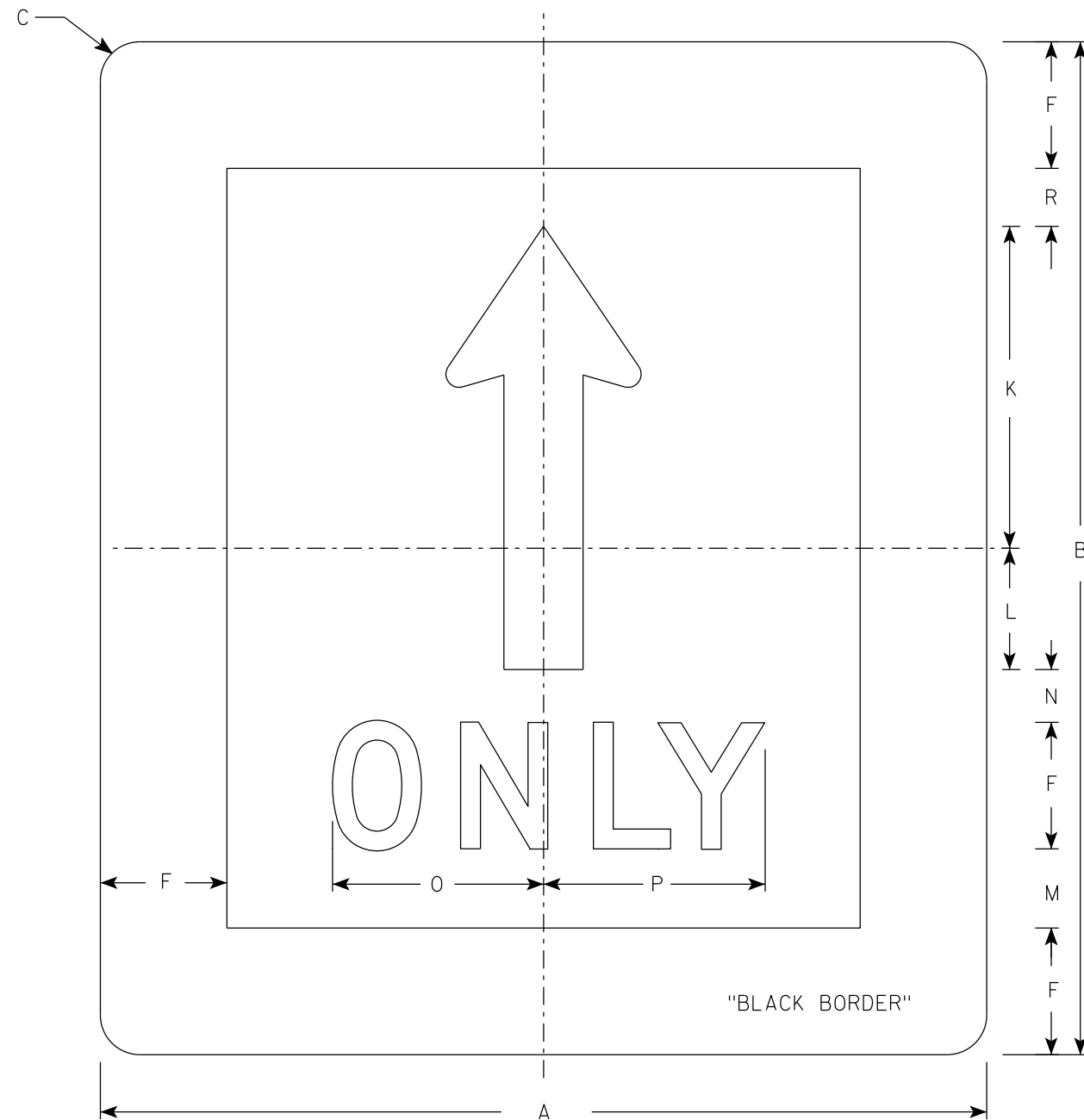
HWY:

COUNTY:

SHEET NO: 389

E

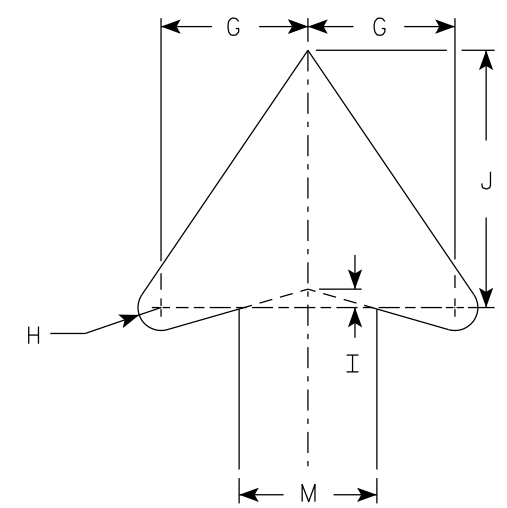




R3-5A

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - D
- 4. The 6" border is non-reflective black.



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<br>sq. ft. |
|------|----|----|-------|---|---|---|---|-----|-----|---|--------|-------|-------|-------|----|--------|---|-------|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |   |   |   |   |     |     |   |        |       |       |       |    |        |   |       |   |   |   |   |   |   |   |   |                 |
| 2S   | 42 | 48 | 1 7/8 |   |   | 6 | 4 | 5/8 | 1/2 | 7 | 15 1/4 | 5 3/4 | 3 3/4 | 2 1/2 | 10 | 10 1/2 |   | 2 3/4 |   |   |   |   |   |   |   |   | 14.0            |
| 2M   | 42 | 48 | 1 7/8 |   |   | 6 | 4 | 5/8 | 1/2 | 7 | 15 1/4 | 5 3/4 | 3 3/4 | 2 1/2 | 10 | 10 1/2 |   | 2 3/4 |   |   |   |   |   |   |   |   | 14.0            |
| 3    |    |    |       |   |   |   |   |     |     |   |        |       |       |       |    |        |   |       |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |   |   |   |   |     |     |   |        |       |       |       |    |        |   |       |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |   |   |   |   |     |     |   |        |       |       |       |    |        |   |       |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
R3-5A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/26/24 PLATE NO. R3-5A.6

PROJECT NO:

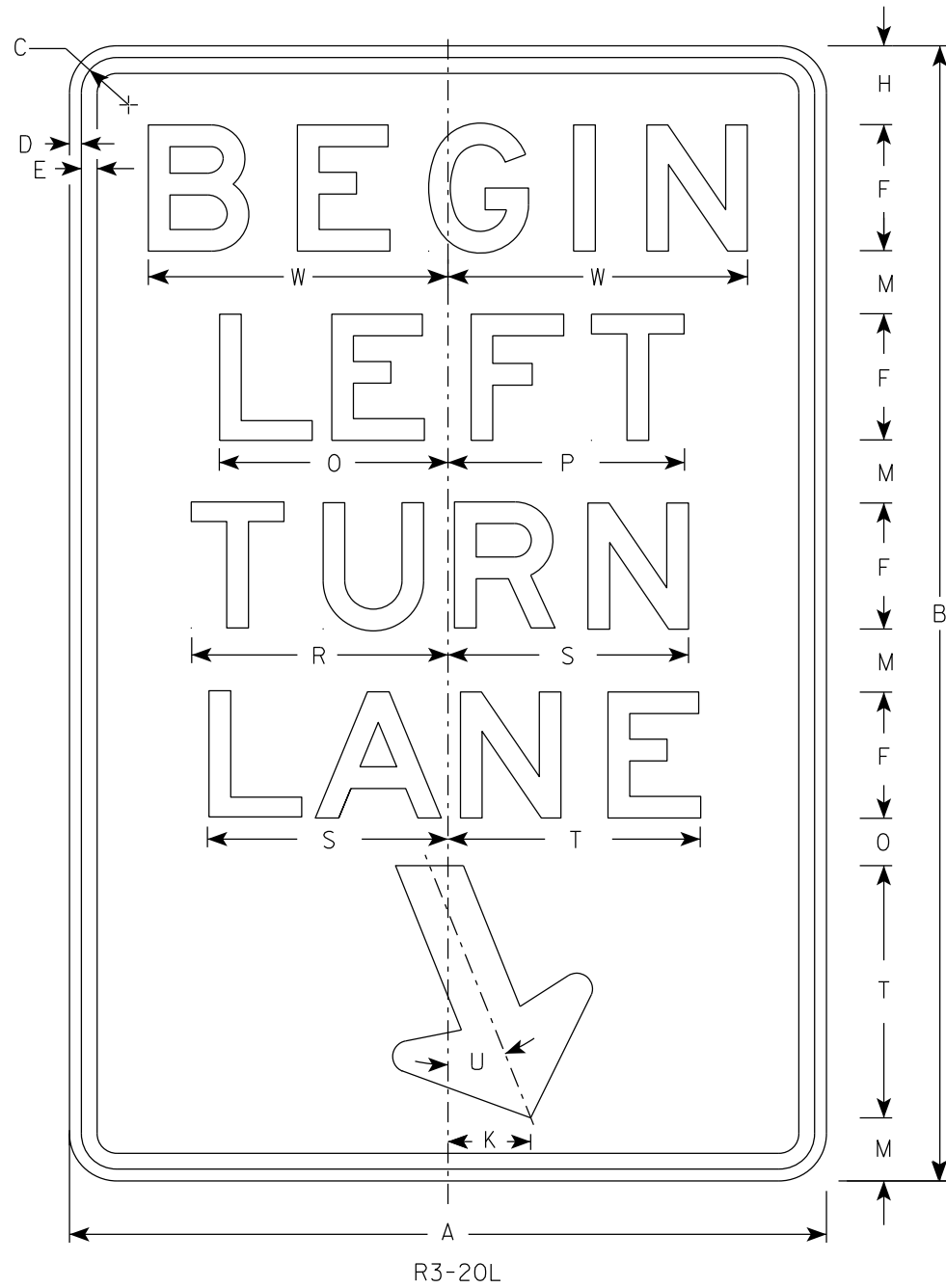
HWY:

COUNTY:

SHEET NO: 390

E

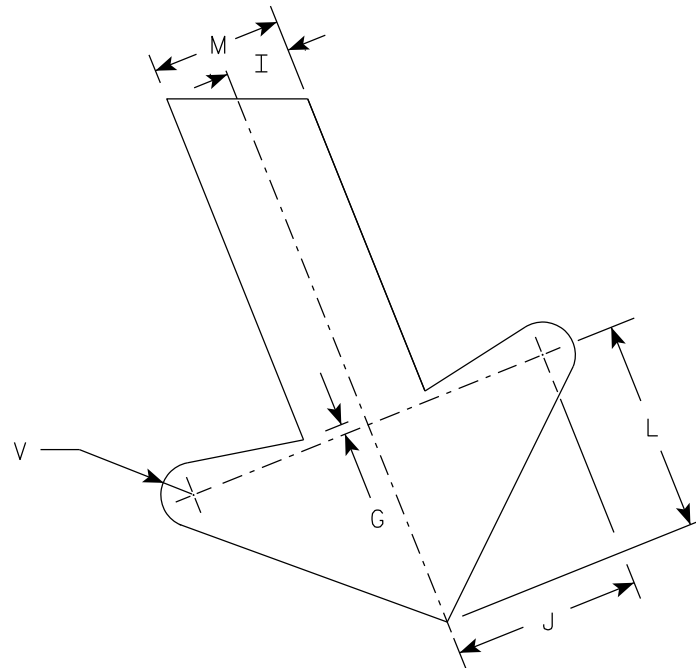
7



R3-20L

NOTES

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



ARROW DETAIL

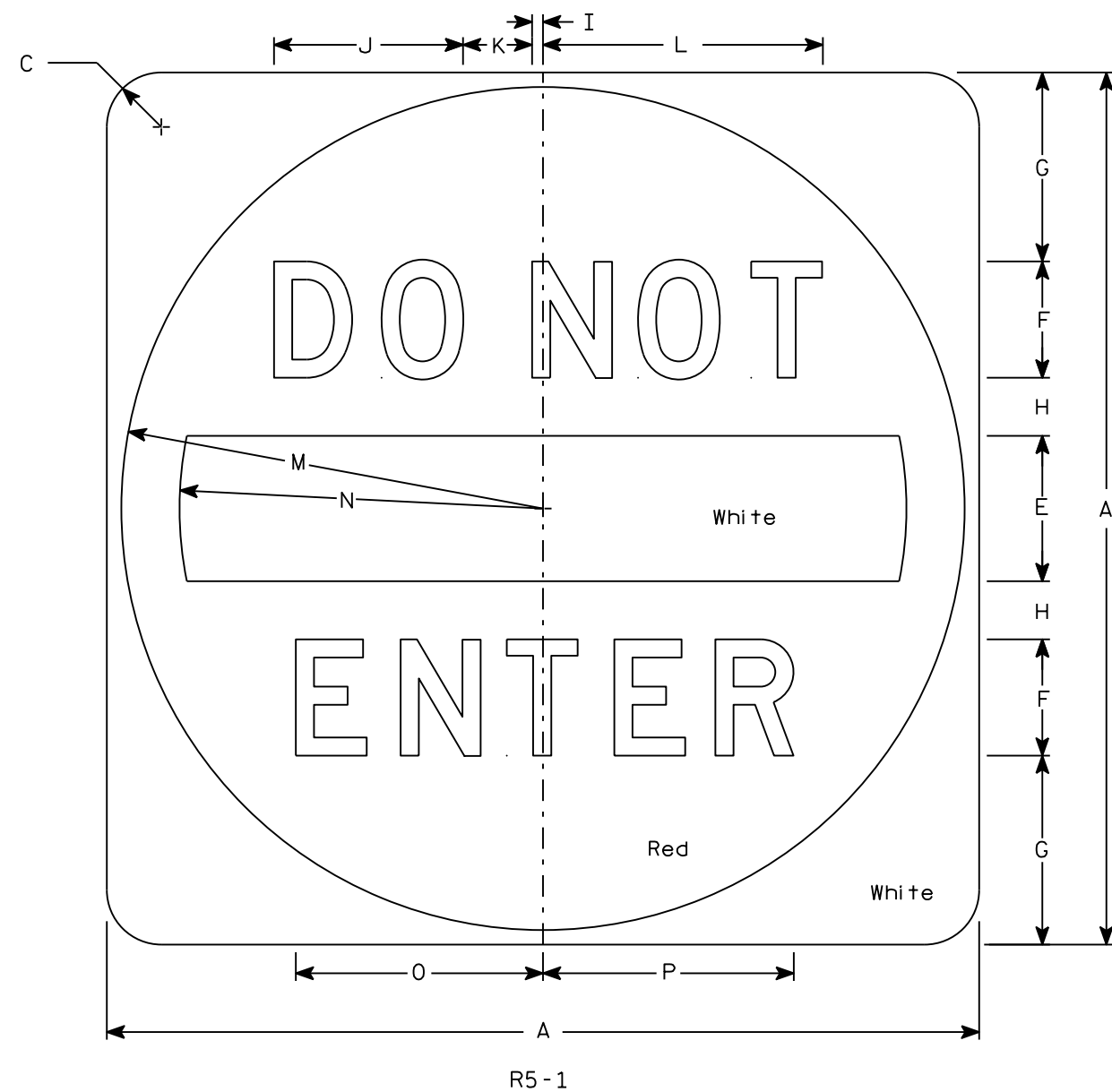
7

| 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<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-----|-------|-------|-------|-------|-------|---|-------|--------|--------|---|--------|--------|----|-----|-----|--------|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |
| 2S   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 4 | 1/4 | 2 1/2 | 1     | 2 7/8 | 2 5/8 | 3 1/4 | 2 | 1 1/2 | 7 1/4  | 7 1/2  |   | 8 1/8  | 7 5/8  | 8  | 22° | 1/2 | 9 1/2  |   |   |   | 6.0             |
| 2M   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 4 | 1/4 | 2 1/2 | 1     | 2 7/8 | 2 5/8 | 3 1/4 | 2 | 1 1/2 | 7 1/4  | 7 1/2  |   | 8 1/8  | 7 5/8  | 8  | 22° | 1/2 | 9 1/2  |   |   |   | 6.0             |
| 3    | 36 | 54 | 1 7/8 | 1/2 | 5/8 | 6 | 3/8 | 3 3/4 | 1 1/2 | 4 1/4 | 4     | 4 7/8 | 3 | 2 1/4 | 10 7/8 | 11 1/4 |   | 12 1/4 | 11 1/2 | 12 | 22° | 3/4 | 13 1/4 |   |   |   | 13.5            |
| 4    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |
| 5    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 391 | E |
|-------------|------|---------|---------------|---|



7



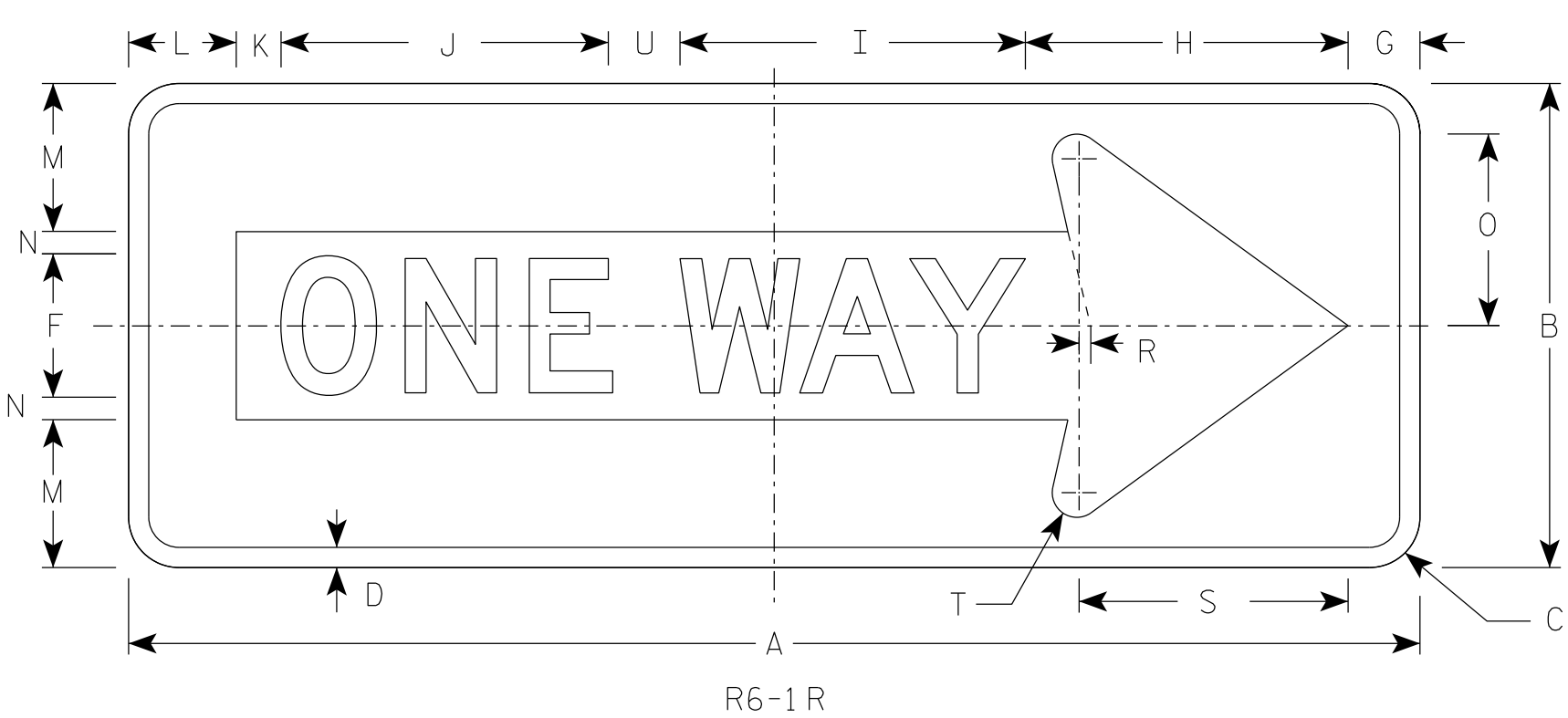
NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See detail  
Message - White
3. Message Series - D

7

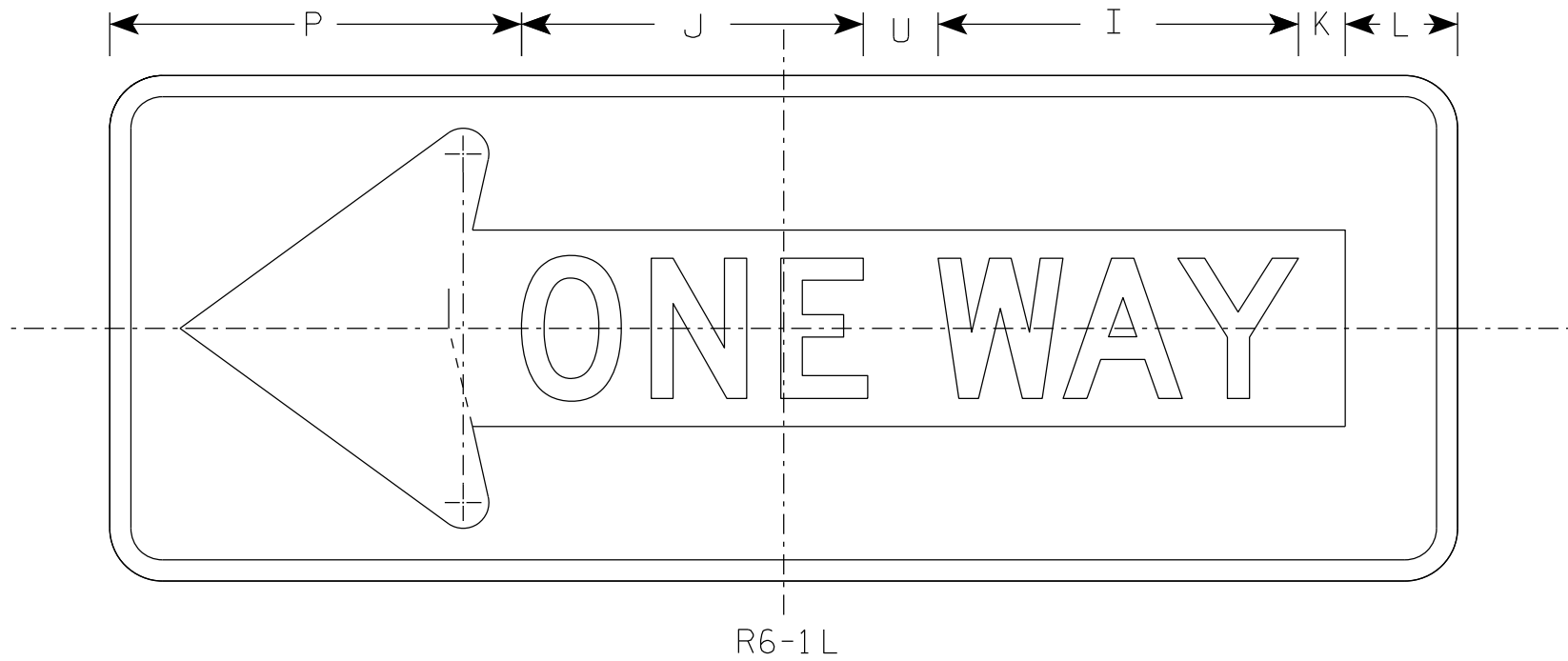
| SIZE | A  | B | C     | D | E | F | G     | H     | I   | J     | K     | L      | M      | N      | O      | P      | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|---|---|---|-------|-------|-----|-------|-------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |   |   |   |       |       |     |       |       |        |        |        |        |        |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 |   | 1 7⁄8 |   | 5 | 4 | 6 1⁄2 | 2     | 3⁄8 | 6 1⁄2 | 2 3⁄8 | 9 5⁄8  | 14 1⁄2 | 12 1⁄2 | 8 1⁄2  | 8 5⁄8  |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 36 |   | 2 1⁄4 |   | 6 | 5 | 7 1⁄2 | 2 1⁄2 | 1⁄2 | 8 1⁄8 | 3     | 12 1⁄8 | 17 1⁄2 | 15     | 10 5⁄8 | 10 3⁄4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1⁄4 |   | 6 | 5 | 7 1⁄2 | 2 1⁄2 | 1⁄2 | 8 1⁄8 | 3     | 12 1⁄8 | 17 1⁄2 | 15     | 10 5⁄8 | 10 3⁄4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1⁄4 |   | 6 | 5 | 7 1⁄2 | 2 1⁄2 | 1⁄2 | 8 1⁄8 | 3     | 12 1⁄8 | 17 1⁄2 | 15     | 10 5⁄8 | 10 3⁄4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 3     |   | 8 | 6 | 11    | 3     | 5⁄8 | 9 3⁄4 | 3 5⁄8 | 14 1⁄2 | 23 1⁄2 | 20     | 12 3⁄4 | 12 7⁄8 |   |   |   |   |   |   |   |   |   |   | 16.0            |

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| STANDARD SIGN<br>R5-1            |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>for State Traffic Engineer |
| DATE 3/15/18                     | PLATE NO. R5-1.16                                     |



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - Black  
Message - Black Legend & White Arrow & Border
- 3. Message Series - D



| 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<br>sq. ft. |
|------|----|----|-------|-----|---|---|-------|-------|-------|--------|-------|-------|-------|-----|-------|--------|---|-----|--------|-----|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |   |   |       |       |       |        |       |       |       |     |       |        |   |     |        |     |   |   |   |   |   |   |                 |
| 2S   | 36 | 12 | 1 1/2 | 1/2 |   | 4 | 2     | 7 1/2 | 9 5/8 | 9 1/8  | 1 1/4 | 3     | 3 3/8 | 5/8 | 4 3/8 | 11     |   | 3/8 | 7 1/2  | 3/4 | 2 |   |   |   |   |   | 3.0             |
| 2M   | 48 | 18 | 1 7/8 | 3/4 |   | 5 | 2 1/2 | 11    | 13    | 12 1/4 | 2 3/4 | 3 1/2 | 5 1/2 | 1   | 7 1/8 | 13 1/2 |   | 1/2 | 10 1/8 | 7/8 | 3 |   |   |   |   |   | 6.0             |
| 3    | 48 | 18 | 1 7/8 | 3/4 |   | 5 | 2 1/2 | 11    | 13    | 12 1/4 | 2 3/4 | 3 1/2 | 5 1/2 | 1   | 7 1/8 | 13 1/2 |   | 1/2 | 10 1/8 | 7/8 | 3 |   |   |   |   |   | 6.0             |
| 4    | 48 | 18 | 1 7/8 | 3/4 |   | 5 | 2 1/2 | 11    | 13    | 12 1/4 | 2 3/4 | 3 1/2 | 5 1/2 | 1   | 7 1/8 | 13 1/2 |   | 1/2 | 10 1/8 | 7/8 | 3 |   |   |   |   |   | 6.0             |
| 5    |    |    |       |     |   |   |       |       |       |        |       |       |       |     |       |        |   |     |        |     |   |   |   |   |   |   |                 |

STANDARD SIGN  
R6-1 L&R

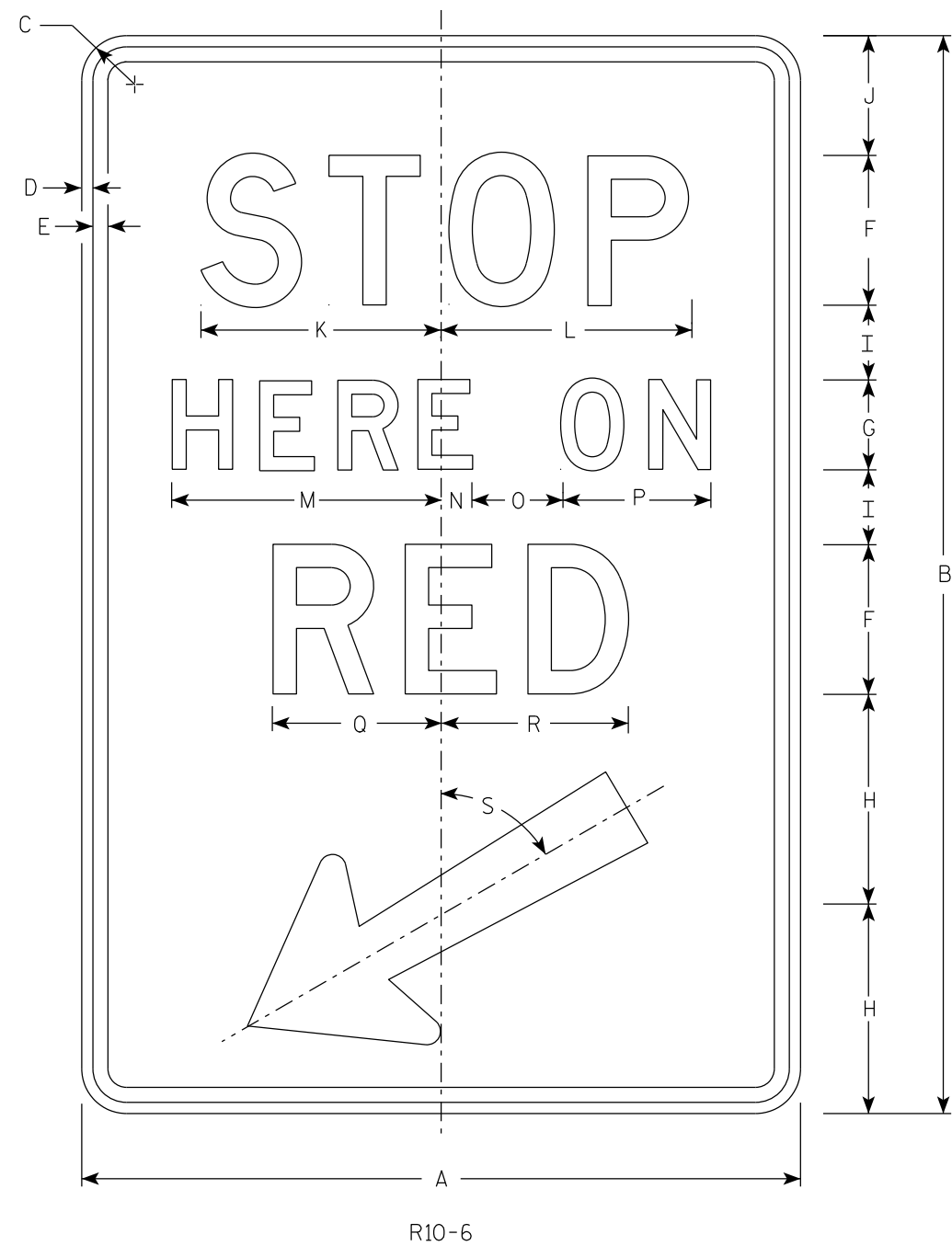
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/7/2025 PLATE NO. R6-1.5

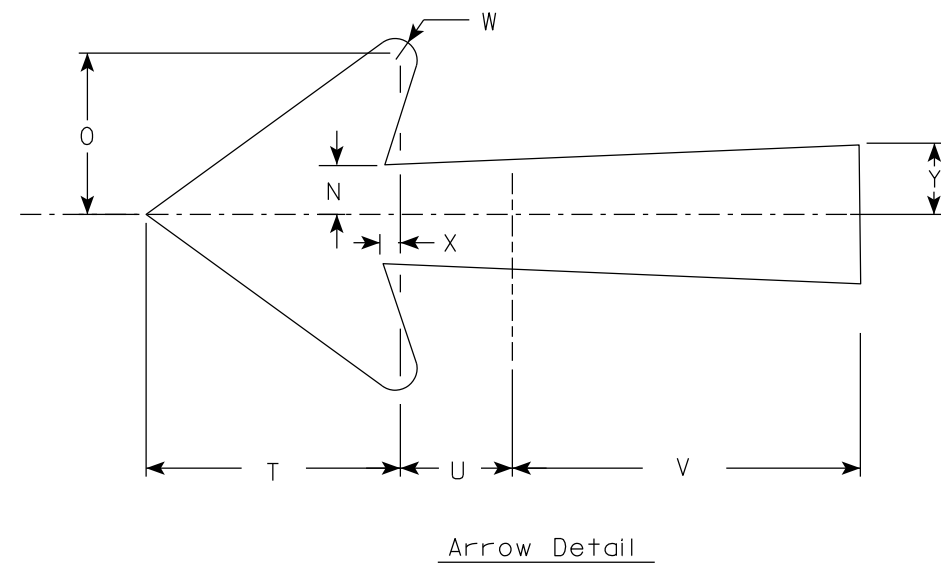
SHEET NO: 393

7



NOTES

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



7

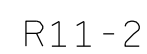
| SIZE | A  | B  | C     | D   | E   | F | G | H | I     | J | K | L     | M | N | O | P | Q     | R     | S   | T     | U     | V     | W   | X   | Y     | Z | Areq<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|---|-------|---|---|-------|---|---|---|---|-------|-------|-----|-------|-------|-------|-----|-----|-------|---|-----------------|
| 1    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |
| 2S   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 5 | 3 | 7 | 2 1/2 | 4 | 8 | 8 3/8 | 9 | 1 | 3 | 5 | 5 5/8 | 6 1/4 | 60° | 5 1/4 | 2 1/4 | 7 1/8 | 1/2 | 3/8 | 1 3/8 |   | 6.0             |
| 2M   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 5 | 3 | 7 | 2 1/2 | 4 | 8 | 8 3/8 | 9 | 1 | 3 | 5 | 5 5/8 | 6 1/4 | 60° | 5 1/4 | 2 1/4 | 7 1/8 | 1/2 | 3/8 | 1 3/8 |   | 6.0             |
| 3    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |
| 4    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |
| 5    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |

STANDARD SIGN  
R10-6

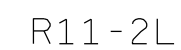
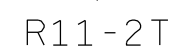
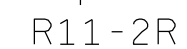
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/25/24 PLATE NO. R10-6.7

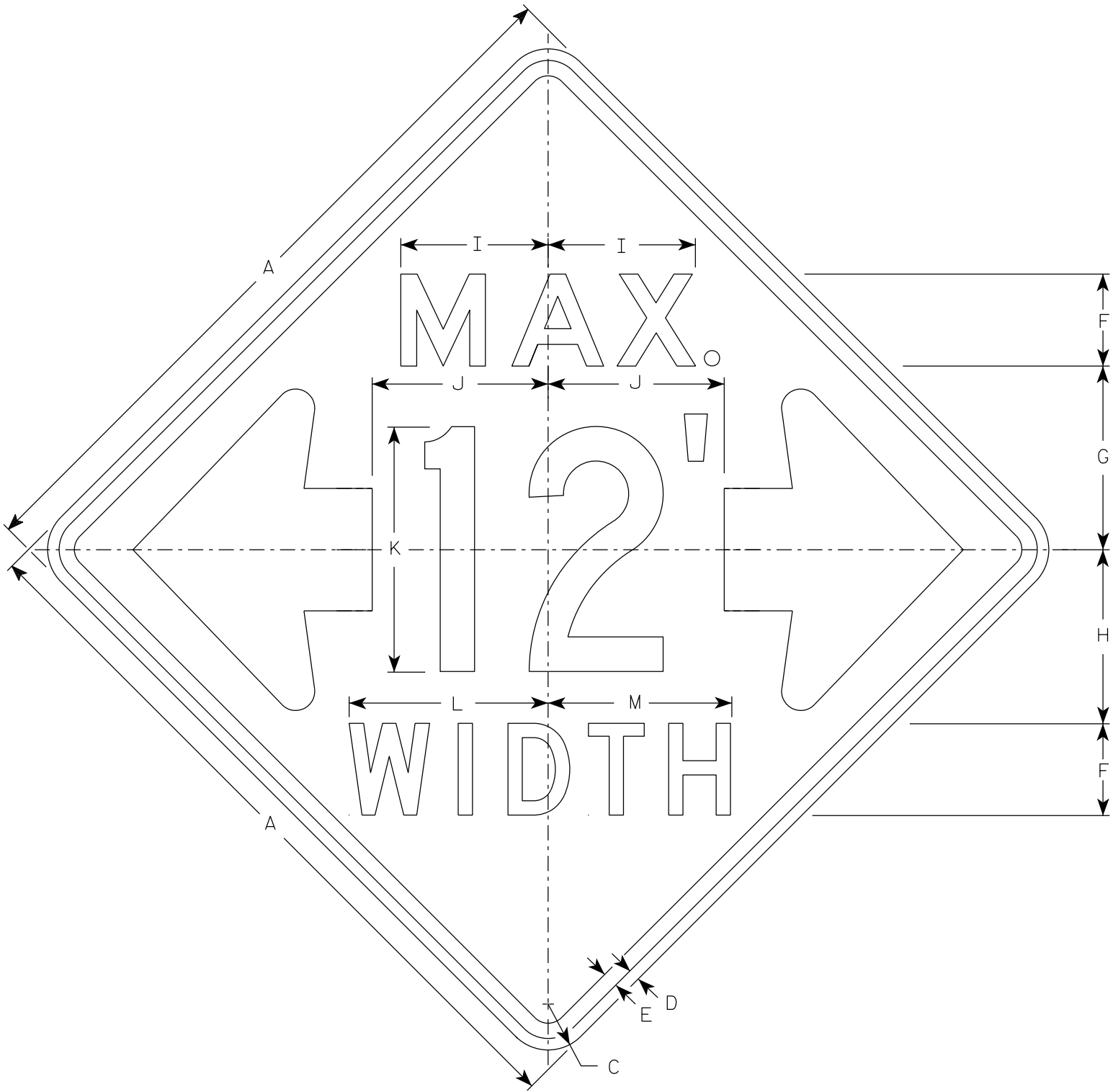


1. Sign is Type II - Type H Reflective
2. Color:
  - Background - White
  - Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



|                                  |                                                      |
|----------------------------------|------------------------------------------------------|
| STANDARD SIGN                    |                                                      |
| R11-2                            |                                                      |
| WISCONSIN DEPT OF TRANSPORTATION |                                                      |
| APPROVED                         | <u>Matthew R Rauch</u><br>for State Traffic Engineer |
| DATE <u>2/5/24</u>               | PLATE NO. <u>R11-2.12</u>                            |

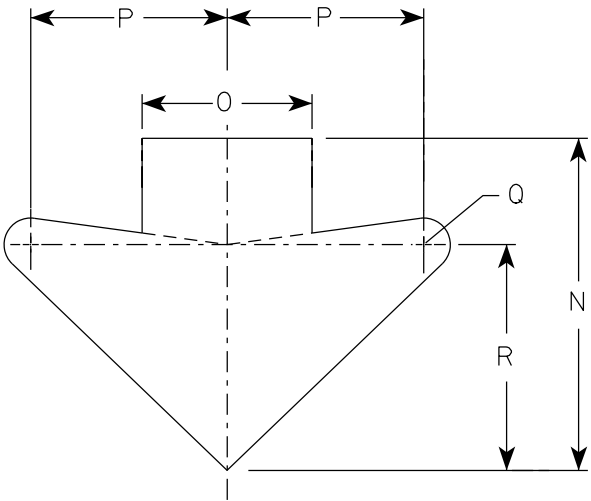
PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42



W12-52

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - See note 5
- 4. The top line is series E, the numerals are series C, and the bottom line is series D.
- 5. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

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

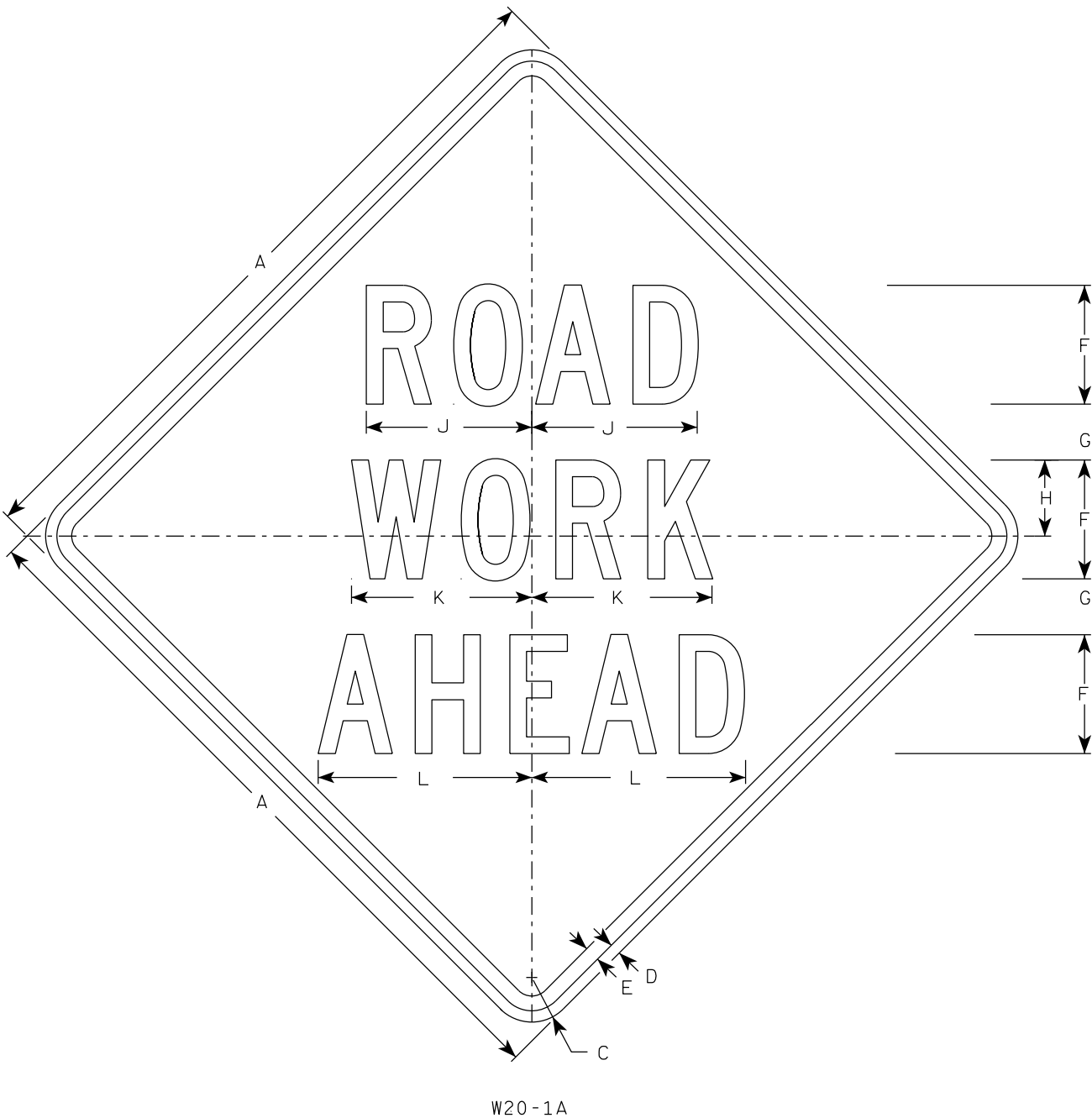
STANDARD SIGN

W12-52

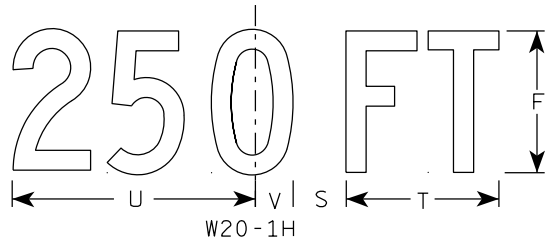
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

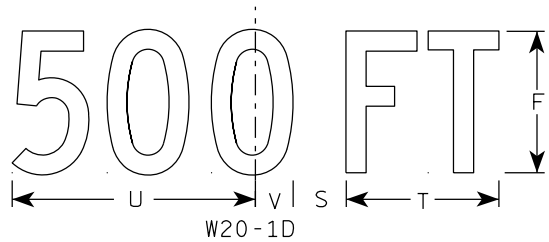
DATE 3/10/2024 PLATE NO. W12-52.8



W20-1A



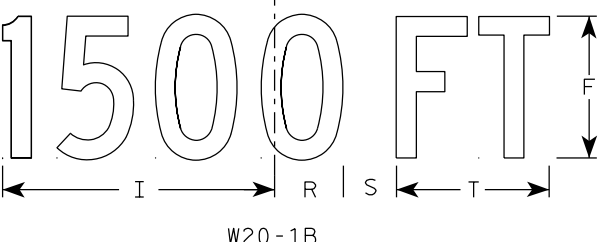
W20-1H



W20-1D

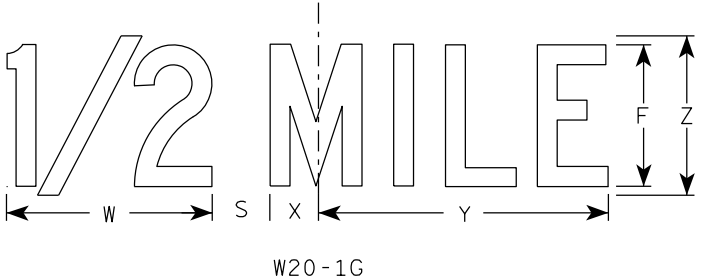


W20-1C

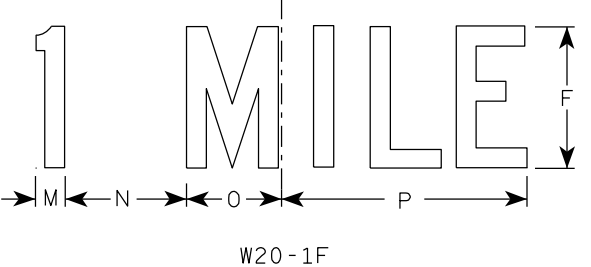


W20-1B

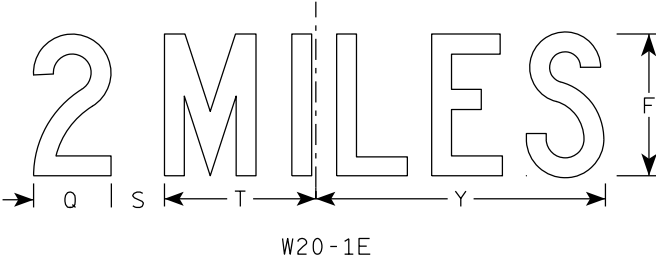
- NOTES
- 1. Sign is Type II - Type F Reflective
  - 2. Color:  
Background - Orange  
Message - Black
  - 3. Message Series - C
  - 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

| 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<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|--------|-------|--------|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 2 5/8 | 3 1/4 | 10 1/8 | 7      | 7 5/8  | 8 7/8  | 1 1/8 | 4 1/2 | 3 1/2 | 9      | 3 1/4 | 2 1/2 | 2 1/4 | 5 5/8 | 9      | 1 3/8 | 8      | 1 3/4 | 10 3/4 | 6 | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |

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

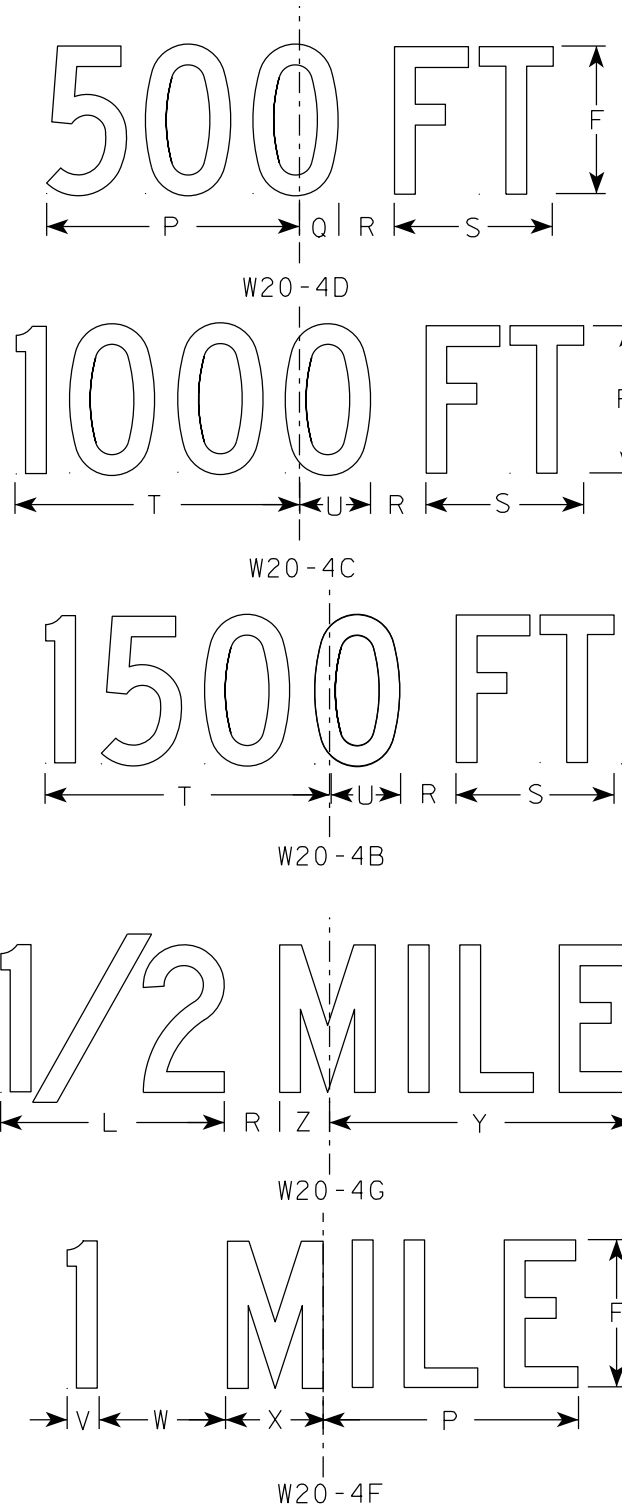
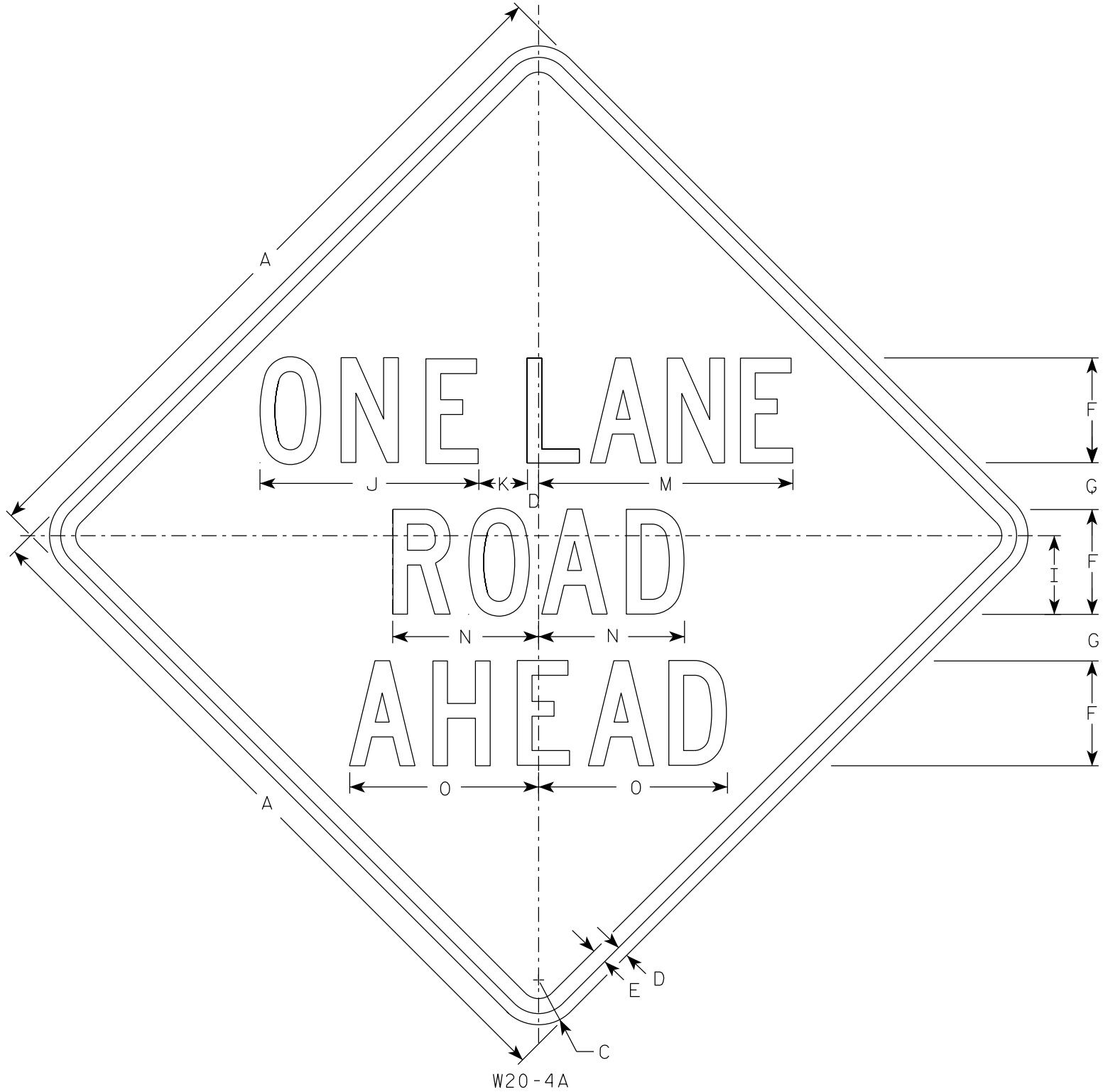
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12



7



- NOTES
- Sign is Type II - Type F Reflective
  - Color:  
Background - Orange  
Message - Black
  - 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.

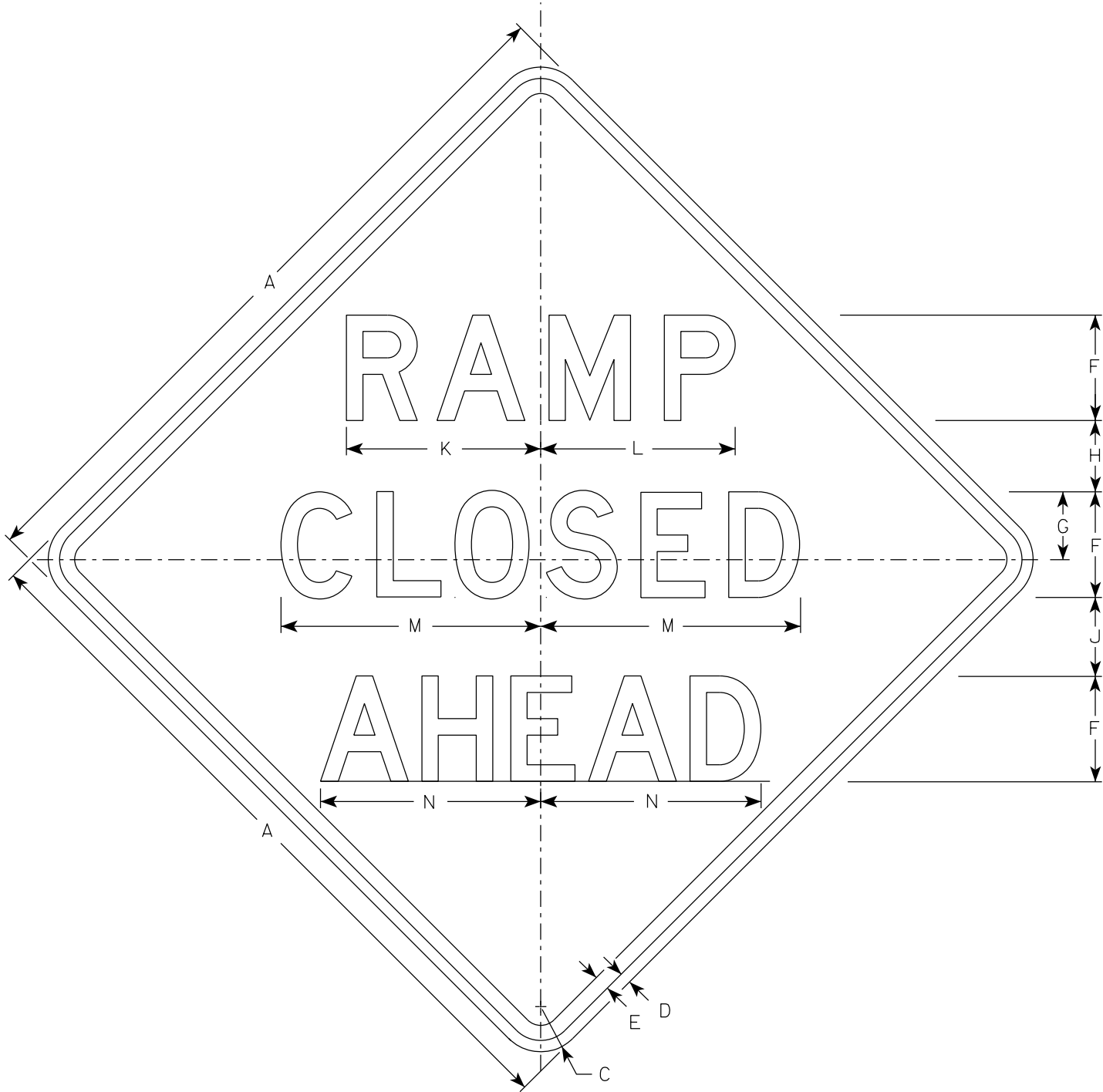
| SIZE | A  | B | C     | D   | E   | F | G     | H | I     | J      | K     | L      | M      | N     | O      | P  | Q     | R     | S     | T      | U     | V     | W     | X     | Y      | Z     | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|---|-------|--------|-------|--------|--------|-------|--------|----|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 2 3/8 | 6 | 3 3/4 | 10 3/8 | 2 3/8 | 8      | 13 1/2 | 7     | 8 7/8  | 9  | 1 3/8 | 1 7/8 | 5 5/8 | 10 1/8 | 2 1/2 | 1 1/8 | 4 1/2 | 3 1/2 | 10 3/4 | 1 3/4 | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7 | 3 1/8 | 8 | 5 1/4 | 14 5/8 | 3 1/4 | 10 5/8 | 17 3/4 | 9 3/4 | 12 5/8 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7 | 3 1/8 | 8 | 5 1/4 | 14 5/8 | 3 1/4 | 10 5/8 | 17 3/4 | 9 3/4 | 12 5/8 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7 | 3 1/8 | 8 | 5 1/4 | 14 5/8 | 3 1/4 | 10 5/8 | 17 3/4 | 9 3/4 | 12 5/8 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7 | 3 1/8 | 8 | 5 1/4 | 14 5/8 | 3 1/4 | 10 5/8 | 17 3/4 | 9 3/4 | 12 5/8 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7 | 3 1/8 | 8 | 5 1/4 | 14 5/8 | 3 1/4 | 10 5/8 | 17 3/4 | 9 3/4 | 12 5/8 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |

STANDARD SIGN  
W20-4A, B, C, D, F & G

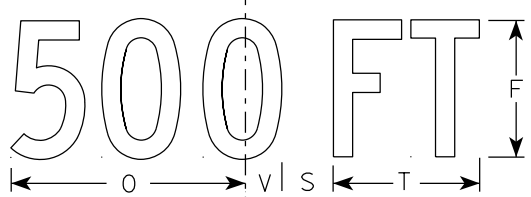
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

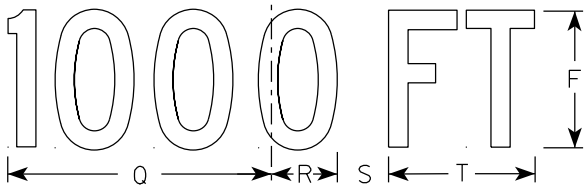
DATE 1/10/2024 PLATE NO. W20-4.10



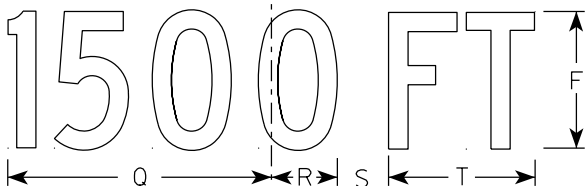
W20-53A



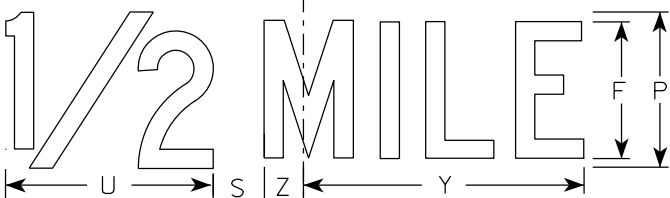
W20-53D



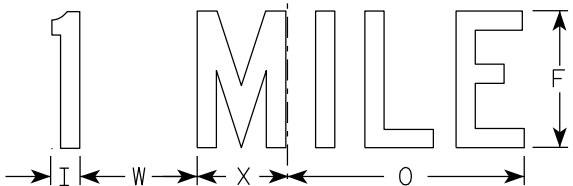
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - see note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1 and 2 are Series D.  
Line 3 is Series D for AHEAD and Series C for all other distances.

| 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<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|-------|--------|--------|--------|--------|----|---|--------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 3 3/8 | 3 1/2 | 1 1/8 | 4     | 9 1/4  | 9 1/4  | 12 1/2 | 11     | 9  | 6 | 10 1/8 | 2 1/2 | 1 7/8 | 5 5/8 | 8      | 1 3/8 | 4 1/2 | 3 1/2 | 10 3/4 | 1 3/4 | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |

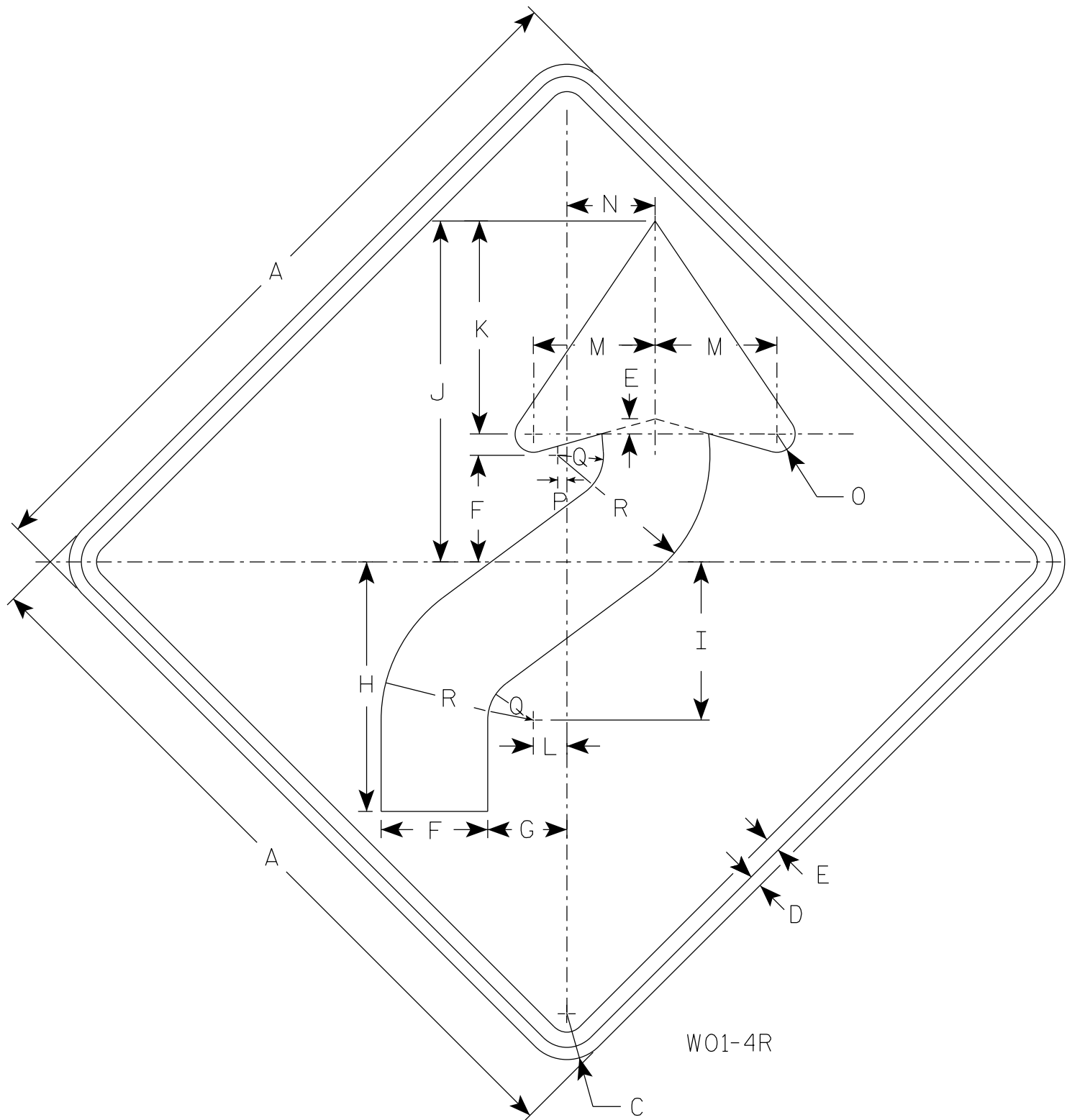
STANDARD SIGN  
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2





NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

| 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<br>sq. ft. |
|------|----|---|-------|-----|-----|-------|-------|--------|--------|--------|--------|-------|---|-------|-------|-----|-------|-------|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 1/4 | 4     | 12 3/8 | 7 7/8  | 16 7/8 | 10 1/2 | 1 5/8 | 6 | 4 1/2 | 1     | 1/2 | 2 1/4 | 7 1/2 |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN  
W01-4

WISCONSIN DEPT OF TRANSPORTATION

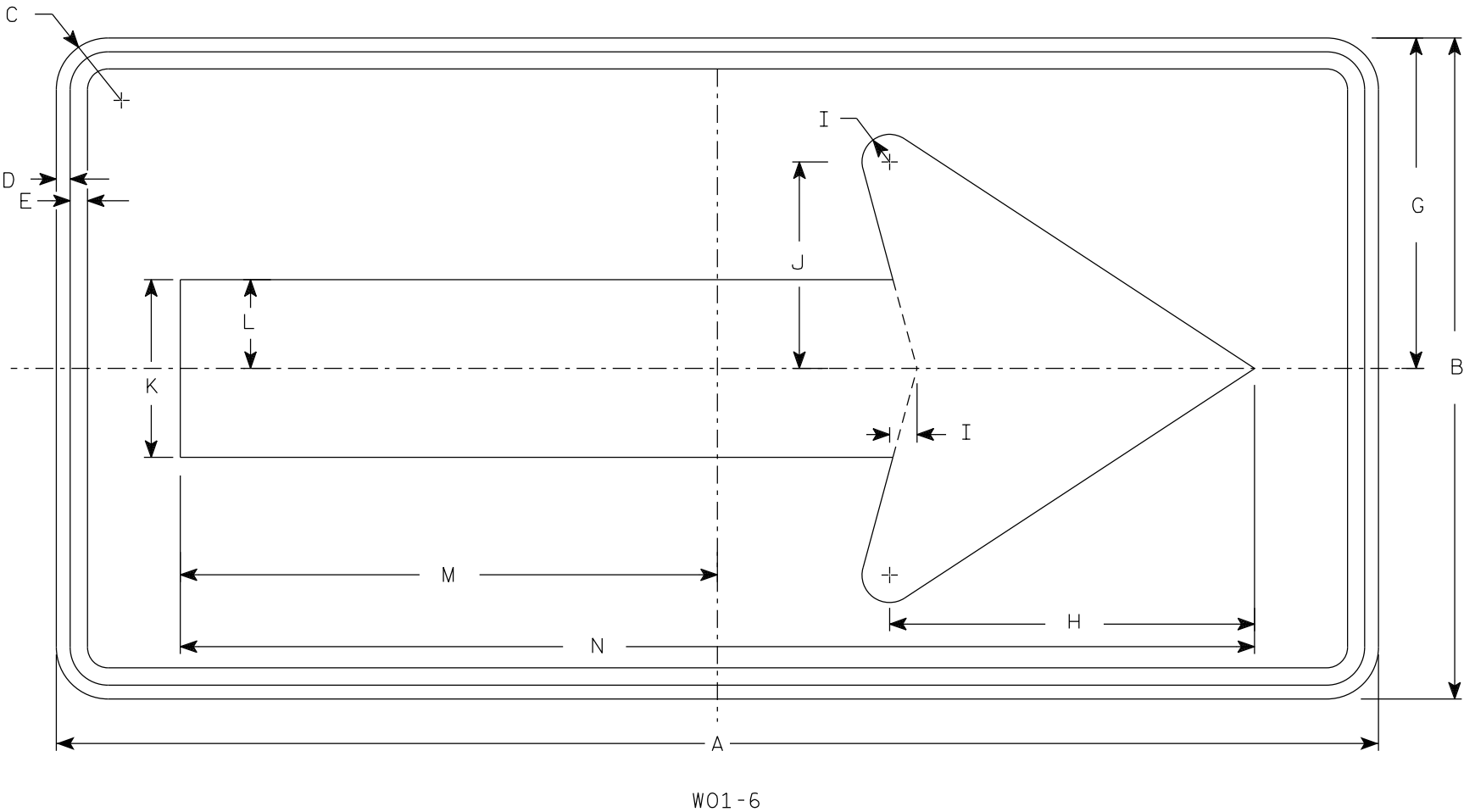
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 400 | E |
|-------------|------|---------|---------------|---|

7

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| 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<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|--------|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |    |        |       |       |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 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    | 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            |

STANDARD SIGN

W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

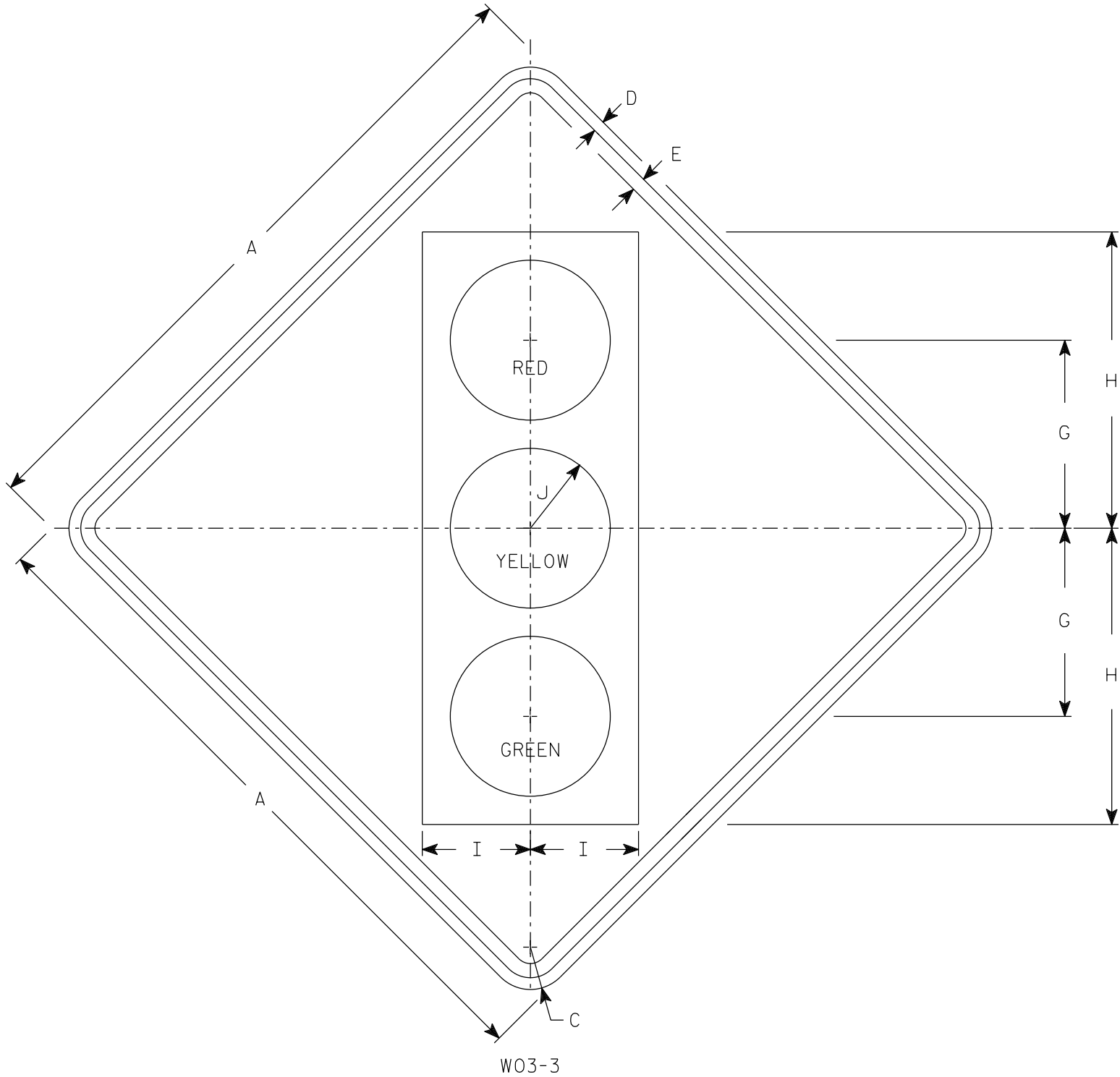
Matthew R. Rauch

for State Traffic Engineer

DATE 1/24/2024

PLATE NO. W01-6.2

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - 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. Symbol and border are non-reflective black.
  - Top circle - Type H Reflectorized Red
  - Center circle - Same as background
  - Bottom circle - Type H Reflectorized Green

7

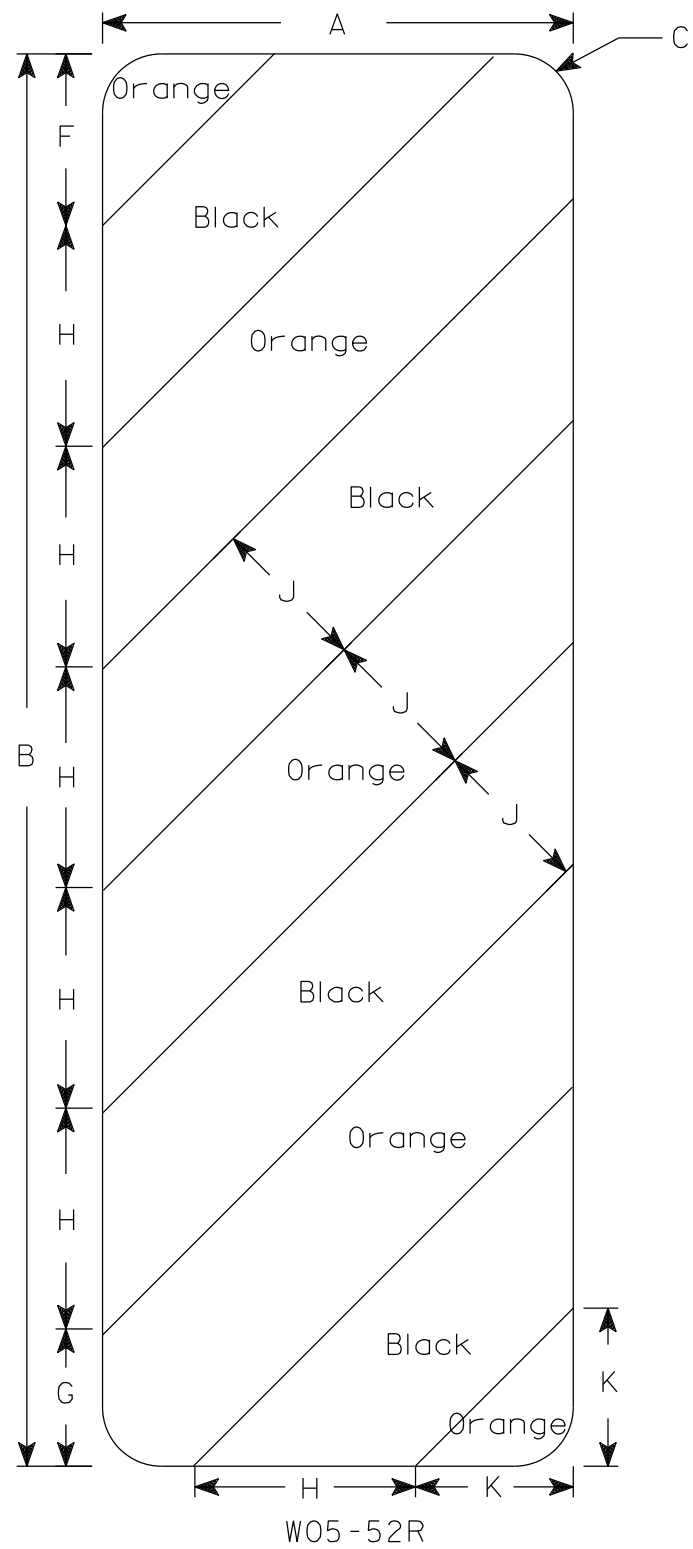
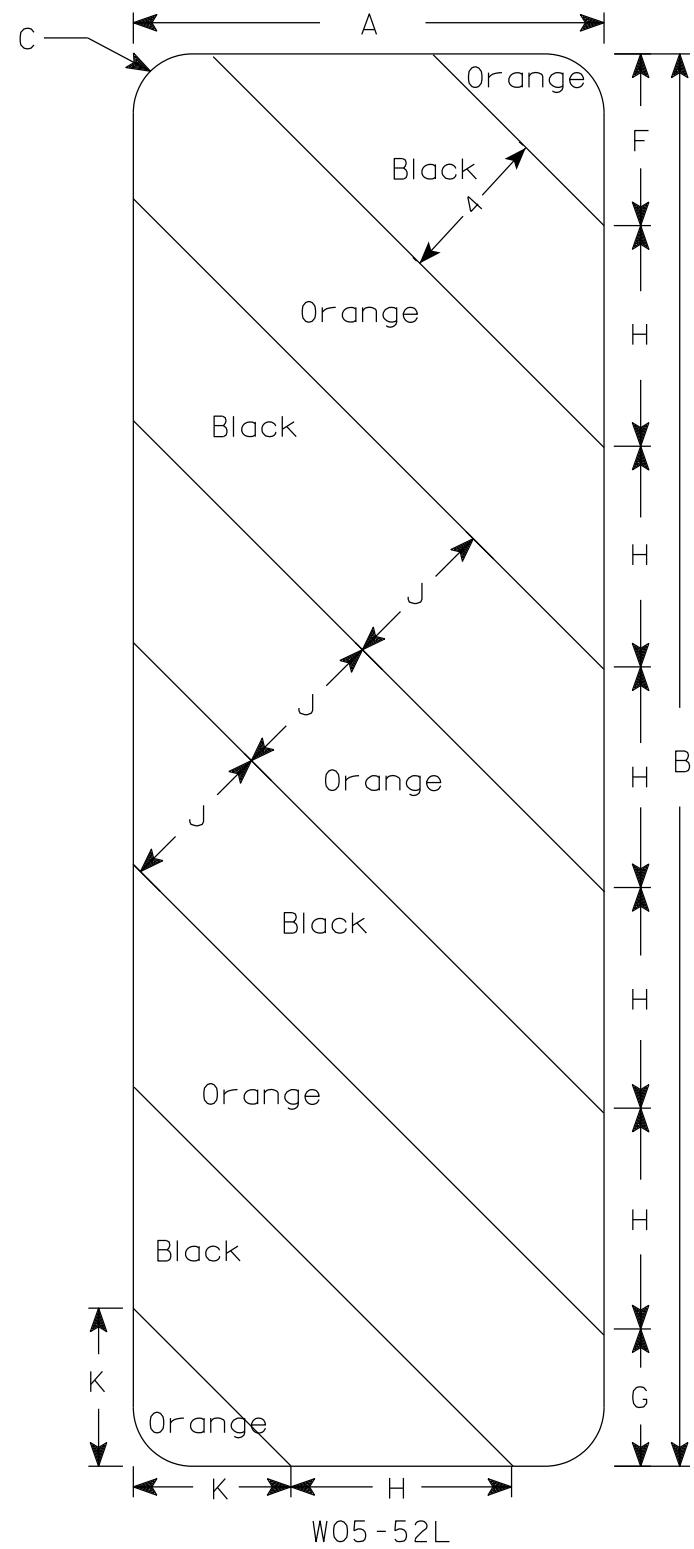
| SIZE | A  | B | C     | D   | E   | F | G      | H      | I     | J     | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|--------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|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

STANDARD SIGN  
W03-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. W03-3.2

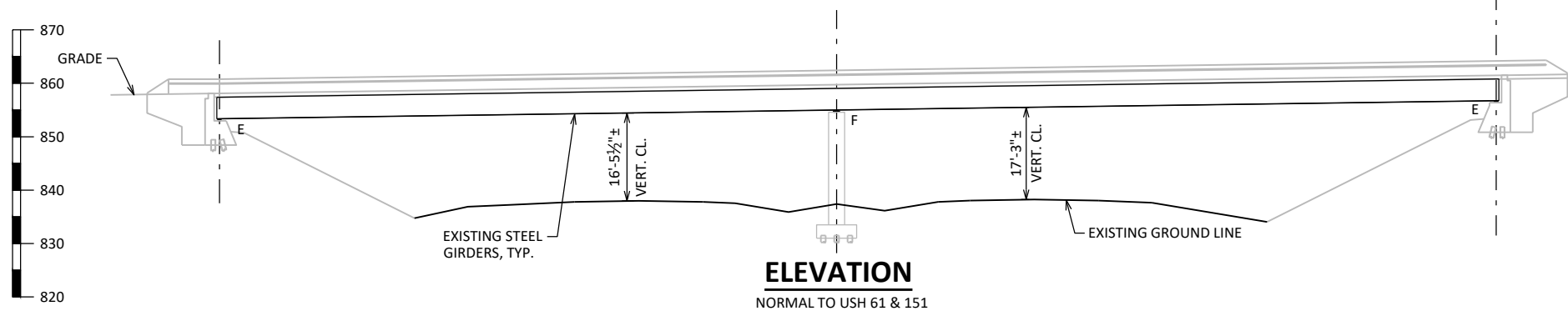
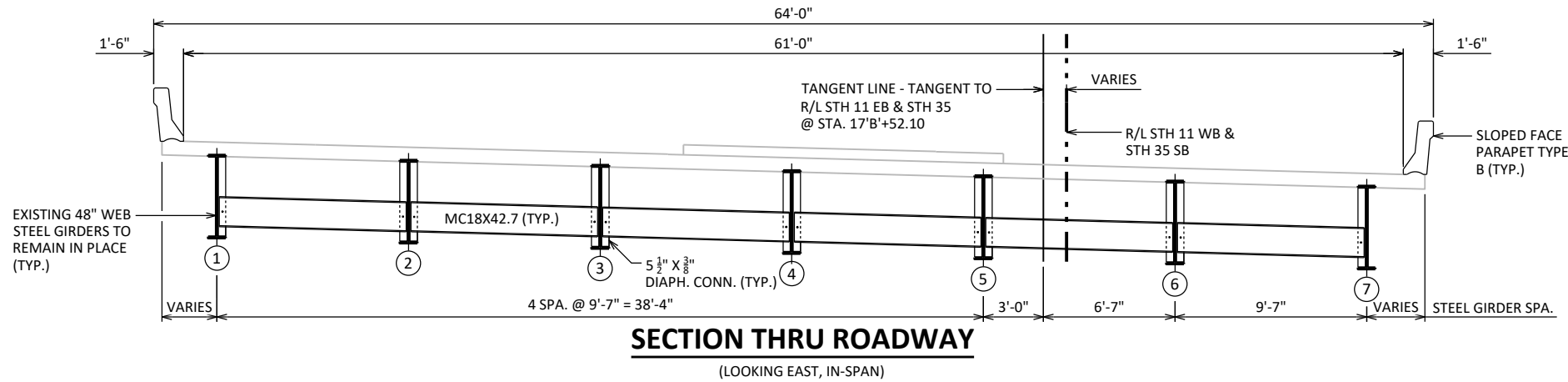
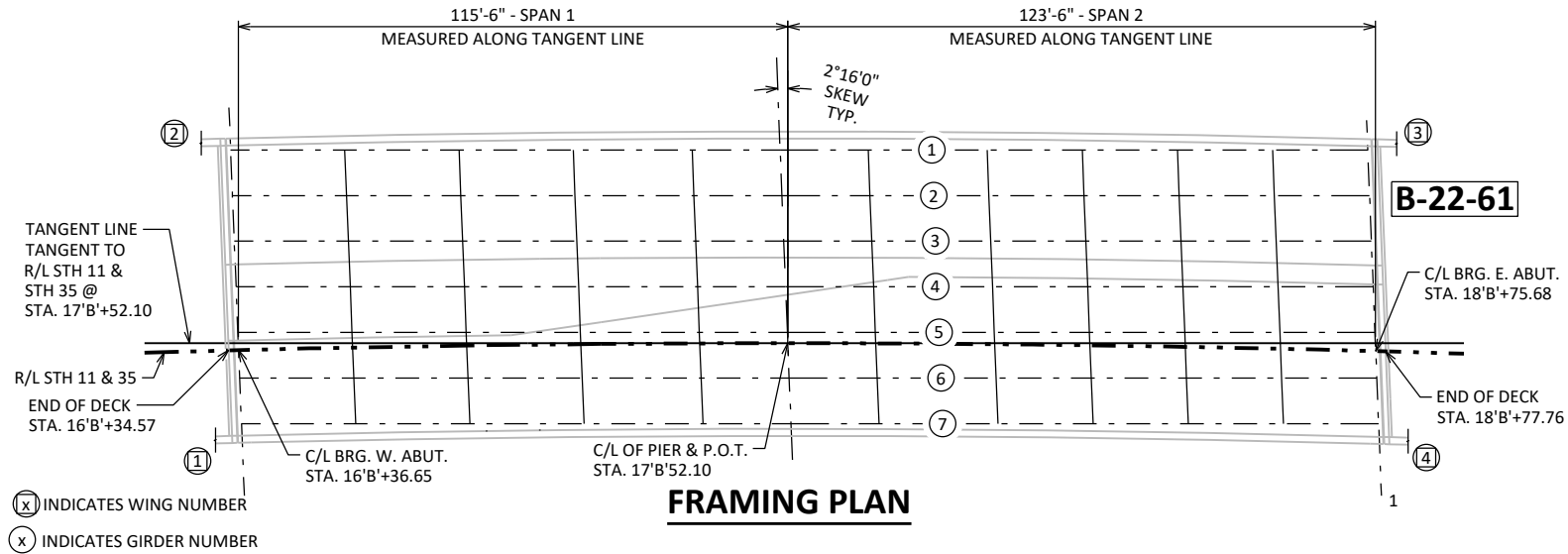


NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
4. Alternate colors of stripes as shown.

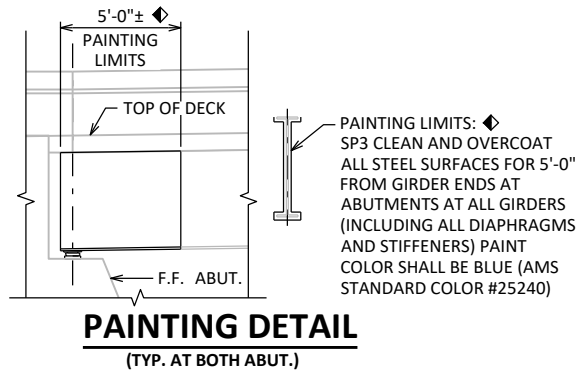
| SIZE | A  | B  | C     | D | E | F     | G     | H     | I   | J | K      | L | M | N | O | P | Q | R | S | T | U | v | W | X | Y | Z | Areg<br>sq. ft. |
|------|----|----|-------|---|---|-------|-------|-------|-----|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |   |   |       |       |       |     |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 12 | 36 | 1 1/2 |   |   | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 2M   | 12 | 36 | 1 1/2 |   |   | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 3    | 18 | 54 | 1 1/2 |   |   | 6     | 5 1/2 | 8 1/2 | 45° | 6 | 6 9/16 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.75            |
| 4    |    |    |       |   |   |       |       |       |     |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |   |   |       |       |       |     |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

|             |  |  |  |      |  |  |  |         |  |  |  |               |  |  |  |  |  |  |  |  |  |  |  |   |
|-------------|--|--|--|------|--|--|--|---------|--|--|--|---------------|--|--|--|--|--|--|--|--|--|--|--|---|
| PROJECT NO: |  |  |  | HWY: |  |  |  | COUNTY: |  |  |  | SHEET NO: 403 |  |  |  |  |  |  |  |  |  |  |  | E |
|-------------|--|--|--|------|--|--|--|---------|--|--|--|---------------|--|--|--|--|--|--|--|--|--|--|--|---|



### TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS                                             | UNIT | TOTALS |
|-----------------|-------------------------------------------------------|------|--------|
| 517.3001.S      | STRUCTURE OVERCOATING CLEANING AND PRIMING B-22-61    | EACH | 1      |
| 517.4001.S      | CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-22-61 | EACH | 1      |
| 517.6001.S      | PORTABLE DECONTAMINATION FACILITY                     | EACH | 1      |
| SPV.0060        | CLEANING AND PAINTING BEARINGS                        | EACH | 15     |
| SPV.0060        | BEARING MAINTENANCE B-22-61                           | EACH | 6      |



### EXISTING CURVE DATA

R/L STH 11 & 35  
P.I. = 17'B'+42.51  
Δ = 3° 39' 23.85"  
D = 1° 15' 00"  
T = 146.32'  
L = 292.53'  
R = 4583.66'  
S.E. = 0.027 1/2  
P.C. = 15'B'+96.19  
P.T. = 18'B'+88.73

### GIRDER REACTIONS AT BEARINGS (KIPS)

|                 |    | C/L BRG. W. ABUT. | C/L BRG. E. ABUT. |
|-----------------|----|-------------------|-------------------|
| INTERIOR GIRDER | DL | 60.4              | 69.4              |
|                 | LL | 169.7             | 172.2             |
| EXTERIOR GIRDER | DL | 60.0              | 68.9              |
|                 | LL | 115.4             | 117.2             |

THE THEORETICAL SERVICE LOADS (UNFACTORED) SHOWN IN THE TABLE ARE BASED ON THE BRIDGE IN ITS FINAL CONFIGURATION. ADDITIONAL LOADS RESULTING FROM STAGING AND/OR CONTRACTOR OPERATIONS, SUCH AS UNEVEN JACKING OF ADJACENT GIRDERS OR ADJACENT SUBSTRUCTURE UNITS, IS NOT INCLUDED.

THE LL REACTIONS ARE BASED ON HS-20 AND INCLUDE IMPACT.

EXTERIOR GIRDER DEAD LOAD REACTIONS WERE INCREASED BY 10% TO ACCOUNT FOR VARIABILITY IN COMPOSITE DL DISTRIBUTION METHODS.

IS IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ADEQUACY OF THE GIRDER AT THE JACKING LOCATION.

STATE PROJECT NUMBER

1202-00-75

### GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE COLOR OF THE FINISH EPOXY COAT SHALL BE BLUE (AMS STANDARD COLOR #25240) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

CLEANING AND PAINTING BEARINGS AND BEARING MAINTENANCE FINISH COLOR IS TO BE BLUE (AMS STANDARD COLOR #25240) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

### SCOPE OF WORK

CLEAN AND PAINT ALL EXISTING EXPOSED SUPERSTRUCTURE STEEL WITHIN 5'-0" OF THE ENDS OF GIRDERS (ABUTMENT ENDS ONLY).

SPOT PAINTING GIRDERS AT LOCATIONS DIRECTED BY ENGINEER

BEARINGS 1, 3, 5, 6 & 7 ON WEST ABUTMENT AND BEARING 3 ON EAST ABUTMENT TO BE REMOVED, CLEANED, REPAINTED AND REINSTALLED PER THE BEARING MAINTENANCE SPV. REMAINING ABUTMENT & PIER BEARINGS TO BE CLEANED AND REPAINTED PER THE CLEANING AND PAINTING BEARINGS SPV.

### DESIGN DATA

#### LIVE LOAD:

DESIGN LOADING: HS-20  
INVENTORY RATING: HS = 25  
OPERATING RATING: HS = 42  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)  
(RATINGS TAKEN FROM OVERLAY PLANS, 1/10/13)

### TRAFFIC DATA

#### STH 11 & STH 35:

ADT = 10,100 (2045)  
R.D.S. = 60 MPH

#### USH 61/151:

ADT = 32,100 (2045)  
R.D.S. = 70 MPH

### LIST OF DRAWINGS:

1. PAINTING DETAILS

#### STRUCTURE DESIGN CONTACTS:

ANN THIELMANN 608-261-0375  
DOMINIQUE BECHLE 608-261-8205

| NO.                                                                                                               | DATE  | REVISION                         | BY                  |
|-------------------------------------------------------------------------------------------------------------------|-------|----------------------------------|---------------------|
|                                                                                                                   |       |                                  |                     |
|  <b>BUREAU OF STRUCTURES</b> |       |                                  |                     |
| ACCEPTED                                                                                                          |       | CHIEF STRUCTURES DESIGN ENGINEER |                     |
|                                                                                                                   |       | DATE                             |                     |
| STRUCTURE B-22-61                                                                                                 |       |                                  |                     |
| STH 11 & STH 35 OVER USH 61/151                                                                                   |       |                                  |                     |
| COUNTY                                                                                                            | GRANT | TOWN                             | JAMESTOWN           |
| DESIGN SPEC. N/A - REHABILITATION                                                                                 |       |                                  |                     |
| DESIGNED BY                                                                                                       | ACT   | DESIGN CK'D                      | DMB                 |
| DRAWN BY                                                                                                          | ACT   | PLANS CK'D                       | DMB                 |
| PAINTING DETAILS                                                                                                  |       |                                  | SHEET 1 OF 1<br>404 |

I.D. 1202-00-05A

DATE: MARCH 2025

| DIVISION 1 - USH 61-151 NB |              |          |           |                                     |      |                                   |                                     |      |                     |                    |              |
|----------------------------|--------------|----------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|------|---------------------|--------------------|--------------|
| STATION                    | REAL STATION | DISTANCE | AREA (SF) |                                     |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |      | CUMULATIVE VOL (CY) |                    |              |
|                            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00<br>NOTE 1  | EXPANDED FILL 1.25 | MASS ORDNATE |
|                            |              |          |           |                                     |      |                                   |                                     |      |                     |                    |              |
| 99+83.29                   | 9983.29      | 0.00     | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                   | 0                  | 0            |
| 100+50.00                  | 10050.00     | 66.71    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                   | 0                  | 0            |
| 101+00.00                  | 10100.00     | 50.00    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                   | 0                  | 0            |
| 102+00.00                  | 10200.00     | 100.00   | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                   | 0                  | 0            |
| 102+19.24                  | 10219.24     | 19.24    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                   | 0                  | 0            |
| 103+00.00                  | 10300.00     | 80.76    | 0.00      | 0.00                                | 1.98 | 0                                 | 0                                   | 3    | 0                   | 4                  | -4           |
| 104+00.00                  | 10400.00     | 100.00   | 0.00      | 0.00                                | 2.04 | 0                                 | 0                                   | 7    | 0                   | 13                 | -13          |
| 105+00.00                  | 10500.00     | 100.00   | 0.00      | 0.00                                | 1.87 | 0                                 | 0                                   | 7    | 0                   | 21                 | -21          |
| 106+00.00                  | 10600.00     | 100.00   | 0.00      | 0.00                                | 0.95 | 0                                 | 0                                   | 5    | 0                   | 28                 | -28          |
| 107+00.00                  | 10700.00     | 100.00   | 0.00      | 0.00                                | 0.38 | 0                                 | 0                                   | 2    | 0                   | 30                 | -30          |
| 107+29.31                  | 10729.31     | 29.31    | 0.00      | 0.00                                | 0.11 | 0                                 | 0                                   | 0    | 0                   | 30                 | -30          |
| 107+82.19                  | 10782.19     | 52.88    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                   | 30                 | -30          |
| 108+21.27                  | 10821.27     | 39.08    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                   | 30                 | -30          |

| DIVISION 1 - USH 61-151 NB |              |          |           |                                     |       |                                   |                                     |      |                     |                    |              |
|----------------------------|--------------|----------|-----------|-------------------------------------|-------|-----------------------------------|-------------------------------------|------|---------------------|--------------------|--------------|
| STATION                    | REAL STATION | DISTANCE | AREA (SF) |                                     |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |      | CUMULATIVE VOL (CY) |                    |              |
|                            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT 1.00<br>NOTE 1  | EXPANDED FILL 1.25 | MASS ORDNATE |
|                            |              |          |           |                                     |       |                                   |                                     |      |                     |                    |              |
| 210+66.89                  | 21066.89     | 0.00     | 3.73      | 0.00                                | 2.24  | 0                                 | 0                                   | 0    | 0                   | 0                  | 0            |
| 211+00.00                  | 21100.00     | 33.11    | 0.50      | 0.00                                | 10.41 | 3                                 | 0                                   | 8    | 3                   | 10                 | -7           |
| 211+24.64                  | 21124.64     | 24.64    | 0.00      | 0.00                                | 16.74 | 0                                 | 0                                   | 12   | 3                   | 25                 | -22          |
| 212+00.00                  | 21200.00     | 75.36    | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 23   | 3                   | 54                 | -51          |
| 213+00.00                  | 21300.00     | 100.00   | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0    | 3                   | 54                 | -51          |
| 214+00.00                  | 21400.00     | 100.00   | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0    | 3                   | 54                 | -51          |
| 214+03.16                  | 21403.16     | 3.16     | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0    | 3                   | 54                 | -51          |
| 214+79.26                  | 21479.26     | 76.10    | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0    | 3                   | 54                 | -51          |
| 215+00.00                  | 21500.00     | 20.74    | 0.00      | 0.00                                | 0.02  | 0                                 | 0                                   | 0    | 3                   | 54                 | -51          |
| 216+00.00                  | 21600.00     | 100.00   | 0.00      | 0.00                                | 0.25  | 0                                 | 0                                   | 1    | 3                   | 55                 | -52          |
| 217+00.00                  | 21700.00     | 100.00   | 0.00      | 0.00                                | 0.11  | 0                                 | 0                                   | 1    | 3                   | 56                 | -53          |
| 217+39.85                  | 21739.85     | 39.85    | 1.62      | 0.00                                | 0.00  | 1                                 | 0                                   | 0    | 4                   | 56                 | -52          |
| 218+00.00                  | 21800.00     | 60.15    | 1.43      | 0.00                                | 5.56  | 3                                 | 0                                   | 6    | 7                   | 64                 | -57          |
| 219+00.00                  | 21900.00     | 100.00   | 5.50      | 0.00                                | 0.00  | 13                                | 0                                   | 10   | 20                  | 76                 | -56          |
| 220+00.00                  | 22000.00     | 100.00   | 1.42      | 0.00                                | 0.00  | 13                                | 0                                   | 0    | 33                  | 76                 | -43          |
| 220+61.86                  | 22061.86     | 61.86    | 0.00      | 0.00                                | 1.06  | 2                                 | 0                                   | 1    | 35                  | 78                 | -43          |

| NOTES:                                  |                                                  |
|-----------------------------------------|--------------------------------------------------|
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |



DIVISION 1 - USH 61-151 NB

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY)   |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|-------|-----------------------------------|----------------------------------------|--------|-----------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |       |                                   |                                        |        |                       |                       |              |
|           |              |          |           |                                        |       | NOTE 1                            | NOTE 2                                 | NOTE 3 |                       |                       |              |
| 223+00.00 | 22300.00     | 0.00     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                     | 0                     | 0            |
| 223+57.45 | 22357.45     | 57.45    | 0.00      | 0.00                                   | 1.71  | 0                                 | 0                                      | 2      | 0                     | 3                     | -3           |
| 223+97.47 | 22397.47     | 40.02    | 0.00      | 0.00                                   | 8.82  | 0                                 | 0                                      | 8      | 0                     | 13                    | -13          |
| 224+00.00 | 22400.00     | 2.53     | 0.00      | 0.00                                   | 8.45  | 0                                 | 0                                      | 1      | 0                     | 14                    | -14          |
| 224+22.49 | 22422.49     | 22.49    | 0.00      | 0.00                                   | 2.40  | 0                                 | 0                                      | 5      | 0                     | 20                    | -20          |
| 224+47.41 | 22447.41     | 24.92    | 0.00      | 0.00                                   | 4.12  | 0                                 | 0                                      | 3      | 0                     | 24                    | -24          |
| 224+70.40 | 22470.40     | 22.99    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 2      | 0                     | 26                    | -26          |
| 225+00.00 | 22500.00     | 29.60    | 0.00      | 0.00                                   | 13.56 | 0                                 | 0                                      | 7      | 0                     | 35                    | -35          |
| 226+00.00 | 22600.00     | 100.00   | 0.00      | 0.00                                   | 1.38  | 0                                 | 0                                      | 28     | 0                     | 70                    | -70          |
| 227+00.00 | 22700.00     | 100.00   | 0.00      | 0.00                                   | 1.26  | 0                                 | 0                                      | 5      | 0                     | 76                    | -76          |
| 227+46.63 | 22746.63     | 46.63    | 0.00      | 0.00                                   | 0.57  | 0                                 | 0                                      | 2      | 0                     | 79                    | -79          |
| 228+00.00 | 22800.00     | 53.37    | 0.00      | 0.00                                   | 1.26  | 0                                 | 0                                      | 2      | 0                     | 81                    | -81          |
| 228+06.63 | 22806.63     | 6.63     | 0.00      | 0.00                                   | 1.29  | 0                                 | 0                                      | 0      | 0                     | 81                    | -81          |
| 228+66.63 | 22866.63     | 60.00    | 0.00      | 0.00                                   | 1.39  | 0                                 | 0                                      | 3      | 0                     | 85                    | -85          |
| 229+00.00 | 22900.00     | 33.37    | 0.00      | 0.00                                   | 1.53  | 0                                 | 0                                      | 2      | 0                     | 88                    | -88          |
| 229+10.63 | 22910.63     | 10.63    | 0.00      | 0.00                                   | 1.64  | 0                                 | 0                                      | 1      | 0                     | 89                    | -89          |
| 229+26.63 | 22926.63     | 16.00    | 0.00      | 0.00                                   | 1.72  | 0                                 | 0                                      | 1      | 0                     | 90                    | -90          |
| 229+62.63 | 22962.63     | 36.00    | 0.00      | 0.00                                   | 1.72  | 0                                 | 0                                      | 2      | 0                     | 93                    | -93          |
| 230+00.00 | 23000.00     | 37.37    | 0.00      | 0.00                                   | 1.46  | 0                                 | 0                                      | 2      | 0                     | 95                    | -95          |
| 231+00.00 | 23100.00     | 100.00   | 0.00      | 0.00                                   | 2.78  | 0                                 | 0                                      | 8      | 0                     | 105                   | -105         |
| 232+00.00 | 23200.00     | 100.00   | 0.00      | 0.00                                   | 2.55  | 0                                 | 0                                      | 10     | 0                     | 118                   | -118         |
| 233+00.00 | 23300.00     | 100.00   | 0.00      | 0.00                                   | 1.51  | 0                                 | 0                                      | 8      | 0                     | 128                   | -128         |
| 233+02.82 | 23302.82     | 2.82     | 0.00      | 0.00                                   | 1.51  | 0                                 | 0                                      | 0      | 0                     | 128                   | -128         |
| 234+00.00 | 23400.00     | 97.18    | 0.00      | 0.00                                   | 0.54  | 0                                 | 0                                      | 4      | 0                     | 133                   | -133         |
| 234+12.60 | 23412.60     | 12.60    | 0.00      | 0.00                                   | 0.48  | 0                                 | 0                                      | 0      | 0                     | 133                   | -133         |
| 234+37.69 | 23437.69     | 25.09    | 0.00      | 0.00                                   | 0.35  | 0                                 | 0                                      | 0      | 0                     | 133                   | -133         |
| 234+62.70 | 23462.70     | 25.01    | 0.00      | 0.00                                   | 0.19  | 0                                 | 0                                      | 0      | 0                     | 133                   | -133         |
| 235+00.00 | 23500.00     | 37.30    | 0.00      | 0.00                                   | 0.22  | 0                                 | 0                                      | 0      | 0                     | 133                   | -133         |
| 236+00.00 | 23600.00     | 100.00   | 0.00      | 0.00                                   | 2.20  | 0                                 | 0                                      | 4      | 0                     | 138                   | -138         |
| 236+65.40 | 23665.40     | 65.40    | 0.00      | 0.00                                   | 2.49  | 0                                 | 0                                      | 6      | 0                     | 145                   | -145         |
| 236+72.41 | 23672.41     | 7.01     | 0.00      | 0.00                                   | 2.91  | 0                                 | 0                                      | 1      | 0                     | 146                   | -146         |
| 237+00.00 | 23700.00     | 27.59    | 0.00      | 0.00                                   | 7.71  | 0                                 | 0                                      | 5      | 0                     | 153                   | -153         |
| 237+00.77 | 23700.77     | 0.77     | 0.00      | 0.00                                   | 7.89  | 0                                 | 0                                      | 0      | 0                     | 153                   | -153         |

DIVISION 1 - USH 61-151 NB

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY)   |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|-------|-----------------------------------|----------------------------------------|--------|-----------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |       |                                   |                                        |        |                       |                       |              |
|           |              |          |           |                                        |       | NOTE 1                            | NOTE 2                                 | NOTE 3 |                       |                       |              |
| 238+66.31 | 23866.31     | 0.00     | 0.00      | 0.00                                   | 8.93  | 0                                 | 0                                      | 0      | 0                     | 0                     | 0            |
| 239+00.00 | 23900.00     | 33.69    | 0.00      | 0.00                                   | 15.09 | 0                                 | 0                                      | 15     | 0                     | 19                    | -19          |
| 239+68.97 | 23968.97     | 68.97    | 0.00      | 0.00                                   | 19.47 | 0                                 | 0                                      | 44     | 0                     | 74                    | -74          |
| 240+00.00 | 24000.00     | 31.03    | 0.00      | 0.00                                   | 7.18  | 0                                 | 0                                      | 15     | 0                     | 93                    | -93          |
| 241+00.00 | 24100.00     | 100.00   | 0.00      | 0.00                                   | 5.95  | 0                                 | 0                                      | 24     | 0                     | 123                   | -123         |
| 241+03.23 | 24103.23     | 3.23     | 0.00      | 0.00                                   | 5.83  | 0                                 | 0                                      | 1      | 0                     | 124                   | -124         |
| 242+00.00 | 24200.00     | 96.77    | 0.00      | 0.00                                   | 3.11  | 0                                 | 0                                      | 16     | 0                     | 144                   | -144         |
| 243+00.00 | 24300.00     | 100.00   | 0.00      | 0.00                                   | 2.60  | 0                                 | 0                                      | 11     | 0                     | 158                   | -158         |
| 244+00.00 | 24400.00     | 100.00   | 0.00      | 0.00                                   | 1.63  | 0                                 | 0                                      | 8      | 0                     | 168                   | -168         |
| 245+00.00 | 24500.00     | 100.00   | 0.00      | 0.00                                   | 1.55  | 0                                 | 0                                      | 6      | 0                     | 175                   | -175         |
| 246+00.00 | 24600.00     | 100.00   | 0.00      | 0.00                                   | 2.80  | 0                                 | 0                                      | 8      | 0                     | 185                   | -185         |
| 246+70.38 | 24670.38     | 70.38    | 0.00      | 0.00                                   | 0.42  | 0                                 | 0                                      | 4      | 0                     | 190                   | -190         |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

DIVISION 1 - USH 61-151 NB

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY) |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|-------|-----------------------------------|----------------------------------------|--------|---------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00         | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |       |                                   |                                        |        |                     |                       |              |
|           |              |          |           |                                        |       | NOTE 1                            | NOTE 2                                 | NOTE 3 | NOTE 1              |                       |              |
| 256+85.38 | 25685.38     | 0.00     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 256+95.68 | 25695.68     | 10.30    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 257+00.00 | 25700.00     | 4.32     | 0.00      | 0.00                                   | 0.02  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 257+59.75 | 25759.75     | 59.75    | 0.00      | 0.00                                   | 0.66  | 0                                 | 0                                      | 1      | 0                   | 1                     | -1           |
| 257+99.77 | 25799.77     | 40.02    | 0.00      | 0.00                                   | 1.52  | 0                                 | 0                                      | 2      | 0                   | 4                     | -4           |
| 258+00.00 | 25800.00     | 0.23     | 0.00      | 0.00                                   | 1.49  | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 258+24.73 | 25824.73     | 24.73    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 1      | 0                   | 5                     | -5           |
| 258+24.79 | 25824.79     | 0.06     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 5                     | -5           |
| 258+49.77 | 25849.77     | 24.98    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 5                     | -5           |
| 259+00.00 | 25900.00     | 50.23    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 5                     | -5           |
| 259+63.40 | 25963.40     | 63.40    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 5                     | -5           |
| 259+91.84 | 25991.84     | 28.44    | 0.00      | 0.00                                   | 0.07  | 0                                 | 0                                      | 0      | 0                   | 5                     | -5           |
| 260+00.00 | 26000.00     | 8.16     | 0.00      | 0.00                                   | 0.87  | 0                                 | 0                                      | 0      | 0                   | 5                     | -5           |
| 260+23.40 | 26023.40     | 23.40    | 0.64      | 0.00                                   | 4.78  | 0                                 | 0                                      | 2      | 0                   | 8                     | -8           |
| 260+50.00 | 26050.00     | 26.60    | 0.00      | 0.00                                   | 15.38 | 0                                 | 0                                      | 10     | 0                   | 20                    | -20          |
| 260+83.40 | 26083.40     | 33.40    | 0.00      | 0.00                                   | 14.30 | 0                                 | 0                                      | 18     | 0                   | 43                    | -43          |
| 261+00.00 | 26100.00     | 16.60    | 0.00      | 0.00                                   | 11.88 | 0                                 | 0                                      | 8      | 0                   | 53                    | -53          |
| 261+43.40 | 26143.40     | 43.40    | 0.00      | 0.00                                   | 6.24  | 0                                 | 0                                      | 15     | 0                   | 71                    | -71          |
| 261+43.41 | 26143.41     | 0.01     | 0.00      | 0.00                                   | 6.24  | 0                                 | 0                                      | 0      | 0                   | 71                    | -71          |
| 262+00.00 | 26200.00     | 56.59    | 0.00      | 0.00                                   | 1.89  | 0                                 | 0                                      | 9      | 0                   | 83                    | -83          |
| 262+03.40 | 26203.40     | 3.40     | 0.00      | 0.00                                   | 1.78  | 0                                 | 0                                      | 0      | 0                   | 83                    | -83          |
| 263+00.00 | 26300.00     | 96.60    | 0.00      | 0.00                                   | 2.30  | 0                                 | 0                                      | 7      | 0                   | 91                    | -91          |
| 264+00.00 | 26400.00     | 100.00   | 0.00      | 0.00                                   | 2.24  | 0                                 | 0                                      | 8      | 0                   | 101                   | -101         |
| 265+00.00 | 26500.00     | 100.00   | 0.00      | 0.00                                   | 0.95  | 0                                 | 0                                      | 6      | 0                   | 109                   | -109         |
| 266+00.00 | 26600.00     | 100.00   | 0.00      | 0.00                                   | 0.30  | 0                                 | 0                                      | 2      | 0                   | 111                   | -111         |
| 266+53.99 | 26653.99     | 53.99    | 0.00      | 0.00                                   | 1.00  | 0                                 | 0                                      | 1      | 0                   | 113                   | -113         |
| 267+00.00 | 26700.00     | 46.01    | 0.00      | 0.00                                   | 0.46  | 0                                 | 0                                      | 1      | 0                   | 114                   | -114         |
| 267+46.27 | 26746.27     | 46.27    | 0.00      | 0.00                                   | 0.43  | 0                                 | 0                                      | 1      | 0                   | 115                   | -115         |
| 267+68.38 | 26768.38     | 22.11    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 115                   | -115         |

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| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY) |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|-------|-----------------------------------|----------------------------------------|--------|---------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00         | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |       |                                   |                                        |        |                     |                       |              |
|           |              |          |           |                                        |       | NOTE 1                            | NOTE 2                                 | NOTE 3 | NOTE 1              |                       |              |
| 278+93.45 | 27893.45     | 0.00     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 279+00.00 | 27900.00     | 6.55     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 279+58.29 | 27958.29     | 58.29    | 0.00      | 0.00                                   | 0.08  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 279+97.48 | 27997.48     | 39.19    | 0.00      | 0.00                                   | 4.16  | 0                                 | 0                                      | 3      | 0                   | 4                     | -4           |
| 280+00.00 | 28000.00     | 2.52     | 0.00      | 0.00                                   | 3.62  | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 280+22.23 | 28022.23     | 22.23    | 0.00      | 0.00                                   | 0.57  | 0                                 | 0                                      | 2      | 0                   | 6                     | -6           |
| 280+46.96 | 28046.96     | 24.73    | 0.00      | 0.00                                   | 0.06  | 0                                 | 0                                      | 0      | 0                   | 6                     | -6           |
| 281+00.00 | 28100.00     | 53.04    | 0.00      | 0.00                                   | 0.04  | 0                                 | 0                                      | 0      | 0                   | 6                     | -6           |
| 281+25.00 | 28125.00     | 25.00    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 6                     | -6           |
| 281+60.41 | 28160.41     | 35.41    | 0.00      | 0.00                                   | 0.03  | 0                                 | 0                                      | 0      | 0                   | 6                     | -6           |
| 282+00.00 | 28200.00     | 39.59    | 0.00      | 0.00                                   | 0.23  | 0                                 | 0                                      | 0      | 0                   | 6                     | -6           |
| 283+00.00 | 28300.00     | 100.00   | 0.00      | 0.00                                   | 0.19  | 0                                 | 0                                      | 1      | 0                   | 8                     | -8           |
| 283+63.95 | 28363.95     | 63.95    | 0.00      | 0.00                                   | 0.46  | 0                                 | 0                                      | 1      | 0                   | 9                     | -9           |
| 284+00.00 | 28400.00     | 36.05    | 0.00      | 0.00                                   | 0.37  | 0                                 | 0                                      | 1      | 0                   | 10                    | -10          |
| 285+00.00 | 28500.00     | 100.00   | 0.00      | 0.00                                   | 0.91  | 0                                 | 0                                      | 2      | 0                   | 13                    | -13          |
| 286+00.00 | 28600.00     | 100.00   | 0.00      | 0.00                                   | 4.32  | 0                                 | 0                                      | 10     | 0                   | 25                    | -25          |
| 286+57.94 | 28657.94     | 57.94    | 0.00      | 0.00                                   | 12.41 | 0                                 | 0                                      | 18     | 0                   | 48                    | -48          |
| 287+00.00 | 28700.00     | 42.06    | 0.00      | 0.00                                   | 4.56  | 0                                 | 0                                      | 13     | 0                   | 64                    | -64          |
| 287+33.32 | 28733.32     | 33.32    | 0.00      | 0.00                                   | 5.25  | 0                                 | 0                                      | 6      | 0                   | 71                    | -71          |
| 288+00.00 | 28800.00     | 66.68    | 0.00      | 0.00                                   | 1.68  | 0                                 | 0                                      | 9      | 0                   | 83                    | -83          |
| 289+00.00 | 28900.00     | 100.00   | 0.00      | 0.00                                   | 0.36  | 0                                 | 0                                      | 4      | 0                   | 88                    | -88          |
| 289+49.70 | 28949.70     | 49.70    | 0.00      | 0.00                                   | 0.56  | 0                                 | 0                                      | 1      | 0                   | 89                    | -89          |
| 289+89.73 | 28989.73     | 40.03    | 0.00      | 0.00                                   | 0.03  | 0                                 | 0                                      | 0      | 0                   | 89                    | -89          |
| 289+94.70 | 28994.70     | 4.97     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 89                    | -89          |
| 290+00.00 | 29000.00     | 5.30     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 89                    | -89          |
| 290+04.70 | 29004.70     | 4.70     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 89                    | -89          |
| 290+26.03 | 29026.03     | 21.33    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 89                    | -89          |
| 290+31.00 | 29031.00     | 4.97     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 89                    | -89          |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |



DIVISION 1 - USH 61 NB RAMP STH 11

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                        |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY) |                       |              |
|------------|--------------|----------|-----------|----------------------------------------|-------|-----------------------------------|----------------------------------------|--------|---------------------|-----------------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00         | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|            |              |          |           |                                        |       |                                   |                                        |        |                     |                       |              |
|            |              |          |           |                                        |       | NOTE 1                            | NOTE 2                                 | NOTE 3 | NOTE 1              |                       |              |
| 147+14.65E | 14714.65     | 0.00     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 147+78.37E | 14778.37     | 63.72    | 0.00      | 0.00                                   | 0.01  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 148+00.00E | 14800.00     | 21.63    | 0.00      | 0.00                                   | 0.24  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 148+33.72E | 14833.72     | 33.72    | 0.00      | 0.00                                   | 1.31  | 0                                 | 0                                      | 1      | 0                   | 1                     | -1           |
| 148+58.77E | 14858.77     | 25.05    | 0.00      | 0.00                                   | 0.93  | 0                                 | 0                                      | 1      | 0                   | 3                     | -3           |
| 148+83.69E | 14883.69     | 24.92    | 0.00      | 0.00                                   | 0.15  | 0                                 | 0                                      | 0      | 0                   | 3                     | -3           |
| 148+88.65E | 14888.65     | 4.96     | 0.00      | 0.00                                   | 0.01  | 0                                 | 0                                      | 0      | 0                   | 3                     | -3           |
| 149+00.00E | 14900.00     | 11.35    | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 3                     | -3           |
| 149+50.00E | 14950.00     | 50.00    | 0.00      | 0.00                                   | 0.02  | 0                                 | 0                                      | 0      | 0                   | 3                     | -3           |
| 149+67.72E | 14967.72     | 17.72    | 0.00      | 0.00                                   | 11.51 | 0                                 | 0                                      | 4      | 0                   | 8                     | -8           |
| 150+00.00E | 15000.00     | 32.28    | 0.00      | 0.00                                   | 6.85  | 0                                 | 0                                      | 11     | 0                   | 21                    | -21          |
| 150+14.45E | 15014.45     | 14.45    | 0.00      | 0.00                                   | 6.09  | 0                                 | 0                                      | 3      | 0                   | 25                    | -25          |
| 151+00.00E | 15100.00     | 85.55    | 0.00      | 0.00                                   | 2.36  | 0                                 | 0                                      | 13     | 0                   | 41                    | -41          |
| 152+00.00E | 15200.00     | 100.00   | 0.00      | 0.00                                   | 0.04  | 0                                 | 0                                      | 4      | 0                   | 46                    | -46          |
| 152+00.56E | 15200.56     | 0.56     | 0.00      | 0.00                                   | 0.00  | 0                                 | 0                                      | 0      | 0                   | 46                    | -46          |

DIVISION 1 - USH 61-151 SB

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY) |                       |              |
|------------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|--------|---------------------|-----------------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00         | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|            |              |          |           |                                        |      |                                   |                                        |        |                     |                       |              |
|            |              |          |           |                                        |      | NOTE 1                            | NOTE 2                                 | NOTE 3 | NOTE 1              |                       |              |
| 100+61.54A | 10061.54     | 0.00     | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 101+25.25A | 10125.25     | 63.71    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 102+00.00A | 10200.00     | 74.75    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 102+44.85A | 10244.85     | 44.85    | 0.00      | 0.00                                   | 0.01 | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 103+00.00A | 10300.00     | 55.15    | 0.00      | 0.00                                   | 0.39 | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 104+00.00A | 10400.00     | 100.00   | 0.00      | 0.00                                   | 0.49 | 0                                 | 0                                      | 2      | 0                   | 3                     | -3           |
| 105+00.00A | 10500.00     | 100.00   | 0.00      | 0.00                                   | 0.18 | 0                                 | 0                                      | 1      | 0                   | 4                     | -4           |
| 106+00.00A | 10600.00     | 100.00   | 0.00      | 0.00                                   | 0.01 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 106+66.54A | 10666.54     | 66.54    | 0.00      | 0.00                                   | 0.30 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 107+00.00A | 10700.00     | 33.46    | 0.00      | 0.00                                   | 0.46 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 107+44.91A | 10744.91     | 44.91    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 108+00.00A | 10800.00     | 55.09    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 109+00.00A | 10900.00     | 100.00   | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 109+02.11A | 10902.11     | 2.11     | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 109+17.79A | 10917.79     | 15.68    | 0.00      | 0.00                                   | 1.68 | 0                                 | 0                                      | 0      | 0                   | 4                     | -4           |
| 109+27.09A | 10927.09     | 9.30     | 0.00      | 0.00                                   | 3.25 | 0                                 | 0                                      | 1      | 0                   | 5                     | -5           |
| 109+52.11A | 10952.11     | 25.02    | 0.00      | 0.00                                   | 5.61 | 0                                 | 0                                      | 4      | 0                   | 10                    | -10          |
| 109+52.14A | 10952.14     | 0.03     | 0.00      | 0.00                                   | 5.60 | 0                                 | 0                                      | 0      | 0                   | 10                    | -10          |
| 109+79.40A | 10979.40     | 27.26    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 3      | 0                   | 14                    | -14          |
| 110+00.00A | 11000.00     | 20.60    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 14                    | -14          |
| 110+41.20A | 11041.20     | 41.20    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 14                    | -14          |

DIVISION 1 - USH 61-151 SB

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                        |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY) |                       |              |
|------------|--------------|----------|-----------|----------------------------------------|-------|-----------------------------------|----------------------------------------|--------|---------------------|-----------------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00         | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|            |              |          |           |                                        |       |                                   |                                        |        |                     |                       |              |
|            |              |          |           |                                        |       | NOTE 1                            | NOTE 2                                 | NOTE 3 | NOTE 1              |                       |              |
| 235+90.99A | 23590.99     | 0.00     | 0.00      | 0.00                                   | 0.33  | 0                                 | 0                                      | 0      | 0                   | 0                     | 0            |
| 236+00.00A | 23600.00     | 9.01     | 0.00      | 0.00                                   | 4.76  | 0                                 | 0                                      | 1      | 0                   | 1                     | -1           |
| 236+12.98A | 23612.98     | 12.98    | 0.00      | 0.00                                   | 14.55 | 0                                 | 0                                      | 5      | 0                   | 8                     | -8           |
| 236+48.55A | 23648.55     | 35.57    | 0.00      | 0.00                                   | 3.18  | 0                                 | 0                                      | 12     | 0                   | 23                    | -23          |
| 236+55.62A | 23655.62     | 7.07     | 0.00      | 0.00                                   | 1.92  | 0                                 | 0                                      | 1      | 0                   | 24                    | -24          |
| 236+89.06A | 23689.06     | 33.44    | 0.00      | 0.00                                   | 2.94  | 0                                 | 0                                      | 3      | 0                   | 28                    | -28          |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

DIVISION 1 - USH 61-151 SB

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                     |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |      | CUMULATIVE VOL (CY)   |                       |              |
|------------|--------------|----------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|------|-----------------------|-----------------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|            |              |          |           |                                     |      |                                   |                                     |      |                       |                       |              |
| 238+34.81A | 23834.81     | 0.00     | 0.00      | 0.00                                | 0.01 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 238+58.46A | 23858.46     | 23.65    | 0.00      | 0.00                                | 0.13 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 238+74.96A | 23874.96     | 16.50    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 238+76.07A | 23876.07     | 1.11     | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 239+00.00A | 23900.00     | 23.93    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 239+34.67A | 23934.67     | 34.67    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 239+52.21A | 23952.21     | 17.54    | 0.00      | 0.00                                | 0.03 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 239+65.37A | 23965.37     | 13.16    | 0.00      | 0.00                                | 6.05 | 0                                 | 0                                   | 1    | 0                     | 1                     | -1           |
| 239+66.73A | 23966.73     | 1.36     | 0.00      | 0.00                                | 5.75 | 0                                 | 0                                   | 0    | 0                     | 1                     | -1           |
| 240+00.00A | 24000.00     | 33.27    | 0.00      | 0.00                                | 5.03 | 0                                 | 0                                   | 7    | 0                     | 10                    | -10          |
| 240+25.00A | 24025.00     | 25.00    | 0.00      | 0.00                                | 6.56 | 0                                 | 0                                   | 5    | 0                     | 16                    | -16          |
| 240+41.22A | 24041.22     | 16.22    | 0.00      | 0.00                                | 5.18 | 0                                 | 0                                   | 4    | 0                     | 21                    | -21          |
| 240+61.58A | 24061.58     | 20.36    | 0.00      | 0.00                                | 2.64 | 0                                 | 0                                   | 3    | 0                     | 25                    | -25          |
| 240+66.46A | 24066.46     | 4.88     | 0.00      | 0.00                                | 2.35 | 0                                 | 0                                   | 0    | 0                     | 25                    | -25          |
| 240+91.78A | 24091.78     | 25.32    | 0.00      | 0.00                                | 2.91 | 0                                 | 0                                   | 2    | 0                     | 28                    | -28          |
| 241+00.00A | 24100.00     | 8.22     | 0.00      | 0.00                                | 2.34 | 0                                 | 0                                   | 1    | 0                     | 29                    | -29          |
| 241+09.12A | 24109.12     | 9.12     | 0.00      | 0.00                                | 1.65 | 0                                 | 0                                   | 1    | 0                     | 30                    | -30          |
| 241+17.32A | 24117.32     | 8.20     | 0.00      | 0.00                                | 1.62 | 0                                 | 0                                   | 0    | 0                     | 30                    | -30          |
| 241+34.12A | 24134.12     | 16.80    | 0.00      | 0.00                                | 1.95 | 0                                 | 0                                   | 1    | 0                     | 31                    | -31          |
| 241+83.97A | 24183.97     | 49.85    | 0.00      | 0.00                                | 1.16 | 0                                 | 0                                   | 3    | 0                     | 35                    | -35          |
| 242+00.00A | 24200.00     | 16.03    | 0.00      | 0.00                                | 1.14 | 0                                 | 0                                   | 1    | 0                     | 36                    | -36          |
| 242+03.96A | 24203.96     | 3.96     | 0.00      | 0.00                                | 1.08 | 0                                 | 0                                   | 0    | 0                     | 36                    | -36          |
| 242+05.21A | 24205.21     | 1.25     | 0.00      | 0.00                                | 1.06 | 0                                 | 0                                   | 0    | 0                     | 36                    | -36          |
| 242+51.99A | 24251.99     | 46.78    | 0.00      | 0.00                                | 0.02 | 0                                 | 0                                   | 1    | 0                     | 38                    | -38          |

DIVISION 1 - USH 61-151 SB

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                     |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |      | CUMULATIVE VOL (CY)   |                       |              |
|------------|--------------|----------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|------|-----------------------|-----------------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|            |              |          |           |                                     |      |                                   |                                     |      |                       |                       |              |
| 275+49.72A | 27549.72     | 0.00     | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 275+64.78A | 27564.78     | 15.06    | 0.00      | 0.00                                | 0.03 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 276+00.00A | 27600.00     | 35.22    | 0.00      | 0.00                                | 0.46 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 276+33.63A | 27633.63     | 33.63    | 0.00      | 0.00                                | 0.76 | 0                                 | 0                                   | 1    | 0                     | 1                     | -1           |
| 276+42.75A | 27642.75     | 9.12     | 0.00      | 0.00                                | 1.48 | 0                                 | 0                                   | 0    | 0                     | 1                     | -1           |
| 276+76.35A | 27676.35     | 33.60    | 0.00      | 0.00                                | 0.58 | 0                                 | 0                                   | 1    | 0                     | 3                     | -3           |

DIVISION 1 - USH 61-151 SB

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                     |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |      | CUMULATIVE VOL (CY)   |                       |              |
|------------|--------------|----------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|------|-----------------------|-----------------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|            |              |          |           |                                     |      |                                   |                                     |      |                       |                       |              |
| 278+99.36A | 27899.36     | 0.00     | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 279+00.00A | 27900.00     | 0.64     | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 279+22.86A | 27922.86     | 22.86    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 279+38.33A | 27938.33     | 15.47    | 0.00      | 0.00                                | 0.26 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 279+45.78A | 27945.78     | 7.45     | 0.00      | 0.00                                | 1.26 | 0                                 | 0                                   | 0    | 0                     | 0                     | 0            |
| 279+62.23A | 27962.23     | 16.45    | 0.00      | 0.00                                | 3.94 | 0                                 | 0                                   | 2    | 0                     | 3                     | -3           |
| 279+62.69A | 27962.69     | 0.46     | 0.00      | 0.00                                | 6.05 | 0                                 | 0                                   | 0    | 0                     | 3                     | -3           |
| 280+00.00A | 28000.00     | 37.31    | 0.00      | 0.00                                | 4.49 | 0                                 | 0                                   | 7    | 0                     | 11                    | -11          |
| 280+56.98A | 28056.98     | 56.98    | 0.00      | 0.00                                | 8.26 | 0                                 | 0                                   | 13   | 0                     | 28                    | -28          |
| 280+98.65A | 28098.65     | 41.67    | 0.00      | 0.00                                | 7.17 | 0                                 | 0                                   | 12   | 0                     | 43                    | -43          |
| 281+00.00A | 28100.00     | 1.35     | 0.00      | 0.00                                | 7.19 | 0                                 | 0                                   | 0    | 0                     | 43                    | -43          |
| 281+23.67A | 28123.67     | 23.67    | 0.00      | 0.00                                | 5.08 | 0                                 | 0                                   | 5    | 0                     | 49                    | -49          |
| 281+36.30A | 28136.30     | 12.63    | 0.00      | 0.00                                | 4.38 | 0                                 | 0                                   | 2    | 0                     | 51                    | -51          |
| 281+48.78A | 28148.78     | 12.48    | 0.00      | 0.00                                | 4.22 | 0                                 | 0                                   | 2    | 0                     | 54                    | -54          |
| 281+55.47A | 28155.47     | 6.69     | 0.00      | 0.00                                | 4.06 | 0                                 | 0                                   | 1    | 0                     | 55                    | -55          |
| 281+56.05A | 28156.05     | 0.58     | 0.00      | 0.00                                | 4.05 | 0                                 | 0                                   | 0    | 0                     | 55                    | -55          |
| 282+00.00A | 28200.00     | 43.95    | 0.00      | 0.00                                | 3.33 | 0                                 | 0                                   | 6    | 0                     | 63                    | -63          |
| 282+50.53A | 28250.53     | 50.53    | 0.00      | 0.00                                | 3.48 | 0                                 | 0                                   | 6    | 0                     | 70                    | -70          |
| 282+75.55A | 28275.55     | 25.02    | 0.00      | 0.00                                | 5.07 | 0                                 | 0                                   | 4    | 0                     | 75                    | -75          |
| 283+00.00A | 28300.00     | 24.45    | 0.00      | 0.00                                | 8.15 | 0                                 | 0                                   | 6    | 0                     | 83                    | -83          |
| 283+00.58A | 28300.58     | 0.58     | 0.00      | 0.00                                | 8.21 | 0                                 | 0                                   | 0    | 0                     | 83                    | -83          |
| 283+51.88A | 28351.88     | 51.30    | 0.00      | 0.00                                | 0.40 | 0                                 | 0                                   | 8    | 0                     | 93                    | -93          |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

| DIVISION 1 - USH 61-151 SB |              |          |           |                                     |      |                                   |                                     |        |                     |                    |              |
|----------------------------|--------------|----------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|--------|---------------------|--------------------|--------------|
| STATION                    | REAL STATION | DISTANCE | AREA (SF) |                                     |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |        | CUMULATIVE VOL (CY) |                    |              |
|                            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL   | CUT 1.00            | EXPANDED FILL 1.25 | MASS ORDNATE |
|                            |              |          |           |                                     |      |                                   |                                     |        |                     |                    |              |
|                            |              |          |           |                                     |      | NOTE 1                            | NOTE 2                              | NOTE 3 | NOTE 1              |                    |              |
| 283+70.95A                 | 28370.95     | 0.00     | 0.00      | 0.00                                | 1.32 | 0                                 | 0                                   | 0      | 0                   | 0                  | 0            |
| 284+00.00A                 | 28400.00     | 29.05    | 0.00      | 0.00                                | 3.04 | 0                                 | 0                                   | 2      | 0                   | 3                  | -3           |
| 284+62.71A                 | 28462.71     | 62.71    | 0.00      | 0.00                                | 1.85 | 0                                 | 0                                   | 6      | 0                   | 10                 | -10          |
| 285+00.00A                 | 28500.00     | 37.29    | 0.00      | 0.00                                | 2.35 | 0                                 | 0                                   | 3      | 0                   | 14                 | -14          |
| 286+00.00A                 | 28600.00     | 100.00   | 0.00      | 0.00                                | 1.08 | 0                                 | 0                                   | 6      | 0                   | 21                 | -21          |
| 286+06.76A                 | 28606.76     | 6.76     | 0.00      | 0.00                                | 1.09 | 0                                 | 0                                   | 0      | 0                   | 21                 | -21          |
| 287+00.00A                 | 28700.00     | 93.24    | 0.00      | 0.00                                | 2.03 | 0                                 | 0                                   | 5      | 0                   | 28                 | -28          |
| 288+00.00A                 | 28800.00     | 100.00   | 0.00      | 0.00                                | 1.71 | 0                                 | 0                                   | 7      | 0                   | 36                 | -36          |
| 289+00.00A                 | 28900.00     | 100.00   | 0.00      | 0.00                                | 0.20 | 0                                 | 0                                   | 4      | 0                   | 41                 | -41          |
| 290+00.00A                 | 29000.00     | 100.00   | 0.00      | 0.00                                | 0.56 | 0                                 | 0                                   | 1      | 0                   | 43                 | -43          |
| 291+00.00A                 | 29100.00     | 100.00   | 0.00      | 0.00                                | 1.40 | 0                                 | 0                                   | 4      | 0                   | 48                 | -48          |
| 291+98.83A                 | 29198.83     | 98.83    | 0.00      | 0.00                                | 1.76 | 0                                 | 0                                   | 6      | 0                   | 55                 | -55          |
| 292+00.00A                 | 29200.00     | 1.17     | 0.00      | 0.00                                | 1.82 | 0                                 | 0                                   | 0      | 0                   | 55                 | -55          |
| 292+23.83A                 | 29223.83     | 23.83    | 0.00      | 0.00                                | 1.49 | 0                                 | 0                                   | 1      | 0                   | 56                 | -56          |
| 292+48.83A                 | 29248.83     | 25.00    | 0.00      | 0.00                                | 2.38 | 0                                 | 0                                   | 2      | 0                   | 59                 | -59          |
| 292+76.00A                 | 29276.00     | 27.17    | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 1      | 0                   | 60                 | -60          |

| DIVISION 1 - USH 61-151 SB |              |          |           |                                     |      |                                   |                                     |        |                     |                    |              |
|----------------------------|--------------|----------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|--------|---------------------|--------------------|--------------|
| STATION                    | REAL STATION | DISTANCE | AREA (SF) |                                     |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |        | CUMULATIVE VOL (CY) |                    |              |
|                            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL   | CUT 1.00            | EXPANDED FILL 1.25 | MASS ORDNATE |
|                            |              |          |           |                                     |      |                                   |                                     |        |                     |                    |              |
|                            |              |          |           |                                     |      | NOTE 1                            | NOTE 2                              | NOTE 3 | NOTE 1              |                    |              |
| 354+63.24A                 | 35463.24     | 0.00     | 0.00      | 0.00                                | 0.00 | 0                                 | 0                                   | 0      | 0                   | 0                  | 0            |
| 354+73.27A                 | 35473.27     | 10.03    | 19.57     | 0.00                                | 0.00 | 4                                 | 0                                   | 0      | 4                   | 0                  | 4            |
| 355+00.00A                 | 35500.00     | 26.73    | 18.02     | 0.00                                | 0.00 | 19                                | 0                                   | 0      | 23                  | 0                  | 23           |
| 355+23.20A                 | 35523.20     | 23.20    | 17.13     | 0.00                                | 3.16 | 15                                | 0                                   | 1      | 38                  | 1                  | 37           |
| 355+50.00A                 | 35550.00     | 26.80    | 18.74     | 0.00                                | 0.00 | 18                                | 0                                   | 2      | 56                  | 4                  | 52           |
| 356+00.00A                 | 35600.00     | 50.00    | 20.08     | 0.00                                | 0.00 | 36                                | 0                                   | 0      | 92                  | 4                  | 88           |
| 356+50.00A                 | 35650.00     | 50.00    | 17.18     | 0.00                                | 0.19 | 34                                | 0                                   | 0      | 126                 | 4                  | 122          |
| 357+00.00A                 | 35700.00     | 50.00    | 14.42     | 0.00                                | 0.22 | 29                                | 0                                   | 0      | 155                 | 4                  | 151          |
| 357+50.00A                 | 35750.00     | 50.00    | 14.03     | 0.00                                | 0.66 | 26                                | 0                                   | 1      | 181                 | 5                  | 176          |
| 358+00.00A                 | 35800.00     | 50.00    | 13.98     | 0.00                                | 0.48 | 26                                | 0                                   | 1      | 207                 | 6                  | 201          |
| 358+31.69A                 | 35831.69     | 31.69    | 13.26     | 0.00                                | 0.74 | 16                                | 0                                   | 1      | 223                 | 8                  | 216          |
| 358+50.00A                 | 35850.00     | 18.31    | 12.36     | 0.00                                | 0.19 | 9                                 | 0                                   | 0      | 232                 | 8                  | 225          |
| 359+00.00A                 | 35900.00     | 50.00    | 12.44     | 0.00                                | 0.00 | 23                                | 0                                   | 0      | 255                 | 8                  | 248          |
| 359+50.00A                 | 35950.00     | 50.00    | 12.46     | 0.00                                | 0.00 | 23                                | 0                                   | 0      | 278                 | 8                  | 271          |
| 359+81.00A                 | 35981.00     | 31.00    | 11.28     | 0.00                                | 0.00 | 14                                | 0                                   | 0      | 292                 | 8                  | 285          |

| DIVISION 1 - REST AREA 106 |              |          |           |                                     |       |                                   |                                     |        |                     |                    |              |
|----------------------------|--------------|----------|-----------|-------------------------------------|-------|-----------------------------------|-------------------------------------|--------|---------------------|--------------------|--------------|
| STATION                    | REAL STATION | DISTANCE | AREA (SF) |                                     |       | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |        | CUMULATIVE VOL (CY) |                    |              |
|                            |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL  | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL   | CUT 1.00            | EXPANDED FILL 1.25 | MASS ORDNATE |
|                            |              |          |           |                                     |       |                                   |                                     |        |                     |                    |              |
|                            |              |          |           |                                     |       | NOTE 1                            | NOTE 2                              | NOTE 3 | NOTE 1              |                    |              |
| 127+39.47X                 | 12739.47     | 0.00     | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 0                  | 0            |
| 127+50.00X                 | 12750.00     | 10.53    | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 0                  | 0            |
| 128+00.00X                 | 12800.00     | 50.00    | 0.00      | 0.00                                | 11.87 | 0                                 | 0                                   | 11     | 0                   | 14                 | -14          |
| 128+25.93X                 | 12825.93     | 25.93    | 0.00      | 0.00                                | 18.03 | 0                                 | 0                                   | 14     | 0                   | 31                 | -31          |
| 128+70.49X                 | 12870.49     | 44.56    | 0.00      | 0.00                                | 2.49  | 0                                 | 0                                   | 17     | 0                   | 53                 | -53          |
| 128+89.44X                 | 12889.44     | 18.95    | 0.00      | 0.00                                | 0.01  | 0                                 | 0                                   | 1      | 0                   | 54                 | -54          |
| 129+00.00X                 | 12900.00     | 10.56    | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 54                 | -54          |
| 129+17.00X                 | 12917.00     | 17.00    | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 54                 | -54          |
| 129+23.94X                 | 12923.94     | 6.94     | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 54                 | -54          |
| 129+77.39X                 | 12977.39     | 53.45    | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 54                 | -54          |
| 130+00.00X                 | 13000.00     | 22.61    | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 54                 | -54          |
| 130+11.85X                 | 13011.85     | 11.85    | 0.00      | 0.00                                | 7.20  | 0                                 | 0                                   | 2      | 0                   | 56                 | -56          |
| 130+46.97X                 | 13046.97     | 35.12    | 0.00      | 0.00                                | 0.06  | 0                                 | 0                                   | 5      | 0                   | 63                 | -63          |
| 130+56.11X                 | 13056.11     | 9.14     | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 63                 | -63          |
| 130+59.10X                 | 13059.10     | 2.99     | 0.00      | 0.00                                | 0.00  | 0                                 | 0                                   | 0      | 0                   | 63                 | -63          |

| NOTES:                                  |                                                  |
|-----------------------------------------|--------------------------------------------------|
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

DIVISION 1 - REST AREA TRUCK PARKING

| STATION     | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |               |
|-------------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|---------------|
|             |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDINATE |
|             |              |          |           |                                        |      |                                   |                                        |      |                       |                       |               |
| 116+91.12XX | 11691.12     | 0.00     | 12.33     | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0             |
| 117+00.00XX | 11700.00     | 8.88     | 9.61      | 0.00                                   | 0.00 | 4                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 117+08.51XX | 11708.51     | 8.51     | 12.15     | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 7                     | 0                     | 7             |
| 117+25.00XX | 11725.00     | 16.49    | 8.20      | 0.00                                   | 0.01 | 6                                 | 0                                      | 0    | 13                    | 0                     | 13            |
| 117+34.20XX | 11734.20     | 9.20     | 7.13      | 0.00                                   | 0.72 | 3                                 | 0                                      | 0    | 16                    | 0                     | 16            |
| 117+43.15XX | 11743.15     | 8.95     | 10.82     | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 19                    | 0                     | 19            |
| 117+48.88XX | 11748.88     | 5.73     | 7.24      | 0.00                                   | 0.81 | 2                                 | 0                                      | 0    | 21                    | 0                     | 21            |
| 117+50.00XX | 11750.00     | 1.12     | 6.92      | 0.00                                   | 1.48 | 0                                 | 0                                      | 0    | 21                    | 0                     | 21            |
| 117+59.89XX | 11759.89     | 9.89     | 9.76      | 0.00                                   | 0.21 | 3                                 | 0                                      | 0    | 24                    | 0                     | 24            |
| 117+75.00XX | 11775.00     | 15.11    | 6.51      | 0.00                                   | 1.46 | 5                                 | 0                                      | 0    | 29                    | 0                     | 29            |
| 118+00.00XX | 11800.00     | 25.00    | 9.83      | 0.00                                   | 2.39 | 8                                 | 0                                      | 2    | 37                    | 3                     | 35            |
| 118+25.00XX | 11825.00     | 25.00    | 9.11      | 0.00                                   | 0.71 | 9                                 | 0                                      | 1    | 46                    | 4                     | 42            |
| 118+44.32XX | 11844.32     | 19.32    | 11.37     | 0.00                                   | 1.11 | 7                                 | 0                                      | 1    | 53                    | 5                     | 48            |
| 118+50.00XX | 11850.00     | 5.68     | 10.95     | 0.00                                   | 1.70 | 2                                 | 0                                      | 0    | 55                    | 5                     | 50            |
| 118+75.00XX | 11875.00     | 25.00    | 6.57      | 0.00                                   | 4.52 | 8                                 | 0                                      | 3    | 63                    | 9                     | 54            |
| 118+94.17XX | 11894.17     | 19.17    | 11.95     | 0.00                                   | 3.13 | 7                                 | 0                                      | 3    | 70                    | 13                    | 58            |
| 119+00.00XX | 11900.00     | 5.83     | 11.78     | 0.00                                   | 3.70 | 3                                 | 0                                      | 1    | 73                    | 14                    | 59            |
| 119+25.00XX | 11925.00     | 25.00    | 10.60     | 0.00                                   | 3.25 | 10                                | 0                                      | 3    | 83                    | 18                    | 66            |
| 119+44.02XX | 11944.02     | 19.02    | 9.03      | 0.00                                   | 1.42 | 7                                 | 0                                      | 2    | 90                    | 20                    | 70            |
| 119+50.00XX | 11950.00     | 5.98     | 10.57     | 0.00                                   | 1.15 | 2                                 | 0                                      | 0    | 92                    | 20                    | 72            |
| 119+68.32XX | 11968.32     | 18.32    | 10.95     | 0.00                                   | 0.15 | 7                                 | 0                                      | 0    | 99                    | 20                    | 79            |
| 119+74.01XX | 11974.01     | 5.69     | 9.96      | 0.00                                   | 0.01 | 2                                 | 0                                      | 0    | 101                   | 20                    | 81            |
| 119+75.00XX | 11975.00     | 0.99     | 9.64      | 0.00                                   | 0.12 | 0                                 | 0                                      | 0    | 101                   | 20                    | 81            |
| 119+79.96XX | 11979.96     | 4.96     | 9.32      | 0.00                                   | 0.28 | 2                                 | 0                                      | 0    | 103                   | 20                    | 83            |
| 119+87.86XX | 11987.86     | 7.90     | 7.86      | 0.00                                   | 0.01 | 3                                 | 0                                      | 0    | 106                   | 20                    | 86            |
| 119+97.21XX | 11997.21     | 9.35     | 7.51      | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 109                   | 20                    | 89            |

DIVISION 1 - REST AREA TRUCK PARKING

| STATION     | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |               |
|-------------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|---------------|
|             |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDINATE |
|             |              |          |           |                                        |      |                                   |                                        |      |                       |                       |               |
| 124+72.31XX | 12472.31     | 0.00     | 11.74     | 0.00                                   | 0.80 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0             |
| 124+75.00XX | 12475.00     | 2.69     | 11.05     | 0.00                                   | 3.35 | 1                                 | 0                                      | 0    | 1                     | 0                     | 1             |
| 124+78.63XX | 12478.63     | 3.63     | 10.39     | 0.00                                   | 5.73 | 1                                 | 0                                      | 1    | 2                     | 1                     | 1             |
| 124+81.87XX | 12481.87     | 3.24     | 10.15     | 0.00                                   | 3.52 | 1                                 | 0                                      | 1    | 3                     | 3                     | 1             |
| 124+90.98XX | 12490.98     | 9.11     | 9.43      | 0.00                                   | 4.31 | 3                                 | 0                                      | 1    | 6                     | 4                     | 2             |
| 124+96.14XX | 12496.14     | 5.16     | 12.16     | 0.00                                   | 4.18 | 2                                 | 0                                      | 1    | 8                     | 5                     | 3             |
| 125+00.00XX | 12500.00     | 3.86     | 9.38      | 0.00                                   | 4.73 | 2                                 | 0                                      | 1    | 10                    | 6                     | 4             |
| 125+01.29XX | 12501.29     | 1.29     | 9.47      | 0.00                                   | 4.94 | 0                                 | 0                                      | 0    | 10                    | 6                     | 4             |
| 125+05.30XX | 12505.30     | 4.01     | 9.31      | 0.00                                   | 4.03 | 1                                 | 0                                      | 1    | 11                    | 8                     | 4             |
| 125+08.37XX | 12508.37     | 3.07     | 9.31      | 0.00                                   | 2.80 | 1                                 | 0                                      | 0    | 12                    | 8                     | 5             |
| 125+14.49XX | 12514.49     | 6.12     | 8.71      | 0.00                                   | 2.87 | 2                                 | 0                                      | 1    | 14                    | 9                     | 5             |
| 125+20.80XX | 12520.80     | 6.31     | 6.71      | 0.00                                   | 5.32 | 2                                 | 0                                      | 1    | 16                    | 10                    | 6             |
| 125+25.00XX | 12525.00     | 4.20     | 8.35      | 0.00                                   | 2.94 | 1                                 | 0                                      | 1    | 17                    | 11                    | 6             |
| 125+33.17XX | 12533.17     | 8.17     | 11.37     | 0.00                                   | 1.82 | 3                                 | 0                                      | 1    | 20                    | 13                    | 8             |
| 125+39.36XX | 12539.36     | 6.19     | 11.12     | 0.00                                   | 2.35 | 3                                 | 0                                      | 0    | 23                    | 13                    | 11            |
| 125+43.48XX | 12543.48     | 4.12     | 13.78     | 0.00                                   | 1.64 | 2                                 | 0                                      | 0    | 25                    | 13                    | 13            |
| 125+50.00XX | 12550.00     | 6.52     | 17.98     | 0.00                                   | 0.45 | 4                                 | 0                                      | 0    | 29                    | 13                    | 17            |
| 125+66.15XX | 12566.15     | 16.15    | 16.86     | 0.00                                   | 0.00 | 10                                | 0                                      | 0    | 39                    | 13                    | 27            |
| 125+75.00XX | 12575.00     | 8.85     | 15.74     | 0.00                                   | 0.00 | 5                                 | 0                                      | 0    | 44                    | 13                    | 32            |
| 125+80.82XX | 12580.82     | 5.82     | 15.01     | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 47                    | 13                    | 35            |
| 125+84.50XX | 12584.50     | 3.68     | 10.94     | 0.00                                   | 0.00 | 2                                 | 0                                      | 0    | 49                    | 13                    | 37            |
| 126+00.00XX | 12600.00     | 15.50    | 6.74      | 0.00                                   | 0.12 | 5                                 | 0                                      | 0    | 54                    | 13                    | 42            |
| 126+16.77XX | 12616.77     | 16.77    | 4.66      | 0.00                                   | 0.00 | 4                                 | 0                                      | 0    | 58                    | 13                    | 46            |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

DIVISION 1 - STH 11 WB TEMPORARY

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |      |                                   |                                        |      |                       |                       |              |
| 19+83.32W | 1983.32      | 0.00     | 19.24     | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0            |
| 20+00.00W | 2000.00      | 16.68    | 25.67     | 0.00                                   | 0.00 | 14                                | 0                                      | 0    | 14                    | 0                     | 14           |
| 20+25.00W | 2025.00      | 25.00    | 26.01     | 0.00                                   | 0.00 | 24                                | 0                                      | 0    | 38                    | 0                     | 38           |
| 20+41.92W | 2041.92      | 16.92    | 26.49     | 0.00                                   | 0.00 | 16                                | 0                                      | 0    | 54                    | 0                     | 54           |
| 20+48.68W | 2048.68      | 6.76     | 22.48     | 0.00                                   | 0.00 | 6                                 | 0                                      | 0    | 60                    | 0                     | 60           |
| 20+50.00W | 2050.00      | 1.32     | 22.06     | 0.00                                   | 0.00 | 1                                 | 0                                      | 0    | 61                    | 0                     | 61           |
| 20+75.00W | 2075.00      | 25.00    | 13.39     | 0.00                                   | 0.00 | 16                                | 0                                      | 0    | 77                    | 0                     | 77           |
| 21+00.00W | 2100.00      | 25.00    | 5.11      | 0.00                                   | 0.00 | 9                                 | 0                                      | 0    | 86                    | 0                     | 86           |
| 21+06.80W | 2106.80      | 6.80     | 2.90      | 0.00                                   | 0.00 | 1                                 | 0                                      | 0    | 87                    | 0                     | 87           |

DIVISION 1 - STH 11 EB TEMPORARY

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |      |                                   |                                        |      |                       |                       |              |
| 48+81.61V | 4881.61      | 0.00     | 7.45      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0            |
| 48+93.53V | 4893.53      | 11.92    | 8.11      | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 3                     | 0                     | 3            |
| 49+00.00V | 4900.00      | 6.47     | 8.41      | 0.00                                   | 0.00 | 2                                 | 0                                      | 0    | 5                     | 0                     | 5            |
| 49+09.45V | 4909.45      | 9.45     | 9.28      | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 8                     | 0                     | 8            |
| 49+10.66V | 4910.66      | 1.21     | 16.84     | 0.00                                   | 0.00 | 1                                 | 0                                      | 0    | 9                     | 0                     | 9            |
| 49+25.00V | 4925.00      | 14.34    | 21.41     | 0.00                                   | 0.00 | 10                                | 0                                      | 0    | 19                    | 0                     | 19           |
| 49+50.00V | 4950.00      | 25.00    | 19.50     | 0.00                                   | 0.00 | 19                                | 0                                      | 0    | 38                    | 0                     | 38           |
| 49+75.00V | 4975.00      | 25.00    | 14.62     | 0.00                                   | 0.00 | 16                                | 0                                      | 0    | 54                    | 0                     | 54           |
| 49+90.21V | 4990.21      | 15.21    | 13.18     | 0.00                                   | 0.00 | 8                                 | 0                                      | 0    | 62                    | 0                     | 62           |
| 49+90.98V | 4990.98      | 0.77     | 13.09     | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 62                    | 0                     | 62           |
| 50+00.00V | 5000.00      | 9.02     | 12.21     | 0.00                                   | 0.00 | 4                                 | 0                                      | 0    | 66                    | 0                     | 66           |
| 50+05.69V | 5005.69      | 5.69     | 11.33     | 0.00                                   | 0.00 | 2                                 | 0                                      | 0    | 68                    | 0                     | 68           |

DIVISION 1 - STH 11 WB REPLACEMENT

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |      |                                   |                                        |      |                       |                       |              |
| 19+83.32W | 1983.32      | 0.00     | 2.54      | 0.00                                   | 0.07 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0            |
| 20+00.00W | 2000.00      | 16.68    | 3.01      | 0.00                                   | 0.20 | 2                                 | 0                                      | 0    | 2                     | 0                     | 2            |
| 20+25.00W | 2025.00      | 25.00    | 3.06      | 0.00                                   | 0.04 | 3                                 | 0                                      | 0    | 5                     | 0                     | 5            |
| 20+50.00W | 2050.00      | 25.00    | 3.38      | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 8                     | 0                     | 8            |
| 20+50.00W | 2050.00      | 0.00     | 3.38      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 8                     | 0                     | 8            |
| 20+50.80W | 2050.80      | 0.80     | 1.60      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 8                     | 0                     | 8            |
| 20+75.00W | 2075.00      | 24.20    | 1.49      | 0.00                                   | 0.03 | 1                                 | 0                                      | 0    | 9                     | 0                     | 9            |
| 21+00.00W | 2100.00      | 25.00    | 1.45      | 0.00                                   | 0.00 | 1                                 | 0                                      | 0    | 10                    | 0                     | 10           |
| 21+06.83W | 2106.83      | 6.83     | 1.43      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 10                    | 0                     | 10           |

DIVISION 1 - STH 11 EB REPLACEMENT

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |              |
|-----------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|           |              |          |           |                                        |      |                                   |                                        |      |                       |                       |              |
| 48+81.61V | 4881.61      | 0.00     | 1.58      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0            |
| 48+93.53V | 4893.53      | 11.92    | 1.75      | 0.00                                   | 0.00 | 1                                 | 0                                      | 0    | 1                     | 0                     | 1            |
| 49+00.00V | 4900.00      | 6.47     | 1.82      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 1                     | 0                     | 1            |
| 49+09.39V | 4909.39      | 9.39     | 1.85      | 0.00                                   | 0.00 | 1                                 | 0                                      | 0    | 2                     | 0                     | 2            |
| 49+09.76V | 4909.76      | 0.37     | 1.84      | 0.00                                   | 0.04 | 0                                 | 0                                      | 0    | 2                     | 0                     | 2            |
| 49+10.66V | 4910.66      | 0.90     | 3.26      | 0.00                                   | 0.13 | 0                                 | 0                                      | 0    | 2                     | 0                     | 2            |
| 49+25.00V | 4925.00      | 14.34    | 3.09      | 0.00                                   | 0.03 | 2                                 | 0                                      | 0    | 4                     | 0                     | 4            |
| 49+50.00V | 4950.00      | 25.00    | 2.82      | 0.00                                   | 0.04 | 3                                 | 0                                      | 0    | 7                     | 0                     | 7            |
| 49+73.28V | 4973.28      | 23.28    | 2.70      | 0.00                                   | 0.39 | 2                                 | 0                                      | 0    | 9                     | 0                     | 9            |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

DIVISION 1 - BADGER RD

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |               |
|-----------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|---------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDINATE |
|           |              |          |           |                                        |      |                                   |                                        |      |                       |                       |               |
| 6+58.09B  | 658.09       | 0.00     | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0             |
| 6+83.09B  | 683.09       | 25.00    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0             |
| 7+08.09B  | 708.09       | 25.00    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0             |
| 12+97.57B | 1297.57      | 589.48   | 0.11      | 0.00                                   | 0.00 | 1                                 | 0                                      | 0    | 1                     | 0                     | 1             |
| 13+02.10B | 1302.10      | 4.53     | 3.26      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 1                     | 0                     | 1             |
| 13+04.00B | 1304.00      | 1.90     | 5.81      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 1                     | 0                     | 1             |
| 13+28.08B | 1328.08      | 24.08    | 0.51      | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 13+31.72B | 1331.72      | 3.64     | 0.21      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 13+53.12B | 1353.12      | 21.40    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 13+64.60B | 1364.60      | 11.48    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 13+78.10B | 1378.10      | 13.50    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 18+29.13B | 1829.13      | 451.03   | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 18+55.27B | 1855.27      | 26.14    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 18+81.49B | 1881.49      | 26.22    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 21+49.91B | 2149.91      | 268.42   | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 21+75.34B | 2175.34      | 25.43    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |
| 22+00.82B | 2200.82      | 25.48    | 0.00      | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 4                     | 0                     | 4             |

DIVISION 1 - USH 61 SB RAMP BADGER RD ENT

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      | CUMULATIVE VOL (CY)   |                       |               |
|------------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|------|-----------------------|-----------------------|---------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDINATE |
|            |              |          |           |                                        |      |                                   |                                        |      |                       |                       |               |
| 209+76.54D | 20976.54     | 0.00     | 15.31     | 0.00                                   | 0.00 | 0                                 | 0                                      | 0    | 0                     | 0                     | 0             |
| 209+79.64D | 20979.64     | 3.10     | 15.28     | 0.00                                   | 0.00 | 2                                 | 0                                      | 0    | 2                     | 0                     | 2             |
| 210+00.00D | 21000.00     | 20.36    | 14.23     | 0.00                                   | 0.00 | 11                                | 0                                      | 0    | 13                    | 0                     | 13            |
| 210+06.52D | 21006.52     | 6.52     | 13.95     | 0.00                                   | 0.00 | 3                                 | 0                                      | 0    | 16                    | 0                     | 16            |
| 210+18.18D | 21018.18     | 11.66    | 15.92     | 0.00                                   | 0.00 | 6                                 | 0                                      | 0    | 22                    | 0                     | 22            |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |



DIVISION 1 - USH 61 NB RAMP EAGLE POINT ENT

| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY) |               |              |
|------------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|--------|---------------------|---------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT                 | EXPANDED FILL | MASS ORDNATE |
|            |              |          |           |                                        |      | NOTE 1                            | NOTE 2                                 | NOTE 3 | NOTE 1              | 1.25          |              |
| 264+30.00J | 26430.00     | 0.00     | 60.63     | 0.00                                   | 0.00 | 0                                 | 0                                      | 0      | 0                   | 0             | 0            |
| 265+00.00J | 26500.00     | 70.00    | 45.08     | 0.00                                   | 0.00 | 137                               | 0                                      | 0      | 137                 | 0             | 137          |
| 265+35.39J | 26535.39     | 35.39    | 43.43     | 0.00                                   | 0.00 | 58                                | 0                                      | 0      | 195                 | 0             | 195          |
| 266+00.00J | 26600.00     | 64.61    | 43.56     | 0.00                                   | 0.40 | 104                               | 0                                      | 0      | 299                 | 0             | 299          |
| 266+11.23J | 26611.23     | 11.23    | 43.02     | 0.00                                   | 1.45 | 18                                | 0                                      | 0      | 317                 | 0             | 317          |
| 267+00.00J | 26700.00     | 88.77    | 41.34     | 0.00                                   | 0.31 | 139                               | 0                                      | 3      | 456                 | 4             | 452          |
| 268+00.00J | 26800.00     | 100.00   | 45.80     | 0.00                                   | 1.33 | 161                               | 0                                      | 3      | 617                 | 8             | 610          |
| 268+15.70J | 26815.70     | 15.70    | 46.26     | 0.00                                   | 2.70 | 27                                | 0                                      | 1      | 644                 | 9             | 635          |
| 268+50.24J | 26850.24     | 34.54    | 54.76     | 0.00                                   | 0.60 | 65                                | 0                                      | 2      | 709                 | 11            | 698          |
| 268+75.24J | 26875.24     | 25.00    | 51.05     | 0.00                                   | 1.03 | 49                                | 0                                      | 1      | 758                 | 13            | 746          |
| 269+00.00J | 26900.00     | 24.76    | 48.77     | 0.00                                   | 1.46 | 46                                | 0                                      | 1      | 804                 | 14            | 790          |
| 269+00.23J | 26900.23     | 0.23     | 48.76     | 0.00                                   | 1.48 | 0                                 | 0                                      | 0      | 804                 | 14            | 790          |
| 269+12.83J | 26912.83     | 12.60    | 47.76     | 0.00                                   | 4.36 | 23                                | 0                                      | 1      | 827                 | 15            | 812          |
| 270+00.00J | 27000.00     | 87.17    | 23.05     | 0.00                                   | 0.95 | 114                               | 0                                      | 9      | 941                 | 26            | 915          |
| 270+39.85J | 27039.85     | 39.85    | 27.34     | 0.00                                   | 0.05 | 37                                | 0                                      | 1      | 978                 | 28            | 951          |
| 271+00.00J | 27100.00     | 60.15    | 27.11     | 0.00                                   | 0.17 | 61                                | 0                                      | 0      | 1039                | 28            | 1012         |
| 271+80.62J | 27180.62     | 80.62    | 30.17     | 0.00                                   | 0.15 | 86                                | 0                                      | 0      | 1125                | 28            | 1098         |
| 272+00.00J | 27200.00     | 19.38    | 20.46     | 0.00                                   | 0.23 | 18                                | 0                                      | 0      | 1143                | 28            | 1116         |
| 272+48.37J | 27248.37     | 48.37    | 19.51     | 0.00                                   | 0.41 | 36                                | 0                                      | 1      | 1179                | 29            | 1150         |
| 272+63.75J | 27263.75     | 15.38    | 19.65     | 0.00                                   | 0.00 | 11                                | 0                                      | 0      | 1190                | 29            | 1161         |
| 272+80.93J | 27280.93     | 17.18    | 23.35     | 0.00                                   | 0.00 | 14                                | 0                                      | 0      | 1204                | 29            | 1175         |
| 273+00.00J | 27300.00     | 19.07    | 24.40     | 0.00                                   | 0.11 | 17                                | 0                                      | 0      | 1221                | 29            | 1192         |
| 273+24.80J | 27324.80     | 24.80    | 22.87     | 0.00                                   | 1.00 | 22                                | 0                                      | 1      | 1243                | 30            | 1213         |
| 273+34.66J | 27334.66     | 9.86     | 23.05     | 0.00                                   | 0.33 | 8                                 | 0                                      | 0      | 1251                | 30            | 1221         |
| 273+50.00J | 27350.00     | 15.34    | 30.10     | 0.00                                   | 0.00 | 15                                | 0                                      | 0      | 1266                | 30            | 1236         |
| 274+00.00J | 27400.00     | 50.00    | 23.52     | 0.00                                   | 0.00 | 50                                | 0                                      | 0      | 1316                | 30            | 1286         |
| 275+00.00J | 27500.00     | 100.00   | 30.04     | 0.00                                   | 0.24 | 99                                | 0                                      | 0      | 1415                | 30            | 1385         |
| 275+75.60J | 27575.60     | 75.60    | 34.15     | 0.00                                   | 4.46 | 90                                | 0                                      | 7      | 1505                | 39            | 1466         |
| 276+00.00J | 27600.00     | 24.40    | 34.38     | 0.00                                   | 0.00 | 31                                | 0                                      | 2      | 1536                | 41            | 1495         |
| 277+00.00J | 27700.00     | 100.00   | 33.91     | 0.00                                   | 0.00 | 126                               | 0                                      | 0      | 1662                | 41            | 1621         |
| 278+00.00J | 27800.00     | 100.00   | 29.16     | 0.00                                   | 0.01 | 117                               | 0                                      | 0      | 1779                | 41            | 1738         |
| 279+00.00J | 27900.00     | 100.00   | 31.28     | 0.00                                   | 1.26 | 112                               | 0                                      | 2      | 1891                | 44            | 1847         |
| 279+41.47J | 27941.47     | 41.47    | 35.77     | 0.00                                   | 0.00 | 51                                | 0                                      | 1      | 1942                | 45            | 1897         |
| 279+58.49J | 27958.49     | 17.02    | 38.43     | 0.00                                   | 0.00 | 23                                | 0                                      | 0      | 1965                | 45            | 1920         |
| 279+75.52J | 27975.52     | 17.03    | 37.69     | 0.00                                   | 0.00 | 24                                | 0                                      | 0      | 1989                | 45            | 1944         |
| 279+95.03J | 27995.03     | 19.51    | 35.45     | 0.00                                   | 0.00 | 26                                | 0                                      | 0      | 2015                | 45            | 1970         |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

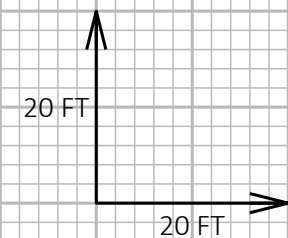
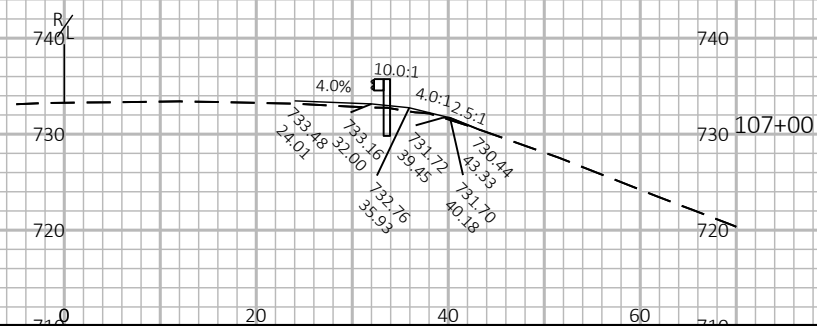
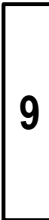
DIVISION 1 - USH 61 SB RAMP EAGLE POINT EXIT

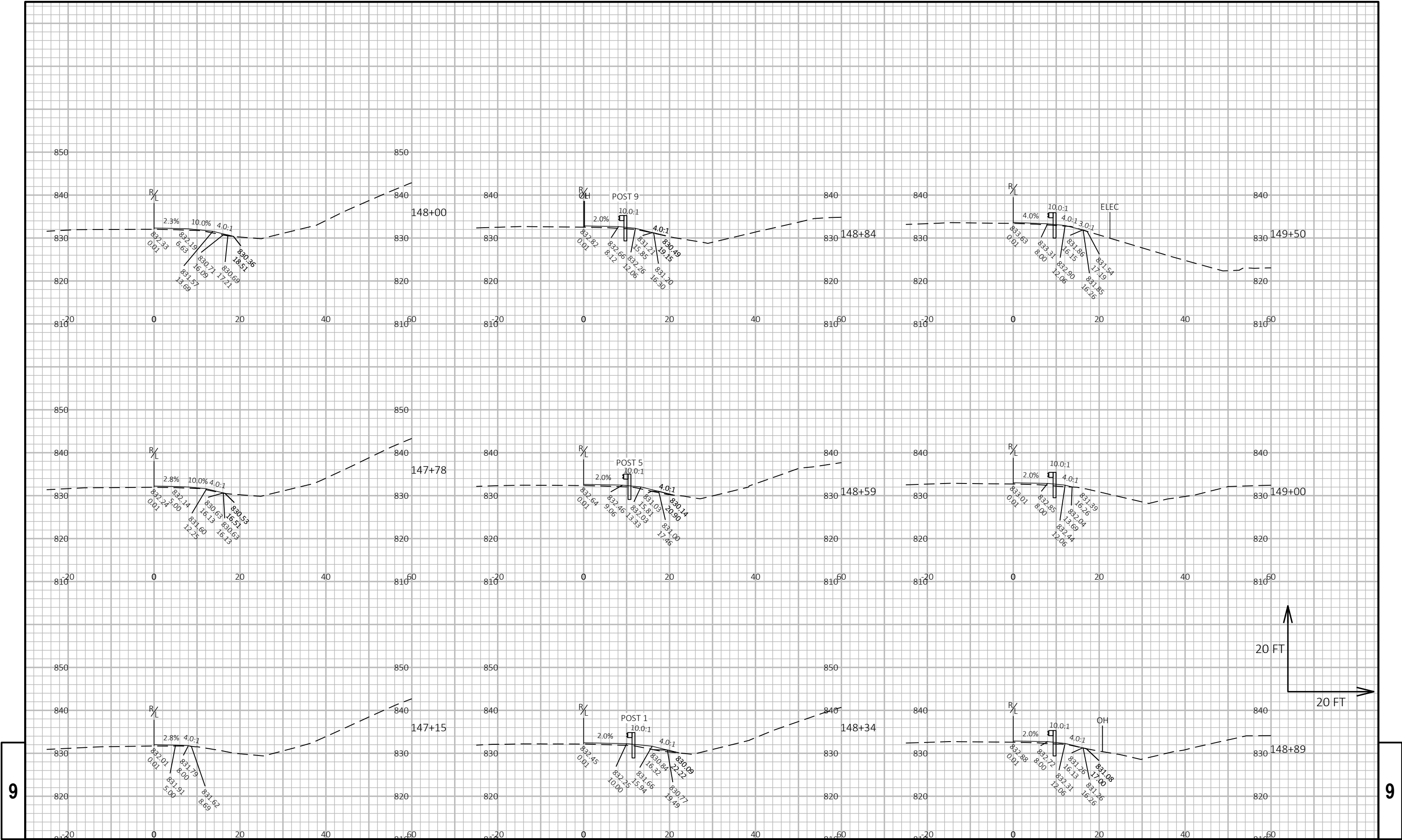
| STATION    | REAL STATION | DISTANCE | AREA (SF) |                                        |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |        | CUMULATIVE VOL (CY)   |                       |              |
|------------|--------------|----------|-----------|----------------------------------------|------|-----------------------------------|----------------------------------------|--------|-----------------------|-----------------------|--------------|
|            |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL   | CUT<br>1.00<br>NOTE 1 | EXPANDED FILL<br>1.25 | MASS ORDNATE |
|            |              |          |           |                                        |      |                                   |                                        |        |                       |                       |              |
|            |              |          |           |                                        |      | NOTE 1                            | NOTE 2                                 | NOTE 3 |                       |                       |              |
| 269+48.87K | 26948.87     | 0.00     | 39.56     | 0.00                                   | 3.54 | 0                                 | 0                                      | 0      | 0                     | 0                     | 0            |
| 269+51.16K | 26951.16     | 2.29     | 36.17     | 0.00                                   | 4.07 | 3                                 | 0                                      | 0      | 3                     | 0                     | 3            |
| 270+00.00K | 27000.00     | 48.84    | 20.40     | 0.00                                   | 2.25 | 51                                | 0                                      | 6      | 54                    | 8                     | 47           |
| 270+75.41K | 27075.41     | 75.41    | 21.46     | 0.00                                   | 1.71 | 58                                | 0                                      | 6      | 112                   | 15                    | 97           |
| 271+00.00K | 27100.00     | 24.59    | 22.42     | 0.00                                   | 0.48 | 20                                | 0                                      | 1      | 132                   | 16                    | 116          |
| 271+28.30K | 27128.30     | 28.30    | 24.24     | 0.00                                   | 0.49 | 24                                | 0                                      | 1      | 156                   | 18                    | 139          |
| 271+75.00K | 27175.00     | 46.70    | 25.26     | 0.00                                   | 0.25 | 43                                | 0                                      | 1      | 199                   | 19                    | 180          |
| 272+00.00K | 27200.00     | 25.00    | 26.26     | 0.00                                   | 0.13 | 24                                | 0                                      | 0      | 223                   | 19                    | 204          |
| 272+82.22K | 27282.22     | 82.22    | 28.88     | 0.00                                   | 0.09 | 84                                | 0                                      | 0      | 307                   | 19                    | 288          |
| 273+00.00K | 27300.00     | 17.78    | 22.83     | 0.00                                   | 0.09 | 17                                | 0                                      | 0      | 324                   | 19                    | 305          |
| 273+14.78K | 27314.78     | 14.78    | 22.94     | 0.00                                   | 0.12 | 13                                | 0                                      | 0      | 337                   | 19                    | 318          |
| 274+00.00K | 27400.00     | 85.22    | 27.64     | 0.00                                   | 0.28 | 80                                | 0                                      | 1      | 417                   | 20                    | 397          |
| 274+83.99K | 27483.99     | 83.99    | 29.10     | 0.00                                   | 0.00 | 88                                | 0                                      | 0      | 505                   | 20                    | 485          |
| 275+00.00K | 27500.00     | 16.01    | 24.85     | 0.00                                   | 0.00 | 16                                | 0                                      | 0      | 521                   | 20                    | 501          |
| 275+42.46K | 27542.46     | 42.46    | 27.80     | 0.00                                   | 0.00 | 41                                | 0                                      | 0      | 562                   | 20                    | 542          |
| 275+44.18K | 27544.18     | 1.72     | 27.73     | 0.00                                   | 0.00 | 2                                 | 0                                      | 0      | 564                   | 20                    | 544          |
| 275+59.73K | 27559.73     | 15.55    | 27.47     | 0.00                                   | 0.00 | 16                                | 0                                      | 0      | 580                   | 20                    | 560          |
| 275+69.36K | 27569.36     | 9.63     | 26.54     | 0.00                                   | 0.00 | 10                                | 0                                      | 0      | 590                   | 20                    | 570          |
| 275+77.00K | 27577.00     | 7.64     | 27.05     | 0.00                                   | 0.00 | 8                                 | 0                                      | 0      | 598                   | 20                    | 578          |
| 275+85.07K | 27585.07     | 8.07     | 27.46     | 0.00                                   | 0.00 | 8                                 | 0                                      | 0      | 606                   | 20                    | 586          |
| 275+94.20K | 27594.20     | 9.13     | 27.63     | 0.00                                   | 0.00 | 9                                 | 0                                      | 0      | 615                   | 20                    | 595          |
| 275+97.73K | 27597.73     | 3.53     | 32.39     | 0.00                                   | 0.00 | 4                                 | 0                                      | 0      | 619                   | 20                    | 599          |
| 276+00.00K | 27600.00     | 2.27     | 31.28     | 0.00                                   | 0.00 | 3                                 | 0                                      | 0      | 622                   | 20                    | 602          |
| 276+04.45K | 27604.45     | 4.45     | 29.44     | 0.00                                   | 0.00 | 5                                 | 0                                      | 0      | 627                   | 20                    | 607          |
| 276+75.00K | 27675.00     | 70.55    | 25.02     | 0.00                                   | 1.02 | 71                                | 0                                      | 1      | 698                   | 21                    | 677          |
| 277+00.00K | 27700.00     | 25.00    | 24.23     | 0.00                                   | 0.00 | 23                                | 0                                      | 0      | 721                   | 21                    | 700          |
| 278+00.00K | 27800.00     | 100.00   | 24.11     | 0.00                                   | 0.00 | 90                                | 0                                      | 0      | 811                   | 21                    | 790          |
| 279+00.00K | 27900.00     | 100.00   | 23.48     | 0.00                                   | 0.00 | 88                                | 0                                      | 0      | 899                   | 21                    | 878          |
| 280+00.00K | 28000.00     | 100.00   | 19.57     | 0.00                                   | 0.00 | 80                                | 0                                      | 0      | 979                   | 21                    | 958          |
| 280+23.75K | 28023.75     | 23.75    | 16.91     | 0.00                                   | 0.00 | 16                                | 0                                      | 0      | 995                   | 21                    | 974          |
| 280+35.18K | 28035.18     | 11.43    | 14.44     | 0.00                                   | 0.00 | 7                                 | 0                                      | 0      | 1002                  | 21                    | 981          |

|                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| NOTES:                                  |                                                  |
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS          |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME    |

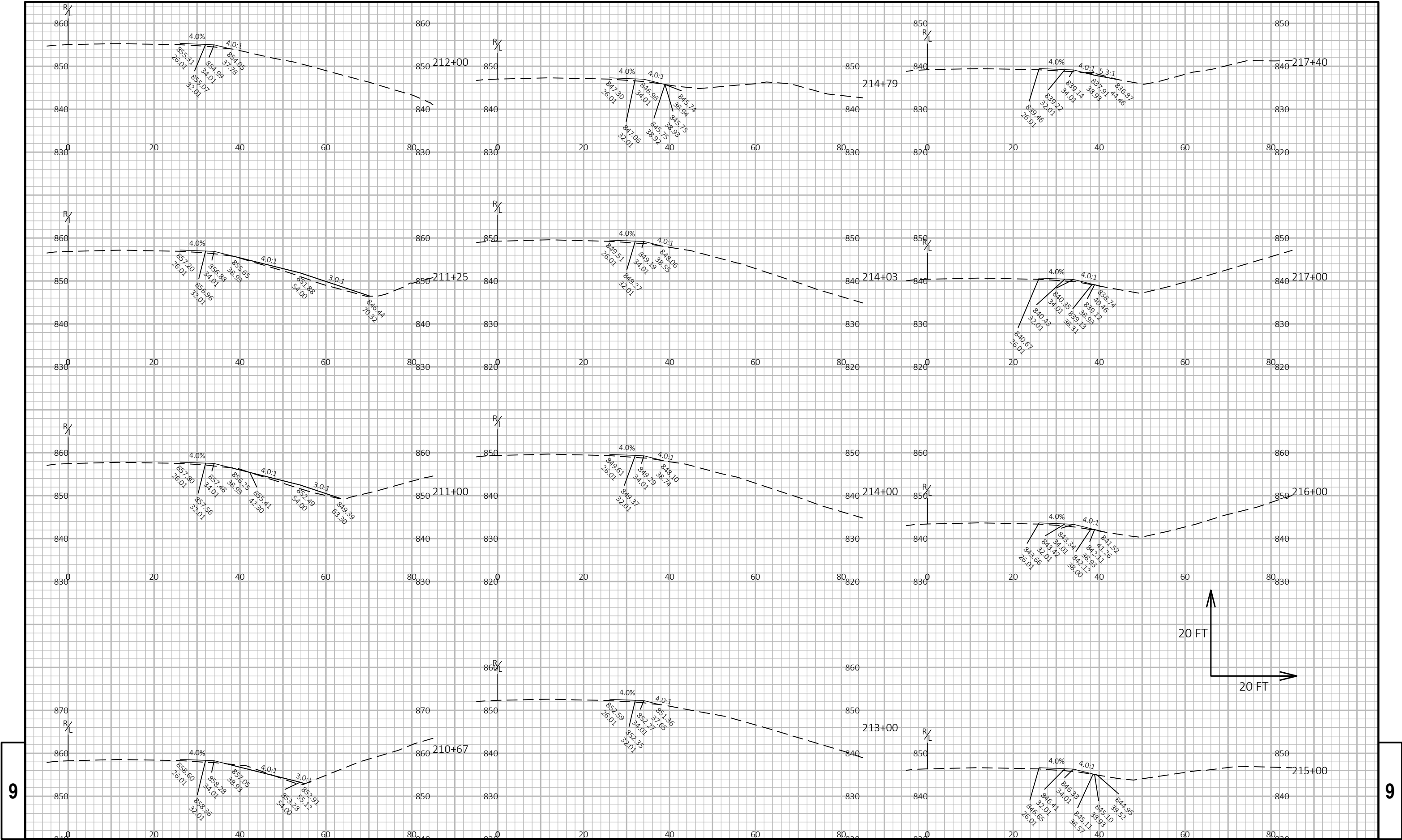










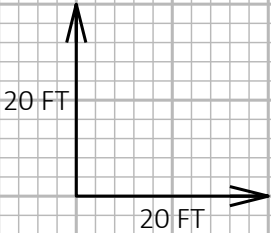
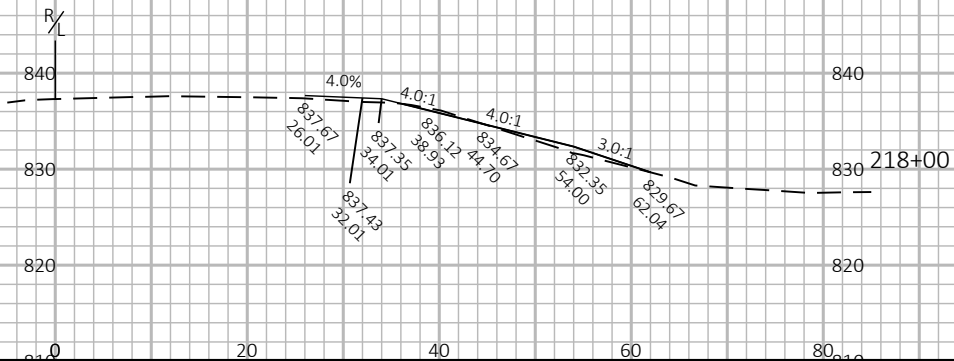
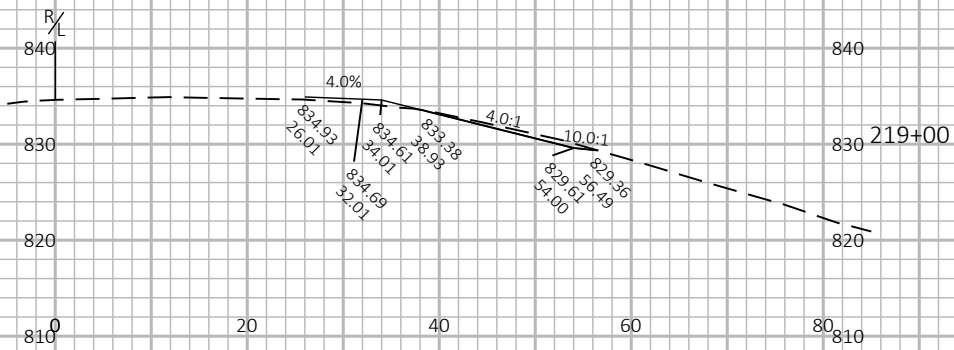
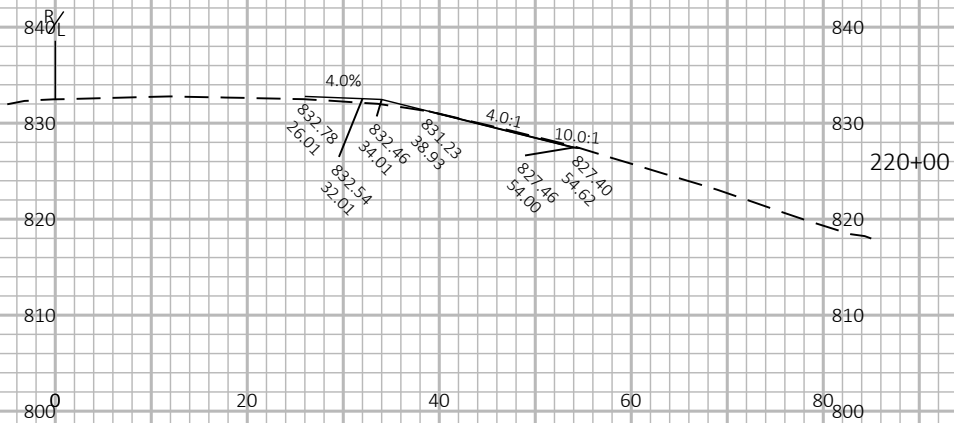


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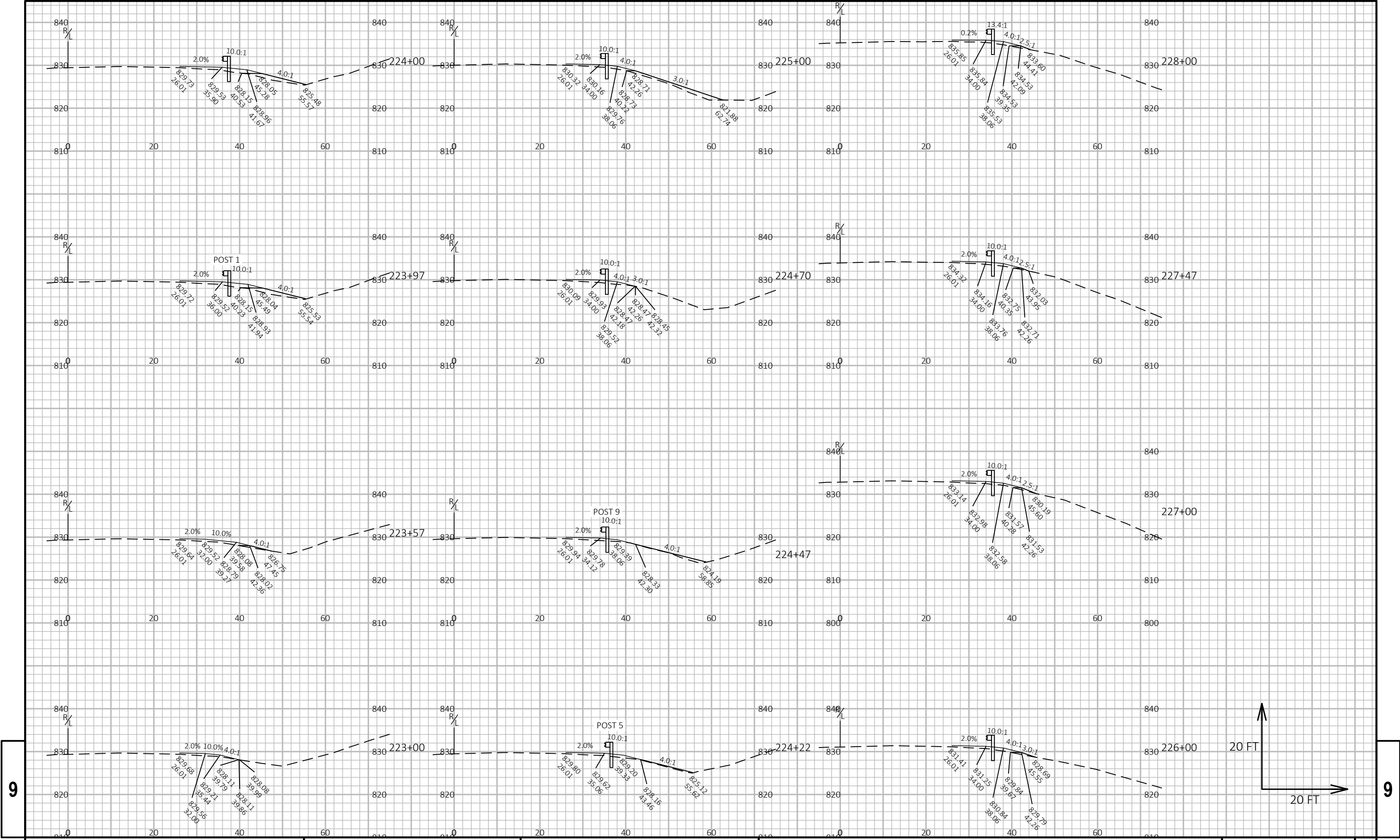
|             |            |      |        |         |       |                 |                 |       |     |   |
|-------------|------------|------|--------|---------|-------|-----------------|-----------------|-------|-----|---|
| PROJECT NO: | 1202-00-75 | HWY: | USH 61 | COUNTY: | GRANT | CROSS SECTIONS: | NB 61 BEAMGUARD | SHEET | 420 | E |
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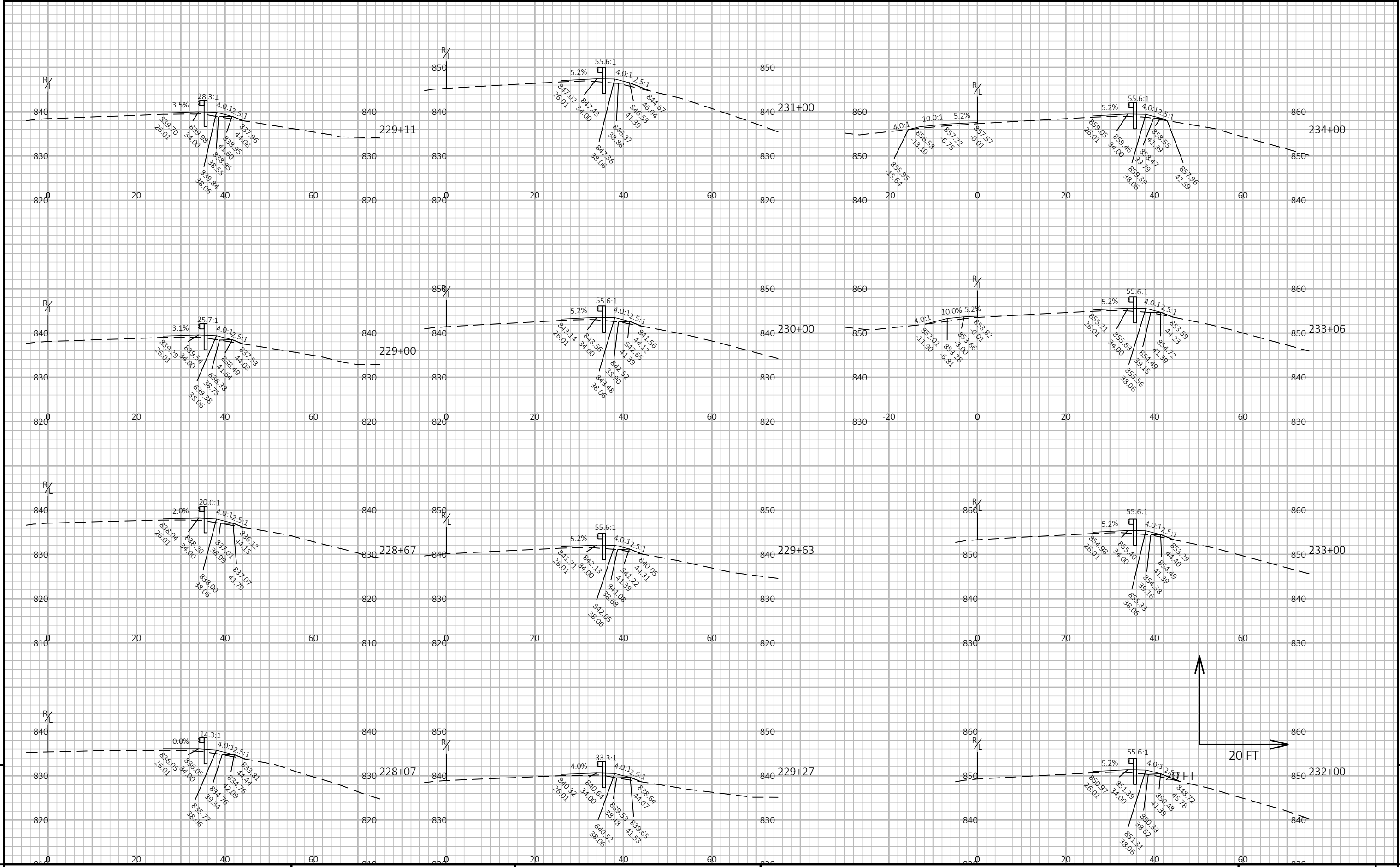




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|------------------------|-------------|---------------|---------------------------------|-----------|---|
| PROJECT NO: 1202-00-75 | HWY: USH 61 | COUNTY: GRANT | CROSS SECTIONS: NB 61 BEAMGUARD | SHEET 422 | E |
|------------------------|-------------|---------------|---------------------------------|-----------|---|

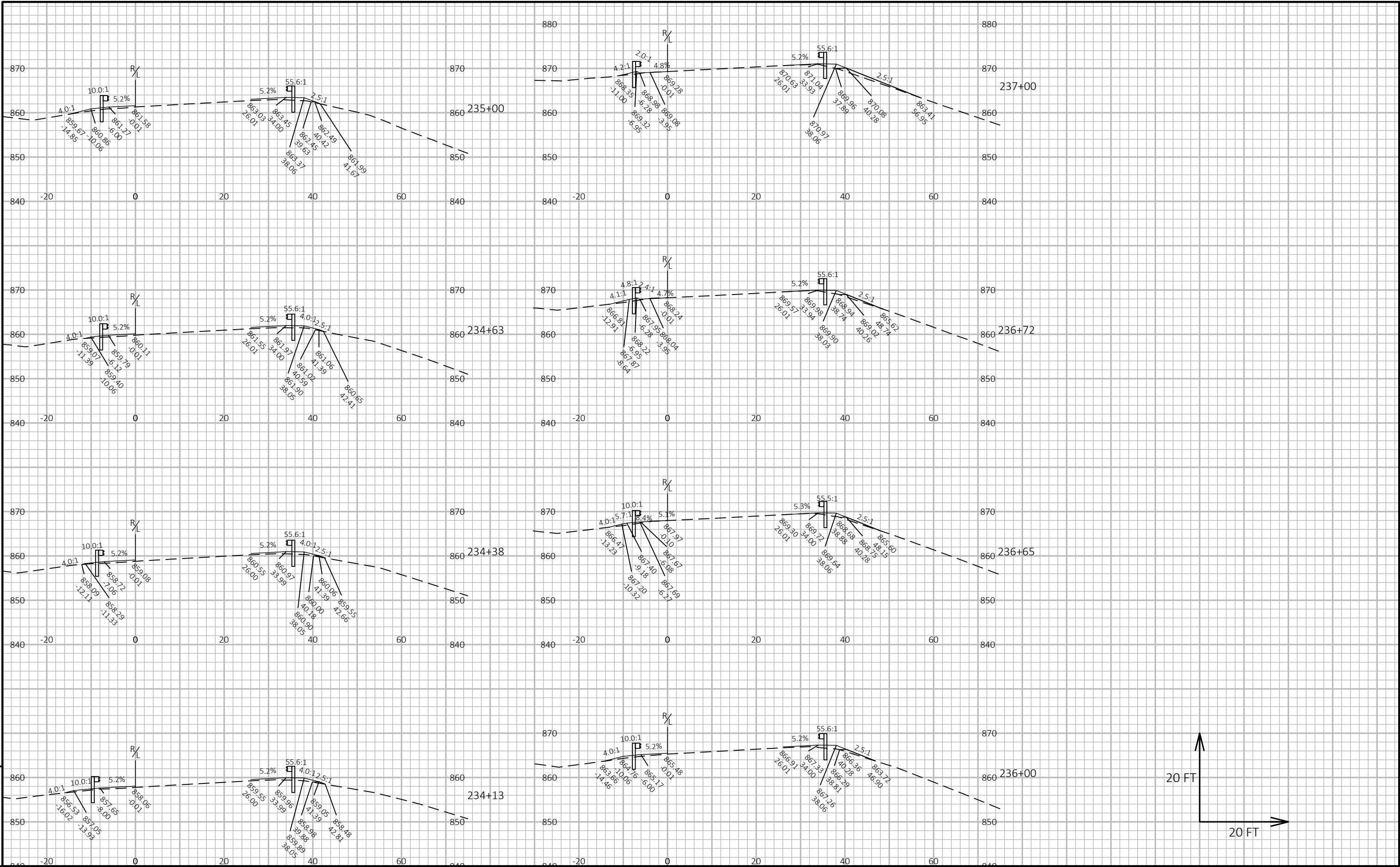


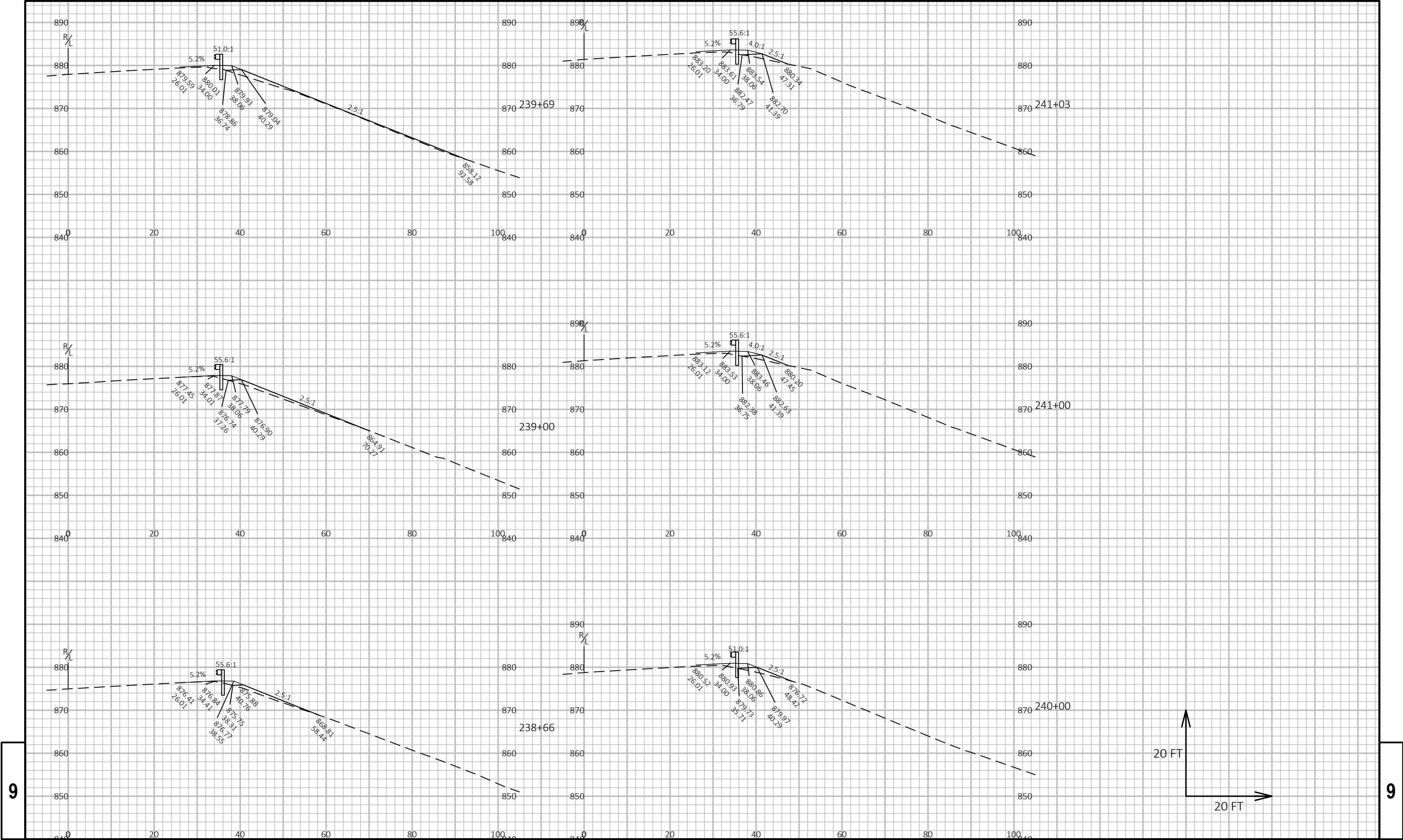
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|------------------------|-------------|---------------|---------------------------------|-----------|---|
| PROJECT NO: 1202-00-75 | HWY: USH 61 | COUNTY: GRANT | CROSS SECTIONS: NB 61 BEAMGUARD | SHEET 423 | E |
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PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: NB 61 BEAMGUARD

SHEET

425

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\090204-XS.DWG  
LAYOUT NAME - 04

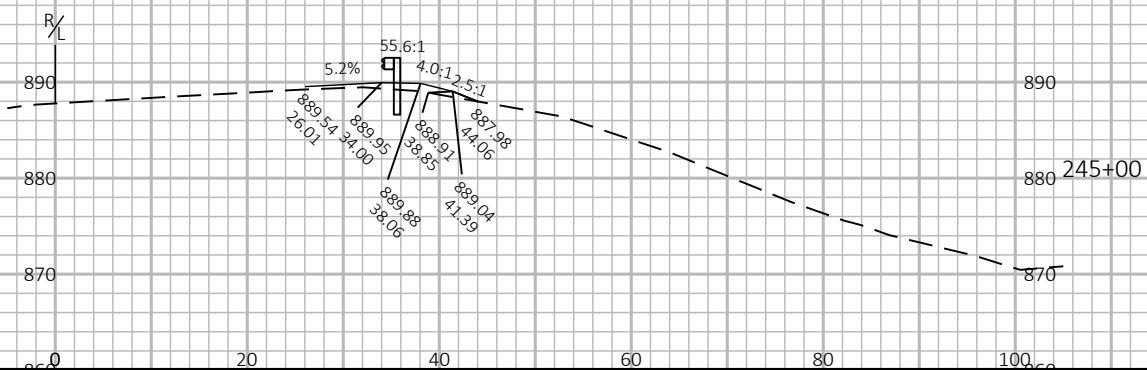
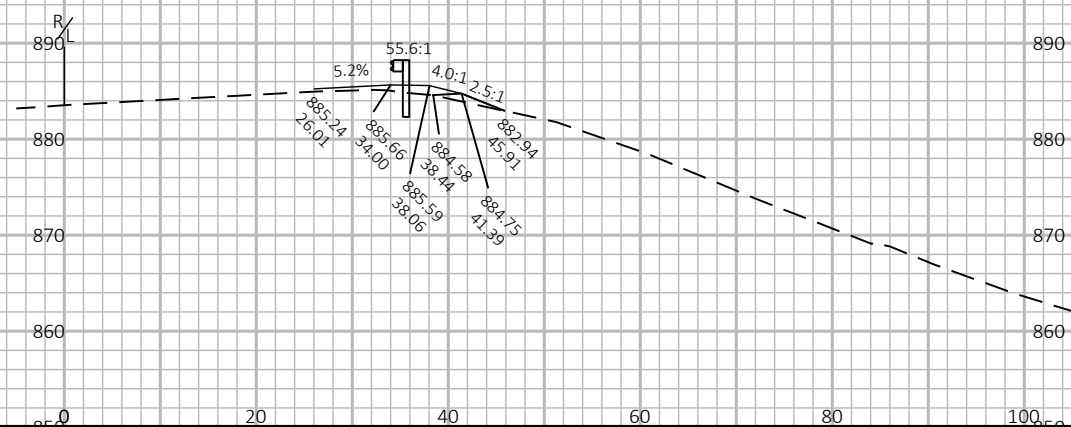
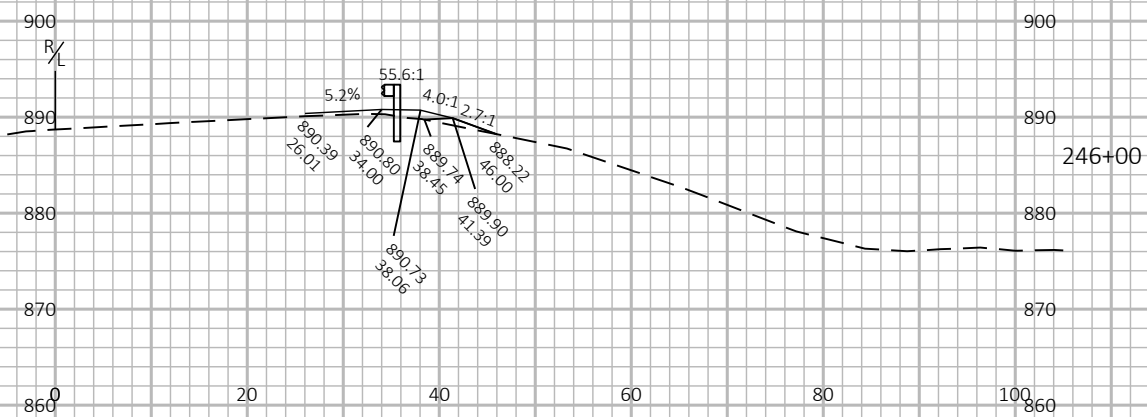
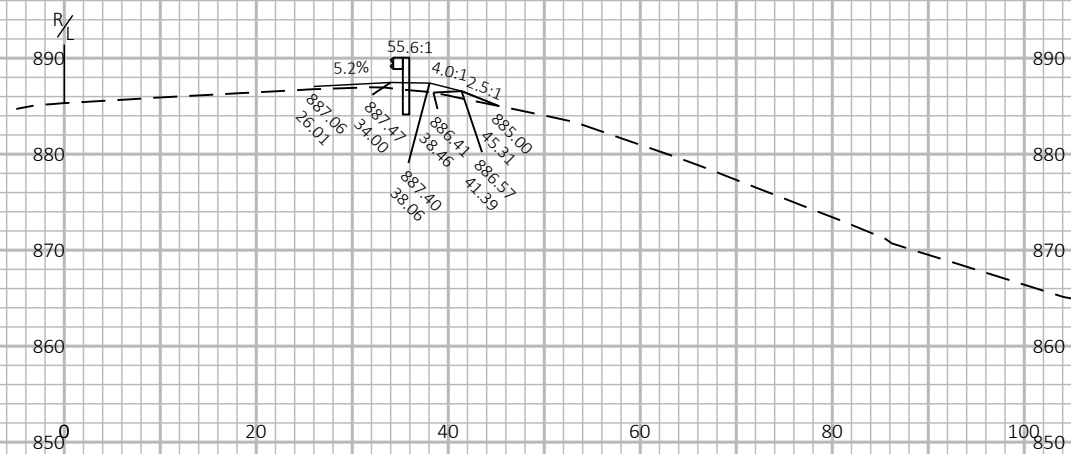
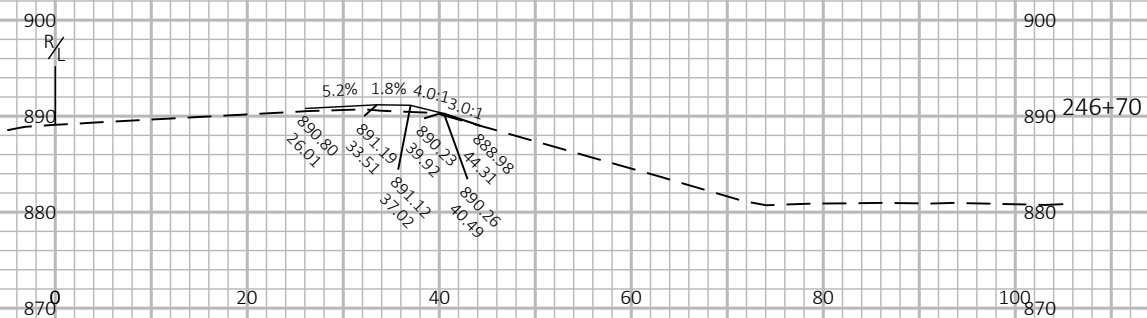
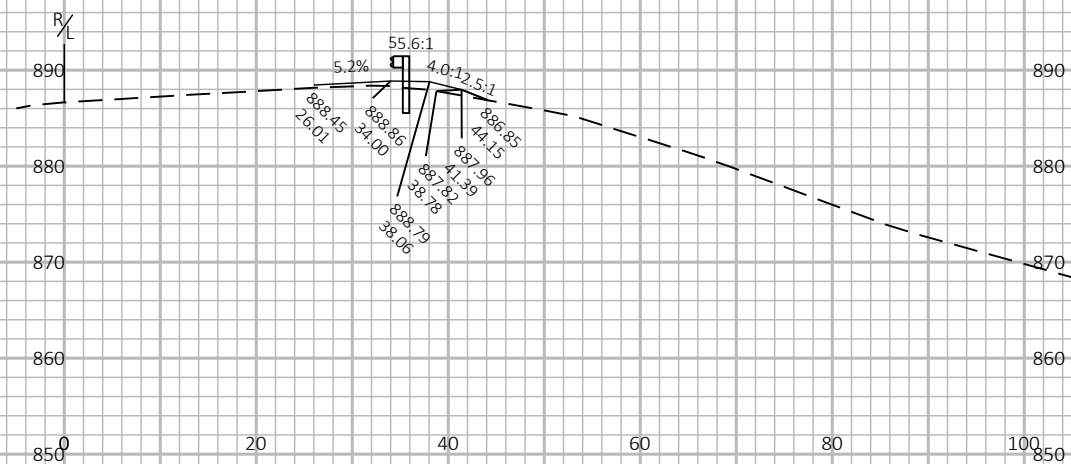
PLOT DATE : 2/27/2025 7:38 AM

PLOT BY : SCHUMAKER, ERICA R

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDs SHEET 49



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| PROJECT NO: | 1202-00-75 |
|-------------|------------|

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: NB 61 BEAMGUARD

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| SHEET | 426 |
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**E**

FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\090204-XS.DWG  
LAYOUT NAME - 05

PLOT DATE : 2/27/2025 7:38 AM

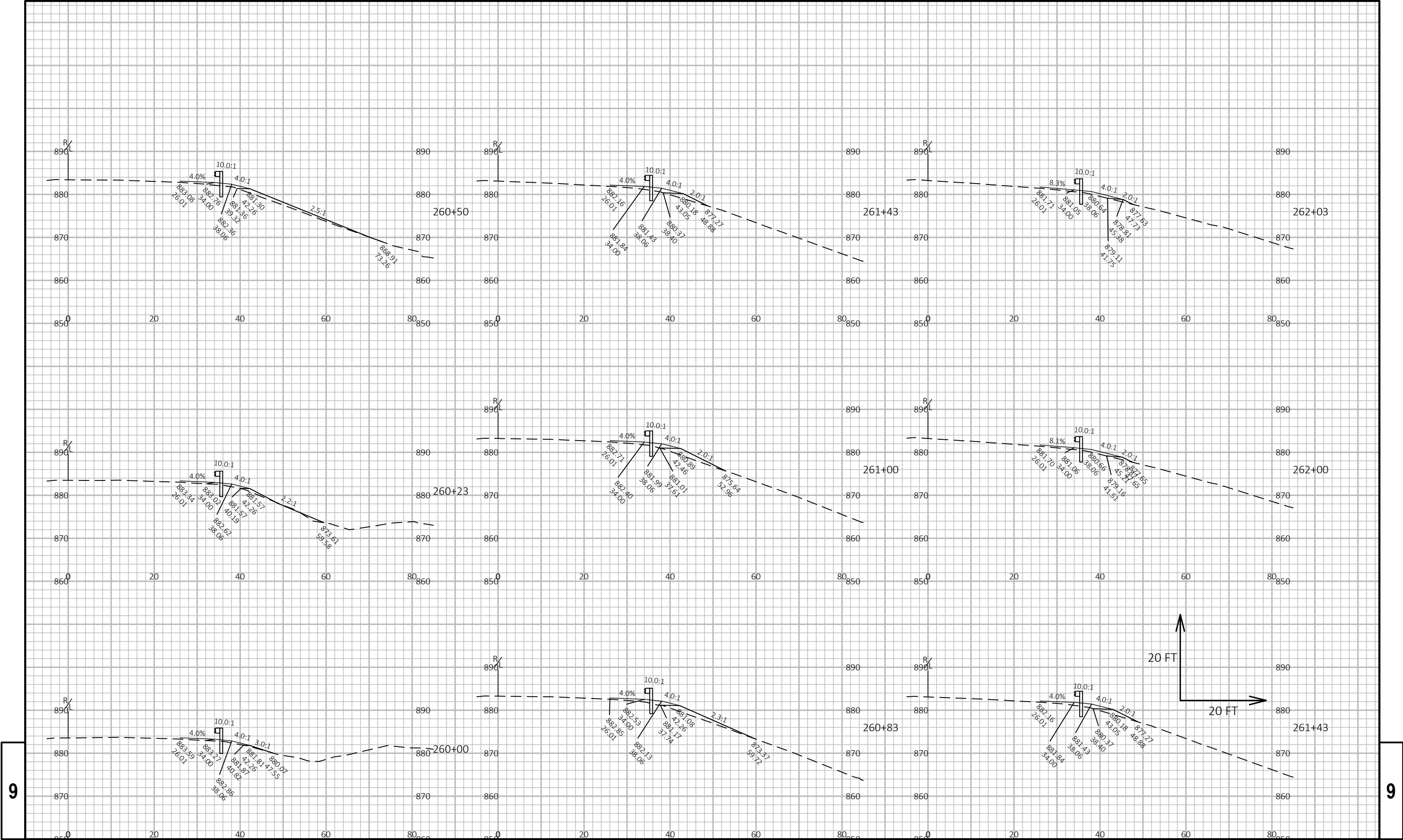
PLOT BY : SCHUMAKER, ERICA R

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



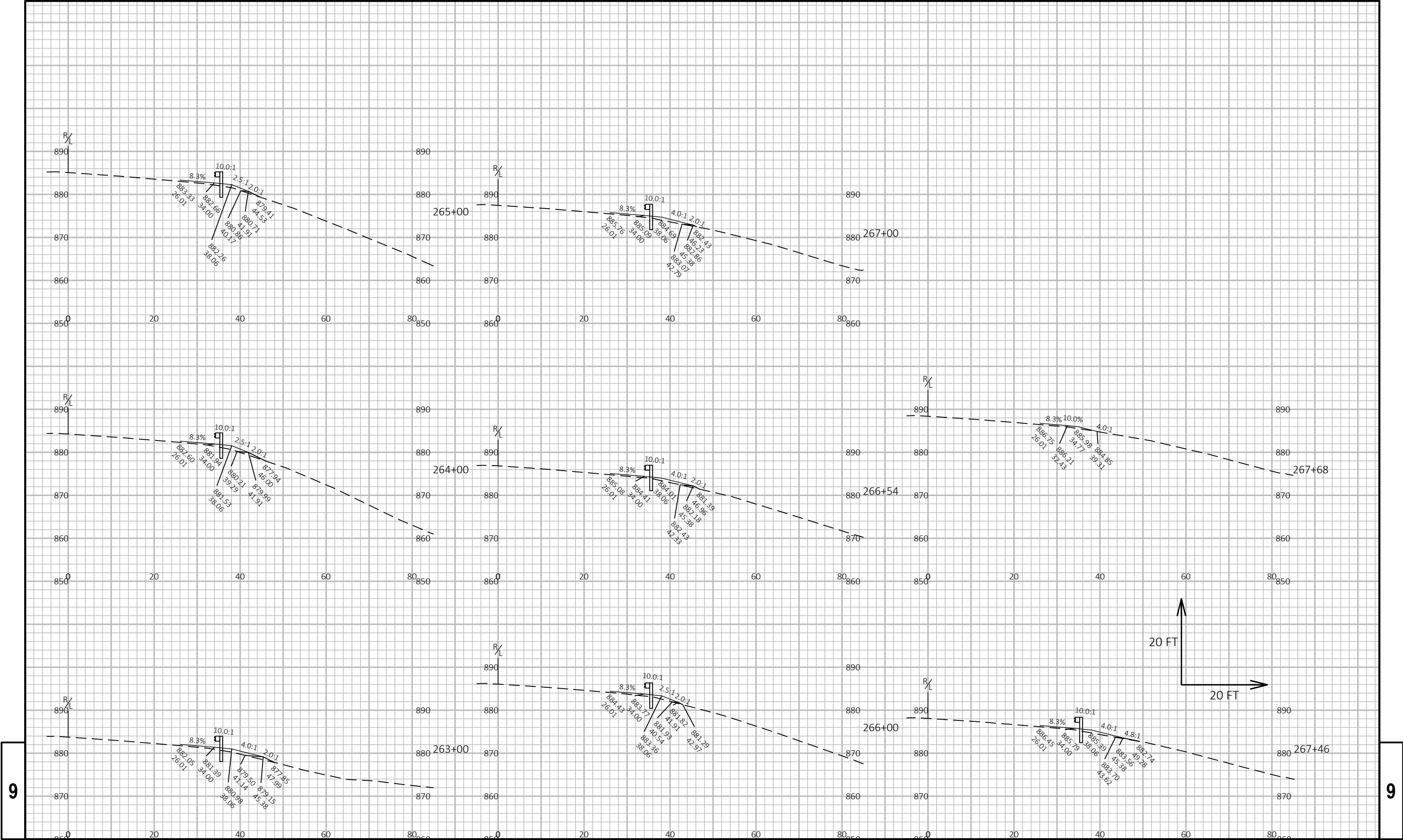


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|------------------------|-------------|---------------|---------------------------------|-----------|---|
| PROJECT NO: 1202-00-75 | HWY: USH 61 | COUNTY: GRANT | CROSS SECTIONS: NB 61 BEAMGUARD | SHEET 428 | E |
|------------------------|-------------|---------------|---------------------------------|-----------|---|

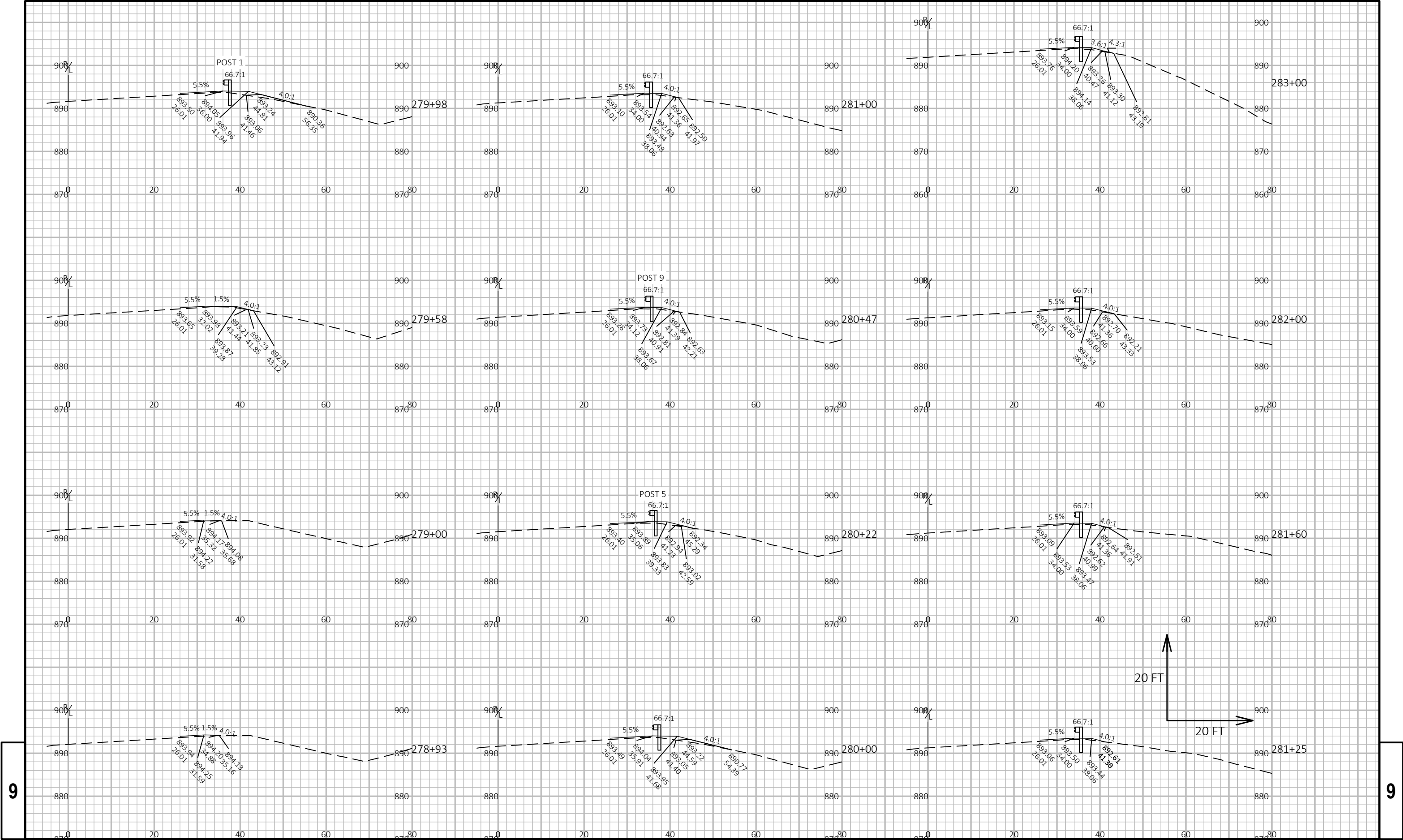
FILE NAME : N:\PDS\C3D\12020005\SHEETSP\PLAN\090205-XS.DWG  
LAYOUT NAME - 02  
PLOT DATE : 2/27/2025 10:29 AM  
PLOT BY : SCHUMAKER, ERICA R  
PLOT NAME :  
PLOT SCALE : 1 IN=20 FT HORZ. / 1 IN=20 FT VERT.  
WISDOT/CADDs SHEET 49



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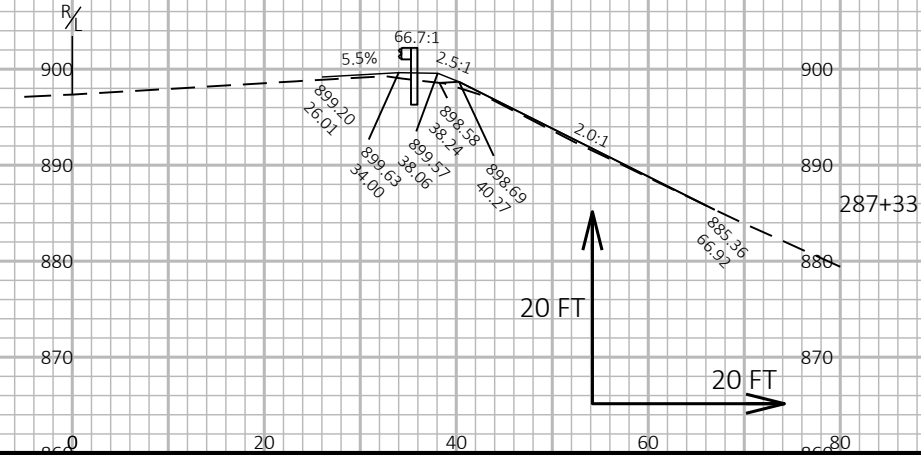
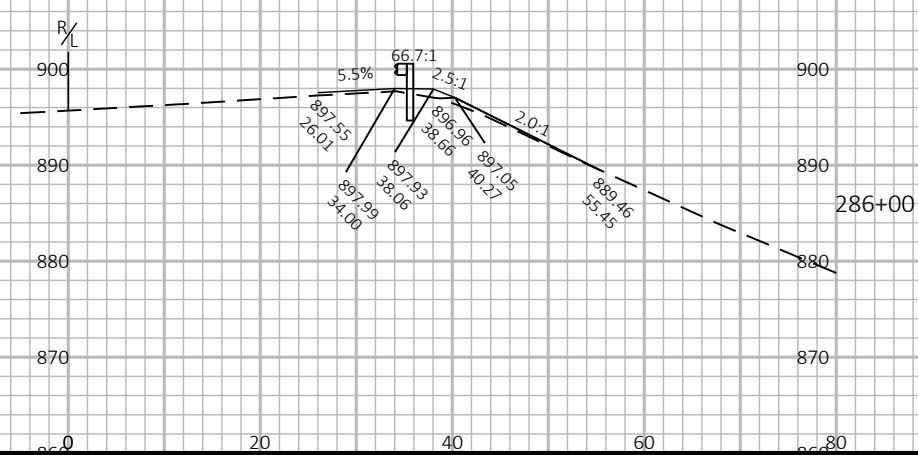
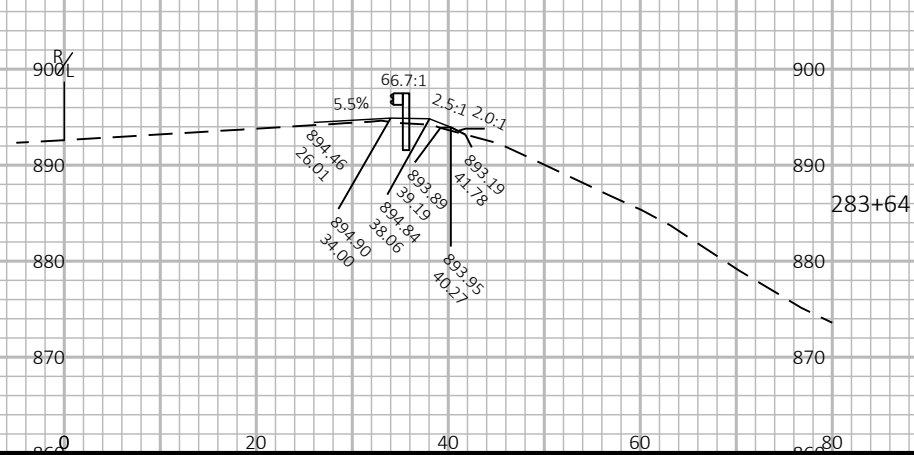
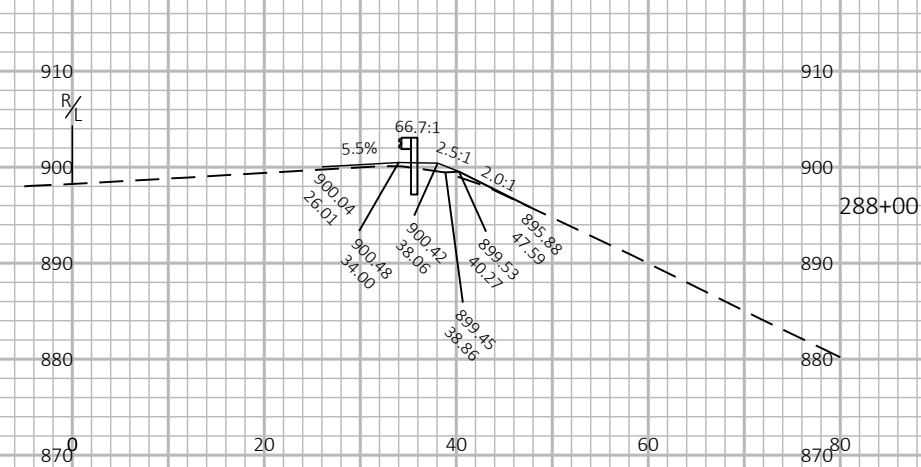
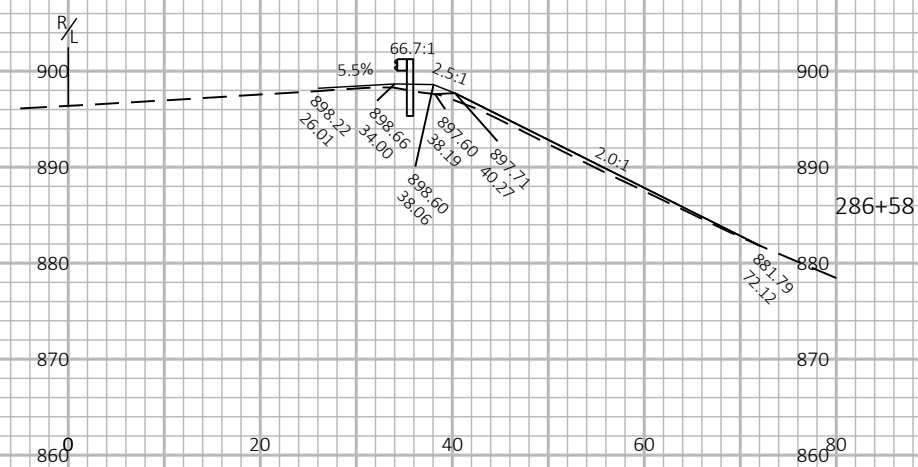
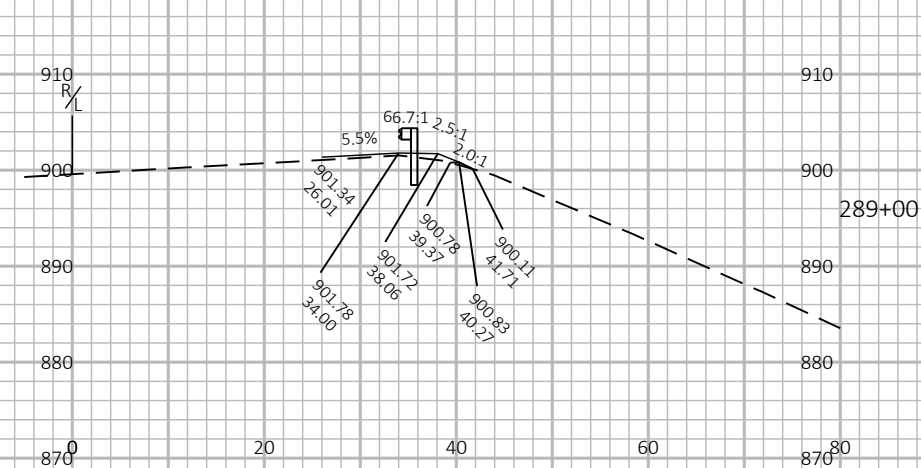
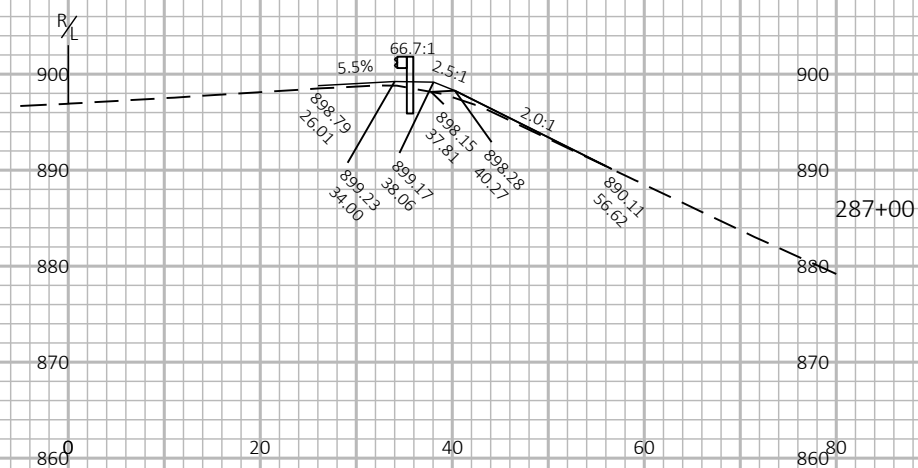
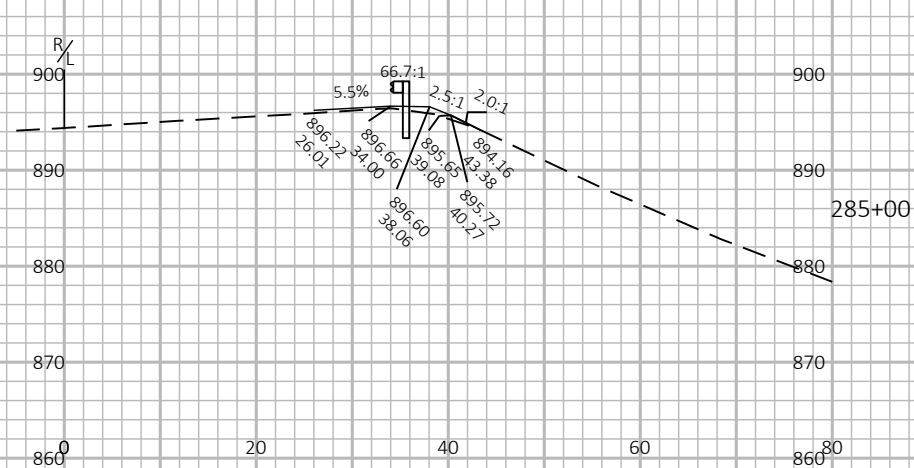
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| PROJECT NO: | 1202-00-75 |
|-------------|------------|

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: NB 61 BEAMGUARD

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| SHEET | 431 |
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FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\090205-XS.DWG  
LAYOUT NAME - 05

PLOT DATE : 2/27/2025 10:29 AM

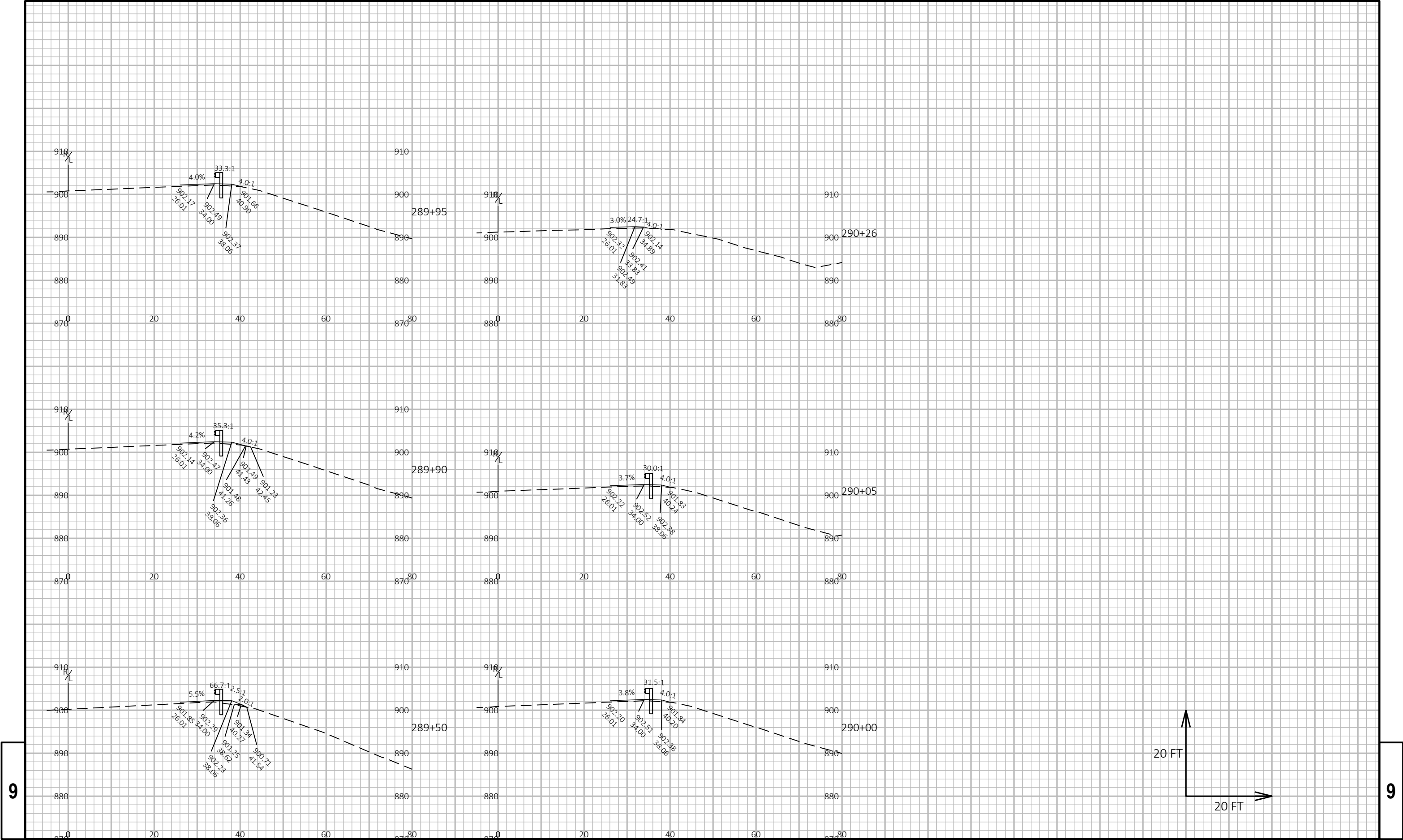
PLOT BY : SCHUMAKER, ERICA R

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

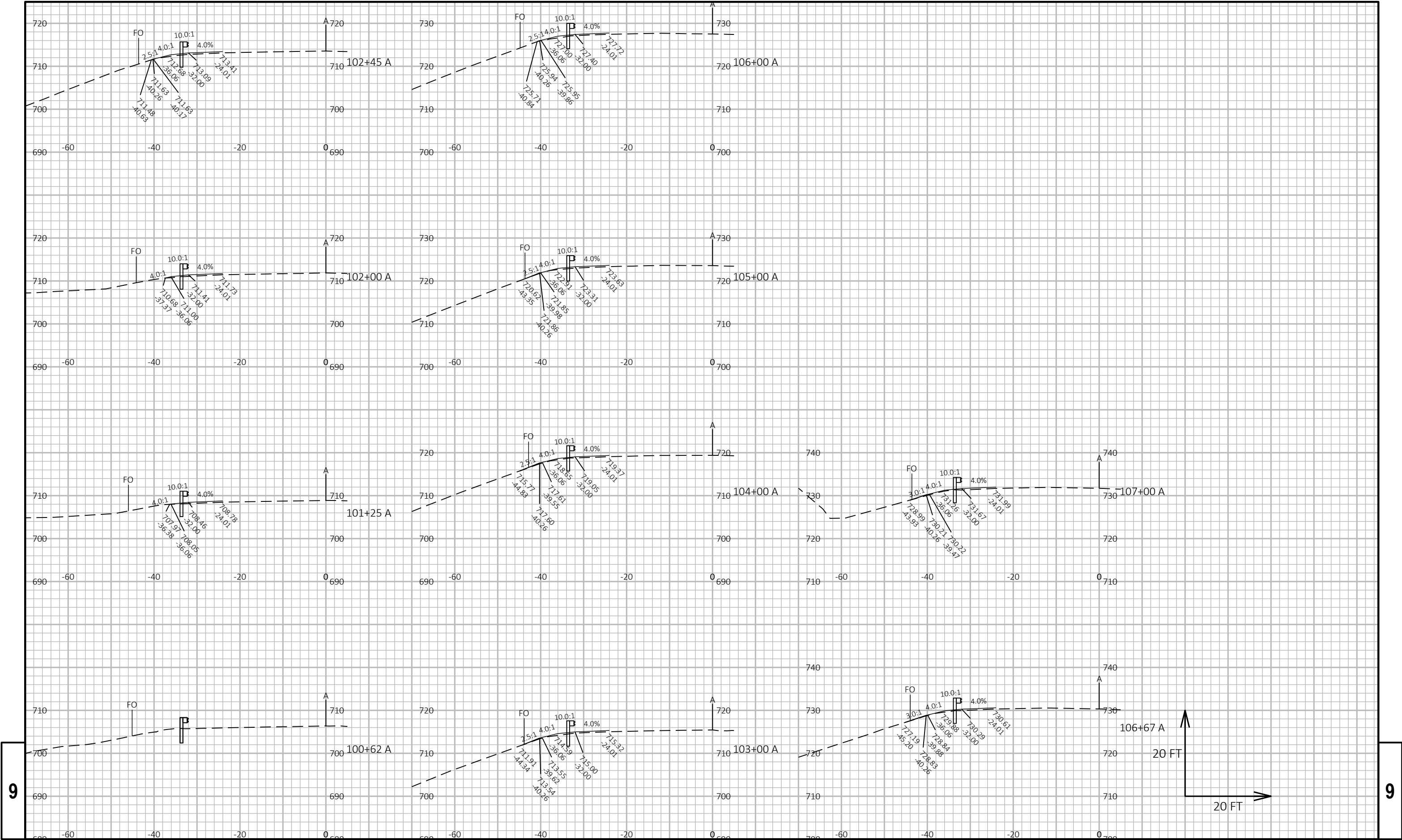
WISDOT/CADDS SHEET 49



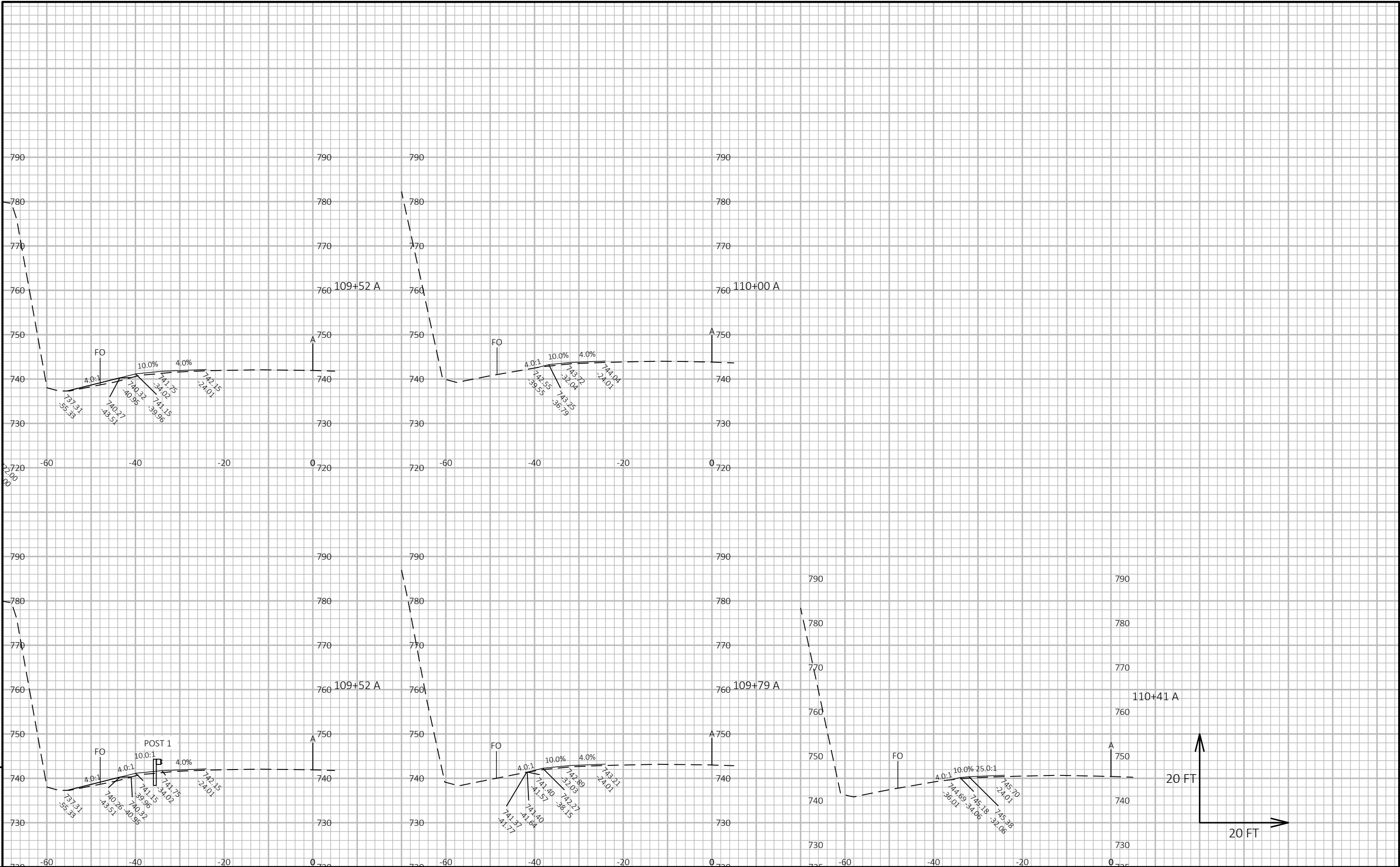


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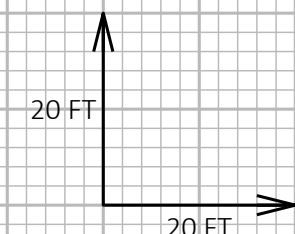
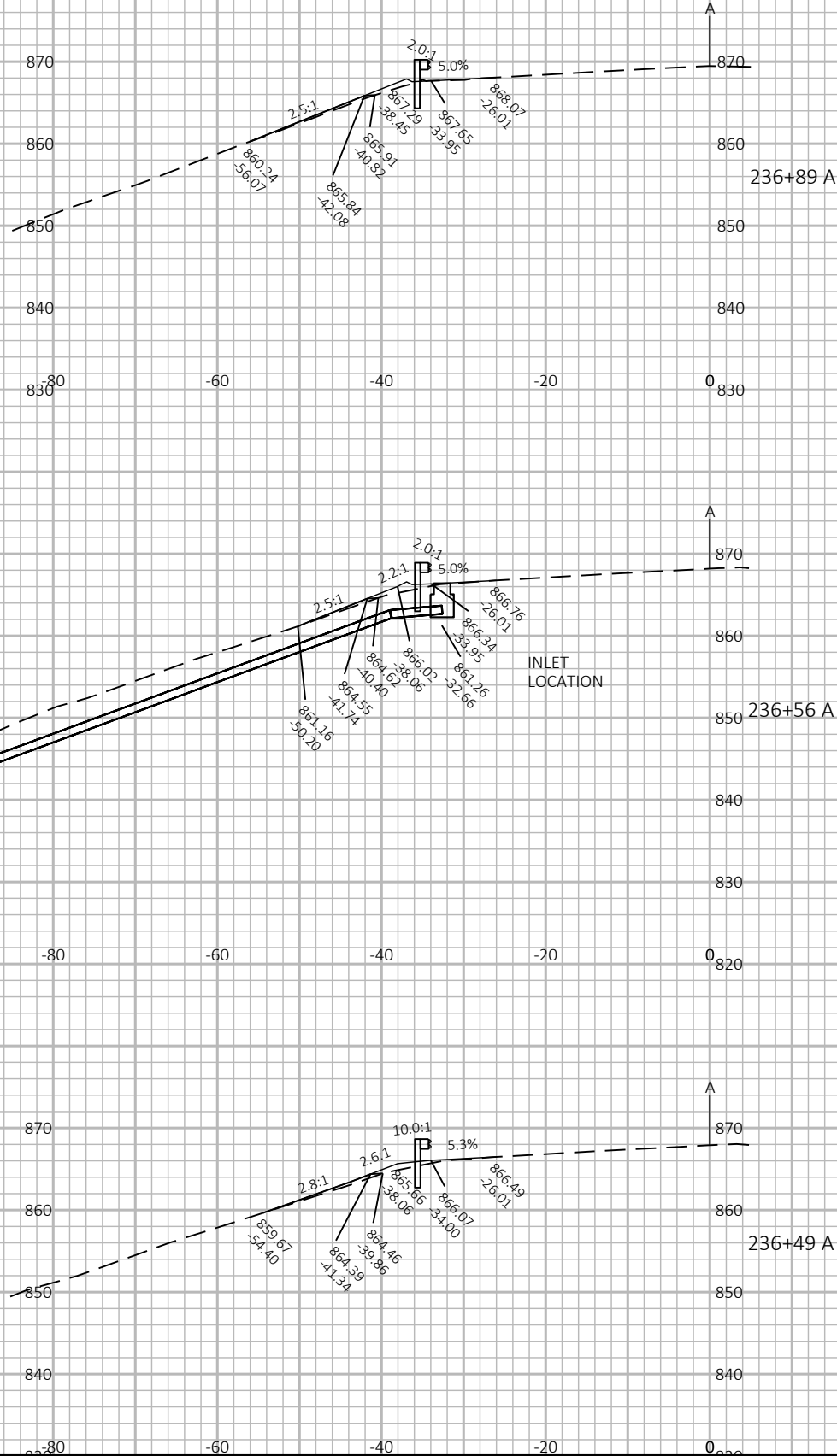
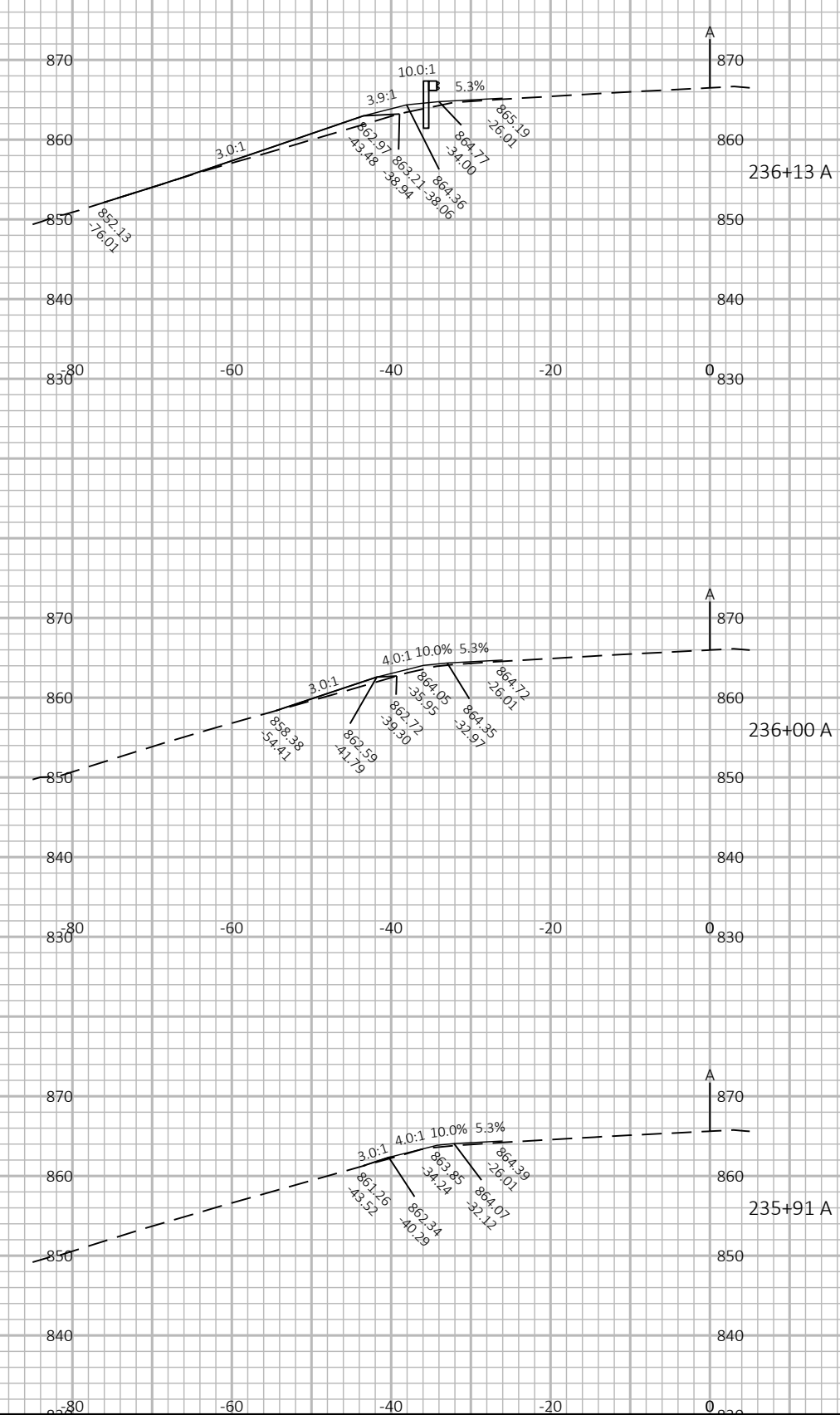
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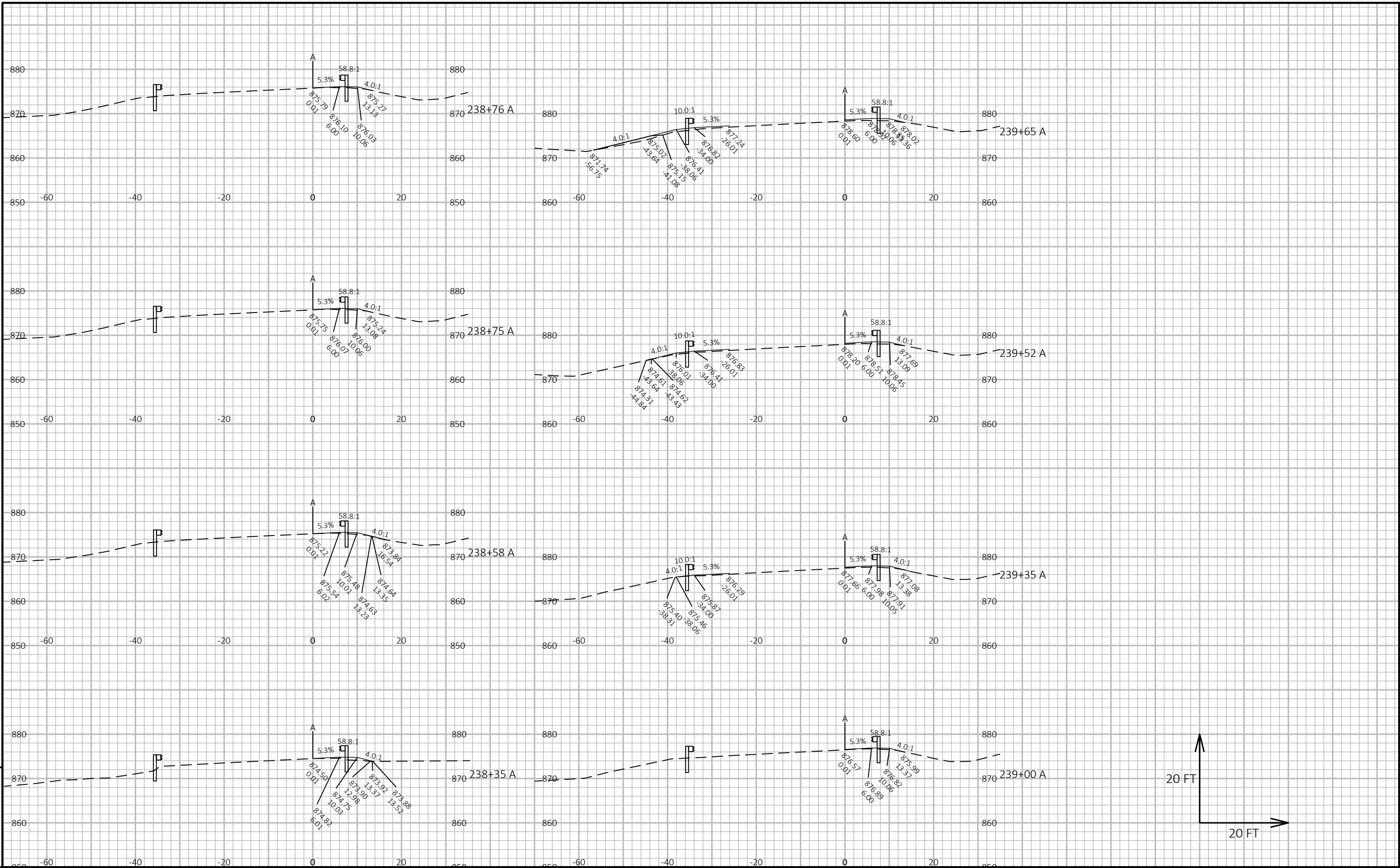




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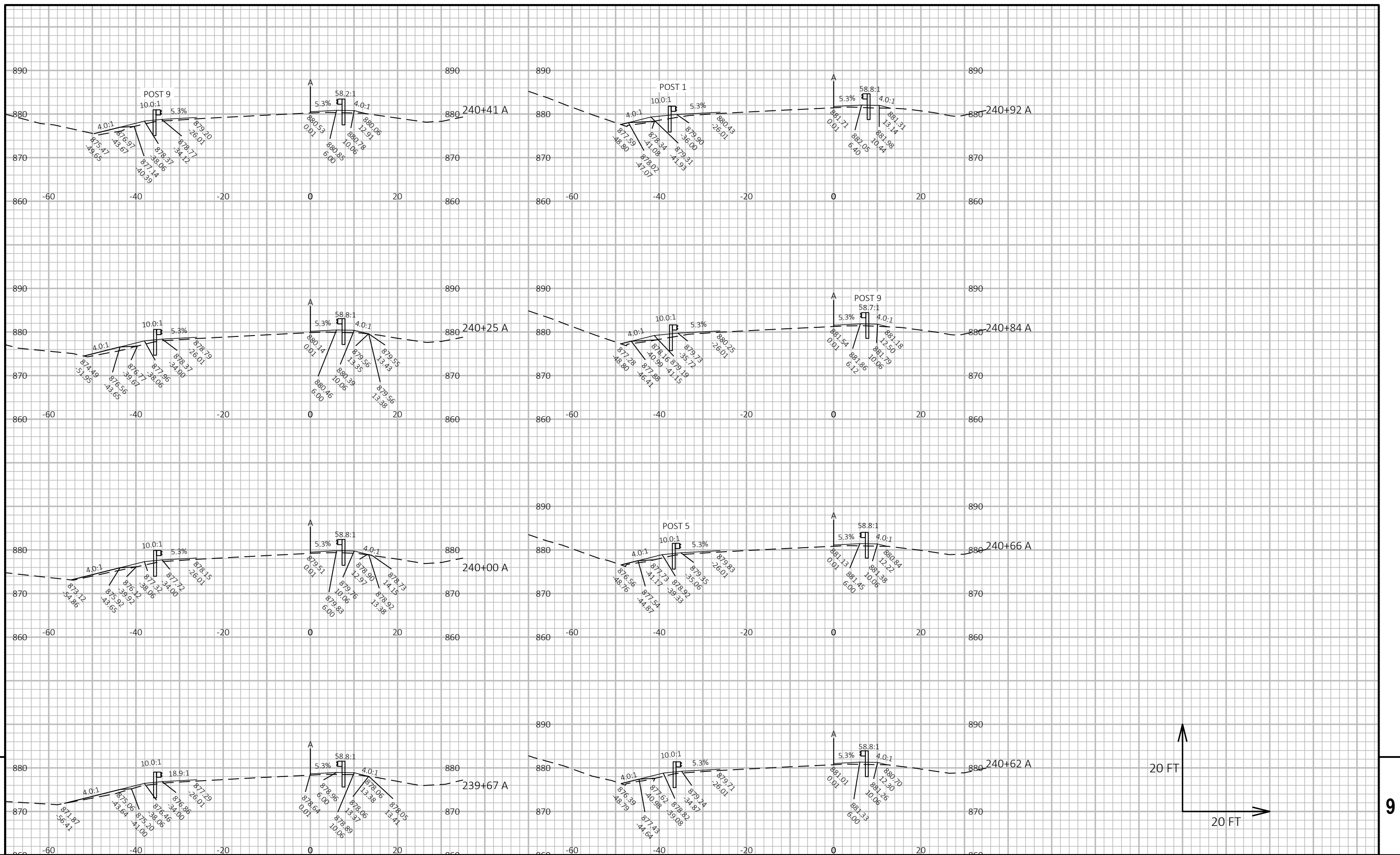
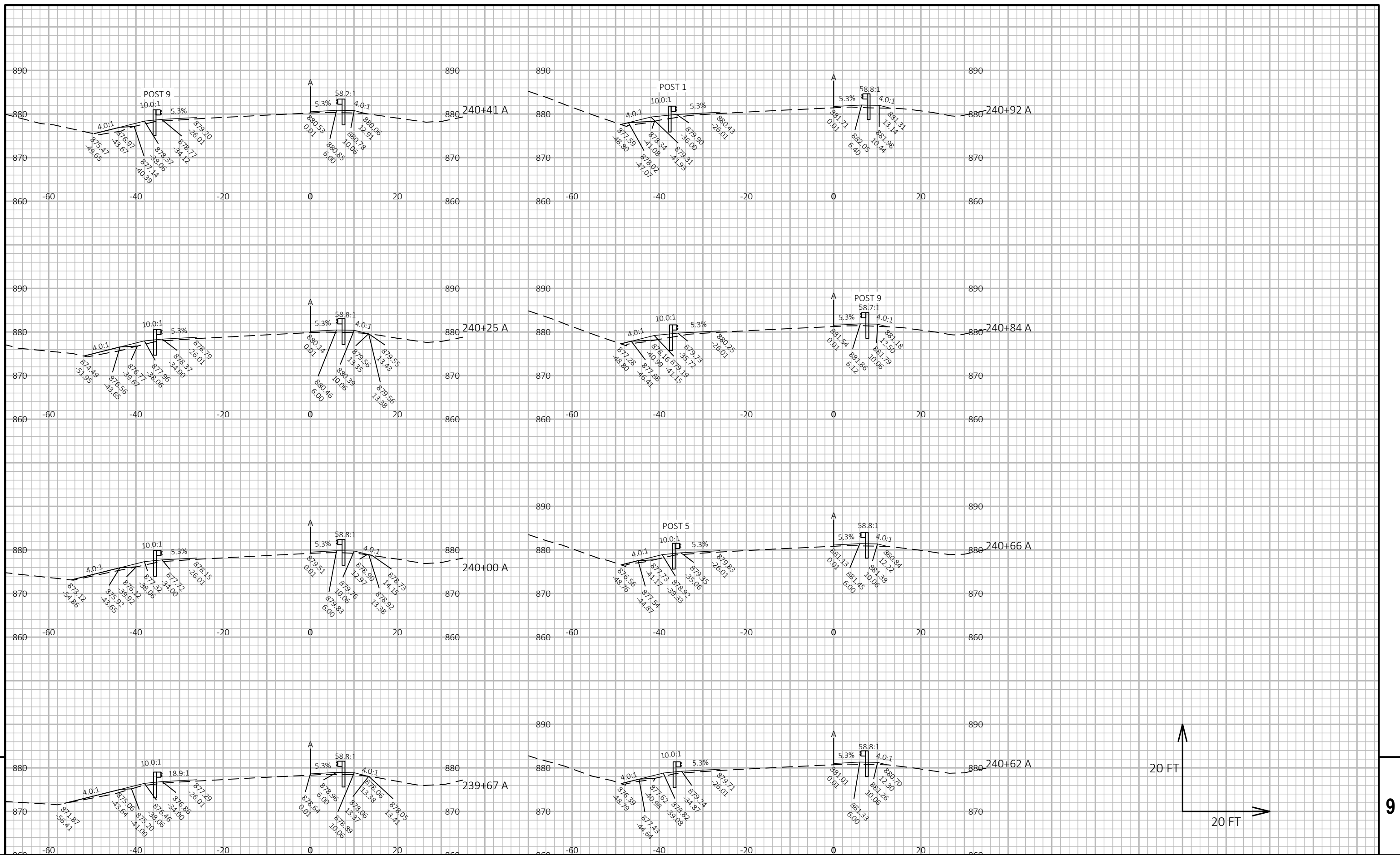
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|-----------------------------------------------------------|--|-------------|--|-------------------------------|--|---------------------------------|--|-------------|--|--------------------------------------------------|--|
| PROJECT NO: 1202-00-75                                    |  | HWY: USH 61 |  | COUNTY: GRANT                 |  | CROSS SECTIONS: SB 61 BEAMGUARD |  | SHEET 438   |  | E                                                |  |
| FILE NAME : N:\PDS\C3D\12020005\SHEETS\PLAN\090207-XS.DWG |  |             |  | PLOT DATE : 2/27/2025 7:51 AM |  | PLOT BY : SCHUMAKER, ERICA R    |  | PLOT NAME : |  | PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. |  |
| LAYOUT NAME - 03                                          |  |             |  | WISDOT/CADDs SHEET 49         |  |                                 |  |             |  |                                                  |  |

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: SB 61 BEAMGUARD

SHEET

438

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\090207-XS.DWG  
LAYOUT NAME - 03

LAYOUT NAME - 03

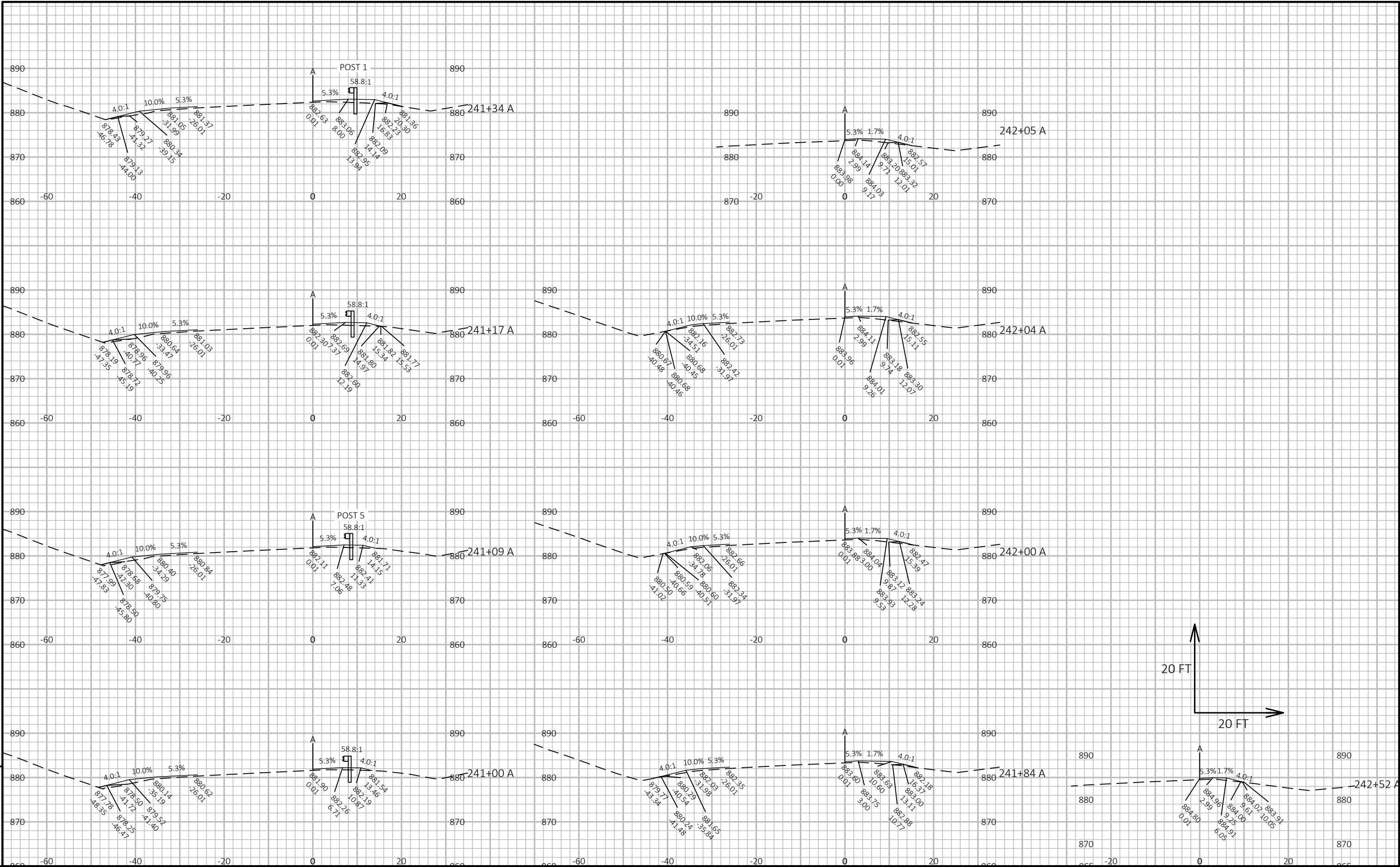
PLOT DATE : 2/27/2025 7:51 AM

PLOT BY : SCHUMAKER, ERICA R

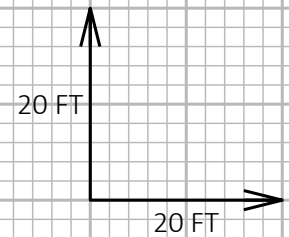
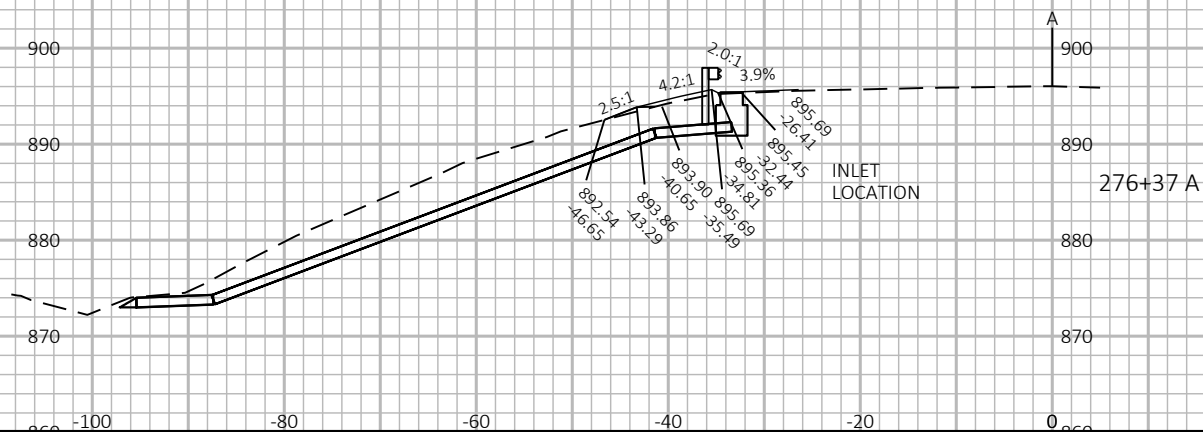
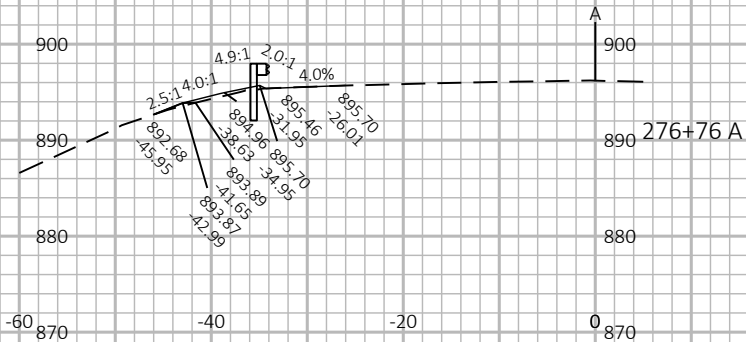
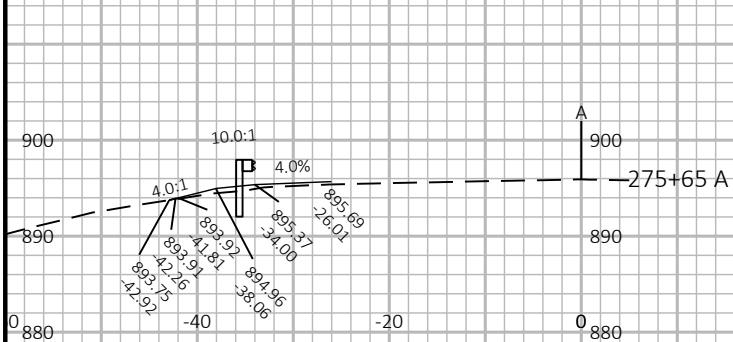
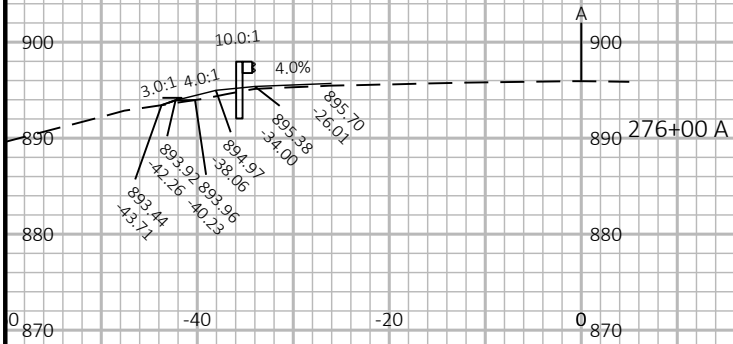
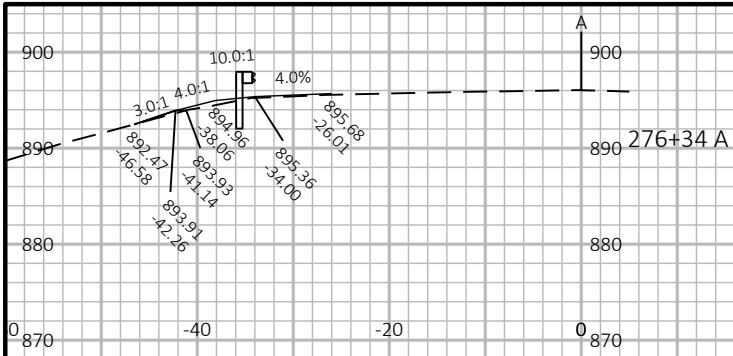
PLOT NAME :

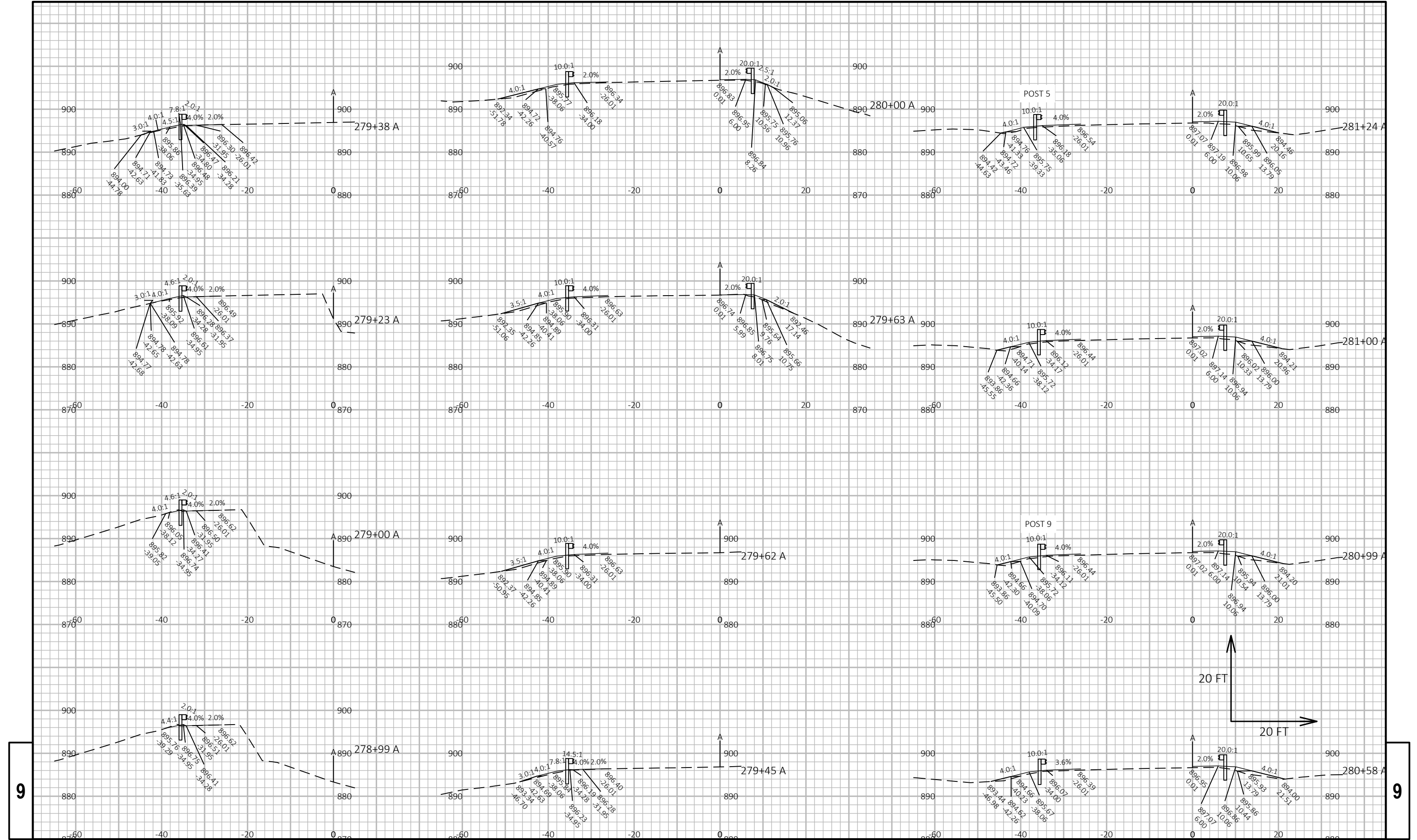
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



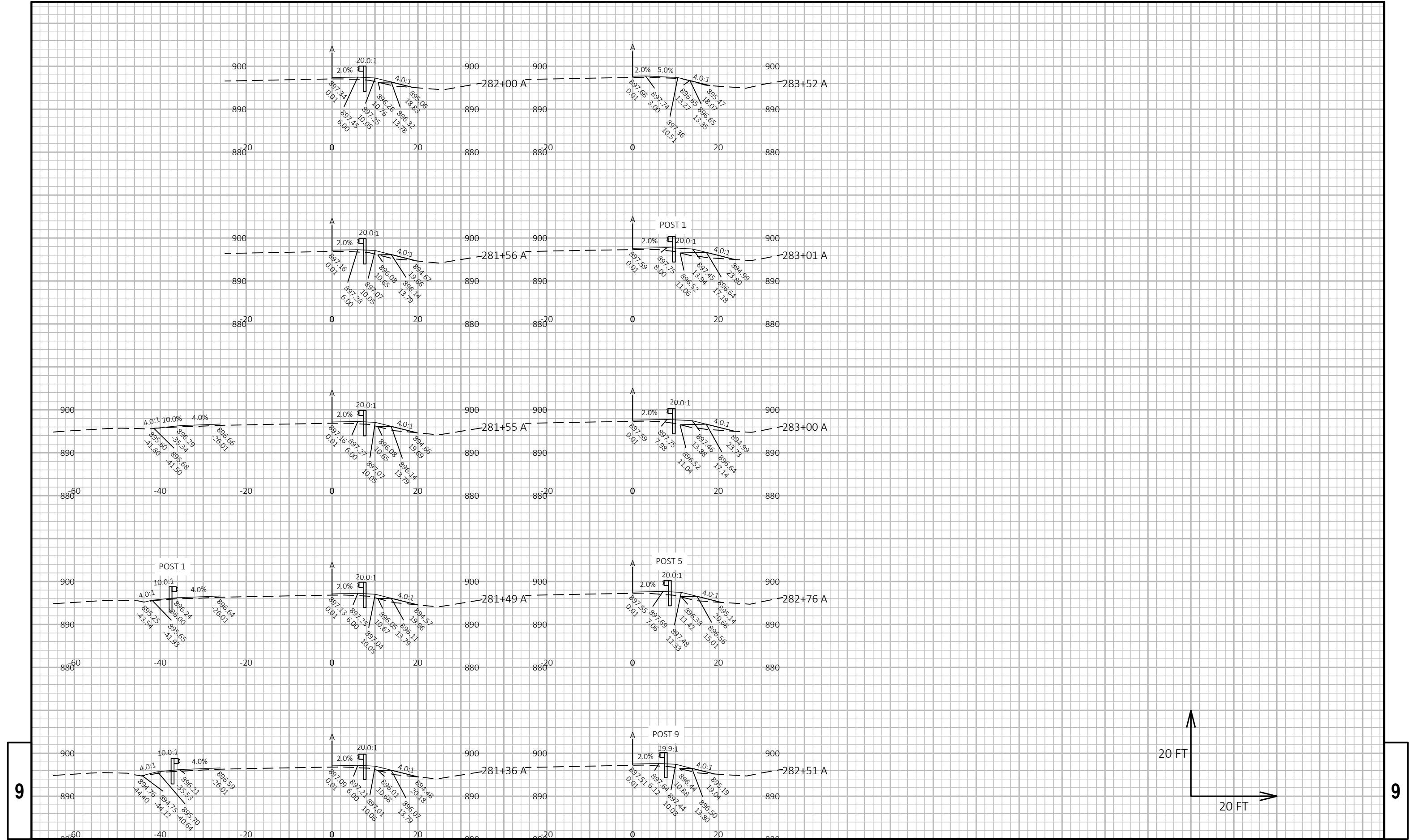






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|                        |             |               |                                 |           |   |
|------------------------|-------------|---------------|---------------------------------|-----------|---|
| PROJECT NO: 1202-00-75 | HWY: USH 61 | COUNTY: GRANT | CROSS SECTIONS: SB 61 BEAMGUARD | SHEET 441 | E |
|------------------------|-------------|---------------|---------------------------------|-----------|---|



PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: SB 61 BEAMGUARD

SHEET

442

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FILE NAME : N:\PDS\C3D\12020005\SHEETPLAN\090208-XS.DWG  
LAYOUT NAME - 03

PLOT DATE : 2/27/2025 8:16 AM

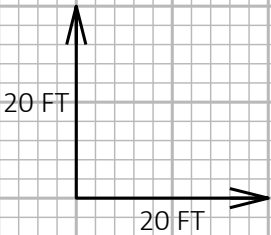
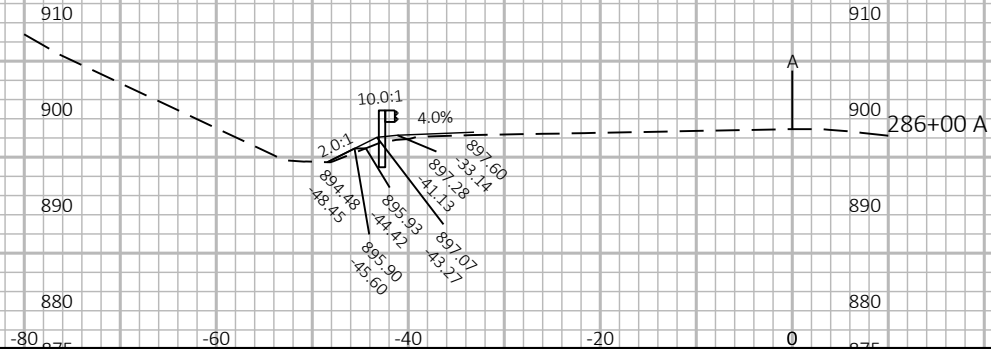
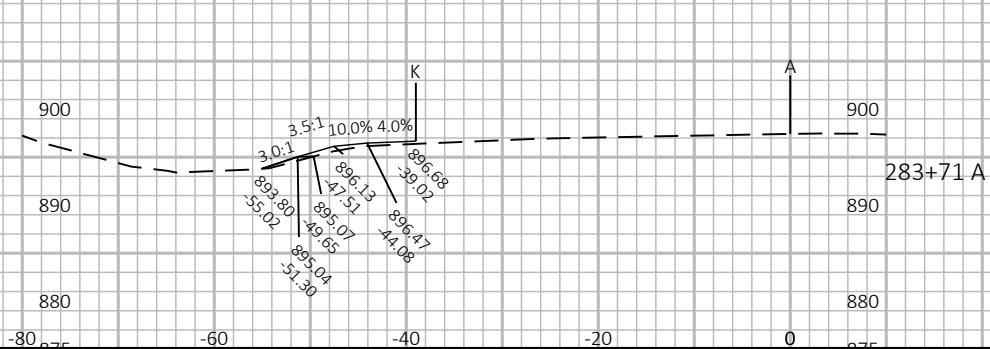
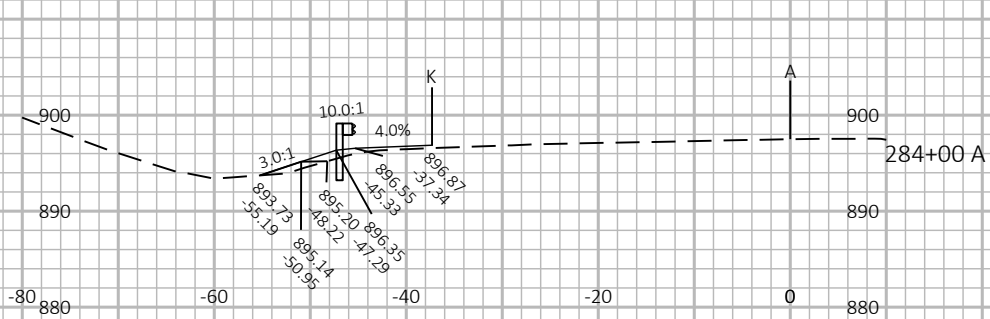
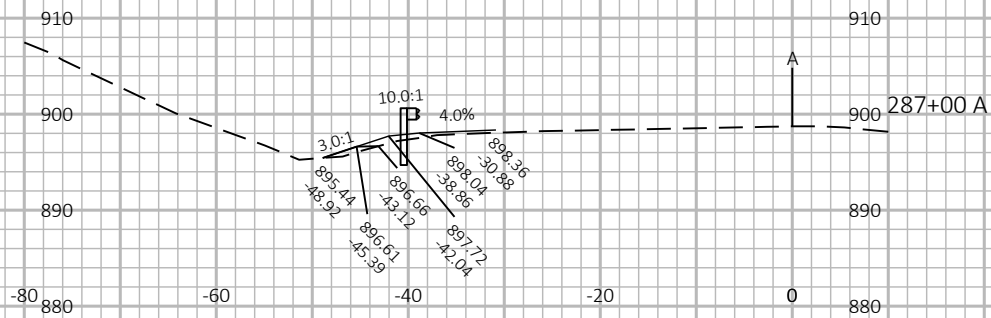
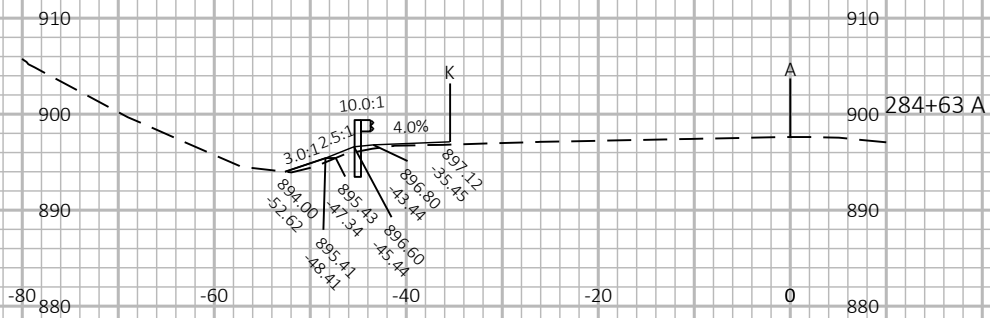
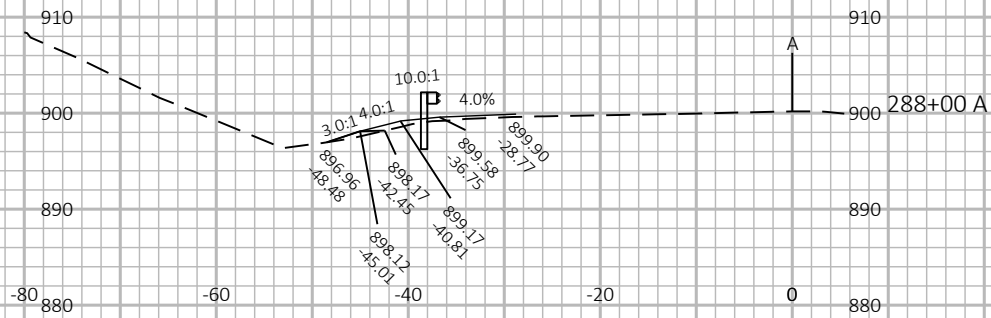
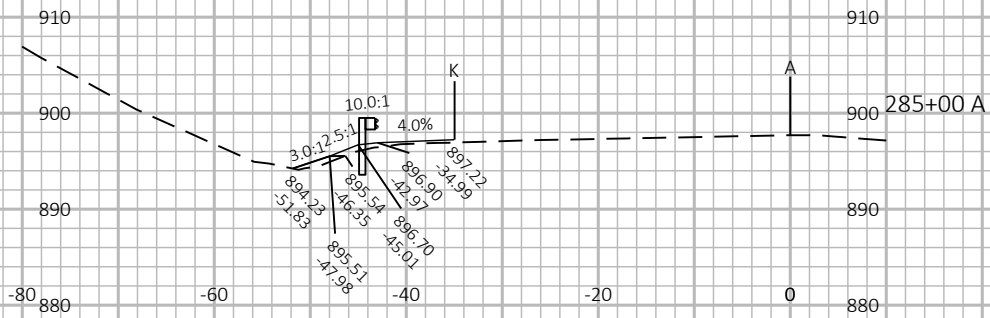
PLOT BY : SCHUMAKER, ERICA R

PLOT NAME :

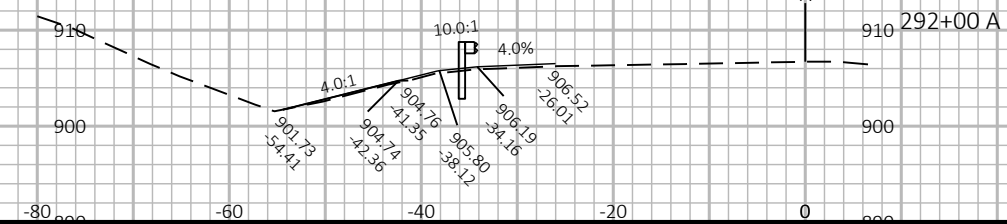
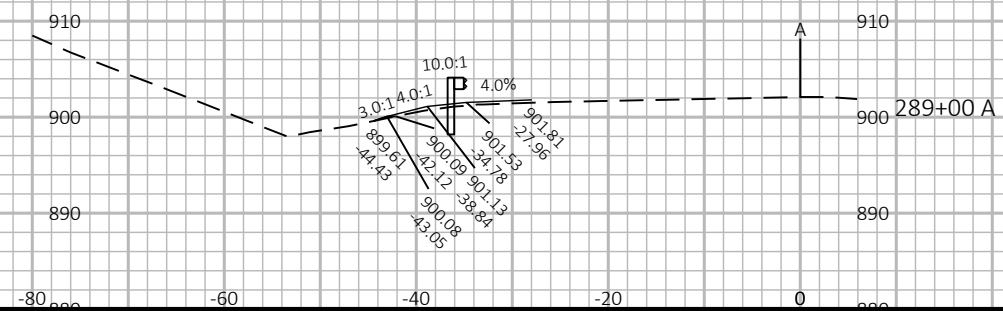
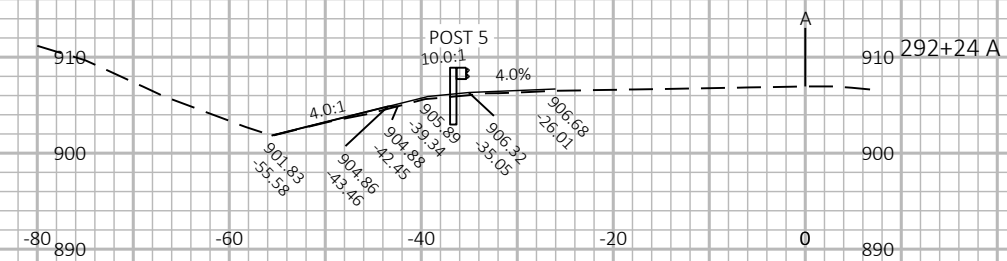
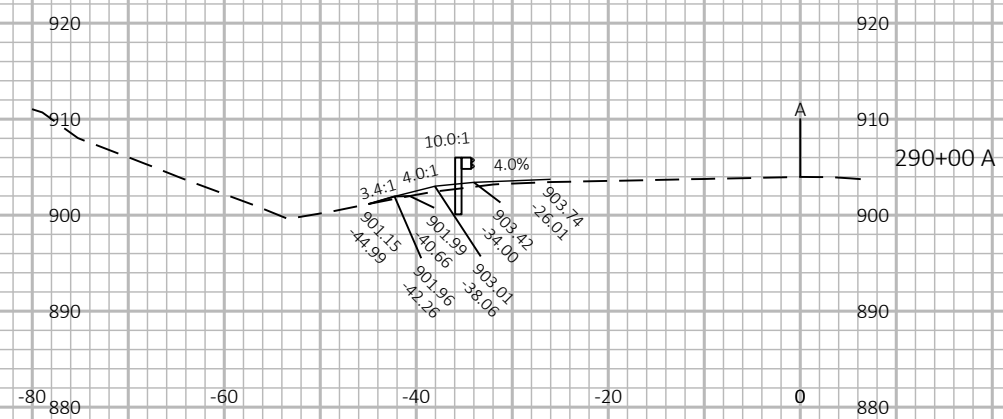
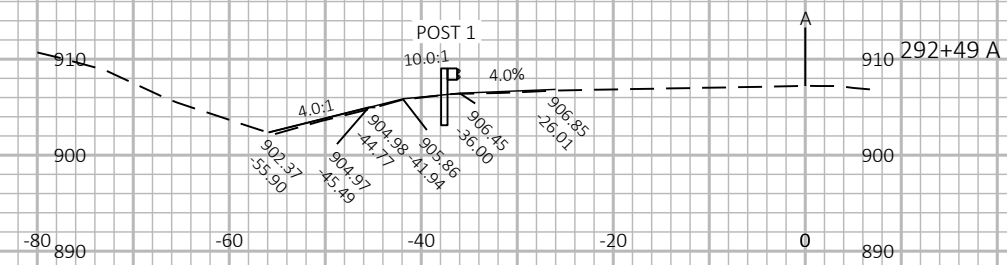
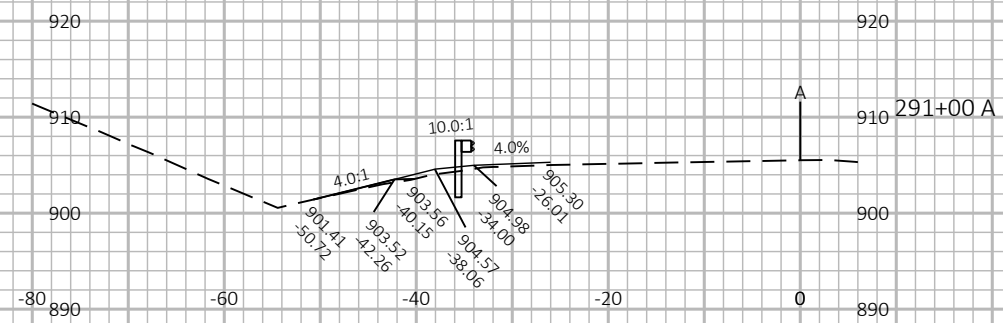
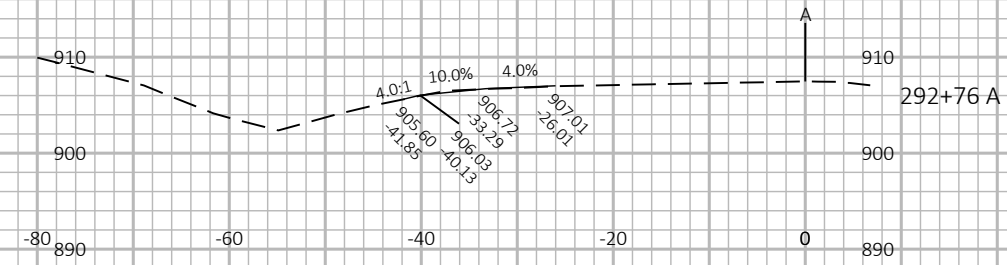
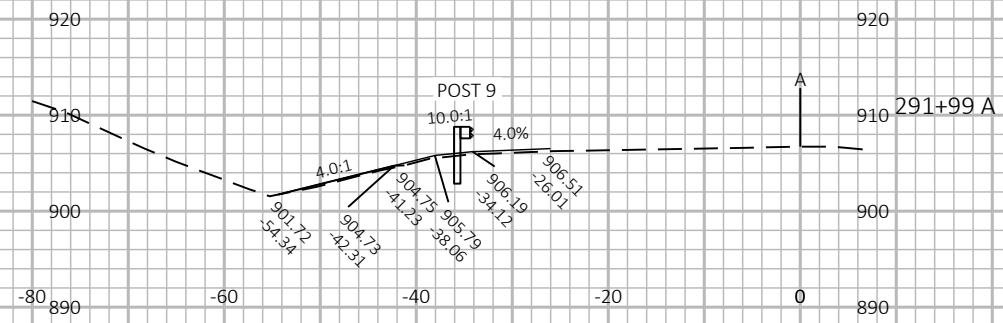
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

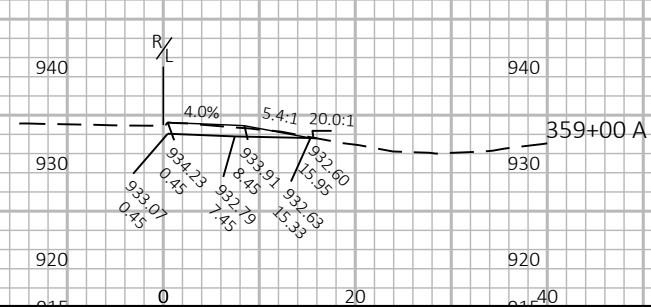
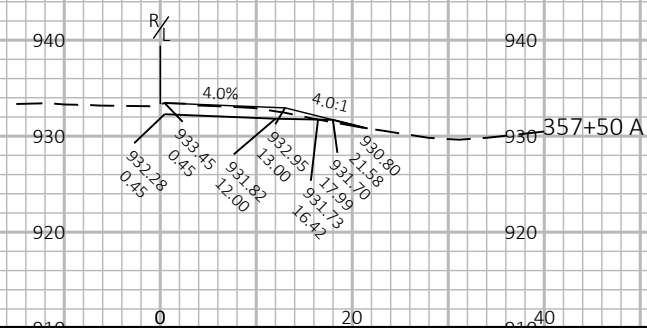
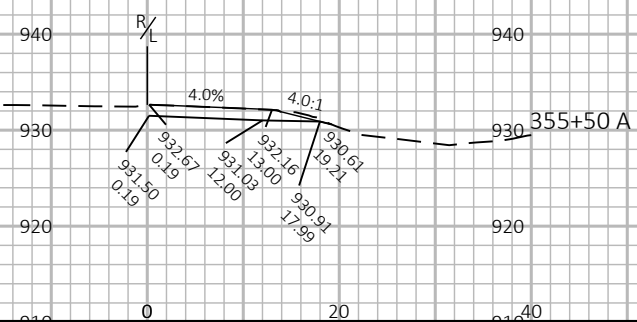
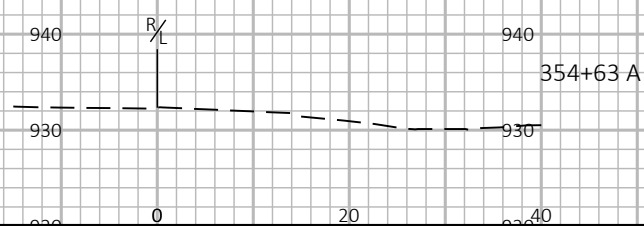
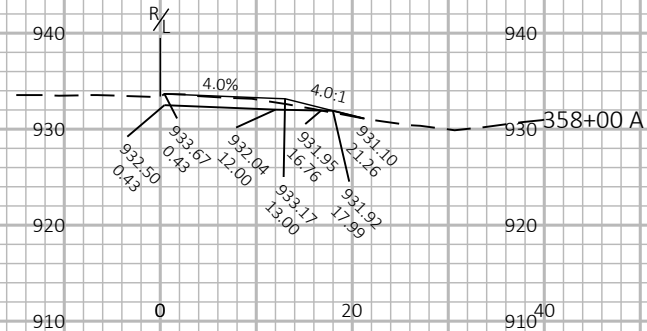
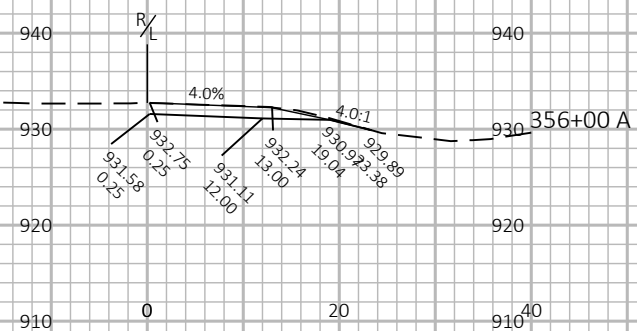
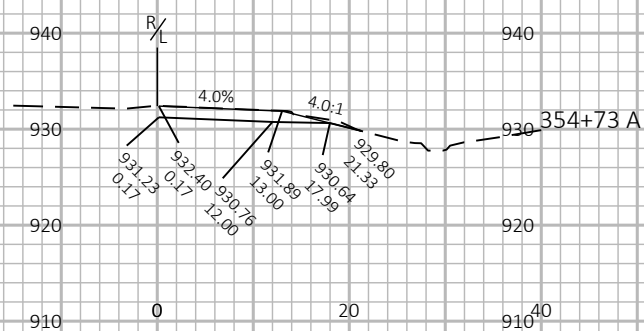
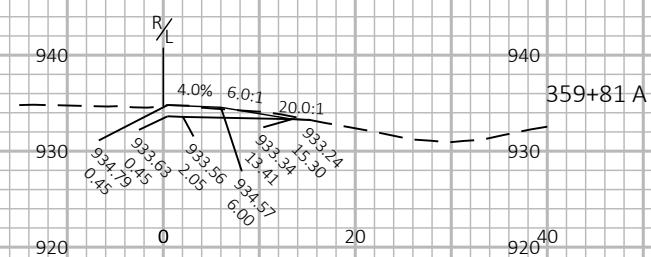
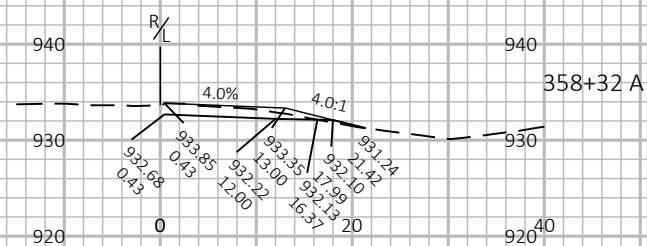
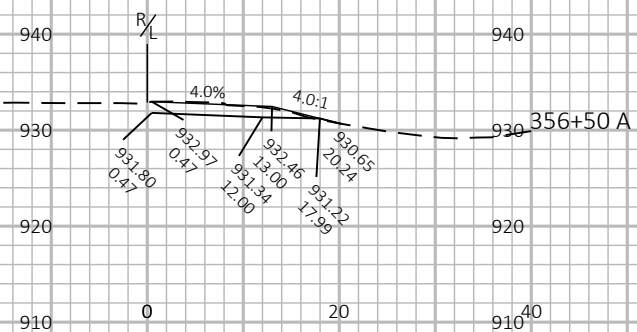
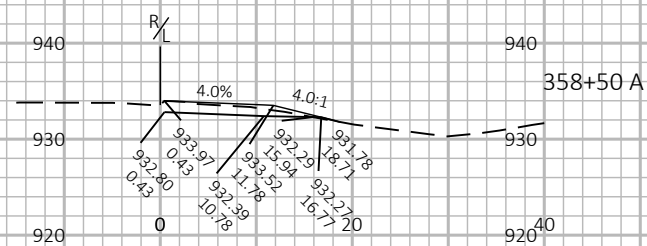
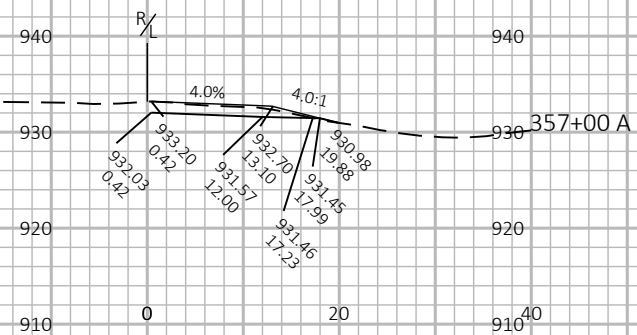
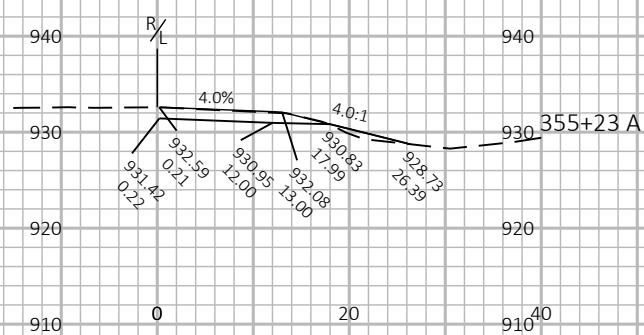
WISDOT/CADDs SHEET 49

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| PROJECT NO: | 1202-00-75 |
|-------------|------------|

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: SB 61 TURN LANE

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| SHEET | 445 |
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FILE NAME : N:\PDS\C3D\12020005\SHEETSP\PLAN\090209.5-XS.DWG  
LAYOUT NAME - 01

PLOT DATE : 2/27/2025 11:03 AM

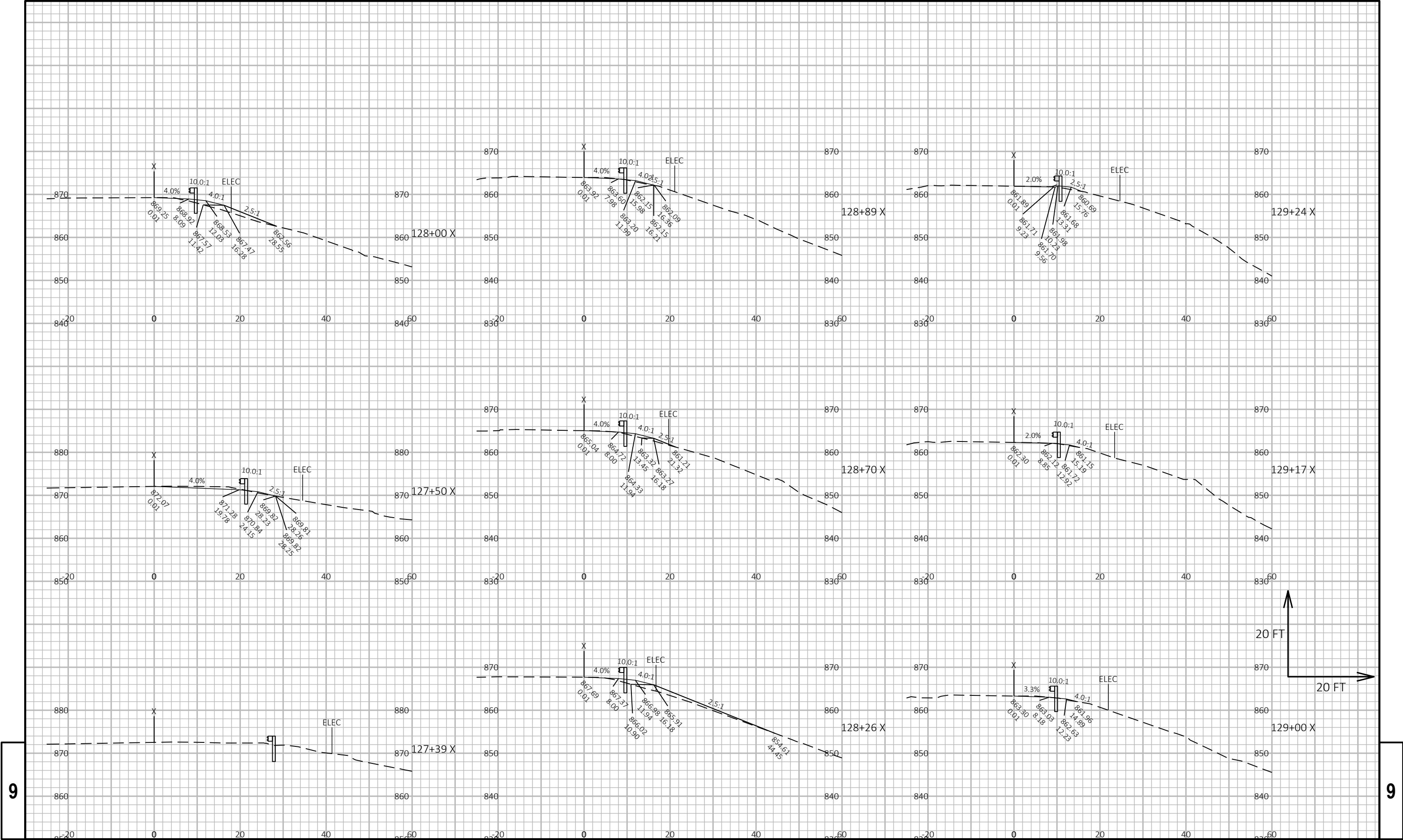
PLOT BY : SCHUMAKER, ERICA R

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: REST AREA 106

SHEET 446

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\090210-XS.DWG  
LAYOUT NAME - 01

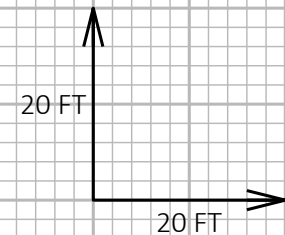
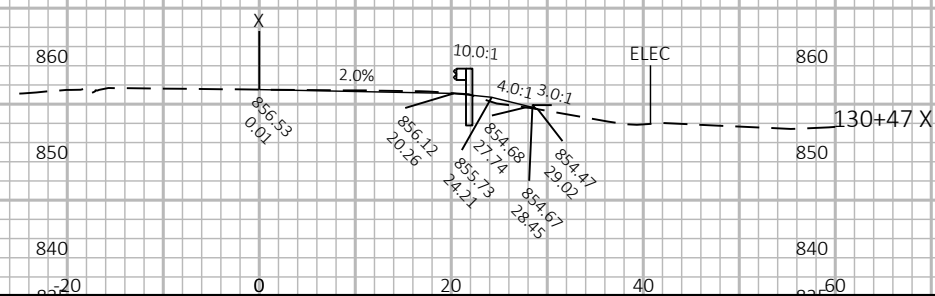
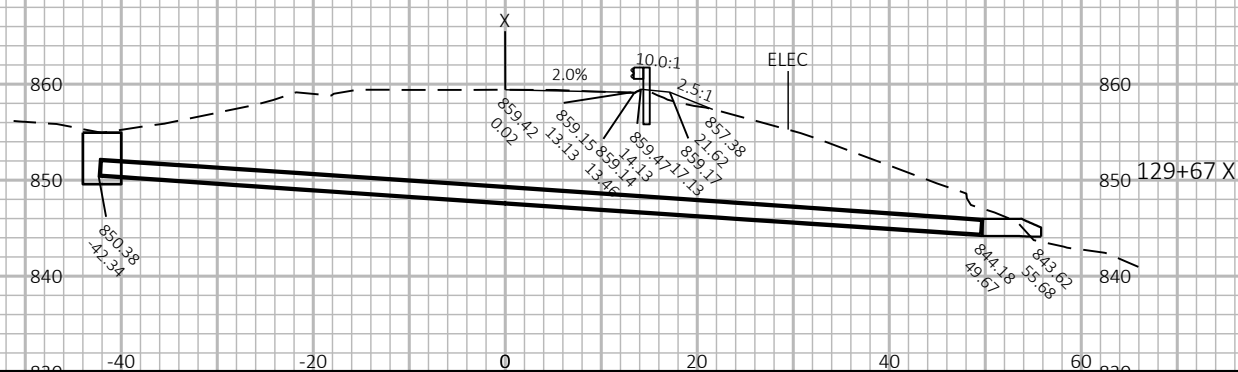
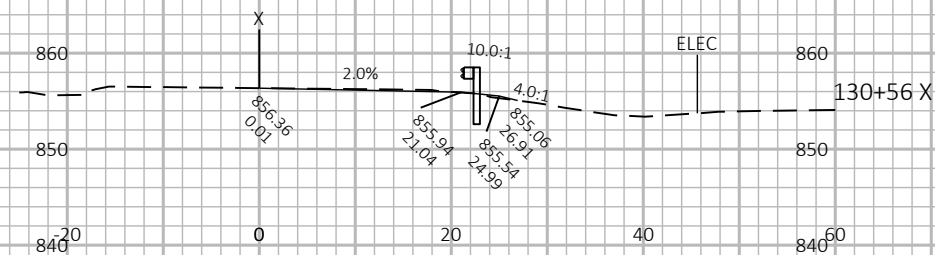
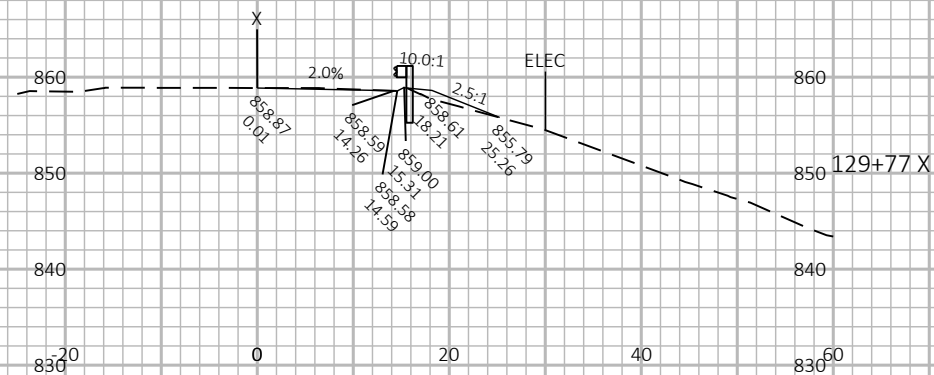
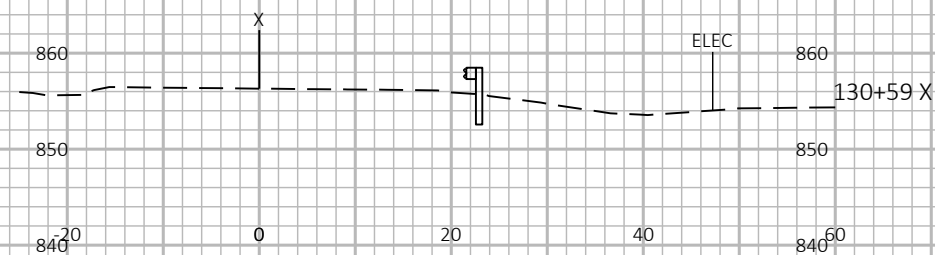
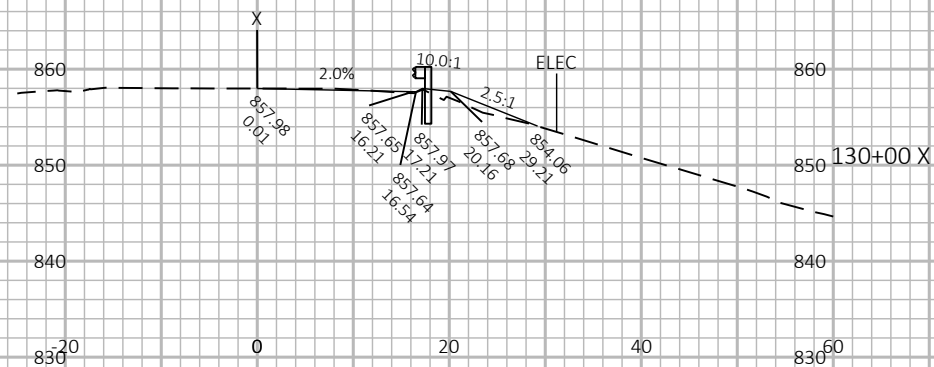
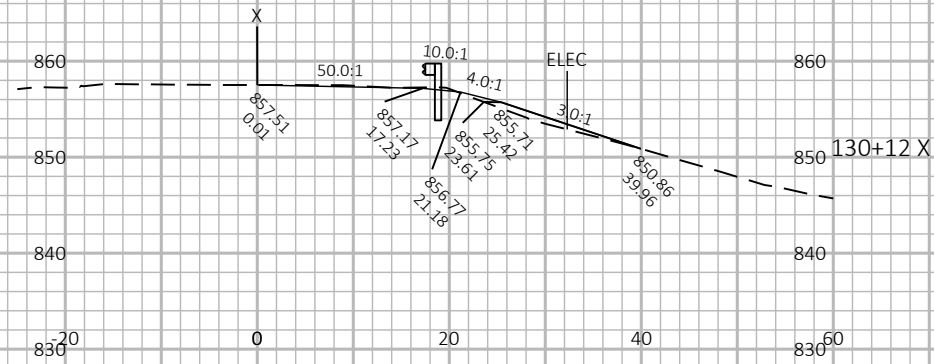
PLOT DATE : 2/27/2025 8:30 AM

PLOT BY : SCHUMAKER, ERICA R

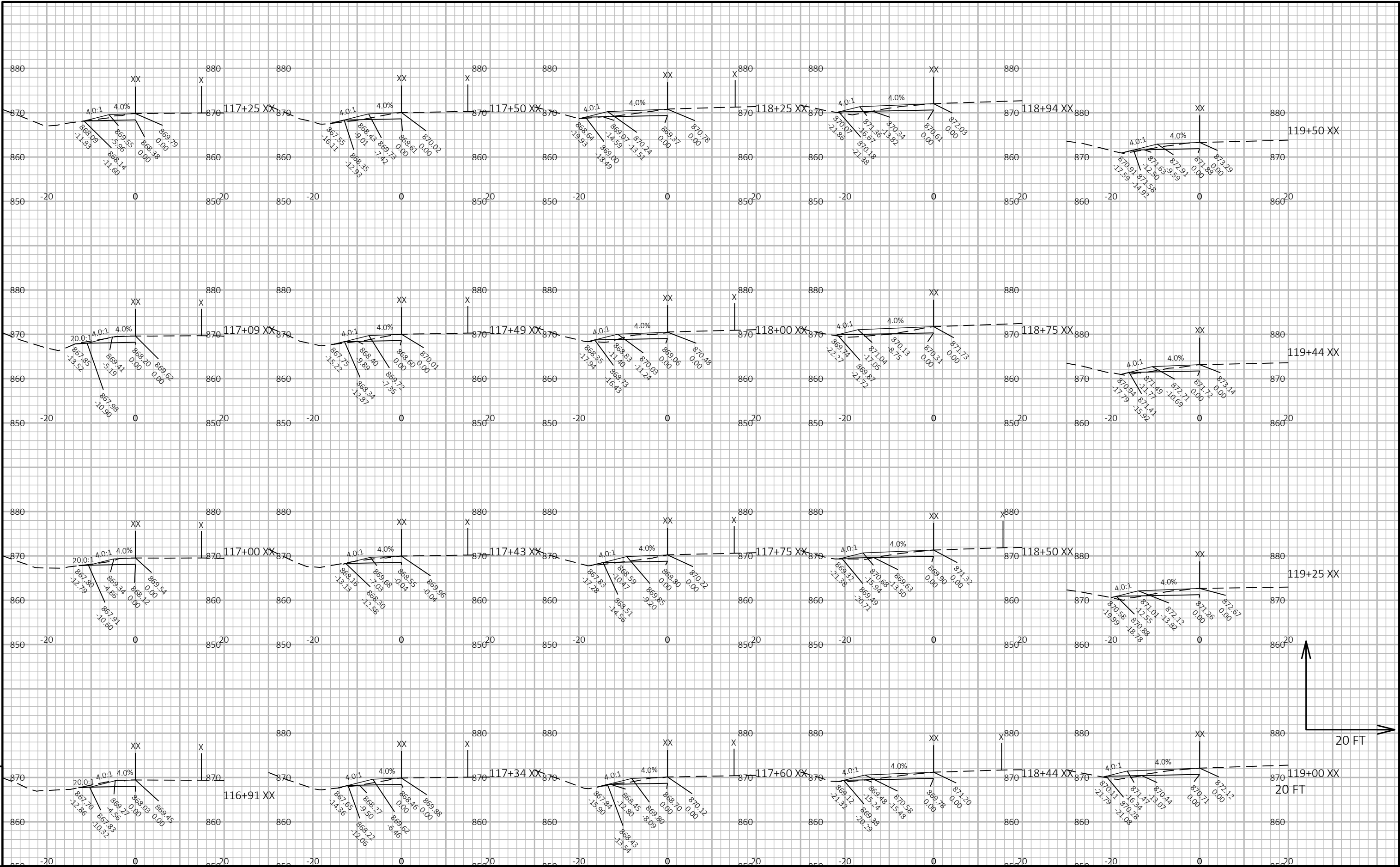
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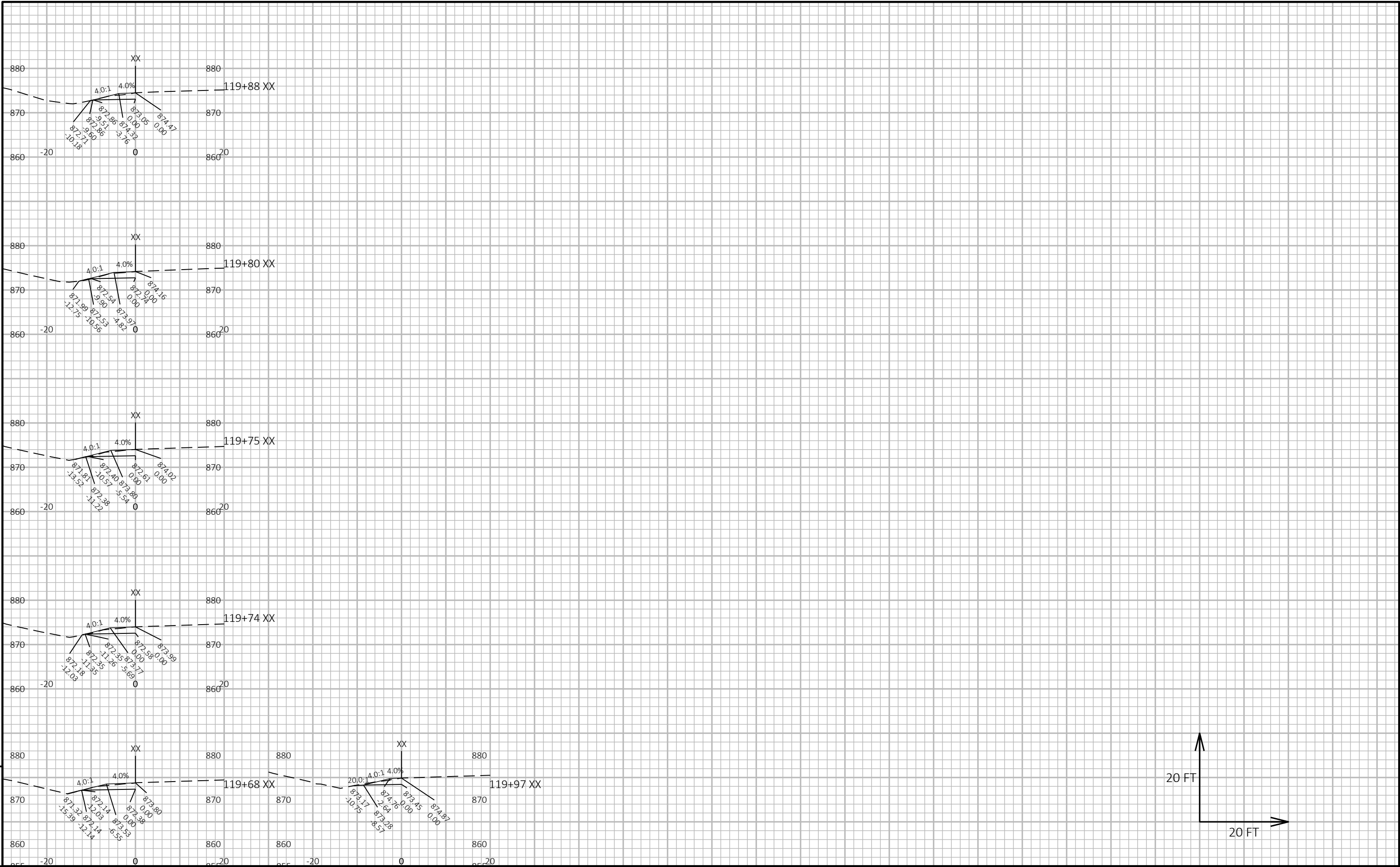
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDs SHEET 49



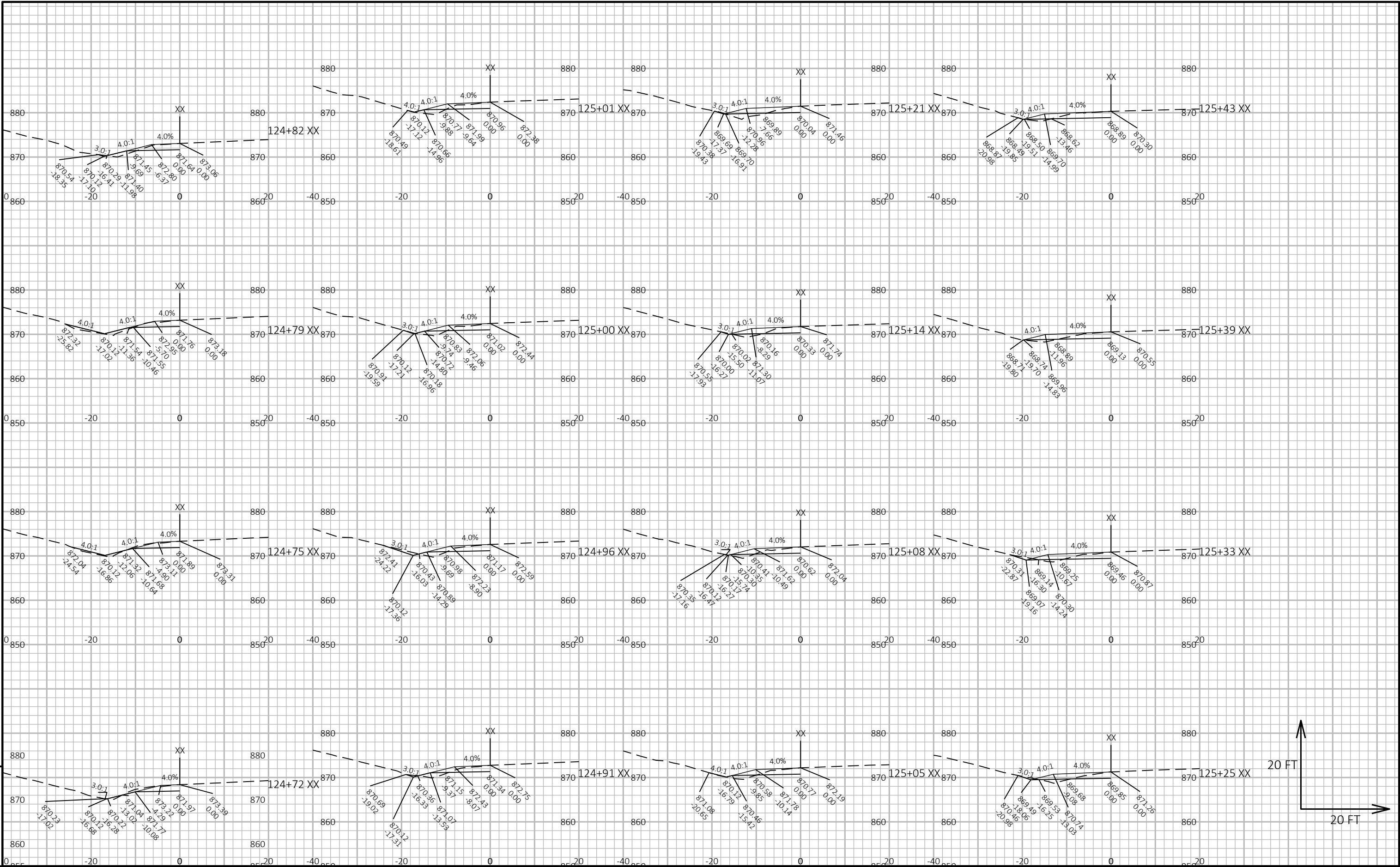


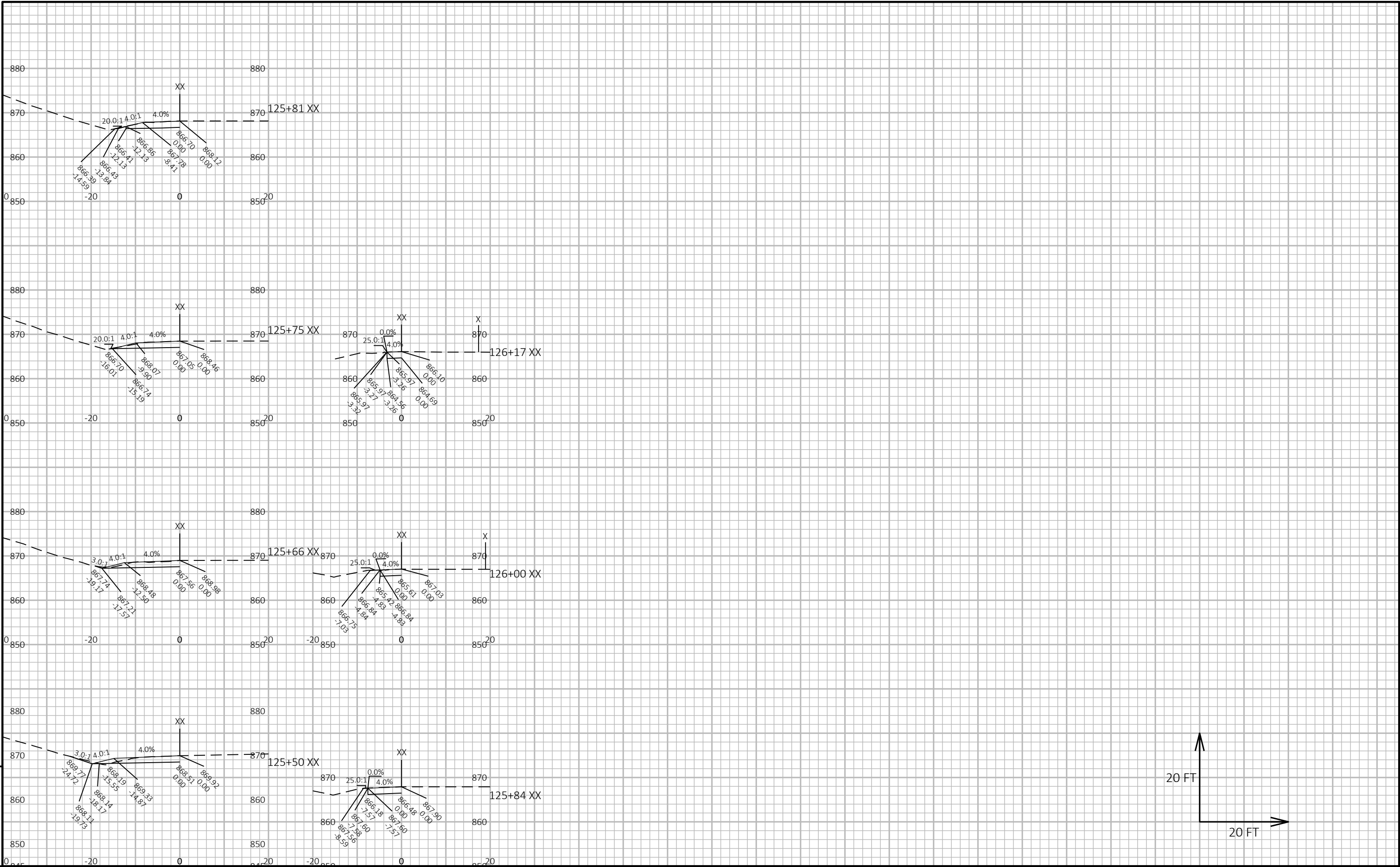


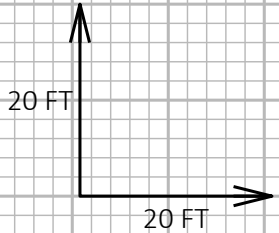
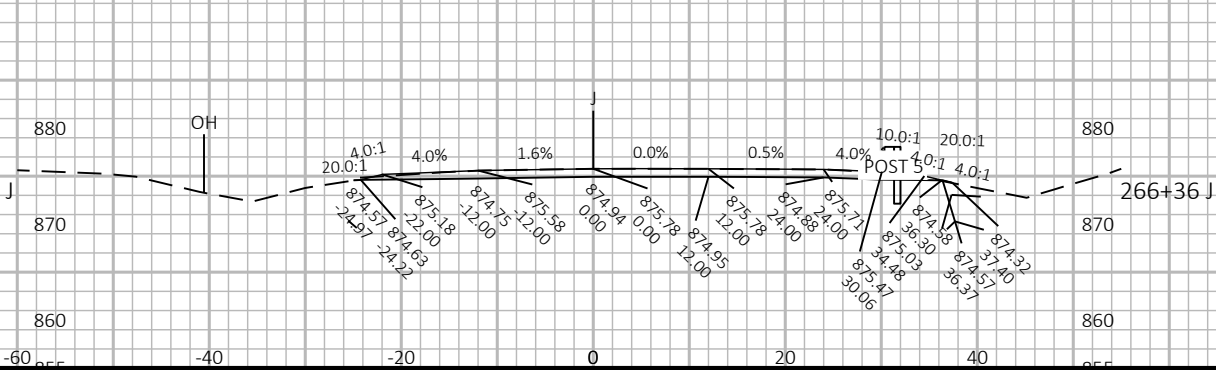
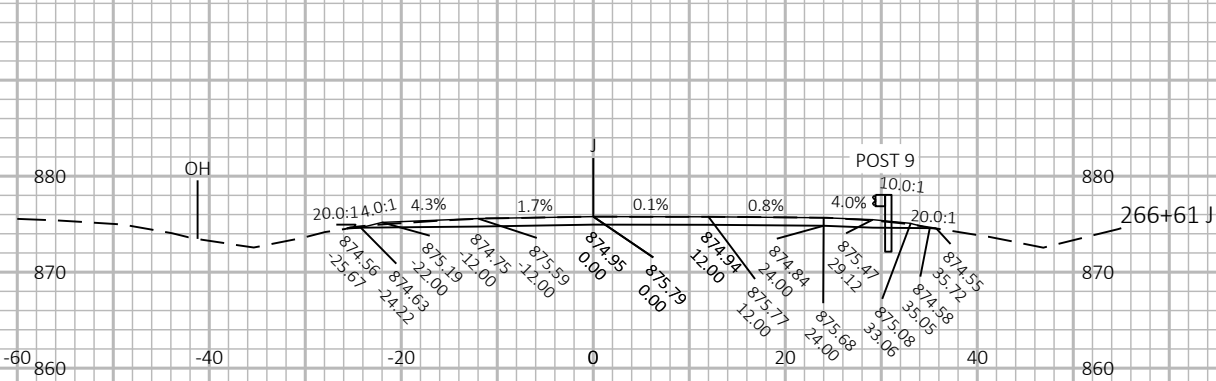
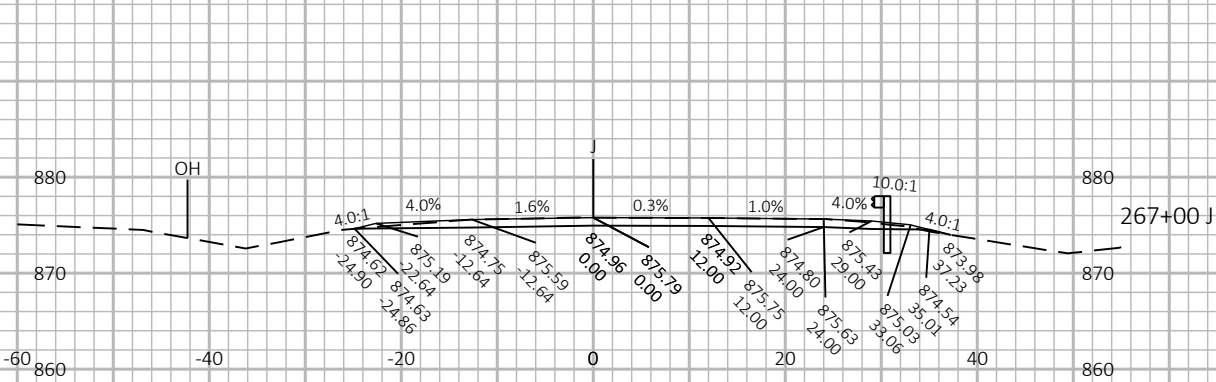
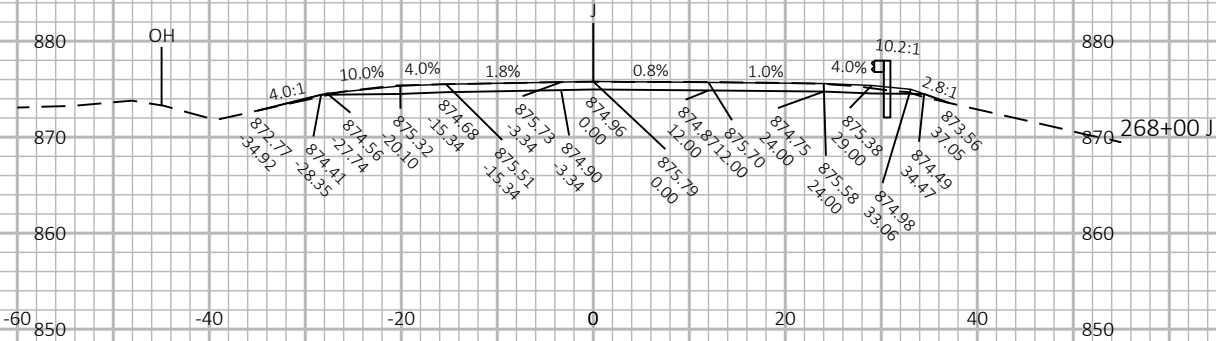
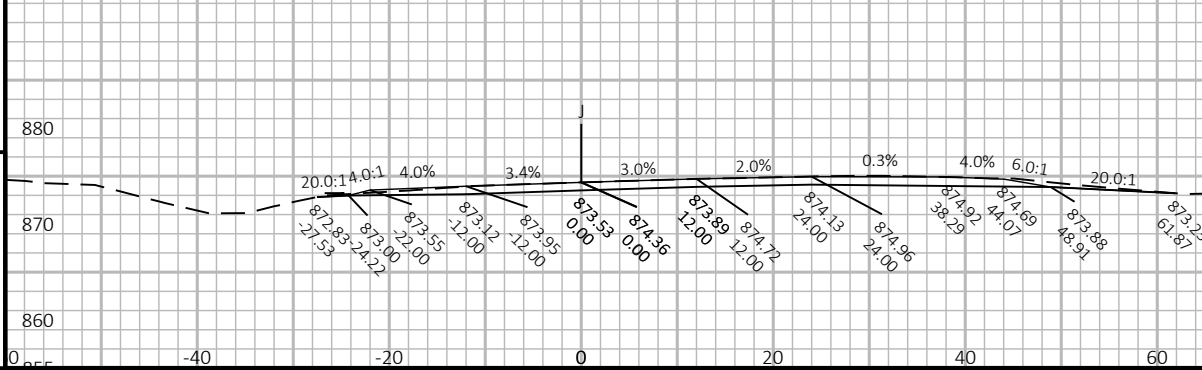
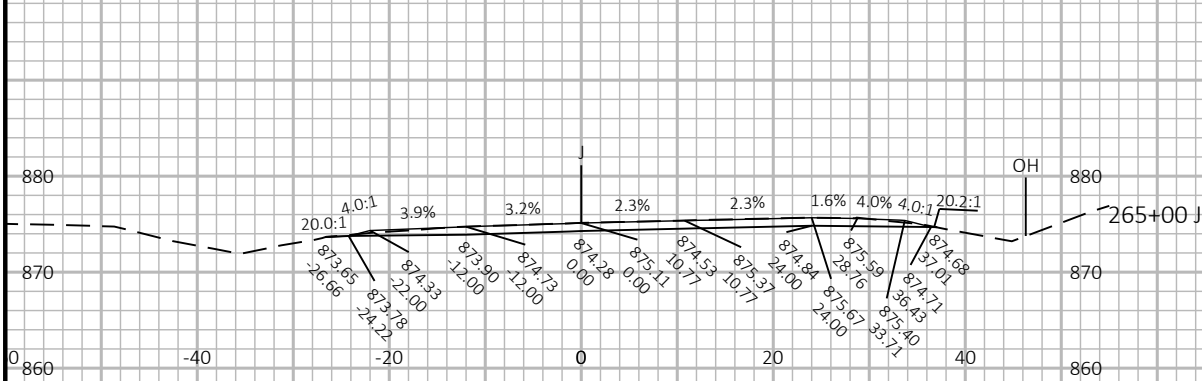
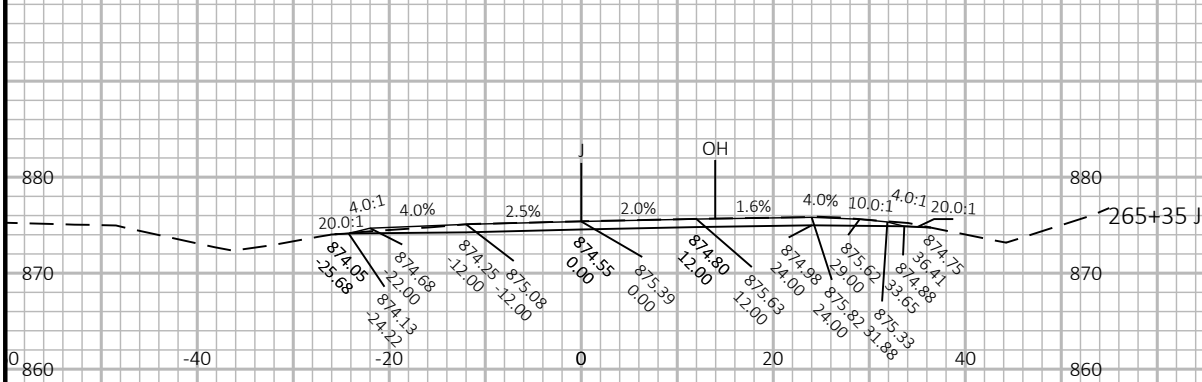
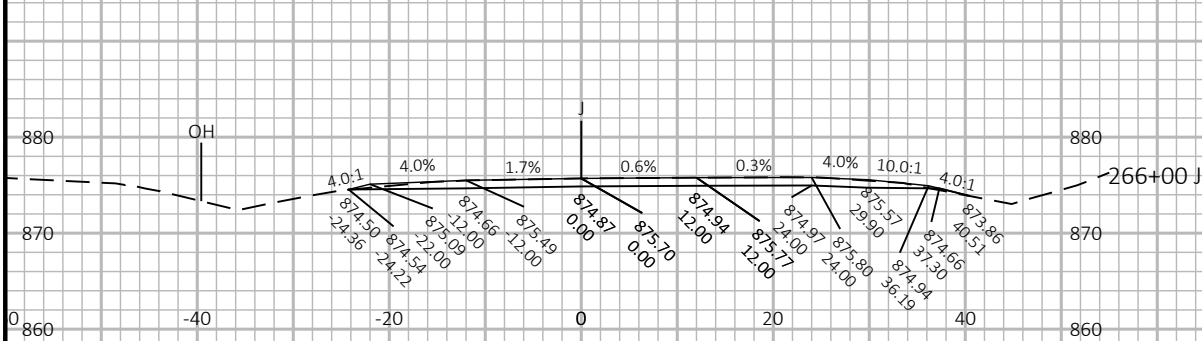
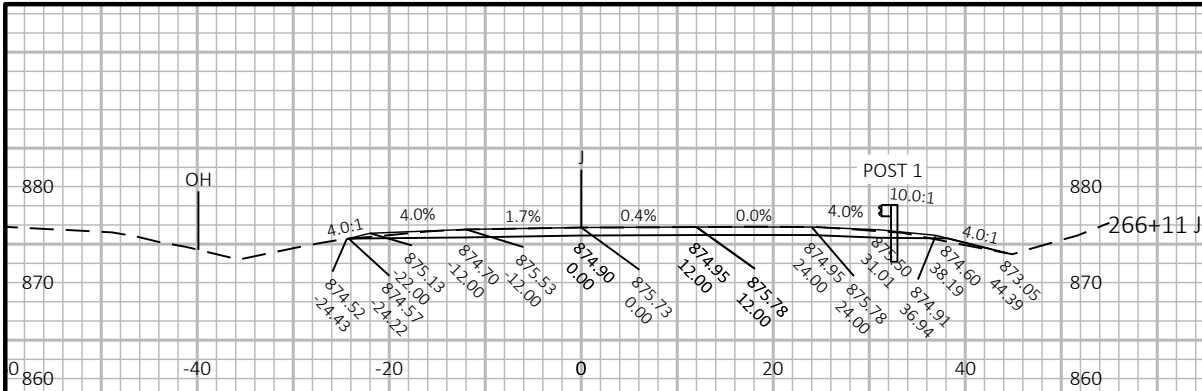


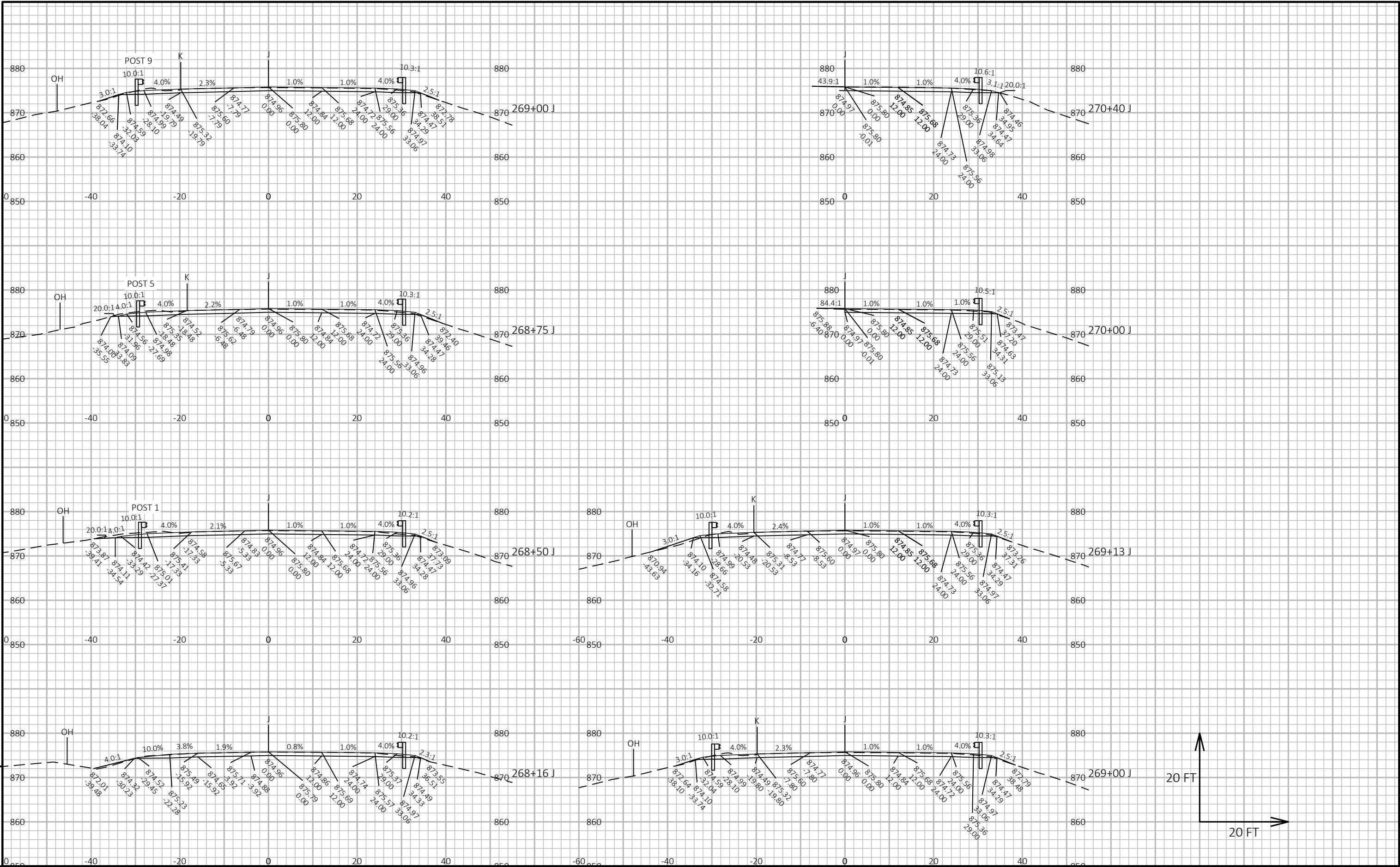
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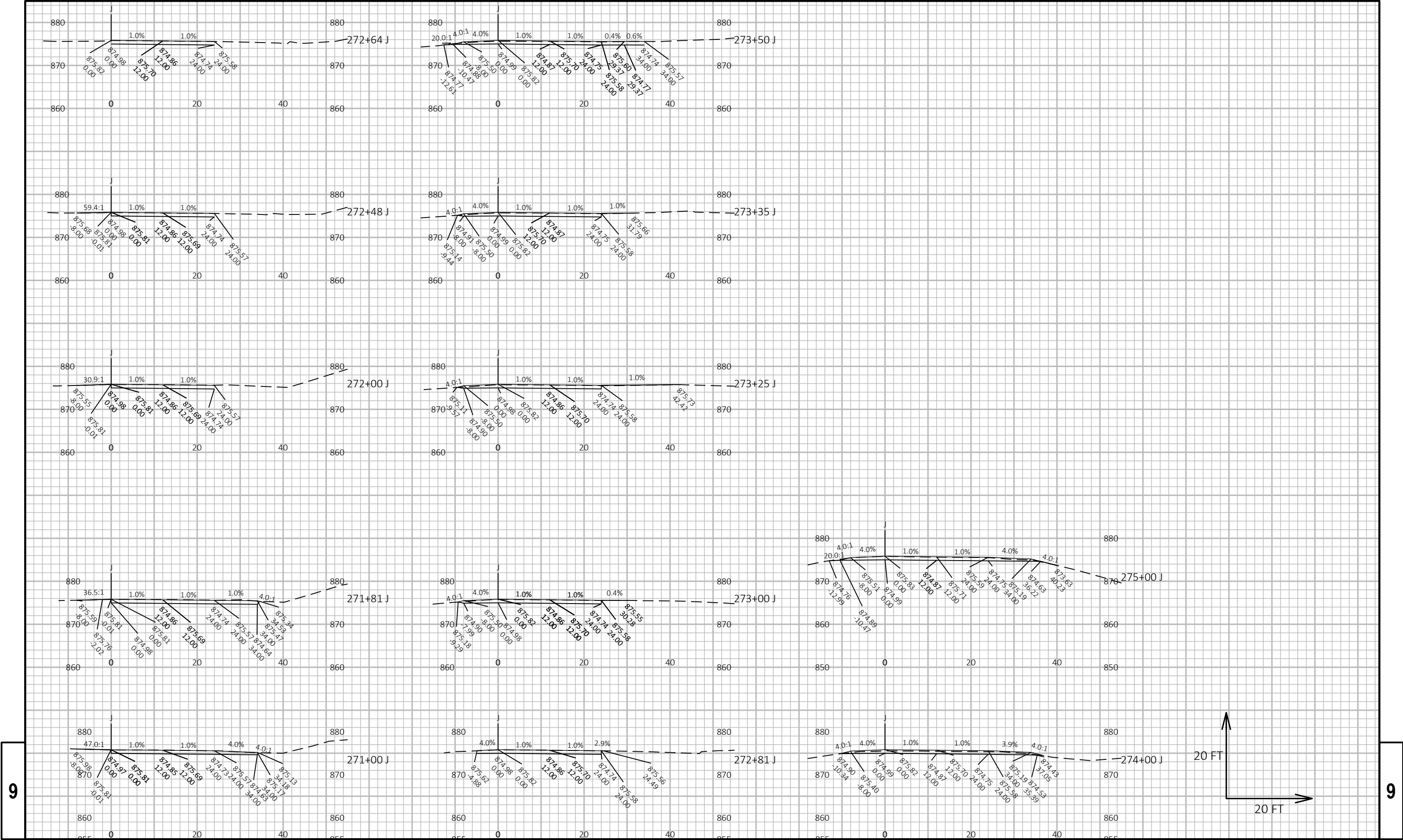






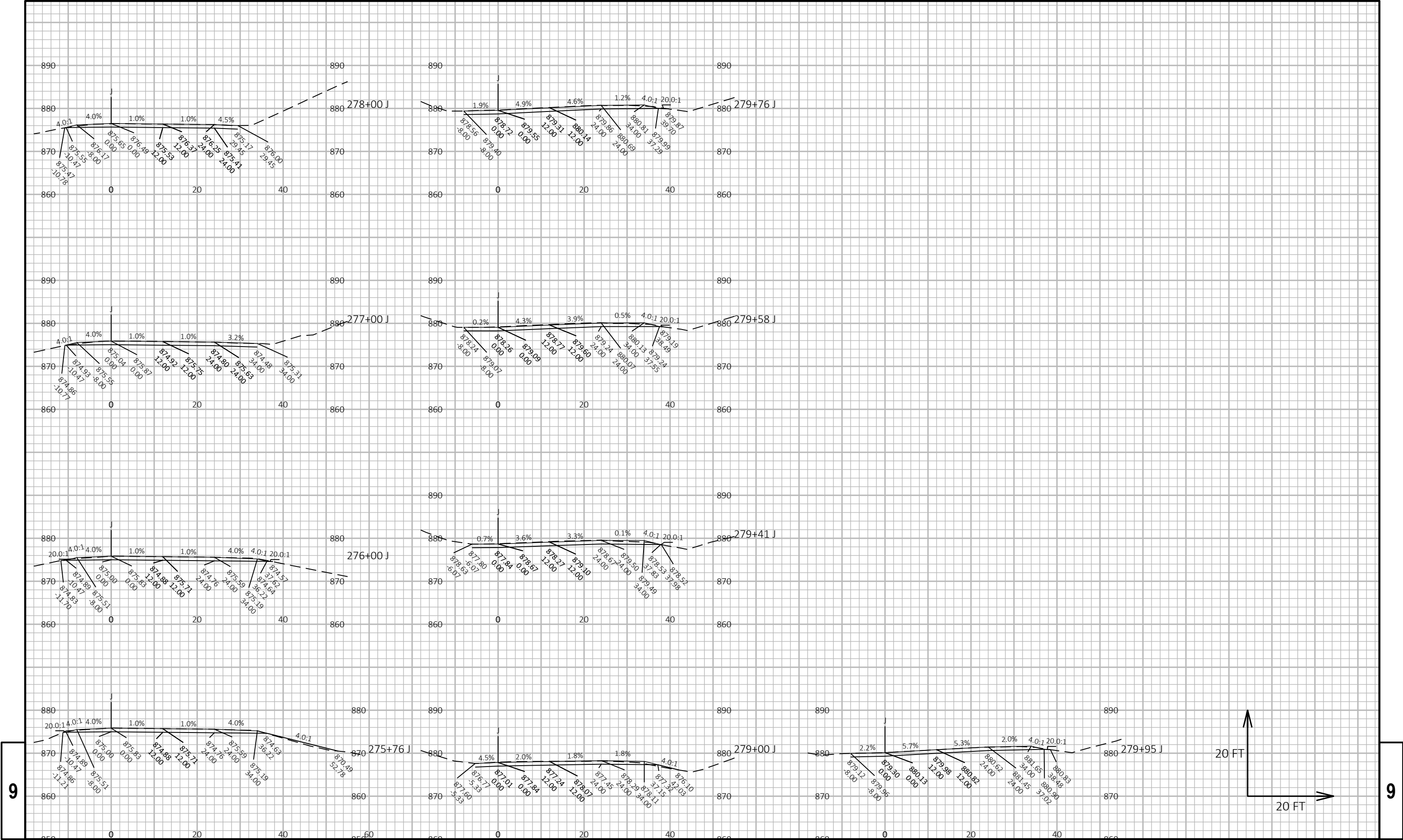




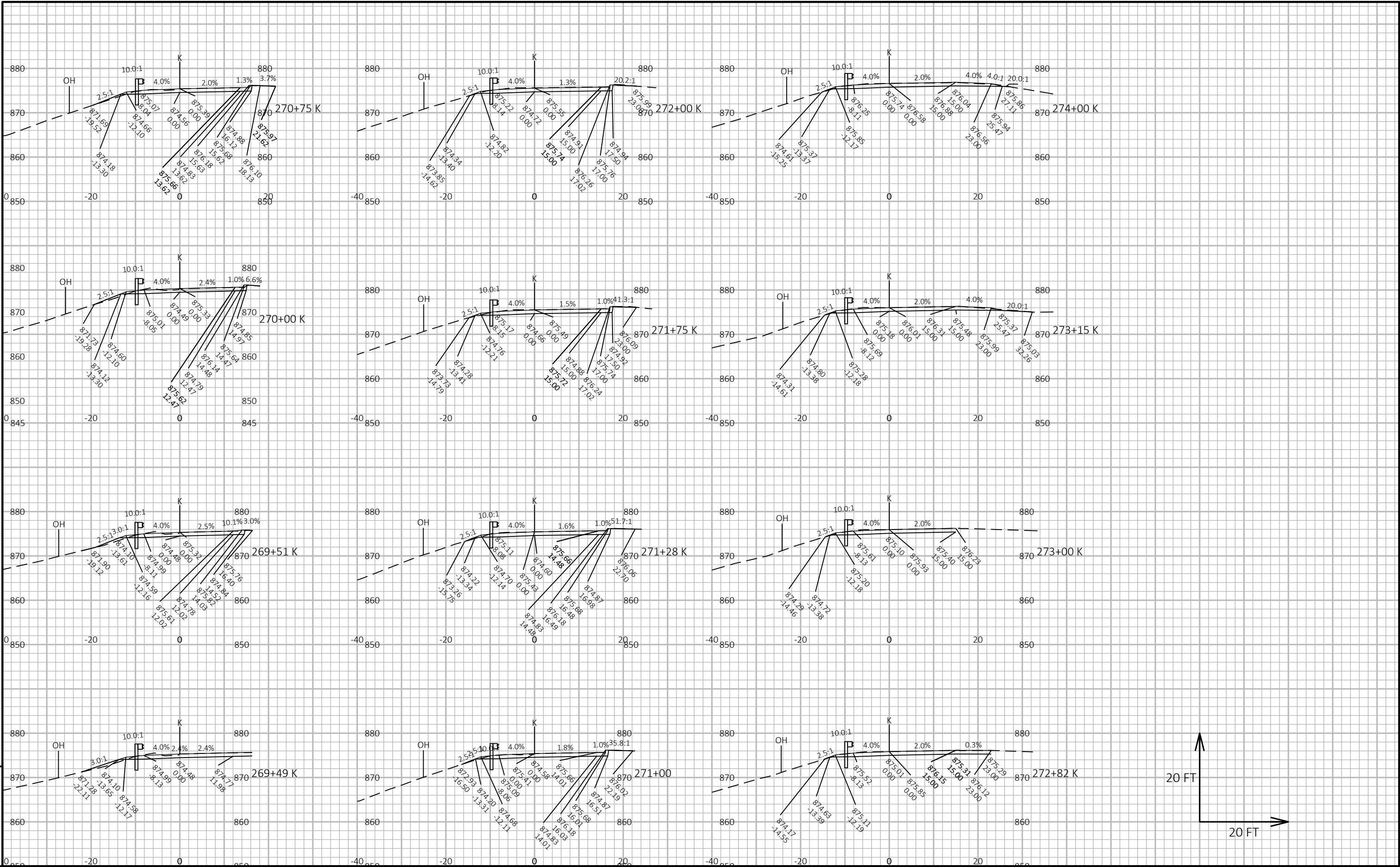


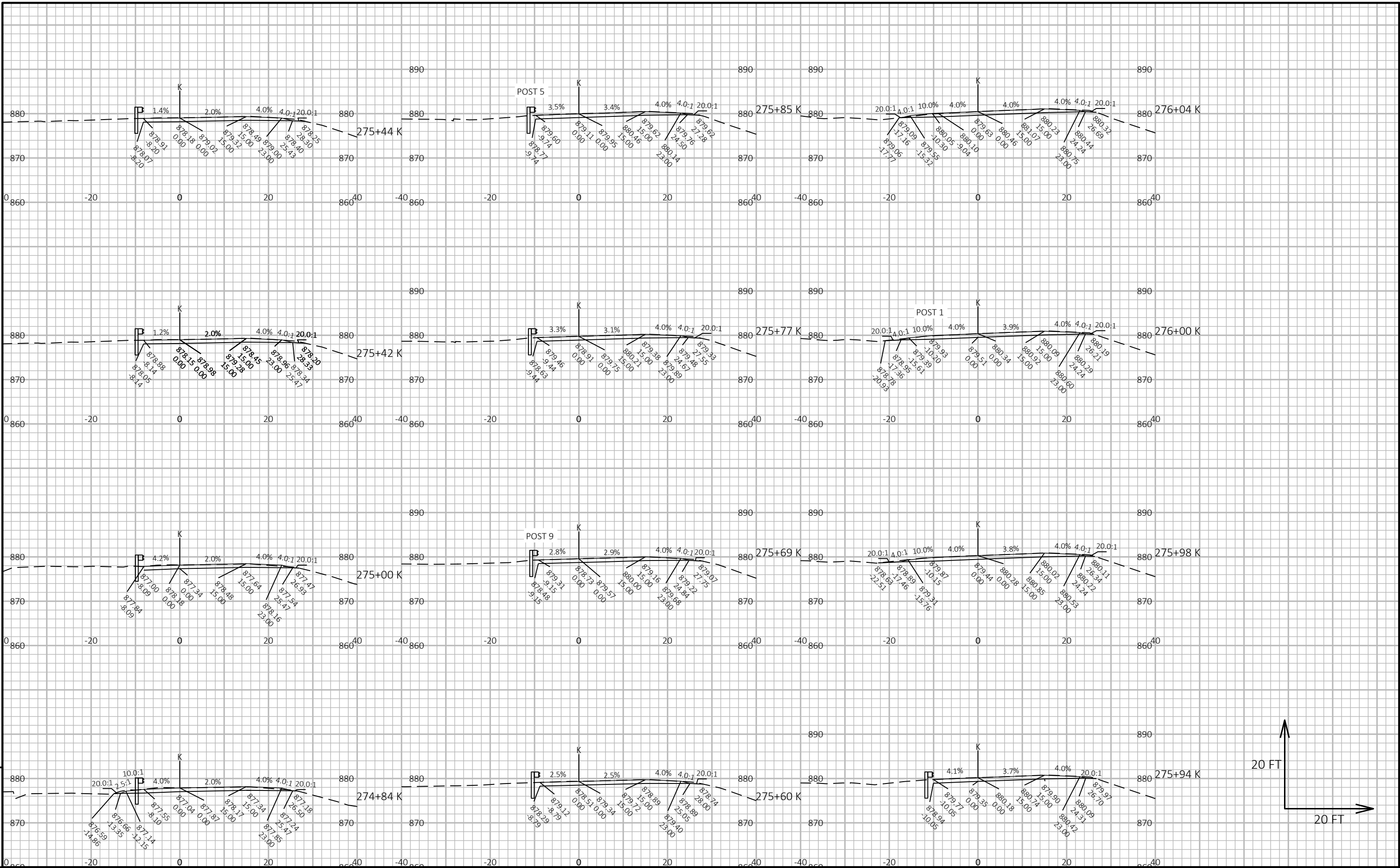
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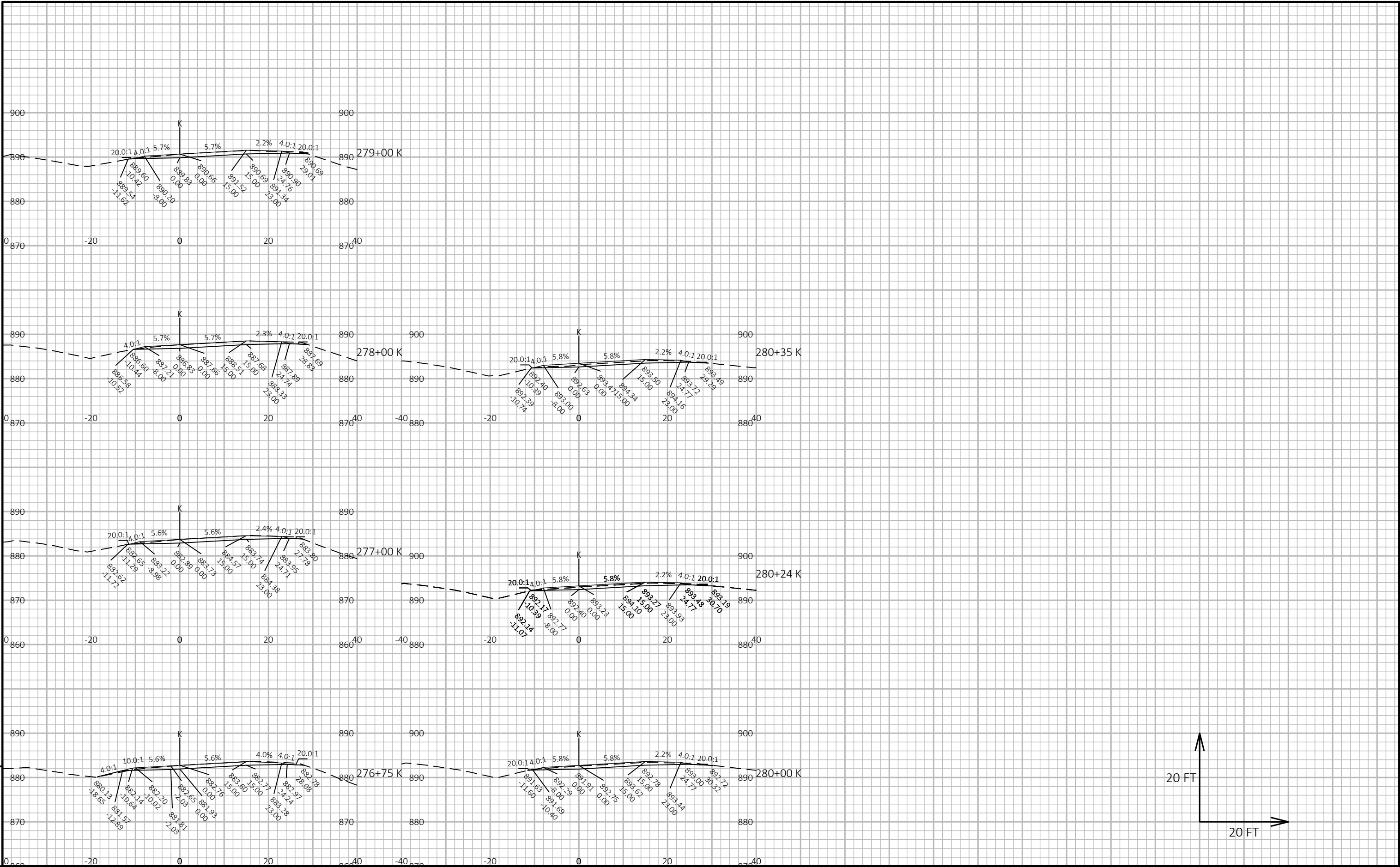
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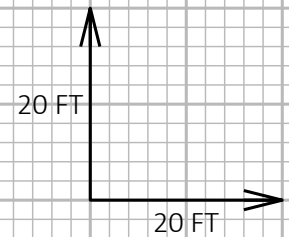
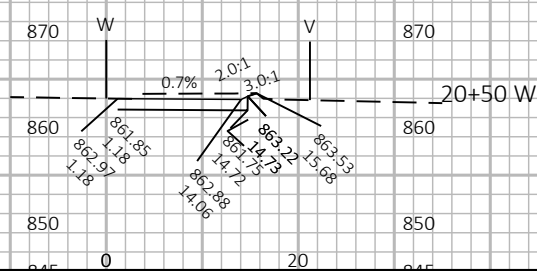
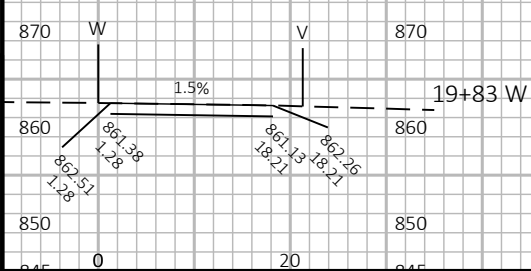
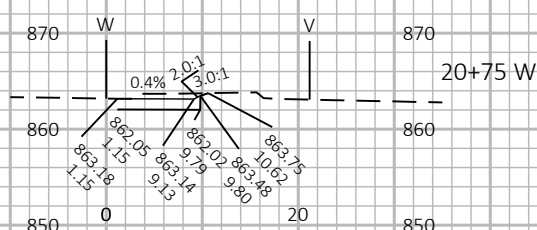
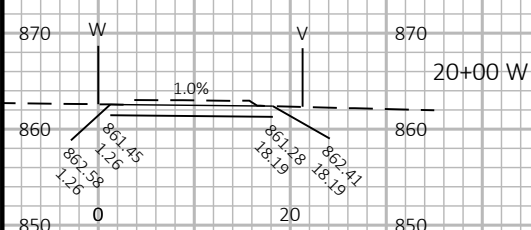
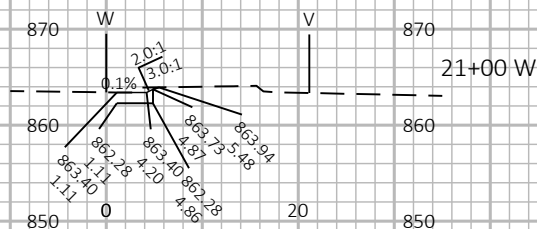
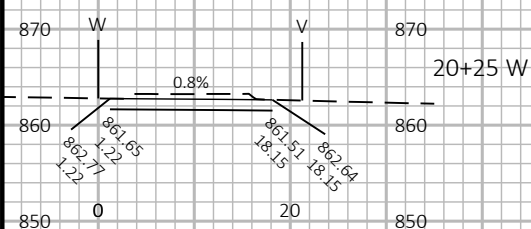
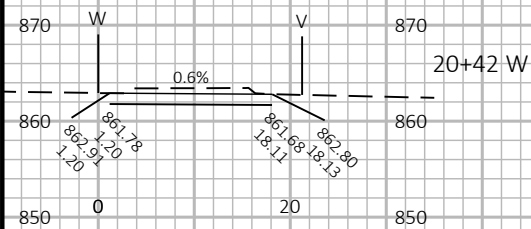
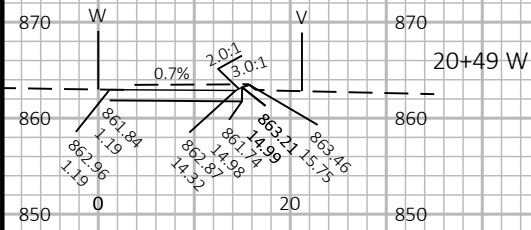






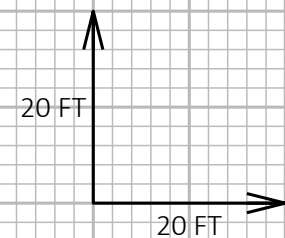
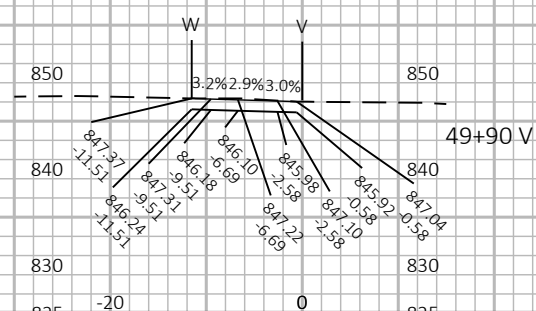
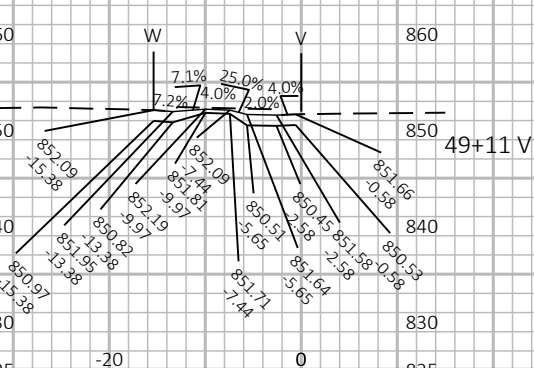
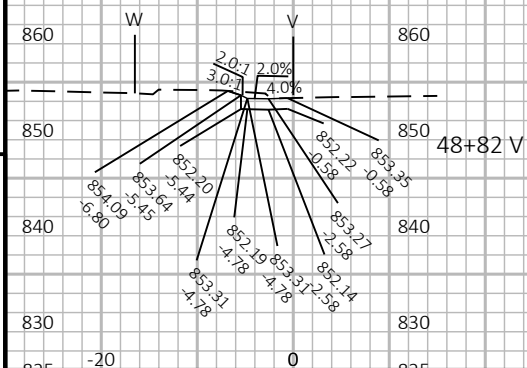
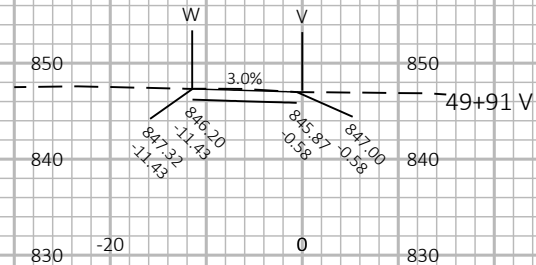
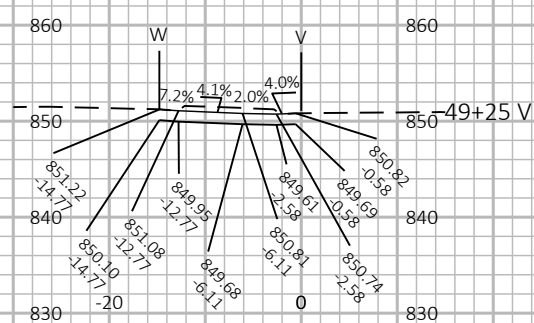
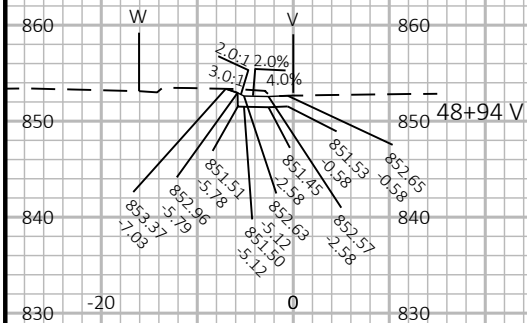
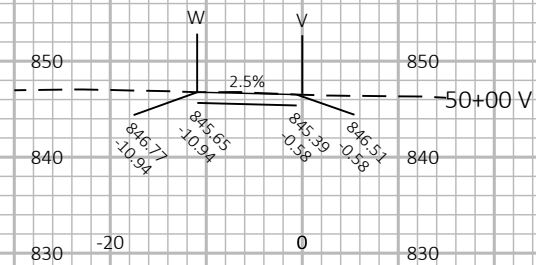
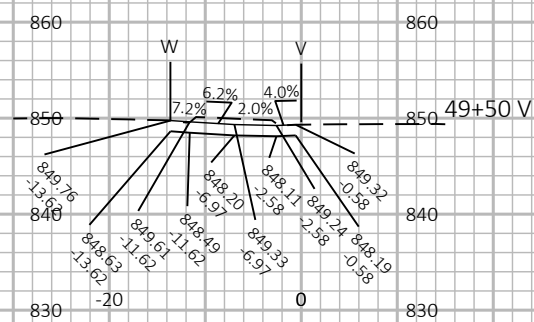
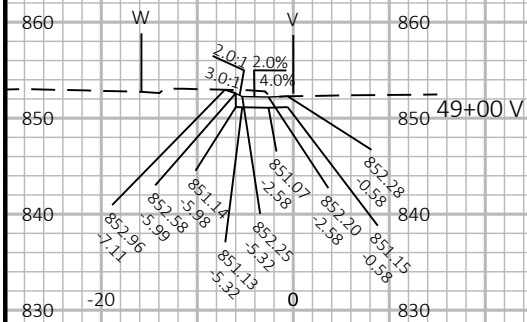
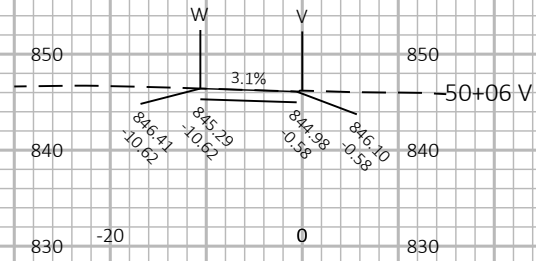
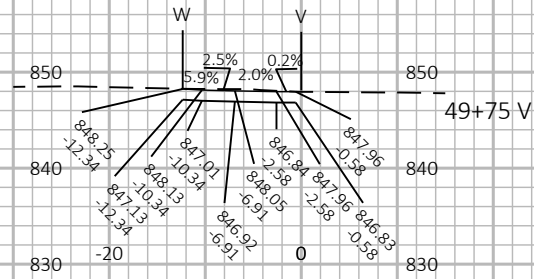
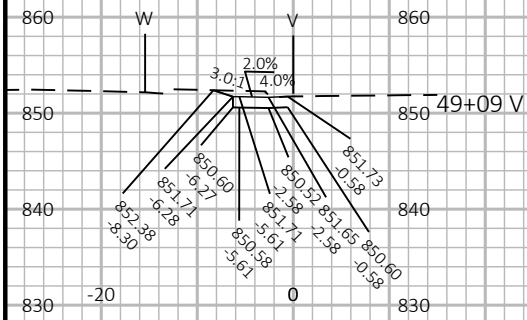






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PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: STH 11 TEMPORARY

SHEET

460

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\090213-XS.DWG  
LAYOUT NAME : 02

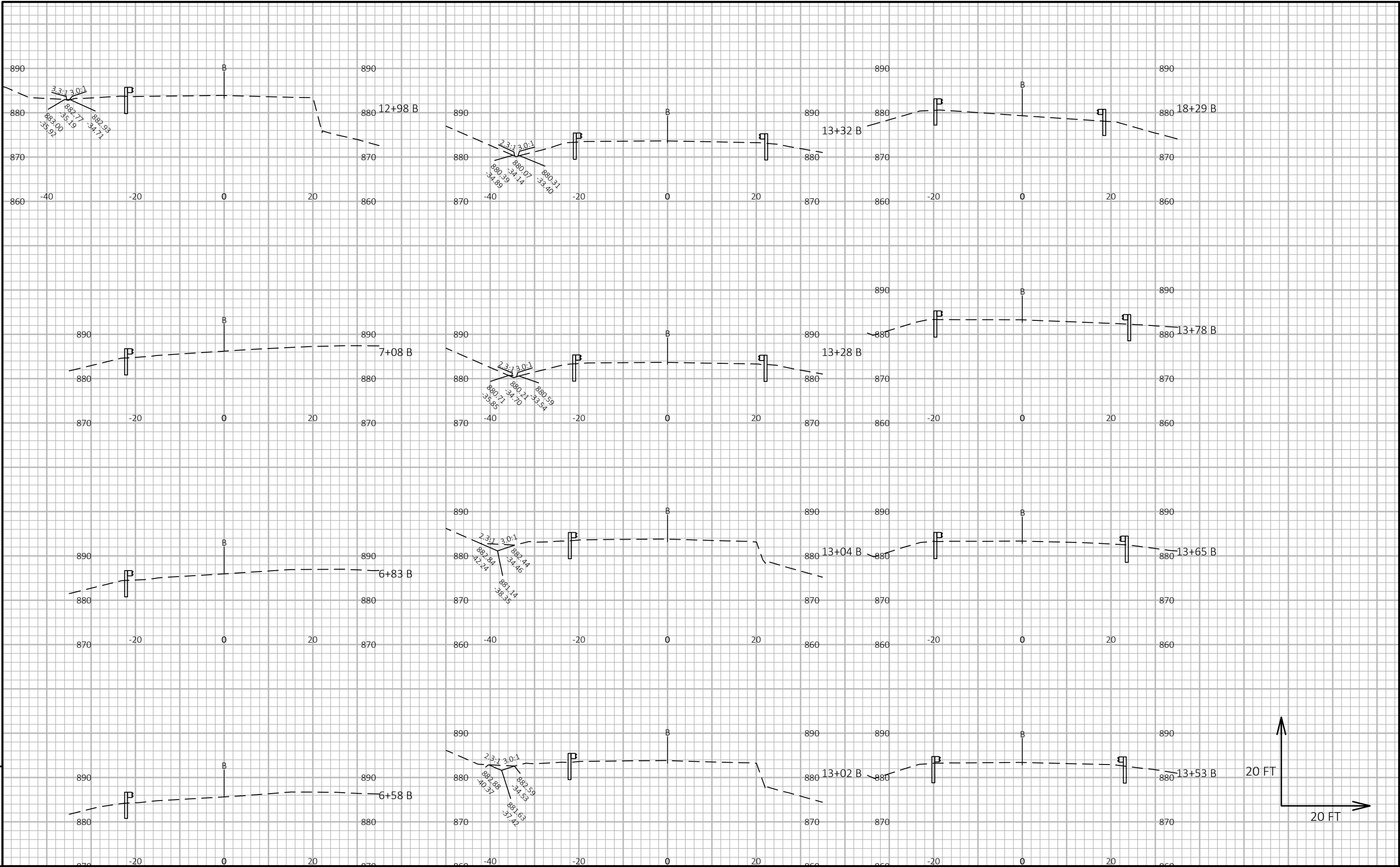
PLOT DATE : 2/27/2025 12:14 PM

PLOT BY : SCHUMAKER, ERICA R

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

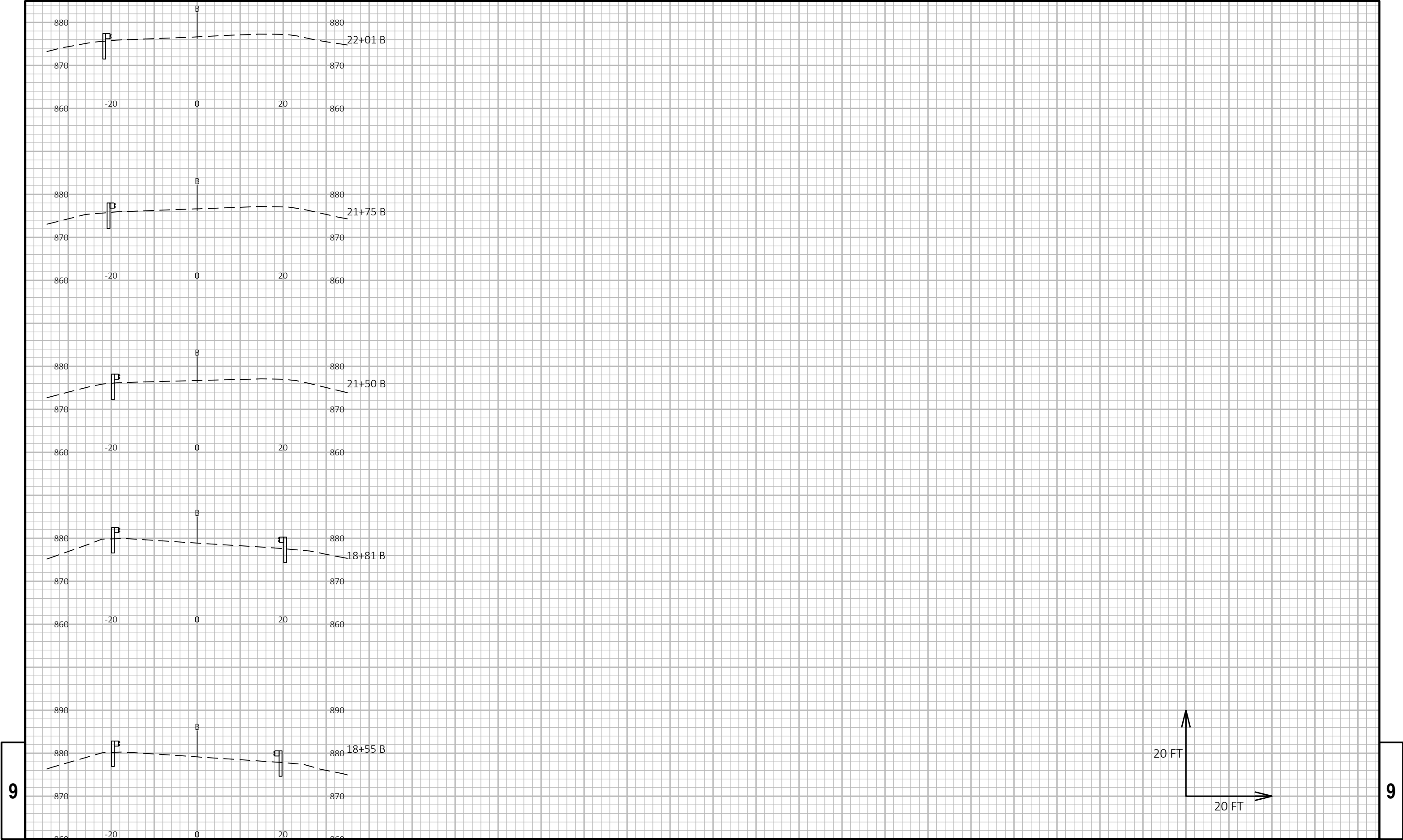
WISDOT/CADDs SHEET 49



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PROJECT NO: 1202-00-75

HWY: USH 61

COUNTY: GRANT

CROSS SECTIONS: BADGER RD

SHEET

462

E

FILE NAME : N:\PDS\C3D\12020005\SHEETSPLAN\090214-XS.DWG  
LAYOUT NAME - 02

PLOT DATE : 2/27/2025 8:48 AM

PLOT BY : SCHUMAKER, ERICA R

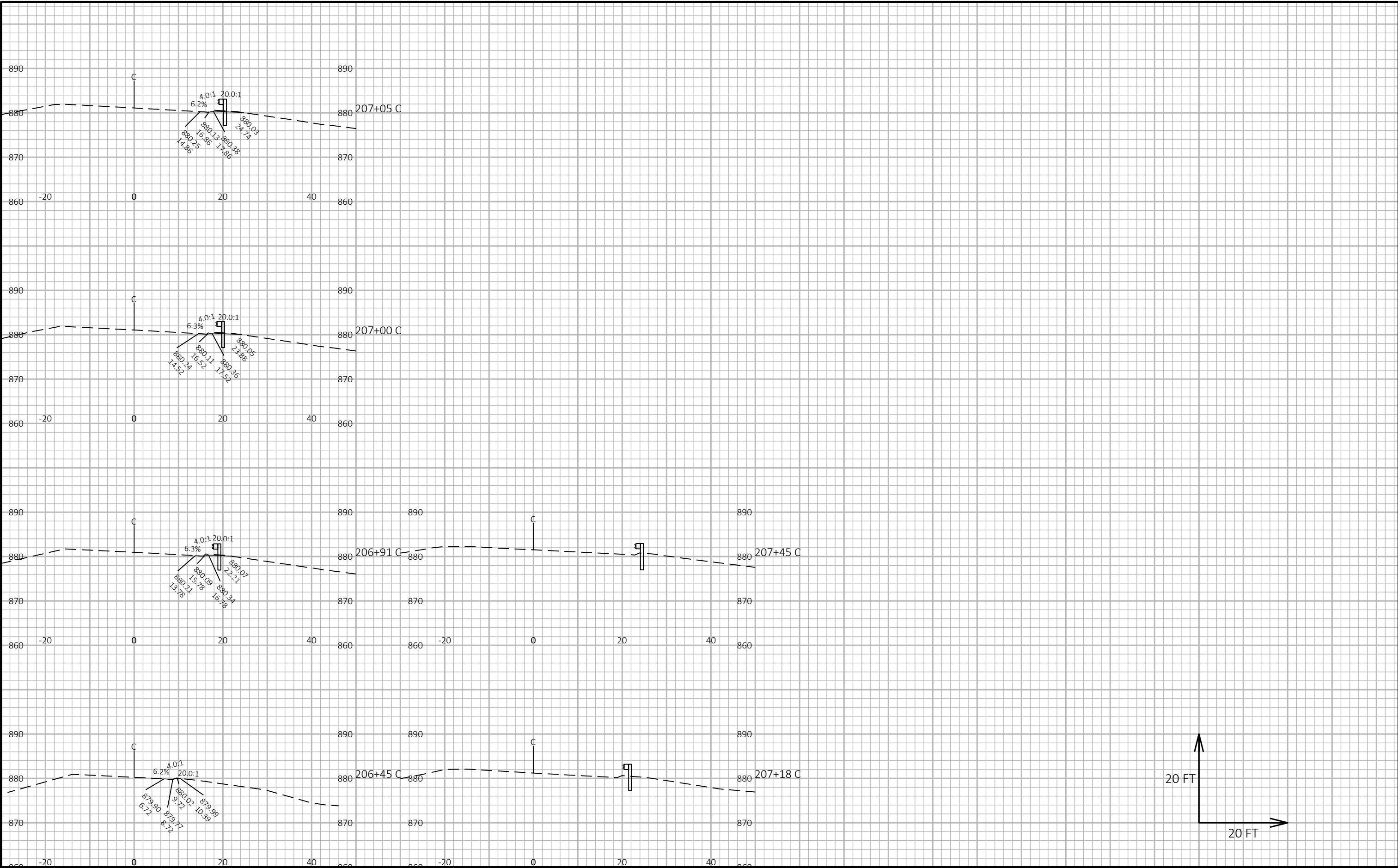
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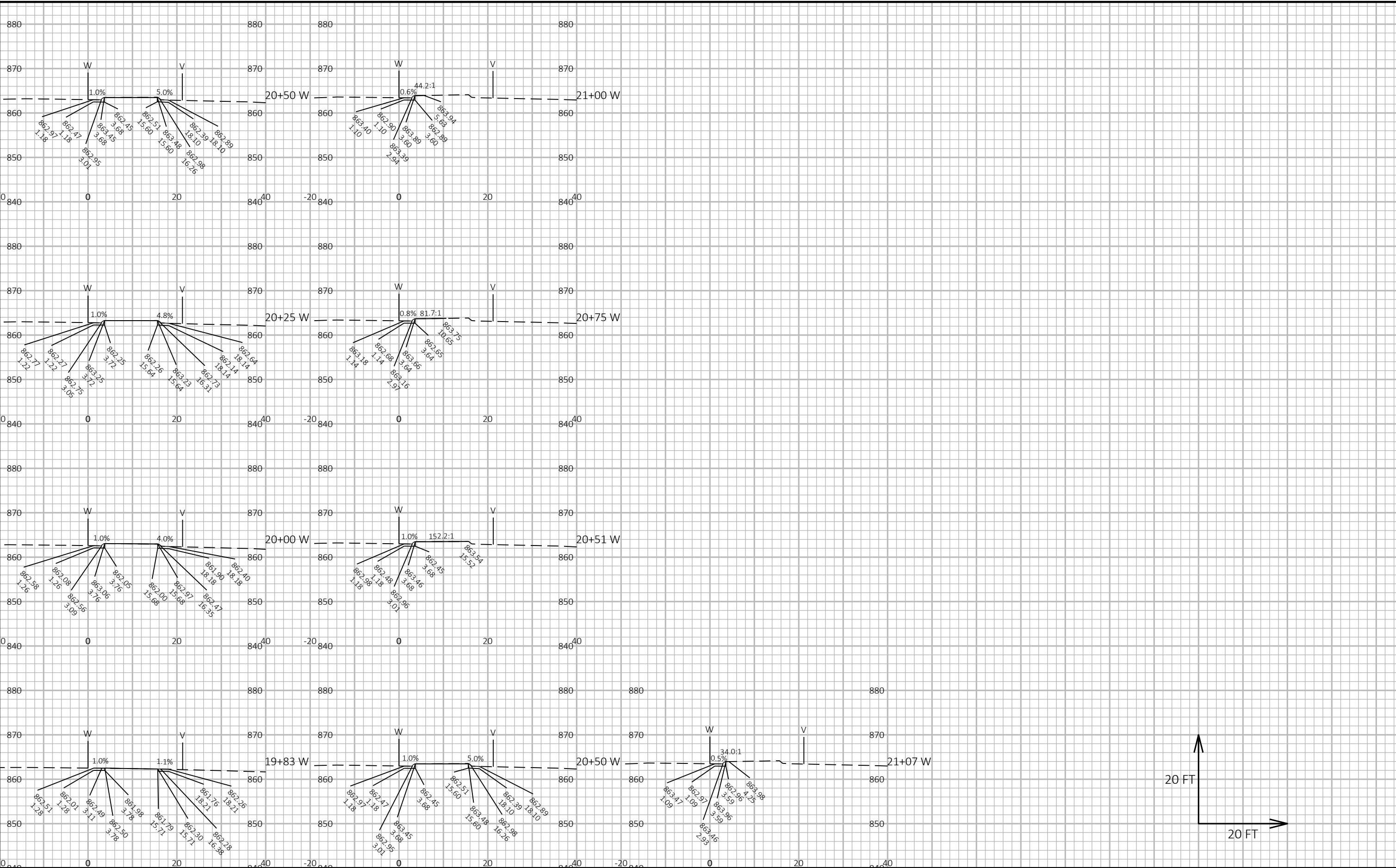
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WISDOT/CADDs SHEET 49

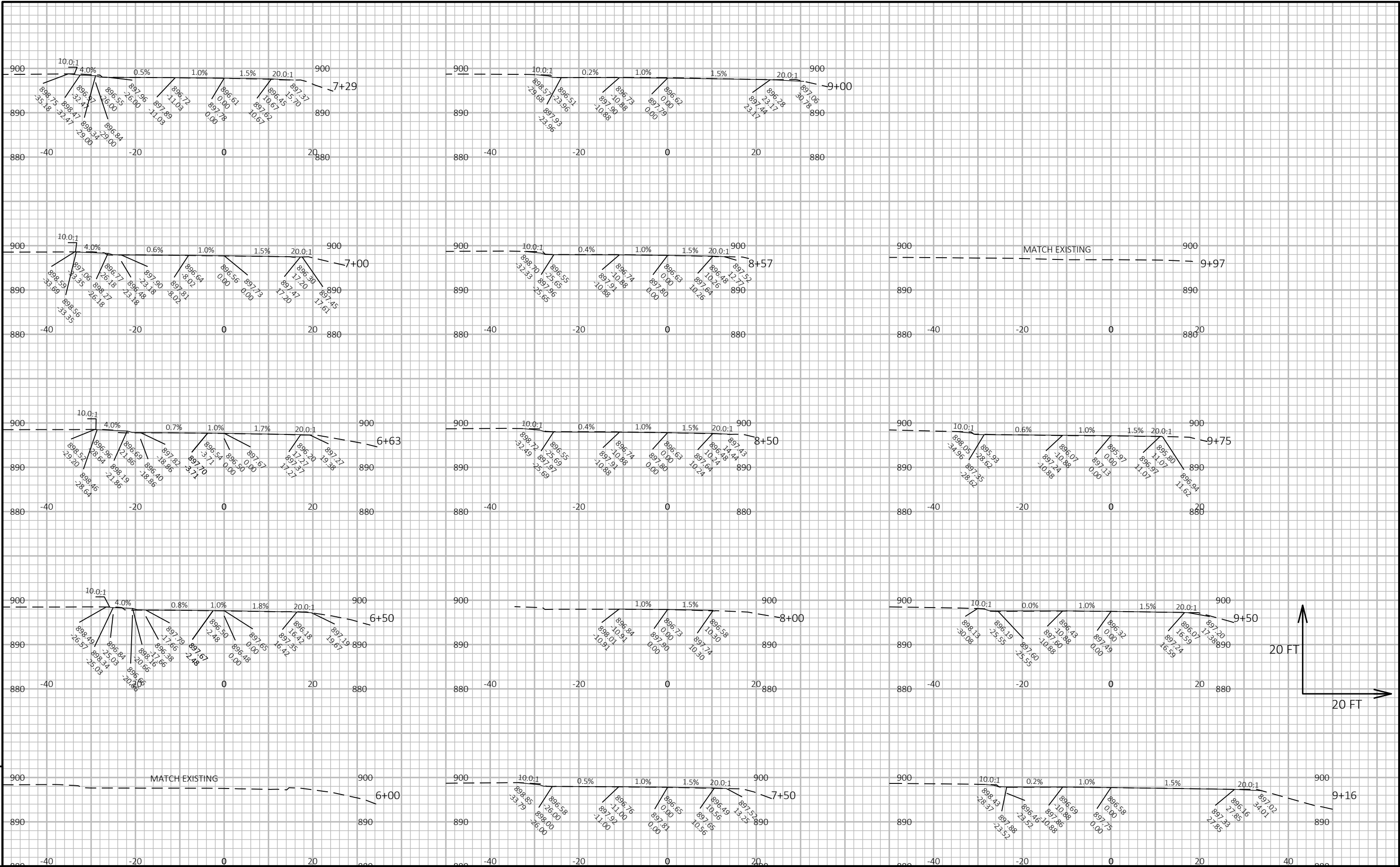


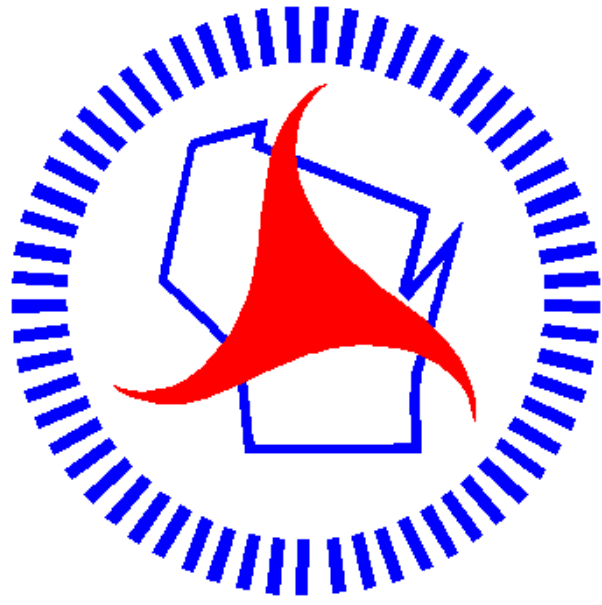












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