

JANUARY 2026
ORDER OF SHEETS

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

TOTAL SHEETS = 236



48

DESIGN DESIGNATION STH 25

A.A.D.T. (2026)	=	4,560 - 22,520
A.A.D.T. (2046)	=	4,560 - 24,310
D.H.V. (2046)	=	300 - 1,610
D.D. (%)	=	59/41
T. (%)	=	6.9 - 19.7
DESIGN SPEED (MPH)	=	35 - 55
ESALS	=	1,700,000-5,200,000

CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

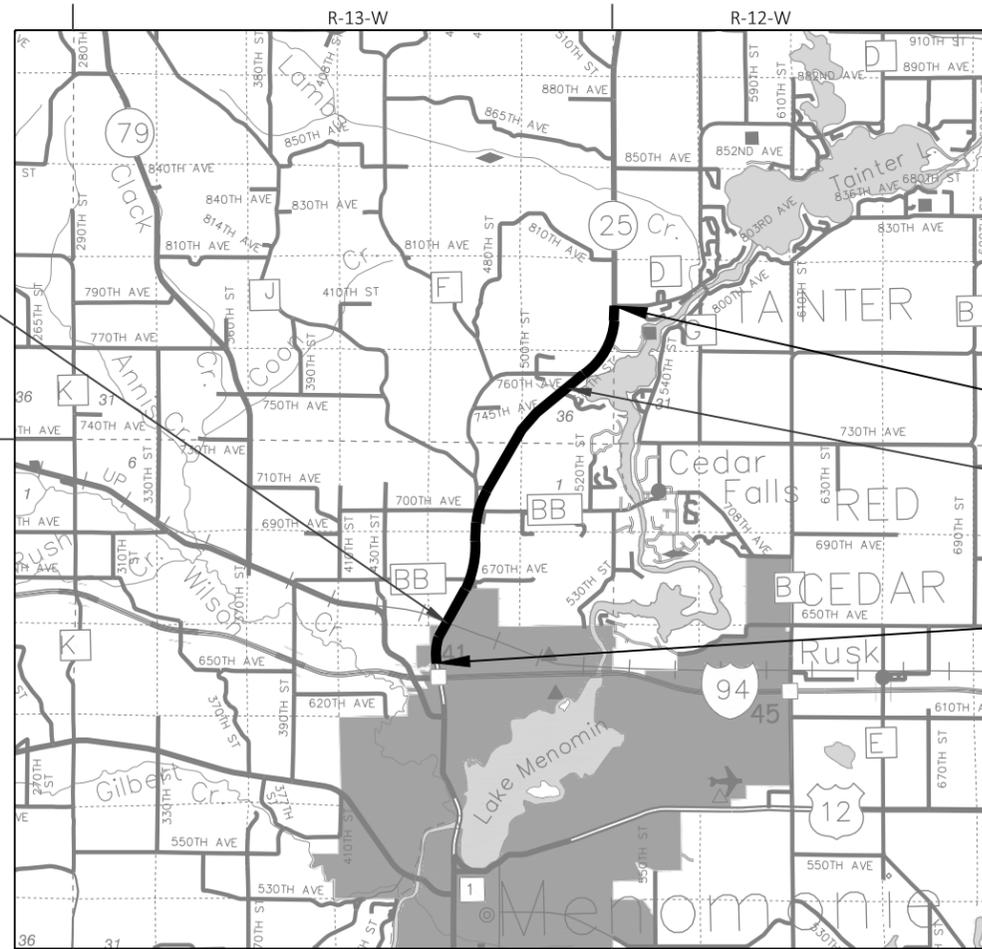
MENOMONIE-RIDGELAND

IH 94 TO CTH D

STH 25

DUNN COUNTY

STATE PROJECT NUMBER
8100-01-72



LAYOUT
SCALE 0 1 MI

NET LENGTH OF CENTERLINE = 4.665 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DUNN COUNTY NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012).

B-17-45
NET EXCEPTION TO CENTERLINE LENGTH
STA. 606+63.91 - STA. 608+30.13

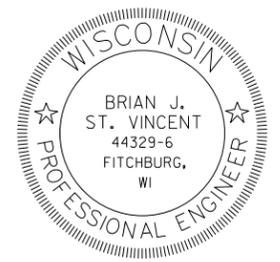
END PROJECT 8100-01-72
STA. 823+35.10

B-17-67
NET EXCEPTION TO CENTERLINE LENGTH
STA. 764+24.94 - STA. 765+31.16

BEGIN PROJECT 8100-01-72
STA. 574+33.39
Y = 181,950.08
X = 159,997.47

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8100-01-72	WISC 2026164	1

ORIGINAL PLANS PREPARED BY
KL Engineering
[A] Better Experience



AUGUST 1, 2025
(Date) *Brian St. Vincent*
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	KL ENGINEERING, INC.
Surveyor	KL ENGINEERING, INC.
Designer	NICHOLAS PITTSCH
Project Manager	NORTHWEST REGION
Regional Examiner	NICHOLAS PITTSCH
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 7/17/2025 *Nicholas Pittsch*
(Signature)

E

ABBREVIATIONS

BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BLDG.	BUILDING
CBTP	CONCRETE BARRIER TEMPORARY PRECAST
CTR	CENTER
C/L	CENTERLINE
C.E.	COMMERCIAL ENTRANCE
CIR	COLD IN-PLACE RECYCLING
CONC.	CONCRETE
CSW	CONCRETE SIDEWALK
CMCP	CORRUGATED METAL CULVERT PIPE
CP	CULVERT PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CPT	CONSTRUCTION PERMIT
DMS	DYNAMIC MESSAGE SIGN
EAT	ENERGY ABSORBING TERMINAL
EB	EASTBOUND
ELEC	ELECTRIC
IE	INVERT ELEVATION
EX. OR EXIST	EXISTING
FO	FIBER OPTIC
F.E.	FIELD ENTRANCE
GAS	GAS
HMA	HOT MIX ASPHALT
HSE.	HOUSE
LHF	LEFT HAND FORWARD
MH	MANHOLE
MAX.	MAXIMUM
MIN.	MINIMUM
NB	NORTHBOUND
NOR.	NORMAL
NTS	NOT TO SCALE
PLE	PERMANENT LIMITED EASEMENT
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
PRW	PROPOSED RIGHT-OF-WAY
RAD OR R	RADIUS
R/L	REFERENCE LINE
REQ'D.	REQUIRED
RHF	RIGHT HAND FORWARD
RW	RIGHT-OF-WAY LINE
SAN	SANITARY SEWER
SB	SOUTHBOUND
SHLD	SHOULDER
SW	SIDEWALK
SF	SQUARE FEET
SY	SQUARE YARD
S.D.D.	STANDARD DETAIL DRAWING
STA	STATION
SS	STORM SEWER
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
WAT	WATER
WB	WESTBOUND

ORDER OF DETAIL SHEETS

- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- CURB RAMP DETAILS
- CONTROL POINTS AND BENCHMARKS
- EXISTING PAVEMENT INFORMATION
- TRAFFIC SIGNALS
- PERMANENT SIGNING & PAVEMENT MARKING
- TRAFFIC CONTROL PLAN
- ALIGNMENT DIAGRAM

GENERAL NOTES

- NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN IN THE PLAN, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. CONTACT DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO START OF WORK.
- UTILITY LOCATION MARKERS ON THE CROSS SECTIONS ARE FOR APPROXIMATE HORIZONTAL REFERENCE ONLY.
- REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.
- EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.
- PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- RADIUS DIMENSIONS FOR CURB AND GUTTER ARE TO THE FLANGE LINE UNLESS OTHERWISE NOTED.
- STATIONING AND OFFSETS TO APRON ENDWALLS FOR CULVERT PIPES ARE SHOWN TO THE END OF THE PIPE.
- CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.
- THE EXACT LOCATION OF DRIVEWAYS IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER. ALL DRIVEWAYS ARE TO BE REPLACED IN KIND.
- NUMBER, LOCATION, AND SPACING OF TRAFFIC CONTROL SIGNS AND DEVICES, AS SHOWN IN THE PLANS, SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.
- FINAL LOCATIONS OF BASE REPAIR FOR CIR LAYER, ASPHALTIC SURFACE, AND ASPHALTIC SURFACE PATCHING FOR MISCELLANEOUS AND MINOR REPAIRS AND SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. ANTICIPATED LOCATION SHOWN ON PLANS FOR INFORMATION ONLY.
- ALL GRADES PROVIDED ALONG RADII ARE ALONG THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE LIMITS OF PAVEMENT REMOVAL ON SIDE STREETS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR'S HMA 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.
- THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.
- MILL AROUND 8"X8"X8" JUNCTION BOXES - PAVE UP TO OR OVERLAY JUNCTION BOXES AS NEEDED. CONTACT NORTHWEST REGION ELECTRICAL FIELD UNIT AT (715) 225-0360 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF MILLING OPERATIONS TO HAVE JUNCTION BOXES MARKED.
- HMA PAVEMENT, WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSES AS FOLLOWS:

LOCATION	STA - STA	TOTAL DEPTH	LAYERS	GRADATION	TRAFFIC	BINDER	DESIGNATION	NOTE
STH 25	574+33 - 579+75	2 1/2-INCH	1 1/2-INCH (UPPER LAYER)	5	MT	58-34	V	HMA OVERLAY (PCC MILL)
	574+33"S" - 579+44"S"		1-INCH (LEVELING LAYER*)	5	MT	58-34	V	
STH 25	579+75 - 617+50	3 1/2-INCH	1 3/4-INCH (UPPER LAYER)	5	MT	58-34	V	HMA OVERLAY (MILL)
	579+44"S" - 601+29"S"		1 3/4-INCH (LOWER LAYER)	5	MT	58-34	V	
STH 25	617+50 - 823+35	2 3/4-INCH	1 1/2-INCH (UPPER LAYER)	5	MT	58-34	V	HMA OVERLAY (CIR)
			1 1/4-INCH (LOWER LAYER)	5	MT	58-34	V	
STH 25	617+50 - 823+35	3 1/2-INCH	1 1/2-INCH (UPPER LAYER)	5	MT	58-34	V	HMA OVERLAY (MILL)
			2-INCH (LOWER LAYER)	5	MT	58-34	V	

*NOTE: PWL VOLUMETRICS STILL APPLY

DESIGN CONTACT

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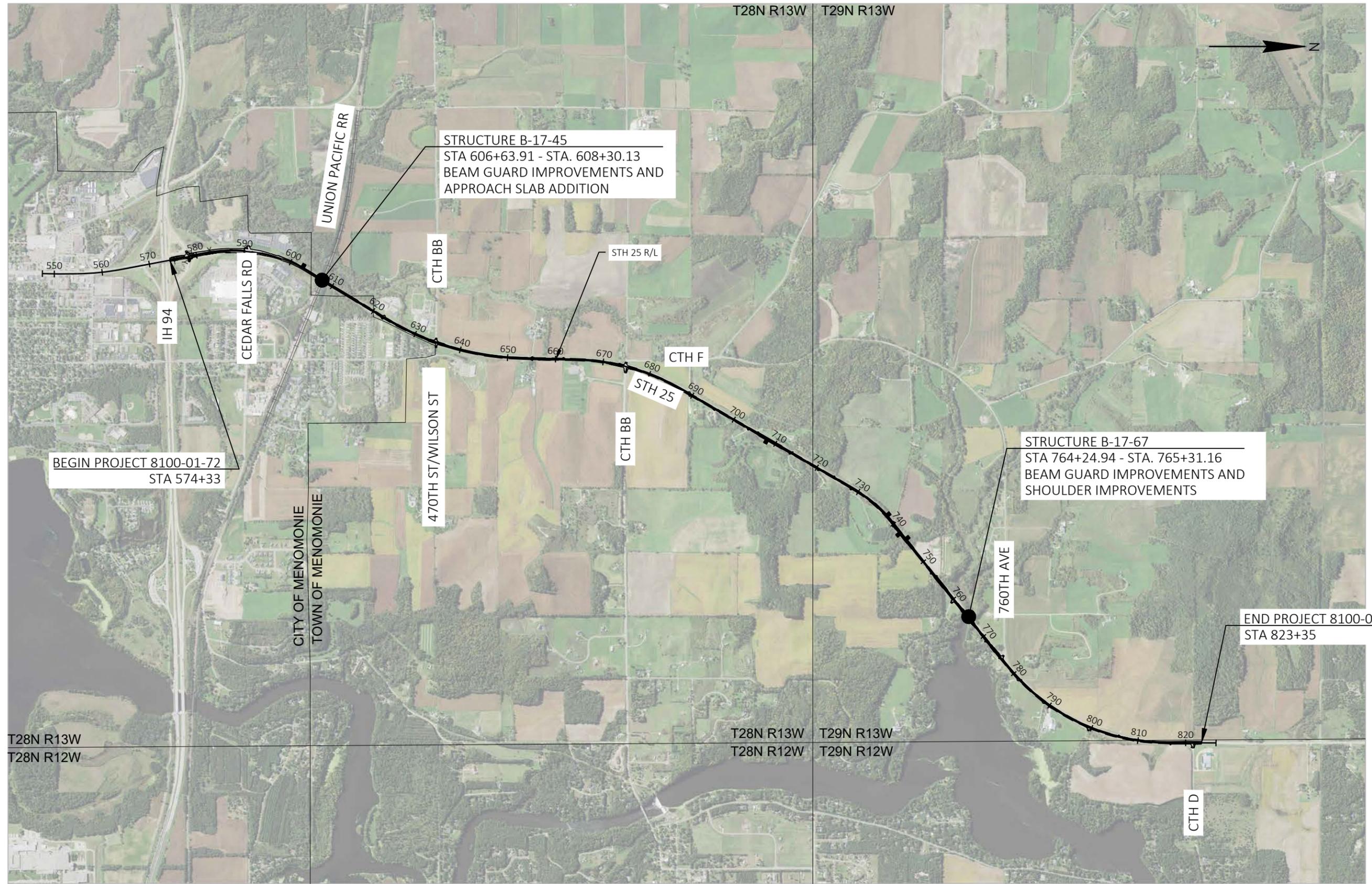
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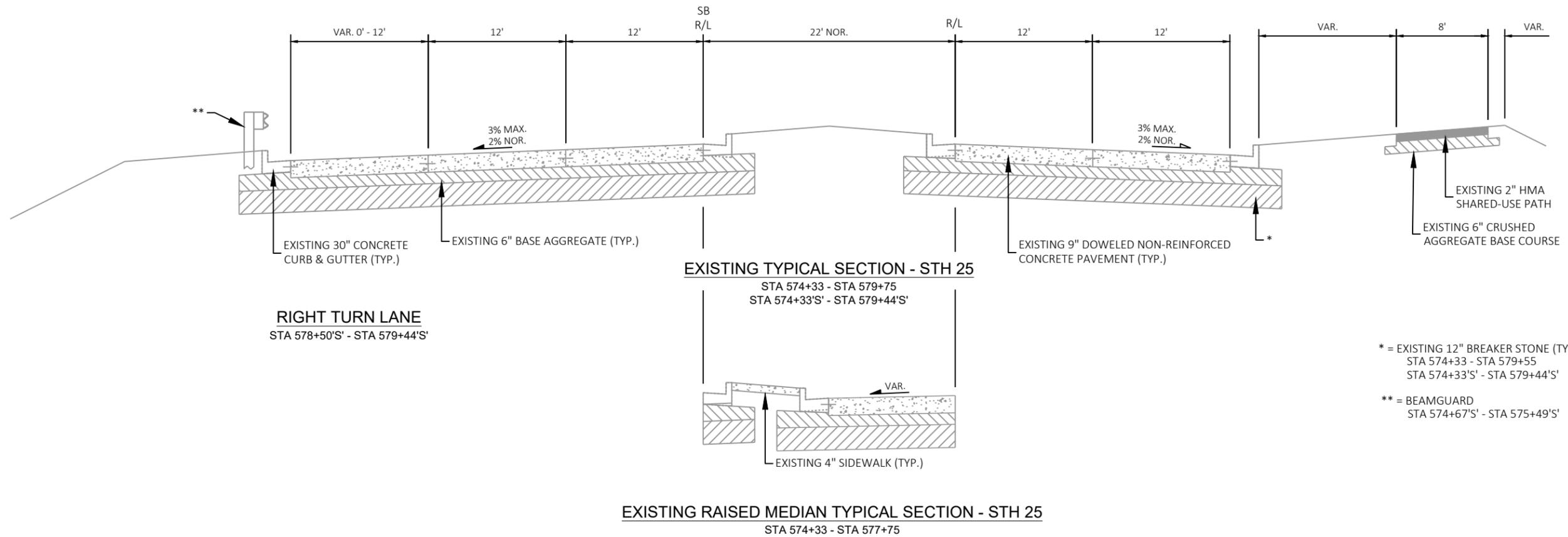


BEGIN PROJECT 8100-01-72
STA 574+33

STRUCTURE B-17-45
STA 606+63.91 - STA. 608+30.13
BEAM GUARD IMPROVEMENTS AND
APPROACH SLAB ADDITION

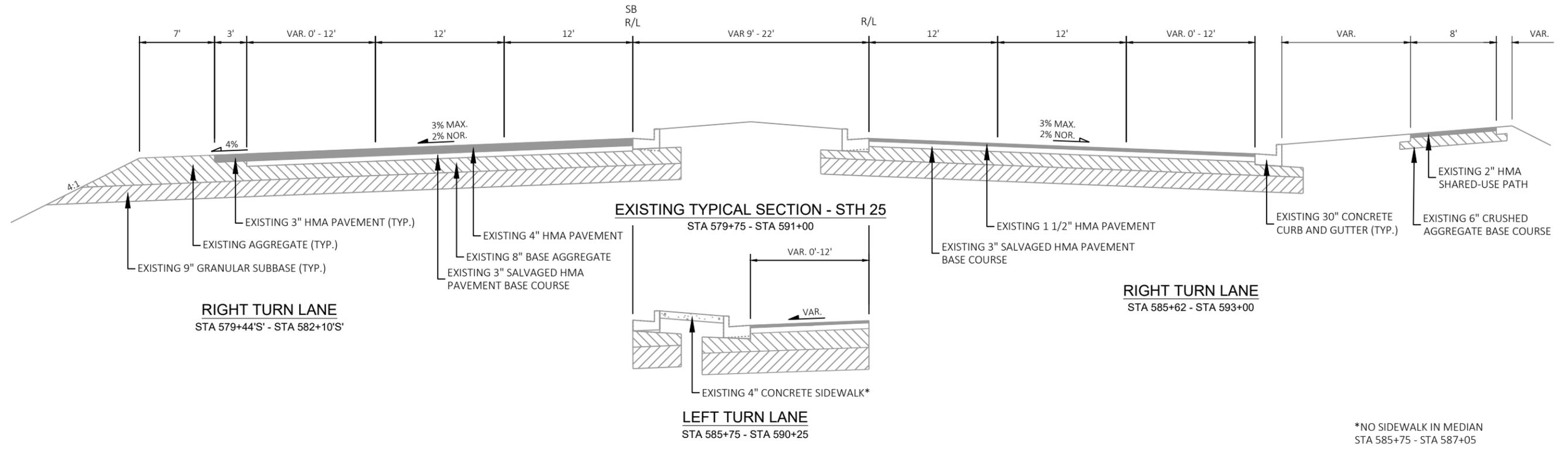
STRUCTURE B-17-67
STA 764+24.94 - STA. 765+31.16
BEAM GUARD IMPROVEMENTS AND
SHOULDER IMPROVEMENTS

END PROJECT 8100-01-72
STA 823+35

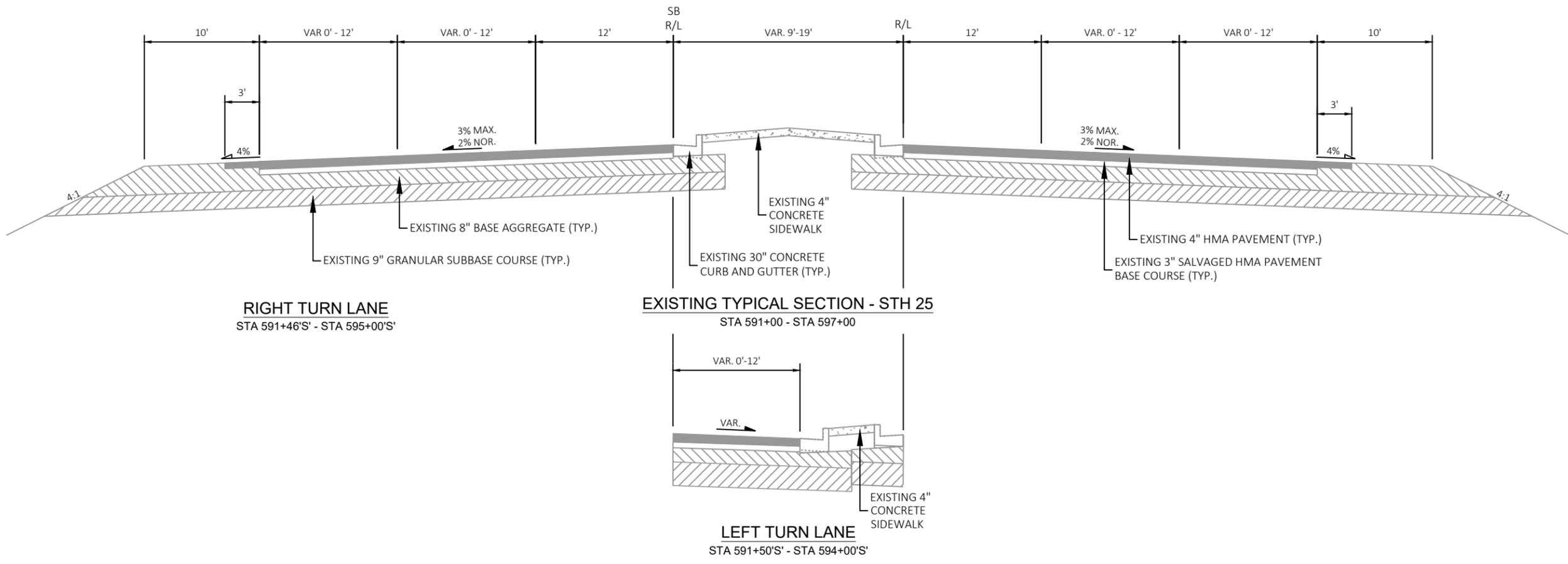


* = EXISTING 12" BREAKER STONE (TYP.)
 STA 574+33 - STA 579+55
 STA 574+33'S - STA 579+44'S

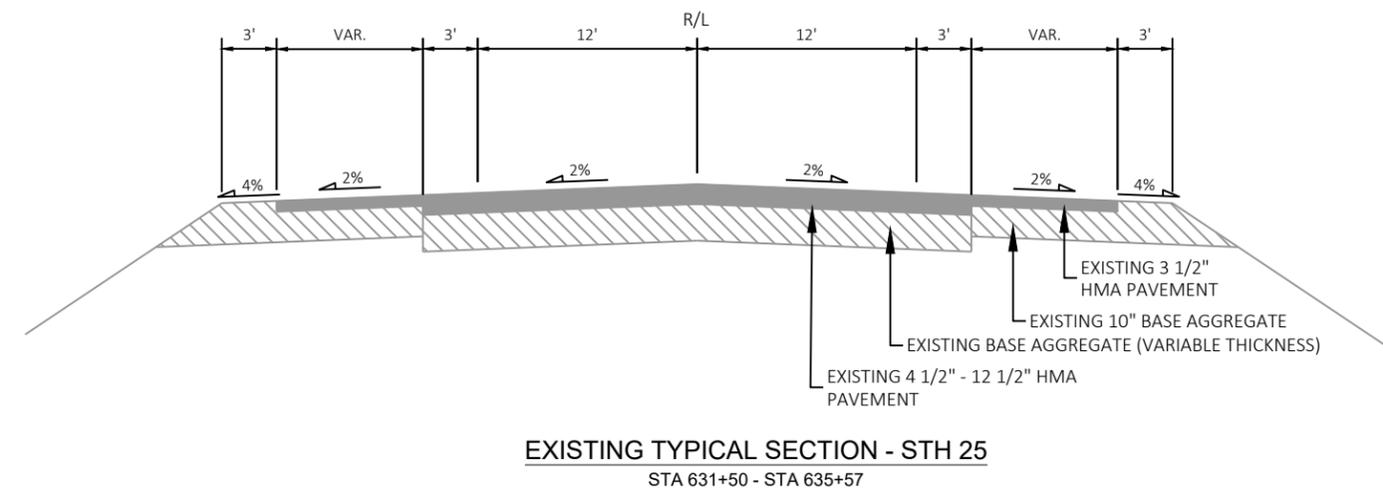
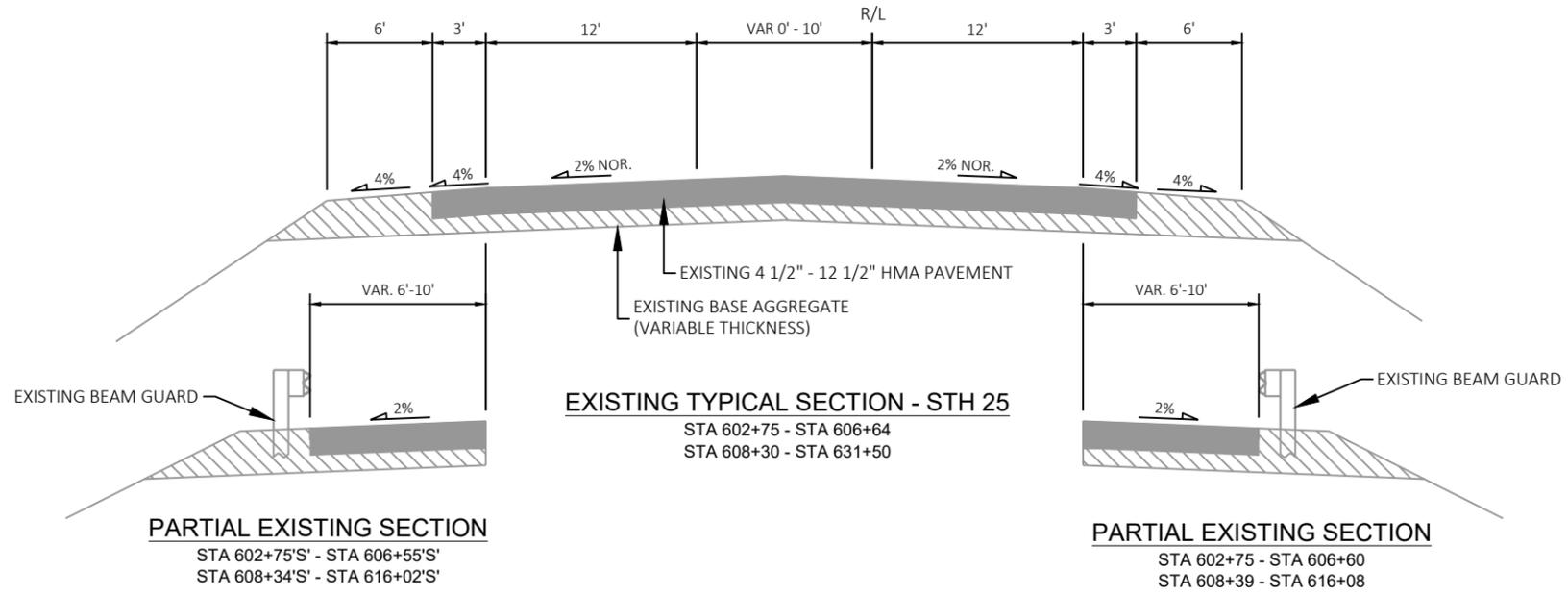
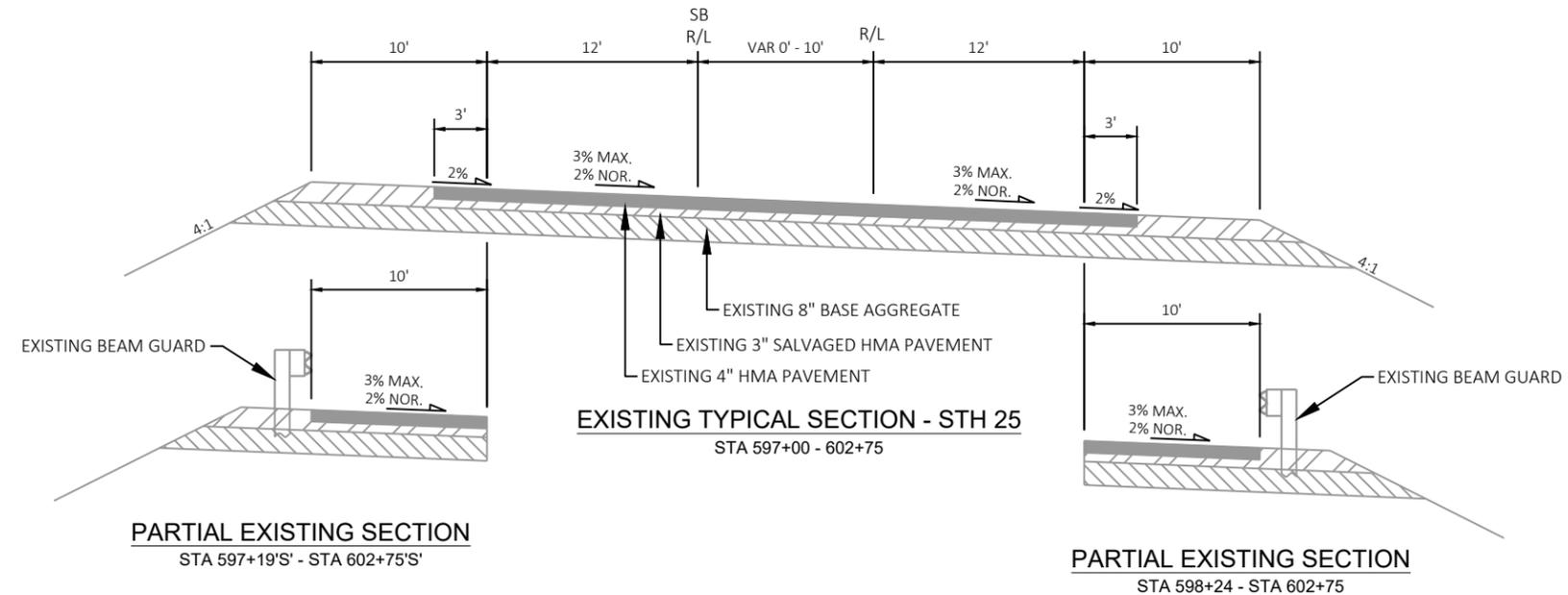
** = BEAMGUARD
 STA 574+67'S - STA 575+49'S

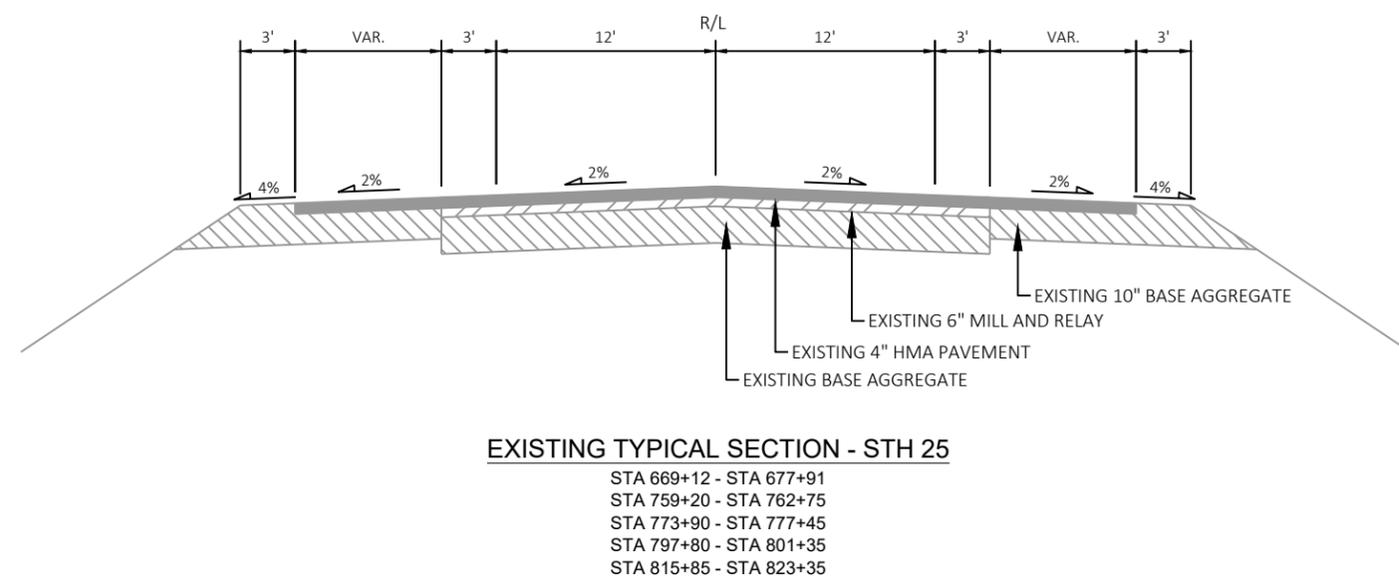
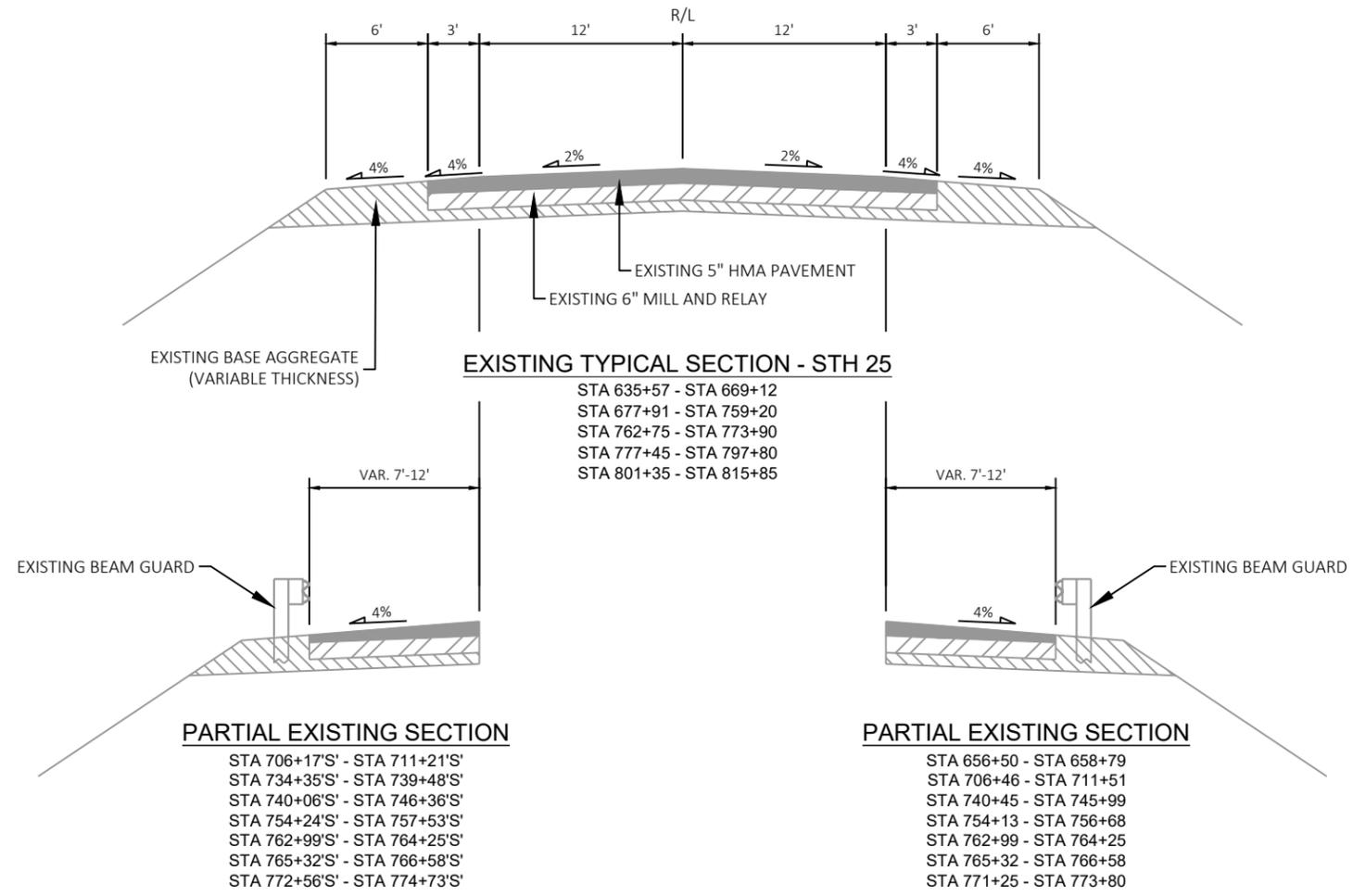


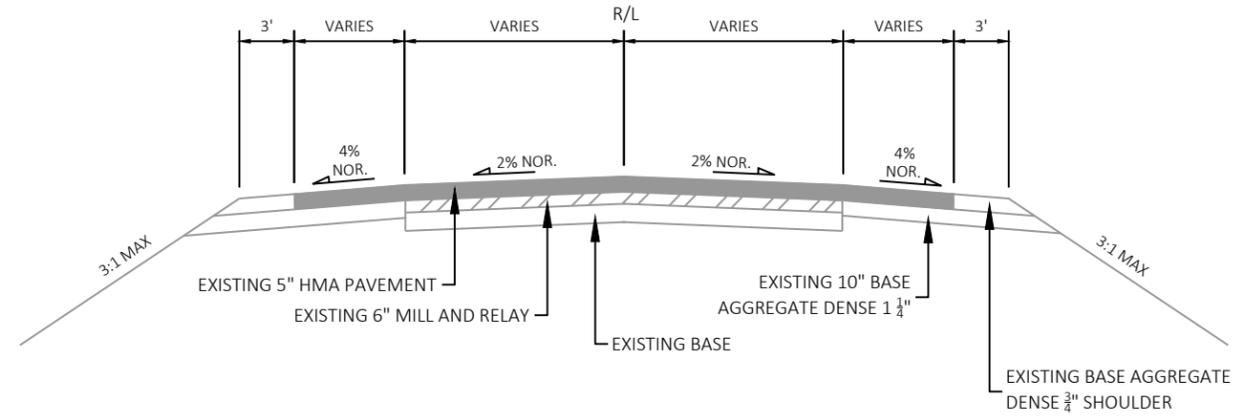
*NO SIDEWALK IN MEDIAN
STA 585+75 - STA 587+05



PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	EXISTING TYPICAL SECTIONS	SHEET	E
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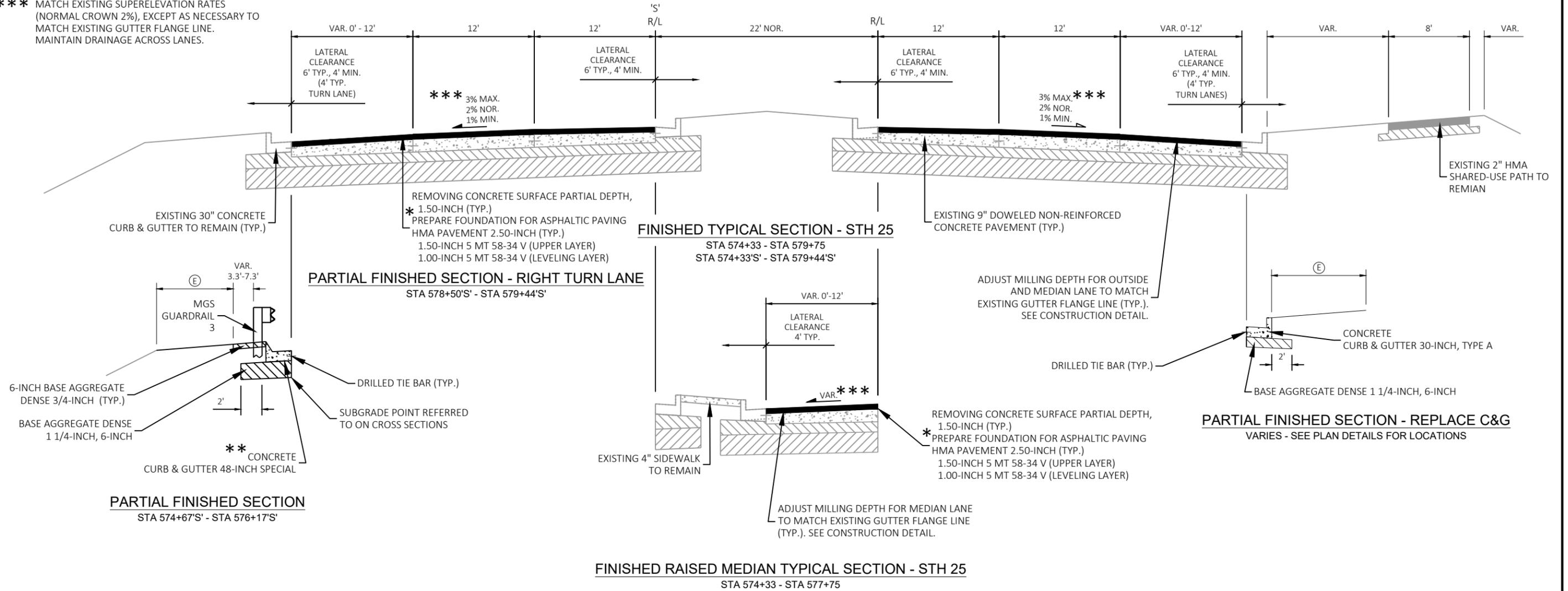


EXISTING TYPICAL SECTION - SIDE ROADS
 CTH BB, CTH F, 470TH ST/WILSON ST

* PRIOR TO PLACING LEVELING LAYER, CLEAN ALL JOINTS AND PATCH EXISTING PCC ON MILLED SURFACE AS DIRECTED BY ENGINEER. PAID FOR UNDER THE PREPARE FOUNDATION FOR ASPHALTIC PAVING BID ITEM.

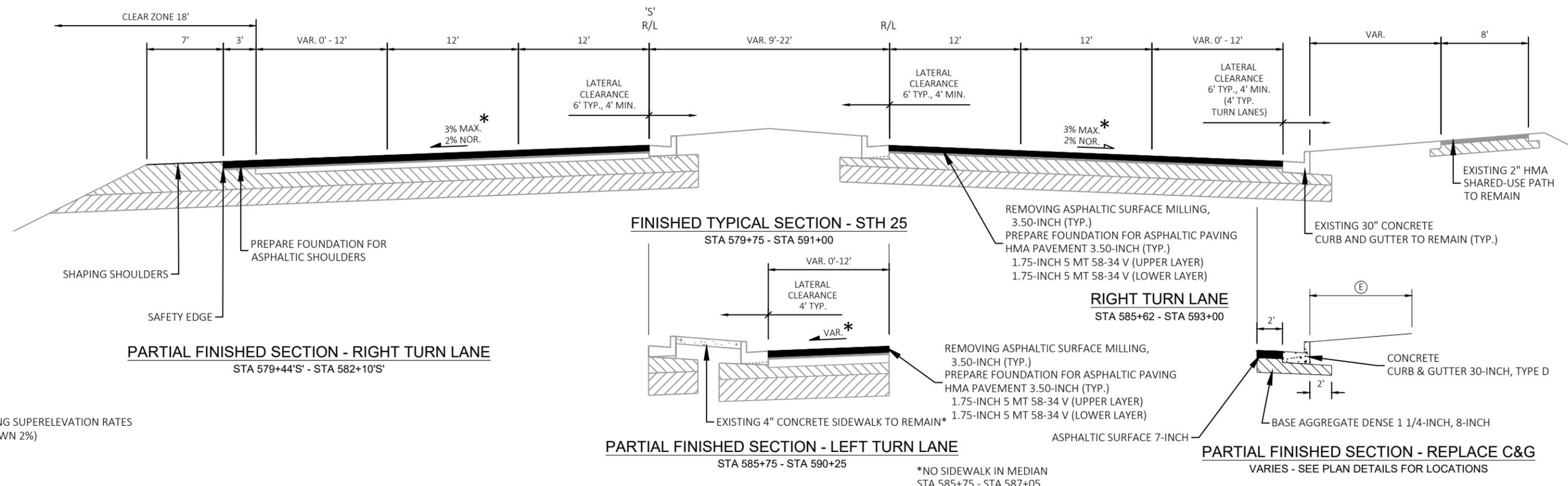
** DRIVEWAY CURB HEAD REQUIRED BETWEEN 25 FT PRIOR TO E.A.T. AND POST #3 OF E.A.T. MINIMUM

*** MATCH EXISTING SUPERELEVATION RATES (NORMAL CROWN 2%), EXCEPT AS NECESSARY TO MATCH EXISTING GUTTER FLANGE LINE. MAINTAIN DRAINAGE ACROSS LANES.



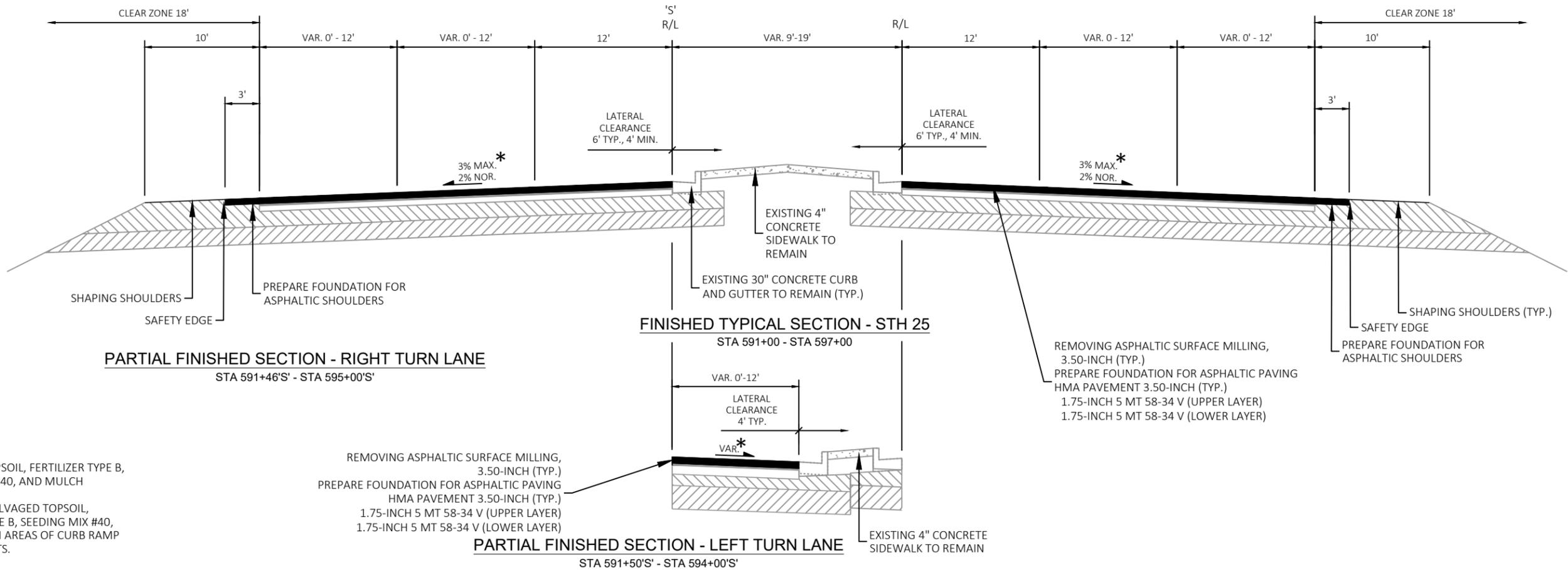
Ⓔ SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIX #40, AND MULCH

NOTE: USE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIX #40, AND MULCH IN AREAS OF CURB RAMP IMPROVEMENTS



* MATCH EXISTING SUPERELEVATION RATES (NORMAL CROWN 2%)

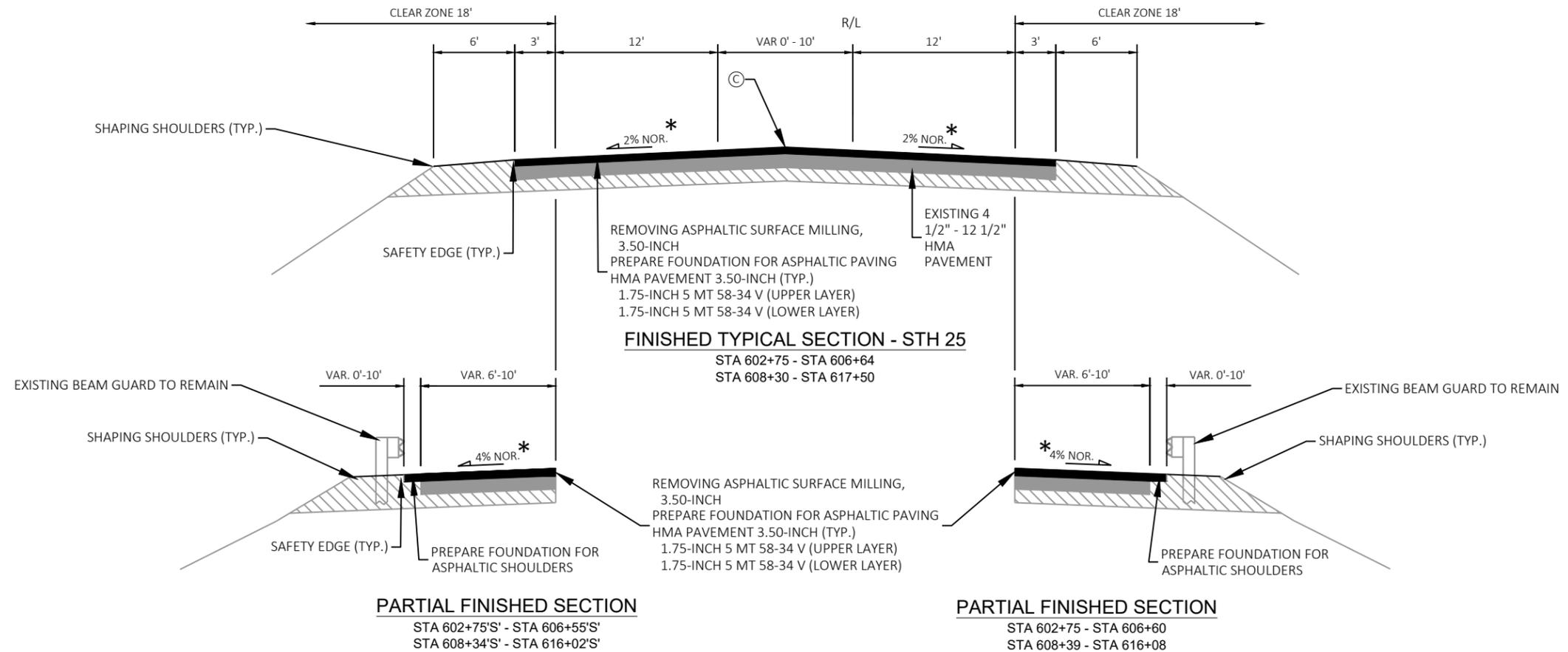
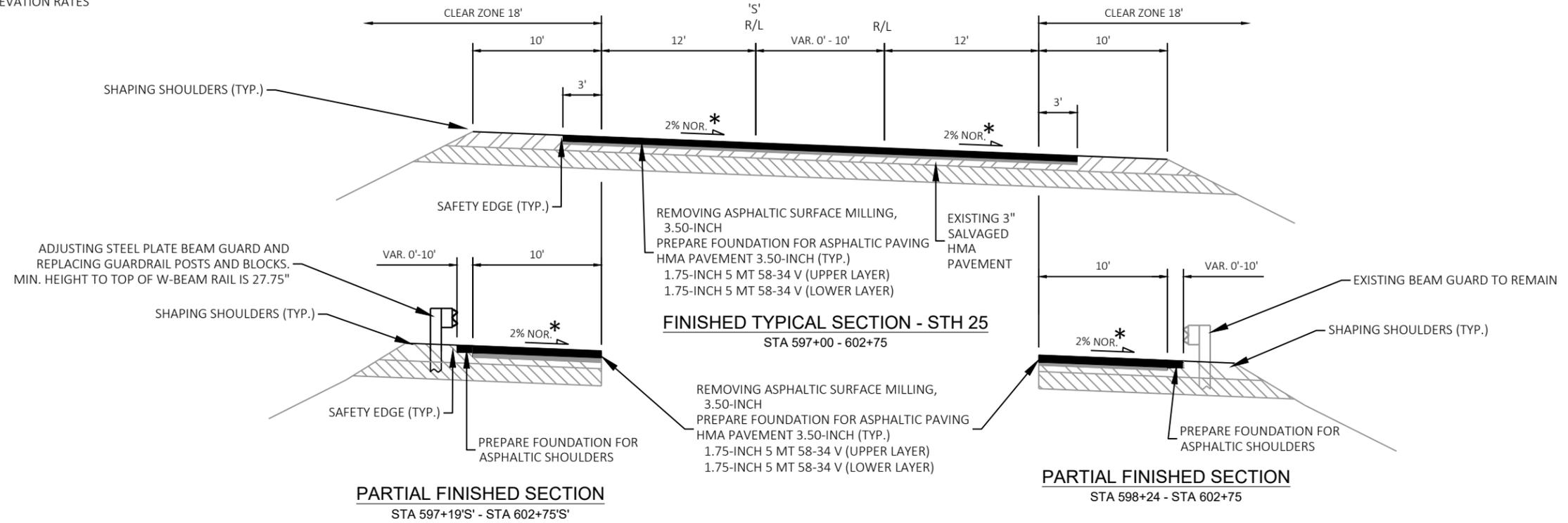
*NO SIDEWALK IN MEDIAN
STA 585+75 - STA 587+05



Ⓔ SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIX #40, AND MULCH

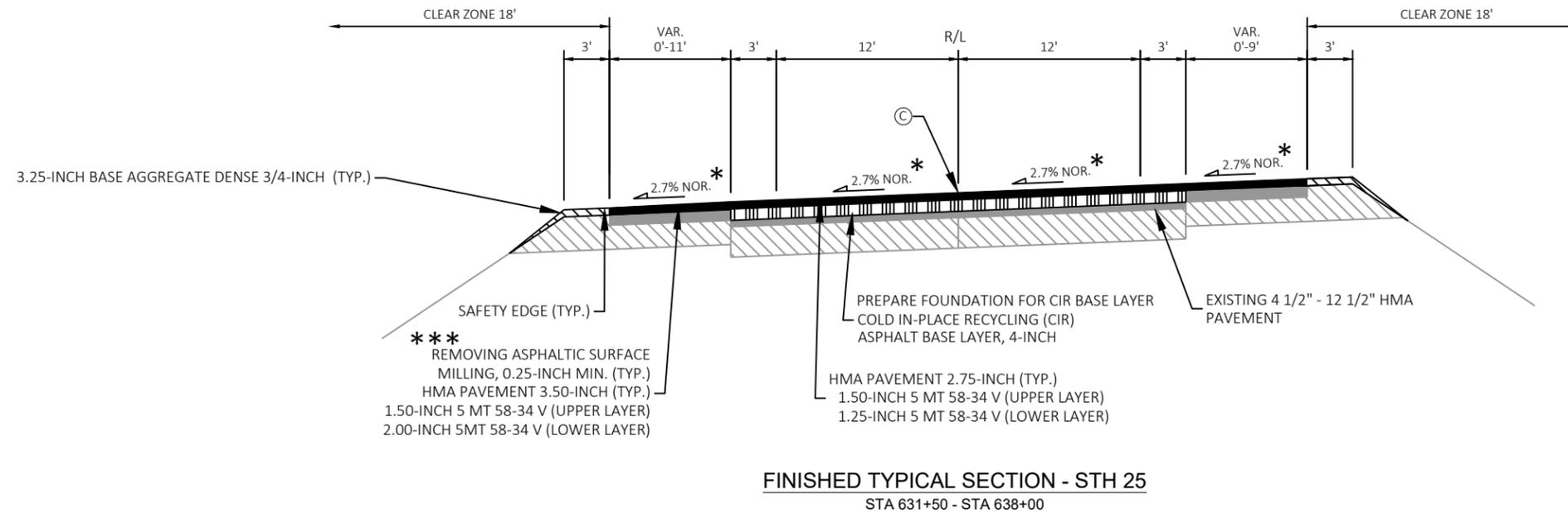
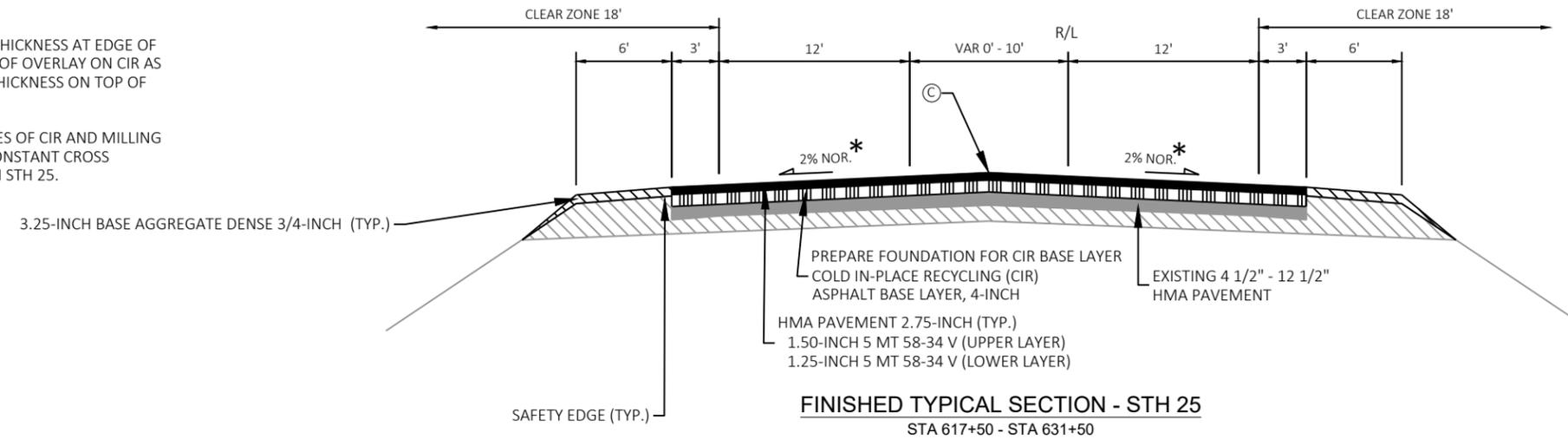
NOTES: USE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIX #40, AND MULCH IN AREAS OF CURB RAMP IMPROVEMENTS.

* MATCH EXISTING SUPERELEVATION RATES (NORMAL CROWN 2%)



Ⓢ ASPHALTIC RUMBLE STRIPS, CENTERLINE

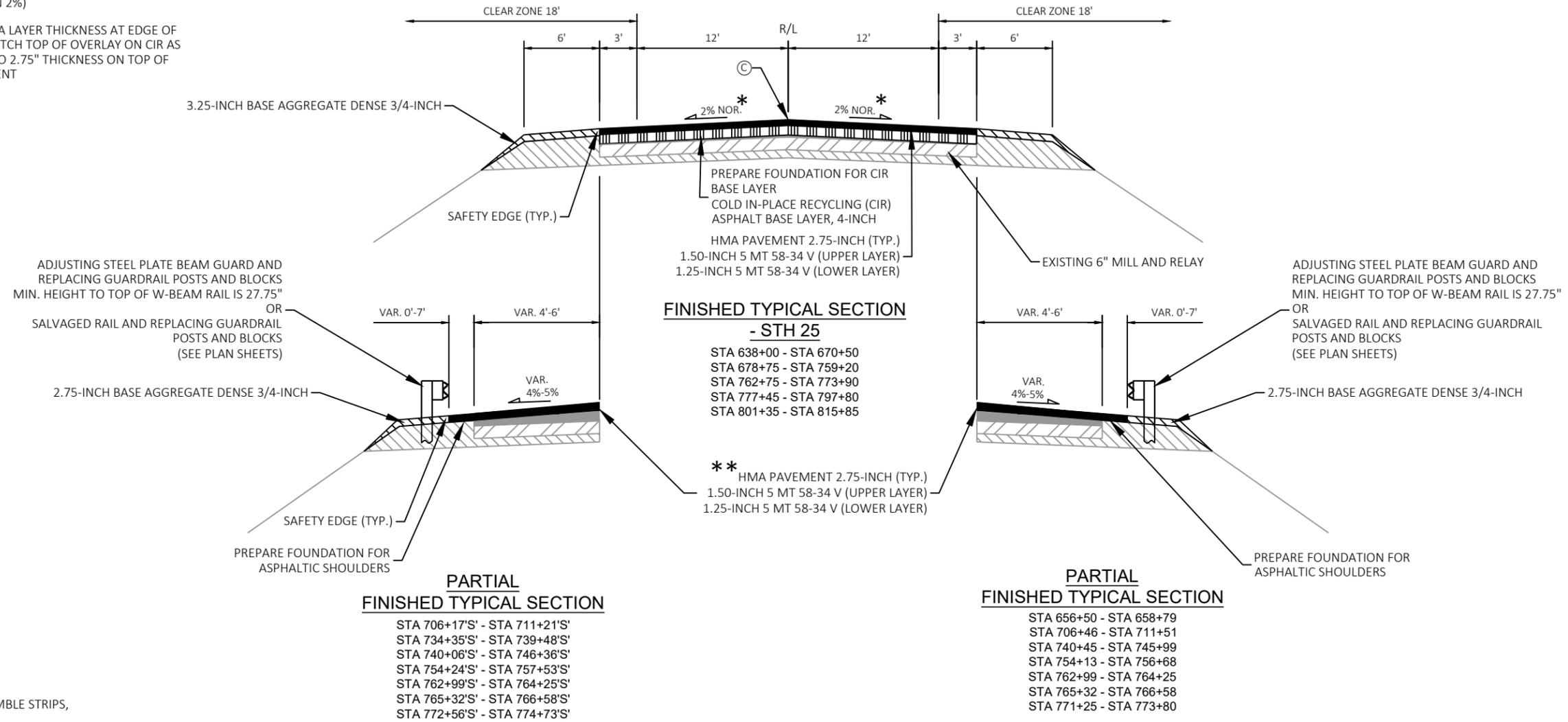
- * MATCH EXISTING SUPERELEVATION RATES (NORMAL CROWN 2%)
- ** VARY LOWER HMA LAYER THICKNESS AT EDGE OF CIR LIMITS TO MATCH TOP OF OVERLAY ON CIR AS NEEDED, TAPER TO 2.75" THICKNESS ON TOP OF EXISTING PAVEMENT
- *** ADJUST DEPTHS AND SLOPES OF CIR AND MILLING AS NEEDED TO PROVIDE CONSTANT CROSS SLOPES FOR EACH LANE ON STH 25.



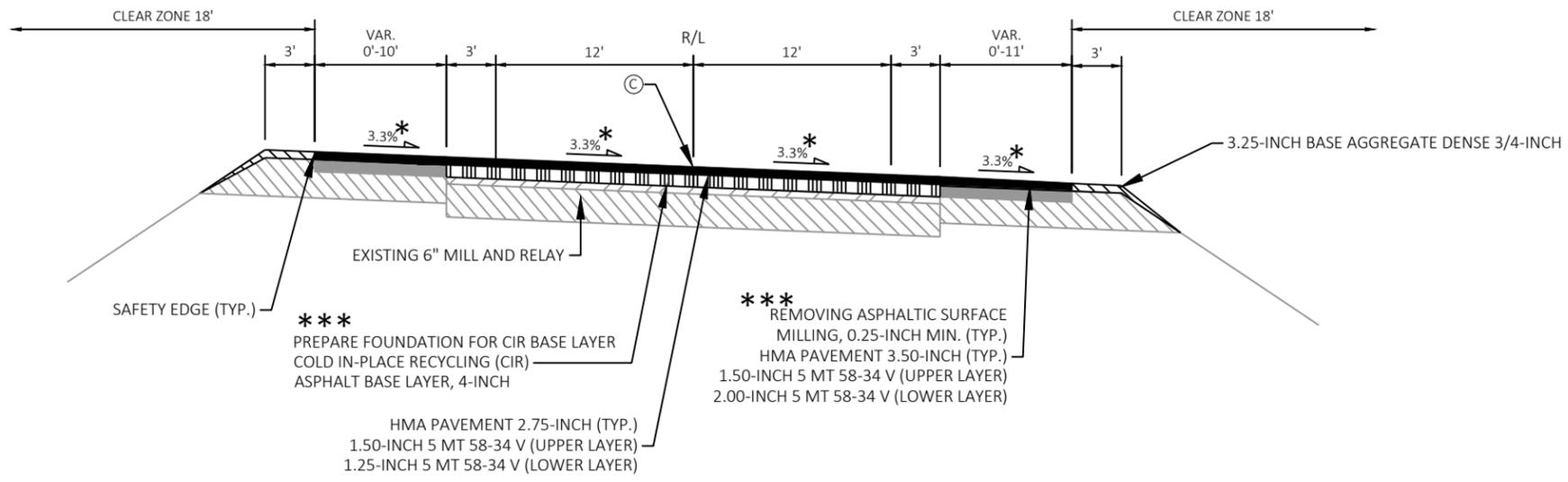
Ⓢ ASPHALTIC RUMBLE STRIPS, CENTERLINE

* MATCH EXISTING SUPERELEVATION RATES (NORMAL CROWN 2%)

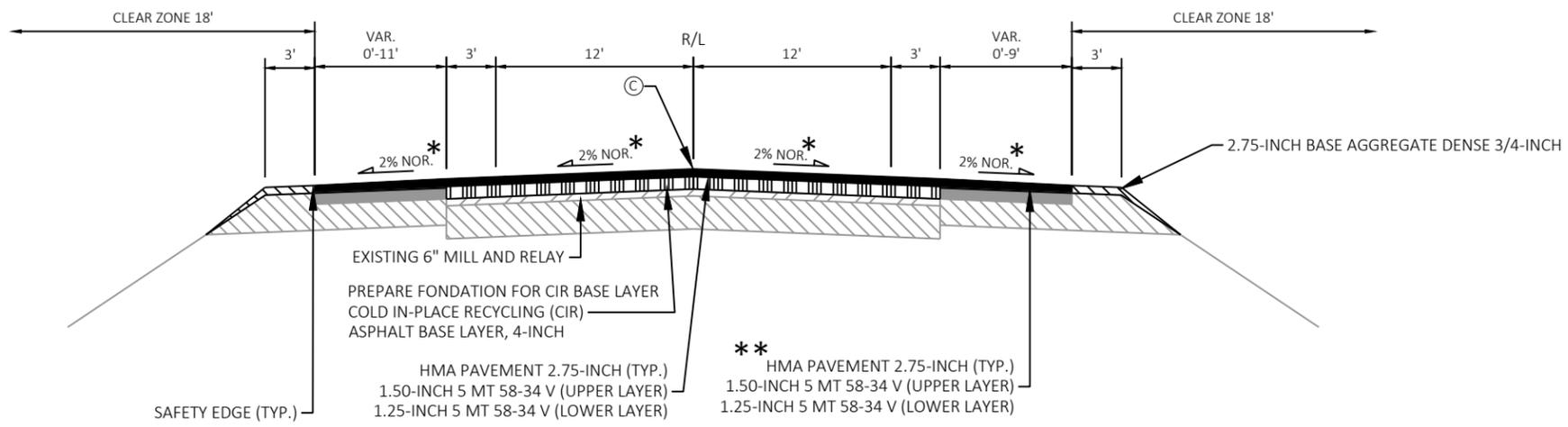
** VARY LOWER HMA LAYER THICKNESS AT EDGE OF CIR LIMITS TO MATCH TOP OF OVERLAY ON CIR AS NEEDED, TAPER TO 2.75" THICKNESS ON TOP OF EXISTING PAVEMENT



- * MATCH EXISTING SUPERELEVATION RATES (NORMAL CROWN 2%)
- ** VARY LOWER HMA LAYER THICKNESS AT EDGE OF CIR LIMITS TO MATCH TOP OF OVERLAY ON CIR AS NEEDED, TAPER TO 2.75" THICKNESS ON TOP OF EXISTING PAVEMENT
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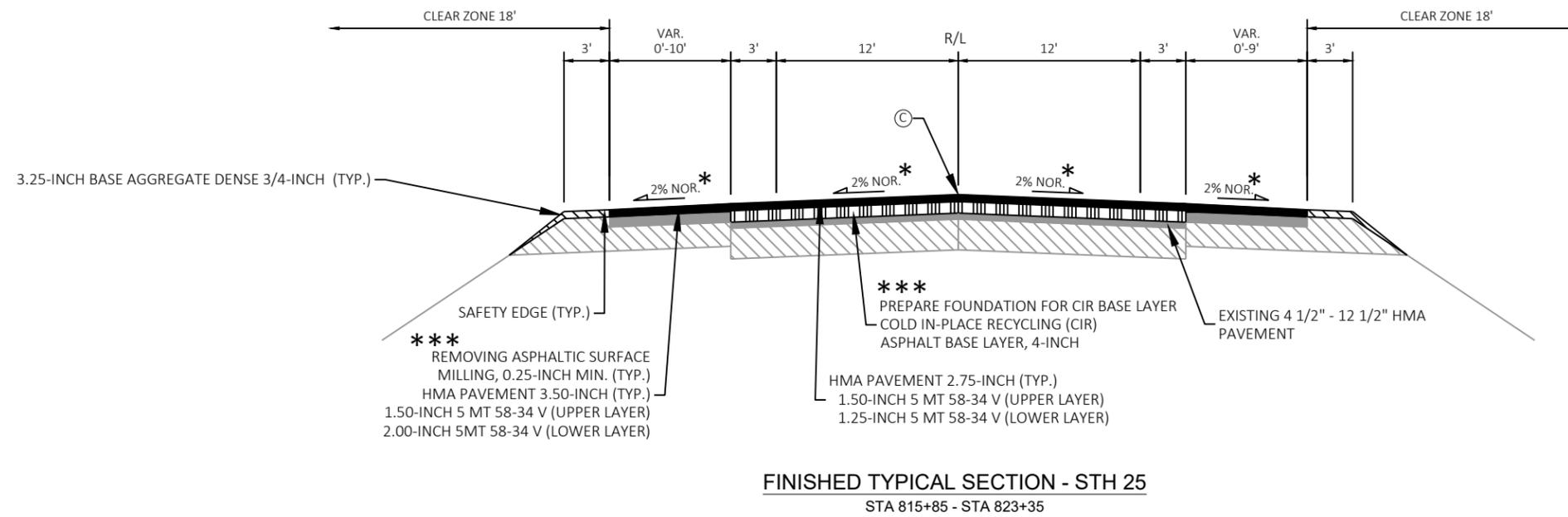
FINISHED TYPICAL SECTION - STH 25
STA 670+50 - STA 678+75



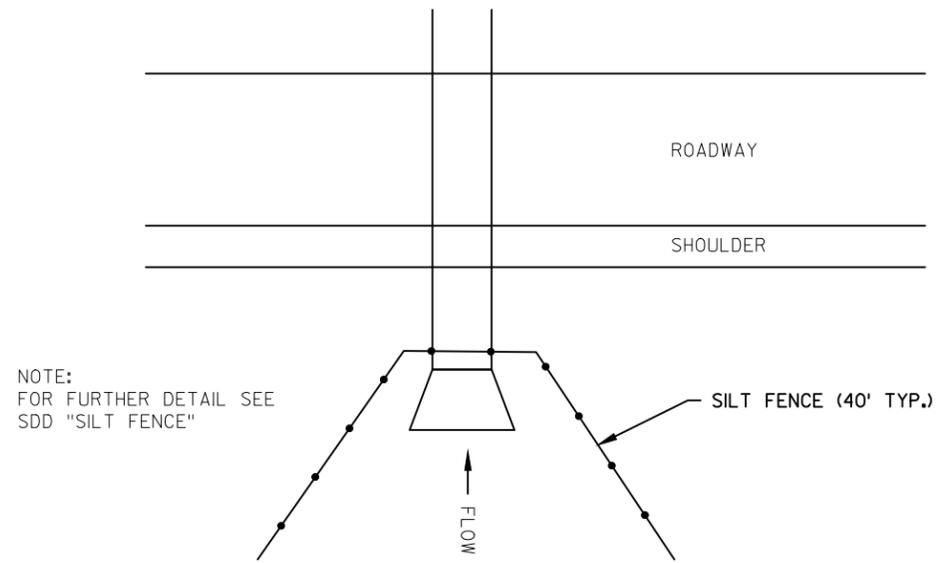
FINISHED TYPICAL SECTION - STH 25
STA 759+20 - STA 762+75
STA 773+90 - STA 777+45
STA 797+80 - STA 801+35

© ASPHALTIC RUMBLE STRIPS, CENTERLINE

- * MATCH EXISTING SUPERELEVATION RATES (NORMAL CROWN 2%)
- ** VARY LOWER HMA LAYER THICKNESS AT EDGE OF CIR LIMITS TO MATCH TOP OF OVERLAY ON CIR AS NEEDED, TAPER TO 2.75" THICKNESS ON TOP OF EXISTING PAVEMENT
- *** ADJUST DEPTHS AND SLOPES OF CIR AND MILLING AS NEEDED TO PROVIDE CONSTANT CROSS SLOPES FOR EACH LANE ON STH 25.



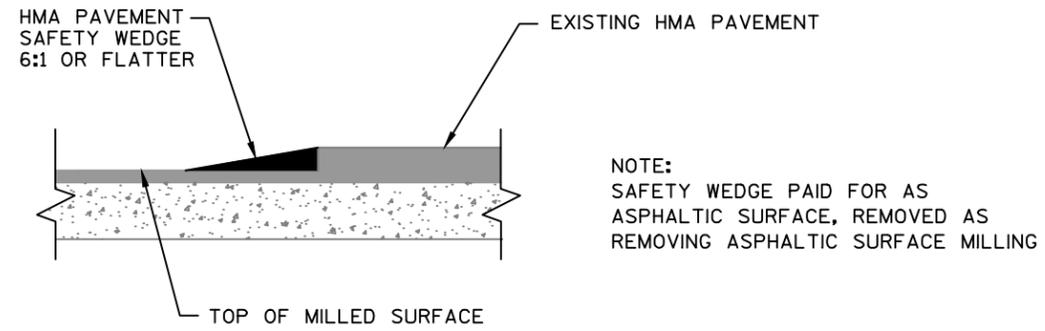
© ASPHALTIC RUMBLE STRIPS, CENTERLINE



TYPICAL SILT FENCE DETAIL AT PIPE INLET
 (SEE PLAN SHEETS FOR LOCATIONS)

	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									
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE TURF			.25 .32			.27 .34			.28 .36			.30 .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 = 105.935 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.551 ACRES

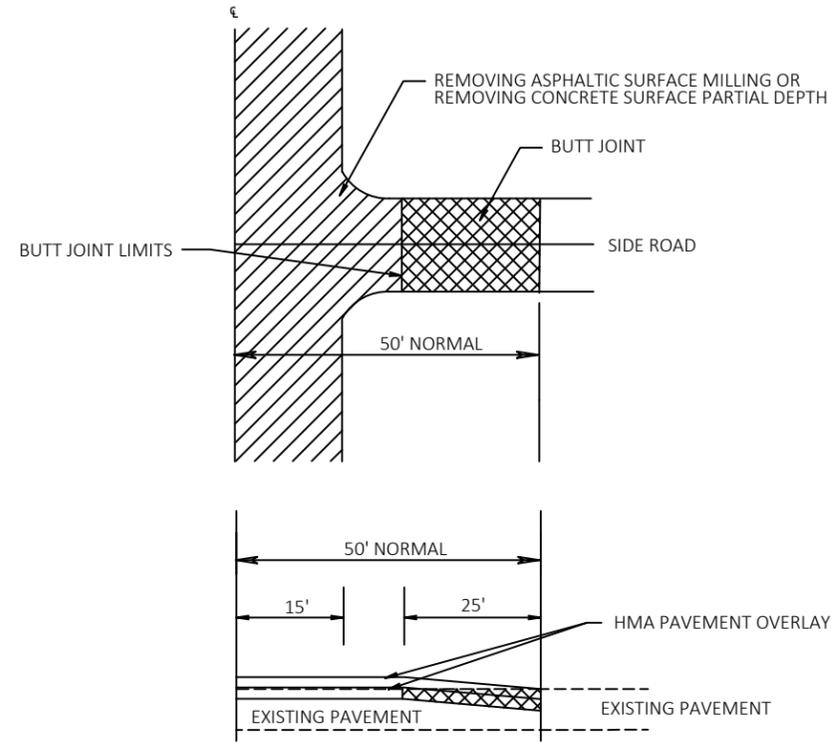


NOTE:
 SAFETY WEDGE PAID FOR AS
 ASPHALTIC SURFACE, REMOVED AS
 REMOVING ASPHALTIC SURFACE MILLING

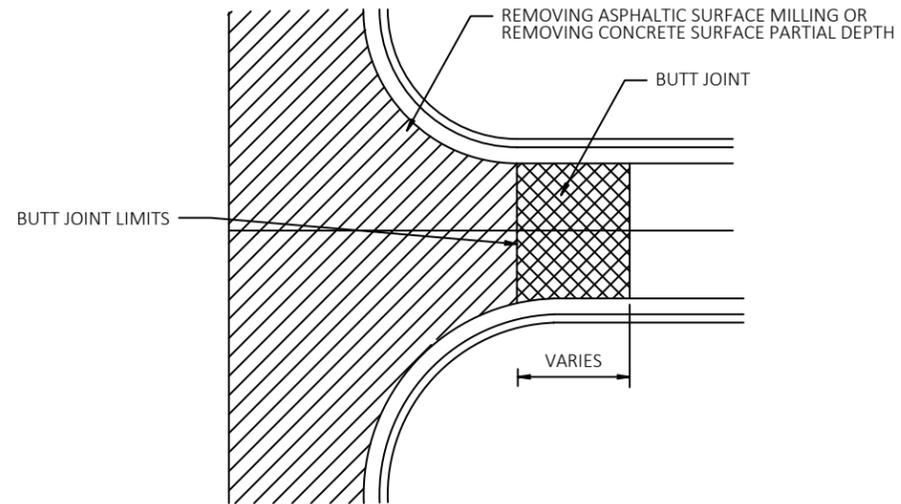
HMA PAVEMENT SAFETY WEDGE

NOTE:
 HMA PAVEMENT SAFETY WEDGE TO BE PLACED WHEN UNABLE TO MILL
 EXISTING PAVEMENT AND PAVE LOWER LAYER OF HMA PAVEMENT ON
 THE SAME DAY AND DROP OFF BETWEEN LAYERS EXCEEDS 2".

SIDE ROAD DETAIL - NO CURB & GUTTER
NOT TO SCALE



SIDEROAD DETAIL - CURB & GUTTER TO REMAIN
NOT TO SCALE

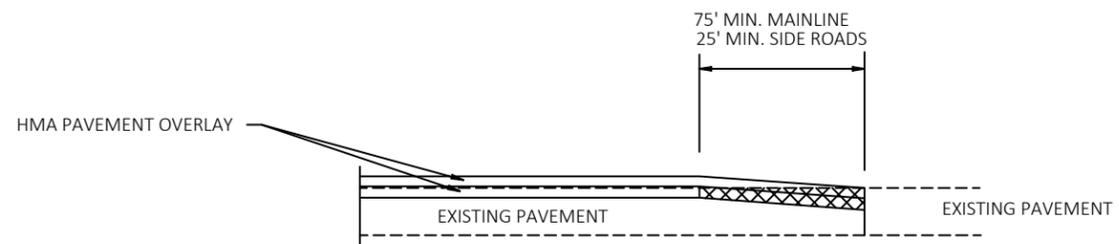


☒ REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALTIC SURFACE BUTT JOINTS' OR 'REMOVING CONCRETE PAVEMENT BUTT JOINTS'. MATERIAL SHALL NOT BE REMOVED UNDER THIS ITEM UNTIL 24 HOURS BEFORE SIDEROAD PAVING.

SIDEROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO OVERLAY DEPTH MINIMUM AT JOINT

NOTE: ANY SAWCUT USED WILL BE CONSIDERED INCIDENTAL TO THE ITEM "REMOVING ASPHALTIC SURFACE, BUTT JOINTS."

BUTT JOINT

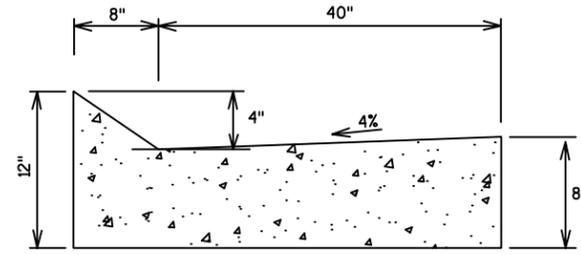


REQUIRED AT BEGIN AND END PAVING LOCATIONS

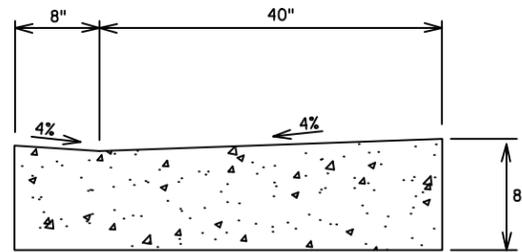
☒ PAID FOR AS REMOVING ASPHALTIC SURFACE BUTT JOINTS OR REMOVING CONCRETE PAVEMENT BUTT JOINTS

NOTE: ANY SAWCUT USED IN THIS OPERATION CONSIDERED INCIDENTAL TO THIS ITEM

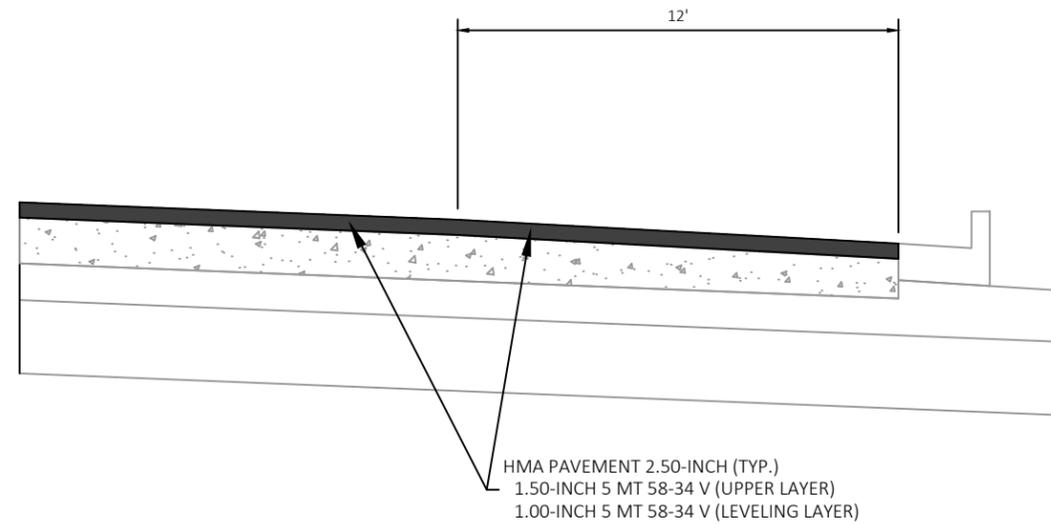
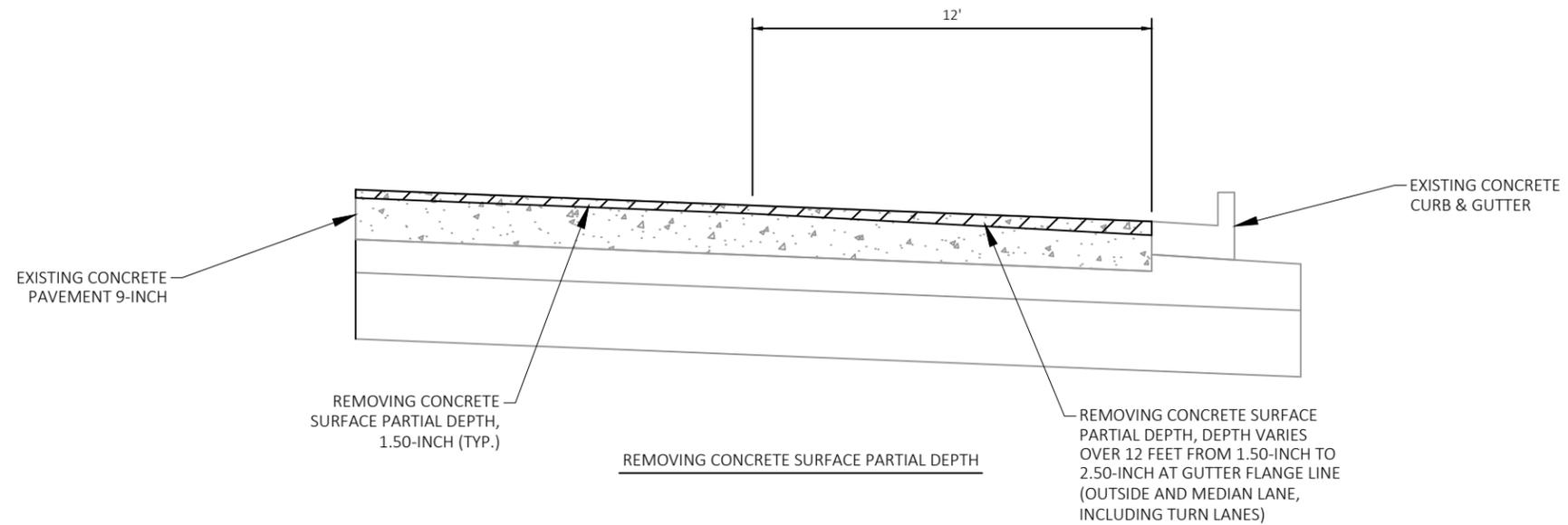
BUTT JOINT DETAIL



CONCRETE CURB & GUTTER 48-INCH SPECIAL



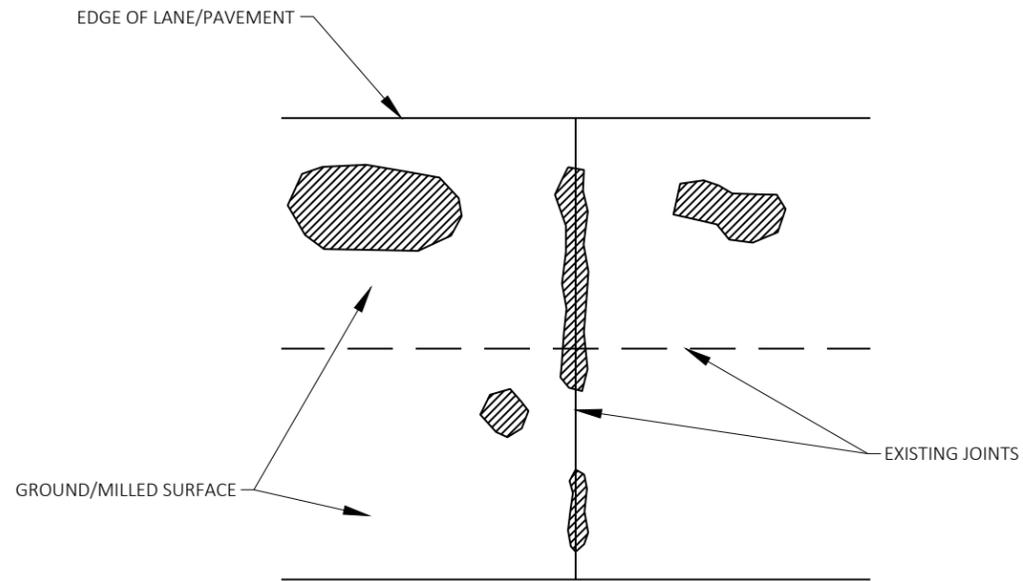
CONCRETE CURB & GUTTER 48-INCH SPECIAL
DRIVEWAY CURB HEAD VERSION



HMA PAVEMENT OVERLAY

MILLING EXISTING CONCRETE PAVEMENT ADJACENT TO CURB LINE

ADJUSTING MILLING DEPTH FOR OUTSIDE AND MEDIAN LANES TO MATCH EXISTING GUTTER FLANGE LINE (TYP. FOR ALL LOCATIONS WITH PROFILE RAISE AND CURB & GUTTER).



NOTES

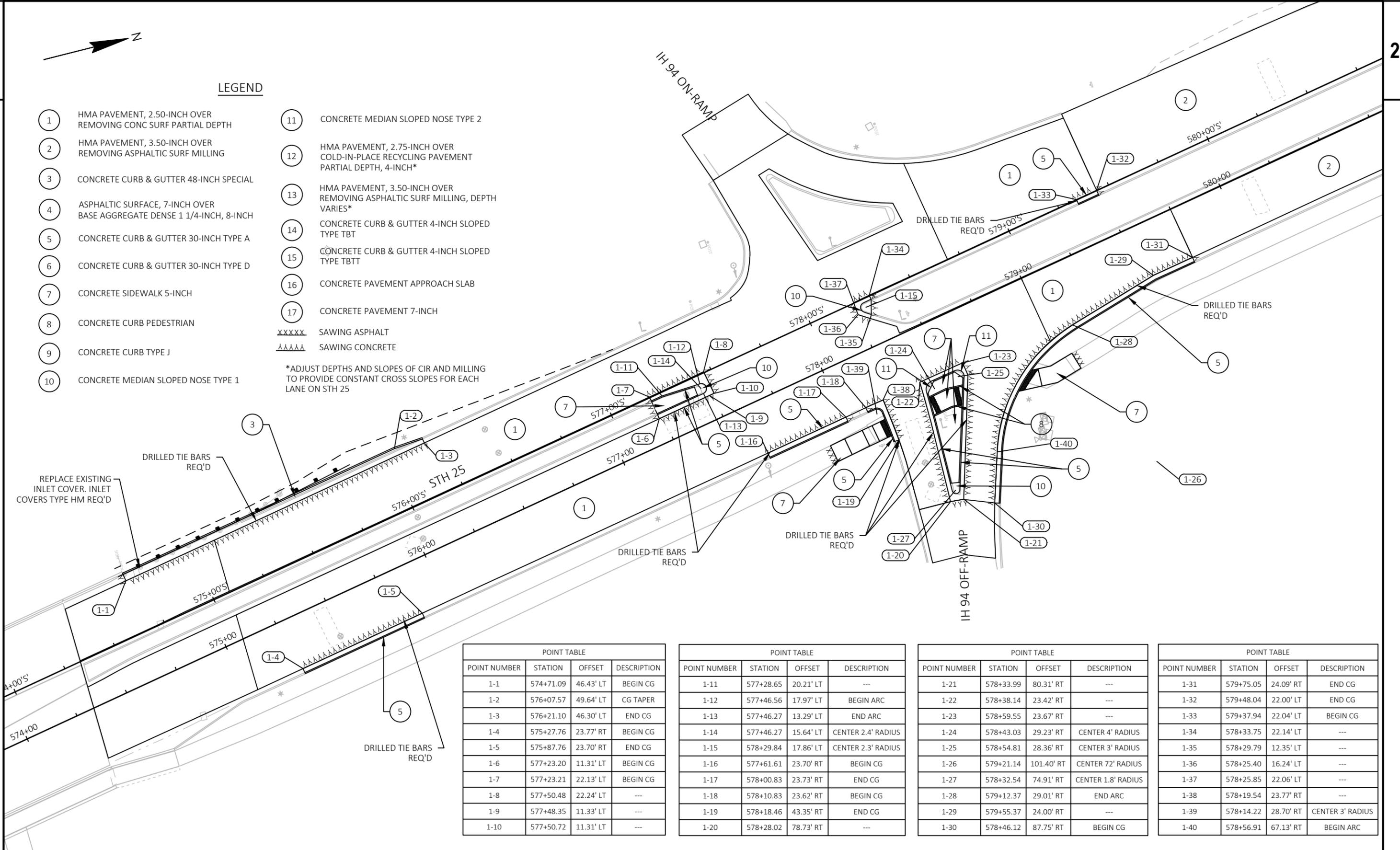
- AFTER THE EXISTING PAVEMENT IS MILLED/GROUND TO DEPTH SPECIFIED ON THE TYPICAL, REMOVE REMAINDER OF CRACKFILL, PATCHING, AND UNSOUND PCC/HMA TO A MAXIMUM DEPTH OF 4" OR FULL DEPTH OF THE REMAINING PAVEMENT, WHICHEVER IS LESS, PAID FOR UNDER PREPARE FOUNDATION FOR ASPHALTIC PAVING ITEM.
- REPAVE REPAIR AREAS WITH ASPHALTIC SURFACE PATCHING OR ASPHALTIC SURFACE ITEM PAID SEPARATELY.
- SEE PLAN DETAILS AND EROSION CONTROL SHEETS FOR ADDITIONAL INFORMATION.

PREPARE FOUNDATION FOR ASPHALTIC PAVING REPAIR AREAS DETAIL



LEGEND

- 1 HMA PAVEMENT, 2.50-INCH OVER REMOVING CONC SURF PARTIAL DEPTH
 - 2 HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING
 - 3 CONCRETE CURB & GUTTER 48-INCH SPECIAL
 - 4 ASPHALTIC SURFACE, 7-INCH OVER BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH
 - 5 CONCRETE CURB & GUTTER 30-INCH TYPE A
 - 6 CONCRETE CURB & GUTTER 30-INCH TYPE D
 - 7 CONCRETE SIDEWALK 5-INCH
 - 8 CONCRETE CURB PEDESTRIAN
 - 9 CONCRETE CURB TYPE J
 - 10 CONCRETE MEDIAN SLOPED NOSE TYPE 1
 - 11 CONCRETE MEDIAN SLOPED NOSE TYPE 2
 - 12 HMA PAVEMENT, 2.75-INCH OVER COLD-IN-PLACE RECYCLING PAVEMENT PARTIAL DEPTH, 4-INCH*
 - 13 HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING, DEPTH VARIES*
 - 14 CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBT
 - 15 CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBTT
 - 16 CONCRETE PAVEMENT APPROACH SLAB
 - 17 CONCRETE PAVEMENT 7-INCH
 - XXXXX SAWING ASPHALT
 - AAAAA SAWING CONCRETE
- *ADJUST DEPTHS AND SLOPES OF CIR AND MILLING TO PROVIDE CONSTANT CROSS SLOPES FOR EACH LANE ON STH 25



POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
1-1	574+71.09	46.43' LT	BEGIN CG
1-2	576+07.57	49.64' LT	CG TAPER
1-3	576+21.10	46.30' LT	END CG
1-4	575+27.76	23.77' RT	BEGIN CG
1-5	575+87.76	23.70' RT	END CG
1-6	577+23.20	11.31' LT	BEGIN CG
1-7	577+23.21	22.13' LT	BEGIN CG
1-8	577+50.48	22.24' LT	---
1-9	577+48.35	11.33' LT	---
1-10	577+50.72	11.31' LT	---

POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
1-11	577+28.65	20.21' LT	---
1-12	577+46.56	17.97' LT	BEGIN ARC
1-13	577+46.27	13.29' LT	END ARC
1-14	577+46.27	15.64' LT	CENTER 2.4' RADIUS
1-15	578+29.84	17.86' LT	CENTER 2.3' RADIUS
1-16	577+61.61	23.70' RT	BEGIN CG
1-17	578+00.83	23.73' RT	END CG
1-18	578+10.83	23.62' RT	BEGIN CG
1-19	578+18.46	43.35' RT	END CG
1-20	578+28.02	78.73' RT	---

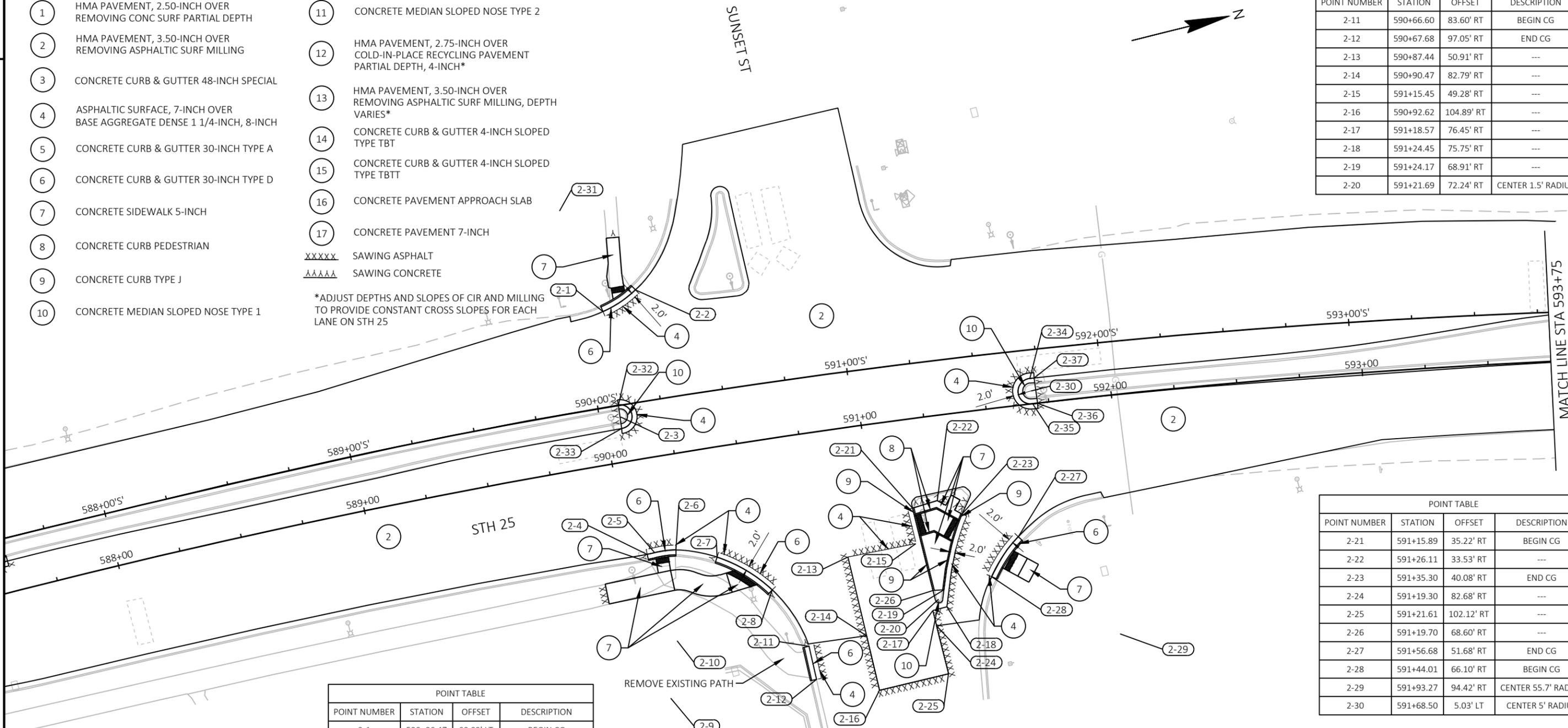
POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
1-21	578+33.99	80.31' RT	---
1-22	578+38.14	23.42' RT	---
1-23	578+59.55	23.67' RT	---
1-24	578+43.03	29.23' RT	CENTER 4' RADIUS
1-25	578+54.81	28.36' RT	CENTER 3' RADIUS
1-26	579+21.14	101.40' RT	CENTER 72' RADIUS
1-27	578+32.54	74.91' RT	CENTER 1.8' RADIUS
1-28	579+12.37	29.01' RT	END ARC
1-29	579+55.37	24.00' RT	---
1-30	578+46.12	87.75' RT	BEGIN CG

POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
1-31	579+75.05	24.09' RT	END CG
1-32	579+48.04	22.00' LT	END CG
1-33	579+37.94	22.04' LT	BEGIN CG
1-34	578+33.75	22.14' LT	---
1-35	578+29.79	12.35' LT	---
1-36	578+25.40	16.24' LT	---
1-37	578+25.85	22.06' LT	---
1-38	578+19.54	23.77' RT	---
1-39	578+14.22	28.70' RT	CENTER 3' RADIUS
1-40	578+56.91	67.13' RT	BEGIN ARC

LEGEND

- ① HMA PAVEMENT, 2.50-INCH OVER REMOVING CONC SURF PARTIAL DEPTH
- ② HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING
- ③ CONCRETE CURB & GUTTER 48-INCH SPECIAL
- ④ ASPHALTIC SURFACE, 7-INCH OVER BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH
- ⑤ CONCRETE CURB & GUTTER 30-INCH TYPE A
- ⑥ CONCRETE CURB & GUTTER 30-INCH TYPE D
- ⑦ CONCRETE SIDEWALK 5-INCH
- ⑧ CONCRETE CURB PEDESTRIAN
- ⑨ CONCRETE CURB TYPE J
- ⑩ CONCRETE MEDIAN SLOPED NOSE TYPE 1
- ⑪ CONCRETE MEDIAN SLOPED NOSE TYPE 2
- ⑫ HMA PAVEMENT, 2.75-INCH OVER COLD-IN-PLACE RECYCLING PAVEMENT PARTIAL DEPTH, 4-INCH*
- ⑬ HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING, DEPTH VARIES*
- ⑭ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBT
- ⑮ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBTT
- ⑯ CONCRETE PAVEMENT APPROACH SLAB
- ⑰ CONCRETE PAVEMENT 7-INCH
- XXXXX SAWING ASPHALT
- AAAAA SAWING CONCRETE

*ADJUST DEPTHS AND SLOPES OF CIR AND MILLING TO PROVIDE CONSTANT CROSS SLOPES FOR EACH LANE ON STH 25



POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
2-11	590+66.60	83.60' RT	BEGIN CG
2-12	590+67.68	97.05' RT	END CG
2-13	590+87.44	50.91' RT	---
2-14	590+90.47	82.79' RT	---
2-15	591+15.45	49.28' RT	---
2-16	590+92.62	104.89' RT	---
2-17	591+18.57	76.45' RT	---
2-18	591+24.45	75.75' RT	---
2-19	591+24.17	68.91' RT	---
2-20	591+21.69	72.24' RT	CENTER 1.5' RADIUS

POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
2-1	590+06.47	60.09' LT	BEGIN CG
2-2	590+20.29	66.47' LT	END CG
2-3	590+06.29	17.91' LT	CENTER 4.7' RADIUS
2-4	590+07.76	37.61' RT	BEGIN CG
2-5	590+10.78	37.47' RT	BEGIN ARC
2-6	590+19.41	37.76' RT	END CG
2-7	590+35.29	43.20' RT	BEGIN CG
2-8	590+55.24	59.41' RT	END CG
2-9	590+07.42	95.20' RT	CENTER 59.7' RADIUS
2-10	590+13.85	73.21' RT	CENTER 32.2' RADIUS

POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
2-21	591+15.89	35.22' RT	BEGIN CG
2-22	591+26.11	33.53' RT	---
2-23	591+35.30	40.08' RT	END CG
2-24	591+19.30	82.68' RT	---
2-25	591+21.61	102.12' RT	---
2-26	591+19.70	68.60' RT	---
2-27	591+56.68	51.68' RT	END CG
2-28	591+44.01	66.10' RT	BEGIN CG
2-29	591+93.27	94.42' RT	CENTER 55.7' RADIUS
2-30	591+68.50	5.03' LT	CENTER 5' RADIUS

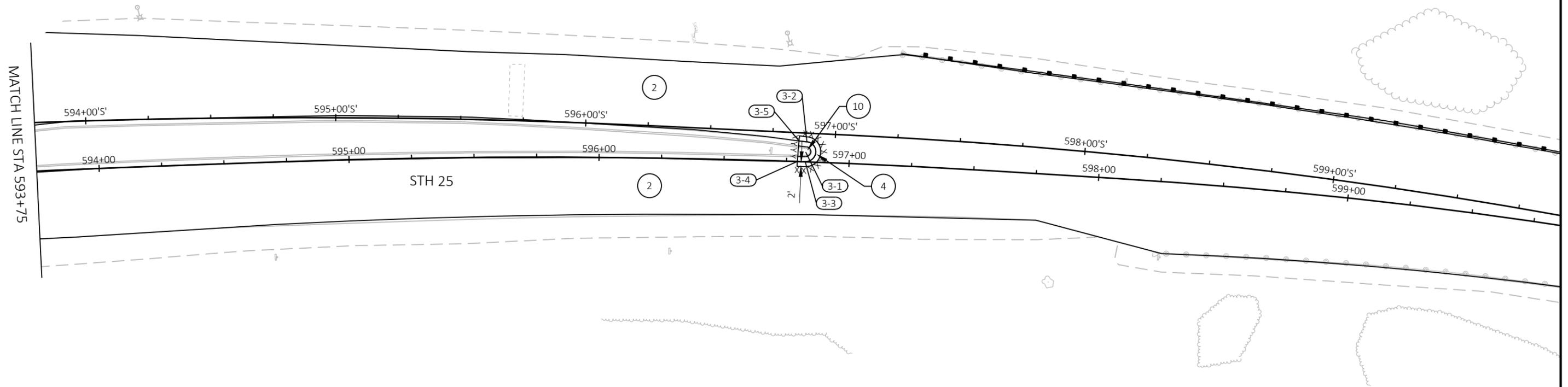
POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
2-31	589+96.37	102.18' LT	CENTER 43.4' RADIUS
2-32	590+06.31	22.62' LT	---
2-33	590+06.05	13.20' LT	---
2-34	591+68.58	9.99' LT	BEGIN ARC
2-35	591+68.58	0.13' RT	END ARC
2-36	591+70.57	0.13' RT	---
2-37	591+70.28	9.99' LT	---

LEGEND

- ① HMA PAVEMENT, 2.50-INCH OVER REMOVING CONC SURF PARTIAL DEPTH
 - ② HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING
 - ③ CONCRETE CURB & GUTTER 48-INCH SPECIAL
 - ④ ASPHALTIC SURFACE, 7-INCH OVER BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH
 - ⑤ CONCRETE CURB & GUTTER 30-INCH TYPE A
 - ⑥ CONCRETE CURB & GUTTER 30-INCH TYPE D
 - ⑦ CONCRETE SIDEWALK 5-INCH
 - ⑧ CONCRETE CURB PEDESTRIAN
 - ⑨ CONCRETE CURB TYPE J
 - ⑩ CONCRETE MEDIAN SLOPED NOSE TYPE 1
 - ⑪ CONCRETE MEDIAN SLOPED NOSE TYPE 2
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 - ⑬ HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING, DEPTH VARIES*
 - ⑭ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBT
 - ⑮ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBTT
 - ⑯ CONCRETE PAVEMENT APPROACH SLAB
 - ⑰ CONCRETE PAVEMENT 7-INCH
 - XXXXX SAWING ASPHALT
 - AAAAA SAWING CONCRETE
- *ADJUST DEPTHS AND SLOPES OF CIR AND MILLING TO PROVIDE CONSTANT CROSS SLOPES FOR EACH LANE ON STH 25



POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
3-1	596+82.48	4.01' LT	CENTER 4' RADIUS
3-2	596+82.82	8.00' LT	END ARC
3-3	596+82.46	0.01' LT	BEGIN ARC
3-4	596+79.30	0.03' LT	END CG
3-5	596+79.68	8.27' LT	BEGIN CG

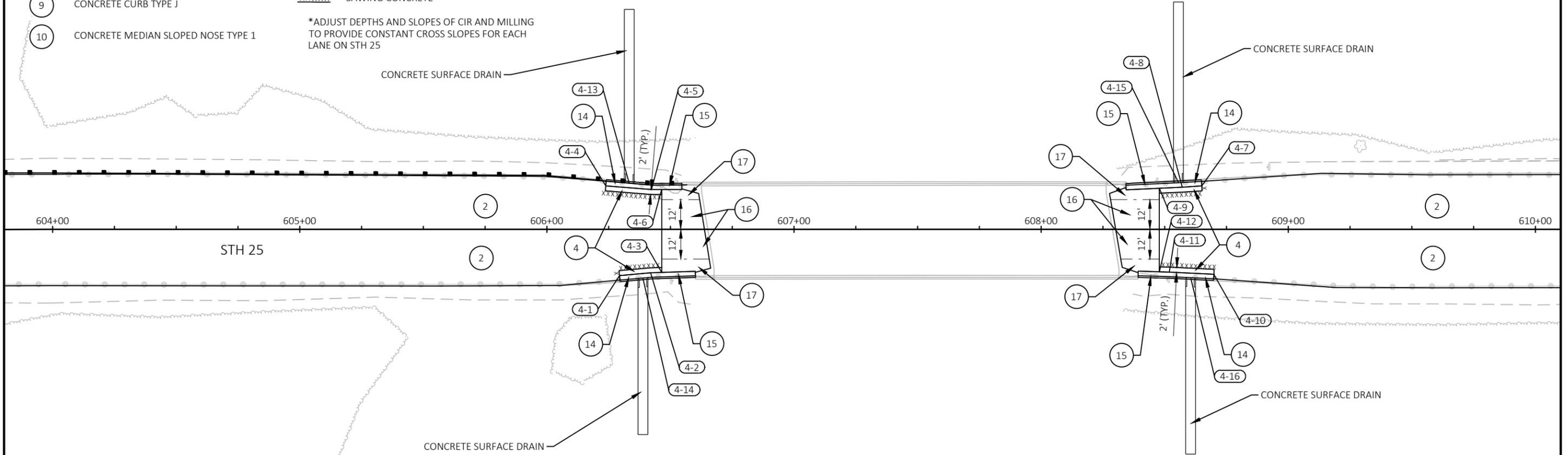


LEGEND

- ① HMA PAVEMENT, 2.50-INCH OVER REMOVING CONC SURF PARTIAL DEPTH
 - ② HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING
 - ③ CONCRETE CURB & GUTTER 48-INCH SPECIAL
 - ④ ASPHALTIC SURFACE, 7-INCH OVER BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH
 - ⑤ CONCRETE CURB & GUTTER 30-INCH TYPE A
 - ⑥ CONCRETE CURB & GUTTER 30-INCH TYPE D
 - ⑦ CONCRETE SIDEWALK 5-INCH
 - ⑧ CONCRETE CURB PEDESTRIAN
 - ⑨ CONCRETE CURB TYPE J
 - ⑩ CONCRETE MEDIAN SLOPED NOSE TYPE 1
 - ⑪ CONCRETE MEDIAN SLOPED NOSE TYPE 2
 - ⑫ HMA PAVEMENT, 2.75-INCH OVER COLD-IN-PLACE RECYCLING PAVEMENT PARTIAL DEPTH, 4-INCH*
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 - ⑭ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBT
 - ⑮ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBTT
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 - ⑰ CONCRETE PAVEMENT 7-INCH
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- *ADJUST DEPTHS AND SLOPES OF CUR AND MILLING TO PROVIDE CONSTANT CROSS SLOPES FOR EACH LANE ON STH 25

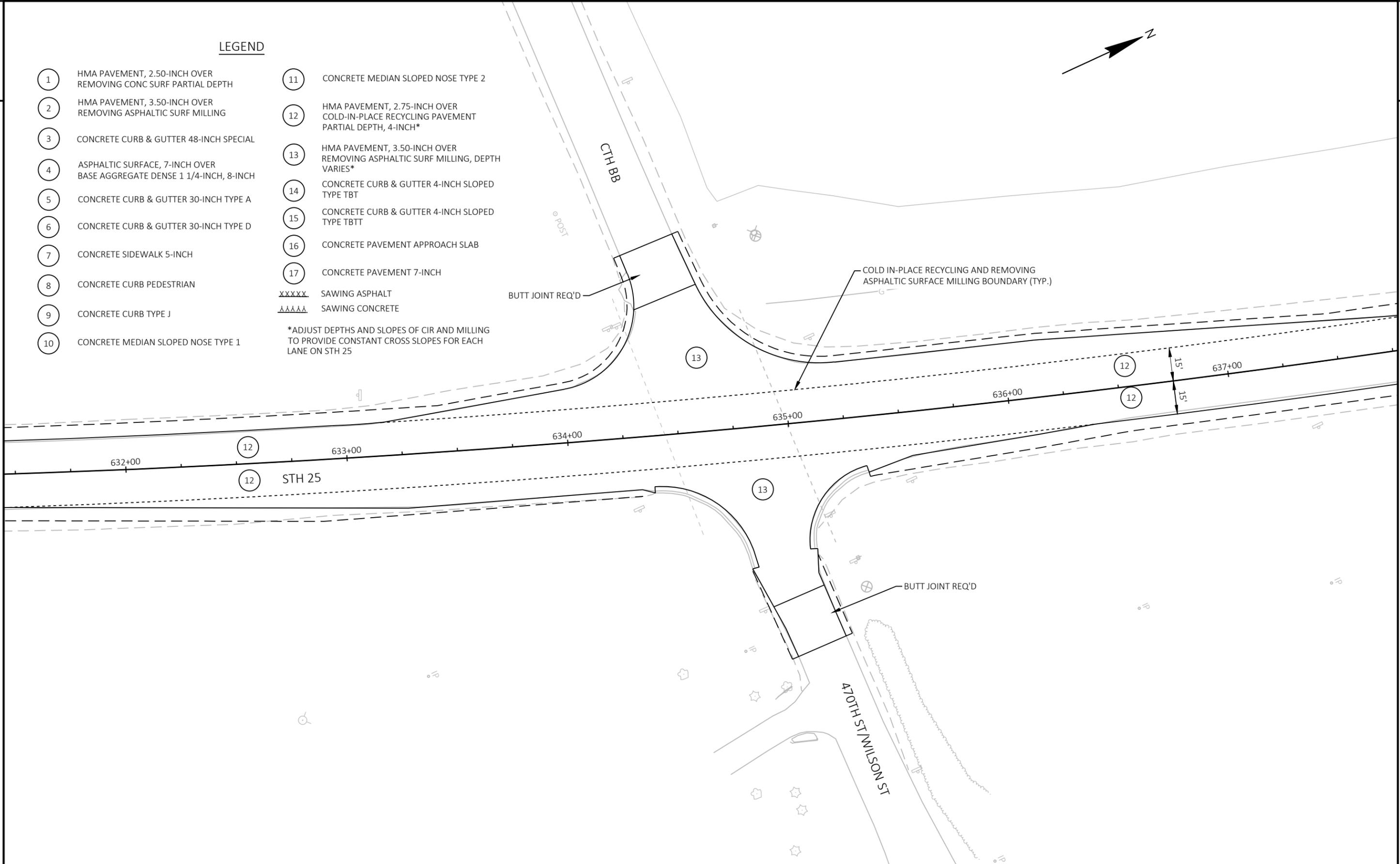
POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
4-1	606+29.39	18.62' RT	BEGIN CG
4-2	606+41.97	17.50' RT	---
4-3	606+46.44	17.35' RT	---
4-4	606+23.81	17.57' LT	BEGIN CG
4-5	606+42.29	16.06' LT	---
4-6	606+46.44	16.07' LT	---
4-7	608+65.02	17.54' LT	END CG
4-8	608+57.08	17.05' LT	---
4-9	608+47.84	16.61' LT	---
4-10	608+69.91	18.10' RT	END CG

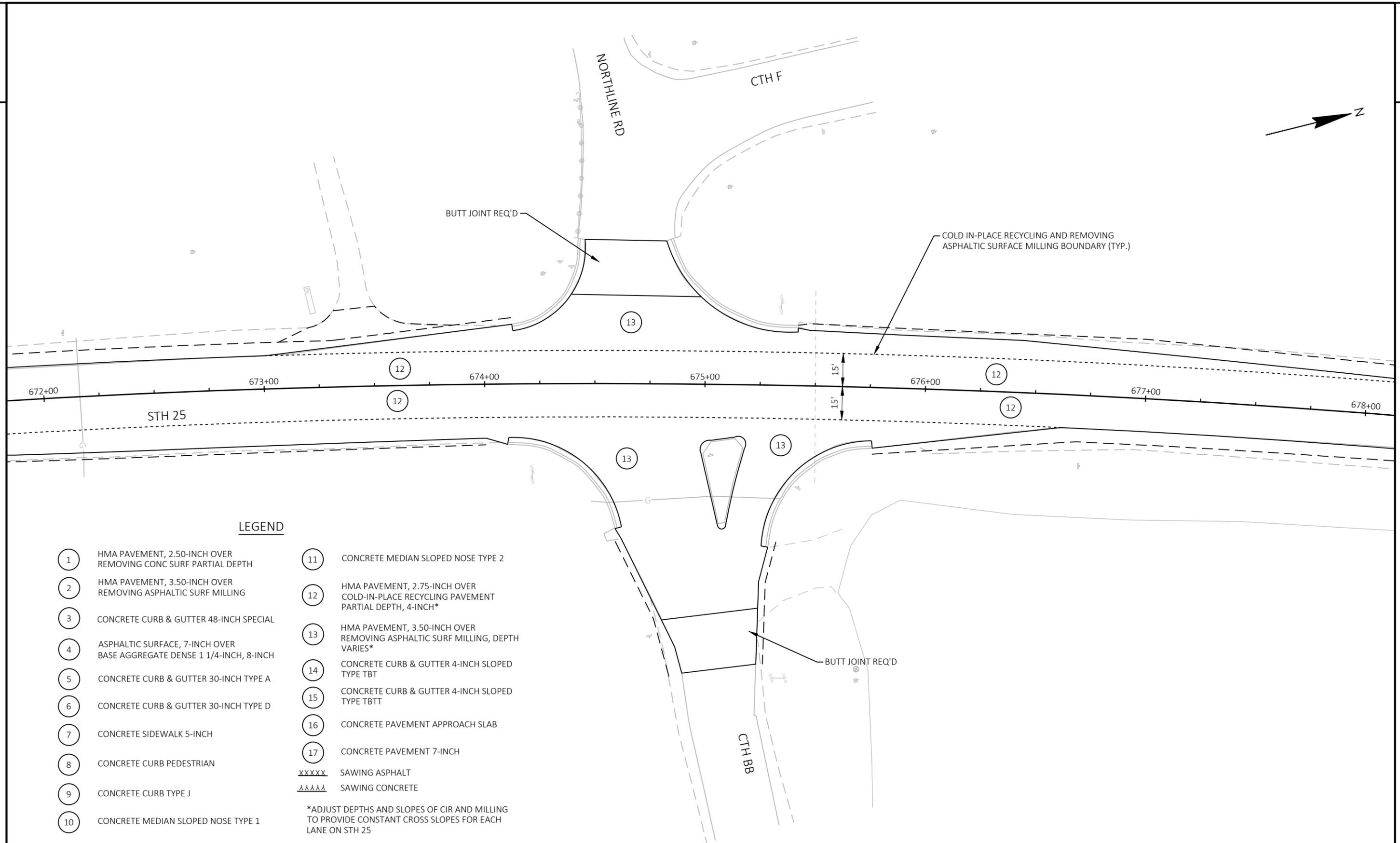
POINT TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
4-11	608+51.84	17.22' RT	---
4-12	608+47.83	17.11' RT	---
4-13	606+33.28	18.63' LT	SURFACE DRAIN
4-14	606+38.81	19.62' RT	SURFACE DRAIN
4-15	608+55.60	18.82' LT	SURFACE DRAIN
4-16	608+60.50	19.49' RT	SURFACE DRAIN



LEGEND

- 1 HMA PAVEMENT, 2.50-INCH OVER REMOVING CONC SURF PARTIAL DEPTH
 - 2 HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING
 - 3 CONCRETE CURB & GUTTER 48-INCH SPECIAL
 - 4 ASPHALTIC SURFACE, 7-INCH OVER BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH
 - 5 CONCRETE CURB & GUTTER 30-INCH TYPE A
 - 6 CONCRETE CURB & GUTTER 30-INCH TYPE D
 - 7 CONCRETE SIDEWALK 5-INCH
 - 8 CONCRETE CURB PEDESTRIAN
 - 9 CONCRETE CURB TYPE J
 - 10 CONCRETE MEDIAN SLOPED NOSE TYPE 1
 - 11 CONCRETE MEDIAN SLOPED NOSE TYPE 2
 - 12 HMA PAVEMENT, 2.75-INCH OVER COLD-IN-PLACE RECYCLING PAVEMENT PARTIAL DEPTH, 4-INCH*
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 - 17 CONCRETE PAVEMENT 7-INCH
 - XXXXX SAWING ASPHALT
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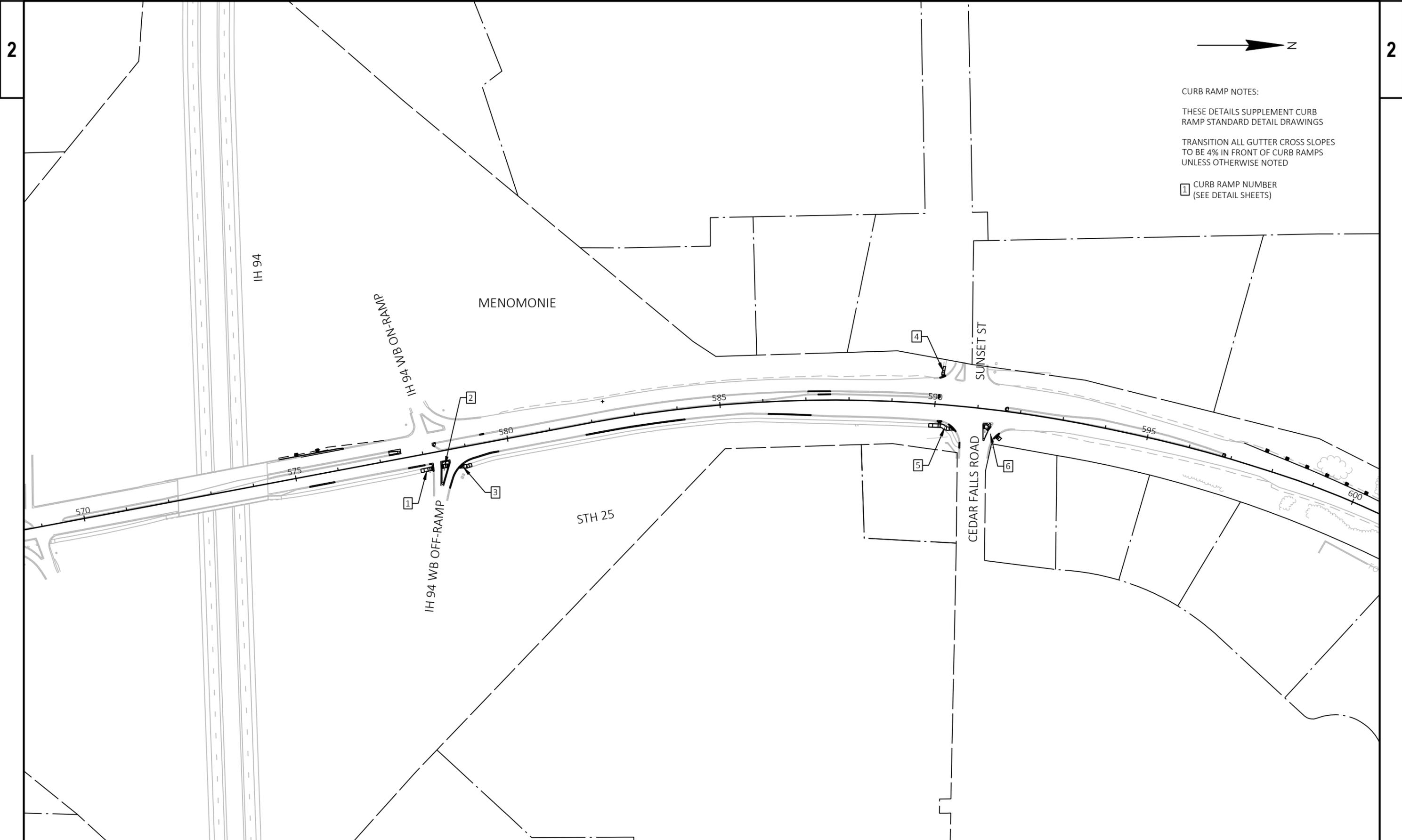




LEGEND

- | | |
|--|--|
| ① HMA PAVEMENT, 2.50-INCH OVER REMOVING CONC SURF PARTIAL DEPTH | ⑪ CONCRETE MEDIAN SLOPED NOSE TYPE 2 |
| ② HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING | ⑫ HMA PAVEMENT, 2.75-INCH OVER COLD-IN-PLACE RECYCLING PAVEMENT PARTIAL DEPTH, 4-INCH* |
| ③ CONCRETE CURB & GUTTER 48-INCH SPECIAL | ⑬ HMA PAVEMENT, 3.50-INCH OVER REMOVING ASPHALTIC SURF MILLING, DEPTH VARIES* |
| ④ ASPHALTIC SURFACE, 7-INCH OVER BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH | ⑭ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBT |
| ⑤ CONCRETE CURB & GUTTER 30-INCH TYPE A | ⑮ CONCRETE CURB & GUTTER 4-INCH SLOPED TYPE TBTT |
| ⑥ CONCRETE CURB & GUTTER 30-INCH TYPE D | ⑯ CONCRETE PAVEMENT APPROACH SLAB |
| ⑦ CONCRETE SIDEWALK 5-INCH | ⑰ CONCRETE PAVEMENT 7-INCH |
| ⑧ CONCRETE CURB PEDESTRIAN | XXXXX SAWING ASPHALT |
| ⑨ CONCRETE CURB TYPE J | AAAAA SAWING CONCRETE |
| ⑩ CONCRETE MEDIAN SLOPED NOSE TYPE 1 | |

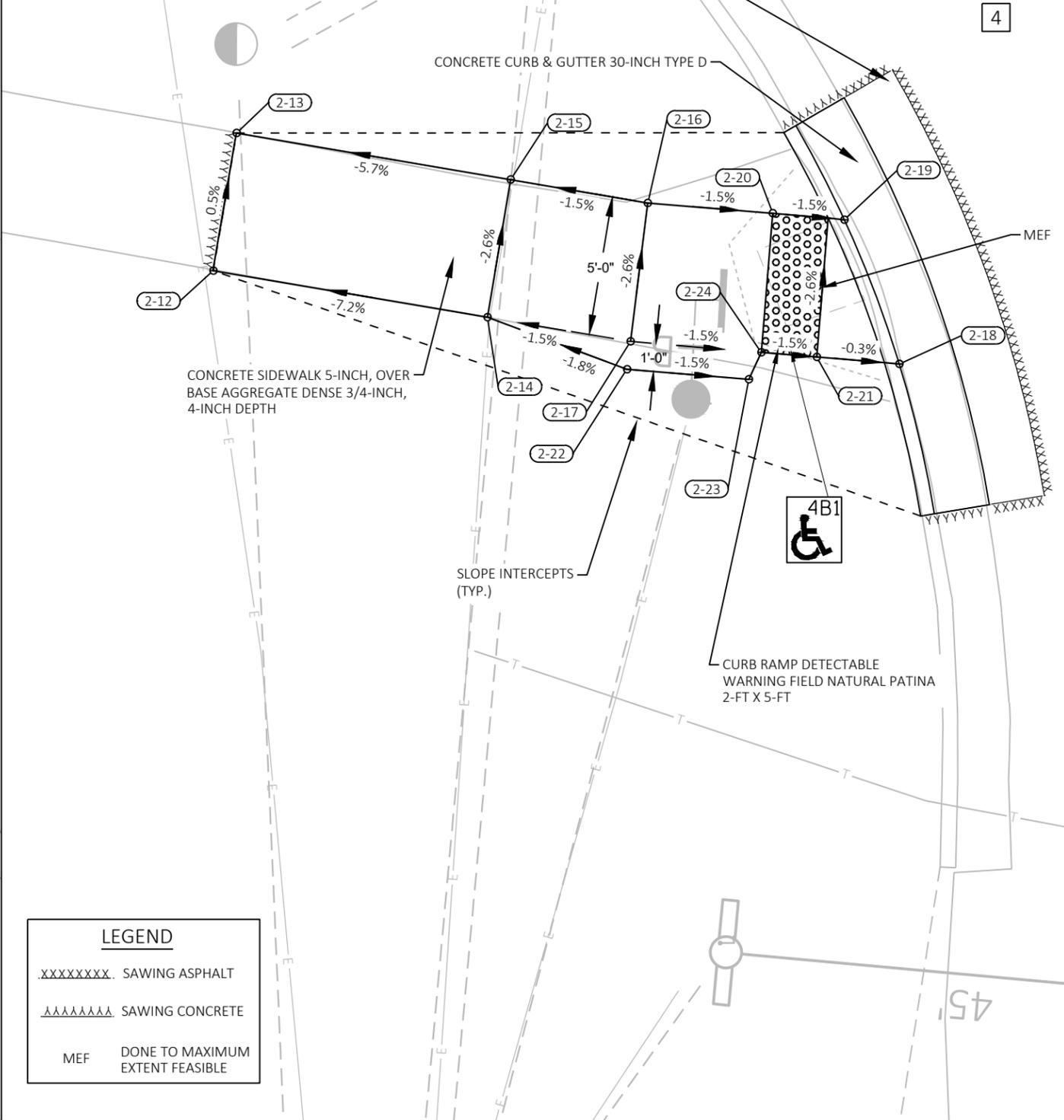
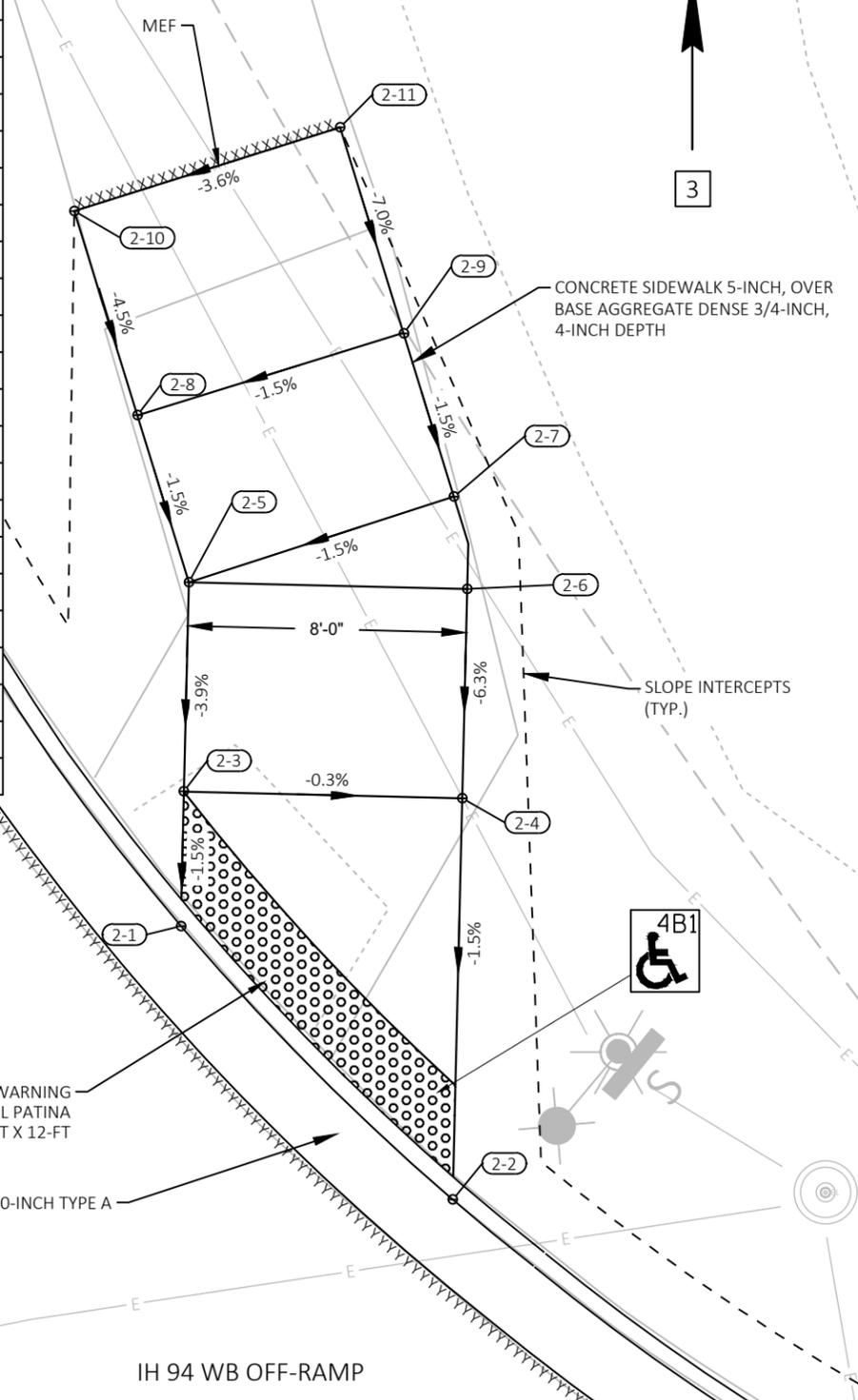
*ADJUST DEPTHS AND SLOPES OF CIR AND MILLING TO PROVIDE CONSTANT CROSS SLOPES FOR EACH LANE ON STH 25



CURB RAMP NOTES:
 THESE DETAILS SUPPLEMENT CURB RAMP STANDARD DETAIL DRAWINGS
 TRANSITION ALL GUTTER CROSS SLOPES TO BE 4% IN FRONT OF CURB RAMP UNLESS OTHERWISE NOTED
 1 CURB RAMP NUMBER (SEE DETAIL SHEETS)

POINT REFERENCE TABLE			
POINT	STATION	OFFSET	ELEVATION
2-1	578+85.97	39.8' RT	884.64
2-2	578+76.82	46.0' RT	884.50
2-3	578+89.75	40.6' RT	884.70
2-4	578+88.08	48.4' RT	884.68
2-5	578+95.61	41.9' RT	884.93
2-6	578+93.94	49.7' RT	885.05
2-7	578+96.61	49.8' RT	885.06
2-8	579+00.59	41.3' RT	885.01
2-9	579+01.48	49.2' RT	885.13
2-10	579+06.68	40.6' RT	EXIST
2-11	579+07.62	48.5' RT	EXIST
2-12	590+12.46	88.5' LT	EXIST
2-13	590+17.30	88.1' LT	EXIST
2-14	590+11.61	78.6' LT	876.22
2-15	590+16.47	78.2' LT	876.09
2-16	590+16.05	73.2' LT	876.17
2-17	590+11.17	73.4' LT	876.30
2-18	590+11.14	63.7' LT	876.19
2-19	590+16.03	66.1' LT	876.06
2-20	590+16.05	68.7' LT	876.10
2-21	590+11.15	66.7' LT	876.20
2-22	590+10.19	73.4' LT	876.32
2-23	590+10.18	69.1' LT	876.25
2-24	590+11.16	68.7' LT	876.23

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
14	578+76.90 69' RT	CUT SQ W COR CONC BASE TFSB	884.88



STH 25

STH 25

RADIAL DETECTABLE WARNING
FIELD ATTRIBUTES
RADIUS (BOC): 70.4'
LONG CHORD (BOC): 11.2'
'XR' DISTANCE: 10.9'

CURB RAMP DETECTABLE WARNING
FIELD RADIAL NATURAL PATINA
2-FT X 12-FT

CONCRETE CURB & GUTTER 30-INCH TYPE A



CURB RAMP DETAILS

THIS DETAIL SUPPLEMENTS STANDARD DETAIL DRAWINGS CURB RAMP TYPES 1 AND 1A, CURB RAMP TYPES 2 AND 3, CURB RAMP TYPES 4A AND 4A1, CURB RAMP TYPES 4B AND 4B1, AND CURB RAMP TYPES 5, 6, 7A, 7B, AND 8.

IH 94 WB OFF-RAMP

LEGEND	
XXXXXXXXXX	SAWING ASPHALT
AAAAAAAAAA	SAWING CONCRETE
MEF	DONE TO MAXIMUM EXTENT FEASIBLE

STH 25



5

CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA 2-FT X 5-FT

ASPHALTIC SURFACE 7-INCH, OVER BASE AGGREGATE DENSE 1 1/4-INCH 8-INCH

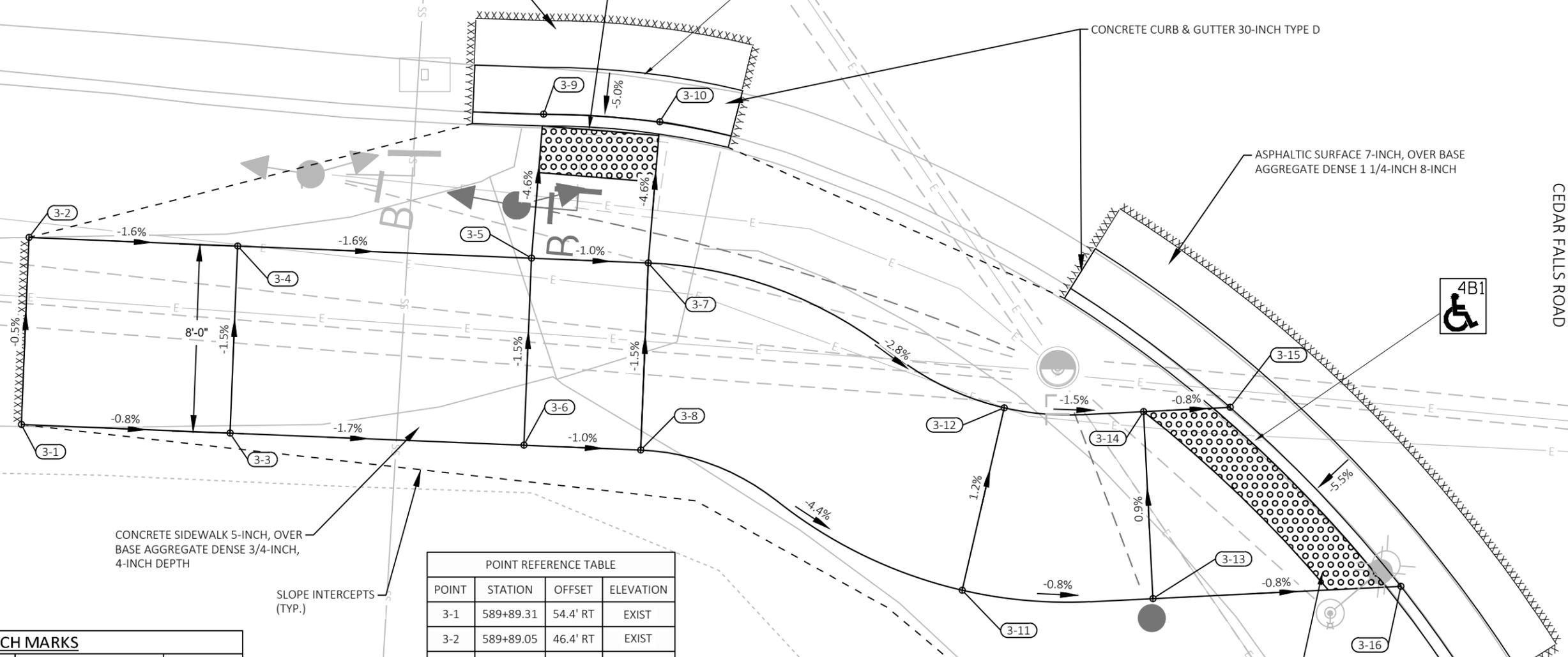


LEGEND	
XXXXXXXXXX	SAWING ASPHALT
AAAAAAAAAA	SAWING CONCRETE
MEF	DONE TO MAXIMUM EXTENT FEASIBLE

CONCRETE CURB & GUTTER 30-INCH TYPE D

ASPHALTIC SURFACE 7-INCH, OVER BASE AGGREGATE DENSE 1 1/4-INCH 8-INCH

CEDAR FALLS ROAD



CONCRETE SIDEWALK 5-INCH, OVER BASE AGGREGATE DENSE 3/4-INCH, 4-INCH DEPTH

SLOPE INTERCEPTS (TYP.)

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
16	590+33.72 87' RT	CUT SQ SW COR INL	873.84

POINT REFERENCE TABLE			
POINT	STATION	OFFSET	ELEVATION
3-1	589+89.31	54.4' RT	EXIST
3-2	589+89.05	46.4' RT	EXIST
3-3	589+98.41	54.1' RT	874.86
3-4	589+98.12	46.1' RT	874.74
3-5	590+10.90	45.6' RT	874.54
3-6	590+11.22	53.6' RT	874.66
3-7	590+15.98	45.4' RT	874.49
3-8	590+16.31	53.4' RT	874.60
3-9	590+10.92	39.5' RT	874.25
3-10	590+15.97	39.4' RT	874.21

POINT REFERENCE TABLE			
POINT	STATION	OFFSET	ELEVATION
3-11	590+30.80	58.2' RT	873.93
3-12	590+31.93	50.3' RT	874.02
3-13	590+39.11	57.9' RT	873.86
3-14	590+37.99	50.0' RT	873.93
3-15	590+41.72	49.4' RT	873.90
3-16	590+49.84	56.4' RT	873.77

RADIAL DETECTABLE WARNING FIELD ATTRIBUTES
RADIUS (BOC): 56.3'
LONG CHORD (BOC): 10.7'
'XR' DISTANCE: 10.0'

CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA 2-FT X 11-FT

CURB RAMP DETAILS

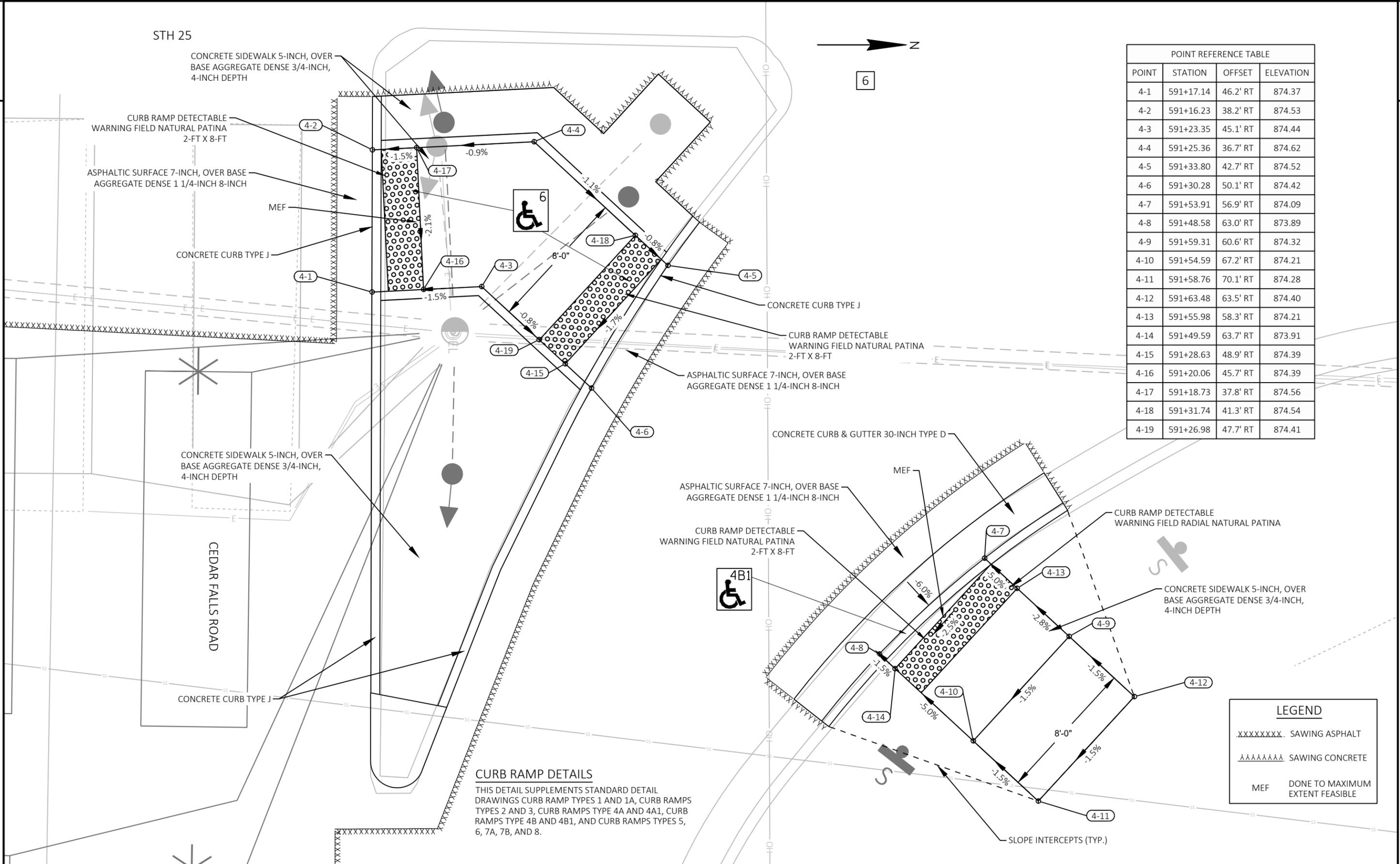
THIS DETAIL SUPPLEMENTS STANDARD DETAIL DRAWINGS CURB RAMP TYPES 1 AND 1A, CURB RAMP TYPES 2 AND 3, CURB RAMP TYPE 4A AND 4A1, CURB RAMP TYPE 4B AND 4B1, AND CURB RAMP TYPES 5, 6, 7A, 7B, AND 8.

STH 25



6

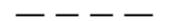
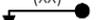
POINT REFERENCE TABLE			
POINT	STATION	OFFSET	ELEVATION
4-1	591+17.14	46.2' RT	874.37
4-2	591+16.23	38.2' RT	874.53
4-3	591+23.35	45.1' RT	874.44
4-4	591+25.36	36.7' RT	874.62
4-5	591+33.80	42.7' RT	874.52
4-6	591+30.28	50.1' RT	874.42
4-7	591+53.91	56.9' RT	874.09
4-8	591+48.58	63.0' RT	873.89
4-9	591+59.31	60.6' RT	874.32
4-10	591+54.59	67.2' RT	874.21
4-11	591+58.76	70.1' RT	874.28
4-12	591+63.48	63.5' RT	874.40
4-13	591+55.98	58.3' RT	874.21
4-14	591+49.59	63.7' RT	873.91
4-15	591+28.63	48.9' RT	874.39
4-16	591+20.06	45.7' RT	874.39
4-17	591+18.73	37.8' RT	874.56
4-18	591+31.74	41.3' RT	874.54
4-19	591+26.98	47.7' RT	874.41



CURB RAMP DETAILS
 THIS DETAIL SUPPLEMENTS STANDARD DETAIL DRAWINGS CURB RAMP TYPES 1 AND 1A, CURB RAMP TYPES 2 AND 3, CURB RAMP TYPES 4A AND 4A1, CURB RAMP TYPES 4B AND 4B1, AND CURB RAMP TYPES 5, 6, 7A, 7B, AND 8.

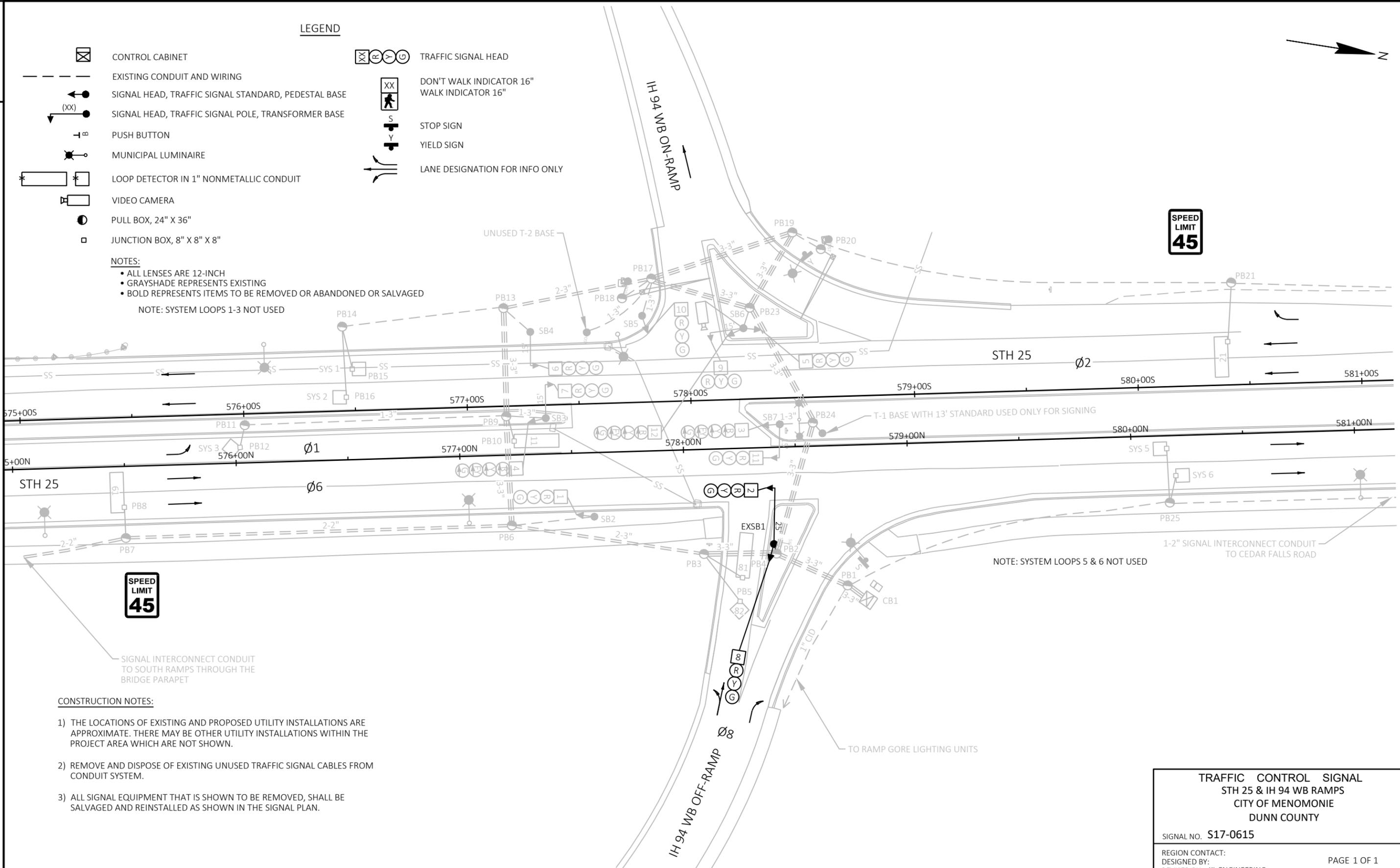
LEGEND	
XXXXXXXXXX	SAWING ASPHALT
AAAAAAAAAA	SAWING CONCRETE
MEF	DONE TO MAXIMUM EXTENT FEASIBLE

LEGEND

-  CONTROL CABINET
-  EXISTING CONDUIT AND WIRING
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  PUSH BUTTON
-  MUNICIPAL LUMINAIRE
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO CAMERA
-  PULL BOX, 24" X 36"
-  JUNCTION BOX, 8" X 8" X 8"
-  TRAFFIC SIGNAL HEAD
-  DON'T WALK INDICATOR 16"
WALK INDICATOR 16"
-  STOP SIGN
-  YIELD SIGN
-  LANE DESIGNATION FOR INFO ONLY

NOTES:

- ALL LENSES ARE 12-INCH
 - GRAYSHADE REPRESENTS EXISTING
 - BOLD REPRESENTS ITEMS TO BE REMOVED OR ABANDONED OR SALVAGED
- NOTE: SYSTEM LOOPS 1-3 NOT USED



SPEED LIMIT 45

SPEED LIMIT 45

CONSTRUCTION NOTES:

- 1) THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 2) REMOVE AND DISPOSE OF EXISTING UNUSED TRAFFIC SIGNAL CABLES FROM CONDUIT SYSTEM.
- 3) ALL SIGNAL EQUIPMENT THAT IS SHOWN TO BE REMOVED, SHALL BE SALVAGED AND REINSTALLED AS SHOWN IN THE SIGNAL PLAN.

TRAFFIC CONTROL SIGNAL
STH 25 & IH 94 WB RAMPS
CITY OF MENOMONIE
DUNN COUNTY

SIGNAL NO. **S17-0615**

REGION CONTACT:
 DESIGNED BY:
 REVISED BY: KL ENGINEERING

PAGE 1 OF 1

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PUSH BUTTON
- MUNICIPAL LUMINAIRE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO CAMERA
- PULL BOX, 24" X 36"
- JUNCTION BOX, 8" X 8" X 8"
- TRAFFIC SIGNAL HEAD
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"
- STOP SIGN
- YIELD SIGN
- LANE DESIGNATION FOR INFO ONLY
- RAMP GATE

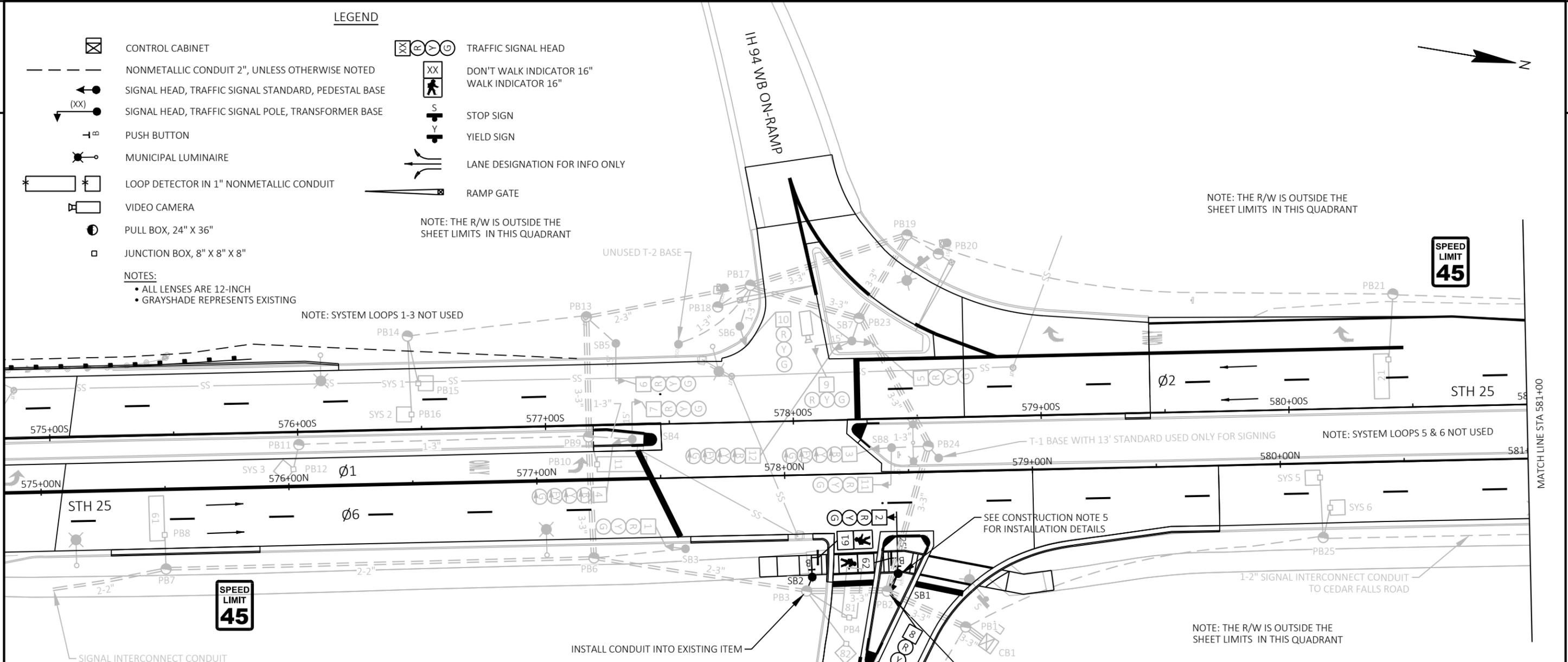
NOTE: THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

NOTE: SYSTEM LOOPS 1-3 NOT USED

NOTE: THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT



NOTE: THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

NOTE: THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

CONSTRUCTION NOTES:

- 1) THE CONTRACTOR SHALL CONTACT NWR ELECTRICAL UNIT AT LEAST 5 WORKING DAYS IN ADVANCE OF MILLING OPERATIONS TO ENSURE THAT LOOPS/JUNCTION BOXES ARE LOCATED SO THAT THEY CAN BE AVOIDED DURING MILLING OPERATIONS AND MILLED BY HAND.
- 2) THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE DEPARTMENTS ELECTRICAL SHOP AT (715) 225-0360.
- 3) THE LOCATIONS OF UTILITY FACILITIES SHOWN ON THE SHEET PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 4) THE ENGINEER MAY ADJUST THE LOCATIONS OF ELECTRICAL ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH UTILITY FACILITIES.
- 5) THE FINAL LOCATION AND ORIENTATION OF PEDESTRIAN BUTTONS MUST ADHERE TO THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT.
- 6) PLACE NEW TYPE 2 CONCRETE BASE FOR SB1. INSTALL SALVAGED TYPE 2 POLE WITH 25' MAST ARM ON NEW SB1, INCLUDING SIGNAL HEADS, SIGNING, PEDESTRIAN HEAD, AND PUSH BUTTON.

MOVE EQUIPMENT FROM EXISTING SB1 TO NEW SB1 TO MINIMIZE DOWNTIME. ADJUST SIGNAL HEAD 2 TO CENTER OF RECEIVING LANE, AS NEEDED.

- 6-1-17 CHANGED HEADS 3 & 4 TO 4-SECTION FYA AND ADDED HEADS 11 & 12.
- 5-25-17 REPLACED CABINET AND CHANGED RAMP PHASING.
- 11-19-15 REPLACED CONTROLLER & MMU.
- 11-10-03 CHANGED CONTROLLER TO EPAC 300 WITH COMMUNICATION & CHANGED TO ALL RED FLASH.
- 10-30-97 PUT SIGNAL HEAD 9 ON MAST ARM.

REVISION			
REV. NO.	PEDESTRIAN ACCOMODATIONS ON EAST APPROACH		
	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
4	DATE	BY	DATE BY
<p align="center">TRAFFIC CONTROL SIGNAL STH 25 & IH 94 WB RAMPS CITY OF MENOMONIE DUNN COUNTY</p>			
SIGNAL NO.	S17-0615	CABINET TYPE:	TS2
		CONTROLLER TYPE:	ASC/3
WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVAL RECOMMENDED	DATE 7-11-95		
	WILLARD JOCHIMSEN	REGION TRAFFIC ENGINEER	
APPROVED	DATE 7-28-95		
	R.I. MOE	STATE TRAFFIC ENGINEER	
REGION CONTACT:	DESIGNED BY:		
REVISED BY: KL ENGINEERING	PAGE 1 OF 3		

PROJECT NO: 8100-01-72

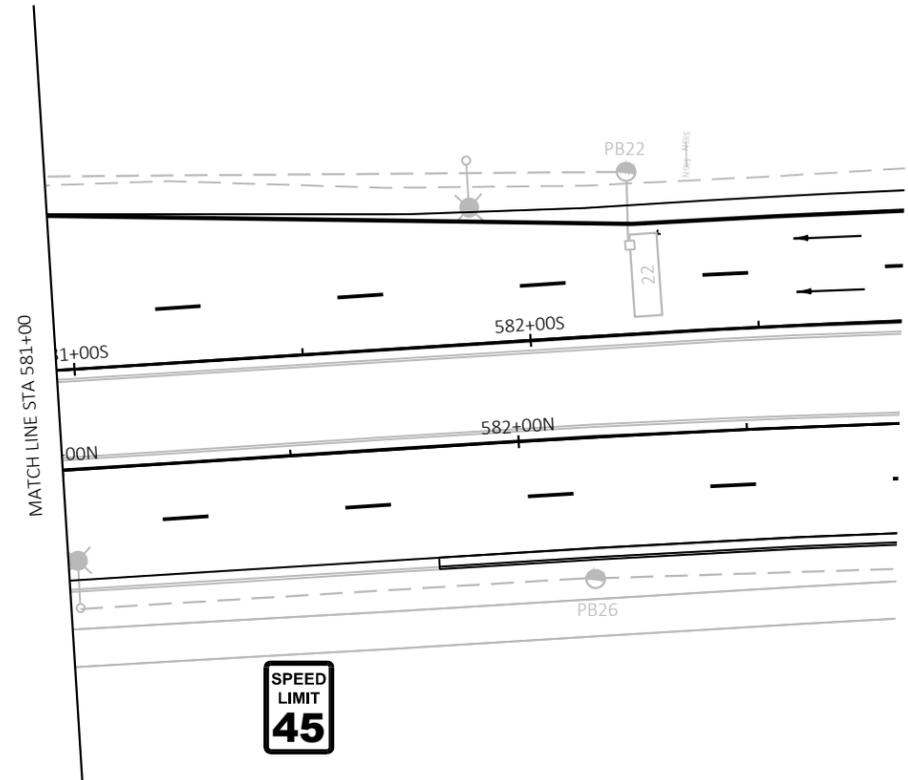
HWY: STH 25

COUNTY: DUNN

TRAFFIC SIGNAL PLAN

SHEET

E



TRAFFIC CONTROL SIGNAL
 STH 25 & IH 94 WB RAMPS
 CITY OF MENOMONIE
 DUNN COUNTY

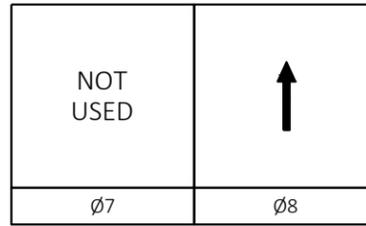
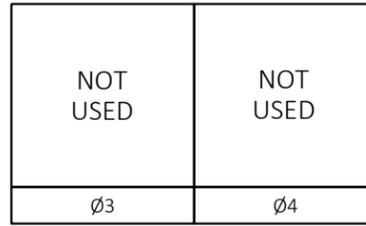
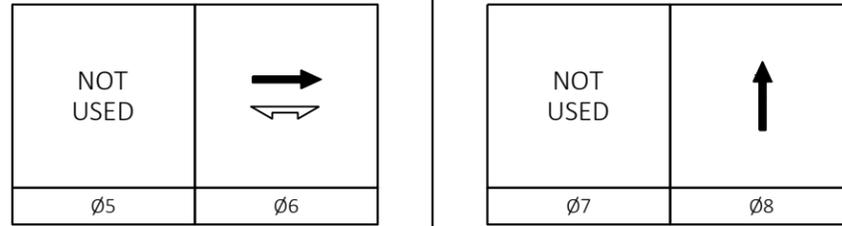
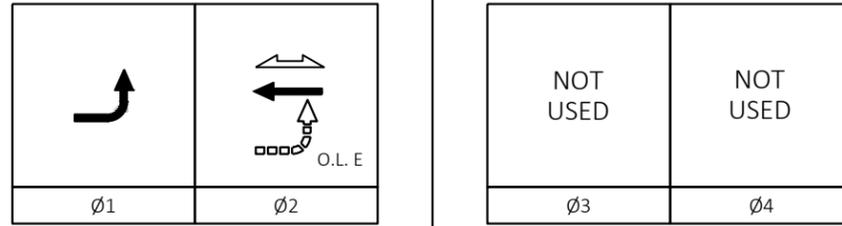
SIGNAL NO. S17-0615

MUNICIPAL CONTACT:
 DESIGNED BY:
 REVISED BY: KL ENGINEERING

PAGE 2 OF 3

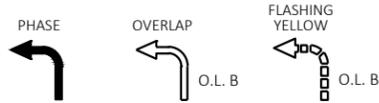
	HEAD NUMBERS	FLASH	
Ø1	3,4,12	-	
Ø2	5,6,7	R	
Ø3			
Ø4			
Ø5			
Ø6	1,2,11	R	
Ø7			
Ø8	8,9,10	R	
Ø2 PED			
Ø4 PED			
Ø6 PED	61,62		
Ø8 PED			
O.L.E	3,4,12	R	Ø2
O.L.F			
O.L.G			
O.L.H			

O.L. ASSIGNMENTS



BARRIER

LEGEND



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W/	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
6	X	2	MIN	X
8	X			X

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	X
*IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE LIGHTING CABINET	

*RAMP GORE LIGHTING ONLY

TYPE OF INTERCONNECT	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	
FIBER OPTIC NETWORK	X

TYPE OF REMOTE COMMUNICATION	
NONE	
FIBER	X
CELL MODEM	
PHONE	

DETECTOR LOGIC

LOOP NUMBER	DETECTOR NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	LOOP SIZE (FEET)	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1	X			1	1				6X20	
21	2	X			2	2				6X18	
22	3	X			2	2				6X18	
61	4	X			6	6				6X18	
81	5	X			8	8				6X20	
82	6	X			8	8				6X6	

TRAFFIC CONTROL SIGNAL
STH 25 & IH 94 WB RAMPS
CITY OF MENOMONIE
DUNN COUNTY
 SIGNAL NO. **S17-0615**
 MUNICIPAL CONTACT:
 DESIGNED BY:
 REVISED BY: KL ENGINEERING

PAGE 3 OF 3

INTERSECTION: STH 25 & IH 94 WB RAMPS

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

DATE: Jul-25

CB1 TO	AWG 14 # OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON	OTHER	
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>	DWALK			WALK
SB1	12	2	6	RED	ORG	GRN								
		8	8	RED/BLK	ORG/BLK	GRN/BLK								
		62	6								BLK	BLU		
SB2	7	61	6								RED	GRN		

NOTE: ONLY NEW CABLE RUNS ARE SHOWN.

NOTES:

1. WHITE CONDUCTOR IS USED FOR NEUTRAL CONDUCTOR, NOT GROUNDING, SEPARATE GREEN WIRE IS RUN FOR GROUNDING.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3

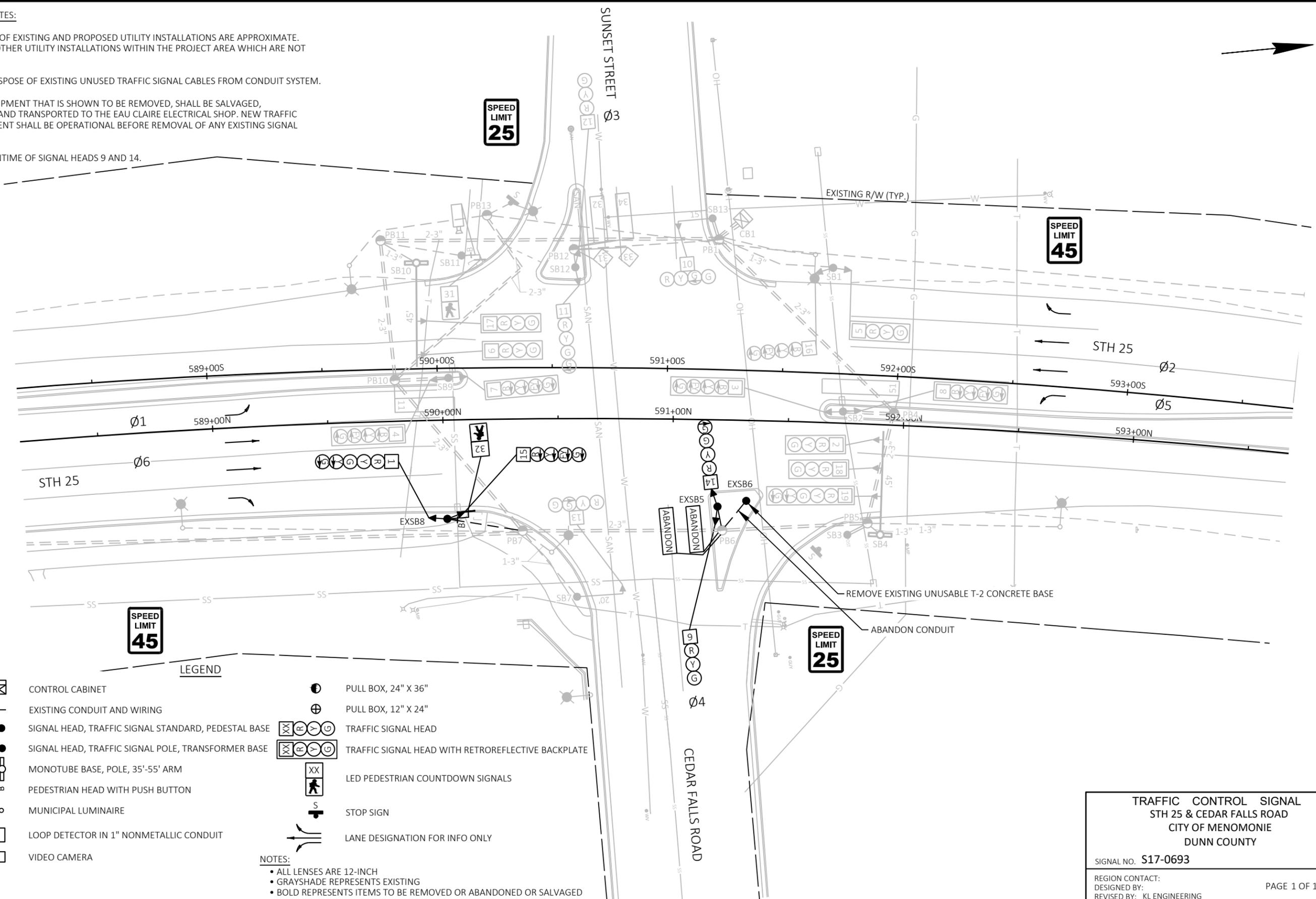
LOOP DETECTOR LEAD-IN CABLE		
FROM	TO BUTTON ON	PHASE
CB1	SB1	6
CB1	SB2	6

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB2	SB1
PB3	SB2

TRAFFIC CONTROL SIGNAL STH 25 & IH 94 WB RAMPS CITY OF MENOMONIE DUNN COUNTY	
SIGNAL NO. S17-0615	
MUNICIPAL CONTACT: DESIGNED BY: REVISED BY: KL ENGINEERING	PAGE 1 OF 1

CONSTRUCTION NOTES:

- 1) THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 2) REMOVE AND DISPOSE OF EXISTING UNUSED TRAFFIC SIGNAL CABLES FROM CONDUIT SYSTEM.
- 3) ALL SIGNAL EQUIPMENT THAT IS SHOWN TO BE REMOVED, SHALL BE SALVAGED, DISASSEMBLED, AND TRANSPORTED TO THE EAU CLAIRE ELECTRICAL SHOP. NEW TRAFFIC SIGNAL EQUIPMENT SHALL BE OPERATIONAL BEFORE REMOVAL OF ANY EXISTING SIGNAL EQUIPMENT.
- 4) MINIMIZE DOWNTIME OF SIGNAL HEADS 9 AND 14.



LEGEND

- | | | | |
|--|---|--|--|
| | CONTROL CABINET | | PULL BOX, 24" X 36" |
| | EXISTING CONDUIT AND WIRING | | PULL BOX, 12" X 24" |
| | SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE | | TRAFFIC SIGNAL HEAD |
| | SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE | | TRAFFIC SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE |
| | MONOTUBE BASE, POLE, 35'-55' ARM | | LED PEDESTRIAN COUNTDOWN SIGNALS |
| | PEDESTRIAN HEAD WITH PUSH BUTTON | | STOP SIGN |
| | MUNICIPAL LUMINAIRE | | LANE DESIGNATION FOR INFO ONLY |
| | LOOP DETECTOR IN 1" NONMETALLIC CONDUIT | | |
| | VIDEO CAMERA | | |

- NOTES:
- ALL LENSES ARE 12-INCH
 - GRAYSHADE REPRESENTS EXISTING
 - BOLD REPRESENTS ITEMS TO BE REMOVED OR ABANDONED OR SALVAGED

TRAFFIC CONTROL SIGNAL
STH 25 & CEDAR FALLS ROAD
 CITY OF MENOMONIE
 DUNN COUNTY

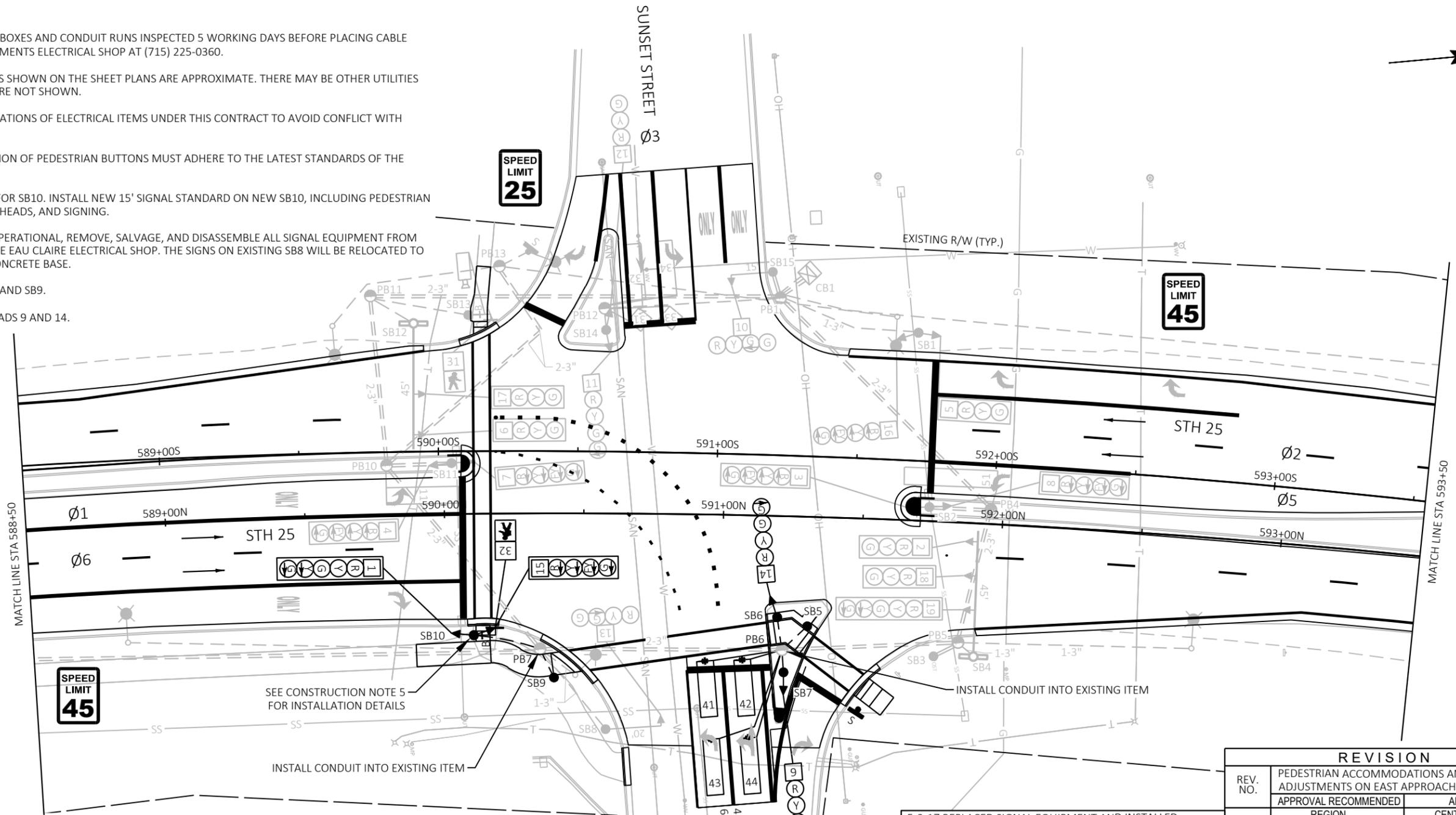
SIGNAL NO. **S17-0693**

REGION CONTACT:
 DESIGNED BY:
 REVISED BY: KL ENGINEERING

PAGE 1 OF 1

CONSTRUCTION NOTES:

- 1) THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE DEPARTMENTS ELECTRICAL SHOP AT (715) 225-0360.
 - 2) THE LOCATIONS OF UTILITY FACILITIES SHOWN ON THE SHEET PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
 - 3) THE ENGINEER MAY ADJUST THE LOCATIONS OF ELECTRICAL ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH UTILITY FACILITIES.
 - 4) THE FINAL LOCATION AND ORIENTATION OF PEDESTRIAN BUTTONS MUST ADHERE TO THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT.
 - 5) PLACE NEW TYPE 1 CONCRETE BASE FOR SB10. INSTALL NEW 15' SIGNAL STANDARD ON NEW SB10, INCLUDING PEDESTRIAN HEAD, PEDESTRIAN BUTTON, SIGNAL HEADS, AND SIGNING.
- ONCE NEW SB10 INDICATIONS ARE OPERATIONAL, REMOVE, SALVAGE, AND DISASSEMBLE ALL SIGNAL EQUIPMENT FROM EXISTING SB8 AND TRANSPORT TO THE EAU CLAIRE ELECTRICAL SHOP. THE SIGNS ON EXISTING SB8 WILL BE RELOCATED TO NEW SB10. REMOVE EXISTING SB8 CONCRETE BASE.
- 6) INSTALL 3.5 FOOT STANDARD AT SB5 AND SB9.
 - 7) MINIMIZE DOWNTIME OF SIGNAL HEADS 9 AND 14.



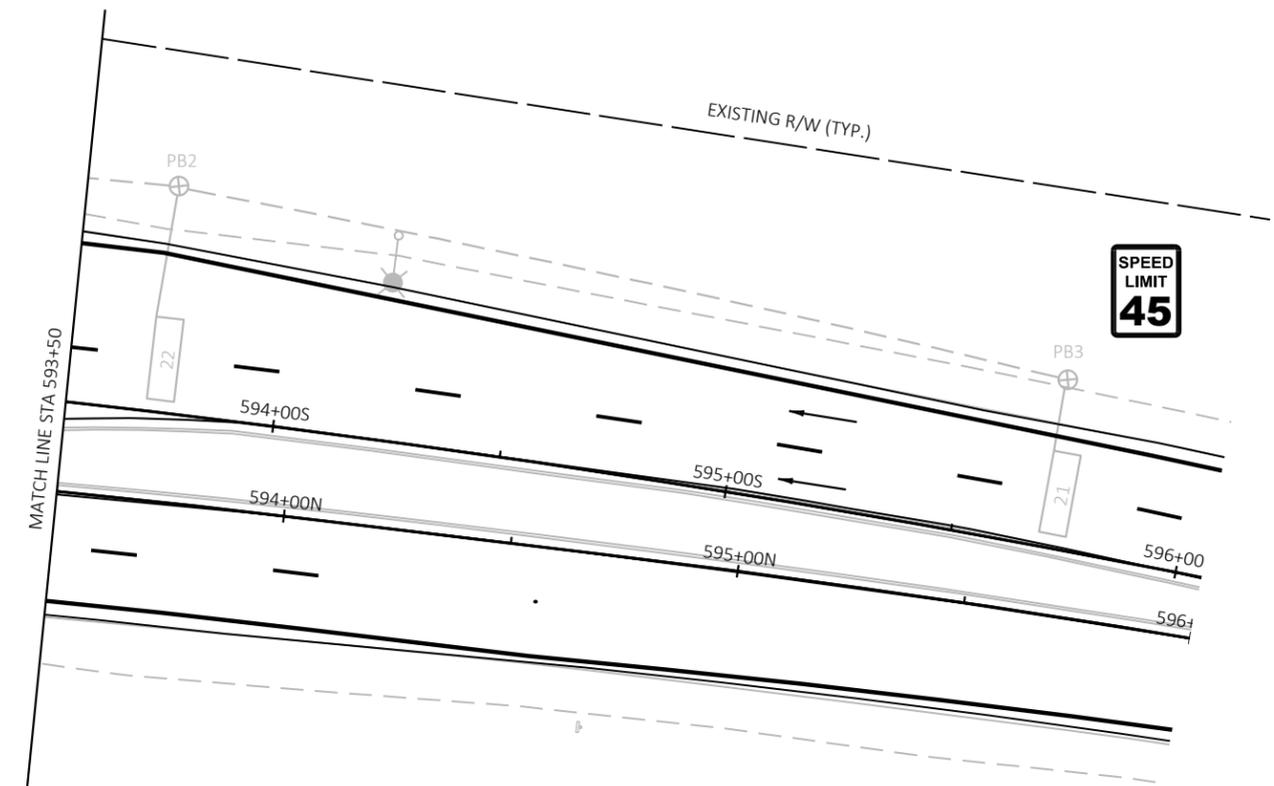
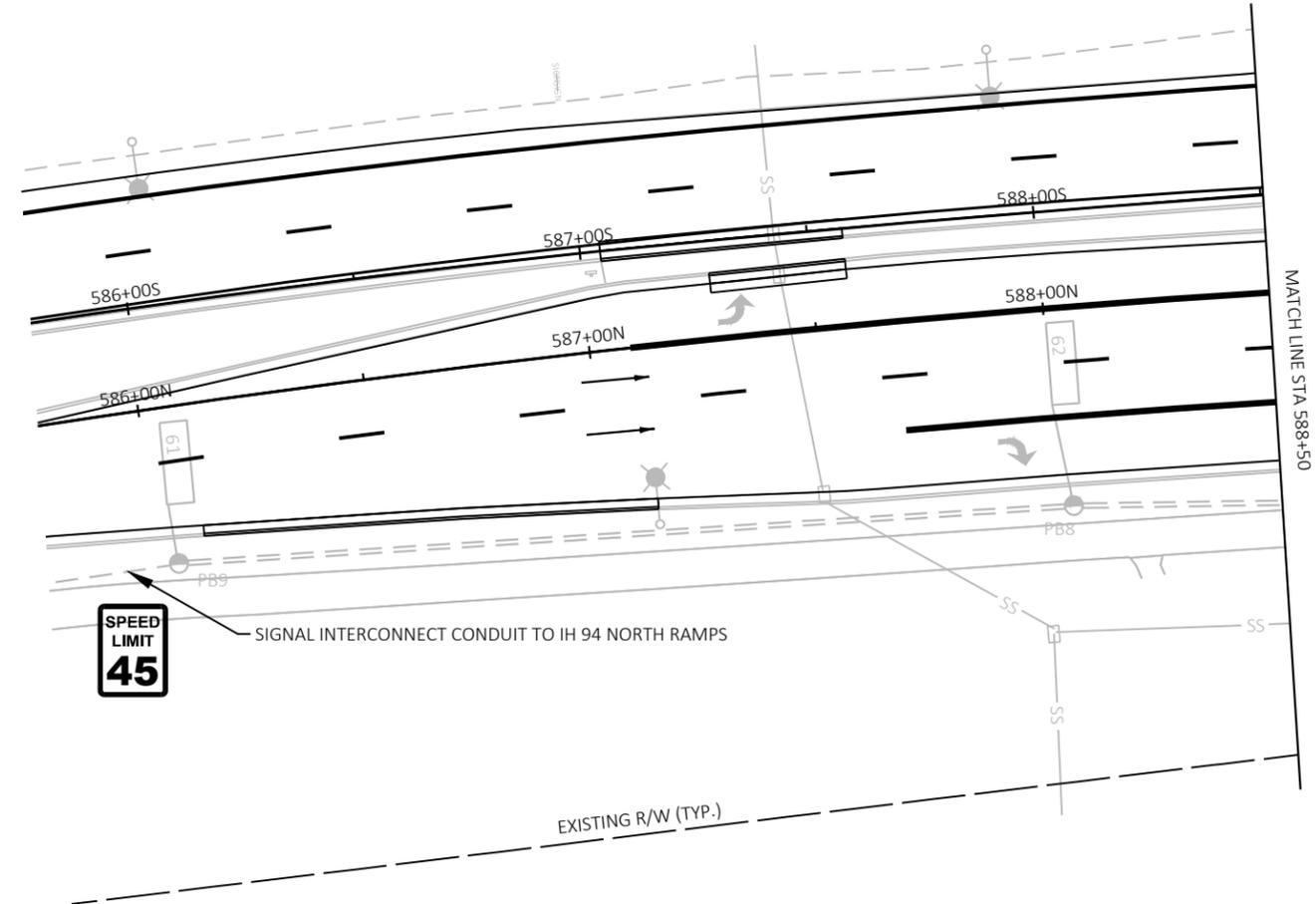
LEGEND

- | | | | |
|--|---|--|--|
| | CONTROL CABINET | | PULL BOX, 24" X 36" |
| | NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED | | PULL BOX, 12" X 24" |
| | SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE | | TRAFFIC SIGNAL HEAD |
| | SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE | | TRAFFIC SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE |
| | MONOTUBE BASE, POLE, 35'-55' ARM | | LED PEDESTRIAN COUNTDOWN SIGNALS |
| | PEDESTRIAN HEAD WITH PUSH BUTTON | | STOP SIGN |
| | MUNICIPAL LUMINAIRE | | LANE DESIGNATION FOR INFO ONLY |
| | LOOP DETECTOR IN 1" NONMETALLIC CONDUIT | | |
| | VIDEO CAMERA | | |

- NOTES:
- ALL LENSES ARE 12-INCH
 - GRAYSHADE REPRESENTS EXISTING

- 5-2-17 REPLACED SIGNAL EQUIPMENT AND INSTALLED MONOTUBE ON EAST AND WEST APPROACH. CHANGED PHASE 1 AND 5 TO PROTECTED/PERMISSIVE FYAS AND ADDED SIGNAL HEADS 15 AND 16 AS FYA.
- 11-19-15 CHANGED CONTROLLER AND MMU.
- 6-27-13 ADDED PHASE 3 PED.
- 11-17-06 MOVED SIGNAL HEAD 2.
- 6-13-03 CHANGED CONTROLLER TO EPAC 300 WITH COMMUNICATION & ADDED PHASE 3 PED WIRING FOR FUTURE ACTIVATION.
- 9-30-02 ADDED NB RIGHT TURN ARROWS THAT TIME WITH ONLY PHASE 4 ON HEADS 1 AND 2.
- 8-30-01 ADDED ALL RED FLASH AND PHASES 1 AND 5.
- 10-18-99 ADDED SPLIT PHASING 3 & 4.

REVISION			
REV. NO.	PEDESTRIAN ACCOMMODATIONS AND LOOP ADJUSTMENTS ON EAST APPROACH		
	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
6	DATE	BY	DATE BY
TRAFFIC CONTROL SIGNAL STH 25 & CEDAR FALLS ROAD CITY OF MENOMONIE DUNN COUNTY			
SIGNAL NO. S17-0693		CABINET TYPE: TS2 CONTROLLER TYPE: ASC/3	
WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVAL RECOMMENDED		GREGORY P. HELGESON	
DATE	10-13-97	REGION TRAFFIC ENGINEER	
APPROVED		WILLIAM C. GILDING	
DATE	10-30-97	STATE TRAFFIC ENGINEER	
REGION CONTACT:		PAGE 1 OF 3	
DESIGNED BY:			
REVISED BY: KL ENGINEERING			



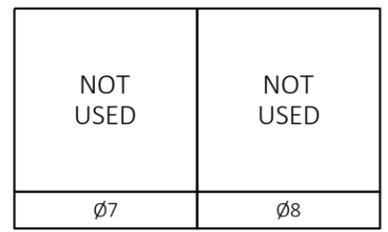
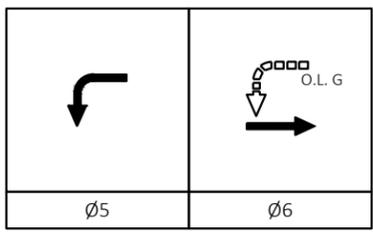
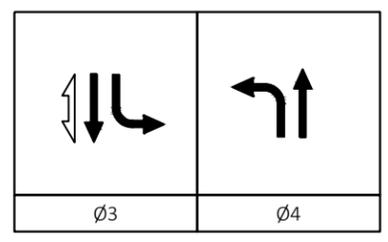
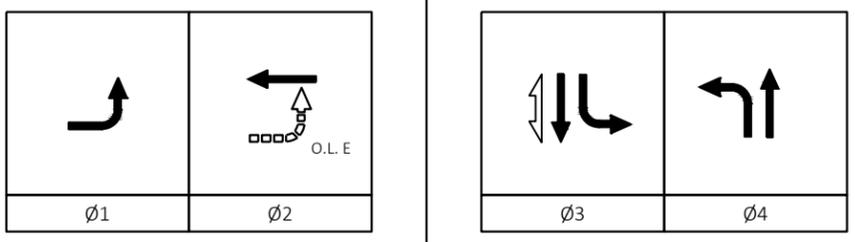
TRAFFIC CONTROL SIGNAL
 STH 25 & CEDAR FALLS ROAD
 CITY OF MENOMONIE
 DUNN COUNTY

SIGNAL NO. S17-0693

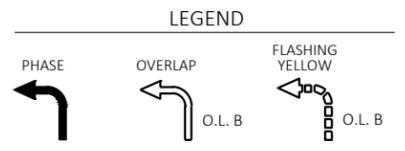
MUNICIPAL CONTACT:
 DESIGNED BY:
 REVISED BY: KL ENGINEERING

PAGE 2 OF 3

	HEAD NUMBERS	FLASH	
∅1	3,4,16	-	
∅2	5,6,17	R	
∅3	12,13,14	R	
∅4	9,10,11	R	
∅5	7,8,15	-	
∅6	1,2,18,19	R	
∅7			
∅8			
∅3 PED	31,32		O.L. ASSIGNMENTS
O.L.E	3,4,16	R	∅2
O.L.F			
O.L.G	7,8,15	R	∅6
O.L.H			



BARRIER



PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W/I	PHASE RECALL	PHASE ACTIVE
1				X
2		6		X
3				X
4				X
5				X
6		2		X

BY OTHER AGENCY	X
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE LIGHTING CABINET	

NONE	
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	X
RADIO	

NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

NONE	
FIBER	X
CELL MODEM	
PHONE	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	11	22	32	34	42	44	61	
PHASE CALLED	1	2	3	3	4	4	6	
PHASE EXTENDED	1	2	3	3	4	4	6	
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	19	17	23	21	27	25	31	29
DETECTOR #(S)								
PHASE CALLED								
PHASE EXTENDED								
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)	21	31	33	41	43	51	62	
PHASE CALLED	2	3	3	4	4	5	6	
PHASE EXTENDED	2	3	3	4	4	5	6	
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	20	18	24	22	28	26	32	30
DETECTOR #(S)								
PHASE CALLED								
PHASE EXTENDED								
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

TRAFFIC CONTROL SIGNAL
 STH 25 & CEDAR FALLS ROAD
 CITY OF MENOMONIE
 DUNN COUNTY

SIGNAL NO. **S17-0693**

MUNICIPAL CONTACT: _____
 DESIGNED BY: _____
 REVISED BY: KL ENGINEERING

PAGE 3 OF 3

INTERSECTION: STH 25 & CEDAR FALLS ROAD

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

DATE: Jul-25

CB1 TO	AWG 14 # OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON	OTHER
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>	DWALK		
SB6	7	14	3	RED	ORG	GRN					GRN		
SB7	7	9	4	RED	ORG	GRN							
SB10	15	1	6	RED	ORG	GRN		BLK		BLU			
		15	5				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK			
		32	3								BLK/WHT	BLU/WHT	

NOTE: ONLY NEW CABLE RUNS ARE SHOWN.

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11

LOOP DETECTOR LEAD-IN CABLE		
FROM	TO BUTTON ON	PHASE
CB1	SB10	3
CB1	SB13	3

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB6	SB5
PB6	SB6
PB6	SB7
PB7	SB9
PB7	SB10

NOTES:

1. WHITE CONDUCTOR IS USED FOR NEUTRAL CONDUCTOR.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

TRAFFIC CONTROL SIGNAL
 STH 25 & CEDAR FALLS ROAD
 CITY OF MENOMONIE
 DUNN COUNTY

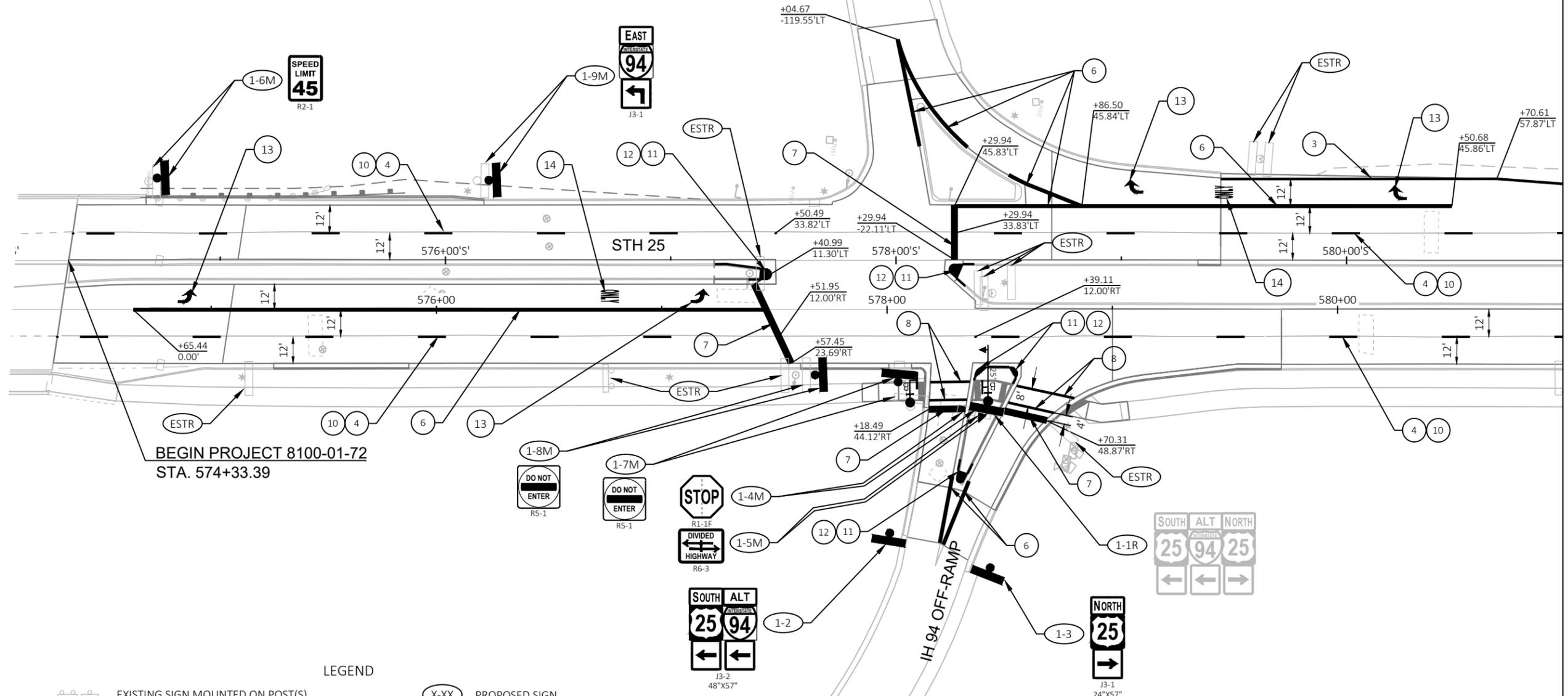
SIGNAL NO. **S17-0693**

MUNICIPAL CONTACT:
 DESIGNED BY:
 REVISED BY: KL ENGINEERING

PAGE 1 OF 1

LEGEND

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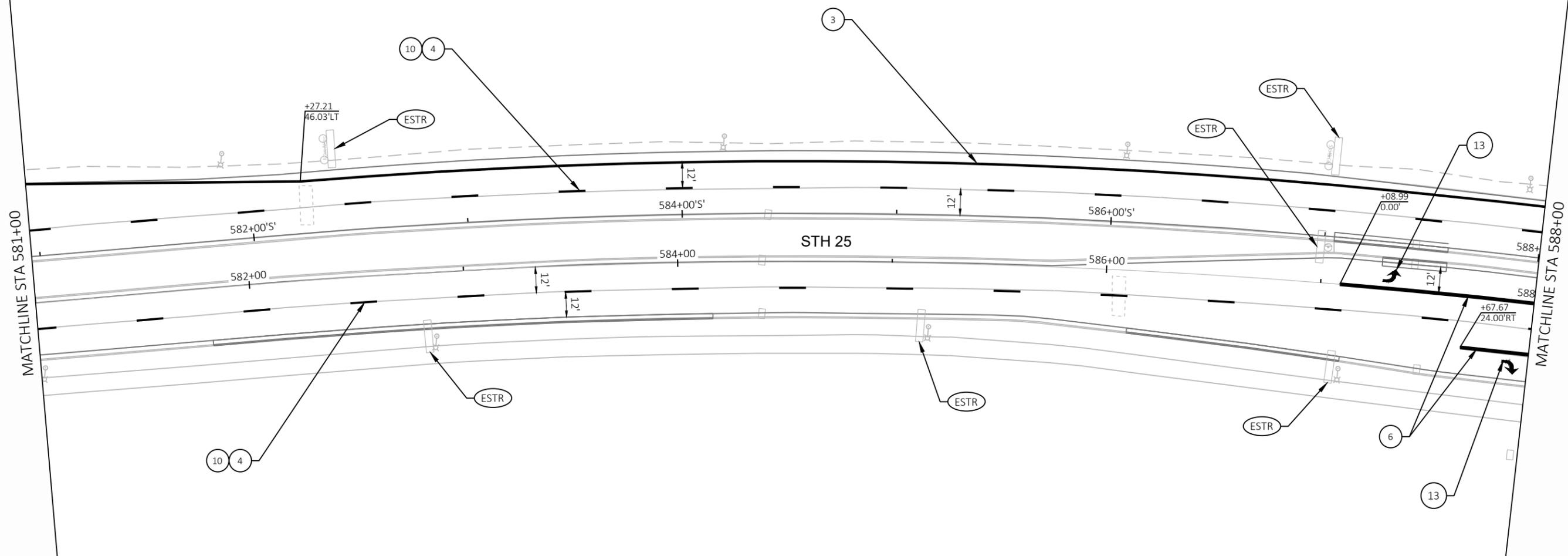


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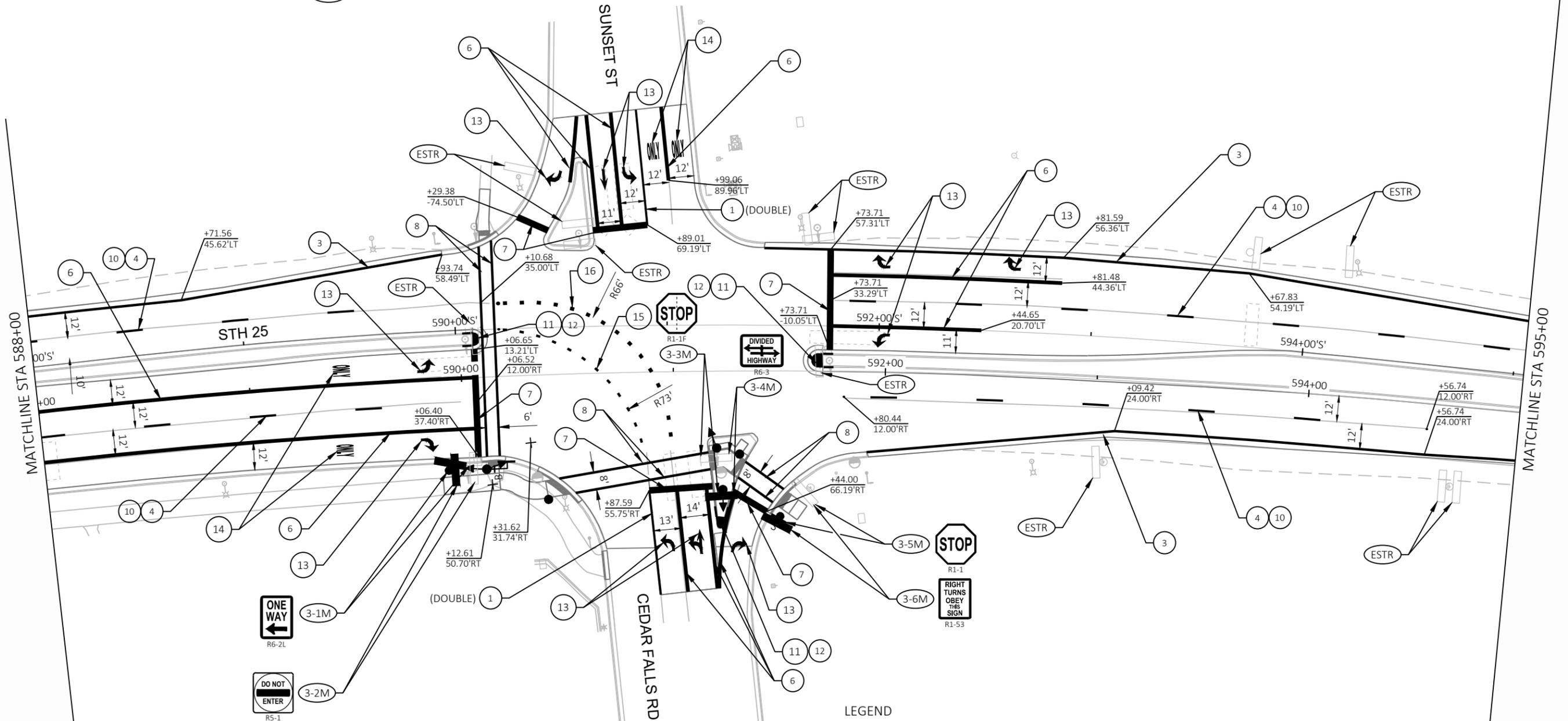


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- | | | | |
|--|---|--|--|
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|  MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE-LANE: 12.5 FT LINE 37.5 FT SKIP) |  MARKING CROSSWALK EPOXY TRANS LINE 6-INCH |  MARKING ARROW EPOXY | |
| |  MARKING DIAGONAL EPOXY 12-INCH |  MARKING WORD EPOXY | |

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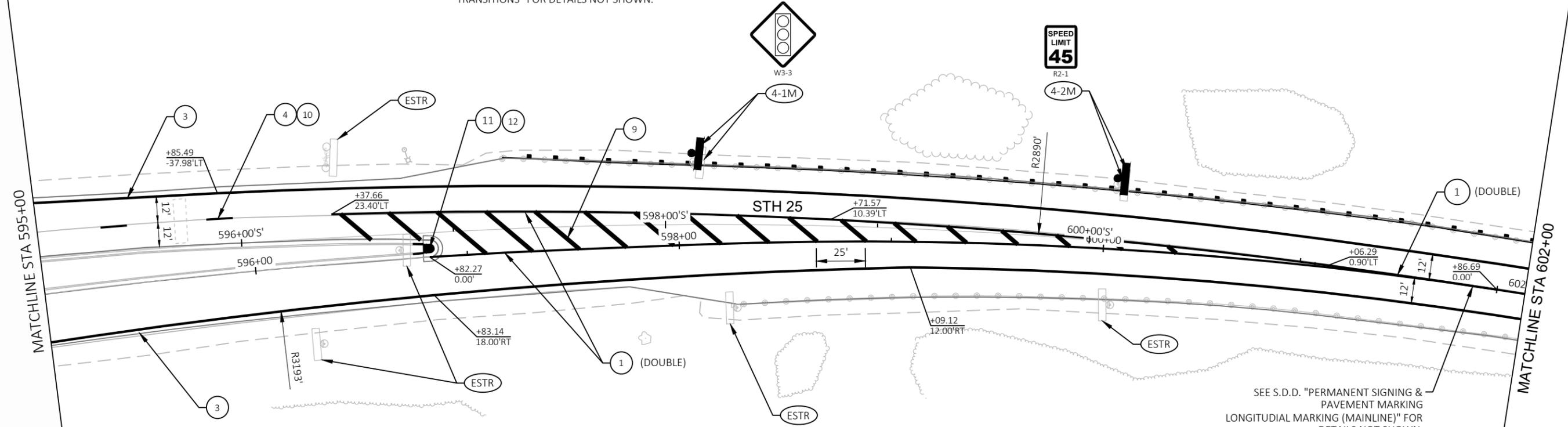
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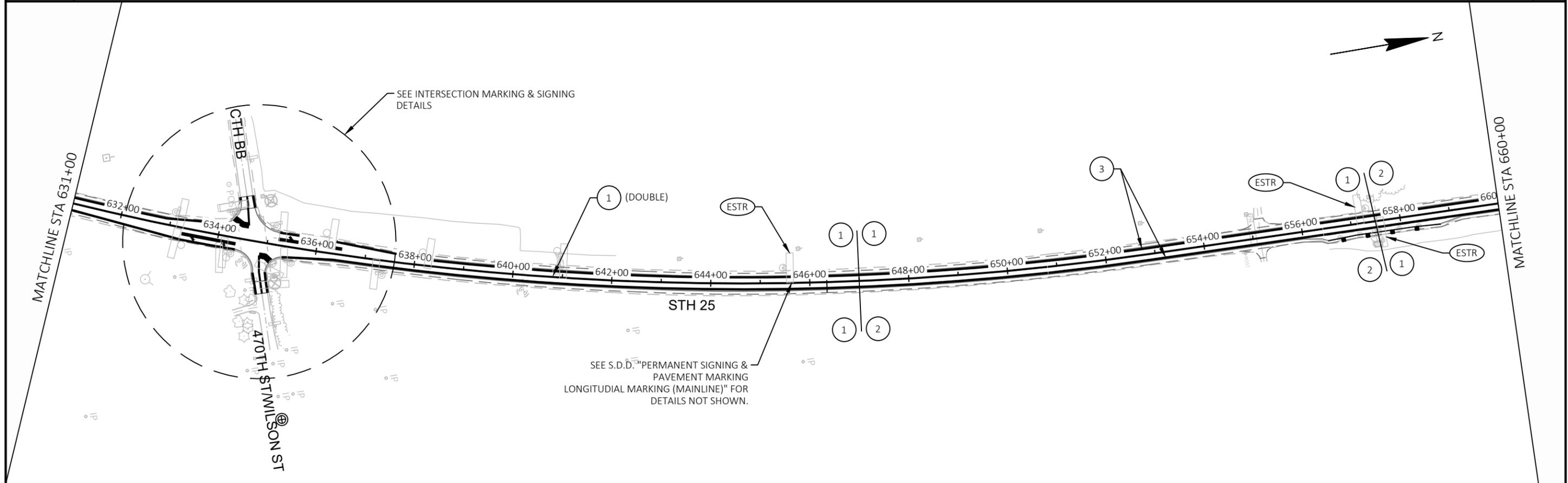
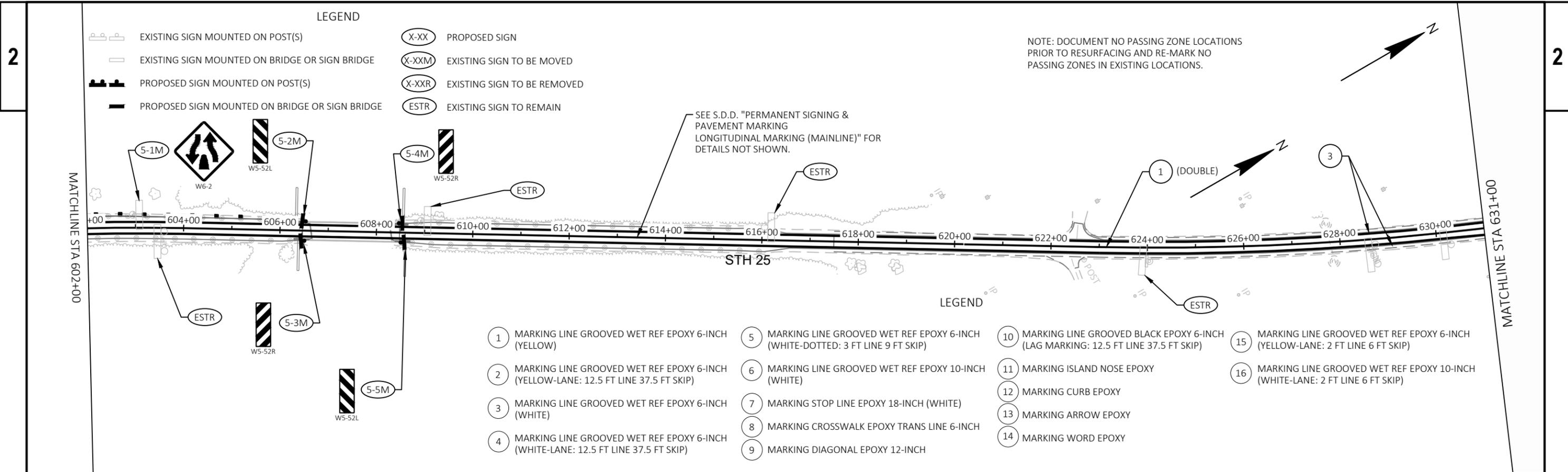
SEE S.D.D. "SIGNING AND MARKING TWO LANE TO FOUR LANE DIVIDED TRANSITIONS" FOR DETAILS NOT SHOWN.

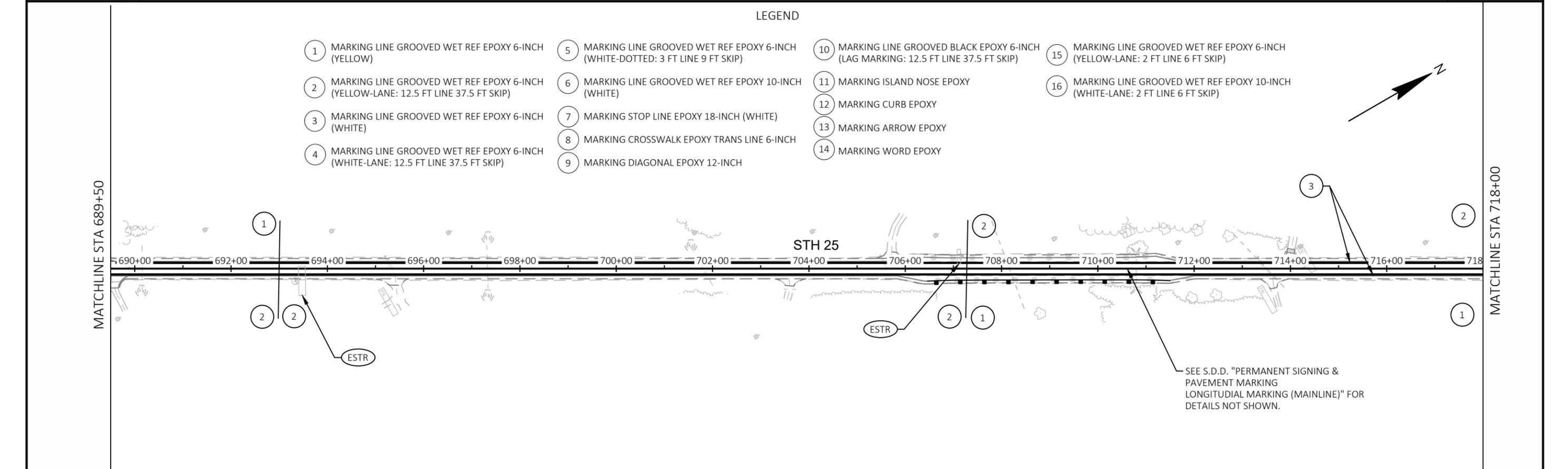
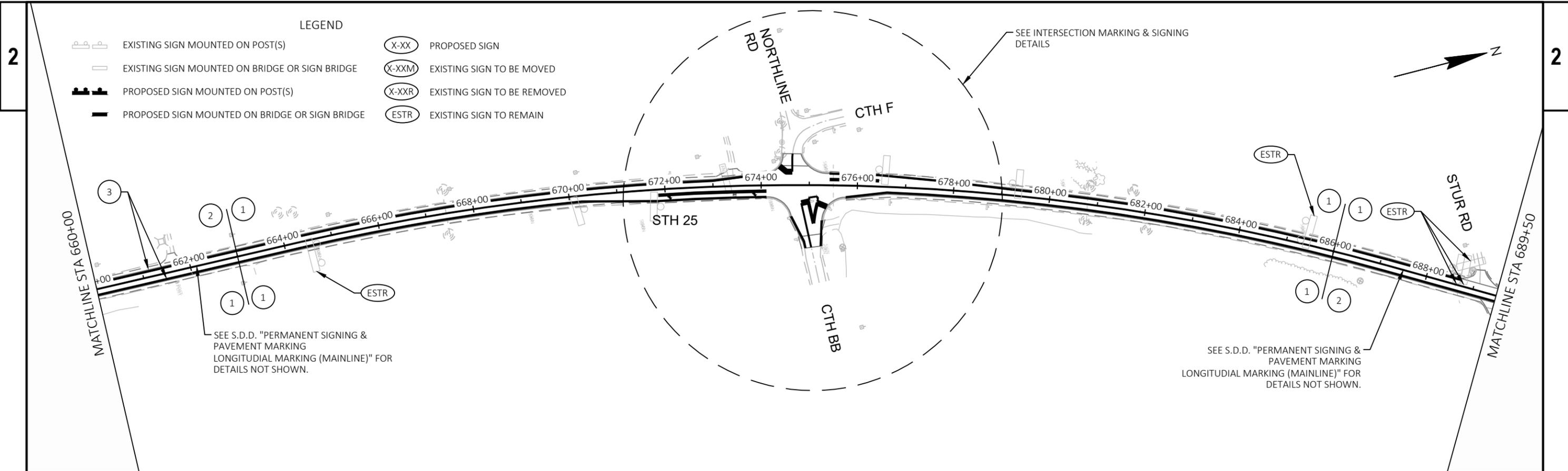


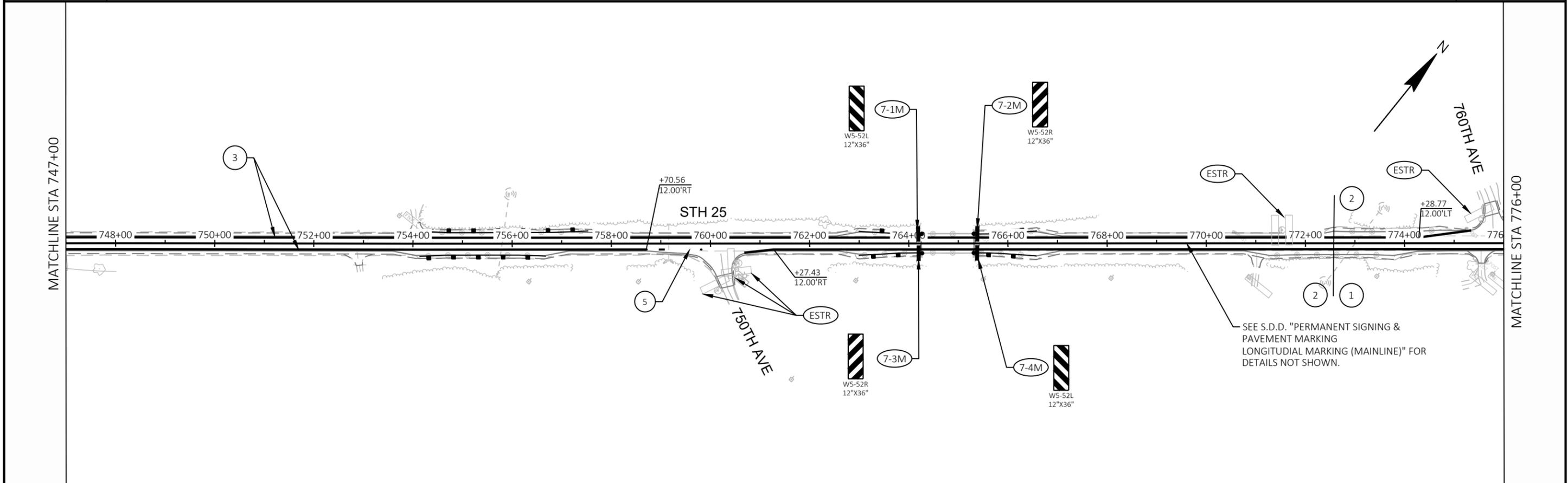
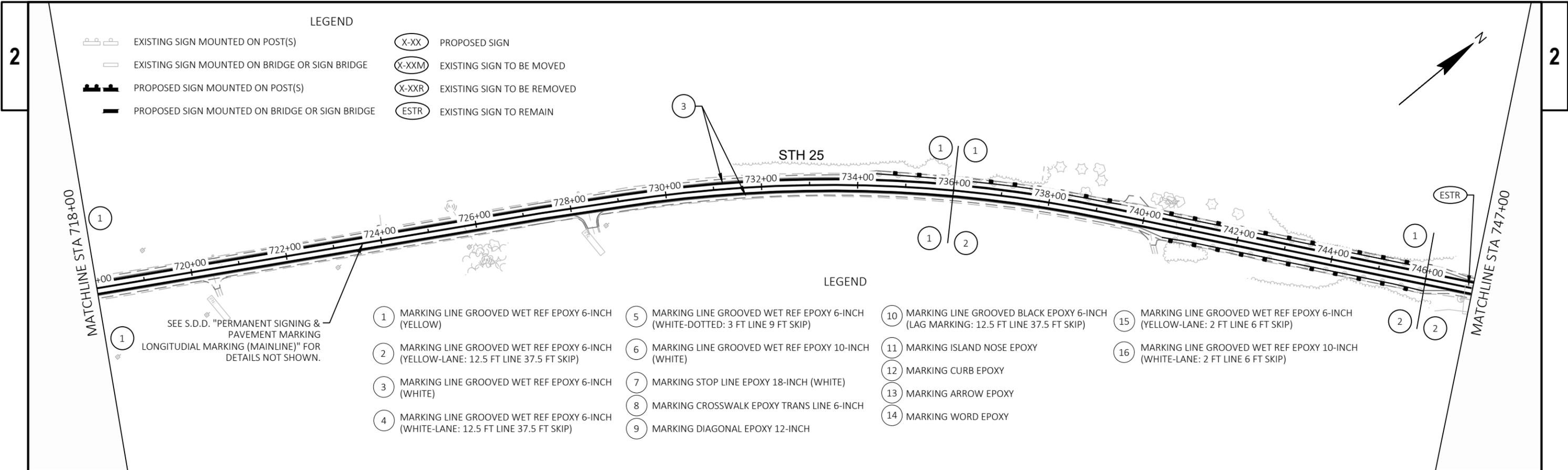
SEE S.D.D. "PERMANENT SIGNING & PAVEMENT MARKING LONGITUDIAL MARKING (MAINLINE)" FOR DETAILS NOT SHOWN.

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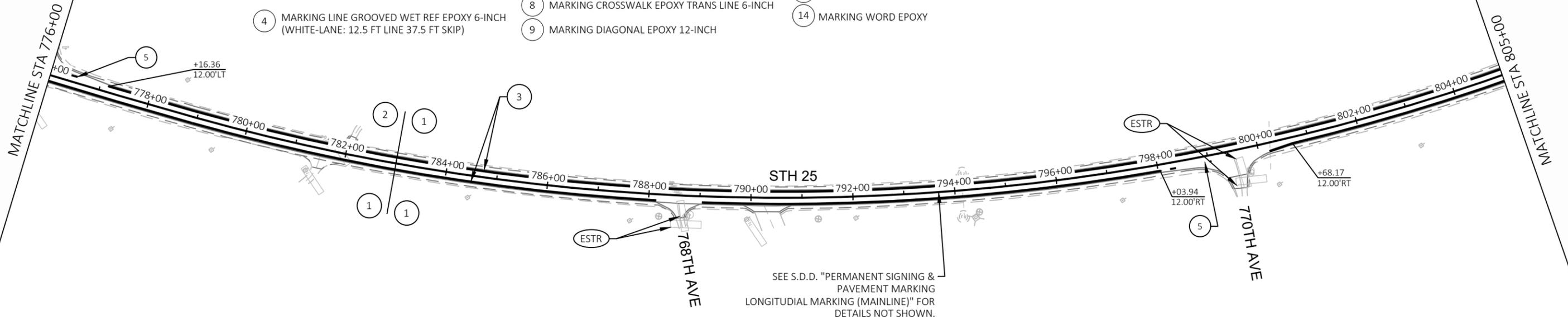




PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	PERMANENT SIGNING & PAVEMENT MARKING - STH 25	SHEET	E
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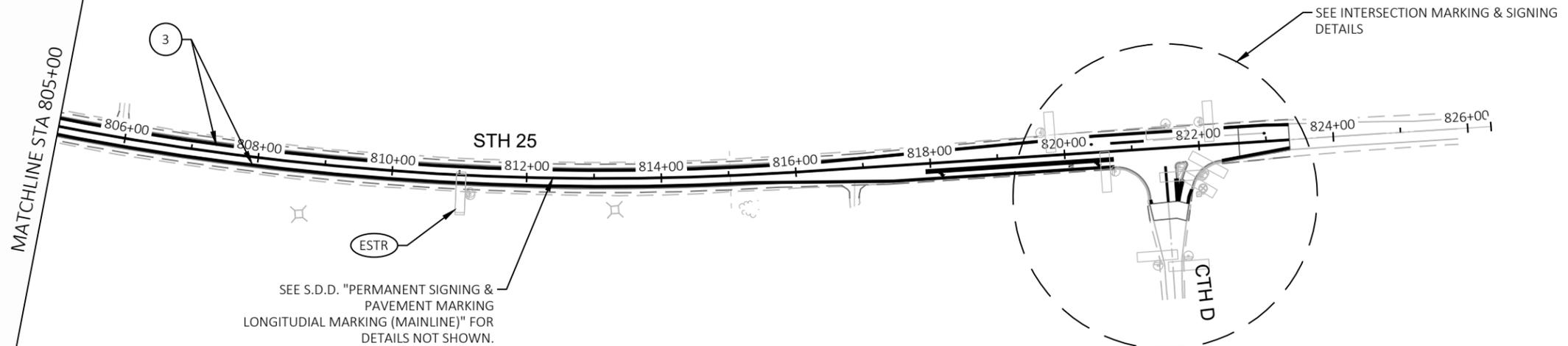
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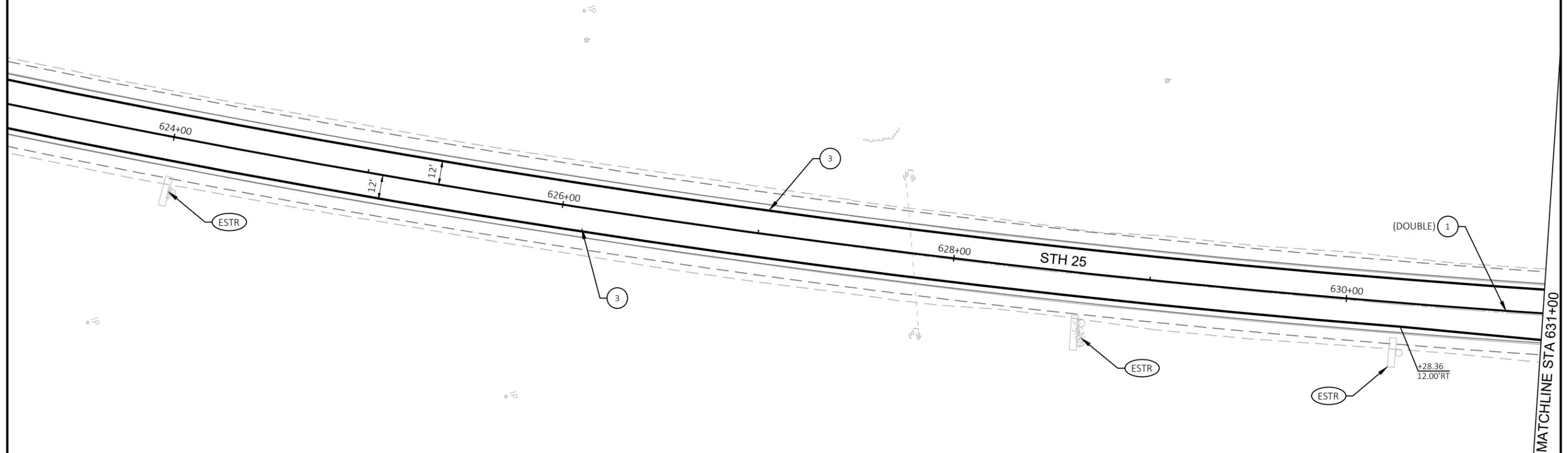
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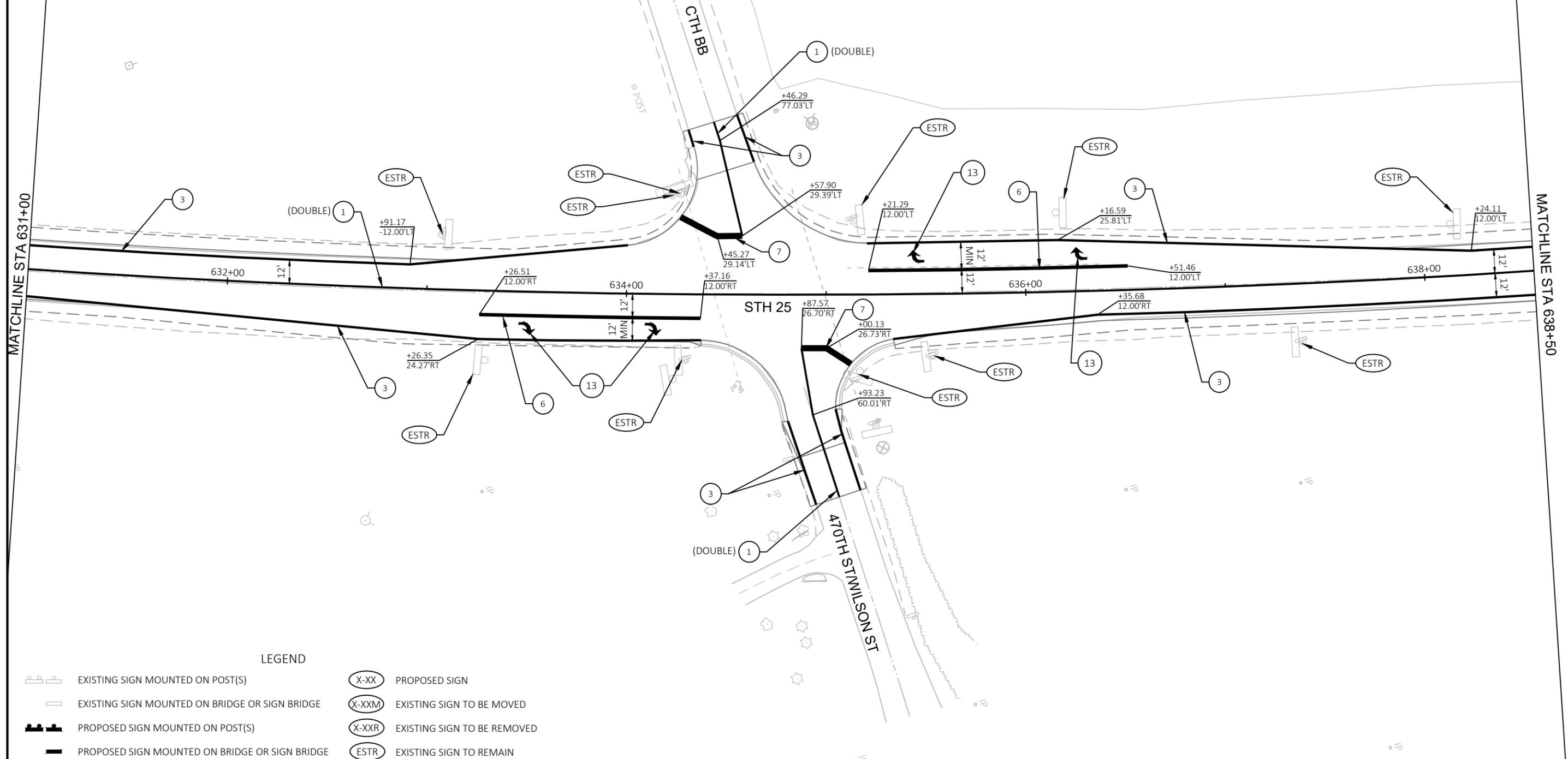
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MATCHLINE STA 631+00

MATCHLINE STA 638+50



LEGEND

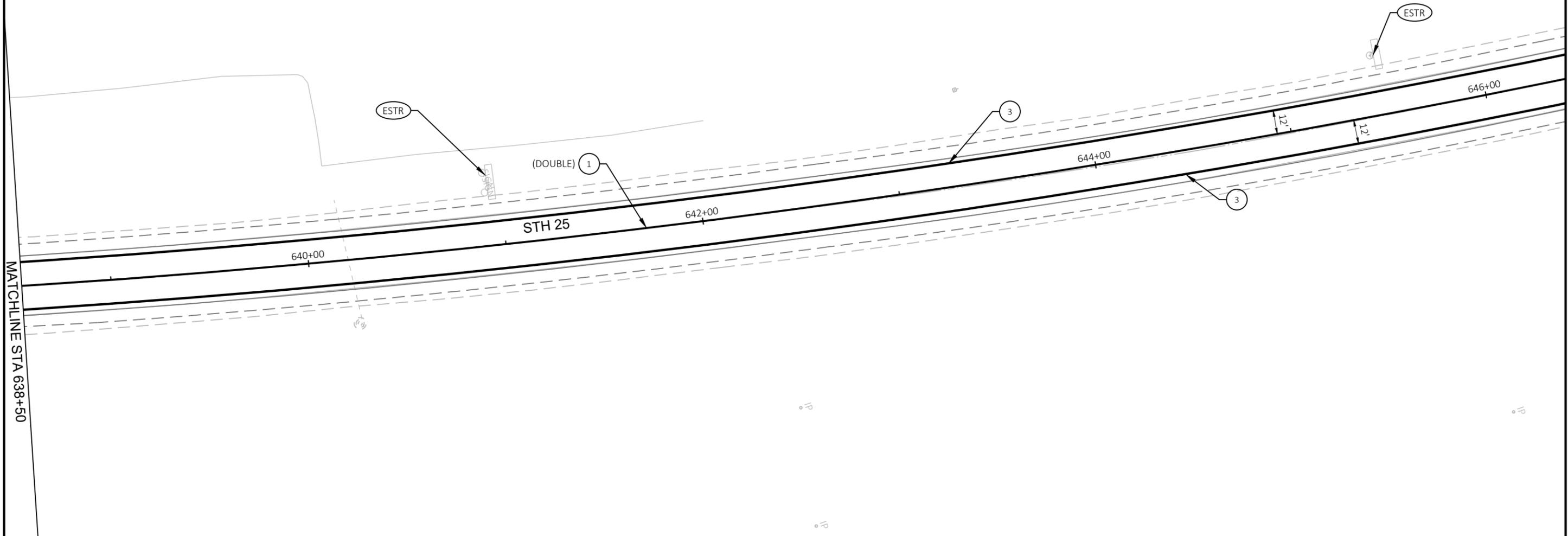
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MATCHLINE STA 638+50

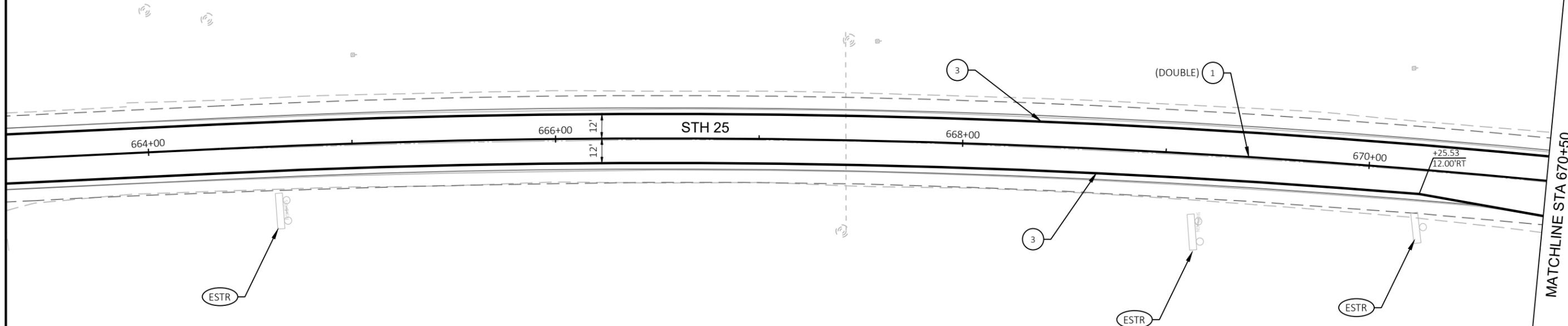


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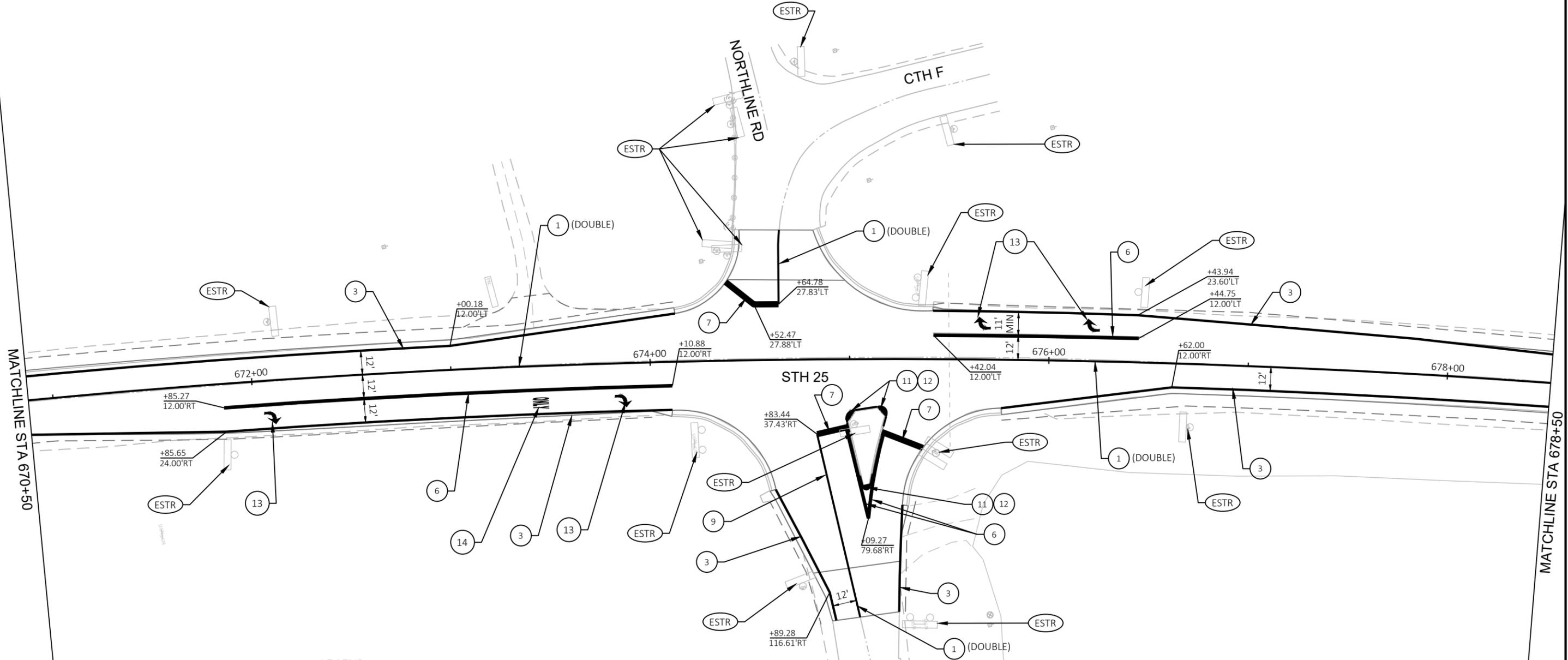


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- X-XXM EXISTING SIGN TO BE MOVED
- X-XXR EXISTING SIGN TO BE REMOVED
- ESTR EXISTING SIGN TO REMAIN

LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW-LANE: 12.5 FT LINE 37.5 FT SKIP)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 4 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE-LANE: 12.5 FT LINE 37.5 FT SKIP)
- 5 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE-DOTTED: 3 FT LINE 9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 8 MARKING CROSSWALK EPOXY TRANS LINE 6-INCH
- 9 MARKING DIAGONAL EPOXY 12-INCH
- 10 MARKING LINE GROOVED BLACK EPOXY 6-INCH (LAG MARKING: 12.5 FT LINE 37.5 FT SKIP)
- 11 MARKING ISLAND NOSE EPOXY
- 12 MARKING CURB EPOXY
- 13 MARKING ARROW EPOXY
- 14 MARKING WORD EPOXY
- 15 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW-LANE: 2 FT LINE 6 FT SKIP)
- 16 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE-LANE: 2 FT LINE 6 FT SKIP)



LEGEND

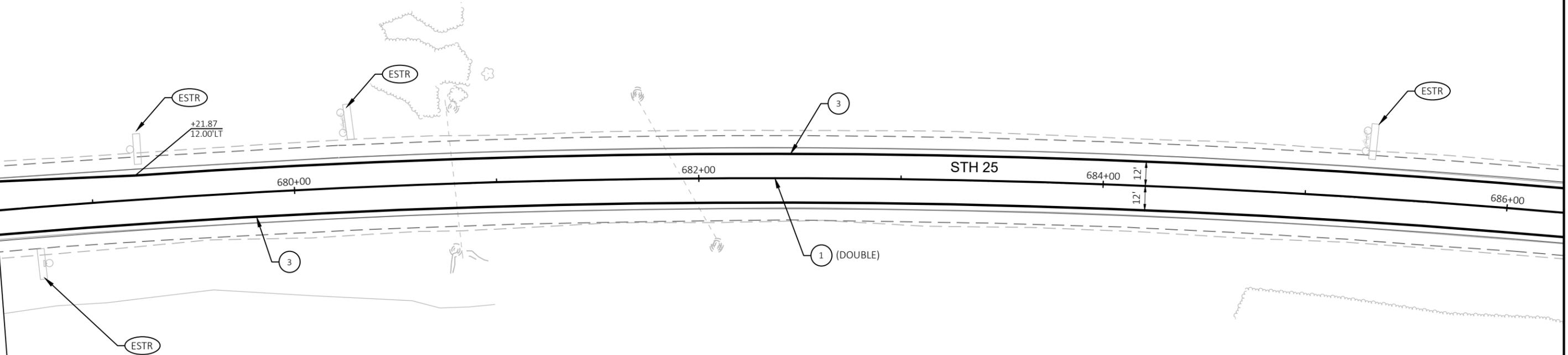
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN
- EXISTING SIGN TO BE MOVED
- EXISTING SIGN TO BE REMOVED
- EXISTING SIGN TO REMAIN

LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW-LANE: 12.5 FT LINE 37.5 FT SKIP)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 4 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE-LANE: 12.5 FT LINE 37.5 FT SKIP)
- 5 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE-DOTTED: 3 FT LINE 9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 8 MARKING CROSSWALK EPOXY TRANS LINE 6-INCH
- 9 MARKING DIAGONAL EPOXY 12-INCH
- 10 MARKING LINE GROOVED BLACK EPOXY 6-INCH (LAG MARKING: 12.5 FT LINE 37.5 FT SKIP)
- 11 MARKING ISLAND NOSE EPOXY
- 12 MARKING CURB EPOXY
- 13 MARKING ARROW EPOXY
- 14 MARKING WORD EPOXY
- 15 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW-LANE: 2 FT LINE 6 FT SKIP)
- 16 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE-LANE: 2 FT LINE 6 FT SKIP)



MATCHLINE STA 678+50

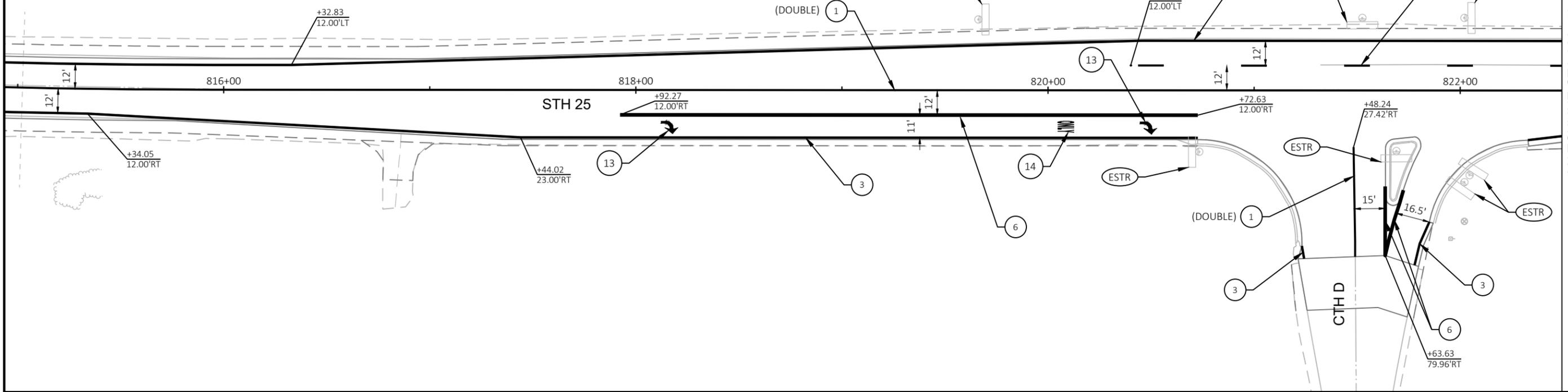


LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN
- EXISTING SIGN TO BE MOVED
- EXISTING SIGN TO BE REMOVED
- EXISTING SIGN TO REMAIN

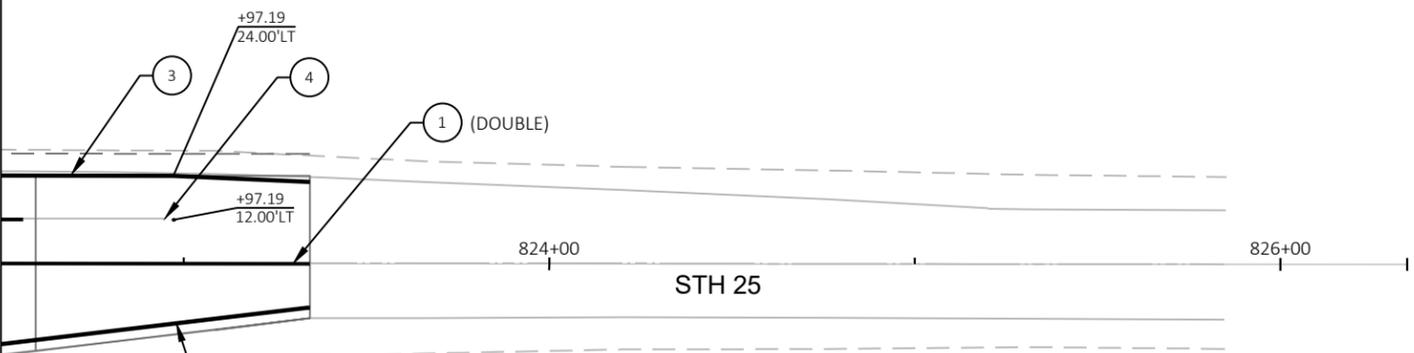
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN
- EXISTING SIGN TO BE MOVED
- EXISTING SIGN TO BE REMOVED
- EXISTING SIGN TO REMAIN



MATCHLINE STA 822+50

MATCHLINE STA 822+50



LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW-LANE: 12.5 FT LINE 37.5 FT SKIP)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ④ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE-LANE: 12.5 FT LINE 37.5 FT SKIP)
- ⑤ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE-DOTTED: 3 FT LINE 9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING STOP LINE EPOXY 18-INCH (WHITE)
- ⑧ MARKING CROSSWALK EPOXY TRANS LINE 6-INCH
- ⑨ MARKING DIAGONAL EPOXY 12-INCH
- ⑩ MARKING LINE GROOVED BLACK EPOXY 6-INCH (LAG MARKING: 12.5 FT LINE 37.5 FT SKIP)
- ⑪ MARKING ISLAND NOSE EPOXY
- ⑫ MARKING CURB EPOXY
- ⑬ MARKING ARROW EPOXY
- ⑭ MARKING WORD EPOXY
- ⑮ MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW-LANE: 2 FT LINE 6 FT SKIP)
- ⑯ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE-LANE: 2 FT LINE 6 FT SKIP)

EARLY CLEARING OPERATIONS

- DURING EARLY CLEARING OPERATIONS, ALL ROADWAYS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES EXCEPT FOR SHOULDER CLOSURES. SEE S.D.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR DETAILS.

MAINTENANCE OF TRAFFIC:

STH 25

- STH 25 SHALL REMAIN OPEN TO ALL EXISTING LANES AT ALL TIMES EXCEPT FOR FLAGGING OPERATIONS, SINGLE LANE CLOSURES, AND SHOULDER CLOSURES AS NOTED IN THE CONTRACT SPECIAL PROVISIONS.

LOCAL ROADS AND DRIVEWAYS

- MAINTAIN LOCAL ACCESS AT ALL TIMES.

PEDESTRIANS / SIDEWALKS

- MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES AT ALL TIMES.

CONSTRUCTION TO BE COMPLETED:

STH 25

- MILL OR COLD-IN-PLACE RECYCLING OF EXISTING PAVEMENT & OVERLAY.
- BEAM GUARD IMPROVEMENTS.

NOTES:

REFER TO THE FOLLOWING TRAFFIC CONTROL DETAILS, AS WELL AS STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

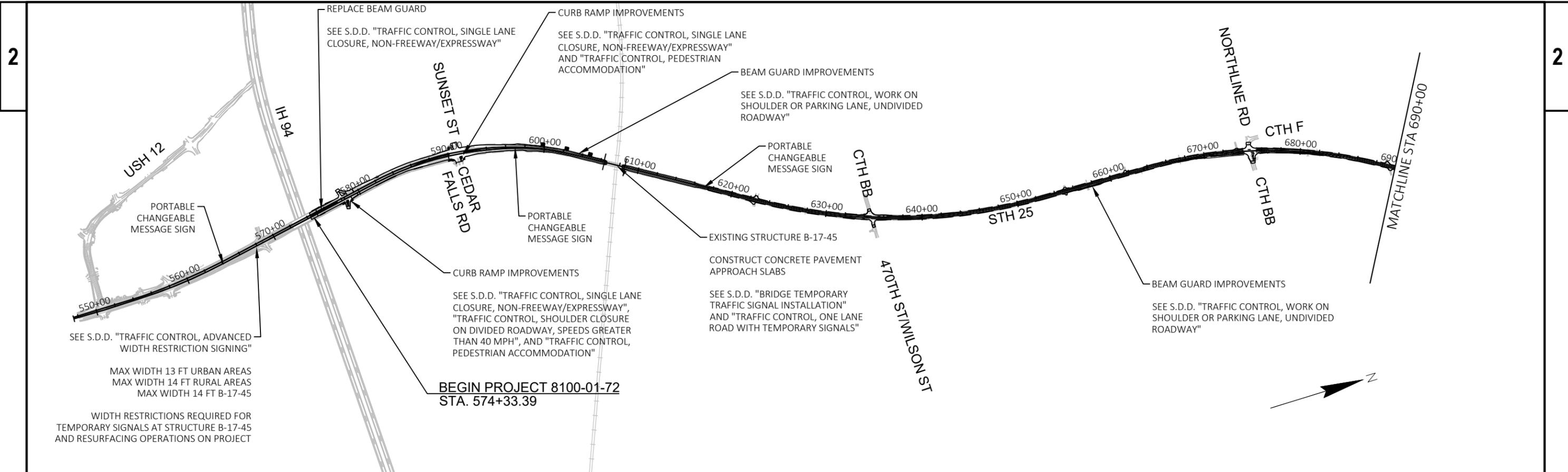
- SEE S.D.D. "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC"
- SEE S.D.D. "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 40 M.P.H. OR LESS"
- SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"
- SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY"
- SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE"
- SEE S.D.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY"
- SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H."
- SEE S.D.D. "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION"
- SEE S.D.D. "TRAFFIC CONTROL FOR DROP-OFF SIGNING"
- SEE S.D.D. "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES"
- SEE S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"
- SEE S.D.D. "BRIDGE TEMPORARY SIGNAL INSTALLATION"

TRAFFIC CONTROL GENERAL NOTES:

- ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED AS NEEDED AND AS APPROVED BY THE ENGINEER. REMOVING/REPLACING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
- CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND OTHER TRAFFIC CONTROL DEVICES SO THE DRIVER HAS A CLEAR VIEW OF THE SIGNS AND OTHER DEVICES.
- IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS WITH A MINIMUM 5' MOUNTING HEIGHT.
- ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, TRAFFIC ENGINEERING, OPERATIONS AND SAFETY MANUAL, AND OTHER CONTRACT DOCUMENTS.
- MOVE, REMOVE OR INSTALL ROUTE MARKER SIGNS AS REQUIRED TO MAINTAIN NECESSARY ROUTE GUIDANCE THROUGHOUT CONSTRUCTION.
- CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CONSTRUCTION CLEAR ZONE WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST.
- STAGE CONSTRUCTION OF CURB RAMPS AND SIDEWALK TO ALLOW CONTINUED PEDESTRIAN ACCESS TO EACH CITY BLOCK FROM AT LEAST ONE DIRECTION WHERE APPLICABLE

PCMS MESSAGE PLAN

EVENT/LOCATION	PANEL 1	PANEL 2
STH 25 WORK TO BEGIN - PROJECT PREWARN	ROAD WORK BEGINS	XXXX/DAY XX/XX
B-17-45 WORK TO BEGIN - NEW TEMPORARY SIGNAL	NEW TRAFFIC SIGNAL	BE PREPARED TO STOP



SEE S.D.D. "TRAFFIC CONTROL, ADVANCED WIDTH RESTRICTION SIGNING"

MAX WIDTH 13 FT URBAN AREAS
MAX WIDTH 14 FT RURAL AREAS
MAX WIDTH 14 FT B-17-45

WIDTH RESTRICTIONS REQUIRED FOR TEMPORARY SIGNALS AT STRUCTURE B-17-45 AND RESURFACING OPERATIONS ON PROJECT

BEGIN PROJECT 8100-01-72
STA. 574+33.39

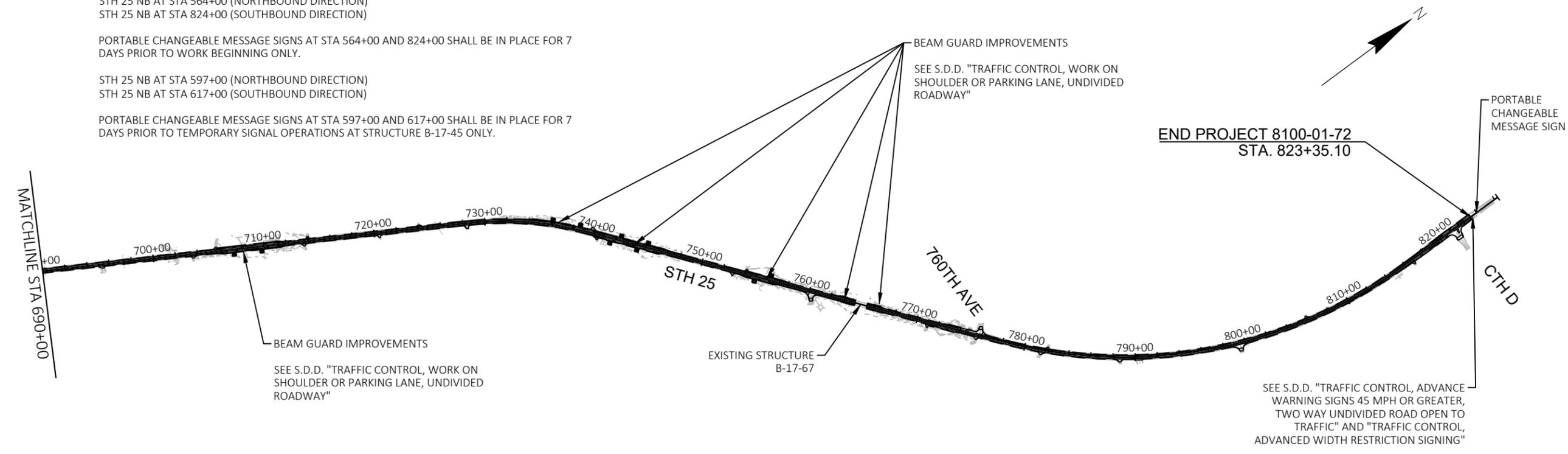
PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

STH 25 NB AT STA 564+00 (NORTHBOUND DIRECTION)
STH 25 NB AT STA 824+00 (SOUTHBOUND DIRECTION)

PORTABLE CHANGEABLE MESSAGE SIGNS AT STA 564+00 AND 824+00 SHALL BE IN PLACE FOR 7 DAYS PRIOR TO WORK BEGINNING ONLY.

STH 25 NB AT STA 597+00 (NORTHBOUND DIRECTION)
STH 25 NB AT STA 617+00 (SOUTHBOUND DIRECTION)

PORTABLE CHANGEABLE MESSAGE SIGNS AT STA 597+00 AND 617+00 SHALL BE IN PLACE FOR 7 DAYS PRIOR TO TEMPORARY SIGNAL OPERATIONS AT STRUCTURE B-17-45 ONLY.



END PROJECT 8100-01-72
STA. 823+35.10

BEAM GUARD IMPROVEMENTS
SEE S.D.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY"

SEE S.D.D. "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL, ADVANCED WIDTH RESTRICTION SIGNING"

- LEGEND**
-  WORK AREA
 -  TYPE II BARRICADE WITH ATTACHED SIGN
 -  TYPE III BARRICADE WITH ATTACHED SIGN
 -  TRAFFIC CONTROL DRUM
 -  TRAFFIC CONTROL DRUM WITH TYPE C LIGHT
 -  SIGN ON TEMPORARY SUPPORT
 -  DIRECTION OF TRAFFIC
 -  TEMPORARY DETECTABLE WARNING FIELD
 -  TEMPORARY PEDESTRIAN BARRICADE
 -  TEMPORARY AUDIBLE MESSAGE DEVICE

TEMPORARY PEDESTRIAN SURFACE MATTING REQ'D (MATCH EXISTING WIDTH)

AUDIBLE MESSAGE: ATTENTION PEDESTRIANS, YOU ARE AT THE INTERSECTION OF WISCONSIN 25 AND SUNSET STREET. SIDEWALK CONSTRUCTION AHEAD. TEMPORARY SIDEWALK AND CROSSING ROUTE ACROSS WISCONSIN 25 IS OPEN.

TEMPORARY PEDESTRIAN SURFACE PLATE REQ'D (MATCH EXISTING WIDTH)

TEMPORARY CURB RAMP REQ'D
875.94 EXISTING TOP OF CURB
875.63 EXISTING ROADWAY
MIN LENGTH 3.7 FT AT 8.33%

AUDIBLE MESSAGE: ATTENTION PEDESTRIANS, YOU ARE AT THE INTERSECTION OF WISCONSIN 25 AND CEDAR FALLS ROAD. PATH CONSTRUCTION AHEAD. TEMPORARY PATH AND CROSSING ROUTES TO CEDAR FALLS ROAD AND SUNSET STREET ARE OPEN.

TEMPORARY MARKING CROSSWALK PAINT 6-INCH (WHITE)

TEMPORARY CURB RAMP REQ'D
874.54 EXISTING TOP OF CURB
874.23 EXISTING ROADWAY
MIN LENGTH 3.7 FT AT 8.33%

TEMPORARY PEDESTRIAN SURFACE PLATE REQ'D (MATCH EXISTING WIDTH)

TEMPORARY PEDESTRIAN BARRICADE REQ'D (TYP.)

EXISTING SURFACE DRAIN TO REMAIN

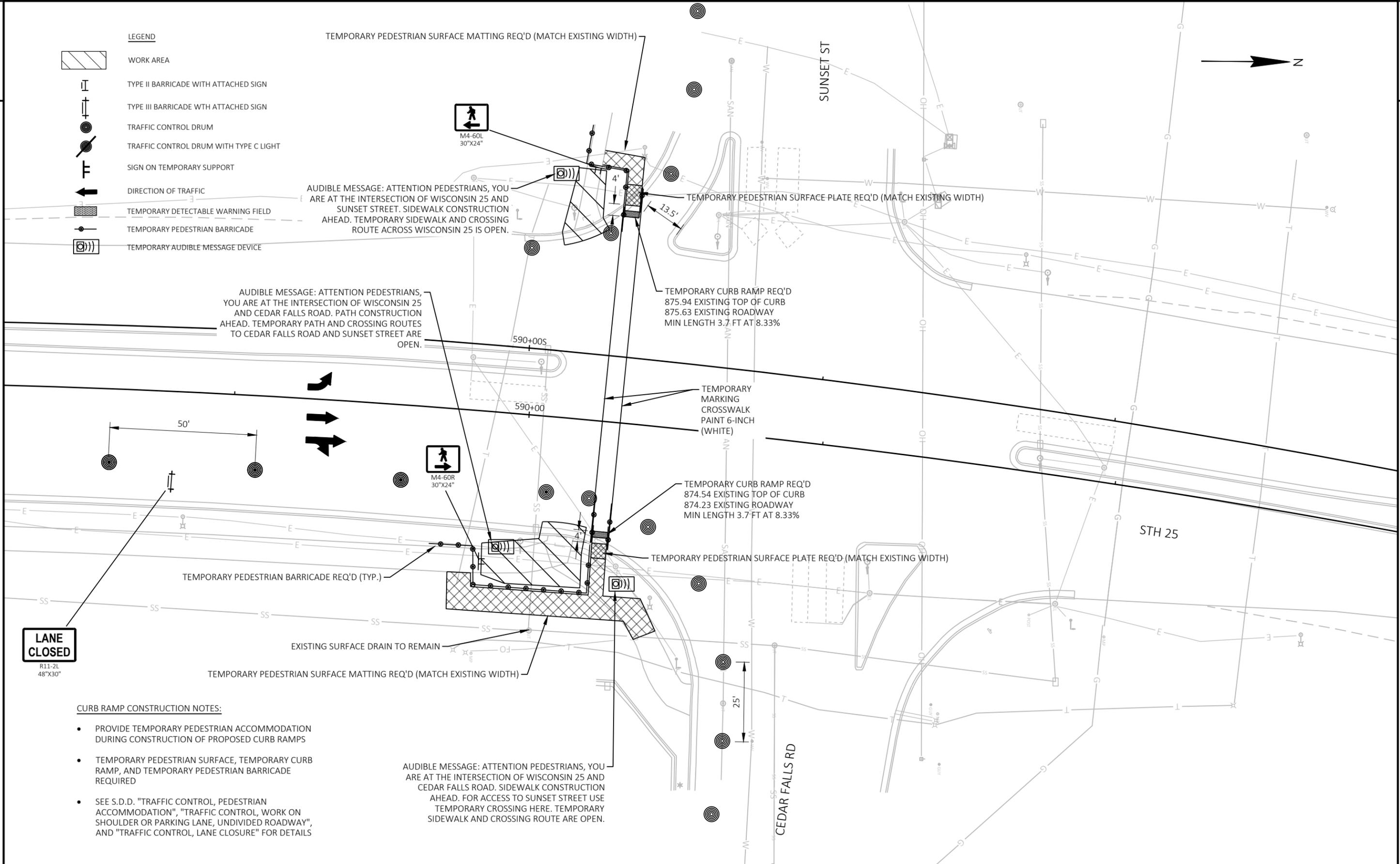
TEMPORARY PEDESTRIAN SURFACE MATTING REQ'D (MATCH EXISTING WIDTH)

LANE CLOSED
R11-2L
48"x30"

CURB RAMP CONSTRUCTION NOTES:

- PROVIDE TEMPORARY PEDESTRIAN ACCOMMODATION DURING CONSTRUCTION OF PROPOSED CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE, TEMPORARY CURB RAMP, AND TEMPORARY PEDESTRIAN BARRICADE REQUIRED
- SEE S.D.D. "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION", "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY", AND "TRAFFIC CONTROL, LANE CLOSURE" FOR DETAILS

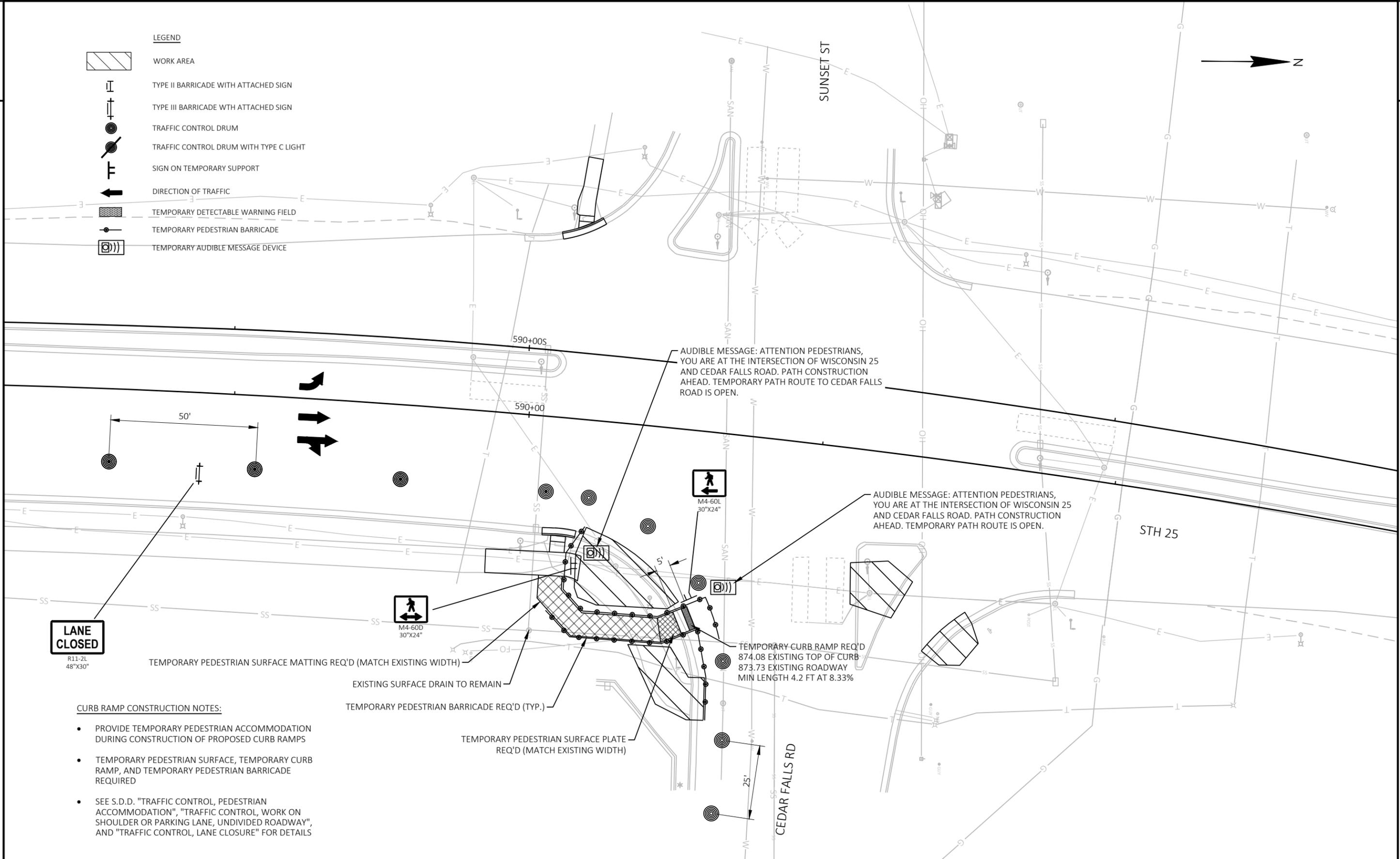
AUDIBLE MESSAGE: ATTENTION PEDESTRIANS, YOU ARE AT THE INTERSECTION OF WISCONSIN 25 AND CEDAR FALLS ROAD. SIDEWALK CONSTRUCTION AHEAD. FOR ACCESS TO SUNSET STREET USE TEMPORARY CROSSING HERE. TEMPORARY SIDEWALK AND CROSSING ROUTE ARE OPEN.





LEGEND

-  WORK AREA
-  TYPE II BARRICADE WITH ATTACHED SIGN
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C LIGHT
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  TEMPORARY DETECTABLE WARNING FIELD
-  TEMPORARY PEDESTRIAN BARRICADE
-  TEMPORARY AUDIBLE MESSAGE DEVICE



LANE CLOSED
R11-2L
48"x30"

TEMPORARY PEDESTRIAN SURFACE MATTING REQ'D (MATCH EXISTING WIDTH)

EXISTING SURFACE DRAIN TO REMAIN

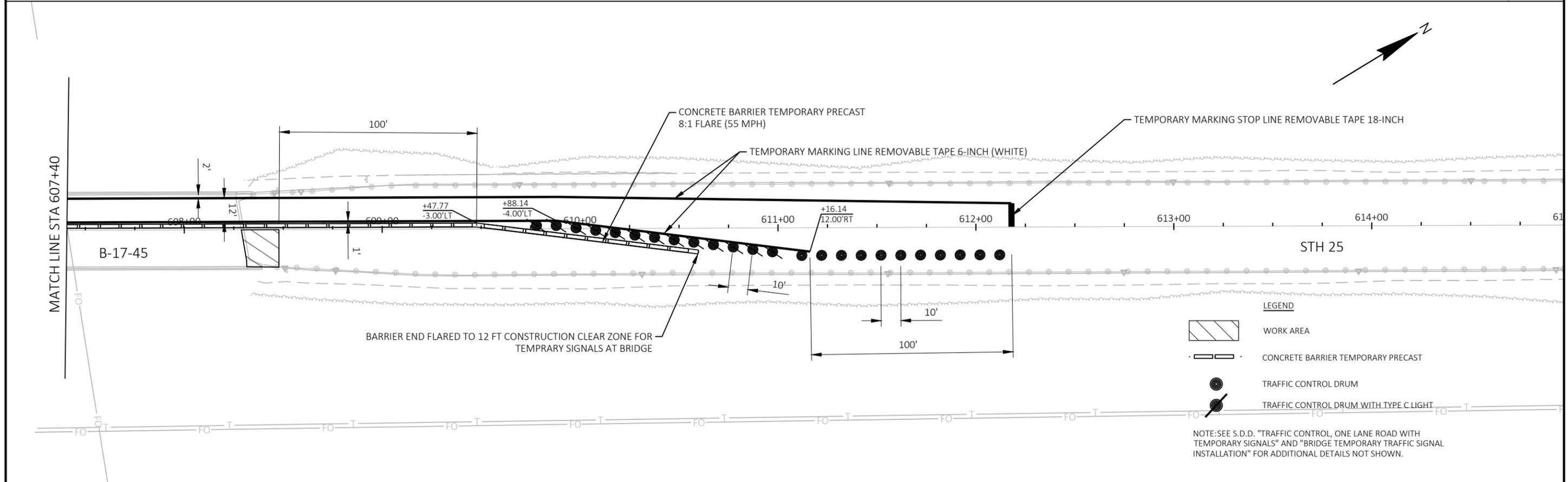
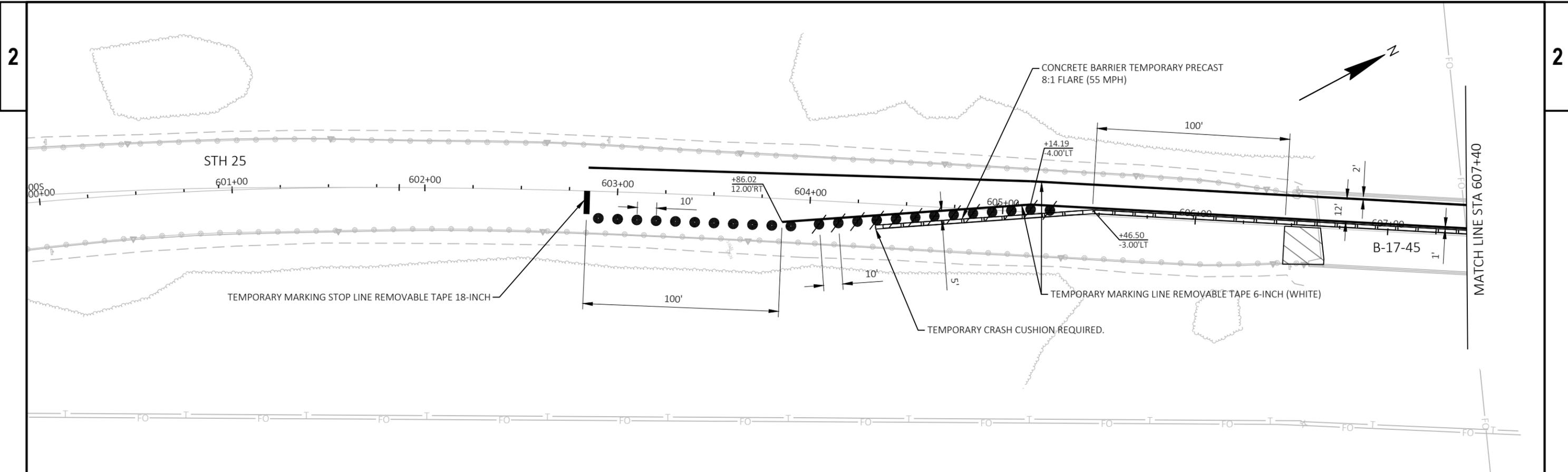
TEMPORARY PEDESTRIAN BARRICADE REQ'D (TYP.)

TEMPORARY PEDESTRIAN SURFACE PLATE REQ'D (MATCH EXISTING WIDTH)

TEMPORARY CURB RAMP REQ'D
874.08 EXISTING TOP OF CURB
873.73 EXISTING ROADWAY
MIN LENGTH 4.2 FT AT 8.33%

CURB RAMP CONSTRUCTION NOTES:

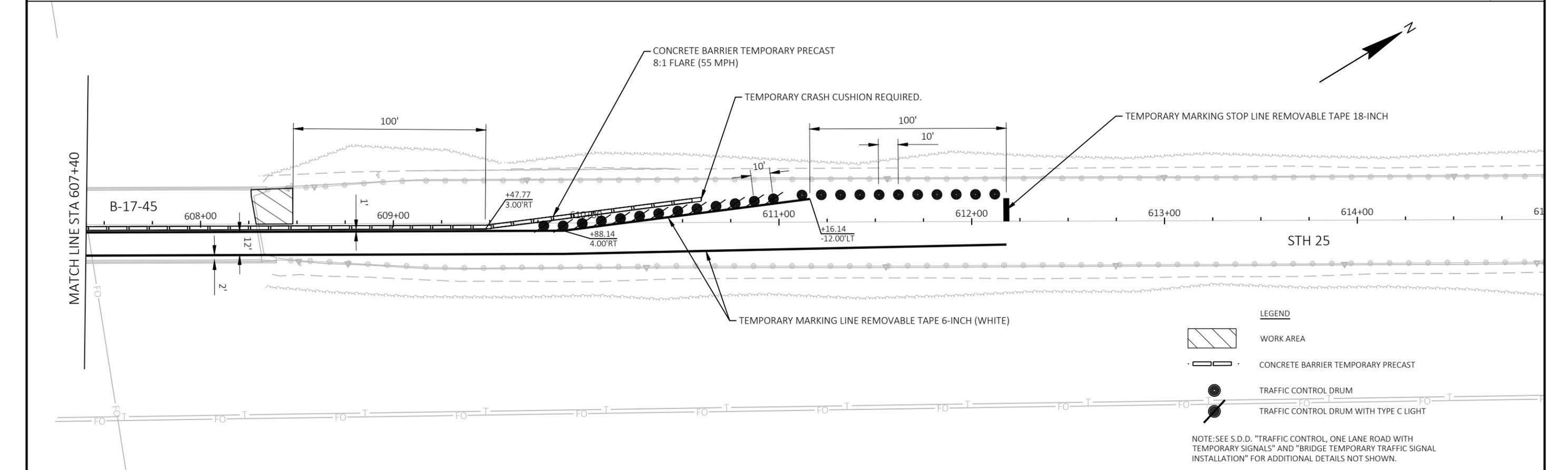
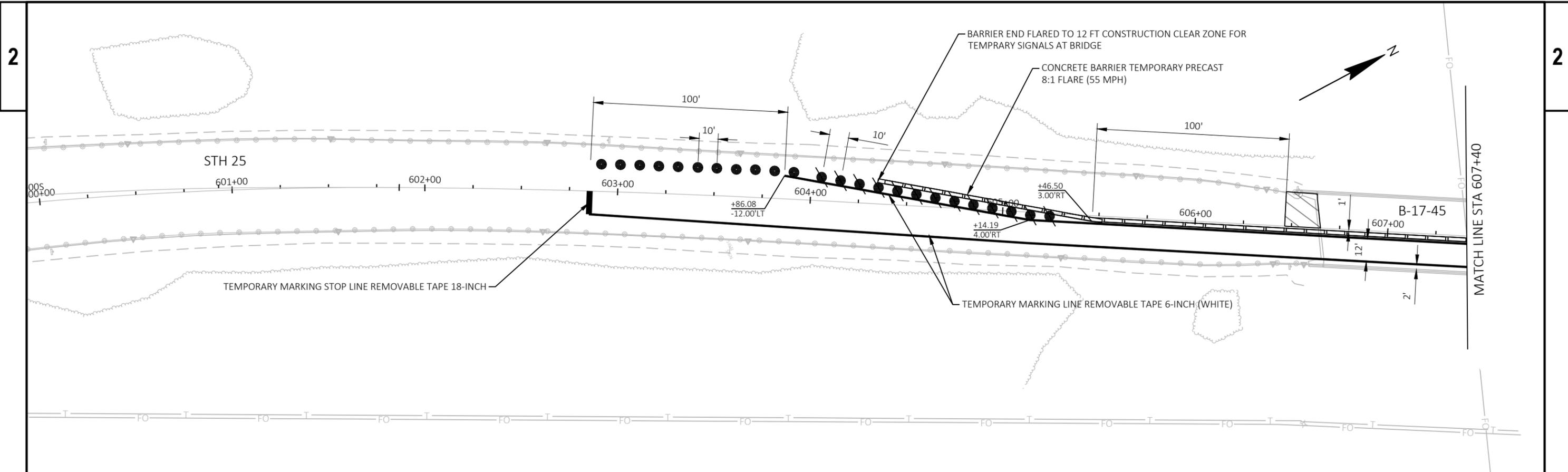
- PROVIDE TEMPORARY PEDESTRIAN ACCOMMODATION DURING CONSTRUCTION OF PROPOSED CURB RAMPS
- TEMPORARY PEDESTRIAN SURFACE, TEMPORARY CURB RAMP, AND TEMPORARY PEDESTRIAN BARRICADE REQUIRED
- SEE S.D.D. "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION", "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY", AND "TRAFFIC CONTROL, LANE CLOSURE" FOR DETAILS



LEGEND

-  WORK AREA
-  CONCRETE BARRIER TEMPORARY PRECAST
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C LIGHT

NOTE: SEE S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL DETAILS NOT SHOWN.



LEGEND

-  WORK AREA
-  CONCRETE BARRIER TEMPORARY PRECAST
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C LIGHT

NOTE: SEE S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" AND "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL DETAILS NOT SHOWN.

PROPOSED TEMPORARY SIGNAL TIMINGS (SEC.)		
PHASE 1 STH 25 NB	PHASE 2 STH 25 SB	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
5	5	MAXIMUM PASSAGE TIME DURING GREEN
3	3	MINIMUM PASSAGE TIME DURING GREEN PHASE
15	15	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
0	0	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
50	50	MAXIMUM GREEN TIME
4	4	YELLOW
21	21	ALL-RED
NONE	NONE	RECALL MODE

NOTES:
1. CONTRACTORS SHALL REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THERE ARE NOT CONFLICTING MOVEMENTS.
2. TRAFFIC SIGNAL TIMINGS ARE BASED ON 935' STOP BAR TO STOP BAR SPACING. IF SPACING, MEASURED ALONG THE SINGLE LANE VEHICLE PATH, EXCEEDS 935', TRAFFIC SIGNAL TIMINGS SHALL BE ADJUSTED PRIOR TO STARTING OPERATION. NOTIFY THE DEPARTMENT REGARDING TIMING ADJUSTMENTS THAT ARE MADE.

BEGIN 'S' ALIGNMENT
STA 547+51.00'S'
 Y = 179291.430
 X = 160261.875

R/L 'S'
 PI STA 547+51.00 'S'
 Y: 179291.4299
 X: 160261.8750

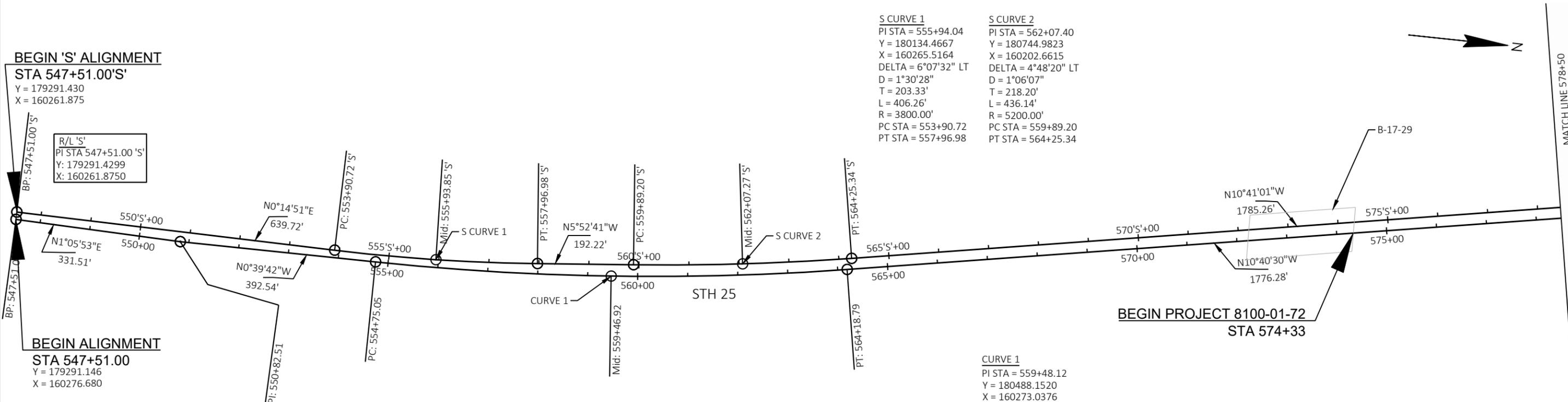
BEGIN ALIGNMENT
STA 547+51.00
 Y = 179291.146
 X = 160276.680

R/L
 PI STA 547+51.00
 Y: 179291.1462
 X: 160276.6799

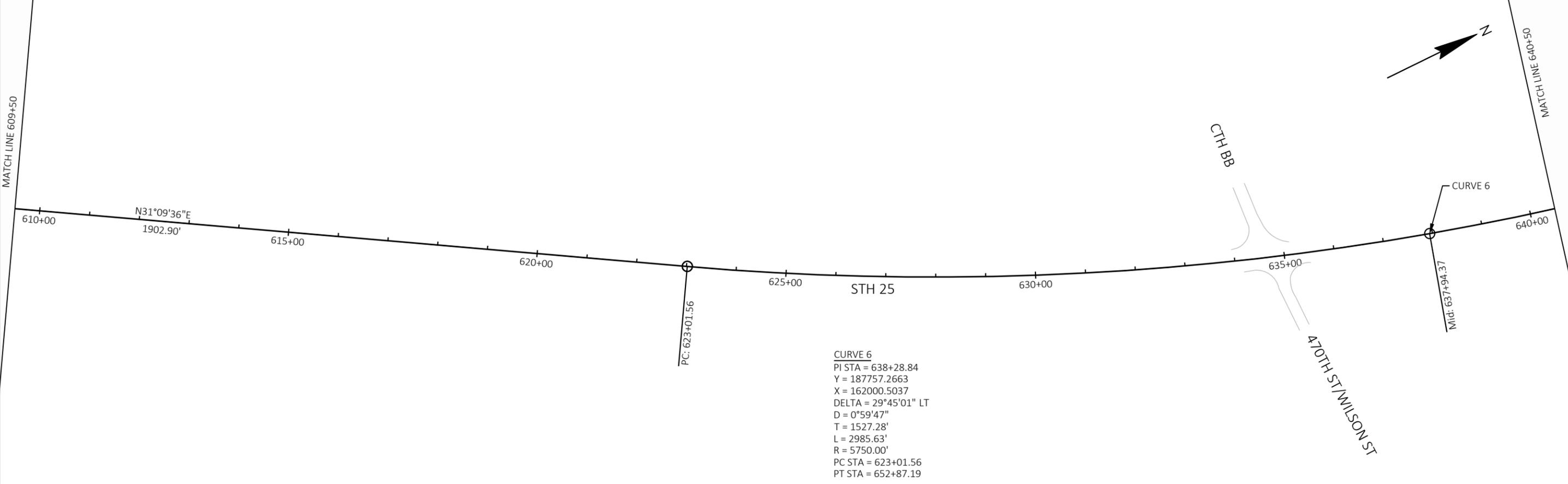
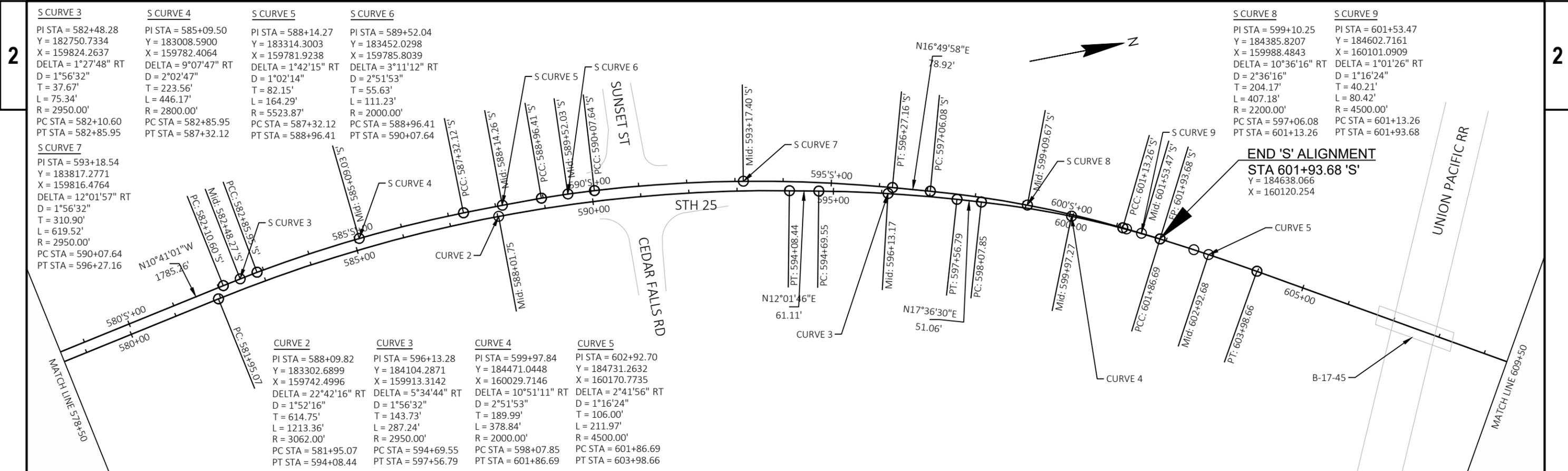
S CURVE 1
 PI STA = 555+94.04
 Y = 180134.4667
 X = 160265.5164
 DELTA = 6°07'32" LT
 D = 1°30'28"
 T = 203.33'
 L = 406.26'
 R = 3800.00'
 PC STA = 553+90.72
 PT STA = 557+96.98

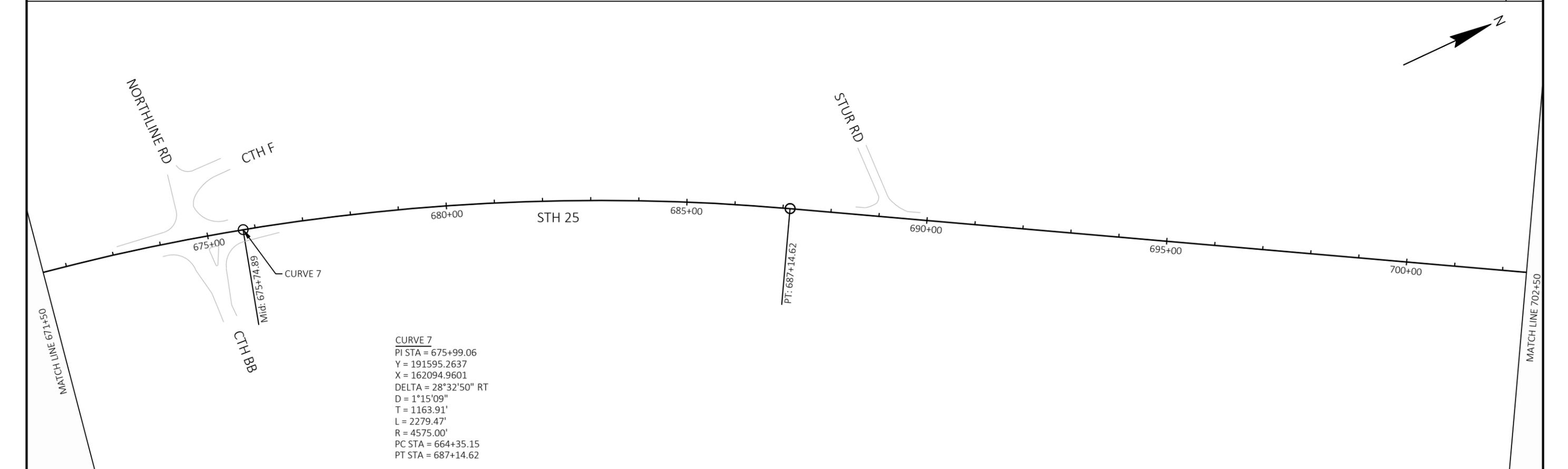
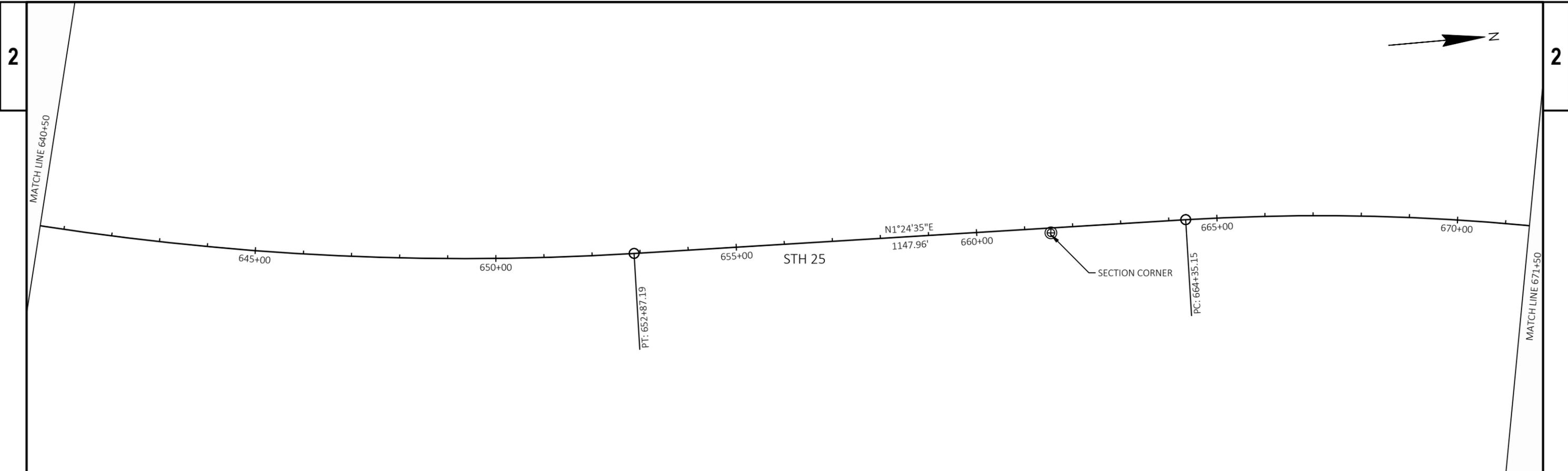
S CURVE 2
 PI STA = 562+07.40
 Y = 180744.9823
 X = 160202.6615
 DELTA = 4°48'20" LT
 D = 1°06'07"
 T = 218.20'
 L = 436.14'
 R = 5200.00'
 PC STA = 559+89.20
 PT STA = 564+25.34

CURVE 1
 PI STA = 559+48.12
 Y = 180488.1520
 X = 160273.0376
 DELTA = 10°00'48" LT
 D = 1°03'40"
 T = 473.07'
 L = 943.74'
 R = 5400.00'
 PC STA = 554+75.05
 PT STA = 564+18.79

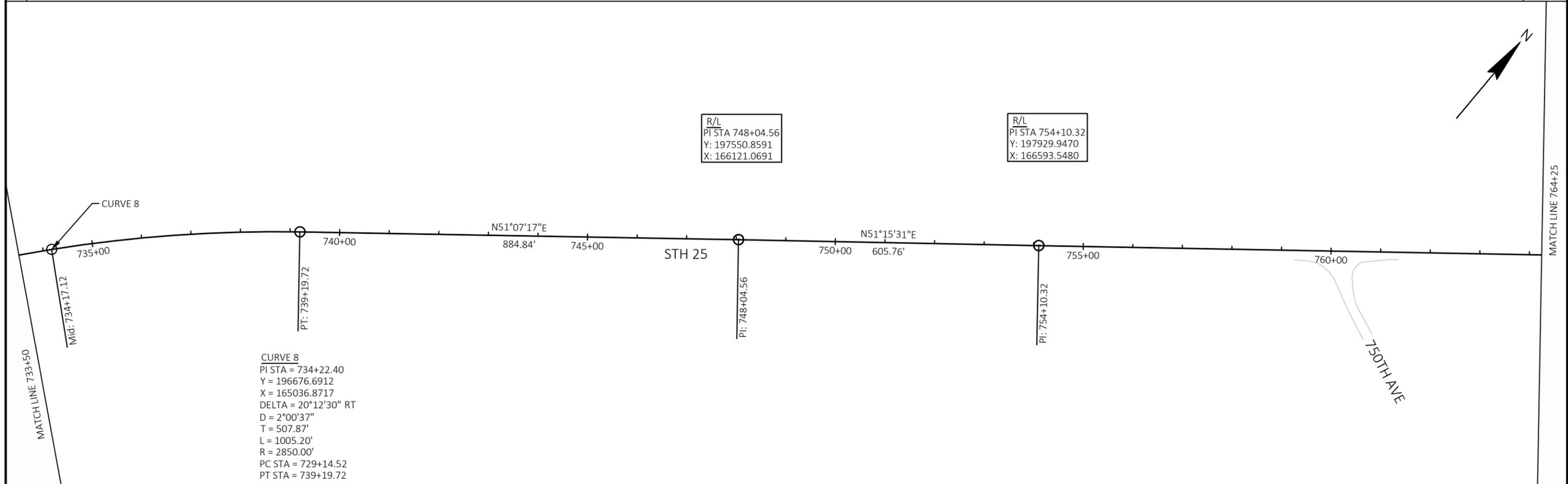
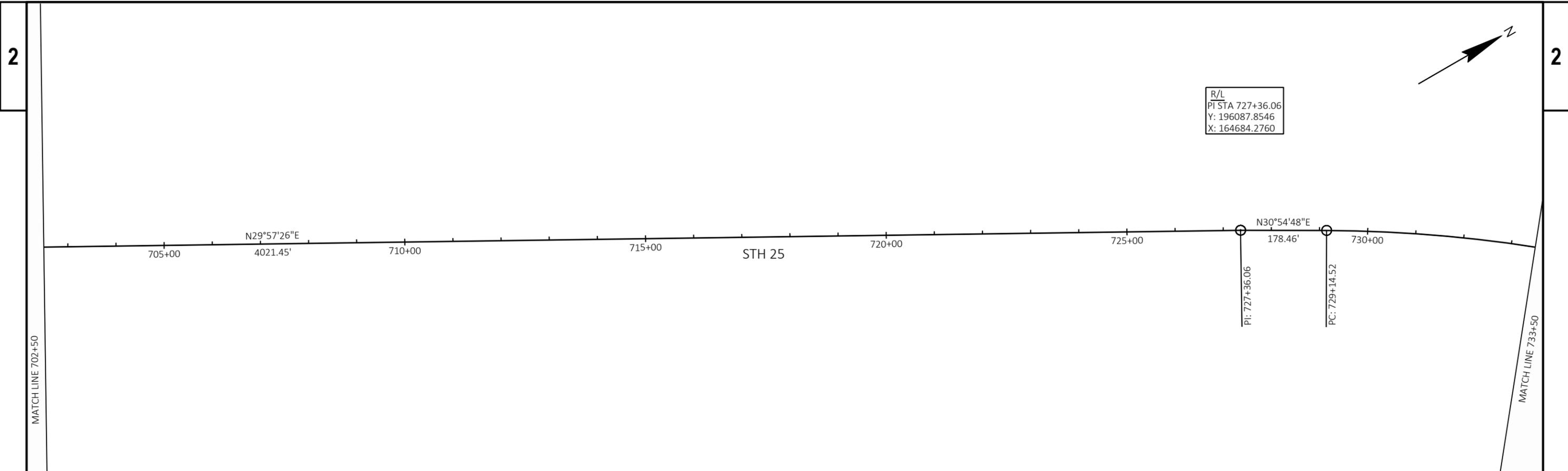


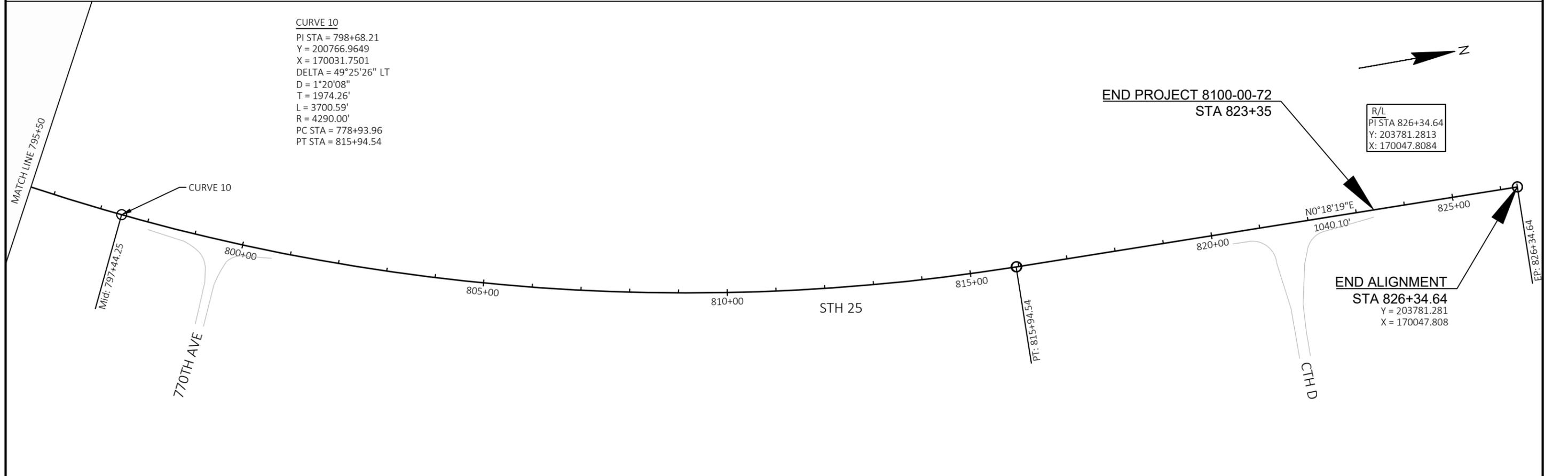
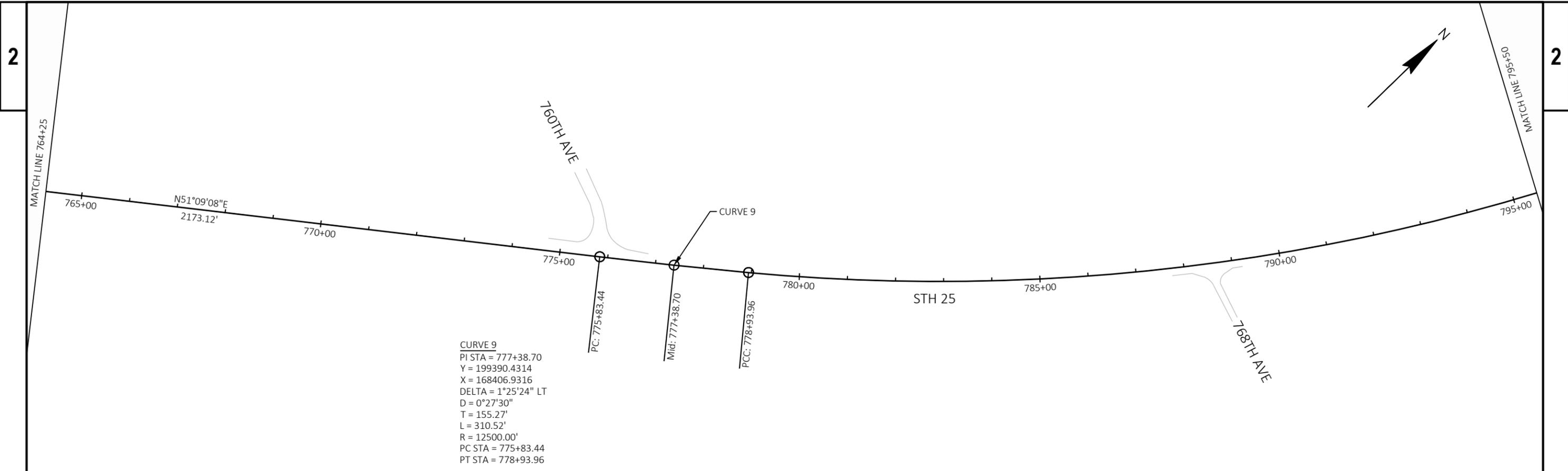
MATCH LINE 578+50



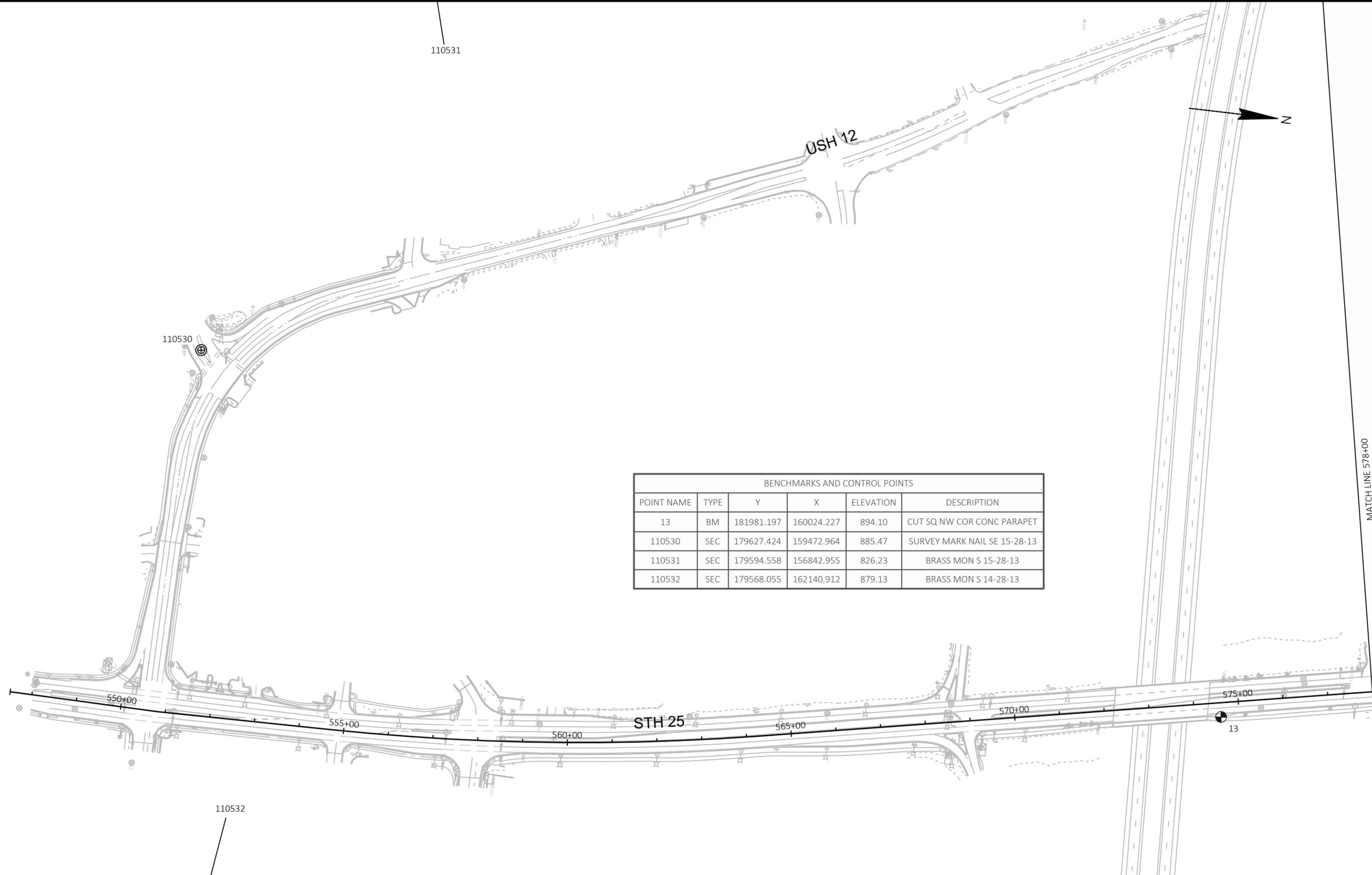


PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	ALIGNMENT DIAGRAM	SHEET	E
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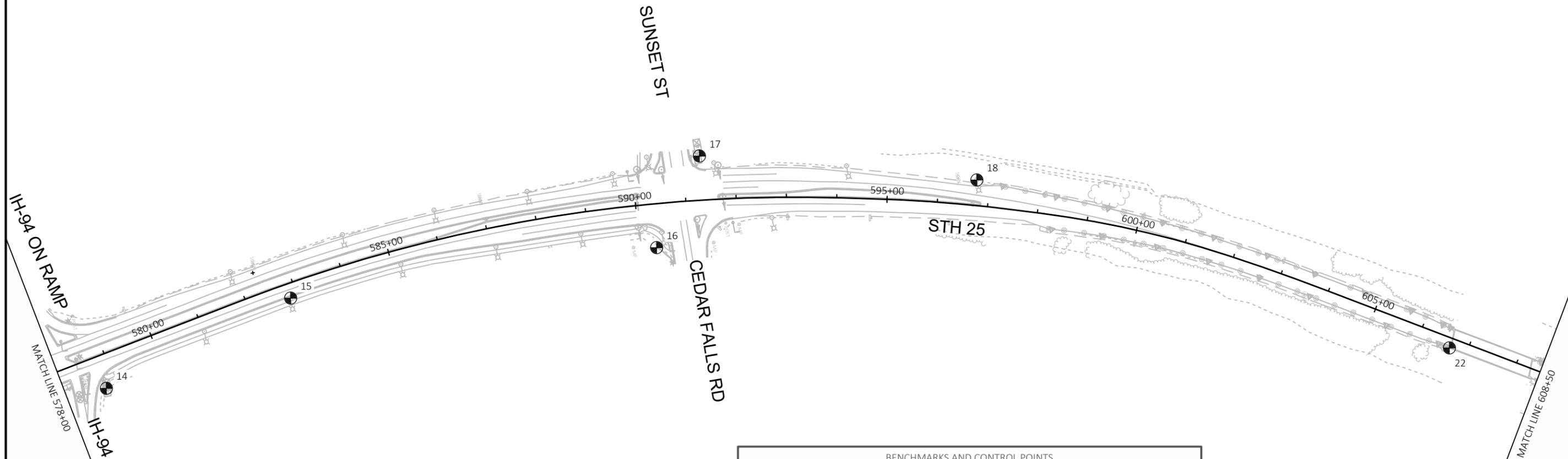




PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	ALIGNMENT DIAGRAM	SHEET	E
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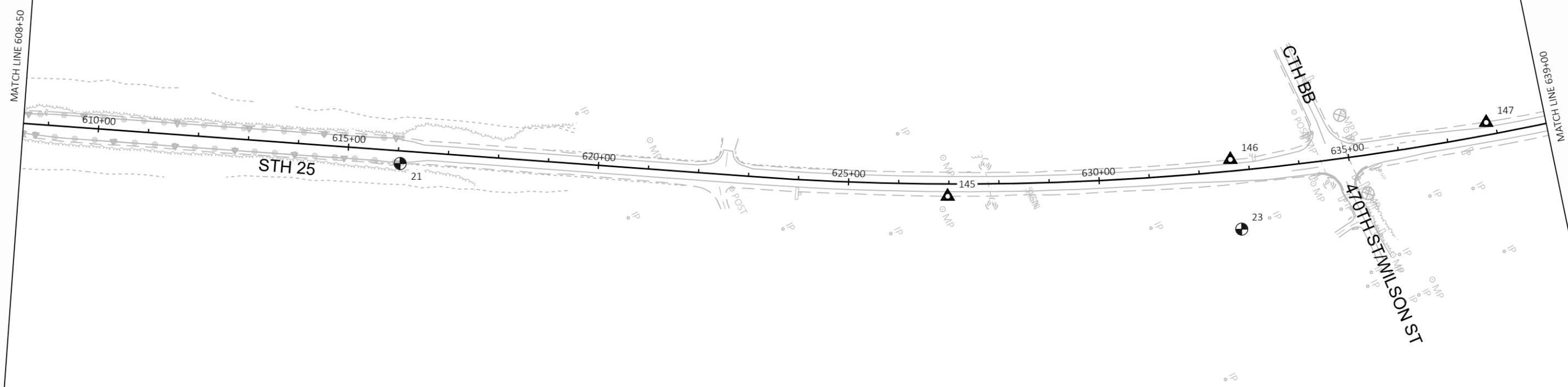


BENCHMARKS AND CONTROL POINTS					
POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
13	BM	181981.197	160024.227	894.10	CUT SQ NW COR CONC PARAPET
110530	SEC	179627.424	159472.964	885.47	SURVEY MARK NAIL SE 15-28-13
110531	SEC	179594.558	156842.955	826.23	BRASS MON S 15-28-13
110532	SEC	179568.055	162140.912	879.13	BRASS MON S 14-28-13



BENCHMARKS AND CONTROL POINTS					
POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
14	BM	182400.643	159979.317	884.88	CUT SQ W COR CONC BASE TFSB
15	BM	182792.789	159869.378	882.10	CUT SQ W COR CONC BASE LPM
16	BM	183525.985	159901.814	873.84	CUT SQ SW COR INL
17	BM	183642.127	159738.763	876.03	CUT SQ N COR CONC BASE TFSB
18	BM	184175.540	159884.345	886.45	CUT SQ ESE SIDE CONC BASE LPM
22	BM	185039.390	160380.119	912.14	WISDOT DISK

BENCHMARKS AND CONTROL POINTS					
POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
21	BM	185841.379	160871.594	893.73	RR SPIKE GRB WOOD POST
23	BM	187277.769	161749.561	889.55	BM CUT X BURY BOLT HYD
145	CP	186784.944	161425.315	884.75	CP 5/8IN RB KL CAP
146	CP	187320.532	161615.982	887.69	CP 5/8IN RB KL CAP
147	CP	187808.692	161781.981	892.87	CP 5/8IN RB KL CAP





MATCH LINE 639+00

MATCH LINE 669+50

STH 25

19

24

148

645+00

650+00

655+00

124

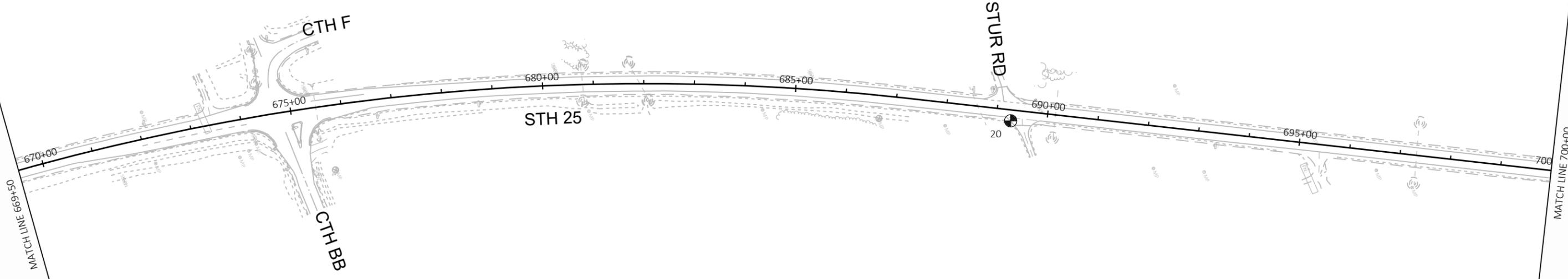
125

660+00

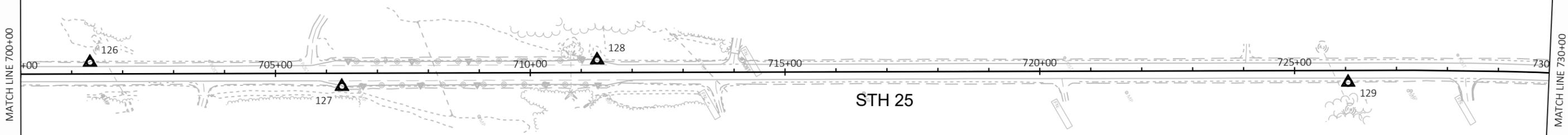
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665+00

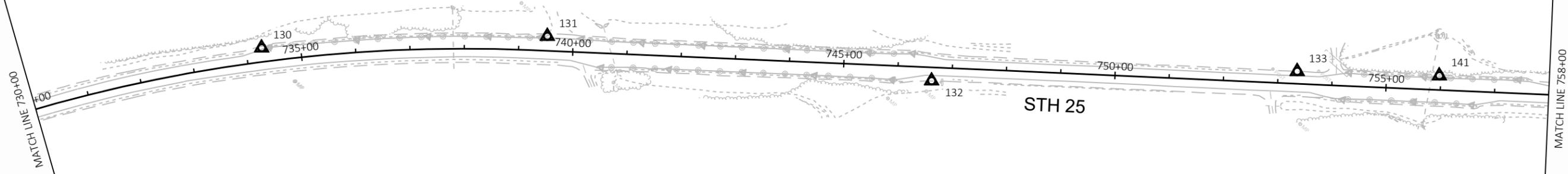
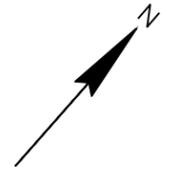
BENCHMARKS AND CONTROL POINTS					
POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
19	BM	187991.993	161872.819	896.43	MAG NAIL
24	BM	188027.198	161902.261	894.81	BM CUT X TOP 24IN CMCP
25	BM	188347.285	161887.943	897.06	BM RR SPIKE PPOL (NO TAG)
124	CP	189634.527	162071.326	900.75	5/8IN RB KL CAP
125	CP	189873.023	162028.244	900.18	5/8IN RB KL CAP
148	CP	188315.037	161988.573	902.50	CP 5/8IN RB KL CAP
110581	SEC	190150.380	162069.661	901.85	MAG NAIL S 02-28-13



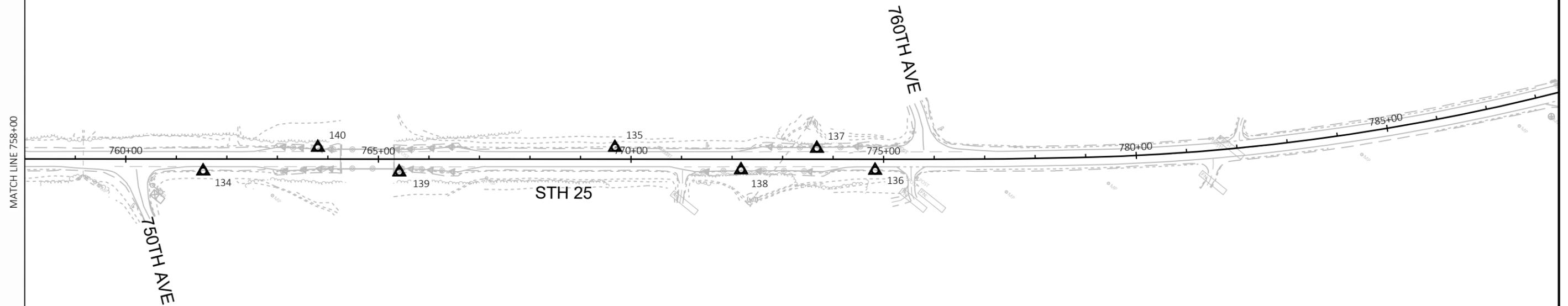
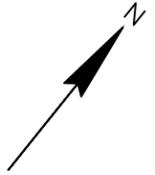
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POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
20	BM	192778.423	162801.829	920.12	MAG NAIL



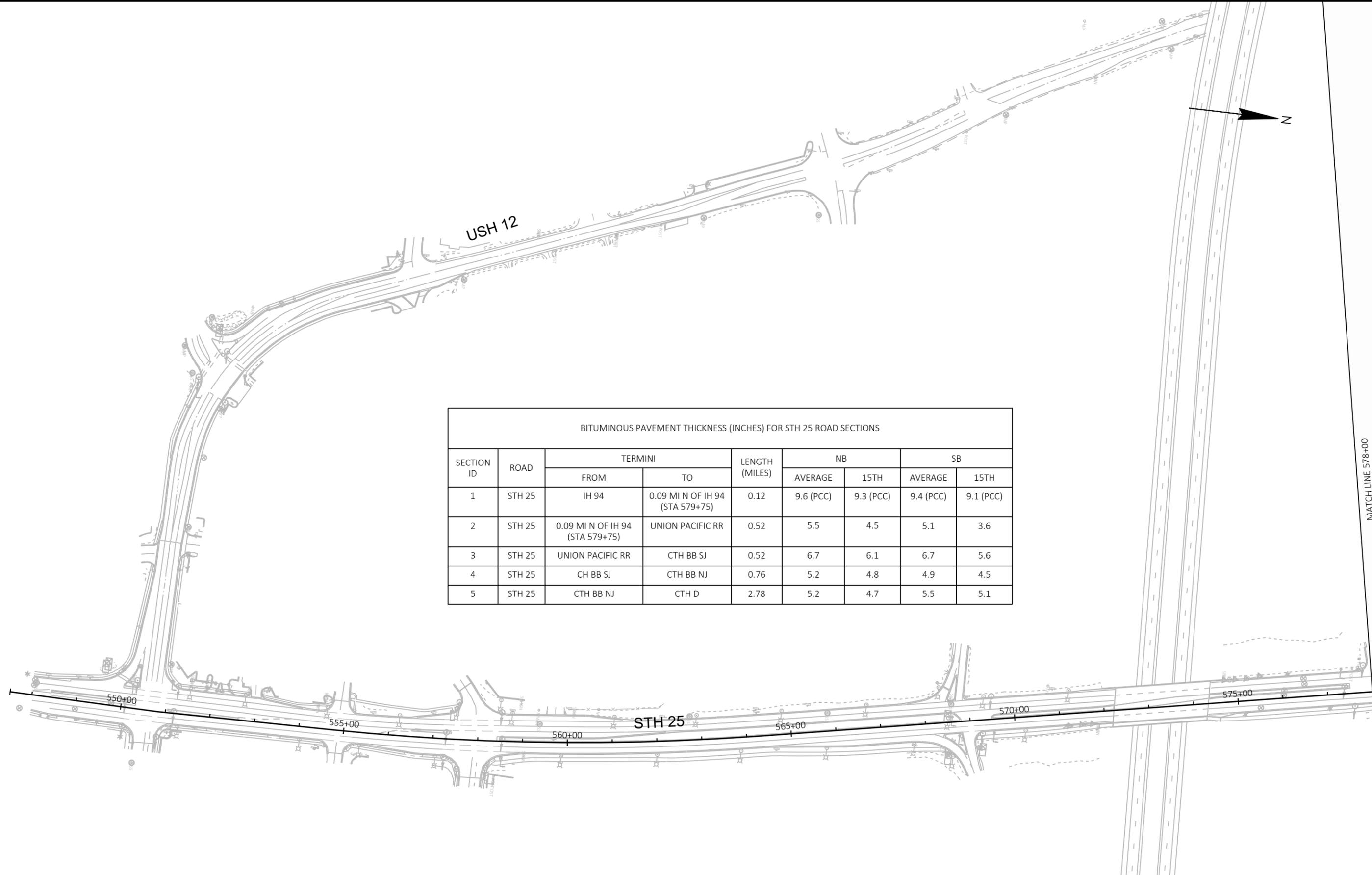
BENCHMARKS AND CONTROL POINTS					
POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
126	CP	193846.471	163366.360	951.32	5/8IN RB KL CAP
127	CP	194250.422	163655.251	968.65	5/8IN RB KL CAP
128	CP	194709.723	163861.726	986.71	5/8IN RB KL CAP
129	CP	195962.804	164639.060	1006.68	5/8IN RB KL CAP



BENCHMARKS AND CONTROL POINTS					
POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
130	CP	196673.009	165059.149	978.00	5/8IN RB KL CAP
131	CP	197036.582	165440.584	950.50	5/8IN RB KL CAP
132	CP	197442.755	166026.213	921.00	5/8IN RB KL CAP
133	CP	197900.581	166520.650	910.64	5/8IN RB KL CAP
141	CP	198067.524	166722.591	907.20	6IN NAIL



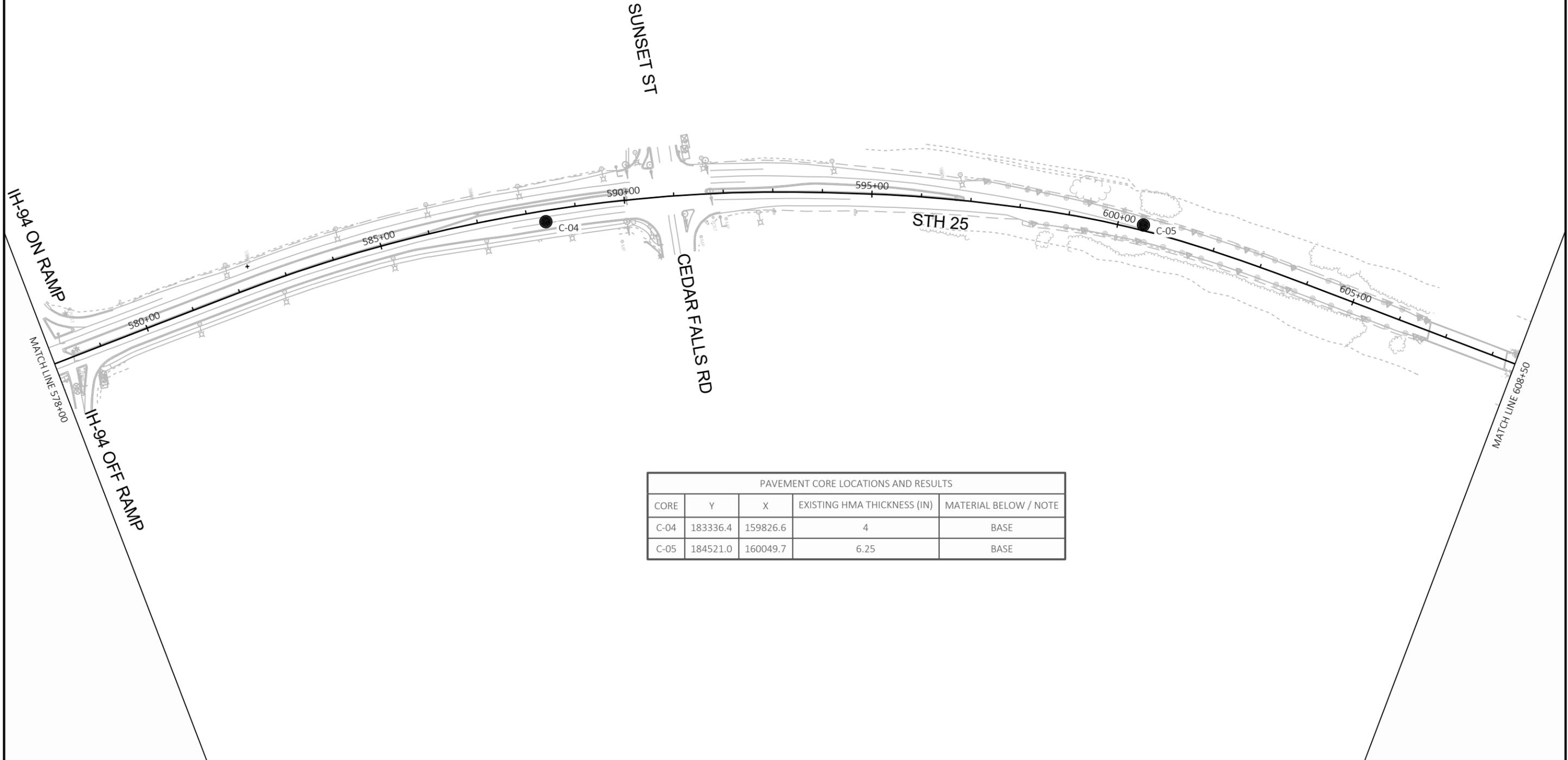
BENCHMARKS AND CONTROL POINTS					
POINT NAME	TYPE	Y	X	ELEVATION	DESCRIPTION
134	CP	198377.482	167186.995	900.15	5/8IN RB KL CAP
135	CP	198925.161	167792.426	901.24	5/8IN RB KL CAP
136	CP	199213.168	168221.580	906.69	5/8IN RB KL CAP
137	CP	199174.442	168104.706	905.92	MAG NAIL
138	CP	199047.322	168014.371	904.62	MAG NAIL
139	CP	198619.336	167490.465	896.26	6IN NAIL
140	CP	198556.267	167334.405	897.35	6IN NAIL



BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
1	STH 25	IH 94	0.09 MI N OF IH 94 (STA 579+75)	0.12	9.6 (PCC)	9.3 (PCC)	9.4 (PCC)	9.1 (PCC)
2	STH 25	0.09 MI N OF IH 94 (STA 579+75)	UNION PACIFIC RR	0.52	5.5	4.5	5.1	3.6
3	STH 25	UNION PACIFIC RR	CTH BB SJ	0.52	6.7	6.1	6.7	5.6
4	STH 25	CH BB SJ	CTH BB NJ	0.76	5.2	4.8	4.9	4.5
5	STH 25	CTH BB NJ	CTH D	2.78	5.2	4.7	5.5	5.1

MATCH LINE 578+00

BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
1	STH 25	IH 94	0.09 MI N OF IH 94 (STA 579+75)	0.12	9.6 (PCC)	9.3 (PCC)	9.4 (PCC)	9.1 (PCC)
2	STH 25	0.09 MI N OF IH 94 (STA 579+75)	UNION PACIFIC RR	0.52	5.5	4.5	5.1	3.6



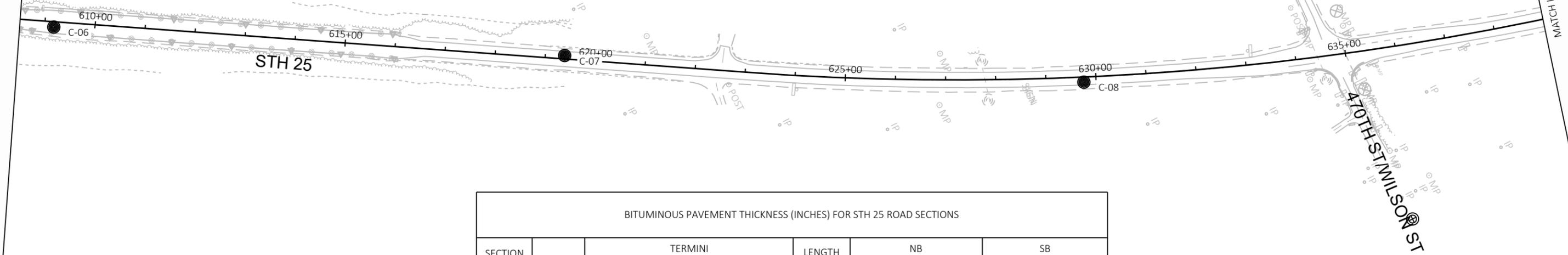
PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-04	183336.4	159826.6	4	BASE
C-05	184521.0	160049.7	6.25	BASE



PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-06	185260.6	160503.4	6	3" RECLAIMED
C-07	186143.1	161016.5	4.25	2.75" RECLAIMED
C-08	187042.0	161533.7	4.75	3.5" RECLAIMED

MATCH LINE 608+50

MATCH LINE 639+00



BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
3	STH 25	UNION PACIFIC RR	CTH BB SJ	0.52	6.7	6.1	6.7	5.6
4	STH 25	CH BB SJ	CTH BB NJ	0.76	5.2	4.8	4.9	4.5



PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-09	187945.0	161837.6	5.5	0.5" RECLAIMED
C-10	188913.0	162022.9	5.5	6" RECLAIMED
C-11	189858.1	162043.5	4	2.75" RECLAIMED
C-12	190896.8	162110.7	5.5	RECLAIMED

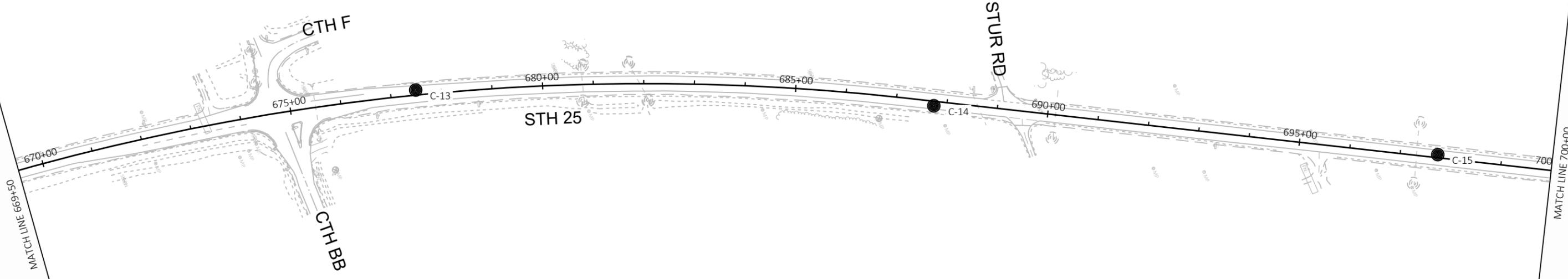
MATCH LINE 639+00

MATCH LINE 669+50



BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
4	STH 25	CH BB SJ	CTH BB NJ	0.76	5.2	4.8	4.9	4.5

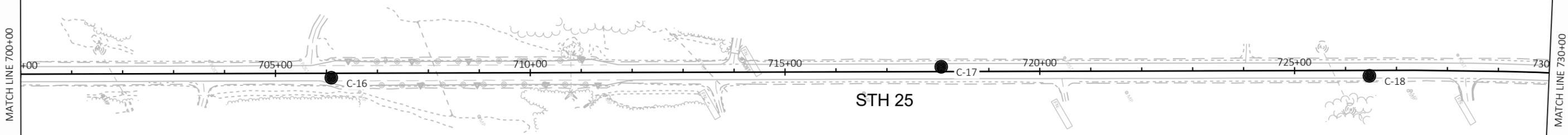
BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
4	STH 25	CH BB SJ	CTH BB NJ	0.76	5.2	4.8	4.9	4.5
5	STH 25	CTH BB NJ	CTH D	2.78	5.2	4.7	5.5	5.1



PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-13	191726.3	162276.5	5.5	RECLAIMED
C-14	192651.2	162713.8	5.75	RECLAIMED
C-15	193524.2	163199.9	5.25	RECLAIMED

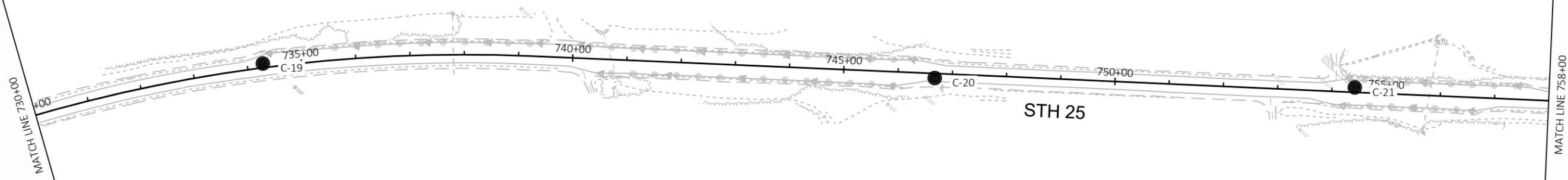
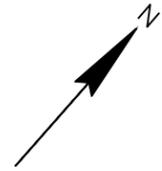


PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-16	194240.9	163630.2	5.25	0.5" RECLAIMED
C-17	195286.9	164212.2	5.5	0.5" RECLAIMED
C-18	196005.0	164649.2	5.25	0.25" RECLAIMED



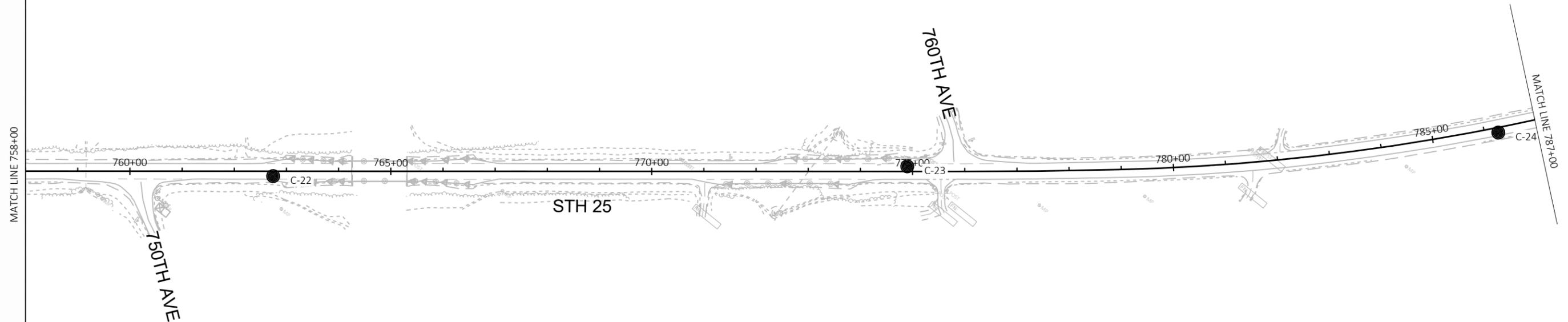
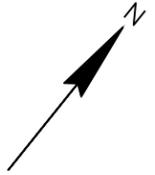
BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
5	STH 25	CTH BB NJ	CTH D	2.78	5.2	4.7	5.5	5.1

PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-19	196660.9	165072.7	6.25	2" RECLAIMED
C-20	197458.5	166020.0	5.375	0.5" RECLAIMED
C-21	197956.4	166612.8	5.5	RECLAIMED



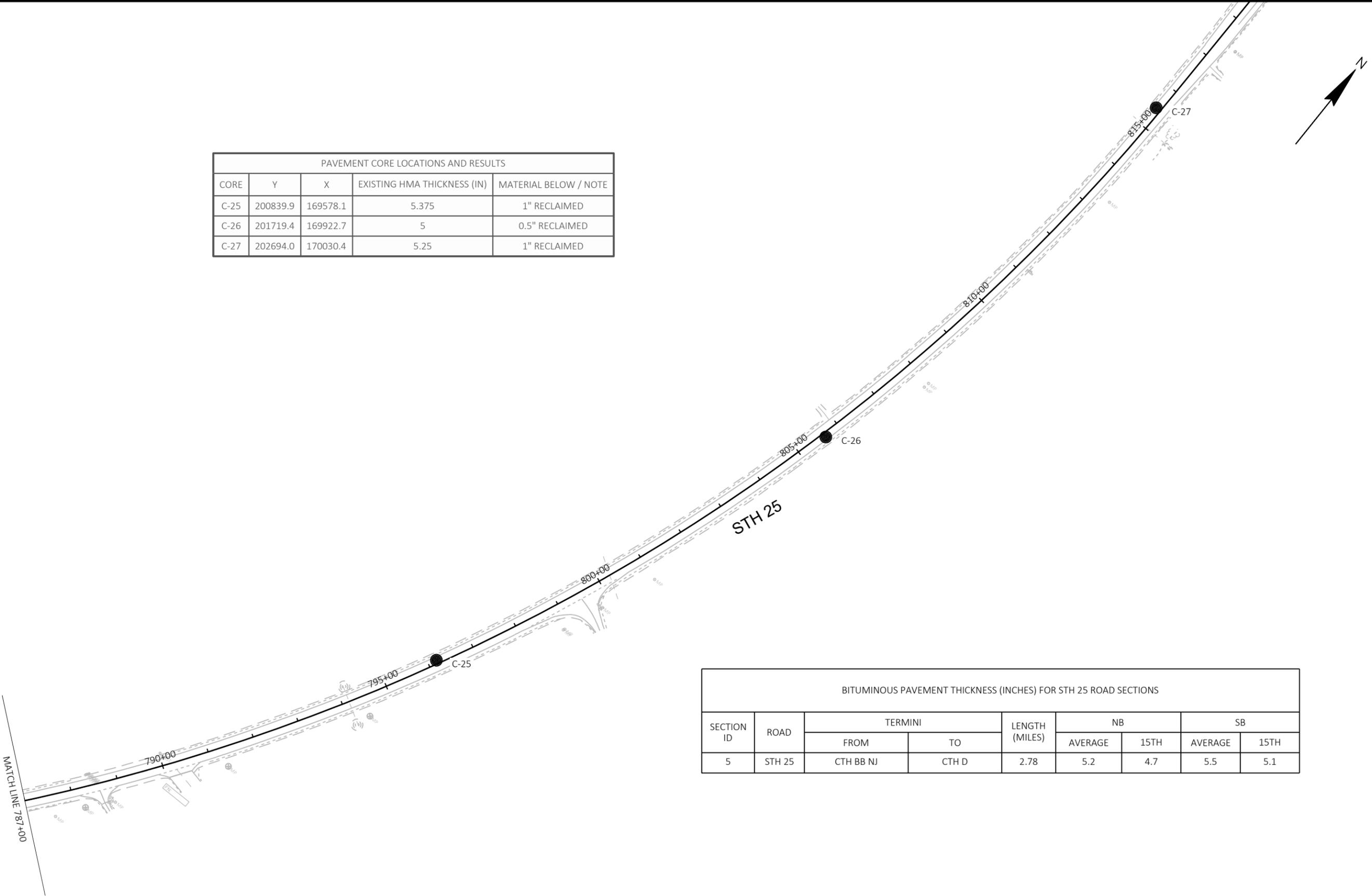
BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
5	STH 25	CTH BB NJ	CTH D	2.78	5.2	4.7	5.5	5.1

PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-22	198464.6	167272.5	4	RECLAIMED
C-23	199241.9	168206.7	5.5	RECLAIMED
C-24	200003.1	169048.2	4.875	RECLAIMED



BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
5	STH 25	CTH BB NJ	CTH D	2.78	5.2	4.7	5.5	5.1

PAVEMENT CORE LOCATIONS AND RESULTS				
CORE	Y	X	EXISTING HMA THICKNESS (IN)	MATERIAL BELOW / NOTE
C-25	200839.9	169578.1	5.375	1" RECLAIMED
C-26	201719.4	169922.7	5	0.5" RECLAIMED
C-27	202694.0	170030.4	5.25	1" RECLAIMED



BITUMINOUS PAVEMENT THICKNESS (INCHES) FOR STH 25 ROAD SECTIONS								
SECTION ID	ROAD	TERMINI		LENGTH (MILES)	NB		SB	
		FROM	TO		AVERAGE	15TH	AVERAGE	15TH
5	STH 25	CTH BB NJ	CTH D	2.78	5.2	4.7	5.5	5.1

Estimate Of Quantities

8100-01-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	5.000	5.000
0004	201.0205	Grubbing	STA	5.000	5.000
0006	204.0100	Removing Concrete Pavement	SY	14.000	14.000
0008	204.0105	Removing Concrete Pavement Butt Joints	SY	1,250.000	1,250.000
0010	204.0109.S	Removing Concrete Surface Partial Depth	SF	27,500.000	27,500.000
0012	204.0110	Removing Asphaltic Surface	SY	440.000	440.000
0014	204.0115	Removing Asphaltic Surface Butt Joints	SY	2,250.000	2,250.000
0016	204.0120	Removing Asphaltic Surface Milling	SY	40,400.000	40,400.000
0018	204.0150	Removing Curb & Gutter	LF	1,250.000	1,250.000
0020	204.0155	Removing Concrete Sidewalk	SY	160.000	160.000
0022	204.0165	Removing Guardrail	LF	85.000	85.000
0024	204.0180	Removing Delineators and Markers	EACH	20.000	20.000
0026	204.0195	Removing Concrete Bases	EACH	4.000	4.000
0028	205.0100	Excavation Common	CY	59.000	59.000
0030	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 8100-01-72	EACH	1.000	1.000
0032	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	113.000	113.000
0034	211.0700.S	Prepare Foundation for CIR Base Layer (project) 01. 8100-01-72	EACH	1.000	1.000
0036	211.0800.S	Base Repair for CIR Layer	CY	450.000	450.000
0038	213.0100	Finishing Roadway (project) 01. 8100-01-72	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,810.000	4,810.000
0042	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,455.000	1,455.000
0044	305.0500	Shaping Shoulders	STA	61.000	61.000
0046	312.0110	Select Crushed Material	TON	30.000	30.000
0048	327.1000.S	CIR Asphaltic Base Layer	SY	68,500.000	68,500.000
0050	415.0070	Concrete Pavement 7-Inch	SY	36.000	36.000
0052	415.0410	Concrete Pavement Approach Slab	SY	96.000	96.000
0054	416.0610	Drilled Tie Bars	EACH	232.000	232.000
0056	416.0620	Drilled Dowel Bars	EACH	12.000	12.000
0058	455.0605	Tack Coat	GAL	15,000.000	15,000.000
0060	455.0770.S	Asphalt Stabilizing Agent	TON	320.000	320.000
0062	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0064	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0066	460.2000	Incentive Density HMA Pavement	DOL	3,200.000	3,200.000
0068	460.2005	Incentive Density PWL HMA Pavement	DOL	8,460.000	8,460.000
0070	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	16,470.000	16,470.000
0072	460.2010	Incentive Air Voids HMA Pavement	DOL	17,650.000	17,650.000
0074	460.6645	HMA Pavement 5 MT 58-34 V	TON	17,650.000	17,650.000
0076	460.9000.S	Material Transfer Vehicle 01. 8100-01-72	EACH	1.000	1.000
0078	465.0105	Asphaltic Surface	TON	590.000	590.000
0080	465.0110	Asphaltic Surface Patching	TON	200.000	200.000
0082	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	110.000	110.000
0084	465.0560	Asphaltic Rumble Strips, Centerline	LF	18,220.000	18,220.000
0086	520.8700	Cleaning Culvert Pipes	EACH	8.000	8.000
0088	520.9700.S	Culvert Pipe Liners (size) 01. 24-Inch	LF	97.000	97.000
0090	520.9700.S	Culvert Pipe Liners (size) 02. 30-Inch	LF	83.000	83.000
0092	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	2.000	2.000
0094	601.0120	Concrete Curb Type J	LF	65.000	65.000
0096	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	485.000	485.000
0098	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	565.000	565.000

Estimate Of Quantities

8100-01-72

Line	Item	Item Description	Unit	Total	Qty
0100	601.0584	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBT	LF	80.000	80.000
0102	601.0586	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBTT	LF	50.000	50.000
0104	601.0600	Concrete Curb Pedestrian	LF	70.000	70.000
0106	602.0410	Concrete Sidewalk 5-Inch	SF	2,340.000	2,340.000
0108	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	116.000	116.000
0110	602.0615	Curb Ramp Detectable Warning Field Radial Natural Patina	SF	45.000	45.000
0112	602.0810	Concrete Driveway 6-Inch	SY	15.000	15.000
0114	602.3010	Concrete Surface Drains	CY	16.000	16.000
0116	603.8000	Concrete Barrier Temporary Precast Delivered	LF	630.000	630.000
0118	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,260.000	1,260.000
0120	606.0200	Riprap Medium	CY	12.000	12.000
0122	611.0627	Inlet Covers Type HM	EACH	1.000	1.000
0124	611.8110	Adjusting Manhole Covers	EACH	4.000	4.000
0126	611.8115	Adjusting Inlet Covers	EACH	6.000	6.000
0128	611.8120.S	Cover Plates Temporary	EACH	6.000	6.000
0130	614.0400	Adjusting Steel Plate Beam Guard	LF	2,530.000	2,530.000
0132	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0134	614.0920	Salvaged Rail	LF	1,980.000	1,980.000
0136	614.0925	Salvaged Guardrail End Treatments	EACH	19.000	19.000
0138	614.0950	Replacing Guardrail Posts and Blocks	EACH	416.000	416.000
0140	614.0951	Replacing Guardrail Rail and Hardware	LF	2,080.000	2,080.000
0142	614.2300	MGS Guardrail 3	LF	25.000	25.000
0144	614.2500	MGS Thrie Beam Transition	LF	40.000	40.000
0146	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0148	616.0700.S	Fence Safety	LF	1,000.000	1,000.000
0150	618.0100	Maintenance and Repair of Haul Roads (project) 01. 8100-01-72	EACH	1.000	1.000
0152	619.1000	Mobilization	EACH	1.000	1.000
0154	620.0300	Concrete Median Sloped Nose	SF	162.000	162.000
0156	624.0100	Water	MGAL	140.000	140.000
0158	625.0100	Topsoil	SY	50.000	50.000
0160	625.0500	Salvaged Topsoil	SY	1,050.000	1,050.000
0162	627.0200	Mulching	SY	780.000	780.000
0164	628.1504	Silt Fence	LF	2,500.000	2,500.000
0166	628.1520	Silt Fence Maintenance	LF	2,500.000	2,500.000
0168	628.1905	Mobilizations Erosion Control	EACH	9.000	9.000
0170	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0172	628.2004	Erosion Mat Class I Type B	SY	270.000	270.000
0174	628.7005	Inlet Protection Type A	EACH	5.000	5.000
0176	628.7015	Inlet Protection Type C	EACH	25.000	25.000
0178	628.7555	Culvert Pipe Checks	EACH	270.000	270.000
0180	628.7570	Rock Bags	EACH	50.000	50.000
0182	629.0210	Fertilizer Type B	CWT	1.000	1.000
0184	630.0140	Seeding Mixture No. 40	LB	47.000	47.000
0186	630.0200	Seeding Temporary	LB	29.000	29.000
0188	630.0500	Seed Water	MGAL	60.000	60.000
0190	633.5200	Markers Culvert End	EACH	19.000	19.000
0192	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	10.000	10.000
0194	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	3.000	3.000
0196	637.2210	Signs Type II Reflective H	SF	28.500	28.500

Estimate Of Quantities

8100-01-72

Line	Item	Item Description	Unit	Total	Qty
0198	638.2102	Moving Signs Type II	EACH	23.000	23.000
0200	638.2602	Removing Signs Type II	EACH	1.000	1.000
0202	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0204	638.4000	Moving Small Sign Supports	EACH	6.000	6.000
0206	642.5001	Field Office Type B	EACH	1.000	1.000
0208	643.0300	Traffic Control Drums	DAY	38,450.000	38,450.000
0210	643.0420	Traffic Control Barricades Type III	DAY	340.000	340.000
0212	643.0705	Traffic Control Warning Lights Type A	DAY	670.000	670.000
0214	643.0715	Traffic Control Warning Lights Type C	DAY	1,510.000	1,510.000
0216	643.0810	Traffic Control Connected Arrow Boards	DAY	150.000	150.000
0218	643.0900	Traffic Control Signs	DAY	9,300.000	9,300.000
0220	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0222	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	300.000	300.000
0224	643.3165	Temporary Marking Line Paint 6-Inch	LF	167,110.000	167,110.000
0226	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	36,180.000	36,180.000
0228	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	3,340.000	3,340.000
0230	643.3265	Temporary Marking Line Paint 10-Inch	LF	5,500.000	5,500.000
0232	643.3305	Temporary Marking Crosswalk Paint 6-inch	LF	920.000	920.000
0234	643.3505	Temporary Marking Arrow Paint	EACH	54.000	54.000
0236	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	840.000	840.000
0238	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	48.000	48.000
0240	643.5000	Traffic Control	EACH	1.000	1.000
0242	644.1430	Temporary Pedestrian Surface Plate	SF	260.000	260.000
0244	644.1440	Temporary Pedestrian Surface Matting	SF	2,540.000	2,540.000
0246	644.1601	Temporary Pedestrian Curb Ramp	DAY	70.000	70.000
0248	644.1605	Temporary Pedestrian Detectable Warning Field	SF	100.000	100.000
0250	644.1810	Temporary Pedestrian Barricade	LF	590.000	590.000
0252	644.1900.S	Temporary Audible Message Devices	DAY	80.000	80.000
0254	645.0120	Geotextile Type HR	SY	187.000	187.000
0256	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	920.000	920.000
0258	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	83,550.000	83,550.000
0260	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	2,745.000	2,745.000
0262	646.5020	Marking Arrow Epoxy	EACH	27.000	27.000
0264	646.5120	Marking Word Epoxy	EACH	8.000	8.000
0266	646.6120	Marking Stop Line Epoxy 18-Inch	LF	420.000	420.000
0268	646.7120	Marking Diagonal Epoxy 12-Inch	LF	310.000	310.000
0270	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	460.000	460.000
0272	646.8120	Marking Curb Epoxy	LF	135.000	135.000
0274	646.8220	Marking Island Nose Epoxy	EACH	12.000	12.000
0276	650.4500	Construction Staking Subgrade	LF	1,062.000	1,062.000
0278	650.5000	Construction Staking Base	LF	992.000	992.000
0280	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	710.000	710.000
0282	650.7000	Construction Staking Concrete Pavement	LF	106.000	106.000
0284	650.8000	Construction Staking Resurfacing Reference	LF	24,630.000	24,630.000
0286	650.8501	Construction Staking Electrical Installations (project) 01. 8100-01-72	EACH	1.000	1.000
0288	650.9000	Construction Staking Curb Ramps	EACH	10.000	10.000
0290	650.9500	Construction Staking Sidewalk (project) 01. 8100-01-72	EACH	1.000	1.000
0292	650.9911	Construction Staking Supplemental Control (project) 01. 8100-01-72	EACH	1.000	1.000
0294	650.9920	Construction Staking Slope Stakes	LF	992.000	992.000

Estimate Of Quantities

8100-01-72

Line	Item	Item Description	Unit	Total	Qty
0296	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	85.000	85.000
0298	652.0700.S	Install Conduit into Existing Item	EACH	7.000	7.000
0300	652.0800	Conduit Loop Detector	LF	508.000	508.000
0302	654.0101	Concrete Bases Type 1	EACH	6.000	6.000
0304	654.0102	Concrete Bases Type 2	EACH	1.000	1.000
0306	655.0230	Cable Traffic Signal 5-14 AWG	LF	221.000	221.000
0308	655.0240	Cable Traffic Signal 7-14 AWG	LF	802.000	802.000
0310	655.0260	Cable Traffic Signal 12-14 AWG	LF	106.000	106.000
0312	655.0270	Cable Traffic Signal 15-14 AWG	LF	414.000	414.000
0314	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,364.000	1,364.000
0316	655.0700	Loop Detector Lead In Cable	LF	2,030.000	2,030.000
0318	655.0800	Loop Detector Wire	LF	1,556.000	1,556.000
0320	657.0100	Pedestal Bases	EACH	6.000	6.000
0322	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	1.000	1.000
0324	657.0405	Traffic Signal Standards Aluminum 3.5-FT	EACH	2.000	2.000
0326	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	3.000	3.000
0328	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	1.000	1.000
0330	658.0173	Traffic Signal Face 3S 12-Inch	EACH	1.000	1.000
0332	658.0174	Traffic Signal Face 4S 12-Inch	EACH	2.000	2.000
0334	658.0175	Traffic Signal Face 5S 12-Inch	EACH	1.000	1.000
0336	658.0416	Pedestrian Signal Face 16-Inch	EACH	3.000	3.000
0338	658.0500	Pedestrian Push Buttons	EACH	3.000	3.000
0340	658.5070	Signal Mounting Hardware (location) 01. STH 25 & IH 94 WB Ramps	EACH	1.000	1.000
0342	658.5070	Signal Mounting Hardware (location) 02. STH 25 & Cedar Falls Road	EACH	1.000	1.000
0344	661.0101	Temporary Traffic Signals for Bridges (structure) 01. B-17-45	EACH	1.000	1.000
0346	680.0100	Public Land Reference Monument Verify and Reset	EACH	4.000	4.000
0348	690.0150	Sawing Asphalt	LF	935.000	935.000
0350	690.0250	Sawing Concrete	LF	835.000	835.000
0352	715.0715	Incentive Flexural Strength Concrete Pavement	DOL	500.000	500.000
0354	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0356	740.0440	Incentive IRI Ride	DOL	20,610.000	20,610.000
0358	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,500.000	1,500.000
0360	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	990.000	990.000
0362	SPV.0060	Special 01. Remove, Salvage, and Reinstall Traffic Sig Equip (STH 25 & IH 94 WB Ramps)	EACH	1.000	1.000
0364	SPV.0060	Special 02. Remove and Salvage Traffic Signals (STH 25 & Cedar Falls Road)	EACH	1.000	1.000
0366	SPV.0090	Special 01. Grading, Shaping, and Finishing Ditch	LF	1,085.000	1,085.000
0368	SPV.0090	Special 02. Concrete Curb & Gutter 48-Inch Special	LF	150.000	150.000

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CLEARING AND GRUBBING

			201.0105	201.0205	
			CLEARING	GRUBBING	
STATION	-	STATION	LOCATION	STA	STA
PROJECT 8100-01-72					
CATEGORY 0010					
579+75	-	607+00	STH 25	1	1
607+00	-	674+50	STH 25	2	2
674+50	-	765+00	STH 25	2	2
PROJECT TOTALS				5	5

REMOVING CONCRETE ITEMS

				204.0100	204.0105	204.0109.S	204.0155
				REMOVING	REMOVING	REMOVING	REMOVING
				CONCRETE	CONCRETE	CONCRETE	CONCRETE
				PAVEMENT	PAVEMENT BUTT	SURFACE	CONCRETE
				JOINTS	PARTIAL DEPTH	SIDEWALK	
STATION	-	STATION	LOCATION	SY	SY	SF	SY
PROJECT 8100-01-72							
CATEGORY 0010							
574+33	-	579+75	STH 25	-	1,250	27,500	96
579+75	-	607+00	STH 25	-	-	-	64
674+50	-	765+00	STH 25	14	-	-	-
PROJECT TOTALS				14	1,250	27,500	160

REMOVING ASPHALT ITEMS

				204.0110	204.0115	204.0120
				REMOVING	REMOVING	REMOVING
				ASPHALTIC	ASPHALTIC	ASPHALTIC
				SURFACE	SURFACE	SURFACE
				BUTT JOINTS	MILLING	
STATION	-	STATION	LOCATION	SY	SY	SY
PROJECT 8100-01-72						
CATEGORY 0010						
574+33	-	579+75	STH 25	22	-	-
579+75	-	607+00	STH 25	409	-	21,070
607+00	-	674+50	STH 25	9	539	7,874
674+50	-	765+00	STH 25	-	696	6,913
765+00	-	823+35	STH 25	-	1,015	4,543
PROJECT TOTALS				440	2,250	40,400

REMOVING CURB & GUTTER

				204.0150
				REMOVING
				CURB &
				GUTTER
STATION	-	STATION	LOCATION	LF
PROJECT 8100-01-72				
CATEGORY 0010				
574+33	-	579+75	STH 25	630
579+75	-	674+50	STH 25	620
PROJECT TOTALS				1,250

REMOVING GUARDRAIL

				204.0165
				REMOVING
				GUARDRAIL
STATION	-	STATION	LOCATION	LF
PROJECT 8100-01-72				
CATEGORY 0010				
574+64	-	575+49	LT	85
PROJECT TOTALS				85

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	EXPANDED EBS BACKFILL (6)	SELECT CRUSHED MATERIAL	UNEXPANDED FILL	EXPANDED FILL (7)	MASS ORDINATE +/- (8)	WASTE
			CUT (2)	EBS EXCAVATION (3)			FACTOR 1.30	(10) TON		FACTOR 1.30		
1-1	574+71 - 577+17	STH 25	55	4	12	43	5	10	0	0	43	43
GRAND TOTAL			55	4	12	43	5	10	0	0	43	43
TOTAL COMMON EXC			59									

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (6) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. EBS BACKFILL FACTOR = 1.30. ITEM NUMBER 312.0110
- (7) EXPANDED FILL FACTOR = 1.25
- (8) 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.
- (9) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.
- (10) SELECT CRUSHED MATERIAL QUANTITY SHOWN HERE FOR INFORMATION ONLY. SEE BASE AGGREGATE DENSE QUANTITY TABLE.

REMOVING DELINEATORS AND MARKERS

STATION	OFFSET	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH	633.5200 MARKERS CULVERT END EACH
PROJECT 8100-01-72 CATEGORY 0010				
640+20	LT	STH 25	1	1
657+50	RT	STH 25	2	2
675+50	LT	STH 25	2	1
688+51	LT	STH 25	1	1
690+15	LT	STH 25	1	1
701+80	RT	STH 25	1	1
710+80	RT & LT	STH 25	2	2
713+50	RT & LT	STH 25	2	2
737+80	RT & LT	STH 25	2	2
755+80	LT	STH 25	1	1
759+15	RT	STH 25	1	1
733+00	LT	STH 25	1	1
800+25	RT & LT	STH 25	2	2
815+02	LT	STH 25	1	1
PROJECT TOTALS			20	19

PREPARE FOUNDATION FOR ASPHALT

STATION	-	STATION	LOCATION	211.0400* PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	211.0101.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING 8100-01-72 EACH
PROJECT 8100-01-72 CATEGORY 0010					
579+75	-	607+00	STH 25	40	-
607+00	-	674+50	STH 25	21	-
674+50	-	765+00	STH 25	42	-
765+00	-	823+35	STH 25	10	-
PROJECT 8100-01-72				-	1
PROJECT TOTALS				113	1

*SEE TYPICAL SECTION SHEETS FOR LOCATIONS

BASE AGGREGATE DENSE

STATION	-	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	305.0500** SHAPING SHOULDERS STA
PROJECT 8100-01-72 CATEGORY 0010							
574+33	-	579+75	STH 25	29	120	-	-
579+75	-	607+00	STH 25	73	279	-	40
607+00	-	674+50	STH 25	1,308	310	-	21
674+50	-	765+00	STH 25	2,052	426	10	-
765+00	-	823+35	STH 25	1,348	235	10	-
EBS BACKFILL			STH 25	-	-	10	-
PROJECT TOTALS				4,810	1,370	30	61

*ADDITIONAL QUANTITY FOUND IN TEMPORARY PEDESTRIAN ITEMS TABLE

**SEE TYPICAL SECTION SHEETS FOR LOCATIONS

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COLD-IN-PLACE RECYCLING

STATION	-	STATION	LOCATION	211.0700.S PREPARE FOUNDATION FOR CIR BASE LAYER	211.0800.S BASE REPAIR FOR CIR LAYER	327.1000.S COLD-IN-PLACE RECYCLING (CIR) ASPHALT BASE LAYER	455.0770.S ASPHALT STABILIZING AGENT TON
PROJECT 8100-01-72							
CATEGORY 0010							
607+00	-	674+50	STH 25	-	-	19,017	86
674+50	-	765+00	STH 25	-	-	29,972	135
765+00	-	823+35	STH 25	-	-	19,101	86
UNDISTRIBUTED				1	450	410	13
PROJECT TOTALS				1	450	68,500	320

CONCRETE PAVEMENT

STATION	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	415.0070 CONCRETE PAVEMENT 7-INCH SY	602.0810 CONCRETE DRIVEWAY 6-INCH SY
PROJECT 8100-01-72				
CATEGORY 0010				
606+57	STH 25	48	18	-
608+36	STH 25	48	18	-
714+00	STH 25	-	-	15
PROJECT TOTALS		96	36	15

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DRILLED BARS

STATION	-	STATION	LOCATION	416.0610 DRILLED TIE BARS EA	416.0620 DRILLED DOWEL BARS EA
PROJECT 8100-01-72					
CATEGORY 0010					
574+33	-	579+75	STH 25	232	12
PROJECT TOTALS				232	12

HMA PAVEMENT

STATION	-	STATION	LOCATION	455.0605 TACK COAT GAL	460.6645 HMA PAVEMENT 5 MT 58-34 V TON	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND TON	NOTES
PROJECT 8100-01-72									
CATEGORY 0010									
574+33	-	579+75	STH 25	601	601	-	-	-	-
579+75	-	607+00	STH 25	2,668	3,736	133	-	-	-
607+00	-	674+50	STH 25	3,568	4,187	4	-	25	-
674+50	-	765+00	STH 25	4,963	5,522	-	-	47	-
765+00	-	823+35	STH 25	3,200	3,604	-	-	38	-
WEDGING				-	-	153	-	-	-
MODERATE REPAIRS - CIR SECTION				-	-	150	-	-	LEVELING, SPOT FAILURES, EDGE REPAIRS
MINOR REPAIRS - CIR SECTION				-	-	-	100	-	MINOR FIXES, PATCHING, POT HOLES
MODERATE REPAIRS - RESURFACING				-	-	150	-	-	LEVELING, SPOT FAILURES, EDGE REPAIRS
MINOR REPAIRS - RESURFACING				-	-	-	100	-	MINOR FIXES, PATCHING, POT HOLES
PROJECT TOTALS				15,000	17,650	590	200	110	

PROJECT NO: 8100-01-72

HWY: STH 25

COUNTY: DUNN

MISCELLANEOUS QUANTITIES

SHEET

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PROJECT 8100-01-72 PWL MIXTURE USE TABLE - ACCEPTANCE CRITERIA

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QMP TO BE USED	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
STH 25 LANES	574+33 - 579+75	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	236	1.50"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY HMA PAVEMENT 460.2000
STH 25 LANES	574+33 - 579+75	LOWER LAYER	MILLED SURFACE	5 MT 58-34 V	157	1.00"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
STH 25 SHOULDERS AND TURN LANES	574+33 - 579+75	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	124	1.50"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY HMA PAVEMENT 460.2000
STH 25 SHOULDERS AND TURN LANES	574+33 - 579+75	LOWER LAYER	MILLED SURFACE	5 MT 58-34 V	84	1.00"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
STH 25 LANES	579+75 - 617+50	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	1,369	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY HMA PAVEMENT 460.2000
STH 25 LANES	579+75 - 617+50	LOWER LAYER	MILLED SURFACE	5 MT 58-34 V	1,369	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY HMA PAVEMENT 460.2000
STH 25 SHOULDERS AND TURN LANES	579+75 - 617+50	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	927	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY HMA PAVEMENT 460.2000
STH 25 SHOULDERS AND TURN LANES	579+75 - 617+50	LOWER LAYER	BASE AGGREGATE / MILLED SURFACE	5 MT 58-34 V	927	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY HMA PAVEMENT 460.2000
STH 25 LANES	617+50 - 823+35	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	4,610	1.50"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
STH 25 LANES	617+50 - 823+35	LOWER LAYER	COLD IN PLACE REC. OR EXISTING PAVEMENT	5 MT 58-34 V	3,841	1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
STH 25 SHOULDERS AND TURN LANES	617+50 - 823+35	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	1,612	1.50"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
STH 25 SHOULDERS AND TURN LANES	617+50 - 823+35	LOWER LAYER	BASE AGG, COLD IN PLACE REC., OR EX PAVT	5 MT 58-34 V	1,344	1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
STH 25 SHOULDERS AND TURN LANES	617+50 - 823+35	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	525	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
STH 25 SHOULDERS AND TURN LANES	617+50 - 823+35	LOWER LAYER	BASE AGG, COLD IN PLACE REC., OR EX PAVT	5 MT 58-34 V	525	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE

PWL TEST STRIPS AND INCENTIVES

LOCATION	STATION - STATION	460.0105.S 460.0110.S	
		VOLUMETRICS (EACH)	DENSITY (EACH)
HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP			
PROJECT 8100-01-72			
CATEGORY 0010			
PROJECT	UNDISTRIBUTED	1	2
PROJECT TOTALS		1	2

RUMBLE STRIPS

				465.0560
				ASPHALTIC
				RUMBLE
				STRIPS,
				CENTERLINE
STATION	-	STATION	LOCATION	LF
PROJECT 8100-01-72				
CATEGORY 0010				
579+75	-	607+00	STH 25	430
607+00	-	674+50	STH 25	5,630
674+50	-	765+00	STH 25	7,590
765+00	-	823+35	STH 25	4,570
PROJECT TOTALS				18,220

CULVERT PIPE LINERS

			520.9700.S.01	520.9700.S.02	520.9750.S
			CULVERT PIPE	CULVERT PIPE	CLEANING CULVERT
			LINERS	LINERS	PIPES FOR LINER
			24-INCH	30-INCH	VERIFICATION
STATION	LOCATION	NOTE	LF	LF	EACH
PROJECT 8100-01-72					
CATEGORY 0010					
688+51	STH 25	EXISTING CMCP	-	83	1
701+80	STH 25	EXISTING CMCP	97	-	1
PROJECT TOTALS			97	83	2

CONCRETE CURB & GUTTER

		601.0120	601.0409	601.0411	601.0584	601.0586	601.0600	650.5500	SPV.0090.02			
		CONCRETE	CONCRETE	CONCRETE	CONCRETE CURB	CONCRETE CURB	CONCRETE	CONSTRUCTION	CONCRETE			
		CURB &	CURB &	& GUTTER 30-	& GUTTER 4-INCH	& GUTTER 4-INCH	CURB	STAKING CURB	CURB & GUTTER			
		CONCRETE	GUTTER 30-	GUTTER 30-	SLOPED 30-INCH	SLOPED 30-INCH	PEDESTRIAN	GUTTER AND CURB	48-INCH			
		CURB TYPE J	INCH TYPE A	INCH TYPE D	TYPE TBT	TYPE TBTT	LF	& GUTTER	SPECIAL			
STATION	-	STATION	LOCATION	OFFSET	LF	LF	LF	LF	LF			
PROJECT 8100-01-72												
CATEGORY 0010												
574+33	-	579+75	STH 25	LT & RT	-	485	-	-	34	150		
579+75	-	607+00	STH 25	LT & RT	65	-	565	40	25	36	670	-
607+00	-	674+50	STH 25	LT & RT	-	-	-	40	25	-	40	-
PROJECT TOTALS					65	485	565	80	50	70	710	150

SEE INTERSECTION DETAIL AND PLAN DETAIL SHEETS FOR SPECIFIC CURB AND CURB & GUTTER LOCATIONS

CONCRETE SIDEWALK

STATION	-	STATION	LOCATION	602.0410 CONCRETE SIDEWALK 5- INCH SF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL SF	602.0615 CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL SF
PROJECT 8100-01-72						
CATEGORY 0010						
574+33	-	579+75	STH 25	1,010	48	23
579+75	-	607+00	STH 25	1,330	68	22
PROJECT TOTALS				2,340	116	45

CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	NOTE	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	Notes
PROJECT 8100-01-72				
CATEGORY 0010				
STH 25	B-17-45 TEMP SIGNAL	630	1,260	2 STAGES
PROJECT TOTALS		630	1,260	

RIPRAP

STATION	OFFSET	LOCATION	602.3010 CONCRETE SURFACE DRAINS CY	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
PROJECT 8100-01-72						
CATEGORY 0010						
606+39	RT	STH 25	4	3	45	CONCRETE SURFACE DRAIN
606+33	LT	STH 25	4	3	47	CONCRETE SURFACE DRAIN
608+56	LT	STH 25	4	3	48	CONCRETE SURFACE DRAIN
608+60	RT	STH 25	4	3	47	CONCRETE SURFACE DRAIN
PROJECT TOTALS			16	12	187	

INLET COVERS

STATION	OFFSET	LOCATION	611.0627 INLET COVERS TYPE HM EACH
PROJECT 8100-01-72			
CATEGORY 0010			
574+77	48.3'LT	STH 25	1
PROJECT TOTALS			1

3

3

ADJUSTING COVERS

STATION	-	STATION	LOCATION	611.8120.S COVER PLATES TEMPORARY EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH
PROJECT 8100-01-72						
CATEGORY 0010						
574+33	-	579+75	STH 25	1	3	1
579+75	-	607+00	STH 25	5	1	5
PROJECT TOTALS				6	4	6

CRASH CUSHIONS TEMPORARY

STATION	LOCATION	NOTE	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
PROJECT 8100-01-72										
CATEGORY 0010										
604+35	STH 25	B-17-45 TEMP SIGNAL	1	2	OM-3R (WO5-58R)	TL-3	BIDIRECTIONAL	L	TEMPORARY BARRIER BRIDGE APPROACH	TRAFFIC SHIFTED LT
610+60	STH 25	B-17-45 TEMP SIGNAL	1	2	OM-3R (WO5-58R)	TL-3	BIDIRECTIONAL	L	TEMPORARY BARRIER BRIDGE APPROACH	TRAFFIC SHIFTED RT
PROJECT TOTALS			2							

GUARDRAIL

STATION	-	STATION	LOCATION	614.0400 ADJUSTING STEEL PLATE BEAM GUARD LF	614.0920 SALVAGED RAIL LF	614.0925 END TREATMENTS EACH	614.0950 REPLACING GUARDRAIL POSTS AND BLOCKS EACH	614.0951 REPLACING GUARDRAIL RAIL AND HARDWARE LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
PROJECT 8100-01-72											
CATEGORY 0010											
574+67	-	576+17	LT	-	-	-	-	-	25	40	1
597+25	-	606+57	LT	900	50	1	38	50	-	-	-
656+50	-	658+79	RT	130	100	2	22	100	-	-	-
706+46	-	711+50	RT	410	100	2	31	100	-	-	-
734+35	-	739+48	LT	-	520	2	85	520	-	-	-
740+06	-	746+36	LT	530	100	2	35	100	-	-	-
740+45	-	746+00	RT	560	0	2	20	100	-	-	-
754+23	-	757+53	LT	-	330	2	54	330	-	-	-
754+13	-	756+67	RT	-	260	2	43	260	-	-	-
762+99	-	764+25	LT	-	130	1	22	130	-	-	-
762+99	-	764+25	RT	-	130	1	22	130	-	-	-
765+31	-	766+58	LT	-	130	1	22	130	-	-	-
765+31	-	766+58	RT	-	130	1	22	130	-	-	-
PROJECT TOTALS				2,530	1,980	19	416	2,080	25	40	1

PROJECT NO: 8100-01-72

HWY: STH 25

COUNTY: DUNN

MISCELLANEOUS QUANTITIES

SHEET

E

FILE NAME:

PLOT DATE:

PLOT BY: KL ENGINEERING

PLOT NAME:

PLOT SCALE: 1"=1'

WISDOT/CADD SHEET 42

FENCE SAFETY

STATION	-	STATION	NOTE	616.0700.S FENCE SAFETY LF
PROJECT 8100-01-72				
CATEGORY 0010				
PROJECT 8100-01-72			WETLAND PROTECTION	1,000
PROJECT TOTALS				1,000

CONCRETE MEDIAN SLOPED NOSE

STATION	OFFSET	LOCATION	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	NOSE TYPE
PROJECT 8100-01-72				
CATEGORY 0010				
577+46	LT	STH 25	22	1
578+30	LT	STH 25	24	1
578+33	RT	STH 25	18	1
578+41	RT	STH 25	10	2
578+56	RT	STH 25	9	2
590+08	LT	STH 25	14	1
591+22	RT	STH 25	17	1
591+69	LT	STH 25	29	1
596+82	LT	STH 25	19	1
PROJECT TOTALS			162	

WATER

LOCATION	TASK	624.0100 WATER MGAL
PROJECT 8100-01-72		
CATEGORY 0010		
STH 25	COMPACTION	130
STH 25	DUST CONTROL	10
PROJECT TOTALS		140

PUBLIC LAND SURVEY MONUMENT VERIFY AND RESET

STATION	OFFSET	LOCATION	ID	DESCRIPTION	680.0100 PUBLIC LAND SURVEY MONUMENT VERIFY AND RESET EA
PROJECT 8100-01-72					
CATEGORY 0010					
661+54.00	10.3' RT	STH 25	110581	MAG NAIL S 02-28-13	1
661+00.47	25.4' RT	STH 25	-	3/4IN RB WITNESS MONUMENT	1
661+53.72	53.9' RT	STH 25	-	3/4IN RB WITNESS MONUMENT	1
662+09.10	26.5' RT	STH 25	-	3/4IN RB WITNESS MONUMENT	1
PROJECT TOTALS					1

FINISHING ITEMS

STATION	-	STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
PROJECT 8100-01-72										
CATEGORY 0010										
574+33	-	579+75	STH 25	-	303	303	0.2	13.7	8.2	17.0
579+75	-	607+00	STH 25	-	417	316	0.3	18.8	11.3	23.4
607+00	-	674+50	STH 25	-	108	-	0.1	4.9	3.0	6.1
UNDISTRIBUTED				50	222	161	0.4	9.6	6.5	13.5
PROJECT TOTALS				50	1050	780	1.0	47.0	29.0	60.0

CULVERT PIPE CHECKS

STATION	OFFSET	LOCATION	PIPE SIZE (IN)	EACH	628.7555 CULVERT PIPE CHECKS
PROJECT 8100-01-72					
CATEGORY 0010					
627+78	RT	STH 25	30	5	
634+44	RT	STH 25	24	3	
635+00	RT	STH 25	20	3	
640+20	RT	STH 25	24	3	
667+43	RT	STH 25	30	5	
675+50	RT	STH 25	24X35	5	
680+79	RT	STH 25	66	24	
681+91	RT	STH 25	24	3	
688+51	RT	STH 25	30	5	
690+15	RT	STH 25	30	5	
697+30	RT	STH 25	30	5	
701+80	RT	STH 25	24	3	
703+90	RT	STH 25	24	3	
708+16	RT	STH 25	20	3	
710+80	LT	STH 25	72	24	
713+50	RT	STH 25	24	3	
714+10	LT	STH 25	24	3	
725+75	LT	STH 25	30	5	
737+80	RT	STH 25	24	3	
740+70	RT	STH 25	72	24	
752+40	RT	STH 25	24	3	
754+00	LT	STH 25	24	3	
755+80	RT	STH 25	24	3	
759+15	RT	STH 25	66	24	
773+00	LT	STH 25	36	7	
775+65	RT	STH 25	24	3	
794+15	LT	STH 25	24	3	
800+25	LT	STH 25	72	24	
815+02	LT	STH 25	32	7	
UNDISTRIBUTED					56
PROJECT TOTALS					270

EROSION CONTROL

STATION	-	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7570 ROCK BAGS EACH
PROJECT 8100-01-72									
CATEGORY 0010									
574+33	-	579+75	STH 25	-	-	-	2	6	-
579+75	-	607+00	STH 25	529	529	101	2	12	-
607+00	-	674+50	STH 25	295	295	108	-	1	-
674+50	-	765+00	STH 25	358	358	-	-	-	-
765+00	-	823+35	STH 25	816	816	-	-	-	-
UNDISTRIBUTED				502	502	61	1	6	50
PROJECT TOTALS				2,500	2,500	270	5	25	50

PERMANENT SIGNING TYPE II

637.2210 634.0616 634.0618 638.2102 638.4000

SIGN #	SIGN CODE	SIGN SIZE	SIZE WXH IN	SIGNS TYPE II REFLECTIVE H SF	POSTS WOOD 4X6-INCH		MOVING SIGNS TYPE II EACH	MOVING SMALL SIGN SUPPORTS EACH	SIGN MOUNTED ON SAME POST AS	REMARKS
					16 FT EACH	18 FT EACH				
PROJECT 8100-01-72										
CATEGORY 0010										
1-2	J3-2	2M	48X57	19.00	---	1	---	---	---	DIRECTIONAL ASSEMBLY (2 HEADED PANEL)
1-3	J3-1	2M	24X57	9.50	---	1	---	---	---	DIRECTIONAL ASSEMBLY (1 HEAD PANEL)
1-4M	R1-1F	2M	36X36	---	---	---	1	---	SIGNAL	STOP SIGN (FOLDING)
1-5M	R6-3	2M	30X24	---	---	---	1	---	SIGNAL	DIVIDED HIGHWAY SIGN CROSSROAD
1-6M	R2-1	2M	30X36	---	---	---	1	1	---	SPEED LIMIT [] MPH
1-7M	R5-1	2M	36X36	---	1	---	1	---	---	DO NOT ENTER
1-8M	R5-1	2M	36X36	---	1	---	1	---	---	DO NOT ENTER
1-9M	J3-1	2M	24X57	---	---	---	1	1	---	DIRECTIONAL ASSEMBLY (1 HEAD PANEL)
3-1M	R6-2L	2M	30X36	---	---	1	1	---	---	ONE WAY LEFT ARROW
3-2M	R5-1	2M	36X36	---	---	---	1	---	3-1M	DO NOT ENTER
3-3M	R1-1F	2M	36X36	---	---	---	1	---	SIGNAL	STOP SIGN (FOLDING)
3-4M	R6-3	2M	30X24	---	---	---	1	---	SIGNAL	DIVIDED HIGHWAY SIGN CROSSROAD
3-5M	R1-1	2M	36X36	---	---	---	1	1	---	STOP SIGN
3-6M	R1-53	2M	24X12	---	---	---	1	---	3-5M	RIGHT TURN OBEY THIS SIGN
4-1M	W3-3	2M	36X36	---	---	---	1	1	---	SIGNAL AHEAD
4-2M	R2-1	2M	30X36	---	---	---	1	1	---	SPEED LIMIT [] MPH
5-1M	W6-2	2S	36X36	---	---	---	1	1	---	DIVIDED HIGHWAY ENDS SYMBOL
5-2M	W5-52L	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN RIGHT
5-3M	W5-52R	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN LEFT
5-4M	W5-52R	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN LEFT
5-5M	W5-52L	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN RIGHT
7-1M	W5-52L	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN RIGHT
7-2M	W5-52R	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN LEFT
7-3M	W5-52R	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN LEFT
7-4M	W5-52L	2S	12X36	---	1	---	1	---	---	CLEARANCE STRIPER DOWN RIGHT
PROJECT TOTALS				28.50	10	3	23	6		

REMOVING SIGNS

638.2602 638.3000

SIGN #	SIGN CODE	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	SIGN MOUNTED ON SAME POST AS	REMARKS
CATEGORY 0010					
1-1R	J3-3	1	2	---	DIRECTIONAL ASSEMBLY (3 HEADED PANEL)
PROJECT TOTALS		1	2		

3

MOBILIZATIONS EROSION CONTROL

STATION - STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 8100-01-72 CATEGORY 0010			
	PROJECT 8100-01-72	9	5
PROJECT TOTALS		9	5

3

CONNECTED ARROW BOARDS

LOCATION	STAGE	DIRECTION	NOTE	DAYS	643.0810 CONNECTED ARROW BOARDS DAY	643.1220 CONNECTED WORK ZONE START AND END LOCATION MARKERS DAY
PROJECT 8100-01-72 CATEGORY 0010						
STH 25	1	NB	MAINLINE	55	55	110
STH 25	1	SB	MAINLINE	55	55	110
STH 25	1	NB	PEDESTRIANS	10	20	40
IH 94 WB OFF-RAMP	1	WB	PEDESTRIANS	10	20	40
PROJECT TOTALS					150	300

TRAFFIC CONTROL

LOCATION	NOTE	DAYS	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	661.0101.01 TEMPORARY TRAFFIC SIGNAL FOR BRIDGES EACH
PROJECT 8100-01-72 CATEGORY 0010									
STH 25	CLEARING	4	110	-	-	-	22	-	-
STH 25	MAINLINE	110	34,732	249	489	731	8,235	14	-
STH 25	B-17-45 TEMP SIGNAL	21	1,155	47	93	647	393	14	1
STH 25	PEDESTRIANS	10	2,453	44	88	132	649	-	-
PROJECT TOTALS			38,450	340	670	1,510	9,300	28	1

PROJECT NO: 8100-01-72

HWY: STH 25

COUNTY: DUNN

MISCELLANEOUS QUANTITIES

SHEET

E

FILE NAME:

PLOT DATE:

PLOT BY: KL ENGINEERING

PLOT NAME:

PLOT SCALE: 1"=1'

WISDOT/CADD SHEET 42

TEMPORARY MARKING

STATION	-	STATION	LOCATION	643.3165		643.3170		643.3265		643.3305		643.3505		643.3805		643.3180		643.3850		NOTE
				PAINT 6-INCH (YELLOW)	PAINT 6-INCH (WHITE)	EPOXY 6-INCH (YELLOW)	EPOXY 6-INCH (WHITE)	PAINT 10-INCH (WHITE)	CROSSWALK PAINT 6-INCH	ARROW PAINT EACH	STOP LINE PAINT 18-INCH (WHITE)	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)							
PROJECT 8100-01-72																				
CATEGORY 0010																				
574+33	-	607+00	STH 25	3,400	5,075	-	-	1,741	460	17	290	-	-	-	-	-	-	-	-	MILLED OR CIR SURFACE PRIOR TO OVERLAY LOWER HMA LAYER
574+33	-	607+00	STH 25	3,400	5,075	-	-	1,741	460	17	290	-	-	-	-	-	-	-	-	UPPER HMA PRIOR TO CENTERLINE RUMBLES
574+33	-	607+00	STH 25	-	-	3,400	-	-	-	-	-	-	-	-	-	-	-	-	-	UPPER HMA PRIOR TO CENTERLINE RUMBLES
602+00	-	613+00	STH 25	-	-	-	-	-	-	-	-	-	3,340	-	48	-	-	-	-	B-17-45 TEMPORARY SIGNAL
607+00	-	674+50	STH 25	12,780	13,390	-	-	451	-	4	61	-	-	-	-	-	-	-	-	MILLED OR CIR SURFACE PRIOR TO OVERLAY LOWER HMA LAYER
607+00	-	674+50	STH 25	12,780	13,390	-	-	451	-	4	61	-	-	-	-	-	-	-	-	UPPER HMA PRIOR TO CENTERLINE RUMBLES
607+00	-	674+50	STH 25	-	-	12,780	-	-	-	-	-	-	-	-	-	-	-	-	-	MILLED OR CIR SURFACE PRIOR TO OVERLAY LOWER HMA LAYER
674+50	-	765+00	STH 25	10,320	17,740	-	-	210	-	4	69	-	-	-	-	-	-	-	-	UPPER HMA PRIOR TO CENTERLINE RUMBLES
674+50	-	765+00	STH 25	10,320	17,740	-	-	210	-	4	69	-	-	-	-	-	-	-	-	MILLED OR CIR SURFACE PRIOR TO OVERLAY LOWER HMA LAYER
674+50	-	765+00	STH 25	-	-	10,320	-	-	-	-	-	-	-	-	-	-	-	-	-	UPPER HMA PRIOR TO CENTERLINE RUMBLES
765+00	-	823+35	STH 25	9,680	11,170	-	-	348	-	2	-	-	-	-	-	-	-	-	-	MILLED OR CIR SURFACE PRIOR TO OVERLAY LOWER HMA LAYER
765+00	-	823+35	STH 25	9,680	11,170	-	-	348	-	2	-	-	-	-	-	-	-	-	-	UPPER HMA PRIOR TO CENTERLINE RUMBLES
765+00	-	823+35	STH 25	-	-	9,680	-	-	-	-	-	-	-	-	-	-	-	-	-	UPPER HMA PRIOR TO CENTERLINE RUMBLES
PROJECT TOTALS				72,360	94,750	36,180	5,500	920	54	840	3,340	48								
				167,110																

TEMPORARY PEDESTRIAN ITEMS

LOCATION	NOTE	DURATION DAY	305.0120*	644.1430	644.1440	644.1601	644.1605	644.1810	644.1900.S
			BASE AGGREGATE DENSE 1 1/4-INCH TON	TEMPORARY PEDESTRIAN SURFACE PLATE SF	TEMPORARY PEDESTRIAN SURFACE MATTING SF	TEMPORARY PEDESTRIAN CURB RAMP DAY	TEMPORARY PEDESTRIAN DETECTABLE SF	TEMPORARY PEDESTRIAN BARRICADE LF	TEMPORARY AUDIBLE MESSAGE DEVICES DAY
STH 25	IH 94 WB OFF-RAMP	10	44	147	1,317	40	64	230	30
STH 25	CEDAR FALLS RD A	10	26	60	793	20	20	177	30
STH 25	CEDAR FALLS RD B	10	15	53	430	10	16	183	20
PROJECT TOTALS			85	260	2,540	70	100	590	80

*ADDITIONAL QUANTITY FOUND IN BASE AGGREGATE DENSE TABLE

PAVEMENT MARKING

STATION	-	STATION	LOCATION	646.2040		646.2025		646.4040		646.5020	646.5120	646.6120	646.7120	646.7420	646.8120	646.8220	
				MARKING LINE GROOVED WET REF EPOXY 6-INCH (DASHED (WHITE) LF	(DASHED (WHITE) LF	(YELLOW) (YELLOW) LF	(YELLOW) (YELLOW) LF	MARKING LINE GROOVED EPOXY 6-INCH (DASHED (WHITE) LF	MARKING LINE GROOVED WET REF EPOXY 10-INCH (DASHED (WHITE) LF	MARKING ARROW EPOXY EACH	MARKING WORD EPOXY EACH	MARKING STOP LINE EPOXY 18-INCH LF	MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	MARKING CURB EPOXY LF	MARKING ISLAND NOSE EPOXY EACH	
PROJECT 8100-01-72																	
CATEGORY 0010																	
574+33	-	607+00	STH 25	4,132	940	3,369	25	920	1,705	32	17	6	290	310	460	100	9
607+00	-	663+44	STH 25	11,192	-	9,960	401	-	241	-	4	-	61	-	-	-	-
663+44	-	686+06	STH 25	4,384	-	4,838	-	-	419	-	4	1	69	-	-	35	3
686+06	-	765+00	STH 25	15,546	28	6,369	1,525	-	-	-	-	-	-	-	-	-	-
765+00	-	823+35	STH 25	11,051	113	9,226	451	-	348	-	2	1	-	-	-	-	-
PROJECT TOTALS				<u>46,305</u>	<u>1,081</u>	<u>33,762</u>	<u>2,402</u>	920	<u>2,713</u>	<u>32</u>	27	8	420	310	460	135	12
				83,550				2,745									

CONSTRUCTION STAKING

STATION	-	STATION	LOCATION	650.4500	650.5000	650.7000	650.8000	650.8501.01	650.9000	650.9500.01	650.9911.01	650.9920
				CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION CONCRETE PAVEMENT LF	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS 8100-01-72 EACH	CONSTRUCTION STAKING CURB RAMPS EACH	CONSTRUCTION STAKING SIDEWALK 8100-01-72 EACH	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 8100-01-72 EACH	CONSTRUCTION STAKING SLOPE STAKES LF
PROJECT 8100-01-72												
CATEGORY 0010												
574+33	-	579+75	STH 25	400	400	-	524	-	4	-	-	400
579+75	-	607+00	STH 25	572	572	18	2,707	-	6	-	-	572
607+00	-	674+50	STH 25	20	20	18	6,620	-	-	-	-	20
674+50	-	765+00	STH 25	70	-	70	8,975	-	-	-	-	-
765+00	-	823+35	STH 25	-	-	-	5,804	-	-	-	-	-
UNDISTRIBUTED				-	-	-	-	1	-	1	1	-
PROJECT TOTALS				1,062	992	106	24,630	1	10	1	1	992

CLEANING CULVERT PIPES

520.8700

CLEANING
CULVERT
PIPES

STATION	LOCATION	SIZE (IN)	LENGTH (FT)	TYPE	EACH
PROJECT 8100-01-72					
CATEGORY 0010					
634+44	STH 25	24	114	CMCP	1
635+00	STH 25	20	114	CMCP	1
640+20	STH 25	24	66	CMCP	1
657+50	STH 25	44	98	CMCP	1
657+50	STH 25	44	98	CMCP	1
680+79	STH 25	66	80	CMCP	1
681+91	STH 25	24	90	CMCP	1
690+15	STH 25	30	98	CMCP	1
PROJECT TOTALS					8

DITCH CLEANING

ITEMS LISTED FOR INFORMATION ONLY

SPV.0090.01

EROSION GRADING,
SHAPING, AND

SEEDING MAT URBAN

EXCAVATION SALVAGED FERTILIZER MIXTURE CLASS I FINISHING

COMMON TOPSOIL TYPE B NO. 40 TYPE B DITCH

STATION LOCATION OFFSET (CY) (SY) (CWT) (LB) (SY) LF

STATION	LOCATION	OFFSET	(CY)	(SY)	(CWT)	(LB)	(SY)	LF
PROJECT 8100-01-72								
CATEGORY 0010								
640+15	STH 25	LT	7	39	0.03	1.8	39	70
640+25	STH 25	RT	6	31	0.02	1.4	31	55
657+50	STH 25	LT	6	34	0.03	1.5	34	60
657+50	STH 25	RT	12	67	0.05	3.0	67	120
680+75	STH 25	LT	7	42	0.03	1.9	42	75
681+70	STH 25	LT	51	184	0.12	8.3	184	160
688+40	STH 25	LT	28	84	0.06	3.8	84	75
701+55	STH 25	LT	6	31	0.02	1.4	31	55
702+05	STH 25	RT	5	28	0.02	1.3	28	50
725+50	STH 25	LT	11	64	0.05	2.9	64	115
726+10	STH 25	RT	5	28	0.02	1.3	28	50
740+50	STH 25	LT	10	59	0.04	2.7	59	105
815+00	STH 25	RT	13	39	0.03	1.8	39	35
815+00	STH 25	LT	17	67	0.05	3.0	67	60
PROJECT TOTALS								1,085

SAWING

690.0150 690.0250

SAWING SAWING
ASPHALT CONCRETE

STATION	-	STATION	LOCATION	LF	LF
PROJECT 8100-01-72					
CATEGORY 0010					
574+33	-	579+75	STH 25	16	727
579+75	-	607+00	STH 25	875	108
607+00	-	674+50	STH 25	44	-
PROJECT TOTALS				935	835

3

TRAFFIC SIGNAL CONDUIT

LOCATION	FROM	-	TO	652.0225	652.0700.S
				CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	INSTALL CONDUIT INTO EXISTING ITEM EACH
CATEGORY 0010					
STH 25 & IH 94 WB RAMPS					
	PB2	-	SB1	9	1
	PB3	-	SB2	6	1
INTERSECTION TOTAL				15	2
CATEGORY 0010					
STH 25 & CEDAR FALLS ROAD					
	PB6	-	SB5	13	1
	PB6	-	SB6	12	1
	PB6	-	SB7	8	1
	PB7	-	SB9	12	1
	PB7	-	SB10	25	1
INTERSECTION TOTAL				70	5
PROJECT TOTALS:				85	7

TRAFFIC SIGNAL HEADS

LOCATION	SIGNAL BASE NO.	HEAD NO.	658.0173	658.0174	658.0175	658.0416
			TRAFFIC SIGNAL FACE			PEDESTRIAN SIGNAL FACE
			3S 12-INCH EACH	4S 12-INCH EACH	5S 12-INCH EACH	16-INCH EACH
CATEGORY 0010						
STH 25 & IH 94 WB RAMPS						
	SB1	62	--	--	--	1
	SB2	61	--	--	--	1
INTERSECTION TOTAL			0	0	0	2
CATEGORY 0010						
STH 25 & CEDAR FALLS ROAD						
	SB6	14	--	1	--	--
	SB7	9	1	--	--	--
	SB10	1	--	--	1*	--
		15	--	1*	--	--
		32	--	--	--	1
INTERSECTION TOTAL			1	2	1	1
PROJECT TOTALS:			1	2	1	3

*RETROREFLECTIVE BACKPLATE

3

TRAFFIC SIGNAL REMOVALS

LOCATION / ITEM NUMBER	204.0195
	REMOVING CONCRETE BASES EACH
CATEGORY 0010	
STH 25 & IH 94 WB RAMPS	
EXSB1	1
INTERSECTION TOTAL	
	1
CATEGORY 0010	
STH 25 & CEDAR FALLS ROAD	
EXSB5	1
EXSB6	1
EXSB8	1
INTERSECTION TOTAL	
	3
PROJECT TOTALS:	
	4

REMOVE AND SALVAGE TRAFFIC SIGNALS

LOCATION	SPV.0060.01	SPV.0060.02
	REMOVE, SALVAGE, AND REINSTALL TRAFFIC SIGNAL EQUIPMENT (STH 25 & IH 94 WB RAMPS) EACH	REMOVE AND SALVAGE TRAFFIC SIGNAL EQUIPMENT (STH 25 & CEDAR FALLS ROAD) EACH
CATEGORY 0010		
STH 25 & IH 94 WB RAMPS		
	1	--
STH 25 & CEDAR FALLS ROAD		
	--	1
PROJECT TOTALS:		1

3

TRAFFIC SIGNAL STRUCTURES

LOCATION / BASE NUMBER	STATION	OFFSET	L/R	654.0101		654.0102	657.0100	657.0255	657.0405	657.0430	657.0425
				CONCRETE BASES		PEDESTAL	TRANSFORMER BASES	TRAFFIC SIGNAL STANDARDS			
				TYPE 1	TYPE 2	BREAKAWAY 11 1/2-INCH	ALUMINUM				
				EACH	EACH	EACH	BOLT CIRCLE	3.5-FT	10-FT	15-FT	
				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
CATEGORY 0010											
STH 25 & IH 94 WB RAMPS											
SB1	578+45'N'	40.5	RT	--	1	--	1	--	--	--	--
SB2	578+10'N'	41.1	RT	1	--	1	--	--	1	--	--
INTERSECTION TOTAL					1	1	1	1	0	1	0
CATEGORY 0010											
STH 25 & CEDAR FALLS ROAD											
SB5	591+31'N'	39.2	RT	1	--	1	--	1	--	1	--
SB6	591+20'N'	36.2	RT	1	--	1	--	--	--	1	--
SB7	591+23'N'	55.8	RT	1	--	1	--	--	--	--	--
SB9	590+39'N'	58.7	RT	1	--	1	--	1	--	--	--
SB10	590+10'N'	43.4	RT	1	--	1	--	--	--	1	--
INTERSECTION TOTAL					5	0	5	0	2	0	3
PROJECT TOTALS:					6	1	6	1	2	1	3

PEDESTRIAN PUSH BUTTONS

LOCATION / BASE NUMBER	658.0500 PEDESTRIAN PUSH BUTTON EACH
CATEGORY 0010	
STH 25 & IH 94 WB RAMPS	
SB1	1
SB2	1
INTERSECTION TOTAL	
	2
CATEGORY 0010	
STH 25 & CEDAR FALLS ROAD	
SB10	1
INTERSECTION TOTAL	
	1
PROJECT TOTALS:	
	3

3

TRAFFIC SIGNAL LOOP DETECTORS

LOCATION / LOOP NO.	STATION **	OFFSET	L/R	SIZE			NO. OF TURNS	INSTALLATION METHOD	652.0800	655.0800	655.0700*
				CONDUIT	LOOP DETECTOR						
				FT	X	FT		LOOP DETECTOR	WIRE	LEAD IN CABLE	
								LF	LF	LF	
CATEGORY 0010											
STH 25 & CEDAR FALLS ROAD											
41	590+94'N'	52.4	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	110	338	269
42	591+08'N'	51.7	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	142	434	285
43	590+97'N'	80.3	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	138	422	282
44	591+11'N'	79.6	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	118	362	273
INTERSECTION TOTAL								508	1,556	1,109	
PROJECT TOTALS:								508	1,556	1,109	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

PROJECT NO: 8100-01-72

HWY: STH 25

COUNTY: DUNN

MISCELLANEOUS QUANTITIES

SHEET

E

TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND

LOCATION	FROM	-	TO	655.0240	655.0260	655.0270	655.0700*	655.0515
				CABLE			LOOP DETECTOR LEAD IN CABLE	ELECTRICAL WIRE TRAFFIC SIGNALS
				7-14 AWG	12-14 AWG	15-14 AWG		
				LF	LF	LF	LF	LF
CATEGORY 0010								
STH 25 & IH 94 WB RAMPS								
	CB1	-	SB1	--	106	--	106	106
	CB1	-	SB2	152	--	--	152	--
	SB1	-	SB2	--	--	--	--	92
	SB2	-	SB3	--	--	--	--	176
	PB2	-	SB1	--	--	--	--	31
	PB3	-	SB2	--	--	--	--	29
INTERSECTION TOTAL				152	106	0	258	434
CATEGORY 0010								
STH 25 & CEDAR FALLS ROAD								
	CB1	-	SB6	327	--	--	--	--
	CB1	-	SB7	323	--	--	--	--
	CB1	-	SB10	--	--	414	414	--
	CB1	-	SB13	--	--	--	249	--
	SB4	-	SB5	--	--	--	--	130
	SB5	-	SB6	--	--	--	--	56
	SB6	-	SB7	--	--	--	--	51
	SB7	-	SB8	--	--	--	--	178
	SB8	-	SB9	--	--	--	--	81
	SB9	-	SB10	--	--	--	--	68
	SB10	-	SB11	--	--	--	--	180
	PB6	-	SB5	--	--	--	--	36
	PB6	-	SB6	--	--	--	--	35
	PB6	-	SB7	--	--	--	--	31
	PB7	-	SB9	--	--	--	--	36
	PB7	-	SB10	--	--	--	--	48
INTERSECTION TOTAL				650	0	414	663	930
PROJECT TOTALS:				802	106	414	921	1,364

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND

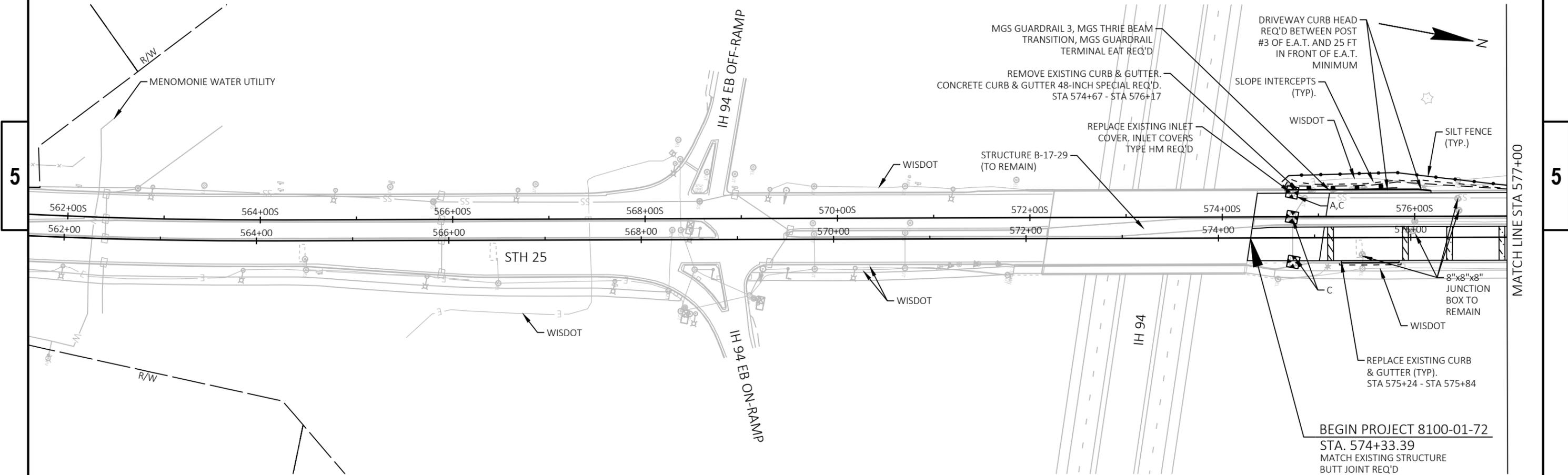
LOCATION	FROM SIGNAL BASE	-	TO SIGNAL HEAD	655.0230
				CABLE TRAFFIC SIGNAL 5-14 AWG LF
CATEGORY 0010				
STH 25 & IH 94 WB RAMPS				
	SB1	-	2	55
		-	62	20
		-	BUTTON	--
	SB2	-	61	20
		-	BUTTON	--
INTERSECTION TOTAL				95
CATEGORY 0010				
STH 25 & CEDAR FALLS ROAD				
	SB6	-	14	27
	SB7	-	9	24
	SB10	-	1	28
		-	15	27
		-	32	20
		-	BUTTON	--
INTERSECTION TOTAL				126
PROJECT TOTALS:				221

SIGNAL MOUNTING

LOCATION	658.5070.01	658.5070.02
	SIGNAL MOUNTING HARDWARE (STH 25 & IH 94 WB RAMPS)	SIGNAL MOUNTING HARDWARE (STH 25 & CEDAR FALLS ROAD)
EACH		
CATEGORY 0010		
STH 25 & IH 94 WB RAMPS	1	--
STH 25 & CEDAR FALLS ROAD	--	1
PROJECT TOTALS:	1	1

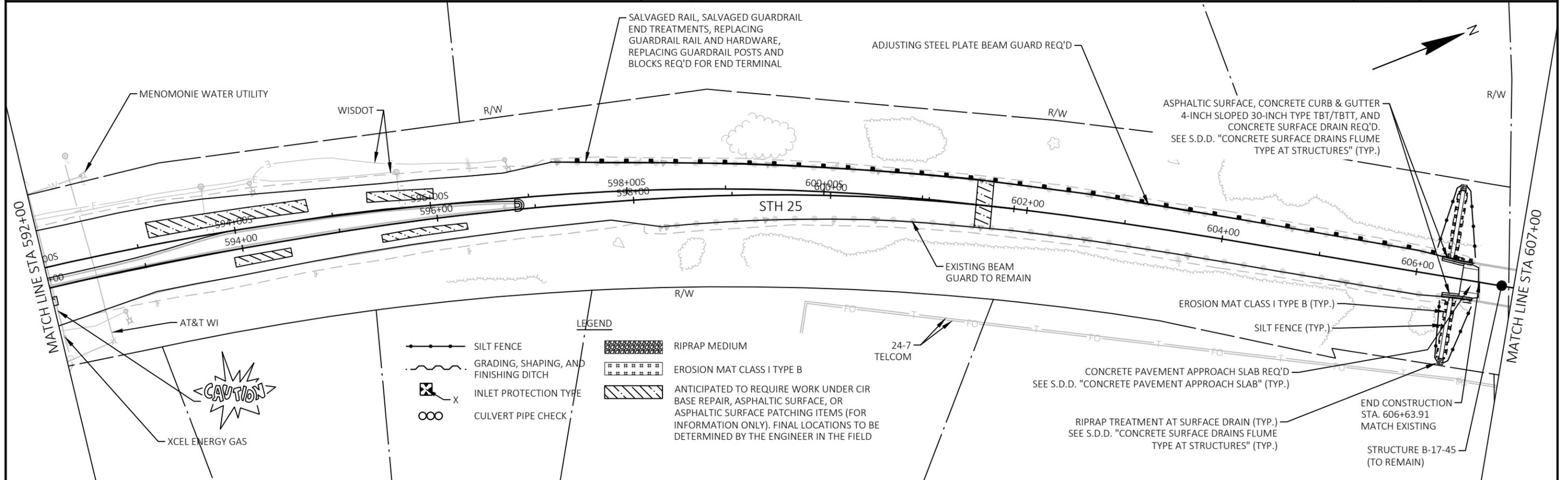
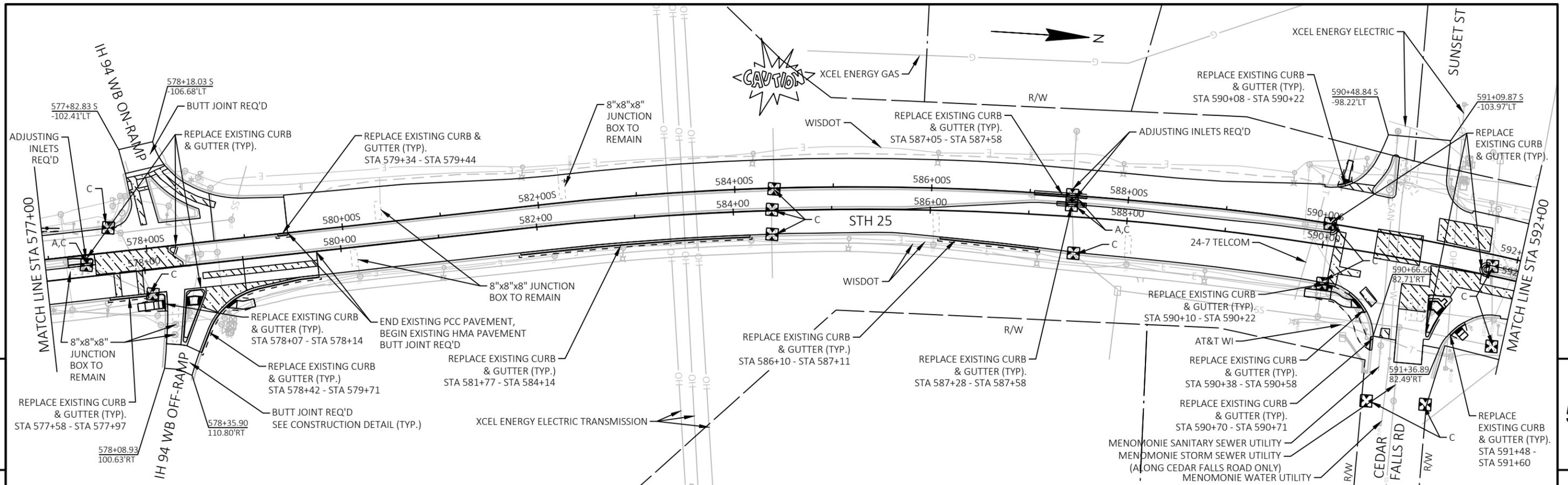
NOTE: MILL AROUND 8"x8"x8" JUNCTION BOXES - PAVE UP TO OR OVERLAY JUNCTION BOXES AS NEEDED. CONTACT NORTHWEST REGION ELECTRICAL FIELD UNIT AT (715) 225-0360 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF MILLING OPERATIONS TO HAVE JUNCTION BOXES MARKED.

PROPOSED GUARDRAIL TERMINAL POINT TABLE			
TERMINAL	POST	STATION	OFFSET TO FACE
575+86, LT	1	575+86	51.6' LT
	5	575+61	50.6' LT
	9	575+36	49.6' LT



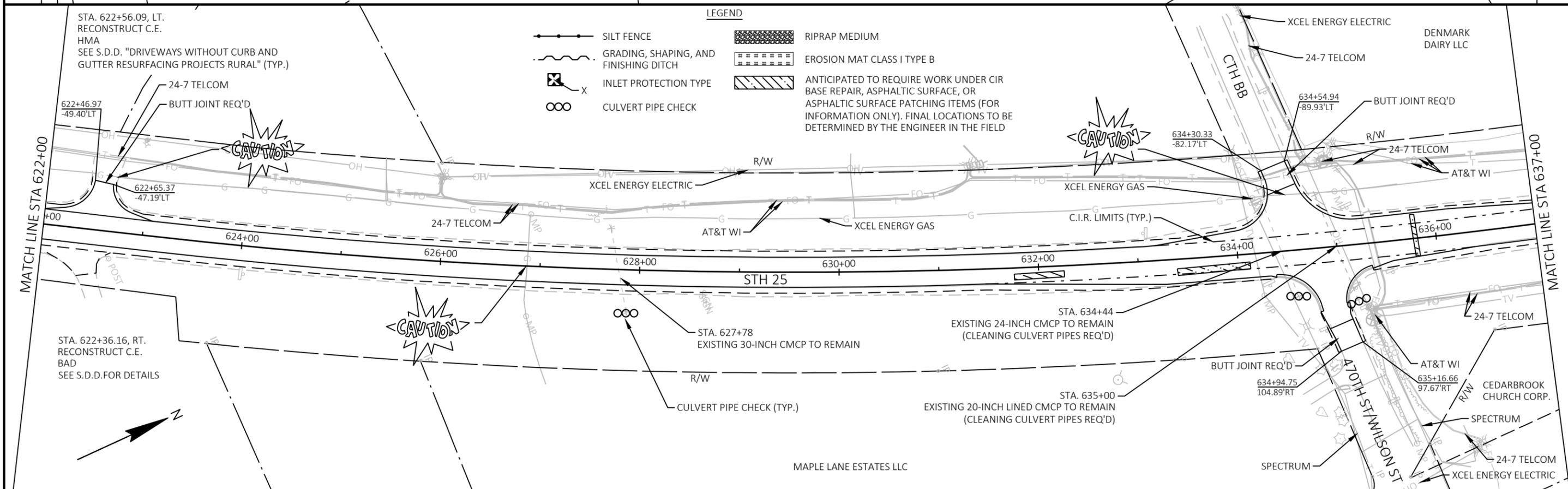
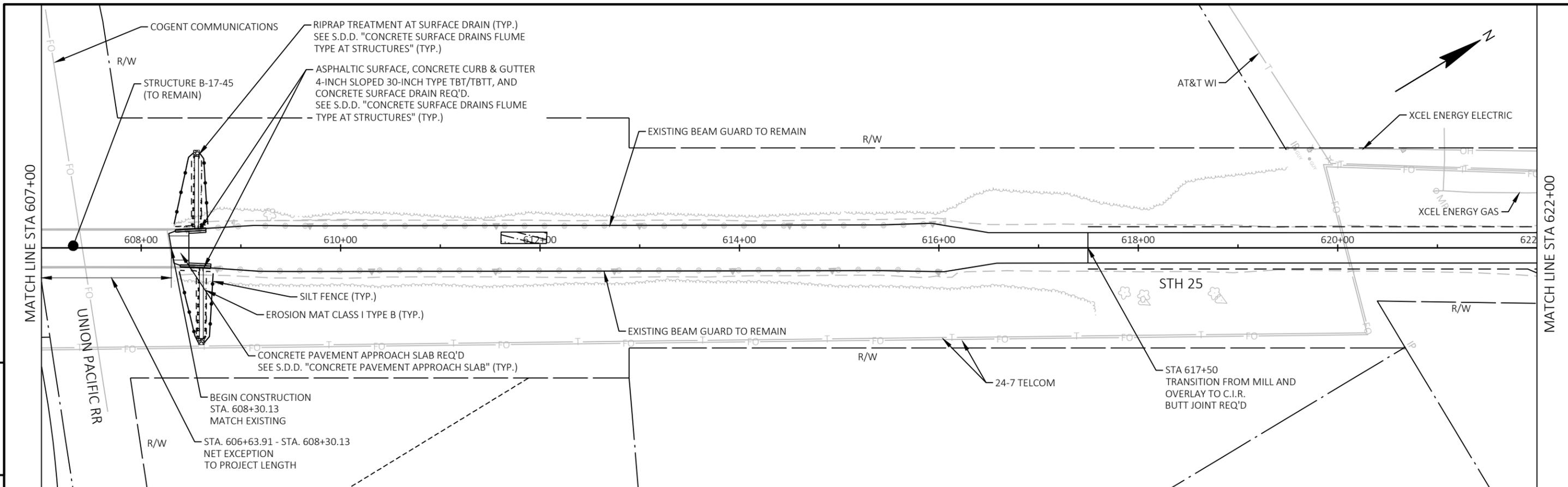
LEGEND

-  SILT FENCE
-  GRADING, SHAPING, AND FINISHING DITCH
-  INLET PROTECTION TYPE
-  CULVERT PIPE CHECK
-  RIPRAP MEDIUM
-  EROSION MAT CLASS I TYPE B
-  ANTICIPATED TO REQUIRE WORK UNDER CIR BASE REPAIR, ASPHALTIC SURFACE, OR ASPHALTIC SURFACE PATCHING ITEMS (FOR INFORMATION ONLY). FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD

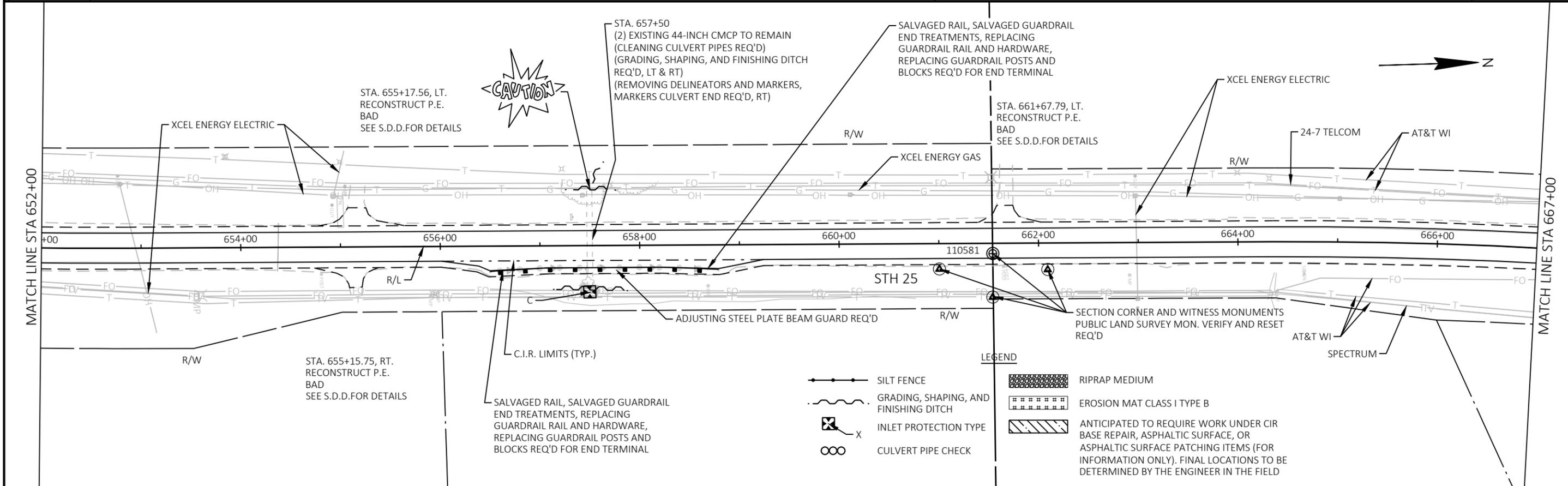
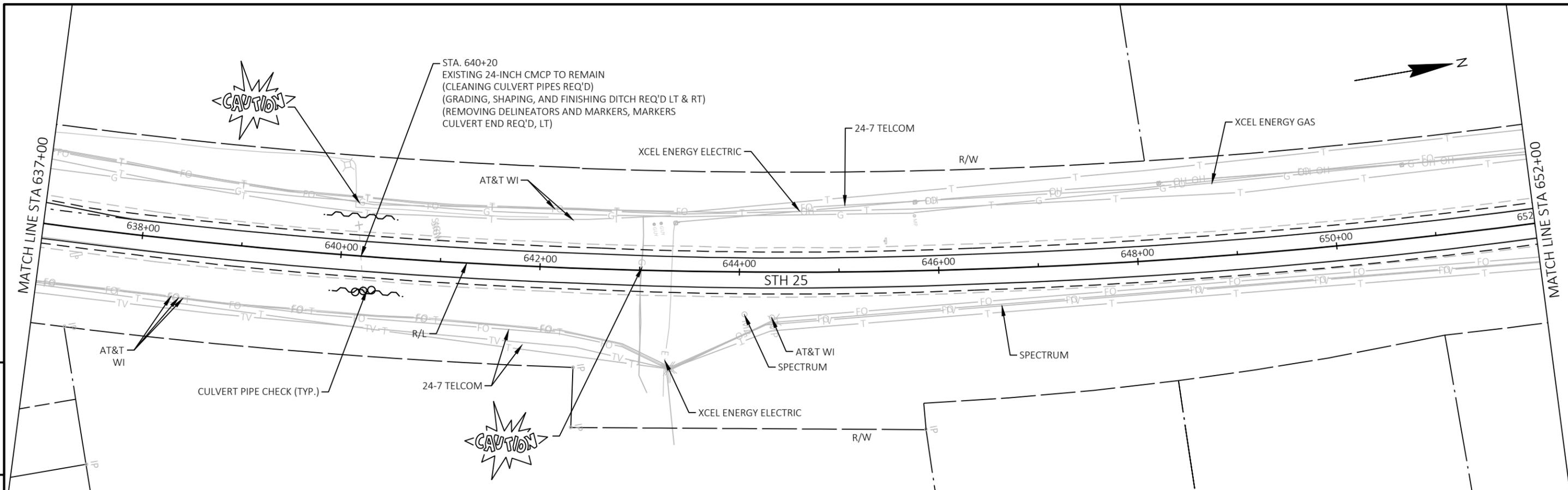


LEGEND

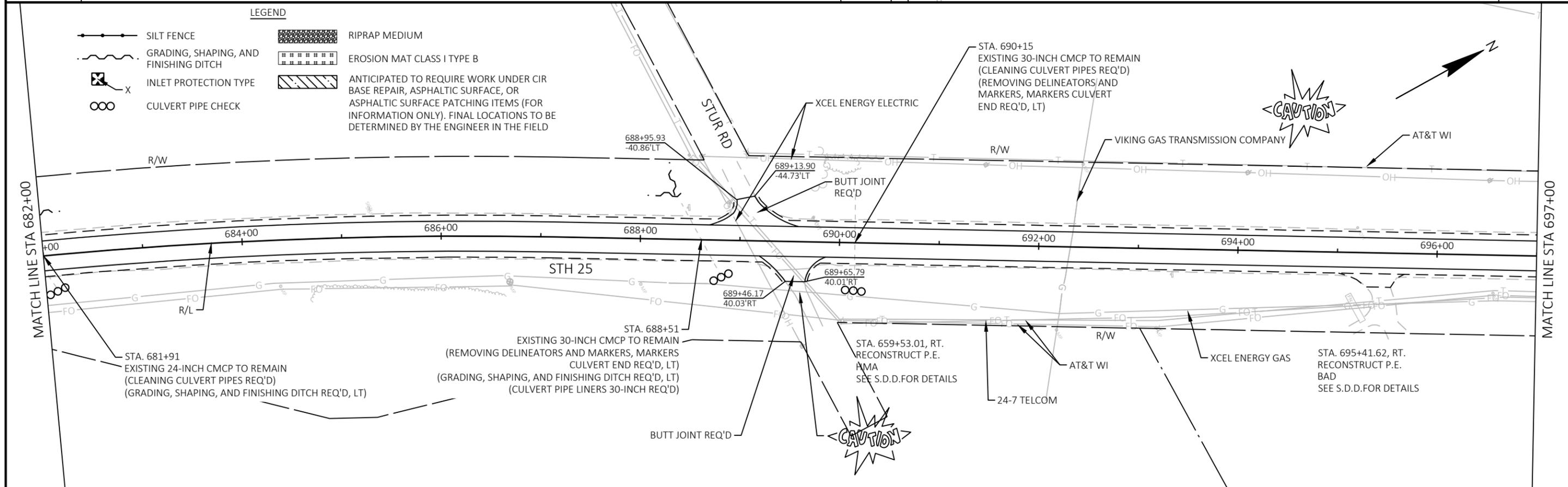
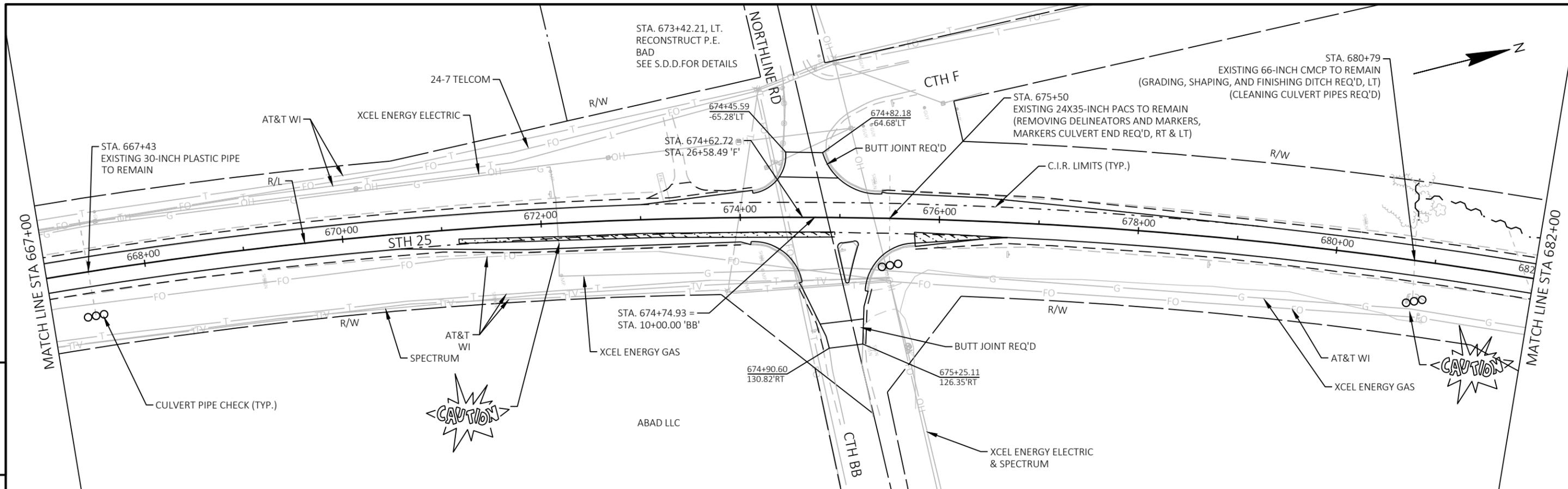
	SILT FENCE		RIPRAP MEDIUM
	GRADING, SHAPING, AND FINISHING DITCH		EROSION MAT CLASS I TYPE B
	INLET PROTECTION TYPE		ANTICIPATED TO REQUIRE WORK UNDER CIR BASE REPAIR, ASPHALTIC SURFACE, OR ASPHALTIC SURFACE PATCHING ITEMS (FOR INFORMATION ONLY). FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD
	CULVERT PIPE CHECK		



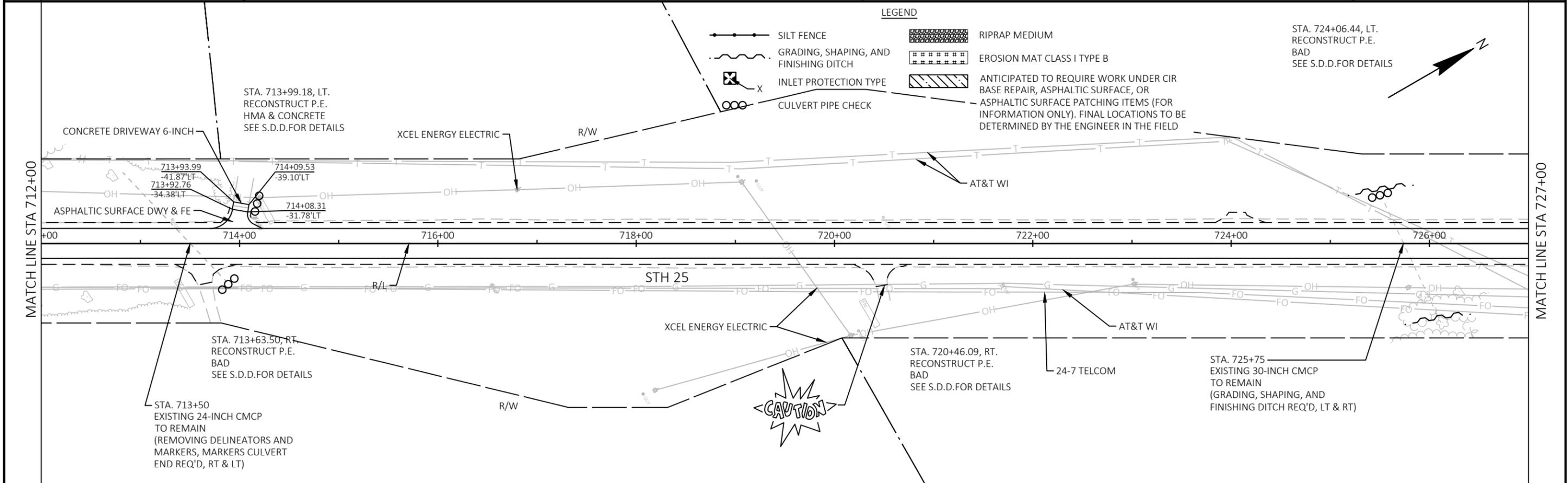
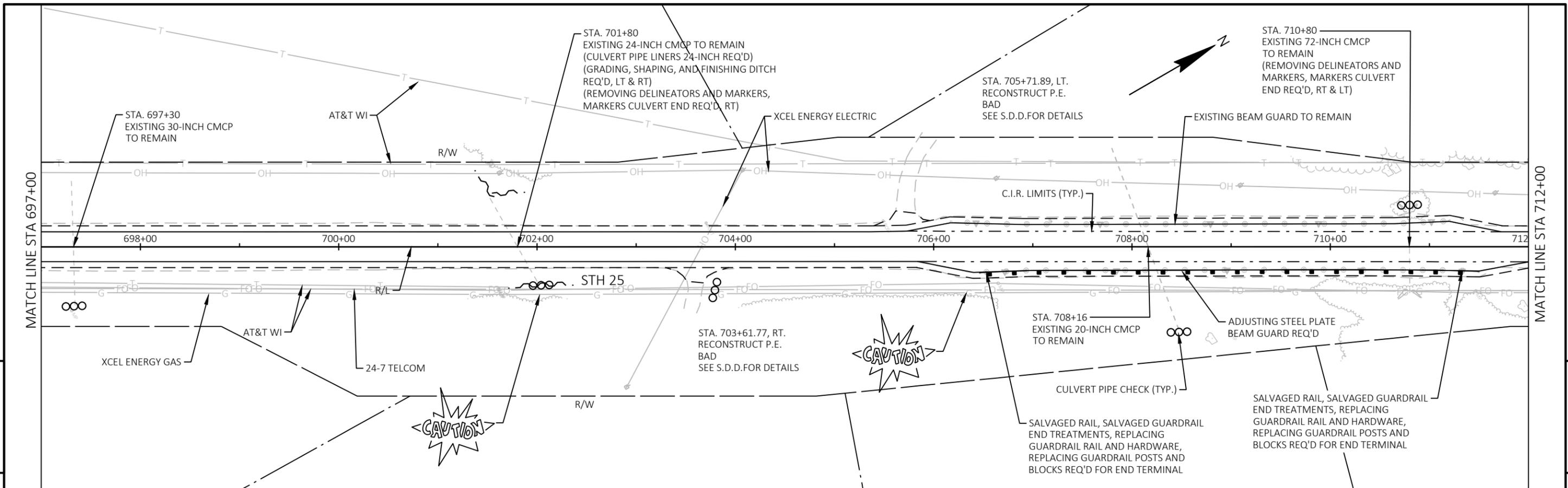
PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	PLAN DETAILS AND EROSION CONTROL - STH 25	SHEET	E
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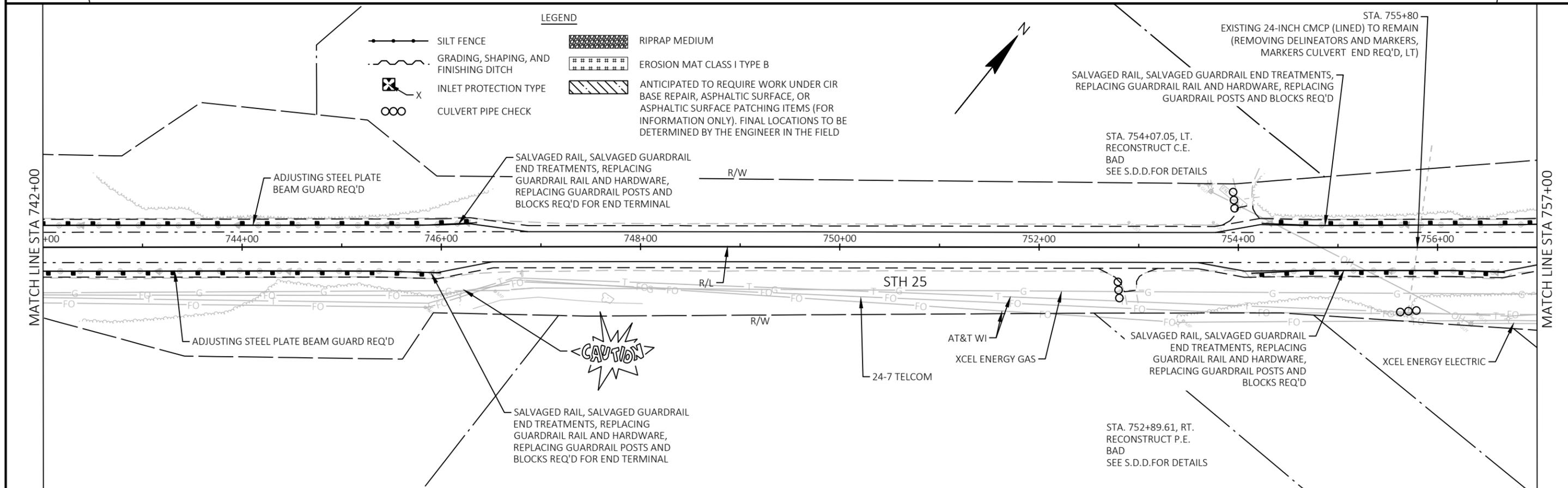
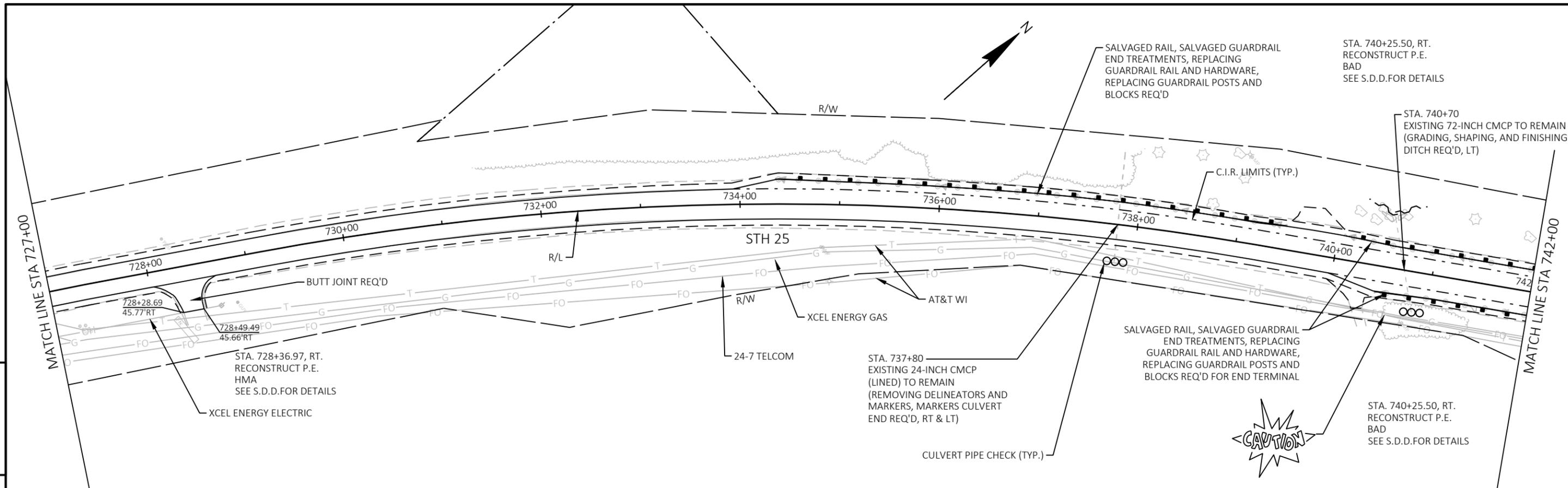
PROJECT NO: 8100-01-72 HWY: STH 25 COUNTY: DUNN PLAN DETAILS AND EROSION CONTROL - STH 25 SHEET E

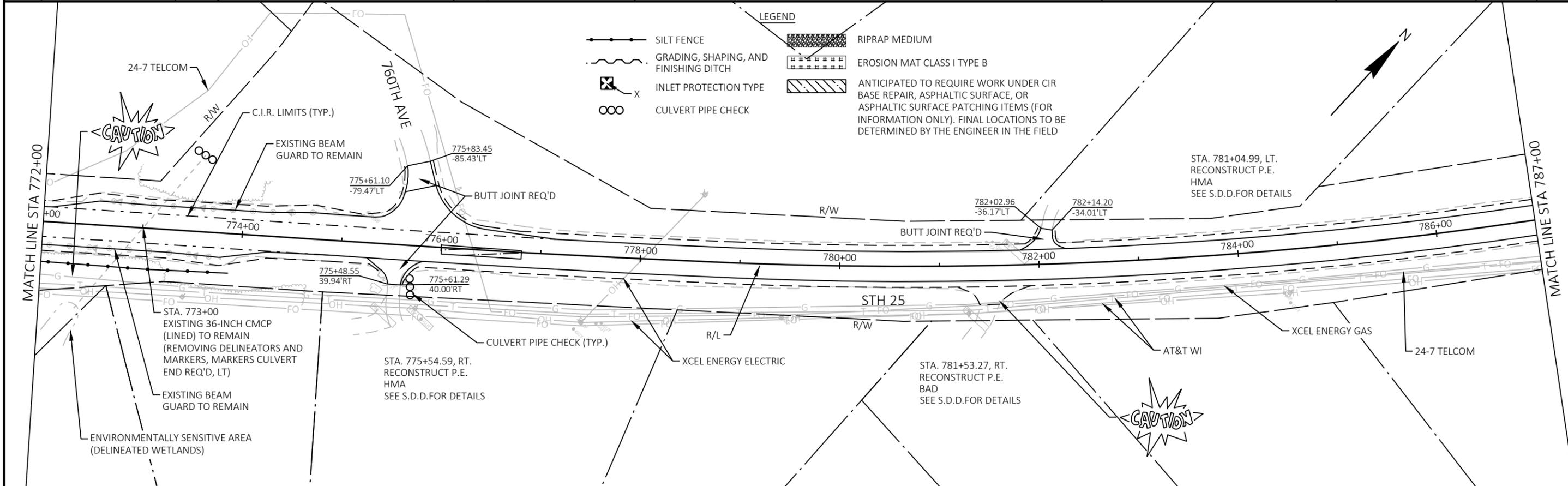
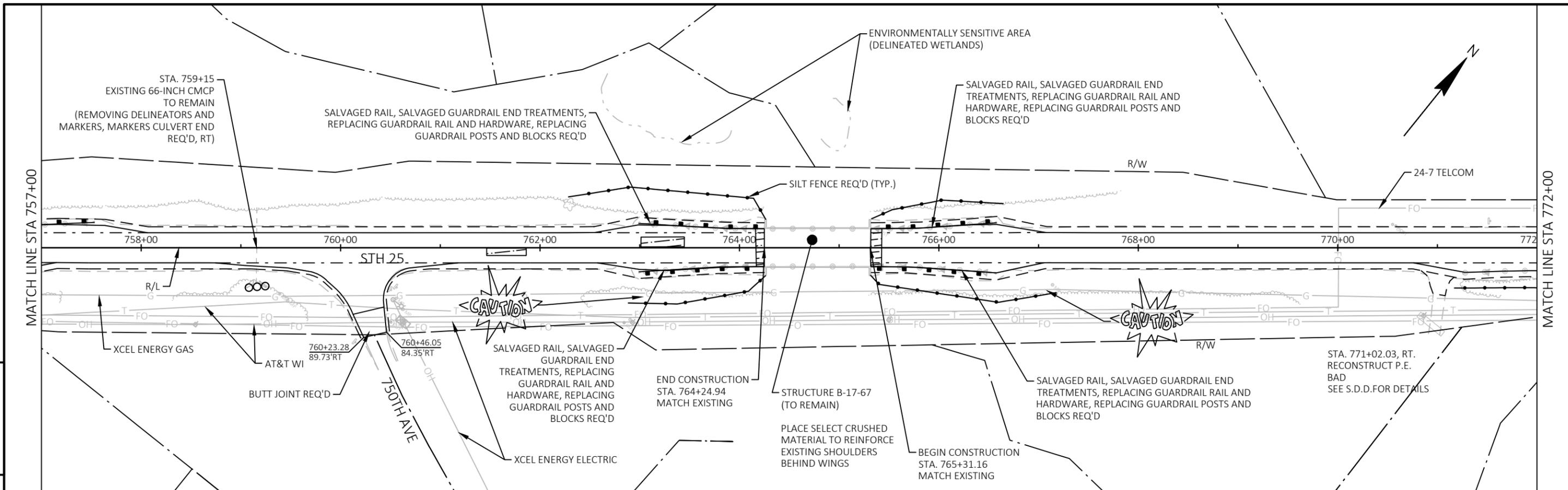


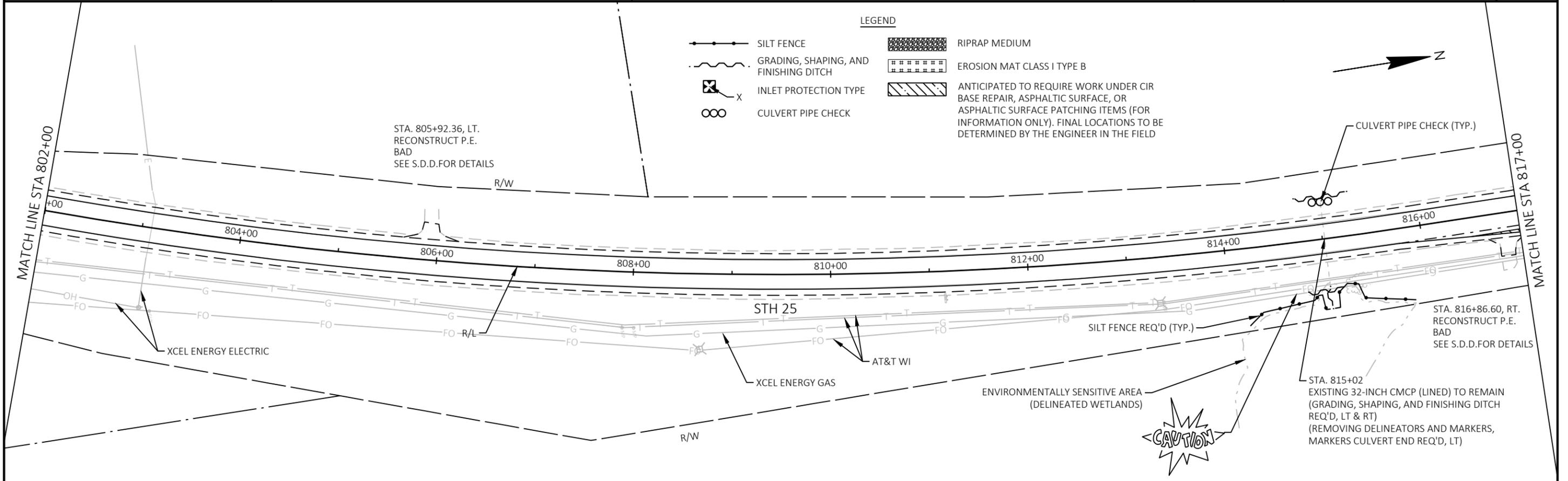
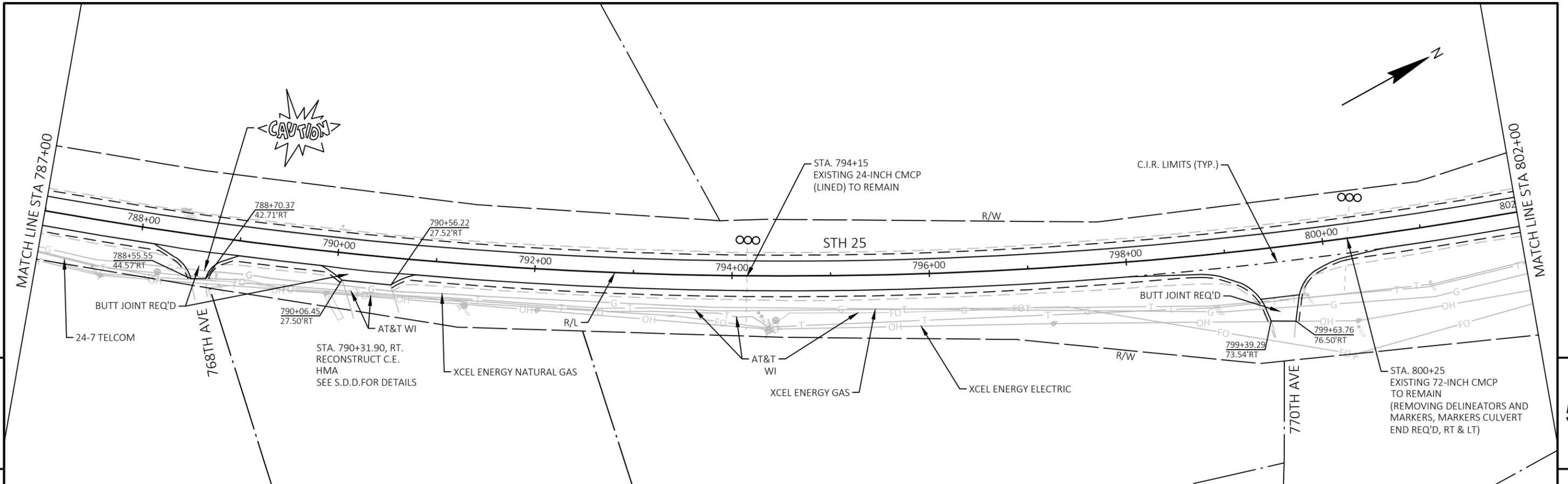
PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	PLAN DETAILS AND EROSION CONTROL - STH 25	SHEET	E
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PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	PLAN DETAILS AND EROSION CONTROL - STH 25	SHEET	E
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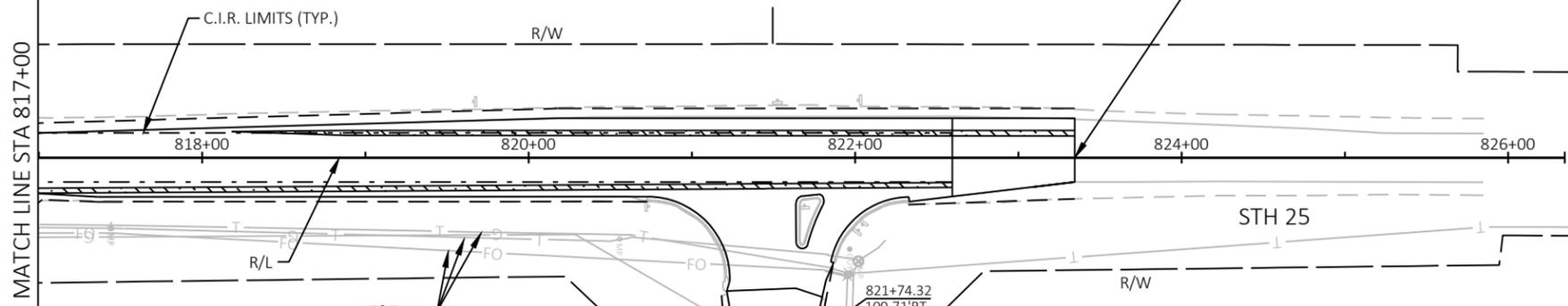


LEGEND

	SILT FENCE		RIPRAP MEDIUM
	GRADING, SHAPING, AND FINISHING DITCH		EROSION MAT CLASS I TYPE B
	INLET PROTECTION TYPE		ANTICIPATED TO REQUIRE WORK UNDER CIR BASE REPAIR, ASPHALTIC SURFACE, OR ASPHALTIC SURFACE PATCHING ITEMS (FOR INFORMATION ONLY). FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD
	CULVERT PIPE CHECK		



END OF PROJECT 8100-01-72
STA. 823+35.10
MATCH EXISTING
BUTT JOINT REQ'D



MATCH LINE STA 817+00

LEGEND

- SILT FENCE
- GRADING, SHAPING, AND FINISHING DITCH
- INLET PROTECTION TYPE
- CULVERT PIPE CHECK
- RIPRAP MEDIUM
- EROSION MAT CLASS I TYPE B
- ANTICIPATED TO REQUIRE WORK UNDER CIR BASE REPAIR, ASPHALTIC SURFACE, OR ASPHALTIC SURFACE PATCHING ITEMS (FOR INFORMATION ONLY). FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD

5

5

Standard Detail Drawing List

08A05-21C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
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
08D05-22A	CURB RAMPS TYPES 1 AND 1-A
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPE 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-13	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-15A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
11B02-02	CONCRETE MEDIUM NOSE
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C19-03	HMA LONGITUDINAL JOINTS
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 THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-24C	PAVEMENT MARKING (TURN LANES)
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-09A	MEDIUM ISLAND PAVEMENT MARKINGS

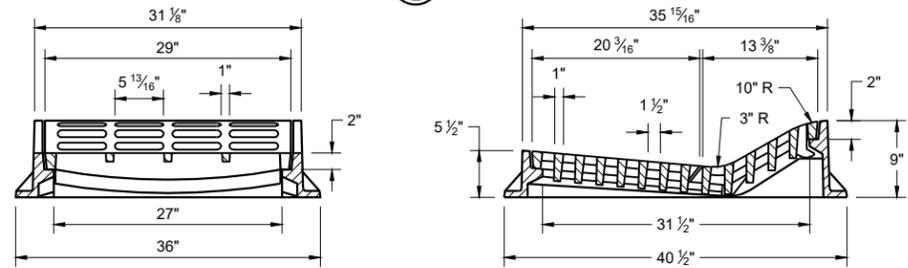
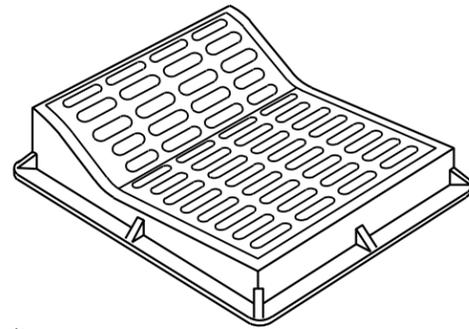
Standard Detail Drawing List

15C18-09B	PAVEMENT MARKINGS, MEDIAN ISLAND NOSE
15C18-09C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C19-10A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-10C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C21-11	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D20-10A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-04	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-11A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11L	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D39-03	TRAFFIC CONTROL, DROP-OFF SIGNING
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

GENERAL NOTES

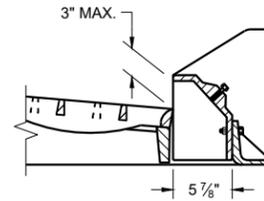
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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 "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

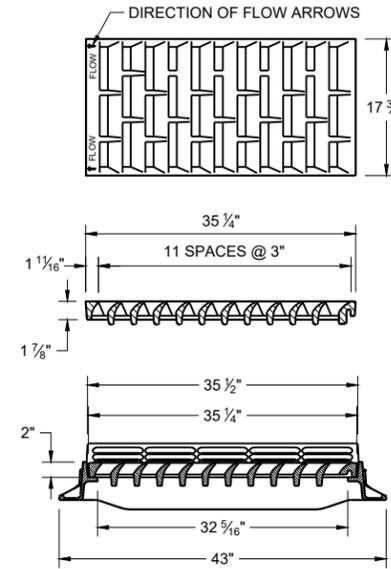


ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

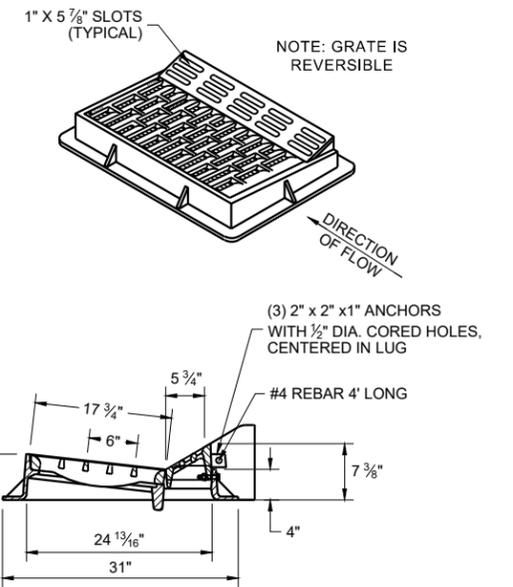
NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



TYPE "HM"

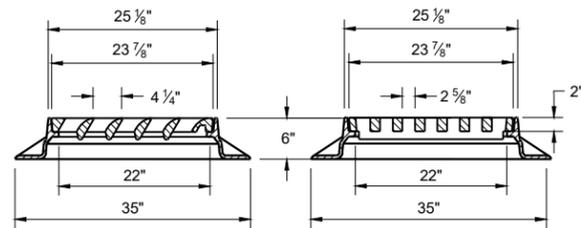
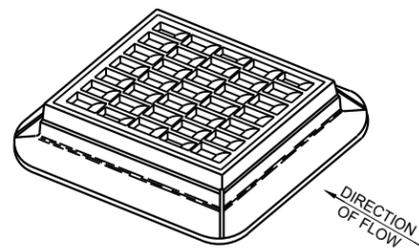
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



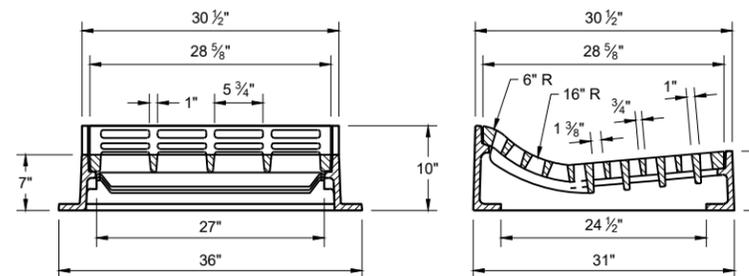
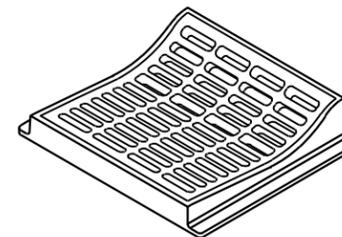
NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.

6



TYPE "S"



TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

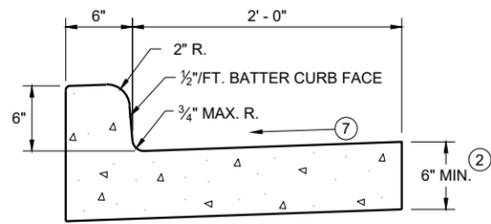
**INLET COVERS
TYPES F, HM, HM-S, S, T,
HM-GJ AND HM-GJ-S**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

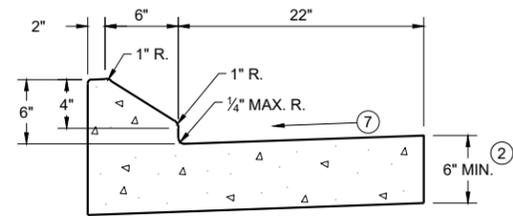
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

SDD 08A05-21c

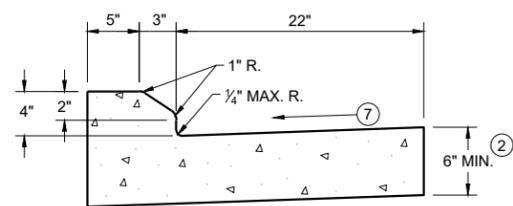
SDD 08A05-21c



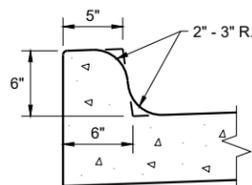
TYPES A^① & D



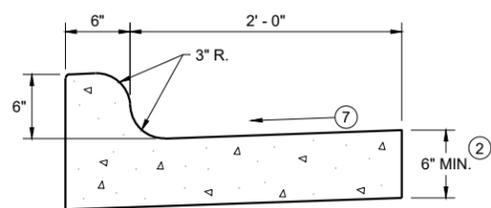
6" SLOPED CURB TYPES G^① & J



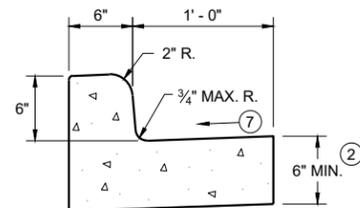
4" SLOPED CURB TYPES G^① & J



TYPES K^① & L
(OPTIONAL CURB SHAPE)

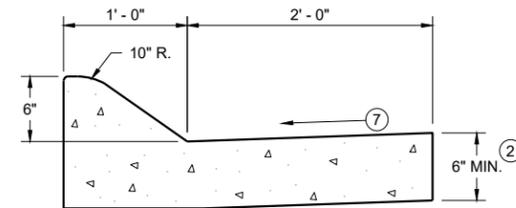


TYPES K^① & L
CONCRETE CURB AND GUTTER 30"

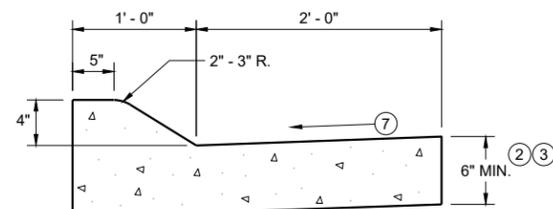


TYPES A^① & D

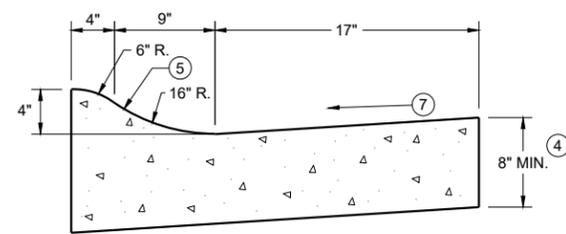
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

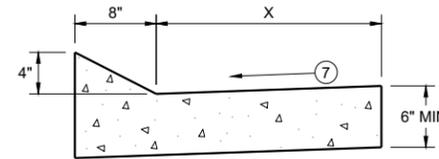


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"

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

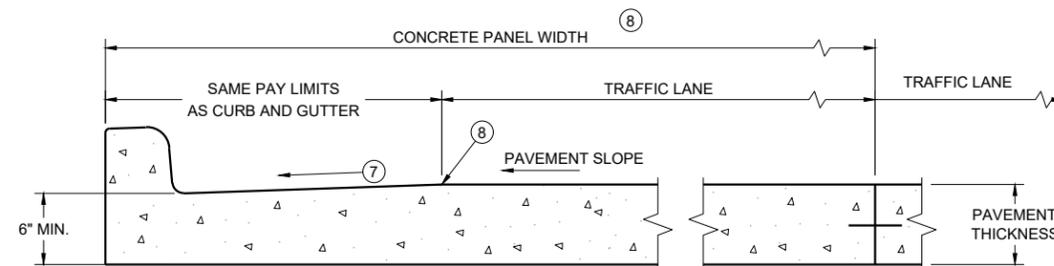


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

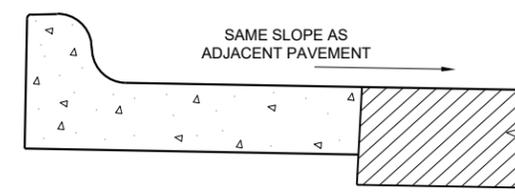
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

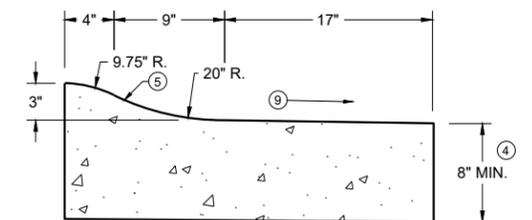
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

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

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

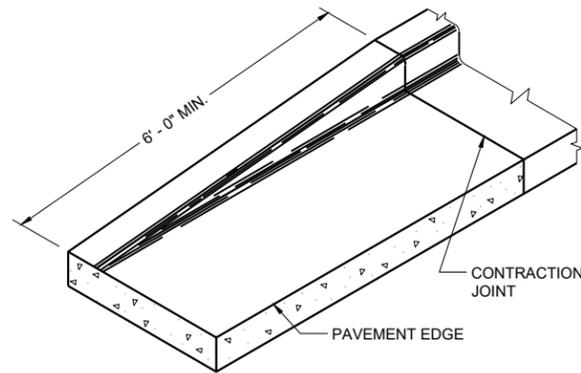
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



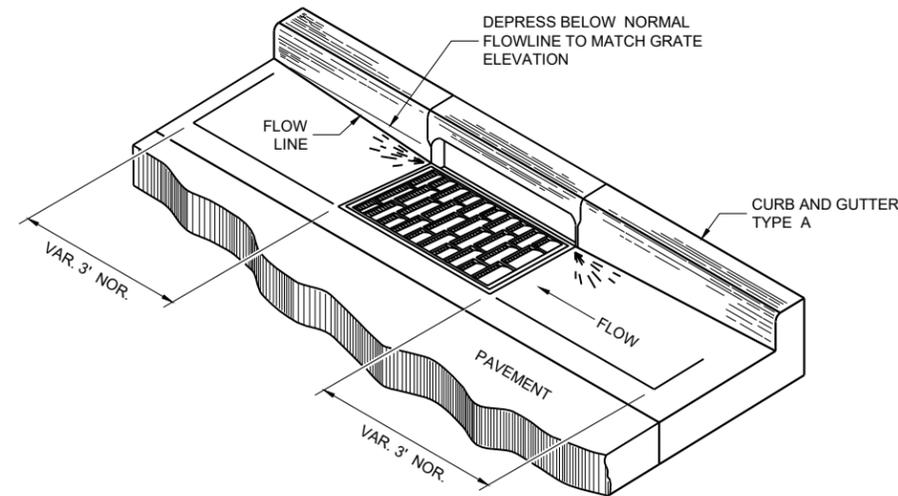
3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

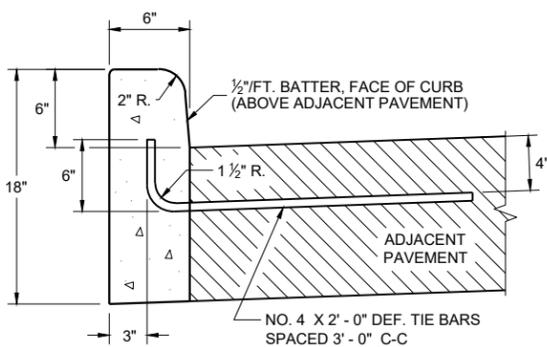
GENERAL NOTES

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

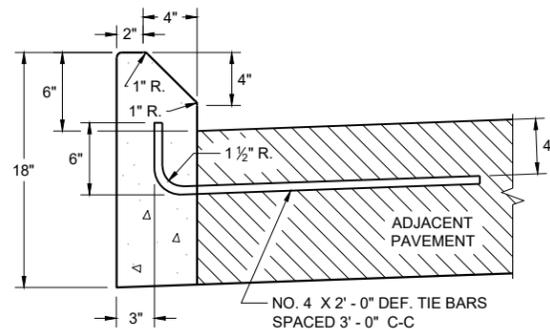
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

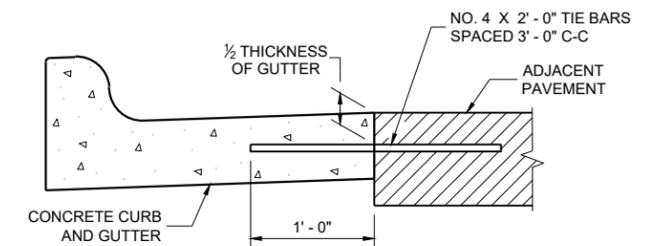
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL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



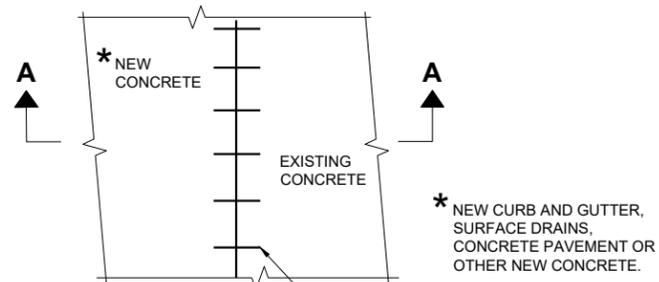
TYPES A ① & D



**TYPES G ① & J
CONCRETE CURB**

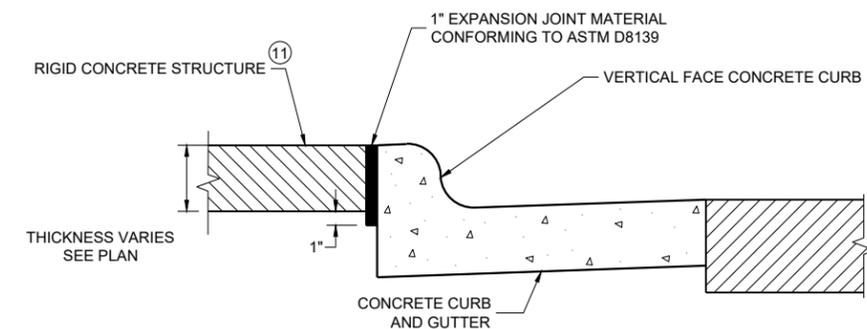


TYPICAL TIE BAR LOCATION ①

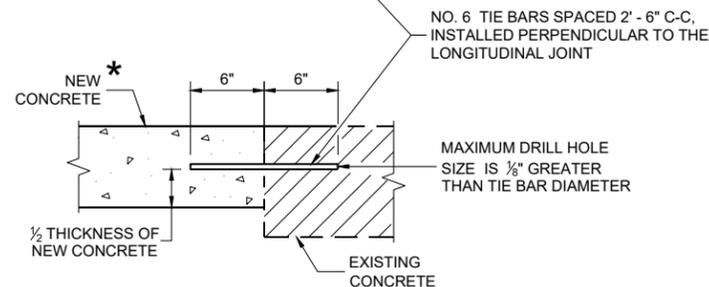


PLAN VIEW

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



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE ⑪

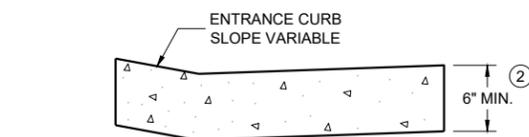


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT

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

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



DRIVEWAY ENTRANCE CURB ⑩
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

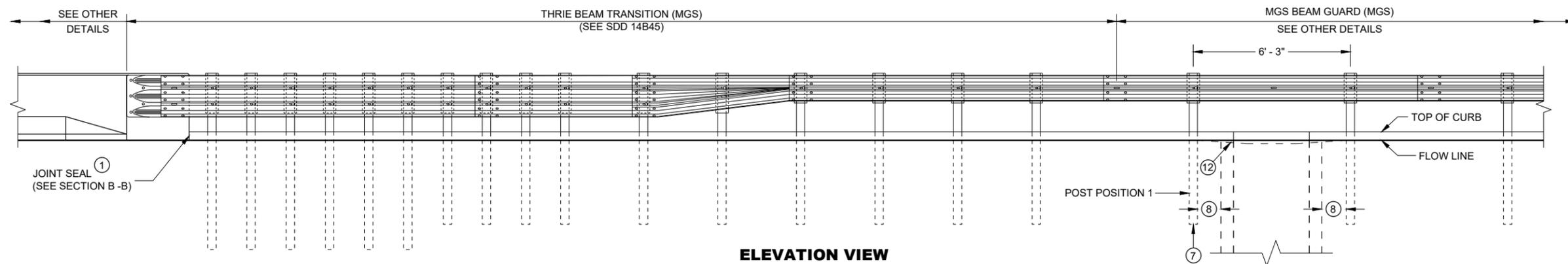
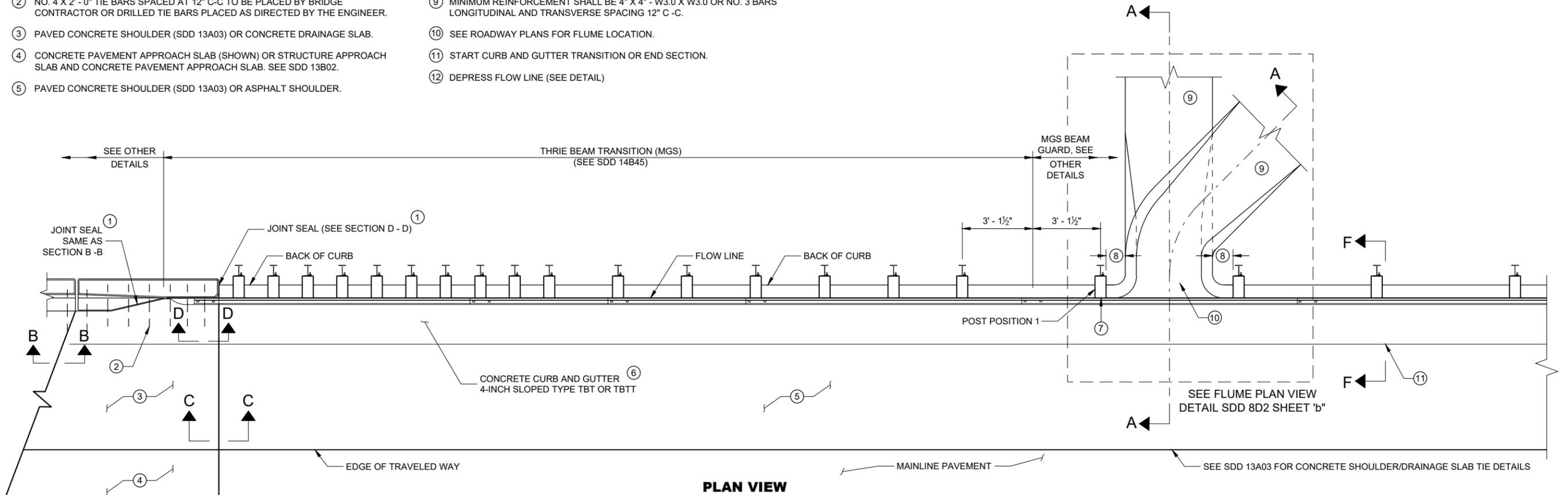
GENERAL NOTES

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)



**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

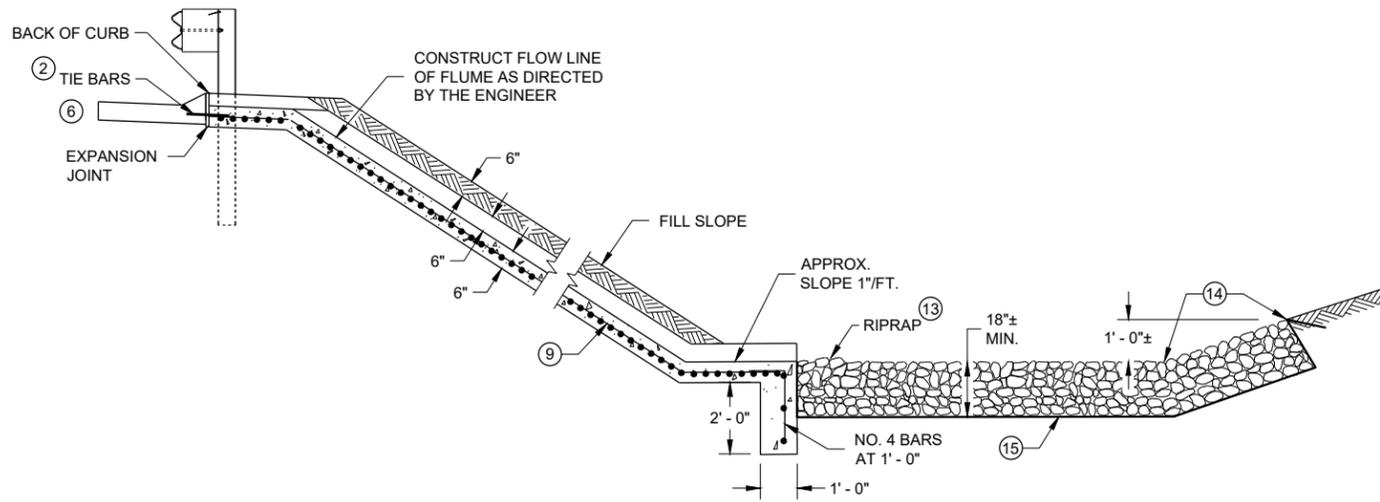
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

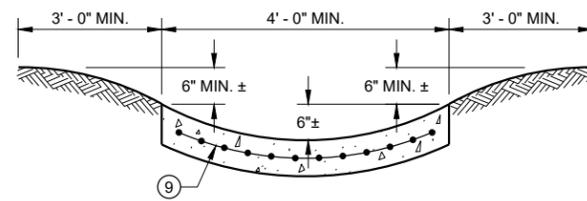
6

SDD 08D02 - 08a

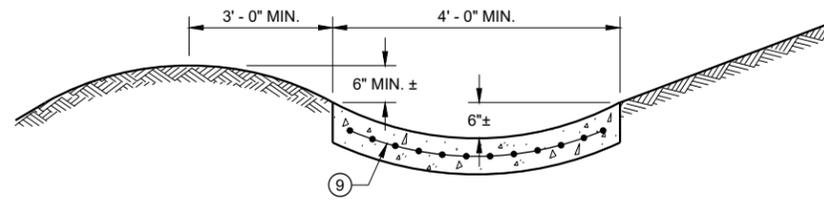
SDD 08D02 - 08a



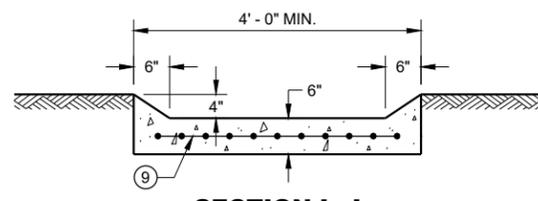
SECTION A - A



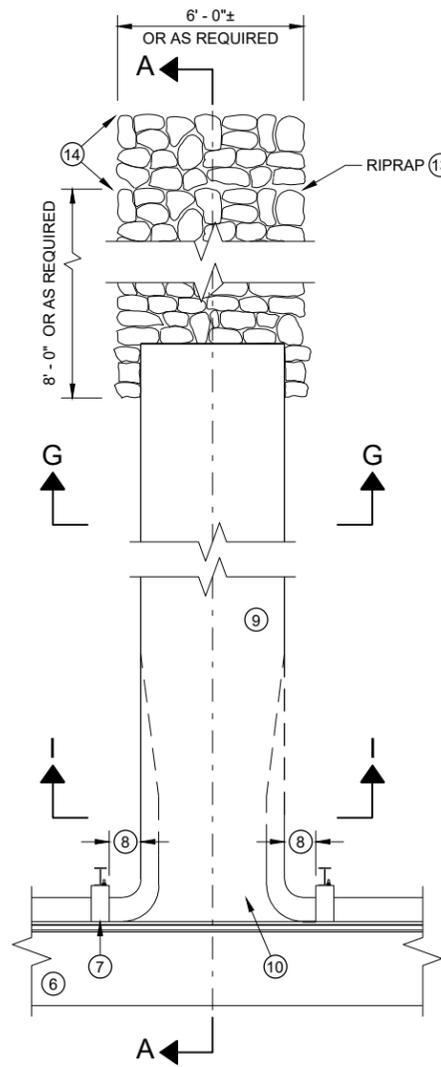
SECTION G - G



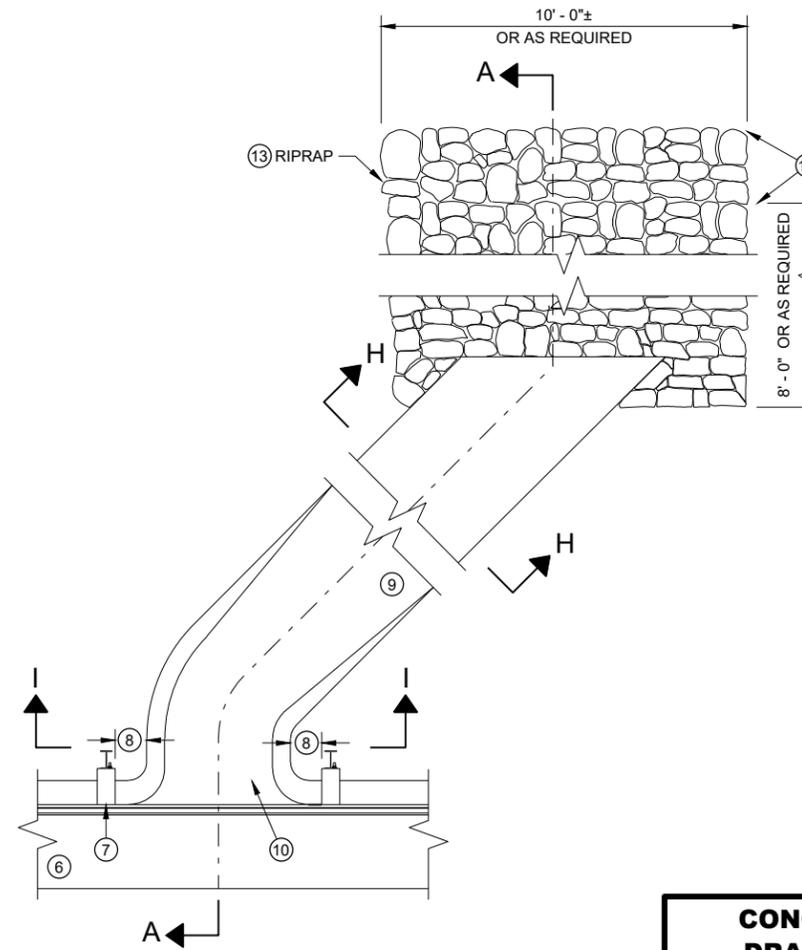
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

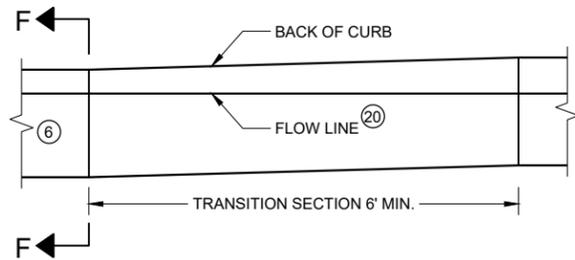
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- 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.

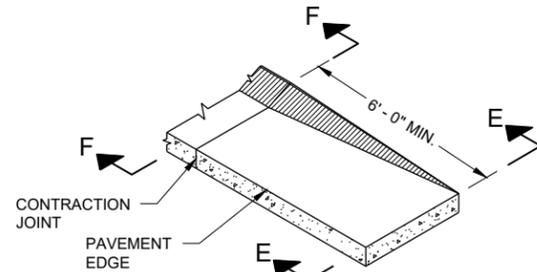
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
- ⑩ SEE ROADWAY PLANS 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 AS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

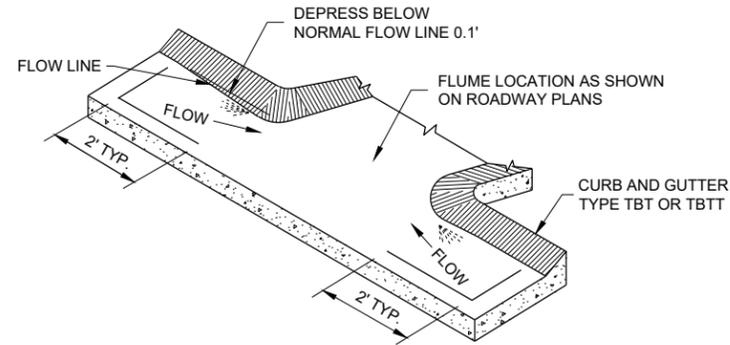
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**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**



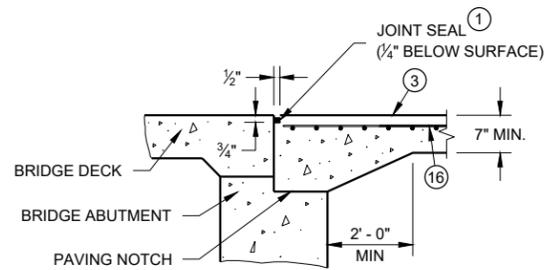
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**

GENERAL NOTES

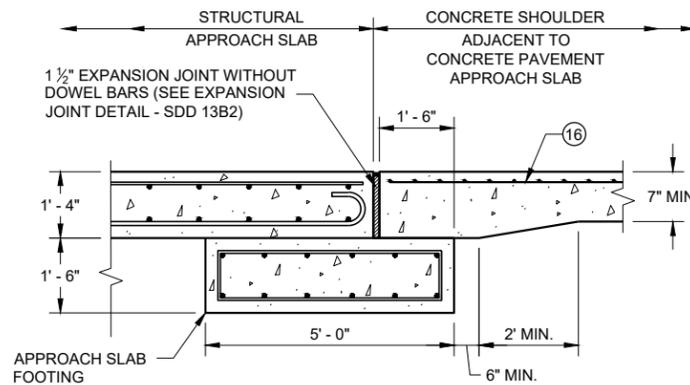
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

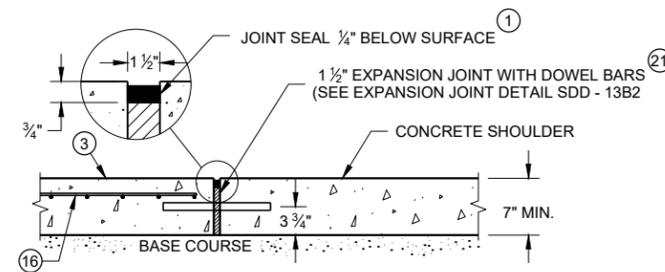
- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH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



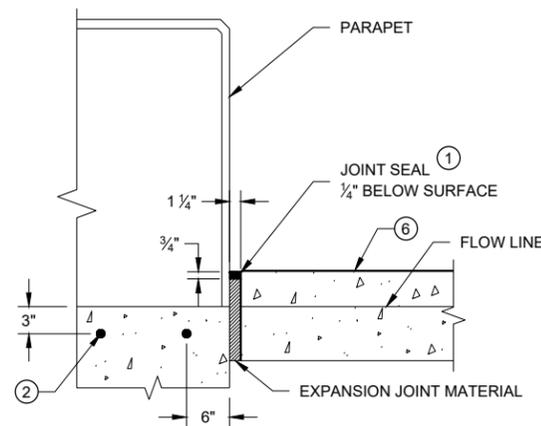
SECTION B-B



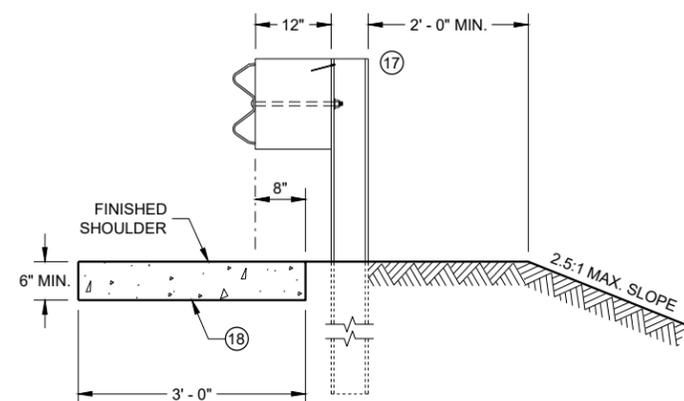
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



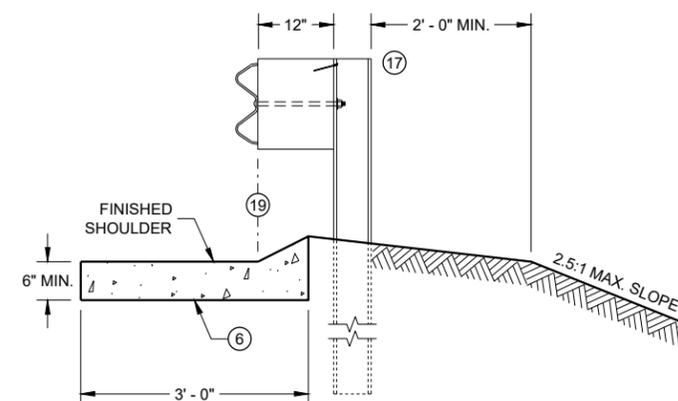
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

6

6

SDD08D02 - 08C

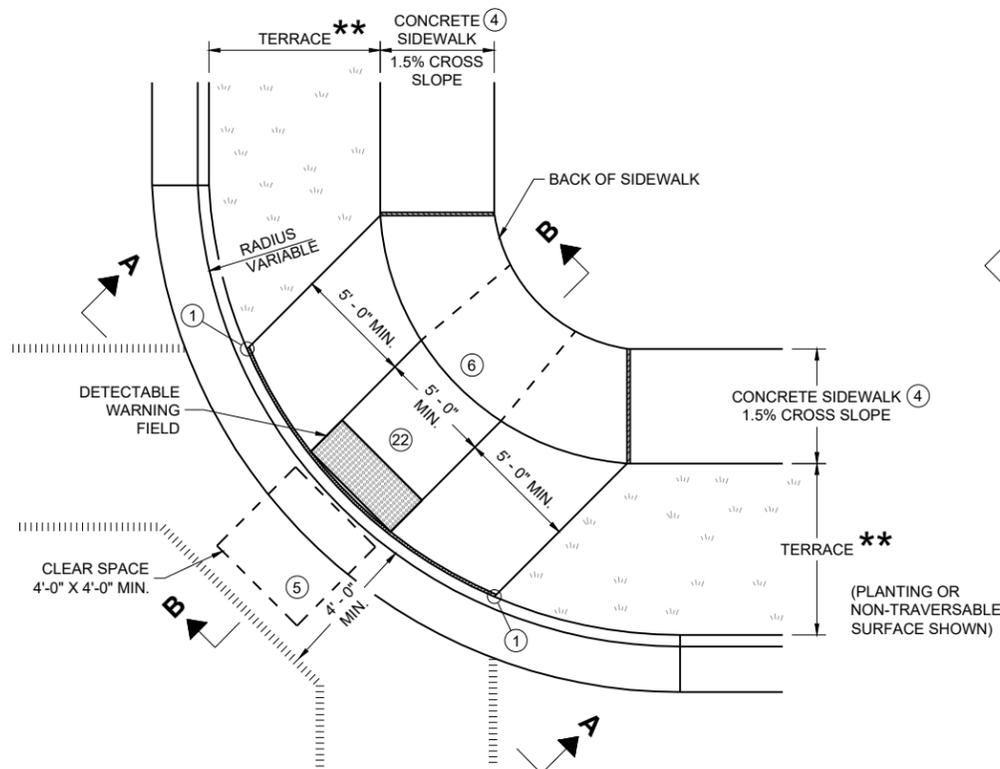
SDD08D02 - 08C

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

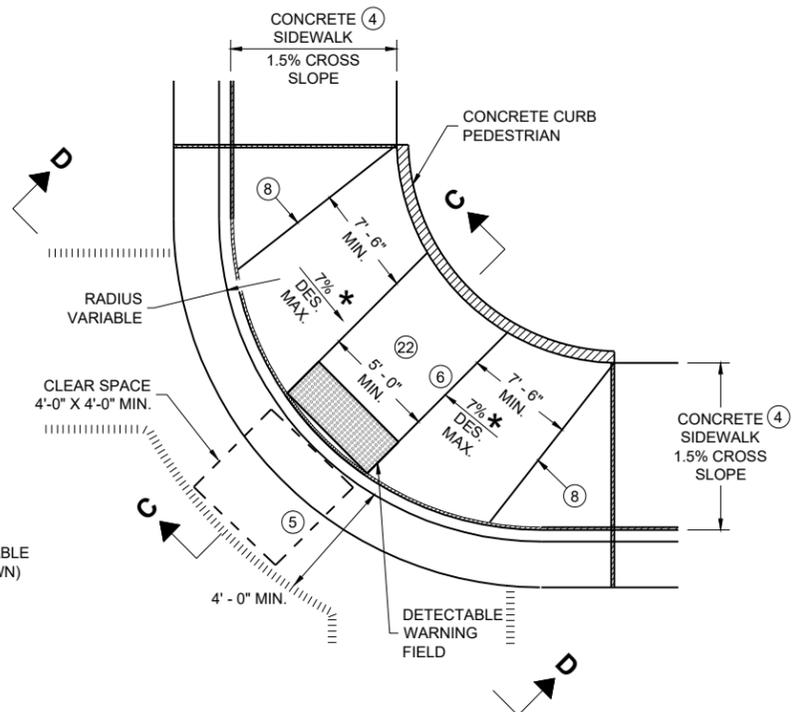
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

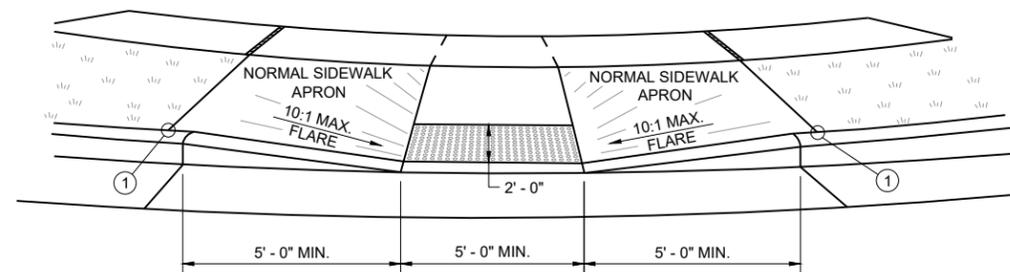
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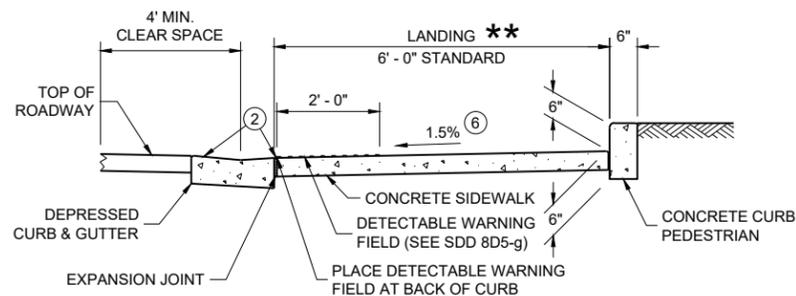
**PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)**



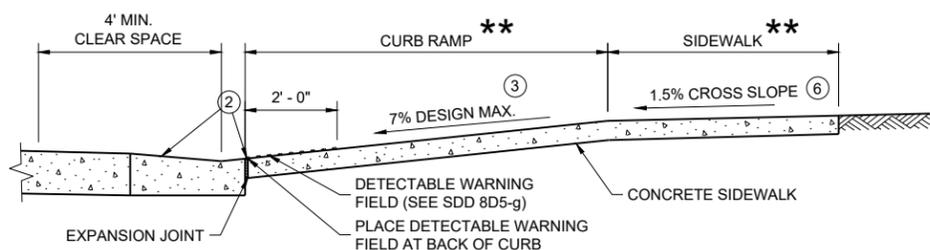
**PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)**



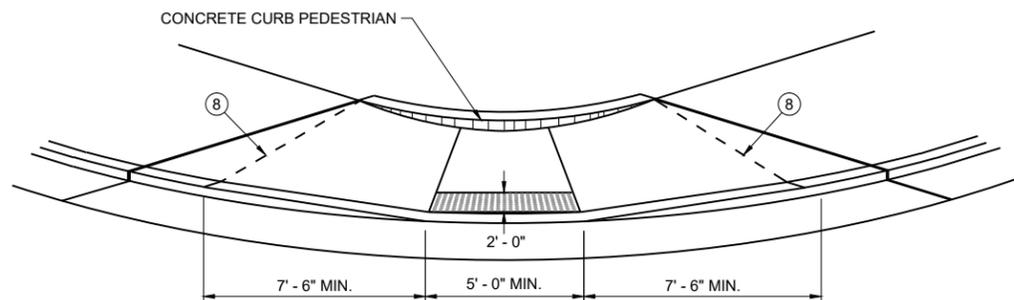
VIEW A - A FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE CURB RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF CURB RAMP.

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

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

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

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

- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑳ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

- — — — — 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

**CURB RAMPS
TYPE 1 AND 1-A**

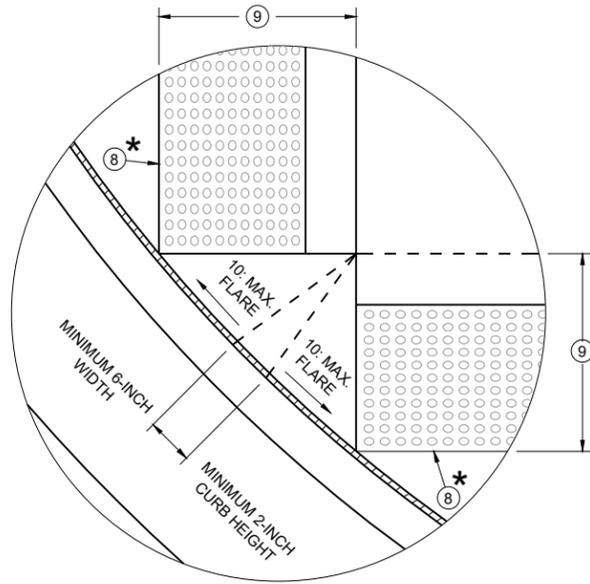
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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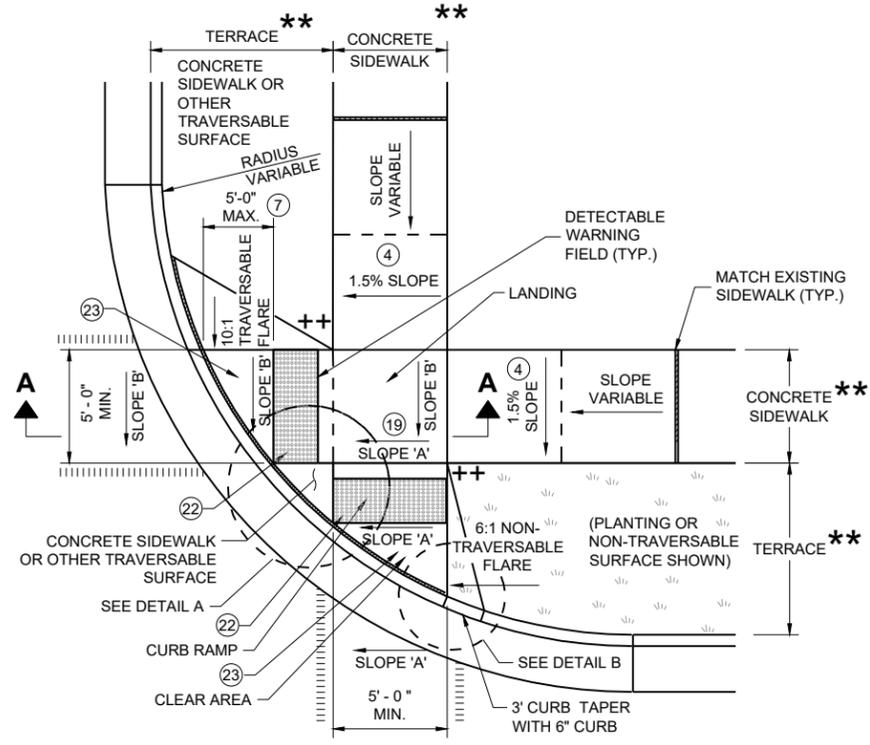
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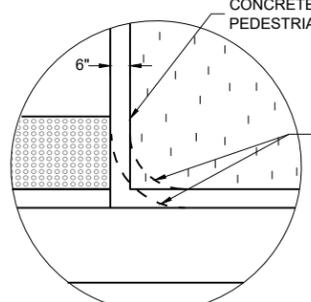
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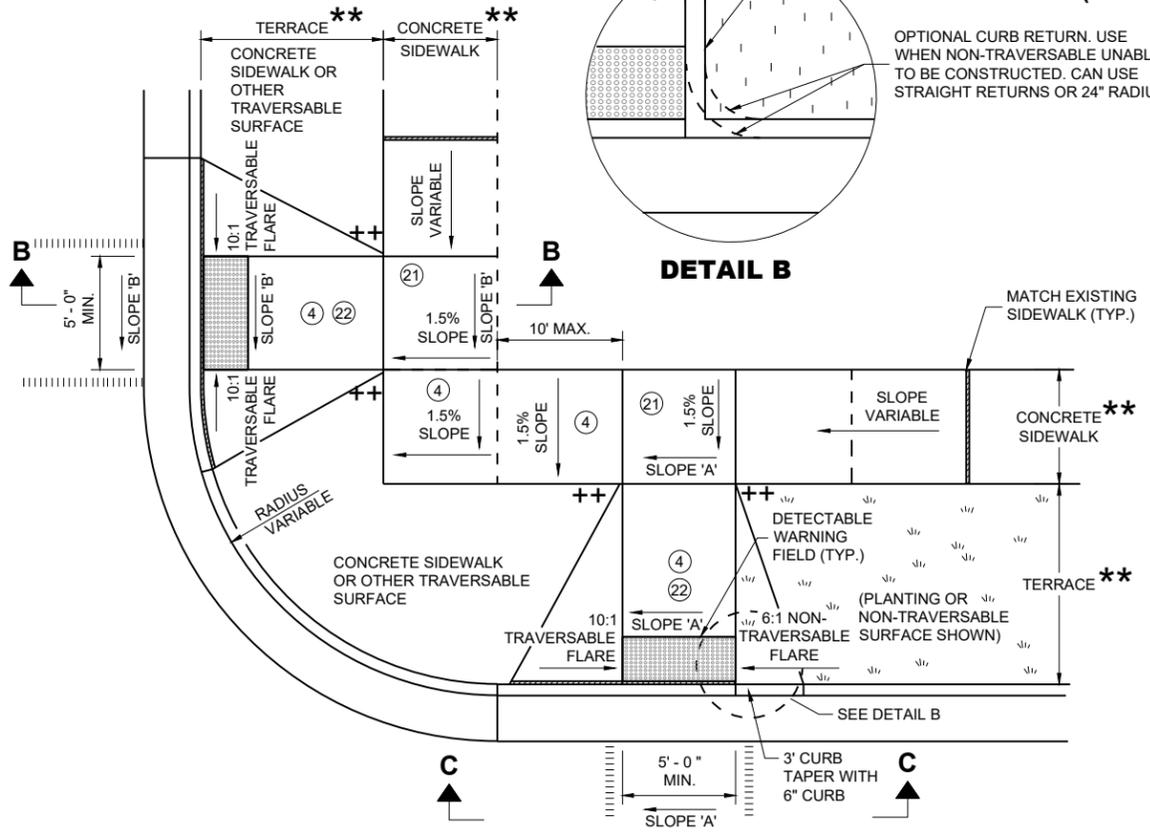
DETAIL A



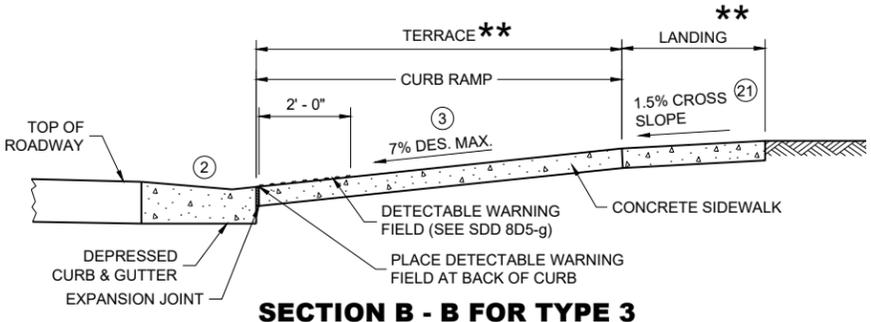
**PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)**



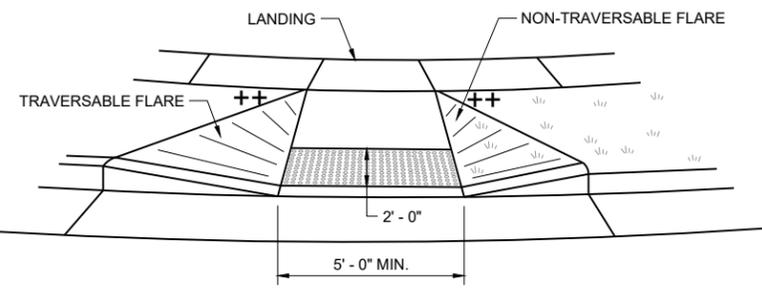
DETAIL B
OPTIONAL CURB RETURN. USE WHEN NON-TRAVERSABLE UNABLE TO BE CONSTRUCTED. CAN USE STRAIGHT RETURNS OR 24" RADIUS.



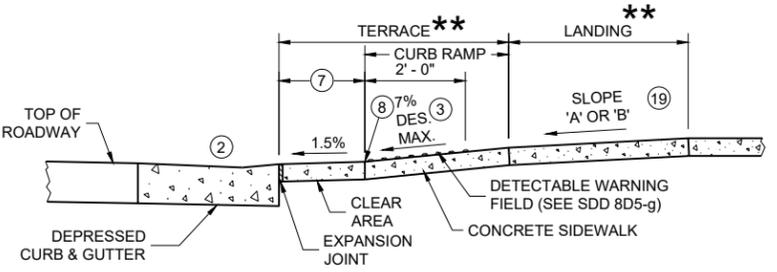
**PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)**



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3



SECTION A - A FOR TYPE 2

LEGEND

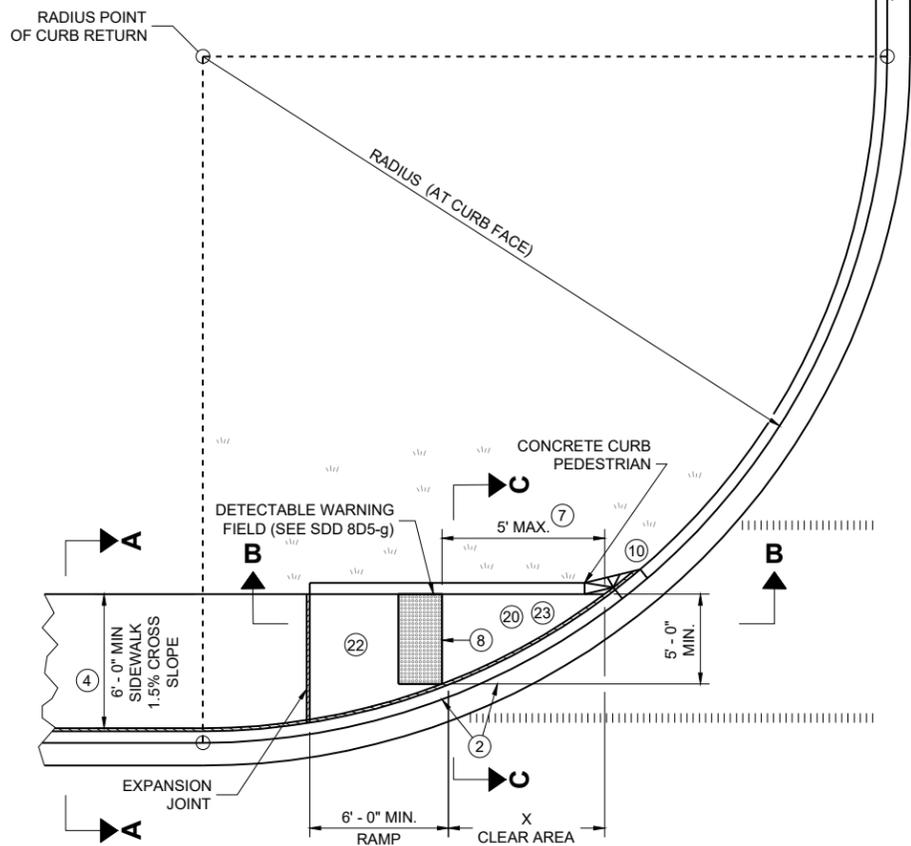
- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
 - ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-4.
 - 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% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.
 - ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
 - ⑲ WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
 - ⑳ PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
 - ㉑ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
 - ㉒ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

**CURB RAMPS
TYPE 2 AND 3**

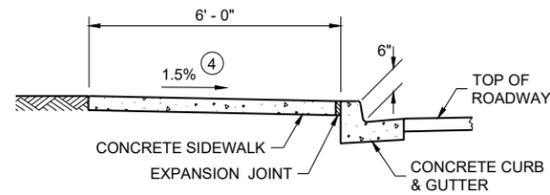
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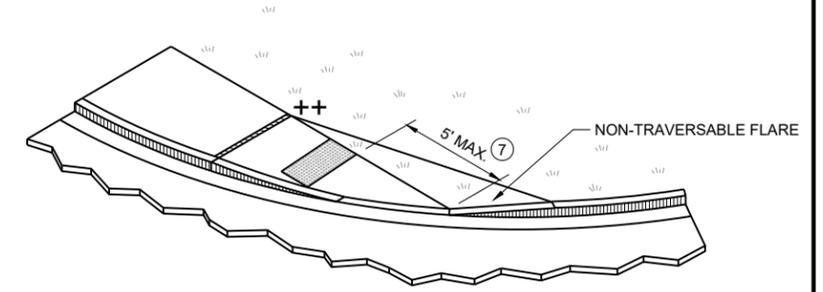
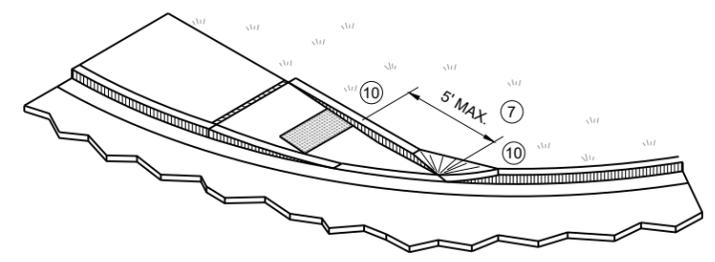
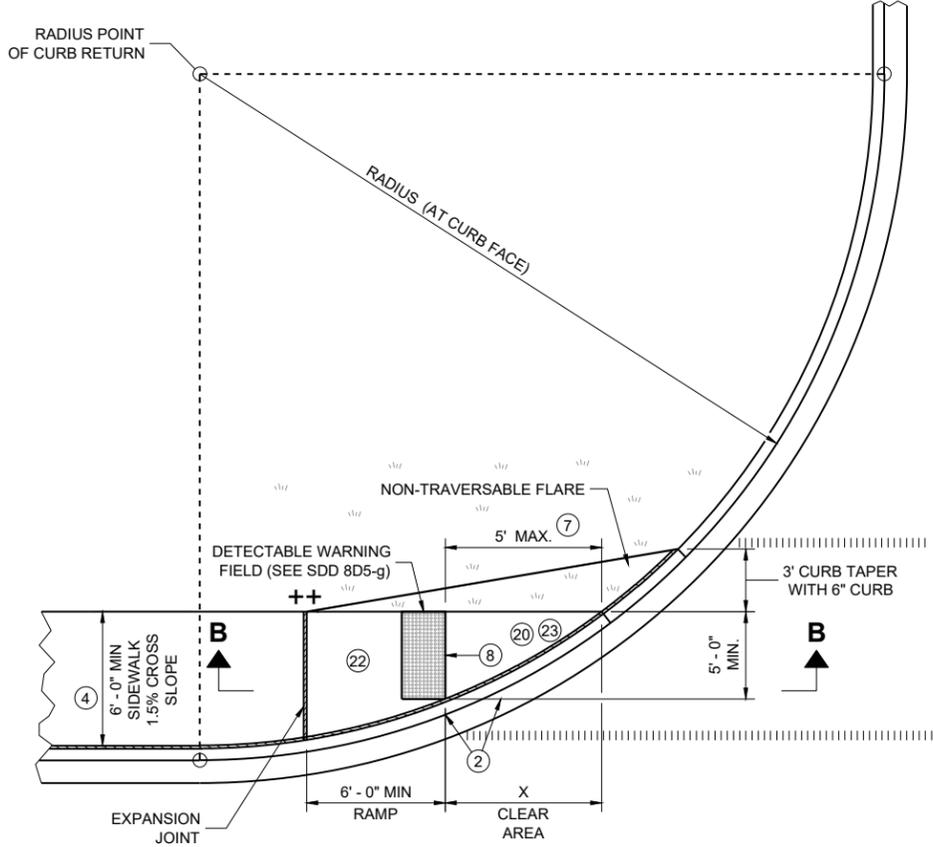
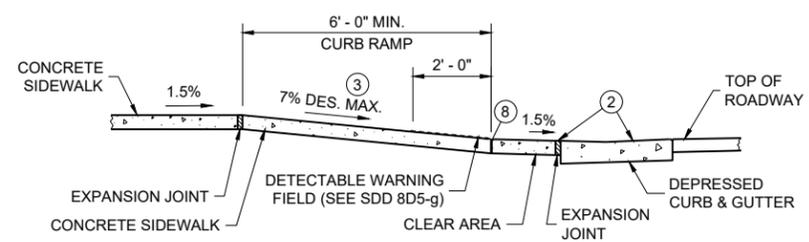
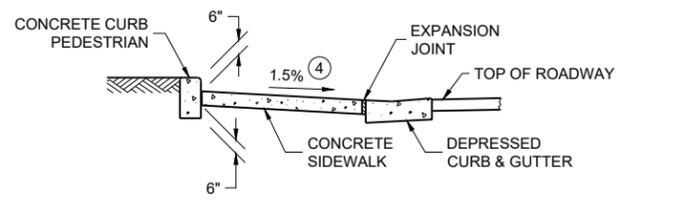
- LEGEND**
- ½" EXPANSION JOINT SIDEWALK
 - - - CONTRACTION JOINT SIDEWALK
 - ||||| PAVEMENT MARKING CROSSWALK (WHITE)
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



- GENERAL NOTES**
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- (2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - (3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
 - (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - (7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
 - (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
 - (17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
 - (20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
 - (22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
 - (23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



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

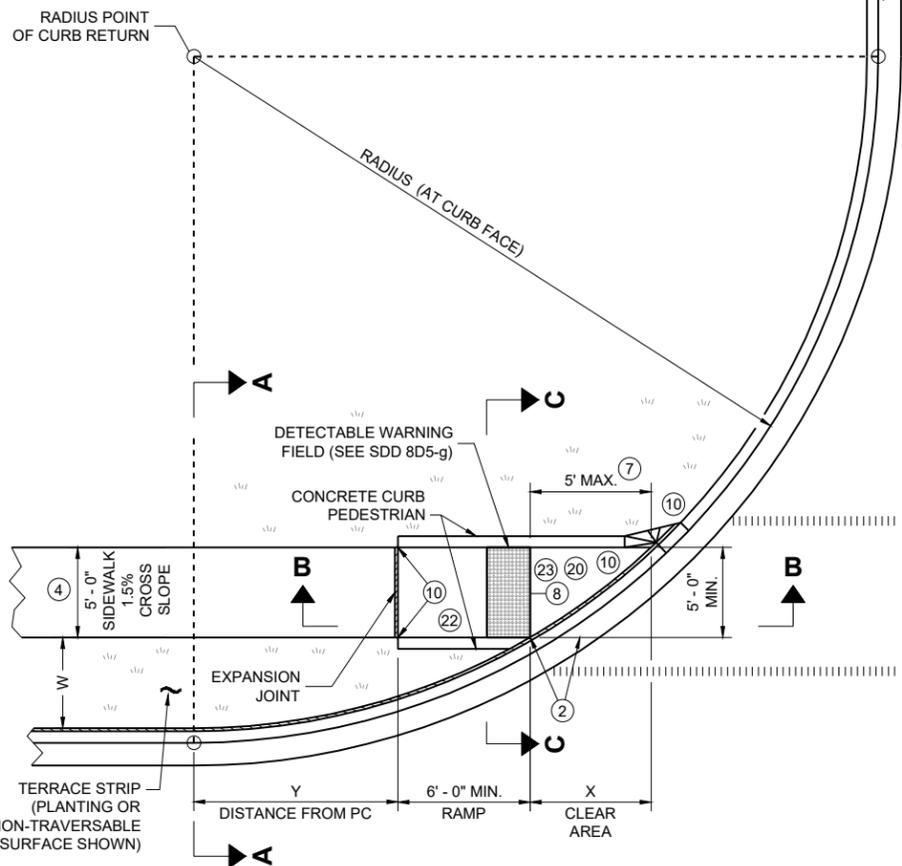
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SDD 08D05-22C



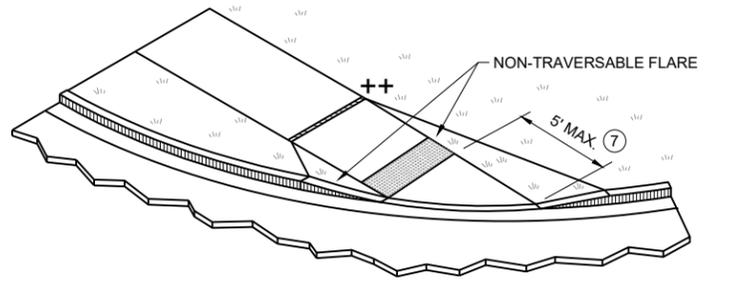
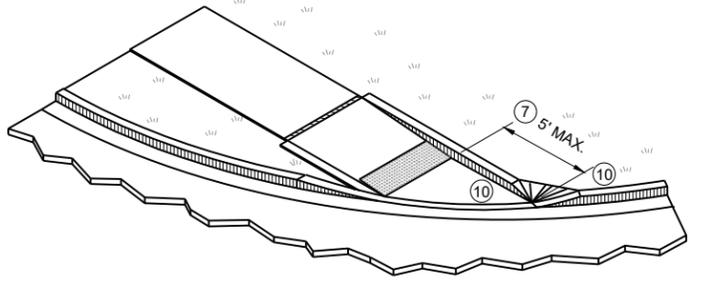
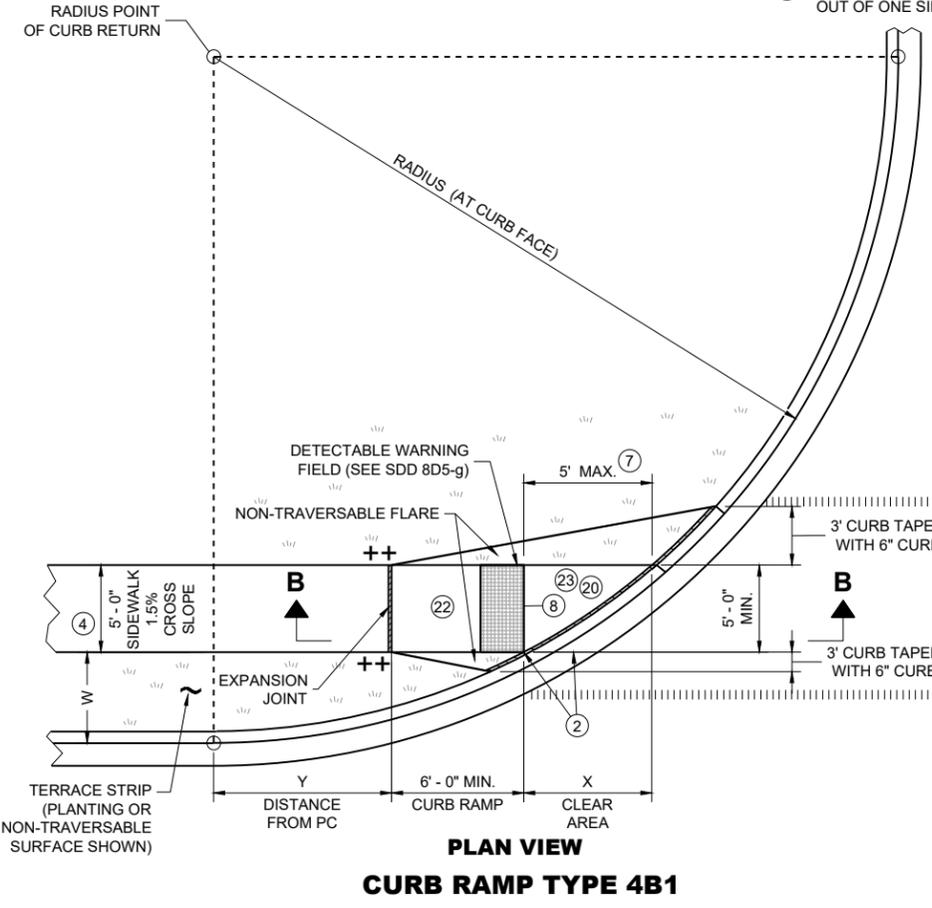
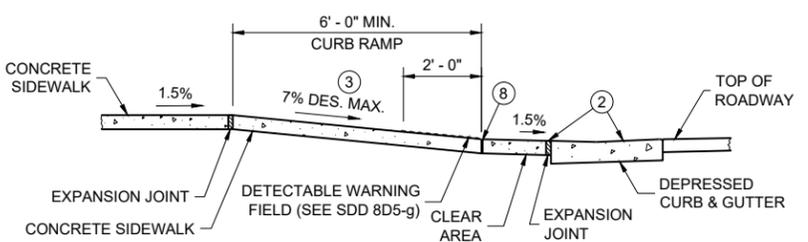
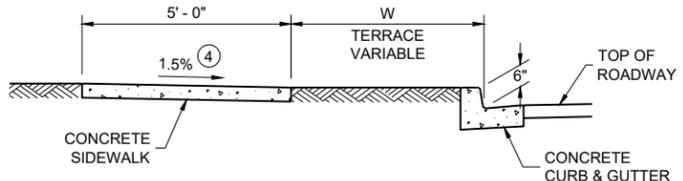
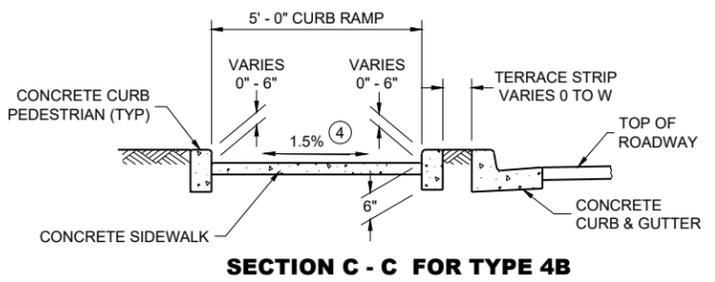
RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10 1/4"	0'-5"	2'-1"	1'-4 1/2"	1'-5"	2'-1"	0'-10"	2'-7 1/2"	0'-3 3/4"	3'-0 1/4"						
15 FEET	4'-6 3/4"	2'-1 3/4"	3'-9"	3'-5 3/4"	3'-1 1/4"	4'-6"	2'-6 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"

- LEGEND**
- ===== 1/2" EXPANSION JOINT SIDEWALK
 - - - - - CONTRACTION JOINT SIDEWALK
 - ||||||| PAVEMENT MARKING CROSSWALK (WHITE)
 - * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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 CURB RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- 2 GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 7 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 10 INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- 17 A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- 20 MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- 22 THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- 23 THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



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

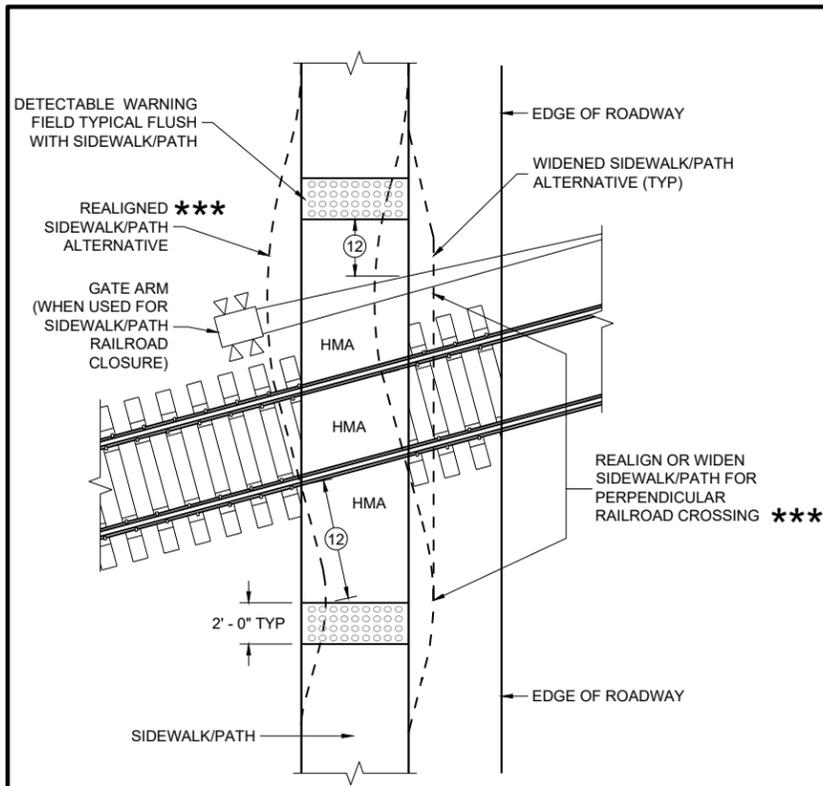
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

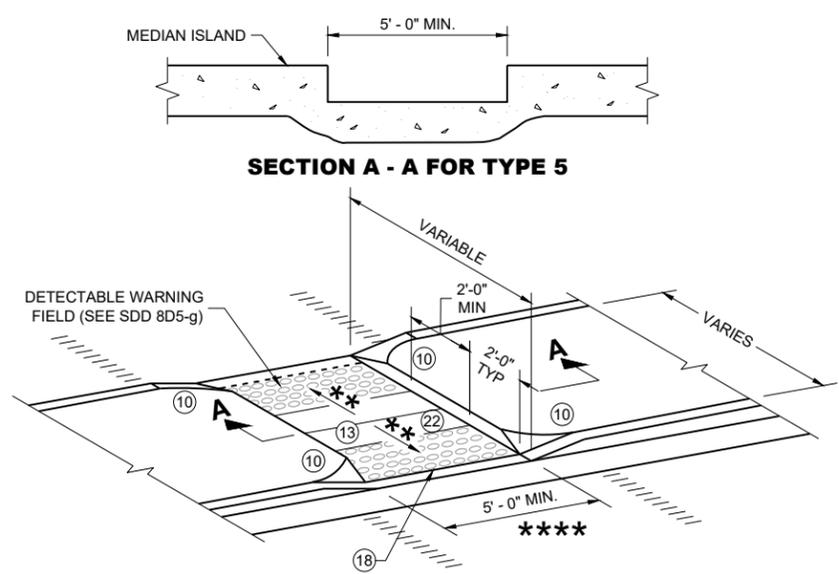
6

SDD 08D05-22d

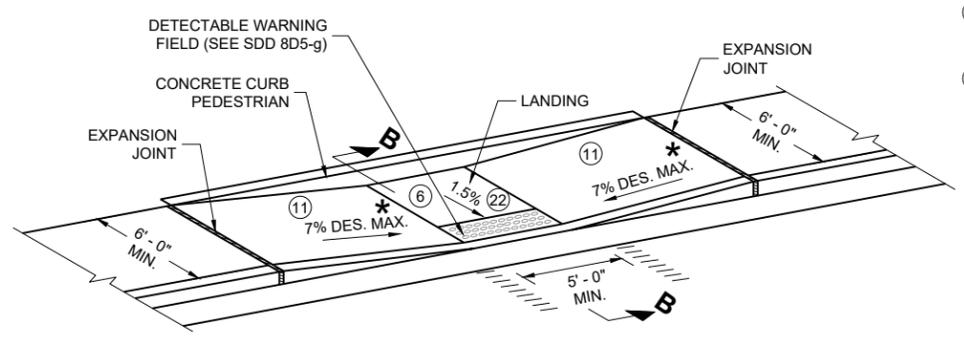
SDD 08D05-22d



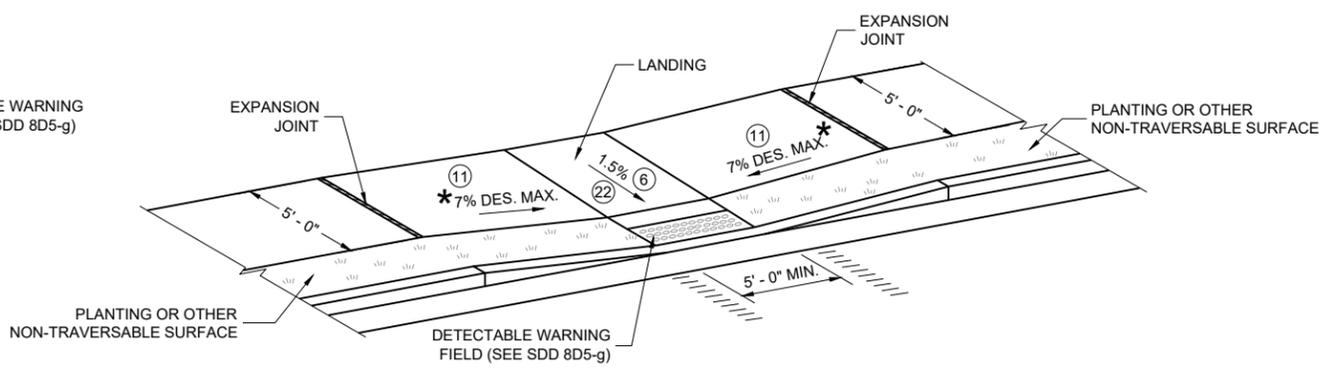
CURB RAMP TYPE 8
DETECTABLE WARNINGS
FOR SIDEWALKS OR SHARED USE PATHS
AT RAILROAD CROSSINGS



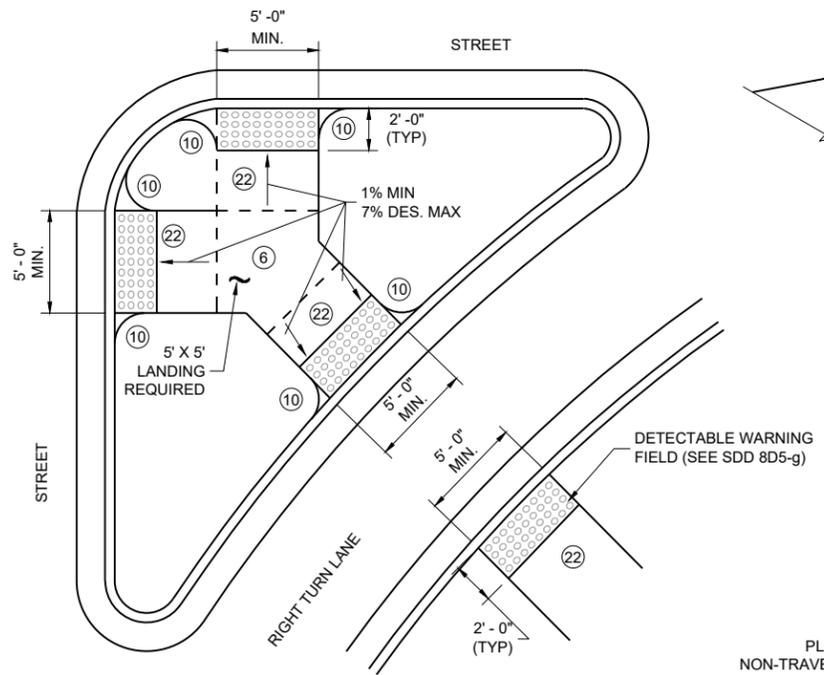
CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS



CURB RAMP TYPE 7B
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS



CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

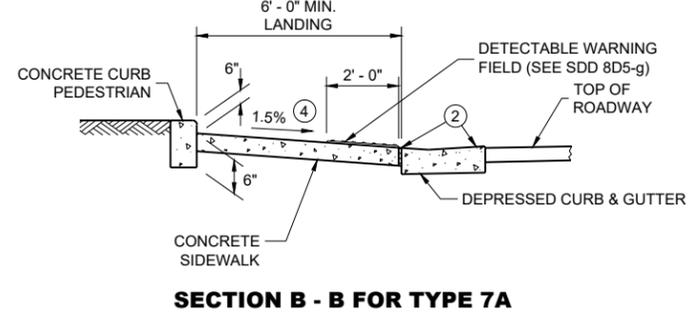
REFER TO GENERAL NOTES (2) AND (3)
 FOR ALL ISLAND CURB RAMPS

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB 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 2.1%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- (2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- (11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- (12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/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 STEEL-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.
- (17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- (18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.
- (22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- MAXIMUM 8.3%
- 1% MINIMUM (PROVIDE DRAINAGE)
- DETAILS TO BE DETERMINED BY ENGINEER
- FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK

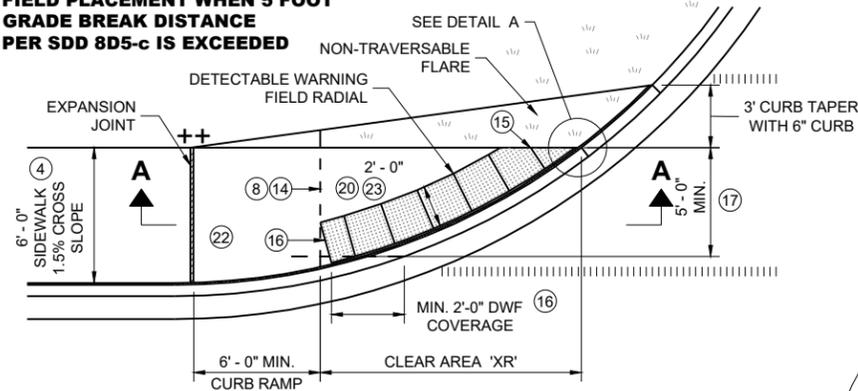


SECTION B - B FOR TYPE 7A

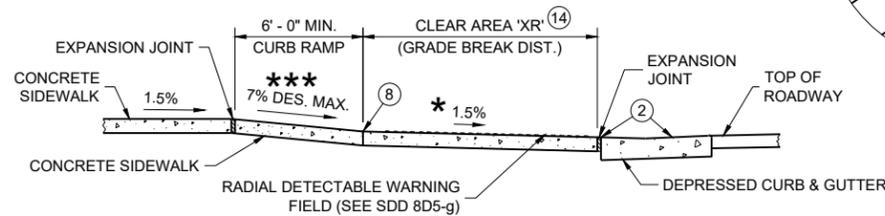
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

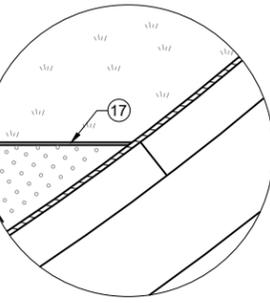
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-c IS EXCEEDED**



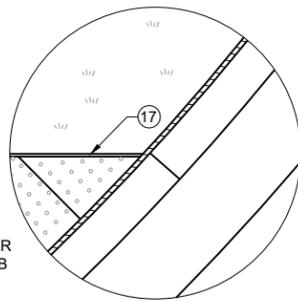
**PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



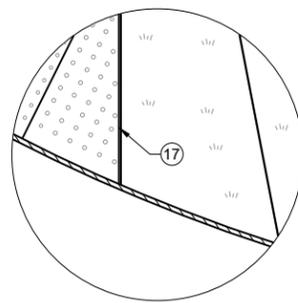
SECTION A - A FOR TYPE 4A1



DETAIL A

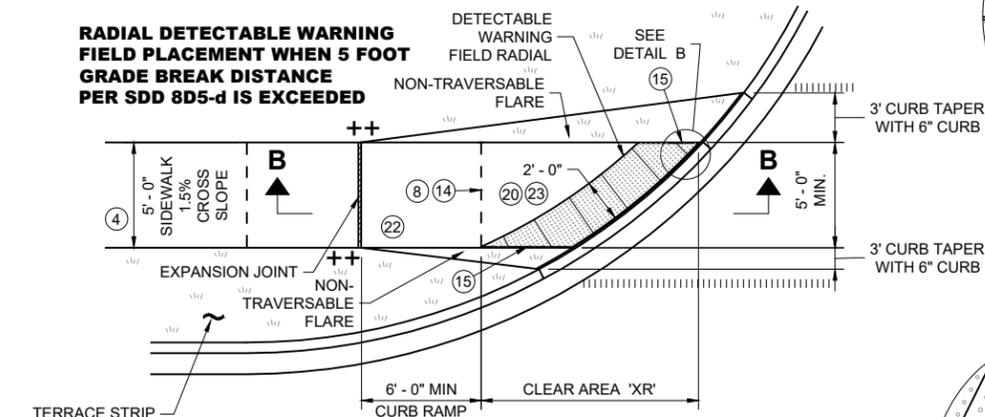


DETAIL B

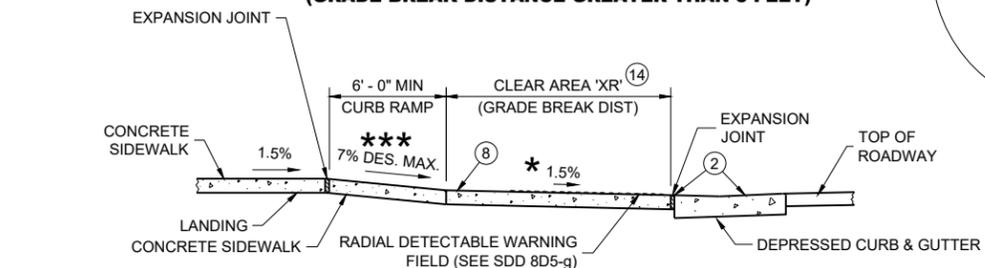


DETAIL C

**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)**

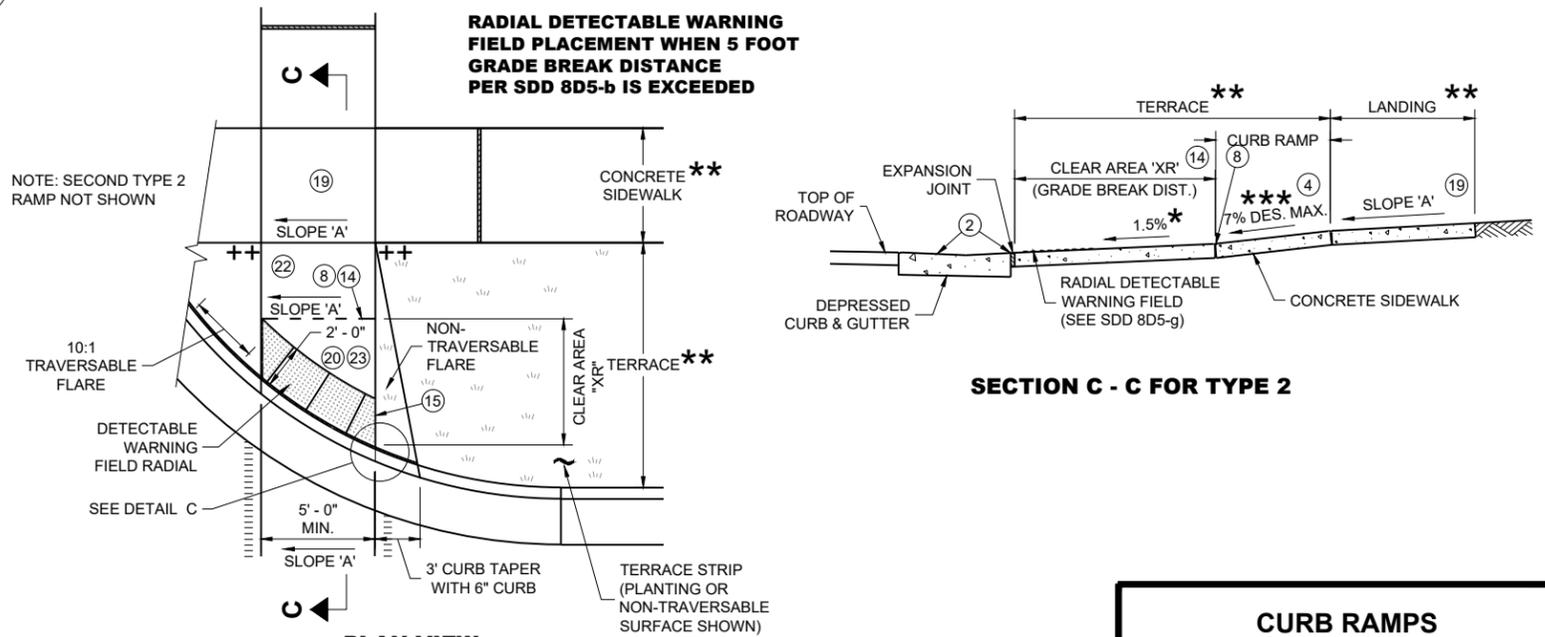


SECTION B - B FOR TYPE 4B1

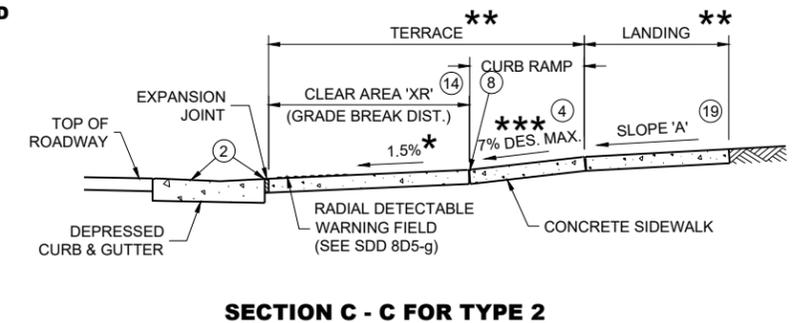
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB 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 COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑭ CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- ⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- ⑯ USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑲ WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- ⑳ MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- ㉒ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ㉓ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

**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)**



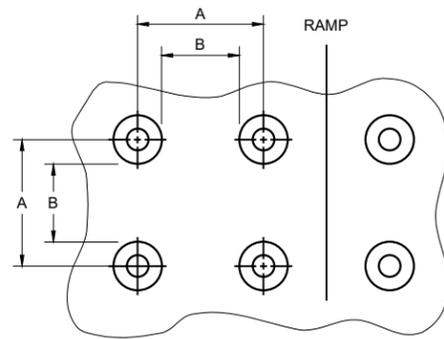
SECTION C - C FOR TYPE 2

**CURB RAMPS
RADIAL DETECTABLE WARNING**

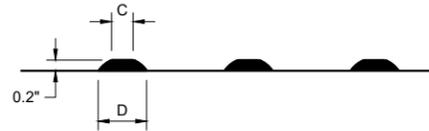
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	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.

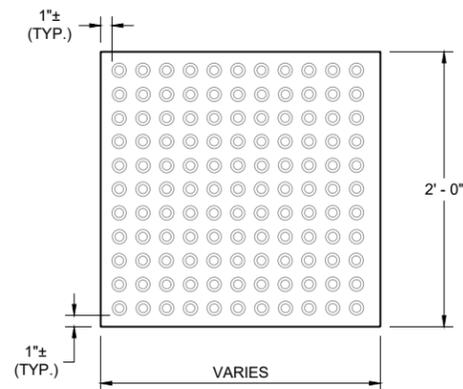


PLAN VIEW

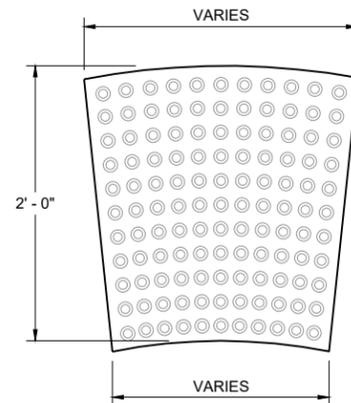


ELEVATION VIEW

**TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL**

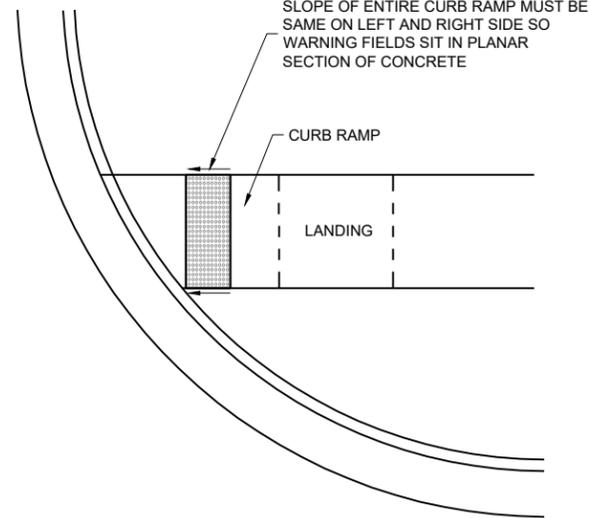


**RECTANGULAR
PLATES**

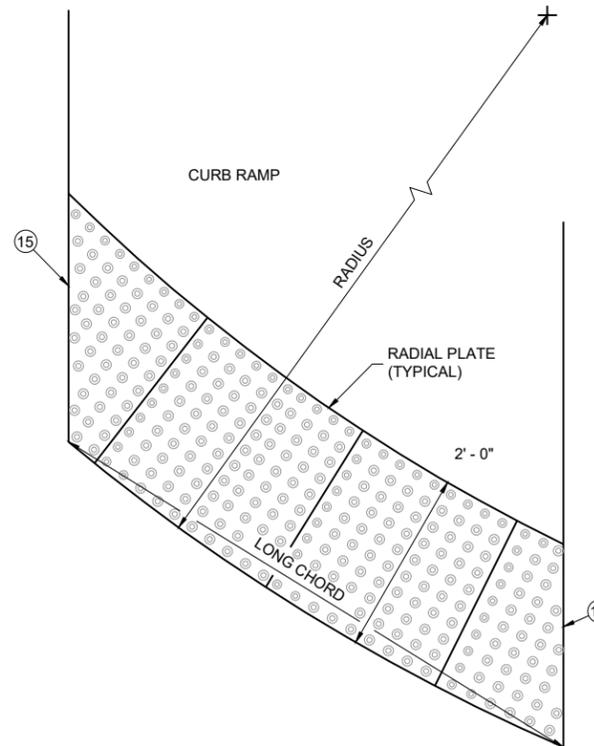


**RADIAL
PLATES**

**PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)**



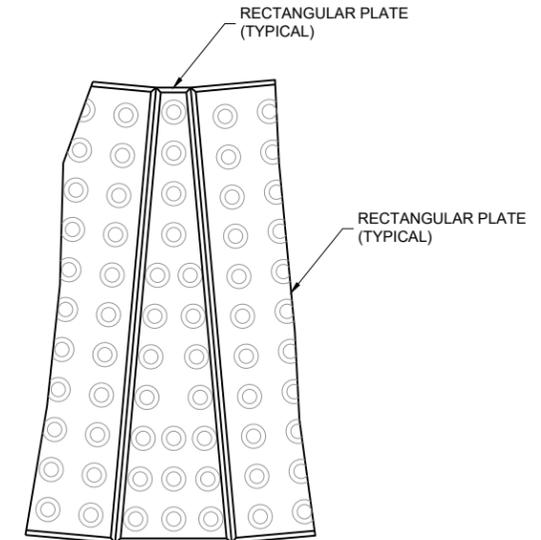
**DETECTABLE WARNING FIELD
PLANAR INSTALLATION**



**PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES**

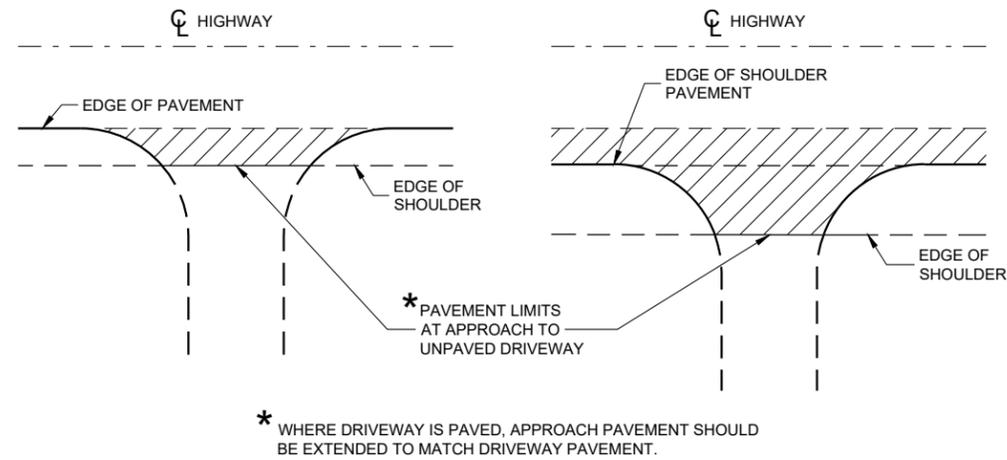
GENERAL NOTES

- 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 FIELD ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.
- DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.
- FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



**PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL**

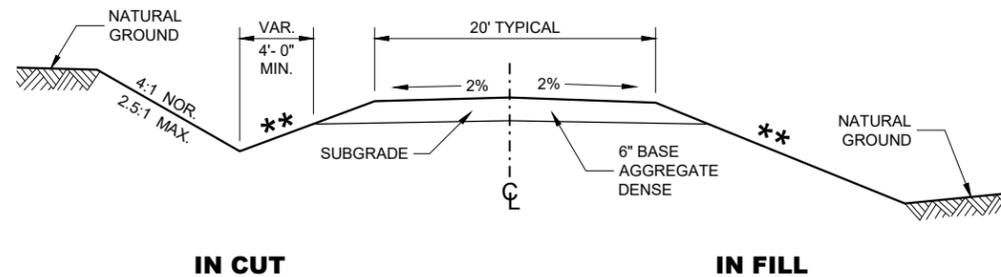
CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2025 DATE	/s/ Rodney Taylor <position>
FHWA	



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

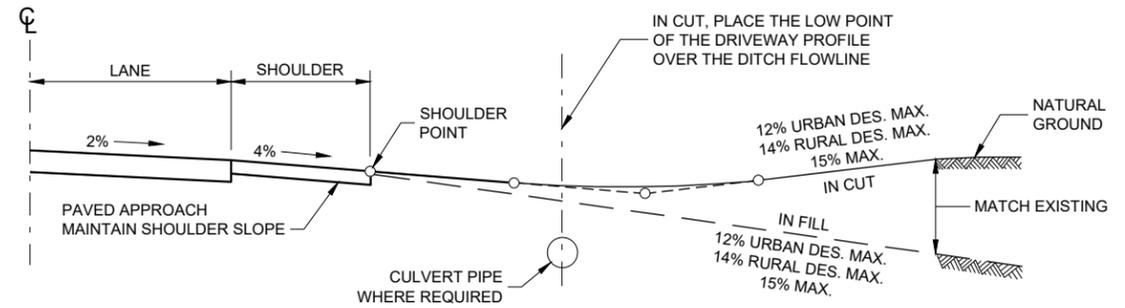
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



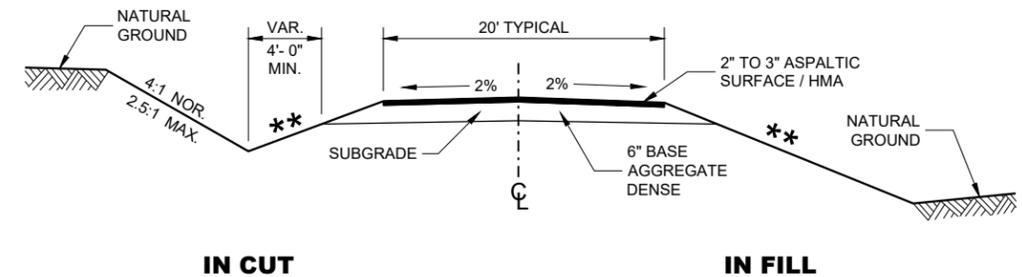
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

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

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



TYPICAL DRIVEWAY PROFILES



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

DRIVEWAYS WITHOUT CURB AND GUTTER

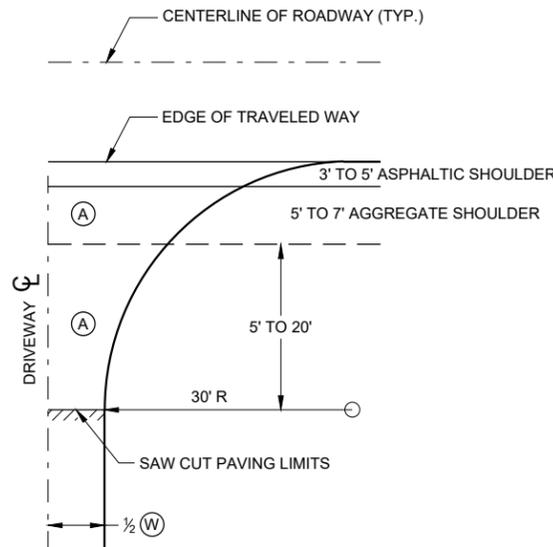
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

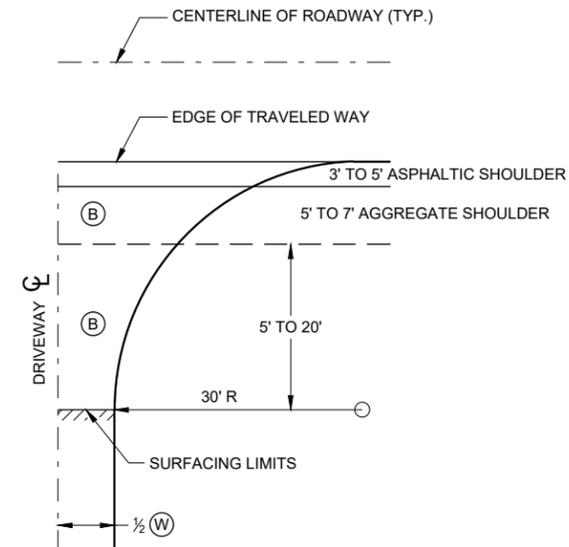
GENERAL NOTES

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

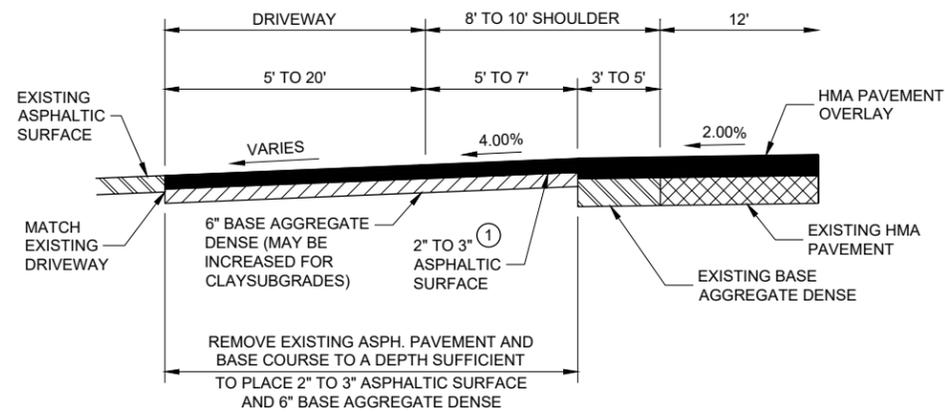


- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.

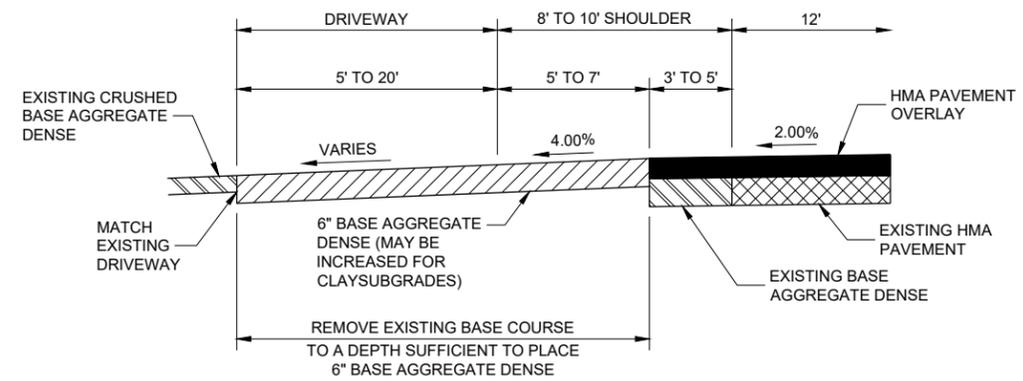
**PLAN VIEW
HALF SECTION**



**PLAN VIEW
HALF SECTION**



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



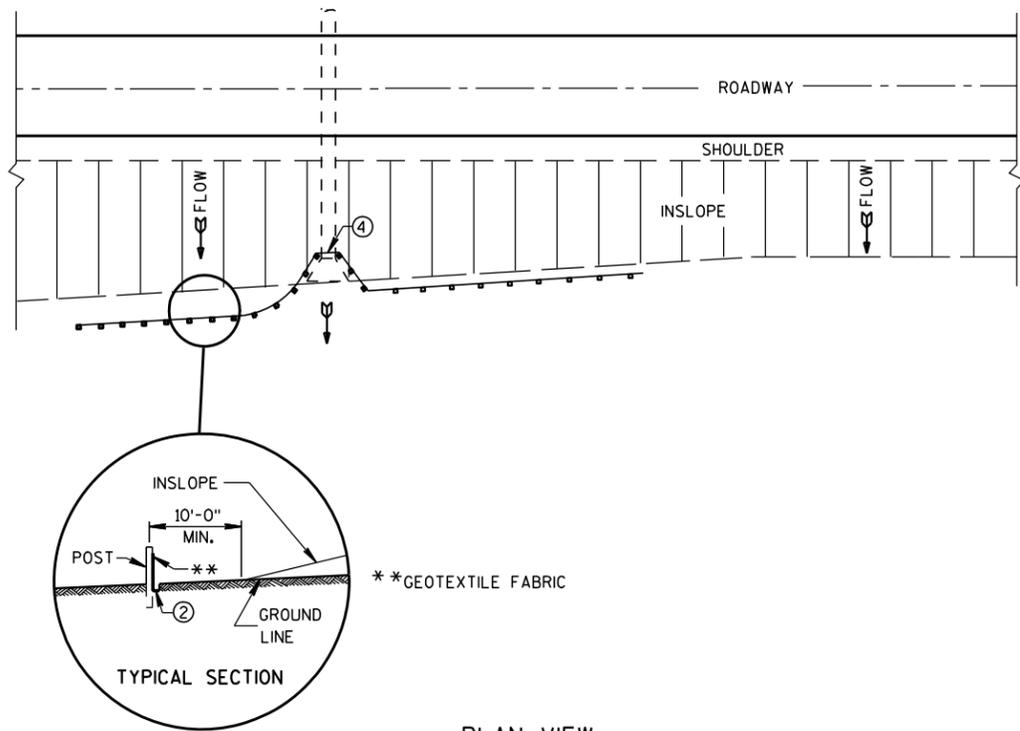
**PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS**

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

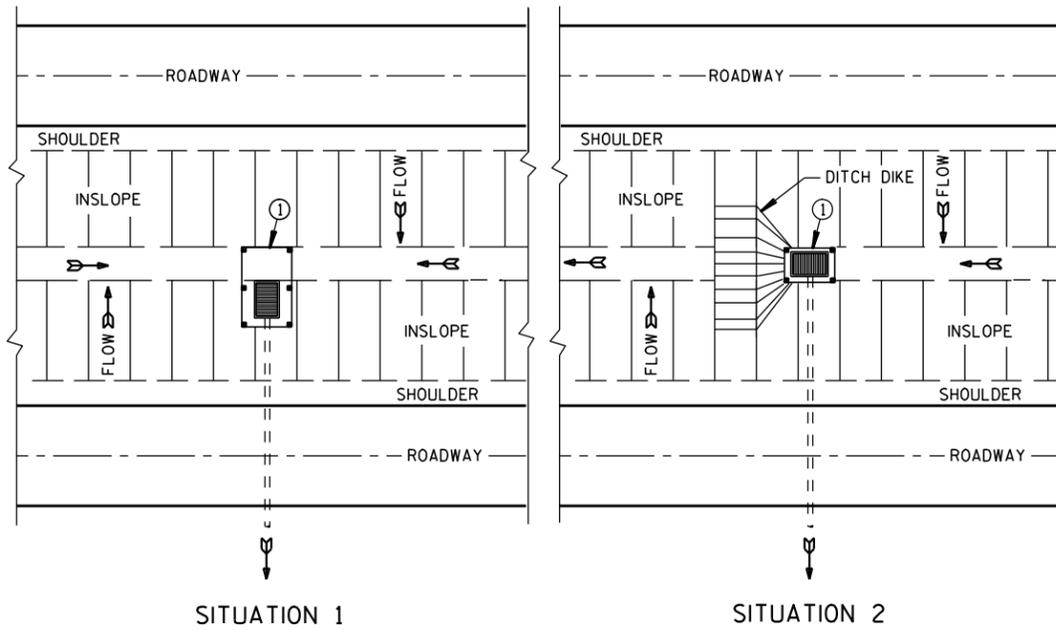
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

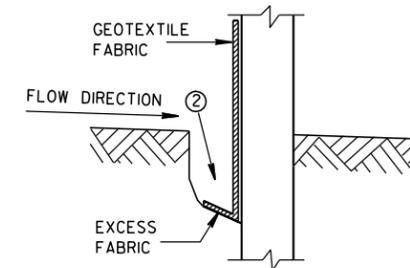


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

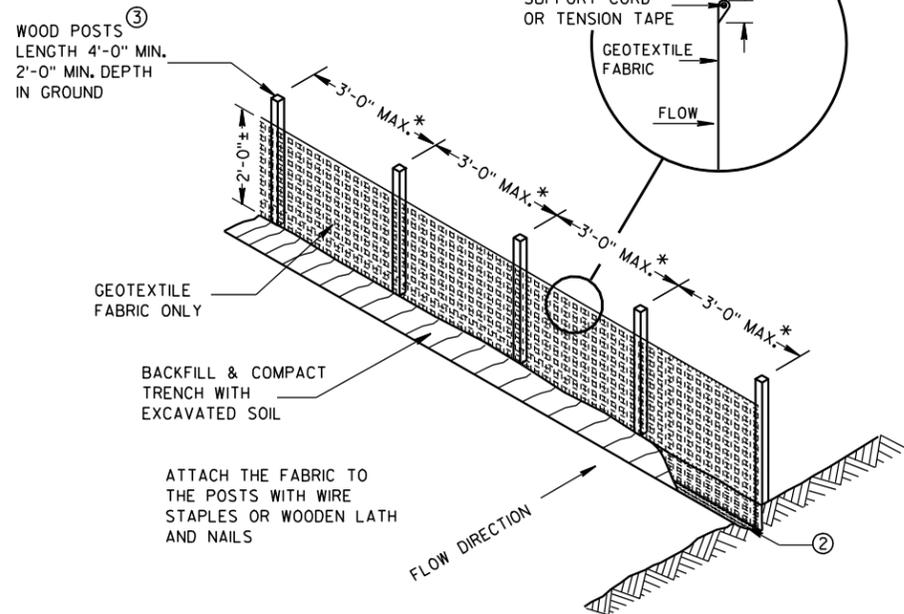
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



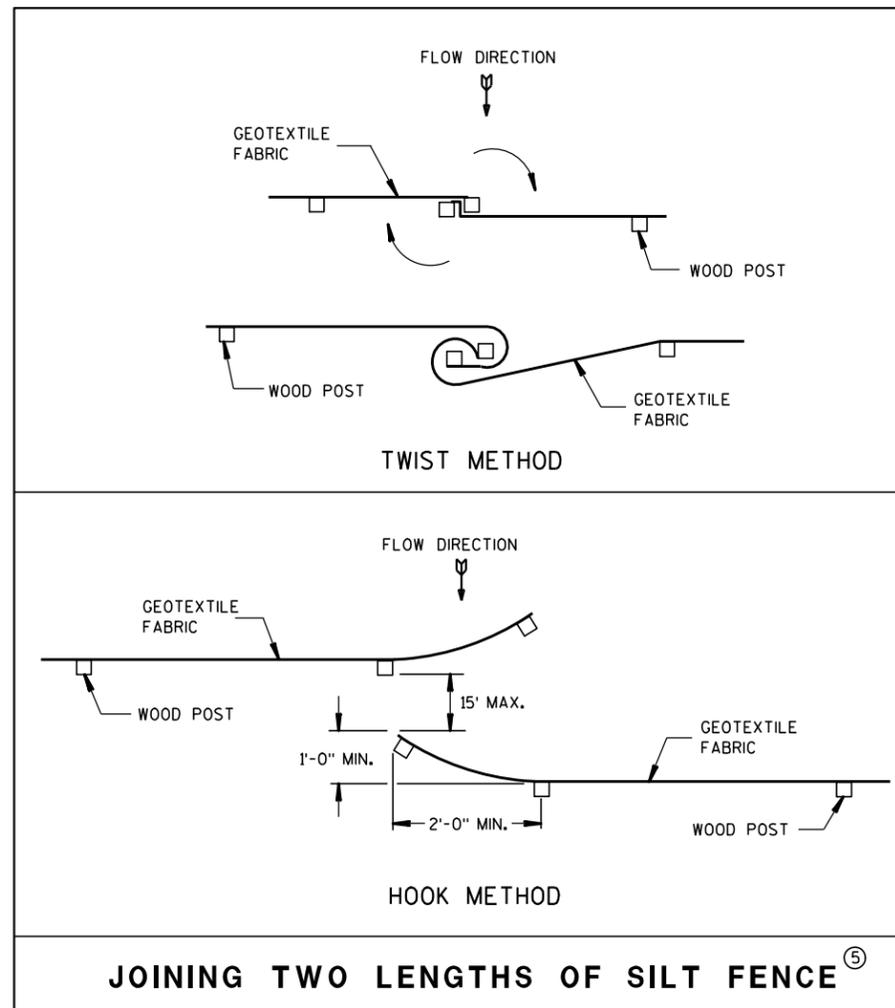
TRENCH DETAIL

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

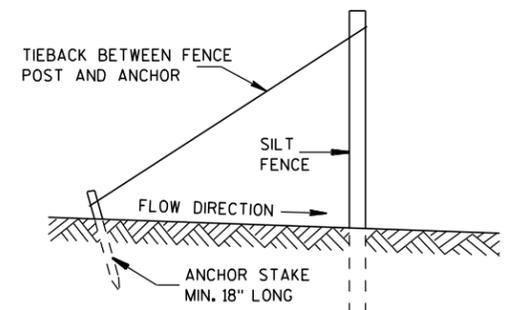


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

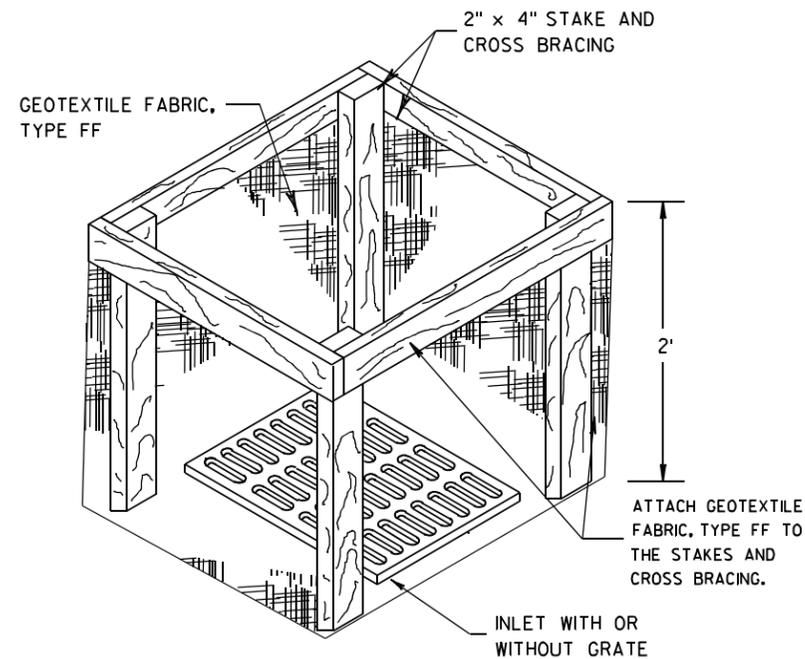
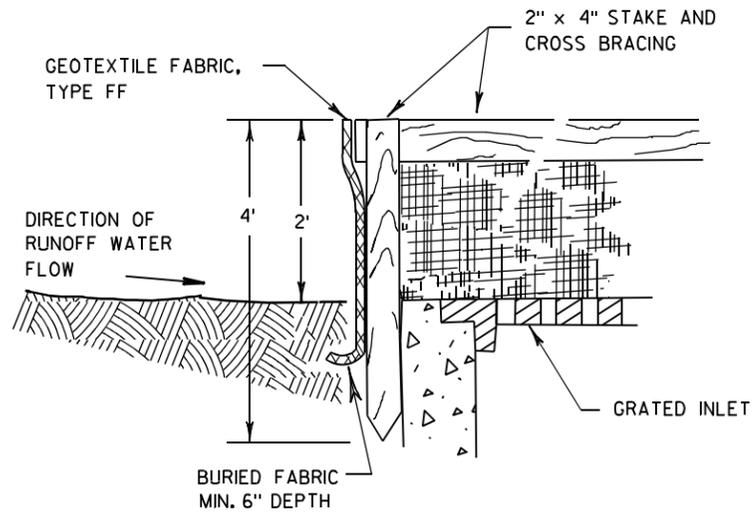
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

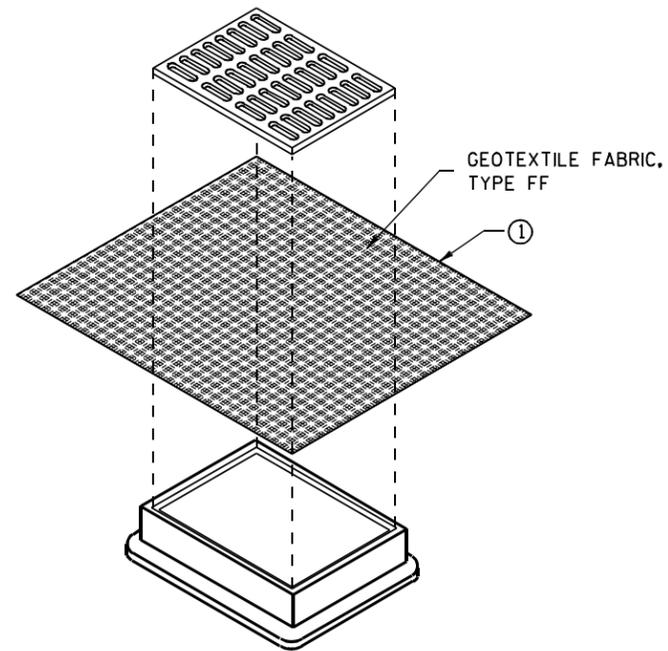
GENERAL NOTES

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

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

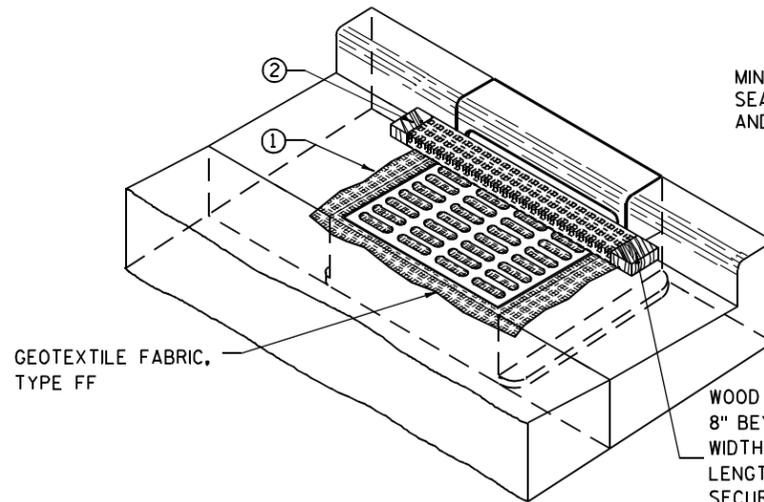
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

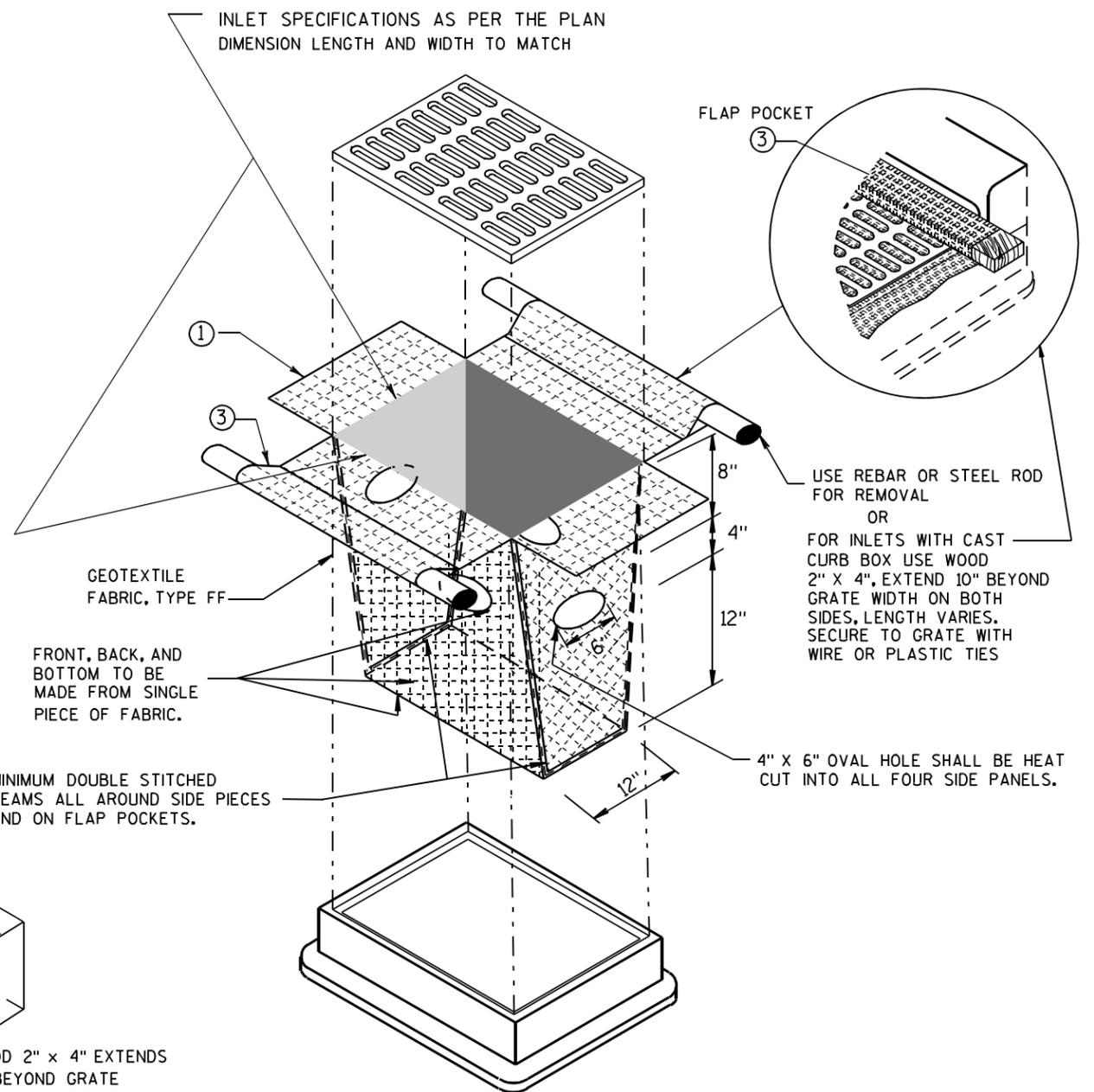
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

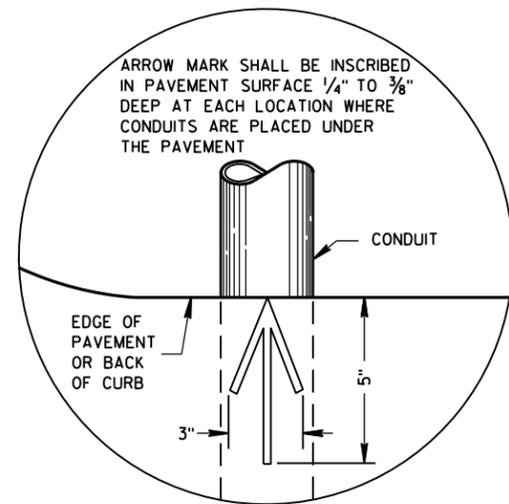
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



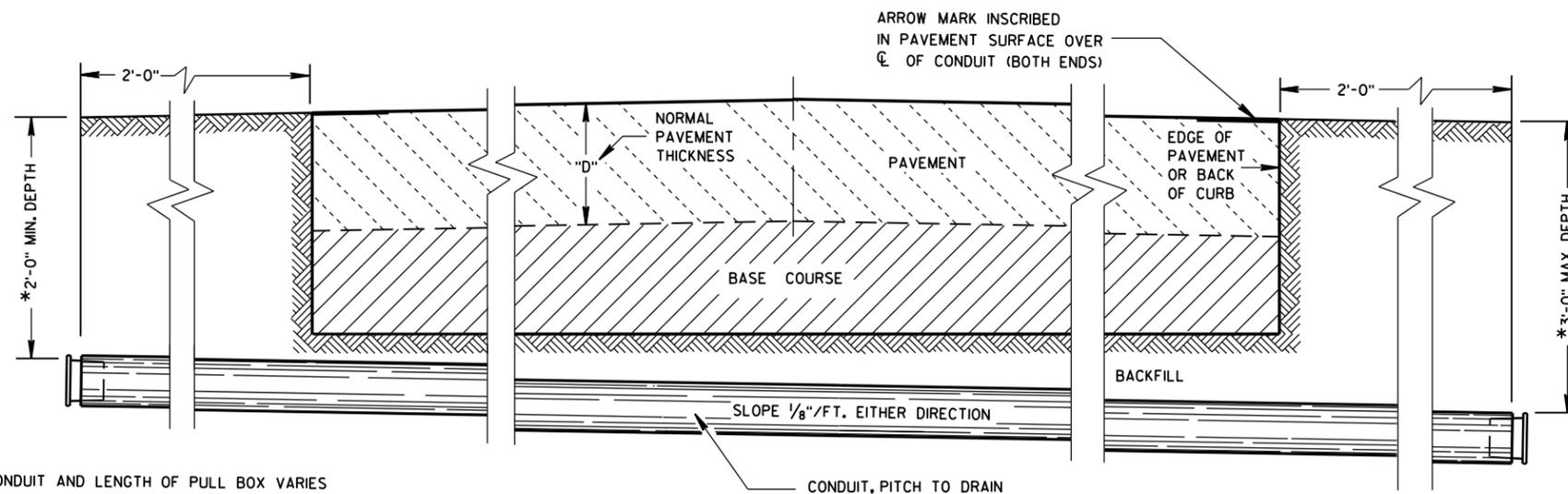
INLET PROTECTION, TYPE D

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

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



**PLAN VIEW
ARROW MARK**



**SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

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

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

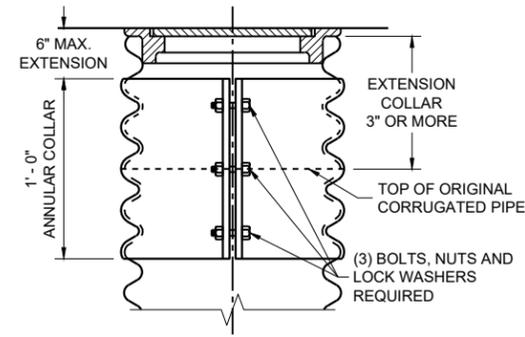
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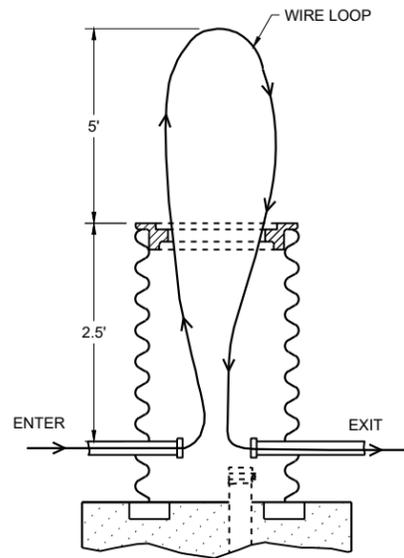
S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

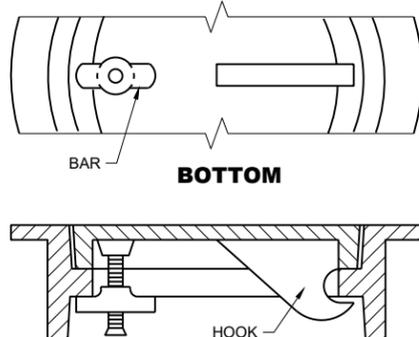
CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



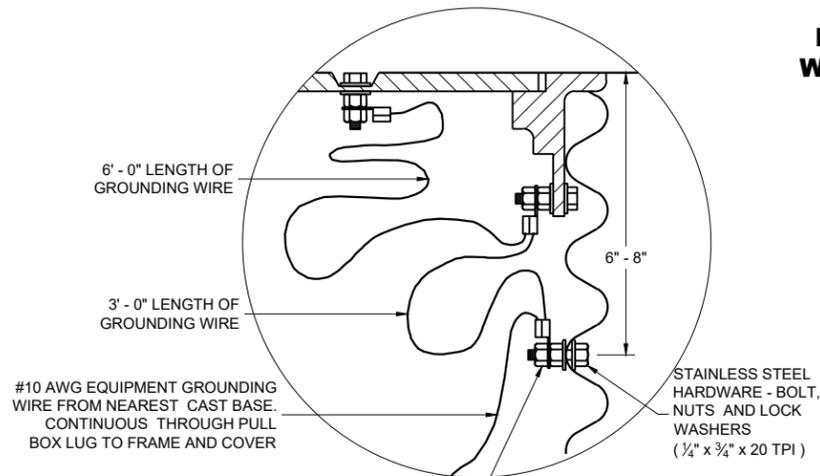
CORRUGATED PIPE EXTENDER



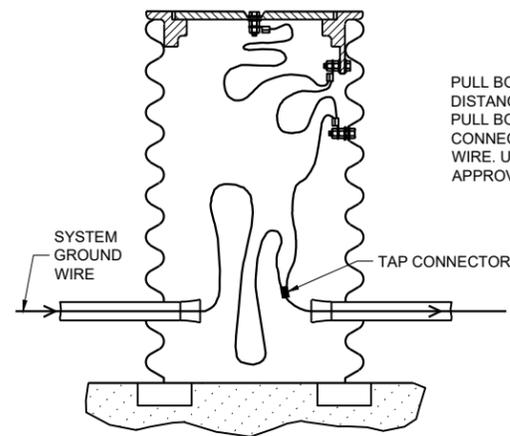
MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE

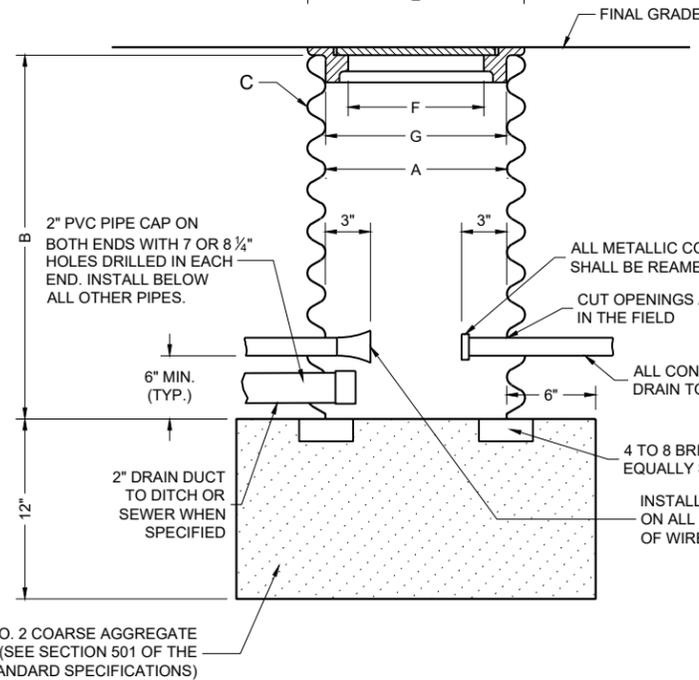
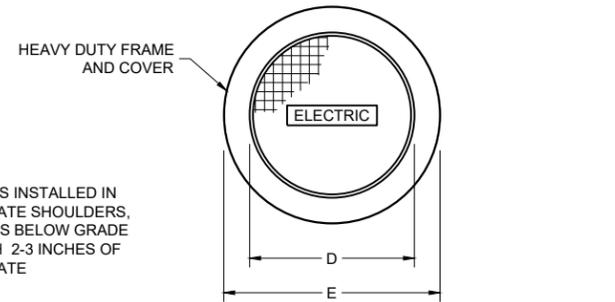


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

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



PULL BOX

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/8".

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
		12	12	12	18	18	18	24	24	24
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
		WEIGHT IN POUNDS*								
FRAME AND COVER		60	60	60	110	110	110	155	155	155

*THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

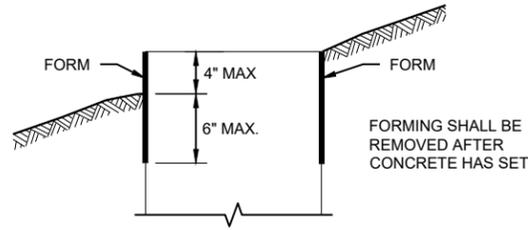
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 /S/ Ahmet Demirebilek
DATE STATE ELECTRICAL ENGINEER

FHWA

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



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

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

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

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

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

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

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

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

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

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

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

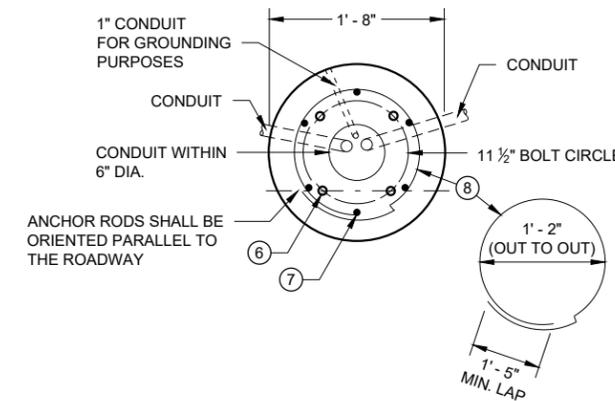
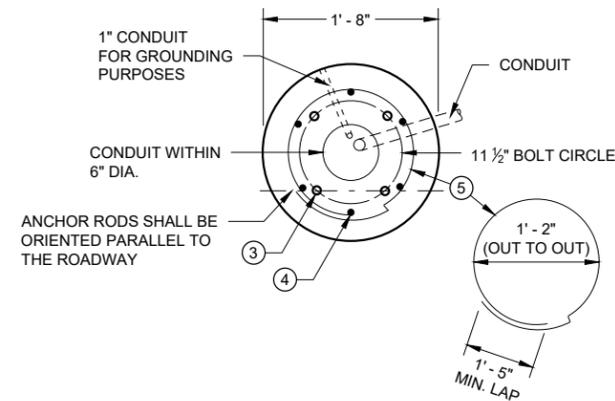
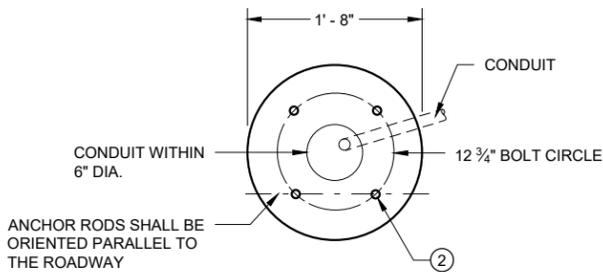
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

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

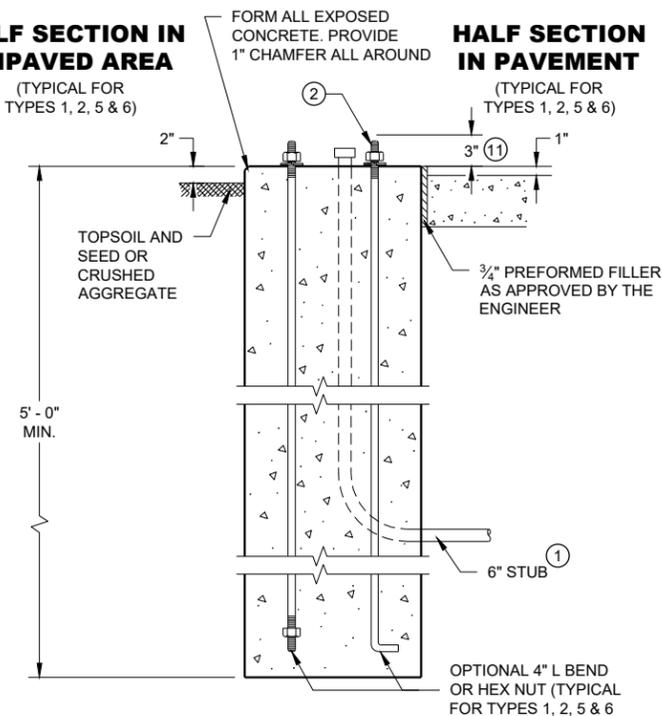
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

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

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

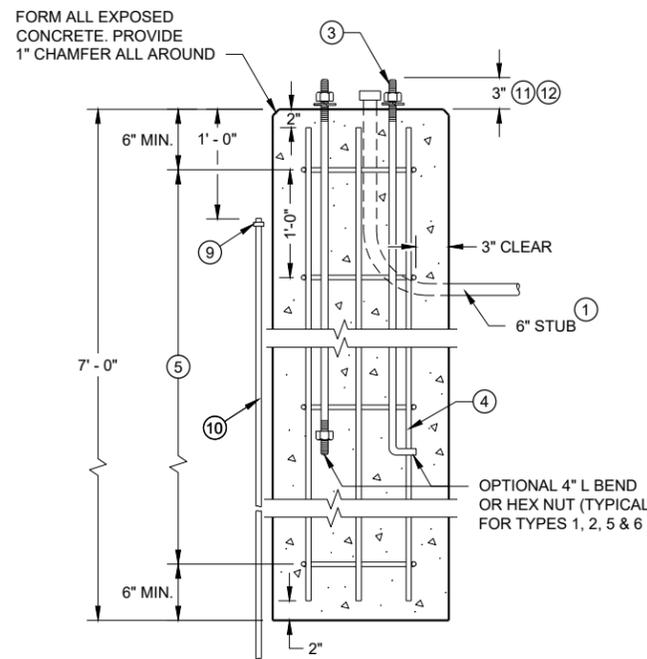


HALF SECTION IN UNPAVED AREA

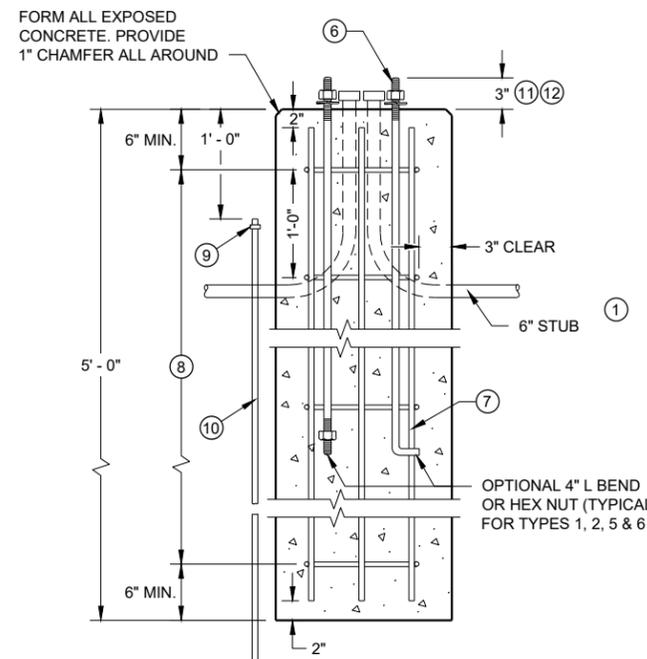


TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2



TYPE 5 & 6

CONCRETE BASES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

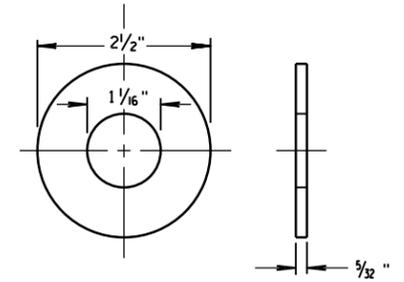
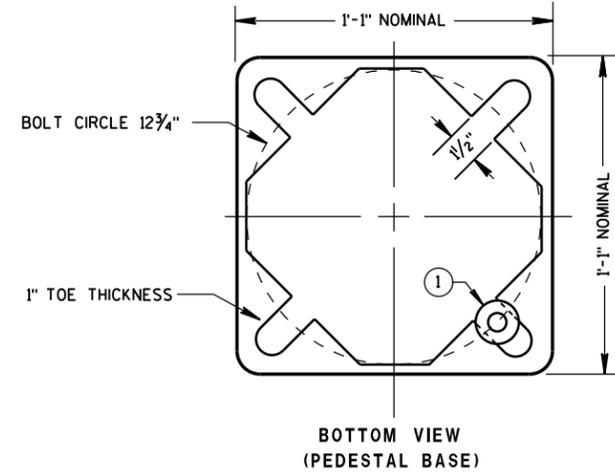
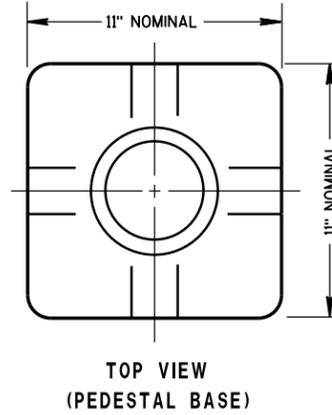
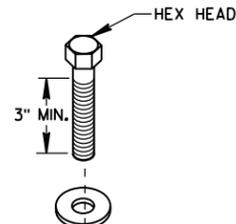
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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

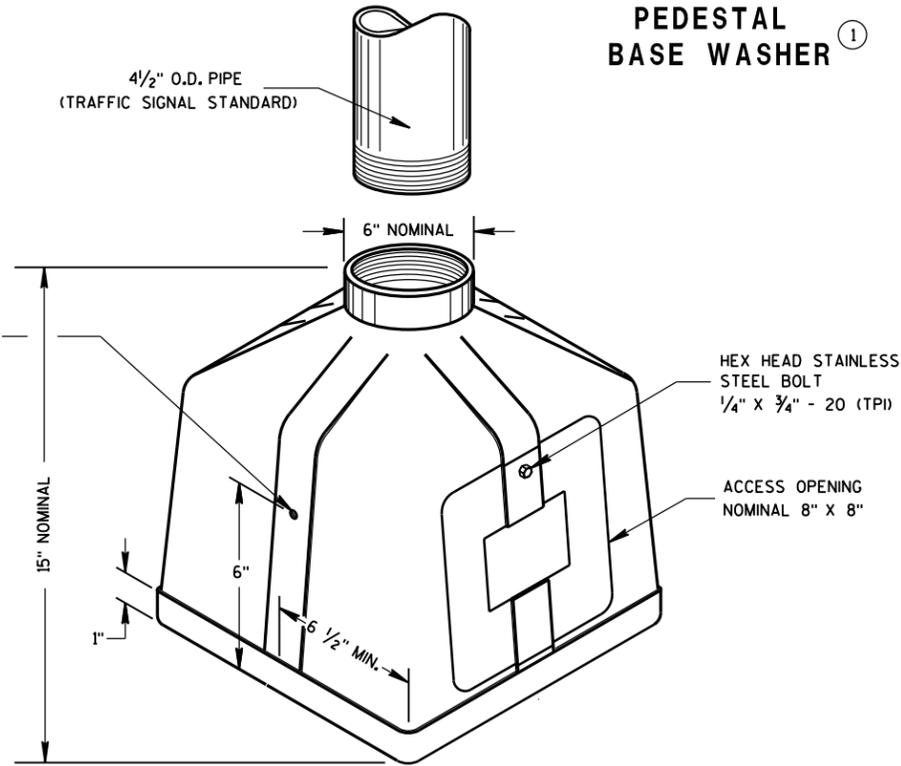
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

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

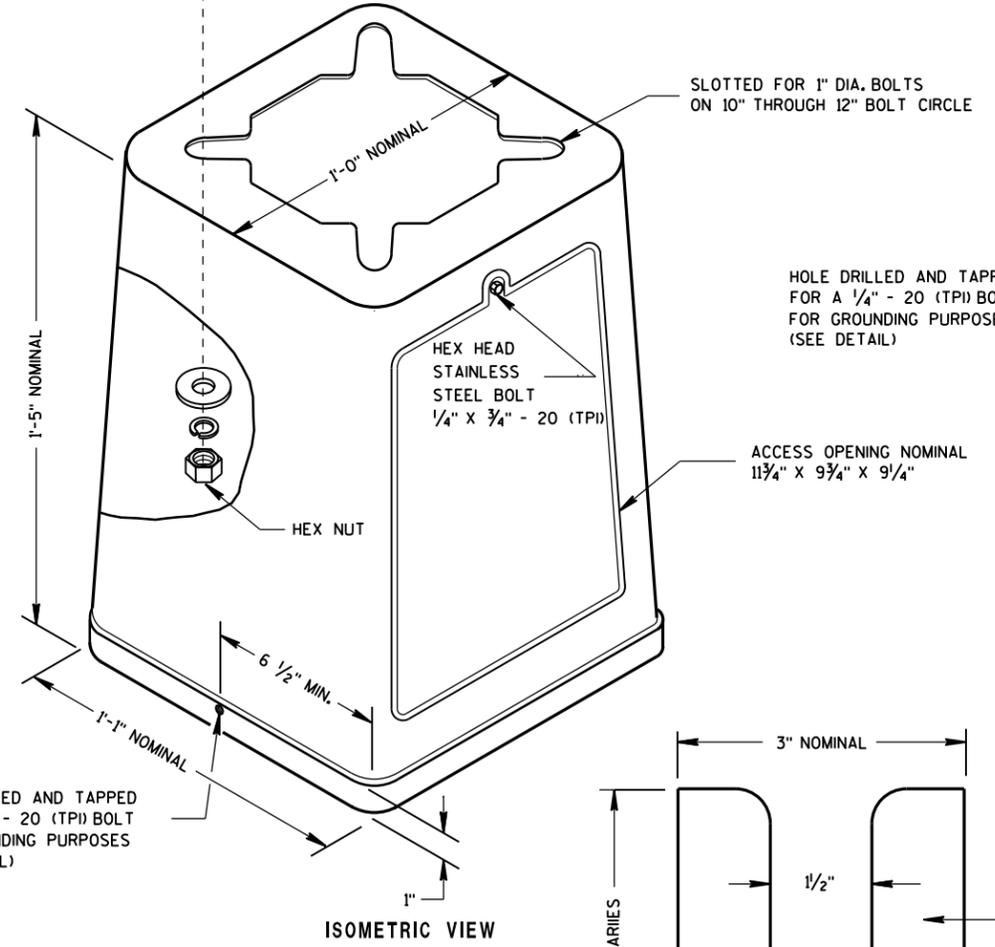
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



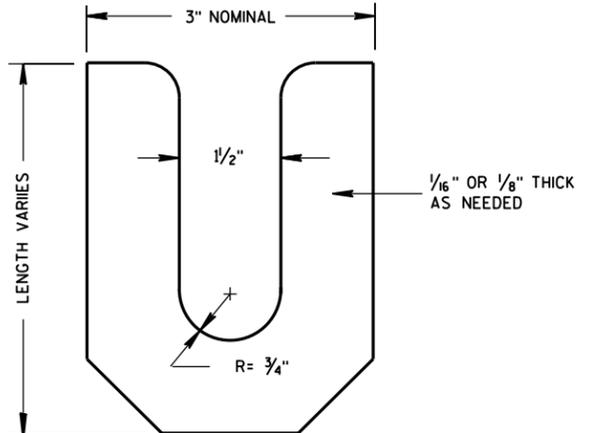
ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR
PEDESTAL BASE WASHER ①



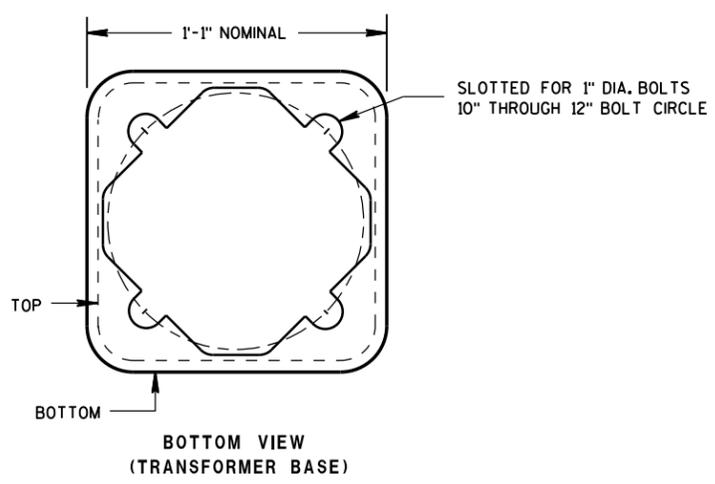
ISOMETRIC VIEW PEDESTAL BASE



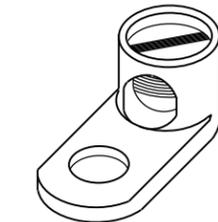
ISOMETRIC VIEW



LEVELING SHIM



BOTTOM VIEW (TRANSFORMER BASE)



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

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

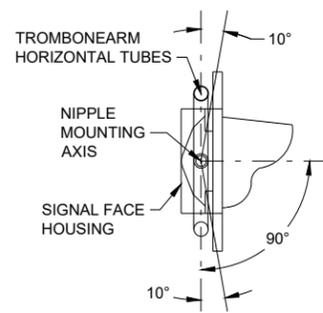
TRANSFORMER/PEDESTAL BASES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

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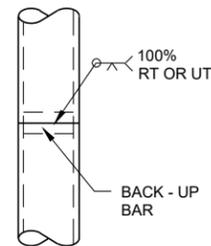
S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

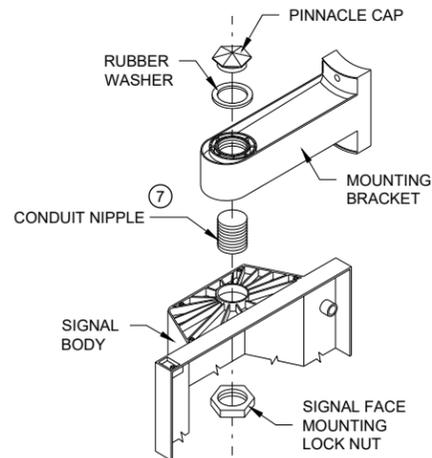


SECTION A-A
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

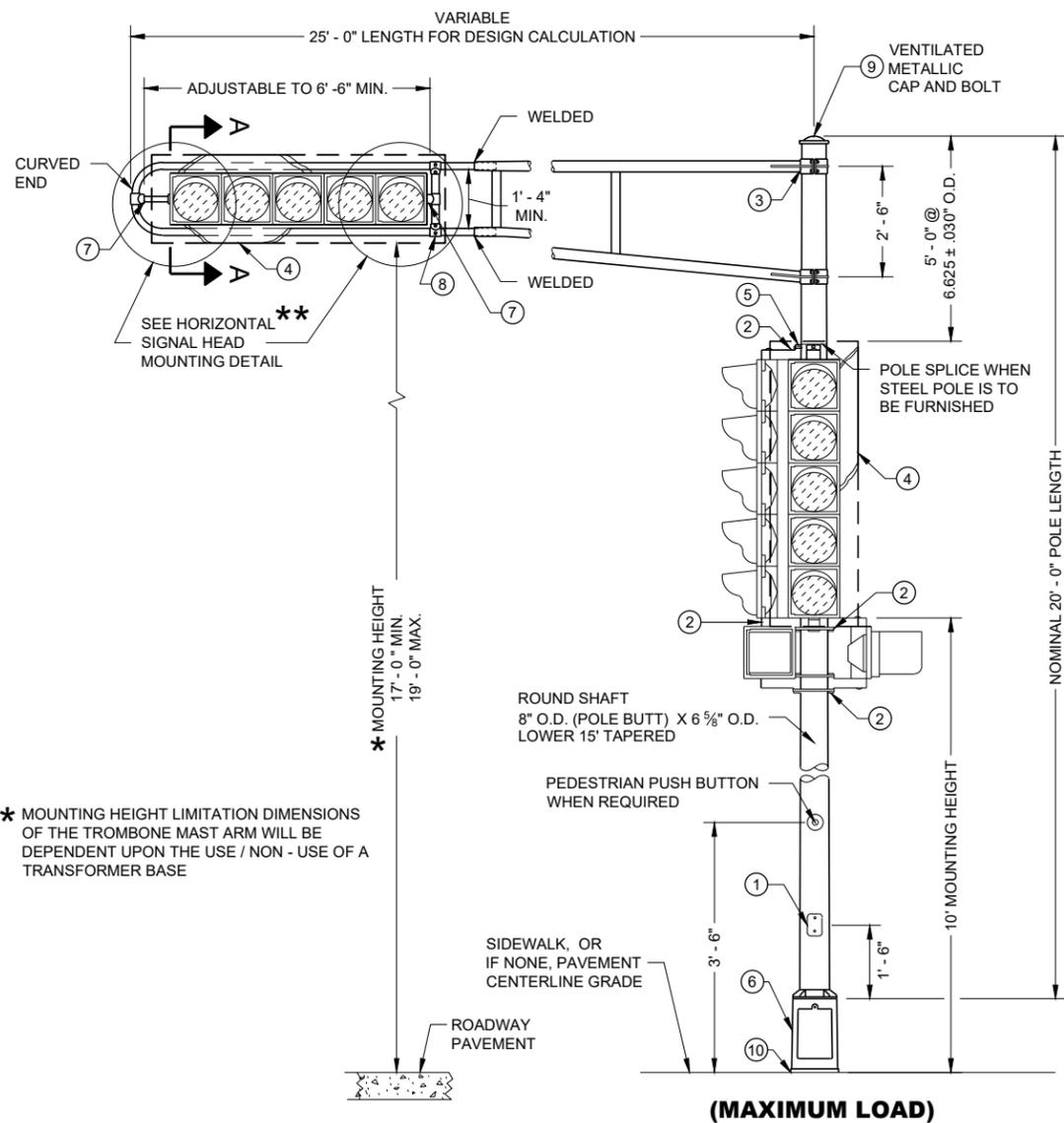
FOR MANUFACTURERS USE ONLY
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



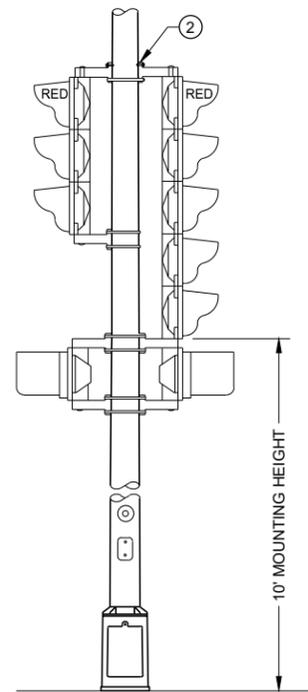
POLE SPLICE DETAIL



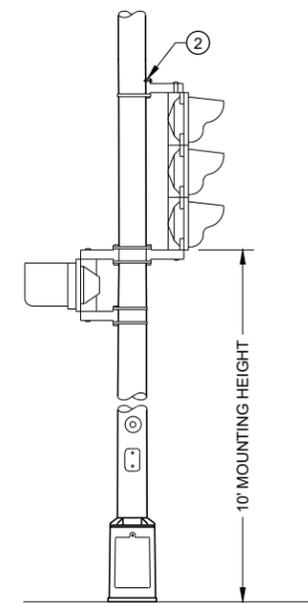
SIGNAL FACE MOUNTING DETAIL (BANDED)



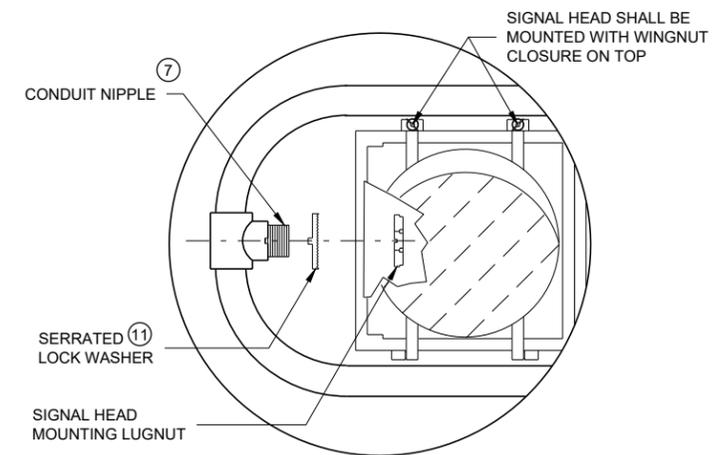
(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL

** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

GENERAL NOTES

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

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

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

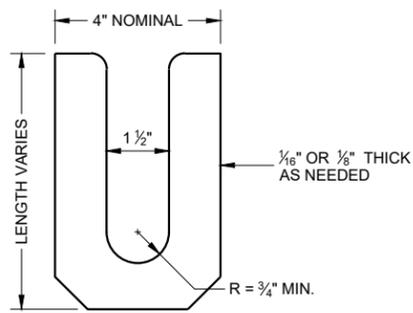
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ⑦ USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.
- ⑧ VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

* MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE / NON - USE OF A TRANSFORMER BASE

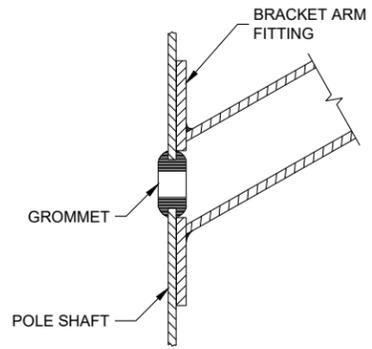
TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

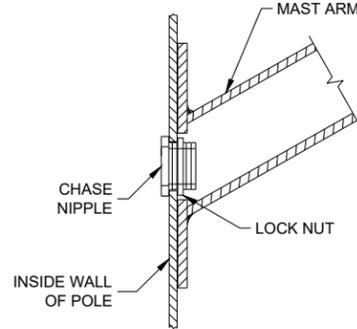
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LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



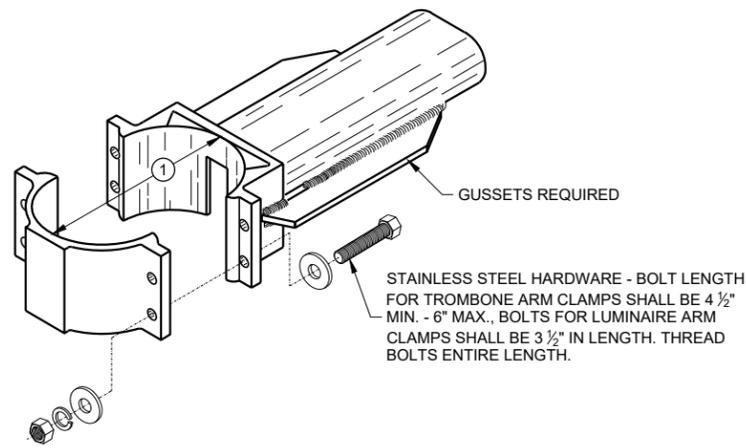
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

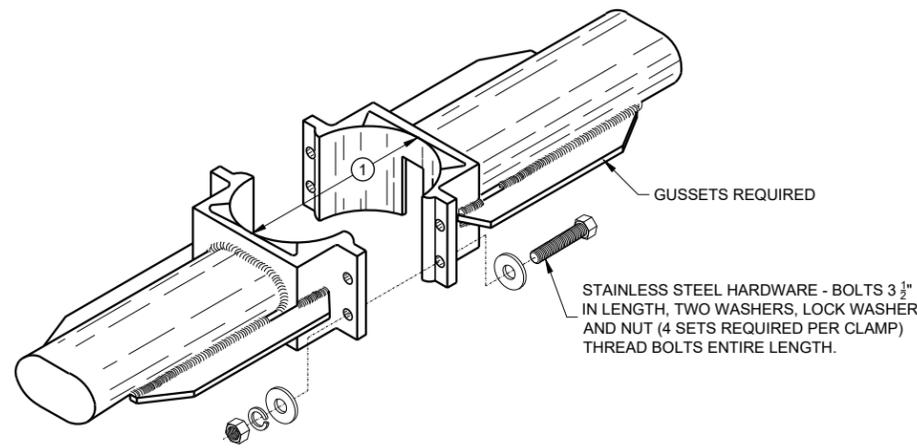
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

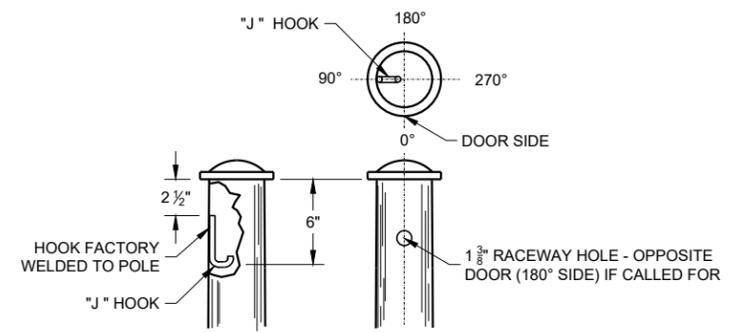
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



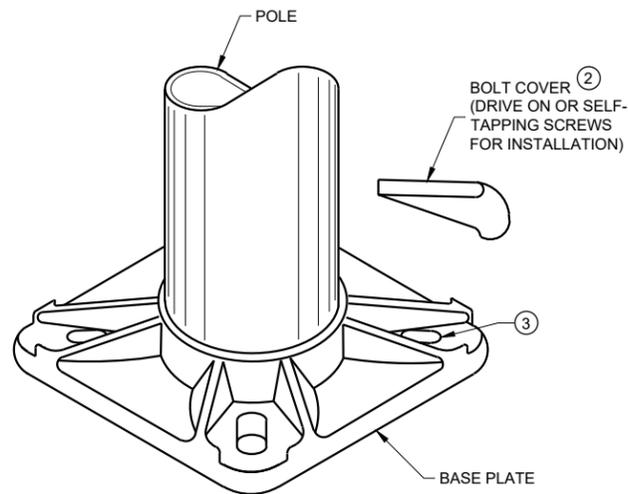
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



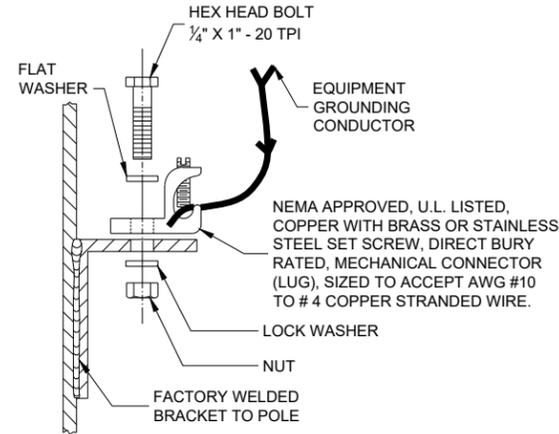
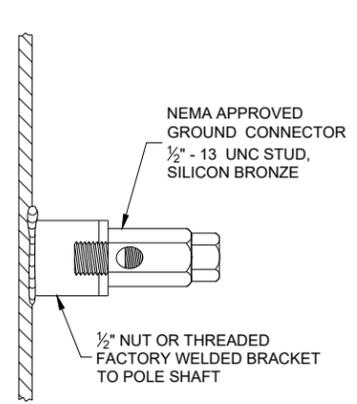
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



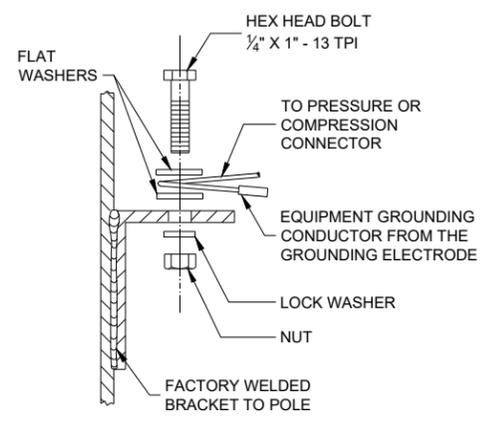
TYPICAL "J" HOOK LOCATION



BASE PLATE



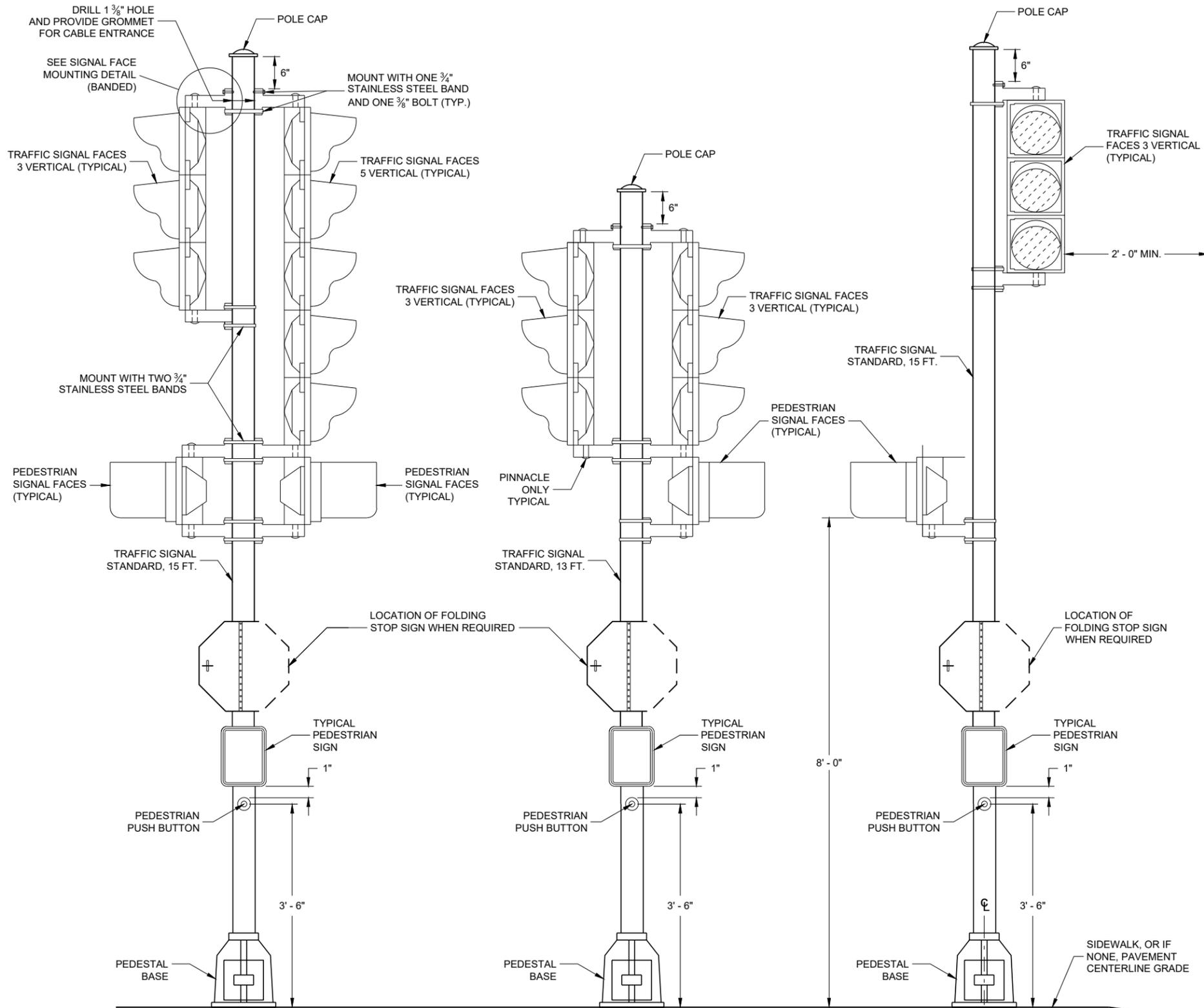
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



TRAFFIC SIGNAL STANDARD - 15 FT.

TRAFFIC SIGNAL STANDARD - 13 FT.

TRAFFIC SIGNAL STANDARD - 15 FT. 3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

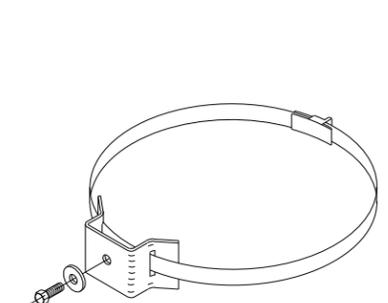
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

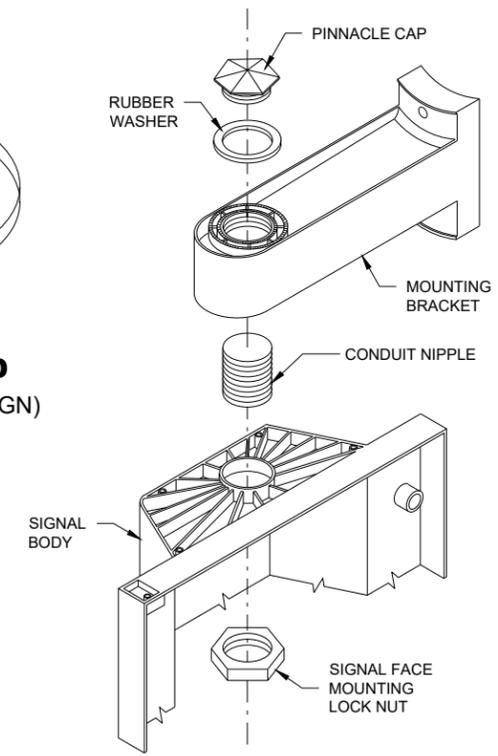
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



TYPICAL SIGN MOUNTING BAND (TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAIL (BANDED)

TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

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2/28/2013 DATE /S/ Ahmet Demirelek
STATE ELECTRICAL ENGINEER

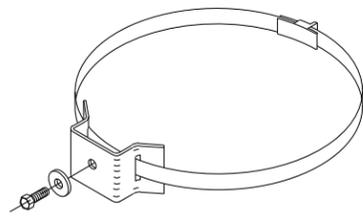
FHWA

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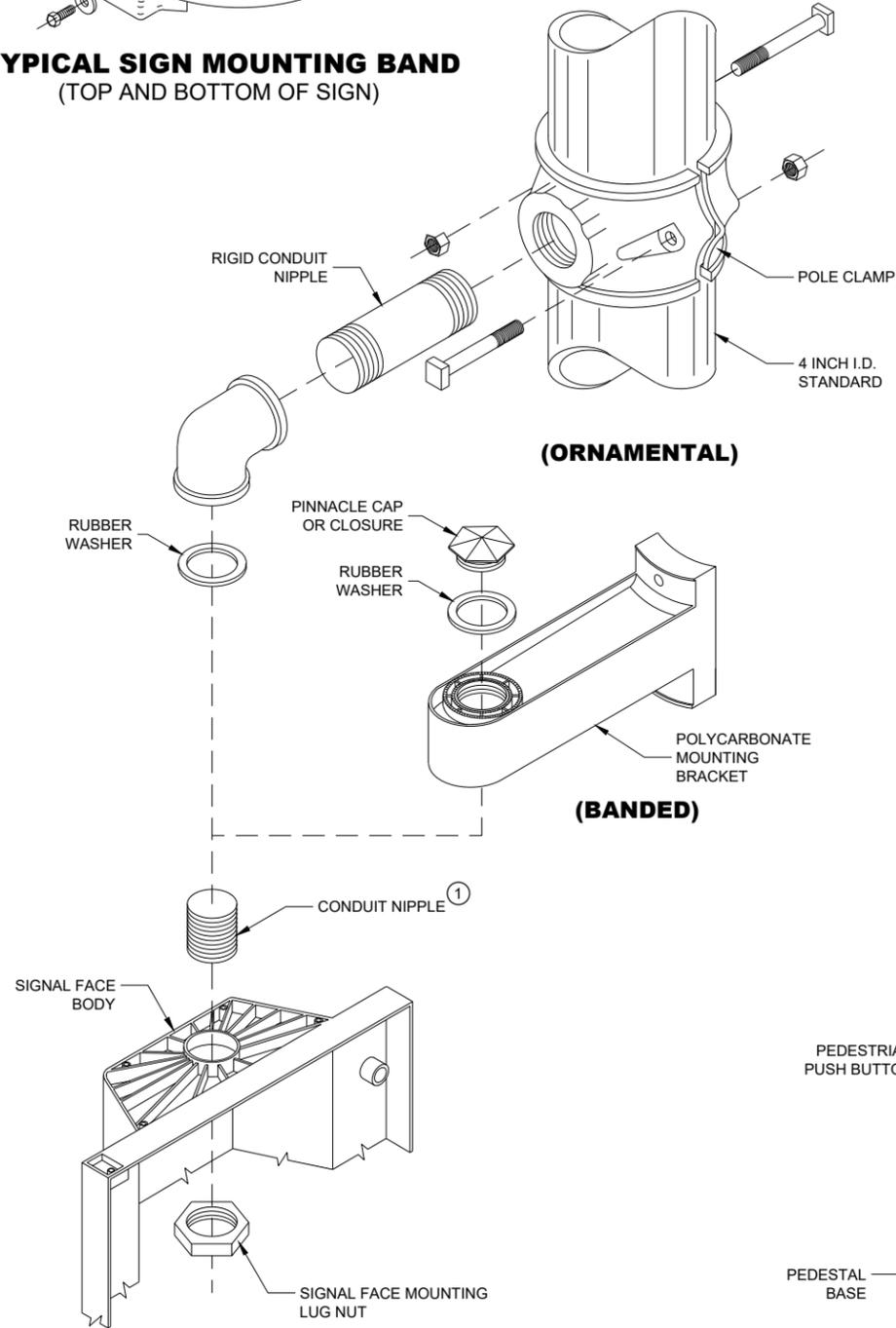
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SDD 09E06 - 05

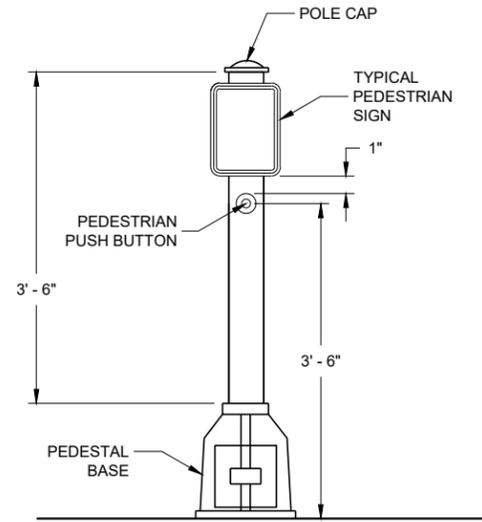
SDD 09E06 - 05



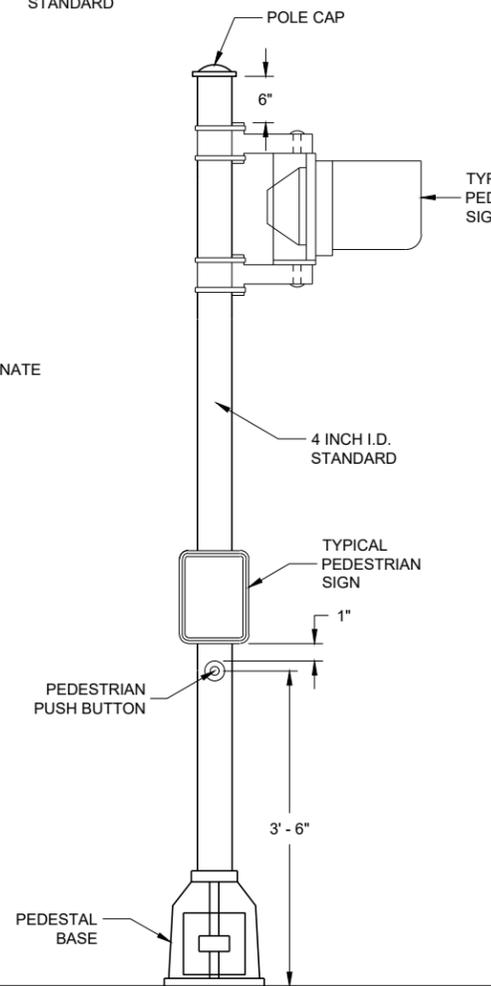
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



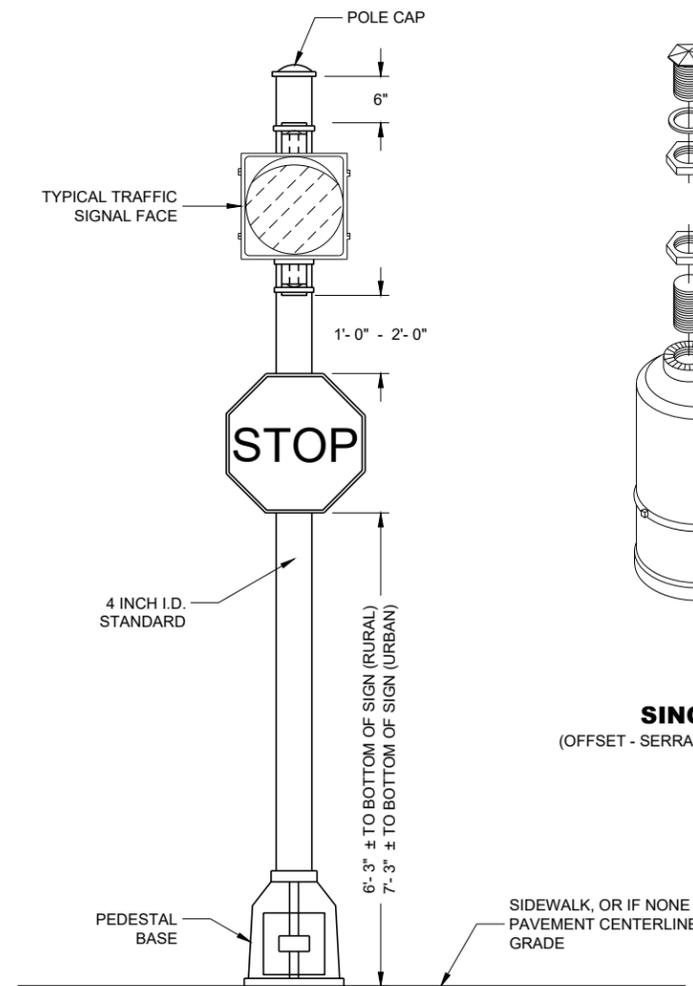
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON
TYPICAL MOUNTING



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

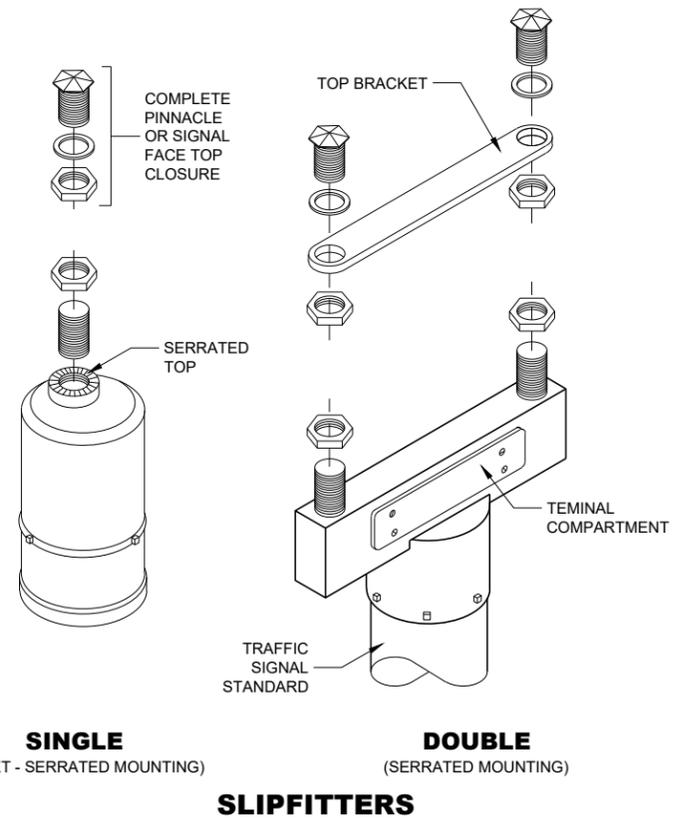
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

① USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.



SINGLE
(OFFSET - SERRATED MOUNTING)

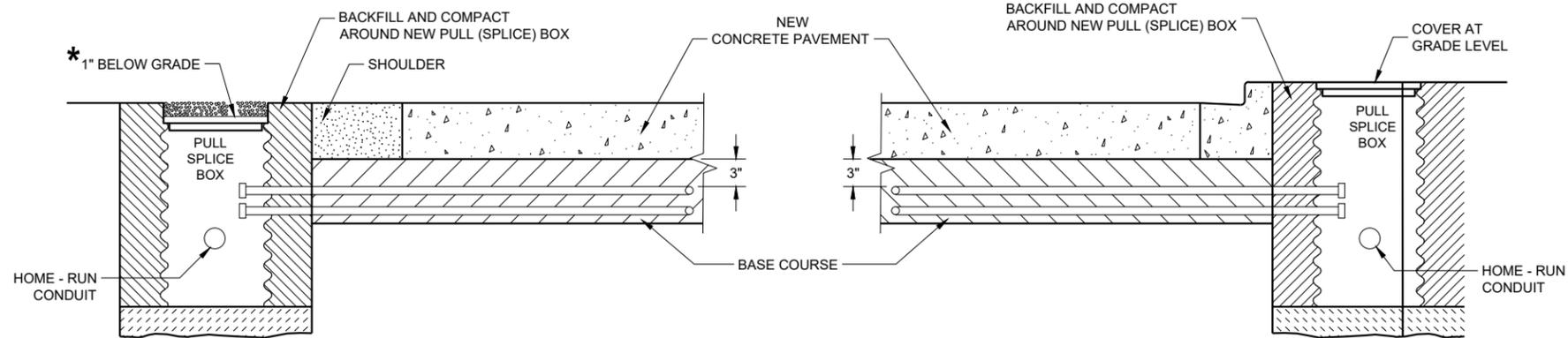
DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER
FHWA



**SECTION A - A
NO CURB AND GUTTER**

**SECTION B - B
CURB AND GUTTER**

* RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

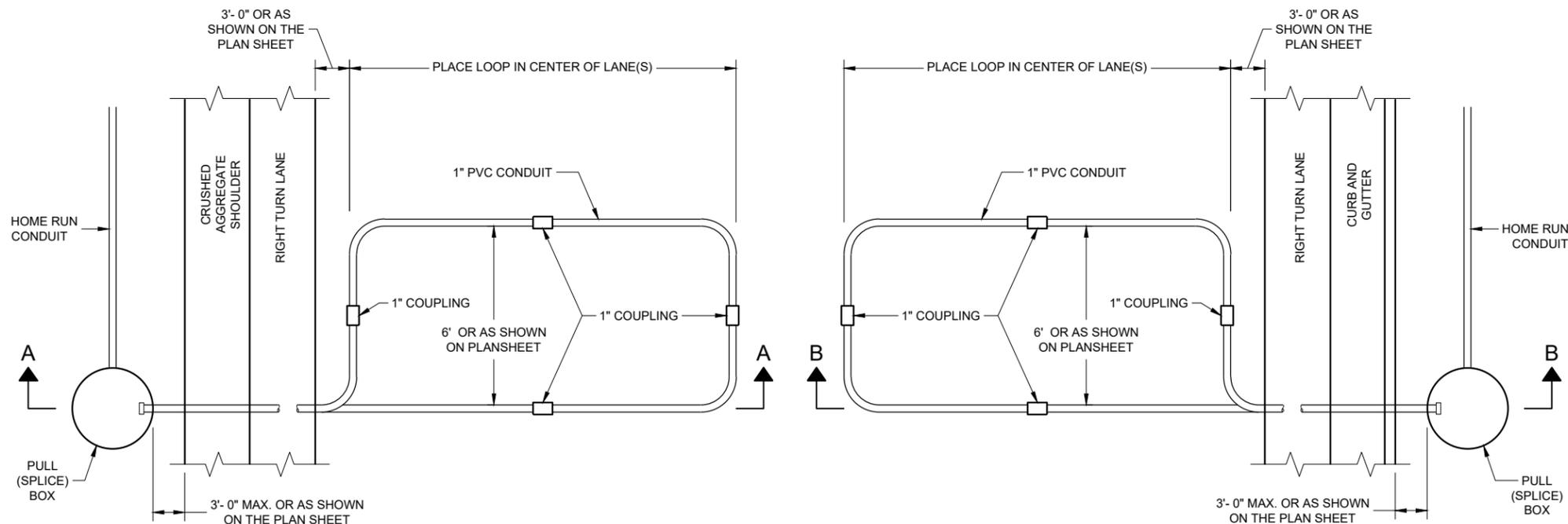
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

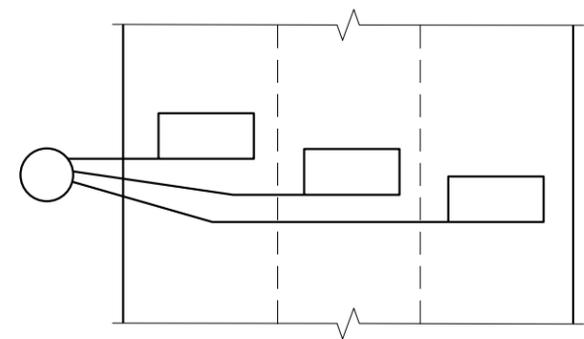
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



**TYPICAL PLAN LOOP DETECTOR
WITH 24" PULL (SPLICE) BOX**



**MULTI-LANE
INSTALLATION**

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6

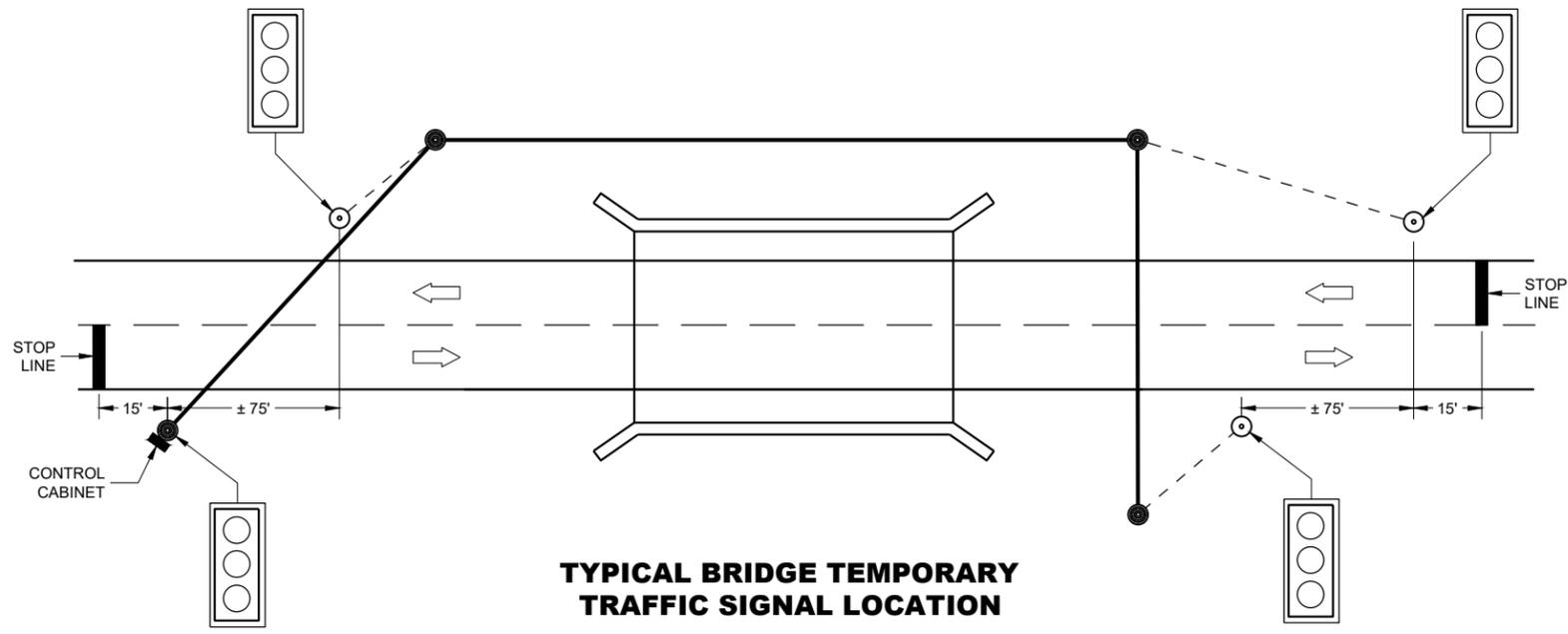
SDD 09F15 - 04b

SDD 09F15 - 04b

**LOOP DETECTOR INSTALLED
IN BASE COURSE WITH
PULL (SPLICE) BOX OFF
ROADWAY (OPTION 2)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER
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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
- 3-12"

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.).

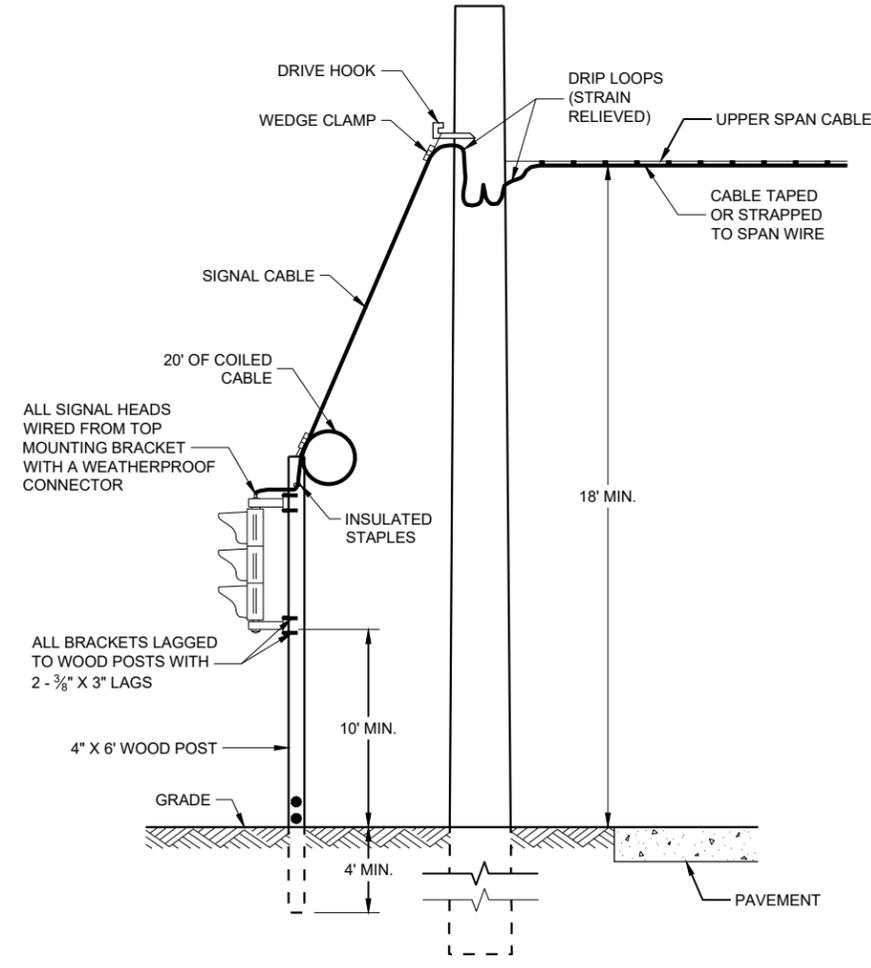
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

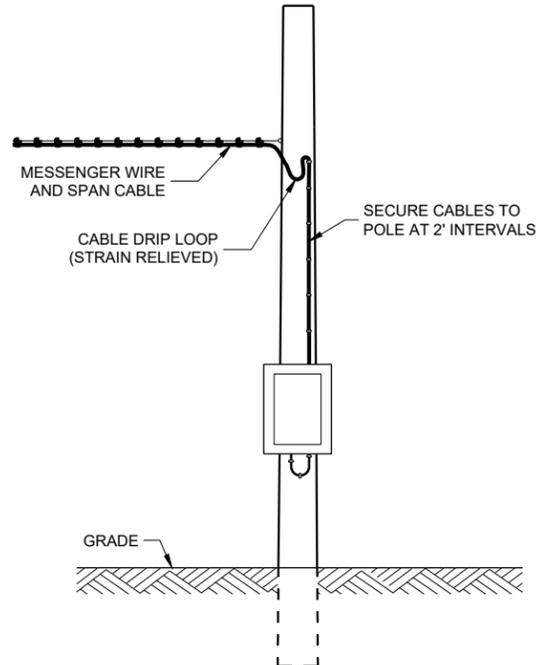
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

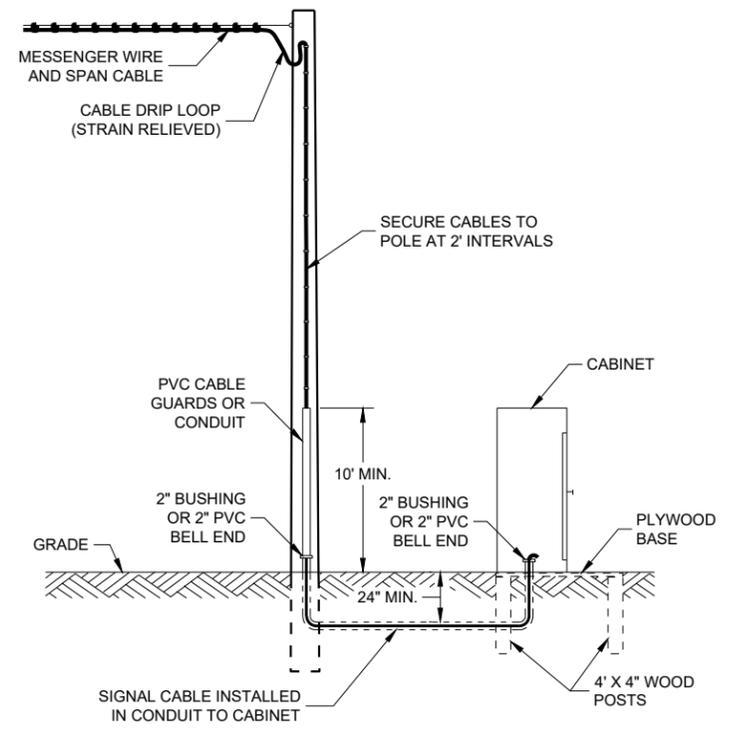
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



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 /S/ Ahmet Demirelek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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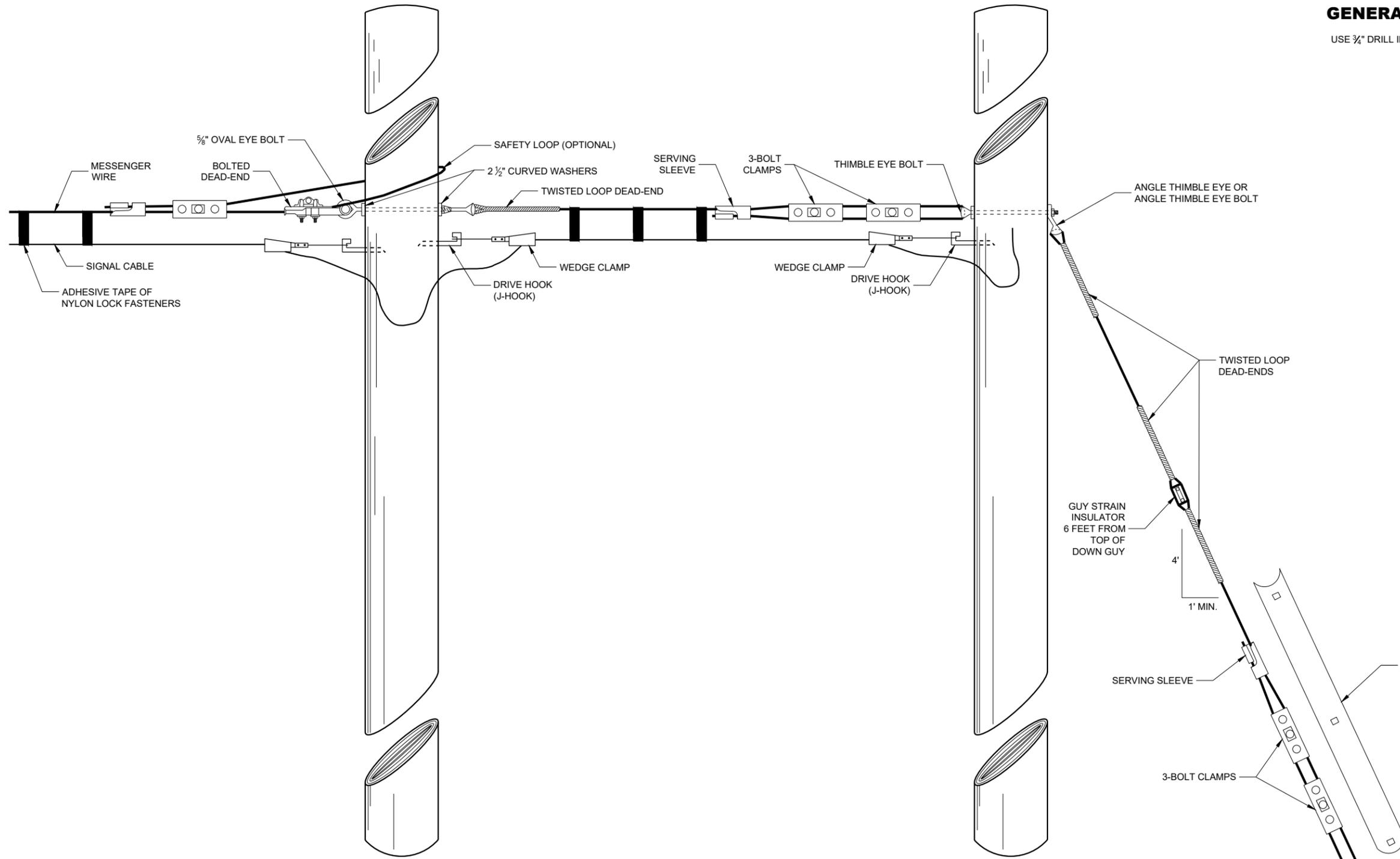
6

SDD09G02 - 05a

SDD09G02 - 05a

GENERAL NOTES

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



SPAN WIRE POLE

GUY POLE

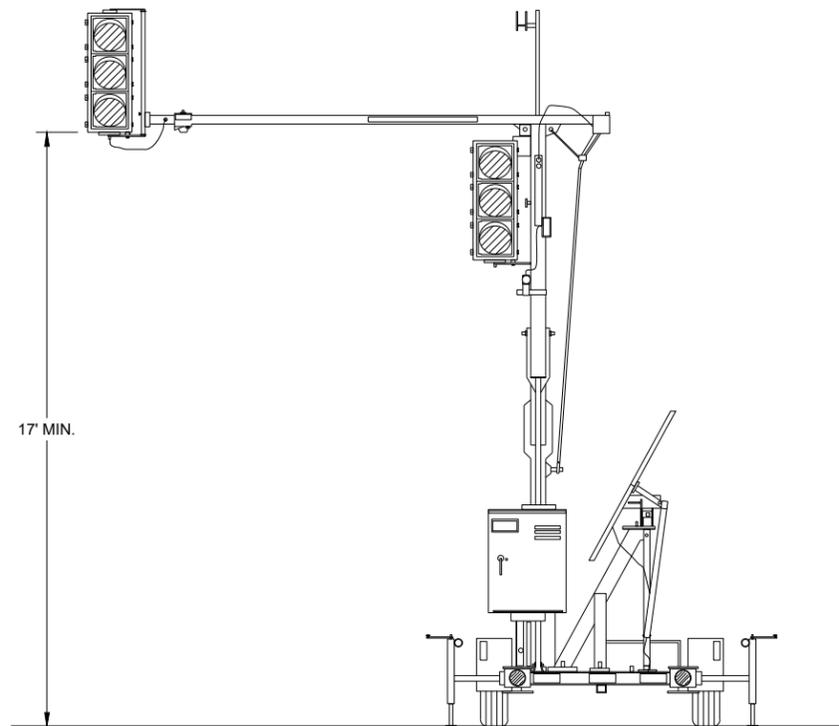
TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

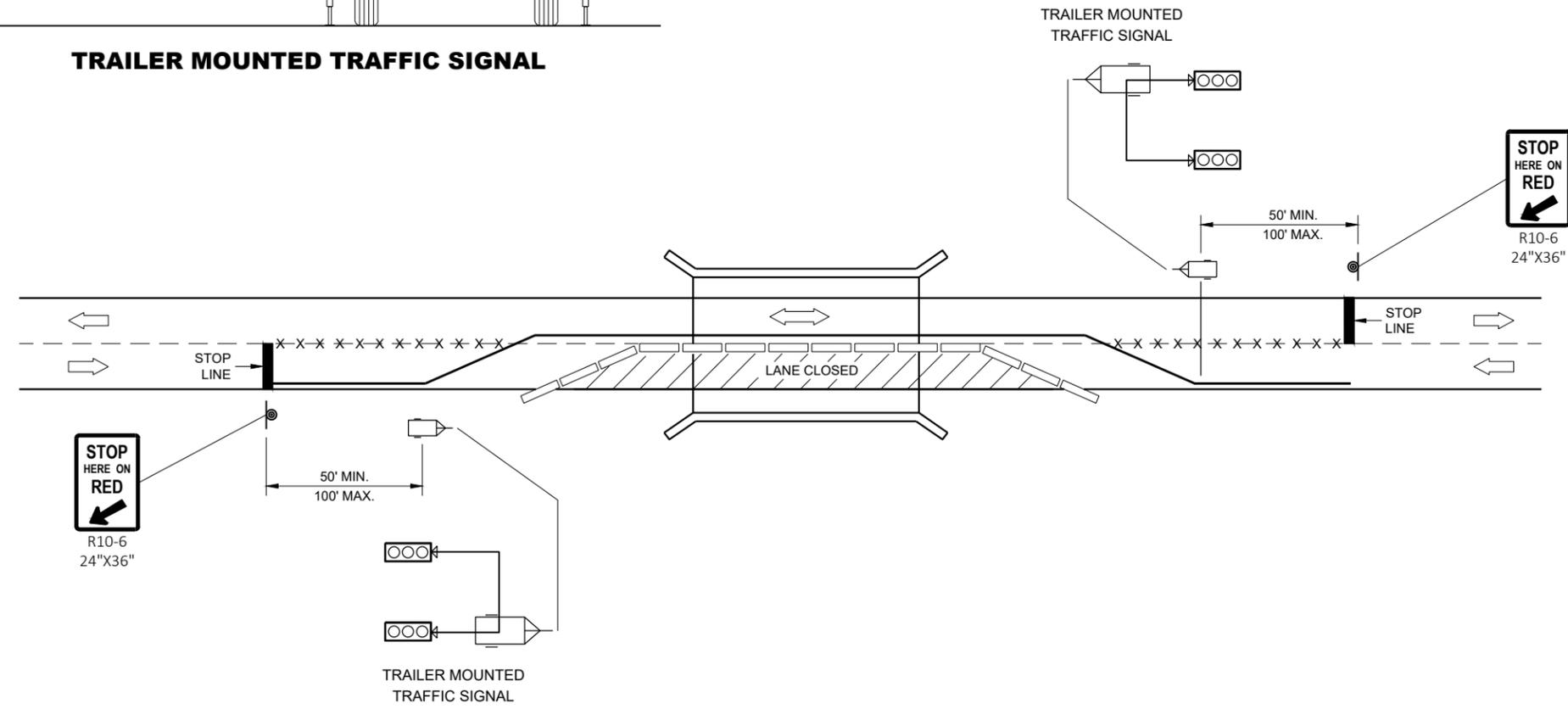


TRAILER MOUNTED TRAFFIC SIGNAL

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

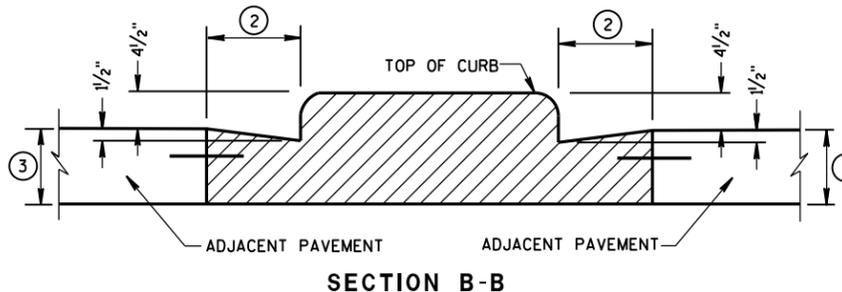
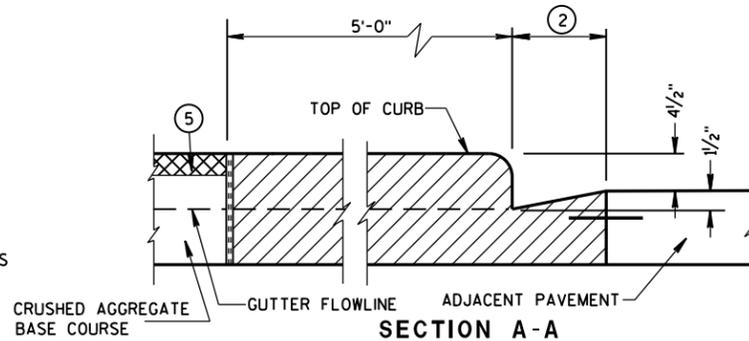
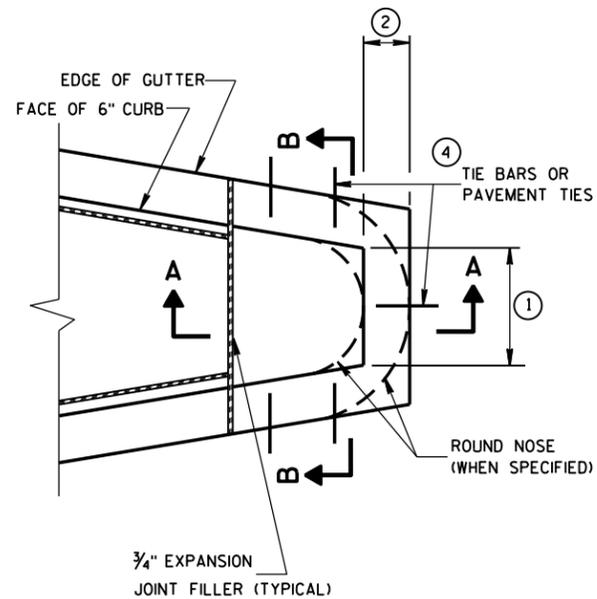
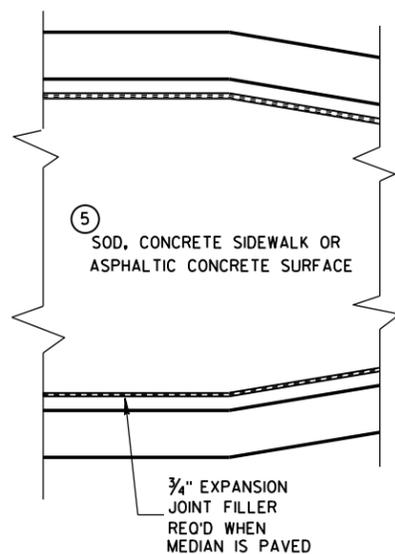
LEGEND

-  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 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

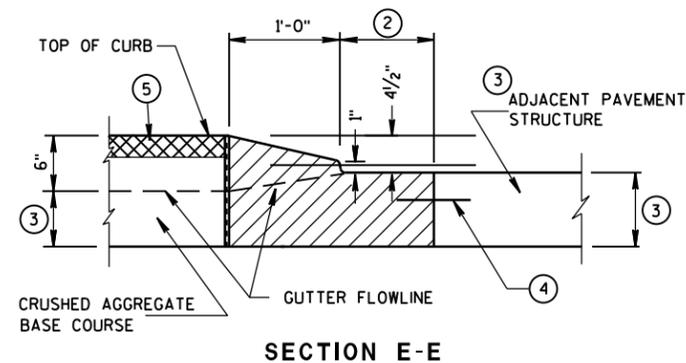
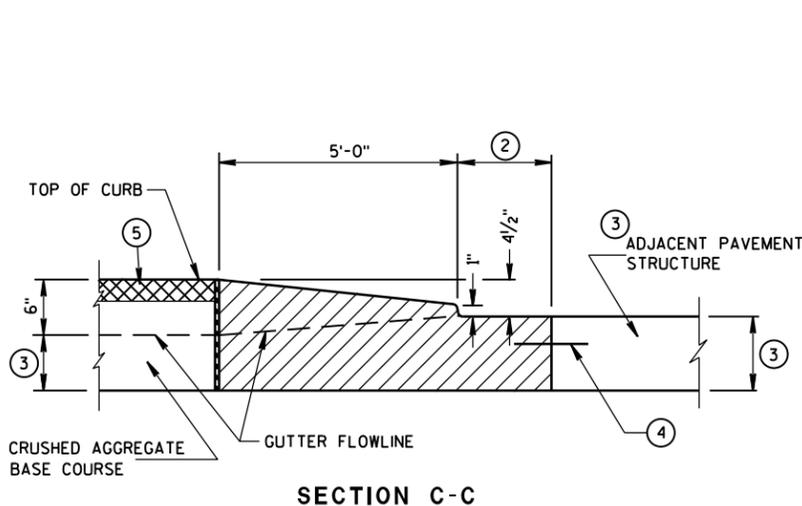
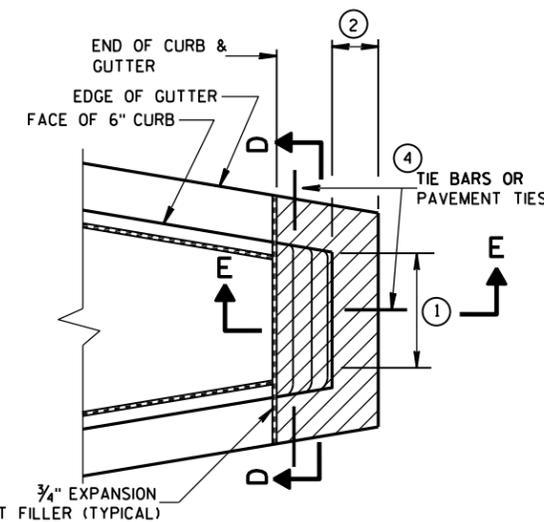


CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

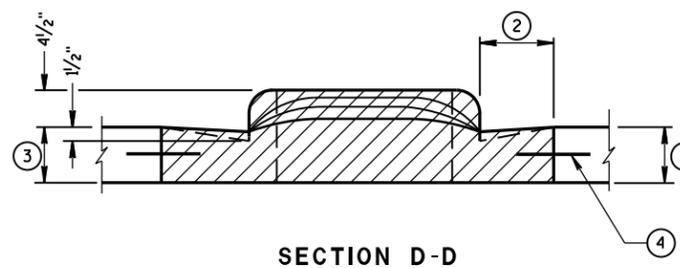
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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



CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

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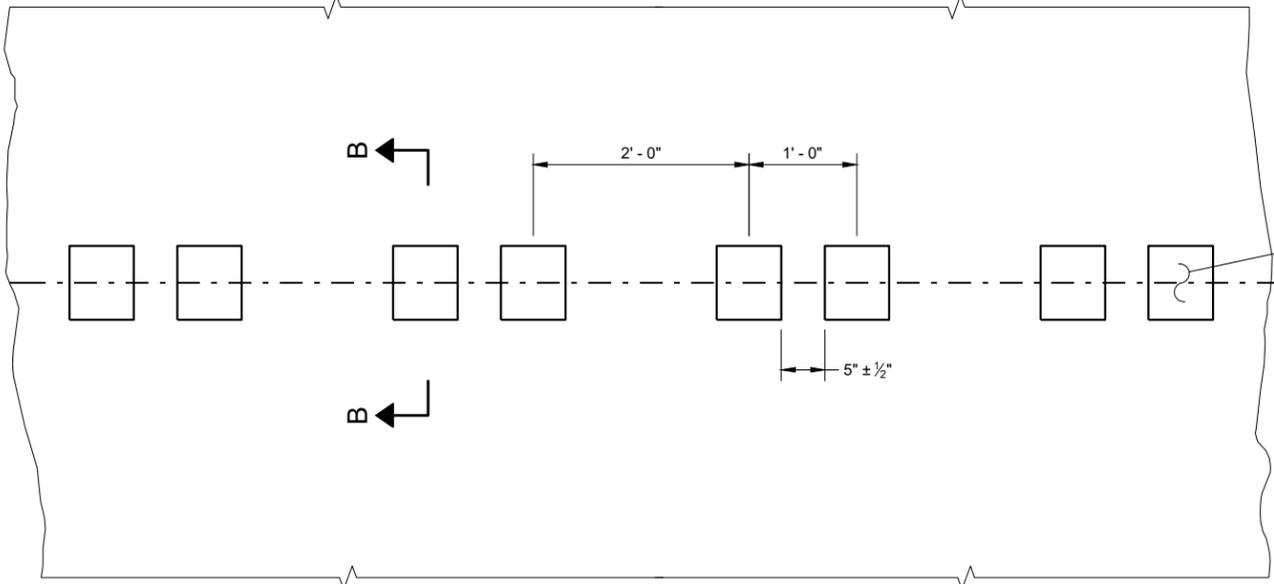
S.D.D. 11 B 2-2

S.D.D. 11 B 2-2

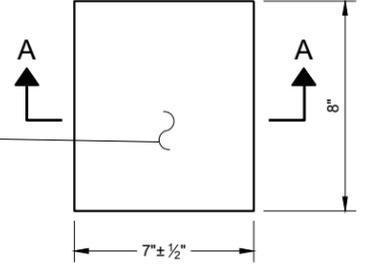
GENERAL NOTES

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

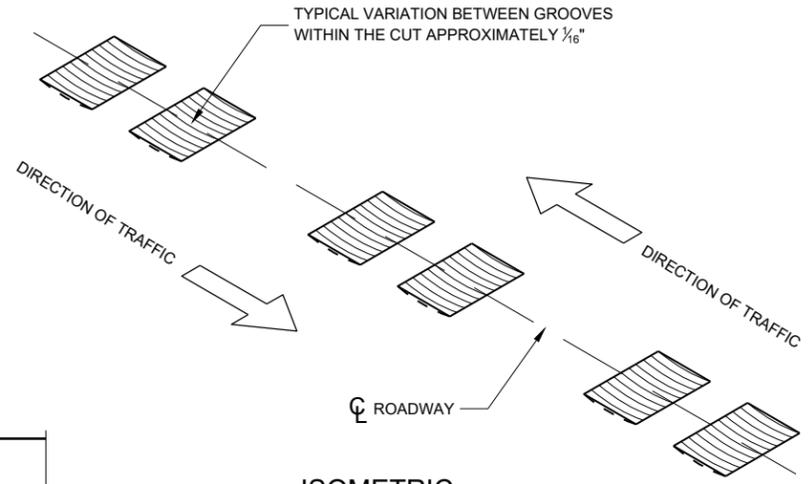
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



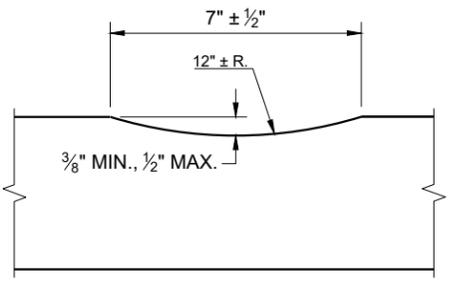
PLAN DETAIL VIEW



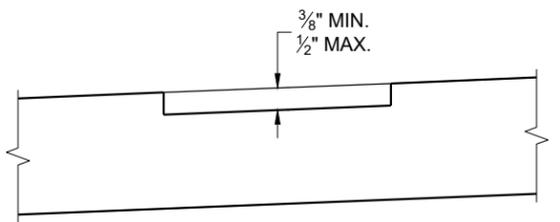
PLAN VIEW (SINGLE GROOVE)



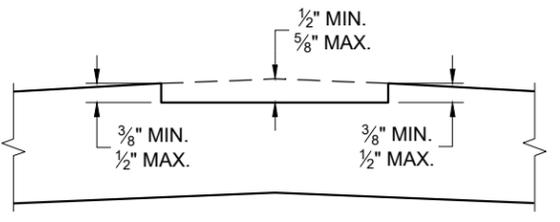
ISOMETRIC



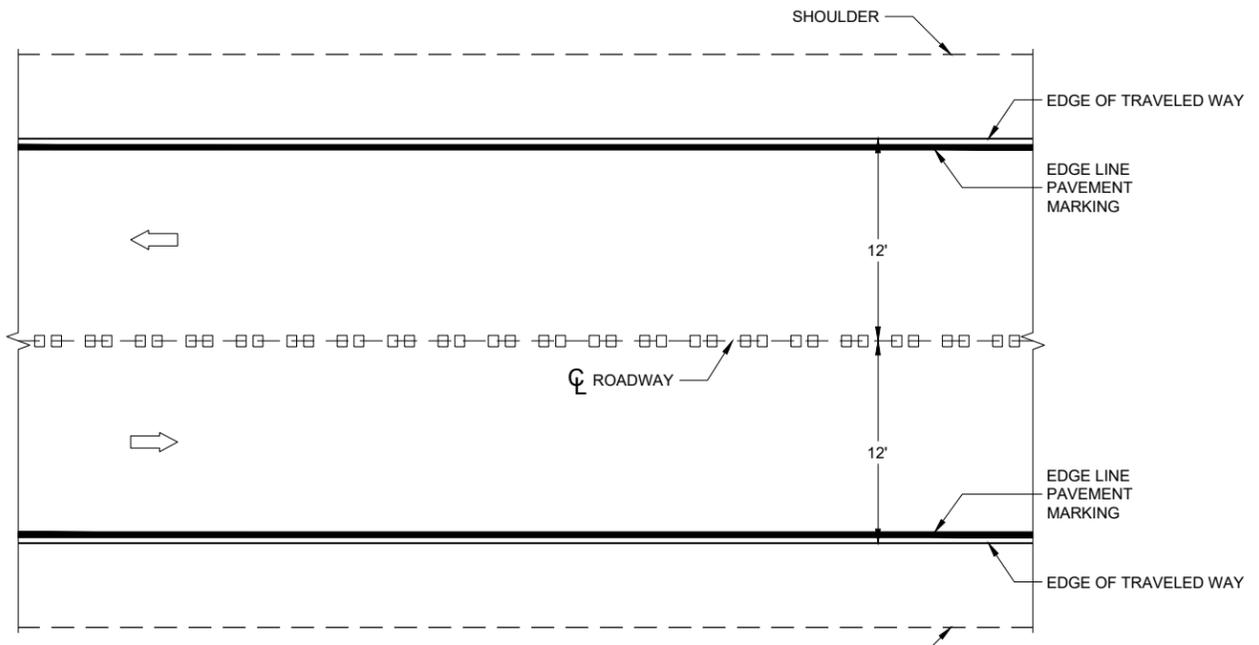
SECTION A - A



SECTION B - B SUPERELEVATED ROADWAY



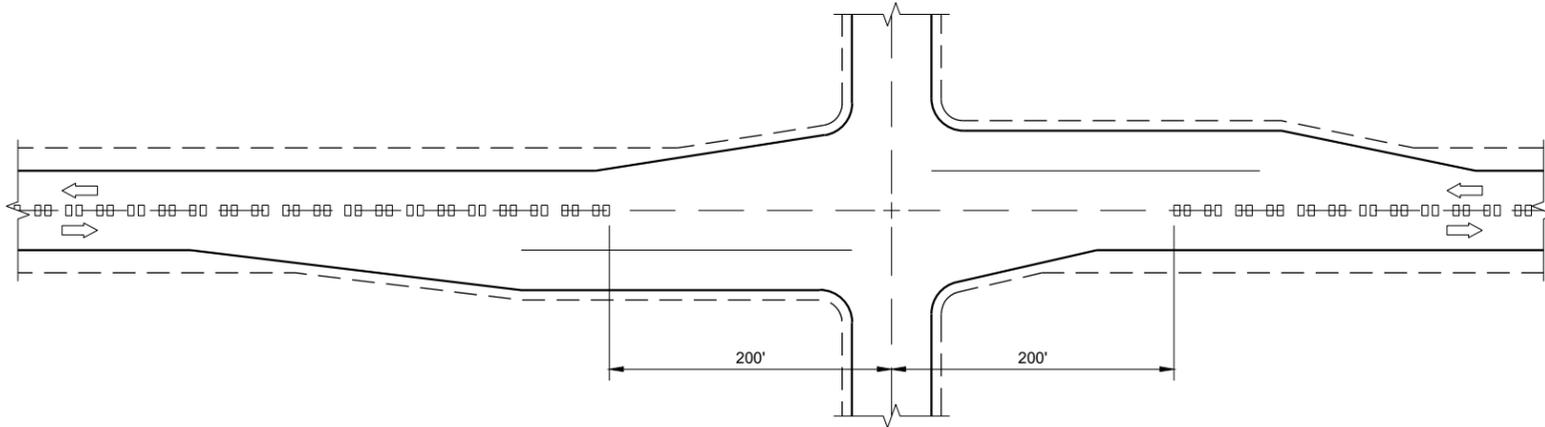
SECTION B - B CROWNED ROADWAY



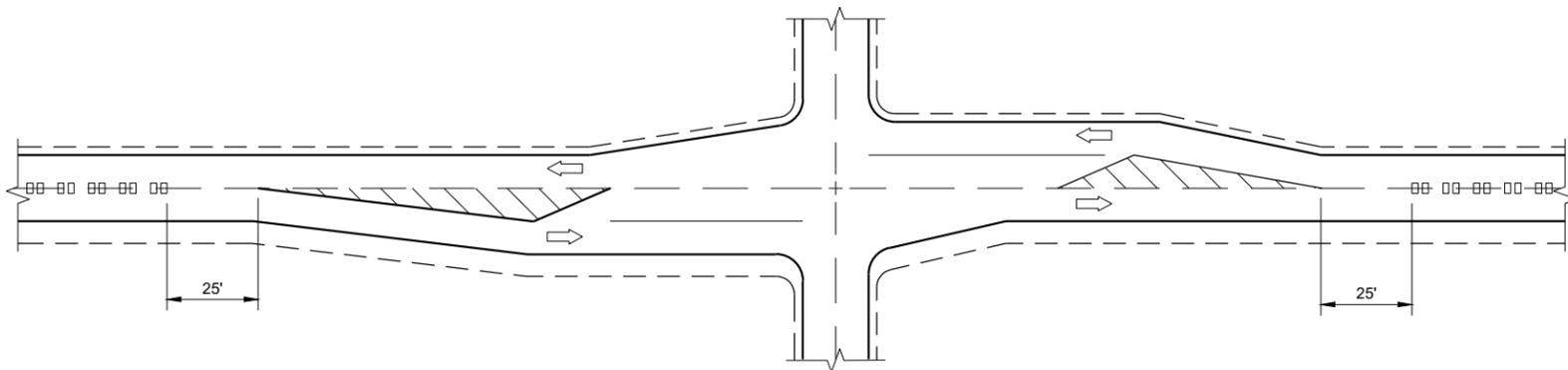
PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

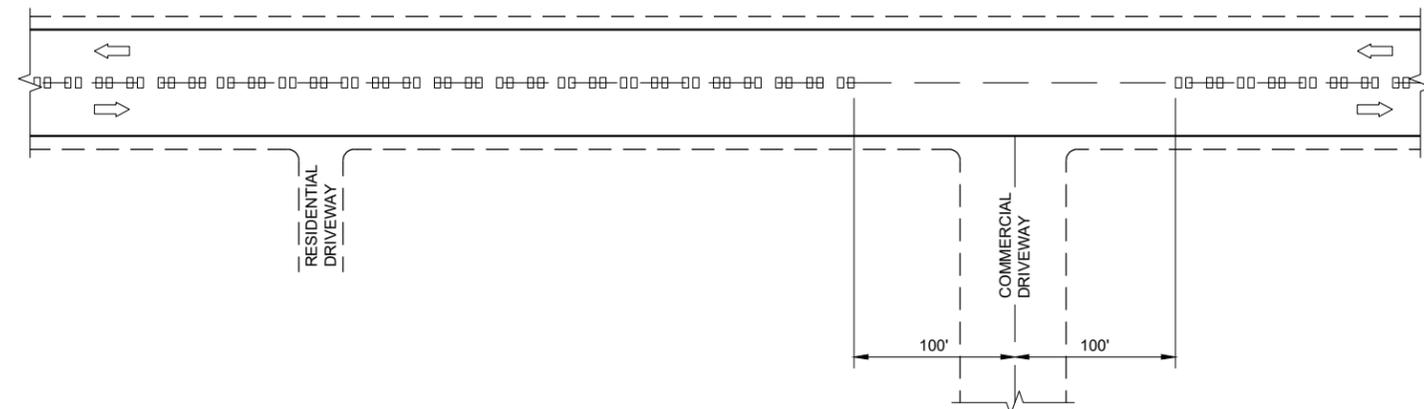
CENTERLINE RUMBLE STRIPS - ASPHALT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



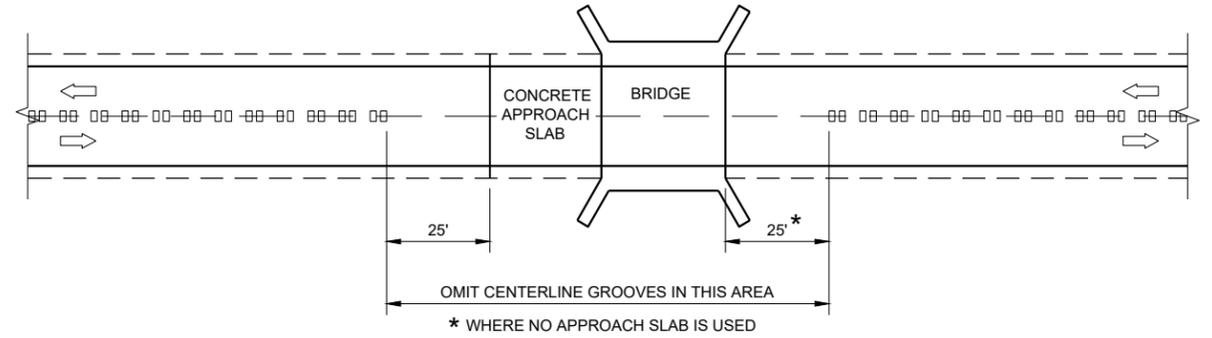
**CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)**



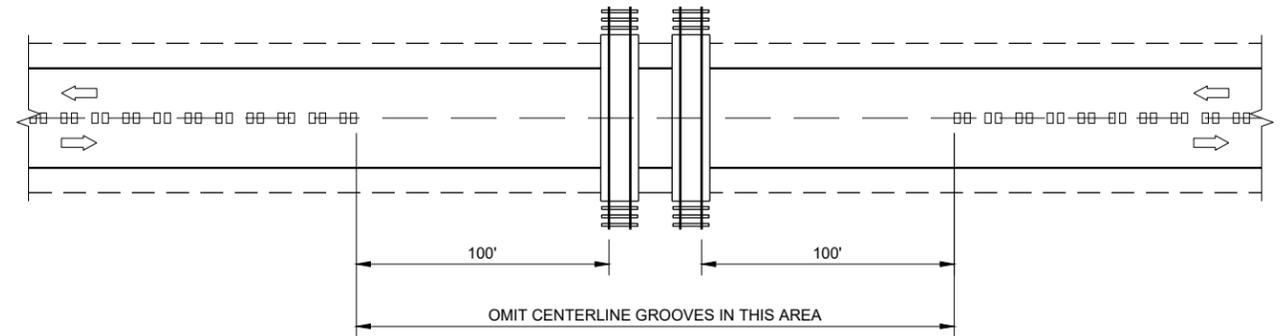
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

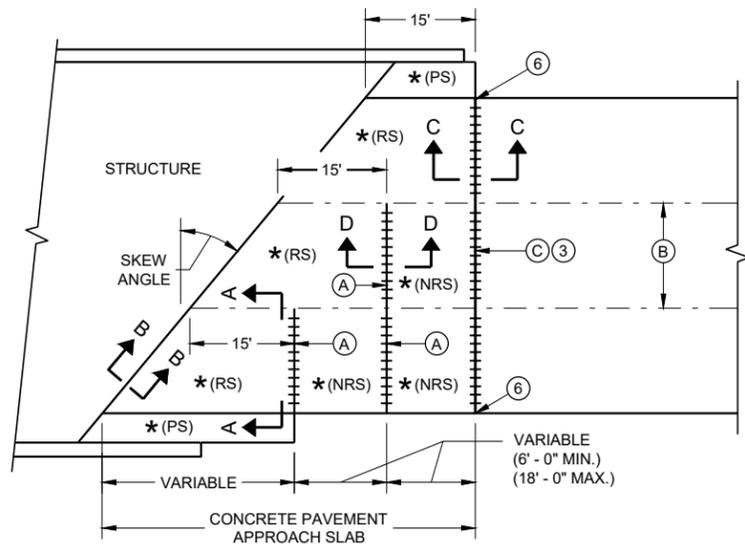
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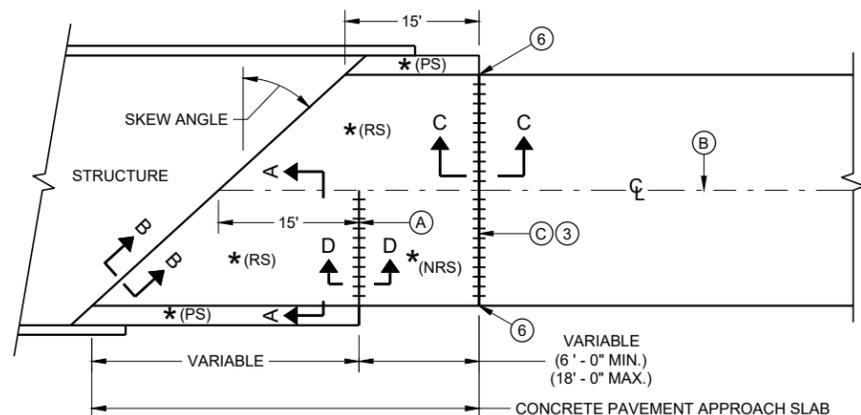
SDD 13A11 - 04d

SDD 13A11 - 04d

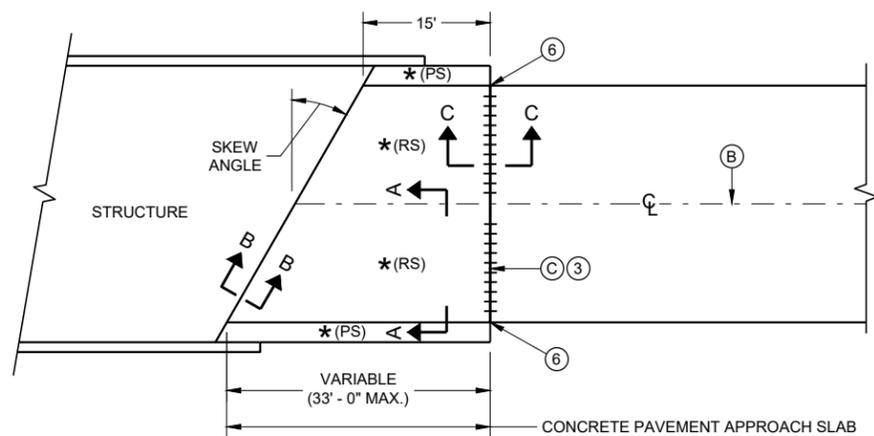
CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



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

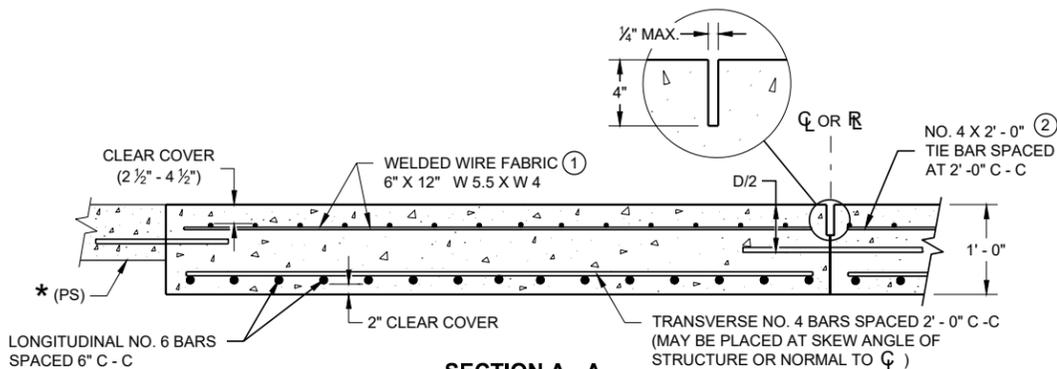


**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**

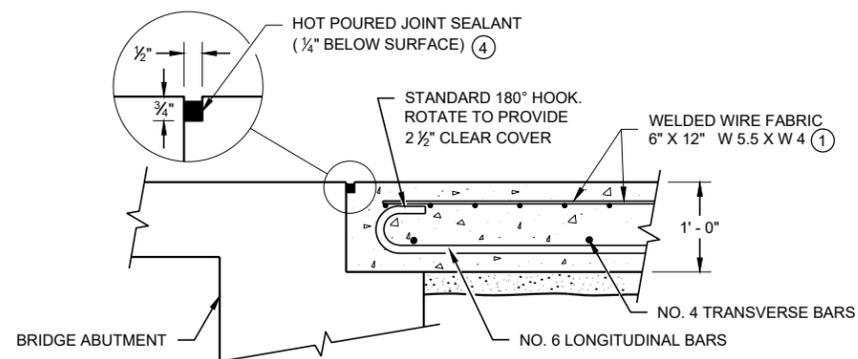


**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**
APPROACH SLAB AND ADJACENT PAVEMENT

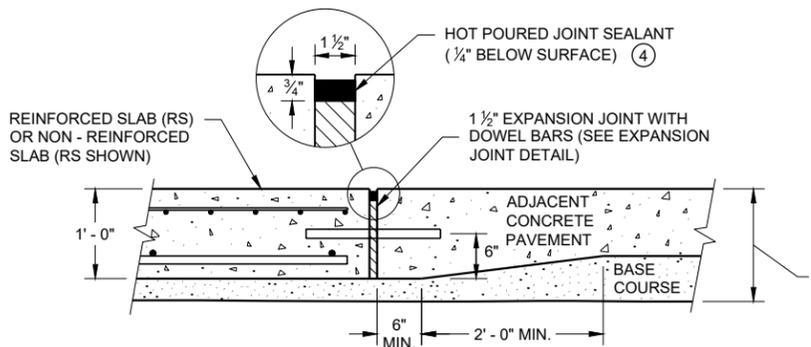
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



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



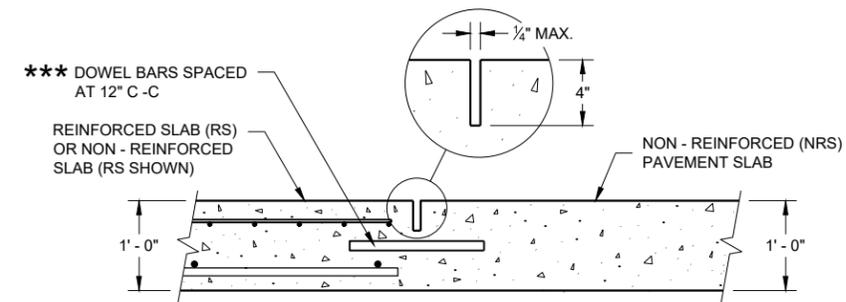
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

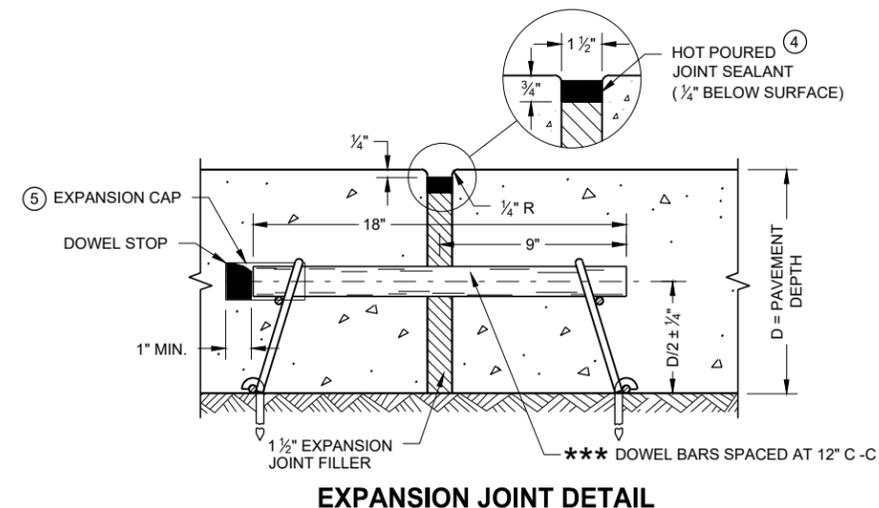
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

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**



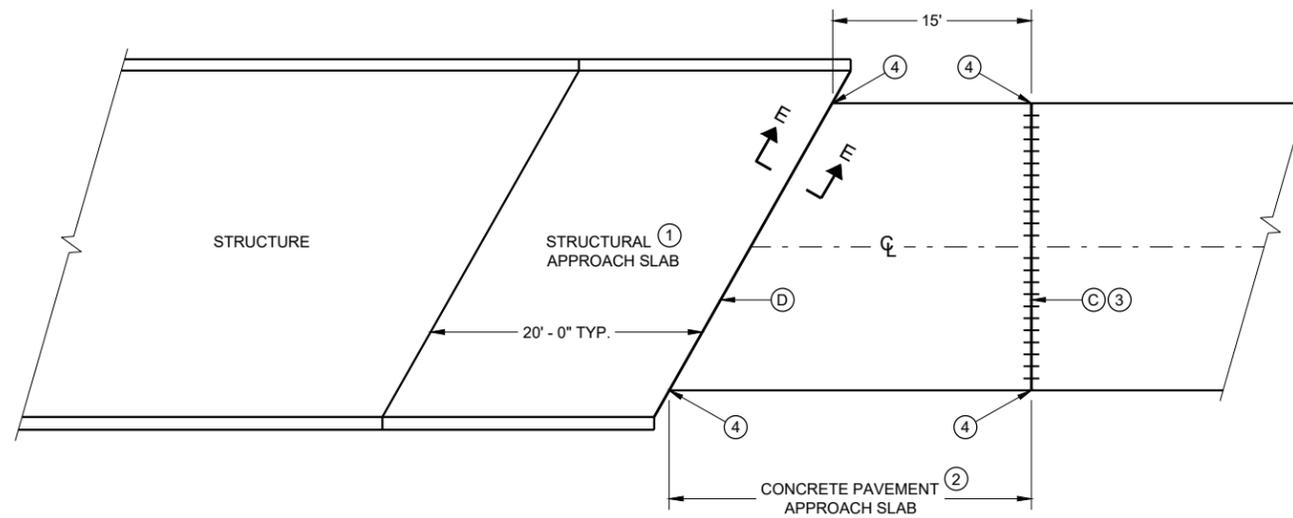
EXPANSION JOINT DETAIL

**CONCRETE PAVEMENT
APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

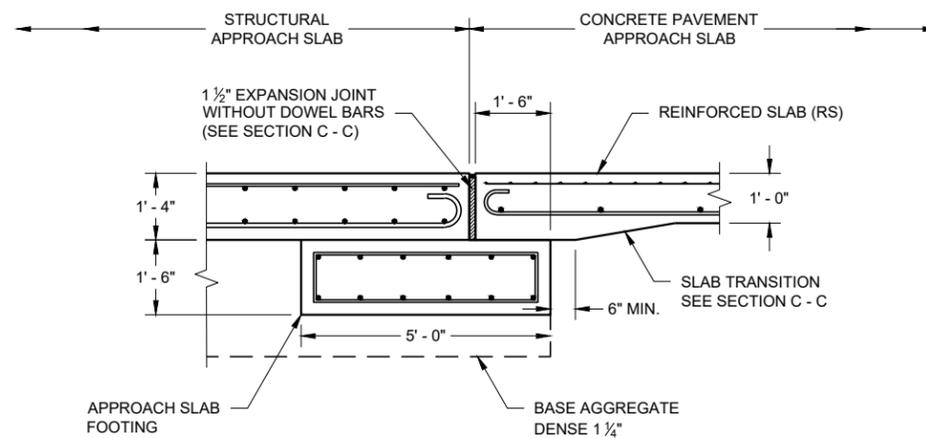


GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

- ① SEE BRIDGE PLAN.
- ② CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO CL OR RL .
- Ⓓ 1½" EXPANSION JOINT (NO DOWELS)

BRIDGE APPROACHES

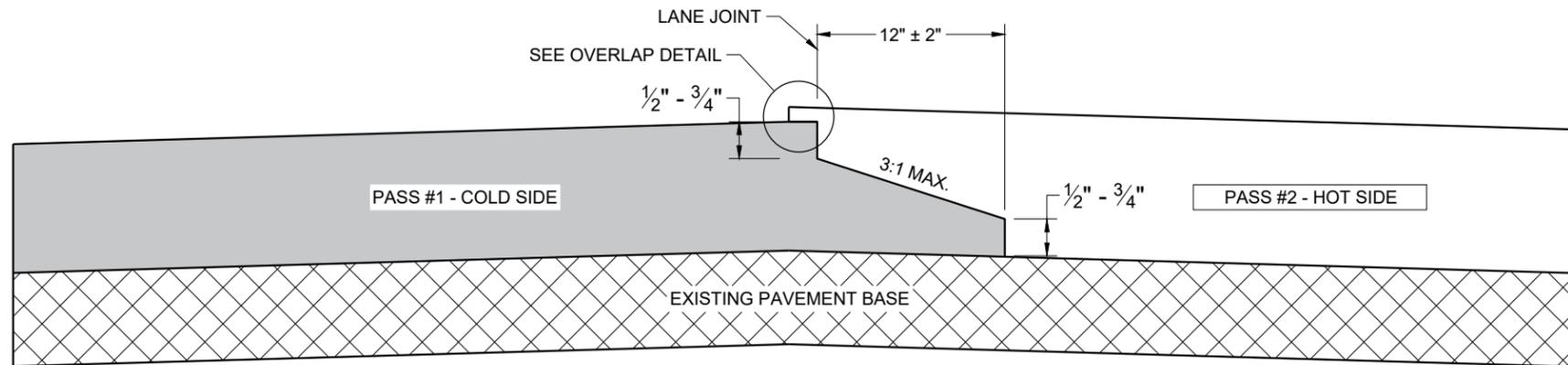


SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

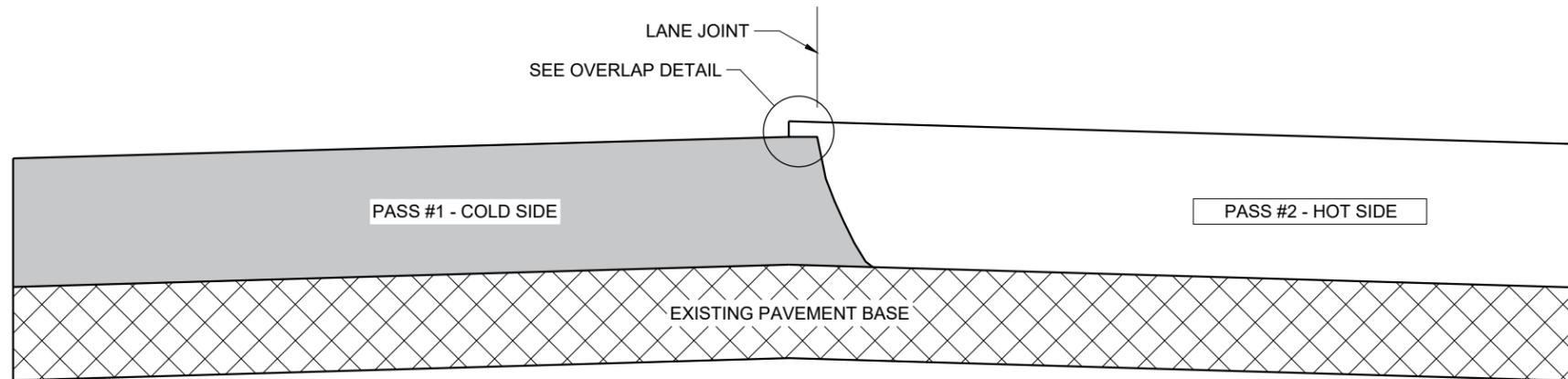
**STRUCTURAL APPROACH SLAB
AND CONCRETE PAVEMENT
APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

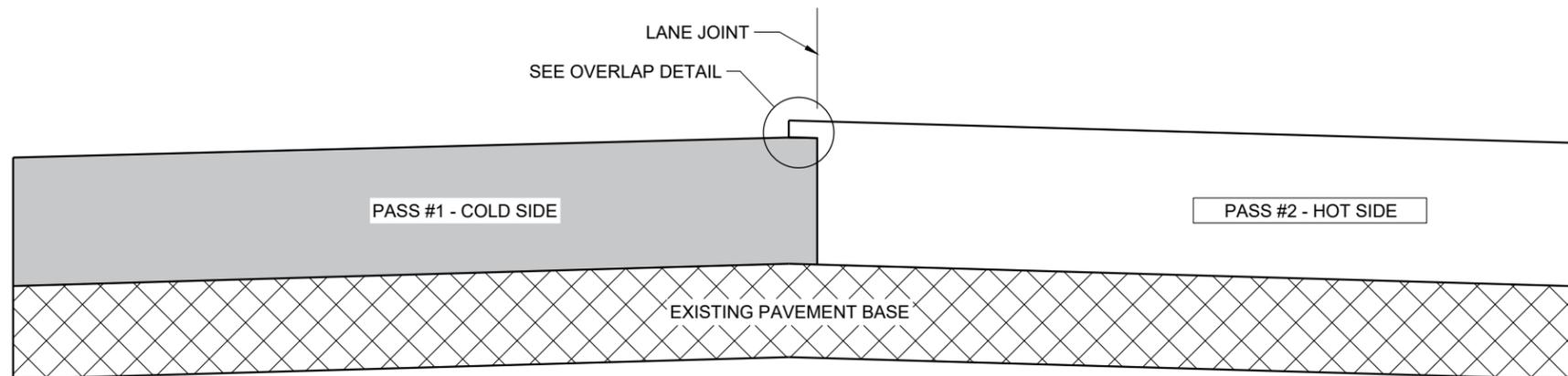
APPROVED
November 2018 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



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

GENERAL NOTES

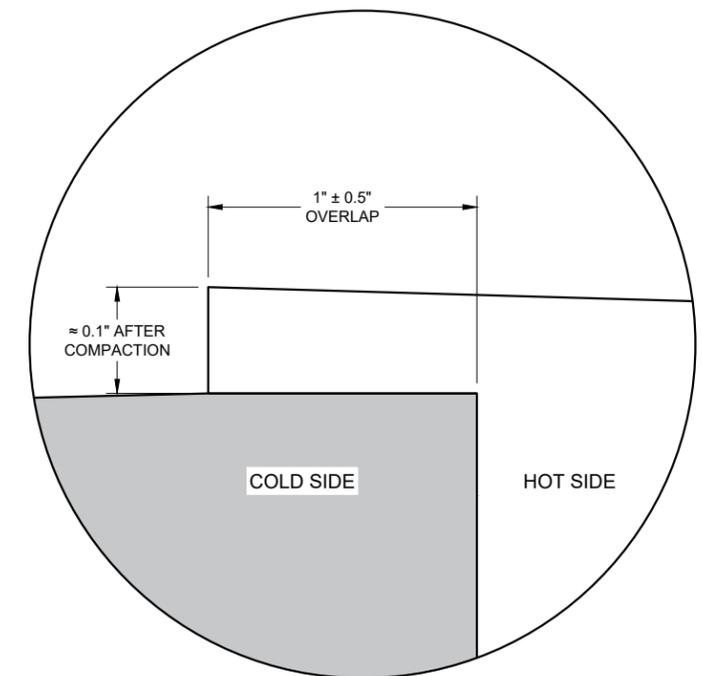
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

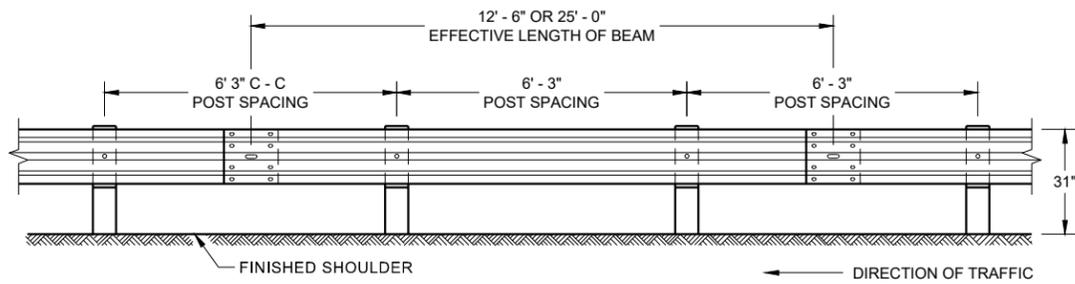
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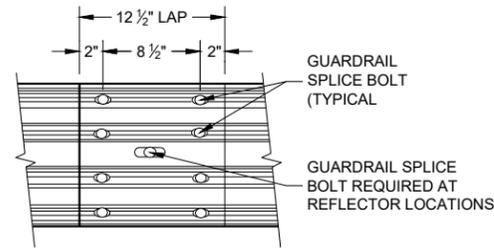
SDD 13C19 - 03

SDD 13C19 - 03

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



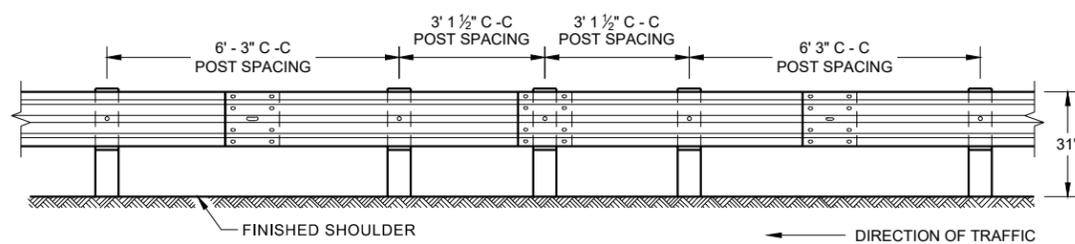
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



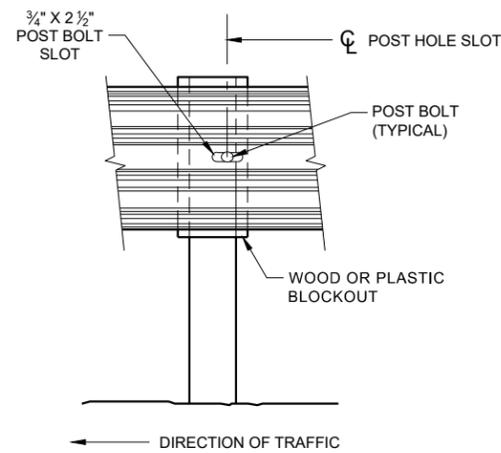
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

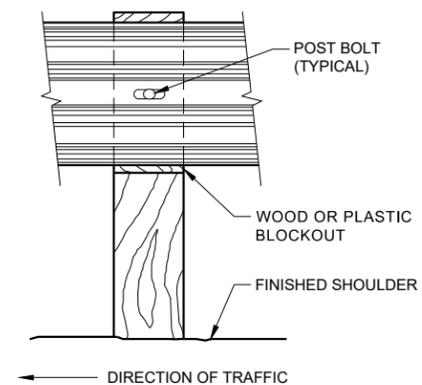
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER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



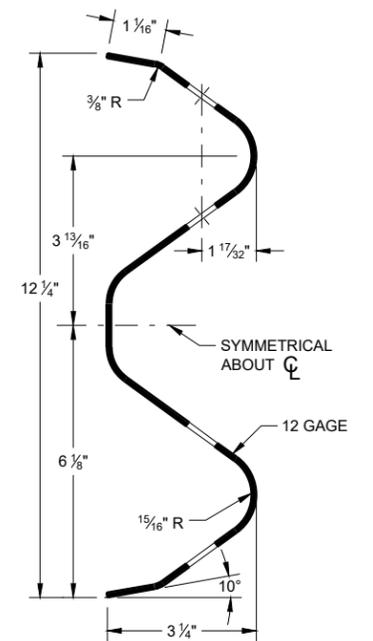
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



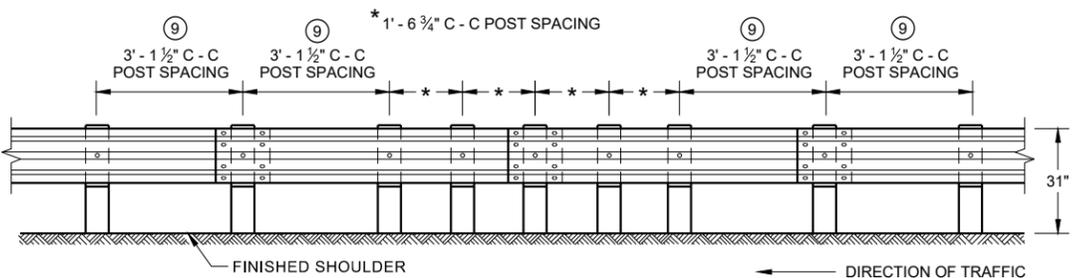
FRONT VIEW AT STEEL POST



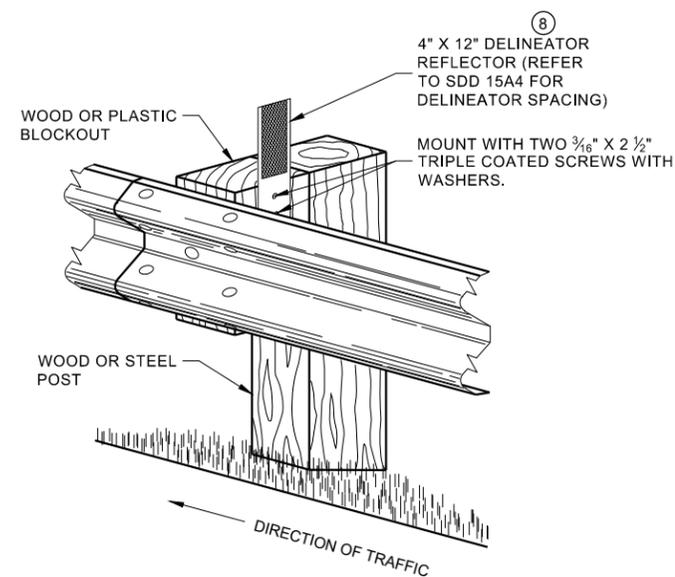
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



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



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

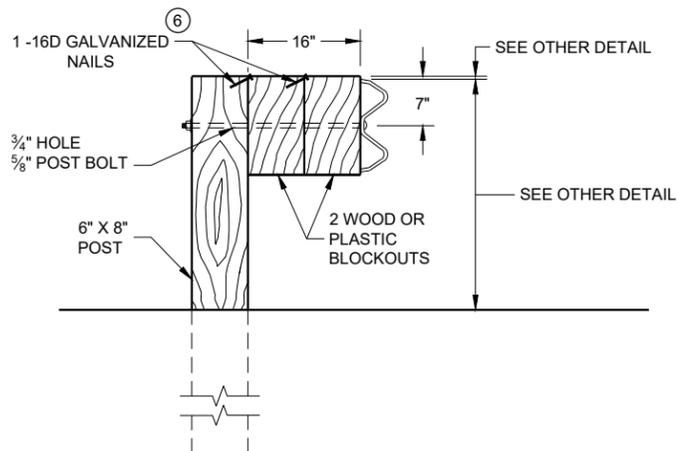
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B42 - 07b

SDD 14B42 - 07b

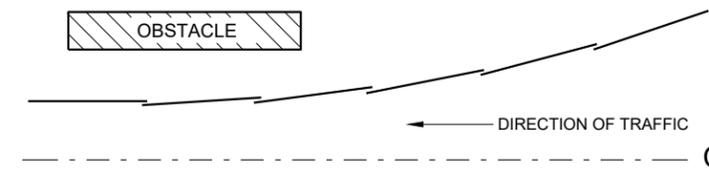
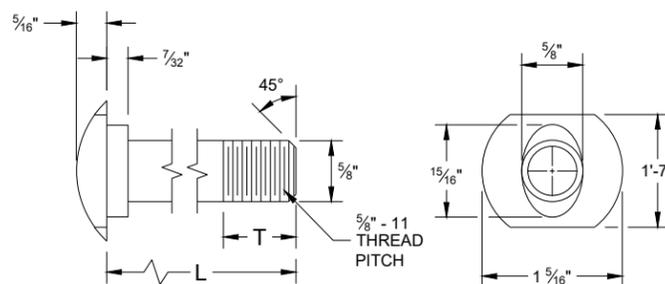


DETAIL FOR 16" BLOCKOUT DEPTH

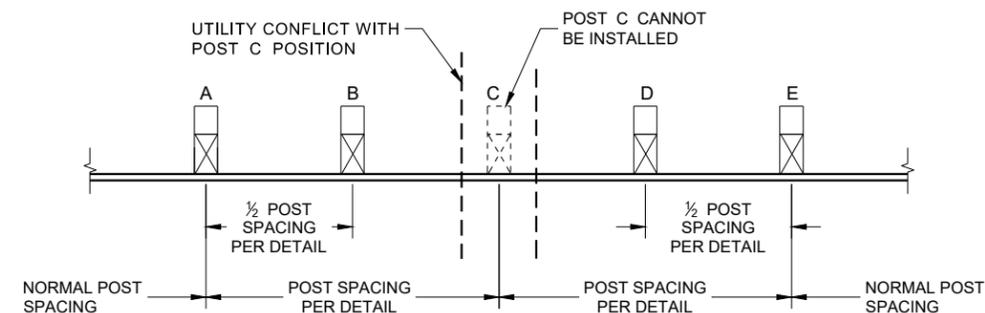
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

NOTE:

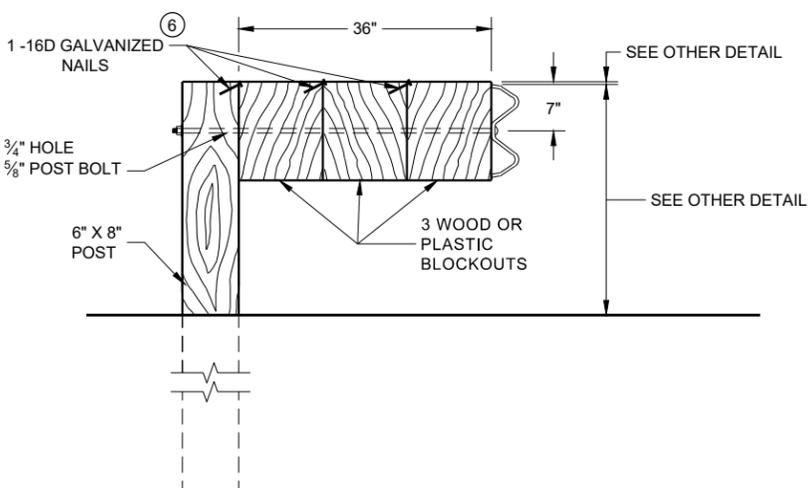
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.



**PLAN VIEW
BEAM LAPPING DETAIL**



**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

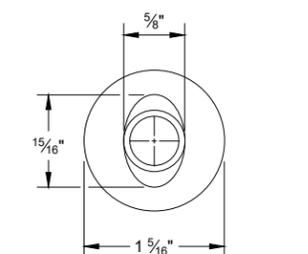


DETAIL FOR 36" BLOCKOUT DEPTH

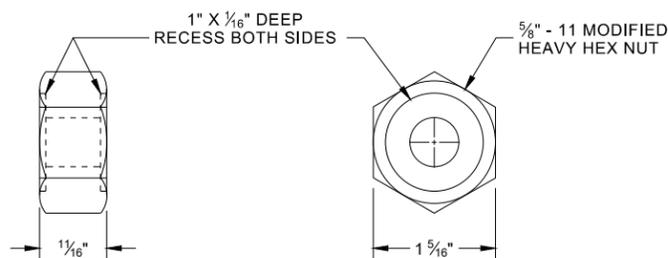
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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

POST BOLT TABLE

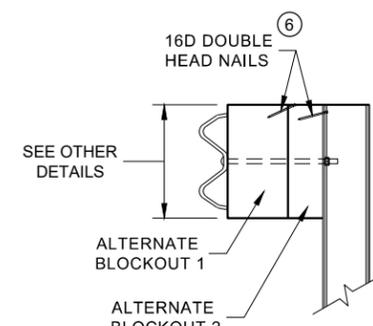
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



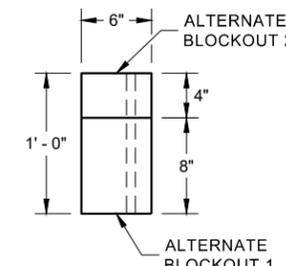
ALTERNATE BOLT HEAD



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



SIDE VIEW



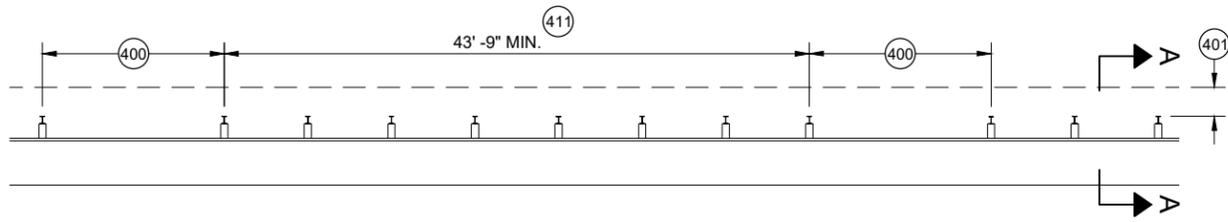
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

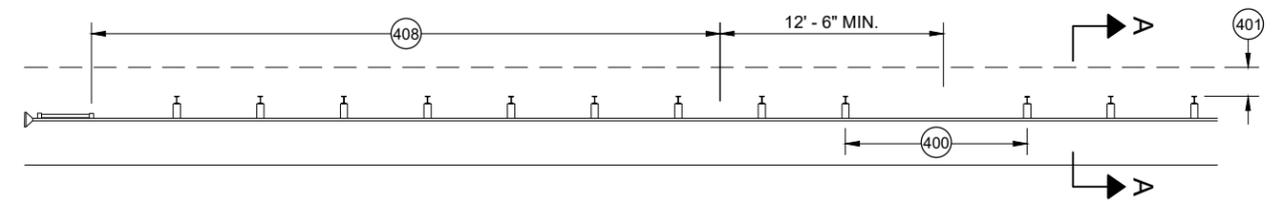
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

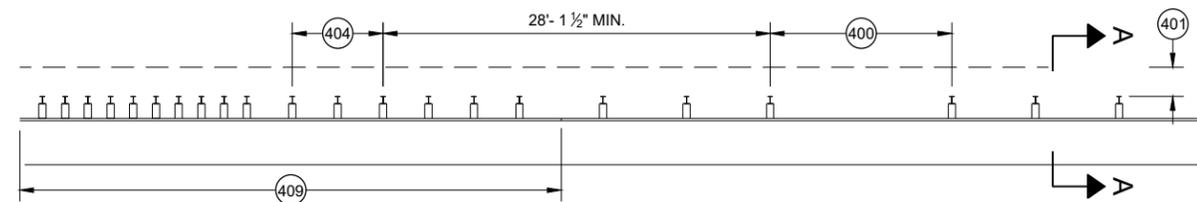
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



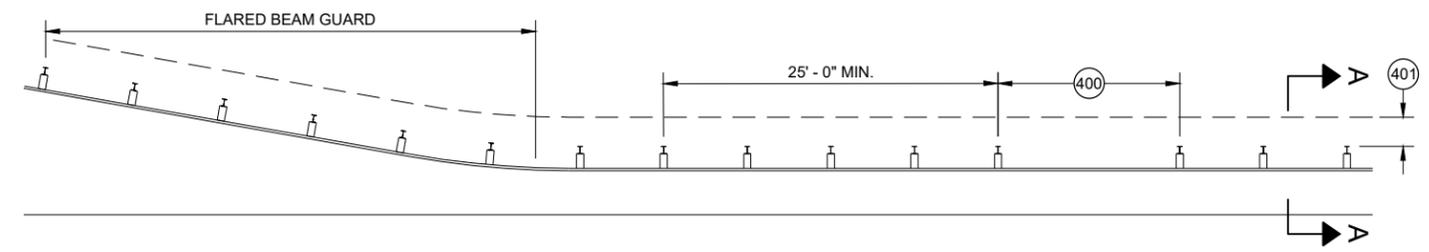
MISSING POST IN MGS GUARDRAIL



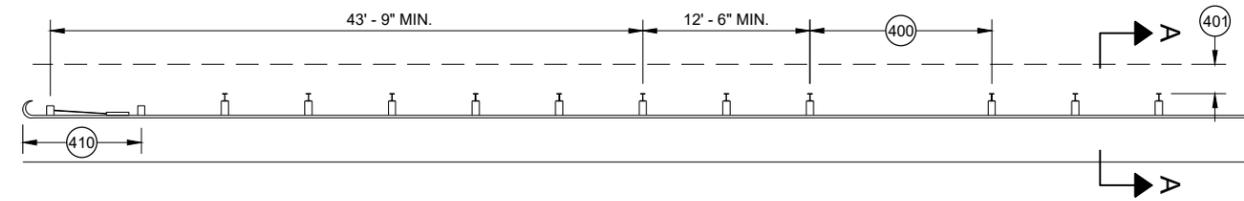
MISSING POST IN MGS GUARDRAIL NEAR EAT



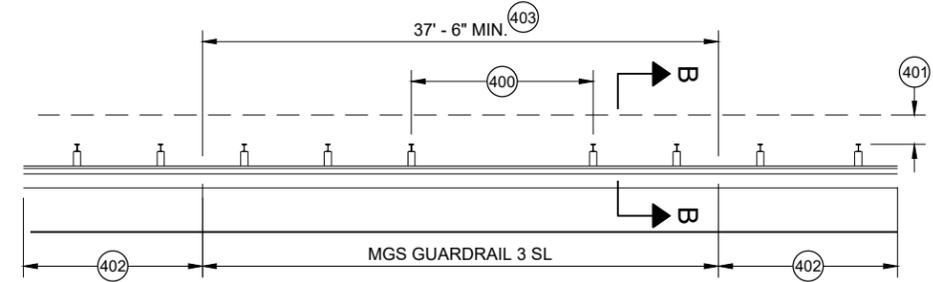
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

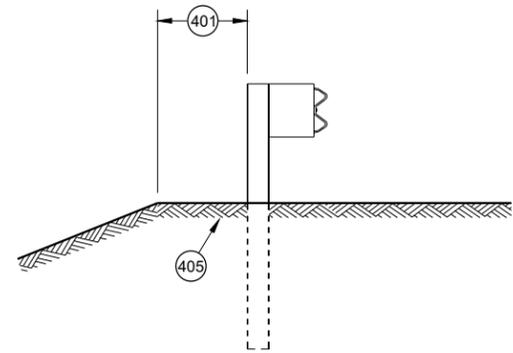


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

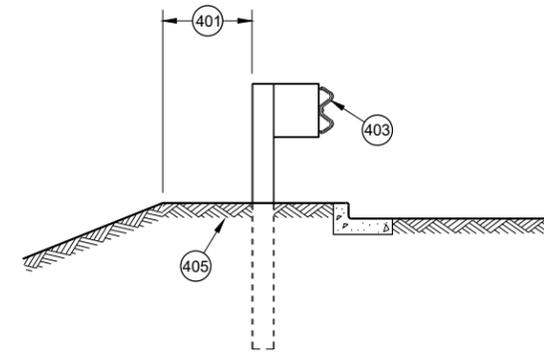


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

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



SECTION A - A



SECTION B - B

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

GENERAL NOTES

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

SEE SDD 14B42 FOR MORE INFORMATION.

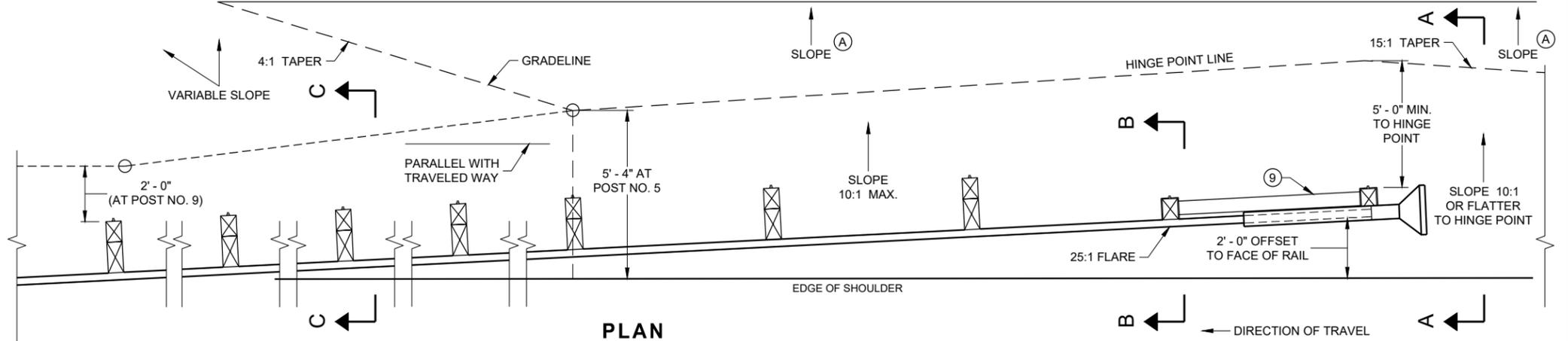
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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

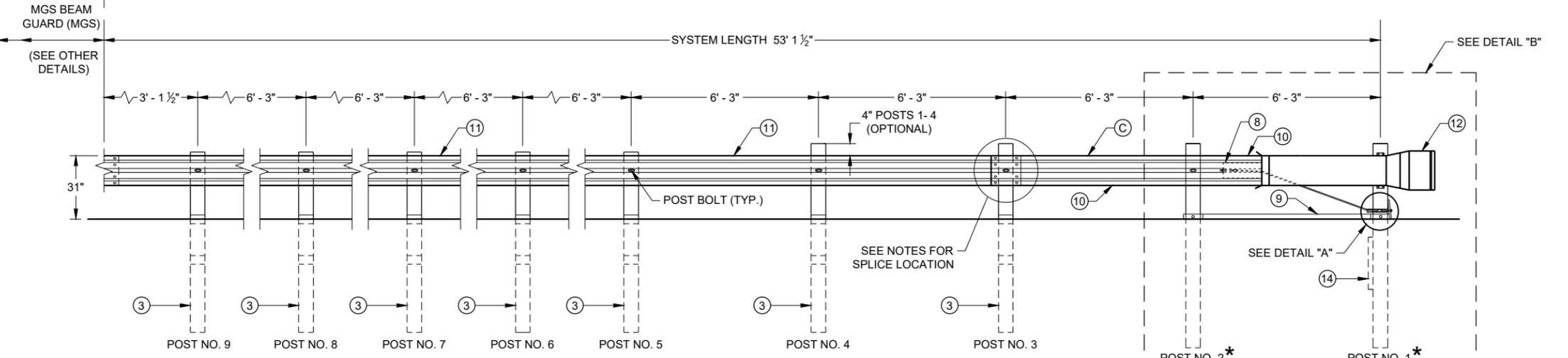
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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

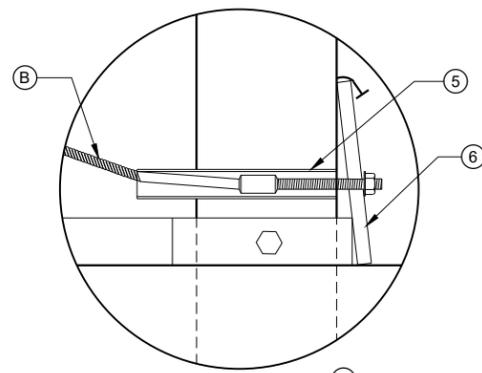
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



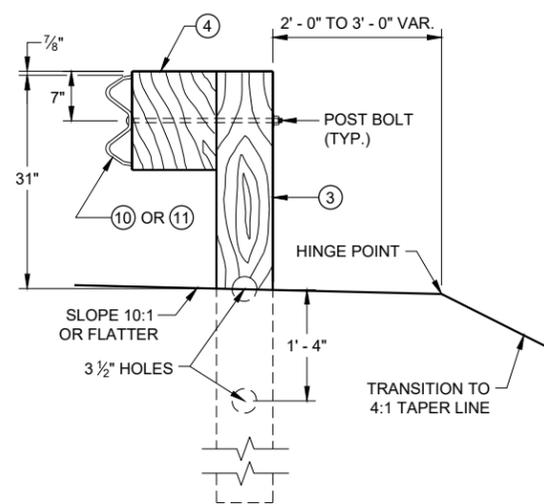
PLAN



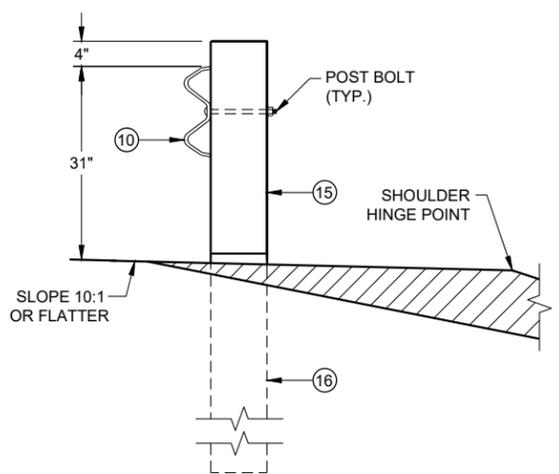
ELEVATION



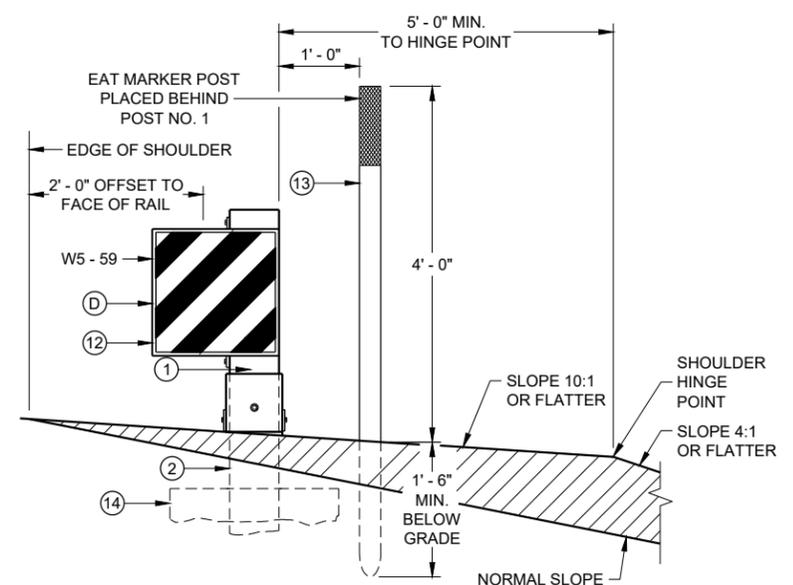
DETAIL "A"



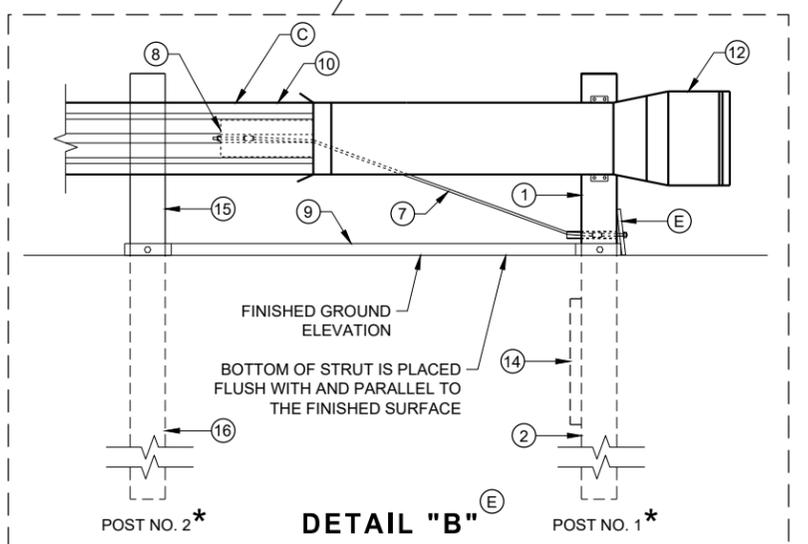
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



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



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



DETAIL "B"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

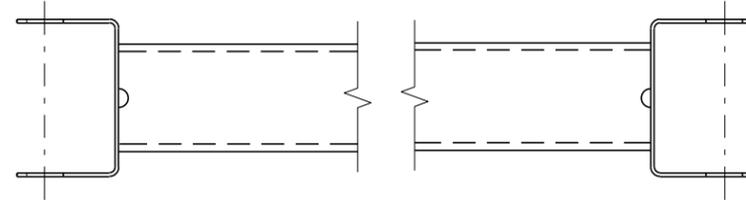
6

SDD 14B44 - 04a

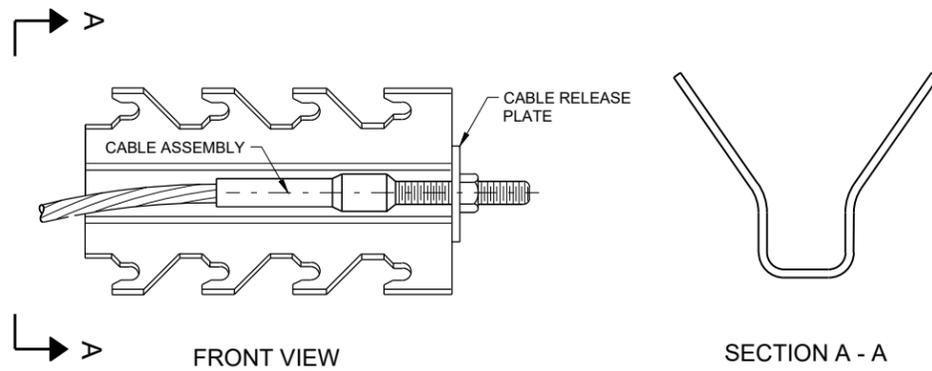
SDD 14B44 - 04a

BILL OF MATERIALS

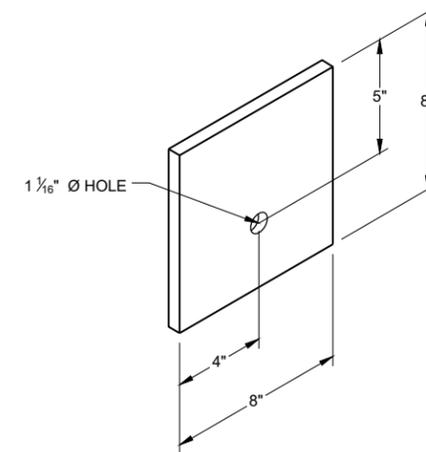
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



GENERIC GROUND STRUT ⑨ ⑤



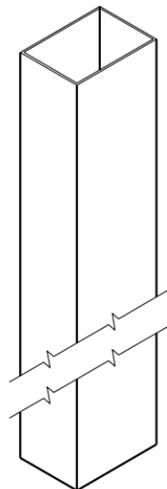
GENERIC ANCHOR CABLE BOX ⑨ ⑤



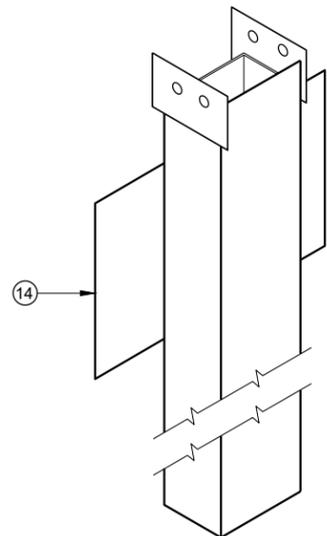
BEARING PLATE ⑥ ⑤

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

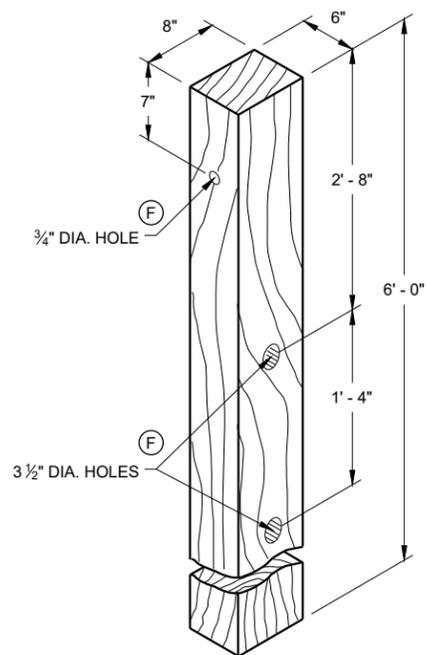
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



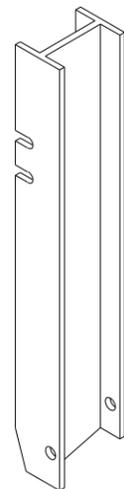
UPPER POST NO. 1 ⁽¹⁾ (E)



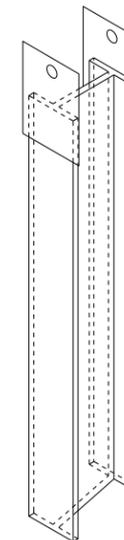
LOWER POST NO. 1 ⁽²⁾ (E)



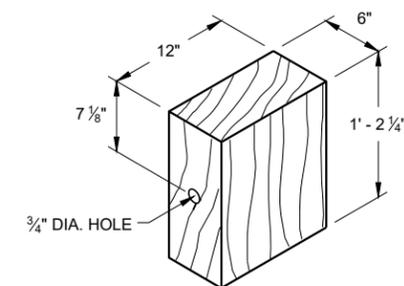
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

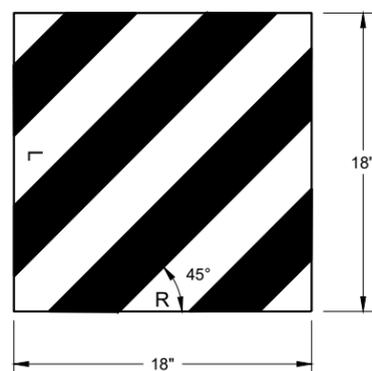


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

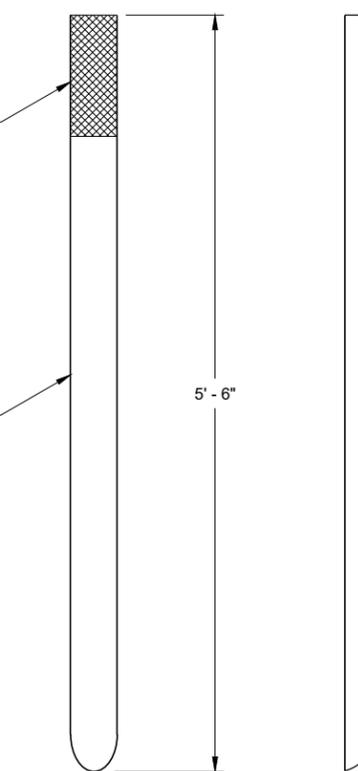
6



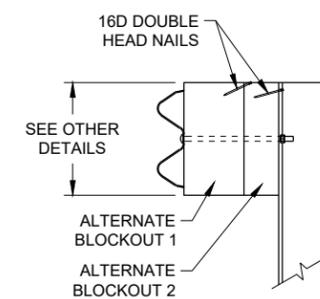
W5 - 59
REFLECTIVE SHEETING DETAIL ^(E)

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

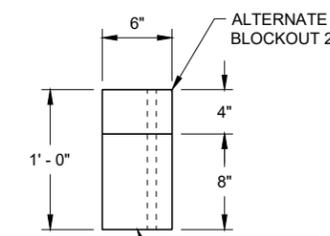
E.A.T. MARKER
POST (YELLOW)



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



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

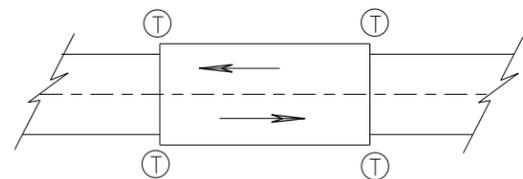
SDD 14B44 - 04c

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

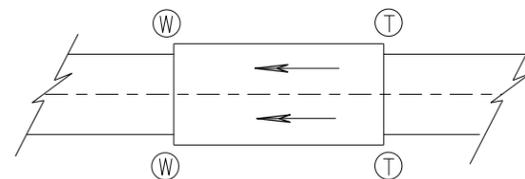
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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

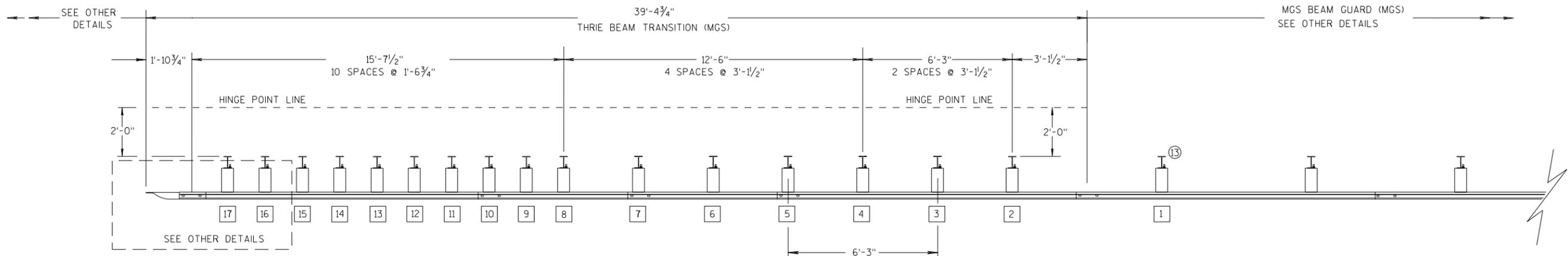
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

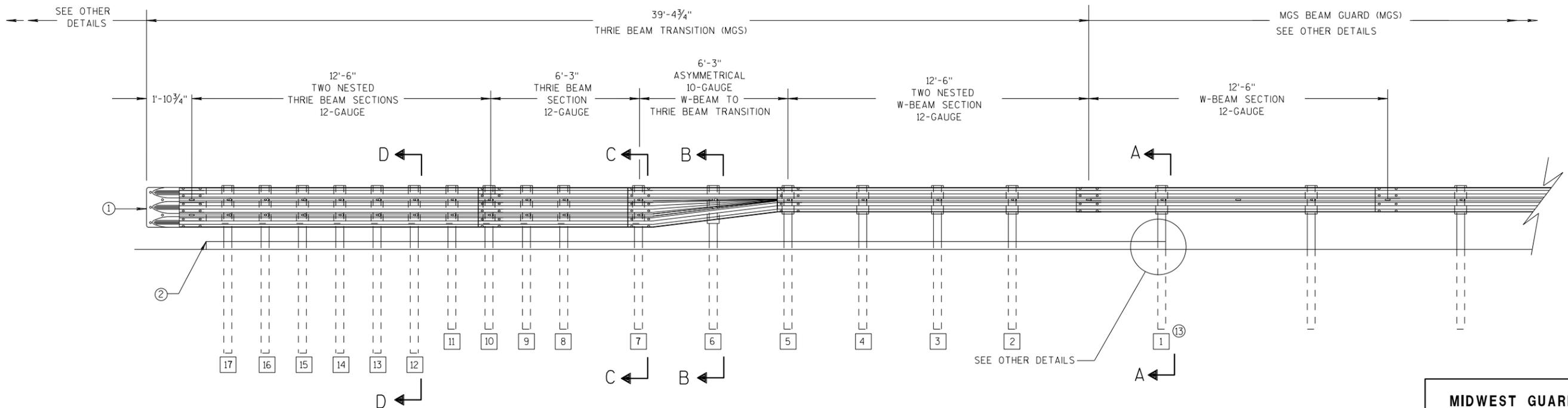
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

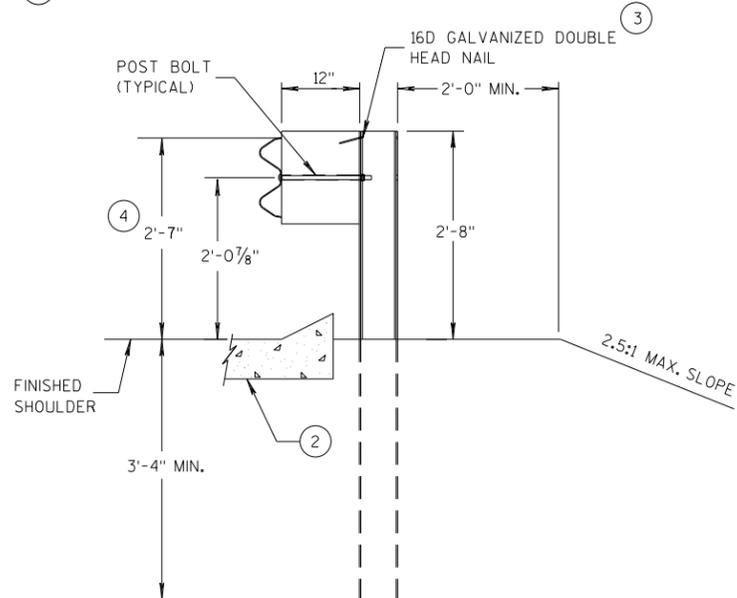
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

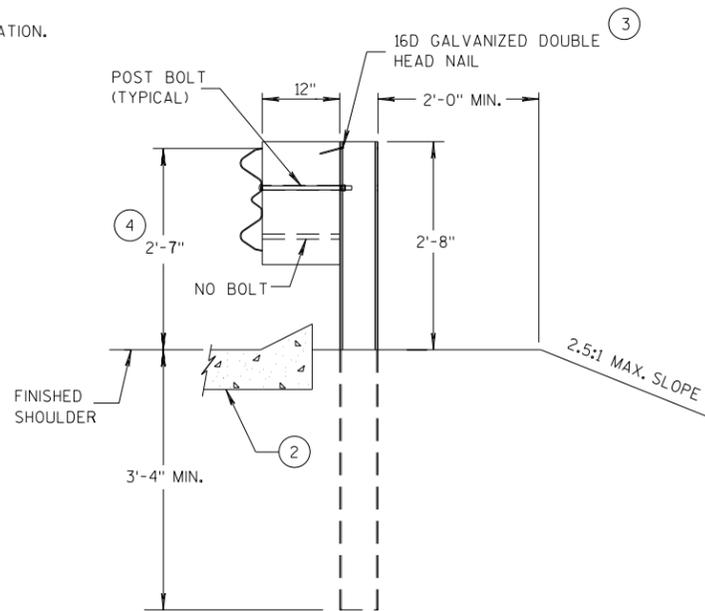
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

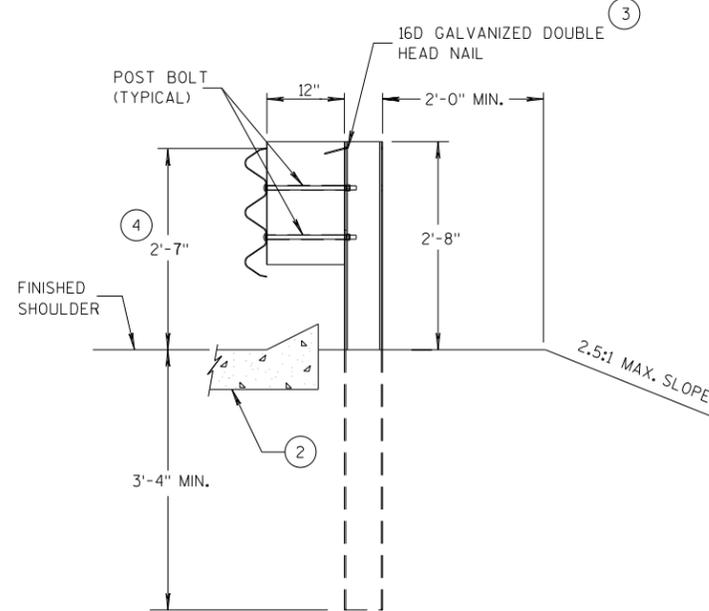
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".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



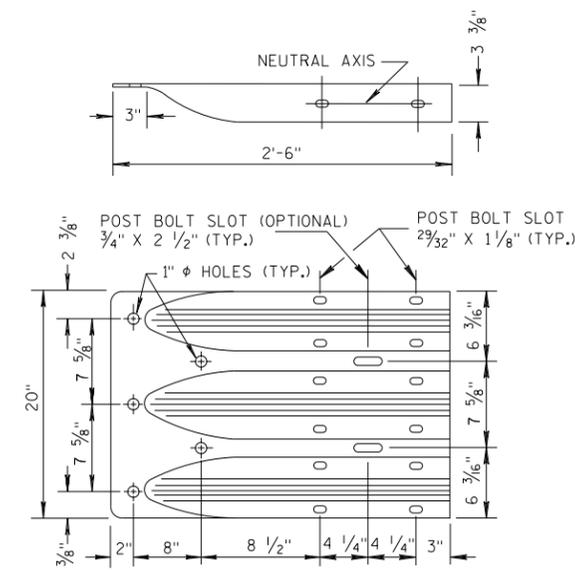
**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



**SECTION C-C
POSTS 7-11**



**THRIE BEAM
TERMINAL CONNECTOR**

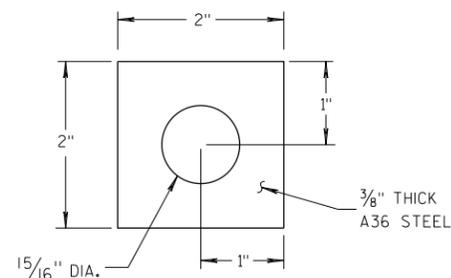
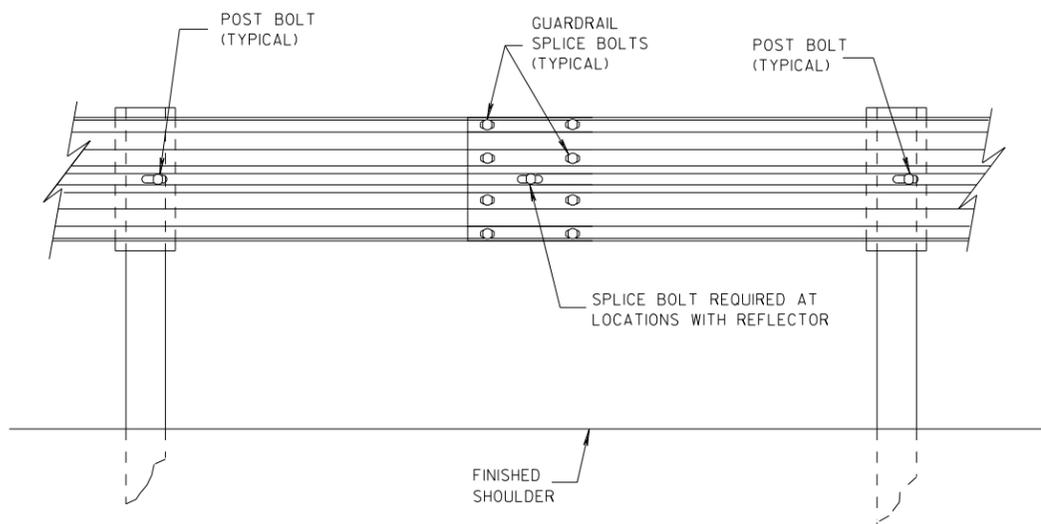
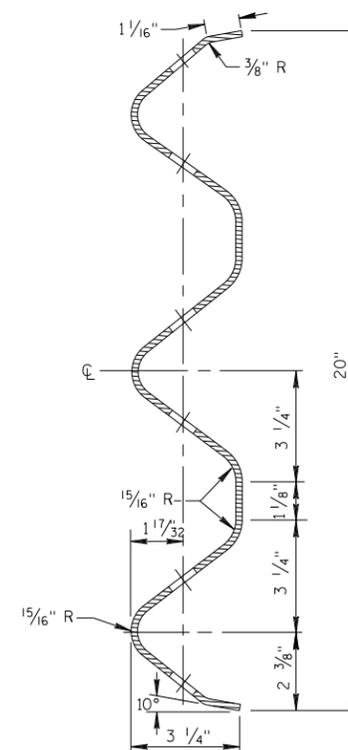


PLATE WASHER DETAIL



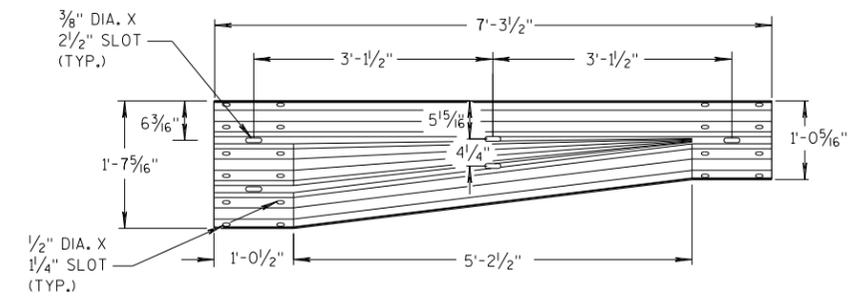
SPLICE DETAIL



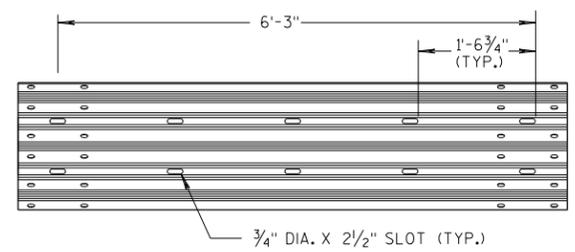
**SECTION THRU THRIE
BEAM RAIL ELEMENT**

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

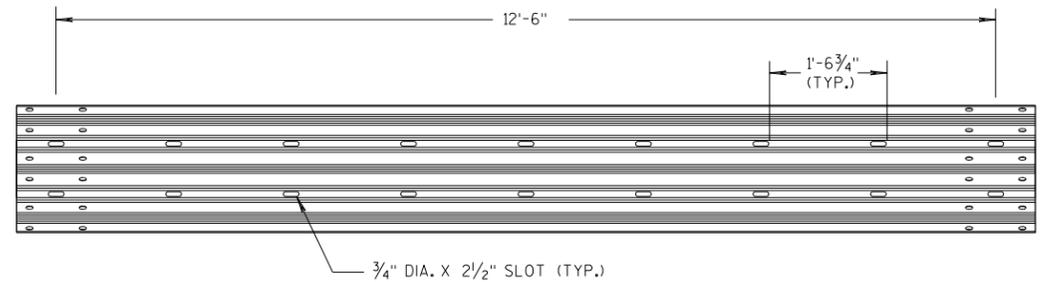
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



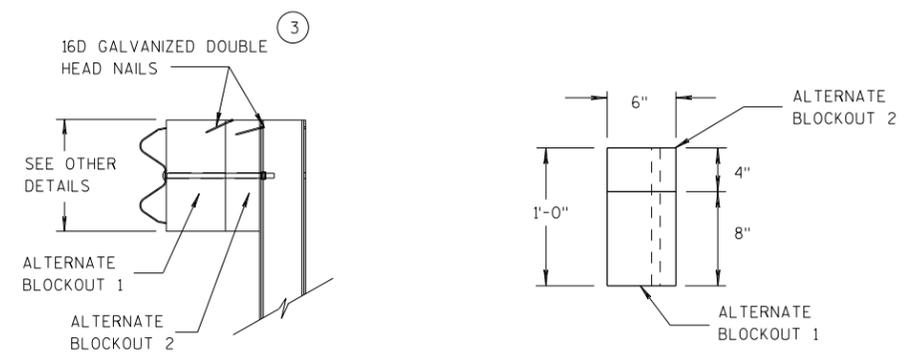
W-BEAM TO THRIE BEAM TRANSITION SECTION



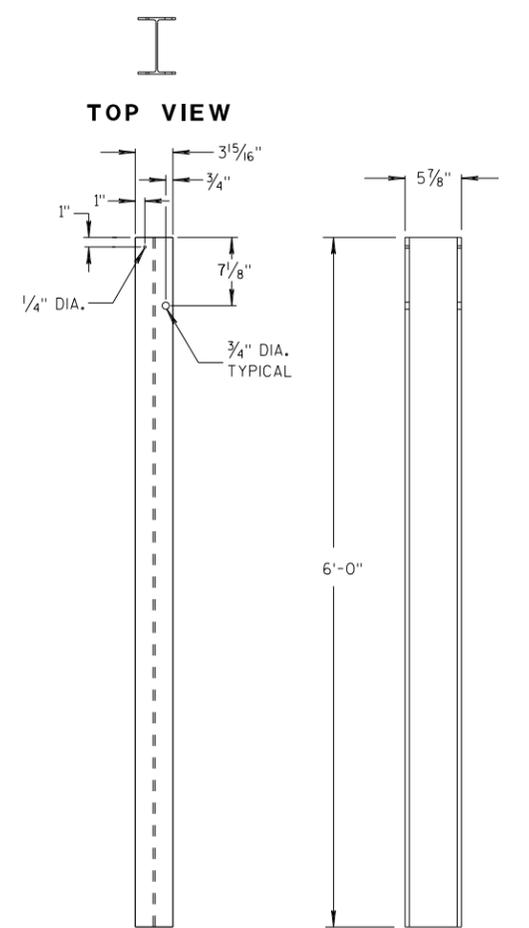
6'-3\"/>



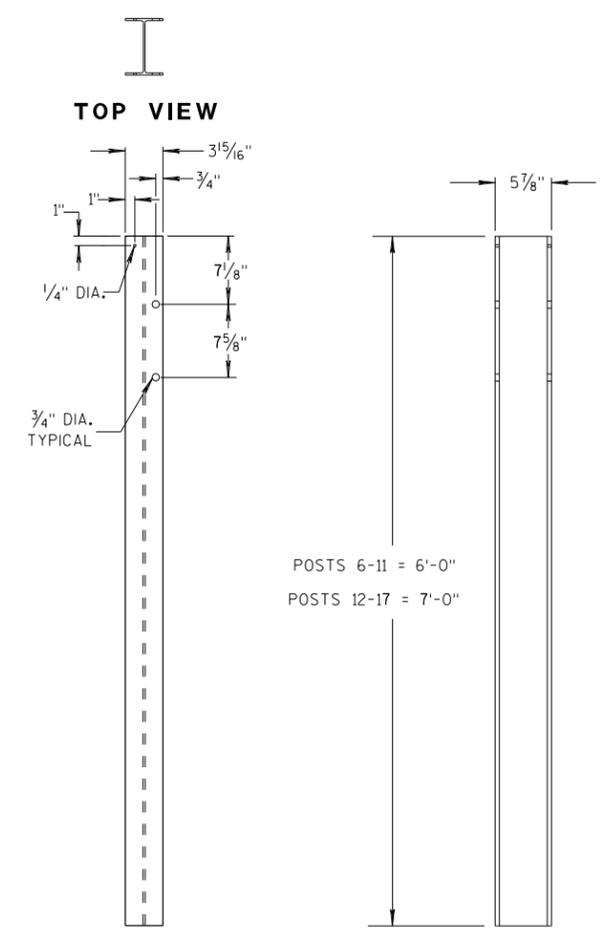
12'-6\"/>



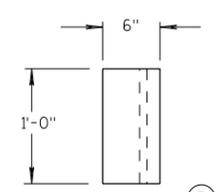
ALTERNATE WOOD BLOCKOUT DETAIL



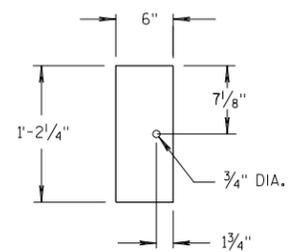
STEEL POSTS 1-5



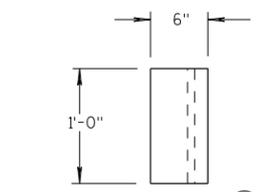
STEEL POSTS 6-17



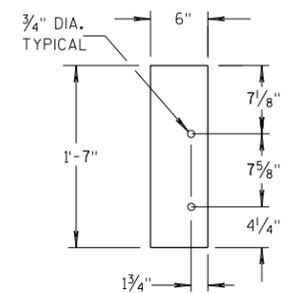
TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 1-5**



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)**

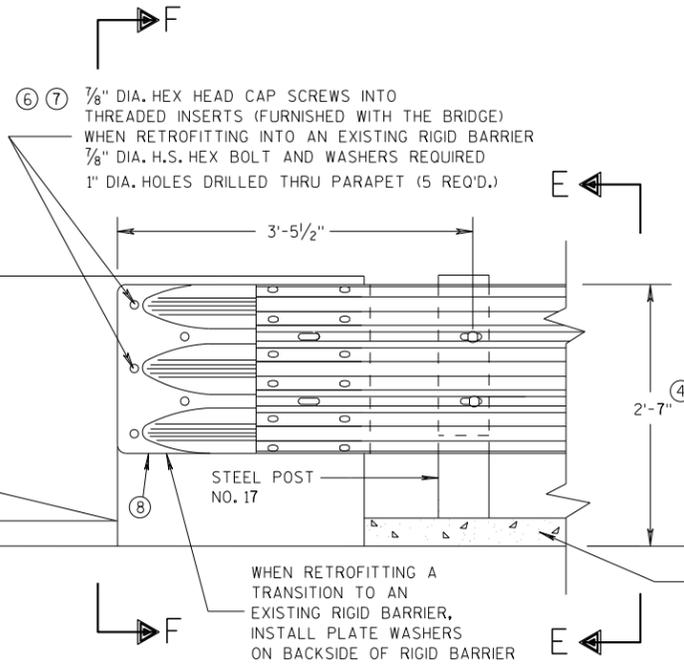
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

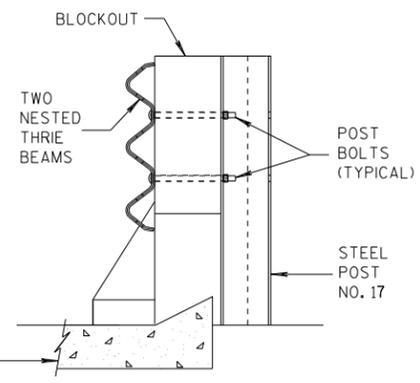
S.D.D. 14 B 45-5c

S.D.D. 14 B 45-5c



FRONT VIEW

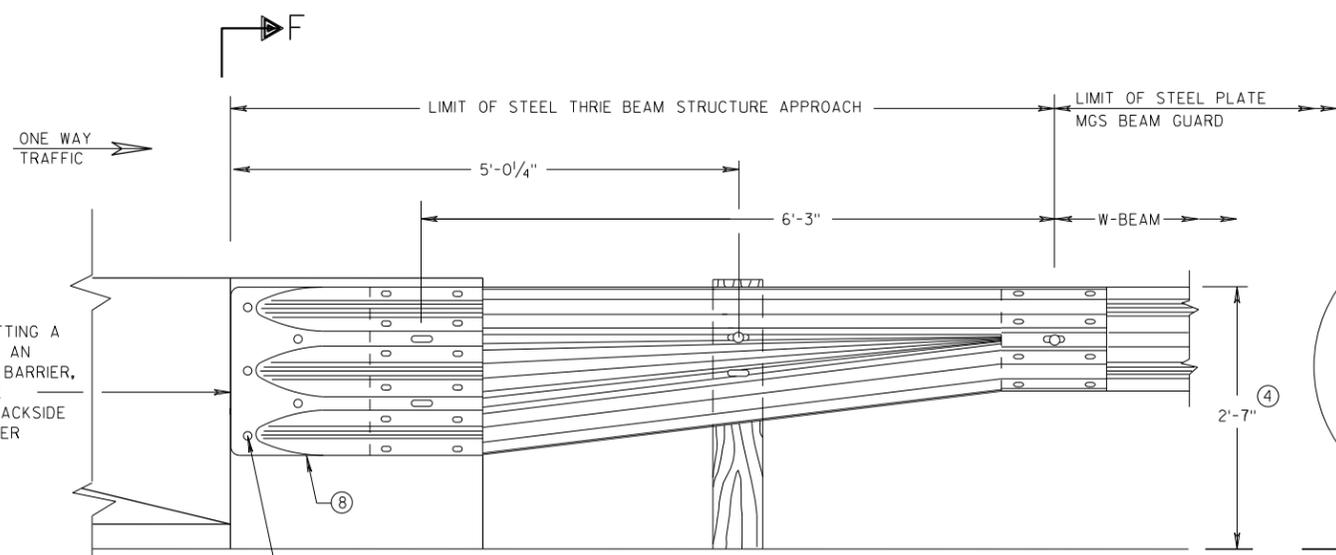
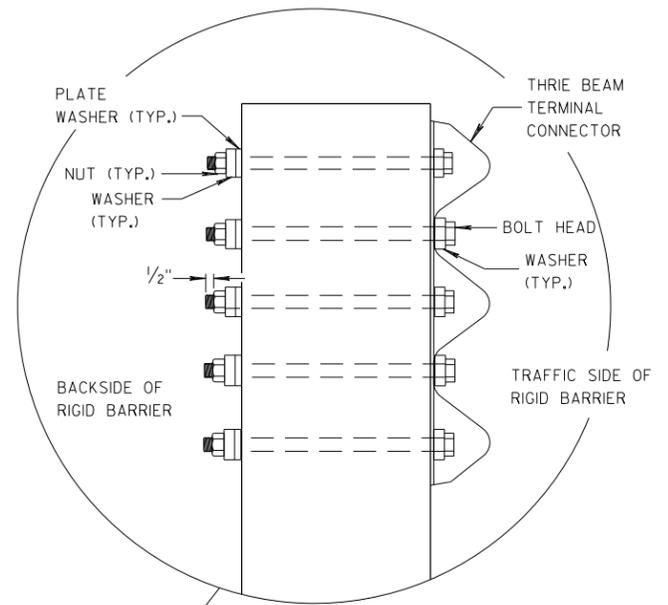
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



SECTION E-E

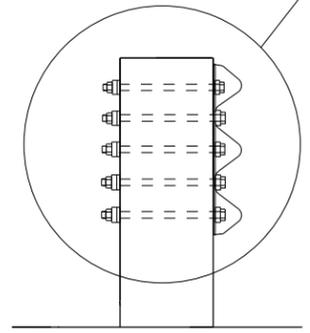
GENERAL NOTES

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

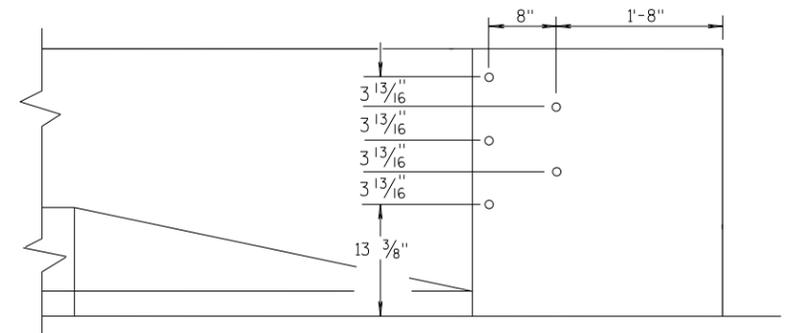


FRONT VIEW

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



SECTION F-F



DRILL HOLE LOCATION

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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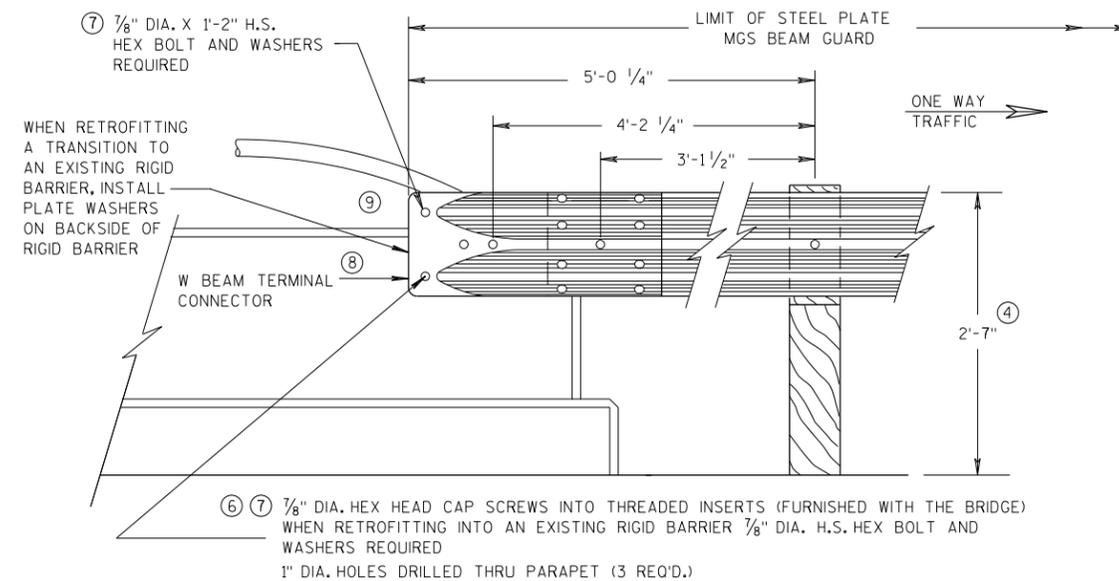
S.D.D. 14 B 45-5d

S.D.D. 14 B 45-5d

GENERAL NOTES

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

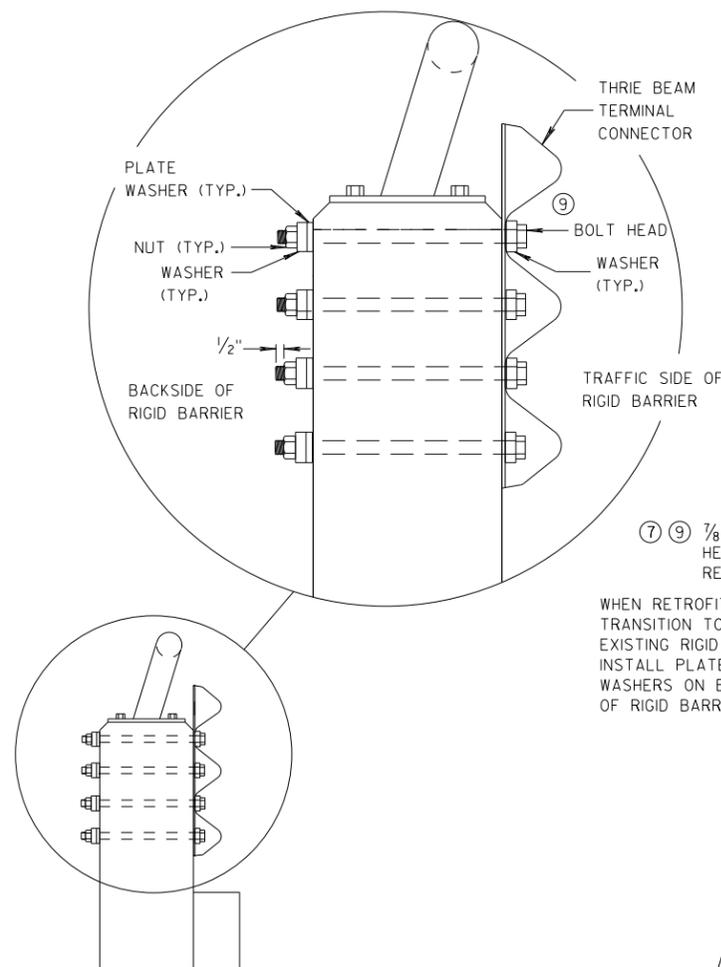
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH 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".
- ⑨ 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.



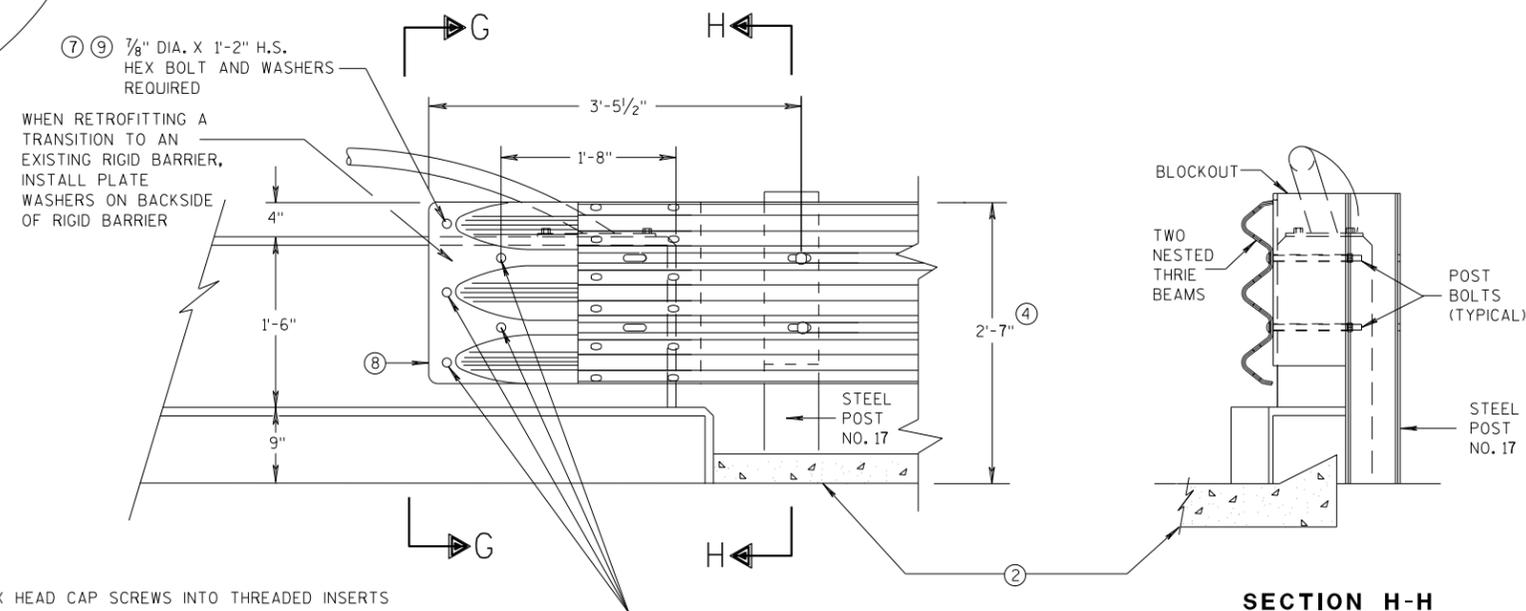
FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



SECTION G-G



FRONT VIEW

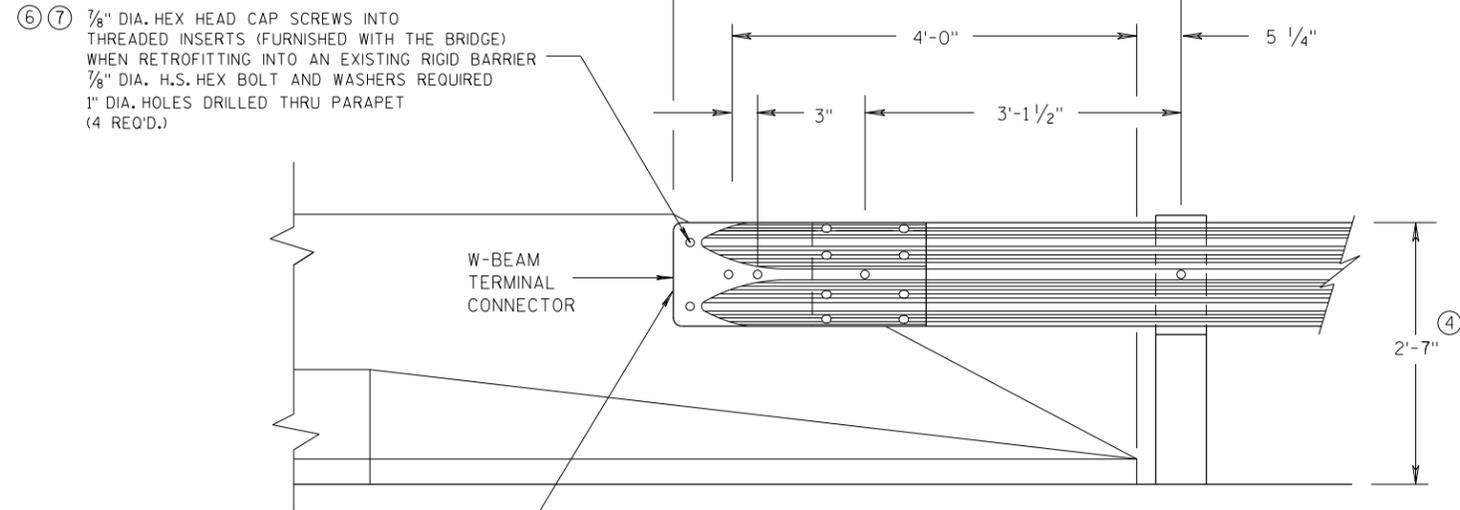
THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

ONE WAY
TRAFFIC



FRONT VIEW

**W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS**

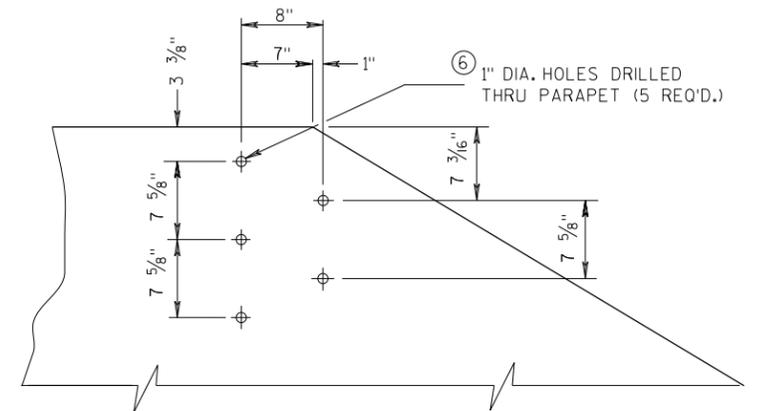
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

WHEN RETROFITTING A TRANSITION
TO AN EXISTING RIGID BARRIER,
INSTALL PLATE WASHERS ON
BACKSIDE OF RIGID BARRIER.

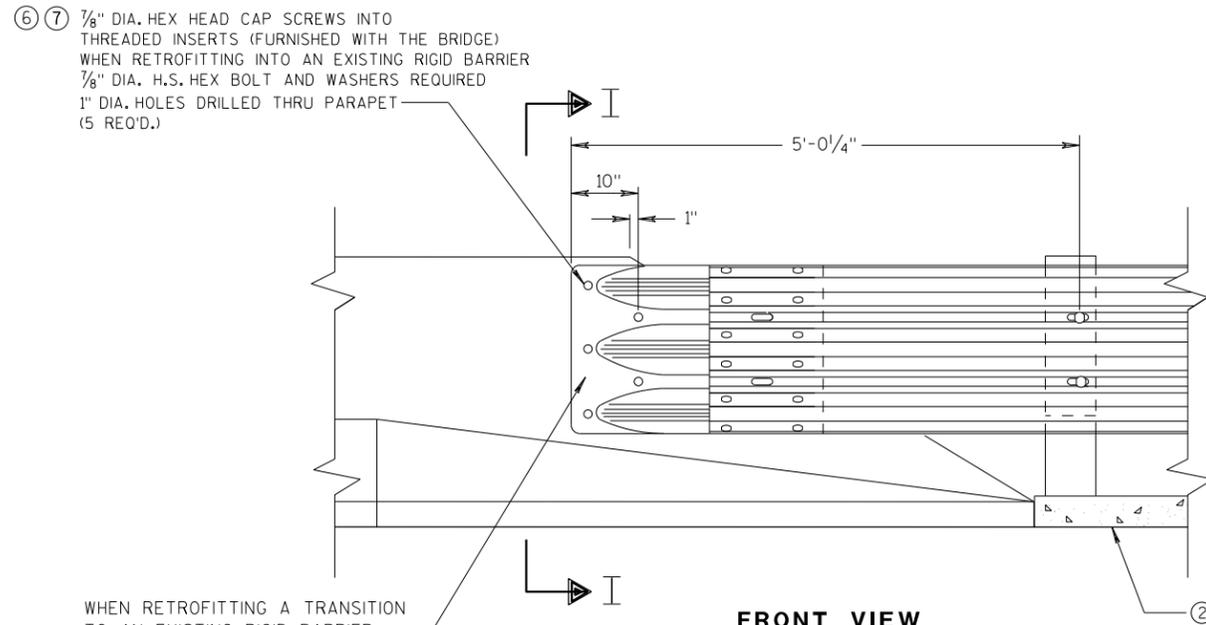
⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(4 REQ'D.)

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

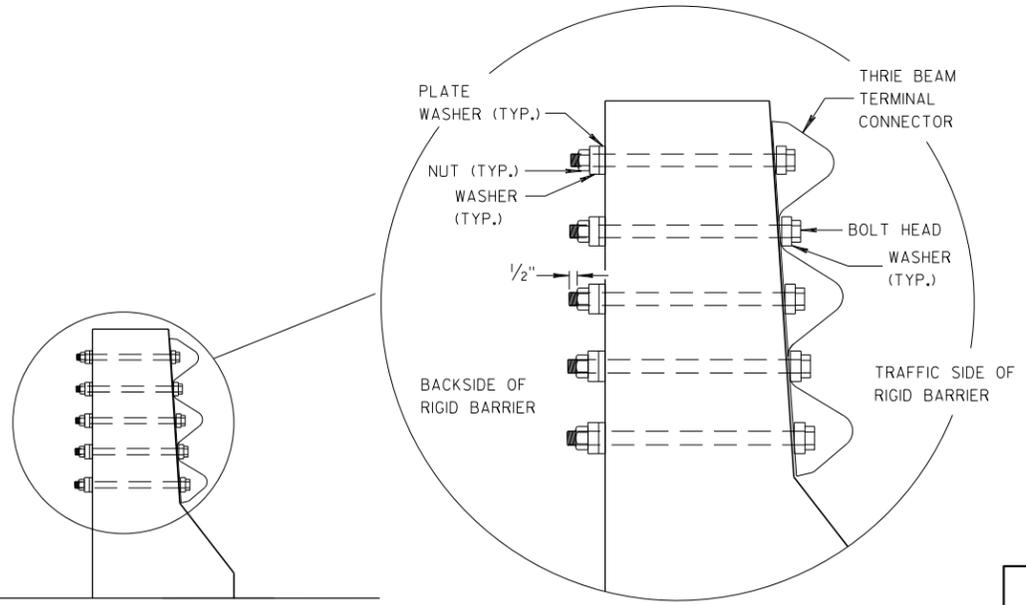


FRONT VIEW

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

WHEN RETROFITTING A TRANSITION
TO AN EXISTING RIGID BARRIER,
INSTALL PLATE WASHERS ON
BACKSIDE OF RIGID BARRIER.

⑥ ⑦ 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
(5 REQ'D.)

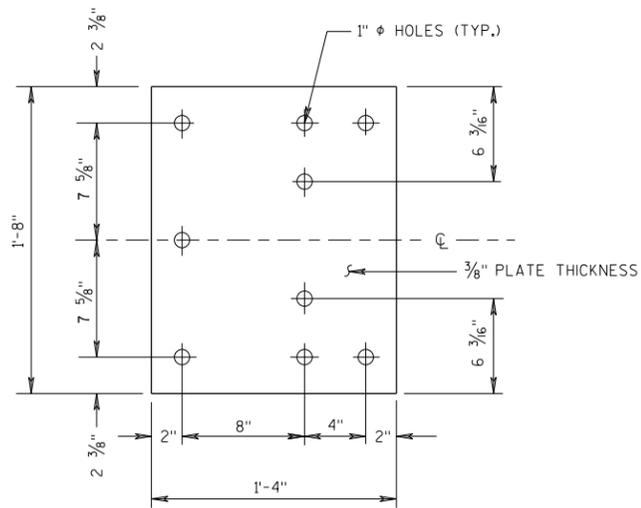


SECTION I-I

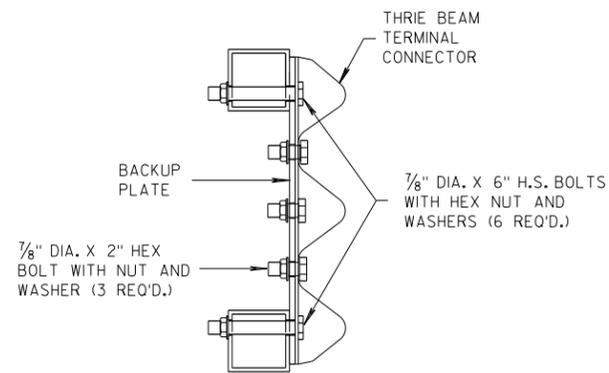
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

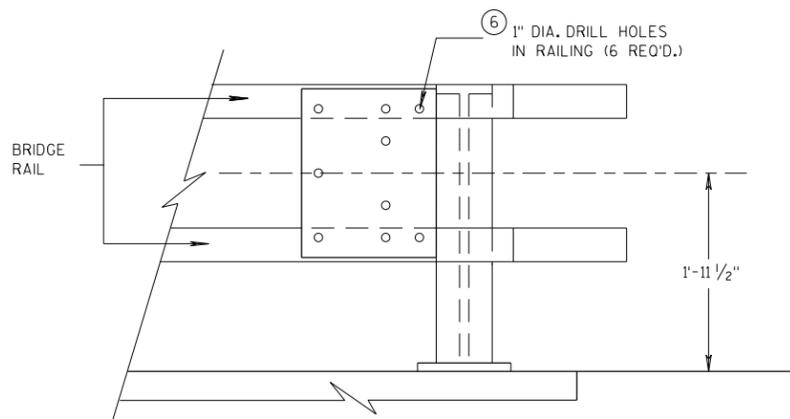
APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



BACK-UP PLATE DETAIL



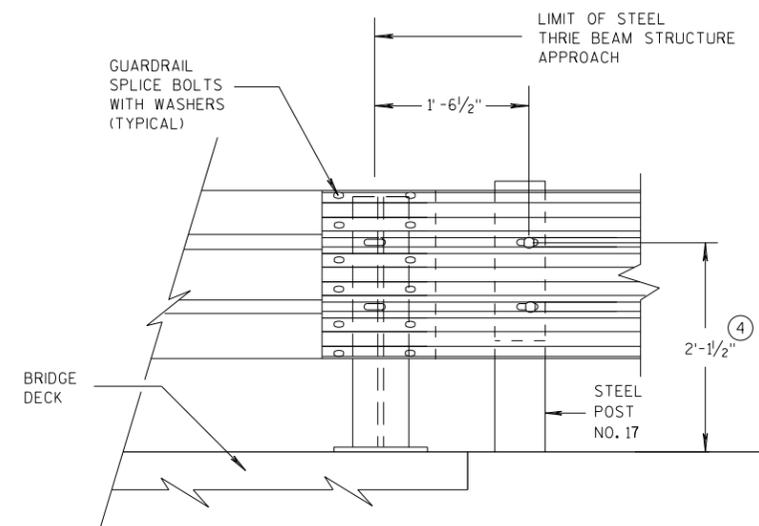
SECTION J-J



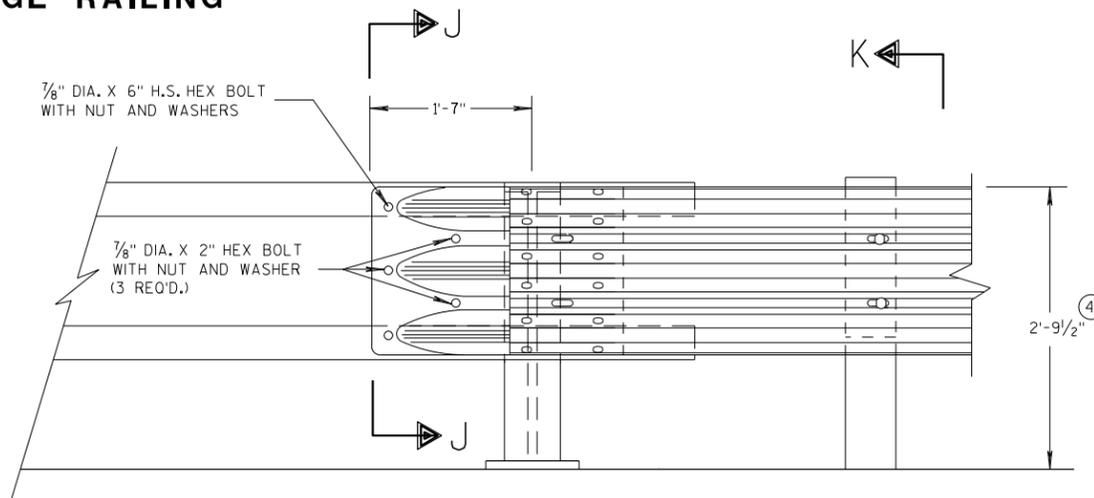
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

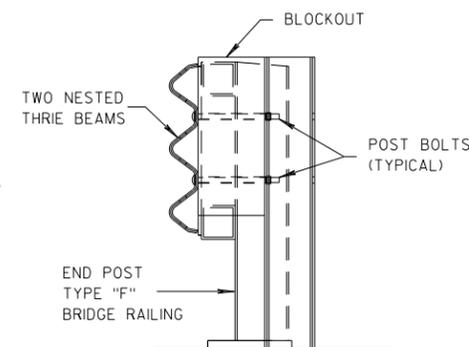
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1'$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.



**FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"**



**FRONT VIEW
THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"**



SECTION K-K

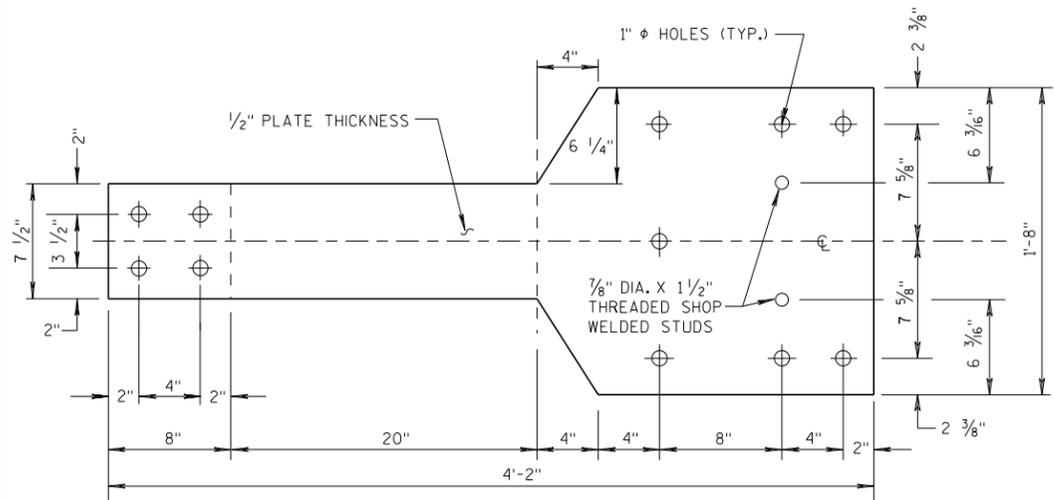
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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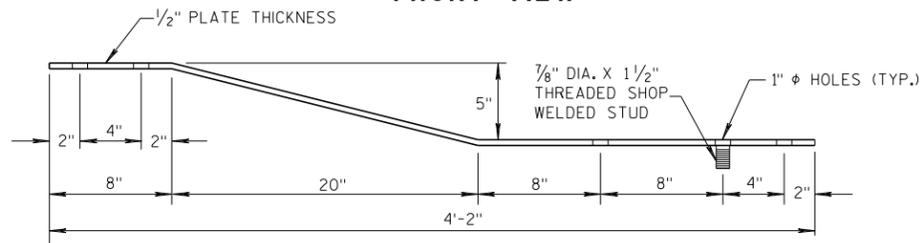
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GENERAL NOTES

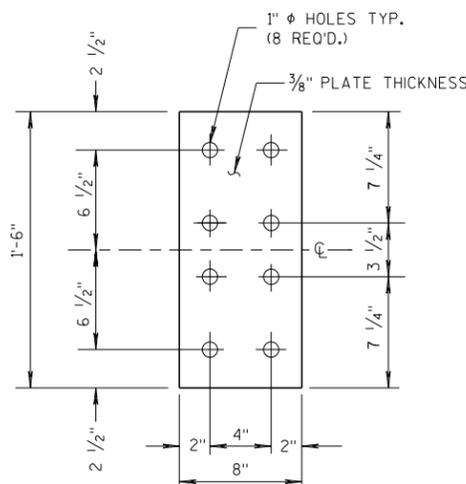
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

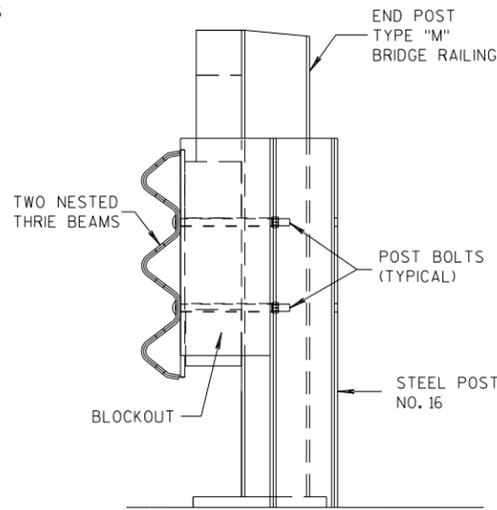


**PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"**

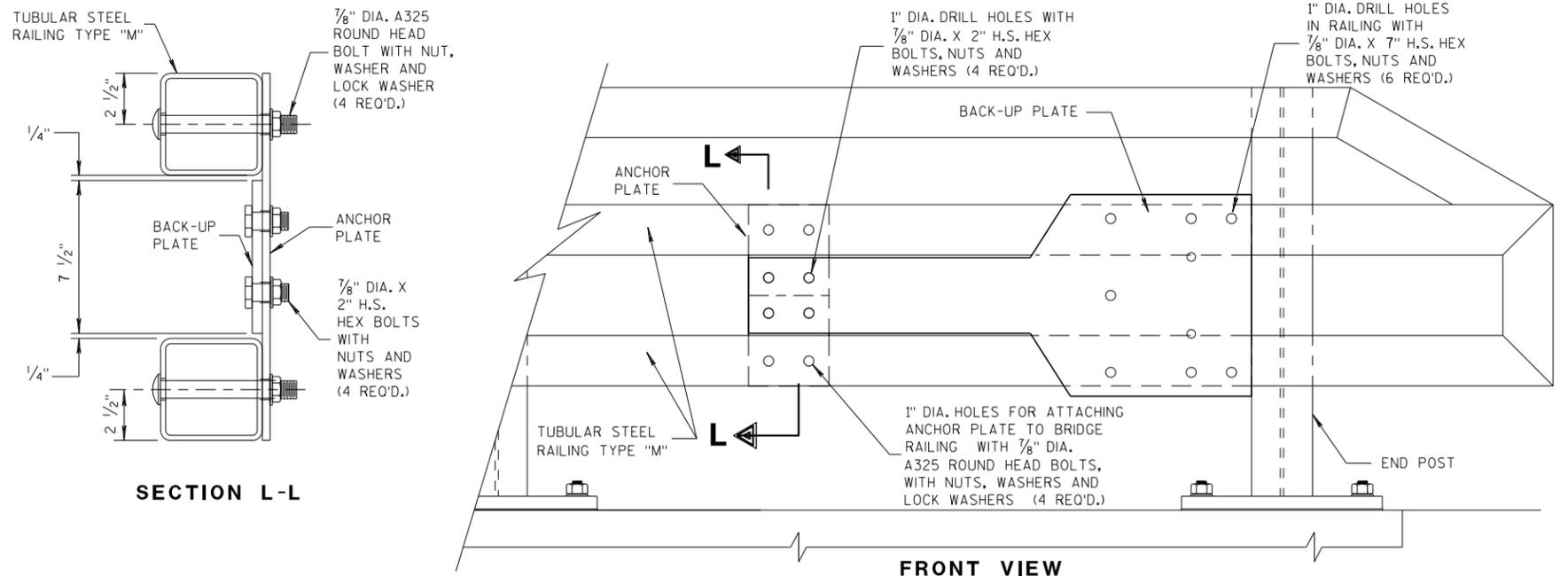


FRONT VIEW

**ANCHOR
PLATE DETAIL,
TYPE "M"**



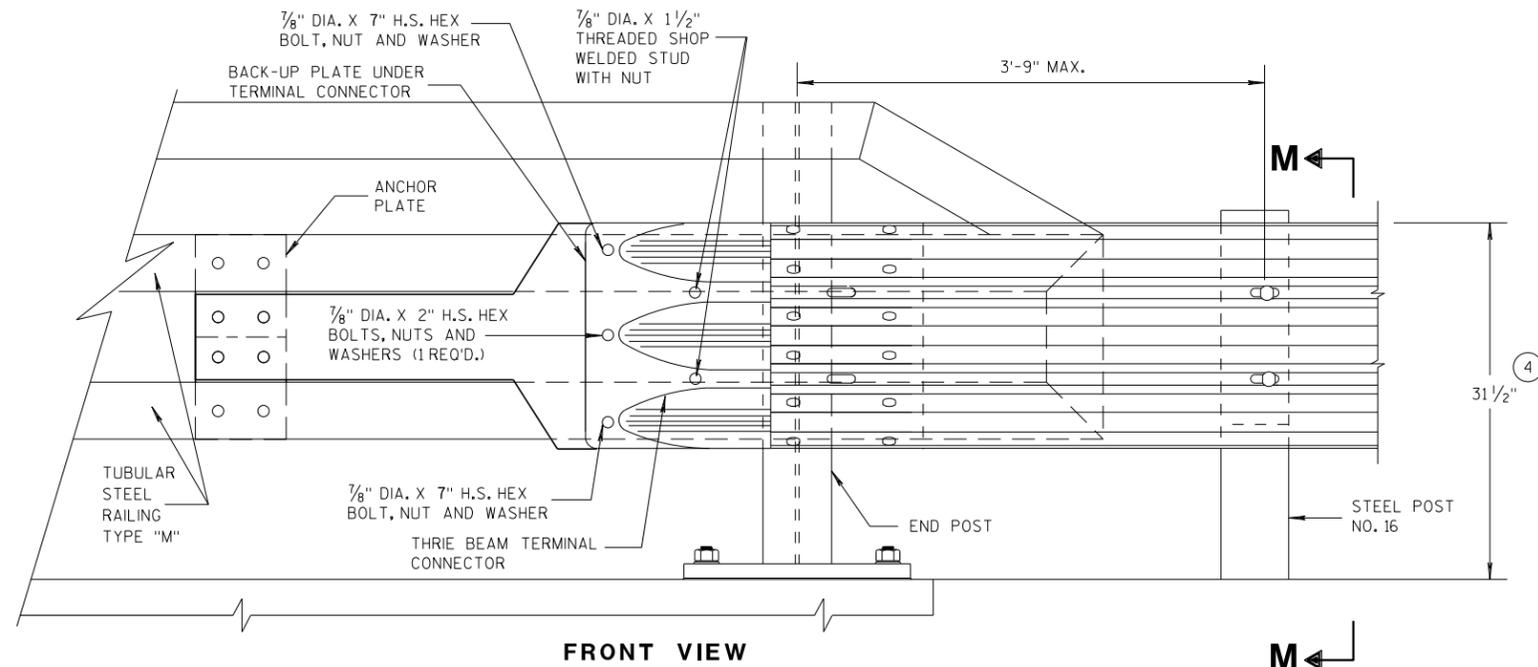
SECTION M-M



SECTION L-L

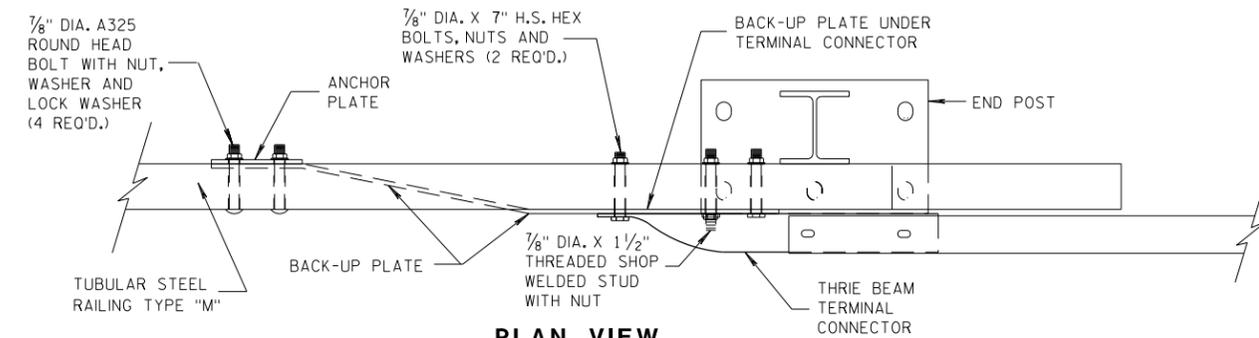
FRONT VIEW

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



FRONT VIEW

M



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

6

6

S.D.D. 14 B 45-5h

S.D.D. 14 B 45-5h

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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.

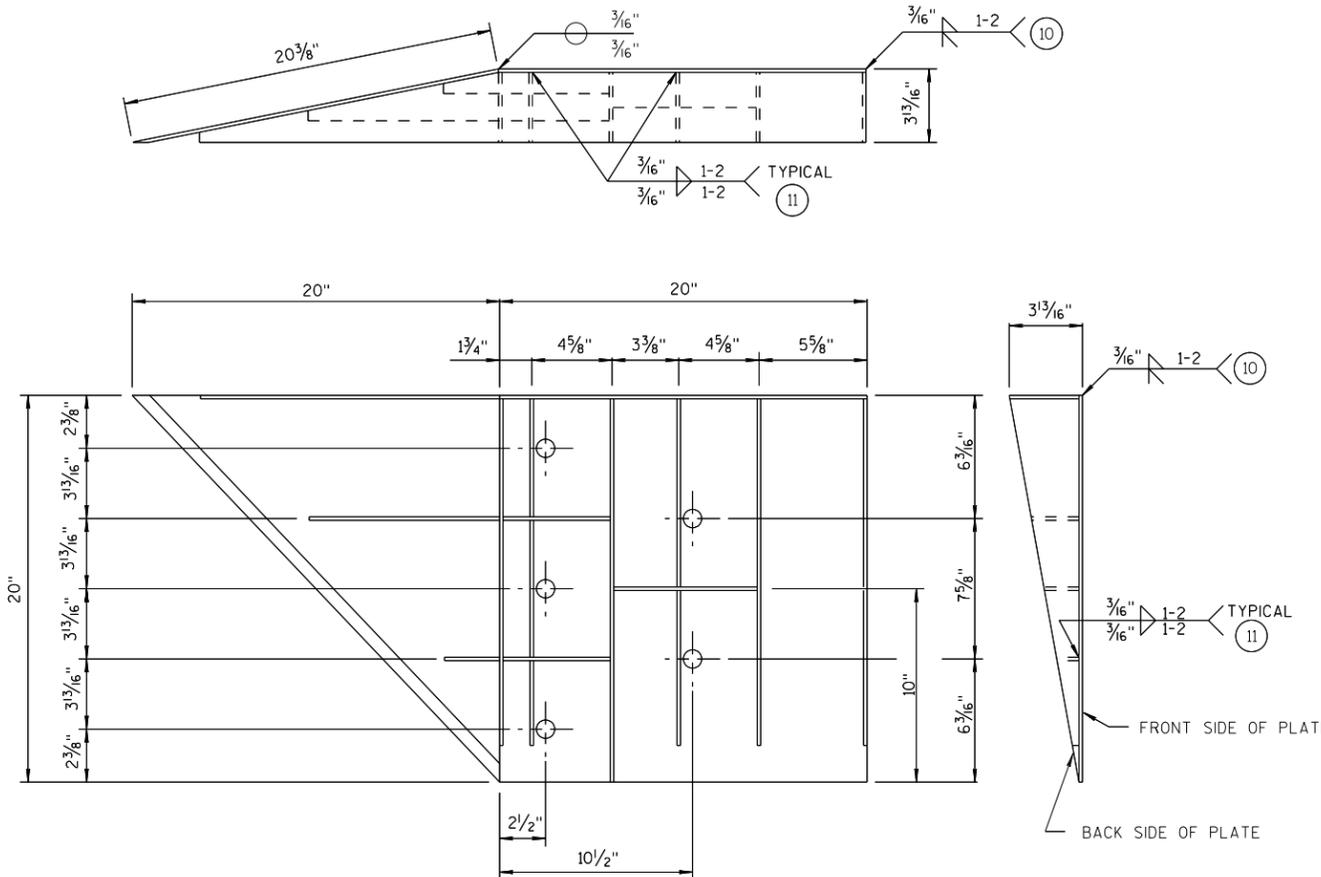
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) 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.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

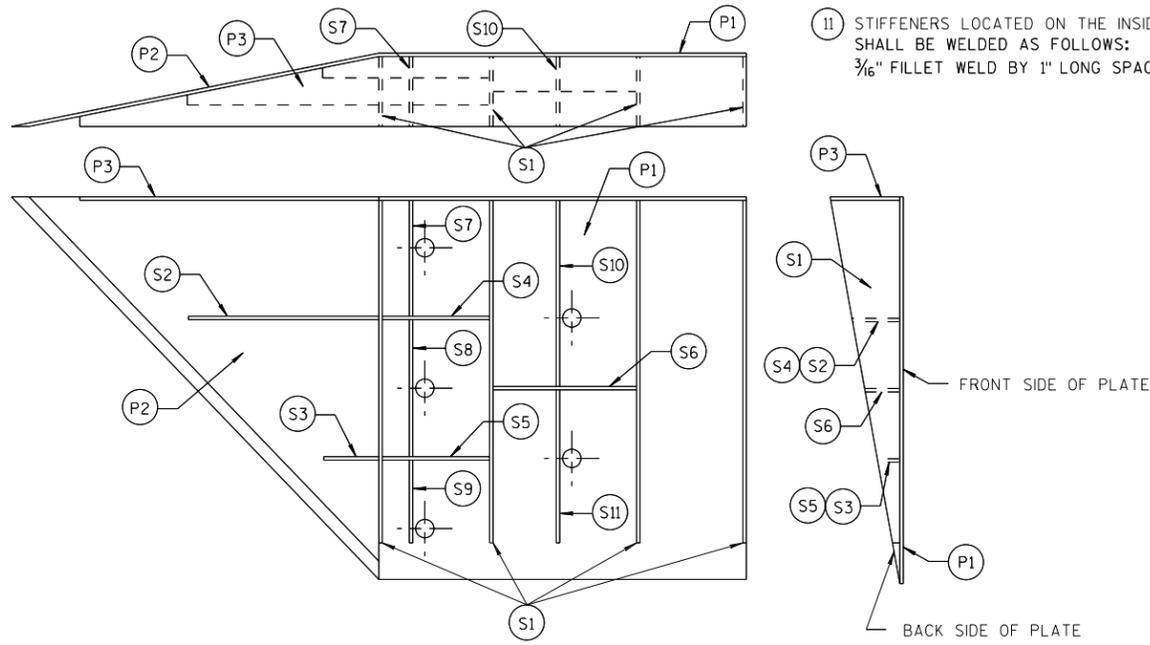


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE 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 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 1/8"	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"

SINGLE SLOPE CONNECTION PLATE

**MIDWEST GUARDRAIL SYSTEM
THREE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

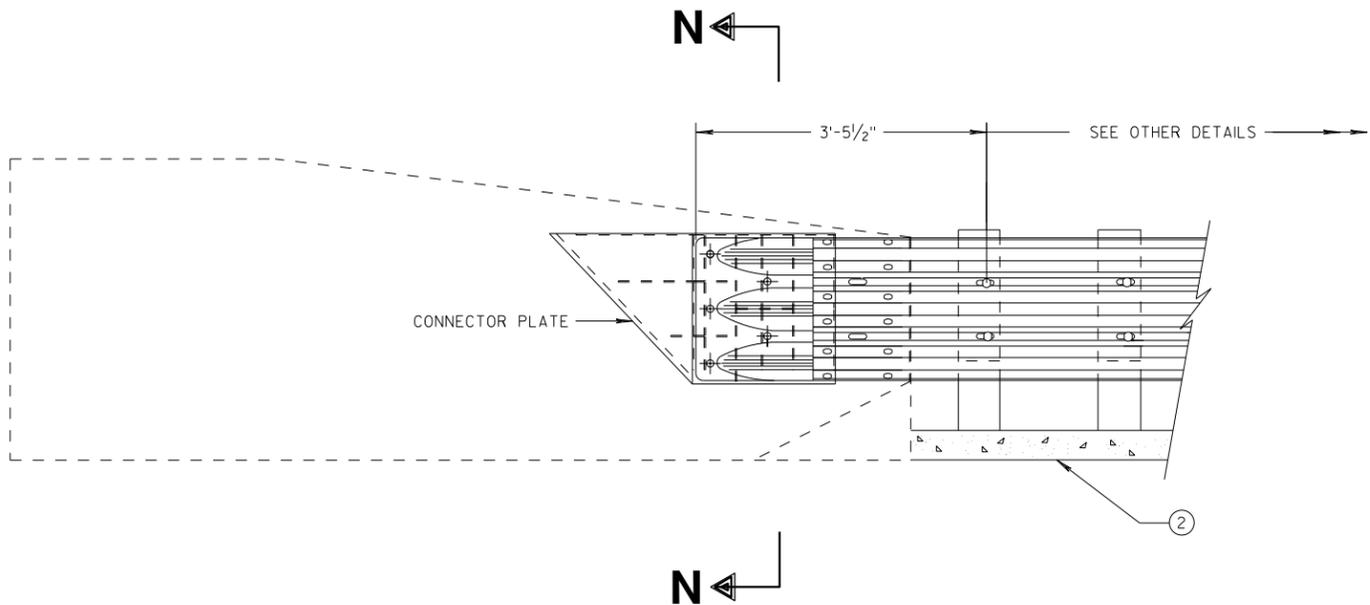
FHWA

GENERAL NOTES

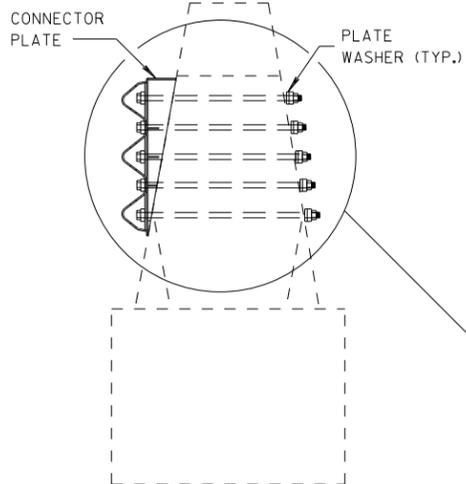
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

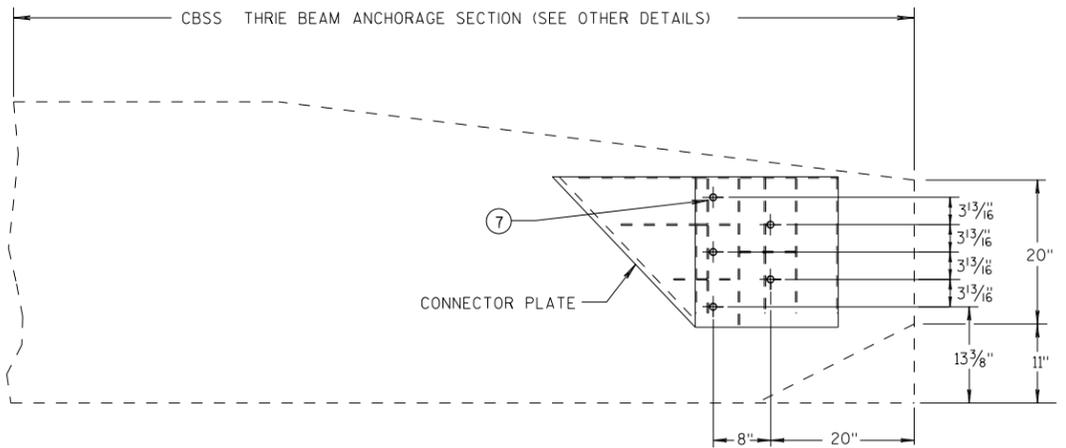
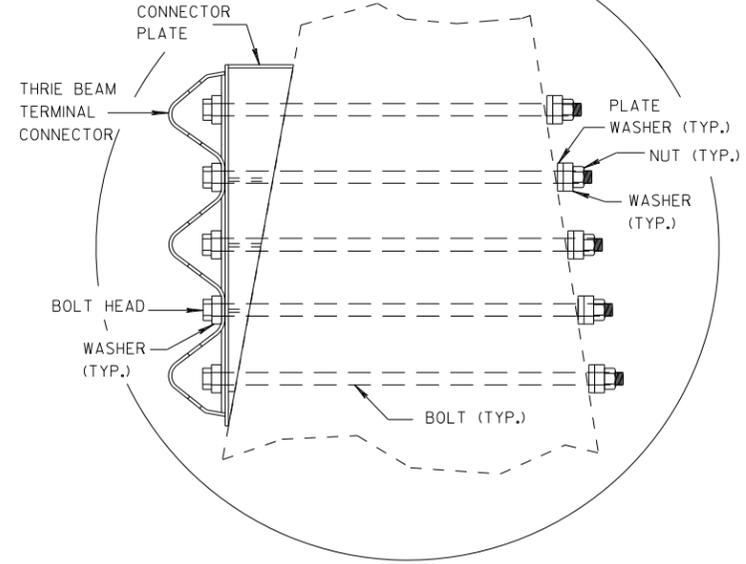
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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



SECTION N-N

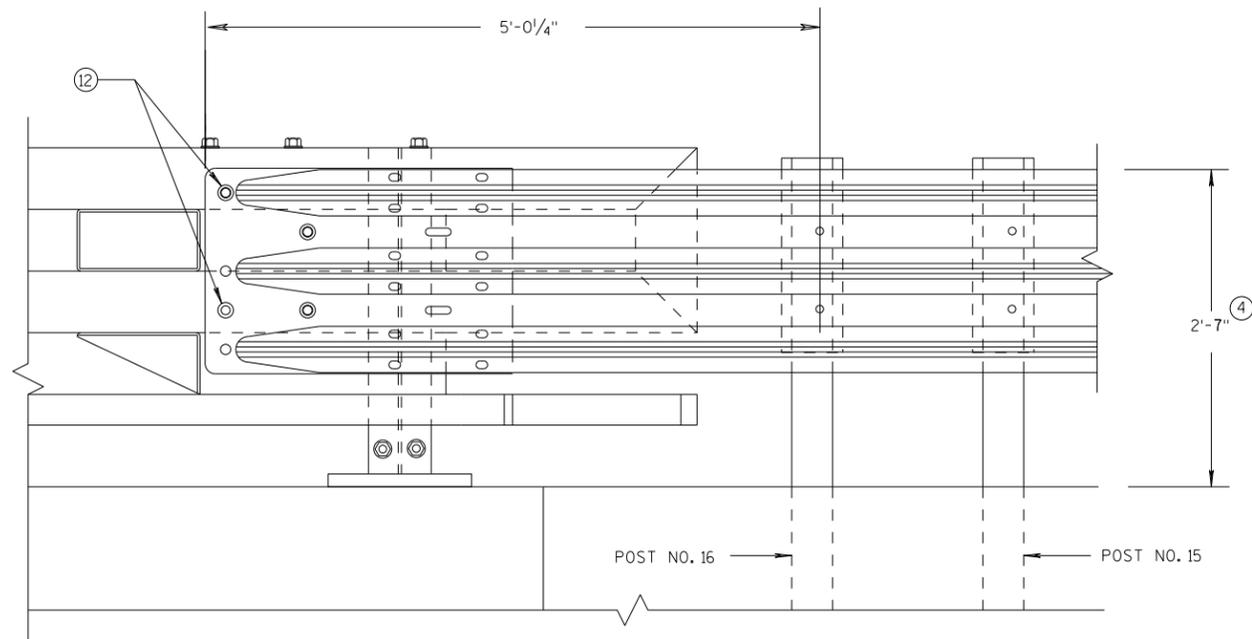


SINGLE SLOPE CONNECTION PLATE PLACEMENT

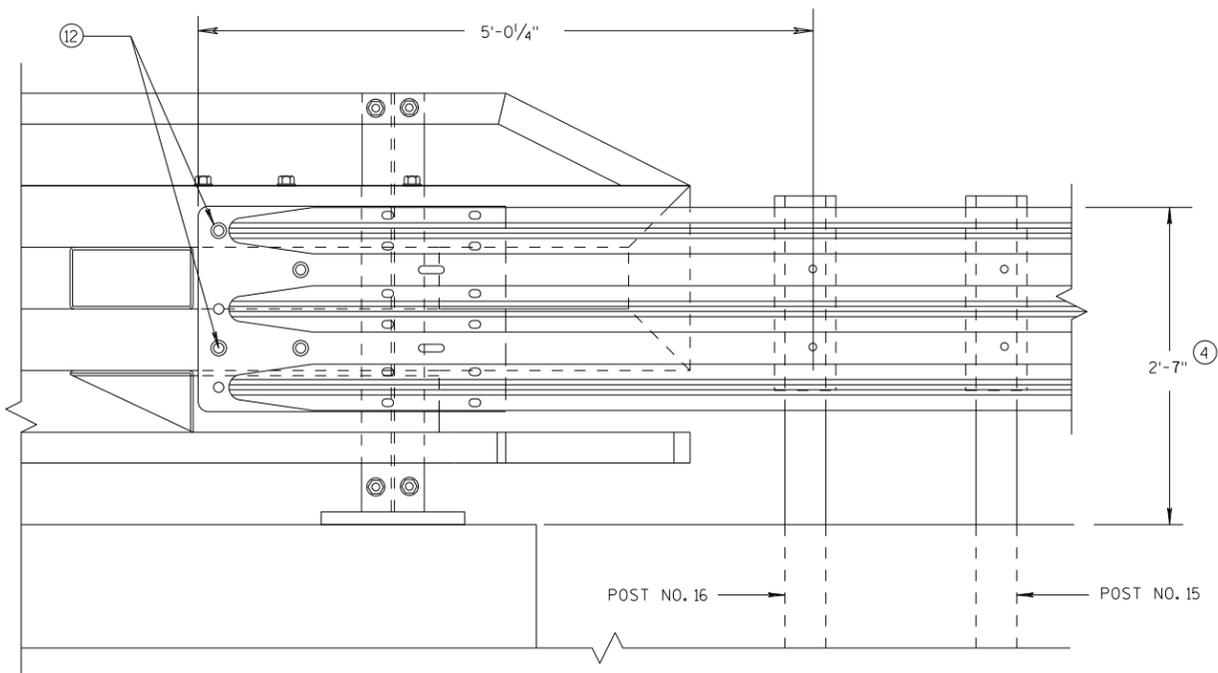
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT**



**ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT**

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.

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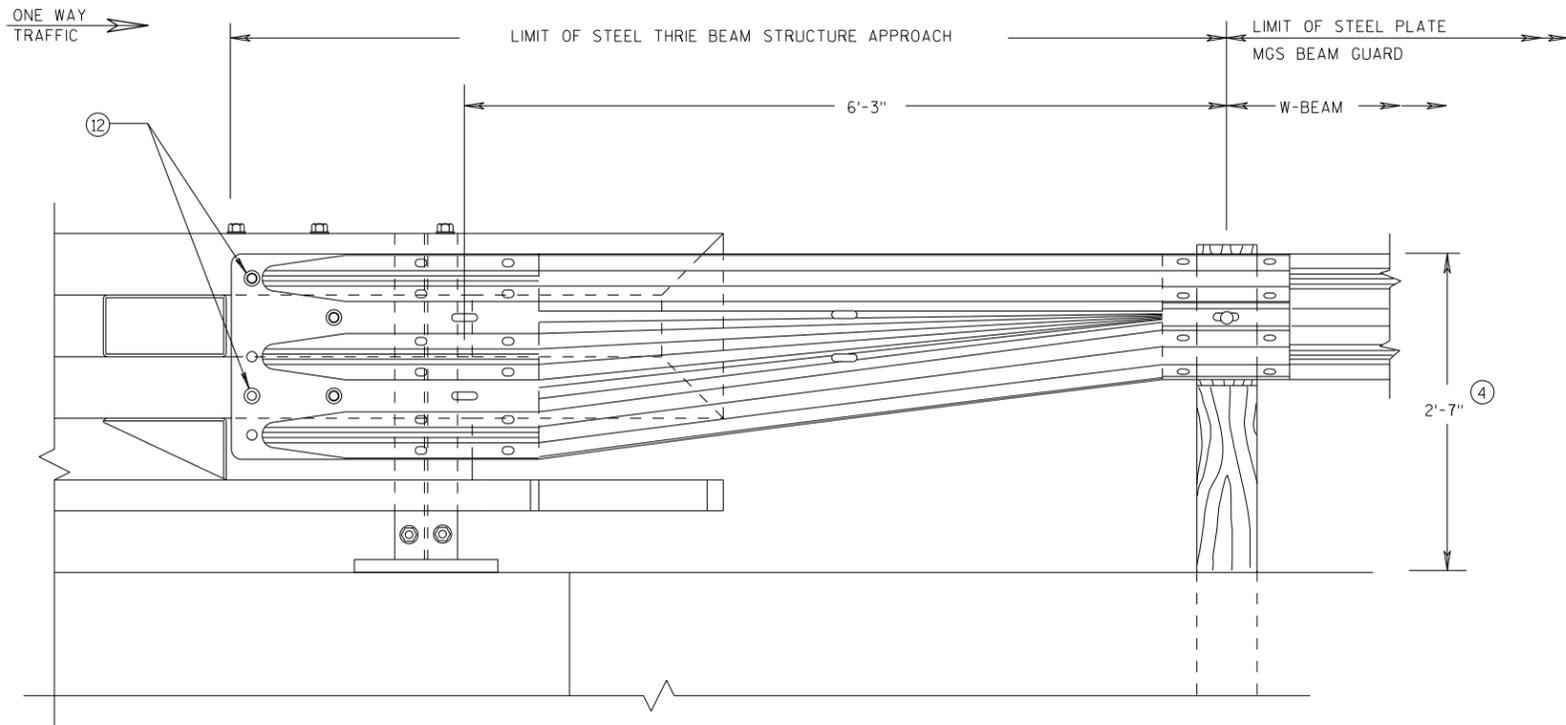
S.D.D. 14 B 45-5k

S.D.D. 14 B 45-5k

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

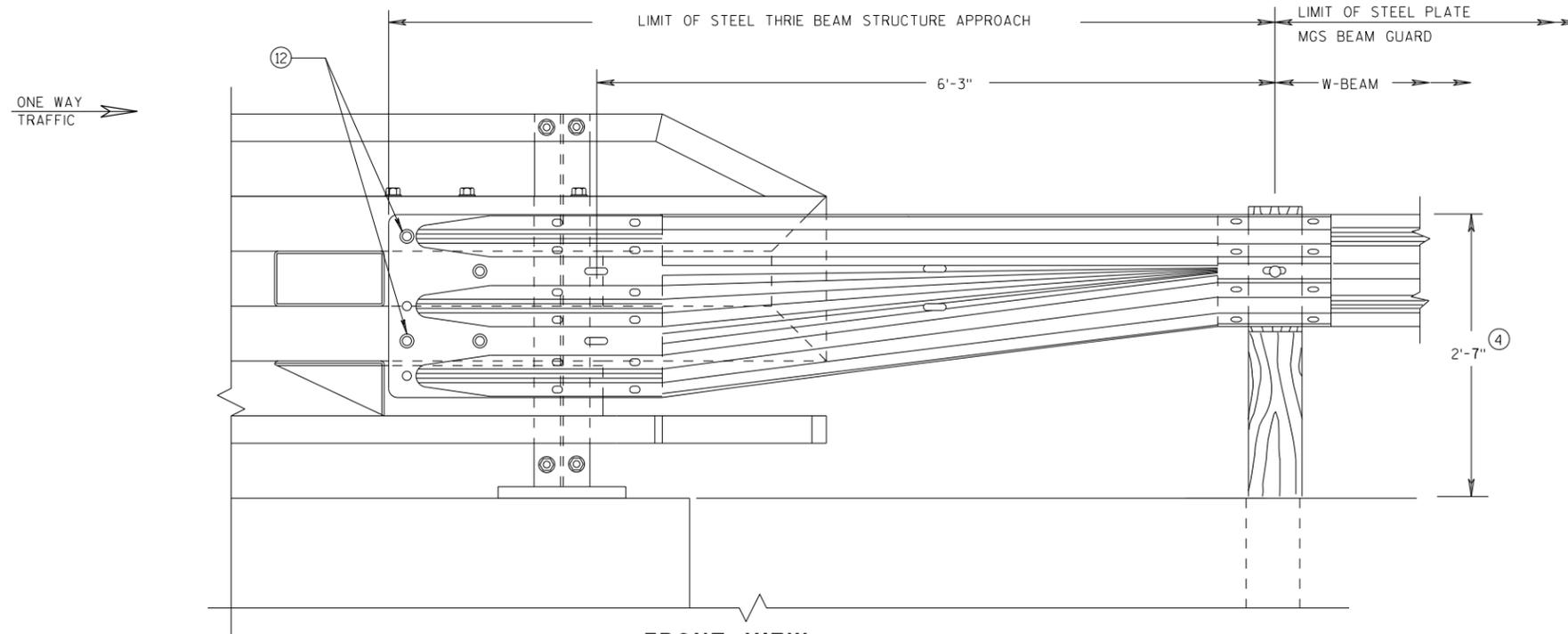
APPROVED
DATE 7/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

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 "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
 DATE 7/2018 /S/ Rodney Taylor
 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.

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.

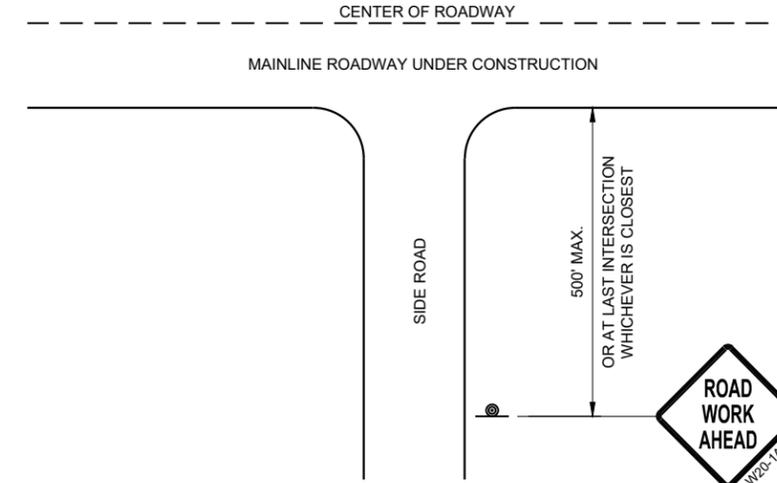
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

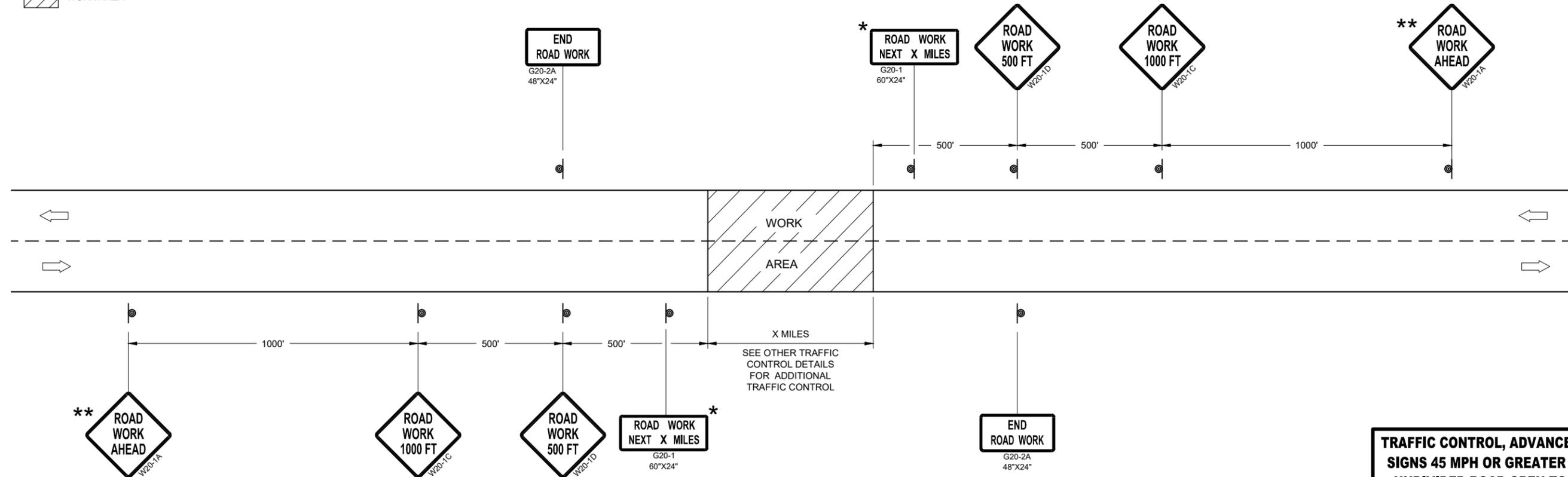
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

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
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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

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

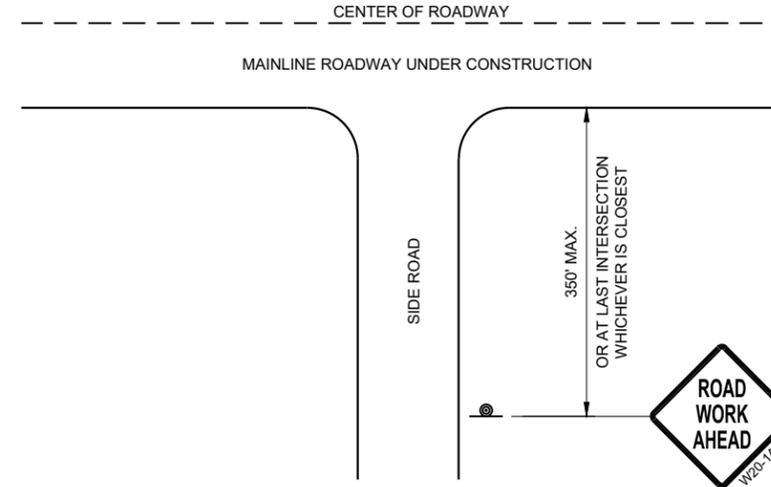
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

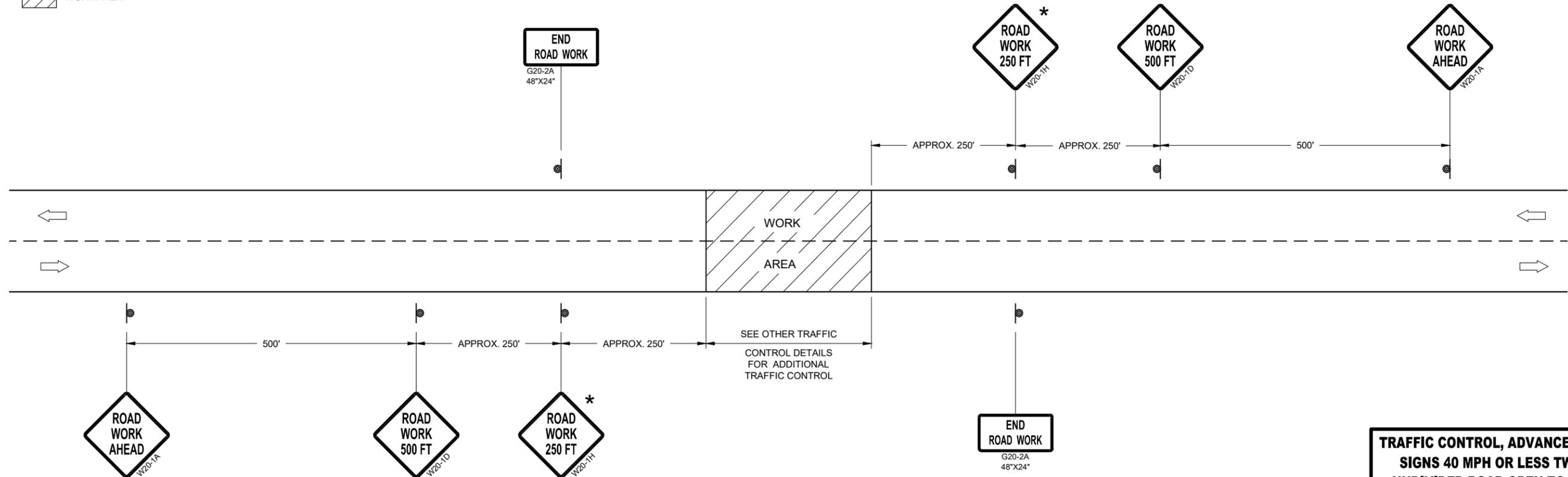
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



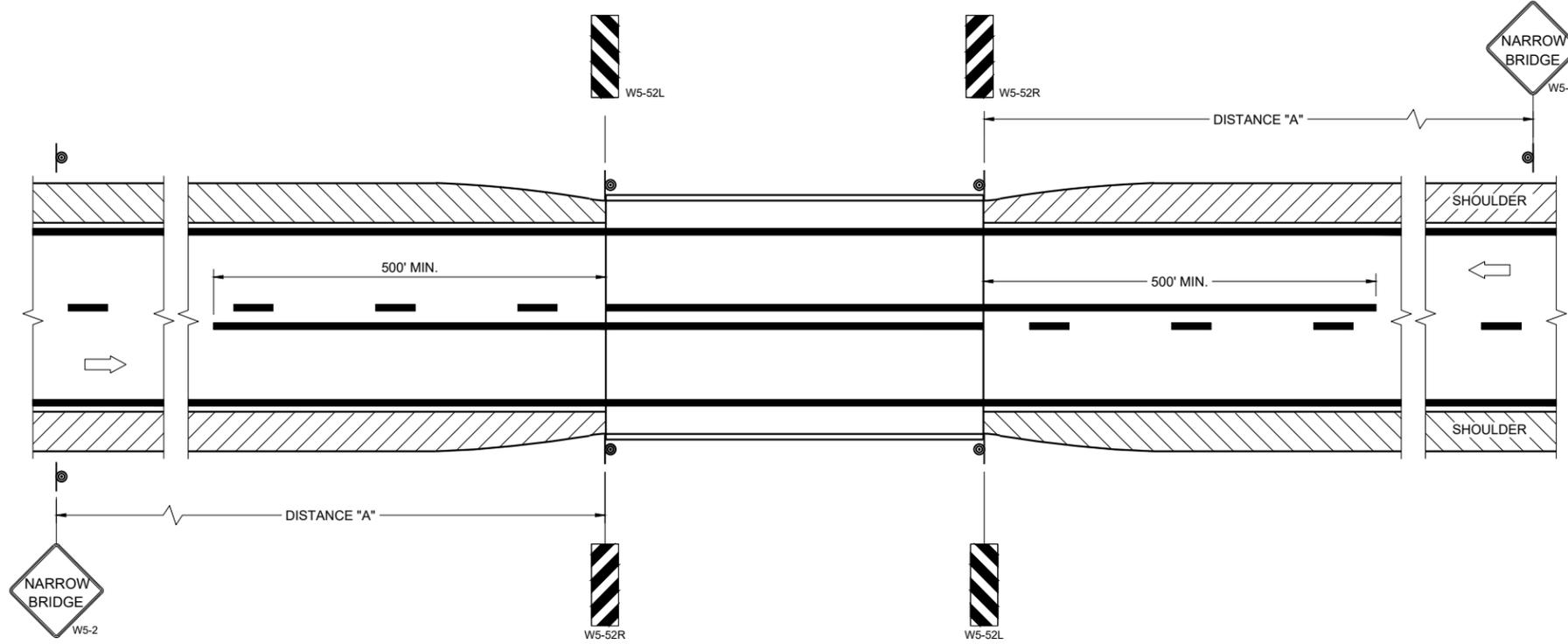
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

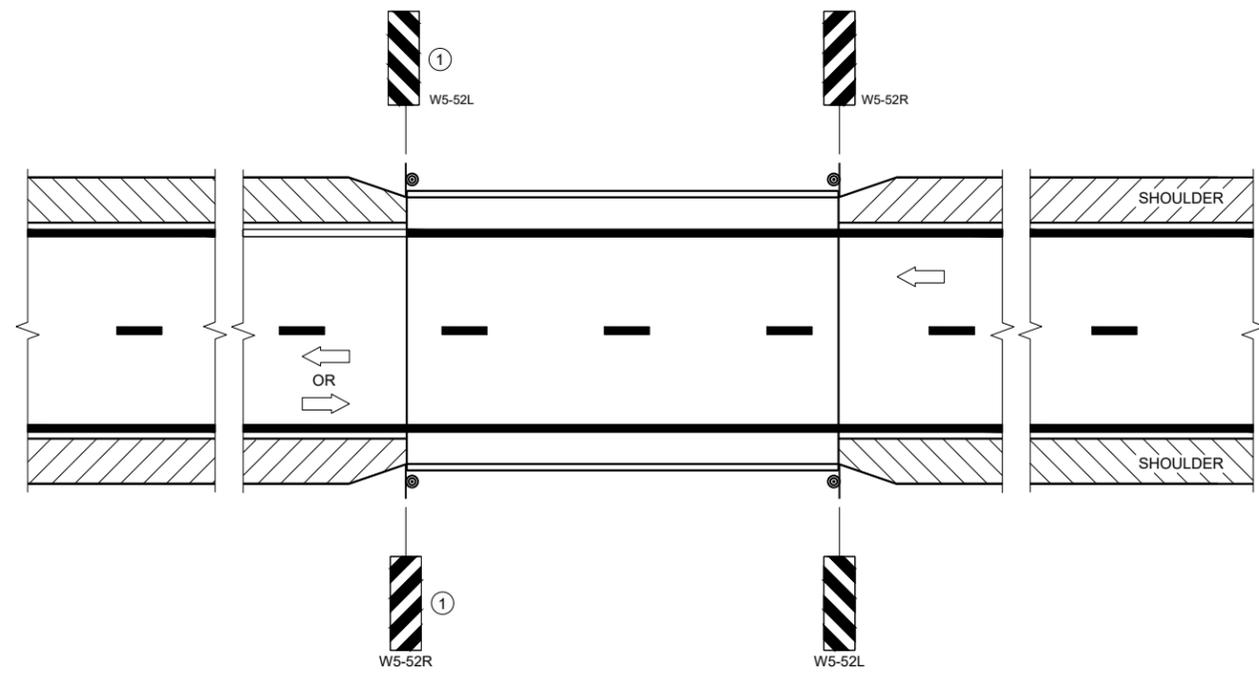
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



SITUATION 1
 WARRANTING CRITERIA:
 BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



SITUATION 2
 WARRANTING CRITERIA:
 1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
 2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

GENERAL NOTES

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

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

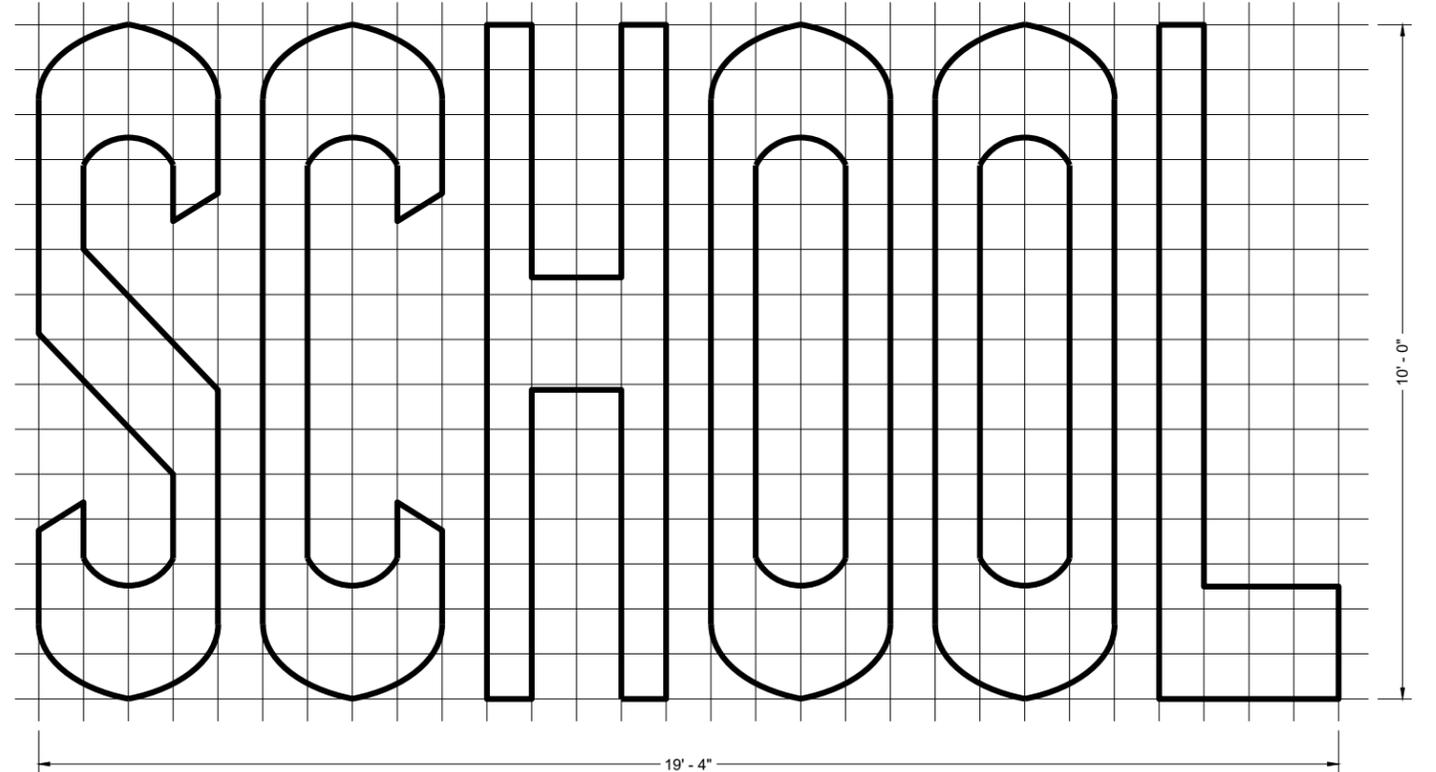
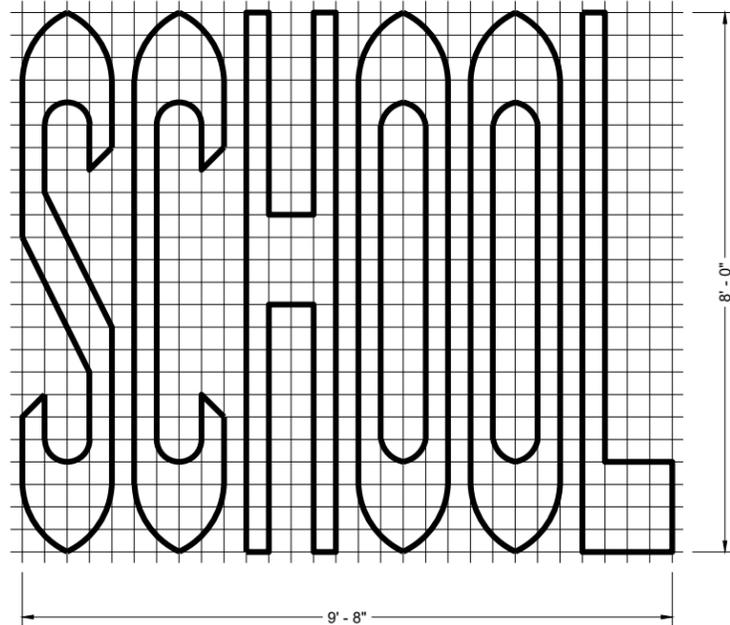
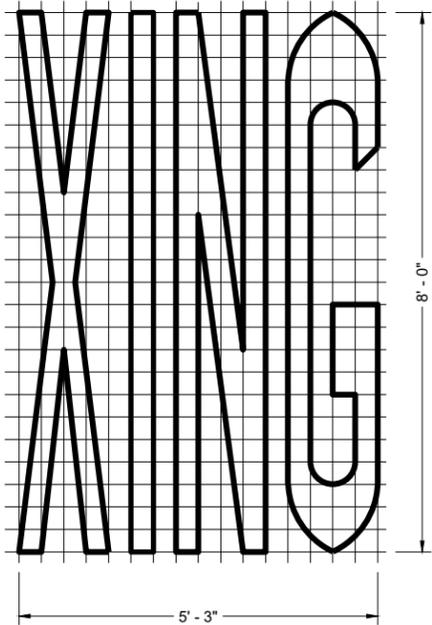
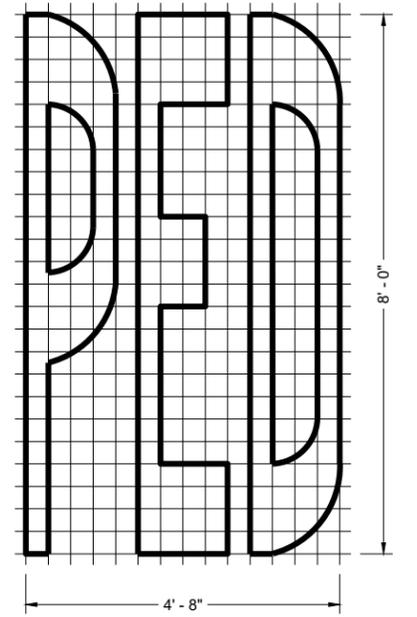
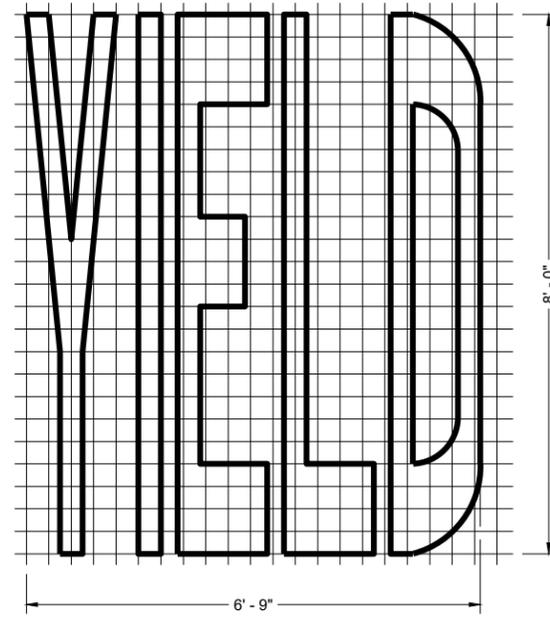
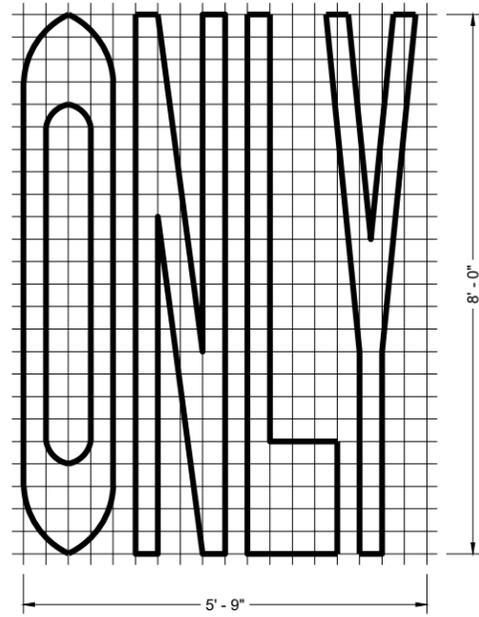
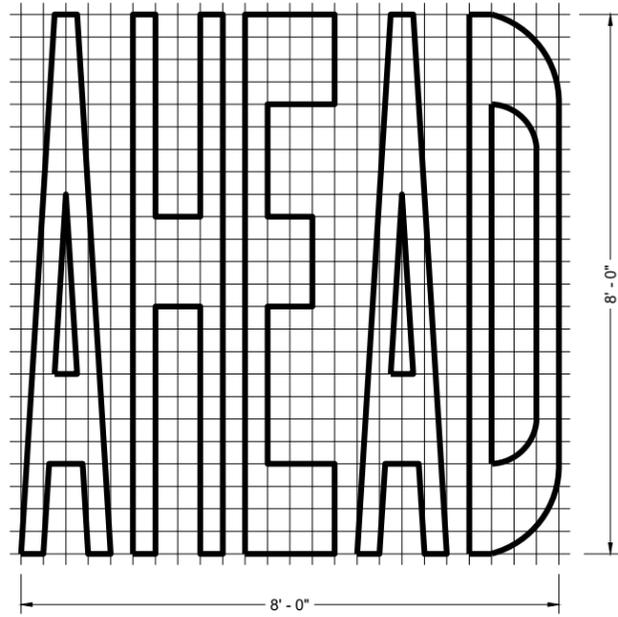
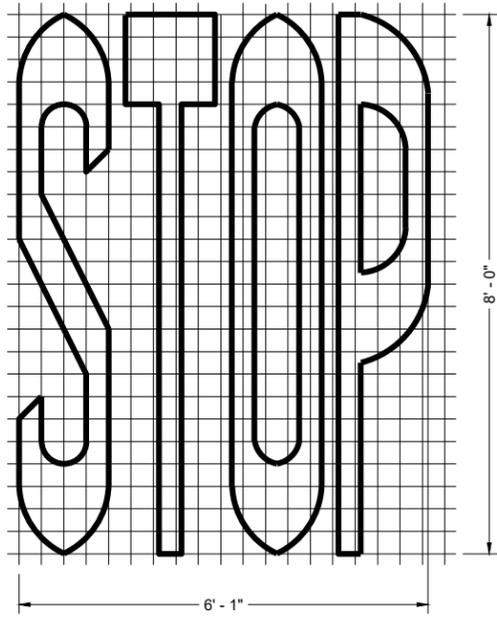
POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2023 /S/ Jeannie Silver
 DATE Statewide Pavement Marking Engineer

FHWA



SINGLE LANE

TWO - LANE

GENERAL NOTES

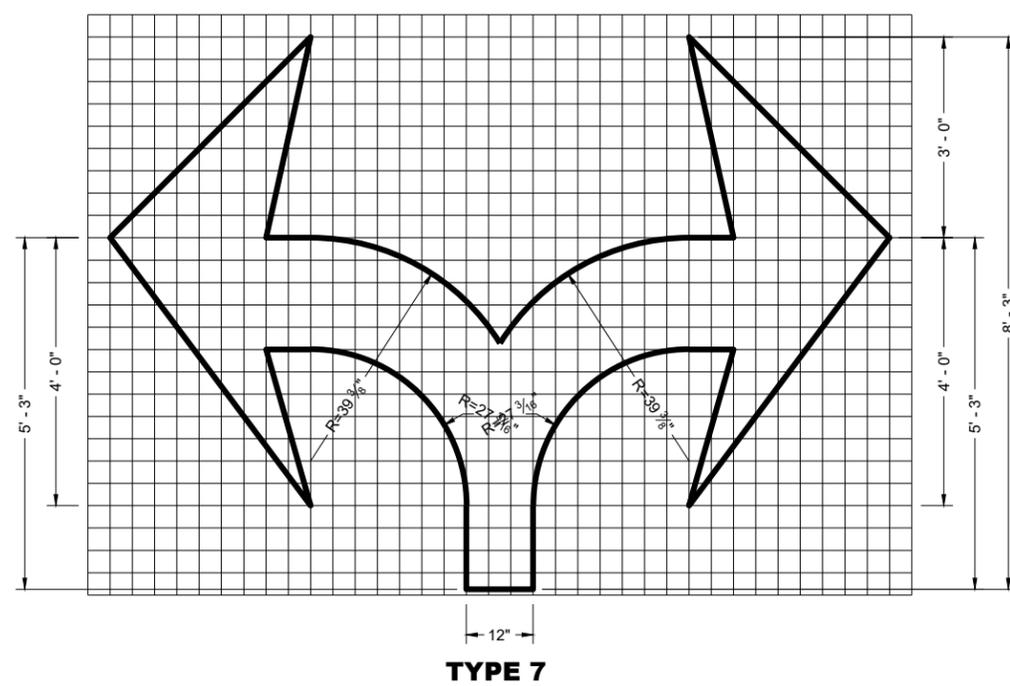
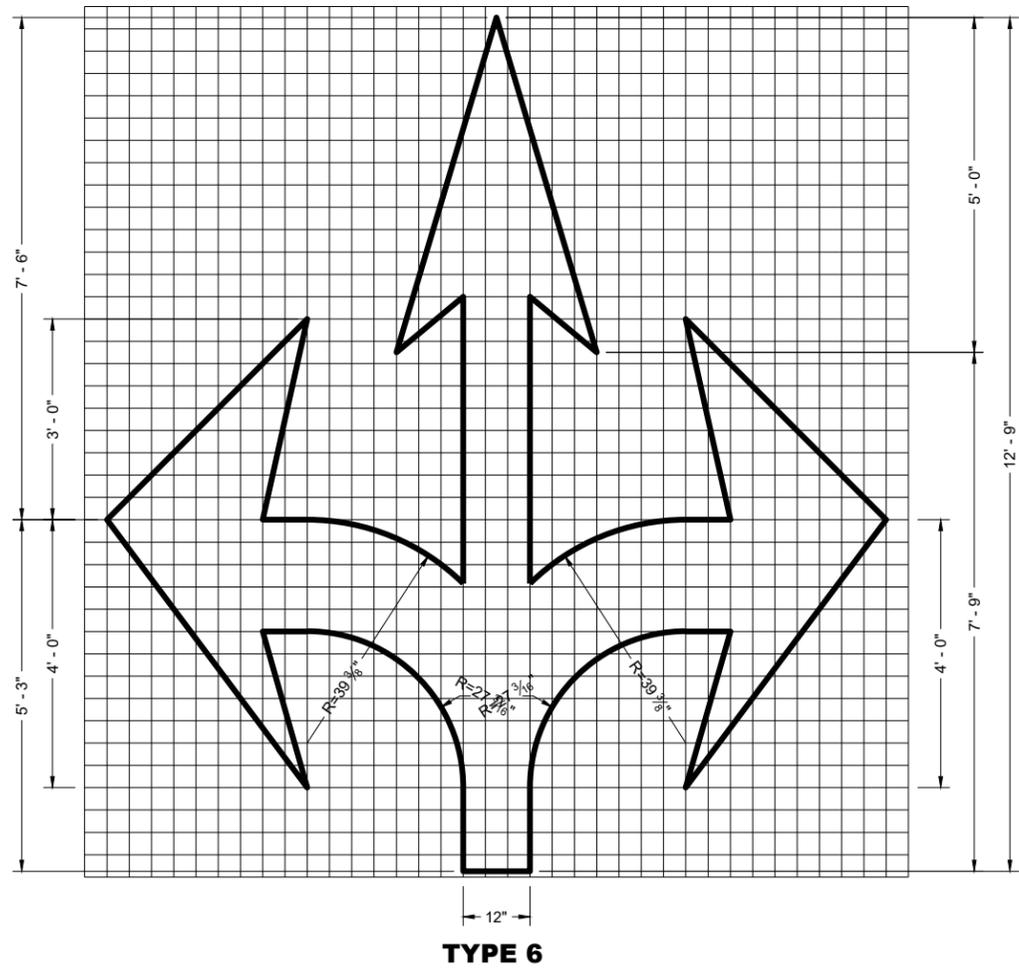
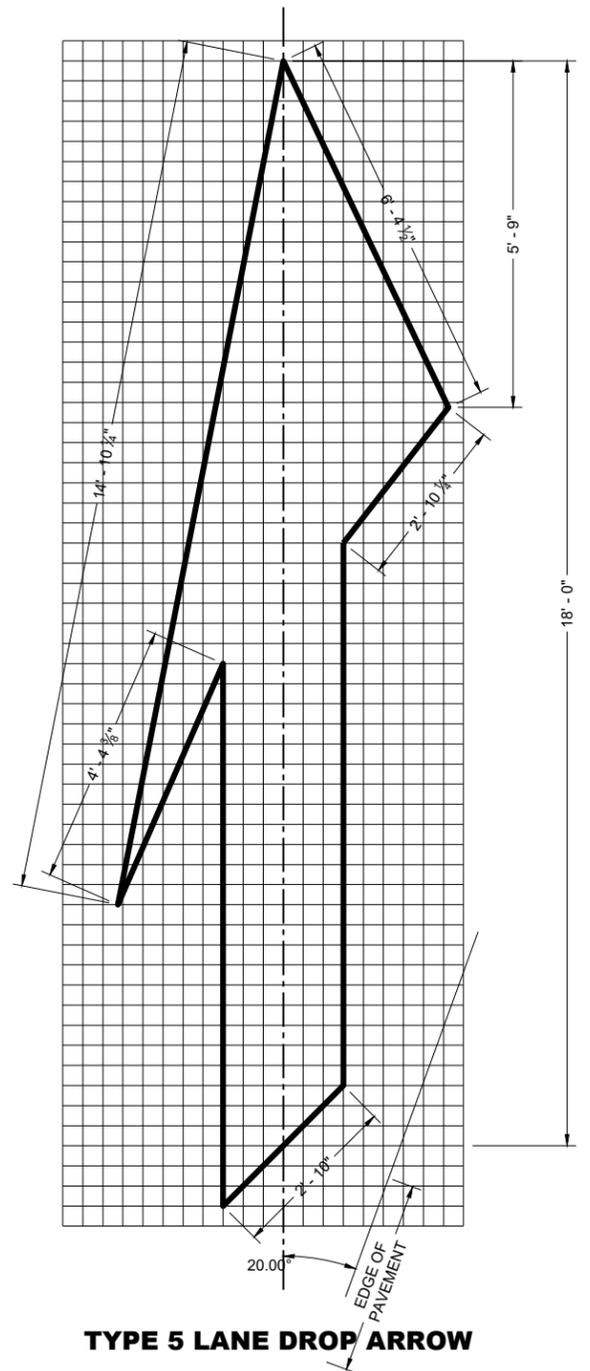
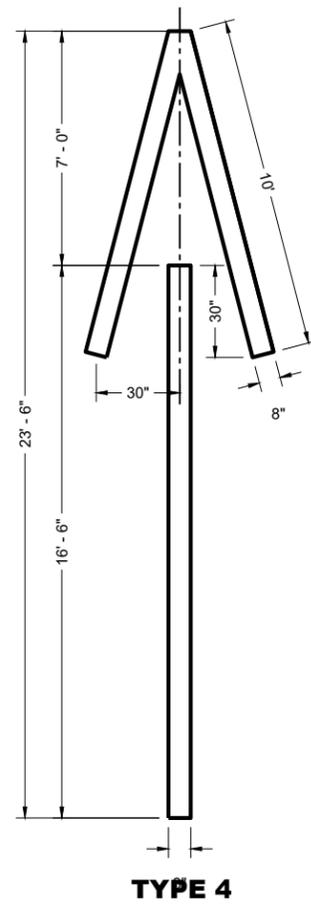
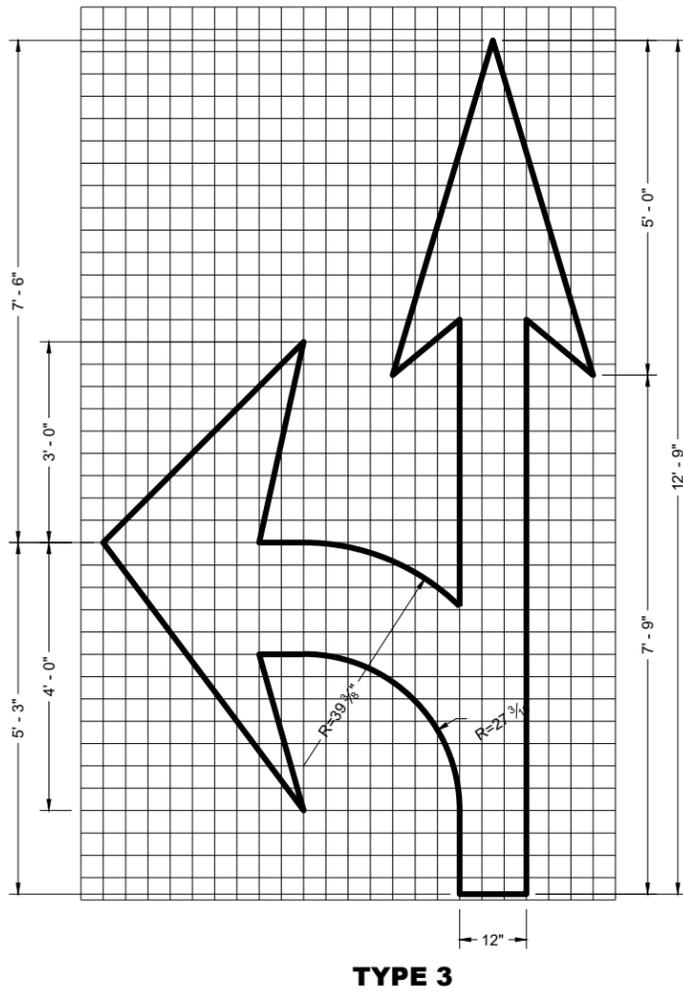
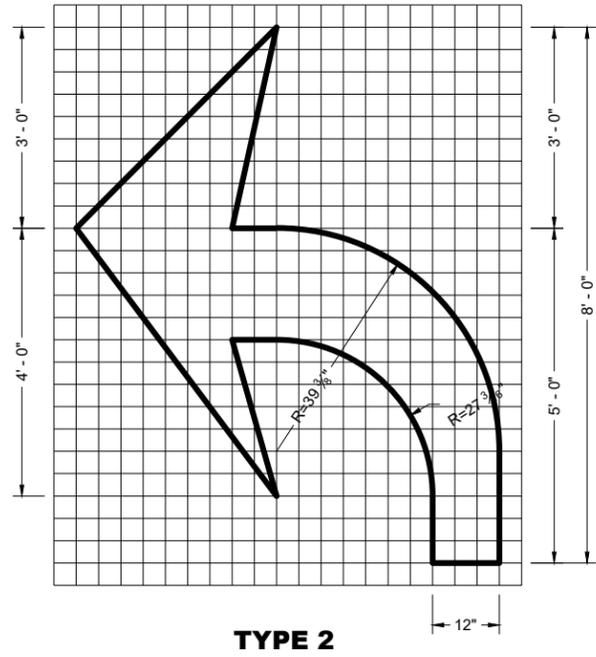
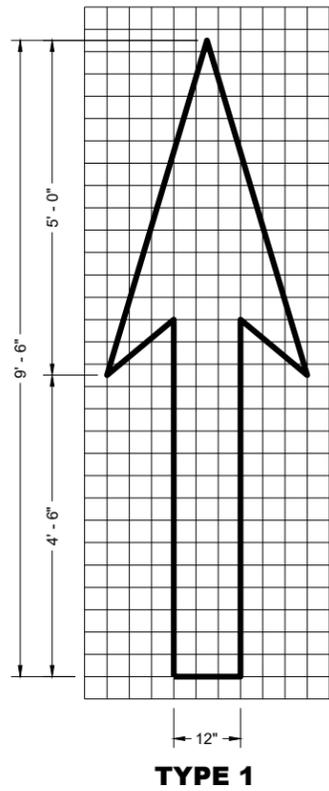
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 /S/ Jeannie Silver
DATE STATE SIGNING AND MARKING ENGINEER

FHWA



GENERAL NOTES

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

PAVEMENT MARKING ARROWS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2024 DATE	/s/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
FHWA	

GENERAL NOTES

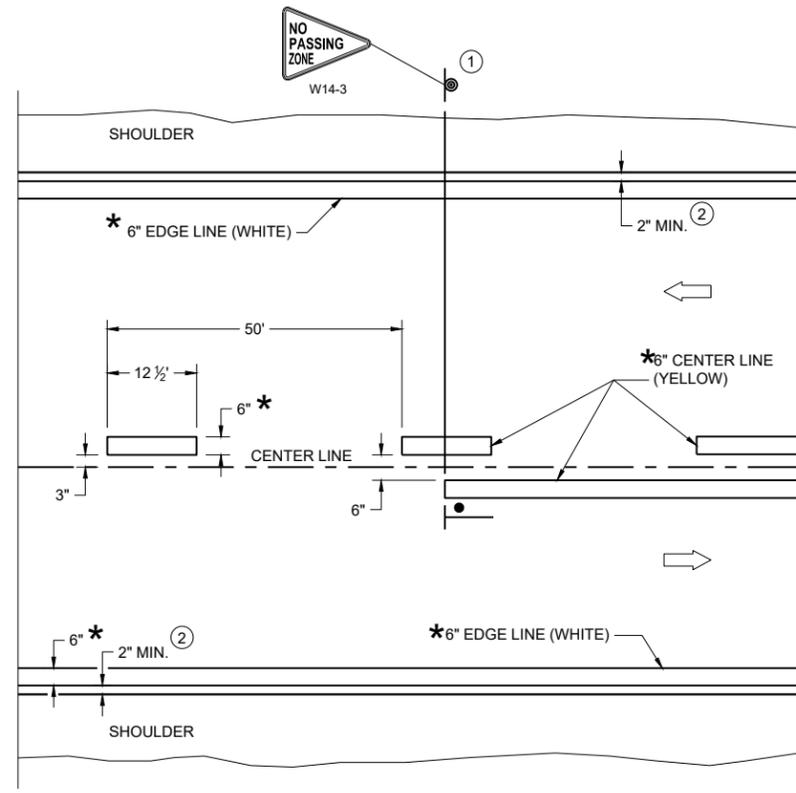
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

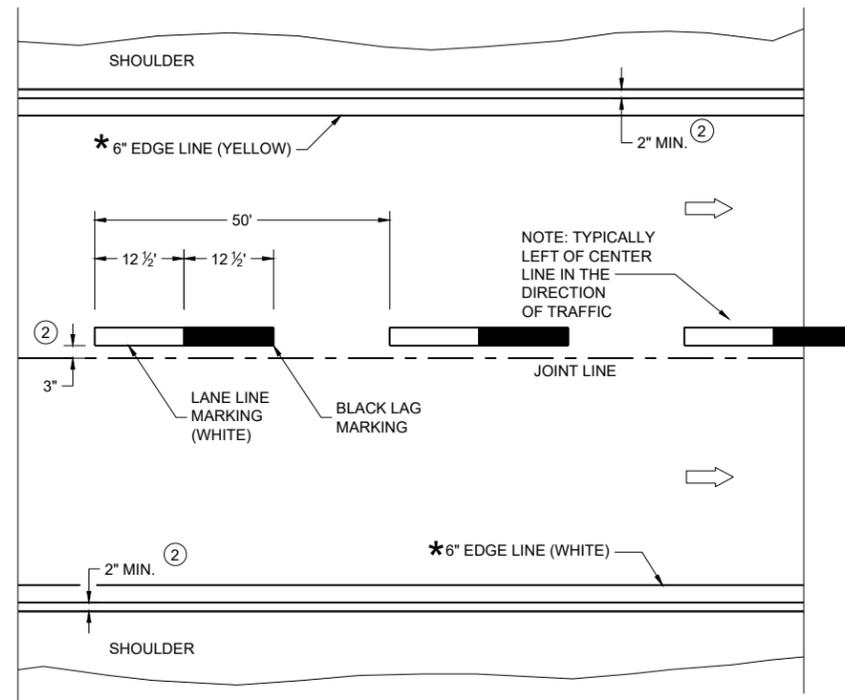
LEGEND

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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

6

SDD 15C08-24a

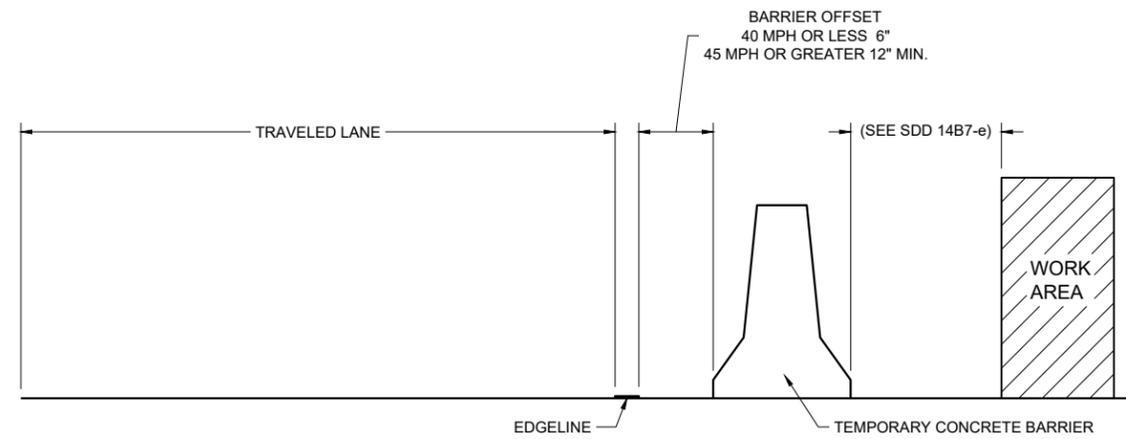
SDD 15C08-24a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer

FHWA



TEMPORARY BARRIER OFFSET FROM EDGELINE

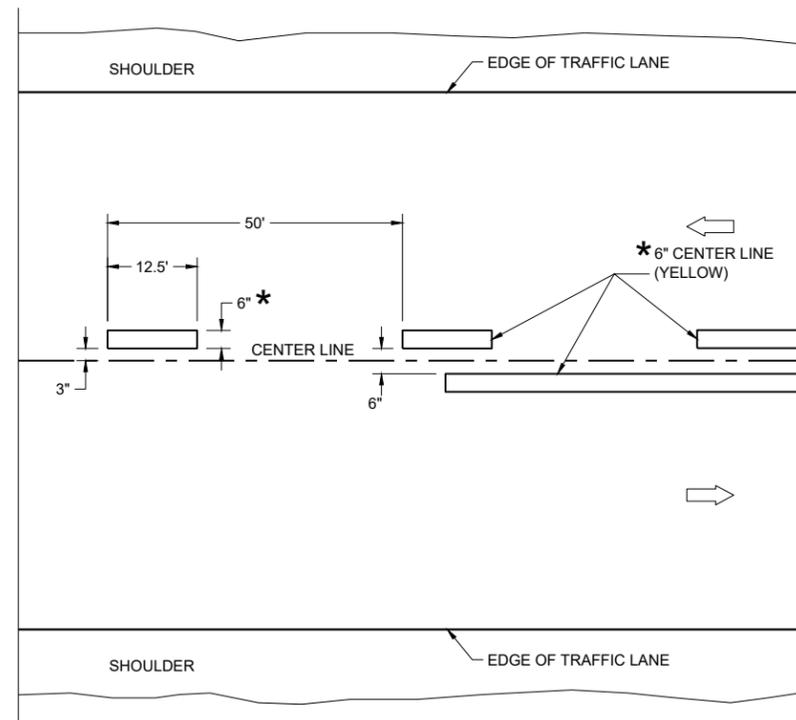
GENERAL NOTES

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

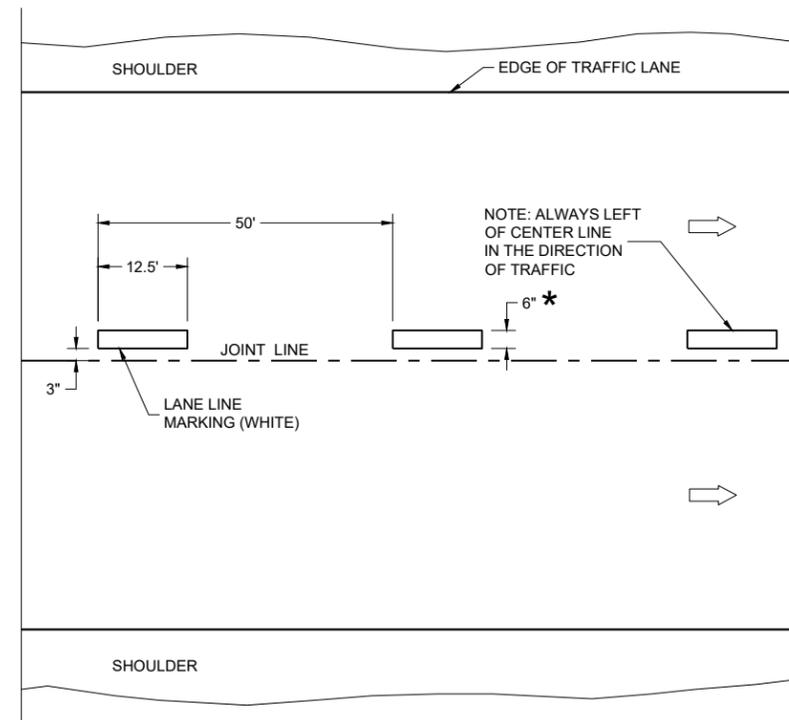
LEGEND

➡ DIRECTION OF TRAFFIC

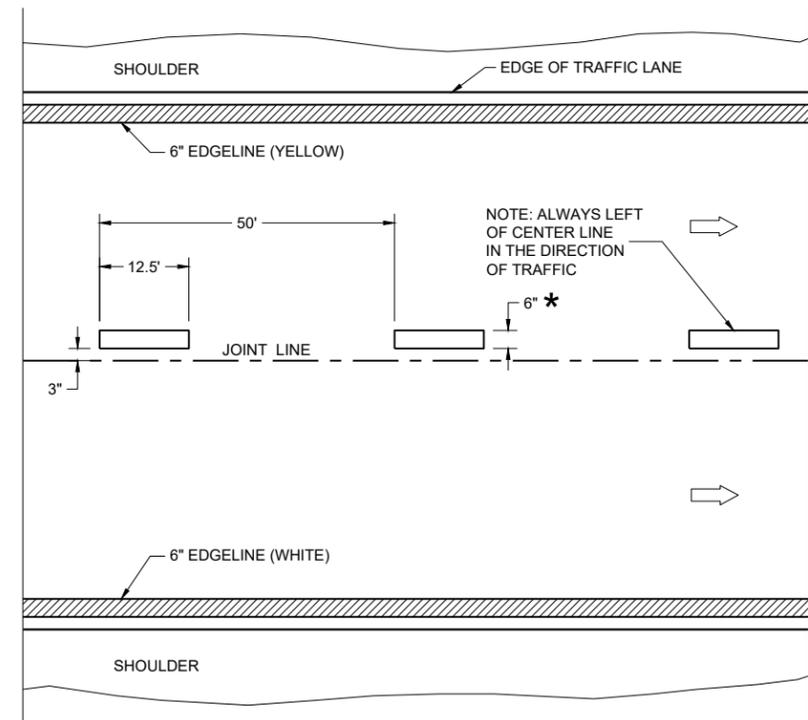
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

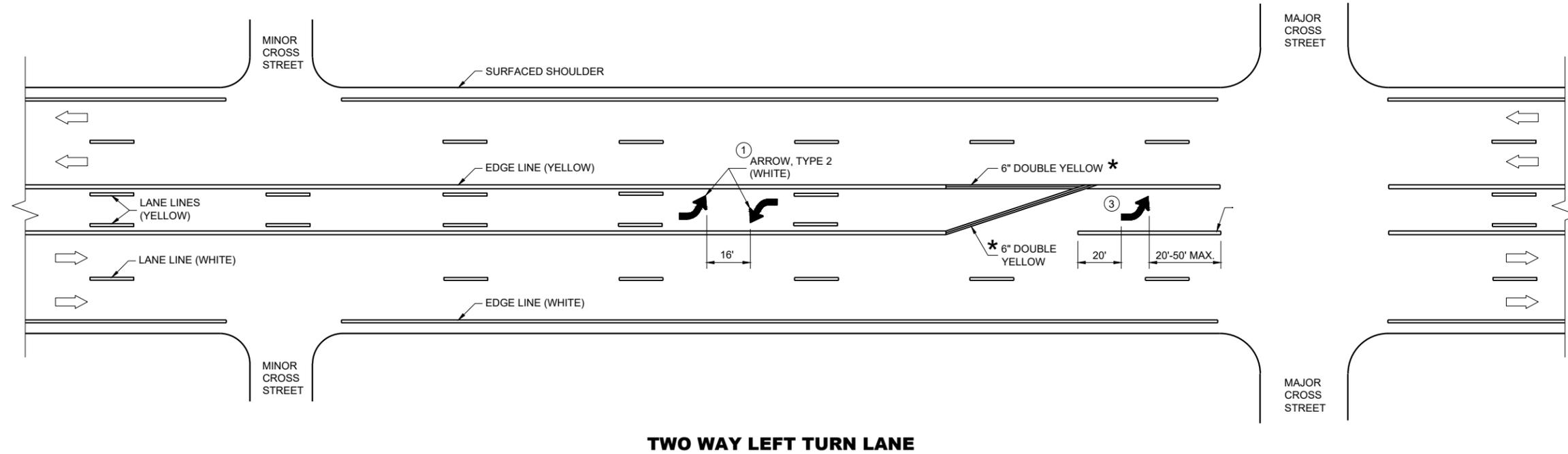
APPROVED
December 2024 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer

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



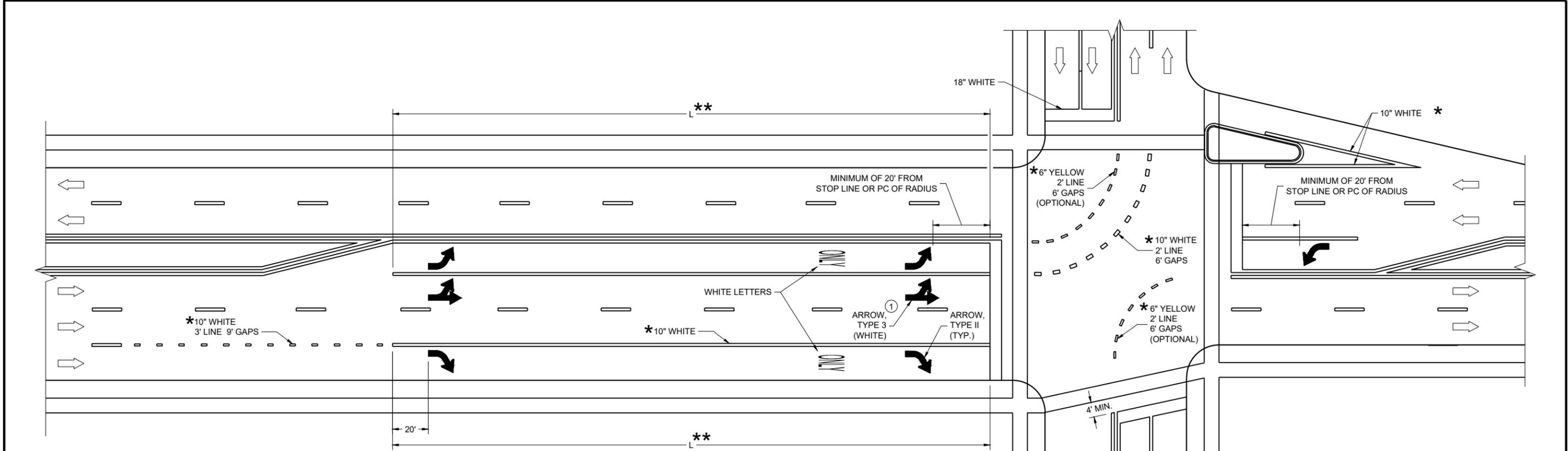
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SDD 15C08-24c

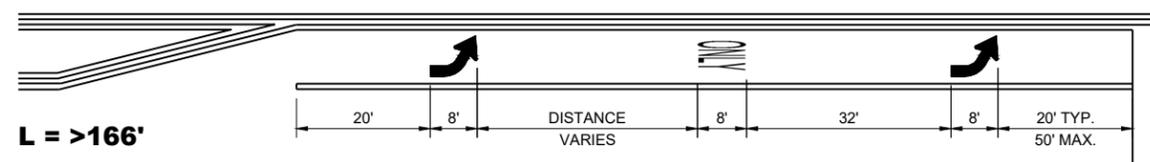
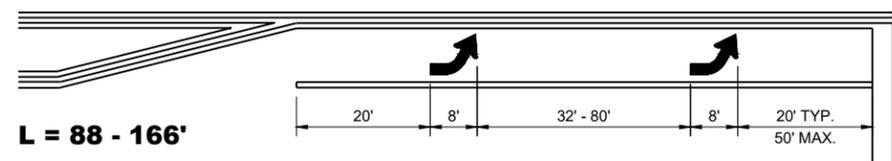
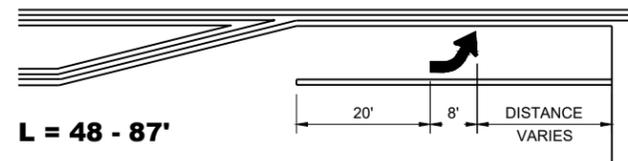
SDD 15C08-24c

<p>PAVEMENT MARKING (TURN LANES)</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



TURN LANE OPTIONS

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



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

GENERAL NOTES

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

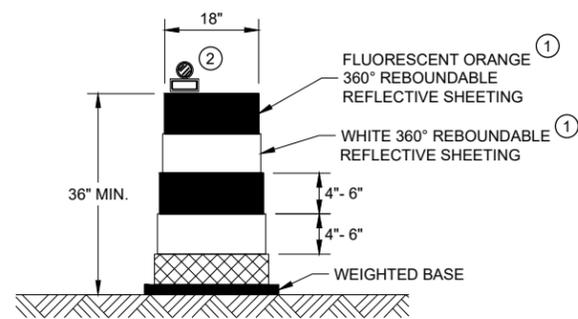
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

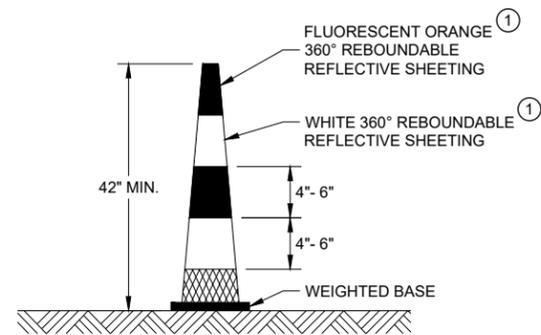
**PAVEMENT MARKING
(TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



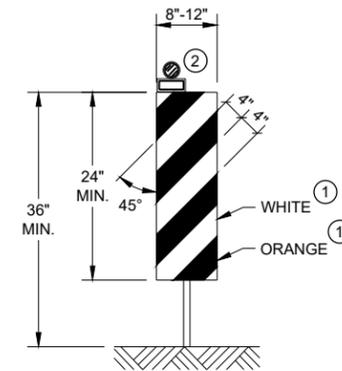
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

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

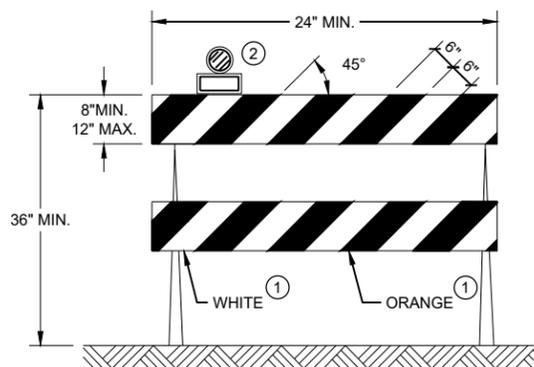


VERTICAL PANEL

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

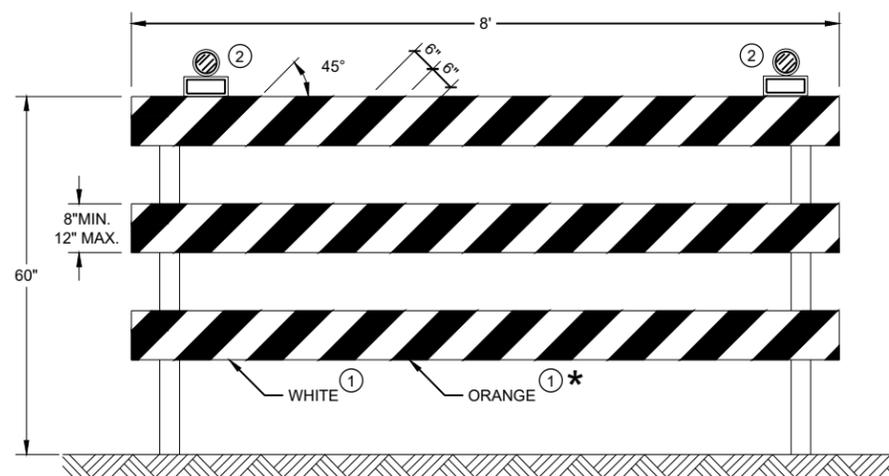
GENERAL NOTES

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

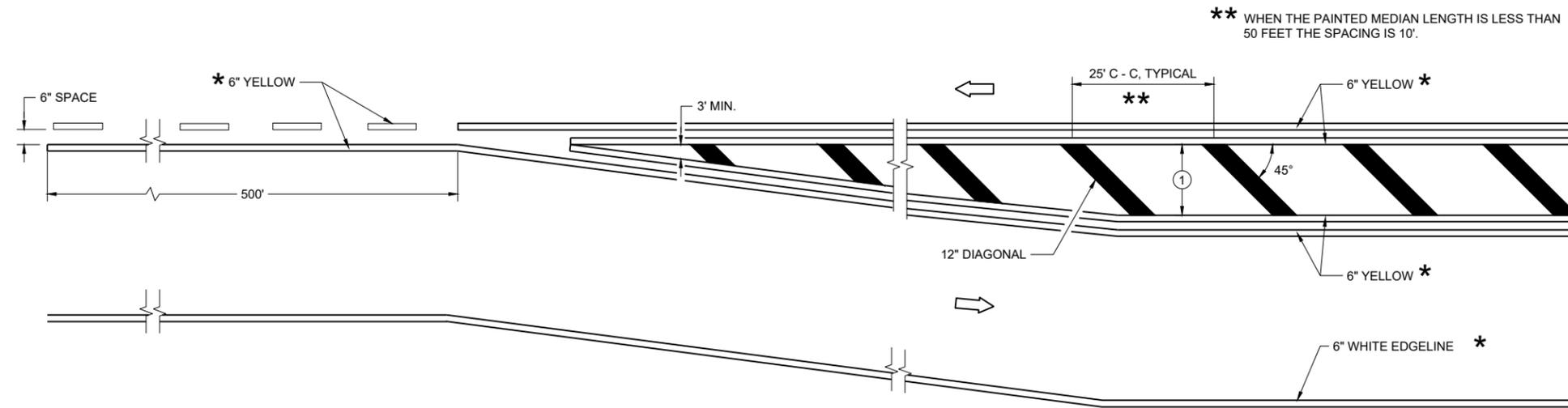
FHWA

GENERAL NOTES

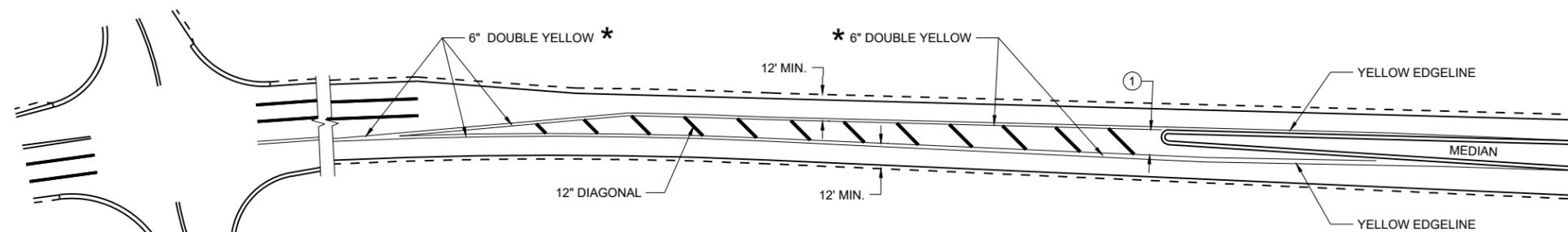
① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➡ DIRECTION OF TRAVEL

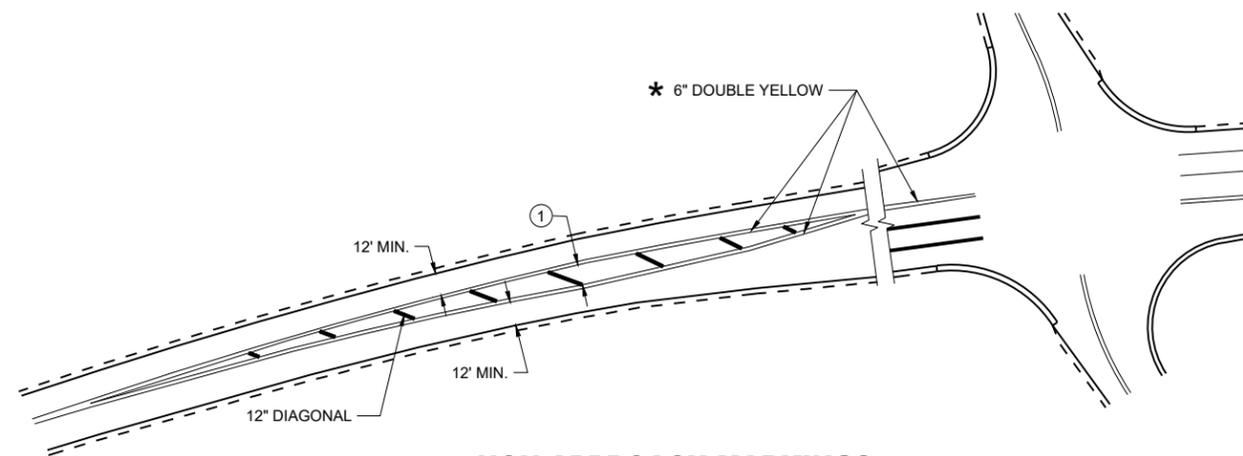
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

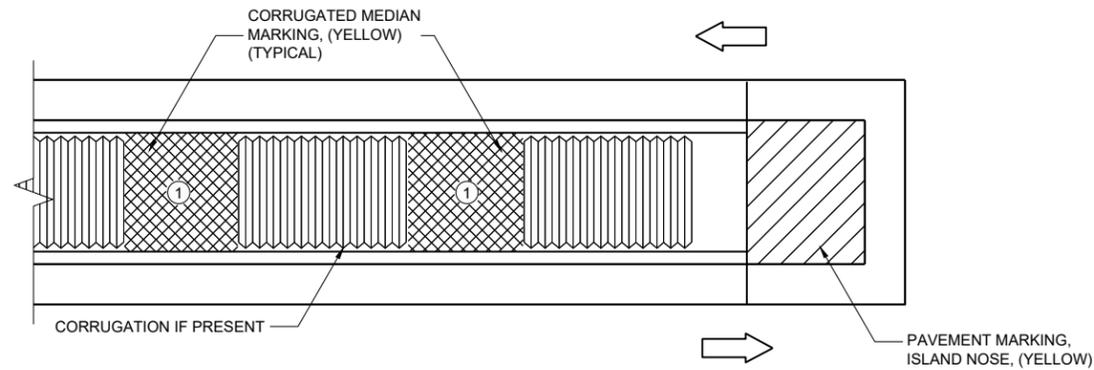
6

6

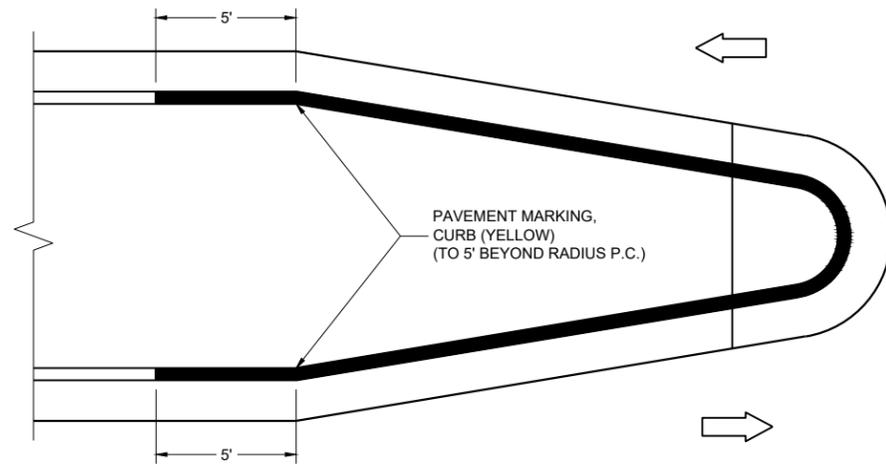
SDD 15C18-09a

SDD 15C18-09a

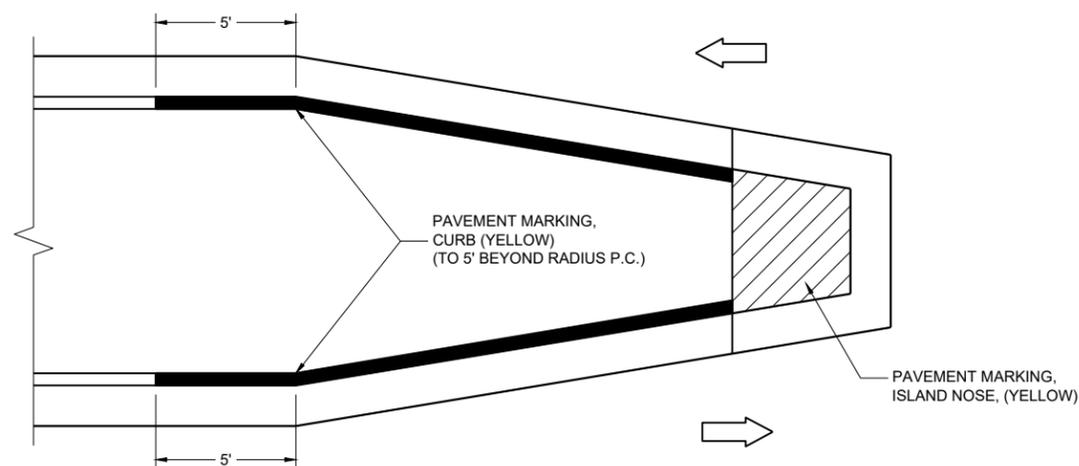
MEDIAN ISLAND PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

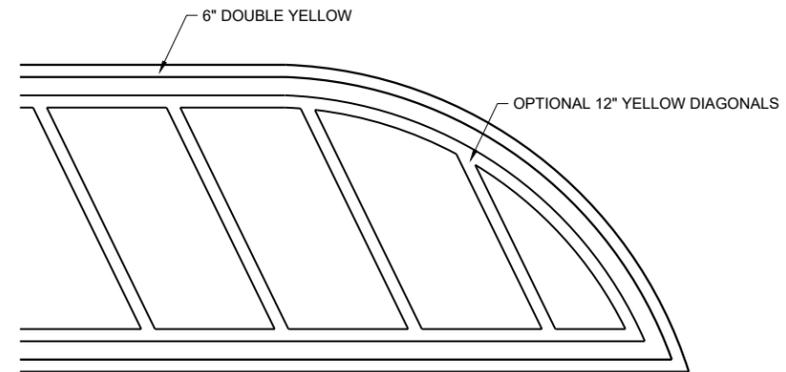
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

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

REQUIREMENTS FOR EDGE LINES

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

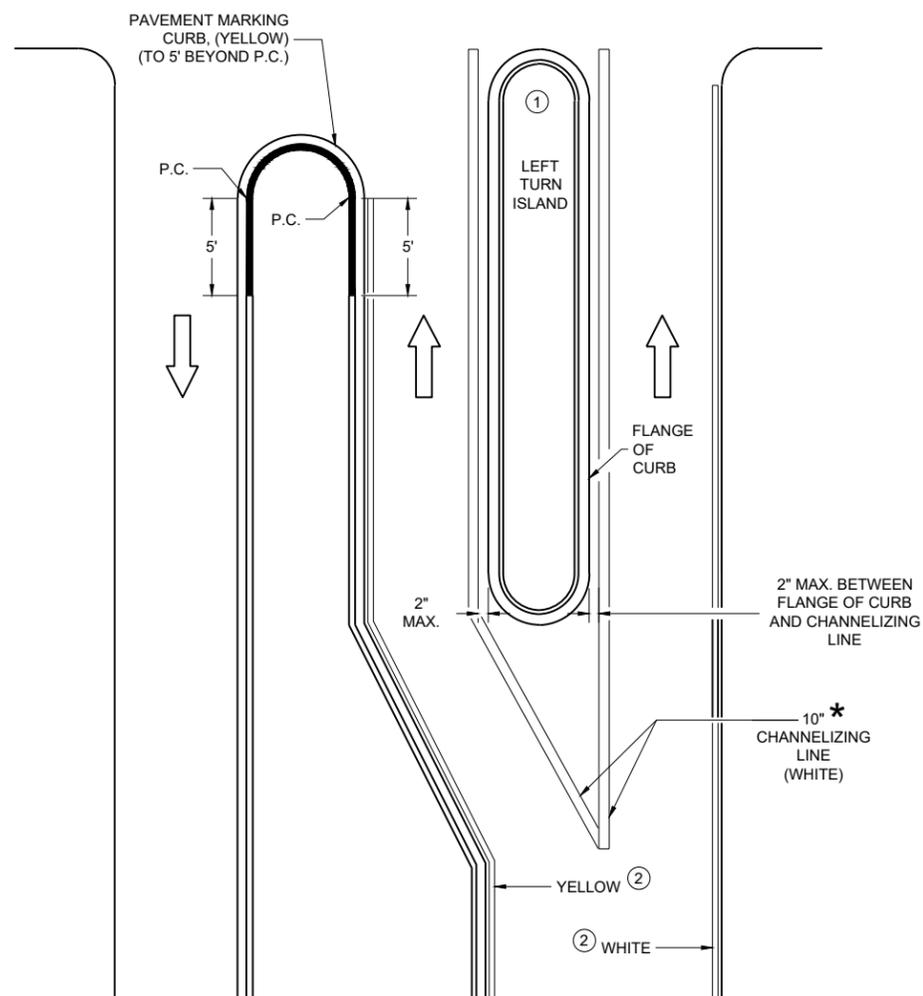
GENERAL NOTES

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

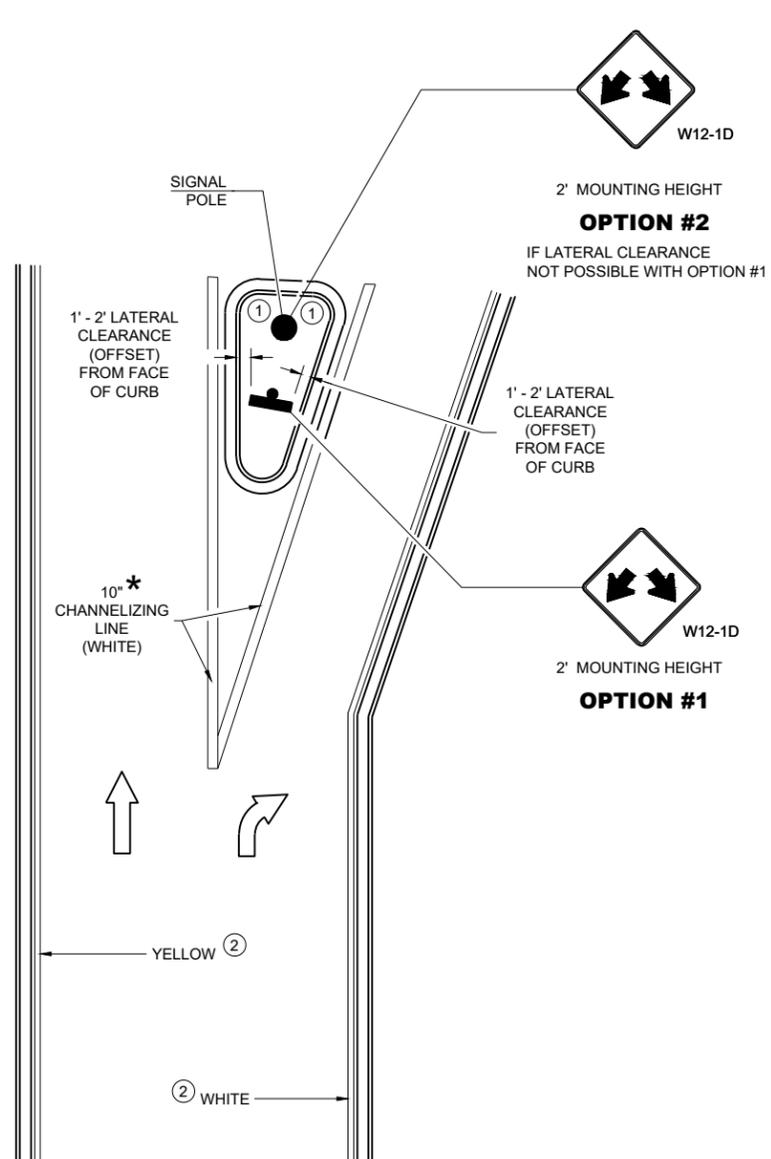
- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.
- ③ CHEVRON MAY BE OMITTED IF LESS THAN 4" WIDE

➔ DIRECTION OF TRAVEL

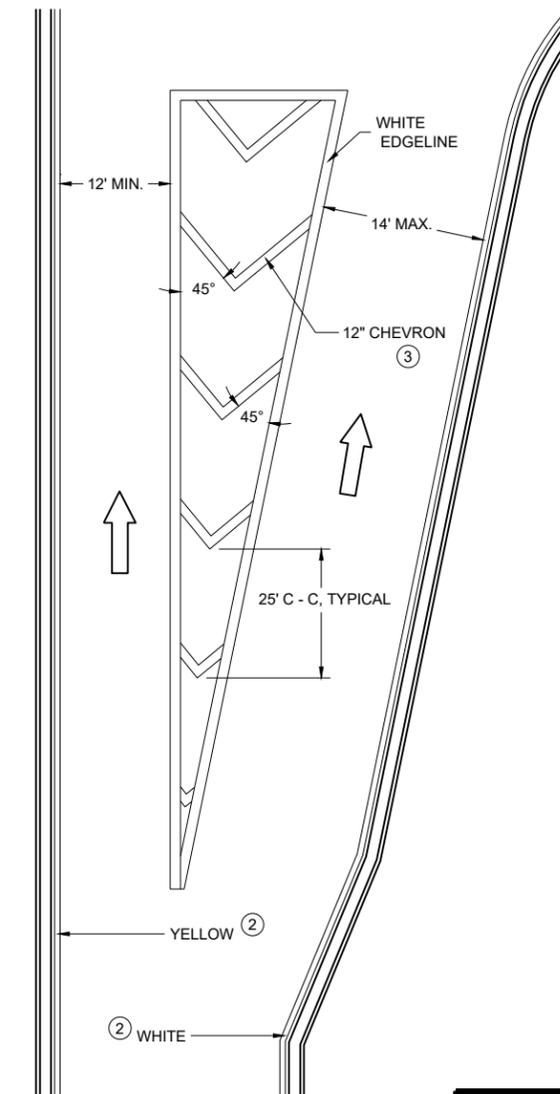
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



TURN LANE DETAIL

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer

LEGEND

- V1** LEAD VEHICLE
- V2** MARKING VEHICLE
- V3** SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

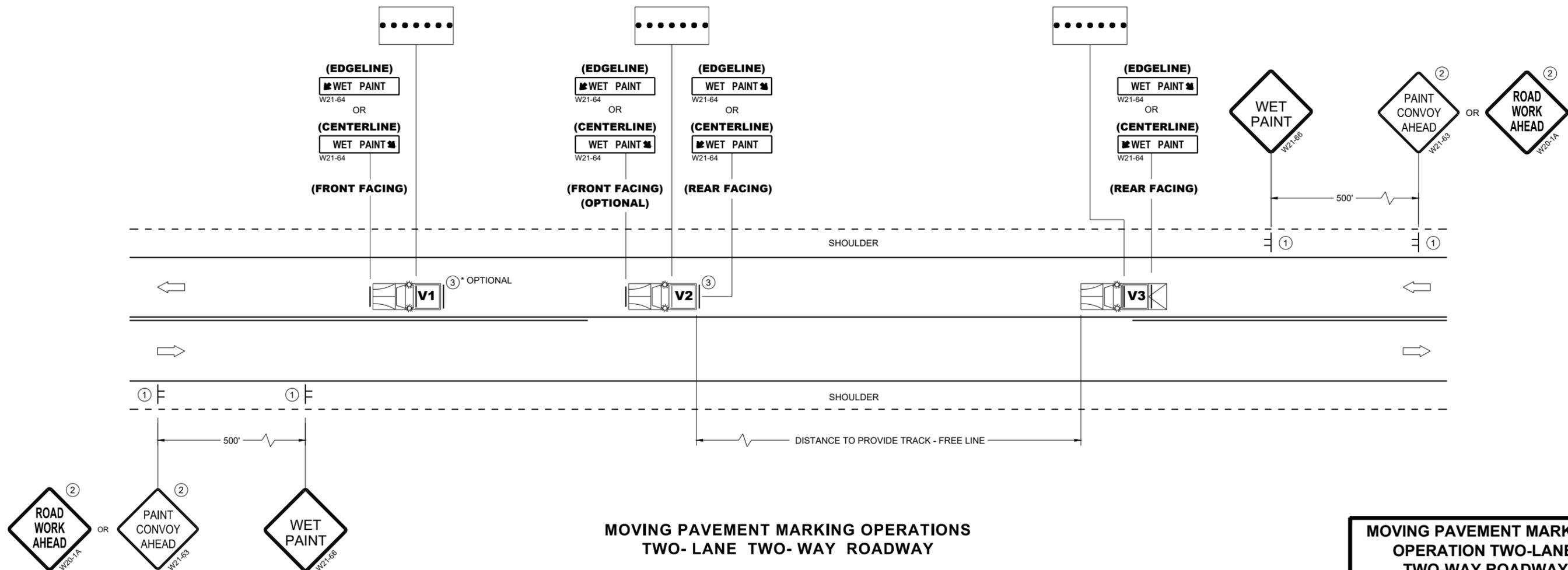
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

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

6

6



**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

**MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

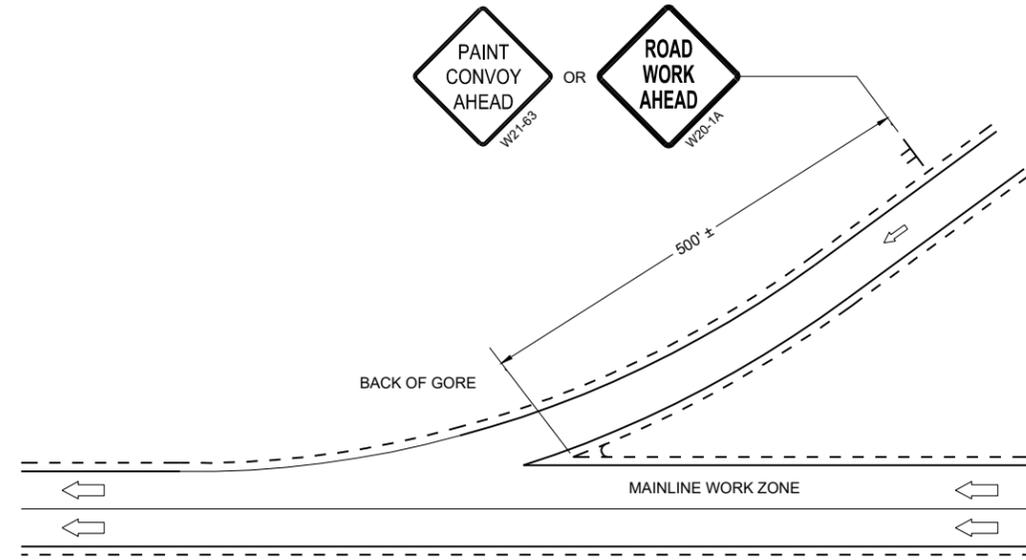
FHWA

SDD 15C19-11a

SDD 15C19-11a

LEGEND

- V1** MARKING VEHICLE
- V2** SHADOW VEHICLE
- V3** TRAIL VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  ARROW PANEL (CAUTION)



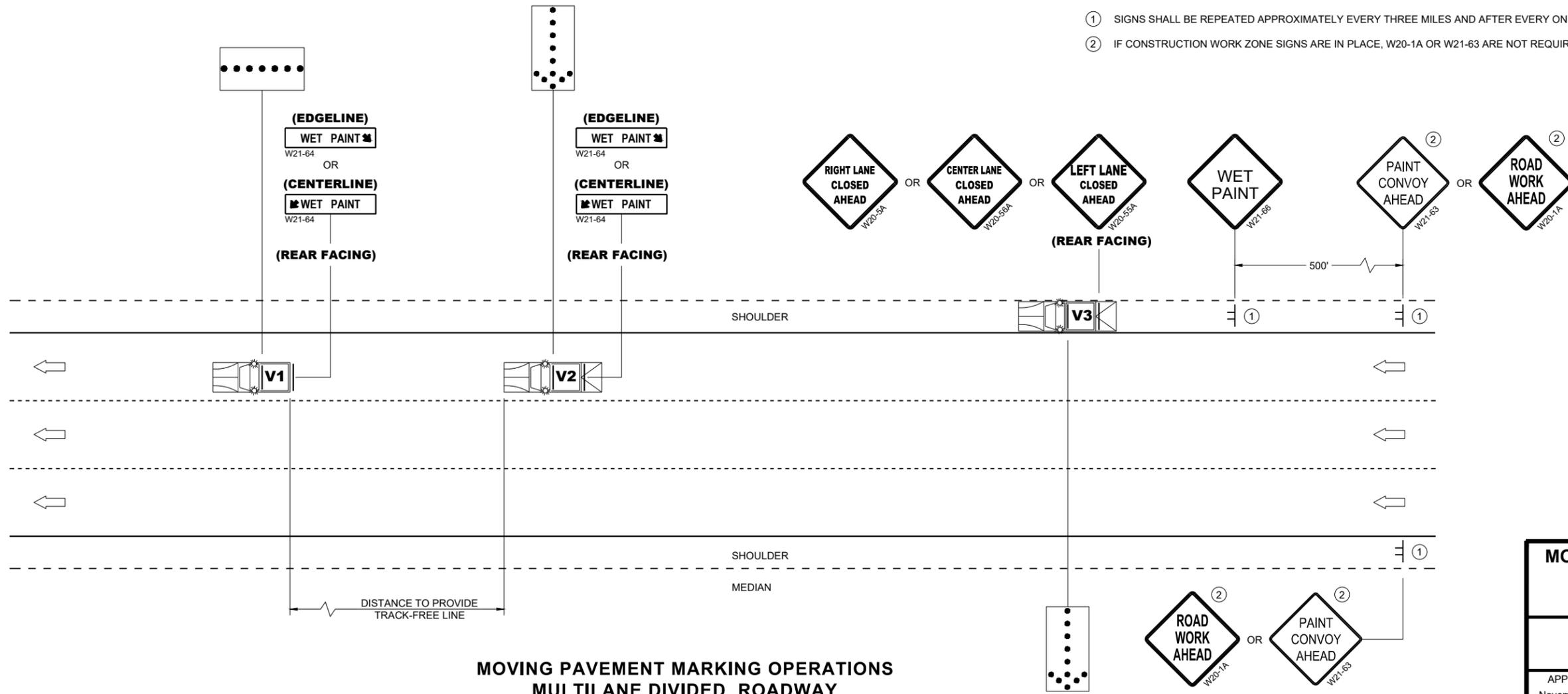
GENERAL NOTES

- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.
- DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.
- WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.
- USE AN ATTENUATOR ON THE REAR MOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.
- IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.
- WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC
- CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS
- WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

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**MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY**

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2025 DATE	/s/ Andrew Heidtke STATE ELECTRICAL ENGINEER
FHWA	

SDD 15C19-11c

SDD 15C19-11c

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

① USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

** SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT PLACEMENT.

*** 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).

LEGEND

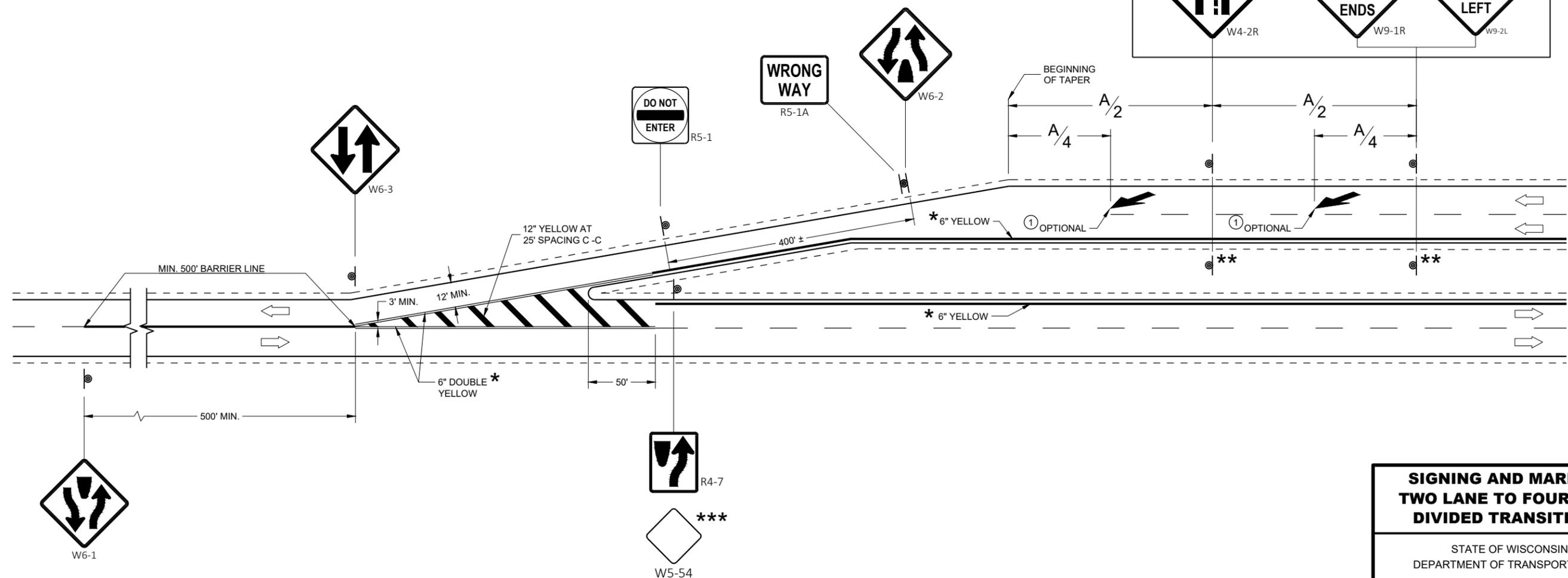
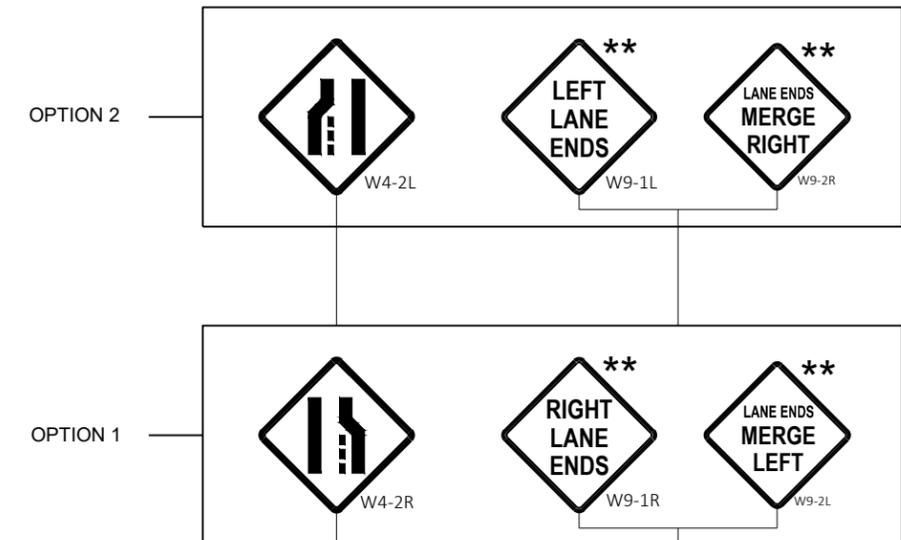
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

⊙ SIGN MOUNTED ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	325'
30	460'
35	565'
40	670'
45	775'
50	885'
55	990'
65	1200'
70	1250'



SIGNING AND MARKING TWO LANE TO FOUR LANE DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

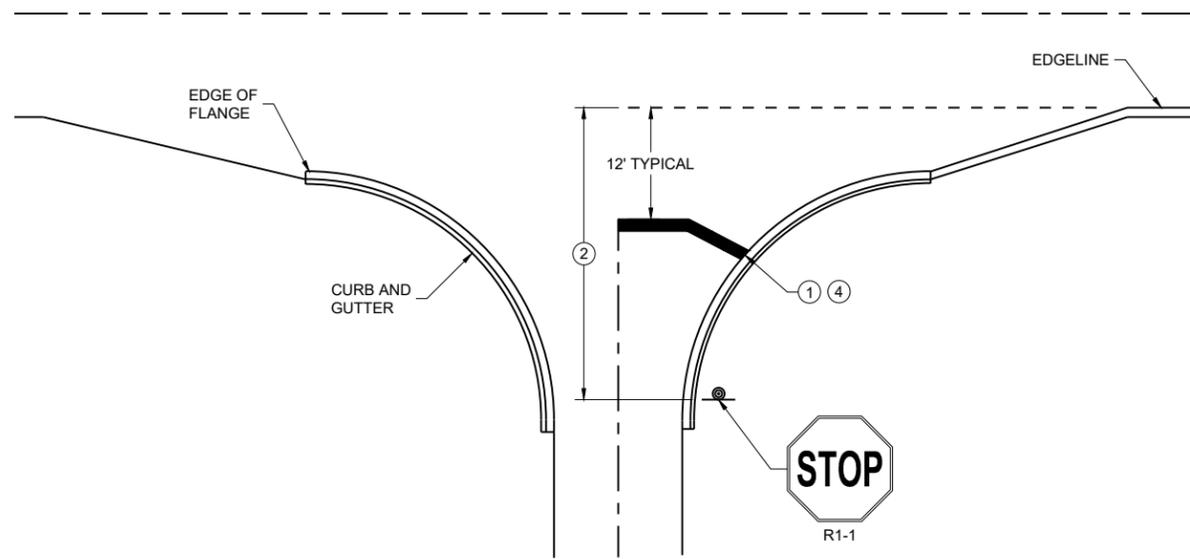
APPROVED
DATE: May 2023 /S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

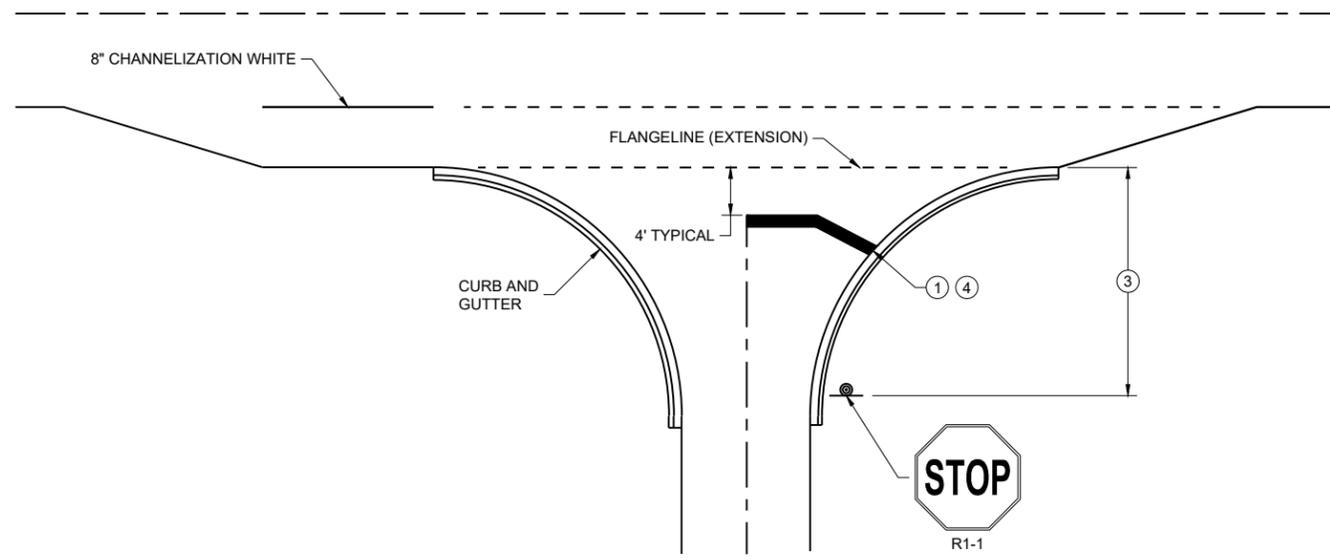
GENERAL NOTES

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

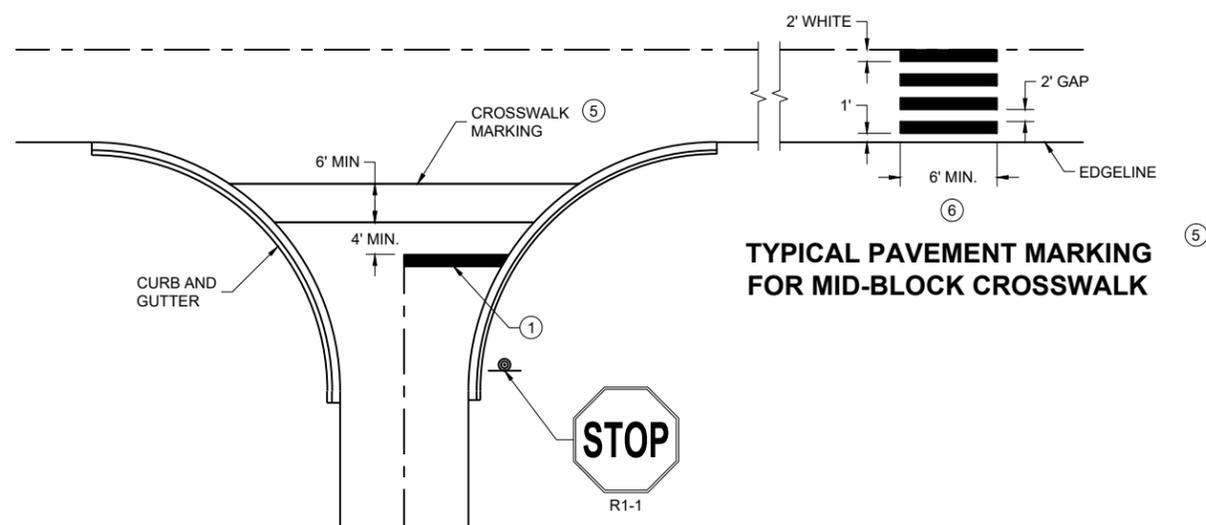
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

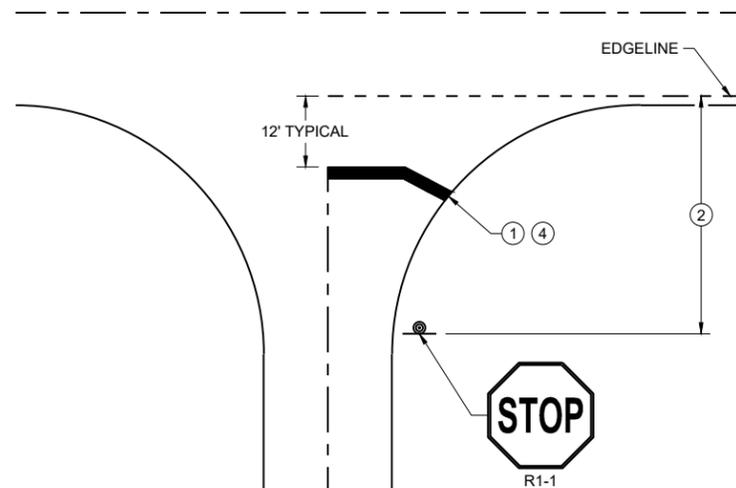


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

6

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SDD 15C33-05

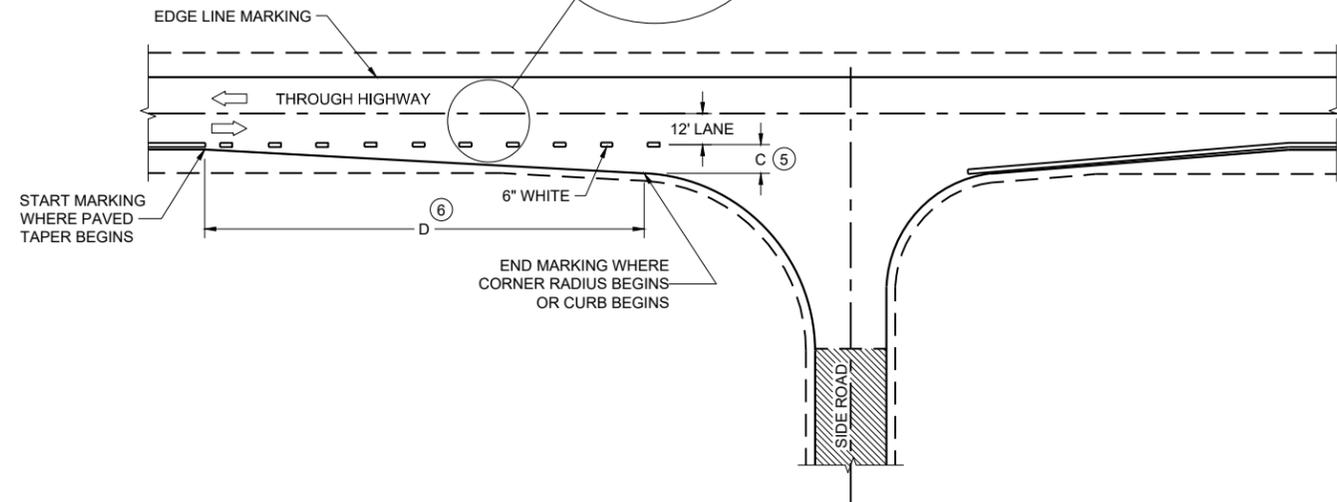
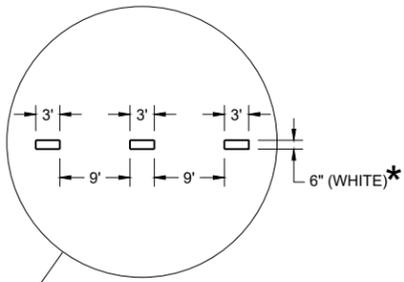
SDD 15C33-05

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



MINOR INTERSECTION

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

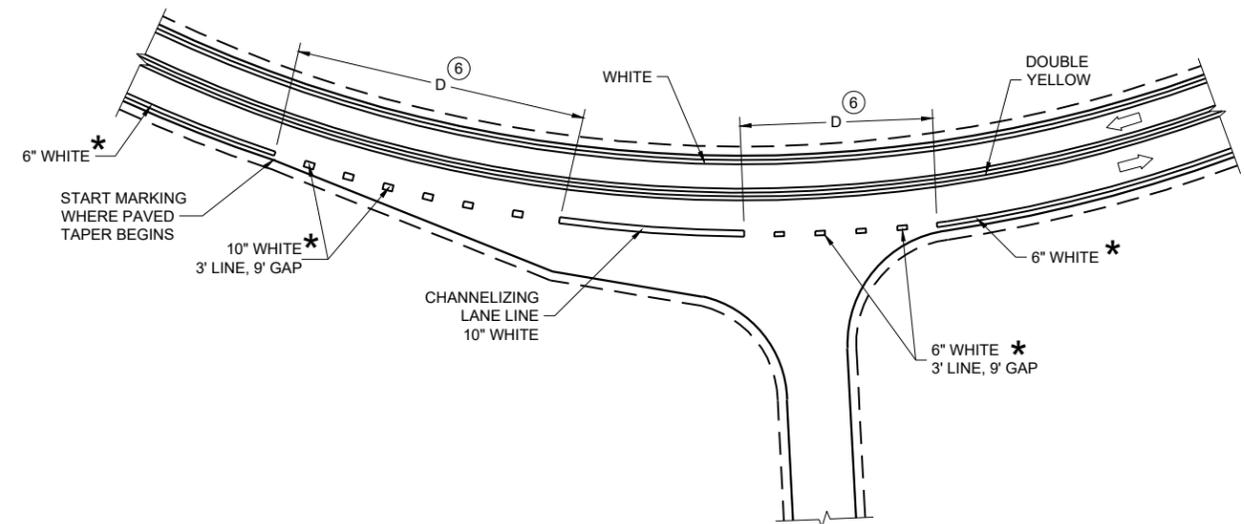
GENERAL NOTES

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

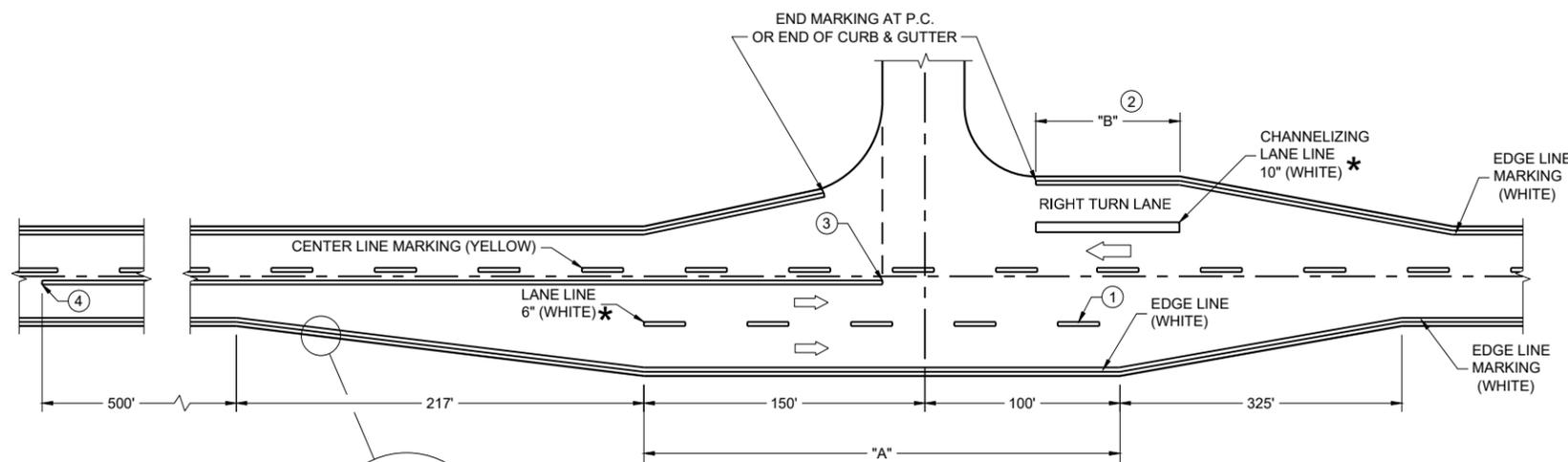
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4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

LEGEND

➡ DIRECTION OF TRAVEL

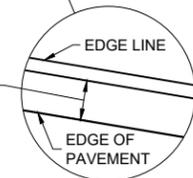


INTERSECTION ON OUTSIDE OF CURVE



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

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



**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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 IN

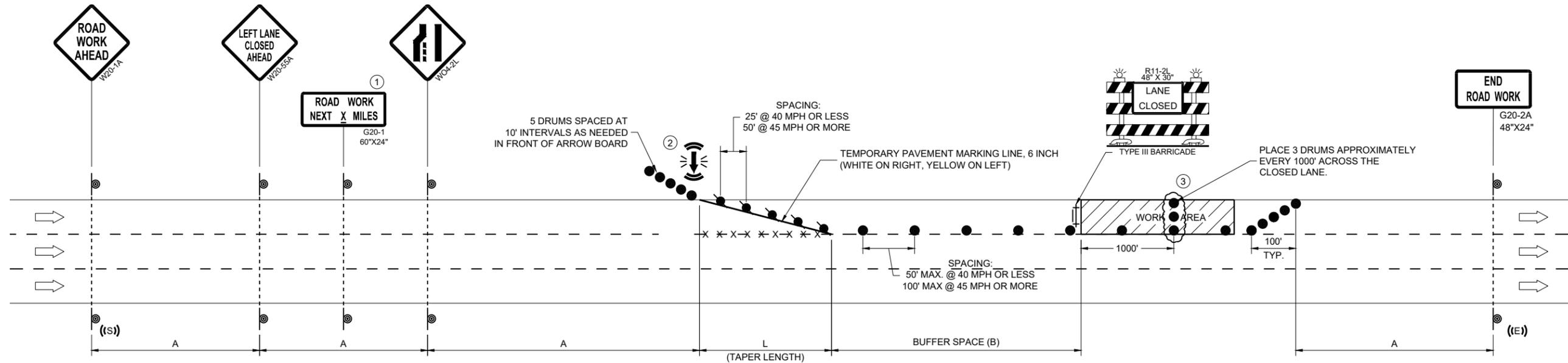
PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.

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 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.
- ③ DRUMS 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.



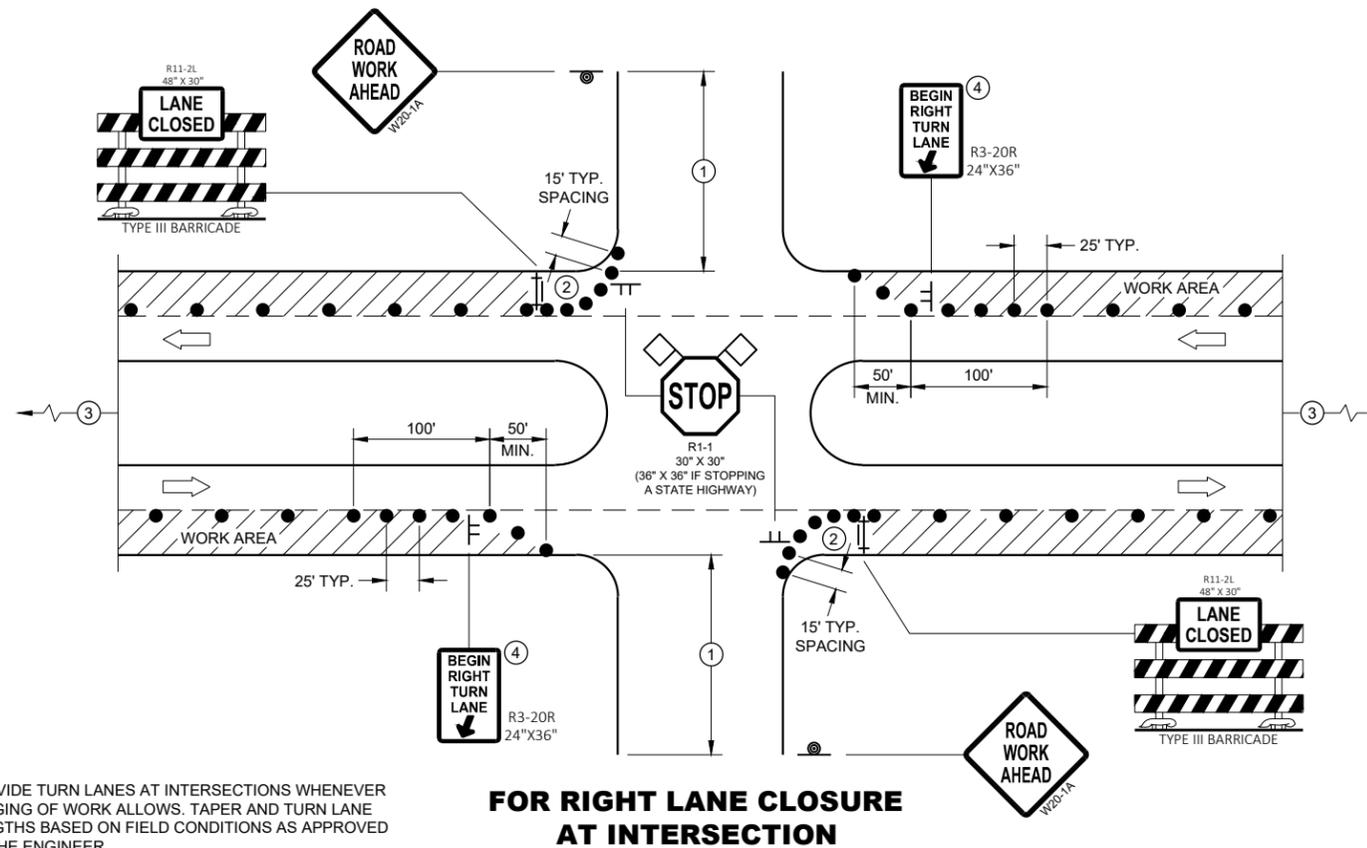
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	155'
30	200'	180'	200'
35	350'	245'	250'
40	350'	320'	305'
45	500'	540'	360'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /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

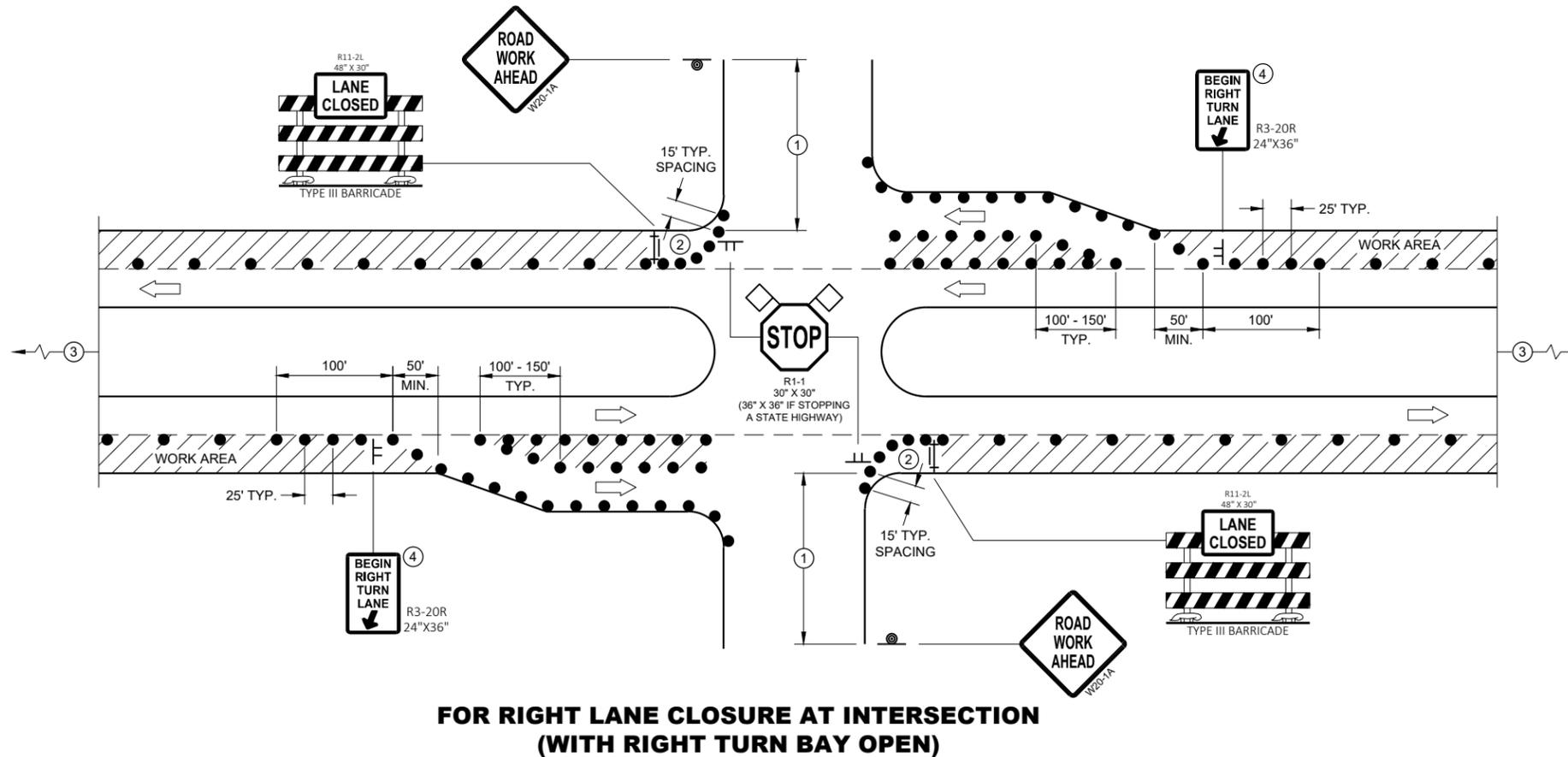
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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.



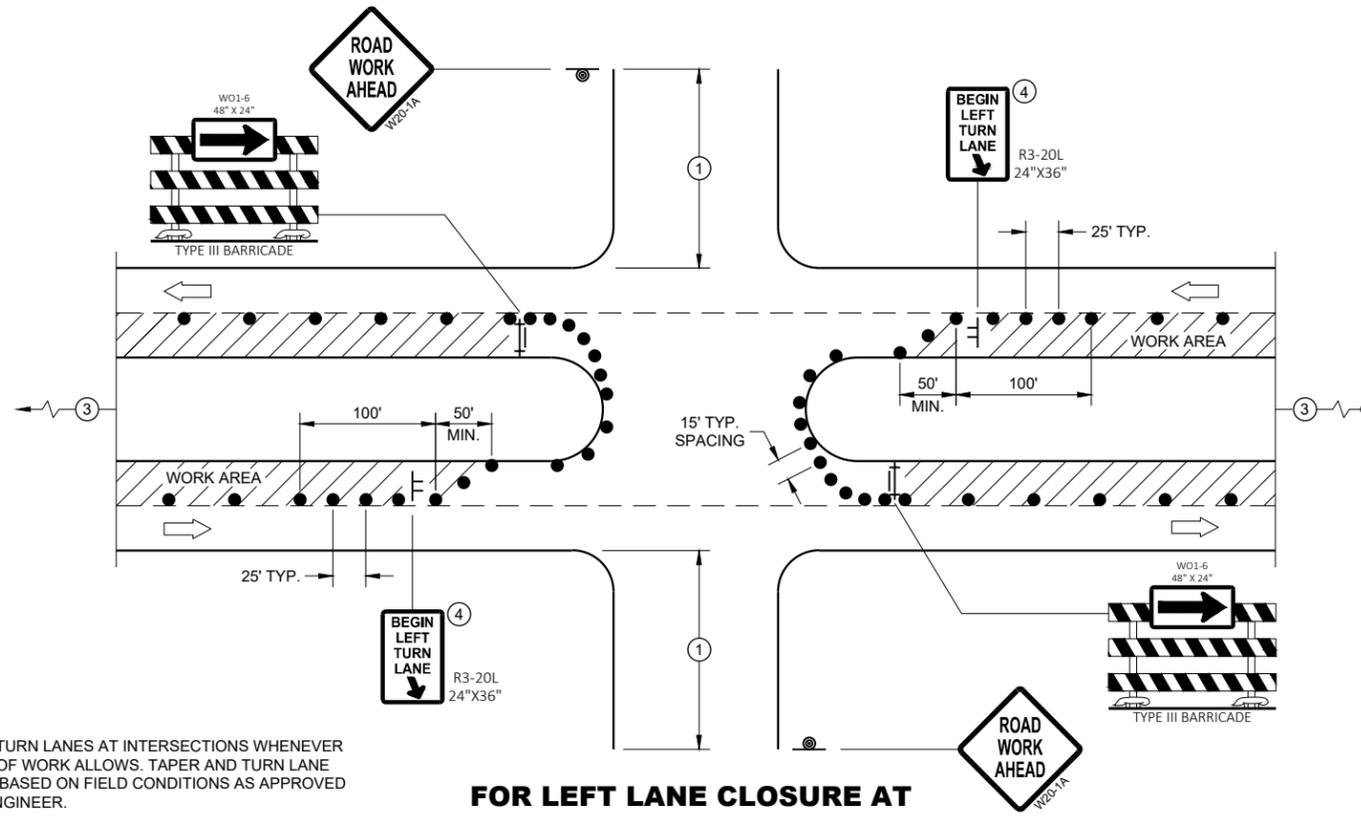
FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

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



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 LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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

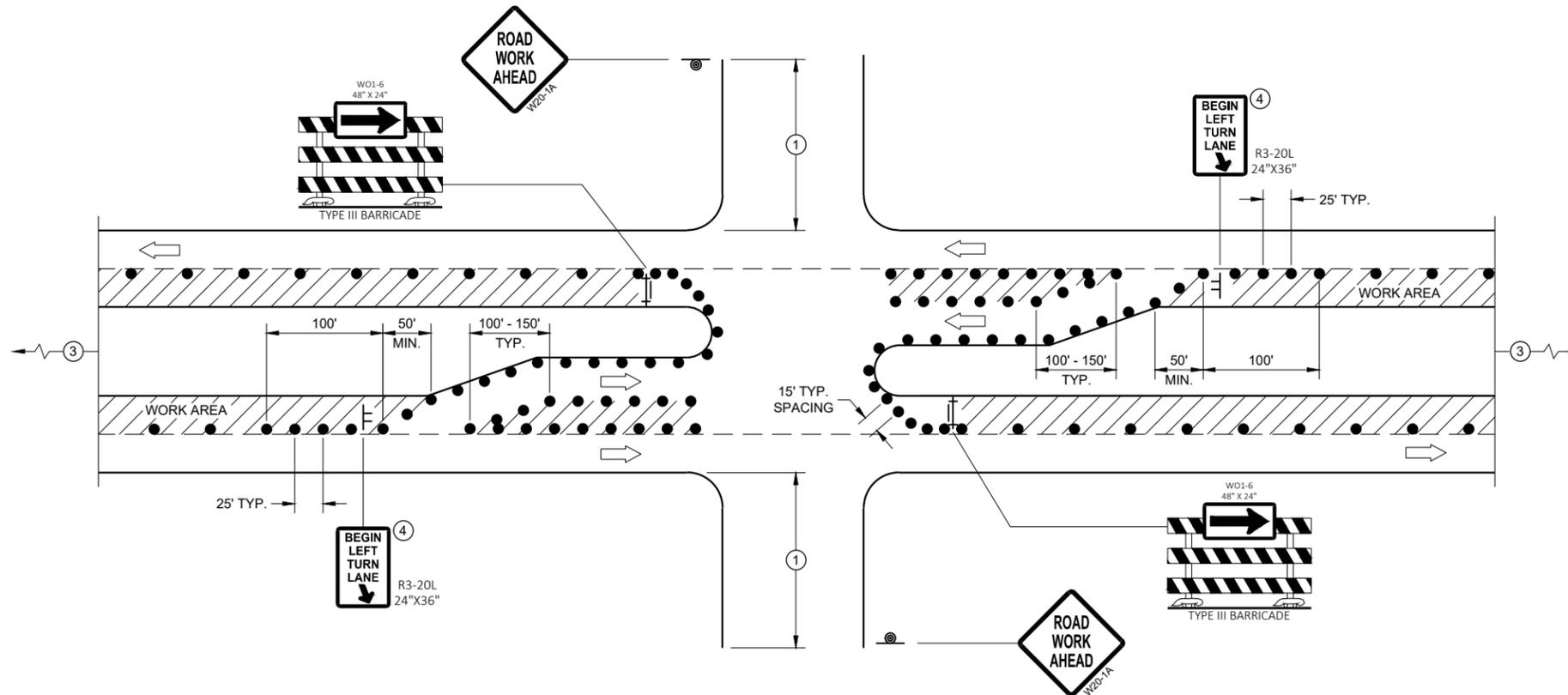
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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 LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT 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
LEFT LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  CONNECTED ARROW BOARD
-  WORK AREA
- (S)** WZ START LOCATION MARKER
- (E)** WZ END LOCATION MARKER

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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.

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

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

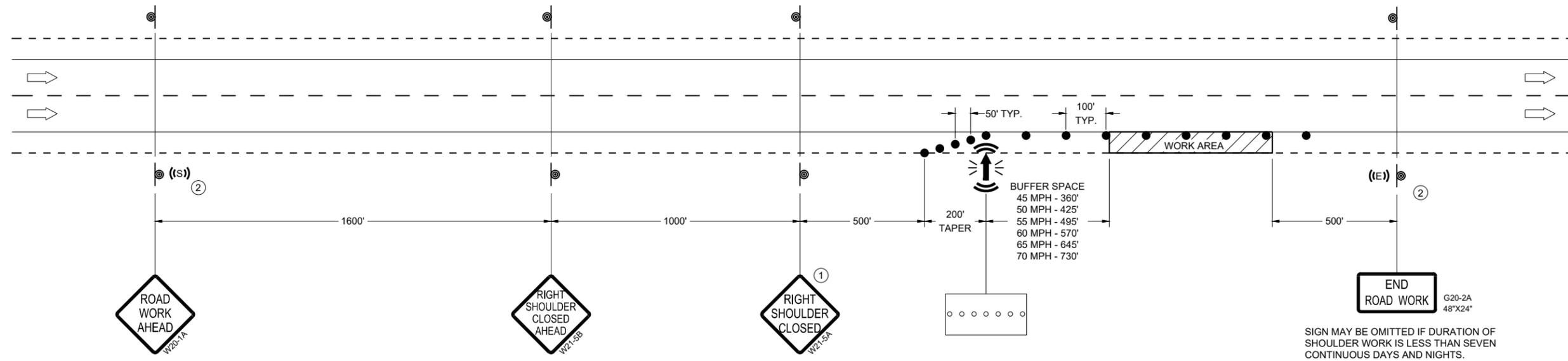
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

① FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR THE W21-5A SIGN MAY BE OMITTED.

② IF ALREADY PRESENT WITHIN PROJECT, DO NOT INCLUDE ADDITIONAL DEVICE.



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SDD 15D27-05

SDD 15D27-05

TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2025 DATE	/s/ Andrew Heidtke STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

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 THE 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.

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

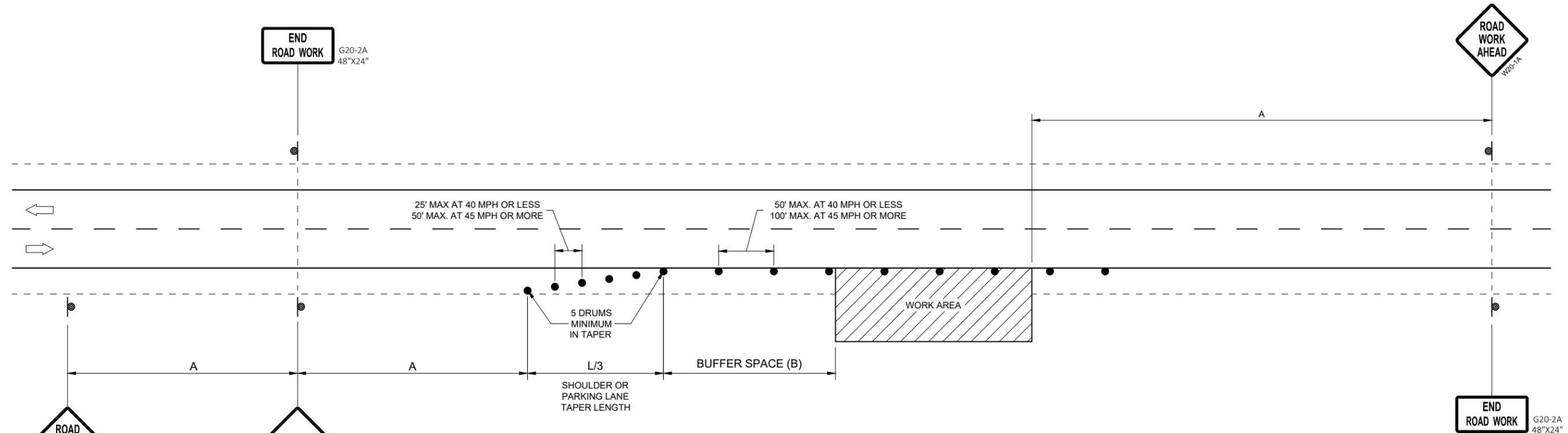
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A 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 OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

**TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY**

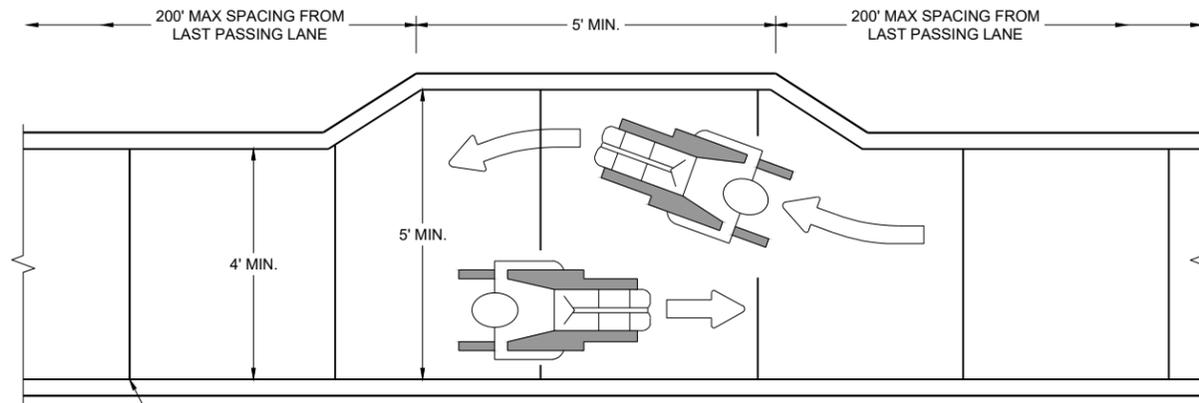
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

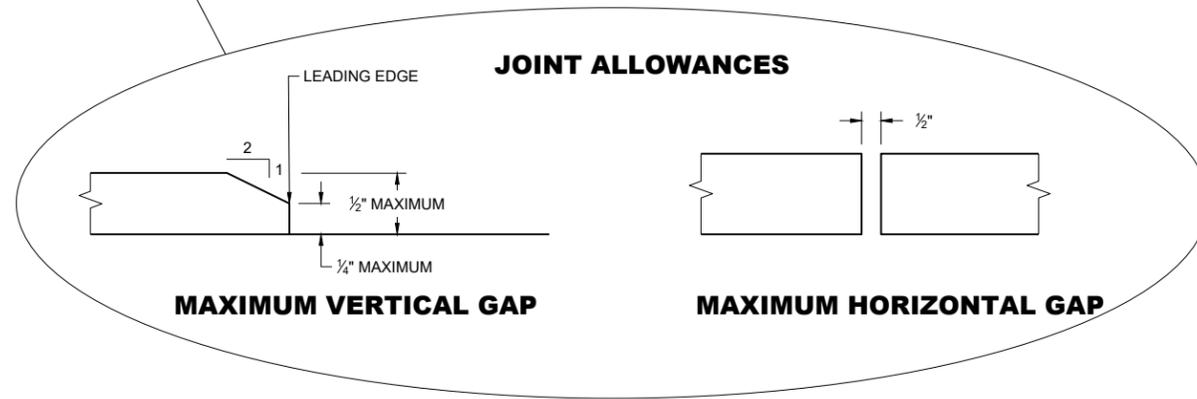
FHWA

SDD 15D28 - 04

SDD 15D28 - 04



NARROW SIDEWALK PASSING DETAIL

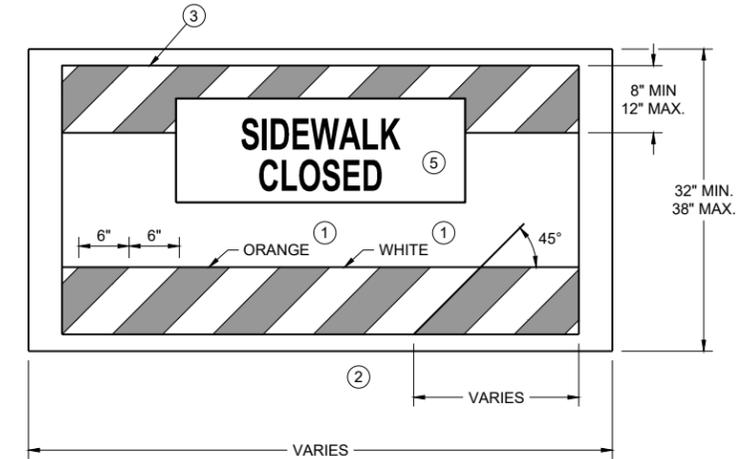


MAXIMUM VERTICAL GAP

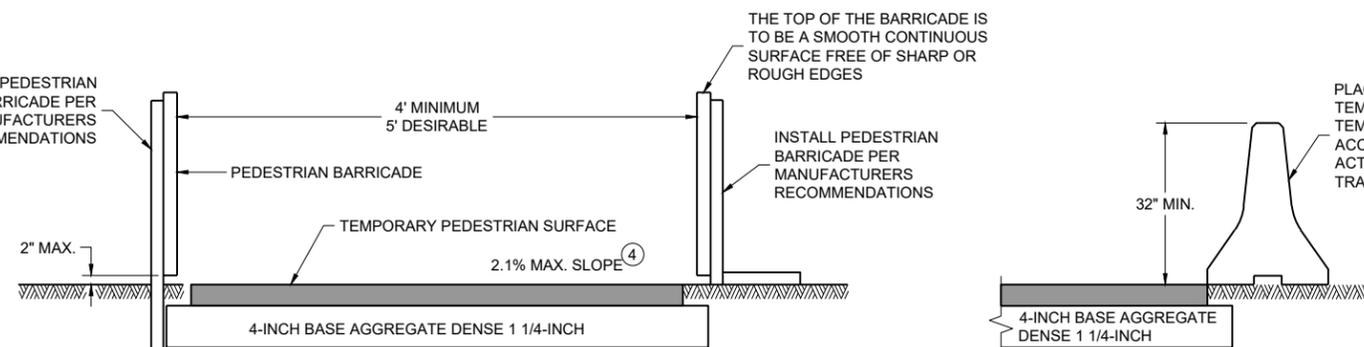
MAXIMUM HORIZONTAL GAP

GENERAL NOTES

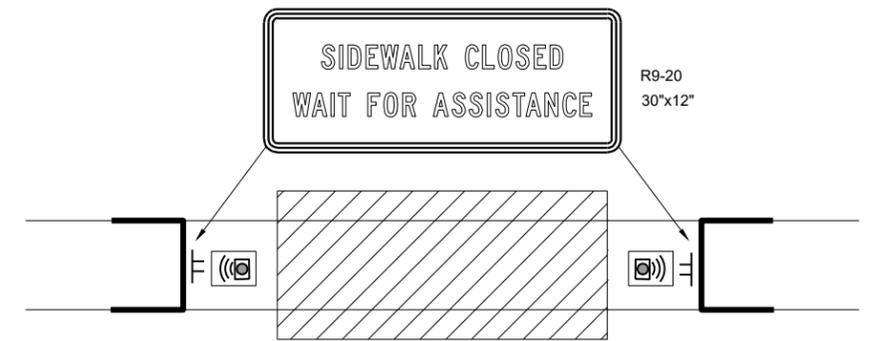
- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- ★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.
- ④ WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.
- ⑤ WHERE SIGNS FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS ARE SHOWN BEING PLACED BEHIND TEMPORARY PEDESTRIAN BARRICADE, THE SIGNS MAY BE MOUNTED ON THE TEMPORARY PEDESTRIAN BARRICADE INSTEAD. A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE SHALL BE USED IF MOUNTED ON THE BARRICADE. THE TOP OF THE SIGN SHALL BE MOUNTED BELOW THE TOP OF THE BARRICADE TO ALLOW A CONTINUOUS HAND-TRAILING EDGE.



TEMPORARY PEDESTRIAN BARRICADE *



TEMPORARY PEDESTRIAN ACCESS



TEMPORARY PEDESTRIAN FLAGGING

- LEGEND**
- TEMPORARY PEDESTRIAN BARRICADE
 - AUDIBLE MESSAGE DEVICE
 - TEMPORARY SIGN SUPPORT
 - WORK AREA

**TRAFFIC CONTROL,
PEDESTRIAN
ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

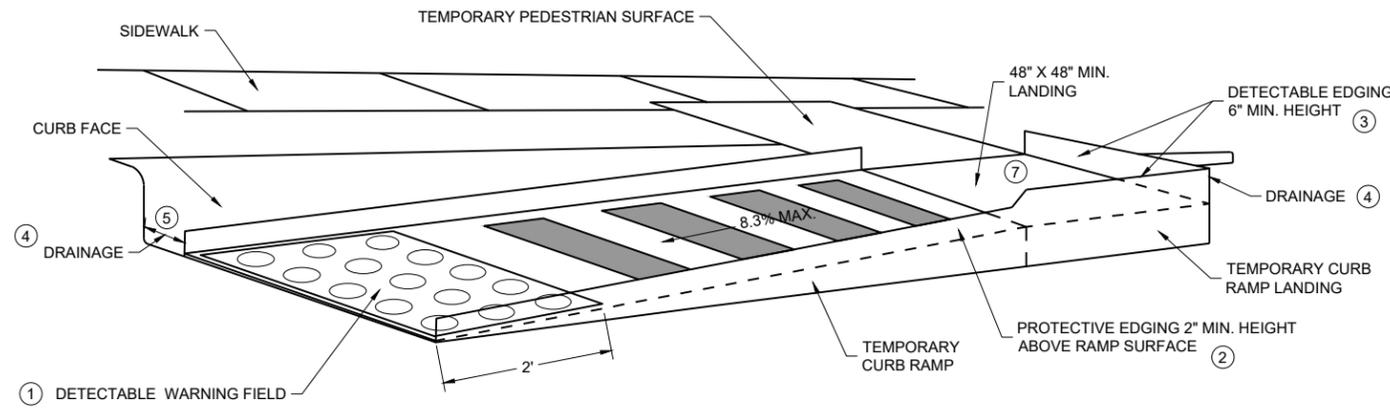
CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

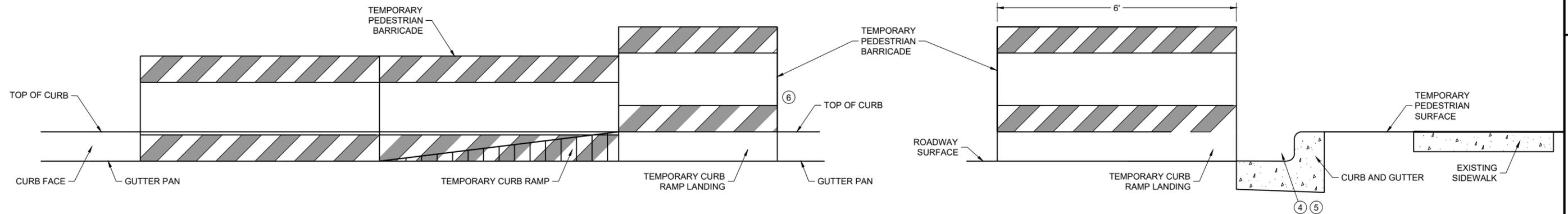
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
- ⑥ IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
- ⑦ LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



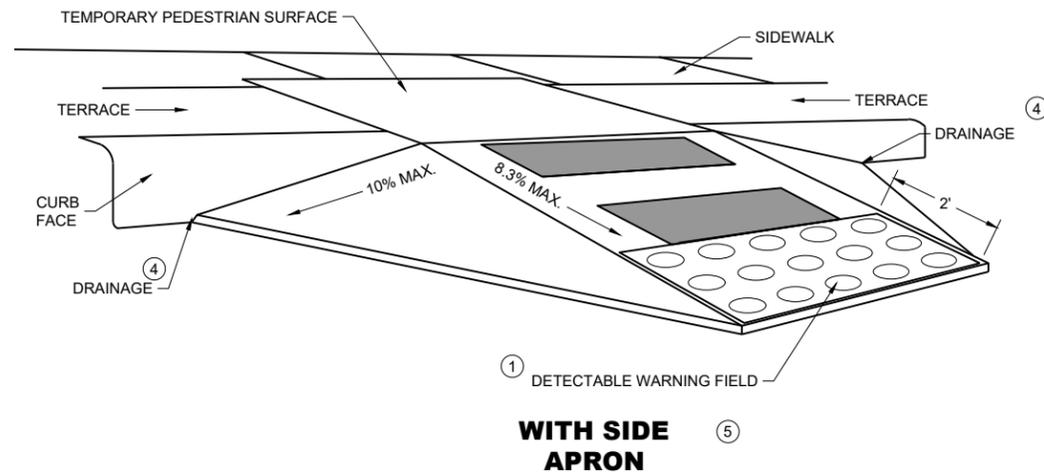
PERSPECTIVE VIEW



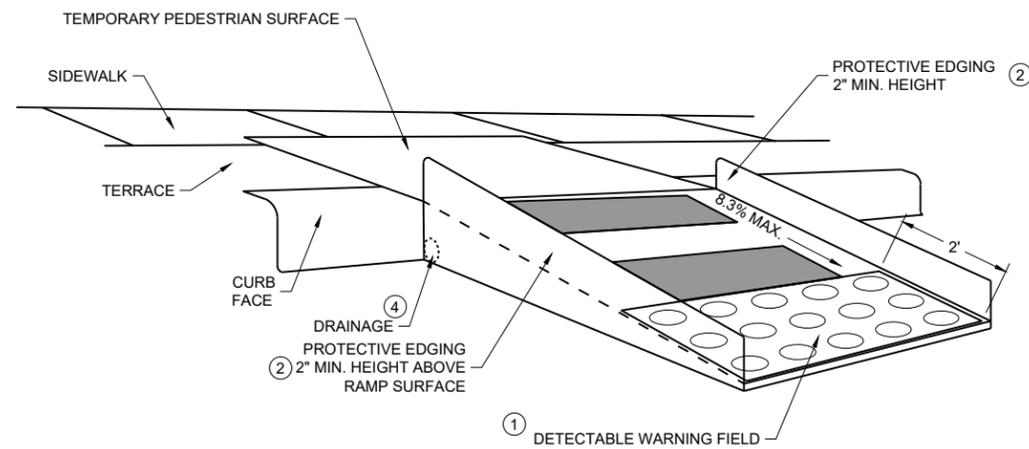
FRONT VIEW

SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

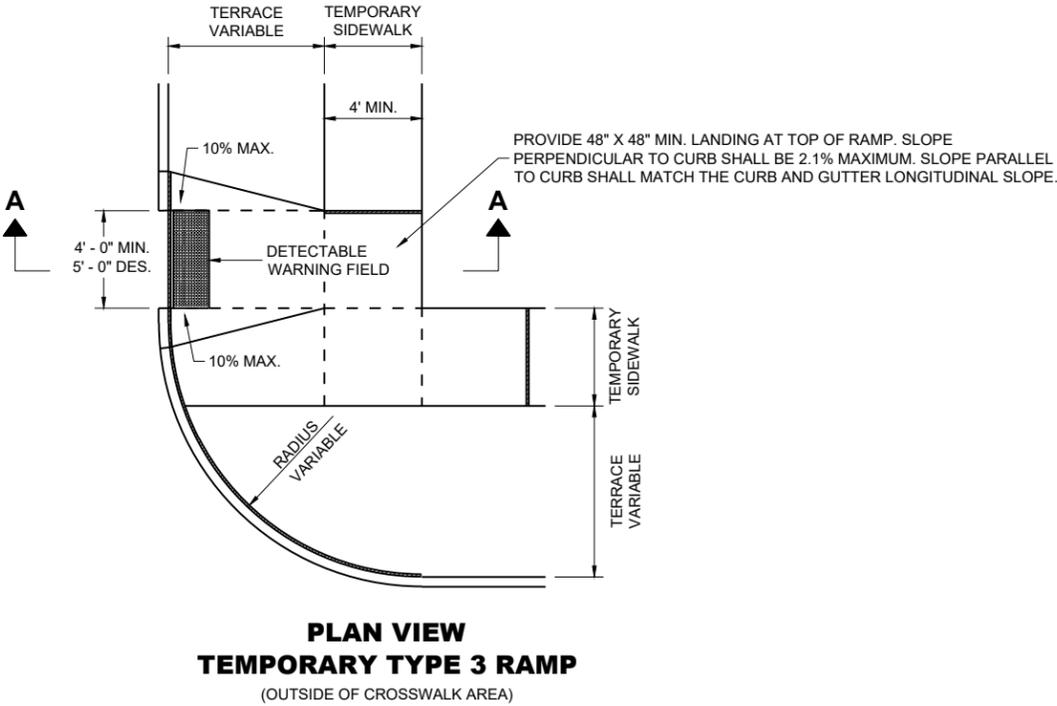
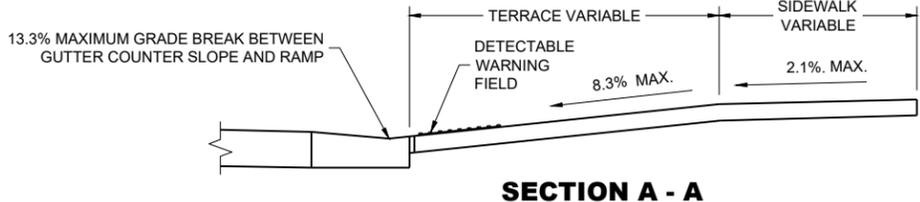
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- (1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- (2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- (3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- (4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- (5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

GENERAL NOTES



6

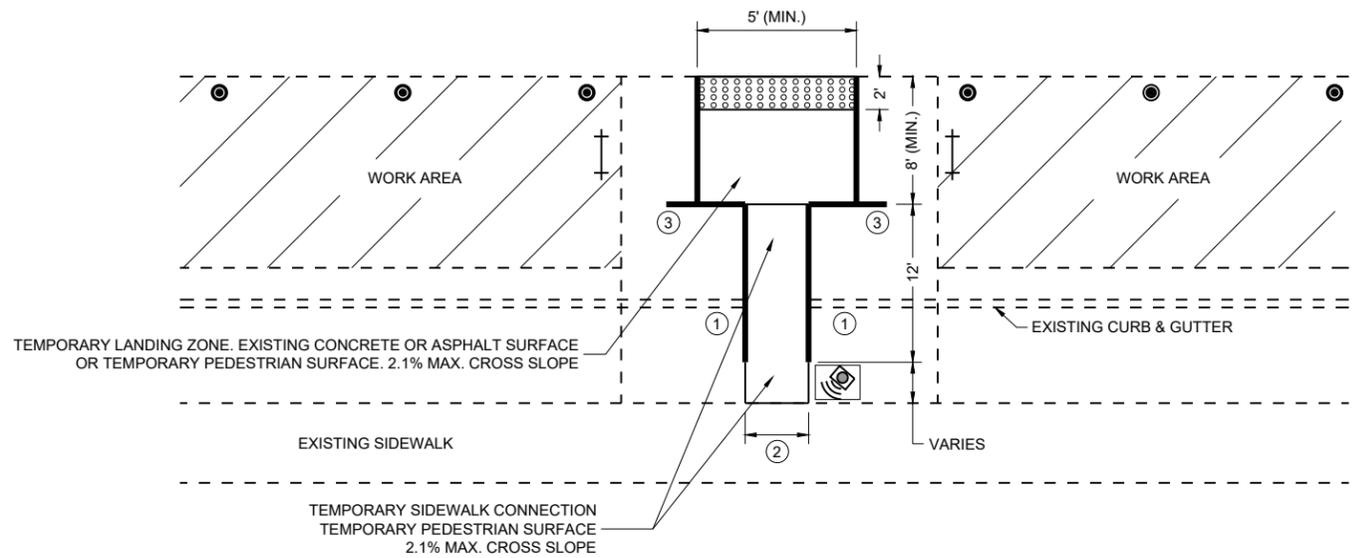
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SDD 15D30-12d

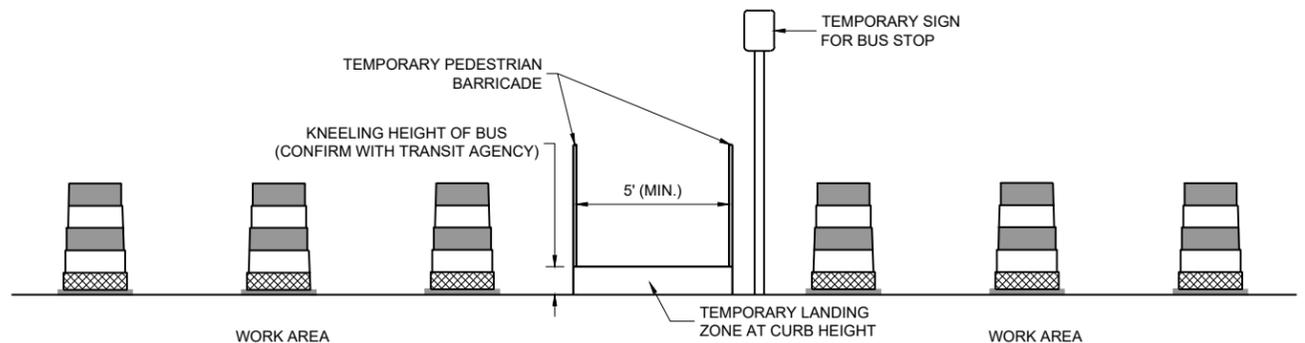
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**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW



PROFILE VIEW
TEMPORARY BUS STOP PAD

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
- PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- CURB RAMP AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

- ① DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ② 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.
- ③ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC
-  TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

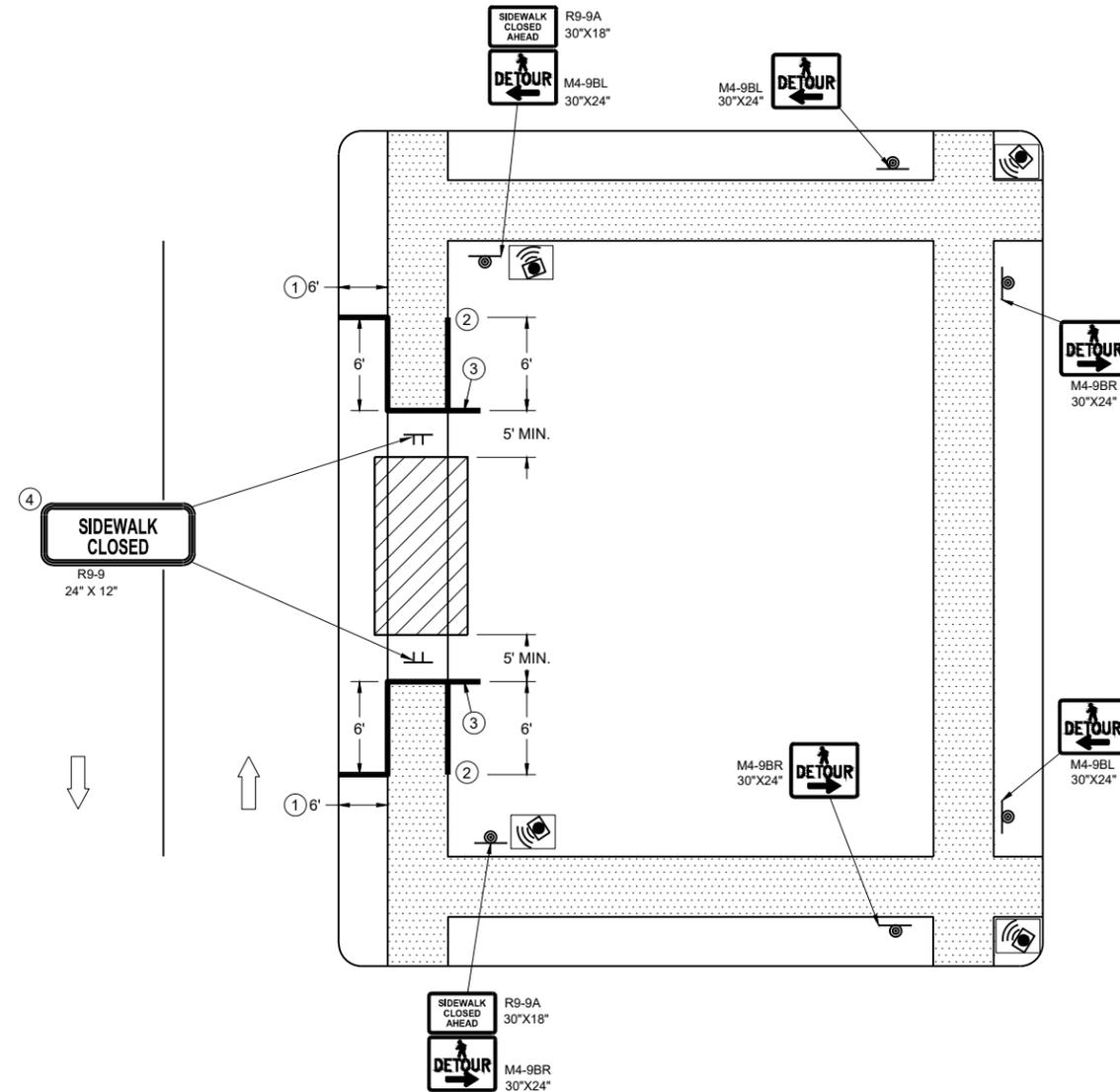
GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  UNDER PEDESTRIAN TRAFFIC
-  TEMPORARY PEDESTRIAN SURFACE
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

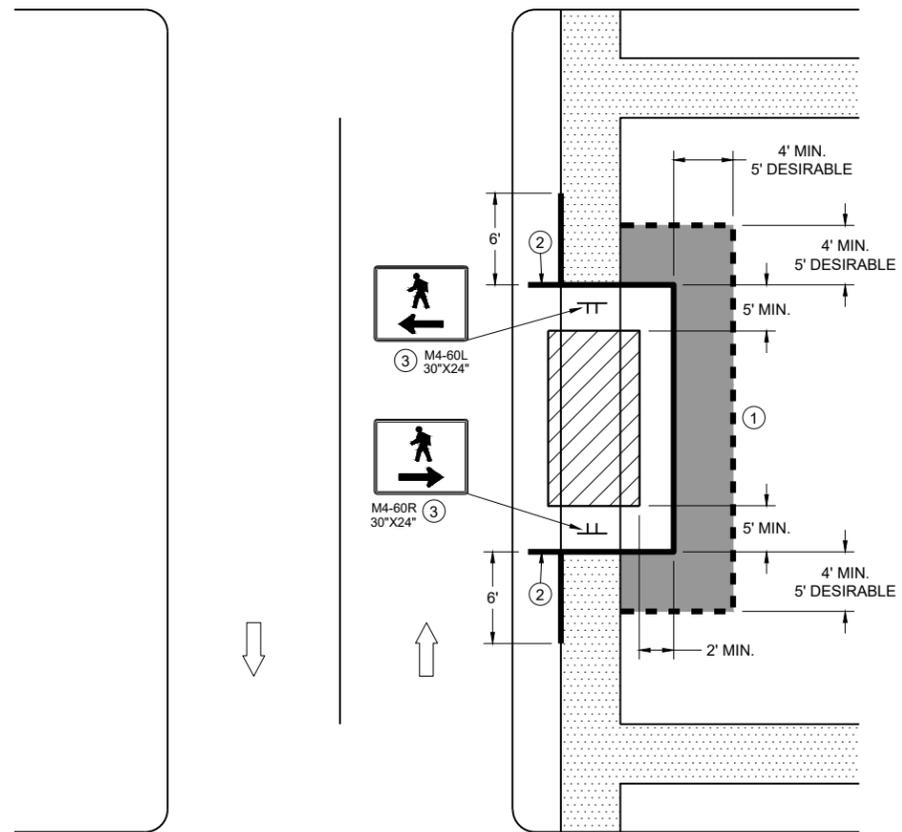
GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

- ① USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ② IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



**SIDEWALK BYPASS
SINGLE SIDE**

LEGEND

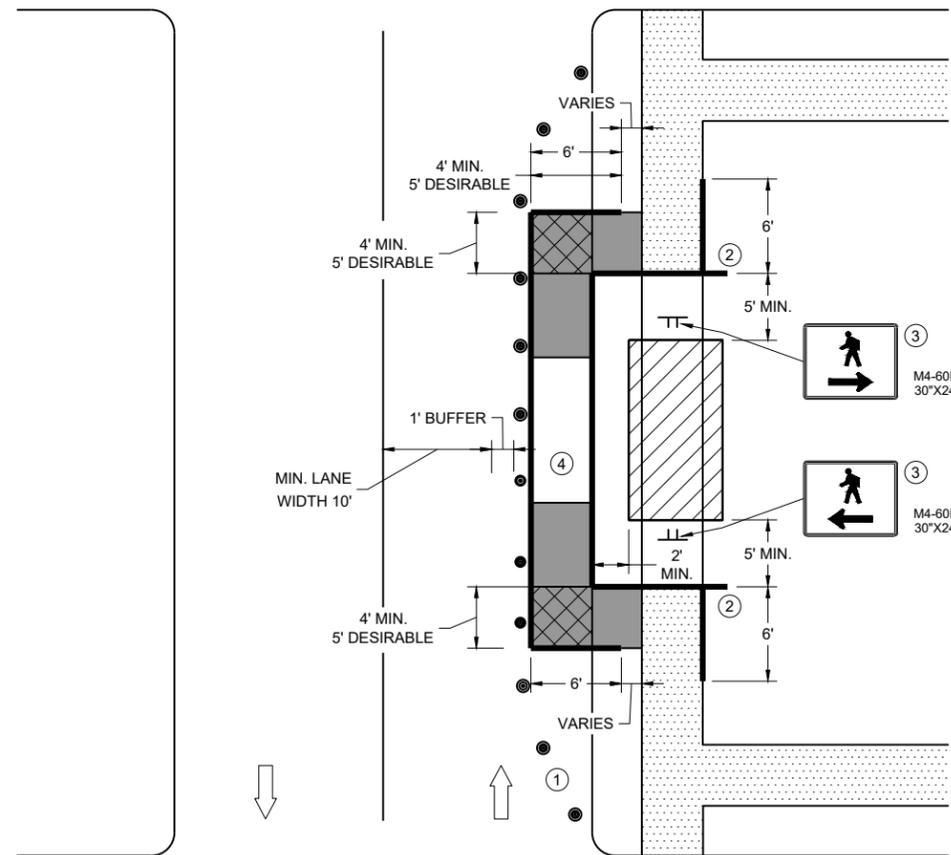
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  UNDER PEDESTRIAN TRAFFIC
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
- ② PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
- ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
- ④ USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



SIDEWALK BYPASS, SINGLE SIDE

6

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SDD 15D30-12h

SDD 15D30-12h

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

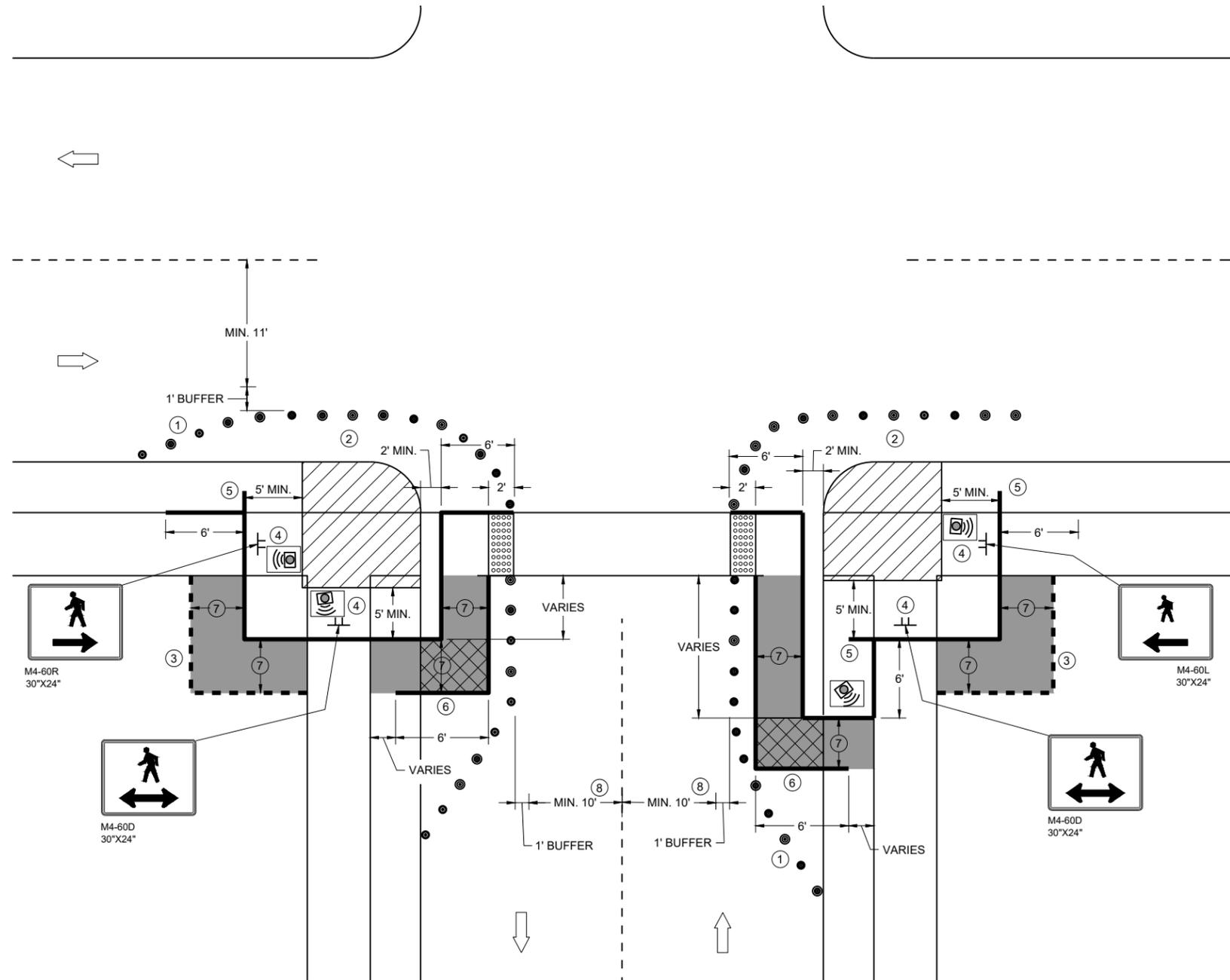
WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑦ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑧ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY DETECTABLE WARNING FIELD
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC
-  TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



**CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE**

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

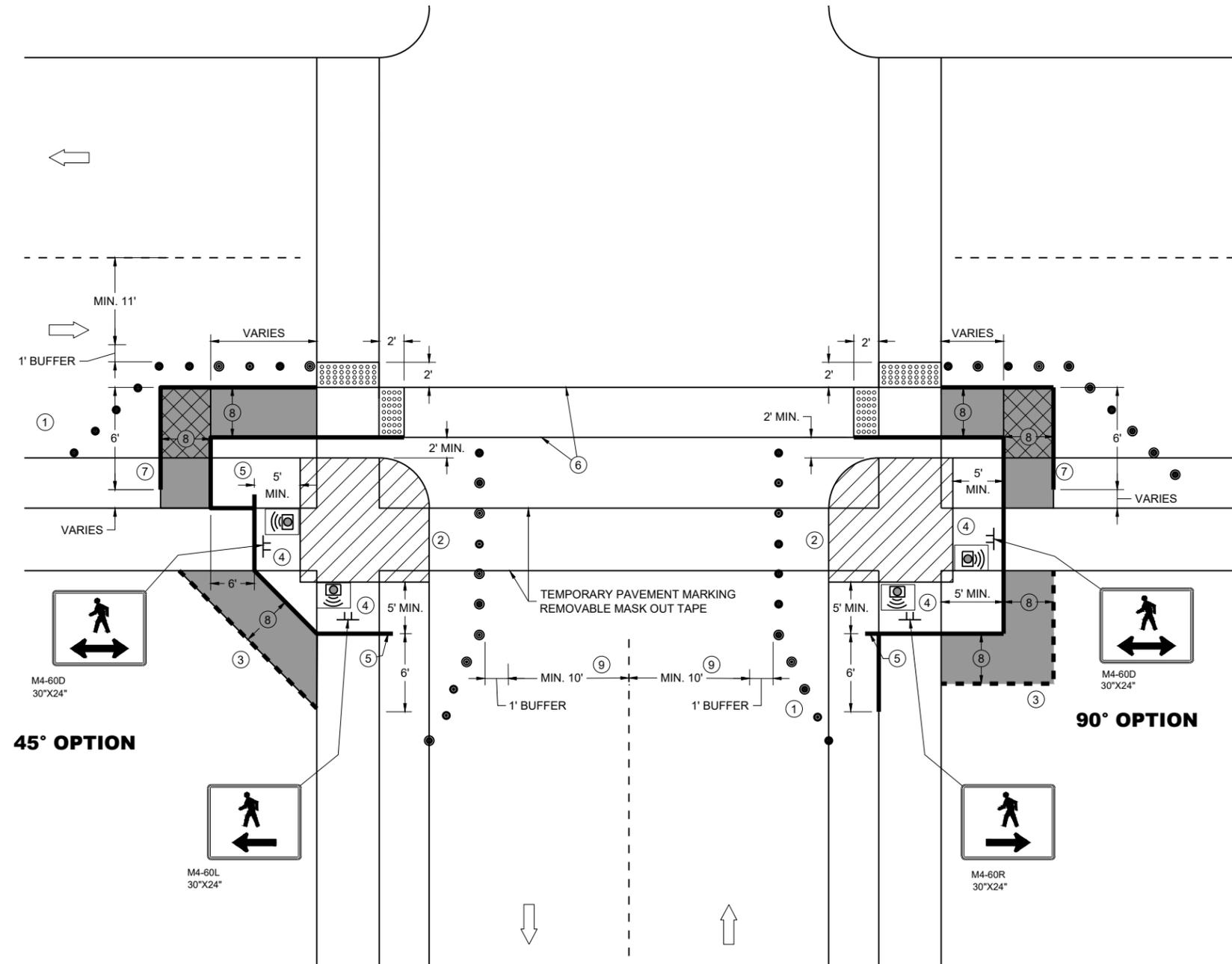
WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ WHITE 6" TEMPORARY PAVEMENT MARKING
- ⑦ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑧ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑨ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY DETECTABLE WARNING FIELD
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC
-  TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 15D30-12j

SDD 15D30-12j

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC
-  TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

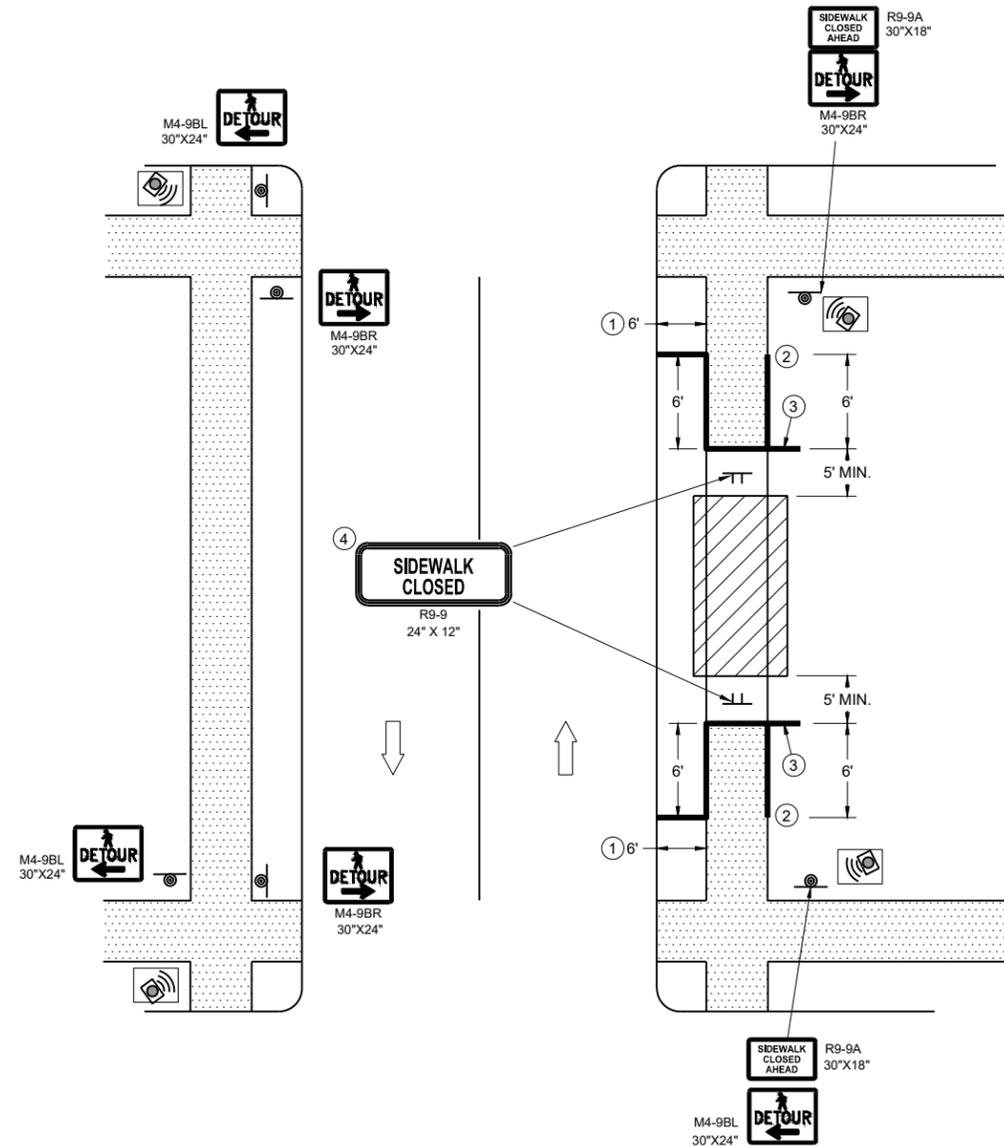
GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

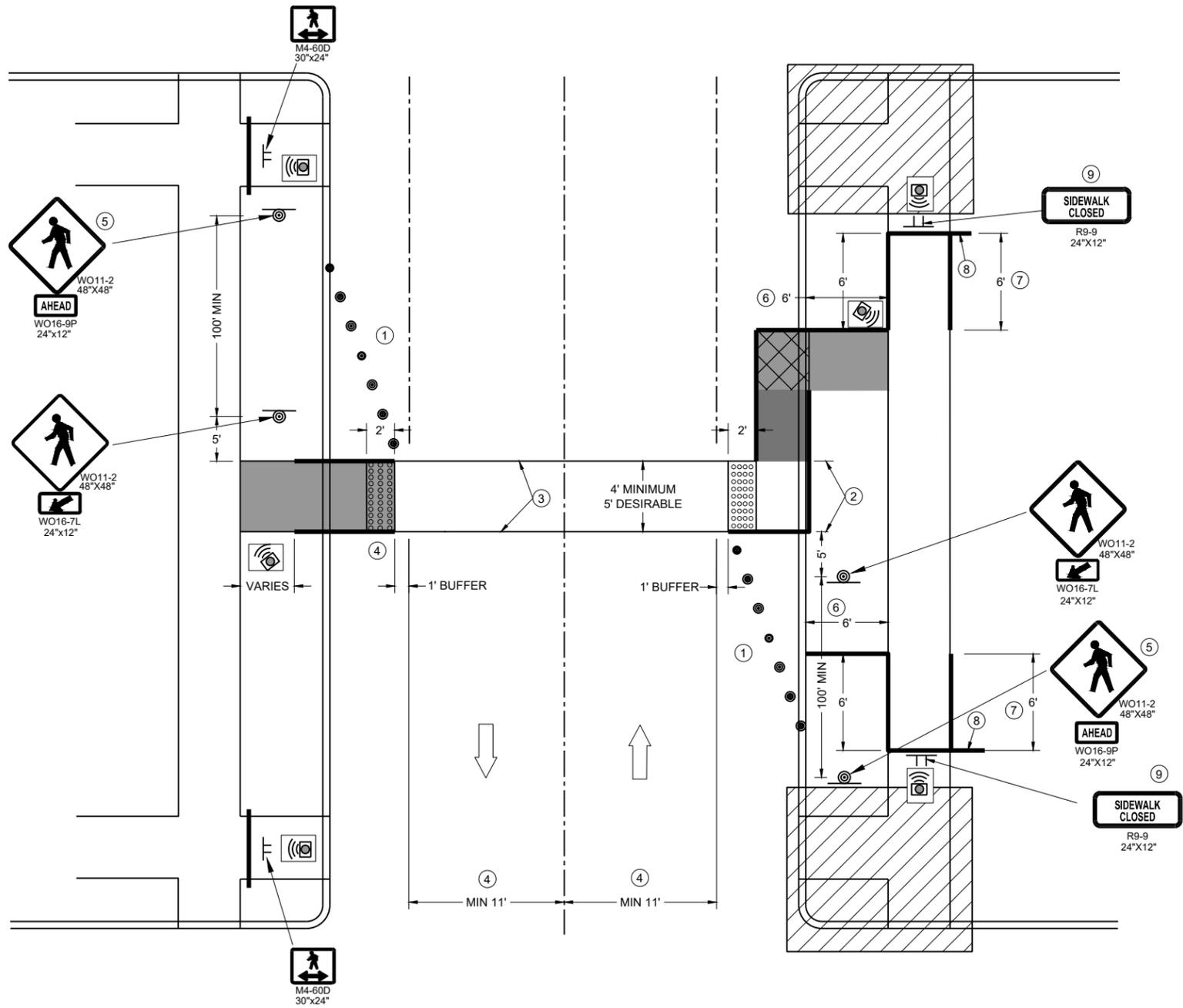
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

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SDD 15D30-12K

SDD 15D30-12K



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

- ① SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② 4 FEET MINIMUM, 5 FEET DESIRABLE.
- ③ WHITE 6" TEMPORARY PAVEMENT MARKING.
- ④ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMPS MAY NEED TO BE UTILIZED.
- ⑤ IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
- ⑥ IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ⑦ PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ⑧ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ⑨ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

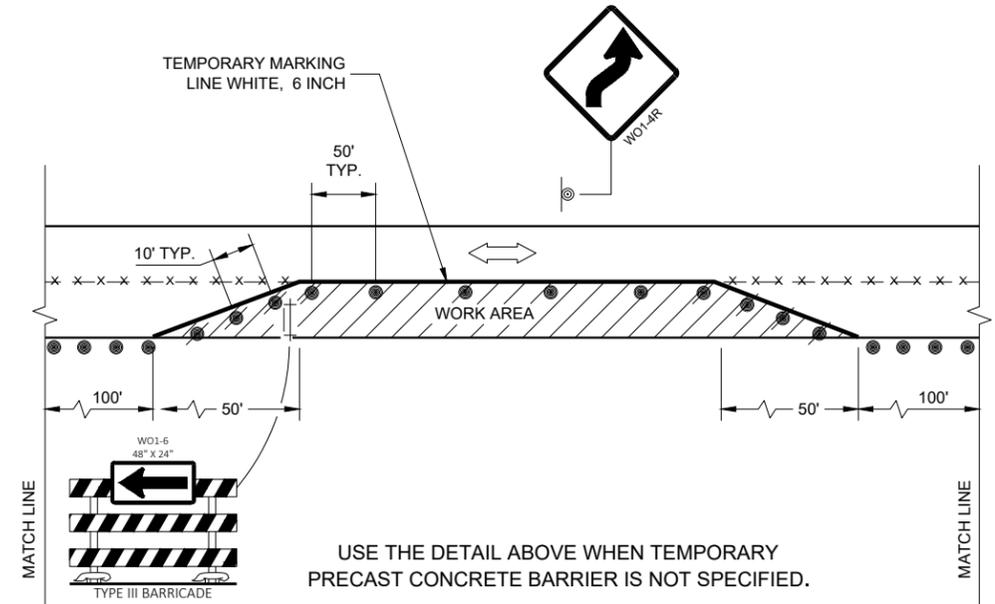
LEGEND

- 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

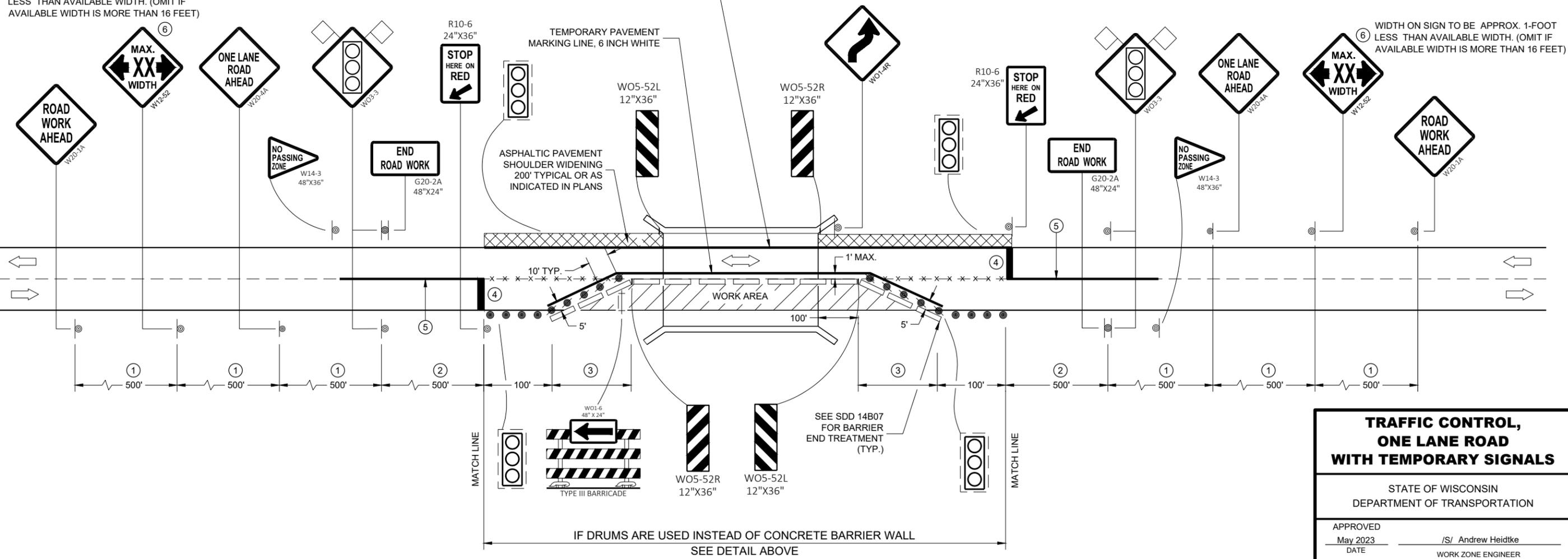
WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET)

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.
- ① 500 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.
 - ② USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
 - ③ DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
 - ④ TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
 - ⑤ 700 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.
 - ⑥ SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TEMPORARY PAVEMENT MARKING LINE, 6 INCH WHITE (STOPLINE TO STOPLINE). REMOVE EXISTING EDGELINE AND OFFSET THE TEMPORARY EDGELINE IF THE DISTANCE FROM THE EDGELINE TO CONCRETE BARRIER WALL IS LESS THAN 9 FEET.

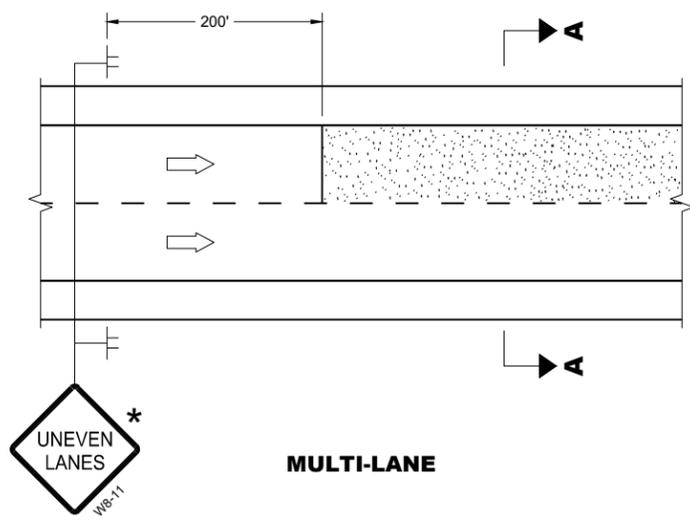


**TRAFFIC CONTROL,
ONE LANE ROAD
WITH TEMPORARY SIGNALS**

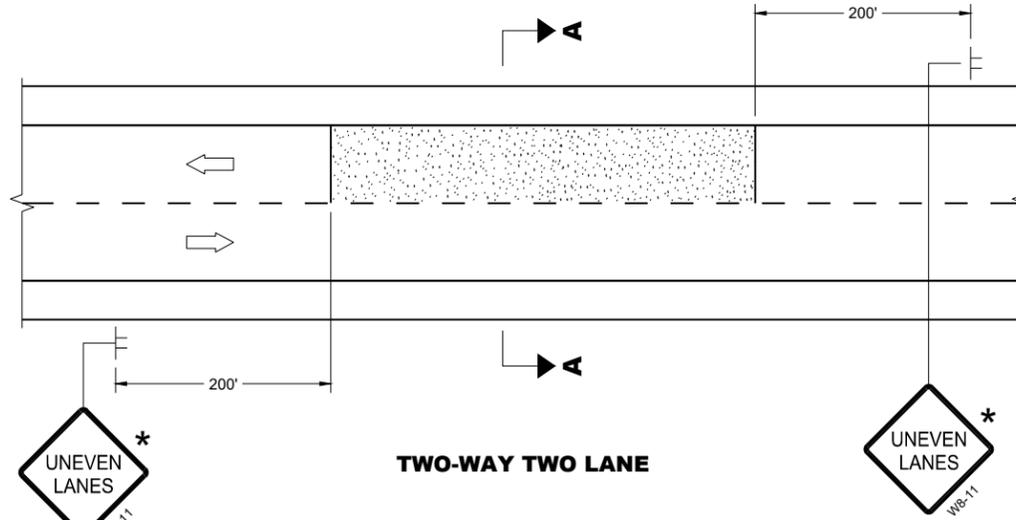
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

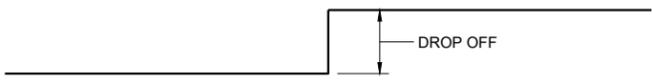
FHWA



MULTI-LANE



TWO-WAY TWO LANE

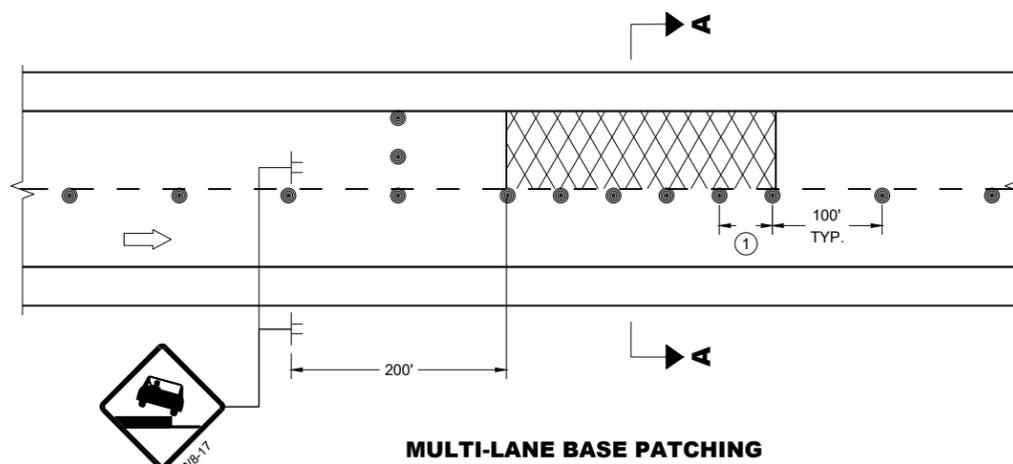


SECTION A - A

OR



SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

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

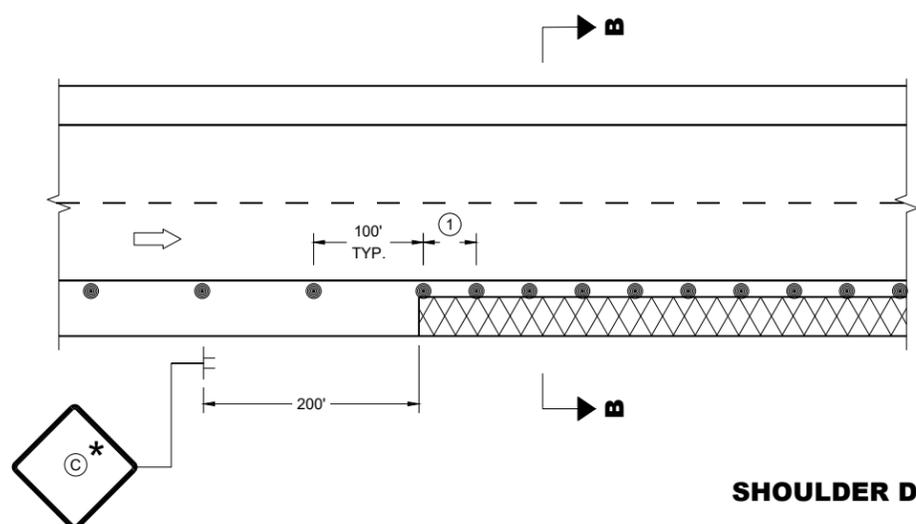
① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

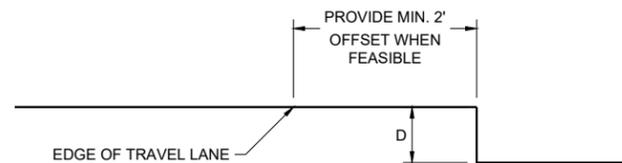
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN ©
< 2" WITH A SLOPE STEEPER THAN 3:1	 LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 SHOULDER DROP - OFF W8-9A
PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT	

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

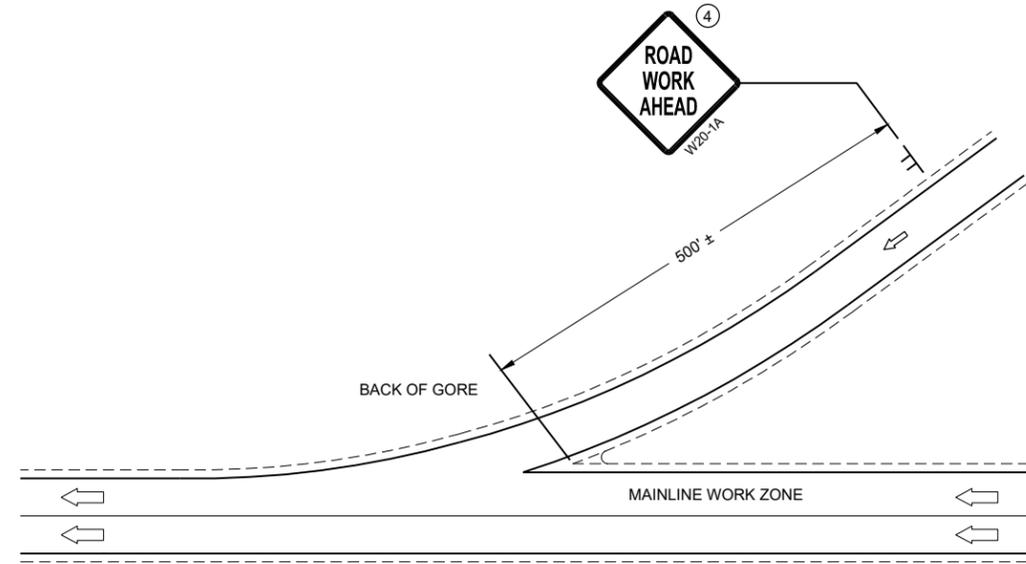
FHWA

SDD 15D39-03

SDD 15D39-03

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- TRAFFIC CONTROL DRUM
- ◻ TRUCK MOUNTED ATTENUATOR (TMA)
- ⊥ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ◻ FLASHING ARROW PANEL (MERGE)
- ◻ FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- ▨ WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

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

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

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

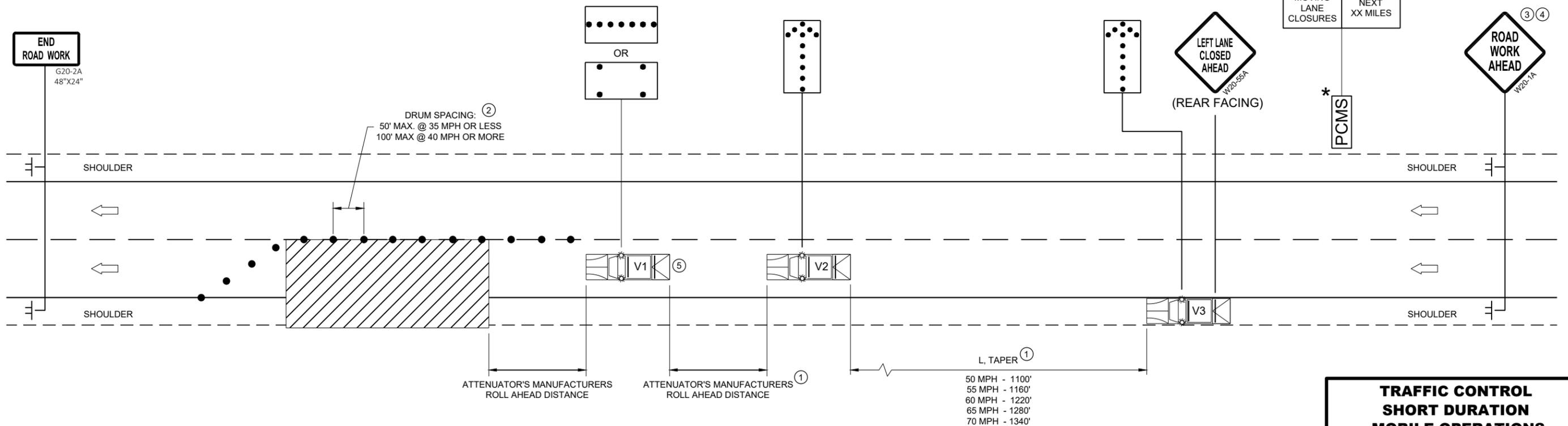
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

- ① DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ② DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.
- ③ WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.
- ④ SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ⑤ SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



**TRAFFIC CONTROL
SHORT DURATION
MOBILE OPERATIONS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

6

SDD 15D43 - 02

SDD 15D43 - 02

GENERAL NOTES

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

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

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

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

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

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

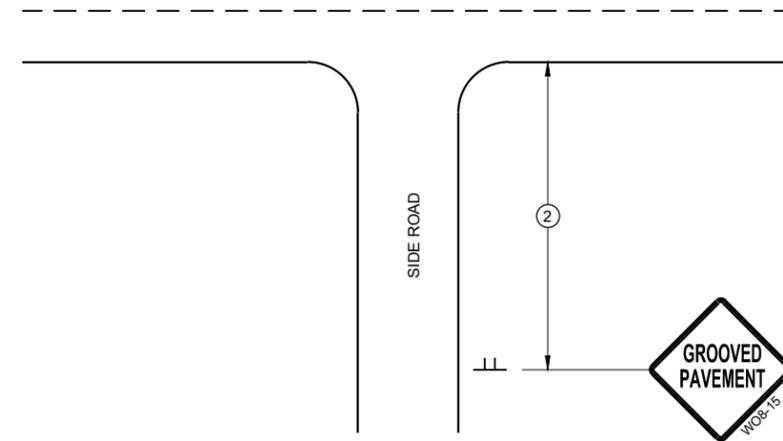
SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

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

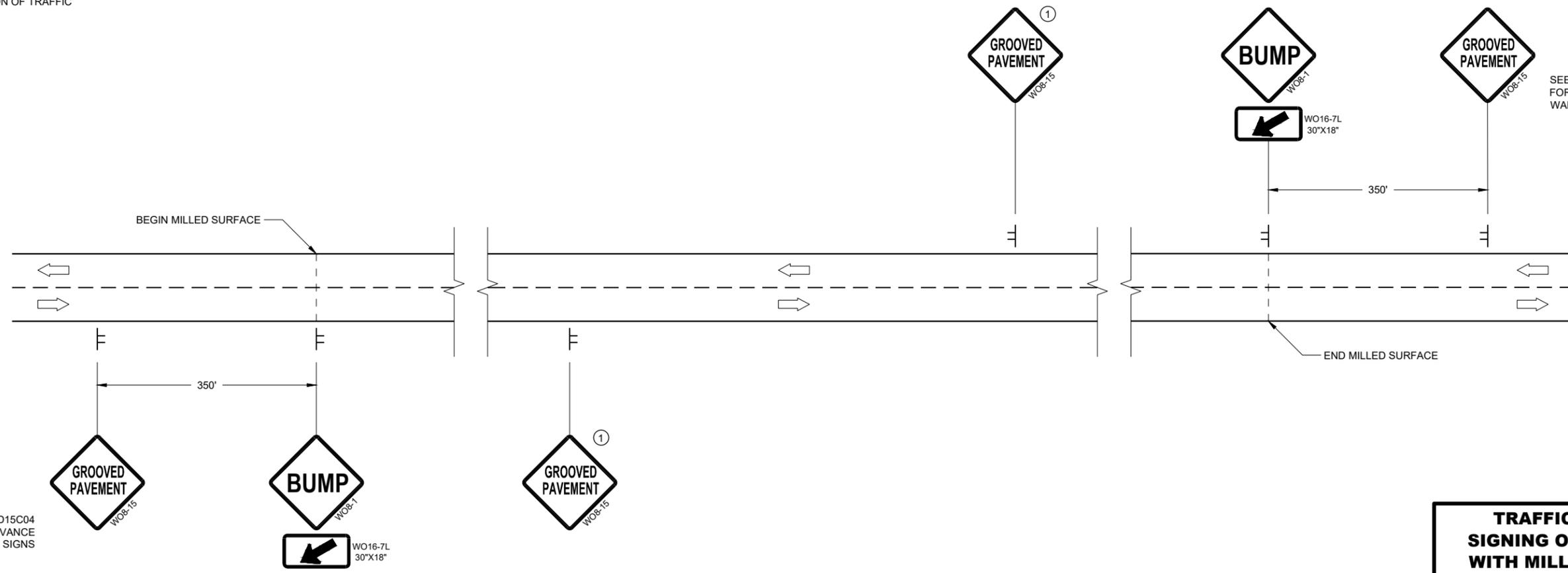
LEGEND

⊥ SIGN ON TEMPORARY SUPPORT

➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

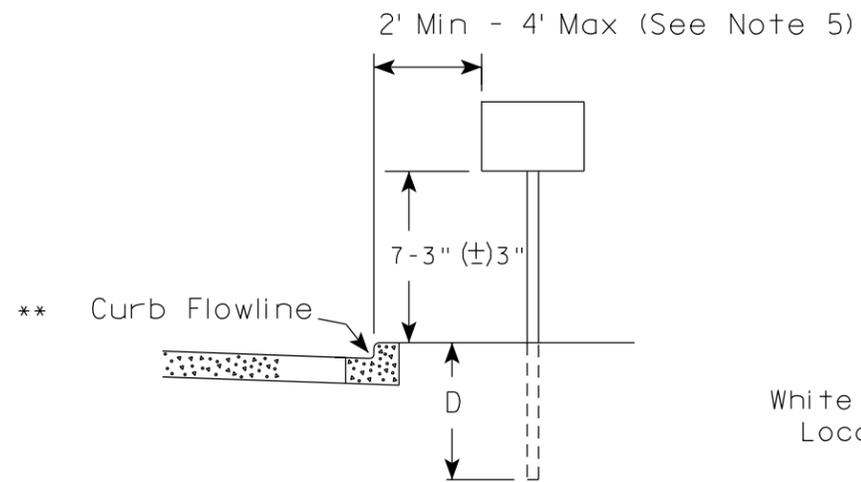
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

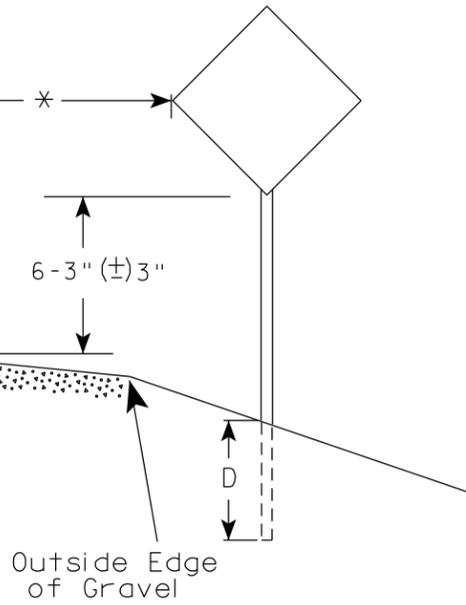
FHWA

URBAN AREA

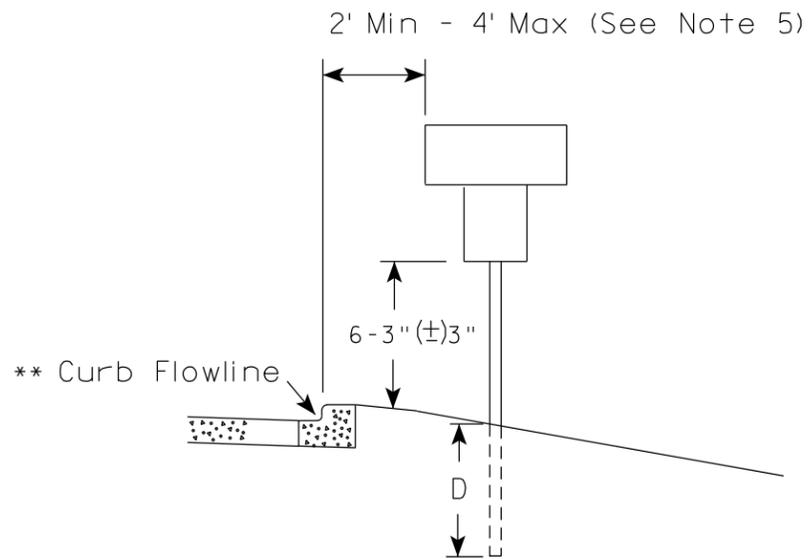
RURAL AREA (See Note 2)



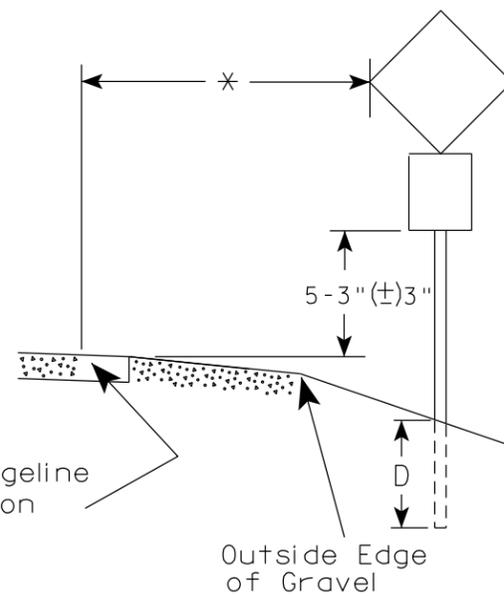
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

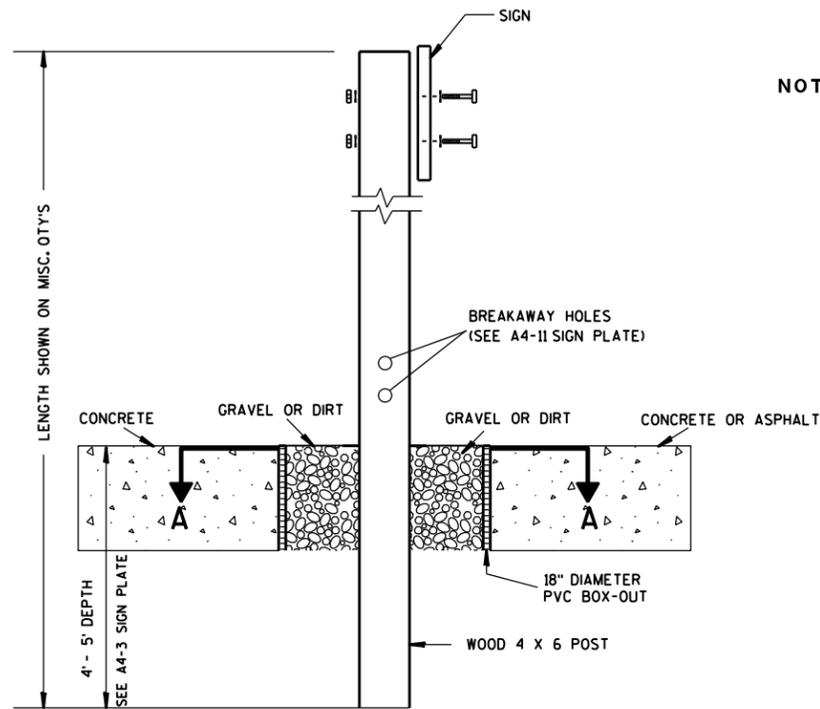
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Raub
for State Traffic Engineer

DATE 12/6/23

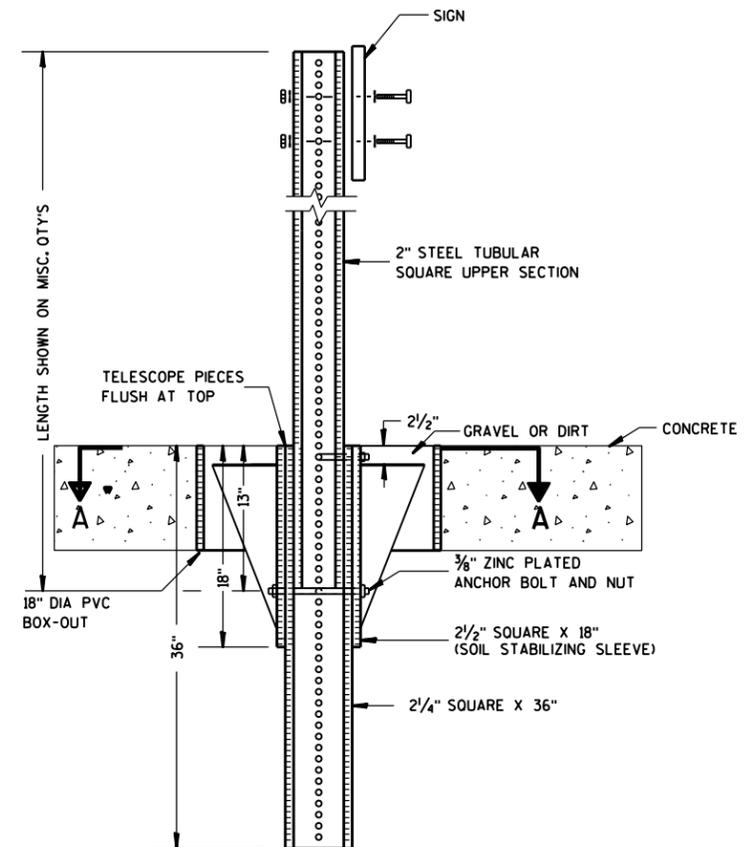
PLATE NO. A4-3.23



ELEVATION VIEW

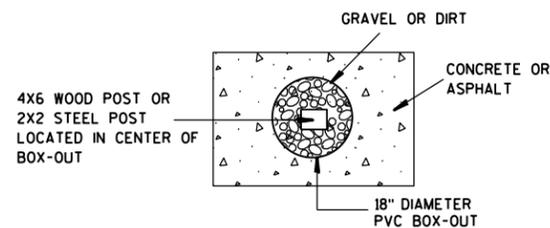
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

GENERAL NOTES

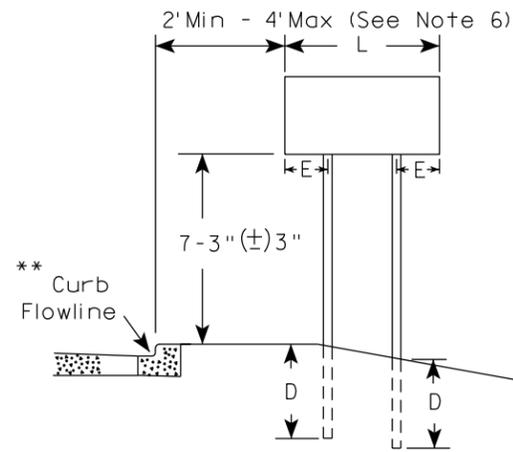
- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (\pm 3") or 6'-3" (\pm 3") depending upon existence of sub-sign.
- The (\pm) tolerance for mounting height is 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" (\pm 3") or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (\pm 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" (\pm 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.

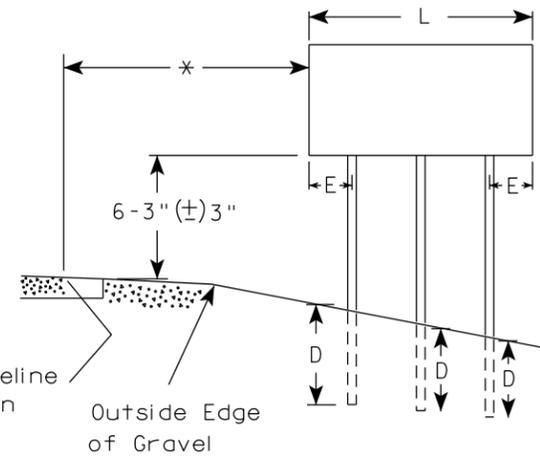
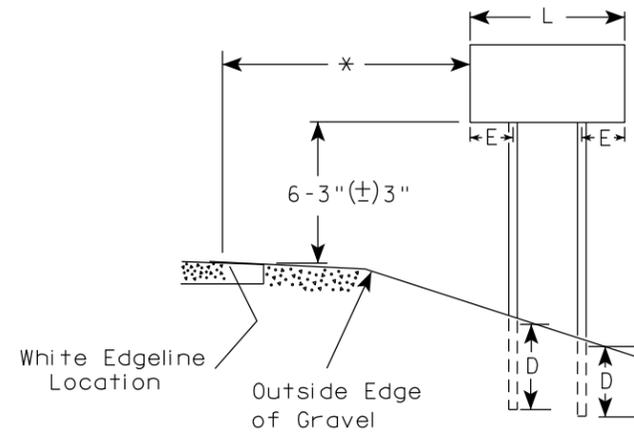
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

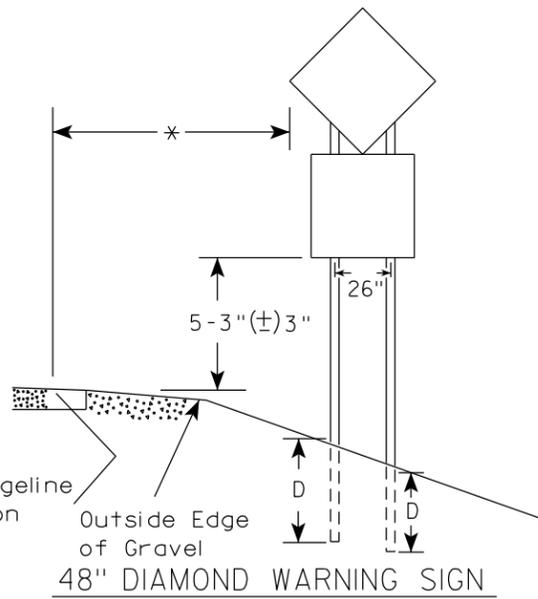
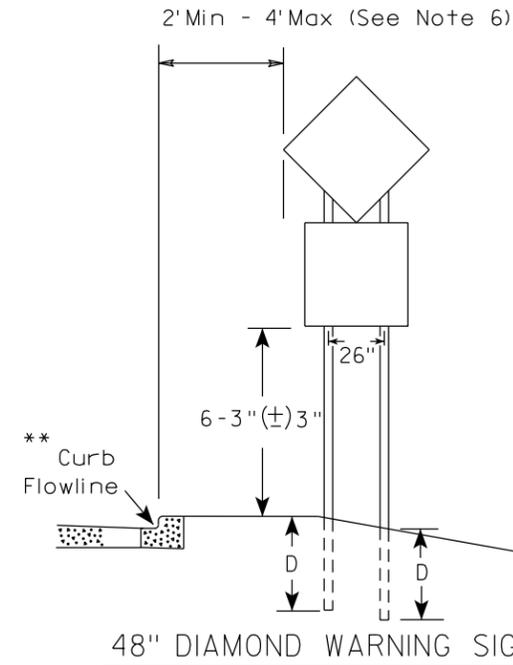
URBAN AREA



RURAL AREA (See Note 3)



URBAN AREA



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

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

POST EMBEDMENT DEPTH

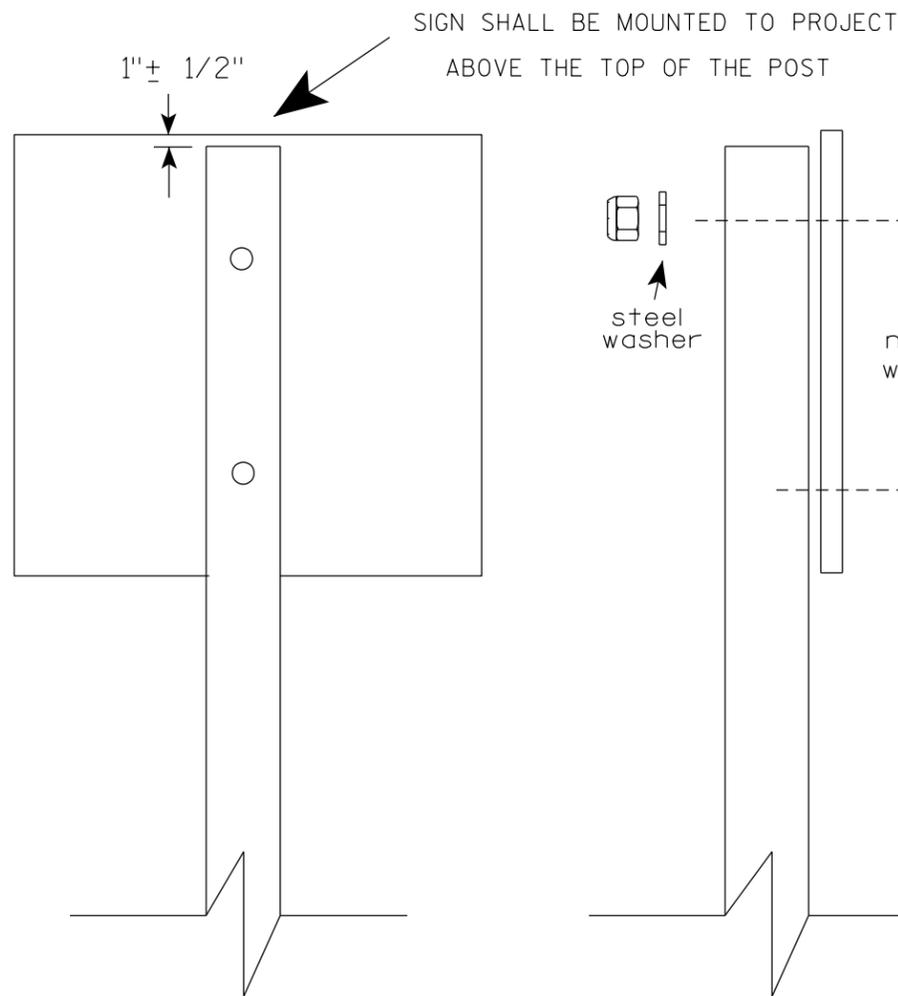
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16



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

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

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

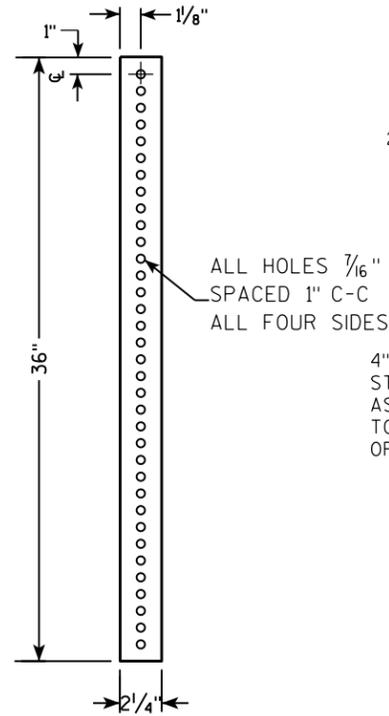
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
- 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

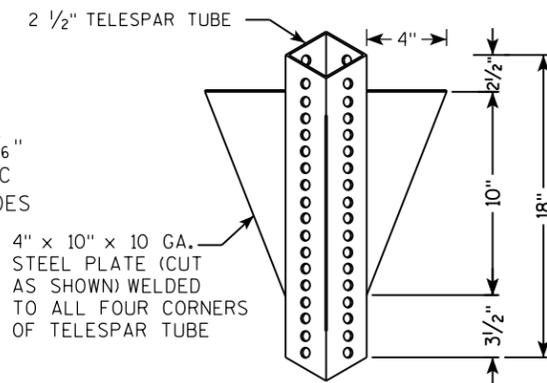
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

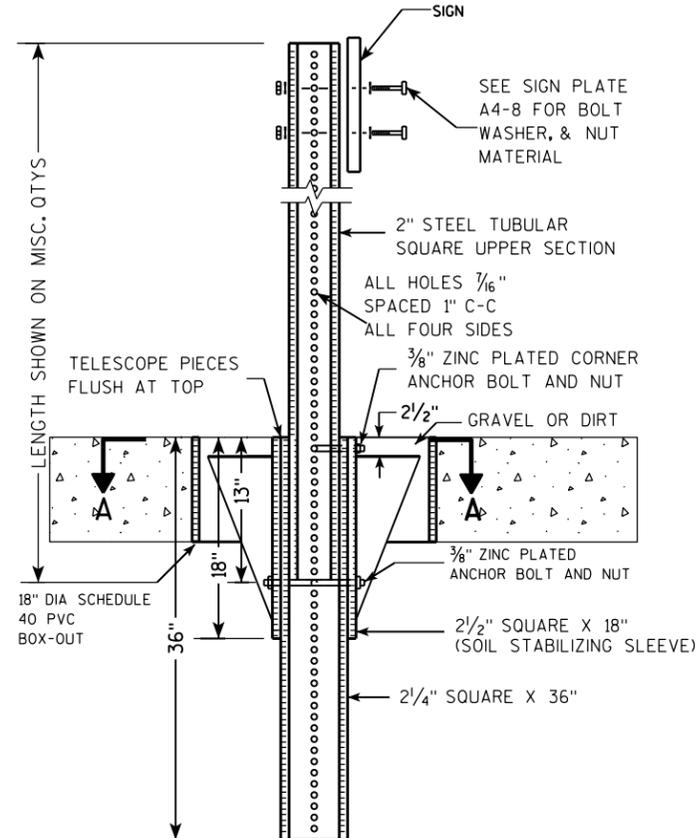
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



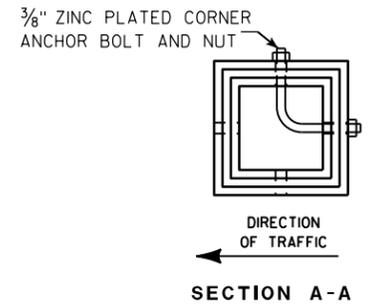
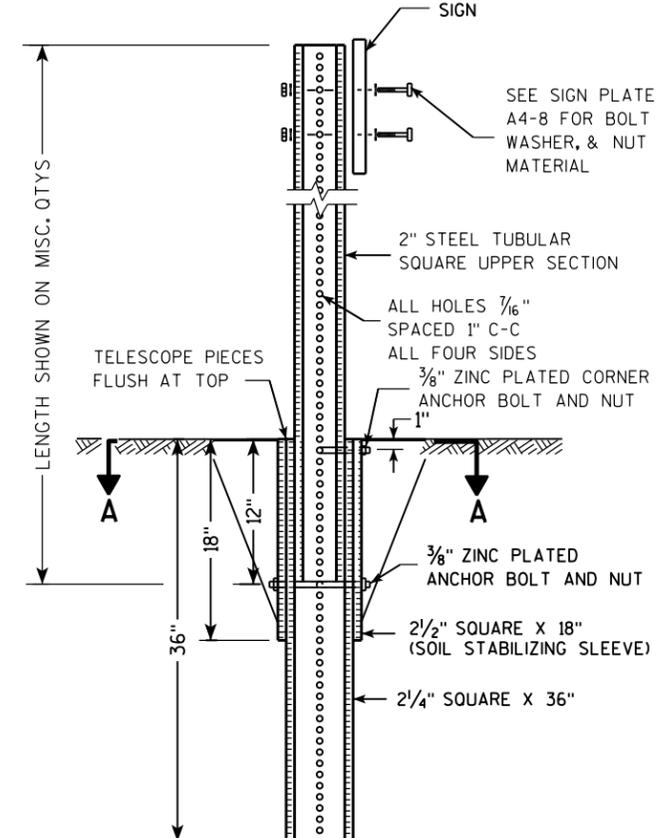
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

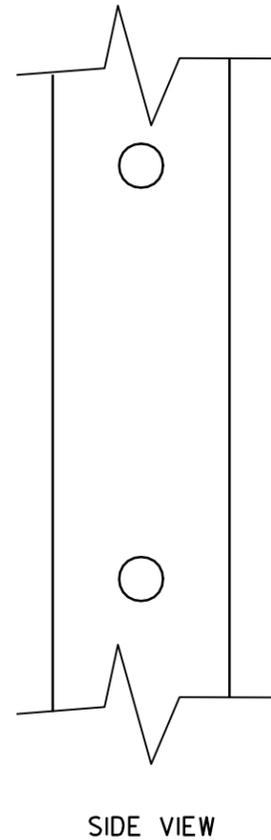
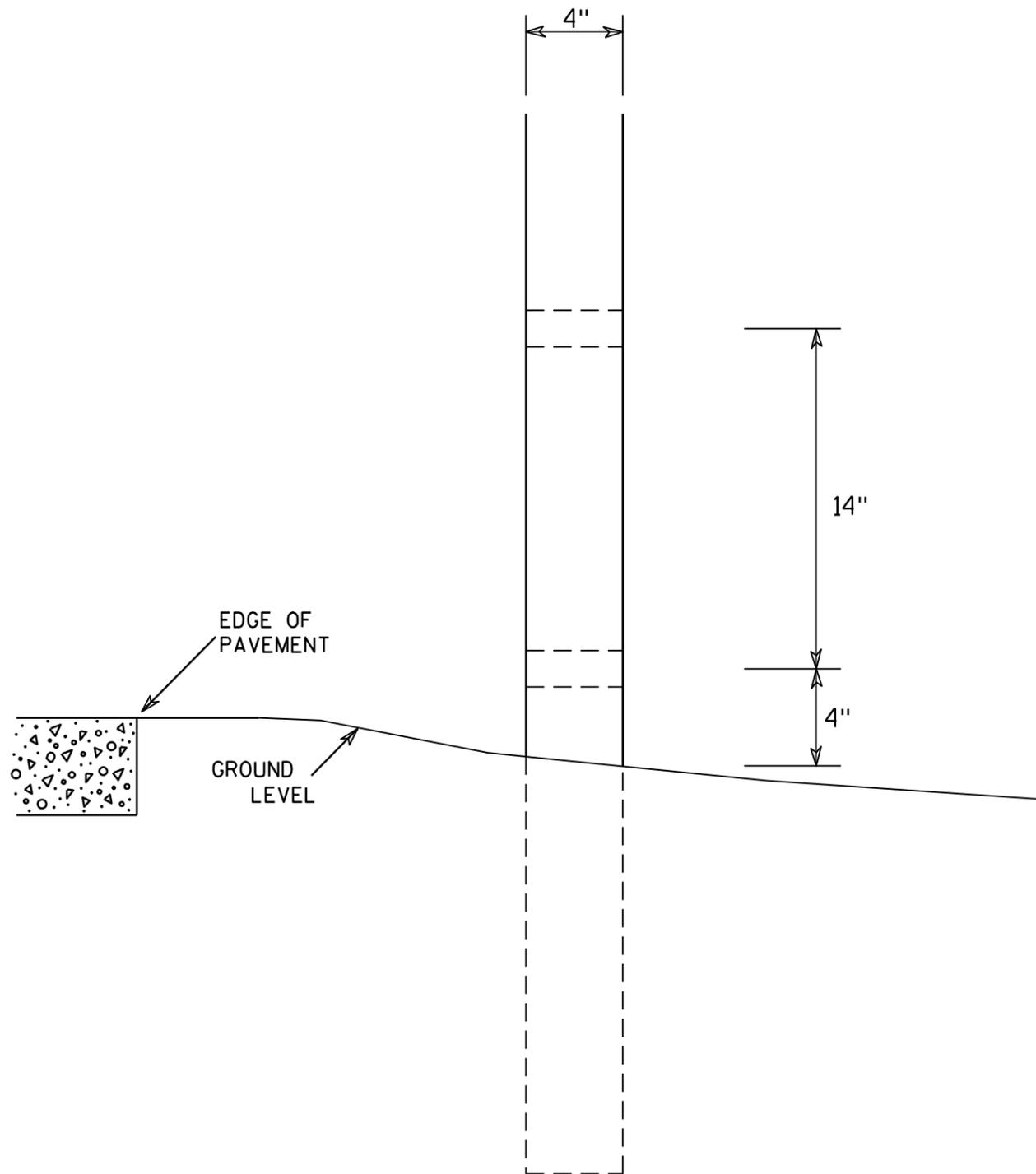
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



GENERAL NOTES

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

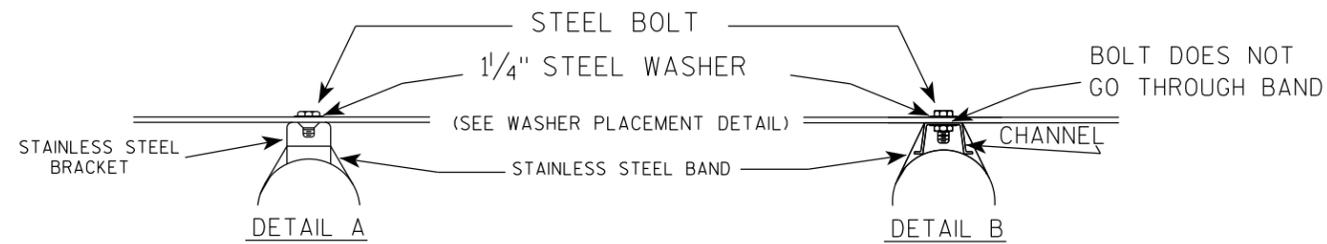
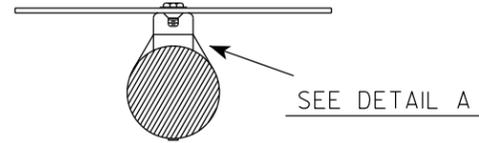
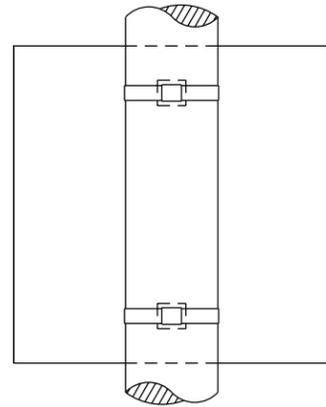
7

7

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

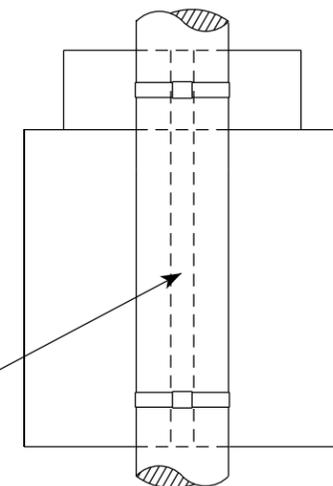
BANDING

SINGLE SIGN



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

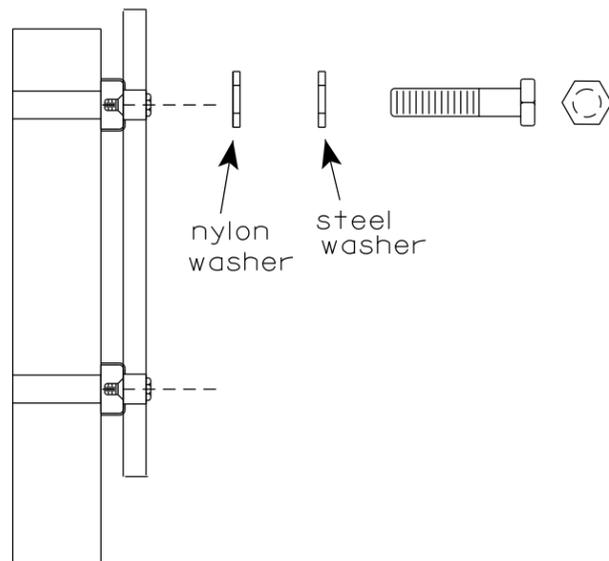
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



WASHER PLACEMENT



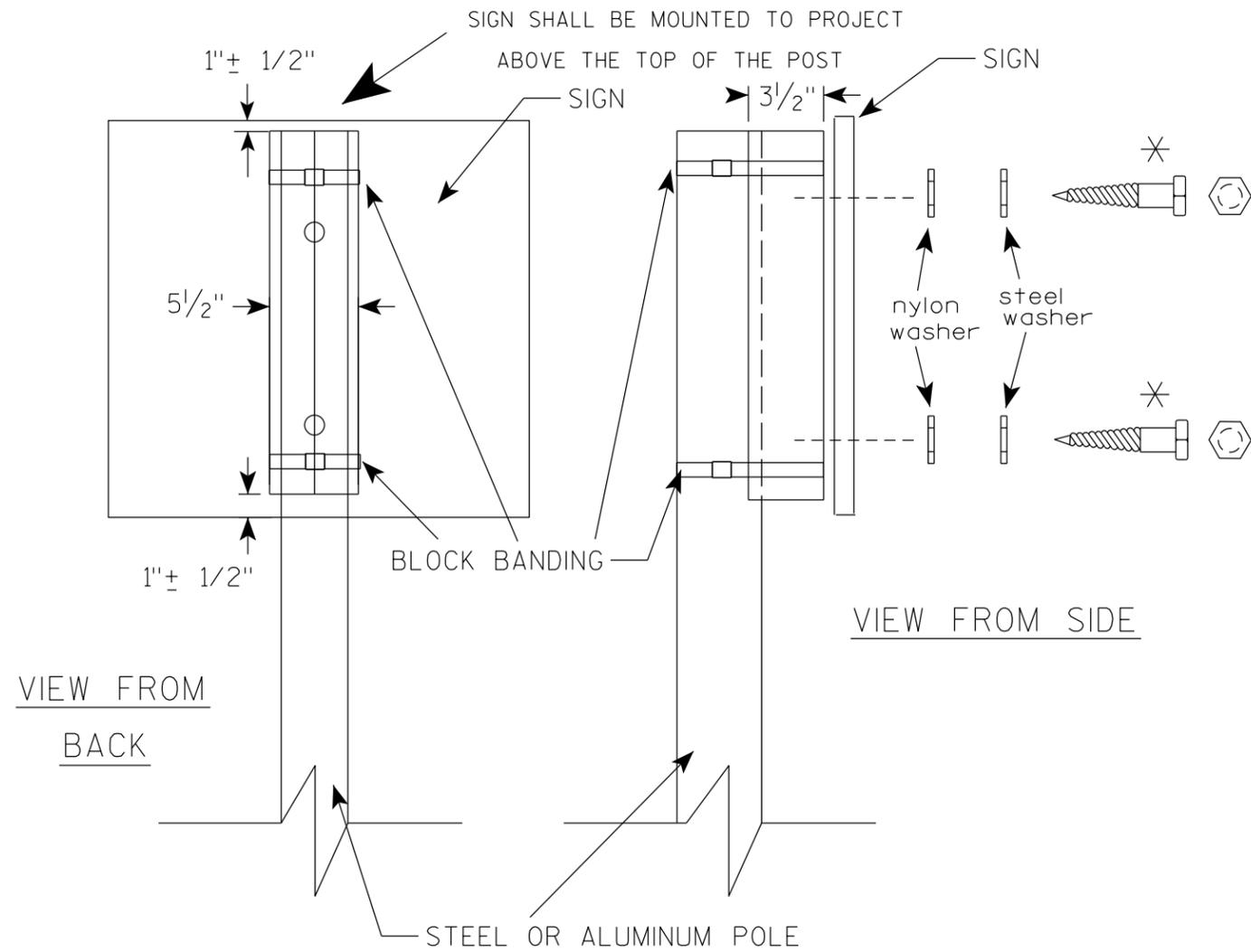
WASHERS (ALL POSTS) -
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON
 FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

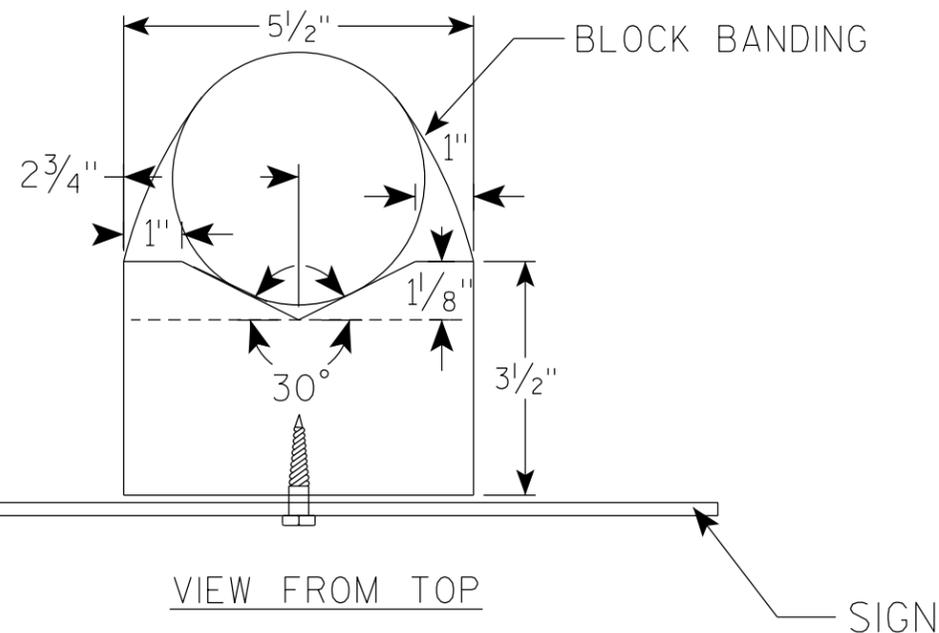
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE

STEEL OR ALUMINUM POLE



VIEW FROM TOP

SIGN

GENERAL NOTES

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

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

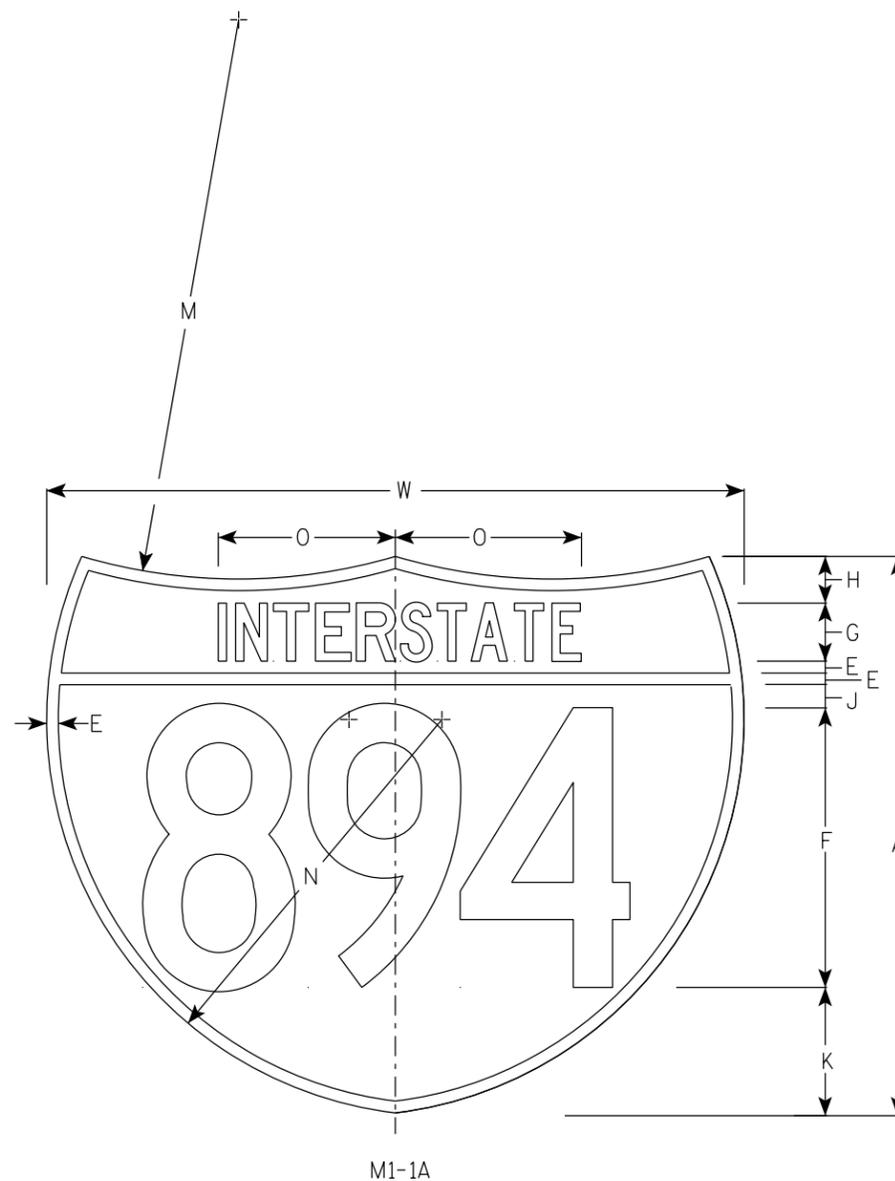
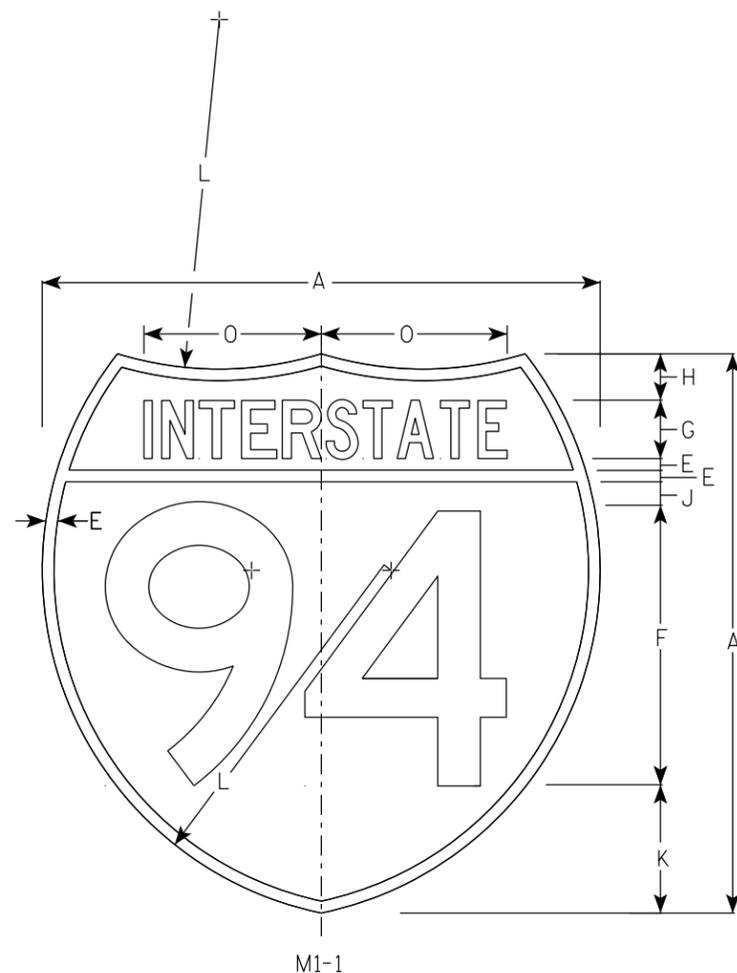
PROJECT NO:

SHEET NO:

E

NOTES

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



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

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

PROJECT NO:

HWY:

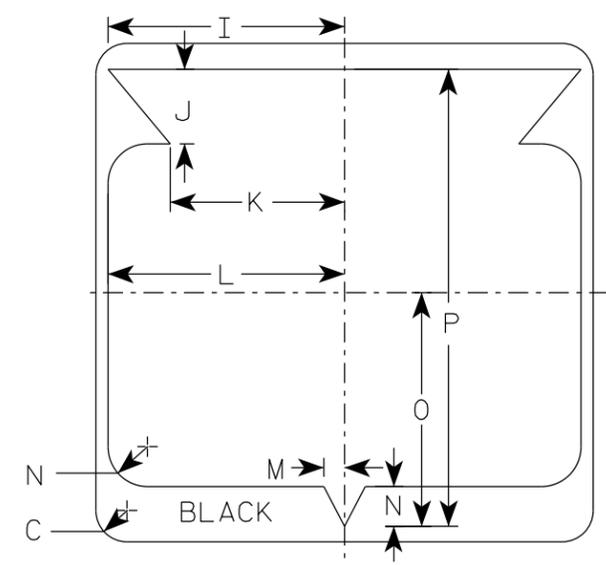
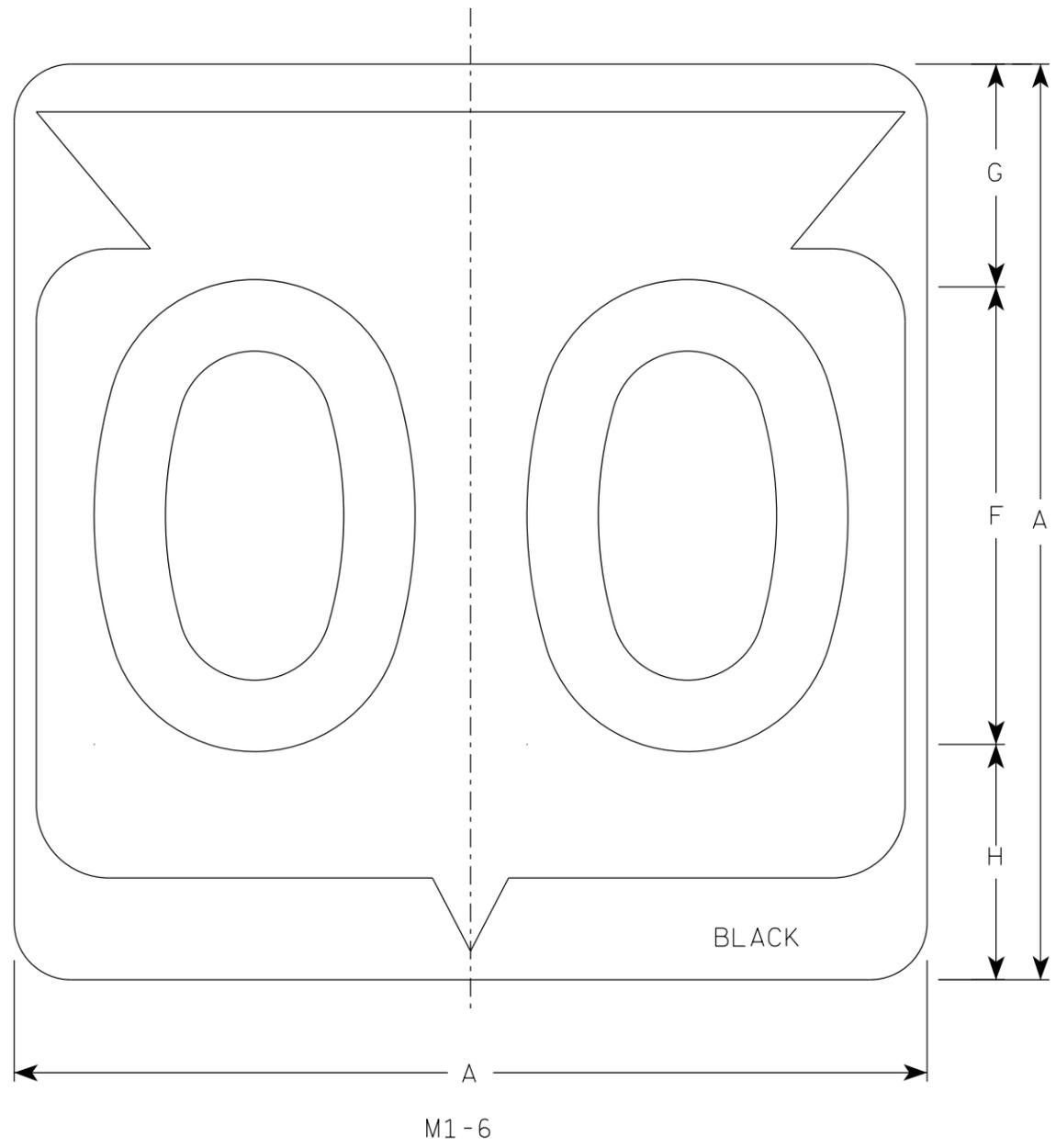
COUNTY:

SHEET NO:

E

NOTES

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



7

7

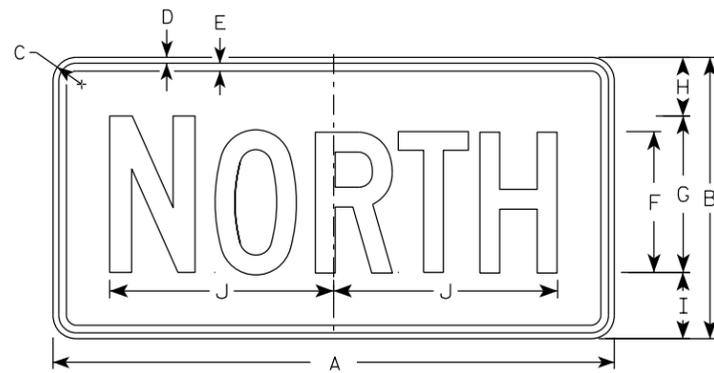
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8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

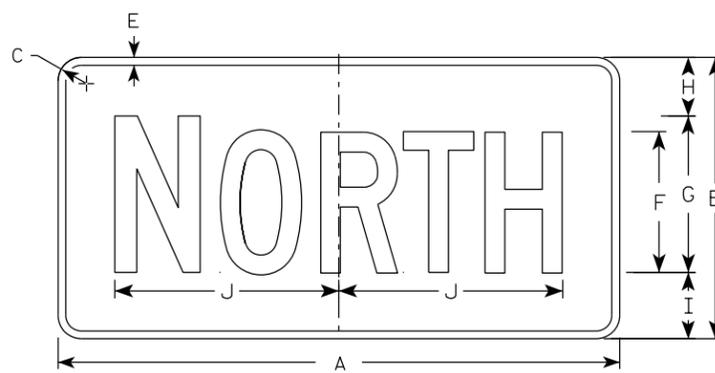
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*
for State Traffic Engineer

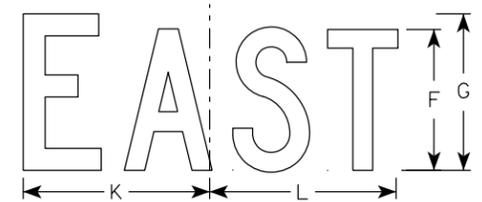
DATE 11/8/2022 PLATE NO. M1-6.11



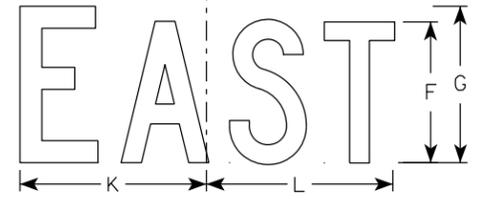
M3-1
MM3-1
MP3-1



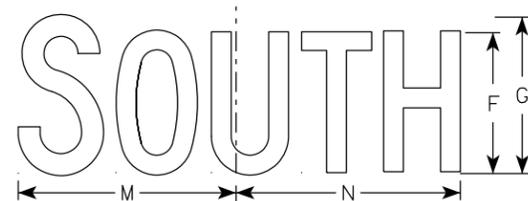
MB3-1
MK3-1
MN3-1



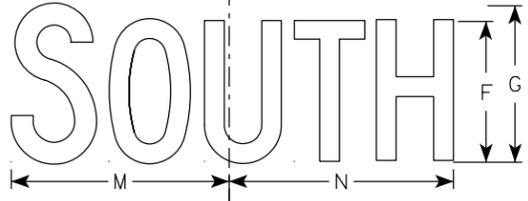
M3-2
MM3-2
MP3-2



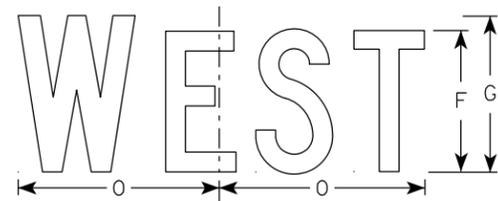
MB3-2
MK3-2
MN3-2



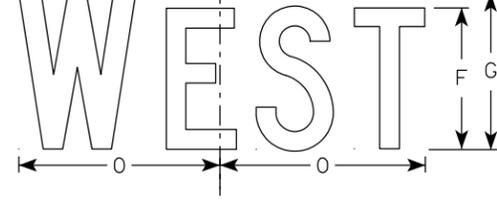
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

- All Signs Type II - Type H Reflective
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

7

7

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

STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

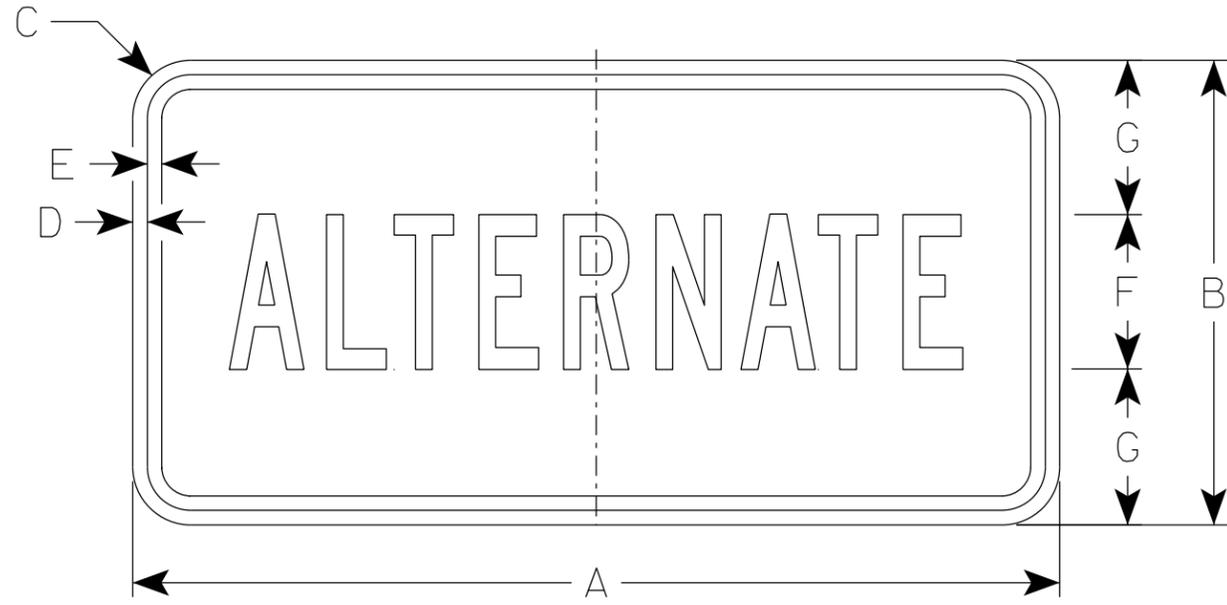
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

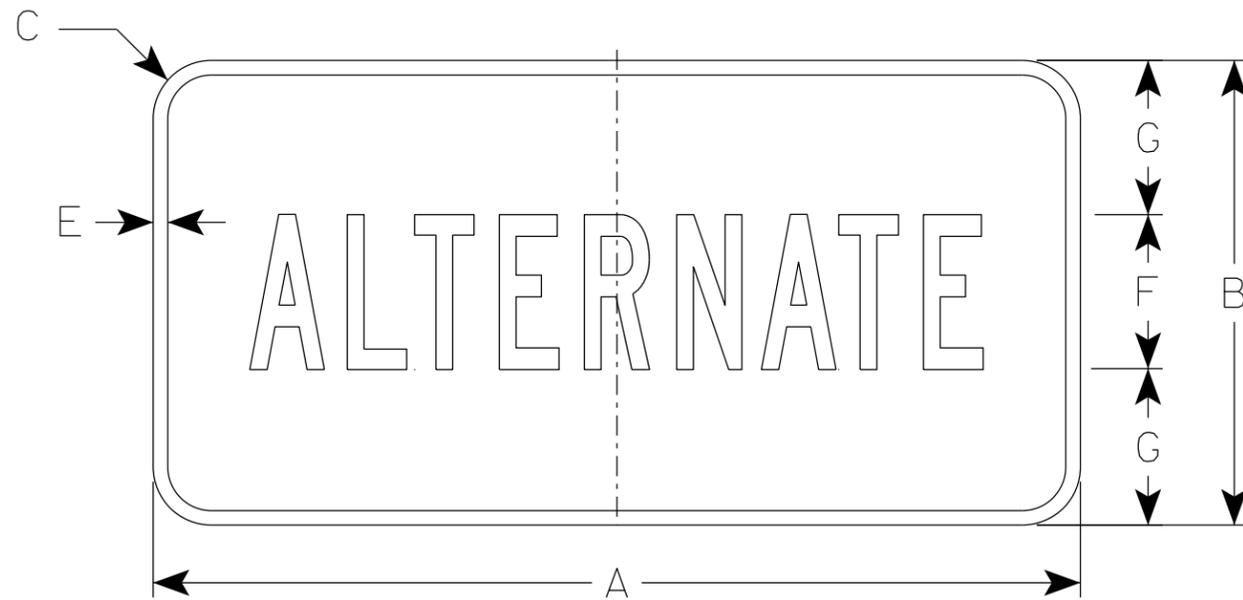
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective except as Shown
2. Color:
Background - See Note 5
Message - See note 5
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-1 Background - White
Message - Black
MB4-1 Background - Blue
Message - White
M04-1 Background - Orange - Type F Reflective
Message - Black



M4 - 1
M04 - 1



MB4 - 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 sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	4	4	9 3/4	9 1/2																		2.00
2M	24	12	1 1/2	3/8	3/8	4	4	9 3/4	9 1/2																		2.00
3	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5

STANDARD SIGN
M4 - 1

WISCONSIN DEPT OF TRANSPORTATION

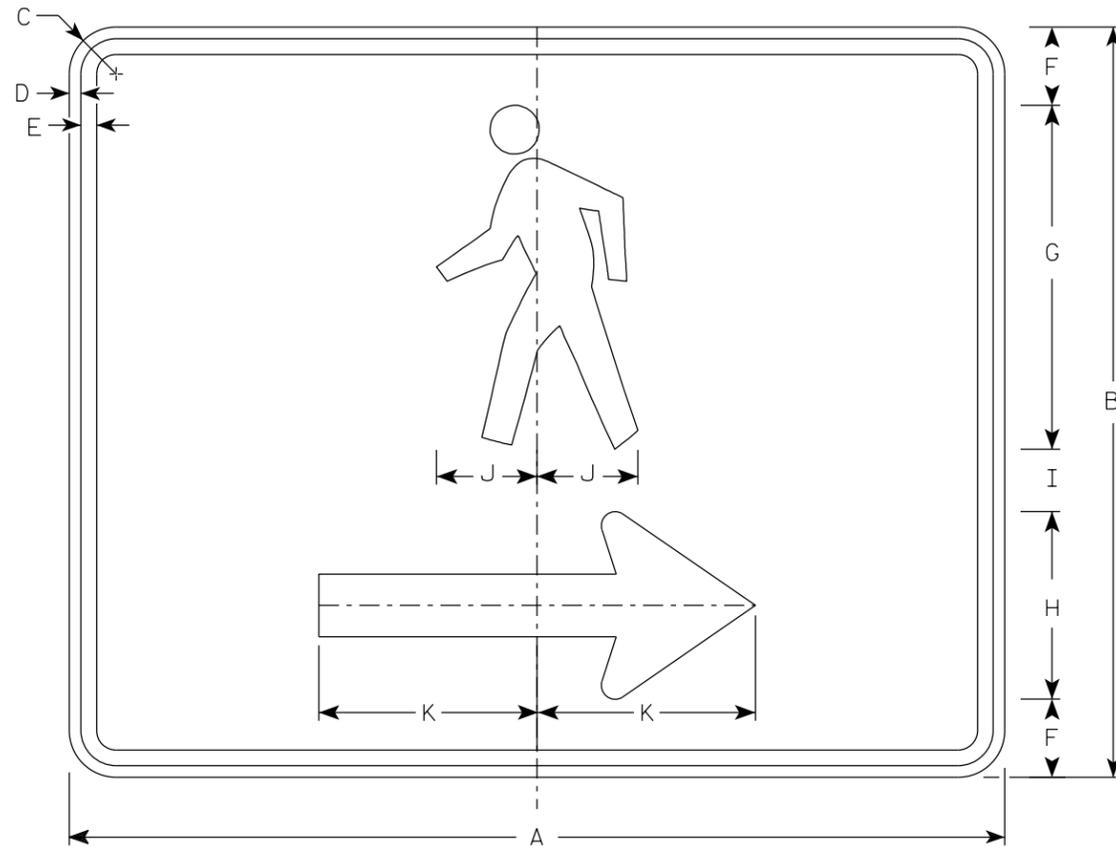
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M4-1.10

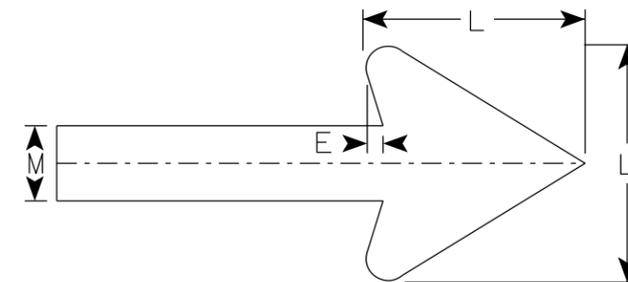
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

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. M4-60L is the same as M4-60R except the arrow is reversed.



M4-60R



Arrow Detail

7

7

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

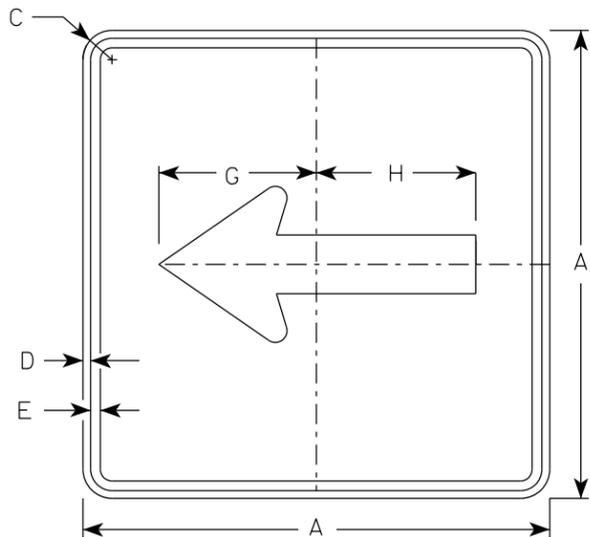
STANDARD SIGN
M4-60 L&R

WISCONSIN DEPT OF TRANSPORTATION

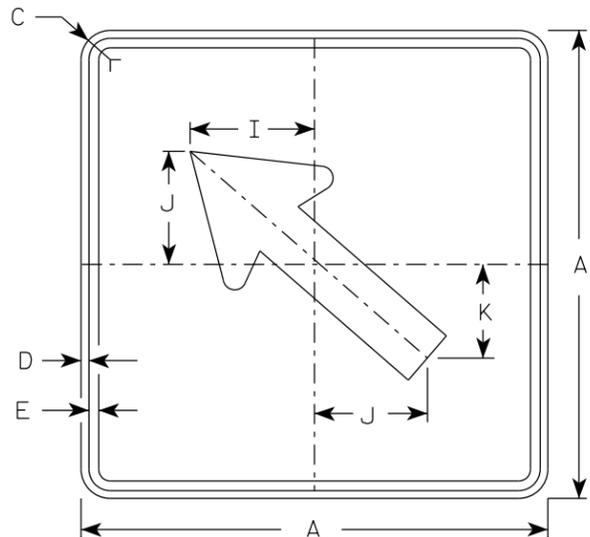
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 2/14/2023 PLATE NO. M4-60.2

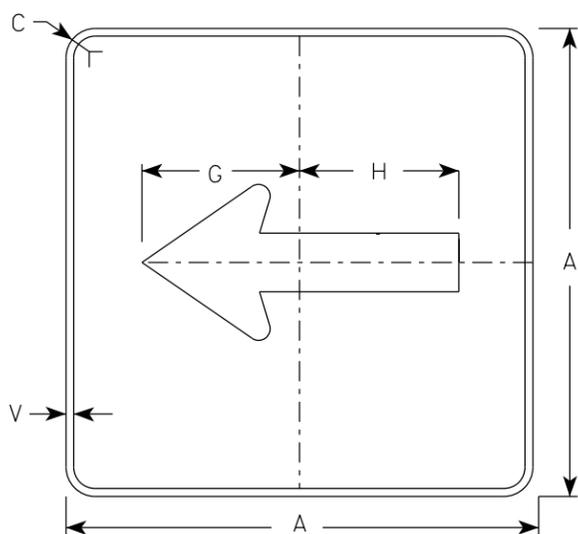
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



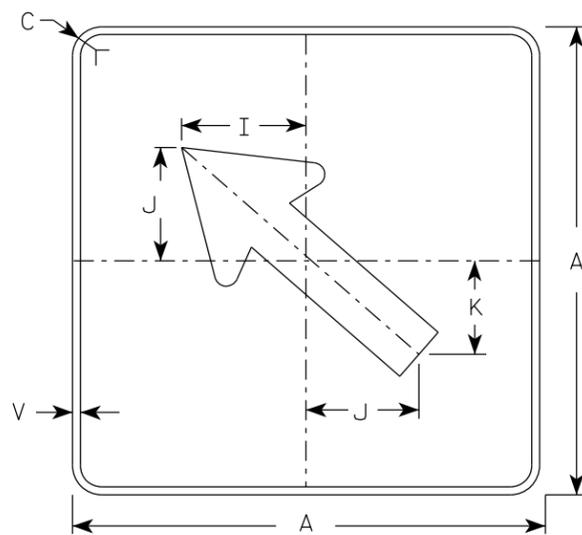
M6-1
MM6-1
M06-1
MP6-1



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



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

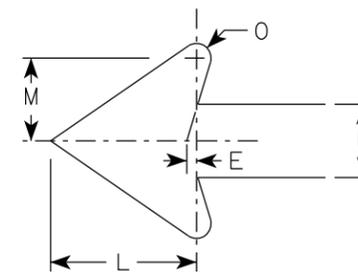


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

- Signs are Type II - Type H 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

ARROW DETAIL



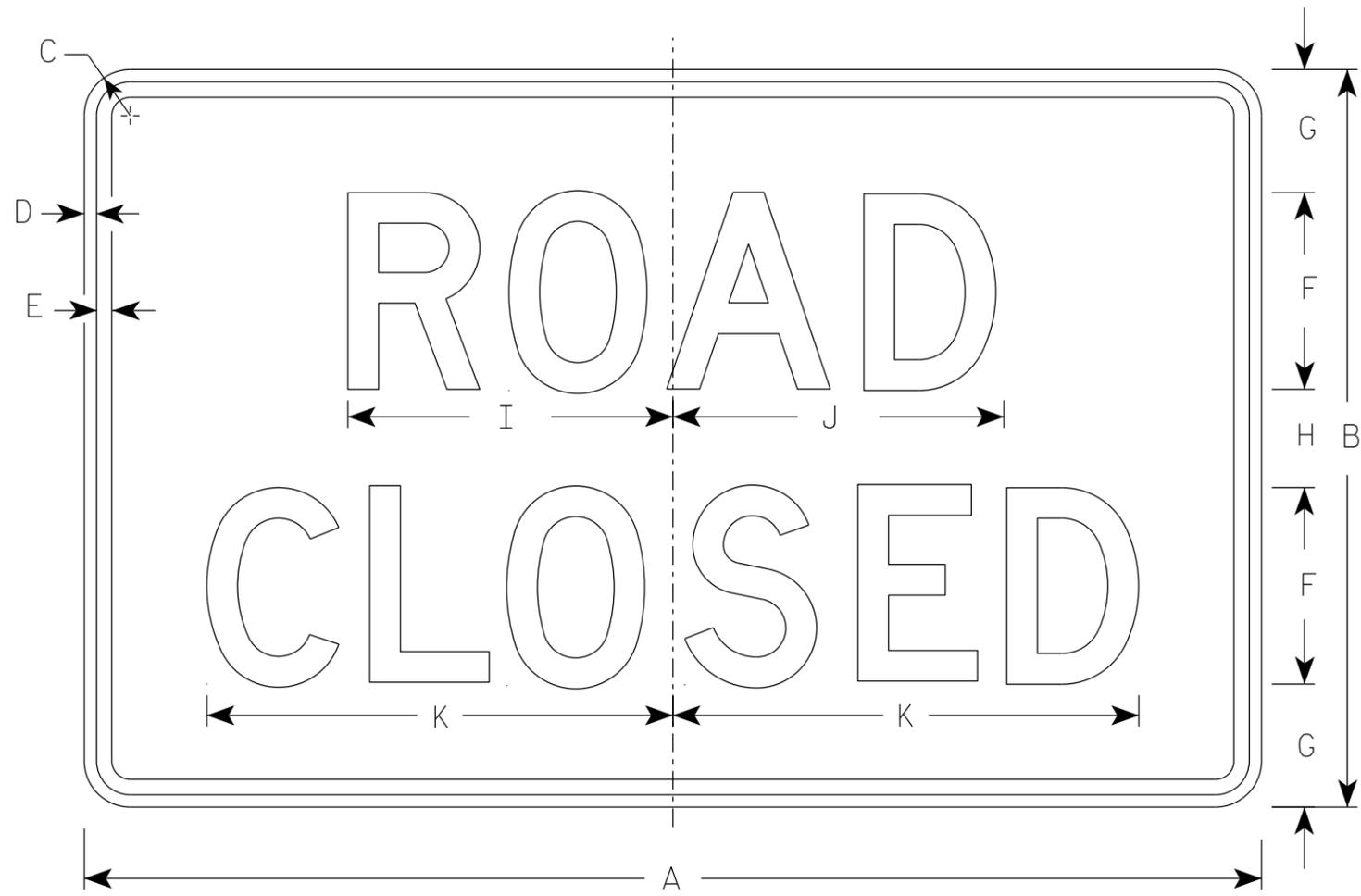
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4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

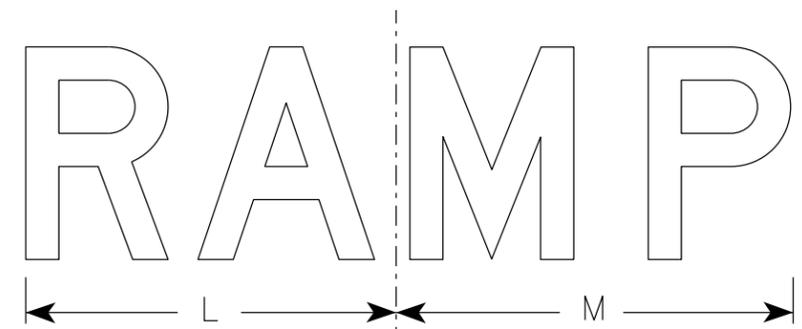
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

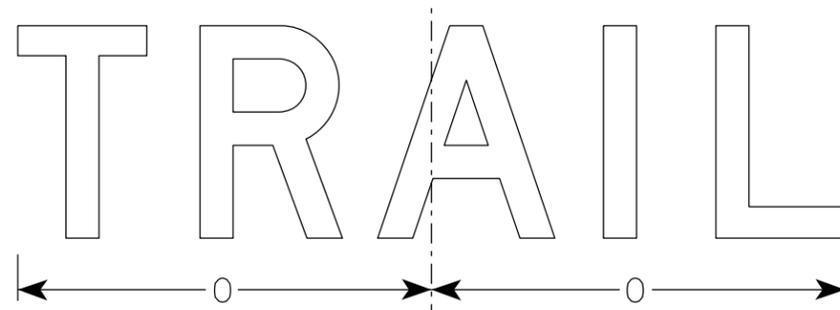
DATE 2/13/2023 PLATE NO. M6-1.16



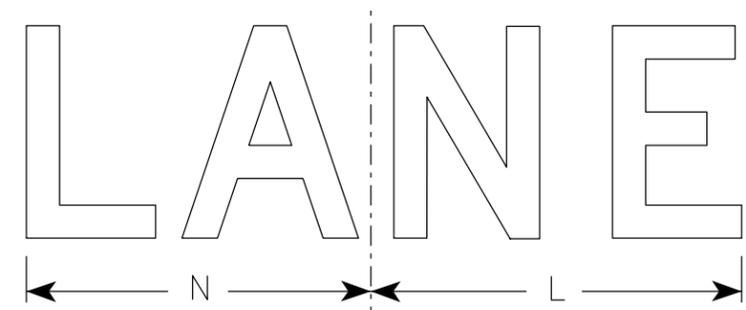
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-2.12

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

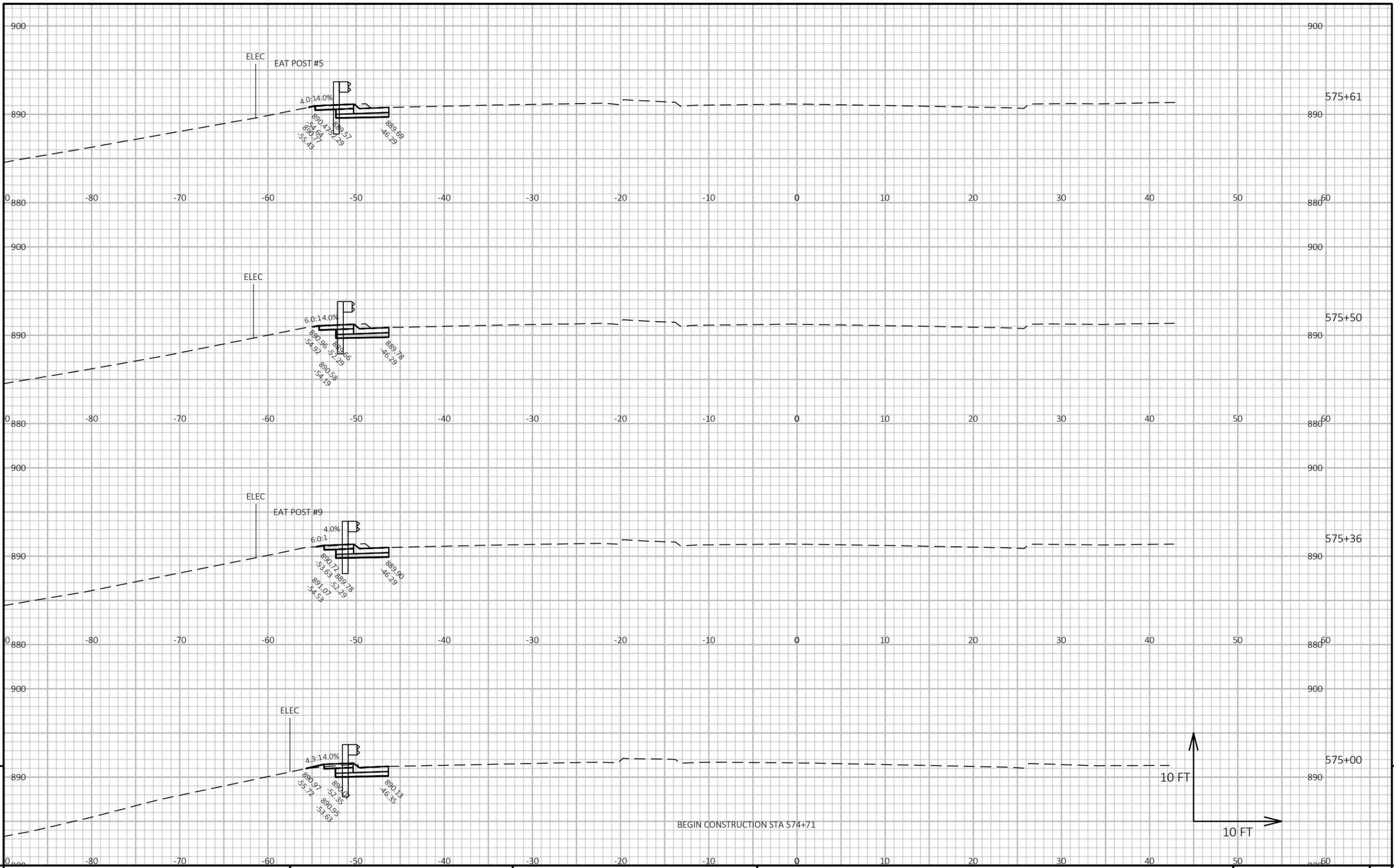
DIVISION - ALI-STH 25 NB

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	MASS ORDINATE
574+71.08	57471.08	0.00	0.00	2.20	0.13	0.00	0	0	0	0	0	0	0	0
575+00.00	57500.00	28.92	7.29	2.20	0.29	0.73	4	2	0	0	4	0	0	2
575+36.02	57536.02	36.02	8.53	2.20	0.04	0.85	11	3	0	1	15	0	1	10
575+50.00	57550.00	13.98	8.86	2.20	0.03	0.89	5	1	0	0	20	0	1	14
575+61.08	57561.08	11.08	8.99	2.20	0.03	0.90	4	1	0	0	24	0	1	17
575+86.13	57586.13	25.05	12.15	2.20	0.00	1.21	10	2	0	1	34	0	3	25
576+00.00	57600.00	13.87	12.13	2.20	0.00	1.21	6	1	0	1	40	0	4	30
576+50.00	57650.00	50.00	2.08	0.00	0.02	0.21	13	2	0	1	53	0	5	41
577+00.00	57700.00	50.00	0.57	0.00	0.00	0.06	2	0	0	0	55	0	5	43
577+17.21	57717.21	17.21	0.00	0.00	0.00	0.00	0	0	0	0	55	0	5	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
4 - EXPANDED EBS	WILL BE BACKFILLED WITH SELECT CRUSHED MATERIAL
5 - MASS ORDINATE	[CUT - SALVAGED PAVT - (FILL * FILL FACTOR)]

9

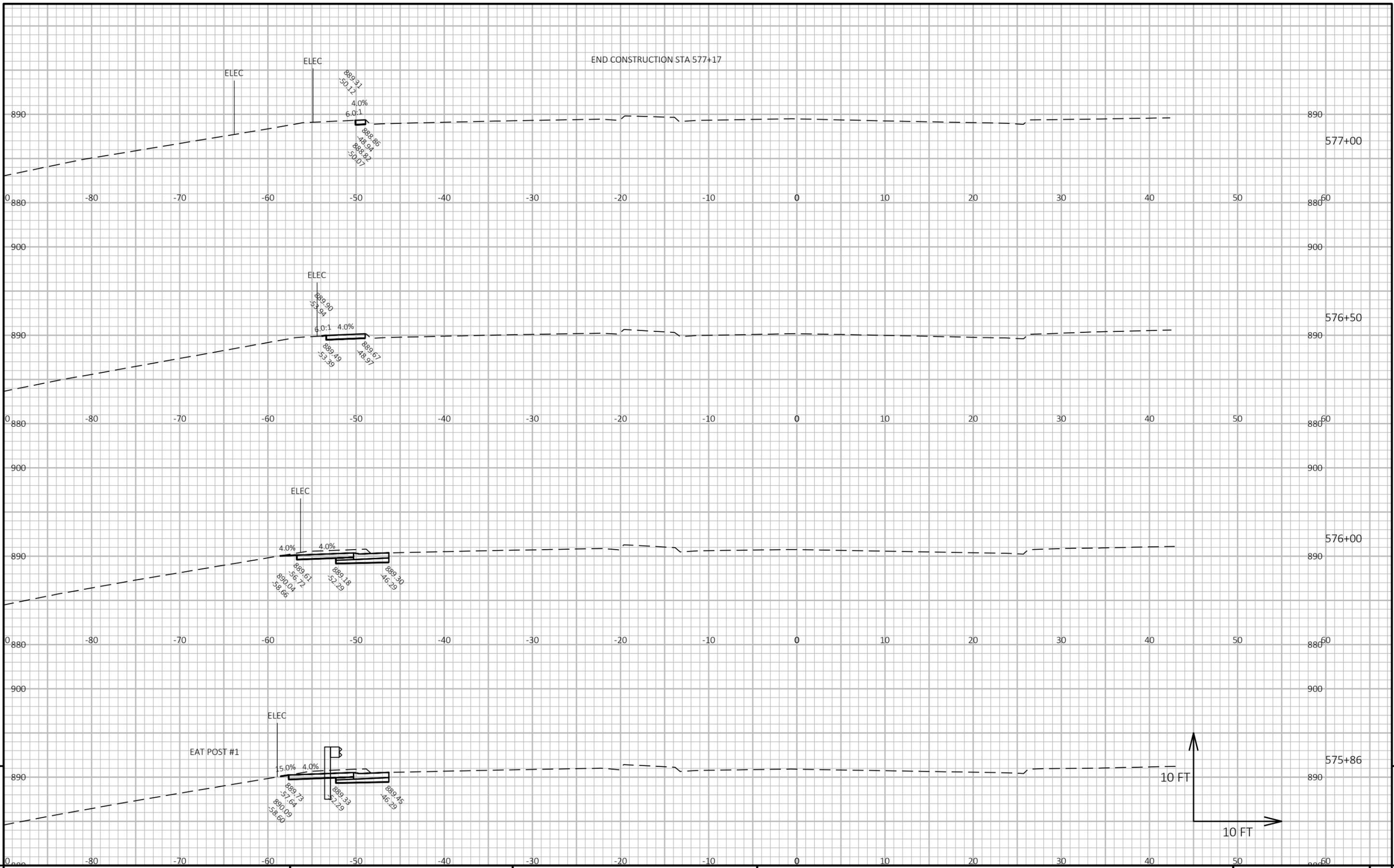
9



9

9

PROJECT NO: 8100-01-72	HWY: STH 25	COUNTY: DUNN	CROSS SECTIONS: STH 25	SHEET	E
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PROJECT NO: 8100-01-72

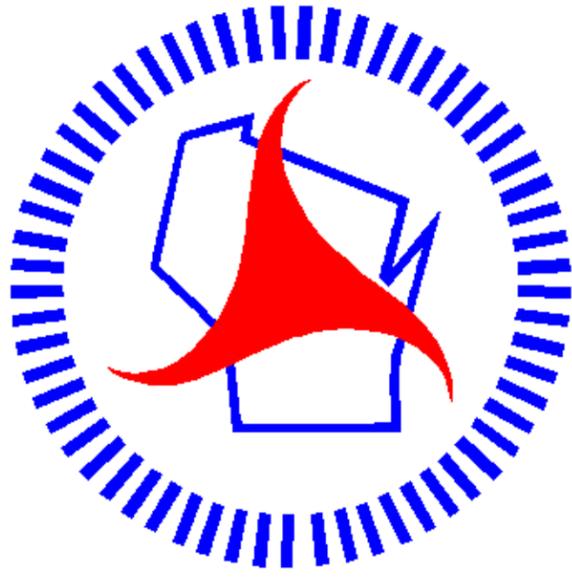
HWY: STH 25

COUNTY: DUNN

CROSS SECTIONS: STH 25

SHEET

E



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